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Base Realignment and Closure
Program Management Office West
1455 Frazee Road, Suite 900
San Diego, California 92108-4310

CONTRACT NO. N68711-04-D -1104

CTO No. 0044

FINAL

INDOOR AIR, OUTDOOR AIR, AND SOIL GAS SAMPLING REPORT – BUILDINGS 163 AND 163A

June 2010

DCN: SEST-1104-0044-0038

OU-2B, IR SITE 4

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ALAMEDA, CALIFORNIA

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June 2010

OU-2B, IR SITE 4, ALAMEDA POINT
ALAMEDA, CALIFORNIA

DCN: SEST-1104-0044-0038

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ABBREVIATIONS AND ACRONYMS

µg/L	microgram per liter
µg/m^3	microgram per cubic meter
1,1-DCA	1,1-dichloroethane
1,1-DCE	1,1-dichloroethene
1,2-DCA	1,2-dichloroethane
1,2-DCE	1,2-dichloroethene
1,1,2-TCA	1,1,2-trichloroethane
1,2,4-TCB	1,2,4-trichlorobenzene
1,1,2,2-PCA	1,1,2,2,-tetrachloroethane
AHA	Activity Hazard Analysis
APP	Accident Prevention Plan
ARRA	Alameda Reuse and Redevelopment Authority
BEC	BRAC Environmental Coordinator
bgs	below ground surface
BRAC	Base Realignment and Closure
BTEX	benzene, toluene, ethylbenzene, and xylenes
Cal-EPA	California Environmental Protection Agency
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CHHSL	California Human Health Screening Level
cis-1,2-DCE	cis-1,2-dichlorethene
COC	chain-of-custody
COPC	chemical of potential concern
CSO	Caretaker Site Office
CTO	Contract Task Order
DOD	U.S. Department of Defense
DOT	U.S. Department of Transportation
DTSC	California Department of Toxic Substances Control
EAS	Environmental Analytical Services
EDB	1,2-dibromoethane
e.g.	for example

EPA	U.S. Environmental Protection Agency
ESL	Environmental Screening Level
FD	Field Duplicate
Hg	mercury
HHRA	Human Health Risk Assessment
ICR	incremental cancer risk
i.e.	such as
in.	inch
IR	Installation Restoration
LDC	Laboratory Data Consultants, Inc.
LFR	Levine Fricke (Incorporated)
MDL	method detection limit
MEK	methyl ethyl ketone
mls	milliliters
MSDS	material safety data sheet
NAS	Naval Air Station
Navy	U.S. Department of the Navy
NOAA	National Oceanic and Atmospheric Administration
OU	Operable Unit
OVM	organic vapor meter
OWS	oil water separator
PAL	project action limit
PCE	tetrachloroethene
PID	photoionization detector
PMO	Program Management Office
PPE	personnel protective equipment
ppm	parts per million
PVC	polyvinyl chloride
QA	Quality Assurance
QAPP	Quality Assurance Project Plan
QC	Quality Control
ROICC	Resident Officer in Charge of Construction
RL	reporting limit

RPM	Remedial Project Manager
RSL	Regional Screening Level
SAP	Sampling and Analysis Plan
SES-TECH	Sealaska Environmental Services, LLC and Tetra Tech EC, Inc.
SFRWQCB	California Regional Water Quality Control Board, San Francisco Bay Region
SHSS	Site Health and Safety Specialist
SIM	Selective Ion Monitoring
SulTech	Sullivan Consulting Group and Tetra Tech EM, Inc.
TCE	trichloroethene
TO	Toxic Organics
TtEC	Tetra Tech EC, Inc.
VOC	volatile organic compound
ZVI	zero valent iron

1.0 INTRODUCTION

This Indoor Air, Outdoor Air, and Soil Gas Sampling Report (Sampling Report) presents the results and evaluation of the air and soil gas sampling activities conducted between June 16-19, 2009 at Buildings 163 and 163A, Installation Restoration (IR) Site 4 of Operable Unit (OU)-2B, Alameda Point, Alameda, California. The scope of work was performed in accordance with the Final Work Plan for Indoor Air, Outdoor Air, and Soil Gas Sampling – Buildings 163 and 163A dated June 8, 2009 (Sealaska Environmental Services, LLC and Tetra Tech EC, Inc. [SES-TECH] 2009a).

The U.S. Department of the Navy (Navy) is the lead agency for the sampling activities. This Sampling Report has been prepared by SES-TECH on behalf of the Navy under Contract Task Order (CTO) No. 0044, issued under Federal Remedial Action Contract No. N68711-04-D-1104.

1.1 PROJECT OBJECTIVES

The purpose of collecting indoor air, outdoor air, and sub-slab soil gas samples is to evaluate whether VOC concentrations present in groundwater and soil gas beneath Building 163 have impacted indoor air at levels greater than screening levels. Analytical results were screened against published human health guidelines: the California Human Health Screening Levels (CHHSLs) (California Department of Toxic Substances Control [DTSC], 2005) and the Environmental Screening Levels (ESLs) (California Regional Water Quality Control Board, San Francisco Bay Region [SFRWQCB] 2008). Sub-slab soil gas samples were collected from beneath contiguous Buildings 163 and 163A and compared with previous sub-slab sampling results. Attenuation factor(s) between soil gas and indoor air concentrations were calculated. Outdoor air samples were collected contemporaneously with indoor air samples so that a comparison of ambient background air quality could be made against indoor air quality. An inventory of chemical products stored within the buildings was also conducted prior to sampling to assess the potential for chemical storage and work practices to contribute to volatile organic compound (VOC) concentrations within the buildings.

1.2 SCOPE OF WORK

The project tasks are:

- **Task A:** Develop Work Plan including the Sampling and Analysis Plan (SAP).
- **Task B:** Inventory and identify chemicals listed as ingredients in products stored and/or used within Buildings 163 and 163A.
- **Task C:** Sample outdoor air and indoor air at Buildings 163 and 163A.

- **Task D**: Install sub-slab soil gas probes in both Buildings 163 and 163A.
- **Task E:** Sample sub-slab soil gas probes.
- **Task F:** Prepare a Sampling Report for indoor air, outdoor air, and sub-slab soil gas sampling that includes evaluation of results through comparison of related data for each data set, projects action levels, and calculated attenuation factor(s), providing conclusions and recommendations.

Development of the Final Work Plan (SES-TECH 2009a), including the SAP, was completed on June 8, 2009 (Task A). An initial inventory of chemicals stored within Buildings 163 and 163A was conducted in February 2009 (Task B). Stored chemicals were evaluated on June 16, 2009, the day indoor air sampling was performed. The indoor air and outdoor air sampling (Task C) was conducted concurrently on June 16, 2009 over an approximate 8-hour interval. Indoor and outdoor air sampling was completed before soil gas probe installation and sampling took place. Sub-slab soil gas probes were installed inside Buildings 163 and 163A on June 17, 2009 and were then sampled on June 19, 2009 using steady flow regulators (Tasks D and E, respectively).

This Sampling Report is provided as initial reporting, as a part of Task F. The Sampling Report provides a description of the field activities, observations and measurements; a consistency assessment and evaluation against the SAP; the laboratory analytical results tabulated with supporting illustrations; and a preliminary side-by-side comparison of site-specific data against project action limits (PALs), the calculation of attenuation factor(s) and human health risk evaluation based upon the results and published health risk guidelines.

1.3 REPORT ORGANIZATION

This Sampling Report provides a description of the air and soil gas sampling activities performed by SES-TECH at Buildings 163 and 16A, a presentation of the analytical results, and an initial evaluation of the data for risk assessment purposes. The report is organized in the following format:

- **Section 1.0 – Introduction**. This section describes the project scope of work, objectives, and organization of this document.
- **Section 2.0 – Site Conditions**. This section describes the site location and a summary of previous investigation results.
- **Section 3.0 – Pre-Field Activities**. This section describes the activities conducted in support of the indoor air, outdoor air, and sub-slab gas sampling prior to the start of fieldwork.
- **Section 4.0 – Field Activities**. This section provides details of the field activities performed for chemical inventory and air/soil gas collection and presents the results of sample analysis.

- **Section 5.0 – Analytical Results and Evaluation**. This section presents the indoor air, outdoor air, and sub-slab soil sampling results and describes steps taken in evaluating the results.
- **Section 6.0 – Conclusions.** This section presents the conclusions drawn regarding the indoor air quality within Buildings 163 and 163A.
- **Section 7.0 – References**. This section provides the references used for this Sampling Report.

The above-mentioned sections of this report are supplemented with tables, figures, and appendices that follow the text. This Sampling Report is supported by additional project-specific appendices.

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2.0 SITE CONDITIONS

This section summarizes the site location, previous investigations results, and regional air quality.

2.1 SITE LOCATION

Alameda Point is located on the west end of Alameda Island, which lies on the east side of San Francisco Bay adjacent to the City of Oakland (Figure 1). Alameda Point is relatively flat land created by filling tidelands, marshlands, and sloughs in the early 1900s. The site is rectangular in shape, approximately two miles long east to west, one mile wide north to south, and occupies 1,734 acres. Prior to 1930, at least two large industrial sites, a borax processing plant and an oil refinery, were located on the island near what is now the eastern end of Alameda Point. Buildings 163 and 163A are located at IR Site 4 within OU-2B, west of Building 360 (Figure 2). Building 163 is a large brick building with a 28- to 32-foot-high vaulted ceiling. It features three paneled windows (see photos Appendix B) each approximately eight feet tall by ten feet wide (8' X 10') with one central three-foot square opening panel and one sliding door measuring approximately ten feet tall by six feet wide (10' X 6') on the western side of the building. The back of Building 163 contains several windows each measuring about eight feet tall by ten feet wide (8' X 10') with opening panels similar to those on the west side of the building. The southern end of the building has two doors, one sliding door similar to the west-side door and one double door measuring about six feet wide by seven feet high (6' X 7').

Building 163A is a small, sheet-metal add-on on the north side of Building 163. It has one door estimated to measure 6'8" by 2'6" located on the western side of the building.

The two buildings are separated by a wall and a single door. Buildings 163 and 163A have small-volume, commercial chemicals and petroleum products stored within their spaces.

2.2 PREVIOUS INVESTIGATIONS

Former Naval Air Station (NAS) Alameda is separated into ten (10) operational units (OU-1, OU-2A, OU-2B, OU-2C, OU-3, OU-4A, OU-4B, OU-4C, OU-5, and OU-6). Soil and groundwater investigations have been conducted at OU-2B under the IR Program dating back to 1992.

Within OU-2B there are four (4) Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) IR sites, which are denoted in Figure 2 and are summarized as follows:

IR Site 3 – the abandoned fuel storage area,

IR Site 4 – Building 360: aircraft engine facility,

IR Site 11 – Building 14: engine test cell, and

IR Site 21 – Building 162: ship fitting and engine repair.

Historical activities within Building 360 reportedly includes painting, blasting, degreasing, solvent cleaning, and plating of aircraft parts (Sullivan Consulting Group and Tetra Tech EM, Inc. [SulTech] 2007). IR Site 4 investigations have detected a number of chlorinated compounds in soil including tetrachloroethene (PCE), trichloroethene (TCE), and vinyl chloride. The presence of these compounds in soil is attributed to the use of solvents at Building 360. Benzene, toluene, ethylbenzene, and xylenes (BTEX) were also detected in soil samples across IR Site 4, most of which were near Building 372 (SulTech 2007). Building 372 was used as an engine testing facility.

Groundwater assessments conducted in OU-2B have detected chlorinated solvents and their degradation products (TCE, 1,2-dichloroethene [1,2-DCE], PCE, vinyl chloride, dichlorobenzene, 1,1,1-trichlorethane [1,1,1-TCA], and 1,1-dichloroethane [1,1-DCA]). Between 2002 and 2005, a quarterly base-wide groundwater monitoring program was implemented (Innovative Technical Solutions, Inc. 2006). The chlorinated solvent plumes in groundwater mapped beneath OU-2B are illustrated in Figure 2.

2.2.1 Soil Gas Sampling – Operable Unit 2B

Soil gas samples were initially collected in OU-2B during the Phase 2A environmental baseline survey in 2001 (International Technology Corporation 2001). Soil gas samples were also collected in OU-2B as part of the remedial investigation data gap assessment (Tetra Tech 2001, 2002). At IR Site 4, soil gas samples were collected at depths ranging between 0.5 feet and 5.5 feet below grade, and each of the samples collected was found to have detectable VOC concentrations.

In January 2006, an investigation for VOCs in soil gas beneath the concrete, slab-on-grade floors of tenant-occupied Buildings 14, 113, 162, 163, and 398 was conducted (SulTech 2007). The investigation began with the installation of 43 sub-slab soil gas probes, two of which were installed in Building 163, not in Building 163A as indicated in the report. The probes were installed within 6 to 8 inches of the bottom of the slab. Soil gas samples were collected into 1-liter SUMMA™ canisters and analyzed for VOCs using U.S. Environmental Protection Agency (EPA) Method Toxic Organics (TO)-15. The results of the first sampling event were compared to the CHHSLs (DTSC 2005) and to the ESLs (SFRWQCB 2007) for industrial/commercial use properties. Sub-slab soil gas samples collected from beneath Buildings 14, 113, 162, and 163 had PCE, TCE, and/or benzene concentrations that were greater than the CHHSLs and/or the ESLs. TCE was detected above the CHHSLs in each of the samples collected within Building 163. The results of this investigation pertaining to Building 163 are summarized in Table 1.

The January 2006 sub-slab soil gas results were combined with building-specific assessments of indoor air migration pathways to estimate the indoor air concentrations from chemicals of potential concern (COPCs). The estimates were calculated using the DTSC and LARWQCB 2003 Advanced Vapor Intrusion Model. Vapor intrusion modeling and baseline Human Health Risk Assessments (HHRAs) were conducted because VOCs in soil and groundwater may accumulate in gaseous phase in pore space and then migrate upward into buildings through cracks or other conduits to adversely affect indoor air quality. Inputs to the model included chemical properties of the contaminant, saturated and unsaturated soil properties, structural properties of the building, and appropriate exposure assumptions for those receptors that are being evaluated (EPA 2000, 2002). The model was used to estimate building-specific attenuation factors between soil gas concentrations, and indoor air concentrations were calculated using the following equation:

Indoor air concentration = Attenuation factor (α) x Soil gas concentration

The information input into the DTSC 2003 Advanced Vapor Intrusion Model produced an attenuation factor for Building 163 of 0.0003 (SulTech 2007). Detectable VOCs in soil gas samples were designated as the COPCs. Cancer risk and non-cancer hazard index values were then calculated. TCE was determined to be the primary contributor to cancer risk for receptors at Building 163, with a cancer risk of 7.0E-05. The non-cancer hazard index value for Building 163 was calculated at 0.08.

A second round of sampling was conducted in September 2006 that included the collection of sub-slab soil gas samples from probes within Buildings 14, 113, 162, 163, and 398. The two probes located within Building 163 were subsequently re-sampled in March 2007. Soil gas samples were collected using 1-liter SUMMA™ canisters and then analyzed for VOCs using EPA Method TO-15. Sub-slab soil gas concentrations were compared to the CHHSLs and ESLs for a preliminary evaluation of health risk. The results of this investigation pertaining to Building 163 are summarized in Table 1.

2.2.2 Buildings 163 and 163A

The September 2006 and March 2007 sub-slab soil gas sampling conducted at Building 163 detected TCE, PCE, and cis-1,2-dichloroethene (cis-1,2-DCE) at concentrations that exceed the CHHSL and/or the ESL screening criteria for soil gas below commercial/industrial properties. The September 2006 and March 2007 sub-slab sampling events identified TCE in soil gas at concentrations ranging from 1.20E+05 micrograms per cubic meter ($\mu g/m^3$) to 2.60E+04 $\mu g/m^3$. The attenuation factor between soil gas and indoor air concentrations used for Building 163 indoor air concentration calculations was 0.0003. Modeled cancer risk for commercial/industrial receptors using attenuation factors and the September 2006 and March 2007 sub-slab soil gas concentrations resulted in carcinogenic risk ratios of 8.0E-04 and 2.0E-04, respectively. Non-

cancer hazard index values of 0.8 and 0.2 were calculated to correspond with the September 2006 and March 2007 sub-slab soil gas concentrations, respectively.

Previous investigations have identified and subsequently confirmed that sub-slab TCE concentrations beneath Building 163 are greater than preliminary screening criteria (i.e. CHHSL and ESL), and there is a modeled carcinogenic risk to commercial/industrial receptors above the risk management range of 1.0E-04 to 1.0E-06. Indoor air sampling was implemented to evaluate whether indoor air VOC concentrations within Building 163 and contiguous Building 163A are above the CHHSLs. The CHHSLs for indoor air concentrations are based upon a 1.0E-06 cancer risk and non-cancer hazard index of 1.0.

2.2.3 Other Work Adjacent to Buildings 163 and 163A

In 2008, TCE was reported in groundwater at 220,000 micro grams per liter (µg/L) from a Hydropunch™ sample immediately west of Oil Water Separator-163 from 5 to 10 feet below ground surface (bgs) (TtEC, 2009). Consequently, the Navy removed the oil water separator (OWS) (in February 2009) that was positioned adjacent to Building 163, as shown in Figure 3. A Zero Valent Iron (ZVI) Treatability Study is currently in progress in the OWS area and the results of sampling at this location are provided in the *Work Plan for Removing OWS-163 and Conducting ZVI Treatability Study* (Tetra Tech, 2009).

An additional investigation was performed at IR Site 4 and the results of the investigation work are documented in the Draft Technical Memorandum IR Sites 2, 4, 34, and 35 (SulTech 2009). The findings from this soil gas sampling scope found 1,1-dichloroethene (1,1-DCE) at concentrations above the CHHSLs, and therefore the chemical was added as a COPC.

2.2.4 Non-Navy Investigations

Two indoor air investigations have been conducted in Buildings 163 and 163A on behalf of Alameda Reuse and Redevelopment Authority (ARRA), which is a community group chartered by the City of Alameda. The investigations were conducted by Levine Fricke, Inc. (LFR) and included the collection of indoor air samples from within the buildings in January 2006 and again in February 2007 (LFR 2006 and 2007). The tabulated indoor air results for these investigations are provided in Table 1 and Table 2 of Appendix A.

3.0 PRE-FIELD ACTIVITIES

Several activities were conducted in support of the indoor air, outdoor air, and sub-slab soil gas sampling prior to starting actual fieldwork. This section discusses these activities.

3.1 ANALYTICAL REQUIREMENTS AND SUPPORT

Prior to the implementation of fieldwork, SES-TECH procured Environmental Analytical Services (EAS), a Naval Facilities Engineering Service Center-evaluated environmental laboratory, as a subcontractor. The laboratory was tasked with performing analytical services and supplying certified clean 6-liter SUMMA™ canisters and pre-set regulators for sample collection and 3.5-liter SUMMA™ canisters for purging of the collections system at the outset of the fieldwork.

Indoor air samples were analyzed for fifteen (15) COPCs identified in the SAP and listed below. The samples were tested using EPA Method TO-15 with Selective Ion Monitoring (SIM) mode to obtain the lowest achievable detection and reporting limits. This method uses a gas chromatograph coupled to a linear quadruple mass spectrometer operating in SIM mode. The 15 COPCs are:

1,1-DCA	1,4-dioxane	PCE
1,1-DCE	benzene	TCE
1,2-dichloroethane (1,2-DCA)	bromodichloromethane	vinyl chloride
1,1,2-trichloroethane (1,1,2-TCA)	carbon tetrachloride	
1,1,2,2-tetrachloroethane	cis-1,2-DCE	
1,2,4-trichlorobenzene (1,2,4-TCB)	naphthalene	

Outdoor air samples and sub-slab soil gas samples were analyzed for the full suite of VOC constituents, 1,4-dioxane, and naphthalene using EPA Method TO-15.

Data validation was performed on all indoor and outdoor air and soil gas analysis results by Laboratory Data Consultants, Inc. (LDC), a third-party data validation company.

3.2 SITE ACCESS, CONDITIONS, AND FIELD READINESS

Other activities conducted to achieve readiness for the commencement of fieldwork included the following:

- A meeting was conducted between the tenant Point Of Contacts and Navy representatives Patrick Brooks (Base Realignment and Closure [BRAC] Environmental Coordinator [BEC]), Curtis Moss (Project Manager), and Doug

Delong (Caretaker Site Office [CSO]) was conducted prior to air and soil gas sampling on April 2, 2009 to address concerns and the sampling schedule.

- Sample documentation and tracking program set-up, including laboratory container and regulator labels verifications.
- Review of details regarding site access and building conditions prior to air and soil gas sampling. Noted in particular were the locations of vents, skylights, doors, and cracks in the slab floors.
- USA DigAlert and base engineering personnel were notified in anticipation of concrete coring and sub-slab probe installation.
- A pre-fieldwork mutual understanding meeting was conducted including performance of a SES-TECH operational readiness review.
- A geophysical survey was conducted for the purpose of utility clearance prior to installation of soil gas probes at all proposed locations. Existing base utility drawings were also reviewed, and a site walk with the CSO and Resident Officer in Charge of Construction (ROICC) was held to review the proposed sampling locations.
- Field personnel reviewed the Accident Prevention Plan (APP)/Site Safety Health Plan to understand the safe work practices that would be required and assure the appropriate monitoring and safety equipment would be available during fieldwork.
- Finally, mobilization of personnel and sampling equipment, and start-up of sample coordination with the offsite analytical laboratory.

4.0 FIELD ACTIVITIES

This section describes the fieldwork elements conducted at the site during the chemical inventory and indoor/outdoor air and soil gas sampling activities and presents the results of these activities. Implementing the indoor air assessment at Buildings 163 and 163A included conducting the chemical inventory in advance of finalizing the scope of fieldwork for indoor air, outdoor air, and soil gas collection and offsite laboratory analysis. The locations at which indoor air and outdoor air samples were collected are illustrated on Figure 3. Figure 4 shows the locations of the sub-slab soil gas probes.

4.1 CHEMICAL INVENTORY

Buildings 163 and 163A are leased to commercial tenants that use the building space for office-related activities, storage, and the production of goods. Preliminary site inspections were conducted between September 2008 and January 2009, at the outset of the project and early Work Plan (SES-TECH 2009a) development. A variety of small volume containers of solvents, fuels, oils, lubricants, inks, dyes, paints, primers, acids, bases, degreasers, polishing compounds, cleaning products, antifreeze, and other chemicals were initially noted and photographed as stored in Buildings 163 and 163A. On February 19, 2009, SES-TECH conducted a survey of the various aerosol containers, liquid containers, and dry chemicals and reviewed Material Safety Data Sheets (MSDSs) to identify chemicals not listed as ingredients. The itemized list of chemicals, materials, and containers documented in Buildings 163 and 163A is presented in Appendix B. SES-TECH also conducted informal interviews with the tenants and workers present in the buildings at that time. Information regarding current and former chemical usage, storage and waste disposal practices was sought. SES-TECH also identified the general chemical nature of stored materials that do not have ingredients plainly listed on the label (e.g. gasoline). The objective of the chemical inventory was to identify the compounds used in Buildings 163 and 163A that may contribute VOCs in ambient indoor air.

4.1.1 Container Logging and Photographs

During the chemical inventory, some chemical products were found stored in every tenant office or shop area, with the greatest variety of products located in Building 163. SES-TECH recorded the product name, number and size of containers found, and volatile ingredients to the extent discernable. The chemical products were also documented in photographs. The chemical inventory summary table presented in Appendix B provides a listing of the products, the associated photograph number, and indicates whether a related MSDS was available for the product. The following VOCs were listed among other ingredients on the product labels:

2-butanone (methyl ethyl ketone [MEK])	dichloromethane	naphthalene
2-butoxyethanol	ester alcohol	toluene
2-(2-butoxyoxy)-ethanol	ethelyne glycol	xylenes
2-(2-methoxyethoxy)-ethanol	heptane	
acetone	methanol	

4.1.2 MSDS Review

Some of the available MSDSs for products stored at the site were collected in a site visit in October 2008. New MSDSs were sought during the chemical inventory for any new chemical products currently stored on site. The MSDSs were not available for all the products found in the buildings, but some MSDSs appeared applicable to more than one product encountered. MSDSs were reviewed for the following chemical products considered to be potential sources of VOCs:

3M brand adhesive	ethylene glycol	No. 2 diesel fuel
aerosols	Gumout brand carburetor and choke cleaner	paint thinner
Alpha Mark printing ink	lacquer thinner	penetrating oil
biodiesel fuel (B100)	Marvel Mystery Oil	polyurethane paint
brake fluid/hydraulic fluid	metal polish	surfactant degreasers
epoxy glue	mineral oil	unleaded gasoline

The MSDSs reviewed listed the following VOCs in one or more of the chemical products found on site:

1,1,1-trichloroethene	ethylbenzene	m,p-xylenes
1,1,1,2-tetrafluoroethane	ethanol	Naphthalene
1,2-dichlorobenzene	isopropyl alcohol	o-xylenes
1,2,4-trimethylbenzene	2-butanone MEK	Toluene
benzene	methylbenzene	trimethylbenzene

4.1.3 Walk Through Organic Vapor Monitoring

A photoionization detector (PID) organic vapor meter (OVM) calibrated 100 parts per million (ppm) isobutylene was used in two ways to survey the areas of chemical storage. The PID was left running during inventory of the stored products and taking of photographs and checked periodically. If no information was available for a product container and the nature of the product was uncertain, then SES-TECH used the PID to screen the container for undifferentiated VOCs.

The results of both survey methods were that VOCs were not detected above the ambient “zero” level set on the PID during calibration offsite.

4.1.4 Personnel Interviews

Personnel interviews were sought with representatives of the tenants of Buildings 163 and 163a during the chemical inventory. The tenant organizations include:

Building 163

Weston Solutions
- Remediation consultant
- Maintains an office adjacent to the Building 163 restroom and a research vessel pontoon boat for sampling of the San Francisco Bay, outside the western side of Building 163.

Charlie Noble, LLC.
- Silk screener, T-shirts

Phasor Corporation.
- Biodiesel fuel vehicle conversions

Planet Island Sails
- Sail design company, with off-site production only
- Mezzanine/loft tenant

Building 163A

Sustainable Technologies
- Environmental consultants on solar energy, environmental remediation, water treatment, general engineering, and electrical contracting.

Of the buildings tenants, only representatives from Sustainable Technologies and Steve Kichi, an associate of Charlie Noble, were available for interviews.

Building 163

Mr. Kichi stated that the tenants no longer actually perform work within Building 163, but maintain their supplies in the separate office or shop areas. Specifically, Charlie Noble no longer prints or designs silk screens in Building 163. The fact that the large, circular ink-screening press photographed in Building 163 in 2008 had been removed sometime prior to the June 2009 sampling work supports this assertion. Mr. Kichi also stated that the various automotive supplies (motor oil, coolant, metal polishes, tire foam, gear lubricants, diesel, biodiesel, gasoline, and batteries) are no longer used within Building 163.

No other tenants were occupying Building 163 at the time of the chemical survey. Chemical products stored in the building were known to include oils (new and used), coolant (new and used), biodiesel, cleaning products, degreasers, spray paints, and other undifferentiated products.

These products were photographed in the southwest corner of Building 163 but were stored in cabinets and on shelves by the time the indoor air sampling was performed.

Building 163A

Victoria Fernandez and Ernesto Montenero of Sustainable Technologies are the primary lessees for both building 163A and 163. They manage Sustainable Technologies in the Building 163A office. Sustainable Technologies assembles and readies environmental fieldwork equipment in a bay of Building 163. Chemical products used in these preparations are largely stored in Building 163. Ms. Fernandez is also the acting building manager for both buildings. Building 163A has a storage area where petroleum fuels, polyvinyl chloride (PVC) pipe glue, other adhesives, and miscellaneous chemical products have been observed.

4.2 INDOOR AND OUTDOOR AIR SAMPLING ACTIVITIES

An initial fieldwork orientation and health and safety briefing was conducted on June 16, 2009. The Work Plan (SES-TECH 2009a) and details of the Activity Hazard Analyses (AHAs) in the APP (SES-TECH 2009b) were reviewed by the field team at this time to assure the air and soil gas sampling methods and procedures were understood and safe work practices in the APP were used to govern the implementation of the SAP. A list of emergency contacts and maps with routes to the local medical clinic and hospital were also provided and reviewed at this time. Sampling was conducted under the responsible charge of a California-registered Professional Geologist and in Level D personnel protective equipment (PPE), including nitrile gloves and safety glasses. Daily health and safety meetings were performed. Air monitoring was conducted using a PID-OVM and explosivity meter.

Indoor and outdoor air sampling activities were conducted prior to sub-slab soil gas sampling. Indoor air samples were collected within Buildings 163 and 163A at the locations illustrated in Figure 3. Indoor air and outdoor samples were collected contemporaneously over an 8-hour period. Two (2) outdoor air samples were also collected immediately adjacent to Building 163 on the upwind and downwind sides of the building and adjacent to doorways. Outdoor wind direction and speed was estimated during the sampling event. The wind remained generally from the west (270°) at about four to eight miles per hour throughout outdoor air sampling. The following sections provide a detailed discussion of the indoor and outdoor air sampling at Buildings 163 and 163A.

4.2.1 Sampling Locations and Setup

Air samples were collected at seven (7) indoor air locations within Building 163 and two (2) indoor air sample locations within Building 163A. The indoor and outdoor air sampling locations are listed in Table 2 and shown as approximated on Figure 3.

The regulated SUMMA™ canister inlets were positioned to assess the breathing zone between 3 and 5 feet above grade. The locations of indoor air sample IND-001 was positioned

approximately 10 feet north of the map location proposed in Work Plan to accommodate sampling air above a large steel access cover in the foundation of Building 163A. Indoor air sample IND-004 was positioned approximately 20 feet to the west of the proposed sample location to collect an air sample adjacent to an un-patched concrete core hole identified the morning of the sampling event. Sample location IND-008 was positioned above some cracks in the slab, and sample location IND-009 was placed within the men's restroom where a floor drain was present (Figure 3).Outdoor air samples were collected at two (2) locations and at approximately 5 feet above ground surface. Delineators were positioned around the outdoor sample canisters to protect the canisters from disturbances and operating vehicles throughout the 8-hour air sampling period. The air sampling locations were monitored continuously from start time to end time.

The following items were checked in the set up for sampling:

- Regulator serial number was assigned to each Summa™ canister and recorded in association with the Summa™ canister number.
- Each Summa™ canister valve was verified to be in the closed position before the compression-seal nut was unthreaded from the port of each canister.
- The regulator assemblies were tightened securely to each Summa™ valve fitting.

4.2.2 Indoor/Outdoor Air Sample Collection

Sample collection proceeded as proposed in the Work Plan (SES-TECH 2009a). The stainless steel, SUMMA™ canisters were supplied under negative pressure and individually certified clean by EAS. Each canister was paired with a flow regulator set provided by EAS to fill over an 8-hour period (flow was based upon the volume of the canister, length of sampling time, and the desired final pressure in the vessel, -5 inches of mercury (in. Hg). Prior to opening the regulator valve for sample collection, each canister's negative pressure was checked and recorded in the field logbook. The regulated inlet of each indoor air SUMMA™ canister was elevated 3 to 5 feet above the foundation, while the regulated inlets of both outdoor air SUMMA™ canisters were raised approximately 5 feet above the pavement. Each SUMMA™, canister sample was considered complete when the vacuum approached -5 in. Hg. Sampling concluded with the closing of the canister valves and recording of the final vacuum and sample completion time. The SUMMA™ regulators were then removed, and the canisters were capped for transportation. The sample identification, start and stop times, pressures, and sampling times are summarized in Table 3.

Indoor temperature and barometric pressure were monitored throughout the sample period using a Davis Weather Station. Outdoor temperature, barometric pressure, wind speed and direction, and humidity information were also monitored and recorded from the weather station. Atmospheric conditions throughout the sampling period are recorded in the field logbook and

summarized in Table 4. National Oceanic and Atmospheric Administration (NOAA) meteorological data from the Alameda, California monitoring station are presented in Table 4.

Deviations to the indoor/outdoor air sampling program resulted from problems with the pre-set regulators provided by EAS and field conditions. Deviations to the sampling plan included:

- The pre-set regulator flow rate into SUMMA™ canister labeled location IND-001 was observed to be too rapid. After a period of approximately 2 hours the canister was closed at a vacuum of approximately -5 in. Hg (13 in. Hg less vacuum than at start) and labeled sample IND-001a. A second SUMMA™ canister was set up at IND-001 and used to collect another indoor air sample, designated IND-001b. This second canister sample took approximately 4.26 hours (from 1109 hours until 1535 hours) to achieve the same final vacuum as IND-001a. The same regulator (2618) was used for each sample because another properly calibrated regulator was not available for use.

- The flow rate for indoor air samples IND-005 and IND-006 were slightly fast and resulted in sampling periods of approximately 7 hours and 6 hours, respectively.

- Field conditions did not allow for adherence to the sampling system purge protocol in the SAP. The SAP states that three times the dead volume of the system would be purged prior to sampling. However, due to the size of the probe boring necessary to accommodate the protective vault (6-inch diameter vault and skirt) the resulting dead volume of air in the borehole (assuming 30% porosity) would have been approximately 1.25 liters. If this volume was purged, it would have purged 3.75 liters of soil gas before collecting the sample. This volume was considered contradictory to the Soil Gas Advisory, which states that for shallow probes (less than 5 feet deep) care should be taken to avoid sample breakthrough from the surface. While breakthrough from the surface was unlikely given the presence of the concrete slab, the large purge volume (3.75 liters) and the sample volume (approximately 5 liters) could have resulted in a lateral sample area exceeding the footprint of the building, especially at probe locations SG-001 and SG-003. A Field Change was discussed with BCT and implemented by Navy to purge 1.5 times the dead volume instead of 3 times dead volume prior to sampling.

4.2.3 Indoor and Outdoor Air Sampling QA/QC

The Quality Assurance/Quality Control (QA/QC) program for indoor/outdoor air samples collected on June 16, 2009 included the collection of one (1) duplicate at location IND-006 and a trip blank that was provided by the analytical laboratory and included with the sample group.

A total of ten (10) indoor air samples, one (1) duplicate indoor air sample, two (2) outdoor air samples, and one (1) trip blank were shipped to EAS for analysis. The air samples were sealed with custody seals, labeled, and packaged for shipment with chain-of-custody (COC) forms completed and inserted into one of the shipping boxes. Chain-of-custody (COCs) forms were

completed and inserted into one of the boxes for shipment. The QA/QC program included a comparison of the final vacuum recorded at the time of sampling with the vacuum at the time of analysis at EAS. No major QA issues were noted by the analytical or validation laboratories and all results are deemed reportable. A detailed discussion of the sample data validation and usability is provided in Appendix E.

4.3 SUB-SLAB SOIL GAS SAMPLING

SES-TECH installed one (1) sub-slab probe (SG-001) within Building 163A and two (2) sub-slab probes (SG-002 and SG-003) within Building 163 (Figure 4). The probes were installed on June 17, 2009. On June 19, 2009, SES-TECH collected soil gas samples in 6-liter SUMMA™ canisters at each of the three (3) probe locations. A field duplicate sample was also collected at probe SG-003. Field methods and observations associated with this work element are described in greater detail in the following sections.

4.3.1 Sub-Slab Soil Gas Probe Installation and Testing

Sub-slab soil gas probes proposed within Buildings 163 and 163A were installed by SES-TECH personnel with the assistance of subcontracted concrete coring services. Each of the three (3) locations was first cored to expose the base material. Concrete thickness was observed to be 6.5 inches, 3.5 inches, and 4 inches at locations SG-001, SG-002, and SG-003, respectively. A post-hole digger and hand trowel were used to advance each borehole to approximately 8 inches beneath the slab. Breathing space air quality monitoring was performed for using a PID, and no VOCs were detected during probe installation.

A stainless steel, porous air filter tip or soil vapor probe was connected to a length of ¼-inch semi-rigid TEFLON® tubing and set at a depth of approximately 6 inches below the bottom of the slab. The annulus was backfilled with clean #3 Lapis Lustre sand from the total depth of 8 inches below grade to approximately 2 inches above the porous tip. A protective vault with flush-mount lid was installed in cement mortar to seal the borehole and complete the semi-permanent, sub-slab soil gas probe construction. An 18-inch lead of tubing was secured with a luer valve to seal the soil gas probe and provide for connection to the SUMMA™ canisters for sampling.

Sub-Slab Sampling

Each sub-slab soil gas probe was installed and allowed to equilibrate for a minimum of 48 hours before sampling. Sub-slab soil gas samples were collected on June 19, 2009 from each of the three (3) sub-slab soil gas probes. The following procedures were used to collect soil gas samples:

1. Nitrile gloves were donned while working with the SUMMA™ canisters and were changed often during the sampling period.

2. Soil Vapor/Air Sampling Forms, presented in Appendix C, record borehole and tubing purge volumes, SUMMA™ canister vacuum pressures, start times and end times.

3. Purging of the borehole and tubing was accomplished using the 3.5-liter SUMMA™ canister attached to each regulator in a "y" configuration. Each soil gas probe location was purged of approximately 1.5 times the dead volume in the borehole and tubing by opening the regulator valve and connections to draw soil gas into the purging canister. At the conclusion of the purge, the purge canister was closed, and the regulator valve to the purge canister was closed for purging into the primary sample canister.

4. Sub-slab soil gas samples were collected in 6-liter SUMMA™ canisters equipped with a flow regulator set by the laboratory at approximately150 milliliters (mls) per minute.

5. Leak testing was conducted by introducing 93 percent (%) isopropyl alcohol, a leak detection compound, to the immediate area of sub-slab sample collection. Leak testing also included comparing the final vacuum recorded at the time of sampling with the vacuum at the time of analysis.

6. Continued soil gas collection until the vacuum reached approximately -5 in. Hg. Sample collection was concluded by closing the valve on the SUMMA™ canister and then closing the tubing valves. Final sampling times and final vacuum readings were recorded on the SUMMA™ canister tag and in the field logbook. The SUMMA™ canisters containing soil gas samples were appropriately sealed and labeled to include the regulator identification, sampling start and stop times, vacuum readings, date, and location. Canisters were stored within boxes after sampling, out of direct sunlight, heat, or cold. The samples were received promptly after shipping by EAS and analyzed within the required holding time.

4.3.2 Soil Gas Sampling QA/QC

The QA/QC program for sub-slab soil gas samples included leak checks and the collection of one (1) sub-slab soil gas sample duplicate at soil gas sample location SG-003 and a trip blank with the sample group throughout transport to the analytical laboratory. No major QA issues were noted by the analytical or validation laboratories and all results are deemed reportable. A detailed discussion of the sample data validation and usability is provided in Appendix E.

4.3.3 Soil Gas Sample Packaging and Shipment

All soil gas samples were packaged and shipped with trip blanks as described previously for the shipment of indoor and outdoor air samples.

4.4 WASTE MANAGEMENT

Waste generated during this investigation was limited to three (8-inch diameter) concrete cores, less than one 5-gallon bucket of gravelly, base material and native soil and approximately 8 gallons of decontamination liquid for the hand tools. PPE (disposable nitrile gloves) waste was also generated. The concrete, solid, and liquid wastes generated were placed into 55–gallon, U.S. Department of Transportation (DOT)-approved drums, which were left on-site. The drums were used to store similar waste materials associated with Tetra Tech EC Inc.'s work in the same OU-2B area that was conducted in July 2009.

4.5 ADDITIONAL FIELD DOCUMENTATION

During all phases of site work, the Project Geologist recorded daily field activities in the field logbook. The log consists of a chronological description of activities and events observed or conducted each day.

4.6 DEMOBILIZATION

Demobilization activities consisted of removal of all equipment and material used during sampling and cleaning the sampled areas at the project site. The Site Health and Safety Specialist (SHSS) ensured the site restoration was performed and all equipment and materials were removed from the site.

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5.0 ANALYTICAL RESULTS AND EVALUATION

The SUMMA™ canisters containing representative samples of indoor air, outdoor air, and sub-slab soil gas collected at Buildings 163 and 163A as part of this investigation were returned to EAS in San Luis Obispo, California for analysis. Indoor air samples were analyzed for the 15 COPCs listed below using EPA Method TO-15 with SIM mode to obtain the lowest achievable detection and reporting limits. This method uses a gas chromatograph coupled to a linear quadruple mass spectrometer operating in SIM mode. The COPCs are:

1,1-DCA	1,4-dioxane	PCE
1,1-DCE	benzene	TCE
1,2-dichloroethane (1,2-DCA)	bromodichloromethane	vinyl chloride
1,1,2-trichloroethane (1,1,2-TCA)	carbon tetrachloride	
1,1,2,2-tetrachloroethane	cis-1,2-DCE	
1,2,4-trichlorobenzene (1,2,4-TCB)	naphthalene	

Outdoor air samples and sub-slab soil gas samples were analyzed for the full suite of VOCs, 1,4-dioxane, and naphthalene using EPA Method TO-15.

The laboratory analytical reports are presented electronically in Appendix D (compact disc attached to inner sleeve of this report). Copies of the COC forms are also presented in Appendix D for quick reference.

Third party data validation was performed in accordance with the U.S. Department of Defense (DOD) Quality Systems Manual for Environmental Laboratories, Version 4.1 (April 22, 2009) by LDC. A copy of the data validation report is included as Appendix E. None of the sample analytical results were rejected as a result of conditions during sample analysis or subsequent data quality review. The data was reviewed for the following:

- Rejected results (R-qualified) as determined by laboratory data validation; this data would not be considered for further evaluation.
- Estimated values (J-qualified), which are values that were detected above the method detection limit (MDL) but are below the reporting limit (RL). The values are considered estimates because they were detected below the RL.
- To identify the actual MDLs and RLs achieved during sample analysis. The MDLs were also compared to the PALs.
- COPC concentrations reported at estimated values (J-qualified) to identify sample concentrations that exceeded PALs.

Elevated levels of TCE encountered in some soil gas samples required laboratory dilution of samples to quantify the concentrations present. As a result, the MDLs for all analytes increased. Consequently, MDLs exceeded PALs for seven analytes including six COPCs; 1,2,2-tetrachloroethane, 1,2-DCA, benzene, carbon tetrachloride, naphthalene, and vinyl chloride, and the results were flagged.

Concentrations of COPCs and other VOCs in the analytical suite for outdoor air and soil gas that were estimated above the MDL and those that exceeded the PALs were also flagged for reference in evaluations.

5.1 INDOOR AIR AND OUTDOOR AIR SAMPLE RESULTS

The analytical results for indoor and outdoor air samples are presented in Table 5 and Table 6, respectively. The COPCs are in bold text and highlighted. The PALs were established in the SAP as the lower value between the California EPA (Cal-EPA), DTSC 2005 CHHSLs and SFRWQCB 2008 ESLs. The following sections describe the analytical results for indoor air, outdoor air, and sub-slab soil gas samples.

5.1.1 Indoor Air

Eleven (11) individual SUMMA™ canisters containing indoor air samples (including a field duplicate) were collected and analyzed for the suite of 15 COPCs identified for the sampling event and xylenes. The indoor air analytical results are summarized in Table 5. The analytical results with their corresponding sample locations are also presented in Figure 3 to illustrate the spatial distribution of COPC detections within Buildings 163 and 163A.

Eight of the COPCs, TCE, benzene, carbon tetrachloride, naphthalene, 1,1,2-TCA, 1,1,2,2-PCA, 1,2,4-TCB, and 1,2-DCA, were detected in indoor air samples at concentrations above PALs. Indoor air sample results are summarized as follows:

- Benzene and carbon tetrachloride were detected above the PALs (0.141 $\mu g/m^3$ and 0.0973 $\mu g/m^3$, respectively) in each of the eleven (11) indoor air samples;
- Naphthalene was detected at concentrations above the PAL (0.12 $\mu g/m^3$) in nine (9) of the eleven (11) indoor air samples;
- TCE was detected at concentrations exceeding the PAL (2.0 $\mu g/m^3$) in five (5) of the eleven (11) samples and overall at concentrations ranging from 0.150 $\mu g/m^3$ to 4.579 $\mu g/m^3$;
- TCE degradation products, 1,2-DCA and 1,1,2-TCA, were detected above PALs in one sample, from IND-007;

- Vinyl chloride, PCE, xylenes, cis-1,2-DCE, bromodichloromethane, 1,4-dioxane, 1,1-DCA, and 1,1-DCE were not detected above PALs; and

- 1,4-dioxane was detected at concentrations ranging between 1.563 $\mu g/m^3$ and 4.307 $\mu g/m^3$ in four (4) indoor air samples.

5.1.2 Outdoor Air

The two (2) outdoor air samples, OTD-001 and OTD-002, and the trip blank were analyzed for the full suite of VOCs using EPA Method TO-15. Outdoor air samples were collected to understand the ambient air quality around the investigation area. The analytical results for the outdoor air samples are presented on Table 6.

A total of twenty-four (24) VOCs were reported in outdoor air and generally at concentrations well below the PALs. Of these, thirteen (13) VOCs were reported consistently.

Six (6) of the fifteen (15) COPCs were reported in outdoor air samples. The COPCs TCE, 1,1,2,2-PCA, 1,1,2-TCA, 1,1-DCA, 1,1-DCE, 1,2-DCA, bromodichloromethane, cis-1,2-DCE, and vinyl chloride were not reported in outdoor air samples. Three of the COPCs that were reported had concentrations exceeding the PALs: benzene, carbon tetrachloride, and naphthalene (sample OTD-001 only). No CHHSL or ESL has been established for 1,4-dioxane; however, the concentration reported for the outdoor air sample OTD-001, 1.034 $\mu g/m^3$, is less than the U.S. EPA 2009 Regional Screening Level (RSL) for Chemical Concentrations at Superfund Sites (Indoor Worker Risk-Based Screening Levels for Ambient Air), which is 1.59 $\mu g/m^3$.

VOCs consistently reported in outdoor air at relatively high levels have the potential to be a source of reported indoor air concentrations. Benzene, carbon tetrachloride, and naphthalene reported in outdoor air samples appear to fit this circumstance.

5.2 SUB-SLAB SOIL GAS RESULTS

Sub-slab soil gas samples collected on June 19, 2009 were analyzed for the full suite of VOCs using EPA Method TO-15. The analytical results are summarized in Table 7, and the results with their corresponding soil gas probe locations are also presented in Figure 4.

Previous investigations had determined that TCE was present in soil gas at elevated concentrations beneath the footprint of Buildings 163 and 163A. Sub-slab soil gas samples SG-003 and SG-003FD (field duplicate) contained TCE at concentrations of 4,132,497 $\mu g/m^3$ and 4,190,042 $\mu g/m^3$, respectively. As shown in Figure 4, TCE concentrations decrease toward the north with sub-slab concentrations of 7,166 $\mu g/m^3$ and 78.86 $\mu g/m^3$ detected in soil gas probes SG-002 and SG-001, respectively.

Carbon tetrachloride and naphthalene were not detected above their respective MDLs in any of soil gas samples collected beneath the building. The COPC cis-1,2-DCE was reported at concentrations ranging from 959 $\mu g/m^3$ to 32,426 $\mu g/m^3$. Benzene was detected at concentrations of 5.03J $\mu g/m^3$ in sample SG-001 and estimated at 357J $\mu g/m^3$ in sample SG-003-FD. PCE was detected in sample SG-001 at a concentration of 196.91 $\mu g/m^3$.

5.3 CALCULATION OF ATTENUATION FACTORS

An objective of this study was to calculate the attenuation factor(s) for COPCs. In order to calculate attenuation factors COPCs were selected that were reported in sub-slab soil gas and indoor air at concentrations above the MDL. Table 8 provides the air and soil gas data used and the resulting attenuation factors calculated for TCE, PCE, and benzene. These COPCs were selected based on the following observations:

TCE - reported in groundwater beneath the site and at high concentrations in sub-slab soil gas exceeding the PALs.

PCE - reported in indoor air and soil gas at concentrations below the PALs.

Benzene - a non-chlorinated VOC consistently reported in indoor air and outdoor air, and either ND or J-flagged (estimated) greater than PALs in soil gas and at concentrations exceeding the PALs.

The attenuation factors were calculated using average concentrations generated from all of the data for a given COPC and also using the concentrations from soil gas and indoor air sample pairs (e.g. SG-001/IND-002, *an indoor air result with adjacent soil gas result*) from locations in close proximity. The formula used for calculating the attenuation factor is:

Attenuation Factor = Adjusted Indoor Air concentration / Soil Gas concentration

where the adjusted indoor air concentration is the result of removing the potential contribution from outdoor air using the following equation:

Adjusted Indoor Air concentration = Indoor Air concentration – Outdoor Air concentration

TCE was not detected in any of the outdoor air samples, and therefore the indoor air concentrations were not adjusted prior to calculating attenuation factors. Indoor air and sub-slab soil concentrations were paired for sample locations within 11 feet of each other and included the highest indoor air concentration reported (IND-008). The resulting paired attenuation factors for TCE range between 0.0068 and 0.0000011, with the highest attenuation factor corresponding to the pairing of the highest indoor air and highest soil gas concentrations (locations SG-001 and IND-008).

The average attenuation factor for TCE was calculated using the average TCE concentration for indoor air divided by the average soil gas concentration. The non-detect value at sample IND-

001A was conservatively estimated at half the MDL. The site average attenuation factor for TCE is 0.00000081.

PCE was reported in indoor air samples with a J-flag (estimated between the MDL and the Reporting Limit) or at non-detectable levels. PCE was also detected in outdoor air samples and therefore the indoor air concentrations were adjusted prior to calculating the attenuation factors. PCE concentrations for the same indoor air and sub-slab soil gas sample pairs were used to calculate the paired data attenuation factors and included the highest indoor air concentration reported (IND-002). Two non-detect values for sub-slab soil gas were conservatively estimated at half the MDL. The resulting paired data attenuation factors for PCE range between 0.0017 and 0.00029.

Only one soil gas concentration was detected above the MDL for PCE. To minimize uncertainty that would be introduced by averaging this reported soil gas concentration with more than one concentration estimated from the MDLs, the maximum concentrations were used in calculating the site attenuation factor. The calculation used the maximum adjusted indoor air concentration for PCE, 0.328 $\mu g/m^3$, divided by the maximum reported sub-slab soil gas concentration, 196.91 $\mu g/m^3$. The resulting site attenuation factor for PCE is 0.0017.

For benzene, indoor air concentrations were adjusted to factor out the outdoor air potential contribution to indoor air quality prior to calculating the attenuation factors. The indoor air benzene concentrations in the paired data included the highest indoor air concentration reported (IND-004). One non-detect value for benzene in sub-slab soil gas (SG-002) was conservatively estimated at half the MDL (11.5 $\mu g/m^3$). The resulting paired attenuation factors for benzene range between 0.277 and 0.0027.

An average attenuation factor for benzene was calculated using the average indoor air concentration adjusted for the average outdoor air concentration, to get a net indoor air concentration of 1.117 $\mu g/m^3$. Using the average sub-slab soil gas concentration of 124.51 $\mu g/m^3$ for benzene, the resulting average attenuation factor is 0.009. Calculated benzene attenuation factors range from 0.256 to 0.00317 based on the extremes observed in adjusted indoor air benzene concentrations divided by the average sub-slab soil gas benzene concentration. Attenuation factors on the order of 0.2 may be indicative of influence from another source of the chemical besides sub-slab soil gas. This is supported by the observed gasoline and other chemicals stored within the building.

5.4 EVALUATION OF INHALATION RISK

The incremental cancer risk (ICR) for each COPC and the cumulative cancer risk were calculated. The analytical results for indoor air samples were compared to CHHSLs and ESLs. Both of these screening criteria use 1.0E-06 cancer risk as the lower threshold limit, which is the accepted risk management lower threshold established by the EPA. Both screening levels were

developed based on the exposure assumption that a human receptor occupies a building eight hours per day for 250 days per years over an exposure period of 25 years.

A CHHSL or ESL has not been established for 1,4-dioxane. In this case, the EPA 2009 Indoor Air RSL for industrial site workers was used as the comparison criteria to establish the 1.06E-06 cancer risk and then the ICR for each COPC was calculated.

5.4.1 Calculation of Associated Risk for Indoor Air

The initial step of determining the ICRs associated with indoor air is presented in Table 9. Because the ESLs and CHHSLs screening criteria are established for a cancer risk of 1.0E-06, indoor air ICRs were conservatively calculated using the maximum indoor air concentration for each COPC in the equation:

$$ICR_{max} = \text{Maximum Indoor Air concentration} \times 1.0E\text{-}06 / \text{ESL or CHHSL}$$

For 1,4-dioxane, the EPA RSL was used instead of an established ESL or CHHSL. Maximum indoor air ICRs were not calculated for six COPCs for which CHHSLs have not been established. Evaluation of the incremental risk for these compounds was based on comparison to ESLs alone.

Four of the COPCs did not have detectable concentrations in indoor air samples. In these cases, the maximum indoor air result was set at zero in lieu of calculating an ICR based upon the non-detect MDL or some fraction thereof. Using this approach vinyl chloride, bromodichloromethane, 1,1-DCA, and 1,1-DCE do not pose an ICR to workers (Table 8).

As shown in Table 9, benzene, carbon tetrachloride, and naphthalene have indoor air ICR_{max} values in the 1.0E-05 range, and TCE degradation chemicals have ICR_{max} values in the 1.0E-06 range. The cumulative ICR_{max} for indoor air at Buildings 163 and 163A using the ESLs as a basis is 1.45E-04, and the cumulative ICR_{max} is 7.09E-05 using the CHHSLs as a basis. Carbon tetrachloride is the greatest contributor to the cumulative ICR_{max} for indoor air.

5.4.2 Evaluation of Adjusted Incremental Risk for Indoor Air

In order to understand the ICR contributed by ambient outdoor air, the average outdoor air concentration was calculated for each of the COPCs and is listed in Table 10. For COPCs not reported in outdoor air, the contribution to ICR was assigned a value of zero. Seven COPCs, naphthalene, TCE, 1,1,2,2-PCA, 1,1-DCA, 1,1-DCE, cis-1,2-DCE, and vinyl chloride, were not reported in outdoor air. The average outdoor air ICR_{ave} was then calculated for each COPC in proportion to the ESLs and CHHSLs. The cumulative cancer risk for outdoor air calculated using the ESLs is 1.85E-05, and it is 6.97E-06 using the CHHSLs.

The adjusted indoor air ICRs were then calculated by subtracting the outdoor air ICR_{ave} from the maximum indoor air ICR_{max} as shown in Table 10. The adjusted indoor air ICRs using the ESLs and the CHHSLs as the risk criteria are listed for each of the COPCs.

The adjusted cumulative cancer risk for indoor air is 1.27E-04 using the ESLs, and it is 6.46E-05 using the CHHSLs. Carbon tetrachloride has the lowest ESL and CHHSL of any COPC for this investigation. It is also the greatest contributor to inhalation risk for indoor air. Carbon tetrachloride was not detected in sub-slab soil gas. Therefore, if carbon tetrachloride is removed from consideration as a soil vapor intrusion component of indoor air, the resulting cumulative cancer risk for indoor air would be, 5.93E-05 and 4.30E-05, respectively. These results are well within the risk management range.

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6.0 CONCLUSIONS

The indoor air samples collected within Buildings 163 and 163A were analyzed for fifteen (15) VOCs that were identified as COPCs based on the results of historic subsurface investigations. Of those fifteen (15) COPCs, seven (7) constituents were reported in indoor air samples at concentrations exceeding the industrial CHHSL or ESL.

The following conclusions have been made based on the results of this investigation:

- Concentrations of COPCs benzene, carbon tetrachloride, naphthalene, and TCE reported in indoor air exceed evaluation criteria (CHHSLs and/or ESLs) used to define COCs and were further evaluated on this basis;

- Only two COPCs, TCE and benzene, were reported in sub-slab soil gas and indoor air at concentrations exceeding the ESLs or the CHHSLs. Benzene, however, is estimated below the laboratory reporting limit in soil gas, and is a component of fuels and chemicals stored within the building and was also detected in outdoor air at concentrations exceeding the CHHSL;

- The ICR calculated for benzene in indoor air is within the risk management range;

- TCE was reported in soil gas beneath the slab across the majority of the building footprint (163 and 163A);

- TCE was reported in 10 indoor air samples collected throughout Buildings 163 and 163A and at concentrations exceeding the CHHSLs in samples from (5) five of the nine (9) locations;

- TCE was not detected in outdoor air samples and was not identified as a chemical component of the fuels, adhesives, solvents, inks, and dyes documented within the buildings;

- The ICR calculated for indoor air TCE at Buildings 163 and 163A is 2.24E-06 based upon the exposure criteria established in the CHHSLs. This ICR for TCE is within the risk management range of 1.0E-4 to 1.0E-6 and is consistent with findings from previous investigations;

- The cumulative cancer risk for all COPCs in indoor air is calculated to be 1.45E-04 using the ESLs and 7.09E-05 using the CHHSLs. Carbon tetrachloride has the lowest ESL and CHHSL of any COPC for this investigation and is the greatest contributor to inhalation risk for indoor air. If the contribution from carbon tetrachloride to indoor air

exposure is removed, the resulting cumulative cancer risk for indoor air would be, 6.15E-05 and 4.43E-05, respectively, and well within the risk management range.

Indoor air in Buildings 163 and 163A has been evaluated three separate times; once in January 2006, February 2007, and June 2009. Sub-slab soil gas has also been evaluated three separate times; in September 2006, March 2007, and June 2009. Indoor air results and incremental cancer risk from the seasonal sampling events (Appendix A) are consistent and consistent with the findings of this investigation.

Buildings 163 and 163A are used by several tenants for light industrial purposes. An array of chemicals and fuels are stored and used in the buildings. The health risk posed by the direct measurement of TCE concentrations in the buildings is an order of magnitude less than that posed by benzene and naphthalene, both of which are stored for use in the buildings.

TCE is the only chemical present in indoor air which can be reasonably concluded to be a result of a CERCLA release to groundwater; the remaining COPCs posing risk are either stored onsite, not reported in soil gas, or reported in outdoor air. Therefore, no further indoor air sampling is warranted at Buildings 163 and 163A. The chlorinated VOC plume beneath Building 163 is being addressed in the Feasibility Study for OU-2B.

7.0 REFERENCES

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TABLES

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Table 1
Historical Sub-Slab Soil Gas Sample Results And Evaluation Against Screening Criteria

	Screening Criteria CHHSL ($\mu g/m^3$)	Screening Criteria ESL ($\mu g/m^3$)	Maximum Sub-slab Soil Gas Results ($\mu g/m^3$)* Jan-06		Sep-06		Mar-07	Decision Criteria: All Samples below CHHSL	Decision Criteria: All Samples below ESL	Detection Limits: Greater Than CHHSL and/or ESL
COPCs (Final Technical Memorandum, SulTech 2007)										
Acetone	NE	1.80E+06	1.30E+02		<940		4.20E+01	NE	yes	no
1,1-Dichloroethane**	NE	5.10E+03	5.20E+01		2.00E+01		1.30E+01	NE	yes	no
1,1-Dichloroethene	NE	8.20E-02	NA		**<390**		**<250**	NE	no	yes
cis-1,2-Dichloroethene	4.44E+04	2.00E+04	5.80E+03	J	**4.00E+04**		1.20E+04	yes	no	no
trans-1,2-Dichloroethene	8.87E+04	4.10E+04	2.60E+02		1.90E+03		4.70E+02	yes	yes	no
Ethylbenzene	NE	3.30E+03	<10		<430		1.20E+01	NE	yes	no
Tetrachloroethene (PCE)	6.03E+02	1.40E+03	<10	<	**6.70E+02**		1.80E+02	yes	yes	yes
Toluene	3.78E+05	1.80E+05	2.10E+01		1.60E+01		1.60E+02	yes	yes	no
1,1,1-Trichloroethane	2.79E+06	1.30E+06	3.20E+01	J	4.70E+01		<250	yes	yes	no
Trichloroethene (TCE)	1.77E+03	4.10E+03	**9.60E+03**	J	**1.20E+05**		**2.60E+04**	no	no	no
Trichlorotriflouroethane	NE	NE	2.60E+01	J	3.50E+01		<500	NE	NE	~
Xylenes	8.79E+05	5.80E+04	5.60E+00		<430		1.50E+01	yes	yes	no
Additional COPCs with Reporting Limits Greater than CHHSL and/or ESL (Final Technical Memorandum, SulTech 2007)										
Benzene	1.22E+02	2.80E+02	<10	<	**3.20E+02**	<	**2.50E+02**	~	~	yes
Bromodichloromethane	NE	4.60E+02	<10	<	**6.70E+03**	<	2.80E+02	NE	~	yes
Carbon Tetrachloride	8.46E+01	6.30E+01	<11	<	**6.30E+02**	<	**2.50E+02**	~	~	yes
1,2-Dichloroethane	1.67E+02	5.10E+03	<10	<	**4.00E+02**	<	**2.50E+02**	~	~	yes
1,1,2,2-Tetrachloroethane	NE	1.40E+02	3.20E+01	<	**6.80E+02**	<	**2.50E+02**	NE	~	yes
1,1,2-Trichloroethane	NE	5.10E+02	<10	<	**5.40E+02**	<	2.50E+02	NE	~	yes
1,2,4-Trichlorobenzene	NE	2.30E+03	<40	<	**3.00E+03**	<	5.00E+02	NE	~	yes
Vinyl chloride	4.48E+01	1.00E+02	<10	<	**2.50E+02**	<	**2.50E+02**	~	~	yes
Additional COPCs From January 2006 Sampling Event (Final Technical Memorandum, SulTech 2007)										
Chloroform	NE	1.50E+03	1.40E+01		<480		<250	NE	yes	no
Client/DTSC Requested COPCs										
1,4 Dioxane	NE	NE	NA		NA		NA	NE	NE	~
Naphthalene	1.20E-01	1.20E-01	NA		NA		NA	NA	NA	~

Notes:

*	Sub-slab soil gas values are maximum detected concentrations for each sampling event. Values above CHHSLs and/or ESLs are **bolded**.
**	Selected as a COPC in response to regulatory agency comment on the investigation work plan (SES-Tech 2009) because it is an indicator VOC for vapor intrusion evaluation and reported concentrations exceeded the CHHSL in the December 2008 Data Gap Sampling event (see Section 2.2.3).
<	Non-detected above the reporting limit concentration given.
~	Cannot be determined from the available data.
$\mu g/m^3$	micrograms per cubic meter
CHHSL	California Human Health Screening Level for soil gas samples collected approximately 5 feet below grade with commercial/industrial property use
COPC	chemical of potential concern
DTSC	California Department of Toxic Substances
ESL	Environmental Screening Levels for soil gas samples collected below grade for commercial/industrial properties (SF RWQCB 2007)
J	Estimated value; below the reporting limit but above the detection limit (SulTech 2007)
NA	Not analyzed
NE	Not established; not available

Table 2
Sample Collection Summary

Sampling Location / Sample ID Numbers	Matrix	Collection Height (above/below grade)	Analytical Suite	Number of Samples	Notes
SUB-SLAB SOIL GAS					
SG-001/44-001	Soil gas	-6 inches	VOCs	1	
SG-002/44-002	Soil gas	-8 inches	VOCs	1	
SG-003/44-003	Soil gas	-8 inches	VOCs	1	
SG-003-FD/44-004	Soil gas	-8 inches	VOCs	1	field duplicate
TRIP BLANK/44-005	Trip Blank	NA	VOCs	1	QC sample
INDOOR AIR					
IND-001A/44-006A	Indoor Air	+3 to 5 feet	COPCs[a]	1	moved to near manhole; initial sample rate high
IND-001B/44-006B	Indoor Air	+3 to 5 feet	COPCs[a]	1	sampled standard rate
IND-002/44-007	Indoor Air	+3 to 5 feet	COPCs[a]	1	
IND-003/44-008	Indoor Air	+3 to 5 feet	COPCs[a]	1	
IND-004/44-009	Indoor Air	+3 to 5 feet	COPCs[a]	1	moved to old borehole location
IND-005/44-010	Indoor Air	+3 to 5 feet	COPCs[a]	1	
IND-006/44-011	Indoor Air	+3 to 5 feet	COPCs[a]	1	swapped regulators
IND-007/44-012	Indoor Air	+3 to 5 feet	COPCs[a]	1	
IND-008/44-013	Indoor Air	+3 to 5 feet	COPCs[a]	1	
IND-009/44-014	Indoor Air	+3 to 5 feet	COPCs[a]	1	location adjust to floor drain in men's room
IND-006-FD/44-015	Indoor Air	+3 to 5 feet	COPCs[a]	1	field duplicate
TRIP BLANK/44-016	Trip Blank	+3 to 5 feet	COPCs[a]	1	QC sample
OUTDOOR AIR					
OTD-001/44-017	Outdoor Air	NA	VOCs	1	
OTD-002/44-018	Outdoor Air	NA	VOCs	1	

Notes:

[a] The list of 15 COPCs include: 1,1-dichloroethane, 1,1-dichloroethene, 1,2-dichloroethane, 1,1,2-trichloroethane, 1,1,2,2-tetrachloroethane, 1,2,4-trichlorobenzene, 1,4-dioxane, benzene, bromodichloromethane, carbon tetrachloride, cis-1,2-dichloroethene, naphthalene, tetrachloroethene, trichloroethene, and vinyl chloride. All other samples were analyzed for the full Toxic Organics-15 VOC suite.

COPC – chemical of potential concern
ID - identification
NA Not Applicable
QC Quality Control
VOC – volatile organic compound

Table 3
Indoor and Outdoor Air Samples Collection Data

Sample Location ID	SUMMA Sample ID	SUMMA Cannister ID	Regulator Serial Number	Start Time (06/16/09)	Start Pressure	End Pressure	End Time (06/16/09)	Sampling Time
(units)				in 24 hours	inches Hg	inches Hg	in 24 hours	hours/mins
Indoor Samples								
IND-001a	44-006a	741	2618	8:50	-18	-5	11:06	2 / 16[1]
IND-001b	44-006b	2968	2618	11:09	-18	-5	15:35	6 / 44
IND-002	44-007	640	2539	8:50	-27	-6	16:51	8 / 1
IND-003	44-008	692	2538	8:46	<-30	-8	16:46	8 / 0
IND-004	44-009	664	2542	8:45	-29.5	-10.5	16:45	8 / 0
IND-005	44-010	633	2605	8:43	-20.5	-1	15:45	7 / 2
IND-006	44-011	169	2595 / 2616[2]	8:39	<-30	-5	14:14	5 / 35
IND-007	44-012	670	2610	8:27	<-30	-9	16:30	8 / 3
IND-008	44-013	782	2623	8:32	-29.5	-10	16:33	8 / 1
IND-009	44-014	526	2567	8:38	<-30	-18	16:38	8 / 0
IND-006	44-015	188	2612	8:39	-29.5	-15	16:40	8 / 1
Outdoor Samples								
OTD-001	44-017	681	2590	8:44	<-30	-9	16:53	8 / 9
OTD-002	44-018	180	2617	8:39	-25	-4	16:53	8 / 14

Notes:

[1] Sample collection at IND-001a ended early due to high regulator flow rate; a second sample was collected (44-006b).

[2] Sampling interupted to change regulators due to regulator flow rate.

Hg Mercury

ID Identification

< Less than the stated measured value, but not at the next lower value for the regulator.

Table 4
Indoor and Outdoor Air Sampling Atmospheric Data

Sampling Period (06/16/2009)	Time	NOAA Data				Time	Field Measured Data						
		Barometric Pressure	Wind Speed	Wind Direction*	Air Temp.		Barometric Pressure	Wind Speed	Wind Direction*	Indoor Temp.	Indoor Humidity	Outdoor Temp.	Outdoor Humidity
(units)	in 24 hours	inches Hg	mph	degree	degrees F	in 24 hours	inches Hg	mph	degrees	degree F	percent	degrees F	percent
Start	8:24	29.96	11.4	280	58.5	10:07	--	4.7	287	69	49	--	--
	11:06	29.92	7.1	276	57.5	10:55	29.93	5.6	235	69	53	61	74
End	14:12	29.93	4.7	236	57.7	14:38	29.92	4.0 - 8.0	270	76	44	64	66
	16:54	29.96	7.4	227	58.6	16:08	29.91	4.0 - 7.0	270	76	43	68	58

Notes:

NOAA	Data Source: National Oceanic and Atmospheric Administration meteorological data from the Alameda, California monitoring station available online for the sampling date (06/16/2009) and time at: http://tidesandcurrents.noaa.gov/data_menu.shtml?stn=9414750%20Alameda,%20CA&type=Meteorological+Observations
*	NOAA data in degrees 0 to 360 relative to north (0/360) reference point. Measured wind direction is estimated.
--	data not recorded.
F	Fahrenheit
Hg	Mercury
mph	miles per hour
Temp.	Temperature

Table 5
Data Summary Table - Indoor Air Concentrations
(in micrograms per cubic meter)

Location ID	Sample ID	Sample Date	1,1,2,2-Tetrachloroethane	1,1,2-Trichloroethane	1,1-Dichloroethane	1,1-Dichloroethene	1,2,4-Trichlorobenzene	1,2-Dichloroethane	1,4-Dioxane	Benzene	Bromodichloromethane	Carbon Tetrachloride	cis-1,2-Dichloroethene	m,p-Xylene	Naphthalene	o-Xylene	Tetrachloroethene	Trichloroethene	Vinyl Chloride
Indoor Air																			
IND-001A	44-006A	6/16/2009	**0.117[a] J**	<0.366[b]	<0.272	<0.048	<0.508	<0.277	<0.176	**1.466 J**	<0.300	**1.727 J**	<0.271	2.967 J	**0.298 J**	0.903 J	<0.455	<0.368	<0.035
IND-001B	44-006B	6/16/2009	<0.088	<0.149	<0.110	<0.049	0.542 J	<0.113	<0.071	**1.357**	<0.122	**2.585**	<0.110	4.534	**0.581**	1.331	0.588 J	0.150 J	<0.036
IND-002	44-007	6/16/2009	<0.051	<0.086	<0.064	<0.028	0.188 J	<0.065	<0.041	**1.243**	<0.070	**1.046**	<0.063	4.341	**0.168 J**	1.305	0.670 J	0.154 J	<0.020
IND-003	44-008	6/16/2009	<0.051	<0.217	<0.161	<0.028	0.522 J	<0.164	1.800	**0.807 J**	<0.178	**0.628 J**	<0.161	3.149 J	0.116	0.951 J	<0.270	0.675 J	<0.021
IND-004	44-009	6/16/2009	<0.112	<0.089	<0.066	<0.066	0.268 J	<0.067	<0.043	**3.422**	<0.073	**1.513**	<0.066	16.752	**0.223 J**	5.224	0.578 J	**3.168**	<0.043
IND-005	44-010	6/16/2009	<0.123	0.106 J	<0.072	<0.072	0.604 J	0.192 J	<0.047	**1.661**	<0.080	**1.027 J**	0.172 J	8.414	**0.445 J**	2.657	0.398 J	**3.073**	<0.047
IND-006	44-011	6/16/2009	<0.050	<0.084	<0.063	<0.028	0.385 J	<0.064	1.563	**1.103**	<0.069	**0.573 J**	0.063 J	5.497	**0.260**	1.728	0.208 J	**2.743**	<0.020
IND-007	44-012	6/16/2009	**0.670 J**	**0.494 J**	<0.318	<0.317	**2.518 J**	**0.557 J**	4.307	**0.841 J**	<0.350	**1.584 J**	<0.317	1.704 J	**1.681 J**	0.568 J	<0.532	0.519 J	<0.204
IND-008	44-013	6/16/2009	<0.057	<0.096	<0.071	<0.031	0.269 J	<0.073	<0.046	**1.193**	<0.079	**0.641 J**	0.095 J	6.381	**0.483 J**	2.030	0.423 J	**4.579**	<0.023
IND-009	44-014	6/16/2009	<0.073	<0.124	<0.092	<0.041	0.253 J	<0.094	1.714	**1.135**	<0.102	**0.656 J**	0.171 J	5.814	**0.233 J**	1.785	0.303 J	**2.371**	<0.030
IND-006-FD	44-015	6/16/2009	<0.117	<0.093	<0.069	<0.069	0.162 J	<0.070	<0.045	**0.629**	<0.076	**0.325 J**	0.086 J	0.239 J	<0.188	0.088 J	<0.116	0.946	<0.044
Project Action Limit for Air[c]			**0.07**	**0.26**	**2.60**	**58**	**1.20**	**0.195**	**NE**	**0.141**	**0.23**	**0.0973**	**51.1**	**1020**	**0.12**	**1020**	**0.693**	**2.04**	**0.0524**

Notes:

a	Analytical result exceeding the Project Action Limit for Air is reported in **bold** type.
b	Analytical result for an analyte not detected in a sample is reported at less than the Method Detection Limit. Results in boxed cells indicate the Method Detection Limit is greater than the Project Action Limit.
c	Project Action Limits are based on California Environmental Protection Agency 2005 California Human Health Screening Levels (CHHSLs) and 2008 Environmental Screening Levels (ESLs) applicable to indoor air at commercial/industrial sites. The larger value from these two sets of criteria is the Project Action Limit for each compound.
<	less than
ID	Identification
J	Value is reported as estimated, between the Method Detection Limit and the Reporting Limit.
NE	Not Established
	Other indoor air analytes; not Chemicals of Potential Concern for the investigation.

Table 6
Data Summary Table - Outdoor Air Concentrations
(in micrograms per cubic meter)

Location ID	Sample ID	Sample Date	1,1,1-Trichloroethane	1,1,2,2-Tetrachloroethane	1,1,2-Trichloroethane	1,1-Dichloroethane	1,1-Dichloroethene	1,2,4-Trichlorobenzene	1,2,4-Trimethylbenzene	1,2-Dibromoethane (EDB)	1,2-Dichlorobenzene	1,2-Dichloroethane	1,2-Dichloropropane	1,3,5-Trimethylbenzene	1,3-Dichlorobenzene	1,4-Dichlorobenzene	1,4-Dioxane	2-Butanone (Methyl Ethyl Ketone)	2-Hexanone	4-Ethyltoluene	4-Methyl-2-pentanone (Methyl Isobutyl Ketone)	Benzene	Benzyl Chloride	Bromodichloromethane	Bromomethane	Carbon Tetrachloride	Chlorobenzene	Chloroethane	Chloroform
Outdoor Air																													
OTD-001 (upwind)	44-017	6/16/2009	<0.107	<0.064	<0.107	<0.080	<0.035	0.180 J	0.227 J	<0.092	<0.116	<0.081	<0.093	0.313 J	<0.118	<0.118	1.034	<0.49	<0.70	<0.86	<0.73	**0.218 J**	<0.076	<0.088	<0.078	**0.324 J**	<0.091	<0.053	<0.096
OTD-002 (downwind)	44-018	6/16/2009	0.067 J	<0.028	<0.047	<0.035	<0.015	0.155 J	0.139 J	**0.070 J**	0.080 J	<0.035	<0.040	0.076 J	0.090 J	0.109 J	<0.022	<0.43	<0.61	<0.75	<0.63	**0.250 J**	<0.033	<0.038	<0.034	**0.647 J**	0.044 J	<0.023	0.087 J
Project Action Limit for Air[c]			**3210**	**0.07**	**0.26**	**2.60**	**58**	**1.20**	**NE**	**0.0068**	**58**	**0.195**	**0.41**	**NE**	**31**	**0.37**	**NE**	**1500**	**NE**	**NE**	**880**	**0.141**	**NE**	**0.23**	**1.50**	**0.0973**	**290**	**29**	**0.77**

Notes:

[a] Analytical result exceeding the Project Action Limit for Air is reported in **bold** type.

[b] Analytical result for an analyte not detected in a sample is reported at less than the Method Detection Limit. Results in boxed cells indicate the Method Detection Limit is greater than the Project Action Limit.

[c] Project Action Limits are based on California Environmental Protection Agency 2005 California Human Health Screening Levels (CHHSLs) and 2008 Environmental Screening Levels (ESLs) applicable to outdoor air at commercial/industrial sites. The larger value from these two sets of criteria is the Project Action Limit for each compound.

< less than

ID Identification

J Value is reported as estimated, between the Method Detection Limit and the Reporting Limit.

NE Not Established

Chemicals of Potential Concern are highlighted; those detected in outdoor air samples are highlighted in green.

Table 6
Data Summary Table - Outdoor Air Concentrations
(in micrograms per cubic meter)

Location ID	Sample ID	Sample Date	Chloromethane	cis-1,2-Dichloroethene	cis-1,3-Dichloropropene	Dibromochloromethane	Dichlorodifluoromethane	Ethyl Benzene	1,1,2-Trichloro-1,1,2-trifluoroethane (Freon 113)	Freon 114	Hexachlorobutadiene	m,p-Xylene	Methyl tert-butyl ether	Methylene Chloride	Naphthalene	o-Xylene	Styrene	Tetrachloroethene	Toluene	trans-1,2-Dichloroethene	trans-1,3-Dichloropropene	Trichloroethene	Trichlorofluoromethane	Vinyl Acetate	Vinyl Chloride
Outdoor Air																									
OTD-001 (upwind)	44-017	6/16/2009	<0.041	<0.080	<0.93	<1.46	<0.101	0.345	<0.151	<1.40	<4.24	1.085 J	<0.046	0.138	**0.144**	0.307 J	0.156 J	0.342 J	3.318	<0.057	<0.91	<0.108	0.190 J	<0.58	<0.026
OTD-002 (downwind)	44-018	6/16/2009	0.121 J	<0.035	<0.81	<1.28	<0.044	0.146	0.491	<1.22	<3.70	0.537 J	<0.020	0.194	<0.063	0.171 J	0.072 J	0.090 J	0.861	<0.025	<0.79	<0.047	0.453 J	<0.51	<0.011
Project Action Limit for Air[c]			**26**	**51.1**	**0.26**	**NE**	**NE**	**1.60**	**NE**	**NE**	**NE**	**1020**	**15.70**	**8.70**	0.12	1020	260	0.693	438	102	0.26	2.04	NE	NE	0.0524

Notes:

[a] Analytical results exceeding the Project Action Limit for Air are reported in **bold** type.

[b] Analytical result for an analyte not detected in a sample is reported at less than the Method Detection Limit. Results in boxed cells indicate the Method Detection Limit is greater than the Project Action Limit.

[c] Project Action Limits are based on California Environmental Protection Agency 2005 California Human Health Screening Levels (CHHSLs) and 2007 Environmental Screening Levels (ESLs) applicable to outdoor air at commercial/industrial sites. The larger value from these two sets of criteria is the Project Action Limit for each compound.

< less than

ID Identification

J Value is reported as estimated, between the Method Detection Limit and the Reporting Limit.

NE Not Established

Chemicals of Potential Concern are highlighted; those detected in outdoor air samples are highlighted in green.

Table 7
Data Summary Table - Sub-Slab Soil Gas Concentrations
(in micrograms per cubic meter)

Location ID	Depth	Sample ID	Sample Date	1,1,1-Trichloroethane	1,1,2,2-Tetrachloroethane	1,1,2-Trichloroethane	1,1-Dichloroethane	1,1-Dichloroethene	1,2,4-Trichlorobenzene	1,2,4-Trimethylbenzene	1,2-Dibromoethane (EDB)	1,2-Dichlorobenzene	1,2-Dichloroethane	1,2-Dichloropropane	1,3,5-Trimethylbenzene	1,3-Dichlorobenzene	1,4-Dioxane	1,4-Dichlorobenzene	2-Butanone (Methyl Ethyl Ketone)	2-Hexanone	4-Ethyltoluene	4-Methyl-2-Pentanone (Methyl Isobutyl Ketone)	Acetone	Benzene	Benzyl Chloride	Bromodichloromethane	Bromoform	Bromomethane	Carbon Disulfide	Carbon Tetrachloride
Sub-Slab Soil Gas																														
SG-001	0.5'	44-001	6/19/2009	67.03[a]	<5.17[b]	<4.11	<3.02	<2.96	<5.64	<3.70	<5.90	<4.44	3.47 J	<3.51	<3.85	<4.53	<2.34	<4.53	3.76 J	<2.66	<3.30	<2.78	13.90	5.03 J	<3.44	<3.96	<7.10	<2.98	10.30	<4.74
SG-002	0.5'	44-002	6/19/2009	<39	<50	<39	<29	<28	<54	<35	<57	<43	<29	<34	<37	<43	<22	<43	<18	<26	<32	<27	50 J	<23	<33	<38	<68	<29	712	<45
SG-003	0.5'	44-003	6/19/2009	<457	<575	<457	386 J	<329	<627	<412	<656	<494	<342	<391	<428	<503	<260	<503	<208	<296	<367	<309	<176	<270	<383	<440	<789	<331	<227	<527
SG-003-FD	0.5'	44-004	6/19/2009	<414	<520	<414	1623	<298	<568	<373	<594	547 J	<310	<354	<387	<456	<236	689 J	<189	<268	<333	<280	<159	**357 J**	<346	<398	<715	<300	<206	<477
Project Action Limit for Soil Gas[c]				**2790000**	**140**	**510**	**5100**	**120000**	**2300**	**NE**	**14**	**120000**	**167**	**820**	**NE**	**61000**	**NE**	**740**	**2900000**	**NE**	**NE**	**1800000**	**1800000**	**122**	**NE**	**460**	**NE**	**2900**	**NE**	**84.6**

Notes:

[a] Analytical results exceeding the Project Action Limit for Soil Gas are reported in **bold** type.

[b] Analytical result for an analyte not detected in a sample is reported at less than the Method Detection Limit. Results in boxed cells indicate the Method Detection Limit is greater than the Project Action Limit.

[c] Project Action Limits are based on California Environmental Protection Agency 2005 California Human Health Screening Levels (CHHSLs) and 2007 Environmental Screening Levels (ESLs) applicable to shallow soil gas screening for vapor intrusion at commercial/industrial sites. The larger value from these two sets of criteria is the Project Action Limit for each compound.

< less than

ID Identification

J Value is reported as estimated, between the Method Detection Limit and the Reporting Limit.

NE Not Established

Chemicals of Potential Concern are highlighted; those detected in soil gas samples are highlighted in green.

Table 7
Data Summary Table - Sub-Slab Soil Gas Concentrations
(in micrograms per cubic meter)

Location ID	Depth	Sample ID	Sample Date	Chlorobenzene	Chloroethane	Chloroform	Chloromethane	cis-1,2-Dichloroethene	cis-1,3-Dichloropropene	Dibromochloromethane	Dichlorodifluoromethane	Ethyl Benzene	1,1,2-Trichloro-1,1,2-trifluoroethane (Freon 113)	Freon 114	Hexachlorobutadiene	Isopropyl Alcohol	Methylene Chloride	m,p-Xylene	Methyl tert-butyl ether	Naphthalene	o-Xylene	Styrene	Tetrachloroethene	Toluene	trans-1,2-dichloroethene	trans-1,3-Dichloropropene	Trichloroethene	Trichlorofluoromethane	Vinyl Acetate	Vinyl Chloride
Sub-Slab Soil Gas																														
SG-001	0.5'	44-001	6/19/2009	<3.47	<2.03	8.01 J	<1.56	<3.01	<3.55	<5.60	<3.83	<3.33	12.89 J	<5.37	<8.11	<1.65	<2.67	<6.61	<2.07	<9.25	<16.35	<3.24	196.91	8.46 J	<2.55	<3.49	78.86	<4.31	<2.24	<1.96
SG-002	0.5'	44-002	6/19/2009	<33	<19	<35	<15	959	<34	<54	<37	<32	<55	<51	<78	<16	<26	<63	<20	<89	<157	<31	<49	44 J	35 J	<33	**7166**	<41	<21	<19
SG-003	0.5'	44-003	6/19/2009	<386	<225	<409	<173	8295	<395	<622	<426	<371	<641	<597	<902	<184	<296	<734	<231	<1,029	<1818	<360	<568	489 J	771 J	<388	**4132497**	<480	<249	<218
SG-003-FD	0.5'	44-004	6/19/2009	<349	<204	<370	<157	32426	<358	<564	<386	<336	<581	<540	<817	<166	<268	<665	<209	<932	<1647	<326	<514	671 J	3413	<351	**4190042**	<434	<225	<198
Project Action Limit for Soil Gas[c]				**580000**	**58000**	**1500**	**53000**	**44400**	**510**	**NE**	**NE**	**3300**	**NE**	**NE**	**NE**	**NE**	**17000**	**887000**	**13400**	**106**	**879000**	**530000**	**603**	**378000**	**88700**	**510**	**1770**	**NE**	**NE**	**44.8**

Notes:

[a] Analytical results exceeding the Project Action Limit for Soil Gas are reported in **bold** type.

[b] Analytical result for an analyte not detected in a sample is reported at less than the Method Detection Limit. Results in boxed cells indicate the Method Detection Limit is greater than the Project Action Limit.

[c] Project Action Limits are based on California Environmental Protection Agency 2005 California Human Health Screening Levels (CHHSLs) and 2008 Environmental Screening Levels (ESLs) applicable to shallow soil gas screening for vapor intrusion at commercial/industrial sites. The larger value from these two sets of criteria is the Project Action Limit for each compound.

< less than

ID Identification

J Value is reported as estimated, between the Method Detection Limit and the Reporting Limit.

NE Not Established

Chemicals of Potential Concern are highlighted; those detected in soil gas samples are highlighted in green.

Table 8
Location-Specific[a] and Site Attenuation Factors for Selected COPCs Reported in Indoor Air and Sub-SlabSoil Gas

Chemical of Potential Concern	Indoor Air Conc.	Data Qualifier	Outdoor Air Conc.	Data Qualifier	Adjusted Indoor Air Conc.[b]	Data Qualifier	Soil Gas Conc.	Data Qualifier	**Calculated Attenuation Factor[c]**	**Previously Estimated Attenuation Factor[d]**
(units)	µg/m³		µg/m³		µg/m³		µg/m³		unitless	unitless
Trichloroethene										
SG-001/IND-002	0.540	J	**0**		0.540		78.86		0.0068	0.00035
SG-002/IND-004[e]	**3.168**		**0**		3.168		**7166**		0.00044	0.00035
SG-003/IND-008[f]	**4.579**		**0**		4.579		**4,190,042**		0.0000011	0.00035
Site Average	1.688		**0**		1.688		**2,082,446**		0.00000081	0.00035
Tetrachloroethene										
SG-001/IND-002	0.670	J	0.342	J	0.328		196.91		0.0017	0.00035
SG-002/IND-004	0.578	J	0.342	J	0.236		24.5		0.0096	0.00035
SG-003/IND-008[f]	0.423	J	0.342	J	0.081		284		0.00029	0.00035
Site Maximum[g]	0.670	J	0.342	J	0.328		196.91		0.0017	0.00035
Benzene										
SG-001/IND-002	**1.243**		**0.234**	**J**	**1.009**		5.03	J	0.201	0.00035
SG-002/IND-004	**3.422**		**0.234**	**J**	**3.188**		11.5		0.277	0.00035
SG-003/IND-008[f]	**1.193**		**0.234**	**J**	0.959		**357**	**J**	0.0027	0.00035
Site Average	**1.351**		**0.234**	**J**	**1.117**		**124.51**		0.009	0.00035

Notes:

a Sub-slab soil gas and indoor air data paired from sample locations within closest proximity (approximately 11 feet).

b Indoor air concentration minus the average (or maximum) outdoor air concentration, depending on the analyte (also see note g).

c Attenuation factor (AF) calculated by the equation: AF = adjusted indoor air concentration / soil gas concentration.

d Source: SulTech. 2007. Final Technical Memorandum, Second Sampling Event Results, Sub-Slab Soil Gas Investigation of Buildings 14, 113, 162, 163A, and 398, Alameda Point, Alameda, California. October 18.

e **Bold** text indicates air or soil gas values exceeding the Project Action Limit.

f Values given for the SG-003 location are the maximum concentrations reported in the parent sample (SG-003) or the field duplicate sample (SG-003-FD).

g Maximum concentrations used because only one soil gas concetration was reported above the Method Detection Limit. Averaging with concentrations estimated from MDLs would increase uncertainty in the attenuation factor calculated.

0 Not Detected. Value used in calculations for an analyte when sample dilution is not expected to have effected the anaylitcal result.

µg/m³ microgram per cubic meter.

Conc. Concentration

J Analytical result at right is estimated below the reporting limit.

For calculation purposes, non-detects in indoor air and/or soil gas results were conservatively estimated at half of the reported method detection limit for a result where shaded.

Table 9
Incremental Cancer Risk Calculation, Maximum Indoor Air Concentrations

Chemical of Potential Concern	Maximum Indoor Air Result[a]	Data Qualifier	Comparison Criteria for Industrial Property[b]		Indoor Air ICR_{max}	
			ESLs	CHHSLs	ESLs	CHHSLs
(units)	µg/m^3		µg/m^3	µg/m^3	µg/m^3	µg/m^3
Trichloroethene	**4.579**		**2**	**2.04**	2.29E-06	2.24E-06
Benzene	**3.422**		**0.140**	**0.141**	2.44E-05	2.43E-05
Carbon Tetrachloride	**2.585**		**0.031**	**0.0973**	8.34E-05	2.66E-05
Naphthalene	**1.681**	**J**	**0.12**	**0.12**	1.40E-05	1.40E-05
1,1,2,2-Tetrachloroethane	**0.670**	**J**	**0.07**	NE	9.57E-06	NE
1,1,2-Trichloroethane	**0.494**	**J**	**0.26**	NE	1.90E-06	NE
1,1-Dichloroethane	0.000		2.6	NE	0.00E+00	NE
1,1-Dichloroethene	0.000		0.082	NE	0.00E+00	NE
1,2-Dichloroethane	**0.557**	**J**	**0.160**	**0.195**	3.48E-06	2.86E-06
1,2,4-Trichlorobenzene	**2.518**	**J**	**1.2**	NE	2.10E-06	NE
Bromodichloromethane	0.000		0.23	NE	0.00E+00	NE
cis-1,2-Dichloroethene	0.172	J	10	51.1	1.72E-08	3.37E-09
Tetrachloroethene	0.670	J	0.69	0.693	9.71E-07	9.67E-07
Vinyl Chloride	0.000		0.052	0.0524	0.00E+00	0.00E+00
Cumulative Cancer Risk - without 1,4 Dioxane					1.42E-04	7.09E-05
1,4-Dioxane[c]	4.307		1.59	NE	2.71E-06	NE
Cumulative Cancer Risk					**1.45E-04**	**7.09E-05**
Cumulative Cancer Risk - without Carbon Tetrachloride					6.15E-05	4.43E-05

Notes:

[a] **Bold** text indicates the maximum indoor air values exceed comparison criteria for the Chemical of Potential Concern. A zero indoor air value (in smaller font) indicates the chemical was not detected above the method detection limit and an ICR could not be calculated.

[b] Comparison Criteria for the evaluation are the California Environmental Protection Agency 2005 California Human Health Screening Levels and 2008 Environmental Screening Levels, applicable to evaluation of indoor air at industrial/commercial properties.

[c] For 1,4-Dioxane, the U.S. EPA 2009 Regional Screening Level for chemical concentrations at Superfund Sites (Indoor Worker Risk-Based Screening Levels for Ambient Air) is used to evaluate the ICR because ESL and CHHSL values have not been established.

max based on maximum values.

CHHSLs California Human Health Screening Levels.

ESL Environmental Screening Levels.

ICR Incremental Cancer Risk, determined by equation: ICR = Maximum Indoor Air X 1.00E-06 / ESL or CHHSL or RSL

J Results estimated below the reporting limit.

µg/m^3 microgram per cubic meter.

NE none established

Table 10
Incremental Cancer Risk Calculations, Average Outdoor Air and Adjusted Indoor Air Concentrations

Chemicals of Potential Concern	Average Outdoor Air Conc.[a]	Comparison Criteria for Industrial Property[b]		Outdoor Air ICR_{ave}		Adjusted Indoor Air ICR (= Indoor Air ICR_{max} - Outdoor Air ICR_{ave})	
		ESLs	CHHSLs	ESLs	CHHSLs	ESLs	CHHSLs
(units)	ug/m^3	ug/m^3	ug/m^3	ug/m^3	ug/m^3	ug/m^3	ug/m^3
Trichloroethene	0.000	2	2.04	0.00E+00	0.00E+00	2.29E-06	2.24E-06
Benzene	**0.234**	**0.140**	**0.141**	1.67E-06	1.66E-06	2.28E-05	2.26E-05
Carbon Tetrachloride	**0.486**	**0.031**	**0.0973**	1.57E-05	4.99E-06	6.77E-05	2.16E-05
Naphthalene	0.000	0.12	0.12	0.00E+00	0.00E+00	1.40E-05	1.40E-05
1,1,2,2-Tetrachloroethane	0.000	0.07	NE	0.00E+00	NE	9.57E-06	NE
1,1,2-Trichloroethane	0.000	0.26	NE	0.00E+00	NE	1.90E-06	NE
1,1-Dichloroethane	0.000	2.6	NE	0.00E+00	NE	0.00E+00	NE
1,1-Dichloroethene	0.000	0.082	NE	0.00E+00	NE	0.00E+00	NE
1,2-Dichloroethane	0.000	0.160	0.195	0.00E+00	0.00E+00	3.48E-06	2.86E-06
1,2,4-Trichlorobenzene	0.1675	1.2	NE	1.40E-07	NE	1.96E-06	NE
Bromodichloromethane	0.000	0.23	NE	0.00E+00	NE	0.00E+00	NE
cis-1,2-Dichloroethene	0.000	10	51.1	0.00E+00	0.00E+00	1.72E-08	3.37E-09
Tetrachloroethene	0.216	0.69	0.693	3.13E-07	3.12E-07	6.58E-07	6.55E-07
Vinyl Chloride	0.000	0.052	0.0524	0.00E+00	0.00E+00	6.92E-07	6.87E-07
Cumulative Cancer Risk - without 1,4 Dioxane				1.78E-05	6.97E-06	1.25E-04	6.46E-05
1,4-Dioxane[c]	1.034	1.59	NE	6.50E-07	NE	2.06E-06	NE
Cumulative Cancer Risk				1.85E-05	6.97E-06	1.27E-04	6.46E-05
Cumulative Cancer Risk - without Carbon Tetrachloride				2.77E-06	1.97E-06	5.94E-05	4.31E-05

Notes:

[a] **Bold** text indicates average outdoor air values exceed comparison criteria for the Chemical of Potential Concern. An outdoor air value of zero (smaller font) indicates the chemical is not detected above the method detection limit and an ICR could not be calculated.

[b] Comparison Criteria for the evaluation are the California Environmental Protection Agency 2005 California Human Health Screening Levels and 2008 Environmental Screening Levels, applicable to evaluation of indoor air at industrial/commercial properties.

[c] For 1,4-Dioxane, the U.S. EPA 2009 Regional Screening Level (RSL) for chemical concentrations at Superfund Sites (Indoor Worker Risk-Based Screening Levels for Ambient Air) is used to evaluate the ICR because ESL and CHHSL values have not been established.

ave based on average values
max based on maximum values
CHHSLs California Human Health Screening Levels
ESL Environmental Screening Levels
ICR Incremental Cancer Risk, determined by equation: ICR = Maximum Indoor Air Result X 1.00E-06 / ESL or CHHSL or RSL
ug/m^3 microgram per cubic meter
NE none established

FIGURES

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N00236_003662
ALAMEDA POINT

SENSITIVE RECORD

PORTIONS OF THIS RECORD ARE CONSIDERED SENSITIVE AND ARE NOT AVAILABLE FOR PUBLIC VIEWING

FIGURES 1 THROUGH 4

FOR ADDITIONAL INFORMATION, CONTACT:

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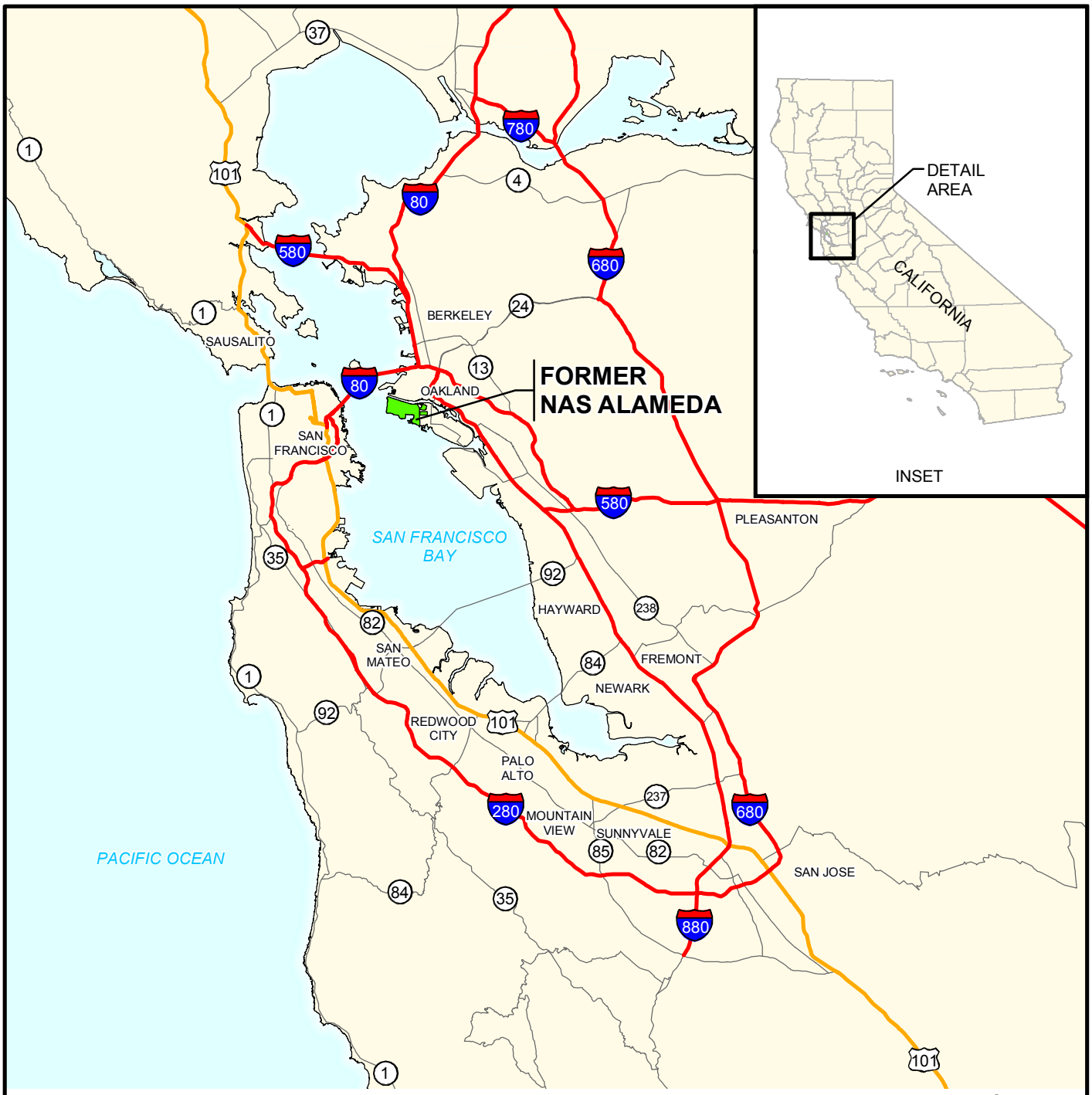
SENSITIVE



LEGEND

- STATE HIGHWAY
- US HIGHWAY
- INTERSTATE HIGHWAY
- ALAMEDA POINT
- WATER

5 0 5 10 Miles

N

BASE REALIGNMENT AND CLOSURE
PROGRAM MANAGEMENT OFFICE WEST
SAN DIEGO, CALIFORNIA

INDOOR AIR, OUTDOOR AIR, AND SOIL
GAS SAMPLING, BUILDINGS 163 AND 163A

FIGURE 1

ALAMEDA POINT REGIONAL MAP

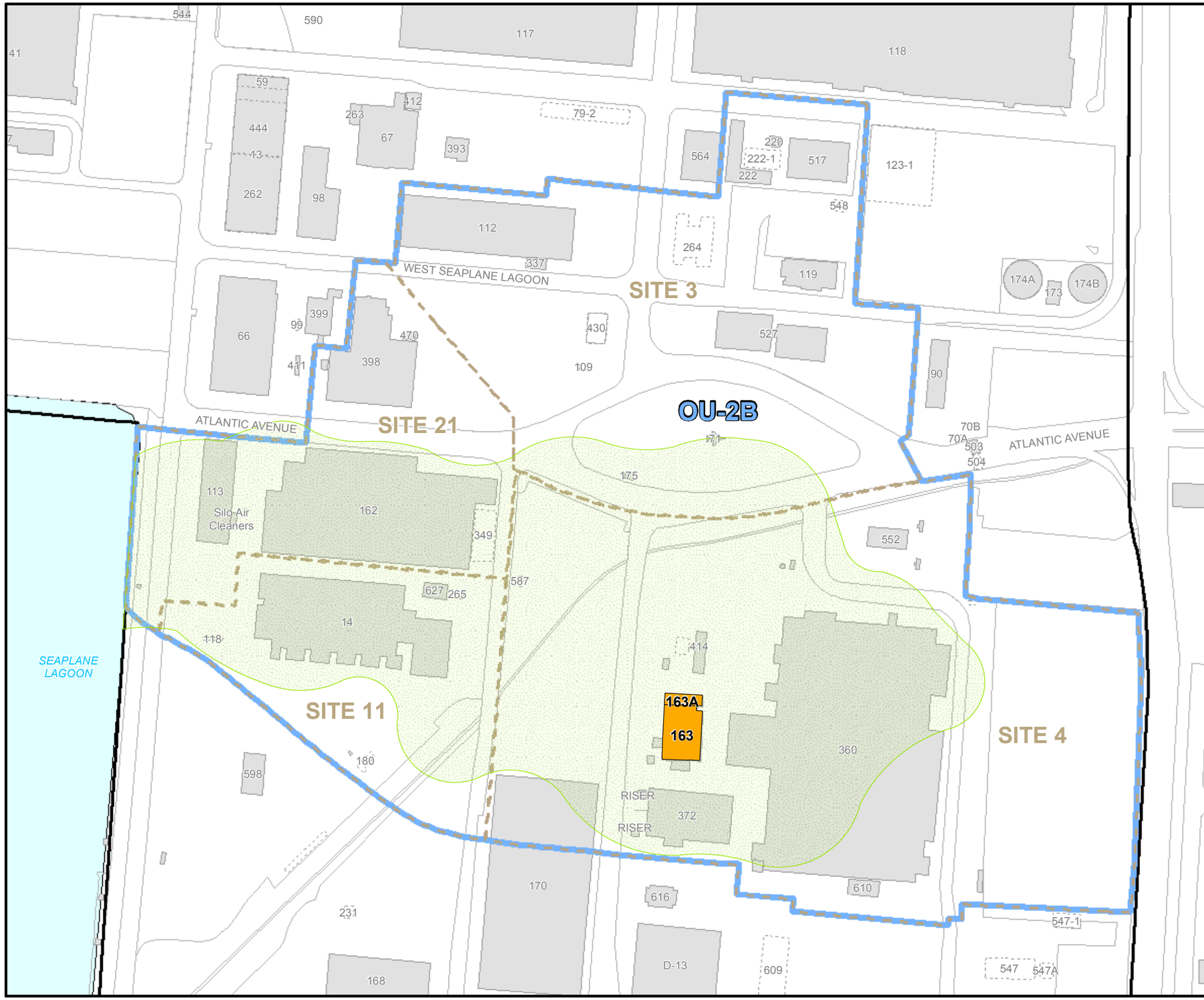
ALAMEDA POINT, CALIFORNIA

REVISION: A
AUTHOR: RKH
DCN: SEST-1104-0044-0038
FILE NUMBER: SEST51R5488.mxd

SES-TECH

SENSITIVE

SENSITIVE



LEGEND

- ROAD
- GENERALIZED CHLORINATED SOLVENT PLUME IN GROUNDWATER
- SITE BOUNDARY
- OPERABLE UNIT 2B
- 174B — BUILDING AND BUILDING NUMBER
- 264 — FORMER BUILDING AND BUILDING NUMBER
- 163 — BUILDING INCLUDED IN PROPOSED INDOOR AIR SAMPLING STUDY
- ALAMEDA POINT BOUNDARY
- WATER

NOTE:

OU-2B AND SITE AREAS SHOWN WITH RELATED GROUNDWATER PLUME TO SUPPORT DISCUSSION OF PREVIOUS INVESTIGATIONS THAT INCLUDED THE BUILDING 163 AND 163 B AREA

100 0 100 200 Feet

N

BASE REALIGNMENT AND CLOSURE
PROGRAM MANAGEMENT OFFICE WEST
SAN DIEGO, CALIFORNIA

INDOOR AIR, OUTDOOR AIR, AND SOIL
GAS SAMPLING, BUILDINGS 163 AND 163A

FIGURE 2

OU-2B AND SITE VICINITY MAP

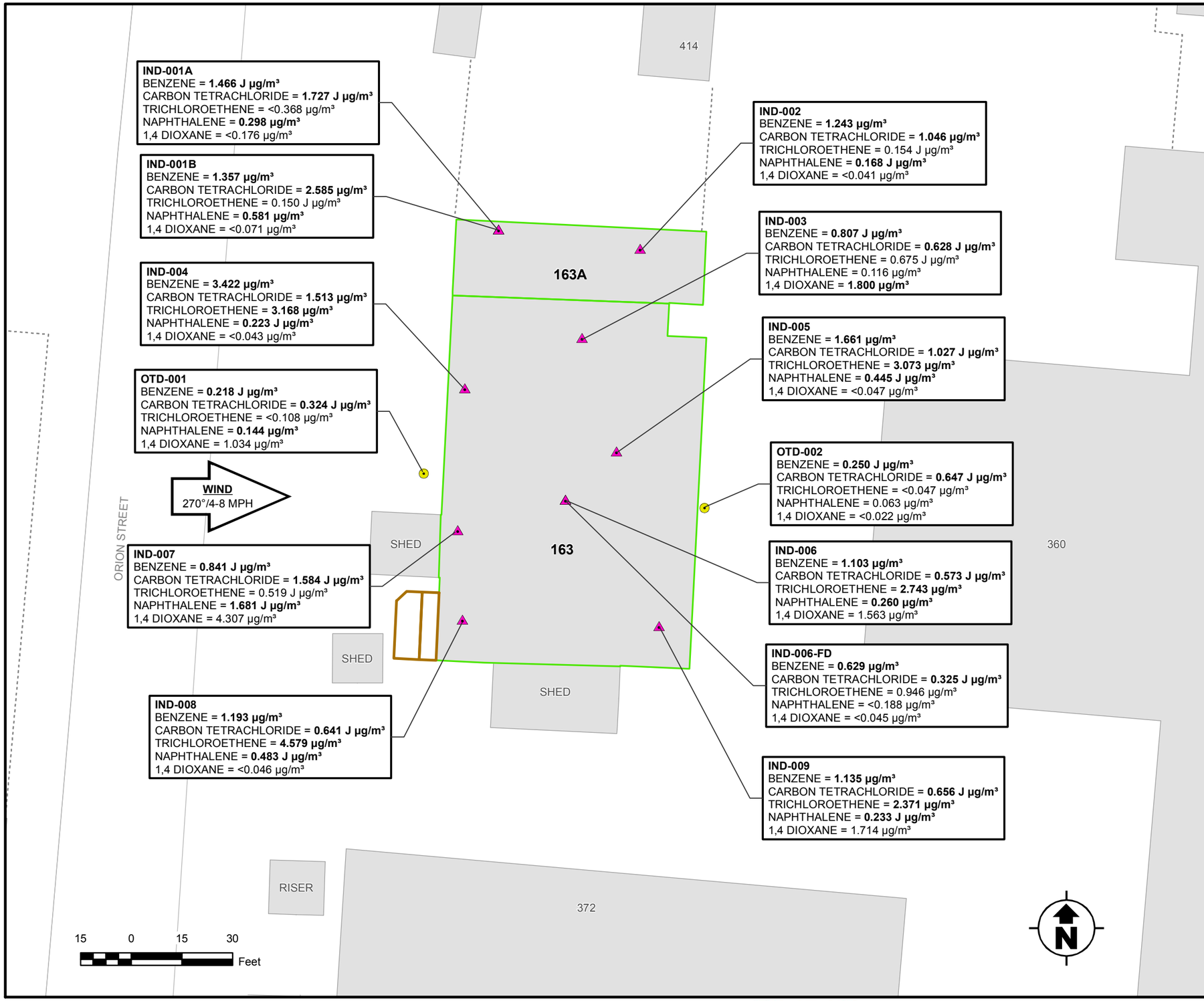
ALAMEDA, CALIFORNIA

REVISION: C
AUTHOR: RKH
DCN: SEST-1104-0044-0038
FILE NUMBER: SEST51C5198.mxd

SES-TECH

SENSITIVE

SENSITIVE



LEGEND

- SES-TECH INDOOR AIR SAMPLE LOCATION (APPROXIMATE)
- SES-TECH OUTDOOR AIR SAMPLE LOCATION (APPROXIMATE)
- ROAD
- 163 — BUILDING INCLUDED IN SOIL GAS STUDY AND BUILDING NUMBER
- OWS EXCAVATION LIMIT
- 174B — BUILDING AND BUILDING NUMBER

NOTES:

µg/m³ - MICROGRAMS PER CUBIC METER
CHHSLs - CALIFORNIA HUMAN HEALTH SCREENING LEVELS
COPC - CHEMICAL OF POTENTIAL CONCERN
DCA - DICHLOROETHANE
DCE - DICHLOROETHENE
ESLs - ENVIRONMENTAL SCREENING LEVELS
J - RESULTS ESTIMATED BELOW THE REPORTING LIMIT
PCA - TETRACHLOROETHANE
TCA - TRICHLOROETHANE
TCBZ - TRICHLOROBENZENE

- ALL SAMPLES COLLECTED JUNE 16, 2009
- IND-006 LOCATION: SAMPLING LOCATION WHERE DUPLICATE INDOOR AIR SAMPLE WAS COLLECTED

COMPARISON CRITERIA - PROJECT ACTION LEVELS
RESULTS GREATER THAN COMPARISON CRITERIA IN **BOLD**

Chemical	CHHSLs	ESLs
BENZENE	0.141	0.140
CARBON TETRACHLORIDE	0.0973	0.031
TRICHLOROETHENE	2.04	2.0
NAPHTHALENE	0.12	0.12
1,4 DIOXANE	NONE	1.59*

* REGIONAL SCREENING LEVELS (US EPA)

OTHER COPCs (RESULTS IN µg/m³)

Location ID	1,1,2,2-PCA	1,1,2-TCA	1,1-DCA	1,1-DCE	1,2-DCA	1,2,4-TCBZ
IND-001A	**0.117 J**	<0.366	<0.272	<0.048	<0.277	<0.508
IND-001B	<0.088	<0.149	<0.110	<0.049	<0.113	0.542 J
IND-002	<0.051	<0.086	<0.064	<0.028	<0.065	0.188 J
IND-003	<0.051	<0.217	<0.161	<0.028	<0.0164	0.522 J
IND-004	<0.112	<0.089	<0.066	<0.066	<0.067	0.268 J
IND-005	<0.123	0.106 J	<0.072	<0.072	0.192 J	0.604 J
IND-006	<0.050	<0.084	<0.063	<0.028	<0.064	0.385 J
IND-007	**0.670 J**	**0.494 J**	<0.318	<0.317	**0.557 J**	**2.518 J**
IND-008	<0.057	<0.096	<0.071	<0.031	<0.073	0.269 J
IND-009	<0.073	<0.124	<0.092	<0.041	<0.094	0.253 J
IND-006	<0.117	<0.093	<0.069	<0.069	<0.070	0.162 J
OTD-001	<0.064	<0.107	<0.080	<0.035	<0.081	0.180 J
OTD-002	<0.028	<0.047	<0.035	<0.015	<0.035	0.155 J

BASE REALIGNMENT AND CLOSURE
PROGRAM MANAGEMENT OFFICE WEST
SAN DIEGO, CALIFORNIA

INDOOR AIR, OUTDOOR AIR, AND SOIL
GAS SAMPLING, BUILDINGS 163 AND 163A

FIGURE 3

INDOOR/OUTDOOR AIR SAMPLING RESULTS

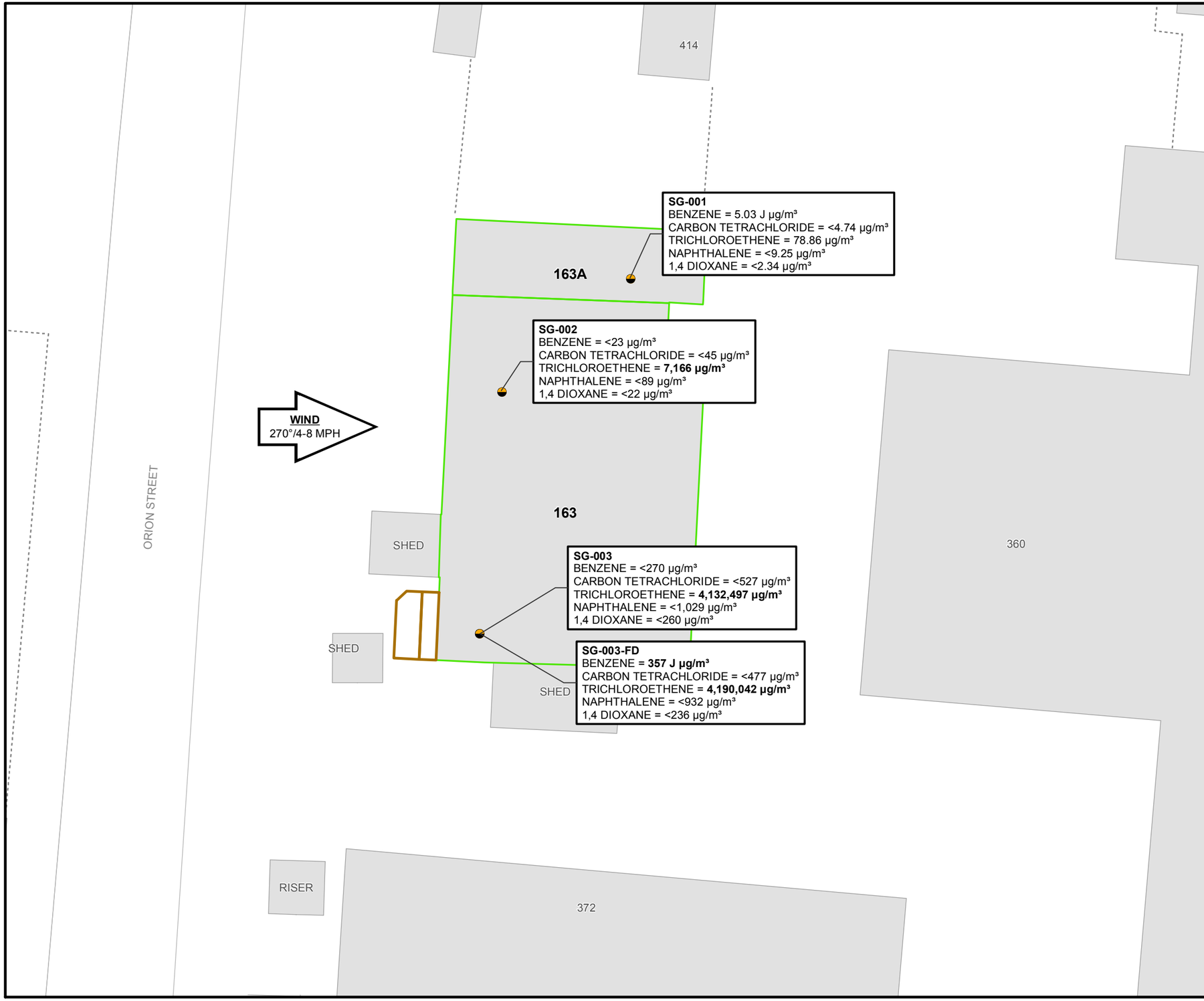
ALAMEDA POINT, CALIFORNIA

REVIEW: L
AUTHOR: RKH
DCN: SEST-1104-0044-0038
FILE NUMBER: SEST51L5054.mxd

SES-TECH

SENSITIVE

SENSITIVE



LEGEND

- SES-TECH SUB-SLAB SOIL GAS PROBE LOCATION (APPROXIMATE)
- ROAD
- 163 — BUILDING INCLUDED IN SOIL GAS STUDY AND BUILDING NUMBER
- OWS EXCAVATION LIMIT
- 174B — BUILDING AND BUILDING NUMBER

NOTES:

µg/m³ - MICROGRAMS PER CUBIC METER
COPC - CHEMICAL OF POTENTIAL CONCERN
DCA - DICHLOROETHANE
DCE - DICHLOROETHENE
J - RESULTS ESTIMATED BELOW THE REPORTING LIMIT
PCA - TETRACHLOROETHANE
TCA - TRICHLOROETHANE
TCBZ - TRICHLOROBENZENE

- ALL SAMPLES COLLECTED JUNE 19, 2009
- SG-003 LOCATION: SAMPLING LOCATION WHERE DUPLICATE SOIL GAS SAMPLE WAS COLLECTED

COMPARISON CRITERIA - PROJECT ACTION LEVELS
RESULTS GREATER THAN COMPARISON CRITERIA IN **BOLD**

BENZENE = 122 µg/m³ +
CARBON TETRACHLORIDE = 84.6 µg/m³ +
TRICHLOROETHENE = 1,770 µg/m³ +
NAPHTHALENE = 106 µg/m³ +
1,4 DIOXANE = NOT ESTABLISHED

+ CHHSLS (CAL EPA)

OTHER COPCs (RESULTS IN µg/m³)

Location ID	1,1,2 ,2 -PCA	1,1,2 -TCA	1,1-DCA	1,1-DCE	1,2 -DCA	1,2,4 -TCBZ
SG-001	< 5.17	< 4.11	< 3.02	< 2.96	3.47 J	< 5.64
SG-002	< 50	< 39	< 29	< 28	< 29	< 54
SG-003	< 575	< 457	386 J	< 329	< 342	< 627
SG-003-FD	< 520	< 414	1623	< 298	< 310	< 3.95

15 0 15 30 Feet

N

BASE REALIGNMENT AND CLOSURE
PROGRAM MANAGEMENT OFFICE WEST
SAN DIEGO, CALIFORNIA

INDOOR AIR, OUTDOOR AIR, AND SOIL
GAS SAMPLING, BUILDINGS 163 AND 163A

FIGURE 4

SUB-SLAB SOIL GAS SAMPLING RESULTS

ALAMEDA POINT, CALIFORNIA

REVIEW: L
AUTHOR: RKH
DCN: SEST-1104-0044-0038
FILE NUMBER: SEST51L5055.mxd

SES-TECH

SENSITIVE

APPENDIX A

Previous Investigation Results, January 2006 to March 2007

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Table 1
Summary of Detected Compounds
Alameda Point Indoor Air Survey - Building 163A
Alameda, California

Results in micrograms per meters cubed (μg/m³)

Parameter	Industrial CHHSL	BAAQMD	B163-inside-01	B163-inside-02	B163-inside-03	B163-outdoor
1,1-Dichloroethene			3.9	4.1	3.8	ND
1,2,4-Trimethylbenzene			7.1J	7.8J	7.5J	0.93J
1,3,5-Trimethylbenzene			2.5	2.7	2.5	ND
1,3-Butadiene			0.60	0.58	0.55	ND
2-Butanone (Methyl Ethyl Ketone)			12	11	11	3.5
2-Propanol			20	15	13	5.0
4-Ethyltoluene			7.7	8.2	7.9	0.84
4-Methyl-2-pentanone			1.0	0.97	0.89	ND
Acetone			43	35	39	13
Benzene	0.14	1.2	4.1	4.5	4.2	1.5
Chloromethane			1.2	1.2	1.1	1.2
cis-1,2-Dichloroethene	51.1	0.22	1.4	1.1	1.0	ND
Cumene			ND	0.80	ND	ND
Cyclohexane			3.4	3.7	3.3	ND
Ethanol			32J	28J	28J	10J
Ethyl Benzene			5.1	6.0	5.4	0.88
Freon 11			3.1	3.0	3.2	2.2
Freon 113			2.0	3.5	2.0	ND
Freon 12			3.2	3.6	3.2	2.4
Heptane			3.9	4.7	4.1	0.95
Hexane			4.8	5.8	4.7	0.78
m,p-Xylene	1000		17	20	18	2.4
Methylene Chloride			3.1	4.2	3.1	ND
o-Xylene	1000		5.9	6.9	6.8	0.98
Propylbenzene			1.6	1.7	1.7	ND
Styrene			ND	0.72	ND	ND
Tetrachloroethene	0.7	0.3	8.5	7.6	8.1	ND
Tetrahydrofuran			12	13	12	ND
Toluene	438	3.6	26	30	28	7.6
Trichloroethene	2.04	0.2	3.1	3.1	2.9	ND

NOTES

J = Estimated value
CHHSL = California Human Health Screening Level
BAAQMD = Bay Area Air Quality Management District
ND = Not Detected above analytical reporting limits
Samples Collected February 16, 2007

Table 2
Summary of Previously Detected Compounds
Alameda Point Indoor Air Survey - Building 163A
Alameda, California
(results in $\mu g/m^3$)

Parameter	Industrial CHHSL	BAAQMD Background	B-163-01	B-163-02	B-163-03	B-163-04
1,1-Dichloroethene	NA	NA	ND	ND	ND	ND
1,2,4-Trimethylbenzene	NA	NA	0.97	11	9.4	11
1,3,5-Trimethylbenzene	NA	NA	ND	3.2	2.8	3.1
1,3-Butadiene	NA	NA	ND	ND	ND	ND
2-Butanone (methyl ethyl ketone)	NA	NA	ND	12	8.5	10
2-Propanol	NA	NA	ND	5.3	4.8	4.8
4-Ethyltoluene	NA	NA	ND	7.5	6.8	8.2
4-Methyl-2-pentanone	NA	NA	ND	ND	ND	ND
Acetone	NA	NA	7.9	33	20	24
Benzene	0.14	1.2	1.3	3.4	2.8	3.3
Chloromethane	NA	NA	1.2	1.3	1.2	1.2
cis-1,2-Dichloroethene	51.1	0.22	ND	1.5	1.9	1.5
Cumene	NA	NA	ND	ND	ND	ND
Cyclohexane	NA	NA	ND	ND	ND	ND
Ethanol	NA	NA	7.0	22	18	22
Ethyl Benzene	NA	NA	0.70	5.6	4.5	5.6
Freon 11	NA	NA	1.7	2.4	2.9	2.6
Freon 113	NA	NA	ND	3.1	3.0	13
Freon 12	NA	NA	2.8	4.0	3.7	7.9
Heptane	NA	NA	ND	4.0	ND	4.0
Hexane	NA	NA	ND	5.4	4.8	5.9
m,p-Xylene	1000	NA	2.4	21	18	22
Methylene Chloride	NA	NA	ND	5.2	4.8	16
o-Xylene	1000	NA	0.82	7.0	6.1	7.8
Propylbenzene	NA	NA	ND	ND	ND	ND
Styrene	NA	NA	ND	ND	ND	ND
Tetrachloroethene	0.7	0.3	ND	ND	ND	ND
Tetrahydrofuran	NA	NA	ND	6.9	5.9	7.6
Toluene	438	3.6	3.8	28	25	31
Trichloroethene	2.04	0.2	0.83 J	3.6	4.2	3.3
1,2-Dichlorobenzene	NA	NA	ND	ND	ND	ND

Notes:

J = Estimated value
CHHSL = California Human Health Screening Level
BAAQMD = Bay Area Air Quality Management District
NA = Not available
ND = Not detected above analytical reporting limits
Samples collected on January 24, 2006
B-163-01 collected outdoors

TABLE 19: CANCER RISK AND NONCANCER HAZARD SUMMARY FOR COMMERCIAL/INDUSTRIAL RECEPTOR, SEPTEMBER 2006 SAMPLING EVENT (CONTINUED)

Technical Memorandum, Subslab Soil Gas Investigation of Buildings 14, 113, 162, 163A, and 398, Alameda Point, Alameda, California

Building	Chemicals of Potential Concern in Soil Gas	Exposure Point Concentration (mg/m^3)	Attenuation Factor[a]	Indoor Air Concentration[a] ($\mu g/m^3$)	Toxicity Values		Risk Estimates	
					Inhalation Cancer Slope Factor [$(mg/kg\text{-}d)^{-1}$]	Inhalation Reference Dose [mg/kg-d]	Cancer Risk	Hazard Index
162	1,1,1-Trichloroethane	3.63E+01	0.00044	1.6E-02	--	6.3E-01	--	3E-06
	1,2,4-Trimethylbenzene	6.92E+00	0.00043	3.0E-03	--	1.7E-03	--	2E-04
	2-Butanone	1.56E+01	0.00044	6.9E-03	--	1.4E+00	--	7E-07
	4-Ethyl Toluene[c]	4.90E+00	0.00045	2.2E-03	--	1.4E+00	--	2E-07
	4-Methyl-2-pentanone	6.72E+00	0.00044	3.0E-03	--	8.6E-01	--	5E-07
	Acetone	4.46E+01	0.00046	2.0E-02	--	9.0E-01	--	3E-06
	Carbon disulfide	4.48E+01	0.00045	2.0E-02	--	2.0E-01	--	1E-05
	Chloroform	5.14E+01	0.00045	2.3E-02	8.1E-02	1.4E-02	9E-08	2E-04
	Hexane	5.64E+00	0.00047	2.7E-03	--	5.7E-02	--	6E-06
	Methylene chloride	3.86E+01	0.00045	1.7E-02	1.6E-03	8.6E-01	1E-09	3E-06
	Tetrachloroethene	4.79E+01	0.00044	2.1E-02	2.1E-02	1.0E-02	2E-08	3E-04
	Tetrahydrofuran	1.82E+01	0.00045	8.2E-03	6.8E-03	8.6E-02	3E-09	1E-05
	Toluene	1.38E+01	0.00045	6.2E-03	--	1.4E+00	--	6E-07
	Trichloroethene	6.03E+03	0.00044	2.7E+00	4.0E-01	1.0E-02	5E-05	4E-02
	Trichlorofluoromethane	2.82E+01	0.00045	1.3E-02	--	2.0E-01	--	9E-06
	Trichlorotrifluoroethane	2.22E+02	0.00044	9.8E-02	--	8.6E+00	--	2E-06
	cis-1,2-Dichloroethene	1.30E+01	0.00044	5.7E-03	--	1.0E-02	--	8E-05
	m,p-Xylene	6.06E+00	0.00044	2.7E-03	--	2.9E-02	--	1E-05
	trans-1,2-Dichloroethene	1.08E+01	0.00044	4.7E-03	--	2.0E-02	--	3E-05
						Total	**5E-05**	**4E-02**
163A	1,1,1-Trichloroethane	4.70E+01	0.00035	1.6E-02	--	6.3E-01	--	4E-06
	1,1-Dichloroethane	2.00E+01	0.00035	7.0E-03	--	1.4E-01	--	7E-06
	Toluene	1.60E+01	0.00035	5.6E-03	--	1.4E+00	--	5E-07
	Trichloroethene	1.20E+05	0.00035	4.2E+01	4.0E-01	1.0E-02	8E-04	6E-01
	Trichlorotrifluoroethane	3.50E+01	0.00035	1.2E-02	--	8.6E+00	--	2E-07
	cis-1,2-Dichloroethene	4.00E+04	0.00035	1.4E+01	--	1.0E-02	--	2E-01
	trans-1,2-Dichloroethene	1.90E+03	0.00035	6.6E-01	--	2.0E-02	--	5E-03
						Total	**8E-04**	**8E-01**

TABLE 20: CANCER RISK AND NONCANCER HAZARD SUMMARY FOR COMMERCIAL/INDUSTRIAL RECEPTOR, MARCH 2007 SAMPLING EVENT

Technical Memorandum, Subslab Soil Gas Investigation of Buildings 14, 113, 162, 163A, and 398, Alameda Point, Alameda, California

Building	Chemicals of Potential Concern in Soil Gas	Exposure Point Concentration ($\mu g/m^3$)	Attenuation Factor[a]	Indoor Air Concentration[a] ($\mu g/m^3$)	Toxicity Values		Risk Estimates	
					Inhalation Cancer Slope Factor [$(mg/kg\text{-}d)^{-1}$]	Inhalation Reference Dose [mg/kg-d]	Cancer Risk	Hazard Index
163A	1,1-Dichloroethane	1.30E+01	0.00035	4.5E-03	--	1.4E-01	--	4E-06
	Acetone	4.20E+01	0.00036	1.5E-02	--	9.0E-01	--	2E-06
	Ethylbenzene	1.20E+01	0.00035	4.2E-03	--	2.9E-01	--	2E-06
	Tetrachloroethene	1.80E+02	0.00035	6.2E-02	2.1E-02	1.0E-02	6E-08	9E-04
	Toluene	1.60E+02	0.00035	5.6E-02	--	1.4E+00	--	5E-06
	Trichloroethene	2.60E+04	0.00035	9.1E+00	4.0E-01	1.0E-02	2E-04	1E-01
	cis-1,2-Dichloroethene	1.20E+04	0.00035	4.2E+00	--	1.0E-02	--	6E-02
	trans-1,2-Dichloroethene	4.70E+02	0.00035	1.6E-01	--	2.0E-02	--	1E-03
	m,p-Xylene	1.50E+01	0.00035	5.2E-03	--	2.9E-02	--	2E-05
						Total	**2E-04**	**2E-01**

Notes:

a Attenuation factor is calculated per building using DTSC's 2003 Vapor Intrusion Model (DTSC 2003), which is based upon Johnson and Ettinger (1991). Indoor air concentration is calculated using the following equation: Indoor air concentration = Attenuation factor (α) x Soil gas concentration.

-- Not available

$\mu g/m^3$ Microgram per cubic meter

mg/kg-d Milligram per kilogram per day

Reference:

Department of Toxic Substances Control (DTSC). 2003. "Johnson and Ettinger (1991) Model for Vapor Intrusion Into Buildings." Version 3.0-Modification 1. July.

APPENDIX B

Chemical Inventory Summary Table and Photographs

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Table B1
Chemical Inventory Summary Table and Photolog

Photo No.	Chemical Product(s) / Ingredients (if listed)	MSDS (Y/N)	Similar Product with MSDS	Location
1	Fire Extinguisher, Dry Chemical	N		Bldg. 163
2	Degreaser, Purple Power	Y		Bldg. 163
3	Brake Parts Cleaner (methanol, toluene, acetone, heptane, xylene, CO2)	N		Bldg. 163
4	Acetone	Y		Bldg. 163
5	Bleach	N		Bldg. 163
5	Lead Acid Battery, deep cycle	Y		Bldg. 163
6	Paint Thinner, in 5 gallon metal fuel jug	Y		Bldg. 163
7	EasiStrip Ink Remover	N		Bldg. 163
8	Unleaded Gasoline generator	Y		Bldg. 163
9	Acrylic Latex Enamel, semi gloss / ethelyne glycol, titanium dioxide, acrylic copolymer, ester alcohol	N		Bldg. 163
10	Latex Paint, Behr , 5 gallon, water based satin enamel, exterio	N		Bldg. 163
10	Toilet Cleaner, Marco brand	N		Bldg. 163
10	Scouring Compound, deep cleaning, Marco brand	N		Bldg. 163
10	Scouring Compound, Comet brand	N		Bldg. 163
10	Mildew Remover, Tilex brand	N		Bldg. 163
10	Cleaner, Spic and Span brand	N		Bldg. 163
10	Cleaner, 408 brand	N		Bldg. 163
10	Cleaner, Resolve brand	N		Bldg. 163
10	Glass Cleaner, Glass Plus brand	N		Bldg. 163
10	Cleaner, Simple Green brand	N		Bldg. 163
10	Rubbing Compound, 3M brand / petroleum distillates, silica grains	N		Bldg. 163
10	Detergent, Zip Way Car Wash	N		Bldg. 163
10	Paint Polish, Automotive, Meguires Cleaner Way	N		Bldg. 163
11	"Battery Acid" hans written on spray bottle (sulphuric acid)	Y		Bldg. 163
12	Biodiesel refining apparatus, 1" deep in cube	Y		Bldg. 163
12	Petroleum distillate, WD-40 brand	N	Marvel Mystery Oil	Bldg. 163
13	Penetrating Oil, "super penetrating liquid"	Y		Bldg. 163
13	Petroleum distillate, WD-40 brand	N	Marvel Mystery Oil	Bldg. 163
13	Diesel	Y		Bldg. 163
13	Hydrogen Peroxide	N		Bldg. 163
14	Methyl Ethyl Ketone (MEK)	N		Bldg. 163
14	Paint Thinner, Ace Hardware brand, 830 VOCs max, 100% "mineral spirits"	Y		Bldg. 163
14	Paint Stripper, Jasco / petroleum distillate, xylene, methyl ethyl ketones (MEK), acetone.	N		Bldg. 163
14	Deglosser, Liquid Sandpapper brand / xylene, naphtha, alcohol	N		Bldg. 163
14	Derusto Galva-Grip brand / "mineral spirits	N		Bldg. 163
15	Acrylic Latex Paint	N		Bldg. 163
16	Toluene	N		Bldg. 163
16	Armor-All brand interior protecting compound	N		Bldg. 163
16	Spray paint	N		Bldg. 163
16	Metal Cleaner, NuSheen	N	Metal polish	Bldg. 163
17	Muriatic Acid	N	Acetic, Nitric, Sulfuric Acid	Bldg. 163
17	Gear Lubricant, Penzoil 4096	N		Bldg. 163
18	Etching compound, used Dual Etch	N		Bldg. 163
19	Etching compound, Dual Etch, W4K 263, Sherwin Williams brand / 2-butoxyethanol, phosphoric acid, potassium fluoride	N		Bldg. 163
20	Latex Paints, various	N	Polyurethane paint	Bldg. 163
20	Buten Industrial Finishes	N		Bldg. 163

Table B1
Chemical Inventory Summary Table and Photolog

Photo No.	Chemical Product(s) / Ingredients (if listed)	MSDS (Y/N)	Similar Product with MSDS	Location
20	Behr 1-part epoxy concrete paint, acrylic	N		Bldg. 163
20	Latex paint, Sherwin Williams brand, 1 gallon	N		Bldg. 163
20	(double) Acrylic Latex Enamel paint, semi gloss	N		Bldg. 163
21	Paint and toluene mix, 1/10 gallon	N		Bldg. 163
21	Varnish, Satin Spar Marine / petroleum distillates	N		Bldg. 163
21	Acrylic Latex Paint, semi-gloss / acrylic resin, petro. distillates solvent, refined light parafinic, 2-(2-butoxyoxy)-ethanol, 2-(2-methoxyethoxy)-ethanol, propanoic acid	N		Bldg. 163
21	Shellac base primer sealer, Bin brand / barium sulfate, ethanol, isopropanol, shellac, titanium dioxide	N		Bldg. 163
21	Wood Preservative, Copper Green brand / copper naphthanate	N		Bldg. 163
21	gallon paint cans and buckets	N/A		Bldg. 163
22	Acetic, Nitric, Sulfuric Acid, "NAOH" (Sodium Hydroxide), and "Zinc Acetate"	Y		Bldg. 163
23	Nitric, Sulfuric Acid, Sigma Aldrrich brand and "hexanes"	Y		Bldg. 163
24	Alcohol, anhydrous reagent / methyl and isopropyl alcohol	N		Bldg. 163
25	Dichloromethane	N		Bldg. 163
26	Sodium Hydroxide	N		Bldg. 163
27	Acetone	Y		Bldg. 163
28	Fuel jugs (gas and diesel)	Y, both		Bldg. 163
28	Acetic, Nitric, Sulfuric Acid	Y		Bldg. 163
29	Lead Acid Batteries, in plastic containers	Y		Bldg. 163
30	Unleaded Gasoline tank, generator	Y		Bldg. 163
31	Empty Unleaded Gasoline tank, generator, new	N/A		Bldg. 163
32	Rust Inhibitor, LPS brand / petroleum distillates, hydrotreated heavy and light parafinic, acetone	N		Bldg. 163
33	Diesel, Engine tank	Y		Bldg. 163
34	Lead acid batteries	Y		Bldg. 163
35	Ethylene Glycol and "used coolant" in Carboy (5 gallon plastic jugs)	Y		Bldg. 163
35	Motor oil, used, in separate Carboys	N		Bldg. 163
36	KOH Glycerin mix	N		Bldg. 163
37	Hydraulic Oil	N		Bldg. 163
38	Muriatic Acid	N		Bldg. 163
39	Motor Oil, used	N		Bldg. 163
40	Fuel, gasoline and diesel	Y		Bldg. 163
41	PVC Primer	N		Bldg. 163
41	Oil lube	N		Bldg. 163
42	Fuel, gasoline and diesel, jugs	Y		Bldg. 163
42	Carburetor Cleaner, Gumout brand / acetone, xylene, methyl ethyl ketone (MEK), petroleum distillate, propane	Y		Bldg 163A
42	"Oil Treatment", Super Tech brand (WalMart), no ingredients	N		Bldg 163A
42	Lithium grease, no ingredients	N		Bldg 163A
42	Brake Parts Cleaner (methanol, toluene, acetone, heptane, xylene, CO2)	N		Bldg 163A
42	Engine degreaser, Super Tech WalMart brand, no ingredients	N	Gumout Carburetor Cleaner	Bldg 163A
42	Tire Sealant, Slime brand	N		Bldg 163A
42	Spray, anti-vandal / methylene chloride, heptane, methyl ethyl ketone (MEK), isopropanol, toluen	N		Bldg 163A
42	Electrical contact cleaner, Loctite brand / dichlorofluoroethane	N		Bldg 163A
42	Motor oil, new	N		Bldg 163A
42	Gear lube	N		Bldg 163A
42	Gear oil			Bldg 163A
42	Anti-Rust additive, Prestone brand / petroleum distillates, sodium petroleum sulfonate	N		Bldg 163A
42	Ethylene glycol (coolant/ anti-freeze)	N		Bldg 163A
43	Fuel, gasoline and diesel, 4 jugs, diesel	Y		Bldg 163A

Table B1
Chemical Inventory Summary Table and Photolog

Photo No.	Chemical Product(s) / Ingredients (if listed)	MSDS (Y/N)	Similar Product with MSDS	Location
44	Electrical insulation coating, liquid, 3M Scotchkote brand / acetone, methyl ethy ketone (MEK), toluene, cyclohexanone, acrylonitrile, butadiene polymer	N		Bldg 163A
44	Thread Sealant, Loctite brand	N		Bldg 163A
44	Pipe Joint Compound, X-Pando brand	N		Bldg 163A
44	PVC Primer / methyl ethyl ketone (MEK), tetrahydrofuran	N		Bldg 163A
44	Silicone Lubricant, "heavy duty" / acetone, heptane, dimethylpolysiloxane, and hyrdrocarbon propellant	N		Bldg 163A
44	Wood Finish, clear	N		Bldg 163A
44	Propane	N		Bldg 163A
44	Insulation in a can, Great Stuff Brand	N		Bldg 163A
44	Mineral spirits, no details	N		Bldg 163A
44	Enamel primer, spray cans	N		Bldg 163A
44	Lithium grease	N		Bldg 163A
44	Electronics cleaner	N		Bldg 163A
44	Hydraulic (jack) oil and power steering fluid	N	Brake fluid	Bldg 163A
44	Motor oil, new	N		Bldg 163A
44	Ethylene glycol, new	N		Bldg 163A
44	ABS Glue / tetrahydrofuran, MEK, cyclohexane, PVC resin	N		Bldg 163A
44	Acetone	N		Bldg 163A
44	Paint Stripping Gel	N		Bldg 163A
44	Enamel and latex house paints, 1 gallons	N		Bldg 163A
44	Polyurethane wood finsh, ZAR brand, pint cans	N		Bldg 163A
44	Caulking	N		Bldg 163A
44	Contact Cement	N		Bldg 163A
45	Gasoline Jugs, plastic	Y		Bldg 163A
46	Naphtha	N		Bldg 163A
46	Acetone	Y		Bldg 163A

NOTES:

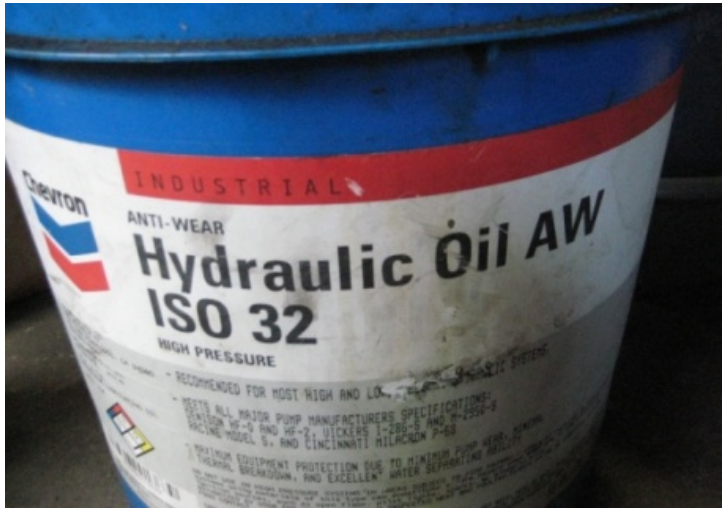
Bldg. Building
MSDS Material Safety Data Sheet
N No
N/A Not Applicable
Y Yes

Appendix B Photos

Building 163

NO EQUAL IN THE WORLD
prolong
SUPER LUBRICANTS
SPL100
SUPER PENETRATING LUBRICANT
THE ULTIMATE IN PROTECTION & PERFORMANCE
WD-40
Stops Squeaks
Protects Metal
Loosens Rusted Parts
Frees Sticky Mechanisms
NET WEIGHT 9 OZ.
Diesel Fuel
APPLE BUTTER
Net Wt. 10 Oz.
hydrogen peroxide

BEHR
PREMIUM PLUS
BEHR
PREMIUM PLUS
BEHR
PREMIUM PLUS


INDUSTRIAL
Chevron
ANTI-WEAR
Hydraulic Oil AW
ISO 32
HIGH PRESSURE

SHERWIN WILLIAMS
SPECIALTY PRODUCTS
PRODUCTOS ESPECIALES
PRODUITS SPÉCIAUX
W4K 263 DUAL-ETCH
Metal Cleaner & Conditioner
Limpiador Y Acondicionador De Metal
Nettoyeur Et Conditionneur De Métal
DANGER!
3.78 litros
3.78 liters
Un Gallon

ACE
VM&P
Naphtha
Pure
High strength paint solvent and additive
Thins oil based paints, enamels and varnishes
ACE
Acetone
Extra Strength

MSDS
available
200-838-9
ALDRICH
CHEMISTS HELPING
Dichloromethane, 99.6%, A.C.S.
TOXIC

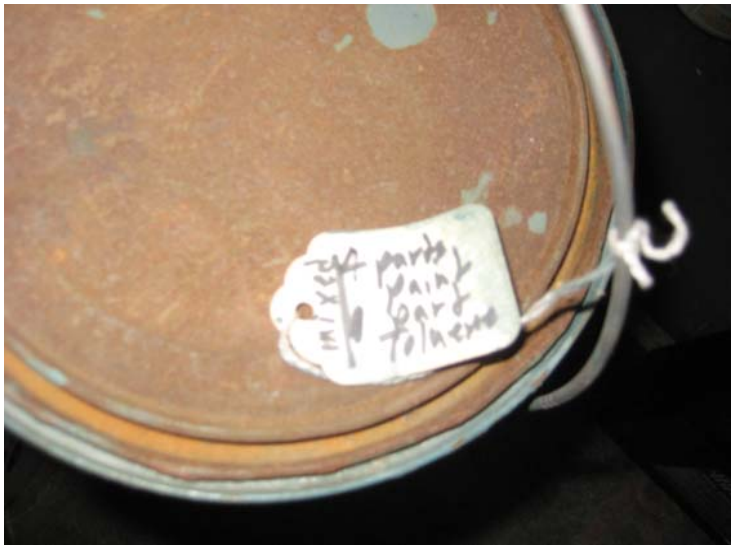
J.T.Baker
Nitric Acid,
69.0-70.0%
Sulfuric Acid
BAKER ANALYZED

Muriatic
Acid

GASOLINE

USED
TOLUENE

USED OIL
USED OIL



easiStrip
one step ink cleaner and emulsion remover
EASIWAY SYSTEMS, INC.
K096

ACE
Semi-Gloss
House & Trim
100% ACRYLIC LATEX ENAMEL

WHITE

LPS
3
PREMIER

N00236_003662
ALAMEDA POINT

SENSITIVE RECORD

PORTIONS OF THIS RECORD ARE CONSIDERED SENSITIVE AND ARE NOT AVAILABLE FOR PUBLIC VIEWING

POTENTIAL PRIVACY ACT INFORMATION

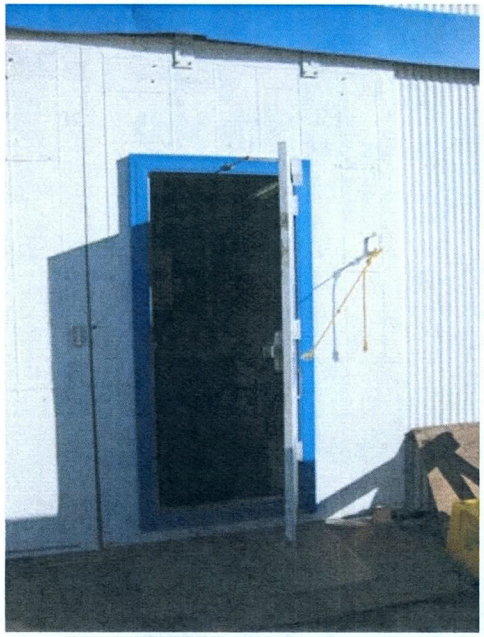
FOR ADDITIONAL INFORMATION, CONTACT:

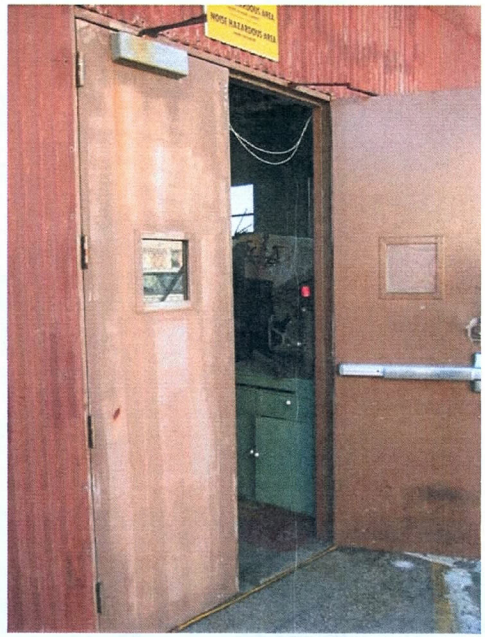
DIANE C. SILVA, RECORDS MANAGER
NAVAL FACILITIES ENGINEERING COMMAND, SOUTHWEST
1220 PACIFIC HIGHWAY
SAN DIEGO, CA 92132

TELEPHONE: (619) 556-1280
E-MAIL: diane.silva@navy.mil

07 21 2008

07 21 2008





07 21 2008

07.21.2008

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07.21.2008

APPENDIX C

Soil Vapor/Air Sampling Forms

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Soil Vapor / Air Sampling Form

Date	6-19-09	Sampler	JACOB JOAB
Container Type	SUMMA 6-LITER	Container ID	656
Regulator ID:	2625	PURGE CAN 863	
Sample ID:	SG-001 LOCATION		
Weather Conditions	Temperature ~~75~~ 69°F	Precipitation	NONE
Sampling Device			
Probe Depth		Tubing Length	34"
Purge Start Time	11:27 @ > -30 in Hg	End Time	11:47 @ -10 in Hg
Sample Start Time	11:48	End Time	12:43
Canister start pressure	> -30 in Hg	End pressure	-5
Purged Volume			

Field Measurements:

Time	Flow (mL/min)	Pressure	Comments
11:52	100 - 150 ml/min	-27 in Hg	
11:56	"	-24.75	
12:14	"	-15	
12:18	"	-13	
12:23	"	-10.75	
12:30	"	-8	
12:38	"	-6.5	
12:40	"	-5.5	
12:43	"	-5	
		6-19-09	

Comments: CALCULATED PURGE VOLUME: 1.25 LITERS
1.5 x CALC. " " : 1.875 LITERS
LISTED REG. FLOW RATE 100-150 ml/min
MAX TIME TO PURGE 19 MIN.
IPA SET BESIDE SAMPLE LOCATION AFTER START TIME

Soil Vapor / Air Sampling Form

Date	6-19-09	Sampler	JACOB JOAB
Container Type	SUMMA 6-LITER	Container ID	779
Regulator ID:	2523	PURGE CAN	423
Sample ID:	SG-002		
Weather Conditions	Temperature 69°F	Precipitation	NONE
Sampling Device			
Probe Depth	7" BELOW BOTTOM FOUNDATION	Tubing Length	34 INCHES
Purge Start Time	11:01 @ >-30 in Hg	End Time	11:21 @ -11 in Hg
Sample Start Time	11:22	End Time	12:28
Canister start pressure	>-30 in Hg	End pressure	-5 in Hg
Purged Volume			

Field Measurements:

Time	Flow (mL/min)	Pressure	Comments
11:31	100-150	-28 in Hg	
11:41	"	-25	
11:49	"	-19	
11:50	"	-16	
12:13	"	-10	
12:12	"	-8	
12:22	"	-7	
12:28	"	-5	

6-19-09

Comments: CALCULATED PURGE VOLUME: 1.25 LITERS
1.5 x CALCULATED PURGE VOLUME: 1.875 LITERS
LISTED REGULATOR FLOW RATE: 100-150 ml/min
MAX TIME TO PURGE: 19 MINUTES

IPA SET AT SAMPLE LOCATION AFTER SAMPLE START TIME

June 8, 2009

Soil Vapor / Air Sampling Form

Date	6-19-09	Sampler	JACOB JOAB
Container Type	SUMMA 6-LITER	Container ID	737
Regulator ID:	2555	PURGE CAN	372
Sample ID: LOCATION	SG-003		
Weather Conditions	Temperature 69°F	Precipitation	NONE
Sampling Device			
Probe Depth	7" BELOW BOTTOM FOUNDATION	Tubing Length	34 INCHES
BOTTOM GAUGE Purge Start Time	10:38 @ -28 in Hg	End Time	10:58 @ -13 in Hg
Sample Start Time	10:58	End Time	12:05
Canister start pressure	-28.6	End pressure	-6 in Hg
Purged Volume			

Field Measurements:

Time	Flow (mL/min)	Pressure	Comments
11:03	100-150	-27 in Hg	
11:18	"	-20.5	
11:24	"	-17.5	
11:30	"	-15.75	
11:42	"	-11.5	
11:49	"	-9.5	
11:54	"	-8	
11:58	"	-7	
12:05	"	-6	
			6-19-09

Comments: CALCULATED PURGE VOLUME: 1.25 LITERS
1.5 x CALCULATED PURGE VOLUME: 1.875 LITERS
LISTED REGULATOR FLOW RATE: 100 - 150 ml/min
MAX TIME TO PURGE: 19 MINUTES

IPA SET BESIDE SAMPLE LOCATION AFTER SAMPLE START TIME

June 8, 2009

Soil Vapor / Air Sampling Form

DUP @ SG-003

Date	6-19-09	Sampler	JACOB JOAB
Container Type	SUMMA 6-LITER	Container ID	696
Regulator ID:	2555	PURGE CAN:	N/A
Sample ID: LOCATION SG-003 DUP			
Weather Conditions	Temperature 70-75 °F	Precipitation	NONE

Sampling Device			
Probe Depth		Tubing Length	34"
Purge Start Time	N/A	End Time	N/A
Sample Start Time	12:09	End Time	13:22
Canister start pressure	-28.5 in Hg	End pressure	
Purged Volume	N/A		

Field Measurements:

Time	Flow (mL/min)	Pressure	Comments
12:15	100 – 150 ml/min	-26	
12:31	"	-19	
12:39	"	-16	
12:46	"	-13.5	
12:53	"	-11	
12:58	"	-9.5	
13:02	"	-8.5	
13:05	"	-8	
13:09	"	-7	
13:12:30	"	-6.5	
13:15	"	-6	
13:22	"	-5	
		6-19-09	

Comments: NO PURGE
LISTED REGULATOR FLOW RATE 100-150 ml/min
IPA REMOVED FROM BUILDING DURING SWAP OF
SUMMA 6-LITER CANISTERS.
AFTER START TIME ON THIS DUP, IPA SET BESIDE
SAMPLING LOCATION

APPENDIX D

Chain-of-Custody Forms (ENCLOSED) and

Analytical Laboratory Data Packages (CD ONLY)

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TETRA TECH
1230 Columbia Street, Suite 750
San Diego, CA 92101 (619) 234-8696

NUMBER 30809

CHAIN-OF-CUSTODY RECORD

PROJECT NAME: Building #163	PURCHASE ORDER NO.
PROJECT LOCATION: Alameda	PROJECT NO.: 12990.0044.003
SAMPLER NAME: Mike Lewis	AIRBILL NUMBER
PROJECT CONTACT: Lynn Jefferson	PROJECT CONTACT PHONE NUMBER: 919-278-2553

ANALYSES REQUIRED: TO15 Sim

LABORATORY NAME: EAS

LABORATORY ID (FOR LABORATORY)

Project Information Section Do not submit to Laboratory

SAMPLE ID	DATE COLLECTED	TIME COLLECTED	NO. OF CONTAINER	LEVEL 3	LEVEL 4	TYPE	TAT	TO15 Sim	COMMENTS	LOCATION	DEPTH START	DEPTH END	QC
44-016	6-16-09		1	X			10 day	X	full scan	Trip Blank			TB
44-017	↓	1653	1	X			↓	X	full scan	OTD-001			Reg
44-018	↓	1653	1	X			↓	X	full scan	OTD-002			Reg
44-006B	6-16-09	1535	1	X			10 day	X	COPCs	IND-001			[illegible]

RELINQUISHED BY (Signature)	DATE	RECEIVED BY (Signature)
[illegible]	6-16-09	[illegible]
COMPANY: SCS Tracy	TIME: 1800	COMPANY
RELINQUISHED BY (Signature)	DATE	RECEIVED BY (Signature)
COMPANY	TIME	COMPANY
RELINQUISHED BY (Signature)	DATE	RECEIVED BY (Signature)
COMPANY	TIME	COMPANY

LABORATORY INSTRUCTIONS/COMMENTS

COMPOSITE DESCRIPTION

SAMPLE CONDITION UPON RECEIPT (FOR LABORATORY)

TEMPERATURE: _____ SAMPLE CONDITION: ☐ INTACT ☐ BROKEN

COOLER SEAL: ☐ INTACT ☐ BROKEN

SAMPLING COMMENT: Bldg. #163

White - Laboratory; Pink - Laboratory; Canary - Project File; Manila - Data Management

TETRA TECH
1230 Columbia Street, Suite 750
San Diego, CA 92101 (619) 234-8696

NUMBER 30653

CHAIN-OF-CUSTODY RECORD

PROJECT NAME: Building #163	PURCHASE ORDER NO.
PROJECT LOCATION: Alameda	PROJECT NO.: 12290.0044.003
SAMPLER NAME: Mike Lewis	AIRBILL NUMBER
PROJECT CONTACT: Lynn Jefferson	PROJECT CONTACT PHONE NUMBER: 619-278-2553

ANALYSES REQUIRED: TO15 SIM

LABORATORY NAME: EAS

LABORATORY ID (FOR LABORATORY)

Project Information Section Do not submit to Laboratory

SAMPLE ID	DATE COLLECTED	TIME COLLECTED	NO. OF CONTAINER	LEVEL 3	LEVEL 4	TYPE	TAT	TO15 SIM	COMMENTS	LOCATION	DEPTH START	DEPTH END	QC
44-006A	6-16-09	1106	1	X			10 day	X	COPCs	IND-001			Reg
44-007	↓	1651	1	X				X	COPCs	IND-002			Reg
44-008		1646 ~~1633~~	1	X				X	COPCs	IND-003			Reg
44-009		1645 ~~1638~~	1	X				X	COPCs	IND-004			Reg
44-010		1545	1	X				X	COPCs	IND-005			Reg
44-011		1414	1	X				X	COPCs	IND-006			Reg
44-012		1630	1	X				X	COPCs	IND-007			Reg
44-013		1633	1	X				X	COPCs	IND-008			Reg
44-014		1638	1	X				X	COPCs	IND-009			Reg
44-015	↓	1640	1		X		↓	X	COPCs	IND-006			FD

RELINQUISHED BY (Signature)	DATE	RECEIVED BY (Signature)
[signature]	6-16-09	FEDEX
COMPANY: Sub Tech	TIME: 1800	COMPANY
RELINQUISHED BY (Signature)	DATE	RECEIVED BY (Signature)
COMPANY	TIME	COMPANY
RELINQUISHED BY (Signature)	DATE	RECEIVED BY (Signature)
COMPANY	TIME	COMPANY

LABORATORY INSTRUCTIONS/COMMENTS

COMPOSITE DESCRIPTION

SAMPLE CONDITION UPON RECEIPT (FOR LABORATORY)

TEMPERATURE: _____ SAMPLE CONDITION: ☐ INTACT ☐ BROKEN

COOLER SEAL: ☐ INTACT ☐ BROKEN

SAMPLING COMMENT: Bldg. #163

White - Laboratory; Pink - Laboratory; Canary - Project File; Manila - Data Management

ENVIRONMENTAL ANALYTICAL SERVICE, INC.
DATA DELIVERABLE PACKAGE

COVER PAGE

Lab Name:	Environmental Analytical Service	Contract:	
Lab Code:		SDG No.:	209270
Report Date:		Level:	4

This Data Deliverable Package was prepared by Environmental Analytical Service and covers the following samples:

Sample No.	Lab Sample ID
44-006A	209270-01
44-007	209270-02
44-008	209270-03
44-009	209270-04
44-010	209270-05
44-011	209270-06
44-012	209270-07
44-013	209270-08
44-014	209270-09
44-015	209270-10
44-016	209270-11
44-017	209270-12
44-018	209270-13
44-006B	209270-14

Comments:

I certify that this data package is in compliance with the Terms and Conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on floppy diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature:	K Bec	Name:	Steve Hoyt
Date:	7/16/09	Title:	Lab Director

(Kristin Beckley for Steve Hoyt)

ANALYTICAL REPORT, QUALITY ASSURANCE REPORT, AND DELIVERABLES

Project Name: Alameda

Sample Date: 6/16/09

Sample Delivery Groups: 209270

Prepared for:

Sealaska Environmental
Trabuco Canyon, CA

Prepared by:

Kristin Beckley

Steve Hoyt

ENVIRONMENTAL ANALYTICAL SERVICE, INC.
173 Cross St.
San Luis Obispo, CA 93401

(805) 781-3585, FAX (805) 541-4550

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SECTION 1
Project Summary

1.1 Analytical Batch and Log-in Batch Summary

The samples received by Environmental Analytical Service (EAS) for this project were logged in and assigned a Sample Delivery Group (SDG) Number. Each sample is also assigned an individual Laboratory ID number. The samples were then distributed to the analysts for the designated analysis. Each sample was analyzed in a daily analytical batch with associated QC. Each QC batch is assigned a QC analytical batch number. The Analytical Batch Reference Table is a summary of the SDG number, the client ID, the date collected, the EAS laboratory ID number, and the analytical batch number for each sample received. The QC Criteria for each analytical test is summarized in Section 1.4. For detailed information on Quality Control consult the EAS Quality Manual. Section 1.5 contains a Case Narrative for each QC analytical batch.

This section contains information equivalent to that found in EPA FORM DC-1 – Volatile Organics Sample Log-In Sheet.

1.2 Sample Receipt Log-in Form and Chain-of-Custody Forms

The following page shows the Sample Receipt Log-In Form that was filled out by Sample Control when the samples were received by EAS. Following the Sample Receipt Log-In Form are the Chain-of-Custody form(s) received with the samples.

SAMPLE LOG-IN SHEET

Lab Name: Environmental Analytical Service
Received By (Print): Karina Campbell
Received By (Signature): Karina Campbell
Contract Number:

Page 1 of 1
Log-In Date: 6/22/2009

Case Number:
Sample Delivery Group # 209270
SAS Number:

CIRCLE THE APPROPRIATE RESPONSE

1. Custody Seal(s): Present/Absent* Intact/Broken N/A
2. Custody Seal Nos.:
3. Traffic Reports/ Chain-of-Custody Records or Packing Lists: Present/Absent* N/A
4. Airbill: Airbill/Sticker Present/Absent* N/A
5. Airbill No(s): 863196576380 863196266998 863196576368 / 863196576379
6. Sample Tags: Present/Absent* Sample Tag Numbers: Listed/Not Listed on Chain-of-Custody
7. Sample Condition: Intact/Broken*/Leaking
8. Cooler Temperature Indicator Bottle: Present/Absent*
9. Cooler Temperature: N/A
10. Does information on custody records, traffic reports and sample tag agree? Yes / No *
11. Date Received at Lab: 6/17/2009
12. Time Received: 12:00 PM

Sample Transfer
Area #:
By:
On:

Sample #	Corresponding Sample Tag #	Corresponding Canister #	Corresponding Assigned Lab #	REMARKS: Condition of Sample Shipment etc.
44-006A		741	209270-01	
44-007		640	209270-02	
44-008		692	209270-03	
44-009		664	209270-04	
44-010		633	209270-05	
44-011		169	209270-06	
44-012		670	209270-07	
44-013		782	209270-08	
44-014		526	209270-09	
44-015		188	209270-10	
44-016		703	209270-11	
44-017		681	209270-12	
44-018		180	209270-13	
44-006B		2968	209270-14	

* If Circled, contact SMO and attach record of resolution

Reviewed By:
Date: 6/22/2009

Logbook No.: 5
Logbook Page 180-181

Form AADC - 1

LBSERV_labtemp\samcon\samlogin.xls

TETRA TECH
1230 Columbia Street, Suite 750
San Diego, CA 92101 (619) 234-8696

NUMBER 30809

CHAIN-OF-CUSTODY RECORD

PROJECT NAME: Building #163	PURCHASE ORDER NO.
PROJECT LOCATION: Alameda	PROJECT NO.: 12990.0044.003
SAMPLER NAME: Mike Lewis	AIRBILL NUMBER
PROJECT CONTACT: Lynn Jefferson	PROJECT CONTACT PHONE NUMBER: 919-278-2553

LABORATORY NAME: EAS

LABORATORY ID (FOR LABORATORY)

ANALYSES REQUIRED: N2

SAMPLE ID	DATE COLLECTED	TIME COLLECTED	NO. OF CONTAINER	LEVEL 3	LEVEL 4	TYPE	TAT	TOIS Sim	Canister #	SDG 209270	Initial P	Final P	Shelf	COMMENTS
44-016	6-16-09		1	X			10 day	X	903	11	1422	1422	E	Full scan
44-017	↓	1653	1	X			↓	X	681	12	488	903	A	Full scan
44-018	↓	1653	1	X			↓	X	180	13	526	856	A	Full scan
44-006B	6-16-09	1535	1	X			10 day	X	968	14	347	900	A	COPCs

DGN

RELINQUISHED BY (Signature)	DATE	RECEIVED BY (Signature)
DGN	6-16-09	Fedex
COMPANY: SES-TECH	TIME: 1800	COMPANY
RELINQUISHED BY (Signature)	DATE	RECEIVED BY (Signature)
COMPANY	TIME	COMPANY
RELINQUISHED BY (Signature)	DATE: 6/19/09	RECEIVED BY (Signature): Travis Robinson
COMPANY	TIME	COMPANY: EAS Lab

LABORATORY INSTRUCTIONS/COMMENTS

COMPOSITE DESCRIPTION

SAMPLE CONDITION UPON RECEIPT (FOR LABORATORY)
TEMPERATURE: _____ SAMPLE CONDITION: ☐ INTACT ☐ BROKEN
COOLER SEAL: ☐ INTACT ☐ BROKEN

TETRA TECH
1230 Columbia Street, Suite 750
San Diego, CA 92101 (619) 234-8696

NUMBER 30809

CHAIN-OF-CUSTODY RECORD

PROJECT NAME: Building #163	PURCHASE ORDER NO.
PROJECT LOCATION: Alameda	PROJECT NO.: 12990.0044.003
SAMPLER NAME: Mike Lewis	AIRBILL NUMBER
PROJECT CONTACT: Lynn Jefferson	PROJECT CONTACT PHONE NUMBER: 919-278-2553

LABORATORY NAME: EAS

LABORATORY ID (FOR LABORATORY)

ANALYSES REQUIRED: N2

SAMPLE ID	DATE COLLECTED	TIME COLLECTED	NO. OF CONTAINER	LEVEL 3	LEVEL 4	TYPE	TAT	TO15 Sim	Canister #	SDG 209270	Initial P	Final P	Shelf	COMMENTS
44-016	6-16-09		1	X			10 day	X	903	11	1422	1422	E	Full scan
44-017	↓	1653	1	X			↓	X	681	12	488	903	A	Full scan
44-018	↓	1653	1	X			↓	X	180	13	526	856	A	Full scan
44-006B	6-16-09	1535	1	X			10 day	X	968	14	347	900	A	COPCs

RELINQUISHED BY (Signature)	DATE	RECEIVED BY (Signature)
[signature]	6-16-09	Fedex
COMPANY: SES-TECH	TIME: 1800	COMPANY
RELINQUISHED BY (Signature)	DATE	RECEIVED BY (Signature)
COMPANY	TIME	COMPANY
RELINQUISHED BY (Signature)	DATE: 6/19/09	RECEIVED BY (Signature): Travis Robinson
COMPANY	TIME	COMPANY: EAS Lab

LABORATORY INSTRUCTIONS/COMMENTS

COMPOSITE DESCRIPTION

SAMPLE CONDITION UPON RECEIPT (FOR LABORATORY)
TEMPERATURE: _____ SAMPLE CONDITION: ☐ INTACT ☐ BROKEN
COOLER SEAL: ☐ INTACT ☐ BROKEN

1.3 Analytical Batch Reference Table(s)

EPA TO-15M Tracer, EPA TO-15M Full Scan

SDG Number	Lab ID Number	Date Collected	Client ID	Analysis Batch
209270	1	6/16/09	44-006A	062409-MS1
209270	2	6/16/09	44-007	062409-MS1
209270	3	6/16/09	44-008	062409-MS1
209270	4	6/16/09	44-009	062509-MS1
209270	5	6/16/09	44-010	062409-MS1
209270	6	6/16/09	44-011	062409-MS1
209270	7	6/16/09	44-012	062509-MS1
209270	8	6/16/09	44-013	062509-MS1
209270	9	6/16/09	44-014	062509-MS1
209270	10	6/16/09	44-015	062509-MS1
209270	11	6/16/09	44-016	062509-MS1
209270	12	6/16/09	44-017	062509-MS1
209270	13	6/16/09	44-018	062509-MS1
209270	14	6/16/09	44-006B	062409-MS1

EPA TO-15M SIM

SDG Number	Lab ID Number	Date Collected	Client ID	Analysis Batch
209270	1	6/16/09	44-006A	062409-MS2 070909-MS2
209270	2	6/16/09	44-007	062209-MS2 070909-MS2
209270	3	6/16/09	44-008	062409-MS2 070909-MS2
209270	4	6/16/09	44-009	062209-MS2
209270	5	6/16/09	44-010	062309-MS2
209270	6	6/16/09	44-011	062309-MS2 070909-MS2
209270	7	6/16/09	44-012	062509-MS2
209270	8	6/16/09	44-013	062309-MS2 071009-MS2
209270	9	6/16/09	44-014	062309-MS2 071009-MS2
209270	10	6/16/09	44-015	062309-MS2
209270	11	6/16/09	44-016	062309-MS2 071009-MS2
209270	12	6/16/09	44-017	062309-MS2 071009-MS2
209270	13	6/16/09	44-018	062409-MS2 071009-MS2
209270	14	6/16/09	44-006B	062209-MS2 071009-MS2

1.4 QC Criteria

The QC criteria are listed in the following tables by analytical test. The EAS QC Criteria described in the EAS Quality Manual was used as The QC criteria unless Project Specific QC Criteria was specified and supplied.

The daily analytical batch data was checked against the QC criteria and any criteria that did not pass are listed in the QC Comments section of the case narrative under the daily analytical batch number.

This package contains all the information needed for data validation for the requested samples.

TO-15 Full Scan Modified

Parameter	EAS Modified TO-15	EPA TO-15
BFB Tune	Daily	Daily
Tuning Criteria	TO-15 Tune Criteria	TO-15 Criteria
Initial Calibration	5pt points minimum Relative Standard Deviation (RSD) < 30% for Standard TO-15 Compounds 4 compounds <40% < 40% for EAS additional compounds 4 additional compounds < 50% 1,2,4-Trichlorobenzene, naphthalene, and hexachlorobutadiene can be up to 80%	2 to 50 ppbv 1 to 25 ppbv <30% with 2 compounds out to 40% EAS has additional compounds to its TO15 list that are not standard TO-15 compounds analyzed by most labs.
Calibration Check Sample (CCS)	Every 12 months Same Percent RSD as Initial Calibration	Every 12 months Same Percent RSD as Initial Calibration
Continuing Calibration Verification (CCV)	Daily (24 hours) 5 ppbv Std Same Percent Criteria as Initial Calibration	TO-15 uses 10 ppbv std
Internal Standard (IS)	10 to 25 ppbv 2 IS Pentafluorobenzene 1,4-Difluorobenzne RT < 0.5 min daily std. Response 60% to 140%	10 ppbv with 3 IS Pentafluorobenzene is used instead of Bromochlorobenzene which is a target compound
Surrogate	Toluene-d8 70-130% recovery.	Matrix interferences can cause out of limits recoveries.
Method Blank	<LOQ	<LOC
Laboratory Control Spike	1 per Daily Batch 70-130% for LCS list which is a short list of Standard TO-15 One compound may marginally exceed limits on LCS, LCD, and/or	70 to 130%

	RPD 60 to 140% for hydrocarbons, oxygenated hydrocarbons, and EAS additional compounds	
Matrix Spike	1 per Daily Batch if Requested 70-130% special list	
Duplicate (One of below) Lab Control Dup Matrix Spike Dup	1 duplicate with each 20 samples <25% for special LCS spike list or standard TO-15 compounds <30% for EAS additional compounds	<25%
Canister Holding Times	30 days from sampling date unless specified by client	30 days
Canister Certification	Certification <0.2 ppbv or less than LOQ of target compound by full scan GC/MS	0.2 ppbv

TO-15 SIM Modified

Parameter	EAS Modified TO-15	EPA TO-15
BFB Tune	Daily	Daily
Tuning Criteria	TO-15 Tune Criteria	TO-15 Criteria
Initial Calibration	5pt points minimum Relative Standard Deviation (RSD) < 30% for Standard TO-15 Compounds 4 compounds <40% < 40% for EAS additional compounds 4 additional compounds < 50% 1,2,4-Trichlorobenzene, naphthalene, and hexachlorobutadiene can be up to 80%	2 to 50 ppbv 1 to 25 ppbv <30% with 2 compounds out to 40% EAS has additional compounds to its TO15 list that are not standard TO-15 compounds analyzed by most labs.
Calibration Check Sample (CCS)	Every 12 months Same Percent RSD as Initial Calibration	Every 12 months Same Percent RSD as Initial Calibration
Continuing Calibration Verification (CCV)	Daily (24 hours) 0.1-0.5 ppbv Std Same Percent Criteria as Initial Calibration	TO-15 uses 10 ppbv std
Internal Standard (IS)	0.2 ppbv IS Chlorobenzene-d5 RT < 0.5 min daily std. Response 50% to 200%	10 ppbv with 3 IS
Surrogate	Toluene-d8 70-130% recovery.	Matrix interferences can cause out of limits recoveries.
Method Blank	<LOQ	<LOC

Laboratory Control Spike	1 per Daily Batch 70-130% for LCS list which is a short list of Standard TO-15 One compound may marginally exceed limits on LCS, LCD, and/or RPD 60 to 140% for hydrocarbons, oxygenated hydrocarbons, and EAS additional compounds	70 to 130%
Matrix Spike	1 per Daily Batch if Requested 70-130% special list	
Duplicate (One of below) Lab Control Dup Matrix Spike Dup	1 duplicate with each 20 samples <25% for special LCS spike list or standard TO-15 compounds <30% for EAS additional compounds <40% Naphthalene	<25%
Canister Holding Times	30 days from sampling date unless specified by client	30 days
Canister Certification	Certification <0.2 ppbv or less than LOQ of target compound by full scan GC/MS	0.2 ppbv

1.5 Project Case Narrative

The samples were received in good condition with canister pressure in an acceptable range for a valid sample event. All analyses were performed in holding time as specified by the QC criteria listed in Section 1.4. The QC criteria for each of the analytical methods used in this project has been met except as noted in the QC comments for the daily analytical batch.

Daily Analytical Batch #: 062209-MS2
All analysis met the QC requirements for the method except sample 209270-14 marginally exceeds QC limits for internal standard recovery due to sample matrix.

Daily Analytical Batch #: 062309-MS2
All analysis met the QC requirements for the method except samples 209270-10,11 marginally exceed QC limits for internal standard recovery due to sample matrix.

Daily Analytical Batch #: 062409-MS1
All analysis met the QC requirements for the method except sample 209270-6 marginally exceeds QC limits for internal standard recovery due to sample matrix.

Daily Analytical Batch #: 062409-MS2
All analysis met the QC requirements for the method except sample 209270-1 marginally exceeds QC limits for internal standard recovery due to sample matrix.

Daily Analytical Batch #: 062509-MS1
All analysis met the QC requirements for the method.

Daily Analytical Batch #: 062509-MS2
All analysis met the QC requirements for the method except sample 209270-7 marginally exceeds QC limits for internal standard recovery due to sample matrix.

Daily Analytical Batch #: 070909-MS2
All analysis met the QC requirements for the method except samples 209270-1,2, &6 marginally exceed QC limits for internal standard recovery due to sample matrix.

Daily Analytical Batch #: 071009-MS2
All analysis met the QC requirements for the method.

SECTION 2
Operational Information

2.1 SAMPLE ANALYSIS

EPA TO-15 Modified Ambient Air by GC/MS

The GC/MS method (EPA Method TO-14/15) uses a cryotrapping system and a high resolution capillary column to analyze for volatile organic compounds for the TO-14 method a nafion dryer is used for water management, on TO-15 no dryer is used so oxygenated compounds can be analyzed.

Samples are analyzed on an HP 5890 gas chromatograph and HP 5970 MSD quadrapole mass spectrometer detector. A 100 to 1000 mL ambient air sample is introduced from the air-sampling container on to the freezeout loop constructed of 1/8" nickel tubing packed with glass beads. A gas phase internal standard mixture, as specified in the EPA SOW for ambient air samples, is injected with each sample. The freezeout loop is immersed in liquid oxygen and concentrates the air sample. After the sample is trapped, it is thermally desorbed using an electric heater at 225° C and is cryofocussed onto the beginning of a 0.25 mm ID deactivated fused silica capillary column. The cryofocussed loop is then warmed and the compounds are injected onto a 60 meter, DB-5, 0.25 mm ID fused silica capillary column in the GC. The GC is temperature programmed from 35 to 220° C. As the column is heated, the compounds elute off the column and enter the mass spectrometer (MS). The GC/MS is tuned and operated according to the specifications outlined in EPA SW 846 Test Methods. Compounds are calibrated by the internal standard procedure using NIST traceable air standards as described below. The relative percent difference (RPD) of a duplicate pair is about 30% at 10 ppbV and the average MDL is approximately 0.10 ppbV for most compounds at a 500 ml load volume. SIM is typically able to achieve detection limits 10-20 times lower depending on target list desired.

2.2 Calibration Procedures

The standards used for the routine analytical tests are commercial NIST traceable gas standards. Special in-house standards are prepared when commercial standards are not available or when commercial standards need to be diluted. Details of the traceability and calibration program at EAS can be found in the EAS Quality Manual.

Working standards are prepared by using a gas dilution system on the gas chromatograph or by making static dilutions to atmospheric levels. The gas dilution system is constructed from an eight port gas sampling valve with various size sample loops. The loops are filled with the standard and flushed with "zero air". The gas dilution system is used for the daily instrument calibration.

The concentration of the individual target compounds is determined using the initial calibration response factors as shown below. The GC/MS methods uses an internal standard in the calibration while the GC methods do not. If no IS is used the terms involving IS are removed from the sample calculations below.

2.3 Sample Calculations

$$RF = \frac{\text{Area Cmpd.}}{\text{Area IS}} * \frac{\text{Conc. IS}}{\text{Std Conc of Cmpd (ppbV)}}$$

Std Conc Cmpd (ppbV) = (Std Conc cmpd (ppmV)*1000*(Std load Vol /1000 mls)

Avg. RF = $(RF_1 + RF_2 + \ldots + Rf_n)/ n$

The Concentration of Analyte in the sample is calculated:

$$\frac{\text{Area Cmpd.}}{\text{Area IS}} * \frac{\text{IS Conc.}}{\text{Avg. RF}} * \frac{\text{1000 ml}}{\text{Smple. Vol.}} * \text{DF}$$

Where IS = Internal Standard
RF = Response Factor
n = Number of calibration levels
DF = Final pressure/ Initial pressure of the SUMMA canister.
IS Conc. = 20 ppbV (for full scan)

2.4 GC/MS Specific Data Processing :

Qualifiers: Qualifiers are ions used to aid in the identification of a peak. These ions are usually the secondary ion peaks for the compound in question. A ratio between the area counts of the primary ion (used for quantitation) and the area counts of the secondary ion is established by analyzing a daily standard containing the ions of interest at a known concentration (generally a mid-level standard). The standard ratios are used to check the running method on a daily basis. The method sets an acceptable criteria window for the qualifier ion by using the ion ratios and the user specific qualifier criteria.

Example For Toluene:

Primary ion 91 : 341877 area counts Secondary ion 92 : 205126 area counts
The target ion 91 is automatically set at 100%.
The ratio of 92 ion to 91 ion is used to set a target qualifier amount for the 91 ion

205126 / 341877 * 100 = 60%.

The user then sets a +/- window based upon the experience and the industry standard criteria. EAS uses a window of +/-20 percent relative except for the early eluting compounds which use a window of +/-35 percent relative.

Qualifier Exceptions: An analyst must use his or her best judgment when positively identifying a compound using qualifiers, as several factors can affect the qualifier ratios. These factors include, but are not limited to, the amounts of carbon dioxide and water present in the sample, the ambient room temperature, coeluting peaks, baseline carry-over from compounds eluting prior to the peak in question, and the actual amount of the compound in the sample.

If a compound is in question, the analyst will first compare the total peak spectra of the sample with the total compound spectra of a standard. If the two spectra are a fair match, the analyst will report a positive result. If the identity is still in question, the analyst runs a library search for compound matches with the NBS54K library. For a positive identification using this library, the peak in question must have a Q value match of 50% or above. If a positive peak identification still is not made, the analyst looks at the area counts for the target ion. If the area is less than 5000 counts and/or the compound result is near the instrument detection limit, the analyst will look for the presence of the qualifier. If it is present, a positive result will be reported. In the case that the compound result is less than 5 times the reported MDL, the presence of the target ion is sufficient to report a positive result. If none of this criterion is met, the compound is reported non-detected (ND).

Retention Time: Each day a calibration standard is analyzed. This calibration standard is used to check the compound target retention times in the running method prior to all other analyses. The normal retention time window is +/- 0.2 minutes of the target retention time, adjusted for any retention time shifts in the internal standard (IS), with all shifts being in the same direction.

Retention Time Exceptions: Air samples rarely fall within the retention time guidelines cited above. The retention times of the compounds are significantly affected by the amount of carbon dioxide and water present in the samples. As a general rule, compounds eluting prior to benzene will be shifted to the left (earlier RTs), while the later eluting compounds may be shifted to the right (later RTs). For retention times near benzene, the normal retention time criteria can be used with judgment. The earlier the peaks elute from benzene, the wider the acceptance window becomes with the earliest peaks having a possible shift of 2 to 3 minutes. The analyst should use the nearest positively identified peak's retention time window as a guide to what the window will be for compounds near that peak. Normally, the peak elution prior to benzene is in the same direction. However, if significant amounts of carbon dioxide or water are present, they can cause the earliest eluting peaks to shift to the right. Peaks eluting after benzene may shift slightly to the right with the window increasing slightly with increasing distance. This shift is normally no more than +/- 0.4 minute of the target RT adjusted for the IS shift and is in the same direction for all compounds. If the analyst has knowledge of certain peak patterns, he or she will also use this information in identifying peaks. Another important retention time criteria for air samples is that all compounds should elute in the same order as the daily calibration standard compounds.

2.5 QUALITY CONTROL PROGRAM

The quality assurance program at Environmental Analytical Service, Inc. is described in detail in the EAS Quality Manual.

2.6 Data Qualifiers and Definitions

Data Qualifiers

U Indicates compound was analyzed for but not detected.

B This compound was also detected in the blank.

DL The sample was analyzed at a lower volume.

E The amount reported is an estimated value. The result may exceed the calibration range or may be affected by possible carry-over from the previous sample.

N Indicates presumptive evidence of a compound. This flag is only used for tentatively identified compounds, where the identification is based on a mass spectral library search. It is applied to all TIC results.

J The amount reported is an estimated value. This flag is used when a compound is reported below the Lower Quantitation Limit (LQL) often called the Reporting Limit (RL).

NFS The ions do not fit the target spectra.

Definitions

$$\textbf{ppbV} = \frac{\text{\# nanomoles cmpd}}{\text{\# moles air}}$$

The compound (cmpd) is reported as ppb of compound by Volume. This unit is temperature independent.

$$\textbf{ug/m3} = \text{ppbV} * \frac{\text{MW cmpd}}{23.68}$$

The compound is reported as ug of a compound in a m3 of air.
23.68 is the molar volume of a gas at 60 F and 1 atm pressure.
MW = molecular weight.
This unit is temperature dependent.

ppbC = ppbV * # carbons in compound.

SECTION 3
Summary of Results

This section contains information equivalent to that found in EPA FORM I – Volatile Organics Data sheet.

3.1 EPA TO-15M Volatile Organics

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified Full Scan GC/MS
Analytical Method: TO-15

SDG: 209270
Laboratory Number: 01

File: 0927001A.D
Description: 44-006A
Can/Tube#: 741
Sam_Type: SA
QC_Batch: 062409-MS1
Air Volume: 200 ml

Date Sampled: 06/16/09 **Time:** 11:06
Date Received: 06/17/09
Date Extracted:
Date Analyzed: 06/24/09 **Time:** 17:49
Can Dilution Factor: 2.55 2
Not Detected Flag: ND

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
67-63-0	2-propanol	0.58	2.91	ND	1.47	7.38	ND	ND

	Surrogate Recovery	Spike Amt. ppbV	Amount ppbV	% Rec.	QC Limits	Flag * = Out
2037-26-5	Toluene-d8	10.000	10.283	103	70-130	

Notes: 1) Reported results are to be interpreted to two significant figures.
2) ug/m3 = ppbV*FW/23.68 calculated assuming conditions at 60 F and 1 atm.
3) MDL and RL are adjusted for sample volume and can dilution.
4) U and ND are Flags used for Not Detected
5) J is a flag for a result between the MDL and the RL (or lower quantitation limit, LQL)

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified Full Scan GC/MS
Analytical Method: TO-15

SDG: 209270
Laboratory Number: 02

File: 0927002A.D
Description: 44-007
Can/Tube#: 640
Sam_Type: SA
QC_Batch: 062409-MS1
Air Volume: 200 ml

Date Sampled: 06/16/09 **Time:** 16:51
Date Received: 06/17/09
Date Extracted:
Date Analyzed: 06/24/09 **Time:** 19:16
Can Dilution Factor: 1.49 2
Not Detected Flag: ND

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
67-63-0	2-propanol	0.34	1.70	ND	0.86	4.31	ND	ND

	Surrogate Recovery	Spike Amt. ppbV	Amount ppbV	% Rec.	QC Limits	Flag * = Out
2037-26-5	Toluene-d8	10.000	10.078	101	70-130	

Notes: 1) Reported results are to be interpreted to two significant figures.
2) ug/m3 = ppbV*FW/23.68 calculated assuming conditions at 60 F and 1 atm.
3) MDL and RL are adjusted for sample volume and can dilution.
4) U and ND are Flags used for Not Detected
5) J is a flag for a result between the MDL and the RL (or lower quantitation limit, LQL)

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified Full Scan GC/MS
Analytical Method: TO-15

SDG: 209270
Laboratory Number: 03

File: 0927003A.D
Description: 44-008
Can/Tube#: 692
Sam_Type: SA
QC_Batch: 062409-MS1
Air Volume: 200 ml

Date Sampled: 06/16/09 **Time:** 16:46
Date Received: 06/17/09
Date Extracted:
Date Analyzed: 06/24/09 **Time:** 19:59
Can Dilution Factor: 1.51 2
Not Detected Flag: ND

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
67-63-0	2-propanol	0.34	1.72	1.66	0.87	4.37	4.21	J

	Surrogate Recovery	Spike Amt. ppbV	Amount ppbV	% Rec.	QC Limits	Flag * = Out
2037-26-5	Toluene-d8	10.000	9.711	97	70-130	

Notes: 1) Reported results are to be interpreted to two significant figures.
2) ug/m3 = ppbV*FW/23.68 calculated assuming conditions at 60 F and 1 atm.
3) MDL and RL are adjusted for sample volume and can dilution.
4) U and ND are Flags used for Not Detected
5) J is a flag for a result between the MDL and the RL (or lower quantitation limit, LQL)

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified Full Scan GC/MS
Analytical Method: TO-15

SDG: 209270
Laboratory Number: 04

File: 0927004A.D
Description: 44-009
Can/Tube#: 664
Sam_Type: SA
QC_Batch: 062509-MS1
Air Volume: 200 ml

Date Sampled: 06/16/09 **Time:** 16:45
Date Received: 06/17/09
Date Extracted:
Date Analyzed: 06/25/09 **Time:** 13:54
Can Dilution Factor: 1.55 2
Not Detected Flag: ND

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
67-63-0	2-propanol	0.35	1.77	0.72	0.89	4.48	1.82	J

	Surrogate Recovery	Spike Amt. ppbV	Amount ppbV	% Rec.	QC Limits	Flag * = Out
2037-26-5	Toluene-d8	10.000	10.372	104	70-130	

Notes: 1) Reported results are to be interpreted to two significant figures.
2) ug/m3 = ppbV*FW/23.68 calculated assuming conditions at 60 F and 1 atm.
3) MDL and RL are adjusted for sample volume and can dilution.
4) U and ND are Flags used for Not Detected
5) J is a flag for a result between the MDL and the RL (or lower quantitation limit, LQL)

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified Full Scan GC/MS | **SDG:** 209270
Analytical Method: TO-15 | **Laboratory Number:** 05

File:	0927005A.D	**Date Sampled:**	06/16/09	**Time:**	15:45
Description:	44-010	**Date Received:**	06/17/09		
Can/Tube#:	633	**Date Extracted:**			
Sam_Type:	SA	**Date Analyzed:**	06/24/09	**Time:**	20:46
QC_Batch:	062409-MS1	**Can Dilution Factor:**	1.70		2
Air Volume:	200 ml	**Not Detected Flag:**	ND		

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
67-63-0	2-propanol	0.39	1.94	ND	0.98	4.92	ND	ND

	Surrogate Recovery	Spike Amt. ppbV	Amount ppbV	% Rec.	QC Limits	Flag * = Out
2037-26-5	Toluene-d8	10.000	9.548	95	70-130	

Notes: 1) Reported results are to be interpreted to two significant figures.
2) ug/m3 = ppbV*FW/23.68 calculated assuming conditions at 60 F and 1 atm.
3) MDL and RL are adjusted for sample volume and can dilution.
4) U and ND are Flags used for Not Detected
5) J is a flag for a result between the MDL and the RL (or lower quantitation limit, LQL)

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified Full Scan GC/MS
Analytical Method: **TO-15**

SDG: **209270**
Laboratory Number: **06**

File: 0927006A.D
Description: 44-011
Can/Tube#: 169
Sam_Type: SA
QC_Batch: 062409-MS1
Air Volume: 200 ml

Date Sampled: 06/16/09 **Time:** 14:14
Date Received: 06/17/09
Date Extracted:
Date Analyzed: 06/24/09 **Time:** 21:30
Can Dilution Factor: 1.47 2
Not Detected Flag: ND

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
67-63-0	2-propanol	0.33	1.68	ND	0.85	4.25	ND	ND

	Surrogate Recovery	Spike Amt. ppbV	Amount ppbV	% Rec.	QC Limits	Flag * = Out
2037-26-5	Toluene-d8	10.000	9.363	94	70-130	

Notes: 1) Reported results are to be interpreted to two significant figures.
2) ug/m3 = ppbV*FW/23.68 calculated assuming conditions at 60 F and 1 atm.
3) MDL and RL are adjusted for sample volume and can dilution.
4) U and ND are Flags used for Not Detected
5) J is a flag for a result between the MDL and the RL (or lower quantitation limit, LQL)

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified Full Scan GC/MS
Analytical Method: TO-15

SDG: 209270
Laboratory Number: 07

File: 0927007A.D
Description: 44-012
Can/Tube#: 670
Sam_Type: SA
QC_Batch: 062509-MS1
Air Volume: 200 ml

Date Sampled: 06/16/09 **Time:** 16:30
Date Received: 06/17/09
Date Extracted:
Date Analyzed: 06/25/09 **Time:** 14:39
Can Dilution Factor: 1.49 2
Not Detected Flag: ND

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
67-63-0	2-propanol	0.34	1.70	0.82	0.86	4.31	2.09	J

	Surrogate Recovery	Spike Amt. ppbV	Amount ppbV	% Rec.	QC Limits	Flag * = Out
2037-26-5	Toluene-d8	10.000	10.004	100	70-130	

Notes: 1) Reported results are to be interpreted to two significant figures.
2) ug/m3 = ppbV*FW/23.68 calculated assuming conditions at 60 F and 1 atm.
3) MDL and RL are adjusted for sample volume and can dilution.
4) U and ND are Flags used for Not Detected
5) J is a flag for a result between the MDL and the RL (or lower quantitation limit, LQL)

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified Full Scan GC/MS
Analytical Method: TO-15

SDG: 209270
Laboratory Number: 08

File: 0927008A.D
Description: 44-013
Can/Tube#: 782
Sam_Type: SA
QC_Batch: 062509-MS1
Air Volume: 200 ml

Date Sampled: 06/16/09 **Time:** 16:33
Date Received: 06/17/09
Date Extracted:
Date Analyzed: 06/25/09 **Time:** 15:28
Can Dilution Factor: 1.67 2
Not Detected Flag: ND

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
67-63-0	2-propanol	0.38	1.90	1.09	0.96	4.83	2.76	J

	Surrogate Recovery	Spike Amt. ppbV	Amount ppbV	% Rec.	QC Limits	Flag * = Out
2037-26-5	Toluene-d8	10.000	10.555	106	70-130	

Notes: 1) Reported results are to be interpreted to two significant figures.
2) ug/m3 = ppbV*FW/23.68 calculated assuming conditions at 60 F and 1 atm.
3) MDL and RL are adjusted for sample volume and can dilution.
4) U and ND are Flags used for Not Detected
5) J is a flag for a result between the MDL and the RL (or lower quantitation limit, LQL)

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified Full Scan GC/MS
Analytical Method: **TO-15**

SDG: **209270**
Laboratory Number: **09**

File:	0927009A.D	**Date Sampled:**	06/16/09	**Time:**	16:38
Description:	44-014	**Date Received:**	06/17/09		
Can/Tube#:	526	**Date Extracted:**			
Sam_Type:	SA	**Date Analyzed:**	06/25/09	**Time:**	16:33
QC_Batch:	062509-MS1	**Can Dilution Factor:**	2.16		2
Air Volume:	200 ml	**Not Detected Flag:**	ND		

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
67-63-0	2-propanol	0.49	2.46	0.74	1.25	6.25	1.88	J

	Surrogate Recovery	Spike Amt. ppbV	Amount ppbV	% Rec.	QC Limits	Flag * = Out
2037-26-5	Toluene-d8	10.000	10.191	102	70-130	

Notes: 1) Reported results are to be interpreted to two significant figures.
2) ug/m3 = ppbV*FW/23.68 calculated assuming conditions at 60 F and 1 atm.
3) MDL and RL are adjusted for sample volume and can dilution.
4) U and ND are Flags used for Not Detected
5) J is a flag for a result between the MDL and the RL (or lower quantitation limit, LQL)

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified Full Scan GC/MS
Analytical Method: TO-15

SDG: 209270
Laboratory Number: 10

File: 0927010A.D
Description: 44-015
Can/Tube#: 188
Sam_Type: SA
QC_Batch: 062509-MS1
Air Volume: 200 ml

Date Sampled: 06/16/09 **Time:** 16:40
Date Received: 06/17/09
Date Extracted:
Date Analyzed: 06/25/09 **Time:** 17:15
Can Dilution Factor: 1.62 2
Not Detected Flag: ND

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
67-63-0	2-propanol	0.37	1.85	0.59	0.94	4.69	1.50	J

	Surrogate Recovery	Spike Amt. ppbV	Amount ppbV	% Rec.	QC Limits	Flag * = Out
2037-26-5	Toluene-d8	10.000	9.583	96	70-130	

Notes: 1) Reported results are to be interpreted to two significant figures.
2) ug/m3 = ppbV*FW/23.68 calculated assuming conditions at 60 F and 1 atm.
3) MDL and RL are adjusted for sample volume and can dilution.
4) U and ND are Flags used for Not Detected
5) J is a flag for a result between the MDL and the RL (or lower quantitation limit, LQL)

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified Full Scan GC/MS
Analytical Method: TO-15

SDG: 209270
Laboratory Number: 11

File: 0927011A.D
Description: 44-016
Can/Tube#: 703
Sam_Type: SA
QC_Batch: 062509-MS1
Air Volume: 500 ml

Date Sampled: 06/16/09 **Time:**
Date Received: 06/17/09
Date Extracted:
Date Analyzed: 06/25/09 **Time:** 17:58
Can Dilution Factor: 1.00 2
Not Detected Flag: ND

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
67-63-0	2-propanol	0.09	0.46	1.32	0.23	1.16	3.34	

	Surrogate Recovery	Spike Amt. ppbV	Amount ppbV	% Rec.	QC Limits	Flag * = Out
2037-26-5	Toluene-d8	10.000	10.017	100	70-130	

Notes: 1) Reported results are to be interpreted to two significant figures.
2) ug/m3 = ppbV*FW/23.68 calculated assuming conditions at 60 F and 1 atm.
3) MDL and RL are adjusted for sample volume and can dilution.
4) U and ND are Flags used for Not Detected
5) J is a flag for a result between the MDL and the RL (or lower quantitation limit, LQL)

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified Full Scan GC/MS
Analytical Method: TO-15

SDG: 209270
Laboratory Number: 11

File: 0927011A.D
Description: 44-016
Can/Tube#: 703
Sam_Type: SA
QC_Batch: 062509-MS1
Air Volume: 500 ml

Date Sampled: 06/16/09 **Time:**
Date Received: 06/17/09
Date Extracted:
Date Analyzed: 06/25/09 **Time:** 17:58
Can Dilution Factor: 1.00 2
Not Detected Flag: ND

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
76-14-2	Freon 114	0.10	0.52	ND	0.75	3.75	ND	ND
108-05-4	Vinyl acetate	0.09	0.43	ND	0.31	1.56	ND	ND
78-93-3	2-Butanone	0.09	0.43	0.80	0.26	1.31	2.43	
108-10-1	Methyl Isobutyl Ketone	0.09	0.46	ND	0.39	1.95	ND	ND
10061-01-5	cis-1,3-Dichloropropene	0.11	0.53	ND	0.50	2.48	ND	ND
10061-02-6	trans-1,3-Dichloropropene	0.10	0.52	ND	0.49	2.44	ND	ND
591-78-6	2-Hexanone	0.09	0.44	ND	0.37	1.86	ND	ND
124-48-1	Dibromochloromethane	0.09	0.45	ND	0.78	3.92	ND	ND
622-96-8	4-Ethyltoluene	0.09	0.46	ND	0.46	2.31	ND	ND
87-68-3	Hexachlorobutadiene	0.21	2.06	ND	2.27	22.69	ND	ND

	Surrogate Recovery	Spike Amt. ppbV	Amount ppbV	% Rec.	QC Limits	Flag * = Out
2037-26-5	Toluene-d8	10.000	10.017	100	70-130	

Notes: 1) Reported results are to be interpreted to two significant figures.
2) ug/m3 = ppbV*FW/23.68 calculated assuming conditions at 60 F and 1 atm.
3) MDL and RL are adjusted for sample volume and can dilution.
4) U and ND are Flags used for Not Detected
5) J is a flag for a result between the MDL and the RL (or lower quantitation limit, LQL)

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified Full Scan GC/MS | **SDG:** 209270
Analytical Method: TO-15 | **Laboratory Number:** 12

File:	0927012A.D	**Date Sampled:**	06/16/09	**Time:**	16:53
Description:	44-017	**Date Received:**	06/17/09		
Can/Tube#:	681	**Date Extracted:**			
Sam_Type:	SA	**Date Analyzed:**	06/25/09	**Time:**	18:56
QC_Batch:	062509-MS1	**Can Dilution Factor:**	1.87		2
Air Volume:	500 ml	**Not Detected Flag:**	ND		

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
67-63-0	2-propanol	0.17	0.85	ND	0.43	2.16	ND	ND

	Surrogate Recovery	Spike Amt. ppbV	Amount ppbV	% Rec.	QC Limits	Flag * = Out
2037-26-5	Toluene-d8	10.000	9.607	96	70-130	

Notes: 1) Reported results are to be interpreted to two significant figures.
2) ug/m3 = ppbV*FW/23.68 calculated assuming conditions at 60 F and 1 atm.
3) MDL and RL are adjusted for sample volume and can dilution.
4) U and ND are Flags used for Not Detected
5) J is a flag for a result between the MDL and the RL (or lower quantitation limit, LQL)

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified Full Scan GC/MS
Analytical Method: TO-15

SDG: 209270
Laboratory Number: 12

File: 0927012A.D
Description: 44-017
Can/Tube#: 681
Sam_Type: SA
QC_Batch: 062509-MS1
Air Volume: 500 ml

Date Sampled: 06/16/09 **Time:** 16:53
Date Received: 06/17/09
Date Extracted:
Date Analyzed: 06/25/09 **Time:** 18:56
Can Dilution Factor: 1.87 2
Not Detected Flag: ND

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
76-14-2	Freon 114	0.19	0.97	ND	1.40	7.02	ND	ND
108-05-4	Vinyl acetate	0.16	0.80	ND	0.58	2.92	ND	ND
78-93-3	2-Butanone	0.16	0.80	ND	0.49	2.45	ND	ND
108-10-1	Methyl Isobutyl Ketone	0.17	0.86	ND	0.73	3.64	ND	ND
10061-01-5	cis-1,3-Dichloropropene	0.20	0.99	ND	0.93	4.65	ND	ND
10061-02-6	trans-1,3-Dichloropropene	0.19	0.97	ND	0.91	4.56	ND	ND
591-78-6	2-Hexanone	0.16	0.82	ND	0.70	3.48	ND	ND
124-48-1	Dibromochloromethane	0.17	0.83	ND	1.46	7.34	ND	ND
622-96-8	4-Ethyltoluene	0.17	0.85	ND	0.86	4.33	ND	ND
87-68-3	Hexachlorobutadiene	0.39	3.85	ND	4.24	42.43	ND	ND

	Surrogate Recovery	Spike Amt. ppbV	Amount ppbV	% Rec.	QC Limits	Flag * = Out
2037-26-5	Toluene-d8	10.000	9.607	96	70-130	

Notes: 1) Reported results are to be interpreted to two significant figures.
2) ug/m3 = ppbV*FW/23.68 calculated assuming conditions at 60 F and 1 atm.
3) MDL and RL are adjusted for sample volume and can dilution.
4) U and ND are Flags used for Not Detected
5) J is a flag for a result between the MDL and the RL (or lower quantitation limit, LQL)

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified Full Scan GC/MS
Analytical Method: **TO-15**

SDG: **209270**
Laboratory Number: **13**

File:	0927013A.D	**Date Sampled:**	06/16/09	**Time:**	16:53
Description:	44-018	**Date Received:**	06/17/09		
Can/Tube#:	180	**Date Extracted:**			
Sam_Type:	SA	**Date Analyzed:**	06/25/09	**Time:**	19:53
QC_Batch:	062509-MS1	**Can Dilution Factor:**	1.63		2
Air Volume:	500 ml	**Not Detected Flag:**	ND		

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
67-63-0	2-propanol	0.15	0.74	ND	0.38	1.89	ND	ND

	Surrogate Recovery	Spike Amt. ppbV	Amount ppbV	% Rec.	QC Limits	Flag * = Out
2037-26-5	Toluene-d8	10.000	9.846	98	70-130	

Notes: 1) Reported results are to be interpreted to two significant figures.
2) ug/m3 = ppbV*FW/23.68 calculated assuming conditions at 60 F and 1 atm.
3) MDL and RL are adjusted for sample volume and can dilution.
4) U and ND are Flags used for Not Detected
5) J is a flag for a result between the MDL and the RL (or lower quantitation limit, LQL)

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified Full Scan GC/MS | **SDG:** 209270
Analytical Method: TO-15 | **Laboratory Number:** 13

File:	0927013A.D	**Date Sampled:**	06/16/09	**Time:**	16:53
Description:	44-018	**Date Received:**	06/17/09		
Can/Tube#:	180	**Date Extracted:**			
Sam_Type:	SA	**Date Analyzed:**	06/25/09	**Time:**	19:53
QC_Batch:	062509-MS1	**Can Dilution Factor:**	1.63		2
Air Volume:	500 ml	**Not Detected Flag:**	ND		

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
76-14-2	Freon 114	0.17	0.85	ND	1.22	6.12	ND	ND
108-05-4	Vinyl acetate	0.14	0.70	ND	0.51	2.55	ND	ND
78-93-3	2-Butanone	0.14	0.70	ND	0.43	2.13	ND	ND
108-10-1	Methyl Isobutyl Ketone	0.15	0.75	ND	0.63	3.17	ND	ND
10061-01-5	cis-1,3-Dichloropropene	0.17	0.86	ND	0.81	4.05	ND	ND
10061-02-6	trans-1,3-Dichloropropene	0.17	0.85	ND	0.79	3.97	ND	ND
591-78-6	2-Hexanone	0.14	0.72	ND	0.61	3.03	ND	ND
124-48-1	Dibromochloromethane	0.15	0.73	ND	1.28	6.39	ND	ND
622-96-8	4-Ethyltoluene	0.15	0.74	ND	0.75	3.77	ND	ND
87-68-3	Hexachlorobutadiene	0.34	3.36	ND	3.70	36.98	ND	ND

	Surrogate Recovery	Spike Amt. ppbV	Amount ppbV	% Rec.	QC Limits	Flag * = Out
2037-26-5	Toluene-d8	10.000	9.846	98	70-130	

Notes: 1) Reported results are to be interpreted to two significant figures.
2) ug/m3 = ppbV*FW/23.68 calculated assuming conditions at 60 F and 1 atm.
3) MDL and RL are adjusted for sample volume and can dilution.
4) U and ND are Flags used for Not Detected
5) J is a flag for a result between the MDL and the RL (or lower quantitation limit, LQL)

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified Full Scan GC/MS
Analytical Method: TO-15

SDG: 209270
Laboratory Number: 14

File: 0927014A.D
Description: 44-006B
Can/Tube#: 2968
Sam_Type: SA
QC_Batch: 062409-MS1
Air Volume: 200 ml

Date Sampled: 06/16/09 **Time:** 15:35
Date Received: 06/17/09
Date Extracted:
Date Analyzed: 06/24/09 **Time:** 18:32
Can Dilution Factor: 2.59 2
Not Detected Flag: ND

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
67-63-0	2-propanol	0.59	2.95	ND	1.50	7.49	ND	ND

	Surrogate Recovery	Spike Amt. ppbV	Amount ppbV	% Rec.	QC Limits	Flag * = Out
2037-26-5	Toluene-d8	10.000	9.769	98	70-130	

Notes: 1) Reported results are to be interpreted to two significant figures.
2) ug/m3 = ppbV*FW/23.68 calculated assuming conditions at 60 F and 1 atm.
3) MDL and RL are adjusted for sample volume and can dilution.
4) U and ND are Flags used for Not Detected
5) J is a flag for a result between the MDL and the RL (or lower quantitation limit, LQL)

3.2 EPA TO-15M SIM

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified SIM GC/MS
Analytical Method: TO-15 SIM

SDG: 209270
Laboratory Number: 01

File: 0927001A.D
Description: 44-006A
Can/Tube#: 741
Sam_Type: SA
QC_Batch: 070909-MS2
Air Volume: 500 ml

Date Sampled: 06/16/09 **Time:** 11:06
Date Received: 06/17/09
Date Extracted:
Date Analyzed: 07/09/09 **Time:** 17:07
Can Dilution Factor: 2.55 3
Not Detected Flag: U

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
75-01-4	Vinyl chloride	0.013	0.133	0.013	0.035	0.350	0.035	U
75-35-4	1,1-Dichloroethene	0.012	0.133	0.012	0.048	0.543	0.048	U
106-93-4	1,2-Dibromoethane	0.016	0.133	0.028	0.126	1.053	0.223	J
79-34-5	1,1,2,2-Tetrachloroethane	0.012	0.133	0.016	0.087	0.940	0.117	J
91-20-3	Naphthalene	0.036	0.270	0.055	0.196	1.463	0.298	J

	Surrogate Recovery	Spike Amt. ppbV	Amount ppbV	% Rec.	QC Limits	Flag * = Out
2037-26-5	Toluene-d8	0.200	0.187	93	70-130	

Notes: 1) Reported results are to be interpreted to two significant figures.
2) ug/m3 = ppbV*FW/23.68 calculated assuming conditions at 60 F and 1 atm.
3) MDL and RL are adjusted for sample volume and can dilution.
4) U and ND are Flags used for Not Detected
5) J is a flag for a result between the MDL and the RL (or lower quantitation limit, LQL)

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified SIM GC/MS
Analytical Method: **TO-15 SIM**

SDG: **209270**
Laboratory Number: **01**

File: 0927001A.D
Description: 44-006A
Can/Tube#: 741
Sam_Type: SA
QC_Batch: 062409-MS2
Air Volume: 200 ml

Date Sampled: 06/16/09 **Time:** 11:06
Date Received: 06/17/09
Date Extracted:
Date Analyzed: 06/24/09 **Time:** 18:06
Can Dilution Factor: 2.55 3
Not Detected Flag: ND

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
75-34-3	1,1-Dichloroethane	0.065	0.650	ND	0.272	2.719	ND	ND
156-59-2	cis-1,2-Dichloroethene	0.066	0.663	ND	0.271	2.713	ND	ND
107-06-2	1,2-Dichloroethane	0.066	0.663	ND	0.277	2.772	ND	ND
71-43-2	Benzene	0.066	0.663	0.445	0.219	2.187	1.466	J
56-23-5	Carbon tetrachloride	0.065	0.650	0.266	0.422	4.223	1.727	J
79-01-6	Trichloroethene	0.066	0.663	ND	0.368	3.679	ND	ND
75-27-4	Bromodichloromethane	0.043	0.434	ND	0.300	2.999	ND	ND
79-00-5	1,1,2-Trichloroethane	0.065	0.650	ND	0.366	3.663	ND	ND
127-18-4	Tetrachloroethene	0.065	0.650	ND	0.455	4.553	ND	ND
108-38-3	m & p-Xylene	0.131	1.313	0.662	0.589	5.890	2.967	J
95-47-6	o-Xylene	0.065	0.650	0.201	0.292	2.916	0.903	J
120-82-1	1,2,4-Trichlorobenzene	0.066	0.663	ND	0.508	5.079	ND	ND
123-91-1	1,4 Dioxane	0.047	0.472	ND	0.176	1.755	ND	ND

	Surrogate Recovery	Spike Amt. ppbV	Amount ppbV	% Rec.	QC Limits	Flag * = Out
2037-26-5	Toluene-d8	0.200	0.202	101	70-130	

Notes: 1) Reported results are to be interpreted to two significant figures.
2) ug/m3 = ppbV*FW/23.68 calculated assuming conditions at 60 F and 1 atm.
3) MDL and RL are adjusted for sample volume and can dilution.
4) U and ND are Flags used for Not Detected
5) J is a flag for a result between the MDL and the RL (or lower quantitation limit, LQL)

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified SIM GC/MS
Analytical Method: **TO-15 SIM**

SDG: **209270**
Laboratory Number: **02**

File: 0927002A.D
Description: 44-007
Can/Tube#: 640
Sam_Type: SA
QC_Batch: 070909-MS2
Air Volume: 500 ml

Date Sampled: 06/16/09 **Time:** 16:51
Date Received: 06/17/09
Date Extracted:
Date Analyzed: 07/09/09 **Time:** 17:48
Can Dilution Factor: 1.49 3
Not Detected Flag: U

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
75-01-4	Vinyl chloride	0.008	0.077	0.008	0.020	0.204	0.020	U
75-35-4	1,1-Dichloroethene	0.007	0.077	0.007	0.028	0.317	0.028	U
106-93-4	1,2-Dibromoethane	0.009	0.077	0.009	0.073	0.615	0.073	U
79-34-5	1,1,2,2-Tetrachloroethane	0.007	0.077	0.007	0.051	0.549	0.051	U
91-20-3	Naphthalene	0.021	0.158	0.031	0.115	0.855	0.168	J

	Surrogate Recovery	Spike Amt. ppbV	Amount ppbV	% Rec.	QC Limits	Flag * = Out
2037-26-5	Toluene-d8	0.200	0.193	96	70-130	

Notes: 1) Reported results are to be interpreted to two significant figures.
2) ug/m3 = ppbV*FW/23.68 calculated assuming conditions at 60 F and 1 atm.
3) MDL and RL are adjusted for sample volume and can dilution.
4) U and ND are Flags used for Not Detected
5) J is a flag for a result between the MDL and the RL (or lower quantitation limit, LQL)

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified SIM GC/MS
Analytical Method: TO-15 SIM

SDG: 209270
Laboratory Number: 02

File: 0927002A.D
Description: 44-007
Can/Tube#: 640
Sam_Type: SA
QC_Batch: 062209-MS2
Air Volume: 500 ml

Date Sampled: 06/16/09 **Time:** 16:51
Date Received: 06/17/09
Date Extracted:
Date Analyzed: 06/22/09 **Time:** 19:37
Can Dilution Factor: 1.49 3
Not Detected Flag: ND

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
75-34-3	1,1-Dichloroethane	0.015	0.152	ND	0.064	0.635	ND	ND
156-59-2	cis-1,2-Dichloroethene	0.015	0.155	ND	0.063	0.634	ND	ND
107-06-2	1,2-Dichloroethane	0.015	0.155	ND	0.065	0.648	ND	ND
71-43-2	Benzene	0.015	0.155	0.377	0.051	0.511	1.243	
56-23-5	Carbon tetrachloride	0.015	0.152	0.161	0.099	0.987	1.046	
79-01-6	Trichloroethene	0.015	0.155	0.028	0.086	0.860	0.154	J
75-27-4	Bromodichloromethane	0.010	0.101	ND	0.070	0.701	ND	ND
79-00-5	1,1,2-Trichloroethane	0.015	0.152	ND	0.086	0.856	ND	ND
127-18-4	Tetrachloroethene	0.015	0.152	0.096	0.106	1.064	0.670	J
108-38-3	m & p-Xylene	0.031	0.307	0.968	0.138	1.377	4.341	
95-47-6	o-Xylene	0.015	0.152	0.291	0.068	0.682	1.305	
120-82-1	1,2,4-Trichlorobenzene	0.015	0.155	0.025	0.119	1.187	0.188	J
123-91-1	1,4 Dioxane	0.011	0.110	ND	0.041	0.410	ND	ND

	Surrogate Recovery	Spike Amt. ppbV	Amount ppbV	% Rec.	QC Limits	Flag * = Out
2037-26-5	Toluene-d8	0.200	0.218	109	70-130	

Notes: 1) Reported results are to be interpreted to two significant figures.
2) ug/m3 = ppbV*FW/23.68 calculated assuming conditions at 60 F and 1 atm.
3) MDL and RL are adjusted for sample volume and can dilution.
4) U and ND are Flags used for Not Detected
5) J is a flag for a result between the MDL and the RL (or lower quantitation limit, LQL)

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified SIM GC/MS
Analytical Method: **TO-15 SIM**

SDG: **209270**
Laboratory Number: **03**

File: 0927003A.D
Description: 44-008
Can/Tube#: 692
Sam_Type: SA
QC_Batch: 070909-MS2
Air Volume: 500 ml

Date Sampled: 06/16/09 **Time:** 16:46
Date Received: 06/17/09
Date Extracted:
Date Analyzed: 07/09/09 **Time:** 18:50
Can Dilution Factor: 1.51 3
Not Detected Flag: U

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
75-01-4	Vinyl chloride	0.008	0.079	0.008	0.021	0.207	0.021	U
75-35-4	1,1-Dichloroethene	0.007	0.079	0.007	0.028	0.321	0.028	U
106-93-4	1,2-Dibromoethane	0.009	0.079	0.009	0.074	0.623	0.074	U
79-34-5	1,1,2,2-Tetrachloroethane	0.007	0.079	0.007	0.051	0.556	0.051	U
91-20-3	Naphthalene	0.021	0.160	0.021	0.116	0.867	0.116	U

	Surrogate Recovery	Spike Amt. ppbV	Amount ppbV	% Rec.	QC Limits	Flag * = Out
2037-26-5	Toluene-d8	0.200	0.211	106	70-130	

Notes: 1) Reported results are to be interpreted to two significant figures.
2) ug/m3 = ppbV*FW/23.68 calculated assuming conditions at 60 F and 1 atm.
3) MDL and RL are adjusted for sample volume and can dilution.
4) U and ND are Flags used for Not Detected
5) J is a flag for a result between the MDL and the RL (or lower quantitation limit, LQL)

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified SIM GC/MS
Analytical Method: TO-15 SIM

SDG: 209270
Laboratory Number: 03

File: 0927003A.D
Description: 44-008
Can/Tube#: 692
Sam_Type: SA
QC_Batch: 062409-MS2
Air Volume: 200 ml

Date Sampled: 06/16/09 **Time:** 16:46
Date Received: 06/17/09
Date Extracted:
Date Analyzed: 06/24/09 **Time:** 17:23
Can Dilution Factor: 1.51 3
Not Detected Flag: ND

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
75-34-3	1,1-Dichloroethane	0.039	0.385	ND	0.161	1.610	ND	ND
156-59-2	cis-1,2-Dichloroethene	0.039	0.393	ND	0.161	1.607	ND	ND
107-06-2	1,2-Dichloroethane	0.039	0.393	ND	0.164	1.641	ND	ND
71-43-2	Benzene	0.039	0.393	0.245	0.129	1.295	0.807	J
56-23-5	Carbon tetrachloride	0.039	0.385	0.097	0.250	2.501	0.628	J
79-01-6	Trichloroethene	0.039	0.393	0.122	0.218	2.179	0.675	J
75-27-4	Bromodichloromethane	0.026	0.257	ND	0.178	1.776	ND	ND
79-00-5	1,1,2-Trichloroethane	0.039	0.385	ND	0.217	2.169	ND	ND
127-18-4	Tetrachloroethene	0.039	0.385	ND	0.270	2.696	ND	ND
108-38-3	m & p-Xylene	0.078	0.778	0.702	0.349	3.488	3.149	J
95-47-6	o-Xylene	0.039	0.385	0.212	0.173	1.727	0.951	J
120-82-1	1,2,4-Trichlorobenzene	0.039	0.393	0.068	0.301	3.008	0.522	J
123-91-1	1,4 Dioxane	0.028	0.279	0.484	0.104	1.039	1.800	

	Surrogate Recovery	Spike Amt. ppbV	Amount ppbV	% Rec.	QC Limits	Flag * = Out
2037-26-5	Toluene-d8	0.200	0.200	100	70-130	

Notes: 1) Reported results are to be interpreted to two significant figures.
2) ug/m3 = ppbV*FW/23.68 calculated assuming conditions at 60 F and 1 atm.
3) MDL and RL are adjusted for sample volume and can dilution.
4) U and ND are Flags used for Not Detected
5) J is a flag for a result between the MDL and the RL (or lower quantitation limit, LQL)

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified SIM GC/MS
Analytical Method: **TO-15 SIM**

SDG: **209270**
Laboratory Number: **04**

File: 0927004A.D
Description: 44-009
Can/Tube#: 664
Sam_Type: SA
QC_Batch: 062209-MS2
Air Volume: 500 ml

Date Sampled: 06/16/09 **Time:** 16:45
Date Received: 06/17/09
Date Extracted:
Date Analyzed: 06/22/09 **Time:** 21:15
Can Dilution Factor: 1.55 3
Not Detected Flag: ND

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
75-01-4	Vinyl chloride	0.016	0.161	ND	0.043	0.425	ND	ND
75-35-4	1,1-Dichloroethene	0.016	0.161	ND	0.066	0.660	ND	ND
75-34-3	1,1-Dichloroethane	0.016	0.158	ND	0.066	0.661	ND	ND
156-59-2	cis-1,2-Dichloroethene	0.016	0.161	ND	0.066	0.660	ND	ND
107-06-2	1,2-Dichloroethane	0.016	0.161	ND	0.067	0.674	ND	ND
71-43-2	Benzene	0.016	0.161	1.038	0.053	0.532	3.422	
56-23-5	Carbon tetrachloride	0.016	0.158	0.233	0.103	1.027	1.513	
79-01-6	Trichloroethene	0.016	0.161	0.571	0.089	0.894	3.168	
75-27-4	Bromodichloromethane	0.011	0.105	ND	0.073	0.729	ND	ND
79-00-5	1,1,2-Trichloroethane	0.016	0.158	ND	0.089	0.891	ND	ND
127-18-4	Tetrachloroethene	0.016	0.158	0.082	0.111	1.107	0.578	J
108-38-3	m & p-Xylene	0.032	0.319	3.735	0.143	1.432	16.752	
95-47-6	o-Xylene	0.016	0.158	1.165	0.071	0.709	5.224	
79-34-5	1,1,2,2-Tetrachloroethane	0.016	0.158	ND	0.112	1.120	ND	ND
120-82-1	1,2,4-Trichlorobenzene	0.016	0.161	0.035	0.123	1.235	0.268	J
123-91-1	1,4 Dioxane	0.011	0.115	ND	0.043	0.427	ND	ND
91-20-3	Naphthalene	0.033	0.332	0.041	0.180	1.796	0.223	J

	Surrogate Recovery	Spike Amt. ppbV	Amount ppbV	% Rec.	QC Limits	Flag * = Out
2037-26-5	Toluene-d8	0.200	0.214	107	70-130	

Notes: 1) Reported results are to be interpreted to two significant figures.
2) ug/m3 = ppbV*FW/23.68 calculated assuming conditions at 60 F and 1 atm.
3) MDL and RL are adjusted for sample volume and can dilution.
4) U and ND are Flags used for Not Detected
5) J is a flag for a result between the MDL and the RL (or lower quantitation limit, LQL)

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified SIM GC/MS
Analytical Method: **TO-15 SIM**

SDG: **209270**
Laboratory Number: **05**

File: 0927005A.D
Description: 44-010
Can/Tube#: 633
Sam_Type: SA
QC_Batch: 062309-MS2
Air Volume: 500 ml

Date Sampled: 06/16/09 **Time:** 15:45
Date Received: 06/17/09
Date Extracted:
Date Analyzed: 06/23/09 **Time:** 14:00
Can Dilution Factor: 1.70 3
Not Detected Flag: ND

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
75-01-4	Vinyl chloride	0.018	0.177	ND	0.047	0.467	ND	ND
75-35-4	1,1-Dichloroethene	0.018	0.177	ND	0.072	0.723	ND	ND
75-34-3	1,1-Dichloroethane	0.017	0.173	ND	0.072	0.725	ND	ND
156-59-2	cis-1,2-Dichloroethene	0.018	0.177	0.042	0.072	0.723	0.172	J
107-06-2	1,2-Dichloroethane	0.018	0.177	0.046	0.074	0.739	0.192	J
71-43-2	Benzene	0.018	0.177	0.504	0.058	0.583	1.661	
56-23-5	Carbon tetrachloride	0.017	0.173	0.158	0.113	1.126	1.027	J
79-01-6	Trichloroethene	0.018	0.177	0.554	0.098	0.981	3.073	
75-27-4	Bromodichloromethane	0.012	0.116	ND	0.080	0.800	ND	ND
79-00-5	1,1,2-Trichloroethane	0.017	0.173	0.019	0.098	0.977	0.106	J
127-18-4	Tetrachloroethene	0.017	0.173	0.057	0.121	1.214	0.398	J
108-38-3	m & p-Xylene	0.035	0.350	1.876	0.157	1.571	8.414	
95-47-6	o-Xylene	0.017	0.173	0.592	0.078	0.778	2.657	
79-34-5	1,1,2,2-Tetrachloroethane	0.017	0.173	ND	0.123	1.229	ND	ND
120-82-1	1,2,4-Trichlorobenzene	0.018	0.177	0.079	0.135	1.354	0.604	J
123-91-1	1,4 Dioxane	0.013	0.126	ND	0.047	0.468	ND	ND
91-20-3	Naphthalene	0.036	0.364	0.082	0.197	1.970	0.445	J

	Surrogate Recovery	Spike Amt. ppbV	Amount ppbV	% Rec.	QC Limits	Flag * = Out
2037-26-5	Toluene-d8	0.200	0.203	101	70-130	

Notes: 1) Reported results are to be interpreted to two significant figures.
2) ug/m3 = ppbV*FW/23.68 calculated assuming conditions at 60 F and 1 atm.
3) MDL and RL are adjusted for sample volume and can dilution.
4) U and ND are Flags used for Not Detected
5) J is a flag for a result between the MDL and the RL (or lower quantitation limit, LQL)

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified SIM GC/MS
Analytical Method: **TO-15 SIM**

SDG: **209270**
Laboratory Number: **06**

File: 0927006A.D
Description: 44-011
Can/Tube#: 169
Sam_Type: SA
QC_Batch: 070909-MS2
Air Volume: 500 ml

Date Sampled: 06/16/09 **Time:** 14:14
Date Received: 06/17/09
Date Extracted:
Date Analyzed: 07/09/09 **Time:** 21:05
Can Dilution Factor: 1.47 3
Not Detected Flag: U

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
75-01-4	Vinyl chloride	0.008	0.076	0.008	0.020	0.202	0.020	U
75-35-4	1,1-Dichloroethene	0.007	0.076	0.007	0.028	0.313	0.028	U
106-93-4	1,2-Dibromoethane	0.009	0.076	0.009	0.072	0.607	0.072	U
79-34-5	1,1,2,2-Tetrachloroethane	0.007	0.076	0.007	0.050	0.542	0.050	U
91-20-3	Naphthalene	0.021	0.156	0.021	0.113	0.844	0.113	U

	Surrogate Recovery	Spike Amt. ppbV	Amount ppbV	% Rec.	QC Limits	Flag * = Out
2037-26-5	Toluene-d8	0.200	0.198	99	70-130	

Notes: 1) Reported results are to be interpreted to two significant figures.
2) ug/m3 = ppbV*FW/23.68 calculated assuming conditions at 60 F and 1 atm.
3) MDL and RL are adjusted for sample volume and can dilution.
4) U and ND are Flags used for Not Detected
5) J is a flag for a result between the MDL and the RL (or lower quantitation limit, LQL)

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified SIM GC/MS
Analytical Method: TO-15 SIM

SDG: 209270
Laboratory Number: 06

File: 0927006A.D
Description: 44-011
Can/Tube#: 169
Sam_Type: SA
QC_Batch: 062309-MS2
Air Volume: 500 ml

Date Sampled: 06/16/09 **Time:** 14:14
Date Received: 06/17/09
Date Extracted:
Date Analyzed: 06/23/09 **Time:** 14:43
Can Dilution Factor: 1.47 3
Not Detected Flag: ND

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
75-34-3	1,1-Dichloroethane	0.015	0.150	ND	0.063	0.627	ND	ND
156-59-2	cis-1,2-Dichloroethene	0.015	0.153	0.015	0.063	0.626	0.063	J
107-06-2	1,2-Dichloroethane	0.015	0.153	ND	0.064	0.639	ND	ND
71-43-2	Benzene	0.015	0.153	0.335	0.050	0.504	1.103	
56-23-5	Carbon tetrachloride	0.015	0.150	0.088	0.097	0.974	0.573	J
79-01-6	Trichloroethene	0.015	0.153	0.494	0.085	0.848	2.743	
75-27-4	Bromodichloromethane	0.010	0.100	ND	0.069	0.691	ND	ND
79-00-5	1,1,2-Trichloroethane	0.015	0.150	ND	0.084	0.845	ND	ND
127-18-4	Tetrachloroethene	0.015	0.150	0.030	0.105	1.050	0.208	J
108-38-3	m & p-Xylene	0.030	0.303	1.226	0.136	1.358	5.497	
95-47-6	o-Xylene	0.015	0.150	0.385	0.067	0.672	1.728	
120-82-1	1,2,4-Trichlorobenzene	0.015	0.153	0.050	0.117	1.171	0.385	J
123-91-1	1,4 Dioxane	0.011	0.109	0.420	0.040	0.405	1.563	

	Surrogate Recovery	Spike Amt. ppbV	Amount ppbV	% Rec.	QC Limits	Flag * = Out
2037-26-5	Toluene-d8	0.200	0.201	100	70-130	

Notes: 1) Reported results are to be interpreted to two significant figures.
2) ug/m3 = ppbV*FW/23.68 calculated assuming conditions at 60 F and 1 atm.
3) MDL and RL are adjusted for sample volume and can dilution.
4) U and ND are Flags used for Not Detected
5) J is a flag for a result between the MDL and the RL (or lower quantitation limit, LQL)

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified SIM GC/MS
Analytical Method: **TO-15 SIM**

SDG: **209270**
Laboratory Number: **07**

File: 0927007A.D
Description: 44-012
Can/Tube#: 670
Sam_Type: SA
QC_Batch: 062509-MS2
Air Volume: 100 ml

Date Sampled: 06/16/09 **Time:** 16:30
Date Received: 06/17/09
Date Extracted:
Date Analyzed: 06/25/09 **Time:** 13:19
Can Dilution Factor: 1.49 3
Not Detected Flag: ND

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
75-01-4	Vinyl chloride	0.077	0.775	ND	0.204	2.045	ND	ND
75-35-4	1,1-Dichloroethene	0.077	0.775	ND	0.317	3.171	ND	ND
75-34-3	1,1-Dichloroethane	0.076	0.760	ND	0.318	3.177	ND	ND
156-59-2	cis-1,2-Dichloroethene	0.077	0.775	ND	0.317	3.171	ND	ND
107-06-2	1,2-Dichloroethane	0.077	0.775	0.133	0.324	3.239	0.557	J
71-43-2	Benzene	0.077	0.775	0.255	0.256	2.555	0.841	J
56-23-5	Carbon tetrachloride	0.076	0.760	0.244	0.494	4.935	1.584	J
79-01-6	Trichloroethene	0.077	0.775	0.093	0.430	4.299	0.519	J
75-27-4	Bromodichloromethane	0.051	0.507	ND	0.350	3.504	ND	ND
79-00-5	1,1,2-Trichloroethane	0.076	0.760	0.088	0.428	4.281	0.494	J
127-18-4	Tetrachloroethene	0.076	0.760	ND	0.532	5.321	ND	ND
108-38-3	m & p-Xylene	0.153	1.535	0.380	0.688	6.883	1.704	J
95-47-6	o-Xylene	0.076	0.760	0.127	0.341	3.408	0.568	J
79-34-5	1,1,2,2-Tetrachloroethane	0.076	0.760	0.095	0.538	5.385	0.670	J
120-82-1	1,2,4-Trichlorobenzene	0.077	0.775	0.329	0.594	5.935	2.518	J
123-91-1	1,4 Dioxane	0.055	0.551	1.158	0.205	2.051	4.307	
91-20-3	Naphthalene	0.159	1.594	0.311	0.863	8.631	1.681	J

	Surrogate Recovery	Spike Amt. ppbV	Amount ppbV	% Rec.	QC Limits	Flag * = Out
2037-26-5	Toluene-d8	0.200	0.193	96	70-130	

Notes: 1) Reported results are to be interpreted to two significant figures.
2) ug/m3 = ppbV*FW/23.68 calculated assuming conditions at 60 F and 1 atm.
3) MDL and RL are adjusted for sample volume and can dilution.
4) U and ND are Flags used for Not Detected
5) J is a flag for a result between the MDL and the RL (or lower quantitation limit, LQL)

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified SIM GC/MS
Analytical Method: **TO-15 SIM**

SDG: **209270**
Laboratory Number: **08**

File: 0927008A.D
Description: 44-013
Can/Tube#: 782
Sam_Type: SA
QC_Batch: 071009-MS2
Air Volume: 500 ml

Date Sampled: 06/16/09 **Time:** 16:33
Date Received: 06/17/09
Date Extracted:
Date Analyzed: 07/10/09 **Time:** 13:13
Can Dilution Factor: 1.67 3
Not Detected Flag: U

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
75-01-4	Vinyl chloride	0.009	0.087	0.009	0.023	0.229	0.023	U
75-35-4	1,1-Dichloroethene	0.008	0.087	0.008	0.031	0.355	0.031	U
106-93-4	1,2-Dibromoethane	0.010	0.087	0.015	0.082	0.689	0.117	J
79-34-5	1,1,2,2-Tetrachloroethane	0.008	0.087	0.008	0.057	0.615	0.057	U
91-20-3	Naphthalene	0.024	0.177	0.089	0.128	0.958	0.483	J

	Surrogate Recovery	Spike Amt. ppbV	Amount ppbV	% Rec.	QC Limits	Flag * = Out
2037-26-5	Toluene-d8	0.200	0.187	93	70-130	

Notes: 1) Reported results are to be interpreted to two significant figures.
2) ug/m3 = ppbV*FW/23.68 calculated assuming conditions at 60 F and 1 atm.
3) MDL and RL are adjusted for sample volume and can dilution.
4) U and ND are Flags used for Not Detected
5) J is a flag for a result between the MDL and the RL (or lower quantitation limit, LQL)

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified SIM GC/MS
Analytical Method: TO-15 SIM

SDG: 209270
Laboratory Number: 08

File: 0927008A.D
Description: 44-013
Can/Tube#: 782
Sam_Type: SA
QC_Batch: 062309-MS2
Air Volume: 500 ml

Date Sampled: 06/16/09 **Time:** 16:33
Date Received: 06/17/09
Date Extracted:
Date Analyzed: 06/23/09 **Time:** 17:28
Can Dilution Factor: 1.67 3
Not Detected Flag: ND

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
75-34-3	1,1-Dichloroethane	0.017	0.170	ND	0.071	0.712	ND	ND
156-59-2	cis-1,2-Dichloroethene	0.017	0.174	0.023	0.071	0.711	0.095	J
107-06-2	1,2-Dichloroethane	0.017	0.174	ND	0.073	0.726	ND	ND
71-43-2	Benzene	0.017	0.174	0.362	0.057	0.573	1.193	
56-23-5	Carbon tetrachloride	0.017	0.170	0.099	0.111	1.106	0.641	J
79-01-6	Trichloroethene	0.017	0.174	0.825	0.096	0.964	4.579	
75-27-4	Bromodichloromethane	0.011	0.114	ND	0.079	0.786	ND	ND
79-00-5	1,1,2-Trichloroethane	0.017	0.170	ND	0.096	0.960	ND	ND
127-18-4	Tetrachloroethene	0.017	0.170	0.060	0.119	1.193	0.423	J
108-38-3	m & p-Xylene	0.034	0.344	1.423	0.154	1.543	6.381	
95-47-6	o-Xylene	0.017	0.170	0.453	0.076	0.764	2.030	
120-82-1	1,2,4-Trichlorobenzene	0.017	0.174	0.035	0.133	1.330	0.269	J
123-91-1	1,4 Dioxane	0.012	0.124	ND	0.046	0.460	ND	ND

	Surrogate Recovery	Spike Amt. ppbV	Amount ppbV	% Rec.	QC Limits	Flag * = Out
2037-26-5	Toluene-d8	0.200	0.196	98	70-130	

Notes: 1) Reported results are to be interpreted to two significant figures.
2) ug/m3 = ppbV*FW/23.68 calculated assuming conditions at 60 F and 1 atm.
3) MDL and RL are adjusted for sample volume and can dilution.
4) U and ND are Flags used for Not Detected
5) J is a flag for a result between the MDL and the RL (or lower quantitation limit, LQL)

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified SIM GC/MS
Analytical Method: TO-15 SIM

SDG: 209270
Laboratory Number: 09

File: 0927009A.D
Description: 44-014
Can/Tube#: 526
Sam_Type: SA
QC_Batch: 071009-MS2
Air Volume: 500 ml

Date Sampled: 06/16/09 **Time:** 16:38
Date Received: 06/17/09
Date Extracted:
Date Analyzed: 07/10/09 **Time:** 13:55
Can Dilution Factor: 2.16 3
Not Detected Flag: U

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
75-01-4	Vinyl chloride	0.011	0.112	0.011	0.030	0.296	0.030	U
75-35-4	1,1-Dichloroethene	0.010	0.112	0.010	0.041	0.460	0.041	U
106-93-4	1,2-Dibromoethane	0.013	0.112	0.013	0.106	0.892	0.106	U
79-34-5	1,1,2,2-Tetrachloroethane	0.010	0.112	0.010	0.073	0.796	0.073	U
91-20-3	Naphthalene	0.031	0.229	0.043	0.166	1.240	0.233	J

	Surrogate Recovery	Spike Amt. ppbV	Amount ppbV	% Rec.	QC Limits	Flag * = Out
2037-26-5	Toluene-d8	0.200	0.201	101	70-130	

Notes: 1) Reported results are to be interpreted to two significant figures.
2) ug/m3 = ppbV*FW/23.68 calculated assuming conditions at 60 F and 1 atm.
3) MDL and RL are adjusted for sample volume and can dilution.
4) U and ND are Flags used for Not Detected
5) J is a flag for a result between the MDL and the RL (or lower quantitation limit, LQL)

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified SIM GC/MS
Analytical Method: **TO-15 SIM**

SDG: **209270**
Laboratory Number: **09**

File: 0927009A.D
Description: 44-014
Can/Tube#: 526
Sam_Type: SA
QC_Batch: 062309-MS2
Air Volume: 500 ml

Date Sampled: 06/16/09 **Time:** 16:38
Date Received: 06/17/09
Date Extracted:
Date Analyzed: 06/23/09 **Time:** 18:13
Can Dilution Factor: 2.16 3
Not Detected Flag: ND

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
75-34-3	1,1-Dichloroethane	0.022	0.220	ND	0.092	0.921	ND	ND
156-59-2	cis-1,2-Dichloroethene	0.022	0.225	0.042	0.092	0.919	0.171	J
107-06-2	1,2-Dichloroethane	0.022	0.225	ND	0.094	0.939	ND	ND
71-43-2	Benzene	0.022	0.225	0.344	0.074	0.741	1.135	
56-23-5	Carbon tetrachloride	0.022	0.220	0.101	0.143	1.431	0.656	J
79-01-6	Trichloroethene	0.022	0.225	0.427	0.125	1.247	2.371	
75-27-4	Bromodichloromethane	0.015	0.147	ND	0.102	1.016	ND	ND
79-00-5	1,1,2-Trichloroethane	0.022	0.220	ND	0.124	1.241	ND	ND
127-18-4	Tetrachloroethene	0.022	0.220	0.043	0.154	1.543	0.303	J
108-38-3	m & p-Xylene	0.044	0.445	1.296	0.200	1.996	5.814	
95-47-6	o-Xylene	0.022	0.220	0.398	0.099	0.988	1.785	
120-82-1	1,2,4-Trichlorobenzene	0.022	0.225	0.033	0.172	1.721	0.253	J
123-91-1	1,4 Dioxane	0.016	0.160	0.461	0.059	0.595	1.714	

	Surrogate Recovery	Spike Amt. ppbV	Amount ppbV	% Rec.	QC Limits	Flag * = Out
2037-26-5	Toluene-d8	0.200	0.196	98	70-130	

Notes: 1) Reported results are to be interpreted to two significant figures.
2) ug/m3 = ppbV*FW/23.68 calculated assuming conditions at 60 F and 1 atm.
3) MDL and RL are adjusted for sample volume and can dilution.
4) U and ND are Flags used for Not Detected
5) J is a flag for a result between the MDL and the RL (or lower quantitation limit, LQL)

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified SIM GC/MS
Analytical Method: TO-15 SIM

SDG: 209270
Laboratory Number: 10

File: 0927010A.D
Description: 44-015
Can/Tube#: 188
Sam_Type: SA
QC_Batch: 062309-MS2
Air Volume: 500 ml

Date Sampled: 06/16/09 **Time:** 16:40
Date Received: 06/17/09
Date Extracted:
Date Analyzed: 06/23/09 **Time:** 19:10
Can Dilution Factor: 1.62 3
Not Detected Flag: ND

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
75-01-4	Vinyl chloride	0.017	0.168	ND	0.044	0.445	ND	ND
75-35-4	1,1-Dichloroethene	0.017	0.168	ND	0.069	0.689	ND	ND
75-34-3	1,1-Dichloroethane	0.017	0.165	ND	0.069	0.691	ND	ND
156-59-2	cis-1,2-Dichloroethene	0.017	0.168	0.021	0.069	0.689	0.086	J
107-06-2	1,2-Dichloroethane	0.017	0.168	ND	0.070	0.704	ND	ND
71-43-2	Benzene	0.017	0.168	0.191	0.056	0.556	0.629	
56-23-5	Carbon tetrachloride	0.017	0.165	0.050	0.107	1.073	0.325	J
79-01-6	Trichloroethene	0.017	0.168	0.171	0.093	0.935	0.946	
75-27-4	Bromodichloromethane	0.011	0.110	ND	0.076	0.762	ND	ND
79-00-5	1,1,2-Trichloroethane	0.017	0.165	ND	0.093	0.931	ND	ND
127-18-4	Tetrachloroethene	0.017	0.165	ND	0.116	1.157	ND	ND
108-38-3	m & p-Xylene	0.033	0.334	0.053	0.150	1.497	0.239	J
95-47-6	o-Xylene	0.017	0.165	0.020	0.074	0.741	0.088	J
79-34-5	1,1,2,2-Tetrachloroethane	0.017	0.165	ND	0.117	1.171	ND	ND
120-82-1	1,2,4-Trichlorobenzene	0.017	0.168	0.021	0.129	1.291	0.162	J
123-91-1	1,4 Dioxane	0.012	0.120	ND	0.045	0.446	ND	ND
91-20-3	Naphthalene	0.035	0.347	ND	0.188	1.877	ND	ND

	Surrogate Recovery	Spike Amt. ppbV	Amount ppbV	% Rec.	QC Limits	Flag * = Out
2037-26-5	Toluene-d8	0.200	0.203	101	70-130	

Notes: 1) Reported results are to be interpreted to two significant figures.
2) ug/m3 = ppbV*FW/23.68 calculated assuming conditions at 60 F and 1 atm.
3) MDL and RL are adjusted for sample volume and can dilution.
4) U and ND are Flags used for Not Detected
5) J is a flag for a result between the MDL and the RL (or lower quantitation limit, LQL)

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified SIM GC/MS
Analytical Method: **TO-15 SIM**

SDG: **209270**
Laboratory Number: **11**

File:	0927011A.D	**Date Sampled:**	06/16/09	**Time:**	
Description:	44-016	**Date Received:**	06/17/09		
Can/Tube#:	703	**Date Extracted:**			
Sam_Type:	SA	**Date Analyzed:**	07/10/09	**Time:**	14:39
QC_Batch:	071009-MS2	**Can Dilution Factor:**	1.00		3
Air Volume:	700 ml	**Not Detected Flag:**	U		

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
75-01-4	Vinyl chloride	0.004	0.037	0.004	0.010	0.098	0.010	U
75-35-4	1,1-Dichloroethene	0.003	0.037	0.003	0.013	0.152	0.013	U
106-93-4	1,2-Dibromoethane	0.004	0.037	0.004	0.035	0.295	0.035	U
79-34-5	1,1,2,2-Tetrachloroethane	0.003	0.037	0.003	0.024	0.263	0.024	U
91-20-3	Naphthalene	0.010	0.076	0.019	0.055	0.410	0.101	J

	Surrogate Recovery	Spike Amt. ppbV	Amount ppbV	% Rec.	QC Limits	Flag * = Out
2037-26-5	Toluene-d8	0.200	0.199	100	70-130	

Notes: 1) Reported results are to be interpreted to two significant figures.
2) ug/m3 = ppbV*FW/23.68 calculated assuming conditions at 60 F and 1 atm.
3) MDL and RL are adjusted for sample volume and can dilution.
4) U and ND are Flags used for Not Detected
5) J is a flag for a result between the MDL and the RL (or lower quantitation limit, LQL)

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified SIM GC/MS | **SDG:** 209270
Analytical Method: TO-15 SIM | **Laboratory Number:** 11

File:	0927011A.D	**Date Sampled:**	06/16/09	**Time:**	
Description:	44-016	**Date Received:**	06/17/09		
Can/Tube#:	703	**Date Extracted:**			
Sam_Type:	SA	**Date Analyzed:**	06/23/09	**Time:**	19:52
QC_Batch:	062309-MS2	**Can Dilution Factor:**	1.00		3
Air Volume:	500 ml	**Not Detected Flag:**	ND		

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
75-71-8	Dichlorodifluoromethane	0.011	0.106	ND	0.054	0.541	ND	ND
74-87-3	Chloromethane	0.010	0.102	ND	0.022	0.218	ND	ND
74-83-9	Bromomethane	0.010	0.104	0.069	0.042	0.417	0.276	J
75-00-3	Chloroethane	0.010	0.104	ND	0.028	0.283	ND	ND
75-69-4	Trichlorofluoromethane	0.010	0.104	ND	0.060	0.603	ND	ND
76-13-1	Freon 113	0.010	0.102	ND	0.081	0.807	ND	ND
75-09-2	Dichloromethane	0.010	0.104	ND	0.037	0.373	ND	ND
1634-04-4	Methyl tert butyl ether	0.007	0.066	ND	0.025	0.246	ND	ND
156-60-5	trans-1,2-Dichloroethene	0.007	0.074	ND	0.030	0.303	ND	ND
75-34-3	1,1-Dichloroethane	0.010	0.102	ND	0.043	0.426	ND	ND
156-59-2	cis-1,2-Dichloroethene	0.010	0.104	ND	0.043	0.426	ND	ND
67-66-3	Chloroform	0.010	0.102	ND	0.051	0.514	ND	ND
71-55-6	1,1,1-Trichloroethane	0.010	0.102	ND	0.057	0.575	ND	ND
107-06-2	1,2-Dichloroethane	0.010	0.104	ND	0.043	0.435	ND	ND
71-43-2	Benzene	0.010	0.104	ND	0.034	0.343	ND	ND
56-23-5	Carbon tetrachloride	0.010	0.102	ND	0.066	0.662	ND	ND
78-87-5	1,2-Dichloropropane	0.010	0.104	ND	0.050	0.496	ND	ND
79-01-6	Trichloroethene	0.010	0.104	ND	0.058	0.577	ND	ND
75-27-4	Bromodichloromethane	0.007	0.068	ND	0.047	0.470	ND	ND
108-88-3	Toluene	0.010	0.104	0.036	0.040	0.404	0.138	J
79-00-5	1,1,2-Trichloroethane	0.010	0.102	ND	0.057	0.575	ND	ND
106-93-4	1,2-Dibromoethane	0.010	0.104	ND	0.083	0.825	ND	ND
127-18-4	Tetrachloroethene	0.010	0.102	ND	0.071	0.714	ND	ND
108-90-7	Chlorobenzene	0.010	0.102	ND	0.049	0.485	ND	ND
100-41-4	Ethylbenzene	0.010	0.104	0.012	0.047	0.466	0.054	J
108-38-3	m & p-Xylene	0.021	0.206	0.040	0.092	0.924	0.180	J
100-42-5	Styrene	0.010	0.104	ND	0.046	0.458	ND	ND
95-47-6	o-Xylene	0.010	0.102	0.012	0.046	0.457	0.052	J
108-67-8	1,3,5-Trimethylbenzene	0.011	0.106	ND	0.054	0.538	ND	ND
95-63-6	1,2,4-Trimethylbenzene	0.010	0.102	ND	0.052	0.517	ND	ND
541-73-1	1,3-Dichlorobenzene	0.010	0.102	ND	0.063	0.633	ND	ND
100-44-7	Benzyl chloride	0.008	0.076	ND	0.041	0.406	ND	ND
106-46-7	1,4-Dichlorobenzene	0.010	0.102	ND	0.063	0.633	ND	ND
95-50-1	1,2-Dichlorobenzene	0.010	0.100	ND	0.062	0.621	ND	ND
120-82-1	1,2,4-Trichlorobenzene	0.010	0.104	0.010	0.080	0.797	0.080	J
123-91-1	1,4 Dioxane	0.007	0.074	0.148	0.028	0.275	0.552	

	Surrogate Recovery	Spike Amt. ppbV	Amount ppbV	% Rec.	QC Limits	Flag * = Out
2037-26-5	Toluene-d8	0.200	0.178	89	70-130	

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag

Notes: 1) Reported results are to be interpreted to two significant figures.
2) ug/m3 = ppbV*FW/23.68 calculated assuming conditions at 60 F and 1 atm.
3) MDL and RL are adjusted for sample volume and can dilution.
4) U and ND are Flags used for Not Detected
5) J is a flag for a result between the MDL and the RL (or lower quantitation limit, LQL)

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified SIM GC/MS
Analytical Method: **TO-15 SIM**

SDG: **209270**
Laboratory Number: **12**

File: 0927012A.D
Description: 44-017
Can/Tube#: 681
Sam_Type: SA
QC_Batch: 071009-MS2
Air Volume: 500 ml

Date Sampled: 06/16/09 **Time:** 16:53
Date Received: 06/17/09
Date Extracted:
Date Analyzed: 07/10/09 **Time:** 15:31
Can Dilution Factor: 1.87 3
Not Detected Flag: U

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
75-01-4	Vinyl chloride	0.010	0.097	0.010	0.026	0.257	0.026	U
75-35-4	1,1-Dichloroethene	0.009	0.097	0.009	0.035	0.398	0.035	U
106-93-4	1,2-Dibromoethane	0.012	0.097	0.012	0.092	0.772	0.092	U
79-34-5	1,1,2,2-Tetrachloroethane	0.009	0.097	0.009	0.064	0.689	0.064	U
91-20-3	Naphthalene	0.027	0.198	0.027	0.144	1.073	0.144	U

	Surrogate Recovery	Spike Amt. ppbV	Amount ppbV	% Rec.	QC Limits	Flag * = Out
2037-26-5	Toluene-d8	0.200	0.207	103	70-130	

Notes: 1) Reported results are to be interpreted to two significant figures.
2) ug/m3 = ppbV*FW/23.68 calculated assuming conditions at 60 F and 1 atm.
3) MDL and RL are adjusted for sample volume and can dilution.
4) U and ND are Flags used for Not Detected
5) J is a flag for a result between the MDL and the RL (or lower quantitation limit, LQL)

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified SIM GC/MS | **SDG:** 209270
Analytical Method: TO-15 SIM | **Laboratory Number:** 12

File:	0927012A.D	**Date Sampled:**	06/16/09	**Time:**	16:53
Description:	44-017	**Date Received:**	06/17/09		
Can/Tube#:	681	**Date Extracted:**			
Sam_Type:	SA	**Date Analyzed:**	06/23/09	**Time:**	20:39
QC_Batch:	062309-MS2	**Can Dilution Factor:**	1.87		3
Air Volume:	500 ml	**Not Detected Flag:**	ND		

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
75-71-8	Dichlorodifluoromethane	0.020	0.198	ND	0.101	1.012	ND	ND
74-87-3	Chloromethane	0.019	0.191	ND	0.041	0.407	ND	ND
74-83-9	Bromomethane	0.019	0.194	ND	0.078	0.779	ND	ND
75-00-3	Chloroethane	0.019	0.194	ND	0.053	0.530	ND	ND
75-69-4	Trichlorofluoromethane	0.019	0.194	0.033	0.113	1.128	0.190	J
76-13-1	Freon 113	0.019	0.191	ND	0.151	1.509	ND	ND
75-09-2	Dichloromethane	0.019	0.194	0.038	0.070	0.697	0.138	J
1634-04-4	Methyl tert butyl ether	0.012	0.123	ND	0.046	0.459	ND	ND
156-60-5	trans-1,2-Dichloroethene	0.014	0.138	ND	0.057	0.566	ND	ND
75-34-3	1,1-Dichloroethane	0.019	0.191	ND	0.080	0.797	ND	ND
156-59-2	cis-1,2-Dichloroethene	0.019	0.194	ND	0.080	0.796	ND	ND
67-66-3	Chloroform	0.019	0.191	ND	0.096	0.962	ND	ND
71-55-6	1,1,1-Trichloroethane	0.019	0.191	ND	0.107	1.075	ND	ND
107-06-2	1,2-Dichloroethane	0.019	0.194	ND	0.081	0.813	ND	ND
71-43-2	Benzene	0.019	0.194	0.066	0.064	0.641	0.218	J
56-23-5	Carbon tetrachloride	0.019	0.191	0.050	0.124	1.239	0.324	J
78-87-5	1,2-Dichloropropane	0.019	0.194	ND	0.093	0.928	ND	ND
79-01-6	Trichloroethene	0.019	0.194	ND	0.108	1.079	ND	ND
75-27-4	Bromodichloromethane	0.013	0.127	ND	0.088	0.880	ND	ND
108-88-3	Toluene	0.019	0.194	0.853	0.076	0.756	3.318	
79-00-5	1,1,2-Trichloroethane	0.019	0.191	ND	0.107	1.075	ND	ND
106-93-4	1,2-Dibromoethane	0.019	0.194	ND	0.154	1.543	ND	ND
127-18-4	Tetrachloroethene	0.019	0.191	0.049	0.134	1.336	0.342	J
108-90-7	Chlorobenzene	0.019	0.191	ND	0.091	0.907	ND	ND
100-41-4	Ethylbenzene	0.019	0.194	0.077	0.087	0.872	0.345	J
108-38-3	m & p-Xylene	0.039	0.385	0.242	0.173	1.728	1.085	J
100-42-5	Styrene	0.019	0.194	0.035	0.086	0.856	0.156	J
95-47-6	o-Xylene	0.019	0.191	0.069	0.086	0.855	0.307	J
108-67-8	1,3,5-Trimethylbenzene	0.020	0.198	0.062	0.101	1.006	0.313	J
95-63-6	1,2,4-Trimethylbenzene	0.019	0.191	0.045	0.097	0.967	0.227	J
541-73-1	1,3-Dichlorobenzene	0.019	0.191	ND	0.118	1.184	ND	ND
100-44-7	Benzyl chloride	0.014	0.142	ND	0.076	0.760	ND	ND
106-46-7	1,4-Dichlorobenzene	0.019	0.191	ND	0.118	1.184	ND	ND
95-50-1	1,2-Dichlorobenzene	0.019	0.187	ND	0.116	1.161	ND	ND
120-82-1	1,2,4-Trichlorobenzene	0.019	0.194	0.024	0.149	1.490	0.180	J
123-91-1	1,4 Dioxane	0.014	0.138	0.278	0.051	0.515	1.034	

	Surrogate Recovery	Spike Amt. ppbV	Amount ppbV	% Rec.	QC Limits	Flag * = Out
2037-26-5	Toluene-d8	0.200	0.183	92	70-130	

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag

Notes: 1) Reported results are to be interpreted to two significant figures.
2) ug/m3 = ppbV*FW/23.68 calculated assuming conditions at 60 F and 1 atm.
3) MDL and RL are adjusted for sample volume and can dilution.
4) U and ND are Flags used for Not Detected
5) J is a flag for a result between the MDL and the RL (or lower quantitation limit, LQL)

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified SIM GC/MS
Analytical Method: TO-15 SIM

SDG: 209270
Laboratory Number: 13

File: 0927013A.D
Description: 44-018
Can/Tube#: 180
Sam_Type: SA
QC_Batch: 071009-MS2
Air Volume: 1000 ml

Date Sampled: 06/16/09 **Time:** 16:53
Date Received: 06/17/09
Date Extracted:
Date Analyzed: 07/10/09 **Time:** 20:19
Can Dilution Factor: 1.63 3
Not Detected Flag: U

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
75-01-4	Vinyl chloride	0.004	0.042	0.004	0.011	0.112	0.011	U
75-35-4	1,1-Dichloroethene	0.004	0.042	0.004	0.015	0.173	0.015	U
106-93-4	1,2-Dibromoethane	0.005	0.042	0.005	0.040	0.336	0.040	U
79-34-5	1,1,2,2-Tetrachloroethane	0.004	0.042	0.004	0.028	0.300	0.028	U
91-20-3	Naphthalene	0.012	0.086	0.012	0.063	0.468	0.063	U

	Surrogate Recovery	Spike Amt. ppbV	Amount ppbV	% Rec.	QC Limits	Flag * = Out
2037-26-5	Toluene-d8	0.200	0.210	105	70-130	

Notes: 1) Reported results are to be interpreted to two significant figures.
2) ug/m3 = ppbV*FW/23.68 calculated assuming conditions at 60 F and 1 atm.
3) MDL and RL are adjusted for sample volume and can dilution.
4) U and ND are Flags used for Not Detected
5) J is a flag for a result between the MDL and the RL (or lower quantitation limit, LQL)

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified SIM GC/MS
Analytical Method: TO-15 SIM

SDG: 209270
Laboratory Number: 13

File: 0927013A.D
Description: 44-018
Can/Tube#: 180
Sam_Type: SA
QC_Batch: 062409-MS2
Air Volume: 1000 ml

Date Sampled: 06/16/09 **Time:** 16:53
Date Received: 06/17/09
Date Extracted:
Date Analyzed: 06/24/09 **Time:** 16:41
Can Dilution Factor: 1.63 3
Not Detected Flag: ND

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
75-71-8	Dichlorodifluoromethane	0.009	0.086	ND	0.044	0.441	ND	ND
74-87-3	Chloromethane	0.008	0.083	0.057	0.018	0.177	0.121	J
74-83-9	Bromomethane	0.008	0.085	ND	0.034	0.340	ND	ND
75-00-3	Chloroethane	0.008	0.085	ND	0.023	0.231	ND	ND
75-69-4	Trichlorofluoromethane	0.008	0.085	0.078	0.049	0.492	0.453	J
76-13-1	Freon 113	0.008	0.083	0.062	0.066	0.658	0.491	J
75-09-2	Dichloromethane	0.008	0.085	0.054	0.030	0.304	0.194	J
1634-04-4	Methyl tert butyl ether	0.005	0.054	ND	0.020	0.200	ND	ND
156-60-5	trans-1,2-Dichloroethene	0.006	0.060	ND	0.025	0.247	ND	ND
75-34-3	1,1-Dichloroethane	0.008	0.083	ND	0.035	0.348	ND	ND
156-59-2	cis-1,2-Dichloroethene	0.008	0.085	ND	0.035	0.347	ND	ND
67-66-3	Chloroform	0.008	0.083	0.017	0.042	0.419	0.087	J
71-55-6	1,1,1-Trichloroethane	0.008	0.083	0.012	0.047	0.468	0.067	J
107-06-2	1,2-Dichloroethane	0.008	0.085	ND	0.035	0.354	ND	ND
71-43-2	Benzene	0.008	0.085	0.076	0.028	0.280	0.250	J
56-23-5	Carbon tetrachloride	0.008	0.083	0.100	0.054	0.540	0.647	
78-87-5	1,2-Dichloropropane	0.008	0.085	ND	0.040	0.404	ND	ND
79-01-6	Trichloroethene	0.008	0.085	ND	0.047	0.470	ND	ND
75-27-4	Bromodichloromethane	0.006	0.055	ND	0.038	0.383	ND	ND
108-88-3	Toluene	0.008	0.085	0.221	0.033	0.330	0.861	
79-00-5	1,1,2-Trichloroethane	0.008	0.083	ND	0.047	0.468	ND	ND
106-93-4	1,2-Dibromoethane	0.008	0.085	0.009	0.067	0.673	0.070	J
127-18-4	Tetrachloroethene	0.008	0.083	0.013	0.058	0.582	0.090	J
108-90-7	Chlorobenzene	0.008	0.083	0.009	0.040	0.395	0.044	J
100-41-4	Ethylbenzene	0.008	0.085	0.033	0.038	0.380	0.146	J
108-38-3	m & p-Xylene	0.017	0.168	0.120	0.075	0.753	0.537	J
100-42-5	Styrene	0.008	0.085	0.016	0.037	0.373	0.072	J
95-47-6	o-Xylene	0.008	0.083	0.038	0.037	0.373	0.171	J
108-67-8	1,3,5-Trimethylbenzene	0.009	0.086	0.015	0.044	0.439	0.076	J
95-63-6	1,2,4-Trimethylbenzene	0.008	0.083	0.027	0.042	0.421	0.139	J
541-73-1	1,3-Dichlorobenzene	0.008	0.083	0.015	0.052	0.516	0.090	J
100-44-7	Benzyl chloride	0.006	0.062	ND	0.033	0.331	ND	ND
106-46-7	1,4-Dichlorobenzene	0.008	0.083	0.018	0.052	0.516	0.109	J
95-50-1	1,2-Dichlorobenzene	0.008	0.082	0.013	0.051	0.506	0.080	J
120-82-1	1,2,4-Trichlorobenzene	0.008	0.085	0.020	0.065	0.649	0.155	J
123-91-1	1,4 Dioxane	0.006	0.060	ND	0.022	0.224	ND	ND

	Surrogate Recovery	Spike Amt. ppbV	Amount ppbV	% Rec.	QC Limits	Flag * = Out
2037-26-5	Toluene-d8	0.200	0.208	104	70-130	

Report File Name: 20927013.MSM
Printed on 7/13/2009

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag

Notes: 1) Reported results are to be interpreted to two significant figures.
2) ug/m3 = ppbV*FW/23.68 calculated assuming conditions at 60 F and 1 atm.
3) MDL and RL are adjusted for sample volume and can dilution.
4) U and ND are Flags used for Not Detected
5) J is a flag for a result between the MDL and the RL (or lower quantitation limit, LQL)

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified SIM GC/MS
Analytical Method: **TO-15 SIM**

SDG: **209270**
Laboratory Number: **14**

File: 0927014A.D
Description: 44-006B
Can/Tube#: 2968
Sam_Type: SA
QC_Batch: 071009-MS2
Air Volume: 500 ml

Date Sampled: 06/16/09 **Time:** 15:35
Date Received: 06/17/09
Date Extracted:
Date Analyzed: 07/10/09 **Time:** 16:17
Can Dilution Factor: 2.59 3
Not Detected Flag: U

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
75-01-4	Vinyl chloride	0.013	0.135	0.013	0.036	0.355	0.036	U
75-35-4	1,1-Dichloroethene	0.012	0.135	0.012	0.049	0.551	0.049	U
106-93-4	1,2-Dibromoethane	0.016	0.135	0.016	0.127	1.069	0.127	U
79-34-5	1,1,2,2-Tetrachloroethane	0.012	0.135	0.012	0.088	0.954	0.088	U
91-20-3	Naphthalene	0.037	0.275	0.037	0.199	1.486	0.199	U

	Surrogate Recovery	Spike Amt. ppbV	Amount ppbV	% Rec.	QC Limits	Flag * = Out
2037-26-5	Toluene-d8	0.200	0.199	100	70-130	

Notes: 1) Reported results are to be interpreted to two significant figures.
2) ug/m3 = ppbV*FW/23.68 calculated assuming conditions at 60 F and 1 atm.
3) MDL and RL are adjusted for sample volume and can dilution.
4) U and ND are Flags used for Not Detected
5) J is a flag for a result between the MDL and the RL (or lower quantitation limit, LQL)

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified SIM GC/MS
Analytical Method: TO-15 SIM

SDG: 209270
Laboratory Number: 14

File: 0927014A.D
Description: 44-006B
Can/Tube#: 2968
Sam_Type: SA
QC_Batch: 062209-MS2
Air Volume: 500 ml

Date Sampled: 06/16/09 **Time:** 15:35
Date Received: 06/17/09
Date Extracted:
Date Analyzed: 06/22/09 **Time:** 18:11
Can Dilution Factor: 2.59 3
Not Detected Flag: ND

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
75-34-3	1,1-Dichloroethane	0.026	0.264	ND	0.110	1.104	ND	ND
156-59-2	cis-1,2-Dichloroethene	0.027	0.269	ND	0.110	1.102	ND	ND
107-06-2	1,2-Dichloroethane	0.027	0.269	ND	0.113	1.126	ND	ND
71-43-2	Benzene	0.027	0.269	0.412	0.089	0.888	1.357	
56-23-5	Carbon tetrachloride	0.026	0.264	0.398	0.172	1.716	2.585	
79-01-6	Trichloroethene	0.027	0.269	0.027	0.149	1.495	0.150	J
75-27-4	Bromodichloromethane	0.018	0.176	ND	0.122	1.218	ND	ND
79-00-5	1,1,2-Trichloroethane	0.026	0.264	ND	0.149	1.488	ND	ND
127-18-4	Tetrachloroethene	0.026	0.264	0.084	0.185	1.850	0.588	J
108-38-3	m & p-Xylene	0.053	0.534	1.011	0.239	2.393	4.534	
95-47-6	o-Xylene	0.026	0.264	0.297	0.118	1.185	1.331	
120-82-1	1,2,4-Trichlorobenzene	0.027	0.269	0.071	0.206	2.063	0.542	J
123-91-1	1,4 Dioxane	0.019	0.192	ND	0.071	0.713	ND	ND

	Surrogate Recovery	Spike Amt. ppbV	Amount ppbV	% Rec.	QC Limits	Flag * = Out
2037-26-5	Toluene-d8	0.200	0.223	112	70-130	

Notes: 1) Reported results are to be interpreted to two significant figures.
2) ug/m3 = ppbV*FW/23.68 calculated assuming conditions at 60 F and 1 atm.
3) MDL and RL are adjusted for sample volume and can dilution.
4) U and ND are Flags used for Not Detected
5) J is a flag for a result between the MDL and the RL (or lower quantitation limit, LQL)

SECTION 4
Analytical Data, Level C

This section contains the Daily Analytical Batch (DAB) data for each analytical test requested. There will be a separate DAB for each day samples were analyzed and for each analysis requested. The DAB's are organized first be analytical test then in order of date. To find a particular sample refer to the Analytical Batch Reference Table in Section 1.3, which gives the DAB number for each sample.

Each Batch contains the following:

1) Tune Data (GC/MS only)
2) Continuing Calibration Sample
3) Method Blank
4) QC Samples (LCS, LCD, MS, Sample Dup)
5) Samples

Each sample data package contains all of the information used to quantitate the results for that sample. The Initial Calibration data is included, along with the response factors, calculation sheet, sample calculation, analytical report. Note: The continuing calibration is considered a separate QC check sample, since the continuing calibration data is not used to calculate the analytical results (results are calculated from the initial calibration curve data).

This section contains information equivalent to that found in EPA FORM I – Volatile Organics Data sheet.

This section contains information equivalent to that found in EPA FORM II – Volatile Organics LCS Recovery and Precision.

This section contains information equivalent to that found in EPA FORM III – Volatile Organics Method Blank Summary.

This section contains information equivalent to that found in EPA FORM IV – Volatile Organics Instrument Performance Check Bromofluorobenzene (BFB).

This section contains information equivalent to that found in EPA FORM V – Volatile Organics Initial Calibration Data.

This section contains information equivalent to that found in EPA FORM VI – Volatile Organics Continuing Calibration Data.

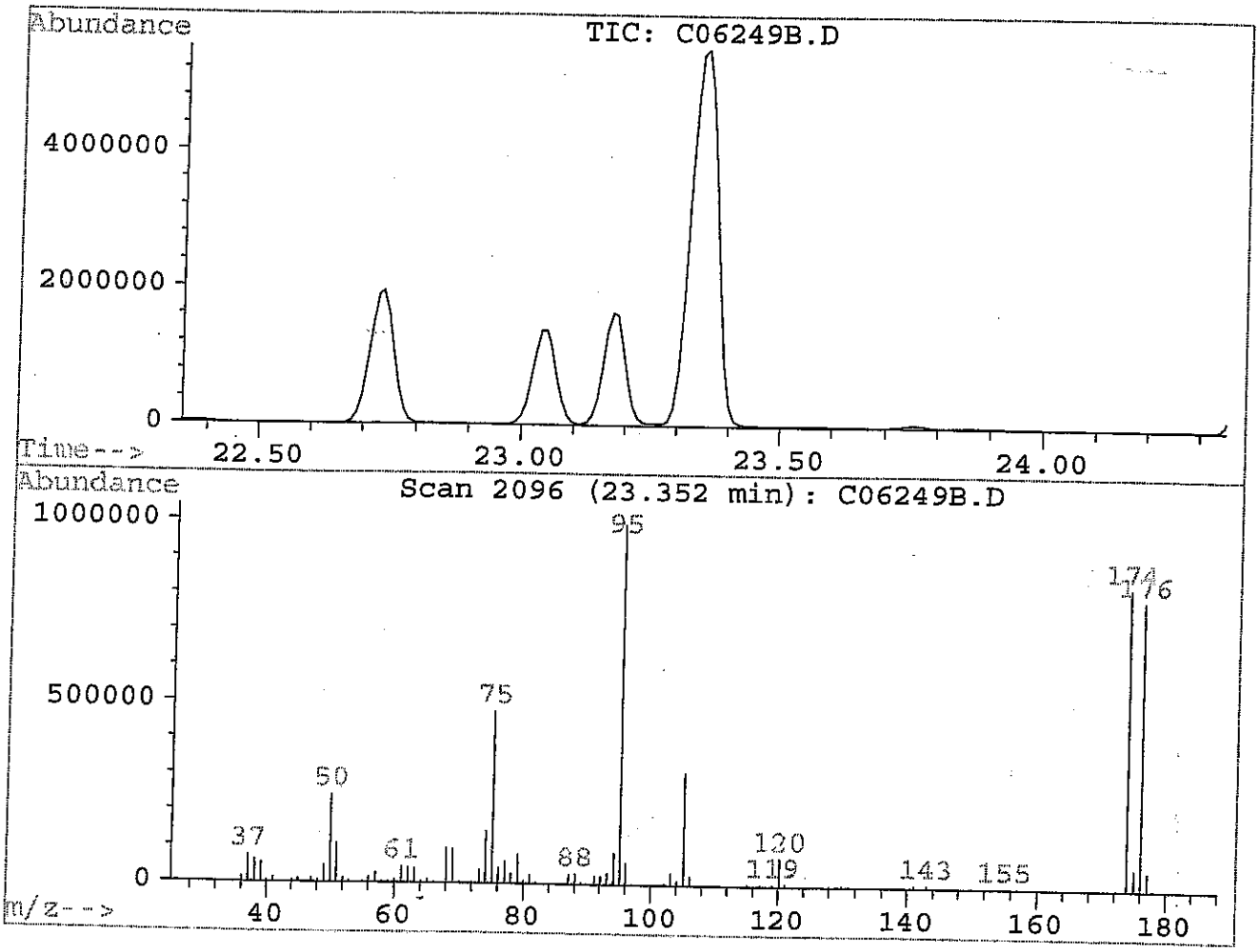
4.1 EPA TO-15M Volatile Organics
Daily Analytical Batch #: 062409-MS1

BFB

Data File : C:\MSCHEM\1\DATA\06249MS1\C06249B.D
Acq Time : 24 Jun 109 10:10 am
Sample : ST60022 + ST60350
Misc :

Operator: JF
Inst : 5970 - In
Multiplr: 1.00

Method : C:\MSCHEM\1\METHODS\1T15EXAY.M
Title : EPA T0-15



Peak Apex is scan: 2096

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	8	40	24.3	240640	PASS
75	95	30	66	47.9	473792	PASS
95	95	100	100	100.0	989824	PASS
96	95	5	9	6.1	60272	PASS
173	174	0	2	0.0	0	PASS
174	95	50	120	83.6	827776	PASS
175	174	4	9	6.9	56768	PASS
176	174	93	101	95.8	792704	PASS
177	176	5	9	6.3	49816	PASS

C06249B.D 1T15EXAY.M Wed Jun 24 10:41:06 2009

CONTINUING CALIBRATION REPORT

SDG:	**LABQC**
QC_Batch:	**062409-MS1**
Sample ID:	ST60022 + ST60350
Sample Analysis Date:	24 Jun 109 10:10 am
Run Method:	1T15EXAY.M
Quant/Calibration Method:	1T15EXAY.M
Cal Update:	Tue Mar 17 14:18:15 2009
Template:	1TO15EXT.MS1
Calibration Level	Level 4 5.0

Sample Calculation:

$$1)\ RFi = \left| \frac{(Astdi)\ (Clstdi)}{(Cstdi)\ (Aistdi)} \right|_i$$

Compound	Area Astdi	Cal Level Cstdi ppbv	CCRRF	AvgRFn	%Dev	%Dev Limit	%Dev Flag
2-propanol	503581	4.550	0.417	0.668	37.5	40	IN
Pentafluorobenzene	5302534	20.000	1.000	1.000	0.0	30	IN
1,4-Difluorobenzene	4592475	20.000	1.000	1.000	0.0	30	IN
Toluene-d8	2456279	10.000	1.070	1.124	4.9	30	IN

QUANTITATION REPORT

EPA Method TO-15 Modified Full Scan GC/MS

			Review	EAS Sample ID: C06249B	
File Name:	C06249B.D				1 KB
Sample ID:	ST60022 + ST60350				2 AT
Date:	24 Jun 109 10:10 am			Cal Amounts	3 BB
Run Method:	1T15EXAY.M			IS Areas	4 SH
Quant Method:	1T15EXAY.M			Carryover	
Cal Update:	Tue Mar 17 14:18:15 2009				
Template:	1TO15EXT.MS1				
Can Factor:	1.00				
Volume:	200	ml		Analyst: KB 1	

CAS#	Compound	n	Raw Amount	RT	Target RT	Ion	Sample Area	Qualifier	Lower Qual	Upper Qual	Qual Flag	Cal Flag	Int Flag
67-63-0	2-propanol	13	2.845	6.15	6.14	45.00	503581	0	18	27	Q		
363-72-4	Pentafluorobenzene	1	20.000	11.39	11.38	168.00	5302534						
540-36-3	1,4-Difluorobenzene	35	20.000	13.18	13.17	114.00	4592475						
2037-26-5	Toluene-d8	94	9.514	16.92	16.94	98.00	2456279	63	51	77			

Integration Flags:

If no flag the integration was done by the instrument computer

M1 Manual Integration because the computer did not integrated the peak or integrated the wrong peak

M2 Manual Integration because computer integration of baseline was different then Inital Calibration

INITIAL CALIBRATION REPORT

EPA Method TO-15 Modified Full Scan GC/MS

File Name:	C06249B.D	SDG:	LABQC
Sample ID:	ST60022 + ST60350	QC_Batch:	062409-MS1
Sample Analysis Date:	24 Jun 109 10:10 am	Instrument Name:	5970 - In
Run Method:	1T15EXAY.M		
Quant and Calibration Method:	1T15EXAY.M	Calibration Title:	EPA T0-15
Cal Update:	Tue Mar 17 14:18:15 2009		
Template:	1TO15EXT.MS1		

Number Compounds:		96
IS1:	ST60403	20
IS2:	ST60403	20
IS3:		
IS4:		

		Calibration Amount CA, ppmv						Calibration Response, Area					
		Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
		Amt	Amt	Amt	Amt	Amt	Amt	C03179C.D	C03179E.D	C03179B.D	C03179A.D	C03169H.D	C03179D.D
n	Compound	0.25	4.0	1.0	5.0	10.0	2.0	0.25	4.0	1.0	5.0	10.0	2.0
13	2-propanol	0.228	3.640	0.910	4.550	9.100	1.820	19578	321532	75563	289890	1427833	154437
1	Pentafluorobenzene	20.000	20.000	20.000	20.000	20.000	20.000	2643183	2935915	2871816	2719013	2737194	3022845
35	1,4-Difluorobenzene	20.000	20.000	20.000	20.000	20.000	20.000	2659938	2870629	2814997	2720455	2706138	3020264
94	Toluene-d8	10.000	10.000	10.000	10.000	10.000	10.000	1479389	1629143	1590486	1469067	1546296	1730275

(70)

INITIAL CALIBRATION REPORT: Response Factors

SDG:	**LABQC**	**Sample Calculation:**	
QC_Batch:	**062409-MS1**	1) Avg RFn = Sum	$\left\lvert \frac{(Astdni)}{(Cstdni)} \frac{(Cistdi)}{(Aistdi)} \right\rvert_i$
Sample ID:	ST60022 + ST60350		
Sample Analysis Date:	24 Jun 109 10:10 am		
Run Method:	1T15EXAY.M		
Quant Method:	1T15EXAY.M		
Cal Update:	Tue Mar 17 14:18:15 2009		
Template:	1TO15EXT.MS1		

Response Factors

Compound	RF1	RF2	RF3	RF4	RF5	RF6	AvgRFn	%RSD
2-propanol	0.650	0.602	0.578	0.469	1.146	0.561	0.668	36.24
Pentafluorobenzene	1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.00
1,4-Difluorobenzene	1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.00
Toluene-d8	1.112	1.135	1.130	1.080	1.143	1.146	1.124	2.20

CALCULATIONS

EPA Method TO-15 Modified Full Scan GC/MS

SDG: LABQC
Laboratory Number: C06249

RL: 1T15EXAY.M (2) RL, Concentration of lowest Standandard in ICAL:
Run Method: 1T15EXAY.M
Quant Method: 1T15EXAY.M
Can Dilution Factor: 1.00
Air Volume: 200 ml MDL Factor 1
Gas Constant: 23.68
Decimal Places: 2

Compound	M.W.	Raw Amount	Result ppbv	Result ug/m3	(1) MDL ppbv	(2) RL ppbv	Calc MDL ppbv	Calc MDL ug/m3	Calc RL ppbv	Calc RL ug/m3	Flag	Spike ppmv
2-propanol	60.1	2.845	14.223	36.10	0.046	0.228	0.23	0.58	1.14	2.89		0.103

SAMPLE CALCULATION

EPA Method TO-15 Modified Full Scan GC/MS

SDG:		**LABQC**
Laboratory Number:		**C06249**
Standard Volume	STV	5.0
Sample Volume	SV	200
Can Dilution Factor	CDF	1.00
Gas Constant		23.68
Decimal Places:		2

Sample Calculation:

1) Avg RFn = Sum $\left| \frac{(Astdni)}{(Cstdni)} \frac{(Cistdi)}{(Aistdi)} \right|_i$ Note: 1

2) Raw Amt = $\frac{(Ansamp)}{(Avg\ RFn)} \frac{(Cistdi)}{(Aistdi)}$ = Cn

3) Amount ppbv = $\frac{(Raw\ Amt)\ 1000}{(SV)}$ (CDF)

4) Amount ug/m3 = $\frac{(amt(ppbv)\ MW}{23.68}$

n	Compound	IS n	Chem type	MW	AvgRFn	Area Ansamp	Cistdi ppmv	Aistdi Ais	Cn ppmV Raw Amt	Amount ppbv	Amount ug/m3
13	2-propanol	1	TRG	60.1	0.668	503581	20.000	5302534	2.845	14.22	36.09
1	Pentafluorobenzene	1	IS		1.000	5302534	20.000	5302534			
35	1,4-Difluorobenzene	35	IS		1.000	4592475	20.000	4592475			
94	Toluene-d8	35	SURR		1.124	2456279	20.000	4592475			

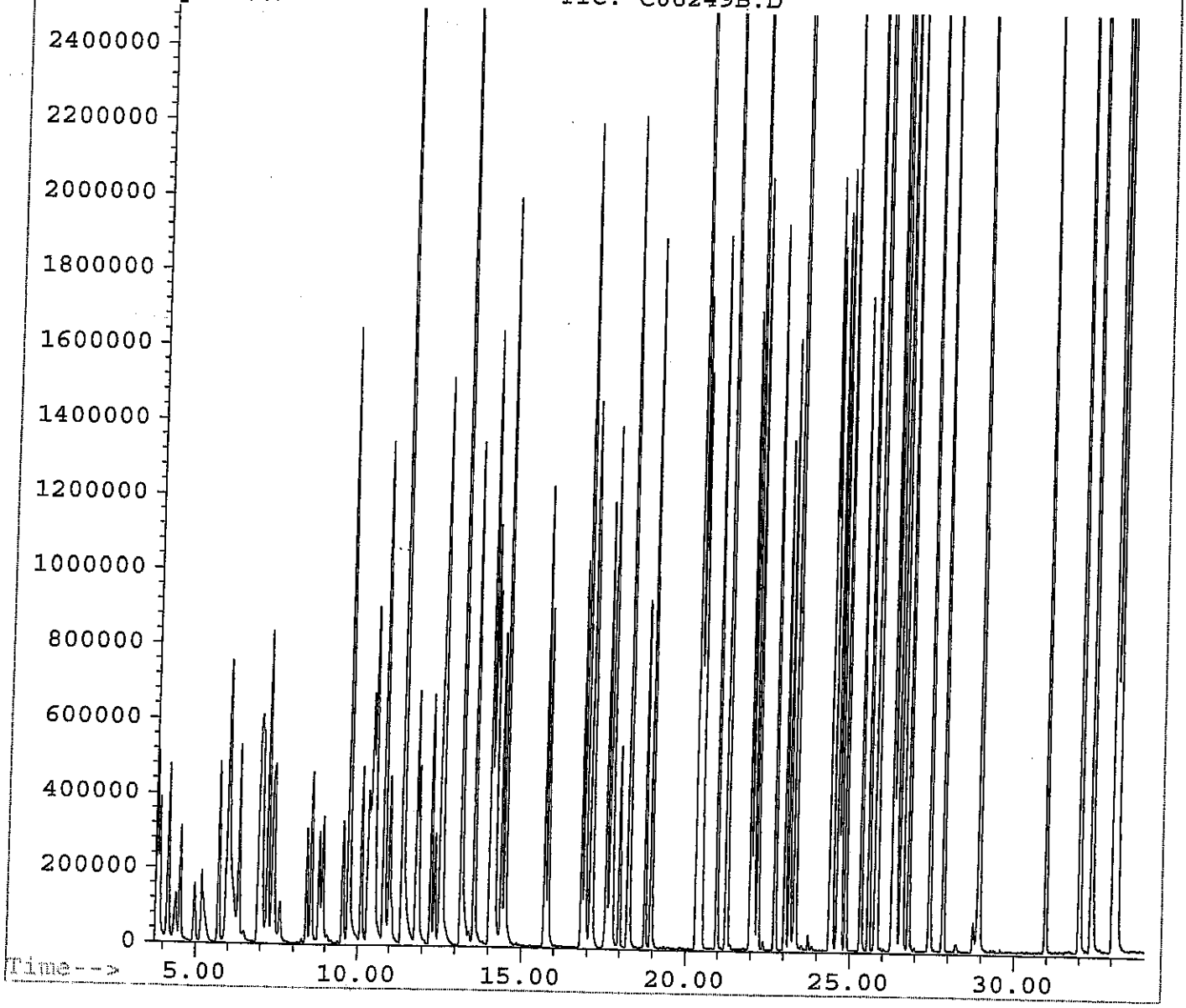
Calculation Definitions:

n	compound n
i	i th calibration level
Astdni	Standard Area for compound n at ith calibration level
Cstdni	Standard Concentration for compound n at ith calibration level in ppmv
Cistdi	Internal Standard Conc used for compound n at ith calibration level in ppmv
Aistdi	Internal Standard Area used for compound n at ith calibration level
Ansamp	Sample Area for compound n
Avg RFn	Average response factor for all ith calibration levels for compound n
Raw Amount	Sample Concentration in ppmv before applying factors
Cistd	Concentration internal standard used for compound n in sample in ppmv
Aistd	Area of internal standard used for compound n in sample
Cn	Concentration of compound n in sample in ppmv
23.68	Gas constant at 60 F as per EPA source test protocol
MW	Molecular weight of compound
Note (1) : Avg RFn	The values for the Average Response Factor AvgRFn can be optained from the response Factor Report for the Initial Calibration, or from the Calibration Report

Name of file: C:\MSCHEM\1\DATA\06249MS1\C06249B.D

Name of operator: JF

TIC: C06249B.D



METHOD BLANK REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified Full Scan GC/MS | **SDG:** LABQC
Analytical Method: TO-15 | **Laboratory Number:** B06249

File:	CC125A.D	**Date Sampled:**		**Time:**	
Description:	METHOD BLANK	**Date Received:**			
Can/Tube#:		**Date Extracted:**			
Sam_Type:	MB	**Date Analyzed:**	06/24/09	**Time:**	13:12
QC_Batch:	062409-MS1	**Can Dilution Factor:**	1.00		2
Air Volume:	200 ml	**Not Detected Flag:**	ND		

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
67-63-0	2-propanol	0.23	1.14	ND	0.58	2.89	ND	ND

	Surrogate Recovery	Spike Amt. ppbV	Amount ppbV	% Rec.	QC Limits	Flag * = Out
2037-26-5	Toluene-d8	10.000	9.797	98	70-130	

Notes: 1) Reported results are to be interpreted to two significant figures.
2) ug/m3 = ppbV*FW/23.68 calculated assuming conditions at 60 F and 1 atm.
3) MDL and RL are adjusted for sample volume and can dilution.
4) U and ND are Flags used for Not Detected
5) J is a flag for a result between the MDL and the RL (or lower quantitation limit, LQL)

QUANTITATION REPORT

EPA Method TO-15 Modified Full Scan GC/MS

			Review	EAS Sample ID: CC125A.	
File Name:	CC125A.D				1 KB
Sample ID:	METHOD BLANK				2 AT
Date:	24 Jun 109 1:12 pm			Cal Amounts	3 BB
Run Method:	1T15EXAY.M			IS Areas	4 SH
Quant Method:	1T15EXAY.M			Carryover	
Cal Update:	Tue Mar 17 14:18:15 2009				
Template:	1TO15EXT.MS1				
Can Factor:	1.00				
Volume:	200	ml		Analyst: KB 1	

CAS#	Compound	n	Raw Amount	RT	Target RT	Ion	Sample Area	Qualifier	Lower Qual	Upper Qual	Qual Flag	Cal Flag	Int Flag
67-63-0	2-propanol	13	0.000	5.97	6.14	45.00	0	0	18	27			
363-72-4	Pentafluorobenzene	1	20.000	11.40	11.38	168.00	**5716190**						
540-36-3	1,4-Difluorobenzene	35	20.000	13.19	13.17	114.00	**4961048**						
2037-26-5	Toluene-d8	94	9.797	16.94	16.94	98.00	2732377	65	51	77			

Integration Flags:

If no flag the Integration was done by the instrument computer

M1 Manual Integration because the computer did not integrated the peak or integrated the wrong peak

M2 Manual Integration because computer integration of baseline was different then Inital Calibration

INITIAL CALIBRATION REPORT

EPA Method TO-15 Modified Full Scan GC/MS

SDG: LABQC
QC_Batch: 062409-MS1
Instrument Name: 5970 - In

File Name: CC125A.D
Sample ID: METHOD BLANK
Sample Analysis Date: 24 Jun 109 1:12 pm
Run Method: 1T15EXAY.M
Quant and Calibration Method: 1T15EXAY.M
Cal Update: Tue Mar 17 14:18:15 2009
Template: 1TO15EXT.MS1

Calibration Title: EPA T0-15

Number Compounds: 96
IS1: ST60403 20
IS2: ST60403 20
IS3:
IS4:

		Calibration Amount CA, ppmv						Calibration Response, Area					
		Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
		Amt	Amt	Amt	Amt	Amt	Amt	C03179C.D	C03179E.D	C03179B.D	C03179A.D	C03169H.D	C03179D.D
n	Compound	0.25	4.0	1.0	5.0	10.0	2.0	0.25	4.0	1.0	5.0	10.0	2.0
13	2-propanol	0.228	3.640	0.910	4.550	9.100	1.820	19578	321532	75563	289890	1427833	154437
1	Pentafluorobenzene	20.000	20.000	20.000	20.000	20.000	20.000	2643183	2935915	2871816	2719013	2737194	3022845
35	1,4-Difluorobenzene	20.000	20.000	20.000	20.000	20.000	20.000	2659938	2870629	2814997	2720455	2706138	3020264
94	Toluene-d8	10.000	10.000	10.000	10.000	10.000	10.000	1479389	1629143	1590486	1469067	1546296	1730275

(77)

INITIAL CALIBRATION REPORT: Response Factors

SDG:	**LABQC**
QC_Batch:	**062409-MS1**
Sample ID:	METHOD BLANK
Sample Analysis Date:	24 Jun 109 1:12 pm
Run Method:	1T15EXAY.M
Quant Method:	1T15EXAY.M
Cal Update:	Tue Mar 17 14:18:15 2009
Template:	1TO15EXT.MS1

Sample Calculation:

1) Avg RFn = Sum $\left| \frac{(Astdni) \quad (Cistdi)}{(Cstdni) \quad (Aistdi)} \right|_i$

Response Factors

Compound	RF1	RF2	RF3	RF4	RF5	RF6	AvgRFn	%RSD
2-propanol	0.650	0.602	0.578	0.469	1.146	0.561	0.668	36.24
Pentafluorobenzene	1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.00
1,4-Difluorobenzene	1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.00
Toluene-d8	1.112	1.135	1.130	1.080	1.143	1.146	1.124	2.20

CALCULATIONS

EPA Method TO-15 Modified Full Scan GC/MS

SDG: LABQC
Laboratory Number: B06249

RL: 1T15EXAY.M (2) RL, Concentration of lowest Standandard in ICAL:
Run Method: 1T15EXAY.M
Quant Method: 1T15EXAY.M
Can Dilution Factor: 1.00
Air Volume: 200 ml MDL Factor 1
Gas Constant: 23.68
Decimal Places: 2

Compound	M.W.	Raw Amount	Result ppbv	Result ug/m3	(1) MDL ppbv	(2) RL ppbv	Calc MDL ppbv	Calc MDL ug/m3	Calc RL ppbv	Calc RL ug/m3	Flag	Spike ppmv
2-propanol	60.1	0.000	0.000	0.00	0.046	0.228	0.23	0.58	1.14	2.89	U	0.103

SAMPLE CALCULATION

EPA Method TO-15 Modified Full Scan GC/MS

SDG:		**LABQC**
Laboratory Number:		**B06249**
Standard Volume	STV	5.0
Sample Volume	SV	200
Can Dilution Factor	CDF	1.00
Gas Constant		23.68
Decimal Places:		2

Sample Calculation:

1) Avg RFn = Sum $\left| \frac{(Astdni)}{(Cstdni)} \frac{(Cistdi)}{(Aistdi)} \right|_i$ Note: 1

2) Raw Amt = $\frac{(Ansamp)}{(Avg\ RFn)} \frac{(Cistdi)}{(Aistdi)}$ = Cn

3) Amount ppbv = $\frac{(Raw\ Amt)\ 1000}{(SV)}$ (CDF)

4) Amount ug/m3 = $\frac{(amt(ppbv)\ MW}{23.68}$

n	Compound	IS n	Chem type	MW	AvgRFn	Area Ansamp	Cistdi ppmv	Aistdi Ais	Cn ppmV Raw Amt	Amount ppbv	Amount ug/m3
13	2-propanol	1	TRG	60.1	0.668	0	20.000	5716190	0.000	0.00	0.00
1	Pentafluorobenzene	1	IS		1.000	5716190	20.000	5716190			
35	1,4-Difluorobenzene	35	IS		1.000	4961048	20.000	4961048			
94	Toluene-d8	35	SURR		1.124	2732377	20.000	4961048			

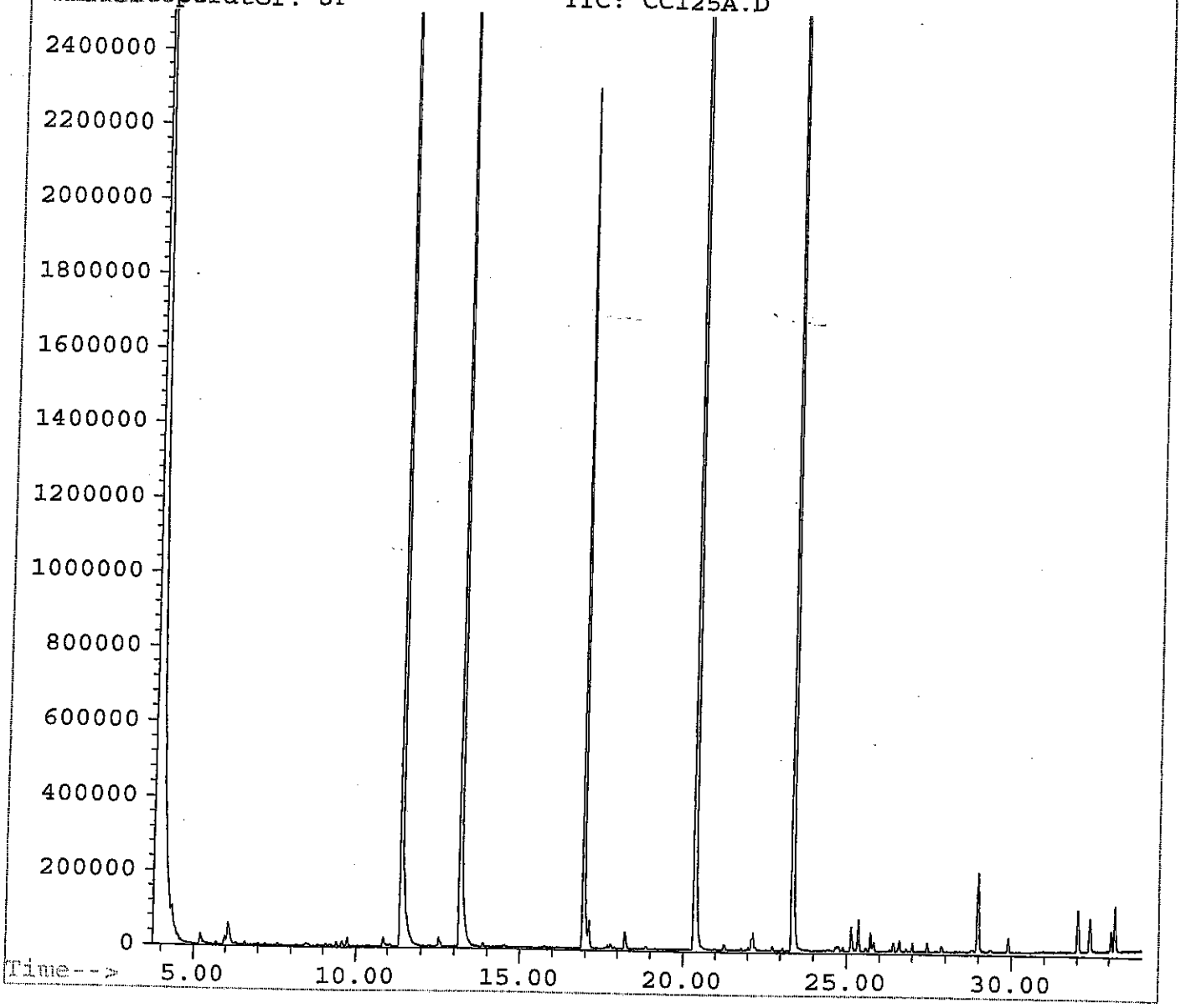
Calculation Definitions:

n	compound n
i	i th calibration level
Astdni	Standard Area for compound n at ith calibration level
Cstdni	Standard Concentration for compound n at ith calibration level in ppmv
Cistdi	Internal Standard Conc used for compound n at ith calibration level in ppmv
Aistdi	Internal Standard Area used for compound n at ith calibration level
Ansamp	Sample Area for compound n
Avg RFn	Average response factor for all Ith calibration levels for compound n
Raw Amount	Sample Concentration in ppmv before applying factors
Cistd	Concentration internal standard used for compound n in sample in ppmv
Aistd	Area of internal standard used for compound n in sample
Cn	Concentration of compound n in sample in ppmv
23.68	Gas constant at 60 F as per EPA source test protocol
MW	Molecular weight of compound
Note (1) : Avg RFn	The values for the Average Response Factor AvgRFn can be optained from the response Factor Report for the Initial Calibration, or from the Calibration Report

Name of file: C:\MSCHEM\1\DATA\06249MS1\CC125A.D

Name of operator: JF

TIC: CC125A.D



FORM II

QUALITY CONTROL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

LABORATORY CONTROL SPIKE

EPA Method TO-15 Modified Full Scan GC/MS **SDG: LABQC**
Analytical Method: **TO-15**

File: QC06249A.D
Description: ST60032
Can/Tube#:
Sam_Type: LCS
QC_Batch: 062409-MS1
Air Volume: 1000 ml

Date Sampled: NA
Date Received: NA
Date Extracted: NA
Date Analyzed: 06/24/09 **Time:** 11:16
Can Dilution Factor: 1.00 2
QC Duplicate: No

CAS#	Compound	MDL ppbv	Spike Conc ppbv	Amount ppbv	Matrix Amt ppbv	Spk Amt ppbv	Percent Recovery	LCL %	UCL %	Flag
75-01-4	Vinyl chloride	0.10	1.04	0.78	0.000	0.78	75	70	130	
75-35-4	1,1-Dichloroethene	0.10	1.04	0.92	0.000	0.92	88	70	130	
75-09-2	Dichloromethane	0.10	1.04	0.93	0.000	0.93	89	70	130	
75-34-3	1,1-Dichloroethane	0.10	1.01	0.83	0.000	0.83	82	70	130	
67-66-3	Chloroform	0.10	1.02	0.78	0.000	0.78	76	70	130	
71-55-6	1,1,1-Trichloroethane	0.10	1.02	0.93	0.000	0.93	91	70	130	
107-06-2	1,2-Dichloroethane	0.10	1.03	0.93	0.000	0.93	90	70	130	
71-43-2	Benzene	0.10	1.03	0.90	0.000	0.90	87	70	130	
56-23-5	Carbon tetrachloride	0.10	1.02	0.98	0.000	0.98	96	70	130	
79-01-6	Trichloroethene	0.10	1.03	0.97	0.000	0.97	94	70	130	
108-88-3	Toluene	0.10	1.03	1.00	0.000	1.00	97	70	130	
106-93-4	1,2-Dibromoethane	0.10	1.04	0.83	0.000	0.83	80	70	130	
127-18-4	Tetrachloroethene	0.10	1.02	0.97	0.000	0.97	95	70	130	
108-90-7	Chlorobenzene	0.10	1.02	0.78	0.000	0.78	76	70	130	
100-41-4	Ethylbenzene	0.10	1.04	0.79	0.000	0.79	76	70	130	
108-38-3	m & p-Xylene	0.21	2.06	1.52	0.000	1.52	74	70	130	
95-47-6	o-Xylene	0.10	1.02	0.70	0.000	0.70	69	70	130	*

	Surrogate Recovery	Spike Amt. ppbV	Amount ppbV	% Rec.	QC Limits	Flag * = Out
2037-26-5	Toluene-d8	10.000	9.840	98	70-130	

Notes: Reported results are to be interpreted to two significant figures.
ug/m3 calculated assuming conditions at 60 F and 1 atm.

QUANTITATION REPORT

EPA Method TO-15 Modified Full Scan GC/MS

			Review	EAS Sample ID: QC06249	
File Name:	QC06249A.D				1 KB
Sample ID:	ST60032				2 AT
Date:	24 Jun 109 11:16 am			Cal Amounts	3 BB
Run Method:	1T15EXAY.M			IS Areas	4 SH
Quant Method:	1T15EXAY.M			Carryover	
Cal Update:	Tue Mar 17 14:18:15 2009				
Template:	1TO15SP.MS1				
Can Factor:	1.00				
Volume:	1000	ml		Analyst: KB 1	

CAS#	Compound	n	Raw Amount	RT	Target RT	Ion	Sample Area	Qualifier	Lower Qual	Upper Qual	Qual Flag	Cal Flag	Int Flag
75-01-4	Vinyl chloride	5	0.783	4.41	4.33	62.00	42788	28	24	36			
75-35-4	1,1-Dichloroethene	15	0.921	6.94	6.89	61.00	111300	42	34	51			
75-09-2	Dichloromethane	19	0.927	7.37	7.31	84.00	49577	57	51	77			
75-34-3	1,1-Dichloroethane	24	0.826	8.95	8.90	63.00	128363	33	24	36			
67-66-3	Chloroform	34	0.776	10.55	10.53	83.00	145031	64	51	77			
71-55-6	1,1,1-Trichloroethane	36	0.931	11.83	11.80	97.00	150907	64	51	76			
107-06-2	1,2-Dichloroethane	37	0.926	11.90	11.87	61.95	140652	31	25	37			
71-43-2	Benzene	40	0.901	12.54	12.51	78.00	238005	24	19	29			
56-23-5	Carbon tetrachloride	41	0.979	12.59	12.56	116.90	160967	94	79	119			
79-01-6	Trichloroethene	46	0.972	14.15	14.13	130.00	124254	93	79	119			
108-88-3	Toluene	51	1.001	17.11	17.11	91.00	345563	56	44	66			
106-93-4	1,2-Dibromoethane	58	0.834	18.78	18.80	107.00	208370	83	75	113			
127-18-4	Tetrachloroethene	59	0.971	18.96	18.97	166.00	213509	61	52	78			
108-90-7	Chlorobenzene	60	0.784	20.44	20.45	112.00	253047	32	25	38			
100-41-4	Ethylbenzene	62	0.786	20.97	17.80	91.00	432607	29	21	32			
108-38-3	m & p-Xylene	63	1.522	21.26	21.28	91.00	706468	42	32	48			
95-47-6	o-Xylene	66	0.696	22.21	22.25	91.00	356944	39	30	45			
363-72-4	Pentafluorobenzene	1	20.000	11.41	11.38	168.00	**5126050**						
540-36-3	1,4-Difluorobenzene	35	20.000	13.18	13.17	114.00	**4462580**						
2037-26-5	Toluene-d8	94	**9.840**	16.93	16.94	98.00	2468617	62	51	77			
3114-55-4	Chlorobenzene-d5	95	**20.783**	20.36	20.36	117.00	4783403	67	56	84		HIGH	
460-00-4	1,4-Bromofluorobenzene	96	**9.263**	23.35	23.38	95.00	3333913	85	56	83	Q		

Integration Flags:

If no flag the Integration was done by the instrument computer

M1 Manual Integration because the computer did not integrated the peak or integrated the wrong peak

M2 Manual Integration because computer integration of baseline was different then Inital Calibration

INITIAL CALIBRATION REPORT

EPA Method TO-15 Modified Full Scan GC/MS

File Name:	QC06249A.D	SDG:	LABQC
Sample ID:	ST60032	QC_Batch:	062409-MS1
Sample Analysis Date:	24 Jun 109 11:16 am	Instrument Name:	5970 - In
Run Method:	1T15EXAY.M		
Quant and Calibration Method:	1T15EXAY.M	Calibration Title:	EPA T0-15
Cal Update:	Tue Mar 17 14:18:15 2009		
Template:	1TO15SP.MS1		

Number Compounds:		96
IS1:	ST60341	20
IS2:	ST60341	20
IS3:		
IS4:		

		Calibration Amount CA, ppmv						Calibration Response, Area					
		Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
		Amt	Amt	Amt	Amt	Amt	Amt	C03179C.D	C03179E.D	C03179B.D	C03179A.D	C03169H.D	C03179D.D
n	Compound	0.25	4.0	1.0	5.0	10.0	2.0	0.25	4.0	1.0	5.0	10.0	2.0
5	Vinyl chloride	0.260	4.160	1.040	5.200	10.400	2.080	7909	132864	32643	150492	285530	62953
15	1,1-Dichloroethene	0.253	4.040	1.010	5.050	10.100	2.020	16793	248606	63935	305424	730028	150732
19	Dichloromethane	0.260	4.160	1.040	5.200	10.400	2.080	8354	124766	26131	120655	330491	71297
24	1,1-Dichloroethane	0.253	4.040	1.010	5.050	10.100	2.020	22823	387657	85531	331041	871129	183187
34	Chloroform	0.255	4.080	1.020	5.100	10.200	2.040	27147	449509	101707	516969	959204	213353
36	1,1,1-Trichloroethane	0.255	4.080	1.020	5.100	10.200	2.040	26931	432442	100881	509527	970639	210683
37	1,2-Dichloroethane	0.258	4.120	1.030	5.150	10.300	2.060	26512	398927	96975	495766	920839	187037
40	Benzene	-1.000	4.120	1.030	5.150	10.300	2.060	-1	712515	206967	782160	1387400	364766
41	Carbon tetrachloride	0.255	4.080	1.020	5.100	10.200	2.040	26276	451629	105798	518753	931992	220983
46	Trichloroethene	0.258	4.120	1.030	5.150	10.300	2.060	27013	323273	83100	364698	666308	165489
51	Toluene	-1.000	4.120	1.030	5.150	10.300	2.060	-1	944443	257501	1033029	1877014	478350
58	1,2-Dibromoethane	0.260	4.160	1.040	5.200	10.400	2.080	46912	660815	169213	701472	1505940	324567
59	Tetrachloroethene	0.255	4.080	1.020	5.100	10.200	2.040	40710	589393	145069	627137	1126037	300057
60	Chlorobenzene	0.255	4.080	1.020	5.100	10.200	2.040	64660	836027	208106	862738	1818049	410336
62	Ethylbenzene	0.260	4.160	1.040	5.200	10.400	2.080	107037	1527752	359496	1548148	3108186	722767
63	m & p-Xylene	0.515	8.240	2.060	10.300	20.600	4.120	192864	2440351	617919	2542524	4725274	1220126
66	o-Xylene	0.255	4.080	1.020	5.100	10.200	2.040	105567	1325719	329821	1384162	2817484	643280
1	Pentafluorobenzene	20.000	20.000	20.000	20.000	20.000	20.000	2643183	2935915	2871816	2719013	2737194	3022845
35	1,4-Difluorobenzene	20.000	20.000	20.000	20.000	20.000	20.000	2659938	2870629	2814997	2720455	2706138	3020264
94	Toluene-d8	10.000	10.000	10.000	10.000	10.000	10.000	1479389	1629143	1590486	1469067	1546296	1730275
95	Chlorobenzene-d5	20.000	20.000	20.000	20.000	20.000	20.000	2736627	3026382	2937451	2602948	2900630	3122484
96	1,4-Bromofluorobenzene	10.000	10.000	10.000	10.000	10.000	10.000	2176179	2385587	2352342	2001651	2163994	2472723

INITIAL CALIBRATION REPORT: Response Factors

SDG:	**LABQC**	**Sample Calculation:**	
QC_Batch:	**062409-MS1**	1) Avg RFn = Sum	$\left[\frac{(Astdni)}{(Cstdni)} \frac{(Cistdi)}{(Aistdi)}\right]_i$
Sample ID:	ST60032		
Sample Analysis Date:	24 Jun 109 11:16 am		
Run Method:	1T15EXAY.M		
Quant Method:	1T15EXAY.M		
Cal Update:	Tue Mar 17 14:18:15 2009		
Template:	1TO15SP.MS1		

Response Factors

Compound	RF1	RF2	RF3	RF4	RF5	RF6	AvgRFn	%RSD
Vinyl chloride	0.230	0.218	0.219	0.213	0.201	0.200	0.213	5.40
1,1-Dichloroethene	0.502	0.419	0.441	0.445	0.528	0.494	0.471	9.01
Dichloromethane	0.243	0.204	0.175	0.171	0.232	0.227	0.209	14.64
1,1-Dichloroethane	0.683	0.654	0.590	0.482	0.630	0.600	0.606	11.51
Chloroform	0.806	0.751	0.694	0.746	0.687	0.692	0.729	6.41
1,1,1-Trichloroethane	0.794	0.738	0.703	0.734	0.703	0.684	0.726	5.40
1,2-Dichloroethane	0.773	0.675	0.669	0.708	0.661	0.601	0.681	8.33
Benzene	0.000	1.205	1.428	1.117	0.996	1.173	0.986	51.05
Carbon tetrachloride	0.775	0.771	0.737	0.748	0.675	0.717	0.737	5.04
Trichloroethene	0.787	0.547	0.573	0.521	0.478	0.532	0.573	19.12
Toluene	0.000	1.597	1.776	1.475	1.347	1.538	1.289	50.21
1,2-Dibromoethane	1.357	1.107	1.156	0.992	1.070	1.033	1.119	11.58
Tetrachloroethene	1.200	1.006	1.010	0.904	0.816	0.974	0.985	13.06
Chlorobenzene	1.907	1.428	1.450	1.244	1.317	1.332	1.446	16.45
Ethylbenzene	3.095	2.559	2.456	2.189	2.209	2.301	2.468	13.74
m & p-Xylene	2.816	2.063	2.131	1.815	1.695	1.961	2.080	18.95
o-Xylene	3.113	2.264	2.297	1.995	2.041	2.088	2.300	18.10
Pentafluorobenzene	1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.00
1,4-Difluorobenzene	1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.00
Toluene-d8	1.112	1.135	1.130	1.080	1.143	1.146	1.124	2.20
Chlorobenzene-d5	1.029	1.054	1.044	0.957	1.072	1.034	1.032	3.85
1,4-Bromofluorobenzene	1.636	1.662	1.671	1.472	1.599	1.637	1.613	4.57

CALCULATIONS

EPA Method TO-15 Modified Full Scan GC/MS

SDG: LABQC
Laboratory Number: QC06249

RL:	1T15EXAY.M
Run Method:	1T15EXAY.M
Quant Method:	1T15EXAY.M
Can Dilution Factor:	1.00
Air Volume:	1000 ml
Gas Constant:	23.68
Decimal Places:	2

MDL Factor 1

Compound	M.W.	Raw Amount	Result ppbv	Result ug/m3	(1) MDL ppbv	(2) RL ppbv	Calc MDL ppbv	Calc MDL ug/m3	Calc RL ppbv	Calc RL ug/m3	Flag	Spike ppmv
Vinyl chloride	62.5	0.783	0.783	2.07	0.104	0.520	0.10	0.27	0.52	1.37		1.040
1,1-Dichloroethene	96.9	0.921	0.921	3.77	0.101	0.505	0.10	0.41	0.51	2.07		1.040
Dichloromethane	84.9	0.927	0.927	3.32	0.104	0.520	0.10	0.37	0.52	1.86		1.040
1,1-Dichloroethane	99.0	0.826	0.826	3.45	0.101	0.505	0.10	0.42	0.51	2.11		1.010
Chloroform	119.4	0.776	0.776	3.91	0.102	0.510	0.10	0.51	0.51	2.57		1.020
1,1,1-Trichloroethane	133.4	0.931	0.931	5.25	0.102	0.510	0.10	0.57	0.51	2.87		1.020
1,2-Dichloroethane	99.0	0.926	0.926	3.87	0.103	0.515	0.10	0.43	0.52	2.15		1.030
Benzene	78.1	0.901	0.901	2.97	0.103	0.515	0.10	0.34	0.52	1.70		1.030
Carbon tetrachloride	153.8	0.979	0.979	6.36	0.102	0.510	0.10	0.66	0.51	3.31		1.020
Trichloroethene	131.4	0.972	0.972	5.39	0.103	0.515	0.10	0.57	0.52	2.86		1.030
Toluene	92.1	1.001	1.001	3.89	0.103	0.515	0.10	0.40	0.52	2.00		1.030
1,2-Dibromoethane	187.9	0.834	0.834	6.62	0.104	0.520	0.10	0.83	0.52	4.13		1.040
Tetrachloroethene	165.8	0.971	0.971	6.80	0.102	0.510	0.10	0.71	0.51	3.57		1.020
Chlorobenzene	112.6	0.784	0.784	3.73	0.102	0.510	0.10	0.49	0.51	2.43		1.020
Ethylbenzene	106.2	0.786	0.786	3.52	0.104	0.520	0.10	0.47	0.52	2.33		1.040
m & p-Xylene	106.2	1.522	1.522	6.83	0.206	1.030	0.21	0.92	1.03	4.62		2.060
o-Xylene	106.2	0.696	0.696	3.12	0.102	0.510	0.10	0.46	0.51	2.29		1.020

SAMPLE CALCULATION

EPA Method TO-15 Modified Full Scan GC/MS

SDG:		**LABQC**
Laboratory Number:		**QC06249**
Standard Volume	STV	5.0
Sample Volume	SV	1000
Can Dilution Factor	CDF	1.00
Gas Constant		23.68
Decimal Places:		2

Sample Calculation:

1) Avg RFn = Sum $\left| \frac{(Astdni)}{(Cstdni)} \frac{(Cistdi)}{(Aistdi)} \right|_i$ Note: 1

2) Raw Amt = $\frac{(Ansamp)}{(Avg\ RFn)} \frac{(Cistdi)}{(Aistdi)}$ = Cn

3) Amount ppbv = $\frac{(Raw\ Amt)\ 1000}{(SV)}$ (CDF)

4) Amount ug/m3 = $\frac{(amt(ppbv)\ MW}{23.68}$

n	Compound	IS n	Chem type	MW	AvgRFn	Area Ansamp	Cistdi ppmv	Aistdi Ais	Cn ppmV Raw Amt	Amount ppbv	Amount ug/m3
5	Vinyl chloride	1	TRG	62.5	0.213	42788	20.000	5126050	0.783	0.78	2.06
15	1,1-Dichloroethene	1	TRG	96.9	0.471	111300	20.000	5126050	0.921	0.92	3.76
19	Dichloromethane	1	TRG	84.9	0.209	49577	20.000	5126050	0.927	0.93	3.33
24	1,1-Dichloroethane	1	TRG	99.0	0.606	128363	20.000	5126050	0.826	0.83	3.47
34	Chloroform	1	TRG	119.4	0.729	145031	20.000	5126050	0.776	0.78	3.93
36	1,1,1-Trichloroethane	35	TRG	133.4	0.726	150907	20.000	4462580	0.931	0.93	5.24
37	1,2-Dichloroethane	35	TRG	99.0	0.681	140652	20.000	4462580	0.926	0.93	3.89
40	Benzene	35	TRG	78.1	0.986	238005	20.000	4462580	0.901	0.90	2.97
41	Carbon tetrachloride	35	TRG	153.8	0.737	160967	20.000	4462580	0.979	0.98	6.37
46	Trichloroethene	35	TRG	131.4	0.573	124254	20.000	4462580	0.972	0.97	5.38
51	Toluene	35	TRG	92.1	1.289	345563	20.000	4462580	1.001	1.00	3.89
58	1,2-Dibromoethane	35	TRG	187.9	1.119	208370	20.000	4462580	0.834	0.83	6.59
59	Tetrachloroethene	35	TRG	165.8	0.985	213509	20.000	4462580	0.971	0.97	6.79
60	Chlorobenzene	35	TRG	112.6	1.446	253047	20.000	4462580	0.784	0.78	3.71
62	Ethylbenzene	35	TRG	106.2	2.468	432607	20.000	4462580	0.786	0.79	3.54
63	m & p-Xylene	35	TRG	106.2	2.080	706468	20.000	4462580	1.522	1.52	6.82
66	o-Xylene	35	TRG	106.2	2.300	356944	20.000	4462580	0.696	0.70	3.14
1	Pentafluorobenzene	1	IS		1.000	5126050	20.000	5126050			
35	1,4-Difluorobenzene	35	IS		1.000	4462580	20.000	4462580			
94	Toluene-d8	35	SURR		1.124	2468617	20.000	4462580			

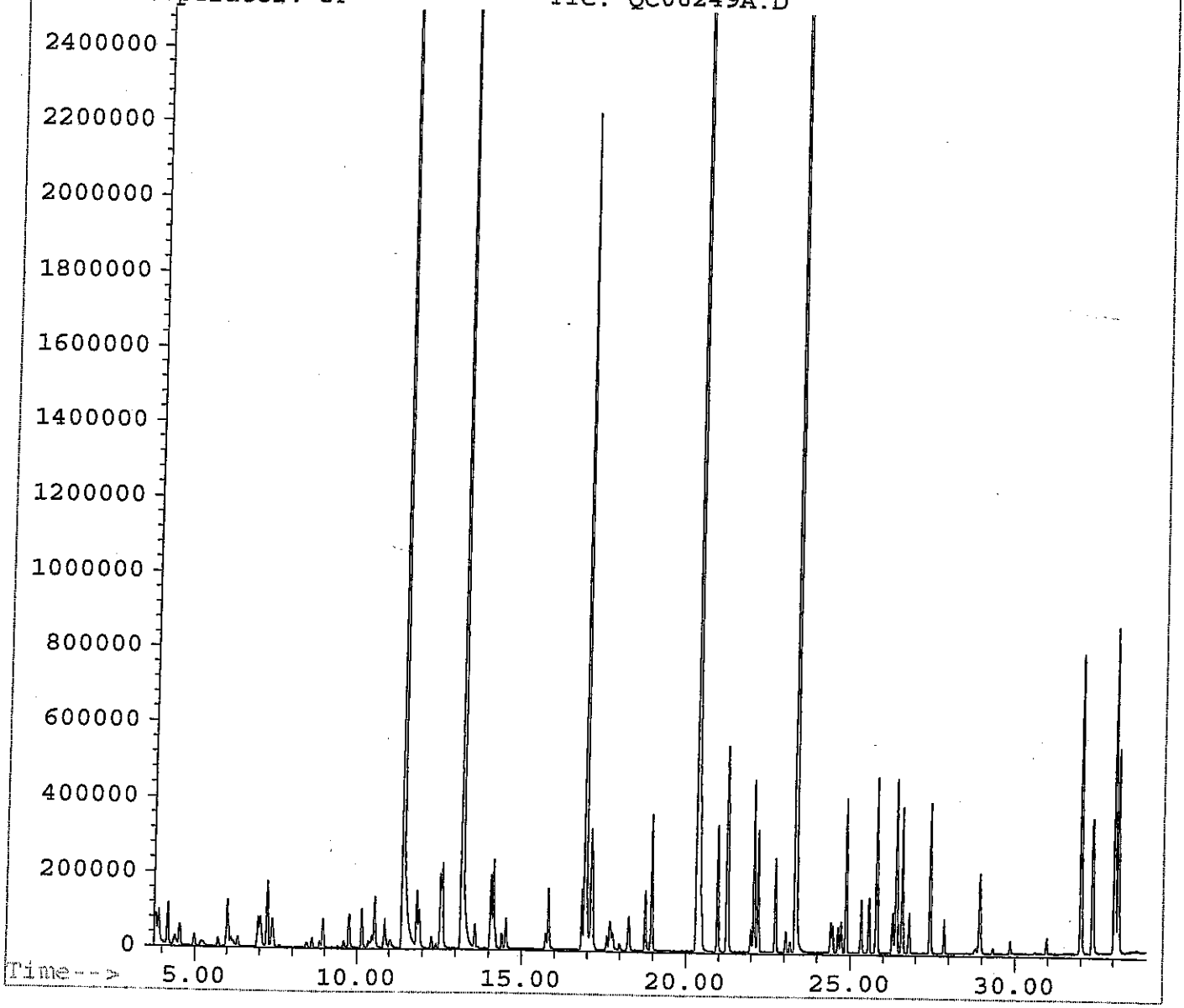
Calculation Definitions:

n	compound n
i	i th calibration level
Astdni	Standard Area for compound n at ith calibration level
Cstdni	Standard Concentration for compound n at ith calibration level in ppmv
Cistdi	Internal Standard Conc used for compound n at Ith calibration level in ppmv
Aistdi	Internal Standard Area used for compound n at ith calibration level
Ansamp	Sample Area for compound n
Avg RFn	Average response factor for all ith calibration levels for compound n
Raw Amount	Sample Concentration in ppmv before applying factors
Cistd	Concentration internal standard used for compound n in sample in ppmv
Aistd	Area of internal standard used for compound n in sample
Cn	Concentration of compound n in sample in ppmv
23.68	Gas constant at 60 F as per EPA source test protocol
MW	Molecular weight of compound
Note (1) : Avg RFn	The values for the Average Response Factor AvgRFn can be optained from the response Factor Report for the Initial Calibration, or from the Calibration Report

Name of file: C:\MSCHEM\1\DATA\06249MS1\QC06249A.D

Name of operator: JF

TIC: QC06249A.D



QUALITY CONTROL DUPLICATE

ENVIRONMENTAL
Analytical Service, Inc.

Duplicate of QC Sample

EPA Method TO-15 Modified Full Scan GC/MS **SDG: LABQC**
Analytical Method: TO-15

Dup File: QC06249B.D
Description: ST60032
Can/Tube#:
QC_Batch: 062409-MS1

CAS#	Compound	LCD ppbv	LCS ppbv	RPD %D	Limit %	Flag * = Out
75-01-4	Vinyl chloride	0.98	0.78	19	25	
75-35-4	1,1-Dichloroethene	0.90	0.92	2	25	
75-09-2	Dichloromethane	0.91	0.93	2	25	
75-34-3	1,1-Dichloroethane	0.82	0.83	1	25	
67-66-3	Chloroform	0.80	0.78	2	25	
71-55-6	1,1,1-Trichloroethane	0.92	0.93	1	25	
107-06-2	1,2-Dichloroethane	0.95	0.93	2	25	
71-43-2	Benzene	0.94	0.90	4	25	
56-23-5	Carbon tetrachloride	1.02	0.98	4	25	
79-01-6	Trichloroethene	1.01	0.97	4	25	
108-88-3	Toluene	1.04	1.00	4	25	
106-93-4	1,2-Dibromoethane	0.90	0.83	7	25	
127-18-4	Tetrachloroethene	1.01	0.97	4	25	
108-90-7	Chlorobenzene	0.87	0.78	9	25	
100-41-4	Ethylbenzene	0.85	0.79	6	25	
108-38-3	m & p-Xylene	1.66	1.52	7	25	
95-47-6	o-Xylene	0.77	0.70	7	25	

FORM II

QUALITY CONTROL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

LABORATORY CONTROL DUPLICATE

EPA Method TO-15 Modified Full Scan GC/MS **SDG: LABQC**
Analytical Method: **TO-15**

File: QC06249B.D
Description: ST60032
Can/Tube#:
Sam_Type: LCD
QC_Batch: 062409-MS1
Air Volume: 1000 ml

Date Sampled: NA
Date Received: NA
Date Extracted: NA
Date Analyzed: 06/24/09 **Time:** 12:00
Can Dilution Factor: 1.00 2
QC Duplicate: Yes

CAS#	Compound	MDL ppbv	Spike Conc ppbv	Amount ppbv	Matrix Amt ppbv	Spk Amt ppbv	Percent Recovery	LCL %	UCL %	Flag
75-01-4	Vinyl chloride	0.10	1.04	0.98	0.000	0.98	94	70	130	
75-35-4	1,1-Dichloroethene	0.10	1.04	0.90	0.000	0.90	87	70	130	
75-09-2	Dichloromethane	0.10	1.04	0.91	0.000	0.91	88	70	130	
75-34-3	1,1-Dichloroethane	0.10	1.01	0.82	0.000	0.82	81	70	130	
67-66-3	Chloroform	0.10	1.02	0.80	0.000	0.80	78	70	130	
71-55-6	1,1,1-Trichloroethane	0.10	1.02	0.92	0.000	0.92	90	70	130	
107-06-2	1,2-Dichloroethane	0.10	1.03	0.95	0.000	0.95	92	70	130	
71-43-2	Benzene	0.10	1.03	0.94	0.000	0.94	91	70	130	
56-23-5	Carbon tetrachloride	0.10	1.02	1.02	0.000	1.02	100	70	130	
79-01-6	Trichloroethene	0.10	1.03	1.01	0.000	1.01	98	70	130	
108-88-3	Toluene	0.10	1.03	1.04	0.000	1.04	101	70	130	
106-93-4	1,2-Dibromoethane	0.10	1.04	0.90	0.000	0.90	87	70	130	
127-18-4	Tetrachloroethene	0.10	1.02	1.01	0.000	1.01	99	70	130	
108-90-7	Chlorobenzene	0.10	1.02	0.87	0.000	0.87	85	70	130	
100-41-4	Ethylbenzene	0.10	1.04	0.85	0.000	0.85	82	70	130	
108-38-3	m & p-Xylene	0.21	2.06	1.66	0.000	1.66	81	70	130	
95-47-6	o-Xylene	0.10	1.02	0.77	0.000	0.77	75	70	130	

	Surrogate Recovery	Spike Amt. ppbV	Amount ppbV	% Rec.	QC Limits	Flag * = Out
2037-26-5	Toluene-d8	10.000	9.981	100	70-130	

Notes: Reported results are to be interpreted to two significant figures.
ug/m3 calculated assuming conditions at 60 F and 1 atm.

QUANTITATION REPORT

EPA Method TO-15 Modified Full Scan GC/MS

			Review	EAS Sample ID: QC06249	
File Name:	QC06249B.D				1 KB
Sample ID:	ST60032				2 AT
Date:	24 Jun 109 12:00 pm			Cal Amounts	3 BB
Run Method:	1T15EXAY.M			IS Areas	4 SH
Quant Method:	1T15EXAY.M			Carryover	
Cal Update:	Tue Mar 17 14:18:15 2009				
Template:	1TO15SP.MS1				
Can Factor:	1.00				
Volume:	1000	ml		Analyst: KB 1	

CAS#	Compound	n	Raw Amount	RT	Target RT	Ion	Sample Area	Qualifier	Lower Qual	Upper Qual	Qual Flag	Cal Flag	Int Flag
75-01-4	Vinyl chloride	5	0.983	4.39	4.33	62.00	56226	27	24	36			
75-35-4	1,1-Dichloroethene	15	0.898	6.95	6.89	61.00	113519	46	34	51			
75-09-2	Dichloromethane	19	0.907	7.37	7.31	84.00	50737	70	51	77			
75-34-3	1,1-Dichloroethane	24	0.824	8.95	8.90	63.00	134081	29	24	36			
67-66-3	Chloroform	34	0.800	10.57	10.53	83.00	156465	61	51	77			
71-55-6	1,1,1-Trichloroethane	36	0.921	11.85	11.80	97.00	154827	65	51	76			
107-06-2	1,2-Dichloroethane	37	0.954	11.92	11.87	61.95	150512	31	25	37			
71-43-2	Benzene	40	0.940	12.56	12.51	78.00	257650	22	19	29			
56-23-5	Carbon tetrachloride	41	1.019	12.61	12.56	116.90	174064	102	79	119			
79-01-6	Trichloroethene	46	1.009	14.17	14.13	130.00	133951	97	79	119			
108-88-3	Toluene	51	1.036	17.13	17.11	91.00	371250	56	44	66			
106-93-4	1,2-Dibromoethane	58	0.900	18.79	18.80	107.00	233216	94	75	113			
127-18-4	Tetrachloroethene	59	1.013	18.99	18.97	166.00	231237	57	52	78			
108-90-7	Chlorobenzene	60	0.872	20.45	20.45	112.00	291991	33	25	38			
100-41-4	Ethylbenzene	62	0.845	20.98	17.80	91.00	483200	29	21	32			
108-38-3	m & p-Xylene	63	1.661	21.27	21.28	91.00	800485	43	32	48			
95-47-6	o-Xylene	66	0.766	22.23	22.25	91.00	408142	38	30	45			
363-72-4	Pentafluorobenzene	1	20.000	11.43	11.38	168.00	5363808						
540-36-3	1,4-Difluorobenzene	35	20.000	13.21	13.17	114.00	4632525						
2037-26-5	Toluene-d8	94	9.981	16.96	16.94	98.00	2599201	60	51	77			
3114-55-4	Chlorobenzene-d5	95	21.002	20.37	20.36	117.00	5017991	66	56	84		HIGH	
460-00-4	1,4-Bromofluorobenzene	96	9.851	23.36	23.38	95.00	3680453	86	56	83	Q		

Integration Flags:

If no flag the Integration was done by the instrument computer

M1 Manual Integration because the computer did not integrated the peak or integrated the wrong peak

M2 Manual Integration because computer integration of baseline was different then Inital Calibration

INITIAL CALIBRATION REPORT

EPA Method TO-15 Modified Full Scan GC/MS

File Name:	QC06249B.D	SDG:	LABQC
Sample ID:	ST60032	QC_Batch:	062409-MS1
Sample Analysis Date:	24 Jun 109 12:00 pm	Instrument Name:	5970 - In
Run Method:	1T15EXAY.M		
Quant and Calibration Method:	1T15EXAY.M	Calibration Title:	EPA T0-15
Cal Update:	Tue Mar 17 14:18:15 2009		
Template:	1TO15SP.MS1		

Number Compounds:		96
IS1:	ST60341	20
IS2:	ST60341	20
IS3:		
IS4:		

		Calibration Amount CA, ppmv						Calibration Response, Area					
		Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
		Amt	Amt	Amt	Amt	Amt	Amt	C03179C.D	C03179E.D	C03179B.D	C03179A.D	C03169H.D	C03179D.D
n	Compound	0.25	4.0	1.0	5.0	10.0	2.0	0.25	4.0	1.0	5.0	10.0	2.0
5	Vinyl chloride	0.260	4.160	1.040	5.200	10.400	2.080	7909	132864	32643	150492	285530	62953
15	1,1-Dichloroethene	0.253	4.040	1.010	5.050	10.100	2.020	16793	248606	63935	305424	730028	150732
19	Dichloromethane	0.260	4.160	1.040	5.200	10.400	2.080	8354	124766	26131	120655	330491	71297
24	1,1-Dichloroethane	0.253	4.040	1.010	5.050	10.100	2.020	22823	387657	85531	331041	871129	183187
34	Chloroform	0.255	4.080	1.020	5.100	10.200	2.040	27147	449509	101707	516969	959204	213353
36	1,1,1-Trichloroethane	0.255	4.080	1.020	5.100	10.200	2.040	26931	432442	100881	509527	970639	210683
37	1,2-Dichloroethane	0.258	4.120	1.030	5.150	10.300	2.060	26512	398927	96975	495766	920839	187037
40	Benzene	-1.000	4.120	1.030	5.150	10.300	2.060	-1	712515	206967	782160	1387400	364766
41	Carbon tetrachloride	0.255	4.080	1.020	5.100	10.200	2.040	26276	451629	105798	518753	931992	220983
46	Trichloroethene	0.258	4.120	1.030	5.150	10.300	2.060	27013	323273	83100	364698	666308	165489
51	Toluene	-1.000	4.120	1.030	5.150	10.300	2.060	-1	944443	257501	1033029	1877014	478350
58	1,2-Dibromoethane	0.260	4.160	1.040	5.200	10.400	2.080	46912	660815	169213	701472	1505940	324567
59	Tetrachloroethene	0.255	4.080	1.020	5.100	10.200	2.040	40710	589393	145069	627137	1126037	300057
60	Chlorobenzene	0.255	4.080	1.020	5.100	10.200	2.040	64660	836027	208106	862738	1818049	410336
62	Ethylbenzene	0.260	4.160	1.040	5.200	10.400	2.080	107037	1527752	359496	1548148	3108186	722767
63	m & p-Xylene	0.515	8.240	2.060	10.300	20.600	4.120	192864	2440351	617919	2542524	4725274	1220126
66	o-Xylene	0.255	4.080	1.020	5.100	10.200	2.040	105567	1325719	329821	1384162	2817484	643280
1	Pentafluorobenzene	20.000	20.000	20.000	20.000	20.000	20.000	2643183	2935915	2871816	2719013	2737194	3022845
35	1,4-Difluorobenzene	20.000	20.000	20.000	20.000	20.000	20.000	2659938	2870629	2814997	2720455	2706138	3020264
94	Toluene-d8	10.000	10.000	10.000	10.000	10.000	10.000	1479389	1629143	1590486	1469067	1546296	1730275
95	Chlorobenzene-d5	20.000	20.000	20.000	20.000	20.000	20.000	2736627	3026382	2937451	2602948	2900630	3122484
96	1,4-Bromofluorobenzene	10.000	10.000	10.000	10.000	10.000	10.000	2176179	2385587	2352342	2001651	2163994	2472723

(92)

INITIAL CALIBRATION REPORT: Response Factors

SDG:	**LABQC**
QC_Batch:	**062409-MS1**
Sample ID:	ST60032
Sample Analysis Date:	24 Jun 109 12:00 pm
Run Method:	1T15EXAY.M
Quant Method:	1T15EXAY.M
Cal Update:	Tue Mar 17 14:18:15 2009
Template:	1TO15SP.MS1

Sample Calculation:

1) Avg RFn = Sum $\left| \frac{(Astdni) \quad (Cistdi)}{(Cstdni) \quad (Aistdi)} \right|_i$

Response Factors

Compound	RF1	RF2	RF3	RF4	RF5	RF6	AvgRFn	%RSD
Vinyl chloride	0.230	0.218	0.219	0.213	0.201	0.200	0.213	5.40
1,1-Dichloroethene	0.502	0.419	0.441	0.445	0.528	0.494	0.471	9.01
Dichloromethane	0.243	0.204	0.175	0.171	0.232	0.227	0.209	14.64
1,1-Dichloroethane	0.683	0.654	0.590	0.482	0.630	0.600	0.606	11.51
Chloroform	0.806	0.751	0.694	0.746	0.687	0.692	0.729	6.41
1,1,1-Trichloroethane	0.794	0.738	0.703	0.734	0.703	0.684	0.726	5.40
1,2-Dichloroethane	0.773	0.675	0.669	0.708	0.661	0.601	0.681	8.33
Benzene	0.000	1.205	1.428	1.117	0.996	1.173	0.986	51.05
Carbon tetrachloride	0.775	0.771	0.737	0.748	0.675	0.717	0.737	5.04
Trichloroethene	0.787	0.547	0.573	0.521	0.478	0.532	0.573	19.12
Toluene	0.000	1.597	1.776	1.475	1.347	1.538	1.289	50.21
1,2-Dibromoethane	1.357	1.107	1.156	0.992	1.070	1.033	1.119	11.58
Tetrachloroethene	1.200	1.006	1.010	0.904	0.816	0.974	0.985	13.06
Chlorobenzene	1.907	1.428	1.450	1.244	1.317	1.332	1.446	16.45
Ethylbenzene	3.095	2.559	2.456	2.189	2.209	2.301	2.468	13.74
m & p-Xylene	2.816	2.063	2.131	1.815	1.695	1.961	2.080	18.95
o-Xylene	3.113	2.264	2.297	1.995	2.041	2.088	2.300	18.10
Pentafluorobenzene	1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.00
1,4-Difluorobenzene	1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.00
Toluene-d8	1.112	1.135	1.130	1.080	1.143	1.146	1.124	2.20
Chlorobenzene-d5	1.029	1.054	1.044	0.957	1.072	1.034	1.032	3.85
1,4-Bromofluorobenzene	1.636	1.662	1.671	1.472	1.599	1.637	1.613	4.57

CALCULATIONS

EPA Method TO-15 Modified Full Scan GC/MS

SDG: LABQC
Laboratory Number: QC06249

RL:	1T15EXAY.M
Run Method:	1T15EXAY.M
Quant Method:	1T15EXAY.M
Can Dilution Factor:	1.00
Air Volume:	1000 ml
Gas Constant:	23.68
Decimal Places:	2

MDL Factor 1

Compound	M.W.	Raw Amount	Result ppbv	Result ug/m3	(1) MDL ppbv	(2) RL ppbv	Calc MDL ppbv	Calc MDL ug/m3	Calc RL ppbv	Calc RL ug/m3	Flag	Spike ppmv
Vinyl chloride	62.5	0.983	0.983	2.59	0.104	0.520	0.10	0.27	0.52	1.37		1.040
1,1-Dichloroethene	96.9	0.898	0.898	3.67	0.101	0.505	0.10	0.41	0.51	2.07		1.040
Dichloromethane	84.9	0.907	0.907	3.25	0.104	0.520	0.10	0.37	0.52	1.86		1.040
1,1-Dichloroethane	99.0	0.824	0.824	3.45	0.101	0.505	0.10	0.42	0.51	2.11		1.010
Chloroform	119.4	0.800	0.800	4.03	0.102	0.510	0.10	0.51	0.51	2.57		1.020
1,1,1-Trichloroethane	133.4	0.921	0.921	5.19	0.102	0.510	0.10	0.57	0.51	2.87		1.020
1,2-Dichloroethane	99.0	0.954	0.954	3.99	0.103	0.515	0.10	0.43	0.52	2.15		1.030
Benzene	78.1	0.940	0.940	3.10	0.103	0.515	0.10	0.34	0.52	1.70		1.030
Carbon tetrachloride	153.8	1.019	1.019	6.62	0.102	0.510	0.10	0.66	0.51	3.31		1.020
Trichloroethene	131.4	1.009	1.009	5.60	0.103	0.515	0.10	0.57	0.52	2.86		1.030
Toluene	92.1	1.036	1.036	4.03	0.103	0.515	0.10	0.40	0.52	2.00		1.030
1,2-Dibromoethane	187.9	0.900	0.900	7.14	0.104	0.520	0.10	0.83	0.52	4.13		1.040
Tetrachloroethene	165.8	1.013	1.013	7.09	0.102	0.510	0.10	0.71	0.51	3.57		1.020
Chlorobenzene	112.6	0.872	0.872	4.15	0.102	0.510	0.10	0.49	0.51	2.43		1.020
Ethylbenzene	106.2	0.845	0.845	3.79	0.104	0.520	0.10	0.47	0.52	2.33		1.040
m & p-Xylene	106.2	1.661	1.661	7.45	0.206	1.030	0.21	0.92	1.03	4.62		2.060
o-Xylene	106.2	0.766	0.766	3.44	0.102	0.510	0.10	0.46	0.51	2.29		1.020

SAMPLE CALCULATION

EPA Method TO-15 Modified Full Scan GC/MS

SDG:		**LABQC**
Laboratory Number:		**QC06249**
Standard Volume	STV	5.0
Sample Volume	SV	1000
Can Dilution Factor	CDF	1.00
Gas Constant		23.68
Decimal Places:		2

Sample Calculation:

1) Avg RFn = Sum $\left| \frac{(Astdni)}{(Cstdni)} \frac{(Cistdi)}{(Aistdi)} \right|_i$ Note: 1

2) Raw Amt = $\frac{(Ansamp)}{(Avg\ RFn)} \frac{(Cistdi)}{(Aistdi)}$ = Cn

3) Amount ppbv = $\frac{(Raw\ Amt)}{(SV)} \frac{1000}{} \frac{(CDF)}{}$

4) Amount ug/m3 = $\frac{(amt(ppbv)}{23.68} \frac{MW}{}$

n	Compound	IS n	Chem type	MW	AvgRFn	Area Ansamp	Cistdi ppmv	Aistdi Ais	Cn ppmV Raw Amt	Amount ppbv	Amount ug/m3
5	Vinyl chloride	1	TRG	62.5	0.213	56226	20.000	5363808	0.983	0.98	2.59
15	1,1-Dichloroethene	1	TRG	96.9	0.471	113519	20.000	5363808	0.898	0.90	3.68
19	Dichloromethane	1	TRG	84.9	0.209	50737	20.000	5363808	0.907	0.91	3.26
24	1,1-Dichloroethane	1	TRG	99.0	0.606	134081	20.000	5363808	0.824	0.82	3.43
34	Chloroform	1	TRG	119.4	0.729	156465	20.000	5363808	0.800	0.80	4.03
36	1,1,1-Trichloroethane	35	TRG	133.4	0.726	154827	20.000	4632525	0.921	0.92	5.18
37	1,2-Dichloroethane	35	TRG	99.0	0.681	150512	20.000	4632525	0.954	0.95	3.97
40	Benzene	35	TRG	78.1	0.986	257650	20.000	4632525	0.940	0.94	3.10
41	Carbon tetrachloride	35	TRG	153.8	0.737	174064	20.000	4632525	1.019	1.02	6.62
46	Trichloroethene	35	TRG	131.4	0.573	133951	20.000	4632525	1.009	1.01	5.60
51	Toluene	35	TRG	92.1	1.289	371250	20.000	4632525	1.036	1.04	4.04
58	1,2-Dibromoethane	35	TRG	187.9	1.119	233216	20.000	4632525	0.900	0.90	7.14
59	Tetrachloroethene	35	TRG	165.8	0.985	231237	20.000	4632525	1.013	1.01	7.07
60	Chlorobenzene	35	TRG	112.6	1.446	291991	20.000	4632525	0.872	0.87	4.14
62	Ethylbenzene	35	TRG	106.2	2.468	483200	20.000	4632525	0.845	0.85	3.81
63	m & p-Xylene	35	TRG	106.2	2.080	800485	20.000	4632525	1.661	1.66	7.44
66	o-Xylene	35	TRG	106.2	2.300	408142	20.000	4632525	0.766	0.77	3.45
1	Pentafluorobenzene	1	IS		1.000	5363808	20.000	5363808			
35	1,4-Difluorobenzene	35	IS		1.000	4632525	20.000	4632525			
94	Toluene-d8	35	SURR		1.124	2599201	20.000	4632525			

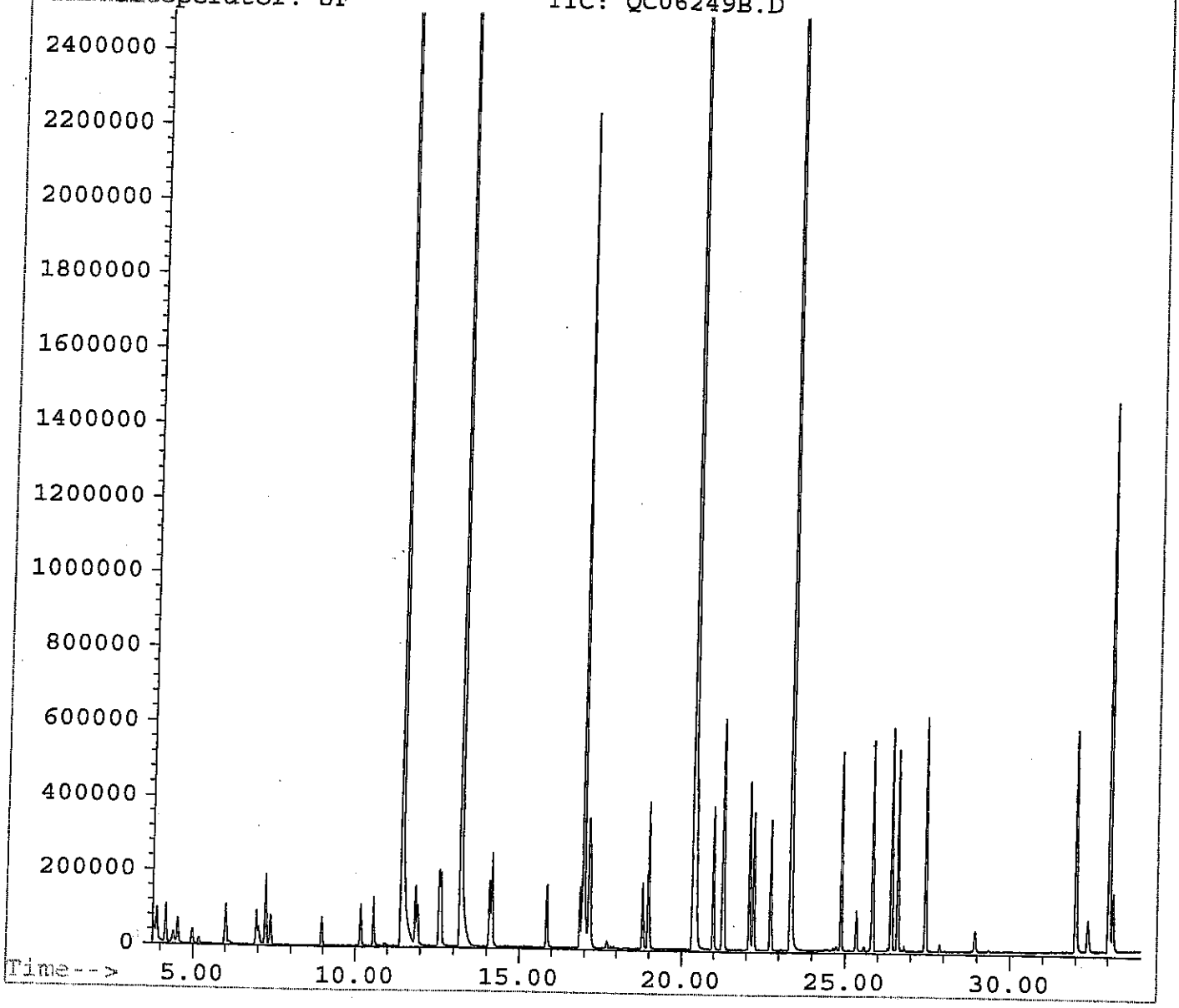
Calculation Definitions:

n	compound n
i	i th calibration level
Astdni	Standard Area for compound n at ith calibration level
Cstdni	Standard Concentration for compound n at ith calibration level in ppmv
Cistdi	Internal Standard Conc used for compound n at ith calibration level in ppmv
Aistdi	Internal Standard Area used for compound n at ith calibration level
Ansamp	Sample Area for compound n
Avg RFn	Average response factor for all ith calibration levels for compound n
Raw Amount	Sample Concentration in ppmv before applying factors
Cistd	Concentration internal standard used for compound n in sample in ppmv
Aistd	Area of internal standard used for compound n in sample
Cn	Concentration of compound n in sample in ppmv
23.68	Gas constant at 60 F as per EPA source test protocol
MW	Molecular weight of compound
Note (1) : Avg RFn	The values for the Average Response Factor AvgRFn can be optained from the response Factor Report for the Initial Calibration, or from the Calibration Report

Name of file: C:\MSCHEM\1\DATA\06249MS1\QC06249B.D

Name of operator: JF

TIC: QC06249B.D



ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified Full Scan GC/MS | **SDG:** 209270
Analytical Method: TO-15 | **Laboratory Number:** 01

File:	0927001A.D	**Date Sampled:**	06/16/09	**Time:**	11:06
Description:	44-006A	**Date Received:**	06/17/09		
Can/Tube#:	741	**Date Extracted:**			
Sam_Type:	SA	**Date Analyzed:**	06/24/09	**Time:**	17:49
QC_Batch:	062409-MS1	**Can Dilution Factor:**	2.55		2
Air Volume:	200 ml	**Not Detected Flag:**	ND		

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
67-63-0	2-propanol	0.58	2.91	ND	1.47	7.38	ND	ND

	Surrogate Recovery	Spike Amt. ppbV	Amount ppbV	% Rec.	QC Limits	Flag * = Out
2037-26-5	Toluene-d8	10.000	10.283	103	70-130	

Notes: 1) Reported results are to be interpreted to two significant figures.
2) ug/m3 = ppbV*FW/23.68 calculated assuming conditions at 60 F and 1 atm.
3) MDL and RL are adjusted for sample volume and can dilution.
4) U and ND are Flags used for Not Detected
5) J is a flag for a result between the MDL and the RL (or lower quantitation limit, LQL)

QUANTITATION REPORT

EPA Method TO-15 Modified Full Scan GC/MS

			Review	EAS Sample ID: 0927001	
File Name:	0927001A.D				1 KB
Sample ID:	44-006A				2 AT
Date:	24 Jun 109 5:49 pm			Cal Amounts	3 BB
Run Method:	1T15EXAY.M			IS Areas	4 SH
Quant Method:	1T15EXAY.M			Carryover	
Cal Update:	Tue Mar 17 14:18:15 2009				
Template:	1TO15EXT.MS1				
Can Factor:	2.55				
Volume:	200	ml		Analyst: KB 1	

CAS#	Compound	n	Raw Amount	RT	Target RT	Ion	Sample Area	Qualifier	Lower Qual	Upper Qual	Qual Flag	Cal Flag	Int Flag
67-63-0	2-propanol	13	0.003	6.09	6.14	45.00	698	0	18	27			
363-72-4	Pentafluorobenzene	1	20.000	11.30	11.38	168.00	6817564						
540-36-3	1,4-Difluorobenzene	35	20.000	13.10	13.17	114.00	5596227						
2037-26-5	Toluene-d8	94	10.283	16.89	16.94	98.00	3234929	61	51	77			

Integration Flags:

If no flag the Integration was done by the instrument computer

M1 Manual Integration because the computer did not integrated the peak or integrated the wrong peak

M2 Manual Integration because computer integration of baseline was different then Inital Calibration

INITIAL CALIBRATION REPORT

EPA Method TO-15 Modified Full Scan GC/MS

File Name:	0927001A.D	SDG:	209270
Sample ID:	44-006A	QC_Batch:	062409-MS1
Sample Analysis Date:	24 Jun 109 5:49 pm	Instrument Name:	5970 - In
Run Method:	1T15EXAY.M		
Quant and Calibration Method:	1T15EXAY.M	Calibration Title:	EPA T0-15
Cal Update:	Tue Mar 17 14:18:15 2009		
Template:	1TO15EXT.MS1		

Number Compounds:		96
IS1:	ST60403	20
IS2:	ST60403	20
IS3:		
IS4:		

		Calibration Amount CA, ppmv						Calibration Response, Area					
		Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
		Amt	Amt	Amt	Amt	Amt	Amt	C03179C.D	C03179E.D	C03179B.D	C03179A.D	C03169H.D	C03179D.D
n	Compound	0.25	4.0	1.0	5.0	10.0	2.0	0.25	4.0	1.0	5.0	10.0	2.0
13	2-propanol	0.228	3.640	0.910	4.550	9.100	1.820	19578	321532	75563	289890	1427833	154437
1	Pentafluorobenzene	20.000	20.000	20.000	20.000	20.000	20.000	2643183	2935915	2871816	2719013	2737194	3022845
35	1,4-Difluorobenzene	20.000	20.000	20.000	20.000	20.000	20.000	2659938	2870629	2814997	2720455	2706138	3020264
94	Toluene-d8	10.000	10.000	10.000	10.000	10.000	10.000	1479389	1629143	1590486	1469067	1546296	1730275

(99)

INITIAL CALIBRATION REPORT: Response Factors

SDG:	**209270**
QC_Batch:	**062409-MS1**
Sample ID:	44-006A
Sample Analysis Date:	24 Jun 109 5:49 pm
Run Method:	1T15EXAY.M
Quant Method:	1T15EXAY.M
Cal Update:	Tue Mar 17 14:18:15 2009
Template:	1TO15EXT.MS1

Sample Calculation:

1) Avg RFn = Sum $\left| \frac{(Astdni)\ (Cistdi)}{(Cstdni)\ (Aistdi)} \right|_i$

Response Factors

Compound	RF1	RF2	RF3	RF4	RF5	RF6	AvgRFn	%RSD
2-propanol	0.650	0.602	0.578	0.469	1.146	0.561	0.668	36.24
Pentafluorobenzene	1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.00
1,4-Difluorobenzene	1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.00
Toluene-d8	1.112	1.135	1.130	1.080	1.143	1.146	1.124	2.20

CALCULATIONS

EPA Method TO-15 Modified Full Scan GC/MS

SDG: 209270
Laboratory Number: 01

RL: 1T15EXAY.M (2) RL, Concentration of lowest Standandard in ICAL:
Run Method: 1T15EXAY.M
Quant Method: 1T15EXAY.M
Can Dilution Factor: 2.55
Air Volume: 200 ml MDL Factor 1
Gas Constant: 23.68
Decimal Places: 2

Compound	M.W.	Raw Amount	Result ppbv	Result ug/m3	(1) MDL ppbv	(2) RL ppbv	Calc MDL ppbv	Calc MDL ug/m3	Calc RL ppbv	Calc RL ug/m3	Flag	Spike ppmv
2-propanol	60.1	0.003	0.039	0.10	0.046	0.228	0.58	1.47	2.91	7.38	U	0.103

SAMPLE CALCULATION

EPA Method TO-15 Modified Full Scan GC/MS

SDG:		**209270**
Laboratory Number:		**01**
Standard Volume	STV	5.0
Sample Volume	SV	200
Can Dilution Factor	CDF	2.55
Gas Constant		23.68
Decimal Places:		2

Sample Calculation:

1) Avg RFn = Sum $\left| \frac{(Astdni)}{(Cstdni)} \frac{(Cistdi)}{(Aistdi)} \right|_i$ Note: 1

2) Raw Amt = $\frac{(Ansamp)}{(Avg\ RFn)} \frac{(Cistdi)}{(Aistdi)}$ = Cn

3) Amount ppbv = $\frac{(Raw\ Amt)\ 1000}{(SV)}$ (CDF)

4) Amount ug/m3 = $\frac{(amt(ppbv)\ MW}{23.68}$

n	Compound	IS n	Chem type	MW	AvgRFn	Area Ansamp	Cistdi ppmv	Aistdi Ais	Cn ppmV Raw Amt	Amount ppbv	Amount ug/m3
13	2-propanol	1	TRG	60.1	0.668	698	20.000	6817564	0.003	0.04	0.10
1	Pentafluorobenzene	1	IS		1.000	6817564	20.000	6817564			
35	1,4-Difluorobenzene	35	IS		1.000	5596227	20.000	5596227			
94	Toluene-d8	35	SURR		1.124	3234929	20.000	5596227			

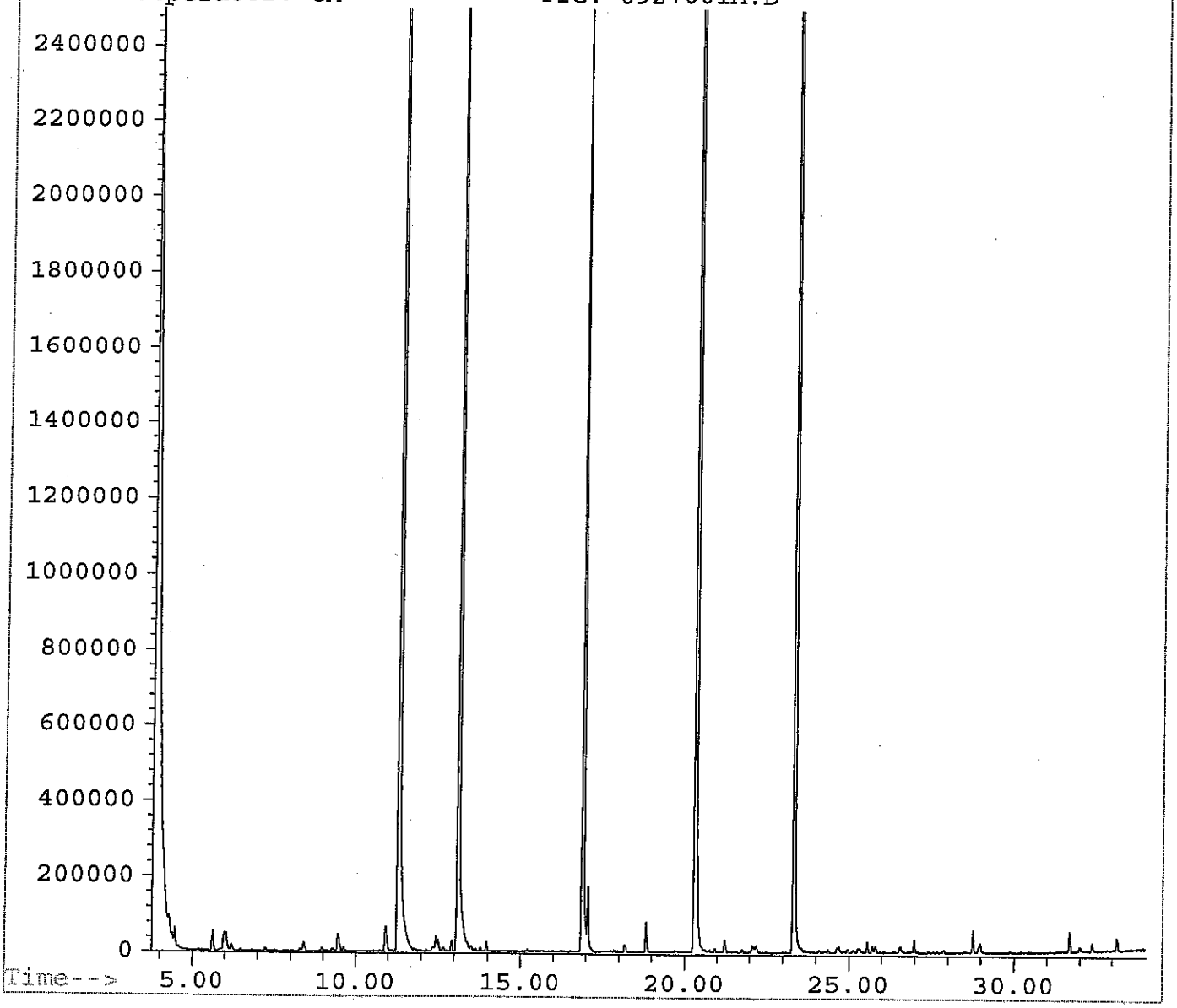
Calculation Definitions:

n	compound n
i	i th calibration level
Astdni	Standard Area for compound n at ith calibration level
Cstdni	Standard Concentration for compound n at ith calibration level in ppmv
Cistdi	Internal Standard Conc used for compound n at ith calibration level in ppmv
Aistdi	Internal Standard Area used for compound n at ith calibration level
Ansamp	Sample Area for compound n
Avg RFn	Average response factor for all ith calibration levels for compound n
Raw Amount	Sample Concentration in ppmv before applying factors
Cistd	Concentration internal standard used for compound n in sample in ppmv
Aistd	Area of internal standard used for compound n in sample
Cn	Concentration of compound n in sample in ppmv
23.68	Gas constant at 60 F as per EPA source test protocol
MW	Molecular weight of compound
Note (1): Avg RFn	The values for the Average Response Factor AvgRFn can be optained from the response Factor Report for the Initial Calibration, or from the Calibration Report

Name of file: C:\MSCHEM\1\DATA\06249MS1\0927001A.D

Name of operator: CM

TIC: 0927001A.D



ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified Full Scan GC/MS | **SDG:** 209270
Analytical Method: TO-15 | **Laboratory Number:** 02

File:	0927002A.D	**Date Sampled:**	06/16/09	**Time:**	16:51
Description:	44-007	**Date Received:**	06/17/09		
Can/Tube#:	640	**Date Extracted:**			
Sam_Type:	SA	**Date Analyzed:**	06/24/09	**Time:**	19:16
QC_Batch:	062409-MS1	**Can Dilution Factor:**	1.49		2
Air Volume:	200 ml	**Not Detected Flag:**	ND		

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
67-63-0	2-propanol	0.34	1.70	ND	0.86	4.31	ND	ND

	Surrogate Recovery	Spike Amt. ppbV	Amount ppbV	% Rec.	QC Limits	Flag * = Out
2037-26-5	Toluene-d8	10.000	10.078	101	70-130	

Notes: 1) Reported results are to be interpreted to two significant figures.
2) ug/m3 = ppbV*FW/23.68 calculated assuming conditions at 60 F and 1 atm.
3) MDL and RL are adjusted for sample volume and can dilution.
4) U and ND are Flags used for Not Detected
5) J is a flag for a result between the MDL and the RL (or lower quantitation limit, LQL)

QUANTITATION REPORT

EPA Method TO-15 Modified Full Scan GC/MS

			Review	EAS Sample ID: 0927002	
File Name:	0927002A.D				1 KB
Sample ID:	44-007				2 AT
Date:	24 Jun 109 7:16 pm			Cal Amounts	3 BB
Run Method:	1T15EXAY.M			IS Areas	4 SH
Quant Method:	1T15EXAY.M			Carryover	
Cal Update:	Tue Mar 17 14:18:15 2009				
Template:	1TO15EXT.MS1				
Can Factor:	1.49				
Volume:	200	ml		Analyst: KB 1	

CAS#	Compound	n	Raw Amount	RT	Target RT	Ion	Sample Area	Qualifier	Lower Qual	Upper Qual	Qual Flag	Cal Flag	Int Flag
67-63-0	2-propanol	13	0.002	6.22	6.14	45.00	332	0	18	27			
363-72-4	Pentafluorobenzene	1	20.000	11.38	11.38	168.00	6273891						
540-36-3	1,4-Difluorobenzene	35	20.000	13.17	13.17	114.00	5367990						
2037-26-5	Toluene-d8	94	10.078	16.94	16.94	98.00	3041137	63	51	77			

Integration Flags:

If no flag the Integration was done by the Instrument computer

M1 Manual Integration because the computer did not integrated the peak or integrated the wrong peak

M2 Manual Integration because computer integration of baseline was different then Inital Calibration

INITIAL CALIBRATION REPORT

EPA Method TO-15 Modified Full Scan GC/MS

SDG: 209270
QC_Batch: 062409-MS1
Instrument Name: 5970 - In

File Name: 0927002A.D
Sample ID: 44-007
Sample Analysis Date: 24 Jun 109 7:16 pm
Run Method: 1T15EXAY.M
Quant and Calibration Method: 1T15EXAY.M
Cal Update: Tue Mar 17 14:18:15 2009
Template: 1TO15EXT.MS1

Calibration Title:EPA T0-15

Number Compounds: 96
IS1: ST60403 20
IS2: ST60403 20
IS3:
IS4:

		Calibration Amount CA, ppmv						Calibration Response, Area					
		Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
		Amt	Amt	Amt	Amt	Amt	Amt	C03179C.D	C03179E.D	C03179B.D	C03179A.D	C03169H.D	C03179D.D
n	Compound	0.25	4.0	1.0	5.0	10.0	2.0	0.25	4.0	1.0	5.0	10.0	2.0
13	2-propanol	0.228	3.640	0.910	4.550	9.100	1.820	19578	321532	75563	289890	1427833	154437
1	Pentafluorobenzene	20.000	20.000	20.000	20.000	20.000	20.000	2643183	2935915	2871816	2719013	2737194	3022845
35	1,4-Difluorobenzene	20.000	20.000	20.000	20.000	20.000	20.000	2659938	2870629	2814997	2720455	2706138	3020264
94	Toluene-d8	10.000	10.000	10.000	10.000	10.000	10.000	1479389	1629143	1590486	1469067	1546296	1730275

(106)

INITIAL CALIBRATION REPORT: Response Factors

SDG:	**209270**
QC_Batch:	**062409-MS1**
Sample ID:	44-007
Sample Analysis Date:	24 Jun 109 7:16 pm
Run Method:	1T15EXAY.M
Quant Method:	1T15EXAY.M
Cal Update:	Tue Mar 17 14:18:15 2009
Template:	1TO15EXT.MS1

Sample Calculation:

1) Avg RFn = Sum $\left| \frac{(Astdni)\ (Cistdi)}{(Cstdni)\ (Aistdi)} \right|_i$

Response Factors

Compound	RF1	RF2	RF3	RF4	RF5	RF6	AvgRFn	%RSD
2-propanol	0.650	0.602	0.578	0.469	1.146	0.561	0.668	36.24
Pentafluorobenzene	1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.00
1,4-Difluorobenzene	1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.00
Toluene-d8	1.112	1.135	1.130	1.080	1.143	1.146	1.124	2.20

CALCULATIONS

EPA Method TO-15 Modified Full Scan GC/MS

SDG: 209270
Laboratory Number: 02

RL: 1T15EXAY.M (2) RL, Concentration of lowest Standandard in ICAL:
Run Method: 1T15EXAY.M
Quant Method: 1T15EXAY.M
Can Dilution Factor: 1.49
Air Volume: 200 ml MDL Factor 1
Gas Constant: 23.68
Decimal Places: 2

Compound	M.W.	Raw Amount	Result ppbv	Result ug/m3	(1) MDL ppbv	(2) RL ppbv	Calc MDL ppbv	Calc MDL ug/m3	Calc RL ppbv	Calc RL ug/m3	Flag	Spike ppmv
2-propanol	60.1	0.002	0.012	0.03	0.046	0.228	0.34	0.86	1.70	4.31	U	0.103

SAMPLE CALCULATION

EPA Method TO-15 Modified Full Scan GC/MS

SDG:		**209270**
Laboratory Number:		**02**
Standard Volume	STV	5.0
Sample Volume	SV	200
Can Dilution Factor	CDF	1.49
Gas Constant		23.68
Decimal Places:		2

Sample Calculation:

1) Avg RFn = Sum $\left| \frac{(Astdni)}{(Cstdni)} \frac{(Cistdi)}{(Aistdi)} \right|_i$ Note: 1

2) Raw Amt = $\frac{(Ansamp)}{(Avg\ RFn)} \frac{(Cistdi)}{(Aistdi)}$ = **Cn**

3) Amount ppbv = $\frac{(Raw\ Amt)\ 1000}{(SV)}$ (CDF)

4) Amount ug/m3 = $\frac{(amt(ppbv)\ MW}{23.68}$

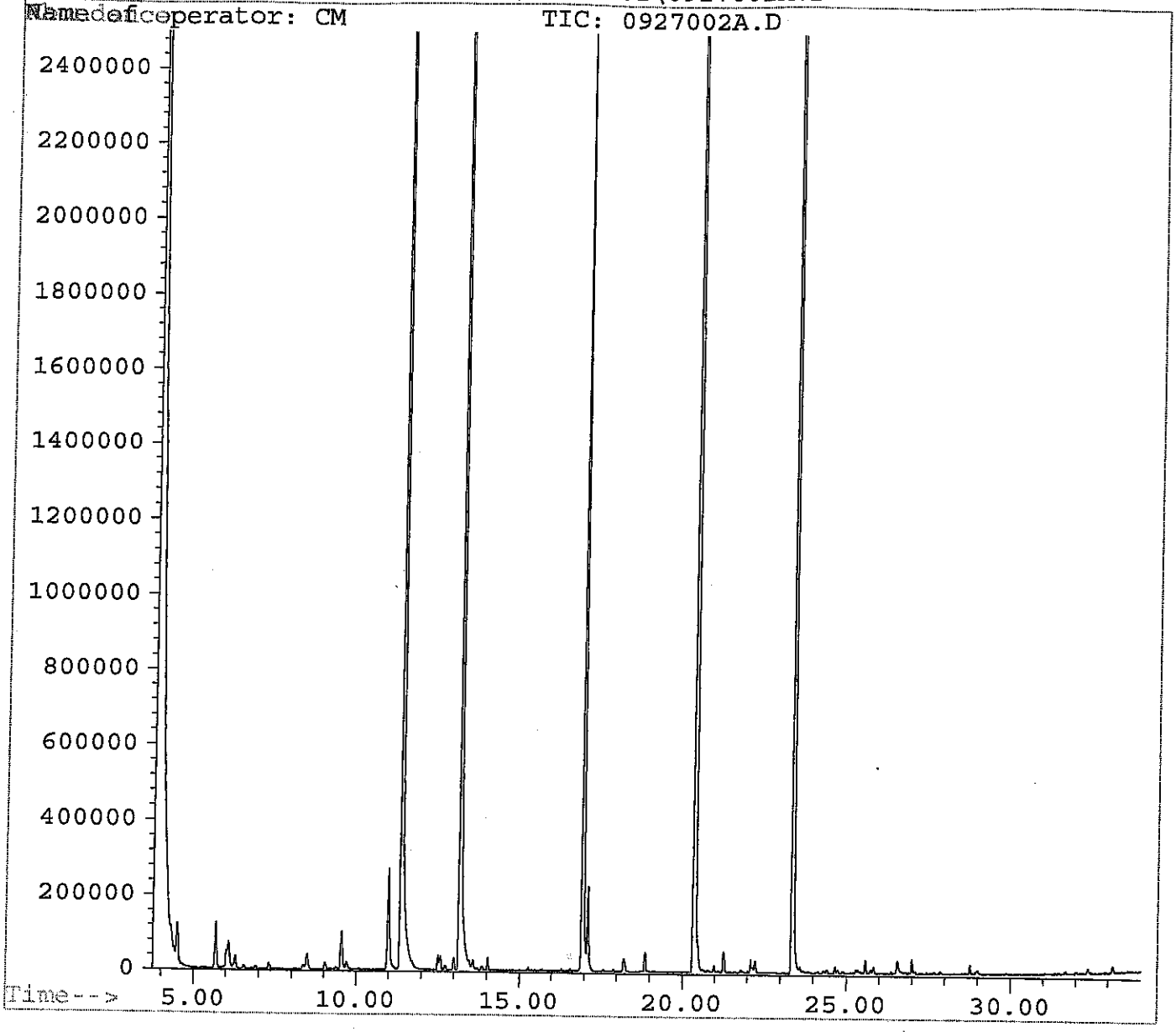
n	Compound	IS n	Chem type	MW	AvgRFn	Area Ansamp	Cistdi ppmv	Aistdi Ais	Cn ppmV Raw Amt	Amount ppbv	Amount ug/m3
13	2-propanol	1	TRG	60.1	0.668	332	20.000	6273891	0.002	0.01	0.03
1	Pentafluorobenzene	1	IS		1.000	6273891	20.000	6273891			
35	1,4-Difluorobenzene	35	IS		1.000	5367990	20.000	5367990			
94	Toluene-d8	35	SURR		1.124	3041137	20.000	5367990			

Calculation Definitions:

n	compound n
i	i th calibration level
Astdni	Standard Area for compound n at ith calibration level
Cstdni	Standard Concentration for compound n at ith calibration level in ppmv
Cistdi	Internal Standard Conc used for compound n at ith calibration level in ppmv
Aistdi	Internal Standard Area used for compound n at ith calibration level
Ansamp	Sample Area for compound n
Avg RFn	Average response factor for all ith calibration levels for compound n
Raw Amount	Sample Concentration in ppmv before applying factors
Cistd	Concentration internal standard used for compound n in sample in ppmv
Aistd	Area of internal standard used for compound n in sample
Cn	Concentration of compound n in sample in ppmv
23.68	Gas constant at 60 F as per EPA source test protocol
MW	Molecular weight of compound
Note (1) : Avg RFn	The values for the Average Response Factor AvgRFn can be optained from the response Factor Report for the Initial Calibration, or from the Calibration Report

Name of file: C:\MSCHEM\1\DATA\06249MS1\0927002A.D

Name of operator: CM



ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified Full Scan GC/MS
Analytical Method: TO-15

SDG: 209270
Laboratory Number: 03

File: 0927003A.D
Description: 44-008
Can/Tube#: 692
Sam_Type: SA
QC_Batch: 062409-MS1
Air Volume: 200 ml

Date Sampled: 06/16/09 **Time:** 16:46
Date Received: 06/17/09
Date Extracted:
Date Analyzed: 06/24/09 **Time:** 19:59
Can Dilution Factor: 1.51 2
Not Detected Flag: ND

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
67-63-0	2-propanol	0.34	1.72	1.66	0.87	4.37	4.21	J

	Surrogate Recovery	Spike Amt. ppbV	Amount ppbV	% Rec.	QC Limits	Flag * = Out
2037-26-5	Toluene-d8	10.000	9.711	97	70-130	

Notes: 1) Reported results are to be interpreted to two significant figures.
2) ug/m3 = ppbV*FW/23.68 calculated assuming conditions at 60 F and 1 atm.
3) MDL and RL are adjusted for sample volume and can dilution.
4) U and ND are Flags used for Not Detected
5) J is a flag for a result between the MDL and the RL (or lower quantitation limit, LQL)

QUANTITATION REPORT

EPA Method TO-15 Modified Full Scan GC/MS

Review **EAS Sample ID: 0927003**

File Name:	0927003A.D		1 KB
Sample ID:	44-008		2 AT
Date:	24 Jun 109 7:59 pm	Cal Amounts	3 BB
Run Method:	1T15EXAY.M	IS Areas	4 SH
Quant Method:	1T15EXAY.M	Carryover	
Cal Update:	Tue Mar 17 14:18:15 2009		
Template:	1TO15EXT.MS1		
Can Factor:	1.51		
Volume:	200 ml	Analyst: KB 1	

CAS#	Compound	n	Raw Amount	RT	Target RT	Ion	Sample Area	Qualifier	Lower Qual	Upper Qual	Qual Flag	Cal Flag	Int Flag
67-63-0	2-propanol	13	0.220	6.09	6.14	45.00	49410	0	18	27	Q		
363-72-4	Pentafluorobenzene	1	20.000	11.29	11.38	168.00	6734188						
540-36-3	1,4-Difluorobenzene	35	20.000	13.09	13.17	114.00	5692743						
2037-26-5	Toluene-d8	94	9.711	16.87	16.94	98.00	3107908	61	51	77			

Integration Flags:

If no flag the integration was done by the instrument computer

M1 Manual Integration because the computer did not integrated the peak or integrated the wrong peak

M2 Manual Integration because computer integration of baseline was different then Inital Calibration

INITIAL CALIBRATION REPORT

EPA Method TO-15 Modified Full Scan GC/MS

File Name:	0927003A.D	SDG:	209270
Sample ID:	44-008	QC_Batch:	062409-MS1
Sample Analysis Date:	24 Jun 109 7:59 pm	Instrument Name:	5970 - In
Run Method:	1T15EXAY.M		
Quant and Calibration Method:	1T15EXAY.M	Calibration Title:	EPA T0-15
Cal Update:	Tue Mar 17 14:18:15 2009		
Template:	1TO15EXT.MS1		

Number Compounds:		96
IS1:	ST60403	20
IS2:	ST60403	20
IS3:		
IS4:		

	Calibration Amount CA, ppmv						Calibration Response, Area					
	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
	Amt	Amt	Amt	Amt	Amt	Amt	C03179C.D	C03179E.D	C03179B.D	C03179A.D	C03169H.D	C03179D.D
n Compound	0.25	4.0	1.0	5.0	10.0	2.0	0.25	4.0	1.0	5.0	10.0	2.0
13 2-propanol	0.228	3.640	0.910	4.550	9.100	1.820	19578	321532	75563	289890	1427833	154437
1 Pentafluorobenzene	20.000	20.000	20.000	20.000	20.000	20.000	2643183	2935915	2871816	2719013	2737194	3022845
35 1,4-Difluorobenzene	20.000	20.000	20.000	20.000	20.000	20.000	2659938	2870629	2814997	2720455	2706138	3020264
94 Toluene-d8	10.000	10.000	10.000	10.000	10.000	10.000	1479389	1629143	1590486	1469067	1546296	1730275

(113)

INITIAL CALIBRATION REPORT: Response Factors

SDG:	**209270**
QC_Batch:	**062409-MS1**
Sample ID:	44-008
Sample Analysis Date:	24 Jun 109 7:59 pm
Run Method:	1T15EXAY.M
Quant Method:	1T15EXAY.M
Cal Update:	Tue Mar 17 14:18:15 2009
Template:	1TO15EXT.MS1

Sample Calculation:

1) Avg RFn = Sum $\left| \frac{(Astdni)}{(Cstdni)} \frac{(Cistdi)}{(Aistdi)} \right|_i$

Response Factors

Compound	RF1	RF2	RF3	RF4	RF5	RF6	AvgRFn	%RSD
2-propanol	0.650	0.602	0.578	0.469	1.146	0.561	0.668	36.24
Pentafluorobenzene	1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.00
1,4-Difluorobenzene	1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.00
Toluene-d8	1.112	1.135	1.130	1.080	1.143	1.146	1.124	2.20

CALCULATIONS

EPA Method TO-15 Modified Full Scan GC/MS

SDG: 209270
Laboratory Number: 03

RL: 1T15EXAY.M (2) RL, Concentration of lowest Standandard in ICAL:
Run Method: 1T15EXAY.M
Quant Method: 1T15EXAY.M
Can Dilution Factor: 1.51
Air Volume: 200 ml MDL Factor 1
Gas Constant: 23.68
Decimal Places: 2

Compound	M.W.	Raw Amount	Result ppbv	Result ug/m3	(1) MDL ppbv	(2) RL ppbv	Calc MDL ppbv	Calc MDL ug/m3	Calc RL ppbv	Calc RL ug/m3	Flag	Spike ppmv
2-propanol	60.1	0.220	1.659	4.21	0.046	0.228	0.34	0.87	1.72	4.37	J	0.103

SAMPLE CALCULATION

EPA Method TO-15 Modified Full Scan GC/MS

SDG:		**209270**
Laboratory Number:		**03**
Standard Volume	STV	5.0
Sample Volume	SV	200
Can Dilution Factor	CDF	1.51
Gas Constant		23.68
Decimal Places:		2

Sample Calculation:

1) Avg RFn = Sum $\left| \frac{(Astdni)}{(Cstdni)} \frac{(Cistdi)}{(Aistdi)} \right|_i$ Note: 1

2) Raw Amt = $\frac{(Ansamp)}{(Avg\ RFn)} \frac{(Cistdi)}{(Aistdi)}$ = Cn

3) Amount ppbv = $\frac{(Raw\ Amt)\ 1000}{(SV)}$ (CDF)

4) Amount ug/m3 = $\frac{(amt(ppbv)\ MW}{23.68}$

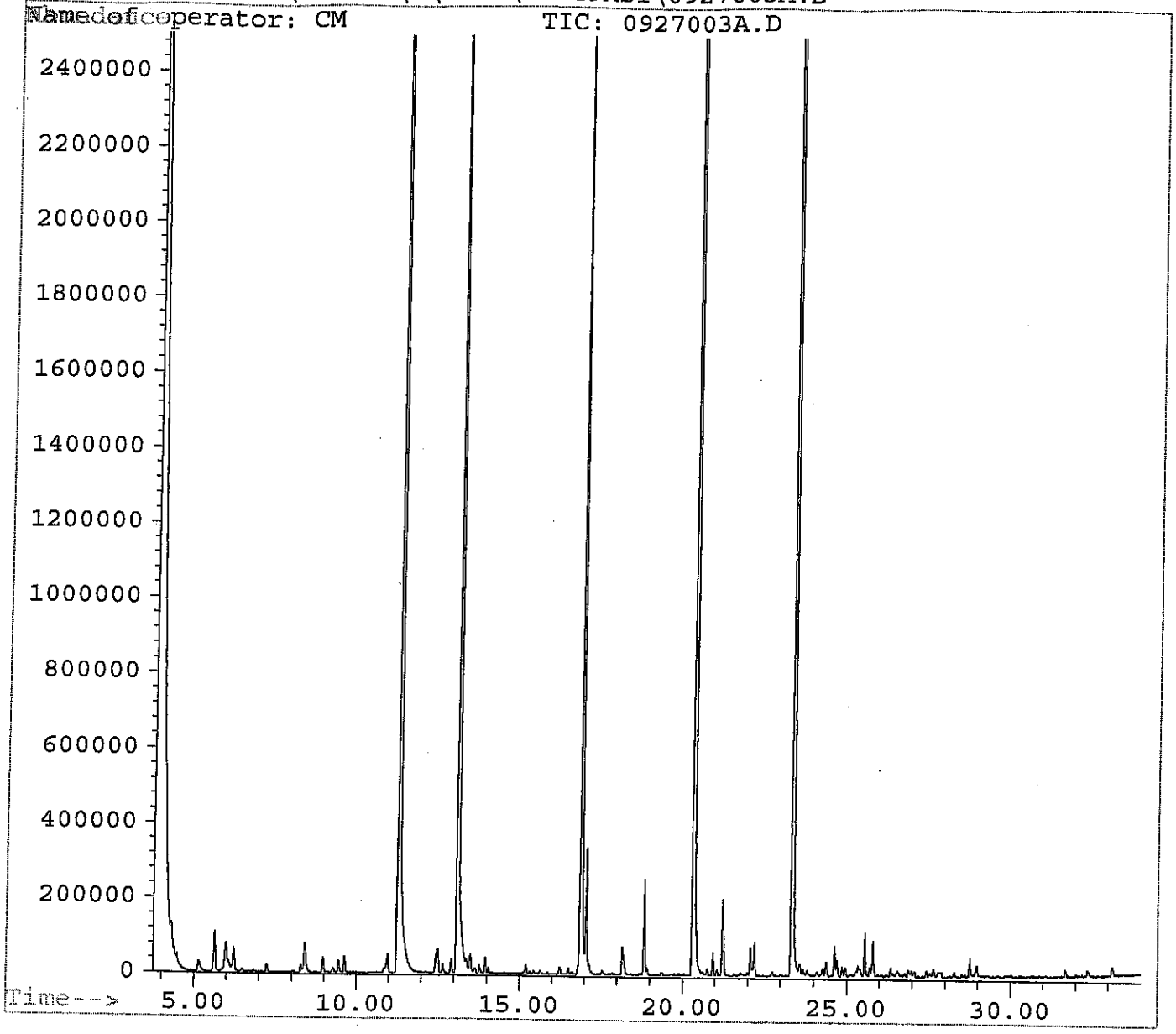
n	Compound	IS n	Chem type	MW	AvgRFn	Area Ansamp	Cistdi ppmv	Aistdi Ais	Cn ppmV Raw Amt	Amount ppbv	Amount ug/m3
13	2-propanol	1	TRG	60.1	0.668	49410	20.000	6734188	0.220	1.66	4.21
1	Pentafluorobenzene	1	IS		1.000	6734188	20.000	6734188			
35	1,4-Difluorobenzene	35	IS		1.000	5692743	20.000	5692743			
94	Toluene-d8	35	SURR		1.124	3107908	20.000	5692743			

Calculation Definitions:

n	compound n
i	i th calibration level
Astdni	Standard Area for compound n at ith calibration level
Cstdni	Standard Concentration for compound n at ith calibration level in ppmv
Cistdi	Internal Standard Conc used for compound n at ith calibration level in ppmv
Aistdi	Internal Standard Area used for compound n at ith calibration level
Ansamp	Sample Area for compound n
Avg RFn	Average response factor for all ith calibration levels for compound n
Raw Amount	Sample Concentration in ppmv before applying factors
Cistd	Concentration internal standard used for compound n in sample in ppmv
Aistd	Area of internal standard used for compound n in sample
Cn	Concentration of compound n in sample in ppmv
23.68	Gas constant at 60 F as per EPA source test protocol
MW	Molecular weight of compound
Note (1): Avg RFn	The values for the Average Response Factor AvgRFn can be optained from the response Factor Report for the Initial Calibration, or from the Calibration Report

Name of file: C:\MSCHEM\1\DATA\06249MS1\0927003A.D

Name of operator: CM



ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified Full Scan GC/MS
Analytical Method: TO-15

SDG: 209270
Laboratory Number: 05

File:	0927005A.D	**Date Sampled:**	06/16/09	**Time:**	15:45
Description:	44-010	**Date Received:**	06/17/09		
Can/Tube#:	633	**Date Extracted:**			
Sam_Type:	SA	**Date Analyzed:**	06/24/09	**Time:**	20:46
QC_Batch:	062409-MS1	**Can Dilution Factor:**	1.70		2
Air Volume:	200 ml	**Not Detected Flag:**	ND		

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
67-63-0	2-propanol	0.39	1.94	ND	0.98	4.92	ND	ND

	Surrogate Recovery	Spike Amt. ppbV	Amount ppbV	% Rec.	QC Limits	Flag * = Out
2037-26-5	Toluene-d8	10.000	9.548	95	70-130	

Notes: 1) Reported results are to be interpreted to two significant figures.
2) ug/m3 = ppbV*FW/23.68 calculated assuming conditions at 60 F and 1 atm.
3) MDL and RL are adjusted for sample volume and can dilution.
4) U and ND are Flags used for Not Detected
5) J is a flag for a result between the MDL and the RL (or lower quantitation limit, LQL)

QUANTITATION REPORT

EPA Method TO-15 Modified Full Scan GC/MS

			Review	EAS Sample ID: 0927005	
File Name:	0927005A.D				1 KB
Sample ID:	44-010				2 AT
Date:	24 Jun 109 8:46 pm			Cal Amounts	3 BB
Run Method:	1T15EXAY.M			IS Areas	4 SH
Quant Method:	1T15EXAY.M			Carryover	
Cal Update:	Tue Mar 17 14:18:15 2009				
Template:	1TO15EXT.MS1				
Can Factor:	1.70				
Volume:	200	ml		Analyst: KB 1	

CAS#	Compound	n	Raw Amount	RT	Target RT	Ion	Sample Area	Qualifier	Lower Qual	Upper Qual	Qual Flag	Cal Flag	Int Flag
67-63-0	2-propanol	13	0.023	6.14	6.14	45.00	5117	0	18	27	Q		
363-72-4	Pentafluorobenzene	1	20.000	11.37	11.38	168.00	6539371						
540-36-3	1,4-Difluorobenzene	35	20.000	13.15	13.17	114.00	5556373						
2037-26-5	Toluene-d8	94	9.548	16.92	16.94	98.00	2982545	60	51	77			

Integration Flags:

If no flag the Integration was done by the Instrument computer

M1 Manual Integration because the computer did not integrated the peak or integrated the wrong peak

M2 Manual Integration because computer integration of baseline was different then Inital Calibration

INITIAL CALIBRATION REPORT

EPA Method TO-15 Modified Full Scan GC/MS

SDG: 209270
QC_Batch: 062409-MS1
Instrument Name: 5970 - In

File Name: 0927005A.D
Sample ID: 44-010
Sample Analysis Date: 24 Jun 109 8:46 pm
Run Method: 1T15EXAY.M
Quant and Calibration Method: 1T15EXAY.M
Cal Update: Tue Mar 17 14:18:15 2009
Template: 1TO15EXT.MS1

Calibration Title: EPA T0-15

Number Compounds: 96
IS1: ST60403 20
IS2: ST60403 20
IS3:
IS4:

		Calibration Amount CA, ppmv						Calibration Response, Area					
		Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
		Amt	Amt	Amt	Amt	Amt	Amt	C03179C.D	C03179E.D	C03179B.D	C03179A.D	C03169H.D	C03179D.D
n	Compound	0.25	4.0	1.0	5.0	10.0	2.0	0.25	4.0	1.0	5.0	10.0	2.0
13	2-propanol	0.228	3.640	0.910	4.550	9.100	1.820	19578	321532	75563	289890	1427833	154437
1	Pentafluorobenzene	20.000	20.000	20.000	20.000	20.000	20.000	2643183	2935915	2871816	2719013	2737194	3022845
35	1,4-Difluorobenzene	20.000	20.000	20.000	20.000	20.000	20.000	2659938	2870629	2814997	2720455	2706138	3020264
94	Toluene-d8	10.000	10.000	10.000	10.000	10.000	10.000	1479389	1629143	1590486	1469067	1546296	1730275

(120)

INITIAL CALIBRATION REPORT: Response Factors

SDG:	**209270**
QC_Batch:	**062409-MS1**
Sample ID:	44-010
Sample Analysis Date:	24 Jun 109 8:46 pm
Run Method:	1T15EXAY.M
Quant Method:	1T15EXAY.M
Cal Update:	Tue Mar 17 14:18:15 2009
Template:	1TO15EXT.MS1

Sample Calculation:

1) Avg RFn = Sum $\left| \frac{(Astdni)}{(Cstdni)} \frac{(Cistdi)}{(Aistdi)} \right|_i$

Response Factors

Compound	RF1	RF2	RF3	RF4	RF5	RF6	AvgRFn	%RSD
2-propanol	0.650	0.602	0.578	0.469	1.146	0.561	0.668	36.24
Pentafluorobenzene	1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.00
1,4-Difluorobenzene	1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.00
Toluene-d8	1.112	1.135	1.130	1.080	1.143	1.146	1.124	2.20

CALCULATIONS

EPA Method TO-15 Modified Full Scan GC/MS

SDG: 209270
Laboratory Number: 05

RL: 1T15EXAY.M (2) RL, Concentration of lowest Standandard in ICAL:
Run Method: 1T15EXAY.M
Quant Method: 1T15EXAY.M
Can Dilution Factor: 1.70
Air Volume: 200 ml MDL Factor 1
Gas Constant: 23.68
Decimal Places: 2

Compound	M.W.	Raw Amount	Result ppbv	Result ug/m3	(1) MDL ppbv	(2) RL ppbv	Calc MDL ppbv	Calc MDL ug/m3	Calc RL ppbv	Calc RL ug/m3	Flag	Spike ppmv
2-propanol	60.1	0.023	0.199	0.51	0.046	0.228	0.39	0.98	1.94	4.92	U	0.103

SAMPLE CALCULATION

EPA Method TO-15 Modified Full Scan GC/MS

SDG:		**209270**
Laboratory Number:		**05**
Standard Volume	STV	5.0
Sample Volume	SV	200
Can Dilution Factor	CDF	1.70
Gas Constant		23.68
Decimal Places:		2

Sample Calculation:

1) Avg RFn = Sum $\left| \frac{(Astdni)}{(Cstdni)} \frac{(Cistdi)}{(Aistdi)} \right|_i$ Note: 1

2) Raw Amt = $\frac{(Ansamp)}{(Avg\ RFn)} \frac{(Cistdi)}{(Aistdi)}$ = Cn

3) Amount ppbv = $\frac{(Raw\ Amt)\ 1000}{(SV)}$ (CDF)

4) Amount ug/m3 = $\frac{(amt(ppbv)\ MW}{23.68}$

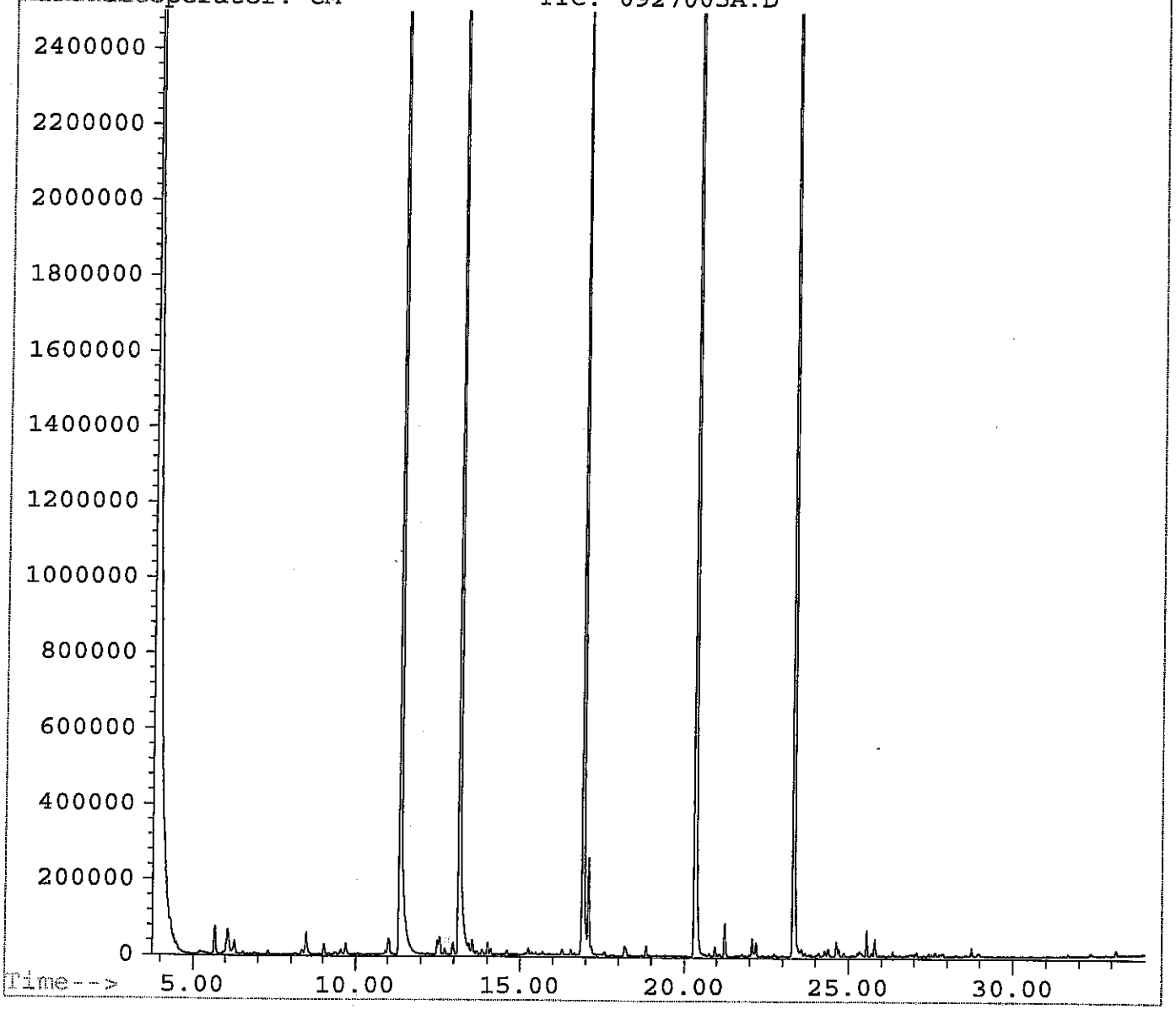
n	Compound	IS n	Chem type	MW	AvgRFn	Area Ansamp	Cistdi ppmv	Aistdi Ais	Cn ppmV Raw Amt	Amount ppbv	Amount ug/m3
13	2-propanol	1	TRG	60.1	0.668	5117	20.000	6539371	0.023	0.20	0.51
1	Pentafluorobenzene	1	IS		1.000	6539371	20.000	6539371			
35	1,4-Difluorobenzene	35	IS		1.000	5556373	20.000	5556373			
94	Toluene-d8	35	SURR		1.124	2982545	20.000	5556373			

Calculation Definitions:

n	compound n
i	i th calibration level
Astdni	Standard Area for compound n at ith calibration level
Cstdni	Standard Concentration for compound n at ith calibration level in ppmv
Cistdi	Internal Standard Conc used for compound n at ith calibration level in ppmv
Aistdi	Internal Standard Area used for compound n at ith calibration level
Ansamp	Sample Area for compound n
Avg RFn	Average response factor for all ith calibration levels for compound n
Raw Amount	Sample Concentration in ppmv before applying factors
Cistd	Concentration internal standard used for compound n in sample in ppmv
Aistd	Area of internal standard used for compound n in sample
Cn	Concentration of compound n in sample in ppmv
23.68	Gas constant at 60 F as per EPA source test protocol
MW	Molecular weight of compound
Note (1) : Avg RFn	The values for the Average Response Factor AvgRFn can be optained from the response Factor Report for the Initial Calibration, or from the Calibration Report

Name of file: C:\MSCHEM\1\DATA\06249MS1\0927005A.D

Name of operator: CM



ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified Full Scan GC/MS
Analytical Method: TO-15

SDG: 209270
Laboratory Number: 06

File: 0927006A.D
Description: 44-011
Can/Tube#: 169
Sam_Type: SA
QC_Batch: 062409-MS1
Air Volume: 200 ml

Date Sampled: 06/16/09 **Time:** 14:14
Date Received: 06/17/09
Date Extracted:
Date Analyzed: 06/24/09 **Time:** 21:30
Can Dilution Factor: 1.47 2
Not Detected Flag: ND

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
67-63-0	2-propanol	0.33	1.68	ND	0.85	4.25	ND	ND

	Surrogate Recovery	Spike Amt. ppbV	Amount ppbV	% Rec.	QC Limits	Flag * = Out
2037-26-5	Toluene-d8	10.000	9.363	94	70-130	

Notes: 1) Reported results are to be interpreted to two significant figures.
2) ug/m3 = ppbV*FW/23.68 calculated assuming conditions at 60 F and 1 atm.
3) MDL and RL are adjusted for sample volume and can dilution.
4) U and ND are Flags used for Not Detected
5) J is a flag for a result between the MDL and the RL (or lower quantitation limit, LQL)

QUANTITATION REPORT

EPA Method TO-15 Modified Full Scan GC/MS

			Review	EAS Sample ID: 0927006	
File Name:	0927006A.D				1 KB
Sample ID:	44-011				2 AT
Date:	24 Jun 109 9:30 pm			Cal Amounts	3 BB
Run Method:	1T15EXAY.M			IS Areas	4 SH
Quant Method:	1T15EXAY.M			Carryover	
Cal Update:	Tue Mar 17 14:18:15 2009				
Template:	1TO15EXT.MS1				
Can Factor:	1.47				
Volume:	200	ml		Analyst: KB 1	

CAS#	Compound	n	Raw Amount	RT	Target RT	Ion	Sample Area	Qualifier	Lower Qual	Upper Qual	Qual Flag	Cal Flag	Int Flag
67-63-0	2-propanol	13	0.013	6.04	6.14	45.00	732	0	18	27			
363-72-4	Pentafluorobenzene	1	20.000	11.21	11.38	168.00	**1703338**						
540-36-3	1,4-Difluorobenzene	35	20.000	13.02	13.17	114.00	**1465145**						
2037-26-5	Toluene-d8	94	**9.363**	16.84	16.94	98.00	771202	57	51	77			

Integration Flags:

If no flag the integration was done by the instrument computer

M1 Manual Integration because the computer did not integrated the peak or integrated the wrong peak

M2 Manual Integration because computer integration of baseline was different then Inital Calibration

INITIAL CALIBRATION REPORT

EPA Method TO-15 Modified Full Scan GC/MS

File Name:	0927006A.D	SDG:	209270
Sample ID:	44-011	QC_Batch:	062409-MS1
Sample Analysis Date:	24 Jun 109 9:30 pm	Instrument Name:	5970 - In
Run Method:	1T15EXAY.M		
Quant and Calibration Method:	1T15EXAY.M	Calibration Title:	EPA T0-15
Cal Update:	Tue Mar 17 14:18:15 2009		
Template:	1TO15EXT.MS1		

Number Compounds:		96
IS1:	ST60403	20
IS2:	ST60403	20
IS3:		
IS4:		

		Calibration Amount CA, ppmv						Calibration Response, Area					
		Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
		Amt	Amt	Amt	Amt	Amt	Amt	C03179C.D	C03179E.D	C03179B.D	C03179A.D	C03169H.D	C03179D.D
n	Compound	0.25	4.0	1.0	5.0	10.0	2.0	0.25	4.0	1.0	5.0	10.0	2.0
13	2-propanol	0.228	3.640	0.910	4.550	9.100	1.820	19578	321532	75563	289890	1427833	154437
1	Pentafluorobenzene	20.000	20.000	20.000	20.000	20.000	20.000	2643183	2935915	2871816	2719013	2737194	3022845
35	1,4-Difluorobenzene	20.000	20.000	20.000	20.000	20.000	20.000	2659938	2870629	2814997	2720455	2706138	3020264
94	Toluene-d8	10.000	10.000	10.000	10.000	10.000	10.000	1479389	1629143	1590486	1469067	1546296	1730275

(127)

INITIAL CALIBRATION REPORT: Response Factors

SDG:	**209270**
QC_Batch:	**062409-MS1**
Sample ID:	44-011
Sample Analysis Date:	24 Jun 109 9:30 pm
Run Method:	1T15EXAY.M
Quant Method:	1T15EXAY.M
Cal Update:	Tue Mar 17 14:18:15 2009
Template:	1TO15EXT.MS1

Sample Calculation:

1) Avg RFn = Sum $\left| \frac{(Astdni)\ (Cistdi)}{(Cstdni)\ (Aistdi)} \right|_i$

Response Factors

Compound	RF1	RF2	RF3	RF4	RF5	RF6	AvgRFn	%RSD
2-propanol	0.650	0.602	0.578	0.469	1.146	0.561	0.668	36.24
Pentafluorobenzene	1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.00
1,4-Difluorobenzene	1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.00
Toluene-d8	1.112	1.135	1.130	1.080	1.143	1.146	1.124	2.20

CALCULATIONS

EPA Method TO-15 Modified Full Scan GC/MS

SDG: 209270
Laboratory Number: 06

RL: 1T15EXAY.M (2) RL, Concentration of lowest Standandard in ICAL:
Run Method: 1T15EXAY.M
Quant Method: 1T15EXAY.M
Can Dilution Factor: 1.47
Air Volume: 200 ml MDL Factor 1
Gas Constant: 23.68
Decimal Places: 2

Compound	M.W.	Raw Amount	Result ppbv	Result ug/m3	(1) MDL ppbv	(2) RL ppbv	Calc MDL ppbv	Calc MDL ug/m3	Calc RL ppbv	Calc RL ug/m3	Flag	Spike ppmv
2-propanol	60.1	0.013	0.095	0.24	0.046	0.228	0.33	0.85	1.68	4.25	U	0.103

SAMPLE CALCULATION

EPA Method TO-15 Modified Full Scan GC/MS

SDG:		**209270**
Laboratory Number:		**06**
Standard Volume	STV	5.0
Sample Volume	SV	200
Can Dilution Factor	CDF	1.47
Gas Constant		23.68
Decimal Places:		2

Sample Calculation:

1) Avg RFn = Sum $\left| \frac{(Astdni)}{(Cstdni)} \frac{(Cistdi)}{(Aistdi)} \right|_i$ Note: 1

2) Raw Amt = $\frac{(Ansamp)}{(Avg\ RFn)} \frac{(Cistdi)}{(Aistdi)}$ = Cn

3) Amount ppbv = $\frac{(Raw\ Amt)\ 1000}{(SV)}$ (CDF)

4) Amount ug/m3 = $\frac{(amt(ppbv))\ MW}{23.68}$

n	Compound	IS n	Chem type	MW	AvgRFn	Area Ansamp	Cistdi ppmv	Aistdi Ais	Cn ppmV Raw Amt	Amount ppbv	Amount ug/m3
13	2-propanol	1	TRG	60.1	0.668	732	20.000	1703338	0.013	0.09	0.23
1	Pentafluorobenzene	1	IS		1.000	1703338	20.000	1703338			
35	1,4-Difluorobenzene	35	IS		1.000	1465145	20.000	1465145			
94	Toluene-d8	35	SURR		1.124	771202	20.000	1465145			

Calculation Definitions:

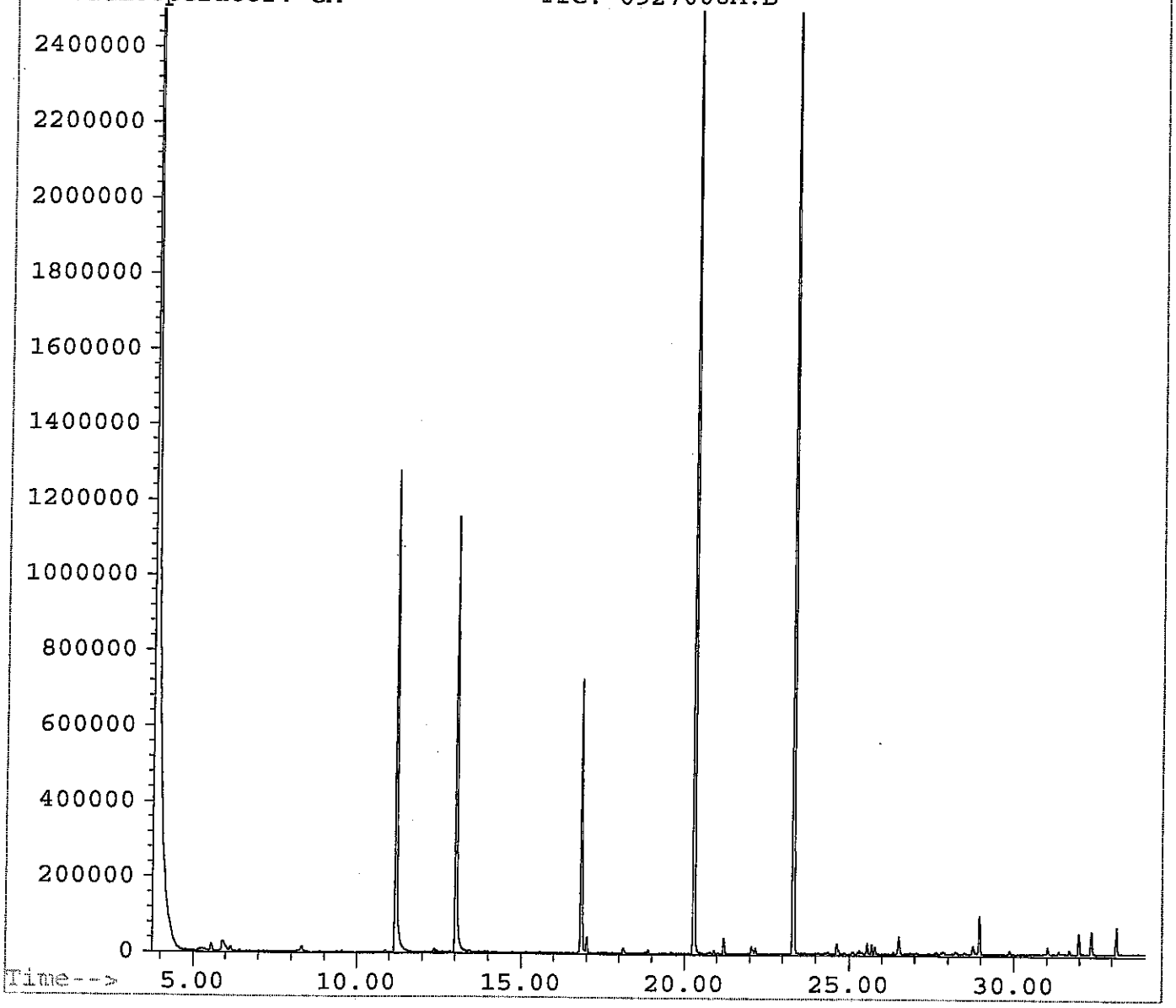
n	compound n
i	i th calibration level
Astdni	Standard Area for compound n at ith calibration level
Cstdni	Standard Concentration for compound n at ith calibration level in ppmv
Cistdi	Internal Standard Conc used for compound n at ith calibration level in ppmv
Aistdi	Internal Standard Area used for compound n at ith calibration level
Ansamp	Sample Area for compound n
Avg RFn	Average response factor for all ith calibration levels for compound n
Raw Amount	Sample Concentration in ppmv before applying factors
Cistd	Concentration internal standard used for compound n in sample in ppmv
Aistd	Area of internal standard used for compound n in sample
Cn	Concentration of compound n in sample in ppmv
23.68	Gas constant at 60 F as per EPA source test protocol
MW	Molecular weight of compound

Note (1): Avg RFn — The values for the Average Response Factor AvgRFn can be optained from the response Factor Report for the Initial Calibration, or from the Calibration Report

Name of file: C:\MSCHEM\1\DATA\06249MS1\0927006A.D

Name of operator: CM

TIC: 0927006A.D



ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified Full Scan GC/MS | **SDG:** 209270
Analytical Method: TO-15 | **Laboratory Number:** 14

File:	0927014A.D	**Date Sampled:**	06/16/09	**Time:**	15:35
Description:	44-006B	**Date Received:**	06/17/09		
Can/Tube#:	2968	**Date Extracted:**			
Sam_Type:	SA	**Date Analyzed:**	06/24/09	**Time:**	18:32
QC_Batch:	062409-MS1	**Can Dilution Factor:**	2.59		2
Air Volume:	200 ml	**Not Detected Flag:**	ND		

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
67-63-0	2-propanol	0.59	2.95	ND	1.50	7.49	ND	ND

	Surrogate Recovery	Spike Amt. ppbV	Amount ppbV	% Rec.	QC Limits	Flag * = Out
2037-26-5	Toluene-d8	10.000	9.769	98	70-130	

Notes: 1) Reported results are to be interpreted to two significant figures.
2) ug/m3 = ppbV*FW/23.68 calculated assuming conditions at 60 F and 1 atm.
3) MDL and RL are adjusted for sample volume and can dilution.
4) U and ND are Flags used for Not Detected
5) J is a flag for a result between the MDL and the RL (or lower quantitation limit, LQL)

QUANTITATION REPORT

EPA Method TO-15 Modified Full Scan GC/MS

			Review	EAS Sample ID: 0927014	
File Name:	0927014A.D				1 KB
Sample ID:	44-006B				2 AT
Date:	24 Jun 109 6:32 pm			Cal Amounts	3 BB
Run Method:	1T15EXAY.M			IS Areas	4 SH
Quant Method:	1T15EXAY.M			Carryover	
Cal Update:	Tue Mar 17 14:18:15 2009				
Template:	1TO15EXT.MS1				
Can Factor:	2.59				
Volume:	200	ml		Analyst: KB 1	

CAS#	Compound	n	Raw Amount	RT	Target RT	Ion	Sample Area	Qualifier	Lower Qual	Upper Qual	Qual Flag	Cal Flag	Int Flag
67-63-0	2-propanol	13	0.023	6.20	6.14	45.00	5077	576	18	27	Q		
363-72-4	Pentafluorobenzene	1	20.000	11.30	11.38	168.00	6618254						
540-36-3	1,4-Difluorobenzene	35	20.000	13.11	13.17	114.00	5638180						
2037-26-5	Toluene-d8	94	9.769	16.89	16.94	98.00	3096486	61	51	77			

Integration Flags:

If no flag the Integration was done by the instrument computer

M1 Manual Integration because the computer did not integrated the peak or integrated the wrong peak

M2 Manual Integration because computer integration of baseline was different then Inital Calibration

INITIAL CALIBRATION REPORT

EPA Method TO-15 Modified Full Scan GC/MS

SDG: 209270
QC_Batch: 062409-MS1
Instrument Name: 5970 - In

File Name: 0927014A.D
Sample ID: 44-006B
Sample Analysis Date: 24 Jun 109 6:32 pm
Run Method: 1T15EXAY.M
Quant and Calibration Method: 1T15EXAY.M
Cal Update: Tue Mar 17 14:18:15 2009
Template: 1TO15EXT.MS1

Calibration Title: EPA T0-15

Number Compounds: 96
IS1: ST60403 20
IS2: ST60403 20
IS3:
IS4:

		Calibration Amount CA, ppmv						Calibration Response, Area					
		Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
		Amt	Amt	Amt	Amt	Amt	Amt	C03179C.D	C03179E.D	C03179B.D	C03179A.D	C03169H.D	C03179D.D
n	Compound	0.25	4.0	1.0	5.0	10.0	2.0	0.25	4.0	1.0	5.0	10.0	2.0
13	2-propanol	0.228	3.640	0.910	4.550	9.100	1.820	19578	321532	75563	289890	1427833	154437
1	Pentafluorobenzene	20.000	20.000	20.000	20.000	20.000	20.000	2643183	2935915	2871816	2719013	2737194	3022845
35	1,4-Difluorobenzene	20.000	20.000	20.000	20.000	20.000	20.000	2659938	2870629	2814997	2720455	2706138	3020264
94	Toluene-d8	10.000	10.000	10.000	10.000	10.000	10.000	1479389	1629143	1590486	1469067	1546296	1730275

(134)

INITIAL CALIBRATION REPORT: Response Factors

SDG:	**209270**
QC_Batch:	**062409-MS1**
Sample ID:	44-006B
Sample Analysis Date:	24 Jun 109 6:32 pm
Run Method:	1T15EXAY.M
Quant Method:	1T15EXAY.M
Cal Update:	Tue Mar 17 14:18:15 2009
Template:	1TO15EXT.MS1

Sample Calculation:

1) Avg RFn = Sum $\left| \frac{(Astdni)}{(Cstdni)} \frac{(Cistdi)}{(Aistdi)} \right|_i$

Response Factors

Compound	RF1	RF2	RF3	RF4	RF5	RF6	AvgRFn	%RSD
2-propanol	0.650	0.602	0.578	0.469	1.146	0.561	0.668	36.24
Pentafluorobenzene	1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.00
1,4-Difluorobenzene	1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.00
Toluene-d8	1.112	1.135	1.130	1.080	1.143	1.146	1.124	2.20

CALCULATIONS

EPA Method TO-15 Modified Full Scan GC/MS

SDG: 209270
Laboratory Number: 14

RL: 1T15EXAY.M (2) RL, Concentration of lowest Standandard in ICAL:
Run Method: 1T15EXAY.M
Quant Method: 1T15EXAY.M
Can Dilution Factor: 2.59
Air Volume: 200 ml MDL Factor 1
Gas Constant: 23.68
Decimal Places: 2

Compound	M.W.	Raw Amount	Result ppbv	Result ug/m3	(1) MDL ppbv	(2) RL ppbv	Calc MDL ppbv	Calc MDL ug/m3	Calc RL ppbv	Calc RL ug/m3	Flag	Spike ppmv
2-propanol	60.1	0.023	0.298	0.76	0.046	0.228	0.59	1.50	2.95	7.49	U	0.103

SAMPLE CALCULATION

EPA Method TO-15 Modified Full Scan GC/MS

SDG:		**209270**
Laboratory Number:		**14**
Standard Volume	STV	5.0
Sample Volume	SV	200
Can Dilution Factor	CDF	2.59
Gas Constant		23.68
Decimal Places:		2

Sample Calculation:

1) Avg RFn = Sum $\left| \frac{(Astdni)}{(Cstdni)} \frac{(Cistdi)}{(Aistdi)} \right|_i$ Note: 1

2) Raw Amt = $\frac{(Ansamp)}{(Avg\ RFn)} \frac{(Cistdi)}{(Aistdi)}$ = **Cn**

3) Amount ppbv = $\frac{(Raw\ Amt)\ 1000}{(SV)}$ (CDF)

4) Amount ug/m3 = $\frac{(amt(ppbv)\ MW}{23.68}$

n	Compound	IS n	Chem type	MW	AvgRFn	Area Ansamp	Cistdi ppmv	Aistdi Ais	Cn ppmV Raw Amt	Amount ppbv	Amount ug/m3
13	2-propanol	1	TRG	60.1	0.668	5077	20.000	6618254	0.023	0.30	0.76
1	Pentafluorobenzene	1	IS		1.000	6618254	20.000	6618254			
35	1,4-Difluorobenzene	35	IS		1.000	5638180	20.000	5638180			
94	Toluene-d8	35	SURR		1.124	3096486	20.000	5638180			

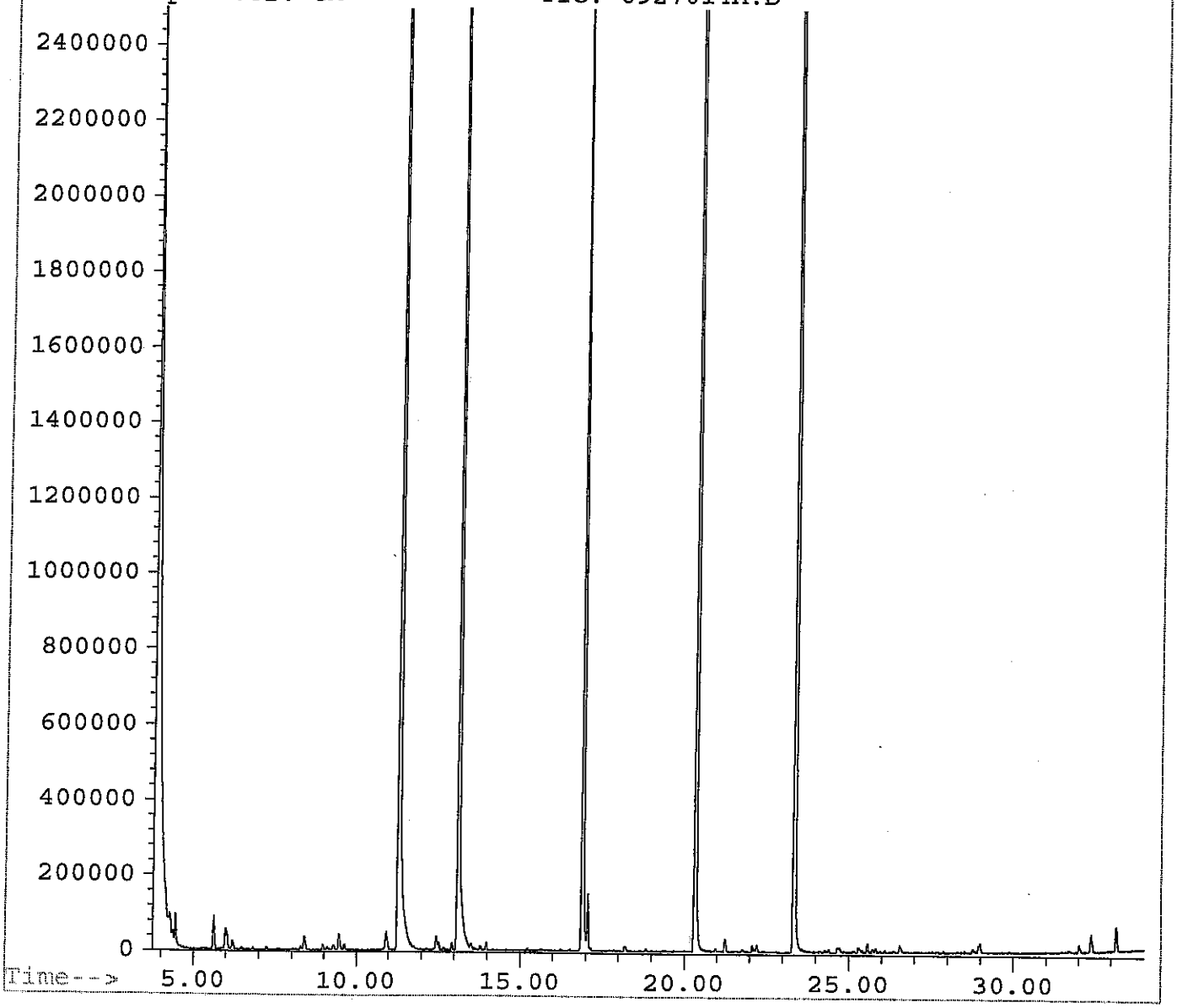
Calculation Definitions:

n	compound n
i	i th calibration level
Astdni	Standard Area for compound n at ith calibration level
Cstdni	Standard Concentration for compound n at ith calibration level in ppmv
Cistdi	Internal Standard Conc used for compound n at ith calibration level in ppmv
Aistdi	Internal Standard Area used for compound n at ith calibration level
Ansamp	Sample Area for compound n
Avg RFn	Average response factor for all ith calibration levels for compound n
Raw Amount	Sample Concentration in ppmv before applying factors
Cistd	Concentration internal standard used for compound n in sample in ppmv
Aistd	Area of internal standard used for compound n in sample
Cn	Concentration of compound n in sample in ppmv
23.68	Gas constant at 60 F as per EPA source test protocol
MW	Molecular weight of compound
Note (1) : Avg RFn	The values for the Average Response Factor AvgRFn can be optained from the response Factor Report for the Initial Calibration, or from the Calibration Report

Name of file: C:\MSCHEM\1\DATA\06249MS1\0927014A.D

Name of operator: CM

TIC: 0927014A.D



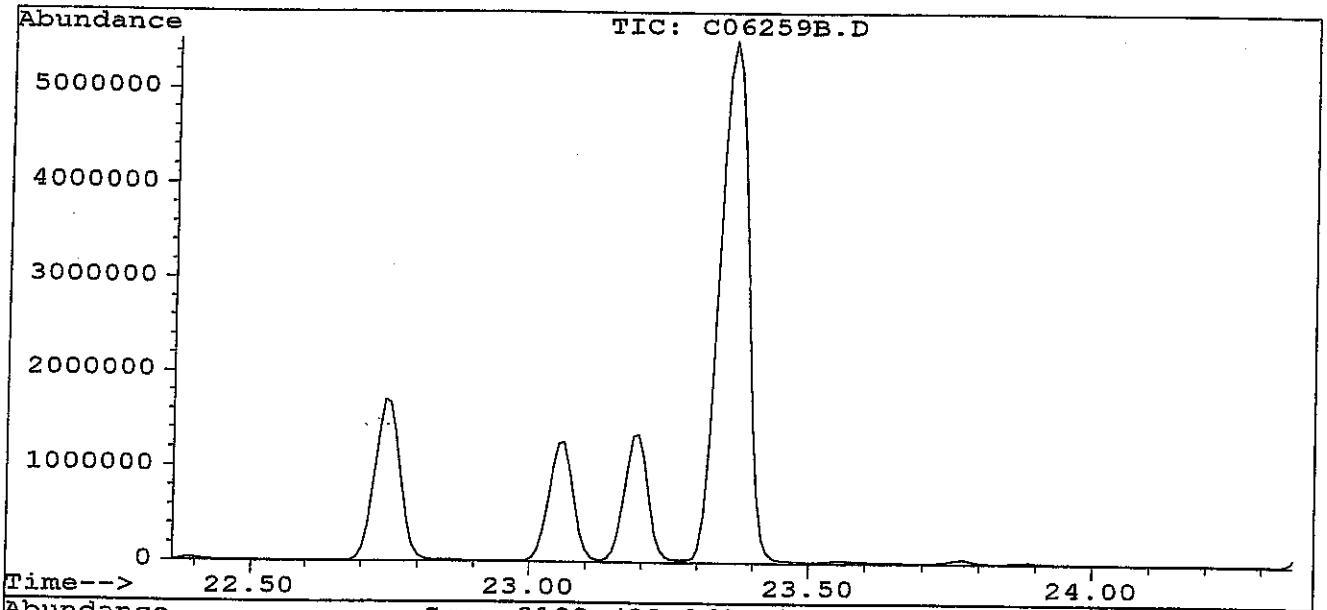
Daily Analytical Batch #: 062509-MS1

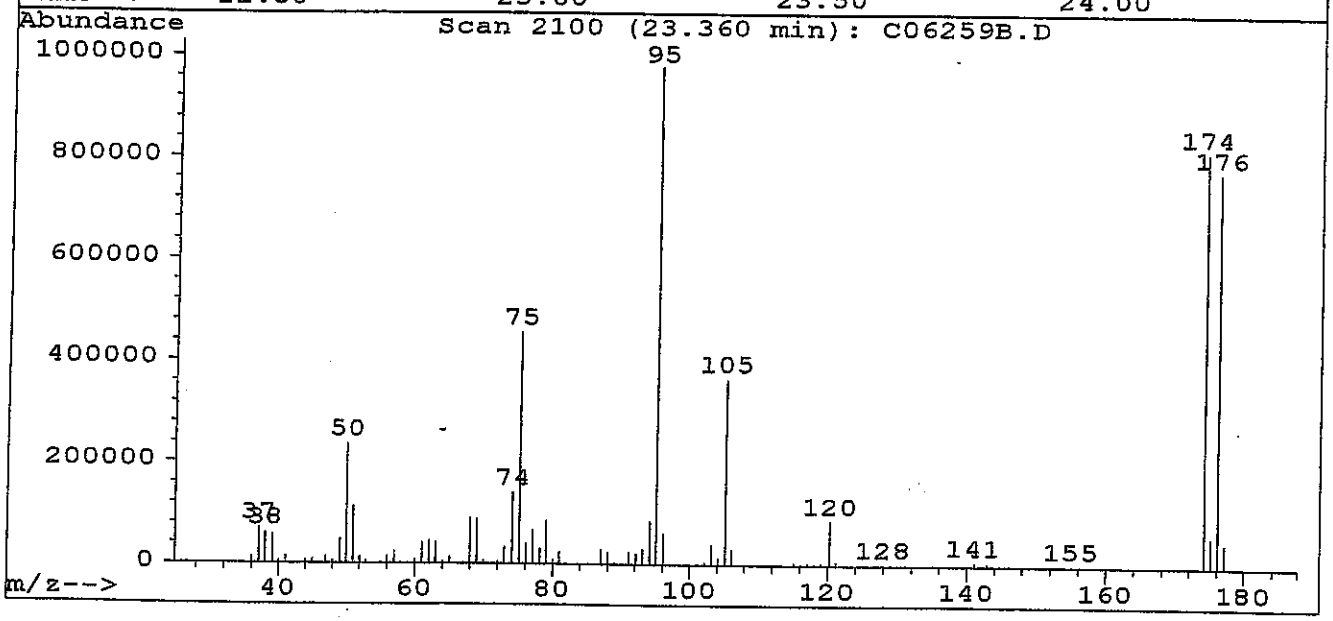
BFB

Data File : C:\MSCHEM\2\DATA\06259MS1\C06259B.D
Acq Time : 25 Jun 109 9:43 am
Sample : ST60022 + ST60350
Misc :

Operator: JF
Inst : 5970 - In
Multiplr: 1.00

Method : C:\MSCHEM\2\METHODS\1T15EXAY.M
Title : EPA TO-15





Peak Apex is scan: 2100

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	8	40	24.0	235456	PASS
75	95	30	66	46.3	453696	PASS
95	95	100	100	100.0	979200	PASS
96	95	5	9	6.1	59944	PASS
173	174	0	2	0.0	0	PASS
174	95	50	120	83.2	814464	PASS
175	174	4	9	7.2	58816	PASS
176	174	93	101	95.0	773632	PASS
177	176	5	9	6.1	47432	PASS

C06259B.D 1T15EXAY.M Sun Jun 28 17:36:40 2009

CONTINUING CALIBRATION REPORT

SDG:	**LABQC**	
QC_Batch:	**062509-MS1**	
Sample ID:	ST60022 + ST60350	
Sample Analysis Date:	25 Jun 109 9:43 am	
Run Method:	1T15EXAY.M	
Quant/Calibration Method:	1T15EXAY.M	
Cal Update:	Tue Mar 17 14:18:15 2009	
Template:	1TO15EXT.MS1	
Calibration Level	Level 4	5.0

Sample Calculation:

$$1)\ RFi = \left| \frac{(Astdi)\ (Cistdi)}{(Cstdi)\ (Aistdi)} \right|_i$$

Compound	Area Astdi	Cal Level Cstdi ppbv	CCRRF	AvgRFn	%Dev	%Dev Limit	%Dev Flag	
Freon 114	503194	5.200	0.351	0.650	45.9	30	OUT	1A
Vinyl acetate	1047841	4.300	0.885	1.295	31.6	40	IN	
2-Butanone	142839	4.300	0.121	0.170	29.2	40	IN	
Methyl Isobutyl Ketone	1839400	4.600	1.741	2.014	13.6	40	IN	
cis-1,3-Dichloropropene	823507	5.300	0.677	0.713	5.2	30	IN	
trans-1,3-Dichloropropene	919371	5.200	0.770	0.847	9.1	30	IN	
2-Hexanone	1954611	4.400	1.934	2.559	24.4	40	IN	
Dibromochloromethane	1111417	4.450	1.087	1.207	9.9	40	IN	
4-Ethyltoluene	2364722	4.550	2.263	3.651	38.0	40	IN	
Hexachlorobutadiene	1653099	5.150	1.398	4.062	65.6	80	IN	
Pentafluorobenzene	5506717	20.000	1.000	1.000	0.0	30	IN	
1,4-Difluorobenzene	4593315	20.000	1.000	1.000	0.0	30	IN	
Toluene-d8	2627267	10.000	1.144	1.124	-1.7	30	IN	

QUANTITATION REPORT

EPA Method TO-15 Modified Full Scan GC/MS

			Review	EAS Sample ID: C06259B	
File Name:	C06259B.D				1 KB
Sample ID:	ST60022 + ST60350				2 AT
Date:	25 Jun 109 9:43 am			Cal Amounts	3 BB
Run Method:	1T15EXAY.M			IS Areas	4 SH
Quant Method:	1T15EXAY.M			Carryover	
Cal Update:	Tue Mar 17 14:18:15 2009				
Template:	1TO15EXT.MS1				
Can Factor:	1.00				
Volume:	500	ml		Analyst: KB 1	

CAS#	Compound	n	Raw Amount	RT	Target RT	Ion	Sample Area	Qualifier	Lower Qual	Upper Qual	Qual Flag	Cal Flag	Int Flag
76-14-2	Freon 114	4	2.813	4.15	4.11	85.00	503194	56	44	65			
108-05-4	Vinyl acetate	25	2.939	10.33	10.32	43.00	1047841	0	0	0			
78-93-3	2-Butanone	26	3.046	9.55	9.54	72.00	142839	32	30	45			
108-10-1	Methyl Isobutyl Ketone	49	3.977	15.72	15.70	43.00	1839400	27	21	35			
10061-01-5	cis-1,3-Dichloropropene	50	5.027	15.81	15.82	75.00	823507	21	15	23			
10061-02-6	trans-1,3-Dichloropropene	52	4.727	16.84	16.85	75.00	919371	21	16	23			
591-78-6	2-Hexanone	54	3.326	17.76	17.80	43.00	1954611	40	28	47			
124-48-1	Dibromochloromethane	57	4.008	18.29	18.30	129.00	1111417	76	60	91			
622-96-8	4-Ethyltoluene	72	2.820	24.73	24.74	105.00	2364722	27	20	31			
87-68-3	Hexachlorobutadiene	88	1.772	33.04	33.08	225.00	1653099	27	22	33			
363-72-4	Pentafluorobenzene	1	20.000	11.40	11.38	168.00	5506717						
540-36-3	1,4-Difluorobenzene	35	20.000	13.18	13.17	114.00	4593315						
2037-26-5	Toluene-d8	94	10.174	16.94	16.94	98.00	2627267	62	51	77			

Integration Flags:

If no flag the integration was done by the instrument computer

M1 Manual Integration because the computer did not integrated the peak or integrated the wrong peak

M2 Manual Integration because computer integration of baseline was different then inital Calibration

INITIAL CALIBRATION REPORT

EPA Method TO-15 Modified Full Scan GC/MS

		SDG:	LABQC
		QC_Batch:	062509-MS1
File Name:	C06259B.D	Instrument Name:	5970 - In
Sample ID:	ST60022 + ST60350		
Sample Analysis Date:	25 Jun 109 9:43 am	Number Compounds:	96
Run Method:	1T15EXAY.M	IS1: ST60403	20
Quant and Calibration Method:	1T15EXAY.M	IS2: ST60403	20
Cal Update:	Tue Mar 17 14:18:15 2009	IS3:	
Template:	1TO15EXT.MS1	IS4:	

Calibration Title: EPA T0-15

		Calibration Amount CA, ppmv						Calibration Response, Area					
		Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
		Amt	Amt	Amt	Amt	Amt	Amt	C03179C.D	C03179E.D	C03179B.D	C03179A.D	C03169H.D	C03179D.D
n	Compound	0.25	4.0	1.0	5.0	10.0	2.0	0.25	4.0	1.0	5.0	10.0	2.0
4	Freon 114	0.260	4.160	1.040	5.200	10.400	2.080	25317	399238	94441	464176	861160	193013
25	Vinyl acetate	0.215	3.440	0.860	4.300	8.600	1.720	40148	687529	149287	676740	1560060	338492
26	2-Butanone	0.215	3.440	0.860	4.300	8.600	1.720	5400	92652	22013	71425	205517	45058
49	Methyl Isobutyl Ketone	0.230	3.680	0.920	4.600	9.200	1.840	67434	1179200	250239	1039898	2505790	566705
50	cis-1,3-Dichloropropene	0.265	4.240	1.060	5.300	10.600	2.120	28339	441906	107039	492454	1010236	206495
52	trans-1,3-Dichloropropene	0.260	4.160	1.040	5.200	10.400	2.080	33546	509168	127376	538174	1205186	242137
54	2-Hexanone	0.220	3.520	0.880	4.400	8.800	1.760	84018	1413472	311524	1112452	3278869	678898
57	Dibromochloromethane	0.223	3.560	0.890	4.450	8.900	1.780	43801	688881	150691	558917	1316838	322250
72	4-Ethyltoluene	0.228	3.640	0.910	4.550	9.100	1.820	177076	1912961	437379	1573293	3712735	943267
88	Hexachlorobutadiene	-1.000	4.120	1.030	5.150	10.300	2.060	-1	2443776	758051	1914490	4177636	1622637
1	Pentafluorobenzene	20.000	20.000	20.000	20.000	20.000	20.000	2643183	2935915	2871816	2719013	2737194	3022845
35	1,4-Difluorobenzene	20.000	20.000	20.000	20.000	20.000	20.000	2659938	2870629	2814997	2720455	2706138	3020264
94	Toluene-d8	10.000	10.000	10.000	10.000	10.000	10.000	1479389	1629143	1590486	1469067	1546296	1730275

(143)

INITIAL CALIBRATION REPORT: Response Factors

SDG:	**LABQC**	**Sample Calculation:**	
QC_Batch:	**062509-MS1**	1) Avg RFn = Sum	$\left[\frac{(Astdni)}{(Cstdni)} \frac{(Cistdi)}{(Aistdi)}\right]_i$
Sample ID:	ST60022 + ST60350		
Sample Analysis Date:	25 Jun 109 9:43 am		
Run Method:	1T15EXAY.M		
Quant Method:	1T15EXAY.M		
Cal Update:	Tue Mar 17 14:18:15 2009		
Template:	1TO15EXT.MS1		

Response Factors

Compound	RF1	RF2	RF3	RF4	RF5	RF6	AvgRFn	%RSD
Freon 114	0.737	0.654	0.632	0.657	0.605	0.614	0.650	7.29
Vinyl acetate	1.413	1.362	1.209	1.158	1.325	1.302	1.295	7.38
2-Butanone	0.190	0.183	0.178	0.122	0.175	0.173	0.170	14.31
Methyl Isobutyl Ketone	2.204	2.233	1.932	1.662	2.013	2.040	2.014	10.30
cis-1,3-Dichloropropene	0.804	0.726	0.717	0.683	0.704	0.645	0.713	7.44
trans-1,3-Dichloropropene	0.970	0.853	0.870	0.761	0.856	0.771	0.847	9.00
2-Hexanone	2.871	2.798	2.515	1.859	2.754	2.554	2.559	14.47
Dibromochloromethane	1.477	1.348	1.203	0.923	1.094	1.199	1.207	15.98
4-Ethyltoluene	5.840	3.661	3.415	2.542	3.015	3.432	3.651	31.30
Hexachlorobutadiene	NA	4.133	5.229	2.733	2.998	5.216	4.062	29.13
Pentafluorobenzene	1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.00
1,4-Difluorobenzene	1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.00
Toluene-d8	1.112	1.135	1.130	1.080	1.143	1.146	1.124	2.20

CALCULATIONS

EPA Method TO-15 Modified Full Scan GC/MS

SDG: LABQC
Laboratory Number: C06259

RL: 1T15EXAY.M (2) RL, Concentration of lowest Standandard in ICAL:
Run Method: 1T15EXAY.M
Quant Method: 1T15EXAY.M
Can Dilution Factor: 1.00
Air Volume: 500 ml MDL Factor 1
Gas Constant: 23.68
Decimal Places: 2

Compound	M.W.	Raw Amount	Result ppbv	Result ug/m3	(1) MDL ppbv	(2) RL ppbv	Calc MDL ppbv	Calc MDL ug/m3	Calc RL ppbv	Calc RL ug/m3	Flag	Spike ppmv
Freon 114	170.9	2.813	5.625	40.60	0.052	0.260	0.10	0.75	0.52	3.75		1
Vinyl acetate	86.1	2.939	5.879	21.37	0.043	0.215	0.09	0.31	0.43	1.56		1
2-Butanone	72.1	3.046	6.092	18.55	0.043	0.215	0.09	0.26	0.43	1.31		1
Methyl Isobutyl Ketone	100.2	3.977	7.953	33.65	0.046	0.230	0.09	0.39	0.46	1.95		1
cis-1,3-Dichloropropene	111.0	5.027	10.053	47.12	0.053	0.265	0.11	0.50	0.53	2.48		1
trans-1,3-Dichloropropene	111.0	4.727	9.454	44.31	0.052	0.260	0.10	0.49	0.52	2.44		1
2-Hexanone	100.2	3.326	6.653	28.15	0.044	0.220	0.09	0.37	0.44	1.86		1
Dibromochloromethane	208.3	4.008	8.017	70.52	0.045	0.223	0.09	0.78	0.45	3.92		1
4-Ethyltoluene	120.2	2.820	5.640	28.63	0.046	0.228	0.09	0.46	0.46	2.31		1
Hexachlorobutadiene	260.8	1.772	3.544	39.04	0.103	1.030	0.21	2.27	2.06	22.69		1

SAMPLE CALCULATION

EPA Method TO-15 Modified Full Scan GC/MS

SDG:		**LABQC**
Laboratory Number:		**C06259**
Standard Volume	STV	5.0
Sample Volume	SV	500
Can Dilution Factor	CDF	1.00
Gas Constant		23.68
Decimal Places:		2

Sample Calculation:

1) Avg RFn = Sum $\left| \frac{(Astdni)}{(Cstdni)} \frac{(Cistdi)}{(Aistdi)} \right|_i$ Note: 1

2) Raw Amt = $\frac{(Ansamp)}{(Avg\ RFn)} \frac{(Cistdi)}{(Aistdi)}$ = Cn

3) Amount ppbv = $\frac{(Raw\ Amt)\ 1000}{(SV)}$ (CDF)

4) Amount ug/m3 = $\frac{(amt(ppbv)\ MW}{23.68}$

n	Compound	IS n	Chem type	MW	AvgRFn	Area Ansamp	Cistdi ppmv	Aistdi Ais	Cn ppmV Raw Amt	Amount ppbv	Amount ug/m3
4	Freon 114	1	TRG	170.9	0.650	503194	20.000	5506717	2.813	5.63	40.63
25	Vinyl acetate	1	TRG	86.1	1.295	1047841	20.000	5506717	2.939	5.88	21.38
26	2-Butanone	1	TRG	72.1	0.170	142839	20.000	5506717	3.046	6.09	18.54
49	Methyl Isobutyl Ketone	35	TRG	100.2	2.014	1839400	20.000	4593315	3.977	7.95	33.64
50	cis-1,3-Dichloropropene	35	TRG	111.0	0.713	823507	20.000	4593315	5.027	10.05	47.11
52	trans-1,3-Dichloropropene	35	TRG	111.0	0.847	919371	20.000	4593315	4.727	9.45	44.30
54	2-Hexanone	35	TRG	100.2	2.559	1954611	20.000	4593315	3.326	6.65	28.14
57	Dibromochloromethane	35	TRG	208.3	1.207	1111417	20.000	4593315	4.008	8.02	70.55
72	4-Ethyltoluene	35	TRG	120.2	3.651	2364722	20.000	4593315	2.820	5.64	28.63
88	Hexachlorobutadiene	35	TRG	260.8	4.062	1653099	20.000	4593315	1.772	3.54	38.99
1	Pentafluorobenzene	1	IS		1.000	5506717	20.000	5506717			
35	1,4-Difluorobenzene	35	IS		1.000	4593315	20.000	4593315			
94	Toluene-d8	35	SURR		1.124	2627267	20.000	4593315			

Calculation Definitions:

n	compound n
i	i th calibration level
Astdni	Standard Area for compound n at ith calibration level
Cstdni	Standard Concentration for compound n at ith calibration level in ppmv
Cistdi	Internal Standard Conc used for compound n at ith calibration level in ppmv
Aistdi	Internal Standard Area used for compound n at ith calibration level
Ansamp	Sample Area for compound n
Avg RFn	Average response factor for all ith calibration levels for compound n
Raw Amount	Sample Concentration in ppmv before applying factors
Cistd	Concentration internal standard used for compound n in sample in ppmv
Aistd	Area of internal standard used for compound n in sample
Cn	Concentration of compound n in sample in ppmv
23.68	Gas constant at 60 F as per EPA source test protocol
MW	Molecular weight of compound
Note (1) : Avg RFn	The values for the Average Response Factor AvgRFn can be optained from the response Factor Report for the Initial Calibration, or from the Calibration Report

CONTINUING CALIBRATION REPORT

SDG:	**LABQC**	
QC_Batch:	**062509-MS1**	
Sample ID:	ST60022 + ST60350	
Sample Analysis Date:	25 Jun 109 9:43 am	
Run Method:	1T15EXAY.M	
Quant/Calibration Method:	1T15EXAY.M	
Cal Update:	Tue Mar 17 14:18:15 2009	
Template:	1TO15EXT.MS1	
Calibration Level	Level 4	5.0

Sample Calculation:

1) RFi = $\left| \frac{(Astdi)\ (Cistdi)}{(Cstdi)\ (Aistdi)} \right|$

Compound	Area Astdi	Cal Level Cstdi ppbv	CCRRF	AvgRFn	%Dev	%Dev Limit	%Dev Flag
2-propanol	510641	4.550	0.408	0.668	39.0	40	IN
Pentafluorobenzene	5506717	20.000	1.000	1.000	0.0	30	IN
1,4-Difluorobenzene	4593315	20.000	1.000	1.000	0.0	30	IN
Toluene-d8	2627267	10.000	1.144	1.124	-1.7	30	IN

QUANTITATION REPORT

EPA Method TO-15 Modified Full Scan GC/MS

			Review	EAS Sample ID: C06259B	
File Name:	C06259B.D				1 KB
Sample ID:	ST60022 + ST60350				2 AT
Date:	25 Jun 109 9:43 am			Cal Amounts	3 BB
Run Method:	1T15EXAY.M			IS Areas	4 SH
Quant Method:	1T15EXAY.M			Carryover	
Cal Update:	Tue Mar 17 14:18:15 2009				
Template:	1TO15EXT.MS1				
Can Factor:	1.00				
Volume:	500	ml		Analyst: KB 1	

CAS#	Compound	n	Raw Amount	RT	Target RT	Ion	Sample Area	Qualifier	Lower Qual	Upper Qual	Qual Flag	Cal Flag	Int Flag
67-63-0	2-propanol	13	2.778	6.16	6.14	45.00	510641	0	18	27	Q		
363-72-4	Pentafluorobenzene	1	20.000	11.40	11.38	168.00	5506717						
540-36-3	1,4-Difluorobenzene	35	20.000	13.18	13.17	114.00	4593315						
2037-26-5	Toluene-d8	94	10.174	16.94	16.94	98.00	2627267	62	51	77			

Integration Flags:

If no flag the Integration was done by the instrument computer

M1 Manual Integration because the computer did not integrated the peak or integrated the wrong peak

M2 Manual Integration because computer integration of baseline was different then Inital Calibration

INITIAL CALIBRATION REPORT

EPA Method TO-15 Modified Full Scan GC/MS

File Name:	C06259B.D	SDG:	LABQC
Sample ID:	ST60022 + ST60350	QC_Batch:	062509-MS1
Sample Analysis Date:	25 Jun 109 9:43 am	Instrument Name:	5970 - In
Run Method:	1T15EXAY.M		
Quant and Calibration Method:	1T15EXAY.M	Calibration Title:	EPA T0-15
Cal Update:	Tue Mar 17 14:18:15 2009		
Template:	1TO15EXT.MS1		

Number Compounds:		96
IS1:	ST60403	20
IS2:	ST60403	20
IS3:		
IS4:		

		Calibration Amount CA, ppmv						Calibration Response, Area					
		Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
		Amt	Amt	Amt	Amt	Amt	Amt	C03179C.D	C03179E.D	C03179B.D	C03179A.D	C03169H.D	C03179D.D
n	Compound	0.25	4.0	1.0	5.0	10.0	2.0	0.25	4.0	1.0	5.0	10.0	2.0
13	2-propanol	0.228	3.640	0.910	4.550	9.100	1.820	19578	321532	75563	289890	1427833	154437
1	Pentafluorobenzene	20.000	20.000	20.000	20.000	20.000	20.000	2643183	2935915	2871816	2719013	2737194	3022845
35	1,4-Difluorobenzene	20.000	20.000	20.000	20.000	20.000	20.000	2659938	2870629	2814997	2720455	2706138	3020264
94	Toluene-d8	10.000	10.000	10.000	10.000	10.000	10.000	1479389	1629143	1590486	1469067	1546296	1730275

(149)

INITIAL CALIBRATION REPORT: Response Factors

SDG:	**LABQC**	**Sample Calculation:**	
QC_Batch:	**062509-MS1**	1) Avg RFn = Sum	$\left[\frac{(Astdni)}{(Cstdni)} \cdot \frac{(Cistdi)}{(Aistdi)}\right]_i$
Sample ID:	ST60022 + ST60350		
Sample Analysis Date:	25 Jun 109 9:43 am		
Run Method:	1T15EXAY.M		
Quant Method:	1T15EXAY.M		
Cal Update:	Tue Mar 17 14:18:15 2009		
Template:	1TO15EXT.MS1		

Response Factors

Compound	RF1	RF2	RF3	RF4	RF5	RF6	AvgRFn	%RSD
2-propanol	0.650	0.602	0.578	0.469	1.146	0.561	0.668	36.24
Pentafluorobenzene	1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.00
1,4-Difluorobenzene	1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.00
Toluene-d8	1.112	1.135	1.130	1.080	1.143	1.146	1.124	2.20

CALCULATIONS

EPA Method TO-15 Modified Full Scan GC/MS

SDG: LABQC
Laboratory Number: C06259

RL: 1T15EXAY.M (2) RL, Concentration of lowest Standandard in ICAL:
Run Method: 1T15EXAY.M
Quant Method: 1T15EXAY.M
Can Dilution Factor: 1.00
Air Volume: 500 ml MDL Factor 1
Gas Constant: 23.68
Decimal Places: 2

Compound	M.W.	Raw Amount	Result ppbv	Result ug/m3	(1) MDL ppbv	(2) RL ppbv	Calc MDL ppbv	Calc MDL ug/m3	Calc RL ppbv	Calc RL ug/m3	Flag	Spike ppmv
2-propanol	60.1	2.778	5.555	14.10	0.046	0.228	0.09	0.23	0.46	1.16		0.103

SAMPLE CALCULATION

EPA Method TO-15 Modified Full Scan GC/MS

SDG:		**LABQC**
Laboratory Number:		**C06259**
Standard Volume	STV	5.0
Sample Volume	SV	500
Can Dilution Factor	CDF	1.00
Gas Constant		23.68
Decimal Places:		2

Sample Calculation:

1) Avg RFn = Sum $\left| \frac{(Astdni)}{(Cstdni)} \frac{(Cistdi)}{(Aistdi)} \right|$ Note: 1

2) Raw Amt = $\frac{(Ansamp)}{(Avg\ RFn)} \frac{(Cistdi)}{(Aistdi)}$ = Cn

3) Amount ppbv = $\frac{(Raw\ Amt)\ 1000}{(SV)}$ (CDF)

4) Amount ug/m3 = $\frac{(amt(ppbv)\ MW}{23.68}$

n	Compound	IS n	Chem type	MW	AvgRFn	Area Ansamp	Cistdi ppmv	Aistdi Ais	Cn ppmV Raw Amt	Amount ppbv	Amount ug/m3
13	2-propanol	1	TRG	60.1	0.668	510641	20.000	5506717	2.778	5.56	14.11
1	Pentafluorobenzene	1	IS		1.000	5506717	20.000	5506717			
35	1,4-Difluorobenzene	35	IS		1.000	4593315	20.000	4593315			
94	Toluene-d8	35	SURR		1.124	2627267	20.000	4593315			

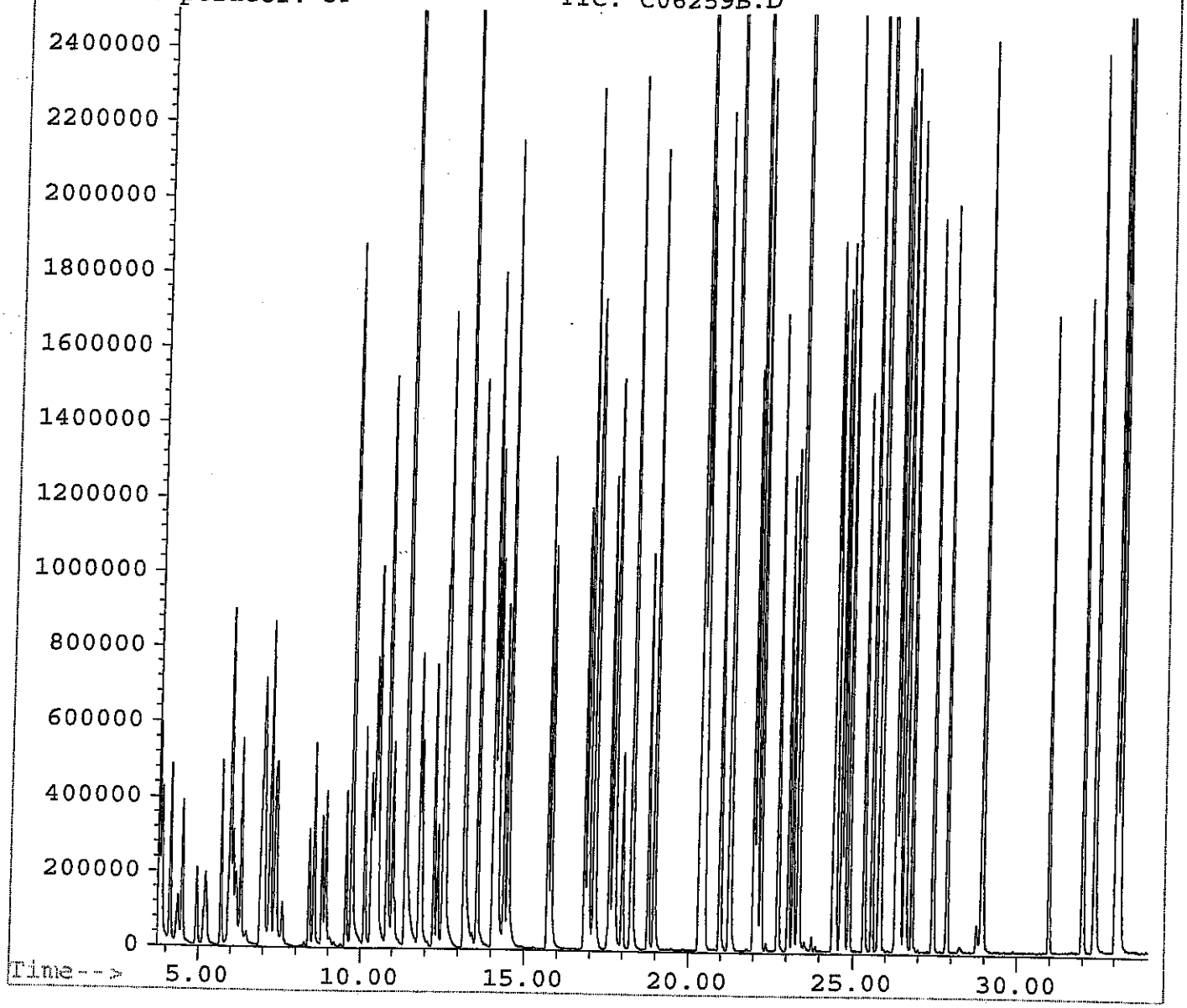
Calculation Definitions:

n	compound n
i	i th calibration level
Astdni	Standard Area for compound n at ith calibration level
Cstdni	Standard Concentration for compound n at ith calibration level in ppmv
Cistdi	Internal Standard Conc used for compound n at ith calibration level in ppmv
Aistdi	Internal Standard Area used for compound n at ith calibration level
Ansamp	Sample Area for compound n
Avg RFn	Average response factor for all ith calibration levels for compound n
Raw Amount	Sample Concentration in ppmv before applying factors
Cistd	Concentration internal standard used for compound n in sample in ppmv
Aistd	Area of internal standard used for compound n in sample
Cn	Concentration of compound n in sample in ppmv
23.68	Gas constant at 60 F as per EPA source test protocol
MW	Molecular weight of compound
Note (1) : Avg RFn	The values for the Average Response Factor AvgRFn can be optained from the response Factor Report for the Initial Calibration, or from the Calibration Report

Name of file: C:\MSCHEM\1\DATA\06259MS1\C06259B.D

Name of operator: JF

TIC: C06259B.D



METHOD BLANK REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified Full Scan GC/MS | **SDG:** LABQC
Analytical Method: TO-15 | **Laboratory Number:** B06259

File:	CC525A.D	**Date Sampled:**		**Time:**	
Description:	METHOD BLANK	**Date Received:**			
Can/Tube#:		**Date Extracted:**			
Sam_Type:	MB	**Date Analyzed:**	06/25/09	**Time:**	12:54
QC_Batch:	062509-MS1	**Can Dilution Factor:**	1.00		2
Air Volume:	500 ml	**Not Detected Flag:**	ND		

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
76-14-2	Freon 114	0.10	0.52	ND	0.75	3.75	ND	ND
108-05-4	Vinyl acetate	0.09	0.43	ND	0.31	1.56	ND	ND
78-93-3	2-Butanone	0.09	0.43	ND	0.26	1.31	ND	ND
108-10-1	Methyl Isobutyl Ketone	0.09	0.46	ND	0.39	1.95	ND	ND
10061-01-5	cis-1,3-Dichloropropene	0.11	0.53	ND	0.50	2.48	ND	ND
10061-02-6	trans-1,3-Dichloropropene	0.10	0.52	ND	0.49	2.44	ND	ND
591-78-6	2-Hexanone	0.09	0.44	ND	0.37	1.86	ND	ND
124-48-1	Dibromochloromethane	0.09	0.45	ND	0.78	3.92	ND	ND
622-96-8	4-Ethyltoluene	0.09	0.46	ND	0.46	2.31	ND	ND
87-68-3	Hexachlorobutadiene	0.21	2.06	ND	2.27	22.69	ND	ND

	Surrogate Recovery	Spike Amt. ppbV	Amount ppbV	% Rec.	QC Limits	Flag * = Out
2037-26-5	Toluene-d8	10.000	9.697	97	70-130	

Notes: 1) Reported results are to be interpreted to two significant figures.
2) ug/m3 = ppbV*FW/23.68 calculated assuming conditions at 60 F and 1 atm.
3) MDL and RL are adjusted for sample volume and can dilution.
4) U and ND are Flags used for Not Detected
5) J is a flag for a result between the MDL and the RL (or lower quantitation limit, LQL)

QUANTITATION REPORT

EPA Method TO-15 Modified Full Scan GC/MS

			Review	EAS Sample ID: CC525A.	
File Name:	CC525A.D				1 KB
Sample ID:	METHOD BLANK				2 AT
Date:	25 Jun 109 12:54 pm			Cal Amounts	3 BB
Run Method:	1T15EXAY.M			IS Areas	4 SH
Quant Method:	1T15EXAY.M			Carryover	
Cal Update:	Tue Mar 17 14:18:15 2009				
Template:	1TO15EXT.MS1				
Can Factor:	1.00				
Volume:	500	ml		Analyst: KB 1	

CAS#	Compound	n	Raw Amount	RT	Target RT	Ion	Sample Area	Qualifier	Lower Qual	Upper Qual	Qual Flag	Cal Flag	Int Flag
76-14-2	Freon 114	4	0.002	4.13	4.11	85.00	331	0	44	65			
108-05-4	Vinyl acetate	25	0.001	10.31	10.32	43.00	383	0	0	0			
78-93-3	2-Butanone	26	0.016	9.55	9.54	72.00	788	0	30	45			
108-10-1	Methyl Isobutyl Ketone	49	0.001	15.69	15.70	43.00	605	0	21	35			
10061-01-5	cis-1,3-Dichloropropene	50	0.000	0.00	15.82	75.00	0	0	15	23			
10061-02-6	trans-1,3-Dichloropropene	52	0.002	16.85	16.85	75.00	382	0	16	23			
591-78-6	2-Hexanone	54	0.018	17.77	17.80	43.00	11985	31	28	47			
124-48-1	Dibromochloromethane	57	0.000	0.00	18.30	129.00	0	0	60	91			
622-96-8	4-Ethyltoluene	72	0.033	24.68	24.74	105.00	31755	0	20	31	Q		
87-68-3	Hexachlorobutadiene	88	0.028	33.04	33.08	225.00	29706	32	22	33			
363-72-4	Pentafluorobenzene	1	20.000	11.38	11.38	168.00	5855494						
540-36-3	1,4-Difluorobenzene	35	20.000	13.17	13.17	114.00	5246984						
2037-26-5	Toluene-d8	94	9.697	16.92	16.94	98.00	2860376	62	51	77			

Integration Flags:

If no flag the integration was done by the instrument computer

M1 Manual Integration because the computer did not integrated the peak or integrated the wrong peak

M2 Manual Integration because computer integration of baseline was different then Inital Calibration

INITIAL CALIBRATION REPORT

EPA Method TO-15 Modified Full Scan GC/MS

SDG: LABQC
QC_Batch: 062509-MS1
Instrument Name: 5970 - In

File Name: CC525A.D
Sample ID: METHOD BLANK
Sample Analysis Date: 25 Jun 109 12:54 pm
Run Method: 1T15EXAY.M
Quant and Calibration Method: 1T15EXAY.M
Cal Update: Tue Mar 17 14:18:15 2009
Template: 1TO15EXT.MS1

Calibration Title: EPA T0-15

Number Compounds: 96
IS1: ST60403 20
IS2: ST60403 20
IS3:
IS4:

		Calibration Amount CA, ppmv						Calibration Response, Area					
		Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
		Amt	Amt	Amt	Amt	Amt	Amt	C03179C.D	C03179E.D	C03179B.D	C03179A.D	C03169H.D	C03179D.D
n	Compound	0.25	4.0	1.0	5.0	10.0	2.0	0.25	4.0	1.0	5.0	10.0	2.0
4	Freon 114	0.260	4.160	1.040	5.200	10.400	2.080	25317	399238	94441	464176	861160	193013
25	Vinyl acetate	0.215	3.440	0.860	4.300	8.600	1.720	40148	687529	149287	676740	1560060	338492
26	2-Butanone	0.215	3.440	0.860	4.300	8.600	1.720	5400	92652	22013	71425	205517	45058
49	Methyl Isobutyl Ketone	0.230	3.680	0.920	4.600	9.200	1.840	67434	1179200	250239	1039898	2505790	566705
50	cis-1,3-Dichloropropene	0.265	4.240	1.060	5.300	10.600	2.120	28339	441906	107039	492454	1010236	206495
52	trans-1,3-Dichloropropene	0.260	4.160	1.040	5.200	10.400	2.080	33546	509168	127376	538174	1205186	242137
54	2-Hexanone	0.220	3.520	0.880	4.400	8.800	1.760	84018	1413472	311524	1112452	3278869	678898
57	Dibromochloromethane	0.223	3.560	0.890	4.450	8.900	1.780	43801	688881	150691	558917	1316838	322250
72	4-Ethyltoluene	0.228	3.640	0.910	4.550	9.100	1.820	177076	1912961	437379	1573293	3712735	943267
88	Hexachlorobutadiene	-1.000	4.120	1.030	5.150	10.300	2.060	-1	2443776	758051	1914490	4177636	1622637
1	Pentafluorobenzene	20.000	20.000	20.000	20.000	20.000	20.000	2643183	2935915	2871816	2719013	2737194	3022845
35	1,4-Difluorobenzene	20.000	20.000	20.000	20.000	20.000	20.000	2659938	2870629	2814997	2720455	2706138	3020264
94	Toluene-d8	10.000	10.000	10.000	10.000	10.000	10.000	1479389	1629143	1590486	1469067	1546296	1730275

(156)

INITIAL CALIBRATION REPORT: Response Factors

SDG:	**LABQC**
QC_Batch:	**062509-MS1**
Sample ID:	METHOD BLANK
Sample Analysis Date:	25 Jun 109 12:54 pm
Run Method:	1T15EXAY.M
Quant Method:	1T15EXAY.M
Cal Update:	Tue Mar 17 14:18:15 2009
Template:	1TO15EXT.MS1

Sample Calculation:

1) Avg RFn = Sum $\left| \frac{(Astdni)}{(Cstdni)} \frac{(Cistdi)}{(Aistdi)} \right|_i$

Response Factors

Compound	RF1	RF2	RF3	RF4	RF5	RF6	AvgRFn	%RSD
Freon 114	0.737	0.654	0.632	0.657	0.605	0.614	0.650	7.29
Vinyl acetate	1.413	1.362	1.209	1.158	1.325	1.302	1.295	7.38
2-Butanone	0.190	0.183	0.178	0.122	0.175	0.173	0.170	14.31
Methyl Isobutyl Ketone	2.204	2.233	1.932	1.662	2.013	2.040	2.014	10.30
cis-1,3-Dichloropropene	0.804	0.726	0.717	0.683	0.704	0.645	0.713	7.44
trans-1,3-Dichloropropene	0.970	0.853	0.870	0.761	0.856	0.771	0.847	9.00
2-Hexanone	2.871	2.798	2.515	1.859	2.754	2.554	2.559	14.47
Dibromochloromethane	1.477	1.348	1.203	0.923	1.094	1.199	1.207	15.98
4-Ethyltoluene	5.840	3.661	3.415	2.542	3.015	3.432	3.651	31.30
Hexachlorobutadiene	NA	4.133	5.229	2.733	2.998	5.216	4.062	29.13
Pentafluorobenzene	1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.00
1,4-Difluorobenzene	1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.00
Toluene-d8	1.112	1.135	1.130	1.080	1.143	1.146	1.124	2.20

CALCULATIONS

EPA Method TO-15 Modified Full Scan GC/MS

SDG: LABQC
Laboratory Number: B06259

RL: 1T15EXAY.M (2) RL, Concentration of lowest Standandard in ICAL:
Run Method: 1T15EXAY.M
Quant Method: 1T15EXAY.M
Can Dilution Factor: 1.00
Air Volume: 500 ml MDL Factor 1
Gas Constant: 23.68
Decimal Places: 2

Compound	M.W.	Raw Amount	Result ppbv	Result ug/m3	(1) MDL ppbv	(2) RL ppbv	Calc MDL ppbv	Calc MDL ug/m3	Calc RL ppbv	Calc RL ug/m3	Flag	Spike ppmv
Freon 114	170.9	0.002	0.003	0.03	0.052	0.260	0.10	0.75	0.52	3.75	U	1
Vinyl acetate	86.1	0.001	0.002	0.01	0.043	0.215	0.09	0.31	0.43	1.56	U	1
2-Butanone	72.1	0.016	0.032	0.10	0.043	0.215	0.09	0.26	0.43	1.31	U	1
Methyl Isobutyl Ketone	100.2	0.001	0.002	0.01	0.046	0.230	0.09	0.39	0.46	1.95	U	1
cis-1,3-Dichloropropene	111.0	0.000	0.000	0.00	0.053	0.265	0.11	0.50	0.53	2.48	U	1
trans-1,3-Dichloropropene	111.0	0.002	0.003	0.02	0.052	0.260	0.10	0.49	0.52	2.44	U	1
2-Hexanone	100.2	0.018	0.036	0.15	0.044	0.220	0.09	0.37	0.44	1.86	U	1
Dibromochloromethane	208.3	0.000	0.000	0.00	0.045	0.223	0.09	0.78	0.45	3.92	U	1
4-Ethyltoluene	120.2	0.033	0.066	0.34	0.046	0.228	0.09	0.46	0.46	2.31	U	1
Hexachlorobutadiene	260.8	0.028	0.056	0.61	0.103	1.030	0.21	2.27	2.06	22.69	U	1

SAMPLE CALCULATION

EPA Method TO-15 Modified Full Scan GC/MS

SDG:		**LABQC**
Laboratory Number:		**B06259**
Standard Volume	STV	5.0
Sample Volume	SV	500
Can Dilution Factor	CDF	1.00
Gas Constant		23.68
Decimal Places:		2

Sample Calculation:

1) Avg RFn = Sum $\left| \frac{(Astdni)}{(Cstdni)} \frac{(Cistdi)}{(Aistdi)} \right|_i$ Note: 1

2) Raw Amt = $\frac{(Ansamp)}{(Avg\ RFn)} \frac{(Cistdi)}{(Aistdi)}$ = Cn

3) Amount ppbv = $\frac{(Raw\ Amt)\ 1000}{(SV)}$ (CDF)

4) Amount ug/m3 = $\frac{(amt(ppbv)\ MW}{23.68}$

n	Compound	IS n	Chem type	MW	AvgRFn	Area Ansamp	Cistdi ppmv	Aistdi Ais	Cn ppmV Raw Amt	Amount ppbv	Amount ug/m3
4	Freon 114	1	TRG	170.9	0.650	331	20.000	5855494	0.002	0.00	0.00
25	Vinyl acetate	1	TRG	86.1	1.295	383	20.000	5855494	0.001	0.00	0.00
26	2-Butanone	1	TRG	72.1	0.170	788	20.000	5855494	0.016	0.03	0.09
49	Methyl Isobutyl Ketone	35	TRG	100.2	2.014	605	20.000	5246984	0.001	0.00	0.00
50	cis-1,3-Dichloropropene	35	TRG	111.0	0.713	0	20.000	5246984	0.000	0.00	0.00
52	trans-1,3-Dichloropropene	35	TRG	111.0	0.847	382	20.000	5246984	0.002	0.00	0.00
54	2-Hexanone	35	TRG	100.2	2.559	11985	20.000	5246984	0.018	0.04	0.17
57	Dibromochloromethane	35	TRG	208.3	1.207	0	20.000	5246984	0.000	0.00	0.00
72	4-Ethyltoluene	35	TRG	120.2	3.651	31755	20.000	5246984	0.033	0.07	0.36
88	Hexachlorobutadiene	35	TRG	260.8	4.062	29706	20.000	5246984	0.028	0.06	0.66
1	Pentafluorobenzene	1	IS		1.000	5855494	20.000	5855494			
35	1,4-Difluorobenzene	35	IS		1.000	5246984	20.000	5246984			
94	Toluene-d8	35	SURR		1.124	2860376	20.000	5246984			

Calculation Definitions:

n	compound n
i	i th calibration level
Astdni	Standard Area for compound n at ith calibration level
Cstdni	Standard Concentration for compound n at ith calibration level in ppmv
Cistdi	Internal Standard Conc used for compound n at ith calibration level in ppmv
Aistdi	Internal Standard Area used for compound n at ith calibration level
Ansamp	Sample Area for compound n
Avg RFn	Average response factor for all ith calibration levels for compound n
Raw Amount	Sample Concentration in ppmv before applying factors
Cistd	Concentration internal standard used for compound n in sample in ppmv
Aistd	Area of internal standard used for compound n in sample
Cn	Concentration of compound n in sample in ppmv
23.68	Gas constant at 60 F as per EPA source test protocol
MW	Molecular weight of compound
Note (1): Avg RFn	The values for the Average Response Factor AvgRFn can be optained from the response Factor Report for the Initial Calibration, or from the Calibration Report

METHOD BLANK REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified Full Scan GC/MS | **SDG:** LABQC
Analytical Method: TO-15 | **Laboratory Number:** B06259

File:	CC525A.D	**Date Sampled:**		**Time:**	
Description:	METHOD BLANK	**Date Received:**			
Can/Tube#:		**Date Extracted:**			
Sam_Type:	MB	**Date Analyzed:**	06/25/09	**Time:**	12:54
QC_Batch:	062509-MS1	**Can Dilution Factor:**	1.00		2
Air Volume:	500 ml	**Not Detected Flag:**	ND		

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
67-63-0	2-propanol	0.09	0.46	ND	0.23	1.16	ND	ND

	Surrogate Recovery	Spike Amt. ppbV	Amount ppbV	% Rec.	QC Limits	Flag * = Out
2037-26-5	Toluene-d8	10.000	9.697	97	70-130	

Notes: 1) Reported results are to be interpreted to two significant figures.
2) ug/m3 = ppbV*FW/23.68 calculated assuming conditions at 60 F and 1 atm.
3) MDL and RL are adjusted for sample volume and can dilution.
4) U and ND are Flags used for Not Detected
5) J is a flag for a result between the MDL and the RL (or lower quantitation limit, LQL)

QUANTITATION REPORT

EPA Method TO-15 Modified Full Scan GC/MS

			Review	EAS Sample ID: CC525A.	
File Name:	CC525A.D				1 KB
Sample ID:	METHOD BLANK				2 AT
Date:	25 Jun 109 12:54 pm			Cal Amounts	3 BB
Run Method:	1T15EXAY.M			IS Areas	4 SH
Quant Method:	1T15EXAY.M			Carryover	
Cal Update:	Tue Mar 17 14:18:15 2009				
Template:	1TO15EXT.MS1				
Can Factor:	1.00				
Volume:	500	ml		Analyst: KB 1	

CAS#	Compound	n	Raw Amount	RT	Target RT	Ion	Sample Area	Qualifier	Lower Qual	Upper Qual	Qual Flag	Cal Flag	Int Flag
67-63-0	2-propanol	13	0.023	6.16	6.14	45.00	4440	0	18	27	Q		
363-72-4	Pentafluorobenzene	1	20.000	11.38	11.38	168.00	**5855494**						
540-36-3	1,4-Difluorobenzene	35	20.000	13.17	13.17	114.00	**5246984**						
2037-26-5	Toluene-d8	94	**9.697**	16.92	16.94	98.00	2860376	62	51	77			

Integration Flags:

If no flag the Integration was done by the instrument computer

M1 Manual Integration because the computer did not integrated the peak or integrated the wrong peak

M2 Manual Integration because computer integration of baseline was different then Inital Calibration

INITIAL CALIBRATION REPORT

EPA Method TO-15 Modified Full Scan GC/MS

File Name:	CC525A.D	SDG:	LABQC
Sample ID:	METHOD BLANK	QC_Batch:	062509-MS1
Sample Analysis Date:	25 Jun 109 12:54 pm	Instrument Name:	5970 - In
Run Method:	1T15EXAY.M		
Quant and Calibration Method:	1T15EXAY.M		
Cal Update:	Tue Mar 17 14:18:15 2009		
Template:	1TO15EXT.MS1		

Calibration Title: EPA T0-15

Number Compounds:		96
IS1:	ST60403	20
IS2:	ST60403	20
IS3:		
IS4:		

		Calibration Amount CA, ppmv						Calibration Response, Area					
		Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
		Amt	Amt	Amt	Amt	Amt	Amt	C03179C.D	C03179E.D	C03179B.D	C03179A.D	C03169H.D	C03179D.D
n	Compound	0.25	4.0	1.0	5.0	10.0	2.0	0.25	4.0	1.0	5.0	10.0	2.0
13	2-propanol	0.228	3.640	0.910	4.550	9.100	1.820	19578	321532	75563	289890	1427833	154437
1	Pentafluorobenzene	20.000	20.000	20.000	20.000	20.000	20.000	2643183	2935915	2871816	2719013	2737194	3022845
35	1,4-Difluorobenzene	20.000	20.000	20.000	20.000	20.000	20.000	2659938	2870629	2814997	2720455	2706138	3020264
94	Toluene-d8	10.000	10.000	10.000	10.000	10.000	10.000	1479389	1629143	1590486	1469067	1546296	1730275

(162)

INITIAL CALIBRATION REPORT: Response Factors

SDG:	**LABQC**	**Sample Calculation:**	
QC_Batch:	**062509-MS1**	1) Avg RFn = Sum	$\left[\frac{(Astdni)}{(Cstdni)} \cdot \frac{(Cistdi)}{(Aistdi)}\right]_i$
Sample ID:	METHOD BLANK		
Sample Analysis Date:	25 Jun 109 12:54 pm		
Run Method:	1T15EXAY.M		
Quant Method:	1T15EXAY.M		
Cal Update:	Tue Mar 17 14:18:15 2009		
Template:	1TO15EXT.MS1		

Response Factors

Compound	RF1	RF2	RF3	RF4	RF5	RF6	AvgRFn	%RSD
2-propanol	0.650	0.602	0.578	0.469	1.146	0.561	0.668	36.24
Pentafluorobenzene	1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.00
1,4-Difluorobenzene	1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.00
Toluene-d8	1.112	1.135	1.130	1.080	1.143	1.146	1.124	2.20

CALCULATIONS

EPA Method TO-15 Modified Full Scan GC/MS

SDG: LABQC
Laboratory Number: B06259

RL: 1T15EXAY.M (2) RL, Concentration of lowest Standandard in ICAL:
Run Method: 1T15EXAY.M
Quant Method: 1T15EXAY.M
Can Dilution Factor: 1.00
Air Volume: 500 ml MDL Factor 1
Gas Constant: 23.68
Decimal Places: 2

Compound	M.W.	Raw Amount	Result ppbv	Result ug/m3	(1) MDL ppbv	(2) RL ppbv	Calc MDL ppbv	Calc MDL ug/m3	Calc RL ppbv	Calc RL ug/m3	Flag	Spike ppmv
2-propanol	60.1	0.023	0.045	0.12	0.046	0.228	0.09	0.23	0.46	1.16	U	0.103

SAMPLE CALCULATION

EPA Method TO-15 Modified Full Scan GC/MS

SDG:		**LABQC**
Laboratory Number:		**B06259**
Standard Volume	STV	5.0
Sample Volume	SV	500
Can Dilution Factor	CDF	1.00
Gas Constant		23.68
Decimal Places:		2

Sample Calculation:

1) Avg RFn = Sum $\left| \frac{(Astdni)}{(Cstdni)} \frac{(Cistdi)}{(Aistdi)} \right|_i$ Note: 1

2) Raw Amt = $\frac{(Ansamp)}{(Avg\ RFn)} \frac{(Cistdi)}{(Aistdi)}$ = Cn

3) Amount ppbv = $\frac{(Raw\ Amt)\ 1000}{(SV)}$ (CDF)

4) Amount ug/m3 = $\frac{(amt(ppbv)\ MW}{23.68}$

n	Compound	IS n	Chem type	MW	AvgRFn	Area Ansamp	Cistdi ppmv	Aistdi Ais	Cn ppmV Raw Amt	Amount ppbv	Amount ug/m3
13	2-propanol	1	TRG	60.1	0.668	4440	20.000	5855494	0.023	0.05	0.13
1	Pentafluorobenzene	1	IS		1.000	5855494	20.000	5855494			
35	1,4-Difluorobenzene	35	IS		1.000	5246984	20.000	5246984			
94	Toluene-d8	35	SURR		1.124	2860376	20.000	5246984			

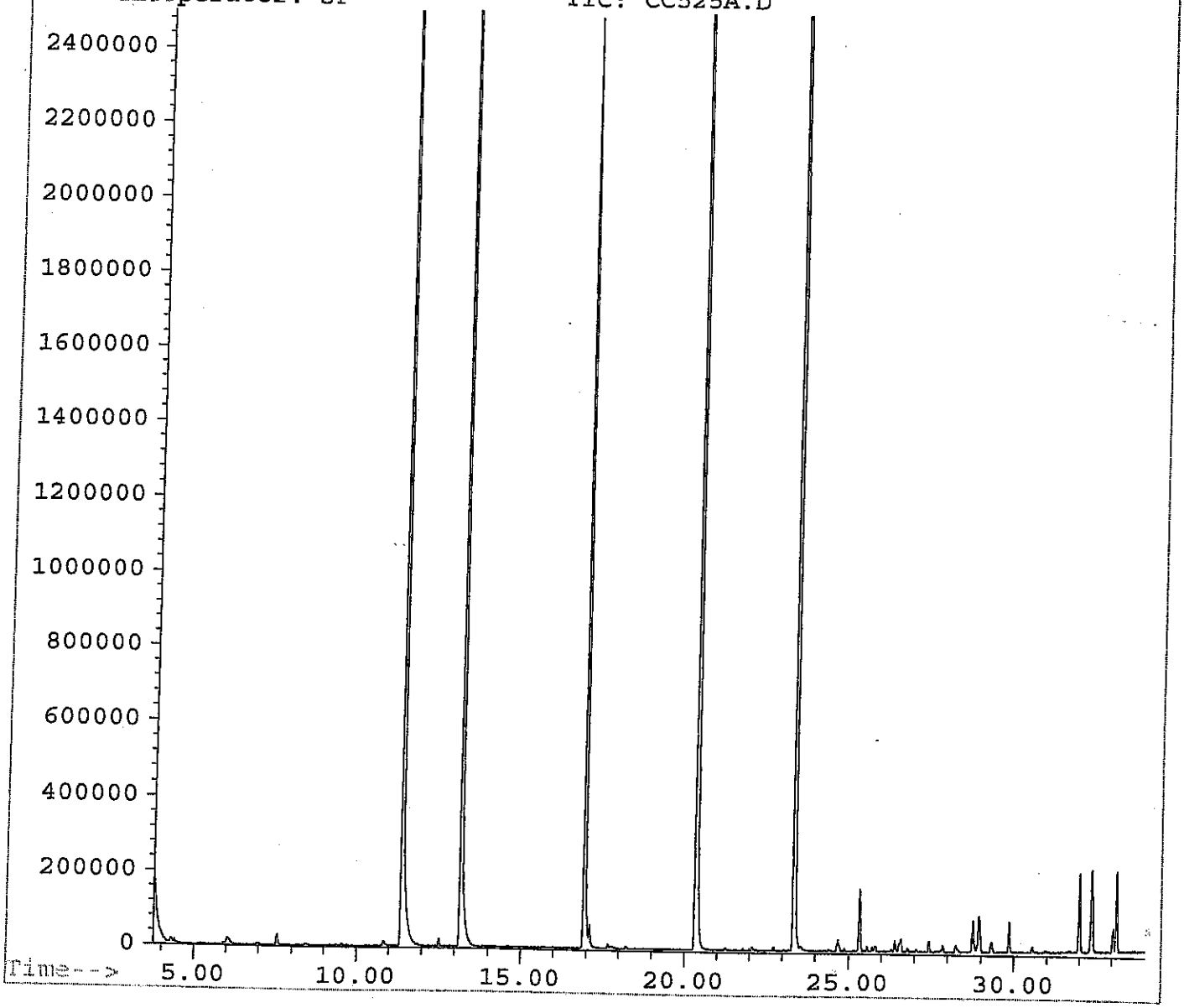
Calculation Definitions:

n	compound n
i	i th calibration level
Astdni	Standard Area for compound n at ith calibration level
Cstdni	Standard Concentration for compound n at ith calibration level in ppmv
Cistdi	Internal Standard Conc used for compound n at ith calibration level in ppmv
Aistdi	Internal Standard Area used for compound n at ith calibration level
Ansamp	Sample Area for compound n
Avg RFn	Average response factor for all ith calibration levels for compound n
Raw Amount	Sample Concentration in ppmv before applying factors
Cistd	Concentration internal standard used for compound n in sample in ppmv
Aistd	Area of internal standard used for compound n in sample
Cn	Concentration of compound n in sample in ppmv
23.68	Gas constant at 60 F as per EPA source test protocol
MW	Molecular weight of compound
Note (1): Avg RFn	The values for the Average Response Factor AvgRFn can be optained from the response Factor Report for the Initial Calibration, or from the Calibration Report

Name of file: C:\MSCHEM\1\DATA\06259MS1\CC525A.D

Name of operator: JF

TIC: CC525A.D



FORM II

QUALITY CONTROL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

LABORATORY CONTROL SPIKE

EPA Method TO-15 Modified Full Scan GC/MS **SDG: LABQC**
Analytical Method: TO-15

File: QC06259A.D
Description: ST60421
Can/Tube#:
Sam_Type: LCS
QC_Batch: 062509-MS1
Air Volume: 1000 ml

Date Sampled: NA
Date Received: NA
Date Extracted: NA
Date Analyzed: 06/25/09 **Time:** 10:38
Can Dilution Factor: 1.00 2
QC Duplicate: No

CAS#	Compound	MDL ppbv	Spike Conc ppbv	Amount ppbv	Matrix Amt ppbv	Spk Amt ppbv	Percent Recovery	LCL %	UCL %	Flag
75-01-4	Vinyl chloride	0.10	1.04	0.78	0.000	0.78	75	70	130	
75-35-4	1,1-Dichloroethene	0.10	1.04	0.90	0.000	0.90	87	70	130	
75-09-2	Dichloromethane	0.10	1.04	0.86	0.000	0.86	83	70	130	
75-34-3	1,1-Dichloroethane	0.10	1.01	0.82	0.000	0.82	81	70	130	
67-66-3	Chloroform	0.10	1.02	0.77	0.000	0.77	75	70	130	
71-55-6	1,1,1-Trichloroethane	0.10	1.02	0.93	0.000	0.93	91	70	130	
107-06-2	1,2-Dichloroethane	0.10	1.03	1.03	0.000	1.03	100	70	130	
71-43-2	Benzene	0.10	1.03	0.99	0.000	0.99	96	70	130	
56-23-5	Carbon tetrachloride	0.10	1.02	1.06	0.000	1.06	104	70	130	
79-01-6	Trichloroethene	0.10	1.03	1.04	0.000	1.04	101	70	130	
108-88-3	Toluene	0.10	1.03	1.11	0.000	1.11	108	70	130	
106-93-4	1,2-Dibromoethane	0.10	1.04	1.04	0.000	1.04	100	70	130	
127-18-4	Tetrachloroethene	0.10	1.02	1.14	0.000	1.14	112	70	130	
108-90-7	Chlorobenzene	0.10	1.02	1.02	0.000	1.02	100	70	130	
100-41-4	Ethylbenzene	0.10	1.04	0.97	0.000	0.97	93	70	130	
108-38-3	m & p-Xylene	0.21	2.06	1.92	0.000	1.92	93	70	130	
95-47-6	o-Xylene	0.10	1.02	0.89	0.000	0.89	87	70	130	

	Surrogate Recovery	Spike Amt. ppbV	Amount ppbV	% Rec.	QC Limits	Flag * = Out
2037-26-5	Toluene-d8	10.000	10.394	104	70-130	

Notes: Reported results are to be interpreted to two significant figures.
ug/m3 calculated assuming conditions at 60 F and 1 atm.

QUANTITATION REPORT

EPA Method TO-15 Modified Full Scan GC/MS

			Review	EAS Sample ID: QC06259	
File Name:	QC06259A.D				1 KB
Sample ID:	ST60421				2 AT
Date:	25 Jun 109 10:38 am			Cal Amounts	3 BB
Run Method:	1T15EXAY.M			IS Areas	4 SH
Quant Method:	1T15EXAY.M			Carryover	
Cal Update:	Tue Mar 17 14:18:15 2009				
Template:	1TO15SP.MS1				
Can Factor:	1.00				
Volume:	1000	ml		Analyst: KB 1	

CAS#	Compound	n	Raw Amount	RT	Target RT	Ion	Sample Area	Qualifier	Lower Qual	Upper Qual	Qual Flag	Cal Flag	Int Flag
75-01-4	Vinyl chloride	5	0.778	4.37	4.33	62.00	44485	29	24	36			
75-35-4	1,1-Dichloroethene	15	0.898	6.92	6.89	61.00	113441	47	34	51			
75-09-2	Dichloromethane	19	0.864	7.34	7.31	84.00	48328	59	51	77			
75-34-3	1,1-Dichloroethane	24	0.821	8.93	8.90	63.00	133408	34	24	36			
67-66-3	Chloroform	34	0.773	10.54	10.53	83.00	151030	63	51	77			
71-55-6	1,1,1-Trichloroethane	36	0.927	11.81	11.80	97.00	158306	58	51	76			
107-06-2	1,2-Dichloroethane	37	1.031	11.87	11.87	61.95	165020	30	25	37			
71-43-2	Benzene	40	0.988	12.52	12.51	78.00	274812	22	19	29			
56-23-5	Carbon tetrachloride	41	1.061	12.58	12.56	116.90	183789	97	79	119			
79-01-6	Trichloroethene	46	1.040	14.13	14.13	130.00	140006	98	79	119			
108-88-3	Toluene	51	1.110	17.11	17.11	91.00	403328	54	44	66			
106-93-4	1,2-Dibromoethane	58	1.037	18.78	18.80	107.00	272747	94	75	113			
127-18-4	Tetrachloroethene	59	1.139	18.96	18.97	166.00	263669	64	52	78			
108-90-7	Chlorobenzene	60	1.023	20.43	20.45	112.00	347742	31	25	38			
100-41-4	Ethylbenzene	62	0.969	20.97	17.80	91.00	562181	27	21	32			
108-38-3	m & p-Xylene	63	1.917	21.26	21.28	91.00	937254	41	32	48			
95-47-6	o-Xylene	66	0.887	22.21	22.25	91.00	479641	40	30	45			
363-72-4	Pentafluorobenzene	1	20.000	11.39	11.38	168.00	**5358338**						
540-36-3	1,4-Difluorobenzene	35	20.000	13.18	13.17	114.00	**4701010**						
2037-26-5	Toluene-d8	94	**10.394**	16.93	16.94	98.00	2746750	62	51	77			
3114-55-4	Chlorobenzene-d5	95	**21.727**	20.35	20.36	117.00	5267953	67	56	84		HIGH	
460-00-4	1,4-Bromofluorobenzene	96	**10.510**	23.35	23.38	95.00	3984806	85	56	83	Q		

Integration Flags:

If no flag the Integration was done by the instrument computer

M1 Manual Integration because the computer did not integrated the peak or integrated the wrong peak

M2 Manual Integration because computer integration of baseline was different then Inital Calibration

INITIAL CALIBRATION REPORT

EPA Method TO-15 Modified Full Scan GC/MS

SDG: LABQC
QC_Batch: 062509-MS1
Instrument Name: 5970 - In

File Name: QC06259A.D
Sample ID: ST60421
Sample Analysis Date: 25 Jun 109 10:38 am
Run Method: 1T15EXAY.M
Quant and Calibration Method: 1T15EXAY.M
Cal Update: Tue Mar 17 14:18:15 2009
Template: 1TO15SP.MS1

Calibration Title:EPA T0-15

Number Compounds: 96
IS1: ST60341 20
IS2: ST60341 20
IS3:
IS4:

		Calibration Amount CA, ppmv						Calibration Response, Area					
		Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
		Amt	Amt	Amt	Amt	Amt	Amt	C03179C.D	C03179E.D	C03179B.D	C03179A.D	C03169H.D	C03179D.D
n	Compound	0.25	4.0	1.0	5.0	10.0	2.0	0.25	4.0	1.0	5.0	10.0	2.0
5	Vinyl chloride	0.260	4.160	1.040	5.200	10.400	2.080	7909	132864	32643	150492	285530	62953
15	1,1-Dichloroethene	0.253	4.040	1.010	5.050	10.100	2.020	16793	248606	63935	305424	730028	150732
19	Dichloromethane	0.260	4.160	1.040	5.200	10.400	2.080	8354	124766	26131	120655	330491	71297
24	1,1-Dichloroethane	0.253	4.040	1.010	5.050	10.100	2.020	22823	387657	85531	331041	871129	183187
34	Chloroform	0.255	4.080	1.020	5.100	10.200	2.040	27147	449509	101707	516969	959204	213353
36	1,1,1-Trichloroethane	0.255	4.080	1.020	5.100	10.200	2.040	26931	432442	100881	509527	970639	210683
37	1,2-Dichloroethane	0.258	4.120	1.030	5.150	10.300	2.060	26512	398927	96975	495766	920839	187037
40	Benzene	-1.000	4.120	1.030	5.150	10.300	2.060	-1	712515	206967	782160	1387400	364766
41	Carbon tetrachloride	0.255	4.080	1.020	5.100	10.200	2.040	26276	451629	105798	518753	931992	220983
46	Trichloroethene	0.258	4.120	1.030	5.150	10.300	2.060	27013	323273	83100	364698	666308	165489
51	Toluene	-1.000	4.120	1.030	5.150	10.300	2.060	-1	944443	257501	1033029	1877014	478350
58	1,2-Dibromoethane	0.260	4.160	1.040	5.200	10.400	2.080	46912	660815	169213	701472	1505940	324567
59	Tetrachloroethene	0.255	4.080	1.020	5.100	10.200	2.040	40710	589393	145069	627137	1126037	300057
60	Chlorobenzene	0.255	4.080	1.020	5.100	10.200	2.040	64660	836027	208106	862738	1818049	410336
62	Ethylbenzene	0.260	4.160	1.040	5.200	10.400	2.080	107037	1527752	359496	1548148	3108186	722767
63	m & p-Xylene	0.515	8.240	2.060	10.300	20.600	4.120	192864	2440351	617919	2542524	4725274	1220126
66	o-Xylene	0.255	4.080	1.020	5.100	10.200	2.040	105567	1325719	329821	1384162	2817484	643280
1	Pentafluorobenzene	20.000	20.000	20.000	20.000	20.000	20.000	2643183	2935915	2871816	2719013	2737194	3022845
35	1,4-Difluorobenzene	20.000	20.000	20.000	20.000	20.000	20.000	2659938	2870629	2814997	2720455	2706138	3020264
94	Toluene-d8	10.000	10.000	10.000	10.000	10.000	10.000	1479389	1629143	1590486	1469067	1546296	1730275
95	Chlorobenzene-d5	20.000	20.000	20.000	20.000	20.000	20.000	2736627	3026382	2937451	2602948	2900630	3122484
96	1,4-Bromofluorobenzene	10.000	10.000	10.000	10.000	10.000	10.000	2176179	2385587	2352342	2001651	2163994	2472723

INITIAL CALIBRATION REPORT: Response Factors

SDG:	**LABQC**	**Sample Calculation:**	
QC_Batch:	**062509-MS1**	1) Avg RFn = Sum	$\left\lvert \frac{(Astdni)}{(Cstdni)} \frac{(Cistdi)}{(Aistdi)} \right\rvert_i$
Sample ID:	ST60421		
Sample Analysis Date:	25 Jun 109 10:38 am		
Run Method:	1T15EXAY.M		
Quant Method:	1T15EXAY.M		
Cal Update:	Tue Mar 17 14:18:15 2009		
Template:	1TO15SP.MS1		

Response Factors

Compound	RF1	RF2	RF3	RF4	RF5	RF6	AvgRFn	%RSD
Vinyl chloride	0.230	0.218	0.219	0.213	0.201	0.200	0.213	5.40
1,1-Dichloroethene	0.502	0.419	0.441	0.445	0.528	0.494	0.471	9.01
Dichloromethane	0.243	0.204	0.175	0.171	0.232	0.227	0.209	14.64
1,1-Dichloroethane	0.683	0.654	0.590	0.482	0.630	0.600	0.606	11.51
Chloroform	0.806	0.751	0.694	0.746	0.687	0.692	0.729	6.41
1,1,1-Trichloroethane	0.794	0.738	0.703	0.734	0.703	0.684	0.726	5.40
1,2-Dichloroethane	0.773	0.675	0.669	0.708	0.661	0.601	0.681	8.33
Benzene	0.000	1.205	1.428	1.117	0.996	1.173	0.986	51.05
Carbon tetrachloride	0.775	0.771	0.737	0.748	0.675	0.717	0.737	5.04
Trichloroethene	0.787	0.547	0.573	0.521	0.478	0.532	0.573	19.12
Toluene	0.000	1.597	1.776	1.475	1.347	1.538	1.289	50.21
1,2-Dibromoethane	1.357	1.107	1.156	0.992	1.070	1.033	1.119	11.58
Tetrachloroethene	1.200	1.006	1.010	0.904	0.816	0.974	0.985	13.06
Chlorobenzene	1.907	1.428	1.450	1.244	1.317	1.332	1.446	16.45
Ethylbenzene	3.095	2.559	2.456	2.189	2.209	2.301	2.468	13.74
m & p-Xylene	2.816	2.063	2.131	1.815	1.695	1.961	2.080	18.95
o-Xylene	3.113	2.264	2.297	1.995	2.041	2.088	2.300	18.10
Pentafluorobenzene	1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.00
1,4-Difluorobenzene	1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.00
Toluene-d8	1.112	1.135	1.130	1.080	1.143	1.146	1.124	2.20
Chlorobenzene-d5	1.029	1.054	1.044	0.957	1.072	1.034	1.032	3.85
1,4-Bromofluorobenzene	1.636	1.662	1.671	1.472	1.599	1.637	1.613	4.57

CALCULATIONS

EPA Method TO-15 Modified Full Scan GC/MS

SDG: LABQC
Laboratory Number: QC06259

RL:	1T15EXAY.M
Run Method:	1T15EXAY.M
Quant Method:	1T15EXAY.M
Can Dilution Factor:	1.00
Air Volume:	1000 ml
Gas Constant:	23.68
Decimal Places:	2

MDL Factor 1

Compound	M.W.	Raw Amount	Result ppbv	Result ug/m3	(1) MDL ppbv	(2) RL ppbv	Calc MDL ppbv	Calc MDL ug/m3	Calc RL ppbv	Calc RL ug/m3	Flag	Spike ppmv
Vinyl chloride	62.5	0.778	0.778	2.05	0.104	0.520	0.10	0.27	0.52	1.37		1.040
1,1-Dichloroethene	96.9	0.898	0.898	3.67	0.101	0.505	0.10	0.41	0.51	2.07		1.040
Dichloromethane	84.9	0.864	0.864	3.10	0.104	0.520	0.10	0.37	0.52	1.86		1.040
1,1-Dichloroethane	99.0	0.821	0.821	3.43	0.101	0.505	0.10	0.42	0.51	2.11		1.010
Chloroform	119.4	0.773	0.773	3.90	0.102	0.510	0.10	0.51	0.51	2.57		1.020
1,1,1-Trichloroethane	133.4	0.927	0.927	5.22	0.102	0.510	0.10	0.57	0.51	2.87		1.020
1,2-Dichloroethane	99.0	1.031	1.031	4.31	0.103	0.515	0.10	0.43	0.52	2.15		1.030
Benzene	78.1	0.988	0.988	3.26	0.103	0.515	0.10	0.34	0.52	1.70		1.030
Carbon tetrachloride	153.8	1.061	1.061	6.89	0.102	0.510	0.10	0.66	0.51	3.31		1.020
Trichloroethene	131.4	1.040	1.040	5.77	0.103	0.515	0.10	0.57	0.52	2.86		1.030
Toluene	92.1	1.110	1.110	4.32	0.103	0.515	0.10	0.40	0.52	2.00		1.030
1,2-Dibromoethane	187.9	1.037	1.037	8.23	0.104	0.520	0.10	0.83	0.52	4.13		1.040
Tetrachloroethene	165.8	1.139	1.139	7.97	0.102	0.510	0.10	0.71	0.51	3.57		1.020
Chlorobenzene	112.6	1.023	1.023	4.86	0.102	0.510	0.10	0.49	0.51	2.43		1.020
Ethylbenzene	106.2	0.969	0.969	4.35	0.104	0.520	0.10	0.47	0.52	2.33		1.040
m & p-Xylene	106.2	1.917	1.917	8.60	0.206	1.030	0.21	0.92	1.03	4.62		2.060
o-Xylene	106.2	0.887	0.887	3.98	0.102	0.510	0.10	0.46	0.51	2.29		1.020

SAMPLE CALCULATION

EPA Method TO-15 Modified Full Scan GC/MS

SDG:		**LABQC**
Laboratory Number:		**QC06259**
Standard Volume	STV	5.0
Sample Volume	SV	1000
Can Dilution Factor	CDF	1.00
Gas Constant		23.68
Decimal Places:		2

Sample Calculation:

1) Avg RFn = Sum $\left| \frac{(Astdni)}{(Cstdni)} \frac{(Cistdi)}{(Aistdi)} \right|_i$ Note: 1

2) Raw Amt = $\frac{(Ansamp)}{(Avg\ RFn)} \frac{(Cistdi)}{(Aistdi)}$ = Cn

3) Amount ppbv = $\frac{(Raw\ Amt)\ 1000}{(SV)}$ (CDF)

4) Amount ug/m3 = $\frac{(amt(ppbv)\ MW}{23.68}$

n	Compound	IS n	Chem type	MW	AvgRFn	Area Ansamp	Cistdi ppmv	Aistdi Ais	Cn ppmV Raw Amt	Amount ppbv	Amount ug/m3
5	Vinyl chloride	1	TRG	62.5	0.213	44485	20.000	5358338	0.778	0.78	2.06
15	1,1-Dichloroethene	1	TRG	96.9	0.471	113441	20.000	5358338	0.898	0.90	3.68
19	Dichloromethane	1	TRG	84.9	0.209	48328	20.000	5358338	0.864	0.86	3.08
24	1,1-Dichloroethane	1	TRG	99.0	0.606	133408	20.000	5358338	0.821	0.82	3.43
34	Chloroform	1	TRG	119.4	0.729	151030	20.000	5358338	0.773	0.77	3.88
36	1,1,1-Trichloroethane	35	TRG	133.4	0.726	158306	20.000	4701010	0.927	0.93	5.24
37	1,2-Dichloroethane	35	TRG	99.0	0.681	165020	20.000	4701010	1.031	1.03	4.31
40	Benzene	35	TRG	78.1	0.986	274812	20.000	4701010	0.988	0.99	3.27
41	Carbon tetrachloride	35	TRG	153.8	0.737	183789	20.000	4701010	1.061	1.06	6.88
46	Trichloroethene	35	TRG	131.4	0.573	140006	20.000	4701010	1.040	1.04	5.77
51	Toluene	35	TRG	92.1	1.289	403328	20.000	4701010	1.110	1.11	4.32
58	1,2-Dibromoethane	35	TRG	187.9	1.119	272747	20.000	4701010	1.037	1.04	8.25
59	Tetrachloroethene	35	TRG	165.8	0.985	263669	20.000	4701010	1.139	1.14	7.98
60	Chlorobenzene	35	TRG	112.6	1.446	347742	20.000	4701010	1.023	1.02	4.85
62	Ethylbenzene	35	TRG	106.2	2.468	562181	20.000	4701010	0.969	0.97	4.35
63	m & p-Xylene	35	TRG	106.2	2.080	937254	20.000	4701010	1.917	1.92	8.61
66	o-Xylene	35	TRG	106.2	2.300	479641	20.000	4701010	0.887	0.89	3.99
1	Pentafluorobenzene	1	IS		1.000	5358338	20.000	5358338			
35	1,4-Difluorobenzene	35	IS		1.000	4701010	20.000	4701010			
94	Toluene-d8	35	SURR		1.124	2746750	20.000	4701010			

Calculation Definitions:

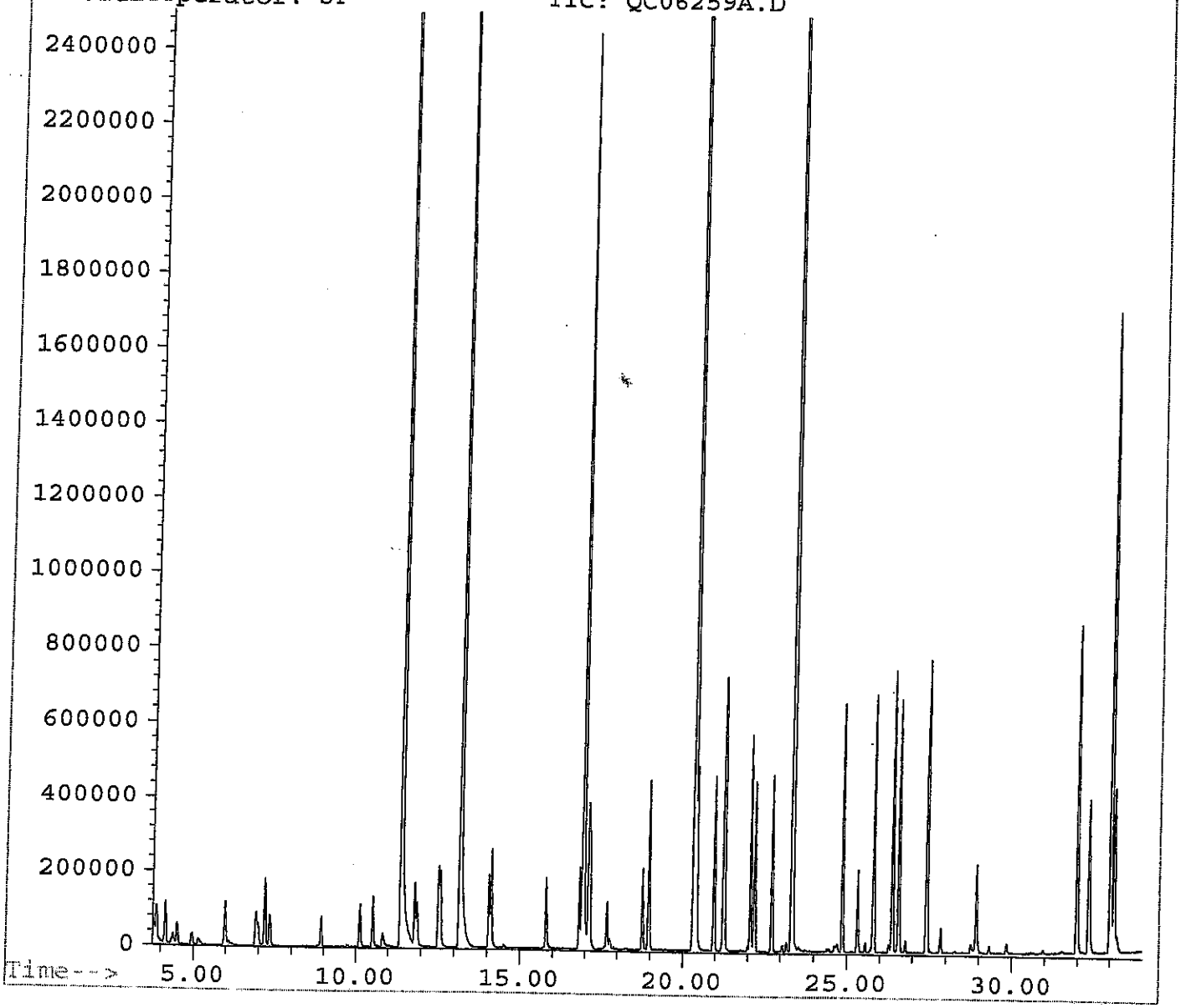
n	compound n
i	i th calibration level
Astdni	Standard Area for compound n at ith calibration level
Cstdni	Standard Concentration for compound n at ith calibration level in ppmv
Cistdi	Internal Standard Conc used for compound n at ith calibration level in ppmv
Aistdi	Internal Standard Area used for compound n at ith calibration level
Ansamp	Sample Area for compound n
Avg RFn	Average response factor for all ith calibration levels for compound n
Raw Amount	Sample Concentration in ppmv before applying factors
Cistd	Concentration internal standard used for compound n in sample in ppmv
Aistd	Area of internal standard used for compound n in sample
Cn	Concentration of compound n in sample in ppmv
23.68	Gas constant at 60 F as per EPA source test protocol
MW	Molecular weight of compound

Note (1) : Avg RFn — The values for the Average Response Factor AvgRFn can be optained from the response Factor Report for the Initial Calibration, or from the Calibration Report

Name of file: C:\MSCHEM\1\DATA\06259MS1\QC06259A.D

Name of operator: JF

TIC: QC06259A.D



QUALITY CONTROL DUPLICATE

ENVIRONMENTAL
Analytical Service, Inc.

Duplicate of QC Sample

EPA Method TO-15 Modified Full Scan GC/MS **SDG: LABQC**
Analytical Method: **TO-15**

Dup File: QC06259B.D
Description: ST60421
Can/Tube#:
QC_Batch: 062509-MS1

CAS#	Compound	LCD ppbv	LCS ppbv	RPD %D	Limit %	Flag * = Out
75-01-4	Vinyl chloride	0.94	0.78	15	25	
75-35-4	1,1-Dichloroethene	0.88	0.90	2	25	
75-09-2	Dichloromethane	0.84	0.86	2	25	
75-34-3	1,1-Dichloroethane	0.80	0.82	2	25	
67-66-3	Chloroform	0.84	0.77	7	25	
71-55-6	1,1,1-Trichloroethane	0.95	0.93	2	25	
107-06-2	1,2-Dichloroethane	1.03	1.03	0	25	
71-43-2	Benzene	0.93	0.99	6	25	
56-23-5	Carbon tetrachloride	1.02	1.06	4	25	
79-01-6	Trichloroethene	1.09	1.04	5	25	
108-88-3	Toluene	1.13	1.11	2	25	
106-93-4	1,2-Dibromoethane	1.03	1.04	1	25	
127-18-4	Tetrachloroethene	1.08	1.14	6	25	
108-90-7	Chlorobenzene	1.06	1.02	4	25	
100-41-4	Ethylbenzene	0.95	0.97	2	25	
108-38-3	m & p-Xylene	1.88	1.92	2	25	
95-47-6	o-Xylene	0.91	0.89	2	25	

FORM II

QUALITY CONTROL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

LABORATORY CONTROL DUPLICATE

EPA Method TO-15 Modified Full Scan GC/MS **SDG: LABQC**
Analytical Method: **TO-15**

File: QC06259B.D
Description: ST60421
Can/Tube#:
Sam_Type: LCD
QC_Batch: 062509-MS1
Air Volume: 1000 ml

Date Sampled: NA
Date Received: NA
Date Extracted: NA
Date Analyzed: 06/25/09 **Time:** 11:24
Can Dilution Factor: 1.00 2
QC Duplicate: Yes

CAS#	Compound	MDL ppbv	Spike Conc ppbv	Amount ppbv	Matrix Amt ppbv	Spk Amt ppbv	Percent Recovery	LCL %	UCL %	Flag
75-01-4	Vinyl chloride	0.10	1.04	0.94	0.000	0.94	90	70	130	
75-35-4	1,1-Dichloroethene	0.10	1.04	0.88	0.000	0.88	85	70	130	
75-09-2	Dichloromethane	0.10	1.04	0.84	0.000	0.84	81	70	130	
75-34-3	1,1-Dichloroethane	0.10	1.01	0.80	0.000	0.80	79	70	130	
67-66-3	Chloroform	0.10	1.02	0.84	0.000	0.84	82	70	130	
71-55-6	1,1,1-Trichloroethane	0.10	1.02	0.95	0.000	0.95	93	70	130	
107-06-2	1,2-Dichloroethane	0.10	1.03	1.03	0.000	1.03	100	70	130	
71-43-2	Benzene	0.10	1.03	0.93	0.000	0.93	90	70	130	
56-23-5	Carbon tetrachloride	0.10	1.02	1.02	0.000	1.02	100	70	130	
79-01-6	Trichloroethene	0.10	1.03	1.09	0.000	1.09	106	70	130	
108-88-3	Toluene	0.10	1.03	1.13	0.000	1.13	110	70	130	
106-93-4	1,2-Dibromoethane	0.10	1.04	1.03	0.000	1.03	99	70	130	
127-18-4	Tetrachloroethene	0.10	1.02	1.08	0.000	1.08	106	70	130	
108-90-7	Chlorobenzene	0.10	1.02	1.06	0.000	1.06	104	70	130	
100-41-4	Ethylbenzene	0.10	1.04	0.95	0.000	0.95	91	70	130	
108-38-3	m & p-Xylene	0.21	2.06	1.88	0.000	1.88	91	70	130	
95-47-6	o-Xylene	0.10	1.02	0.91	0.000	0.91	89	70	130	

	Surrogate Recovery	Spike Amt. ppbV	Amount ppbV	% Rec.	QC Limits	Flag * = Out
2037-26-5	Toluene-d8	10.000	10.233	102	70-130	

Notes: Reported results are to be interpreted to two significant figures.
ug/m3 calculated assuming conditions at 60 F and 1 atm.

QUANTITATION REPORT

EPA Method TO-15 Modified Full Scan GC/MS

			Review	EAS Sample ID: QC06259	
File Name:	QC06259B.D				1 KB
Sample ID:	ST60421				2 AT
Date:	25 Jun 109 11:24 am			Cal Amounts	3 BB
Run Method:	1T15EXAY.M			IS Areas	4 SH
Quant Method:	1T15EXAY.M			Carryover	
Cal Update:	Tue Mar 17 14:18:15 2009				
Template:	1TO15SP.MS1				
Can Factor:	1.00				
Volume:	1000	ml		Analyst: KB 1	

CAS#	Compound	n	Raw Amount	RT	Target RT	Ion	Sample Area	Qualifier	Lower Qual	Upper Qual	Qual Flag	Cal Flag	Int Flag
75-01-4	Vinyl chloride	5	0.937	4.38	4.33	62.00	59368	25	24	36			
75-35-4	1,1-Dichloroethene	15	0.882	6.93	6.89	61.00	123504	46	34	51			
75-09-2	Dichloromethane	19	0.842	7.35	7.31	84.00	52195	65	51	77			
75-34-3	1,1-Dichloroethane	24	0.795	8.93	8.90	63.00	143201	33	24	36			
67-66-3	Chloroform	34	0.837	10.54	10.53	83.00	181227	63	51	77			
71-55-6	1,1,1-Trichloroethane	36	0.951	11.83	11.80	97.00	173813	66	51	76			
107-06-2	1,2-Dichloroethane	37	1.027	11.88	11.87	61.95	176152	34	25	37			
71-43-2	Benzene	40	0.927	12.53	12.51	78.00	276250	25	19	29			
56-23-5	Carbon tetrachloride	41	1.023	12.59	12.56	116.90	189981	103	79	119			
79-01-6	Trichloroethene	46	1.090	14.14	14.13	130.00	157294	95	79	119			
108-88-3	Toluene	51	1.133	17.12	17.11	91.00	441137	54	44	66			
106-93-4	1,2-Dibromoethane	58	1.032	18.78	18.80	107.00	290900	97	75	113			
127-18-4	Tetrachloroethene	59	1.075	18.97	18.97	166.00	266707	65	52	78			
108-90-7	Chlorobenzene	60	1.061	20.44	20.45	112.00	386459	32	25	38			
100-41-4	Ethylbenzene	62	0.947	20.97	17.80	91.00	588834	27	21	32			
108-38-3	m & p-Xylene	63	1.878	21.27	21.28	91.00	983736	40	32	48			
95-47-6	o-Xylene	66	0.907	22.22	22.25	91.00	525362	39	30	45			
363-72-4	Pentafluorobenzene	1	20.000	11.40	11.38	168.00	**5939187**						
540-36-3	1,4-Difluorobenzene	35	20.000	13.18	13.17	114.00	**5036170**						
2037-26-5	Toluene-d8	94	**10.233**	16.94	16.94	98.00	2896997	61	51	77			
3114-55-4	Chlorobenzene-d5	95	**21.968**	20.36	20.36	117.00	5706013	65	56	84		HIGH	
460-00-4	1,4-Bromofluorobenzene	96	**10.146**	23.36	23.38	95.00	4121000	88	56	83	Q		

Integration Flags:

If no flag the Integration was done by the instrument computer

M1 Manual Integration because the computer did not integrated the peak or integrated the wrong peak

M2 Manual Integration because computer integration of baseline was different then Inital Calibration

INITIAL CALIBRATION REPORT

EPA Method TO-15 Modified Full Scan GC/MS

File Name:	QC06259B.D	SDG:	LABQC
Sample ID:	ST60421	QC_Batch:	062509-MS1
Sample Analysis Date:	25 Jun 109 11:24 am	Instrument Name:	5970 - In
Run Method:	1T15EXAY.M		
Quant and Calibration Method:	1T15EXAY.M	Calibration Title:	EPA T0-15
Cal Update:	Tue Mar 17 14:18:15 2009		
Template:	1TO15SP.MS1		

Number Compounds:		96
IS1:	ST60341	20
IS2:	ST60341	20
IS3:		
IS4:		

		Calibration Amount CA, ppmv						Calibration Response, Area					
		Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
		Amt	Amt	Amt	Amt	Amt	Amt	C03179C.D	C03179E.D	C03179B.D	C03179A.D	C03169H.D	C03179D.D
n	Compound	0.25	4.0	1.0	5.0	10.0	2.0	0.25	4.0	1.0	5.0	10.0	2.0
5	Vinyl chloride	0.260	4.160	1.040	5.200	10.400	2.080	7909	132864	32643	150492	285530	62953
15	1,1-Dichloroethene	0.253	4.040	1.010	5.050	10.100	2.020	16793	248606	63935	305424	730028	150732
19	Dichloromethane	0.260	4.160	1.040	5.200	10.400	2.080	8354	124766	26131	120655	330491	71297
24	1,1-Dichloroethane	0.253	4.040	1.010	5.050	10.100	2.020	22823	387657	85531	331041	871129	183187
34	Chloroform	0.255	4.080	1.020	5.100	10.200	2.040	27147	449509	101707	516969	959204	213353
36	1,1,1-Trichloroethane	0.255	4.080	1.020	5.100	10.200	2.040	26931	432442	100881	509527	970639	210683
37	1,2-Dichloroethane	0.258	4.120	1.030	5.150	10.300	2.060	26512	398927	96975	495766	920839	187037
40	Benzene	-1.000	4.120	1.030	5.150	10.300	2.060	-1	712515	206967	782160	1387400	364766
41	Carbon tetrachloride	0.255	4.080	1.020	5.100	10.200	2.040	26276	451629	105798	518753	931992	220983
46	Trichloroethene	0.258	4.120	1.030	5.150	10.300	2.060	27013	323273	83100	364698	666308	165489
51	Toluene	-1.000	4.120	1.030	5.150	10.300	2.060	-1	944443	257501	1033029	1877014	478350
58	1,2-Dibromoethane	0.260	4.160	1.040	5.200	10.400	2.080	46912	660815	169213	701472	1505940	324567
59	Tetrachloroethene	0.255	4.080	1.020	5.100	10.200	2.040	40710	589393	145069	627137	1126037	300057
60	Chlorobenzene	0.255	4.080	1.020	5.100	10.200	2.040	64660	836027	208106	862738	1818049	410336
62	Ethylbenzene	0.260	4.160	1.040	5.200	10.400	2.080	107037	1527752	359496	1548148	3108186	722767
63	m & p-Xylene	0.515	8.240	2.060	10.300	20.600	4.120	192864	2440351	617919	2542524	4725274	1220126
66	o-Xylene	0.255	4.080	1.020	5.100	10.200	2.040	105567	1325719	329821	1384162	2817484	643280
1	Pentafluorobenzene	20.000	20.000	20.000	20.000	20.000	20.000	2643183	2935915	2871816	2719013	2737194	3022845
35	1,4-Difluorobenzene	20.000	20.000	20.000	20.000	20.000	20.000	2659938	2870629	2814997	2720455	2706138	3020264
94	Toluene-d8	10.000	10.000	10.000	10.000	10.000	10.000	1479389	1629143	1590486	1469067	1546296	1730275
95	Chlorobenzene-d5	20.000	20.000	20.000	20.000	20.000	20.000	2736627	3026382	2937451	2602948	2900630	3122484
96	1,4-Bromofluorobenzene	10.000	10.000	10.000	10.000	10.000	10.000	2176179	2385587	2352342	2001651	2163994	2472723

(177)

INITIAL CALIBRATION REPORT: Response Factors

SDG:	**LABQC**	**Sample Calculation:**	
QC_Batch:	**062509-MS1**	1) Avg RFn = Sum	$\frac{(Astdni)\ (Cistdi)}{(Cstdni)\ (Aistdi)}$ i
Sample ID:	ST60421		
Sample Analysis Date:	25 Jun 109 11:24 am		
Run Method:	1T15EXAY.M		
Quant Method:	1T15EXAY.M		
Cal Update:	Tue Mar 17 14:18:15 2009		
Template:	1TO15SP.MS1		

Response Factors

Compound	RF1	RF2	RF3	RF4	RF5	RF6	AvgRFn	%RSD
Vinyl chloride	0.230	0.218	0.219	0.213	0.201	0.200	0.213	5.40
1,1-Dichloroethene	0.502	0.419	0.441	0.445	0.528	0.494	0.471	9.01
Dichloromethane	0.243	0.204	0.175	0.171	0.232	0.227	0.209	14.64
1,1-Dichloroethane	0.683	0.654	0.590	0.482	0.630	0.600	0.606	11.51
Chloroform	0.806	0.751	0.694	0.746	0.687	0.692	0.729	6.41
1,1,1-Trichloroethane	0.794	0.738	0.703	0.734	0.703	0.684	0.726	5.40
1,2-Dichloroethane	0.773	0.675	0.669	0.708	0.661	0.601	0.681	8.33
Benzene	0.000	1.205	1.428	1.117	0.996	1.173	0.986	51.05
Carbon tetrachloride	0.775	0.771	0.737	0.748	0.675	0.717	0.737	5.04
Trichloroethene	0.787	0.547	0.573	0.521	0.478	0.532	0.573	19.12
Toluene	0.000	1.597	1.776	1.475	1.347	1.538	1.289	50.21
1,2-Dibromoethane	1.357	1.107	1.156	0.992	1.070	1.033	1.119	11.58
Tetrachloroethene	1.200	1.006	1.010	0.904	0.816	0.974	0.985	13.06
Chlorobenzene	1.907	1.428	1.450	1.244	1.317	1.332	1.446	16.45
Ethylbenzene	3.095	2.559	2.456	2.189	2.209	2.301	2.468	13.74
m & p-Xylene	2.816	2.063	2.131	1.815	1.695	1.961	2.080	18.95
o-Xylene	3.113	2.264	2.297	1.995	2.041	2.088	2.300	18.10
Pentafluorobenzene	1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.00
1,4-Difluorobenzene	1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.00
Toluene-d8	1.112	1.135	1.130	1.080	1.143	1.146	1.124	2.20
Chlorobenzene-d5	1.029	1.054	1.044	0.957	1.072	1.034	1.032	3.85
1,4-Bromofluorobenzene	1.636	1.662	1.671	1.472	1.599	1.637	1.613	4.57

CALCULATIONS

EPA Method TO-15 Modified Full Scan GC/MS

SDG: LABQC
Laboratory Number: QC06259

RL: 1T15EXAY.M
Run Method: 1T15EXAY.M
Quant Method: 1T15EXAY.M
Can Dilution Factor: 1.00
Air Volume: 1000 ml
MDL Factor 1
Gas Constant: 23.68
Decimal Places: 2

Compound	M.W.	Raw Amount	Result ppbv	Result ug/m3	(1) MDL ppbv	(2) RL ppbv	Calc MDL ppbv	Calc MDL ug/m3	Calc RL ppbv	Calc RL ug/m3	Flag	Spike ppmv
Vinyl chloride	62.5	0.937	0.937	2.47	0.104	0.520	0.10	0.27	0.52	1.37		1.040
1,1-Dichloroethene	96.9	0.882	0.882	3.61	0.101	0.505	0.10	0.41	0.51	2.07		1.040
Dichloromethane	84.9	0.842	0.842	3.02	0.104	0.520	0.10	0.37	0.52	1.86		1.040
1,1-Dichloroethane	99.0	0.795	0.795	3.32	0.101	0.505	0.10	0.42	0.51	2.11		1.010
Chloroform	119.4	0.837	0.837	4.22	0.102	0.510	0.10	0.51	0.51	2.57		1.020
1,1,1-Trichloroethane	133.4	0.951	0.951	5.36	0.102	0.510	0.10	0.57	0.51	2.87		1.020
1,2-Dichloroethane	99.0	1.027	1.027	4.29	0.103	0.515	0.10	0.43	0.52	2.15		1.030
Benzene	78.1	0.927	0.927	3.06	0.103	0.515	0.10	0.34	0.52	1.70		1.030
Carbon tetrachloride	153.8	1.023	1.023	6.65	0.102	0.510	0.10	0.66	0.51	3.31		1.020
Trichloroethene	131.4	1.090	1.090	6.05	0.103	0.515	0.10	0.57	0.52	2.86		1.030
Toluene	92.1	1.133	1.133	4.41	0.103	0.515	0.10	0.40	0.52	2.00		1.030
1,2-Dibromoethane	187.9	1.032	1.032	8.19	0.104	0.520	0.10	0.83	0.52	4.13		1.040
Tetrachloroethene	165.8	1.075	1.075	7.53	0.102	0.510	0.10	0.71	0.51	3.57		1.020
Chlorobenzene	112.6	1.061	1.061	5.05	0.102	0.510	0.10	0.49	0.51	2.43		1.020
Ethylbenzene	106.2	0.947	0.947	4.25	0.104	0.520	0.10	0.47	0.52	2.33		1.040
m & p-Xylene	106.2	1.878	1.878	8.42	0.206	1.030	0.21	0.92	1.03	4.62		2.060
o-Xylene	106.2	0.907	0.907	4.07	0.102	0.510	0.10	0.46	0.51	2.29		1.020

SAMPLE CALCULATION

EPA Method TO-15 Modified Full Scan GC/MS

SDG:		**LABQC**
Laboratory Number:		**QC06259**
Standard Volume	STV	5.0
Sample Volume	SV	1000
Can Dilution Factor	CDF	1.00
Gas Constant		23.68
Decimal Places:		2

Sample Calculation:

1) Avg RFn = Sum $\left| \frac{(Astdni)}{(Cstdni)} \frac{(Cistdi)}{(Aistdi)} \right|_i$ Note: 1

2) Raw Amt = $\frac{(Ansamp)}{(Avg\ RFn)} \frac{(Cistdi)}{(Aistdi)}$ = Cn

3) Amount ppbv = $\frac{(Raw\ Amt)}{} \frac{1000}{(SV)} \frac{(CDF)}{}$

4) Amount ug/m3 = $\frac{(amt(ppbv)}{} \frac{MW}{23.68}$

n	Compound	IS n	Chem type	MW	AvgRFn	Area Ansamp	Cistdi ppmv	Aistdi Ais	Cn ppmV Raw Amt	Amount ppbv	Amount ug/m3
5	Vinyl chloride	1	TRG	62.5	0.213	59368	20.000	5939187	0.937	0.94	2.48
15	1,1-Dichloroethene	1	TRG	96.9	0.471	123504	20.000	5939187	0.882	0.88	3.60
19	Dichloromethane	1	TRG	84.9	0.209	52195	20.000	5939187	0.842	0.84	3.01
24	1,1-Dichloroethane	1	TRG	99.0	0.606	143201	20.000	5939187	0.795	0.80	3.34
34	Chloroform	1	TRG	119.4	0.729	181227	20.000	5939187	0.837	0.84	4.24
36	1,1,1-Trichloroethane	35	TRG	133.4	0.726	173813	20.000	5036170	0.951	0.95	5.35
37	1,2-Dichloroethane	35	TRG	99.0	0.681	176152	20.000	5036170	1.027	1.03	4.31
40	Benzene	35	TRG	78.1	0.986	276250	20.000	5036170	0.927	0.93	3.07
41	Carbon tetrachloride	35	TRG	153.8	0.737	189981	20.000	5036170	1.023	1.02	6.62
46	Trichloroethene	35	TRG	131.4	0.573	157294	20.000	5036170	1.090	1.09	6.05
51	Toluene	35	TRG	92.1	1.289	441137	20.000	5036170	1.133	1.13	4.39
58	1,2-Dibromoethane	35	TRG	187.9	1.119	290900	20.000	5036170	1.032	1.03	8.17
59	Tetrachloroethene	35	TRG	165.8	0.985	266707	20.000	5036170	1.075	1.08	7.56
60	Chlorobenzene	35	TRG	112.6	1.446	386459	20.000	5036170	1.061	1.06	5.04
62	Ethylbenzene	35	TRG	106.2	2.468	588834	20.000	5036170	0.947	0.95	4.26
63	m & p-Xylene	35	TRG	106.2	2.080	983736	20.000	5036170	1.878	1.88	8.43
66	o-Xylene	35	TRG	106.2	2.300	525362	20.000	5036170	0.907	0.91	4.08
1	Pentafluorobenzene	1	IS		1.000	5939187	20.000	5939187			
35	1,4-Difluorobenzene	35	IS		1.000	5036170	20.000	5036170			
94	Toluene-d8	35	SURR		1.124	2896997	20.000	5036170			

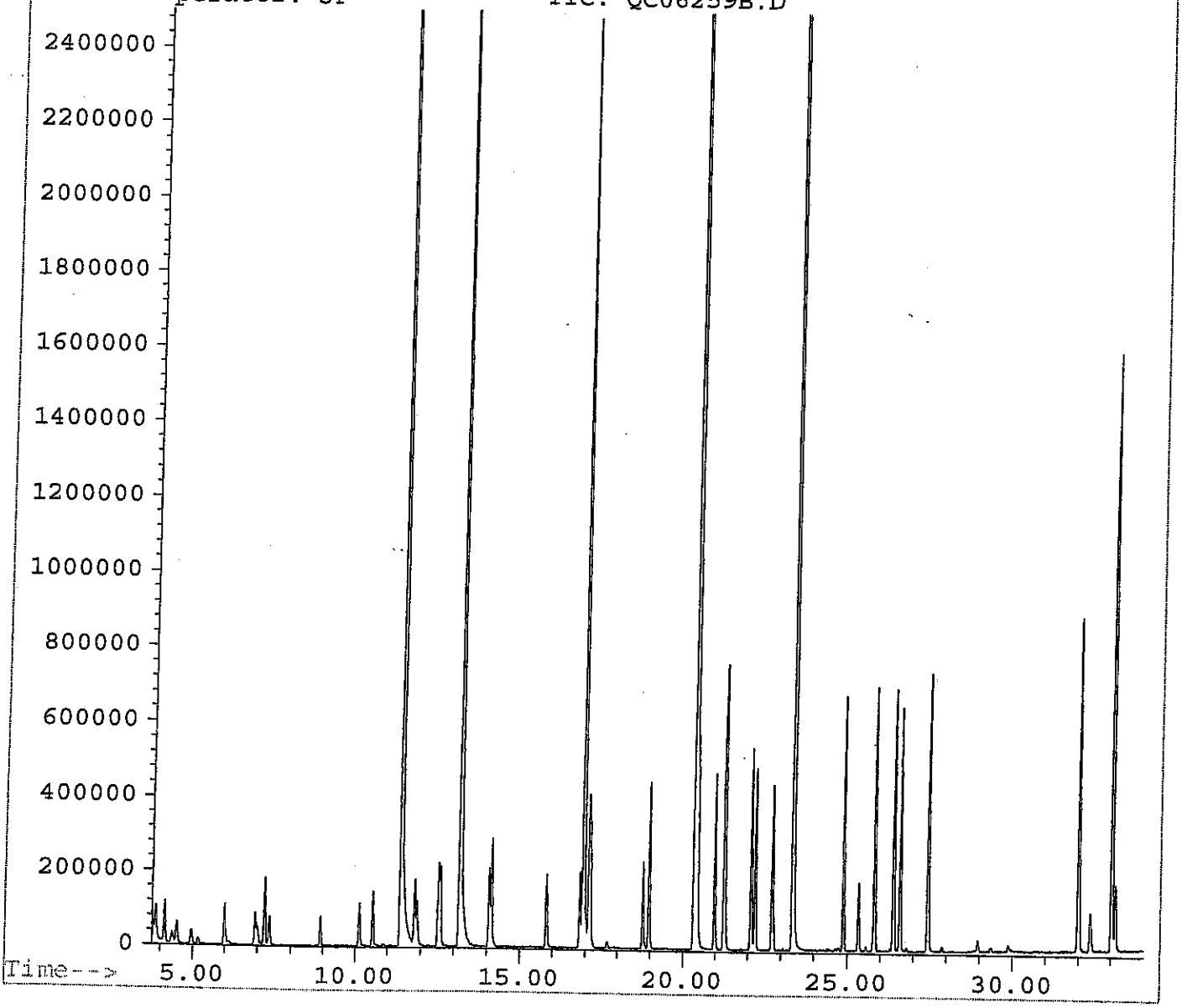
Calculation Definitions:

n	compound n
i	i th calibration level
Astdni	Standard Area for compound n at ith calibration level
Cstdni	Standard Concentration for compound n at ith calibration level in ppmv
Cistdi	Internal Standard Conc used for compound n at ith calibration level in ppmv
Aistdi	Internal Standard Area used for compound n at ith calibration level
Ansamp	Sample Area for compound n
Avg RFn	Average response factor for all ith calibration levels for compound n
Raw Amount	Sample Concentration in ppmv before applying factors
Cistd	Concentration internal standard used for compound n in sample in ppmv
Aistd	Area of internal standard used for compound n in sample
Cn	Concentration of compound n in sample in ppmv
23.68	Gas constant at 60 F as per EPA source test protocol
MW	Molecular weight of compound
Note (1) : Avg RFn	The values for the Average Response Factor AvgRFn can be optained from the response Factor Report for the Initial Calibration, or from the Calibration Report

Name of file: C:\MSCHEM\1\DATA\06259MS1\QC06259B.D

Name of operator: JF

TIC: QC06259B.D



ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified Full Scan GC/MS | **SDG:** 209270
Analytical Method: TO-15 | **Laboratory Number:** 04

File:	0927004A.D	**Date Sampled:**	06/16/09	**Time:**	16:45
Description:	44-009	**Date Received:**	06/17/09		
Can/Tube#:	664	**Date Extracted:**			
Sam_Type:	SA	**Date Analyzed:**	06/25/09	**Time:**	13:54
QC_Batch:	062509-MS1	**Can Dilution Factor:**	1.55		2
Air Volume:	200 ml	**Not Detected Flag:**	ND		

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
67-63-0	2-propanol	0.35	1.77	0.72	0.89	4.48	1.82	J

	Surrogate Recovery	Spike Amt. ppbV	Amount ppbV	% Rec.	QC Limits	Flag * = Out
2037-26-5	Toluene-d8	10.000	10.372	104	70-130	

Notes: 1) Reported results are to be interpreted to two significant figures.
2) ug/m3 = ppbV*FW/23.68 calculated assuming conditions at 60 F and 1 atm.
3) MDL and RL are adjusted for sample volume and can dilution.
4) U and ND are Flags used for Not Detected
5) J is a flag for a result between the MDL and the RL (or lower quantitation limit, LQL)

QUANTITATION REPORT

EPA Method TO-15 Modified Full Scan GC/MS

			Review	EAS Sample ID: 0927004	
File Name:	0927004A.D				1 KB
Sample ID:	44-009				2 AT
Date:	25 Jun 109 1:54 pm			Cal Amounts	3 BB
Run Method:	1T15EXAY.M			IS Areas	4 SH
Quant Method:	1T15EXAY.M			Carryover	
Cal Update:	Tue Mar 17 14:18:15 2009				
Template:	1TO15EXT.MS1				
Can Factor:	1.55				
Volume:	200	ml		Analyst: KB 1	

CAS#	Compound	n	Raw Amount	RT	Target RT	Ion	Sample Area	Qualifier	Lower Qual	Upper Qual	Qual Flag	Cal Flag	Int Flag
67-63-0	2-propanol	13	0.093	6.19	6.14	45.00	18987	0	18	27	Q		
363-72-4	Pentafluorobenzene	1	20.000	11.40	11.38	168.00	**6141233**						
540-36-3	1,4-Difluorobenzene	35	20.000	13.18	13.17	114.00	**5041467**						
2037-26-5	Toluene-d8	94	**10.372**	16.93	16.94	98.00	2939637	64	51	77			

Integration Flags:

If no flag the Integration was done by the instrument computer

M1 Manual Integration because the computer did not integrated the peak or integrated the wrong peak

M2 Manual Integration because computer integration of baseline was different then Inital Calibration

INITIAL CALIBRATION REPORT

EPA Method TO-15 Modified Full Scan GC/MS

SDG: 209270
QC_Batch: 062509-MS1
Instrument Name: 5970 - In

File Name: 0927004A.D
Sample ID: 44-009
Sample Analysis Date: 25 Jun 109 1:54 pm
Run Method: 1T15EXAY.M
Quant and Calibration Method: 1T15EXAY.M
Cal Update: Tue Mar 17 14:18:15 2009
Template: 1TO15EXT.MS1

Calibration Title: EPA T0-15

Number Compounds: 96
IS1: ST60403 20
IS2: ST60403 20
IS3:
IS4:

		Calibration Amount CA, ppmv						Calibration Response, Area					
		Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
		Amt	Amt	Amt	Amt	Amt	Amt	C03179C.D	C03179E.D	C03179B.D	C03179A.D	C03169H.D	C03179D.D
n	Compound	0.25	4.0	1.0	5.0	10.0	2.0	0.25	4.0	1.0	5.0	10.0	2.0
13	2-propanol	0.228	3.640	0.910	4.550	9.100	1.820	19578	321532	75563	289890	1427833	154437
1	Pentafluorobenzene	20.000	20.000	20.000	20.000	20.000	20.000	2643183	2935915	2871816	2719013	2737194	3022845
35	1,4-Difluorobenzene	20.000	20.000	20.000	20.000	20.000	20.000	2659938	2870629	2814997	2720455	2706138	3020264
94	Toluene-d8	10.000	10.000	10.000	10.000	10.000	10.000	1479389	1629143	1590486	1469067	1546296	1730275

(184)

INITIAL CALIBRATION REPORT: Response Factors

SDG:	**209270**
QC_Batch:	**062509-MS1**
Sample ID:	44-009
Sample Analysis Date:	25 Jun 109 1:54 pm
Run Method:	1T15EXAY.M
Quant Method:	1T15EXAY.M
Cal Update:	Tue Mar 17 14:18:15 2009
Template:	1TO15EXT.MS1

Sample Calculation:

1) Avg RFn = Sum $\left| \frac{(Astdni)}{(Cstdni)} \frac{(Cistdi)}{(Aistdi)} \right|_i$

Response Factors

Compound	RF1	RF2	RF3	RF4	RF5	RF6	AvgRFn	%RSD
2-propanol	0.650	0.602	0.578	0.469	1.146	0.561	0.668	36.24
Pentafluorobenzene	1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.00
1,4-Difluorobenzene	1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.00
Toluene-d8	1.112	1.135	1.130	1.080	1.143	1.146	1.124	2.20

CALCULATIONS

EPA Method TO-15 Modified Full Scan GC/MS

SDG: 209270
Laboratory Number: 04

RL: 1T15EXAY.M (2) RL, Concentration of lowest Standandard in ICAL:
Run Method: 1T15EXAY.M
Quant Method: 1T15EXAY.M
Can Dilution Factor: 1.55
Air Volume: 200 ml MDL Factor 1
Gas Constant: 23.68
Decimal Places: 2

Compound	M.W.	Raw Amount	Result ppbv	Result ug/m3	(1) MDL ppbv	(2) RL ppbv	Calc MDL ppbv	Calc MDL ug/m3	Calc RL ppbv	Calc RL ug/m3	Flag	Spike ppmv
2-propanol	60.1	0.093	0.718	1.82	0.046	0.228	0.35	0.89	1.77	4.48	J	0.103

SAMPLE CALCULATION

EPA Method TO-15 Modified Full Scan GC/MS

SDG:		**209270**
Laboratory Number:		**04**
Standard Volume	STV	5.0
Sample Volume	SV	200
Can Dilution Factor	CDF	1.55
Gas Constant		23.68
Decimal Places:		2

Sample Calculation:

1) Avg RFn = Sum $\left| \frac{(Astdni)}{(Cstdni)} \frac{(Cistdi)}{(Aistdi)} \right|_i$ Note: 1

2) Raw Amt = $\frac{(Ansamp)}{(Avg\ RFn)} \frac{(Cistdi)}{(Aistdi)}$ = Cn

3) Amount ppbv = $\frac{(Raw\ Amt)\ 1000}{(SV)}$ (CDF)

4) Amount ug/m3 = $\frac{(amt(ppbv)\ MW}{23.68}$

n	Compound	IS n	Chem type	MW	AvgRFn	Area Ansamp	Cistdi ppmv	Aistdi Ais	Cn ppmV Raw Amt	Amount ppbv	Amount ug/m3
13	2-propanol	1	TRG	60.1	0.668	18987	20.000	6141233	0.093	0.72	1.83
1	Pentafluorobenzene	1	IS		1.000	6141233	20.000	6141233			
35	1,4-Difluorobenzene	35	IS		1.000	5041467	20.000	5041467			
94	Toluene-d8	35	SURR		1.124	2939637	20.000	5041467			

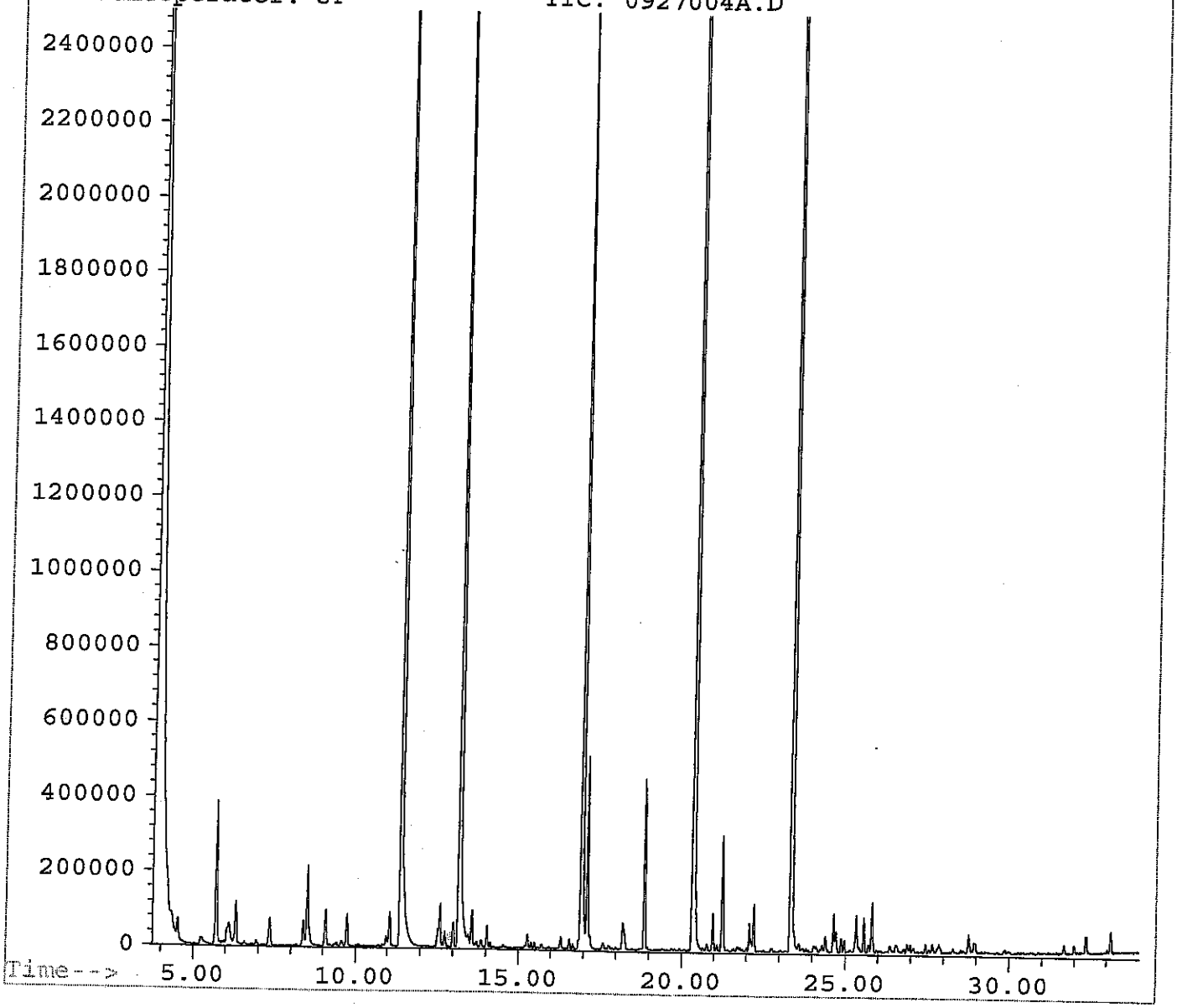
Calculation Definitions:

n	compound n
i	i th calibration level
Astdni	Standard Area for compound n at ith calibration level
Cstdni	Standard Concentration for compound n at ith calibration level in ppmv
Cistdi	Internal Standard Conc used for compound n at ith calibration level in ppmv
Aistdi	Internal Standard Area used for compound n at ith calibration level
Ansamp	Sample Area for compound n
Avg RFn	Average response factor for all ith calibration levels for compound n
Raw Amount	Sample Concentration in ppmv before applying factors
Cistd	Concentration internal standard used for compound n in sample in ppmv
Aistd	Area of internal standard used for compound n in sample
Cn	Concentration of compound n in sample in ppmv
23.68	Gas constant at 60 F as per EPA source test protocol
MW	Molecular weight of compound
Note (1) : Avg RFn	The values for the Average Response Factor AvgRFn can be optained from the response Factor Report for the Initial Calibration, or from the Calibration Report

Name of file: C:\MSCHEM\1\DATA\06259MS1\0927004A.D

Name of operator: JF

TIC: 0927004A.D



ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified Full Scan GC/MS
Analytical Method: TO-15

SDG: 209270
Laboratory Number: 07

File: 0927007A.D
Description: 44-012
Can/Tube#: 670
Sam_Type: SA
QC_Batch: 062509-MS1
Air Volume: 200 ml

Date Sampled: 06/16/09 **Time:** 16:30
Date Received: 06/17/09
Date Extracted:
Date Analyzed: 06/25/09 **Time:** 14:39
Can Dilution Factor: 1.49 2
Not Detected Flag: ND

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
67-63-0	2-propanol	0.34	1.70	0.82	0.86	4.31	2.09	J

	Surrogate Recovery	Spike Amt. ppbV	Amount ppbV	% Rec.	QC Limits	Flag * = Out
2037-26-5	Toluene-d8	10.000	10.004	100	70-130	

Notes: 1) Reported results are to be interpreted to two significant figures.
2) ug/m3 = ppbV*FW/23.68 calculated assuming conditions at 60 F and 1 atm.
3) MDL and RL are adjusted for sample volume and can dilution.
4) U and ND are Flags used for Not Detected
5) J is a flag for a result between the MDL and the RL (or lower quantitation limit, LQL)

QUANTITATION REPORT

EPA Method TO-15 Modified Full Scan GC/MS

Review **EAS Sample ID: 0927007**

File Name:	0927007A.D		1 KB
Sample ID:	44-012		2 AT
Date:	25 Jun 109 2:39 pm	Cal Amounts	3 BB
Run Method:	1T15EXAY.M	IS Areas	4 SH
Quant Method:	1T15EXAY.M	Carryover	
Cal Update:	Tue Mar 17 14:18:15 2009		
Template:	1TO15EXT.MS1		
Can Factor:	1.49		
Volume:	200 ml	Analyst: KB 1	

CAS#	Compound	n	Raw Amount	RT	Target RT	Ion	Sample Area	Qualifier	Lower Qual	Upper Qual	Qual Flag	Cal Flag	Int Flag
67-63-0	2-propanol	13	0.111	6.17	6.14	45.00	23684	343	18	27	Q		
363-72-4	Pentafluorobenzene	1	20.000	11.41	11.38	168.00	**6418588**						
540-36-3	1,4-Difluorobenzene	35	20.000	13.18	13.17	114.00	**5530766**						
2037-26-5	Toluene-d8	94	**10.004**	16.94	16.94	98.00	3110477	62	51	77			

Integration Flags:

If no flag the Integration was done by the instrument computer

M1 Manual Integration because the computer did not integrated the peak or integrated the wrong peak

M2 Manual Integration because computer integration of baseline was different then Inital Calibration

INITIAL CALIBRATION REPORT

EPA Method TO-15 Modified Full Scan GC/MS

File Name:	0927007A.D	SDG:	209270
Sample ID:	44-012	QC_Batch:	062509-MS1
Sample Analysis Date:	25 Jun 109 2:39 pm	Instrument Name:	5970 - In
Run Method:	1T15EXAY.M		
Quant and Calibration Method:	1T15EXAY.M	Calibration Title:	EPA T0-15
Cal Update:	Tue Mar 17 14:18:15 2009		
Template:	1TO15EXT.MS1		

Number Compounds:		96
IS1:	ST60403	20
IS2:	ST60403	20
IS3:		
IS4:		

	Calibration Amount CA, ppmv						Calibration Response, Area					
	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
	Amt	Amt	Amt	Amt	Amt	Amt	C03179C.D	C03179E.D	C03179B.D	C03179A.D	C03169H.D	C03179D.D
n Compound	0.25	4.0	1.0	5.0	10.0	2.0	0.25	4.0	1.0	5.0	10.0	2.0
13 2-propanol	0.228	3.640	0.910	4.550	9.100	1.820	19578	321532	75563	289890	1427833	154437
1 Pentafluorobenzene	20.000	20.000	20.000	20.000	20.000	20.000	2643183	2935915	2871816	2719013	2737194	3022845
35 1,4-Difluorobenzene	20.000	20.000	20.000	20.000	20.000	20.000	2659938	2870629	2814997	2720455	2706138	3020264
94 Toluene-d8	10.000	10.000	10.000	10.000	10.000	10.000	1479389	1629143	1590486	1469067	1546296	1730275

(191)

INITIAL CALIBRATION REPORT: Response Factors

SDG:	**209270**
QC_Batch:	**062509-MS1**
Sample ID:	44-012
Sample Analysis Date:	25 Jun 109 2:39 pm
Run Method:	1T15EXAY.M
Quant Method:	1T15EXAY.M
Cal Update:	Tue Mar 17 14:18:15 2009
Template:	1TO15EXT.MS1

Sample Calculation:

1) Avg RFn = Sum $\left| \frac{(Astdni)\ (Cistdi)}{(Cstdni)\ (Aistdi)} \right|_i$

Response Factors

Compound	RF1	RF2	RF3	RF4	RF5	RF6	AvgRFn	%RSD
2-propanol	0.650	0.602	0.578	0.469	1.146	0.561	0.668	36.24
Pentafluorobenzene	1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.00
1,4-Difluorobenzene	1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.00
Toluene-d8	1.112	1.135	1.130	1.080	1.143	1.146	1.124	2.20

CALCULATIONS

EPA Method TO-15 Modified Full Scan GC/MS

SDG: 209270
Laboratory Number: 07

RL: 1T15EXAY.M (2) RL, Concentration of lowest Standandard in ICAL:
Run Method: 1T15EXAY.M
Quant Method: 1T15EXAY.M
Can Dilution Factor: 1.49
Air Volume: 200 ml MDL Factor 1
Gas Constant: 23.68
Decimal Places: 2

Compound	M.W.	Raw Amount	Result ppbv	Result ug/m3	(1) MDL ppbv	(2) RL ppbv	Calc MDL ppbv	Calc MDL ug/m3	Calc RL ppbv	Calc RL ug/m3	Flag	Spike ppmv
2-propanol	60.1	0.111	0.823	2.09	0.046	0.228	0.34	0.86	1.70	4.31	J	0.103

SAMPLE CALCULATION

EPA Method TO-15 Modified Full Scan GC/MS

SDG:		**209270**
Laboratory Number:		**07**
Standard Volume	STV	5.0
Sample Volume	SV	200
Can Dilution Factor	CDF	1.49
Gas Constant		23.68
Decimal Places:		2

Sample Calculation:

1) Avg RFn = Sum $\left| \frac{(Astdni)}{(Cstdni)} \frac{(Cistdi)}{(Aistdi)} \right|_i$ Note: 1

2) Raw Amt = $\frac{(Ansamp)}{(Avg\ RFn)} \frac{(Cistdi)}{(Aistdi)}$ = Cn

3) Amount ppbv = $\frac{(Raw\ Amt)\ 1000}{(SV)}$ (CDF)

4) Amount ug/m3 = $\frac{(amt(ppbv)\ MW}{23.68}$

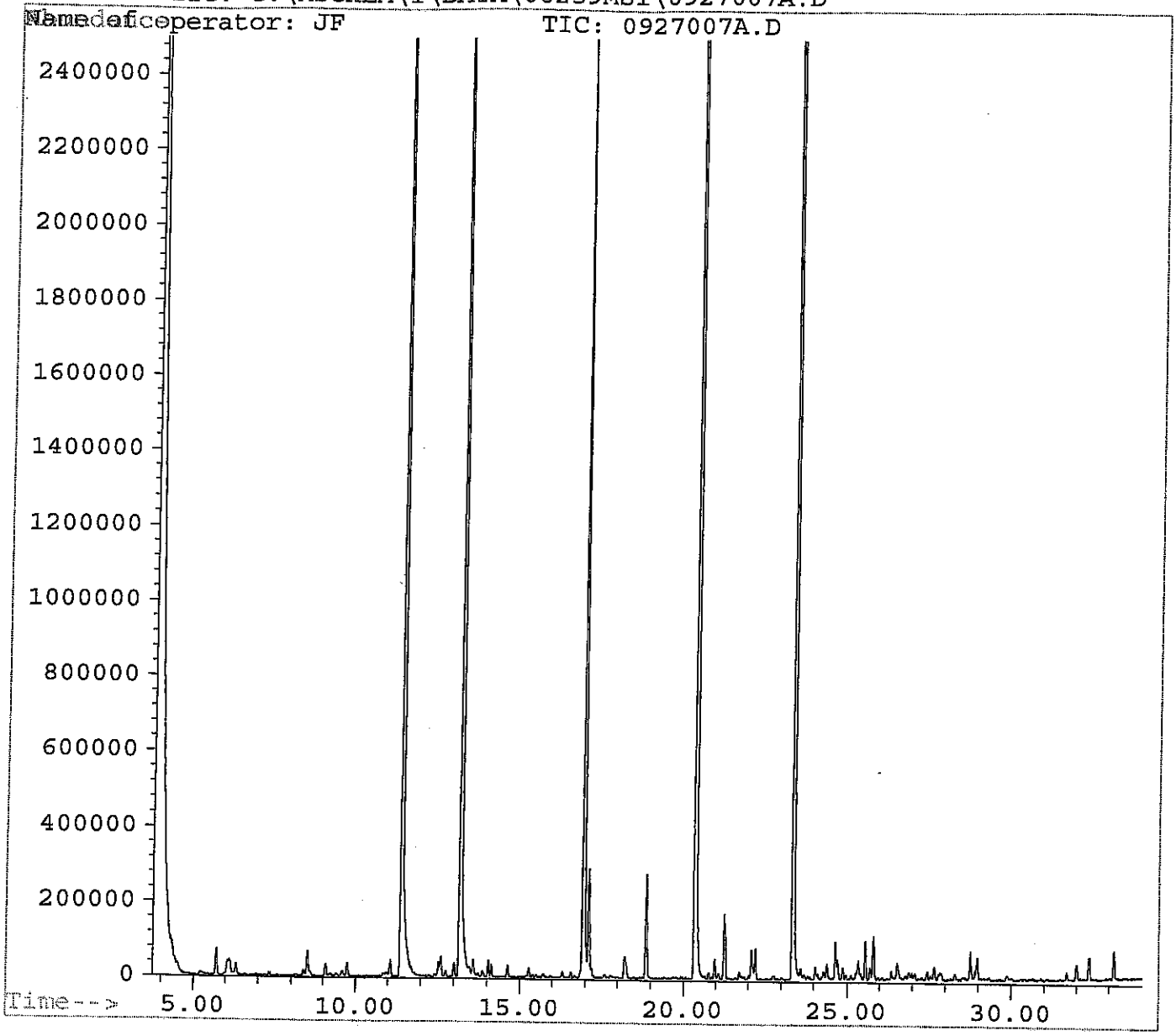
n	Compound	IS n	Chem type	MW	AvgRFn	Area Ansamp	Cistdi ppmv	Aistdi Ais	Cn ppmV Raw Amt	Amount ppbv	Amount ug/m3
13	2-propanol	1	TRG	60.1	0.668	23684	20.000	6418588	0.111	0.82	2.08
1	Pentafluorobenzene	1	IS		1.000	6418588	20.000	6418588			
35	1,4-Difluorobenzene	35	IS		1.000	5530766	20.000	5530766			
94	Toluene-d8	35	SURR		1.124	3110477	20.000	5530766			

Calculation Definitions:

n	compound n
i	i th calibration level
Astdni	Standard Area for compound n at ith calibration level
Cstdni	Standard Concentration for compound n at ith calibration level in ppmv
Cistdi	Internal Standard Conc used for compound n at ith calibration level in ppmv
Aistdi	Internal Standard Area used for compound n at ith calibration level
Ansamp	Sample Area for compound n
Avg RFn	Average response factor for all ith calibration levels for compound n
Raw Amount	Sample Concentration in ppmv before applying factors
Cistd	Concentration internal standard used for compound n in sample in ppmv
Aistd	Area of internal standard used for compound n in sample
Cn	Concentration of compound n in sample in ppmv
23.68	Gas constant at 60 F as per EPA source test protocol
MW	Molecular weight of compound
Note (1) : Avg RFn	The values for the Average Response Factor AvgRFn can be optained from the response Factor Report for the Initial Calibration, or from the Calibration Report

Name of file: C:\MSCHEM\1\DATA\06259MS1\0927007A.D

Name of operator: JF



ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified Full Scan GC/MS | **SDG:** 209270
Analytical Method: TO-15 | **Laboratory Number:** 08

File:	0927008A.D	**Date Sampled:**	06/16/09	**Time:**	16:33
Description:	44-013	**Date Received:**	06/17/09		
Can/Tube#:	782	**Date Extracted:**			
Sam_Type:	SA	**Date Analyzed:**	06/25/09	**Time:**	15:28
QC_Batch:	062509-MS1	**Can Dilution Factor:**	1.67		2
Air Volume:	200 ml	**Not Detected Flag:**	ND		

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
67-63-0	2-propanol	0.38	1.90	1.09	0.96	4.83	2.76	J

	Surrogate Recovery	Spike Amt. ppbV	Amount ppbV	% Rec.	QC Limits	Flag * = Out
2037-26-5	Toluene-d8	10.000	10.555	106	70-130	

Notes: 1) Reported results are to be interpreted to two significant figures.
2) ug/m3 = ppbV*FW/23.68 calculated assuming conditions at 60 F and 1 atm.
3) MDL and RL are adjusted for sample volume and can dilution.
4) U and ND are Flags used for Not Detected
5) J is a flag for a result between the MDL and the RL (or lower quantitation limit, LQL)

QUANTITATION REPORT

EPA Method TO-15 Modified Full Scan GC/MS

			Review	EAS Sample ID: 0927008	
File Name:	0927008A.D				1 KB
Sample ID:	44-013				2 AT
Date:	25 Jun 109 3:28 pm			Cal Amounts	3 BB
Run Method:	1T15EXAY.M			IS Areas	4 SH
Quant Method:	1T15EXAY.M			Carryover	
Cal Update:	Tue Mar 17 14:18:15 2009				
Template:	1TO15EXT.MS1				
Can Factor:	1.67				
Volume:	200	ml		Analyst: KB 1	

CAS#	Compound	n	Raw Amount	RT	Target RT	Ion	Sample Area	Qualifier	Lower Qual	Upper Qual	Qual Flag	Cal Flag	Int Flag
67-63-0	2-propanol	13	0.130	6.19	6.14	45.00	19014	263	18	27	Q		
363-72-4	Pentafluorobenzene	1	20.000	11.40	11.38	168.00	**4380241**						
540-36-3	1,4-Difluorobenzene	35	20.000	13.19	13.17	114.00	**3711105**						
2037-26-5	Toluene-d8	94	**10.555**	16.94	16.94	98.00	2201997	61	51	77			

Integration Flags:

If no flag the Integration was done by the instrument computer

M1 Manual Integration because the computer did not integrated the peak or integrated the wrong peak

M2 Manual Integration because computer integration of baseline was different then Inital Calibration

INITIAL CALIBRATION REPORT

EPA Method TO-15 Modified Full Scan GC/MS

SDG: 209270
QC_Batch: 062509-MS1
Instrument Name: 5970 - In

File Name: 0927008A.D
Sample ID: 44-013
Sample Analysis Date: 25 Jun 109 3:28 pm
Run Method: 1T15EXAY.M
Quant and Calibration Method: 1T15EXAY.M
Cal Update: Tue Mar 17 14:18:15 2009
Template: 1TO15EXT.MS1

Calibration Title:EPA T0-15

Number Compounds: 96
IS1: ST60403 20
IS2: ST60403 20
IS3:
IS4:

		Calibration Amount CA, ppmv						Calibration Response, Area					
		Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
		Amt	Amt	Amt	Amt	Amt	Amt	C03179C.D	C03179E.D	C03179B.D	C03179A.D	C03169H.D	C03179D.D
n	Compound	0.25	4.0	1.0	5.0	10.0	2.0	0.25	4.0	1.0	5.0	10.0	2.0
13	2-propanol	0.228	3.640	0.910	4.550	9.100	1.820	19578	321532	75563	289890	1427833	154437
1	Pentafluorobenzene	20.000	20.000	20.000	20.000	20.000	20.000	2643183	2935915	2871816	2719013	2737194	3022845
35	1,4-Difluorobenzene	20.000	20.000	20.000	20.000	20.000	20.000	2659938	2870629	2814997	2720455	2706138	3020264
94	Toluene-d8	10.000	10.000	10.000	10.000	10.000	10.000	1479389	1629143	1590486	1469067	1546296	1730275

INITIAL CALIBRATION REPORT: Response Factors

SDG:	**209270**
QC_Batch:	**062509-MS1**
Sample ID:	44-013
Sample Analysis Date:	25 Jun 109 3:28 pm
Run Method:	1T15EXAY.M
Quant Method:	1T15EXAY.M
Cal Update:	Tue Mar 17 14:18:15 2009
Template:	1TO15EXT.MS1

Sample Calculation:

1) Avg RFn = Sum $\left| \frac{(Astdni)}{(Cstdni)} \frac{(Cistdi)}{(Aistdi)} \right|$

Response Factors

Compound	RF1	RF2	RF3	RF4	RF5	RF6	AvgRFn	%RSD
2-propanol	0.650	0.602	0.578	0.469	1.146	0.561	0.668	36.24
Pentafluorobenzene	1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.00
1,4-Difluorobenzene	1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.00
Toluene-d8	1.112	1.135	1.130	1.080	1.143	1.146	1.124	2.20

CALCULATIONS

EPA Method TO-15 Modified Full Scan GC/MS

SDG: 209270
Laboratory Number: 08

RL: 1T15EXAY.M (2) RL, Concentration of lowest Standandard in ICAL:
Run Method: 1T15EXAY.M
Quant Method: 1T15EXAY.M
Can Dilution Factor: 1.67
Air Volume: 200 ml MDL Factor 1
Gas Constant: 23.68
Decimal Places: 2

Compound	M.W.	Raw Amount	Result ppbv	Result ug/m3	(1) MDL ppbv	(2) RL ppbv	Calc MDL ppbv	Calc MDL ug/m3	Calc RL ppbv	Calc RL ug/m3	Flag	Spike ppmv
2-propanol	60.1	0.130	1.086	2.76	0.046	0.228	0.38	0.96	1.90	4.83	J	0.103

SAMPLE CALCULATION

EPA Method TO-15 Modified Full Scan GC/MS

SDG:		**209270**
Laboratory Number:		**08**
Standard Volume	STV	5.0
Sample Volume	SV	200
Can Dilution Factor	CDF	1.67
Gas Constant		23.68
Decimal Places:		2

Sample Calculation:

1) Avg RFn = Sum $\left| \frac{(Astdni)}{(Cstdni)} \frac{(Cistdi)}{(Aistdi)} \right|_i$ Note: 1

2) Raw Amt = $\frac{(Ansamp)}{(Avg\ RFn)} \frac{(Cistdi)}{(Aistdi)}$ = **Cn**

3) Amount ppbv = $\frac{(Raw\ Amt)\ 1000}{(SV)}$ (CDF)

4) Amount ug/m3 = $\frac{(amt(ppbv)\ MW}{23.68}$

n	Compound	IS n	Chem type	MW	AvgRFn	Area Ansamp	Cistdi ppmv	Aistdi Ais	Cn ppmV Raw Amt	Amount ppbv	Amount ug/m3
13	2-propanol	1	TRG	60.1	0.668	19014	20.000	4380241	0.130	1.09	2.77
1	Pentafluorobenzene	1	IS		1.000	4380241	20.000	4380241			
35	1,4-Difluorobenzene	35	IS		1.000	3711105	20.000	3711105			
94	Toluene-d8	35	SURR		1.124	2201997	20.000	3711105			

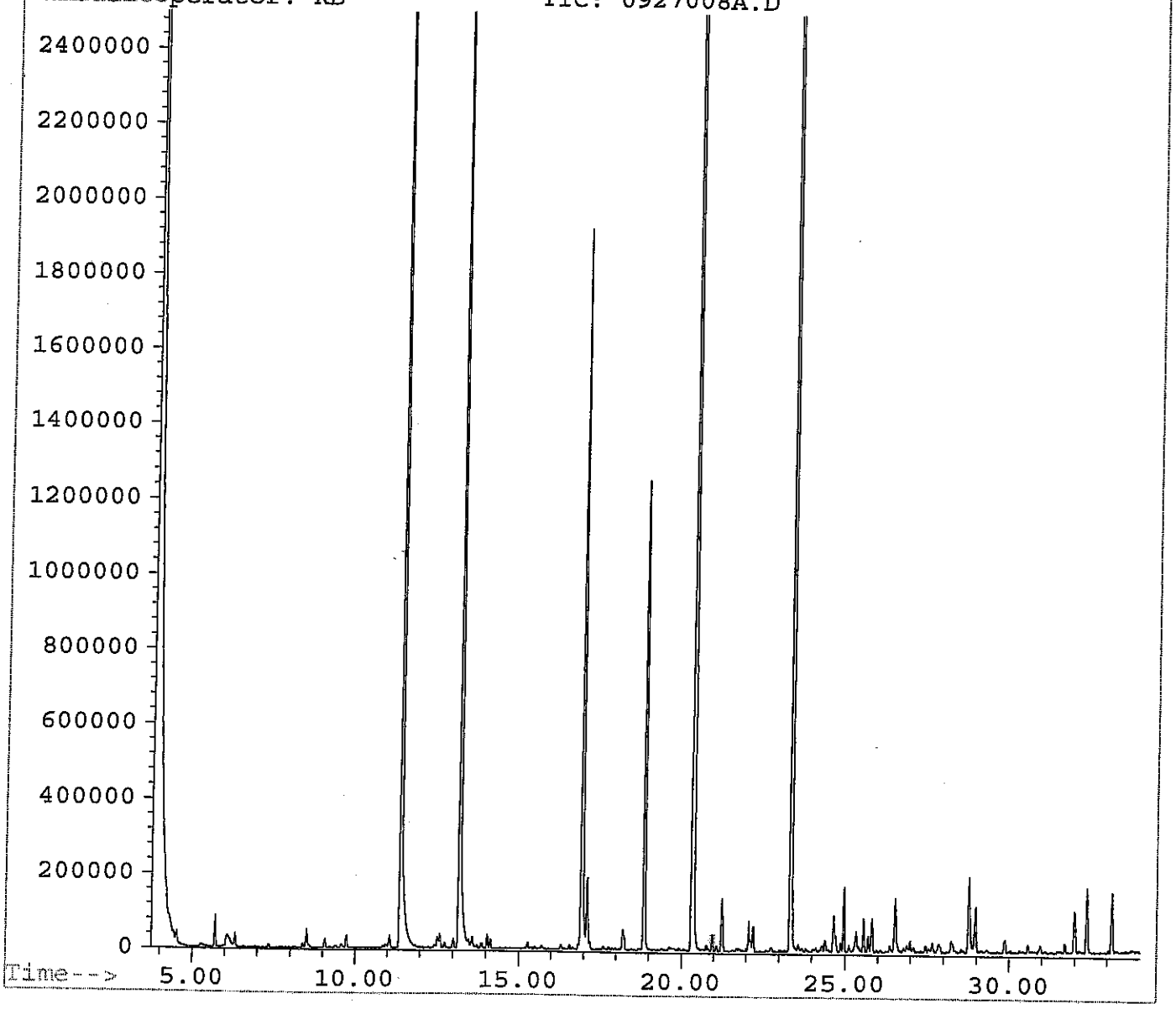
Calculation Definitions:

n	compound n
i	i th calibration level
Astdni	Standard Area for compound n at ith calibration level
Cstdni	Standard Concentration for compound n at ith calibration level in ppmv
Cistdi	Internal Standard Conc used for compound n at ith calibration level in ppmv
Aistdi	Internal Standard Area used for compound n at ith calibration level
Ansamp	Sample Area for compound n
Avg RFn	Average response factor for all ith calibration levels for compound n
Raw Amount	Sample Concentration in ppmv before applying factors
Cistd	Concentration internal standard used for compound n in sample in ppmv
Aistd	Area of internal standard used for compound n in sample
Cn	Concentration of compound n in sample in ppmv
23.68	Gas constant at 60 F as per EPA source test protocol
MW	Molecular weight of compound
Note (1) : Avg RFn	The values for the Average Response Factor AvgRFn can be optained from the response Factor Report for the Initial Calibration, or from the Calibration Report

Name of file: C:\MSCHEM\1\DATA\06259MS1\0927008A.D

Name of operator: KB

TIC: 0927008A.D



ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified Full Scan GC/MS
Analytical Method: TO-15

SDG: 209270
Laboratory Number: 09

File: 0927009A.D
Description: 44-014
Can/Tube#: 526
Sam_Type: SA
QC_Batch: 062509-MS1
Air Volume: 200 ml

Date Sampled: 06/16/09 **Time:** 16:38
Date Received: 06/17/09
Date Extracted:
Date Analyzed: 06/25/09 **Time:** 16:33
Can Dilution Factor: 2.16 2
Not Detected Flag: ND

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
67-63-0	2-propanol	0.49	2.46	0.74	1.25	6.25	1.88	J

	Surrogate Recovery	Spike Amt. ppbV	Amount ppbV	% Rec.	QC Limits	Flag * = Out
2037-26-5	Toluene-d8	10.000	10.191	102	70-130	

Notes: 1) Reported results are to be interpreted to two significant figures.
2) ug/m3 = ppbV*FW/23.68 calculated assuming conditions at 60 F and 1 atm.
3) MDL and RL are adjusted for sample volume and can dilution.
4) U and ND are Flags used for Not Detected
5) J is a flag for a result between the MDL and the RL (or lower quantitation limit, LQL)

QUANTITATION REPORT

EPA Method TO-15 Modified Full Scan GC/MS

			Review	EAS Sample ID: 0927009	
File Name:	0927009A.D				1 KB
Sample ID:	44-014				2 AT
Date:	25 Jun 109 4:33 pm			Cal Amounts	3 BB
Run Method:	1T15EXAY.M			IS Areas	4 SH
Quant Method:	1T15EXAY.M			Carryover	
Cal Update:	Tue Mar 17 14:18:15 2009				
Template:	1TO15EXT.MS1				
Can Factor:	2.16				
Volume:	200	ml		Analyst: KB 1	

CAS#	Compound	n	Raw Amount	RT	Target RT	Ion	Sample Area	Qualifier	Lower Qual	Upper Qual	Qual Flag	Cal Flag	Int Flag
67-63-0	2-propanol	13	0.068	6.18	6.14	45.00	12804	0	18	27	Q		
363-72-4	Pentafluorobenzene	1	20.000	11.36	11.38	168.00	5603603						
540-36-3	1,4-Difluorobenzene	35	20.000	13.15	13.17	114.00	4977819						
2037-26-5	Toluene-d8	94	10.191	16.92	16.94	98.00	2851736	62	51	77			

Integration Flags:

If no flag the Integration was done by the instrument computer

M1 Manual Integration because the computer did not integrated the peak or integrated the wrong peak

M2 Manual Integration because computer integration of baseline was different then Inital Calibration

INITIAL CALIBRATION REPORT

EPA Method TO-15 Modified Full Scan GC/MS

		SDG:	209270
		QC_Batch:	062509-MS1
File Name:	0927009A.D	Instrument Name:	5970 - In
Sample ID:	44-014		
Sample Analysis Date:	25 Jun 109 4:33 pm		
Run Method:	1T15EXAY.M	Number Compounds:	96
Quant and Calibration Method:	1T15EXAY.M	IS1: ST60403	20
Cal Update:	Tue Mar 17 14:18:15 2009	IS2: ST60403	20
Template:	1TO15EXT.MS1	IS3:	
		IS4:	

Calibration Title:EPA T0-15

		Calibration Amount CA, ppmv						Calibration Response, Area					
		Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
		Amt	Amt	Amt	Amt	Amt	Amt	C03179C.D	C03179E.D	C03179B.D	C03179A.D	C03169H.D	C03179D.D
n	Compound	0.25	4.0	1.0	5.0	10.0	2.0	0.25	4.0	1.0	5.0	10.0	2.0
13	2-propanol	0.228	3.640	0.910	4.550	9.100	1.820	19578	321532	75563	289890	1427833	154437
1	Pentafluorobenzene	20.000	20.000	20.000	20.000	20.000	20.000	2643183	2935915	2871816	2719013	2737194	3022845
35	1,4-Difluorobenzene	20.000	20.000	20.000	20.000	20.000	20.000	2659938	2870629	2814997	2720455	2706138	3020264
94	Toluene-d8	10.000	10.000	10.000	10.000	10.000	10.000	1479389	1629143	1590486	1469067	1546296	1730275

(205)

INITIAL CALIBRATION REPORT: Response Factors

SDG:	**209270**
QC_Batch:	**062509-MS1**
Sample ID:	44-014
Sample Analysis Date:	25 Jun 109 4:33 pm
Run Method:	1T15EXAY.M
Quant Method:	1T15EXAY.M
Cal Update:	Tue Mar 17 14:18:15 2009
Template:	1TO15EXT.MS1

Sample Calculation:

1) Avg RFn = Sum $\left| \frac{(Astdni)}{(Cstdni)} \frac{(Cistdi)}{(Aistdi)} \right|_i$

Response Factors

Compound	RF1	RF2	RF3	RF4	RF5	RF6	AvgRFn	%RSD
2-propanol	0.650	0.602	0.578	0.469	1.146	0.561	0.668	36.24
Pentafluorobenzene	1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.00
1,4-Difluorobenzene	1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.00
Toluene-d8	1.112	1.135	1.130	1.080	1.143	1.146	1.124	2.20

CALCULATIONS

EPA Method TO-15 Modified Full Scan GC/MS

SDG: 209270
Laboratory Number: 09

RL: 1T15EXAY.M (2) RL, Concentration of lowest Standandard in ICAL:
Run Method: 1T15EXAY.M
Quant Method: 1T15EXAY.M
Can Dilution Factor: 2.16
Air Volume: 200 ml MDL Factor 1
Gas Constant: 23.68
Decimal Places: 2

Compound	M.W.	Raw Amount	Result ppbv	Result ug/m3	(1) MDL ppbv	(2) RL ppbv	Calc MDL ppbv	Calc MDL ug/m3	Calc RL ppbv	Calc RL ug/m3	Flag	Spike ppmv
2-propanol	60.1	0.068	0.739	1.88	0.046	0.228	0.49	1.25	2.46	6.25	J	0.103

SAMPLE CALCULATION

EPA Method TO-15 Modified Full Scan GC/MS

SDG:		**209270**
Laboratory Number:		**09**
Standard Volume	STV	5.0
Sample Volume	SV	200
Can Dilution Factor	CDF	2.16
Gas Constant		23.68
Decimal Places:		2

Sample Calculation:

1) Avg RFn = Sum $\left| \frac{(Astdni)}{(Cstdni)} \frac{(Cistdi)}{(Aistdi)} \right|_i$ Note: 1

2) Raw Amt = $\frac{(Ansamp)}{(Avg\ RFn)} \frac{(Cistdi)}{(Aistdi)}$ = Cn

3) Amount ppbv = $\frac{(Raw\ Amt)\ 1000}{(SV)}$ (CDF)

4) Amount ug/m3 = $\frac{(amt(ppbv)\ MW}{23.68}$

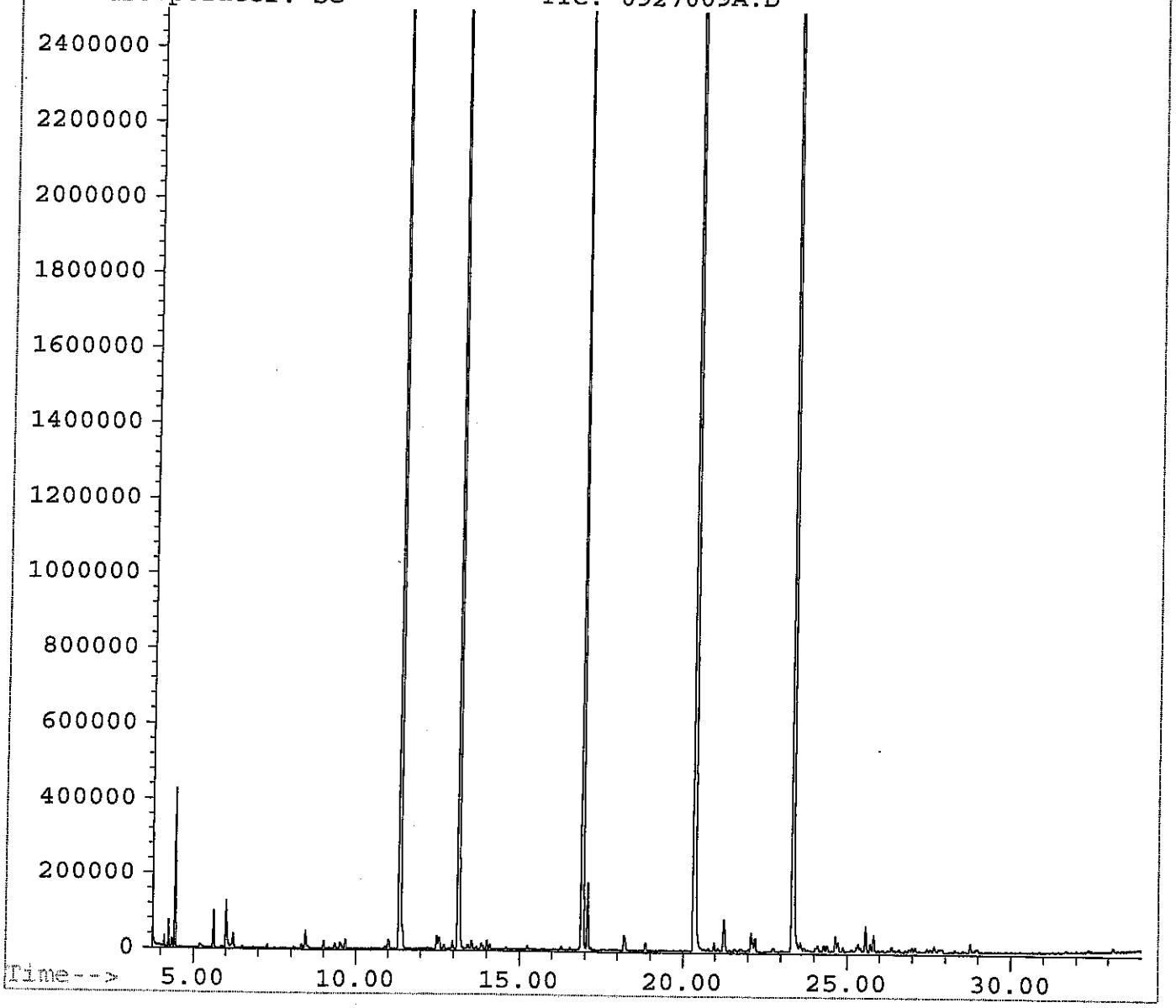
n	Compound	IS n	Chem type	MW	AvgRFn	Area Ansamp	Cistdi ppmv	Aistdi Ais	Cn ppmV Raw Amt	Amount ppbv	Amount ug/m3
13	2-propanol	1	TRG	60.1	0.668	12804	20.000	5603603	0.068	0.74	1.88
1	Pentafluorobenzene	1	IS		1.000	5603603	20.000	5603603			
35	1,4-Difluorobenzene	35	IS		1.000	4977819	20.000	4977819			
94	Toluene-d8	35	SURR		1.124	2851736	20.000	4977819			

Calculation Definitions:

n	compound n
i	i th calibration level
Astdni	Standard Area for compound n at ith calibration level
Cstdni	Standard Concentration for compound n at ith calibration level in ppmv
Cistdi	Internal Standard Conc used for compound n at ith calibration level in ppmv
Aistdi	Internal Standard Area used for compound n at ith calibration level
Ansamp	Sample Area for compound n
Avg RFn	Average response factor for all ith calibration levels for compound n
Raw Amount	Sample Concentration in ppmv before applying factors
Cistd	Concentration internal standard used for compound n in sample in ppmv
Aistd	Area of internal standard used for compound n in sample
Cn	Concentration of compound n in sample in ppmv
23.68	Gas constant at 60 F as per EPA source test protocol
MW	Molecular weight of compound
Note (1): Avg RFn	The values for the Average Response Factor AvgRFn can be optained from the response Factor Report for the Initial Calibration, or from the Calibration Report

Name of file: C:\MSCHEM\1\DATA\06259MS1\0927009A.D

Name of operator: SG



ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified Full Scan GC/MS
Analytical Method: TO-15

SDG: 209270
Laboratory Number: 10

File: 0927010A.D
Description: 44-015
Can/Tube#: 188
Sam_Type: SA
QC_Batch: 062509-MS1
Air Volume: 200 ml

Date Sampled: 06/16/09 **Time:** 16:40
Date Received: 06/17/09
Date Extracted:
Date Analyzed: 06/25/09 **Time:** 17:15
Can Dilution Factor: 1.62 2
Not Detected Flag: ND

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
67-63-0	2-propanol	0.37	1.85	0.59	0.94	4.69	1.50	J

	Surrogate Recovery	Spike Amt. ppbV	Amount ppbV	% Rec.	QC Limits	Flag * = Out
2037-26-5	Toluene-d8	10.000	9.583	96	70-130	

Notes: 1) Reported results are to be interpreted to two significant figures.
2) ug/m3 = ppbV*FW/23.68 calculated assuming conditions at 60 F and 1 atm.
3) MDL and RL are adjusted for sample volume and can dilution.
4) U and ND are Flags used for Not Detected
5) J is a flag for a result between the MDL and the RL (or lower quantitation limit, LQL)

QUANTITATION REPORT

EPA Method TO-15 Modified Full Scan GC/MS

			Review	EAS Sample ID: 0927010	
File Name:	0927010A.D				1 KB
Sample ID:	44-015				2 AT
Date:	25 Jun 109 5:15 pm			Cal Amounts	3 BB
Run Method:	1T15EXAY.M			IS Areas	4 SH
Quant Method:	1T15EXAY.M			Carryover	
Cal Update:	Tue Mar 17 14:18:15 2009				
Template:	1TO15EXT.MS1				
Can Factor:	1.62				
Volume:	200	ml		Analyst: KB 1	

CAS#	Compound	n	Raw Amount	RT	Target RT	Ion	Sample Area	Qualifier	Lower Qual	Upper Qual	Qual Flag	Cal Flag	Int Flag
67-63-0	2-propanol	13	0.073	6.05	6.14	45.00	15331	0	18	27	Q		
363-72-4	Pentafluorobenzene	1	20.000	11.27	11.38	168.00	6300048						
540-36-3	1,4-Difluorobenzene	35	20.000	13.08	13.17	114.00	5311136						
2037-26-5	Toluene-d8	94	9.583	16.86	16.94	98.00	2861196	63	51	77			

Integration Flags:

If no flag the integration was done by the instrument computer

M1 Manual integration because the computer did not integrated the peak or integrated the wrong peak

M2 Manual integration because computer integration of baseline was different then Inital Calibration

INITIAL CALIBRATION REPORT

EPA Method TO-15 Modified Full Scan GC/MS

File Name:	0927010A.D	SDG:	209270
Sample ID:	44-015	QC_Batch:	062509-MS1
Sample Analysis Date:	25 Jun 109 5:15 pm	Instrument Name:	5970 - In
Run Method:	1T15EXAY.M		
Quant and Calibration Method:	1T15EXAY.M	Calibration Title:	EPA T0-15
Cal Update:	Tue Mar 17 14:18:15 2009		
Template:	1TO15EXT.MS1		

Number Compounds:		96
IS1:	ST60403	20
IS2:	ST60403	20
IS3:		
IS4:		

		Calibration Amount CA, ppmv						Calibration Response, Area					
		Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
		Amt	Amt	Amt	Amt	Amt	Amt	C03179C.D	C03179E.D	C03179B.D	C03179A.D	C03169H.D	C03179D.D
n	Compound	0.25	4.0	1.0	5.0	10.0	2.0	0.25	4.0	1.0	5.0	10.0	2.0
13	2-propanol	0.228	3.640	0.910	4.550	9.100	1.820	19578	321532	75563	289890	1427833	154437
1	Pentafluorobenzene	20.000	20.000	20.000	20.000	20.000	20.000	2643183	2935915	2871816	2719013	2737194	3022845
35	1,4-Difluorobenzene	20.000	20.000	20.000	20.000	20.000	20.000	2659938	2870629	2814997	2720455	2706138	3020264
94	Toluene-d8	10.000	10.000	10.000	10.000	10.000	10.000	1479389	1629143	1590486	1469067	1546296	1730275

(212)

INITIAL CALIBRATION REPORT: Response Factors

SDG:	**209270**
QC_Batch:	**062509-MS1**
Sample ID:	44-015
Sample Analysis Date:	25 Jun 109 5:15 pm
Run Method:	1T15EXAY.M
Quant Method:	1T15EXAY.M
Cal Update:	Tue Mar 17 14:18:15 2009
Template:	1TO15EXT.MS1

Sample Calculation:

1) Avg RFn = Sum $\left| \frac{(Astdni)\ (Cistdi)}{(Cstdni)\ (Aistdi)} \right|_i$

Response Factors

Compound	RF1	RF2	RF3	RF4	RF5	RF6	AvgRFn	%RSD
2-propanol	0.650	0.602	0.578	0.469	1.146	0.561	0.668	36.24
Pentafluorobenzene	1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.00
1,4-Difluorobenzene	1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.00
Toluene-d8	1.112	1.135	1.130	1.080	1.143	1.146	1.124	2.20

CALCULATIONS

EPA Method TO-15 Modified Full Scan GC/MS

SDG: 209270
Laboratory Number: 10

RL: 1T15EXAY.M (2) RL, Concentration of lowest Standandard in ICAL:
Run Method: 1T15EXAY.M
Quant Method: 1T15EXAY.M
Can Dilution Factor: 1.62
Air Volume: 200 ml MDL Factor 1
Gas Constant: 23.68
Decimal Places: 2

Compound	M.W.	Raw Amount	Result ppbv	Result ug/m3	(1) MDL ppbv	(2) RL ppbv	Calc MDL ppbv	Calc MDL ug/m3	Calc RL ppbv	Calc RL ug/m3	Flag	Spike ppmv
2-propanol	60.1	0.073	0.590	1.50	0.046	0.228	0.37	0.94	1.85	4.69	J	0.103

SAMPLE CALCULATION

EPA Method TO-15 Modified Full Scan GC/MS

SDG:		**209270**
Laboratory Number:		**10**
Standard Volume	STV	5.0
Sample Volume	SV	200
Can Dilution Factor	CDF	1.62
Gas Constant		23.68
Decimal Places:		2

Sample Calculation:

1) Avg RFn = Sum $\left| \frac{(Astdni)}{(Cstdni)} \frac{(Cistdi)}{(Aistdi)} \right|_i$ Note: 1

2) Raw Amt = $\frac{(Ansamp)}{(Avg\ RFn)} \frac{(Cistdi)}{(Aistdi)}$ = **Cn**

3) Amount ppbv = $\frac{(Raw\ Amt)\ 1000}{(SV)}$ (CDF)

4) Amount ug/m3 = $\frac{(amt(ppbv)\ MW}{23.68}$

n	Compound	IS n	Chem type	MW	AvgRFn	Area Ansamp	Cistdi ppmv	Aistdi Ais	Cn ppmV Raw Amt	Amount ppbv	Amount ug/m3
13	2-propanol	1	TRG	60.1	0.668	15331	20.000	6300048	0.073	0.59	1.50
1	Pentafluorobenzene	1	IS		1.000	6300048	20.000	6300048			
35	1,4-Difluorobenzene	35	IS		1.000	5311136	20.000	5311136			
94	Toluene-d8	35	SURR		1.124	2861196	20.000	5311136			

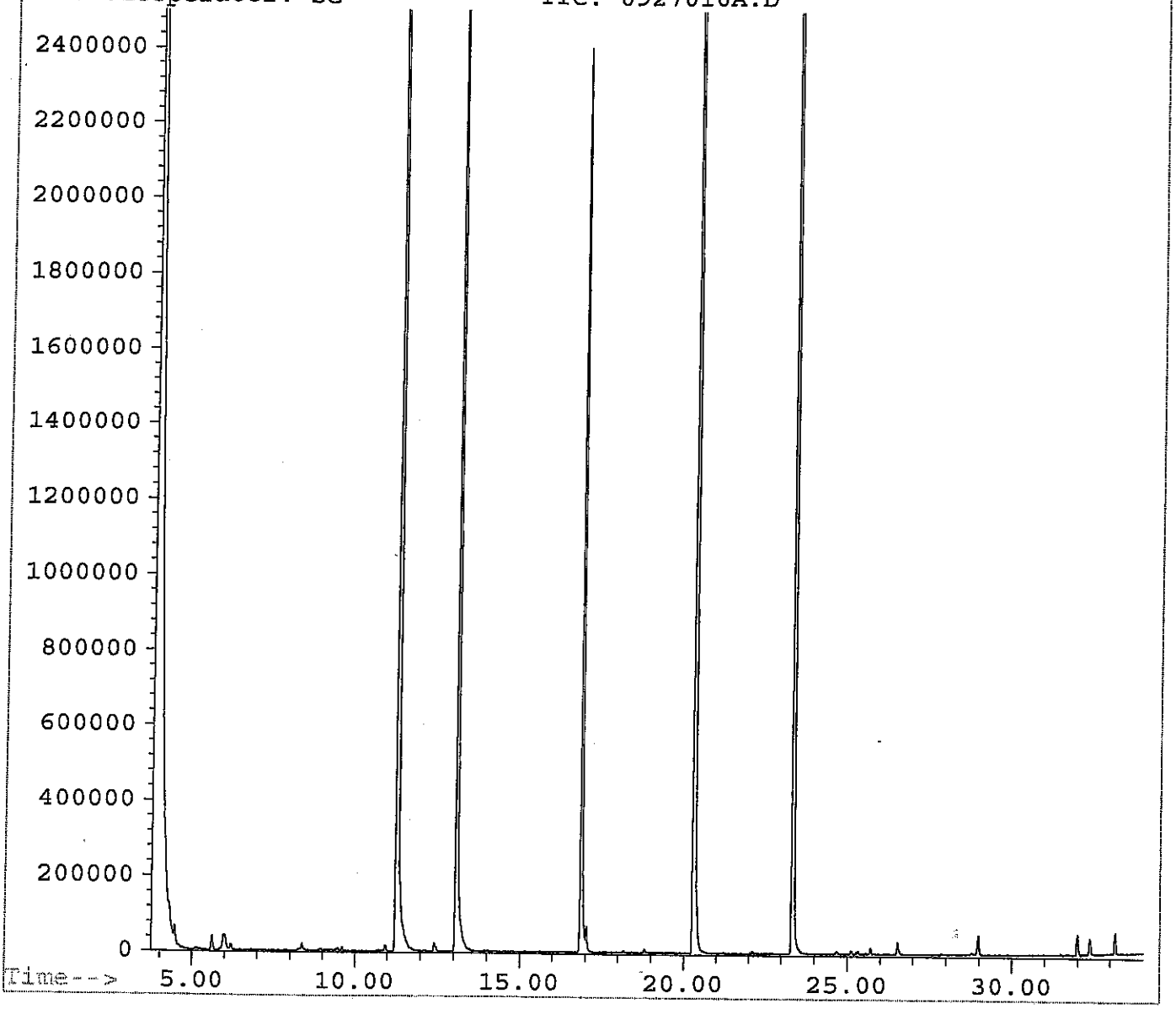
Calculation Definitions:

n	compound n
i	i th calibration level
Astdni	Standard Area for compound n at ith calibration level
Cstdni	Standard Concentration for compound n at ith calibration level in ppmv
Cistdi	Internal Standard Conc used for compound n at ith calibration level in ppmv
Aistdi	Internal Standard Area used for compound n at ith calibration level
Ansamp	Sample Area for compound n
Avg RFn	Average response factor for all ith calibration levels for compound n
Raw Amount	Sample Concentration in ppmv before applying factors
Cistd	Concentration internal standard used for compound n in sample in ppmv
Aistd	Area of internal standard used for compound n in sample
Cn	Concentration of compound n in sample in ppmv
23.68	Gas constant at 60 F as per EPA source test protocol
MW	Molecular weight of compound
Note (1) : Avg RFn	The values for the Average Response Factor AvgRFn can be optained from the response Factor Report for the Initial Calibration, or from the Calibration Report

Name of file: C:\MSCHEM\1\DATA\06259MS1\0927010A.D

Name of operator: SG

TIC: 0927010A.D



ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified Full Scan GC/MS | **SDG:** 209270
Analytical Method: TO-15 | **Laboratory Number:** 11

File:	0927011A.D	**Date Sampled:**	06/16/09	**Time:**	
Description:	44-016	**Date Received:**	06/17/09		
Can/Tube#:	703	**Date Extracted:**			
Sam_Type:	SA	**Date Analyzed:**	06/25/09	**Time:**	17:58
QC_Batch:	062509-MS1	**Can Dilution Factor:**	1.00		2
Air Volume:	500 ml	**Not Detected Flag:**	ND		

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
76-14-2	Freon 114	0.10	0.52	ND	0.75	3.75	ND	ND
108-05-4	Vinyl acetate	0.09	0.43	ND	0.31	1.56	ND	ND
78-93-3	2-Butanone	0.09	0.43	0.80	0.26	1.31	2.43	
108-10-1	Methyl Isobutyl Ketone	0.09	0.46	ND	0.39	1.95	ND	ND
10061-01-5	cis-1,3-Dichloropropene	0.11	0.53	ND	0.50	2.48	ND	ND
10061-02-6	trans-1,3-Dichloropropene	0.10	0.52	ND	0.49	2.44	ND	ND
591-78-6	2-Hexanone	0.09	0.44	ND	0.37	1.86	ND	ND
124-48-1	Dibromochloromethane	0.09	0.45	ND	0.78	3.92	ND	ND
622-96-8	4-Ethyltoluene	0.09	0.46	ND	0.46	2.31	ND	ND
87-68-3	Hexachlorobutadiene	0.21	2.06	ND	2.27	22.69	ND	ND

	Surrogate Recovery	Spike Amt. ppbV	Amount ppbV	% Rec.	QC Limits	Flag * = Out
2037-26-5	Toluene-d8	10.000	10.017	100	70-130	

Notes: 1) Reported results are to be interpreted to two significant figures.
2) ug/m3 = ppbV*FW/23.68 calculated assuming conditions at 60 F and 1 atm.
3) MDL and RL are adjusted for sample volume and can dilution.
4) U and ND are Flags used for Not Detected
5) J is a flag for a result between the MDL and the RL (or lower quantitation limit, LQL)

QUANTITATION REPORT

EPA Method TO-15 Modified Full Scan GC/MS

			Review	EAS Sample ID: 0927011	
File Name:	0927011A.D				1 KB
Sample ID:	44-016				2 AT
Date:	25 Jun 109 5:58 pm			Cal Amounts	3 BB
Run Method:	1T15EXAY.M			IS Areas	4 SH
Quant Method:	1T15EXAY.M			Carryover	
Cal Update:	Tue Mar 17 14:18:15 2009				
Template:	1TO15EXT.MS1				
Can Factor:	1.00				
Volume:	500	ml		Analyst: KB 1	

CAS#	Compound	n	Raw Amount	RT	Target RT	Ion	Sample Area	Qualifier	Lower Qual	Upper Qual	Qual Flag	Cal Flag	Int Flag
76-14-2	Freon 114	4	0.015	3.85	4.11	85.00	2024	0	44	65	Q		
108-05-4	Vinyl acetate	25	0.000	0.00	10.32	43.00	0	0	0	0			
78-93-3	2-Butanone	26	0.399	9.55	9.54	72.00	14461	45	30	45	Q		
108-10-1	Methyl Isobutyl Ketone	49	0.010	15.76	15.70	43.00	3688	0	21	35	Q		
10061-01-5	cis-1,3-Dichloropropene	50	0.000	0.00	15.82	75.00	0	0	15	23			
10061-02-6	trans-1,3-Dichloropropene	52	0.000	0.00	16.85	75.00	0	0	16	23			
591-78-6	2-Hexanone	54	0.011	17.80	17.80	43.00	5262	0	28	47	Q		
124-48-1	Dibromochloromethane	57	0.000	0.00	18.30	129.00	0	0	60	91			
622-96-8	4-Ethyltoluene	72	0.008	24.72	24.74	105.00	5359	0	20	31	Q		
87-68-3	Hexachlorobutadiene	88	0.004	33.05	33.08	225.00	3073	0	22	33	Q		
363-72-4	Pentafluorobenzene	1	20.000	11.39	11.38	168.00	4260909						
540-36-3	1,4-Difluorobenzene	35	20.000	13.19	13.17	114.00	3646886						
2037-26-5	Toluene-d8	94	10.017	16.95	16.94	98.00	2053623	61	51	77			

Integration Flags:

If no flag the Integration was done by the instrument computer

M1 Manual Integration because the computer did not integrated the peak or integrated the wrong peak

M2 Manual Integration because computer integration of baseline was different then Inital Calibration

INITIAL CALIBRATION REPORT

EPA Method TO-15 Modified Full Scan GC/MS

		SDG:	209270
		QC_Batch:	062509-MS1
File Name:	0927011A.D	Instrument Name:	5970 - In
Sample ID:	44-016		
Sample Analysis Date:	25 Jun 109 5:58 pm	Number Compounds:	96
Run Method:	1T15EXAY.M	IS1: ST60403	20
Quant and Calibration Method:	1T15EXAY.M	IS2: ST60403	20
Cal Update:	Tue Mar 17 14:18:15 2009	IS3:	
Template:	1TO15EXT.MS1	IS4:	

Calibration Title:EPA T0-15

		Calibration Amount CA, ppmv						Calibration Response, Area					
		Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
		Amt	Amt	Amt	Amt	Amt	Amt	C03179C.D	C03179E.D	C03179B.D	C03179A.D	C03169H.D	C03179D.D
n	Compound	0.25	4.0	1.0	5.0	10.0	2.0	0.25	4.0	1.0	5.0	10.0	2.0
4	Freon 114	0.260	4.160	1.040	5.200	10.400	2.080	25317	399238	94441	464176	861160	193013
25	Vinyl acetate	0.215	3.440	0.860	4.300	8.600	1.720	40148	687529	149287	676740	1560060	338492
26	2-Butanone	0.215	3.440	0.860	4.300	8.600	1.720	5400	92652	22013	71425	205517	45058
49	Methyl Isobutyl Ketone	0.230	3.680	0.920	4.600	9.200	1.840	67434	1179200	250239	1039898	2505790	566705
50	cis-1,3-Dichloropropene	0.265	4.240	1.060	5.300	10.600	2.120	28339	441906	107039	492454	1010236	206495
52	trans-1,3-Dichloropropene	0.260	4.160	1.040	5.200	10.400	2.080	33546	509168	127376	538174	1205186	242137
54	2-Hexanone	0.220	3.520	0.880	4.400	8.800	1.760	84018	1413472	311524	1112452	3278869	678898
57	Dibromochloromethane	0.223	3.560	0.890	4.450	8.900	1.780	43801	688881	150691	558917	1316838	322250
72	4-Ethyltoluene	0.228	3.640	0.910	4.550	9.100	1.820	177076	1912961	437379	1573293	3712735	943267
88	Hexachlorobutadiene	-1.000	4.120	1.030	5.150	10.300	2.060	-1	2443776	758051	1914490	4177636	1622637
1	Pentafluorobenzene	20.000	20.000	20.000	20.000	20.000	20.000	2643183	2935915	2871816	2719013	2737194	3022845
35	1,4-Difluorobenzene	20.000	20.000	20.000	20.000	20.000	20.000	2659938	2870629	2814997	2720455	2706138	3020264
94	Toluene-d8	10.000	10.000	10.000	10.000	10.000	10.000	1479389	1629143	1590486	1469067	1546296	1730275

(219)

INITIAL CALIBRATION REPORT: Response Factors

SDG:	**209270**
QC_Batch:	**062509-MS1**
Sample ID:	44-016
Sample Analysis Date:	25 Jun 109 5:58 pm
Run Method:	1T15EXAY.M
Quant Method:	1T15EXAY.M
Cal Update:	Tue Mar 17 14:18:15 2009
Template:	1TO15EXT.MS1

Sample Calculation:

1) Avg RFn = Sum $\left| \frac{(Astdni)}{(Cstdni)} \frac{(Cistdi)}{(Aistdi)} \right|_i$

Response Factors

Compound	RF1	RF2	RF3	RF4	RF5	RF6	AvgRFn	%RSD
Freon 114	0.737	0.654	0.632	0.657	0.605	0.614	0.650	7.29
Vinyl acetate	1.413	1.362	1.209	1.158	1.325	1.302	1.295	7.38
2-Butanone	0.190	0.183	0.178	0.122	0.175	0.173	0.170	14.31
Methyl Isobutyl Ketone	2.204	2.233	1.932	1.662	2.013	2.040	2.014	10.30
cis-1,3-Dichloropropene	0.804	0.726	0.717	0.683	0.704	0.645	0.713	7.44
trans-1,3-Dichloropropene	0.970	0.853	0.870	0.761	0.856	0.771	0.847	9.00
2-Hexanone	2.871	2.798	2.515	1.859	2.754	2.554	2.559	14.47
Dibromochloromethane	1.477	1.348	1.203	0.923	1.094	1.199	1.207	15.98
4-Ethyltoluene	5.840	3.661	3.415	2.542	3.015	3.432	3.651	31.30
Hexachlorobutadiene	NA	4.133	5.229	2.733	2.998	5.216	4.062	29.13
Pentafluorobenzene	1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.00
1,4-Difluorobenzene	1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.00
Toluene-d8	1.112	1.135	1.130	1.080	1.143	1.146	1.124	2.20

CALCULATIONS

EPA Method TO-15 Modified Full Scan GC/MS

SDG: 209270
Laboratory Number: 11

RL: 1T15EXAY.M (2) RL, Concentration of lowest Standandard in ICAL:
Run Method: 1T15EXAY.M
Quant Method: 1T15EXAY.M
Can Dilution Factor: 1.00
Air Volume: 500 ml MDL Factor 1
Gas Constant: 23.68
Decimal Places: 2

Compound	M.W.	Raw Amount	Result ppbv	Result ug/m3	(1) MDL ppbv	(2) RL ppbv	Calc MDL ppbv	Calc MDL ug/m3	Calc RL ppbv	Calc RL ug/m3	Flag	Spike ppmv
Freon 114	170.9	0.015	0.029	0.21	0.052	0.260	0.10	0.75	0.52	3.75	U	1
Vinyl acetate	86.1	0.000	0.000	0.00	0.043	0.215	0.09	0.31	0.43	1.56	U	1
2-Butanone	72.1	0.399	0.797	2.43	0.043	0.215	0.09	0.26	0.43	1.31		1
Methyl Isobutyl Ketone	100.2	0.010	0.020	0.08	0.046	0.230	0.09	0.39	0.46	1.95	U	1
cis-1,3-Dichloropropene	111.0	0.000	0.000	0.00	0.053	0.265	0.11	0.50	0.53	2.48	U	1
trans-1,3-Dichloropropene	111.0	0.000	0.000	0.00	0.052	0.260	0.10	0.49	0.52	2.44	U	1
2-Hexanone	100.2	0.011	0.023	0.10	0.044	0.220	0.09	0.37	0.44	1.86	U	1
Dibromochloromethane	208.3	0.000	0.000	0.00	0.045	0.223	0.09	0.78	0.45	3.92	U	1
4-Ethyltoluene	120.2	0.008	0.016	0.08	0.046	0.228	0.09	0.46	0.46	2.31	U	1
Hexachlorobutadiene	260.8	0.004	0.008	0.09	0.103	1.030	0.21	2.27	2.06	22.69	U	1

SAMPLE CALCULATION

EPA Method TO-15 Modified Full Scan GC/MS

SDG:		**209270**
Laboratory Number:		**11**
Standard Volume	STV	5.0
Sample Volume	SV	500
Can Dilution Factor	CDF	1.00
Gas Constant		23.68
Decimal Places:		2

Sample Calculation:

1) Avg RFn = Sum $\left| \frac{(Astdni)}{(Cstdni)} \frac{(Cistdi)}{(Aistdi)} \right|_i$ Note: 1

2) Raw Amt = $\frac{(Ansamp)}{(Avg\ RFn)} \frac{(Cistdi)}{(Aistdi)}$ = Cn

3) Amount ppbv = $\frac{(Raw\ Amt)\ 1000}{(SV)}$ (CDF)

4) Amount ug/m3 = $\frac{(amt(ppbv)\ MW}{23.68}$

n	Compound	IS n	Chem type	MW	AvgRFn	Area Ansamp	Cistdi ppmv	Aistdi Ais	Cn ppmV Raw Amt	Amount ppbv	Amount ug/m3
4	Freon 114	1	TRG	170.9	0.650	2024	20.000	4260909	0.015	0.03	0.22
25	Vinyl acetate	1	TRG	86.1	1.295	0	20.000	4260909	0.000	0.00	0.00
26	2-Butanone	1	TRG	72.1	0.170	14461	20.000	4260909	0.399	0.80	2.44
49	Methyl Isobutyl Ketone	35	TRG	100.2	2.014	3688	20.000	3646886	0.010	0.02	0.08
50	cis-1,3-Dichloropropene	35	TRG	111.0	0.713	0	20.000	3646886	0.000	0.00	0.00
52	trans-1,3-Dichloropropene	35	TRG	111.0	0.847	0	20.000	3646886	0.000	0.00	0.00
54	2-Hexanone	35	TRG	100.2	2.559	5262	20.000	3646886	0.011	0.02	0.08
57	Dibromochloromethane	35	TRG	208.3	1.207	0	20.000	3646886	0.000	0.00	0.00
72	4-Ethyltoluene	35	TRG	120.2	3.651	5359	20.000	3646886	0.008	0.02	0.10
88	Hexachlorobutadiene	35	TRG	260.8	4.062	3073	20.000	3646886	0.004	0.01	0.11
1	Pentafluorobenzene	1	IS		1.000	4260909	20.000	4260909			
35	1,4-Difluorobenzene	35	IS		1.000	3646886	20.000	3646886			
94	Toluene-d8	35	SURR		1.124	2053623	20.000	3646886			

Calculation Definitions:

n	compound n
i	I th calibration level
Astdni	Standard Area for compound n at ith calibration level
Cstdni	Standard Concentration for compound n at ith calibration level in ppmv
Cistdi	Internal Standard Conc used for compound n at ith calibration level in ppmv
Aistdi	Internal Standard Area used for compound n at ith calibration level
Ansamp	Sample Area for compound n
Avg RFn	Average response factor for all ith calibration levels for compound n
Raw Amount	Sample Concentration in ppmv before applying factors
Cistd	Concentration internal standard used for compound n in sample in ppmv
Aistd	Area of internal standard used for compound n in sample
Cn	Concentration of compound n in sample in ppmv
23.68	Gas constant at 60 F as per EPA source test protocol
MW	Molecular weight of compound
Note (1) : Avg RFn	The values for the Average Response Factor AvgRFn can be optained from the response Factor Report for the Initial Calibration, or from the Calibration Report

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified Full Scan GC/MS
Analytical Method: TO-15

SDG: 209270
Laboratory Number: 11

File: 0927011A.D
Description: 44-016
Can/Tube#: 703
Sam_Type: SA
QC_Batch: 062509-MS1
Air Volume: 500 ml

Date Sampled: 06/16/09 **Time:**
Date Received: 06/17/09
Date Extracted:
Date Analyzed: 06/25/09 **Time:** 17:58
Can Dilution Factor: 1.00 2
Not Detected Flag: ND

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
67-63-0	2-propanol	0.09	0.46	1.32	0.23	1.16	3.34	

	Surrogate Recovery	Spike Amt. ppbV	Amount ppbV	% Rec.	QC Limits	Flag * = Out
2037-26-5	Toluene-d8	10.000	10.017	100	70-130	

Notes: 1) Reported results are to be interpreted to two significant figures.
2) ug/m3 = ppbV*FW/23.68 calculated assuming conditions at 60 F and 1 atm.
3) MDL and RL are adjusted for sample volume and can dilution.
4) U and ND are Flags used for Not Detected
5) J is a flag for a result between the MDL and the RL (or lower quantitation limit, LQL)

QUANTITATION REPORT

EPA Method TO-15 Modified Full Scan GC/MS

		Review	EAS Sample ID: 0927011	
File Name:	0927011A.D			1 KB
Sample ID:	44-016			2 AT
Date:	25 Jun 109 5:58 pm		Cal Amounts	3 BB
Run Method:	1T15EXAY.M		IS Areas	4 SH
Quant Method:	1T15EXAY.M		Carryover	
Cal Update:	Tue Mar 17 14:18:15 2009			
Template:	1TO15EXT.MS1			
Can Factor:	1.00			
Volume:	500 ml		Analyst: KB 1	

CAS#	Compound	n	Raw Amount	RT	Target RT	Ion	Sample Area	Qualifier	Lower Qual	Upper Qual	Qual Flag	Cal Flag	Int Flag
67-63-0	2-propanol	13	0.658	6.16	6.14	45.00	93586	0	18	27	Q		
363-72-4	Pentafluorobenzene	1	20.000	11.39	11.38	168.00	**4260909**						
540-36-3	1,4-Difluorobenzene	35	20.000	13.19	13.17	114.00	**3646886**						
2037-26-5	Toluene-d8	94	**10.017**	16.95	16.94	98.00	2053623	61	51	77			

Integration Flags:

If no flag the Integration was done by the instrument computer

M1 Manual Integration because the computer did not integrated the peak or integrated the wrong peak

M2 Manual Integration because computer Integration of baseline was different then Inital Calibration

INITIAL CALIBRATION REPORT

EPA Method TO-15 Modified Full Scan GC/MS

File Name:	0927011A.D	SDG:	209270
Sample ID:	44-016	QC_Batch:	062509-MS1
Sample Analysis Date:	25 Jun 109 5:58 pm	Instrument Name:	5970 - In
Run Method:	1T15EXAY.M		
Quant and Calibration Method:	1T15EXAY.M	Calibration Title:	EPA T0-15
Cal Update:	Tue Mar 17 14:18:15 2009		
Template:	1TO15EXT.MS1		

Number Compounds:		96
IS1:	ST60403	20
IS2:	ST60403	20
IS3:		
IS4:		

		Calibration Amount CA, ppmv						Calibration Response, Area					
		Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
		Amt	Amt	Amt	Amt	Amt	Amt	C03179C.D	C03179E.D	C03179B.D	C03179A.D	C03169H.D	C03179D.D
n	Compound	0.25	4.0	1.0	5.0	10.0	2.0	0.25	4.0	1.0	5.0	10.0	2.0
13	2-propanol	0.228	3.640	0.910	4.550	9.100	1.820	19578	321532	75563	289890	1427833	154437
1	Pentafluorobenzene	20.000	20.000	20.000	20.000	20.000	20.000	2643183	2935915	2871816	2719013	2737194	3022845
35	1,4-Difluorobenzene	20.000	20.000	20.000	20.000	20.000	20.000	2659938	2870629	2814997	2720455	2706138	3020264
94	Toluene-d8	10.000	10.000	10.000	10.000	10.000	10.000	1479389	1629143	1590486	1469067	1546296	1730275

(225)

INITIAL CALIBRATION REPORT: Response Factors

SDG:	**209270**
QC_Batch:	**062509-MS1**
Sample ID:	44-016
Sample Analysis Date:	25 Jun 109 5:58 pm
Run Method:	1T15EXAY.M
Quant Method:	1T15EXAY.M
Cal Update:	Tue Mar 17 14:18:15 2009
Template:	1TO15EXT.MS1

Sample Calculation:

1) Avg RFn = Sum $\left| \frac{(Astdni)}{(Cstdni)} \frac{(Clstdi)}{(Aistdi)} \right|_i$

Response Factors

Compound	RF1	RF2	RF3	RF4	RF5	RF6	AvgRFn	%RSD
2-propanol	0.650	0.602	0.578	0.469	1.146	0.561	0.668	36.24
Pentafluorobenzene	1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.00
1,4-Difluorobenzene	1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.00
Toluene-d8	1.112	1.135	1.130	1.080	1.143	1.146	1.124	2.20

CALCULATIONS

EPA Method TO-15 Modified Full Scan GC/MS

SDG: 209270
Laboratory Number: 11

RL: 1T15EXAY.M (2) RL, Concentration of lowest Standandard in ICAL:
Run Method: 1T15EXAY.M
Quant Method: 1T15EXAY.M
Can Dilution Factor: 1.00
Air Volume: 500 ml MDL Factor 1
Gas Constant: 23.68
Decimal Places: 2

Compound	M.W.	Raw Amount	Result ppbv	Result ug/m3	(1) MDL ppbv	(2) RL ppbv	Calc MDL ppbv	Calc MDL ug/m3	Calc RL ppbv	Calc RL ug/m3	Flag	Spike ppmv
2-propanol	60.1	0.658	1.316	3.34	0.046	0.228	0.09	0.23	0.46	1.16		0.103

SAMPLE CALCULATION

EPA Method TO-15 Modified Full Scan GC/MS

SDG:		**209270**
Laboratory Number:		**11**
Standard Volume	STV	5.0
Sample Volume	SV	500
Can Dilution Factor	CDF	1.00
Gas Constant		23.68
Decimal Places:		2

Sample Calculation:

1) Avg RFn = Sum $\left| \frac{(Astdni)}{(Cstdni)} \frac{(Cistdi)}{(Aistdi)} \right|_i$ Note: 1

2) Raw Amt = $\frac{(Ansamp)}{(Avg\ RFn)} \frac{(Cistdi)}{(Aistdi)}$ = Cn

3) Amount ppbv = $\frac{(Raw\ Amt)\ 1000}{(SV)}$ (CDF)

4) Amount ug/m3 = $\frac{(amt(ppbv)\ MW}{23.68}$

n	Compound	IS n	Chem type	MW	AvgRFn	Area Ansamp	Cistdi ppmv	Aistdi Ais	Cn ppmV Raw Amt	Amount ppbv	Amount ug/m3
13	2-propanol	1	TRG	60.1	0.668	93586	20.000	4260909	0.658	1.32	3.35
1	Pentafluorobenzene	1	IS		1.000	4260909	20.000	4260909			
35	1,4-Difluorobenzene	35	IS		1.000	3646886	20.000	3646886			
94	Toluene-d8	35	SURR		1.124	2053623	20.000	3646886			

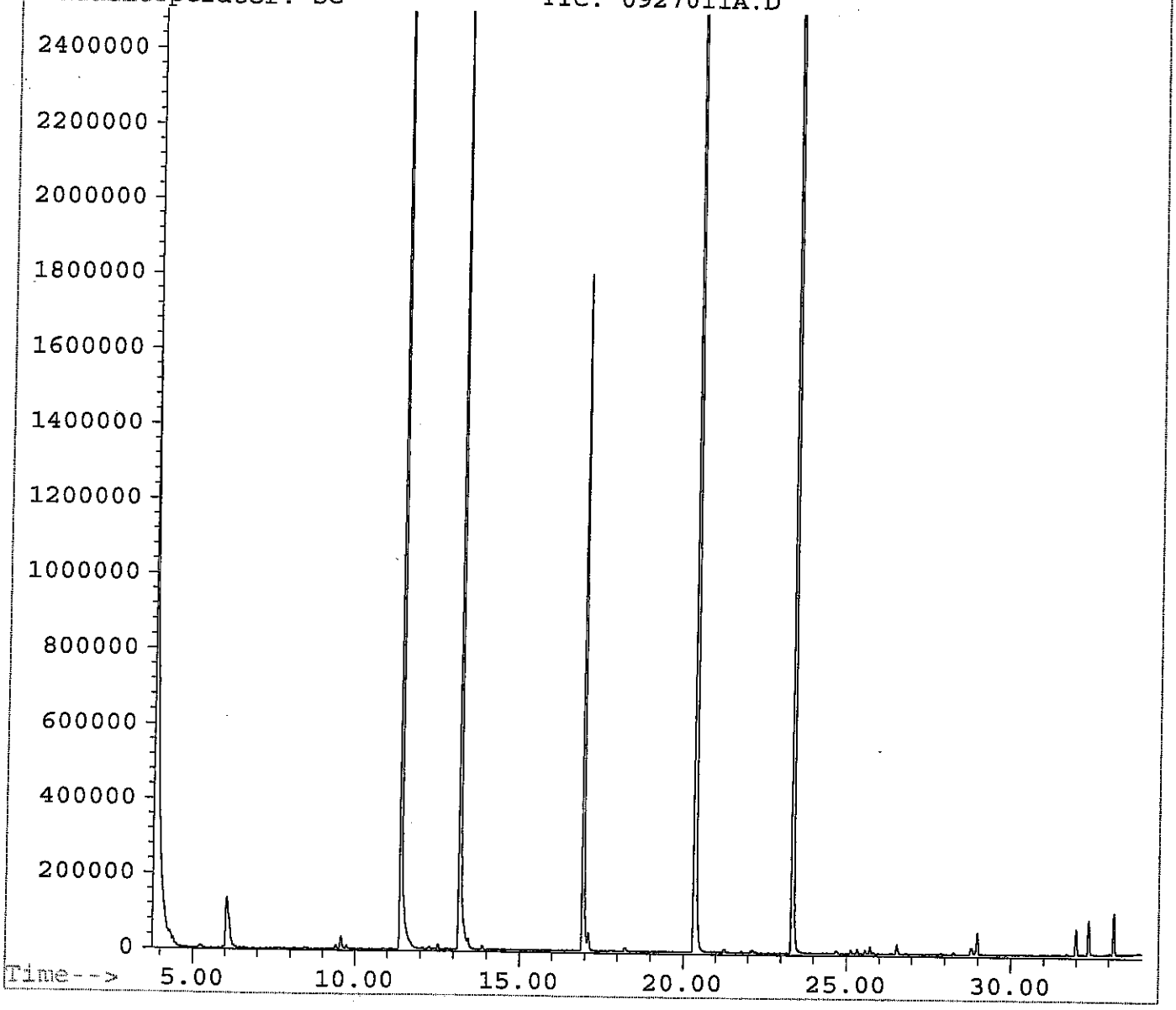
Calculation Definitions:

n	compound n
i	i th calibration level
Astdni	Standard Area for compound n at ith calibration level
Cstdni	Standard Concentration for compound n at ith calibration level in ppmv
Cistdi	Internal Standard Conc used for compound n at ith calibration level in ppmv
Aistdi	Internal Standard Area used for compound n at ith calibration level
Ansamp	Sample Area for compound n
Avg RFn	Average response factor for all ith calibration levels for compound n
Raw Amount	Sample Concentration in ppmv before applying factors
Cistd	Concentration internal standard used for compound n in sample in ppmv
Aistd	Area of internal standard used for compound n in sample
Cn	Concentration of compound n in sample in ppmv
23.68	Gas constant at 60 F as per EPA source test protocol
MW	Molecular weight of compound
Note (1) : Avg RFn	The values for the Average Response Factor AvgRFn can be optained from the response Factor Report for the Initial Calibration, or from the Calibration Report

Name of file: C:\MSCHEM\1\DATA\06259MS1\0927011A.D

Name of operator: SG

TIC: 0927011A.D



ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified Full Scan GC/MS
Analytical Method: TO-15

SDG: 209270
Laboratory Number: 12

File: 0927012A.D
Description: 44-017
Can/Tube#: 681
Sam_Type: SA
QC_Batch: 062509-MS1
Air Volume: 500 ml

Date Sampled: 06/16/09 **Time:** 16:53
Date Received: 06/17/09
Date Extracted:
Date Analyzed: 06/25/09 **Time:** 18:56
Can Dilution Factor: 1.87 2
Not Detected Flag: ND

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
76-14-2	Freon 114	0.19	0.97	ND	1.40	7.02	ND	ND
108-05-4	Vinyl acetate	0.16	0.80	ND	0.58	2.92	ND	ND
78-93-3	2-Butanone	0.16	0.80	ND	0.49	2.45	ND	ND
108-10-1	Methyl Isobutyl Ketone	0.17	0.86	ND	0.73	3.64	ND	ND
10061-01-5	cis-1,3-Dichloropropene	0.20	0.99	ND	0.93	4.65	ND	ND
10061-02-6	trans-1,3-Dichloropropene	0.19	0.97	ND	0.91	4.56	ND	ND
591-78-6	2-Hexanone	0.16	0.82	ND	0.70	3.48	ND	ND
124-48-1	Dibromochloromethane	0.17	0.83	ND	1.46	7.34	ND	ND
622-96-8	4-Ethyltoluene	0.17	0.85	ND	0.86	4.33	ND	ND
87-68-3	Hexachlorobutadiene	0.39	3.85	ND	4.24	42.43	ND	ND

	Surrogate Recovery	Spike Amt. ppbV	Amount ppbV	% Rec.	QC Limits	Flag * = Out
2037-26-5	Toluene-d8	10.000	9.607	96	70-130	

Notes: 1) Reported results are to be interpreted to two significant figures.
2) ug/m3 = ppbV*FW/23.68 calculated assuming conditions at 60 F and 1 atm.
3) MDL and RL are adjusted for sample volume and can dilution.
4) U and ND are Flags used for Not Detected
5) J is a flag for a result between the MDL and the RL (or lower quantitation limit, LQL)

QUANTITATION REPORT

EPA Method TO-15 Modified Full Scan GC/MS

File Name:	0927012A.D	Review	EAS Sample ID: 0927012	
Sample ID:	44-017			1 KB
Date:	25 Jun 109 6:56 pm			2 AT
Run Method:	1T15EXAY.M		Cal Amounts	3 BB
Quant Method:	1T15EXAY.M		IS Areas	4 SH
Cal Update:	Tue Mar 17 14:18:15 2009		Carryover	
Template:	1TO15EXT.MS1			
Can Factor:	1.87			
Volume:	500 ml		Analyst: KB 1	

CAS#	Compound	n	Raw Amount	RT	Target RT	Ion	Sample Area	Qualifier	Lower Qual	Upper Qual	Qual Flag	Cal Flag	Int Flag
76-14-2	Freon 114	4	0.000	3.99	4.11	85.00	0	0	44	65			
108-05-4	Vinyl acetate	25	0.016	10.35	10.32	43.00	5810	0	0	0			
78-93-3	2-Butanone	26	0.000	0.00	9.54	72.00	0	0	30	45			
108-10-1	Methyl Isobutyl Ketone	49	0.001	15.49	15.70	43.00	679	0	21	35			
10061-01-5	cis-1,3-Dichloropropene	50	0.000	0.00	15.82	75.00	0	0	15	23			
10061-02-6	trans-1,3-Dichloropropene	52	0.000	0.00	16.85	75.00	0	0	16	23			
591-78-6	2-Hexanone	54	0.001	17.58	17.80	43.00	302	0	28	47			
124-48-1	Dibromochloromethane	57	0.000	0.00	18.30	129.00	0	0	60	91			
622-96-8	4-Ethyltoluene	72	0.002	24.73	24.74	105.00	1828	0	20	31	Q		
87-68-3	Hexachlorobutadiene	88	0.000	0.00	33.08	225.00	0	0	22	33			
363-72-4	Pentafluorobenzene	1	20.000	11.39	11.38	168.00	5516768						
540-36-3	1,4-Difluorobenzene	35	20.000	13.17	13.17	114.00	4696715						
2037-26-5	Toluene-d8	94	9.607	16.93	16.94	98.00	2536587	63	51	77			

Integration Flags:

If no flag the Integration was done by the instrument computer

M1 Manual Integration because the computer did not integrated the peak or integrated the wrong peak

M2 Manual Integration because computer integration of baseline was different then Inital Calibration

INITIAL CALIBRATION REPORT

EPA Method TO-15 Modified Full Scan GC/MS

SDG: 209270
QC_Batch: 062509-MS1
Instrument Name: 5970 - In

File Name: 0927012A.D
Sample ID: 44-017
Sample Analysis Date: 25 Jun 109 6:56 pm
Run Method: 1T15EXAY.M
Quant and Calibration Method: 1T15EXAY.M
Cal Update: Tue Mar 17 14:18:15 2009
Template: 1TO15EXT.MS1

Calibration Title:EPA T0-15

Number Compounds: 96
IS1: ST60403 20
IS2: ST60403 20
IS3:
IS4:

		Calibration Amount CA, ppmv						Calibration Response, Area					
		Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
		Amt	Amt	Amt	Amt	Amt	Amt	C03179C.D	C03179E.D	C03179B.D	C03179A.D	C03169H.D	C03179D.D
n	Compound	0.25	4.0	1.0	5.0	10.0	2.0	0.25	4.0	1.0	5.0	10.0	2.0
4	Freon 114	0.260	4.160	1.040	5.200	10.400	2.080	25317	399238	94441	464176	861160	193013
25	Vinyl acetate	0.215	3.440	0.860	4.300	8.600	1.720	40148	687529	149287	676740	1560060	338492
26	2-Butanone	0.215	3.440	0.860	4.300	8.600	1.720	5400	92652	22013	71425	205517	45058
49	Methyl Isobutyl Ketone	0.230	3.680	0.920	4.600	9.200	1.840	67434	1179200	250239	1039898	2505790	566705
50	cis-1,3-Dichloropropene	0.265	4.240	1.060	5.300	10.600	2.120	28339	441906	107039	492454	1010236	206495
52	trans-1,3-Dichloropropene	0.260	4.160	1.040	5.200	10.400	2.080	33546	509168	127376	538174	1205186	242137
54	2-Hexanone	0.220	3.520	0.880	4.400	8.800	1.760	84018	1413472	311524	1112452	3278869	678898
57	Dibromochloromethane	0.223	3.560	0.890	4.450	8.900	1.780	43801	688881	150691	558917	1316838	322250
72	4-Ethyltoluene	0.228	3.640	0.910	4.550	9.100	1.820	177076	1912961	437379	1573293	3712735	943267
88	Hexachlorobutadiene	-1.000	4.120	1.030	5.150	10.300	2.060	-1	2443776	758051	1914490	4177636	1622637
1	Pentafluorobenzene	20.000	20.000	20.000	20.000	20.000	20.000	2643183	2935915	2871816	2719013	2737194	3022845
35	1,4-Difluorobenzene	20.000	20.000	20.000	20.000	20.000	20.000	2659938	2870629	2814997	2720455	2706138	3020264
94	Toluene-d8	10.000	10.000	10.000	10.000	10.000	10.000	1479389	1629143	1590486	1469067	1546296	1730275

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INITIAL CALIBRATION REPORT: Response Factors

SDG:	**209270**
QC_Batch:	**062509-MS1**
Sample ID:	44-017
Sample Analysis Date:	25 Jun 109 6:56 pm
Run Method:	1T15EXAY.M
Quant Method:	1T15EXAY.M
Cal Update:	Tue Mar 17 14:18:15 2009
Template:	1TO15EXT.MS1

Sample Calculation:

1) Avg RFn = Sum $\left| \frac{(Astdni)}{(Cstdni)} \frac{(Cistdi)}{(Aistdi)} \right|_i$

Response Factors

Compound	RF1	RF2	RF3	RF4	RF5	RF6	AvgRFn	%RSD
Freon 114	0.737	0.654	0.632	0.657	0.605	0.614	0.650	7.29
Vinyl acetate	1.413	1.362	1.209	1.158	1.325	1.302	1.295	7.38
2-Butanone	0.190	0.183	0.178	0.122	0.175	0.173	0.170	14.31
Methyl Isobutyl Ketone	2.204	2.233	1.932	1.662	2.013	2.040	2.014	10.30
cis-1,3-Dichloropropene	0.804	0.726	0.717	0.683	0.704	0.645	0.713	7.44
trans-1,3-Dichloropropene	0.970	0.853	0.870	0.761	0.856	0.771	0.847	9.00
2-Hexanone	2.871	2.798	2.515	1.859	2.754	2.554	2.559	14.47
Dibromochloromethane	1.477	1.348	1.203	0.923	1.094	1.199	1.207	15.98
4-Ethyltoluene	5.840	3.661	3.415	2.542	3.015	3.432	3.651	31.30
Hexachlorobutadiene	NA	4.133	5.229	2.733	2.998	5.216	4.062	29.13
Pentafluorobenzene	1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.00
1,4-Difluorobenzene	1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.00
Toluene-d8	1.112	1.135	1.130	1.080	1.143	1.146	1.124	2.20

CALCULATIONS

EPA Method TO-15 Modified Full Scan GC/MS

SDG: 209270
Laboratory Number: 12

RL: 1T15EXAY.M (2) RL, Concentration of lowest Standandard in ICAL:
Run Method: 1T15EXAY.M
Quant Method: 1T15EXAY.M
Can Dilution Factor: 1.87
Air Volume: 500 ml MDL Factor 1
Gas Constant: 23.68
Decimal Places: 2

Compound	M.W.	Raw Amount	Result ppbv	Result ug/m3	(1) MDL ppbv	(2) RL ppbv	Calc MDL ppbv	Calc MDL ug/m3	Calc RL ppbv	Calc RL ug/m3	Flag	Spike ppmv
Freon 114	170.9	0.000	0.000	0.00	0.052	0.260	0.19	1.40	0.97	7.02	U	1
Vinyl acetate	86.1	0.016	0.061	0.22	0.043	0.215	0.16	0.58	0.80	2.92	U	1
2-Butanone	72.1	0.000	0.000	0.00	0.043	0.215	0.16	0.49	0.80	2.45	U	1
Methyl Isobutyl Ketone	100.2	0.001	0.005	0.02	0.046	0.230	0.17	0.73	0.86	3.64	U	1
cis-1,3-Dichloropropene	111.0	0.000	0.000	0.00	0.053	0.265	0.20	0.93	0.99	4.65	U	1
trans-1,3-Dichloropropene	111.0	0.000	0.000	0.00	0.052	0.260	0.19	0.91	0.97	4.56	U	1
2-Hexanone	100.2	0.001	0.002	0.01	0.044	0.220	0.16	0.70	0.82	3.48	U	1
Dibromochloromethane	208.3	0.000	0.000	0.00	0.045	0.223	0.17	1.46	0.83	7.34	U	1
4-Ethyltoluene	120.2	0.002	0.008	0.04	0.046	0.228	0.17	0.86	0.85	4.33	U	1
Hexachlorobutadiene	260.8	0.000	0.000	0.00	0.103	1.030	0.39	4.24	3.85	42.43	U	1

SAMPLE CALCULATION

EPA Method TO-15 Modified Full Scan GC/MS

SDG:		**209270**
Laboratory Number:		**12**
Standard Volume	STV	5.0
Sample Volume	SV	500
Can Dilution Factor	CDF	1.87
Gas Constant		23.68
Decimal Places:		2

Sample Calculation:

1) Avg RFn = Sum $\left| \frac{(Astdni)}{(Cstdni)} \frac{(Cistdi)}{(Aistdi)} \right|_i$ Note: 1

2) Raw Amt = $\frac{(Ansamp)}{(Avg\ RFn)} \frac{(Cistdi)}{(Aistdi)}$ = Cn

3) Amount ppbv = $\frac{(Raw\ Amt)\ 1000}{(SV)}$ (CDF)

4) Amount ug/m3 = $\frac{(amt(ppbv)\ MW}{23.68}$

n	Compound	IS n	Chem type	MW	AvgRFn	Area Ansamp	Cistdi ppmv	Aistdi Ais	Cn ppmV Raw Amt	Amount ppbv	Amount ug/m3
4	Freon 114	1	TRG	170.9	0.650	0	20.000	5516768	0.000	0.00	0.00
25	Vinyl acetate	1	TRG	86.1	1.295	5810	20.000	5516768	0.016	0.06	0.22
26	2-Butanone	1	TRG	72.1	0.170	0	20.000	5516768	0.000	0.00	0.00
49	Methyl Isobutyl Ketone	35	TRG	100.2	2.014	679	20.000	4696715	0.001	0.01	0.04
50	cis-1,3-Dichloropropene	35	TRG	111.0	0.713	0	20.000	4696715	0.000	0.00	0.00
52	trans-1,3-Dichloropropene	35	TRG	111.0	0.847	0	20.000	4696715	0.000	0.00	0.00
54	2-Hexanone	35	TRG	100.2	2.559	302	20.000	4696715	0.001	0.00	0.00
57	Dibromochloromethane	35	TRG	208.3	1.207	0	20.000	4696715	0.000	0.00	0.00
72	4-Ethyltoluene	35	TRG	120.2	3.651	1828	20.000	4696715	0.002	0.01	0.05
88	Hexachlorobutadiene	35	TRG	260.8	4.062	0	20.000	4696715	0.000	0.00	0.00
1	Pentafluorobenzene	1	IS		1.000	5516768	20.000	5516768			
35	1,4-Difluorobenzene	35	IS		1.000	4696715	20.000	4696715			
94	Toluene-d8	35	SURR		1.124	2536587	20.000	4696715			

Calculation Definitions:

n	compound n
i	i th calibration level
Astdni	Standard Area for compound n at ith calibration level
Cstdni	Standard Concentration for compound n at ith calibration level in ppmv
Cistdi	Internal Standard Conc used for compound n at ith calibration level in ppmv
Aistdi	Internal Standard Area used for compound n at ith calibration level
Ansamp	Sample Area for compound n
Avg RFn	Average response factor for all ith calibration levels for compound n
Raw Amount	Sample Concentration in ppmv before applying factors
Cistd	Concentration internal standard used for compound n in sample in ppmv
Aistd	Area of internal standard used for compound n in sample
Cn	Concentration of compound n in sample in ppmv
23.68	Gas constant at 60 F as per EPA source test protocol
MW	Molecular weight of compound
Note (1) : Avg RFn	The values for the Average Response Factor AvgRFn can be optained from the response Factor Report for the Initial Calibration, or from the Calibration Report

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified Full Scan GC/MS
Analytical Method: TO-15

SDG: 209270
Laboratory Number: 12

File:	0927012A.D	**Date Sampled:**	06/16/09	**Time:**	16:53
Description:	44-017	**Date Received:**	06/17/09		
Can/Tube#:	681	**Date Extracted:**			
Sam_Type:	SA	**Date Analyzed:**	06/25/09	**Time:**	18:56
QC_Batch:	062509-MS1	**Can Dilution Factor:**	1.87		2
Air Volume:	500 ml	**Not Detected Flag:**	ND		

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
67-63-0	2-propanol	0.17	0.85	ND	0.43	2.16	ND	ND

	Surrogate Recovery	Spike Amt. ppbV	Amount ppbV	% Rec.	QC Limits	Flag * = Out
2037-26-5	Toluene-d8	10.000	9.607	96	70-130	

Notes: 1) Reported results are to be interpreted to two significant figures.
2) ug/m3 = ppbV*FW/23.68 calculated assuming conditions at 60 F and 1 atm.
3) MDL and RL are adjusted for sample volume and can dilution.
4) U and ND are Flags used for Not Detected
5) J is a flag for a result between the MDL and the RL (or lower quantitation limit, LQL)

QUANTITATION REPORT

EPA Method TO-15 Modified Full Scan GC/MS

			Review	EAS Sample ID: 0927012	
File Name:	0927012A.D				1 KB
Sample ID:	44-017				2 AT
Date:	25 Jun 109 6:56 pm			Cal Amounts	3 BB
Run Method:	1T15EXAY.M			IS Areas	4 SH
Quant Method:	1T15EXAY.M			Carryover	
Cal Update:	Tue Mar 17 14:18:15 2009				
Template:	1TO15EXT.MS1				
Can Factor:	1.87				
Volume:	500	ml		Analyst: KB 1	

CAS#	Compound	n	Raw Amount	RT	Target RT	Ion	Sample Area	Qualifier	Lower Qual	Upper Qual	Qual Flag	Cal Flag	Int Flag
67-63-0	2-propanol	13	0.003	6.25	6.14	45.00	636	0	18	27			
363-72-4	Pentafluorobenzene	1	20.000	11.39	11.38	168.00	5516768						
540-36-3	1,4-Difluorobenzene	35	20.000	13.17	13.17	114.00	4696715						
2037-26-5	Toluene-d8	94	9.607	16.93	16.94	98.00	2536587	63	51	77			

Integration Flags:

If no flag the Integration was done by the instrument computer

M1 Manual Integration because the computer did not integrated the peak or integrated the wrong peak

M2 Manual Integration because computer integration of baseline was different then Inital Calibration

INITIAL CALIBRATION REPORT

EPA Method TO-15 Modified Full Scan GC/MS

SDG: 209270
QC_Batch: 062509-MS1
Instrument Name: 5970 - In

File Name: 0927012A.D
Sample ID: 44-017
Sample Analysis Date: 25 Jun 109 6:56 pm
Run Method: 1T15EXAY.M
Quant and Calibration Method: 1T15EXAY.M
Cal Update: Tue Mar 17 14:18:15 2009
Template: 1TO15EXT.MS1

Calibration Title: EPA T0-15

Number Compounds: 96
IS1: ST60403 20
IS2: ST60403 20
IS3:
IS4:

		Calibration Amount CA, ppmv						Calibration Response, Area					
		Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
		Amt	Amt	Amt	Amt	Amt	Amt	C03179C.D	C03179E.D	C03179B.D	C03179A.D	C03169H.D	C03179D.D
n	Compound	0.25	4.0	1.0	5.0	10.0	2.0	0.25	4.0	1.0	5.0	10.0	2.0
13	2-propanol	0.228	3.640	0.910	4.550	9.100	1.820	19578	321532	75563	289890	1427833	154437
1	Pentafluorobenzene	20.000	20.000	20.000	20.000	20.000	20.000	2643183	2935915	2871816	2719013	2737194	3022845
35	1,4-Difluorobenzene	20.000	20.000	20.000	20.000	20.000	20.000	2659938	2870629	2814997	2720455	2706138	3020264
94	Toluene-d8	10.000	10.000	10.000	10.000	10.000	10.000	1479389	1629143	1590486	1469067	1546296	1730275

(238)

INITIAL CALIBRATION REPORT: Response Factors

SDG:	**209270**
QC_Batch:	**062509-MS1**
Sample ID:	44-017
Sample Analysis Date:	25 Jun 109 6:56 pm
Run Method:	1T15EXAY.M
Quant Method:	1T15EXAY.M
Cal Update:	Tue Mar 17 14:18:15 2009
Template:	1TO15EXT.MS1

Sample Calculation:

1) Avg RFn = Sum $\left| \frac{(Astdni)}{(Cstdni)} \frac{(Cistdi)}{(Aistdi)} \right|_i$

Response Factors

Compound	RF1	RF2	RF3	RF4	RF5	RF6	AvgRFn	%RSD
2-propanol	0.650	0.602	0.578	0.469	1.146	0.561	0.668	36.24
Pentafluorobenzene	1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.00
1,4-Difluorobenzene	1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.00
Toluene-d8	1.112	1.135	1.130	1.080	1.143	1.146	1.124	2.20

CALCULATIONS

EPA Method TO-15 Modified Full Scan GC/MS

SDG: 209270
Laboratory Number: 12

RL: 1T15EXAY.M (2) RL, Concentration of lowest Standandard in ICAL:
Run Method: 1T15EXAY.M
Quant Method: 1T15EXAY.M
Can Dilution Factor: 1.87
Air Volume: 500 ml MDL Factor 1
Gas Constant: 23.68
Decimal Places: 2

Compound	M.W.	Raw Amount	Result ppbv	Result ug/m3	(1) MDL ppbv	(2) RL ppbv	Calc MDL ppbv	Calc MDL ug/m3	Calc RL ppbv	Calc RL ug/m3	Flag	Spike ppmv
2-propanol	60.1	0.003	0.013	0.03	0.046	0.228	0.17	0.43	0.85	2.16	U	0.103

SAMPLE CALCULATION

EPA Method TO-15 Modified Full Scan GC/MS

SDG:		**209270**
Laboratory Number:		**12**
Standard Volume	STV	5.0
Sample Volume	SV	500
Can Dilution Factor	CDF	1.87
Gas Constant		23.68
Decimal Places:		2

Sample Calculation:

1) Avg RFn = Sum $\left| \frac{(Astdni)}{(Cstdni)} \frac{(Cistdi)}{(Aistdi)} \right|_i$ Note: 1

2) Raw Amt = $\frac{(Ansamp)}{(Avg\ RFn)} \frac{(Cistdi)}{(Aistdi)}$ = Cn

3) Amount ppbv = $\frac{(Raw\ Amt)\ 1000\ (CDF)}{(SV)}$

4) Amount ug/m3 = $\frac{(amt(ppbv)\ MW}{23.68}$

n	Compound	IS n	Chem type	MW	AvgRFn	Area Ansamp	Cistdi ppmv	Aistdi Ais	Cn ppmV Raw Amt	Amount ppbv	Amount ug/m3
13	2-propanol	1	TRG	60.1	0.668	636	20.000	5516768	0.003	0.01	0.03
1	Pentafluorobenzene	1	IS		1.000	5516768	20.000	5516768			
35	1,4-Difluorobenzene	35	IS		1.000	4696715	20.000	4696715			
94	Toluene-d8	35	SURR		1.124	2536587	20.000	4696715			

Calculation Definitions:

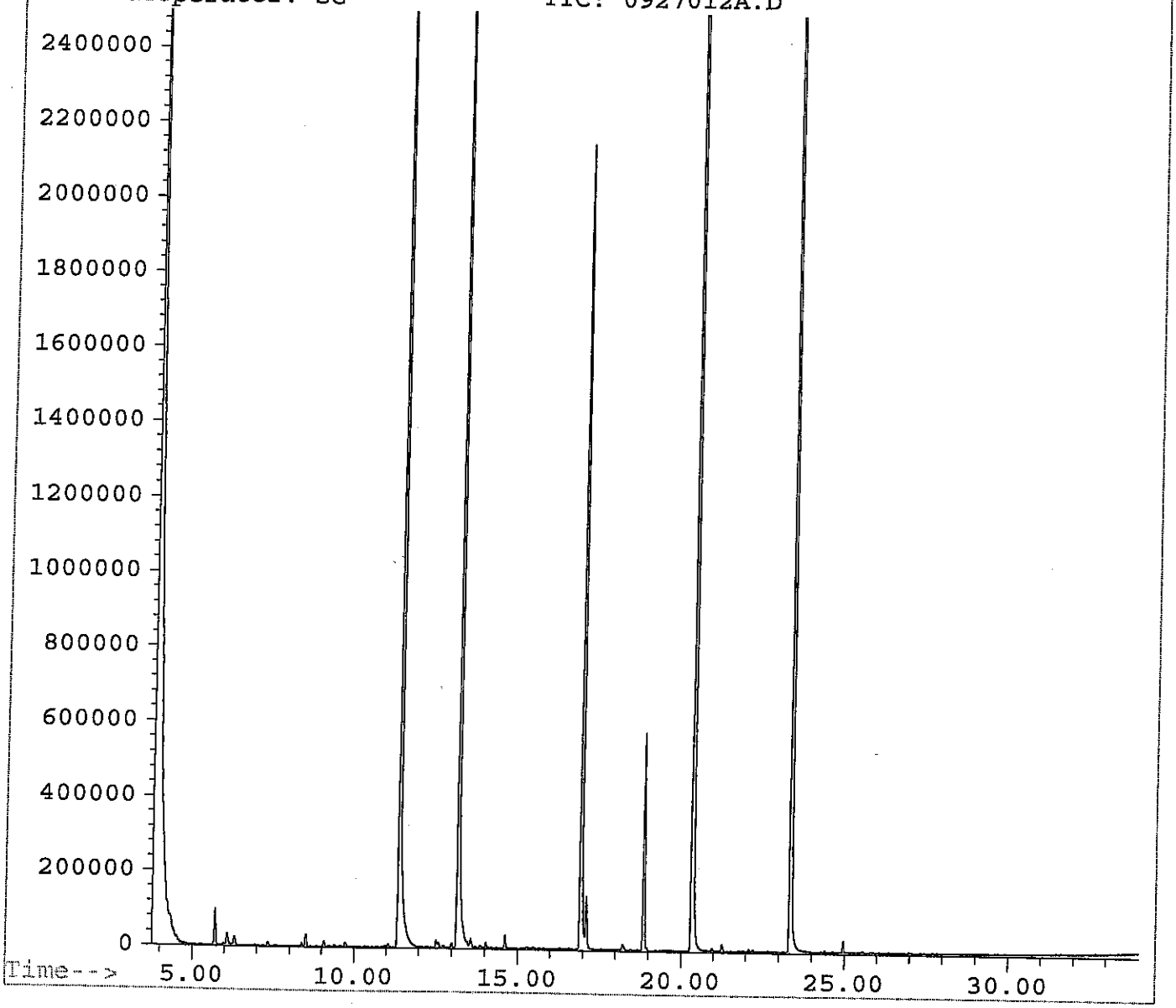
n	compound n
i	i th calibration level
Astdni	Standard Area for compound n at ith calibration level
Cstdni	Standard Concentration for compound n at ith calibration level in ppmv
Cistdi	Internal Standard Conc used for compound n at ith calibration level in ppmv
Aistdi	Internal Standard Area used for compound n at ith calibration level
Ansamp	Sample Area for compound n
Avg RFn	Average response factor for all ith calibration levels for compound n
Raw Amount	Sample Concentration in ppmv before applying factors
Cistd	Concentration internal standard used for compound n in sample in ppmv
Aistd	Area of internal standard used for compound n in sample
Cn	Concentration of compound n in sample in ppmv
23.68	Gas constant at 60 F as per EPA source test protocol
MW	Molecular weight of compound

Note (1) : Avg RFn — The values for the Average Response Factor AvgRFn can be optained from the response Factor Report for the Initial Calibration, or from the Calibration Report

Name of file: C:\MSCHEM\1\DATA\06259MS1\0927012A.D

Name of operator: SG

TIC: 0927012A.D



ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified Full Scan GC/MS
Analytical Method: TO-15

SDG: 209270
Laboratory Number: 13

File: 0927013A.D
Description: 44-018
Can/Tube#: 180
Sam_Type: SA
QC_Batch: 062509-MS1
Air Volume: 500 ml

Date Sampled: 06/16/09 **Time:** 16:53
Date Received: 06/17/09
Date Extracted:
Date Analyzed: 06/25/09 **Time:** 19:53
Can Dilution Factor: 1.63 2
Not Detected Flag: ND

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
76-14-2	Freon 114	0.17	0.85	ND	1.22	6.12	ND	ND
108-05-4	Vinyl acetate	0.14	0.70	ND	0.51	2.55	ND	ND
78-93-3	2-Butanone	0.14	0.70	ND	0.43	2.13	ND	ND
108-10-1	Methyl Isobutyl Ketone	0.15	0.75	ND	0.63	3.17	ND	ND
10061-01-5	cis-1,3-Dichloropropene	0.17	0.86	ND	0.81	4.05	ND	ND
10061-02-6	trans-1,3-Dichloropropene	0.17	0.85	ND	0.79	3.97	ND	ND
591-78-6	2-Hexanone	0.14	0.72	ND	0.61	3.03	ND	ND
124-48-1	Dibromochloromethane	0.15	0.73	ND	1.28	6.39	ND	ND
622-96-8	4-Ethyltoluene	0.15	0.74	ND	0.75	3.77	ND	ND
87-68-3	Hexachlorobutadiene	0.34	3.36	ND	3.70	36.98	ND	ND

	Surrogate Recovery	Spike Amt. ppbV	Amount ppbV	% Rec.	QC Limits	Flag * = Out
2037-26-5	Toluene-d8	10.000	9.846	98	70-130	

Notes: 1) Reported results are to be interpreted to two significant figures.
2) ug/m3 = ppbV*FW/23.68 calculated assuming conditions at 60 F and 1 atm.
3) MDL and RL are adjusted for sample volume and can dilution.
4) U and ND are Flags used for Not Detected
5) J is a flag for a result between the MDL and the RL (or lower quantitation limit, LQL)

QUANTITATION REPORT

EPA Method TO-15 Modified Full Scan GC/MS

		Review	EAS Sample ID: 0927013	
File Name:	0927013A.D			1 KB
Sample ID:	44-018			2 AT
Date:	25 Jun 109 7:53 pm		Cal Amounts	3 BB
Run Method:	1T15EXAY.M		IS Areas	4 SH
Quant Method:	1T15EXAY.M		Carryover	
Cal Update:	Tue Mar 17 14:18:15 2009			
Template:	1TO15EXT.MS1			
Can Factor:	1.63			
Volume:	500 ml		Analyst: KB 1	

CAS#	Compound	n	Raw Amount	RT	Target RT	Ion	Sample Area	Qualifier	Lower Qual	Upper Qual	Qual Flag	Cal Flag	Int Flag
76-14-2	Freon 114	4	0.000	0.00	4.11	85.00	0	0	44	65			
108-05-4	Vinyl acetate	25	0.001	10.10	10.32	43.00	298	0	0	0			
78-93-3	2-Butanone	26	0.000	0.00	9.54	72.00	0	0	30	45			
108-10-1	Methyl Isobutyl Ketone	49	0.002	15.60	15.70	43.00	626	0	21	35			
10061-01-5	cis-1,3-Dichloropropene	50	0.000	0.00	15.82	75.00	0	0	15	23			
10061-02-6	trans-1,3-Dichloropropene	52	0.000	0.00	16.85	75.00	0	0	16	23			
591-78-6	2-Hexanone	54	0.001	17.80	17.80	43.00	313	0	28	47			
124-48-1	Dibromochloromethane	57	0.000	0.00	18.30	129.00	0	0	60	91			
622-96-8	4-Ethyltoluene	72	0.008	24.83	24.74	105.00	4857	30	20	31			
87-68-3	Hexachlorobutadiene	88	0.005	33.03	33.08	225.00	3005	0	22	33	Q		
363-72-4	Pentafluorobenzene	1	20.000	10.56	11.38	168.00	**3736122**						
540-36-3	1,4-Difluorobenzene	35	20.000	12.55	13.17	114.00	**3224300**						
2037-26-5	Toluene-d8	94	**9.846**	16.61	16.94	98.00	1784651	64	51	77			

Integration Flags:

If no flag the Integration was done by the instrument computer

M1 Manual Integration because the computer did not integrated the peak or integrated the wrong peak

M2 Manual Integration because computer integration of baseline was different then Inital Calibration

INITIAL CALIBRATION REPORT

EPA Method TO-15 Modified Full Scan GC/MS

SDG: 209270
QC_Batch: 062509-MS1
Instrument Name: 5970 - In

File Name: 0927013A.D
Sample ID: 44-018
Sample Analysis Date: 25 Jun 109 7:53 pm
Run Method: 1T15EXAY.M
Quant and Calibration Method: 1T15EXAY.M
Cal Update: Tue Mar 17 14:18:15 2009
Template: 1TO15EXT.MS1

Calibration Title: EPA T0-15

Number Compounds: 96
IS1: ST60403 20
IS2: ST60403 20
IS3:
IS4:

		Calibration Amount CA, ppmv						Calibration Response, Area					
		Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
		Amt	Amt	Amt	Amt	Amt	Amt	C03179C.D	C03179E.D	C03179B.D	C03179A.D	C03169H.D	C03179D.D
n	Compound	0.25	4.0	1.0	5.0	10.0	2.0	0.25	4.0	1.0	5.0	10.0	2.0
4	Freon 114	0.260	4.160	1.040	5.200	10.400	2.080	25317	399238	94441	464176	861160	193013
25	Vinyl acetate	0.215	3.440	0.860	4.300	8.600	1.720	40148	687529	149287	676740	1560060	338492
26	2-Butanone	0.215	3.440	0.860	4.300	8.600	1.720	5400	92652	22013	71425	205517	45058
49	Methyl Isobutyl Ketone	0.230	3.680	0.920	4.600	9.200	1.840	67434	1179200	250239	1039898	2505790	566705
50	cis-1,3-Dichloropropene	0.265	4.240	1.060	5.300	10.600	2.120	28339	441906	107039	492454	1010236	206495
52	trans-1,3-Dichloropropene	0.260	4.160	1.040	5.200	10.400	2.080	33546	509168	127376	538174	1205186	242137
54	2-Hexanone	0.220	3.520	0.880	4.400	8.800	1.760	84018	1413472	311524	1112452	3278869	678898
57	Dibromochloromethane	0.223	3.560	0.890	4.450	8.900	1.780	43801	688881	150691	558917	1316838	322250
72	4-Ethyltoluene	0.228	3.640	0.910	4.550	9.100	1.820	177076	1912961	437379	1573293	3712735	943267
88	Hexachlorobutadiene	-1.000	4.120	1.030	5.150	10.300	2.060	-1	2443776	758051	1914490	4177636	1622637
1	Pentafluorobenzene	20.000	20.000	20.000	20.000	20.000	20.000	2643183	2935915	2871816	2719013	2737194	3022845
35	1,4-Difluorobenzene	20.000	20.000	20.000	20.000	20.000	20.000	2659938	2870629	2814997	2720455	2706138	3020264
94	Toluene-d8	10.000	10.000	10.000	10.000	10.000	10.000	1479389	1629143	1590486	1469067	1546296	1730275

(245)

INITIAL CALIBRATION REPORT: Response Factors

SDG:	**209270**
QC_Batch:	**062509-MS1**
Sample ID:	44-018
Sample Analysis Date:	25 Jun 109 7:53 pm
Run Method:	1T15EXAY.M
Quant Method:	1T15EXAY.M
Cal Update:	Tue Mar 17 14:18:15 2009
Template:	1TO15EXT.MS1

Sample Calculation:

1) Avg RFn = Sum $\left| \frac{(Astdni)}{(Cstdni)} \frac{(Cistdi)}{(Aistdi)} \right|_i$

Response Factors

Compound	RF1	RF2	RF3	RF4	RF5	RF6	AvgRFn	%RSD
Freon 114	0.737	0.654	0.632	0.657	0.605	0.614	0.650	7.29
Vinyl acetate	1.413	1.362	1.209	1.158	1.325	1.302	1.295	7.38
2-Butanone	0.190	0.183	0.178	0.122	0.175	0.173	0.170	14.31
Methyl Isobutyl Ketone	2.204	2.233	1.932	1.662	2.013	2.040	2.014	10.30
cis-1,3-Dichloropropene	0.804	0.726	0.717	0.683	0.704	0.645	0.713	7.44
trans-1,3-Dichloropropene	0.970	0.853	0.870	0.761	0.856	0.771	0.847	9.00
2-Hexanone	2.871	2.798	2.515	1.859	2.754	2.554	2.559	14.47
Dibromochloromethane	1.477	1.348	1.203	0.923	1.094	1.199	1.207	15.98
4-Ethyltoluene	5.840	3.661	3.415	2.542	3.015	3.432	3.651	31.30
Hexachlorobutadiene	NA	4.133	5.229	2.733	2.998	5.216	4.062	29.13
Pentafluorobenzene	1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.00
1,4-Difluorobenzene	1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.00
Toluene-d8	1.112	1.135	1.130	1.080	1.143	1.146	1.124	2.20

CALCULATIONS

EPA Method TO-15 Modified Full Scan GC/MS

SDG: 209270
Laboratory Number: 13

RL: 1T15EXAY.M (2) RL, Concentration of lowest Standandard in ICAL:
Run Method: 1T15EXAY.M
Quant Method: 1T15EXAY.M
Can Dilution Factor: 1.63
Air Volume: 500 ml MDL Factor 1
Gas Constant: 23.68
Decimal Places: 2

Compound	M.W.	Raw Amount	Result ppbv	Result ug/m3	(1) MDL ppbv	(2) RL ppbv	Calc MDL ppbv	Calc MDL ug/m3	Calc RL ppbv	Calc RL ug/m3	Flag	Spike ppmv
Freon 114	170.9	0.000	0.000	0.00	0.052	0.260	0.17	1.22	0.85	6.12	U	1
Vinyl acetate	86.1	0.001	0.004	0.01	0.043	0.215	0.14	0.51	0.70	2.55	U	1
2-Butanone	72.1	0.000	0.000	0.00	0.043	0.215	0.14	0.43	0.70	2.13	U	1
Methyl Isobutyl Ketone	100.2	0.002	0.006	0.03	0.046	0.230	0.15	0.63	0.75	3.17	U	1
cis-1,3-Dichloropropene	111.0	0.000	0.000	0.00	0.053	0.265	0.17	0.81	0.86	4.05	U	1
trans-1,3-Dichloropropene	111.0	0.000	0.000	0.00	0.052	0.260	0.17	0.79	0.85	3.97	U	1
2-Hexanone	100.2	0.001	0.002	0.01	0.044	0.220	0.14	0.61	0.72	3.03	U	1
Dibromochloromethane	208.3	0.000	0.000	0.00	0.045	0.223	0.15	1.28	0.73	6.39	U	1
4-Ethyltoluene	120.2	0.008	0.027	0.14	0.046	0.228	0.15	0.75	0.74	3.77	U	1
Hexachlorobutadiene	260.8	0.005	0.015	0.16	0.103	1.030	0.34	3.70	3.36	36.98	U	1

SAMPLE CALCULATION

EPA Method TO-15 Modified Full Scan GC/MS

SDG:		**209270**
Laboratory Number:		**13**
Standard Volume	STV	5.0
Sample Volume	SV	500
Can Dilution Factor	CDF	1.63
Gas Constant		23.68
Decimal Places:		2

Sample Calculation:

1) Avg RFn = Sum $\left| \frac{(Astdni)}{(Cstdni)} \frac{(Cistdi)}{(Aistdi)} \right|_i$ Note: 1

2) Raw Amt = $\frac{(Ansamp)}{(Avg\ RFn)} \frac{(Cistdi)}{(Aistdi)}$ = Cn

3) Amount ppbv = $\frac{(Raw\ Amt)\ 1000}{(SV)}$ (CDF)

4) Amount ug/m3 = $\frac{(amt(ppbv)\ MW}{23.68}$

n	Compound	IS n	Chem type	MW	AvgRFn	Area Ansamp	Cistdi ppmv	Aistdi Ais	Cn ppmV Raw Amt	Amount ppbv	Amount ug/m3
4	Freon 114	1	TRG	170.9	0.650	0	20.000	3736122	0.000	0.00	0.00
25	Vinyl acetate	1	TRG	86.1	1.295	298	20.000	3736122	0.001	0.00	0.00
26	2-Butanone	1	TRG	72.1	0.170	0	20.000	3736122	0.000	0.00	0.00
49	Methyl Isobutyl Ketone	35	TRG	100.2	2.014	626	20.000	3224300	0.002	0.01	0.04
50	cis-1,3-Dichloropropene	35	TRG	111.0	0.713	0	20.000	3224300	0.000	0.00	0.00
52	trans-1,3-Dichloropropene	35	TRG	111.0	0.847	0	20.000	3224300	0.000	0.00	0.00
54	2-Hexanone	35	TRG	100.2	2.559	313	20.000	3224300	0.001	0.00	0.00
57	Dibromochloromethane	35	TRG	208.3	1.207	0	20.000	3224300	0.000	0.00	0.00
72	4-Ethyltoluene	35	TRG	120.2	3.651	4857	20.000	3224300	0.008	0.03	0.15
88	Hexachlorobutadiene	35	TRG	260.8	4.062	3005	20.000	3224300	0.005	0.01	0.11
1	Pentafluorobenzene	1	IS		1.000	3736122	20.000	3736122			
35	1,4-Difluorobenzene	35	IS		1.000	3224300	20.000	3224300			
94	Toluene-d8	35	SURR		1.124	1784651	20.000	3224300			

Calculation Definitions:

n	compound n
i	i th calibration level
Astdni	Standard Area for compound n at ith calibration level
Cstdni	Standard Concentration for compound n at ith calibration level in ppmv
Cistdi	Internal Standard Conc used for compound n at ith calibration level in ppmv
Aistdi	Internal Standard Area used for compound n at ith calibration level
Ansamp	Sample Area for compound n
Avg RFn	Average response factor for all ith calibration levels for compound n
Raw Amount	Sample Concentration in ppmv before applying factors
Cistd	Concentration internal standard used for compound n in sample in ppmv
Aistd	Area of internal standard used for compound n in sample
Cn	Concentration of compound n in sample in ppmv
23.68	Gas constant at 60 F as per EPA source test protocol
MW	Molecular weight of compound
Note (1): Avg RFn	The values for the Average Response Factor AvgRFn can be optained from the response Factor Report for the Initial Calibration, or from the Calibration Report

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified Full Scan GC/MS
Analytical Method: TO-15

SDG: 209270
Laboratory Number: 13

File: 0927013A.D
Description: 44-018
Can/Tube#: 180
Sam_Type: SA
QC_Batch: 062509-MS1
Air Volume: 500 ml

Date Sampled: 06/16/09 **Time:** 16:53
Date Received: 06/17/09
Date Extracted:
Date Analyzed: 06/25/09 **Time:** 19:53
Can Dilution Factor: 1.63 2
Not Detected Flag: ND

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
67-63-0	2-propanol	0.15	0.74	ND	0.38	1.89	ND	ND

	Surrogate Recovery	Spike Amt. ppbV	Amount ppbV	% Rec.	QC Limits	Flag * = Out
2037-26-5	Toluene-d8	10.000	9.846	98	70-130	

Notes: 1) Reported results are to be interpreted to two significant figures.
2) ug/m3 = ppbV*FW/23.68 calculated assuming conditions at 60 F and 1 atm.
3) MDL and RL are adjusted for sample volume and can dilution.
4) U and ND are Flags used for Not Detected
5) J is a flag for a result between the MDL and the RL (or lower quantitation limit, LQL)

QUANTITATION REPORT

EPA Method TO-15 Modified Full Scan GC/MS

Review **EAS Sample ID: 0927013**

File Name:	0927013A.D		1 KB
Sample ID:	44-018		2 AT
Date:	25 Jun 109 7:53 pm	Cal Amounts	3 BB
Run Method:	1T15EXAY.M	IS Areas	4 SH
Quant Method:	1T15EXAY.M	Carryover	
Cal Update:	Tue Mar 17 14:18:15 2009		
Template:	1TO15EXT.MS1		
Can Factor:	1.63		
Volume:	500 ml	Analyst: KB 1	

CAS#	Compound	n	Raw Amount	RT	Target RT	Ion	Sample Area	Qualifier	Lower Qual	Upper Qual	Qual Flag	Cal Flag	Int Flag
67-63-0	2-propanol	13	0.009	6.15	6.14	45.00	1142	0	18	27	Q		
363-72-4	Pentafluorobenzene	1	20.000	10.56	11.38	168.00	3736122						
540-36-3	1,4-Difluorobenzene	35	20.000	12.55	13.17	114.00	3224300						
2037-26-5	Toluene-d8	94	9.846	16.61	16.94	98.00	1784651	64	51	77			

Integration Flags:

If no flag the Integration was done by the instrument computer

M1 Manual Integration because the computer did not integrated the peak or integrated the wrong peak

M2 Manual Integration because computer integration of baseline was different then Inital Calibration

INITIAL CALIBRATION REPORT

EPA Method TO-15 Modified Full Scan GC/MS

File Name:	0927013A.D	SDG:	209270
Sample ID:	44-018	QC_Batch:	062509-MS1
Sample Analysis Date:	25 Jun 109 7:53 pm	Instrument Name:	5970 - In
Run Method:	1T15EXAY.M		
Quant and Calibration Method:	1T15EXAY.M	Calibration Title:	EPA T0-15
Cal Update:	Tue Mar 17 14:18:15 2009		
Template:	1TO15EXT.MS1		

Number Compounds:		96
IS1:	ST60403	20
IS2:	ST60403	20
IS3:		
IS4:		

		Calibration Amount CA, ppmv						Calibration Response, Area					
		Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
		Amt	Amt	Amt	Amt	Amt	Amt	C03179C.D	C03179E.D	C03179B.D	C03179A.D	C03169H.D	C03179D.D
n	Compound	0.25	4.0	1.0	5.0	10.0	2.0	0.25	4.0	1.0	5.0	10.0	2.0
13	2-propanol	0.228	3.640	0.910	4.550	9.100	1.820	19578	321532	75563	289890	1427833	154437
1	Pentafluorobenzene	20.000	20.000	20.000	20.000	20.000	20.000	2643183	2935915	2871816	2719013	2737194	3022845
35	1,4-Difluorobenzene	20.000	20.000	20.000	20.000	20.000	20.000	2659938	2870629	2814997	2720455	2706138	3020264
94	Toluene-d8	10.000	10.000	10.000	10.000	10.000	10.000	1479389	1629143	1590486	1469067	1546296	1730275

(251)

INITIAL CALIBRATION REPORT: Response Factors

SDG:	**209270**
QC_Batch:	**062509-MS1**
Sample ID:	44-018
Sample Analysis Date:	25 Jun 109 7:53 pm
Run Method:	1T15EXAY.M
Quant Method:	1T15EXAY.M
Cal Update:	Tue Mar 17 14:18:15 2009
Template:	1TO15EXT.MS1

Sample Calculation:

1) Avg RFn = Sum $\left| \frac{(Astdni)}{(Cstdni)} \frac{(Cistdi)}{(Aistdi)} \right|_i$

Response Factors

Compound	RF1	RF2	RF3	RF4	RF5	RF6	AvgRFn	%RSD
2-propanol	0.650	0.602	0.578	0.469	1.146	0.561	0.668	36.24
Pentafluorobenzene	1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.00
1,4-Difluorobenzene	1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.00
Toluene-d8	1.112	1.135	1.130	1.080	1.143	1.146	1.124	2.20

CALCULATIONS

EPA Method TO-15 Modified Full Scan GC/MS

SDG: 209270
Laboratory Number: 13

RL: 1T15EXAY.M (2) RL, Concentration of lowest Standandard in ICAL:
Run Method: 1T15EXAY.M
Quant Method: 1T15EXAY.M
Can Dilution Factor: 1.63
Air Volume: 500 ml MDL Factor 1
Gas Constant: 23.68
Decimal Places: 2

Compound	M.W.	Raw Amount	Result ppbv	Result ug/m3	(1) MDL ppbv	(2) RL ppbv	Calc MDL ppbv	Calc MDL ug/m3	Calc RL ppbv	Calc RL ug/m3	Flag	Spike ppmv
2-propanol	60.1	0.009	0.030	0.08	0.046	0.228	0.15	0.38	0.74	1.89	U	0.103

SAMPLE CALCULATION

EPA Method TO-15 Modified Full Scan GC/MS

SDG:		**209270**
Laboratory Number:		**13**
Standard Volume	STV	5.0
Sample Volume	SV	500
Can Dilution Factor	CDF	1.63
Gas Constant		23.68
Decimal Places:		2

Sample Calculation:

1) Avg RFn = Sum $\left| \frac{(Astdni)}{(Cstdni)} \frac{(Cistdi)}{(Aistdi)} \right|_i$ Note: 1

2) Raw Amt = $\frac{(Ansamp)}{(Avg\ RFn)} \frac{(Cistdi)}{(Aistdi)}$ = Cn

3) Amount ppbv = $\frac{(Raw\ Amt)\ 1000}{(SV)}$ (CDF)

4) Amount ug/m3 = $\frac{(amt(ppbv)\ MW}{23.68}$

n	Compound	IS n	Chem type	MW	AvgRFn	Area Ansamp	Cistdi ppmv	Aistdi Ais	Cn ppmV Raw Amt	Amount ppbv	Amount ug/m3
13	2-propanol	1	TRG	60.1	0.668	1142	20.000	3736122	0.009	0.03	0.08
1	Pentafluorobenzene	1	IS		1.000	3736122	20.000	3736122			
35	1,4-Difluorobenzene	35	IS		1.000	3224300	20.000	3224300			
94	Toluene-d8	35	SURR		1.124	1784651	20.000	3224300			

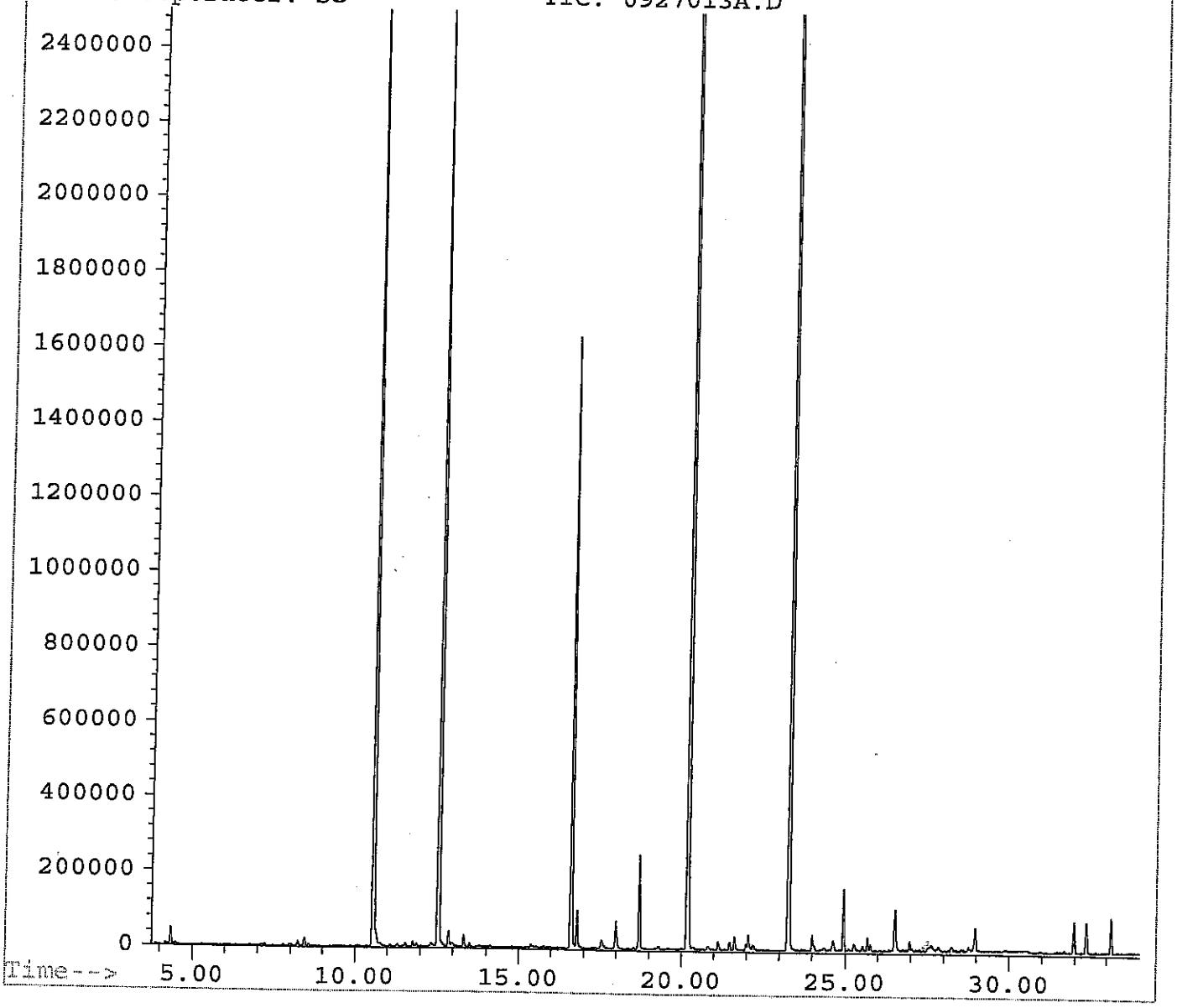
Calculation Definitions:

n	compound n
i	i th calibration level
Astdni	Standard Area for compound n at ith calibration level
Cstdni	Standard Concentration for compound n at ith calibration level in ppmv
Cistdi	Internal Standard Conc used for compound n at ith calibration level in ppmv
Aistdi	Internal Standard Area used for compound n at ith calibration level
Ansamp	Sample Area for compound n
Avg RFn	Average response factor for all ith calibration levels for compound n
Raw Amount	Sample Concentration in ppmv before applying factors
Cistd	Concentration internal standard used for compound n in sample in ppmv
Aistd	Area of internal standard used for compound n in sample
Cn	Concentration of compound n in sample in ppmv
23.68	Gas constant at 60 F as per EPA source test protocol
MW	Molecular weight of compound
Note (1) : Avg RFn	The values for the Average Response Factor AvgRFn can be optained from the response Factor Report for the Initial Calibration, or from the Calibration Report

Name of file: C:\MSCHEM\1\DATA\06259MS1\0927013A.D

Name of operator: SG

TIC: 0927013A.D



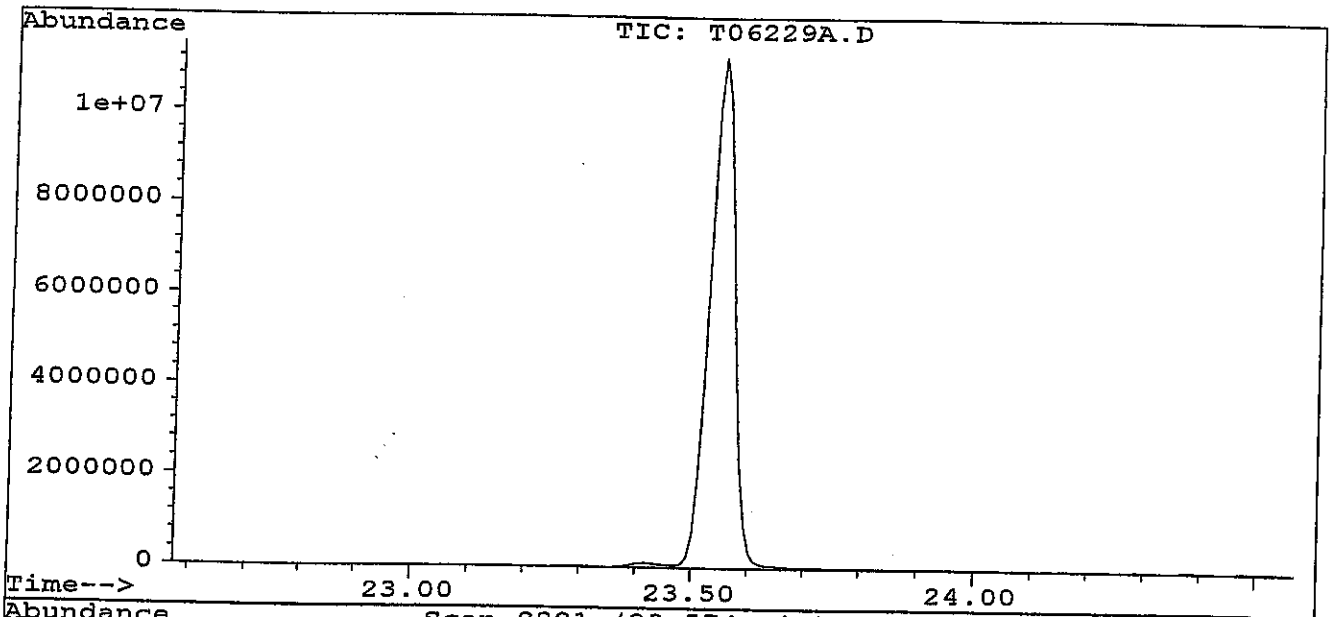
4.2 EPA TO-15M SIM
Daily Analytical Batch #: 062209-MS2

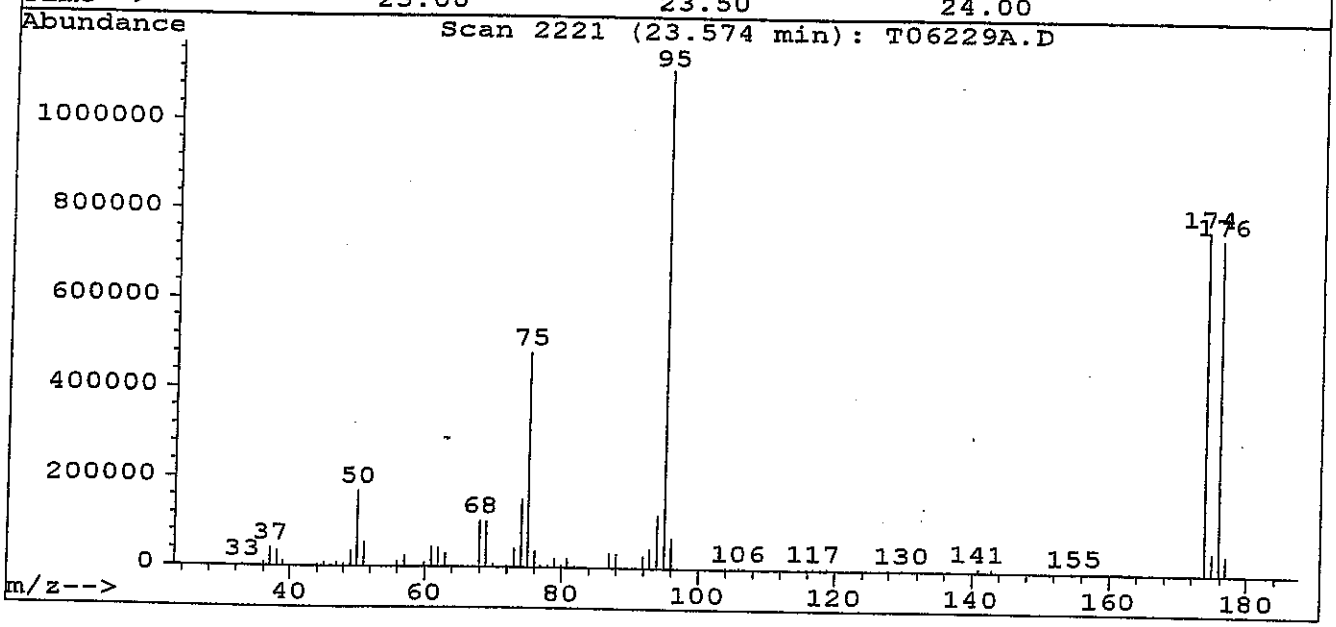
BFB

Data File : C:\MSCHEM\2\DATA\06229MS2\T06229A.D
Acq Time : 22 Jun 109 8:39 am
Sample : BFB TUNE
Misc :

Operator: JF
Inst : MS2
Multiplr: 1.00

Method : C:\MSCHEM\2\METHODS\2EXSIM_I.M
Title : EPA TO-15





Peak Apex is scan: 2221

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	8	40	15.3	170816	PASS
75	95	30	66	43.1	480832	PASS
95	95	100	100	100.0	1116672	PASS
96	95	5	9	6.2	69408	PASS
173	174	0	2	0.0	0	PASS
174	95	50	120	68.7	767168	PASS
175	174	4	9	6.5	50096	PASS
176	174	93	101	97.7	749824	PASS
177	176	5	9	5.8	43232	PASS

T06229A.D 2EXSIM_I.M Tue Jun 30 13:19:04 2009

CONTINUING CALIBRATION REPORT

SDG:	**LABQC**
QC_Batch:	**062209-MS2**
Sample ID:	ST60032 + ST60250
Sample Analysis Date:	22 Jun 109 9:24 am
Run Method:	2EXSIM_I.M
Quant/Calibration Method:	2EXSIM_I.M
Cal Update:	Mon Jun 22 09:18:18 2009
Template:	EARTEXSM.MS3
Calibration Level	Level 2 0.5

Sample Calculation:

1) $RFi = \frac{(Astdi)\ (Cistdi)}{(Cstdi)\ (Aistdi)}$

Compound	Area Astdi	Cal Level Cstdi ppbv	CCRRF	AvgRFn	%Dev	%Dev Limit	%Dev Flag
Vinyl chloride	27363	0.104	0.039	0.039	0.5	30	IN
1,1-Dichloroethene	64242	0.104	0.091	0.081	-12.6	30	IN
1,1-Dichloroethane	67933	0.101	0.099	0.089	-11.2	30	IN
cis-1,2-Dichloroethene	41349	0.103	0.059	0.057	-4.4	30	IN
1,2-Dichloroethane	200096	0.103	0.286	0.239	-19.6	30	IN
Benzene	147058	0.103	0.210	0.183	-14.9	30	IN
Carbon tetrachloride	86557	0.102	0.125	0.112	-11.6	30	IN
Trichloroethene	60494	0.103	0.087	0.073	-18.1	30	IN
Bromodichloromethane	59717	0.067	0.131	0.133	1.2	30	IN
1,1,2-Trichloroethane	81943	0.102	0.118	0.109	-8.1	30	IN
Tetrachloroethene	76488	0.102	0.110	0.092	-19.9	30	IN
m & p-Xylene	609116	0.206	0.436	0.360	-21.0	30	IN
o-Xylene	386312	0.102	0.558	0.460	-21.3	30	IN
1,1,2,2-Tetrachloroethane	345959	0.102	0.500	0.538	7.1	30	IN
1,2,4-Trichlorobenzene	978922	0.103	1.400	1.988	29.6	80	IN
1,4 Dioxane	25623	0.074	0.051	0.063	19.2	40	IN
Naphthalene	6712681	0.213	4.644	6.704	30.7	80	IN
Chlorobenzene-d5	1357329	0.200	1.000	1.000	0.0	30	IN
Toluene-d8	693988	0.200	0.511	0.425	-20.2	30	IN

QUANTITATION REPORT

EPA Method TO-15 Modified SIM GC/MS

			Review	EAS Sample ID: C06229A	
File Name:	C06229A.D				1 SS
Sample ID:	ST60032 + ST60250				2 KB
Date:	22 Jun 109 9:24 am			Cal Amounts	3 AT
Run Method:	2EXSIM_I.M			IS Areas	4 BB
Quant Method:	2EXSIM_I.M			Carryover	5 SH
Cal Update:	Mon Jun 22 09:18:18 2009				
Template:	EARTEXSM.MS3				
Can Factor:	1.00				
Volume:	500	ml		Analyst: SS 1	

CAS#	Compound	n	Raw Amount	RT	Target RT	Ion	Sample Area	Qualifier	Lower Qual	Upper Qual	Qual Flag	Cal Flag	Int Flag
75-01-4	Vinyl chloride	5	0.104	4.42	4.37	62.00	27363	38	28	42			
75-35-4	1,1-Dichloroethene	9	0.117	7.01	6.95	61.00	64242	55	37	56			
75-34-3	1,1-Dichloroethane	14	0.112	9.08	9.00	63.00	67933	32	25	37			
156-59-2	cis-1,2-Dichloroethene	15	0.108	10.30	10.24	96.00	41349	137	102	153			
107-06-2	1,2-Dichloroethane	19	0.123	12.10	12.02	61.95	200096	34	14	21	Q		
71-43-2	Benzene	20	0.118	12.68	12.63	78.00	147058	16	16	23			
56-23-5	Carbon tetrachloride	21	0.114	12.71	12.66	116.90	86557	94	79	119			
79-01-6	Trichloroethene	23	0.122	14.31	14.26	130.00	60494	100	75	112			
75-27-4	Bromodichloromethane	24	0.066	14.63	14.57	83.00	59717	68	52	78			
79-00-5	1,1,2-Trichloroethane	28	0.110	17.37	17.35	97.00	81943	82	63	94			
127-18-4	Tetrachloroethene	30	0.122	19.13	19.09	166.00	76488	76	64	97			
108-38-3	m & p-Xylene	34	0.249	21.39	21.37	91.00	609116	50	42	63			
95-47-6	o-Xylene	36	0.124	22.37	22.34	91.00	386312	52	38	56			
79-34-5	1,1,2,2-Tetrachloroethane	37	0.095	22.96	22.93	83.00	345959	7	8	12	Q		
120-82-1	1,2,4-Trichlorobenzene	45	0.073	32.18	32.17	180.00	978922	101	79	118			
123-91-1	1,4 Dioxane	47	0.060	14.68	14.57	88.00	25623	71	55	82			
91-20-3	Naphthalene	48	0.148	32.55	32.78	128.00	6712681	0	0	0			
3114-55-4	Chlorobenzene-d5	1	0.200	20.55	20.51	117.00	1357329						
2037-26-5	Toluene-d8	16	0.240	17.08	17.05	98.00	693988						

Integration Flags:

If no flag the Integration was done by the Instrument computer

M1 Manual Integration because the computer did not integrated the peak or integrated the wrong peak

M2 Manual Integration because computer integration of baseline was different then Inital Calibration

INITIAL CALIBRATION REPORT

EPA Method TO-15 Modified SIM GC/MS

SDG: LABQC
QC_Batch: 062209-MS2
Instrument Name: MS2

File Name: C06229A.D
Sample ID: ST60032 + ST60250
Sample Analysis Date: 22 Jun 109 9:24 am
Run Method: 2EXSIM_I.M
Quant and Calibration Method: 2EXSIM_I.M
Cal Update: Mon Jun 22 09:18:18 2009
Template: EARTEXSM.MS3

Calibration Title: EPA T0-15

Number Compounds: 49
IS1: ST60024 0.2
IS2:
IS3:
IS4:

		Calibration Amount CA, ppmv						Calibration Response, Area					
		Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
		Amt	Amt	Amt	Amt	Amt	Amt	C06199B.D	C06199H.D	C06199A.D	C06199F.D	C06199E.D	C06199K.D
n	Compound	10.0	0.5	20.0	2.0	4.0	1.0	10.0	0.5	20.0	2.0	4.0	1.0
5	Vinyl chloride	1.040	0.052	2.080	0.208	0.416	0.104	184476	12222	596605	24865	140317	19936
9	1,1-Dichloroethene	1.040	0.052	2.080	0.208	0.416	0.104	388365	27969	1185798	47507	301017	40726
14	1,1-Dichloroethane	1.010	0.051	2.020	0.202	0.404	0.101	403912	31159	1225807	51920	327340	43151
15	cis-1,2-Dichloroethene	1.030	0.052	2.060	0.206	0.412	0.103	240146	21098	758337	35003	226396	27004
19	1,2-Dichloroethane	1.030	0.052	2.060	0.206	0.412	0.103	1236150	74052	4935278	125964	835756	97954
20	Benzene	1.030	0.052	2.060	0.206	0.412	0.103	967913	60686	3573129	94902	641363	73510
21	Carbon tetrachloride	1.020	0.051	2.040	0.204	0.408	0.102	492544	40672	1579809	67130	410007	53667
23	Trichloroethene	1.030	0.052	2.060	0.206	0.412	0.103	305786	29555	968228	45278	286372	33459
24	Bromodichloromethane	0.670	0.034	1.340	0.134	0.268	0.067	349165	34872	980125	57413	329960	43188
28	1,1,2-Trichloroethane	1.020	0.051	2.040	0.204	0.408	0.102	480870	37160	1655491	70973	441832	43484
30	Tetrachloroethene	1.020	0.051	2.040	0.204	0.408	0.102	373918	35806	1224836	58411	374447	38753
34	m & p-Xylene	2.060	0.103	4.120	0.412	0.824	0.206	2970894	279033	10312056	481458	2872586	284680
36	o-Xylene	1.020	0.051	2.040	0.204	0.408	0.102	1996168	168269	6920115	304155	1831287	166711
37	1,1,2,2-Tetrachloroethane	1.020	0.051	2.040	0.204	0.408	0.102	2273482	192188	6988630	401655	2300254	180334
45	1,2,4-Trichlorobenzene	1.030	0.052	2.060	0.206	0.412	0.103	6381826	918959	14261028	1761172	9410822	617532
47	1,4 Dioxane	0.740	0.037	1.480	0.148	0.296	0.074	154378	17449	450267	31614	179188	26330
48	Naphthalene	2.130	0.107	-1.000	0.426	0.852	0.213	34587722	6597377	-1	12354059	37178978	4780301
1	Chlorobenzene-d5	0.200	0.200	0.200	0.200	0.200	0.200	877690	1273169	1660044	554145	1807068	927887
16	Toluene-d8	0.200	0.200	0.200	0.200	0.200	0.200	389596	565545	652462	236781	753686	395034

(260)

INITIAL CALIBRATION REPORT: Response Factors

SDG:	**LABQC**
QC_Batch:	**062209-MS2**
Sample ID:	ST60032 + ST60250
Sample Analysis Date:	22 Jun 109 9:24 am
Run Method:	2EXSIM_I.M
Quant Method:	2EXSIM_I.M
Cal Update:	Mon Jun 22 09:18:18 2009
Template:	EARTEXSM.MS3

Sample Calculation:

1) Avg RFn = Sum $\left| \frac{(Astdni)\ (Cistdi)}{(Cstdni)\ (Aistdi)} \right|_i$

Response Factors

Compound	RF1	RF2	RF3	RF4	RF5	RF6	AvgRFn	%RSD
Vinyl chloride	0.040	0.037	0.035	0.043	0.037	0.041	0.039	8.23
1,1-Dichloroethene	0.085	0.084	0.069	0.082	0.080	0.084	0.081	7.72
1,1-Dichloroethane	0.091	0.096	0.073	0.093	0.090	0.092	0.089	9.11
cis-1,2-Dichloroethene	0.053	0.064	0.044	0.061	0.061	0.057	0.057	12.56
1,2-Dichloroethane	0.273	0.224	0.289	0.221	0.225	0.205	0.239	13.97
Benzene	0.214	0.183	0.209	0.166	0.172	0.154	0.183	13.13
Carbon tetrachloride	0.110	0.125	0.093	0.119	0.111	0.113	0.112	9.60
Trichloroethene	0.068	0.089	0.057	0.079	0.077	0.070	0.073	15.26
Bromodichloromethane	0.119	0.161	0.088	0.155	0.136	0.139	0.133	19.96
1,1,2-Trichloroethane	0.107	0.114	0.098	0.126	0.120	0.092	0.109	11.85
Tetrachloroethene	0.084	0.110	0.072	0.103	0.102	0.082	0.092	16.20
m & p-Xylene	0.329	0.426	0.302	0.422	0.386	0.298	0.360	16.21
o-Xylene	0.446	0.518	0.409	0.538	0.497	0.352	0.460	15.46
1,1,2,2-Tetrachloroethane	0.508	0.592	0.413	0.711	0.624	0.381	0.538	23.70
1,2,4-Trichlorobenzene	1.412	2.776	0.834	3.086	2.528	1.292	1.988	46.46
1,4 Dioxane	0.048	0.074	0.037	0.077	0.067	0.077	0.063	27.03
Naphthalene	3.700	9.686	NA	10.467	4.830	4.837	6.704	46.62
Chlorobenzene-d5	1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.00
Toluene-d8	0.444	0.444	0.393	0.427	0.417	0.426	0.425	4.48

CALCULATIONS

EPA Method TO-15 Modified SIM GC/MS

SDG: LABQC
Laboratory Number: C06229

RL:	2EXSIM_I.M
Run Method:	2EXSIM_I.M
Quant Method:	2EXSIM_I.M
Can Dilution Factor:	1.00
Air Volume:	500 ml
Gas Constant:	23.68
Decimal Places:	3

Compound	M.W.	Raw Amount	Result ppbv	Result ug/m3	(1) MDL ppbv	(2) RL ppbv	Calc MDL ppbv	Calc MDL ug/m3	Calc RL ppbv	Calc RL ug/m3	Flag	S062602-1 Spike ppmv
Vinyl chloride	62.5	0.104	0.207	0.546	0.005	0.052	0.01	0.027	0.10	0.274		0.103
1,1-Dichloroethene	96.9	0.117	0.234	0.958	0.005	0.052	0.01	0.043	0.10	0.426		0.103
1,1-Dichloroethane	99.0	0.112	0.225	0.939	0.005	0.051	0.01	0.043	0.10	0.426		0.103
cis-1,2-Dichloroethene	96.9	0.108	0.215	0.880	0.005	0.052	0.01	0.043	0.10	0.426		0.103
1,2-Dichloroethane	99.0	0.123	0.246	1.030	0.005	0.052	0.01	0.043	0.10	0.435		0.103
Benzene	78.1	0.118	0.237	0.780	0.005	0.052	0.01	0.034	0.10	0.343		0.103
Carbon tetrachloride	153.8	0.114	0.228	1.479	0.005	0.051	0.01	0.066	0.10	0.662		0.103
Trichloroethene	131.4	0.122	0.243	1.349	0.005	0.052	0.01	0.058	0.10	0.577		0.103
Bromodichloromethane	163.8	0.066	0.132	0.915	0.003	0.034	0.01	0.047	0.07	0.470		0.103
1,1,2-Trichloroethane	133.4	0.110	0.221	1.242	0.005	0.051	0.01	0.057	0.10	0.575		0.103
Tetrachloroethene	165.8	0.122	0.245	1.712	0.005	0.051	0.01	0.071	0.10	0.714		0.103
m & p-Xylene	106.2	0.249	0.498	2.235	0.010	0.103	0.02	0.092	0.21	0.924		0.103
o-Xylene	106.2	0.124	0.247	1.110	0.005	0.051	0.01	0.046	0.10	0.457		0.103
1,1,2,2-Tetrachloroethane	167.8	0.095	0.189	1.343	0.005	0.051	0.01	0.072	0.10	0.723		0.103
1,2,4-Trichlorobenzene	181.4	0.073	0.145	1.112	0.005	0.052	0.01	0.080	0.10	0.797		0.103
1,4 Dioxane	88.1	0.060	0.120	0.445	0.004	0.037	0.01	0.028	0.07	0.275		1.103
Naphthalene	128.2	0.148	0.295	1.598	0.011	0.107	0.02	0.116	0.21	1.159		2.103

SAMPLE CALCULATION

EPA Method TO-15 Modified SIM GC/MS

SDG:		**LABQC**
Laboratory Number:		**C06229**
Standard Volume	STV	0.5
Sample Volume	SV	500
Can Dilution Factor	CDF	1.00
Gas Constant		23.68
Decimal Places:		3

Sample Calculation:

1) Avg RFn = Sum $\left| \frac{(Astdni)}{(Cstdni)} \frac{(Cistdi)}{(Aistdi)} \right|_i$ Note: 1

2) Raw Amt = $\frac{(Ansamp)}{(Avg\ RFn)} \frac{(Cistdi)}{(Aistdi)}$ = **Cn**

3) Amount ppbv = $\frac{(Raw\ Amt)\ 1000}{(SV)}$ (CDF) (STV)

4) Amount ug/m3 = $\frac{(amt(ppbv)\ MW}{23.68}$

n	Compound	IS n	Chem type	MW	AvgRFn	Area Ansamp	Cistdi ppmv	Aistdi Ais	Cn ppmV Raw Amt	Amount ppbv	Amount ug/m3
5	Vinyl chloride	1	TRG	62.5	0.039	27363	0.200	1357329	0.104	0.207	0.546
9	1,1-Dichloroethene	1	TRG	96.9	0.081	64242	0.200	1357329	0.117	0.234	0.958
14	1,1-Dichloroethane	1	TRG	99.0	0.089	67933	0.200	1357329	0.112	0.225	0.941
15	cis-1,2-Dichloroethene	1	TRG	96.9	0.057	41349	0.200	1357329	0.108	0.215	0.880
19	1,2-Dichloroethane	1	TRG	99.0	0.239	200096	0.200	1357329	0.123	0.246	1.028
20	Benzene	1	TRG	78.1	0.183	147058	0.200	1357329	0.118	0.237	0.782
21	Carbon tetrachloride	1	TRG	153.8	0.112	86557	0.200	1357329	0.114	0.228	1.481
23	Trichloroethene	1	TRG	131.4	0.073	60494	0.200	1357329	0.122	0.243	1.348
24	Bromodichloromethane	1	TRG	163.8	0.133	59717	0.200	1357329	0.066	0.132	0.913
28	1,1,2-Trichloroethane	1	TRG	133.4	0.109	81943	0.200	1357329	0.110	0.221	1.245
30	Tetrachloroethene	1	TRG	165.8	0.092	76488	0.200	1357329	0.122	0.245	1.715
34	m & p-Xylene	1	TRG	106.2	0.360	609116	0.200	1357329	0.249	0.498	2.233
36	o-Xylene	1	TRG	106.2	0.460	386312	0.200	1357329	0.124	0.247	1.108
37	1,1,2,2-Tetrachloroethane	1	TRG	167.8	0.54	345959	0.200	1357329	0.095	0.189	1.339
45	1,2,4-Trichlorobenzene	1	TRG	181.4	1.99	978922	0.200	1357329	0.073	0.145	1.111
47	1,4 Dioxane	1	TRG	88.1	0.06	25623	0.200	1357329	0.060	0.120	0.446
48	Naphthalene	1	TRG	128.2	6.70	6712681	0.200	1357329	0.148	0.295	1.597
1	Chlorobenzene-d5	1	IS	0.0	1.000	1357329	0.200	1357329	0.000	0.000	0.000
16	Toluene-d8	1	SURR	0.0	0.425	693988	0.200	1357329	0.000	0.000	0.000

Calculation Definitions:

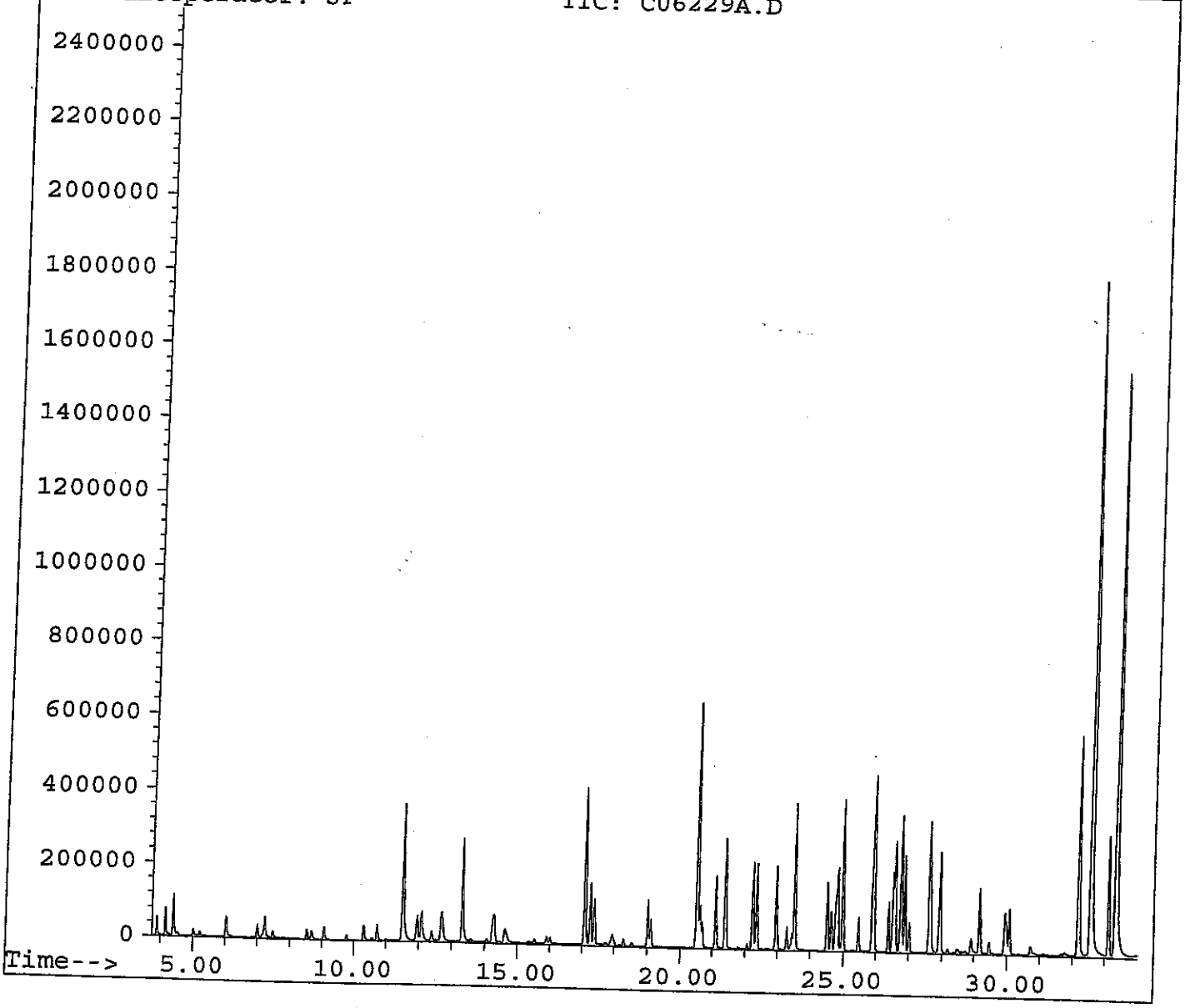
n	compound n
i	i th calibration level
Astdni	Standard Area for compound n at ith calibration level
Cstdni	Standard Concentration for compound n at ith calibration level in ppmv
Cistdi	Internal Standard Conc used for compound n at ith calibration level in ppmv
Aistdi	Internal Standard Area used for compound n at ith calibration level
Ansamp	Sample Area for compound n
Avg RFn	Average response factor for all ith calibration levels for compound n
Raw Amount	Sample Concentration in ppmv before applying factors
Cistd	Concentration internal standard used for compound n in sample in ppmv
Aistd	Area of internal standard used for compound n in sample
Cn	Concentration of compound n in sample in ppmv
23.68	Gas constant at 60 F as per EPA source test protocol
MW	Molecular weight of compound

Note (1) : Avg RFn — The values for the Average Response Factor AvgRFn can be optained from the response Factor Report for the Initial Calibration, or from the Calibration Report

Name of file: C:\HPCHEM\1\DATA\06229MS2\C06229A.D

Name of operator: JF

TIC: C06229A.D



METHOD BLANK REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified SIM GC/MS
Analytical Method: TO-15 SIM

SDG: LABQC
Laboratory Number: B06229

File: B06229B.D
Description: METHOD BLANK
Can/Tube#:
Sam_Type: MB
QC_Batch: 062209-MS2
Air Volume: 500 ml

Date Sampled: **Time:**
Date Received:
Date Extracted:
Date Analyzed: 06/22/09 **Time:** 14:29
Can Dilution Factor: 1.00 3
Not Detected Flag: ND

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
75-01-4	Vinyl chloride	0.010	0.104	ND	0.027	0.274	ND	ND
75-35-4	1,1-Dichloroethene	0.010	0.104	ND	0.043	0.426	ND	ND
75-34-3	1,1-Dichloroethane	0.010	0.102	ND	0.043	0.426	ND	ND
156-59-2	cis-1,2-Dichloroethene	0.010	0.104	ND	0.043	0.426	ND	ND
107-06-2	1,2-Dichloroethane	0.010	0.104	ND	0.043	0.435	ND	ND
71-43-2	Benzene	0.010	0.104	0.016	0.034	0.343	0.053	J
56-23-5	Carbon tetrachloride	0.010	0.102	ND	0.066	0.662	ND	ND
79-01-6	Trichloroethene	0.010	0.104	0.014	0.058	0.577	0.079	J
75-27-4	Bromodichloromethane	0.007	0.068	ND	0.047	0.470	ND	ND
79-00-5	1,1,2-Trichloroethane	0.010	0.102	ND	0.057	0.575	ND	ND
127-18-4	Tetrachloroethene	0.010	0.102	0.012	0.071	0.714	0.087	J
108-38-3	m & p-Xylene	0.021	0.206	0.024	0.092	0.924	0.108	J
95-47-6	o-Xylene	0.010	0.102	ND	0.046	0.457	ND	ND
79-34-5	1,1,2,2-Tetrachloroethane	0.010	0.102	ND	0.072	0.723	ND	ND
120-82-1	1,2,4-Trichlorobenzene	0.010	0.104	0.027	0.080	0.797	0.205	J
123-91-1	1,4 Dioxane	0.007	0.074	ND	0.028	0.275	ND	ND
91-20-3	Naphthalene	0.021	0.214	0.024	0.116	1.159	0.128	J

	Surrogate Recovery	Spike Amt. ppbV	Amount ppbV	% Rec.	QC Limits	Flag * = Out
2037-26-5	Toluene-d8	0.200	0.172	86	70-130	

Notes: 1) Reported results are to be interpreted to two significant figures.
2) ug/m3 = ppbV*FW/23.68 calculated assuming conditions at 60 F and 1 atm.
3) MDL and RL are adjusted for sample volume and can dilution.
4) U and ND are Flags used for Not Detected
5) J is a flag for a result between the MDL and the RL (or lower quantitation limit, LQL)

QUANTITATION REPORT

EPA Method TO-15 Modified SIM GC/MS

Review **EAS Sample ID: B06229B**

File Name:	B06229B.D		1 SS
Sample ID:	METHOD BLANK		2 KB
Date:	22 Jun 109 2:29 pm	Cal Amounts	3 AT
Run Method:	2EXSIM_I.M	IS Areas	4 BB
Quant Method:	2EXSIM_I.M	Carryover	5 SH
Cal Update:	Mon Jun 22 09:18:18 2009		
Template:	EARTEXSM.MS3		
Can Factor:	1.00		
Volume:	500 ml	Analyst: SS 1	

CAS#	Compound	n	Raw Amount	RT	Target RT	Ion	Sample Area	Qualifier	Lower Qual	Upper Qual	Qual Flag	Cal Flag	Int Flag
75-01-4	Vinyl chloride	5	0.000	4.32	4.37	62.00	0	0	28	42			
75-35-4	1,1-Dichloroethene	9	0.005	6.96	6.95	61.00	943	55	37	56			
75-34-3	1,1-Dichloroethane	14	0.004	9.04	9.00	63.00	864	51	25	37			
156-59-2	cis-1,2-Dichloroethene	15	0.005	10.27	10.24	96.00	610	130	102	153			
107-06-2	1,2-Dichloroethane	19	0.000	12.20	12.02	61.95	0	0	14	21			
71-43-2	Benzene	20	0.008	12.66	12.63	78.00	3358	24	16	23	Q		
56-23-5	Carbon tetrachloride	21	0.000	12.63	12.66	116.90	0	0	79	119			
79-01-6	Trichloroethene	23	0.007	14.28	14.26	130.00	1185	96	75	112			
75-27-4	Bromodichloromethane	24	0.000	14.71	14.57	83.00	0	0	52	78			
79-00-5	1,1,2-Trichloroethane	28	0.000	17.51	17.35	97.00	0	0	63	94			
127-18-4	Tetrachloroethene	30	0.006	19.13	19.09	166.00	1304	87	64	97			
108-38-3	m & p-Xylene	34	0.012	21.41	21.37	91.00	9846	48	42	63			
95-47-6	o-Xylene	36	0.005	22.38	22.34	91.00	5048	44	38	56			
79-34-5	1,1,2,2-Tetrachloroethane	37	0.000	23.12	22.93	83.00	0	0	8	12			
120-82-1	1,2,4-Trichlorobenzene	45	0.013	32.20	32.17	180.00	60206	96	79	118			
123-91-1	1,4 Dioxane	47	0.000	14.50	14.57	88.00	0	0	55	82			
91-20-3	Naphthalene	48	0.012	32.59	32.78	128.00	179303	0	0	0			
3114-55-4	Chlorobenzene-d5	1	0.200	20.55	20.51	117.00	**453663**						
2037-26-5	Toluene-d8	16	0.172	17.08	17.05	98.00	**165952**						

Integration Flags:

If no flag the Integration was done by the instrument computer

M1 Manual Integration because the computer did not integrated the peak or integrated the wrong peak

M2 Manual Integration because computer integration of baseline was different then Inital Calibration

INITIAL CALIBRATION REPORT

EPA Method TO-15 Modified SIM GC/MS

File Name:	B06229B.D	SDG:	LABQC
Sample ID:	METHOD BLANK	QC_Batch:	062209-MS2
Sample Analysis Date:	22 Jun 109 2:29 pm	Instrument Name:	MS2
Run Method:	2EXSIM_I.M	Number Compounds:	49
Quant and Calibration Method:	2EXSIM_I.M	IS1: ST60024	0.2
Cal Update:	Mon Jun 22 09:18:18 2009	IS2:	
Template:	EARTEXSM.MS3	IS3:	
		IS4:	

Calibration Title:EPA T0-15

		Calibration Amount CA, ppmv						Calibration Response, Area					
		Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
		Amt	Amt	Amt	Amt	Amt	Amt	C06199B.D	C06199H.D	C06199A.D	C06199F.D	C06199E.D	C06199K.D
n	Compound	10.0	0.5	20.0	2.0	4.0	1.0	10.0	0.5	20.0	2.0	4.0	1.0
5	Vinyl chloride	1.040	0.052	2.080	0.208	0.416	0.104	184476	12222	596605	24865	140317	19936
9	1,1-Dichloroethene	1.040	0.052	2.080	0.208	0.416	0.104	388365	27969	1185798	47507	301017	40726
14	1,1-Dichloroethane	1.010	0.051	2.020	0.202	0.404	0.101	403912	31159	1225807	51920	327340	43151
15	cis-1,2-Dichloroethene	1.030	0.052	2.060	0.206	0.412	0.103	240146	21098	758337	35003	226396	27004
19	1,2-Dichloroethane	1.030	0.052	2.060	0.206	0.412	0.103	1236150	74052	4935278	125964	835756	97954
20	Benzene	1.030	0.052	2.060	0.206	0.412	0.103	967913	60686	3573129	94902	641363	73510
21	Carbon tetrachloride	1.020	0.051	2.040	0.204	0.408	0.102	492544	40672	1579809	67130	410007	53667
23	Trichloroethene	1.030	0.052	2.060	0.206	0.412	0.103	305786	29555	968228	45278	286372	33459
24	Bromodichloromethane	0.670	0.034	1.340	0.134	0.268	0.067	349165	34872	980125	57413	329960	43188
28	1,1,2-Trichloroethane	1.020	0.051	2.040	0.204	0.408	0.102	480870	37160	1655491	70973	441832	43484
30	Tetrachloroethene	1.020	0.051	2.040	0.204	0.408	0.102	373918	35806	1224836	58411	374447	38753
34	m & p-Xylene	2.060	0.103	4.120	0.412	0.824	0.206	2970894	279033	10312056	481458	2872586	284680
36	o-Xylene	1.020	0.051	2.040	0.204	0.408	0.102	1996168	168269	6920115	304155	1831287	166711
37	1,1,2,2-Tetrachloroethane	1.020	0.051	2.040	0.204	0.408	0.102	2273482	192188	6988630	401655	2300254	180334
45	1,2,4-Trichlorobenzene	1.030	0.052	2.060	0.206	0.412	0.103	6381826	918959	14261028	1761172	9410822	617532
47	1,4 Dioxane	0.740	0.037	1.480	0.148	0.296	0.074	154378	17449	450267	31614	179188	26330
48	Naphthalene	2.130	0.107	-1.000	0.426	0.852	0.213	34587722	6597377	-1	12354059	37178978	4780301
1	Chlorobenzene-d5	0.200	0.200	0.200	0.200	0.200	0.200	877690	1273169	1660044	554145	1807068	927887
16	Toluene-d8	0.200	0.200	0.200	0.200	0.200	0.200	389596	565545	652462	236781	753686	395034

(267)

INITIAL CALIBRATION REPORT: Response Factors

SDG:	**LABQC**
QC_Batch:	**062209-MS2**
Sample ID:	METHOD BLANK
Sample Analysis Date:	22 Jun 109 2:29 pm
Run Method:	2EXSIM_I.M
Quant Method:	2EXSIM_I.M
Cal Update:	Mon Jun 22 09:18:18 2009
Template:	EARTEXSM.MS3

Sample Calculation:

1) Avg RFn = Sum $\left| \frac{(Astdni)\ (Cistdi)}{(Cstdni)\ (Aistdi)} \right|_i$

Response Factors

Compound	RF1	RF2	RF3	RF4	RF5	RF6	AvgRFn	%RSD
Vinyl chloride	0.040	0.037	0.035	0.043	0.037	0.041	0.039	8.23
1,1-Dichloroethene	0.085	0.084	0.069	0.082	0.080	0.084	0.081	7.72
1,1-Dichloroethane	0.091	0.096	0.073	0.093	0.090	0.092	0.089	9.11
cis-1,2-Dichloroethene	0.053	0.064	0.044	0.061	0.061	0.057	0.057	12.56
1,2-Dichloroethane	0.273	0.224	0.289	0.221	0.225	0.205	0.239	13.97
Benzene	0.214	0.183	0.209	0.166	0.172	0.154	0.183	13.13
Carbon tetrachloride	0.110	0.125	0.093	0.119	0.111	0.113	0.112	9.60
Trichloroethene	0.068	0.089	0.057	0.079	0.077	0.070	0.073	15.26
Bromodichloromethane	0.119	0.161	0.088	0.155	0.136	0.139	0.133	19.96
1,1,2-Trichloroethane	0.107	0.114	0.098	0.126	0.120	0.092	0.109	11.85
Tetrachloroethene	0.084	0.110	0.072	0.103	0.102	0.082	0.092	16.20
m & p-Xylene	0.329	0.426	0.302	0.422	0.386	0.298	0.360	16.21
o-Xylene	0.446	0.518	0.409	0.538	0.497	0.352	0.460	15.46
1,1,2,2-Tetrachloroethane	0.508	0.592	0.413	0.711	0.624	0.381	0.538	23.70
1,2,4-Trichlorobenzene	1.412	2.776	0.834	3.086	2.528	1.292	1.988	46.46
1,4 Dioxane	0.048	0.074	0.037	0.077	0.067	0.077	0.063	27.03
Naphthalene	3.700	9.686	NA	10.467	4.830	4.837	6.704	46.62
Chlorobenzene-d5	1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.00
Toluene-d8	0.444	0.444	0.393	0.427	0.417	0.426	0.425	4.48

CALCULATIONS

EPA Method TO-15 Modified SIM GC/MS

SDG: LABQC
Laboratory Number: B06229

RL:	2EXSIM_I.M
Run Method:	2EXSIM_I.M
Quant Method:	2EXSIM_I.M
Can Dilution Factor:	1.00
Air Volume:	500 ml
Gas Constant:	23.68
Decimal Places:	3

Compound	M.W.	Raw Amount	Result ppbv	Result ug/m3	(1) MDL ppbv	(2) RL ppbv	Calc MDL ppbv	Calc MDL ug/m3	Calc RL ppbv	Calc RL ug/m3	Flag	S062602-1 Spike ppmv
Vinyl chloride	62.5	0.000	0.000	0.000	0.005	0.052	0.01	0.027	0.10	0.274	U	0.103
1,1-Dichloroethene	96.9	0.005	0.010	0.042	0.005	0.052	0.01	0.043	0.10	0.426	U	0.103
1,1-Dichloroethane	99.0	0.004	0.009	0.036	0.005	0.051	0.01	0.043	0.10	0.426	U	0.103
cis-1,2-Dichloroethene	96.9	0.005	0.009	0.039	0.005	0.052	0.01	0.043	0.10	0.426	U	0.103
1,2-Dichloroethane	99.0	0.000	0.000	0.000	0.005	0.052	0.01	0.043	0.10	0.435	U	0.103
Benzene	78.1	0.008	0.016	0.053	0.005	0.052	0.01	0.034	0.10	0.343	J	0.103
Carbon tetrachloride	153.8	0.000	0.000	0.000	0.005	0.051	0.01	0.066	0.10	0.662	U	0.103
Trichloroethene	131.4	0.007	0.014	0.079	0.005	0.052	0.01	0.058	0.10	0.577	J	0.103
Bromodichloromethane	163.8	0.000	0.000	0.000	0.003	0.034	0.01	0.047	0.07	0.470	U	0.103
1,1,2-Trichloroethane	133.4	0.000	0.000	0.000	0.005	0.051	0.01	0.057	0.10	0.575	U	0.103
Tetrachloroethene	165.8	0.006	0.012	0.087	0.005	0.051	0.01	0.071	0.10	0.714	J	0.103
m & p-Xylene	106.2	0.012	0.024	0.108	0.010	0.103	0.02	0.092	0.21	0.924	J	0.103
o-Xylene	106.2	0.005	0.010	0.043	0.005	0.051	0.01	0.046	0.10	0.457	U	0.103
1,1,2,2-Tetrachloroethane	167.8	0.000	0.000	0.000	0.005	0.051	0.01	0.072	0.10	0.723	U	0.103
1,2,4-Trichlorobenzene	181.4	0.013	0.027	0.205	0.005	0.052	0.01	0.080	0.10	0.797	J	0.103
1,4 Dioxane	88.1	0.000	0.000	0.000	0.004	0.037	0.01	0.028	0.07	0.275	U	1.103
Naphthalene	128.2	0.012	0.024	0.128	0.011	0.107	0.02	0.116	0.21	1.159	J	2.103

SAMPLE CALCULATION

EPA Method TO-15 Modified SIM GC/MS

SDG:		**LABQC**
Laboratory Number:		**B06229**
Standard Volume	STV	0.5
Sample Volume	SV	500
Can Dilution Factor	CDF	1.00
Gas Constant		23.68
Decimal Places:		3

Sample Calculation:

1) Avg RFn = Sum $\left| \frac{(Astdni)}{(Cstdni)} \frac{(Cistdi)}{(Aistdi)} \right|_i$ Note: 1

2) Raw Amt = $\frac{(Ansamp)}{(Avg\ RFn)} \frac{(Cistdi)}{(Aistdi)}$ = **Cn**

3) Amount ppbv = $\frac{(Raw\ Amt)\ 1000}{(SV)}$ (CDF) (STV)

4) Amount ug/m3 = $\frac{(amt(ppbv)\ MW}{23.68}$

n	Compound	IS n	Chem type	MW	AvgRFn	Area Ansamp	Cistdi ppmv	Aistdi Ais	Cn ppmV Raw Amt	Amount ppbv	Amount ug/m3
5	Vinyl chloride	1	TRG	62.5	0.039	0	0.200	453663	0.000	0.000	0.000
9	1,1-Dichloroethene	1	TRG	96.9	0.081	943	0.200	453663	0.005	0.010	0.041
14	1,1-Dichloroethane	1	TRG	99.0	0.089	864	0.200	453663	0.004	0.009	0.038
15	cis-1,2-Dichloroethene	1	TRG	96.9	0.057	610	0.200	453663	0.005	0.009	0.037
19	1,2-Dichloroethane	1	TRG	99.0	0.239	0	0.200	453663	0.000	0.000	0.000
20	Benzene	1	TRG	78.1	0.183	3358	0.200	453663	0.008	0.016	0.053
21	Carbon tetrachloride	1	TRG	153.8	0.112	0	0.200	453663	0.000	0.000	0.000
23	Trichloroethene	1	TRG	131.4	0.073	1185	0.200	453663	0.007	0.014	0.078
24	Bromodichloromethane	1	TRG	163.8	0.133	0	0.200	453663	0.000	0.000	0.000
28	1,1,2-Trichloroethane	1	TRG	133.4	0.109	0	0.200	453663	0.000	0.000	0.000
30	Tetrachloroethene	1	TRG	165.8	0.092	1304	0.200	453663	0.006	0.012	0.084
34	m & p-Xylene	1	TRG	106.2	0.360	9846	0.200	453663	0.012	0.024	0.108
36	o-Xylene	1	TRG	106.2	0.460	5048	0.200	453663	0.005	0.010	0.045
37	1,1,2,2-Tetrachloroethane	1	TRG	167.8	0.54	0	0.200	453663	0.000	0.000	0.000
45	1,2,4-Trichlorobenzene	1	TRG	181.4	1.99	60206	0.200	453663	0.013	0.027	0.207
47	1,4 Dioxane	1	TRG	88.1	0.06	0	0.200	453663	0.000	0.000	0.000
48	Naphthalene	1	TRG	128.2	6.70	179303	0.200	453663	0.012	0.024	0.130
1	Chlorobenzene-d5	1	IS	0.0	1.000	453663	0.200	453663	0.000	0.000	0.000
16	Toluene-d8	1	SURR	0.0	0.425	165952	0.200	453663	0.000	0.000	0.000

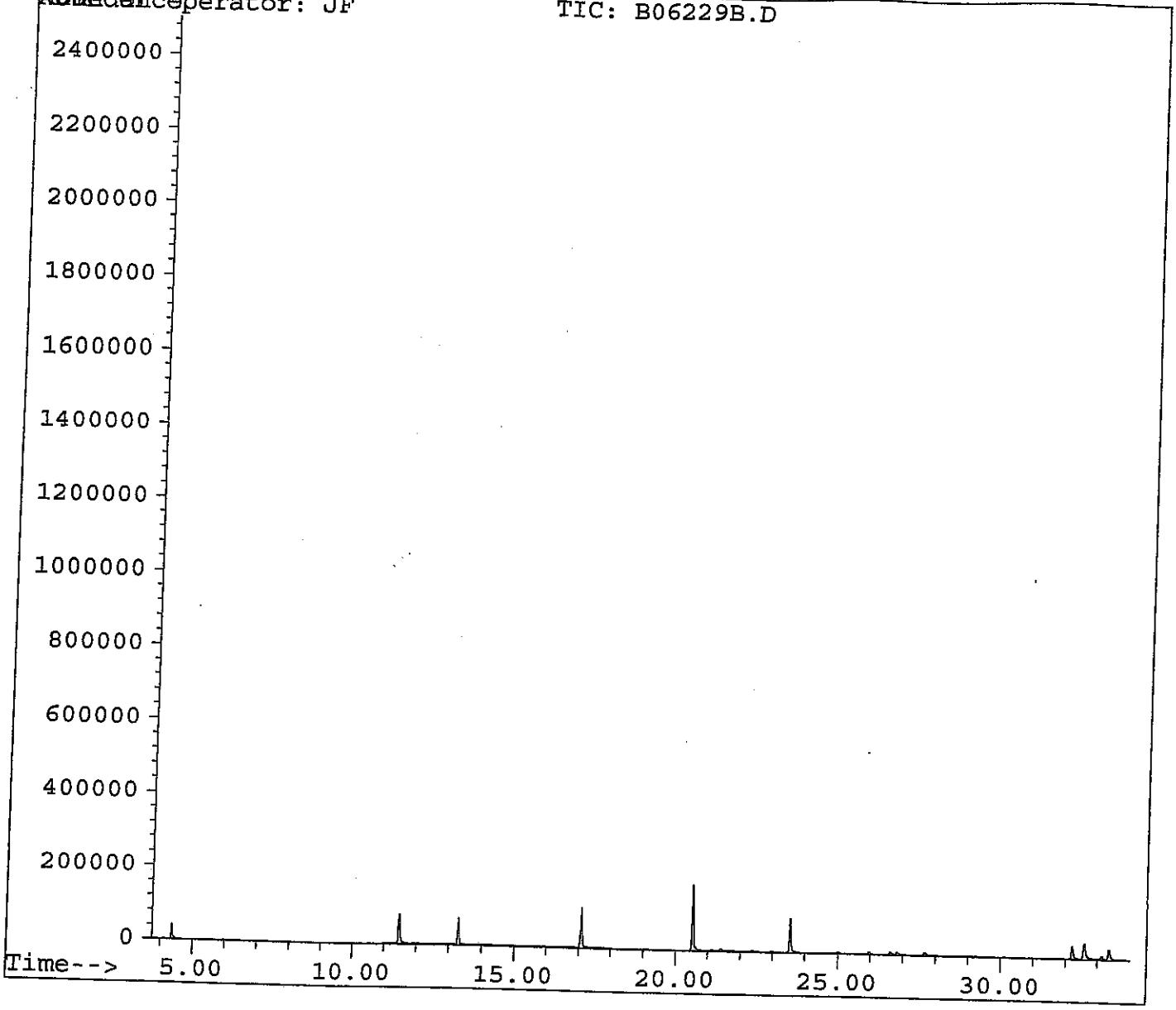
Calculation Definitions:

n	compound n
i	i th calibration level
Astdni	Standard Area for compound n at ith calibration level
Cstdni	Standard Concentration for compound n at ith calibration level in ppmv
Cistdi	Internal Standard Conc used for compound n at ith calibration level in ppmv
Aistdi	Internal Standard Area used for compound n at ith calibration level
Ansamp	Sample Area for compound n
Avg RFn	Average response factor for all ith calibration levels for compound n
Raw Amount	Sample Concentration in ppmv before applying factors
Cistd	Concentration internal standard used for compound n in sample in ppmv
Aistd	Area of internal standard used for compound n in sample
Cn	Concentration of compound n in sample in ppmv
23.68	Gas constant at 60 F as per EPA source test protocol
MW	Molecular weight of compound
Note (1) : Avg RFn	The values for the Average Response Factor AvgRFn can be optained from the response Factor Report for the Initial Calibration, or from the Calibration Report

Name of file: C:\HPCHEM\1\DATA\06229MS2\B06229B.D

Name of operator: JF

TIC: B06229B.D



QUALITY CONTROL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

LABORATORY CONTROL SPIKE

EPA Method TO-15 Modified SIM GC/MS
Analytical Method: TO-15 SIM

SDG: LABQC

File: QC06229C.D
Description: ST0623091
Can/Tube#:
Sam_Type: LCS
QC_Batch: 062209-MS2
Air Volume: 1000 ml

Date Sampled: NA
Date Received: NA
Date Extracted: NA
Date Analyzed: 06/22/09 **Time:** 12:21
Can Dilution Factor: 1.00 3
QC Duplicate: No

CAS#	Compound	MDL ppbv	Spike Conc ppbv	Amount ppbv	Matrix Amt ppbv	Spk Amt ppbv	Percent Recovery	LCL %	UCL %	Flag
74-87-3	Chloromethane	0.005	1.044	0.977	0.000	0.977	94	70	130	
75-01-4	Vinyl chloride	0.005	1.268	1.309	0.000	1.309	103	70	130	
74-83-9	Bromomethane	0.005	1.422	1.598	0.000	1.598	112	70	130	
75-35-4	1,1-Dichloroethene	0.005	1.275	1.375	0.000	1.375	108	70	130	
75-09-2	Dichloromethane	0.005	1.090	1.235	0.000	1.235	113	70	130	
75-34-3	1,1-Dichloroethane	0.005	1.159	1.248	0.000	1.248	108	70	130	
156-59-2	cis-1,2-Dichloroethene	0.005	0.966	1.161	0.000	1.161	120	70	130	
67-66-3	Chloroform	0.005	1.234	1.197	0.000	1.197	97	70	130	
71-55-6	1,1,1-Trichloroethane	0.005	1.150	1.302	0.000	1.302	113	70	130	
107-06-2	1,2-Dichloroethane	0.005	0.901	0.949	0.000	0.949	105	70	130	
71-43-2	Benzene	0.005	0.793	0.892	0.000	0.892	112	70	130	
56-23-5	Carbon tetrachloride	0.005	1.158	1.390	0.000	1.390	120	70	130	
78-87-5	1,2-Dichloropropane	0.005	0.976	1.099	0.000	1.099	113	70	130	
79-01-6	Trichloroethene	0.005	0.877	1.076	0.000	1.076	123	70	130	
108-88-3	Toluene	0.005	0.709	0.790	0.000	0.790	111	70	130	
79-00-5	1,1,2-Trichloroethane	0.005	0.710	0.813	0.000	0.813	115	70	130	
106-93-4	1,2-Dibromoethane	0.005	0.611	0.782	0.000	0.782	128	70	130	
127-18-4	Tetrachloroethene	0.005	0.779	0.994	0.000	0.994	128	70	130	
108-90-7	Chlorobenzene	0.005	0.634	0.769	0.000	0.769	121	70	130	
100-41-4	Ethylbenzene	0.005	0.649	0.709	0.000	0.709	109	70	130	
108-38-3	m & p-Xylene	0.010	1.346	1.427	0.000	1.427	106	70	130	
95-47-6	o-Xylene	0.005	0.594	0.620	0.000	0.620	104	70	130	

Surrogate Recovery	Spike Amt. ppbV	Amount ppbV	% Rec.	QC Limits	Flag * = Out
Toluene-d8	0.200	0.208	104	70-130	

Notes: Reported results are to be interpreted to two significant figures.
*ug/m3 calculated assuming conditions at 60 F and 1 atm.

QUANTITATION REPORT

EPA Method TO-15 Modified SIM GC/MS

			Review	EAS Sample ID: QC06229	
File Name:	QC06229C.D				1 SS
Sample ID:	ST0623091				2 KB
Date:	22 Jun 109 12:21 pm			Cal Amounts	3 AT
Run Method:	2EXSIM_I.M			IS Areas	4 BB
Quant Method:	2EXSIM_I.M			Carryover	5 SH
Cal Update:	Mon Jun 22 09:18:18 2009				
Template:	EARTEXSM.MS3				
Can Factor:	1.00				
Volume:	1000	ml		Analyst: SS 1	

CAS#	Compound	n	Raw Amount	RT	Target RT	Ion	Sample Area	Qualifier	Lower Qual	Upper Qual	Qual Flag	Cal Flag	Int Flag
74-87-3	Chloromethane	3	0.977	4.15	4.12	50.00	154874	24	21	32			
75-01-4	Vinyl chloride	5	1.309	4.41	4.37	62.00	148976	34	28	42			
74-83-9	Bromomethane	6	1.598	5.01	4.97	94.00	174303	94	69	104			
75-35-4	1,1-Dichloroethene	9	1.375	7.00	6.95	61.00	325032	47	37	56			
75-09-2	Dichloromethane	11	1.235	7.48	7.42	84.00	148495	68	51	77			
75-34-3	1,1-Dichloroethane	14	1.248	9.08	9.00	63.00	324927	33	25	37			
156-59-2	cis-1,2-Dichloroethene	15	1.161	10.30	10.24	96.00	192267	143	102	153			
67-66-3	Chloroform	17	1.197	10.72	10.66	83.00	411560	70	52	78			
71-55-6	1,1,1-Trichloroethane	18	1.302	11.96	11.91	97.00	495307	71	53	80			
107-06-2	1,2-Dichloroethane	19	0.949	12.10	12.02	61.95	663469	19	14	21			
71-43-2	Benzene	20	0.892	12.68	12.63	78.00	477360	17	16	23			
56-23-5	Carbon tetrachloride	21	1.390	12.71	12.66	116.90	454870	99	79	119			
78-87-5	1,2-Dichloropropane	22	1.099	14.26	14.20	63.00	198421	158	126	189			
79-01-6	Trichloroethene	23	1.076	14.31	14.26	130.00	230558	104	75	112			
108-88-3	Toluene	26	0.790	17.27	17.21	91.00	597669	70	53	80			
79-00-5	1,1,2-Trichloroethane	28	0.813	17.37	17.35	97.00	260259	83	63	94			
106-93-4	1,2-Dibromoethane	29	0.782	19.03	18.99	107.00	463025	100	76	114			
127-18-4	Tetrachloroethene	30	0.994	19.13	19.09	166.00	267808	77	64	97			
108-90-7	Chlorobenzene	31	0.769	20.63	20.59	112.00	584700	34	27	40			
100-41-4	Ethylbenzene	33	0.709	21.12	21.08	91.00	982217	36	24	36			
108-38-3	m & p-Xylene	34	1.427	21.41	21.37	91.00	1501904	55	42	63			
95-47-6	o-Xylene	36	0.620	22.38	22.34	91.00	833425	51	38	56			
3114-55-4	Chlorobenzene-d5	1	0.200	20.55	20.51	117.00	584486						
2037-26-5	Toluene-d8	16	0.208	17.11	17.05	98.00	258954						

Integration Flags:

If no flag the Integration was done by the instrument computer

M1 Manual Integration because the computer did not integrated the peak or integrated the wrong peak

M2 Manual Integration because computer integration of baseline was different then Inital Calibration

INITIAL CALIBRATION REPORT

EPA Method TO-15 Modified SIM GC/MS

SDG: LABQC
QC_Batch: 062209-MS2
Instrument Name: MS2

File Name: QC06229C.D
Sample ID: ST0623091
Sample Analysis Date: 22 Jun 109 12:21 pm
Run Method: 2EXSIM_I.M
Quant and Calibration Method: 2EXSIM_I.M
Cal Update: Mon Jun 22 09:18:18 2009
Template: EARTEXSM.MS3

Calibration Title: EPA T0-15

Number Compounds: 49
IS1: ST60360 0.2
IS2:
IS3:
IS4:

		Calibration Amount CA, ppmv						Calibration Response, Area					
		Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
		Amt	Amt	Amt	Amt	Amt	Amt	C06199B.D	C06199H.D	C06199A.D	C06199F.D	C06199E.D	C06199K.D
n	Compound	10.0	0.5	20.0	2.0	4.0	1.0	10.0	0.5	20.0	2.0	4.0	1.0
3	Chloromethane	1.020	0.051	2.040	0.204	0.408	0.102	268477	16811	877342	29933	189687	27154
5	Vinyl chloride	1.040	0.052	2.080	0.208	0.416	0.104	184476	12222	596605	24865	140317	19936
6	Bromomethane	1.040	0.052	2.080	0.208	0.416	0.104	193900	12685	547447	21277	126567	19683
9	1,1-Dichloroethene	1.040	0.052	2.080	0.208	0.416	0.104	388365	27969	1185798	47507	301017	40726
11	Dichloromethane	1.040	0.052	2.080	0.208	0.416	0.104	180065	15163	530282	25781	167890	19971
14	1,1-Dichloroethane	1.010	0.051	2.020	0.202	0.404	0.101	403912	31159	1225807	51920	327340	43151
15	cis-1,2-Dichloroethene	1.030	0.052	2.060	0.206	0.412	0.103	240146	21098	758337	35003	226396	27004
17	Chloroform	1.020	0.051	2.040	0.204	0.408	0.102	510308	42620	1697577	69088	427372	57851
18	1,1,1-Trichloroethane	1.020	0.051	2.040	0.204	0.408	0.102	587705	46722	1955378	75018	469425	61727
19	1,2-Dichloroethane	1.030	0.052	2.060	0.206	0.412	0.103	1236150	74052	4935278	125964	835756	97954
20	Benzene	1.030	0.052	2.060	0.206	0.412	0.103	967913	60686	3573129	94902	641363	73510
21	Carbon tetrachloride	1.020	0.051	2.040	0.204	0.408	0.102	492544	40672	1579809	67130	410007	53667
22	1,2-Dichloropropane	1.030	0.052	2.060	0.206	0.412	0.103	280915	22034	957916	37485	236197	27080
23	Trichloroethene	1.030	0.052	2.060	0.206	0.412	0.103	305786	29555	968228	45278	286372	33459
26	Toluene	1.030	0.052	2.060	0.206	0.412	0.103	1260474	90214	4659514	149575	935329	102952
28	1,1,2-Trichloroethane	1.020	0.051	2.040	0.204	0.408	0.102	480870	37160	1655491	70973	441832	43484
29	1,2-Dibromoethane	1.040	0.052	2.080	0.208	0.416	0.104	915216	67709	3403871	130478	834780	79525
30	Tetrachloroethene	1.020	0.051	2.040	0.204	0.408	0.102	373918	35806	1224836	58411	374447	38753
31	Chlorobenzene	1.020	0.051	2.040	0.204	0.408	0.102	1017786	104021	3390004	174301	1040689	105228
33	Ethylbenzene	1.040	0.052	2.080	0.208	0.416	0.104	2140675	173953	7709871	303124	1882967	181776
34	m & p-Xylene	2.060	0.103	4.120	0.412	0.824	0.206	2970894	279033	10312056	481458	2872586	284680
36	o-Xylene	1.020	0.051	2.040	0.204	0.408	0.102	1996168	168269	6920115	304155	1831287	166711

n	Compound	Amt 10.0	Amt 0.5	Amt 20.0	Amt 2.0	Amt 4.0	Amt 1.0	C06199B.D 10.0	C06199H.D 0.5	C06199A.D 20.0	C06199F.D 2.0	C06199E.D 4.0	C06199K.D 1.0
1	Chlorobenzene-d5	0.200	0.200	0.200	0.200	0.200	0.200	877690	1273169	1660044	554145	1807068	927887
16	Toluene-d8	0.200	0.200	0.200	0.200	0.200	0.200	389596	565545	652462	236781	753686	395034

(275)

INITIAL CALIBRATION REPORT: Response Factors

SDG:	**LABQC**	**Sample Calculation:**	
QC_Batch:	**062209-MS2**	1) Avg RFn = Sum	$\frac{(Astdni)}{(Cstdni)} \frac{(Cistdi)}{(Aistdi)}$ i
Sample ID:	ST0623091		
Sample Analysis Date:	22 Jun 109 12:21 pm		
Run Method:	2EXSIM_I.M		
Quant Method:	2EXSIM_I.M		
Cal Update:	Mon Jun 22 09:18:18 2009		
Template:	EARTEXSM.MS3		

Response Factors

Compound	RF1	RF2	RF3	RF4	RF5	RF6	AvgRFn	%RSD
Chloromethane	0.060	0.052	0.052	0.053	0.051	0.057	0.054	6.60
Vinyl chloride	0.040	0.037	0.035	0.043	0.037	0.041	0.039	8.23
Bromomethane	0.042	0.038	0.032	0.037	0.034	0.041	0.037	11.03
1,1-Dichloroethene	0.085	0.084	0.069	0.082	0.080	0.084	0.081	7.72
Dichloromethane	0.039	0.046	0.031	0.045	0.045	0.041	0.041	13.70
1,1-Dichloroethane	0.091	0.096	0.073	0.093	0.090	0.092	0.089	9.11
cis-1,2-Dichloroethene	0.053	0.064	0.044	0.061	0.061	0.057	0.057	12.56
Chloroform	0.114	0.131	0.100	0.122	0.116	0.122	0.118	8.89
1,1,1-Trichloroethane	0.131	0.144	0.115	0.133	0.127	0.130	0.130	7.04
1,2-Dichloroethane	0.273	0.224	0.289	0.221	0.225	0.205	0.239	13.97
Benzene	0.214	0.183	0.209	0.166	0.172	0.154	0.183	13.13
Carbon tetrachloride	0.110	0.125	0.093	0.119	0.111	0.113	0.112	9.60
1,2-Dichloropropane	0.062	0.067	0.056	0.066	0.063	0.057	0.062	7.25
Trichloroethene	0.068	0.089	0.057	0.079	0.077	0.070	0.073	15.26
Toluene	0.279	0.273	0.273	0.262	0.251	0.215	0.259	9.02
1,1,2-Trichloroethane	0.107	0.114	0.098	0.126	0.120	0.092	0.109	11.85
1,2-Dibromoethane	0.201	0.205	0.197	0.226	0.222	0.165	0.203	10.84
Tetrachloroethene	0.084	0.110	0.072	0.103	0.102	0.082	0.092	16.20
Chlorobenzene	0.227	0.320	0.200	0.308	0.282	0.222	0.260	19.25
Ethylbenzene	0.469	0.525	0.447	0.526	0.501	0.377	0.474	12.05
m & p-Xylene	0.329	0.426	0.302	0.422	0.386	0.298	0.360	16.21
o-Xylene	0.446	0.518	0.409	0.538	0.497	0.352	0.460	15.46
Chlorobenzene-d5	1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.00
Toluene-d8	0.444	0.444	0.393	0.427	0.417	0.426	0.425	4.48

CALCULATIONS

EPA Method TO-15 Modified SIM GC/MS

SDG: LABQC
Laboratory Number: QC06229

RL:	2EXSIM_I.M
Run Method:	2EXSIM_I.M
Quant Method:	2EXSIM_I.M
Can Dilution Factor:	1.00
Air Volume:	1000 ml
Gas Constant:	23.68
Decimal Places:	3

Compound	M.W.	Raw Amount	Result ppbv	Result ug/m3	(1) MDL ppbv	(2) RL ppbv	Calc MDL ppbv	Calc MDL ug/m3	Calc RL ppbv	Calc RL ug/m3	Flag	ST0623091 Spike ppmv
Chloromethane	50.5	0.977	0.977	2.084	0.005	0.051	0.01	0.011	0.05	0.109		1.044
Vinyl chloride	62.5	1.309	1.309	3.454	0.005	0.052	0.01	0.014	0.05	0.137		1.268
Bromomethane	94.9	1.598	1.598	6.405	0.005	0.052	0.01	0.021	0.05	0.208		1.422
1,1-Dichloroethene	96.9	1.375	1.375	5.628	0.005	0.052	0.01	0.021	0.05	0.213		1.275
Dichloromethane	84.9	1.235	1.235	4.430	0.005	0.052	0.01	0.019	0.05	0.186		1.090
1,1-Dichloroethane	99.0	1.248	1.248	5.216	0.005	0.051	0.01	0.021	0.05	0.213		1.159
cis-1,2-Dichloroethene	96.9	1.161	1.161	4.753	0.005	0.052	0.01	0.021	0.05	0.213		0.966
Chloroform	119.4	1.197	1.197	6.035	0.005	0.051	0.01	0.026	0.05	0.257		1.234
1,1,1-Trichloroethane	133.4	1.302	1.302	7.333	0.005	0.051	0.01	0.029	0.05	0.287		1.150
1,2-Dichloroethane	99.0	0.949	0.949	3.966	0.005	0.052	0.01	0.022	0.05	0.217		0.901
Benzene	78.1	0.892	0.892	2.942	0.005	0.052	0.01	0.017	0.05	0.172		0.793
Carbon tetrachloride	153.8	1.390	1.390	9.026	0.005	0.051	0.01	0.033	0.05	0.331		1.158
1,2-Dichloropropane	113.0	1.099	1.099	5.247	0.005	0.052	0.01	0.025	0.05	0.248		0.976
Trichloroethene	131.4	1.076	1.076	5.972	0.005	0.052	0.01	0.029	0.05	0.289		0.877
Toluene	92.1	0.790	0.790	3.074	0.005	0.052	0.01	0.020	0.05	0.202		0.709
1,1,2-Trichloroethane	133.4	0.813	0.813	4.582	0.005	0.051	0.01	0.029	0.05	0.287		0.710
1,2-Dibromoethane	187.9	0.782	0.782	6.206	0.005	0.052	0.01	0.041	0.05	0.413		0.611
Tetrachloroethene	165.8	0.994	0.994	6.962	0.005	0.051	0.01	0.036	0.05	0.357		0.779
Chlorobenzene	112.6	0.769	0.769	3.657	0.005	0.051	0.01	0.024	0.05	0.243		0.634
Ethylbenzene	106.2	0.709	0.709	3.179	0.005	0.052	0.01	0.023	0.05	0.233		0.649
m & p-Xylene	106.2	1.427	1.427	6.399	0.010	0.103	0.01	0.046	0.10	0.462		1.346
o-Xylene	106.2	0.620	0.620	2.780	0.005	0.051	0.01	0.023	0.05	0.229		0.594

SAMPLE CALCULATION

EPA Method TO-15 Modified SIM GC/MS

SDG:		**LABQC**
Laboratory Number:		**QC06229**
Standard Volume	STV	0.5
Sample Volume	SV	1000
Can Dilution Factor	CDF	1.00
Gas Constant		23.68
Decimal Places:		3

Sample Calculation:

1) Avg RFn = Sum $\left| \frac{(Astdni)}{(Cstdni)} \frac{(Cistdi)}{(Aistdi)} \right|_i$ Note: 1

2) Raw Amt = $\frac{(Ansamp)}{(Avg\ RFn)} \frac{(Cistdi)}{(Aistdi)}$ = Cn

3) Amount ppbv = $\frac{(Raw\ Amt)\ 1000}{(SV)}$ (CDF) (STV)

4) Amount ug/m3 = $\frac{(amt(ppbv)\ MW}{23.68}$

n	Compound	IS n	Chem type	MW	AvgRFn	Area Ansamp	Cistdi ppmv	Aistdi Ais	Cn ppmV Raw Amt	Amount ppbv	Amount ug/m3
3	Chloromethane	1	TRG	50.5	0.054	154874	0.200	584486	0.977	0.977	2.084
5	Vinyl chloride	1	TRG	62.5	0.039	148976	0.200	584486	1.309	1.309	3.455
6	Bromomethane	1	TRG	94.9	0.037	174303	0.200	584486	1.598	1.598	6.404
9	1,1-Dichloroethene	1	TRG	96.9	0.081	325032	0.200	584486	1.375	1.375	5.627
11	Dichloromethane	1	TRG	84.9	0.041	148495	0.200	584486	1.235	1.235	4.428
14	1,1-Dichloroethane	1	TRG	99.0	0.089	324927	0.200	584486	1.248	1.248	5.218
15	cis-1,2-Dichloroethene	1	TRG	96.9	0.057	192267	0.200	584486	1.161	1.161	4.751
17	Chloroform	1	TRG	119.4	0.118	411560	0.200	584486	1.197	1.197	6.036
18	1,1,1-Trichloroethane	1	TRG	133.4	0.130	495307	0.200	584486	1.302	1.302	7.335
19	1,2-Dichloroethane	1	TRG	99.0	0.239	663469	0.200	584486	0.949	0.949	3.968
20	Benzene	1	TRG	78.1	0.183	477360	0.200	584486	0.892	0.892	2.942
21	Carbon tetrachloride	1	TRG	153.8	0.112	454870	0.200	584486	1.390	1.390	9.028
22	1,2-Dichloropropane	1	TRG	113.0	0.062	198421	0.200	584486	1.099	1.099	5.244
23	Trichloroethene	1	TRG	131.4	0.073	230558	0.200	584486	1.076	1.076	5.971
26	Toluene	1	TRG	92.1	0.259	597669	0.200	584486	0.790	0.790	3.073
28	1,1,2-Trichloroethane	1	TRG	133.4	0.109	260259	0.200	584486	0.813	0.813	4.580
29	1,2-Dibromoethane	1	TRG	187.9	0.203	463025	0.200	584486	0.782	0.782	6.205
30	Tetrachloroethene	1	TRG	165.8	0.092	267808	0.200	584486	0.994	0.994	6.960
31	Chlorobenzene	1	TRG	112.6	0.260	584700	0.200	584486	0.769	0.769	3.657
33	Ethylbenzene	1	TRG	106.2	0.474	982217	0.200	584486	0.709	0.709	3.180
34	m & p-Xylene	1	TRG	106.2	0.360	1501904	0.200	584486	1.427	1.427	6.400
36	o-Xylene	1	TRG	106.2	0.460	833425	0.200	584486	0.620	0.620	2.781
1	Chlorobenzene-d5	1	IS	0.0	1.000	584486	0.200	584486	0.000	0.000	0.000
16	Toluene-d8	1	SURR	0.0	0.425	258954	0.200	584486	0.000	0.000	0.000

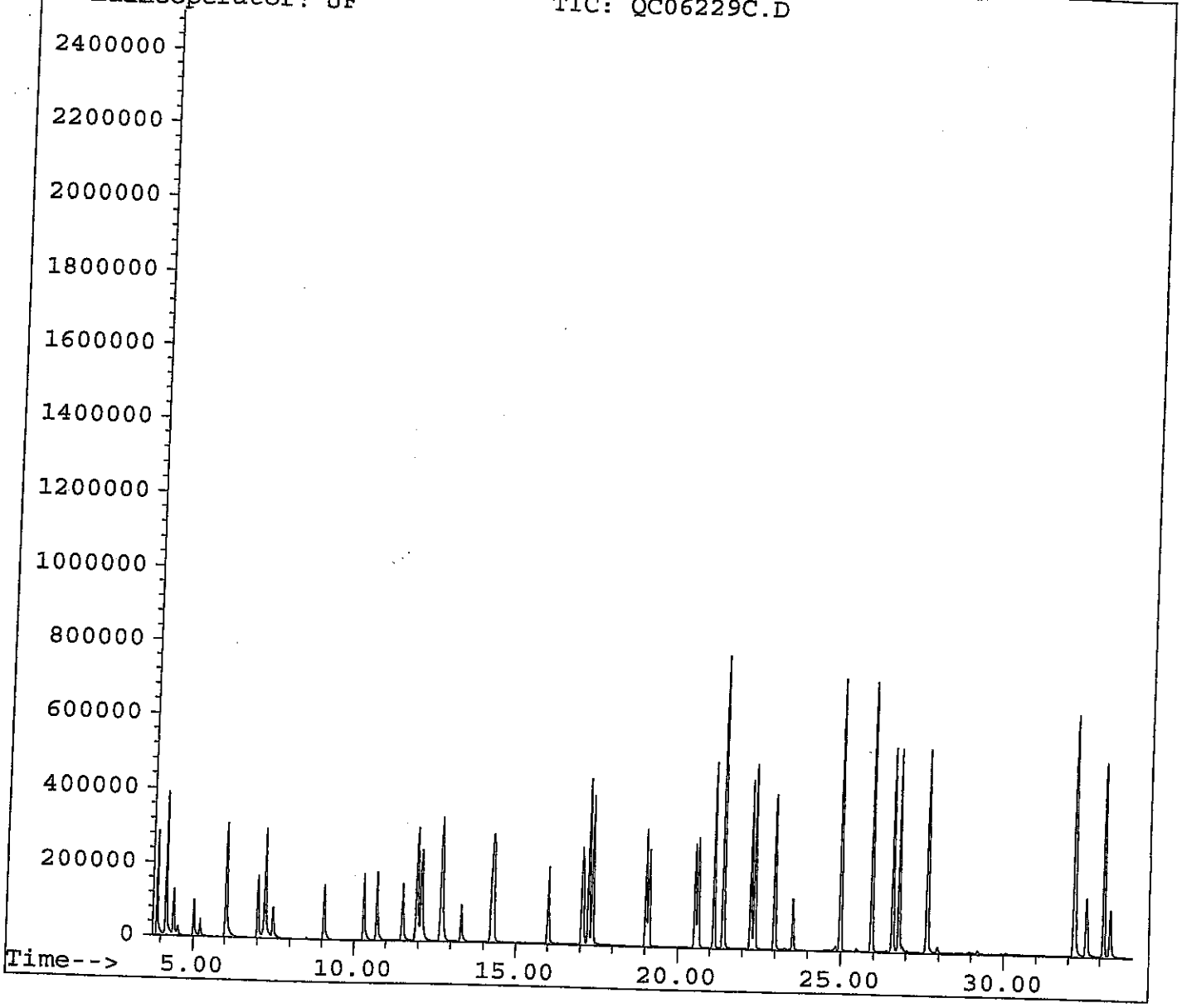
Calculation Definitions:

n	compound n
i	i th calibration level
Astdni	Standard Area for compound n at ith calibration level
Cstdni	Standard Concentration for compound n at ith calibration level in ppmv
Cistdi	Internal Standard Conc used for compound n at ith calibration level in ppmv
Aistdi	Internal Standard Area used for compound n at ith calibration level
Ansamp	Sample Area for compound n
Avg RFn	Average response factor for all ith calibration levels for compound n
Raw Amount	Sample Concentration in ppmv before applying factors
Cistd	Concentration internal standard used for compound n in sample in ppmv
Aistd	Area of internal standard used for compound n in sample
Cn	Concentration of compound n in sample in ppmv
23.68	Gas constant at 60 F as per EPA source test protocol
MW	Molecular weight of compound
Note (1) : Avg RFn	The values for the Average Response Factor AvgRFn can be optained from the response Factor Report for the Initial Calibration, or from the Calibration Report

Name of file: C:\HPCHEM\1\DATA\06229MS2\QC06229C.D

Abundance Operator: JF

TIC: QC06229C.D



QUALITY CONTROL DUPLICATE

ENVIRONMENTAL
Analytical Service, Inc.

Duplicate of QC Sample

EPA Method TO-15 Modified SIM GC/MS **SDG: LABQC** **FOLDER 2 OF 3**

Analytical Method: **TO-15 SIM**

Dup File: QC06229D.D
Description: ST0623091
Can/Tube#:
QC_Batch: 062209-MS2

CAS#	Compound	LCD ppbv	LCS ppbv	RPD %D	Limit %	Flag * = Out
74-87-3	Chloromethane	1.053	0.977	7	25	
75-01-4	Vinyl chloride	1.439	1.309	10	25	
74-83-9	Bromomethane	1.661	1.598	4	25	
75-35-4	1,1-Dichloroethene	1.425	1.375	4	25	
75-09-2	Dichloromethane	1.277	1.235	4	25	
75-34-3	1,1-Dichloroethane	1.359	1.248	10	25	
156-59-2	cis-1,2-Dichloroethene	1.139	1.161	2	25	
67-66-3	Chloroform	1.278	1.197	7	25	
71-55-6	1,1,1-Trichloroethane	1.372	1.302	6	25	
107-06-2	1,2-Dichloroethane	1.050	0.949	11	25	
71-43-2	Benzene	0.955	0.892	8	25	
56-23-5	Carbon tetrachloride	1.512	1.390	11	25	
78-87-5	1,2-Dichloropropane	1.211	1.099	11	25	
79-01-6	Trichloroethene	1.126	1.076	6	25	
108-88-3	Toluene	0.844	0.790	8	25	
79-00-5	1,1,2-Trichloroethane	0.813	0.813	0	25	
106-93-4	1,2-Dibromoethane	0.728	0.782	9	25	
127-18-4	Tetrachloroethene	1.012	0.994	2	25	
108-90-7	Chlorobenzene	0.729	0.769	6	25	
100-41-4	Ethylbenzene	0.709	0.709	0	25	
108-38-3	m & p-Xylene	1.425	1.427	0	25	
95-47-6	o-Xylene	0.608	0.620	2	25	

QUALITY CONTROL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

LABORATORY CONTROL DUPLICATE

EPA Method TO-15 Modified SIM GC/MS **SDG: LABQC**
Analytical Method: **TO-15 SIM**

File: QC06229D.D
Description: ST0623091
Can/Tube#:
Sam_Type: LCD
QC_Batch: 062209-MS2
Air Volume: 1000 ml

Date Sampled: NA
Date Received: NA
Date Extracted: NA
Date Analyzed: 06/22/09 **Time:** 13:04
Can Dilution Factor: 1.00 3
QC Duplicate: Yes

CAS#	Compound	MDL ppbv	Spike Conc ppbv	Amount ppbv	Matrix Amt ppbv	Spk Amt ppbv	Percent Recovery	LCL %	UCL %	Flag
74-87-3	Chloromethane	0.005	1.044	1.053	0.000	1.053	101	70	130	
75-01-4	Vinyl chloride	0.005	1.268	1.439	0.000	1.439	113	70	130	
74-83-9	Bromomethane	0.005	1.422	1.661	0.000	1.661	117	70	130	
75-35-4	1,1-Dichloroethene	0.005	1.275	1.425	0.000	1.425	112	70	130	
75-09-2	Dichloromethane	0.005	1.090	1.277	0.000	1.277	117	70	130	
75-34-3	1,1-Dichloroethane	0.005	1.159	1.359	0.000	1.359	117	70	130	
156-59-2	cis-1,2-Dichloroethene	0.005	0.966	1.139	0.000	1.139	118	70	130	
67-66-3	Chloroform	0.005	1.234	1.278	0.000	1.278	104	70	130	
71-55-6	1,1,1-Trichloroethane	0.005	1.150	1.372	0.000	1.372	119	70	130	
107-06-2	1,2-Dichloroethane	0.005	0.901	1.050	0.000	1.050	117	70	130	
71-43-2	Benzene	0.005	0.793	0.955	0.000	0.955	120	70	130	
56-23-5	Carbon tetrachloride	0.005	1.158	1.512	0.000	1.512	131	70	130	*
78-87-5	1,2-Dichloropropane	0.005	0.976	1.211	0.000	1.211	124	70	130	
79-01-6	Trichloroethene	0.005	0.877	1.126	0.000	1.126	128	70	130	
108-88-3	Toluene	0.005	0.709	0.844	0.000	0.844	119	70	130	
79-00-5	1,1,2-Trichloroethane	0.005	0.710	0.813	0.000	0.813	115	70	130	
106-93-4	1,2-Dibromoethane	0.005	0.611	0.728	0.000	0.728	119	70	130	
127-18-4	Tetrachloroethene	0.005	0.779	1.012	0.000	1.012	130	70	130	
108-90-7	Chlorobenzene	0.005	0.634	0.729	0.000	0.729	115	70	130	
100-41-4	Ethylbenzene	0.005	0.649	0.709	0.000	0.709	109	70	130	
108-38-3	m & p-Xylene	0.010	1.346	1.425	0.000	1.425	106	70	130	
95-47-6	o-Xylene	0.005	0.594	0.608	0.000	0.608	102	70	130	

Surrogate Recovery	Spike Amt. ppbV	Amount ppbV	% Rec.	QC Limits	Flag * = Out
Toluene-d8	0.200	0.223	112	70-130	

Notes: Reported results are to be interpreted to two significant figures.
*ug/m3 calculated assuming conditions at 60 F and 1 atm.

QUANTITATION REPORT

EPA Method TO-15 Modified SIM GC/MS

			Review	EAS Sample ID: QC06229	
File Name:	QC06229D.D				1 SS
Sample ID:	ST0623091				2 KB
Date:	22 Jun 109 1:04 pm			Cal Amounts	3 AT
Run Method:	2EXSIM_I.M			IS Areas	4 BB
Quant Method:	2EXSIM_I.M			Carryover	5 SH
Cal Update:	Mon Jun 22 09:18:18 2009				
Template:	EARTEXSM.MS3				
Can Factor:	1.00				
Volume:	1000	ml		Analyst: SS 1	

CAS#	Compound	n	Raw Amount	RT	Target RT	Ion	Sample Area	Qualifier	Lower Qual	Upper Qual	Qual Flag	Cal Flag	Int Flag
74-87-3	Chloromethane	3	1.053	4.16	4.12	50.00	166881	24	21	32			
75-01-4	Vinyl chloride	5	1.439	4.41	4.37	62.00	163718	33	28	42			
74-83-9	Bromomethane	6	1.661	5.02	4.97	94.00	181041	98	69	104			
75-35-4	1,1-Dichloroethene	9	1.425	7.01	6.95	61.00	336585	50	37	56			
75-09-2	Dichloromethane	11	1.277	7.48	7.42	84.00	153469	66	51	77			
75-34-3	1,1-Dichloroethane	14	1.359	9.08	9.00	63.00	353796	33	25	37			
156-59-2	cis-1,2-Dichloroethene	15	1.139	10.31	10.24	96.00	188560	142	102	153			
67-66-3	Chloroform	17	1.278	10.73	10.66	83.00	439195	71	52	78			
71-55-6	1,1,1-Trichloroethane	18	1.372	11.96	11.91	97.00	521693	71	53	80			
107-06-2	1,2-Dichloroethane	19	1.050	12.10	12.02	61.95	734051	19	14	21			
71-43-2	Benzene	20	0.955	12.68	12.63	78.00	510888	18	16	23			
56-23-5	Carbon tetrachloride	21	1.512	12.71	12.66	116.90	494628	99	79	119			
78-87-5	1,2-Dichloropropane	22	1.211	14.26	14.20	63.00	218409	159	126	189			
79-01-6	Trichloroethene	23	1.126	14.31	14.26	130.00	241224	103	75	112			
108-88-3	Toluene	26	0.844	17.27	17.21	91.00	638220	69	53	80			
79-00-5	1,1,2-Trichloroethane	28	0.813	17.37	17.35	97.00	260106	84	63	94			
106-93-4	1,2-Dibromoethane	29	0.728	19.03	18.99	107.00	431158	99	76	114			
127-18-4	Tetrachloroethene	30	1.012	19.13	19.09	166.00	272411	81	64	97			
108-90-7	Chlorobenzene	31	0.729	20.65	20.59	112.00	554200	35	27	40			
100-41-4	Ethylbenzene	33	0.709	21.12	21.08	91.00	982283	34	24	36			
108-38-3	m & p-Xylene	34	1.425	21.41	21.37	91.00	1499937	52	42	63			
95-47-6	o-Xylene	36	0.608	22.38	22.34	91.00	817566	48	38	56			
3114-55-4	Chlorobenzene-d5	1	0.200	20.55	20.51	117.00	584289						
2037-26-5	Toluene-d8	16	0.223	17.11	17.05	98.00	277472						

Integration Flags:

If no flag the Integration was done by the instrument computer

M1 Manual Integration because the computer did not integrated the peak or integrated the wrong peak

M2 Manual Integration because computer integration of baseline was different then Inital Calibration

INITIAL CALIBRATION REPORT

EPA Method TO-15 Modified SIM GC/MS

SDG: LABQC
QC_Batch: 062209-MS2
Instrument Name: MS2

File Name: QC06229D.D
Sample ID: ST0623091
Sample Analysis Date: 22 Jun 109 1:04 pm
Run Method: 2EXSIM_I.M
Quant and Calibration Method: 2EXSIM_I.M
Cal Update: Mon Jun 22 09:18:18 2009
Template: EARTEXSM.MS3

Calibration Title:EPA T0-15

Number Compounds: 49
IS1: ST60360 0.2
IS2:
IS3:
IS4:

		Calibration Amount CA, ppmv						Calibration Response, Area					
		Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
		Amt	Amt	Amt	Amt	Amt	Amt	C06199B.D	C06199H.D	C06199A.D	C06199F.D	C06199E.D	C06199K.D
n	Compound	10.0	0.5	20.0	2.0	4.0	1.0	10.0	0.5	20.0	2.0	4.0	1.0
3	Chloromethane	1.020	0.051	2.040	0.204	0.408	0.102	268477	16811	877342	29933	189687	27154
5	Vinyl chloride	1.040	0.052	2.080	0.208	0.416	0.104	184476	12222	596605	24865	140317	19936
6	Bromomethane	1.040	0.052	2.080	0.208	0.416	0.104	193900	12685	547447	21277	126567	19683
9	1,1-Dichloroethene	1.040	0.052	2.080	0.208	0.416	0.104	388365	27969	1185798	47507	301017	40726
11	Dichloromethane	1.040	0.052	2.080	0.208	0.416	0.104	180065	15163	530282	25781	167890	19971
14	1,1-Dichloroethane	1.010	0.051	2.020	0.202	0.404	0.101	403912	31159	1225807	51920	327340	43151
15	cis-1,2-Dichloroethene	1.030	0.052	2.060	0.206	0.412	0.103	240146	21098	758337	35003	226396	27004
17	Chloroform	1.020	0.051	2.040	0.204	0.408	0.102	510308	42620	1697577	69088	427372	57851
18	1,1,1-Trichloroethane	1.020	0.051	2.040	0.204	0.408	0.102	587705	46722	1955378	75018	469425	61727
19	1,2-Dichloroethane	1.030	0.052	2.060	0.206	0.412	0.103	1236150	74052	4935278	125964	835756	97954
20	Benzene	1.030	0.052	2.060	0.206	0.412	0.103	967913	60686	3573129	94902	641363	73510
21	Carbon tetrachloride	1.020	0.051	2.040	0.204	0.408	0.102	492544	40672	1579809	67130	410007	53667
22	1,2-Dichloropropane	1.030	0.052	2.060	0.206	0.412	0.103	280915	22034	957916	37485	236197	27080
23	Trichloroethene	1.030	0.052	2.060	0.206	0.412	0.103	305786	29555	968228	45278	286372	33459
26	Toluene	1.030	0.052	2.060	0.206	0.412	0.103	1260474	90214	4659514	149575	935329	102952
28	1,1,2-Trichloroethane	1.020	0.051	2.040	0.204	0.408	0.102	480870	37160	1655491	70973	441832	43484
29	1,2-Dibromoethane	1.040	0.052	2.080	0.208	0.416	0.104	915216	67709	3403871	130478	834780	79525
30	Tetrachloroethene	1.020	0.051	2.040	0.204	0.408	0.102	373918	35806	1224836	58411	374447	38753
31	Chlorobenzene	1.020	0.051	2.040	0.204	0.408	0.102	1017786	104021	3390004	174301	1040689	105228
33	Ethylbenzene	1.040	0.052	2.080	0.208	0.416	0.104	2140675	173953	7709871	303124	1882967	181776
34	m & p-Xylene	2.060	0.103	4.120	0.412	0.824	0.206	2970894	279033	10312056	481458	2872586	284680
36	o-Xylene	1.020	0.051	2.040	0.204	0.408	0.102	1996168	168269	6920115	304155	1831287	166711

n	Compound	Amt 10.0	Amt 0.5	Amt 20.0	Amt 2.0	Amt 4.0	Amt 1.0	C06199B.D 10.0	C06199H.D 0.5	C06199A.D 20.0	C06199F.D 2.0	C06199E.D 4.0	C06199K.D 1.0
1	Chlorobenzene-d5	0.200	0.200	0.200	0.200	0.200	0.200	877690	1273169	1660044	554145	1807068	927887
16	Toluene-d8	0.200	0.200	0.200	0.200	0.200	0.200	389596	565545	652462	236781	753686	395034

(284)

INITIAL CALIBRATION REPORT: Response Factors

SDG:	**LABQC**	**Sample Calculation:**	
QC_Batch:	**062209-MS2**	1) Avg RFn = Sum	$\left[\frac{(Astdni)}{(Cstdni)} \cdot \frac{(Cistdi)}{(Aistdi)}\right]_i$
Sample ID:	ST0623091		
Sample Analysis Date:	22 Jun 109 1:04 pm		
Run Method:	2EXSIM_I.M		
Quant Method:	2EXSIM_I.M		
Cal Update:	Mon Jun 22 09:18:18 2009		
Template:	EARTEXSM.MS3		

Response Factors

Compound	RF1	RF2	RF3	RF4	RF5	RF6	AvgRFn	%RSD
Chloromethane	0.060	0.052	0.052	0.053	0.051	0.057	0.054	6.60
Vinyl chloride	0.040	0.037	0.035	0.043	0.037	0.041	0.039	8.23
Bromomethane	0.042	0.038	0.032	0.037	0.034	0.041	0.037	11.03
1,1-Dichloroethene	0.085	0.084	0.069	0.082	0.080	0.084	0.081	7.72
Dichloromethane	0.039	0.046	0.031	0.045	0.045	0.041	0.041	13.70
1,1-Dichloroethane	0.091	0.096	0.073	0.093	0.090	0.092	0.089	9.11
cis-1,2-Dichloroethene	0.053	0.064	0.044	0.061	0.061	0.057	0.057	12.56
Chloroform	0.114	0.131	0.100	0.122	0.116	0.122	0.118	8.89
1,1,1-Trichloroethane	0.131	0.144	0.115	0.133	0.127	0.130	0.130	7.04
1,2-Dichloroethane	0.273	0.224	0.289	0.221	0.225	0.205	0.239	13.97
Benzene	0.214	0.183	0.209	0.166	0.172	0.154	0.183	13.13
Carbon tetrachloride	0.110	0.125	0.093	0.119	0.111	0.113	0.112	9.60
1,2-Dichloropropane	0.062	0.067	0.056	0.066	0.063	0.057	0.062	7.25
Trichloroethene	0.068	0.089	0.057	0.079	0.077	0.070	0.073	15.26
Toluene	0.279	0.273	0.273	0.262	0.251	0.215	0.259	9.02
1,1,2-Trichloroethane	0.107	0.114	0.098	0.126	0.120	0.092	0.109	11.85
1,2-Dibromoethane	0.201	0.205	0.197	0.226	0.222	0.165	0.203	10.84
Tetrachloroethene	0.084	0.110	0.072	0.103	0.102	0.082	0.092	16.20
Chlorobenzene	0.227	0.320	0.200	0.308	0.282	0.222	0.260	19.25
Ethylbenzene	0.469	0.525	0.447	0.526	0.501	0.377	0.474	12.05
m & p-Xylene	0.329	0.426	0.302	0.422	0.386	0.298	0.360	16.21
o-Xylene	0.446	0.518	0.409	0.538	0.497	0.352	0.460	15.46
Chlorobenzene-d5	1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.00
Toluene-d8	0.444	0.444	0.393	0.427	0.417	0.426	0.425	4.48

CALCULATIONS

EPA Method TO-15 Modified SIM GC/MS

SDG: LABQC
Laboratory Number: QC06229

RL:	2EXSIM_I.M
Run Method:	2EXSIM_I.M
Quant Method:	2EXSIM_I.M
Can Dilution Factor:	1.00
Air Volume:	1000 ml
Gas Constant:	23.68
Decimal Places:	3

Compound	M.W.	Raw Amount	Result ppbv	Result ug/m3	(1) MDL ppbv	(2) RL ppbv	Calc MDL ppbv	Calc MDL ug/m3	Calc RL ppbv	Calc RL ug/m3	Flag	ST0623091 Spike ppmv
Chloromethane	50.5	1.053	1.053	2.246	0.005	0.051	0.01	0.011	0.05	0.109		1.044
Vinyl chloride	62.5	1.439	1.439	3.798	0.005	0.052	0.01	0.014	0.05	0.137		1.268
Bromomethane	94.9	1.661	1.661	6.655	0.005	0.052	0.01	0.021	0.05	0.208		1.422
1,1-Dichloroethene	96.9	1.425	1.425	5.830	0.005	0.052	0.01	0.021	0.05	0.213		1.275
Dichloromethane	84.9	1.277	1.277	4.579	0.005	0.052	0.01	0.019	0.05	0.186		1.090
1,1-Dichloroethane	99.0	1.359	1.359	5.681	0.005	0.051	0.01	0.021	0.05	0.213		1.159
cis-1,2-Dichloroethene	96.9	1.139	1.139	4.663	0.005	0.052	0.01	0.021	0.05	0.213		0.966
Chloroform	119.4	1.278	1.278	6.443	0.005	0.051	0.01	0.026	0.05	0.257		1.234
1,1,1-Trichloroethane	133.4	1.372	1.372	7.727	0.005	0.051	0.01	0.029	0.05	0.287		1.150
1,2-Dichloroethane	99.0	1.050	1.050	4.389	0.005	0.052	0.01	0.022	0.05	0.217		0.901
Benzene	78.1	0.955	0.955	3.149	0.005	0.052	0.01	0.017	0.05	0.172		0.793
Carbon tetrachloride	153.8	1.512	1.512	9.818	0.005	0.051	0.01	0.033	0.05	0.331		1.158
1,2-Dichloropropane	113.0	1.211	1.211	5.777	0.005	0.052	0.01	0.025	0.05	0.248		0.976
Trichloroethene	131.4	1.126	1.126	6.250	0.005	0.052	0.01	0.029	0.05	0.289		0.877
Toluene	92.1	0.844	0.844	3.283	0.005	0.052	0.01	0.020	0.05	0.202		0.709
1,1,2-Trichloroethane	133.4	0.813	0.813	4.581	0.005	0.051	0.01	0.029	0.05	0.287		0.710
1,2-Dibromoethane	187.9	0.728	0.728	5.780	0.005	0.052	0.01	0.041	0.05	0.413		0.611
Tetrachloroethene	165.8	1.012	1.012	7.084	0.005	0.051	0.01	0.036	0.05	0.357		0.779
Chlorobenzene	112.6	0.729	0.729	3.467	0.005	0.051	0.01	0.024	0.05	0.243		0.634
Ethylbenzene	106.2	0.709	0.709	3.180	0.005	0.052	0.01	0.023	0.05	0.233		0.649
m & p-Xylene	106.2	1.425	1.425	6.393	0.010	0.103	0.01	0.046	0.10	0.462		1.346
o-Xylene	106.2	0.608	0.608	2.728	0.005	0.051	0.01	0.023	0.05	0.229		0.594

SAMPLE CALCULATION

EPA Method TO-15 Modified SIM GC/MS

SDG:		**LABQC**
Laboratory Number:		**QC06229**
Standard Volume	STV	0.5
Sample Volume	SV	1000
Can Dilution Factor	CDF	1.00
Gas Constant		23.68
Decimal Places:		3

Sample Calculation:

1) Avg RFn = Sum $\left| \frac{(Astdni)}{(Cstdni)} \frac{(Cistdi)}{(Aistdi)} \right|_i$ Note: 1

2) Raw Amt = $\frac{(Ansamp)}{(Avg\ RFn)} \frac{(Cistdi)}{(Aistdi)}$ = Cn

3) Amount ppbv = $\frac{(Raw\ Amt)}{} \frac{1000}{(SV)} (CDF) (STV)$

4) Amount ug/m3 = $\frac{(amt(ppbv)}{} \frac{MW}{23.68}$

n	Compound	IS n	Chem type	MW	AvgRFn	Area Ansamp	Cistdi ppmv	Aistdi Ais	Cn ppmV Raw Amt	Amount ppbv	Amount ug/m3
3	Chloromethane	1	TRG	50.5	0.054	166881	0.200	584289	1.053	1.053	2.246
5	Vinyl chloride	1	TRG	62.5	0.039	163718	0.200	584289	1.439	1.439	3.798
6	Bromomethane	1	TRG	94.9	0.037	181041	0.200	584289	1.661	1.661	6.657
9	1,1-Dichloroethene	1	TRG	96.9	0.081	336585	0.200	584289	1.425	1.425	5.831
11	Dichloromethane	1	TRG	84.9	0.041	153469	0.200	584289	1.277	1.277	4.578
14	1,1-Dichloroethane	1	TRG	99.0	0.089	353796	0.200	584289	1.359	1.359	5.682
15	cis-1,2-Dichloroethene	1	TRG	96.9	0.057	188560	0.200	584289	1.139	1.139	4.661
17	Chloroform	1	TRG	119.4	0.118	439195	0.200	584289	1.278	1.278	6.444
18	1,1,1-Trichloroethane	1	TRG	133.4	0.130	521693	0.200	584289	1.372	1.372	7.729
19	1,2-Dichloroethane	1	TRG	99.0	0.239	734051	0.200	584289	1.050	1.050	4.390
20	Benzene	1	TRG	78.1	0.183	510888	0.200	584289	0.955	0.955	3.150
21	Carbon tetrachloride	1	TRG	153.8	0.112	494628	0.200	584289	1.512	1.512	9.820
22	1,2-Dichloropropane	1	TRG	113.0	0.062	218409	0.200	584289	1.211	1.211	5.779
23	Trichloroethene	1	TRG	131.4	0.073	241224	0.200	584289	1.126	1.126	6.248
26	Toluene	1	TRG	92.1	0.259	638220	0.200	584289	0.844	0.844	3.283
28	1,1,2-Trichloroethane	1	TRG	133.4	0.109	260106	0.200	584289	0.813	0.813	4.580
29	1,2-Dibromoethane	1	TRG	187.9	0.203	431158	0.200	584289	0.728	0.728	5.777
30	Tetrachloroethene	1	TRG	165.8	0.092	272411	0.200	584289	1.012	1.012	7.086
31	Chlorobenzene	1	TRG	112.6	0.260	554200	0.200	584289	0.729	0.729	3.466
33	Ethylbenzene	1	TRG	106.2	0.474	982283	0.200	584289	0.709	0.709	3.180
34	m & p-Xylene	1	TRG	106.2	0.360	1499937	0.200	584289	1.425	1.425	6.391
36	o-Xylene	1	TRG	106.2	0.460	817566	0.200	584289	0.608	0.608	2.727
1	Chlorobenzene-d5	1	IS	0.0	1.000	584289	0.200	584289	0.000	0.000	0.000
16	Toluene-d8	1	SURR	0.0	0.425	277472	0.200	584289	0.000	0.000	0.000

Calculation Definitions:

n	compound n
i	i th calibration level
Astdni	Standard Area for compound n at ith calibration level
Cstdni	Standard Concentration for compound n at ith calibration level in ppmv
Cistdi	Internal Standard Conc used for compound n at ith calibration level in ppmv
Aistdi	Internal Standard Area used for compound n at ith calibration level
Ansamp	Sample Area for compound n
Avg RFn	Average response factor for all Ith calibration levels for compound n
Raw Amount	Sample Concentration in ppmv before applying factors
Cistd	Concentration internal standard used for compound n in sample in ppmv
Aistd	Area of internal standard used for compound n in sample
Cn	Concentration of compound n in sample in ppmv
23.68	Gas constant at 60 F as per EPA source test protocol
MW	Molecular weight of compound
Note (1) : Avg RFn	The values for the Average Response Factor AvgRFn can be optained from the response Factor Report for the Initial Calibration, or from the Calibration Report

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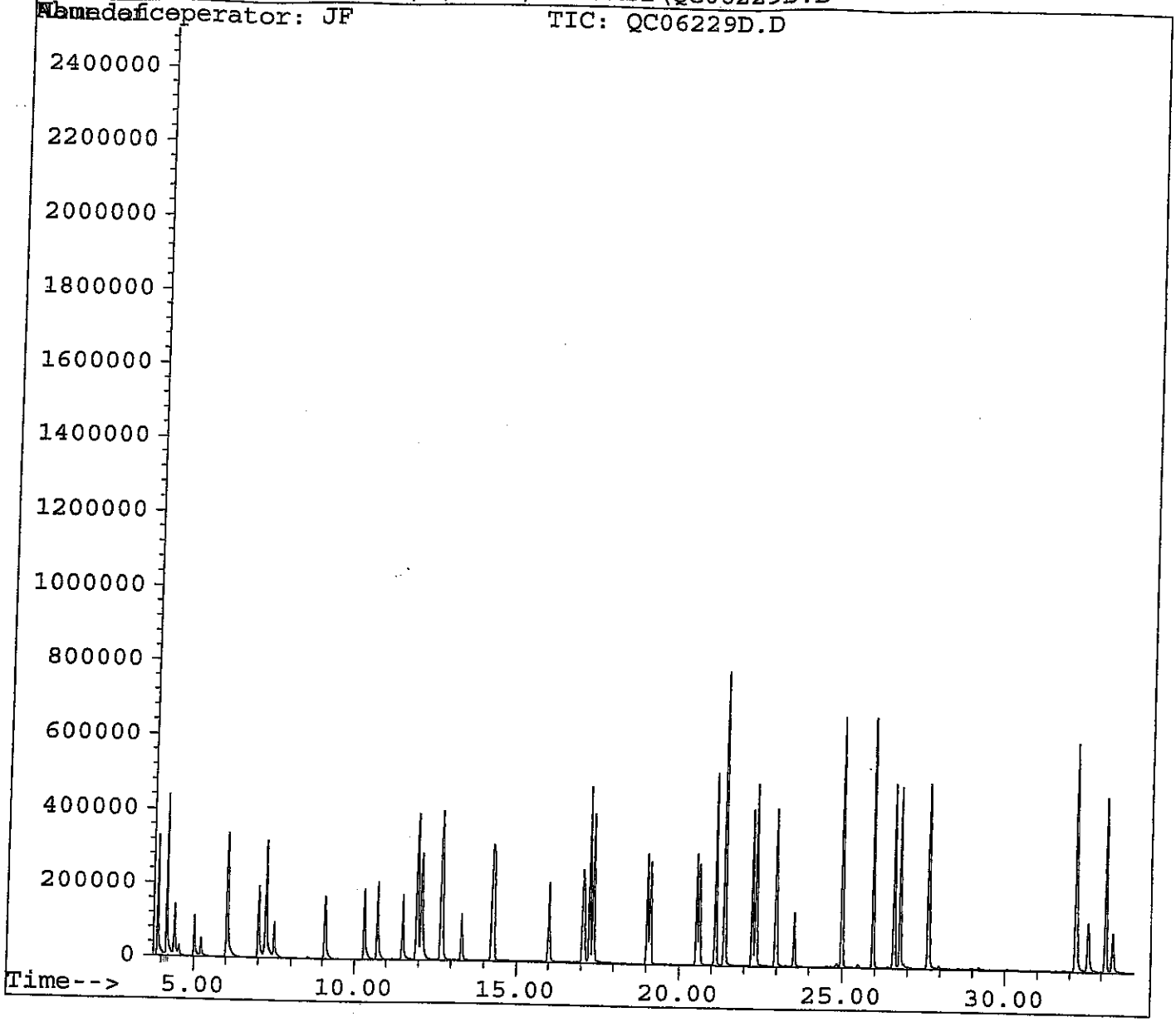
Name of operator: JF

TIC: QC06229D.D



ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified SIM GC/MS
Analytical Method: **TO-15 SIM**

SDG: **209270**
Laboratory Number: **02**

File: 0927002A.D
Description: 44-007
Can/Tube#: 640
Sam_Type: SA
QC_Batch: 062209-MS2
Air Volume: 500 ml

Date Sampled: 06/16/09 **Time:** 16:51
Date Received: 06/17/09
Date Extracted:
Date Analyzed: 06/22/09 **Time:** 19:37
Can Dilution Factor: 1.49 3
Not Detected Flag: ND

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
75-34-3	1,1-Dichloroethane	0.015	0.152	ND	0.064	0.635	ND	ND
156-59-2	cis-1,2-Dichloroethene	0.015	0.155	ND	0.063	0.634	ND	ND
107-06-2	1,2-Dichloroethane	0.015	0.155	ND	0.065	0.648	ND	ND
71-43-2	Benzene	0.015	0.155	0.377	0.051	0.511	1.243	
56-23-5	Carbon tetrachloride	0.015	0.152	0.161	0.099	0.987	1.046	
79-01-6	Trichloroethene	0.015	0.155	0.028	0.086	0.860	0.154	J
75-27-4	Bromodichloromethane	0.010	0.101	ND	0.070	0.701	ND	ND
79-00-5	1,1,2-Trichloroethane	0.015	0.152	ND	0.086	0.856	ND	ND
127-18-4	Tetrachloroethene	0.015	0.152	0.096	0.106	1.064	0.670	J
108-38-3	m & p-Xylene	0.031	0.307	0.968	0.138	1.377	4.341	
95-47-6	o-Xylene	0.015	0.152	0.291	0.068	0.682	1.305	
120-82-1	1,2,4-Trichlorobenzene	0.015	0.155	0.025	0.119	1.187	0.188	J
123-91-1	1,4 Dioxane	0.011	0.110	ND	0.041	0.410	ND	ND

	Surrogate Recovery	Spike Amt. ppbV	Amount ppbV	% Rec.	QC Limits	Flag * = Out
2037-26-5	Toluene-d8	0.200	0.218	109	70-130	

Notes: 1) Reported results are to be interpreted to two significant figures.
2) ug/m3 = ppbV*FW/23.68 calculated assuming conditions at 60 F and 1 atm.
3) MDL and RL are adjusted for sample volume and can dilution.
4) U and ND are Flags used for Not Detected
5) J is a flag for a result between the MDL and the RL (or lower quantitation limit, LQL)

QUANTITATION REPORT

EPA Method TO-15 Modified SIM GC/MS

			Review	EAS Sample ID: 0927002	
File Name:	0927002A.D				1 SS
Sample ID:	44-007				2 KB
Date:	22 Jun 109 7:37 pm			Cal Amounts	3 AT
Run Method:	2EXSIM_I.M			IS Areas	4 BB
Quant Method:	2EXSIM_I.M			Carryover	5 SH
Cal Update:	Mon Jun 22 09:18:18 2009				
Template:	EARTEXSM.MS3				
Can Factor:	1.49				
Volume:	500	ml		Analyst: SS 1	

CAS#	Compound	n	Raw Amount	RT	Target RT	Ion	Sample Area	Qualifier	Lower Qual	Upper Qual	Qual Flag	Cal Flag	Int Flag
75-34-3	1,1-Dichloroethane	14	0.000	8.92	9.00	63.00	0	0	25	37			
156-59-2	cis-1,2-Dichloroethene	15	0.000	10.25	10.24	96.00	0	0	102	153			
107-06-2	1,2-Dichloroethane	19	0.005	11.59	12.02	61.95	4551	45	14	21	Q		
71-43-2	Benzene	20	0.126	12.23	12.63	78.00	89838	18	16	23			
56-23-5	Carbon tetrachloride	21	0.054	12.26	12.66	116.90	23470	95	79	119			
79-01-6	Trichloroethene	23	0.009	13.96	14.26	130.00	2645	98	75	112			
75-27-4	Bromodichloromethane	24	0.000	14.57	14.57	83.00	0	0	52	78			
79-00-5	1,1,2-Trichloroethane	28	0.000	17.40	17.35	97.00	0	0	63	94			
127-18-4	Tetrachloroethene	30	0.032	18.99	19.09	166.00	11473	77	64	97			
108-38-3	m & p-Xylene	34	0.325	21.31	21.37	91.00	453725	44	42	63			
95-47-6	o-Xylene	36	0.098	22.32	22.34	91.00	174226	47	38	56			
120-82-1	1,2,4-Trichlorobenzene	45	0.008	32.20	32.17	180.00	63572	96	79	118			
123-91-1	1,4 Dioxane	47	0.000	14.57	14.57	88.00	0	0	55	82			
3114-55-4	Chlorobenzene-d5	1	0.200	20.46	20.51	117.00	775666						
2037-26-5	Toluene-d8	16	0.218	16.89	17.05	98.00	359543						

Integration Flags:

If no flag the integration was done by the instrument computer

M1 Manual Integration because the computer did not integrated the peak or integrated the wrong peak

M2 Manual Integration because computer integration of baseline was different then Inital Calibration

INITIAL CALIBRATION REPORT

EPA Method TO-15 Modified SIM GC/MS

File Name:	0927002A.D	SDG:	209270
Sample ID:	44-007	QC_Batch:	062209-MS2
Sample Analysis Date:	22 Jun 109 7:37 pm	Instrument Name:	MS2
Run Method:	2EXSIM_I.M	Number Compounds:	49
Quant and Calibration Method:	2EXSIM_I.M	IS1: ST60024	0.2
Cal Update:	Mon Jun 22 09:18:18 2009	IS2:	
Template:	EARTEXSM.MS3	IS3:	
		IS4:	

Calibration Title: EPA T0-15

		Calibration Amount CA, ppmv						Calibration Response, Area					
		Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
		Amt	Amt	Amt	Amt	Amt	Amt	C06199B.D	C06199H.D	C06199A.D	C06199F.D	C06199E.D	C06199K.D
n	Compound	10.0	0.5	20.0	2.0	4.0	1.0	10.0	0.5	20.0	2.0	4.0	1.0
14	1,1-Dichloroethane	1.010	0.051	2.020	0.202	0.404	0.101	403912	31159	1225807	51920	327340	43151
15	cis-1,2-Dichloroethene	1.030	0.052	2.060	0.206	0.412	0.103	240146	21098	758337	35003	226396	27004
19	1,2-Dichloroethane	1.030	0.052	2.060	0.206	0.412	0.103	1236150	74052	4935278	125964	835756	97954
20	Benzene	1.030	0.052	2.060	0.206	0.412	0.103	967913	60686	3573129	94902	641363	73510
21	Carbon tetrachloride	1.020	0.051	2.040	0.204	0.408	0.102	492544	40672	1579809	67130	410007	53667
23	Trichloroethene	1.030	0.052	2.060	0.206	0.412	0.103	305786	29555	968228	45278	286372	33459
24	Bromodichloromethane	0.670	0.034	1.340	0.134	0.268	0.067	349165	34872	980125	57413	329960	43188
28	1,1,2-Trichloroethane	1.020	0.051	2.040	0.204	0.408	0.102	480870	37160	1655491	70973	441832	43484
30	Tetrachloroethene	1.020	0.051	2.040	0.204	0.408	0.102	373918	35806	1224836	58411	374447	38753
34	m & p-Xylene	2.060	0.103	4.120	0.412	0.824	0.206	2970894	279033	10312056	481458	2872586	284680
36	o-Xylene	1.020	0.051	2.040	0.204	0.408	0.102	1996168	168269	6920115	304155	1831287	166711
45	1,2,4-Trichlorobenzene	1.030	0.052	2.060	0.206	0.412	0.103	6381826	918959	14261028	1761172	9410822	617532
47	1,4 Dioxane	0.740	0.037	1.480	0.148	0.296	0.074	154378	17449	450267	31614	179188	26330
1	Chlorobenzene-d5	0.200	0.200	0.200	0.200	0.200	0.200	877690	1273169	1660044	554145	1807068	927887
16	Toluene-d8	0.200	0.200	0.200	0.200	0.200	0.200	389596	565545	652462	236781	753686	395034

(291)

INITIAL CALIBRATION REPORT: Response Factors

SDG:	**209270**
QC_Batch:	**062209-MS2**
Sample ID:	44-007
Sample Analysis Date:	22 Jun 109 7:37 pm
Run Method:	2EXSIM_I.M
Quant Method:	2EXSIM_I.M
Cal Update:	Mon Jun 22 09:18:18 2009
Template:	EARTEXSM.MS3

Sample Calculation:

1) Avg RFn = Sum $\left| \frac{(Astdni)\ (Cistdi)}{(Cstdni)\ (Aistdi)} \right|_i$

Response Factors

Compound	RF1	RF2	RF3	RF4	RF5	RF6	AvgRFn	%RSD
1,1-Dichloroethane	0.091	0.096	0.073	0.093	0.090	0.092	0.089	9.11
cis-1,2-Dichloroethene	0.053	0.064	0.044	0.061	0.061	0.057	0.057	12.56
1,2-Dichloroethane	0.273	0.224	0.289	0.221	0.225	0.205	0.239	13.97
Benzene	0.214	0.183	0.209	0.166	0.172	0.154	0.183	13.13
Carbon tetrachloride	0.110	0.125	0.093	0.119	0.111	0.113	0.112	9.60
Trichloroethene	0.068	0.089	0.057	0.079	0.077	0.070	0.073	15.26
Bromodichloromethane	0.119	0.161	0.088	0.155	0.136	0.139	0.133	19.96
1,1,2-Trichloroethane	0.107	0.114	0.098	0.126	0.120	0.092	0.109	11.85
Tetrachloroethene	0.084	0.110	0.072	0.103	0.102	0.082	0.092	16.20
m & p-Xylene	0.329	0.426	0.302	0.422	0.386	0.298	0.360	16.21
o-Xylene	0.446	0.518	0.409	0.538	0.497	0.352	0.460	15.46
1,2,4-Trichlorobenzene	1.412	2.776	0.834	3.086	2.528	1.292	1.988	46.46
1,4 Dioxane	0.048	0.074	0.037	0.077	0.067	0.077	0.063	27.03
Chlorobenzene-d5	1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.00
Toluene-d8	0.444	0.444	0.393	0.427	0.417	0.426	0.425	4.48

CALCULATIONS

EPA Method TO-15 Modified SIM GC/MS

SDG: 209270
Laboratory Number: 02

RL:	2EXSIM_I.M
Run Method:	2EXSIM_I.M
Quant Method:	2EXSIM_I.M
Can Dilution Factor:	1.49
Air Volume:	500 ml
Gas Constant:	23.68
Decimal Places:	3

Compound	M.W.	Raw Amount	Result ppbv	Result ug/m3	(1) MDL ppbv	(2) RL ppbv	Calc MDL ppbv	Calc MDL ug/m3	Calc RL ppbv	Calc RL ug/m3	Flag	S062602-1 Spike ppmv
1,1-Dichloroethane	99.0	0.000	0.000	0.000	0.005	0.051	0.02	0.064	0.15	0.635	U	0.103
cis-1,2-Dichloroethene	96.9	0.000	0.000	0.000	0.005	0.052	0.02	0.063	0.15	0.634	U	0.103
1,2-Dichloroethane	99.0	0.005	0.015	0.061	0.005	0.052	0.02	0.065	0.15	0.648	U	0.103
Benzene	78.1	0.126	0.377	1.243	0.005	0.052	0.02	0.051	0.15	0.511		0.103
Carbon tetrachloride	153.8	0.054	0.161	1.046	0.005	0.051	0.02	0.099	0.15	0.987		0.103
Trichloroethene	131.4	0.009	0.028	0.154	0.005	0.052	0.02	0.086	0.15	0.860	J	0.103
Bromodichloromethane	163.8	0.000	0.000	0.000	0.003	0.034	0.01	0.070	0.10	0.701	U	0.103
1,1,2-Trichloroethane	133.4	0.000	0.000	0.000	0.005	0.051	0.02	0.086	0.15	0.856	U	0.103
Tetrachloroethene	165.8	0.032	0.096	0.670	0.005	0.051	0.02	0.106	0.15	1.064	J	0.103
m & p-Xylene	106.2	0.325	0.968	4.341	0.010	0.103	0.03	0.138	0.31	1.377		0.103
o-Xylene	106.2	0.098	0.291	1.305	0.005	0.051	0.02	0.068	0.15	0.682		0.103
1,2,4-Trichlorobenzene	181.4	0.008	0.025	0.188	0.005	0.052	0.02	0.119	0.15	1.187	J	0.103
1,4 Dioxane	88.1	0.000	0.000	0.000	0.004	0.037	0.01	0.041	0.11	0.410	U	1.103

SAMPLE CALCULATION

EPA Method TO-15 Modified SIM GC/MS

SDG:		**209270**
Laboratory Number:		**02**
Standard Volume	STV	0.5
Sample Volume	SV	500
Can Dilution Factor	CDF	1.49
Gas Constant		23.68
Decimal Places:		3

Sample Calculation:

1) Avg RFn = Sum $\left| \frac{(Astdni)}{(Cstdni)} \frac{(Cistdi)}{(Aistdi)} \right|_i$ Note: 1

2) Raw Amt = $\frac{(Ansamp)}{(Avg\ RFn)} \frac{(Cistdi)}{(Aistdi)}$ = **Cn**

3) Amount ppbv = $\frac{(Raw\ Amt)}{(SV)} \frac{1000}{MW} (CDF) (STV)$

4) Amount ug/m3 = $\frac{(amt(ppbv)}{23.68}$

n	Compound	IS n	Chem type	MW	AvgRFn	Area Ansamp	Cistdi ppmv	Aistdi Ais	Cn ppmV Raw Amt	Amount ppbv	Amount ug/m3
14	1,1-Dichloroethane	1	TRG	99.0	0.089	0	0.200	775666	0.000	0.000	0.000
15	cis-1,2-Dichloroethene	1	TRG	96.9	0.057	0	0.200	775666	0.000	0.000	0.000
19	1,2-Dichloroethane	1	TRG	99.0	0.239	4551	0.200	775666	0.005	0.015	0.063
20	Benzene	1	TRG	78.1	0.183	89838	0.200	775666	0.126	0.377	1.243
21	Carbon tetrachloride	1	TRG	153.8	0.112	23470	0.200	775666	0.054	0.161	1.046
23	Trichloroethene	1	TRG	131.4	0.073	2645	0.200	775666	0.009	0.028	0.155
24	Bromodichloromethane	1	TRG	163.8	0.133	0	0.200	775666	0.000	0.000	0.000
28	1,1,2-Trichloroethane	1	TRG	133.4	0.109	0	0.200	775666	0.000	0.000	0.000
30	Tetrachloroethene	1	TRG	165.8	0.092	11473	0.200	775666	0.032	0.096	0.672
34	m & p-Xylene	1	TRG	106.2	0.360	453725	0.200	775666	0.325	0.968	4.341
36	o-Xylene	1	TRG	106.2	0.460	174226	0.200	775666	0.098	0.291	1.305
45	1,2,4-Trichlorobenzene	1	TRG	181.4	1.99	63572	0.200	775666	0.008	0.025	0.192
47	1,4 Dioxane	1	TRG	88.1	0.06	0	0.200	775666	0.000	0.000	0.000
1	Chlorobenzene-d5	1	IS	0.0	1.000	775666	0.200	775666	0.000	0.000	0.000
16	Toluene-d8	1	SURR	0.0	0.425	359543	0.200	775666	0.000	0.000	0.000

Calculation Definitions:

n	compound n
i	i th calibration level
Astdni	Standard Area for compound n at ith calibration level
Cstdni	Standard Concentration for compound n at ith calibration level in ppmv
Cistdi	Internal Standard Conc used for compound n at ith calibration level in ppmv
Aistdi	Internal Standard Area used for compound n at ith calibration level
Ansamp	Sample Area for compound n
Avg RFn	Average response factor for all ith calibration levels for compound n
Raw Amount	Sample Concentration in ppmv before applying factors
Cistd	Concentration internal standard used for compound n in sample in ppmv
Aistd	Area of internal standard used for compound n in sample
Cn	Concentration of compound n in sample in ppmv
23.68	Gas constant at 60 F as per EPA source test protocol
MW	Molecular weight of compound
Note (1) : Avg RFn	The values for the Average Response Factor AvgRFn can be optained from the response Factor Report for the Initial Calibration, or from the Calibration Report

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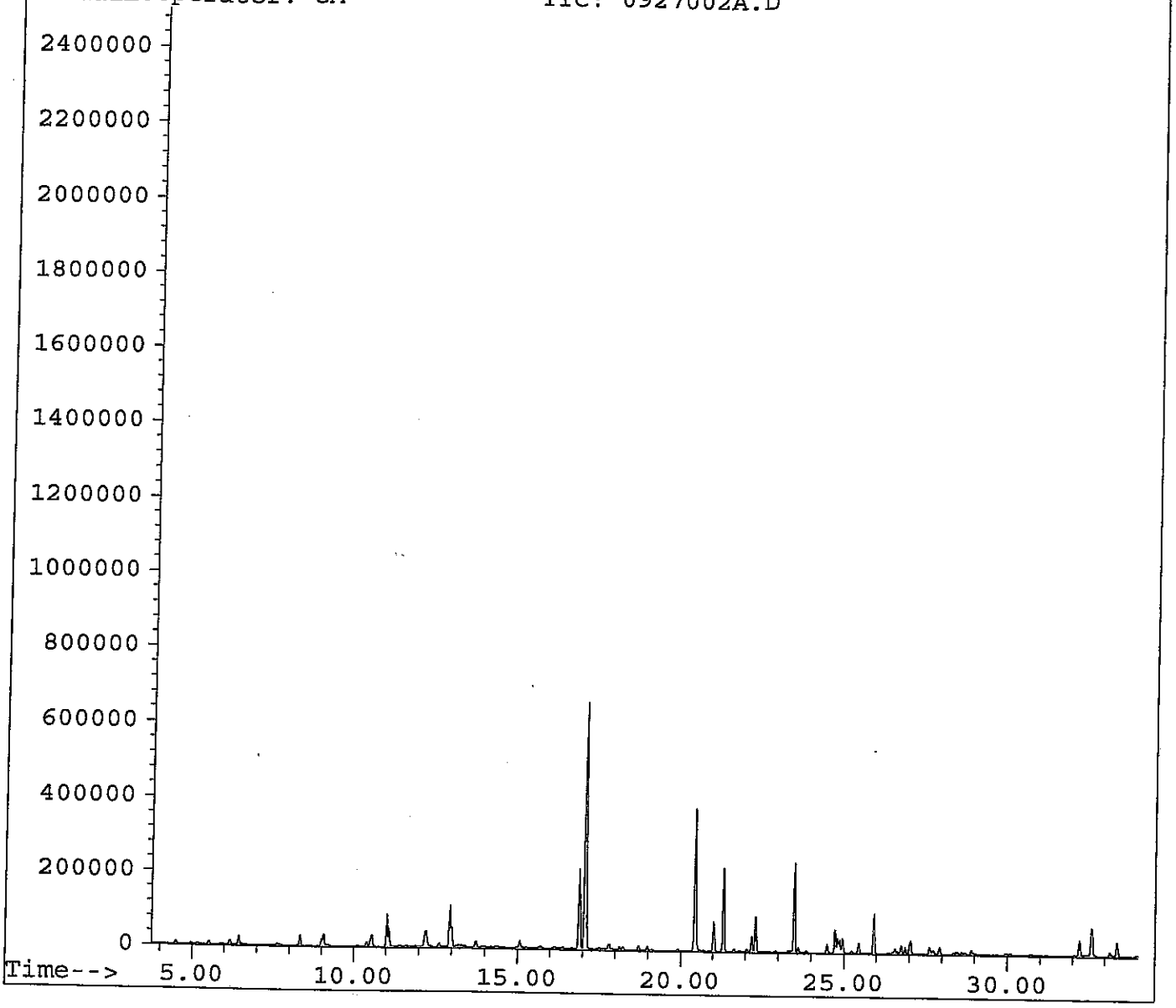


ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified SIM GC/MS
Analytical Method: TO-15 SIM

SDG: 209270
Laboratory Number: 04

File: 0927004A.D
Description: 44-009
Can/Tube#: 664
Sam_Type: SA
QC_Batch: 062209-MS2
Air Volume: 500 ml

Date Sampled: 06/16/09 **Time:** 16:45
Date Received: 06/17/09
Date Extracted:
Date Analyzed: 06/22/09 **Time:** 21:15
Can Dilution Factor: 1.55 3
Not Detected Flag: ND

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
75-01-4	Vinyl chloride	0.016	0.161	ND	0.043	0.425	ND	ND
75-35-4	1,1-Dichloroethene	0.016	0.161	ND	0.066	0.660	ND	ND
75-34-3	1,1-Dichloroethane	0.016	0.158	ND	0.066	0.661	ND	ND
156-59-2	cis-1,2-Dichloroethene	0.016	0.161	ND	0.066	0.660	ND	ND
107-06-2	1,2-Dichloroethane	0.016	0.161	ND	0.067	0.674	ND	ND
71-43-2	Benzene	0.016	0.161	1.038	0.053	0.532	3.422	
56-23-5	Carbon tetrachloride	0.016	0.158	0.233	0.103	1.027	1.513	
79-01-6	Trichloroethene	0.016	0.161	0.571	0.089	0.894	3.168	
75-27-4	Bromodichloromethane	0.011	0.105	ND	0.073	0.729	ND	ND
79-00-5	1,1,2-Trichloroethane	0.016	0.158	ND	0.089	0.891	ND	ND
127-18-4	Tetrachloroethene	0.016	0.158	0.082	0.111	1.107	0.578	J
108-38-3	m & p-Xylene	0.032	0.319	3.735	0.143	1.432	16.752	
95-47-6	o-Xylene	0.016	0.158	1.165	0.071	0.709	5.224	
79-34-5	1,1,2,2-Tetrachloroethane	0.016	0.158	ND	0.112	1.120	ND	ND
120-82-1	1,2,4-Trichlorobenzene	0.016	0.161	0.035	0.123	1.235	0.268	J
123-91-1	1,4 Dioxane	0.011	0.115	ND	0.043	0.427	ND	ND
91-20-3	Naphthalene	0.033	0.332	0.041	0.180	1.796	0.223	J

	Surrogate Recovery	Spike Amt. ppbV	Amount ppbV	% Rec.	QC Limits	Flag * = Out
2037-26-5	Toluene-d8	0.200	0.214	107	70-130	

Notes: 1) Reported results are to be interpreted to two significant figures.
2) ug/m3 = ppbV*FW/23.68 calculated assuming conditions at 60 F and 1 atm.
3) MDL and RL are adjusted for sample volume and can dilution.
4) U and ND are Flags used for Not Detected
5) J is a flag for a result between the MDL and the RL (or lower quantitation limit, LQL)

QUANTITATION REPORT

EPA Method TO-15 Modified SIM GC/MS

Review **EAS Sample ID: 0927004**

File Name:	0927004A.D		1 SS
Sample ID:	44-009		2 KB
Date:	22 Jun 109 9:15 pm	Cal Amounts	3 AT
Run Method:	2EXSIM_I.M	IS Areas	4 BB
Quant Method:	2EXSIM_I.M	Carryover	5 SH
Cal Update:	Mon Jun 22 09:18:18 2009		
Template:	EARTEXSM.MS3		
Can Factor:	1.55		
Volume:	500 ml	Analyst: SS 1	

CAS#	Compound	n	Raw Amount	RT	Target RT	Ion	Sample Area	Qualifier	Lower Qual	Upper Qual	Qual Flag	Cal Flag	Int Flag
75-01-4	Vinyl chloride	5	0.000	4.14	4.37	62.00	0	0	28	42			
75-35-4	1,1-Dichloroethene	9	0.000	6.91	6.95	61.00	0	0	37	56			
75-34-3	1,1-Dichloroethane	14	0.000	8.89	9.00	63.00	0	0	25	37			
156-59-2	cis-1,2-Dichloroethene	15	0.000	10.21	10.24	96.00	0	0	102	153			
107-06-2	1,2-Dichloroethane	19	0.000	11.80	12.02	61.95	0	0	14	21			
71-43-2	Benzene	20	0.335	11.96	12.63	78.00	236470	18	16	23			
56-23-5	Carbon tetrachloride	21	0.075	11.99	12.66	116.90	32468	98	79	119			
79-01-6	Trichloroethene	23	0.184	13.75	14.26	130.00	52084	97	75	112			
75-27-4	Bromodichloromethane	24	0.000	13.99	14.57	83.00	0	0	52	78			
79-00-5	1,1,2-Trichloroethane	28	0.000	17.11	17.35	97.00	0	0	63	94			
127-18-4	Tetrachloroethene	30	0.027	18.90	19.09	166.00	9461	48	64	97	Q		
108-38-3	m & p-Xylene	34	1.205	21.27	21.37	91.00	1674399	49	42	63			
95-47-6	o-Xylene	36	0.376	22.26	22.34	91.00	666799	41	38	56			
79-34-5	1,1,2,2-Tetrachloroethane	37	0.000	22.64	22.93	83.00	0	0	8	12			
120-82-1	1,2,4-Trichlorobenzene	45	0.011	32.20	32.17	180.00	86596	98	79	118			
123-91-1	1,4 Dioxane	47	0.000	14.82	14.57	88.00	0	0	55	82			
91-20-3	Naphthalene	48	0.013	32.57	32.78	128.00	343423	0	0	0			
3114-55-4	Chlorobenzene-d5	1	0.200	20.38	20.51	117.00	771601						
2037-26-5	Toluene-d8	16	0.214	16.76	17.05	98.00	351548						

Integration Flags:

If no flag the Integration was done by the instrument computer

M1 Manual Integration because the computer did not integrated the peak or integrated the wrong peak

M2 Manual Integration because computer integration of baseline was different then Inital Calibration

INITIAL CALIBRATION REPORT

EPA Method TO-15 Modified SIM GC/MS

SDG: 209270
QC_Batch: 062209-MS2
Instrument Name: MS2

File Name: 0927004A.D
Sample ID: 44-009
Sample Analysis Date: 22 Jun 109 9:15 pm
Run Method: 2EXSIM_I.M
Quant and Calibration Method: 2EXSIM_I.M
Cal Update: Mon Jun 22 09:18:18 2009
Template: EARTEXSM.MS3

Calibration Title: EPA T0-15

Number Compounds: 49
IS1: ST60024 0.2
IS2:
IS3:
IS4:

		Calibration Amount CA, ppmv						Calibration Response, Area					
		Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
		Amt	Amt	Amt	Amt	Amt	Amt	C06199B.D	C06199H.D	C06199A.D	C06199F.D	C06199E.D	C06199K.D
n	Compound	10.0	0.5	20.0	2.0	4.0	1.0	10.0	0.5	20.0	2.0	4.0	1.0
5	Vinyl chloride	1.040	0.052	2.080	0.208	0.416	0.104	184476	12222	596605	24865	140317	19936
9	1,1-Dichloroethene	1.040	0.052	2.080	0.208	0.416	0.104	388365	27969	1185798	47507	301017	40726
14	1,1-Dichloroethane	1.010	0.051	2.020	0.202	0.404	0.101	403912	31159	1225807	51920	327340	43151
15	cis-1,2-Dichloroethene	1.030	0.052	2.060	0.206	0.412	0.103	240146	21098	758337	35003	226396	27004
19	1,2-Dichloroethane	1.030	0.052	2.060	0.206	0.412	0.103	1236150	74052	4935278	125964	835756	97954
20	Benzene	1.030	0.052	2.060	0.206	0.412	0.103	967913	60686	3573129	94902	641363	73510
21	Carbon tetrachloride	1.020	0.051	2.040	0.204	0.408	0.102	492544	40672	1579809	67130	410007	53667
23	Trichloroethene	1.030	0.052	2.060	0.206	0.412	0.103	305786	29555	968228	45278	286372	33459
24	Bromodichloromethane	0.670	0.034	1.340	0.134	0.268	0.067	349165	34872	980125	57413	329960	43188
28	1,1,2-Trichloroethane	1.020	0.051	2.040	0.204	0.408	0.102	480870	37160	1655491	70973	441832	43484
30	Tetrachloroethene	1.020	0.051	2.040	0.204	0.408	0.102	373918	35806	1224836	58411	374447	38753
34	m & p-Xylene	2.060	0.103	4.120	0.412	0.824	0.206	2970894	279033	10312056	481458	2872586	284680
36	o-Xylene	1.020	0.051	2.040	0.204	0.408	0.102	1996168	168269	6920115	304155	1831287	166711
37	1,1,2,2-Tetrachloroethane	1.020	0.051	2.040	0.204	0.408	0.102	2273482	192188	6988630	401655	2300254	180334
45	1,2,4-Trichlorobenzene	1.030	0.052	2.060	0.206	0.412	0.103	6381826	918959	14261028	1761172	9410822	617532
47	1,4 Dioxane	0.740	0.037	1.480	0.148	0.296	0.074	154378	17449	450267	31614	179188	26330
48	Naphthalene	2.130	0.107	-1.000	0.426	0.852	0.213	34587722	6597377	-1	12354059	37178978	4780301
1	Chlorobenzene-d5	0.200	0.200	0.200	0.200	0.200	0.200	877690	1273169	1660044	554145	1807068	927887
16	Toluene-d8	0.200	0.200	0.200	0.200	0.200	0.200	389596	565545	652462	236781	753686	395034

(298)

INITIAL CALIBRATION REPORT: Response Factors

SDG:	**209270**
QC_Batch:	**062209-MS2**
Sample ID:	44-009
Sample Analysis Date:	22 Jun 109 9:15 pm
Run Method:	2EXSIM_I.M
Quant Method:	2EXSIM_I.M
Cal Update:	Mon Jun 22 09:18:18 2009
Template:	EARTEXSM.MS3

Sample Calculation:

1) Avg RFn = Sum $\left| \frac{(Astdni)}{(Cstdni)} \frac{(Cistdi)}{(Aistdi)} \right|_i$

Response Factors

Compound	RF1	RF2	RF3	RF4	RF5	RF6	AvgRFn	%RSD
Vinyl chloride	0.040	0.037	0.035	0.043	0.037	0.041	0.039	8.23
1,1-Dichloroethene	0.085	0.084	0.069	0.082	0.080	0.084	0.081	7.72
1,1-Dichloroethane	0.091	0.096	0.073	0.093	0.090	0.092	0.089	9.11
cis-1,2-Dichloroethene	0.053	0.064	0.044	0.061	0.061	0.057	0.057	12.56
1,2-Dichloroethane	0.273	0.224	0.289	0.221	0.225	0.205	0.239	13.97
Benzene	0.214	0.183	0.209	0.166	0.172	0.154	0.183	13.13
Carbon tetrachloride	0.110	0.125	0.093	0.119	0.111	0.113	0.112	9.60
Trichloroethene	0.068	0.089	0.057	0.079	0.077	0.070	0.073	15.26
Bromodichloromethane	0.119	0.161	0.088	0.155	0.136	0.139	0.133	19.96
1,1,2-Trichloroethane	0.107	0.114	0.098	0.126	0.120	0.092	0.109	11.85
Tetrachloroethene	0.084	0.110	0.072	0.103	0.102	0.082	0.092	16.20
m & p-Xylene	0.329	0.426	0.302	0.422	0.386	0.298	0.360	16.21
o-Xylene	0.446	0.518	0.409	0.538	0.497	0.352	0.460	15.46
1,1,2,2-Tetrachloroethane	0.508	0.592	0.413	0.711	0.624	0.381	0.538	23.70
1,2,4-Trichlorobenzene	1.412	2.776	0.834	3.086	2.528	1.292	1.988	46.46
1,4 Dioxane	0.048	0.074	0.037	0.077	0.067	0.077	0.063	27.03
Naphthalene	3.700	9.686	NA	10.467	4.830	4.837	6.704	46.62
Chlorobenzene-d5	1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.00
Toluene-d8	0.444	0.444	0.393	0.427	0.417	0.426	0.425	4.48

CALCULATIONS

EPA Method TO-15 Modified SIM GC/MS

SDG: 209270
Laboratory Number: 04

RL:	2EXSIM_I.M
Run Method:	2EXSIM_I.M
Quant Method:	2EXSIM_I.M
Can Dilution Factor:	1.55
Air Volume:	500 ml
Gas Constant:	23.68
Decimal Places:	3

Compound	M.W.	Raw Amount	Result ppbv	Result ug/m3	(1) MDL ppbv	(2) RL ppbv	Calc MDL ppbv	Calc MDL ug/m3	Calc RL ppbv	Calc RL ug/m3	Flag	S062602-1 Spike ppmv
Vinyl chloride	62.5	0.000	0.000	0.000	0.005	0.052	0.02	0.043	0.16	0.425	U	0.103
1,1-Dichloroethene	96.9	0.000	0.000	0.000	0.005	0.052	0.02	0.066	0.16	0.660	U	0.103
1,1-Dichloroethane	99.0	0.000	0.000	0.000	0.005	0.051	0.02	0.066	0.16	0.661	U	0.103
cis-1,2-Dichloroethene	96.9	0.000	0.000	0.000	0.005	0.052	0.02	0.066	0.16	0.660	U	0.103
1,2-Dichloroethane	99.0	0.000	0.000	0.000	0.005	0.052	0.02	0.067	0.16	0.674	U	0.103
Benzene	78.1	0.335	1.038	3.422	0.005	0.052	0.02	0.053	0.16	0.532		0.103
Carbon tetrachloride	153.8	0.075	0.233	1.513	0.005	0.051	0.02	0.103	0.16	1.027		0.103
Trichloroethene	131.4	0.184	0.571	3.168	0.005	0.052	0.02	0.089	0.16	0.894		0.103
Bromodichloromethane	163.8	0.000	0.000	0.000	0.003	0.034	0.01	0.073	0.11	0.729	U	0.103
1,1,2-Trichloroethane	133.4	0.000	0.000	0.000	0.005	0.051	0.02	0.089	0.16	0.891	U	0.103
Tetrachloroethene	165.8	0.027	0.082	0.578	0.005	0.051	0.02	0.111	0.16	1.107	J	0.103
m & p-Xylene	106.2	1.205	3.735	16.752	0.010	0.103	0.03	0.143	0.32	1.432		0.103
o-Xylene	106.2	0.376	1.165	5.224	0.005	0.051	0.02	0.071	0.16	0.709		0.103
1,1,2,2-Tetrachloroethane	167.8	0.000	0.000	0.000	0.005	0.051	0.02	0.112	0.16	1.120	U	0.103
1,2,4-Trichlorobenzene	181.4	0.011	0.035	0.268	0.005	0.052	0.02	0.123	0.16	1.235	J	0.103
1,4 Dioxane	88.1	0.000	0.000	0.000	0.004	0.037	0.01	0.043	0.11	0.427	U	1.103
Naphthalene	128.2	0.013	0.041	0.223	0.011	0.107	0.03	0.180	0.33	1.796	J	2.103

SAMPLE CALCULATION

EPA Method TO-15 Modified SIM GC/MS

SDG:		**209270**
Laboratory Number:		**04**
Standard Volume	STV	0.5
Sample Volume	SV	500
Can Dilution Factor	CDF	1.55
Gas Constant		23.68
Decimal Places:		3

Sample Calculation:

1) Avg RFn = Sum $\left| \frac{(Astdni)}{(Cstdni)} \frac{(Cistdi)}{(Aistdi)} \right|_i$ Note: 1

2) Raw Amt = $\frac{(Ansamp)}{(Avg\ RFn)} \frac{(Cistdi)}{(Aistdi)}$ = **Cn**

3) Amount ppbv = $\frac{(Raw\ Amt)\ 1000}{(SV)}$ (CDF) (STV)

4) Amount ug/m3 = $\frac{(amt(ppbv)\ MW}{23.68}$

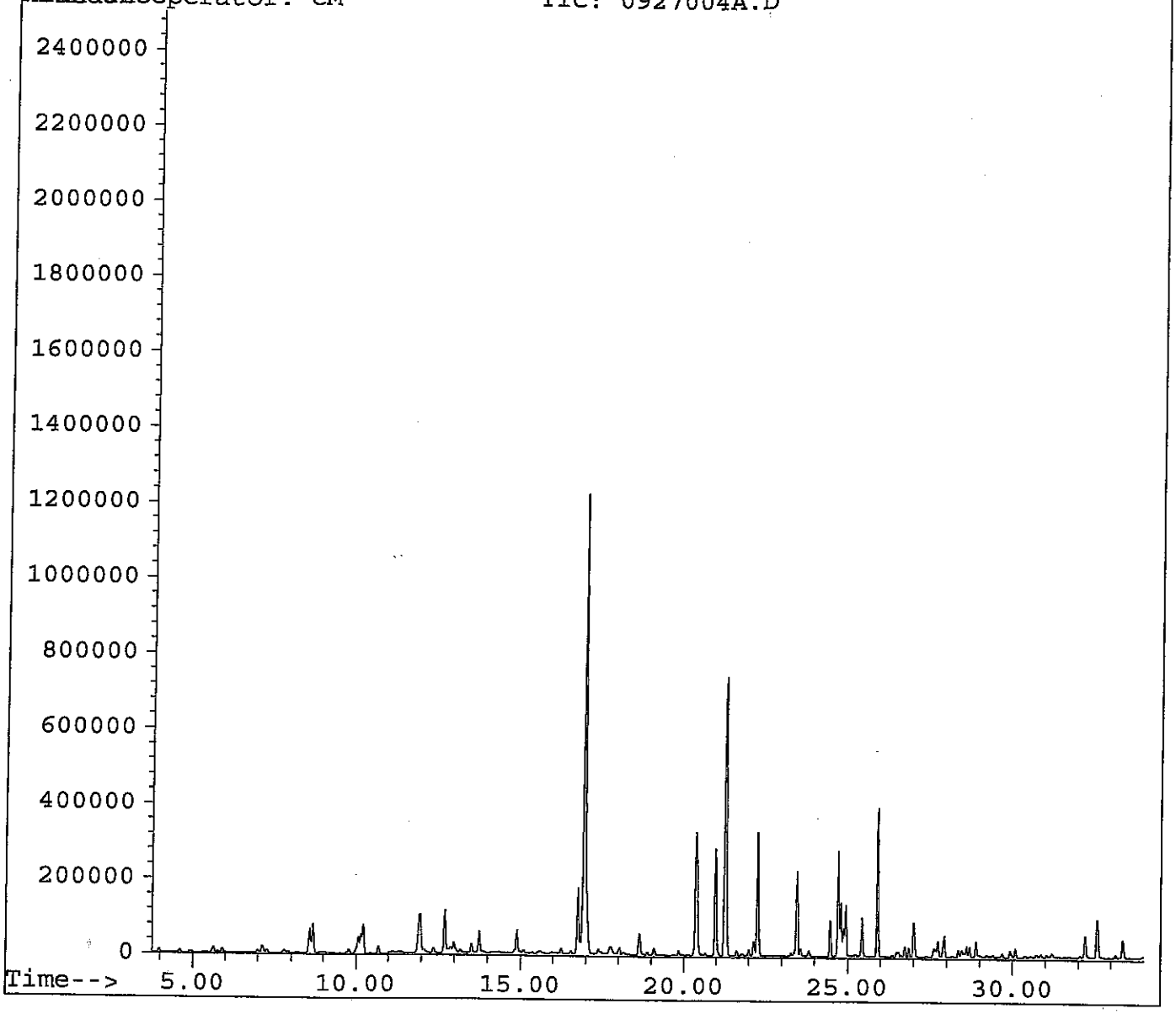
n	Compound	IS n	Chem type	MW	AvgRFn	Area Ansamp	Cistdi ppmv	Aistdi Ais	Cn ppmV Raw Amt	Amount ppbv	Amount ug/m3
5	Vinyl chloride	1	TRG	62.5	0.039	0	0.200	771601	0.000	0.000	0.000
9	1,1-Dichloroethene	1	TRG	96.9	0.081	0	0.200	771601	0.000	0.000	0.000
14	1,1-Dichloroethane	1	TRG	99.0	0.089	0	0.200	771601	0.000	0.000	0.000
15	cis-1,2-Dichloroethene	1	TRG	96.9	0.057	0	0.200	771601	0.000	0.000	0.000
19	1,2-Dichloroethane	1	TRG	99.0	0.239	0	0.200	771601	0.000	0.000	0.000
20	Benzene	1	TRG	78.1	0.183	236470	0.200	771601	0.335	1.038	3.423
21	Carbon tetrachloride	1	TRG	153.8	0.112	32468	0.200	771601	0.075	0.233	1.513
23	Trichloroethene	1	TRG	131.4	0.073	52084	0.200	771601	0.184	0.571	3.168
24	Bromodichloromethane	1	TRG	163.8	0.133	0	0.200	771601	0.000	0.000	0.000
28	1,1,2-Trichloroethane	1	TRG	133.4	0.109	0	0.200	771601	0.000	0.000	0.000
30	Tetrachloroethene	1	TRG	165.8	0.092	9461	0.200	771601	0.027	0.082	0.574
34	m & p-Xylene	1	TRG	106.2	0.360	1674399	0.200	771601	1.205	3.735	16.751
36	o-Xylene	1	TRG	106.2	0.460	666799	0.200	771601	0.376	1.165	5.225
37	1,1,2,2-Tetrachloroethane	1	TRG	167.8	0.54	0	0.200	771601	0.000	0.000	0.000
45	1,2,4-Trichlorobenzene	1	TRG	181.4	1.99	86596	0.200	771601	0.011	0.035	0.268
47	1,4 Dioxane	1	TRG	88.1	0.06	0	0.200	771601	0.000	0.000	0.000
48	Naphthalene	1	TRG	128.2	6.70	343423	0.200	771601	0.013	0.041	0.222
1	Chlorobenzene-d5	1	IS	0.0	1.000	771601	0.200	771601	0.000	0.000	0.000
16	Toluene-d8	1	SURR	0.0	0.425	351548	0.200	771601	0.000	0.000	0.000

Calculation Definitions:

n	compound n
i	i th calibration level
Astdni	Standard Area for compound n at ith calibration level
Cstdni	Standard Concentration for compound n at ith calibration level in ppmv
Cistdi	Internal Standard Conc used for compound n at ith calibration level in ppmv
Aistdi	Internal Standard Area used for compound n at ith calibration level
Ansamp	Sample Area for compound n
Avg RFn	Average response factor for all ith calibration levels for compound n
Raw Amount	Sample Concentration in ppmv before applying factors
Cistd	Concentration internal standard used for compound n in sample in ppmv
Aistd	Area of internal standard used for compound n in sample
Cn	Concentration of compound n in sample in ppmv
23.68	Gas constant at 60 F as per EPA source test protocol
MW	Molecular weight of compound
Note (1) : Avg RFn	The values for the Average Response Factor AvgRFn can be optained from the response Factor Report for the Initial Calibration, or from the Calibration Report

Name of file: C:\HPCHEM\1\DATA\06229MS2\0927004A.D

Abundance Operator: CM TIC: 0927004A.D



ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified SIM GC/MS | **SDG: 209270**
Analytical Method: TO-15 SIM | **Laboratory Number: 14**

File:	0927014A.D	**Date Sampled:**	06/16/09	**Time:**	15:35
Description:	44-006B	**Date Received:**	06/17/09		
Can/Tube#:	2968	**Date Extracted:**			
Sam_Type:	SA	**Date Analyzed:**	06/22/09	**Time:**	18:11
QC_Batch:	062209-MS2	**Can Dilution Factor:**	2.59		3
Air Volume:	500 ml	**Not Detected Flag:**	ND		

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
75-34-3	1,1-Dichloroethane	0.026	0.264	ND	0.110	1.104	ND	ND
156-59-2	cis-1,2-Dichloroethene	0.027	0.269	ND	0.110	1.102	ND	ND
107-06-2	1,2-Dichloroethane	0.027	0.269	ND	0.113	1.126	ND	ND
71-43-2	Benzene	0.027	0.269	0.412	0.089	0.888	1.357	
56-23-5	Carbon tetrachloride	0.026	0.264	0.398	0.172	1.716	2.585	
79-01-6	Trichloroethene	0.027	0.269	0.027	0.149	1.495	0.150	J
75-27-4	Bromodichloromethane	0.018	0.176	ND	0.122	1.218	ND	ND
79-00-5	1,1,2-Trichloroethane	0.026	0.264	ND	0.149	1.488	ND	ND
127-18-4	Tetrachloroethene	0.026	0.264	0.084	0.185	1.850	0.588	J
108-38-3	m & p-Xylene	0.053	0.534	1.011	0.239	2.393	4.534	
95-47-6	o-Xylene	0.026	0.264	0.297	0.118	1.185	1.331	
120-82-1	1,2,4-Trichlorobenzene	0.027	0.269	0.071	0.206	2.063	0.542	J
123-91-1	1,4 Dioxane	0.019	0.192	ND	0.071	0.713	ND	ND

	Surrogate Recovery	Spike Amt. ppbV	Amount ppbV	% Rec.	QC Limits	Flag * = Out
2037-26-5	Toluene-d8	0.200	0.223	112	70-130	

Notes: 1) Reported results are to be interpreted to two significant figures.
2) ug/m3 = ppbV*FW/23.68 calculated assuming conditions at 60 F and 1 atm.
3) MDL and RL are adjusted for sample volume and can dilution.
4) U and ND are Flags used for Not Detected
5) J is a flag for a result between the MDL and the RL (or lower quantitation limit, LQL)

QUANTITATION REPORT

EPA Method TO-15 Modified SIM GC/MS

			Review	EAS Sample ID: 0927014	
File Name:	0927014A.D				1 SS
Sample ID:	44-006B				2 KB
Date:	22 Jun 109 6:11 pm			Cal Amounts	3 AT
Run Method:	2EXSIM_I.M			IS Areas	4 BB
Quant Method:	2EXSIM_I.M			Carryover	5 SH
Cal Update:	Mon Jun 22 09:18:18 2009				
Template:	EARTEXSM.MS3				
Can Factor:	2.59				
Volume:	500	ml		Analyst: SS 1	

CAS#	Compound	n	Raw Amount	RT	Target RT	Ion	Sample Area	Qualifier	Lower Qual	Upper Qual	Qual Flag	Cal Flag	Int Flag
75-34-3	1,1-Dichloroethane	14	0.000	8.92	9.00	63.00	0	0	25	37			
156-59-2	cis-1,2-Dichloroethene	15	0.000	10.27	10.24	96.00	30	89	102	153			
107-06-2	1,2-Dichloroethane	19	0.000	11.88	12.02	61.95	0	0	14	21			
71-43-2	Benzene	20	0.079	12.04	12.63	78.00	46493	23	16	23			
56-23-5	Carbon tetrachloride	21	0.077	12.07	12.66	116.90	27494	97	79	119			
79-01-6	Trichloroethene	23	0.005	13.83	14.26	130.00	1225	103	75	112			
75-27-4	Bromodichloromethane	24	0.000	14.41	14.57	83.00	0	0	52	78			
79-00-5	1,1,2-Trichloroethane	28	0.000	17.24	17.35	97.00	139	102	63	94			
127-18-4	Tetrachloroethene	30	0.016	18.94	19.09	166.00	4774	80	64	97			
108-38-3	m & p-Xylene	34	0.195	21.27	21.37	91.00	224591	42	42	63			
95-47-6	o-Xylene	36	0.057	22.28	22.34	91.00	84185	42	38	56			
120-82-1	1,2,4-Trichlorobenzene	45	0.014	32.20	32.17	180.00	86834	95	79	118			
123-91-1	1,4 Dioxane	47	0.000	14.71	14.57	88.00	0	0	55	82			
3114-55-4	Chlorobenzene-d5	1	0.200	20.40	20.51	117.00	639000						
2037-26-5	Toluene-d8	16	0.223	16.81	17.05	98.00	303194						

Integration Flags:

If no flag the Integration was done by the instrument computer

M1 Manual Integration because the computer did not integrated the peak or integrated the wrong peak

M2 Manual Integration because computer integration of baseline was different then Inital Calibration

INITIAL CALIBRATION REPORT

EPA Method TO-15 Modified SIM GC/MS

		SDG:	209270
		QC_Batch:	062209-MS2
File Name:	0927014A.D	Instrument Name:	MS2
Sample ID:	44-006B		
Sample Analysis Date:	22 Jun 109 6:11 pm	Number Compounds:	49
Run Method:	2EXSIM_I.M	IS1: ST60024	0.2
Quant and Calibration Method:	2EXSIM_I.M	IS2:	
Cal Update:	Mon Jun 22 09:18:18 2009	IS3:	
Template:	EARTEXSM.MS3	IS4:	

Calibration Title: EPA T0-15

		Calibration Amount CA, ppmv						Calibration Response, Area					
		Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
		Amt	Amt	Amt	Amt	Amt	Amt	C06199B.D	C06199H.D	C06199A.D	C06199F.D	C06199E.D	C06199K.D
n	Compound	10.0	0.5	20.0	2.0	4.0	1.0	10.0	0.5	20.0	2.0	4.0	1.0
14	1,1-Dichloroethane	1.010	0.051	2.020	0.202	0.404	0.101	403912	31159	1225807	51920	327340	43151
15	cis-1,2-Dichloroethene	1.030	0.052	2.060	0.206	0.412	0.103	240146	21098	758337	35003	226396	27004
19	1,2-Dichloroethane	1.030	0.052	2.060	0.206	0.412	0.103	1236150	74052	4935278	125964	835756	97954
20	Benzene	1.030	0.052	2.060	0.206	0.412	0.103	967913	60686	3573129	94902	641363	73510
21	Carbon tetrachloride	1.020	0.051	2.040	0.204	0.408	0.102	492544	40672	1579809	67130	410007	53667
23	Trichloroethene	1.030	0.052	2.060	0.206	0.412	0.103	305786	29555	968228	45278	286372	33459
24	Bromodichloromethane	0.670	0.034	1.340	0.134	0.268	0.067	349165	34872	980125	57413	329960	43188
28	1,1,2-Trichloroethane	1.020	0.051	2.040	0.204	0.408	0.102	480870	37160	1655491	70973	441832	43484
30	Tetrachloroethene	1.020	0.051	2.040	0.204	0.408	0.102	373918	35806	1224836	58411	374447	38753
34	m & p-Xylene	2.060	0.103	4.120	0.412	0.824	0.206	2970894	279033	10312056	481458	2872586	284680
35	o-Xylene	1.020	0.051	2.040	0.204	0.408	0.102	1996168	168269	6920115	304155	1831287	166711
45	1,2,4-Trichlorobenzene	1.030	0.052	2.060	0.206	0.412	0.103	6381826	918959	14261028	1761172	9410822	617532
47	1,4 Dioxane	0.740	0.037	1.480	0.148	0.296	0.074	154378	17449	450267	31614	179188	26330
1	Chlorobenzene-d5	0.200	0.200	0.200	0.200	0.200	0.200	877690	1273169	1660044	554145	1807068	927887
16	Toluene-d8	0.200	0.200	0.200	0.200	0.200	0.200	389596	565545	652462	236781	753686	395034

(305)

INITIAL CALIBRATION REPORT: Response Factors

SDG:	**209270**	**Sample Calculation:**	
QC_Batch:	**062209-MS2**	1) Avg RFn = Sum	$\left\lvert \frac{(Astdni)}{(Cstdni)} \frac{(Cistdi)}{(Aistdi)} \right\rvert_i$
Sample ID:	44-006B		
Sample Analysis Date:	22 Jun 109 6:11 pm		
Run Method:	2EXSIM_I.M		
Quant Method:	2EXSIM_I.M		
Cal Update:	Mon Jun 22 09:18:18 2009		
Template:	EARTEXSM.MS3		

Response Factors

Compound	RF1	RF2	RF3	RF4	RF5	RF6	AvgRFn	%RSD
1,1-Dichloroethane	0.091	0.096	0.073	0.093	0.090	0.092	0.089	9.11
cis-1,2-Dichloroethene	0.053	0.064	0.044	0.061	0.061	0.057	0.057	12.56
1,2-Dichloroethane	0.273	0.224	0.289	0.221	0.225	0.205	0.239	13.97
Benzene	0.214	0.183	0.209	0.166	0.172	0.154	0.183	13.13
Carbon tetrachloride	0.110	0.125	0.093	0.119	0.111	0.113	0.112	9.60
Trichloroethene	0.068	0.089	0.057	0.079	0.077	0.070	0.073	15.26
Bromodichloromethane	0.119	0.161	0.088	0.155	0.136	0.139	0.133	19.96
1,1,2-Trichloroethane	0.107	0.114	0.098	0.126	0.120	0.092	0.109	11.85
Tetrachloroethene	0.084	0.110	0.072	0.103	0.102	0.082	0.092	16.20
m & p-Xylene	0.329	0.426	0.302	0.422	0.386	0.298	0.360	16.21
o-Xylene	0.446	0.518	0.409	0.538	0.497	0.352	0.460	15.46
1,2,4-Trichlorobenzene	1.412	2.776	0.834	3.086	2.528	1.292	1.988	46.46
1,4 Dioxane	0.048	0.074	0.037	0.077	0.067	0.077	0.063	27.03
Chlorobenzene-d5	1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.00
Toluene-d8	0.444	0.444	0.393	0.427	0.417	0.426	0.425	4.48

CALCULATIONS

EPA Method TO-15 Modified SIM GC/MS

SDG: 209270
Laboratory Number: 14

RL:	2EXSIM_I.M
Run Method:	2EXSIM_I.M
Quant Method:	2EXSIM_I.M
Can Dilution Factor:	2.59
Air Volume:	500 ml
Gas Constant:	23.68
Decimal Places:	3

Compound	M.W.	Raw Amount	Result ppbv	Result ug/m3	(1) MDL ppbv	(2) RL ppbv	Calc MDL ppbv	Calc MDL ug/m3	Calc RL ppbv	Calc RL ug/m3	Flag	S062602-1 Spike ppmv
1,1-Dichloroethane	99.0	0.000	0.000	0.000	0.005	0.051	0.03	0.110	0.26	1.104	U	0.103
cis-1,2-Dichloroethene	96.9	0.000	0.001	0.004	0.005	0.052	0.03	0.110	0.27	1.102	U	0.103
1,2-Dichloroethane	99.0	0.000	0.000	0.000	0.005	0.052	0.03	0.113	0.27	1.126	U	0.103
Benzene	78.1	0.079	0.412	1.357	0.005	0.052	0.03	0.089	0.27	0.888		0.103
Carbon tetrachloride	153.8	0.077	0.398	2.585	0.005	0.051	0.03	0.172	0.26	1.716		0.103
Trichloroethene	131.4	0.005	0.027	0.150	0.005	0.052	0.03	0.149	0.27	1.495	J	0.103
Bromodichloromethane	163.8	0.000	0.000	0.000	0.003	0.034	0.02	0.122	0.18	1.218	U	0.103
1,1,2-Trichloroethane	133.4	0.000	0.002	0.012	0.005	0.051	0.03	0.149	0.26	1.488	U	0.103
Tetrachloroethene	165.8	0.016	0.084	0.588	0.005	0.051	0.03	0.185	0.26	1.850	J	0.103
m & p-Xylene	106.2	0.195	1.011	4.534	0.010	0.103	0.05	0.239	0.53	2.393		0.103
o-Xylene	106.2	0.057	0.297	1.331	0.005	0.051	0.03	0.118	0.26	1.185		0.103
1,2,4-Trichlorobenzene	181.4	0.014	0.071	0.542	0.005	0.052	0.03	0.206	0.27	2.063	J	0.103
1,4 Dioxane	88.1	0.000	0.000	0.000	0.004	0.037	0.02	0.071	0.19	0.713	U	1.103

SAMPLE CALCULATION

EPA Method TO-15 Modified SIM GC/MS

SDG:		**209270**
Laboratory Number:		**14**
Standard Volume	STV	0.5
Sample Volume	SV	500
Can Dilution Factor	CDF	2.59
Gas Constant		23.68
Decimal Places:		3

Sample Calculation:

1) Avg RFn = Sum $\left| \frac{(Astdni)}{(Cstdni)} \frac{(Cistdi)}{(Aistdi)} \right|_i$ Note: 1

2) Raw Amt = $\frac{(Ansamp)}{(Avg\ RFn)} \frac{(Cistdi)}{(Aistdi)}$ = Cn

3) Amount ppbv = $\frac{(Raw\ Amt)\ 1000}{(SV)}$ (CDF) (STV)

4) Amount ug/m3 = $\frac{(amt(ppbv)\ MW}{23.68}$

n	Compound	IS n	Chem type	MW	AvgRFn	Area Ansamp	Cistdi ppmv	Aistdi Ais	Cn ppmV Raw Amt	Amount ppbv	Amount ug/m3
14	1,1-Dichloroethane	1	TRG	99.0	0.089	0	0.200	639000	0.000	0.000	0.000
15	cis-1,2-Dichloroethene	1	TRG	96.9	0.057	30	0.200	639000	0.000	0.001	0.004
19	1,2-Dichloroethane	1	TRG	99.0	0.239	0	0.200	639000	0.000	0.000	0.000
20	Benzene	1	TRG	78.1	0.183	46493	0.200	639000	0.079	0.412	1.359
21	Carbon tetrachloride	1	TRG	153.8	0.112	27494	0.200	639000	0.077	0.398	2.585
23	Trichloroethene	1	TRG	131.4	0.073	1225	0.200	639000	0.005	0.027	0.150
24	Bromodichloromethane	1	TRG	163.8	0.133	0	0.200	639000	0.000	0.000	0.000
28	1,1,2-Trichloroethane	1	TRG	133.4	0.109	139	0.200	639000	0.000	0.002	0.011
30	Tetrachloroethene	1	TRG	165.8	0.092	4774	0.200	639000	0.016	0.084	0.588
34	m & p-Xylene	1	TRG	106.2	0.360	224591	0.200	639000	0.195	1.011	4.534
36	o-Xylene	1	TRG	106.2	0.460	84185	0.200	639000	0.057	0.297	1.332
45	1,2,4-Trichlorobenzene	1	TRG	181.4	1.99	86834	0.200	639000	0.014	0.071	0.544
47	1,4 Dioxane	1	TRG	88.1	0.06	0	0.200	639000	0.000	0.000	0.000
1	Chlorobenzene-d5	1	IS	0.0	1.000	639000	0.200	639000	0.000	0.000	0.000
16	Toluene-d8	1	SURR	0.0	0.425	303194	0.200	639000	0.000	0.000	0.000

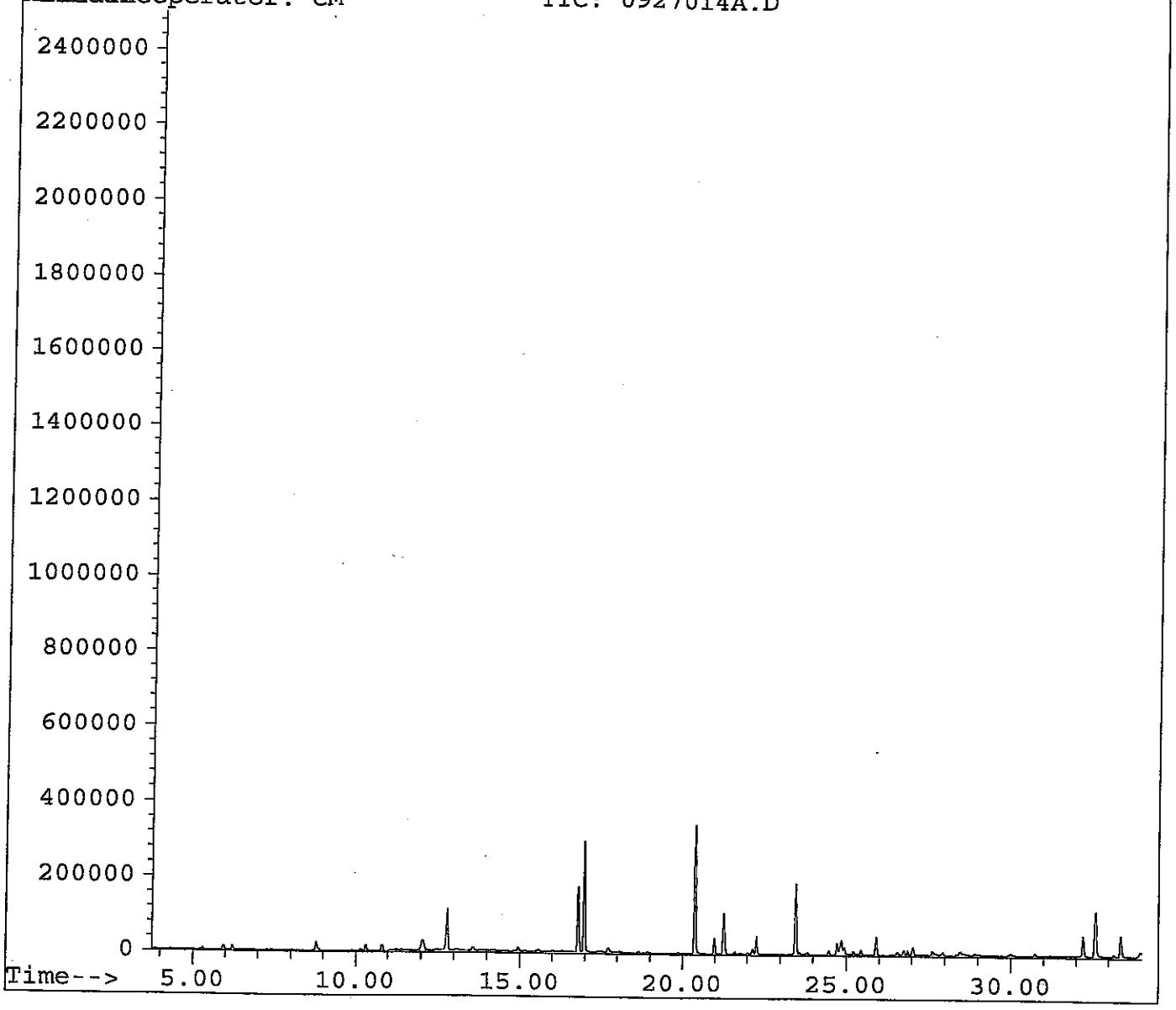
Calculation Definitions:

n	compound n
i	i th calibration level
Astdni	Standard Area for compound n at ith calibration level
Cstdni	Standard Concentration for compound n at ith calibration level in ppmv
Cistdi	Internal Standard Conc used for compound n at ith calibration level in ppmv
Aistdi	Internal Standard Area used for compound n at ith calibration level
Ansamp	Sample Area for compound n
Avg RFn	Average response factor for all ith calibration levels for compound n
Raw Amount	Sample Concentration in ppmv before applying factors
Cistd	Concentration internal standard used for compound n in sample in ppmv
Aistd	Area of internal standard used for compound n in sample
Cn	Concentration of compound n in sample in ppmv
23.68	Gas constant at 60 F as per EPA source test protocol
MW	Molecular weight of compound
Note (1) : Avg RFn	The values for the Average Response Factor AvgRFn can be optained from the response Factor Report for the Initial Calibration, or from the Calibration Report

Name of file: C:\HPCHEM\1\DATA\06229MS2\0927014A.D

Name of operator: CM

TIC: 0927014A.D



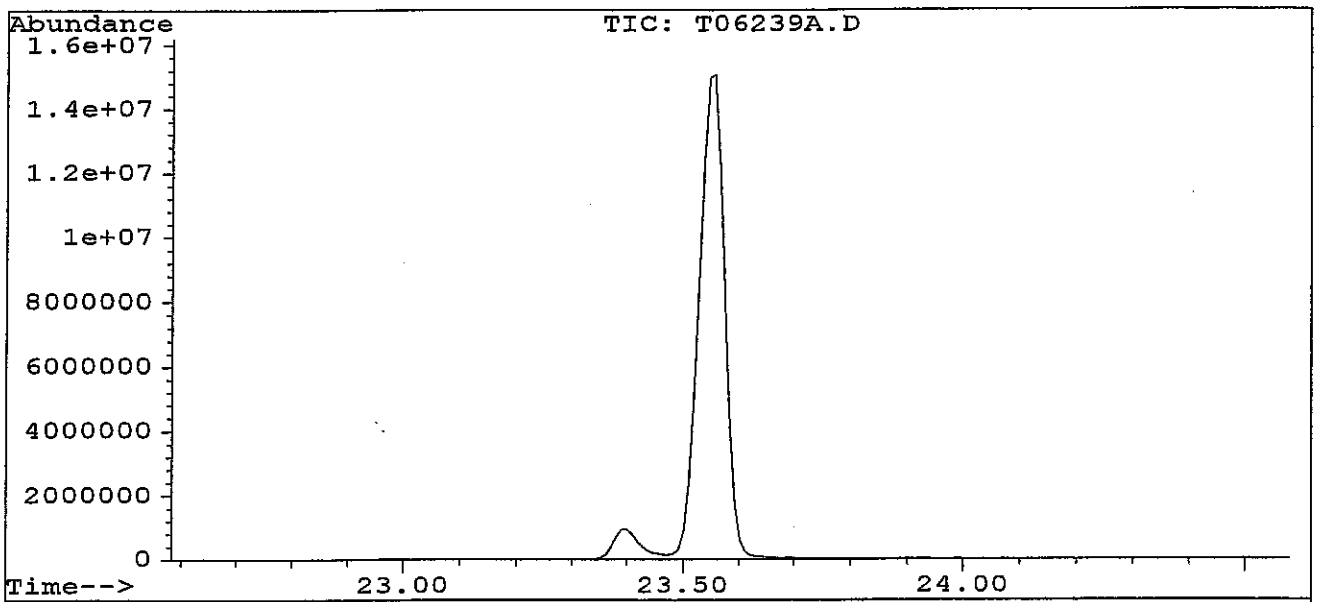
Daily Analytical Batch #: 062309-MS2

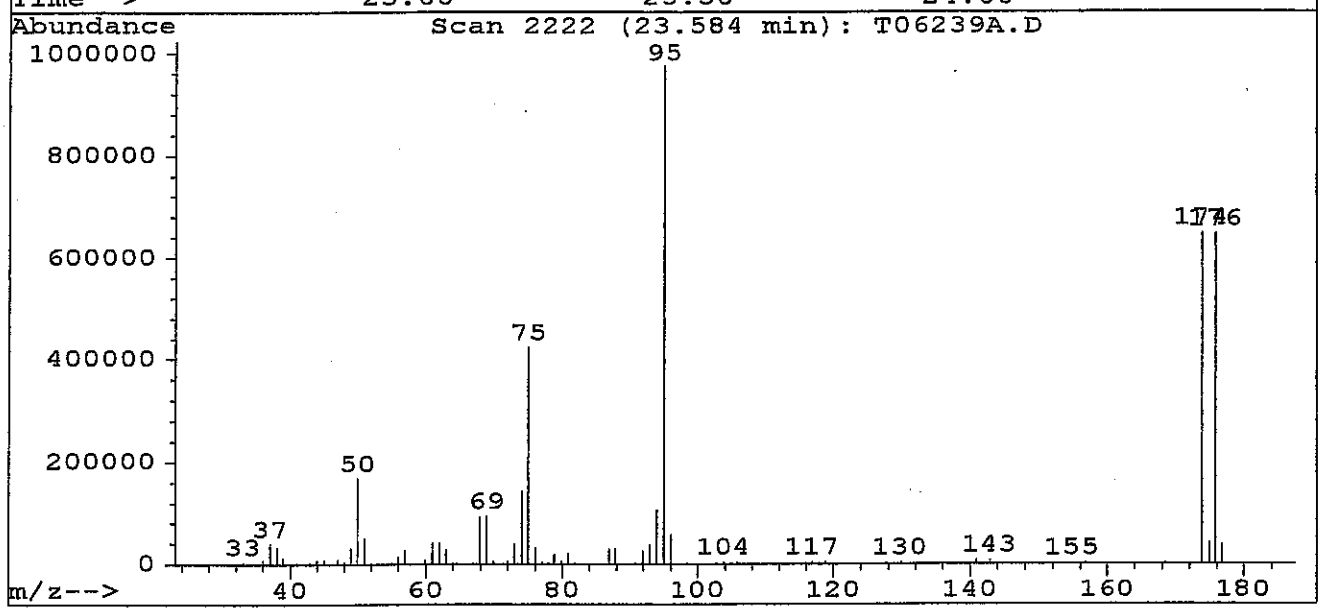
BFB

Data File : C:\MSCHEM\2\DATA\06239MS2\T06239A.D
Acq Time : 23 Jun 109 8:44 am
Sample : BFB TUNE
Misc :

Operator: JF
Inst : MS2
Multiplr: 1.00

Method : C:\MSCHEM\2\METHODS\2EXSIM_I.M
Title : EPA T0-15





Peak Apex is scan: 2222

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	8	40	17.2	168256	PASS
75	95	30	66	43.3	422592	PASS
95	95	100	100	100.0	975616	PASS
96	95	5	9	5.8	56720	PASS
173	174	0	2	0.0	0	PASS
174	95	50	120	66.5	648384	PASS
175	174	4	9	6.3	41160	PASS
176	174	93	101	99.7	646464	PASS
177	176	5	9	5.6	36096	PASS

T06239A.D 2EXSIM_I.M Mon Jun 29 16:03:14 2009

CONTINUING CALIBRATION REPORT

SDG:	**LABQC**	
QC_Batch:	**062309-MS2**	
Sample ID:	ST60032 + ST60250	
Sample Analysis Date:	23 Jun 109 10:12 am	
Run Method:	2EXSIM_I.M	
Quant/Calibration Method:	2EXSIM_I.M	
Cal Update:	Mon Jun 22 09:18:18 2009	
Template:	EARTEXSM.MS3	
Calibration Level	Level 2	0.5

Sample Calculation:

1) RFi = $\frac{(Astdi)\ (Cistdi)}{(Cstdi)\ (Aistdi)}$ i

Compound	Area Astdi	Cal Level Cstdi ppbv	CCRRF	AvgRFn	%Dev	%Dev Limit	%Dev Flag
Dichlorodifluoromethane	90407	0.105	0.125	0.116	-8.4	40	IN
Chloromethane	39981	0.102	0.057	0.054	-5.3	30	IN
Vinyl chloride	27322	0.104	0.038	0.039	1.8	30	IN
Bromomethane	23734	0.104	0.033	0.037	11.0	40	IN
Chloroethane	23597	0.104	0.033	0.034	2.8	30	IN
Trichlorofluoromethane	102236	0.104	0.143	0.135	-6.0	30	IN
1,1-Dichloroethene	62450	0.104	0.087	0.081	-8.1	30	IN
Freon 113	37523	0.102	0.054	0.060	11.4	30	IN
Dichloromethane	28508	0.104	0.040	0.041	3.0	30	IN
Methyl tert butyl ether	88728	0.066	0.196	0.169	-15.7	40	IN
trans-1,2-Dichloroethene	23642	0.073	0.047	0.047	-1.1	30	IN
1,1-Dichloroethane	63336	0.101	0.091	0.089	-2.5	30	IN
cis-1,2-Dichloroethene	37036	0.103	0.052	0.057	7.6	30	IN
Chloroform	94006	0.102	0.134	0.118	-14.1	30	IN
1,1,1-Trichloroethane	93554	0.102	0.134	0.130	-2.6	30	IN
1,2-Dichloroethane	176539	0.103	0.250	0.239	-4.3	30	IN
Benzene	114787	0.103	0.162	0.183	11.4	30	IN
Carbon tetrachloride	77613	0.102	0.111	0.112	1.1	30	IN
1,2-Dichloropropane	41084	0.103	0.058	0.062	5.9	30	IN
Trichloroethene	47106	0.103	0.067	0.073	9.2	30	IN
Bromodichloromethane	63995	0.067	0.139	0.133	-4.6	30	IN
Toluene	181249	0.103	0.256	0.259	1.0	30	IN
1,1,2-Trichloroethane	65904	0.102	0.094	0.109	14.1	30	IN
1,2-Dibromoethane	124715	0.104	0.175	0.203	13.8	30	IN
Tetrachloroethene	54407	0.102	0.078	0.092	15.7	30	IN
Chlorobenzene	155754	0.102	0.222	0.260	14.5	30	IN
Ethylbenzene	312285	0.104	0.437	0.474	7.8	30	IN
m & p-Xylene	493234	0.206	0.349	0.360	3.2	30	IN
Styrene	247076	0.103	0.349	0.437	20.1	40	IN
o-Xylene	306720	0.102	0.438	0.460	4.8	30	IN
1,1,2,2-Tetrachloroethane	325889	0.102	0.465	0.538	13.5	30	IN
1,3,5-Trimethylbenzene	511658	0.106	0.703	0.806	12.8	30	IN
1,2,4-Trimethylbenzene	586566	0.102	0.837	0.937	10.6	30	IN
1,3-Dichlorobenzene	407054	0.102	0.581	0.712	18.4	30	IN
Benzyl chloride	305401	0.076	0.585	0.749	21.9	30	IN
1,4-Dichlorobenzene	434348	0.102	0.620	0.735	15.6	30	IN
1,2-Dichlorobenzene	496098	0.100	0.722	0.886	18.4	30	IN

1,2,4-Trichlorobenzene	1038343	0.103	1.468	1.988	26.2	80	IN
1,4 Dioxane	27834	0.074	0.055	0.063	13.3	40	IN
Naphthalene	7033626	0.213	4.808	6.704	28.3	80	IN
Chlorobenzene-d5	1373512	0.200	1.000	1.000	0.0	30	IN
Toluene-d8	732353	0.200	0.533	0.425	-25.4	30	IN

QUANTITATION REPORT

EPA Method TO-15 Modified SIM GC/MS

			Review	EAS Sample ID: C06239B	
File Name:	C06239B.D				1 SS
Sample ID:	ST60032 + ST60250				2 KB
Date:	23 Jun 109 10:12 am			Cal Amounts	3 AT
Run Method:	2EXSIM_I.M			IS Areas	4 BB
Quant Method:	2EXSIM_I.M			Carryover	5 SH
Cal Update:	Mon Jun 22 09:18:18 2009				
Template:	EARTEXSM.MS3				
Can Factor:	1.00				
Volume:	200	ml		Analyst: SS 1	

CAS#	Compound	n	Raw Amount	RT	Target RT	Ion	Sample Area	Qualifier	Lower Qual	Upper Qual	Qual Flag	Cal Flag	Int Flag
75-71-8	Dichlorodifluoromethane	2	0.114	3.93	3.85	85.00	90407	33	26	38			
74-87-3	Chloromethane	3	0.107	4.20	4.12	50.00	39981	26	21	32			
75-01-4	Vinyl chloride	5	0.102	4.45	4.37	62.00	27322	37	28	42			
74-83-9	Bromomethane	6	0.093	5.05	4.97	94.00	23734	83	69	104			
75-00-3	Chloroethane	7	0.101	5.26	5.18	64.00	23597	35	27	40			
75-69-4	Trichlorofluoromethane	8	0.110	6.07	5.98	101.00	102236	66	53	80			
75-35-4	1,1-Dichloroethene	9	0.112	7.03	6.95	61.00	62450	44	37	56			
76-13-1	Freon 113	10	0.090	7.26	7.13	151.00	37523	176	136	204			
75-09-2	Dichloromethane	11	0.101	7.51	7.42	84.00	28508	62	51	77			
1634-04-4	Methyl tert butyl ether	13	0.076	8.72	8.60	73.00	88728	22	16	24			
156-60-5	trans-1,2-Dichloroethene	12	0.074	8.57	8.48	96.00	23642	148	111	167			
75-34-3	1,1-Dichloroethane	14	0.103	9.11	9.00	63.00	63336	32	25	37			
156-59-2	cis-1,2-Dichloroethene	15	0.095	10.33	10.24	96.00	37036	136	102	153			
67-66-3	Chloroform	17	0.116	10.74	10.66	83.00	94006	66	52	78			
71-55-6	1,1,1-Trichloroethane	18	0.105	11.96	11.91	97.00	93554	61	53	80			
107-06-2	1,2-Dichloroethane	19	0.107	12.10	12.02	61.95	176539	16	14	21			
71-43-2	Benzene	20	0.091	12.71	12.63	78.00	114787	15	16	23	Q		
56-23-5	Carbon tetrachloride	21	0.101	12.74	12.66	116.90	77613	97	79	119			
78-87-5	1,2-Dichloropropane	22	0.097	14.26	14.20	63.00	41084	165	126	189			
79-01-6	Trichloroethene	23	0.094	14.31	14.26	130.00	47106	96	75	112			
75-27-4	Bromodichloromethane	24	0.070	14.63	14.57	83.00	63995	65	52	78			
108-88-3	Toluene	26	0.102	17.27	17.21	91.00	181249	66	53	80			
79-00-5	1,1,2-Trichloroethane	28	0.088	17.40	17.35	97.00	65904	70	63	94			
106-93-4	1,2-Dibromoethane	29	0.090	19.03	18.99	107.00	124715	95	76	114			
127-18-4	Tetrachloroethene	30	0.086	19.13	19.09	166.00	54407	86	64	97			
108-90-7	Chlorobenzene	31	0.087	20.65	20.59	112.00	155754	34	27	40			
100-41-4	Ethylbenzene	33	0.096	21.12	21.08	91.00	312285	30	24	36			
108-38-3	m & p-Xylene	34	0.199	21.41	21.37	91.00	493234	49	42	63			
100-42-5	Styrene	35	0.082	22.26	22.22	104.00	247076	51	28	42			
95-47-6	o-Xylene	36	0.097	22.38	22.34	91.00	306720	45	38	56			
79-34-5	1,1,2,2-Tetrachloroethane	37	0.088	22.96	22.93	83.00	325889	6	8	12	Q		
108-67-8	1,3,5-Trimethylbenzene	39	0.092	24.99	24.96	105.00	511658	46	39	58			
95-63-6	1,2,4-Trimethylbenzene	40	0.091	25.94	25.91	105.00	586566	44	36	54			
541-73-1	1,3-Dichlorobenzene	41	0.083	26.58	26.55	146.00	407054	46	35	52			
100-44-7	Benzyl chloride	42	0.059	26.75	26.70	91.00	305401	17	15	23			
106-46-7	1,4-Dichlorobenzene	43	0.086	26.78	26.75	146.00	434348	44	32	49			

CAS#	Compound	n	Raw Amount	RT	Target RT	Ion	Sample Area	Qualifier	Lower Qual	Upper Qual	Qual Flag	Cal Flag	Int Flag
95-50-1	1,2-Dichlorobenzene	44	0.082	27.64	27.61	146.00	496098	51	38	57			
120-82-1	1,2,4-Trichlorobenzene	45	0.076	32.18	32.17	180.00	1038343	99	79	118			
123-91-1	1,4 Dioxane	47	0.064	14.68	14.57	88.00	27834	74	55	82			
91-20-3	Naphthalene	48	0.153	32.57	32.78	128.00	7033626	0	0	0			
3114-55-4	Chlorobenzene-d5	1	0.200	20.55	20.51	117.00	**1373512**						
2037-26-5	Toluene-d8	16	0.251	17.11	17.05	98.00	**732353**						

Integration Flags:

If no flag the Integration was done by the instrument computer

M1 Manual Integration because the computer did not integrated the peak or integrated the wrong peak

M2 Manual Integration because computer integration of baseline was different then Inital Calibration

INITIAL CALIBRATION REPORT

EPA Method TO-15 Modified SIM GC/MS

File Name:	C06239B.D	SDG:	LABQC
Sample ID:	ST60032 + ST60250	QC_Batch:	062309-MS2
Sample Analysis Date:	23 Jun 109 10:12 am	Instrument Name:	MS2
Run Method:	2EXSIM_I.M	Number Compounds:	49
Quant and Calibration Method:	2EXSIM_I.M	IS1: ST60024	0.2
Cal Update:	Mon Jun 22 09:18:18 2009	IS2:	
Template:	EARTEXSM.MS3	IS3:	
		IS4:	

Calibration Title: EPA T0-15

		Calibration Amount CA, ppmv						Calibration Response, Area					
		Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
		Amt	Amt	Amt	Amt	Amt	Amt	C06199B.D	C06199H.D	C06199A.D	C06199F.D	C06199E.D	C06199K.D
n	Compound	10.0	0.5	20.0	2.0	4.0	1.0	10.0	0.5	20.0	2.0	4.0	1.0
2	Dichlorodifluoromethane	1.050	0.053	2.100	0.210	0.420	0.105	534841	38986	1705728	73746	400604	64289
3	Chloromethane	1.020	0.051	2.040	0.204	0.408	0.102	268477	16811	877342	29933	189687	27154
5	Vinyl chloride	1.040	0.052	2.080	0.208	0.416	0.104	184476	12222	596605	24865	140317	19936
6	Bromomethane	1.040	0.052	2.080	0.208	0.416	0.104	193900	12685	547447	21277	126567	19683
7	Chloroethane	1.040	0.052	2.080	0.208	0.416	0.104	180453	11984	584817	18602	111983	15560
8	Trichlorofluoromethane	1.040	0.052	2.080	0.208	0.416	0.104	631888	46620	1969166	80614	475586	72646
9	1,1-Dichloroethene	1.040	0.052	2.080	0.208	0.416	0.104	388365	27969	1185798	47507	301017	40726
10	Freon 113	1.020	0.051	2.040	0.204	0.408	0.102	274663	20804	826803	35204	228496	30309
11	Dichloromethane	1.040	0.052	2.080	0.208	0.416	0.104	180065	15163	530282	25781	167890	19971
13	Methyl tert butyl ether	0.660	0.033	1.320	0.132	0.264	0.066	620120	31056	2309675	52207	365659	44883
12	trans-1,2-Dichloroethene	0.730	0.037	1.460	0.146	0.292	0.073	142963	12852	384125	20102	132501	16643
14	1,1-Dichloroethane	1.010	0.051	2.020	0.202	0.404	0.101	403912	31159	1225807	51920	327340	43151
15	cis-1,2-Dichloroethene	1.030	0.052	2.060	0.206	0.412	0.103	240146	21098	758337	35003	226396	27004
17	Chloroform	1.020	0.051	2.040	0.204	0.408	0.102	510308	42620	1697577	69088	427372	57851
18	1,1,1-Trichloroethane	1.020	0.051	2.040	0.204	0.408	0.102	587705	46722	1955378	75018	469425	61727
19	1,2-Dichloroethane	1.030	0.052	2.060	0.206	0.412	0.103	1236150	74052	4935278	125964	835756	97954
20	Benzene	1.030	0.052	2.060	0.206	0.412	0.103	967913	60686	3573129	94902	641363	73510
21	Carbon tetrachloride	1.020	0.051	2.040	0.204	0.408	0.102	492544	40672	1579809	67130	410007	53667
22	1,2-Dichloropropane	1.030	0.052	2.060	0.206	0.412	0.103	280915	22034	957916	37485	236197	27080
23	Trichloroethene	1.030	0.052	2.060	0.206	0.412	0.103	305786	29555	968228	45278	286372	33459
24	Bromodichloromethane	0.670	0.034	1.340	0.134	0.268	0.067	349165	34872	980125	57413	329960	43188
26	Toluene	1.030	0.052	2.060	0.206	0.412	0.103	1260474	90214	4659514	149575	935329	102952

n	Compound	Amt 10.0	Amt 0.5	Amt 20.0	Amt 2.0	Amt 4.0	Amt 1.0	C06199B.D 10.0	C06199H.D 0.5	C06199A.D 20.0	C06199F.D 2.0	C06199E.D 4.0	C06199K.D 1.0
28	1,1,2-Trichloroethane	1.020	0.051	2.040	0.204	0.408	0.102	480870	37160	1655491	70973	441832	43484
29	1,2-Dibromoethane	1.040	0.052	2.080	0.208	0.416	0.104	915216	67709	3403871	130478	834780	79525
30	Tetrachloroethene	1.020	0.051	2.040	0.204	0.408	0.102	373918	35806	1224836	58411	374447	38753
31	Chlorobenzene	1.020	0.051	2.040	0.204	0.408	0.102	1017786	104021	3390004	174301	1040689	105228
33	Ethylbenzene	1.040	0.052	2.080	0.208	0.416	0.104	2140675	173953	7709871	303124	1882967	181776
34	m & p-Xylene	2.060	0.103	4.120	0.412	0.824	0.206	2970894	279033	10312056	481458	2872586	284680
35	Styrene	1.030	0.052	2.060	0.206	0.412	0.103	2090268	153303	6660464	294984	1772326	150847
36	o-Xylene	1.020	0.051	2.040	0.204	0.408	0.102	1996168	168269	6920115	304155	1831287	166711
37	1,1,2,2-Tetrachloroethane	1.020	0.051	2.040	0.204	0.408	0.102	2273482	192188	6988630	401655	2300254	180334
39	1,3,5-Trimethylbenzene	1.060	0.053	2.120	0.212	0.424	0.106	3143240	323037	9985329	644118	3708236	280478
40	1,2,4-Trimethylbenzene	1.020	0.051	2.040	0.204	0.408	0.102	3248488	373791	10120607	742439	4300475	315230
41	1,3-Dichlorobenzene	1.020	0.051	2.040	0.204	0.408	0.102	2387618	303170	7032467	572612	3179015	243933
42	Benzyl chloride	0.760	0.038	1.520	0.152	0.304	0.076	2015808	210430	6118543	463035	2452250	191598
43	1,4-Dichlorobenzene	1.020	0.051	2.040	0.204	0.408	0.102	2189006	331504	6500736	598783	3247824	271163
44	1,2-Dichlorobenzene	1.000	0.050	2.000	0.200	0.400	0.100	3162973	359724	9089085	693423	3769025	288406
45	1,2,4-Trichlorobenzene	1.030	0.052	2.060	0.206	0.412	0.103	6381826	918959	14261028	1761172	9410822	617532
47	1,4 Dioxane	0.740	0.037	1.480	0.148	0.296	0.074	154378	17449	450267	31614	179188	26330
48	Naphthalene	2.130	0.107	-1.000	0.426	0.852	0.213	34587722	6597377	-1	12354059	37178978	4780301
1	Chlorobenzene-d5	0.200	0.200	0.200	0.200	0.200	0.200	877690	1273169	1660044	554145	1807068	927887
16	Toluene-d8	0.200	0.200	0.200	0.200	0.200	0.200	389596	565545	652462	236781	753686	395034

(317)

INITIAL CALIBRATION REPORT: Response Factors

SDG:	**LABQC**	**Sample Calculation:**	
QC_Batch:	**062309-MS2**	1) Avg RFn = Sum	$\left\| \frac{(Astdni)}{(Cstdni)} \frac{(Cistdi)}{(Aistdi)} \right\|_i$
Sample ID:	ST60032 + ST60250		
Sample Analysis Date:	23 Jun 109 10:12 am		
Run Method:	2EXSIM_I.M		
Quant Method:	2EXSIM_I.M		
Cal Update:	Mon Jun 22 09:18:18 2009		
Template:	EARTEXSM.MS3		

Response Factors

Compound	RF1	RF2	RF3	RF4	RF5	RF6	AvgRFn	%RSD
Dichlorodifluoromethane	0.116	0.116	0.098	0.127	0.106	0.132	0.116	10.99
Chloromethane	0.060	0.052	0.052	0.053	0.051	0.057	0.054	6.60
Vinyl chloride	0.040	0.037	0.035	0.043	0.037	0.041	0.039	8.23
Bromomethane	0.042	0.038	0.032	0.037	0.034	0.041	0.037	11.03
Chloroethane	0.040	0.036	0.034	0.032	0.030	0.032	0.034	10.13
Trichlorofluoromethane	0.138	0.141	0.114	0.140	0.127	0.151	0.135	9.50
1,1-Dichloroethene	0.085	0.084	0.069	0.082	0.080	0.084	0.081	7.72
Freon 113	0.061	0.064	0.049	0.062	0.062	0.064	0.060	9.58
Dichloromethane	0.039	0.046	0.031	0.045	0.045	0.041	0.041	13.70
Methyl tert butyl ether	0.214	0.148	0.211	0.143	0.153	0.147	0.169	19.90
trans-1,2-Dichloroethene	0.045	0.055	0.032	0.050	0.050	0.049	0.047	17.11
1,1-Dichloroethane	0.091	0.096	0.073	0.093	0.090	0.092	0.089	9.11
cis-1,2-Dichloroethene	0.053	0.064	0.044	0.061	0.061	0.057	0.057	12.56
Chloroform	0.114	0.131	0.100	0.122	0.116	0.122	0.118	8.89
1,1,1-Trichloroethane	0.131	0.144	0.115	0.133	0.127	0.130	0.130	7.04
1,2-Dichloroethane	0.273	0.224	0.289	0.221	0.225	0.205	0.239	13.97
Benzene	0.214	0.183	0.209	0.166	0.172	0.154	0.183	13.13
Carbon tetrachloride	0.110	0.125	0.093	0.119	0.111	0.113	0.112	9.60
1,2-Dichloropropane	0.062	0.067	0.056	0.066	0.063	0.057	0.062	7.25
Trichloroethene	0.068	0.089	0.057	0.079	0.077	0.070	0.073	15.26
Bromodichloromethane	0.119	0.161	0.088	0.155	0.136	0.139	0.133	19.96
Toluene	0.279	0.273	0.273	0.262	0.251	0.215	0.259	9.02
1,1,2-Trichloroethane	0.107	0.114	0.098	0.126	0.120	0.092	0.109	11.85
1,2-Dibromoethane	0.201	0.205	0.197	0.226	0.222	0.165	0.203	10.84
Tetrachloroethene	0.084	0.110	0.072	0.103	0.102	0.082	0.092	16.20
Chlorobenzene	0.227	0.320	0.200	0.308	0.282	0.222	0.260	19.25
Ethylbenzene	0.469	0.525	0.447	0.526	0.501	0.377	0.474	12.05
m & p-Xylene	0.329	0.426	0.302	0.422	0.386	0.298	0.360	16.21
Styrene	0.462	0.463	0.390	0.517	0.476	0.316	0.437	16.55
o-Xylene	0.446	0.518	0.409	0.538	0.497	0.352	0.460	15.46
1,1,2,2-Tetrachloroethane	0.508	0.592	0.413	0.711	0.624	0.381	0.538	23.70
1,3,5-Trimethylbenzene	0.676	0.957	0.567	1.097	0.968	0.570	0.806	28.46
1,2,4-Trimethylbenzene	0.726	1.151	0.598	1.314	1.167	0.666	0.937	32.85
1,3-Dichlorobenzene	0.533	0.934	0.415	1.013	0.862	0.515	0.712	35.57
Benzyl chloride	0.604	0.870	0.485	1.099	0.893	0.543	0.749	32.20
1,4-Dichlorobenzene	0.489	1.021	0.384	1.059	0.881	0.573	0.735	39.38
1,2-Dichlorobenzene	0.721	1.130	0.548	1.251	1.043	0.622	0.886	33.09

1,2,4-Trichlorobenzene	1.412	2.776	0.834	3.086	2.528	1.292	1.988	46.46
1,4 Dioxane	0.048	0.074	0.037	0.077	0.067	0.077	0.063	27.03
Naphthalene	3.700	9.686	NA	10.467	4.830	4.837	6.704	46.62
Chlorobenzene-d5	1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.00
Toluene-d8	0.444	0.444	0.393	0.427	0.417	0.426	0.425	4.48

CALCULATIONS

EPA Method TO-15 Modified SIM GC/MS

SDG: LABQC
Laboratory Number: C06239

RL:	2EXSIM_I.M
Run Method:	2EXSIM_I.M
Quant Method:	2EXSIM_I.M
Can Dilution Factor:	1.00
Air Volume:	200 ml
Gas Constant:	23.68
Decimal Places:	3

Compound	M.W.	Raw Amount	Result ppbv	Result ug/m3	(1) MDL ppbv	(2) RL ppbv	Calc MDL ppbv	Calc MDL ug/m3	Calc RL ppbv	Calc RL ug/m3	Flag	S062602-1 Spike ppmv
Dichlorodifluoromethane	120.9	0.114	0.569	2.906	0.005	0.053	0.03	0.135	0.27	1.353		0.103
Chloromethane	50.5	0.107	0.537	1.145	0.005	0.051	0.03	0.054	0.26	0.544		0.103
Vinyl chloride	62.5	0.102	0.511	1.348	0.005	0.052	0.03	0.069	0.26	0.686		0.103
Bromomethane	94.9	0.093	0.463	1.856	0.005	0.052	0.03	0.104	0.26	1.042		0.103
Chloroethane	64.5	0.101	0.505	1.377	0.005	0.052	0.03	0.071	0.26	0.708		0.103
Trichlorofluoromethane	137.4	0.110	0.551	3.198	0.005	0.052	0.03	0.151	0.26	1.509		0.103
1,1-Dichloroethene	96.9	0.112	0.562	2.301	0.005	0.052	0.03	0.106	0.26	1.064		0.103
Freon 113	187.3	0.090	0.452	3.576	0.005	0.051	0.03	0.202	0.26	2.017		0.103
Dichloromethane	84.9	0.101	0.505	1.809	0.005	0.052	0.03	0.093	0.26	0.932		0.103
Methyl tert butyl ether	88.1	0.076	0.382	1.420	0.003	0.033	0.02	0.061	0.17	0.614		1.103
trans-1,2-Dichloroethene	96.9	0.074	0.369	1.510	0.004	0.037	0.02	0.076	0.19	0.757		0.103
1,1-Dichloroethane	99.0	0.103	0.517	2.163	0.005	0.051	0.03	0.107	0.26	1.066		0.103
cis-1,2-Dichloroethene	96.9	0.095	0.476	1.948	0.005	0.052	0.03	0.106	0.26	1.064		0.103
Chloroform	119.4	0.116	0.582	2.933	0.005	0.051	0.03	0.129	0.26	1.286		0.103
1,1,1-Trichloroethane	133.4	0.105	0.523	2.947	0.005	0.051	0.03	0.144	0.26	1.437		0.103
1,2-Dichloroethane	99.0	0.107	0.537	2.245	0.005	0.052	0.03	0.109	0.26	1.087		0.103
Benzene	78.1	0.091	0.456	1.505	0.005	0.052	0.03	0.086	0.26	0.858		0.103
Carbon tetrachloride	153.8	0.101	0.505	3.277	0.005	0.051	0.03	0.166	0.26	1.656		0.103
1,2-Dichloropropane	113.0	0.097	0.484	2.311	0.005	0.052	0.03	0.124	0.26	1.241		0.103
Trichloroethene	131.4	0.094	0.468	2.596	0.005	0.052	0.03	0.144	0.26	1.443		0.103
Bromodichloromethane	163.8	0.070	0.350	2.424	0.003	0.034	0.02	0.118	0.17	1.176		0.103
Toluene	92.1	0.102	0.510	1.983	0.005	0.052	0.03	0.101	0.26	1.011		0.103
1,1,2-Trichloroethane	133.4	0.088	0.438	2.469	0.005	0.051	0.03	0.144	0.26	1.437		0.103
1,2-Dibromoethane	187.9	0.090	0.448	3.556	0.005	0.052	0.03	0.206	0.26	2.063		0.103
Tetrachloroethene	165.8	0.086	0.430	3.009	0.005	0.051	0.03	0.179	0.26	1.785		0.103
Chlorobenzene	112.6	0.087	0.436	2.073	0.005	0.051	0.03	0.121	0.26	1.213		0.103
Ethylbenzene	106.2	0.096	0.480	2.151	0.005	0.052	0.03	0.117	0.26	1.166		0.103
m & p-Xylene	106.2	0.199	0.997	4.471	0.010	0.103	0.05	0.231	0.52	2.310		0.103
Styrene	104.2	0.082	0.411	1.810	0.005	0.052	0.03	0.114	0.26	1.144		0.103
o-Xylene	106.2	0.097	0.485	2.177	0.005	0.051	0.03	0.114	0.26	1.144		0.103
1,1,2,2-Tetrachloroethane	167.8	0.088	0.441	3.125	0.005	0.051	0.03	0.181	0.26	1.807		0.103
1,3,5-Trimethylbenzene	120.2	0.092	0.462	2.346	0.005	0.053	0.03	0.135	0.27	1.345		0.103
1,2,4-Trimethylbenzene	120.0	0.091	0.456	2.310	0.005	0.051	0.03	0.129	0.26	1.292		0.103
1,3-Dichlorobenzene	147.0	0.083	0.416	2.583	0.005	0.051	0.03	0.158	0.26	1.583		0.103
Benzyl chloride	126.6	0.059	0.297	1.587	0.004	0.038	0.02	0.102	0.19	1.016		0.103
1,4-Dichlorobenzene	147.0	0.086	0.430	2.672	0.005	0.051	0.03	0.158	0.26	1.583		0.103
1,2-Dichlorobenzene	147.0	0.082	0.408	2.531	0.005	0.050	0.03	0.155	0.25	1.552		0.103

1,2,4-Trichlorobenzene	181.4	0.076	0.380	2.913	0.005	0.052	0.03	0.199	0.26	1.992	0.103
1,4 Dioxane	88.1	0.064	0.321	1.193	0.004	0.037	0.02	0.069	0.19	0.688	1.103
Naphthalene	128.2	0.153	0.764	4.135	0.011	0.107	0.05	0.290	0.54	2.896	2.103

SAMPLE CALCULATION

EPA Method TO-15 Modified SIM GC/MS

SDG:		**LABQC**
Laboratory Number:		**C06239**
Standard Volume	STV	0.5
Sample Volume	SV	200
Can Dilution Factor	CDF	1.00
Gas Constant		23.68
Decimal Places:		3

Sample Calculation:

1) Avg RFn = Sum $\left| \frac{(Astdni)}{(Cstdni)} \frac{(Cistdi)}{(Aistdi)} \right|_i$ Note: 1

2) Raw Amt = $\frac{(Ansamp)}{(Avg\ RFn)} \frac{(Cistdi)}{(Aistdi)}$ = Cn

3) Amount ppbv = $\frac{(Raw\ Amt)\ 1000}{(SV)}$ (CDF) (STV)

4) Amount ug/m3 = $\frac{(amt(ppbv)\ MW}{23.68}$

n	Compound	IS n	Chem type	MW	AvgRFn	Area Ansamp	Cistdi ppmv	Aistdi Ais	Cn ppmV Raw Amt	Amount ppbv	Amount ug/m3
2	Dichlorodifluoromethane	1	TRG	120.9	0.116	90407	0.200	1373512	0.114	0.569	2.905
3	Chloromethane	1	TRG	50.5	0.054	39981	0.200	1373512	0.107	0.537	1.145
5	Vinyl chloride	1	TRG	62.5	0.039	27322	0.200	1373512	0.102	0.511	1.349
6	Bromomethane	1	TRG	94.9	0.037	23734	0.200	1373512	0.093	0.463	1.856
7	Chloroethane	1	TRG	64.5	0.034	23597	0.200	1373512	0.101	0.505	1.376
8	Trichlorofluoromethane	1	TRG	137.4	0.135	102236	0.200	1373512	0.110	0.551	3.197
9	1,1-Dichloroethene	1	TRG	96.9	0.081	62450	0.200	1373512	0.112	0.562	2.300
10	Freon 113	1	TRG	187.3	0.060	37523	0.200	1373512	0.090	0.452	3.575
11	Dichloromethane	1	TRG	84.9	0.041	28508	0.200	1373512	0.101	0.505	1.811
13	Methyl tert butyl ether	2	TRG	88.1	0.169	88728	0.200	1373512	0.076	0.382	1.421
12	trans-1,2-Dichloroethene	1	TRG	96.9	0.047	23642	0.200	1373512	0.074	0.369	1.510
14	1,1-Dichloroethane	1	TRG	99.0	0.089	63336	0.200	1373512	0.103	0.517	2.161
15	cis-1,2-Dichloroethene	1	TRG	96.9	0.057	37036	0.200	1373512	0.095	0.476	1.948
17	Chloroform	1	TRG	119.4	0.118	94006	0.200	1373512	0.116	0.582	2.935
18	1,1,1-Trichloroethane	1	TRG	133.4	0.130	93554	0.200	1373512	0.105	0.523	2.946
19	1,2-Dichloroethane	1	TRG	99.0	0.239	176539	0.200	1373512	0.107	0.537	2.245
20	Benzene	1	TRG	78.1	0.183	114787	0.200	1373512	0.091	0.456	1.504
21	Carbon tetrachloride	1	TRG	153.8	0.112	77613	0.200	1373512	0.101	0.505	3.280
22	1,2-Dichloropropane	1	TRG	113.0	0.062	41084	0.200	1373512	0.097	0.484	2.310
23	Trichloroethene	1	TRG	131.4	0.073	47106	0.200	1373512	0.094	0.468	2.597
24	Bromodichloromethane	1	TRG	163.8	0.133	63995	0.200	1373512	0.070	0.350	2.421
26	Toluene	1	TRG	92.1	0.259	181249	0.200	1373512	0.102	0.510	1.984
28	1,1,2-Trichloroethane	1	TRG	133.4	0.109	65904	0.200	1373512	0.088	0.438	2.467
29	1,2-Dibromoethane	1	TRG	187.9	0.203	124715	0.200	1373512	0.090	0.448	3.555
30	Tetrachloroethene	1	TRG	165.8	0.092	54407	0.200	1373512	0.086	0.430	3.011
31	Chlorobenzene	1	TRG	112.6	0.260	155754	0.200	1373512	0.087	0.436	2.073
33	Ethylbenzene	1	TRG	106.2	0.474	312285	0.200	1373512	0.096	0.480	2.153
34	m & p-Xylene	1	TRG	106.2	0.360	493234	0.200	1373512	0.199	0.997	4.471
35	Styrene	1	TRG	104.2	0.437	247076	0.200	1373512	0.082	0.411	1.809
36	o-Xylene	1	TRG	106.2	0.460	306720	0.200	1373512	0.097	0.485	2.175
37	1,1,2,2-Tetrachloroethane	1	TRG	167.8	0.54	325889	0.200	1373512	0.088	0.441	3.125
39	1,3,5-Trimethylbenzene	1	TRG	120.2	0.806	511658	0.200	1373512	0.092	0.462	2.345
40	1,2,4-Trimethylbenzene	1	TRG	120.0	0.937	586566	0.200	1373512	0.091	0.456	2.311
41	1,3-Dichlorobenzene	1	TRG	147.0	0.712	407054	0.200	1373512	0.083	0.416	2.582
42	Benzyl chloride	1	TRG	126.6	0.749	305401	0.200	1373512	0.059	0.297	1.588
43	1,4-Dichlorobenzene	1	TRG	147.0	0.735	434348	0.200	1373512	0.086	0.430	2.669
44	1,2-Dichlorobenzene	1	TRG	147.0	0.886	496098	0.200	1373512	0.082	0.408	2.533
45	1,2,4-Trichlorobenzene	1	TRG	181.4	1.99	1038343	0.200	1373512	0.076	0.380	2.911
47	1,4 Dioxane	1	TRG	88.1	0.06	27834	0.200	1373512	0.064	0.321	1.194
48	Naphthalene	1	TRG	128.2	6.70	7033626	0.200	1373512	0.153	0.764	4.136
1	Chlorobenzene-d5	1	IS	0.0	1.000	1373512	0.200	1373512	0.000	0.000	0.000

16 Toluene-d8	1	SURR	0.0	0.425	732353	0.200	1373512	0.000	0.000	0.000

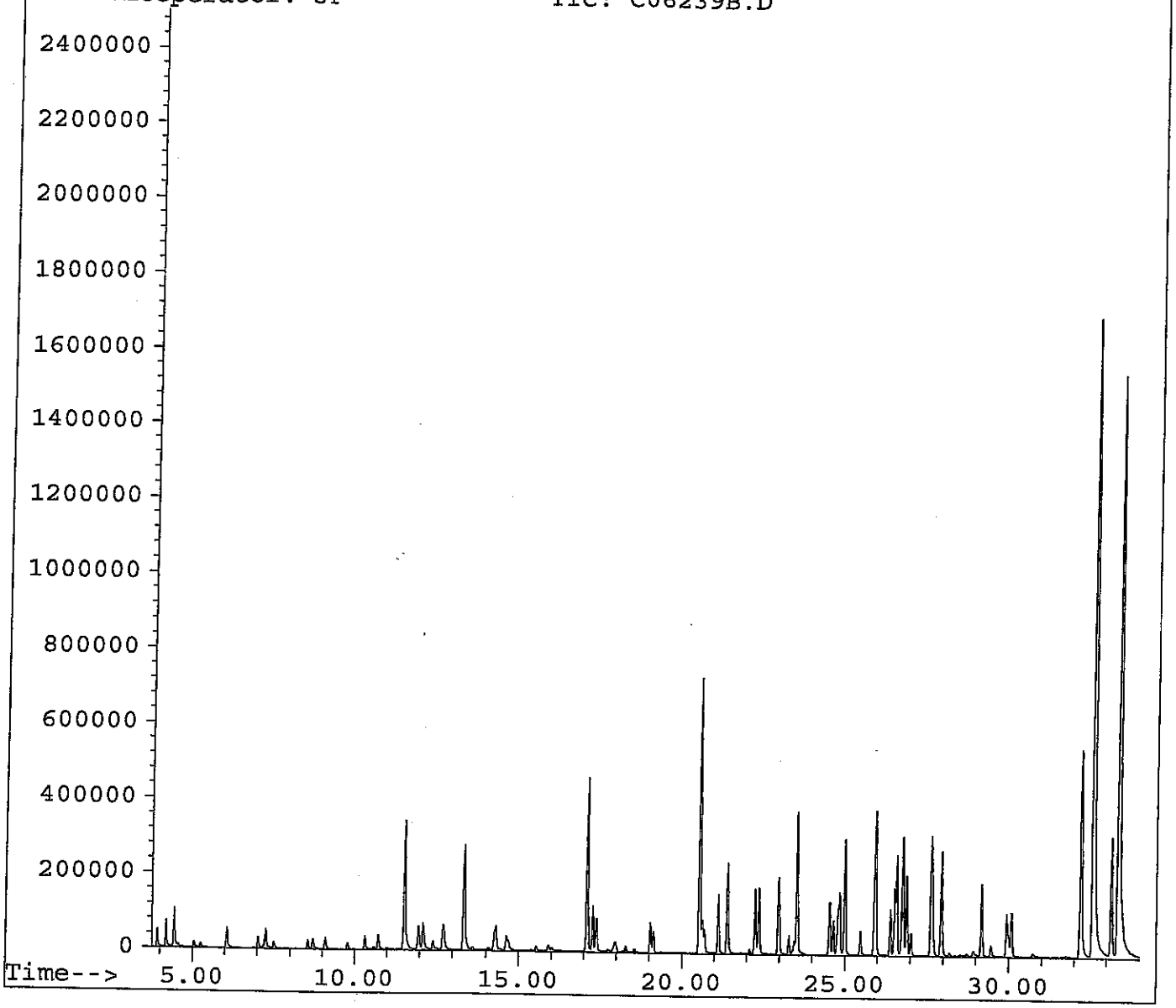
Calculation Definitions:

n	compound n
i	i th calibration level
Astdni	Standard Area for compound n at ith calibration level
Cstdni	Standard Concentration for compound n at ith calibration level in ppmv
Cistdi	Internal Standard Conc used for compound n at ith calibration level in ppmv
Aistdi	Internal Standard Area used for compound n at ith calibration level
Ansamp	Sample Area for compound n
Avg RFn	Average response factor for all ith calibration levels for compound n
Raw Amount	Sample Concentration in ppmv before applying factors
Cistd	Concentration internal standard used for compound n in sample in ppmv
Aistd	Area of internal standard used for compound n in sample
Cn	Concentration of compound n in sample in ppmv
23.68	Gas constant at 60 F as per EPA source test protocol
MW	Molecular weight of compound

Note (1) : Avg RFn — The values for the Average Response Factor AvgRFn can be optained from the response Factor Report for the Initial Calibration, or from the Calibration Report

Name of file: C:\HPCHEM\1\DATA\06239MS2\C06239B.D

Abundance Operator: JF TIC: C06239B.D



METHOD BLANK REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified SIM GC/MS
Analytical Method: TO-15 SIM

SDG: LABQC
Laboratory Number: B06239

File: B06239A.D
Description: METHOD BLANK
Can/Tube#:
Sam_Type: MB
QC_Batch: 062309-MS2
Air Volume: 500 ml

Date Sampled: **Time:**
Date Received:
Date Extracted:
Date Analyzed: 06/23/09 **Time:** 13:09
Can Dilution Factor: 1.00 3
Not Detected Flag: ND

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
75-71-8	Dichlorodifluoromethane	0.011	0.106	ND	0.054	0.541	ND	ND
74-87-3	Chloromethane	0.010	0.102	ND	0.022	0.218	ND	ND
75-01-4	Vinyl chloride	0.010	0.104	ND	0.027	0.274	ND	ND
74-83-9	Bromomethane	0.010	0.104	ND	0.042	0.417	ND	ND
75-00-3	Chloroethane	0.010	0.104	ND	0.028	0.283	ND	ND
75-69-4	Trichlorofluoromethane	0.010	0.104	ND	0.060	0.603	ND	ND
75-35-4	1,1-Dichloroethene	0.010	0.104	ND	0.043	0.426	ND	ND
76-13-1	Freon 113	0.010	0.102	ND	0.081	0.807	ND	ND
75-09-2	Dichloromethane	0.010	0.104	ND	0.037	0.373	ND	ND
1634-04-4	Methyl tert butyl ether	0.007	0.066	ND	0.025	0.246	ND	ND
156-60-5	trans-1,2-Dichloroethene	0.007	0.074	ND	0.030	0.303	ND	ND
75-34-3	1,1-Dichloroethane	0.010	0.102	ND	0.043	0.426	ND	ND
156-59-2	cis-1,2-Dichloroethene	0.010	0.104	ND	0.043	0.426	ND	ND
67-66-3	Chloroform	0.010	0.102	ND	0.051	0.514	ND	ND
71-55-6	1,1,1-Trichloroethane	0.010	0.102	ND	0.057	0.575	ND	ND
107-06-2	1,2-Dichloroethane	0.010	0.104	0.011	0.043	0.435	0.046	J
71-43-2	Benzene	0.010	0.104	ND	0.034	0.343	ND	ND
56-23-5	Carbon tetrachloride	0.010	0.102	ND	0.066	0.662	ND	ND
78-87-5	1,2-Dichloropropane	0.010	0.104	ND	0.050	0.496	ND	ND
79-01-6	Trichloroethene	0.010	0.104	ND	0.058	0.577	ND	ND
75-27-4	Bromodichloromethane	0.007	0.068	ND	0.047	0.470	ND	ND
108-88-3	Toluene	0.010	0.104	0.011	0.040	0.404	0.043	J
79-00-5	1,1,2-Trichloroethane	0.010	0.102	0.012	0.057	0.575	0.070	J
106-93-4	1,2-Dibromoethane	0.010	0.104	0.019	0.083	0.825	0.148	J
127-18-4	Tetrachloroethene	0.010	0.102	ND	0.071	0.714	ND	ND
108-90-7	Chlorobenzene	0.010	0.102	0.018	0.049	0.485	0.085	J
100-41-4	Ethylbenzene	0.010	0.104	0.012	0.047	0.466	0.053	J
108-38-3	m & p-Xylene	0.021	0.206	0.032	0.092	0.924	0.142	J
100-42-5	Styrene	0.010	0.104	0.017	0.046	0.458	0.075	J
95-47-6	o-Xylene	0.010	0.102	0.013	0.046	0.457	0.058	J
79-34-5	1,1,2,2-Tetrachloroethane	0.010	0.102	ND	0.072	0.723	ND	ND
108-67-8	1,3,5-Trimethylbenzene	0.011	0.106	0.012	0.054	0.538	0.059	J
95-63-6	1,2,4-Trimethylbenzene	0.010	0.102	0.018	0.052	0.517	0.091	J
541-73-1	1,3-Dichlorobenzene	0.010	0.102	0.025	0.063	0.633	0.153	J
100-44-7	Benzyl chloride	0.008	0.076	ND	0.041	0.406	ND	ND
106-46-7	1,4-Dichlorobenzene	0.010	0.102	0.030	0.063	0.633	0.189	J
95-50-1	1,2-Dichlorobenzene	0.010	0.100	0.024	0.062	0.621	0.151	J
120-82-1	1,2,4-Trichlorobenzene	0.010	0.104	0.048	0.080	0.797	0.368	J
123-91-1	1,4 Dioxane	0.007	0.074	0.012	0.028	0.275	0.046	J
91-20-3	Naphthalene	0.021	0.214	ND	0.116	1.159	ND	ND

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
	Surrogate Recovery		Spike Amt. ppbV		Amount ppbV	% Rec.	QC Limits	Flag * = Out
2037-26-5	Toluene-d8		0.200		0.199	100	70-130	

Notes: 1) Reported results are to be interpreted to two significant figures.
2) ug/m3 = ppbV*FW/23.68 calculated assuming conditions at 60 F and 1 atm.
3) MDL and RL are adjusted for sample volume and can dilution.
4) U and ND are Flags used for Not Detected
5) J is a flag for a result between the MDL and the RL (or lower quantitation limit, LQL)

QUANTITATION REPORT

EPA Method TO-15 Modified SIM GC/MS

			Review	EAS Sample ID: B06239A	
File Name:	B06239A.D				1 SS
Sample ID:	METHOD BLANK				2 KB
Date:	23 Jun 109 1:09 pm			Cal Amounts	3 AT
Run Method:	2EXSIM_I.M			IS Areas	4 BB
Quant Method:	2EXSIM_I.M			Carryover	5 SH
Cal Update:	Mon Jun 22 09:18:18 2009				
Template:	EARTEXSM.MS3				
Can Factor:	1.00				
Volume:	500	ml		Analyst: SS 1	

CAS#	Compound	n	Raw Amount	RT	Target RT	Ion	Sample Area	Qualifier	Lower Qual	Upper Qual	Qual Flag	Cal Flag	Int Flag
75-71-8	Dichlorodifluoromethane	2	0.000	0.00	3.85	85.00	0	0	26	38			
74-87-3	Chloromethane	3	0.000	4.33	4.12	50.00	0	0	21	32			
75-01-4	Vinyl chloride	5	0.000	4.53	4.37	62.00	0	0	28	42			
74-83-9	Bromomethane	6	0.000	5.07	4.97	94.00	0	0	69	104			
75-00-3	Chloroethane	7	0.000	5.34	5.18	64.00	0	0	27	40			
75-69-4	Trichlorofluoromethane	8	0.000	5.92	5.98	101.00	0	0	53	80			
75-35-4	1,1-Dichloroethene	9	0.000	6.92	6.95	61.00	0	0	37	56			
76-13-1	Freon 113	10	0.000	7.09	7.13	151.00	0	0	136	204			
75-09-2	Dichloromethane	11	0.003	7.49	7.42	84.00	596	62	51	77			
1634-04-4	Methyl tert butyl ether	13	0.000	8.60	8.60	73.00	0	0	16	24			
156-60-5	trans-1,2-Dichloroethene	12	0.000	8.52	8.48	96.00	0	0	111	167			
75-34-3	1,1-Dichloroethane	14	0.000	9.03	9.00	63.00	0	0	25	37			
156-59-2	cis-1,2-Dichloroethene	15	0.004	10.33	10.24	96.00	1185	117	102	153			
67-66-3	Chloroform	17	0.002	10.73	10.66	83.00	1327	64	52	78			
71-55-6	1,1,1-Trichloroethane	18	0.001	11.96	11.91	97.00	458	32	53	80			
107-06-2	1,2-Dichloroethane	19	0.006	12.10	12.02	61.95	7537	16	14	21			
71-43-2	Benzene	20	0.005	12.68	12.63	78.00	5359	21	16	23			
56-23-5	Carbon tetrachloride	21	0.000	12.71	12.66	116.90	281	79	79	119			
78-87-5	1,2-Dichloropropane	22	0.000	14.39	14.20	63.00	0	0	126	189			
79-01-6	Trichloroethene	23	0.005	14.31	14.26	130.00	2158	92	75	112			
75-27-4	Bromodichloromethane	24	0.000	14.41	14.57	83.00	0	0	52	78			
108-88-3	Toluene	26	0.006	17.27	17.21	91.00	8107	61	53	80			
79-00-5	1,1,2-Trichloroethane	28	0.006	17.40	17.35	97.00	3839	74	63	94			
106-93-4	1,2-Dibromoethane	29	0.009	19.05	18.99	107.00	10698	94	76	114			
127-18-4	Tetrachloroethene	30	0.004	19.12	19.09	166.00	2265	84	64	97			
108-90-7	Chlorobenzene	31	0.009	20.64	20.59	112.00	13149	31	27	40			
100-41-4	Ethylbenzene	33	0.006	21.12	21.08	91.00	15830	26	24	36			
108-38-3	m & p-Xylene	34	0.016	21.41	21.37	91.00	32402	43	42	63			
100-42-5	Styrene	35	0.008	22.28	22.22	104.00	21065	46	28	42			
95-47-6	o-Xylene	36	0.006	22.37	22.34	91.00	16952	40	38	56			
79-34-5	1,1,2,2-Tetrachloroethane	37	0.000	23.17	22.93	83.00	0	0	8	12			
108-67-8	1,3,5-Trimethylbenzene	39	0.006	25.00	24.96	105.00	26522	45	39	58			
95-63-6	1,2,4-Trimethylbenzene	40	0.009	25.95	25.91	105.00	47627	41	36	54			
541-73-1	1,3-Dichlorobenzene	41	0.012	26.58	26.55	146.00	49737	44	35	52			
100-44-7	Benzyl chloride	42	0.001	26.78	26.70	91.00	3119	17	15	23			
106-46-7	1,4-Dichlorobenzene	43	0.015	26.78	26.75	146.00	63608	43	32	49			

CAS#	Compound	n	Raw Amount	RT	Target RT	Ion	Sample Area	Qualifier	Lower Qual	Upper Qual	Qual Flag	Cal Flag	Int Flag
95-50-1	1,2-Dichlorobenzene	44	0.012	27.66	27.61	146.00	61095	44	38	57			
120-82-1	1,2,4-Trichlorobenzene	45	0.024	32.18	32.17	180.00	271547	99	79	118			
123-91-1	1,4 Dioxane	47	0.006	14.71	14.57	88.00	2198	74	55	82			
91-20-3	Naphthalene	48	0.008	32.57	32.78	128.00	297245	0	0	0			
3114-55-4	Chlorobenzene-d5	1	0.200	20.55	20.51	117.00	**1135862**						
2037-26-5	Toluene-d8	16	0.199	17.11	17.05	98.00	**480756**						

Integration Flags:

If no flag the Integration was done by the instrument computer

M1 Manual Integration because the computer did not integrated the peak or integrated the wrong peak

M2 Manual Integration because computer integration of baseline was different then Inital Calibration

INITIAL CALIBRATION REPORT

EPA Method TO-15 Modified SIM GC/MS

File Name:	B06239A.D	SDG:	LABQC
Sample ID:	METHOD BLANK	QC_Batch:	062309-MS2
Sample Analysis Date:	23 Jun 109 1:09 pm	Instrument Name:	MS2
Run Method:	2EXSIM_I.M	Number Compounds:	49
Quant and Calibration Method:	2EXSIM_I.M	IS1: ST60024	0.2
Cal Update:	Mon Jun 22 09:18:18 2009	IS2:	
Template:	EARTEXSM.MS3	IS3:	
		IS4:	

Calibration Title: EPA T0-15

		Calibration Amount CA, ppmv						Calibration Response, Area					
		Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
		Amt	Amt	Amt	Amt	Amt	Amt	C06199B.D	C06199H.D	C06199A.D	C06199F.D	C06199E.D	C06199K.D
n	Compound	10.0	0.5	20.0	2.0	4.0	1.0	10.0	0.5	20.0	2.0	4.0	1.0
2	Dichlorodifluoromethane	1.050	0.053	2.100	0.210	0.420	0.105	534841	38986	1705728	73746	400604	64289
3	Chloromethane	1.020	0.051	2.040	0.204	0.408	0.102	268477	16811	877342	29933	189687	27154
5	Vinyl chloride	1.040	0.052	2.080	0.208	0.416	0.104	184476	12222	596605	24865	140317	19936
6	Bromomethane	1.040	0.052	2.080	0.208	0.416	0.104	193900	12685	547447	21277	126567	19683
7	Chloroethane	1.040	0.052	2.080	0.208	0.416	0.104	180453	11984	584817	18602	111983	15560
8	Trichlorofluoromethane	1.040	0.052	2.080	0.208	0.416	0.104	631888	46620	1969166	80614	475586	72646
9	1,1-Dichloroethene	1.040	0.052	2.080	0.208	0.416	0.104	388365	27969	1185798	47507	301017	40726
10	Freon 113	1.020	0.051	2.040	0.204	0.408	0.102	274663	20804	826803	35204	228496	30309
11	Dichloromethane	1.040	0.052	2.080	0.208	0.416	0.104	180065	15163	530282	25781	167890	19971
13	Methyl tert butyl ether	0.660	0.033	1.320	0.132	0.264	0.066	620120	31056	2309675	52207	365659	44883
12	trans-1,2-Dichloroethene	0.730	0.037	1.460	0.146	0.292	0.073	142963	12852	384125	20102	132501	16643
14	1,1-Dichloroethane	1.010	0.051	2.020	0.202	0.404	0.101	403912	31159	1225807	51920	327340	43151
15	cis-1,2-Dichloroethene	1.030	0.052	2.060	0.206	0.412	0.103	240146	21098	758337	35003	226396	27004
17	Chloroform	1.020	0.051	2.040	0.204	0.408	0.102	510308	42620	1697577	69088	427372	57851
18	1,1,1-Trichloroethane	1.020	0.051	2.040	0.204	0.408	0.102	587705	46722	1955378	75018	469425	61727
19	1,2-Dichloroethane	1.030	0.052	2.060	0.206	0.412	0.103	1236150	74052	4935278	125964	835756	97954
20	Benzene	1.030	0.052	2.060	0.206	0.412	0.103	967913	60686	3573129	94902	641363	73510
21	Carbon tetrachloride	1.020	0.051	2.040	0.204	0.408	0.102	492544	40672	1579809	67130	410007	53667
22	1,2-Dichloropropane	1.030	0.052	2.060	0.206	0.412	0.103	280915	22034	957916	37485	236197	27080
23	Trichloroethene	1.030	0.052	2.060	0.206	0.412	0.103	305786	29555	968228	45278	286372	33459
24	Bromodichloromethane	0.670	0.034	1.340	0.134	0.268	0.067	349165	34872	980125	57413	329960	43188
26	Toluene	1.030	0.052	2.060	0.206	0.412	0.103	1260474	90214	4659514	149575	935329	102952

n	Compound	Amt 10.0	Amt 0.5	Amt 20.0	Amt 2.0	Amt 4.0	Amt 1.0	C06199B.D 10.0	C06199H.D 0.5	C06199A.D 20.0	C06199F.D 2.0	C06199E.D 4.0	C06199K.D 1.0
28	1,1,2-Trichloroethane	1.020	0.051	2.040	0.204	0.408	0.102	480870	37160	1655491	70973	441832	43484
29	1,2-Dibromoethane	1.040	0.052	2.080	0.208	0.416	0.104	915216	67709	3403871	130478	834780	79525
30	Tetrachloroethene	1.020	0.051	2.040	0.204	0.408	0.102	373918	35806	1224836	58411	374447	38753
31	Chlorobenzene	1.020	0.051	2.040	0.204	0.408	0.102	1017786	104021	3390004	174301	1040689	105228
33	Ethylbenzene	1.040	0.052	2.080	0.208	0.416	0.104	2140675	173953	7709871	303124	1882967	181776
34	m & p-Xylene	2.060	0.103	4.120	0.412	0.824	0.206	2970894	279033	10312056	481458	2872586	284680
35	Styrene	1.030	0.052	2.060	0.206	0.412	0.103	2090268	153303	6660464	294984	1772326	150847
36	o-Xylene	1.020	0.051	2.040	0.204	0.408	0.102	1996168	168269	6920115	304155	1831287	166711
37	1,1,2,2-Tetrachloroethane	1.020	0.051	2.040	0.204	0.408	0.102	2273482	192188	6988630	401655	2300254	180334
39	1,3,5-Trimethylbenzene	1.060	0.053	2.120	0.212	0.424	0.106	3143240	323037	9985329	644118	3708236	280478
40	1,2,4-Trimethylbenzene	1.020	0.051	2.040	0.204	0.408	0.102	3248488	373791	10120607	742439	4300475	315230
41	1,3-Dichlorobenzene	1.020	0.051	2.040	0.204	0.408	0.102	2387618	303170	7032467	572612	3179015	243933
42	Benzyl chloride	0.760	0.038	1.520	0.152	0.304	0.076	2015808	210430	6118543	463035	2452250	191598
43	1,4-Dichlorobenzene	1.020	0.051	2.040	0.204	0.408	0.102	2189006	331504	6500736	598783	3247824	271163
44	1,2-Dichlorobenzene	1.000	0.050	2.000	0.200	0.400	0.100	3162973	359724	9089085	693423	3769025	288406
45	1,2,4-Trichlorobenzene	1.030	0.052	2.060	0.206	0.412	0.103	6381826	918959	14261028	1761172	9410822	617532
47	1,4 Dioxane	0.740	0.037	1.480	0.148	0.296	0.074	154378	17449	450267	31614	179188	26330
48	Naphthalene	2.130	0.107	-1.000	0.426	0.852	0.213	34587722	6597377	-1	12354059	37178978	4780301
1	Chlorobenzene-d5	0.200	0.200	0.200	0.200	0.200	0.200	877690	1273169	1660044	554145	1807068	927887
16	Toluene-d8	0.200	0.200	0.200	0.200	0.200	0.200	389596	565545	652462	236781	753686	395034

(330)

INITIAL CALIBRATION REPORT: Response Factors

SDG:	**LABQC**
QC_Batch:	**062309-MS2**
Sample ID:	METHOD BLANK
Sample Analysis Date:	23 Jun 109 1:09 pm
Run Method:	2EXSIM_I.M
Quant Method:	2EXSIM_I.M
Cal Update:	Mon Jun 22 09:18:18 2009
Template:	EARTEXSM.MS3

Sample Calculation:

1) Avg RFn = Sum $\left| \frac{(Astdni)}{(Cstdni)} \frac{(Cistdi)}{(Aistdi)} \right|_i$

Response Factors

Compound	RF1	RF2	RF3	RF4	RF5	RF6	AvgRFn	%RSD
Dichlorodifluoromethane	0.116	0.116	0.098	0.127	0.106	0.132	0.116	10.99
Chloromethane	0.060	0.052	0.052	0.053	0.051	0.057	0.054	6.60
Vinyl chloride	0.040	0.037	0.035	0.043	0.037	0.041	0.039	8.23
Bromomethane	0.042	0.038	0.032	0.037	0.034	0.041	0.037	11.03
Chloroethane	0.040	0.036	0.034	0.032	0.030	0.032	0.034	10.13
Trichlorofluoromethane	0.138	0.141	0.114	0.140	0.127	0.151	0.135	9.50
1,1-Dichloroethene	0.085	0.084	0.069	0.082	0.080	0.084	0.081	7.72
Freon 113	0.061	0.064	0.049	0.062	0.062	0.064	0.060	9.58
Dichloromethane	0.039	0.046	0.031	0.045	0.045	0.041	0.041	13.70
Methyl tert butyl ether	0.214	0.148	0.211	0.143	0.153	0.147	0.169	19.90
trans-1,2-Dichloroethene	0.045	0.055	0.032	0.050	0.050	0.049	0.047	17.11
1,1-Dichloroethane	0.091	0.096	0.073	0.093	0.090	0.092	0.089	9.11
cis-1,2-Dichloroethene	0.053	0.064	0.044	0.061	0.061	0.057	0.057	12.56
Chloroform	0.114	0.131	0.100	0.122	0.116	0.122	0.118	8.89
1,1,1-Trichloroethane	0.131	0.144	0.115	0.133	0.127	0.130	0.130	7.04
1,2-Dichloroethane	0.273	0.224	0.289	0.221	0.225	0.205	0.239	13.97
Benzene	0.214	0.183	0.209	0.166	0.172	0.154	0.183	13.13
Carbon tetrachloride	0.110	0.125	0.093	0.119	0.111	0.113	0.112	9.60
1,2-Dichloropropane	0.062	0.067	0.056	0.066	0.063	0.057	0.062	7.25
Trichloroethene	0.068	0.089	0.057	0.079	0.077	0.070	0.073	15.26
Bromodichloromethane	0.119	0.161	0.088	0.155	0.136	0.139	0.133	19.96
Toluene	0.279	0.273	0.273	0.262	0.251	0.215	0.259	9.02
1,1,2-Trichloroethane	0.107	0.114	0.098	0.126	0.120	0.092	0.109	11.85
1,2-Dibromoethane	0.201	0.205	0.197	0.226	0.222	0.165	0.203	10.84
Tetrachloroethene	0.084	0.110	0.072	0.103	0.102	0.082	0.092	16.20
Chlorobenzene	0.227	0.320	0.200	0.308	0.282	0.222	0.260	19.25
Ethylbenzene	0.469	0.525	0.447	0.526	0.501	0.377	0.474	12.05
m & p-Xylene	0.329	0.426	0.302	0.422	0.386	0.298	0.360	16.21
Styrene	0.462	0.463	0.390	0.517	0.476	0.316	0.437	16.55
o-Xylene	0.446	0.518	0.409	0.538	0.497	0.352	0.460	15.46
1,1,2,2-Tetrachloroethane	0.508	0.592	0.413	0.711	0.624	0.381	0.538	23.70
1,3,5-Trimethylbenzene	0.676	0.957	0.567	1.097	0.968	0.570	0.806	28.46
1,2,4-Trimethylbenzene	0.726	1.151	0.598	1.314	1.167	0.666	0.937	32.85
1,3-Dichlorobenzene	0.533	0.934	0.415	1.013	0.862	0.515	0.712	35.57
Benzyl chloride	0.604	0.870	0.485	1.099	0.893	0.543	0.749	32.20
1,4-Dichlorobenzene	0.489	1.021	0.384	1.059	0.881	0.573	0.735	39.38
1,2-Dichlorobenzene	0.721	1.130	0.548	1.251	1.043	0.622	0.886	33.09

1,2,4-Trichlorobenzene	1.412	2.776	0.834	3.086	2.528	1.292	1.988	46.46
1,4 Dioxane	0.048	0.074	0.037	0.077	0.067	0.077	0.063	27.03
Naphthalene	3.700	9.686	NA	10.467	4.830	4.837	6.704	46.62
Chlorobenzene-d5	1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.00
Toluene-d8	0.444	0.444	0.393	0.427	0.417	0.426	0.425	4.48

CALCULATIONS

EPA Method TO-15 Modified SIM GC/MS

SDG: LABQC
Laboratory Number: B06239

RL:	2EXSIM_I.M
Run Method:	2EXSIM_I.M
Quant Method:	2EXSIM_I.M
Can Dilution Factor:	1.00
Air Volume:	500 ml
Gas Constant:	23.68
Decimal Places:	3

Compound	M.W.	Raw Amount	Result ppbv	Result ug/m3	(1) MDL ppbv	(2) RL ppbv	Calc MDL ppbv	Calc MDL ug/m3	Calc RL ppbv	Calc RL ug/m3	Flag	S062602-1 Spike ppmv
Dichlorodifluoromethane	120.9	0.000	0.000	0.000	0.005	0.053	0.01	0.054	0.11	0.541	U	0.103
Chloromethane	50.5	0.000	0.000	0.000	0.005	0.051	0.01	0.022	0.10	0.218	U	0.103
Vinyl chloride	62.5	0.000	0.000	0.000	0.005	0.052	0.01	0.027	0.10	0.274	U	0.103
Bromomethane	94.9	0.000	0.000	0.000	0.005	0.052	0.01	0.042	0.10	0.417	U	0.103
Chloroethane	64.5	0.000	0.000	0.000	0.005	0.052	0.01	0.028	0.10	0.283	U	0.103
Trichlorofluoromethane	137.4	0.000	0.000	0.000	0.005	0.052	0.01	0.060	0.10	0.603	U	0.103
1,1-Dichloroethene	96.9	0.000	0.000	0.000	0.005	0.052	0.01	0.043	0.10	0.426	U	0.103
Freon 113	187.3	0.000	0.000	0.000	0.005	0.051	0.01	0.081	0.10	0.807	U	0.103
Dichloromethane	84.9	0.003	0.005	0.018	0.005	0.052	0.01	0.037	0.10	0.373	U	0.103
Methyl tert butyl ether	88.1	0.000	0.000	0.000	0.003	0.033	0.01	0.025	0.07	0.246	U	1.103
trans-1,2-Dichloroethene	96.9	0.000	0.000	0.000	0.004	0.037	0.01	0.030	0.07	0.303	U	0.103
1,1-Dichloroethane	99.0	0.000	0.000	0.000	0.005	0.051	0.01	0.043	0.10	0.426	U	0.103
cis-1,2-Dichloroethene	96.9	0.004	0.007	0.030	0.005	0.052	0.01	0.043	0.10	0.426	U	0.103
Chloroform	119.4	0.002	0.004	0.020	0.005	0.051	0.01	0.051	0.10	0.514	U	0.103
1,1,1-Trichloroethane	133.4	0.001	0.001	0.007	0.005	0.051	0.01	0.057	0.10	0.575	U	0.103
1,2-Dichloroethane	99.0	0.006	0.011	0.046	0.005	0.052	0.01	0.043	0.10	0.435	J	0.103
Benzene	78.1	0.005	0.010	0.034	0.005	0.052	0.01	0.034	0.10	0.343	U	0.103
Carbon tetrachloride	153.8	0.000	0.001	0.006	0.005	0.051	0.01	0.066	0.10	0.662	U	0.103
1,2-Dichloropropane	113.0	0.000	0.000	0.000	0.005	0.052	0.01	0.050	0.10	0.496	U	0.103
Trichloroethene	131.4	0.005	0.010	0.058	0.005	0.052	0.01	0.058	0.10	0.577	U	0.103
Bromodichloromethane	163.8	0.000	0.000	0.000	0.003	0.034	0.01	0.047	0.07	0.470	U	0.103
Toluene	92.1	0.006	0.011	0.043	0.005	0.052	0.01	0.040	0.10	0.404	J	0.103
1,1,2-Trichloroethane	133.4	0.006	0.012	0.070	0.005	0.051	0.01	0.057	0.10	0.575	J	0.103
1,2-Dibromoethane	187.9	0.009	0.019	0.148	0.005	0.052	0.01	0.083	0.10	0.825	J	0.103
Tetrachloroethene	165.8	0.004	0.009	0.061	0.005	0.051	0.01	0.071	0.10	0.714	U	0.103
Chlorobenzene	112.6	0.009	0.018	0.085	0.005	0.051	0.01	0.049	0.10	0.485	J	0.103
Ethylbenzene	106.2	0.006	0.012	0.053	0.005	0.052	0.01	0.047	0.10	0.466	J	0.103
m & p-Xylene	106.2	0.016	0.032	0.142	0.010	0.103	0.02	0.092	0.21	0.924	J	0.103
Styrene	104.2	0.008	0.017	0.075	0.005	0.052	0.01	0.046	0.10	0.458	J	0.103
o-Xylene	106.2	0.006	0.013	0.058	0.005	0.051	0.01	0.046	0.10	0.457	J	0.103
1,1,2,2-Tetrachloroethane	167.8	0.000	0.000	0.000	0.005	0.051	0.01	0.072	0.10	0.723	U	0.103
1,3,5-Trimethylbenzene	120.2	0.006	0.012	0.059	0.005	0.053	0.01	0.054	0.11	0.538	J	0.103
1,2,4-Trimethylbenzene	120.0	0.009	0.018	0.091	0.005	0.051	0.01	0.052	0.10	0.517	J	0.103
1,3-Dichlorobenzene	147.0	0.012	0.025	0.153	0.005	0.051	0.01	0.063	0.10	0.633	J	0.103
Benzyl chloride	126.6	0.001	0.001	0.008	0.004	0.038	0.01	0.041	0.08	0.406	U	0.103
1,4-Dichlorobenzene	147.0	0.015	0.030	0.189	0.005	0.051	0.01	0.063	0.10	0.633	J	0.103
1,2-Dichlorobenzene	147.0	0.012	0.024	0.151	0.005	0.050	0.01	0.062	0.10	0.621	J	0.103

1,2,4-Trichlorobenzene	181.4	0.024	0.048	0.368	0.005	0.052	0.01	0.080	0.10	0.797	J	0.103
1,4 Dioxane	88.1	0.006	0.012	0.046	0.004	0.037	0.01	0.028	0.07	0.275	J	1.103
Naphthalene	128.2	0.008	0.016	0.085	0.011	0.107	0.02	0.116	0.21	1.159	U	2.103

SAMPLE CALCULATION

EPA Method TO-15 Modified SIM GC/MS

SDG:		**LABQC**
Laboratory Number:		**B06239**
Standard Volume	STV	0.5
Sample Volume	SV	500
Can Dilution Factor	CDF	1.00
Gas Constant		23.68
Decimal Places:		3

Sample Calculation:

1) Avg RFn = Sum $\left| \frac{(Astdni)}{(Cstdni)} \frac{(Cistdi)}{(Aistdi)} \right|_i$ Note: 1

2) Raw Amt = $\frac{(Ansamp)}{(Avg\ RFn)} \frac{(Cistdi)}{(Aistdi)}$ = Cn

3) Amount ppbv = $\frac{(Raw\ Amt)\ 1000}{(SV)}$ (CDF) (STV)

4) Amount ug/m3 = $\frac{(amt(ppbv)\ MW}{23.68}$

n	Compound	IS n	Chem type	MW	AvgRFn	Area Ansamp	Cistdi ppmv	Aistdi Ais	Cn ppmV Raw Amt	Amount ppbv	Amount ug/m3
2	Dichlorodifluoromethane	1	TRG	120.9	0.116	0	0.200	1135862	0.000	0.000	0.000
3	Chloromethane	1	TRG	50.5	0.054	0	0.200	1135862	0.000	0.000	0.000
5	Vinyl chloride	1	TRG	62.5	0.039	0	0.200	1135862	0.000	0.000	0.000
6	Bromomethane	1	TRG	94.9	0.037	0	0.200	1135862	0.000	0.000	0.000
7	Chloroethane	1	TRG	64.5	0.034	0	0.200	1135862	0.000	0.000	0.000
8	Trichlorofluoromethane	1	TRG	137.4	0.135	0	0.200	1135862	0.000	0.000	0.000
9	1,1-Dichloroethene	1	TRG	96.9	0.081	0	0.200	1135862	0.000	0.000	0.000
10	Freon 113	1	TRG	187.3	0.060	0	0.200	1135862	0.000	0.000	0.000
11	Dichloromethane	1	TRG	84.9	0.041	596	0.200	1135862	0.003	0.005	0.018
13	Methyl tert butyl ether	2	TRG	88.1	0.169	0	0.200	1135862	0.000	0.000	0.000
12	trans-1,2-Dichloroethene	1	TRG	96.9	0.047	0	0.200	1135862	0.000	0.000	0.000
14	1,1-Dichloroethane	1	TRG	99.0	0.089	0	0.200	1135862	0.000	0.000	0.000
15	cis-1,2-Dichloroethene	1	TRG	96.9	0.057	1185	0.200	1135862	0.004	0.007	0.029
17	Chloroform	1	TRG	119.4	0.118	1327	0.200	1135862	0.002	0.004	0.020
18	1,1,1-Trichloroethane	1	TRG	133.4	0.130	458	0.200	1135862	0.001	0.001	0.006
19	1,2-Dichloroethane	1	TRG	99.0	0.239	7537	0.200	1135862	0.006	0.011	0.046
20	Benzene	1	TRG	78.1	0.183	5359	0.200	1135862	0.005	0.010	0.033
21	Carbon tetrachloride	1	TRG	153.8	0.112	281	0.200	1135862	0.000	0.001	0.006
22	1,2-Dichloropropane	1	TRG	113.0	0.062	0	0.200	1135862	0.000	0.000	0.000
23	Trichloroethene	1	TRG	131.4	0.073	2158	0.200	1135862	0.005	0.010	0.055
24	Bromodichloromethane	1	TRG	163.8	0.133	0	0.200	1135862	0.000	0.000	0.000
26	Toluene	1	TRG	92.1	0.259	8107	0.200	1135862	0.006	0.011	0.043
28	1,1,2-Trichloroethane	1	TRG	133.4	0.109	3839	0.200	1135862	0.006	0.012	0.068
29	1,2-Dibromoethane	1	TRG	187.9	0.203	10698	0.200	1135862	0.009	0.019	0.151
30	Tetrachloroethene	1	TRG	165.8	0.092	2265	0.200	1135862	0.004	0.009	0.063
31	Chlorobenzene	1	TRG	112.6	0.260	13149	0.200	1135862	0.009	0.018	0.086
33	Ethylbenzene	1	TRG	106.2	0.474	15830	0.200	1135862	0.006	0.012	0.054
34	m & p-Xylene	1	TRG	106.2	0.360	32402	0.200	1135862	0.016	0.032	0.144
35	Styrene	1	TRG	104.2	0.437	21065	0.200	1135862	0.008	0.017	0.075
36	o-Xylene	1	TRG	106.2	0.460	16952	0.200	1135862	0.006	0.013	0.058
37	1,1,2,2-Tetrachloroethane	1	TRG	167.8	0.54	0	0.200	1135862	0.000	0.000	0.000
39	1,3,5-Trimethylbenzene	1	TRG	120.2	0.806	26522	0.200	1135862	0.006	0.012	0.061
40	1,2,4-Trimethylbenzene	1	TRG	120.0	0.937	47627	0.200	1135862	0.009	0.018	0.091
41	1,3-Dichlorobenzene	1	TRG	147.0	0.712	49737	0.200	1135862	0.012	0.025	0.155
42	Benzyl chloride	1	TRG	126.6	0.749	3119	0.200	1135862	0.001	0.001	0.005
43	1,4-Dichlorobenzene	1	TRG	147.0	0.735	63608	0.200	1135862	0.015	0.030	0.186
44	1,2-Dichlorobenzene	1	TRG	147.0	0.886	61095	0.200	1135862	0.012	0.024	0.149
45	1,2,4-Trichlorobenzene	1	TRG	181.4	1.99	271547	0.200	1135862	0.024	0.048	0.368
47	1,4 Dioxane	1	TRG	88.1	0.06	2198	0.200	1135862	0.006	0.012	0.045
48	Naphthalene	1	TRG	128.2	6.70	297245	0.200	1135862	0.008	0.016	0.087
1	Chlorobenzene-d5	1	IS	0.0	1.000	1135862	0.200	1135862	0.000	0.000	0.000

16 Toluene-d8	1	SURR	0.0	0.425	480756	0.200	1135862	0.000	0.000	0.000

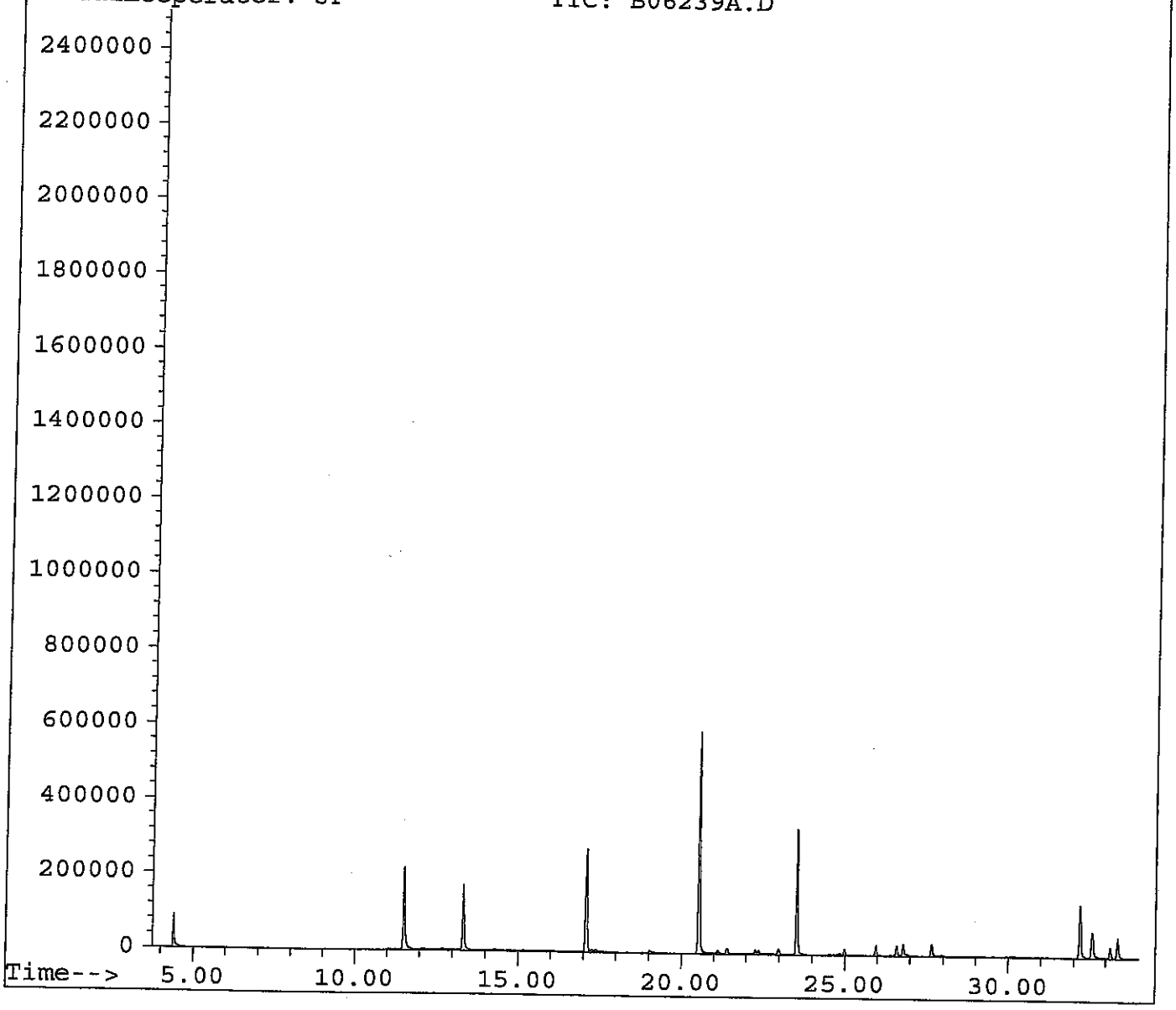
Calculation Definitions:

n	compound n
i	i th calibration level
Astdni	Standard Area for compound n at ith calibration level
Cstdni	Standard Concentration for compound n at ith calibration level in ppmv
Cistdi	Internal Standard Conc used for compound n at ith calibration level in ppmv
Aistdi	Internal Standard Area used for compound n at ith calibration level
Ansamp	Sample Area for compound n
Avg RFn	Average response factor for all ith calibration levels for compound n
Raw Amount	Sample Concentration in ppmv before applying factors
Cistd	Concentration internal standard used for compound n in sample in ppmv
Aistd	Area of internal standard used for compound n in sample
Cn	Concentration of compound n in sample in ppmv
23.68	Gas constant at 60 F as per EPA source test protocol
MW	Molecular weight of compound

Note (1) : Avg RFn — The values for the Average Response Factor AvgRFn can be optained from the response Factor Report for the Initial Calibration, or from the Calibration Report

Name of file: C:\HPCHEM\1\DATA\06239MS2\B06239A.D

Abundance Operator: JF TIC: B06239A.D



QUALITY CONTROL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

LABORATORY CONTROL SPIKE

EPA Method TO-15 Modified SIM GC/MS
Analytical Method: TO-15 SIM

SDG: LABQC

File: QC06239B.D
Description: ST0623091
Can/Tube#:
Sam_Type: LCS
QC_Batch: 062309-MS2
Air Volume: 1000 ml

Date Sampled: NA
Date Received: NA
Date Extracted: NA
Date Analyzed: 06/23/09 **Time:** 11:39
Can Dilution Factor: 1.00 3
QC Duplicate: No

CAS#	Compound	MDL ppbv	Spike Conc ppbv	Amount ppbv	Matrix Amt ppbv	Spk Amt ppbv	Percent Recovery	LCL %	UCL %	Flag
74-87-3	Chloromethane	0.005	1.044	0.991	0.000	0.991	95	70	130	
75-01-4	Vinyl chloride	0.005	1.268	1.280	0.000	1.280	101	70	130	
74-83-9	Bromomethane	0.005	1.422	1.432	0.000	1.432	101	70	130	
75-35-4	1,1-Dichloroethene	0.005	1.275	1.250	0.000	1.250	98	70	130	
75-09-2	Dichloromethane	0.005	1.090	1.077	0.000	1.077	99	70	130	
75-34-3	1,1-Dichloroethane	0.005	1.159	1.159	0.000	1.159	100	70	130	
156-59-2	cis-1,2-Dichloroethene	0.005	0.966	0.980	0.000	0.980	101	70	130	
67-66-3	Chloroform	0.005	1.234	1.237	0.000	1.237	100	70	130	
71-55-6	1,1,1-Trichloroethane	0.005	1.150	1.142	0.000	1.142	99	70	130	
107-06-2	1,2-Dichloroethane	0.005	0.901	0.832	0.000	0.832	92	70	130	
71-43-2	Benzene	0.005	0.793	0.792	0.000	0.792	100	70	130	
56-23-5	Carbon tetrachloride	0.005	1.158	1.136	0.000	1.136	98	70	130	
78-87-5	1,2-Dichloropropane	0.005	0.976	0.962	0.000	0.962	99	70	130	
79-01-6	Trichloroethene	0.005	0.877	0.875	0.000	0.875	100	70	130	
108-88-3	Toluene	0.005	0.709	0.671	0.000	0.671	95	70	130	
79-00-5	1,1,2-Trichloroethane	0.005	0.710	0.624	0.000	0.624	88	70	130	
106-93-4	1,2-Dibromoethane	0.005	0.611	0.523	0.000	0.523	86	70	130	
127-18-4	Tetrachloroethene	0.005	0.779	0.754	0.000	0.754	97	70	130	
108-90-7	Chlorobenzene	0.005	0.634	0.552	0.000	0.552	87	70	130	
100-41-4	Ethylbenzene	0.005	0.649	0.570	0.000	0.570	88	70	130	
108-38-3	m & p-Xylene	0.010	1.346	1.156	0.000	1.156	86	70	130	
95-47-6	o-Xylene	0.005	0.594	0.494	0.000	0.494	83	70	130	

Surrogate Recovery	Spike Amt. ppbV	Amount ppbV	% Rec.	QC Limits	Flag * = Out
Toluene-d8	0.200	0.236	118	70-130	

Notes: Reported results are to be interpreted to two significant figures.
*ug/m3 calculated assuming conditions at 60 F and 1 atm.

QUANTITATION REPORT

EPA Method TO-15 Modified SIM GC/MS

			Review	EAS Sample ID: QC06239	
File Name:	QC06239B.D				1 SS
Sample ID:	ST0623091				2 KB
Date:	23 Jun 109 11:39 am			Cal Amounts	3 AT
Run Method:	2EXSIM_I.M			IS Areas	4 BB
Quant Method:	2EXSIM_I.M			Carryover	5 SH
Cal Update:	Mon Jun 22 09:18:18 2009				
Template:	EARTEXSM.MS3				
Can Factor:	1.00				
Volume:	1000	ml		Analyst: SS 1	

CAS#	Compound	n	Raw Amount	RT	Target RT	Ion	Sample Area	Qualifier	Lower Qual	Upper Qual	Qual Flag	Cal Flag	Int Flag
74-87-3	Chloromethane	3	0.991	4.16	4.12	50.00	228800	24	21	32			
75-01-4	Vinyl chloride	5	1.280	4.42	4.37	62.00	212308	34	28	42			
74-83-9	Bromomethane	6	1.432	5.02	4.97	94.00	227510	94	69	104			
75-35-4	1,1-Dichloroethene	9	1.250	7.01	6.95	61.00	430448	44	37	56			
75-09-2	Dichloromethane	11	1.077	7.48	7.42	84.00	188665	65	51	77			
75-34-3	1,1-Dichloroethane	14	1.159	9.09	9.00	63.00	439863	34	25	37			
156-59-2	cis-1,2-Dichloroethene	15	0.980	10.31	10.24	96.00	236466	150	102	153			
67-66-3	Chloroform	17	1.237	10.73	10.66	83.00	619529	70	52	78			
71-55-6	1,1,1-Trichloroethane	18	1.142	11.96	11.91	97.00	632986	69	53	80			
107-06-2	1,2-Dichloroethane	19	0.832	12.10	12.02	61.95	847748	19	14	21			
71-43-2	Benzene	20	0.792	12.68	12.63	78.00	617230	21	16	23			
56-23-5	Carbon tetrachloride	21	1.136	12.74	12.66	116.90	541791	105	79	119			
78-87-5	1,2-Dichloropropane	22	0.962	14.25	14.20	63.00	252919	160	126	189			
79-01-6	Trichloroethene	23	0.875	14.31	14.26	130.00	272978	102	75	112			
108-88-3	Toluene	26	0.671	17.27	17.21	91.00	738918	70	53	80			
79-00-5	1,1,2-Trichloroethane	28	0.624	17.37	17.35	97.00	290725	89	63	94			
106-93-4	1,2-Dibromoethane	29	0.523	19.03	18.99	107.00	451534	100	76	114			
127-18-4	Tetrachloroethene	30	0.754	19.12	19.09	166.00	296064	84	64	97			
108-90-7	Chlorobenzene	31	0.552	20.65	20.59	112.00	611331	36	27	40			
100-41-4	Ethylbenzene	33	0.570	21.12	21.08	91.00	1149886	32	24	36			
108-38-3	m & p-Xylene	34	1.156	21.41	21.37	91.00	1772416	50	42	63			
95-47-6	o-Xylene	36	0.494	22.37	22.34	91.00	967555	46	38	56			
3114-55-4	Chlorobenzene-d5	1	0.200	20.55	20.51	117.00	851611						
2037-26-5	Toluene-d8	16	0.236	17.11	17.05	98.00	427649						

Integration Flags:

If no flag the Integration was done by the instrument computer

M1 Manual Integration because the computer did not integrated the peak or integrated the wrong peak

M2 Manual Integration because computer integration of baseline was different then Inital Calibration

INITIAL CALIBRATION REPORT

EPA Method TO-15 Modified SIM GC/MS

File Name:	QC06239B.D	SDG:	LABQC
Sample ID:	ST0623091	QC_Batch:	062309-MS2
Sample Analysis Date:	23 Jun 109 11:39 am	Instrument Name:	MS2
Run Method:	2EXSIM_I.M	Number Compounds:	49
Quant and Calibration Method:	2EXSIM_I.M	IS1: ST60360	0.2
Cal Update:	Mon Jun 22 09:18:18 2009	IS2:	
Template:	EARTEXSM.MS3	IS3:	
		IS4:	

Calibration Title: EPA T0-15

		Calibration Amount CA, ppmv						Calibration Response, Area					
		Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
		Amt	Amt	Amt	Amt	Amt	Amt	C06199B.D	C06199H.D	C06199A.D	C06199F.D	C06199E.D	C06199K.D
n	Compound	10.0	0.5	20.0	2.0	4.0	1.0	10.0	0.5	20.0	2.0	4.0	1.0
3	Chloromethane	1.020	0.051	2.040	0.204	0.408	0.102	268477	16811	877342	29933	189687	27154
5	Vinyl chloride	1.040	0.052	2.080	0.208	0.416	0.104	184476	12222	596605	24865	140317	19936
6	Bromomethane	1.040	0.052	2.080	0.208	0.416	0.104	193900	12685	547447	21277	126567	19683
9	1,1-Dichloroethene	1.040	0.052	2.080	0.208	0.416	0.104	388365	27969	1185798	47507	301017	40726
11	Dichloromethane	1.040	0.052	2.080	0.208	0.416	0.104	180065	15163	530282	25781	167890	19971
14	1,1-Dichloroethane	1.010	0.051	2.020	0.202	0.404	0.101	403912	31159	1225807	51920	327340	43151
15	cis-1,2-Dichloroethene	1.030	0.052	2.060	0.206	0.412	0.103	240146	21098	758337	35003	226396	27004
17	Chloroform	1.020	0.051	2.040	0.204	0.408	0.102	510308	42620	1697577	69088	427372	57851
18	1,1,1-Trichloroethane	1.020	0.051	2.040	0.204	0.408	0.102	587705	46722	1955378	75018	469425	61727
19	1,2-Dichloroethane	1.030	0.052	2.060	0.206	0.412	0.103	1236150	74052	4935278	125964	835756	97954
20	Benzene	1.030	0.052	2.060	0.206	0.412	0.103	967913	60686	3573129	94902	641363	73510
21	Carbon tetrachloride	1.020	0.051	2.040	0.204	0.408	0.102	492544	40672	1579809	67130	410007	53667
22	1,2-Dichloropropane	1.030	0.052	2.060	0.206	0.412	0.103	280915	22034	957916	37485	236197	27080
23	Trichloroethene	1.030	0.052	2.060	0.206	0.412	0.103	305786	29555	968228	45278	286372	33459
26	Toluene	1.030	0.052	2.060	0.206	0.412	0.103	1260474	90214	4659514	149575	935329	102952
28	1,1,2-Trichloroethane	1.020	0.051	2.040	0.204	0.408	0.102	480870	37160	1655491	70973	441832	43484
29	1,2-Dibromoethane	1.040	0.052	2.080	0.208	0.416	0.104	915216	67709	3403871	130478	834780	79525
30	Tetrachloroethene	1.020	0.051	2.040	0.204	0.408	0.102	373918	35806	1224836	58411	374447	38753
31	Chlorobenzene	1.020	0.051	2.040	0.204	0.408	0.102	1017786	104021	3390004	174301	1040689	105228
33	Ethylbenzene	1.040	0.052	2.080	0.208	0.416	0.104	2140675	173953	7709871	303124	1882967	181776
34	m & p-Xylene	2.060	0.103	4.120	0.412	0.824	0.206	2970894	279033	10312056	481458	2872586	284680
36	o-Xylene	1.020	0.051	2.040	0.204	0.408	0.102	1996168	168269	6920115	304155	1831287	166711

n	Compound	Amt 10.0	Amt 0.5	Amt 20.0	Amt 2.0	Amt 4.0	Amt 1.0	C06199B.D 10.0	C06199H.D 0.5	C06199A.D 20.0	C06199F.D 2.0	C06199E.D 4.0	C06199K.D 1.0
1	Chlorobenzene-d5	0.200	0.200	0.200	0.200	0.200	0.200	877690	1273169	1660044	554145	1807068	927887
16	Toluene-d8	0.200	0.200	0.200	0.200	0.200	0.200	389596	565545	652462	236781	753686	395034

(341)

INITIAL CALIBRATION REPORT: Response Factors

SDG:	**LABQC**	**Sample Calculation:**	
QC_Batch:	**062309-MS2**	1) Avg RFn = Sum	$\frac{(Astdni)}{(Cstdni)} \frac{(Cistdi)}{(Aistdi)}$
Sample ID:	ST0623091		
Sample Analysis Date:	23 Jun 109 11:39 am		
Run Method:	2EXSIM_I.M		
Quant Method:	2EXSIM_I.M		
Cal Update:	Mon Jun 22 09:18:18 2009		
Template:	EARTEXSM.MS3		

Response Factors

Compound	RF1	RF2	RF3	RF4	RF5	RF6	AvgRFn	%RSD
Chloromethane	0.060	0.052	0.052	0.053	0.051	0.057	0.054	6.60
Vinyl chloride	0.040	0.037	0.035	0.043	0.037	0.041	0.039	8.23
Bromomethane	0.042	0.038	0.032	0.037	0.034	0.041	0.037	11.03
1,1-Dichloroethene	0.085	0.084	0.069	0.082	0.080	0.084	0.081	7.72
Dichloromethane	0.039	0.046	0.031	0.045	0.045	0.041	0.041	13.70
1,1-Dichloroethane	0.091	0.096	0.073	0.093	0.090	0.092	0.089	9.11
cis-1,2-Dichloroethene	0.053	0.064	0.044	0.061	0.061	0.057	0.057	12.56
Chloroform	0.114	0.131	0.100	0.122	0.116	0.122	0.118	8.89
1,1,1-Trichloroethane	0.131	0.144	0.115	0.133	0.127	0.130	0.130	7.04
1,2-Dichloroethane	0.273	0.224	0.289	0.221	0.225	0.205	0.239	13.97
Benzene	0.214	0.183	0.209	0.166	0.172	0.154	0.183	13.13
Carbon tetrachloride	0.110	0.125	0.093	0.119	0.111	0.113	0.112	9.60
1,2-Dichloropropane	0.062	0.067	0.056	0.066	0.063	0.057	0.062	7.25
Trichloroethene	0.068	0.089	0.057	0.079	0.077	0.070	0.073	15.26
Toluene	0.279	0.273	0.273	0.262	0.251	0.215	0.259	9.02
1,1,2-Trichloroethane	0.107	0.114	0.098	0.126	0.120	0.092	0.109	11.85
1,2-Dibromoethane	0.201	0.205	0.197	0.226	0.222	0.165	0.203	10.84
Tetrachloroethene	0.084	0.110	0.072	0.103	0.102	0.082	0.092	16.20
Chlorobenzene	0.227	0.320	0.200	0.308	0.282	0.222	0.260	19.25
Ethylbenzene	0.469	0.525	0.447	0.526	0.501	0.377	0.474	12.05
m & p-Xylene	0.329	0.426	0.302	0.422	0.386	0.298	0.360	16.21
o-Xylene	0.446	0.518	0.409	0.538	0.497	0.352	0.460	15.46
Chlorobenzene-d5	1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.00
Toluene-d8	0.444	0.444	0.393	0.427	0.417	0.426	0.425	4.48

CALCULATIONS

EPA Method TO-15 Modified SIM GC/MS

SDG: LABQC
Laboratory Number: QC06239

RL:	2EXSIM_I.M
Run Method:	2EXSIM_I.M
Quant Method:	2EXSIM_I.M
Can Dilution Factor:	1.00
Air Volume:	1000 ml
Gas Constant:	23.68
Decimal Places:	3

Compound	M.W.	Raw Amount	Result ppbv	Result ug/m3	(1) MDL ppbv	(2) RL ppbv	Calc MDL ppbv	Calc MDL ug/m3	Calc RL ppbv	Calc RL ug/m3	Flag	ST0623091 Spike ppmv
Chloromethane	50.5	0.991	0.991	2.113	0.005	0.051	0.01	0.011	0.05	0.109		1.044
Vinyl chloride	62.5	1.280	1.280	3.379	0.005	0.052	0.01	0.014	0.05	0.137		1.268
Bromomethane	94.9	1.432	1.432	5.738	0.005	0.052	0.01	0.021	0.05	0.208		1.422
1,1-Dichloroethene	96.9	1.250	1.250	5.115	0.005	0.052	0.01	0.021	0.05	0.213		1.275
Dichloromethane	84.9	1.077	1.077	3.863	0.005	0.052	0.01	0.019	0.05	0.186		1.090
1,1-Dichloroethane	99.0	1.159	1.159	4.846	0.005	0.051	0.01	0.021	0.05	0.213		1.159
cis-1,2-Dichloroethene	96.9	0.980	0.980	4.012	0.005	0.052	0.01	0.021	0.05	0.213		0.966
Chloroform	119.4	1.237	1.237	6.235	0.005	0.051	0.01	0.026	0.05	0.257		1.234
1,1,1-Trichloroethane	133.4	1.142	1.142	6.432	0.005	0.051	0.01	0.029	0.05	0.287		1.150
1,2-Dichloroethane	99.0	0.832	0.832	3.478	0.005	0.052	0.01	0.022	0.05	0.217		0.901
Benzene	78.1	0.792	0.792	2.611	0.005	0.052	0.01	0.017	0.05	0.172		0.793
Carbon tetrachloride	153.8	1.136	1.136	7.379	0.005	0.051	0.01	0.033	0.05	0.331		1.158
1,2-Dichloropropane	113.0	0.962	0.962	4.590	0.005	0.052	0.01	0.025	0.05	0.248		0.976
Trichloroethene	131.4	0.875	0.875	4.853	0.005	0.052	0.01	0.029	0.05	0.289		0.877
Toluene	92.1	0.671	0.671	2.608	0.005	0.052	0.01	0.020	0.05	0.202		0.709
1,1,2-Trichloroethane	133.4	0.624	0.624	3.513	0.005	0.051	0.01	0.029	0.05	0.287		0.710
1,2-Dibromoethane	187.9	0.523	0.523	4.153	0.005	0.052	0.01	0.041	0.05	0.413		0.611
Tetrachloroethene	165.8	0.754	0.754	5.282	0.005	0.051	0.01	0.036	0.05	0.357		0.779
Chlorobenzene	112.6	0.552	0.552	2.624	0.005	0.051	0.01	0.024	0.05	0.243		0.634
Ethylbenzene	106.2	0.570	0.570	2.554	0.005	0.052	0.01	0.023	0.05	0.233		0.649
m & p-Xylene	106.2	1.156	1.156	5.183	0.010	0.103	0.01	0.046	0.10	0.462		1.346
o-Xylene	106.2	0.494	0.494	2.215	0.005	0.051	0.01	0.023	0.05	0.229		0.594

SAMPLE CALCULATION

EPA Method TO-15 Modified SIM GC/MS

SDG:		**LABQC**
Laboratory Number:		**QC06239**
Standard Volume	STV	0.5
Sample Volume	SV	1000
Can Dilution Factor	CDF	1.00
Gas Constant		23.68
Decimal Places:		3

Sample Calculation:

1) Avg RFn = Sum $\left| \frac{(Astdni)}{(Cstdni)} \frac{(Cistdi)}{(Aistdi)} \right|_i$ Note: 1

2) Raw Amt = $\frac{(Ansamp)}{(Avg\ RFn)} \frac{(Cistdi)}{(Aistdi)}$ = Cn

3) Amount ppbv = $\frac{(Raw\ Amt)\ 1000}{(SV)}$ (CDF) (STV)

4) Amount ug/m3 = $\frac{(amt(ppbv)\ MW}{23.68}$

n	Compound	IS n	Chem type	MW	AvgRFn	Area Ansamp	Cistdi ppmv	Aistdi Ais	Cn ppmV Raw Amt	Amount ppbv	Amount ug/m3
3	Chloromethane	1	TRG	50.5	0.054	228800	0.200	851611	0.991	0.991	2.113
5	Vinyl chloride	1	TRG	62.5	0.039	212308	0.200	851611	1.280	1.280	3.378
6	Bromomethane	1	TRG	94.9	0.037	227510	0.200	851611	1.432	1.432	5.739
9	1,1-Dichloroethene	1	TRG	96.9	0.081	430448	0.200	851611	1.250	1.250	5.115
11	Dichloromethane	1	TRG	84.9	0.041	188665	0.200	851611	1.077	1.077	3.861
14	1,1-Dichloroethane	1	TRG	99.0	0.089	439863	0.200	851611	1.159	1.159	4.845
15	cis-1,2-Dichloroethene	1	TRG	96.9	0.057	236466	0.200	851611	0.980	0.980	4.010
17	Chloroform	1	TRG	119.4	0.118	619529	0.200	851611	1.237	1.237	6.237
18	1,1,1-Trichloroethane	1	TRG	133.4	0.130	632986	0.200	851611	1.142	1.142	6.433
19	1,2-Dichloroethane	1	TRG	99.0	0.239	847748	0.200	851611	0.832	0.832	3.478
20	Benzene	1	TRG	78.1	0.183	617230	0.200	851611	0.792	0.792	2.612
21	Carbon tetrachloride	1	TRG	153.8	0.112	541791	0.200	851611	1.136	1.136	7.378
22	1,2-Dichloropropane	1	TRG	113.0	0.062	252919	0.200	851611	0.962	0.962	4.591
23	Trichloroethene	1	TRG	131.4	0.073	272978	0.200	851611	0.875	0.875	4.855
26	Toluene	1	TRG	92.1	0.259	738918	0.200	851611	0.671	0.671	2.610
28	1,1,2-Trichloroethane	1	TRG	133.4	0.109	290725	0.200	851611	0.624	0.624	3.515
29	1,2-Dibromoethane	1	TRG	187.9	0.203	451534	0.200	851611	0.523	0.523	4.150
30	Tetrachloroethene	1	TRG	165.8	0.092	296064	0.200	851611	0.754	0.754	5.279
31	Chlorobenzene	1	TRG	112.6	0.260	611331	0.200	851611	0.552	0.552	2.625
33	Ethylbenzene	1	TRG	106.2	0.474	1149886	0.200	851611	0.570	0.570	2.556
34	m & p-Xylene	1	TRG	106.2	0.360	1772416	0.200	851611	1.156	1.156	5.184
36	o-Xylene	1	TRG	106.2	0.460	967555	0.200	851611	0.494	0.494	2.215
1	Chlorobenzene-d5	1	IS	0.0	1.000	851611	0.200	851611	0.000	0.000	0.000
16	Toluene-d8	1	SURR	0.0	0.425	427649	0.200	851611	0.000	0.000	0.000

Calculation Definitions:

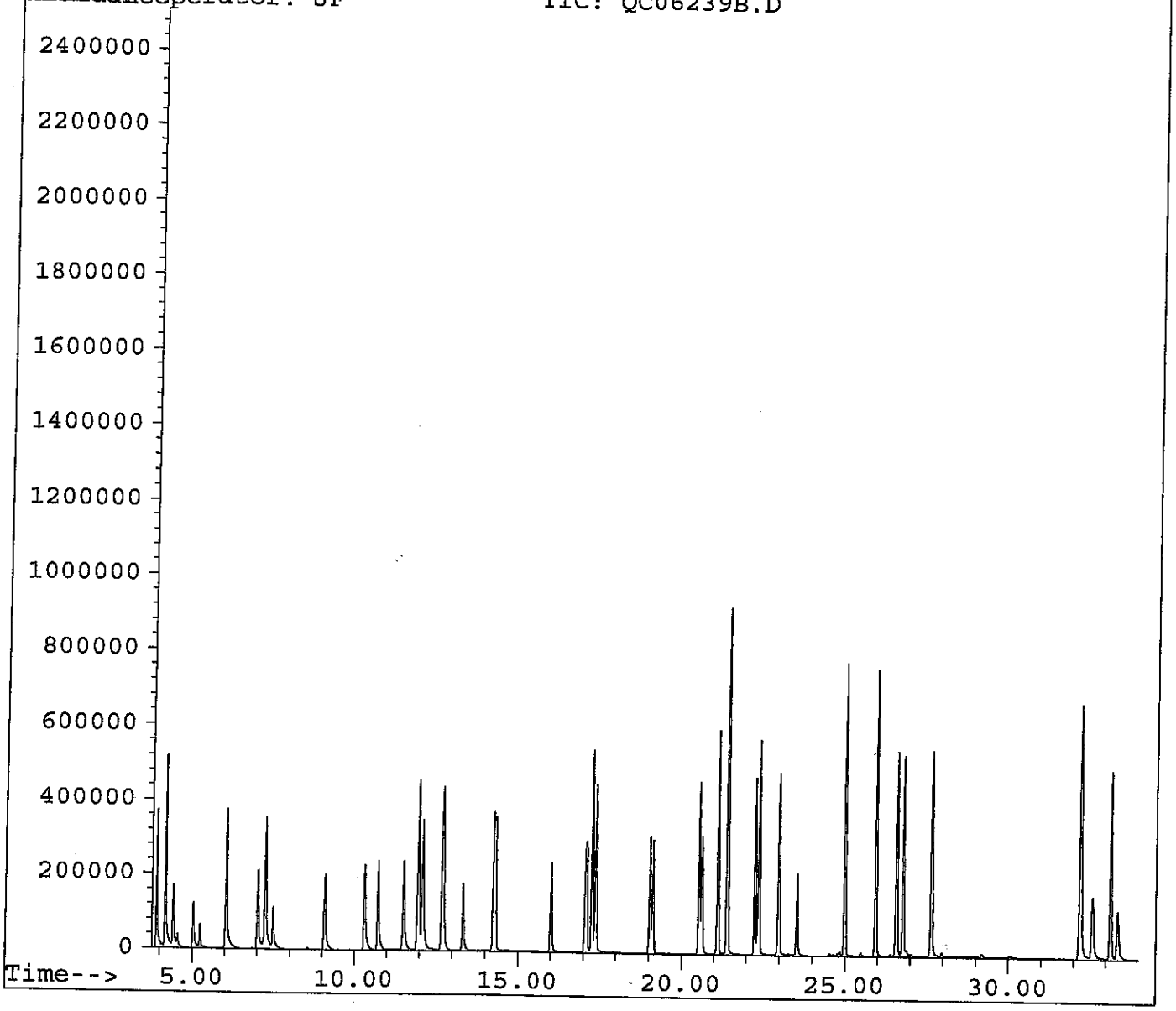
n	compound n
I	I th calibration level
Astdni	Standard Area for compound n at ith calibration level
Cstdni	Standard Concentration for compound n at ith calibration level in ppmv
Cistdi	Internal Standard Conc used for compound n at ith calibration level in ppmv
Aistdi	Internal Standard Area used for compound n at ith calibration level
Ansamp	Sample Area for compound n
Avg RFn	Average response factor for all ith calibration levels for compound n
Raw Amount	Sample Concentration in ppmv before applying factors
Cistd	Concentration internal standard used for compound n in sample in ppmv
Aistd	Area of internal standard used for compound n in sample
Cn	Concentration of compound n in sample in ppmv
23.68	Gas constant at 60 F as per EPA source test protocol
MW	Molecular weight of compound

Note (1): Avg RFn — The values for the Average Response Factor AvgRFn can be optained from the response Factor Report for the Initial Calibration, or from the Calibration Report

Name of file: C:\HPCHEM\1\DATA\06239MS2\QC06239B.D

Name of operator: JF

TIC: QC06239B.D



QUALITY CONTROL DUPLICATE

ENVIRONMENTAL
Analytical Service, Inc.

Duplicate of QC Sample

EPA Method TO-15 Modified SIM GC/MS
Analytical Method: TO-15 SIM

SDG: LABQC

Dup File: QC06239C.D
Description: ST0623091
Can/Tube#:
QC_Batch: 062309-MS2

CAS#	Compound	LCD ppbv	LCS ppbv	RPD %D	Limit %	Flag * = Out
74-87-3	Chloromethane	0.866	0.991	12	25	
75-01-4	Vinyl chloride	1.103	1.280	14	25	
74-83-9	Bromomethane	1.326	1.432	7	25	
75-35-4	1,1-Dichloroethene	1.147	1.250	8	25	
75-09-2	Dichloromethane	1.015	1.077	6	25	
75-34-3	1,1-Dichloroethane	1.051	1.159	9	25	
156-59-2	cis-1,2-Dichloroethene	0.930	0.980	5	25	
67-66-3	Chloroform	1.134	1.237	8	25	
71-55-6	1,1,1-Trichloroethane	1.020	1.142	11	25	
107-06-2	1,2-Dichloroethane	0.772	0.832	7	25	
71-43-2	Benzene	0.725	0.792	8	25	
56-23-5	Carbon tetrachloride	1.042	1.136	8	25	
78-87-5	1,2-Dichloropropane	0.888	0.962	8	25	
79-01-6	Trichloroethene	0.819	0.875	6	25	
108-88-3	Toluene	0.638	0.671	5	25	
79-00-5	1,1,2-Trichloroethane	0.644	0.624	3	25	
106-93-4	1,2-Dibromoethane	0.578	0.523	9	25	
127-18-4	Tetrachloroethene	0.736	0.754	2	25	
108-90-7	Chlorobenzene	0.576	0.552	4	25	
100-41-4	Ethylbenzene	0.579	0.570	1	25	
108-38-3	m & p-Xylene	1.182	1.156	2	25	
95-47-6	o-Xylene	0.521	0.494	5	25	

QUALITY CONTROL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

LABORATORY CONTROL DUPLICATE

EPA Method TO-15 Modified SIM GC/MS **SDG: LABQC**
Analytical Method: **TO-15 SIM**

File: QC06239C.D
Description: ST0623091
Can/Tube#:
Sam_Type: LCD
QC_Batch: 062309-MS2
Air Volume: 1000 ml

Date Sampled: NA
Date Received: NA
Date Extracted: NA
Date Analyzed: 06/23/09 **Time:** 12:25
Can Dilution Factor: 1.00 3
QC Duplicate: Yes

CAS#	Compound	MDL ppbv	Spike Conc ppbv	Amount ppbv	Matrix Amt ppbv	Spk Amt ppbv	Percent Recovery	LCL %	UCL %	Flag
74-87-3	Chloromethane	0.005	1.044	0.866	0.000	0.866	83	70	130	
75-01-4	Vinyl chloride	0.005	1.268	1.103	0.000	1.103	87	70	130	
74-83-9	Bromomethane	0.005	1.422	1.326	0.000	1.326	93	70	130	
75-35-4	1,1-Dichloroethene	0.005	1.275	1.147	0.000	1.147	90	70	130	
75-09-2	Dichloromethane	0.005	1.090	1.015	0.000	1.015	93	70	130	
75-34-3	1,1-Dichloroethane	0.005	1.159	1.051	0.000	1.051	91	70	130	
156-59-2	cis-1,2-Dichloroethene	0.005	0.966	0.930	0.000	0.930	96	70	130	
67-66-3	Chloroform	0.005	1.234	1.134	0.000	1.134	92	70	130	
71-55-6	1,1,1-Trichloroethane	0.005	1.150	1.020	0.000	1.020	89	70	130	
107-06-2	1,2-Dichloroethane	0.005	0.901	0.772	0.000	0.772	86	70	130	
71-43-2	Benzene	0.005	0.793	0.725	0.000	0.725	91	70	130	
56-23-5	Carbon tetrachloride	0.005	1.158	1.042	0.000	1.042	90	70	130	
78-87-5	1,2-Dichloropropane	0.005	0.976	0.888	0.000	0.888	91	70	130	
79-01-6	Trichloroethene	0.005	0.877	0.819	0.000	0.819	93	70	130	
108-88-3	Toluene	0.005	0.709	0.638	0.000	0.638	90	70	130	
79-00-5	1,1,2-Trichloroethane	0.005	0.710	0.644	0.000	0.644	91	70	130	
106-93-4	1,2-Dibromoethane	0.005	0.611	0.578	0.000	0.578	95	70	130	
127-18-4	Tetrachloroethene	0.005	0.779	0.736	0.000	0.736	94	70	130	
108-90-7	Chlorobenzene	0.005	0.634	0.576	0.000	0.576	91	70	130	
100-41-4	Ethylbenzene	0.005	0.649	0.579	0.000	0.579	89	70	130	
108-38-3	m & p-Xylene	0.010	1.346	1.182	0.000	1.182	88	70	130	
95-47-6	o-Xylene	0.005	0.594	0.521	0.000	0.521	88	70	130	

Surrogate Recovery	Spike Amt. ppbV	Amount ppbV	% Rec.	QC Limits	Flag * = Out
Toluene-d8	0.200	0.217	109	70-130	

Notes: Reported results are to be interpreted to two significant figures.
*ug/m3 calculated assuming conditions at 60 F and 1 atm.

QUANTITATION REPORT

EPA Method TO-15 Modified SIM GC/MS

			Review	EAS Sample ID: QC06239	
File Name:	QC06239C.D				1 SS
Sample ID:	ST0623091				2 KB
Date:	23 Jun 109 12:25 pm			Cal Amounts	3 AT
Run Method:	2EXSIM_I.M			IS Areas	4 BB
Quant Method:	2EXSIM_I.M			Carryover	5 SH
Cal Update:	Mon Jun 22 09:18:18 2009				
Template:	EARTEXSM.MS3				
Can Factor:	1.00				
Volume:	1000	ml		Analyst: SS 1	

CAS#	Compound	n	Raw Amount	RT	Target RT	Ion	Sample Area	Qualifier	Lower Qual	Upper Qual	Qual Flag	Cal Flag	Int Flag
74-87-3	Chloromethane	3	0.866	4.16	4.12	50.00	308375	24	21	32			
75-01-4	Vinyl chloride	5	1.103	4.42	4.37	62.00	282098	34	28	42			
74-83-9	Bromomethane	6	1.326	5.02	4.97	94.00	325020	96	69	104			
75-35-4	1,1-Dichloroethene	9	1.147	7.01	6.95	61.00	609481	49	37	56			
75-09-2	Dichloromethane	11	1.015	7.48	7.42	84.00	274302	67	51	77			
75-34-3	1,1-Dichloroethane	14	1.051	9.08	9.00	63.00	615275	34	25	37			
156-59-2	cis-1,2-Dichloroethene	15	0.930	10.30	10.24	96.00	346096	151	102	153			
67-66-3	Chloroform	17	1.134	10.72	10.66	83.00	876225	71	52	78			
71-55-6	1,1,1-Trichloroethane	18	1.020	11.96	11.91	97.00	872209	70	53	80			
107-06-2	1,2-Dichloroethane	19	0.772	12.07	12.02	61.95	1212929	17	14	21			
71-43-2	Benzene	20	0.725	12.68	12.63	78.00	871974	17	16	23			
56-23-5	Carbon tetrachloride	21	1.042	12.71	12.66	116.90	766402	99	79	119			
78-87-5	1,2-Dichloropropane	22	0.888	14.25	14.20	63.00	360256	165	126	189			
79-01-6	Trichloroethene	23	0.819	14.31	14.26	130.00	394431	105	75	112			
108-88-3	Toluene	26	0.638	17.27	17.21	91.00	1085051	70	53	80			
79-00-5	1,1,2-Trichloroethane	28	0.644	17.37	17.35	97.00	462814	82	63	94			
106-93-4	1,2-Dibromoethane	29	0.578	19.03	18.99	107.00	768586	101	76	114			
127-18-4	Tetrachloroethene	30	0.736	19.13	19.09	166.00	445394	81	64	97			
108-90-7	Chlorobenzene	31	0.576	20.63	20.59	112.00	983679	35	27	40			
100-41-4	Ethylbenzene	33	0.579	21.10	21.08	91.00	1802626	28	24	36			
108-38-3	m & p-Xylene	34	1.182	21.41	21.37	91.00	2797614	52	42	63			
95-47-6	o-Xylene	36	0.521	22.38	22.34	91.00	1574090	49	38	56			
3114-55-4	Chlorobenzene-d5	1	0.200	20.55	20.51	117.00	1313676						
2037-26-5	Toluene-d8	16	0.217	17.08	17.05	98.00	606619						

Integration Flags:

If no flag the Integration was done by the instrument computer

M1 Manual Integration because the computer did not integrated the peak or integrated the wrong peak

M2 Manual Integration because computer integration of baseline was different then Inital Calibration

INITIAL CALIBRATION REPORT

EPA Method TO-15 Modified SIM GC/MS

File Name:	QC06239C.D	SDG:	LABQC
Sample ID:	ST0623091	QC_Batch:	062309-MS2
Sample Analysis Date:	23 Jun 109 12:25 pm	Instrument Name:	MS2
Run Method:	2EXSIM_I.M	Number Compounds:	49
Quant and Calibration Method:	2EXSIM_I.M	IS1: ST60360	0.2
Cal Update:	Mon Jun 22 09:18:18 2009	IS2:	
Template:	EARTEXSM.MS3	IS3:	
		IS4:	

Calibration Title:EPA T0-15

		Calibration Amount CA, ppmv						Calibration Response, Area					
		Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
		Amt	Amt	Amt	Amt	Amt	Amt	C06199B.D	C06199H.D	C06199A.D	C06199F.D	C06199E.D	C06199K.D
n	Compound	10.0	0.5	20.0	2.0	4.0	1.0	10.0	0.5	20.0	2.0	4.0	1.0
3	Chloromethane	1.020	0.051	2.040	0.204	0.408	0.102	268477	16811	877342	29933	189687	27154
5	Vinyl chloride	1.040	0.052	2.080	0.208	0.416	0.104	184476	12222	596605	24865	140317	19936
6	Bromomethane	1.040	0.052	2.080	0.208	0.416	0.104	193900	12685	547447	21277	126567	19683
9	1,1-Dichloroethene	1.040	0.052	2.080	0.208	0.416	0.104	388365	27969	1185798	47507	301017	40726
11	Dichloromethane	1.040	0.052	2.080	0.208	0.416	0.104	180065	15163	530282	25781	167890	19971
14	1,1-Dichloroethane	1.010	0.051	2.020	0.202	0.404	0.101	403912	31159	1225807	51920	327340	43151
15	cis-1,2-Dichloroethene	1.030	0.052	2.060	0.206	0.412	0.103	240146	21098	758337	35003	226396	27004
17	Chloroform	1.020	0.051	2.040	0.204	0.408	0.102	510308	42620	1697577	69088	427372	57851
18	1,1,1-Trichloroethane	1.020	0.051	2.040	0.204	0.408	0.102	587705	46722	1955378	75018	469425	61727
19	1,2-Dichloroethane	1.030	0.052	2.060	0.206	0.412	0.103	1236150	74052	4935278	125964	835756	97954
20	Benzene	1.030	0.052	2.060	0.206	0.412	0.103	967913	60686	3573129	94902	641363	73510
21	Carbon tetrachloride	1.020	0.051	2.040	0.204	0.408	0.102	492544	40672	1579809	67130	410007	53667
22	1,2-Dichloropropane	1.030	0.052	2.060	0.206	0.412	0.103	280915	22034	957916	37485	236197	27080
23	Trichloroethene	1.030	0.052	2.060	0.206	0.412	0.103	305786	29555	968228	45278	286372	33459
26	Toluene	1.030	0.052	2.060	0.206	0.412	0.103	1260474	90214	4659514	149575	935329	102952
28	1,1,2-Trichloroethane	1.020	0.051	2.040	0.204	0.408	0.102	480870	37160	1655491	70973	441832	43484
29	1,2-Dibromoethane	1.040	0.052	2.080	0.208	0.416	0.104	915216	67709	3403871	130478	834780	79525
30	Tetrachloroethene	1.020	0.051	2.040	0.204	0.408	0.102	373918	35806	1224836	58411	374447	38753
31	Chlorobenzene	1.020	0.051	2.040	0.204	0.408	0.102	1017786	104021	3390004	174301	1040689	105228
33	Ethylbenzene	1.040	0.052	2.080	0.208	0.416	0.104	2140675	173953	7709871	303124	1882967	181776
34	m & p-Xylene	2.060	0.103	4.120	0.412	0.824	0.206	2970894	279033	10312056	481458	2872586	284680
36	o-Xylene	1.020	0.051	2.040	0.204	0.408	0.102	1996168	168269	6920115	304155	1831287	166711

n	Compound	Amt 10.0	Amt 0.5	Amt 20.0	Amt 2.0	Amt 4.0	Amt 1.0	C06199B.D 10.0	C06199H.D 0.5	C06199A.D 20.0	C06199F.D 2.0	C06199E.D 4.0	C06199K.D 1.0
1	Chlorobenzene-d5	0.200	0.200	0.200	0.200	0.200	0.200	877690	1273169	1660044	554145	1807068	927887
16	Toluene-d8	0.200	0.200	0.200	0.200	0.200	0.200	389596	565545	652462	236781	753686	395034

(350)

INITIAL CALIBRATION REPORT: Response Factors

SDG:	**LABQC**	**Sample Calculation:**	
QC_Batch:	**062309-MS2**	1) Avg RFn = Sum	$\left[\frac{(Astdni)}{(Cstdni)} \cdot \frac{(Cistdi)}{(Aistdi)}\right]_i$
Sample ID:	ST0623091		
Sample Analysis Date:	23 Jun 109 12:25 pm		
Run Method:	2EXSIM_I.M		
Quant Method:	2EXSIM_I.M		
Cal Update:	Mon Jun 22 09:18:18 2009		
Template:	EARTEXSM.MS3		

Response Factors

Compound	RF1	RF2	RF3	RF4	RF5	RF6	AvgRFn	%RSD
Chloromethane	0.060	0.052	0.052	0.053	0.051	0.057	0.054	6.60
Vinyl chloride	0.040	0.037	0.035	0.043	0.037	0.041	0.039	8.23
Bromomethane	0.042	0.038	0.032	0.037	0.034	0.041	0.037	11.03
1,1-Dichloroethene	0.085	0.084	0.069	0.082	0.080	0.084	0.081	7.72
Dichloromethane	0.039	0.046	0.031	0.045	0.045	0.041	0.041	13.70
1,1-Dichloroethane	0.091	0.096	0.073	0.093	0.090	0.092	0.089	9.11
cis-1,2-Dichloroethene	0.053	0.064	0.044	0.061	0.061	0.057	0.057	12.56
Chloroform	0.114	0.131	0.100	0.122	0.116	0.122	0.118	8.89
1,1,1-Trichloroethane	0.131	0.144	0.115	0.133	0.127	0.130	0.130	7.04
1,2-Dichloroethane	0.273	0.224	0.289	0.221	0.225	0.205	0.239	13.97
Benzene	0.214	0.183	0.209	0.166	0.172	0.154	0.183	13.13
Carbon tetrachloride	0.110	0.125	0.093	0.119	0.111	0.113	0.112	9.60
1,2-Dichloropropane	0.062	0.067	0.056	0.066	0.063	0.057	0.062	7.25
Trichloroethene	0.068	0.089	0.057	0.079	0.077	0.070	0.073	15.26
Toluene	0.279	0.273	0.273	0.262	0.251	0.215	0.259	9.02
1,1,2-Trichloroethane	0.107	0.114	0.098	0.126	0.120	0.092	0.109	11.85
1,2-Dibromoethane	0.201	0.205	0.197	0.226	0.222	0.165	0.203	10.84
Tetrachloroethene	0.084	0.110	0.072	0.103	0.102	0.082	0.092	16.20
Chlorobenzene	0.227	0.320	0.200	0.308	0.282	0.222	0.260	19.25
Ethylbenzene	0.469	0.525	0.447	0.526	0.501	0.377	0.474	12.05
m & p-Xylene	0.329	0.426	0.302	0.422	0.386	0.298	0.360	16.21
o-Xylene	0.446	0.518	0.409	0.538	0.497	0.352	0.460	15.46
Chlorobenzene-d5	1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.00
Toluene-d8	0.444	0.444	0.393	0.427	0.417	0.426	0.425	4.48

CALCULATIONS

EPA Method TO-15 Modified SIM GC/MS

SDG: LABQC
Laboratory Number: QC06239

RL:	2EXSIM_I.M
Run Method:	2EXSIM_I.M
Quant Method:	2EXSIM_I.M
Can Dilution Factor:	1.00
Air Volume:	1000 ml
Gas Constant:	23.68
Decimal Places:	3

Compound	M.W.	Raw Amount	Result ppbv	Result ug/m3	(1) MDL ppbv	(2) RL ppbv	Calc MDL ppbv	Calc MDL ug/m3	Calc RL ppbv	Calc RL ug/m3	Flag	ST0623091 Spike ppmv
Chloromethane	50.5	0.866	0.866	1.846	0.005	0.051	0.01	0.011	0.05	0.109		1.044
Vinyl chloride	62.5	1.103	1.103	2.910	0.005	0.052	0.01	0.014	0.05	0.137		1.268
Bromomethane	94.9	1.326	1.326	5.314	0.005	0.052	0.01	0.021	0.05	0.208		1.422
1,1-Dichloroethene	96.9	1.147	1.147	4.695	0.005	0.052	0.01	0.021	0.05	0.213		1.275
Dichloromethane	84.9	1.015	1.015	3.640	0.005	0.052	0.01	0.019	0.05	0.186		1.090
1,1-Dichloroethane	99.0	1.051	1.051	4.394	0.005	0.051	0.01	0.021	0.05	0.213		1.159
cis-1,2-Dichloroethene	96.9	0.930	0.930	3.806	0.005	0.052	0.01	0.021	0.05	0.213		0.966
Chloroform	119.4	1.134	1.134	5.717	0.005	0.051	0.01	0.026	0.05	0.257		1.234
1,1,1-Trichloroethane	133.4	1.020	1.020	5.746	0.005	0.051	0.01	0.029	0.05	0.287		1.150
1,2-Dichloroethane	99.0	0.772	0.772	3.226	0.005	0.052	0.01	0.022	0.05	0.217		0.901
Benzene	78.1	0.725	0.725	2.391	0.005	0.052	0.01	0.017	0.05	0.172		0.793
Carbon tetrachloride	153.8	1.042	1.042	6.766	0.005	0.051	0.01	0.033	0.05	0.331		1.158
1,2-Dichloropropane	113.0	0.888	0.888	4.238	0.005	0.052	0.01	0.025	0.05	0.248		0.976
Trichloroethene	131.4	0.819	0.819	4.546	0.005	0.052	0.01	0.029	0.05	0.289		0.877
Toluene	92.1	0.638	0.638	2.483	0.005	0.052	0.01	0.020	0.05	0.202		0.709
1,1,2-Trichloroethane	133.4	0.644	0.644	3.625	0.005	0.051	0.01	0.029	0.05	0.287		0.710
1,2-Dibromoethane	187.9	0.578	0.578	4.583	0.005	0.052	0.01	0.041	0.05	0.413		0.611
Tetrachloroethene	165.8	0.736	0.736	5.152	0.005	0.051	0.01	0.036	0.05	0.357		0.779
Chlorobenzene	112.6	0.576	0.576	2.737	0.005	0.051	0.01	0.024	0.05	0.243		0.634
Ethylbenzene	106.2	0.579	0.579	2.596	0.005	0.052	0.01	0.023	0.05	0.233		0.649
m & p-Xylene	106.2	1.182	1.182	5.303	0.010	0.103	0.01	0.046	0.10	0.462		1.346
o-Xylene	106.2	0.521	0.521	2.336	0.005	0.051	0.01	0.023	0.05	0.229		0.594

SAMPLE CALCULATION

EPA Method TO-15 Modified SIM GC/MS

SDG:		**LABQC**
Laboratory Number:		**QC06239**
Standard Volume	STV	0.5
Sample Volume	SV	1000
Can Dilution Factor	CDF	1.00
Gas Constant		23.68
Decimal Places:		3

Sample Calculation:

1) Avg RFn = Sum $\left| \frac{(Astdni)}{(Cstdni)} \frac{(Cistdi)}{(Aistdi)} \right|_i$ Note: 1

2) Raw Amt = $\frac{(Ansamp)}{(Avg\ RFn)} \frac{(Cistdi)}{(Aistdi)}$ = Cn

3) Amount ppbv = $\frac{(Raw\ Amt)\ 1000}{(SV)}$ (CDF) (STV)

4) Amount ug/m3 = $\frac{(amt(ppbv)\ MW}{23.68}$

n	Compound	IS n	Chem type	MW	AvgRFn	Area Ansamp	Cistdi ppmv	Aistdi Ais	Cn ppmV Raw Amt	Amount ppbv	Amount ug/m3
3	Chloromethane	1	TRG	50.5	0.054	308375	0.200	1313676	0.866	0.866	1.847
5	Vinyl chloride	1	TRG	62.5	0.039	282098	0.200	1313676	1.103	1.103	2.911
6	Bromomethane	1	TRG	94.9	0.037	325020	0.200	1313676	1.326	1.326	5.314
9	1,1-Dichloroethene	1	TRG	96.9	0.081	609481	0.200	1313676	1.147	1.147	4.694
11	Dichloromethane	1	TRG	84.9	0.041	274302	0.200	1313676	1.015	1.015	3.639
14	1,1-Dichloroethane	1	TRG	99.0	0.089	615275	0.200	1313676	1.051	1.051	4.394
15	cis-1,2-Dichloroethene	1	TRG	96.9	0.057	346096	0.200	1313676	0.930	0.930	3.806
17	Chloroform	1	TRG	119.4	0.118	876225	0.200	1313676	1.134	1.134	5.718
18	1,1,1-Trichloroethane	1	TRG	133.4	0.130	872209	0.200	1313676	1.020	1.020	5.746
19	1,2-Dichloroethane	1	TRG	99.0	0.239	1212929	0.200	1313676	0.772	0.772	3.228
20	Benzene	1	TRG	78.1	0.183	871974	0.200	1313676	0.725	0.725	2.391
21	Carbon tetrachloride	1	TRG	153.8	0.112	766402	0.200	1313676	1.042	1.042	6.768
22	1,2-Dichloropropane	1	TRG	113.0	0.062	360256	0.200	1313676	0.888	0.888	4.238
23	Trichloroethene	1	TRG	131.4	0.073	394431	0.200	1313676	0.819	0.819	4.545
26	Toluene	1	TRG	92.1	0.259	1085051	0.200	1313676	0.638	0.638	2.481
28	1,1,2-Trichloroethane	1	TRG	133.4	0.109	462814	0.200	1313676	0.644	0.644	3.628
29	1,2-Dibromoethane	1	TRG	187.9	0.203	768586	0.200	1313676	0.578	0.578	4.586
30	Tetrachloroethene	1	TRG	165.8	0.092	445394	0.200	1313676	0.736	0.736	5.153
31	Chlorobenzene	1	TRG	112.6	0.260	983679	0.200	1313676	0.576	0.576	2.739
33	Ethylbenzene	1	TRG	106.2	0.474	1802626	0.200	1313676	0.579	0.579	2.597
34	m & p-Xylene	1	TRG	106.2	0.360	2797614	0.200	1313676	1.182	1.182	5.301
36	o-Xylene	1	TRG	106.2	0.460	1574090	0.200	1313676	0.521	0.521	2.337
1	Chlorobenzene-d5	1	IS	0.0	1.000	1313676	0.200	1313676	0.000	0.000	0.000
16	Toluene-d8	1	SURR	0.0	0.425	606619	0.200	1313676	0.000	0.000	0.000

Calculation Definitions:

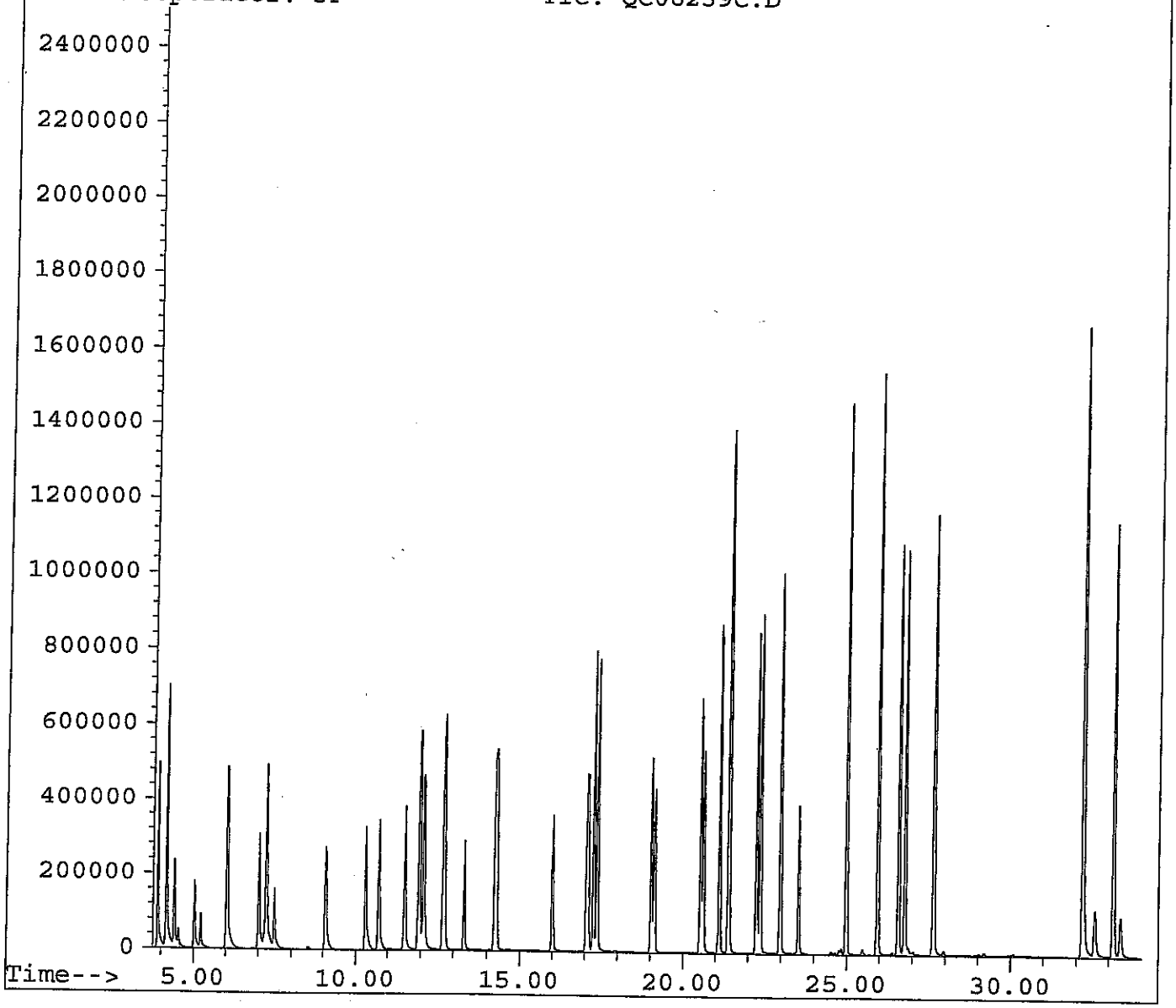
n	compound n
i	i th calibration level
Astdni	Standard Area for compound n at ith calibration level
Cstdni	Standard Concentration for compound n at ith calibration level in ppmv
Cistdi	Internal Standard Conc used for compound n at ith calibration level in ppmv
Aistdi	Internal Standard Area used for compound n at ith calibration level
Ansamp	Sample Area for compound n
Avg RFn	Average response factor for all ith calibration levels for compound n
Raw Amount	Sample Concentration in ppmv before applying factors
Cistd	Concentration internal standard used for compound n in sample in ppmv
Aistd	Area of internal standard used for compound n in sample
Cn	Concentration of compound n in sample in ppmv
23.68	Gas constant at 60 F as per EPA source test protocol
MW	Molecular weight of compound

Note (1) : Avg RFn — The values for the Average Response Factor AvgRFn can be optained from the response Factor Report for the Initial Calibration, or from the Calibration Report

Name of file: C:\HPCHEM\1\DATA\06239MS2\QC06239C.D

Name of operator: JF

TIC: QC06239C.D



ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified SIM GC/MS
Analytical Method: TO-15 SIM

SDG: 209270
Laboratory Number: 05

File: 0927005A.D
Description: 44-010
Can/Tube#: 633
Sam_Type: SA
QC_Batch: 062309-MS2
Air Volume: 500 ml

Date Sampled: 06/16/09 **Time:** 15:45
Date Received: 06/17/09
Date Extracted:
Date Analyzed: 06/23/09 **Time:** 14:00
Can Dilution Factor: 1.70 3
Not Detected Flag: ND

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
75-01-4	Vinyl chloride	0.018	0.177	ND	0.047	0.467	ND	ND
75-35-4	1,1-Dichloroethene	0.018	0.177	ND	0.072	0.723	ND	ND
75-34-3	1,1-Dichloroethane	0.017	0.173	ND	0.072	0.725	ND	ND
156-59-2	cis-1,2-Dichloroethene	0.018	0.177	0.042	0.072	0.723	0.172	J
107-06-2	1,2-Dichloroethane	0.018	0.177	0.046	0.074	0.739	0.192	J
71-43-2	Benzene	0.018	0.177	0.504	0.058	0.583	1.661	
56-23-5	Carbon tetrachloride	0.017	0.173	0.158	0.113	1.126	1.027	J
79-01-6	Trichloroethene	0.018	0.177	0.554	0.098	0.981	3.073	
75-27-4	Bromodichloromethane	0.012	0.116	ND	0.080	0.800	ND	ND
79-00-5	1,1,2-Trichloroethane	0.017	0.173	0.019	0.098	0.977	0.106	J
127-18-4	Tetrachloroethene	0.017	0.173	0.057	0.121	1.214	0.398	J
108-38-3	m & p-Xylene	0.035	0.350	1.876	0.157	1.571	8.414	
95-47-6	o-Xylene	0.017	0.173	0.592	0.078	0.778	2.657	
79-34-5	1,1,2,2-Tetrachloroethane	0.017	0.173	ND	0.123	1.229	ND	ND
120-82-1	1,2,4-Trichlorobenzene	0.018	0.177	0.079	0.135	1.354	0.604	J
123-91-1	1,4 Dioxane	0.013	0.126	ND	0.047	0.468	ND	ND
91-20-3	Naphthalene	0.036	0.364	0.082	0.197	1.970	0.445	J

	Surrogate Recovery	Spike Amt. ppbV	Amount ppbV	% Rec.	QC Limits	Flag * = Out
2037-26-5	Toluene-d8	0.200	0.203	101	70-130	

Notes: 1) Reported results are to be interpreted to two significant figures.
2) ug/m3 = ppbV*FW/23.68 calculated assuming conditions at 60 F and 1 atm.
3) MDL and RL are adjusted for sample volume and can dilution.
4) U and ND are Flags used for Not Detected
5) J is a flag for a result between the MDL and the RL (or lower quantitation limit, LQL)

QUANTITATION REPORT

EPA Method TO-15 Modified SIM GC/MS

		Review	EAS Sample ID: 0927005	
File Name:	0927005A.D			1 SS
Sample ID:	44-010			2 KB
Date:	23 Jun 109 2:00 pm		Cal Amounts	3 AT
Run Method:	2EXSIM_I.M		IS Areas	4 BB
Quant Method:	2EXSIM_I.M		Carryover	5 SH
Cal Update:	Mon Jun 22 09:18:18 2009			
Template:	EARTEXSM.MS3			
Can Factor:	1.70			
Volume:	500 ml		Analyst: SS 1	

CAS#	Compound	n	Raw Amount	RT	Target RT	Ion	Sample Area	Qualifier	Lower Qual	Upper Qual	Qual Flag	Cal Flag	Int Flag
75-01-4	Vinyl chloride	5	0.000	4.35	4.37	62.00	0	0	28	42			
75-35-4	1,1-Dichloroethene	9	0.000	7.00	6.95	61.00	0	0	37	56			
75-34-3	1,1-Dichloroethane	14	0.000	9.00	9.00	63.00	0	0	25	37			
156-59-2	cis-1,2-Dichloroethene	15	0.012	10.37	10.24	96.00	4478	145	102	153			
107-06-2	1,2-Dichloroethane	19	0.014	12.12	12.02	61.95	20665	17	14	21			
71-43-2	Benzene	20	0.148	12.73	12.63	78.00	173399	17	16	23			
56-23-5	Carbon tetrachloride	21	0.047	12.76	12.66	116.90	33303	91	79	119			
79-01-6	Trichloroethene	23	0.163	14.33	14.26	130.00	76325	102	75	112			
75-27-4	Bromodichloromethane	24	0.000	14.68	14.57	83.00	0	0	52	78			
79-00-5	1,1,2-Trichloroethane	28	0.006	17.40	17.35	97.00	3856	76	63	94			
127-18-4	Tetrachloroethene	30	0.017	19.15	19.09	166.00	9839	126	64	97	Q		
108-38-3	m & p-Xylene	34	0.552	21.41	21.37	91.00	1270581	50	42	63			
95-47-6	o-Xylene	36	0.174	22.38	22.34	91.00	512388	43	38	56			
79-34-5	1,1,2,2-Tetrachloroethane	37	0.000	22.91	22.93	83.00	0	0	8	12			
120-82-1	1,2,4-Trichlorobenzene	45	0.023	32.18	32.17	180.00	294671	101	79	118			
123-91-1	1,4 Dioxane	47	0.000	14.65	14.57	88.00	0	0	55	82			
91-20-3	Naphthalene	48	0.024	32.56	32.78	128.00	1036809	0	0	0			
3114-55-4	Chlorobenzene-d5	1	0.200	20.55	20.51	117.00	1278502						
2037-26-5	Toluene-d8	16	0.203	17.11	17.05	98.00	550865						

Integration Flags:

If no flag the Integration was done by the instrument computer

M1 Manual Integration because the computer did not integrated the peak or integrated the wrong peak

M2 Manual Integration because computer integration of baseline was different then Inital Calibration

INITIAL CALIBRATION REPORT

EPA Method TO-15 Modified SIM GC/MS

SDG: 209270
QC_Batch: 062309-MS2
Instrument Name: MS2

File Name: 0927005A.D
Sample ID: 44-010
Sample Analysis Date: 23 Jun 109 2:00 pm
Run Method: 2EXSIM_I.M
Quant and Calibration Method: 2EXSIM_I.M
Cal Update: Mon Jun 22 09:18:18 2009
Template: EARTEXSM.MS3

Calibration Title: EPA T0-15

Number Compounds: 49
IS1: ST60024 0.2
IS2:
IS3:
IS4:

		Calibration Amount CA, ppmv						Calibration Response, Area					
		Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
		Amt	Amt	Amt	Amt	Amt	Amt	C06199B.D	C06199H.D	C06199A.D	C06199F.D	C06199E.D	C06199K.D
n	Compound	10.0	0.5	20.0	2.0	4.0	1.0	10.0	0.5	20.0	2.0	4.0	1.0
5	Vinyl chloride	1.040	0.052	2.080	0.208	0.416	0.104	184476	12222	596605	24865	140317	19936
9	1,1-Dichloroethene	1.040	0.052	2.080	0.208	0.416	0.104	388365	27969	1185798	47507	301017	40726
14	1,1-Dichloroethane	1.010	0.051	2.020	0.202	0.404	0.101	403912	31159	1225807	51920	327340	43151
15	cis-1,2-Dichloroethene	1.030	0.052	2.060	0.206	0.412	0.103	240146	21098	758337	35003	226396	27004
19	1,2-Dichloroethane	1.030	0.052	2.060	0.206	0.412	0.103	1236150	74052	4935278	125964	835756	97954
20	Benzene	1.030	0.052	2.060	0.206	0.412	0.103	967913	60686	3573129	94902	641363	73510
21	Carbon tetrachloride	1.020	0.051	2.040	0.204	0.408	0.102	492544	40672	1579809	67130	410007	53667
23	Trichloroethene	1.030	0.052	2.060	0.206	0.412	0.103	305786	29555	968228	45278	286372	33459
24	Bromodichloromethane	0.670	0.034	1.340	0.134	0.268	0.067	349165	34872	980125	57413	329960	43188
28	1,1,2-Trichloroethane	1.020	0.051	2.040	0.204	0.408	0.102	480870	37160	1655491	70973	441832	43484
30	Tetrachloroethene	1.020	0.051	2.040	0.204	0.408	0.102	373918	35806	1224836	58411	374447	38753
34	m & p-Xylene	2.060	0.103	4.120	0.412	0.824	0.206	2970894	279033	10312056	481458	2872586	284680
36	o-Xylene	1.020	0.051	2.040	0.204	0.408	0.102	1996168	168269	6920115	304155	1831287	166711
37	1,1,2,2-Tetrachloroethane	1.020	0.051	2.040	0.204	0.408	0.102	2273482	192188	6988630	401655	2300254	180334
45	1,2,4-Trichlorobenzene	1.030	0.052	2.060	0.206	0.412	0.103	6381826	918959	14261028	1761172	9410822	617532
47	1,4 Dioxane	0.740	0.037	1.480	0.148	0.296	0.074	154378	17449	450267	31614	179188	26330
48	Naphthalene	2.130	0.107	-1.000	0.426	0.852	0.213	34587722	6597377	-1	12354059	37178978	4780301
1	Chlorobenzene-d5	0.200	0.200	0.200	0.200	0.200	0.200	877690	1273169	1660044	554145	1807068	927887
16	Toluene-d8	0.200	0.200	0.200	0.200	0.200	0.200	389596	565545	652462	236781	753686	395034

(357)

INITIAL CALIBRATION REPORT: Response Factors

SDG:	**209270**	**Sample Calculation:**	
QC_Batch:	**062309-MS2**	1) Avg RFn = Sum	$\frac{(Astdni)\ (Cistdi)}{(Cstdni)\ (Aistdi)}$ i
Sample ID:	44-010		
Sample Analysis Date:	23 Jun 109 2:00 pm		
Run Method:	2EXSIM_I.M		
Quant Method:	2EXSIM_I.M		
Cal Update:	Mon Jun 22 09:18:18 2009		
Template:	EARTEXSM.MS3		

Response Factors

Compound	RF1	RF2	RF3	RF4	RF5	RF6	AvgRFn	%RSD
Vinyl chloride	0.040	0.037	0.035	0.043	0.037	0.041	0.039	8.23
1,1-Dichloroethene	0.085	0.084	0.069	0.082	0.080	0.084	0.081	7.72
1,1-Dichloroethane	0.091	0.096	0.073	0.093	0.090	0.092	0.089	9.11
cis-1,2-Dichloroethene	0.053	0.064	0.044	0.061	0.061	0.057	0.057	12.56
1,2-Dichloroethane	0.273	0.224	0.289	0.221	0.225	0.205	0.239	13.97
Benzene	0.214	0.183	0.209	0.166	0.172	0.154	0.183	13.13
Carbon tetrachloride	0.110	0.125	0.093	0.119	0.111	0.113	0.112	9.60
Trichloroethene	0.068	0.089	0.057	0.079	0.077	0.070	0.073	15.26
Bromodichloromethane	0.119	0.161	0.088	0.155	0.136	0.139	0.133	19.96
1,1,2-Trichloroethane	0.107	0.114	0.098	0.126	0.120	0.092	0.109	11.85
Tetrachloroethene	0.084	0.110	0.072	0.103	0.102	0.082	0.092	16.20
m & p-Xylene	0.329	0.426	0.302	0.422	0.386	0.298	0.360	16.21
o-Xylene	0.446	0.518	0.409	0.538	0.497	0.352	0.460	15.46
1,1,2,2-Tetrachloroethane	0.508	0.592	0.413	0.711	0.624	0.381	0.538	23.70
1,2,4-Trichlorobenzene	1.412	2.776	0.834	3.086	2.528	1.292	1.988	46.46
1,4 Dioxane	0.048	0.074	0.037	0.077	0.067	0.077	0.063	27.03
Naphthalene	3.700	9.686	NA	10.467	4.830	4.837	6.704	46.62
Chlorobenzene-d5	1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.00
Toluene-d8	0.444	0.444	0.393	0.427	0.417	0.426	0.425	4.48

CALCULATIONS

EPA Method TO-15 Modified SIM GC/MS

SDG: 209270
Laboratory Number: 05

RL:	2EXSIM_I.M
Run Method:	2EXSIM_I.M
Quant Method:	2EXSIM_I.M
Can Dilution Factor:	1.70
Air Volume:	500 ml
Gas Constant:	23.68
Decimal Places:	3

Compound	M.W.	Raw Amount	Result ppbv	Result ug/m3	(1) MDL ppbv	(2) RL ppbv	Calc MDL ppbv	Calc MDL ug/m3	Calc RL ppbv	Calc RL ug/m3	Flag	S062602-1 Spike ppmv
Vinyl chloride	62.5	0.000	0.000	0.000	0.005	0.052	0.02	0.047	0.18	0.467	U	0.103
1,1-Dichloroethene	96.9	0.000	0.000	0.000	0.005	0.052	0.02	0.072	0.18	0.723	U	0.103
1,1-Dichloroethane	99.0	0.000	0.000	0.000	0.005	0.051	0.02	0.072	0.17	0.725	U	0.103
cis-1,2-Dichloroethene	96.9	0.012	0.042	0.172	0.005	0.052	0.02	0.072	0.18	0.723	J	0.103
1,2-Dichloroethane	99.0	0.014	0.046	0.192	0.005	0.052	0.02	0.074	0.18	0.739	J	0.103
Benzene	78.1	0.148	0.504	1.661	0.005	0.052	0.02	0.058	0.18	0.583		0.103
Carbon tetrachloride	153.8	0.047	0.158	1.027	0.005	0.051	0.02	0.113	0.17	1.126	J	0.103
Trichloroethene	131.4	0.163	0.554	3.073	0.005	0.052	0.02	0.098	0.18	0.981		0.103
Bromodichloromethane	163.8	0.000	0.000	0.000	0.003	0.034	0.01	0.080	0.12	0.800	U	0.103
1,1,2-Trichloroethane	133.4	0.006	0.019	0.106	0.005	0.051	0.02	0.098	0.17	0.977	J	0.103
Tetrachloroethene	165.8	0.017	0.057	0.398	0.005	0.051	0.02	0.121	0.17	1.214	J	0.103
m & p-Xylene	106.2	0.552	1.876	8.414	0.010	0.103	0.04	0.157	0.35	1.571		0.103
o-Xylene	106.2	0.174	0.592	2.657	0.005	0.051	0.02	0.078	0.17	0.778		0.103
1,1,2,2-Tetrachloroethane	167.8	0.000	0.000	0.000	0.005	0.051	0.02	0.123	0.17	1.229	U	0.103
1,2,4-Trichlorobenzene	181.4	0.023	0.079	0.604	0.005	0.052	0.02	0.135	0.18	1.354	J	0.103
1,4 Dioxane	88.1	0.000	0.000	0.000	0.004	0.037	0.01	0.047	0.13	0.468	U	1.103
Naphthalene	128.2	0.024	0.082	0.445	0.011	0.107	0.04	0.197	0.36	1.970	J	2.103

SAMPLE CALCULATION

EPA Method TO-15 Modified SIM GC/MS

SDG:		**209270**
Laboratory Number:		**05**
Standard Volume	STV	0.5
Sample Volume	SV	500
Can Dilution Factor	CDF	1.70
Gas Constant		23.68
Decimal Places:		3

Sample Calculation:

1) Avg RFn = Sum $\left| \frac{(Astdni)}{(Cstdni)} \frac{(Cistdi)}{(Aistdi)} \right|_i$ Note: 1

2) Raw Amt = $\frac{(Ansamp)}{(Avg\ RFn)} \frac{(Cistdi)}{(Aistdi)}$ = **Cn**

3) Amount ppbv = $\frac{(Raw\ Amt)}{(SV)} \frac{1000}{} (CDF) (STV)$

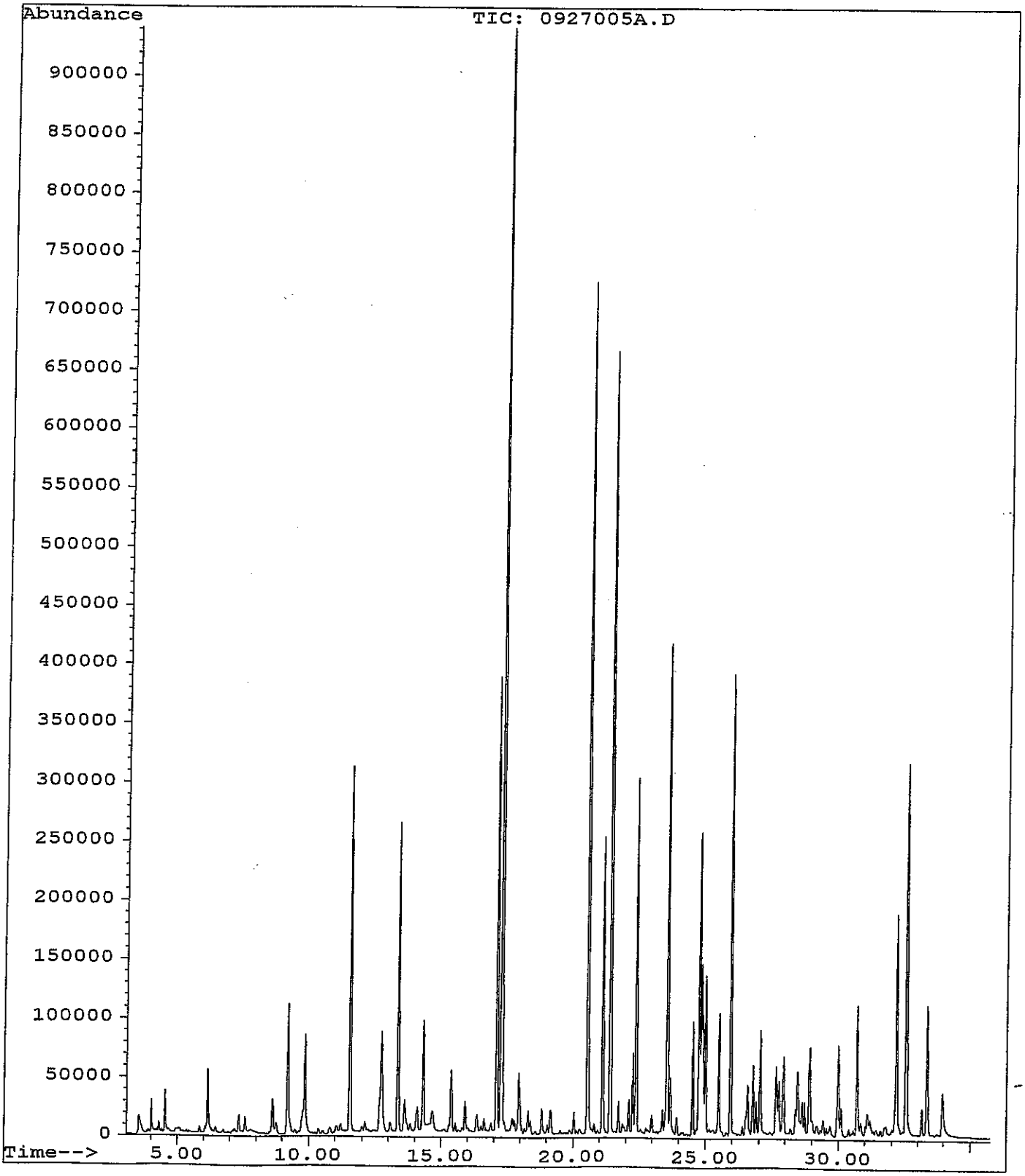
4) Amount ug/m3 = $\frac{(amt(ppbv)}{23.68} \frac{MW}{}$

n	Compound	IS n	Chem type	MW	AvgRFn	Area Ansamp	Cistdi ppmv	Aistdi Ais	Cn ppmV Raw Amt	Amount ppbv	Amount ug/m3
5	Vinyl chloride	1	TRG	62.5	0.039	0	0.200	1278502	0.000	0.000	0.000
9	1,1-Dichloroethene	1	TRG	96.9	0.081	0	0.200	1278502	0.000	0.000	0.000
14	1,1-Dichloroethane	1	TRG	99.0	0.089	0	0.200	1278502	0.000	0.000	0.000
15	cis-1,2-Dichloroethene	1	TRG	96.9	0.057	4478	0.200	1278502	0.012	0.042	0.172
19	1,2-Dichloroethane	1	TRG	99.0	0.239	20665	0.200	1278502	0.014	0.046	0.192
20	Benzene	1	TRG	78.1	0.183	173399	0.200	1278502	0.148	0.504	1.662
21	Carbon tetrachloride	1	TRG	153.8	0.112	33303	0.200	1278502	0.047	0.158	1.026
23	Trichloroethene	1	TRG	131.4	0.073	76325	0.200	1278502	0.163	0.554	3.074
24	Bromodichloromethane	1	TRG	163.8	0.133	0	0.200	1278502	0.000	0.000	0.000
28	1,1,2-Trichloroethane	1	TRG	133.4	0.109	3856	0.200	1278502	0.006	0.019	0.107
30	Tetrachloroethene	1	TRG	165.8	0.092	9839	0.200	1278502	0.017	0.057	0.399
34	m & p-Xylene	1	TRG	106.2	0.360	1270581	0.200	1278502	0.552	1.876	8.413
36	o-Xylene	1	TRG	106.2	0.460	512388	0.200	1278502	0.174	0.592	2.655
37	1,1,2,2-Tetrachloroethane	1	TRG	167.8	0.54	0	0.200	1278502	0.000	0.000	0.000
45	1,2,4-Trichlorobenzene	1	TRG	181.4	1.99	294671	0.200	1278502	0.023	0.079	0.605
47	1,4 Dioxane	1	TRG	88.1	0.06	0	0.200	1278502	0.000	0.000	0.000
48	Naphthalene	1	TRG	128.2	6.70	1036809	0.200	1278502	0.024	0.082	0.444
1	Chlorobenzene-d5	1	IS	0.0	1.000	1278502	0.200	1278502	0.000	0.000	0.000
16	Toluene-d8	1	SURR	0.0	0.425	550865	0.200	1278502	0.000	0.000	0.000

Calculation Definitions:

n	compound n
i	i th calibration level
Astdni	Standard Area for compound n at ith calibration level
Cstdni	Standard Concentration for compound n at ith calibration level in ppmv
Cistdi	Internal Standard Conc used for compound n at ith calibration level in ppmv
Aistdi	Internal Standard Area used for compound n at ith calibration level
Ansamp	Sample Area for compound n
Avg RFn	Average response factor for all ith calibration levels for compound n
Raw Amount	Sample Concentration in ppmv before applying factors
Cistd	Concentration internal standard used for compound n in sample in ppmv
Aistd	Area of internal standard used for compound n in sample
Cn	Concentration of compound n in sample in ppmv
23.68	Gas constant at 60 F as per EPA source test protocol
MW	Molecular weight of compound
Note (1) : Avg RFn	The values for the Average Response Factor AvgRFn can be optained from the response Factor Report for the Initial Calibration, or from the Calibration Report

File : C:\MSCHEM\2\DATA\06239MS2\0927005A.D
Operator : JF
Acquired : 23 Jun 109 2:00 pm using AcqMethod 2EXSIM_I.M
Instrument : MS2
Sample Name: 44-010
Misc Info : SEALASKA
Vial Number: 1



ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified SIM GC/MS
Analytical Method: **TO-15 SIM**

SDG: **209270**
Laboratory Number: **06**

File: 0927006A.D
Description: 44-011
Can/Tube#: 169
Sam_Type: SA
QC_Batch: 062309-MS2
Air Volume: 500 ml

Date Sampled: 06/16/09 **Time:** 14:14
Date Received: 06/17/09
Date Extracted:
Date Analyzed: 06/23/09 **Time:** 14:43
Can Dilution Factor: 1.47 3
Not Detected Flag: ND

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
75-34-3	1,1-Dichloroethane	0.015	0.150	ND	0.063	0.627	ND	ND
156-59-2	cis-1,2-Dichloroethene	0.015	0.153	0.015	0.063	0.626	0.063	J
107-06-2	1,2-Dichloroethane	0.015	0.153	ND	0.064	0.639	ND	ND
71-43-2	Benzene	0.015	0.153	0.335	0.050	0.504	1.103	
56-23-5	Carbon tetrachloride	0.015	0.150	0.088	0.097	0.974	0.573	J
79-01-6	Trichloroethene	0.015	0.153	0.494	0.085	0.848	2.743	
75-27-4	Bromodichloromethane	0.010	0.100	ND	0.069	0.691	ND	ND
79-00-5	1,1,2-Trichloroethane	0.015	0.150	ND	0.084	0.845	ND	ND
127-18-4	Tetrachloroethene	0.015	0.150	0.030	0.105	1.050	0.208	J
108-38-3	m & p-Xylene	0.030	0.303	1.226	0.136	1.358	5.497	
95-47-6	o-Xylene	0.015	0.150	0.385	0.067	0.672	1.728	
120-82-1	1,2,4-Trichlorobenzene	0.015	0.153	0.050	0.117	1.171	0.385	J
123-91-1	1,4 Dioxane	0.011	0.109	0.420	0.040	0.405	1.563	

	Surrogate Recovery	Spike Amt. ppbV	Amount ppbV	% Rec.	QC Limits	Flag * = Out
2037-26-5	Toluene-d8	0.200	0.201	100	70-130	

Notes: 1) Reported results are to be interpreted to two significant figures.
2) ug/m3 = ppbV*FW/23.68 calculated assuming conditions at 60 F and 1 atm.
3) MDL and RL are adjusted for sample volume and can dilution.
4) U and ND are Flags used for Not Detected
5) J is a flag for a result between the MDL and the RL (or lower quantitation limit, LQL)

QUANTITATION REPORT

EPA Method TO-15 Modified SIM GC/MS

			Review	EAS Sample ID: 0927006	
File Name:	0927006A.D				1 SS
Sample ID:	44-011				2 KB
Date:	23 Jun 109 2:43 pm			Cal Amounts	3 AT
Run Method:	2EXSIM_I.M			IS Areas	4 BB
Quant Method:	2EXSIM_I.M			Carryover	5 SH
Cal Update:	Mon Jun 22 09:18:18 2009				
Template:	EARTEXSM.MS3				
Can Factor:	1.47				
Volume:	500	ml		Analyst: SS 1	

CAS#	Compound	n	Raw Amount	RT	Target RT	Ion	Sample Area	Qualifier	Lower Qual	Upper Qual	Qual Flag	Cal Flag	Int Flag
75-34-3	1,1-Dichloroethane	14	0.000	9.04	9.00	63.00	0	0	25	37			
156-59-2	cis-1,2-Dichloroethene	15	0.005	10.34	10.24	96.00	1018	117	102	153			
107-06-2	1,2-Dichloroethane	19	0.004	12.12	12.02	61.95	3634	19	14	21			
71-43-2	Benzene	20	0.114	12.71	12.63	78.00	71197	18	16	23			
56-23-5	Carbon tetrachloride	21	0.030	12.74	12.66	116.90	11487	95	79	119			
79-01-6	Trichloroethene	23	0.168	14.34	14.26	130.00	42114	100	75	112			
75-27-4	Bromodichloromethane	24	0.000	14.73	14.57	83.00	0	0	52	78			
79-00-5	1,1,2-Trichloroethane	28	0.000	17.40	17.35	97.00	0	0	63	94			
127-18-4	Tetrachloroethene	30	0.010	19.14	19.09	166.00	3185	79	64	97			
108-38-3	m & p-Xylene	34	0.417	21.41	21.37	91.00	513063	48	42	63			
95-47-6	o-Xylene	36	0.131	22.38	22.34	91.00	205949	41	38	56			
120-82-1	1,2,4-Trichlorobenzene	45	0.017	32.18	32.17	180.00	116196	96	79	118			
123-91-1	1,4 Dioxane	47	0.143	14.68	14.57	88.00	30844	78	55	82			
3114-55-4	Chlorobenzene-d5	1	0.200	20.55	20.51	117.00	683336						
2037-26-5	Toluene-d8	16	0.201	17.11	17.05	98.00	291750						

Integration Flags:

If no flag the Integration was done by the instrument computer

M1 Manual Integration because the computer did not integrated the peak or integrated the wrong peak

M2 Manual Integration because computer integration of baseline was different then Inital Calibration

INITIAL CALIBRATION REPORT

EPA Method TO-15 Modified SIM GC/MS

SDG: 209270
QC_Batch: 062309-MS2
Instrument Name: MS2

File Name: 0927006A.D
Sample ID: 44-011
Sample Analysis Date: 23 Jun 109 2:43 pm
Run Method: 2EXSIM_I.M
Quant and Calibration Method: 2EXSIM_I.M
Cal Update: Mon Jun 22 09:18:18 2009
Template: EARTEXSM.MS3

Calibration Title: EPA T0-15

Number Compounds: 49
IS1: ST60024 0.2
IS2:
IS3:
IS4:

		Calibration Amount CA, ppmv						Calibration Response, Area					
		Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
		Amt	Amt	Amt	Amt	Amt	Amt	C06199B.D	C06199H.D	C06199A.D	C06199F.D	C06199E.D	C06199K.D
n	Compound	10.0	0.5	20.0	2.0	4.0	1.0	10.0	0.5	20.0	2.0	4.0	1.0
14	1,1-Dichloroethane	1.010	0.051	2.020	0.202	0.404	0.101	403912	31159	1225807	51920	327340	43151
15	cis-1,2-Dichloroethene	1.030	0.052	2.060	0.206	0.412	0.103	240146	21098	758337	35003	226396	27004
19	1,2-Dichloroethane	1.030	0.052	2.060	0.206	0.412	0.103	1236150	74052	4935278	125964	835756	97954
20	Benzene	1.030	0.052	2.060	0.206	0.412	0.103	967913	60686	3573129	94902	641363	73510
21	Carbon tetrachloride	1.020	0.051	2.040	0.204	0.408	0.102	492544	40672	1579809	67130	410007	53667
23	Trichloroethene	1.030	0.052	2.060	0.206	0.412	0.103	305786	29555	968228	45278	286372	33459
24	Bromodichloromethane	0.670	0.034	1.340	0.134	0.268	0.067	349165	34872	980125	57413	329960	43188
28	1,1,2-Trichloroethane	1.020	0.051	2.040	0.204	0.408	0.102	480870	37160	1655491	70973	441832	43484
30	Tetrachloroethene	1.020	0.051	2.040	0.204	0.408	0.102	373918	35806	1224836	58411	374447	38753
34	m & p-Xylene	2.060	0.103	4.120	0.412	0.824	0.206	2970894	279033	10312056	481458	2872586	284680
36	o-Xylene	1.020	0.051	2.040	0.204	0.408	0.102	1996168	168269	6920115	304155	1831287	166711
45	1,2,4-Trichlorobenzene	1.030	0.052	2.060	0.206	0.412	0.103	6381826	918959	14261028	1761172	9410822	617532
47	1,4 Dioxane	0.740	0.037	1.480	0.148	0.296	0.074	154378	17449	450267	31614	179188	26330
1	Chlorobenzene-d5	0.200	0.200	0.200	0.200	0.200	0.200	877690	1273169	1660044	554145	1807068	927887
16	Toluene-d8	0.200	0.200	0.200	0.200	0.200	0.200	389596	565545	652462	236781	753686	395034

(364)

INITIAL CALIBRATION REPORT: Response Factors

SDG:	**209270**
QC_Batch:	**062309-MS2**
Sample ID:	44-011
Sample Analysis Date:	23 Jun 109 2:43 pm
Run Method:	2EXSIM_I.M
Quant Method:	2EXSIM_I.M
Cal Update:	Mon Jun 22 09:18:18 2009
Template:	EARTEXSM.MS3

Sample Calculation:

1) Avg RFn = Sum $\left| \frac{(Astdni)}{(Cstdni)} \frac{(Cistdi)}{(Aistdi)} \right|$

Response Factors

Compound	RF1	RF2	RF3	RF4	RF5	RF6	AvgRFn	%RSD
1,1-Dichloroethane	0.091	0.096	0.073	0.093	0.090	0.092	0.089	9.11
cis-1,2-Dichloroethene	0.053	0.064	0.044	0.061	0.061	0.057	0.057	12.56
1,2-Dichloroethane	0.273	0.224	0.289	0.221	0.225	0.205	0.239	13.97
Benzene	0.214	0.183	0.209	0.166	0.172	0.154	0.183	13.13
Carbon tetrachloride	0.110	0.125	0.093	0.119	0.111	0.113	0.112	9.60
Trichloroethene	0.068	0.089	0.057	0.079	0.077	0.070	0.073	15.26
Bromodichloromethane	0.119	0.161	0.088	0.155	0.136	0.139	0.133	19.96
1,1,2-Trichloroethane	0.107	0.114	0.098	0.126	0.120	0.092	0.109	11.85
Tetrachloroethene	0.084	0.110	0.072	0.103	0.102	0.082	0.092	16.20
m & p-Xylene	0.329	0.426	0.302	0.422	0.386	0.298	0.360	16.21
o-Xylene	0.446	0.518	0.409	0.538	0.497	0.352	0.460	15.46
1,2,4-Trichlorobenzene	1.412	2.776	0.834	3.086	2.528	1.292	1.988	46.46
1,4 Dioxane	0.048	0.074	0.037	0.077	0.067	0.077	0.063	27.03
Chlorobenzene-d5	1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.00
Toluene-d8	0.444	0.444	0.393	0.427	0.417	0.426	0.425	4.48

CALCULATIONS

EPA Method TO-15 Modified SIM GC/MS

SDG: 209270
Laboratory Number: 06

RL:	2EXSIM_I.M
Run Method:	2EXSIM_I.M
Quant Method:	2EXSIM_I.M
Can Dilution Factor:	1.47
Air Volume:	500 ml
Gas Constant:	23.68
Decimal Places:	3

Compound	M.W.	Raw Amount	Result ppbv	Result ug/m3	(1) MDL ppbv	(2) RL ppbv	Calc MDL ppbv	Calc MDL ug/m3	Calc RL ppbv	Calc RL ug/m3	Flag	S062602-1 Spike ppmv
1,1-Dichloroethane	99.0	0.000	0.000	0.000	0.005	0.051	0.01	0.063	0.15	0.627	U	0.103
cis-1,2-Dichloroethene	96.9	0.005	0.015	0.063	0.005	0.052	0.02	0.063	0.15	0.626	J	0.103
1,2-Dichloroethane	99.0	0.004	0.013	0.055	0.005	0.052	0.02	0.064	0.15	0.639	U	0.103
Benzene	78.1	0.114	0.335	1.103	0.005	0.052	0.02	0.050	0.15	0.504		0.103
Carbon tetrachloride	153.8	0.030	0.088	0.573	0.005	0.051	0.01	0.097	0.15	0.974	J	0.103
Trichloroethene	131.4	0.168	0.494	2.743	0.005	0.052	0.02	0.085	0.15	0.848		0.103
Bromodichloromethane	163.8	0.000	0.000	0.000	0.003	0.034	0.01	0.069	0.10	0.691	U	0.103
1,1,2-Trichloroethane	133.4	0.000	0.000	0.000	0.005	0.051	0.01	0.084	0.15	0.845	U	0.103
Tetrachloroethene	165.8	0.010	0.030	0.208	0.005	0.051	0.01	0.105	0.15	1.050	J	0.103
m & p-Xylene	106.2	0.417	1.226	5.497	0.010	0.103	0.03	0.136	0.30	1.358		0.103
o-Xylene	106.2	0.131	0.385	1.728	0.005	0.051	0.01	0.067	0.15	0.672		0.103
1,2,4-Trichlorobenzene	181.4	0.017	0.050	0.385	0.005	0.052	0.02	0.117	0.15	1.171	J	0.103
1,4 Dioxane	88.1	0.143	0.420	1.563	0.004	0.037	0.01	0.040	0.11	0.405		1.103

SAMPLE CALCULATION

EPA Method TO-15 Modified SIM GC/MS

SDG:		**209270**
Laboratory Number:		**06**
Standard Volume	STV	0.5
Sample Volume	SV	500
Can Dilution Factor	CDF	1.47
Gas Constant		23.68
Decimal Places:		3

Sample Calculation:

1) Avg RFn = Sum $\left| \frac{(Astdni)}{(Cstdni)} \frac{(Cistdi)}{(Aistdi)} \right|_i$ Note: 1

2) Raw Amt = $\frac{(Ansamp)}{(Avg\ RFn)} \frac{(Cistdi)}{(Aistdi)}$ = **Cn**

3) Amount ppbv = $\frac{(Raw\ Amt)\ 1000}{(SV)}$ (CDF) (STV)

4) Amount ug/m3 = $\frac{(amt(ppbv)\ MW}{23.68}$

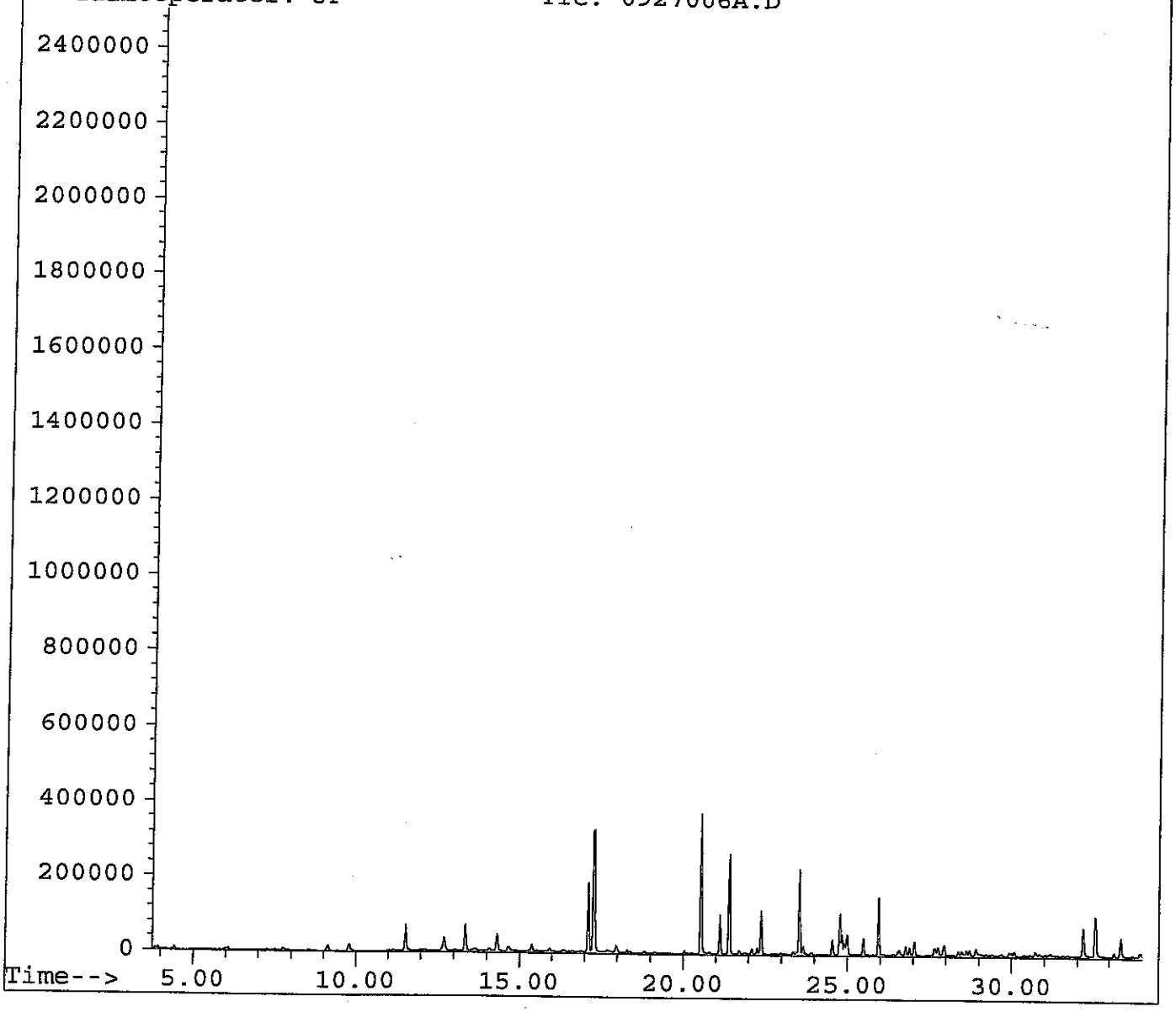
n	Compound	IS n	Chem type	MW	AvgRFn	Area Ansamp	Cistdi ppmv	Aistdi Ais	**Cn** ppmV Raw Amt	Amount ppbv	Amount ug/m3
14	1,1-Dichloroethane	1	TRG	99.0	0.089	0	0.200	683336	0.000	0.000	0.000
15	cis-1,2-Dichloroethene	1	TRG	96.9	0.057	1018	0.200	683336	0.005	0.015	0.061
19	1,2-Dichloroethane	1	TRG	99.0	0.239	3634	0.200	683336	0.004	0.013	0.054
20	Benzene	1	TRG	78.1	0.183	71197	0.200	683336	0.114	0.335	1.105
21	Carbon tetrachloride	1	TRG	153.8	0.112	11487	0.200	683336	0.030	0.088	0.572
23	Trichloroethene	1	TRG	131.4	0.073	42114	0.200	683336	0.168	0.494	2.741
24	Bromodichloromethane	1	TRG	163.8	0.133	0	0.200	683336	0.000	0.000	0.000
28	1,1,2-Trichloroethane	1	TRG	133.4	0.109	0	0.200	683336	0.000	0.000	0.000
30	Tetrachloroethene	1	TRG	165.8	0.092	3185	0.200	683336	0.010	0.030	0.210
34	m & p-Xylene	1	TRG	106.2	0.360	513063	0.200	683336	0.417	1.226	5.498
36	o-Xylene	1	TRG	106.2	0.460	205949	0.200	683336	0.131	0.385	1.727
45	1,2,4-Trichlorobenzene	1	TRG	181.4	1.99	116196	0.200	683336	0.017	0.050	0.383
47	1,4 Dioxane	1	TRG	88.1	0.06	30844	0.200	683336	0.143	0.420	1.563
1	Chlorobenzene-d5	1	IS	0.0	1.000	683336	0.200	683336	0.000	0.000	0.000
16	Toluene-d8	1	SURR	0.0	0.425	291750	0.200	683336	0.000	0.000	0.000

Calculation Definitions:

n	compound n
i	i th calibration level
Astdni	Standard Area for compound n at ith calibration level
Cstdni	Standard Concentration for compound n at ith calibration level in ppmv
Cistdi	Internal Standard Conc used for compound n at ith calibration level in ppmv
Aistdi	Internal Standard Area used for compound n at ith calibration level
Ansamp	Sample Area for compound n
Avg RFn	Average response factor for all ith calibration levels for compound n
Raw Amount	Sample Concentration in ppmv before applying factors
Cistd	Concentration internal standard used for compound n in sample in ppmv
Aistd	Area of internal standard used for compound n in sample
Cn	Concentration of compound n in sample in ppmv
23.68	Gas constant at 60 F as per EPA source test protocol
MW	Molecular weight of compound
Note (1): Avg RFn	The values for the Average Response Factor AvgRFn can be optained from the response Factor Report for the Initial Calibration, or from the Calibration Report

Name of file: C:\HPCHEM\1\DATA\06239MS2\0927006A.D

Name of file: C:\HPCHEM\1\DATA\06239MS2\0927006A.D
Operator: JF TIC: 0927006A.D



ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified SIM GC/MS
Analytical Method: **TO-15 SIM**

SDG: **209270**
Laboratory Number: **08**

File: 0927008A.D
Description: 44-013
Can/Tube#: 782
Sam_Type: SA
QC_Batch: 062309-MS2
Air Volume: 500 ml

Date Sampled: 06/16/09 **Time:** 16:33
Date Received: 06/17/09
Date Extracted:
Date Analyzed: 06/23/09 **Time:** 17:28
Can Dilution Factor: 1.67 3
Not Detected Flag: ND

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
75-34-3	1,1-Dichloroethane	0.017	0.170	ND	0.071	0.712	ND	ND
156-59-2	cis-1,2-Dichloroethene	0.017	0.174	0.023	0.071	0.711	0.095	J
107-06-2	1,2-Dichloroethane	0.017	0.174	ND	0.073	0.726	ND	ND
71-43-2	Benzene	0.017	0.174	0.362	0.057	0.573	1.193	
56-23-5	Carbon tetrachloride	0.017	0.170	0.099	0.111	1.106	0.641	J
79-01-6	Trichloroethene	0.017	0.174	0.825	0.096	0.964	4.579	
75-27-4	Bromodichloromethane	0.011	0.114	ND	0.079	0.786	ND	ND
79-00-5	1,1,2-Trichloroethane	0.017	0.170	ND	0.096	0.960	ND	ND
127-18-4	Tetrachloroethene	0.017	0.170	0.060	0.119	1.193	0.423	J
108-38-3	m & p-Xylene	0.034	0.344	1.423	0.154	1.543	6.381	
95-47-6	o-Xylene	0.017	0.170	0.453	0.076	0.764	2.030	
120-82-1	1,2,4-Trichlorobenzene	0.017	0.174	0.035	0.133	1.330	0.269	J
123-91-1	1,4 Dioxane	0.012	0.124	ND	0.046	0.460	ND	ND

	Surrogate Recovery	Spike Amt. ppbV	Amount ppbV	% Rec.	QC Limits	Flag * = Out
2037-26-5	Toluene-d8	0.200	0.196	98	70-130	

Notes: 1) Reported results are to be interpreted to two significant figures.
2) ug/m3 = ppbV*FW/23.68 calculated assuming conditions at 60 F and 1 atm.
3) MDL and RL are adjusted for sample volume and can dilution.
4) U and ND are Flags used for Not Detected
5) J is a flag for a result between the MDL and the RL (or lower quantitation limit, LQL)

QUANTITATION REPORT

EPA Method TO-15 Modified SIM GC/MS

			Review	EAS Sample ID: 0927008	
File Name:	0927008A.D				1 SS
Sample ID:	44-013				2 KB
Date:	23 Jun 109 5:28 pm			Cal Amounts	3 AT
Run Method:	2EXSIM_I.M			IS Areas	4 BB
Quant Method:	2EXSIM_I.M			Carryover	5 SH
Cal Update:	Mon Jun 22 09:18:18 2009				
Template:	EARTEXSM.MS3				
Can Factor:	1.67				
Volume:	500	ml		Analyst: SS 1	

CAS#	Compound	n	Raw Amount	RT	Target RT	Ion	Sample Area	Qualifier	Lower Qual	Upper Qual	Qual Flag	Cal Flag	Int Flag
75-34-3	1,1-Dichloroethane	14	0.000	8.97	9.00	63.00	0	0	25	37			
156-59-2	cis-1,2-Dichloroethene	15	0.007	9.70	10.24	96.00	1791	134	102	153			
107-06-2	1,2-Dichloroethane	19	0.005	11.64	12.02	61.95	5200	46	14	21	Q		
71-43-2	Benzene	20	0.108	12.26	12.63	78.00	90288	25	16	23	Q		
56-23-5	Carbon tetrachloride	21	0.030	12.31	12.66	116.90	15064	99	79	119			
79-01-6	Trichloroethene	23	0.247	13.99	14.26	130.00	82468	97	75	112			
75-27-4	Bromodichloromethane	24	0.000	14.60	14.57	83.00	0	0	52	78			
79-00-5	1,1,2-Trichloroethane	28	0.000	17.45	17.35	97.00	0	0	63	94			
127-18-4	Tetrachloroethene	30	0.018	19.01	19.09	166.00	7593	85	64	97			
108-38-3	m & p-Xylene	34	0.426	21.33	21.37	91.00	698615	48	42	63			
95-47-6	o-Xylene	36	0.136	22.32	22.34	91.00	283879	44	38	56			
120-82-1	1,2,4-Trichlorobenzene	45	0.011	32.18	32.17	180.00	95190	98	79	118			
123-91-1	1,4 Dioxane	47	0.000	14.73	14.57	88.00	0	0	55	82			
3114-55-4	Chlorobenzene-d5	1	0.200	20.46	20.51	117.00	910660						
2037-26-5	Toluene-d8	16	0.196	16.92	17.05	98.00	379578						

Integration Flags:

If no flag the Integration was done by the instrument computer

M1 Manual Integration because the computer did not integrated the peak or integrated the wrong peak

M2 Manual Integration because computer integration of baseline was different then Inital Calibration

INITIAL CALIBRATION REPORT

EPA Method TO-15 Modified SIM GC/MS

SDG: 209270
QC_Batch: 062309-MS2
Instrument Name: MS2

File Name: 0927008A.D
Sample ID: 44-013
Sample Analysis Date: 23 Jun 109 5:28 pm
Run Method: 2EXSIM_I.M
Quant and Calibration Method: 2EXSIM_I.M
Cal Update: Mon Jun 22 09:18:18 2009
Template: EARTEXSM.MS3

Calibration Title: EPA T0-15

Number Compounds: 49
IS1: ST60024 0.2
IS2:
IS3:
IS4:

		Calibration Amount CA, ppmv						Calibration Response, Area					
		Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
		Amt	Amt	Amt	Amt	Amt	Amt	C06199B.D	C06199H.D	C06199A.D	C06199F.D	C06199E.D	C06199K.D
n	Compound	10.0	0.5	20.0	2.0	4.0	1.0	10.0	0.5	20.0	2.0	4.0	1.0
14	1,1-Dichloroethane	1.010	0.051	2.020	0.202	0.404	0.101	403912	31159	1225807	51920	327340	43151
15	cis-1,2-Dichloroethene	1.030	0.052	2.060	0.206	0.412	0.103	240146	21098	758337	35003	226396	27004
19	1,2-Dichloroethane	1.030	0.052	2.060	0.206	0.412	0.103	1236150	74052	4935278	125964	835756	97954
20	Benzene	1.030	0.052	2.060	0.206	0.412	0.103	967913	60686	3573129	94902	641363	73510
21	Carbon tetrachloride	1.020	0.051	2.040	0.204	0.408	0.102	492544	40672	1579809	67130	410007	53667
23	Trichloroethene	1.030	0.052	2.060	0.206	0.412	0.103	305786	29555	968228	45278	286372	33459
24	Bromodichloromethane	0.670	0.034	1.340	0.134	0.268	0.067	349165	34872	980125	57413	329960	43188
28	1,1,2-Trichloroethane	1.020	0.051	2.040	0.204	0.408	0.102	480870	37160	1655491	70973	441832	43484
30	Tetrachloroethene	1.020	0.051	2.040	0.204	0.408	0.102	373918	35806	1224836	58411	374447	38753
34	m & p-Xylene	2.060	0.103	4.120	0.412	0.824	0.206	2970894	279033	10312056	481458	2872586	284680
36	o-Xylene	1.020	0.051	2.040	0.204	0.408	0.102	1996168	168269	6920115	304155	1831287	166711
45	1,2,4-Trichlorobenzene	1.030	0.052	2.060	0.206	0.412	0.103	6381826	918959	14261028	1761172	9410822	617532
47	1,4 Dioxane	0.740	0.037	1.480	0.148	0.296	0.074	154378	17449	450267	31614	179188	26330
1	Chlorobenzene-d5	0.200	0.200	0.200	0.200	0.200	0.200	877690	1273169	1660044	554145	1807068	927887
16	Toluene-d8	0.200	0.200	0.200	0.200	0.200	0.200	389596	565545	652462	236781	753686	395034

(371)

INITIAL CALIBRATION REPORT: Response Factors

SDG:	**209270**
QC_Batch:	**062309-MS2**
Sample ID:	44-013
Sample Analysis Date:	23 Jun 109 5:28 pm
Run Method:	2EXSIM_I.M
Quant Method:	2EXSIM_I.M
Cal Update:	Mon Jun 22 09:18:18 2009
Template:	EARTEXSM.MS3

Sample Calculation:

1) Avg RFn = Sum $\left| \frac{(Astdni)}{(Cstdni)} \frac{(Cistdi)}{(Aistdi)} \right|_i$

Response Factors

Compound	RF1	RF2	RF3	RF4	RF5	RF6	AvgRFn	%RSD
1,1-Dichloroethane	0.091	0.096	0.073	0.093	0.090	0.092	0.089	9.11
cis-1,2-Dichloroethene	0.053	0.064	0.044	0.061	0.061	0.057	0.057	12.56
1,2-Dichloroethane	0.273	0.224	0.289	0.221	0.225	0.205	0.239	13.97
Benzene	0.214	0.183	0.209	0.166	0.172	0.154	0.183	13.13
Carbon tetrachloride	0.110	0.125	0.093	0.119	0.111	0.113	0.112	9.60
Trichloroethene	0.068	0.089	0.057	0.079	0.077	0.070	0.073	15.26
Bromodichloromethane	0.119	0.161	0.088	0.155	0.136	0.139	0.133	19.96
1,1,2-Trichloroethane	0.107	0.114	0.098	0.126	0.120	0.092	0.109	11.85
Tetrachloroethene	0.084	0.110	0.072	0.103	0.102	0.082	0.092	16.20
m & p-Xylene	0.329	0.426	0.302	0.422	0.386	0.298	0.360	16.21
o-Xylene	0.446	0.518	0.409	0.538	0.497	0.352	0.460	15.46
1,2,4-Trichlorobenzene	1.412	2.776	0.834	3.086	2.528	1.292	1.988	46.46
1,4 Dioxane	0.048	0.074	0.037	0.077	0.067	0.077	0.063	27.03
Chlorobenzene-d5	1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.00
Toluene-d8	0.444	0.444	0.393	0.427	0.417	0.426	0.425	4.48

CALCULATIONS

EPA Method TO-15 Modified SIM GC/MS

SDG: 209270
Laboratory Number: 08

RL:	2EXSIM_I.M
Run Method:	2EXSIM_I.M
Quant Method:	2EXSIM_I.M
Can Dilution Factor:	1.67
Air Volume:	500 ml
Gas Constant:	23.68
Decimal Places:	3

Compound	M.W.	Raw Amount	Result ppbv	Result ug/m3	(1) MDL ppbv	(2) RL ppbv	Calc MDL ppbv	Calc MDL ug/m3	Calc RL ppbv	Calc RL ug/m3	Flag	S062602-1 Spike ppmv
1,1-Dichloroethane	99.0	0.000	0.000	0.000	0.005	0.051	0.02	0.071	0.17	0.712	U	0.103
cis-1,2-Dichloroethene	96.9	0.007	0.023	0.095	0.005	0.052	0.02	0.071	0.17	0.711	J	0.103
1,2-Dichloroethane	99.0	0.005	0.016	0.067	0.005	0.052	0.02	0.073	0.17	0.726	U	0.103
Benzene	78.1	0.108	0.362	1.193	0.005	0.052	0.02	0.057	0.17	0.573		0.103
Carbon tetrachloride	153.8	0.030	0.099	0.641	0.005	0.051	0.02	0.111	0.17	1.106	J	0.103
Trichloroethene	131.4	0.247	0.825	4.579	0.005	0.052	0.02	0.096	0.17	0.964		0.103
Bromodichloromethane	163.8	0.000	0.000	0.000	0.003	0.034	0.01	0.079	0.11	0.786	U	0.103
1,1,2-Trichloroethane	133.4	0.000	0.000	0.000	0.005	0.051	0.02	0.096	0.17	0.960	U	0.103
Tetrachloroethene	165.8	0.018	0.060	0.423	0.005	0.051	0.02	0.119	0.17	1.193	J	0.103
m & p-Xylene	106.2	0.426	1.423	6.381	0.010	0.103	0.03	0.154	0.34	1.543		0.103
o-Xylene	106.2	0.136	0.453	2.030	0.005	0.051	0.02	0.076	0.17	0.764		0.103
1,2,4-Trichlorobenzene	181.4	0.011	0.035	0.269	0.005	0.052	0.02	0.133	0.17	1.330	J	0.103
1,4 Dioxane	88.1	0.000	0.000	0.000	0.004	0.037	0.01	0.046	0.12	0.460	U	1.103

SAMPLE CALCULATION

EPA Method TO-15 Modified SIM GC/MS

SDG:		**209270**
Laboratory Number:		**08**
Standard Volume	STV	0.5
Sample Volume	SV	500
Can Dilution Factor	CDF	1.67
Gas Constant		23.68
Decimal Places:		3

Sample Calculation:

1) Avg RFn = Sum $\left| \frac{(Astdni)}{(Cstdni)} \frac{(Cistdi)}{(Aistdi)} \right|$ Note: 1

2) Raw Amt = $\frac{(Ansamp)}{(Avg\ RFn)} \frac{(Cistdi)}{(Aistdi)}$ = Cn

3) Amount ppbv = $\frac{(Raw\ Amt)\ 1000}{(SV)}$ (CDF) (STV)

4) Amount ug/m3 = $\frac{(amt(ppbv)\ MW}{23.68}$

n	Compound	IS n	Chem type	MW	AvgRFn	Area Ansamp	Cistdi ppmv	Aistdi Ais	Cn ppmV Raw Amt	Amount ppbv	Amount ug/m3
14	1,1-Dichloroethane	1	TRG	99.0	0.089	0	0.200	910660	0.000	0.000	0.000
15	cis-1,2-Dichloroethene	1	TRG	96.9	0.057	1791	0.200	910660	0.007	0.023	0.094
19	1,2-Dichloroethane	1	TRG	99.0	0.239	5200	0.200	910660	0.005	0.016	0.067
20	Benzene	1	TRG	78.1	0.183	90288	0.200	910660	0.108	0.362	1.194
21	Carbon tetrachloride	1	TRG	153.8	0.112	15064	0.200	910660	0.030	0.099	0.643
23	Trichloroethene	1	TRG	131.4	0.073	82468	0.200	910660	0.247	0.825	4.578
24	Bromodichloromethane	1	TRG	163.8	0.133	0	0.200	910660	0.000	0.000	0.000
28	1,1,2-Trichloroethane	1	TRG	133.4	0.109	0	0.200	910660	0.000	0.000	0.000
30	Tetrachloroethene	1	TRG	165.8	0.092	7593	0.200	910660	0.018	0.060	0.420
34	m & p-Xylene	1	TRG	106.2	0.360	698615	0.200	910660	0.426	1.423	6.382
36	o-Xylene	1	TRG	106.2	0.460	283879	0.200	910660	0.136	0.453	2.032
45	1,2,4-Trichlorobenzene	1	TRG	181.4	1.99	95190	0.200	910660	0.011	0.035	0.268
47	1,4 Dioxane	1	TRG	88.1	0.06	0	0.200	910660	0.000	0.000	0.000
1	Chlorobenzene-d5	1	IS	0.0	1.000	910660	0.200	910660	0.000	0.000	0.000
16	Toluene-d8	1	SURR	0.0	0.425	379578	0.200	910660	0.000	0.000	0.000

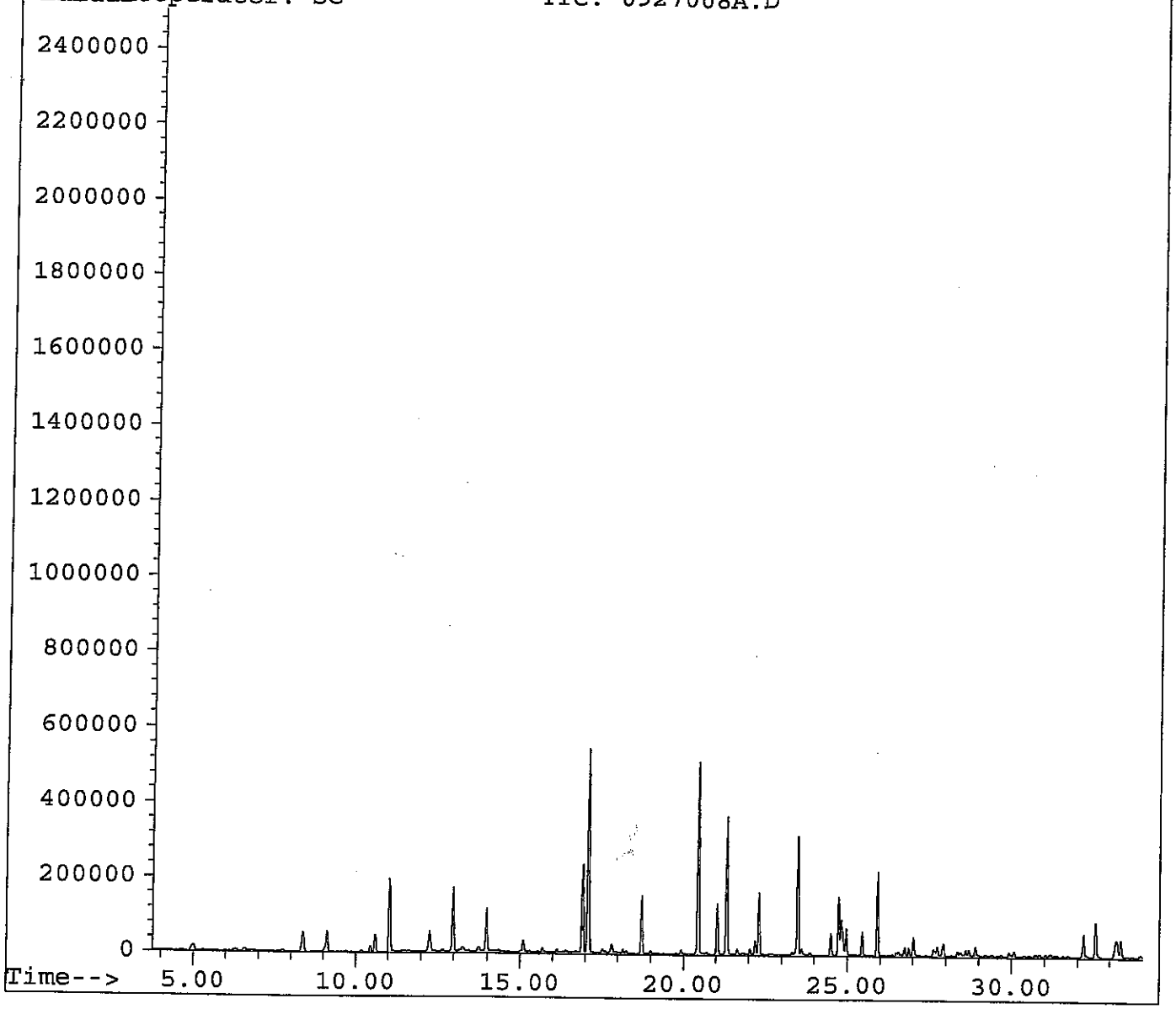
Calculation Definitions:

n	compound n
i	i th calibration level
Astdni	Standard Area for compound n at ith calibration level
Cstdni	Standard Concentration for compound n at ith calibration level in ppmv
Cistdi	Internal Standard Conc used for compound n at ith calibration level in ppmv
Aistdi	Internal Standard Area used for compound n at ith calibration level
Ansamp	Sample Area for compound n
Avg RFn	Average response factor for all ith calibration levels for compound n
Raw Amount	Sample Concentration in ppmv before applying factors
Cistd	Concentration internal standard used for compound n in sample in ppmv
Aistd	Area of internal standard used for compound n in sample
Cn	Concentration of compound n in sample in ppmv
23.68	Gas constant at 60 F as per EPA source test protocol
MW	Molecular weight of compound
Note (1) : Avg RFn	The values for the Average Response Factor AvgRFn can be optained from the response Factor Report for the Initial Calibration, or from the Calibration Report

Name of file: C:\HPCHEM\1\DATA\06239MS2\0927008A.D

Name of operator: SG

TIC: 0927008A.D



ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified SIM GC/MS | **SDG: 209270**
Analytical Method: TO-15 SIM | **Laboratory Number: 09**

File:	0927009A.D	**Date Sampled:**	06/16/09	**Time:**	16:38
Description:	44-014	**Date Received:**	06/17/09		
Can/Tube#:	526	**Date Extracted:**			
Sam_Type:	SA	**Date Analyzed:**	06/23/09	**Time:**	18:13
QC_Batch:	062309-MS2	**Can Dilution Factor:**	2.16		3
Air Volume:	500 ml	**Not Detected Flag:**	ND		

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
75-34-3	1,1-Dichloroethane	0.022	0.220	ND	0.092	0.921	ND	ND
156-59-2	cis-1,2-Dichloroethene	0.022	0.225	0.042	0.092	0.919	0.171	J
107-06-2	1,2-Dichloroethane	0.022	0.225	ND	0.094	0.939	ND	ND
71-43-2	Benzene	0.022	0.225	0.344	0.074	0.741	1.135	
56-23-5	Carbon tetrachloride	0.022	0.220	0.101	0.143	1.431	0.656	J
79-01-6	Trichloroethene	0.022	0.225	0.427	0.125	1.247	2.371	
75-27-4	Bromodichloromethane	0.015	0.147	ND	0.102	1.016	ND	ND
79-00-5	1,1,2-Trichloroethane	0.022	0.220	ND	0.124	1.241	ND	ND
127-18-4	Tetrachloroethene	0.022	0.220	0.043	0.154	1.543	0.303	J
108-38-3	m & p-Xylene	0.044	0.445	1.296	0.200	1.996	5.814	
95-47-6	o-Xylene	0.022	0.220	0.398	0.099	0.988	1.785	
120-82-1	1,2,4-Trichlorobenzene	0.022	0.225	0.033	0.172	1.721	0.253	J
123-91-1	1,4 Dioxane	0.016	0.160	0.461	0.059	0.595	1.714	

	Surrogate Recovery	Spike Amt. ppbV	Amount ppbV	% Rec.	QC Limits	Flag * = Out
2037-26-5	Toluene-d8	0.200	0.196	98	70-130	

Notes: 1) Reported results are to be interpreted to two significant figures.
2) ug/m3 = ppbV*FW/23.68 calculated assuming conditions at 60 F and 1 atm.
3) MDL and RL are adjusted for sample volume and can dilution.
4) U and ND are Flags used for Not Detected
5) J is a flag for a result between the MDL and the RL (or lower quantitation limit, LQL)

QUANTITATION REPORT

EPA Method TO-15 Modified SIM GC/MS

			Review	EAS Sample ID: 0927009	
File Name:	0927009A.D				1 SS
Sample ID:	44-014				2 KB
Date:	23 Jun 109 6:13 pm			Cal Amounts	3 AT
Run Method:	2EXSIM_I.M			IS Areas	4 BB
Quant Method:	2EXSIM_I.M			Carryover	5 SH
Cal Update:	Mon Jun 22 09:18:18 2009				
Template:	EARTEXSM.MS3				
Can Factor:	2.16				
Volume:	500	ml		Analyst: SS 1	

CAS#	Compound	n	Raw Amount	RT	Target RT	Ion	Sample Area	Qualifier	Lower Qual	Upper Qual	Qual Flag	Cal Flag	Int Flag
75-34-3	1,1-Dichloroethane	14	0.000	9.04	9.00	63.00	0	0	25	37			
156-59-2	cis-1,2-Dichloroethene	15	0.010	10.28	10.24	96.00	2379	152	102	153			
107-06-2	1,2-Dichloroethane	19	0.004	12.07	12.02	61.95	3967	16	14	21			
71-43-2	Benzene	20	0.080	12.68	12.63	78.00	63229	17	16	23			
56-23-5	Carbon tetrachloride	21	0.023	12.71	12.66	116.90	11344	94	79	119			
79-01-6	Trichloroethene	23	0.099	14.31	14.26	130.00	31415	100	75	112			
75-27-4	Bromodichloromethane	24	0.000	14.49	14.57	83.00	0	0	52	78			
79-00-5	1,1,2-Trichloroethane	28	0.000	17.45	17.35	97.00	0	0	63	94			
127-18-4	Tetrachloroethene	30	0.010	19.12	19.09	166.00	4006	87	64	97			
108-38-3	m & p-Xylene	34	0.300	21.41	21.37	91.00	468407	49	42	63			
95-47-6	o-Xylene	36	0.092	22.37	22.34	91.00	183651	42	38	56			
120-82-1	1,2,4-Trichlorobenzene	45	0.008	32.20	32.17	180.00	65983	95	79	118			
123-91-1	1,4 Dioxane	47	0.107	14.65	14.57	88.00	29189	80	55	82			
3114-55-4	Chlorobenzene-d5	1	0.200	20.55	20.51	117.00	866703						
2037-26-5	Toluene-d8	16	0.196	17.08	17.05	98.00	361113						

Integration Flags:

If no flag the Integration was done by the instrument computer

M1 Manual Integration because the computer did not integrated the peak or integrated the wrong peak

M2 Manual Integration because computer integration of baseline was different then Inital Calibration

INITIAL CALIBRATION REPORT

EPA Method TO-15 Modified SIM GC/MS

SDG: 209270
QC_Batch: 062309-MS2
Instrument Name: MS2

File Name: 0927009A.D
Sample ID: 44-014
Sample Analysis Date: 23 Jun 109 6:13 pm
Run Method: 2EXSIM_I.M
Quant and Calibration Method: 2EXSIM_I.M
Cal Update: Mon Jun 22 09:18:18 2009
Template: EARTEXSM.MS3

Calibration Title: EPA T0-15

Number Compounds: 49
IS1: ST60024 0.2
IS2:
IS3:
IS4:

		Calibration Amount CA, ppmv						Calibration Response, Area					
		Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
		Amt	Amt	Amt	Amt	Amt	Amt	C06199B.D	C06199H.D	C06199A.D	C06199F.D	C06199E.D	C06199K.D
n	Compound	10.0	0.5	20.0	2.0	4.0	1.0	10.0	0.5	20.0	2.0	4.0	1.0
14	1,1-Dichloroethane	1.010	0.051	2.020	0.202	0.404	0.101	403912	31159	1225807	51920	327340	43151
15	cis-1,2-Dichloroethene	1.030	0.052	2.060	0.206	0.412	0.103	240146	21098	758337	35003	226396	27004
19	1,2-Dichloroethane	1.030	0.052	2.060	0.206	0.412	0.103	1236150	74052	4935278	125964	835756	97954
20	Benzene	1.030	0.052	2.060	0.206	0.412	0.103	967913	60686	3573129	94902	641363	73510
21	Carbon tetrachloride	1.020	0.051	2.040	0.204	0.408	0.102	492544	40672	1579809	67130	410007	53667
23	Trichloroethene	1.030	0.052	2.060	0.206	0.412	0.103	305786	29555	968228	45278	286372	33459
24	Bromodichloromethane	0.670	0.034	1.340	0.134	0.268	0.067	349165	34872	980125	57413	329960	43188
28	1,1,2-Trichloroethane	1.020	0.051	2.040	0.204	0.408	0.102	480870	37160	1655491	70973	441832	43484
30	Tetrachloroethene	1.020	0.051	2.040	0.204	0.408	0.102	373918	35806	1224836	58411	374447	38753
34	m & p-Xylene	2.060	0.103	4.120	0.412	0.824	0.206	2970894	279033	10312056	481458	2872586	284680
36	o-Xylene	1.020	0.051	2.040	0.204	0.408	0.102	1996168	168269	6920115	304155	1831287	166711
45	1,2,4-Trichlorobenzene	1.030	0.052	2.060	0.206	0.412	0.103	6381826	918959	14261028	1761172	9410822	617532
47	1,4 Dioxane	0.740	0.037	1.480	0.148	0.296	0.074	154378	17449	450267	31614	179188	26330
1	Chlorobenzene-d5	0.200	0.200	0.200	0.200	0.200	0.200	877690	1273169	1660044	554145	1807068	927887
16	Toluene-d8	0.200	0.200	0.200	0.200	0.200	0.200	389596	565545	652462	236781	753686	395034

(378)

INITIAL CALIBRATION REPORT: Response Factors

SDG:	**209270**
QC_Batch:	**062309-MS2**
Sample ID:	44-014
Sample Analysis Date:	23 Jun 109 6:13 pm
Run Method:	2EXSIM_I.M
Quant Method:	2EXSIM_I.M
Cal Update:	Mon Jun 22 09:18:18 2009
Template:	EARTEXSM.MS3

Sample Calculation:

1) Avg RFn = Sum $\left| \frac{(Astdni)}{(Cstdni)} \frac{(Cistdi)}{(Aistdi)} \right|_i$

Response Factors

Compound	RF1	RF2	RF3	RF4	RF5	RF6	AvgRFn	%RSD
1,1-Dichloroethane	0.091	0.096	0.073	0.093	0.090	0.092	0.089	9.11
cis-1,2-Dichloroethene	0.053	0.064	0.044	0.061	0.061	0.057	0.057	12.56
1,2-Dichloroethane	0.273	0.224	0.289	0.221	0.225	0.205	0.239	13.97
Benzene	0.214	0.183	0.209	0.166	0.172	0.154	0.183	13.13
Carbon tetrachloride	0.110	0.125	0.093	0.119	0.111	0.113	0.112	9.60
Trichloroethene	0.068	0.089	0.057	0.079	0.077	0.070	0.073	15.26
Bromodichloromethane	0.119	0.161	0.088	0.155	0.136	0.139	0.133	19.96
1,1,2-Trichloroethane	0.107	0.114	0.098	0.126	0.120	0.092	0.109	11.85
Tetrachloroethene	0.084	0.110	0.072	0.103	0.102	0.082	0.092	16.20
m & p-Xylene	0.329	0.426	0.302	0.422	0.386	0.298	0.360	16.21
o-Xylene	0.446	0.518	0.409	0.538	0.497	0.352	0.460	15.46
1,2,4-Trichlorobenzene	1.412	2.776	0.834	3.086	2.528	1.292	1.988	46.46
1,4 Dioxane	0.048	0.074	0.037	0.077	0.067	0.077	0.063	27.03
Chlorobenzene-d5	1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.00
Toluene-d8	0.444	0.444	0.393	0.427	0.417	0.426	0.425	4.48

CALCULATIONS

EPA Method TO-15 Modified SIM GC/MS

SDG: 209270
Laboratory Number: 09

RL:	2EXSIM_I.M
Run Method:	2EXSIM_I.M
Quant Method:	2EXSIM_I.M
Can Dilution Factor:	2.16
Air Volume:	500 ml
Gas Constant:	23.68
Decimal Places:	3

Compound	M.W.	Raw Amount	Result ppbv	Result ug/m3	(1) MDL ppbv	(2) RL ppbv	Calc MDL ppbv	Calc MDL ug/m3	Calc RL ppbv	Calc RL ug/m3	Flag	S062602-1 Spike ppmv
1,1-Dichloroethane	99.0	0.000	0.000	0.000	0.005	0.051	0.02	0.092	0.22	0.921	U	0.103
cis-1,2-Dichloroethene	96.9	0.010	0.042	0.171	0.005	0.052	0.02	0.092	0.22	0.919	J	0.103
1,2-Dichloroethane	99.0	0.004	0.017	0.069	0.005	0.052	0.02	0.094	0.22	0.939	U	0.103
Benzene	78.1	0.080	0.344	1.135	0.005	0.052	0.02	0.074	0.22	0.741		0.103
Carbon tetrachloride	153.8	0.023	0.101	0.656	0.005	0.051	0.02	0.143	0.22	1.431	J	0.103
Trichloroethene	131.4	0.099	0.427	2.371	0.005	0.052	0.02	0.125	0.22	1.247		0.103
Bromodichloromethane	163.8	0.000	0.000	0.000	0.003	0.034	0.01	0.102	0.15	1.016	U	0.103
1,1,2-Trichloroethane	133.4	0.000	0.000	0.000	0.005	0.051	0.02	0.124	0.22	1.241	U	0.103
Tetrachloroethene	165.8	0.010	0.043	0.303	0.005	0.051	0.02	0.154	0.22	1.543	J	0.103
m & p-Xylene	106.2	0.300	1.296	5.814	0.010	0.103	0.04	0.200	0.44	1.996		0.103
o-Xylene	106.2	0.092	0.398	1.785	0.005	0.051	0.02	0.099	0.22	0.988		0.103
1,2,4-Trichlorobenzene	181.4	0.008	0.033	0.253	0.005	0.052	0.02	0.172	0.22	1.721	J	0.103
1,4 Dioxane	88.1	0.107	0.461	1.714	0.004	0.037	0.02	0.059	0.16	0.595		1.103

SAMPLE CALCULATION

EPA Method TO-15 Modified SIM GC/MS

SDG:		**209270**
Laboratory Number:		**09**
Standard Volume	STV	0.5
Sample Volume	SV	500
Can Dilution Factor	CDF	2.16
Gas Constant		23.68
Decimal Places:		3

Sample Calculation:

1) Avg RFn = Sum $\left| \frac{(Astdni)}{(Cstdni)} \frac{(Cistdi)}{(Aistdi)} \right|_i$ Note: 1

2) Raw Amt = $\frac{(Ansamp)}{(Avg\ RFn)} \frac{(Cistdi)}{(Aistdi)}$ = Cn

3) Amount ppbv = $\frac{(Raw\ Amt)\ 1000}{(SV)}$ (CDF) (STV)

4) Amount ug/m3 = $\frac{(amt(ppbv)\ MW}{23.68}$

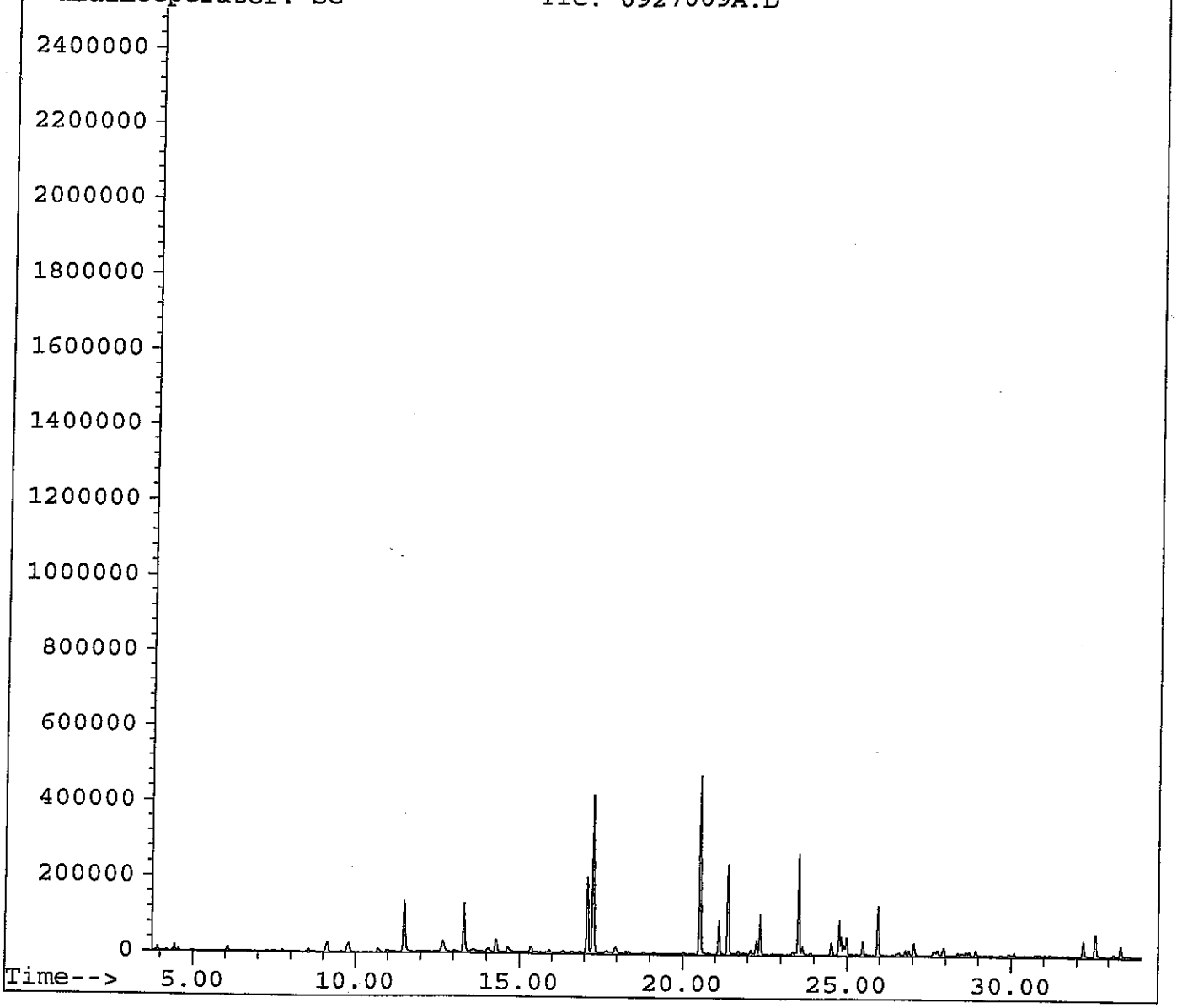
n	Compound	IS n	Chem type	MW	AvgRFn	Area Ansamp	Cistdi ppmv	Aistdi Ais	Cn ppmV Raw Amt	Amount ppbv	Amount ug/m3
14	1,1-Dichloroethane	1	TRG	99.0	0.089	0	0.200	866703	0.000	0.000	0.000
15	cis-1,2-Dichloroethene	1	TRG	96.9	0.057	2379	0.200	866703	0.010	0.042	0.172
19	1,2-Dichloroethane	1	TRG	99.0	0.239	3967	0.200	866703	0.004	0.017	0.071
20	Benzene	1	TRG	78.1	0.183	63229	0.200	866703	0.080	0.344	1.135
21	Carbon tetrachloride	1	TRG	153.8	0.112	11344	0.200	866703	0.023	0.101	0.656
23	Trichloroethene	1	TRG	131.4	0.073	31415	0.200	866703	0.099	0.427	2.369
24	Bromodichloromethane	1	TRG	163.8	0.133	0	0.200	866703	0.000	0.000	0.000
28	1,1,2-Trichloroethane	1	TRG	133.4	0.109	0	0.200	866703	0.000	0.000	0.000
30	Tetrachloroethene	1	TRG	165.8	0.092	4006	0.200	866703	0.010	0.043	0.301
34	m & p-Xylene	1	TRG	106.2	0.360	468407	0.200	866703	0.300	1.296	5.812
36	o-Xylene	1	TRG	106.2	0.460	183651	0.200	866703	0.092	0.398	1.785
45	1,2,4-Trichlorobenzene	1	TRG	181.4	1.99	65983	0.200	866703	0.008	0.033	0.253
47	1,4 Dioxane	1	TRG	88.1	0.06	29189	0.200	866703	0.107	0.461	1.715
1	Chlorobenzene-d5	1	IS	0.0	1.000	866703	0.200	866703	0.000	0.000	0.000
16	Toluene-d8	1	SURR	0.0	0.425	361113	0.200	866703	0.000	0.000	0.000

Calculation Definitions:

n	compound n
i	i th calibration level
Astdni	Standard Area for compound n at ith calibration level
Cstdni	Standard Concentration for compound n at ith calibration level in ppmv
Cistdi	Internal Standard Conc used for compound n at ith calibration level in ppmv
Aistdi	Internal Standard Area used for compound n at ith calibration level
Ansamp	Sample Area for compound n
Avg RFn	Average response factor for all ith calibration levels for compound n
Raw Amount	Sample Concentration in ppmv before applying factors
Cistd	Concentration internal standard used for compound n in sample in ppmv
Aistd	Area of internal standard used for compound n in sample
Cn	Concentration of compound n in sample in ppmv
23.68	Gas constant at 60 F as per EPA source test protocol
MW	Molecular weight of compound
Note (1) : Avg RFn	The values for the Average Response Factor AvgRFn can be optained from the response Factor Report for the Initial Calibration, or from the Calibration Report

Name of file: C:\HPCHEM\1\DATA\06239MS2\0927009A.D

Name of operator: SG TIC: 0927009A.D



ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified SIM GC/MS | **SDG:** 209270
Analytical Method: TO-15 SIM | **Laboratory Number:** 10

File:	0927010A.D	**Date Sampled:**	06/16/09	**Time:**	16:40
Description:	44-015	**Date Received:**	06/17/09		
Can/Tube#:	188	**Date Extracted:**			
Sam_Type:	SA	**Date Analyzed:**	06/23/09	**Time:**	19:10
QC_Batch:	062309-MS2	**Can Dilution Factor:**	1.62		3
Air Volume:	500 ml	**Not Detected Flag:**	ND		

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
75-01-4	Vinyl chloride	0.017	0.168	ND	0.044	0.445	ND	ND
75-35-4	1,1-Dichloroethene	0.017	0.168	ND	0.069	0.689	ND	ND
75-34-3	1,1-Dichloroethane	0.017	0.165	ND	0.069	0.691	ND	ND
156-59-2	cis-1,2-Dichloroethene	0.017	0.168	0.021	0.069	0.689	0.086	J
107-06-2	1,2-Dichloroethane	0.017	0.168	ND	0.070	0.704	ND	ND
71-43-2	Benzene	0.017	0.168	0.191	0.056	0.556	0.629	
56-23-5	Carbon tetrachloride	0.017	0.165	0.050	0.107	1.073	0.325	J
79-01-6	Trichloroethene	0.017	0.168	0.171	0.093	0.935	0.946	
75-27-4	Bromodichloromethane	0.011	0.110	ND	0.076	0.762	ND	ND
79-00-5	1,1,2-Trichloroethane	0.017	0.165	ND	0.093	0.931	ND	ND
127-18-4	Tetrachloroethene	0.017	0.165	ND	0.116	1.157	ND	ND
108-38-3	m & p-Xylene	0.033	0.334	0.053	0.150	1.497	0.239	J
95-47-6	o-Xylene	0.017	0.165	0.020	0.074	0.741	0.088	J
79-34-5	1,1,2,2-Tetrachloroethane	0.017	0.165	ND	0.117	1.171	ND	ND
120-82-1	1,2,4-Trichlorobenzene	0.017	0.168	0.021	0.129	1.291	0.162	J
123-91-1	1,4 Dioxane	0.012	0.120	ND	0.045	0.446	ND	ND
91-20-3	Naphthalene	0.035	0.347	ND	0.188	1.877	ND	ND

	Surrogate Recovery	Spike Amt. ppbV	Amount ppbV	% Rec.	QC Limits	Flag * = Out
2037-26-5	Toluene-d8	0.200	0.203	101	70-130	

Notes: 1) Reported results are to be interpreted to two significant figures.
2) ug/m3 = ppbV*FW/23.68 calculated assuming conditions at 60 F and 1 atm.
3) MDL and RL are adjusted for sample volume and can dilution.
4) U and ND are Flags used for Not Detected
5) J is a flag for a result between the MDL and the RL (or lower quantitation limit, LQL)

QUANTITATION REPORT

EPA Method TO-15 Modified SIM GC/MS

			Review	EAS Sample ID: 0927010	
File Name:	0927010A.D				1 SS
Sample ID:	44-015				2 KB
Date:	23 Jun 109 7:10 pm			Cal Amounts	3 AT
Run Method:	2EXSIM_I.M			IS Areas	4 BB
Quant Method:	1T15EXAY.M			Carryover	5 SH
Cal Update:	Mon Jun 22 09:18:18 2009				
Template:	EARTEXSM.MS3				
Can Factor:	1.62				
Volume:	500	ml		Analyst: SS 1	

CAS#	Compound	n	Raw Amount	RT	Target RT	Ion	Sample Area	Qualifier	Lower Qual	Upper Qual	Qual Flag	Cal Flag	Int Flag
75-01-4	Vinyl chloride	5	0.000	4.26	4.37	62.00	0	0	28	42			
75-35-4	1,1-Dichloroethene	9	0.000	6.92	6.95	61.00	0	0	37	56			
75-34-3	1,1-Dichloroethane	14	0.000	8.92	9.00	63.00	0	0	25	37			
156-59-2	cis-1,2-Dichloroethene	15	0.007	10.31	10.24	96.00	572	135	102	153			
107-06-2	1,2-Dichloroethane	19	0.000	11.94	12.02	61.95	0	0	14	21			
71-43-2	Benzene	20	0.059	12.68	12.63	78.00	16735	22	16	23			
56-23-5	Carbon tetrachloride	21	0.015	12.71	12.66	116.90	2684	93	79	119			
79-01-6	Trichloroethene	23	0.053	14.31	14.26	130.00	5989	94	75	112			
75-27-4	Bromodichloromethane	24	0.000	14.63	14.57	83.00	0	0	52	78			
79-00-5	1,1,2-Trichloroethane	28	0.000	17.45	17.35	97.00	0	0	63	94			
127-18-4	Tetrachloroethene	30	0.002	19.12	19.09	166.00	288	95	64	97			
108-38-3	m & p-Xylene	34	0.016	21.41	21.37	91.00	9183	42	42	63			
95-47-6	o-Xylene	36	0.006	22.37	22.34	91.00	4317	40	38	56			
79-34-5	1,1,2,2-Tetrachloroethane	37	0.001	22.98	22.93	83.00	609	8	8	12			
120-82-1	1,2,4-Trichlorobenzene	45	0.007	32.20	32.17	180.00	20106	97	79	118			
123-91-1	1,4 Dioxane	47	0.000	14.49	14.57	88.00	0	0	55	82			
91-20-3	Naphthalene	48	0.007	32.57	32.78	128.00	73703	0	0	0			
3114-55-4	Chlorobenzene-d5	1	0.200	20.55	20.51	117.00	**310499**						
2037-26-5	Toluene-d8	16	0.203	17.11	17.05	98.00	**133946**						

Integration Flags:

If no flag the Integration was done by the instrument computer

M1 Manual Integration because the computer did not integrated the peak or integrated the wrong peak

M2 Manual Integration because computer integration of baseline was different then Inital Calibration

INITIAL CALIBRATION REPORT

EPA Method TO-15 Modified SIM GC/MS

SDG: 209270
QC_Batch: 062309-MS2
Instrument Name: MS2

File Name: 0927010A.D
Sample ID: 44-015
Sample Analysis Date: 23 Jun 109 7:10 pm
Run Method: 2EXSIM_I.M
Quant and Calibration Method: 1T15EXAY.M
Cal Update: Mon Jun 22 09:18:18 2009
Template: EARTEXSM.MS3

Calibration Title: EPA T0-15

Numbe
IS1:
IS2:
IS3:
IS4:

		Calibration Amount CA, ppmv						Calibration Response, Area			
		Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Level 1	Level 2	Level 3	Level 4
		Amt	Amt	Amt	Amt	Amt	Amt	C06199B.D	C06199H.D	C06199A.D	C06199F.D
n	Compound	10.0	0.5	20.0	2.0	4.0	1.0	10.0	0.5	20.0	2.0
5	Vinyl chloride	1.040	0.052	2.080	0.208	0.416	0.104	184476	12222	596605	24865
9	1,1-Dichloroethene	1.040	0.052	2.080	0.208	0.416	0.104	388365	27969	1185798	47507
14	1,1-Dichloroethane	1.010	0.051	2.020	0.202	0.404	0.101	403912	31159	1225807	51920
15	cis-1,2-Dichloroethene	1.030	0.052	2.060	0.206	0.412	0.103	240146	21098	758337	35003
19	1,2-Dichloroethane	1.030	0.052	2.060	0.206	0.412	0.103	1236150	74052	4935278	125964
20	Benzene	1.030	0.052	2.060	0.206	0.412	0.103	967913	60686	3573129	94902
21	Carbon tetrachloride	1.020	0.051	2.040	0.204	0.408	0.102	492544	40672	1579809	67130
23	Trichloroethene	1.030	0.052	2.060	0.206	0.412	0.103	305786	29555	968228	45278
24	Bromodichloromethane	0.670	0.034	1.340	0.134	0.268	0.067	349165	34872	980125	57413
28	1,1,2-Trichloroethane	1.020	0.051	2.040	0.204	0.408	0.102	480870	37160	1655491	70973
30	Tetrachloroethene	1.020	0.051	2.040	0.204	0.408	0.102	373918	35806	1224836	58411
34	m & p-Xylene	2.060	0.103	4.120	0.412	0.824	0.206	2970894	279033	10312056	481458
36	o-Xylene	1.020	0.051	2.040	0.204	0.408	0.102	1996168	168269	6920115	304155
37	1,1,2,2-Tetrachloroethane	1.020	0.051	2.040	0.204	0.408	0.102	2273482	192188	6988630	401655
45	1,2,4-Trichlorobenzene	1.030	0.052	2.060	0.206	0.412	0.103	6381826	918959	14261028	1761172
47	1,4 Dioxane	0.740	0.037	1.480	0.148	0.296	0.074	154378	17449	450267	31614
48	Naphthalene	2.130	0.107	-1.000	0.426	0.852	0.213	34587722	6597377	-1	12354059
1	Chlorobenzene-d5	0.200	0.200	0.200	0.200	0.200	0.200	877690	1273169	1660044	554145
16	Toluene-d8	0.200	0.200	0.200	0.200	0.200	0.200	389596	565545	652462	236781

r Compounds:	49
ST60024	0.2

Level 5	Level 6
C06199E.D	C06199K.D
4.0	1.0
140317	19936
301017	40726
327340	43151
226396	27004
835756	97954
641363	73510
410007	53667
286372	33459
329960	43188
441832	43484
374447	38753
2872586	284680
1831287	166711
2300254	180334
9410822	617532
179188	26330
37178978	4780301
1807068	927887
753686	395034

INITIAL CALIBRATION REPORT: Response Factors

SDG:	**209270**
QC_Batch:	**062309-MS2**
Sample ID:	44-015
Sample Analysis Date:	23 Jun 109 7:10 pm
Run Method:	2EXSIM_I.M
Quant Method:	1T15EXAY.M
Cal Update:	Mon Jun 22 09:18:18 2009
Template:	EARTEXSM.MS3

Sample Calculation:

1) Avg RFn = Sum $\left| \frac{(Astdni)}{(Cstdni)} \frac{(Cistdi)}{(Aistdi)} \right|$

Response Factors

Compound	RF1	RF2	RF3	RF4	RF5	RF6	AvgRFn	%RSD
Vinyl chloride	0.040	0.037	0.035	0.043	0.037	0.041	0.039	8.23
1,1-Dichloroethene	0.085	0.084	0.069	0.082	0.080	0.084	0.081	7.72
1,1-Dichloroethane	0.091	0.096	0.073	0.093	0.090	0.092	0.089	9.11
cis-1,2-Dichloroethene	0.053	0.064	0.044	0.061	0.061	0.057	0.057	12.56
1,2-Dichloroethane	0.273	0.224	0.289	0.221	0.225	0.205	0.239	13.97
Benzene	0.214	0.183	0.209	0.166	0.172	0.154	0.183	13.13
Carbon tetrachloride	0.110	0.125	0.093	0.119	0.111	0.113	0.112	9.60
Trichloroethene	0.068	0.089	0.057	0.079	0.077	0.070	0.073	15.26
Bromodichloromethane	0.119	0.161	0.088	0.155	0.136	0.139	0.133	19.96
1,1,2-Trichloroethane	0.107	0.114	0.098	0.126	0.120	0.092	0.109	11.85
Tetrachloroethene	0.084	0.110	0.072	0.103	0.102	0.082	0.092	16.20
m & p-Xylene	0.329	0.426	0.302	0.422	0.386	0.298	0.360	16.21
o-Xylene	0.446	0.518	0.409	0.538	0.497	0.352	0.460	15.46
1,1,2,2-Tetrachloroethane	0.508	0.592	0.413	0.711	0.624	0.381	0.538	23.70
1,2,4-Trichlorobenzene	1.412	2.776	0.834	3.086	2.528	1.292	1.988	46.46
1,4 Dioxane	0.048	0.074	0.037	0.077	0.067	0.077	0.063	27.03
Naphthalene	3.700	9.686	NA	10.467	4.830	4.837	6.704	46.62
Chlorobenzene-d5	1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.00
Toluene-d8	0.444	0.444	0.393	0.427	0.417	0.426	0.425	4.48

CALCULATIONS

EPA Method TO-15 Modified SIM GC/MS

SDG: 209270
Laboratory Number: 10

RL:	1T15EXAY.M
Run Method:	2EXSIM_I.M
Quant Method:	1T15EXAY.M
Can Dilution Factor:	1.62
Air Volume:	500 ml
Gas Constant:	23.68
Decimal Places:	3

Compound	M.W.	Raw Amount	Result ppbv	Result ug/m3	(1) MDL ppbv	(2) RL ppbv	Calc MDL ppbv	Calc MDL ug/m3	Calc RL ppbv	Calc RL ug/m3	Flag	S062602-1 Spike ppmv
Vinyl chloride	62.5	0.000	0.000	0.000	0.005	0.052	0.02	0.044	0.17	0.445	U	0.103
1,1-Dichloroethene	96.9	0.000	0.000	0.000	0.005	0.052	0.02	0.069	0.17	0.689	U	0.103
1,1-Dichloroethane	99.0	0.000	0.000	0.000	0.005	0.051	0.02	0.069	0.17	0.691	U	0.103
cis-1,2-Dichloroethene	96.9	0.007	0.021	0.086	0.005	0.052	0.02	0.069	0.17	0.689	J	0.103
1,2-Dichloroethane	99.0	0.000	0.000	0.000	0.005	0.052	0.02	0.070	0.17	0.704	U	0.103
Benzene	78.1	0.059	0.191	0.629	0.005	0.052	0.02	0.056	0.17	0.556		0.103
Carbon tetrachloride	153.8	0.015	0.050	0.325	0.005	0.051	0.02	0.107	0.17	1.073	J	0.103
Trichloroethene	131.4	0.053	0.171	0.946	0.005	0.052	0.02	0.093	0.17	0.935		0.103
Bromodichloromethane	163.8	0.000	0.000	0.000	0.003	0.034	0.01	0.076	0.11	0.762	U	0.103
1,1,2-Trichloroethane	133.4	0.000	0.000	0.000	0.005	0.051	0.02	0.093	0.17	0.931	U	0.103
Tetrachloroethene	165.8	0.002	0.007	0.046	0.005	0.051	0.02	0.116	0.17	1.157	U	0.103
m & p-Xylene	106.2	0.016	0.053	0.239	0.010	0.103	0.03	0.150	0.33	1.497	J	0.103
o-Xylene	106.2	0.006	0.020	0.088	0.005	0.051	0.02	0.074	0.17	0.741	J	0.103
1,1,2,2-Tetrachloroethane	167.8	0.001	0.002	0.017	0.005	0.051	0.02	0.117	0.17	1.171	U	0.103
1,2,4-Trichlorobenzene	181.4	0.007	0.021	0.162	0.005	0.052	0.02	0.129	0.17	1.291	J	0.103
1,4 Dioxane	88.1	0.000	0.000	0.000	0.004	0.037	0.01	0.045	0.12	0.446	U	1.103
Naphthalene	128.2	0.007	0.023	0.124	0.011	0.107	0.03	0.188	0.35	1.877	U	2.103

SAMPLE CALCULATION

EPA Method TO-15 Modified SIM GC/MS

SDG:		**209270**
Laboratory Number:		**10**
Standard Volume	STV	0.5
Sample Volume	SV	500
Can Dilution Factor	CDF	1.62
Gas Constant		23.68
Decimal Places:		3

Sample Calculation:

1) Avg RFn = Sum $\left| \frac{(Astdni)}{(Cstdni)} \frac{(Cistdi)}{(Aistdi)} \right|_i$ Note: 1

2) Raw Amt = $\frac{(Ansamp)}{(Avg\ RFn)} \frac{(Cistdi)}{(Aistdi)}$ = Cn

3) Amount ppbv = $\frac{(Raw\ Amt)\ 1000}{(SV)}$ (CDF) (STV)

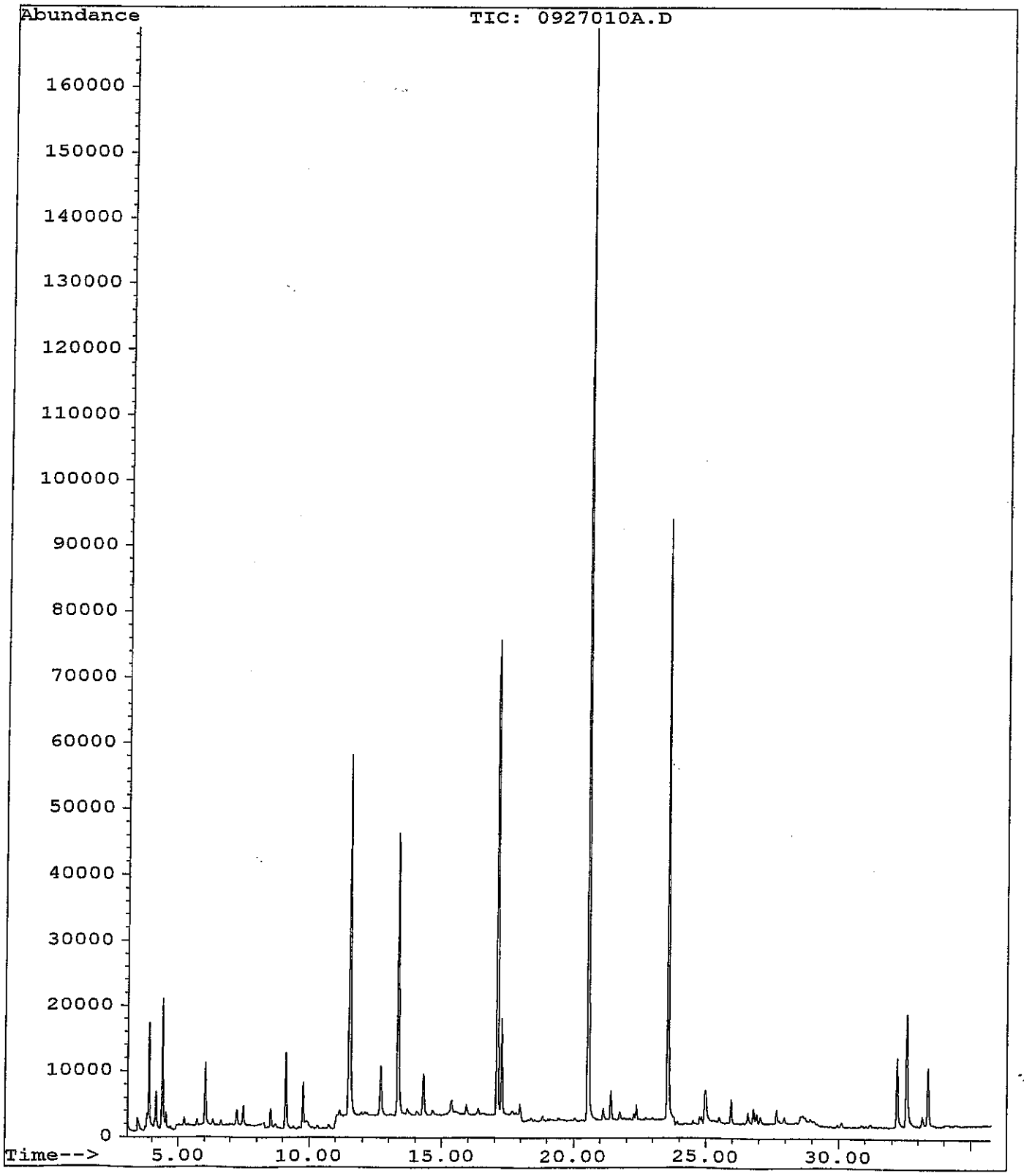
4) Amount ug/m3 = $\frac{(amt(ppbv)\ MW}{23.68}$

n	Compound	IS n	Chem type	MW	AvgRFn	Area Ansamp	Cistdi ppmv	Aistdi Ais	Cn ppmV Raw Amt	Amount ppbv	Amount ug/m3
5	Vinyl chloride	1	TRG	62.5	0.039	0	0.200	310499	0.000	0.000	0.000
9	1,1-Dichloroethene	1	TRG	96.9	0.081	0	0.200	310499	0.000	0.000	0.000
14	1,1-Dichloroethane	1	TRG	99.0	0.089	0	0.200	310499	0.000	0.000	0.000
15	cis-1,2-Dichloroethene	1	TRG	96.9	0.057	572	0.200	310499	0.007	0.021	0.086
19	1,2-Dichloroethane	1	TRG	99.0	0.239	0	0.200	310499	0.000	0.000	0.000
20	Benzene	1	TRG	78.1	0.183	16735	0.200	310499	0.059	0.191	0.630
21	Carbon tetrachloride	1	TRG	153.8	0.112	2684	0.200	310499	0.015	0.050	0.325
23	Trichloroethene	1	TRG	131.4	0.073	5989	0.200	310499	0.053	0.171	0.949
24	Bromodichloromethane	1	TRG	163.8	0.133	0	0.200	310499	0.000	0.000	0.000
28	1,1,2-Trichloroethane	1	TRG	133.4	0.109	0	0.200	310499	0.000	0.000	0.000
30	Tetrachloroethene	1	TRG	165.8	0.092	288	0.200	310499	0.002	0.007	0.049
34	m & p-Xylene	1	TRG	106.2	0.360	9183	0.200	310499	0.016	0.053	0.238
36	o-Xylene	1	TRG	106.2	0.460	4317	0.200	310499	0.006	0.020	0.090
37	1,1,2,2-Tetrachloroethane	1	TRG	167.8	0.54	609	0.200	310499	0.001	0.002	0.014
45	1,2,4-Trichlorobenzene	1	TRG	181.4	1.99	20106	0.200	310499	0.007	0.021	0.161
47	1,4 Dioxane	1	TRG	88.1	0.06	0	0.200	310499	0.000	0.000	0.000
48	Naphthalene	1	TRG	128.2	6.70	73703	0.200	310499	0.007	0.023	0.125
1	Chlorobenzene-d5	1	IS	0.0	1.000	310499	0.200	310499	0.000	0.000	0.000
16	Toluene-d8	1	SURR	0.0	0.425	133946	0.200	310499	0.000	0.000	0.000

Calculation Definitions:

n	compound n
i	i th calibration level
Astdni	Standard Area for compound n at ith calibration level
Cstdni	Standard Concentration for compound n at ith calibration level in ppmv
Cistdi	Internal Standard Conc used for compound n at ith calibration level in ppmv
Aistdi	Internal Standard Area used for compound n at ith calibration level
Ansamp	Sample Area for compound n
Avg RFn	Average response factor for all ith calibration levels for compound n
Raw Amount	Sample Concentration in ppmv before applying factors
Cistd	Concentration internal standard used for compound n in sample in ppmv
Aistd	Area of internal standard used for compound n in sample
Cn	Concentration of compound n in sample in ppmv
23.68	Gas constant at 60 F as per EPA source test protocol
MW	Molecular weight of compound
Note (1) : Avg RFn	The values for the Average Response Factor AvgRFn can be optained from the response Factor Report for the Initial Calibration, or from the Calibration Report

File : C:\MSCHEM\2\DATA\06239M~1\0927010A.D
Operator : SG
Acquired : 23 Jun 109 7:10 pm using AcqMethod 2EXSIM_I.M
Instrument : MS2
Sample Name: 44-015
Misc Info : SEALASKA
Vial Number: 1



ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified SIM GC/MS
Analytical Method: TO-15 SIM

SDG: 209270
Laboratory Number: 11

File: 0927011A.D
Description: 44-016
Can/Tube#: 703
Sam_Type: SA
QC_Batch: 062309-MS2
Air Volume: 500 ml

Date Sampled: 06/16/09 **Time:**
Date Received: 06/17/09
Date Extracted:
Date Analyzed: 06/23/09 **Time:** 19:52
Can Dilution Factor: 1.00 3
Not Detected Flag: ND

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
75-71-8	Dichlorodifluoromethane	0.011	0.106	ND	0.054	0.541	ND	ND
74-87-3	Chloromethane	0.010	0.102	ND	0.022	0.218	ND	ND
74-83-9	Bromomethane	0.010	0.104	0.069	0.042	0.417	0.276	J
75-00-3	Chloroethane	0.010	0.104	ND	0.028	0.283	ND	ND
75-69-4	Trichlorofluoromethane	0.010	0.104	ND	0.060	0.603	ND	ND
76-13-1	Freon 113	0.010	0.102	ND	0.081	0.807	ND	ND
75-09-2	Dichloromethane	0.010	0.104	ND	0.037	0.373	ND	ND
1634-04-4	Methyl tert butyl ether	0.007	0.066	ND	0.025	0.246	ND	ND
156-60-5	trans-1,2-Dichloroethene	0.007	0.074	ND	0.030	0.303	ND	ND
75-34-3	1,1-Dichloroethane	0.010	0.102	ND	0.043	0.426	ND	ND
156-59-2	cis-1,2-Dichloroethene	0.010	0.104	ND	0.043	0.426	ND	ND
67-66-3	Chloroform	0.010	0.102	ND	0.051	0.514	ND	ND
71-55-6	1,1,1-Trichloroethane	0.010	0.102	ND	0.057	0.575	ND	ND
107-06-2	1,2-Dichloroethane	0.010	0.104	ND	0.043	0.435	ND	ND
71-43-2	Benzene	0.010	0.104	ND	0.034	0.343	ND	ND
56-23-5	Carbon tetrachloride	0.010	0.102	ND	0.066	0.662	ND	ND
78-87-5	1,2-Dichloropropane	0.010	0.104	ND	0.050	0.496	ND	ND
79-01-6	Trichloroethene	0.010	0.104	ND	0.058	0.577	ND	ND
75-27-4	Bromodichloromethane	0.007	0.068	ND	0.047	0.470	ND	ND
108-88-3	Toluene	0.010	0.104	0.036	0.040	0.404	0.138	J
79-00-5	1,1,2-Trichloroethane	0.010	0.102	ND	0.057	0.575	ND	ND
106-93-4	1,2-Dibromoethane	0.010	0.104	ND	0.083	0.825	ND	ND
127-18-4	Tetrachloroethene	0.010	0.102	ND	0.071	0.714	ND	ND
108-90-7	Chlorobenzene	0.010	0.102	ND	0.049	0.485	ND	ND
100-41-4	Ethylbenzene	0.010	0.104	0.012	0.047	0.466	0.054	J
108-38-3	m & p-Xylene	0.021	0.206	0.040	0.092	0.924	0.180	J
100-42-5	Styrene	0.010	0.104	ND	0.046	0.458	ND	ND
95-47-6	o-Xylene	0.010	0.102	0.012	0.046	0.457	0.052	J
108-67-8	1,3,5-Trimethylbenzene	0.011	0.106	ND	0.054	0.538	ND	ND
95-63-6	1,2,4-Trimethylbenzene	0.010	0.102	ND	0.052	0.517	ND	ND
541-73-1	1,3-Dichlorobenzene	0.010	0.102	ND	0.063	0.633	ND	ND
100-44-7	Benzyl chloride	0.008	0.076	ND	0.041	0.406	ND	ND
106-46-7	1,4-Dichlorobenzene	0.010	0.102	ND	0.063	0.633	ND	ND
95-50-1	1,2-Dichlorobenzene	0.010	0.100	ND	0.062	0.621	ND	ND
120-82-1	1,2,4-Trichlorobenzene	0.010	0.104	0.010	0.080	0.797	0.080	J
123-91-1	1,4 Dioxane	0.007	0.074	0.148	0.028	0.275	0.552	

	Surrogate Recovery	Spike Amt. ppbV	Amount ppbV	% Rec.	QC Limits	Flag * = Out
2037-26-5	Toluene-d8	0.200	0.178	89	70-130	

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag

Notes: 1) Reported results are to be interpreted to two significant figures.
2) ug/m3 = ppbV*FW/23.68 calculated assuming conditions at 60 F and 1 atm.
3) MDL and RL are adjusted for sample volume and can dilution.
4) U and ND are Flags used for Not Detected
5) J is a flag for a result between the MDL and the RL (or lower quantitation limit, LQL)

QUANTITATION REPORT

EPA Method TO-15 Modified SIM GC/MS

			Review	EAS Sample ID: 0927011	
File Name:	0927011A.D				1 SS
Sample ID:	44-016				2 KB
Date:	23 Jun 109 7:52 pm			Cal Amounts	3 AT
Run Method:	2EXSIM_I.M			IS Areas	4 BB
Quant Method:	2EXSIM_I.M			Carryover	5 SH
Cal Update:	Mon Jun 22 09:18:18 2009				
Template:	EARTEXSM.MS3				
Can Factor:	1.00				
Volume:	500	ml		Analyst: SS 1	

CAS#	Compound	n	Raw Amount	RT	Target RT	Ion	Sample Area	Qualifier	Lower Qual	Upper Qual	Qual Flag	Cal Flag	Int Flag
75-71-8	Dichlorodifluoromethane	2	0.000	0.00	3.85	85.00	0	0	26	38			
74-87-3	Chloromethane	3	0.001	4.31	4.12	50.00	48	32	21	32			
74-83-9	Bromomethane	6	0.034	4.95	4.97	94.00	1892	20	69	104	Q		
75-00-3	Chloroethane	7	0.004	5.23	5.18	64.00	197	0	27	40			
75-69-4	Trichlorofluoromethane	8	0.000	5.91	5.98	101.00	16	138	53	80			
76-13-1	Freon 113	10	0.000	7.09	7.13	151.00	4	17	136	204			
75-09-2	Dichloromethane	11	0.001	7.37	7.42	84.00	54	0	51	77			
1634-04-4	Methyl tert butyl ether	13	0.001	8.57	8.60	73.00	283	0	16	24			
156-60-5	trans-1,2-Dichloroethene	12	0.001	8.43	8.48	96.00	52	0	111	167			
75-34-3	1,1-Dichloroethane	14	0.000	8.98	9.00	63.00	13	107	25	37			
156-59-2	cis-1,2-Dichloroethene	15	0.000	10.18	10.24	96.00	11	219	102	153			
67-66-3	Chloroform	17	0.000	10.62	10.66	83.00	29	40	52	78			
71-55-6	1,1,1-Trichloroethane	18	0.000	11.91	11.91	97.00	78	0	53	80			
107-06-2	1,2-Dichloroethane	19	0.000	12.04	12.02	61.95	171	0	14	21			
71-43-2	Benzene	20	0.001	12.68	12.63	78.00	329	26	16	23			
56-23-5	Carbon tetrachloride	21	0.000	12.50	12.66	116.90	27	0	79	119			
78-87-5	1,2-Dichloropropane	22	0.001	14.15	14.20	63.00	51	44	126	189			
79-01-6	Trichloroethene	23	0.000	14.18	14.26	130.00	46	0	75	112			
75-27-4	Bromodichloromethane	24	0.001	14.55	14.57	83.00	153	0	52	78			
108-88-3	Toluene	26	0.018	17.08	17.21	91.00	6779	63	53	80			
79-00-5	1,1,2-Trichloroethane	28	0.000	17.35	17.35	97.00	63	17	63	94			
106-93-4	1,2-Dibromoethane	29	0.001	18.90	18.99	107.00	241	76	76	114			
127-18-4	Tetrachloroethene	30	0.001	18.99	19.09	166.00	156	98	64	97			
108-90-7	Chlorobenzene	31	0.001	20.53	20.59	112.00	407	22	27	40			
100-41-4	Ethylbenzene	33	0.006	21.03	21.08	91.00	4193	20	24	36	Q		
108-38-3	m & p-Xylene	34	0.020	21.33	21.37	91.00	10669	43	42	63			
100-42-5	Styrene	35	0.000	22.09	22.22	104.00	23	0	28	42			
95-47-6	o-Xylene	36	0.006	22.32	22.34	91.00	3941	44	38	56			
108-67-8	1,3,5-Trimethylbenzene	39	0.001	24.85	24.96	105.00	1150	29	39	58	Q		
95-63-6	1,2,4-Trimethylbenzene	40	0.000	25.82	25.91	105.00	26	45	36	54			
541-73-1	1,3-Dichlorobenzene	41	0.002	26.60	26.55	146.00	2018	50	35	52			
100-44-7	Benzyl chloride	42	0.000	26.66	26.70	91.00	23	57	15	23			
106-46-7	1,4-Dichlorobenzene	43	0.003	26.80	26.75	146.00	2838	45	32	49			
95-50-1	1,2-Dichlorobenzene	44	0.002	27.66	27.61	146.00	2795	40	38	57			
120-82-1	1,2,4-Trichlorobenzene	45	0.005	32.20	32.17	180.00	15362	94	79	118			
123-91-1	1,4 Dioxane	47	0.074	14.66	14.57	88.00	6903	0	55	82	Q		

CAS#	Compound	n	Raw Amount	RT	Target RT	Ion	Sample Area	Qualifier	Lower Qual	Upper Qual	Qual Flag	Cal Flag	Int Flag
3114-55-4	Chlorobenzene-d5	1	0.200	20.44	20.51	117.00	**294772**						
2037-26-5	Toluene-d8	16	0.178	16.89	17.05	98.00	**111276**						

Integration Flags:

If no flag the Integration was done by the instrument computer

M1 Manual Integration because the computer did not integrated the peak or integrated the wrong peak

M2 Manual Integration because computer integration of baseline was different then Inital Calibration

INITIAL CALIBRATION REPORT

EPA Method TO-15 Modified SIM GC/MS

SDG: 209270
QC_Batch: 062309-MS2
Instrument Name: MS2

File Name: 0927011A.D
Sample ID: 44-016
Sample Analysis Date: 23 Jun 109 7:52 pm
Run Method: 2EXSIM_I.M
Quant and Calibration Method: 2EXSIM_I.M
Cal Update: Mon Jun 22 09:18:18 2009
Template: EARTEXSM.MS3

Calibration Title: EPA T0-15

Number Compounds: 49
IS1: ST60024 0.2
IS2:
IS3:
IS4:

		Calibration Amount CA, ppmv						Calibration Response, Area					
		Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
		Amt	Amt	Amt	Amt	Amt	Amt	C06199B.D	C06199H.D	C06199A.D	C06199F.D	C06199E.D	C06199K.D
n	Compound	10.0	0.5	20.0	2.0	4.0	1.0	10.0	0.5	20.0	2.0	4.0	1.0
2	Dichlorodifluoromethane	1.050	0.053	2.100	0.210	0.420	0.105	534841	38986	1705728	73746	400604	64289
3	Chloromethane	1.020	0.051	2.040	0.204	0.408	0.102	268477	16811	877342	29933	189687	27154
6	Bromomethane	1.040	0.052	2.080	0.208	0.416	0.104	193900	12685	547447	21277	126567	19683
7	Chloroethane	1.040	0.052	2.080	0.208	0.416	0.104	180453	11984	584817	18602	111983	15560
8	Trichlorofluoromethane	1.040	0.052	2.080	0.208	0.416	0.104	631888	46620	1969166	80614	475586	72646
10	Freon 113	1.020	0.051	2.040	0.204	0.408	0.102	274663	20804	826803	35204	228496	30309
11	Dichloromethane	1.040	0.052	2.080	0.208	0.416	0.104	180065	15163	530282	25781	167890	19971
13	Methyl tert butyl ether	0.660	0.033	1.320	0.132	0.264	0.066	620120	31056	2309675	52207	365659	44883
12	trans-1,2-Dichloroethene	0.730	0.037	1.460	0.146	0.292	0.073	142963	12852	384125	20102	132501	16643
14	1,1-Dichloroethane	1.010	0.051	2.020	0.202	0.404	0.101	403912	31159	1225807	51920	327340	43151
15	cis-1,2-Dichloroethene	1.030	0.052	2.060	0.206	0.412	0.103	240146	21098	758337	35003	226396	27004
17	Chloroform	1.020	0.051	2.040	0.204	0.408	0.102	510308	42620	1697577	69088	427372	57851
18	1,1,1-Trichloroethane	1.020	0.051	2.040	0.204	0.408	0.102	587705	46722	1955378	75018	469425	61727
19	1,2-Dichloroethane	1.030	0.052	2.060	0.206	0.412	0.103	1236150	74052	4935278	125964	835756	97954
20	Benzene	1.030	0.052	2.060	0.206	0.412	0.103	967913	60686	3573129	94902	641363	73510
21	Carbon tetrachloride	1.020	0.051	2.040	0.204	0.408	0.102	492544	40672	1579809	67130	410007	53667
22	1,2-Dichloropropane	1.030	0.052	2.060	0.206	0.412	0.103	280915	22034	957916	37485	236197	27080
23	Trichloroethene	1.030	0.052	2.060	0.206	0.412	0.103	305786	29555	968228	45278	286372	33459
24	Bromodichloromethane	0.670	0.034	1.340	0.134	0.268	0.067	349165	34872	980125	57413	329960	43188
26	Toluene	1.030	0.052	2.060	0.206	0.412	0.103	1260474	90214	4659514	149575	935329	102952
28	1,1,2-Trichloroethane	1.020	0.051	2.040	0.204	0.408	0.102	480870	37160	1655491	70973	441832	43484
29	1,2-Dibromoethane	1.040	0.052	2.080	0.208	0.416	0.104	915216	67709	3403871	130478	834780	79525

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n	Compound	Amt 10.0	Amt 0.5	Amt 20.0	Amt 2.0	Amt 4.0	Amt 1.0	C06199B.D 10.0	C06199H.D 0.5	C06199A.D 20.0	C06199F.D 2.0	C06199E.D 4.0	C06199K.D 1.0
30	Tetrachloroethene	1.020	0.051	2.040	0.204	0.408	0.102	373918	35806	1224836	58411	374447	38753
31	Chlorobenzene	1.020	0.051	2.040	0.204	0.408	0.102	1017786	104021	3390004	174301	1040689	105228
33	Ethylbenzene	1.040	0.052	2.080	0.208	0.416	0.104	2140675	173953	7709871	303124	1882967	181776
34	m & p-Xylene	2.060	0.103	4.120	0.412	0.824	0.206	2970894	279033	10312056	481458	2872586	284680
35	Styrene	1.030	0.052	2.060	0.206	0.412	0.103	2090268	153303	6660464	294984	1772326	150847
36	o-Xylene	1.020	0.051	2.040	0.204	0.408	0.102	1996168	168269	6920115	304155	1831287	166711
39	1,3,5-Trimethylbenzene	1.060	0.053	2.120	0.212	0.424	0.106	3143240	323037	9985329	644118	3708236	280478
40	1,2,4-Trimethylbenzene	1.020	0.051	2.040	0.204	0.408	0.102	3248488	373791	10120607	742439	4300475	315230
41	1,3-Dichlorobenzene	1.020	0.051	2.040	0.204	0.408	0.102	2387618	303170	7032467	572612	3179015	243933
42	Benzyl chloride	0.760	0.038	1.520	0.152	0.304	0.076	2015808	210430	6118543	463035	2452250	191598
43	1,4-Dichlorobenzene	1.020	0.051	2.040	0.204	0.408	0.102	2189006	331504	6500736	598783	3247824	271163
44	1,2-Dichlorobenzene	1.000	0.050	2.000	0.200	0.400	0.100	3162973	359724	9089085	693423	3769025	288406
45	1,2,4-Trichlorobenzene	1.030	0.052	2.060	0.206	0.412	0.103	6381826	918959	14261028	1761172	9410822	617532
47	1,4 Dioxane	0.740	0.037	1.480	0.148	0.296	0.074	154378	17449	450267	31614	179188	26330
1	Chlorobenzene-d5	0.200	0.200	0.200	0.200	0.200	0.200	877690	1273169	1660044	554145	1807068	927887
15	Toluene-d8	0.200	0.200	0.200	0.200	0.200	0.200	389596	565545	652462	236781	753686	395034

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INITIAL CALIBRATION REPORT: Response Factors

SDG:	209270
QC_Batch:	062309-MS2
Sample ID:	44-016
Sample Analysis Date:	23 Jun 109 7:52 pm
Run Method:	2EXSIM_I.M
Quant Method:	2EXSIM_I.M
Cal Update:	Mon Jun 22 09:18:18 2009
Template:	EARTEXSM.MS3

Sample Calculation:

1) Avg RFn = Sum $\left| \frac{(Astdni)}{(Cstdni)} \frac{(Cistdi)}{(Aistdi)} \right|_i$

Response Factors

Compound	RF1	RF2	RF3	RF4	RF5	RF6	AvgRFn	%RSD
Dichlorodifluoromethane	0.116	0.116	0.098	0.127	0.106	0.132	0.116	10.99
Chloromethane	0.060	0.052	0.052	0.053	0.051	0.057	0.054	6.60
Bromomethane	0.042	0.038	0.032	0.037	0.034	0.041	0.037	11.03
Chloroethane	0.040	0.036	0.034	0.032	0.030	0.032	0.034	10.13
Trichlorofluoromethane	0.138	0.141	0.114	0.140	0.127	0.151	0.135	9.50
Freon 113	0.061	0.064	0.049	0.062	0.062	0.064	0.060	9.58
Dichloromethane	0.039	0.046	0.031	0.045	0.045	0.041	0.041	13.70
Methyl tert butyl ether	0.214	0.148	0.211	0.143	0.153	0.147	0.169	19.90
trans-1,2-Dichloroethene	0.045	0.055	0.032	0.050	0.050	0.049	0.047	17.11
1,1-Dichloroethane	0.091	0.096	0.073	0.093	0.090	0.092	0.089	9.11
cis-1,2-Dichloroethene	0.053	0.064	0.044	0.061	0.061	0.057	0.057	12.56
Chloroform	0.114	0.131	0.100	0.122	0.116	0.122	0.118	8.89
1,1,1-Trichloroethane	0.131	0.144	0.115	0.133	0.127	0.130	0.130	7.04
1,2-Dichloroethane	0.273	0.224	0.289	0.221	0.225	0.205	0.239	13.97
Benzene	0.214	0.183	0.209	0.166	0.172	0.154	0.183	13.13
Carbon tetrachloride	0.110	0.125	0.093	0.119	0.111	0.113	0.112	9.60
1,2-Dichloropropane	0.062	0.067	0.056	0.066	0.063	0.057	0.062	7.25
Trichloroethene	0.068	0.089	0.057	0.079	0.077	0.070	0.073	15.26
Bromodichloromethane	0.119	0.161	0.088	0.155	0.136	0.139	0.133	19.96
Toluene	0.279	0.273	0.273	0.262	0.251	0.215	0.259	9.02
1,1,2-Trichloroethane	0.107	0.114	0.098	0.126	0.120	0.092	0.109	11.85
1,2-Dibromoethane	0.201	0.205	0.197	0.226	0.222	0.165	0.203	10.84
Tetrachloroethene	0.084	0.110	0.072	0.103	0.102	0.082	0.092	16.20
Chlorobenzene	0.227	0.320	0.200	0.308	0.282	0.222	0.260	19.25
Ethylbenzene	0.469	0.525	0.447	0.526	0.501	0.377	0.474	12.05
m & p-Xylene	0.329	0.426	0.302	0.422	0.386	0.298	0.360	16.21
Styrene	0.462	0.463	0.390	0.517	0.476	0.316	0.437	16.55
o-Xylene	0.446	0.518	0.409	0.538	0.497	0.352	0.460	15.46
1,3,5-Trimethylbenzene	0.676	0.957	0.567	1.097	0.968	0.570	0.806	28.46
1,2,4-Trimethylbenzene	0.726	1.151	0.598	1.314	1.167	0.666	0.937	32.85
1,3-Dichlorobenzene	0.533	0.934	0.415	1.013	0.862	0.515	0.712	35.57
Benzyl chloride	0.604	0.870	0.485	1.099	0.893	0.543	0.749	32.20
1,4-Dichlorobenzene	0.489	1.021	0.384	1.059	0.881	0.573	0.735	39.38
1,2-Dichlorobenzene	0.721	1.130	0.548	1.251	1.043	0.622	0.886	33.09
1,2,4-Trichlorobenzene	1.412	2.776	0.834	3.086	2.528	1.292	1.988	46.46
1,4 Dioxane	0.048	0.074	0.037	0.077	0.067	0.077	0.063	27.03
Chlorobenzene-d5	1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.00

Toluene-d8	0.444	0.444	0.393	0.427	0.417	0.426	0.425	4.48

CALCULATIONS

EPA Method TO-15 Modified SIM GC/MS

SDG: 209270
Laboratory Number: 11

RL: 2EXSIM_I.M
Run Method: 2EXSIM_I.M
Quant Method: 2EXSIM_I.M
Can Dilution Factor: 1.00
Air Volume: 500 ml
Gas Constant: 23.68
Decimal Places: 3

Compound	M.W.	Raw Amount	Result ppbv	Result ug/m3	(1) MDL ppbv	(2) RL ppbv	Calc MDL ppbv	Calc MDL ug/m3	Calc RL ppbv	Calc RL ug/m3	Flag	S062602-1 Spike ppmv
Dichlorodifluoromethane	120.9	0.000	0.000	0.000	0.005	0.053	0.01	0.054	0.11	0.541	U	0.103
Chloromethane	50.5	0.001	0.001	0.003	0.005	0.051	0.01	0.022	0.10	0.218	U	0.103
Bromomethane	94.9	0.034	0.069	0.276	0.005	0.052	0.01	0.042	0.10	0.417	J	0.103
Chloroethane	64.5	0.004	0.008	0.021	0.005	0.052	0.01	0.028	0.10	0.283	U	0.103
Trichlorofluoromethane	137.4	0.000	0.000	0.001	0.005	0.052	0.01	0.060	0.10	0.603	U	0.103
Freon 113	187.3	0.000	0.000	0.001	0.005	0.051	0.01	0.081	0.10	0.807	U	0.103
Dichloromethane	84.9	0.001	0.002	0.006	0.005	0.052	0.01	0.037	0.10	0.373	U	0.103
Methyl tert butyl ether	88.1	0.001	0.002	0.008	0.003	0.033	0.01	0.025	0.07	0.246	U	1.103
trans-1,2-Dichloroethene	96.9	0.001	0.002	0.006	0.004	0.037	0.01	0.030	0.07	0.303	U	0.103
1,1-Dichloroethane	99.0	0.000	0.000	0.001	0.005	0.051	0.01	0.043	0.10	0.426	U	0.103
cis-1,2-Dichloroethene	96.9	0.000	0.000	0.001	0.005	0.052	0.01	0.043	0.10	0.426	U	0.103
Chloroform	119.4	0.000	0.000	0.002	0.005	0.051	0.01	0.051	0.10	0.514	U	0.103
1,1,1-Trichloroethane	133.4	0.000	0.001	0.005	0.005	0.051	0.01	0.057	0.10	0.575	U	0.103
1,2-Dichloroethane	99.0	0.000	0.001	0.004	0.005	0.052	0.01	0.043	0.10	0.435	U	0.103
Benzene	78.1	0.001	0.002	0.008	0.005	0.052	0.01	0.034	0.10	0.343	U	0.103
Carbon tetrachloride	153.8	0.000	0.000	0.002	0.005	0.051	0.01	0.066	0.10	0.662	U	0.103
1,2-Dichloropropane	113.0	0.001	0.001	0.005	0.005	0.052	0.01	0.050	0.10	0.496	U	0.103
Trichloroethene	131.4	0.000	0.001	0.005	0.005	0.052	0.01	0.058	0.10	0.577	U	0.103
Bromodichloromethane	163.8	0.001	0.002	0.011	0.003	0.034	0.01	0.047	0.07	0.470	U	0.103
Toluene	92.1	0.018	0.036	0.138	0.005	0.052	0.01	0.040	0.10	0.404	J	0.103
1,1,2-Trichloroethane	133.4	0.000	0.001	0.004	0.005	0.051	0.01	0.057	0.10	0.575	U	0.103
1,2-Dibromoethane	187.9	0.001	0.002	0.013	0.005	0.052	0.01	0.083	0.10	0.825	U	0.103
Tetrachloroethene	165.8	0.001	0.002	0.016	0.005	0.051	0.01	0.071	0.10	0.714	U	0.103
Chlorobenzene	112.6	0.001	0.002	0.010	0.005	0.051	0.01	0.049	0.10	0.485	U	0.103
Ethylbenzene	106.2	0.006	0.012	0.054	0.005	0.052	0.01	0.047	0.10	0.466	J	0.103
m & p-Xylene	106.2	0.020	0.040	0.180	0.010	0.103	0.02	0.092	0.21	0.924	J	0.103
Styrene	104.2	0.000	0.000	0.000	0.005	0.052	0.01	0.046	0.10	0.458	U	0.103
o-Xylene	106.2	0.006	0.012	0.052	0.005	0.051	0.01	0.046	0.10	0.457	J	0.103
1,3,5-Trimethylbenzene	120.2	0.001	0.002	0.010	0.005	0.053	0.01	0.054	0.11	0.538	U	0.103
1,2,4-Trimethylbenzene	120.0	0.000	0.000	0.000	0.005	0.051	0.01	0.052	0.10	0.517	U	0.103
1,3-Dichlorobenzene	147.0	0.002	0.004	0.024	0.005	0.051	0.01	0.063	0.10	0.633	U	0.103
Benzyl chloride	126.6	0.000	0.000	0.000	0.004	0.038	0.01	0.041	0.08	0.406	U	0.103
1,4-Dichlorobenzene	147.0	0.003	0.005	0.033	0.005	0.051	0.01	0.063	0.10	0.633	U	0.103
1,2-Dichlorobenzene	147.0	0.002	0.004	0.027	0.005	0.050	0.01	0.062	0.10	0.621	U	0.103
1,2,4-Trichlorobenzene	181.4	0.005	0.010	0.080	0.005	0.052	0.01	0.080	0.10	0.797	J	0.103
1,4 Dioxane	88.1	0.074	0.148	0.552	0.004	0.037	0.01	0.028	0.07	0.275		1.103

SAMPLE CALCULATION

EPA Method TO-15 Modified SIM GC/MS

SDG:		**209270**
Laboratory Number:		**11**
Standard Volume	STV	0.5
Sample Volume	SV	500
Can Dilution Factor	CDF	1.00
Gas Constant		23.68
Decimal Places:		3

Sample Calculation:

1) Avg RFn = Sum $\left| \frac{(Astdni)}{(Cstdni)} \frac{(Cistdi)}{(Aistdi)} \right|_i$ Note: 1

2) Raw Amt = $\frac{(Ansamp)}{(Avg\ RFn)} \frac{(Cistdi)}{(Aistdi)}$ = **Cn**

3) Amount ppbv = $\frac{(Raw\ Amt)}{} \frac{1000}{(SV)} (CDF) (STV)$

4) Amount ug/m3 = $\frac{(amt(ppbv)}{} \frac{MW}{23.68}$

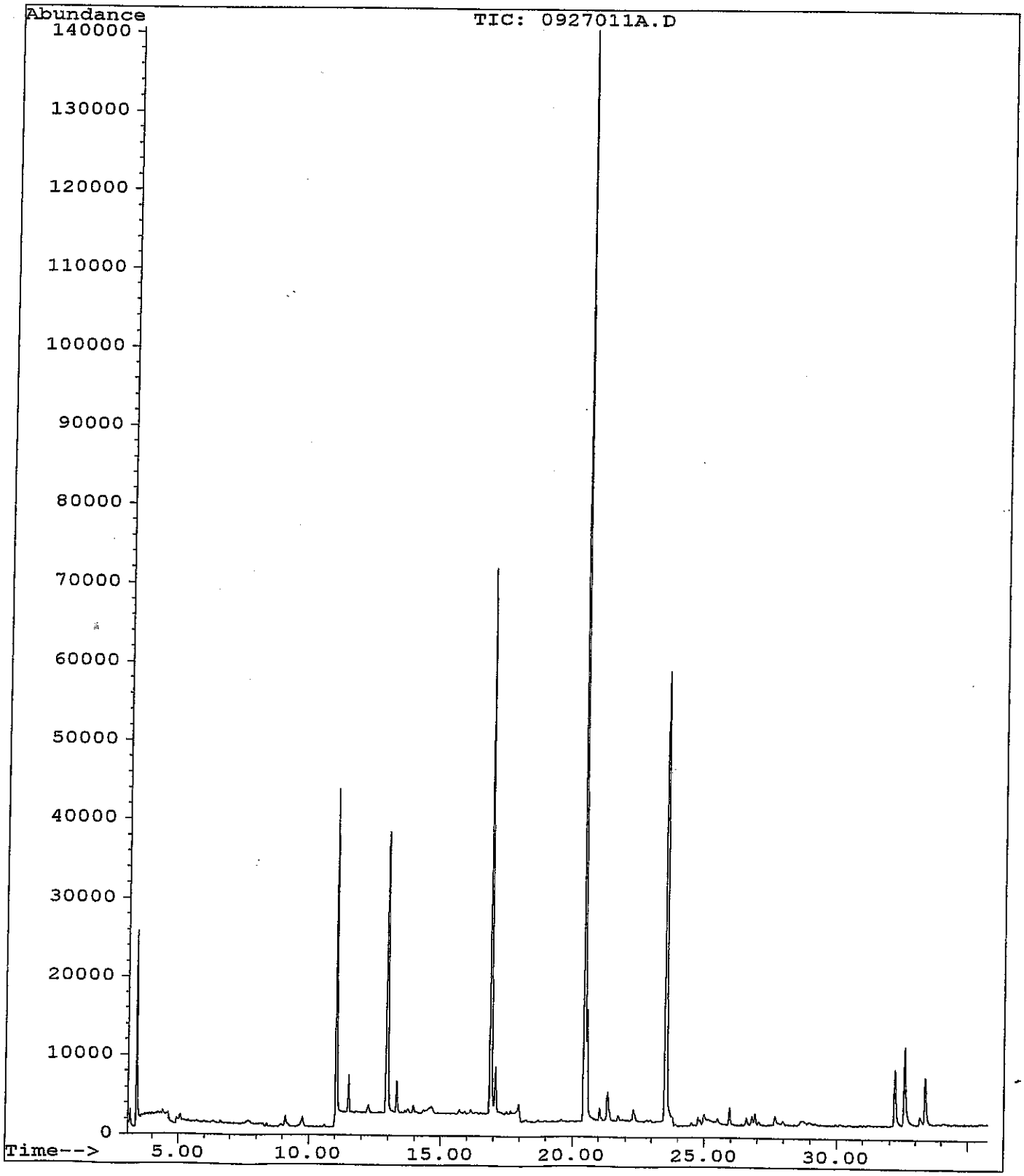
n	Compound	IS n	Chem type	MW	AvgRFn	Area Ansamp	Cistdi ppmv	Aistdi Ais	Cn ppmV Raw Amt	Amount ppbv	Amount ug/m3
2	Dichlorodifluoromethane	1	TRG	120.9	0.116	0	0.200	294772	0.000	0.000	0.000
3	Chloromethane	1	TRG	50.5	0.054	48	0.200	294772	0.001	0.001	0.002
6	Bromomethane	1	TRG	94.9	0.037	1892	0.200	294772	0.034	0.069	0.277
7	Chloroethane	1	TRG	64.5	0.034	197	0.200	294772	0.004	0.008	0.022
8	Trichlorofluoromethane	1	TRG	137.4	0.135	16	0.200	294772	0.000	0.000	0.000
10	Freon 113	1	TRG	187.3	0.060	4	0.200	294772	0.000	0.000	0.000
11	Dichloromethane	1	TRG	84.9	0.041	54	0.200	294772	0.001	0.002	0.007
13	Methyl tert butyl ether	2	TRG	88.1	0.169	283	0.200	294772	0.001	0.002	0.007
12	trans-1,2-Dichloroethene	1	TRG	96.9	0.047	52	0.200	294772	0.001	0.002	0.008
14	1,1-Dichloroethane	1	TRG	99.0	0.089	13	0.200	294772	0.000	0.000	0.000
15	cis-1,2-Dichloroethene	1	TRG	96.9	0.057	11	0.200	294772	0.000	0.000	0.000
17	Chloroform	1	TRG	119.4	0.118	29	0.200	294772	0.000	0.000	0.000
18	1,1,1-Trichloroethane	1	TRG	133.4	0.130	78	0.200	294772	0.000	0.001	0.006
19	1,2-Dichloroethane	1	TRG	99.0	0.239	171	0.200	294772	0.000	0.001	0.004
20	Benzene	1	TRG	78.1	0.183	329	0.200	294772	0.001	0.002	0.007
21	Carbon tetrachloride	1	TRG	153.8	0.112	27	0.200	294772	0.000	0.000	0.000
22	1,2-Dichloropropane	1	TRG	113.0	0.062	51	0.200	294772	0.001	0.001	0.005
23	Trichloroethene	1	TRG	131.4	0.073	46	0.200	294772	0.000	0.001	0.006
24	Bromodichloromethane	1	TRG	163.8	0.133	153	0.200	294772	0.001	0.002	0.014
26	Toluene	1	TRG	92.1	0.259	6779	0.200	294772	0.018	0.036	0.140
28	1,1,2-Trichloroethane	1	TRG	133.4	0.109	63	0.200	294772	0.000	0.001	0.006
29	1,2-Dibromoethane	1	TRG	187.9	0.203	241	0.200	294772	0.001	0.002	0.016
30	Tetrachloroethene	1	TRG	165.8	0.092	156	0.200	294772	0.001	0.002	0.014
31	Chlorobenzene	1	TRG	112.6	0.260	407	0.200	294772	0.001	0.002	0.010
33	Ethylbenzene	1	TRG	106.2	0.474	4193	0.200	294772	0.006	0.012	0.054
34	m & p-Xylene	1	TRG	106.2	0.360	10669	0.200	294772	0.020	0.040	0.179
35	Styrene	1	TRG	104.2	0.437	23	0.200	294772	0.000	0.000	0.000
36	o-Xylene	1	TRG	106.2	0.460	3941	0.200	294772	0.006	0.012	0.054
39	1,3,5-Trimethylbenzene	1	TRG	120.2	0.806	1150	0.200	294772	0.001	0.002	0.010
40	1,2,4-Trimethylbenzene	1	TRG	120.0	0.937	26	0.200	294772	0.000	0.000	0.000
41	1,3-Dichlorobenzene	1	TRG	147.0	0.712	2018	0.200	294772	0.002	0.004	0.025
42	Benzyl chloride	1	TRG	126.6	0.749	23	0.200	294772	0.000	0.000	0.000
43	1,4-Dichlorobenzene	1	TRG	147.0	0.735	2838	0.200	294772	0.003	0.005	0.031
44	1,2-Dichlorobenzene	1	TRG	147.0	0.886	2795	0.200	294772	0.002	0.004	0.025
45	1,2,4-Trichlorobenzene	1	TRG	181.4	1.99	15362	0.200	294772	0.005	0.010	0.077
47	1,4 Dioxane	1	TRG	88.1	0.06	6903	0.200	294772	0.074	0.148	0.551
1	Chlorobenzene-d5	1	IS	0.0	1.000	294772	0.200	294772	0.000	0.000	0.000
16	Toluene-d8	1	SURR	0.0	0.425	111276	0.200	294772	0.000	0.000	0.000

Calculation Definitions:

n	compound n
i	I th calibration level

Astdni	Standard Area for compound n at ith calibration level
Cstdni	Standard Concentration for compound n at ith calibration level in ppmv
Cistdi	Internal Standard Conc used for compound n at ith calibration level in ppmv
Aistdi	Internal Standard Area used for compound n at ith calibration level
Ansamp	Sample Area for compound n
Avg RFn	Average response factor for all ith calibration levels for compound n
Raw Amount	Sample Concentration in ppmv before applying factors
Cistd	Concentration internal standard used for compound n in sample in ppmv
Aistd	Area of internal standard used for compound n in sample
Cn	Concentration of compound n in sample in ppmv
23.68	Gas constant at 60 F as per EPA source test protocol
MW	Molecular weight of compound
Note (1) : Avg RFn	The values for the Average Response Factor AvgRFn can be optained from the response Factor Report for the Initial Calibration, or from the Calibration Report

File : C:\MSCHEM\2\DATA\06239MS2\0927011A.D
Operator : SG
Acquired : 23 Jun 109 7:52 pm using AcqMethod 2EXSIM_I.M
Instrument : MS2
Sample Name: 44-016
Misc Info : SEALASKA
Vial Number: 1



ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified SIM GC/MS
Analytical Method: TO-15 SIM

SDG: 209270
Laboratory Number: 12

File: 0927012A.D
Description: 44-017
Can/Tube#: 681
Sam_Type: SA
QC_Batch: 062309-MS2
Air Volume: 500 ml

Date Sampled: 06/16/09 **Time:** 16:53
Date Received: 06/17/09
Date Extracted:
Date Analyzed: 06/23/09 **Time:** 20:39
Can Dilution Factor: 1.87 3
Not Detected Flag: ND

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
75-71-8	Dichlorodifluoromethane	0.020	0.198	ND	0.101	1.012	ND	ND
74-87-3	Chloromethane	0.019	0.191	ND	0.041	0.407	ND	ND
74-83-9	Bromomethane	0.019	0.194	ND	0.078	0.779	ND	ND
75-00-3	Chloroethane	0.019	0.194	ND	0.053	0.530	ND	ND
75-69-4	Trichlorofluoromethane	0.019	0.194	0.033	0.113	1.128	0.190	J
76-13-1	Freon 113	0.019	0.191	ND	0.151	1.509	ND	ND
75-09-2	Dichloromethane	0.019	0.194	0.038	0.070	0.697	0.138	J
1634-04-4	Methyl tert butyl ether	0.012	0.123	ND	0.046	0.459	ND	ND
156-60-5	trans-1,2-Dichloroethene	0.014	0.138	ND	0.057	0.566	ND	ND
75-34-3	1,1-Dichloroethane	0.019	0.191	ND	0.080	0.797	ND	ND
156-59-2	cis-1,2-Dichloroethene	0.019	0.194	ND	0.080	0.796	ND	ND
67-66-3	Chloroform	0.019	0.191	ND	0.096	0.962	ND	ND
71-55-6	1,1,1-Trichloroethane	0.019	0.191	ND	0.107	1.075	ND	ND
107-06-2	1,2-Dichloroethane	0.019	0.194	ND	0.081	0.813	ND	ND
71-43-2	Benzene	0.019	0.194	0.066	0.064	0.641	0.218	J
56-23-5	Carbon tetrachloride	0.019	0.191	0.050	0.124	1.239	0.324	J
78-87-5	1,2-Dichloropropane	0.019	0.194	ND	0.093	0.928	ND	ND
79-01-6	Trichloroethene	0.019	0.194	ND	0.108	1.079	ND	ND
75-27-4	Bromodichloromethane	0.013	0.127	ND	0.088	0.880	ND	ND
108-88-3	Toluene	0.019	0.194	0.853	0.076	0.756	3.318	
79-00-5	1,1,2-Trichloroethane	0.019	0.191	ND	0.107	1.075	ND	ND
106-93-4	1,2-Dibromoethane	0.019	0.194	ND	0.154	1.543	ND	ND
127-18-4	Tetrachloroethene	0.019	0.191	0.049	0.134	1.336	0.342	J
108-90-7	Chlorobenzene	0.019	0.191	ND	0.091	0.907	ND	ND
100-41-4	Ethylbenzene	0.019	0.194	0.077	0.087	0.872	0.345	J
108-38-3	m & p-Xylene	0.039	0.385	0.242	0.173	1.728	1.085	J
100-42-5	Styrene	0.019	0.194	0.035	0.086	0.856	0.156	J
95-47-6	o-Xylene	0.019	0.191	0.069	0.086	0.855	0.307	J
108-67-8	1,3,5-Trimethylbenzene	0.020	0.198	0.062	0.101	1.006	0.313	J
95-63-6	1,2,4-Trimethylbenzene	0.019	0.191	0.045	0.097	0.967	0.227	J
541-73-1	1,3-Dichlorobenzene	0.019	0.191	ND	0.118	1.184	ND	ND
100-44-7	Benzyl chloride	0.014	0.142	ND	0.076	0.760	ND	ND
106-46-7	1,4-Dichlorobenzene	0.019	0.191	ND	0.118	1.184	ND	ND
95-50-1	1,2-Dichlorobenzene	0.019	0.187	ND	0.116	1.161	ND	ND
120-82-1	1,2,4-Trichlorobenzene	0.019	0.194	0.024	0.149	1.490	0.180	J
123-91-1	1,4 Dioxane	0.014	0.138	0.278	0.051	0.515	1.034	

	Surrogate Recovery	Spike Amt. ppbV	Amount ppbV	% Rec.	QC Limits	Flag * = Out
2037-26-5	Toluene-d8	0.200	0.183	92	70-130	

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag

Notes: 1) Reported results are to be interpreted to two significant figures.
2) ug/m3 = ppbV*FW/23.68 calculated assuming conditions at 60 F and 1 atm.
3) MDL and RL are adjusted for sample volume and can dilution.
4) U and ND are Flags used for Not Detected
5) J is a flag for a result between the MDL and the RL (or lower quantitation limit, LQL)

QUANTITATION REPORT

EPA Method TO-15 Modified SIM GC/MS

Review

EAS Sample ID: 0927012

File Name: 0927012A.D
Sample ID: 44-017
Date: 23 Jun 109 8:39 pm
Run Method: 2EXSIM_I.M
Quant Method: 2EXSIM_I.M
Cal Update: Mon Jun 22 09:18:18 2009
Template: EARTEXSM.MS3
Can Factor: 1.87
Volume: 500 ml

Cal Amounts
IS Areas
Carryover

1 SS
2 KB
3 AT
4 BB
5 SH

Analyst: SS 1

CAS#	Compound	n	Raw Amount	RT	Target RT	Ion	Sample Area	Qualifier	Lower Qual	Upper Qual	Qual Flag	Cal Flag	Int Flag
75-71-8	Dichlorodifluoromethane	2	0.000	0.00	3.85	85.00	0	0	26	38			
74-87-3	Chloromethane	3	0.000	4.06	4.12	50.00	0	0	21	32			
74-83-9	Bromomethane	6	0.000	5.16	4.97	94.00	0	0	69	104			
75-00-3	Chloroethane	7	0.000	5.13	5.18	64.00	0	0	27	40			
75-69-4	Trichlorofluoromethane	8	0.009	6.04	5.98	101.00	6306	60	53	80			
76-13-1	Freon 113	10	0.002	7.25	7.13	151.00	736	181	136	204			
75-09-2	Dichloromethane	11	0.010	7.50	7.42	84.00	2247	57	51	77			
1634-04-4	Methyl tert butyl ether	13	0.000	8.67	8.60	73.00	0	0	16	24			
156-60-5	trans-1,2-Dichloroethene	12	0.000	8.51	8.48	96.00	0	0	111	167			
75-34-3	1,1-Dichloroethane	14	0.000	9.06	9.00	63.00	0	0	25	37			
156-59-2	cis-1,2-Dichloroethene	15	0.000	10.35	10.24	96.00	0	0	102	153			
67-66-3	Chloroform	17	0.001	10.73	10.66	83.00	803	68	52	78			
71-55-6	1,1,1-Trichloroethane	18	0.001	11.96	11.91	97.00	957	52	53	80			
107-06-2	1,2-Dichloroethane	19	0.002	12.09	12.02	61.95	2173	16	14	21			
71-43-2	Benzene	20	0.018	12.71	12.63	78.00	17267	17	16	23			
56-23-5	Carbon tetrachloride	21	0.013	12.73	12.66	116.90	7955	100	79	119			
78-87-5	1,2-Dichloropropane	22	0.000	14.31	14.20	63.00	0	0	126	189			
79-01-6	Trichloroethene	23	0.002	14.31	14.26	130.00	932	89	75	112			
75-27-4	Bromodichloromethane	24	0.000	14.73	14.57	83.00	0	0	52	78			
108-88-3	Toluene	26	0.228	17.27	17.21	91.00	314261	65	53	80			
79-00-5	1,1,2-Trichloroethane	28	0.000	17.45	17.35	97.00	0	0	63	94			
106-93-4	1,2-Dibromoethane	29	0.001	19.05	18.99	107.00	1045	95	76	114			
127-18-4	Tetrachloroethene	30	0.013	19.13	19.09	166.00	6413	53	64	97	Q		
108-90-7	Chlorobenzene	31	0.001	20.65	20.59	112.00	1975	41	27	40	Q		
100-41-4	Ethylbenzene	33	0.021	21.12	21.08	91.00	51884	25	24	36			
108-38-3	m & p-Xylene	34	0.065	21.41	21.37	91.00	124087	44	42	63			
100-42-5	Styrene	35	0.009	22.28	22.22	104.00	22075	45	28	42			
95-47-6	o-Xylene	36	0.018	22.38	22.34	91.00	44892	37	38	56	Q		
108-67-8	1,3,5-Trimethylbenzene	39	0.016	24.94	24.96	105.00	70651	0	39	58	Q		
95-63-6	1,2,4-Trimethylbenzene	40	0.012	25.96	25.91	105.00	59659	41	36	54			
541-73-1	1,3-Dichlorobenzene	41	0.002	26.60	26.55	146.00	9289	42	35	52			
100-44-7	Benzyl chloride	42	0.001	26.77	26.70	91.00	3532	13	15	23	Q		
106-46-7	1,4-Dichlorobenzene	43	0.004	26.80	26.75	146.00	14196	39	32	49			
95-50-1	1,2-Dichlorobenzene	44	0.002	27.66	27.61	146.00	11627	44	38	57			
120-82-1	1,2,4-Trichlorobenzene	45	0.006	32.18	32.17	180.00	66510	97	79	118			
123-91-1	1,4 Dioxane	47	0.074	14.68	14.57	88.00	24985	98	55	82	Q		

CAS#	Compound	n	Raw Amount	RT	Target RT	Ion	Sample Area	Qualifier	Lower Qual	Upper Qual	Qual Flag	Cal Flag	Int Flag
3114-55-4	Chlorobenzene-d5	1	0.200	20.55	20.51	117.00	**1064664**						
2037-26-5	Toluene-d8	16	0.183	17.11	17.05	98.00	**414958**						

Integration Flags:

If no flag the Integration was done by the instrument computer

M1 Manual Integration because the computer did not integrated the peak or integrated the wrong peak

M2 Manual Integration because computer integration of baseline was different then Initial Calibration

INITIAL CALIBRATION REPORT

EPA Method TO-15 Modified SIM GC/MS

SDG: 209270
QC_Batch: 062309-MS2
Instrument Name: MS2

File Name: 0927012A.D
Sample ID: 44-017
Sample Analysis Date: 23 Jun 109 8:39 pm
Run Method: 2EXSIM_I.M
Quant and Calibration Method: 2EXSIM_I.M
Cal Update: Mon Jun 22 09:18:18 2009
Template: EARTEXSM.MS3

Calibration Title: EPA T0-15

Number Compounds: 49
IS1: ST60024 0.2
IS2:
IS3:
IS4:

		Calibration Amount CA, ppmv						Calibration Response, Area					
		Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
		Amt	Amt	Amt	Amt	Amt	Amt	C06199B.D	C06199H.D	C06199A.D	C06199F.D	C06199E.D	C06199K.D
n	Compound	10.0	0.5	20.0	2.0	4.0	1.0	10.0	0.5	20.0	2.0	4.0	1.0
2	Dichlorodifluoromethane	1.050	0.053	2.100	0.210	0.420	0.105	534841	38986	1705728	73746	400604	64289
3	Chloromethane	1.020	0.051	2.040	0.204	0.408	0.102	268477	16811	877342	29933	189687	27154
6	Bromomethane	1.040	0.052	2.080	0.208	0.416	0.104	193900	12685	547447	21277	126567	19683
7	Chloroethane	1.040	0.052	2.080	0.208	0.416	0.104	180453	11984	584817	18602	111983	15560
8	Trichlorofluoromethane	1.040	0.052	2.080	0.208	0.416	0.104	631888	46620	1969166	80614	475586	72646
10	Freon 113	1.020	0.051	2.040	0.204	0.408	0.102	274663	20804	826803	35204	228496	30309
11	Dichloromethane	1.040	0.052	2.080	0.208	0.416	0.104	180065	15163	530282	25781	167890	19971
13	Methyl tert butyl ether	0.660	0.033	1.320	0.132	0.264	0.066	620120	31056	2309675	52207	365659	44883
12	trans-1,2-Dichloroethene	0.730	0.037	1.460	0.146	0.292	0.073	142963	12852	384125	20102	132501	16643
14	1,1-Dichloroethane	1.010	0.051	2.020	0.202	0.404	0.101	403912	31159	1225807	51920	327340	43151
15	cis-1,2-Dichloroethene	1.030	0.052	2.060	0.206	0.412	0.103	240146	21098	758337	35003	226396	27004
17	Chloroform	1.020	0.051	2.040	0.204	0.408	0.102	510308	42620	1697577	69088	427372	57851
18	1,1,1-Trichloroethane	1.020	0.051	2.040	0.204	0.408	0.102	587705	46722	1955378	75018	469425	61727
19	1,2-Dichloroethane	1.030	0.052	2.060	0.206	0.412	0.103	1236150	74052	4935278	125964	835756	97954
20	Benzene	1.030	0.052	2.060	0.206	0.412	0.103	967913	60686	3573129	94902	641363	73510
21	Carbon tetrachloride	1.020	0.051	2.040	0.204	0.408	0.102	492544	40672	1579809	67130	410007	53667
22	1,2-Dichloropropane	1.030	0.052	2.060	0.206	0.412	0.103	280915	22034	957916	37485	236197	27080
23	Trichloroethene	1.030	0.052	2.060	0.206	0.412	0.103	305786	29555	968228	45278	286372	33459
24	Bromodichloromethane	0.670	0.034	1.340	0.134	0.268	0.067	349165	34872	980125	57413	329960	43188
26	Toluene	1.030	0.052	2.060	0.206	0.412	0.103	1260474	90214	4659514	149575	935329	102952
28	1,1,2-Trichloroethane	1.020	0.051	2.040	0.204	0.408	0.102	480870	37160	1655491	70973	441832	43484
29	1,2-Dibromoethane	1.040	0.052	2.080	0.208	0.416	0.104	915216	67709	3403871	130478	834780	79525

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n	Compound	Amt 10.0	Amt 0.5	Amt 20.0	Amt 2.0	Amt 4.0	Amt 1.0	C06199B.D 10.0	C06199H.D 0.5	C06199A.D 20.0	C06199F.D 2.0	C06199E.D 4.0	C06199K.D 1.0
30	Tetrachloroethene	1.020	0.051	2.040	0.204	0.408	0.102	373918	35806	1224836	58411	374447	38753
31	Chlorobenzene	1.020	0.051	2.040	0.204	0.408	0.102	1017786	104021	3390004	174301	1040689	105228
33	Ethylbenzene	1.040	0.052	2.080	0.208	0.416	0.104	2140675	173953	7709871	303124	1882967	181776
34	m & p-Xylene	2.060	0.103	4.120	0.412	0.824	0.206	2970894	279033	10312056	481458	2872586	284680
35	Styrene	1.030	0.052	2.060	0.206	0.412	0.103	2090268	153303	6660464	294984	1772326	150847
36	o-Xylene	1.020	0.051	2.040	0.204	0.408	0.102	1996168	168269	6920115	304155	1831287	166711
39	1,3,5-Trimethylbenzene	1.060	0.053	2.120	0.212	0.424	0.106	3143240	323037	9985329	644118	3708236	280478
40	1,2,4-Trimethylbenzene	1.020	0.051	2.040	0.204	0.408	0.102	3248488	373791	10120607	742439	4300475	315230
41	1,3-Dichlorobenzene	1.020	0.051	2.040	0.204	0.408	0.102	2387618	303170	7032467	572612	3179015	243933
42	Benzyl chloride	0.760	0.038	1.520	0.152	0.304	0.076	2015808	210430	6118543	463035	2452250	191598
43	1,4-Dichlorobenzene	1.020	0.051	2.040	0.204	0.408	0.102	2189006	331504	6500736	598783	3247824	271163
44	1,2-Dichlorobenzene	1.000	0.050	2.000	0.200	0.400	0.100	3162973	359724	9089085	693423	3769025	288406
45	1,2,4-Trichlorobenzene	1.030	0.052	2.060	0.206	0.412	0.103	6381826	918959	14261028	1761172	9410822	617532
47	1,4 Dioxane	0.740	0.037	1.480	0.148	0.296	0.074	154378	17449	450267	31614	179188	26330
1	Chlorobenzene-d5	0.200	0.200	0.200	0.200	0.200	0.200	877690	1273169	1660044	554145	1807068	927887
16	Toluene-d8	0.200	0.200	0.200	0.200	0.200	0.200	389596	565545	652462	236781	753686	395034

(409)

INITIAL CALIBRATION REPORT: Response Factors

SDG:	**209270**
QC_Batch:	**062309-MS2**
Sample ID:	44-017
Sample Analysis Date:	23 Jun 109 8:39 pm
Run Method:	2EXSIM_I.M
Quant Method:	2EXSIM_I.M
Cal Update:	Mon Jun 22 09:18:18 2009
Template:	EARTEXSM.MS3

Sample Calculation:

1) Avg RFn = Sum $\left| \frac{(Astdni)}{(Cstdni)} \frac{(Cistdi)}{(Aistdi)} \right|_i$

Response Factors

Compound	RF1	RF2	RF3	RF4	RF5	RF6	AvgRFn	%RSD
Dichlorodifluoromethane	0.116	0.116	0.098	0.127	0.106	0.132	0.116	10.99
Chloromethane	0.060	0.052	0.052	0.053	0.051	0.057	0.054	6.60
Bromomethane	0.042	0.038	0.032	0.037	0.034	0.041	0.037	11.03
Chloroethane	0.040	0.036	0.034	0.032	0.030	0.032	0.034	10.13
Trichlorofluoromethane	0.138	0.141	0.114	0.140	0.127	0.151	0.135	9.50
Freon 113	0.061	0.064	0.049	0.062	0.062	0.064	0.060	9.58
Dichloromethane	0.039	0.046	0.031	0.045	0.045	0.041	0.041	13.70
Methyl tert butyl ether	0.214	0.148	0.211	0.143	0.153	0.147	0.169	19.90
trans-1,2-Dichloroethene	0.045	0.055	0.032	0.050	0.050	0.049	0.047	17.11
1,1-Dichloroethane	0.091	0.096	0.073	0.093	0.090	0.092	0.089	9.11
cis-1,2-Dichloroethene	0.053	0.064	0.044	0.061	0.061	0.057	0.057	12.56
Chloroform	0.114	0.131	0.100	0.122	0.116	0.122	0.118	8.89
1,1,1-Trichloroethane	0.131	0.144	0.115	0.133	0.127	0.130	0.130	7.04
1,2-Dichloroethane	0.273	0.224	0.289	0.221	0.225	0.205	0.239	13.97
Benzene	0.214	0.183	0.209	0.166	0.172	0.154	0.183	13.13
Carbon tetrachloride	0.110	0.125	0.093	0.119	0.111	0.113	0.112	9.60
1,2-Dichloropropane	0.062	0.067	0.056	0.066	0.063	0.057	0.062	7.25
Trichloroethene	0.068	0.089	0.057	0.079	0.077	0.070	0.073	15.26
Bromodichloromethane	0.119	0.161	0.088	0.155	0.136	0.139	0.133	19.96
Toluene	0.279	0.273	0.273	0.262	0.251	0.215	0.259	9.02
1,1,2-Trichloroethane	0.107	0.114	0.098	0.126	0.120	0.092	0.109	11.85
1,2-Dibromoethane	0.201	0.205	0.197	0.226	0.222	0.165	0.203	10.84
Tetrachloroethene	0.084	0.110	0.072	0.103	0.102	0.082	0.092	16.20
Chlorobenzene	0.227	0.320	0.200	0.308	0.282	0.222	0.260	19.25
Ethylbenzene	0.469	0.525	0.447	0.526	0.501	0.377	0.474	12.05
m & p-Xylene	0.329	0.426	0.302	0.422	0.386	0.298	0.360	16.21
Styrene	0.462	0.463	0.390	0.517	0.476	0.316	0.437	16.55
o-Xylene	0.446	0.518	0.409	0.538	0.497	0.352	0.460	15.46
1,3,5-Trimethylbenzene	0.676	0.957	0.567	1.097	0.968	0.570	0.806	28.46
1,2,4-Trimethylbenzene	0.726	1.151	0.598	1.314	1.167	0.666	0.937	32.85
1,3-Dichlorobenzene	0.533	0.934	0.415	1.013	0.862	0.515	0.712	35.57
Benzyl chloride	0.604	0.870	0.485	1.099	0.893	0.543	0.749	32.20
1,4-Dichlorobenzene	0.489	1.021	0.384	1.059	0.881	0.573	0.735	39.38
1,2-Dichlorobenzene	0.721	1.130	0.548	1.251	1.043	0.622	0.886	33.09
1,2,4-Trichlorobenzene	1.412	2.776	0.834	3.086	2.528	1.292	1.988	46.46
1,4 Dioxane	0.048	0.074	0.037	0.077	0.067	0.077	0.063	27.03
Chlorobenzene-d5	1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.00

Toluene-d8	0.444	0.444	0.393	0.427	0.417	0.426	0.425	4.48

CALCULATIONS

EPA Method TO-15 Modified SIM GC/MS

SDG: 209270
Laboratory Number: 12

RL:	2EXSIM_I.M
Run Method:	2EXSIM_I.M
Quant Method:	2EXSIM_I.M
Can Dilution Factor:	1.87
Air Volume:	500 ml
Gas Constant:	23.68
Decimal Places:	3

Compound	M.W.	Raw Amount	Result ppbv	Result ug/m3	(1) MDL ppbv	(2) RL ppbv	Calc MDL ppbv	Calc MDL ug/m3	Calc RL ppbv	Calc RL ug/m3	Flag	S062602-1 Spike ppmv
Dichlorodifluoromethane	120.9	0.000	0.000	0.000	0.005	0.053	0.02	0.101	0.20	1.012	U	0.103
Chloromethane	50.5	0.000	0.000	0.000	0.005	0.051	0.02	0.041	0.19	0.407	U	0.103
Bromomethane	94.9	0.000	0.000	0.000	0.005	0.052	0.02	0.078	0.19	0.779	U	0.103
Chloroethane	64.5	0.000	0.000	0.000	0.005	0.052	0.02	0.053	0.19	0.530	U	0.103
Trichlorofluoromethane	137.4	0.009	0.033	0.190	0.005	0.052	0.02	0.113	0.19	1.128	J	0.103
Freon 113	187.3	0.002	0.009	0.068	0.005	0.051	0.02	0.151	0.19	1.509	U	0.103
Dichloromethane	84.9	0.010	0.038	0.138	0.005	0.052	0.02	0.070	0.19	0.697	J	0.103
Methyl tert butyl ether	88.1	0.000	0.000	0.000	0.003	0.033	0.01	0.046	0.12	0.459	U	1.103
trans-1,2-Dichloroethene	96.9	0.000	0.000	0.000	0.004	0.037	0.01	0.057	0.14	0.566	U	0.103
1,1-Dichloroethane	99.0	0.000	0.000	0.000	0.005	0.051	0.02	0.080	0.19	0.797	U	0.103
cis-1,2-Dichloroethene	96.9	0.000	0.000	0.000	0.005	0.052	0.02	0.080	0.19	0.796	U	0.103
Chloroform	119.4	0.001	0.005	0.024	0.005	0.051	0.02	0.096	0.19	0.962	U	0.103
1,1,1-Trichloroethane	133.4	0.001	0.005	0.029	0.005	0.051	0.02	0.107	0.19	1.075	U	0.103
1,2-Dichloroethane	99.0	0.002	0.006	0.027	0.005	0.052	0.02	0.081	0.19	0.813	U	0.103
Benzene	78.1	0.018	0.066	0.218	0.005	0.052	0.02	0.064	0.19	0.641	J	0.103
Carbon tetrachloride	153.8	0.013	0.050	0.324	0.005	0.051	0.02	0.124	0.19	1.239	J	0.103
1,2-Dichloropropane	113.0	0.000	0.000	0.000	0.005	0.052	0.02	0.093	0.19	0.928	U	0.103
Trichloroethene	131.4	0.002	0.009	0.050	0.005	0.052	0.02	0.108	0.19	1.079	U	0.103
Bromodichloromethane	163.8	0.000	0.000	0.000	0.003	0.034	0.01	0.088	0.13	0.880	U	0.103
Toluene	92.1	0.228	0.853	3.318	0.005	0.052	0.02	0.076	0.19	0.756		0.103
1,1,2-Trichloroethane	133.4	0.000	0.000	0.000	0.005	0.051	0.02	0.107	0.19	1.075	U	0.103
1,2-Dibromoethane	187.9	0.001	0.004	0.029	0.005	0.052	0.02	0.154	0.19	1.543	U	0.103
Tetrachloroethene	165.8	0.013	0.049	0.342	0.005	0.051	0.02	0.134	0.19	1.336	J	0.103
Chlorobenzene	112.6	0.001	0.005	0.025	0.005	0.051	0.02	0.091	0.19	0.907	U	0.103
Ethylbenzene	106.2	0.021	0.077	0.345	0.005	0.052	0.02	0.087	0.19	0.872	J	0.103
m & p-Xylene	106.2	0.065	0.242	1.085	0.010	0.103	0.04	0.173	0.39	1.728	J	0.103
Styrene	104.2	0.009	0.035	0.156	0.005	0.052	0.02	0.086	0.19	0.856	J	0.103
o-Xylene	106.2	0.018	0.069	0.307	0.005	0.051	0.02	0.086	0.19	0.855	J	0.103
1,3,5-Trimethylbenzene	120.2	0.016	0.062	0.313	0.005	0.053	0.02	0.101	0.20	1.006	J	0.103
1,2,4-Trimethylbenzene	120.0	0.012	0.045	0.227	0.005	0.051	0.02	0.097	0.19	0.967	J	0.103
1,3-Dichlorobenzene	147.0	0.002	0.009	0.057	0.005	0.051	0.02	0.118	0.19	1.184	U	0.103
Benzyl chloride	126.6	0.001	0.003	0.018	0.004	0.038	0.01	0.076	0.14	0.760	U	0.103
1,4-Dichlorobenzene	147.0	0.004	0.014	0.084	0.005	0.051	0.02	0.118	0.19	1.184	U	0.103
1,2-Dichlorobenzene	147.0	0.002	0.009	0.057	0.005	0.050	0.02	0.116	0.19	1.161	U	0.103
1,2,4-Trichlorobenzene	181.4	0.006	0.024	0.180	0.005	0.052	0.02	0.149	0.19	1.490	J	0.103
1,4 Dioxane	88.1	0.074	0.278	1.034	0.004	0.037	0.01	0.051	0.14	0.515		1.103

SAMPLE CALCULATION

EPA Method TO-15 Modified SIM GC/MS

SDG:		**209270**
Laboratory Number:		**12**
Standard Volume	STV	0.5
Sample Volume	SV	500
Can Dilution Factor	CDF	1.87
Gas Constant		23.68
Decimal Places:		3

Sample Calculation:

1) Avg RFn = Sum $\left| \frac{(Astdni)}{(Cstdni)} \frac{(Cistdi)}{(Aistdi)} \right|_i$ Note: 1

2) Raw Amt = $\frac{(Ansamp)}{(Avg\ RFn)} \frac{(Cistdi)}{(Aistdi)}$ = **Cn**

3) Amount ppbv = $\frac{(Raw\ Amt)\ 1000}{(SV)}$ (CDF) (STV)

4) Amount ug/m3 = $\frac{(amt(ppbv)\ MW}{23.68}$

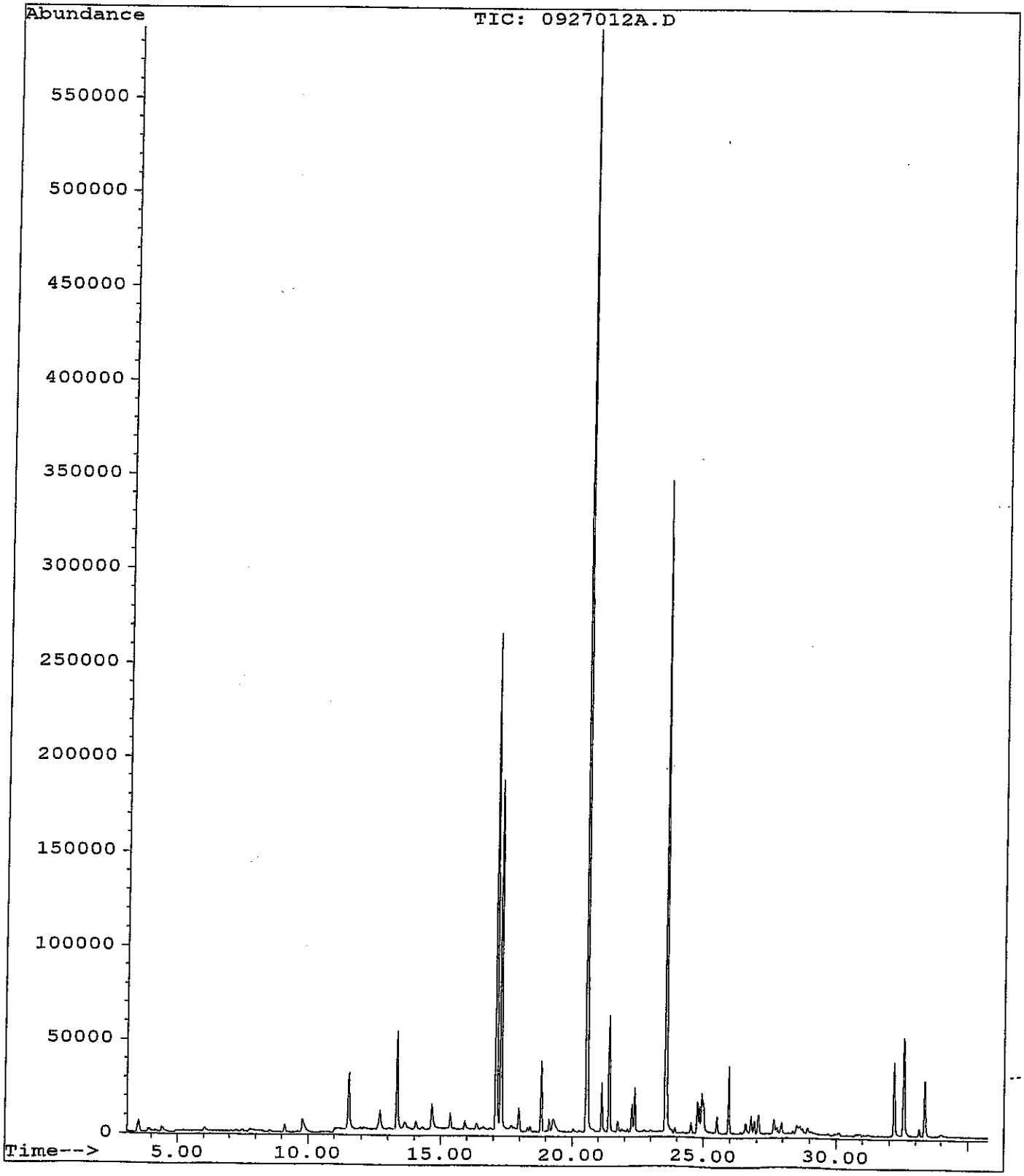
n	Compound	IS n	Chem type	MW	AvgRFn	Area Ansamp	Cistdi ppmv	Aistdi Ais	Cn ppmV Raw Amt	Amount ppbv	Amount ug/m3
2	Dichlorodifluoromethane	1	TRG	120.9	0.116	0	0.200	1064664	0.000	0.000	0.000
3	Chloromethane	1	TRG	50.5	0.054	0	0.200	1064664	0.000	0.000	0.000
6	Bromomethane	1	TRG	94.9	0.037	0	0.200	1064664	0.000	0.000	0.000
7	Chloroethane	1	TRG	64.5	0.034	0	0.200	1064664	0.000	0.000	0.000
8	Trichlorofluoromethane	1	TRG	137.4	0.135	6306	0.200	1064664	0.009	0.033	0.191
10	Freon 113	1	TRG	187.3	0.060	736	0.200	1064664	0.002	0.009	0.071
11	Dichloromethane	1	TRG	84.9	0.041	2247	0.200	1064664	0.010	0.038	0.136
13	Methyl tert butyl ether	2	TRG	88.1	0.169	0	0.200	1064664	0.000	0.000	0.000
12	trans-1,2-Dichloroethene	1	TRG	96.9	0.047	0	0.200	1064664	0.000	0.000	0.000
14	1,1-Dichloroethane	1	TRG	99.0	0.089	0	0.200	1064664	0.000	0.000	0.000
15	cis-1,2-Dichloroethene	1	TRG	96.9	0.057	0	0.200	1064664	0.000	0.000	0.000
17	Chloroform	1	TRG	119.4	0.118	803	0.200	1064664	0.001	0.005	0.025
18	1,1,1-Trichloroethane	1	TRG	133.4	0.130	957	0.200	1064664	0.001	0.005	0.028
19	1,2-Dichloroethane	1	TRG	99.0	0.239	2173	0.200	1064664	0.002	0.006	0.025
20	Benzene	1	TRG	78.1	0.183	17267	0.200	1064664	0.018	0.066	0.218
21	Carbon tetrachloride	1	TRG	153.8	0.112	7955	0.200	1064664	0.013	0.050	0.325
22	1,2-Dichloropropane	1	TRG	113.0	0.062	0	0.200	1064664	0.000	0.000	0.000
23	Trichloroethene	1	TRG	131.4	0.073	932	0.200	1064664	0.002	0.009	0.050
24	Bromodichloromethane	1	TRG	163.8	0.133	0	0.200	1064664	0.000	0.000	0.000
26	Toluene	1	TRG	92.1	0.259	314261	0.200	1064664	0.228	0.853	3.318
28	1,1,2-Trichloroethane	1	TRG	133.4	0.109	0	0.200	1064664	0.000	0.000	0.000
29	1,2-Dibromoethane	1	TRG	187.9	0.203	1045	0.200	1064664	0.001	0.004	0.032
30	Tetrachloroethene	1	TRG	165.8	0.092	6413	0.200	1064664	0.013	0.049	0.343
31	Chlorobenzene	1	TRG	112.6	0.260	1975	0.200	1064664	0.001	0.005	0.024
33	Ethylbenzene	1	TRG	106.2	0.474	51884	0.200	1064664	0.021	0.077	0.345
34	m & p-Xylene	1	TRG	106.2	0.360	124087	0.200	1064664	0.065	0.242	1.085
35	Styrene	1	TRG	104.2	0.437	22075	0.200	1064664	0.009	0.035	0.154
36	o-Xylene	1	TRG	106.2	0.460	44892	0.200	1064664	0.018	0.069	0.309
39	1,3,5-Trimethylbenzene	1	TRG	120.2	0.806	70651	0.200	1064664	0.016	0.062	0.315
40	1,2,4-Trimethylbenzene	1	TRG	120.0	0.937	59659	0.200	1064664	0.012	0.045	0.228
41	1,3-Dichlorobenzene	1	TRG	147.0	0.712	9289	0.200	1064664	0.002	0.009	0.056
42	Benzyl chloride	1	TRG	126.6	0.749	3532	0.200	1064664	0.001	0.003	0.016
43	1,4-Dichlorobenzene	1	TRG	147.0	0.735	14196	0.200	1064664	0.004	0.014	0.087
44	1,2-Dichlorobenzene	1	TRG	147.0	0.886	11627	0.200	1064664	0.002	0.009	0.056
45	1,2,4-Trichlorobenzene	1	TRG	181.4	1.99	66510	0.200	1064664	0.006	0.024	0.184
47	1,4 Dioxane	1	TRG	88.1	0.06	24985	0.200	1064664	0.074	0.278	1.034
1	Chlorobenzene-d5	1	IS	0.0	1.000	1064664	0.200	1064664	0.000	0.000	0.000
16	Toluene-d8	1	SURR	0.0	0.425	414958	0.200	1064664	0.000	0.000	0.000

Calculation Definitions:

n	compound n
i	i th calibration level

Astdni	Standard Area for compound n at ith calibration level
Cstdni	Standard Concentration for compound n at ith calibration level in ppmv
Cistdi	Internal Standard Conc used for compound n at ith calibration level in ppmv
Aistdi	Internal Standard Area used for compound n at ith calibration level
Ansamp	Sample Area for compound n
Avg RFn	Average response factor for all ith calibration levels for compound n
Raw Amount	Sample Concentration in ppmv before applying factors
Cistd	Concentration internal standard used for compound n in sample in ppmv
Aistd	Area of internal standard used for compound n in sample
Cn	Concentration of compound n in sample in ppmv
23.68	Gas constant at 60 F as per EPA source test protocol
MW	Molecular weight of compound
Note (1) : Avg RFn	The values for the Average Response Factor AvgRFn can be optained from the response Factor Report for the Initial Calibration, or from the Calibration Report

File : C:\MSCHEM\2\DATA\06239MS2\0927012A.D
Operator : SG
Acquired : 23 Jun 109 8:39 pm using AcqMethod 2EXSIM_I.M
Instrument : MS2
Sample Name: 44-017
Misc Info : SEALASKA
Vial Number: 1



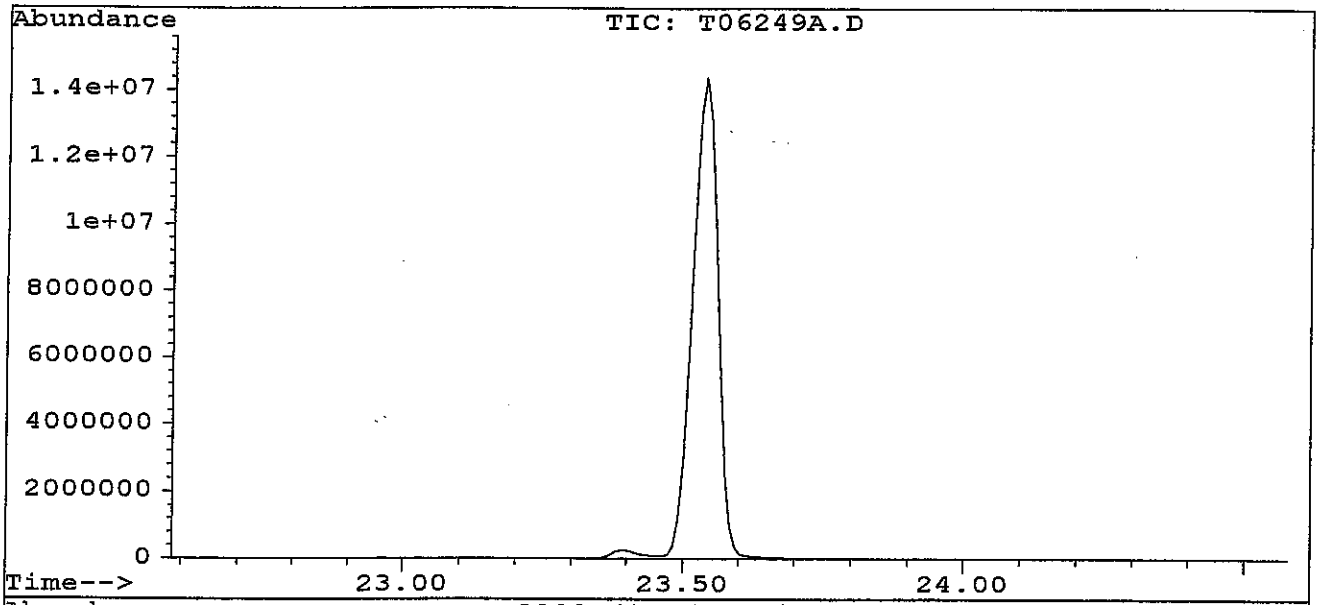
Daily Analytical Batch #: 062409-MS2

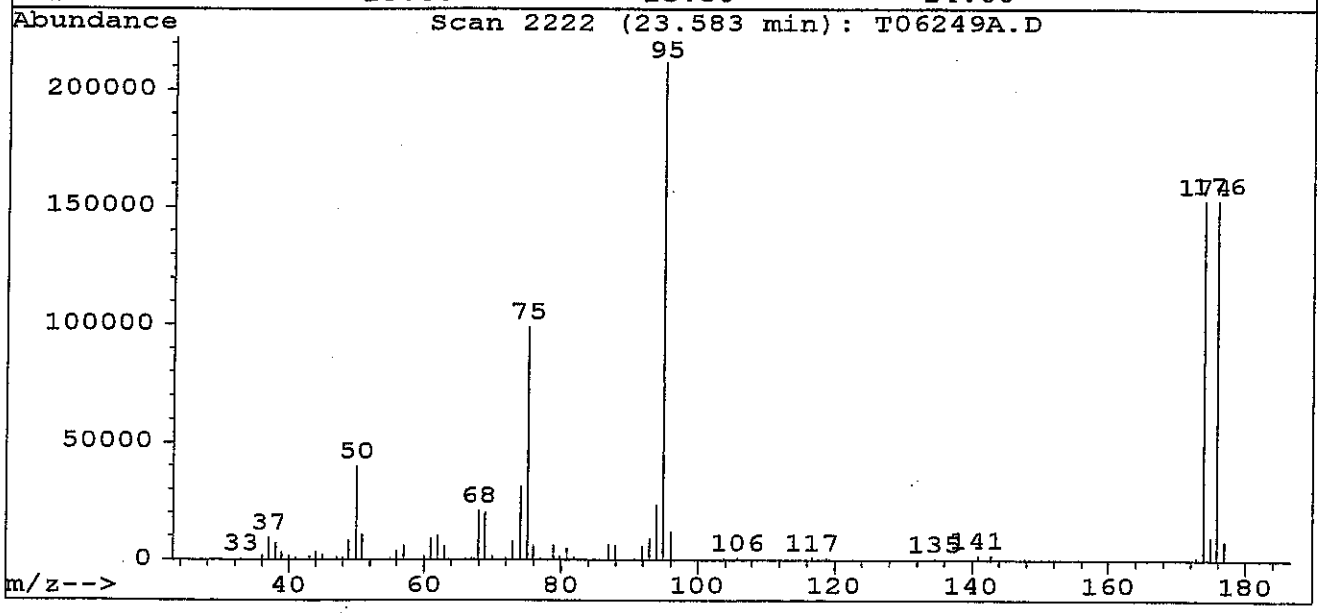
BFB

Data File : C:\MSCHEM\2\DATA\06249MS2\T06249A.D
Acq Time : 24 Jun 109 8:50 am
Sample : BFB TUNE
Misc :

Operator: JF
Inst : MS2
Multiplr: 1.00

Method : C:\MSCHEM\2\METHODS\2EXSIM_I.M
Title : EPA TO-15





Peak Apex is scan: 2222

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	8	40	18.9	39976	PASS
75	95	30	66	46.8	99056	PASS
95	95	100	100	100.0	211776	PASS
96	95	5	9	5.7	12039	PASS
173	174	0	2	0.9	1309	PASS
174	95	50	120	72.2	152832	PASS
175	174	4	9	6.3	9611	PASS
176	174	93	101	100.3	153280	PASS
177	176	5	9	5.3	8126	PASS

T06249A.D 2EXSIM_I.M Mon Jun 29 13:00:23 2009

CONTINUING CALIBRATION REPORT

SDG:	**LABQC**	
QC_Batch:	**062409-MS2**	
Sample ID:	ST60032 + ST60250	
Sample Analysis Date:	24 Jun 109 9:37 am	
Run Method:	2EXSIM_I.M	
Quant/Calibration Method:	2EXSIM_I.M	
Cal Update:	Mon Jun 22 09:18:18 2009	
Template:	EARTEXSM.MS3	
Calibration Level	Level 2	0.5

Sample Calculation:

1) $RFi = \left| \frac{(Astdi)}{(Cstdi)} \frac{(Cistdi)}{(Aistdi)} \right|_i$

Compound	Area Astdi	Cal Level Cstdi ppbv	CCRRF	AvgRFn	%Dev	%Dev Limit	%Dev Flag	
Dichlorodifluoromethane	82673	0.105	0.135	0.116	-16.8	40	IN	
Chloromethane	34091	0.102	0.057	0.054	-5.8	30	IN	
Vinyl chloride	25438	0.104	0.042	0.039	-7.8	30	IN	
Bromomethane	25675	0.104	0.042	0.037	-13.5	40	IN	
Chloroethane	20005	0.104	0.033	0.034	2.9	30	IN	
Trichlorofluoromethane	97512	0.104	0.161	0.135	-19.1	30	IN	
1,1-Dichloroethene	57518	0.104	0.095	0.081	-17.4	30	IN	
Freon 113	35717	0.102	0.060	0.060	0.6	30	IN	
Dichloromethane	25253	0.104	0.042	0.041	-1.3	30	IN	
Methyl tert butyl ether	56486	0.066	0.147	0.169	13.2	40	IN	
trans-1,2-Dichloroethene	19592	0.073	0.046	0.047	1.3	30	IN	
1,1-Dichloroethane	58095	0.101	0.099	0.089	-10.7	30	IN	
cis-1,2-Dichloroethene	29708	0.103	0.049	0.057	12.6	30	IN	
Chloroform	72728	0.102	0.122	0.118	-4.0	30	IN	
1,1,1-Trichloroethane	85551	0.102	0.144	0.130	-10.5	30	IN	
1,2-Dichloroethane	142946	0.103	0.238	0.239	0.5	30	IN	
Benzene	100765	0.103	0.168	0.183	8.3	30	IN	
Carbon tetrachloride	72255	0.102	0.122	0.112	-8.5	30	IN	
1,2-Dichloropropane	33604	0.103	0.056	0.062	9.3	30	IN	
Trichloroethene	36687	0.103	0.061	0.073	16.6	30	IN	
Bromodichloromethane	51927	0.067	0.133	0.133	0.0	30	IN	
Toluene	142041	0.103	0.237	0.259	8.6	30	IN	
1,1,2-Trichloroethane	46891	0.102	0.079	0.109	28.0	30	IN	
1,2-Dibromoethane	105591	0.104	0.174	0.203	14.0	30	IN	
Tetrachloroethene	39788	0.102	0.067	0.092	27.4	30	IN	
Chlorobenzene	106648	0.102	0.179	0.260	31.0	30	OUT	1A
Ethylbenzene	237483	0.104	0.392	0.474	17.4	30	IN	
m & p-Xylene	363650	0.206	0.303	0.360	15.9	30	IN	
Styrene	165377	0.103	0.276	0.437	37.0	40	IN	
o-Xylene	231143	0.102	0.389	0.460	15.5	30	IN	
1,1,2,2-Tetrachloroethane	197432	0.102	0.332	0.538	38.3	30	OUT	2A
1,3,5-Trimethylbenzene	359142	0.106	0.581	0.806	27.9	30	IN	
1,2,4-Trimethylbenzene	395014	0.102	0.665	0.937	29.1	30	IN	
1,3-Dichlorobenzene	224874	0.102	0.378	0.712	46.9	30	OUT	3A
Benzyl chloride	334143	0.076	0.754	0.749	-0.7	30	IN	
1,4-Dichlorobenzene	237950	0.102	0.400	0.735	45.5	30	OUT	3A
1,2-Dichlorobenzene	266634	0.100	0.458	0.886	48.3	30	OUT	4A

1,2,4-Trichlorobenzene	392582	0.103	0.654	1.988	67.1	80	IN
1,4 Dioxane	22599	0.074	0.052	0.063	17.1	40	IN
Naphthalene	5162461	0.213	4.159	6.704	38.0	80	IN
Chlorobenzene-d5	1165562	0.200	1.000	1.000	0.0	30	IN
Toluene-d8	572680	0.200	0.491	0.425	-15.6	30	IN

QUANTITATION REPORT

EPA Method TO-15 Modified SIM GC/MS

			Review	EAS Sample ID: C06249A	
File Name:	C06249A.D				1 SS
Sample ID:	ST60032 + ST60250				2 KB
Date:	24 Jun 109 9:37 am			Cal Amounts	3 AT
Run Method:	2EXSIM_I.M			IS Areas	4 BB
Quant Method:	2EXSIM_I.M			Carryover	5 SH
Cal Update:	Mon Jun 22 09:18:18 2009				
Template:	EARTEXSM.MS3				
Can Factor:	1.00				
Volume:	200	ml		Analyst: SS 1	

CAS#	Compound	n	Raw Amount	RT	Target RT	Ion	Sample Area	Qualifier	Lower Qual	Upper Qual	Qual Flag	Cal Flag	Int Flag
75-71-8	Dichlorodifluoromethane	2	0.123	3.88	3.85	85.00	82673	32	26	38			
74-87-3	Chloromethane	3	0.108	4.15	4.12	50.00	34091	26	21	32			
75-01-4	Vinyl chloride	5	0.112	4.40	4.37	62.00	25438	37	28	42			
74-83-9	Bromomethane	6	0.118	5.01	4.97	94.00	25675	86	69	104			
75-00-3	Chloroethane	7	0.101	5.20	5.18	64.00	20005	33	27	40			
75-69-4	Trichlorofluoromethane	8	0.124	6.02	5.98	101.00	97512	68	53	80			
75-35-4	1,1-Dichloroethene	9	0.122	6.98	6.95	61.00	57518	46	37	56			
76-13-1	Freon 113	10	0.101	7.22	7.13	151.00	35717	174	136	204			
75-09-2	Dichloromethane	11	0.105	7.46	7.42	84.00	25253	62	51	77			
1634-04-4	Methyl tert butyl ether	13	0.057	8.67	8.60	73.00	56486	21	16	24			
156-60-5	trans-1,2-Dichloroethene	12	0.072	8.53	8.48	96.00	19592	147	111	167			
75-34-3	1,1-Dichloroethane	14	0.112	9.06	9.00	63.00	58095	31	25	37			
156-59-2	cis-1,2-Dichloroethene	15	0.090	10.28	10.24	96.00	29708	145	102	153			
67-66-3	Chloroform	17	0.106	10.70	10.66	83.00	72728	68	52	78			
71-55-6	1,1,1-Trichloroethane	18	0.113	11.94	11.91	97.00	85551	66	53	80			
107-06-2	1,2-Dichloroethane	19	0.102	12.07	12.02	61.95	142946	17	14	21			
71-43-2	Benzene	20	0.094	12.66	12.63	78.00	100765	21	16	23			
56-23-5	Carbon tetrachloride	21	0.111	12.71	12.66	116.90	72255	99	79	119			
78-87-5	1,2-Dichloropropane	22	0.093	14.23	14.20	63.00	33604	160	126	189			
79-01-6	Trichloroethene	23	0.086	14.28	14.26	130.00	36687	96	75	112			
75-27-4	Bromodichloromethane	24	0.067	14.60	14.57	83.00	51927	66	52	78			
108-88-3	Toluene	26	0.094	17.24	17.21	91.00	142041	64	53	80			
79-00-5	1,1,2-Trichloroethane	28	0.073	17.37	17.35	97.00	46891	74	63	94			
106-93-4	1,2-Dibromoethane	29	0.089	19.01	18.99	107.00	105591	95	76	114			
127-18-4	Tetrachloroethene	30	0.074	19.11	19.09	166.00	39788	88	64	97			
108-90-7	Chlorobenzene	31	0.070	20.63	20.59	112.00	106648	33	27	40			
100-41-4	Ethylbenzene	33	0.086	21.10	21.08	91.00	237483	29	24	36			
108-38-3	m & p-Xylene	34	0.173	21.39	21.37	91.00	363650	48	42	63			
100-42-5	Styrene	35	0.065	22.24	22.22	104.00	165377	54	28	42			
95-47-6	o-Xylene	36	0.086	22.36	22.34	91.00	231143	44	38	56			
79-34-5	1,1,2,2-Tetrachloroethane	37	0.063	22.96	22.93	83.00	197432	10	8	12			
108-67-8	1,3,5-Trimethylbenzene	39	0.076	24.97	24.96	105.00	359142	47	39	58			
95-63-6	1,2,4-Trimethylbenzene	40	0.072	25.92	25.91	105.00	395014	45	36	54			
541-73-1	1,3-Dichlorobenzene	41	0.054	26.56	26.55	146.00	224874	43	35	52			
100-44-7	Benzyl chloride	42	0.077	26.74	26.70	91.00	334143	18	15	23			
106-46-7	1,4-Dichlorobenzene	43	0.056	26.77	26.75	146.00	237950	40	32	49			

CAS#	Compound	n	Raw Amount	RT	Target RT	Ion	Sample Area	Qualifier	Lower Qual	Upper Qual	Qual Flag	Cal Flag	Int Flag
95-50-1	1,2-Dichlorobenzene	44	0.052	27.63	27.61	146.00	266634	47	38	57			
120-82-1	1,2,4-Trichlorobenzene	45	0.034	32.17	32.17	180.00	392582	102	79	118			
123-91-1	1,4 Dioxane	47	0.061	14.65	14.57	88.00	22599	70	55	82			
91-20-3	Naphthalene	48	0.132	32.54	32.78	128.00	5162461	0	0	0			
3114-55-4	Chlorobenzene-d5	1	0.200	20.53	20.51	117.00	**1165562**						
2037-26-5	Toluene-d8	16	0.231	17.08	17.05	98.00	**572680**						

Integration Flags:

If no flag the Integration was done by the instrument computer

M1 Manual Integration because the computer did not integrated the peak or integrated the wrong peak

M2 Manual Integration because computer integration of baseline was different then Inital Calibration

INITIAL CALIBRATION REPORT

EPA Method TO-15 Modified SIM GC/MS

SDG: LABQC
QC_Batch: 062409-MS2
Instrument Name: MS2

File Name: C06249A.D
Sample ID: ST60032 + ST60250
Sample Analysis Date: 24 Jun 109 9:37 am
Run Method: 2EXSIM_I.M
Quant and Calibration Method: 2EXSIM_I.M
Cal Update: Mon Jun 22 09:18:18 2009
Template: EARTEXSM.MS3

Calibration Title: EPA T0-15

Number Compounds: 49
IS1: ST60024 0.2
IS2:
IS3:
IS4:

		Calibration Amount CA, ppmv						Calibration Response, Area					
		Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
		Amt	Amt	Amt	Amt	Amt	Amt	C06199B.D	C06199H.D	C06199A.D	C06199F.D	C06199E.D	C06199K.D
n	Compound	10.0	0.5	20.0	2.0	4.0	1.0	10.0	0.5	20.0	2.0	4.0	1.0
2	Dichlorodifluoromethane	1.050	0.053	2.100	0.210	0.420	0.105	534841	38986	1705728	73746	400604	64289
3	Chloromethane	1.020	0.051	2.040	0.204	0.408	0.102	268477	16811	877342	29933	189687	27154
5	Vinyl chloride	1.040	0.052	2.080	0.208	0.416	0.104	184476	12222	596605	24865	140317	19936
6	Bromomethane	1.040	0.052	2.080	0.208	0.416	0.104	193900	12685	547447	21277	126567	19683
7	Chloroethane	1.040	0.052	2.080	0.208	0.416	0.104	180453	11984	584817	18602	111983	15560
8	Trichlorofluoromethane	1.040	0.052	2.080	0.208	0.416	0.104	631888	46620	1969166	80614	475586	72646
9	1,1-Dichloroethene	1.040	0.052	2.080	0.208	0.416	0.104	388365	27969	1185798	47507	301017	40726
10	Freon 113	1.020	0.051	2.040	0.204	0.408	0.102	274663	20804	826803	35204	228496	30309
11	Dichloromethane	1.040	0.052	2.080	0.208	0.416	0.104	180065	15163	530282	25781	167890	19971
13	Methyl tert butyl ether	0.660	0.033	1.320	0.132	0.264	0.066	620120	31056	2309675	52207	365659	44883
12	trans-1,2-Dichloroethene	0.730	0.037	1.460	0.146	0.292	0.073	142963	12852	384125	20102	132501	16643
14	1,1-Dichloroethane	1.010	0.051	2.020	0.202	0.404	0.101	403912	31159	1225807	51920	327340	43151
15	cis-1,2-Dichloroethene	1.030	0.052	2.060	0.206	0.412	0.103	240146	21098	758337	35003	226396	27004
17	Chloroform	1.020	0.051	2.040	0.204	0.408	0.102	510308	42620	1697577	69088	427372	57851
18	1,1,1-Trichloroethane	1.020	0.051	2.040	0.204	0.408	0.102	587705	46722	1955378	75018	469425	61727
19	1,2-Dichloroethane	1.030	0.052	2.060	0.206	0.412	0.103	1236150	74052	4935278	125964	835756	97954
20	Benzene	1.030	0.052	2.060	0.206	0.412	0.103	967913	60686	3573129	94902	641363	73510
21	Carbon tetrachloride	1.020	0.051	2.040	0.204	0.408	0.102	492544	40672	1579809	67130	410007	53667
22	1,2-Dichloropropane	1.030	0.052	2.060	0.206	0.412	0.103	280915	22034	957916	37485	236197	27080
23	Trichloroethene	1.030	0.052	2.060	0.206	0.412	0.103	305786	29555	968228	45278	286372	33459
24	Bromodichloromethane	0.670	0.034	1.340	0.134	0.268	0.067	349165	34872	980125	57413	329960	43188
26	Toluene	1.030	0.052	2.060	0.206	0.412	0.103	1260474	90214	4659514	149575	935329	102952

n	Compound	Amt 10.0	Amt 0.5	Amt 20.0	Amt 2.0	Amt 4.0	Amt 1.0	C06199B.D 10.0	C06199H.D 0.5	C06199A.D 20.0	C06199F.D 2.0	C06199E.D 4.0	C06199K.D 1.0
28	1,1,2-Trichloroethane	1.020	0.051	2.040	0.204	0.408	0.102	480870	37160	1655491	70973	441832	43484
29	1,2-Dibromoethane	1.040	0.052	2.080	0.208	0.416	0.104	915216	67709	3403871	130478	834780	79525
30	Tetrachloroethene	1.020	0.051	2.040	0.204	0.408	0.102	373918	35806	1224836	58411	374447	38753
31	Chlorobenzene	1.020	0.051	2.040	0.204	0.408	0.102	1017786	104021	3390004	174301	1040689	105228
33	Ethylbenzene	1.040	0.052	2.080	0.208	0.416	0.104	2140675	173953	7709871	303124	1882967	181776
34	m & p-Xylene	2.060	0.103	4.120	0.412	0.824	0.206	2970894	279033	10312056	481458	2872586	284680
35	Styrene	1.030	0.052	2.060	0.206	0.412	0.103	2090268	153303	6660464	294984	1772326	150847
36	o-Xylene	1.020	0.051	2.040	0.204	0.408	0.102	1996168	168269	6920115	304155	1831287	166711
37	1,1,2,2-Tetrachloroethane	1.020	0.051	2.040	0.204	0.408	0.102	2273482	192188	6988630	401655	2300254	180334
39	1,3,5-Trimethylbenzene	1.060	0.053	2.120	0.212	0.424	0.106	3143240	323037	9985329	644118	3708236	280478
40	1,2,4-Trimethylbenzene	1.020	0.051	2.040	0.204	0.408	0.102	3248488	373791	10120607	742439	4300475	315230
41	1,3-Dichlorobenzene	1.020	0.051	2.040	0.204	0.408	0.102	2387618	303170	7032467	572612	3179015	243933
42	Benzyl chloride	0.760	0.038	1.520	0.152	0.304	0.076	2015808	210430	6118543	463035	2452250	191598
43	1,4-Dichlorobenzene	1.020	0.051	2.040	0.204	0.408	0.102	2189006	331504	6500736	598783	3247824	271163
44	1,2-Dichlorobenzene	1.000	0.050	2.000	0.200	0.400	0.100	3162973	359724	9089085	693423	3769025	288406
45	1,2,4-Trichlorobenzene	1.030	0.052	2.060	0.206	0.412	0.103	6381826	918959	14261028	1761172	9410822	617532
47	1,4 Dioxane	0.740	0.037	1.480	0.148	0.296	0.074	154378	17449	450267	31614	179188	26330
48	Naphthalene	2.130	0.107	-1.000	0.426	0.852	0.213	34587722	6597377	-1	12354059	37178978	4780301
1	Chlorobenzene-d5	0.200	0.200	0.200	0.200	0.200	0.200	877690	1273169	1660044	554145	1807068	927887
16	Toluene-d8	0.200	0.200	0.200	0.200	0.200	0.200	389596	565545	652462	236781	753686	395034

(424)

INITIAL CALIBRATION REPORT: Response Factors

SDG:	**LABQC**
QC_Batch:	**062409-MS2**
Sample ID:	ST60032 + ST60250
Sample Analysis Date:	24 Jun 109 9:37 am
Run Method:	2EXSIM_I.M
Quant Method:	2EXSIM_I.M
Cal Update:	Mon Jun 22 09:18:18 2009
Template:	EARTEXSM.MS3

Sample Calculation:

1) Avg RFn = Sum $\left| \frac{(Astdni)}{(Cstdni)} \frac{(Cistdi)}{(Aistdi)} \right|_i$

Response Factors

Compound	RF1	RF2	RF3	RF4	RF5	RF6	AvgRFn	%RSD
Dichlorodifluoromethane	0.116	0.116	0.098	0.127	0.106	0.132	0.116	10.99
Chloromethane	0.060	0.052	0.052	0.053	0.051	0.057	0.054	6.60
Vinyl chloride	0.040	0.037	0.035	0.043	0.037	0.041	0.039	8.23
Bromomethane	0.042	0.038	0.032	0.037	0.034	0.041	0.037	11.03
Chloroethane	0.040	0.036	0.034	0.032	0.030	0.032	0.034	10.13
Trichlorofluoromethane	0.138	0.141	0.114	0.140	0.127	0.151	0.135	9.50
1,1-Dichloroethene	0.085	0.084	0.069	0.082	0.080	0.084	0.081	7.72
Freon 113	0.061	0.064	0.049	0.062	0.062	0.064	0.060	9.58
Dichloromethane	0.039	0.046	0.031	0.045	0.045	0.041	0.041	13.70
Methyl tert butyl ether	0.214	0.148	0.211	0.143	0.153	0.147	0.169	19.90
trans-1,2-Dichloroethene	0.045	0.055	0.032	0.050	0.050	0.049	0.047	17.11
1,1-Dichloroethane	0.091	0.096	0.073	0.093	0.090	0.092	0.089	9.11
cis-1,2-Dichloroethene	0.053	0.064	0.044	0.061	0.061	0.057	0.057	12.56
Chloroform	0.114	0.131	0.100	0.122	0.116	0.122	0.118	8.89
1,1,1-Trichloroethane	0.131	0.144	0.115	0.133	0.127	0.130	0.130	7.04
1,2-Dichloroethane	0.273	0.224	0.289	0.221	0.225	0.205	0.239	13.97
Benzene	0.214	0.183	0.209	0.166	0.172	0.154	0.183	13.13
Carbon tetrachloride	0.110	0.125	0.093	0.119	0.111	0.113	0.112	9.60
1,2-Dichloropropane	0.062	0.067	0.056	0.066	0.063	0.057	0.062	7.25
Trichloroethene	0.068	0.089	0.057	0.079	0.077	0.070	0.073	15.26
Bromodichloromethane	0.119	0.161	0.088	0.155	0.136	0.139	0.133	19.96
Toluene	0.279	0.273	0.273	0.262	0.251	0.215	0.259	9.02
1,1,2-Trichloroethane	0.107	0.114	0.098	0.126	0.120	0.092	0.109	11.85
1,2-Dibromoethane	0.201	0.205	0.197	0.226	0.222	0.165	0.203	10.84
Tetrachloroethene	0.084	0.110	0.072	0.103	0.102	0.082	0.092	16.20
Chlorobenzene	0.227	0.320	0.200	0.308	0.282	0.222	0.260	19.25
Ethylbenzene	0.469	0.525	0.447	0.526	0.501	0.377	0.474	12.05
m & p-Xylene	0.329	0.426	0.302	0.422	0.386	0.298	0.360	16.21
Styrene	0.462	0.463	0.390	0.517	0.476	0.316	0.437	16.55
o-Xylene	0.446	0.518	0.409	0.538	0.497	0.352	0.460	15.46
1,1,2,2-Tetrachloroethane	0.508	0.592	0.413	0.711	0.624	0.381	0.538	23.70
1,3,5-Trimethylbenzene	0.676	0.957	0.567	1.097	0.968	0.570	0.806	28.46
1,2,4-Trimethylbenzene	0.726	1.151	0.598	1.314	1.167	0.666	0.937	32.85
1,3-Dichlorobenzene	0.533	0.934	0.415	1.013	0.862	0.515	0.712	35.57
Benzyl chloride	0.604	0.870	0.485	1.099	0.893	0.543	0.749	32.20
1,4-Dichlorobenzene	0.489	1.021	0.384	1.059	0.881	0.573	0.735	39.38
1,2-Dichlorobenzene	0.721	1.130	0.548	1.251	1.043	0.622	0.886	33.09

1,2,4-Trichlorobenzene	1.412	2.776	0.834	3.086	2.528	1.292	1.988	46.46
1,4 Dioxane	0.048	0.074	0.037	0.077	0.067	0.077	0.063	27.03
Naphthalene	3.700	9.686	NA	10.467	4.830	4.837	6.704	46.62
Chlorobenzene-d5	1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.00
Toluene-d8	0.444	0.444	0.393	0.427	0.417	0.426	0.425	4.48

CALCULATIONS

EPA Method TO-15 Modified SIM GC/MS

SDG: LABQC
Laboratory Number: C06249

RL:	2EXSIM_I.M
Run Method:	2EXSIM_I.M
Quant Method:	2EXSIM_I.M
Can Dilution Factor:	1.00
Air Volume:	200 ml
Gas Constant:	23.68
Decimal Places:	3

Compound	M.W.	Raw Amount	Result ppbv	Result ug/m3	(1) MDL ppbv	(2) RL ppbv	Calc MDL ppbv	Calc MDL ug/m3	Calc RL ppbv	Calc RL ug/m3	Flag	S062602-1 Spike ppmv
Dichlorodifluoromethane	120.9	0.123	0.613	3.132	0.005	0.053	0.03	0.135	0.27	1.353		0.103
Chloromethane	50.5	0.108	0.539	1.150	0.005	0.051	0.03	0.054	0.26	0.544		0.103
Vinyl chloride	62.5	0.112	0.560	1.479	0.005	0.052	0.03	0.069	0.26	0.686		0.103
Bromomethane	94.9	0.118	0.590	2.366	0.005	0.052	0.03	0.104	0.26	1.042		0.103
Chloroethane	64.5	0.101	0.505	1.375	0.005	0.052	0.03	0.071	0.26	0.708		0.103
Trichlorofluoromethane	137.4	0.124	0.619	3.594	0.005	0.052	0.03	0.151	0.26	1.509		0.103
1,1-Dichloroethene	96.9	0.122	0.610	2.497	0.005	0.052	0.03	0.106	0.26	1.064		0.103
Freon 113	187.3	0.101	0.507	4.011	0.005	0.051	0.03	0.202	0.26	2.017		0.103
Dichloromethane	84.9	0.105	0.527	1.889	0.005	0.052	0.03	0.093	0.26	0.932		0.103
Methyl tert butyl ether	88.1	0.057	0.286	1.065	0.003	0.033	0.02	0.061	0.17	0.614		1.103
trans-1,2-Dichloroethene	96.9	0.072	0.360	1.474	0.004	0.037	0.02	0.076	0.19	0.757		0.103
1,1-Dichloroethane	99.0	0.112	0.559	2.338	0.005	0.051	0.03	0.107	0.26	1.066		0.103
cis-1,2-Dichloroethene	96.9	0.090	0.450	1.841	0.005	0.052	0.03	0.106	0.26	1.064		0.103
Chloroform	119.4	0.106	0.530	2.674	0.005	0.051	0.03	0.129	0.26	1.286		0.103
1,1,1-Trichloroethane	133.4	0.113	0.564	3.176	0.005	0.051	0.03	0.144	0.26	1.437		0.103
1,2-Dichloroethane	99.0	0.102	0.512	2.142	0.005	0.052	0.03	0.109	0.26	1.087		0.103
Benzene	78.1	0.094	0.472	1.557	0.005	0.052	0.03	0.086	0.26	0.858		0.103
Carbon tetrachloride	153.8	0.111	0.553	3.595	0.005	0.051	0.03	0.166	0.26	1.656		0.103
1,2-Dichloropropane	113.0	0.093	0.467	2.228	0.005	0.052	0.03	0.124	0.26	1.241		0.103
Trichloroethene	131.4	0.086	0.429	2.383	0.005	0.052	0.03	0.144	0.26	1.443		0.103
Bromodichloromethane	163.8	0.067	0.335	2.318	0.003	0.034	0.02	0.118	0.17	1.176		0.103
Toluene	92.1	0.094	0.471	1.832	0.005	0.052	0.03	0.101	0.26	1.011		0.103
1,1,2-Trichloroethane	133.4	0.073	0.367	2.070	0.005	0.051	0.03	0.144	0.26	1.437		0.103
1,2-Dibromoethane	187.9	0.089	0.447	3.548	0.005	0.052	0.03	0.206	0.26	2.063		0.103
Tetrachloroethene	165.8	0.074	0.370	2.593	0.005	0.051	0.03	0.179	0.26	1.785		0.103
Chlorobenzene	112.6	0.070	0.352	1.672	0.005	0.051	0.03	0.121	0.26	1.213		0.103
Ethylbenzene	106.2	0.086	0.430	1.927	0.005	0.052	0.03	0.117	0.26	1.166		0.103
m & p-Xylene	106.2	0.173	0.866	3.885	0.010	0.103	0.05	0.231	0.52	2.310		0.103
Styrene	104.2	0.065	0.324	1.428	0.005	0.052	0.03	0.114	0.26	1.144		0.103
o-Xylene	106.2	0.086	0.431	1.933	0.005	0.051	0.03	0.114	0.26	1.144		0.103
1,1,2,2-Tetrachloroethane	167.8	0.063	0.315	2.231	0.005	0.051	0.03	0.181	0.26	1.807		0.103
1,3,5-Trimethylbenzene	120.2	0.076	0.382	1.941	0.005	0.053	0.03	0.135	0.27	1.345		0.103
1,2,4-Trimethylbenzene	120.0	0.072	0.362	1.833	0.005	0.051	0.03	0.129	0.26	1.292		0.103
1,3-Dichlorobenzene	147.0	0.054	0.271	1.682	0.005	0.051	0.03	0.158	0.26	1.583		0.103
Benzyl chloride	126.6	0.077	0.383	2.046	0.004	0.038	0.02	0.102	0.19	1.016		0.103
1,4-Dichlorobenzene	147.0	0.056	0.278	1.725	0.005	0.051	0.03	0.158	0.26	1.583		0.103
1,2-Dichlorobenzene	147.0	0.052	0.258	1.603	0.005	0.050	0.03	0.155	0.25	1.552		0.103

1,2,4-Trichlorobenzene	181.4	0.034	0.169	1.298	0.005	0.052	0.03	0.199	0.26	1.992	J	0.103
1,4 Dioxane	88.1	0.061	0.307	1.142	0.004	0.037	0.02	0.069	0.19	0.688		1.103
Naphthalene	128.2	0.132	0.661	3.577	0.011	0.107	0.05	0.290	0.54	2.896		2.103

SAMPLE CALCULATION

EPA Method TO-15 Modified SIM GC/MS

SDG:		**LABQC**
Laboratory Number:		**C06249**
Standard Volume	STV	0.5
Sample Volume	SV	200
Can Dilution Factor	CDF	1.00
Gas Constant		23.68
Decimal Places:		3

Sample Calculation:

1) Avg RFn = Sum $\left| \frac{(Astdni)}{(Cstdni)} \frac{(Cistdi)}{(Aistdi)} \right|_i$ Note: 1

2) Raw Amt = $\frac{(Ansamp)}{(Avg\ RFn)} \frac{(Cistdi)}{(Aistdi)}$ = Cn

3) Amount ppbv = $\frac{(Raw\ Amt)\ 1000}{(SV)}$ (CDF) (STV)

4) Amount ug/m3 = $\frac{(amt(ppbv)\ MW}{23.68}$

n	Compound	IS n	Chem type	MW	AvgRFn	Area Ansamp	Cistdi ppmv	Aistdi Ais	Cn ppmV Raw Amt	Amount ppbv	Amount ug/m3
2	Dichlorodifluoromethane	1	TRG	120.9	0.116	82673	0.200	1165562	0.123	0.613	3.130
3	Chloromethane	1	TRG	50.5	0.054	34091	0.200	1165562	0.108	0.539	1.149
5	Vinyl chloride	1	TRG	62.5	0.039	25438	0.200	1165562	0.112	0.560	1.478
6	Bromomethane	1	TRG	94.9	0.037	25675	0.200	1165562	0.118	0.590	2.364
7	Chloroethane	1	TRG	64.5	0.034	20005	0.200	1165562	0.101	0.505	1.376
8	Trichlorofluoromethane	1	TRG	137.4	0.135	97512	0.200	1165562	0.124	0.619	3.592
9	1,1-Dichloroethene	1	TRG	96.9	0.081	57518	0.200	1165562	0.122	0.610	2.496
10	Freon 113	1	TRG	187.3	0.060	35717	0.200	1165562	0.101	0.507	4.010
11	Dichloromethane	1	TRG	84.9	0.041	25253	0.200	1165562	0.105	0.527	1.889
13	Methyl tert butyl ether	2	TRG	88.1	0.169	56486	0.200	1165562	0.057	0.286	1.064
12	trans-1,2-Dichloroethene	1	TRG	96.9	0.047	19592	0.200	1165562	0.072	0.360	1.473
14	1,1-Dichloroethane	1	TRG	99.0	0.089	58095	0.200	1165562	0.112	0.559	2.337
15	cis-1,2-Dichloroethene	1	TRG	96.9	0.057	29708	0.200	1165562	0.090	0.450	1.841
17	Chloroform	1	TRG	119.4	0.118	72728	0.200	1165562	0.106	0.530	2.672
18	1,1,1-Trichloroethane	1	TRG	133.4	0.130	85551	0.200	1165562	0.113	0.564	3.177
19	1,2-Dichloroethane	1	TRG	99.0	0.239	142946	0.200	1165562	0.102	0.512	2.141
20	Benzene	1	TRG	78.1	0.183	100765	0.200	1165562	0.094	0.472	1.557
21	Carbon tetrachloride	1	TRG	153.8	0.112	72255	0.200	1165562	0.111	0.553	3.592
22	1,2-Dichloropropane	1	TRG	113.0	0.062	33604	0.200	1165562	0.093	0.467	2.229
23	Trichloroethene	1	TRG	131.4	0.073	36687	0.200	1165562	0.086	0.429	2.381
24	Bromodichloromethane	1	TRG	163.8	0.133	51927	0.200	1165562	0.067	0.335	2.317
26	Toluene	1	TRG	92.1	0.259	142041	0.200	1165562	0.094	0.471	1.832
28	1,1,2-Trichloroethane	1	TRG	133.4	0.109	46891	0.200	1165562	0.073	0.367	2.067
29	1,2-Dibromoethane	1	TRG	187.9	0.203	105591	0.200	1165562	0.089	0.447	3.547
30	Tetrachloroethene	1	TRG	165.8	0.092	39788	0.200	1165562	0.074	0.370	2.591
31	Chlorobenzene	1	TRG	112.6	0.260	106648	0.200	1165562	0.070	0.352	1.674
33	Ethylbenzene	1	TRG	106.2	0.474	237483	0.200	1165562	0.086	0.430	1.928
34	m & p-Xylene	1	TRG	106.2	0.360	363650	0.200	1165562	0.173	0.866	3.884
35	Styrene	1	TRG	104.2	0.437	165377	0.200	1165562	0.065	0.324	1.426
36	o-Xylene	1	TRG	106.2	0.460	231143	0.200	1165562	0.086	0.431	1.933
37	1,1,2,2-Tetrachloroethane	1	TRG	167.8	0.54	197432	0.200	1165562	0.063	0.315	2.232
39	1,3,5-Trimethylbenzene	1	TRG	120.2	0.806	359142	0.200	1165562	0.076	0.382	1.939
40	1,2,4-Trimethylbenzene	1	TRG	120.0	0.937	395014	0.200	1165562	0.072	0.362	1.834
41	1,3-Dichlorobenzene	1	TRG	147.0	0.712	224874	0.200	1165562	0.054	0.271	1.682
42	Benzyl chloride	1	TRG	126.6	0.749	334143	0.200	1165562	0.077	0.383	2.048
43	1,4-Dichlorobenzene	1	TRG	147.0	0.735	237950	0.200	1165562	0.056	0.278	1.726
44	1,2-Dichlorobenzene	1	TRG	147.0	0.886	266634	0.200	1165562	0.052	0.258	1.602
45	1,2,4-Trichlorobenzene	1	TRG	181.4	1.99	392582	0.200	1165562	0.034	0.169	1.295
47	1,4 Dioxane	1	TRG	88.1	0.06	22599	0.200	1165562	0.061	0.307	1.142
48	Naphthalene	1	TRG	128.2	6.70	5162461	0.200	1165562	0.132	0.661	3.579
1	Chlorobenzene-d5	1	IS	0.0	1.000	1165562	0.200	1165562	0.000	0.000	0.000

16 Toluene-d8	1	SURR	0.0	0.425	572680	0.200	1165562	0.000	0.000	0.000

Calculation Definitions:

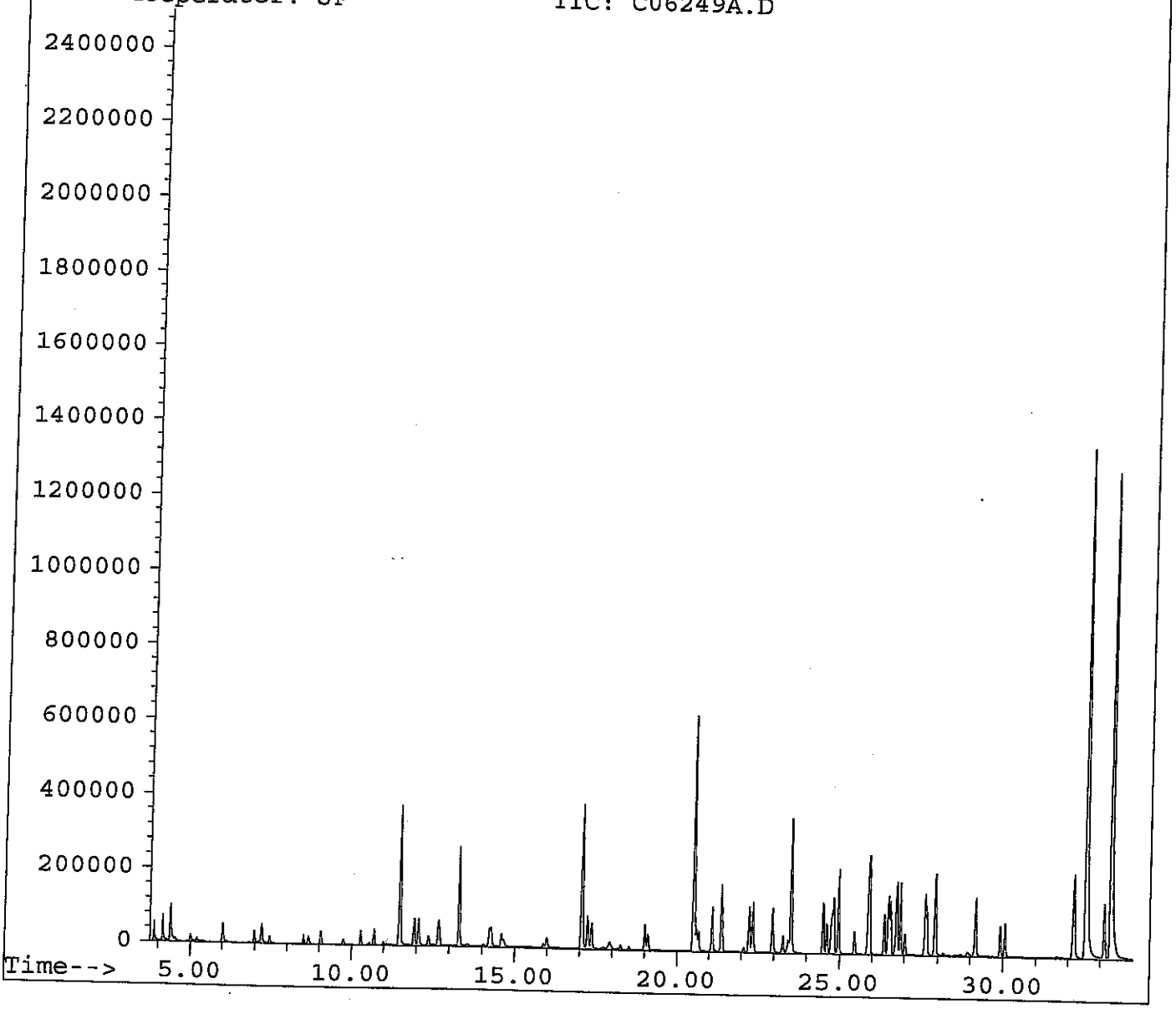
n	compound n
i	i th calibration level
Astdni	Standard Area for compound n at ith calibration level
Cstdni	Standard Concentration for compound n at ith calibration level in ppmv
Cistdi	Internal Standard Conc used for compound n at ith calibration level in ppmv
Aistdi	Internal Standard Area used for compound n at ith calibration level
Ansamp	Sample Area for compound n
Avg RFn	Average response factor for all ith calibration levels for compound n
Raw Amount	Sample Concentration in ppmv before applying factors
Cistd	Concentration internal standard used for compound n in sample in ppmv
Aistd	Area of internal standard used for compound n in sample
Cn	Concentration of compound n in sample in ppmv
23.68	Gas constant at 60 F as per EPA source test protocol
MW	Molecular weight of compound

Note (1) : Avg RFn — The values for the Average Response Factor AvgRFn can be optained from the response Factor Report for the Initial Calibration, or from the Callbration Report

Name of file: C:\HPCHEM\1\DATA\06249MS2\C06249A.D

Name of operator: JF

TIC: C06249A.D



METHOD BLANK REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified SIM GC/MS
Analytical Method: TO-15 SIM

SDG: LABQC
Laboratory Number: B06249

File: B06249B.D
Description: METHOD BLANK
Can/Tube#:
Sam_Type: MB
QC_Batch: 062409-MS2
Air Volume: 1000 ml

Date Sampled: **Time:**
Date Received:
Date Extracted:
Date Analyzed: 06/24/09 **Time:** 14:20
Can Dilution Factor: 1.00 3
Not Detected Flag: ND

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
75-71-8	Dichlorodifluoromethane	0.005	0.053	ND	0.027	0.271	ND	ND
74-87-3	Chloromethane	0.005	0.051	ND	0.011	0.109	ND	ND
75-01-4	Vinyl chloride	0.005	0.052	ND	0.014	0.137	ND	ND
74-83-9	Bromomethane	0.005	0.052	ND	0.021	0.208	ND	ND
75-00-3	Chloroethane	0.005	0.052	ND	0.014	0.142	ND	ND
75-69-4	Trichlorofluoromethane	0.005	0.052	ND	0.030	0.302	ND	ND
75-35-4	1,1-Dichloroethene	0.005	0.052	ND	0.021	0.213	ND	ND
76-13-1	Freon 113	0.005	0.051	ND	0.040	0.403	ND	ND
75-09-2	Dichloromethane	0.005	0.052	ND	0.019	0.186	ND	ND
1634-04-4	Methyl tert butyl ether	0.003	0.033	ND	0.012	0.123	ND	ND
156-60-5	trans-1,2-Dichloroethene	0.004	0.037	ND	0.015	0.151	ND	ND
75-34-3	1,1-Dichloroethane	0.005	0.051	ND	0.021	0.213	ND	ND
156-59-2	cis-1,2-Dichloroethene	0.005	0.052	ND	0.021	0.213	ND	ND
67-66-3	Chloroform	0.005	0.051	ND	0.026	0.257	ND	ND
71-55-6	1,1,1-Trichloroethane	0.005	0.051	ND	0.029	0.287	ND	ND
107-06-2	1,2-Dichloroethane	0.005	0.052	ND	0.022	0.217	ND	ND
71-43-2	Benzene	0.005	0.052	ND	0.017	0.172	ND	ND
56-23-5	Carbon tetrachloride	0.005	0.051	ND	0.033	0.331	ND	ND
78-87-5	1,2-Dichloropropane	0.005	0.052	ND	0.025	0.248	ND	ND
79-01-6	Trichloroethene	0.005	0.052	ND	0.029	0.289	ND	ND
75-27-4	Bromodichloromethane	0.003	0.034	ND	0.024	0.235	ND	ND
108-88-3	Toluene	0.005	0.052	ND	0.020	0.202	ND	ND
79-00-5	1,1,2-Trichloroethane	0.005	0.051	ND	0.029	0.287	ND	ND
106-93-4	1,2-Dibromoethane	0.005	0.052	0.006	0.041	0.413	0.051	J
127-18-4	Tetrachloroethene	0.005	0.051	ND	0.036	0.357	ND	ND
108-90-7	Chlorobenzene	0.005	0.051	0.006	0.024	0.243	0.031	J
100-41-4	Ethylbenzene	0.005	0.052	ND	0.023	0.233	ND	ND
108-38-3	m & p-Xylene	0.010	0.103	ND	0.046	0.462	ND	ND
100-42-5	Styrene	0.005	0.052	ND	0.023	0.229	ND	ND
95-47-6	o-Xylene	0.005	0.051	ND	0.023	0.229	ND	ND
79-34-5	1,1,2,2-Tetrachloroethane	0.005	0.051	ND	0.036	0.361	ND	ND
108-67-8	1,3,5-Trimethylbenzene	0.005	0.053	ND	0.027	0.269	ND	ND
95-63-6	1,2,4-Trimethylbenzene	0.005	0.051	0.006	0.026	0.258	0.033	J
541-73-1	1,3-Dichlorobenzene	0.005	0.051	0.009	0.032	0.317	0.055	J
100-44-7	Benzyl chloride	0.004	0.038	ND	0.020	0.203	ND	ND
106-46-7	1,4-Dichlorobenzene	0.005	0.051	0.011	0.032	0.317	0.068	J
95-50-1	1,2-Dichlorobenzene	0.005	0.050	0.009	0.031	0.310	0.054	J
120-82-1	1,2,4-Trichlorobenzene	0.005	0.052	0.015	0.040	0.398	0.112	J
123-91-1	1,4 Dioxane	0.004	0.037	0.004	0.014	0.138	0.016	J
91-20-3	Naphthalene	0.011	0.107	ND	0.058	0.579	ND	ND

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
	Surrogate Recovery		Spike Amt. ppbV		Amount ppbV	% Rec.	QC Limits	Flag * = Out
2037-26-5	Toluene-d8		0.200		0.208	104	70-130	

Notes: 1) Reported results are to be interpreted to two significant figures.
2) ug/m3 = ppbV*FW/23.68 calculated assuming conditions at 60 F and 1 atm.
3) MDL and RL are adjusted for sample volume and can dilution.
4) U and ND are Flags used for Not Detected
5) J is a flag for a result between the MDL and the RL (or lower quantitation limit, LQL)

QUANTITATION REPORT

EPA Method TO-15 Modified SIM GC/MS

Review **EAS Sample ID: B06249B**

File Name:	B06249B.D			1 SS
Sample ID:	METHOD BLANK			2 KB
Date:	24 Jun 109 2:20 pm	Cal Amounts		3 AT
Run Method:	2EXSIM_I.M	IS Areas		4 BB
Quant Method:	2EXSIM_I.M	Carryover		5 SH
Cal Update:	Mon Jun 22 09:18:18 2009			
Template:	EARTEXSM.MS3			
Can Factor:	1.00			
Volume:	1000 ml	Analyst:	SS 1	

CAS#	Compound	n	Raw Amount	RT	Target RT	Ion	Sample Area	Qualifier	Lower Qual	Upper Qual	Qual Flag	Cal Flag	Int Flag
75-71-8	Dichlorodifluoromethane	2	0.000	0.00	3.85	85.00	0	0	26	38			
74-87-3	Chloromethane	3	0.000	4.22	4.12	50.00	0	0	21	32			
75-01-4	Vinyl chloride	5	0.000	4.52	4.37	62.00	0	0	28	42			
74-83-9	Bromomethane	6	0.000	5.13	4.97	94.00	0	0	69	104			
75-00-3	Chloroethane	7	0.002	5.19	5.18	64.00	334	41	27	40			
75-69-4	Trichlorofluoromethane	8	0.000	6.23	5.98	101.00	0	0	53	80			
75-35-4	1,1-Dichloroethene	9	0.001	6.97	6.95	61.00	621	35	37	56			
76-13-1	Freon 113	10	0.000	7.09	7.13	151.00	0	0	136	204			
75-09-2	Dichloromethane	11	0.003	7.46	7.42	84.00	637	56	51	77			
1634-04-4	Methyl tert butyl ether	13	0.000	8.69	8.60	73.00	0	0	16	24			
156-60-5	trans-1,2-Dichloroethene	12	0.000	8.41	8.48	96.00	0	0	111	167			
75-34-3	1,1-Dichloroethane	14	0.000	8.88	9.00	63.00	0	0	25	37			
156-59-2	cis-1,2-Dichloroethene	15	0.003	10.29	10.24	96.00	1077	145	102	153			
67-66-3	Chloroform	17	0.002	10.70	10.66	83.00	1316	64	52	78			
71-55-6	1,1,1-Trichloroethane	18	0.001	11.94	11.91	97.00	444	0	53	80			
107-06-2	1,2-Dichloroethane	19	0.005	12.07	12.02	61.95	6819	15	14	21			
71-43-2	Benzene	20	0.004	12.66	12.63	78.00	4146	24	16	23	Q		
56-23-5	Carbon tetrachloride	21	0.001	12.71	12.66	116.90	354	82	79	119			
78-87-5	1,2-Dichloropropane	22	0.000	14.39	14.20	63.00	0	0	126	189			
79-01-6	Trichloroethene	23	0.004	14.28	14.26	130.00	1763	96	75	112			
75-27-4	Bromodichloromethane	24	0.000	14.76	14.57	83.00	0	0	52	78			
108-88-3	Toluene	26	0.004	17.27	17.21	91.00	6077	63	53	80			
79-00-5	1,1,2-Trichloroethane	28	0.004	17.37	17.35	97.00	2580	93	63	94			
106-93-4	1,2-Dibromoethane	29	0.006	19.03	18.99	107.00	7393	91	76	114			
127-18-4	Tetrachloroethene	30	0.003	19.11	19.09	166.00	1663	93	64	97			
108-90-7	Chlorobenzene	31	0.006	20.63	20.59	112.00	9434	29	27	40			
100-41-4	Ethylbenzene	33	0.004	21.12	21.08	91.00	10416	28	24	36			
108-38-3	m & p-Xylene	34	0.010	21.41	21.37	91.00	20857	46	42	63			
100-42-5	Styrene	35	0.005	22.28	22.22	104.00	11807	43	28	42			
95-47-6	o-Xylene	36	0.004	22.36	22.34	91.00	11048	37	38	56	Q		
79-34-5	1,1,2,2-Tetrachloroethane	37	0.000	23.23	22.93	83.00	0	0	8	12			
108-67-8	1,3,5-Trimethylbenzene	39	0.005	24.99	24.96	105.00	20974	43	39	58			
95-63-6	1,2,4-Trimethylbenzene	40	0.006	25.94	25.91	105.00	34047	40	36	54			
541-73-1	1,3-Dichlorobenzene	41	0.009	26.58	26.55	146.00	35401	42	35	52			
100-44-7	Benzyl chloride	42	0.000	26.70	26.70	91.00	0	0	15	23			
106-46-7	1,4-Dichlorobenzene	43	0.011	26.78	26.75	146.00	44992	41	32	49			

CAS#	Compound	n	Raw Amount	RT	Target RT	Ion	Sample Area	Qualifier	Lower Qual	Upper Qual	Qual Flag	Cal Flag	Int Flag
95-50-1	1,2-Dichlorobenzene	44	0.009	27.64	27.61	146.00	43550	46	38	57			
120-82-1	1,2,4-Trichlorobenzene	45	0.015	32.18	32.17	180.00	163301	97	79	118			
123-91-1	1,4 Dioxane	47	0.004	14.71	14.57	88.00	1485	68	55	82			
91-20-3	Naphthalene	48	0.004	32.57	32.78	128.00	140171	0	0	0			
3114-55-4	Chlorobenzene-d5	1	0.200	20.53	20.51	117.00	**1125527**						
2037-26-5	Toluene-d8	16	0.208	17.08	17.05	98.00	**497747**						

Integration Flags:

If no flag the Integration was done by the instrument computer

M1 Manual Integration because the computer did not integrated the peak or integrated the wrong peak

M2 Manual Integration because computer integration of baseline was different then Inital Calibration

INITIAL CALIBRATION REPORT

EPA Method TO-15 Modified SIM GC/MS

File Name:	B06249B.D	SDG:	LABQC
Sample ID:	METHOD BLANK	QC_Batch:	062409-MS2
Sample Analysis Date:	24 Jun 109 2:20 pm	Instrument Name:	MS2
Run Method:	2EXSIM_I.M	Number Compounds:	49
Quant and Calibration Method:	2EXSIM_I.M	IS1: ST60024	0.2
Cal Update:	Mon Jun 22 09:18:18 2009	IS2:	
Template:	EARTEXSM.MS3	IS3:	
		IS4:	

Calibration Title:EPA T0-15

		Calibration Amount CA, ppmv						Calibration Response, Area					
		Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
		Amt	Amt	Amt	Amt	Amt	Amt	C06199B.D	C06199H.D	C06199A.D	C06199F.D	C06199E.D	C06199K.D
n	Compound	10.0	0.5	20.0	2.0	4.0	1.0	10.0	0.5	20.0	2.0	4.0	1.0
2	Dichlorodifluoromethane	1.050	0.053	2.100	0.210	0.420	0.105	534841	38986	1705728	73746	400604	64289
3	Chloromethane	1.020	0.051	2.040	0.204	0.408	0.102	268477	16811	877342	29933	189687	27154
5	Vinyl chloride	1.040	0.052	2.080	0.208	0.416	0.104	184476	12222	596605	24865	140317	19936
6	Bromomethane	1.040	0.052	2.080	0.208	0.416	0.104	193900	12685	547447	21277	126567	19683
7	Chloroethane	1.040	0.052	2.080	0.208	0.416	0.104	180453	11984	584817	18602	111983	15560
8	Trichlorofluoromethane	1.040	0.052	2.080	0.208	0.416	0.104	631888	46620	1969166	80614	475586	72646
9	1,1-Dichloroethene	1.040	0.052	2.080	0.208	0.416	0.104	388365	27969	1185798	47507	301017	40726
10	Freon 113	1.020	0.051	2.040	0.204	0.408	0.102	274663	20804	826803	35204	228496	30309
11	Dichloromethane	1.040	0.052	2.080	0.208	0.416	0.104	180065	15163	530282	25781	167890	19971
13	Methyl tert butyl ether	0.660	0.033	1.320	0.132	0.264	0.066	620120	31056	2309675	52207	365659	44883
12	trans-1,2-Dichloroethene	0.730	0.037	1.460	0.146	0.292	0.073	142963	12852	384125	20102	132501	16643
14	1,1-Dichloroethane	1.010	0.051	2.020	0.202	0.404	0.101	403912	31159	1225807	51920	327340	43151
15	cis-1,2-Dichloroethene	1.030	0.052	2.060	0.206	0.412	0.103	240146	21098	758337	35003	226396	27004
17	Chloroform	1.020	0.051	2.040	0.204	0.408	0.102	510308	42620	1697577	69088	427372	57851
18	1,1,1-Trichloroethane	1.020	0.051	2.040	0.204	0.408	0.102	587705	46722	1955378	75018	469425	61727
19	1,2-Dichloroethane	1.030	0.052	2.060	0.206	0.412	0.103	1236150	74052	4935278	125964	835756	97954
20	Benzene	1.030	0.052	2.060	0.206	0.412	0.103	967913	60686	3573129	94902	641363	73510
21	Carbon tetrachloride	1.020	0.051	2.040	0.204	0.408	0.102	492544	40672	1579809	67130	410007	53667
22	1,2-Dichloropropane	1.030	0.052	2.060	0.206	0.412	0.103	280915	22034	957916	37485	236197	27080
23	Trichloroethene	1.030	0.052	2.060	0.206	0.412	0.103	305786	29555	968228	45278	286372	33459
24	Bromodichloromethane	0.670	0.034	1.340	0.134	0.268	0.067	349165	34872	980125	57413	329960	43188
26	Toluene	1.030	0.052	2.060	0.206	0.412	0.103	1260474	90214	4659514	149575	935329	102952

n	Compound	Amt 10.0	Amt 0.5	Amt 20.0	Amt 2.0	Amt 4.0	Amt 1.0	C06199B.D 10.0	C06199H.D 0.5	C06199A.D 20.0	C06199F.D 2.0	C06199E.D 4.0	C06199K.D 1.0
28	1,1,2-Trichloroethane	1.020	0.051	2.040	0.204	0.408	0.102	480870	37160	1655491	70973	441832	43484
29	1,2-Dibromoethane	1.040	0.052	2.080	0.208	0.416	0.104	915216	67709	3403871	130478	834780	79525
30	Tetrachloroethene	1.020	0.051	2.040	0.204	0.408	0.102	373918	35806	1224836	58411	374447	38753
31	Chlorobenzene	1.020	0.051	2.040	0.204	0.408	0.102	1017786	104021	3390004	174301	1040689	105228
33	Ethylbenzene	1.040	0.052	2.080	0.208	0.416	0.104	2140675	173953	7709871	303124	1882967	181776
34	m & p-Xylene	2.060	0.103	4.120	0.412	0.824	0.206	2970894	279033	10312056	481458	2872586	284680
35	Styrene	1.030	0.052	2.060	0.206	0.412	0.103	2090268	153303	6660464	294984	1772326	150847
36	o-Xylene	1.020	0.051	2.040	0.204	0.408	0.102	1996168	168269	6920115	304155	1831287	166711
37	1,1,2,2-Tetrachloroethane	1.020	0.051	2.040	0.204	0.408	0.102	2273482	192188	6988630	401655	2300254	180334
39	1,3,5-Trimethylbenzene	1.060	0.053	2.120	0.212	0.424	0.106	3143240	323037	9985329	644118	3708236	280478
40	1,2,4-Trimethylbenzene	1.020	0.051	2.040	0.204	0.408	0.102	3248488	373791	10120607	742439	4300475	315230
41	1,3-Dichlorobenzene	1.020	0.051	2.040	0.204	0.408	0.102	2387618	303170	7032467	572612	3179015	243933
42	Benzyl chloride	0.760	0.038	1.520	0.152	0.304	0.076	2015808	210430	6118543	463035	2452250	191598
43	1,4-Dichlorobenzene	1.020	0.051	2.040	0.204	0.408	0.102	2189006	331504	6500736	598783	3247824	271163
44	1,2-Dichlorobenzene	1.000	0.050	2.000	0.200	0.400	0.100	3162973	359724	9089085	693423	3769025	288406
45	1,2,4-Trichlorobenzene	1.030	0.052	2.060	0.206	0.412	0.103	6381826	918959	14261028	1761172	9410822	617532
47	1,4 Dioxane	0.740	0.037	1.480	0.148	0.296	0.074	154378	17449	450267	31614	179188	26330
48	Naphthalene	2.130	0.107	-1.000	0.426	0.852	0.213	34587722	6597377	-1	12354059	37178978	4780301
1	Chlorobenzene-d5	0.200	0.200	0.200	0.200	0.200	0.200	877690	1273169	1660044	554145	1807068	927887
16	Toluene-d8	0.200	0.200	0.200	0.200	0.200	0.200	389596	565545	652462	236781	753686	395034

(437)

INITIAL CALIBRATION REPORT: Response Factors

SDG:	**LABQC**	**Sample Calculation:**	
QC_Batch:	**062409-MS2**	1) Avg RFn = Sum	$\left\lvert \frac{(Astdni)\ (Cistdi)}{(Cstdni)\ (Aistdi)} \right\rvert_i$
Sample ID:	METHOD BLANK		
Sample Analysis Date:	24 Jun 109 2:20 pm		
Run Method:	2EXSIM_I.M		
Quant Method:	2EXSIM_I.M		
Cal Update:	Mon Jun 22 09:18:18 2009		
Template:	EARTEXSM.MS3		

Response Factors

Compound	RF1	RF2	RF3	RF4	RF5	RF6	AvgRFn	%RSD
Dichlorodifluoromethane	0.116	0.116	0.098	0.127	0.106	0.132	0.116	10.99
Chloromethane	0.060	0.052	0.052	0.053	0.051	0.057	0.054	6.60
Vinyl chloride	0.040	0.037	0.035	0.043	0.037	0.041	0.039	8.23
Bromomethane	0.042	0.038	0.032	0.037	0.034	0.041	0.037	11.03
Chloroethane	0.040	0.036	0.034	0.032	0.030	0.032	0.034	10.13
Trichlorofluoromethane	0.138	0.141	0.114	0.140	0.127	0.151	0.135	9.50
1,1-Dichloroethene	0.085	0.084	0.069	0.082	0.080	0.084	0.081	7.72
Freon 113	0.061	0.064	0.049	0.062	0.062	0.064	0.060	9.58
Dichloromethane	0.039	0.046	0.031	0.045	0.045	0.041	0.041	13.70
Methyl tert butyl ether	0.214	0.148	0.211	0.143	0.153	0.147	0.169	19.90
trans-1,2-Dichloroethene	0.045	0.055	0.032	0.050	0.050	0.049	0.047	17.11
1,1-Dichloroethane	0.091	0.096	0.073	0.093	0.090	0.092	0.089	9.11
cis-1,2-Dichloroethene	0.053	0.064	0.044	0.061	0.061	0.057	0.057	12.56
Chloroform	0.114	0.131	0.100	0.122	0.116	0.122	0.118	8.89
1,1,1-Trichloroethane	0.131	0.144	0.115	0.133	0.127	0.130	0.130	7.04
1,2-Dichloroethane	0.273	0.224	0.289	0.221	0.225	0.205	0.239	13.97
Benzene	0.214	0.183	0.209	0.166	0.172	0.154	0.183	13.13
Carbon tetrachloride	0.110	0.125	0.093	0.119	0.111	0.113	0.112	9.60
1,2-Dichloropropane	0.062	0.067	0.056	0.066	0.063	0.057	0.062	7.25
Trichloroethene	0.068	0.089	0.057	0.079	0.077	0.070	0.073	15.26
Bromodichloromethane	0.119	0.161	0.088	0.155	0.136	0.139	0.133	19.96
Toluene	0.279	0.273	0.273	0.262	0.251	0.215	0.259	9.02
1,1,2-Trichloroethane	0.107	0.114	0.098	0.126	0.120	0.092	0.109	11.85
1,2-Dibromoethane	0.201	0.205	0.197	0.226	0.222	0.165	0.203	10.84
Tetrachloroethene	0.084	0.110	0.072	0.103	0.102	0.082	0.092	16.20
Chlorobenzene	0.227	0.320	0.200	0.308	0.282	0.222	0.260	19.25
Ethylbenzene	0.469	0.525	0.447	0.526	0.501	0.377	0.474	12.05
m & p-Xylene	0.329	0.426	0.302	0.422	0.386	0.298	0.360	16.21
Styrene	0.462	0.463	0.390	0.517	0.476	0.316	0.437	16.55
o-Xylene	0.446	0.518	0.409	0.538	0.497	0.352	0.460	15.46
1,1,2,2-Tetrachloroethane	0.508	0.592	0.413	0.711	0.624	0.381	0.538	23.70
1,3,5-Trimethylbenzene	0.676	0.957	0.567	1.097	0.968	0.570	0.806	28.46
1,2,4-Trimethylbenzene	0.726	1.151	0.598	1.314	1.167	0.666	0.937	32.85
1,3-Dichlorobenzene	0.533	0.934	0.415	1.013	0.862	0.515	0.712	35.57
Benzyl chloride	0.604	0.870	0.485	1.099	0.893	0.543	0.749	32.20
1,4-Dichlorobenzene	0.489	1.021	0.384	1.059	0.881	0.573	0.735	39.38
1,2-Dichlorobenzene	0.721	1.130	0.548	1.251	1.043	0.622	0.886	33.09

1,2,4-Trichlorobenzene	1.412	2.776	0.834	3.086	2.528	1.292	1.988	46.46
1,4 Dioxane	0.048	0.074	0.037	0.077	0.067	0.077	0.063	27.03
Naphthalene	3.700	9.686	NA	10.467	4.830	4.837	6.704	46.62
Chlorobenzene-d5	1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.00
Toluene-d8	0.444	0.444	0.393	0.427	0.417	0.426	0.425	4.48

CALCULATIONS

EPA Method TO-15 Modified SIM GC/MS

SDG: LABQC
Laboratory Number: B06249

RL: 2EXSIM_I.M
Run Method: 2EXSIM_I.M
Quant Method: 2EXSIM_I.M
Can Dilution Factor: 1.00
Air Volume: 1000 ml
Gas Constant: 23.68
Decimal Places: 3

Compound	M.W.	Raw Amount	Result ppbv	Result ug/m3	(1) MDL ppbv	(2) RL ppbv	Calc MDL ppbv	Calc MDL ug/m3	Calc RL ppbv	Calc RL ug/m3	Flag	S062602-1 Spike ppmv
Dichlorodifluoromethane	120.9	0.000	0.000	0.000	0.005	0.053	0.01	0.027	0.05	0.271	U	0.103
Chloromethane	50.5	0.000	0.000	0.000	0.005	0.051	0.01	0.011	0.05	0.109	U	0.103
Vinyl chloride	62.5	0.000	0.000	0.000	0.005	0.052	0.01	0.014	0.05	0.137	U	0.103
Bromomethane	94.9	0.000	0.000	0.000	0.005	0.052	0.01	0.021	0.05	0.208	U	0.103
Chloroethane	64.5	0.002	0.002	0.005	0.005	0.052	0.01	0.014	0.05	0.142	U	0.103
Trichlorofluoromethane	137.4	0.000	0.000	0.000	0.005	0.052	0.01	0.030	0.05	0.302	U	0.103
1,1-Dichloroethene	96.9	0.001	0.001	0.006	0.005	0.052	0.01	0.021	0.05	0.213	U	0.103
Freon 113	187.3	0.000	0.000	0.000	0.005	0.051	0.01	0.040	0.05	0.403	U	0.103
Dichloromethane	84.9	0.003	0.003	0.010	0.005	0.052	0.01	0.019	0.05	0.186	U	0.103
Methyl tert butyl ether	88.1	0.000	0.000	0.000	0.003	0.033	0.00	0.012	0.03	0.123	U	1.103
trans-1,2-Dichloroethene	96.9	0.000	0.000	0.000	0.004	0.037	0.00	0.015	0.04	0.151	U	0.103
1,1-Dichloroethane	99.0	0.000	0.000	0.000	0.005	0.051	0.01	0.021	0.05	0.213	U	0.103
cis-1,2-Dichloroethene	96.9	0.003	0.003	0.014	0.005	0.052	0.01	0.021	0.05	0.213	U	0.103
Chloroform	119.4	0.002	0.002	0.010	0.005	0.051	0.01	0.026	0.05	0.257	U	0.103
1,1,1-Trichloroethane	133.4	0.001	0.001	0.003	0.005	0.051	0.01	0.029	0.05	0.287	U	0.103
1,2-Dichloroethane	99.0	0.005	0.005	0.021	0.005	0.052	0.01	0.022	0.05	0.217	U	0.103
Benzene	78.1	0.004	0.004	0.013	0.005	0.052	0.01	0.017	0.05	0.172	U	0.103
Carbon tetrachloride	153.8	0.001	0.001	0.004	0.005	0.051	0.01	0.033	0.05	0.331	U	0.103
1,2-Dichloropropane	113.0	0.000	0.000	0.000	0.005	0.052	0.01	0.025	0.05	0.248	U	0.103
Trichloroethene	131.4	0.004	0.004	0.024	0.005	0.052	0.01	0.029	0.05	0.289	U	0.103
Bromodichloromethane	163.8	0.000	0.000	0.000	0.003	0.034	0.00	0.024	0.03	0.235	U	0.103
Toluene	92.1	0.004	0.004	0.016	0.005	0.052	0.01	0.020	0.05	0.202	U	0.103
1,1,2-Trichloroethane	133.4	0.004	0.004	0.024	0.005	0.051	0.01	0.029	0.05	0.287	U	0.103
1,2-Dibromoethane	187.9	0.006	0.006	0.051	0.005	0.052	0.01	0.041	0.05	0.413	J	0.103
Tetrachloroethene	165.8	0.003	0.003	0.022	0.005	0.051	0.01	0.036	0.05	0.357	U	0.103
Chlorobenzene	112.6	0.006	0.006	0.031	0.005	0.051	0.01	0.024	0.05	0.243	J	0.103
Ethylbenzene	106.2	0.004	0.004	0.018	0.005	0.052	0.01	0.023	0.05	0.233	U	0.103
m & p-Xylene	106.2	0.010	0.010	0.046	0.010	0.103	0.01	0.046	0.10	0.462	U	0.103
Styrene	104.2	0.005	0.005	0.021	0.005	0.052	0.01	0.023	0.05	0.229	U	0.103
o-Xylene	106.2	0.004	0.004	0.019	0.005	0.051	0.01	0.023	0.05	0.229	U	0.103
1,1,2,2-Tetrachloroethane	167.8	0.000	0.000	0.000	0.005	0.051	0.01	0.036	0.05	0.361	U	0.103
1,3,5-Trimethylbenzene	120.2	0.005	0.005	0.023	0.005	0.053	0.01	0.027	0.05	0.269	U	0.103
1,2,4-Trimethylbenzene	120.0	0.006	0.006	0.033	0.005	0.051	0.01	0.026	0.05	0.258	J	0.103
1,3-Dichlorobenzene	147.0	0.009	0.009	0.055	0.005	0.051	0.01	0.032	0.05	0.317	J	0.103
Benzyl chloride	126.6	0.000	0.000	0.000	0.004	0.038	0.00	0.020	0.04	0.203	U	0.103
1,4-Dichlorobenzene	147.0	0.011	0.011	0.068	0.005	0.051	0.01	0.032	0.05	0.317	J	0.103
1,2-Dichlorobenzene	147.0	0.009	0.009	0.054	0.005	0.050	0.01	0.031	0.05	0.310	J	0.103

1,2,4-Trichlorobenzene	181.4	0.015	0.015	0.112	0.005	0.052	0.01	0.040	0.05	0.398	J	0.103
1,4 Dioxane	88.1	0.004	0.004	0.016	0.004	0.037	0.00	0.014	0.04	0.138	J	1.103
Naphthalene	128.2	0.004	0.004	0.020	0.011	0.107	0.01	0.058	0.11	0.579	U	2.103

SAMPLE CALCULATION

EPA Method TO-15 Modified SIM GC/MS

SDG:		**LABQC**
Laboratory Number:		**B06249**
Standard Volume	STV	0.5
Sample Volume	SV	1000
Can Dilution Factor	CDF	1.00
Gas Constant		23.68
Decimal Places:		3

Sample Calculation:

1) Avg RFn = Sum $\left| \frac{(Astdni)}{(Cstdni)} \frac{(Cistdi)}{(Aistdi)} \right|_i$ Note: 1

2) Raw Amt = $\frac{(Ansamp)}{(Avg\ RFn)} \frac{(Cistdi)}{(Aistdi)}$ = Cn

3) Amount ppbv = $\frac{(Raw\ Amt)\ 1000}{(SV)}$ (CDF) (STV)

4) Amount ug/m3 = $\frac{(amt(ppbv)\ MW}{23.68}$

n	Compound	IS n	Chem type	MW	AvgRFn	Area Ansamp	Cistdi ppmv	Aistdi Als	Cn ppmV Raw Amt	Amount ppbv	Amount ug/m3
2	Dichlorodifluoromethane	1	TRG	120.9	0.116	0	0.200	1125527	0.000	0.000	0.000
3	Chloromethane	1	TRG	50.5	0.054	0	0.200	1125527	0.000	0.000	0.000
5	Vinyl chloride	1	TRG	62.5	0.039	0	0.200	1125527	0.000	0.000	0.000
6	Bromomethane	1	TRG	94.9	0.037	0	0.200	1125527	0.000	0.000	0.000
7	Chloroethane	1	TRG	64.5	0.034	334	0.200	1125527	0.002	0.002	0.005
8	Trichlorofluoromethane	1	TRG	137.4	0.135	0	0.200	1125527	0.000	0.000	0.000
9	1,1-Dichloroethene	1	TRG	96.9	0.081	621	0.200	1125527	0.001	0.001	0.004
10	Freon 113	1	TRG	187.3	0.060	0	0.200	1125527	0.000	0.000	0.000
11	Dichloromethane	1	TRG	84.9	0.041	637	0.200	1125527	0.003	0.003	0.011
13	Methyl tert butyl ether	2	TRG	88.1	0.169	0	0.200	1125527	0.000	0.000	0.000
12	trans-1,2-Dichloroethene	1	TRG	96.9	0.047	0	0.200	1125527	0.000	0.000	0.000
14	1,1-Dichloroethane	1	TRG	99.0	0.089	0	0.200	1125527	0.000	0.000	0.000
15	cis-1,2-Dichloroethene	1	TRG	96.9	0.057	1077	0.200	1125527	0.003	0.003	0.012
17	Chloroform	1	TRG	119.4	0.118	1316	0.200	1125527	0.002	0.002	0.010
18	1,1,1-Trichloroethane	1	TRG	133.4	0.130	444	0.200	1125527	0.001	0.001	0.006
19	1,2-Dichloroethane	1	TRG	99.0	0.239	6819	0.200	1125527	0.005	0.005	0.021
20	Benzene	1	TRG	78.1	0.183	4146	0.200	1125527	0.004	0.004	0.013
21	Carbon tetrachloride	1	TRG	153.8	0.112	354	0.200	1125527	0.001	0.001	0.006
22	1,2-Dichloropropane	1	TRG	113.0	0.062	0	0.200	1125527	0.000	0.000	0.000
23	Trichloroethene	1	TRG	131.4	0.073	1763	0.200	1125527	0.004	0.004	0.022
24	Bromodichloromethane	1	TRG	163.8	0.133	0	0.200	1125527	0.000	0.000	0.000
26	Toluene	1	TRG	92.1	0.259	6077	0.200	1125527	0.004	0.004	0.016
28	1,1,2-Trichloroethane	1	TRG	133.4	0.109	2580	0.200	1125527	0.004	0.004	0.023
29	1,2-Dibromoethane	1	TRG	187.9	0.203	7393	0.200	1125527	0.006	0.006	0.048
30	Tetrachloroethene	1	TRG	165.8	0.092	1663	0.200	1125527	0.003	0.003	0.021
31	Chlorobenzene	1	TRG	112.6	0.260	9434	0.200	1125527	0.006	0.006	0.029
33	Ethylbenzene	1	TRG	106.2	0.474	10416	0.200	1125527	0.004	0.004	0.018
34	m & p-Xylene	1	TRG	106.2	0.360	20857	0.200	1125527	0.010	0.010	0.045
35	Styrene	1	TRG	104.2	0.437	11807	0.200	1125527	0.005	0.005	0.022
36	o-Xylene	1	TRG	106.2	0.460	11048	0.200	1125527	0.004	0.004	0.018
37	1,1,2,2-Tetrachloroethane	1	TRG	167.8	0.54	0	0.200	1125527	0.000	0.000	0.000
39	1,3,5-Trimethylbenzene	1	TRG	120.2	0.806	20974	0.200	1125527	0.005	0.005	0.025
40	1,2,4-Trimethylbenzene	1	TRG	120.0	0.937	34047	0.200	1125527	0.006	0.006	0.030
41	1,3-Dichlorobenzene	1	TRG	147.0	0.712	35401	0.200	1125527	0.009	0.009	0.056
42	Benzyl chloride	1	TRG	126.6	0.749	0	0.200	1125527	0.000	0.000	0.000
43	1,4-Dichlorobenzene	1	TRG	147.0	0.735	44992	0.200	1125527	0.011	0.011	0.068
44	1,2-Dichlorobenzene	1	TRG	147.0	0.886	43550	0.200	1125527	0.009	0.009	0.056
45	1,2,4-Trichlorobenzene	1	TRG	181.4	1.99	163301	0.200	1125527	0.015	0.015	0.115
47	1,4 Dioxane	1	TRG	88.1	0.06	1485	0.200	1125527	0.004	0.004	0.015
48	Naphthalene	1	TRG	128.2	6.70	140171	0.200	1125527	0.004	0.004	0.022
1	Chlorobenzene-d5	1	IS	0.0	1.000	1125527	0.200	1125527	0.000	0.000	0.000

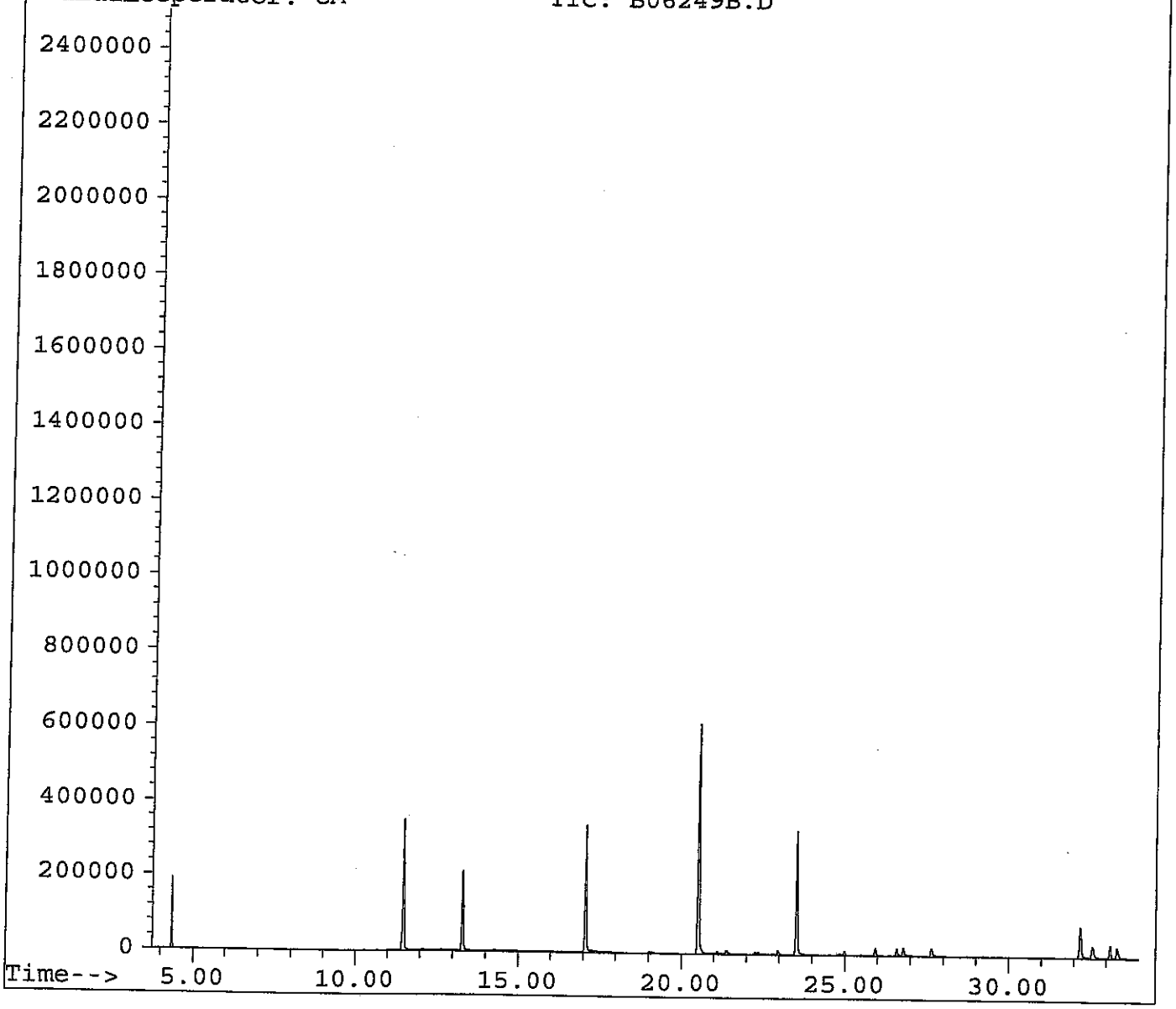
16 Toluene-d8	1	SURR	0.0	0.425	497747	0.200	1125527	0.000	0.000	0.000

Calculation Definitions:

n	compound n
i	i th calibration level
Astdni	Standard Area for compound n at ith calibration level
Cstdni	Standard Concentration for compound n at ith calibration level in ppmv
Cistdi	Internal Standard Conc used for compound n at ith calibration level in ppmv
Aistdi	Internal Standard Area used for compound n at ith calibration level
Ansamp	Sample Area for compound n
Avg RFn	Average response factor for all ith calibration levels for compound n
Raw Amount	Sample Concentration in ppmv before applying factors
Cistd	Concentration internal standard used for compound n in sample in ppmv
Aistd	Area of internal standard used for compound n in sample
Cn	Concentration of compound n in sample in ppmv
23.68	Gas constant at 60 F as per EPA source test protocol
MW	Molecular weight of compound
Note (1) : Avg RFn	The values for the Average Response Factor AvgRFn can be optained from the response Factor Report for the Initial Calibration, or from the Calibration Report

Name of file: C:\HPCHEM\1\DATA\06249MS2\B06249B.D

Abundance Operator: CM TIC: B06249B.D



QUALITY CONTROL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

LABORATORY CONTROL SPIKE

EPA Method TO-15 Modified SIM GC/MS
Analytical Method: TO-15 SIM

SDG: LABQC

File: QC06249C.D
Description: ST0623091
Can/Tube#:
Sam_Type: LCS
QC_Batch: 062409-MS2
Air Volume: 1000 ml

Date Sampled: NA
Date Received: NA
Date Extracted: NA
Date Analyzed: 06/24/09 **Time:** 11:49
Can Dilution Factor: 1.00 3
QC Duplicate: No

CAS#	Compound	MDL ppbv	Spike Conc ppbv	Amount ppbv	Matrix Amt ppbv	Spk Amt ppbv	Percent Recovery	LCL %	UCL %	Flag
74-87-3	Chloromethane	0.005	1.044	1.192	0.000	1.192	114	70	130	
75-01-4	Vinyl chloride	0.005	1.268	1.388	0.000	1.388	109	70	130	
74-83-9	Bromomethane	0.005	1.422	1.560	0.000	1.560	110	70	130	
75-35-4	1,1-Dichloroethene	0.005	1.275	1.433	0.000	1.433	112	70	130	
75-09-2	Dichloromethane	0.005	1.090	1.135	0.000	1.135	104	70	130	
75-34-3	1,1-Dichloroethane	0.005	1.159	1.288	0.000	1.288	111	70	130	
156-59-2	cis-1,2-Dichloroethene	0.005	0.966	0.994	0.000	0.994	103	70	130	
67-66-3	Chloroform	0.005	1.234	1.321	0.000	1.321	107	70	130	
71-55-6	1,1,1-Trichloroethane	0.005	1.150	1.294	0.000	1.294	113	70	130	
107-06-2	1,2-Dichloroethane	0.005	0.901	0.938	0.000	0.938	104	70	130	
71-43-2	Benzene	0.005	0.793	0.846	0.000	0.846	107	70	130	
56-23-5	Carbon tetrachloride	0.005	1.158	1.306	0.000	1.306	113	70	130	
78-87-5	1,2-Dichloropropane	0.005	0.976	1.023	0.000	1.023	105	70	130	
79-01-6	Trichloroethene	0.005	0.877	0.899	0.000	0.899	103	70	130	
108-88-3	Toluene	0.005	0.709	0.739	0.000	0.739	104	70	130	
79-00-5	1,1,2-Trichloroethane	0.005	0.710	0.740	0.000	0.740	104	70	130	
106-93-4	1,2-Dibromoethane	0.005	0.611	0.649	0.000	0.649	106	70	130	
127-18-4	Tetrachloroethene	0.005	0.779	0.775	0.000	0.775	99	70	130	
108-90-7	Chlorobenzene	0.005	0.634	0.677	0.000	0.677	107	70	130	
100-41-4	Ethylbenzene	0.005	0.649	0.689	0.000	0.689	106	70	130	
108-38-3	m & p-Xylene	0.010	1.346	1.445	0.000	1.445	107	70	130	
95-47-6	o-Xylene	0.005	0.594	0.645	0.000	0.645	109	70	130	

Surrogate Recovery	Spike Amt. ppbV	Amount ppbV	% Rec.	QC Limits	Flag * = Out
Toluene-d8	0.200	0.199	100	70-130	

Notes: Reported results are to be interpreted to two significant figures.
*ug/m3 calculated assuming conditions at 60 F and 1 atm.

QUANTITATION REPORT

EPA Method TO-15 Modified SIM GC/MS

			Review	EAS Sample ID: QC06249	
File Name:	QC06249C.D				1 SS
Sample ID:	ST0623091				2 KB
Date:	24 Jun 109 11:49 am			Cal Amounts	3 AT
Run Method:	2EXSIM_I.M			IS Areas	4 BB
Quant Method:	2EXSIM_I.M			Carryover	5 SH
Cal Update:	Mon Jun 22 09:18:18 2009				
Template:	EARTEXSM.MS3				
Can Factor:	1.00				
Volume:	1000	ml		Analyst: SS 1	

CAS#	Compound	n	Raw Amount	RT	Target RT	Ion	Sample Area	Qualifier	Lower Qual	Upper Qual	Qual Flag	Cal Flag	Int Flag
74-87-3	Chloromethane	3	1.192	4.15	4.12	50.00	129102	24	21	32			
75-01-4	Vinyl chloride	5	1.388	4.40	4.37	62.00	107953	32	28	42			
74-83-9	Bromomethane	6	1.560	5.01	4.97	94.00	116283	92	69	104			
75-35-4	1,1-Dichloroethene	9	1.433	7.00	6.95	61.00	231502	42	37	56			
75-09-2	Dichloromethane	11	1.135	7.47	7.42	84.00	93211	65	51	77			
75-34-3	1,1-Dichloroethane	14	1.288	9.07	9.00	63.00	229205	32	25	37			
156-59-2	cis-1,2-Dichloroethene	15	0.994	10.30	10.24	96.00	112483	150	102	153			
67-66-3	Chloroform	17	1.321	10.71	10.66	83.00	310506	69	52	78			
71-55-6	1,1,1-Trichloroethane	18	1.294	11.94	11.91	97.00	336586	65	53	80			
107-06-2	1,2-Dichloroethane	19	0.938	12.07	12.02	61.95	448334	16	14	21			
71-43-2	Benzene	20	0.846	12.68	12.63	78.00	309508	14	16	23	Q		
56-23-5	Carbon tetrachloride	21	1.306	12.71	12.66	116.90	292018	102	79	119			
78-87-5	1,2-Dichloropropane	22	1.023	14.23	14.20	63.00	126110	159	126	189			
79-01-6	Trichloroethene	23	0.899	14.28	14.26	130.00	131657	97	75	112			
108-88-3	Toluene	26	0.739	17.27	17.21	91.00	382175	69	53	80			
79-00-5	1,1,2-Trichloroethane	28	0.740	17.37	17.35	97.00	161889	73	63	94			
106-93-4	1,2-Dibromoethane	29	0.649	19.01	18.99	107.00	262479	98	76	114			
127-18-4	Tetrachloroethene	30	0.775	19.11	19.09	166.00	142599	88	64	97			
108-90-7	Chlorobenzene	31	0.677	20.63	20.59	112.00	351930	34	27	40			
100-41-4	Ethylbenzene	33	0.689	21.10	21.08	91.00	652184	30	24	36			
108-38-3	m & p-Xylene	34	1.445	21.39	21.37	91.00	1039789	48	42	63			
95-47-6	o-Xylene	36	0.645	22.36	22.34	91.00	592510	44	38	56			
3114-55-4	Chlorobenzene-d5	1	0.200	20.53	20.51	117.00	399425						
2037-26-5	Toluene-d8	16	0.199	17.08	17.05	98.00	169367						

Integration Flags:

If no flag the Integration was done by the Instrument computer

M1 Manual Integration because the computer did not integrated the peak or integrated the wrong peak

M2 Manual Integration because computer integration of baseline was different then Inital Calibration

INITIAL CALIBRATION REPORT

EPA Method TO-15 Modified SIM GC/MS

File Name:	QC06249C.D	SDG:	LABQC
Sample ID:	ST0623091	QC_Batch:	062409-MS2
Sample Analysis Date:	24 Jun 109 11:49 am	Instrument Name:	MS2
Run Method:	2EXSIM_I.M	Number Compounds:	49
Quant and Calibration Method:	2EXSIM_I.M	IS1: ST60360	0.2
Cal Update:	Mon Jun 22 09:18:18 2009	IS2:	
Template:	EARTEXSM.MS3	IS3:	
		IS4:	

Calibration Title: EPA T0-15

		Calibration Amount CA, ppmv						Calibration Response, Area					
		Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
		Amt	Amt	Amt	Amt	Amt	Amt	C06199B.D	C06199H.D	C06199A.D	C06199F.D	C06199E.D	C06199K.D
n	Compound	10.0	0.5	20.0	2.0	4.0	1.0	10.0	0.5	20.0	2.0	4.0	1.0
3	Chloromethane	1.020	0.051	2.040	0.204	0.408	0.102	268477	16811	877342	29933	189687	27154
5	Vinyl chloride	1.040	0.052	2.080	0.208	0.416	0.104	184476	12222	596605	24865	140317	19936
6	Bromomethane	1.040	0.052	2.080	0.208	0.416	0.104	193900	12685	547447	21277	126567	19683
9	1,1-Dichloroethene	1.040	0.052	2.080	0.208	0.416	0.104	388365	27969	1185798	47507	301017	40726
11	Dichloromethane	1.040	0.052	2.080	0.208	0.416	0.104	180065	15163	530282	25781	167890	19971
14	1,1-Dichloroethane	1.010	0.051	2.020	0.202	0.404	0.101	403912	31159	1225807	51920	327340	43151
15	cis-1,2-Dichloroethene	1.030	0.052	2.060	0.206	0.412	0.103	240146	21098	758337	35003	226396	27004
17	Chloroform	1.020	0.051	2.040	0.204	0.408	0.102	510308	42620	1697577	69088	427372	57851
18	1,1,1-Trichloroethane	1.020	0.051	2.040	0.204	0.408	0.102	587705	46722	1955378	75018	469425	61727
19	1,2-Dichloroethane	1.030	0.052	2.060	0.206	0.412	0.103	1236150	74052	4935278	125964	835756	97954
20	Benzene	1.030	0.052	2.060	0.206	0.412	0.103	967913	60686	3573129	94902	641363	73510
21	Carbon tetrachloride	1.020	0.051	2.040	0.204	0.408	0.102	492544	40672	1579809	67130	410007	53667
22	1,2-Dichloropropane	1.030	0.052	2.060	0.206	0.412	0.103	280915	22034	957916	37485	236197	27080
23	Trichloroethene	1.030	0.052	2.060	0.206	0.412	0.103	305786	29555	968228	45278	286372	33459
26	Toluene	1.030	0.052	2.060	0.206	0.412	0.103	1260474	90214	4659514	149575	935329	102952
28	1,1,2-Trichloroethane	1.020	0.051	2.040	0.204	0.408	0.102	480870	37160	1655491	70973	441832	43484
29	1,2-Dibromoethane	1.040	0.052	2.080	0.208	0.416	0.104	915216	67709	3403871	130478	834780	79525
30	Tetrachloroethene	1.020	0.051	2.040	0.204	0.408	0.102	373918	35806	1224836	58411	374447	38753
31	Chlorobenzene	1.020	0.051	2.040	0.204	0.408	0.102	1017786	104021	3390004	174301	1040689	105228
33	Ethylbenzene	1.040	0.052	2.080	0.208	0.416	0.104	2140675	173953	7709871	303124	1882967	181776
34	m & p-Xylene	2.060	0.103	4.120	0.412	0.824	0.206	2970894	279033	10312056	481458	2872586	284680
36	o-Xylene	1.020	0.051	2.040	0.204	0.408	0.102	1996168	168269	6920115	304155	1831287	166711

(447)

n	Compound	Amt 10.0	Amt 0.5	Amt 20.0	Amt 2.0	Amt 4.0	Amt 1.0	C06199B.D 10.0	C06199H.D 0.5	C06199A.D 20.0	C06199F.D 2.0	C06199E.D 4.0	C06199K.D 1.0
1	Chlorobenzene-d5	0.200	0.200	0.200	0.200	0.200	0.200	877690	1273169	1660044	554145	1807068	927887
16	Toluene-d8	0.200	0.200	0.200	0.200	0.200	0.200	389596	565545	652462	236781	753686	395034

(448)

INITIAL CALIBRATION REPORT: Response Factors

SDG:	**LABQC**	**Sample Calculation:**	
QC_Batch:	**062409-MS2**	1) Avg RFn = Sum	$\frac{(Astdni)}{(Cstdni)} \frac{(Cistdi)}{(Aistdi)}$
Sample ID:	ST0623091		
Sample Analysis Date:	24 Jun 109 11:49 am		
Run Method:	2EXSIM_I.M		
Quant Method:	2EXSIM_I.M		
Cal Update:	Mon Jun 22 09:18:18 2009		
Template:	EARTEXSM.MS3		

Response Factors

Compound	RF1	RF2	RF3	RF4	RF5	RF6	AvgRFn	%RSD
Chloromethane	0.060	0.052	0.052	0.053	0.051	0.057	0.054	6.60
Vinyl chloride	0.040	0.037	0.035	0.043	0.037	0.041	0.039	8.23
Bromomethane	0.042	0.038	0.032	0.037	0.034	0.041	0.037	11.03
1,1-Dichloroethene	0.085	0.084	0.069	0.082	0.080	0.084	0.081	7.72
Dichloromethane	0.039	0.046	0.031	0.045	0.045	0.041	0.041	13.70
1,1-Dichloroethane	0.091	0.096	0.073	0.093	0.090	0.092	0.089	9.11
cis-1,2-Dichloroethene	0.053	0.064	0.044	0.061	0.061	0.057	0.057	12.56
Chloroform	0.114	0.131	0.100	0.122	0.116	0.122	0.118	8.89
1,1,1-Trichloroethane	0.131	0.144	0.115	0.133	0.127	0.130	0.130	7.04
1,2-Dichloroethane	0.273	0.224	0.289	0.221	0.225	0.205	0.239	13.97
Benzene	0.214	0.183	0.209	0.166	0.172	0.154	0.183	13.13
Carbon tetrachloride	0.110	0.125	0.093	0.119	0.111	0.113	0.112	9.60
1,2-Dichloropropane	0.062	0.067	0.056	0.066	0.063	0.057	0.062	7.25
Trichloroethene	0.068	0.089	0.057	0.079	0.077	0.070	0.073	15.26
Toluene	0.279	0.273	0.273	0.262	0.251	0.215	0.259	9.02
1,1,2-Trichloroethane	0.107	0.114	0.098	0.126	0.120	0.092	0.109	11.85
1,2-Dibromoethane	0.201	0.205	0.197	0.226	0.222	0.165	0.203	10.84
Tetrachloroethene	0.084	0.110	0.072	0.103	0.102	0.082	0.092	16.20
Chlorobenzene	0.227	0.320	0.200	0.308	0.282	0.222	0.260	19.25
Ethylbenzene	0.469	0.525	0.447	0.526	0.501	0.377	0.474	12.05
m & p-Xylene	0.329	0.426	0.302	0.422	0.386	0.298	0.360	16.21
o-Xylene	0.446	0.518	0.409	0.538	0.497	0.352	0.460	15.46
Chlorobenzene-d5	1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.00
Toluene-d8	0.444	0.444	0.393	0.427	0.417	0.426	0.425	4.48

CALCULATIONS

EPA Method TO-15 Modified SIM GC/MS

SDG: LABQC
Laboratory Number: QC06249

RL:	2EXSIM_I.M
Run Method:	2EXSIM_I.M
Quant Method:	2EXSIM_I.M
Can Dilution Factor:	1.00
Air Volume:	1000 ml
Gas Constant:	23.68
Decimal Places:	3

Compound	M.W.	Raw Amount	Result ppbv	Result ug/m3	(1) MDL ppbv	(2) RL ppbv	Calc MDL ppbv	Calc MDL ug/m3	Calc RL ppbv	Calc RL ug/m3	Flag	ST0623091 Spike ppmv
Chloromethane	50.5	1.192	1.192	2.542	0.005	0.051	0.01	0.011	0.05	0.109		1.044
Vinyl chloride	62.5	1.388	1.388	3.663	0.005	0.052	0.01	0.014	0.05	0.137		1.268
Bromomethane	94.9	1.560	1.560	6.253	0.005	0.052	0.01	0.021	0.05	0.208		1.422
1,1-Dichloroethene	96.9	1.433	1.433	5.866	0.005	0.052	0.01	0.021	0.05	0.213		1.275
Dichloromethane	84.9	1.135	1.135	4.069	0.005	0.052	0.01	0.019	0.05	0.186		1.090
1,1-Dichloroethane	99.0	1.288	1.288	5.384	0.005	0.051	0.01	0.021	0.05	0.213		1.159
cis-1,2-Dichloroethene	96.9	0.994	0.994	4.069	0.005	0.052	0.01	0.021	0.05	0.213		0.966
Chloroform	119.4	1.321	1.321	6.663	0.005	0.051	0.01	0.026	0.05	0.257		1.234
1,1,1-Trichloroethane	133.4	1.294	1.294	7.292	0.005	0.051	0.01	0.029	0.05	0.287		1.150
1,2-Dichloroethane	99.0	0.938	0.938	3.921	0.005	0.052	0.01	0.022	0.05	0.217		0.901
Benzene	78.1	0.846	0.846	2.791	0.005	0.052	0.01	0.017	0.05	0.172		0.793
Carbon tetrachloride	153.8	1.306	1.306	8.479	0.005	0.051	0.01	0.033	0.05	0.331		1.158
1,2-Dichloropropane	113.0	1.023	1.023	4.879	0.005	0.052	0.01	0.025	0.05	0.248		0.976
Trichloroethene	131.4	0.899	0.899	4.990	0.005	0.052	0.01	0.029	0.05	0.289		0.877
Toluene	92.1	0.739	0.739	2.876	0.005	0.052	0.01	0.020	0.05	0.202		0.709
1,1,2-Trichloroethane	133.4	0.740	0.740	4.171	0.005	0.051	0.01	0.029	0.05	0.287		0.710
1,2-Dibromoethane	187.9	0.649	0.649	5.148	0.005	0.052	0.01	0.041	0.05	0.413		0.611
Tetrachloroethene	165.8	0.775	0.775	5.425	0.005	0.051	0.01	0.036	0.05	0.357		0.779
Chlorobenzene	112.6	0.677	0.677	3.221	0.005	0.051	0.01	0.024	0.05	0.243		0.634
Ethylbenzene	106.2	0.689	0.689	3.089	0.005	0.052	0.01	0.023	0.05	0.233		0.649
m & p-Xylene	106.2	1.445	1.445	6.482	0.010	0.103	0.01	0.046	0.10	0.462		1.346
o-Xylene	106.2	0.645	0.645	2.892	0.005	0.051	0.01	0.023	0.05	0.229		0.594

SAMPLE CALCULATION

EPA Method TO-15 Modified SIM GC/MS

SDG:		**LABQC**
Laboratory Number:		**QC06249**
Standard Volume	STV	0.5
Sample Volume	SV	1000
Can Dilution Factor	CDF	1.00
Gas Constant		23.68
Decimal Places:		3

Sample Calculation:

1) Avg RFn = Sum $\left| \frac{(Astdni)}{(Cstdni)} \frac{(Cistdi)}{(Aistdi)} \right|_i$ Note: 1

2) Raw Amt = $\frac{(Ansamp)}{(Avg\ RFn)} \frac{(Cistdi)}{(Aistdi)}$ = Cn

3) Amount ppbv = $\frac{(Raw\ Amt)}{} \frac{1000}{(SV)} (CDF) (STV)$

4) Amount ug/m3 = $\frac{(amt(ppbv)}{} \frac{MW}{23.68}$

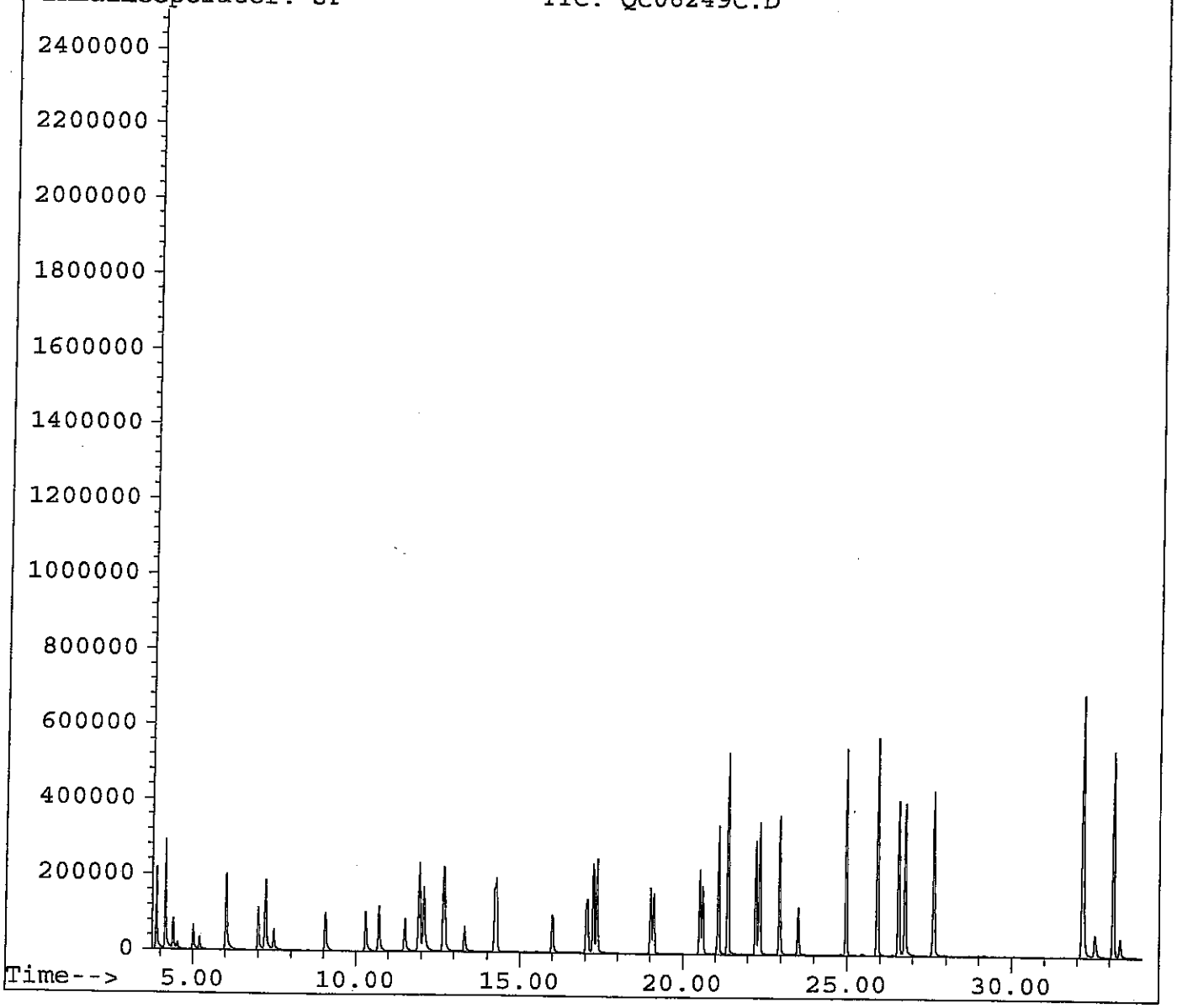
n	Compound	IS n	Chem type	MW	AvgRFn	Area Ansamp	Cistdi ppmv	Aistdi Ais	Cn ppmV Raw Amt	Amount ppbv	Amount ug/m3
3	Chloromethane	1	TRG	50.5	0.054	129102	0.200	399425	1.192	1.192	2.542
5	Vinyl chloride	1	TRG	62.5	0.039	107953	0.200	399425	1.388	1.388	3.663
6	Bromomethane	1	TRG	94.9	0.037	116283	0.200	399425	1.560	1.560	6.252
9	1,1-Dichloroethene	1	TRG	96.9	0.081	231502	0.200	399425	1.433	1.433	5.864
11	Dichloromethane	1	TRG	84.9	0.041	93211	0.200	399425	1.135	1.135	4.069
14	1,1-Dichloroethane	1	TRG	99.0	0.089	229205	0.200	399425	1.288	1.288	5.385
15	cis-1,2-Dichloroethene	1	TRG	96.9	0.057	112483	0.200	399425	0.994	0.994	4.068
17	Chloroform	1	TRG	119.4	0.118	310506	0.200	399425	1.321	1.321	6.661
18	1,1,1-Trichloroethane	1	TRG	133.4	0.130	336586	0.200	399425	1.294	1.294	7.290
19	1,2-Dichloroethane	1	TRG	99.0	0.239	448334	0.200	399425	0.938	0.938	3.922
20	Benzene	1	TRG	78.1	0.183	309508	0.200	399425	0.846	0.846	2.790
21	Carbon tetrachloride	1	TRG	153.8	0.112	292018	0.200	399425	1.306	1.306	8.482
22	1,2-Dichloropropane	1	TRG	113.0	0.062	126110	0.200	399425	1.023	1.023	4.882
23	Trichloroethene	1	TRG	131.4	0.073	131657	0.200	399425	0.899	0.899	4.989
26	Toluene	1	TRG	92.1	0.259	382175	0.200	399425	0.739	0.739	2.874
28	1,1,2-Trichloroethane	1	TRG	133.4	0.109	161889	0.200	399425	0.740	0.740	4.169
29	1,2-Dibromoethane	1	TRG	187.9	0.203	262479	0.200	399425	0.649	0.649	5.150
30	Tetrachloroethene	1	TRG	165.8	0.092	142599	0.200	399425	0.775	0.775	5.426
31	Chlorobenzene	1	TRG	112.6	0.260	351930	0.200	399425	0.677	0.677	3.219
33	Ethylbenzene	1	TRG	106.2	0.474	652184	0.200	399425	0.689	0.689	3.090
34	m & p-Xylene	1	TRG	106.2	0.360	1039789	0.200	399425	1.445	1.445	6.481
36	o-Xylene	1	TRG	106.2	0.460	592510	0.200	399425	0.645	0.645	2.893
1	Chlorobenzene-d5	1	IS	0.0	1.000	399425	0.200	399425	0.000	0.000	0.000
16	Toluene-d8	1	SURR	0.0	0.425	169367	0.200	399425	0.000	0.000	0.000

Calculation Definitions:

n	compound n
i	i th calibration level
Astdni	Standard Area for compound n at ith calibration level
Cstdni	Standard Concentration for compound n at ith calibration level in ppmv
Cistdi	Internal Standard Conc used for compound n at ith calibration level in ppmv
Aistdi	Internal Standard Area used for compound n at ith calibration level
Ansamp	Sample Area for compound n
Avg RFn	Average response factor for all ith calibration levels for compound n
Raw Amount	Sample Concentration in ppmv before applying factors
Cistd	Concentration internal standard used for compound n in sample in ppmv
Aistd	Area of internal standard used for compound n in sample
Cn	Concentration of compound n in sample in ppmv
23.68	Gas constant at 60 F as per EPA source test protocol
MW	Molecular weight of compound
Note (1) : Avg RFn	The values for the Average Response Factor AvgRFn can be optained from the response Factor Report for the Initial Calibration, or from the Calibration Report

Name of file: C:\HPCHEM\1\DATA\06249MS2\QC06249C.D

Name of file: C:\HPCHEM\1\DATA\06249MS2\QC06249C.D
Operator: JF
TIC: QC06249C.D



QUALITY CONTROL DUPLICATE

ENVIRONMENTAL
Analytical Service, Inc.

Duplicate of QC Sample

EPA Method TO-15 Modified SIM GC/MS
Analytical Method: TO-15 SIM

SDG: LABQC

Dup File: QC06249D.D
Description: ST0623091
Can/Tube#:
QC_Batch: 062409-MS2

CAS#	Compound	LCD ppbv	LCS ppbv	RPD %D	Limit %	Flag * = Out
74-87-3	Chloromethane	1.117	1.192	7	25	
75-01-4	Vinyl chloride	1.407	1.388	1	25	
74-83-9	Bromomethane	1.571	1.560	1	25	
75-35-4	1,1-Dichloroethene	1.351	1.433	6	25	
75-09-2	Dichloromethane	1.133	1.135	0	25	
75-34-3	1,1-Dichloroethane	1.198	1.288	8	25	
156-59-2	cis-1,2-Dichloroethene	0.984	0.994	1	25	
67-66-3	Chloroform	1.256	1.321	5	25	
71-55-6	1,1,1-Trichloroethane	1.188	1.294	9	25	
107-06-2	1,2-Dichloroethane	0.925	0.938	1	25	
71-43-2	Benzene	0.811	0.846	4	25	
56-23-5	Carbon tetrachloride	1.198	1.306	9	25	
78-87-5	1,2-Dichloropropane	0.988	1.023	4	25	
79-01-6	Trichloroethene	0.890	0.899	1	25	
108-88-3	Toluene	0.742	0.739	0	25	
79-00-5	1,1,2-Trichloroethane	0.763	0.740	3	25	
106-93-4	1,2-Dibromoethane	0.670	0.649	3	25	
127-18-4	Tetrachloroethene	0.808	0.775	4	25	
108-90-7	Chlorobenzene	0.695	0.677	3	25	
100-41-4	Ethylbenzene	0.698	0.689	1	25	
108-38-3	m & p-Xylene	1.456	1.445	1	25	
95-47-6	o-Xylene	0.647	0.645	0	25	

QUALITY CONTROL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

LABORATORY CONTROL DUPLICATE

EPA Method TO-15 Modified SIM GC/MS **SDG: LABQC**
Analytical Method: **TO-15 SIM**

File: QC06249D.D
Description: ST0623091
Can/Tube#:
Sam_Type: LCD
QC_Batch: 062409-MS2
Air Volume: 1000 ml

Date Sampled: NA
Date Received: NA
Date Extracted: NA
Date Analyzed: 06/24/09 **Time:** 12:47
Can Dilution Factor: 1.00 3
QC Duplicate: Yes

CAS#	Compound	MDL ppbv	Spike Conc ppbv	Amount ppbv	Matrix Amt ppbv	Spk Amt ppbv	Percent Recovery	LCL %	UCL %	Flag
74-87-3	Chloromethane	0.005	1.044	1.117	0.000	1.117	107	70	130	
75-01-4	Vinyl chloride	0.005	1.268	1.407	0.000	1.407	111	70	130	
74-83-9	Bromomethane	0.005	1.422	1.571	0.000	1.571	110	70	130	
75-35-4	1,1-Dichloroethene	0.005	1.275	1.351	0.000	1.351	106	70	130	
75-09-2	Dichloromethane	0.005	1.090	1.133	0.000	1.133	104	70	130	
75-34-3	1,1-Dichloroethane	0.005	1.159	1.198	0.000	1.198	103	70	130	
156-59-2	cis-1,2-Dichloroethene	0.005	0.966	0.984	0.000	0.984	102	70	130	
67-66-3	Chloroform	0.005	1.234	1.256	0.000	1.256	102	70	130	
71-55-6	1,1,1-Trichloroethane	0.005	1.150	1.188	0.000	1.188	103	70	130	
107-06-2	1,2-Dichloroethane	0.005	0.901	0.925	0.000	0.925	103	70	130	
71-43-2	Benzene	0.005	0.793	0.811	0.000	0.811	102	70	130	
56-23-5	Carbon tetrachloride	0.005	1.158	1.198	0.000	1.198	103	70	130	
78-87-5	1,2-Dichloropropane	0.005	0.976	0.988	0.000	0.988	101	70	130	
79-01-6	Trichloroethene	0.005	0.877	0.890	0.000	0.890	101	70	130	
108-88-3	Toluene	0.005	0.709	0.742	0.000	0.742	105	70	130	
79-00-5	1,1,2-Trichloroethane	0.005	0.710	0.763	0.000	0.763	107	70	130	
106-93-4	1,2-Dibromoethane	0.005	0.611	0.670	0.000	0.670	110	70	130	
127-18-4	Tetrachloroethene	0.005	0.779	0.808	0.000	0.808	104	70	130	
108-90-7	Chlorobenzene	0.005	0.634	0.695	0.000	0.695	110	70	130	
100-41-4	Ethylbenzene	0.005	0.649	0.698	0.000	0.698	108	70	130	
108-38-3	m & p-Xylene	0.010	1.346	1.456	0.000	1.456	108	70	130	
95-47-6	o-Xylene	0.005	0.594	0.647	0.000	0.647	109	70	130	

Surrogate Recovery	Spike Amt. ppbV	Amount ppbV	% Rec.	QC Limits	Flag * = Out
Toluene-d8	0.200	0.212	106	70-130	

Notes: Reported results are to be interpreted to two significant figures.
*ug/m3 calculated assuming conditions at 60 F and 1 atm.

QUANTITATION REPORT

EPA Method TO-15 Modified SIM GC/MS

			Review	EAS Sample ID: QC06249	
File Name:	QC06249D.D				1 SS
Sample ID:	ST0623091				2 KB
Date:	24 Jun 109 12:47 pm			Cal Amounts	3 AT
Run Method:	2EXSIM_I.M			IS Areas	4 BB
Quant Method:	2EXSIM_I.M			Carryover	5 SH
Cal Update:	Mon Jun 22 09:18:18 2009				
Template:	EARTEXSM.MS3				
Can Factor:	1.00				
Volume:	1000	ml		Analyst: SS 1	

CAS#	Compound	n	Raw Amount	RT	Target RT	Ion	Sample Area	Qualifier	Lower Qual	Upper Qual	Qual Flag	Cal Flag	Int Flag
74-87-3	Chloromethane	3	1.117	4.13	4.12	50.00	166858	23	21	32			
75-01-4	Vinyl chloride	5	1.407	4.38	4.37	62.00	150968	33	28	42			
74-83-9	Bromomethane	6	1.571	4.99	4.97	94.00	161476	97	69	104			
75-35-4	1,1-Dichloroethene	9	1.351	6.97	6.95	61.00	300939	43	37	56			
75-09-2	Dichloromethane	11	1.133	7.45	7.42	84.00	128305	64	51	77			
75-34-3	1,1-Dichloroethane	14	1.198	9.05	9.00	63.00	294064	33	25	37			
156-59-2	cis-1,2-Dichloroethene	15	0.984	10.28	10.24	96.00	153461	143	102	153			
67-66-3	Chloroform	17	1.256	10.69	10.66	83.00	406960	70	52	78			
71-55-6	1,1,1-Trichloroethane	18	1.188	11.94	11.91	97.00	425965	70	53	80			
107-06-2	1,2-Dichloroethane	19	0.925	12.07	12.02	61.95	609655	19	14	21			
71-43-2	Benzene	20	0.811	12.66	12.63	78.00	409121	19	16	23			
56-23-5	Carbon tetrachloride	21	1.198	12.68	12.66	116.90	369687	99	79	119			
78-87-5	1,2-Dichloropropane	22	0.988	14.23	14.20	63.00	168018	159	126	189			
79-01-6	Trichloroethene	23	0.890	14.28	14.26	130.00	179618	103	75	112			
108-88-3	Toluene	26	0.742	17.24	17.21	91.00	528973	69	53	80			
79-00-5	1,1,2-Trichloroethane	28	0.763	17.37	17.35	97.00	230092	68	63	94			
106-93-4	1,2-Dibromoethane	29	0.670	19.01	18.99	107.00	373815	100	76	114			
127-18-4	Tetrachloroethene	30	0.808	19.11	19.09	166.00	204967	85	64	97			
108-90-7	Chlorobenzene	31	0.695	20.61	20.59	112.00	498025	34	27	40			
100-41-4	Ethylbenzene	33	0.698	21.10	21.08	91.00	910999	32	24	36			
108-38-3	m & p-Xylene	34	1.456	21.39	21.37	91.00	1444248	49	42	63			
95-47-6	o-Xylene	36	0.647	22.36	22.34	91.00	820069	46	38	56			
3114-55-4	Chlorobenzene-d5	1	0.200	20.53	20.51	117.00	550834						
2037-26-5	Toluene-d8	16	0.212	17.08	17.05	98.00	247723						

Integration Flags:

If no flag the Integration was done by the instrument computer

M1 Manual Integration because the computer did not integrated the peak or integrated the wrong peak

M2 Manual Integration because computer integration of baseline was different then Inital Calibration

INITIAL CALIBRATION REPORT

EPA Method TO-15 Modified SIM GC/MS

SDG: LABQC
QC_Batch: 062409-MS2
Instrument Name: MS2

File Name: QC06249D.D
Sample ID: ST0623091
Sample Analysis Date: 24 Jun 109 12:47 pm
Run Method: 2EXSIM_I.M
Quant and Calibration Method: 2EXSIM_I.M
Cal Update: Mon Jun 22 09:18:18 2009
Template: EARTEXSM.MS3

Calibration Title: EPA T0-15

Number Compounds: 49
IS1: ST60360 0.2
IS2:
IS3:
IS4:

		Calibration Amount CA, ppmv						Calibration Response, Area					
		Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
		Amt	Amt	Amt	Amt	Amt	Amt	C06199B.D	C06199H.D	C06199A.D	C06199F.D	C06199E.D	C06199K.D
n	Compound	10.0	0.5	20.0	2.0	4.0	1.0	10.0	0.5	20.0	2.0	4.0	1.0
3	Chloromethane	1.020	0.051	2.040	0.204	0.408	0.102	268477	16811	877342	29933	189687	27154
5	Vinyl chloride	1.040	0.052	2.080	0.208	0.416	0.104	184476	12222	596605	24865	140317	19936
6	Bromomethane	1.040	0.052	2.080	0.208	0.416	0.104	193900	12685	547447	21277	126567	19683
9	1,1-Dichloroethene	1.040	0.052	2.080	0.208	0.416	0.104	388365	27969	1185798	47507	301017	40726
11	Dichloromethane	1.040	0.052	2.080	0.208	0.416	0.104	180065	15163	530282	25781	167890	19971
14	1,1-Dichloroethane	1.010	0.051	2.020	0.202	0.404	0.101	403912	31159	1225807	51920	327340	43151
15	cis-1,2-Dichloroethene	1.030	0.052	2.060	0.206	0.412	0.103	240146	21098	758337	35003	226396	27004
17	Chloroform	1.020	0.051	2.040	0.204	0.408	0.102	510308	42620	1697577	69088	427372	57851
18	1,1,1-Trichloroethane	1.020	0.051	2.040	0.204	0.408	0.102	587705	46722	1955378	75018	469425	61727
19	1,2-Dichloroethane	1.030	0.052	2.060	0.206	0.412	0.103	1236150	74052	4935278	125964	835756	97954
20	Benzene	1.030	0.052	2.060	0.206	0.412	0.103	967913	60686	3573129	94902	641363	73510
21	Carbon tetrachloride	1.020	0.051	2.040	0.204	0.408	0.102	492544	40672	1579809	67130	410007	53667
22	1,2-Dichloropropane	1.030	0.052	2.060	0.206	0.412	0.103	280915	22034	957916	37485	236197	27080
23	Trichloroethene	1.030	0.052	2.060	0.206	0.412	0.103	305786	29555	968228	45278	286372	33459
26	Toluene	1.030	0.052	2.060	0.206	0.412	0.103	1260474	90214	4659514	149575	935329	102952
28	1,1,2-Trichloroethane	1.020	0.051	2.040	0.204	0.408	0.102	480870	37160	1655491	70973	441832	43484
29	1,2-Dibromoethane	1.040	0.052	2.080	0.208	0.416	0.104	915216	67709	3403871	130478	834780	79525
30	Tetrachloroethene	1.020	0.051	2.040	0.204	0.408	0.102	373918	35806	1224836	58411	374447	38753
31	Chlorobenzene	1.020	0.051	2.040	0.204	0.408	0.102	1017786	104021	3390004	174301	1040689	105228
33	Ethylbenzene	1.040	0.052	2.080	0.208	0.416	0.104	2140675	173953	7709871	303124	1882967	181776
34	m & p-Xylene	2.060	0.103	4.120	0.412	0.824	0.206	2970894	279033	10312056	481458	2872586	284680
36	o-Xylene	1.020	0.051	2.040	0.204	0.408	0.102	1996168	168269	6920115	304155	1831287	166711

(456)

n	Compound	Amt 10.0	Amt 0.5	Amt 20.0	Amt 2.0	Amt 4.0	Amt 1.0	C06199B.D 10.0	C06199H.D 0.5	C06199A.D 20.0	C06199F.D 2.0	C06199E.D 4.0	C06199K.D 1.0
1	Chlorobenzene-d5	0.200	0.200	0.200	0.200	0.200	0.200	877690	1273169	1660044	554145	1807068	927887
16	Toluene-d8	0.200	0.200	0.200	0.200	0.200	0.200	389596	565545	652462	236781	753686	395034

(457)

INITIAL CALIBRATION REPORT: Response Factors

SDG:	**LABQC**
QC_Batch:	**062409-MS2**
Sample ID:	ST0623091
Sample Analysis Date:	24 Jun 109 12:47 pm
Run Method:	2EXSIM_I.M
Quant Method:	2EXSIM_I.M
Cal Update:	Mon Jun 22 09:18:18 2009
Template:	EARTEXSM.MS3

Sample Calculation:

1) Avg RFn = Sum $\left| \frac{(Astdni)\ (Cistdi)}{(Cstdni)\ (Aistdi)} \right|_i$

Response Factors

Compound	RF1	RF2	RF3	RF4	RF5	RF6	AvgRFn	%RSD
Chloromethane	0.060	0.052	0.052	0.053	0.051	0.057	0.054	6.60
Vinyl chloride	0.040	0.037	0.035	0.043	0.037	0.041	0.039	8.23
Bromomethane	0.042	0.038	0.032	0.037	0.034	0.041	0.037	11.03
1,1-Dichloroethene	0.085	0.084	0.069	0.082	0.080	0.084	0.081	7.72
Dichloromethane	0.039	0.046	0.031	0.045	0.045	0.041	0.041	13.70
1,1-Dichloroethane	0.091	0.096	0.073	0.093	0.090	0.092	0.089	9.11
cis-1,2-Dichloroethene	0.053	0.064	0.044	0.061	0.061	0.057	0.057	12.56
Chloroform	0.114	0.131	0.100	0.122	0.116	0.122	0.118	8.89
1,1,1-Trichloroethane	0.131	0.144	0.115	0.133	0.127	0.130	0.130	7.04
1,2-Dichloroethane	0.273	0.224	0.289	0.221	0.225	0.205	0.239	13.97
Benzene	0.214	0.183	0.209	0.166	0.172	0.154	0.183	13.13
Carbon tetrachloride	0.110	0.125	0.093	0.119	0.111	0.113	0.112	9.60
1,2-Dichloropropane	0.062	0.067	0.056	0.066	0.063	0.057	0.062	7.25
Trichloroethene	0.068	0.089	0.057	0.079	0.077	0.070	0.073	15.26
Toluene	0.279	0.273	0.273	0.262	0.251	0.215	0.259	9.02
1,1,2-Trichloroethane	0.107	0.114	0.098	0.126	0.120	0.092	0.109	11.85
1,2-Dibromoethane	0.201	0.205	0.197	0.226	0.222	0.165	0.203	10.84
Tetrachloroethene	0.084	0.110	0.072	0.103	0.102	0.082	0.092	16.20
Chlorobenzene	0.227	0.320	0.200	0.308	0.282	0.222	0.260	19.25
Ethylbenzene	0.469	0.525	0.447	0.526	0.501	0.377	0.474	12.05
m & p-Xylene	0.329	0.426	0.302	0.422	0.386	0.298	0.360	16.21
o-Xylene	0.446	0.518	0.409	0.538	0.497	0.352	0.460	15.46
Chlorobenzene-d5	1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.00
Toluene-d8	0.444	0.444	0.393	0.427	0.417	0.426	0.425	4.48

CALCULATIONS

EPA Method TO-15 Modified SIM GC/MS

SDG: LABQC
Laboratory Number: QC06249

RL:	2EXSIM_I.M
Run Method:	2EXSIM_I.M
Quant Method:	2EXSIM_I.M
Can Dilution Factor:	1.00
Air Volume:	1000 ml
Gas Constant:	23.68
Decimal Places:	3

Compound	M.W.	Raw Amount	Result ppbv	Result ug/m3	(1) MDL ppbv	(2) RL ppbv	Calc MDL ppbv	Calc MDL ug/m3	Calc RL ppbv	Calc RL ug/m3	Flag	ST0623091 Spike ppmv
Chloromethane	50.5	1.117	1.117	2.383	0.005	0.051	0.01	0.011	0.05	0.109		1.044
Vinyl chloride	62.5	1.407	1.407	3.714	0.005	0.052	0.01	0.014	0.05	0.137		1.268
Bromomethane	94.9	1.571	1.571	6.296	0.005	0.052	0.01	0.021	0.05	0.208		1.422
1,1-Dichloroethene	96.9	1.351	1.351	5.529	0.005	0.052	0.01	0.021	0.05	0.213		1.275
Dichloromethane	84.9	1.133	1.133	4.061	0.005	0.052	0.01	0.019	0.05	0.186		1.090
1,1-Dichloroethane	99.0	1.198	1.198	5.009	0.005	0.051	0.01	0.021	0.05	0.213		1.159
cis-1,2-Dichloroethene	96.9	0.984	0.984	4.025	0.005	0.052	0.01	0.021	0.05	0.213		0.966
Chloroform	119.4	1.256	1.256	6.332	0.005	0.051	0.01	0.026	0.05	0.257		1.234
1,1,1-Trichloroethane	133.4	1.188	1.188	6.692	0.005	0.051	0.01	0.029	0.05	0.287		1.150
1,2-Dichloroethane	99.0	0.925	0.925	3.867	0.005	0.052	0.01	0.022	0.05	0.217		0.901
Benzene	78.1	0.811	0.811	2.675	0.005	0.052	0.01	0.017	0.05	0.172		0.793
Carbon tetrachloride	153.8	1.198	1.198	7.784	0.005	0.051	0.01	0.033	0.05	0.331		1.158
1,2-Dichloropropane	113.0	0.988	0.988	4.714	0.005	0.052	0.01	0.025	0.05	0.248		0.976
Trichloroethene	131.4	0.890	0.890	4.937	0.005	0.052	0.01	0.029	0.05	0.289		0.877
Toluene	92.1	0.742	0.742	2.887	0.005	0.052	0.01	0.020	0.05	0.202		0.709
1,1,2-Trichloroethane	133.4	0.763	0.763	4.298	0.005	0.051	0.01	0.029	0.05	0.287		0.710
1,2-Dibromoethane	187.9	0.670	0.670	5.316	0.005	0.052	0.01	0.041	0.05	0.413		0.611
Tetrachloroethene	165.8	0.808	0.808	5.654	0.005	0.051	0.01	0.036	0.05	0.357		0.779
Chlorobenzene	112.6	0.695	0.695	3.305	0.005	0.051	0.01	0.024	0.05	0.243		0.634
Ethylbenzene	106.2	0.698	0.698	3.129	0.005	0.052	0.01	0.023	0.05	0.233		0.649
m & p-Xylene	106.2	1.456	1.456	6.529	0.010	0.103	0.01	0.046	0.10	0.462		1.346
o-Xylene	106.2	0.647	0.647	2.903	0.005	0.051	0.01	0.023	0.05	0.229		0.594

SAMPLE CALCULATION

EPA Method TO-15 Modified SIM GC/MS

SDG:		**LABQC**
Laboratory Number:		**QC06249**
Standard Volume	STV	0.5
Sample Volume	SV	1000
Can Dilution Factor	CDF	1.00
Gas Constant		23.68
Decimal Places:		3

Sample Calculation:

1) Avg RFn = Sum $\left| \frac{(Astdni)}{(Cstdni)} \frac{(Cistdi)}{(Aistdi)} \right|_i$ Note: 1

2) Raw Amt = $\frac{(Ansamp)}{(Avg\ RFn)} \frac{(Cistdi)}{(Aistdi)}$ = Cn

3) Amount ppbv = $\frac{(Raw\ Amt)\ 1000}{(SV)}$ (CDF) (STV)

4) Amount ug/m3 = $\frac{(amt(ppbv)\ MW}{23.68}$

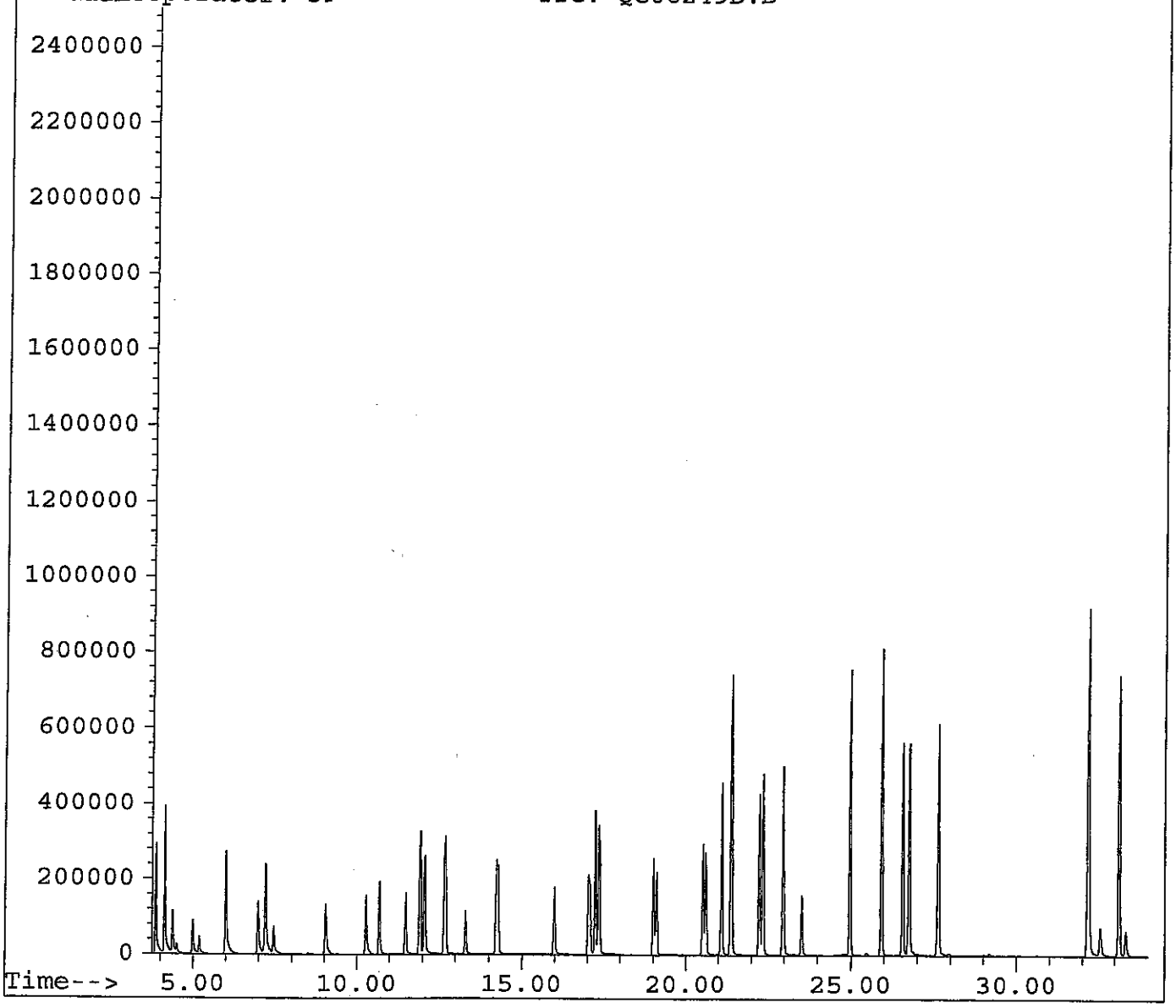
n	Compound	IS n	Chem type	MW	AvgRFn	Area Ansamp	Cistdi ppmv	Aistdi Ais	Cn ppmV Raw Amt	Amount ppbv	Amount ug/m3
3	Chloromethane	1	TRG	50.5	0.054	166858	0.200	550834	1.117	1.117	2.382
5	Vinyl chloride	1	TRG	62.5	0.039	150968	0.200	550834	1.407	1.407	3.714
6	Bromomethane	1	TRG	94.9	0.037	161476	0.200	550834	1.571	1.571	6.296
9	1,1-Dichloroethene	1	TRG	96.9	0.081	300939	0.200	550834	1.351	1.351	5.528
11	Dichloromethane	1	TRG	84.9	0.041	128305	0.200	550834	1.133	1.133	4.062
14	1,1-Dichloroethane	1	TRG	99.0	0.089	294064	0.200	550834	1.198	1.198	5.009
15	cis-1,2-Dichloroethene	1	TRG	96.9	0.057	153461	0.200	550834	0.984	0.984	4.027
17	Chloroform	1	TRG	119.4	0.118	406960	0.200	550834	1.256	1.256	6.333
18	1,1,1-Trichloroethane	1	TRG	133.4	0.130	425965	0.200	550834	1.188	1.188	6.693
19	1,2-Dichloroethane	1	TRG	99.0	0.239	609655	0.200	550834	0.925	0.925	3.867
20	Benzene	1	TRG	78.1	0.183	409121	0.200	550834	0.811	0.811	2.675
21	Carbon tetrachloride	1	TRG	153.8	0.112	369687	0.200	550834	1.198	1.198	7.781
22	1,2-Dichloropropane	1	TRG	113.0	0.062	168018	0.200	550834	0.988	0.988	4.715
23	Trichloroethene	1	TRG	131.4	0.073	179618	0.200	550834	0.890	0.890	4.939
26	Toluene	1	TRG	92.1	0.259	528973	0.200	550834	0.742	0.742	2.886
28	1,1,2-Trichloroethane	1	TRG	133.4	0.109	230092	0.200	550834	0.763	0.763	4.298
29	1,2-Dibromoethane	1	TRG	187.9	0.203	373815	0.200	550834	0.670	0.670	5.316
30	Tetrachloroethene	1	TRG	165.8	0.092	204967	0.200	550834	0.808	0.808	5.657
31	Chlorobenzene	1	TRG	112.6	0.260	498025	0.200	550834	0.695	0.695	3.305
33	Ethylbenzene	1	TRG	106.2	0.474	910999	0.200	550834	0.698	0.698	3.130
34	m & p-Xylene	1	TRG	106.2	0.360	1444248	0.200	550834	1.456	1.456	6.530
36	o-Xylene	1	TRG	106.2	0.460	820069	0.200	550834	0.647	0.647	2.902
1	Chlorobenzene-d5	1	IS	0.0	1.000	550834	0.200	550834	0.000	0.000	0.000
16	Toluene-d8	1	SURR	0.0	0.425	247723	0.200	550834	0.000	0.000	0.000

Calculation Definitions:

n	compound n
i	i th calibration level
Astdni	Standard Area for compound n at ith calibration level
Cstdni	Standard Concentration for compound n at ith calibration level in ppmv
Cistdi	Internal Standard Conc used for compound n at ith calibration level in ppmv
Aistdi	Internal Standard Area used for compound n at ith calibration level
Ansamp	Sample Area for compound n
Avg RFn	Average response factor for all ith calibration levels for compound n
Raw Amount	Sample Concentration in ppmv before applying factors
Cistd	Concentration internal standard used for compound n in sample in ppmv
Aistd	Area of internal standard used for compound n in sample
Cn	Concentration of compound n in sample in ppmv
23.68	Gas constant at 60 F as per EPA source test protocol
MW	Molecular weight of compound
Note (1) : Avg RFn	The values for the Average Response Factor AvgRFn can be optained from the response Factor Report for the Initial Calibration, or from the Calibration Report

Name of file: C:\HPCHEM\1\DATA\06249MS2\QC06249D.D

Name of operator: JF TIC: QC06249D.D



ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified SIM GC/MS | **SDG:** 209270
Analytical Method: TO-15 SIM | **Laboratory Number:** 01

File:	0927001A.D	**Date Sampled:**	06/16/09	**Time:**	11:06
Description:	44-006A	**Date Received:**	06/17/09		
Can/Tube#:	741	**Date Extracted:**			
Sam_Type:	SA	**Date Analyzed:**	06/24/09	**Time:**	18:06
QC_Batch:	062409-MS2	**Can Dilution Factor:**	2.55		3
Air Volume:	200 ml	**Not Detected Flag:**	ND		

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
75-34-3	1,1-Dichloroethane	0.065	0.650	ND	0.272	2.719	ND	ND
156-59-2	cis-1,2-Dichloroethene	0.066	0.663	ND	0.271	2.713	ND	ND
107-06-2	1,2-Dichloroethane	0.066	0.663	ND	0.277	2.772	ND	ND
71-43-2	Benzene	0.066	0.663	0.445	0.219	2.187	1.466	J
56-23-5	Carbon tetrachloride	0.065	0.650	0.266	0.422	4.223	1.727	J
79-01-6	Trichloroethene	0.066	0.663	ND	0.368	3.679	ND	ND
75-27-4	Bromodichloromethane	0.043	0.434	ND	0.300	2.999	ND	ND
79-00-5	1,1,2-Trichloroethane	0.065	0.650	ND	0.366	3.663	ND	ND
127-18-4	Tetrachloroethene	0.065	0.650	ND	0.455	4.553	ND	ND
108-38-3	m & p-Xylene	0.131	1.313	0.662	0.589	5.890	2.967	J
95-47-6	o-Xylene	0.065	0.650	0.201	0.292	2.916	0.903	J
120-82-1	1,2,4-Trichlorobenzene	0.066	0.663	ND	0.508	5.079	ND	ND
123-91-1	1,4 Dioxane	0.047	0.472	ND	0.176	1.755	ND	ND

	Surrogate Recovery	Spike Amt. ppbV	Amount ppbV	% Rec.	QC Limits	Flag * = Out
2037-26-5	Toluene-d8	0.200	0.202	101	70-130	

Notes: 1) Reported results are to be interpreted to two significant figures.
2) ug/m3 = ppbV*FW/23.68 calculated assuming conditions at 60 F and 1 atm.
3) MDL and RL are adjusted for sample volume and can dilution.
4) U and ND are Flags used for Not Detected
5) J is a flag for a result between the MDL and the RL (or lower quantitation limit, LQL)

QUANTITATION REPORT

EPA Method TO-15 Modified SIM GC/MS

			Review	EAS Sample ID: 0927001	
File Name:	0927001A.D				1 SS
Sample ID:	44-006A				2 KB
Date:	24 Jun 109 6:06 pm			Cal Amounts	3 AT
Run Method:	2EXSIM_I.M			IS Areas	4 BB
Quant Method:	2EXSIM_I.M			Carryover	5 SH
Cal Update:	Mon Jun 22 09:18:18 2009				
Template:	EARTEXSM.MS3				
Can Factor:	2.55				
Volume:	200	ml		Analyst: SS 1	

CAS#	Compound	n	Raw Amount	RT	Target RT	Ion	Sample Area	Qualifier	Lower Qual	Upper Qual	Qual Flag	Cal Flag	Int Flag
75-34-3	1,1-Dichloroethane	14	0.000	9.01	9.00	63.00	0	0	25	37			
156-59-2	cis-1,2-Dichloroethene	15	0.000	10.25	10.24	96.00	0	0	102	153			
107-06-2	1,2-Dichloroethane	19	0.004	12.04	12.02	61.95	1531	17	14	21			
71-43-2	Benzene	20	0.035	12.63	12.63	78.00	11124	21	16	23			
56-23-5	Carbon tetrachloride	21	0.021	12.68	12.66	116.90	4069	99	79	119			
79-01-6	Trichloroethene	23	0.002	14.25	14.26	130.00	239	83	75	112			
75-27-4	Bromodichloromethane	24	0.000	14.60	14.57	83.00	0	0	52	78			
79-00-5	1,1,2-Trichloroethane	28	0.000	17.40	17.35	97.00	0	0	63	94			
127-18-4	Tetrachloroethene	30	0.004	19.11	19.09	166.00	613	68	64	97			
108-38-3	m & p-Xylene	34	0.052	21.39	21.37	91.00	32557	45	42	63			
95-47-6	o-Xylene	36	0.016	22.36	22.34	91.00	12653	38	38	56			
120-82-1	1,2,4-Trichlorobenzene	45	0.000	32.31	32.17	180.00	0	0	79	118			
123-91-1	1,4 Dioxane	47	0.000	14.55	14.57	88.00	0	0	55	82			
3114-55-4	Chlorobenzene-d5	1	0.200	20.53	20.51	117.00	**348362**						
2037-26-5	Toluene-d8	16	0.202	17.05	17.05	98.00	**149704**						

Integration Flags:

If no flag the Integration was done by the instrument computer

M1 Manual Integration because the computer did not integrated the peak or integrated the wrong peak

M2 Manual Integration because computer integration of baseline was different then Inital Calibration

INITIAL CALIBRATION REPORT

EPA Method TO-15 Modified SIM GC/MS

File Name:	0927001A.D	SDG:	209270
Sample ID:	44-006A	QC_Batch:	062409-MS2
Sample Analysis Date:	24 Jun 109 6:06 pm	Instrument Name:	MS2
Run Method:	2EXSIM_I.M	Number Compounds:	49
Quant and Calibration Method:	2EXSIM_I.M	IS1: ST60024	0.2
Cal Update:	Mon Jun 22 09:18:18 2009	IS2:	
Template:	EARTEXSM.MS3	IS3:	
		IS4:	

Calibration Title: EPA T0-15

		Calibration Amount CA, ppmv						Calibration Response, Area					
		Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
		Amt	Amt	Amt	Amt	Amt	Amt	C06199B.D	C06199H.D	C06199A.D	C06199F.D	C06199E.D	C06199K.D
n	Compound	10.0	0.5	20.0	2.0	4.0	1.0	10.0	0.5	20.0	2.0	4.0	1.0
14	1,1-Dichloroethane	1.010	0.051	2.020	0.202	0.404	0.101	403912	31159	1225807	51920	327340	43151
15	cis-1,2-Dichloroethene	1.030	0.052	2.060	0.206	0.412	0.103	240146	21098	758337	35003	226396	27004
19	1,2-Dichloroethane	1.030	0.052	2.060	0.206	0.412	0.103	1236150	74052	4935278	125964	835756	97954
20	Benzene	1.030	0.052	2.060	0.206	0.412	0.103	967913	60686	3573129	94902	641363	73510
21	Carbon tetrachloride	1.020	0.051	2.040	0.204	0.408	0.102	492544	40672	1579809	67130	410007	53667
23	Trichloroethene	1.030	0.052	2.060	0.206	0.412	0.103	305786	29555	968228	45278	286372	33459
24	Bromodichloromethane	0.670	0.034	1.340	0.134	0.268	0.067	349165	34872	980125	57413	329960	43188
28	1,1,2-Trichloroethane	1.020	0.051	2.040	0.204	0.408	0.102	480870	37160	1655491	70973	441832	43484
30	Tetrachloroethene	1.020	0.051	2.040	0.204	0.408	0.102	373918	35806	1224836	58411	374447	38753
34	m & p-Xylene	2.060	0.103	4.120	0.412	0.824	0.206	2970894	279033	10312056	481458	2872586	284680
36	o-Xylene	1.020	0.051	2.040	0.204	0.408	0.102	1996168	168269	6920115	304155	1831287	166711
45	1,2,4-Trichlorobenzene	1.030	0.052	2.060	0.206	0.412	0.103	6381826	918959	14261028	1761172	9410822	617532
47	1,4 Dioxane	0.740	0.037	1.480	0.148	0.296	0.074	154378	17449	450267	31614	179188	26330
1	Chlorobenzene-d5	0.200	0.200	0.200	0.200	0.200	0.200	877690	1273169	1660044	554145	1807068	927887
16	Toluene-d8	0.200	0.200	0.200	0.200	0.200	0.200	389596	565545	652462	236781	753686	395034

(464)

INITIAL CALIBRATION REPORT: Response Factors

SDG:	**209270**
QC_Batch:	**062409-MS2**
Sample ID:	44-006A
Sample Analysis Date:	24 Jun 109 6:06 pm
Run Method:	2EXSIM_I.M
Quant Method:	2EXSIM_I.M
Cal Update:	Mon Jun 22 09:18:18 2009
Template:	EARTEXSM.MS3

Sample Calculation:

1) Avg RFn = Sum $\left| \frac{(Astdni)}{(Cstdni)} \frac{(Cistdi)}{(Aistdi)} \right|_i$

Response Factors

Compound	RF1	RF2	RF3	RF4	RF5	RF6	AvgRFn	%RSD
1,1-Dichloroethane	0.091	0.096	0.073	0.093	0.090	0.092	0.089	9.11
cis-1,2-Dichloroethene	0.053	0.064	0.044	0.061	0.061	0.057	0.057	12.56
1,2-Dichloroethane	0.273	0.224	0.289	0.221	0.225	0.205	0.239	13.97
Benzene	0.214	0.183	0.209	0.166	0.172	0.154	0.183	13.13
Carbon tetrachloride	0.110	0.125	0.093	0.119	0.111	0.113	0.112	9.60
Trichloroethene	0.068	0.089	0.057	0.079	0.077	0.070	0.073	15.26
Bromodichloromethane	0.119	0.161	0.088	0.155	0.136	0.139	0.133	19.96
1,1,2-Trichloroethane	0.107	0.114	0.098	0.126	0.120	0.092	0.109	11.85
Tetrachloroethene	0.084	0.110	0.072	0.103	0.102	0.082	0.092	16.20
m & p-Xylene	0.329	0.426	0.302	0.422	0.386	0.298	0.360	16.21
o-Xylene	0.446	0.518	0.409	0.538	0.497	0.352	0.460	15.46
1,2,4-Trichlorobenzene	1.412	2.776	0.834	3.086	2.528	1.292	1.988	46.46
1,4 Dioxane	0.048	0.074	0.037	0.077	0.067	0.077	0.063	27.03
Chlorobenzene-d5	1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.00
Toluene-d8	0.444	0.444	0.393	0.427	0.417	0.426	0.425	4.48

CALCULATIONS

EPA Method TO-15 Modified SIM GC/MS

SDG: 209270
Laboratory Number: 01

RL:	2EXSIM_I.M
Run Method:	2EXSIM_I.M
Quant Method:	2EXSIM_I.M
Can Dilution Factor:	2.55
Air Volume:	200 ml
Gas Constant:	23.68
Decimal Places:	3

Compound	M.W.	Raw Amount	Result ppbv	Result ug/m3	(1) MDL ppbv	(2) RL ppbv	Calc MDL ppbv	Calc MDL ug/m3	Calc RL ppbv	Calc RL ug/m3	Flag	S062602-1 Spike ppmv
1,1-Dichloroethane	99.0	0.000	0.000	0.000	0.005	0.051	0.07	0.272	0.65	2.719	U	0.103
cis-1,2-Dichloroethene	96.9	0.000	0.000	0.000	0.005	0.052	0.07	0.271	0.66	2.713	U	0.103
1,2-Dichloroethane	99.0	0.004	0.047	0.196	0.005	0.052	0.07	0.277	0.66	2.772	U	0.103
Benzene	78.1	0.035	0.445	1.466	0.005	0.052	0.07	0.219	0.66	2.187	J	0.103
Carbon tetrachloride	153.8	0.021	0.266	1.727	0.005	0.051	0.07	0.422	0.65	4.223	J	0.103
Trichloroethene	131.4	0.002	0.024	0.132	0.005	0.052	0.07	0.368	0.66	3.679	U	0.103
Bromodichloromethane	163.8	0.000	0.000	0.000	0.003	0.034	0.04	0.300	0.43	2.999	U	0.103
1,1,2-Trichloroethane	133.4	0.000	0.000	0.000	0.005	0.051	0.07	0.366	0.65	3.663	U	0.103
Tetrachloroethene	165.8	0.004	0.049	0.341	0.005	0.051	0.07	0.455	0.65	4.553	U	0.103
m & p-Xylene	106.2	0.052	0.662	2.967	0.010	0.103	0.13	0.589	1.31	5.890	J	0.103
o-Xylene	106.2	0.016	0.201	0.903	0.005	0.051	0.07	0.292	0.65	2.916	J	0.103
1,2,4-Trichlorobenzene	181.4	0.000	0.000	0.000	0.005	0.052	0.07	0.508	0.66	5.079	U	0.103
1,4 Dioxane	88.1	0.000	0.000	0.000	0.004	0.037	0.05	0.176	0.47	1.755	U	1.103

SAMPLE CALCULATION

EPA Method TO-15 Modified SIM GC/MS

SDG:		**209270**
Laboratory Number:		**01**
Standard Volume	STV	0.5
Sample Volume	SV	200
Can Dilution Factor	CDF	2.55
Gas Constant		23.68
Decimal Places:		3

Sample Calculation:

1) Avg RFn = Sum $\left| \frac{(Astdni)}{(Cstdni)} \frac{(Cistdi)}{(Aistdi)} \right|_i$ Note: 1

2) Raw Amt = $\frac{(Ansamp)}{(Avg\ RFn)} \frac{(Cistdi)}{(Aistdi)}$ = Cn

3) Amount ppbv = $\frac{(Raw\ Amt)\ 1000}{(SV)}$ (CDF) (STV)

4) Amount ug/m3 = $\frac{(amt(ppbv)\ MW}{23.68}$

n	Compound	IS n	Chem type	MW	AvgRFn	Area Ansamp	Cistdi ppmv	Aistdi Ais	Cn ppmV Raw Amt	Amount ppbv	Amount ug/m3
14	1,1-Dichloroethane	1	TRG	99.0	0.089	0	0.200	348362	0.000	0.000	0.000
15	cis-1,2-Dichloroethene	1	TRG	96.9	0.057	0	0.200	348362	0.000	0.000	0.000
19	1,2-Dichloroethane	1	TRG	99.0	0.239	1531	0.200	348362	0.004	0.047	0.196
20	Benzene	1	TRG	78.1	0.183	11124	0.200	348362	0.035	0.445	1.468
21	Carbon tetrachloride	1	TRG	153.8	0.112	4069	0.200	348362	0.021	0.266	1.728
23	Trichloroethene	1	TRG	131.4	0.073	239	0.200	348362	0.002	0.024	0.133
24	Bromodichloromethane	1	TRG	163.8	0.133	0	0.200	348362	0.000	0.000	0.000
28	1,1,2-Trichloroethane	1	TRG	133.4	0.109	0	0.200	348362	0.000	0.000	0.000
30	Tetrachloroethene	1	TRG	165.8	0.092	613	0.200	348362	0.004	0.049	0.343
34	m & p-Xylene	1	TRG	106.2	0.360	32557	0.200	348362	0.052	0.662	2.969
36	o-Xylene	1	TRG	106.2	0.460	12653	0.200	348362	0.016	0.201	0.901
45	1,2,4-Trichlorobenzene	1	TRG	181.4	1.99	0	0.200	348362	0.000	0.000	0.000
47	1,4 Dioxane	1	TRG	88.1	0.06	0	0.200	348362	0.000	0.000	0.000
1	Chlorobenzene-d5	1	IS	0.0	1.000	348362	0.200	348362	0.000	0.000	0.000
16	Toluene-d8	1	SURR	0.0	0.425	149704	0.200	348362	0.000	0.000	0.000

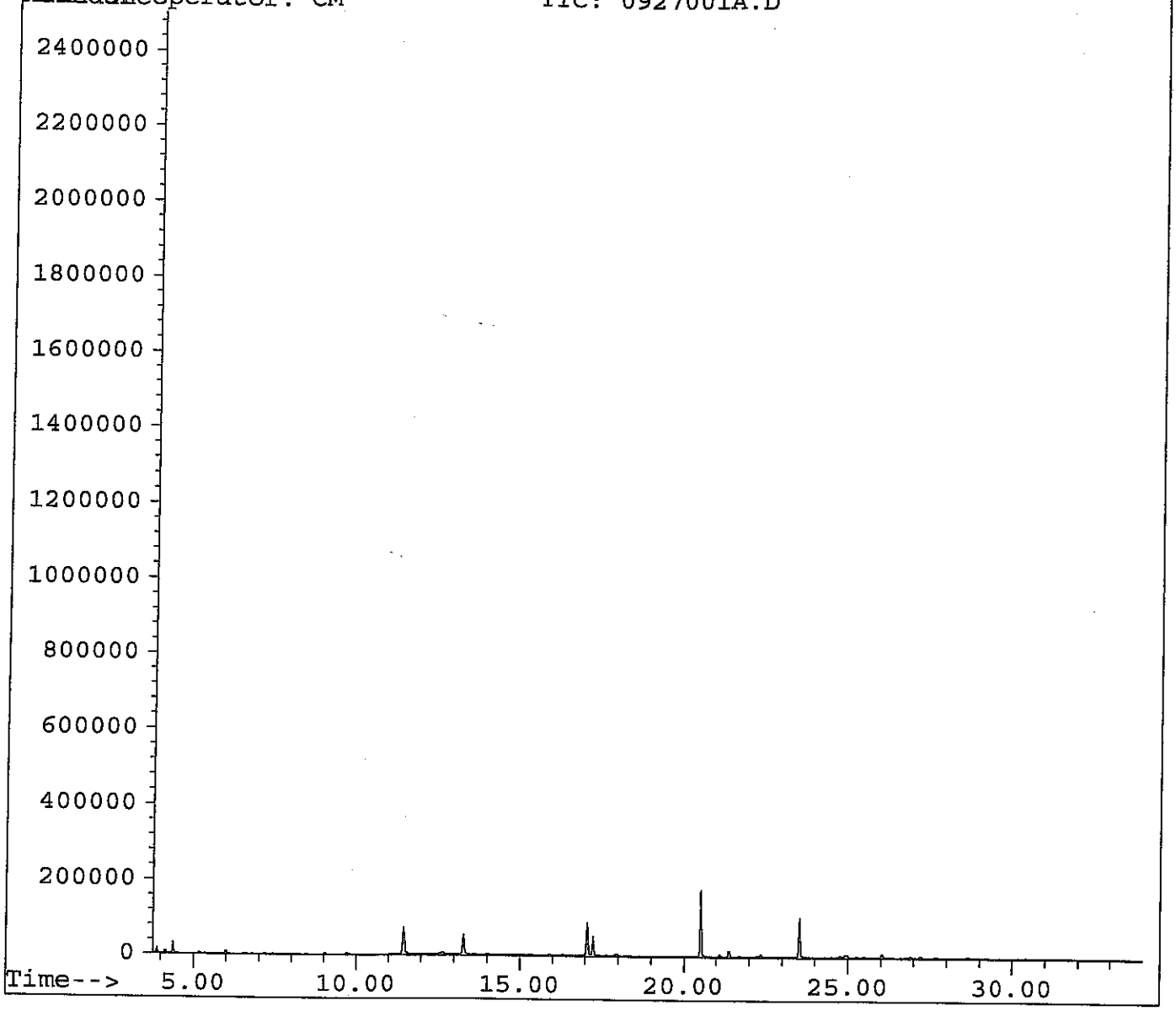
Calculation Definitions:

n	compound n
i	i th calibration level
Astdni	Standard Area for compound n at ith calibration level
Cstdni	Standard Concentration for compound n at ith calibration level in ppmv
Cistdi	Internal Standard Conc used for compound n at Ith calibration level in ppmv
Aistdi	Internal Standard Area used for compound n at Ith calibration level
Ansamp	Sample Area for compound n
Avg RFn	Average response factor for all Ith calibration levels for compound n
Raw Amount	Sample Concentration in ppmv before applying factors
Cistd	Concentration internal standard used for compound n in sample in ppmv
Aistd	Area of internal standard used for compound n in sample
Cn	Concentration of compound n in sample in ppmv
23.68	Gas constant at 60 F as per EPA source test protocol
MW	Molecular weight of compound
Note (1) : Avg RFn	The values for the Average Response Factor AvgRFn can be optained from the response Factor Report for the Initial Calibration, or from the Calibration Report

Name of file: C:\HPCHEM\1\DATA\06249MS2\0927001A.D

Name of operator: CM

TIC: 0927001A.D



ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified SIM GC/MS
Analytical Method: **TO-15 SIM**

SDG: **209270**
Laboratory Number: **03**

File: 0927003A.D
Description: 44-008
Can/Tube#: 692
Sam_Type: SA
QC_Batch: 062409-MS2
Air Volume: 200 ml

Date Sampled: 06/16/09 **Time:** 16:46
Date Received: 06/17/09
Date Extracted:
Date Analyzed: 06/24/09 **Time:** 17:23
Can Dilution Factor: 1.51 3
Not Detected Flag: ND

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
75-34-3	1,1-Dichloroethane	0.039	0.385	ND	0.161	1.610	ND	ND
156-59-2	cis-1,2-Dichloroethene	0.039	0.393	ND	0.161	1.607	ND	ND
107-06-2	1,2-Dichloroethane	0.039	0.393	ND	0.164	1.641	ND	ND
71-43-2	Benzene	0.039	0.393	0.245	0.129	1.295	0.807	J
56-23-5	Carbon tetrachloride	0.039	0.385	0.097	0.250	2.501	0.628	J
79-01-6	Trichloroethene	0.039	0.393	0.122	0.218	2.179	0.675	J
75-27-4	Bromodichloromethane	0.026	0.257	ND	0.178	1.776	ND	ND
79-00-5	1,1,2-Trichloroethane	0.039	0.385	ND	0.217	2.169	ND	ND
127-18-4	Tetrachloroethene	0.039	0.385	ND	0.270	2.696	ND	ND
108-38-3	m & p-Xylene	0.078	0.778	0.702	0.349	3.488	3.149	J
95-47-6	o-Xylene	0.039	0.385	0.212	0.173	1.727	0.951	J
120-82-1	1,2,4-Trichlorobenzene	0.039	0.393	0.068	0.301	3.008	0.522	J
123-91-1	1,4 Dioxane	0.028	0.279	0.484	0.104	1.039	1.800	

	Surrogate Recovery	Spike Amt. ppbV	Amount ppbV	% Rec.	QC Limits	Flag * = Out
2037-26-5	Toluene-d8	0.200	0.200	100	70-130	

Notes: 1) Reported results are to be interpreted to two significant figures.
2) ug/m3 = ppbV*FW/23.68 calculated assuming conditions at 60 F and 1 atm.
3) MDL and RL are adjusted for sample volume and can dilution.
4) U and ND are Flags used for Not Detected
5) J is a flag for a result between the MDL and the RL (or lower quantitation limit, LQL)

QUANTITATION REPORT

EPA Method TO-15 Modified SIM GC/MS

			Review	EAS Sample ID: 0927003	
File Name:	0927003A.D				1 SS
Sample ID:	44-008				2 KB
Date:	24 Jun 109 5:23 pm			Cal Amounts	3 AT
Run Method:	2EXSIM_I.M			IS Areas	4 BB
Quant Method:	2EXSIM_I.M			Carryover	5 SH
Cal Update:	Mon Jun 22 09:18:18 2009				
Template:	EARTEXSM.MS3				
Can Factor:	1.51				
Volume:	200	ml		Analyst: SS 1	

CAS#	Compound	n	Raw Amount	RT	Target RT	Ion	Sample Area	Qualifier	Lower Qual	Upper Qual	Qual Flag	Cal Flag	Int Flag
75-34-3	1,1-Dichloroethane	14	0.000	8.86	9.00	63.00	0	0	25	37			
156-59-2	cis-1,2-Dichloroethene	15	0.000	10.09	10.24	96.00	0	0	102	153			
107-06-2	1,2-Dichloroethane	19	0.003	11.51	12.02	61.95	2200	46	14	21	Q		
71-43-2	Benzene	20	0.032	12.15	12.63	78.00	19935	21	16	23			
56-23-5	Carbon tetrachloride	21	0.013	12.18	12.66	116.90	4819	95	79	119			
79-01-6	Trichloroethene	23	0.016	13.91	14.26	130.00	3970	107	75	112			
75-27-4	Bromodichloromethane	24	0.000	14.36	14.57	83.00	0	0	52	78			
79-00-5	1,1,2-Trichloroethane	28	0.000	17.32	17.35	97.00	0	0	63	94			
127-18-4	Tetrachloroethene	30	0.004	18.95	19.09	166.00	1172	86	64	97			
108-38-3	m & p-Xylene	34	0.093	21.29	21.37	91.00	112572	43	42	63			
95-47-6	o-Xylene	36	0.028	22.28	22.34	91.00	43424	37	38	56	Q		
120-82-1	1,2,4-Trichlorobenzene	45	0.009	32.17	32.17	180.00	60295	94	79	118			
123-91-1	1,4 Dioxane	47	0.064	14.28	14.57	88.00	13605	79	55	82			
3114-55-4	Chlorobenzene-d5	1	0.200	20.42	20.51	117.00	**672066**						
2037-26-5	Toluene-d8	16	0.200	16.84	17.05	98.00	**285966**						

Integration Flags:

If no flag the Integration was done by the instrument computer

M1 Manual Integration because the computer did not integrated the peak or integrated the wrong peak

M2 Manual Integration because computer integration of baseline was different then Inital Calibration

INITIAL CALIBRATION REPORT

EPA Method TO-15 Modified SIM GC/MS

SDG: 209270
QC_Batch: 062409-MS2
Instrument Name: MS2

File Name: 0927003A.D
Sample ID: 44-008
Sample Analysis Date: 24 Jun 109 5:23 pm
Run Method: 2EXSIM_I.M
Quant and Calibration Method: 2EXSIM_I.M
Cal Update: Mon Jun 22 09:18:18 2009
Template: EARTEXSM.MS3

Calibration Title:EPA T0-15

Number Compounds: 49
IS1: ST60024 0.2
IS2:
IS3:
IS4:

		Calibration Amount CA, ppmv						Calibration Response, Area					
		Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
		Amt	Amt	Amt	Amt	Amt	Amt	C06199B.D	C06199H.D	C06199A.D	C06199F.D	C06199E.D	C06199K.D
n	Compound	10.0	0.5	20.0	2.0	4.0	1.0	10.0	0.5	20.0	2.0	4.0	1.0
14	1,1-Dichloroethane	1.010	0.051	2.020	0.202	0.404	0.101	403912	31159	1225807	51920	327340	43151
15	cis-1,2-Dichloroethene	1.030	0.052	2.060	0.206	0.412	0.103	240146	21098	758337	35003	226396	27004
19	1,2-Dichloroethane	1.030	0.052	2.060	0.206	0.412	0.103	1236150	74052	4935278	125964	835756	97954
20	Benzene	1.030	0.052	2.060	0.206	0.412	0.103	967913	60686	3573129	94902	641363	73510
21	Carbon tetrachloride	1.020	0.051	2.040	0.204	0.408	0.102	492544	40672	1579809	67130	410007	53667
23	Trichloroethene	1.030	0.052	2.060	0.206	0.412	0.103	305786	29555	968228	45278	286372	33459
24	Bromodichloromethane	0.670	0.034	1.340	0.134	0.268	0.067	349165	34872	980125	57413	329960	43188
28	1,1,2-Trichloroethane	1.020	0.051	2.040	0.204	0.408	0.102	480870	37160	1655491	70973	441832	43484
30	Tetrachloroethene	1.020	0.051	2.040	0.204	0.408	0.102	373918	35806	1224836	58411	374447	38753
34	m & p-Xylene	2.060	0.103	4.120	0.412	0.824	0.206	2970894	279033	10312056	481458	2872586	284680
36	o-Xylene	1.020	0.051	2.040	0.204	0.408	0.102	1996168	168269	6920115	304155	1831287	166711
45	1,2,4-Trichlorobenzene	1.030	0.052	2.060	0.206	0.412	0.103	6381826	918959	14261028	1761172	9410822	617532
47	1,4 Dioxane	0.740	0.037	1.480	0.148	0.296	0.074	154378	17449	450267	31614	179188	26330
1	Chlorobenzene-d5	0.200	0.200	0.200	0.200	0.200	0.200	877690	1273169	1660044	554145	1807068	927887
16	Toluene-d8	0.200	0.200	0.200	0.200	0.200	0.200	389596	565545	652462	236781	753686	395034

(471)

INITIAL CALIBRATION REPORT: Response Factors

SDG:	**209270**	**Sample Calculation:**	
QC_Batch:	**062409-MS2**	1) Avg RFn = Sum	$\frac{(Astdni)}{(Cstdni)} \frac{(Cistdi)}{(Aistdi)}$
Sample ID:	44-008		
Sample Analysis Date:	24 Jun 109 5:23 pm		
Run Method:	2EXSIM_I.M		
Quant Method:	2EXSIM_I.M		
Cal Update:	Mon Jun 22 09:18:18 2009		
Template:	EARTEXSM.MS3		

Response Factors

Compound	RF1	RF2	RF3	RF4	RF5	RF6	AvgRFn	%RSD
1,1-Dichloroethane	0.091	0.096	0.073	0.093	0.090	0.092	0.089	9.11
cis-1,2-Dichloroethene	0.053	0.064	0.044	0.061	0.061	0.057	0.057	12.56
1,2-Dichloroethane	0.273	0.224	0.289	0.221	0.225	0.205	0.239	13.97
Benzene	0.214	0.183	0.209	0.166	0.172	0.154	0.183	13.13
Carbon tetrachloride	0.110	0.125	0.093	0.119	0.111	0.113	0.112	9.60
Trichloroethene	0.068	0.089	0.057	0.079	0.077	0.070	0.073	15.26
Bromodichloromethane	0.119	0.161	0.088	0.155	0.136	0.139	0.133	19.96
1,1,2-Trichloroethane	0.107	0.114	0.098	0.126	0.120	0.092	0.109	11.85
Tetrachloroethene	0.084	0.110	0.072	0.103	0.102	0.082	0.092	16.20
m & p-Xylene	0.329	0.426	0.302	0.422	0.386	0.298	0.360	16.21
o-Xylene	0.446	0.518	0.409	0.538	0.497	0.352	0.460	15.46
1,2,4-Trichlorobenzene	1.412	2.776	0.834	3.086	2.528	1.292	1.988	46.46
1,4 Dioxane	0.048	0.074	0.037	0.077	0.067	0.077	0.063	27.03
Chlorobenzene-d5	1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.00
Toluene-d8	0.444	0.444	0.393	0.427	0.417	0.426	0.425	4.48

CALCULATIONS

EPA Method TO-15 Modified SIM GC/MS

SDG: 209270
Laboratory Number: 03

RL:	2EXSIM_I.M
Run Method:	2EXSIM_I.M
Quant Method:	2EXSIM_I.M
Can Dilution Factor:	1.51
Air Volume:	200 ml
Gas Constant:	23.68
Decimal Places:	3

Compound	M.W.	Raw Amount	Result ppbv	Result ug/m3	(1) MDL ppbv	(2) RL ppbv	Calc MDL ppbv	Calc MDL ug/m3	Calc RL ppbv	Calc RL ug/m3	Flag	S062602-1 Spike ppmv
1,1-Dichloroethane	99.0	0.000	0.000	0.000	0.005	0.051	0.04	0.161	0.39	1.610	U	0.103
cis-1,2-Dichloroethene	96.9	0.000	0.000	0.000	0.005	0.052	0.04	0.161	0.39	1.607	U	0.103
1,2-Dichloroethane	99.0	0.003	0.021	0.086	0.005	0.052	0.04	0.164	0.39	1.641	U	0.103
Benzene	78.1	0.032	0.245	0.807	0.005	0.052	0.04	0.129	0.39	1.295	J	0.103
Carbon tetrachloride	153.8	0.013	0.097	0.628	0.005	0.051	0.04	0.250	0.39	2.501	J	0.103
Trichloroethene	131.4	0.016	0.122	0.675	0.005	0.052	0.04	0.218	0.39	2.179	J	0.103
Bromodichloromethane	163.8	0.000	0.000	0.000	0.003	0.034	0.03	0.178	0.26	1.776	U	0.103
1,1,2-Trichloroethane	133.4	0.000	0.000	0.000	0.005	0.051	0.04	0.217	0.39	2.169	U	0.103
Tetrachloroethene	165.8	0.004	0.029	0.200	0.005	0.051	0.04	0.270	0.39	2.696	U	0.103
m & p-Xylene	106.2	0.093	0.702	3.149	0.010	0.103	0.08	0.349	0.78	3.488	J	0.103
o-Xylene	106.2	0.028	0.212	0.951	0.005	0.051	0.04	0.173	0.39	1.727	J	0.103
1,2,4-Trichlorobenzene	181.4	0.009	0.068	0.522	0.005	0.052	0.04	0.301	0.39	3.008	J	0.103
1,4 Dioxane	88.1	0.064	0.484	1.800	0.004	0.037	0.03	0.104	0.28	1.039		1.103

SAMPLE CALCULATION

EPA Method TO-15 Modified SIM GC/MS

SDG:		**209270**
Laboratory Number:		**03**
Standard Volume	STV	0.5
Sample Volume	SV	200
Can Dilution Factor	CDF	1.51
Gas Constant		23.68
Decimal Places:		3

Sample Calculation:

1) Avg RFn = Sum $\left| \frac{(Astdni)}{(Cstdni)} \frac{(Cistdi)}{(Aistdi)} \right|_i$ Note: 1

2) Raw Amt = $\frac{(Ansamp)}{(Avg\ RFn)} \frac{(Cistdi)}{(Aistdi)}$ = Cn

3) Amount ppbv = $\frac{(Raw\ Amt)\ 1000}{(SV)}$ (CDF) (STV)

4) Amount ug/m3 = $\frac{(amt(ppbv)\ MW}{23.68}$

n	Compound	IS n	Chem type	MW	AvgRFn	Area Ansamp	Cistdi ppmv	Aistdi Ais	Cn ppmV Raw Amt	Amount ppbv	Amount ug/m3
14	1,1-Dichloroethane	1	TRG	99.0	0.089	0	0.200	672066	0.000	0.000	0.000
15	cis-1,2-Dichloroethene	1	TRG	96.9	0.057	0	0.200	672066	0.000	0.000	0.000
19	1,2-Dichloroethane	1	TRG	99.0	0.239	2200	0.200	672066	0.003	0.021	0.088
20	Benzene	1	TRG	78.1	0.183	19935	0.200	672066	0.032	0.245	0.808
21	Carbon tetrachloride	1	TRG	153.8	0.112	4819	0.200	672066	0.013	0.097	0.630
23	Trichloroethene	1	TRG	131.4	0.073	3970	0.200	672066	0.016	0.122	0.677
24	Bromodichloromethane	1	TRG	163.8	0.133	0	0.200	672066	0.000	0.000	0.000
28	1,1,2-Trichloroethane	1	TRG	133.4	0.109	0	0.200	672066	0.000	0.000	0.000
30	Tetrachloroethene	1	TRG	165.8	0.092	1172	0.200	672066	0.004	0.029	0.203
34	m & p-Xylene	1	TRG	106.2	0.360	112572	0.200	672066	0.093	0.702	3.148
36	o-Xylene	1	TRG	106.2	0.460	43424	0.200	672066	0.028	0.212	0.951
45	1,2,4-Trichlorobenzene	1	TRG	181.4	1.99	60295	0.200	672066	0.009	0.068	0.521
47	1,4 Dioxane	1	TRG	88.1	0.06	13605	0.200	672066	0.064	0.484	1.801
1	Chlorobenzene-d5	1	IS	0.0	1.000	672066	0.200	672066	0.000	0.000	0.000
16	Toluene-d8	1	SURR	0.0	0.425	285966	0.200	672066	0.000	0.000	0.000

Calculation Definitions:

n	compound n
i	i th calibration level
Astdni	Standard Area for compound n at ith calibration level
Cstdni	Standard Concentration for compound n at ith calibration level in ppmv
Cistdi	Internal Standard Conc used for compound n at ith calibration level in ppmv
Aistdi	Internal Standard Area used for compound n at ith calibration level
Ansamp	Sample Area for compound n
Avg RFn	Average response factor for all ith calibration levels for compound n
Raw Amount	Sample Concentration in ppmv before applying factors
Cistd	Concentration internal standard used for compound n in sample in ppmv
Aistd	Area of internal standard used for compound n in sample
Cn	Concentration of compound n in sample in ppmv
23.68	Gas constant at 60 F as per EPA source test protocol
MW	Molecular weight of compound
Note (1) : Avg RFn	The values for the Average Response Factor AvgRFn can be optained from the response Factor Report for the Initial Calibration, or from the Calibration Report

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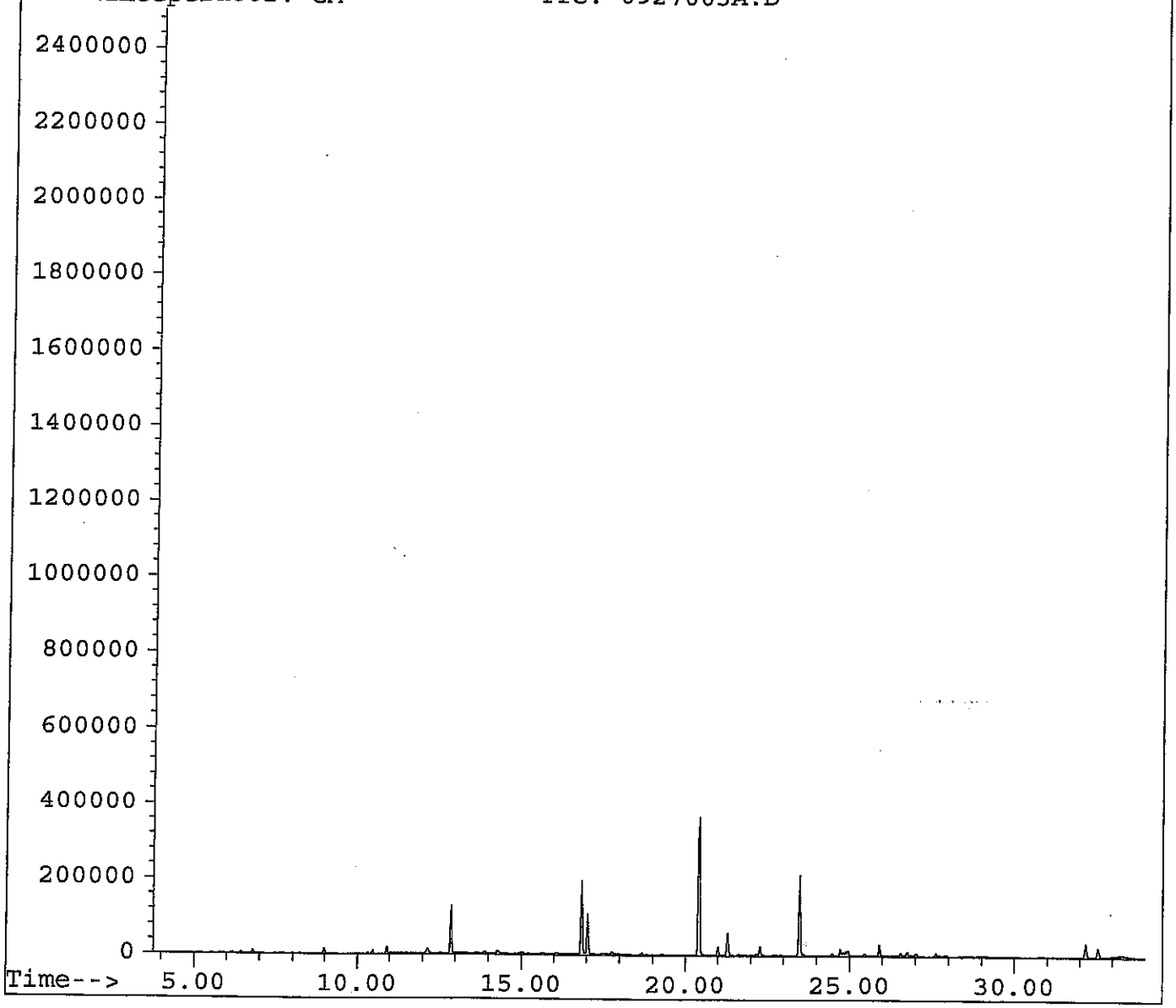
Abundance Operator: CM TIC: 0927003A.D



ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified SIM GC/MS
Analytical Method: TO-15 SIM

SDG: 209270
Laboratory Number: 13

File: 0927013A.D
Description: 44-018
Can/Tube#: 180
Sam_Type: SA
QC_Batch: 062409-MS2
Air Volume: 1000 ml

Date Sampled: 06/16/09 **Time:** 16:53
Date Received: 06/17/09
Date Extracted:
Date Analyzed: 06/24/09 **Time:** 16:41
Can Dilution Factor: 1.63 3
Not Detected Flag: ND

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
75-71-8	Dichlorodifluoromethane	0.009	0.086	ND	0.044	0.441	ND	ND
74-87-3	Chloromethane	0.008	0.083	0.057	0.018	0.177	0.121	J
74-83-9	Bromomethane	0.008	0.085	ND	0.034	0.340	ND	ND
75-00-3	Chloroethane	0.008	0.085	ND	0.023	0.231	ND	ND
75-69-4	Trichlorofluoromethane	0.008	0.085	0.078	0.049	0.492	0.453	J
76-13-1	Freon 113	0.008	0.083	0.062	0.066	0.658	0.491	J
75-09-2	Dichloromethane	0.008	0.085	0.054	0.030	0.304	0.194	J
1634-04-4	Methyl tert butyl ether	0.005	0.054	ND	0.020	0.200	ND	ND
156-60-5	trans-1,2-Dichloroethene	0.006	0.060	ND	0.025	0.247	ND	ND
75-34-3	1,1-Dichloroethane	0.008	0.083	ND	0.035	0.348	ND	ND
156-59-2	cis-1,2-Dichloroethene	0.008	0.085	ND	0.035	0.347	ND	ND
67-66-3	Chloroform	0.008	0.083	0.017	0.042	0.419	0.087	J
71-55-6	1,1,1-Trichloroethane	0.008	0.083	0.012	0.047	0.468	0.067	J
107-06-2	1,2-Dichloroethane	0.008	0.085	ND	0.035	0.354	ND	ND
71-43-2	Benzene	0.008	0.085	0.076	0.028	0.280	0.250	J
56-23-5	Carbon tetrachloride	0.008	0.083	0.100	0.054	0.540	0.647	
78-87-5	1,2-Dichloropropane	0.008	0.085	ND	0.040	0.404	ND	ND
79-01-6	Trichloroethene	0.008	0.085	ND	0.047	0.470	ND	ND
75-27-4	Bromodichloromethane	0.006	0.055	ND	0.038	0.383	ND	ND
108-88-3	Toluene	0.008	0.085	0.221	0.033	0.330	0.861	
79-00-5	1,1,2-Trichloroethane	0.008	0.083	ND	0.047	0.468	ND	ND
106-93-4	1,2-Dibromoethane	0.008	0.085	0.009	0.067	0.673	0.070	J
127-18-4	Tetrachloroethene	0.008	0.083	0.013	0.058	0.582	0.090	J
108-90-7	Chlorobenzene	0.008	0.083	0.009	0.040	0.395	0.044	J
100-41-4	Ethylbenzene	0.008	0.085	0.033	0.038	0.380	0.146	J
108-38-3	m & p-Xylene	0.017	0.168	0.120	0.075	0.753	0.537	J
100-42-5	Styrene	0.008	0.085	0.016	0.037	0.373	0.072	J
95-47-6	o-Xylene	0.008	0.083	0.038	0.037	0.373	0.171	J
108-67-8	1,3,5-Trimethylbenzene	0.009	0.086	0.015	0.044	0.439	0.076	J
95-63-6	1,2,4-Trimethylbenzene	0.008	0.083	0.027	0.042	0.421	0.139	J
541-73-1	1,3-Dichlorobenzene	0.008	0.083	0.015	0.052	0.516	0.090	J
100-44-7	Benzyl chloride	0.006	0.062	ND	0.033	0.331	ND	ND
106-46-7	1,4-Dichlorobenzene	0.008	0.083	0.018	0.052	0.516	0.109	J
95-50-1	1,2-Dichlorobenzene	0.008	0.082	0.013	0.051	0.506	0.080	J
120-82-1	1,2,4-Trichlorobenzene	0.008	0.085	0.020	0.065	0.649	0.155	J
123-91-1	1,4 Dioxane	0.006	0.060	ND	0.022	0.224	ND	ND

	Surrogate Recovery	Spike Amt. ppbV	Amount ppbV	% Rec.	QC Limits	Flag * = Out
2037-26-5	Toluene-d8	0.200	0.208	104	70-130	

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag

Notes: 1) Reported results are to be interpreted to two significant figures.
2) ug/m3 = ppbV*FW/23.68 calculated assuming conditions at 60 F and 1 atm.
3) MDL and RL are adjusted for sample volume and can dilution.
4) U and ND are Flags used for Not Detected
5) J is a flag for a result between the MDL and the RL (or lower quantitation limit, LQL)

QUANTITATION REPORT

EPA Method TO-15 Modified SIM GC/MS

Review EAS Sample ID: 0927013

File Name: 0927013A.D
Sample ID: 44-018
Date: 24 Jun 109 4:41 pm
Run Method: 2EXSIM_I.M
Quant Method: 2EXSIM_I.M
Cal Update: Mon Jun 22 09:18:18 2009
Template: EARTEXSM.MS3
Can Factor: 1.63
Volume: 1000 ml

Cal Amounts _____
IS Areas _____
Carryover _____

1 SS
2 KB
3 AT
4 BB
5 SH

Analyst: SS 1

CAS#	Compound	n	Raw Amount	RT	Target RT	Ion	Sample Area	Qualifier	Lower Qual	Upper Qual	Qual Flag	Cal Flag	Int Flag
75-71-8	Dichlorodifluoromethane	2	0.000	0.00	3.85	85.00	0	0	26	38			
74-87-3	Chloromethane	3	0.035	3.34	4.12	50.00	9150	35	21	32	Q		
74-83-9	Bromomethane	6	0.000	5.17	4.97	94.00	0	0	69	104			
75-00-3	Chloroethane	7	0.000	5.17	5.18	64.00	0	0	27	40			
75-69-4	Trichlorofluoromethane	8	0.048	5.24	5.98	101.00	31329	65	53	80			
76-13-1	Freon 113	10	0.038	6.52	7.13	151.00	11154	199	136	204			
75-09-2	Dichloromethane	11	0.033	6.78	7.42	84.00	6605	66	51	77			
1634-04-4	Methyl tert butyl ether	13	0.000	8.64	8.60	73.00	0	0	16	24			
156-60-5	trans-1,2-Dichloroethene	12	0.000	8.35	8.48	96.00	0	0	111	167			
75-34-3	1,1-Dichloroethane	14	0.000	8.90	9.00	63.00	0	0	25	37			
156-59-2	cis-1,2-Dichloroethene	15	0.000	10.27	10.24	96.00	0	0	102	153			
67-66-3	Chloroform	17	0.011	10.40	10.66	83.00	6019	72	52	78			
71-55-6	1,1,1-Trichloroethane	18	0.007	11.62	11.91	97.00	4572	72	53	80			
107-06-2	1,2-Dichloroethane	19	0.000	11.75	12.02	61.95	0	0	14	21			
71-43-2	Benzene	20	0.047	12.36	12.63	78.00	41294	24	16	23	Q		
56-23-5	Carbon tetrachloride	21	0.061	12.42	12.66	116.90	33166	98	79	119			
78-87-5	1,2-Dichloropropane	22	0.000	14.15	14.20	63.00	0	0	126	189			
79-01-6	Trichloroethene	23	0.004	14.10	14.26	130.00	1422	96	75	112			
75-27-4	Bromodichloromethane	24	0.000	14.63	14.57	83.00	0	0	52	78			
108-88-3	Toluene	26	0.136	17.16	17.21	91.00	170275	65	53	80			
79-00-5	1,1,2-Trichloroethane	28	0.000	17.37	17.35	97.00	0	0	63	94			
106-93-4	1,2-Dibromoethane	29	0.005	18.95	18.99	107.00	5308	95	76	114			
127-18-4	Tetrachloroethene	30	0.008	19.05	19.09	166.00	3505	0	64	97	Q		
108-90-7	Chlorobenzene	31	0.006	20.57	20.59	112.00	7111	35	27	40			
100-41-4	Ethylbenzene	33	0.020	21.06	21.08	91.00	46023	26	24	36			
108-38-3	m & p-Xylene	34	0.073	21.35	21.37	91.00	128233	43	42	63			
100-42-5	Styrene	35	0.010	22.22	22.22	104.00	21202	48	28	42			
95-47-6	o-Xylene	36	0.023	22.34	22.34	91.00	52100	41	38	56			
108-67-8	1,3,5-Trimethylbenzene	39	0.009	24.96	24.96	105.00	35779	43	39	58			
95-63-6	1,2,4-Trimethylbenzene	40	0.017	25.92	25.91	105.00	76161	44	36	54			
541-73-1	1,3-Dichlorobenzene	41	0.009	26.56	26.55	146.00	30856	40	35	52			
100-44-7	Benzyl chloride	42	0.002	26.73	26.70	91.00	5650	15	15	23			
106-46-7	1,4-Dichlorobenzene	43	0.011	26.75	26.75	146.00	38273	45	32	49			
95-50-1	1,2-Dichlorobenzene	44	0.008	27.62	27.61	146.00	33931	44	38	57			
120-82-1	1,2,4-Trichlorobenzene	45	0.012	32.16	32.17	180.00	119177	99	79	118			
123-91-1	1,4 Dioxane	47	0.000	14.65	14.57	88.00	0	0	55	82			

CAS#	Compound	n	Raw Amount	RT	Target RT	Ion	Sample Area	Qualifier	Lower Qual	Upper Qual	Qual Flag	Cal Flag	Int Flag
3114-55-4	Chlorobenzene-d5	1	0.200	20.49	20.51	117.00	968959						
2037-26-5	Toluene-d8	16	0.208	16.97	17.05	98.00	427586						

Integration Flags:

If no flag the Integration was done by the instrument computer

M1 Manual Integration because the computer did not integrated the peak or integrated the wrong peak

M2 Manual Integration because computer integration of baseline was different then Inital Calibration

INITIAL CALIBRATION REPORT

EPA Method TO-15 Modified SIM GC/MS

SDG: 209270
QC_Batch: 062409-MS2
Instrument Name: MS2

File Name: 0927013A.D
Sample ID: 44-018
Sample Analysis Date: 24 Jun 109 4:41 pm
Run Method: 2EXSIM_I.M
Quant and Calibration Method: 2EXSIM_I.M
Cal Update: Mon Jun 22 09:18:18 2009
Template: EARTEXSM.MS3

Calibration Title:EPA T0-15

Number Compounds: 49
IS1: ST60024 0.2
IS2:
IS3:
IS4:

		Calibration Amount CA, ppmv						Calibration Response, Area					
		Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
		Amt	Amt	Amt	Amt	Amt	Amt	C06199B.D	C06199H.D	C06199A.D	C06199F.D	C06199E.D	C06199K.D
n	Compound	10.0	0.5	20.0	2.0	4.0	1.0	10.0	0.5	20.0	2.0	4.0	1.0
2	Dichlorodifluoromethane	1.050	0.053	2.100	0.210	0.420	0.105	534841	38986	1705728	73746	400604	64289
3	Chloromethane	1.020	0.051	2.040	0.204	0.408	0.102	268477	16811	877342	29933	189687	27154
6	Bromomethane	1.040	0.052	2.080	0.208	0.416	0.104	193900	12685	547447	21277	126567	19683
7	Chloroethane	1.040	0.052	2.080	0.208	0.416	0.104	180453	11984	584817	18602	111983	15560
8	Trichlorofluoromethane	1.040	0.052	2.080	0.208	0.416	0.104	631888	46620	1969166	80614	475586	72646
10	Freon 113	1.020	0.051	2.040	0.204	0.408	0.102	274663	20804	826803	35204	228496	30309
11	Dichloromethane	1.040	0.052	2.080	0.208	0.416	0.104	180065	15163	530282	25781	167890	19971
13	Methyl tert butyl ether	0.660	0.033	1.320	0.132	0.264	0.066	620120	31056	2309675	52207	365659	44883
12	trans-1,2-Dichloroethene	0.730	0.037	1.460	0.146	0.292	0.073	142963	12852	384125	20102	132501	16643
14	1,1-Dichloroethane	1.010	0.051	2.020	0.202	0.404	0.101	403912	31159	1225807	51920	327340	43151
15	cis-1,2-Dichloroethene	1.030	0.052	2.060	0.206	0.412	0.103	240146	21098	758337	35003	226396	27004
17	Chloroform	1.020	0.051	2.040	0.204	0.408	0.102	510308	42620	1697577	69088	427372	57851
18	1,1,1-Trichloroethane	1.020	0.051	2.040	0.204	0.408	0.102	587705	46722	1955378	75018	469425	61727
19	1,2-Dichloroethane	1.030	0.052	2.060	0.206	0.412	0.103	1236150	74052	4935278	125964	835756	97954
20	Benzene	1.030	0.052	2.060	0.206	0.412	0.103	967913	60686	3573129	94902	641363	73510
21	Carbon tetrachloride	1.020	0.051	2.040	0.204	0.408	0.102	492544	40672	1579809	67130	410007	53667
22	1,2-Dichloropropane	1.030	0.052	2.060	0.206	0.412	0.103	280915	22034	957916	37485	236197	27080
23	Trichloroethene	1.030	0.052	2.060	0.206	0.412	0.103	305786	29555	968228	45278	286372	33459
24	Bromodichloromethane	0.670	0.034	1.340	0.134	0.268	0.067	349165	34872	980125	57413	329960	43188
26	Toluene	1.030	0.052	2.060	0.206	0.412	0.103	1260474	90214	4659514	149575	935329	102952
28	1,1,2-Trichloroethane	1.020	0.051	2.040	0.204	0.408	0.102	480870	37160	1655491	70973	441832	43484
29	1,2-Dibromoethane	1.040	0.052	2.080	0.208	0.416	0.104	915216	67709	3403871	130478	834780	79525

(480)

n	Compound	Amt 10.0	Amt 0.5	Amt 20.0	Amt 2.0	Amt 4.0	Amt 1.0	C06199B.D 10.0	C06199H.D 0.5	C06199A.D 20.0	C06199F.D 2.0	C06199E.D 4.0	C06199K.D 1.0
30	Tetrachloroethene	1.020	0.051	2.040	0.204	0.408	0.102	373918	35806	1224836	58411	374447	38753
31	Chlorobenzene	1.020	0.051	2.040	0.204	0.408	0.102	1017786	104021	3390004	174301	1040689	105228
33	Ethylbenzene	1.040	0.052	2.080	0.208	0.416	0.104	2140675	173953	7709871	303124	1882967	181776
34	m & p-Xylene	2.060	0.103	4.120	0.412	0.824	0.206	2970894	279033	10312056	481458	2872586	284680
35	Styrene	1.030	0.052	2.060	0.206	0.412	0.103	2090268	153303	6660464	294984	1772326	150847
36	o-Xylene	1.020	0.051	2.040	0.204	0.408	0.102	1996168	168269	6920115	304155	1831287	166711
39	1,3,5-Trimethylbenzene	1.060	0.053	2.120	0.212	0.424	0.106	3143240	323037	9985329	644118	3708236	280478
40	1,2,4-Trimethylbenzene	1.020	0.051	2.040	0.204	0.408	0.102	3248488	373791	10120607	742439	4300475	315230
41	1,3-Dichlorobenzene	1.020	0.051	2.040	0.204	0.408	0.102	2387618	303170	7032467	572612	3179015	243933
42	Benzyl chloride	0.760	0.038	1.520	0.152	0.304	0.076	2015808	210430	6118543	463035	2452250	191598
43	1,4-Dichlorobenzene	1.020	0.051	2.040	0.204	0.408	0.102	2189006	331504	6500736	598783	3247824	271163
44	1,2-Dichlorobenzene	1.000	0.050	2.000	0.200	0.400	0.100	3162973	359724	9089085	693423	3769025	288406
45	1,2,4-Trichlorobenzene	1.030	0.052	2.060	0.206	0.412	0.103	6381826	918959	14261028	1761172	9410822	617532
47	1,4 Dioxane	0.740	0.037	1.480	0.148	0.296	0.074	154378	17449	450267	31614	179188	26330
1	Chlorobenzene-d5	0.200	0.200	0.200	0.200	0.200	0.200	877690	1273169	1660044	554145	1807068	927887
16	Toluene-d8	0.200	0.200	0.200	0.200	0.200	0.200	389596	565545	652462	236781	753686	395034

(481)

INITIAL CALIBRATION REPORT: Response Factors

SDG:	**209270**
QC_Batch:	**062409-MS2**
Sample ID:	44-018
Sample Analysis Date:	24 Jun 109 4:41 pm
Run Method:	2EXSIM_I.M
Quant Method:	2EXSIM_I.M
Cal Update:	Mon Jun 22 09:18:18 2009
Template:	EARTEXSM.MS3

Sample Calculation:

1) Avg RFn = Sum $\left| \frac{(Astdni)}{(Cstdni)} \frac{(Cistdi)}{(Aistdi)} \right|_i$

Response Factors

Compound	RF1	RF2	RF3	RF4	RF5	RF6	AvgRFn	%RSD
Dichlorodifluoromethane	0.116	0.116	0.098	0.127	0.106	0.132	0.116	10.99
Chloromethane	0.060	0.052	0.052	0.053	0.051	0.057	0.054	6.60
Bromomethane	0.042	0.038	0.032	0.037	0.034	0.041	0.037	11.03
Chloroethane	0.040	0.036	0.034	0.032	0.030	0.032	0.034	10.13
Trichlorofluoromethane	0.138	0.141	0.114	0.140	0.127	0.151	0.135	9.50
Freon 113	0.061	0.064	0.049	0.062	0.062	0.064	0.060	9.58
Dichloromethane	0.039	0.046	0.031	0.045	0.045	0.041	0.041	13.70
Methyl tert butyl ether	0.214	0.148	0.211	0.143	0.153	0.147	0.169	19.90
trans-1,2-Dichloroethene	0.045	0.055	0.032	0.050	0.050	0.049	0.047	17.11
1,1-Dichloroethane	0.091	0.096	0.073	0.093	0.090	0.092	0.089	9.11
cis-1,2-Dichloroethene	0.053	0.064	0.044	0.061	0.061	0.057	0.057	12.56
Chloroform	0.114	0.131	0.100	0.122	0.116	0.122	0.118	8.89
1,1,1-Trichloroethane	0.131	0.144	0.115	0.133	0.127	0.130	0.130	7.04
1,2-Dichloroethane	0.273	0.224	0.289	0.221	0.225	0.205	0.239	13.97
Benzene	0.214	0.183	0.209	0.166	0.172	0.154	0.183	13.13
Carbon tetrachloride	0.110	0.125	0.093	0.119	0.111	0.113	0.112	9.60
1,2-Dichloropropane	0.062	0.067	0.056	0.066	0.063	0.057	0.062	7.25
Trichloroethene	0.068	0.089	0.057	0.079	0.077	0.070	0.073	15.26
Bromodichloromethane	0.119	0.161	0.088	0.155	0.136	0.139	0.133	19.96
Toluene	0.279	0.273	0.273	0.262	0.251	0.215	0.259	9.02
1,1,2-Trichloroethane	0.107	0.114	0.098	0.126	0.120	0.092	0.109	11.85
1,2-Dibromoethane	0.201	0.205	0.197	0.226	0.222	0.165	0.203	10.84
Tetrachloroethene	0.084	0.110	0.072	0.103	0.102	0.082	0.092	16.20
Chlorobenzene	0.227	0.320	0.200	0.308	0.282	0.222	0.260	19.25
Ethylbenzene	0.469	0.525	0.447	0.526	0.501	0.377	0.474	12.05
m & p-Xylene	0.329	0.426	0.302	0.422	0.386	0.298	0.360	16.21
Styrene	0.462	0.463	0.390	0.517	0.476	0.316	0.437	16.55
o-Xylene	0.446	0.518	0.409	0.538	0.497	0.352	0.460	15.46
1,3,5-Trimethylbenzene	0.676	0.957	0.567	1.097	0.968	0.570	0.806	28.46
1,2,4-Trimethylbenzene	0.726	1.151	0.598	1.314	1.167	0.666	0.937	32.85
1,3-Dichlorobenzene	0.533	0.934	0.415	1.013	0.862	0.515	0.712	35.57
Benzyl chloride	0.604	0.870	0.485	1.099	0.893	0.543	0.749	32.20
1,4-Dichlorobenzene	0.489	1.021	0.384	1.059	0.881	0.573	0.735	39.38
1,2-Dichlorobenzene	0.721	1.130	0.548	1.251	1.043	0.622	0.886	33.09
1,2,4-Trichlorobenzene	1.412	2.776	0.834	3.086	2.528	1.292	1.988	46.46
1,4 Dioxane	0.048	0.074	0.037	0.077	0.067	0.077	0.063	27.03
Chlorobenzene-d5	1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.00

Toluene-d8	0.444	0.444	0.393	0.427	0.417	0.426	0.425	4.48

CALCULATIONS

EPA Method TO-15 Modified SIM GC/MS

SDG: 209270
Laboratory Number: 13

RL:	2EXSIM_I.M
Run Method:	2EXSIM_I.M
Quant Method:	2EXSIM_I.M
Can Dilution Factor:	1.63
Air Volume:	1000 ml
Gas Constant:	23.68
Decimal Places:	3

Compound	M.W.	Raw Amount	Result ppbv	Result ug/m3	(1) MDL ppbv	(2) RL ppbv	Calc MDL ppbv	Calc MDL ug/m3	Calc RL ppbv	Calc RL ug/m3	Flag	S062602-1 Spike ppmv
Dichlorodifluoromethane	120.9	0.000	0.000	0.000	0.005	0.053	0.01	0.044	0.09	0.441	U	0.103
Chloromethane	50.5	0.035	0.057	0.121	0.005	0.051	0.01	0.018	0.08	0.177	J	0.103
Bromomethane	94.9	0.000	0.000	0.000	0.005	0.052	0.01	0.034	0.08	0.340	U	0.103
Chloroethane	64.5	0.000	0.000	0.000	0.005	0.052	0.01	0.023	0.08	0.231	U	0.103
Trichlorofluoromethane	137.4	0.048	0.078	0.453	0.005	0.052	0.01	0.049	0.08	0.492	J	0.103
Freon 113	187.3	0.038	0.062	0.491	0.005	0.051	0.01	0.066	0.08	0.658	J	0.103
Dichloromethane	84.9	0.033	0.054	0.194	0.005	0.052	0.01	0.030	0.08	0.304	J	0.103
Methyl tert butyl ether	88.1	0.000	0.000	0.000	0.003	0.033	0.01	0.020	0.05	0.200	U	1.103
trans-1,2-Dichloroethene	96.9	0.000	0.000	0.000	0.004	0.037	0.01	0.025	0.06	0.247	U	0.103
1,1-Dichloroethane	99.0	0.000	0.000	0.000	0.005	0.051	0.01	0.035	0.08	0.348	U	0.103
cis-1,2-Dichloroethene	96.9	0.000	0.000	0.000	0.005	0.052	0.01	0.035	0.08	0.347	U	0.103
Chloroform	119.4	0.011	0.017	0.087	0.005	0.051	0.01	0.042	0.08	0.419	J	0.103
1,1,1-Trichloroethane	133.4	0.007	0.012	0.067	0.005	0.051	0.01	0.047	0.08	0.468	J	0.103
1,2-Dichloroethane	99.0	0.000	0.000	0.000	0.005	0.052	0.01	0.035	0.08	0.354	U	0.103
Benzene	78.1	0.047	0.076	0.250	0.005	0.052	0.01	0.028	0.08	0.280	J	0.103
Carbon tetrachloride	153.8	0.061	0.100	0.647	0.005	0.051	0.01	0.054	0.08	0.540		0.103
1,2-Dichloropropane	113.0	0.000	0.000	0.000	0.005	0.052	0.01	0.040	0.08	0.404	U	0.103
Trichloroethene	131.4	0.004	0.007	0.036	0.005	0.052	0.01	0.047	0.08	0.470	U	0.103
Bromodichloromethane	163.8	0.000	0.000	0.000	0.003	0.034	0.01	0.038	0.06	0.383	U	0.103
Toluene	92.1	0.136	0.221	0.861	0.005	0.052	0.01	0.033	0.08	0.330		0.103
1,1,2-Trichloroethane	133.4	0.000	0.000	0.000	0.005	0.051	0.01	0.047	0.08	0.468	U	0.103
1,2-Dibromoethane	187.9	0.005	0.009	0.070	0.005	0.052	0.01	0.067	0.08	0.673	J	0.103
Tetrachloroethene	165.8	0.008	0.013	0.090	0.005	0.051	0.01	0.058	0.08	0.582	J	0.103
Chlorobenzene	112.6	0.006	0.009	0.044	0.005	0.051	0.01	0.040	0.08	0.395	J	0.103
Ethylbenzene	106.2	0.020	0.033	0.146	0.005	0.052	0.01	0.038	0.08	0.380	J	0.103
m & p-Xylene	106.2	0.073	0.120	0.537	0.010	0.103	0.02	0.075	0.17	0.753	J	0.103
Styrene	104.2	0.010	0.016	0.072	0.005	0.052	0.01	0.037	0.08	0.373	J	0.103
o-Xylene	106.2	0.023	0.038	0.171	0.005	0.051	0.01	0.037	0.08	0.373	J	0.103
1,3,5-Trimethylbenzene	120.2	0.009	0.015	0.076	0.005	0.053	0.01	0.044	0.09	0.439	J	0.103
1,2,4-Trimethylbenzene	120.0	0.017	0.027	0.139	0.005	0.051	0.01	0.042	0.08	0.421	J	0.103
1,3-Dichlorobenzene	147.0	0.009	0.015	0.090	0.005	0.051	0.01	0.052	0.08	0.516	J	0.103
Benzyl chloride	126.6	0.002	0.003	0.014	0.004	0.038	0.01	0.033	0.06	0.331	U	0.103
1,4-Dichlorobenzene	147.0	0.011	0.018	0.109	0.005	0.051	0.01	0.052	0.08	0.516	J	0.103
1,2-Dichlorobenzene	147.0	0.008	0.013	0.080	0.005	0.050	0.01	0.051	0.08	0.506	J	0.103
1,2,4-Trichlorobenzene	181.4	0.012	0.020	0.155	0.005	0.052	0.01	0.065	0.08	0.649	J	0.103
1,4 Dioxane	88.1	0.000	0.000	0.000	0.004	0.037	0.01	0.022	0.06	0.224	U	1.103

SAMPLE CALCULATION

EPA Method TO-15 Modified SIM GC/MS

SDG:		**209270**
Laboratory Number:		**13**
Standard Volume	STV	0.5
Sample Volume	SV	1000
Can Dilution Factor	CDF	1.63
Gas Constant		23.68
Decimal Places:		3

Sample Calculation:

1) Avg RFn = Sum $\left| \frac{(Astdni)}{(Cstdni)} \frac{(Cistdi)}{(Aistdi)} \right|_i$ Note: 1

2) Raw Amt = $\frac{(Ansamp)}{(Avg\ RFn)} \frac{(Cistdi)}{(Aistdi)}$ = Cn

3) Amount ppbv = $\frac{(Raw\ Amt)\ 1000}{(SV)}$ (CDF) (STV)

4) Amount ug/m3 = $\frac{(amt(ppbv)\ MW}{23.68}$

n	Compound	IS n	Chem type	MW	AvgRFn	Area Ansamp	Cistdi ppmv	Aistdi Ais	Cn ppmV Raw Amt	Amount ppbv	Amount ug/m3
2	Dichlorodifluoromethane	1	TRG	120.9	0.116	0	0.200	968959	0.000	0.000	0.000
3	Chloromethane	1	TRG	50.5	0.054	9150	0.200	968959	0.035	0.057	0.122
6	Bromomethane	1	TRG	94.9	0.037	0	0.200	968959	0.000	0.000	0.000
7	Chloroethane	1	TRG	64.5	0.034	0	0.200	968959	0.000	0.000	0.000
8	Trichlorofluoromethane	1	TRG	137.4	0.135	31329	0.200	968959	0.048	0.078	0.453
10	Freon 113	1	TRG	187.3	0.060	11154	0.200	968959	0.038	0.062	0.490
11	Dichloromethane	1	TRG	84.9	0.041	6605	0.200	968959	0.033	0.054	0.194
13	Methyl tert butyl ether	2	TRG	88.1	0.169	0	0.200	968959	0.000	0.000	0.000
12	trans-1,2-Dichloroethene	1	TRG	96.9	0.047	0	0.200	968959	0.000	0.000	0.000
14	1,1-Dichloroethane	1	TRG	99.0	0.089	0	0.200	968959	0.000	0.000	0.000
15	cis-1,2-Dichloroethene	1	TRG	96.9	0.057	0	0.200	968959	0.000	0.000	0.000
17	Chloroform	1	TRG	119.4	0.118	6019	0.200	968959	0.011	0.017	0.086
18	1,1,1-Trichloroethane	1	TRG	133.4	0.130	4572	0.200	968959	0.007	0.012	0.068
19	1,2-Dichloroethane	1	TRG	99.0	0.239	0	0.200	968959	0.000	0.000	0.000
20	Benzene	1	TRG	78.1	0.183	41294	0.200	968959	0.047	0.076	0.251
21	Carbon tetrachloride	1	TRG	153.8	0.112	33166	0.200	968959	0.061	0.100	0.649
22	1,2-Dichloropropane	1	TRG	113.0	0.062	0	0.200	968959	0.000	0.000	0.000
23	Trichloroethene	1	TRG	131.4	0.073	1422	0.200	968959	0.004	0.007	0.039
24	Bromodichloromethane	1	TRG	163.8	0.133	0	0.200	968959	0.000	0.000	0.000
26	Toluene	1	TRG	92.1	0.259	170275	0.200	968959	0.136	0.221	0.860
28	1,1,2-Trichloroethane	1	TRG	133.4	0.109	0	0.200	968959	0.000	0.000	0.000
29	1,2-Dibromoethane	1	TRG	187.9	0.203	5308	0.200	968959	0.005	0.009	0.071
30	Tetrachloroethene	1	TRG	165.8	0.092	3505	0.200	968959	0.008	0.013	0.091
31	Chlorobenzene	1	TRG	112.6	0.260	7111	0.200	968959	0.006	0.009	0.043
33	Ethylbenzene	1	TRG	106.2	0.474	46023	0.200	968959	0.020	0.033	0.148
34	m & p-Xylene	1	TRG	106.2	0.360	128233	0.200	968959	0.073	0.120	0.538
35	Styrene	1	TRG	104.2	0.437	21202	0.200	968959	0.010	0.016	0.070
36	o-Xylene	1	TRG	106.2	0.460	52100	0.200	968959	0.023	0.038	0.170
39	1,3,5-Trimethylbenzene	1	TRG	120.2	0.806	35779	0.200	968959	0.009	0.015	0.076
40	1,2,4-Trimethylbenzene	1	TRG	120.0	0.937	76161	0.200	968959	0.017	0.027	0.137
41	1,3-Dichlorobenzene	1	TRG	147.0	0.712	30856	0.200	968959	0.009	0.015	0.093
42	Benzyl chloride	1	TRG	126.6	0.749	5650	0.200	968959	0.002	0.003	0.016
43	1,4-Dichlorobenzene	1	TRG	147.0	0.735	38273	0.200	968959	0.011	0.018	0.112
44	1,2-Dichlorobenzene	1	TRG	147.0	0.886	33931	0.200	968959	0.008	0.013	0.081
45	1,2,4-Trichlorobenzene	1	TRG	181.4	1.99	119177	0.200	968959	0.012	0.020	0.153
47	1,4 Dioxane	1	TRG	88.1	0.06	0	0.200	968959	0.000	0.000	0.000
1	Chlorobenzene-d5	1	IS	0.0	1.000	968959	0.200	968959	0.000	0.000	0.000
16	Toluene-d8	1	SURR	0.0	0.425	427586	0.200	968959	0.000	0.000	0.000

Calculation Definitions:

n	compound n
i	i th calibration level

Astdni	Standard Area for compound n at ith calibration level
Cstdni	Standard Concentration for compound n at ith calibration level in ppmv
Cistdi	Internal Standard Conc used for compound n at ith calibration level in ppmv
Aistdi	Internal Standard Area used for compound n at ith calibration level
Ansamp	Sample Area for compound n
Avg RFn	Average response factor for all ith calibration levels for compound n
Raw Amount	Sample Concentration in ppmv before applying factors
Cistd	Concentration internal standard used for compound n in sample in ppmv
Aistd	Area of internal standard used for compound n in sample
Cn	Concentration of compound n in sample in ppmv
23.68	Gas constant at 60 F as per EPA source test protocol
MW	Molecular weight of compound

Note (1) : Avg RFn — The values for the Average Response Factor AvgRFn can be optained from the response Factor Report for the Initial Calibration, or from the Calibration Report

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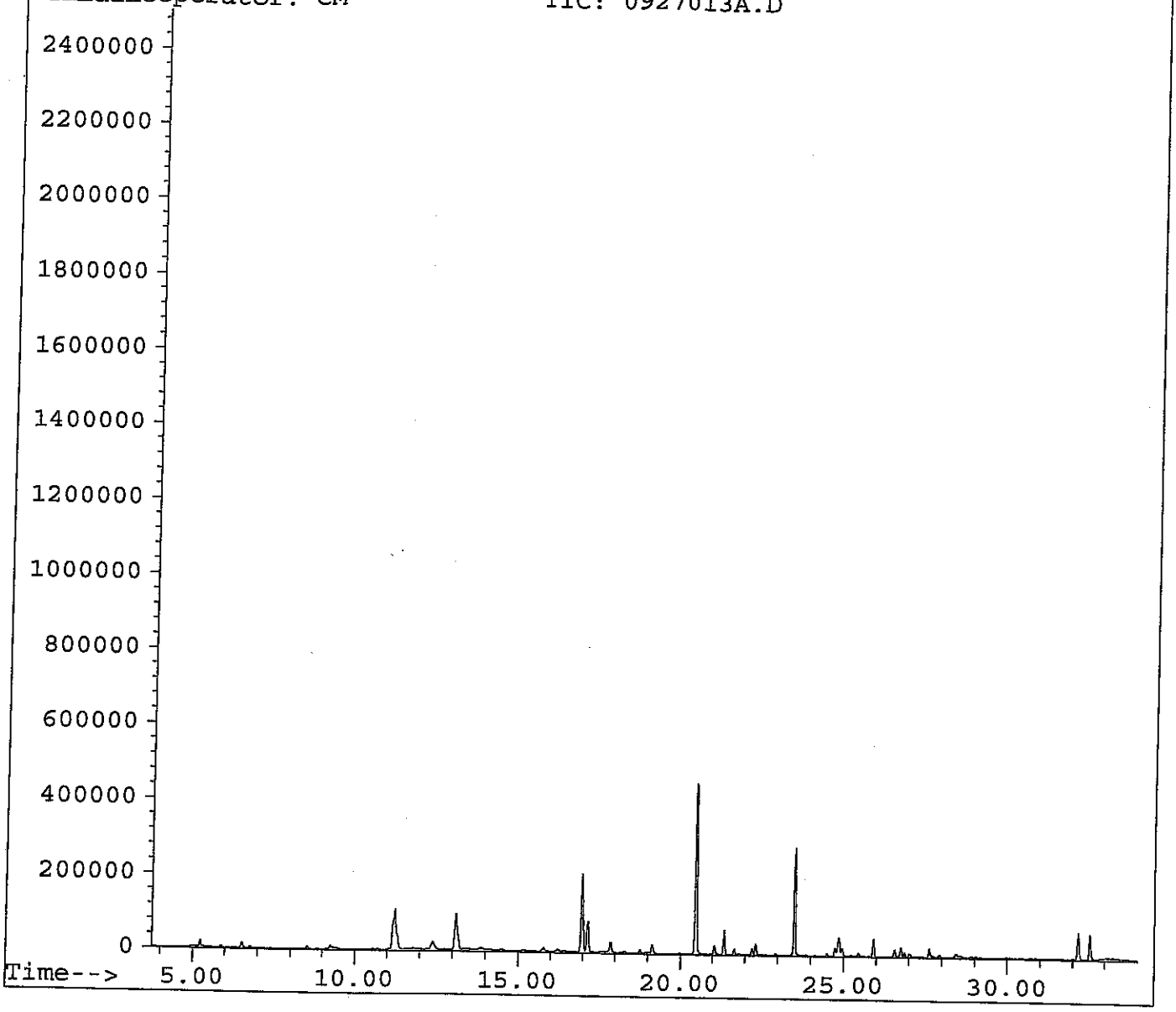
Name of operator: CM

TIC: 0927013A.D



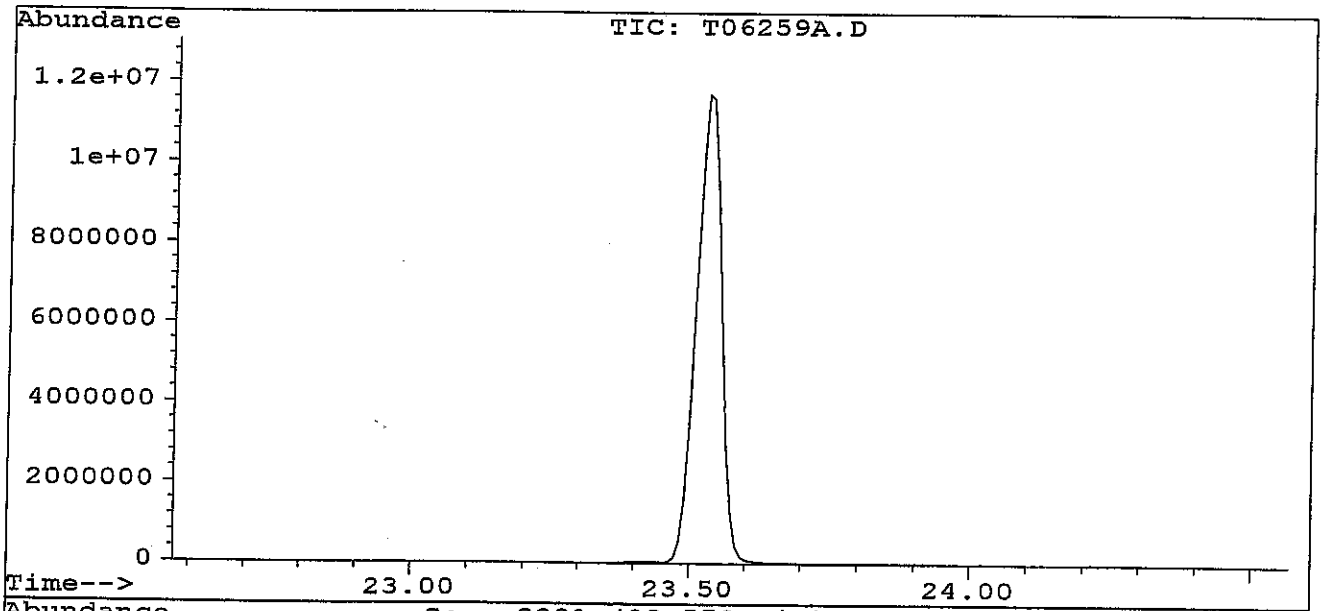
Daily Analytical Batch #: 062509-MS2

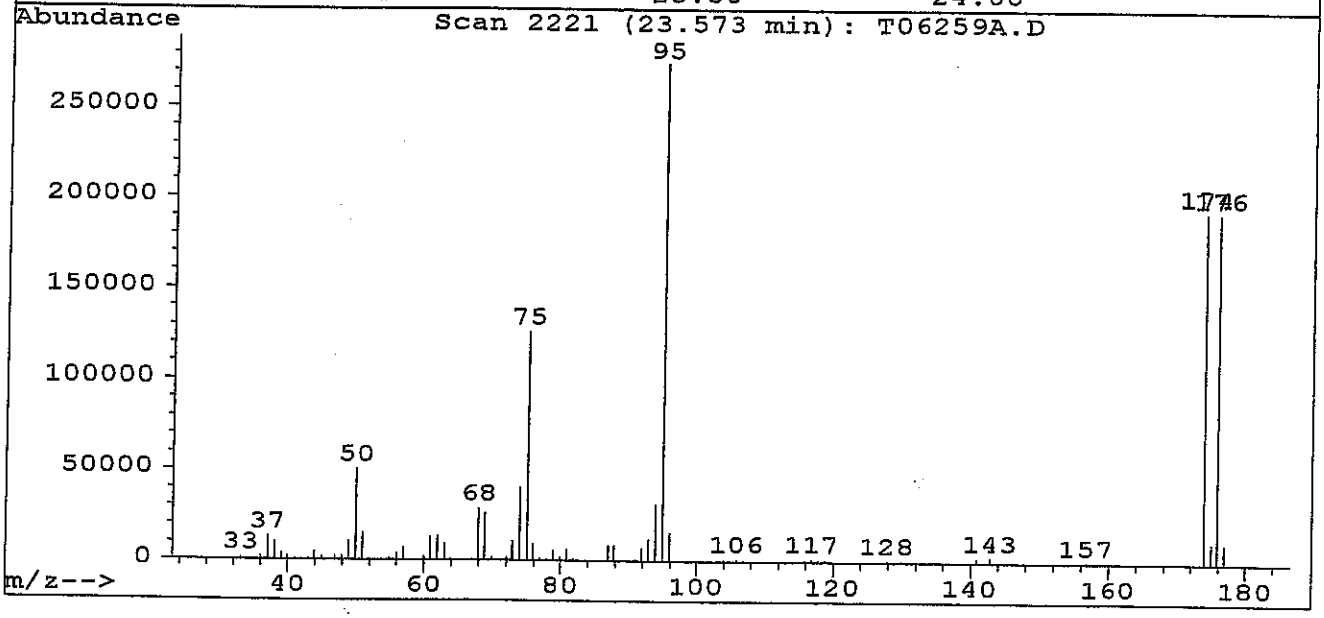
BFB

Data File : C:\MSCHEM\2\DATA\06259MS2\T06259A.D
Acq Time : 25 Jun 109 8:43 am
Sample : BFB TUNE
Misc :

Operator: JF
Inst : MS2
Multiplr: 1.00

Method : C:\MSCHEM\2\METHODS\2EXSIM_I.M
Title : EPA TO-15





Peak Apex is scan: 2221

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	8	40	18.3	50248	PASS
75	95	30	66	45.8	125736	PASS
95	95	100	100	100.0	274816	PASS
96	95	5	9	5.7	15699	PASS
173	174	0	2	0.0	0	PASS
174	95	50	120	70.3	193152	PASS
175	174	4	9	6.0	11553	PASS
176	174	93	101	99.8	192704	PASS
177	176	5	9	5.8	11201	PASS

T06259A.D 2EXSIM_I.M Tue Jun 30 08:41:54 2009

CONTINUING CALIBRATION REPORT

SDG:	**LABQC**	
QC_Batch:	**062509-MS2**	
Sample ID:	ST60421 + ST60250	
Sample Analysis Date:	25 Jun 109 10:10 am	
Run Method:	2EXSIM_I.M	
Quant/Calibration Method:	2EXSIM_I.M	
Cal Update:	Mon Jun 22 09:18:18 2009	
Template:	EARTEXSM.MS3	
Calibration Level	Level 2	0.5

Sample Calculation:

$$1)\ RFi = \left| \frac{(Astdi)\ (Cistdi)}{(Cstdi)\ (Aistdi)} \right|_i$$

Compound	Area Astdi	Cal Level Cstdi ppbv	CCRRF	AvgRFn	%Dev	%Dev Limit	%Dev Flag	
Vinyl chloride	24140	0.104	0.032	0.039	18.1	30	IN	
1,1-Dichloroethene	54483	0.104	0.072	0.081	11.0	30	IN	
1,1-Dichloroethane	58204	0.101	0.079	0.089	11.2	30	IN	
cis-1,2-Dichloroethene	32910	0.103	0.044	0.057	22.5	30	IN	
1,2-Dichloroethane	158780	0.103	0.212	0.239	11.5	30	IN	
Benzene	101147	0.103	0.135	0.183	26.4	30	IN	
Carbon tetrachloride	68966	0.102	0.093	0.112	17.1	30	IN	
Trichloroethene	42704	0.103	0.057	0.073	22.3	30	IN	
Bromodichloromethane	62067	0.067	0.127	0.133	4.3	30	IN	
1,1,2-Trichloroethane	57143	0.102	0.077	0.109	29.7	30	IN	
Tetrachloroethene	50679	0.102	0.068	0.092	26.0	30	IN	
m & p-Xylene	407706	0.206	0.272	0.360	24.5	30	IN	
o-Xylene	288664	0.102	0.389	0.460	15.5	30	IN	
1,1,2,2-Tetrachloroethane	205238	0.102	0.276	0.538	48.6	30	OUT	1A
1,2,4-Trichlorobenzene	351085	0.103	0.468	1.988	76.5	80	IN	
1,4 Dioxane	26293	0.074	0.049	0.063	22.8	40	IN	
Naphthalene	6131043	0.213	3.953	6.704	41.0	80	IN	
Chlorobenzene-d5	1456174	0.200	1.000	1.000	0.0	30	IN	
Toluene-d8	645082	0.200	0.443	0.425	-4.2	30	IN	

QUANTITATION REPORT

EPA Method TO-15 Modified SIM GC/MS

			Review	EAS Sample ID: C06259B	
File Name:	C06259B.D				1 SS
Sample ID:	ST60421 + ST60250				2 KB
Date:	25 Jun 109 10:10 am			Cal Amounts	3 AT
Run Method:	2EXSIM_I.M			IS Areas	4 BB
Quant Method:	2EXSIM_I.M			Carryover	5 SH
Cal Update:	Mon Jun 22 09:18:18 2009				
Template:	EARTEXSM.MS3				
Can Factor:	1.00				
Volume:	100	ml		Analyst: SS 1	

CAS#	Compound	n	Raw Amount	RT	Target RT	Ion	Sample Area	Qualifier	Lower Qual	Upper Qual	Qual Flag	Cal Flag	Int Flag
75-01-4	Vinyl chloride	5	0.085	4.39	4.37	62.00	24140	37	28	42			
75-35-4	1,1-Dichloroethene	9	0.093	6.97	6.95	61.00	54483	45	37	56			
75-34-3	1,1-Dichloroethane	14	0.090	9.04	9.00	63.00	58204	30	25	37			
156-59-2	cis-1,2-Dichloroethene	15	0.080	10.27	10.24	96.00	32910	143	102	153			
107-06-2	1,2-Dichloroethane	19	0.091	12.04	12.02	61.95	158780	15	14	21			
71-43-2	Benzene	20	0.076	12.66	12.63	78.00	101147	17	16	23			
56-23-5	Carbon tetrachloride	21	0.085	12.68	12.66	116.90	68966	95	79	119			
79-01-6	Trichloroethene	23	0.080	14.28	14.26	130.00	42704	99	75	112			
75-27-4	Bromodichloromethane	24	0.064	14.60	14.57	83.00	62067	70	52	78			
79-00-5	1,1,2-Trichloroethane	28	0.072	17.37	17.35	97.00	57143	70	63	94			
127-18-4	Tetrachloroethene	30	0.076	19.11	19.09	166.00	50679	85	64	97			
108-38-3	m & p-Xylene	34	0.155	21.37	21.37	91.00	407706	42	42	63			
95-47-6	o-Xylene	36	0.086	22.36	22.34	91.00	288664	46	38	56			
79-34-5	1,1,2,2-Tetrachloroethane	37	0.052	22.95	22.93	83.00	205238	6	8	12	Q		
120-82-1	1,2,4-Trichlorobenzene	45	0.024	32.12	32.17	180.00	351085	100	79	118			
123-91-1	1,4 Dioxane	47	0.057	14.63	14.57	88.00	26293	75	55	82			
91-20-3	Naphthalene	48	0.126	32.48	32.78	128.00	6131043	0	0	0			
3114-55-4	Chlorobenzene-d5	1	0.200	20.53	20.51	117.00	**1456174**						
2037-26-5	Toluene-d8	16	0.208	17.08	17.05	98.00	**645082**						

Integration Flags:

If no flag the Integration was done by the instrument computer

M1 Manual Integration because the computer did not integrated the peak or integrated the wrong peak

M2 Manual Integration because computer integration of baseline was different then Inital Calibration

INITIAL CALIBRATION REPORT

EPA Method TO-15 Modified SIM GC/MS

File Name:	C06259B.D	SDG:	LABQC
Sample ID:	ST60421 + ST60250	QC_Batch:	062509-MS2
Sample Analysis Date:	25 Jun 109 10:10 am	Instrument Name:	MS2
Run Method:	2EXSIM_I.M	Number Compounds:	49
Quant and Calibration Method:	2EXSIM_I.M	IS1: ST60024	0.2
Cal Update:	Mon Jun 22 09:18:18 2009	IS2:	
Template:	EARTEXSM.MS3	IS3:	
		IS4:	

Calibration Title: EPA T0-15

		Calibration Amount CA, ppmv						Calibration Response, Area					
		Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
		Amt	Amt	Amt	Amt	Amt	Amt	C06199B.D	C06199H.D	C06199A.D	C06199F.D	C06199E.D	C06199K.D
n	Compound	10.0	0.5	20.0	2.0	4.0	1.0	10.0	0.5	20.0	2.0	4.0	1.0
5	Vinyl chloride	1.040	0.052	2.080	0.208	0.416	0.104	184476	12222	596605	24865	140317	19936
9	1,1-Dichloroethene	1.040	0.052	2.080	0.208	0.416	0.104	388365	27969	1185798	47507	301017	40726
14	1,1-Dichloroethane	1.010	0.051	2.020	0.202	0.404	0.101	403912	31159	1225807	51920	327340	43151
15	cis-1,2-Dichloroethene	1.030	0.052	2.060	0.206	0.412	0.103	240146	21098	758337	35003	226396	27004
19	1,2-Dichloroethane	1.030	0.052	2.060	0.206	0.412	0.103	1236150	74052	4935278	125964	835756	97954
20	Benzene	1.030	0.052	2.060	0.206	0.412	0.103	967913	60686	3573129	94902	641363	73510
21	Carbon tetrachloride	1.020	0.051	2.040	0.204	0.408	0.102	492544	40672	1579809	67130	410007	53667
23	Trichloroethene	1.030	0.052	2.060	0.206	0.412	0.103	305786	29555	968228	45278	286372	33459
24	Bromodichloromethane	0.670	0.034	1.340	0.134	0.268	0.067	349165	34872	980125	57413	329960	43188
28	1,1,2-Trichloroethane	1.020	0.051	2.040	0.204	0.408	0.102	480870	37160	1655491	70973	441832	43484
30	Tetrachloroethene	1.020	0.051	2.040	0.204	0.408	0.102	373918	35806	1224836	58411	374447	38753
34	m & p-Xylene	2.060	0.103	4.120	0.412	0.824	0.206	2970894	279033	10312056	481458	2872586	284680
36	o-Xylene	1.020	0.051	2.040	0.204	0.408	0.102	1996168	168269	6920115	304155	1831287	166711
37	1,1,2,2-Tetrachloroethane	1.020	0.051	2.040	0.204	0.408	0.102	2273482	192188	6988630	401655	2300254	180334
45	1,2,4-Trichlorobenzene	1.030	0.052	2.060	0.206	0.412	0.103	6381826	918959	14261028	1761172	9410822	617532
47	1,4 Dioxane	0.740	0.037	1.480	0.148	0.296	0.074	154378	17449	450267	31614	179188	26330
48	Naphthalene	2.130	0.107	-1.000	0.426	0.852	0.213	34587722	6597377	-1	12354059	37178978	4780301
1	Chlorobenzene-d5	0.200	0.200	0.200	0.200	0.200	0.200	877690	1273169	1660044	554145	1807068	927887
16	Toluene-d8	0.200	0.200	0.200	0.200	0.200	0.200	389596	565545	652462	236781	753686	395034

(493)

INITIAL CALIBRATION REPORT: Response Factors

SDG:	**LABQC**
QC_Batch:	**062509-MS2**
Sample ID:	ST60421 + ST60250
Sample Analysis Date:	25 Jun 109 10:10 am
Run Method:	2EXSIM_I.M
Quant Method:	2EXSIM_I.M
Cal Update:	Mon Jun 22 09:18:18 2009
Template:	EARTEXSM.MS3

Sample Calculation:

1) Avg RFn = Sum $\left| \frac{(Astdnl)}{(Cstdnl)} \frac{(Cistdi)}{(Aistdi)} \right|$

Response Factors

Compound	RF1	RF2	RF3	RF4	RF5	RF6	AvgRFn	%RSD
Vinyl chloride	0.040	0.037	0.035	0.043	0.037	0.041	0.039	8.23
1,1-Dichloroethene	0.085	0.084	0.069	0.082	0.080	0.084	0.081	7.72
1,1-Dichloroethane	0.091	0.096	0.073	0.093	0.090	0.092	0.089	9.11
cis-1,2-Dichloroethene	0.053	0.064	0.044	0.061	0.061	0.057	0.057	12.56
1,2-Dichloroethane	0.273	0.224	0.289	0.221	0.225	0.205	0.239	13.97
Benzene	0.214	0.183	0.209	0.166	0.172	0.154	0.183	13.13
Carbon tetrachloride	0.110	0.125	0.093	0.119	0.111	0.113	0.112	9.60
Trichloroethene	0.068	0.089	0.057	0.079	0.077	0.070	0.073	15.26
Bromodichloromethane	0.119	0.161	0.088	0.155	0.136	0.139	0.133	19.96
1,1,2-Trichloroethane	0.107	0.114	0.098	0.126	0.120	0.092	0.109	11.85
Tetrachloroethene	0.084	0.110	0.072	0.103	0.102	0.082	0.092	16.20
m & p-Xylene	0.329	0.426	0.302	0.422	0.386	0.298	0.360	16.21
o-Xylene	0.446	0.518	0.409	0.538	0.497	0.352	0.460	15.46
1,1,2,2-Tetrachloroethane	0.508	0.592	0.413	0.711	0.624	0.381	0.538	23.70
1,2,4-Trichlorobenzene	1.412	2.776	0.834	3.086	2.528	1.292	1.988	46.46
1,4 Dioxane	0.048	0.074	0.037	0.077	0.067	0.077	0.063	27.03
Naphthalene	3.700	9.686	NA	10.467	4.830	4.837	6.704	46.62
Chlorobenzene-d5	1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.00
Toluene-d8	0.444	0.444	0.393	0.427	0.417	0.426	0.425	4.48

CALCULATIONS

EPA Method TO-15 Modified SIM GC/MS

SDG: LABQC
Laboratory Number: C06259

RL:	2EXSIM_I.M
Run Method:	2EXSIM_I.M
Quant Method:	2EXSIM_I.M
Can Dilution Factor:	1.00
Air Volume:	100 ml
Gas Constant:	23.68
Decimal Places:	3

Compound	M.W.	Raw Amount	Result ppbv	Result ug/m3	(1) MDL ppbv	(2) RL ppbv	Calc MDL ppbv	Calc MDL ug/m3	Calc RL ppbv	Calc RL ug/m3	Flag	S062602-1 Spike ppmv
Vinyl chloride	62.5	0.085	0.851	2.247	0.005	0.052	0.05	0.137	0.52	1.372		0.103
1,1-Dichloroethene	96.9	0.093	0.925	3.787	0.005	0.052	0.05	0.213	0.52	2.128		0.103
1,1-Dichloroethane	99.0	0.090	0.897	3.750	0.005	0.051	0.05	0.213	0.51	2.132		0.103
cis-1,2-Dichloroethene	96.9	0.080	0.798	3.265	0.005	0.052	0.05	0.213	0.52	2.128		0.103
1,2-Dichloroethane	99.0	0.091	0.911	3.809	0.005	0.052	0.05	0.217	0.52	2.174		0.103
Benzene	78.1	0.076	0.759	2.502	0.005	0.052	0.05	0.172	0.52	1.715		0.103
Carbon tetrachloride	153.8	0.085	0.846	5.493	0.005	0.051	0.05	0.331	0.51	3.312		0.103
Trichloroethene	131.4	0.080	0.800	4.440	0.005	0.052	0.05	0.289	0.52	2.885		0.103
Bromodichloromethane	163.8	0.064	0.641	4.435	0.003	0.034	0.03	0.235	0.34	2.352		0.103
1,1,2-Trichloroethane	133.4	0.072	0.717	4.038	0.005	0.051	0.05	0.287	0.51	2.873		0.103
Tetrachloroethene	165.8	0.076	0.755	5.288	0.005	0.051	0.05	0.357	0.51	3.571		0.103
m & p-Xylene	106.2	0.155	1.555	6.972	0.010	0.103	0.10	0.462	1.03	4.619		0.103
o-Xylene	106.2	0.086	0.862	3.865	0.005	0.051	0.05	0.229	0.51	2.287		0.103
1,1,2,2-Tetrachloroethane	167.8	0.052	0.524	3.712	0.005	0.051	0.05	0.361	0.51	3.614		0.103
1,2,4-Trichlorobenzene	181.4	0.024	0.243	1.858	0.005	0.052	0.05	0.398	0.52	3.983	J	0.103
1,4 Dioxane	88.1	0.057	0.572	2.127	0.004	0.037	0.04	0.138	0.37	1.377		1.103
Naphthalene	128.2	0.126	1.256	6.800	0.011	0.107	0.11	0.579	1.07	5.793		2.103

SAMPLE CALCULATION

EPA Method TO-15 Modified SIM GC/MS

SDG:		**LABQC**
Laboratory Number:		**C06259**
Standard Volume	STV	0.5
Sample Volume	SV	100
Can Dilution Factor	CDF	1.00
Gas Constant		23.68
Decimal Places:		3

Sample Calculation:

1) Avg RFn = Sum $\left| \frac{(Astdni)}{(Cstdni)} \frac{(Cistdi)}{(Aistdi)} \right|_i$ Note: 1

2) Raw Amt = $\frac{(Ansamp)}{(Avg\ RFn)} \frac{(Cistdi)}{(Aistdi)}$ = **Cn**

3) Amount ppbv = $\frac{(Raw\ Amt)\ 1000}{(SV)}$ (CDF) (STV)

4) Amount ug/m3 = $\frac{(amt(ppbv)\ MW}{23.68}$

n	Compound	IS n	Chem type	MW	AvgRFn	Area Ansamp	Cistdi ppmv	Aistdi Ais	Cn ppmV Raw Amt	Amount ppbv	Amount ug/m3
5	Vinyl chloride	1	TRG	62.5	0.039	24140	0.200	1456174	0.085	0.851	2.246
9	1,1-Dichloroethene	1	TRG	96.9	0.081	54483	0.200	1456174	0.093	0.925	3.785
14	1,1-Dichloroethane	1	TRG	99.0	0.089	58204	0.200	1456174	0.090	0.897	3.750
15	cis-1,2-Dichloroethene	1	TRG	96.9	0.057	32910	0.200	1456174	0.080	0.798	3.265
19	1,2-Dichloroethane	1	TRG	99.0	0.239	158780	0.200	1456174	0.091	0.911	3.809
20	Benzene	1	TRG	78.1	0.183	101147	0.200	1456174	0.076	0.759	2.503
21	Carbon tetrachloride	1	TRG	153.8	0.112	68966	0.200	1456174	0.085	0.846	5.495
23	Trichloroethene	1	TRG	131.4	0.073	42704	0.200	1456174	0.080	0.800	4.439
24	Bromodichloromethane	1	TRG	163.8	0.133	62067	0.200	1456174	0.064	0.641	4.434
28	1,1,2-Trichloroethane	1	TRG	133.4	0.109	57143	0.200	1456174	0.072	0.717	4.039
30	Tetrachloroethene	1	TRG	165.8	0.092	50679	0.200	1456174	0.076	0.755	5.286
34	m & p-Xylene	1	TRG	106.2	0.360	407706	0.200	1456174	0.155	1.555	6.974
36	o-Xylene	1	TRG	106.2	0.460	288664	0.200	1456174	0.086	0.862	3.866
37	1,1,2,2-Tetrachloroethane	1	TRG	167.8	0.54	205238	0.200	1456174	0.052	0.524	3.713
45	1,2,4-Trichlorobenzene	1	TRG	181.4	1.99	351085	0.200	1456174	0.024	0.243	1.861
47	1,4 Dioxane	1	TRG	88.1	0.06	26293	0.200	1456174	0.057	0.572	2.128
48	Naphthalene	1	TRG	128.2	6.70	6131043	0.200	1456174	0.126	1.256	6.800
1	Chlorobenzene-d5	1	IS	0.0	1.000	1456174	0.200	1456174	0.000	0.000	0.000
16	Toluene-d8	1	SURR	0.0	0.425	645082	0.200	1456174	0.000	0.000	0.000

Calculation Definitions:

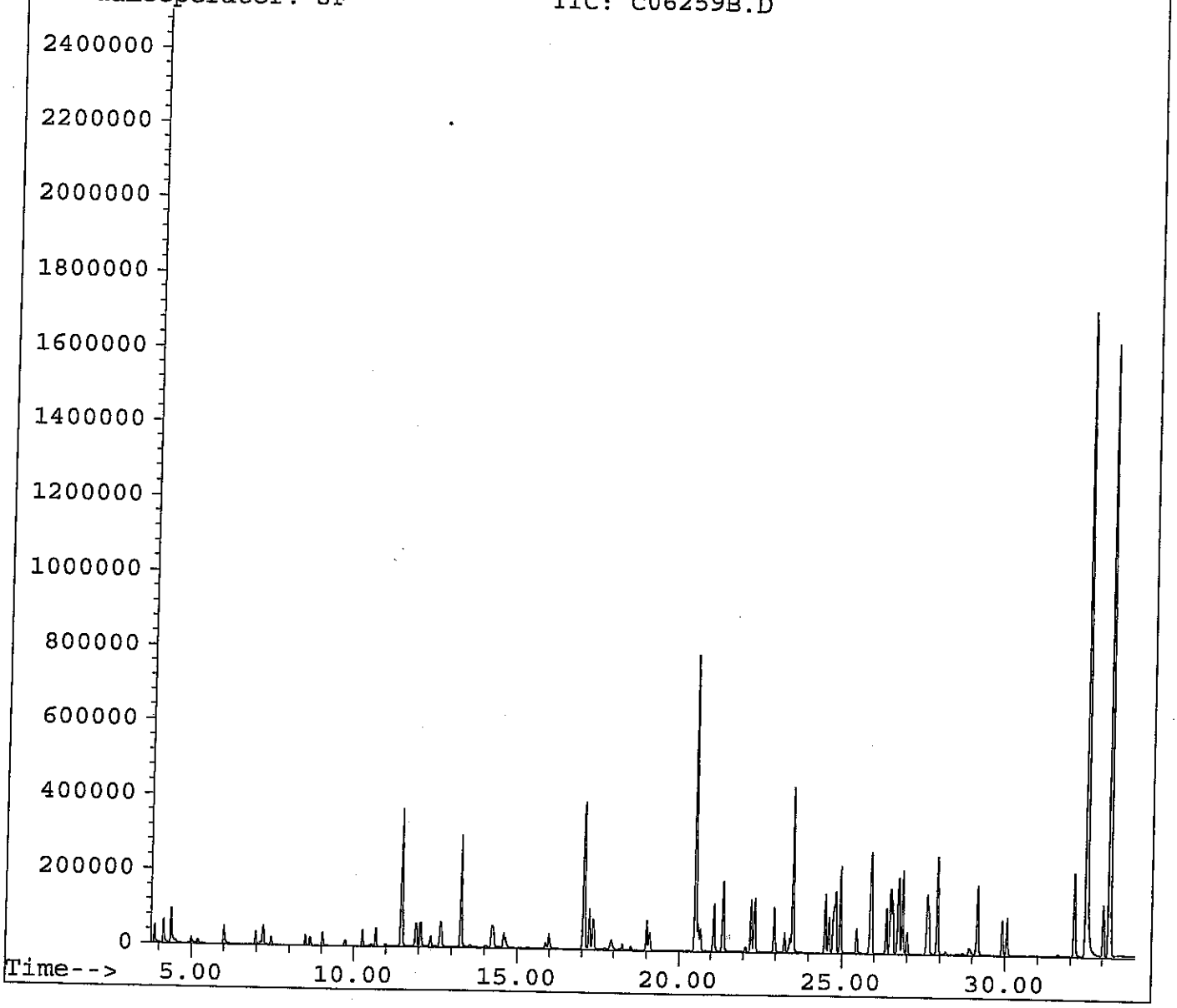
n	compound n
I	i th calibration level
Astdni	Standard Area for compound n at ith calibration level
Cstdni	Standard Concentration for compound n at ith calibration level in ppmv
Cistdi	Internal Standard Conc used for compound n at ith calibration level in ppmv
Aistdi	Internal Standard Area used for compound n at ith calibration level
Ansamp	Sample Area for compound n
Avg RFn	Average response factor for all ith calibration levels for compound n
Raw Amount	Sample Concentration in ppmv before applying factors
Cistd	Concentration internal standard used for compound n in sample in ppmv
Aistd	Area of internal standard used for compound n in sample
Cn	Concentration of compound n in sample in ppmv
23.68	Gas constant at 60 F as per EPA source test protocol
MW	Molecular weight of compound

Note (1) : Avg RFn — The values for the Average Response Factor AvgRFn can be optained from the response Factor Report for the Initial Calibration, or from the Calibration Report

Name of file: C:\HPCHEM\1\DATA\06259MS2\C06259B.D

Name of operator: JF

TIC: C06259B.D



METHOD BLANK REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified SIM GC/MS
Analytical Method: TO-15 SIM

SDG: LABQC
Laboratory Number: B06259

File: B06259A.D
Description: METHOD BLANK
Can/Tube#:
Sam_Type: MB
QC_Batch: 062509-MS2
Air Volume: 100 ml

Date Sampled: **Time:**
Date Received:
Date Extracted:
Date Analyzed: 06/25/09 **Time:** 12:32
Can Dilution Factor: 1.00 3
Not Detected Flag: ND

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
75-01-4	Vinyl chloride	0.052	0.520	ND	0.137	1.372	ND	ND
75-35-4	1,1-Dichloroethene	0.052	0.520	ND	0.213	2.128	ND	ND
75-34-3	1,1-Dichloroethane	0.051	0.510	ND	0.213	2.132	ND	ND
156-59-2	cis-1,2-Dichloroethene	0.052	0.520	ND	0.213	2.128	ND	ND
107-06-2	1,2-Dichloroethane	0.052	0.520	0.070	0.217	2.174	0.291	J
71-43-2	Benzene	0.052	0.520	ND	0.172	1.715	ND	ND
56-23-5	Carbon tetrachloride	0.051	0.510	ND	0.331	3.312	ND	ND
79-01-6	Trichloroethene	0.052	0.520	ND	0.289	2.885	ND	ND
75-27-4	Bromodichloromethane	0.034	0.340	ND	0.235	2.352	ND	ND
79-00-5	1,1,2-Trichloroethane	0.051	0.510	0.072	0.287	2.873	0.408	J
127-18-4	Tetrachloroethene	0.051	0.510	ND	0.357	3.571	ND	ND
108-38-3	m & p-Xylene	0.103	1.030	0.140	0.462	4.619	0.627	J
95-47-6	o-Xylene	0.051	0.510	0.062	0.229	2.287	0.279	J
79-34-5	1,1,2,2-Tetrachloroethane	0.051	0.510	ND	0.361	3.614	ND	ND
120-82-1	1,2,4-Trichlorobenzene	0.052	0.520	0.168	0.398	3.983	1.287	J
123-91-1	1,4 Dioxane	0.037	0.370	0.049	0.138	1.377	0.182	J
91-20-3	Naphthalene	0.107	1.070	ND	0.579	5.793	ND	ND

	Surrogate Recovery	Spike Amt. ppbV	Amount ppbV	% Rec.	QC Limits	Flag * = Out
2037-26-5	Toluene-d8	0.200	0.208	104	70-130	

Notes: 1) Reported results are to be interpreted to two significant figures.
2) ug/m3 = ppbV*FW/23.68 calculated assuming conditions at 60 F and 1 atm.
3) MDL and RL are adjusted for sample volume and can dilution.
4) U and ND are Flags used for Not Detected
5) J is a flag for a result between the MDL and the RL (or lower quantitation limit, LQL)

QUANTITATION REPORT

EPA Method TO-15 Modified SIM GC/MS

			Review	EAS Sample ID: B06259A	
File Name:	B06259A.D		_____		1 SS
Sample ID:	METHOD BLANK		_____		2 KB
Date:	25 Jun 109 12:32 pm		_____	Cal Amounts_____	3 AT
Run Method:	2EXSIM_I.M		_____	IS Areas_____	4 BB
Quant Method:	2EXSIM_I.M		_____	Carryover_____	5 SH
Cal Update:	Mon Jun 22 09:18:18 2009		_____		
Template:	EARTEXSM.MS3		_____		
Can Factor:	1.00		_____		
Volume:	100	ml		Analyst: SS 1	

CAS#	Compound	n	Raw Amount	RT	Target RT	Ion	Sample Area	Qualifier	Lower Qual	Upper Qual	Qual Flag	Cal Flag	Int Flag
75-01-4	Vinyl chloride	5	0.000	4.28	4.37	62.00	0	0	28	42			
75-35-4	1,1-Dichloroethene	9	0.002	6.95	6.95	61.00	580	44	37	56			
75-34-3	1,1-Dichloroethane	14	0.001	9.03	9.00	63.00	470	54	25	37			
156-59-2	cis-1,2-Dichloroethene	15	0.003	10.27	10.24	96.00	868	131	102	153			
107-06-2	1,2-Dichloroethane	19	0.007	12.07	12.02	61.95	7470	17	14	21			
71-43-2	Benzene	20	0.004	12.66	12.63	78.00	3606	20	16	23			
56-23-5	Carbon tetrachloride	21	0.001	12.68	12.66	116.90	570	86	79	119			
79-01-6	Trichloroethene	23	0.005	14.28	14.26	130.00	1514	103	75	112			
75-27-4	Bromodichloromethane	24	0.000	14.71	14.57	83.00	0	0	52	78			
79-00-5	1,1,2-Trichloroethane	28	0.007	17.37	17.35	97.00	3561	82	63	94			
127-18-4	Tetrachloroethene	30	0.005	19.11	19.09	166.00	1887	94	64	97			
108-38-3	m & p-Xylene	34	0.014	21.39	21.37	91.00	22603	43	42	63			
95-47-6	o-Xylene	36	0.006	22.36	22.34	91.00	12862	40	38	56			
79-34-5	1,1,2,2-Tetrachloroethane	37	0.000	22.93	22.93	83.00	0	0	8	12			
120-82-1	1,2,4-Trichlorobenzene	45	0.017	32.18	32.17	180.00	149960	97	79	118			
123-91-1	1,4 Dioxane	47	0.005	14.71	14.57	88.00	1384	81	55	82			
91-20-3	Naphthalene	48	0.007	32.57	32.78	128.00	196777	0	0	0			
3114-55-4	Chlorobenzene-d5	1	0.200	20.53	20.51	117.00	897982						
2037-26-5	Toluene-d8	16	0.208	17.08	17.05	98.00	397242						

Integration Flags:

If no flag the Integration was done by the instrument computer

M1 Manual Integration because the computer did not integrated the peak or integrated the wrong peak

M2 Manual Integration because computer integration of baseline was different then Inital Calibration

INITIAL CALIBRATION REPORT

EPA Method TO-15 Modified SIM GC/MS

File Name:	B06259A.D	SDG:	LABQC
Sample ID:	METHOD BLANK	QC_Batch:	062509-MS2
Sample Analysis Date:	25 Jun 109 12:32 pm	Instrument Name:	MS2
Run Method:	2EXSIM_I.M	Number Compounds:	49
Quant and Calibration Method:	2EXSIM_I.M	IS1: ST60024	0.2
Cal Update:	Mon Jun 22 09:18:18 2009	IS2:	
Template:	EARTEXSM.MS3	IS3:	
		IS4:	

Calibration Title: EPA T0-15

		Calibration Amount CA, ppmv						Calibration Response, Area					
		Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
		Amt	Amt	Amt	Amt	Amt	Amt	C06199B.D	C06199H.D	C06199A.D	C06199F.D	C06199E.D	C06199K.D
n	Compound	10.0	0.5	20.0	2.0	4.0	1.0	10.0	0.5	20.0	2.0	4.0	1.0
5	Vinyl chloride	1.040	0.052	2.080	0.208	0.416	0.104	184476	12222	596605	24865	140317	19936
9	1,1-Dichloroethene	1.040	0.052	2.080	0.208	0.416	0.104	388365	27969	1185798	47507	301017	40726
14	1,1-Dichloroethane	1.010	0.051	2.020	0.202	0.404	0.101	403912	31159	1225807	51920	327340	43151
15	cis-1,2-Dichloroethene	1.030	0.052	2.060	0.206	0.412	0.103	240146	21098	758337	35003	226396	27004
19	1,2-Dichloroethane	1.030	0.052	2.060	0.206	0.412	0.103	1236150	74052	4935278	125964	835756	97954
20	Benzene	1.030	0.052	2.060	0.206	0.412	0.103	967913	60686	3573129	94902	641363	73510
21	Carbon tetrachloride	1.020	0.051	2.040	0.204	0.408	0.102	492544	40672	1579809	67130	410007	53667
23	Trichloroethene	1.030	0.052	2.060	0.206	0.412	0.103	305786	29555	968228	45278	286372	33459
24	Bromodichloromethane	0.670	0.034	1.340	0.134	0.268	0.067	349165	34872	980125	57413	329960	43188
28	1,1,2-Trichloroethane	1.020	0.051	2.040	0.204	0.408	0.102	480870	37160	1655491	70973	441832	43484
30	Tetrachloroethene	1.020	0.051	2.040	0.204	0.408	0.102	373918	35806	1224836	58411	374447	38753
34	m & p-Xylene	2.060	0.103	4.120	0.412	0.824	0.206	2970894	279033	10312056	481458	2872586	284680
36	o-Xylene	1.020	0.051	2.040	0.204	0.408	0.102	1996168	168269	6920115	304155	1831287	166711
37	1,1,2,2-Tetrachloroethane	1.020	0.051	2.040	0.204	0.408	0.102	2273482	192188	6988630	401655	2300254	180334
45	1,2,4-Trichlorobenzene	1.030	0.052	2.060	0.206	0.412	0.103	6381826	918959	14261028	1761172	9410822	617532
47	1,4 Dioxane	0.740	0.037	1.480	0.148	0.296	0.074	154378	17449	450267	31614	179188	26330
48	Naphthalene	2.130	0.107	-1.000	0.426	0.852	0.213	34587722	6597377	-1	12354059	37178978	4780301
1	Chlorobenzene-d5	0.200	0.200	0.200	0.200	0.200	0.200	877690	1273169	1660044	554145	1807068	927887
16	Toluene-d8	0.200	0.200	0.200	0.200	0.200	0.200	389596	565545	652462	236781	753686	395034

(500)

INITIAL CALIBRATION REPORT: Response Factors

SDG:	**LABQC**
QC_Batch:	**062509-MS2**
Sample ID:	METHOD BLANK
Sample Analysis Date:	25 Jun 109 12:32 pm
Run Method:	2EXSIM_I.M
Quant Method:	2EXSIM_I.M
Cal Update:	Mon Jun 22 09:18:18 2009
Template:	EARTEXSM.MS3

Sample Calculation:

1) Avg RFn = Sum $\left| \frac{(Astdni)}{(Cstdnl)} \frac{(Cistdi)}{(Aistdi)} \right|_i$

Response Factors

Compound	RF1	RF2	RF3	RF4	RF5	RF6	AvgRFn	%RSD
Vinyl chloride	0.040	0.037	0.035	0.043	0.037	0.041	0.039	8.23
1,1-Dichloroethene	0.085	0.084	0.069	0.082	0.080	0.084	0.081	7.72
1,1-Dichloroethane	0.091	0.096	0.073	0.093	0.090	0.092	0.089	9.11
cis-1,2-Dichloroethene	0.053	0.064	0.044	0.061	0.061	0.057	0.057	12.56
1,2-Dichloroethane	0.273	0.224	0.289	0.221	0.225	0.205	0.239	13.97
Benzene	0.214	0.183	0.209	0.166	0.172	0.154	0.183	13.13
Carbon tetrachloride	0.110	0.125	0.093	0.119	0.111	0.113	0.112	9.60
Trichloroethene	0.068	0.089	0.057	0.079	0.077	0.070	0.073	15.26
Bromodichloromethane	0.119	0.161	0.088	0.155	0.136	0.139	0.133	19.96
1,1,2-Trichloroethane	0.107	0.114	0.098	0.126	0.120	0.092	0.109	11.85
Tetrachloroethene	0.084	0.110	0.072	0.103	0.102	0.082	0.092	16.20
m & p-Xylene	0.329	0.426	0.302	0.422	0.386	0.298	0.360	16.21
o-Xylene	0.446	0.518	0.409	0.538	0.497	0.352	0.460	15.46
1,1,2,2-Tetrachloroethane	0.508	0.592	0.413	0.711	0.624	0.381	0.538	23.70
1,2,4-Trichlorobenzene	1.412	2.776	0.834	3.086	2.528	1.292	1.988	46.46
1,4 Dioxane	0.048	0.074	0.037	0.077	0.067	0.077	0.063	27.03
Naphthalene	3.700	9.686	NA	10.467	4.830	4.837	6.704	46.62
Chlorobenzene-d5	1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.00
Toluene-d8	0.444	0.444	0.393	0.427	0.417	0.426	0.425	4.48

CALCULATIONS

EPA Method TO-15 Modified SIM GC/MS

SDG: LABQC
Laboratory Number: B06259

RL:	2EXSIM_I.M
Run Method:	2EXSIM_I.M
Quant Method:	2EXSIM_I.M
Can Dilution Factor:	1.00
Air Volume:	100 ml
Gas Constant:	23.68
Decimal Places:	3

Compound	M.W.	Raw Amount	Result ppbv	Result ug/m3	(1) MDL ppbv	(2) RL ppbv	Calc MDL ppbv	Calc MDL ug/m3	Calc RL ppbv	Calc RL ug/m3	Flag	S062602-1 Spike ppmv
Vinyl chloride	62.5	0.000	0.000	0.000	0.005	0.052	0.05	0.137	0.52	1.372	U	0.103
1,1-Dichloroethene	96.9	0.002	0.016	0.065	0.005	0.052	0.05	0.213	0.52	2.128	U	0.103
1,1-Dichloroethane	99.0	0.001	0.012	0.049	0.005	0.051	0.05	0.213	0.51	2.132	U	0.103
cis-1,2-Dichloroethene	96.9	0.003	0.034	0.140	0.005	0.052	0.05	0.213	0.52	2.128	U	0.103
1,2-Dichloroethane	99.0	0.007	0.070	0.291	0.005	0.052	0.05	0.217	0.52	2.174	J	0.103
Benzene	78.1	0.004	0.044	0.145	0.005	0.052	0.05	0.172	0.52	1.715	U	0.103
Carbon tetrachloride	153.8	0.001	0.011	0.074	0.005	0.051	0.05	0.331	0.51	3.312	U	0.103
Trichloroethene	131.4	0.005	0.046	0.255	0.005	0.052	0.05	0.289	0.52	2.885	U	0.103
Bromodichloromethane	163.8	0.000	0.000	0.000	0.003	0.034	0.03	0.235	0.34	2.352	U	0.103
1,1,2-Trichloroethane	133.4	0.007	0.072	0.408	0.005	0.051	0.05	0.287	0.51	2.873	J	0.103
Tetrachloroethene	165.8	0.005	0.046	0.319	0.005	0.051	0.05	0.357	0.51	3.571	U	0.103
m & p-Xylene	106.2	0.014	0.140	0.627	0.010	0.103	0.10	0.462	1.03	4.619	J	0.103
o-Xylene	106.2	0.006	0.062	0.279	0.005	0.051	0.05	0.229	0.51	2.287	J	0.103
1,1,2,2-Tetrachloroethane	167.8	0.000	0.000	0.000	0.005	0.051	0.05	0.361	0.51	3.614	U	0.103
1,2,4-Trichlorobenzene	181.4	0.017	0.168	1.287	0.005	0.052	0.05	0.398	0.52	3.983	J	0.103
1,4 Dioxane	88.1	0.005	0.049	0.182	0.004	0.037	0.04	0.138	0.37	1.377	J	1.103
Naphthalene	128.2	0.007	0.065	0.354	0.011	0.107	0.11	0.579	1.07	5.793	U	2.103

SAMPLE CALCULATION

EPA Method TO-15 Modified SIM GC/MS

SDG:		**LABQC**
Laboratory Number:		**B06259**
Standard Volume	STV	0.5
Sample Volume	SV	100
Can Dilution Factor	CDF	1.00
Gas Constant		23.68
Decimal Places:		3

Sample Calculation:

1) Avg RFn = Sum $\left| \frac{(Astdni)}{(Cstdni)} \frac{(Cistdi)}{(Aistdi)} \right|_i$ Note: 1

2) Raw Amt = $\frac{(Ansamp)}{(Avg\ RFn)} \frac{(Cistdi)}{(Aistdi)}$ = Cn

3) Amount ppbv = $\frac{(Raw\ Amt)\ 1000}{(SV)}$ (CDF) (STV)

4) Amount ug/m3 = $\frac{(amt(ppbv)\ MW}{23.68}$

n	Compound	IS n	Chem type	MW	AvgRFn	Area Ansamp	Cistdi ppmv	Aistdi Ais	Cn ppmV Raw Amt	Amount ppbv	Amount ug/m3
5	Vinyl chloride	1	TRG	62.5	0.039	0	0.200	897982	0.000	0.000	0.000
9	1,1-Dichloroethene	1	TRG	96.9	0.081	580	0.200	897982	0.002	0.016	0.065
14	1,1-Dichloroethane	1	TRG	99.0	0.089	470	0.200	897982	0.001	0.012	0.050
15	cis-1,2-Dichloroethene	1	TRG	96.9	0.057	868	0.200	897982	0.003	0.034	0.139
19	1,2-Dichloroethane	1	TRG	99.0	0.239	7470	0.200	897982	0.007	0.070	0.293
20	Benzene	1	TRG	78.1	0.183	3606	0.200	897982	0.004	0.044	0.145
21	Carbon tetrachloride	1	TRG	153.8	0.112	570	0.200	897982	0.001	0.011	0.071
23	Trichloroethene	1	TRG	131.4	0.073	1514	0.200	897982	0.005	0.046	0.255
24	Bromodichloromethane	1	TRG	163.8	0.133	0	0.200	897982	0.000	0.000	0.000
28	1,1,2-Trichloroethane	1	TRG	133.4	0.109	3561	0.200	897982	0.007	0.072	0.406
30	Tetrachloroethene	1	TRG	165.8	0.092	1887	0.200	897982	0.005	0.046	0.322
34	m & p-Xylene	1	TRG	106.2	0.360	22603	0.200	897982	0.014	0.140	0.628
36	o-Xylene	1	TRG	106.2	0.460	12862	0.200	897982	0.006	0.062	0.278
37	1,1,2,2-Tetrachloroethane	1	TRG	167.8	0.54	0	0.200	897982	0.000	0.000	0.000
45	1,2,4-Trichlorobenzene	1	TRG	181.4	1.99	149960	0.200	897982	0.017	0.168	1.287
47	1,4 Dioxane	1	TRG	88.1	0.06	1384	0.200	897982	0.005	0.049	0.182
48	Naphthalene	1	TRG	128.2	6.70	196777	0.200	897982	0.007	0.065	0.352
1	Chlorobenzene-d5	1	IS	0.0	1.000	897982	0.200	897982	0.000	0.000	0.000
16	Toluene-d8	1	SURR	0.0	0.425	397242	0.200	897982	0.000	0.000	0.000

Calculation Definitions:

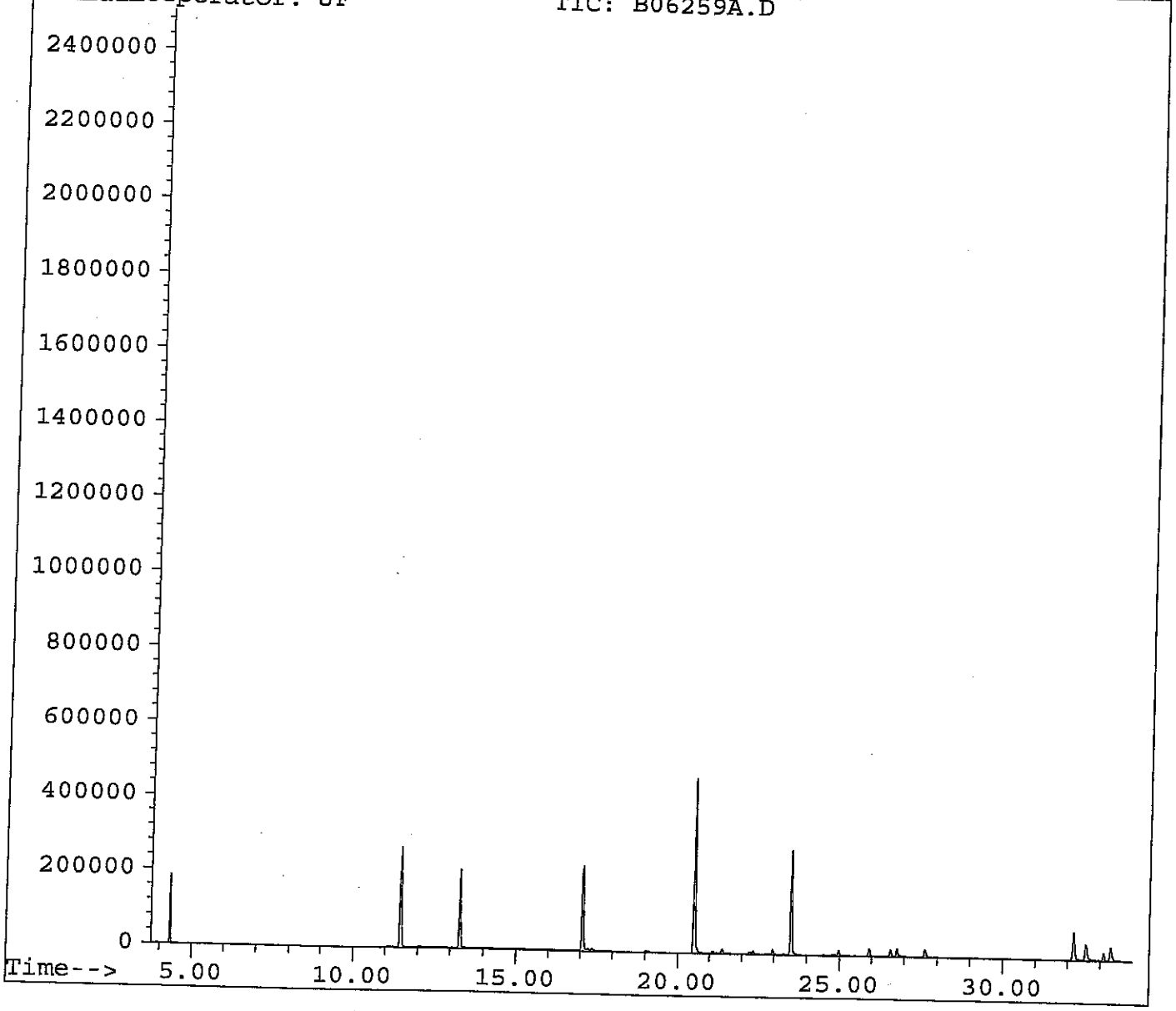
n	compound n
i	i th calibration level
Astdni	Standard Area for compound n at ith calibration level
Cstdni	Standard Concentration for compound n at ith calibration level in ppmv
Cistdi	Internal Standard Conc used for compound n at ith calibration level in ppmv
Aistdi	Internal Standard Area used for compound n at ith calibration level
Ansamp	Sample Area for compound n
Avg RFn	Average response factor for all ith calibration levels for compound n
Raw Amount	Sample Concentration in ppmv before applying factors
Cistd	Concentration internal standard used for compound n in sample in ppmv
Aistd	Area of internal standard used for compound n in sample
Cn	Concentration of compound n in sample in ppmv
23.68	Gas constant at 60 F as per EPA source test protocol
MW	Molecular weight of compound

Note (1) : Avg RFn — The values for the Average Response Factor AvgRFn can be optained from the response Factor Report for the Initial Calibration, or from the Calibration Report

Name of file: C:\HPCHEM\1\DATA\06259MS2\B06259A.D

Name of operator: JF

TIC: B06259A.D



QUALITY CONTROL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

LABORATORY CONTROL SPIKE

EPA Method TO-15 Modified SIM GC/MS
Analytical Method: TO-15 SIM

SDG: LABQC

File: QC06259A.D
Description: ST0623091
Can/Tube#:
Sam_Type: LCS
QC_Batch: 062509-MS2
Air Volume: 1000 ml

Date Sampled: NA
Date Received: NA
Date Extracted: NA
Date Analyzed: 06/25/09 **Time:** 10:53
Can Dilution Factor: 1.00 3
QC Duplicate: No

CAS#	Compound	MDL ppbv	Spike Conc ppbv	Amount ppbv	Matrix Amt ppbv	Spk Amt ppbv	Percent Recovery	LCL %	UCL %	Flag
74-87-3	Chloromethane	0.005	1.044	1.191	0.000	1.191	114	70	130	
75-01-4	Vinyl chloride	0.005	1.268	1.369	0.000	1.369	108	70	130	
74-83-9	Bromomethane	0.005	1.422	1.526	0.000	1.526	107	70	130	
75-35-4	1,1-Dichloroethene	0.005	1.275	1.401	0.000	1.401	110	70	130	
75-09-2	Dichloromethane	0.005	1.090	1.213	0.000	1.213	111	70	130	
75-34-3	1,1-Dichloroethane	0.005	1.159	1.272	0.000	1.272	110	70	130	
156-59-2	cis-1,2-Dichloroethene	0.005	0.966	1.049	0.000	1.049	109	70	130	
67-66-3	Chloroform	0.005	1.234	1.356	0.000	1.356	110	70	130	
71-55-6	1,1,1-Trichloroethane	0.005	1.150	1.283	0.000	1.283	112	70	130	
107-06-2	1,2-Dichloroethane	0.005	0.901	1.056	0.000	1.056	117	70	130	
71-43-2	Benzene	0.005	0.793	0.888	0.000	0.888	112	70	130	
56-23-5	Carbon tetrachloride	0.005	1.158	1.292	0.000	1.292	112	70	130	
78-87-5	1,2-Dichloropropane	0.005	0.976	1.116	0.000	1.116	114	70	130	
79-01-6	Trichloroethene	0.005	0.877	0.996	0.000	0.996	114	70	130	
108-88-3	Toluene	0.005	0.709	0.810	0.000	0.810	114	70	130	
79-00-5	1,1,2-Trichloroethane	0.005	0.710	0.826	0.000	0.826	116	70	130	
106-93-4	1,2-Dibromoethane	0.005	0.611	0.692	0.000	0.692	113	70	130	
127-18-4	Tetrachloroethene	0.005	0.779	0.886	0.000	0.886	114	70	130	
108-90-7	Chlorobenzene	0.005	0.634	0.720	0.000	0.720	114	70	130	
100-41-4	Ethylbenzene	0.005	0.649	0.754	0.000	0.754	116	70	130	
108-38-3	m & p-Xylene	0.010	1.346	1.575	0.000	1.575	117	70	130	
95-47-6	o-Xylene	0.005	0.594	0.702	0.000	0.702	118	70	130	

Surrogate Recovery	Spike Amt. ppbV	Amount ppbV	% Rec.	QC Limits	Flag * = Out
Toluene-d8	0.200	0.242	121	70-130	

Notes: Reported results are to be interpreted to two significant figures.
*ug/m3 calculated assuming conditions at 60 F and 1 atm.

QUANTITATION REPORT

EPA Method TO-15 Modified SIM GC/MS

			Review	EAS Sample ID: QC06259	
File Name:	QC06259A.D				1 SS
Sample ID:	ST0623091				2 KB
Date:	25 Jun 109 10:53 am			Cal Amounts	3 AT
Run Method:	2EXSIM_I.M			IS Areas	4 BB
Quant Method:	2EXSIM_I.M			Carryover	5 SH
Cal Update:	Mon Jun 22 09:18:18 2009				
Template:	EARTEXSM.MS3				
Can Factor:	1.00				
Volume:	1000	ml		Analyst: SS 1	

CAS#	Compound	n	Raw Amount	RT	Target RT	Ion	Sample Area	Qualifier	Lower Qual	Upper Qual	Qual Flag	Cal Flag	Int Flag
74-87-3	Chloromethane	3	1.191	4.12	4.12	50.00	294913	25	21	32			
75-01-4	Vinyl chloride	5	1.369	4.36	4.37	62.00	243533	34	28	42			
74-83-9	Bromomethane	6	1.526	4.96	4.97	94.00	260025	98	69	104			
75-35-4	1,1-Dichloroethene	9	1.401	6.92	6.95	61.00	517516	44	37	56			
75-09-2	Dichloromethane	11	1.213	7.40	7.42	84.00	227846	68	51	77			
75-34-3	1,1-Dichloroethane	14	1.272	8.99	9.00	63.00	517857	33	25	37			
156-59-2	cis-1,2-Dichloroethene	15	1.049	10.23	10.24	96.00	271480	162	102	153	Q		
67-66-3	Chloroform	17	1.356	10.64	10.66	83.00	728491	71	52	78			
71-55-6	1,1,1-Trichloroethane	18	1.283	11.88	11.91	97.00	762650	67	53	80			
107-06-2	1,2-Dichloroethane	19	1.056	12.02	12.02	61.95	1154062	19	14	21			
71-43-2	Benzene	20	0.888	12.63	12.63	78.00	742502	14	16	23	Q		
56-23-5	Carbon tetrachloride	21	1.292	12.66	12.66	116.90	660885	102	79	119			
78-87-5	1,2-Dichloropropane	22	1.116	14.18	14.20	63.00	314870	160	126	189			
79-01-6	Trichloroethene	23	0.996	14.26	14.26	130.00	333338	106	75	112			
108-88-3	Toluene	26	0.810	17.21	17.21	91.00	957747	67	53	80			
79-00-5	1,1,2-Trichloroethane	28	0.826	17.35	17.35	97.00	413132	73	63	94			
106-93-4	1,2-Dibromoethane	29	0.692	18.99	18.99	107.00	640633	101	76	114			
127-18-4	Tetrachloroethene	30	0.886	19.09	19.09	166.00	372744	87	64	97			
108-90-7	Chlorobenzene	31	0.720	20.61	20.59	112.00	855372	36	27	40			
100-41-4	Ethylbenzene	33	0.754	21.08	21.08	91.00	1632873	29	24	36			
108-38-3	m & p-Xylene	34	1.575	21.37	21.37	91.00	2590685	45	42	63			
95-47-6	o-Xylene	36	0.702	22.34	22.34	91.00	1475195	40	38	56			
3114-55-4	Chlorobenzene-d5	1	0.200	20.51	20.51	117.00	913449						
2037-26-5	Toluene-d8	16	0.242	17.05	17.05	98.00	470626						

Integration Flags:

If no flag the Integration was done by the instrument computer

M1 Manual Integration because the computer did not integrated the peak or integrated the wrong peak

M2 Manual Integration because computer integration of baseline was different then Inital Calibration

INITIAL CALIBRATION REPORT

EPA Method TO-15 Modified SIM GC/MS

File Name:	QC06259A.D	SDG:	LABQC
Sample ID:	ST0623091	QC_Batch:	062509-MS2
Sample Analysis Date:	25 Jun 109 10:53 am	Instrument Name:	MS2
Run Method:	2EXSIM_I.M	Number Compounds:	49
Quant and Calibration Method:	2EXSIM_I.M	IS1: ST60360	0.2
Cal Update:	Mon Jun 22 09:18:18 2009	IS2:	
Template:	EARTEXSM.MS3	IS3:	
		IS4:	

Calibration Title: EPA T0-15

		Calibration Amount CA, ppmv						Calibration Response, Area					
		Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
		Amt	Amt	Amt	Amt	Amt	Amt	C06199B.D	C06199H.D	C06199A.D	C06199F.D	C06199E.D	C06199K.D
n	Compound	10.0	0.5	20.0	2.0	4.0	1.0	10.0	0.5	20.0	2.0	4.0	1.0
3	Chloromethane	1.020	0.051	2.040	0.204	0.408	0.102	268477	16811	877342	29933	189687	27154
5	Vinyl chloride	1.040	0.052	2.080	0.208	0.416	0.104	184476	12222	596605	24865	140317	19936
6	Bromomethane	1.040	0.052	2.080	0.208	0.416	0.104	193900	12685	547447	21277	126567	19683
9	1,1-Dichloroethene	1.040	0.052	2.080	0.208	0.416	0.104	388365	27969	1185798	47507	301017	40726
11	Dichloromethane	1.040	0.052	2.080	0.208	0.416	0.104	180065	15163	530282	25781	167890	19971
14	1,1-Dichloroethane	1.010	0.051	2.020	0.202	0.404	0.101	403912	31159	1225807	51920	327340	43151
15	cis-1,2-Dichloroethene	1.030	0.052	2.060	0.206	0.412	0.103	240146	21098	758337	35003	226396	27004
17	Chloroform	1.020	0.051	2.040	0.204	0.408	0.102	510308	42620	1697577	69088	427372	57851
18	1,1,1-Trichloroethane	1.020	0.051	2.040	0.204	0.408	0.102	587705	46722	1955378	75018	469425	61727
19	1,2-Dichloroethane	1.030	0.052	2.060	0.206	0.412	0.103	1236150	74052	4935278	125964	835756	97954
20	Benzene	1.030	0.052	2.060	0.206	0.412	0.103	967913	60686	3573129	94902	641363	73510
21	Carbon tetrachloride	1.020	0.051	2.040	0.204	0.408	0.102	492544	40672	1579809	67130	410007	53667
22	1,2-Dichloropropane	1.030	0.052	2.060	0.206	0.412	0.103	280915	22034	957916	37485	236197	27080
23	Trichloroethene	1.030	0.052	2.060	0.206	0.412	0.103	305786	29555	968228	45278	286372	33459
26	Toluene	1.030	0.052	2.060	0.206	0.412	0.103	1260474	90214	4659514	149575	935329	102952
28	1,1,2-Trichloroethane	1.020	0.051	2.040	0.204	0.408	0.102	480870	37160	1655491	70973	441832	43484
29	1,2-Dibromoethane	1.040	0.052	2.080	0.208	0.416	0.104	915216	67709	3403871	130478	834780	79525
30	Tetrachloroethene	1.020	0.051	2.040	0.204	0.408	0.102	373918	35806	1224836	58411	374447	38753
31	Chlorobenzene	1.020	0.051	2.040	0.204	0.408	0.102	1017786	104021	3390004	174301	1040689	105228
33	Ethylbenzene	1.040	0.052	2.080	0.208	0.416	0.104	2140675	173953	7709871	303124	1882967	181776
34	m & p-Xylene	2.060	0.103	4.120	0.412	0.824	0.206	2970894	279033	10312056	481458	2872586	284680
36	o-Xylene	1.020	0.051	2.040	0.204	0.408	0.102	1996168	168269	6920115	304155	1831287	166711

(507)

n	Compound	Amt 10.0	Amt 0.5	Amt 20.0	Amt 2.0	Amt 4.0	Amt 1.0	C06199B.D 10.0	C06199H.D 0.5	C06199A.D 20.0	C06199F.D 2.0	C06199E.D 4.0	C06199K.D 1.0
1	Chlorobenzene-d5	0.200	0.200	0.200	0.200	0.200	0.200	877690	1273169	1660044	554145	1807068	927887
16	Toluene-d8	0.200	0.200	0.200	0.200	0.200	0.200	389596	565545	652462	236781	753686	395034

INITIAL CALIBRATION REPORT: Response Factors

SDG:	**LABQC**
QC_Batch:	**062509-MS2**
Sample ID:	ST0623091
Sample Analysis Date:	25 Jun 109 10:53 am
Run Method:	2EXSIM_I.M
Quant Method:	2EXSIM_I.M
Cal Update:	Mon Jun 22 09:18:18 2009
Template:	EARTEXSM.MS3

Sample Calculation:

1) Avg RFn = Sum $\left| \frac{(Astdni)}{(Cstdni)} \frac{(Cistdi)}{(Aistdi)} \right|_i$

Response Factors

Compound	RF1	RF2	RF3	RF4	RF5	RF6	AvgRFn	%RSD
Chloromethane	0.060	0.052	0.052	0.053	0.051	0.057	0.054	6.60
Vinyl chloride	0.040	0.037	0.035	0.043	0.037	0.041	0.039	8.23
Bromomethane	0.042	0.038	0.032	0.037	0.034	0.041	0.037	11.03
1,1-Dichloroethene	0.085	0.084	0.069	0.082	0.080	0.084	0.081	7.72
Dichloromethane	0.039	0.046	0.031	0.045	0.045	0.041	0.041	13.70
1,1-Dichloroethane	0.091	0.096	0.073	0.093	0.090	0.092	0.089	9.11
cis-1,2-Dichloroethene	0.053	0.064	0.044	0.061	0.061	0.057	0.057	12.56
Chloroform	0.114	0.131	0.100	0.122	0.116	0.122	0.118	8.89
1,1,1-Trichloroethane	0.131	0.144	0.115	0.133	0.127	0.130	0.130	7.04
1,2-Dichloroethane	0.273	0.224	0.289	0.221	0.225	0.205	0.239	13.97
Benzene	0.214	0.183	0.209	0.166	0.172	0.154	0.183	13.13
Carbon tetrachloride	0.110	0.125	0.093	0.119	0.111	0.113	0.112	9.60
1,2-Dichloropropane	0.062	0.067	0.056	0.066	0.063	0.057	0.062	7.25
Trichloroethene	0.068	0.089	0.057	0.079	0.077	0.070	0.073	15.26
Toluene	0.279	0.273	0.273	0.262	0.251	0.215	0.259	9.02
1,1,2-Trichloroethane	0.107	0.114	0.098	0.126	0.120	0.092	0.109	11.85
1,2-Dibromoethane	0.201	0.205	0.197	0.226	0.222	0.165	0.203	10.84
Tetrachloroethene	0.084	0.110	0.072	0.103	0.102	0.082	0.092	16.20
Chlorobenzene	0.227	0.320	0.200	0.308	0.282	0.222	0.260	19.25
Ethylbenzene	0.469	0.525	0.447	0.526	0.501	0.377	0.474	12.05
m & p-Xylene	0.329	0.426	0.302	0.422	0.386	0.298	0.360	16.21
o-Xylene	0.446	0.518	0.409	0.538	0.497	0.352	0.460	15.46
Chlorobenzene-d5	1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.00
Toluene-d8	0.444	0.444	0.393	0.427	0.417	0.426	0.425	4.48

CALCULATIONS

EPA Method TO-15 Modified SIM GC/MS

SDG: LABQC
Laboratory Number: QC06259

RL: 2EXSIM_I.M
Run Method: 2EXSIM_I.M
Quant Method: 2EXSIM_I.M
Can Dilution Factor: 1.00
Air Volume: 1000 ml
Gas Constant: 23.68
Decimal Places: 3

Compound	M.W.	Raw Amount	Result ppbv	Result ug/m3	(1) MDL ppbv	(2) RL ppbv	Calc MDL ppbv	Calc MDL ug/m3	Calc RL ppbv	Calc RL ug/m3	Flag	ST0623091 Spike ppmv
Chloromethane	50.5	1.191	1.191	2.539	0.005	0.051	0.01	0.011	0.05	0.109		1.044
Vinyl chloride	62.5	1.369	1.369	3.613	0.005	0.052	0.01	0.014	0.05	0.137		1.268
Bromomethane	94.9	1.526	1.526	6.114	0.005	0.052	0.01	0.021	0.05	0.208		1.422
1,1-Dichloroethene	96.9	1.401	1.401	5.734	0.005	0.052	0.01	0.021	0.05	0.213		1.275
Dichloromethane	84.9	1.213	1.213	4.349	0.005	0.052	0.01	0.019	0.05	0.186		1.090
1,1-Dichloroethane	99.0	1.272	1.272	5.319	0.005	0.051	0.01	0.021	0.05	0.213		1.159
cis-1,2-Dichloroethene	96.9	1.049	1.049	4.294	0.005	0.052	0.01	0.021	0.05	0.213		0.966
Chloroform	119.4	1.356	1.356	6.836	0.005	0.051	0.01	0.026	0.05	0.257		1.234
1,1,1-Trichloroethane	133.4	1.283	1.283	7.225	0.005	0.051	0.01	0.029	0.05	0.287		1.150
1,2-Dichloroethane	99.0	1.056	1.056	4.414	0.005	0.052	0.01	0.022	0.05	0.217		0.901
Benzene	78.1	0.888	0.888	2.928	0.005	0.052	0.01	0.017	0.05	0.172		0.793
Carbon tetrachloride	153.8	1.292	1.292	8.391	0.005	0.051	0.01	0.033	0.05	0.331		1.158
1,2-Dichloropropane	113.0	1.116	1.116	5.327	0.005	0.052	0.01	0.025	0.05	0.248		0.976
Trichloroethene	131.4	0.996	0.996	5.525	0.005	0.052	0.01	0.029	0.05	0.289		0.877
Toluene	92.1	0.810	0.810	3.152	0.005	0.052	0.01	0.020	0.05	0.202		0.709
1,1,2-Trichloroethane	133.4	0.826	0.826	4.654	0.005	0.051	0.01	0.029	0.05	0.287		0.710
1,2-Dibromoethane	187.9	0.692	0.692	5.494	0.005	0.052	0.01	0.041	0.05	0.413		0.611
Tetrachloroethene	165.8	0.886	0.886	6.200	0.005	0.051	0.01	0.036	0.05	0.357		0.779
Chlorobenzene	112.6	0.720	0.720	3.423	0.005	0.051	0.01	0.024	0.05	0.243		0.634
Ethylbenzene	106.2	0.754	0.754	3.382	0.005	0.052	0.01	0.023	0.05	0.233		0.649
m & p-Xylene	106.2	1.575	1.575	7.062	0.010	0.103	0.01	0.046	0.10	0.462		1.346
o-Xylene	106.2	0.702	0.702	3.149	0.005	0.051	0.01	0.023	0.05	0.229		0.594

SAMPLE CALCULATION

EPA Method TO-15 Modified SIM GC/MS

SDG:		**LABQC**
Laboratory Number:		**QC06259**
Standard Volume	STV	0.5
Sample Volume	SV	1000
Can Dilution Factor	CDF	1.00
Gas Constant		23.68
Decimal Places:		3

Sample Calculation:

1) Avg RFn = Sum $\left| \frac{(Astdni)}{(Cstdni)} \frac{(Cistdi)}{(Aistdi)} \right|_i$ Note: 1

2) Raw Amt = $\frac{(Ansamp)}{(Avg\ RFn)} \frac{(Cistdi)}{(Aistdi)}$ = Cn

3) Amount ppbv = (Raw Amt) $\frac{1000}{(SV)}$ (CDF) (STV)

4) Amount ug/m3 = (amt(ppbv) $\frac{MW}{23.68}$

n	Compound	IS n	Chem type	MW	AvgRFn	Area Ansamp	Cistdi ppmv	Aistdi Ais	Cn ppmV Raw Amt	Amount ppbv	Amount ug/m3
3	Chloromethane	1	TRG	50.5	0.054	294913	0.200	913449	1.191	1.191	2.540
5	Vinyl chloride	1	TRG	62.5	0.039	243533	0.200	913449	1.369	1.369	3.613
6	Bromomethane	1	TRG	94.9	0.037	260025	0.200	913449	1.526	1.526	6.116
9	1,1-Dichloroethene	1	TRG	96.9	0.081	517516	0.200	913449	1.401	1.401	5.733
11	Dichloromethane	1	TRG	84.9	0.041	227846	0.200	913449	1.213	1.213	4.349
14	1,1-Dichloroethane	1	TRG	99.0	0.089	517857	0.200	913449	1.272	1.272	5.318
15	cis-1,2-Dichloroethene	1	TRG	96.9	0.057	271480	0.200	913449	1.049	1.049	4.293
17	Chloroform	1	TRG	119.4	0.118	728491	0.200	913449	1.356	1.356	6.837
18	1,1,1-Trichloroethane	1	TRG	133.4	0.130	762650	0.200	913449	1.283	1.283	7.228
19	1,2-Dichloroethane	1	TRG	99.0	0.239	1154062	0.200	913449	1.056	1.056	4.415
20	Benzene	1	TRG	78.1	0.183	742502	0.200	913449	0.888	0.888	2.929
21	Carbon tetrachloride	1	TRG	153.8	0.112	660885	0.200	913449	1.292	1.292	8.391
22	1,2-Dichloropropane	1	TRG	113.0	0.062	314870	0.200	913449	1.116	1.116	5.326
23	Trichloroethene	1	TRG	131.4	0.073	333338	0.200	913449	0.996	0.996	5.527
26	Toluene	1	TRG	92.1	0.259	957747	0.200	913449	0.810	0.810	3.150
28	1,1,2-Trichloroethane	1	TRG	133.4	0.109	413132	0.200	913449	0.826	0.826	4.653
29	1,2-Dibromoethane	1	TRG	187.9	0.203	640633	0.200	913449	0.692	0.692	5.491
30	Tetrachloroethene	1	TRG	165.8	0.092	372744	0.200	913449	0.886	0.886	6.203
31	Chlorobenzene	1	TRG	112.6	0.260	855372	0.200	913449	0.720	0.720	3.424
33	Ethylbenzene	1	TRG	106.2	0.474	1632873	0.200	913449	0.754	0.754	3.382
34	m & p-Xylene	1	TRG	106.2	0.360	2590685	0.200	913449	1.575	1.575	7.064
36	o-Xylene	1	TRG	106.2	0.460	1475195	0.200	913449	0.702	0.702	3.148
1	Chlorobenzene-d5	1	IS	0.0	1.000	913449	0.200	913449	0.000	0.000	0.000
16	Toluene-d8	1	SURR	0.0	0.425	470626	0.200	913449	0.000	0.000	0.000

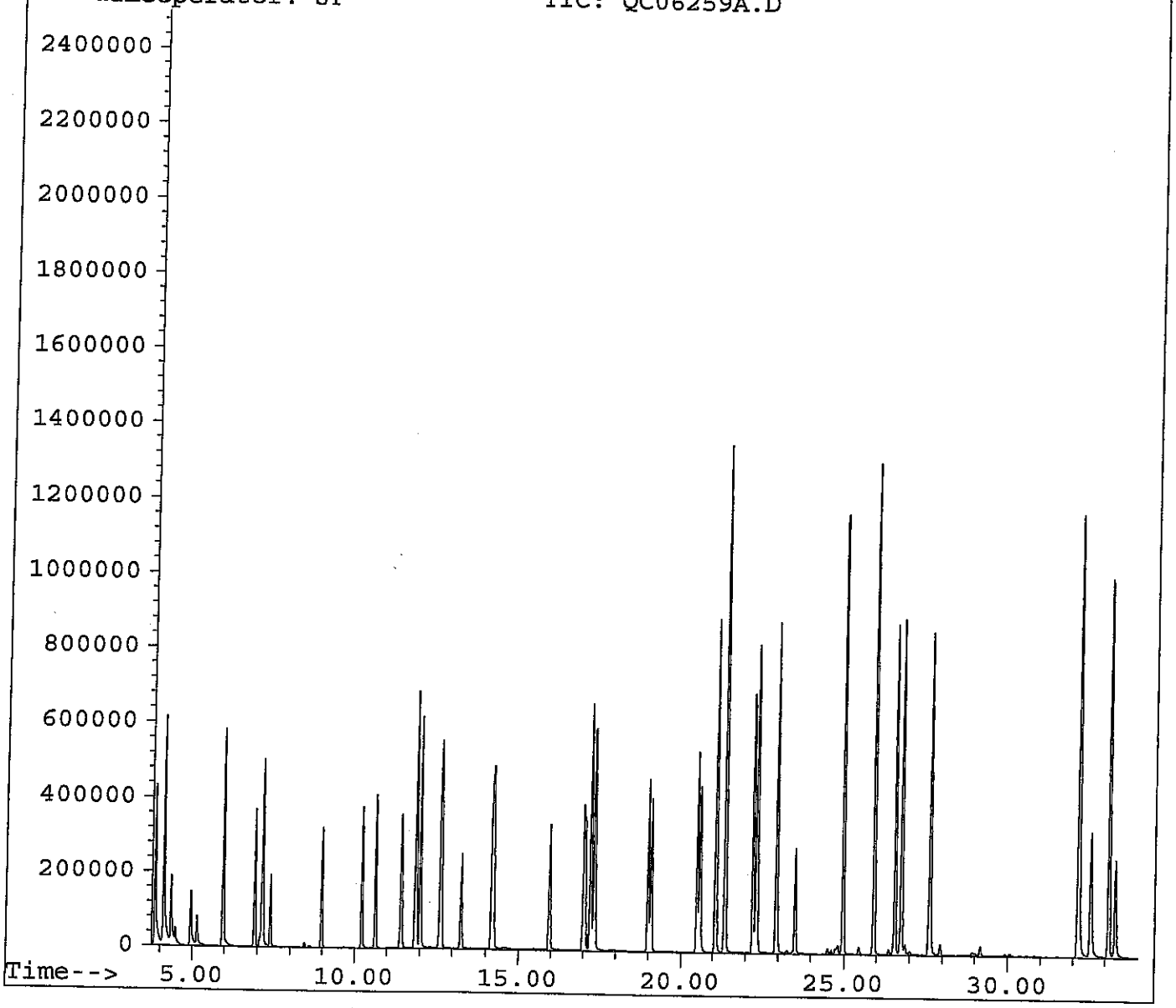
Calculation Definitions:

n	compound n
i	i th calibration level
Astdni	Standard Area for compound n at ith calibration level
Cstdni	Standard Concentration for compound n at ith calibration level in ppmv
Cistdi	Internal Standard Conc used for compound n at ith calibration level in ppmv
Aistdi	Internal Standard Area used for compound n at ith calibration level
Ansamp	Sample Area for compound n
Avg RFn	Average response factor for all ith calibration levels for compound n
Raw Amount	Sample Concentration in ppmv before applying factors
Cistd	Concentration internal standard used for compound n in sample in ppmv
Aistd	Area of internal standard used for compound n in sample
Cn	Concentration of compound n in sample in ppmv
23.68	Gas constant at 60 F as per EPA source test protocol
MW	Molecular weight of compound
Note (1) : Avg RFn	The values for the Average Response Factor AvgRFn can be optained from the response Factor Report for the Initial Calibration, or from the Calibration Report

Name of file: C:\HPCHEM\1\DATA\06259MS2\QC06259A.D

Name of operator: JF

TIC: QC06259A.D



QUALITY CONTROL DUPLICATE

ENVIRONMENTAL
Analytical Service, Inc.

Duplicate of QC Sample

EPA Method TO-15 Modified SIM GC/MS
Analytical Method: **TO-15 SIM**

SDG: LABQC

Dup File: QC06259B.D
Description: ST0623091
Can/Tube#:
QC_Batch: 062509-MS2

CAS#	Compound	LCD ppbv	LCS ppbv	RPD %D	Limit %	Flag * = Out
74-87-3	Chloromethane	1.149	1.191	4	25	
75-01-4	Vinyl chloride	1.358	1.369	1	25	
74-83-9	Bromomethane	1.519	1.526	0	25	
75-35-4	1,1-Dichloroethene	1.401	1.401	0	25	
75-09-2	Dichloromethane	1.197	1.213	1	25	
75-34-3	1,1-Dichloroethane	1.274	1.272	0	25	
156-59-2	cis-1,2-Dichloroethene	1.026	1.049	2	25	
67-66-3	Chloroform	1.366	1.356	1	25	
71-55-6	1,1,1-Trichloroethane	1.262	1.283	2	25	
107-06-2	1,2-Dichloroethane	0.976	1.056	9	25	
71-43-2	Benzene	0.855	0.888	4	25	
56-23-5	Carbon tetrachloride	1.261	1.292	3	25	
78-87-5	1,2-Dichloropropane	1.046	1.116	7	25	
79-01-6	Trichloroethene	0.919	0.996	9	25	
108-88-3	Toluene	0.741	0.810	10	25	
79-00-5	1,1,2-Trichloroethane	0.726	0.826	14	25	
106-93-4	1,2-Dibromoethane	0.604	0.692	14	25	
127-18-4	Tetrachloroethene	0.809	0.886	10	25	
108-90-7	Chlorobenzene	0.633	0.720	14	25	
100-41-4	Ethylbenzene	0.660	0.754	14	25	
108-38-3	m & p-Xylene	1.372	1.575	15	25	
95-47-6	o-Xylene	0.600	0.702	17	25	

QUALITY CONTROL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

LABORATORY CONTROL DUPLICATE

EPA Method TO-15 Modified SIM GC/MS **SDG: LABQC**
Analytical Method: **TO-15 SIM**

File: QC06259B.D
Description: ST0623091
Can/Tube#:
Sam_Type: LCD
QC_Batch: 062509-MS2
Air Volume: 1000 ml

Date Sampled: NA
Date Received: NA
Date Extracted: NA
Date Analyzed: 06/25/09 **Time:** 11:39
Can Dilution Factor: 1.00 3
QC Duplicate: Yes

CAS#	Compound	MDL ppbv	Spike Conc ppbv	Amount ppbv	Matrix Amt ppbv	Spk Amt ppbv	Percent Recovery	LCL %	UCL %	Flag
74-87-3	Chloromethane	0.005	1.044	1.149	0.000	1.149	110	70	130	
75-01-4	Vinyl chloride	0.005	1.268	1.358	0.000	1.358	107	70	130	
74-83-9	Bromomethane	0.005	1.422	1.519	0.000	1.519	107	70	130	
75-35-4	1,1-Dichloroethene	0.005	1.275	1.401	0.000	1.401	110	70	130	
75-09-2	Dichloromethane	0.005	1.090	1.197	0.000	1.197	110	70	130	
75-34-3	1,1-Dichloroethane	0.005	1.159	1.274	0.000	1.274	110	70	130	
156-59-2	cis-1,2-Dichloroethene	0.005	0.966	1.026	0.000	1.026	106	70	130	
67-66-3	Chloroform	0.005	1.234	1.366	0.000	1.366	111	70	130	
71-55-6	1,1,1-Trichloroethane	0.005	1.150	1.262	0.000	1.262	110	70	130	
107-06-2	1,2-Dichloroethane	0.005	0.901	0.976	0.000	0.976	108	70	130	
71-43-2	Benzene	0.005	0.793	0.855	0.000	0.855	108	70	130	
56-23-5	Carbon tetrachloride	0.005	1.158	1.261	0.000	1.261	109	70	130	
78-87-5	1,2-Dichloropropane	0.005	0.976	1.046	0.000	1.046	107	70	130	
79-01-6	Trichloroethene	0.005	0.877	0.919	0.000	0.919	105	70	130	
108-88-3	Toluene	0.005	0.709	0.741	0.000	0.741	105	70	130	
79-00-5	1,1,2-Trichloroethane	0.005	0.710	0.726	0.000	0.726	102	70	130	
106-93-4	1,2-Dibromoethane	0.005	0.611	0.604	0.000	0.604	99	70	130	
127-18-4	Tetrachloroethene	0.005	0.779	0.809	0.000	0.809	104	70	130	
108-90-7	Chlorobenzene	0.005	0.634	0.633	0.000	0.633	100	70	130	
100-41-4	Ethylbenzene	0.005	0.649	0.660	0.000	0.660	102	70	130	
108-38-3	m & p-Xylene	0.010	1.346	1.372	0.000	1.372	102	70	130	
95-47-6	o-Xylene	0.005	0.594	0.600	0.000	0.600	101	70	130	

Surrogate Recovery	Spike Amt. ppbV	Amount ppbV	% Rec.	QC Limits	Flag * = Out
Toluene-d8	0.200	0.229	115	70-130	

Notes: Reported results are to be interpreted to two significant figures.
*ug/m3 calculated assuming conditions at 60 F and 1 atm.

QUANTITATION REPORT

EPA Method TO-15 Modified SIM GC/MS

Review **EAS Sample ID: QC06259**

File Name: QC06259B.D
Sample ID: ST0623091
Date: 25 Jun 109 11:39 am
Run Method: 2EXSIM_I.M
Quant Method: 2EXSIM_I.M
Cal Update: Mon Jun 22 09:18:18 2009
Template: EARTEXSM.MS3
Can Factor: 1.00
Volume: 1000 ml

Cal Amounts
IS Areas
Carryover

1 SS
2 KB
3 AT
4 BB
5 SH

Analyst: SS 1

CAS#	Compound	n	Raw Amount	RT	Target RT	Ion	Sample Area	Qualifier	Lower Qual	Upper Qual	Qual Flag	Cal Flag	Int Flag
74-87-3	Chloromethane	3	1.149	4.16	4.12	50.00	230709	24	21	32			
75-01-4	Vinyl chloride	5	1.358	4.42	4.37	62.00	195709	33	28	42			
74-83-9	Bromomethane	6	1.519	5.02	4.97	94.00	209850	93	69	104			
75-35-4	1,1-Dichloroethene	9	1.401	7.01	6.95	61.00	419218	43	37	56			
75-09-2	Dichloromethane	11	1.197	7.48	7.42	84.00	182263	67	51	77			
75-34-3	1,1-Dichloroethane	14	1.274	9.08	9.00	63.00	420391	34	25	37			
156-59-2	cis-1,2-Dichloroethene	15	1.026	10.30	10.24	96.00	215177	157	102	153	Q		
67-66-3	Chloroform	17	1.366	10.72	10.66	83.00	594855	71	52	78			
71-55-6	1,1,1-Trichloroethane	18	1.262	11.94	11.91	97.00	608125	65	53	80			
107-06-2	1,2-Dichloroethane	19	0.976	12.07	12.02	61.95	864691	17	14	21			
71-43-2	Benzene	20	0.855	12.68	12.63	78.00	579496	15	16	23	Q		
56-23-5	Carbon tetrachloride	21	1.261	12.71	12.66	116.90	522605	102	79	119			
78-87-5	1,2-Dichloropropane	22	1.046	14.23	14.20	63.00	239061	159	126	189			
79-01-6	Trichloroethene	23	0.919	14.28	14.26	130.00	249356	97	75	112			
108-88-3	Toluene	26	0.741	17.27	17.21	91.00	709626	71	53	80			
79-00-5	1,1,2-Trichloroethane	28	0.726	17.37	17.35	97.00	294206	76	63	94			
106-93-4	1,2-Dibromoethane	29	0.604	19.01	18.99	107.00	453217	99	76	114			
127-18-4	Tetrachloroethene	30	0.809	19.11	19.09	166.00	276107	88	64	97			
108-90-7	Chlorobenzene	31	0.633	20.61	20.59	112.00	609586	34	27	40			
100-41-4	Ethylbenzene	33	0.660	21.10	21.08	91.00	1157786	31	24	36			
108-38-3	m & p-Xylene	34	1.372	21.39	21.37	91.00	1829895	47	42	63			
95-47-6	o-Xylene	36	0.600	22.36	22.34	91.00	1021215	44	38	56			
3114-55-4	Chlorobenzene-d5	1	0.200	20.53	20.51	117.00	740290						
2037-26-5	Toluene-d8	16	0.229	17.08	17.05	98.00	360897						

Integration Flags:

If no flag the Integration was done by the instrument computer

M1 Manual Integration because the computer did not integrated the peak or integrated the wrong peak

M2 Manual Integration because computer integration of baseline was different then Inital Calibration

INITIAL CALIBRATION REPORT

EPA Method TO-15 Modified SIM GC/MS

File Name:	QC06259B.D	SDG:	LABQC
Sample ID:	ST0623091	QC_Batch:	062509-MS2
Sample Analysis Date:	25 Jun 109 11:39 am	Instrument Name:	MS2
Run Method:	2EXSIM_I.M	Number Compounds:	49
Quant and Calibration Method:	2EXSIM_I.M	IS1:	ST60360 0.2
Cal Update:	Mon Jun 22 09:18:18 2009	IS2:	
Template:	EARTEXSM.MS3	IS3:	
		IS4:	

Calibration Title:EPA T0-15

		Calibration Amount CA, ppmv						Calibration Response, Area					
		Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
		Amt	Amt	Amt	Amt	Amt	Amt	C06199B.D	C06199H.D	C06199A.D	C06199F.D	C06199E.D	C06199K.D
n	Compound	10.0	0.5	20.0	2.0	4.0	1.0	10.0	0.5	20.0	2.0	4.0	1.0
3	Chloromethane	1.020	0.051	2.040	0.204	0.408	0.102	268477	16811	877342	29933	189687	27154
5	Vinyl chloride	1.040	0.052	2.080	0.208	0.416	0.104	184476	12222	596605	24865	140317	19936
6	Bromomethane	1.040	0.052	2.080	0.208	0.416	0.104	193900	12685	547447	21277	126567	19683
9	1,1-Dichloroethene	1.040	0.052	2.080	0.208	0.416	0.104	388365	27969	1185798	47507	301017	40726
11	Dichloromethane	1.040	0.052	2.080	0.208	0.416	0.104	180065	15163	530282	25781	167890	19971
14	1,1-Dichloroethane	1.010	0.051	2.020	0.202	0.404	0.101	403912	31159	1225807	51920	327340	43151
15	cis-1,2-Dichloroethene	1.030	0.052	2.060	0.206	0.412	0.103	240146	21098	758337	35003	226396	27004
17	Chloroform	1.020	0.051	2.040	0.204	0.408	0.102	510308	42620	1697577	69088	427372	57851
18	1,1,1-Trichloroethane	1.020	0.051	2.040	0.204	0.408	0.102	587705	46722	1955378	75018	469425	61727
19	1,2-Dichloroethane	1.030	0.052	2.060	0.206	0.412	0.103	1236150	74052	4935278	125964	835756	97954
20	Benzene	1.030	0.052	2.060	0.206	0.412	0.103	967913	60686	3573129	94902	641363	73510
21	Carbon tetrachloride	1.020	0.051	2.040	0.204	0.408	0.102	492544	40672	1579809	67130	410007	53667
22	1,2-Dichloropropane	1.030	0.052	2.060	0.206	0.412	0.103	280915	22034	957916	37485	236197	27080
23	Trichloroethene	1.030	0.052	2.060	0.206	0.412	0.103	305786	29555	968228	45278	286372	33459
26	Toluene	1.030	0.052	2.060	0.206	0.412	0.103	1260474	90214	4659514	149575	935329	102952
28	1,1,2-Trichloroethane	1.020	0.051	2.040	0.204	0.408	0.102	480870	37160	1655491	70973	441832	43484
29	1,2-Dibromoethane	1.040	0.052	2.080	0.208	0.416	0.104	915216	67709	3403871	130478	834780	79525
30	Tetrachloroethene	1.020	0.051	2.040	0.204	0.408	0.102	373918	35806	1224836	58411	374447	38753
31	Chlorobenzene	1.020	0.051	2.040	0.204	0.408	0.102	1017786	104021	3390004	174301	1040689	105228
33	Ethylbenzene	1.040	0.052	2.080	0.208	0.416	0.104	2140675	173953	7709871	303124	1882967	181776
34	m & p-Xylene	2.060	0.103	4.120	0.412	0.824	0.206	2970894	279033	10312056	481458	2872586	284680
36	o-Xylene	1.020	0.051	2.040	0.204	0.408	0.102	1996168	168269	6920115	304155	1831287	166711

n	Compound	Amt 10.0	Amt 0.5	Amt 20.0	Amt 2.0	Amt 4.0	Amt 1.0	C06199B.D 10.0	C06199H.D 0.5	C06199A.D 20.0	C06199F.D 2.0	C06199E.D 4.0	C06199K.D 1.0
1	Chlorobenzene-d5	0.200	0.200	0.200	0.200	0.200	0.200	877690	1273169	1660044	554145	1807068	927887
16	Toluene-d8	0.200	0.200	0.200	0.200	0.200	0.200	389596	565545	652462	236781	753686	395034

(517)

INITIAL CALIBRATION REPORT: Response Factors

SDG:	**LABQC**
QC_Batch:	**062509-MS2**
Sample ID:	ST0623091
Sample Analysis Date:	25 Jun 109 11:39 am
Run Method:	2EXSIM_I.M
Quant Method:	2EXSIM_I.M
Cal Update:	Mon Jun 22 09:18:18 2009
Template:	EARTEXSM.MS3

Sample Calculation:

1) Avg RFn = Sum $\left| \frac{(Astdni)}{(Cstdni)} \frac{(Cistdi)}{(Aistdi)} \right|_i$

Response Factors

Compound	RF1	RF2	RF3	RF4	RF5	RF6	AvgRFn	%RSD
Chloromethane	0.060	0.052	0.052	0.053	0.051	0.057	0.054	6.60
Vinyl chloride	0.040	0.037	0.035	0.043	0.037	0.041	0.039	8.23
Bromomethane	0.042	0.038	0.032	0.037	0.034	0.041	0.037	11.03
1,1-Dichloroethene	0.085	0.084	0.069	0.082	0.080	0.084	0.081	7.72
Dichloromethane	0.039	0.046	0.031	0.045	0.045	0.041	0.041	13.70
1,1-Dichloroethane	0.091	0.096	0.073	0.093	0.090	0.092	0.089	9.11
cis-1,2-Dichloroethene	0.053	0.064	0.044	0.061	0.061	0.057	0.057	12.56
Chloroform	0.114	0.131	0.100	0.122	0.116	0.122	0.118	8.89
1,1,1-Trichloroethane	0.131	0.144	0.115	0.133	0.127	0.130	0.130	7.04
1,2-Dichloroethane	0.273	0.224	0.289	0.221	0.225	0.205	0.239	13.97
Benzene	0.214	0.183	0.209	0.166	0.172	0.154	0.183	13.13
Carbon tetrachloride	0.110	0.125	0.093	0.119	0.111	0.113	0.112	9.60
1,2-Dichloropropane	0.062	0.067	0.056	0.066	0.063	0.057	0.062	7.25
Trichloroethene	0.068	0.089	0.057	0.079	0.077	0.070	0.073	15.26
Toluene	0.279	0.273	0.273	0.262	0.251	0.215	0.259	9.02
1,1,2-Trichloroethane	0.107	0.114	0.098	0.126	0.120	0.092	0.109	11.85
1,2-Dibromoethane	0.201	0.205	0.197	0.226	0.222	0.165	0.203	10.84
Tetrachloroethene	0.084	0.110	0.072	0.103	0.102	0.082	0.092	16.20
Chlorobenzene	0.227	0.320	0.200	0.308	0.282	0.222	0.260	19.25
Ethylbenzene	0.469	0.525	0.447	0.526	0.501	0.377	0.474	12.05
m & p-Xylene	0.329	0.426	0.302	0.422	0.386	0.298	0.360	16.21
o-Xylene	0.446	0.518	0.409	0.538	0.497	0.352	0.460	15.46
Chlorobenzene-d5	1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.00
Toluene-d8	0.444	0.444	0.393	0.427	0.417	0.426	0.425	4.48

CALCULATIONS

EPA Method TO-15 Modified SIM GC/MS

SDG: LABQC
Laboratory Number: QC06259

RL:	2EXSIM_I.M
Run Method:	2EXSIM_I.M
Quant Method:	2EXSIM_I.M
Can Dilution Factor:	1.00
Air Volume:	1000 ml
Gas Constant:	23.68
Decimal Places:	3

Compound	M.W.	Raw Amount	Result ppbv	Result ug/m3	(1) MDL ppbv	(2) RL ppbv	Calc MDL ppbv	Calc MDL ug/m3	Calc RL ppbv	Calc RL ug/m3	Flag	ST0623091 Spike ppmv
Chloromethane	50.5	1.149	1.149	2.451	0.005	0.051	0.01	0.011	0.05	0.109		1.044
Vinyl chloride	62.5	1.358	1.358	3.583	0.005	0.052	0.01	0.014	0.05	0.137		1.268
Bromomethane	94.9	1.519	1.519	6.089	0.005	0.052	0.01	0.021	0.05	0.208		1.422
1,1-Dichloroethene	96.9	1.401	1.401	5.731	0.005	0.052	0.01	0.021	0.05	0.213		1.275
Dichloromethane	84.9	1.197	1.197	4.293	0.005	0.052	0.01	0.019	0.05	0.186		1.090
1,1-Dichloroethane	99.0	1.274	1.274	5.328	0.005	0.051	0.01	0.021	0.05	0.213		1.159
cis-1,2-Dichloroethene	96.9	1.026	1.026	4.200	0.005	0.052	0.01	0.021	0.05	0.213		0.966
Chloroform	119.4	1.366	1.366	6.887	0.005	0.051	0.01	0.026	0.05	0.257		1.234
1,1,1-Trichloroethane	133.4	1.262	1.262	7.109	0.005	0.051	0.01	0.029	0.05	0.287		1.150
1,2-Dichloroethane	99.0	0.976	0.976	4.081	0.005	0.052	0.01	0.022	0.05	0.217		0.901
Benzene	78.1	0.855	0.855	2.819	0.005	0.052	0.01	0.017	0.05	0.172		0.793
Carbon tetrachloride	153.8	1.261	1.261	8.188	0.005	0.051	0.01	0.033	0.05	0.331		1.158
1,2-Dichloropropane	113.0	1.046	1.046	4.991	0.005	0.052	0.01	0.025	0.05	0.248		0.976
Trichloroethene	131.4	0.919	0.919	5.099	0.005	0.052	0.01	0.029	0.05	0.289		0.877
Toluene	92.1	0.741	0.741	2.881	0.005	0.052	0.01	0.020	0.05	0.202		0.709
1,1,2-Trichloroethane	133.4	0.726	0.726	4.089	0.005	0.051	0.01	0.029	0.05	0.287		0.710
1,2-Dibromoethane	187.9	0.604	0.604	4.796	0.005	0.052	0.01	0.041	0.05	0.413		0.611
Tetrachloroethene	165.8	0.809	0.809	5.667	0.005	0.051	0.01	0.036	0.05	0.357		0.779
Chlorobenzene	112.6	0.633	0.633	3.010	0.005	0.051	0.01	0.024	0.05	0.243		0.634
Ethylbenzene	106.2	0.660	0.660	2.959	0.005	0.052	0.01	0.023	0.05	0.233		0.649
m & p-Xylene	106.2	1.372	1.372	6.155	0.010	0.103	0.01	0.046	0.10	0.462		1.346
o-Xylene	106.2	0.600	0.600	2.690	0.005	0.051	0.01	0.023	0.05	0.229		0.594

SAMPLE CALCULATION

EPA Method TO-15 Modified SIM GC/MS

SDG:		**LABQC**
Laboratory Number:		**QC06259**
Standard Volume	STV	0.5
Sample Volume	SV	1000
Can Dilution Factor	CDF	1.00
Gas Constant		23.68
Decimal Places:		3

Sample Calculation:

1) Avg RFn = Sum $\left| \frac{(Astdni)}{(Cstdni)} \frac{(Cistdi)}{(Aistdi)} \right|_i$ Note: 1

2) Raw Amt = $\frac{(Ansamp)}{(Avg\ RFn)} \frac{(Cistdi)}{(Aistdi)}$ = Cn

3) Amount ppbv = $\frac{(Raw\ Amt)}{} \frac{1000}{(SV)} (CDF) (STV)$

4) Amount ug/m3 = $\frac{(amt(ppbv)}{} \frac{MW}{23.68}$

n	Compound	IS n	Chem type	MW	AvgRFn	Area Ansamp	Cistdi ppmv	Aistdi Ais	Cn ppmV Raw Amt	Amount ppbv	Amount ug/m3
3	Chloromethane	1	TRG	50.5	0.054	230709	0.200	740290	1.149	1.149	2.450
5	Vinyl chloride	1	TRG	62.5	0.039	195709	0.200	740290	1.358	1.358	3.584
6	Bromomethane	1	TRG	94.9	0.037	209850	0.200	740290	1.519	1.519	6.088
9	1,1-Dichloroethene	1	TRG	96.9	0.081	419218	0.200	740290	1.401	1.401	5.733
11	Dichloromethane	1	TRG	84.9	0.041	182263	0.200	740290	1.197	1.197	4.292
14	1,1-Dichloroethane	1	TRG	99.0	0.089	420391	0.200	740290	1.274	1.274	5.326
15	cis-1,2-Dichloroethene	1	TRG	96.9	0.057	215177	0.200	740290	1.026	1.026	4.198
17	Chloroform	1	TRG	119.4	0.118	594855	0.200	740290	1.366	1.366	6.888
18	1,1,1-Trichloroethane	1	TRG	133.4	0.130	608125	0.200	740290	1.262	1.262	7.109
19	1,2-Dichloroethane	1	TRG	99.0	0.239	864691	0.200	740290	0.976	0.976	4.080
20	Benzene	1	TRG	78.1	0.183	579496	0.200	740290	0.855	0.855	2.820
21	Carbon tetrachloride	1	TRG	153.8	0.112	522605	0.200	740290	1.261	1.261	8.190
22	1,2-Dichloropropane	1	TRG	113.0	0.062	239061	0.200	740290	1.046	1.046	4.991
23	Trichloroethene	1	TRG	131.4	0.073	249356	0.200	740290	0.919	0.919	5.100
26	Toluene	1	TRG	92.1	0.259	709626	0.200	740290	0.741	0.741	2.882
28	1,1,2-Trichloroethane	1	TRG	133.4	0.109	294206	0.200	740290	0.726	0.726	4.090
29	1,2-Dibromoethane	1	TRG	187.9	0.203	453217	0.200	740290	0.604	0.604	4.793
30	Tetrachloroethene	1	TRG	165.8	0.092	276107	0.200	740290	0.809	0.809	5.664
31	Chlorobenzene	1	TRG	112.6	0.260	609586	0.200	740290	0.633	0.633	3.010
33	Ethylbenzene	1	TRG	106.2	0.474	1157786	0.200	740290	0.660	0.660	2.960
34	m & p-Xylene	1	TRG	106.2	0.360	1829895	0.200	740290	1.372	1.372	6.153
36	o-Xylene	1	TRG	106.2	0.460	1021215	0.200	740290	0.600	0.600	2.691
1	Chlorobenzene-d5	1	IS	0.0	1.000	740290	0.200	740290	0.000	0.000	0.000
16	Toluene-d8	1	SURR	0.0	0.425	360897	0.200	740290	0.000	0.000	0.000

Calculation Definitions:

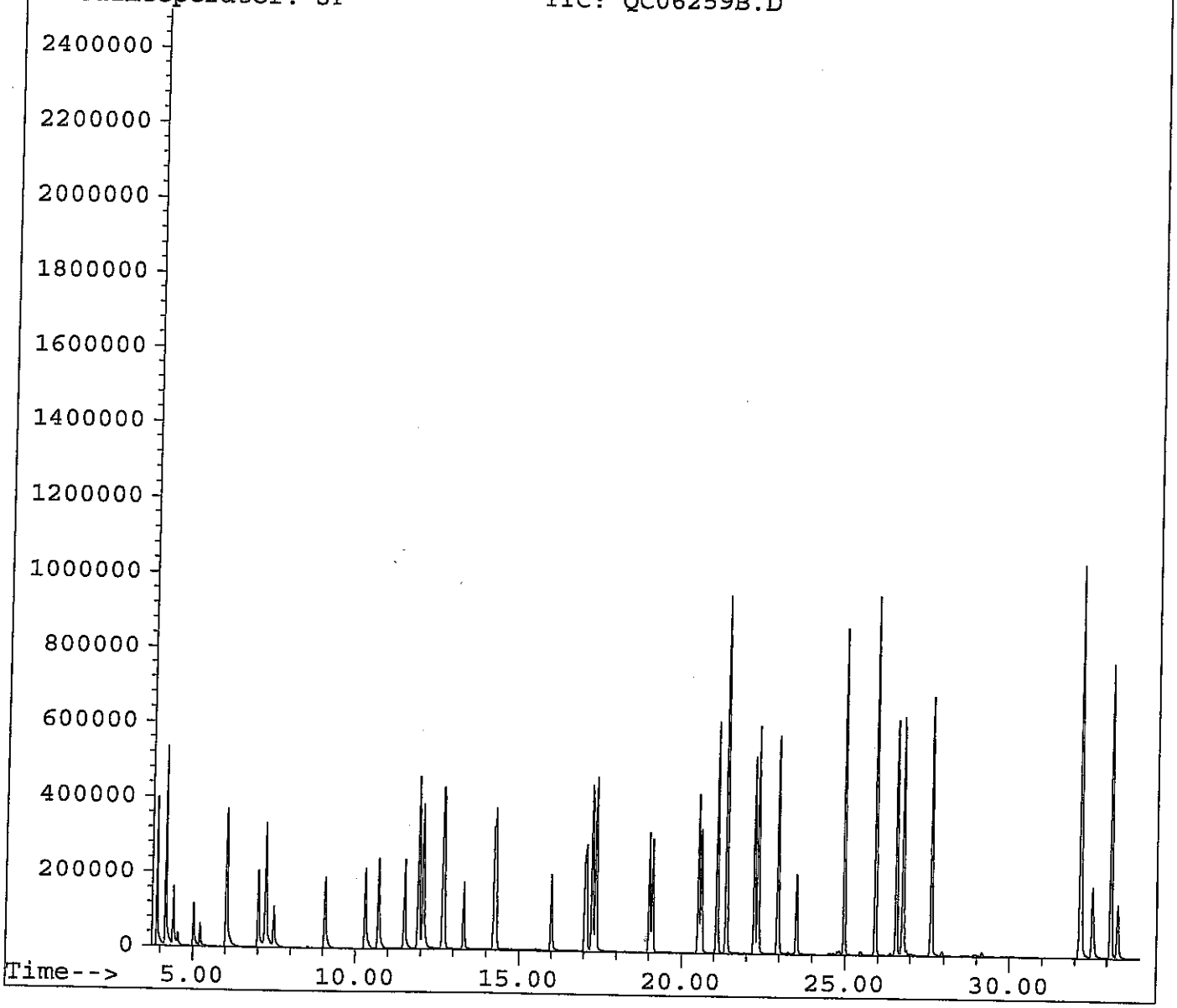
n	compound n
i	i th calibration level
Astdni	Standard Area for compound n at ith calibration level
Cstdni	Standard Concentration for compound n at ith calibration level in ppmv
Cistdi	Internal Standard Conc used for compound n at ith calibration level in ppmv
Aistdi	Internal Standard Area used for compound n at ith calibration level
Ansamp	Sample Area for compound n
Avg RFn	Average response factor for all Ith calibration levels for compound n
Raw Amount	Sample Concentration in ppmv before applying factors
Cistd	Concentration internal standard used for compound n in sample in ppmv
Aistd	Area of internal standard used for compound n in sample
Cn	Concentration of compound n in sample in ppmv
23.68	Gas constant at 60 F as per EPA source test protocol
MW	Molecular weight of compound

Note (1) : Avg RFn — The values for the Average Response Factor AvgRFn can be optained from the response Factor Report for the Initial Calibration, or from the Calibration Report

Name of file: C:\HPCHEM\1\DATA\06259MS2\QC06259B.D

Name of operator: JF

TIC: QC06259B.D



ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified SIM GC/MS
Analytical Method: **TO-15 SIM**

SDG: **209270**
Laboratory Number: **07**

File: 0927007A.D
Description: 44-012
Can/Tube#: 670
Sam_Type: SA
QC_Batch: 062509-MS2
Air Volume: 100 ml

Date Sampled: 06/16/09 **Time:** 16:30
Date Received: 06/17/09
Date Extracted:
Date Analyzed: 06/25/09 **Time:** 13:19
Can Dilution Factor: 1.49 3
Not Detected Flag: ND

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
75-01-4	Vinyl chloride	0.077	0.775	ND	0.204	2.045	ND	ND
75-35-4	1,1-Dichloroethene	0.077	0.775	ND	0.317	3.171	ND	ND
75-34-3	1,1-Dichloroethane	0.076	0.760	ND	0.318	3.177	ND	ND
156-59-2	cis-1,2-Dichloroethene	0.077	0.775	ND	0.317	3.171	ND	ND
107-06-2	1,2-Dichloroethane	0.077	0.775	0.133	0.324	3.239	0.557	J
71-43-2	Benzene	0.077	0.775	0.255	0.256	2.555	0.841	J
56-23-5	Carbon tetrachloride	0.076	0.760	0.244	0.494	4.935	1.584	J
79-01-6	Trichloroethene	0.077	0.775	0.093	0.430	4.299	0.519	J
75-27-4	Bromodichloromethane	0.051	0.507	ND	0.350	3.504	ND	ND
79-00-5	1,1,2-Trichloroethane	0.076	0.760	0.088	0.428	4.281	0.494	J
127-18-4	Tetrachloroethene	0.076	0.760	ND	0.532	5.321	ND	ND
108-38-3	m & p-Xylene	0.153	1.535	0.380	0.688	6.883	1.704	J
95-47-6	o-Xylene	0.076	0.760	0.127	0.341	3.408	0.568	J
79-34-5	1,1,2,2-Tetrachloroethane	0.076	0.760	0.095	0.538	5.385	0.670	J
120-82-1	1,2,4-Trichlorobenzene	0.077	0.775	0.329	0.594	5.935	2.518	J
123-91-1	1,4 Dioxane	0.055	0.551	1.158	0.205	2.051	4.307	
91-20-3	Naphthalene	0.159	1.594	0.311	0.863	8.631	1.681	J

	Surrogate Recovery	Spike Amt. ppbV	Amount ppbV	% Rec.	QC Limits	Flag * = Out
2037-26-5	Toluene-d8	0.200	0.193	96	70-130	

Notes: 1) Reported results are to be interpreted to two significant figures.
2) ug/m3 = ppbV*FW/23.68 calculated assuming conditions at 60 F and 1 atm.
3) MDL and RL are adjusted for sample volume and can dilution.
4) U and ND are Flags used for Not Detected
5) J is a flag for a result between the MDL and the RL (or lower quantitation limit, LQL)

QUANTITATION REPORT

EPA Method TO-15 Modified SIM GC/MS

Review **EAS Sample ID: 0927007**

File Name: 0927007A.D
Sample ID: 44-012
Date: 25 Jun 109 1:19 pm
Run Method: 2EXSIM_I.M
Quant Method: 2EXSIM_I.M
Cal Update: Mon Jun 22 09:18:18 2009
Template: EARTEXSM.MS3
Can Factor: 1.49
Volume: 100 ml

Cal Amounts
IS Areas
Carryover

1 SS
2 KB
3 AT
4 BB
5 SH

Analyst: SS 1

CAS#	Compound	n	Raw Amount	RT	Target RT	Ion	Sample Area	Qualifier	Lower Qual	Upper Qual	Qual Flag	Cal Flag	Int Flag
75-01-4	Vinyl chloride	5	0.000	4.34	4.37	62.00	0	0	28	42			
75-35-4	1,1-Dichloroethene	9	0.000	6.98	6.95	61.00	0	0	37	56			
75-34-3	1,1-Dichloroethane	14	0.000	8.97	9.00	63.00	0	0	25	37			
156-59-2	cis-1,2-Dichloroethene	15	0.002	10.29	10.24	96.00	224	129	102	153			
107-06-2	1,2-Dichloroethane	19	0.009	12.10	12.02	61.95	4654	16	14	21			
71-43-2	Benzene	20	0.017	12.68	12.63	78.00	6818	17	16	23			
56-23-5	Carbon tetrachloride	21	0.016	12.71	12.66	116.90	3986	89	79	119			
79-01-6	Trichloroethene	23	0.006	14.31	14.26	130.00	1000	95	75	112			
75-27-4	Bromodichloromethane	24	0.000	14.79	14.57	83.00	0	0	52	78			
79-00-5	1,1,2-Trichloroethane	28	0.006	17.37	17.35	97.00	1402	86	63	94			
127-18-4	Tetrachloroethene	30	0.005	19.11	19.09	166.00	933	88	64	97			
108-38-3	m & p-Xylene	34	0.026	21.39	21.37	91.00	19977	42	42	63			
95-47-6	o-Xylene	36	0.009	22.36	22.34	91.00	8506	38	38	56			
79-34-5	1,1,2,2-Tetrachloroethane	37	0.006	22.96	22.93	83.00	7425	6	8	12	Q		
120-82-1	1,2,4-Trichlorobenzene	45	0.022	32.16	32.17	180.00	95354	100	79	118			
123-91-1	1,4 Dioxane	47	0.078	14.68	14.57	88.00	10674	71	55	82			
91-20-3	Naphthalene	48	0.021	32.54	32.78	128.00	303866	0	0	0			
3114-55-4	Chlorobenzene-d5	1	0.200	20.53	20.51	117.00	**434929**						
2037-26-5	Toluene-d8	16	0.193	17.08	17.05	98.00	**178246**						

Integration Flags:

If no flag the Integration was done by the instrument computer

M1 Manual Integration because the computer did not integrated the peak or integrated the wrong peak

M2 Manual Integration because computer integration of baseline was different then Inital Calibration

INITIAL CALIBRATION REPORT

EPA Method TO-15 Modified SIM GC/MS

SDG: 209270
QC_Batch: 062509-MS2
Instrument Name: MS2

File Name: 0927007A.D
Sample ID: 44-012
Sample Analysis Date: 25 Jun 109 1:19 pm
Run Method: 2EXSIM_I.M
Quant and Calibration Method: 2EXSIM_I.M
Cal Update: Mon Jun 22 09:18:18 2009
Template: EARTEXSM.MS3

Calibration Title:EPA T0-15

Number Compounds: 49
IS1: ST60024 0.2
IS2:
IS3:
IS4:

		Calibration Amount CA, ppmv						Calibration Response, Area					
		Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
		Amt	Amt	Amt	Amt	Amt	Amt	C06199B.D	C06199H.D	C06199A.D	C06199F.D	C06199E.D	C06199K.D
n	Compound	10.0	0.5	20.0	2.0	4.0	1.0	10.0	0.5	20.0	2.0	4.0	1.0
5	Vinyl chloride	1.040	0.052	2.080	0.208	0.416	0.104	184476	12222	596605	24865	140317	19936
9	1,1-Dichloroethene	1.040	0.052	2.080	0.208	0.416	0.104	388365	27969	1185798	47507	301017	40726
14	1,1-Dichloroethane	1.010	0.051	2.020	0.202	0.404	0.101	403912	31159	1225807	51920	327340	43151
15	cis-1,2-Dichloroethene	1.030	0.052	2.060	0.206	0.412	0.103	240146	21098	758337	35003	226396	27004
19	1,2-Dichloroethane	1.030	0.052	2.060	0.206	0.412	0.103	1236150	74052	4935278	125964	835756	97954
20	Benzene	1.030	0.052	2.060	0.206	0.412	0.103	967913	60686	3573129	94902	641363	73510
21	Carbon tetrachloride	1.020	0.051	2.040	0.204	0.408	0.102	492544	40672	1579809	67130	410007	53667
23	Trichloroethene	1.030	0.052	2.060	0.206	0.412	0.103	305786	29555	968228	45278	286372	33459
24	Bromodichloromethane	0.670	0.034	1.340	0.134	0.268	0.067	349165	34872	980125	57413	329960	43188
28	1,1,2-Trichloroethane	1.020	0.051	2.040	0.204	0.408	0.102	480870	37160	1655491	70973	441832	43484
30	Tetrachloroethene	1.020	0.051	2.040	0.204	0.408	0.102	373918	35806	1224836	58411	374447	38753
34	m & p-Xylene	2.060	0.103	4.120	0.412	0.824	0.206	2970894	279033	10312056	481458	2872586	284680
36	o-Xylene	1.020	0.051	2.040	0.204	0.408	0.102	1996168	168269	6920115	304155	1831287	166711
37	1,1,2,2-Tetrachloroethane	1.020	0.051	2.040	0.204	0.408	0.102	2273482	192188	6988630	401655	2300254	180334
45	1,2,4-Trichlorobenzene	1.030	0.052	2.060	0.206	0.412	0.103	6381826	918959	14261028	1761172	9410822	617532
47	1,4 Dioxane	0.740	0.037	1.480	0.148	0.296	0.074	154378	17449	450267	31614	179188	26330
48	Naphthalene	2.130	0.107	-1.000	0.426	0.852	0.213	34587722	6597377	-1	12354059	37178978	4780301
1	Chlorobenzene-d5	0.200	0.200	0.200	0.200	0.200	0.200	877690	1273169	1660044	554145	1807068	927887
16	Toluene-d8	0.200	0.200	0.200	0.200	0.200	0.200	389596	565545	652462	236781	753686	395034

(524)

INITIAL CALIBRATION REPORT: Response Factors

SDG:	**209270**
QC_Batch:	**062509-MS2**
Sample ID:	44-012
Sample Analysis Date:	25 Jun 109 1:19 pm
Run Method:	2EXSIM_I.M
Quant Method:	2EXSIM_I.M
Cal Update:	Mon Jun 22 09:18:18 2009
Template:	EARTEXSM.MS3

Sample Calculation:

1) Avg RFn = Sum $\left| \frac{(Astdni)}{(Cstdni)} \frac{(Cistdi)}{(Aistdi)} \right|_i$

Response Factors

Compound	RF1	RF2	RF3	RF4	RF5	RF6	AvgRFn	%RSD
Vinyl chloride	0.040	0.037	0.035	0.043	0.037	0.041	0.039	8.23
1,1-Dichloroethene	0.085	0.084	0.069	0.082	0.080	0.084	0.081	7.72
1,1-Dichloroethane	0.091	0.096	0.073	0.093	0.090	0.092	0.089	9.11
cis-1,2-Dichloroethene	0.053	0.064	0.044	0.061	0.061	0.057	0.057	12.56
1,2-Dichloroethane	0.273	0.224	0.289	0.221	0.225	0.205	0.239	13.97
Benzene	0.214	0.183	0.209	0.166	0.172	0.154	0.183	13.13
Carbon tetrachloride	0.110	0.125	0.093	0.119	0.111	0.113	0.112	9.60
Trichloroethene	0.068	0.089	0.057	0.079	0.077	0.070	0.073	15.26
Bromodichloromethane	0.119	0.161	0.088	0.155	0.136	0.139	0.133	19.96
1,1,2-Trichloroethane	0.107	0.114	0.098	0.126	0.120	0.092	0.109	11.85
Tetrachloroethene	0.084	0.110	0.072	0.103	0.102	0.082	0.092	16.20
m & p-Xylene	0.329	0.426	0.302	0.422	0.386	0.298	0.360	16.21
o-Xylene	0.446	0.518	0.409	0.538	0.497	0.352	0.460	15.46
1,1,2,2-Tetrachloroethane	0.508	0.592	0.413	0.711	0.624	0.381	0.538	23.70
1,2,4-Trichlorobenzene	1.412	2.776	0.834	3.086	2.528	1.292	1.988	46.46
1,4 Dioxane	0.048	0.074	0.037	0.077	0.067	0.077	0.063	27.03
Naphthalene	3.700	9.686	NA	10.467	4.830	4.837	6.704	46.62
Chlorobenzene-d5	1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.00
Toluene-d8	0.444	0.444	0.393	0.427	0.417	0.426	0.425	4.48

CALCULATIONS

EPA Method TO-15 Modified SIM GC/MS

SDG: 209270
Laboratory Number: 07

RL:	2EXSIM_I.M
Run Method:	2EXSIM_I.M
Quant Method:	2EXSIM_I.M
Can Dilution Factor:	1.49
Air Volume:	100 ml
Gas Constant:	23.68
Decimal Places:	3

Compound	M.W.	Raw Amount	Result ppbv	Result ug/m3	(1) MDL ppbv	(2) RL ppbv	Calc MDL ppbv	Calc MDL ug/m3	Calc RL ppbv	Calc RL ug/m3	Flag	S062602-1 Spike ppmv
Vinyl chloride	62.5	0.000	0.000	0.000	0.005	0.052	0.08	0.204	0.77	2.045	U	0.103
1,1-Dichloroethene	96.9	0.000	0.000	0.000	0.005	0.052	0.08	0.317	0.77	3.171	U	0.103
1,1-Dichloroethane	99.0	0.000	0.000	0.000	0.005	0.051	0.08	0.318	0.76	3.177	U	0.103
cis-1,2-Dichloroethene	96.9	0.002	0.027	0.111	0.005	0.052	0.08	0.317	0.77	3.171	U	0.103
1,2-Dichloroethane	99.0	0.009	0.133	0.557	0.005	0.052	0.08	0.324	0.77	3.239	J	0.103
Benzene	78.1	0.017	0.255	0.841	0.005	0.052	0.08	0.256	0.77	2.555	J	0.103
Carbon tetrachloride	153.8	0.016	0.244	1.584	0.005	0.051	0.08	0.494	0.76	4.935	J	0.103
Trichloroethene	131.4	0.006	0.093	0.519	0.005	0.052	0.08	0.430	0.77	4.299	J	0.103
Bromodichloromethane	163.8	0.000	0.000	0.000	0.003	0.034	0.05	0.350	0.51	3.504	U	0.103
1,1,2-Trichloroethane	133.4	0.006	0.088	0.494	0.005	0.051	0.08	0.428	0.76	4.281	J	0.103
Tetrachloroethene	165.8	0.005	0.069	0.486	0.005	0.051	0.08	0.532	0.76	5.321	U	0.103
m & p-Xylene	106.2	0.026	0.380	1.704	0.010	0.103	0.15	0.688	1.53	6.883	J	0.103
o-Xylene	106.2	0.009	0.127	0.568	0.005	0.051	0.08	0.341	0.76	3.408	J	0.103
1,1,2,2-Tetrachloroethane	167.8	0.006	0.095	0.670	0.005	0.051	0.08	0.538	0.76	5.385	J	0.103
1,2,4-Trichlorobenzene	181.4	0.022	0.329	2.518	0.005	0.052	0.08	0.594	0.77	5.935	J	0.103
1,4 Dioxane	88.1	0.078	1.158	4.307	0.004	0.037	0.06	0.205	0.55	2.051		1.103
Naphthalene	128.2	0.021	0.311	1.681	0.011	0.107	0.16	0.863	1.59	8.631	J	2.103

SAMPLE CALCULATION

EPA Method TO-15 Modified SIM GC/MS

SDG:		**209270**
Laboratory Number:		**07**
Standard Volume	STV	0.5
Sample Volume	SV	100
Can Dilution Factor	CDF	1.49
Gas Constant		23.68
Decimal Places:		3

Sample Calculation:

1) Avg RFn = Sum $\left| \frac{(Astdni)}{(Cstdni)} \frac{(Cistdi)}{(Aistdi)} \right|_i$ Note: 1

2) Raw Amt = $\frac{(Ansamp)}{(Avg\ RFn)} \frac{(Cistdi)}{(Aistdi)}$ = **Cn**

3) Amount ppbv = $\frac{(Raw\ Amt)\ 1000}{(SV)}$ (CDF) (STV)

4) Amount ug/m3 = $\frac{(amt(ppbv)\ MW}{23.68}$

n	Compound	IS n	Chem type	MW	AvgRFn	Area Ansamp	Cistdi ppmv	Aistdi Ais	Cn ppmV Raw Amt	Amount ppbv	Amount ug/m3
5	Vinyl chloride	1	TRG	62.5	0.039	0	0.200	434929	0.000	0.000	0.000
9	1,1-Dichloroethene	1	TRG	96.9	0.081	0	0.200	434929	0.000	0.000	0.000
14	1,1-Dichloroethane	1	TRG	99.0	0.089	0	0.200	434929	0.000	0.000	0.000
15	cis-1,2-Dichloroethene	1	TRG	96.9	0.057	224	0.200	434929	0.002	0.027	0.110
19	1,2-Dichloroethane	1	TRG	99.0	0.239	4654	0.200	434929	0.009	0.133	0.556
20	Benzene	1	TRG	78.1	0.183	6818	0.200	434929	0.017	0.255	0.841
21	Carbon tetrachloride	1	TRG	153.8	0.112	3986	0.200	434929	0.016	0.244	1.585
23	Trichloroethene	1	TRG	131.4	0.073	1000	0.200	434929	0.006	0.093	0.516
24	Bromodichloromethane	1	TRG	163.8	0.133	0	0.200	434929	0.000	0.000	0.000
28	1,1,2-Trichloroethane	1	TRG	133.4	0.109	1402	0.200	434929	0.006	0.088	0.496
30	Tetrachloroethene	1	TRG	165.8	0.092	933	0.200	434929	0.005	0.069	0.483
34	m & p-Xylene	1	TRG	106.2	0.360	19977	0.200	434929	0.026	0.380	1.704
36	o-Xylene	1	TRG	106.2	0.460	8506	0.200	434929	0.009	0.127	0.570
37	1,1,2,2-Tetrachloroethane	1	TRG	167.8	0.54	7425	0.200	434929	0.006	0.095	0.673
45	1,2,4-Trichlorobenzene	1	TRG	181.4	1.99	95354	0.200	434929	0.022	0.329	2.520
47	1,4 Dioxane	1	TRG	88.1	0.06	10674	0.200	434929	0.078	1.158	4.308
48	Naphthalene	1	TRG	128.2	6.70	303866	0.200	434929	0.021	0.311	1.684
1	Chlorobenzene-d5	1	IS	0.0	1.000	434929	0.200	434929	0.000	0.000	0.000
16	Toluene-d8	1	SURR	0.0	0.425	178246	0.200	434929	0.000	0.000	0.000

Calculation Definitions:

n	compound n
i	i th calibration level
Astdni	Standard Area for compound n at ith calibration level
Cstdni	Standard Concentration for compound n at ith calibration level in ppmv
Cistdi	Internal Standard Conc used for compound n at ith calibration level in ppmv
Aistdi	Internal Standard Area used for compound n at ith calibration level
Ansamp	Sample Area for compound n
Avg RFn	Average response factor for all ith calibration levels for compound n
Raw Amount	Sample Concentration in ppmv before applying factors
Cistd	Concentration internal standard used for compound n in sample in ppmv
Aistd	Area of internal standard used for compound n in sample
Cn	Concentration of compound n in sample in ppmv
23.68	Gas constant at 60 F as per EPA source test protocol
MW	Molecular weight of compound

Note (1) : Avg RFn — The values for the Average Response Factor AvgRFn can be optained from the response Factor Report for the Initial Calibration, or from the Calibration Report

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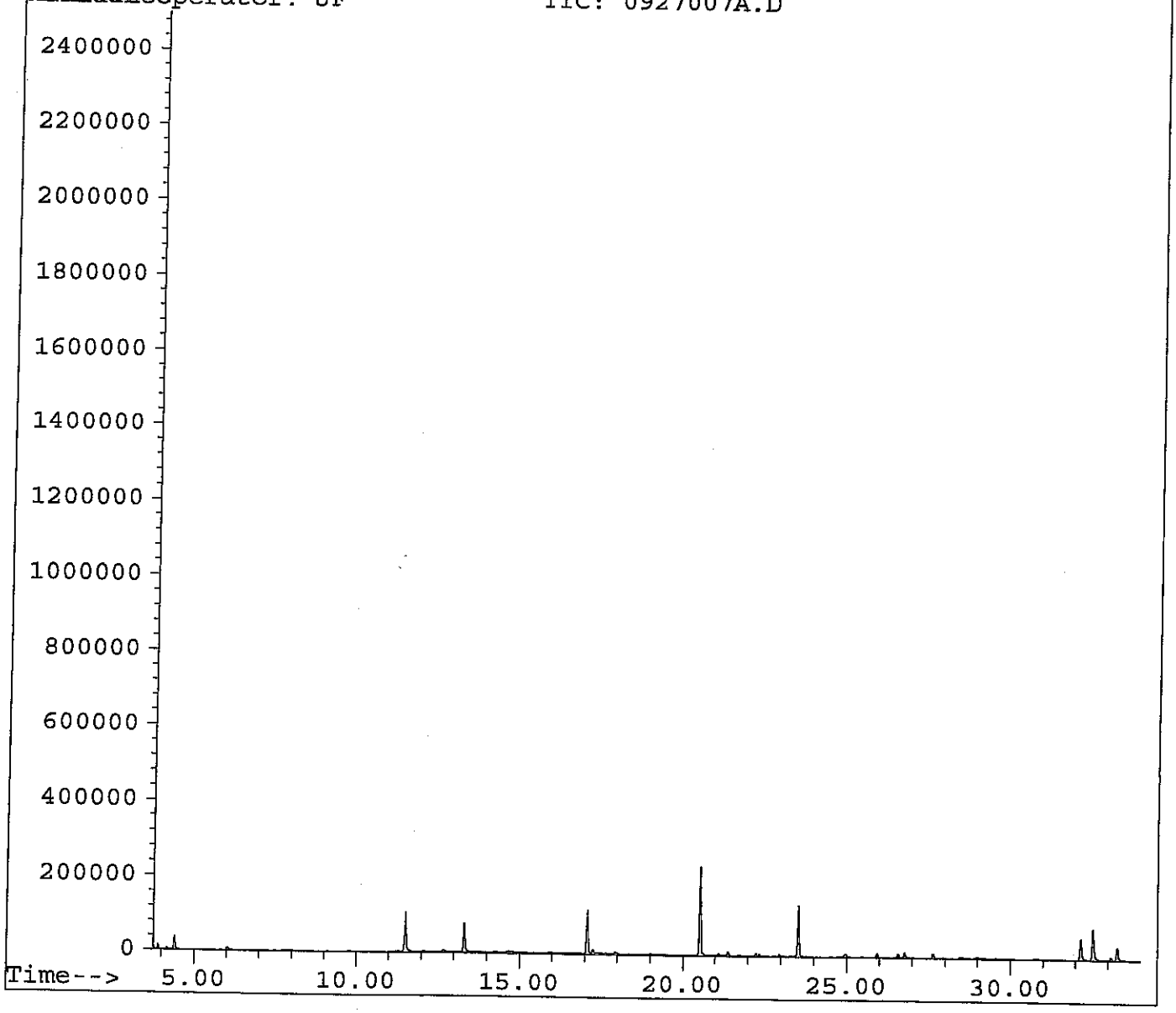
Name of operator: JF

TIC: 0927007A.D



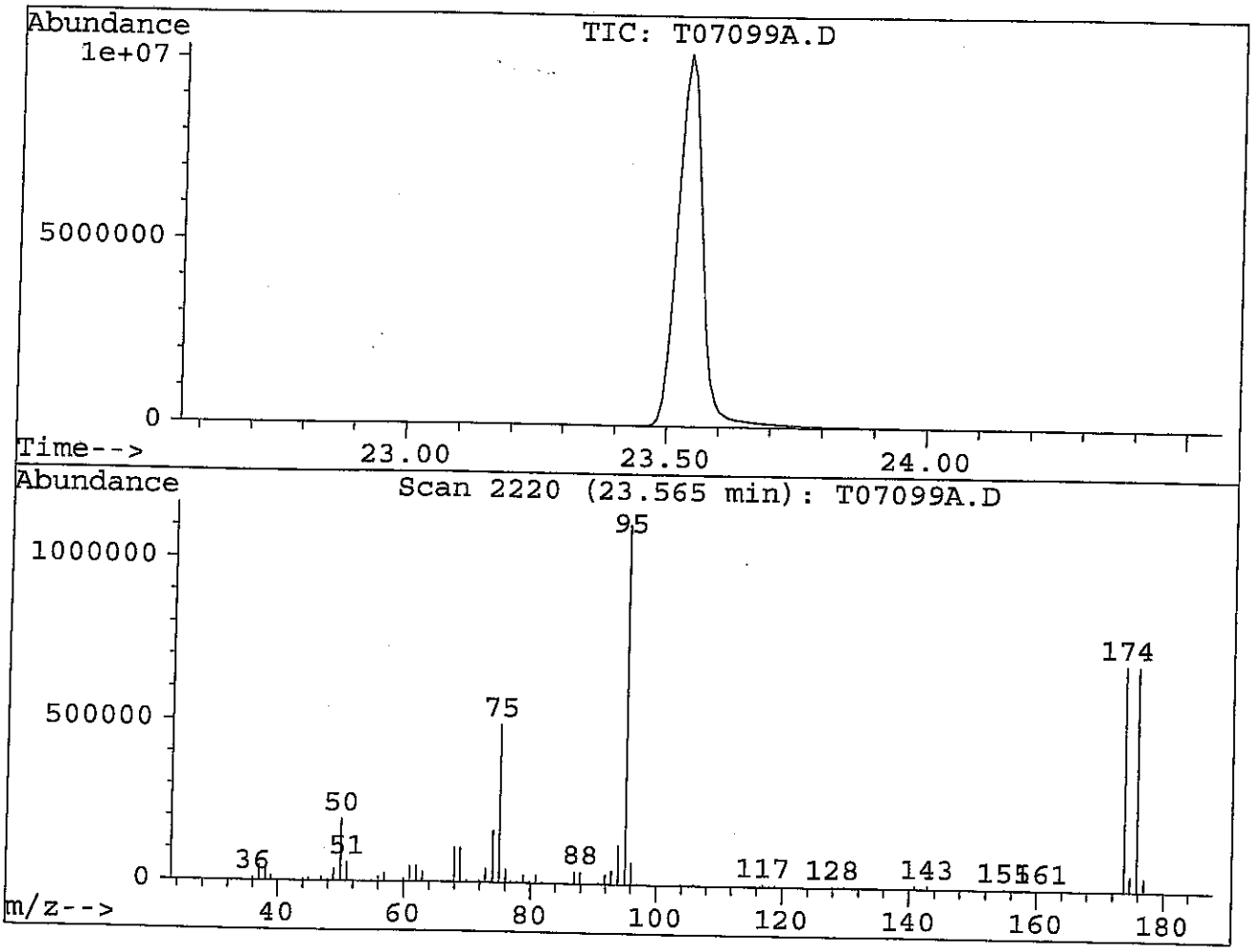
Daily Analytical Batch #: 070909-MS2

BFB

Data File : C:\HPCHEM\1\DATA\07099MS2\T07099A.D
Acq Time : 9 Jul 109 8:41 am
Sample : BFB TUNE
Misc :

Operator: JF
Inst : MS2
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\2SIM_SEA.M
Title : EPA T0-15



Peak Apex is scan: 2220

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	8	40	17.2	191168	PASS
75	95	30	66	44.2	490752	PASS
95	95	100	100	100.0	1111040	PASS
96	95	5	9	6.2	68544	PASS
173	174	0	2	0.0	0	PASS
174	95	50	120	62.7	696704	PASS
175	174	4	9	6.7	46864	PASS
176	174	93	101	99.9	696128	PASS
177	176	5	9	5.8	40520	PASS

T07099A.D 2SIM_SEA.M Thu Jul 09 09:07:42 2009 GCMS3

CONTINUING CALIBRATION REPORT

SDG:	**LABQC**
QC_Batch:	**070909-MS2**
Sample ID:	ST60421 + ST60250
Sample Analysis Date:	9 Jul 109 11:36 am
Run Method:	2SIM_SEA.M
Quant/Calibration Method:	2SIM_SEA.M
Cal Update:	Thu Jul 09 08:26:17 2009
Template:	EARTEXSM.MS3
Calibration Level	Level 2 0.5

Sample Calculation:

1) $RFi = \left| \frac{(Astdi)\ (Clstdi)}{(Cstdi)\ (Aistdi)} \right|_i$

Compound	Area Astdi	Cal Level Cstdi ppbv	CCRRF	AvgRFn	%Dev	%Dev Limit	%Dev Flag
Vinyl chloride	19475	0.104	0.049	0.046	-7.8	30	IN
1,1-Dichloroethene	36182	0.104	0.091	0.087	-5.0	30	IN
1,2-Dibromoethane	73258	0.104	0.185	0.193	4.1	30	IN
1,1,2,2-Tetrachloroethane	141339	0.102	0.364	0.473	23.1	30	IN
Naphthalene	3633605	0.213	4.475	13.474	66.8	80	IN
Chlorobenzene-d5	762378	0.200	1.000	1.000	0.0	30	IN
Toluene-d8	342683	0.200	0.449	0.429	-4.7	30	IN

QUANTITATION REPORT

EPA Method TO-15 Modified SIM GC/MS

		Review	EAS Sample ID: C07099C	
File Name:	C07099C.D			1 SS
Sample ID:	ST60421 + ST60250			2 KB
Date:	9 Jul 109 11:36 am		Cal Amounts	3 AT
Run Method:	2SIM_SEA.M		IS Areas	4 BB
Quant Method:	2SIM_SEA.M		Carryover	5 SH
Cal Update:	Thu Jul 09 08:26:17 2009			
Template:	EARTEXSM.MS3			
Can Factor:	1.00			
Volume:	500 ml		Analyst: SS 1	

CAS#	Compound	n	Raw Amount	RT	Target RT	Ion	Sample Area	Qualifier	Lower Qual	Upper Qual	Qual Flag	Cal Flag	Int Flag
75-01-4	Vinyl chloride	2	0.112	4.42	4.37	62.00	19475	37	52	78	Q		
75-35-4	1,1-Dichloroethene	3	0.109	7.00	6.95	61.00	36182	49	42	63			
106-93-4	1,2-Dibromoethane	5	0.100	19.02	18.99	107.00	73258	96	73	109			
79-34-5	1,1,2,2-Tetrachloroethane	6	0.078	22.97	22.93	83.00	141339	9	7	11			
91-20-3	Naphthalene	7	0.071	32.56	32.78	128.00	3633605	13	10	14			
3114-55-4	Chlorobenzene-d5	1	0.200	20.54	20.51	117.00	762378						
2037-26-5	Toluene-d8	4	0.209	17.08	17.05	98.00	342683						

Integration Flags:

If no flag, the Integration was done by the instrument computer

M1 Manual Integration because the computer did not integrated the peak or integrated the wrong peak

M2 Manual Integration because computer integration of baseline was different than Initial Calibration

INITIAL CALIBRATION REPORT

EPA Method TO-15 Modified SIM GC/MS

File Name:	C07099C.D	SDG:	LABQC
Sample ID:	ST60421 + ST60250	QC_Batch:	070909-MS2
Sample Analysis Date:	9 Jul 109 11:36 am	Instrument Name:	MS2
Run Method:	2SIM_SEA.M	Number Compounds:	8
Quant and Calibration Method:	2SIM_SEA.M	IS1: ST60360	0.2
Cal Update:	Thu Jul 09 08:26:17 2009	IS2:	
Template:	EARTEXSM.MS3	IS3:	
		IS4:	

Calibration Title: EPA T0-15

		Calibration Amount CA, ppmv						Calibration Response, Area					
		Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
		Amt	Amt	Amt	Amt	Amt	Amt	C07089D.D	C07089H.D	C07089I.D	C07089F.D	C07089E.D	C07089G.D
n	Compound	10.0	0.5	0.25	2.0	4.0	1.0	10.0	0.5	0.25	2.0	4.0	1.0
2	Vinyl chloride	1.040	0.052	0.026	0.208	0.416	0.104	233907	2185	668	20463	93939	14023
3	1,1-Dichloroethene	1.040	0.052	0.026	0.208	0.416	0.104	475136	3956	1191	39546	191059	26523
5	1,2-Dibromoethane	1.040	0.052	0.026	0.208	0.416	0.104	910214	8843	3034	89643	417465	56275
6	1,1,2,2-Tetrachloroethane	1.020	0.051	0.026	0.204	0.408	0.102	2066403	19486	10290	216109	952470	103998
7	Naphthalene	-1.000	0.107	0.053	0.426	0.852	0.213	-1	1174309	813490	11669920	29903019	3979332
1	Chlorobenzene-d5	0.200	0.200	0.200	0.200	0.200	0.200	1210851	185512	107112	436325	1007442	508059
4	Toluene-d8	0.200	0.200	0.200	0.200	0.200	0.200	555865	82583	42311	183795	436164	214227

(533)

INITIAL CALIBRATION REPORT: Response Factors

SDG:	**LABQC**
QC_Batch:	**070909-MS2**
Sample ID:	ST60421 + ST60250
Sample Analysis Date:	9 Jul 109 11:36 am
Run Method:	2SIM_SEA.M
Quant Method:	2SIM_SEA.M
Cal Update:	Thu Jul 09 08:26:17 2009
Template:	EARTEXSM.MS3

Sample Calculation:

1) Avg RFn = Sum $\left| \frac{(Astdni)}{(Cstdni)} \frac{(Cistdi)}{(Aistdi)} \right|$

Response Factors

Compound	RF1	RF2	RF3	RF4	RF5	RF6	AvgRFn	%RSD
Vinyl chloride	0.037	0.045	0.048	0.045	0.045	0.053	0.046	11.36
1,1-Dichloroethene	0.075	0.082	0.086	0.087	0.091	0.100	0.087	9.72
1,2-Dibromoethane	0.145	0.183	0.218	0.198	0.199	0.213	0.193	13.77
1,1,2,2-Tetrachloroethane	0.335	0.412	0.739	0.486	0.463	0.401	0.473	29.77
Naphthalene	NA	11.832	28.659	12.557	6.968	7.354	13.474	65.75
Chlorobenzene-d5	1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.00
Toluene-d8	0.459	0.445	0.395	0.421	0.433	0.422	0.429	5.16

CALCULATIONS

EPA Method TO-15 Modified SIM GC/MS

SDG: LABQC
Laboratory Number: B07099

RL:	2SIM_SEA.M
Run Method:	2SIM_SEA.M
Quant Method:	2SIM_SEA.M
Can Dilution Factor:	1.00
Air Volume:	500 ml
Gas Constant:	23.68
Decimal Places:	3

Compound	M.W.	Raw Amount	Result ppbv	Result ug/m3	(1) MDL ppbv	(2) RL ppbv	Calc MDL ppbv	Calc MDL ug/m3	Calc RL ppbv	Calc RL ug/m3	Flag	Spike ppmv
Vinyl chloride	62.5	0.112	0.224	0.592	0.0026	0.026	0.01	0.014	0.05	0.137		0.103
1,1-Dichloroethene	96.9	0.109	0.218	0.893	0.0023	0.026	0.00	0.019	0.05	0.213		0.103
1,2-Dibromoethane	188.0	0.100	0.200	1.584	0.0031	0.026	0.01	0.049	0.05	0.413		0.103
1,1,2,2-Tetrachloroethane	167.8	0.078	0.157	1.112	0.0024	0.026	0.00	0.034	0.05	0.368		0.103
Naphthalene	128.2	0.071	0.141	0.766	0.0071	0.053	0.01	0.077	0.11	0.574		0.103

SAMPLE CALCULATION

EPA Method TO-15 Modified SIM GC/MS

SDG:		**LABQC**
Laboratory Number:		**B07099**
Standard Volume	STV	0.5
Sample Volume	SV	500
Can Dilution Factor	CDF	1.00
Gas Constant		23.68
Decimal Places:		3

Sample Calculation:

1) Avg RFn = Sum $\left| \frac{(Astdni)}{(Cstdni)} \frac{(Cistdi)}{(Aistdi)} \right|_i$ Note: 1

2) Raw Amt = $\frac{(Ansamp)}{(Avg\ RFn)} \frac{(Cistdi)}{(Aistdi)}$ = **Cn**

3) Amount ppbv = $\frac{(Raw\ Amt)\ 1000}{(SV)}$ (CDF) (STV)

4) Amount ug/m3 = $\frac{(amt(ppbv)\ MW}{23.68}$

n	Compound	IS n	Chem type	MW	AvgRFn	Area Ansamp	Cistdi ppmv	Aistdi Ais	**Cn** ppmV Raw Amt	Amount ppbv	Amount ug/m3
2	Vinyl chloride	1	TRG	62.5	0.046	19475	0.200	762378	0.112	0.224	0.591
3	1,1-Dichloroethene	1	TRG	96.9	0.087	36182	0.200	762378	0.109	0.218	0.892
5	1,2-Dibromoethane	1	TRG	188.0	0.193	73258	0.200	762378	0.100	0.200	1.588
6	1,1,2,2-Tetrachloroethane	1	TRG	167.8	0.473	141339	0.200	762378	0.078	0.157	1.113
7	Naphthalene	1	TRG	128.2	13.474	3633605	0.200	762378	0.071	0.141	0.763
1	Chlorobenzene-d5	1	IS	0.0	1.000	762378	0.200	762378	0.000	0.000	0.000
4	Toluene-d8	1	SURR	0.0	0.429	342683	0.200	762378	0.000	0.000	0.000

Calculation Definitions:

n	compound n
i	i th calibration level
Astdni	Standard Area for compound n at ith calibration level
Cstdni	Standard Concentration for compound n at ith calibration level in ppmv
Cistdi	Internal Standard Conc used for compound n at ith calibration level in ppmv
Aistdi	Internal Standard Area used for compound n at ith calibration level
Ansamp	Sample Area for compound n
Avg RFn	Average response factor for all ith calibration levels for compound n
Raw Amount	Sample Concentration in ppmv before applying factors
Cistd	Concentration internal standard used for compound n in sample in ppmv
Aistd	Area of internal standard used for compound n in sample
Cn	Concentration of compound n in sample in ppmv
23.68	Gas constant at 60 F as per EPA source test protocol
MW	Molecular weight of compound
Note (1) : Avg RFn	The values for the Average Response Factor AvgRFn can be optained from the response Factor Report for the Initial Calibration, or from the Calibration Report

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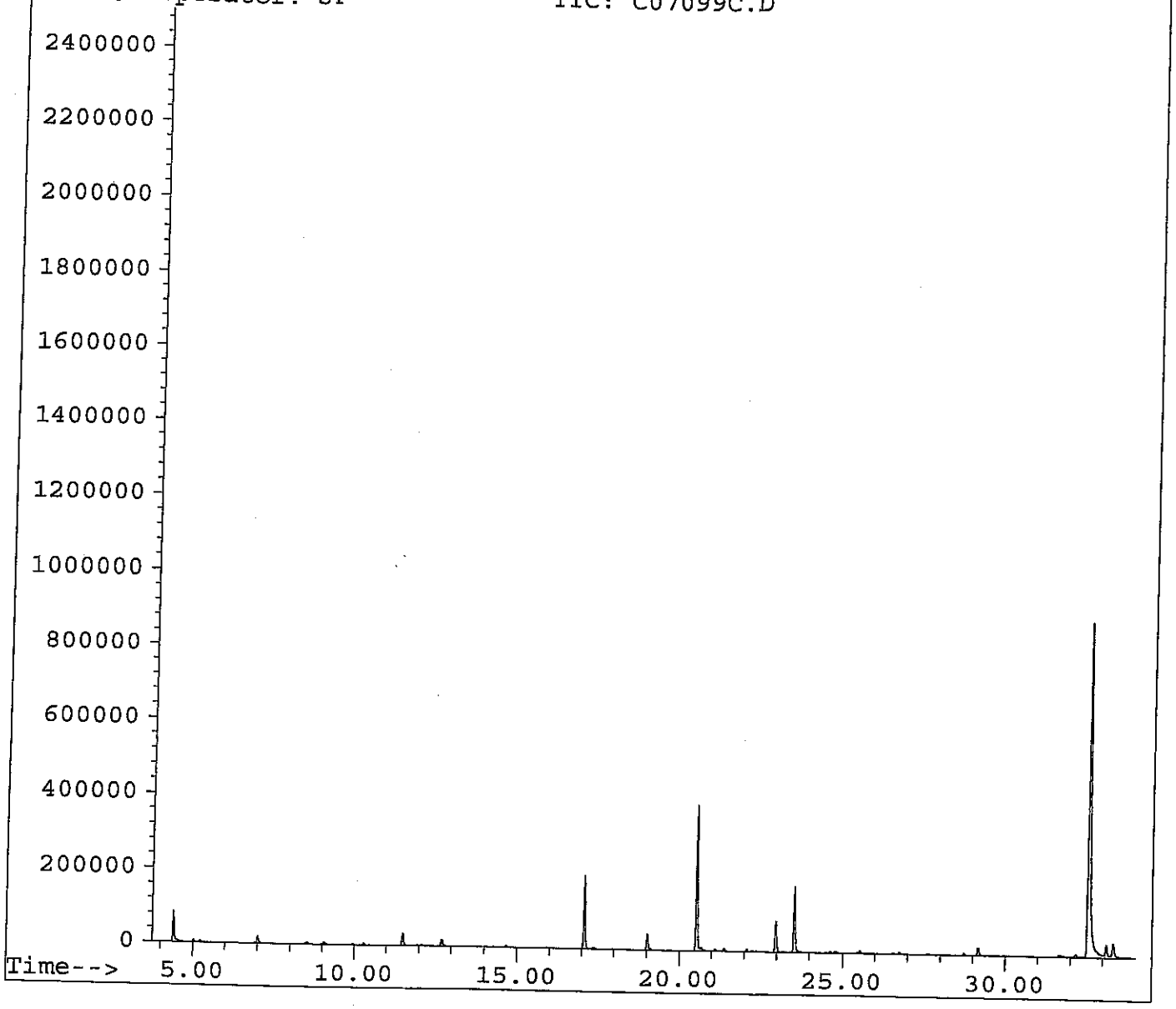
Name of Operator: JF

TIC: C07099C.D



METHOD BLANK REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified SIM GC/MS
Analytical Method: **TO-15 SIM**

SDG: **LABQC**
Laboratory Number: **B07099**

File: B07099B.D
Description: METHOD BLANK
Can/Tube#:
Sam_Type: MB
QC_Batch: 070909-MS2
Air Volume: 500 ml

Date Sampled: **Time:**
Date Received:
Date Extracted:
Date Analyzed: 07/09/09 **Time:** 16:24
Can Dilution Factor: 1.00 3
Not Detected Flag: U

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
75-01-4	Vinyl chloride	0.005	0.052	0.005	0.014	0.137	0.014	U
75-35-4	1,1-Dichloroethene	0.005	0.052	0.005	0.019	0.213	0.019	U
106-93-4	1,2-Dibromoethane	0.006	0.052	0.006	0.049	0.413	0.049	U
79-34-5	1,1,2,2-Tetrachloroethane	0.005	0.052	0.005	0.034	0.368	0.034	U
91-20-3	Naphthalene	0.014	0.106	0.015	0.077	0.574	0.082	J

	Surrogate Recovery	Spike Amt. ppbV	Amount ppbV	% Rec.	QC Limits	Flag * = Out
2037-26-5	Toluene-d8	0.200	0.192	96	70-130	

Notes: 1) Reported results are to be interpreted to two significant figures.
2) ug/m3 = ppbV*FW/23.68 calculated assuming conditions at 60 F and 1 atm.
3) MDL and RL are adjusted for sample volume and can dilution.
4) U and ND are Flags used for Not Detected
5) J is a flag for a result between the MDL and the RL (or lower quantitation limit, LQL)

QUANTITATION REPORT

EPA Method TO-15 Modified SIM GC/MS

Review **EAS Sample ID: B07099B**

File Name:	B07099B.D		1 SS
Sample ID:	METHOD BLANK		2 KB
Date:	9 Jul 109 4:24 pm	Cal Amounts	3 AT
Run Method:	2SIM_SEA.M	IS Areas	4 BB
Quant Method:	2SIM_SEA.M	Carryover	5 SH
Cal Update:	Thu Jul 09 08:26:17 2009		
Template:	EARTEXSM.MS3		
Can Factor:	1.00		
Volume:	500 ml	Analyst: SS 1	

CAS#	Compound	n	Raw Amount	RT	Target RT	Ion	Sample Area	Qualifier	Lower Qual	Upper Qual	Qual Flag	Cal Flag	Int Flag
75-01-4	Vinyl chloride	2	0.000	4.26	4.37	62.00	0	0	52	78			
75-35-4	1,1-Dichloroethene	3	0.000	6.97	6.95	61.00	0	0	42	63			
106-93-4	1,2-Dibromoethane	5	0.001	19.03	18.99	107.00	566	92	73	109			
79-34-5	1,1,2,2-Tetrachloroethane	6	0.001	22.97	22.93	83.00	815	33	7	11			
91-20-3	Naphthalene	7	0.008	32.58	32.78	128.00	280686	12	10	14			
3114-55-4	Chlorobenzene-d5	1	0.200	20.52	20.51	117.00	550070						
2037-26-5	Toluene-d8	4	0.192	17.04	17.05	98.00	226659						

Integration Flags:

If no flag, the Integration was done by the instrument computer

M1 Manual Integration because the computer did not integrated the peak or integrated the wrong peak

M2 Manual Integration because computer integration of baseline was different than Initial Calibration

INITIAL CALIBRATION REPORT

EPA Method TO-15 Modified SIM GC/MS

File Name:	B07099B.D	SDG:	LABQC
Sample ID:	METHOD BLANK	QC_Batch:	070909-MS2
Sample Analysis Date:	9 Jul 109 4:24 pm	Instrument Name:	MS2
Run Method:	2SIM_SEA.M		
Quant and Calibration Method:	2SIM_SEA.M	Calibration Title:	EPA T0-15
Cal Update:	Thu Jul 09 08:26:17 2009		
Template:	EARTEXSM.MS3		

Number Compounds:		8
IS1:	ST60360	0.2
IS2:		
IS3:		
IS4:		

		Calibration Amount CA, ppmv						Calibration Response, Area					
		Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
		Amt	Amt	Amt	Amt	Amt	Amt	C07089D.D	C07089H.D	C07089I.D	C07089F.D	C07089E.D	C07089G.D
n	Compound	10.0	0.5	0.25	2.0	4.0	1.0	10.0	0.5	0.25	2.0	4.0	1.0
2	Vinyl chloride	1.040	0.052	0.026	0.208	0.416	0.104	233907	2185	668	20463	93939	14023
3	1,1-Dichloroethene	1.040	0.052	0.026	0.208	0.416	0.104	475136	3956	1191	39546	191059	26523
5	1,2-Dibromoethane	1.040	0.052	0.026	0.208	0.416	0.104	910214	8843	3034	89643	417465	56275
6	1,1,2,2-Tetrachloroethane	1.020	0.051	0.026	0.204	0.408	0.102	2066403	19486	10290	216109	952470	103998
7	Naphthalene	-1.000	0.107	0.053	0.426	0.852	0.213	-1	1174309	813490	11669920	29903019	3979332
1	Chlorobenzene-d5	0.200	0.200	0.200	0.200	0.200	0.200	1210851	185512	107112	436325	1007442	508059
4	Toluene-d8	0.200	0.200	0.200	0.200	0.200	0.200	555865	82583	42311	183795	436164	214227

(540)

INITIAL CALIBRATION REPORT: Response Factors

SDG:	**LABQC**
QC_Batch:	**070909-MS2**
Sample ID:	METHOD BLANK
Sample Analysis Date:	9 Jul 109 4:24 pm
Run Method:	2SIM_SEA.M
Quant Method:	2SIM_SEA.M
Cal Update:	Thu Jul 09 08:26:17 2009
Template:	EARTEXSM.MS3

Sample Calculation:

1) Avg RFn = Sum $\left| \frac{(Astdni)}{(Cstdni)} \frac{(Cistdi)}{(Aistdi)} \right|_i$

Response Factors

Compound	RF1	RF2	RF3	RF4	RF5	RF6	AvgRFn	%RSD
Vinyl chloride	0.037	0.045	0.048	0.045	0.045	0.053	0.046	11.36
1,1-Dichloroethene	0.075	0.082	0.086	0.087	0.091	0.100	0.087	9.72
1,2-Dibromoethane	0.145	0.183	0.218	0.198	0.199	0.213	0.193	13.77
1,1,2,2-Tetrachloroethane	0.335	0.412	0.739	0.486	0.463	0.401	0.473	29.77
Naphthalene	NA	11.832	28.659	12.557	6.968	7.354	13.474	65.75
Chlorobenzene-d5	1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.00
Toluene-d8	0.459	0.445	0.395	0.421	0.433	0.422	0.429	5.16

CALCULATIONS

EPA Method TO-15 Modified SIM GC/MS

SDG: LABQC
Laboratory Number: B07099

RL:	2SIM_SEA.M
Run Method:	2SIM_SEA.M
Quant Method:	2SIM_SEA.M
Can Dilution Factor:	1.00
Air Volume:	500 ml
Gas Constant:	23.68
Decimal Places:	3

Compound	M.W.	Raw Amount	Result ppbv	Result ug/m3	(1) MDL ppbv	(2) RL ppbv	Calc MDL ppbv	Calc MDL ug/m3	Calc RL ppbv	Calc RL ug/m3	Flag	Spike ppmv
Vinyl chloride	62.5	0.000	0.000	0.000	0.0026	0.026	0.01	0.014	0.05	0.137	U	0.103
1,1-Dichloroethene	96.9	0.000	0.000	0.000	0.0023	0.026	0.00	0.019	0.05	0.213	U	0.103
1,2-Dibromoethane	188.0	0.001	0.002	0.017	0.0031	0.026	0.01	0.049	0.05	0.413	U	0.103
1,1,2,2-Tetrachloroethane	167.8	0.001	0.001	0.009	0.0024	0.026	0.00	0.034	0.05	0.368	U	0.103
Naphthalene	128.2	0.008	0.015	0.082	0.0071	0.053	0.01	0.077	0.11	0.574	J	0.103

SAMPLE CALCULATION

EPA Method TO-15 Modified SIM GC/MS

SDG:		**LABQC**
Laboratory Number:		**B07099**
Standard Volume	STV	0.5
Sample Volume	SV	500
Can Dilution Factor	CDF	1.00
Gas Constant		23.68
Decimal Places:		3

Sample Calculation:

1) Avg RFn = Sum $\left| \frac{(Astdni)}{(Cstdni)} \frac{(Cistdi)}{(Aistdi)} \right|_i$ Note: 1

2) Raw Amt = $\frac{(Ansamp)}{(Avg\ RFn)} \frac{(Cistdi)}{(Aistdi)}$ = **Cn**

3) Amount ppbv = $\frac{(Raw\ Amt)\ 1000}{(SV)}$ (CDF) (STV)

4) Amount ug/m3 = $\frac{(amt(ppbv)\ MW}{23.68}$

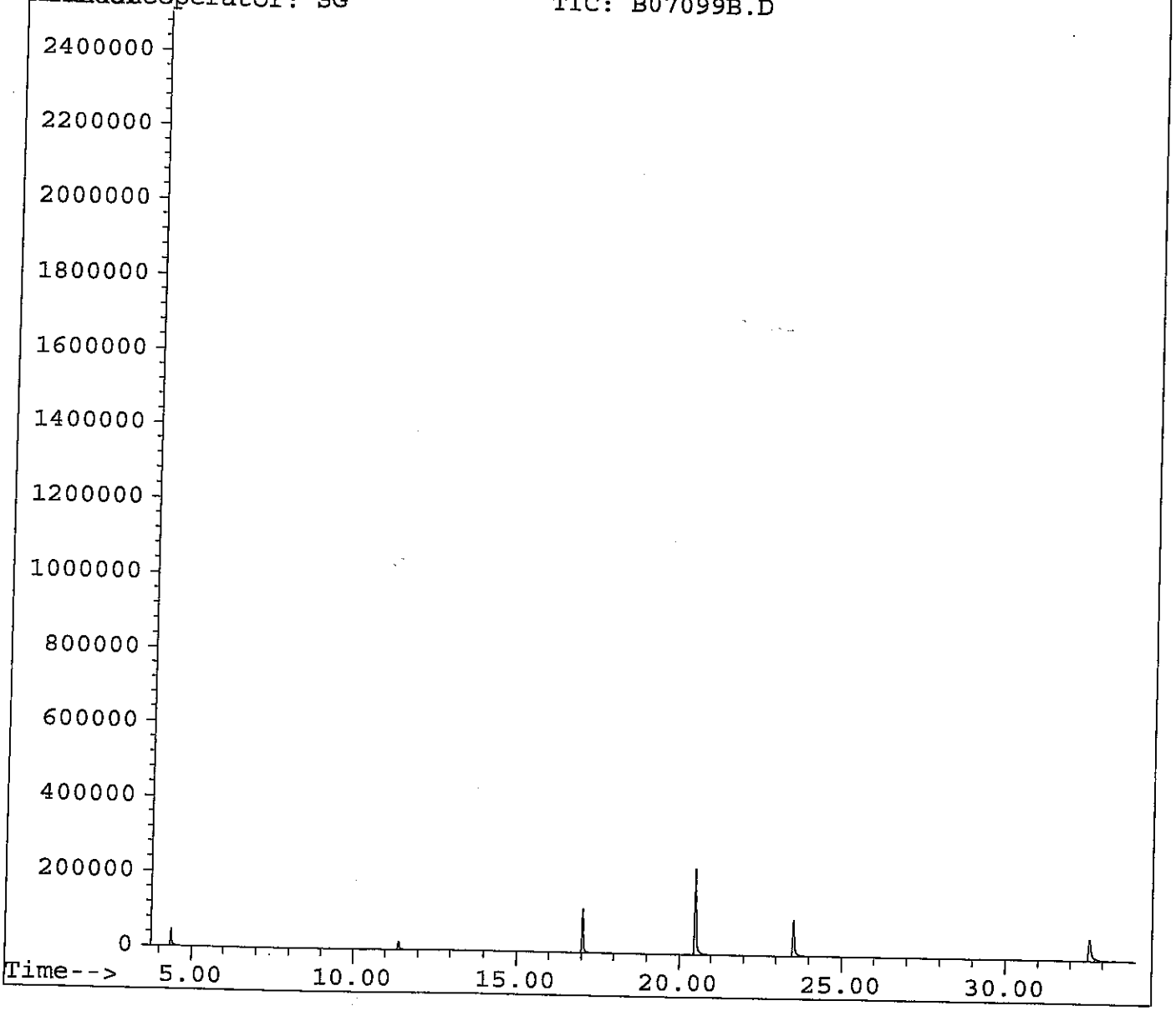
n	Compound	IS n	Chem type	MW	AvgRFn	Area Ansamp	Cistdi ppmv	Aistdi Ais	**Cn** ppmV Raw Amt	Amount ppbv	Amount ug/m3
2	Vinyl chloride	1	TRG	62.5	0.046	0	0.200	550070	0.000	0.000	0.000
3	1,1-Dichloroethene	1	TRG	96.9	0.087	0	0.200	550070	0.000	0.000	0.000
5	1,2-Dibromoethane	1	TRG	188.0	0.193	566	0.200	550070	0.001	0.002	0.016
6	1,1,2,2-Tetrachloroethane	1	TRG	167.8	0.473	815	0.200	550070	0.001	0.001	0.007
7	Naphthalene	1	TRG	128.2	13.474	280686	0.200	550070	0.008	0.015	0.081
1	Chlorobenzene-d5	1	IS	0.0	1.000	550070	0.200	550070	0.000	0.000	0.000
4	Toluene-d8	1	SURR	0.0	0.429	226659	0.200	550070	0.000	0.000	0.000

Calculation Definitions:

n	compound n
i	i th calibration level
Astdni	Standard Area for compound n at ith calibration level
Cstdni	Standard Concentration for compound n at ith calibration level in ppmv
Cistdi	Internal Standard Conc used for compound n at ith calibration level in ppmv
Aistdi	Internal Standard Area used for compound n at ith calibration level
Ansamp	Sample Area for compound n
Avg RFn	Average response factor for all ith calibration levels for compound n
Raw Amount	Sample Concentration in ppmv before applying factors
Cistd	Concentration internal standard used for compound n in sample in ppmv
Aistd	Area of internal standard used for compound n in sample
Cn	Concentration of compound n in sample in ppmv
23.68	Gas constant at 60 F as per EPA source test protocol
MW	Molecular weight of compound
Note (1) : Avg RFn	The values for the Average Response Factor AvgRFn can be optained from the response Factor Report for the Initial Calibration, or from the Calibration Report

Name of file: C:\HPCHEM\1\DATA\07099MS2\B07099B.D

Abundance Operator: SG TIC: B07099B.D



QUALITY CONTROL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

LABORATORY CONTROL SPIKE

EPA Method TO-15 Modified SIM GC/MS
Analytical Method: **TO-15 SIM**

SDG: LABQC

File: QC07099A.D
Description: ST0709091
Can/Tube#:
Sam_Type: LCS
QC_Batch: 070909-MS2
Air Volume: 1000 ml

Date Sampled: NA
Date Received: NA
Date Extracted: NA
Date Analyzed: 07/09/09 **Time:** 13:16
Can Dilution Factor: 1.00 3
QC Duplicate: No

CAS#	Compound	MDL ppbv	Spike Conc ppbv	Amount ppbv	Matrix Amt ppbv	Spk Amt ppbv	Percent Recovery	LCL %	UCL %	Flag
75-01-4	Vinyl chloride	0.003	0.473	0.502	0.000	0.502	106	70	130	
75-35-4	1,1-Dichloroethene	0.002	0.513	0.566	0.000	0.566	110	70	130	
106-93-4	1,2-Dibromoethane	0.003	0.327	0.322	0.000	0.322	98	70	130	
79-34-5	1,1,2,2-Tetrachloroethane	0.002	0.228	0.215	0.000	0.215	94	70	130	
91-20-3	Naphthalene	0.007	0.188	0.139	0.000	0.139	74	60	140	

Surrogate Recovery	Spike Amt. ppbV	Amount ppbV	% Rec.	QC Limits	Flag * = Out
Toluene-d8	0.200	0.218	109	70-130	

Notes: Reported results are to be interpreted to two significant figures.
*ug/m3 calculated assuming conditions at 60 F and 1 atm.

QUANTITATION REPORT

EPA Method TO-15 Modified SIM GC/MS

			Review	EAS Sample ID: QC07099	
File Name:	QC07099A.D				1 SS
Sample ID:	ST0709091				2 KB
Date:	9 Jul 109 1:16 pm			Cal Amounts	3 AT
Run Method:	2SIM_SEA.M			IS Areas	4 BB
Quant Method:	2SIM_SEA.M			Carryover	5 SH
Cal Update:	Thu Jul 09 08:26:17 2009				
Template:	EARTEXSM.MS3				
Can Factor:	1.00				
Volume:	1000	ml		Analyst: SS 1	

CAS#	Compound	n	Raw Amount	RT	Target RT	Ion	Sample Area	Qualifier	Lower Qual	Upper Qual	Qual Flag	Cal Flag	Int Flag
75-01-4	Vinyl chloride	2	0.502	4.42	4.37	62.00	155567	34	52	78	Q		
75-35-4	1,1-Dichloroethene	3	0.566	7.01	6.95	61.00	334372	49	42	63			
106-93-4	1,2-Dibromoethane	5	0.322	19.02	18.99	107.00	421021	98	73	109			
79-34-5	1,1,2,2-Tetrachloroethane	6	0.215	22.96	22.93	83.00	688915	9	7	11			
91-20-3	Naphthalene	7	0.139	32.55	32.78	128.00	12696503	14	10	14			
3114-55-4	Chlorobenzene-d5	1	0.200	20.53	20.51	117.00	1358979						
2037-26-5	Toluene-d8	4	0.218	17.08	17.05	98.00	634966						

Integration Flags:

If no flag, the Integration was done by the instrument computer

M1 Manual Integration because the computer did not integrated the peak or integrated the wrong peak

M2 Manual Integration because computer integration of baseline was different than Initial Calibration

INITIAL CALIBRATION REPORT

EPA Method TO-15 Modified SIM GC/MS

File Name:	QC07099A.D	SDG:	LABQC
Sample ID:	ST0709091	QC_Batch:	070909-MS2
Sample Analysis Date:	9 Jul 109 1:16 pm	Instrument Name:	MS2
Run Method:	2SIM_SEA.M	Number Compounds:	8
Quant and Calibration Method:	2SIM_SEA.M	IS1: ST60360	0.2
Cal Update:	Thu Jul 09 08:26:17 2009	IS2:	
Template:	EARTEXSM.MS3	IS3:	
		IS4:	

Calibration Title: EPA T0-15

		Calibration Amount CA, ppmv						Calibration Response, Area					
		Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
		Amt	Amt	Amt	Amt	Amt	Amt	C07089D.D	C07089H.D	C07089I.D	C07089F.D	C07089E.D	C07089G.D
n	Compound	10.0	0.5	0.25	2.0	4.0	1.0	10.0	0.5	0.25	2.0	4.0	1.0
2	Vinyl chloride	1.040	0.052	0.026	0.208	0.416	0.104	233907	2185	668	20463	93939	14023
3	1,1-Dichloroethene	1.040	0.052	0.026	0.208	0.416	0.104	475136	3956	1191	39546	191059	26523
5	1,2-Dibromoethane	1.040	0.052	0.026	0.208	0.416	0.104	910214	8843	3034	89643	417465	56275
6	1,1,2,2-Tetrachloroethane	1.020	0.051	0.026	0.204	0.408	0.102	2066403	19486	10290	216109	952470	103998
7	Naphthalene	-1.000	0.107	0.053	0.426	0.852	0.213	-1	1174309	813490	11669920	29903019	3979332
1	Chlorobenzene-d5	0.200	0.200	0.200	0.200	0.200	0.200	1210851	185512	107112	436325	1007442	508059
4	Toluene-d8	0.200	0.200	0.200	0.200	0.200	0.200	555865	82583	42311	183795	436164	214227

(547)

INITIAL CALIBRATION REPORT: Response Factors

SDG:	**LABQC**
QC_Batch:	**070909-MS2**
Sample ID:	ST0709091
Sample Analysis Date:	9 Jul 109 1:16 pm
Run Method:	2SIM_SEA.M
Quant Method:	2SIM_SEA.M
Cal Update:	Thu Jul 09 08:26:17 2009
Template:	EARTEXSM.MS3

Sample Calculation:

1) Avg RFn = Sum $\left| \frac{(Astdni)}{(Cstdni)} \frac{(Cistdi)}{(Aistdi)} \right|_i$

Response Factors

Compound	RF1	RF2	RF3	RF4	RF5	RF6	AvgRFn	%RSD
Vinyl chloride	0.037	0.045	0.048	0.045	0.045	0.053	0.046	11.36
1,1-Dichloroethene	0.075	0.082	0.086	0.087	0.091	0.100	0.087	9.72
1,2-Dibromoethane	0.145	0.183	0.218	0.198	0.199	0.213	0.193	13.77
1,1,2,2-Tetrachloroethane	0.335	0.412	0.739	0.486	0.463	0.401	0.473	29.77
Naphthalene	NA	11.832	28.659	12.557	6.968	7.354	13.474	65.75
Chlorobenzene-d5	1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.00
Toluene-d8	0.459	0.445	0.395	0.421	0.433	0.422	0.429	5.16

CALCULATIONS

EPA Method TO-15 Modified SIM GC/MS

SDG: LABQC
Laboratory Number: QC07099

RL:	2SIM_SEA.M
Run Method:	2SIM_SEA.M
Quant Method:	2SIM_SEA.M
Can Dilution Factor:	1.00
Air Volume:	1000 ml
Gas Constant:	23.68
Decimal Places:	3

Compound	M.W.	Raw Amount	Result ppbv	Result ug/m3	(1) MDL ppbv	(2) RL ppbv	Calc MDL ppbv	Calc MDL ug/m3	Calc RL ppbv	Calc RL ug/m3	Flag	Spike ppmv
Vinyl chloride	62.5	0.502	0.502	1.326	0.0026	0.026	0.00	0.007	0.03	0.069		0.473
1,1-Dichloroethene	96.9	0.566	0.566	2.316	0.0023	0.026	0.00	0.009	0.03	0.106		0.513
1,2-Dibromoethane	188.0	0.322	0.322	2.554	0.0031	0.026	0.00	0.025	0.03	0.206		0.327
1,1,2,2-Tetrachloroethane	167.8	0.215	0.215	1.520	0.0024	0.026	0.00	0.017	0.03	0.184		0.228
Naphthalene	128.2	0.139	0.139	0.751	0.0071	0.053	0.01	0.038	0.05	0.287		0.188

SAMPLE CALCULATION

EPA Method TO-15 Modified SIM GC/MS

SDG:		**LABQC**
Laboratory Number:		**QC07099**
Standard Volume	STV	0.5
Sample Volume	SV	1000
Can Dilution Factor	CDF	1.00
Gas Constant		23.68
Decimal Places:		3

Sample Calculation:

1) Avg RFn = Sum $\left| \frac{(Astdni)}{(Cstdni)} \frac{(Cistdi)}{(Aistdi)} \right|_i$ Note: 1

2) Raw Amt = $\frac{(Ansamp)}{(Avg\ RFn)} \frac{(Cistdi)}{(Aistdi)}$ = Cn

3) Amount ppbv = $\frac{(Raw\ Amt)\ 1000}{(SV)}$ (CDF) (STV)

4) Amount ug/m3 = $\frac{(amt(ppbv)\ MW}{23.68}$

n	Compound	IS n	Chem type	MW	AvgRFn	Area Ansamp	Cistdi ppmv	Aistdi Ais	Cn ppmV Raw Amt	Amount ppbv	Amount ug/m3
2	Vinyl chloride	1	TRG	62.5	0.046	155567	0.200	1358979	0.502	0.502	1.325
3	1,1-Dichloroethene	1	TRG	96.9	0.087	334372	0.200	1358979	0.566	0.566	2.316
5	1,2-Dibromoethane	1	TRG	188.0	0.193	421021	0.200	1358979	0.322	0.322	2.556
6	1,1,2,2-Tetrachloroethane	1	TRG	167.8	0.473	688915	0.200	1358979	0.215	0.215	1.524
7	Naphthalene	1	TRG	128.2	13.474	12696503	0.200	1358979	0.139	0.139	0.753
1	Chlorobenzene-d5	1	IS	0.0	1.000	1358979	0.200	1358979	0.000	0.000	0.000
4	Toluene-d8	1	SURR	0.0	0.429	634966	0.200	1358979	0.000	0.000	0.000

Calculation Definitions:

n	compound n
i	i th calibration level
Astdni	Standard Area for compound n at ith calibration level
Cstdni	Standard Concentration for compound n at ith calibration level in ppmv
Cistdi	Internal Standard Conc used for compound n at ith calibration level in ppmv
Aistdi	Internal Standard Area used for compound n at ith calibration level
Ansamp	Sample Area for compound n
Avg RFn	Average response factor for all ith calibration levels for compound n
Raw Amount	Sample Concentration in ppmv before applying factors
Cistd	Concentration internal standard used for compound n in sample in ppmv
Aistd	Area of internal standard used for compound n in sample
Cn	Concentration of compound n in sample in ppmv
23.68	Gas constant at 60 F as per EPA source test protocol
MW	Molecular weight of compound
Note (1) : Avg RFn	The values for the Average Response Factor AvgRFn can be optained from the response Factor Report for the Initial Calibration, or from the Calibration Report

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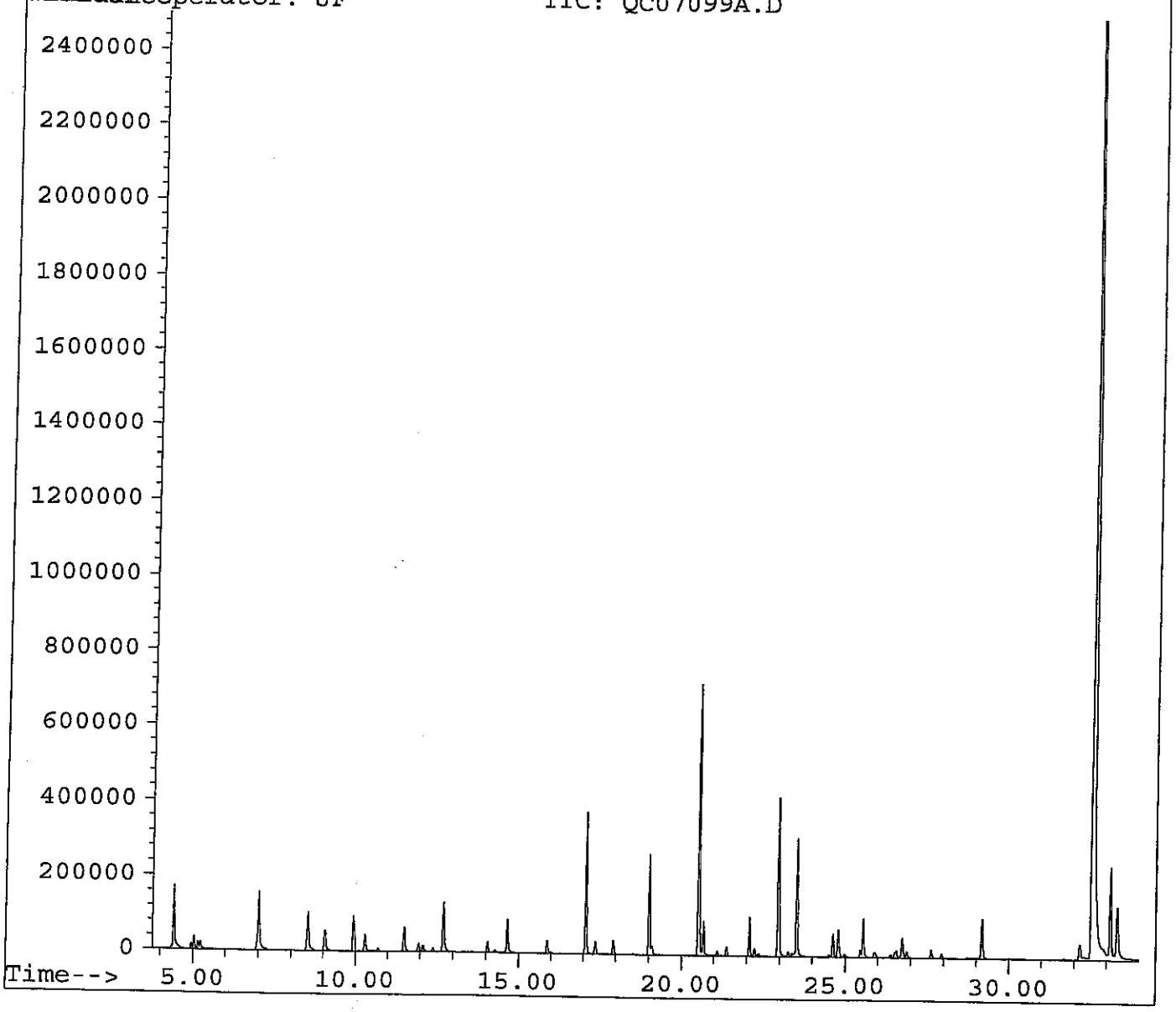
Name of operator: JF

TIC: QC07099A.D



QUALITY CONTROL DUPLICATE

ENVIRONMENTAL
Analytical Service, Inc.

Duplicate of QC Sample

EPA Method TO-15 Modified SIM GC/MS
Analytical Method: **TO-15 SIM**

SDG: LABQC

Dup File: QC07099B.D
Description: ST0709091
Can/Tube#:
QC_Batch: 070909-MS2

CAS#	Compound	LCD ppbv	LCS ppbv	RPD %D	Limit %	Flag * = Out
75-01-4	Vinyl chloride	0.460	0.502	9	25	
75-35-4	1,1-Dichloroethene	0.536	0.566	6	25	
106-93-4	1,2-Dibromoethane	0.358	0.322	11	25	
79-34-5	1,1,2,2-Tetrachloroethane	0.250	0.215	15	25	
91-20-3	Naphthalene	0.188	0.139	26	40	

QUALITY CONTROL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

LABORATORY CONTROL DUPLICATE

EPA Method TO-15 Modified SIM GC/MS
Analytical Method: **TO-15 SIM**

SDG: LABQC

File: QC07099B.D
Description: ST0709091
Can/Tube#:
Sam_Type: LCD
QC_Batch: 070909-MS2
Air Volume: 1000 ml

Date Sampled: NA
Date Received: NA
Date Extracted: NA
Date Analyzed: 07/09/09 **Time:** 14:02
Can Dilution Factor: 1.00 3
QC Duplicate: Yes

CAS#	Compound	MDL ppbv	Spike Conc ppbv	Amount ppbv	Matrix Amt ppbv	Spk Amt ppbv	Percent Recovery	LCL %	UCL %	Flag
75-01-4	Vinyl chloride	0.003	0.473	0.460	0.000	0.460	97	70	130	
75-35-4	1,1-Dichloroethene	0.002	0.513	0.536	0.000	0.536	104	70	130	
106-93-4	1,2-Dibromoethane	0.003	0.327	0.358	0.000	0.358	109	70	130	
79-34-5	1,1,2,2-Tetrachloroethane	0.002	0.228	0.250	0.000	0.250	110	70	130	
91-20-3	Naphthalene	0.007	0.188	0.188	0.000	0.188	100	60	140	

Surrogate Recovery	Spike Amt. ppbV	Amount ppbV	% Rec.	QC Limits	Flag * = Out
Toluene-d8	0.200	0.214	107	70-130	

Notes: Reported results are to be interpreted to two significant figures.
*ug/m3 calculated assuming conditions at 60 F and 1 atm.

QUANTITATION REPORT

EPA Method TO-15 Modified SIM GC/MS

			Review	EAS Sample ID: QC07099	
File Name:	QC07099B.D				1 SS
Sample ID:	ST0709091				2 KB
Date:	9 Jul 109 2:02 pm			Cal Amounts	3 AT
Run Method:	2SIM_SEA.M			IS Areas	4 BB
Quant Method:	2SIM_SEA.M			Carryover	5 SH
Cal Update:	Thu Jul 09 08:26:17 2009				
Template:	EARTEXSM.MS3				
Can Factor:	1.00				
Volume:	1000	ml		Analyst: SS 1	

CAS#	Compound	n	Raw Amount	RT	Target RT	Ion	Sample Area	Qualifier	Lower Qual	Upper Qual	Qual Flag	Cal Flag	Int Flag
75-01-4	Vinyl chloride	2	0.460	4.40	4.37	62.00	83540	34	52	78	Q		
75-35-4	1,1-Dichloroethene	3	0.536	6.98	6.95	61.00	185803	48	42	63			
106-93-4	1,2-Dibromoethane	5	0.358	19.02	18.99	107.00	274564	99	73	109			
79-34-5	1,1,2,2-Tetrachloroethane	6	0.250	22.96	22.93	83.00	470491	9	7	11			
91-20-3	Naphthalene	7	0.188	32.55	32.78	128.00	10093736	14	10	14			
3114-55-4	Chlorobenzene-d5	1	0.200	20.53	20.51	117.00	796790						
2037-26-5	Toluene-d8	4	0.214	17.07	17.05	98.00	366143						

Integration Flags:

If no flag, the Integration was done by the instrument computer

M1 Manual Integration because the computer did not integrated the peak or integrated the wrong peak

M2 Manual Integration because computer integration of baseline was different than Initial Calibration

INITIAL CALIBRATION REPORT

EPA Method TO-15 Modified SIM GC/MS

SDG: LABQC
QC_Batch: 070909-MS2
Instrument Name: MS2

File Name: QC07099B.D
Sample ID: ST0709091
Sample Analysis Date: 9 Jul 109 2:02 pm
Run Method: 2SIM_SEA.M
Quant and Calibration Method: 2SIM_SEA.M
Cal Update: Thu Jul 09 08:26:17 2009
Template: EARTEXSM.MS3

Calibration Title: EPA T0-15

Number Compounds: 8
IS1: ST60360 0.2
IS2:
IS3:
IS4:

		Calibration Amount CA, ppmv						Calibration Response, Area					
		Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
		Amt	Amt	Amt	Amt	Amt	Amt	C07089D.D	C07089H.D	C07089I.D	C07089F.D	C07089E.D	C07089G.D
n	Compound	10.0	0.5	0.25	2.0	4.0	1.0	10.0	0.5	0.25	2.0	4.0	1.0
2	Vinyl chloride	1.040	0.052	0.026	0.208	0.416	0.104	233907	2185	668	20463	93939	14023
3	1,1-Dichloroethene	1.040	0.052	0.026	0.208	0.416	0.104	475136	3956	1191	39546	191059	26523
5	1,2-Dibromoethane	1.040	0.052	0.026	0.208	0.416	0.104	910214	8843	3034	89643	417465	56275
6	1,1,2,2-Tetrachloroethane	1.020	0.051	0.026	0.204	0.408	0.102	2066403	19486	10290	216109	952470	103998
7	Naphthalene	-1.000	0.107	0.053	0.426	0.852	0.213	-1	1174309	813490	11669920	29903019	3979332
1	Chlorobenzene-d5	0.200	0.200	0.200	0.200	0.200	0.200	1210851	185512	107112	436325	1007442	508059
4	Toluene-d8	0.200	0.200	0.200	0.200	0.200	0.200	555865	82583	42311	183795	436164	214227

(555)

INITIAL CALIBRATION REPORT: Response Factors

SDG:	**LABQC**
QC_Batch:	**070909-MS2**
Sample ID:	ST0709091
Sample Analysis Date:	9 Jul 109 2:02 pm
Run Method:	2SIM_SEA.M
Quant Method:	2SIM_SEA.M
Cal Update:	Thu Jul 09 08:26:17 2009
Template:	EARTEXSM.MS3

Sample Calculation:

1) Avg RFn = Sum $\left| \frac{(Astdni)}{(Cstdni)} \frac{(Cistdi)}{(Aistdi)} \right|_i$

Response Factors

Compound	RF1	RF2	RF3	RF4	RF5	RF6	AvgRFn	%RSD
Vinyl chloride	0.037	0.045	0.048	0.045	0.045	0.053	0.046	11.36
1,1-Dichloroethene	0.075	0.082	0.086	0.087	0.091	0.100	0.087	9.72
1,2-Dibromoethane	0.145	0.183	0.218	0.198	0.199	0.213	0.193	13.77
1,1,2,2-Tetrachloroethane	0.335	0.412	0.739	0.486	0.463	0.401	0.473	29.77
Naphthalene	NA	11.832	28.659	12.557	6.968	7.354	13.474	65.75
Chlorobenzene-d5	1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.00
Toluene-d8	0.459	0.445	0.395	0.421	0.433	0.422	0.429	5.16

CALCULATIONS

EPA Method TO-15 Modified SIM GC/MS

SDG: LABQC
Laboratory Number: QC07099

RL:	2SIM_SEA.M
Run Method:	2SIM_SEA.M
Quant Method:	2SIM_SEA.M
Can Dilution Factor:	1.00
Air Volume:	1000 ml
Gas Constant:	23.68
Decimal Places:	3

Compound	M.W.	Raw Amount	Result ppbv	Result ug/m3	(1) MDL ppbv	(2) RL ppbv	Calc MDL ppbv	Calc MDL ug/m3	Calc RL ppbv	Calc RL ug/m3	Flag	Spike ppmv
Vinyl chloride	62.5	0.460	0.460	1.214	0.0026	0.026	0.00	0.007	0.03	0.069		0.473
1,1-Dichloroethene	96.9	0.536	0.536	2.195	0.0023	0.026	0.00	0.009	0.03	0.106		0.513
1,2-Dibromoethane	188.0	0.358	0.358	2.841	0.0031	0.026	0.00	0.025	0.03	0.206		0.327
1,1,2,2-Tetrachloroethane	167.8	0.250	0.250	1.771	0.0024	0.026	0.00	0.017	0.03	0.184		0.228
Naphthalene	128.2	0.188	0.188	1.018	0.0071	0.053	0.01	0.038	0.05	0.287		0.188

SAMPLE CALCULATION

EPA Method TO-15 Modified SIM GC/MS

SDG:		**LABQC**
Laboratory Number:		**QC07099**
Standard Volume	STV	0.5
Sample Volume	SV	1000
Can Dilution Factor	CDF	1.00
Gas Constant		23.68
Decimal Places:		3

Sample Calculation:

1) Avg RFn = Sum $\left| \frac{(Astdni)}{(Cstdni)} \frac{(Cistdi)}{(Aistdi)} \right|_i$ Note: 1

2) Raw Amt = $\frac{(Ansamp)}{(Avg\ RFn)} \frac{(Cistdi)}{(Aistdi)}$ = Cn

3) Amount ppbv = $\frac{(Raw\ Amt)\ 1000}{(SV)}$ (CDF) (STV)

4) Amount ug/m3 = $\frac{(amt(ppbv)\ MW}{23.68}$

n	Compound	IS n	Chem type	MW	AvgRFn	Area Ansamp	Cistdi ppmv	Aistdi Ais	Cn ppmV Raw Amt	Amount ppbv	Amount ug/m3
2	Vinyl chloride	1	TRG	62.5	0.046	83540	0.200	796790	0.460	0.460	1.214
3	1,1-Dichloroethene	1	TRG	96.9	0.087	185803	0.200	796790	0.536	0.536	2.193
5	1,2-Dibromoethane	1	TRG	188.0	0.193	274564	0.200	796790	0.358	0.358	2.842
6	1,1,2,2-Tetrachloroethane	1	TRG	167.8	0.473	470491	0.200	796790	0.250	0.250	1.772
7	Naphthalene	1	TRG	128.2	13.474	10093736	0.200	796790	0.188	0.188	1.018
1	Chlorobenzene-d5	1	IS	0.0	1.000	796790	0.200	796790	0.000	0.000	0.000
4	Toluene-d8	1	SURR	0.0	0.429	366143	0.200	796790	0.000	0.000	0.000

Calculation Definitions:

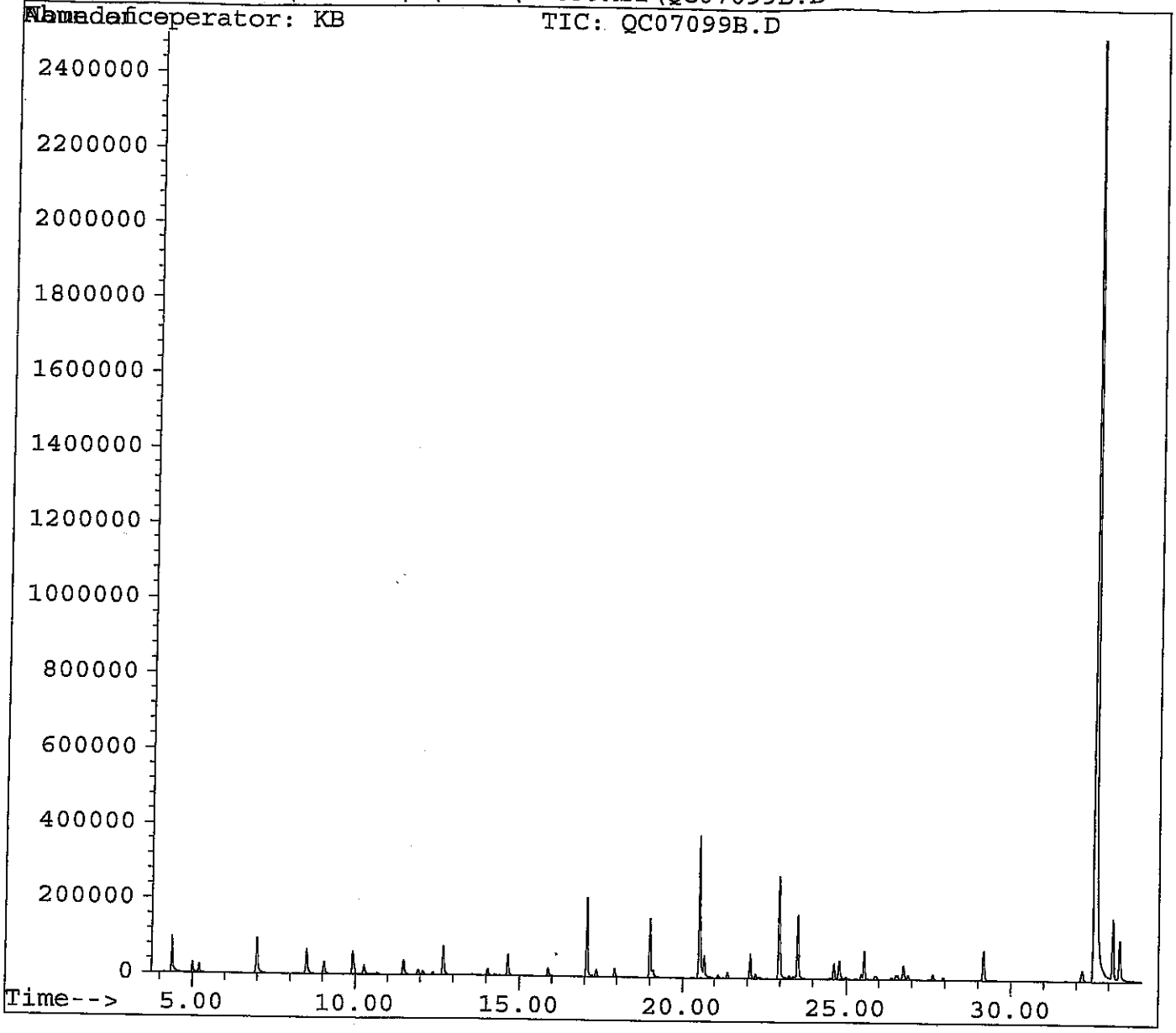
n	compound n
i	i th calibration level
Astdni	Standard Area for compound n at ith calibration level
Cstdni	Standard Concentration for compound n at ith calibration level in ppmv
Cistdi	Internal Standard Conc used for compound n at ith calibration level in ppmv
Aistdi	Internal Standard Area used for compound n at ith calibration level
Ansamp	Sample Area for compound n
Avg RFn	Average response factor for all ith calibration levels for compound n
Raw Amount	Sample Concentration in ppmv before applying factors
Cistd	Concentration internal standard used for compound n in sample in ppmv
Aistd	Area of internal standard used for compound n in sample
Cn	Concentration of compound n in sample in ppmv
23.68	Gas constant at 60 F as per EPA source test protocol
MW	Molecular weight of compound

Note (1) : Avg RFn — The values for the Average Response Factor AvgRFn can be optained from the response Factor Report for the Initial Calibration, or from the Calibration Report

Name of file: C:\HPCHEM\1\DATA\07099MS2\QC07099B.D

Name of operator: KB

TIC: QC07099B.D



ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified SIM GC/MS
Analytical Method: **TO-15 SIM**

SDG: **209270**
Laboratory Number: **01**

File: 0927001A.D
Description: 44-006A
Can/Tube#: 741
Sam_Type: SA
QC_Batch: 070909-MS2
Air Volume: 500 ml

Date Sampled: 06/16/09 **Time:** 11:06
Date Received: 06/17/09
Date Extracted:
Date Analyzed: 07/09/09 **Time:** 17:07
Can Dilution Factor: 2.55 3
Not Detected Flag: U

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
75-01-4	Vinyl chloride	0.013	0.133	0.013	0.035	0.350	0.035	U
75-35-4	1,1-Dichloroethene	0.012	0.133	0.012	0.048	0.543	0.048	U
106-93-4	1,2-Dibromoethane	0.016	0.133	0.028	0.126	1.053	0.223	J
79-34-5	1,1,2,2-Tetrachloroethane	0.012	0.133	0.016	0.087	0.940	0.117	J
91-20-3	Naphthalene	0.036	0.270	0.055	0.196	1.463	0.298	J

	Surrogate Recovery	Spike Amt. ppbV	Amount ppbV	% Rec.	QC Limits	Flag * = Out
2037-26-5	Toluene-d8	0.200	0.187	93	70-130	

Notes: 1) Reported results are to be interpreted to two significant figures.
2) ug/m3 = ppbV*FW/23.68 calculated assuming conditions at 60 F and 1 atm.
3) MDL and RL are adjusted for sample volume and can dilution.
4) U and ND are Flags used for Not Detected
5) J is a flag for a result between the MDL and the RL (or lower quantitation limit, LQL)

QUANTITATION REPORT

EPA Method TO-15 Modified SIM GC/MS

			Review	EAS Sample ID: 0927001	
File Name:	0927001A.D				1 SS
Sample ID:	44-006A				2 KB
Date:	9 Jul 109 5:07 pm			Cal Amounts	3 AT
Run Method:	2SIM_SEA.M			IS Areas	4 BB
Quant Method:	2SIM_SEA.M			Carryover	5 SH
Cal Update:	Thu Jul 09 08:26:17 2009				
Template:	EARTEXSM.MS3				
Can Factor:	2.55				
Volume:	500	ml		Analyst: SS 1	

CAS#	Compound	n	Raw Amount	RT	Target RT	Ion	Sample Area	Qualifier	Lower Qual	Upper Qual	Qual Flag	Cal Flag	Int Flag
75-01-4	Vinyl chloride	2	0.000	4.40	4.37	62.00	0	0	52	78			
75-35-4	1,1-Dichloroethene	3	0.000	6.95	6.95	61.00	0	0	42	63			
106-93-4	1,2-Dibromoethane	5	0.005	18.84	18.99	107.00	3285	99	73	109			
79-34-5	1,1,2,2-Tetrachloroethane	6	0.003	22.92	22.93	83.00	4744	14	7	11	Q		
91-20-3	Naphthalene	7	0.011	32.58	32.78	128.00	451786	13	10	14			
3114-55-4	Chlorobenzene-d5	1	0.200	20.41	20.51	117.00	**620716**						
2037-26-5	Toluene-d8	4	0.187	16.81	17.05	98.00	**248735**						

Integration Flags:

If no flag, the Integration was done by the instrument computer

M1 Manual Integration because the computer did not integrated the peak or integrated the wrong peak

M2 Manual Integration because computer Integration of baseline was different than Initial Calibration

INITIAL CALIBRATION REPORT

EPA Method TO-15 Modified SIM GC/MS

File Name:	0927001A.D	SDG:	209270
Sample ID:	44-006A	QC_Batch:	070909-MS2
Sample Analysis Date:	9 Jul 109 5:07 pm	Instrument Name:	MS2
Run Method:	2SIM_SEA.M	Number Compounds:	8
Quant and Calibration Method:	2SIM_SEA.M	IS1: ST60360	0.2
Cal Update:	Thu Jul 09 08:26:17 2009	IS2:	
Template:	EARTEXSM.MS3	IS3:	
		IS4:	

Calibration Title: EPA T0-15

		Calibration Amount CA, ppmv						Calibration Response, Area					
		Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
		Amt	Amt	Amt	Amt	Amt	Amt	C07089D.D	C07089H.D	C07089I.D	C07089F.D	C07089E.D	C07089G.D
n	Compound	10.0	0.5	0.25	2.0	4.0	1.0	10.0	0.5	0.25	2.0	4.0	1.0
2	Vinyl chloride	1.040	0.052	0.026	0.208	0.416	0.104	233907	2185	668	20463	93939	14023
3	1,1-Dichloroethene	1.040	0.052	0.026	0.208	0.416	0.104	475136	3956	1191	39546	191059	26523
5	1,2-Dibromoethane	1.040	0.052	0.026	0.208	0.416	0.104	910214	8843	3034	89643	417465	56275
6	1,1,2,2-Tetrachloroethane	1.020	0.051	0.026	0.204	0.408	0.102	2066403	19486	10290	216109	952470	103998
7	Naphthalene	-1.000	0.107	0.053	0.426	0.852	0.213	-1	1174309	813490	11669920	29903019	3979332
1	Chlorobenzene-d5	0.200	0.200	0.200	0.200	0.200	0.200	1210851	185512	107112	436325	1007442	508059
4	Toluene-d8	0.200	0.200	0.200	0.200	0.200	0.200	555865	82583	42311	183795	436164	214227

(562)

INITIAL CALIBRATION REPORT: Response Factors

SDG:	**209270**
QC_Batch:	**070909-MS2**
Sample ID:	44-006A
Sample Analysis Date:	9 Jul 109 5:07 pm
Run Method:	2SIM_SEA.M
Quant Method:	2SIM_SEA.M
Cal Update:	Thu Jul 09 08:26:17 2009
Template:	EARTEXSM.MS3

Sample Calculation:

1) Avg RFn = Sum $\left| \frac{(Astdni)}{(Cstdni)} \frac{(Cistdi)}{(Aistdi)} \right|_i$

Response Factors

Compound	RF1	RF2	RF3	RF4	RF5	RF6	AvgRFn	%RSD
Vinyl chloride	0.037	0.045	0.048	0.045	0.045	0.053	0.046	11.36
1,1-Dichloroethene	0.075	0.082	0.086	0.087	0.091	0.100	0.087	9.72
1,2-Dibromoethane	0.145	0.183	0.218	0.198	0.199	0.213	0.193	13.77
1,1,2,2-Tetrachloroethane	0.335	0.412	0.739	0.486	0.463	0.401	0.473	29.77
Naphthalene	NA	11.832	28.659	12.557	6.968	7.354	13.474	65.75
Chlorobenzene-d5	1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.00
Toluene-d8	0.459	0.445	0.395	0.421	0.433	0.422	0.429	5.16

CALCULATIONS

EPA Method TO-15 Modified SIM GC/MS

SDG: 209270
Laboratory Number: 01

RL:	2SIM_SEA.M
Run Method:	2SIM_SEA.M
Quant Method:	2SIM_SEA.M
Can Dilution Factor:	2.55
Air Volume:	500 ml
Gas Constant:	23.68
Decimal Places:	3

Compound	M.W.	Raw Amount	Result ppbv	Result ug/m3	(1) MDL ppbv	(2) RL ppbv	Calc MDL ppbv	Calc MDL ug/m3	Calc RL ppbv	Calc RL ug/m3	Flag	Spike ppmv
Vinyl chloride	62.5	0.000	0.000	0.000	0.0026	0.026	0.01	0.035	0.13	0.350	U	0.103
1,1-Dichloroethene	96.9	0.000	0.000	0.000	0.0023	0.026	0.01	0.048	0.13	0.543	U	0.103
1,2-Dibromoethane	188.0	0.005	0.028	0.223	0.0031	0.026	0.02	0.126	0.13	1.053	J	0.103
1,1,2,2-Tetrachloroethane	167.8	0.003	0.016	0.117	0.0024	0.026	0.01	0.087	0.13	0.940	J	0.103
Naphthalene	128.2	0.011	0.055	0.298	0.0071	0.053	0.04	0.196	0.27	1.463	J	0.103

SAMPLE CALCULATION

EPA Method TO-15 Modified SIM GC/MS

SDG:		**209270**
Laboratory Number:		**01**
Standard Volume	STV	0.5
Sample Volume	SV	500
Can Dilution Factor	CDF	2.55
Gas Constant		23.68
Decimal Places:		3

Sample Calculation:

1) Avg RFn = Sum $\left| \frac{(Astdni)}{(Cstdni)} \frac{(Cistdi)}{(Aistdi)} \right|_i$ Note: 1

2) Raw Amt = $\frac{(Ansamp)}{(Avg\ RFn)} \frac{(Cistdi)}{(Aistdi)}$ = **Cn**

3) Amount ppbv = $\frac{(Raw\ Amt)\ 1000}{(SV)}$ (CDF) (STV)

4) Amount ug/m3 = $\frac{(amt(ppbv)\ MW}{23.68}$

n	Compound	IS n	Chem type	MW	AvgRFn	Area Ansamp	Cistdi ppmv	Aistdi Als	Cn ppmV Raw Amt	Amount ppbv	Amount ug/m3
2	Vinyl chloride	1	TRG	62.5	0.046	0	0.200	620716	0.000	0.000	0.000
3	1,1-Dichloroethene	1	TRG	96.9	0.087	0	0.200	620716	0.000	0.000	0.000
5	1,2-Dibromoethane	1	TRG	188.0	0.193	3285	0.200	620716	0.005	0.028	0.222
6	1,1,2,2-Tetrachloroethane	1	TRG	167.8	0.473	4744	0.200	620716	0.003	0.016	0.113
7	Naphthalene	1	TRG	128.2	13.474	451786	0.200	620716	0.011	0.055	0.298
1	Chlorobenzene-d5	1	IS	0.0	1.000	620716	0.200	620716	0.000	0.000	0.000
4	Toluene-d8	1	SURR	0.0	0.429	248735	0.200	620716	0.000	0.000	0.000

Calculation Definitions:

n	compound n
i	i th calibration level
Astdni	Standard Area for compound n at ith calibration level
Cstdni	Standard Concentration for compound n at ith calibration level in ppmv
Cistdi	Internal Standard Conc used for compound n at ith calibration level in ppmv
Aistdi	Internal Standard Area used for compound n at ith calibration level
Ansamp	Sample Area for compound n
Avg RFn	Average response factor for all ith calibration levels for compound n
Raw Amount	Sample Concentration in ppmv before applying factors
Cistd	Concentration internal standard used for compound n in sample in ppmv
Aistd	Area of internal standard used for compound n in sample
Cn	Concentration of compound n in sample in ppmv
23.68	Gas constant at 60 F as per EPA source test protocol
MW	Molecular weight of compound
Note (1) : Avg RFn	The values for the Average Response Factor AvgRFn can be optained from the response Factor Report for the Initial Calibration, or from the Calibration Report

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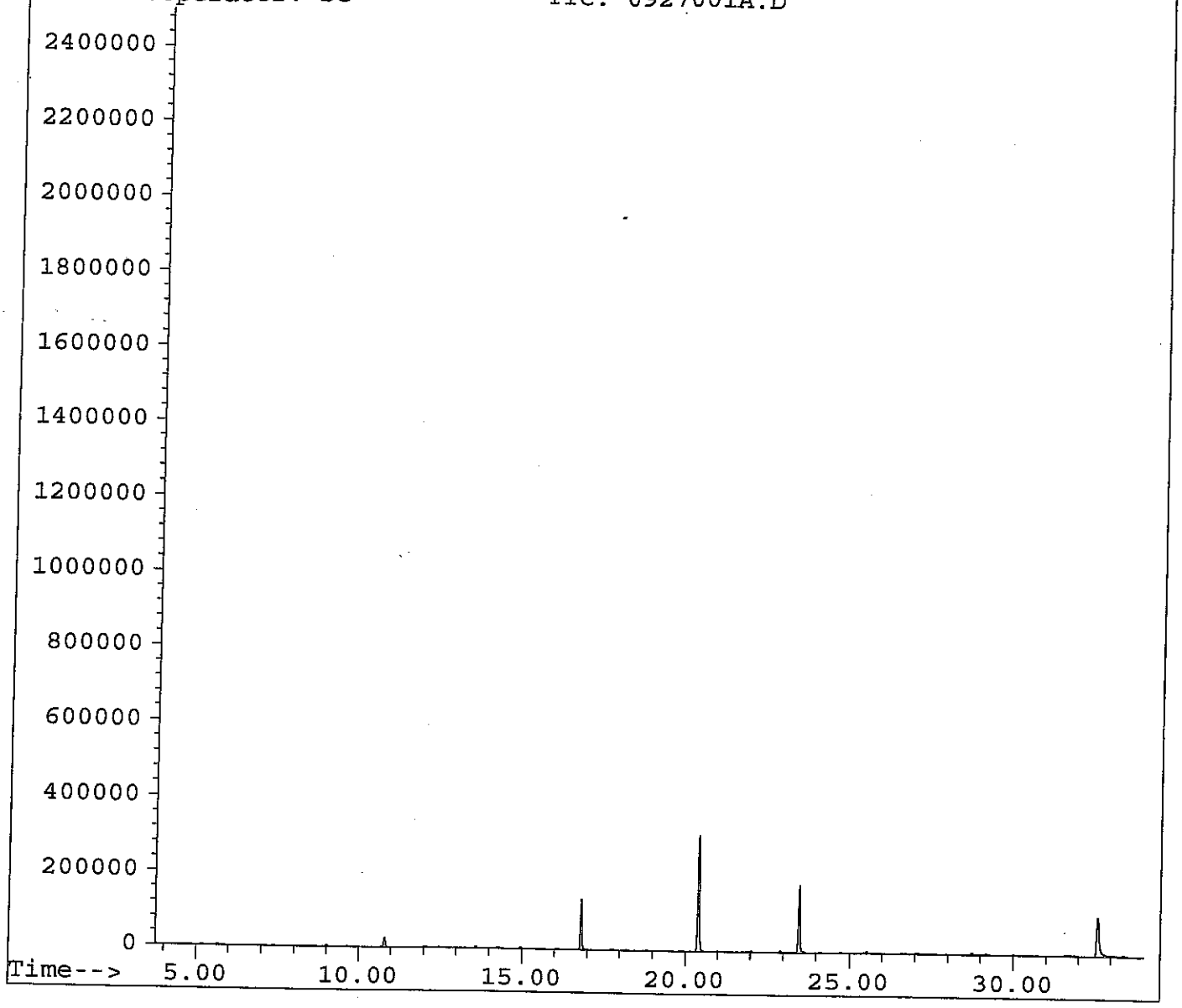
Name of operator: SG

TIC: 0927001A.D



ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified SIM GC/MS
Analytical Method: **TO-15 SIM**

SDG: **209270**
Laboratory Number: **02**

File: 0927002A.D
Description: 44-007
Can/Tube#: 640
Sam_Type: SA
QC_Batch: 070909-MS2
Air Volume: 500 ml

Date Sampled: 06/16/09 **Time:** 16:51
Date Received: 06/17/09
Date Extracted:
Date Analyzed: 07/09/09 **Time:** 17:48
Can Dilution Factor: 1.49 3
Not Detected Flag: U

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
75-01-4	Vinyl chloride	0.008	0.077	0.008	0.020	0.204	0.020	U
75-35-4	1,1-Dichloroethene	0.007	0.077	0.007	0.028	0.317	0.028	U
106-93-4	1,2-Dibromoethane	0.009	0.077	0.009	0.073	0.615	0.073	U
79-34-5	1,1,2,2-Tetrachloroethane	0.007	0.077	0.007	0.051	0.549	0.051	U
91-20-3	Naphthalene	0.021	0.158	0.031	0.115	0.855	0.168	J

	Surrogate Recovery	Spike Amt. ppbV	Amount ppbV	% Rec.	QC Limits	Flag * = Out
2037-26-5	Toluene-d8	0.200	0.193	96	70-130	

Notes: 1) Reported results are to be interpreted to two significant figures.
2) ug/m3 = ppbV*FW/23.68 calculated assuming conditions at 60 F and 1 atm.
3) MDL and RL are adjusted for sample volume and can dilution.
4) U and ND are Flags used for Not Detected
5) J is a flag for a result between the MDL and the RL (or lower quantitation limit, LQL)

QUANTITATION REPORT

EPA Method TO-15 Modified SIM GC/MS

			Review	EAS Sample ID: 0927002	
File Name:	0927002A.D				1 SS
Sample ID:	44-007				2 KB
Date:	9 Jul 109 5:48 pm			Cal Amounts	3 AT
Run Method:	2SIM_SEA.M			IS Areas	4 BB
Quant Method:	2SIM_SEA.M			Carryover	5 SH
Cal Update:	Thu Jul 09 08:26:17 2009				
Template:	EARTEXSM.MS3				
Can Factor:	1.49				
Volume:	500	ml		Analyst: SS 1	

CAS#	Compound	n	Raw Amount	RT	Target RT	Ion	Sample Area	Qualifier	Lower Qual	Upper Qual	Qual Flag	Cal Flag	Int Flag
75-01-4	Vinyl chloride	2	0.000	4.36	4.37	62.00	0	0	52	78			
75-35-4	1,1-Dichloroethene	3	0.000	6.89	6.95	61.00	0	0	42	63			
106-93-4	1,2-Dibromoethane	5	0.001	19.00	18.99	107.00	634	100	73	109			
79-34-5	1,1,2,2-Tetrachloroethane	6	0.001	22.97	22.93	83.00	770	23	7	11			
91-20-3	Naphthalene	7	0.010	32.57	32.78	128.00	322625	12	10	14			
3114-55-4	Chlorobenzene-d5	1	0.200	20.52	20.51	117.00	459331						
2037-26-5	Toluene-d8	4	0.193	17.05	17.05	98.00	189981						

Integration Flags:

If no flag, the Integration was done by the instrument computer

M1 Manual Integration because the computer did not integrated the peak or integrated the wrong peak

M2 Manual Integration because computer integration of baseline was different than Initial Calibration

INITIAL CALIBRATION REPORT

EPA Method TO-15 Modified SIM GC/MS

SDG: 209270
QC_Batch: 070909-MS2
Instrument Name: MS2

File Name: 0927002A.D
Sample ID: 44-007
Sample Analysis Date: 9 Jul 109 5:48 pm
Run Method: 2SIM_SEA.M
Quant and Calibration Method: 2SIM_SEA.M
Cal Update: Thu Jul 09 08:26:17 2009
Template: EARTEXSM.MS3

Calibration Title: EPA T0-15

Number Compounds: 8
IS1: ST60360 0.2
IS2:
IS3:
IS4:

		Calibration Amount CA, ppmv						Calibration Response, Area					
		Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
		Amt	Amt	Amt	Amt	Amt	Amt	C07089D.D	C07089H.D	C07089I.D	C07089F.D	C07089E.D	C07089G.D
n	Compound	10.0	0.5	0.25	2.0	4.0	1.0	10.0	0.5	0.25	2.0	4.0	1.0
2	Vinyl chloride	1.040	0.052	0.026	0.208	0.416	0.104	233907	2185	668	20463	93939	14023
3	1,1-Dichloroethene	1.040	0.052	0.026	0.208	0.416	0.104	475136	3956	1191	39546	191059	26523
5	1,2-Dibromoethane	1.040	0.052	0.026	0.208	0.416	0.104	910214	8843	3034	89643	417465	56275
6	1,1,2,2-Tetrachloroethane	1.020	0.051	0.026	0.204	0.408	0.102	2066403	19486	10290	216109	952470	103998
7	Naphthalene	-1.000	0.107	0.053	0.426	0.852	0.213	-1	1174309	813490	11669920	29903019	3979332
1	Chlorobenzene-d5	0.200	0.200	0.200	0.200	0.200	0.200	1210851	185512	107112	436325	1007442	508059
4	Toluene-d8	0.200	0.200	0.200	0.200	0.200	0.200	555865	82583	42311	183795	436164	214227

(569)

INITIAL CALIBRATION REPORT: Response Factors

SDG:	**209270**
QC_Batch:	**070909-MS2**
Sample ID:	44-007
Sample Analysis Date:	9 Jul 109 5:48 pm
Run Method:	2SIM_SEA.M
Quant Method:	2SIM_SEA.M
Cal Update:	Thu Jul 09 08:26:17 2009
Template:	EARTEXSM.MS3

Sample Calculation:

1) Avg RFn = Sum $\left| \frac{(Astdni)}{(Cstdni)} \frac{(Cistdi)}{(Aistdi)} \right|$

Response Factors

Compound	RF1	RF2	RF3	RF4	RF5	RF6	AvgRFn	%RSD
Vinyl chloride	0.037	0.045	0.048	0.045	0.045	0.053	0.046	11.36
1,1-Dichloroethene	0.075	0.082	0.086	0.087	0.091	0.100	0.087	9.72
1,2-Dibromoethane	0.145	0.183	0.218	0.198	0.199	0.213	0.193	13.77
1,1,2,2-Tetrachloroethane	0.335	0.412	0.739	0.486	0.463	0.401	0.473	29.77
Naphthalene	NA	11.832	28.659	12.557	6.968	7.354	13.474	65.75
Chlorobenzene-d5	1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.00
Toluene-d8	0.459	0.445	0.395	0.421	0.433	0.422	0.429	5.16

CALCULATIONS

EPA Method TO-15 Modified SIM GC/MS

SDG: 209270
Laboratory Number: 02

RL:	2SIM_SEA.M
Run Method:	2SIM_SEA.M
Quant Method:	2SIM_SEA.M
Can Dilution Factor:	1.49
Air Volume:	500 ml
Gas Constant:	23.68
Decimal Places:	3

Compound	M.W.	Raw Amount	Result ppbv	Result ug/m3	(1) MDL ppbv	(2) RL ppbv	Calc MDL ppbv	Calc MDL ug/m3	Calc RL ppbv	Calc RL ug/m3	Flag	Spike ppmv
Vinyl chloride	62.5	0.000	0.000	0.000	0.0026	0.026	0.01	0.020	0.08	0.204	U	0.103
1,1-Dichloroethene	96.9	0.000	0.000	0.000	0.0023	0.026	0.01	0.028	0.08	0.317	U	0.103
1,2-Dibromoethane	188.0	0.001	0.004	0.034	0.0031	0.026	0.01	0.073	0.08	0.615	U	0.103
1,1,2,2-Tetrachloroethane	167.8	0.001	0.002	0.015	0.0024	0.026	0.01	0.051	0.08	0.549	U	0.103
Naphthalene	128.2	0.010	0.031	0.168	0.0071	0.053	0.02	0.115	0.16	0.855	J	0.103

SAMPLE CALCULATION

EPA Method TO-15 Modified SIM GC/MS

SDG:		**209270**
Laboratory Number:		**02**
Standard Volume	STV	0.5
Sample Volume	SV	500
Can Dilution Factor	CDF	1.49
Gas Constant		23.68
Decimal Places:		3

Sample Calculation:

1) Avg RFn = Sum $\left| \frac{(Astdni)}{(Cstdni)} \frac{(Cistdi)}{(Aistdi)} \right|_i$ Note: 1

2) Raw Amt = $\frac{(Ansamp)}{(Avg\ RFn)} \frac{(Cistdi)}{(Aistdi)}$ = Cn

3) Amount ppbv = $\frac{(Raw\ Amt)\ 1000}{(SV)}$ (CDF) (STV)

4) Amount ug/m3 = $\frac{(amt(ppbv)\ MW}{23.68}$

n	Compound	IS n	Chem type	MW	AvgRFn	Area Ansamp	Cistdi ppmv	Aistdi Ais	Cn ppmV Raw Amt	Amount ppbv	Amount ug/m3
2	Vinyl chloride	1	TRG	62.5	0.046	0	0.200	459331	0.000	0.000	0.000
3	1,1-Dichloroethene	1	TRG	96.9	0.087	0	0.200	459331	0.000	0.000	0.000
5	1,2-Dibromoethane	1	TRG	188.0	0.193	634	0.200	459331	0.001	0.004	0.032
6	1,1,2,2-Tetrachloroethane	1	TRG	167.8	0.473	770	0.200	459331	0.001	0.002	0.014
7	Naphthalene	1	TRG	128.2	13.474	322625	0.200	459331	0.010	0.031	0.168
1	Chlorobenzene-d5	1	IS	0.0	1.000	459331	0.200	459331	0.000	0.000	0.000
4	Toluene-d8	1	SURR	0.0	0.429	189981	0.200	459331	0.000	0.000	0.000

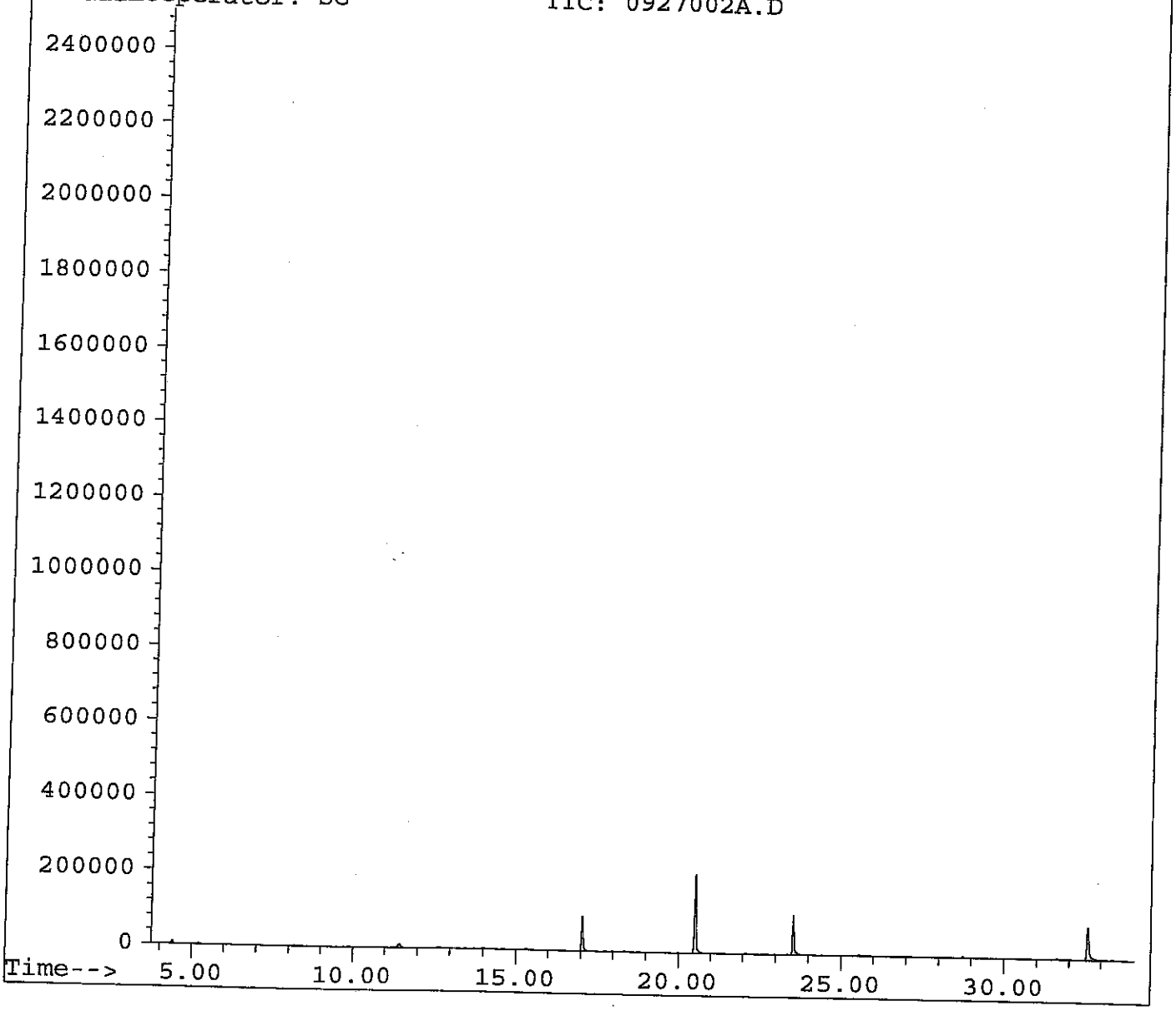
Calculation Definitions:

n	compound n
i	i th calibration level
Astdni	Standard Area for compound n at ith calibration level
Cstdni	Standard Concentration for compound n at ith calibration level in ppmv
Cistdi	Internal Standard Conc used for compound n at ith calibration level in ppmv
Aistdi	Internal Standard Area used for compound n at ith calibration level
Ansamp	Sample Area for compound n
Avg RFn	Average response factor for all ith calibration levels for compound n
Raw Amount	Sample Concentration in ppmv before applying factors
Cistd	Concentration Internal standard used for compound n in sample in ppmv
Aistd	Area of internal standard used for compound n in sample
Cn	Concentration of compound n in sample in ppmv
23.68	Gas constant at 60 F as per EPA source test protocol
MW	Molecular weight of compound
Note (1) : Avg RFn	The values for the Average Response Factor AvgRFn can be optained from the response Factor Report for the Initial Calibration, or from the Calibration Report

Name of file: C:\HPCHEM\1\DATA\07099MS2\0927002A.D

Name of operator: SG

TIC: 0927002A.D



ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified SIM GC/MS
Analytical Method: TO-15 SIM

SDG: 209270
Laboratory Number: 03

File: 0927003A.D
Description: 44-008
Can/Tube#: 692
Sam_Type: SA
QC_Batch: 070909-MS2
Air Volume: 500 ml

Date Sampled: 06/16/09 **Time:** 16:46
Date Received: 06/17/09
Date Extracted:
Date Analyzed: 07/09/09 **Time:** 18:50
Can Dilution Factor: 1.51 3
Not Detected Flag: U

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
75-01-4	Vinyl chloride	0.008	0.079	0.008	0.021	0.207	0.021	U
75-35-4	1,1-Dichloroethene	0.007	0.079	0.007	0.028	0.321	0.028	U
106-93-4	1,2-Dibromoethane	0.009	0.079	0.009	0.074	0.623	0.074	U
79-34-5	1,1,2,2-Tetrachloroethane	0.007	0.079	0.007	0.051	0.556	0.051	U
91-20-3	Naphthalene	0.021	0.160	0.021	0.116	0.867	0.116	U

	Surrogate Recovery	Spike Amt. ppbV	Amount ppbV	% Rec.	QC Limits	Flag * = Out
2037-26-5	Toluene-d8	0.200	0.211	106	70-130	

Notes: 1) Reported results are to be interpreted to two significant figures.
2) ug/m3 = ppbV*FW/23.68 calculated assuming conditions at 60 F and 1 atm.
3) MDL and RL are adjusted for sample volume and can dilution.
4) U and ND are Flags used for Not Detected
5) J is a flag for a result between the MDL and the RL (or lower quantitation limit, LQL)

QUANTITATION REPORT

EPA Method TO-15 Modified SIM GC/MS

		Review	EAS Sample ID: 0927003	
File Name:	0927003A.D			1 SS
Sample ID:	44-008			2 KB
Date:	9 Jul 109 6:50 pm		Cal Amounts	3 AT
Run Method:	2SIM_SEA.M		IS Areas	4 BB
Quant Method:	2SIM_SEA.M		Carryover	5 SH
Cal Update:	Thu Jul 09 08:26:17 2009			
Template:	EARTEXSM.MS3			
Can Factor:	1.51			
Volume:	500 ml		Analyst: SS 1	

CAS#	Compound	n	Raw Amount	RT	Target RT	Ion	Sample Area	Qualifier	Lower Qual	Upper Qual	Qual Flag	Cal Flag	Int Flag
75-01-4	Vinyl chloride	2	0.000	4.28	4.37	62.00	0	0	52	78			
75-35-4	1,1-Dichloroethene	3	0.000	6.89	6.95	61.00	0	0	42	63			
106-93-4	1,2-Dibromoethane	5	0.001	19.02	18.99	107.00	876	98	73	109			
79-34-5	1,1,2,2-Tetrachloroethane	6	0.001	22.98	22.93	83.00	1124	20	7	11	Q		
91-20-3	Naphthalene	7	0.005	32.57	32.78	128.00	276667	12	10	14			
3114-55-4	Chlorobenzene-d5	1	0.200	20.54	20.51	117.00	**752290**						
2037-26-5	Toluene-d8	4	0.211	17.08	17.05	98.00	**340791**						

Integration Flags:

If no flag, the Integration was done by the instrument computer

M1 Manual Integration because the computer did not integrated the peak or integrated the wrong peak

M2 Manual Integration because computer integration of baseline was different than Initial Calibration

INITIAL CALIBRATION REPORT

EPA Method TO-15 Modified SIM GC/MS

File Name:	0927003A.D	SDG:	209270
Sample ID:	44-008	QC_Batch:	070909-MS2
Sample Analysis Date:	9 Jul 109 6:50 pm	Instrument Name:	MS2
Run Method:	2SIM_SEA.M	Number Compounds:	8
Quant and Calibration Method:	2SIM_SEA.M	IS1: ST60360	0.2
Cal Update:	Thu Jul 09 08:26:17 2009	IS2:	
Template:	EARTEXSM.MS3	IS3:	
		IS4:	

Calibration Title:EPA T0-15

		Calibration Amount CA, ppmv						Calibration Response, Area					
		Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
		Amt	Amt	Amt	Amt	Amt	Amt	C07089D.D	C07089H.D	C07089I.D	C07089F.D	C07089E.D	C07089G.D
n	Compound	10.0	0.5	0.25	2.0	4.0	1.0	10.0	0.5	0.25	2.0	4.0	1.0
2	Vinyl chloride	1.040	0.052	0.026	0.208	0.416	0.104	233907	2185	668	20463	93939	14023
3	1,1-Dichloroethene	1.040	0.052	0.026	0.208	0.416	0.104	475136	3956	1191	39546	191059	26523
5	1,2-Dibromoethane	1.040	0.052	0.026	0.208	0.416	0.104	910214	8843	3034	89643	417465	56275
6	1,1,2,2-Tetrachloroethane	1.020	0.051	0.026	0.204	0.408	0.102	2066403	19486	10290	216109	952470	103998
7	Naphthalene	-1.000	0.107	0.053	0.426	0.852	0.213	-1	1174309	813490	11669920	29903019	3979332
1	Chlorobenzene-d5	0.200	0.200	0.200	0.200	0.200	0.200	1210851	185512	107112	436325	1007442	508059
4	Toluene-d8	0.200	0.200	0.200	0.200	0.200	0.200	555865	82583	42311	183795	436164	214227

(576)

INITIAL CALIBRATION REPORT: Response Factors

SDG:	**209270**
QC_Batch:	**070909-MS2**
Sample ID:	44-008
Sample Analysis Date:	9 Jul 109 6:50 pm
Run Method:	2SIM_SEA.M
Quant Method:	2SIM_SEA.M
Cal Update:	Thu Jul 09 08:26:17 2009
Template:	EARTEXSM.MS3

Sample Calculation:

1) Avg RFn = Sum $\left| \frac{(Astdni)\ (Cistdi)}{(Cstdni)\ (Aistdi)} \right|$

Response Factors

Compound	RF1	RF2	RF3	RF4	RF5	RF6	AvgRFn	%RSD
Vinyl chloride	0.037	0.045	0.048	0.045	0.045	0.053	0.046	11.36
1,1-Dichloroethene	0.075	0.082	0.086	0.087	0.091	0.100	0.087	9.72
1,2-Dibromoethane	0.145	0.183	0.218	0.198	0.199	0.213	0.193	13.77
1,1,2,2-Tetrachloroethane	0.335	0.412	0.739	0.486	0.463	0.401	0.473	29.77
Naphthalene	NA	11.832	28.659	12.557	6.968	7.354	13.474	65.75
Chlorobenzene-d5	1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.00
Toluene-d8	0.459	0.445	0.395	0.421	0.433	0.422	0.429	5.16

CALCULATIONS

EPA Method TO-15 Modified SIM GC/MS

SDG: 209270
Laboratory Number: 03

RL:	2SIM_SEA.M
Run Method:	2SIM_SEA.M
Quant Method:	2SIM_SEA.M
Can Dilution Factor:	1.51
Air Volume:	500 ml
Gas Constant:	23.68
Decimal Places:	3

Compound	M.W.	Raw Amount	Result ppbv	Result ug/m3	(1) MDL ppbv	(2) RL ppbv	Calc MDL ppbv	Calc MDL ug/m3	Calc RL ppbv	Calc RL ug/m3	Flag	Spike ppmv
Vinyl chloride	62.5	0.000	0.000	0.000	0.0026	0.026	0.01	0.021	0.08	0.207	U	0.103
1,1-Dichloroethene	96.9	0.000	0.000	0.000	0.0023	0.026	0.01	0.028	0.08	0.321	U	0.103
1,2-Dibromoethane	188.0	0.001	0.004	0.029	0.0031	0.026	0.01	0.074	0.08	0.623	U	0.103
1,1,2,2-Tetrachloroethane	167.8	0.001	0.002	0.014	0.0024	0.026	0.01	0.051	0.08	0.556	U	0.103
Naphthalene	128.2	0.005	0.016	0.089	0.0071	0.053	0.02	0.116	0.16	0.867	U	0.103

SAMPLE CALCULATION

EPA Method TO-15 Modified SIM GC/MS

SDG:		**209270**
Laboratory Number:		**03**
Standard Volume	STV	0.5
Sample Volume	SV	500
Can Dilution Factor	CDF	1.51
Gas Constant		23.68
Decimal Places:		3

Sample Calculation:

1) Avg RFn = Sum $\left| \frac{(Astdni)}{(Cstdni)} \frac{(Cistdi)}{(Aistdi)} \right|_i$ Note: 1

2) Raw Amt = $\frac{(Ansamp)}{(Avg\ RFn)} \frac{(Cistdi)}{(Aistdi)}$ = Cn

3) Amount ppbv = $\frac{(Raw\ Amt)\ 1000}{(SV)}$ (CDF) (STV)

4) Amount ug/m3 = $\frac{(amt(ppbv)\ MW}{23.68}$

n	Compound	IS n	Chem type	MW	AvgRFn	Area Ansamp	Cistdi ppmv	Aistdi Ais	Cn ppmV Raw Amt	Amount ppbv	Amount ug/m3
2	Vinyl chloride	1	TRG	62.5	0.046	0	0.200	752290	0.000	0.000	0.000
3	1,1-Dichloroethene	1	TRG	96.9	0.087	0	0.200	752290	0.000	0.000	0.000
5	1,2-Dibromoethane	1	TRG	188.0	0.193	876	0.200	752290	0.001	0.004	0.032
6	1,1,2,2-Tetrachloroethane	1	TRG	167.8	0.473	1124	0.200	752290	0.001	0.002	0.014
7	Naphthalene	1	TRG	128.2	13.474	276667	0.200	752290	0.005	0.016	0.087
1	Chlorobenzene-d5	1	IS	0.0	1.000	752290	0.200	752290	0.000	0.000	0.000
4	Toluene-d8	1	SURR	0.0	0.429	340791	0.200	752290	0.000	0.000	0.000

Calculation Definitions:

n	compound n
i	i th calibration level
Astdni	Standard Area for compound n at ith calibration level
Cstdni	Standard Concentration for compound n at ith calibration level in ppmv
Cistdi	Internal Standard Conc used for compound n at ith calibration level in ppmv
Aistdi	Internal Standard Area used for compound n at ith calibration level
Ansamp	Sample Area for compound n
Avg RFn	Average response factor for all Ith calibration levels for compound n
Raw Amount	Sample Concentration in ppmv before applying factors
Cistd	Concentration internal standard used for compound n in sample in ppmv
Aistd	Area of internal standard used for compound n in sample
Cn	Concentration of compound n in sample in ppmv
23.68	Gas constant at 60 F as per EPA source test protocol
MW	Molecular weight of compound
Note (1) : Avg RFn	The values for the Average Response Factor AvgRFn can be optained from the response Factor Report for the Initial Calibration, or from the Calibration Report

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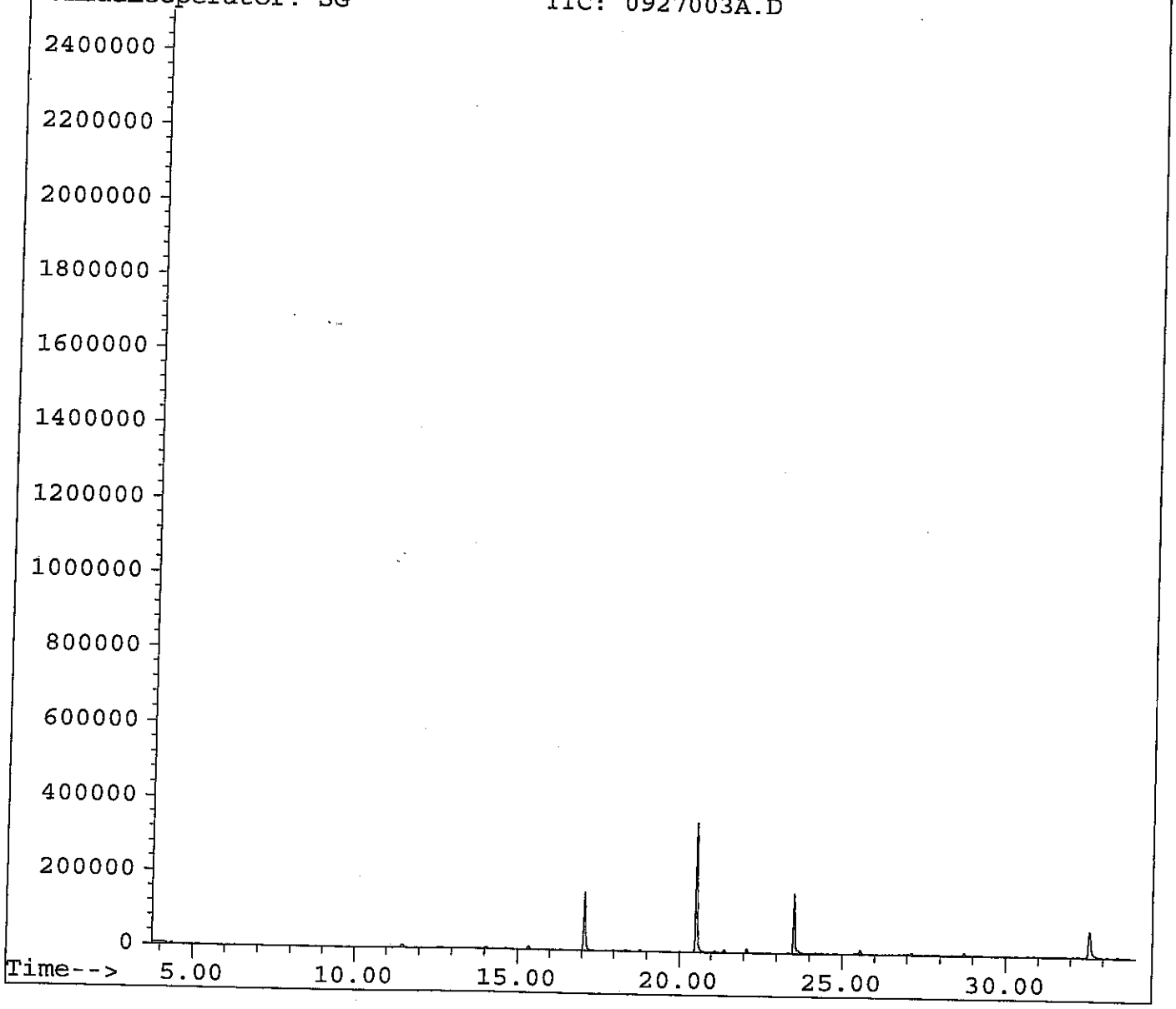
Abundance Operator: SG TIC: 0927003A.D



ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified SIM GC/MS
Analytical Method: **TO-15 SIM**

SDG: **209270**
Laboratory Number: **06**

File: 0927006A.D
Description: 44-011
Can/Tube#: 169
Sam_Type: SA
QC_Batch: 070909-MS2
Air Volume: 500 ml

Date Sampled: 06/16/09 **Time:** 14:14
Date Received: 06/17/09
Date Extracted:
Date Analyzed: 07/09/09 **Time:** 21:05
Can Dilution Factor: 1.47 3
Not Detected Flag: U

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
75-01-4	Vinyl chloride	0.008	0.076	0.008	0.020	0.202	0.020	U
75-35-4	1,1-Dichloroethene	0.007	0.076	0.007	0.028	0.313	0.028	U
106-93-4	1,2-Dibromoethane	0.009	0.076	0.009	0.072	0.607	0.072	U
79-34-5	1,1,2,2-Tetrachloroethane	0.007	0.076	0.007	0.050	0.542	0.050	U
91-20-3	Naphthalene	0.021	0.156	0.021	0.113	0.844	0.113	U

	Surrogate Recovery	Spike Amt. ppbV	Amount ppbV	% Rec.	QC Limits	Flag * = Out
2037-26-5	Toluene-d8	0.200	0.198	99	70-130	

Notes: 1) Reported results are to be interpreted to two significant figures.
2) ug/m3 = ppbV*FW/23.68 calculated assuming conditions at 60 F and 1 atm.
3) MDL and RL are adjusted for sample volume and can dilution.
4) U and ND are Flags used for Not Detected
5) J is a flag for a result between the MDL and the RL (or lower quantitation limit, LQL)

QUANTITATION REPORT

EPA Method TO-15 Modified SIM GC/MS

			Review	EAS Sample ID: 0927006	
File Name:	0927006A.D				1 SS
Sample ID:	44-011				2 KB
Date:	9 Jul 109 9:05 pm			Cal Amounts	3 AT
Run Method:	2SIM_SEA.M			IS Areas	4 BB
Quant Method:	2SIM_SEA.M			Carryover	5 SH
Cal Update:	Thu Jul 09 08:26:17 2009				
Template:	EARTEXSM.MS3				
Can Factor:	1.47				
Volume:	500	ml		Analyst: SS 1	

CAS#	Compound	n	Raw Amount	RT	Target RT	Ion	Sample Area	Qualifier	Lower Qual	Upper Qual	Qual Flag	Cal Flag	Int Flag
75-01-4	Vinyl chloride	2	0.000	4.31	4.37	62.00	0	0	52	78			
75-35-4	1,1-Dichloroethene	3	0.000	6.97	6.95	61.00	0	0	42	63			
106-93-4	1,2-Dibromoethane	5	0.001	18.80	18.99	107.00	576	100	73	109			
79-34-5	1,1,2,2-Tetrachloroethane	6	0.000	22.83	22.93	83.00	0	0	7	11			
91-20-3	Naphthalene	7	0.006	32.55	32.78	128.00	302759	12	10	14			
3114-55-4	Chlorobenzene-d5	1	0.200	20.37	20.51	117.00	717421						
2037-26-5	Toluene-d8	4	0.198	16.76	17.05	98.00	304484						

Integration Flags:

If no flag, the Integration was done by the instrument computer

M1 Manual Integration because the computer did not integrated the peak or integrated the wrong peak

M2 Manual Integration because computer integration of baseline was different than Initial Calibration

INITIAL CALIBRATION REPORT

EPA Method TO-15 Modified SIM GC/MS

SDG: 209270
QC_Batch: 070909-MS2
Instrument Name: MS2

File Name: 0927006A.D
Sample ID: 44-011
Sample Analysis Date: 9 Jul 109 9:05 pm
Run Method: 2SIM_SEA.M
Quant and Calibration Method: 2SIM_SEA.M
Cal Update: Thu Jul 09 08:26:17 2009
Template: EARTEXSM.MS3

Calibration Title: EPA T0-15

Number Compounds: 8
IS1: ST60360 0.2
IS2:
IS3:
IS4:

		Calibration Amount CA, ppmv						Calibration Response, Area					
		Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
		Amt	Amt	Amt	Amt	Amt	Amt	C07089D.D	C07089H.D	C07089I.D	C07089F.D	C07089E.D	C07089G.D
n	Compound	10.0	0.5	0.25	2.0	4.0	1.0	10.0	0.5	0.25	2.0	4.0	1.0
2	Vinyl chloride	1.040	0.052	0.026	0.208	0.416	0.104	233907	2185	668	20463	93939	14023
3	1,1-Dichloroethene	1.040	0.052	0.026	0.208	0.416	0.104	475136	3956	1191	39546	191059	26523
5	1,2-Dibromoethane	1.040	0.052	0.026	0.208	0.416	0.104	910214	8843	3034	89643	417465	56275
6	1,1,2,2-Tetrachloroethane	1.020	0.051	0.026	0.204	0.408	0.102	2066403	19486	10290	216109	952470	103998
7	Naphthalene	-1.000	0.107	0.053	0.426	0.852	0.213	-1	1174309	813490	11669920	29903019	3979332
1	Chlorobenzene-d5	0.200	0.200	0.200	0.200	0.200	0.200	1210851	185512	107112	436325	1007442	508059
4	Toluene-d8	0.200	0.200	0.200	0.200	0.200	0.200	555865	82583	42311	183795	436164	214227

(583)

INITIAL CALIBRATION REPORT: Response Factors

SDG:	**209270**
QC_Batch:	**070909-MS2**
Sample ID:	44-011
Sample Analysis Date:	9 Jul 109 9:05 pm
Run Method:	2SIM_SEA.M
Quant Method:	2SIM_SEA.M
Cal Update:	Thu Jul 09 08:26:17 2009
Template:	EARTEXSM.MS3

Sample Calculation:

1) Avg RFn = Sum $\left| \frac{(Astdni)\ (Cistdi)}{(Cstdni)\ (Aistdi)} \right|_i$

Response Factors

Compound	RF1	RF2	RF3	RF4	RF5	RF6	AvgRFn	%RSD
Vinyl chloride	0.037	0.045	0.048	0.045	0.045	0.053	0.046	11.36
1,1-Dichloroethene	0.075	0.082	0.086	0.087	0.091	0.100	0.087	9.72
1,2-Dibromoethane	0.145	0.183	0.218	0.198	0.199	0.213	0.193	13.77
1,1,2,2-Tetrachloroethane	0.335	0.412	0.739	0.486	0.463	0.401	0.473	29.77
Naphthalene	NA	11.832	28.659	12.557	6.968	7.354	13.474	65.75
Chlorobenzene-d5	1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.00
Toluene-d8	0.459	0.445	0.395	0.421	0.433	0.422	0.429	5.16

CALCULATIONS

EPA Method TO-15 Modified SIM GC/MS

SDG: 209270
Laboratory Number: 06

RL:	2SIM_SEA.M
Run Method:	2SIM_SEA.M
Quant Method:	2SIM_SEA.M
Can Dilution Factor:	1.47
Air Volume:	500 ml
Gas Constant:	23.68
Decimal Places:	3

Compound	M.W.	Raw Amount	Result ppbv	Result ug/m3	(1) MDL ppbv	(2) RL ppbv	Calc MDL ppbv	Calc MDL ug/m3	Calc RL ppbv	Calc RL ug/m3	Flag	Spike ppmv
Vinyl chloride	62.5	0.000	0.000	0.000	0.0026	0.026	0.01	0.020	0.08	0.202	U	0.103
1,1-Dichloroethene	96.9	0.000	0.000	0.000	0.0023	0.026	0.01	0.028	0.08	0.313	U	0.103
1,2-Dibromoethane	188.0	0.001	0.002	0.019	0.0031	0.026	0.01	0.072	0.08	0.607	U	0.103
1,1,2,2-Tetrachloroethane	167.8	0.000	0.000	0.000	0.0024	0.026	0.01	0.050	0.08	0.542	U	0.103
Naphthalene	128.2	0.006	0.018	0.100	0.0071	0.053	0.02	0.113	0.16	0.844	U	0.103

SAMPLE CALCULATION

EPA Method TO-15 Modified SIM GC/MS

SDG:		**209270**
Laboratory Number:		**06**
Standard Volume	STV	0.5
Sample Volume	SV	500
Can Dilution Factor	CDF	1.47
Gas Constant		23.68
Decimal Places:		3

Sample Calculation:

1) Avg RFn = Sum $\left| \frac{(Astdni)}{(Cstdni)} \frac{(Cistdi)}{(Aistdi)} \right|_i$ Note: 1

2) Raw Amt = $\frac{(Ansamp)}{(Avg\ RFn)} \frac{(Cistdi)}{(Aistdi)}$ = **Cn**

3) Amount ppbv = $\frac{(Raw\ Amt)\ 1000}{(SV)}$ (CDF) (STV)

4) Amount ug/m3 = $\frac{(amt(ppbv)\ MW}{23.68}$

n	Compound	IS n	Chem type	MW	AvgRFn	Area Ansamp	Cistdi ppmv	Aistdi Ais	**Cn** ppmV Raw Amt	Amount ppbv	Amount ug/m3
2	Vinyl chloride	1	TRG	62.5	0.046	0	0.200	717421	0.000	0.000	0.000
3	1,1-Dichloroethene	1	TRG	96.9	0.087	0	0.200	717421	0.000	0.000	0.000
5	1,2-Dibromoethane	1	TRG	188.0	0.193	576	0.200	717421	0.001	0.002	0.016
6	1,1,2,2-Tetrachloroethane	1	TRG	167.8	0.473	0	0.200	717421	0.000	0.000	0.000
7	Naphthalene	1	TRG	128.2	13.474	302759	0.200	717421	0.006	0.018	0.097
1	Chlorobenzene-d5	1	IS	0.0	1.000	717421	0.200	717421	0.000	0.000	0.000
4	Toluene-d8	1	SURR	0.0	0.429	304484	0.200	717421	0.000	0.000	0.000

Calculation Definitions:

n	compound n
i	i th calibration level
Astdni	Standard Area for compound n at ith calibration level
Cstdni	Standard Concentration for compound n at ith calibration level in ppmv
Cistdi	Internal Standard Conc used for compound n at ith calibration level in ppmv
Aistdi	Internal Standard Area used for compound n at ith calibration level
Ansamp	Sample Area for compound n
Avg RFn	Average response factor for all ith calibration levels for compound n
Raw Amount	Sample Concentration in ppmv before applying factors
Cistd	Concentration internal standard used for compound n in sample in ppmv
Aistd	Area of internal standard used for compound n in sample
Cn	Concentration of compound n in sample in ppmv
23.68	Gas constant at 60 F as per EPA source test protocol
MW	Molecular weight of compound

Note (1) : Avg RFn — The values for the Average Response Factor AvgRFn can be optained from the response Factor Report for the Initial Calibration, or from the Calibration Report

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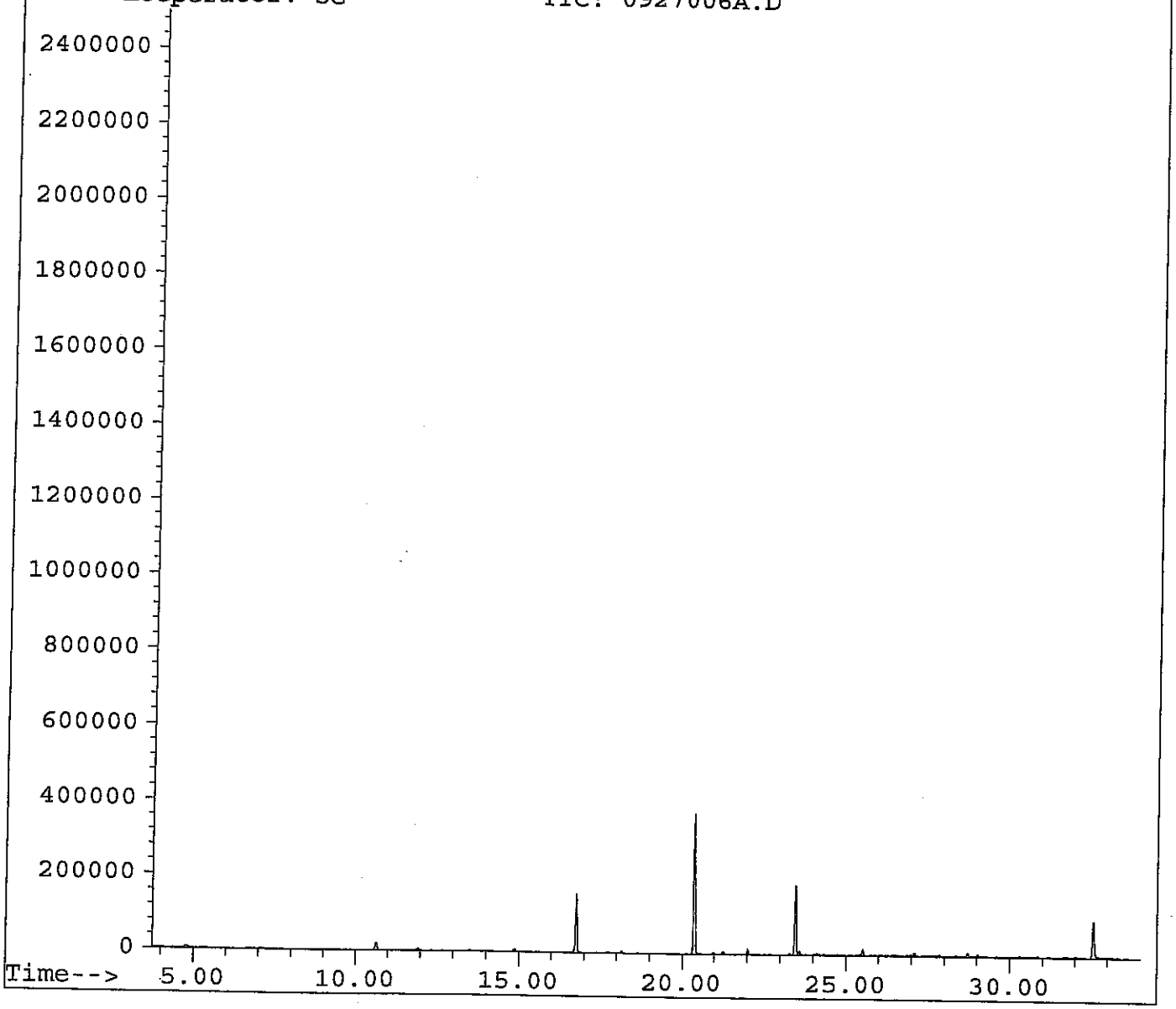
Name of operator: SG

TIC: 0927006A.D



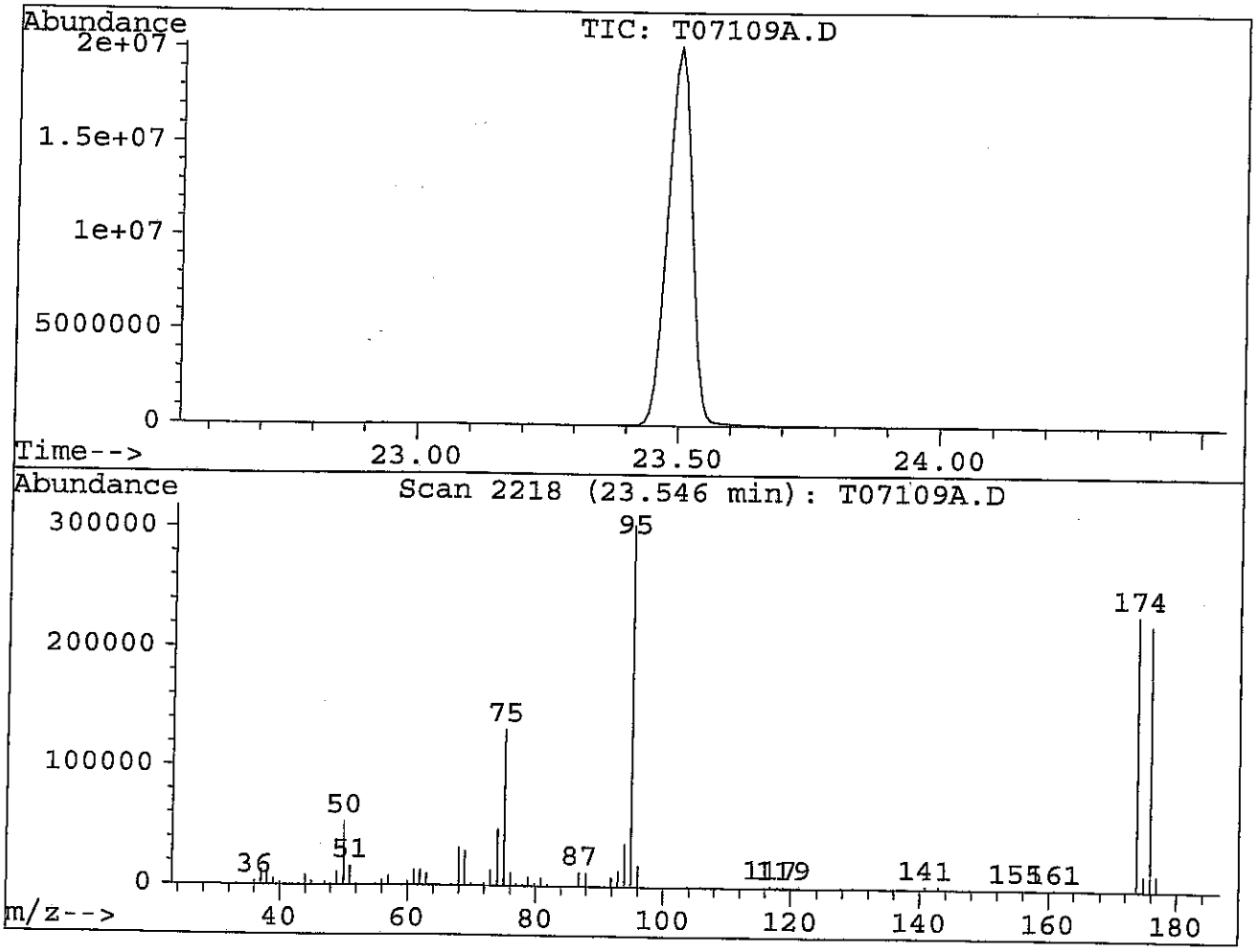
Daily Analytical Batch #: 071009-MS2

BFB

Data File : C:\HPCHEM\1\DATA\07109MS2\T07109A.D
Acq Time : 10 Jul 109 8:20 am
Sample : BFB TUNE
Misc :

Operator: KB
Inst : MS2
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\2SIM_SEA.M
Title : EPA T0-15



Peak Apex is scan: 2218

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	8	40	17.5	52936	PASS
75	95	30	66	43.3	130816	PASS
95	95	100	100	100.0	302464	PASS
96	95	5	9	5.9	17760	PASS
173	174	0	2	0.0	0	PASS
174	95	50	120	76.0	229952	PASS
175	174	4	9	5.7	13143	PASS
176	174	93	101	96.6	222080	PASS
177	176	5	9	5.8	12780	PASS

T07109A.D 2SIM_SEA.M Fri Jul 10 08:45:19 2009 GCMS3

CONTINUING CALIBRATION REPORT

SDG:	**LABQC**	
QC_Batch:	**071009-MS2**	
Sample ID:	ST60421 + ST60250	
Sample Analysis Date:	10 Jul 109 9:06 am	
Run Method:	2SIM_SEA.M	
Quant/Calibration Method:	2SIM_SEA.M	
Cal Update:	Thu Jul 09 08:26:17 2009	
Template:	EARTEXSM.MS3	
Calibration Level	Level 2	0.5

Sample Calculation:

1) RFi = $\left| \frac{(Astdi)\ (Cistdi)}{(Cstdi)\ (Aistdi)} \right|_i$

Compound	Area Astdi	Cal Level Cstdi ppbv	CCRRF	AvgRFn	%Dev	%Dev Limit	%Dev Flag
Vinyl chloride	19853	0.104	0.049	0.046	-8.2	30	IN
1,1-Dichloroethene	41836	0.104	0.104	0.087	-19.5	30	IN
1,2-Dibromoethane	81860	0.104	0.203	0.193	-5.6	30	IN
1,1,2,2-Tetrachloroethane	188752	0.102	0.478	0.473	-1.2	30	IN
Naphthalene	6258297	0.213	7.591	13.474	43.7	80	IN
Chlorobenzene-d5	774107	0.200	1.000	1.000	0.0	30	IN
Toluene-d8	325503	0.200	0.420	0.429	2.0	30	IN

QUANTITATION REPORT

EPA Method TO-15 Modified SIM GC/MS

			Review	EAS Sample ID: C07109A	
File Name:	C07109A.D				1 SS
Sample ID:	ST60421 + ST60250				2 KB
Date:	10 Jul 109 9:06 am			Cal Amounts	3 AT
Run Method:	2SIM_SEA.M			IS Areas	4 BB
Quant Method:	2SIM_SEA.M			Carryover	5 SH
Cal Update:	Thu Jul 09 08:26:17 2009				
Template:	EARTEXSM.MS3				
Can Factor:	1.00				
Volume:	1000	ml		Analyst: SS 1	

CAS#	Compound	n	Raw Amount	RT	Target RT	Ion	Sample Area	Qualifier	Lower Qual	Upper Qual	Qual Flag	Cal Flag	Int Flag
75-01-4	Vinyl chloride	2	0.113	4.37	4.37	62.00	19853	37	52	78	Q		
75-35-4	1,1-Dichloroethene	3	0.124	6.96	6.95	61.00	41836	46	42	63			
106-93-4	1,2-Dibromoethane	5	0.110	19.02	18.99	107.00	81860	95	73	109			
79-34-5	1,1,2,2-Tetrachloroethane	6	0.103	22.97	22.93	83.00	188752	9	7	11			
91-20-3	Naphthalene	7	0.120	32.55	32.78	128.00	6258297	14	10	14			
3114-55-4	Chlorobenzene-d5	1	0.200	20.53	20.51	117.00	774107						
2037-26-5	Toluene-d8	4	0.196	17.07	17.05	98.00	325503						

Integration Flags:

If no flag, the Integration was done by the instrument computer

M1 Manual Integration because the computer did not integrated the peak or integrated the wrong peak

M2 Manual Integration because computer integration of baseline was different than Initial Calibration

INITIAL CALIBRATION REPORT

EPA Method TO-15 Modified SIM GC/MS

File Name:	C07109A.D	SDG:	LABQC
Sample ID:	ST60421 + ST60250	QC_Batch:	071009-MS2
Sample Analysis Date:	10 Jul 109 9:06 am	Instrument Name:	MS2
Run Method:	2SIM_SEA.M	Number Compounds:	8
Quant and Calibration Method:	2SIM_SEA.M	IS1: ST60360	0.2
Cal Update:	Thu Jul 09 08:26:17 2009	IS2:	
Template:	EARTEXSM.MS3	IS3:	
		IS4:	

Calibration Title:EPA T0-15

		Calibration Amount CA, ppmv						Calibration Response, Area					
		Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
		Amt	Amt	Amt	Amt	Amt	Amt	C07089D.D	C07089H.D	C07089I.D	C07089F.D	C07089E.D	C07089G.D
n	Compound	10.0	0.5	0.25	2.0	4.0	1.0	10.0	0.5	0.25	2.0	4.0	1.0
2	Vinyl chloride	1.040	0.052	0.026	0.208	0.416	0.104	233907	2185	668	20463	93939	14023
3	1,1-Dichloroethene	1.040	0.052	0.026	0.208	0.416	0.104	475136	3956	1191	39546	191059	26523
5	1,2-Dibromoethane	1.040	0.052	0.026	0.208	0.416	0.104	910214	8843	3034	89643	417465	56275
6	1,1,2,2-Tetrachloroethane	1.020	0.051	0.026	0.204	0.408	0.102	2066403	19486	10290	216109	952470	103998
7	Naphthalene	-1.000	0.107	0.053	0.426	0.852	0.213	-1	1174309	813490	11669920	29903019	3979332
1	Chlorobenzene-d5	0.200	0.200	0.200	0.200	0.200	0.200	1210851	185512	107112	436325	1007442	508059
4	Toluene-d8	0.200	0.200	0.200	0.200	0.200	0.200	555865	82583	42311	183795	436164	214227

(592)

INITIAL CALIBRATION REPORT: Response Factors

SDG:	**LABQC**
QC_Batch:	**071009-MS2**
Sample ID:	ST60421 + ST60250
Sample Analysis Date:	10 Jul 109 9:06 am
Run Method:	2SIM_SEA.M
Quant Method:	2SIM_SEA.M
Cal Update:	Thu Jul 09 08:26:17 2009
Template:	EARTEXSM.MS3

Sample Calculation:

1) Avg RFn = Sum $\left| \frac{(Astdni)\ (Cistdi)}{(Cstdni)\ (Aistdi)} \right|$

Response Factors

Compound	RF1	RF2	RF3	RF4	RF5	RF6	AvgRFn	%RSD
Vinyl chloride	0.037	0.045	0.048	0.045	0.045	0.053	0.046	11.36
1,1-Dichloroethene	0.075	0.082	0.086	0.087	0.091	0.100	0.087	9.72
1,2-Dibromoethane	0.145	0.183	0.218	0.198	0.199	0.213	0.193	13.77
1,1,2,2-Tetrachloroethane	0.335	0.412	0.739	0.486	0.463	0.401	0.473	29.77
Naphthalene	NA	11.832	28.659	12.557	6.968	7.354	13.474	65.75
Chlorobenzene-d5	1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.00
Toluene-d8	0.459	0.445	0.395	0.421	0.433	0.422	0.429	5.16

CALCULATIONS

EPA Method TO-15 Modified SIM GC/MS

SDG: LABQC
Laboratory Number: C07109

RL:	2SIM_SEA.M
Run Method:	2SIM_SEA.M
Quant Method:	2SIM_SEA.M
Can Dilution Factor:	1.00
Air Volume:	1000 ml
Gas Constant:	23.68
Decimal Places:	3

Compound	M.W.	Raw Amount	Result ppbv	Result ug/m3	(1) MDL ppbv	(2) RL ppbv	Calc MDL ppbv	Calc MDL ug/m3	Calc RL ppbv	Calc RL ug/m3	Flag	Spike ppmv
Vinyl chloride	62.5	0.113	0.113	0.297	0.0026	0.026	0.00	0.007	0.03	0.069		0.103
1,1-Dichloroethene	96.9	0.124	0.124	0.509	0.0023	0.026	0.00	0.009	0.03	0.106		0.103
1,2-Dibromoethane	188.0	0.110	0.110	0.872	0.0031	0.026	0.00	0.025	0.03	0.206		0.103
1,1,2,2-Tetrachloroethane	167.8	0.103	0.103	0.731	0.0024	0.026	0.00	0.017	0.03	0.184		0.103
Naphthalene	128.2	0.120	0.120	0.650	0.0071	0.053	0.01	0.038	0.05	0.287		0.103

SAMPLE CALCULATION

EPA Method TO-15 Modified SIM GC/MS

SDG:		**LABQC**
Laboratory Number:		**C07109**
Standard Volume	STV	0.5
Sample Volume	SV	1000
Can Dilution Factor	CDF	1.00
Gas Constant		23.68
Decimal Places:		3

Sample Calculation:

1) Avg RFn = Sum $\left| \frac{(Astdni)}{(Cstdni)} \frac{(Cistdi)}{(Aistdi)} \right|$ Note: 1

2) Raw Amt = $\frac{(Ansamp)}{(Avg\ RFn)} \frac{(Cistdi)}{(Aistdi)}$ = Cn

3) Amount ppbv = $\frac{(Raw\ Amt)\ 1000}{(SV)}$ (CDF) (STV)

4) Amount ug/m3 = $\frac{(amt(ppbv)\ MW}{23.68}$

n	Compound	IS n	Chem type	MW	AvgRFn	Area Ansamp	Cistdi ppmv	Aistdi Ais	Cn ppmV Raw Amt	Amount ppbv	Amount ug/m3
2	Vinyl chloride	1	TRG	62.5	0.046	19853	0.200	774107	0.113	0.113	0.298
3	1,1-Dichloroethene	1	TRG	96.9	0.087	41836	0.200	774107	0.124	0.124	0.507
5	1,2-Dibromoethane	1	TRG	188.0	0.193	81860	0.200	774107	0.110	0.110	0.873
6	1,1,2,2-Tetrachloroethane	1	TRG	167.8	0.473	188752	0.200	774107	0.103	0.103	0.730
7	Naphthalene	1	TRG	128.2	13.474	6258297	0.200	774107	0.120	0.120	0.650
1	Chlorobenzene-d5	1	IS	0.0	1.000	774107	0.200	774107	0.000	0.000	0.000
4	Toluene-d8	1	SURR	0.0	0.429	325503	0.200	774107	0.000	0.000	0.000

Calculation Definitions:

n	compound n
i	i th calibration level
Astdni	Standard Area for compound n at ith calibration level
Cstdni	Standard Concentration for compound n at ith calibration level in ppmv
Cistdi	Internal Standard Conc used for compound n at ith calibration level in ppmv
Aistdi	Internal Standard Area used for compound n at ith calibration level
Ansamp	Sample Area for compound n
Avg RFn	Average response factor for all ith calibration levels for compound n
Raw Amount	Sample Concentration in ppmv before applying factors
Cistd	Concentration internal standard used for compound n in sample in ppmv
Aistd	Area of internal standard used for compound n in sample
Cn	Concentration of compound n in sample in ppmv
23.68	Gas constant at 60 F as per EPA source test protocol
MW	Molecular weight of compound
Note (1) : Avg RFn	The values for the Average Response Factor AvgRFn can be optained from the response Factor Report for the Initial Calibration, or from the Calibration Report

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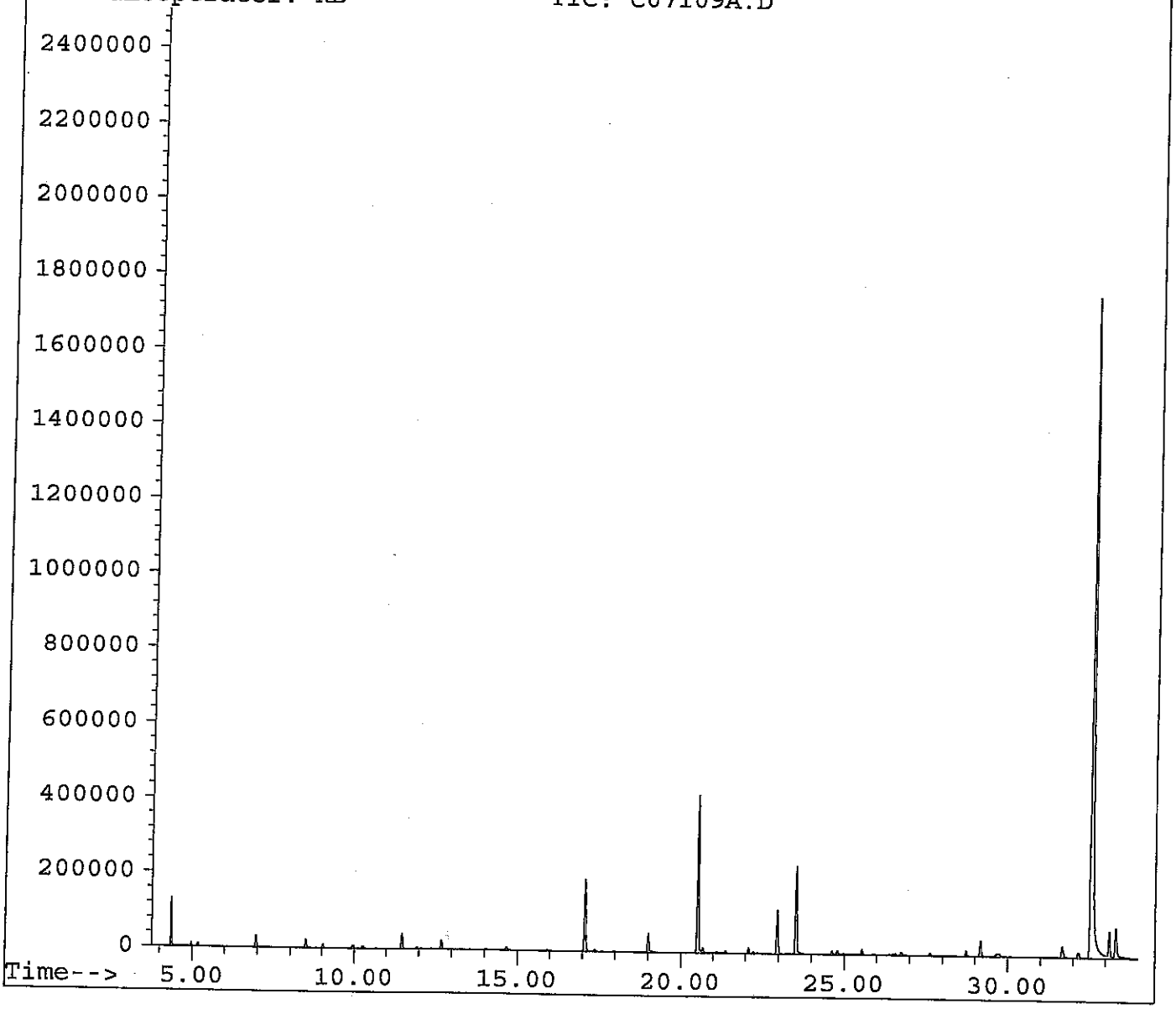
Name of operator: KB

TIC: C07109A.D



METHOD BLANK REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified SIM GC/MS
Analytical Method: **TO-15 SIM**

SDG: **LABQC**
Laboratory Number: **B07109**

File: B07109A.D
Description: METHOD BLANK
Can/Tube#:
Sam_Type: MB
QC_Batch: 071009-MS2
Air Volume: 1000 ml

Date Sampled: **Time:**
Date Received:
Date Extracted:
Date Analyzed: 07/10/09 **Time:** 12:31
Can Dilution Factor: 1.00 3
Not Detected Flag: U

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
75-01-4	Vinyl chloride	0.003	0.026	0.003	0.007	0.069	0.007	U
75-35-4	1,1-Dichloroethene	0.002	0.026	0.002	0.009	0.106	0.009	U
106-93-4	1,2-Dibromoethane	0.003	0.026	0.003	0.025	0.206	0.025	U
79-34-5	1,1,2,2-Tetrachloroethane	0.002	0.026	0.002	0.017	0.184	0.017	U
91-20-3	Naphthalene	0.007	0.053	0.009	0.038	0.287	0.048	J

	Surrogate Recovery	Spike Amt. ppbV	Amount ppbV	% Rec.	QC Limits	Flag * = Out
2037-26-5	Toluene-d8	0.200	0.200	100	70-130	

Notes: 1) Reported results are to be interpreted to two significant figures.
2) ug/m3 = ppbV*FW/23.68 calculated assuming conditions at 60 F and 1 atm.
3) MDL and RL are adjusted for sample volume and can dilution.
4) U and ND are Flags used for Not Detected
5) J is a flag for a result between the MDL and the RL (or lower quantitation limit, LQL)

QUANTITATION REPORT

EPA Method TO-15 Modified SIM GC/MS

			Review	EAS Sample ID: B07109A	
File Name:	B07109A.D				1 SS
Sample ID:	METHOD BLANK				2 KB
Date:	10 Jul 109 12:31 pm			Cal Amounts	3 AT
Run Method:	2SIM_SEA.M			IS Areas	4 BB
Quant Method:	2SIM_SEA.M			Carryover	5 SH
Cal Update:	Thu Jul 09 08:26:17 2009				
Template:	EARTEXSM.MS3				
Can Factor:	1.00				
Volume:	1000	ml		Analyst: SS 1	

CAS#	Compound	n	Raw Amount	RT	Target RT	Ion	Sample Area	Qualifier	Lower Qual	Upper Qual	Qual Flag	Cal Flag	Int Flag
75-01-4	Vinyl chloride	2	0.000	4.55	4.37	62.00	0	0	52	78			
75-35-4	1,1-Dichloroethene	3	0.000	6.96	6.95	61.00	197	65	42	63			
106-93-4	1,2-Dibromoethane	5	0.002	19.02	18.99	107.00	2357	86	73	109			
79-34-5	1,1,2,2-Tetrachloroethane	6	0.000	23.04	22.93	83.00	0	0	7	11			
91-20-3	Naphthalene	7	0.009	32.56	32.78	128.00	675658	12	10	14			
3114-55-4	Chlorobenzene-d5	1	0.200	20.52	20.51	117.00	**1122878**						
2037-26-5	Toluene-d8	4	0.200	17.07	17.05	98.00	**481674**						

Integration Flags:

If no flag, the Integration was done by the instrument computer

M1 Manual Integration because the computer did not integrated the peak or integrated the wrong peak

M2 Manual Integration because computer integration of baseline was different than Initial Calibration

INITIAL CALIBRATION REPORT

EPA Method TO-15 Modified SIM GC/MS

SDG: LABQC
QC_Batch: 071009-MS2
Instrument Name: MS2

File Name: B07109A.D
Sample ID: METHOD BLANK
Sample Analysis Date: 10 Jul 109 12:31 pm
Run Method: 2SIM_SEA.M
Quant and Calibration Method: 2SIM_SEA.M
Cal Update: Thu Jul 09 08:26:17 2009
Template: EARTEXSM.MS3

Calibration Title: EPA T0-15

Number Compounds: 8
IS1: ST60360 0.2
IS2:
IS3:
IS4:

		Calibration Amount CA, ppmv						Calibration Response, Area					
		Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
		Amt	Amt	Amt	Amt	Amt	Amt	C07089D.D	C07089H.D	C07089I.D	C07089F.D	C07089E.D	C07089G.D
n	Compound	10.0	0.5	0.25	2.0	4.0	1.0	10.0	0.5	0.25	2.0	4.0	1.0
2	Vinyl chloride	1.040	0.052	0.026	0.208	0.416	0.104	233907	2185	668	20463	93939	14023
3	1,1-Dichloroethene	1.040	0.052	0.026	0.208	0.416	0.104	475136	3956	1191	39546	191059	26523
5	1,2-Dibromoethane	1.040	0.052	0.026	0.208	0.416	0.104	910214	8843	3034	89643	417465	56275
6	1,1,2,2-Tetrachloroethane	1.020	0.051	0.026	0.204	0.408	0.102	2066403	19486	10290	216109	952470	103998
7	Naphthalene	-1.000	0.107	0.053	0.426	0.852	0.213	-1	1174309	813490	11669920	29903019	3979332
1	Chlorobenzene-d5	0.200	0.200	0.200	0.200	0.200	0.200	1210851	185512	107112	436325	1007442	508059
4	Toluene-d8	0.200	0.200	0.200	0.200	0.200	0.200	555865	82583	42311	183795	436164	214227

(599)

INITIAL CALIBRATION REPORT: Response Factors

SDG:	**LABQC**
QC_Batch:	**071009-MS2**
Sample ID:	METHOD BLANK
Sample Analysis Date:	10 Jul 109 12:31 pm
Run Method:	2SIM_SEA.M
Quant Method:	2SIM_SEA.M
Cal Update:	Thu Jul 09 08:26:17 2009
Template:	EARTEXSM.MS3

Sample Calculation:

1) Avg RFn = Sum $\left| \frac{(Astdni)}{(Cstdni)} \frac{(Cistdi)}{(Aistdi)} \right|_i$

Response Factors

Compound	RF1	RF2	RF3	RF4	RF5	RF6	AvgRFn	%RSD
Vinyl chloride	0.037	0.045	0.048	0.045	0.045	0.053	0.046	11.36
1,1-Dichloroethene	0.075	0.082	0.086	0.087	0.091	0.100	0.087	9.72
1,2-Dibromoethane	0.145	0.183	0.218	0.198	0.199	0.213	0.193	13.77
1,1,2,2-Tetrachloroethane	0.335	0.412	0.739	0.486	0.463	0.401	0.473	29.77
Naphthalene	NA	11.832	28.659	12.557	6.968	7.354	13.474	65.75
Chlorobenzene-d5	1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.00
Toluene-d8	0.459	0.445	0.395	0.421	0.433	0.422	0.429	5.16

CALCULATIONS

EPA Method TO-15 Modified SIM GC/MS

SDG: LABQC
Laboratory Number: B07109

RL:	2SIM_SEA.M
Run Method:	2SIM_SEA.M
Quant Method:	2SIM_SEA.M
Can Dilution Factor:	1.00
Air Volume:	1000 ml
Gas Constant:	23.68
Decimal Places:	3

Compound	M.W.	Raw Amount	Result ppbv	Result ug/m3	(1) MDL ppbv	(2) RL ppbv	Calc MDL ppbv	Calc MDL ug/m3	Calc RL ppbv	Calc RL ug/m3	Flag	Spike ppmv
Vinyl chloride	62.5	0.000	0.000	0.000	0.0026	0.026	0.00	0.007	0.03	0.069	U	0.103
1,1-Dichloroethene	96.9	0.000	0.000	0.002	0.0023	0.026	0.00	0.009	0.03	0.106	U	0.103
1,2-Dibromoethane	188.0	0.002	0.002	0.017	0.0031	0.026	0.00	0.025	0.03	0.206	U	0.103
1,1,2,2-Tetrachloroethane	167.8	0.000	0.000	0.000	0.0024	0.026	0.00	0.017	0.03	0.184	U	0.103
Naphthalene	128.2	0.009	0.009	0.048	0.0071	0.053	0.01	0.038	0.05	0.287	J	0.103

SAMPLE CALCULATION

EPA Method TO-15 Modified SIM GC/MS

SDG:		**LABQC**
Laboratory Number:		**B07109**
Standard Volume	STV	0.5
Sample Volume	SV	1000
Can Dilution Factor	CDF	1.00
Gas Constant		23.68
Decimal Places:		3

Sample Calculation:

1) Avg RFn = Sum $\left| \frac{(Astdni)}{(Cstdni)} \frac{(Cistdi)}{(Aistdi)} \right|_i$ Note: 1

2) Raw Amt = $\frac{(Ansamp)}{(Avg\ RFn)} \frac{(Cistdi)}{(Aistdi)}$ = Cn

3) Amount ppbv = $\frac{(Raw\ Amt)\ 1000}{(SV)}$ (CDF) (STV)

4) Amount ug/m3 = $\frac{(amt(ppbv)\ MW}{23.68}$

n	Compound	IS n	Chem type	MW	AvgRFn	Area Ansamp	Cistdi ppmv	Aistdi Ais	Cn ppmV Raw Amt	Amount ppbv	Amount ug/m3
2	Vinyl chloride	1	TRG	62.5	0.046	0	0.200	1122878	0.000	0.000	0.000
3	1,1-Dichloroethene	1	TRG	96.9	0.087	197	0.200	1122878	0.000	0.000	0.000
5	1,2-Dibromoethane	1	TRG	188.0	0.193	2357	0.200	1122878	0.002	0.002	0.016
6	1,1,2,2-Tetrachloroethane	1	TRG	167.8	0.473	0	0.200	1122878	0.000	0.000	0.000
7	Naphthalene	1	TRG	128.2	13.474	675658	0.200	1122878	0.009	0.009	0.049
1	Chlorobenzene-d5	1	IS	0.0	1.000	1122878	0.200	1122878	0.000	0.000	0.000
4	Toluene-d8	1	SURR	0.0	0.429	481674	0.200	1122878	0.000	0.000	0.000

Calculation Definitions:

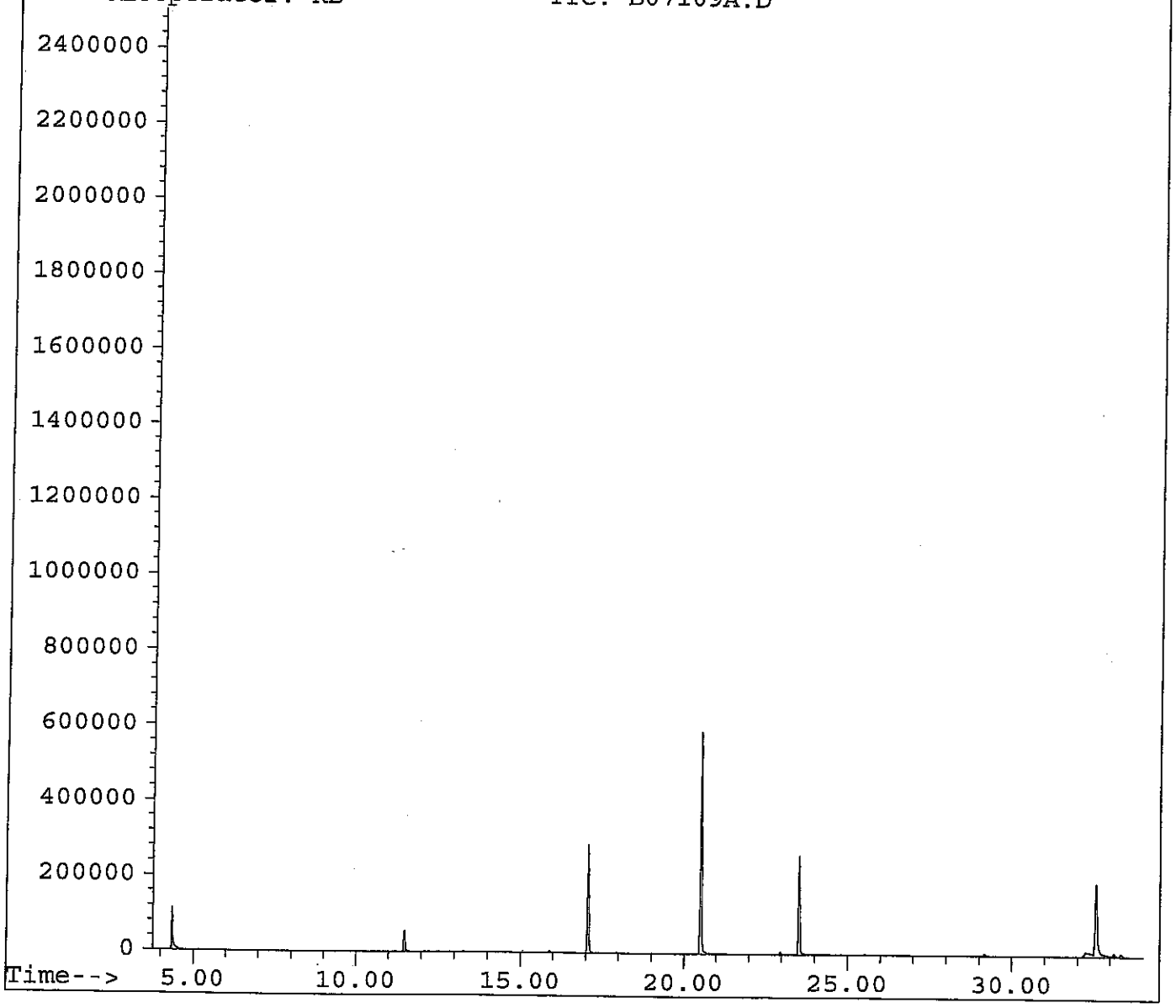
n	compound n
i	i th calibration level
Astdni	Standard Area for compound n at ith calibration level
Cstdni	Standard Concentration for compound n at ith calibration level in ppmv
Cistdi	Internal Standard Conc used for compound n at ith calibration level in ppmv
Aistdi	Internal Standard Area used for compound n at ith calibration level
Ansamp	Sample Area for compound n
Avg RFn	Average response factor for all ith calibration levels for compound n
Raw Amount	Sample Concentration in ppmv before applying factors
Cistd	Concentration internal standard used for compound n in sample in ppmv
Aistd	Area of internal standard used for compound n in sample
Cn	Concentration of compound n in sample in ppmv
23.68	Gas constant at 60 F as per EPA source test protocol
MW	Molecular weight of compound

Note (1) : Avg RFn — The values for the Average Response Factor AvgRFn can be optained from the response Factor Report for the Initial Calibration, or from the Calibration Report

Name of file: C:\HPCHEM\1\DATA\07109MS2\B07109A.D

Name of operator: KB

TIC: B07109A.D



QUALITY CONTROL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

LABORATORY CONTROL SPIKE

EPA Method TO-15 Modified SIM GC/MS **SDG: LABQC**
Analytical Method: **TO-15 SIM**

File: QC07109A.D
Description: ST0709091
Can/Tube#:
Sam_Type: LCS
QC_Batch: 071009-MS2
Air Volume: 1000 ml

Date Sampled: NA
Date Received: NA
Date Extracted: NA
Date Analyzed: 07/10/09 **Time:** 10:03
Can Dilution Factor: 1.00 3
QC Duplicate: No

CAS#	Compound	MDL ppbv	Spike Conc ppbv	Amount ppbv	Matrix Amt ppbv	Spk Amt ppbv	Percent Recovery	LCL %	UCL %	Flag
75-01-4	Vinyl chloride	0.003	0.473	0.468	0.000	0.468	99	70	130	
75-35-4	1,1-Dichloroethene	0.002	0.513	0.516	0.000	0.516	101	70	130	
106-93-4	1,2-Dibromoethane	0.003	0.327	0.301	0.000	0.301	92	70	130	
79-34-5	1,1,2,2-Tetrachloroethane	0.002	0.228	0.223	0.000	0.223	98	70	130	
91-20-3	Naphthalene	0.007	0.188	0.122	0.000	0.122	65	60	140	

Surrogate Recovery	Spike Amt. ppbV	Amount ppbV	% Rec.	QC Limits	Flag * = Out
Toluene-d8	0.200	0.204	102	70-130	

Notes: Reported results are to be interpreted to two significant figures.
*ug/m3 calculated assuming conditions at 60 F and 1 atm.

QUANTITATION REPORT

EPA Method TO-15 Modified SIM GC/MS

			Review	EAS Sample ID: QC07109	
File Name:	QC07109A.D				1 SS
Sample ID:	ST0709091				2 KB
Date:	10 Jul 109 10:03 am			Cal Amounts	3 AT
Run Method:	2SIM_SEA.M			IS Areas	4 BB
Quant Method:	2SIM_SEA.M			Carryover	5 SH
Cal Update:	Thu Jul 09 08:26:17 2009				
Template:	EARTEXSM.MS3				
Can Factor:	1.00				
Volume:	1000	ml		Analyst: SS 1	

CAS#	Compound	n	Raw Amount	RT	Target RT	Ion	Sample Area	Qualifier	Lower Qual	Upper Qual	Qual Flag	Cal Flag	Int Flag
75-01-4	Vinyl chloride	2	0.468	4.39	4.37	62.00	145846	33	52	78	Q		
75-35-4	1,1-Dichloroethene	3	0.516	6.97	6.95	61.00	306761	47	42	63			
106-93-4	1,2-Dibromoethane	5	0.301	19.01	18.99	107.00	395448	100	73	109			
79-34-5	1,1,2,2-Tetrachloroethane	6	0.223	22.95	22.93	83.00	721175	9	7	11			
91-20-3	Naphthalene	7	0.122	32.55	32.78	128.00	11260016	14	10	14			
3114-55-4	Chlorobenzene-d5	1	0.200	20.52	20.51	117.00	**1366486**						
2037-26-5	Toluene-d8	4	0.204	17.07	17.05	98.00	**599100**						

Integration Flags:

If no flag, the Integration was done by the instrument computer

M1 Manual Integration because the computer did not integrated the peak or integrated the wrong peak

M2 Manual Integration because computer integration of baseline was different than Initial Calibration

INITIAL CALIBRATION REPORT

EPA Method TO-15 Modified SIM GC/MS

File Name:	QC07109A.D	SDG:	LABQC
Sample ID:	ST0709091	QC_Batch:	071009-MS2
Sample Analysis Date:	10 Jul 109 10:03 am	Instrument Name:	MS2
Run Method:	2SIM_SEA.M	Number Compounds:	8
Quant and Calibration Method:	2SIM_SEA.M	IS1: ST60360	0.2
Cal Update:	Thu Jul 09 08:26:17 2009	IS2:	
Template:	EARTEXSM.MS3	IS3:	
		IS4:	

Calibration Title: EPA T0-15

		Calibration Amount CA, ppmv						Calibration Response, Area					
		Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
		Amt	Amt	Amt	Amt	Amt	Amt	C07089D.D	C07089H.D	C07089I.D	C07089F.D	C07089E.D	C07089G.D
n	Compound	10.0	0.5	0.25	2.0	4.0	1.0	10.0	0.5	0.25	2.0	4.0	1.0
2	Vinyl chloride	1.040	0.052	0.026	0.208	0.416	0.104	233907	2185	668	20463	93939	14023
3	1,1-Dichloroethene	1.040	0.052	0.026	0.208	0.416	0.104	475136	3956	1191	39546	191059	26523
5	1,2-Dibromoethane	1.040	0.052	0.026	0.208	0.416	0.104	910214	8843	3034	89643	417465	56275
6	1,1,2,2-Tetrachloroethane	1.020	0.051	0.026	0.204	0.408	0.102	2066403	19486	10290	216109	952470	103998
7	Naphthalene	-1.000	0.107	0.053	0.426	0.852	0.213	-1	1174309	813490	11669920	29903019	3979332
1	Chlorobenzene-d5	0.200	0.200	0.200	0.200	0.200	0.200	1210851	185512	107112	436325	1007442	508059
4	Toluene-d8	0.200	0.200	0.200	0.200	0.200	0.200	555865	82583	42311	183795	436164	214227

(606)

INITIAL CALIBRATION REPORT: Response Factors

SDG:	**LABQC**
QC_Batch:	**071009-MS2**
Sample ID:	ST0709091
Sample Analysis Date:	10 Jul 109 10:03 am
Run Method:	2SIM_SEA.M
Quant Method:	2SIM_SEA.M
Cal Update:	Thu Jul 09 08:26:17 2009
Template:	EARTEXSM.MS3

Sample Calculation:

1) Avg RFn = Sum $\left| \frac{(Astdni)}{(Cstdni)} \frac{(Cistdi)}{(Aistdi)} \right|_i$

Response Factors

Compound	RF1	RF2	RF3	RF4	RF5	RF6	AvgRFn	%RSD
Vinyl chloride	0.037	0.045	0.048	0.045	0.045	0.053	0.046	11.36
1,1-Dichloroethene	0.075	0.082	0.086	0.087	0.091	0.100	0.087	9.72
1,2-Dibromoethane	0.145	0.183	0.218	0.198	0.199	0.213	0.193	13.77
1,1,2,2-Tetrachloroethane	0.335	0.412	0.739	0.486	0.463	0.401	0.473	29.77
Naphthalene	NA	11.832	28.659	12.557	6.968	7.354	13.474	65.75
Chlorobenzene-d5	1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.00
Toluene-d8	0.459	0.445	0.395	0.421	0.433	0.422	0.429	5.16

CALCULATIONS

EPA Method TO-15 Modified SIM GC/MS

SDG: LABQC
Laboratory Number: QC07109

RL:	2SIM_SEA.M
Run Method:	2SIM_SEA.M
Quant Method:	2SIM_SEA.M
Can Dilution Factor:	1.00
Air Volume:	1000 ml
Gas Constant:	23.68
Decimal Places:	3

Compound	M.W.	Raw Amount	Result ppbv	Result ug/m3	(1) MDL ppbv	(2) RL ppbv	Calc MDL ppbv	Calc MDL ug/m3	Calc RL ppbv	Calc RL ug/m3	Flag	Spike ppmv
Vinyl chloride	62.5	0.468	0.468	1.236	0.0026	0.026	0.00	0.007	0.03	0.069		0.473
1,1-Dichloroethene	96.9	0.516	0.516	2.113	0.0023	0.026	0.00	0.009	0.03	0.106		0.513
1,2-Dibromoethane	188.0	0.301	0.301	2.386	0.0031	0.026	0.00	0.025	0.03	0.206		0.327
1,1,2,2-Tetrachloroethane	167.8	0.223	0.223	1.582	0.0024	0.026	0.00	0.017	0.03	0.184		0.228
Naphthalene	128.2	0.122	0.122	0.662	0.0071	0.053	0.01	0.038	0.05	0.287		0.188

SAMPLE CALCULATION

EPA Method TO-15 Modified SIM GC/MS

SDG:		**LABQC**
Laboratory Number:		**QC07109**
Standard Volume	STV	0.5
Sample Volume	SV	1000
Can Dilution Factor	CDF	1.00
Gas Constant		23.68
Decimal Places:		3

Sample Calculation:

1) Avg RFn = Sum $\left| \frac{(Astdni)}{(Cstdni)} \frac{(Cistdi)}{(Aistdi)} \right|$ Note: 1

2) Raw Amt = $\frac{(Ansamp)}{(Avg\ RFn)} \frac{(Cistdi)}{(Aistdi)}$ = Cn

3) Amount ppbv = $\frac{(Raw\ Amt)\ 1000}{(SV)}$ (CDF) (STV)

4) Amount ug/m3 = $\frac{(amt(ppbv)\ MW}{23.68}$

n	Compound	IS n	Chem type	MW	AvgRFn	Area Ansamp	Cistdi ppmv	Aistdi Ais	Cn ppmV Raw Amt	Amount ppbv	Amount ug/m3
2	Vinyl chloride	1	TRG	62.5	0.046	145846	0.200	1366486	0.468	0.468	1.235
3	1,1-Dichloroethene	1	TRG	96.9	0.087	306761	0.200	1366486	0.516	0.516	2.112
5	1,2-Dibromoethane	1	TRG	188.0	0.193	395448	0.200	1366486	0.301	0.301	2.390
6	1,1,2,2-Tetrachloroethane	1	TRG	167.8	0.473	721175	0.200	1366486	0.223	0.223	1.580
7	Naphthalene	1	TRG	128.2	13.474	11260016	0.200	1366486	0.122	0.122	0.660
1	Chlorobenzene-d5	1	IS	0.0	1.000	1366486	0.200	1366486	0.000	0.000	0.000
4	Toluene-d8	1	SURR	0.0	0.429	599100	0.200	1366486	0.000	0.000	0.000

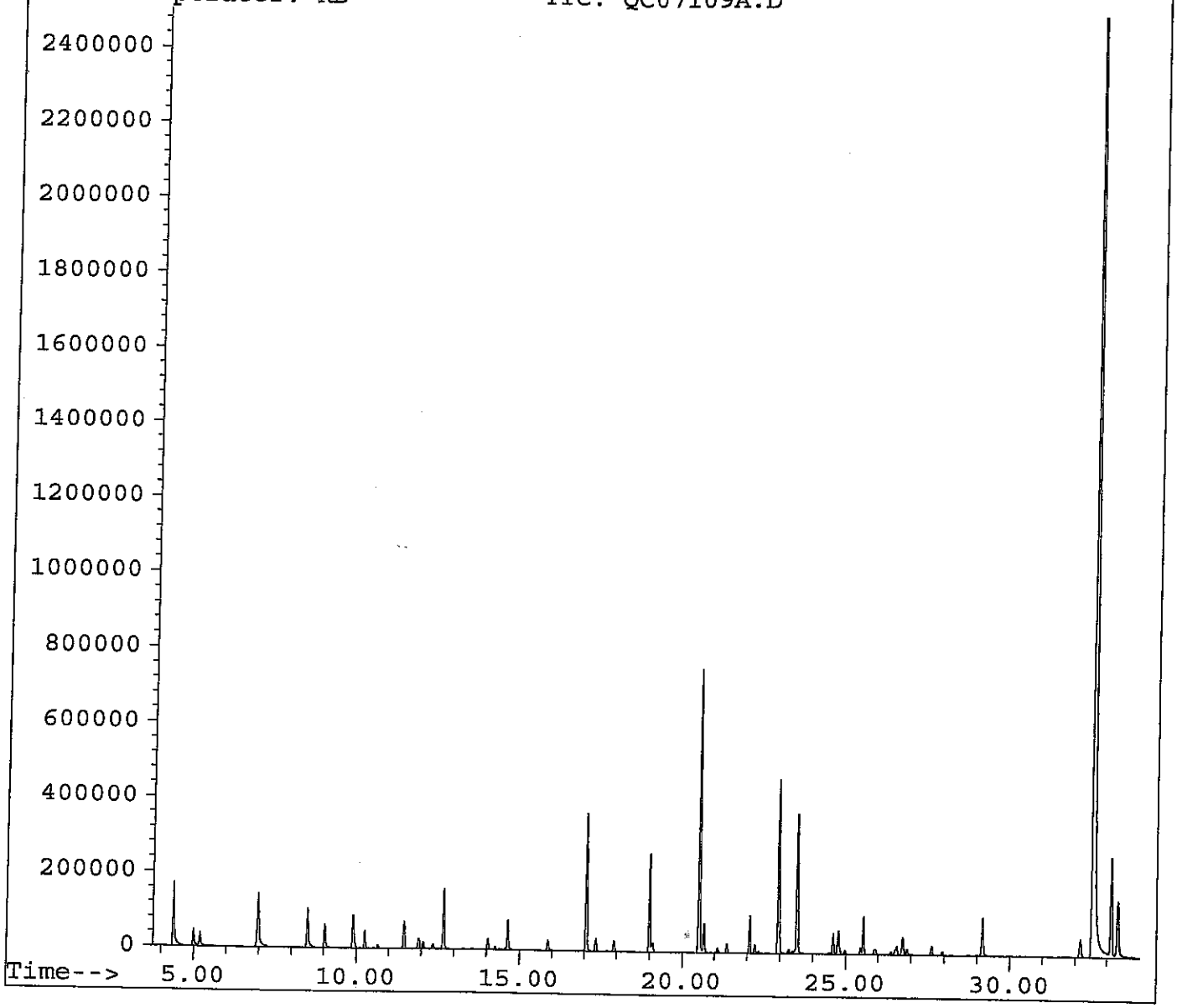
Calculation Definitions:

n	compound n
i	i th calibration level
Astdni	Standard Area for compound n at ith calibration level
Cstdni	Standard Concentration for compound n at ith calibration level in ppmv
Cistdi	Internal Standard Conc used for compound n at ith calibration level in ppmv
Aistdi	Internal Standard Area used for compound n at ith calibration level
Ansamp	Sample Area for compound n
Avg RFn	Average response factor for all ith calibration levels for compound n
Raw Amount	Sample Concentration in ppmv before applying factors
Cistd	Concentration internal standard used for compound n in sample in ppmv
Aistd	Area of internal standard used for compound n in sample
Cn	Concentration of compound n in sample in ppmv
23.68	Gas constant at 60 F as per EPA source test protocol
MW	Molecular weight of compound

Note (1) : Avg RFn — The values for the Average Response Factor AvgRFn can be optained from the response Factor Report for the Initial Calibration, or from the Calibration Report

Name of file: C:\HPCHEM\1\DATA\07109MS2\QC07109A.D

Name of file: C:\HPCHEM\1\DATA\07109MS2\QC07109A.D
Operator: KB
TIC: QC07109A.D



QUALITY CONTROL DUPLICATE

ENVIRONMENTAL
Analytical Service, Inc.

Duplicate of QC Sample

EPA Method TO-15 Modified SIM GC/MS
Analytical Method: **TO-15 SIM**

SDG: LABQC

Dup File: QC07109B.D
Description: ST0709091
Can/Tube#:
QC_Batch: 071009-MS2

CAS#	Compound	LCD ppbv	LCS ppbv	RPD %D	Limit %	Flag * = Out
75-01-4	Vinyl chloride	0.470	0.468	0	25	
75-35-4	1,1-Dichloroethene	0.526	0.516	2	25	
106-93-4	1,2-Dibromoethane	0.330	0.301	9	25	
79-34-5	1,1,2,2-Tetrachloroethane	0.252	0.223	13	25	
91-20-3	Naphthalene	0.143	0.122	11	40	

QUALITY CONTROL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

LABORATORY CONTROL DUPLICATE

EPA Method TO-15 Modified SIM GC/MS **SDG: LABQC**
Analytical Method: **TO-15 SIM**

File: QC07109B.D
Description: ST0709091
Can/Tube#:
Sam_Type: LCD
QC_Batch: 071009-MS2
Air Volume: 1000 ml

Date Sampled: NA
Date Received: NA
Date Extracted: NA
Date Analyzed: 07/10/09 **Time:** 10:47
Can Dilution Factor: 1.00 3
QC Duplicate: Yes

CAS#	Compound	MDL ppbv	Spike Conc ppbv	Amount ppbv	Matrix Amt ppbv	Spk Amt ppbv	Percent Recovery	LCL %	UCL %	Flag
75-01-4	Vinyl chloride	0.003	0.473	0.470	0.000	0.470	99	70	130	
75-35-4	1,1-Dichloroethene	0.002	0.513	0.526	0.000	0.526	103	70	130	
106-93-4	1,2-Dibromoethane	0.003	0.327	0.330	0.000	0.330	101	70	130	
79-34-5	1,1,2,2-Tetrachloroethane	0.002	0.228	0.252	0.000	0.252	111	70	130	
91-20-3	Naphthalene	0.007	0.188	0.143	0.000	0.143	76	60	140	

Surrogate Recovery	Spike Amt. ppbV	Amount ppbV	% Rec.	QC Limits	Flag * = Out
Toluene-d8	0.200	0.202	101	70-130	

Notes: Reported results are to be interpreted to two significant figures.
*ug/m3 calculated assuming conditions at 60 F and 1 atm.

QUANTITATION REPORT

EPA Method TO-15 Modified SIM GC/MS

			Review	EAS Sample ID: QC07109	
File Name:	QC07109B.D				1 SS
Sample ID:	ST0709091				2 KB
Date:	10 Jul 109 10:47 am			Cal Amounts	3 AT
Run Method:	2SIM_SEA.M			IS Areas	4 BB
Quant Method:	2SIM_SEA.M			Carryover	5 SH
Cal Update:	Thu Jul 09 08:26:17 2009				
Template:	EARTEXSM.MS3				
Can Factor:	1.00				
Volume:	1000	ml		Analyst: SS 1	

CAS#	Compound	n	Raw Amount	RT	Target RT	Ion	Sample Area	Qualifier	Lower Qual	Upper Qual	Qual Flag	Cal Flag	Int Flag
75-01-4	Vinyl chloride	2	0.470	4.37	4.37	62.00	148514	34	52	78	Q		
75-35-4	1,1-Dichloroethene	3	0.526	6.96	6.95	61.00	317034	45	42	63			
106-93-4	1,2-Dibromoethane	5	0.330	19.01	18.99	107.00	440157	99	73	109			
79-34-5	1,1,2,2-Tetrachloroethane	6	0.252	22.96	22.93	83.00	827195	10	7	11			
91-20-3	Naphthalene	7	0.143	32.55	32.78	128.00	13378766	14	10	14			
3114-55-4	Chlorobenzene-d5	1	0.200	20.53	20.51	117.00	**1387158**						
2037-26-5	Toluene-d8	4	0.202	17.07	17.05	98.00	**602722**						

Integration Flags:

If no flag, the Integration was done by the instrument computer

M1 Manual Integration because the computer did not integrated the peak or integrated the wrong peak

M2 Manual Integration because computer integration of baseline was different than Initial Calibration

INITIAL CALIBRATION REPORT

EPA Method TO-15 Modified SIM GC/MS

File Name:	QC07109B.D	SDG:	LABQC
Sample ID:	ST0709091	QC_Batch:	071009-MS2
Sample Analysis Date:	10 Jul 109 10:47 am	Instrument Name:	MS2
Run Method:	2SIM_SEA.M	Number Compounds:	8
Quant and Calibration Method:	2SIM_SEA.M	IS1: ST60360	0.2
Cal Update:	Thu Jul 09 08:26:17 2009	IS2:	
Template:	EARTEXSM.MS3	IS3:	
		IS4:	

Calibration Title: EPA T0-15

		Calibration Amount CA, ppmv						Calibration Response, Area					
		Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
		Amt	Amt	Amt	Amt	Amt	Amt	C07089D.D	C07089H.D	C07089I.D	C07089F.D	C07089E.D	C07089G.D
n	Compound	10.0	0.5	0.25	2.0	4.0	1.0	10.0	0.5	0.25	2.0	4.0	1.0
2	Vinyl chloride	1.040	0.052	0.026	0.208	0.416	0.104	233907	2185	668	20463	93939	14023
3	1,1-Dichloroethene	1.040	0.052	0.026	0.208	0.416	0.104	475136	3956	1191	39546	191059	26523
5	1,2-Dibromoethane	1.040	0.052	0.026	0.208	0.416	0.104	910214	8843	3034	89643	417465	56275
6	1,1,2,2-Tetrachloroethane	1.020	0.051	0.026	0.204	0.408	0.102	2066403	19486	10290	216109	952470	103998
7	Naphthalene	-1.000	0.107	0.053	0.426	0.852	0.213	-1	1174309	813490	11669920	29903019	3979332
1	Chlorobenzene-d5	0.200	0.200	0.200	0.200	0.200	0.200	1210851	185512	107112	436325	1007442	508059
4	Toluene-d8	0.200	0.200	0.200	0.200	0.200	0.200	555865	82583	42311	183795	436164	214227

(614)

INITIAL CALIBRATION REPORT: Response Factors

SDG:	**LABQC**
QC_Batch:	**071009-MS2**
Sample ID:	ST0709091
Sample Analysis Date:	10 Jul 109 10:47 am
Run Method:	2SIM_SEA.M
Quant Method:	2SIM_SEA.M
Cal Update:	Thu Jul 09 08:26:17 2009
Template:	EARTEXSM.MS3

Sample Calculation:

1) Avg RFn = Sum $\left| \frac{(Astdni)}{(Cstdni)} \frac{(Cistdi)}{(Aistdi)} \right|$

Response Factors

Compound	RF1	RF2	RF3	RF4	RF5	RF6	AvgRFn	%RSD
Vinyl chloride	0.037	0.045	0.048	0.045	0.045	0.053	0.046	11.36
1,1-Dichloroethene	0.075	0.082	0.086	0.087	0.091	0.100	0.087	9.72
1,2-Dibromoethane	0.145	0.183	0.218	0.198	0.199	0.213	0.193	13.77
1,1,2,2-Tetrachloroethane	0.335	0.412	0.739	0.486	0.463	0.401	0.473	29.77
Naphthalene	NA	11.832	28.659	12.557	6.968	7.354	13.474	65.75
Chlorobenzene-d5	1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.00
Toluene-d8	0.459	0.445	0.395	0.421	0.433	0.422	0.429	5.16

CALCULATIONS

EPA Method TO-15 Modified SIM GC/MS

SDG: LABQC
Laboratory Number: QC07109

RL:	2SIM_SEA.M
Run Method:	2SIM_SEA.M
Quant Method:	2SIM_SEA.M
Can Dilution Factor:	1.00
Air Volume:	1000 ml
Gas Constant:	23.68
Decimal Places:	3

Compound	M.W.	Raw Amount	Result ppbv	Result ug/m3	(1) MDL ppbv	(2) RL ppbv	Calc MDL ppbv	Calc MDL ug/m3	Calc RL ppbv	Calc RL ug/m3	Flag	Spike ppmv
Vinyl chloride	62.5	0.470	0.470	1.240	0.0026	0.026	0.00	0.007	0.03	0.069		0.473
1,1-Dichloroethene	96.9	0.526	0.526	2.151	0.0023	0.026	0.00	0.009	0.03	0.106		0.513
1,2-Dibromoethane	188.0	0.330	0.330	2.616	0.0031	0.026	0.00	0.025	0.03	0.206		0.327
1,1,2,2-Tetrachloroethane	167.8	0.252	0.252	1.788	0.0024	0.026	0.00	0.017	0.03	0.184		0.228
Naphthalene	128.2	0.143	0.143	0.775	0.0071	0.053	0.01	0.038	0.05	0.287		0.188

SAMPLE CALCULATION

EPA Method TO-15 Modified SIM GC/MS

SDG:		**LABQC**
Laboratory Number:		**QC07109**
Standard Volume	STV	0.5
Sample Volume	SV	1000
Can Dilution Factor	CDF	1.00
Gas Constant		23.68
Decimal Places:		3

Sample Calculation:

1) Avg RFn = Sum $\left| \frac{(Astdni)}{(Cstdni)} \frac{(Cistdi)}{(Aistdi)} \right|_i$ Note: 1

2) Raw Amt = $\frac{(Ansamp)}{(Avg\ RFn)} \frac{(Cistdi)}{(Aistdi)}$ = **Cn**

3) Amount ppbv = $\frac{(Raw\ Amt)\ 1000}{(SV)}$ (CDF) (STV)

4) Amount ug/m3 = $\frac{(amt(ppbv)\ MW}{23.68}$

n	Compound	IS n	Chem type	MW	AvgRFn	Area Ansamp	Cistdi ppmv	Aistdi Ais	Cn ppmV Raw Amt	Amount ppbv	Amount ug/m3
2	Vinyl chloride	1	TRG	62.5	0.046	148514	0.200	1387158	0.470	0.470	1.240
3	1,1-Dichloroethene	1	TRG	96.9	0.087	317034	0.200	1387158	0.526	0.526	2.152
5	1,2-Dibromoethane	1	TRG	188.0	0.193	440157	0.200	1387158	0.330	0.330	2.620
6	1,1,2,2-Tetrachloroethane	1	TRG	167.8	0.473	827195	0.200	1387158	0.252	0.252	1.786
7	Naphthalene	1	TRG	128.2	13.474	13378766	0.200	1387158	0.143	0.143	0.774
1	Chlorobenzene-d5	1	IS	0.0	1.000	1387158	0.200	1387158	0.000	0.000	0.000
4	Toluene-d8	1	SURR	0.0	0.429	602722	0.200	1387158	0.000	0.000	0.000

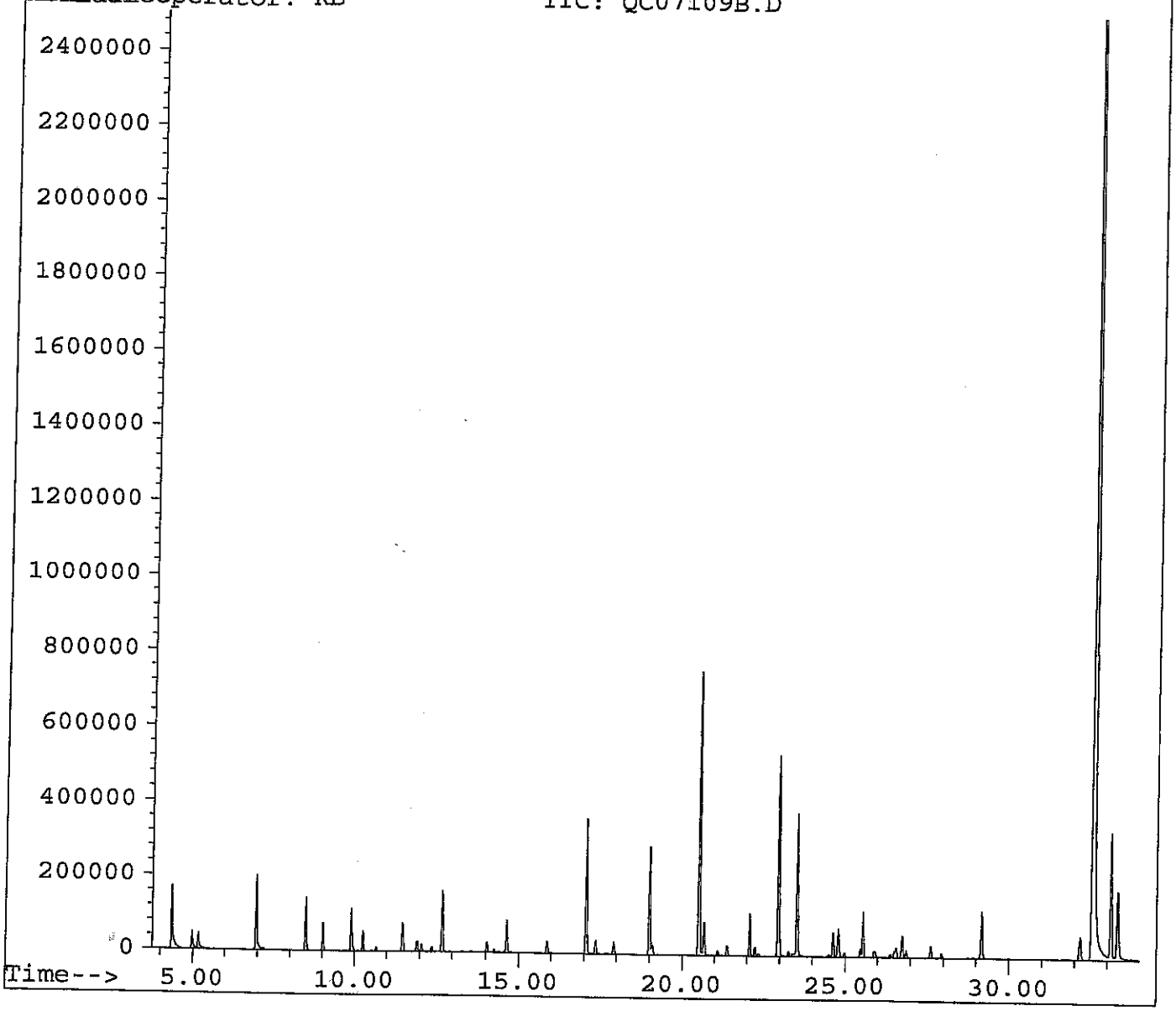
Calculation Definitions:

n	compound n
i	i th calibration level
Astdni	Standard Area for compound n at ith calibration level
Cstdni	Standard Concentration for compound n at ith calibration level in ppmv
Cistdi	Internal Standard Conc used for compound n at ith calibration level in ppmv
Aistdi	Internal Standard Area used for compound n at ith calibration level
Ansamp	Sample Area for compound n
Avg RFn	Average response factor for all ith calibration levels for compound n
Raw Amount	Sample Concentration in ppmv before applying factors
Cistd	Concentration internal standard used for compound n in sample in ppmv
Aistd	Area of internal standard used for compound n in sample
Cn	Concentration of compound n in sample in ppmv
23.68	Gas constant at 60 F as per EPA source test protocol
MW	Molecular weight of compound
Note (1) : Avg RFn	The values for the Average Response Factor AvgRFn can be optained from the response Factor Report for the Initial Calibration, or from the Calibration Report

Name of file: C:\HPCHEM\1\DATA\07109MS2\QC07109B.D

Name of operator: KB

TIC: QC07109B.D



ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified SIM GC/MS
Analytical Method: **TO-15 SIM**

SDG: **209270**
Laboratory Number: **08**

File: 0927008A.D
Description: 44-013
Can/Tube#: 782
Sam_Type: SA
QC_Batch: 071009-MS2
Air Volume: 500 ml

Date Sampled: 06/16/09 **Time:** 16:33
Date Received: 06/17/09
Date Extracted:
Date Analyzed: 07/10/09 **Time:** 13:13
Can Dilution Factor: 1.67 3
Not Detected Flag: U

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
75-01-4	Vinyl chloride	0.009	0.087	0.009	0.023	0.229	0.023	U
75-35-4	1,1-Dichloroethene	0.008	0.087	0.008	0.031	0.355	0.031	U
106-93-4	1,2-Dibromoethane	0.010	0.087	0.015	0.082	0.689	0.117	J
79-34-5	1,1,2,2-Tetrachloroethane	0.008	0.087	0.008	0.057	0.615	0.057	U
91-20-3	Naphthalene	0.024	0.177	0.089	0.128	0.958	0.483	J

	Surrogate Recovery	Spike Amt. ppbV	Amount ppbV	% Rec.	QC Limits	Flag * = Out
2037-26-5	Toluene-d8	0.200	0.187	93	70-130	

Notes: 1) Reported results are to be interpreted to two significant figures.
2) ug/m3 = ppbV*FW/23.68 calculated assuming conditions at 60 F and 1 atm.
3) MDL and RL are adjusted for sample volume and can dilution.
4) U and ND are Flags used for Not Detected
5) J is a flag for a result between the MDL and the RL (or lower quantitation limit, LQL)

QUANTITATION REPORT

EPA Method TO-15 Modified SIM GC/MS

			Review	EAS Sample ID: 0927008	
File Name:	0927008A.D				1 SS
Sample ID:	44-013				2 KB
Date:	10 Jul 109 1:13 pm			Cal Amounts	3 AT
Run Method:	2SIM_SEA.M			IS Areas	4 BB
Quant Method:	2SIM_SEA.M			Carryover	5 SH
Cal Update:	Thu Jul 09 08:26:17 2009				
Template:	EARTEXSM.MS3				
Can Factor:	1.67				
Volume:	500	ml		Analyst: SS 1	

CAS#	Compound	n	Raw Amount	RT	Target RT	Ion	Sample Area	Qualifier	Lower Qual	Upper Qual	Qual Flag	Cal Flag	Int Flag
75-01-4	Vinyl chloride	2	0.000	4.40	4.37	62.00	0	0	52	78			
75-35-4	1,1-Dichloroethene	3	0.000	6.84	6.95	61.00	0	0	42	63			
106-93-4	1,2-Dibromoethane	5	0.004	18.76	18.99	107.00	3630	90	73	109			
79-34-5	1,1,2,2-Tetrachloroethane	6	0.000	22.81	22.93	83.00	0	0	7	11			
91-20-3	Naphthalene	7	0.027	32.57	32.78	128.00	1541917	12	10	14			
3114-55-4	Chlorobenzene-d5	1	0.200	20.35	20.51	117.00	**857099**						
2037-26-5	Toluene-d8	4	0.187	16.72	17.05	98.00	**343424**						

Integration Flags:

If no flag, the Integration was done by the instrument computer

M1 Manual Integration because the computer did not integrated the peak or integrated the wrong peak

M2 Manual Integration because computer integration of baseline was different than Initial Calibration

INITIAL CALIBRATION REPORT

EPA Method TO-15 Modified SIM GC/MS

		SDG:	209270
		QC_Batch:	071009-MS2
File Name:	0927008A.D	Instrument Name:	MS2
Sample ID:	44-013		
Sample Analysis Date:	10 Jul 109 1:13 pm	Number Compounds:	8
Run Method:	2SIM_SEA.M	IS1: ST60360	0.2
Quant and Calibration Method:	2SIM_SEA.M	IS2:	
Cal Update:	Thu Jul 09 08:26:17 2009	IS3:	
Template:	EARTEXSM.MS3	IS4:	

Calibration Title: EPA T0-15

		Calibration Amount CA, ppmv						Calibration Response, Area					
		Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
		Amt	Amt	Amt	Amt	Amt	Amt	C07089D.D	C07089H.D	C07089I.D	C07089F.D	C07089E.D	C07089G.D
n	Compound	10.0	0.5	0.25	2.0	4.0	1.0	10.0	0.5	0.25	2.0	4.0	1.0
2	Vinyl chloride	1.040	0.052	0.026	0.208	0.416	0.104	233907	2185	668	20463	93939	14023
3	1,1-Dichloroethene	1.040	0.052	0.026	0.208	0.416	0.104	475136	3956	1191	39546	191059	26523
5	1,2-Dibromoethane	1.040	0.052	0.026	0.208	0.416	0.104	910214	8843	3034	89643	417465	56275
6	1,1,2,2-Tetrachloroethane	1.020	0.051	0.026	0.204	0.408	0.102	2066403	19486	10290	216109	952470	103998
7	Naphthalene	-1.000	0.107	0.053	0.426	0.852	0.213	-1	1174309	813490	11669920	29903019	3979332
1	Chlorobenzene-d5	0.200	0.200	0.200	0.200	0.200	0.200	1210851	185512	107112	436325	1007442	508059
4	Toluene-d8	0.200	0.200	0.200	0.200	0.200	0.200	555865	82583	42311	183795	436164	214227

(621)

INITIAL CALIBRATION REPORT: Response Factors

SDG:	**209270**
QC_Batch:	**071009-MS2**
Sample ID:	44-013
Sample Analysis Date:	10 Jul 109 1:13 pm
Run Method:	2SIM_SEA.M
Quant Method:	2SIM_SEA.M
Cal Update:	Thu Jul 09 08:26:17 2009
Template:	EARTEXSM.MS3

Sample Calculation:

1) Avg RFn = Sum $\left| \frac{(Astdni)}{(Cstdni)} \frac{(Cistdi)}{(Aistdi)} \right|_i$

Response Factors

Compound	RF1	RF2	RF3	RF4	RF5	RF6	AvgRFn	%RSD
Vinyl chloride	0.037	0.045	0.048	0.045	0.045	0.053	0.046	11.36
1,1-Dichloroethene	0.075	0.082	0.086	0.087	0.091	0.100	0.087	9.72
1,2-Dibromoethane	0.145	0.183	0.218	0.198	0.199	0.213	0.193	13.77
1,1,2,2-Tetrachloroethane	0.335	0.412	0.739	0.486	0.463	0.401	0.473	29.77
Naphthalene	NA	11.832	28.659	12.557	6.968	7.354	13.474	65.75
Chlorobenzene-d5	1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.00
Toluene-d8	0.459	0.445	0.395	0.421	0.433	0.422	0.429	5.16

CALCULATIONS

EPA Method TO-15 Modified SIM GC/MS

SDG: 209270
Laboratory Number: 08

RL:	2SIM_SEA.M
Run Method:	2SIM_SEA.M
Quant Method:	2SIM_SEA.M
Can Dilution Factor:	1.67
Air Volume:	500 ml
Gas Constant:	23.68
Decimal Places:	3

Compound	M.W.	Raw Amount	Result ppbv	Result ug/m3	(1) MDL ppbv	(2) RL ppbv	Calc MDL ppbv	Calc MDL ug/m3	Calc RL ppbv	Calc RL ug/m3	Flag	Spike ppmv
Vinyl chloride	62.5	0.000	0.000	0.000	0.0026	0.026	0.01	0.023	0.09	0.229	U	0.103
1,1-Dichloroethene	96.9	0.000	0.000	0.000	0.0023	0.026	0.01	0.031	0.09	0.355	U	0.103
1,2-Dibromoethane	188.0	0.004	0.015	0.117	0.0031	0.026	0.01	0.082	0.09	0.689	J	0.103
1,1,2,2-Tetrachloroethane	167.8	0.000	0.000	0.000	0.0024	0.026	0.01	0.057	0.09	0.615	U	0.103
Naphthalene	128.2	0.027	0.089	0.483	0.0071	0.053	0.02	0.128	0.18	0.958	J	0.103

SAMPLE CALCULATION

EPA Method TO-15 Modified SIM GC/MS

SDG:		**209270**
Laboratory Number:		**08**
Standard Volume	STV	0.5
Sample Volume	SV	500
Can Dilution Factor	CDF	1.67
Gas Constant		23.68
Decimal Places:		3

Sample Calculation:

1) Avg RFn = Sum $\left| \frac{(Astdni)}{(Cstdni)} \frac{(Cistdi)}{(Aistdi)} \right|$ Note: 1

2) Raw Amt = $\frac{(Ansamp)}{(Avg\ RFn)} \frac{(Cistdi)}{(Aistdi)}$ = **Cn**

3) Amount ppbv = $\frac{(Raw\ Amt)\ 1000}{(SV)}$ (CDF) (STV)

4) Amount ug/m3 = $\frac{(amt(ppbv)\ MW}{23.68}$

n	Compound	IS n	Chem type	MW	AvgRFn	Area Ansamp	Cistdi ppmv	Aistdi Als	**Cn ppmV** Raw Amt	Amount ppbv	Amount ug/m3
2	Vinyl chloride	1	TRG	62.5	0.046	0	0.200	857099	0.000	0.000	0.000
3	1,1-Dichloroethene	1	TRG	96.9	0.087	0	0.200	857099	0.000	0.000	0.000
5	1,2-Dibromoethane	1	TRG	188.0	0.193	3630	0.200	857099	0.004	0.015	0.119
6	1,1,2,2-Tetrachloroethane	1	TRG	167.8	0.473	0	0.200	857099	0.000	0.000	0.000
7	Naphthalene	1	TRG	128.2	13.474	1541917	0.200	857099	0.027	0.089	0.482
1	Chlorobenzene-d5	1	IS	0.0	1.000	857099	0.200	857099	0.000	0.000	0.000
4	Toluene-d8	1	SURR	0.0	0.429	343424	0.200	857099	0.000	0.000	0.000

Calculation Definitions:

n	compound n
i	i th calibration level
Astdni	Standard Area for compound n at ith calibration level
Cstdni	Standard Concentration for compound n at ith calibration level in ppmv
Cistdi	Internal Standard Conc used for compound n at ith calibration level in ppmv
Aistdi	Internal Standard Area used for compound n at ith calibration level
Ansamp	Sample Area for compound n
Avg RFn	Average response factor for all ith calibration levels for compound n
Raw Amount	Sample Concentration in ppmv before applying factors
Cistd	Concentration internal standard used for compound n in sample in ppmv
Aistd	Area of internal standard used for compound n in sample
Cn	Concentration of compound n in sample in ppmv
23.68	Gas constant at 60 F as per EPA source test protocol
MW	Molecular weight of compound
Note (1) : Avg RFn	The values for the Average Response Factor AvgRFn can be optained from the response Factor Report for the Initial Calibration, or from the Calibration Report

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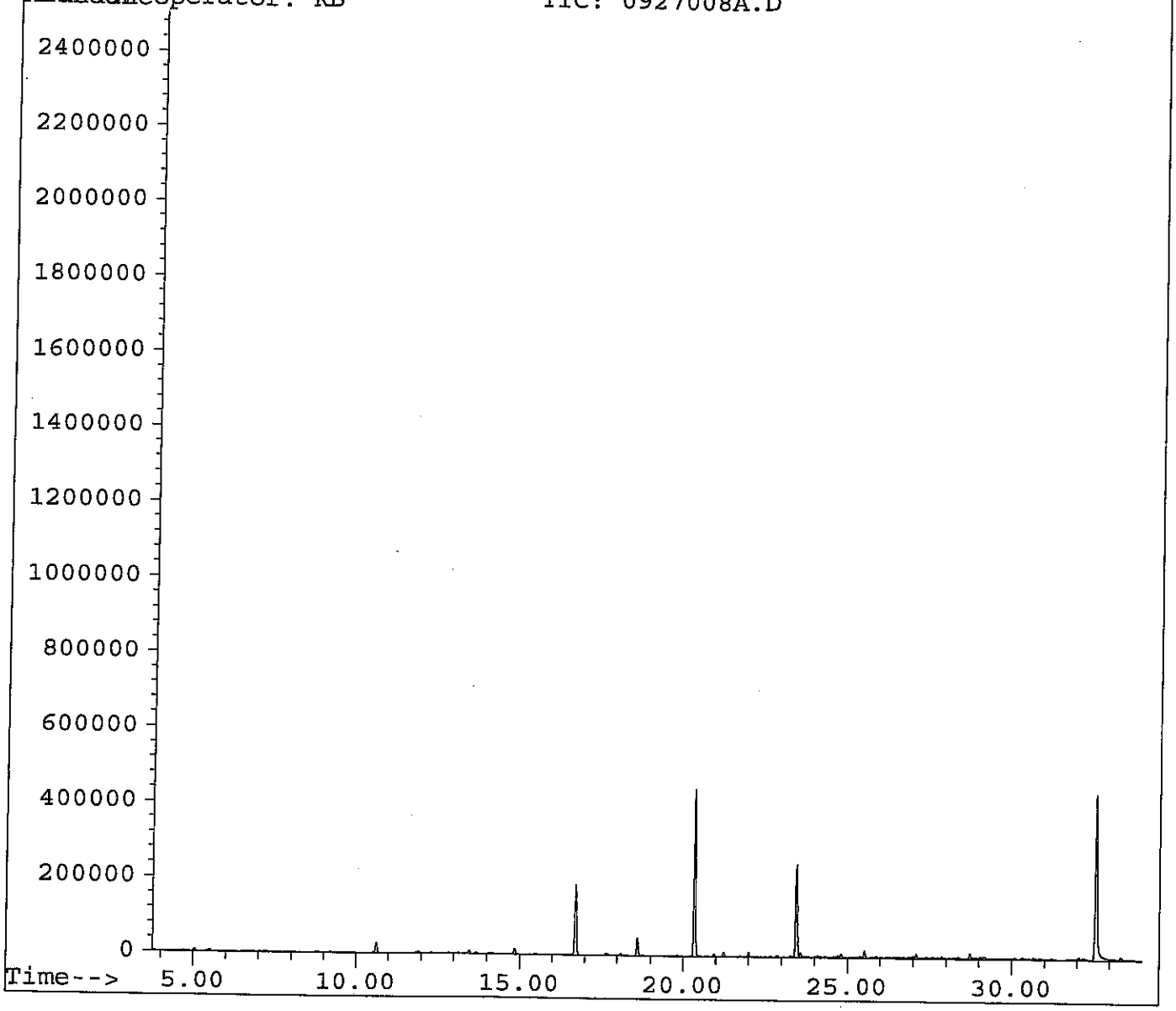
Name of operator: KB TIC: 0927008A.D



ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified SIM GC/MS | **SDG:** 209270
Analytical Method: TO-15 SIM | **Laboratory Number:** 09

File:	0927009A.D	**Date Sampled:**	06/16/09	**Time:**	16:38
Description:	44-014	**Date Received:**	06/17/09		
Can/Tube#:	526	**Date Extracted:**			
Sam_Type:	SA	**Date Analyzed:**	07/10/09	**Time:**	13:55
QC_Batch:	071009-MS2	**Can Dilution Factor:**	2.16		3
Air Volume:	500 ml	**Not Detected Flag:**	U		

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
75-01-4	Vinyl chloride	0.011	0.112	0.011	0.030	0.296	0.030	U
75-35-4	1,1-Dichloroethene	0.010	0.112	0.010	0.041	0.460	0.041	U
106-93-4	1,2-Dibromoethane	0.013	0.112	0.013	0.106	0.892	0.106	U
79-34-5	1,1,2,2-Tetrachloroethane	0.010	0.112	0.010	0.073	0.796	0.073	U
91-20-3	Naphthalene	0.031	0.229	0.043	0.166	1.240	0.233	J

	Surrogate Recovery	Spike Amt. ppbV	Amount ppbV	% Rec.	QC Limits	Flag * = Out
2037-26-5	Toluene-d8	0.200	0.201	101	70-130	

Notes: 1) Reported results are to be interpreted to two significant figures.
2) ug/m3 = ppbV*FW/23.68 calculated assuming conditions at 60 F and 1 atm.
3) MDL and RL are adjusted for sample volume and can dilution.
4) U and ND are Flags used for Not Detected
5) J is a flag for a result between the MDL and the RL (or lower quantitation limit, LQL)

QUANTITATION REPORT

EPA Method TO-15 Modified SIM GC/MS

			Review	EAS Sample ID: 0927009	
File Name:	0927009A.D				1 SS
Sample ID:	44-014				2 KB
Date:	10 Jul 109 1:55 pm			Cal Amounts	3 AT
Run Method:	2SIM_SEA.M			IS Areas	4 BB
Quant Method:	2SIM_SEA.M			Carryover	5 SH
Cal Update:	Thu Jul 09 08:26:17 2009				
Template:	EARTEXSM.MS3				
Can Factor:	2.16				
Volume:	500	ml		Analyst: SS 1	

CAS#	Compound	n	Raw Amount	RT	Target RT	Ion	Sample Area	Qualifier	Lower Qual	Upper Qual	Qual Flag	Cal Flag	Int Flag
75-01-4	Vinyl chloride	2	0.000	4.33	4.37	62.00	0	0	52	78			
75-35-4	1,1-Dichloroethene	3	0.000	6.95	6.95	61.00	0	0	42	63			
106-93-4	1,2-Dibromoethane	5	0.002	18.77	18.99	107.00	1450	100	73	109			
79-34-5	1,1,2,2-Tetrachloroethane	6	0.000	22.82	22.93	83.00	0	0	7	11			
91-20-3	Naphthalene	7	0.010	32.57	32.78	128.00	594459	12	10	14			
3114-55-4	Chlorobenzene-d5	1	0.200	20.36	20.51	117.00	887191						
2037-26-5	Toluene-d8	4	0.201	16.73	17.05	98.00	383276						

Integration Flags:

If no flag, the Integration was done by the instrument computer

M1 Manual Integration because the computer did not integrated the peak or integrated the wrong peak

M2 Manual Integration because computer integration of baseline was different than Initial Calibration

INITIAL CALIBRATION REPORT

EPA Method TO-15 Modified SIM GC/MS

		SDG:	209270
		QC_Batch:	071009-MS2
File Name:	0927009A.D	Instrument Name:	MS2
Sample ID:	44-014		
Sample Analysis Date:	10 Jul 109 1:55 pm	Number Compounds:	8
Run Method:	2SIM_SEA.M	IS1:	ST60360 0.2
Quant and Calibration Method:	2SIM_SEA.M	IS2:	
Cal Update:	Thu Jul 09 08:26:17 2009	IS3:	
Template:	EARTEXSM.MS3	IS4:	

Calibration Title: EPA TO-15

		Calibration Amount CA, ppmv						Calibration Response, Area					
		Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
		Amt	Amt	Amt	Amt	Amt	Amt	C07089D.D	C07089H.D	C07089I.D	C07089F.D	C07089E.D	C07089G.D
n	Compound	10.0	0.5	0.25	2.0	4.0	1.0	10.0	0.5	0.25	2.0	4.0	1.0
2	Vinyl chloride	1.040	0.052	0.026	0.208	0.416	0.104	233907	2185	668	20463	93939	14023
3	1,1-Dichloroethene	1.040	0.052	0.026	0.208	0.416	0.104	475136	3956	1191	39546	191059	26523
5	1,2-Dibromoethane	1.040	0.052	0.026	0.208	0.416	0.104	910214	8843	3034	89643	417465	56275
6	1,1,2,2-Tetrachloroethane	1.020	0.051	0.026	0.204	0.408	0.102	2066403	19486	10290	216109	952470	103998
7	Naphthalene	-1.000	0.107	0.053	0.426	0.852	0.213	-1	1174309	813490	11669920	29903019	3979332
1	Chlorobenzene-d5	0.200	0.200	0.200	0.200	0.200	0.200	1210851	185512	107112	436325	1007442	508059
4	Toluene-d8	0.200	0.200	0.200	0.200	0.200	0.200	555865	82583	42311	183795	436164	214227

(628)

INITIAL CALIBRATION REPORT: Response Factors

SDG:	**209270**
QC_Batch:	**071009-MS2**
Sample ID:	44-014
Sample Analysis Date:	10 Jul 109 1:55 pm
Run Method:	2SIM_SEA.M
Quant Method:	2SIM_SEA.M
Cal Update:	Thu Jul 09 08:26:17 2009
Template:	EARTEXSM.MS3

Sample Calculation:

1) Avg RFn = Sum $\left| \frac{(Astdni)}{(Cstdni)} \frac{(Cistdi)}{(Aistdi)} \right|_i$

Response Factors

Compound	RF1	RF2	RF3	RF4	RF5	RF6	AvgRFn	%RSD
Vinyl chloride	0.037	0.045	0.048	0.045	0.045	0.053	0.046	11.36
1,1-Dichloroethene	0.075	0.082	0.086	0.087	0.091	0.100	0.087	9.72
1,2-Dibromoethane	0.145	0.183	0.218	0.198	0.199	0.213	0.193	13.77
1,1,2,2-Tetrachloroethane	0.335	0.412	0.739	0.486	0.463	0.401	0.473	29.77
Naphthalene	NA	11.832	28.659	12.557	6.968	7.354	13.474	65.75
Chlorobenzene-d5	1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.00
Toluene-d8	0.459	0.445	0.395	0.421	0.433	0.422	0.429	5.16

CALCULATIONS

EPA Method TO-15 Modified SIM GC/MS

SDG: 209270
Laboratory Number: 09

RL:	2SIM_SEA.M
Run Method:	2SIM_SEA.M
Quant Method:	2SIM_SEA.M
Can Dilution Factor:	2.16
Air Volume:	500 ml
Gas Constant:	23.68
Decimal Places:	3

Compound	M.W.	Raw Amount	Result ppbv	Result ug/m3	(1) MDL ppbv	(2) RL ppbv	Calc MDL ppbv	Calc MDL ug/m3	Calc RL ppbv	Calc RL ug/m3	Flag	Spike ppmv
Vinyl chloride	62.5	0.000	0.000	0.000	0.0026	0.026	0.01	0.030	0.11	0.296	U	0.103
1,1-Dichloroethene	96.9	0.000	0.000	0.000	0.0023	0.026	0.01	0.041	0.11	0.460	U	0.103
1,2-Dibromoethane	188.0	0.002	0.007	0.058	0.0031	0.026	0.01	0.106	0.11	0.892	U	0.103
1,1,2,2-Tetrachloroethane	167.8	0.000	0.000	0.000	0.0024	0.026	0.01	0.073	0.11	0.796	U	0.103
Naphthalene	128.2	0.010	0.043	0.233	0.0071	0.053	0.03	0.166	0.23	1.240	J	0.103

SAMPLE CALCULATION

EPA Method TO-15 Modified SIM GC/MS

SDG:		**209270**
Laboratory Number:		**09**
Standard Volume	STV	0.5
Sample Volume	SV	500
Can Dilution Factor	CDF	2.16
Gas Constant		23.68
Decimal Places:		3

Sample Calculation:

1) Avg RFn = Sum $\left| \frac{(Astdni)}{(Cstdni)} \frac{(Cistdi)}{(Aistdi)} \right|_i$ Note: 1

2) Raw Amt = $\frac{(Ansamp)}{(Avg\ RFn)} \frac{(Cistdi)}{(Aistdi)}$ = Cn

3) Amount ppbv = $\frac{(Raw\ Amt)\ 1000}{(SV)}$ (CDF) (STV)

4) Amount ug/m3 = $\frac{(amt(ppbv)\ MW}{23.68}$

n	Compound	IS n	Chem type	MW	AvgRFn	Area Ansamp	Cistdi ppmv	Aistdi Ais	Cn ppmV Raw Amt	Amount ppbv	Amount ug/m3
2	Vinyl chloride	1	TRG	62.5	0.046	0	0.200	887191	0.000	0.000	0.000
3	1,1-Dichloroethene	1	TRG	96.9	0.087	0	0.200	887191	0.000	0.000	0.000
5	1,2-Dibromoethane	1	TRG	188.0	0.193	1450	0.200	887191	0.002	0.007	0.056
6	1,1,2,2-Tetrachloroethane	1	TRG	167.8	0.473	0	0.200	887191	0.000	0.000	0.000
7	Naphthalene	1	TRG	128.2	13.474	594459	0.200	887191	0.010	0.043	0.233
1	Chlorobenzene-d5	1	IS	0.0	1.000	887191	0.200	887191	0.000	0.000	0.000
4	Toluene-d8	1	SURR	0.0	0.429	383276	0.200	887191	0.000	0.000	0.000

Calculation Definitions:

n	compound n
i	i th calibration level
Astdni	Standard Area for compound n at ith calibration level
Cstdni	Standard Concentration for compound n at ith calibration level in ppmv
Cistdi	Internal Standard Conc used for compound n at ith calibration level in ppmv
Aistdi	Internal Standard Area used for compound n at ith calibration level
Ansamp	Sample Area for compound n
Avg RFn	Average response factor for all ith calibration levels for compound n
Raw Amount	Sample Concentration in ppmv before applying factors
Cistd	Concentration internal standard used for compound n in sample in ppmv
Aistd	Area of internal standard used for compound n in sample
Cn	Concentration of compound n in sample in ppmv
23.68	Gas constant at 60 F as per EPA source test protocol
MW	Molecular weight of compound

Note (1) : Avg RFn — The values for the Average Response Factor AvgRFn can be optained from the response Factor Report for the Initial Calibration, or from the Calibration Report

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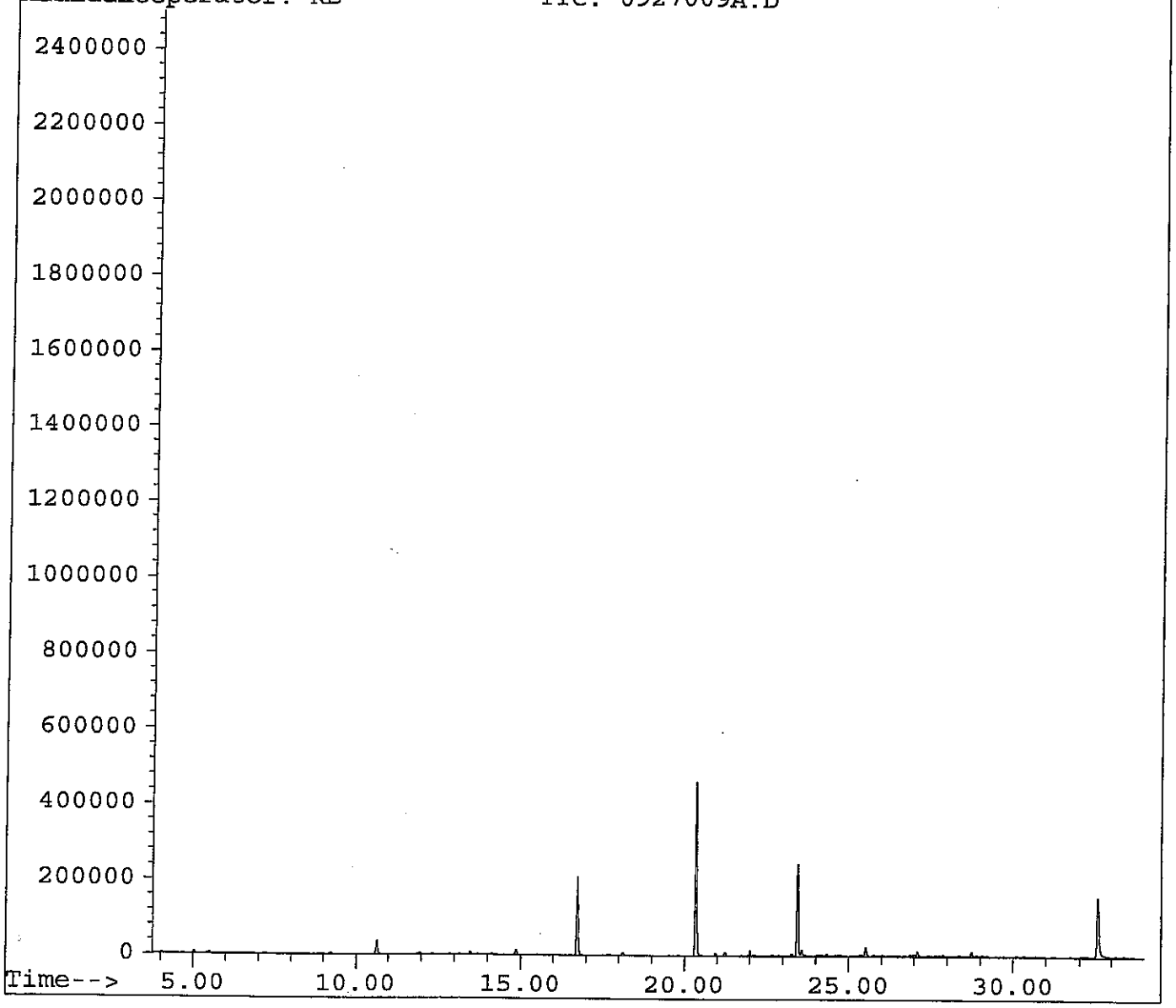
Name of operator: KB TIC: 0927009A.D



ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified SIM GC/MS
Analytical Method: TO-15 SIM

SDG: 209270
Laboratory Number: 11

File: 0927011A.D
Description: 44-016
Can/Tube#: 703
Sam_Type: SA
QC_Batch: 071009-MS2
Air Volume: 700 ml

Date Sampled: 06/16/09 **Time:**
Date Received: 06/17/09
Date Extracted:
Date Analyzed: 07/10/09 **Time:** 14:39
Can Dilution Factor: 1.00 3
Not Detected Flag: U

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
75-01-4	Vinyl chloride	0.004	0.037	0.004	0.010	0.098	0.010	U
75-35-4	1,1-Dichloroethene	0.003	0.037	0.003	0.013	0.152	0.013	U
106-93-4	1,2-Dibromoethane	0.004	0.037	0.004	0.035	0.295	0.035	U
79-34-5	1,1,2,2-Tetrachloroethane	0.003	0.037	0.003	0.024	0.263	0.024	U
91-20-3	Naphthalene	0.010	0.076	0.019	0.055	0.410	0.101	J

	Surrogate Recovery	Spike Amt. ppbV	Amount ppbV	% Rec.	QC Limits	Flag * = Out
2037-26-5	Toluene-d8	0.200	0.199	100	70-130	

Notes: 1) Reported results are to be interpreted to two significant figures.
2) ug/m3 = ppbV*FW/23.68 calculated assuming conditions at 60 F and 1 atm.
3) MDL and RL are adjusted for sample volume and can dilution.
4) U and ND are Flags used for Not Detected
5) J is a flag for a result between the MDL and the RL (or lower quantitation limit, LQL)

QUANTITATION REPORT

EPA Method TO-15 Modified SIM GC/MS

Review **EAS Sample ID: 0927011**

File Name:	0927011A.D		1 SS
Sample ID:	44-016		2 KB
Date:	10 Jul 109 2:39 pm	Cal Amounts	3 AT
Run Method:	2SIM_SEA.M	IS Areas	4 BB
Quant Method:	2SIM_SEA.M	Carryover	5 SH
Cal Update:	Thu Jul 09 08:26:17 2009		
Template:	EARTEXSM.MS3		
Can Factor:	1.00		
Volume:	700 ml	Analyst: SS 1	

CAS#	Compound	n	Raw Amount	RT	Target RT	Ion	Sample Area	Qualifier	Lower Qual	Upper Qual	Qual Flag	Cal Flag	Int Flag
75-01-4	Vinyl chloride	2	0.000	4.28	4.37	62.00	0	0	52	78			
75-35-4	1,1-Dichloroethene	3	0.000	6.97	6.95	61.00	0	0	42	63			
106-93-4	1,2-Dibromoethane	5	0.002	18.84	18.99	107.00	786	94	73	109			
79-34-5	1,1,2,2-Tetrachloroethane	6	0.000	23.10	22.93	83.00	0	0	7	11			
91-20-3	Naphthalene	7	0.013	32.57	32.78	128.00	361420	11	10	14			
3114-55-4	Chlorobenzene-d5	1	0.200	20.41	20.51	117.00	**410216**						
2037-26-5	Toluene-d8	4	0.199	16.83	17.05	98.00	**175422**						

Integration Flags:

If no flag, the Integration was done by the instrument computer

M1 Manual Integration because the computer did not integrated the peak or integrated the wrong peak

M2 Manual Integration because computer integration of baseline was different than Initial Calibration

INITIAL CALIBRATION REPORT

EPA Method TO-15 Modified SIM GC/MS

		SDG:	209270
		QC_Batch:	071009-MS2
File Name:	0927011A.D	Instrument Name:	MS2
Sample ID:	44-016		
Sample Analysis Date:	10 Jul 109 2:39 pm	Number Compounds:	8
Run Method:	2SIM_SEA.M	IS1: ST60360	0.2
Quant and Calibration Method:	2SIM_SEA.M	IS2:	
Cal Update:	Thu Jul 09 08:26:17 2009	IS3:	
Template:	EARTEXSM.MS3	IS4:	

Calibration Title: EPA T0-15

		Calibration Amount CA, ppmv						Calibration Response, Area					
		Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
		Amt	Amt	Amt	Amt	Amt	Amt	C07089D.D	C07089H.D	C07089I.D	C07089F.D	C07089E.D	C07089G.D
n	Compound	10.0	0.5	0.25	2.0	4.0	1.0	10.0	0.5	0.25	2.0	4.0	1.0
2	Vinyl chloride	1.040	0.052	0.026	0.208	0.416	0.104	233907	2185	668	20463	93939	14023
3	1,1-Dichloroethene	1.040	0.052	0.026	0.208	0.416	0.104	475136	3956	1191	39546	191059	26523
5	1,2-Dibromoethane	1.040	0.052	0.026	0.208	0.416	0.104	910214	8843	3034	89643	417465	56275
6	1,1,2,2-Tetrachloroethane	1.020	0.051	0.026	0.204	0.408	0.102	2066403	19486	10290	216109	952470	103998
7	Naphthalene	-1.000	0.107	0.053	0.426	0.852	0.213	-1	1174309	813490	11669920	29903019	3979332
1	Chlorobenzene-d5	0.200	0.200	0.200	0.200	0.200	0.200	1210851	185512	107112	436325	1007442	508059
4	Toluene-d8	0.200	0.200	0.200	0.200	0.200	0.200	555865	82583	42311	183795	436164	214227

(635)

INITIAL CALIBRATION REPORT: Response Factors

SDG:	**209270**
QC_Batch:	**071009-MS2**
Sample ID:	44-016
Sample Analysis Date:	10 Jul 109 2:39 pm
Run Method:	2SIM_SEA.M
Quant Method:	2SIM_SEA.M
Cal Update:	Thu Jul 09 08:26:17 2009
Template:	EARTEXSM.MS3

Sample Calculation:

1) Avg RFn = Sum $\left| \frac{(Astdni)\ (Cistdi)}{(Cstdni)\ (Aistdi)} \right|_i$

Response Factors

Compound	RF1	RF2	RF3	RF4	RF5	RF6	AvgRFn	%RSD
Vinyl chloride	0.037	0.045	0.048	0.045	0.045	0.053	0.046	11.36
1,1-Dichloroethene	0.075	0.082	0.086	0.087	0.091	0.100	0.087	9.72
1,2-Dibromoethane	0.145	0.183	0.218	0.198	0.199	0.213	0.193	13.77
1,1,2,2-Tetrachloroethane	0.335	0.412	0.739	0.486	0.463	0.401	0.473	29.77
Naphthalene	NA	11.832	28.659	12.557	6.968	7.354	13.474	65.75
Chlorobenzene-d5	1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.00
Toluene-d8	0.459	0.445	0.395	0.421	0.433	0.422	0.429	5.16

CALCULATIONS

EPA Method TO-15 Modified SIM GC/MS

SDG: 209270
Laboratory Number: 11

RL:	2SIM_SEA.M
Run Method:	2SIM_SEA.M
Quant Method:	2SIM_SEA.M
Can Dilution Factor:	1.00
Air Volume:	700 ml
Gas Constant:	23.68
Decimal Places:	3

Compound	M.W.	Raw Amount	Result ppbv	Result ug/m3	(1) MDL ppbv	(2) RL ppbv	Calc MDL ppbv	Calc MDL ug/m3	Calc RL ppbv	Calc RL ug/m3	Flag	Spike ppmv
Vinyl chloride	62.5	0.000	0.000	0.000	0.0026	0.026	0.00	0.010	0.04	0.098	U	0.103
1,1-Dichloroethene	96.9	0.000	0.000	0.000	0.0023	0.026	0.00	0.013	0.04	0.152	U	0.103
1,2-Dibromoethane	188.0	0.002	0.003	0.023	0.0031	0.026	0.00	0.035	0.04	0.295	U	0.103
1,1,2,2-Tetrachloroethane	167.8	0.000	0.000	0.000	0.0024	0.026	0.00	0.024	0.04	0.263	U	0.103
Naphthalene	128.2	0.013	0.019	0.101	0.0071	0.053	0.01	0.055	0.08	0.410	J	0.103

SAMPLE CALCULATION

EPA Method TO-15 Modified SIM GC/MS

SDG:		**209270**
Laboratory Number:		**11**
Standard Volume	STV	0.5
Sample Volume	SV	700
Can Dilution Factor	CDF	1.00
Gas Constant		23.68
Decimal Places:		3

Sample Calculation:

1) Avg RFn = Sum $\left| \frac{(Astdni)}{(Cstdni)} \frac{(Cistdi)}{(Aistdi)} \right|_i$ Note: 1

2) Raw Amt = $\frac{(Ansamp)}{(Avg\ RFn)} \frac{(Cistdi)}{(Aistdi)}$ **= Cn**

3) Amount ppbv = $\frac{(Raw\ Amt)\ 1000}{(SV)}$ (CDF) (STV)

4) Amount ug/m3 = $\frac{(amt(ppbv)\ MW}{23.68}$

n	Compound	IS n	Chem type	MW	AvgRFn	Area Ansamp	Cistdi ppmv	AIstdi Ais	**Cn** ppmV Raw Amt	Amount ppbv	Amount ug/m3
2	Vinyl chloride	1	TRG	62.5	0.046	0	0.200	410216	0.000	0.000	0.000
3	1,1-Dichloroethene	1	TRG	96.9	0.087	0	0.200	410216	0.000	0.000	0.000
5	1,2-Dibromoethane	1	TRG	188.0	0.193	786	0.200	410216	0.002	0.003	0.024
6	1,1,2,2-Tetrachloroethane	1	TRG	167.8	0.473	0	0.200	410216	0.000	0.000	0.000
7	Naphthalene	1	TRG	128.2	13.474	361420	0.200	410216	0.013	0.019	0.103
1	Chlorobenzene-d5	1	IS	0.0	1.000	410216	0.200	410216	0.000	0.000	0.000
4	Toluene-d8	1	SURR	0.0	0.429	175422	0.200	410216	0.000	0.000	0.000

Calculation Definitions:

n	compound n
i	i th calibration level
Astdni	Standard Area for compound n at ith calibration level
Cstdni	Standard Concentration for compound n at ith calibration level in ppmv
Cistdi	Internal Standard Conc used for compound n at ith calibration level in ppmv
Aistdi	Internal Standard Area used for compound n at ith calibration level
Ansamp	Sample Area for compound n
Avg RFn	Average response factor for all ith calibration levels for compound n
Raw Amount	Sample Concentration in ppmv before applying factors
Cistd	Concentration internal standard used for compound n in sample in ppmv
Aistd	Area of internal standard used for compound n in sample
Cn	Concentration of compound n in sample in ppmv
23.68	Gas constant at 60 F as per EPA source test protocol
MW	Molecular weight of compound
Note (1) : Avg RFn	The values for the Average Response Factor AvgRFn can be optained from the response Factor Report for the Initial Calibration, or from the Calibration Report

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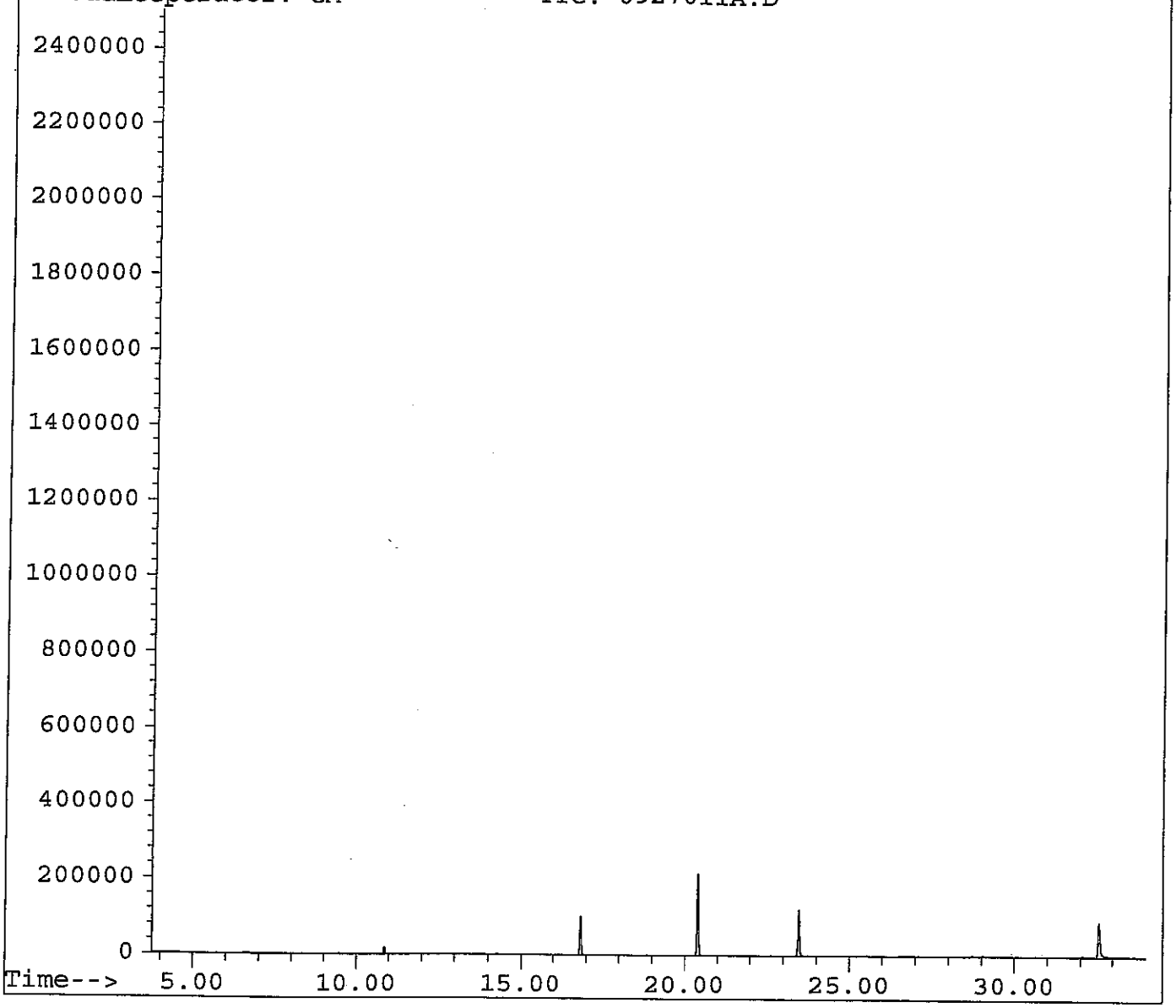
Name of operator: CM TIC: 0927011A.D



ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified SIM GC/MS | **SDG:** 209270
Analytical Method: TO-15 SIM | **Laboratory Number:** 12

File:	0927012A.D	**Date Sampled:**	06/16/09	**Time:**	16:53
Description:	44-017	**Date Received:**	06/17/09		
Can/Tube#:	681	**Date Extracted:**			
Sam_Type:	SA	**Date Analyzed:**	07/10/09	**Time:**	15:31
QC_Batch:	071009-MS2	**Can Dilution Factor:**	1.87		3
Air Volume:	500 ml	**Not Detected Flag:**	U		

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
75-01-4	Vinyl chloride	0.010	0.097	0.010	0.026	0.257	0.026	U
75-35-4	1,1-Dichloroethene	0.009	0.097	0.009	0.035	0.398	0.035	U
106-93-4	1,2-Dibromoethane	0.012	0.097	0.012	0.092	0.772	0.092	U
79-34-5	1,1,2,2-Tetrachloroethane	0.009	0.097	0.009	0.064	0.689	0.064	U
91-20-3	Naphthalene	0.027	0.198	0.027	0.144	1.073	0.144	U

	Surrogate Recovery	Spike Amt. ppbV	Amount ppbV	% Rec.	QC Limits	Flag * = Out
2037-26-5	Toluene-d8	0.200	0.207	103	70-130	

Notes: 1) Reported results are to be interpreted to two significant figures.
2) ug/m3 = ppbV*FW/23.68 calculated assuming conditions at 60 F and 1 atm.
3) MDL and RL are adjusted for sample volume and can dilution.
4) U and ND are Flags used for Not Detected
5) J is a flag for a result between the MDL and the RL (or lower quantitation limit, LQL)

QUANTITATION REPORT

EPA Method TO-15 Modified SIM GC/MS

			Review	EAS Sample ID: 0927012	
File Name:	0927012A.D				1 SS
Sample ID:	44-017				2 KB
Date:	10 Jul 109 3:31 pm			Cal Amounts	3 AT
Run Method:	2SIM_SEA.M			IS Areas	4 BB
Quant Method:	2SIM_SEA.M			Carryover	5 SH
Cal Update:	Thu Jul 09 08:26:17 2009				
Template:	EARTEXSM.MS3				
Can Factor:	1.87				
Volume:	500	ml		Analyst: SS 1	

CAS#	Compound	n	Raw Amount	RT	Target RT	Ion	Sample Area	Qualifier	Lower Qual	Upper Qual	Qual Flag	Cal Flag	Int Flag
75-01-4	Vinyl chloride	2	0.000	4.18	4.37	62.00	0	0	52	78			
75-35-4	1,1-Dichloroethene	3	0.000	7.01	6.95	61.00	0	0	42	63			
106-93-4	1,2-Dibromoethane	5	0.002	19.04	18.99	107.00	1353	99	73	109			
79-34-5	1,1,2,2-Tetrachloroethane	6	0.000	22.96	22.93	83.00	0	0	7	11			
91-20-3	Naphthalene	7	0.007	32.55	32.78	128.00	400422	12	10	14			
3114-55-4	Chlorobenzene-d5	1	0.200	20.55	20.51	117.00	**872506**						
2037-26-5	Toluene-d8	4	0.207	17.12	17.05	98.00	**387132**						

Integration Flags:

If no flag, the Integration was done by the Instrument computer

M1 Manual Integration because the computer did not integrated the peak or integrated the wrong peak

M2 Manual Integration because computer integration of baseline was different than Initial Calibration

INITIAL CALIBRATION REPORT

EPA Method TO-15 Modified SIM GC/MS

File Name:	0927012A.D	SDG:	209270
Sample ID:	44-017	QC_Batch:	071009-MS2
Sample Analysis Date:	10 Jul 109 3:31 pm	Instrument Name:	MS2
Run Method:	2SIM_SEA.M	Number Compounds:	8
Quant and Calibration Method:	2SIM_SEA.M	IS1: ST60360	0.2
Cal Update:	Thu Jul 09 08:26:17 2009	IS2:	
Template:	EARTEXSM.MS3	IS3:	
		IS4:	

Calibration Title: EPA T0-15

		Calibration Amount CA, ppmv						Calibration Response, Area					
		Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
		Amt	Amt	Amt	Amt	Amt	Amt	C07089D.D	C07089H.D	C07089I.D	C07089F.D	C07089E.D	C07089G.D
n	Compound	10.0	0.5	0.25	2.0	4.0	1.0	10.0	0.5	0.25	2.0	4.0	1.0
2	Vinyl chloride	1.040	0.052	0.026	0.208	0.416	0.104	233907	2185	668	20463	93939	14023
3	1,1-Dichloroethene	1.040	0.052	0.026	0.208	0.416	0.104	475136	3956	1191	39546	191059	26523
5	1,2-Dibromoethane	1.040	0.052	0.026	0.208	0.416	0.104	910214	8843	3034	89643	417465	56275
6	1,1,2,2-Tetrachloroethane	1.020	0.051	0.026	0.204	0.408	0.102	2066403	19486	10290	216109	952470	103998
7	Naphthalene	-1.000	0.107	0.053	0.426	0.852	0.213	-1	1174309	813490	11669920	29903019	3979332
1	Chlorobenzene-d5	0.200	0.200	0.200	0.200	0.200	0.200	1210851	185512	107112	436325	1007442	508059
4	Toluene-d8	0.200	0.200	0.200	0.200	0.200	0.200	555865	82583	42311	183795	436164	214227

(642)

INITIAL CALIBRATION REPORT: Response Factors

SDG:	**209270**
QC_Batch:	**071009-MS2**
Sample ID:	44-017
Sample Analysis Date:	10 Jul 109 3:31 pm
Run Method:	2SIM_SEA.M
Quant Method:	2SIM_SEA.M
Cal Update:	Thu Jul 09 08:26:17 2009
Template:	EARTEXSM.MS3

Sample Calculation:

1) Avg RFn = Sum $\left| \frac{(Astdni)\ (Cistdi)}{(Cstdni)\ (Aistdi)} \right|_i$

Response Factors

Compound	RF1	RF2	RF3	RF4	RF5	RF6	AvgRFn	%RSD
Vinyl chloride	0.037	0.045	0.048	0.045	0.045	0.053	0.046	11.36
1,1-Dichloroethene	0.075	0.082	0.086	0.087	0.091	0.100	0.087	9.72
1,2-Dibromoethane	0.145	0.183	0.218	0.198	0.199	0.213	0.193	13.77
1,1,2,2-Tetrachloroethane	0.335	0.412	0.739	0.486	0.463	0.401	0.473	29.77
Naphthalene	NA	11.832	28.659	12.557	6.968	7.354	13.474	65.75
Chlorobenzene-d5	1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.00
Toluene-d8	0.459	0.445	0.395	0.421	0.433	0.422	0.429	5.16

CALCULATIONS

EPA Method TO-15 Modified SIM GC/MS

SDG: 209270
Laboratory Number: 12

RL:	2SIM_SEA.M
Run Method:	2SIM_SEA.M
Quant Method:	2SIM_SEA.M
Can Dilution Factor:	1.87
Air Volume:	500 ml
Gas Constant:	23.68
Decimal Places:	3

Compound	M.W.	Raw Amount	Result ppbv	Result ug/m3	(1) MDL ppbv	(2) RL ppbv	Calc MDL ppbv	Calc MDL ug/m3	Calc RL ppbv	Calc RL ug/m3	Flag	Spike ppmv
Vinyl chloride	62.5	0.000	0.000	0.000	0.0026	0.026	0.01	0.026	0.10	0.257	U	0.103
1,1-Dichloroethene	96.9	0.000	0.000	0.000	0.0023	0.026	0.01	0.035	0.10	0.398	U	0.103
1,2-Dibromoethane	188.0	0.002	0.006	0.048	0.0031	0.026	0.01	0.092	0.10	0.772	U	0.103
1,1,2,2-Tetrachloroethane	167.8	0.000	0.000	0.000	0.0024	0.026	0.01	0.064	0.10	0.689	U	0.103
Naphthalene	128.2	0.007	0.025	0.138	0.0071	0.053	0.03	0.144	0.20	1.073	U	0.103

SAMPLE CALCULATION

EPA Method TO-15 Modified SIM GC/MS

SDG:		**209270**
Laboratory Number:		**12**
Standard Volume	STV	0.5
Sample Volume	SV	500
Can Dilution Factor	CDF	1.87
Gas Constant		23.68
Decimal Places:		3

Sample Calculation:

1) Avg RFn = Sum $\left| \frac{(Astdni)}{(Cstdni)} \frac{(Cistdi)}{(Aistdi)} \right|_i$ Note: 1

2) Raw Amt = $\frac{(Ansamp)}{(Avg\ RFn)} \frac{(Cistdi)}{(Aistdi)}$ = **Cn**

3) Amount ppbv = $\frac{(Raw\ Amt)\ 1000}{(SV)}$ (CDF) (STV)

4) Amount ug/m3 = $\frac{(amt(ppbv)\ MW}{23.68}$

n	Compound	IS n	Chem type	MW	AvgRFn	Area Ansamp	Cistdi ppmv	Aistdi Ais	**Cn** ppmV Raw Amt	Amount ppbv	Amount ug/m3
2	Vinyl chloride	1	TRG	62.5	0.046	0	0.200	872506	0.000	0.000	0.000
3	1,1-Dichloroethene	1	TRG	96.9	0.087	0	0.200	872506	0.000	0.000	0.000
5	1,2-Dibromoethane	1	TRG	188.0	0.193	1353	0.200	872506	0.002	0.006	0.048
6	1,1,2,2-Tetrachloroethane	1	TRG	167.8	0.473	0	0.200	872506	0.000	0.000	0.000
7	Naphthalene	1	TRG	128.2	13.474	400422	0.200	872506	0.007	0.025	0.135
1	Chlorobenzene-d5	1	IS	0.0	1.000	872506	0.200	872506	0.000	0.000	0.000
4	Toluene-d8	1	SURR	0.0	0.429	387132	0.200	872506	0.000	0.000	0.000

Calculation Definitions:

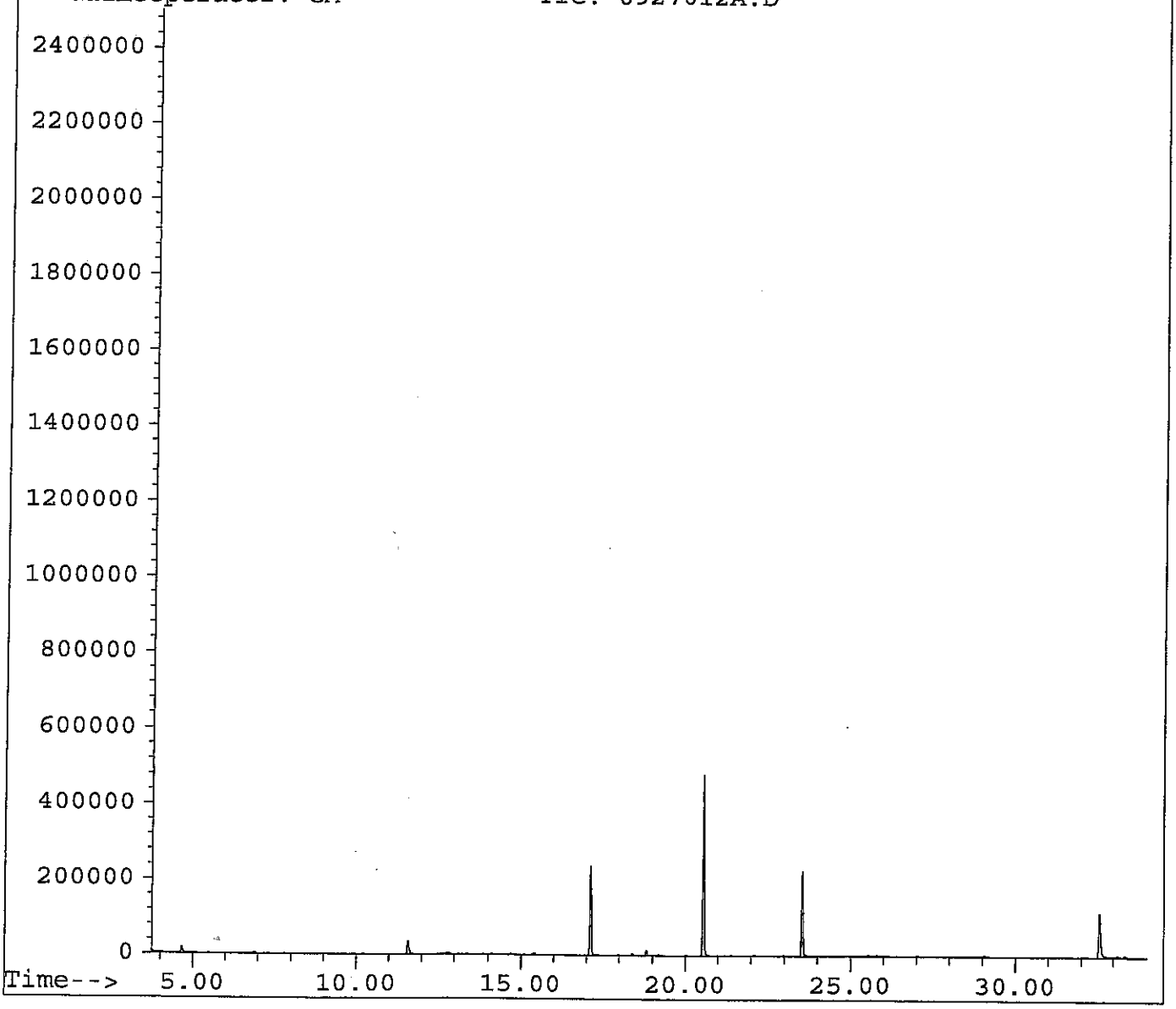
n	compound n
i	i th calibration level
Astdni	Standard Area for compound n at ith calibration level
Cstdni	Standard Concentration for compound n at ith calibration level in ppmv
Cistdi	Internal Standard Conc used for compound n at ith calibration level in ppmv
Aistdi	Internal Standard Area used for compound n at ith calibration level
Ansamp	Sample Area for compound n
Avg RFn	Average response factor for all ith calibration levels for compound n
Raw Amount	Sample Concentration in ppmv before applying factors
Cistd	Concentration internal standard used for compound n in sample in ppmv
Aistd	Area of internal standard used for compound n in sample
Cn	Concentration of compound n in sample in ppmv
23.68	Gas constant at 60 F as per EPA source test protocol
MW	Molecular weight of compound

Note (1) : Avg RFn — The values for the Average Response Factor AvgRFn can be optained from the response Factor Report for the Initial Calibration, or from the Calibration Report

Name of file: C:\HPCHEM\1\DATA\07109MS2\0927012A.D

Name of operator: CM

TIC: 0927012A.D



ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified SIM GC/MS | **SDG:** 209270
Analytical Method: TO-15 SIM | **Laboratory Number:** 13

File:	0927013A.D	**Date Sampled:**	06/16/09	**Time:**	16:53
Description:	44-018	**Date Received:**	06/17/09		
Can/Tube#:	180	**Date Extracted:**			
Sam_Type:	SA	**Date Analyzed:**	07/10/09	**Time:**	20:19
QC_Batch:	071009-MS2	**Can Dilution Factor:**	1.63		3
Air Volume:	1000 ml	**Not Detected Flag:**	U		

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
75-01-4	Vinyl chloride	0.004	0.042	0.004	0.011	0.112	0.011	U
75-35-4	1,1-Dichloroethene	0.004	0.042	0.004	0.015	0.173	0.015	U
106-93-4	1,2-Dibromoethane	0.005	0.042	0.005	0.040	0.336	0.040	U
79-34-5	1,1,2,2-Tetrachloroethane	0.004	0.042	0.004	0.028	0.300	0.028	U
91-20-3	Naphthalene	0.012	0.086	0.012	0.063	0.468	0.063	U

	Surrogate Recovery	Spike Amt. ppbV	Amount ppbV	% Rec.	QC Limits	Flag * = Out
2037-26-5	Toluene-d8	0.200	0.210	105	70-130	

Notes: 1) Reported results are to be interpreted to two significant figures.
2) ug/m3 = ppbV*FW/23.68 calculated assuming conditions at 60 F and 1 atm.
3) MDL and RL are adjusted for sample volume and can dilution.
4) U and ND are Flags used for Not Detected
5) J is a flag for a result between the MDL and the RL (or lower quantitation limit, LQL)

QUANTITATION REPORT

EPA Method TO-15 Modified SIM GC/MS

			Review	EAS Sample ID: 0927013	
File Name:	0927013A.D				1 SS
Sample ID:	44-018				2 KB
Date:	10 Jul 109 8:19 pm			Cal Amounts	3 AT
Run Method:	2SIM_SEA.M			IS Areas	4 BB
Quant Method:	2SIM_SEA.M			Carryover	5 SH
Cal Update:	Thu Jul 09 08:26:17 2009				
Template:	EARTEXSM.MS3				
Can Factor:	1.63				
Volume:	1000	ml		Analyst: SS 1	

CAS#	Compound	n	Raw Amount	RT	Target RT	Ion	Sample Area	Qualifier	Lower Qual	Upper Qual	Qual Flag	Cal Flag	Int Flag
75-01-4	Vinyl chloride	2	0.000	4.23	4.37	62.00	0	0	52	78			
75-35-4	1,1-Dichloroethene	3	0.000	6.87	6.95	61.00	0	0	42	63			
106-93-4	1,2-Dibromoethane	5	0.002	19.02	18.99	107.00	1435	76	73	109			
79-34-5	1,1,2,2-Tetrachloroethane	6	0.000	22.85	22.93	83.00	0	0	7	11			
91-20-3	Naphthalene	7	0.006	32.55	32.78	128.00	302711	12	10	14			
3114-55-4	Chlorobenzene-d5	1	0.200	20.54	20.51	117.00	**709595**						
2037-26-5	Toluene-d8	4	0.210	17.09	17.05	98.00	**319941**						

Integration Flags:

If no flag, the Integration was done by the instrument computer

M1 Manual Integration because the computer did not integrated the peak or integrated the wrong peak

M2 Manual Integration because computer integration of baseline was different than Initial Calibration

INITIAL CALIBRATION REPORT

EPA Method TO-15 Modified SIM GC/MS

		SDG:	**209270**
		QC_Batch:	**071009-MS2**
File Name:	0927013A.D	**Instrument Name:**	MS2
Sample ID:	44-018		
Sample Analysis Date:	10 Jul 109 8:19 pm	Number Compounds:	8
Run Method:	2SIM_SEA.M	IS1: ST60360	0.2
Quant and Calibration Method:	2SIM_SEA.M	IS2:	
Cal Update:	Thu Jul 09 08:26:17 2009	IS3:	
Template:	EARTEXSM.MS3	IS4:	

Calibration Title: EPA T0-15

		Calibration Amount CA, ppmv						**Calibration Response, Area**					
		Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
		Amt	Amt	Amt	Amt	Amt	Amt	C07089D.D	C07089H.D	C07089I.D	C07089F.D	C07089E.D	C07089G.D
n	Compound	10.0	0.5	0.25	2.0	4.0	1.0	10.0	0.5	0.25	2.0	4.0	1.0
2	Vinyl chloride	1.040	0.052	0.026	0.208	0.416	0.104	233907	2185	668	20463	93939	14023
3	1,1-Dichloroethene	1.040	0.052	0.026	0.208	0.416	0.104	475136	3956	1191	39546	191059	26523
5	1,2-Dibromoethane	1.040	0.052	0.026	0.208	0.416	0.104	910214	8843	3034	89643	417465	56275
6	1,1,2,2-Tetrachloroethane	1.020	0.051	0.026	0.204	0.408	0.102	2066403	19486	10290	216109	952470	103998
7	Naphthalene	-1.000	0.107	0.053	0.426	0.852	0.213	-1	1174309	813490	11669920	29903019	3979332
1	Chlorobenzene-d5	0.200	0.200	0.200	0.200	0.200	0.200	1210851	185512	107112	436325	1007442	508059
4	Toluene-d8	0.200	0.200	0.200	0.200	0.200	0.200	555865	82583	42311	183795	436164	214227

(649)

INITIAL CALIBRATION REPORT: Response Factors

SDG:	**209270**
QC_Batch:	**071009-MS2**
Sample ID:	44-018
Sample Analysis Date:	10 Jul 109 8:19 pm
Run Method:	2SIM_SEA.M
Quant Method:	2SIM_SEA.M
Cal Update:	Thu Jul 09 08:26:17 2009
Template:	EARTEXSM.MS3

Sample Calculation:

1) Avg RFn = Sum $\left| \frac{(Astdni)\ (Cistdi)}{(Cstdni)\ (Aistdi)} \right|_i$

Response Factors

Compound	RF1	RF2	RF3	RF4	RF5	RF6	AvgRFn	%RSD
Vinyl chloride	0.037	0.045	0.048	0.045	0.045	0.053	0.046	11.36
1,1-Dichloroethene	0.075	0.082	0.086	0.087	0.091	0.100	0.087	9.72
1,2-Dibromoethane	0.145	0.183	0.218	0.198	0.199	0.213	0.193	13.77
1,1,2,2-Tetrachloroethane	0.335	0.412	0.739	0.486	0.463	0.401	0.473	29.77
Naphthalene	NA	11.832	28.659	12.557	6.968	7.354	13.474	65.75
Chlorobenzene-d5	1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.00
Toluene-d8	0.459	0.445	0.395	0.421	0.433	0.422	0.429	5.16

CALCULATIONS

EPA Method TO-15 Modified SIM GC/MS

SDG: 209270
Laboratory Number: 13

RL:	2SIM_SEA.M
Run Method:	2SIM_SEA.M
Quant Method:	2SIM_SEA.M
Can Dilution Factor:	1.63
Air Volume:	1000 ml
Gas Constant:	23.68
Decimal Places:	3

Compound	M.W.	Raw Amount	Result ppbv	Result ug/m3	(1) MDL ppbv	(2) RL ppbv	Calc MDL ppbv	Calc MDL ug/m3	Calc RL ppbv	Calc RL ug/m3	Flag	Spike ppmv
Vinyl chloride	62.5	0.000	0.000	0.000	0.0026	0.026	0.00	0.011	0.04	0.112	U	0.103
1,1-Dichloroethene	96.9	0.000	0.000	0.000	0.0023	0.026	0.00	0.015	0.04	0.173	U	0.103
1,2-Dibromoethane	188.0	0.002	0.003	0.027	0.0031	0.026	0.01	0.040	0.04	0.336	U	0.103
1,1,2,2-Tetrachloroethane	167.8	0.000	0.000	0.000	0.0024	0.026	0.00	0.028	0.04	0.300	U	0.103
Naphthalene	128.2	0.006	0.010	0.056	0.0071	0.053	0.01	0.063	0.09	0.468	U	0.103

SAMPLE CALCULATION

EPA Method TO-15 Modified SIM GC/MS

SDG:		**209270**
Laboratory Number:		**13**
Standard Volume	STV	0.5
Sample Volume	SV	1000
Can Dilution Factor	CDF	1.63
Gas Constant		23.68
Decimal Places:		3

Sample Calculation:

1) Avg RFn = Sum $\left| \frac{(Astdni)}{(Cstdni)} \frac{(Cistdi)}{(Aistdi)} \right|_i$ Note: 1

2) Raw Amt = $\frac{(Ansamp)}{(Avg\ RFn)} \frac{(Cistdi)}{(Aistdi)}$ = **Cn**

3) Amount ppbv = $\frac{(Raw\ Amt)\ 1000}{(SV)}$ (CDF) (STV)

4) Amount ug/m3 = $\frac{(amt(ppbv)\ MW}{23.68}$

n	Compound	IS n	Chem type	MW	AvgRFn	Area Ansamp	Cistdi ppmv	Aistdi Ais	Cn ppmV Raw Amt	Amount ppbv	Amount ug/m3
2	Vinyl chloride	1	TRG	62.5	0.046	0	0.200	709595	0.000	0.000	0.000
3	1,1-Dichloroethene	1	TRG	96.9	0.087	0	0.200	709595	0.000	0.000	0.000
5	1,2-Dibromoethane	1	TRG	188.0	0.193	1435	0.200	709595	0.002	0.003	0.024
6	1,1,2,2-Tetrachloroethane	1	TRG	167.8	0.473	0	0.200	709595	0.000	0.000	0.000
7	Naphthalene	1	TRG	128.2	13.474	302711	0.200	709595	0.006	0.010	0.054
1	Chlorobenzene-d5	1	IS	0.0	1.000	709595	0.200	709595	0.000	0.000	0.000
4	Toluene-d8	1	SURR	0.0	0.429	319941	0.200	709595	0.000	0.000	0.000

Calculation Definitions:

n	compound n
i	i th calibration level
Astdni	Standard Area for compound n at ith calibration level
Cstdni	Standard Concentration for compound n at ith calibration level in ppmv
Cistdi	Internal Standard Conc used for compound n at ith calibration level in ppmv
Aistdi	Internal Standard Area used for compound n at ith calibration level
Ansamp	Sample Area for compound n
Avg RFn	Average response factor for all ith calibration levels for compound n
Raw Amount	Sample Concentration in ppmv before applying factors
Cistd	Concentration internal standard used for compound n in sample in ppmv
Aistd	Area of internal standard used for compound n in sample
Cn	Concentration of compound n in sample in ppmv
23.68	Gas constant at 60 F as per EPA source test protocol
MW	Molecular weight of compound
Note (1) : Avg RFn	The values for the Average Response Factor AvgRFn can be optained from the response Factor Report for the Initial Calibration, or from the Calibration Report

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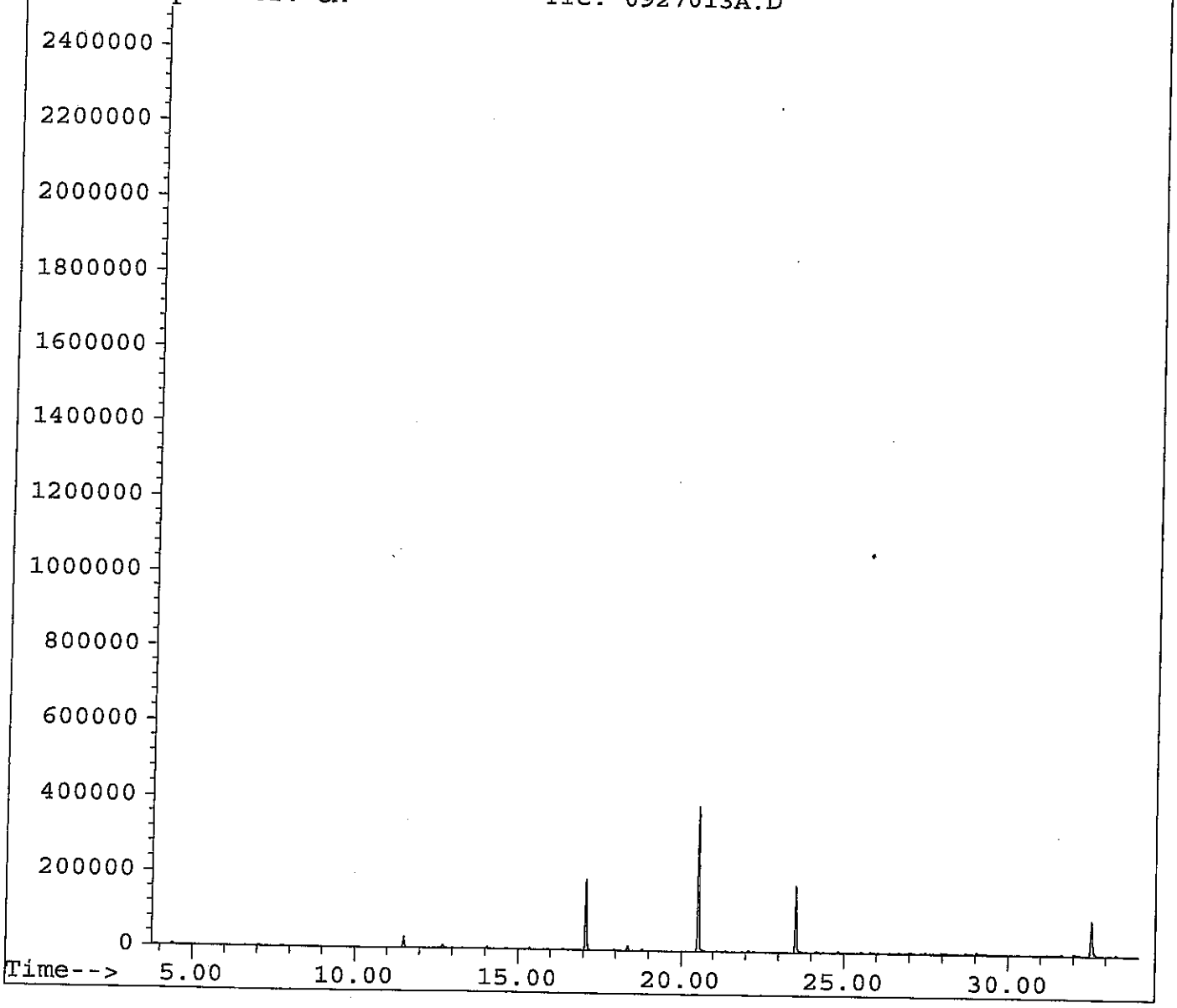
Name of operator: CM

TIC: 0927013A.D



ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified SIM GC/MS | **SDG:** 209270
Analytical Method: TO-15 SIM | **Laboratory Number:** 14

File:	0927014A.D	**Date Sampled:**	06/16/09	**Time:**	15:35
Description:	44-006B	**Date Received:**	06/17/09		
Can/Tube#:	2968	**Date Extracted:**			
Sam_Type:	SA	**Date Analyzed:**	07/10/09	**Time:**	16:17
QC_Batch:	071009-MS2	**Can Dilution Factor:**	2.59		3
Air Volume:	500 ml	**Not Detected Flag:**	U		

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
75-01-4	Vinyl chloride	0.013	0.135	0.013	0.036	0.355	0.036	U
75-35-4	1,1-Dichloroethene	0.012	0.135	0.012	0.049	0.551	0.049	U
106-93-4	1,2-Dibromoethane	0.016	0.135	0.016	0.127	1.069	0.127	U
79-34-5	1,1,2,2-Tetrachloroethane	0.012	0.135	0.012	0.088	0.954	0.088	U
91-20-3	Naphthalene	0.037	0.275	0.037	0.199	1.486	0.199	U

	Surrogate Recovery	Spike Amt. ppbV	Amount ppbV	% Rec.	QC Limits	Flag * = Out
2037-26-5	Toluene-d8	0.200	0.199	100	70-130	

Notes: 1) Reported results are to be interpreted to two significant figures.
2) ug/m3 = ppbV*FW/23.68 calculated assuming conditions at 60 F and 1 atm.
3) MDL and RL are adjusted for sample volume and can dilution.
4) U and ND are Flags used for Not Detected
5) J is a flag for a result between the MDL and the RL (or lower quantitation limit, LQL)

QUANTITATION REPORT

EPA Method TO-15 Modified SIM GC/MS

Review **EAS Sample ID: 0927014**

File Name:	0927014A.D			1 SS
Sample ID:	44-006B			2 KB
Date:	10 Jul 109 4:17 pm	Cal Amounts		3 AT
Run Method:	2SIM_SEA.M	IS Areas		4 BB
Quant Method:	2SIM_SEA.M	Carryover		5 SH
Cal Update:	Thu Jul 09 08:26:17 2009			
Template:	EARTEXSM.MS3			
Can Factor:	2.59			
Volume:	500 ml	Analyst:	SS 1	

CAS#	Compound	n	Raw Amount	RT	Target RT	Ion	Sample Area	Qualifier	Lower Qual	Upper Qual	Qual Flag	Cal Flag	Int Flag
75-01-4	Vinyl chloride	2	0.000	4.38	4.37	62.00	0	0	52	78			
75-35-4	1,1-Dichloroethene	3	0.000	6.95	6.95	61.00	0	0	42	63			
106-93-4	1,2-Dibromoethane	5	0.001	18.97	18.99	107.00	716	98	73	109			
79-34-5	1,1,2,2-Tetrachloroethane	6	0.000	22.86	22.93	83.00	0	0	7	11			
91-20-3	Naphthalene	7	0.004	32.56	32.78	128.00	164693	11	10	14			
3114-55-4	Chlorobenzene-d5	1	0.200	20.49	20.51	117.00	**548129**						
2037-26-5	Toluene-d8	4	0.199	17.00	17.05	98.00	**234341**						

Integration Flags:

If no flag, the Integration was done by the instrument computer

M1 Manual Integration because the computer did not integrated the peak or integrated the wrong peak

M2 Manual Integration because computer integration of baseline was different than Initial Calibration

INITIAL CALIBRATION REPORT

EPA Method TO-15 Modified SIM GC/MS

		SDG:	**209270**
		QC_Batch:	**071009-MS2**
File Name:	0927014A.D	**Instrument Name:**	MS2
Sample ID:	44-006B		
Sample Analysis Date:	10 Jul 109 4:17 pm	Number Compounds:	8
Run Method:	2SIM_SEA.M	IS1: ST60360	0.2
Quant and Calibration Method:	2SIM_SEA.M	IS2:	
Cal Update:	Thu Jul 09 08:26:17 2009	IS3:	
Template:	EARTEXSM.MS3	IS4:	

Calibration Title: EPA T0-15

		Calibration Amount CA, ppmv						**Calibration Response, Area**					
		Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
		Amt	Amt	Amt	Amt	Amt	Amt	C07089D.D	C07089H.D	C07089I.D	C07089F.D	C07089E.D	C07089G.D
n	Compound	10.0	0.5	0.25	2.0	4.0	1.0	10.0	0.5	0.25	2.0	4.0	1.0
2	Vinyl chloride	1.040	0.052	0.026	0.208	0.416	0.104	233907	2185	668	20463	93939	14023
3	1,1-Dichloroethene	1.040	0.052	0.026	0.208	0.416	0.104	475136	3956	1191	39546	191059	26523
5	1,2-Dibromoethane	1.040	0.052	0.026	0.208	0.416	0.104	910214	8843	3034	89643	417465	56275
6	1,1,2,2-Tetrachloroethane	1.020	0.051	0.026	0.204	0.408	0.102	2066403	19486	10290	216109	952470	103998
7	Naphthalene	-1.000	0.107	0.053	0.426	0.852	0.213	-1	1174309	813490	11669920	29903019	3979332
1	Chlorobenzene-d5	0.200	0.200	0.200	0.200	0.200	0.200	1210851	185512	107112	436325	1007442	508059
4	Toluene-d8	0.200	0.200	0.200	0.200	0.200	0.200	555865	82583	42311	183795	436164	214227

(656)

INITIAL CALIBRATION REPORT: Response Factors

SDG:	**209270**
QC_Batch:	**071009-MS2**
Sample ID:	44-006B
Sample Analysis Date:	10 Jul 109 4:17 pm
Run Method:	2SIM_SEA.M
Quant Method:	2SIM_SEA.M
Cal Update:	Thu Jul 09 08:26:17 2009
Template:	EARTEXSM.MS3

Sample Calculation:

1) Avg RFn = Sum $\left| \frac{(Astdni)\ (Cistdi)}{(Cstdni)\ (Aistdi)} \right|_i$

Response Factors

Compound	RF1	RF2	RF3	RF4	RF5	RF6	AvgRFn	%RSD
Vinyl chloride	0.037	0.045	0.048	0.045	0.045	0.053	0.046	11.36
1,1-Dichloroethene	0.075	0.082	0.086	0.087	0.091	0.100	0.087	9.72
1,2-Dibromoethane	0.145	0.183	0.218	0.198	0.199	0.213	0.193	13.77
1,1,2,2-Tetrachloroethane	0.335	0.412	0.739	0.486	0.463	0.401	0.473	29.77
Naphthalene	NA	11.832	28.659	12.557	6.968	7.354	13.474	65.75
Chlorobenzene-d5	1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.00
Toluene-d8	0.459	0.445	0.395	0.421	0.433	0.422	0.429	5.16

CALCULATIONS

EPA Method TO-15 Modified SIM GC/MS

SDG: 209270
Laboratory Number: 14

RL:	2SIM_SEA.M
Run Method:	2SIM_SEA.M
Quant Method:	2SIM_SEA.M
Can Dilution Factor:	2.59
Air Volume:	500 ml
Gas Constant:	23.68
Decimal Places:	3

Compound	M.W.	Raw Amount	Result ppbv	Result ug/m3	(1) MDL ppbv	(2) RL ppbv	Calc MDL ppbv	Calc MDL ug/m3	Calc RL ppbv	Calc RL ug/m3	Flag	Spike ppmv
Vinyl chloride	62.5	0.000	0.000	0.000	0.0026	0.026	0.01	0.036	0.13	0.355	U	0.103
1,1-Dichloroethene	96.9	0.000	0.000	0.000	0.0023	0.026	0.01	0.049	0.13	0.551	U	0.103
1,2-Dibromoethane	188.0	0.001	0.007	0.056	0.0031	0.026	0.02	0.127	0.13	1.069	U	0.103
1,1,2,2-Tetrachloroethane	167.8	0.000	0.000	0.000	0.0024	0.026	0.01	0.088	0.13	0.954	U	0.103
Naphthalene	128.2	0.004	0.023	0.125	0.0071	0.053	0.04	0.199	0.27	1.486	U	0.103

SAMPLE CALCULATION

EPA Method TO-15 Modified SIM GC/MS

SDG:		**209270**
Laboratory Number:		**14**
Standard Volume	STV	0.5
Sample Volume	SV	500
Can Dilution Factor	CDF	2.59
Gas Constant		23.68
Decimal Places:		3

Sample Calculation:

1) Avg RFn = Sum $\left| \frac{(Astdni)}{(Cstdni)} \frac{(Cistdi)}{(Aistdi)} \right|_i$ Note: 1

2) Raw Amt = $\frac{(Ansamp)}{(Avg\ RFn)} \frac{(Cistdi)}{(Aistdi)}$ = Cn

3) Amount ppbv = $\frac{(Raw\ Amt)\ 1000}{(SV)}$ (CDF) (STV)

4) Amount ug/m3 = $\frac{(amt(ppbv)\ MW}{23.68}$

n	Compound	IS n	Chem type	MW	AvgRFn	Area Ansamp	Cistdi ppmv	Aistdi Ais	Cn ppmV Raw Amt	Amount ppbv	Amount ug/m3
2	Vinyl chloride	1	TRG	62.5	0.046	0	0.200	548129	0.000	0.000	0.000
3	1,1-Dichloroethene	1	TRG	96.9	0.087	0	0.200	548129	0.000	0.000	0.000
5	1,2-Dibromoethane	1	TRG	188.0	0.193	716	0.200	548129	0.001	0.007	0.056
6	1,1,2,2-Tetrachloroethane	1	TRG	167.8	0.473	0	0.200	548129	0.000	0.000	0.000
7	Naphthalene	1	TRG	128.2	13.474	164693	0.200	548129	0.004	0.023	0.125
1	Chlorobenzene-d5	1	IS	0.0	1.000	548129	0.200	548129	0.000	0.000	0.000
4	Toluene-d8	1	SURR	0.0	0.429	234341	0.200	548129	0.000	0.000	0.000

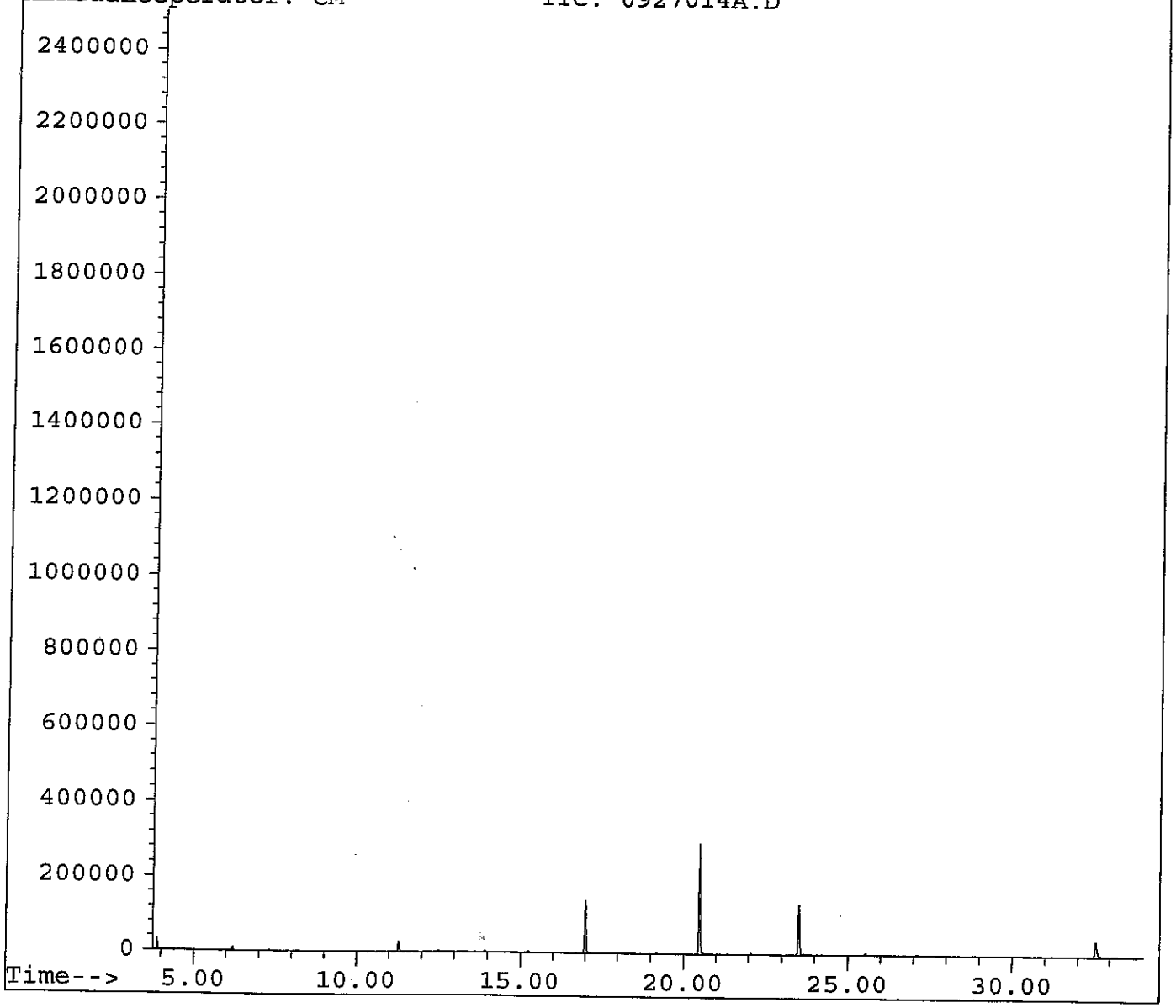
Calculation Definitions:

n	compound n
i	i th calibration level
Astdni	Standard Area for compound n at ith calibration level
Cstdni	Standard Concentration for compound n at ith calibration level in ppmv
Cistdi	Internal Standard Conc used for compound n at ith calibration level in ppmv
Aistdi	Internal Standard Area used for compound n at ith calibration level
Ansamp	Sample Area for compound n
Avg RFn	Average response factor for all ith calibration levels for compound n
Raw Amount	Sample Concentration in ppmv before applying factors
Cistd	Concentration internal standard used for compound n in sample in ppmv
Aistd	Area of internal standard used for compound n in sample
Cn	Concentration of compound n in sample in ppmv
23.68	Gas constant at 60 F as per EPA source test protocol
MW	Molecular weight of compound

Note (1) : Avg RFn — The values for the Average Response Factor AvgRFn can be optained from the response Factor Report for the Initial Calibration, or from the Calibration Report

Name of file: C:\HPCHEM\1\DATA\07109MS2\0927014A.D

Name of operator: CM TIC: 0927014A.D



SECTION 5
Sample Delivery Group Information

5.1: Instrument Daily Analytical Batch Run Logs and Initial Calibration Run Logs

Daily Analytical Batch

Method: 1T15EXAY **DAB:** 062409-MS1

RUN	TYPE	SDG or LABQC	ID	File ID	Can	Description	Client	Vol	DAB	Tech	Qual	Method	Comments
01	STD	LABQC		C06249A		ST60022	ST60350	5.0	062409-MS1	JF	NG	1T15EXAY	
02	STD	LABQC		C0624B		ST60022	ST60350	5.0	062409-MS1	JF		1T15EXAY	
03	SPK	LABQC		QC06249		ST60032		10	062409-MS1	JF		1T15EXAY	
04	SPK	LABQC		QC06249B		ST60032		10	062409-MS1	JF		1T15EXAY	
05	CC			CC125A	125	125	062409	100	062409-MS1	JF		1T15EXAY	
06	CC			CC710	710	710	062309	100	062409-MS1	JF		1T15EXAY	
07	SA	209269	01	0926901A	608	GUEST ROOM	RON GENTRY	500	062409-MS1	CM		1T15EXAY	
08	SA	209267	03	0926703A	707	2 G	CHBW	500	062409-MS1	CM		1T15EXAY	
09	SA	209267	04	0926704A	702	2 GD	CHBW	500	062409-MS1	CM		1T15EXAY	
10	SA	209267	05	0926705A	749	3 G	CHBW	500	062409-MS1	CM		1T15EXAY	
11	SA	209270	01	0927001A	741	44-006A	SEALASKA ENVIRONME	200	062409-MS1	CM		1T15EXAY	
12	SA	209270	14	0927014A	2968	44-006B	SEALASKA ENVIRONME	200	062409-MS1	CM		1T15EXAY	
13	SA	209270	02	0927002A	640	44-007	SEALASKA ENVIRONME	200	062409-MS1	CM		1T15EXAY	
14	SA	209270	03	0927003A	692	44-008	SEALASKA ENVIRONME	200	062409-MS1	CM		1T15EXAY	
15	SA	209270	05	0927005A	633	44-010	SEALASKA ENVIRONME	200	062409-MS1	CM		1T15EXAY	
16	SA	209270	06	0927006A	169	44-011	SEALASKA ENVIRONME	200	062409-MS1	CM		1T15EXAY	

Daily Analytical Batch

Method: 1T15EXAY **DAB** 062509-MS1

RUN	TYPE	SDG or LABQC	ID	File ID	Can	Description	Client	Vol	DAB	Tech	Qual	Method	Comments
01	STD	LABQC		C06259A		ST60022	ST60350	5.0	062509-MS1	JF	NG	1T15EXAY	
02	STD	LABQC		C06259B		ST60022	ST60350	5.0	062509-MS1	JF	OK	1T15EXAY	
03	SPK	LABQC		QC06259A		ST60421		10	062509-MS1	JF	OK	1T15EXAY	
04	SPK	LABQC		QC06259B		ST60421		10	062509-MS1	JF	OK	1T15EXAY	
05	CC			CC525A	525	525	062509	100	062509-MS1	JF	OK	1T15EXAY	
06	SA	209270	04	0927004A	664	44-009	SEALASKA	200	062509-MS1	JF	OK	1T15EXAY	
07	SA	209270	07	0927007A	670	44-012	SEALASKA	200	062509-MS1	JF		1T15EXAY	
08	SA	209270	08	0927008A	782	44-013	SEALASKA	200	062509-MS1	KB		1T15EXAY	
09	SA	209270	09	0927009A	526	44-014	SEALASKA	200	062509-MS1	SG	OK	1T15EXAY	
10	SA	209270	10	0927010A	188	44-015	SEALASKA	200	062509-MS1	SG	OK	1T15EXAY	
11	SA	209270	11	0927011A	703	44-016	SEALASKA	500	062509-MS1	SG	OK	1T15EXAY	
12	SA	209270	12	0927012A	681	44-017	SEALASKA	500	062509-MS1	SG	OK	1T15EXAY	
13	SA	209270	13	0927013A	180	44-018	SEALASKA	500	062509-MS1	SG	OK	1T15EXAY	
14	SA	209279	03	0927903A	511	EFF-2	URS CORP	20	062509-MS1	SG	OK	1T15EXAY	
15	SA	209279	01	0927901A	417	EFF-1	URS CORP	20	062509-MS1	SG	OK	1T15EXAY	

Daily Analytical Batch

Method: 2TISEXAU **DAB** 062209-MS2

RUN	TYPE	SDG or LABQC	ID	File ID	Can	Description	Client	Vol	DAB	Tech	Qual	Method	Comments
01	TUNE	LABQC		T06229A		BFB TUNE		500	062209-MS2	JF	OK	2TISEXAU	
02	STD	LABQC		C06229A		ST60032	ST60250	1.0	062209-MS2	JF	OK	2EXSIM_I	
03	STD	LABQC		C06229B		ST60032	ST60250	0.1	062209-MS2	JF	OK	2EXSIM_I	
04	SPK	LABQC		QC06229A		ST0623091		0.5	062209-MS2	JF	NG	2EXSIM_I	
05	SPK	LABQC		QC06229B		ST0623091		0.5	062209-MS2	JF	NG	2EXSIM_I	
06	SPK	LABQC		QC06229C		ST0623091		1.0	062209-MS2	JF		2EXSIM_I	
07	SPK	LABQC		QC06229D		ST0623091		1.0	062209-MS2	JF		2EXSIM_I	
08	BLK	LABQC		B06229A		METHOD BLANK		500	062209-MS2	JF		2EXSIM_I	
09	BLK	LABQC		B06229B		METHOD BLANK		500	062209-MS2	JF		2EXSIM_I	
10	SA	LABQC		0926203A	155	5	CHWM	500	062209-MS2	CM		2EXSIM_I	
11	SA	LABQC		0926204A	514	3	CHWM	500	062209-MS2	CM		2EXSIM_I	
12	SA	LABQC		0926205A	418	1B	CHWM	500	062209-MS2	CM		2EXSIM_I	
13	SA	LABQC		0927001A	741	44-006A	SEALASKA ENVIRONME	500	062209-MS2	CM		2EXSIM_I	
14	SA	LABQC		0927014A	2968	44-006B	SEALASKA ENVIRONME	500	062209-MS2	CM		2EXSIM_I	
15	SA	LABQC		0927002A	640	44-007	SEALASKA ENVIRONME	500	062209-MS2	CM		2EXSIM_I	
16	SA	LABQC		0927003A	692	44-008	SEALASKA ENVIRONME	500	062209-MS2	CM		2EXSIM_I	
17	SA	LABQC		0927004A	664	44-009	SEALASKA ENVIRONME	500	062209-MS2	CM		2EXSIM_I	

Daily Analytical Batch

Method: 2T15EXAU **DAB** 062309-MS2

RUN	TYPE	SDG or LABQC	ID	File ID	Can	Description	Client	Vol	DAB	Tech	Qual	Method	Comments
01	TUNE	LABQC		T06239A		BFB TUNE		500	062309-MS2	JF	OK	2T15EXAU	
02	STD	LABQC		C06239A		ST60032	ST60250	1.0	062309-MS2	JF	NG	2EXSIM_I	
03	STD	LABQC		C06239B		ST60032	ST60250	1.0	062309-MS2	JF	OK	2EXSIM_I	
04	SPK	LABQC		QC06239A		ST0623091		1.0	062309-MS2	JF	NG	2EXSIM_I	
05	SPK	LABQC		QC06239B		ST0623091		1.0	062309-MS2	JF	OK	2EXSIM_I	
06	SPK	LABQC		QC06239C		ST0623091		1.0	062309-MS2	JF	OK	2EXSIM_I	
07	BLK	LABQC		B06239A		METHOD BLANK		500	062309-MS2	JF	OK	2EXSIM_I	
08	SA	209270	05	0927005A	633	44-010	SEALASKA	500	062309-MS2	JF	OK	2EXSIM_I	
09	SA	209270	06	0927006A	169	44-011	SEALASKA	500	062309-MS2	JF	OK	2EXSIM_I	
10	SA	209270	07	0927007A	670	44-012	SEALASKA	500	062309-MS2	SG	OK	2EXSIM_I	
11	SA	209270	08	0927008A	782	44-013	SEALASKA	500	062309-MS2	SG	OK	2EXSIM_I	
12	SA	209270	09	0927009A	526	44-014	SEALASKA	500	062309-MS2	SG	OK	2EXSIM_I	
13	SA	209270	10	0927010A	188	44-015	SEALASKA	500	062309-MS2	SG	OK	2EXSIM_I	
14	SA	209270	11	0927011A	703	44-016	SEALASKA	500	062309-MS2	SG	OK	2EXSIM_I	
15	SA	209270	12	0927012A	681	44-017	SEALASKA	500	062309-MS2	SG	OK	2EXSIM_I	
16	SA	209270	13	0927013A	180	44-018	SEALASKA	500	062309-MS2	SG	NG	2EXSIM_I	

Daily Analytical Batch

Method: 2T15EXAU **DAB** 062409-MS2

RUN	TYPE	SDG or LABQC	ID	File ID	Can	Description	Client	Vol	DAB	Tech	Qual	Method	Comments
01	TUNE	LABQC		T06249A		BFB TUNE		500	062409-MS2	JF	OK	2T15EXAU	
02	STD	LABQC		C06249A		ST60032	ST60250	1.0	062409-MS2	JF	OK	2EXSIM_I	
03	SPK	LABQC		QC06249A		ST0623091		1.0	062409-MS2	JF	NG	2EXSIM_I	
04	SPK	LABQC		QC06249B		ST0623091		1.0	062409-MS2	JF	NG	2EXSIM_I	MS ERROR
05	SPK	LABQC		QC06249C		ST0623091		1.0	062409-MS2	JF	OK	2EXSIM_I	
06	SPK	LABQC		QC06249D		ST0623091		1.0	062409-MS2	JF	OK	2EXSIM_I	
07	BLK	LABQC		B06249A		METHOD BLANK		500	062409-MS2	JF	NG	2EXSIM_I	
08	BLK	LABQC		B06249B		METHOD BLANK		500	062409-MS2	CM	OK	2EXSIM_I	
09	SA	209270	05	0927005A	633	44-010	SEALASKA ENVIRONME	100	062409-MS2	CM		2EXSIM_I	
10	SA	209270	12	0927012A	681	44-017	SEALASKA ENVIRONME	100	062409-MS2	CM		2EXSIM_I	
11	SA	209270	13	0927013A	180	44-018	SEALASKA ENVIRONME	100	062409-MS2	CM		2EXSIM_I	
12	SA	209270	03	0927003A	692	44-008	SEALASKA ENVIRONME	200	062409-MS2	CM		2EXSIM_I	
13	SA	209270	01	0927001A	741	44-006A	SEALASKA ENVIRONME	200	062409-MS2	CM		2EXSIM_I	
14	SA	209270	07	0927007A	670	44-012	SEALASKA ENVIRONME	200	062409-MS2	CM		2EXSIM_I	
15	SA	209270	10	0927010A	188	44-015	SEALASKA ENVIRONME	200	062409-MS2	CM		2EXSIM_I	
16	SA	209270	11	0927011A	703	44-016	SEALASKA ENVIRONME	200	062409-MS2	CM		2EXSIM_I	

Daily Analytical Batch

Method: 2T15EXAU **DAB** 062509-MS2

RUN	TYPE	SDG or LABQC	ID	File ID	Can	Description	Client	Vol	DAB	Tech	Qual	Method	Comments
01	TUNE	LABQC		T06259A		BFB TUNE		500	062509-MS2	JF	OK	2T15EXAU	
02	STD	LABQC		C06259A		ST60421	ST60250	1.0	062509-MS2	JF	NG	2EXSIM_I	
03	STD	LABQC		C06259B		ST60421	ST60250	1.0	062509-MS2	JF	OK	2EXSIM_I	
04	SPK	LABQC		QC06259A		ST0623091		1.0	062509-MS2	JF	OK	2EXSIM_I	
05	SPK	LABQC		QC06259B		ST0623091		1.0	062509-MS2	JF	OK	2EXSIM_I	
06	BLK	LABQC		B06259A		METHOD BLANK		500	062509-MS2	JF	OK	2EXSIM_I	
07	SA	209270	07	0927007A	670	44-012	SEALASKA	100	062509-MS2	JF	OK	2EXSIM_I	IS LOW, MI
08	SA	209278	01	0927801A	621	1	CHWM	500	062509-MS2	JF	OK	2EXSIM_I	
09	SA	209278	02	0927802A	402	2	CHWM	500	062509-MS2	JF	OK	2EXSM_I	
10	SA	209278	03	0927803A	533	5	CHWM	500	062509-MS2	SG	OK	2EXSIM_I	
11	SA	209278	04	0927804A	541	3	CHWM	500	062509-MS2	SG	NG	2EXSIM_I	IS LOW
12	SA	209278	05	0927805A	182	2B	CHWM	500	062509-MS2	SG	OK	2EXSIM_I	
13	SA	209278	04	0927804B	541	3	CHWM	500	062509-MS2	SG	OK	2EXSIM_I	

Daily Analytical Batch

Method: 2T15EXAU **DAB** 070909-MS2

RUN	TYPE	SDG or LABQC	ID	File ID	Can	Description	Client	Vol	DAB	Tech	Qual	Method	Comments
01	TUNE	LABQC		T07099A		BFB TUNE		500	070909-MS2	JF	OK	2T15EXAU	
02	STD	LABQC		C07099A		ST60421	ST60250	1.0	070909-MS2	JF	NG	2SIM_SEA	
03	STD	LABQC		C07099B		ST60421	ST60250	1.0	070909-MS2	KB	NG	2SIM_SEA	
04	STD	LABQC		C07099C		ST60421	ST60250	1.0	070909-MS2	JF	OK	2SIM_SEA	
05	SPK	LABQC		QC07099A		ST0709091		0.5	070909-MS2	JF	OK	2SIM_SEA	
06	SPK	LABQC		QC07099B		ST0709091		0.5	070909-MS2	KB	OK	2SIM_SEA	
07	SPK	LABQC		QC07099C		ST0709091		0.5	070909-MS2	KB	OK	2SIM_SEA	
08	BLK	LABQC		B07099A		METHOD BLANK		0.5	070909-MS2	SG	OK	2SIM_SEA	
09	BLK	LABQC		B07099B		METHOD BLANK		0.5	070909-MS2	SG	OK	2SIM_SEA	
10	SA	209270	01	0927001A	741	44-006A	SEALASKA	500	070909-MS2	SG	OK	2SIM_SEA	
11	SA	209270	02	0927002A	640	44-007	SEALASKA	500	070909-MS2	SG	OK	2SIM_SEA	
12	SA	209270	03	0927003A	692	44-008	SEALASKA	500	070909-MS2	SG	OK	2SIM_SEA	
13	SA	209270	04	0927004A	664	44-009	SEALASKA	500	070909-MS2	SG	NG	2SIM_SEA	IS LOW
14	SA	209270	05	0927005A	633	44-010	SEALASKA	500	070909-MS2	SG	NG	2SIM_SEA	IS LOW
15	SA	209270	06	0927006A	169	44-011	SEALASKA	500	070909-MS2	SG	OK	2SIM_SEA	

Daily Analytical Batch

Method: 2T15EXAU **DAB:** 071009-MS2

RUN	TYPE	SDG or LABQC	ID	File ID	Can	Description	Client	Vol	DAB	Tech	Qual	Method	Comments
01	TUNE	LABQC		T07109A		BFB TUNE		200	071009-MS2	KB	OK	2T15EXAU	
02	STD	LABQC		C07109A		ST60421	ST60250	1.0	071009-MS2	KB	OK	2SIM_SEA	
03	SPK	LABQC		QC07109A		ST0709091		0.5	071009-MS2	KB	OK	2SIM_SEA	
04	SPK	LABQC		QC07109B		ST0709091		0.5	071009-MS2	KB	OK	2SIM_SEA	
05	BLK	LABQC		B07109A		METHOD BLANK		500	071009-MS2	KB	OK	2SIM_SEA	
06	SA	209270	08	0927008A	782	44-013	SEALASKA	500	071009-MS2	KB	OK	2SIM_SEA	
07	SA	209270	09	0927009A	526	44-014	SEALASKA	500	071009-MS2	KB	OK	2SIM_SEA	
08	SA	209270	11	0927011A	703	44-016	SEALASKA	700	071009-MS2	CM	OK	2SIM_SEA	
09	SA	209270	12	0927012A	681	44-017	SEALASKA	500	071009-MS2	CM	OK	2SIM_SEA	
10	SA	209270	14	0927014A	2968	44-006B	SEALAKSA	500	071009-MS2	CM	OK	2SIM_SEA	
11	SA	209270	07	0927007A	670	44-012	SEALASKA	200	071009-MS2	CM	NG	2SIM_SEA	M1
12	SA	209270	04	0927004A	664	44-009	SEALASKA	500	071009-MS2	CM	NG	2SIM_SEA	M1
13	SA	209270	05	0927005A	663	44-010	SEALASKA	500	071009-MS2	CM	NG	2SIM_SEA	M1
14	SA	209270	10	0927010A	188	44-015	SEALASKA	500	071009-MS2	CM	NG	2SIM_SEA	M1
15	SA	209270	13	0927013A	180	44-018	SEALASKA	100	071009-MS2	CM	OK	2SIM_SEA	

Daily Analytical Batch

Method: **2T15EXAU** **DAB** **061909-MS2**

RUN	TYPE	SDG or LABQC	ID	File ID	Can	Description	Client	Vol	DAB	Tech	Qual	Method	Comments
01	TUNE	LABQC		T06199A		BFB TUNE		500	061909-MS2	KB	OK	2T15EXAU	
02	STD	LABQC		C06199A		ST60032	ST60250	20	061909-MS2	KB	OK	2EXSIM_H	
03	STD	LABQC		C06199B		ST60032	ST60250	10	061909-MS2	KB	OK	2EXSIM_H	
04	STD	LABQC		C06199C		ST60032	ST60250	4	061909-MS2	KB		2EXSIM_H	POSS MISLOA
05	STD	LABQC		C06199D		ST60032	ST60250	5	061909-MS2	CM		2EXSIM_H	
06	STD	LABQC		C06199E		ST60032	ST60250	4	061909-MS2	CM		2EXSIM_H	
07	STD	LABQC		C06199F		ST60032	ST60250	2	061909-MS2	CM		2EXSIM_H	
08	STD	LABQC		C06199G		ST60032	ST60250	4	061909-MS2	JF		2EXSIM_H	
09	STD	LABQC		C06199H		ST60032	ST60250	0.5	061909-MS2	CM		2EXSIM_H	
10	STD	LABQC		C06199I		ST60032	ST60250	.25	061909-MS2	CM		2EXSIM_H	
11	STD	LABQC		C06199J		ST60032	ST60250	0.5	061909-MS2	CM		2EXSIM_H	
12	STD	LABQC		C06199K		ST60032	ST60250	1.0	061909-MS2	CM		2EXSIM_H	

Daily Analytical Batch

Method: 2T15EXAU **DAB** 070809-MS2

RUN	TYPE	SDG or LABQC	ID	File ID	Can	Description	Client	Vol	DAB	Tech	Qual	Method	Comments
01	TUNE	LABQC		B07089A		BFB TUNE		500	070809-MS2	JF	OK	2T15EXAU	
02	STD	LABQC		C07089A		ST60421	ST60250	20	070809-MS2	JF	OK	2SIM_SEA	
03	STD	LABQC		C07089B		ST60421	ST60250	10	070809-MS2	JF	NG	2SIM_SEA	
04	STD	LABQC		C07089C		ST60421	ST60250	5.0	070809-MS2	JF	OK	2SIM_SEA	
05	STD	LABQC		C07089D		ST60421	ST60250	10	070809-MS2	JF	OK	2SIM_SEA	
06	STD	LABQC		C07089E		ST60421	ST60250	4.0	070809-MS2	JF		2SIM_SEA	
07	STD	LABQC		C07089F		ST60421	ST60250	2.0	070809-MS2	JF		2SIM_SEA	
08	STD	LABQC		C07089G		ST60421	ST60250	1.0	070809-MS2	JF		2SIM_SEA	
09	STD	LABQC		C07089H		ST60421	ST60250	0.5	070809-MS2	CM		2SIM_SEA	
10	STD	LABQC		C07089I		ST60421	ST60250	.25	070809-MS2	CM		2SIM_SEA	
11	STD	LABQC		C07089J		ST60421	ST60250	0.1	070809-MS2	CM		2SIM_SEA	
12	STD	LABQC		C07089K		ST60421	ST60250	0.1	070809-MS2	CM		2SIM_SEA	
13	STD	LABQC		C07089L		ST60421	ST60250	.25	070809-MS2	CM		2SIM_SEA	
14	STD	LABQC		C07089M		ST60421	ST60250	0.5	070809-MS2	CM		2SIM_SEA	
15	STD	LABQC		C07089N		ST60421	ST60250	1.0	070809-MS2	CM		2SIM_SEA	
16	STD	LABQC		C07089O		ST60421	ST60250	2.0	070809-MS2	CM		2SIM_SEA	

INSTRUMENT LOGBOOK

ENVIRONMENTAL
Analytical Service, Inc.

FILE NAME	CAN #	CLIENT NAME	CLIENT ID	VOLUME	COMMENTS
C03179A	STD	ST60022	ST60350	5.0 ML	OK
C03179B	STD	""	""	1.0 ML	OK
C03179C	STD	""	""	0.25 ML	OK
C03179D	STD	""	""	2.0 ML	OK
C03179E	STD	""	""	4.0 ML	OK
QC03179A	SPK	ST60032		10.0 ML	OK
QC03179B	SPK	""		10.0 ML	OK
B03179A	BLK	METHOD	BLANK	500 ML	NG
CC951A	951	031709	751	1000 ML	OK
0911201A	1771	URS CORP	EFF	20.0 ML	OK
0911202A	698	""	INF	0.5 ML	OK
0909701A	753	TWINING	KMVZBT.-01	10.0 ML	OK
0909401A	TBAG	EXPONENT	FINAL DRYWALL	500 ML	OK

Instrument Name: MSD1
Date: 03/17/09
Technician Initials: KB
Method(s): 1T15EXAY.M

5.2: Sample Preparation Logs

5.3: Shipping Receipts, Correspondence, Phone Logs

Environmental
ANALYTICAL SERVICE, INC.

PACKING SLIP

Project Manager:

Lynn Jefferson
Sealaska Environmental
28513 Salerno Drive
Trabuco Canyon CA 92679
619-889-7902

Ship To:

SES-Trech Trailer, North of Bldg 45
Cummins Ave
Moffit Field CA 94035
619 889-7902

PS NO: 8085

Quote: 15981 **Order Date:** 6/5/2009 **Due Date:** 6/10/2009 **Ship Date:** 6/5/2009

Carrier: UPS Ground **Bill Client:** **Account:**

Airbill Number: **Order Status** Completed

Item	Quan	Description	ID	Equipment Clean Batch	Return	SDG	Date Returned
1	1	SUMMA Canister 3.2 L	357	060809C	Yes		
2	1	SUMMA Canister 3.2 L	423	060809C	Yes		
3	1	SUMMA Canister 3.2 L	359	060809C	Yes		
4	1	SUMMA Canister 3.2 L	372	060809C	Yes		
5	1	SUMMA Canister 3.2 L	863	060809C	Yes		
	1				Yes		
	1	Trip Blank 6.0 L	703	021809B	Yes	209270	6/17/2009
	1	Trip Blank 3.2 L	312	060809C	Yes		
	1				Yes		
1	1	Purge Can	521		Yes		
2	1	Purge Can	750		Yes		
	1				Yes		
1	1	SUMMA Canister 6.0 L	633	060409A	Yes	209270	6/17/2009
2	1	SUMMA Canister 6.0 L	526	060409A	Yes	209270	6/17/2009
3	1	SUMMA Canister 6.0 L	670	060409A	Yes	209270	6/17/2009
4	1	SUMMA Canister 6.0 L	664	060409A	Yes	209270	6/17/2009
5	1	SUMMA Canister 6.0 L	782	060409A	Yes	209270	6/17/2009
6	1	SUMMA Canister 6.0 L	188	060409A	Yes	209270	6/17/2009
7	1	SUMMA Canister 6.0 L	692	060309A	Yes	209270	6/17/2009
8	1	SUMMA Canister 6.0 L	640	060309A	Yes	209270	6/17/2009
9	1	SUMMA Canister 6.0 L	741	060309A	Yes	209270	6/17/2009
10	1	SUMMA Canister 6.0 L	180	060509A	Yes	209270	6/17/2009
11	1	SUMMA Canister 6.0 L	169	060309A	Yes	209270	6/17/2009
12	1	SUMMA Canister 6.0 L	681	060309A	Yes	209270	6/17/2009
13	1	SUMMA Canister 6.0 L	2968	060309A	Yes	209270	6/17/2009

	1				Yes		
1	1	Flow Orifice 8 Hour	2542		Yes	209270	6/17/2009
2	1	Flow Orifice 8 Hour	2612	2014	Yes	209270	6/17/2009
3	1	Flow Orifice 8 Hour	2605	2092	Yes	209270	6/17/2009
4	1	Flow Orifice 8 Hour	2538	2016	Yes	209270	6/17/2009
5	1	Flow Orifice 8 Hour	2616		Yes	209270	6/17/2009
6	1	Flow Orifice 8 Hour	2617	2087	Yes	209270	6/17/2009
7	1	Flow Orifice 8 Hour	2610		Yes	209270	6/17/2009
8	1	Flow Orifice 8 Hour	2618	2071	Yes	209270	6/17/2009
9	1	Flow Orifice 8 Hour	2590	2053	Yes	209270	6/17/2009
10	1	Flow Orifice 8 Hour	2539	2037	Yes	209270	6/17/2009
11	1	Flow Orifice 8 Hour	2595	2052	Yes	209270	6/17/2009
12	1	Flow Orifice 8 Hour	2567		Yes	209270	6/17/2009
13	1	Flow Orifice 8 Hour	2623		Yes	209270	6/17/2009
	1				Yes		
1	1	Soil Gas Sampler	2514		Yes		
2	1	Soil Gas Sampler	2555		Yes		
3	1	Soil Gas Sampler	2625		Yes		
4	1	Soil Gas Sampler	2523		Yes		
5	1	Soil Gas Sampler	2576		Yes		

Note: If the Return Column is Marked "Yes" for an Items it Needs to be Returned to EAS

FedEx. US Airbill Express

FedEx Tracking Number 8631 9657 6380

D200 Recipient's Copy

1 From

Date

Sender's Name Phone

Company

Address Dept./Floor/Suite/Room

City State ZIP

2 Your Internal Billing Reference

3 To

Recipient's Name Phone

Company

Recipient's Address

We cannot deliver to P.O. boxes or P.O. ZIP codes. Dept./Floor/Suite/Room

Address

To request a package be held at a specific FedEx location, print FedEx address here.

City State CA ZIP

8631 9657 6380

4a Express Package Service *Packages up to 150 lbs.*

- ☐ FedEx Priority Overnight — Next business morning.* Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- ☐ FedEx Standard Overnight — Next business afternoon.* Saturday Delivery NOT available.
- ☐ FedEx First Overnight — Earliest next business morning delivery to select locations.* Saturday Delivery NOT available.
- ☐ FedEx 2Day — Second business day.* Thursday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- ☐ FedEx Express Saver — Third business day.* Saturday Delivery NOT available.

FedEx Envelope rate not available. Minimum charge: One-pound rate. *To most locations.

4b Express Freight Service *Packages over 150 lbs.*

- ☐ FedEx 1Day Freight* — Next business day.** Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- ☐ FedEx 2Day Freight — Second business day.** Thursday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- ☐ FedEx 3Day Freight — Third business day.** Saturday Delivery NOT available.

* Call for Confirmation: ** To most locations.

5 Packaging

☐ FedEx Envelope* ☐ FedEx Pak* Includes FedEx Small Pak, FedEx Large Pak, and FedEx Sturdy Pak. ☐ FedEx Box ☐ FedEx Tube ☐ Other

* Declared value limit $500.

6 Special Handling Include FedEx address in Section 3.

- ☐ SATURDAY Delivery — Not available for FedEx Standard Overnight, FedEx First Overnight, FedEx Express Saver, or FedEx 3Day Freight.
- ☐ HOLD Weekday at FedEx Location — Not available for FedEx First Overnight.
- ☐ HOLD Saturday at FedEx Location — Available ONLY for FedEx Priority Overnight and FedEx 2Day to select locations.

Does this shipment contain dangerous goods? One box must be checked.

☐ No ☐ Yes As per attached Shipper's Declaration. ☐ Yes Shipper's Declaration not required. ☐ Dry Ice Dry Ice, 9, UN 1845 ____ x ____ kg

Dangerous goods (including dry ice) cannot be shipped in FedEx packaging. ☐ Cargo Aircraft Only

7 Payment *Bill to:* Enter FedEx Acct. No. or Credit Card No. below.

☐ Sender Acct. No. in Section 1 will be billed. ☐ Recipient ☐ Third Party ☐ Credit Card ☐ Cash/Check Obtain Recip. Acct. No. ☐

Total Packages Total Weight Total Declared Value† $ .00

†Our liability is limited to $100 unless you declare a higher value. See back for details. Credit Card Auth.

8 Residential Delivery Signature Options If you require a signature, check Direct or Indirect.

- ☐ No Signature Required — Package may be left without obtaining a signature for delivery.
- ☐ Direct Signature — Someone at recipient's address may sign for delivery. *Fee applies.*
- ☐ Indirect Signature — If no one is available at recipient's address, someone at a neighboring address may sign for delivery. *Fee applies.*

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Rev. Date 10/99•Part #156281•©1994–2006 FedEx•PRINTED IN U.S.A. SRY

FedEx. US Airbill Express

FedEx Tracking Number 8631 9626 6998

D200 Recipient's Copy

1 From

Date

Sender's Name Phone

Company

Address Dept./Floor/Suite/Room

City State ZIP

Your Internal Billing Reference

To

Recipient's Name Phone

Company

Recipient's Address

We cannot deliver to P.O. boxes or P.O. ZIP codes. Dept./Floor/Suite/Room

Address

To request a package be held at a specific FedEx location, print FedEx address here.

City State ZIP

8631 9626 6998

4a Express Package Service *Packages up to 150 lbs.*

- ☐ FedEx Priority Overnight — Next business morning.* Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- ☐ FedEx Standard Overnight — Next business afternoon.* Saturday Delivery NOT available.
- ☐ FedEx First Overnight — Earliest next business morning delivery to select locations.* Saturday Delivery NOT available.
- ☐ FedEx 2Day — Second business day.* Thursday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- ☐ FedEx Express Saver — Third business day.* Saturday Delivery NOT available.

FedEx Envelope rate not available. Minimum charge: One-pound rate. *To most locations.

4b Express Freight Service *Packages over 150 lbs.*

- ☐ FedEx 1Day Freight* — Next business day.** Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- ☐ FedEx 2Day Freight — Second business day.** Thursday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- ☐ FedEx 3Day Freight — Third business day.** Saturday Delivery NOT available.

* Call for Confirmation: ** To most locations.

5 Packaging

☐ FedEx Envelope* ☐ FedEx Pak* Includes FedEx Small Pak, FedEx Large Pak, and FedEx Sturdy Pak. ☐ FedEx Box ☐ FedEx Tube ☐ Other

* Declared value limit $500.

6 Special Handling Include FedEx address in Section 3.

- ☐ SATURDAY Delivery — Not available for FedEx Standard Overnight, FedEx First Overnight, FedEx Express Saver, or FedEx 3Day Freight.
- ☐ HOLD Weekday at FedEx Location — Not available for FedEx First Overnight.
- ☐ HOLD Saturday at FedEx Location — Available ONLY for FedEx Priority Overnight and FedEx 2Day to select locations.

Does this shipment contain dangerous goods? One box must be checked.

☐ No ☐ Yes As per attached Shipper's Declaration. ☐ Yes Shipper's Declaration not required. ☐ Dry Ice Dry Ice, 9, UN 1845 ____ x ____ kg

Dangerous goods (including dry ice) cannot be shipped in FedEx packaging. ☐ Cargo Aircraft Only

7 Payment *Bill to:* Enter FedEx Acct. No. or Credit Card No. below.

☐ Sender Acct. No. in Section 1 will be billed. ☐ Recipient ☐ Third Party ☐ Credit Card ☐ Cash/Check Obtain Recip. Acct. No. ☐

Total Packages Total Weight 26.75 Total Declared Value† $ .00

†Our liability is limited to $100 unless you declare a higher value. See back for details. Credit Card Auth.

8 Residential Delivery Signature Options If you require a signature, check Direct or Indirect.

- ☐ No Signature Required — Package may be left without obtaining a signature for delivery.
- ☐ Direct Signature — Someone at recipient's address may sign for delivery. *Fee applies.*
- ☐ Indirect Signature — If no one is available at recipient's address, someone at a neighboring address may sign for delivery. *Fee applies.*

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Rev. Date 10/99•Part #156281•©1994–2006 FedEx•PRINTED IN U.S.A. SRY

FedEx Express **US Airbill** FedEx Tracking Number 8631 9657 6379

0200 **Recipient's Copy**

1 From

Date: [redacted]

Sender's Name [redacted] Phone [redacted]

Company [redacted]

Address [redacted] Dept./Floor/Suite/Room

City [redacted] State [redacted] ZIP [redacted]

2 Your Internal Billing Reference [redacted]

3 To

Recipient's Name [redacted] Phone [redacted]

Company [redacted]

Recipient's Address [redacted] Dept./Floor/Suite/Room

We cannot deliver to P.O. boxes or P.O. ZIP codes.

Address

To request a package be held at a specific FedEx location, print FedEx address here.

City [redacted] State CA ZIP 93401-7207

8631 9657 6379

4a Express Package Service *Packages up to 150 lbs.*

- [ ] FedEx Priority Overnight — Next business morning.* Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- [ ] FedEx Standard Overnight — Next business afternoon.* Saturday Delivery NOT available.
- [ ] FedEx First Overnight — Earliest next business morning delivery to select locations.* Saturday Delivery NOT available.
- [x] FedEx 2Day — Second business day.* Thursday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- [ ] FedEx Express Saver — Third business day.* Saturday Delivery NOT available.

FedEx Envelope rate not available. Minimum charge: One-pound rate.

*To most locations.

4b Express Freight Service *Packages over 150 lbs.*

- [ ] FedEx 1Day Freight* — Next business day.** Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- [ ] FedEx 2Day Freight — Second business day.** Thursday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- [ ] FedEx 3Day Freight — Third business day.** Saturday Delivery NOT available.

*Call for Confirmation:

**To most locations.

5 Packaging

- [ ] FedEx Envelope*
- [ ] FedEx Pak* — Includes FedEx Small Pak, FedEx Large Pak, and FedEx Sturdy Pak.
- [ ] FedEx Box
- [ ] FedEx Tube
- [ ] Other

*Declared value limit $500.

6 Special Handling — Include FedEx address in Section 3.

- [ ] SATURDAY Delivery — Not available for FedEx Standard Overnight, FedEx First Overnight, FedEx Express Saver, or FedEx 3Day Freight.
- [ ] HOLD Weekday at FedEx Location — Not available for FedEx First Overnight.
- [ ] HOLD Saturday at FedEx Location — Available ONLY for FedEx Priority Overnight and FedEx 2Day to select locations.

Does this shipment contain dangerous goods? One box must be checked.

- [ ] No
- [ ] Yes — As per attached Shipper's Declaration.
- [ ] Yes — Shipper's Declaration not required.
- [ ] Dry Ice — Dry Ice, 9, UN 1845 ____ x ____ kg

Dangerous goods (including dry ice) cannot be shipped in FedEx packaging.

- [ ] Cargo Aircraft Only

7 Payment *Bill to:* — Enter FedEx Acct. No. or Credit Card No. below.

- [x] Sender — Acct. No. in Section 1 will be billed.
- [ ] Recipient
- [ ] Third Party
- [ ] Credit Card
- [ ] Cash/Check
- [ ] Obtain Recip. Acct. No.

Total Packages [redacted] Total Weight [redacted] Total Declared Value† $ ____.00

†Our liability is limited to $100 unless you declare a higher value. See back for details.

Credit Card Auth.

8 Residential Delivery Signature Options If you require a signature, check Direct or Indirect.

- [ ] No Signature Required — Package may be left without obtaining a signature for delivery.
- [ ] Direct Signature — Someone at recipient's address may sign for delivery. *Fee applies.*
- [ ] Indirect Signature — If no one is available at recipient's address, someone at a neighboring address may sign for delivery. *Fee applies.*

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FedEx Express **US Airbill** FedEx Tracking Number 8631 9657 6368

0200 **Recipients Copy**

1 From

Date [redacted]

Sender's Name [redacted] Phone [redacted]

Company [redacted]

Address [redacted] Dept./Floor/Suite/Room

City [redacted] State [redacted] ZIP [redacted]

Your Internal Billing Reference

To

Recipient's Name [redacted] Phone [redacted]

Company [redacted]

Recipient's Address [redacted] Dept./Floor/Suite/Room

We cannot deliver to P.O. boxes or P.O. ZIP codes.

Address

To request a package be held at a specific FedEx location, print FedEx address here.

City [redacted] State [redacted] ZIP [redacted]

8631 9657 6368

4a Express Package Service *Packages up to 150 lbs.*

- [ ] FedEx Priority Overnight — Next business morning.* Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- [ ] FedEx Standard Overnight — Next business afternoon.* Saturday Delivery NOT available.
- [ ] FedEx First Overnight — Earliest next business morning delivery to select locations.* Saturday Delivery NOT available.
- [x] FedEx 2Day — Second business day.* Thursday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- [ ] FedEx Express Saver — Third business day.* Saturday Delivery NOT available.

FedEx Envelope rate not available. Minimum charge: One-pound rate.

*To most locations.

4b Express Freight Service *Packages over 150 lbs.*

- [ ] FedEx 1Day Freight* — Next business day.** Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- [ ] FedEx 2Day Freight — Second business day.** Thursday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- [ ] FedEx 3Day Freight — Third business day.** Saturday Delivery NOT available.

*Call for Confirmation:

**To most locations.

5 Packaging

- [ ] FedEx Envelope*
- [ ] FedEx Pak* — Includes FedEx Small Pak, FedEx Large Pak, and FedEx Sturdy Pak.
- [ ] FedEx Box
- [ ] FedEx Tube
- [ ] Other

*Declared value limit $500.

6 Special Handling — Include FedEx address in Section 3.

- [ ] SATURDAY Delivery — Not available for FedEx Standard Overnight, FedEx First Overnight, FedEx Express Saver, or FedEx 3Day Freight.
- [ ] HOLD Weekday at FedEx Location — Not available for FedEx First Overnight.
- [ ] HOLD Saturday at FedEx Location — Available ONLY for FedEx Priority Overnight and FedEx 2Day to select locations.

Does this shipment contain dangerous goods? One box must be checked.

- [ ] No
- [ ] Yes — As per attached Shipper's Declaration.
- [ ] Yes — Shipper's Declaration not required.
- [ ] Dry Ice — Dry Ice, 9, UN 1845 ____ x ____ kg

Dangerous goods (including dry ice) cannot be shipped in FedEx packaging.

- [ ] Cargo Aircraft Only

7 Payment *Bill to:* — Enter FedEx Acct. No. or Credit Card No. below.

- [ ] Sender — Acct. No. in Section 1 will be billed.
- [ ] Recipient
- [ ] Third Party
- [ ] Credit Card
- [ ] Cash/Check
- [ ] Obtain Recip. Acct. No.

Total Packages [redacted] Total Weight [redacted] Total Declared Value† $ ____.00

†Our liability is limited to $100 unless you declare a higher value. See back for details.

Credit Card Auth.

8 Residential Delivery Signature Options If you require a signature, check Direct or Indirect.

- [ ] No Signature Required — Package may be left without obtaining a signature for delivery.
- [ ] Direct Signature — Someone at recipient's address may sign for delivery. *Fee applies.*
- [ ] Indirect Signature — If no one is available at recipient's address, someone at a neighboring address may sign for delivery. *Fee applies.*

520

Environmental
ANALYTICAL SERVICE, INC

LABORATORY WORK ORDER

INFORMATION

SDG Number: 209270

Project Manager: Lynn Jefferson

e-mail: lynn.jefferson@sealaska.com

Client: Sealaska Environmental

Quote Number: 15981

Date Received: 6/17/2009

The Turn-Around-Time from the Date Received and the preliminary report due date are shown on the right. If you have any question on these please contact Sample Control.

TAT: 10

Due Date: 7/3/2009

SAMPLE DESCRIPTION AND ANALYSIS REQUESTED

Client Sample No.	EAS Lab No.	Analysis Requested	Date Sampled	Pressure (torr) Initial Rec	Final	Factor
44-006A	209270 1	IPA Tracer	6/16/2009	347	886	2.55
44-006A	209270 1	EPA TO-15 SIM	6/16/2009	347	886	2.55
44-007	209270 2	EPA TO-15 SIM	6/16/2009	594	885	1.49
44-007	209270 2	IPA Tracer	6/16/2009	594	885	1.49
44-008	209270 3	EPA TO-15 SIM	6/16/2009	571	860	1.51
44-008	209270 3	IPA Tracer	6/16/2009	571	860	1.51
44-009	209270 4	EPA TO-15 SIM	6/16/2009	552	854	1.55
44-009	209270 4	IPA Tracer	6/16/2009	552	854	1.55
44-010	209270 5	EPA TO-15 SIM	6/16/2009	525	895	1.70
44-010	209270 5	IPA Tracer	6/16/2009	525	895	1.70
44-011	209270 6	EPA TO-15 SIM	6/16/2009	584	860	1.47
44-011	209270 6	IPA Tracer	6/16/2009	584	860	1.47
44-012	209270 7	IPA Tracer	6/16/2009	586	872	1.49
44-012	209270 7	EPA TO-15 SIM	6/16/2009	586	872	1.49
44-013	209270 8	IPA Tracer	6/16/2009	514	859	1.67
44-013	209270 8	EPA TO-15 SIM	6/16/2009	514	859	1.67
44-014	209270 9	EPA TO-15 SIM	6/16/2009	403	869	2.16
44-014	209270 9	IPA Tracer	6/16/2009	403	869	2.16
44-015	209270 10	EPA TO-15 SIM	6/16/2009	553	898	1.62
44-015	209270 10	IPA Tracer	6/16/2009	553	898	1.62
44-016	209270 11	EPA TO-15 SIM with Full Scan	6/16/2009	1422	1422	1.00
44-016	209270 11	EPA TO-15 Full Scan - Soil Gas	6/16/2009	1422	1422	1.00
44-017	209270 12	EPA TO-15 Full Scan - Soil Gas	6/16/2009	482	903	1.87
44-017	209270 12	EPA TO-15 SIM with Full Scan	6/16/2009	482	903	1.87
44-018	209270 13	EPA TO-15 Full Scan - Soil Gas	6/16/2009	526	856	1.63

Client Sample No.	EAS Lab No.	Analysis Requested	Date Sampled	Pressure (torr) Rec	Final	Factor
44-018	209270 13	EPA TO-15 SIM with Full Scan	6/16/2009	526	856	1.63
44-006B	209270 14	EPA TO-15 SIM	6/16/2009	347	900	2.59
44-006B	209270 14	IPA Tracer	6/16/2009	347	900	2.59

Environmental
Analytical Service, Inc.
173 Cross Street, San Luis Obispo, CA 93401-759

Sample Receipt Notification

Project Manager:	Lynn Jefferson	**EAS SDG Number:**	209270
Company:	Sealaska Environmental	**Date Received:**	6/17/2009
Proj. Number:		**EAS Project/Quote Number:**	15981
		EAS Project Manager:	Kristin Beckley

Thank you for submitting samples to Environmental Analytical Service. Attached to this sample receipt notification are copies or your Chain of Custody forms signed by Sample Control. If there were any problems with the sample shipment they will be recorded in the Sample Control Case Narrative. Each batch of samples received is assigned a Sample Delivery Group (SDG) number and a project manager. When contacting EAS please reference your SDG number.

In a couple of days your Project Manager will e-mail you an EAS Work Order that has the LIMS login information on your samples, including your field ID, the EAS sample ID, canister pressures, and the analytical tests requested for each sample. Please review this information to make sure it is correct.

Normal Turn Around Time for e-mailed reports is 10 working days from date of receipt unless an expedited TAT was requested. Depending on the sample load, your project manager may be able to e-mail preliminary results in about 5 to 7 working days, if requested. If you have any special scheduling needs please contact us and we will try to accomodate them if possible.

EAS uses the method specified holding times. EPA TO-15 specifies a holding time for SUMMA canisters of 30 days for most normal sampling situations. EAS pressurizest canisters as soon as they are received so they will qualify for the 30 day holding time. If your project specifies a holding time that is shorter than the method holding time, please notify your project manager as soon as possible. If you have questions on canister pressurization, dilution factors, holding times, or any other technical questions, please contact Dr. Steve Hoyt for assistance.

Sample Control Case Narrative

For Technical Questions
Dr. Steve Hoyt
stevehoyt@easlab.com or (805 781-3585 x 2

For Questions on SDG
Kristin Beckley
kbeckley@easlab.com or (805) 781-3585 x 6

5.4: Standard Certificates

STANDARD CERTIFICATE
CALIBRATION GAS STANDARD

ENVIRONMENTAL
Analytical Service, Inc.

Standard Identification Number: ST60022

Date Originally Purchased/Prepared:	**07/25/06**	**Cylinder:**	**CC-230154**
Date Recertified:	**08/29/08**	**Cylinder Pres:**	**1100 psi**
Recertification Standard:	**ST60025**		
Expires:	**08/29/09**	**Analytical Accuracy: +/- 10%**	

CAS	Compound	Concentration (ppmV)
75-71-8	Freon 12	1.05
74-87-3	Chloromethane	1.02
76-14-2	Freon 114	1.04
75-01-4	Vinyl chloride	1.04
74-83-9	Bromomethane	1.04
75-00-3	Chloroethane	1.04
75-69-4	Trichlorofluoromethane	1.04
75-35-4	1,1-Dichloroethene	1.04
75-09-2	Dichloromethane	1.04
76-13-1	Freon 113	1.02
75-34-3	1,1-Dichloroethane	1.01
156-59-2	c-1,2-Dichloroethene	1.03
67-66-3	Chloroform	1.02
107-06-2	1,2-Dichloroethane	1.03
71-55-6	1,1,1-Trichloroethane	1.02
71-43-2	Benzene	1.03
56-23-5	Carbon Tetrachloride	1.02
78-87-5	1,2-Dichloropropane	1.03
79-01-6	Trichloroethene	1.03
10061-01-5	c-1,3-Dichloropropene	1.06
10061-02-6	t-1,3-Dichloropropene	1.04
79-00-5	1,1,2-Trichloroethane	1.02
108-88-3	Toluene	1.03
106-93-4	1,2-Dibromoethane	1.04
127-18-4	Tetrachloroethene	1.02
108-90-7	Chlorobenzene	1.02
100-41-4	Ethylbenzene	1.04
106-42-3	p-Xylenes	1.03
108-38-3	m-Xylenes	1.03
100-42-5	Styrene	1.03
95-47-6	o-Xylene	1.02
79-34-5	1,1,2,2-Tetrachloroethane	1.02
108-67-8	1,3,5-Trimethylbenzene	1.06
95-63-6	1,2,4-Trimethylbenzene	1.02
541-73-1	1,3-Dichlorobenzene	1.02
106-46-7	1,4-Dichlorobenzene	1.02
95-50-1	1,2-Dichlorobenzene	1.00
120-82-1	1,2,4-Trichlorobenzene	1.03
87-68-3	Hexachlorobutadiene	1.03
106-99-0	1,3-Butadiene	1.07
107-13-1	Acrylonitrile	1.08

•This Analysis is NIST Traceable by either measurement or weight•

Analyst: Approved:

The stability of gas standards cannot be guaranteed and EAS will only be liable for replacement or reanalysis if the standard changes in six months from analysis date.

Standard Certificate1

STANDARD CERTIFICATE
CALIBRATION GAS STANDARD

ENVIRONMENTAL
Analytical Service, Inc.

Standard Identification Number: ST60350

Date Originally Purchased/Prepared:	**10/20/08**	**Cylinder:**	**AL150**
Date Recertified:		**Cylinder Pres:**	**1000 psi**
Recertification Standard:			
Expires:	**10/20/09**	**Analytical Accuracy: +/- 10%**	

CAS	Compound	Recertified Values (ppmV)
11-65-9	Octane	0.823
74-95-3	Dibromomethane	0.885
104-51-8	n-Butylbenzene	0.923
135-98-8	sec-Butylbenzene	0.915
98-06-6	tert-butylbenzene	0.902
104-51-8	i-Butylbenzene	0.903
99-87-6	p-Isopropyltoluene(cymene)	0.907
74-97-5	Bromochloromethane	0.864
98-82-8	Isopropylbenzene (Cumene)	0.950
98-83-9	Methylstyrene	0.899
103-65-1	n-Propylbenzene	0.839
630-20-6	1,1,1,2-Tetrachloroethane	0.888
563-58-6	1,1-Dichloropropene	0.839
96-18-4	1,2,3 Trichloropropane	0.863
142-28-9	1,3-Dichloropropane	0.826
594-20-7	2,2-Dichloropropane	0.906
111-84-2	Nonane	0.889
124-18-5	Decane	0.905
95-49-8	2-Chlorotoluene	0.893
106-43-4	4-Chlorotoluene	0.904
97-63-3	Ethyl methacrylate	0.886
96-33-3	Methyl acrylate	0.868
109-66-0	Pentane	0.899
78-78-4	2-Methylbutane	0.899
110-57-6	t-1,4-Dichloro-2-butene	2.554
96-12-8	1,2-Dibromo-3-chloropropane	2.402
67-56-1	Methanol	2.134
64-17-5	Ethanol	2.445
78-00-2	Tetra ethyl lead	2.156
75-05-8	Acetonitrile	2.436
4227-95-6	Methyl iodide	2.043
107-02--8	Acrolein	2.654
107-13-1	Acrylonitrile	2.326
78-83-1	Isobutyl alcohol	2.458
80-62-6	Methyl methacrylate	2.294
126-98-7	Methacrylonitrile	3.032
107-12-0	Propionitrile	2.265
87-61-6	1,2,3-Trichlorobenzene	2.372
91-20-3	Naphthalene	2.386
78-93-3	2-Butanone	0.863
67-64-1	Acetone	0.901
75-15-0	Carbon Disulfide	0.889
75-25-2	Bromoform	0.930
108-10-1	4-Methyl-2-pentanone	0.915
591-78-6	2-Hexanone	0.884
75-27-4	Bromodichloromethane	0.802

Standard Certificate1

CAS	Compound	Recertified Values (ppmV)
124-48-1	Dibromochloromethane	0.887
108-05-4	Vinyl acetate	0.861
156-60-5	t-1,2-Dichloroethene(total)	0.873
100-44-7	Benzylchloride	0.905
622-96-8	4-Ethyltoluene	0.915
1634-04-4	Methyl t-butyl ether	0.784
110-82-7	Cyclohexane	0.892
123-91-1	1,4-Dioxane	0.883
110-54-3	Hexane	0.752
67-63-0	2-Propanol (Isopropanol)	0.912
109-99-9	Tetrahydrofuran	0.922
540-84-1	2,2,4-Trimethylpentane (isooctane)	0.901
107-05-1	Allyl Chloride	0.927
141-78-6	Ethyl acetate	0.838
142-82-5	Heptane	0.836
115-07-1	Propene	1.996

•This Analysis is NIST Traceable by either measurement or weight•

Analyst: Approved:

The stability of gas standards cannot be guaranteed and EAS will only be liable for replacement or reanalysis if the standard changes in six months from analysis date.

Standard Certificate2

STANDARD CERTIFICATE
CALIBRATION GAS STANDARD

ENVIRONMENTAL
Analytical Service, Inc.

Standard Identification Number: ST60032

Date Originally Purchased/Prepared:	**09/26/06**	**Cylinder:**	**AL032401**
Date Recertified:	**01/06/09**	**Cylinder Pres:**	**1300 psi**
Recertification Standard:	**ST60025**		
Expires:	**01/06/10**	**Analytical Accuracy: +/- 10%**	

CAS	Compound	Concentration (ppmV)
75-71-8	Freon 12	0.105
74-87-3	Chloromethane	0.102
76-14-2	Freon 114	0.104
75-01-4	Vinyl chloride	0.104
74-83-9	Bromomethane	0.104
75-00-3	Chloroethane	0.104
75-69-4	Trichlorofluoromethane	0.104
75-35-4	1,1-Dichloroethene	0.104
75-09-2	Dichloromethane	0.104
76-13-1	Freon 113	0.102
75-34-3	1,1-Dichloroethane	0.101
156-59-2	c-1,2-Dichloroethene	0.103
67-66-3	Chloroform	0.102
107-06-2	1,2-Dichloroethane	0.103
71-55-6	1,1,1-Trichloroethane	0.102
71-43-2	Benzene	0.103
56-23-5	Carbon Tetrachloride	0.102
78-87-5	1,2-Dichloropropane	0.103
79-01-6	Trichloroethene	0.103
10061-01-5	c-1,3-Dichloropropene	0.040
10061-02-6	t-1,3-Dichloropropene	0.022
79-00-5	1,1,2-Trichloroethane	0.102
108-88-3	Toluene	0.103
106-93-4	1,2-Dibromoethane	0.104
127-18-4	Tetrachloroethene	0.102
108-90-7	Chlorobenzene	0.102
100-41-4	Ethylbenzene	0.104
106-42-3	p-Xylenes	0.103
108-38-3	m-Xylenes	0.103
100-42-5	Styrene	0.103
95-47-6	o-Xylene	0.102
79-34-5	1,1,2,2-Tetrachloroethane	0.102
108-67-8	1,3,5-Trimethylbenzene	0.106
95-63-6	1,2,4-Trimethylbenzene	0.102
541-73-1	1,3-Dichlorobenzene	0.102
106-46-7	1,4-Dichlorobenzene	0.102
95-50-1	1,2-Dichlorobenzene	0.100
120-82-1	1,2,4-Trichlorobenzene	0.103
87-68-3	Hexachlorobutadiene	0.103
106-99-0	1,3-Butadiene	0.107
107-13-1	Acrylonitrile	0.108

•This Analysis is NIST Traceable by either measurement or weight•

Analyst: Approved:

The stability of gas standards cannot be guaranteed and EAS will only be liable for replacement or reanalysis if the standard changes in six months from analysis date.

Standard Certificate1

STANDARD CERTIFICATE
CALIBRATION GAS STANDARD

ENVIRONMENTAL
Analytical Service, Inc.

Standard Identification Number: ST60250

Date Originally Purchased/Prepared:	**01/21/08**	**Cylinder:**	**AL150**
Date Recertified:	**01/06/09**	**Cylinder Pres:**	**999 PSI**
Recertification Standard:	**ST60350**	**Prepared From:**	**ST60172**
Expires:	**01/06/10**	**Analytical Accuracy: +/- 10%**	

CAS	Compound	Recertified Values (ppmV)
11-65-9	Octane	0.077
74-95-3	Dibromomethane	0.083
104-51-8	n-Butylbenzene	0.086
135-98-8	sec-Butylbenzene	0.085
98-06-6	tert-butylbenzene	0.084
104-51-8	i-Butylbenzene	0.084
99-87-6	p-Isopropyltoluene(cymene)	0.085
74-97-5	Bromochloromethane	0.080
98-82-8	Isopropylbenzene (Cumene)	0.088
98-83-9	Methylstyrene	0.084
103-65-1	n-Propylbenzene	0.078
630-20-6	1,1,1,2-Tetrachloroethane	0.083
563-58-6	1,1-Dichloropropene	0.078
96-18-4	1,2,3 Trichloropropane	0.080
142-28-9	1,3-Dichloropropane	0.077
594-20-7	2,2-Dichloropropane	0.085
111-84-2	Nonane	0.083
124-18-5	Decane	0.085
95-49-8	2-Chlorotoluene	0.083
106-43-4	4-Chlorotoluene	0.085
97-63-3	Ethyl methacrylate	0.083
96-33-3	Methyl acrylate	0.081
109-66-0	Pentane	0.084
78-78-4	2-Methylbutane	0.084
110-57-6	t-1,4-Dichloro-2-butene	0.228
96-12-8	1,2-Dibromo-3-chloropropane	0.214
67-56-1	Methanol	0.190
64-17-5	Ethanol	0.219
78-00-2	Tetra ethyl lead	0.192
75-05-8	Acetonitrile	0.218
4227-95-6	Methyl iodide	0.182
107-02-8	Acrolein	0.237
107-13-1	Acrylonitrile	0.208
78-83-1	Isobutyl alcohol	0.219
80-62-6	Methyl methacrylate	0.205
126-98-7	Methacrylonitrile	0.270
107-12-0	Propionitrile	0.203
87-61-6	1,2,3-Trichlorobenzene	0.211
91-20-3	Naphthalene	0.213
78-93-3	2-Butanone	0.072
67-64-1	Acetone	0.076
75-15-0	Carbon Disulfide	0.075
75-25-2	Bromoform	0.078
108-10-1	4-Methyl-2-pentanone	0.077
591-78-6	2-Hexanone	0.074
75-27-4	Bromodichloromethane	0.067

CAS	Compound	Recertified Values (ppmV)
124-48-1	Dibromochloromethane	0.074
108-05-4	Vinyl acetate	0.072
156-60-5	t-1,2-Dichloroethene(total)	0.073
100-44-7	Benzylchloride	0.076
622-96-8	4-Ethyltoluene	0.077
1634-04-4	Methyl t-butyl ether	0.066
110-82-7	Cyclohexane	0.075
123-91-1	1,4-Dioxane	0.074
110-54-3	Hexane	0.063
67-63-0	2-Propanol (Isopropanol)	0.077
109-99-9	Tetrahydrofuran	0.078
540-84-1	2,2,4-Trimethylpentane (isooctane)	0.076
107-05-1	Allyl Chloride	0.078
141-78-6	Ethyl acetate	0.070
142-82-5	Heptane	0.070

•This Analysis is NIST Traceable by either measurement or weight•

Analyst: Approved:

The stability of gas standards cannot be guaranteed and EAS will only be liable for replacement or reanalysis if the standard changes in six months from analysis date.

STANDARD CERTIFICATE
CALIBRATION GAS STANDARD

ENVIRONMENTAL
Analytical Service, Inc.

Standard Identification Number: ST60421

Date Originally Purchased/Prepared:	**06/23/09**	**Cylinder:**	**AL032401**
Date Recertified:		**Cylinder Pres:**	**1000 psi**
Prep Standard:	**ST60022**		
Expires:	**06/23/10**	**Analytical Accuracy: +/- 10%**	

CAS	Compound	Concentration (ppmV)
75-71-8	Freon 12	0.105
74-87-3	Chloromethane	0.102
76-14-2	Freon 114	0.104
75-01-4	Vinyl chloride	0.104
74-83-9	Bromomethane	0.104
75-00-3	Chloroethane	0.104
75-69-4	Trichlorofluoromethane	0.104
75-35-4	1,1-Dichloroethene	0.104
75-09-2	Dichloromethane	0.104
76-13-1	Freon 113	0.102
75-34-3	1,1-Dichloroethane	0.101
156-59-2	c-1,2-Dichloroethene	0.103
67-66-3	Chloroform	0.102
107-06-2	1,2-Dichloroethane	0.103
71-55-6	1,1,1-Trichloroethane	0.102
71-43-2	Benzene	0.103
56-23-5	Carbon Tetrachloride	0.102
78-87-5	1,2-Dichloropropane	0.103
79-01-6	Trichloroethene	0.103
10061-01-5	c-1,3-Dichloropropene	0.040
10061-02-6	t-1,3-Dichloropropene	0.022
79-00-5	1,1,2-Trichloroethane	0.102
108-88-3	Toluene	0.103
106-93-4	1,2-Dibromoethane	0.104
127-18-4	Tetrachloroethene	0.102
108-90-7	Chlorobenzene	0.102
100-41-4	Ethylbenzene	0.104
106-42-3	p-Xylenes	0.103
108-38-3	m-Xylenes	0.103
100-42-5	Styrene	0.103
95-47-6	o-Xylene	0.102
79-34-5	1,1,2,2-Tetrachloroethane	0.102
108-67-8	1,3,5-Trimethylbenzene	0.106
95-63-6	1,2,4-Trimethylbenzene	0.102
541-73-1	1,3-Dichlorobenzene	0.102
106-46-7	1,4-Dichlorobenzene	0.102
95-50-1	1,2-Dichlorobenzene	0.100
120-82-1	1,2,4-Trichlorobenzene	0.103
87-68-3	Hexachlorobutadiene	0.103
106-99-0	1,3-Butadiene	0.107
107-13-1	Acrylonitrile	0.108

•This Analysis is NIST Traceable by either measurement or weight•

Analyst: Approved:

The stability of gas standards cannot be guaranteed and EAS will only be liable for replacement or reanalysis if the standard changes in six months from analysis date.

Standard Certificate1

5.5: Laboratory Control Spike Certificates & Internal Standard Certificates

STANDARD CERTIFICATE
CALIBRATION GAS STANDARD

ENVIRONMENTAL
Analytical Service, Inc.

Standard Identification Number: ST60403

Date Originally Purchased/Prepared:	**03/13/09**	**Cylinder:**	**AL150**
Date Recertified:		**Cylinder Pres:**	**998 psi**
Recertification Standard:			
Expires:	**03/13/10**	**Analytical Accuracy: +/- 10%**	

CAS	Compound	Concentration (ppmV)
386-72-4	Pentafluorobenzene	9.685
540-36-3	1,4-Difluorobenzene	9.974
3114-55-4	Chlorobenzene-d5	9.576
460-00-4	1,4-Bromofluorobenzene	4.975
2037-26-5	Toluene-d8	5.450

•This Analysis is NIST Traceable by either measurement or weight•

Analyst: Approved:

The stability of gas standards cannot be guaranteed and EAS will only be liable for replacement or reanalysis if the standard changes in six months from analysis date.

Standard Certificate1

STANDARD CERTIFICATE
CALIBRATION GAS STANDARD

ENVIRONMENTAL
Analytical Service, Inc.

Standard Identification Number: ST60360

Date Originally Purchased/Prepared:	**12/09/08**	**Cylinder:**	**AL150**
Date Recertified:		**Cylinder Pres:**	**995 psig**
Recertification Standard:			
Expires:	**12/09/09**	**Analytical Accuracy: +/- 10%**	

CAS	Compound	Concentration (ppmV)
3114-55-4	Chlorobenzene-d5	0.392
386-72-4	Pentafluorobenzene	0.426
540-36-3	1,4-Difluorobenzene	0.427
460-00-4	1,4-Bromofluorobenzene	0.211
2037-26-5	Toluene-d8	0.237
	Vinyl Chloride-d3	0.400

•This Analysis is NIST Traceable by either measurement or weight•

Analyst: _____ Approved: _____

The stability of gas standards cannot be guaranteed and EAS will only be liable for replacement or reanalysis if the standard changes in six months from analysis date.

Standard Certificate1

STANDARD CERTIFICATE
CALIBRATION GAS STANDARD

ENVIRONMENTAL
Analytical Service, Inc.

Standard Identification Number: ST0623091

Date Originally Purchased/Prepared:	**07/25/06**	**Cylinder:**	**CC-230154**
Date Recertified:	**06/23/09**	**Cylinder Pres:**	**1000 psi**
Recertification Standard:	**ST60032**		
Expires:	**06/23/10**	**Analytical Accuracy: +/- 10%**	

CAS	Compound	Concentration (ppmV)
75-71-8	Chloromethane	1.04
74-87-3	Vinyl chloride	1.27
76-14-2	Bromomethane	1.42
75-01-4	1,1-Dichloroethene	1.28
74-83-9	Dichloromethane	1.09
75-00-3	1,1-Dichloroethane	1.16
75-69-4	cis-1,2-Dichloroethene	0.97
75-35-4	Chloroform	1.23
75-09-2	1,1,1-Trichloroethane	1.15
76-13-1	1,2-Dichloroethane	0.90
75-34-3	Benzene	0.79
156-59-2	Carbon tetrachloride	1.16
67-66-3	1,2-Dichloropropane	0.98
107-06-2	Trichloroethene	0.88
71-55-6	Toluene	0.71
71-43-2	1,1,2-Trichloroethane	0.71
56-23-5	1,2-Dibromoethane	0.61
78-87-5	Tetrachloroethene	0.78
79-01-6	Chlorobenzene	0.63
10061-01-5	Ethylbenzene	0.65
10061-02-6	m & p-Xylene	1.35
79-00-5	o-Xylene	0.59

•This Analysis is NIST Traceable by either measurement or weight•

Analyst: _____ Approved: _____

The stability of gas standards cannot be guaranteed and EAS will only be liable for replacement or reanalysis if the standard changes in six months from analysis date.

STANDARD CERTIFICATE
CALIBRATION GAS STANDARD

ENVIRONMENTAL
Analytical Service, Inc.

Standard Identification Number: ST0709091

Date Originally Purchased/Prepared:	**07/25/06**	**Cylinder:**	**CC-230154**
Date Recertified:	**07/09/09**	**Cylinder Pres:**	**1000 psi**
Recertification Standard:	**ST60032**		
Expires:	**07/09/10**	**Analytical Accuracy: +/- 10%**	

CAS	Compound	Concentration (ppmV)
75-71-8	Vinyl chloride	0.47
74-87-3	1,1-Dichloroethene	0.51
76-14-2	1,2-Dibromoethane	0.33
75-01-4	1,1,2,2-Tetrachloroethane	0.23
74-83-9	Naphthalene	0.19

•This Analysis is NIST Traceable by either measurement or weight•

Analyst: _____ Approved: _____

The stability of gas standards cannot be guaranteed and EAS will only be liable for replacement or reanalysis if the standard changes in six months from analysis date.

SECTION 6
Canister Certification Data

This section contains information equivalent to that found in EPA FORM I – Volatile Organics Summa Canister Certification Sheet.

6.1 Canister Certification Information

Canister certification for this project was done by batch certification method.

SECTION 7
Ion Spectra for GC/MS, Level D

This Section contains the Ion Spectra for samples analyzed for GC/MS for Level D Data Deliverable Packages. The Ion Spectra is grouped by Daily Analytical Batch and is included for the DAB and the Initial Calibration. Initial Calibration Tune Data is also included.

7.1: Ion Spectra for Daily Analytical Batch

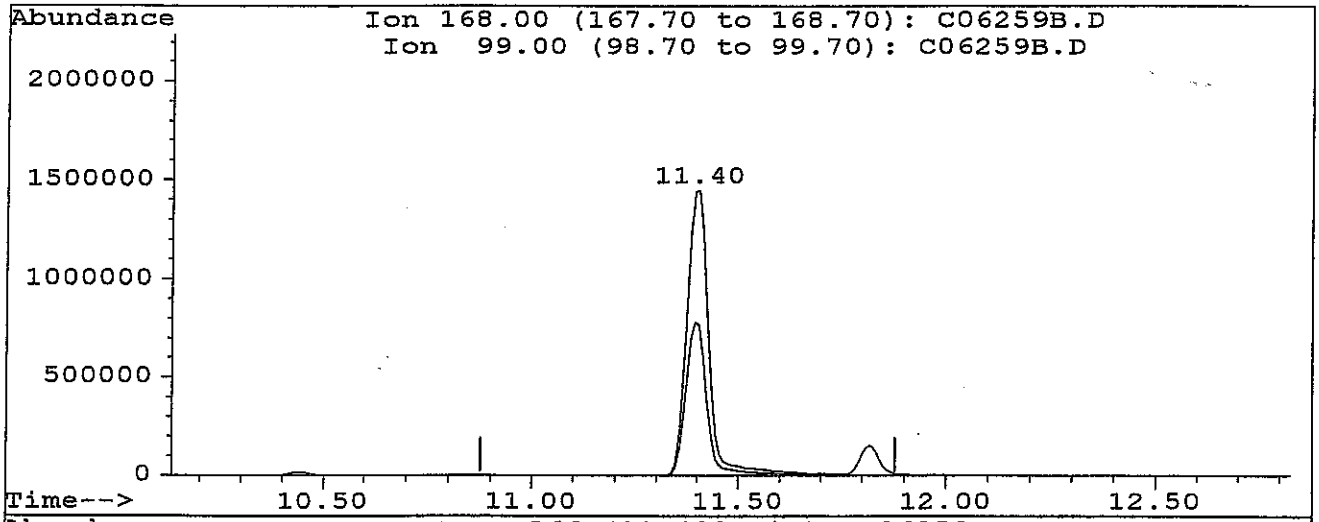
Daily Analytical Batch #: 062509-MS1

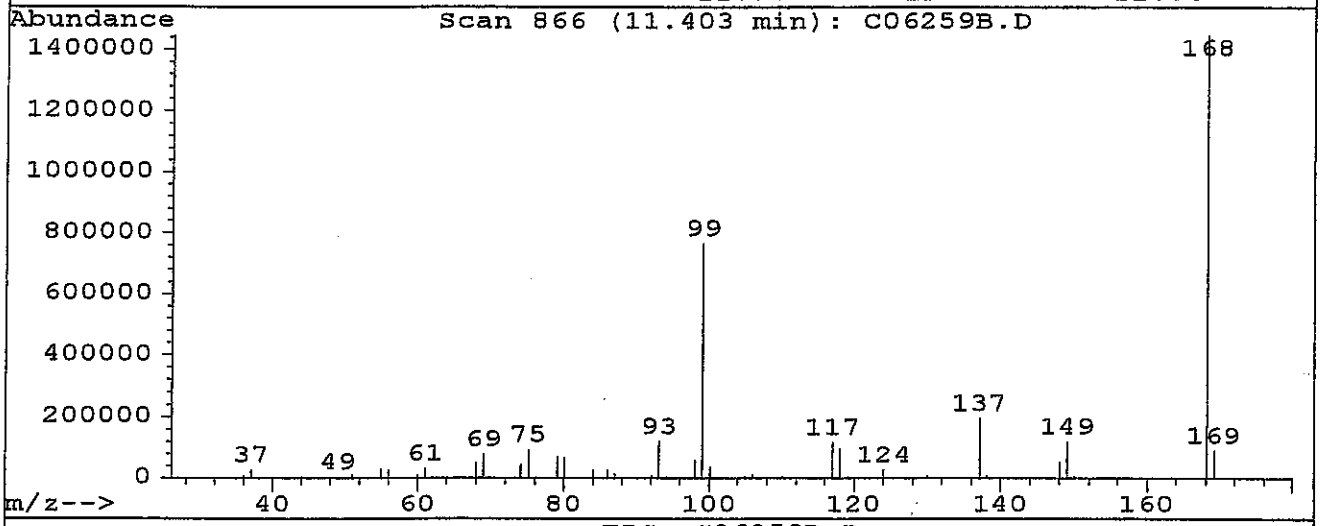
Quantitation Report

Data File : C:\MSCHEM\2\DATA\06259MS1\C06259B.D
Acq Time : 25 Jun 109 9:43 am
Sample : ST60022 + ST60350
Misc :
Quant Time: Jun 25 10:19 19109

Operator: JF
Inst : 5970 - In
Multiplr: 1.00

Method : C:\MSCHEM\2\METHODS\1T15EXAY.M
Title : EPA TO-15
Last Update : Tue Mar 17 14:18:15 2009
Response via : Multiple Level Calibration





TIC: C06259B.D

(1) Pentafluorobenzene (I)

11.40min 20.00ppbV

response 5506717

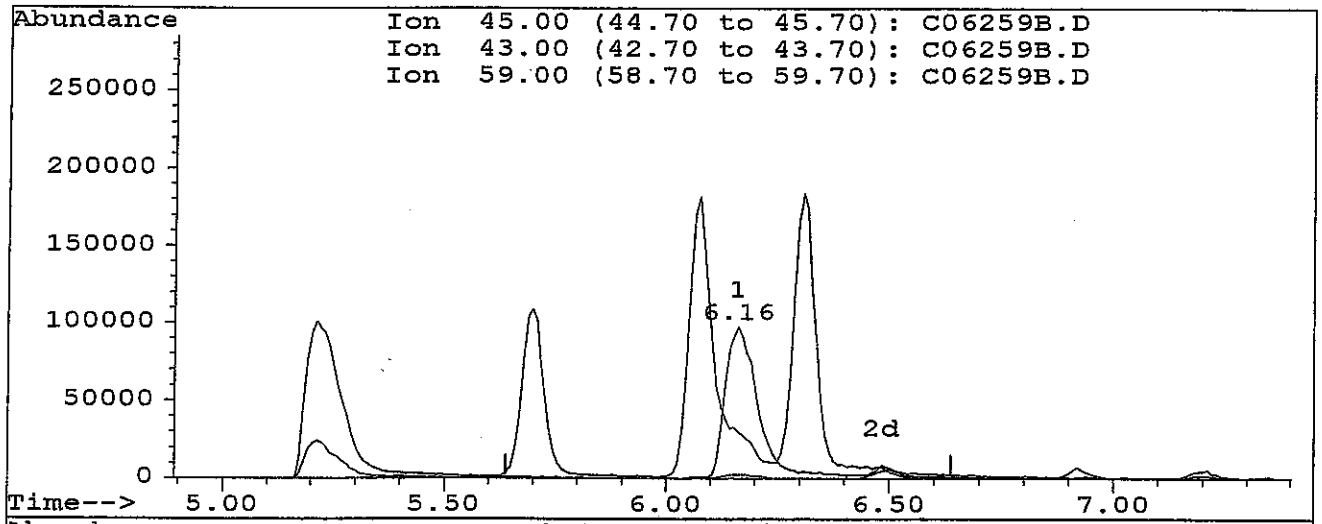
Ion	Exp%	Act%
168.00	100	100
99.00	67.00	48.61#
0.00	0.00	0.00
0.00	0.00	0.00

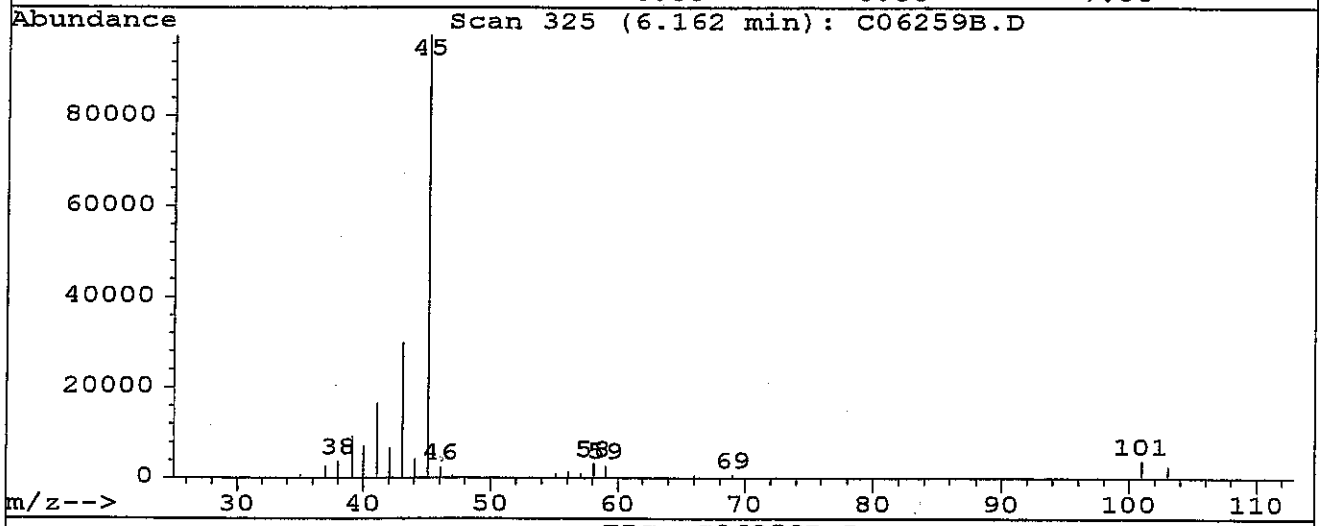
Quantitation Report

Data File : C:\MSCHEM\2\DATA\06259MS1\C06259B.D
Acq Time : 25 Jun 109 9:43 am
Sample : ST60022 + ST60350
Misc :
Quant Time: Jun 28 18:01 19109

Operator: JF
Inst : 5970 - In
Multiplr: 1.00

Method : C:\MSCHEM\2\METHODS\1T15EXAY.M
Title : EPA TO-15
Last Update : Tue Mar 17 14:18:15 2009
Response via : Multiple Level Calibration





TIC: C06259B.D

(13) 2-propanol (T)

6.16min 2.78ppbV

response 510641

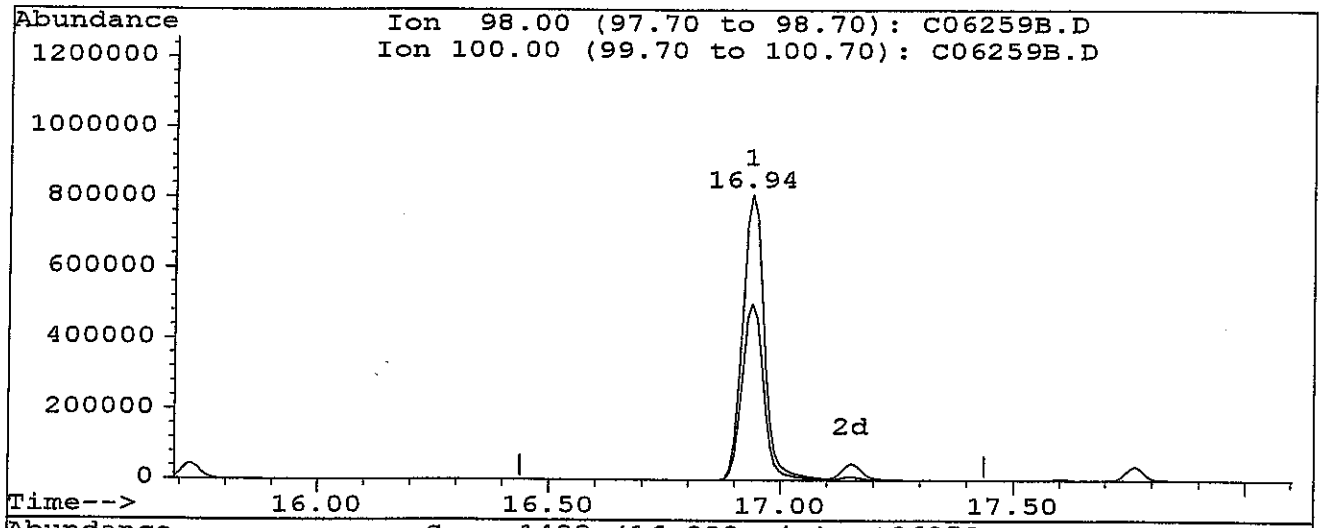
Ion	Exp%	Act%
45.00	100	100
43.00	22.70	0.00#
59.00	3.20	2.63
0.00	0.00	0.00

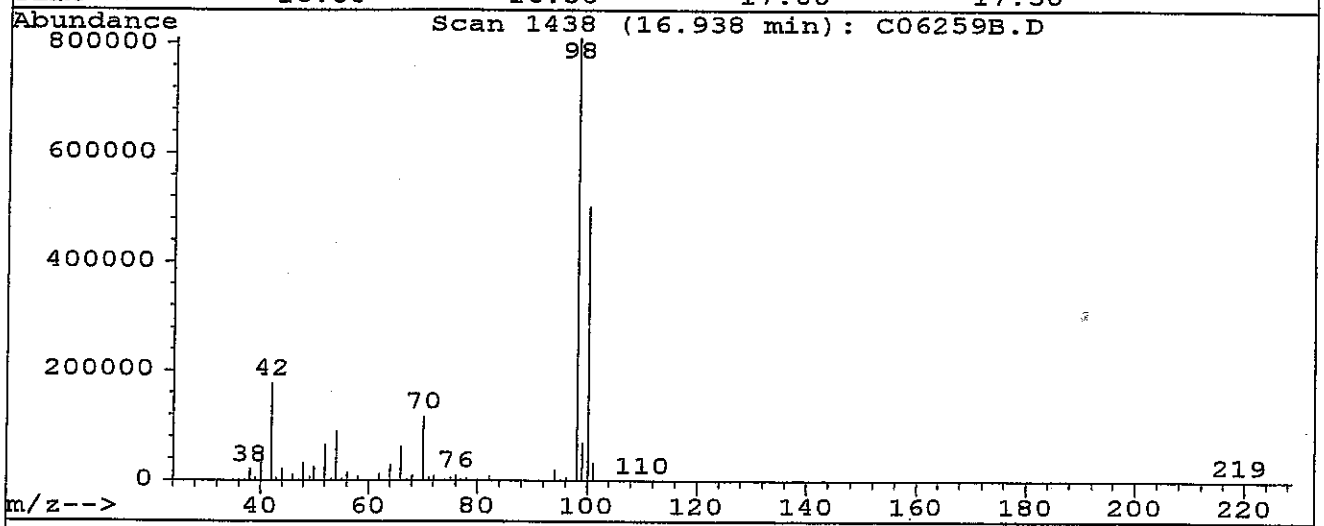
Quantitation Report

Data File : C:\MSCHEM\2\DATA\06259MS1\C06259B.D
Acq Time : 25 Jun 109 9:43 am
Sample : ST60022 + ST60350
Misc :
Quant Time: Jun 28 18:02 19109

Operator: JF
Inst : 5970 - In
Multiplr: 1.00

Method : C:\MSCHEM\2\METHODS\1T15EXAY.M
Title : EPA TO-15
Last Update : Tue Mar 17 14:18:15 2009
Response via : Multiple Level Calibration





TIC: C06259B.D

(94) Toluene-d8 (S)

16.94min 10.17ppbV

response 2627267

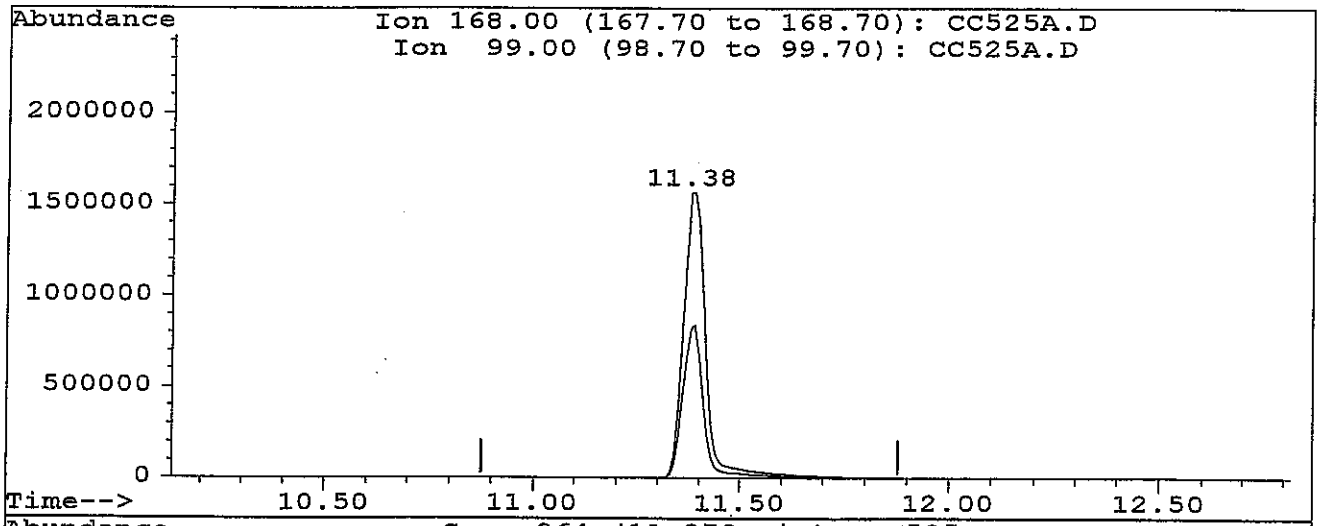
Ion	Exp%	Act%
98.00	100	100
100.00	64.30	61.91
0.00	0.00	0.00
0.00	0.00	0.00

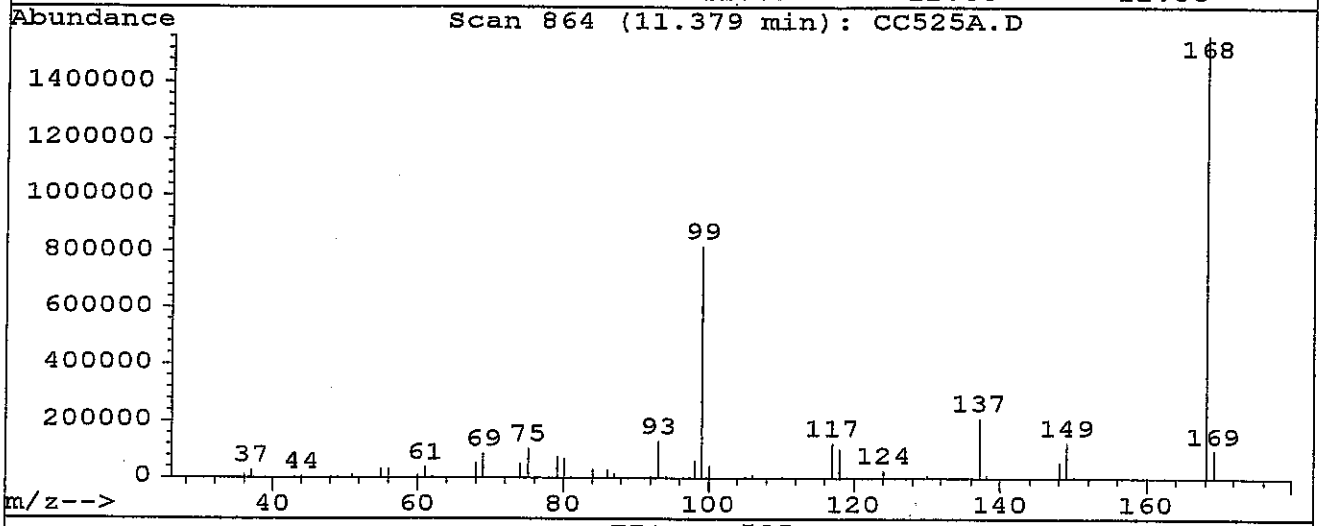
Quantitation Report

Data File : C:\MSCHEM\2\DATA\06259MS1\CC525A.D
Acq Time : 25 Jun 109 12:54 pm
Sample : 525
Misc : 062509
Quant Time: Jun 25 13:30 19109

Operator: JF
Inst : 5970 - In
Multiplr: 1.00

Method : C:\MSCHEM\2\METHODS\1T15EXAY.M
Title : EPA TO-15
Last Update : Tue Mar 17 14:18:15 2009
Response via : Multiple Level Calibration





TIC: CC525A.D

(1) Pentafluorobenzene (I)

11.38min 20.00ppbV

response 5855494

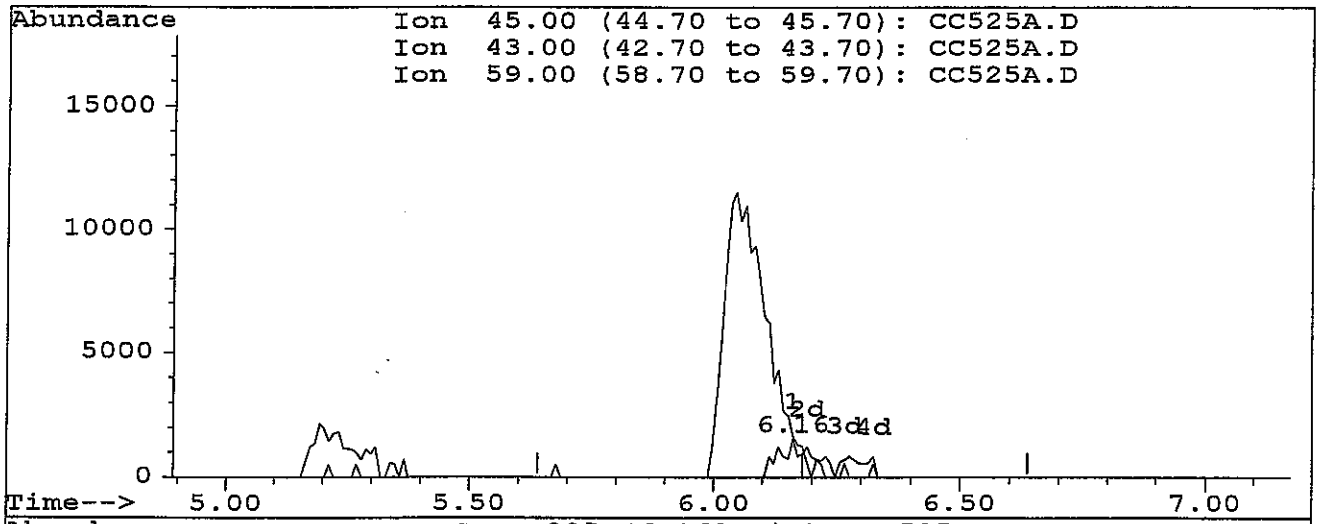
Ion	Exp%	Act%
168.00	100	100
99.00	67.00	52.36#
0.00	0.00	0.00
0.00	0.00	0.00

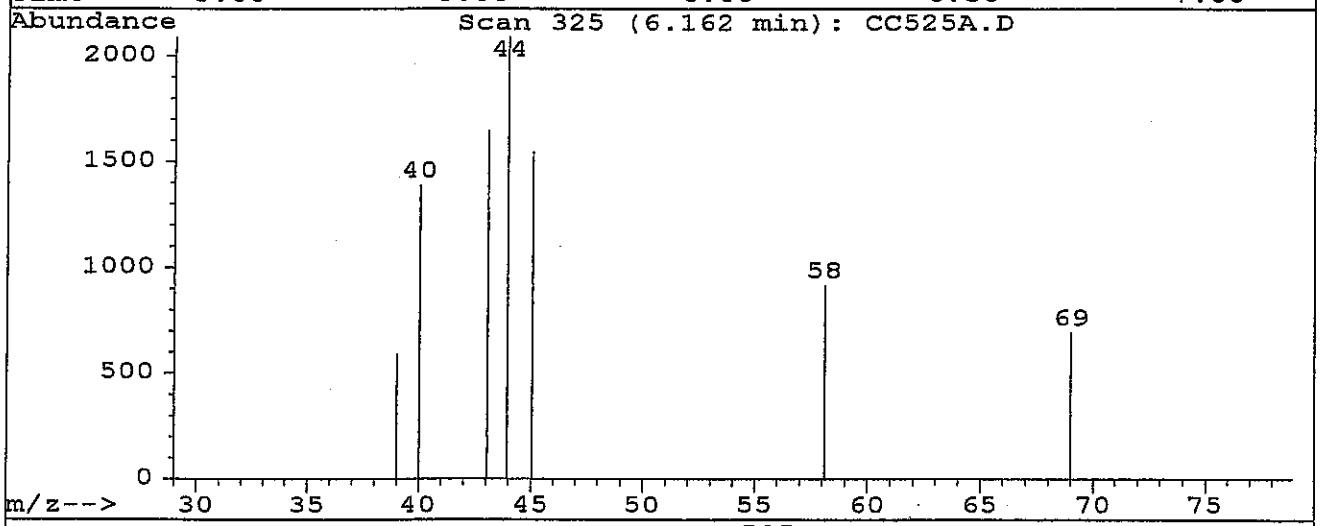
Quantitation Report

Data File : C:\MSCHEM\2\DATA\06259MS1\CC525A.D
Acq Time : 25 Jun 109 12:54 pm
Sample : 525
Misc : 062509
Quant Time: Jun 25 13:30 19109

Operator: JF
Inst : 5970 - In
Multiplr: 1.00

Method : C:\MSCHEM\2\METHODS\1T15EXAY.M
Title : EPA TO-15
Last Update : Tue Mar 17 14:18:15 2009
Response via : Multiple Level Calibration





TIC: CC525A.D

(13) 2-propanol (T)

6.16min 0.02ppbV

response 4440

Ion	Exp%	Act%
45.00	100	100
43.00	22.70	0.00#
59.00	3.20	0.00#
0.00	0.00	0.00

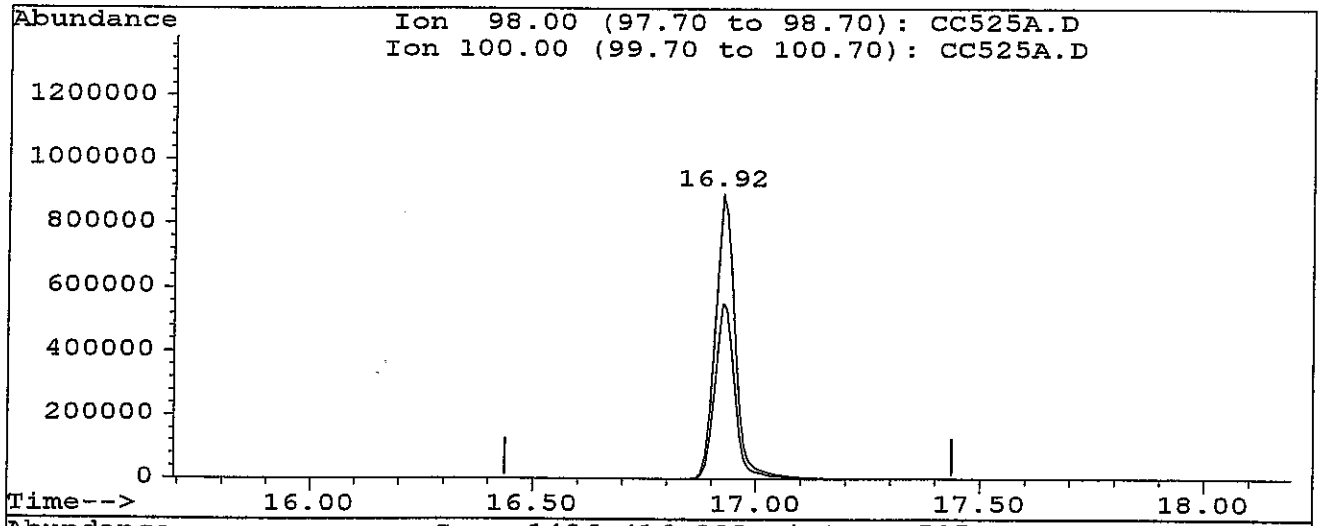
CC525A.D 1T15EXAY.M Sun Jun 28 18:03:55 2009

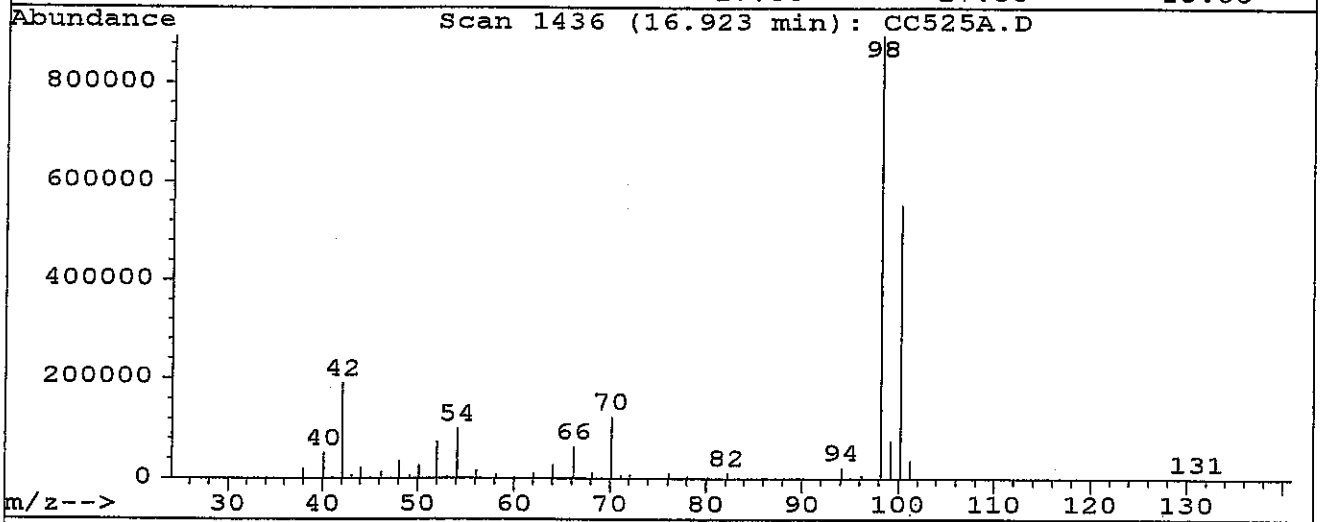
Quantitation Report

Data File : C:\MSCHEM\2\DATA\06259MS1\CC525A.D
Acq Time : 25 Jun 109 12:54 pm
Sample : 525
Misc : 062509
Quant Time: Jun 25 13:30 19109

Operator: JF
Inst : 5970 - In
Multiplr: 1.00

Method : C:\MSCHEM\2\METHODS\1T15EXAY.M
Title : EPA TO-15
Last Update : Tue Mar 17 14:18:15 2009
Response via : Multiple Level Calibration





TIC: CC525A.D

(94) Toluene-d8 (S)

16.92min 9.70ppbV

response 2860376

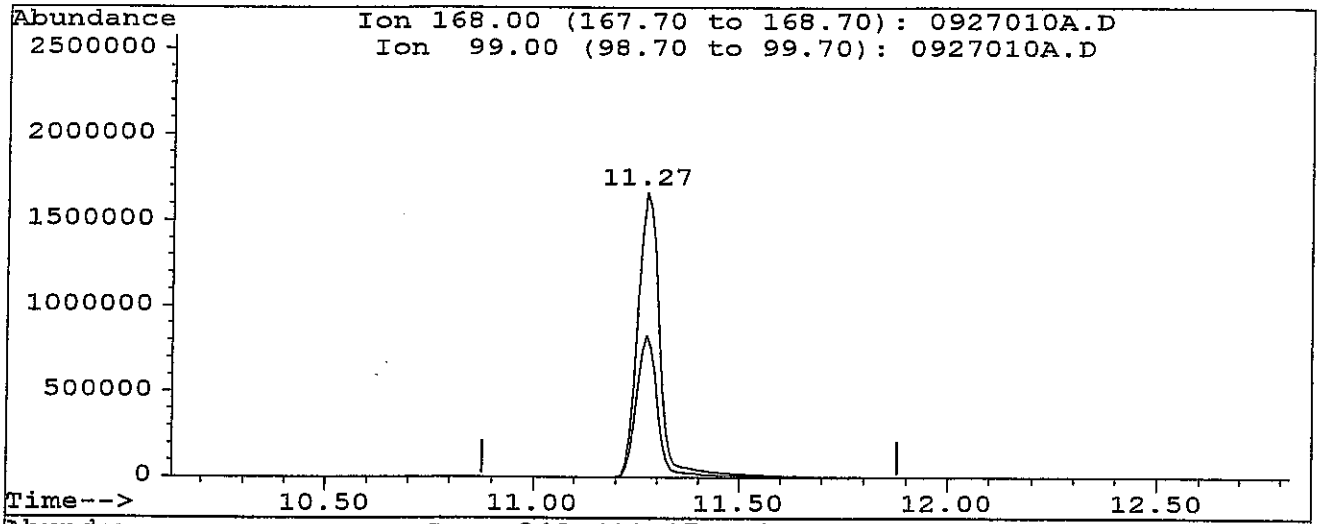
Ion	Exp%	Act%
98.00	100	100
100.00	64.30	61.74
0.00	0.00	0.00
0.00	0.00	0.00

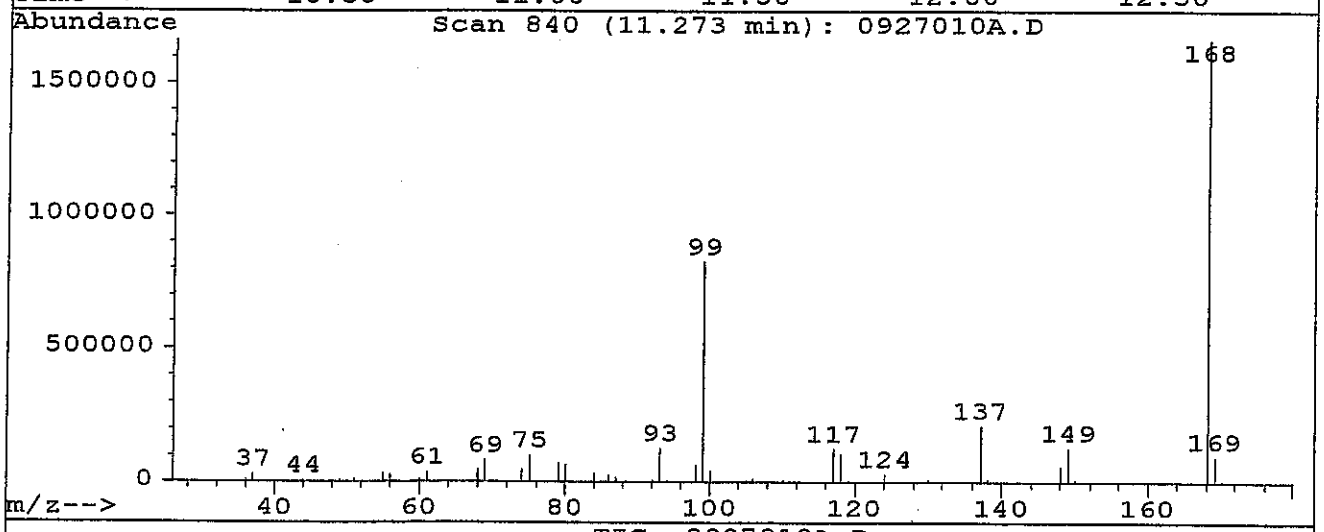
Quantitation Report

Data File : C:\MSCHEM\2\DATA\06259MS1\0927010A.D
Acq Time : 25 Jun 109 5:15 pm
Sample : 44-015
Misc : SEALASKA ENVIRONMENTAL
Quant Time: Jun 25 17:51 19109

Operator: SG
Inst : 5970 - In
Multiplr: 1.00

Method : C:\MSCHEM\2\METHODS\1T15EXAY.M
Title : EPA TO-15
Last Update : Tue Mar 17 14:18:15 2009
Response via : Multiple Level Calibration





TIC: 0927010A.D

(1) Pentafluorobenzene (I)

11.27min 20.00ppbV

response 6300048

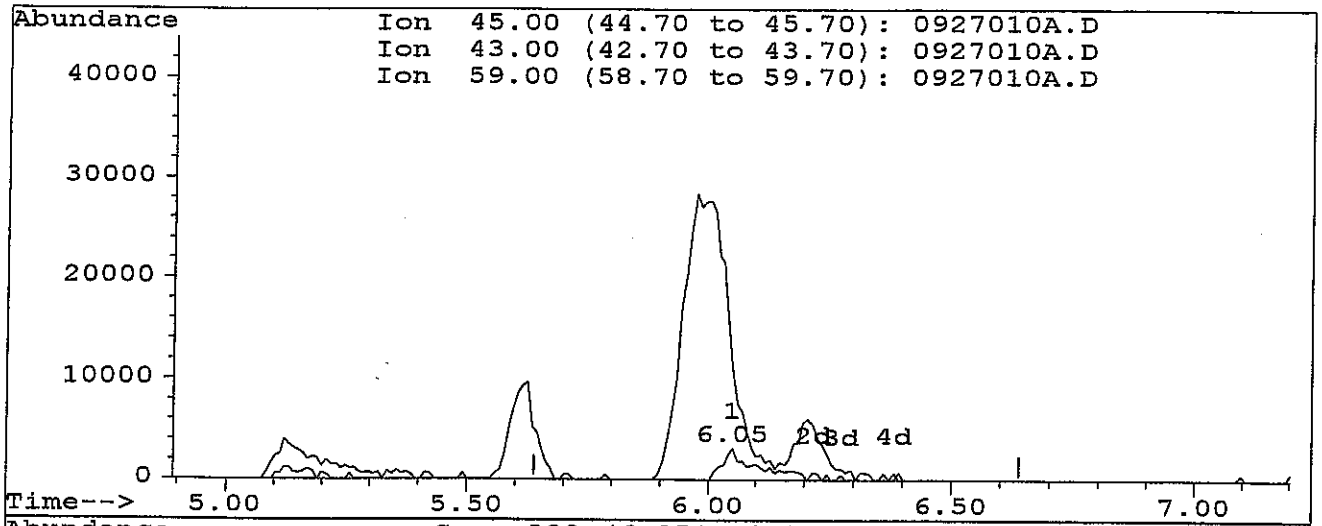
Ion	Exp%	Act%
168.00	100	100
99.00	67.00	49.72#
0.00	0.00	0.00
0.00	0.00	0.00

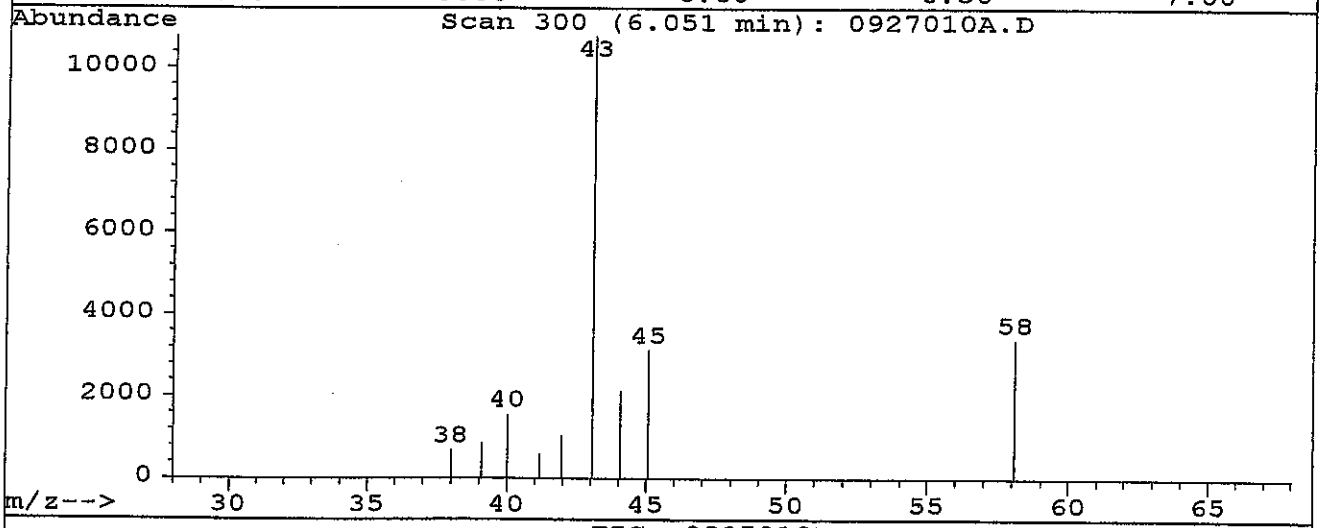
Quantitation Report

Data File : C:\MSCHEM\2\DATA\06259MS1\0927010A.D
Acq Time : 25 Jun 109 5:15 pm
Sample : 44-015
Misc : SEALASKA ENVIRONMENTAL
Quant Time: Jun 25 17:51 19109

Operator: SG
Inst : 5970 - In
Multiplr: 1.00

Method : C:\MSCHEM\2\METHODS\1T15EXAY.M
Title : EPA TO-15
Last Update : Tue Mar 17 14:18:15 2009
Response via : Multiple Level Calibration





TIC: 0927010A.D

(13) 2-propanol (T)

6.05min 0.07ppbV

response 15331

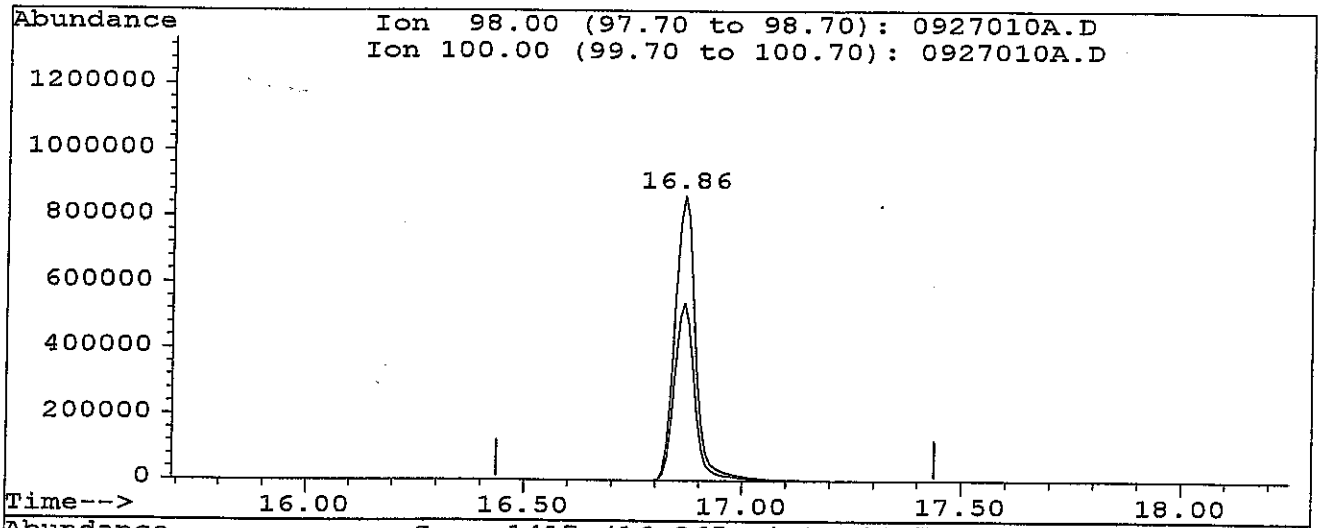
Ion	Exp%	Act%
45.00	100	100
43.00	22.70	0.00#
59.00	3.20	0.00#
0.00	0.00	0.00

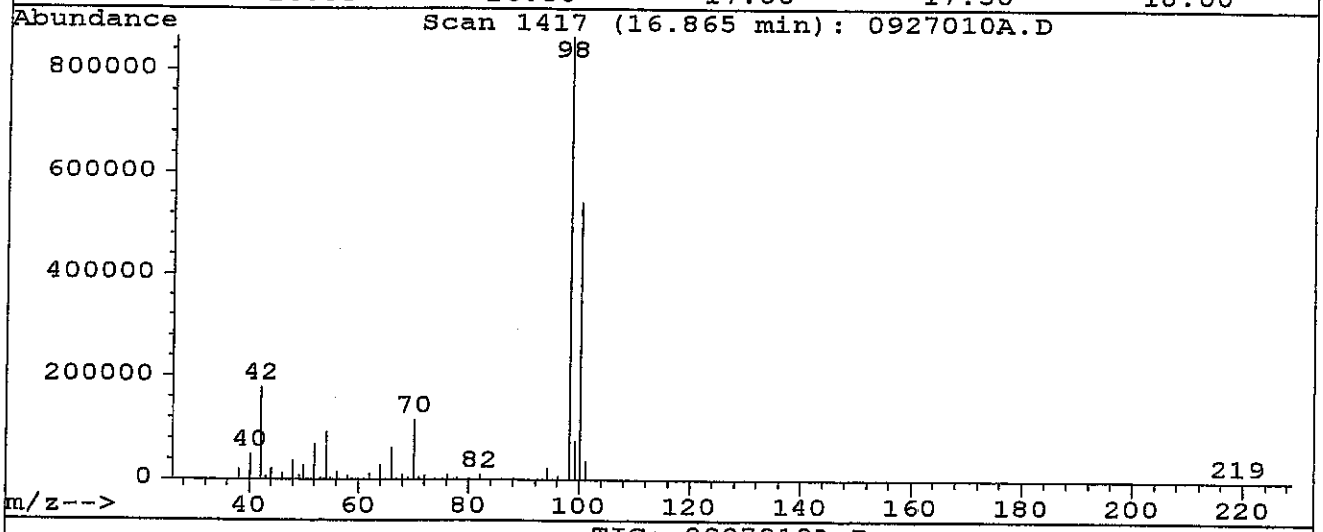
Quantitation Report

Data File : C:\MSCHEM\2\DATA\06259MS1\0927010A.D
Acq Time : 25 Jun 109 5:15 pm
Sample : 44-015
Misc : SEALASKA ENVIRONMENTAL
Quant Time: Jun 25 17:51 19109

Operator: SG
Inst : 5970 - In
Multiplr: 1.00

Method : C:\MSCHEM\2\METHODS\1T15EXAY.M
Title : EPA TO-15
Last Update : Tue Mar 17 14:18:15 2009
Response via : Multiple Level Calibration





TIC: 0927010A.D

(94) Toluene-d8 (S)

16.86min 9.58ppbV

response 2861196

Ion	Exp%	Act%
98.00	100	100
100.00	64.30	62.59
0.00	0.00	0.00
0.00	0.00	0.00

Daily Analytical Batch #: 062309-MS2

Quantitation Report

Data File : C:\MSCHEM\2\DATA\06239M~1\C06239B.D
Acq Time : 23 Jun 109 10:12 am
Sample : ST60032 + ST60250
Misc :
Quant Time: Jun 29 16:41 19109

Operator: JF
Inst : MS2
Multiplr: 1.00

Method : C:\MSCHEM\2\METHODS\1T15EXAY.M
Title : EPA TO-15
Last Update : Tue Mar 17 14:18:15 2009
Response via : Multiple Level Calibration

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Chlorobenzene-d5	20.55	117	1373512	0.20 ppbV	0.04
System Monitoring Compounds					%Recovery
16) Toluene-d8	17.11	98	732353	0.25 ppbV	
49) Vinyl Chloride-d3	4.43	65	217982	0.19 ppbV	
Target Compounds					Qvalue
2) Dichlorodifluoromethane	3.93	85	90407	0.11 ppbV m	0
3) Chloromethane	4.20	50	39981	0.11 ppbV	98
4) Freon 114	4.20	85	83080	0.11 ppbV	95
5) Vinyl chloride	4.45	62	27322	0.10 ppbV	96
6) Bromomethane	5.05	94	23734	0.09 ppbV m	98
7) Chloroethane	5.26	64	23597	0.10 ppbV	98
8) Trichlorofluoromethane	6.07	101	102236	0.11 ppbV	100
9) 1,1-Dichloroethene	7.03	61	62450	0.11 ppbV	96
10) Freon 113	7.26	151	37523	0.09 ppbV	96
11) Dichloromethane	7.51	84	28508	0.10 ppbV #	93
12) trans-1,2-Dichloroethene	8.57	96	23642	0.07 ppbV	94
13) Methyl tert butyl ether	8.72	73	88728	0.08 ppbV	97
14) 1,1-Dichloroethane	9.11	63	63336	0.10 ppbV	99
15) cis-1,2-Dichloroethene	10.33	96	37036	0.10 ppbV	95
17) Chloroform	10.74	83	94006	0.12 ppbV	99
18) 1,1,1-Trichloroethane	11.96	97	93554	0.10 ppbV #	85
19) 1,2-Dichloroethane	12.10	62	176539	0.11 ppbV	97
20) Benzene	12.71	78	114787	0.09 ppbV #	91
21) Carbon tetrachloride	12.74	117	77613	0.10 ppbV	98
22) 1,2-Dichloropropane	14.26	63	41084	0.10 ppbV	95
23) Trichloroethene	14.31	130	47106	0.09 ppbV	95
24) Bromodichloromethane	14.63	83	63995	0.07 ppbV	100
25) cis-1,3-Dichloropropene	16.04	75	16397	0.04 ppbV	92
26) Toluene	17.27	91	181249	0.10 ppbV	99
27) trans-1,3-Dichloropropene	17.08	75	10871	0.03 ppbV #	84
28) 1,1,2-Trichloroethane	17.40	97	65904	0.09 ppbV	92
29) 1,2-Dibromoethane	19.03	107	124715	0.09 ppbV	100
30) Tetrachloroethene	19.13	166	54407	0.09 ppbV #	88
31) Chlorobenzene	20.65	112	155754	0.09 ppbV	97
32) 1,1,1,2-Tetrachloroethane	20.70	131	55251	0.07 ppbV	99
33) Ethylbenzene	21.12	91	312285	0.10 ppbV	99
34) m & p-Xylene	21.41	91	493234	0.20 ppbV	95
35) Styrene	22.26	104	247076	0.08 ppbV #	86
36) o-Xylene	22.38	91	306720	0.10 ppbV	97
37) 1,1,2,2-Tetrachloroethane	22.96	83	325889	0.09 ppbV #	97
38) 4-Ethyltoluene	24.83	105	400409	0.07 ppbV m	97
39) 1,3,5-Trimethylbenzene	24.99	105	511658	0.09 ppbV	97
40) 1,2,4-Trimethylbenzene	25.94	105	586566	0.09 ppbV	97
41) 1,3-Dichlorobenzene	26.58	146	407054	0.08 ppbV	97
42) Benzyl chloride	26.75	91	305401	0.06 ppbV	96
43) 1,4-Dichlorobenzene	26.78	146	434348	0.09 ppbV	97
44) 1,2-Dichlorobenzene	27.64	146	496098	0.08 ppbV	98
45) 1,2,4-Trichlorobenzene	32.18	180	1038343	0.08 ppbV	100
46) Hexachlorobutadiene	33.15	225	482470	0.08 ppbV	98
47) 1,4 Dioxane	14.68	88	27834	0.06 ppbV	93
48) Naphthalene	32.57	128	7033626	0.15 ppbV m	0

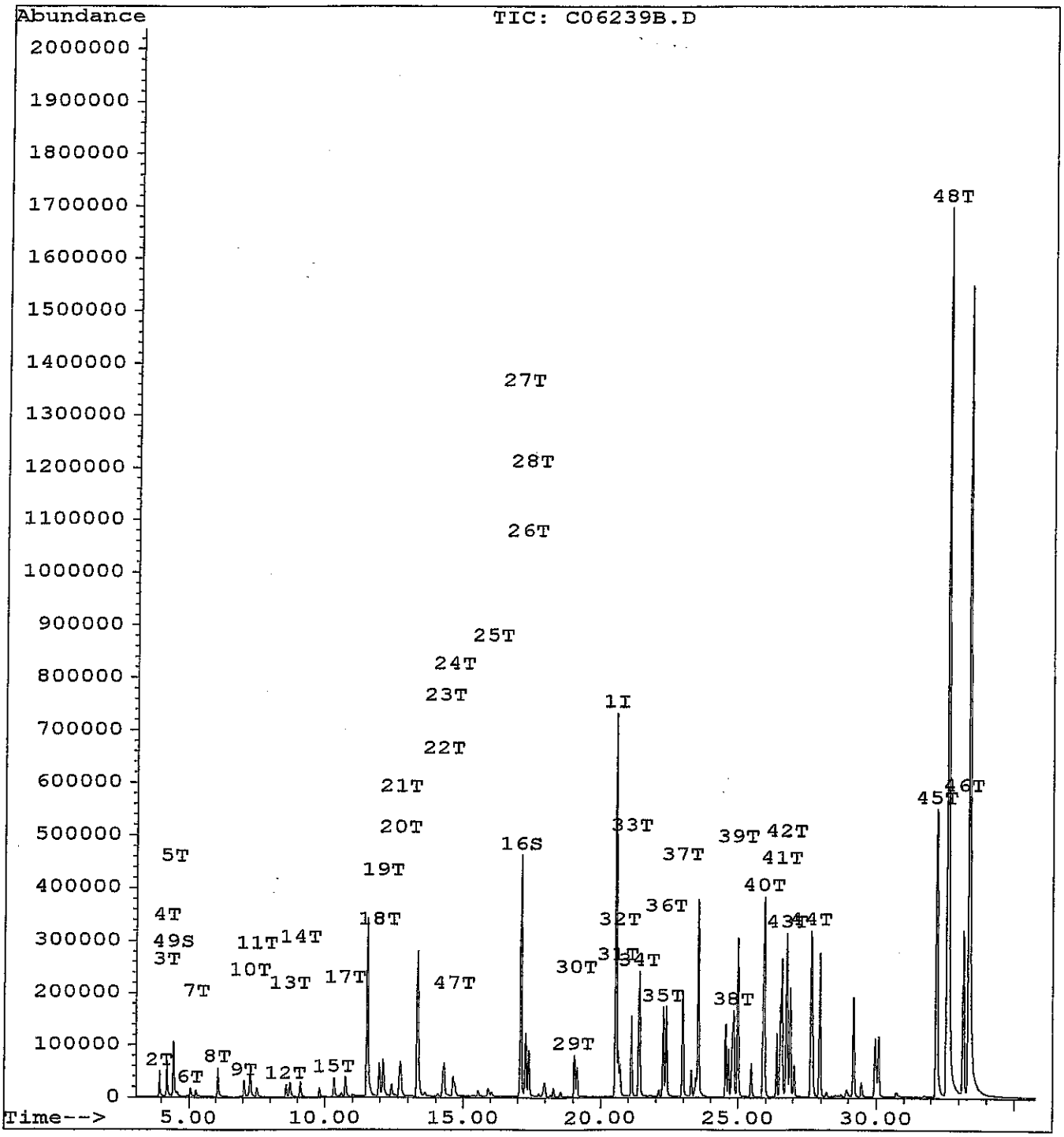
(#) = qualifier out of range (m) = manual integration

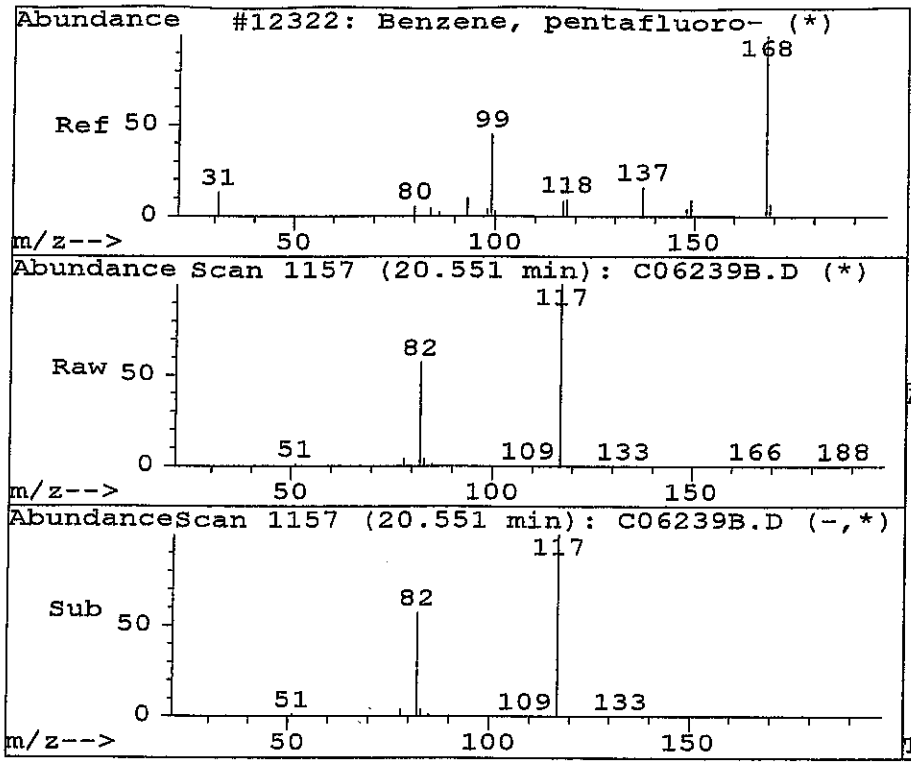
Quantitation Report

Data File : C:\MSCHEM\2\DATA\06239M~1\C06239B.D
Acq Time : 23 Jun 109 10:12 am
Sample : ST60032 + ST60250
Misc :
Quant Time: Jun 29 16:41 19109

Operator: JF
Inst : MS2
Multiplr: 1.00

Method : C:\MSCHEM\2\METHODS\1T15EXAY.M
Title : EPA TO-15
Last Update : Tue Mar 17 14:18:15 2009
Response via : Multiple Level Calibration

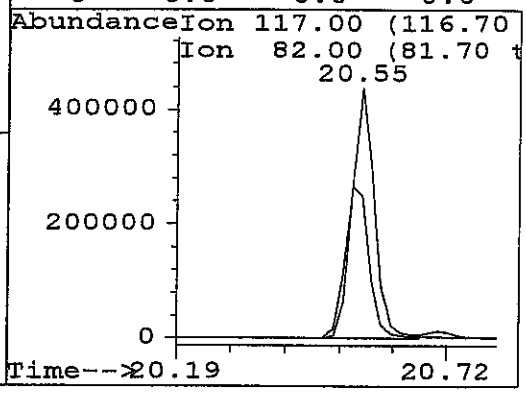


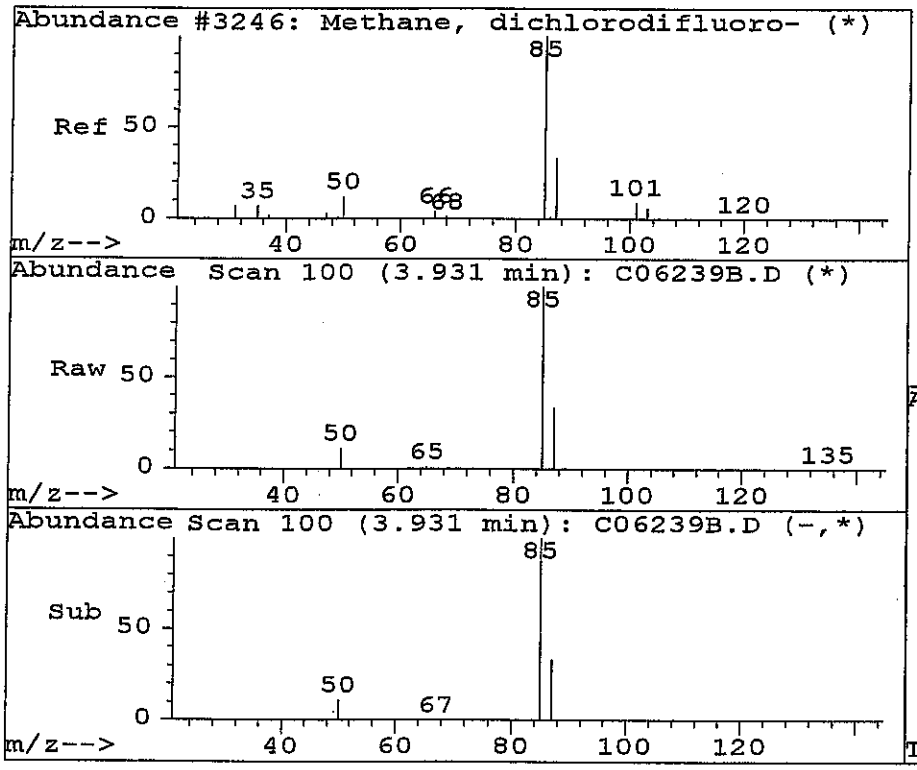


#1
Chlorobenzene-d5
Concen: 0.20 ppbV
RT: 20.55 min Scan# 1157
Delta R.T. 0.04 min
Lab File: C06239B.D
Acq: 23 Jun 109 10:12 am

Tgt Ion:117 Resp: 1373512

Ion	Ratio	Lower	Upper
117	100		
82	56.7	43.5	65.3
0	0.0	0.0	0.0
0	0.0	0.0	0.0

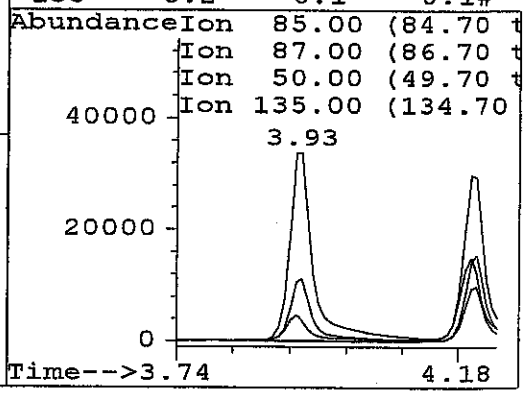


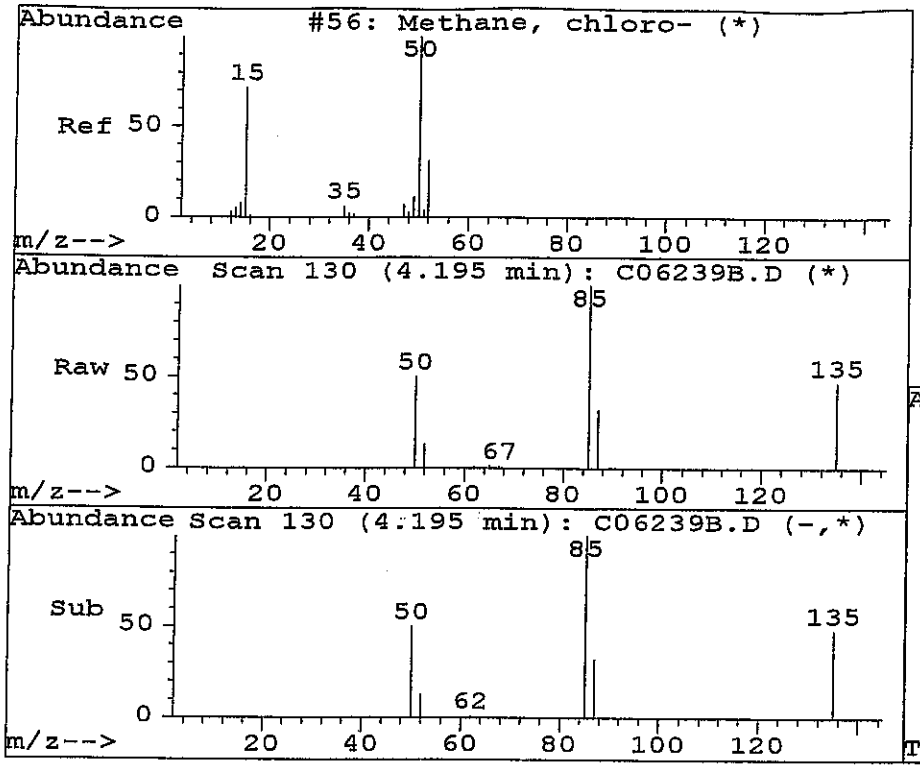


#2
Dichlorodifluoromethane
Concen: 0.11 ppbV m
RT: 3.93 min Scan# 100
Delta R.T. 0.08 min
Lab File: C06239B.D
Acq: 23 Jun 109 10:12 am

Tgt Ion:85 Resp: 90407

Ion	Ratio	Lower	Upper
85	100		
87	33.2	25.6	38.4
50	11.2	8.6	12.8
135	0.2	0.1	0.1#

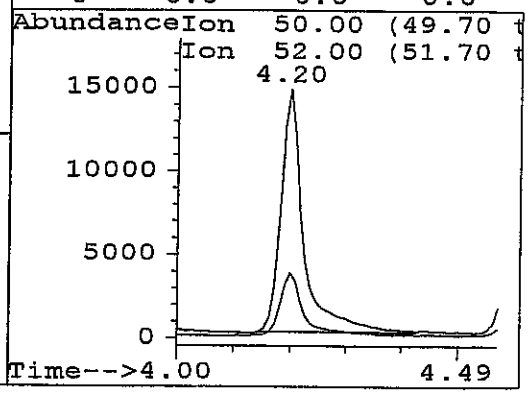


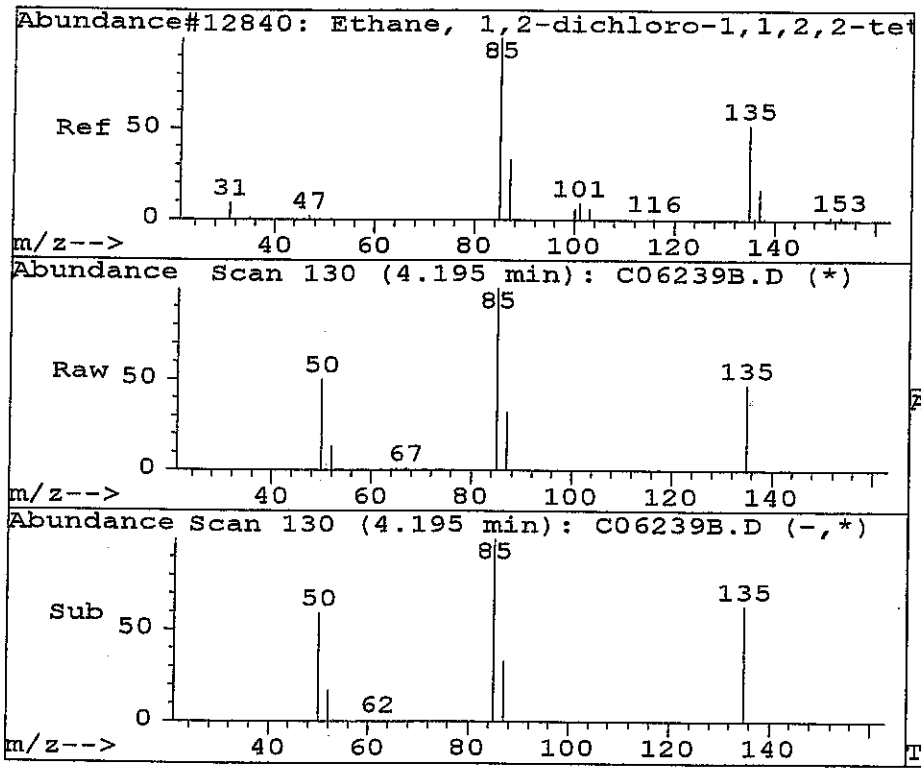


#3
Chloromethane
Concen: 0.11 ppbV
RT: 4.20 min Scan# 130
Delta R.T. 0.08 min
Lab File: C06239B.D
Acq: 23 Jun 109 10:12 am

Tgt Ion:50 Resp: 39981

Ion	Ratio	Lower	Upper
50	100		
52	25.5	21.2	31.8
0	0.0	0.0	0.0
0	0.0	0.0	0.0

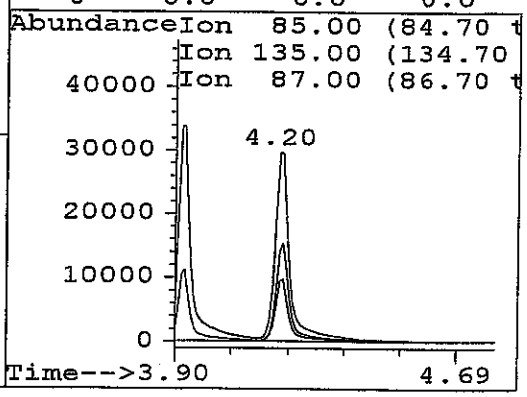


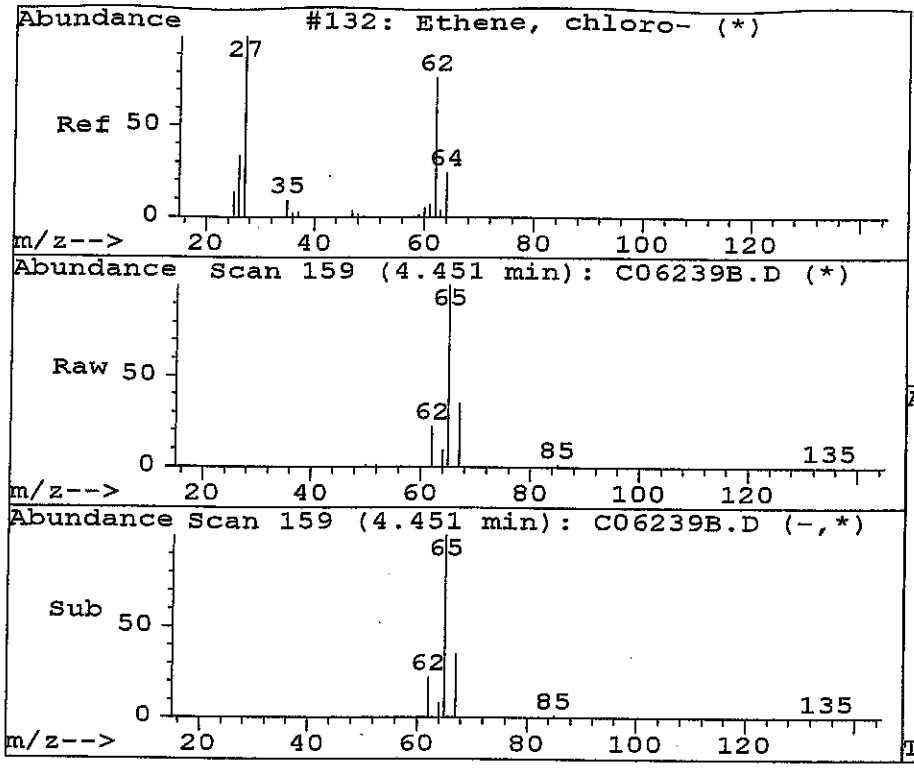


#4
Freon 114
Concen: 0.11 ppbV
RT: 4.20 min Scan# 130
Delta R.T. 0.08 min
Lab File: C06239B.D
Acq: 23 Jun 109 10:12 am

Tgt Ion:85 Resp: 83080

Ion	Ratio	Lower	Upper
85	100		
135	47.5	42.3	63.5
87	31.6	26.0	39.0
0	0.0	0.0	0.0

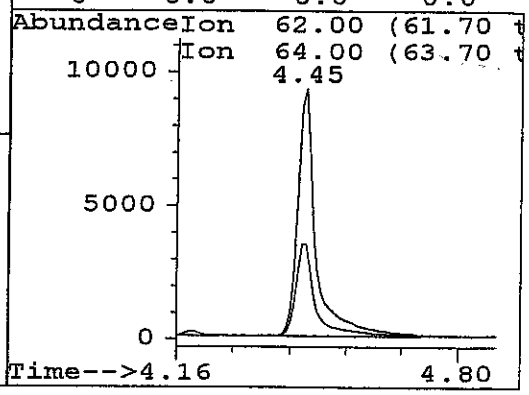


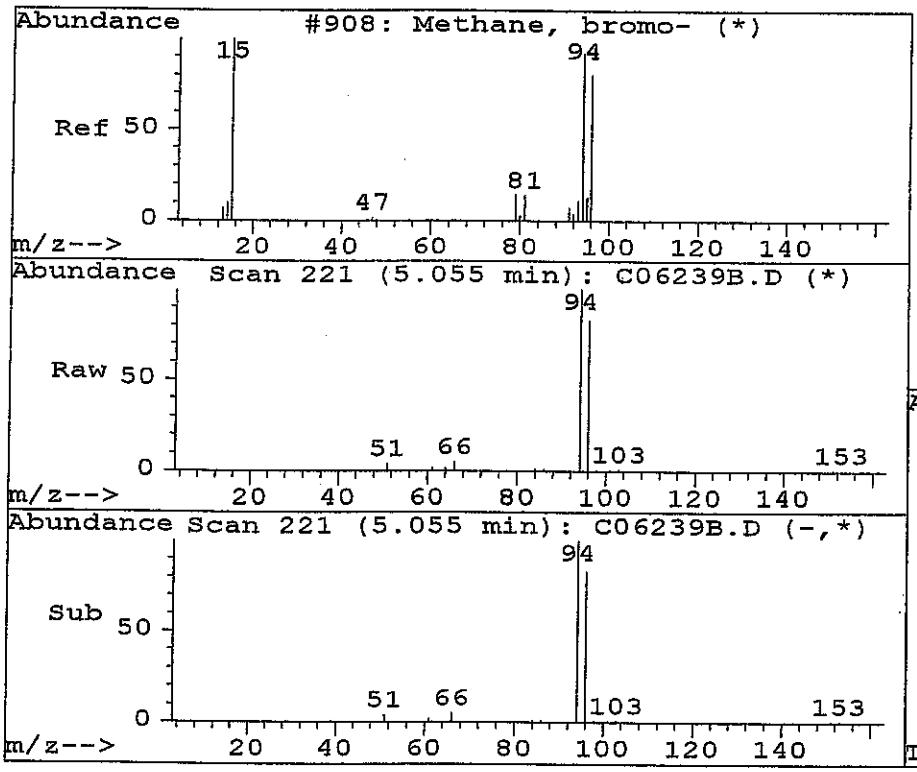


#5
Vinyl chloride
Concen: 0.10 ppbV
RT: 4.45 min Scan# 159
Delta R.T. 0.08 min
Lab File: C06239B.D
Acq: 23 Jun 109 10:12 am

Tgt Ion:62 Resp: 27322

Ion	Ratio	Lower	Upper
62	100		
64	37.2	28.2	42.2
0	0.0	0.0	0.0
0	0.0	0.0	0.0

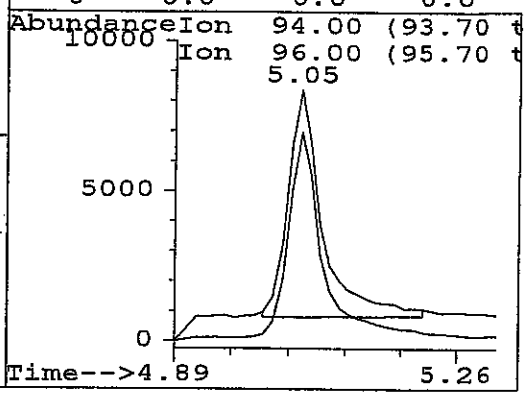


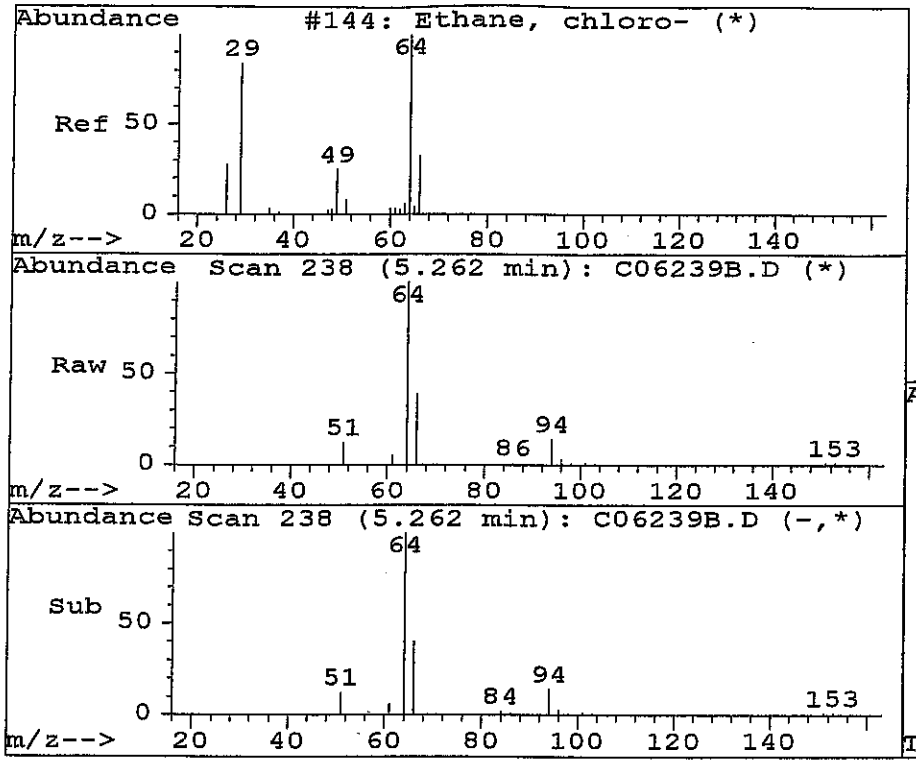


#6
Bromomethane
Concen: 0.09 ppbV m
RT: 5.05 min Scan# 221
Delta R.T. 0.08 min
Lab File: C06239B.D
Acq: 23 Jun 109 10:12 am

Tgt Ion:94 Resp: 23734

Ion	Ratio	Lower	Upper
94	100		
96	83.4	69.4	104.2
0	0.0	0.0	0.0
0	0.0	0.0	0.0

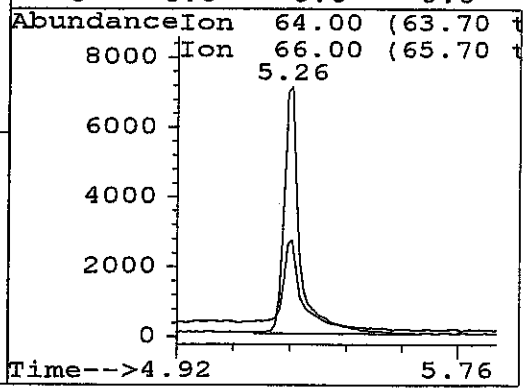


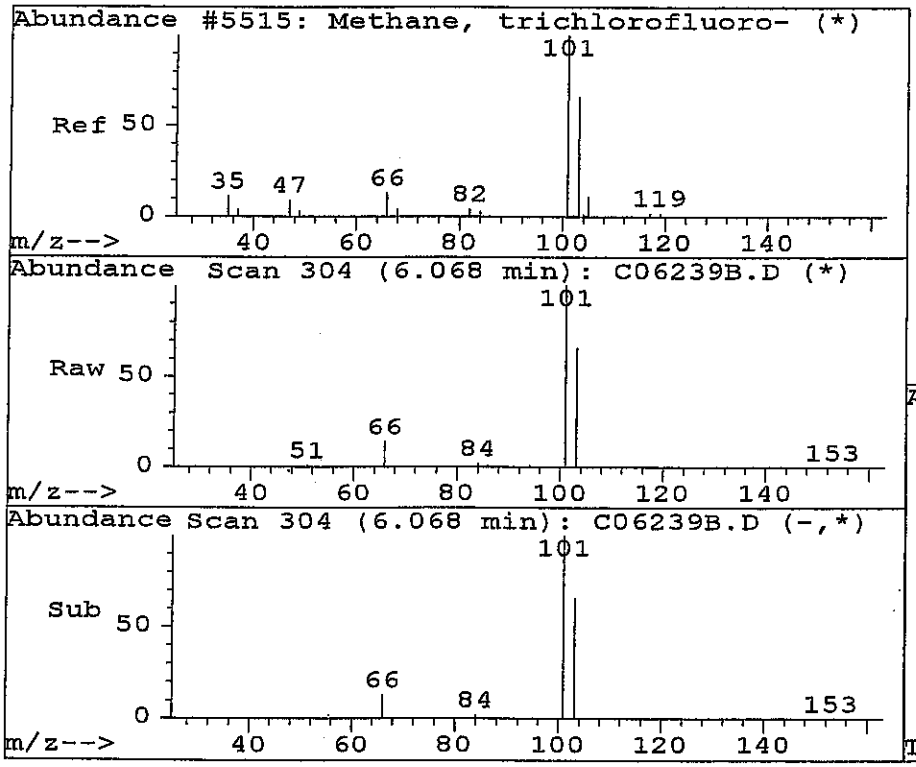


#7
Chloroethane
Concen: 0.10 ppbV
RT: 5.26 min Scan# 238
Delta R.T. 0.08 min
Lab File: C06239B.D
Acq: 23 Jun 109 10:12 am

Tgt Ion:64 Resp: 23597

Ion	Ratio	Lower	Upper
64	100		
66	34.5	26.6	40.0
0	0.0	0.0	0.0
0	0.0	0.0	0.0

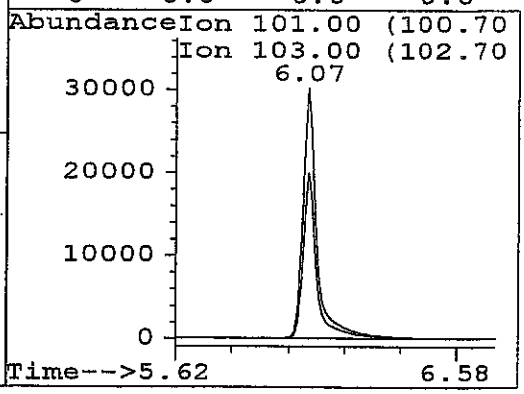


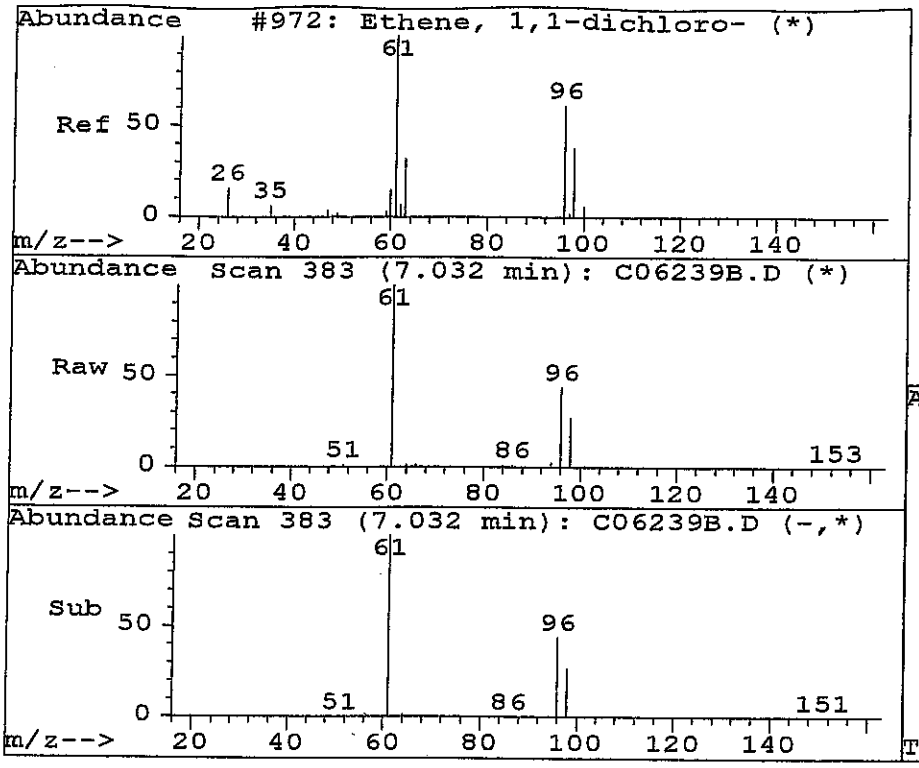


#8
Trichlorofluoromethane
Concen: 0.11 ppbV
RT: 6.07 min Scan# 304
Delta R.T. 0.09 min
Lab File: C06239B.D
Acq: 23 Jun 109 10:12 am

Tgt Ion:101 Resp: 102236

Ion	Ratio	Lower	Upper
101	100		
103	66.2	53.2	79.8
0	0.0	0.0	0.0
0	0.0	0.0	0.0

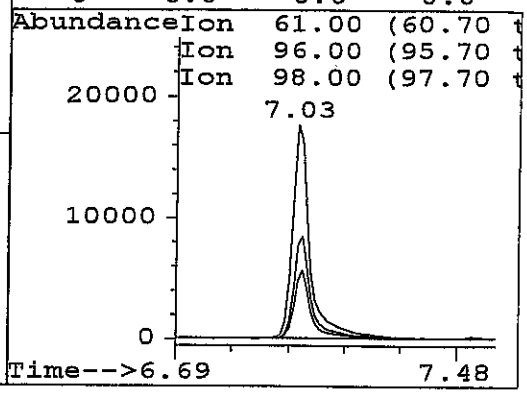


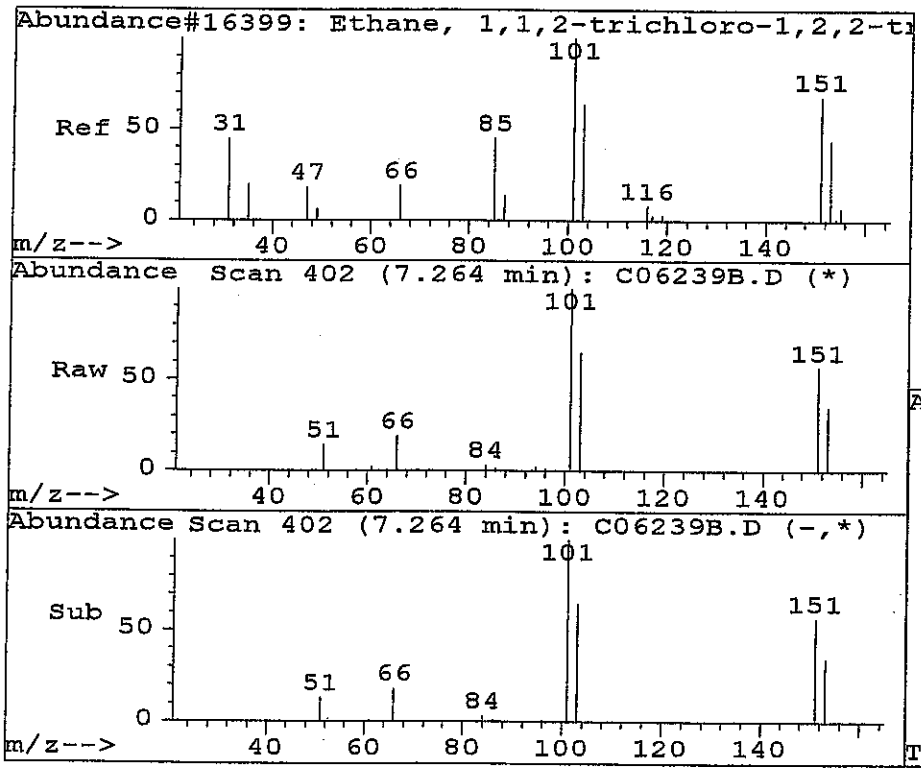


#9
1,1-Dichloroethene
Concen: 0.11 ppbV
RT: 7.03 min Scan# 383
Delta R.T. 0.08 min
Lab File: C06239B.D
Acq: 23 Jun 109 10:12 am

Tgt Ion:61 Resp: 62450

Ion	Ratio	Lower	Upper
61	100		
96	43.6	37.4	56.0
98	27.1	23.1	34.7
0	0.0	0.0	0.0

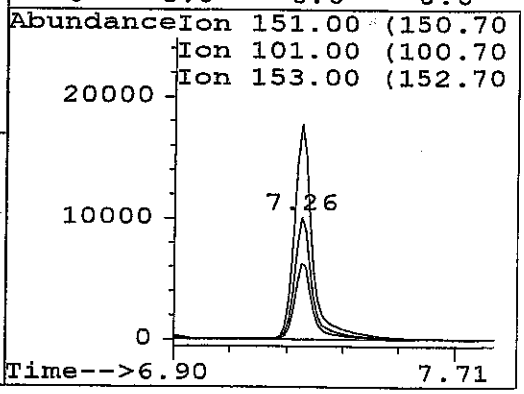


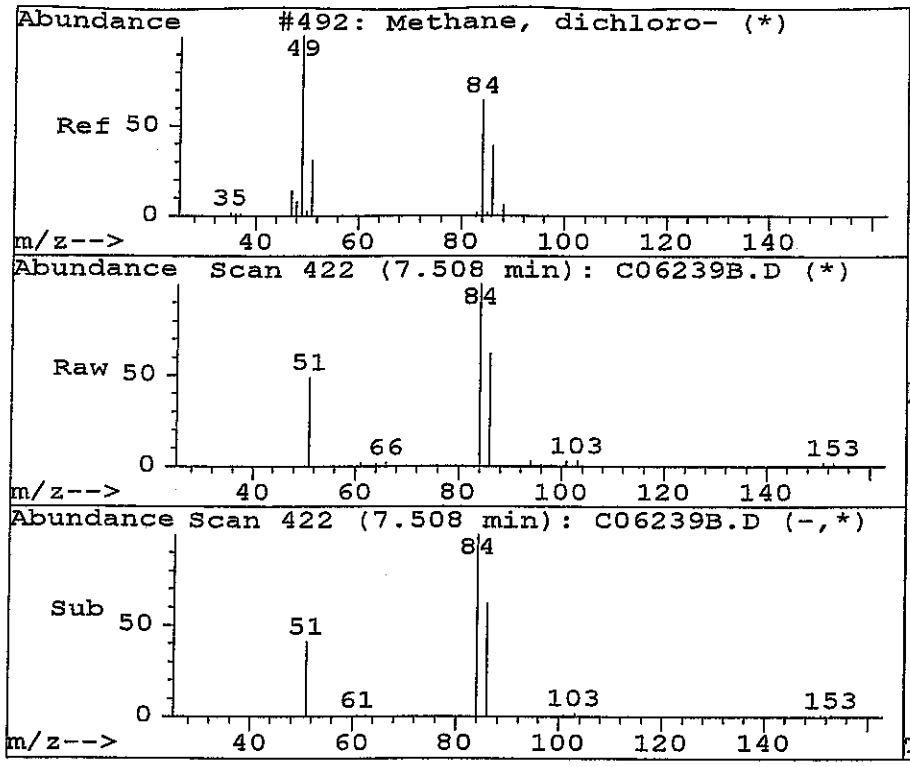


#10
Freon 113
Concen: 0.09 ppbV
RT: 7.26 min Scan# 402
Delta R.T. 0.13 min
Lab File: C06239B.D
Acq: 23 Jun 109 10:12 am

Tgt Ion:151 Resp: 37523

Ion	Ratio	Lower	Upper
151	100		
101	176.1	135.8	203.6
153	62.1	50.0	75.0
0	0.0	0.0	0.0

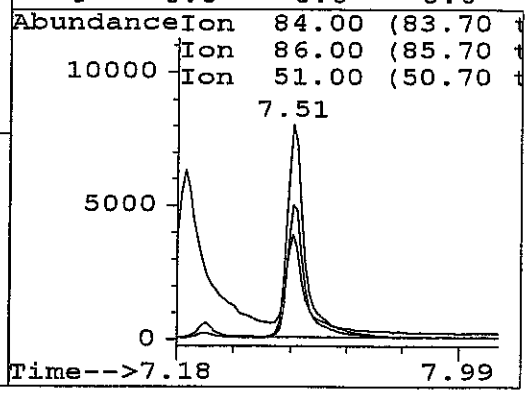


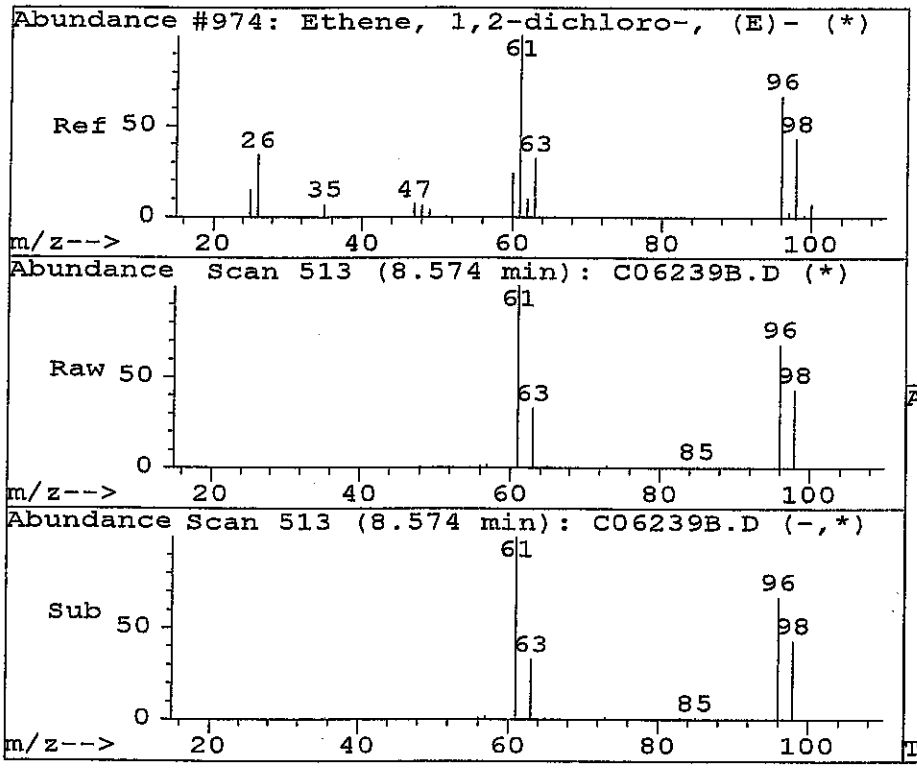


#11
Dichloromethane
Concen: 0.10 ppbV
RT: 7.51 min Scan# 422
Delta R.T. 0.09 min
Lab File: C06239B.D
Acq: 23 Jun 109 10:12 am

Tgt Ion:84 Resp: 28508

Ion	Ratio	Lower	Upper
84	100		
86	62.0	51.3	76.9
51	43.1	27.4	41.0#
0	0.0	0.0	0.0

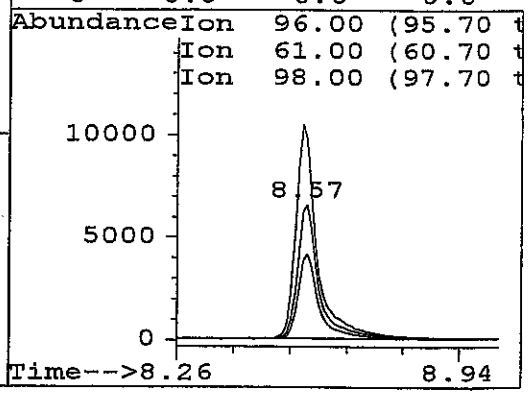


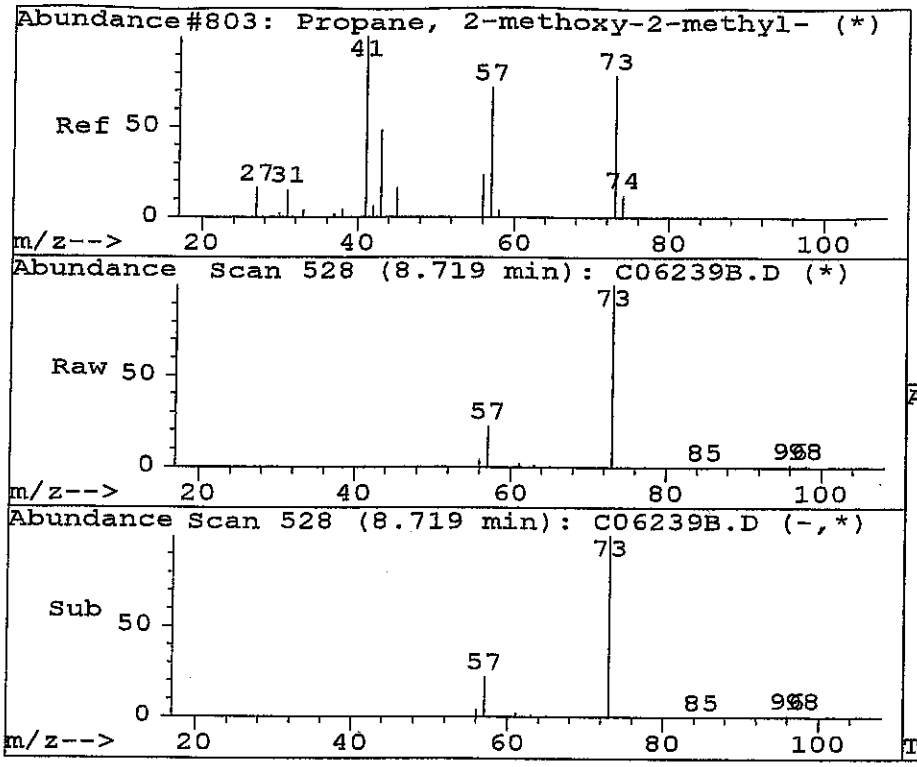


#12
trans-1,2-Dichloroethene
Concen: 0.07 ppbV
RT: 8.57 min Scan# 513
Delta R.T. 0.09 min
Lab File: C06239B.D
Acq: 23 Jun 109 10:12 am

Tgt Ion:96 Resp: 23642

Ion	Ratio	Lower	Upper
96	100		
61	148.2	111.4	167.2
98	63.3	51.7	77.5
0	0.0	0.0	0.0

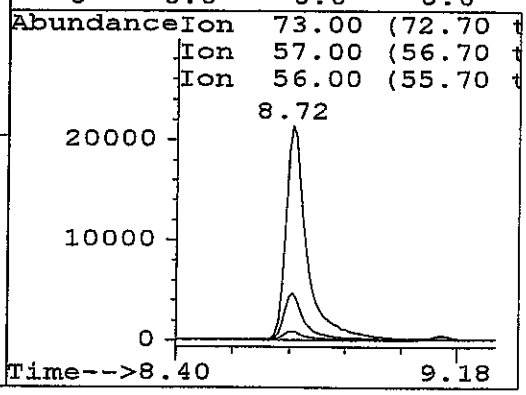


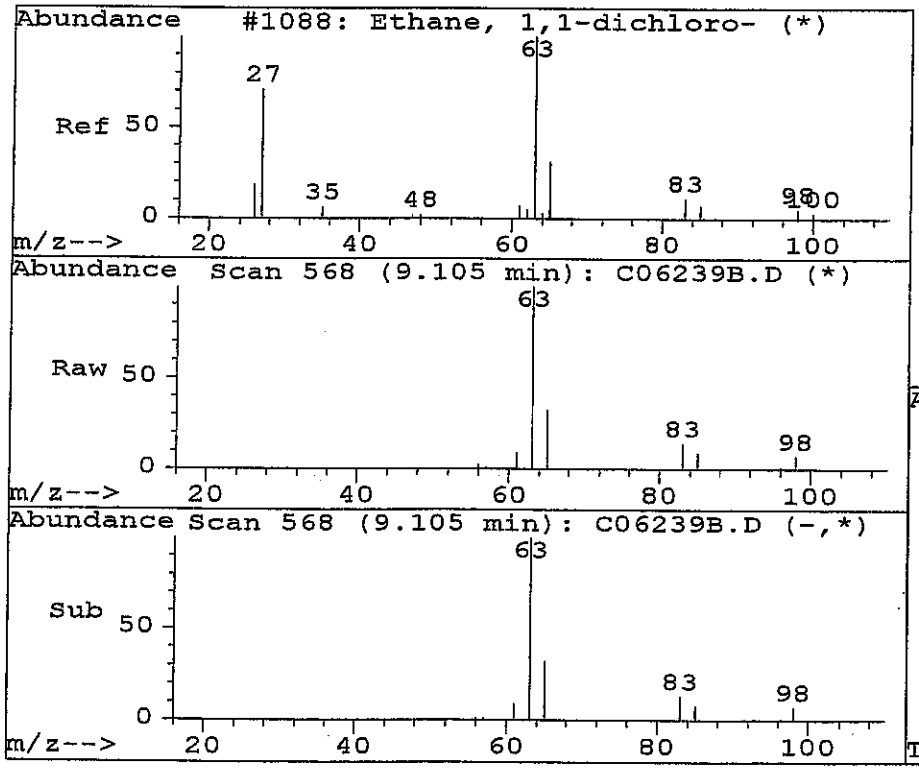


#13
Methyl tert butyl ether
Concen: 0.08 ppbV
RT: 8.72 min Scan# 528
Delta R.T. 0.12 min
Lab File: C06239B.D
Acq: 23 Jun 109 10:12 am

Tgt Ion:73 Resp: 88728

Ion	Ratio	Lower	Upper
73	100		
57	21.6	16.0	24.0
56	3.6	2.6	3.8
0	0.0	0.0	0.0

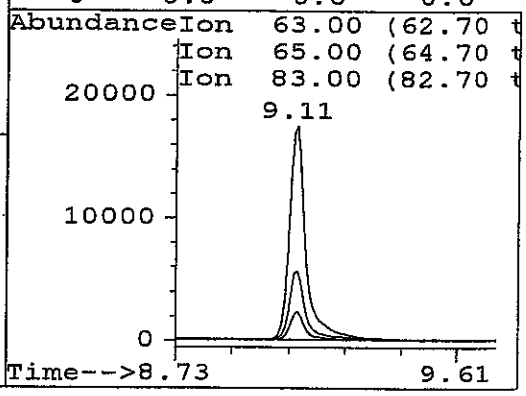


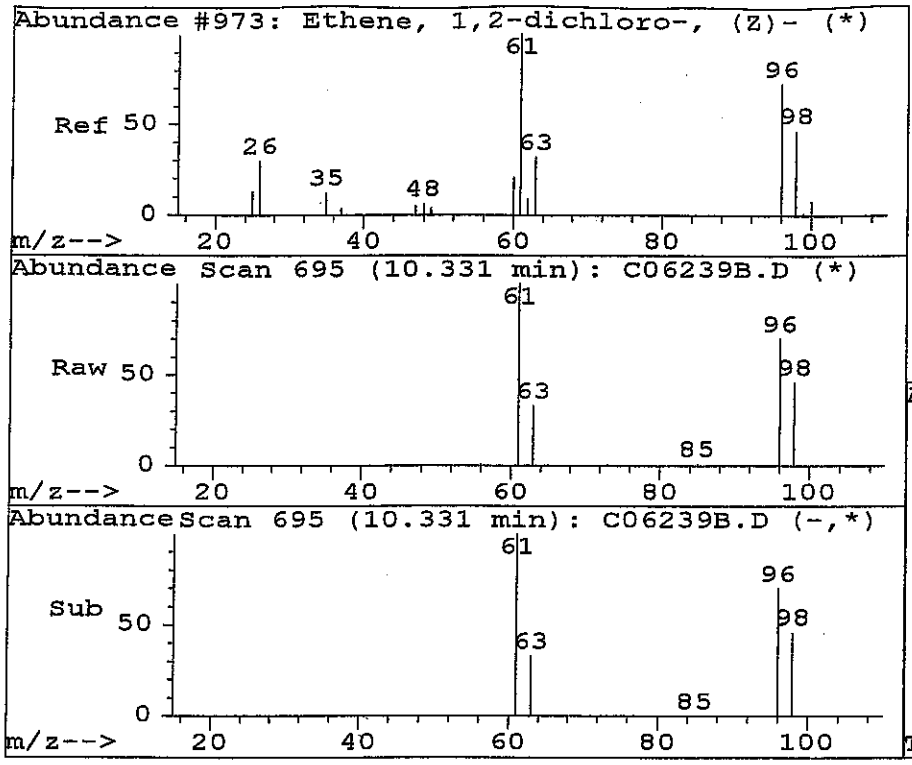


#14
1,1-Dichloroethane
Concen: 0.10 ppbV
RT: 9.11 min Scan# 568
Delta R.T. 0.11 min
Lab File: C06239B.D
Acq: 23 Jun 109 10:12 am

Tgt Ion:63 Resp: 63336

Ion	Ratio	Lower	Upper
63	100		
65	31.7	24.9	37.3
83	13.1	10.3	15.5
0	0.0	0.0	0.0

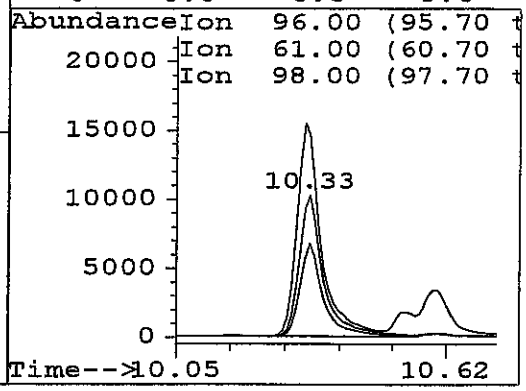


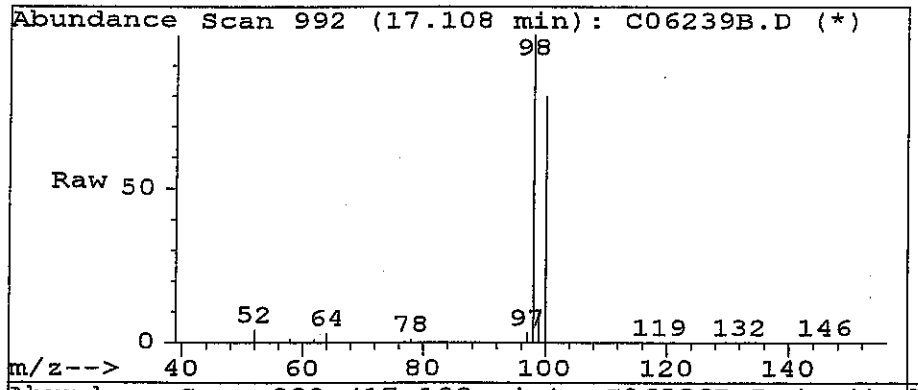


#15
cis-1,2-Dichloroethene
Concen: 0.10 ppbV
RT: 10.33 min Scan# 695
Delta R.T. 0.09 min
Lab File: C06239B.D
Acq: 23 Jun 109 10:12 am

Tgt Ion:96 Resp: 37036

Ion	Ratio	Lower	Upper
96	100		
61	135.7	102.0	153.0
98	65.8	52.2	78.2
0	0.0	0.0	0.0

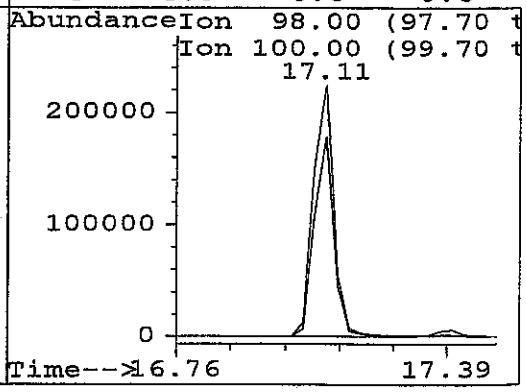


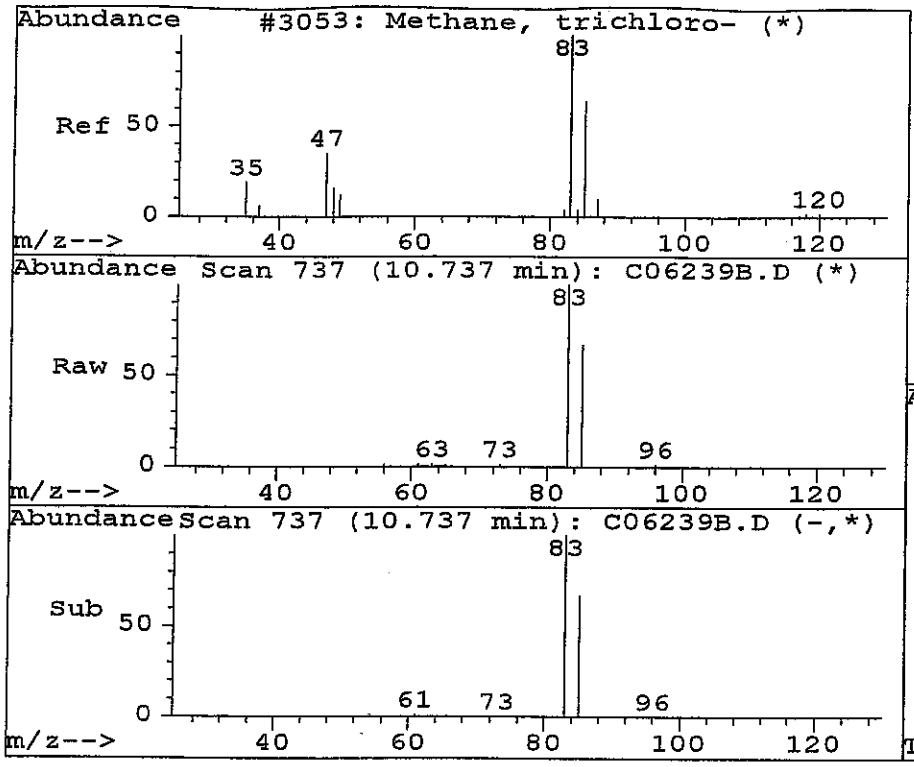


#16
Toluene-d8
Concen: 0.25 ppbV
RT: 17.11 min Scan# 992
Delta R.T. 0.06 min
Lab File: C06239B.D
Acq: 23 Jun 109 10:12 am

Tgt Ion:98 Resp: 732353

Ion	Ratio	Lower	Upper
98	100		
100	76.3	59.5	89.3
0	0.0	0.0	0.0
0	0.0	0.0	0.0

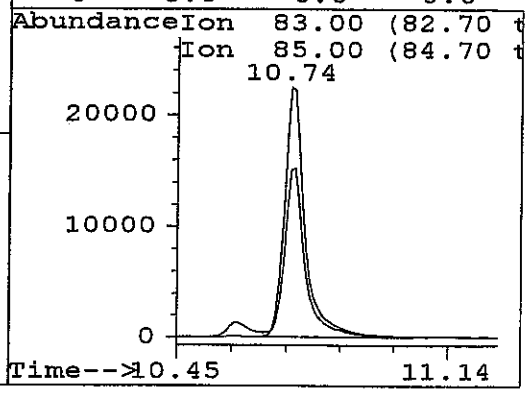


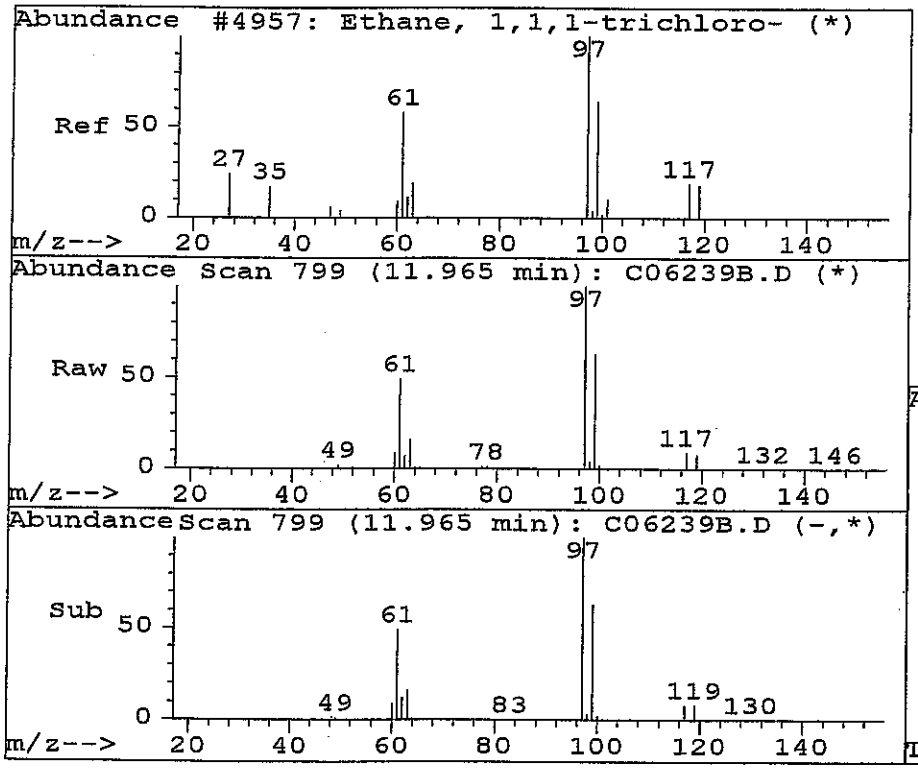


#17
Chloroform
Concen: 0.12 ppbV
RT: 10.74 min Scan# 737
Delta R.T. 0.08 min
Lab File: C06239B.D
Acq: 23 Jun 109 10:12 am

Tgt Ion:83 Resp: 94006

Ion	Ratio	Lower	Upper
83	100		
85	66.0	52.2	78.4
0	0.0	0.0	0.0
0	0.0	0.0	0.0

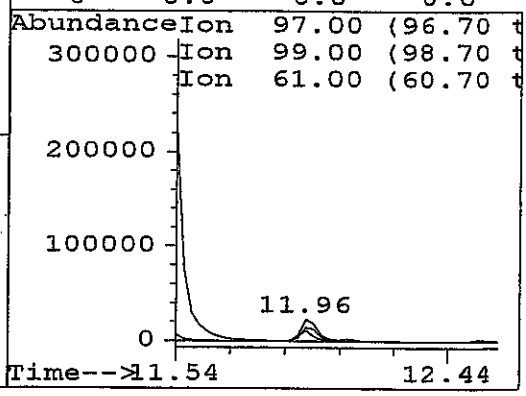


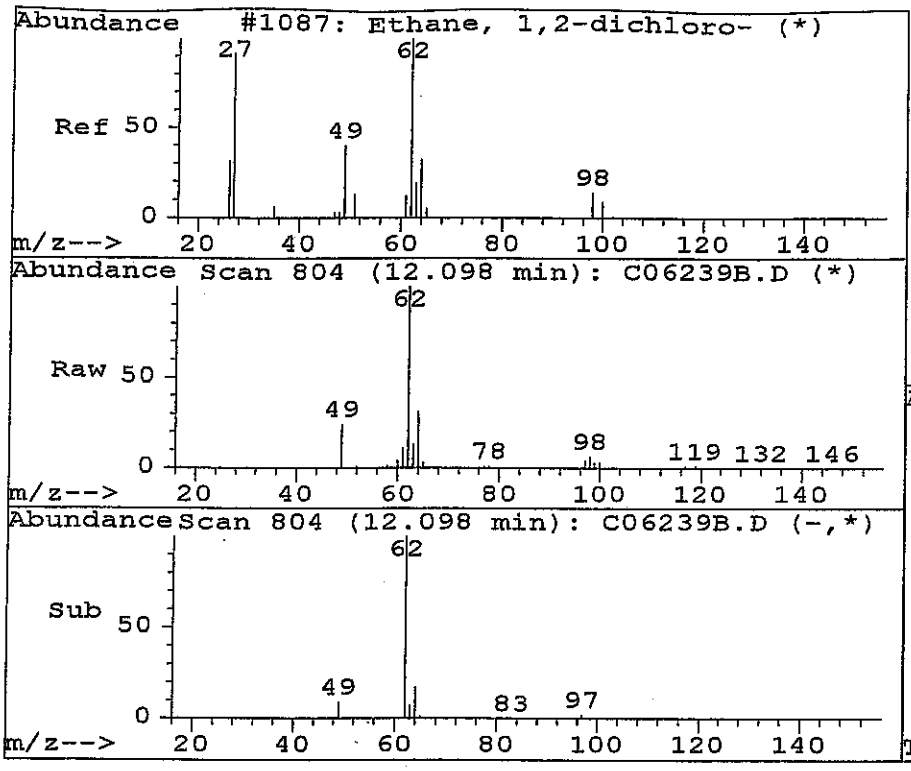


#18
1,1,1-Trichloroethane
Concen: 0.10 ppbV
RT: 11.96 min Scan# 799
Delta R.T. 0.05 min
Lab File: C06239B.D
Acq: 23 Jun 109 10:12 am

Tgt Ion:97 Resp: 93554

Ion	Ratio	Lower	Upper
97	100		
99	61.3	53.2	79.8
61	48.7	24.2	36.4#
0	0.0	0.0	0.0

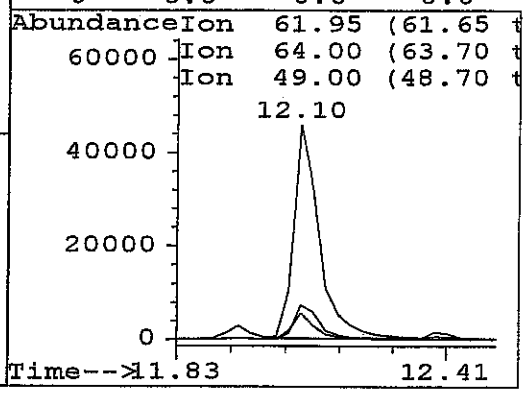


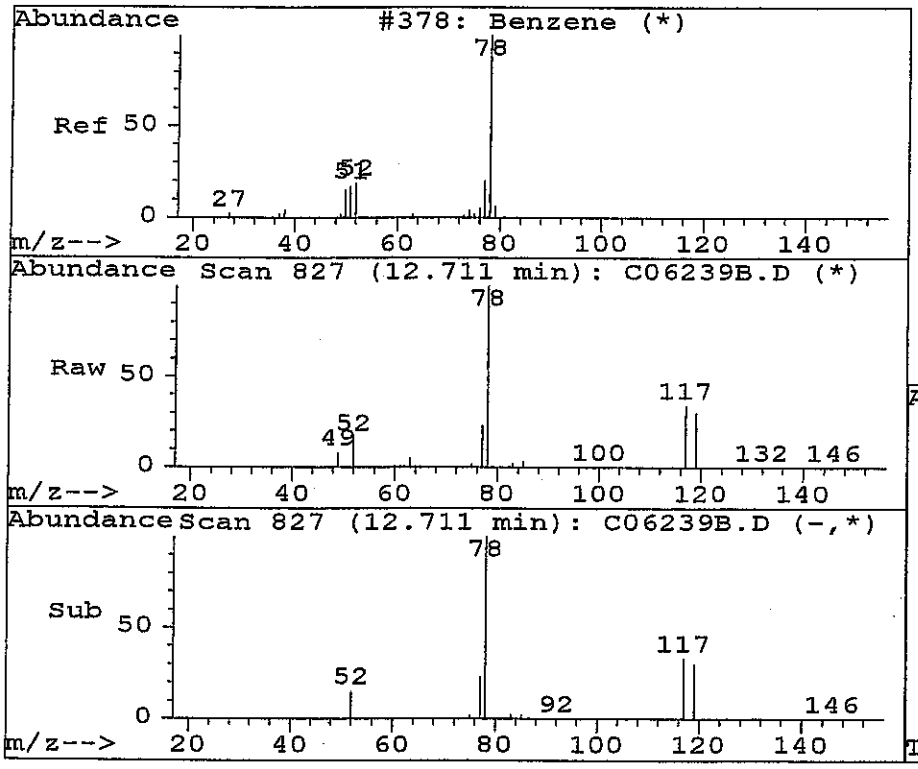


#19
1,2-Dichloroethane
Concen: 0.11 ppbV
RT: 12.10 min Scan# 804
Delta R.T. 0.08 min
Lab File: C06239B.D
Acq: 23 Jun 109 10:12 am

Tgt Ion:61.95 Resp: 17653

Ion	Ratio	Lower	Upper
62	100		
64	15.8	13.8	20.6
49	11.9	8.9	13.3
0	0.0	0.0	0.0

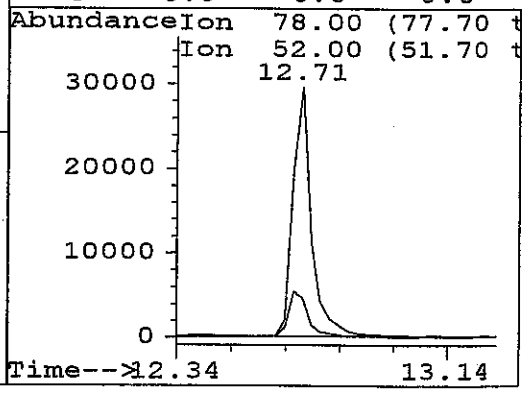


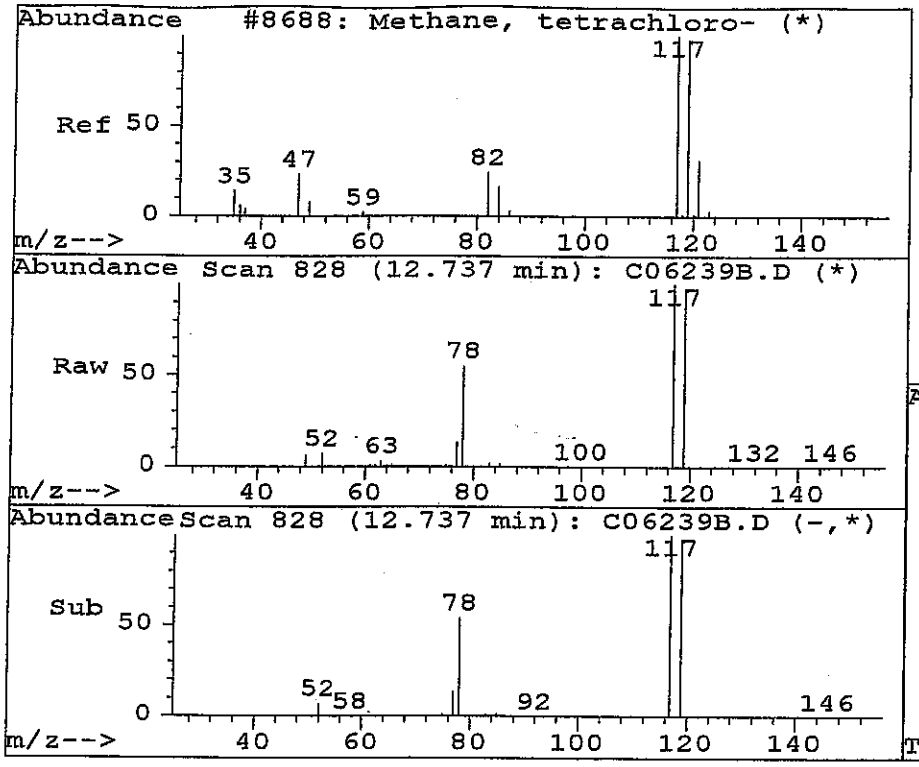


#20
Benzene
Concen: 0.09 ppbV
RT: 12.71 min Scan# 827
Delta R.T. 0.08 min
Lab File: C06239B.D
Acq: 23 Jun 109 10:12 am

Tgt Ion:78 Resp: 114787

Ion	Ratio	Lower	Upper
78	100		
52	15.3	15.6	23.4#
0	0.0	0.0	0.0
0	0.0	0.0	0.0

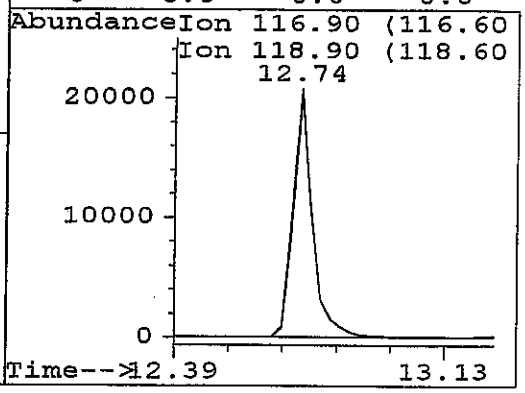


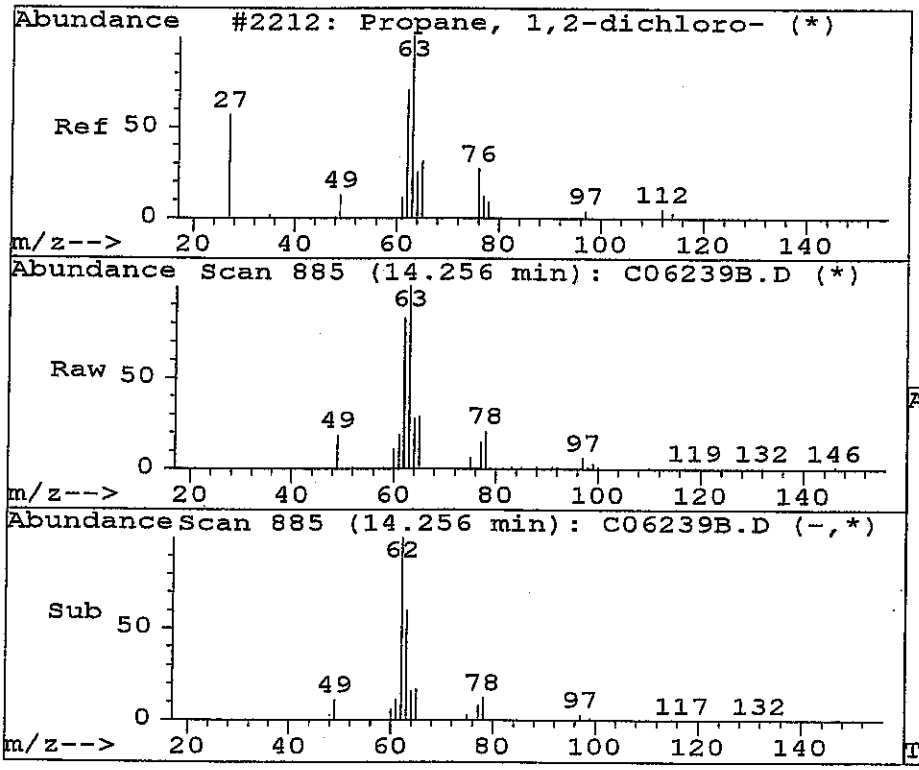


#21
Carbon tetrachloride
Concen: 0.10 ppbV
RT: 12.74 min Scan# 828
Delta R.T. 0.08 min
Lab File: C06239B.D
Acq: 23 Jun 109 10:12 am

Tgt Ion:116.9 Resp: 7761

Ion	Ratio	Lower	Upper
117	100		
119	97.5	79.4	119.2
0	0.0	0.0	0.0
0	0.0	0.0	0.0

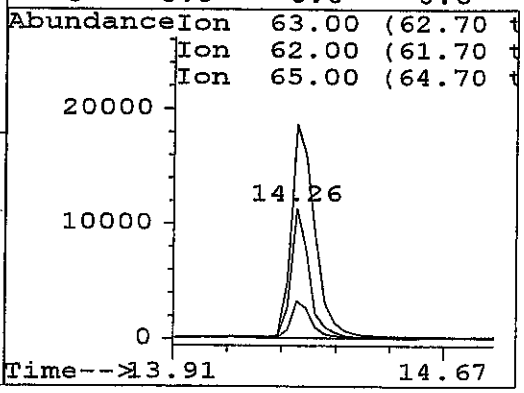


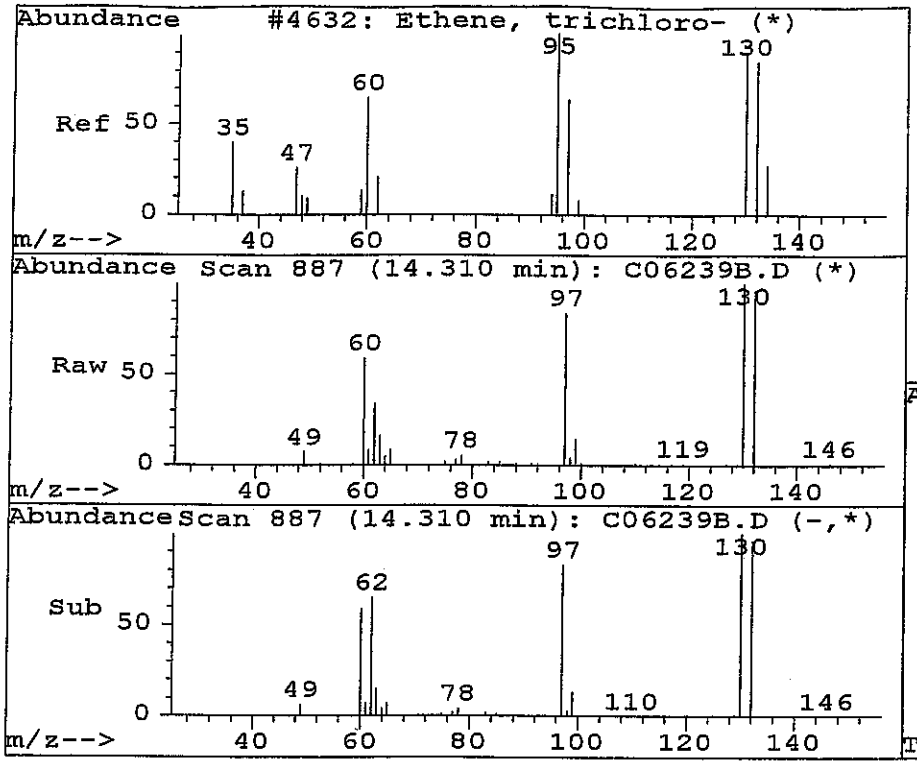


#22
1,2-Dichloropropane
Concen: 0.10 ppbV
RT: 14.26 min Scan# 885
Delta R.T. 0.06 min
Lab File: C06239B.D
Acq: 23 Jun 109 10:12 am

Tgt Ion:63 Resp: 41084

Ion	Ratio	Lower	Upper
63	100		
62	164.8	125.8	188.6
65	28.2	22.2	33.2
0	0.0	0.0	0.0

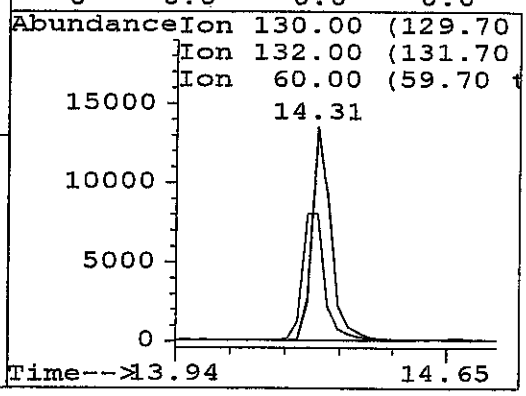


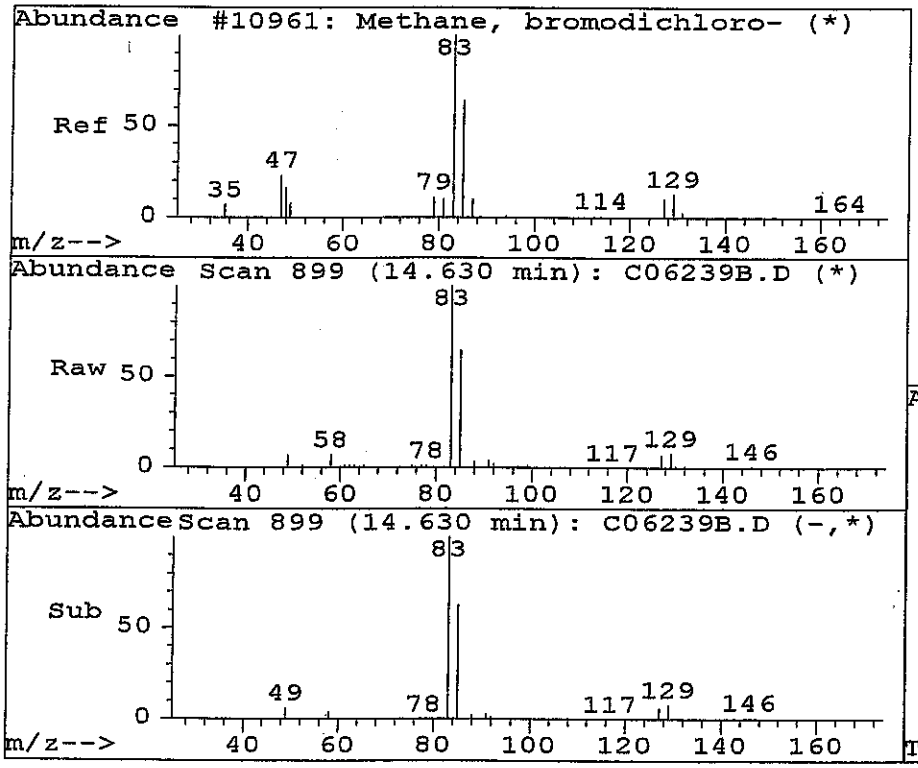


#23
Trichloroethene
Concen: 0.09 ppbV
RT: 14.31 min Scan# 887
Delta R.T. 0.05 min
Lab File: C06239B.D
Acq: 23 Jun 109 10:12 am

Tgt Ion:130 Resp: 47106

Ion	Ratio	Lower	Upper
130	100		
132	95.7	74.6	112.0
60	58.6	41.6	62.4
0	0.0	0.0	0.0

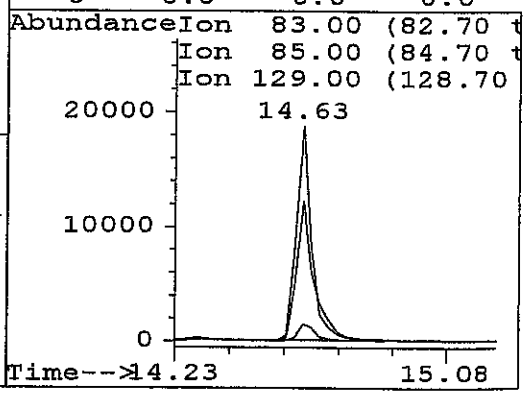


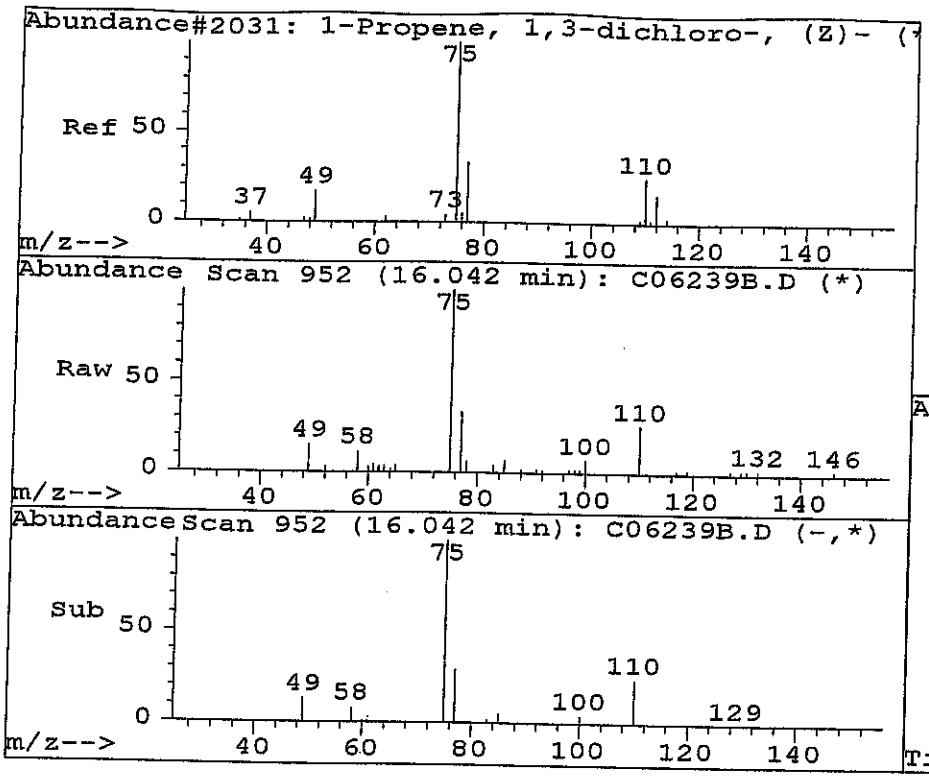


#24
Bromodichloromethane
Concen: 0.07 ppbV
RT: 14.63 min Scan# 899
Delta R.T. 0.06 min
Lab File: C06239B.D
Acq: 23 Jun 109 10:12 am

Tgt Ion:83 Resp: 63995

Ion	Ratio	Lower	Upper
83	100		
85	65.2	52.0	78.0
129	7.6	5.7	8.5
0	0.0	0.0	0.0

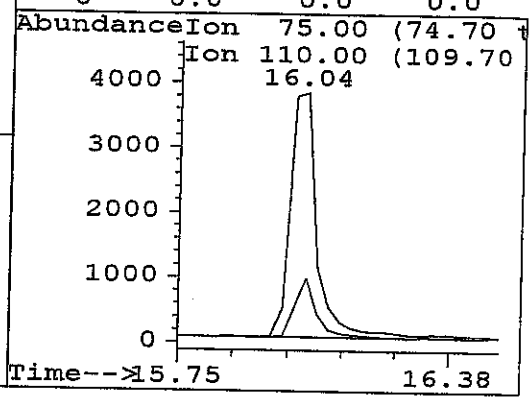


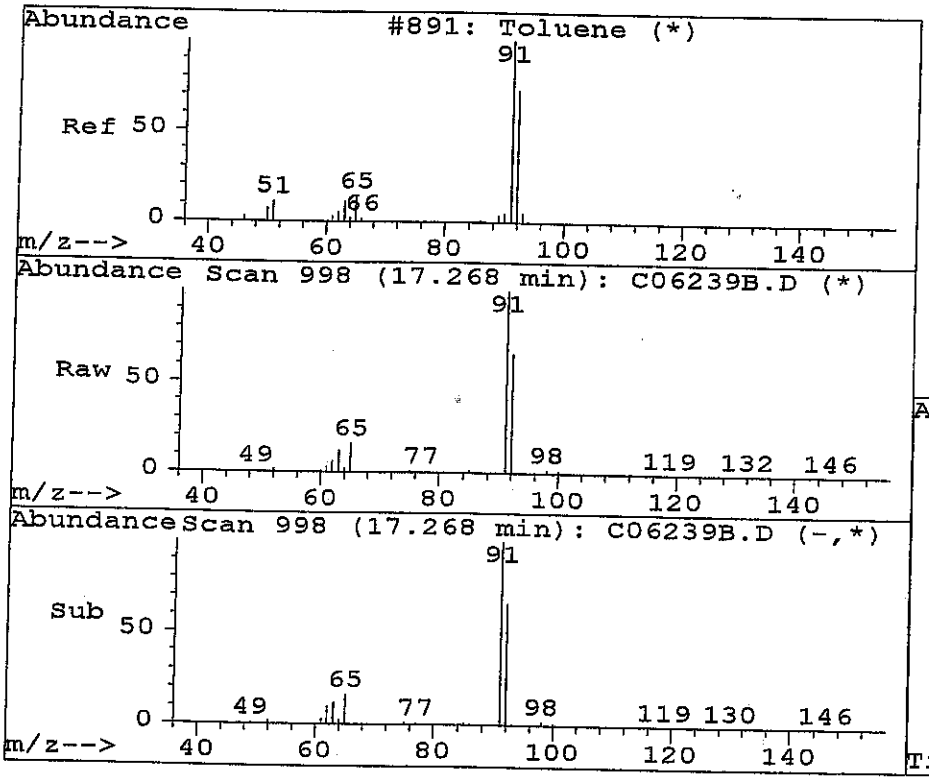


#25
cis-1,3-Dichloropropene
Concen: 0.04 ppbV
RT: 16.04 min Scan# 952
Delta R.T. 0.08 min
Lab File: C06239B.D
Acq: 23 Jun 109 10:12 am

Tgt Ion:75 Resp: 16397

Ion	Ratio	Lower	Upper
75	100		
110	24.1	16.2	24.2
0	0.0	0.0	0.0
0	0.0	0.0	0.0

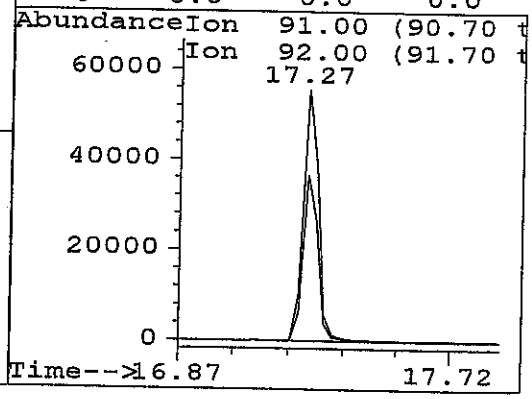


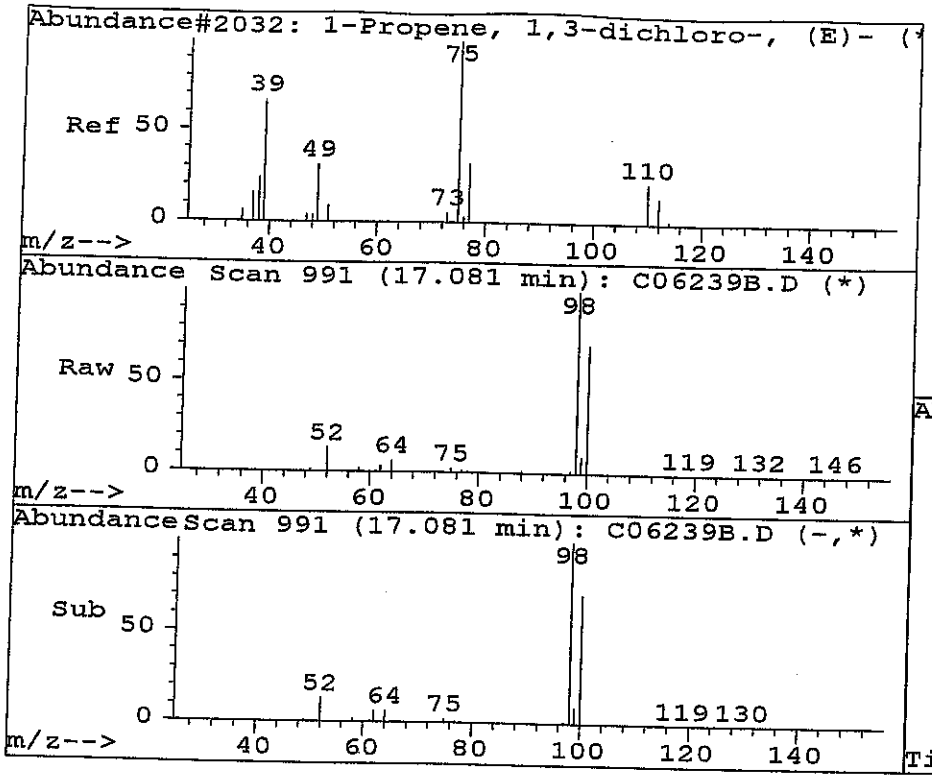


#26
Toluene
Concen: 0.10 ppbV
RT: 17.27 min Scan# 998
Delta R.T. 0.06 min
Lab File: C06239B.D
Acq: 23 Jun 109 10:12 am

Tgt Ion:91 Resp: 181249

Ion	Ratio	Lower	Upper
91	100		
92	66.0	53.2	79.8
0	0.0	0.0	0.0
0	0.0	0.0	0.0

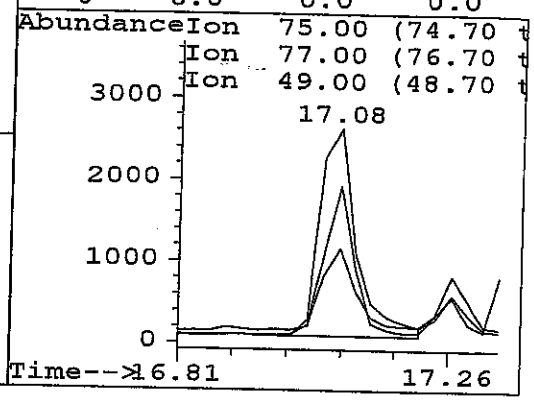


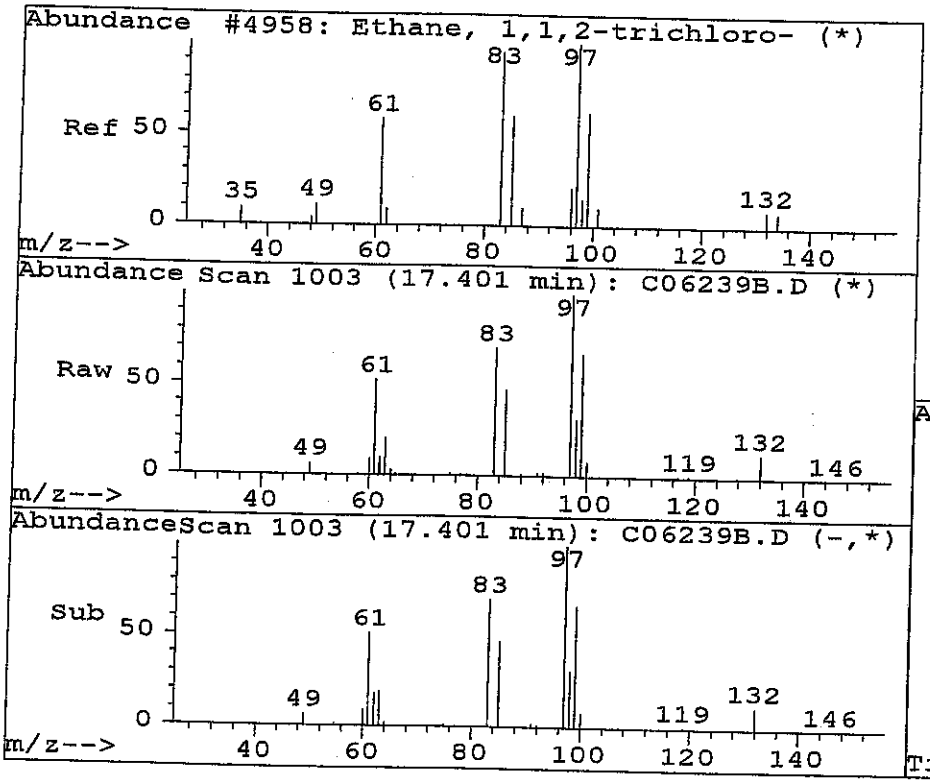


#27
trans-1,3-Dichloropropene
Concen: 0.03 ppbV
RT: 17.08 min Scan# 991
Delta R.T. 0.08 min
Lab File: C06239B.D
Acq: 23 Jun 109 10:12 am

Tgt Ion:75 Resp: 10871

Ion	Ratio	Lower	Upper
75	100		
77	39.7	30.1	45.1
49	73.0	44.2	66.2#
0	0.0	0.0	0.0

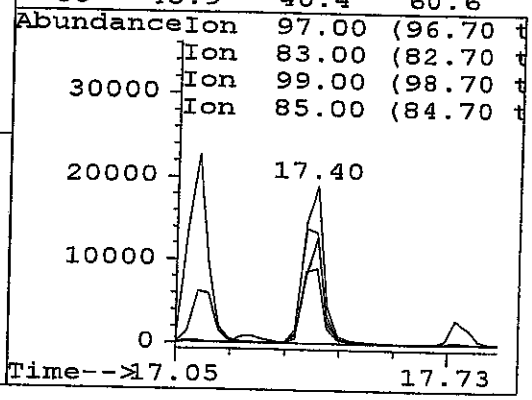


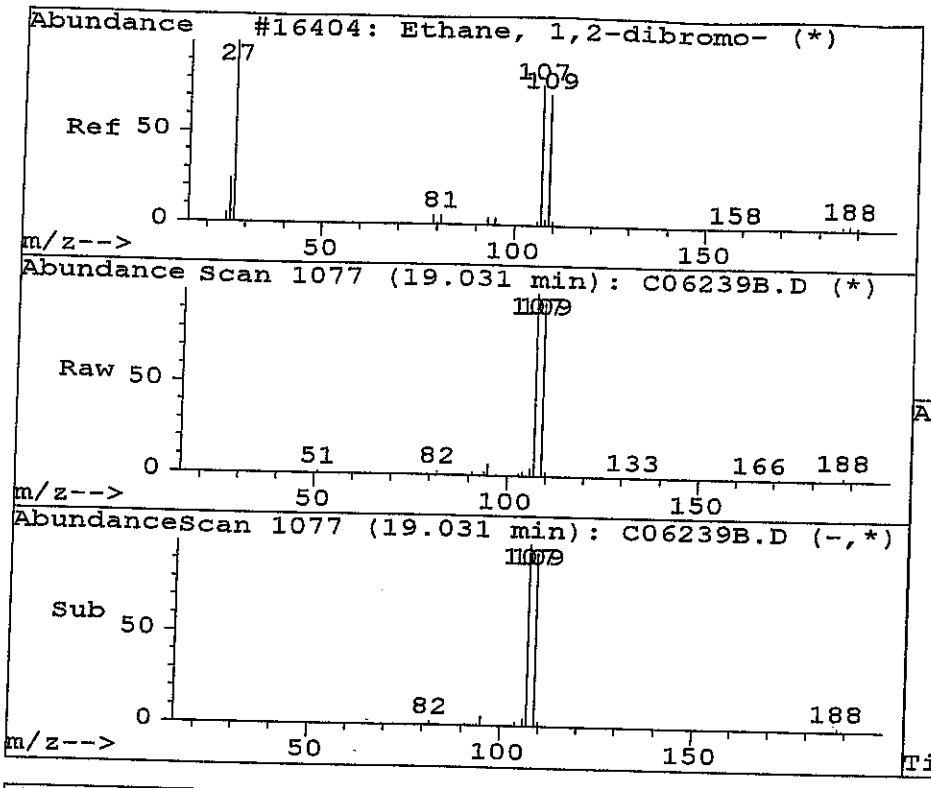


#28
1,1,2-Trichloroethane
Concen: 0.09 ppbV
RT: 17.40 min Scan# 1003
Delta R.T. 0.05 min
Lab File: C06239B.D
Acq: 23 Jun 109 10:12 am

Tgt Ion:97 Resp: 65904

Ion	Ratio	Lower	Upper
97	100		
83	69.9	62.7	94.1
99	66.6	48.7	73.1
85	45.9	40.4	60.6

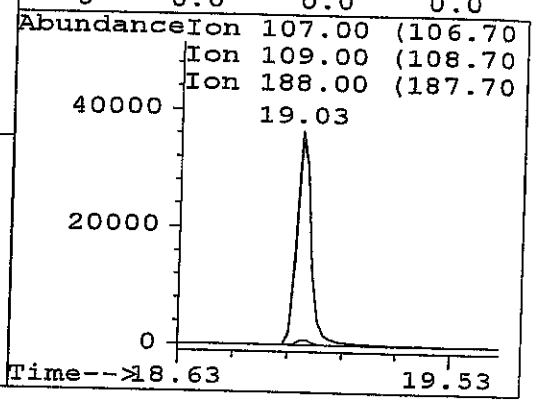


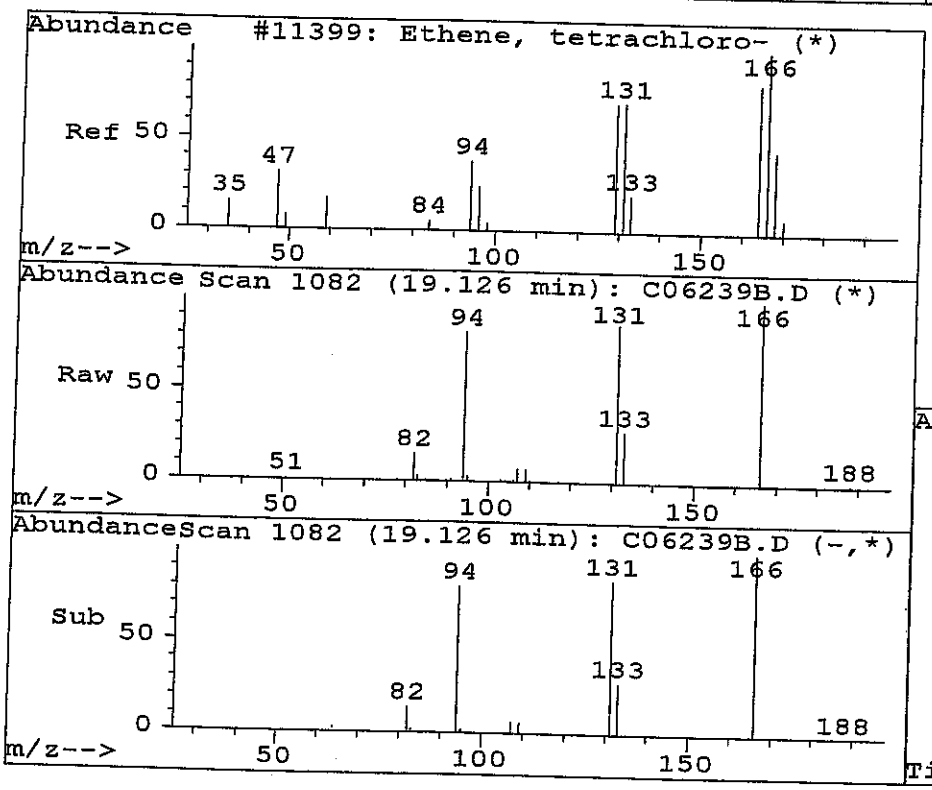


#29
1,2-Dibromoethane
Concen: 0.09 ppbV
RT: 19.03 min Scan# 1077
Delta R.T. 0.04 min
Lab File: C06239B.D
Acq: 23 Jun 109 10:12 am

Tgt Ion:107 Resp: 124715

Ion	Ratio	Lower	Upper
107	100		
109	94.6	75.9	113.9
188	2.1	1.7	2.5
0	0.0	0.0	0.0

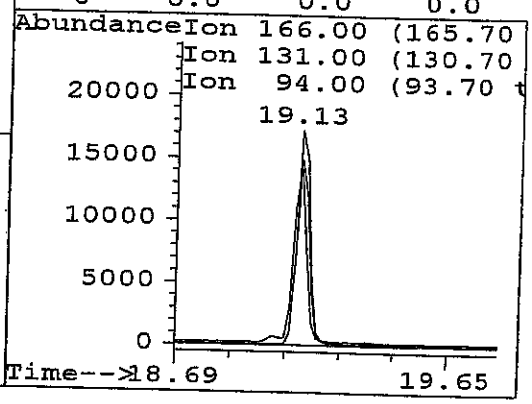


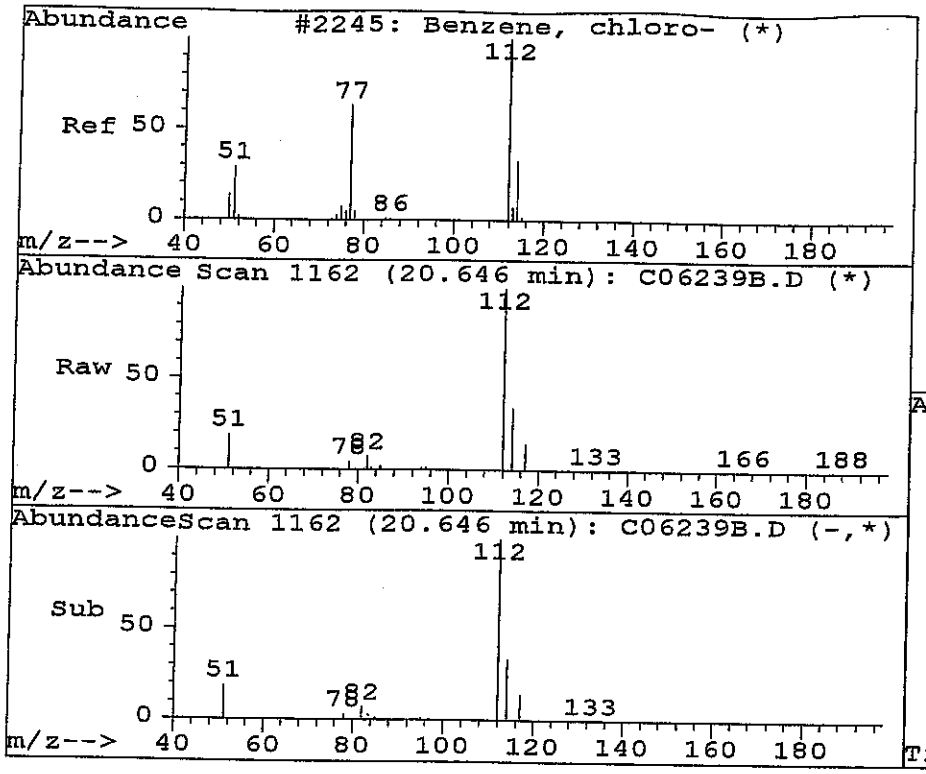


#30
Tetrachloroethene
Concen: 0.09 ppbV
RT: 19.13 min Scan# 1082
Delta R.T. 0.04 min
Lab File: C06239B.D
Acq: 23 Jun 109 10:12 am

Tgt Ion:166 Resp: 54407

Ion	Ratio	Lower	Upper
166	100		
131	86.5	64.4	96.6
94	80.8	53.6	80.4#
0	0.0	0.0	0.0

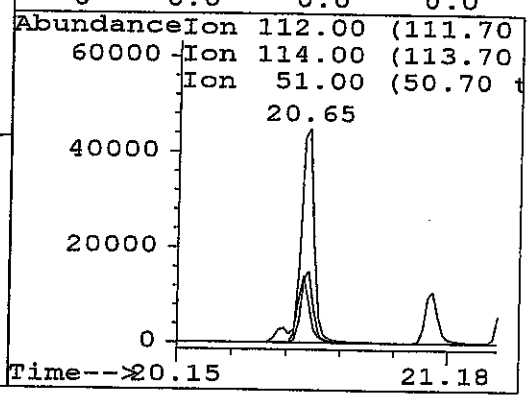


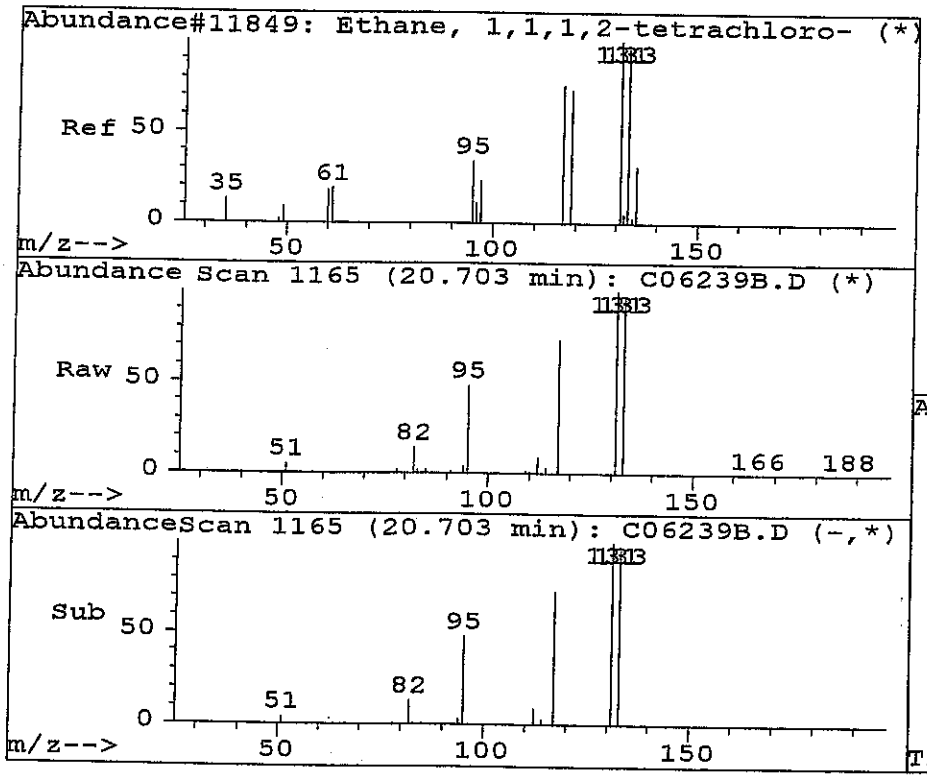


#31
Chlorobenzene
Concen: 0.09 ppbV
RT: 20.65 min Scan# 1162
Delta R.T. 0.06 min
Lab File: C06239B.D
Acq: 23 Jun 109 10:12 am

Tgt Ion:112 Resp: 155754

Ion	Ratio	Lower	Upper
112	100		
114	33.5	26.6	39.8
51	18.4	12.4	18.6
0	0.0	0.0	0.0

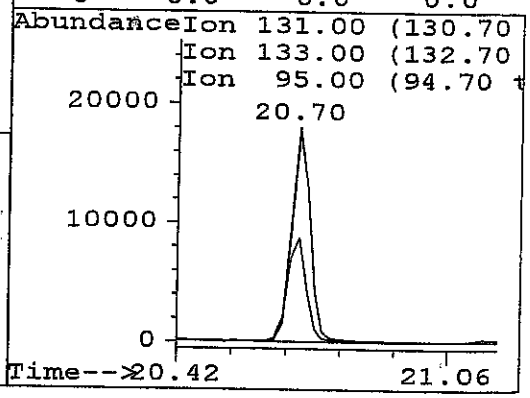


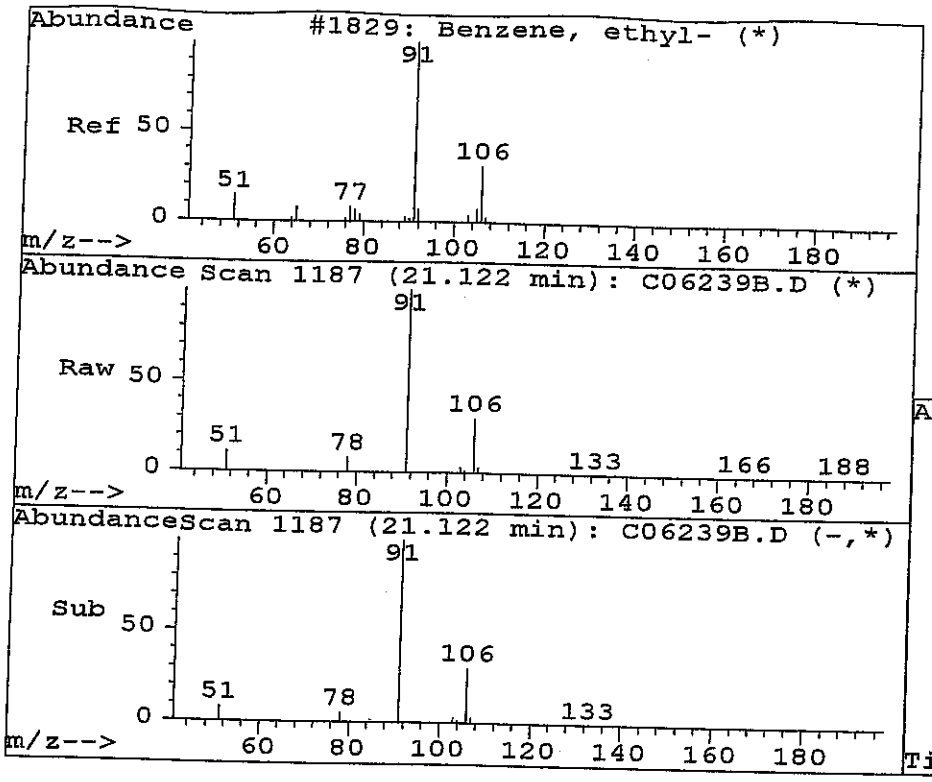


#32
1,1,1,2-Tetrachloroethane
Concen: 0.07 ppbV
RT: 20.70 min Scan# 1165
Delta R.T. 0.03 min
Lab File: C06239B.D
Acq: 23 Jun 109 10:12 am

Tgt Ion:131 Resp: 55251

Ion	Ratio	Lower	Upper
131	100		
133	96.1	76.6	114.8
95	47.9	38.7	58.1
0	0.0	0.0	0.0

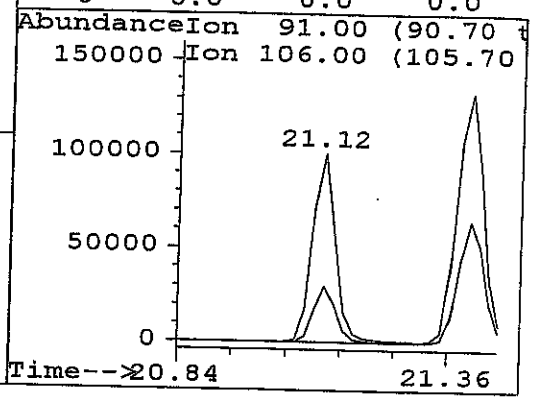


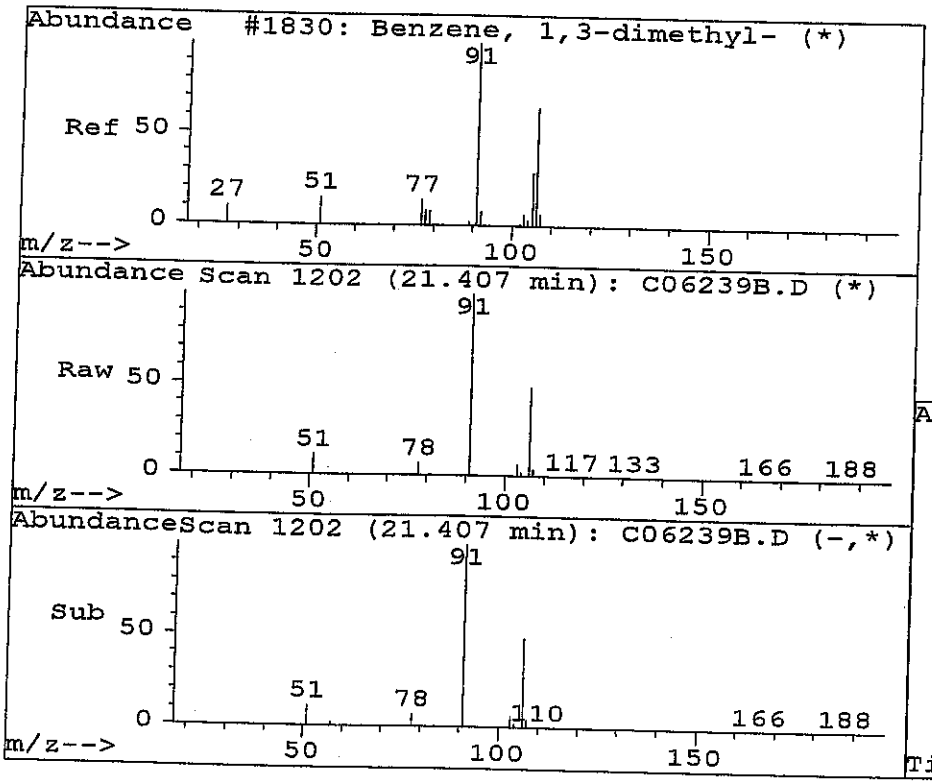


#33
Ethylbenzene
Concen: 0.10 ppbV
RT: 21.12 min Scan# 1187
Delta R.T. 0.04 min
Lab File: C06239B.D
Acq: 23 Jun 109 10:12 am

Tgt Ion:91 Resp: 312285

Ion	Ratio	Lower	Upper
91	100		
106	29.7	24.2	36.4
0	0.0	0.0	0.0
0	0.0	0.0	0.0

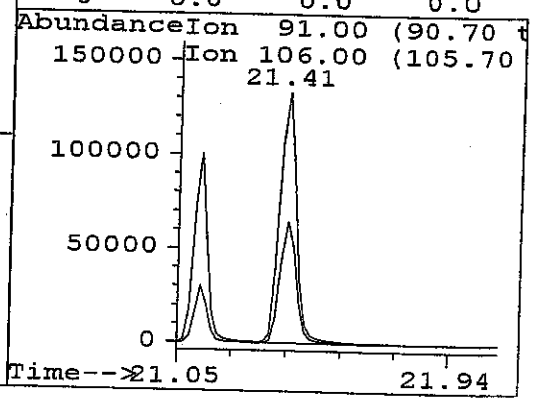


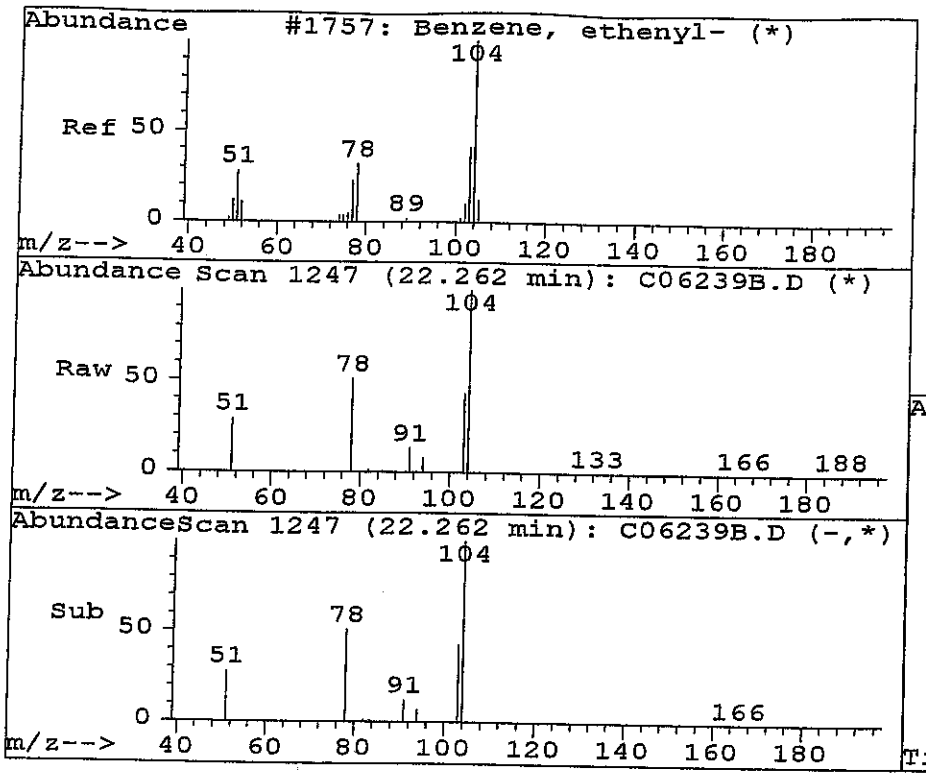


#34
m & p-Xylene
Concen: 0.20 ppbV
RT: 21.41 min Scan# 1202
Delta R.T. 0.04 min
Lab File: C06239B.D
Acq: 23 Jun 109 10:12 am

Tgt Ion:91 Resp: 493234

Ion	Ratio	Lower	Upper
91	100		
106	48.8	41.7	62.5
0	0.0	0.0	0.0
0	0.0	0.0	0.0

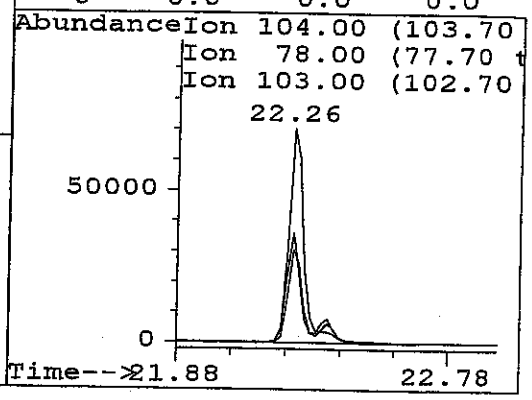


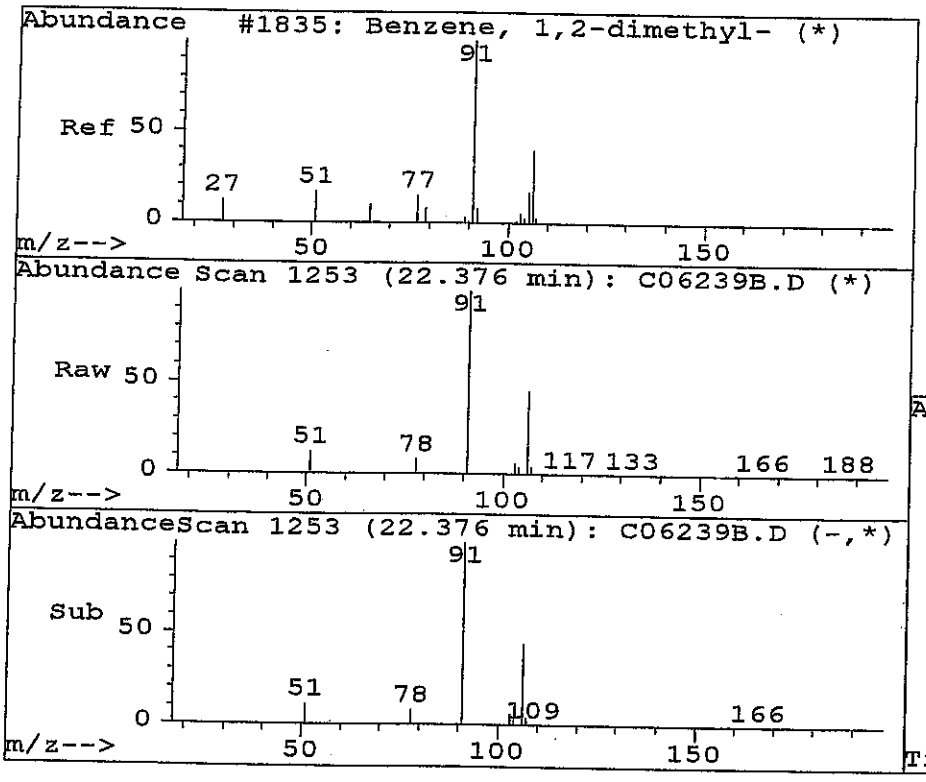


#35
Styrene
Concen: 0.08 ppbV
RT: 22.26 min Scan# 1247
Delta R.T. 0.04 min
Lab File: C06239B.D
Acq: 23 Jun 109 10:12 am

Tgt Ion:104 Resp: 247076

Ion	Ratio	Lower	Upper
104	100		
78	51.2	28.2	42.2#
103	43.4	33.8	50.6
0	0.0	0.0	0.0

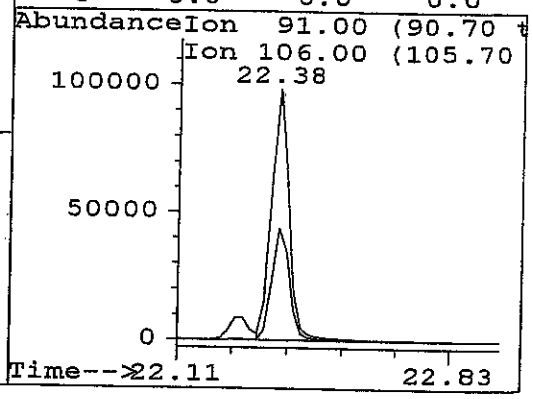


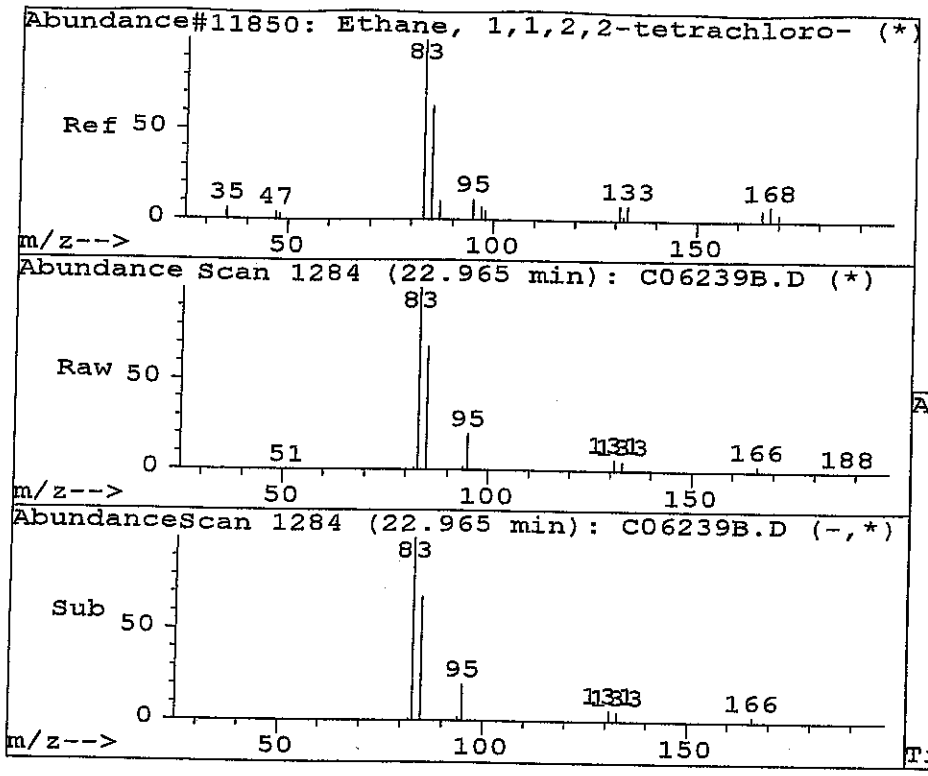


#36
o-Xylene
Concen: 0.10 ppbV
RT: 22.38 min Scan# 1253
Delta R.T. 0.04 min
Lab File: C06239B.D
Acq: 23 Jun 109 10:12 am

Tgt Ion:91 Resp: 306720

Ion	Ratio	Lower	Upper
91	100		
106	44.9	37.5	56.3
0	0.0	0.0	0.0
0	0.0	0.0	0.0

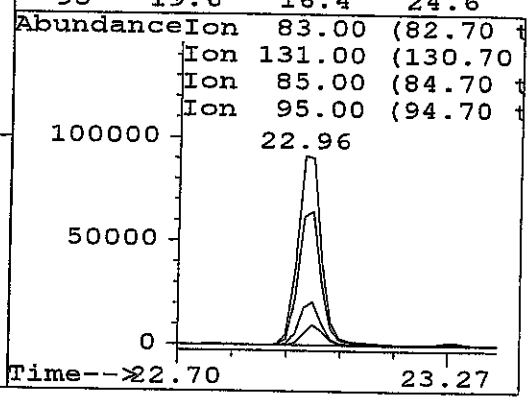


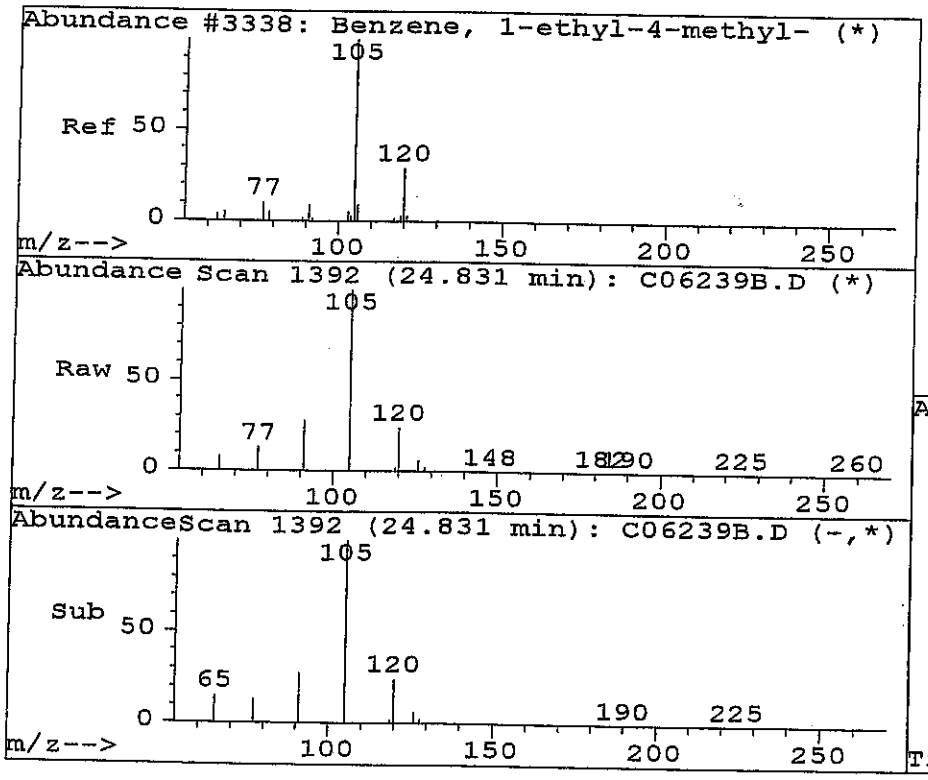


#37
1,1,2,2-Tetrachloroethane
Concen: 0.09 ppbV
RT: 22.96 min Scan# 1284
Delta R.T. 0.03 min
Lab File: C06239B.D
Acq: 23 Jun 109 10:12 am

Tgt Ion:83 Resp: 325889

Ion	Ratio	Lower	Upper
83	100		
131	5.8	7.8	11.6#
85	67.6	55.5	83.3
95	19.6	16.4	24.6

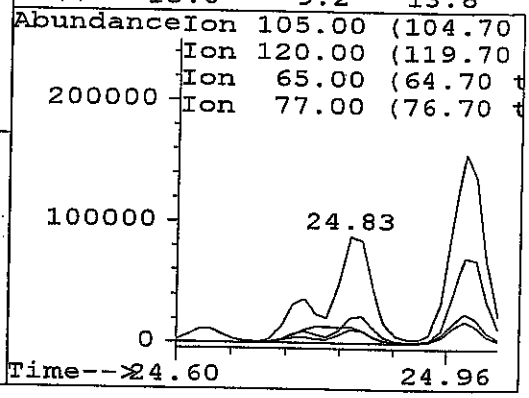


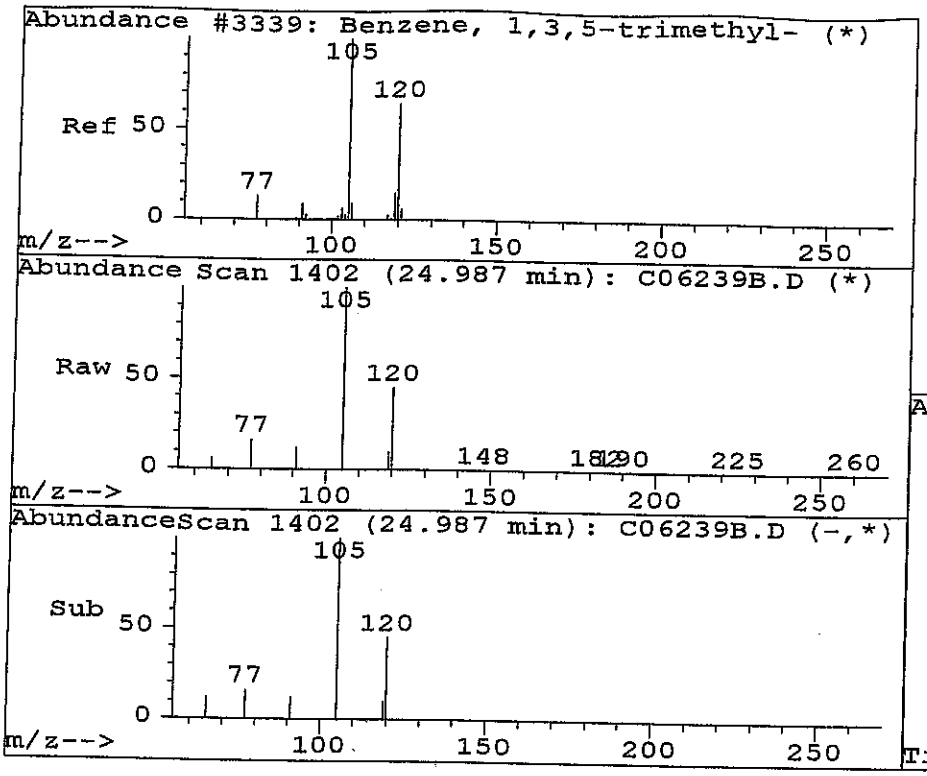


#38
4-Ethyltoluene
Concen: 0.07 ppbV m
RT: 24.83 min Scan# 1392
Delta R.T. 0.03 min
Lab File: C06239B.D
Acq: 23 Jun 109 10:12 am

Tgt Ion:105 Resp: 400409

Ion	Ratio	Lower	Upper
105	100		
120	23.8	19.6	29.4
65	7.9	9.1	13.7#
77	13.0	9.2	13.8

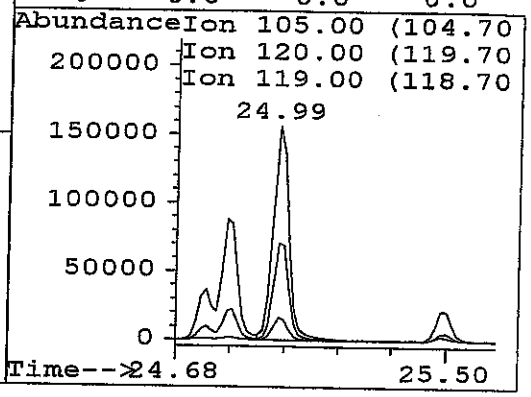


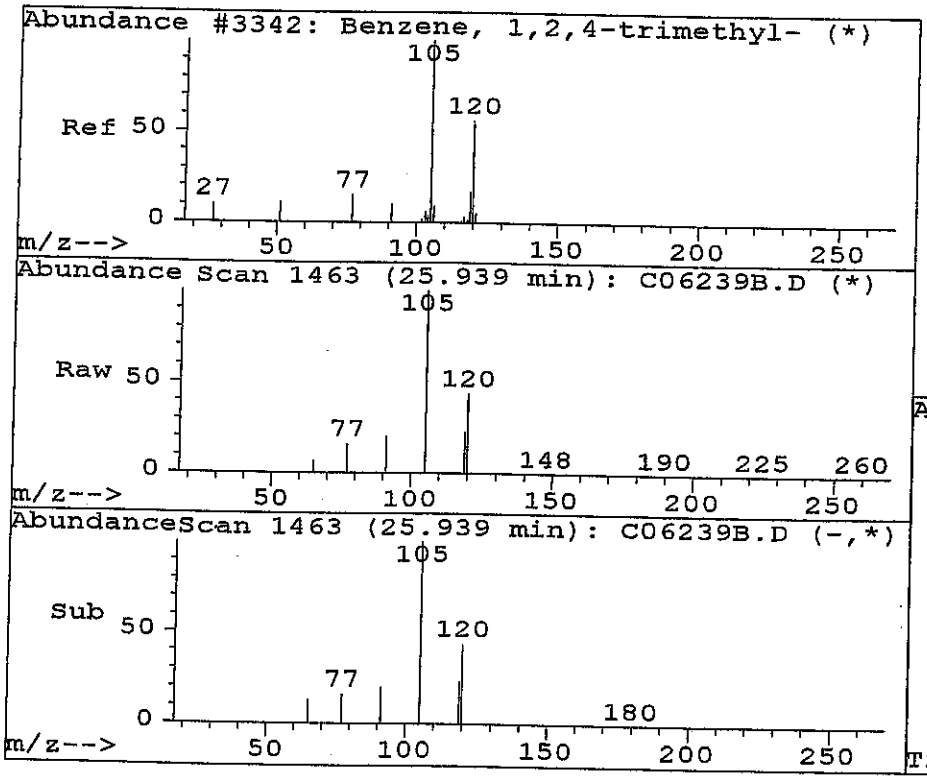


#39
1,3,5-Trimethylbenzene
Concen: 0.09 ppbV
RT: 24.99 min Scan# 1402
Delta R.T. 0.03 min
Lab File: C06239B.D
Acq: 23 Jun 109 10:12 am

Tgt Ion:105 Resp: 511658

Ion	Ratio	Lower	Upper
105	100		
120	45.5	38.6	57.8
119	10.3	8.6	13.0
0	0.0	0.0	0.0

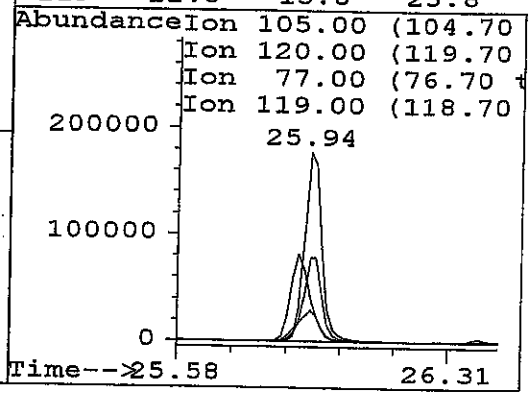


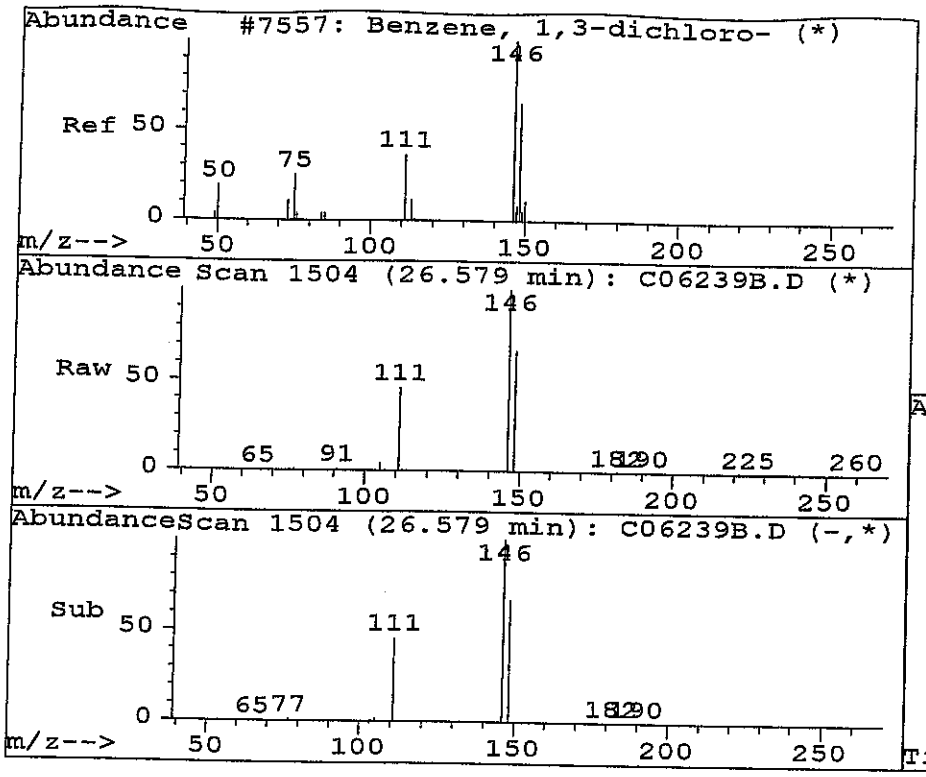


#40
1,2,4-Trimethylbenzene
Concen: 0.09 ppbV
RT: 25.94 min Scan# 1463
Delta R.T. 0.03 min
Lab File: C06239B.D
Acq: 23 Jun 109 10:12 am

Tgt Ion:105 Resp: 586566

Ion	Ratio	Lower	Upper
105	100		
120	44.1	36.1	54.1
77	16.3	11.7	17.5
119	22.8	15.8	23.8

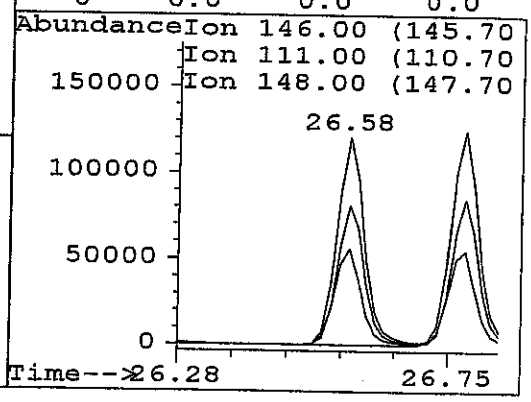


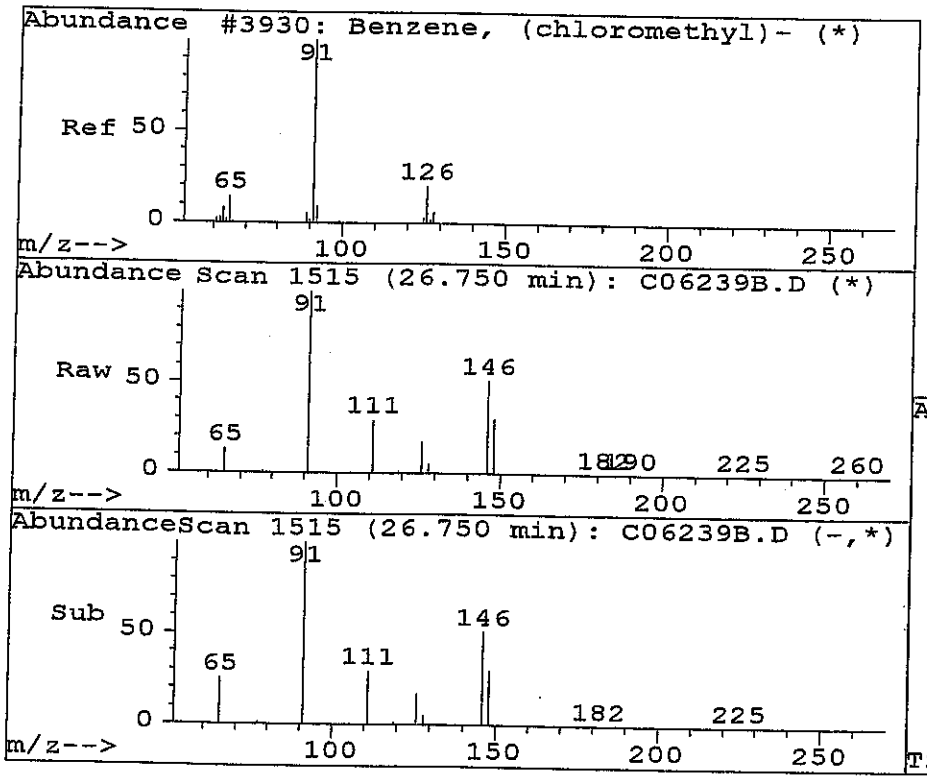


#41
1,3-Dichlorobenzene
Concen: 0.08 ppbV
RT: 26.58 min Scan# 1504
Delta R.T. 0.03 min
Lab File: C06239B.D
Acq: 23 Jun 109 10:12 am

Tgt Ion:146 Resp: 407054

Ion	Ratio	Lower	Upper
146	100		
111	46.2	34.7	52.1
148	67.3	55.0	82.4
0	0.0	0.0	0.0

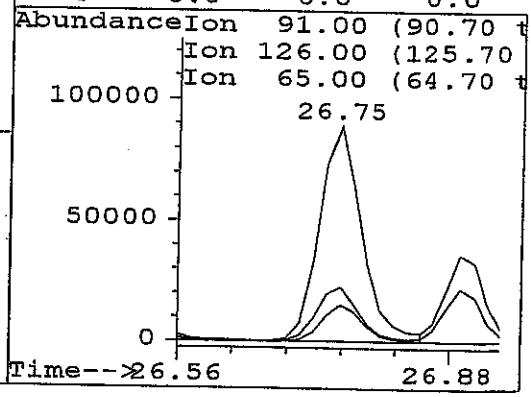


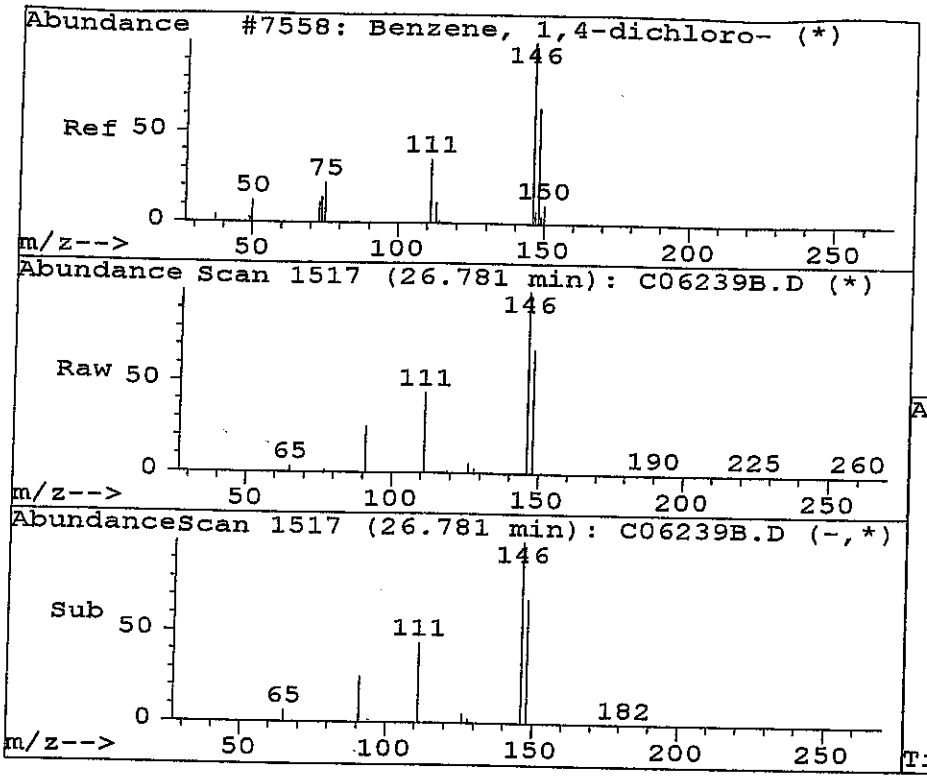


#42
Benzyl chloride
Concen: 0.06 ppbV
RT: 26.75 min Scan# 1515
Delta R.T. 0.05 min
Lab File: C06239B.D
Acq: 23 Jun 109 10:12 am

Tgt Ion:91 Resp: 305401

Ion	Ratio	Lower	Upper
91	100		
126	17.3	15.4	23.0
65	24.8	18.6	27.8
0	0.0	0.0	0.0

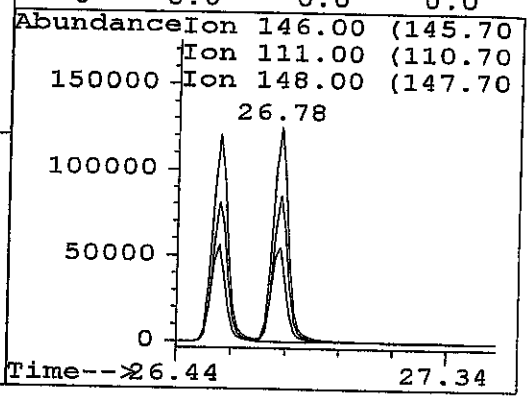


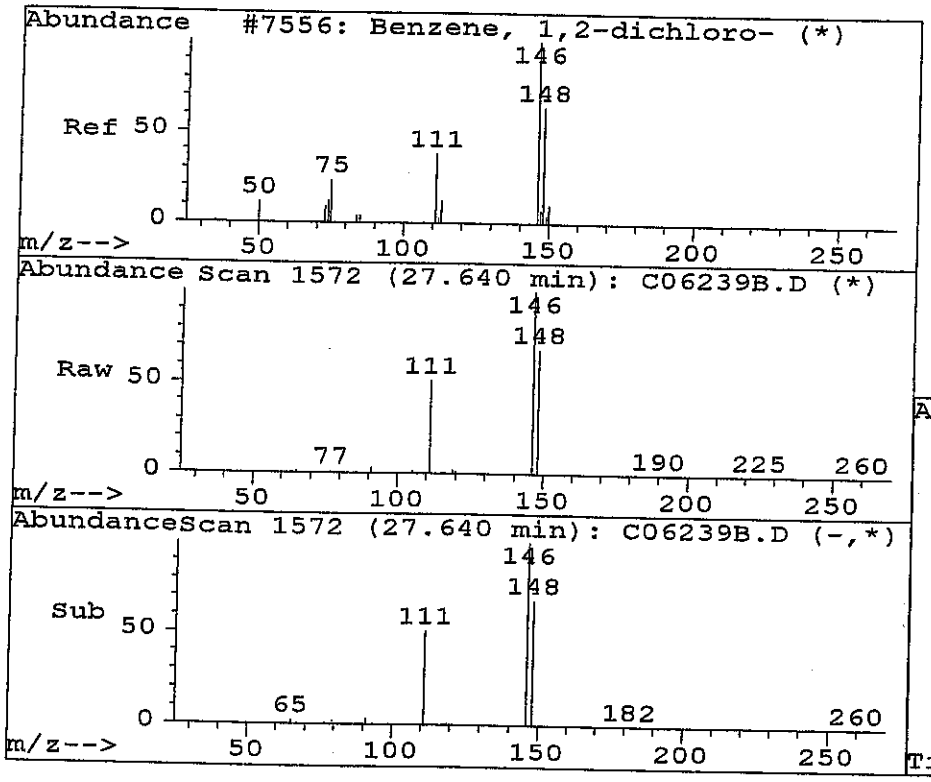


#43
1,4-Dichlorobenzene
Concen: 0.09 ppbV
RT: 26.78 min Scan# 1517
Delta R.T. 0.03 min
Lab File: C06239B.D
Acq: 23 Jun 109 10:12 am

Tgt Ion:146 Resp: 434348

Ion	Ratio	Lower	Upper
146	100		
111	43.9	32.4	48.6
148	68.1	55.3	82.9
0	0.0	0.0	0.0

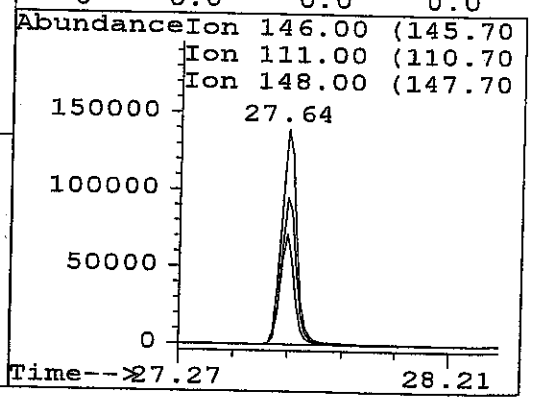


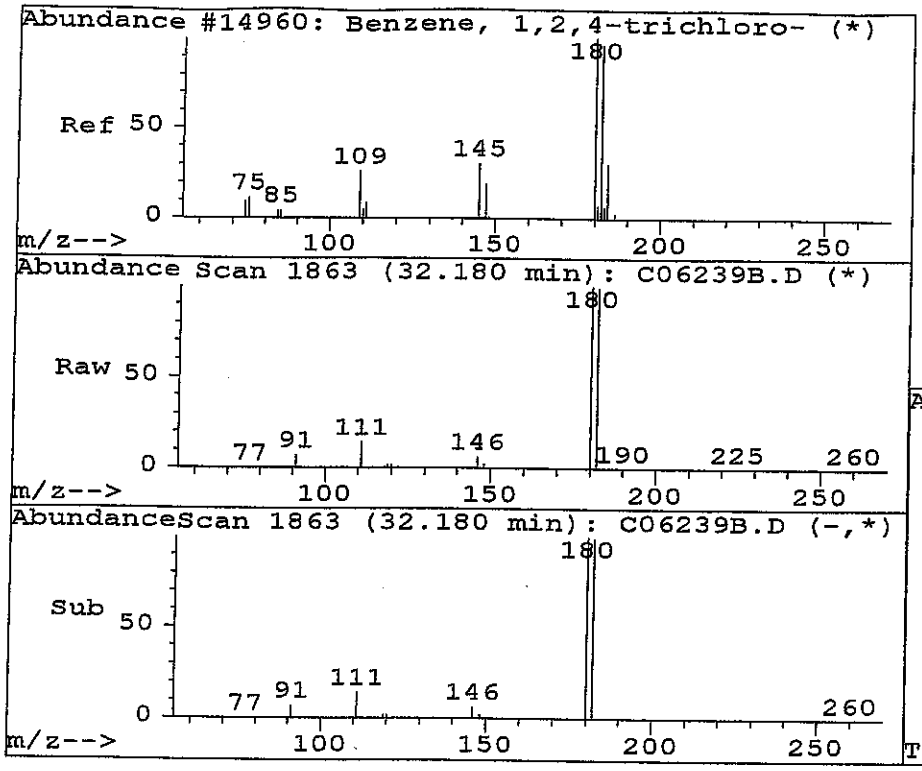


#44
1,2-Dichlorobenzene
Concen: 0.08 ppbV
RT: 27.64 min Scan# 1572
Delta R.T. 0.03 min
Lab File: C06239B.D
Acq: 23 Jun 109 10:12 am

Tgt Ion:146 Resp: 496098

Ion	Ratio	Lower	Upper
146	100		
111	51.1	38.2	57.2
148	67.9	54.6	81.8
0	0.0	0.0	0.0

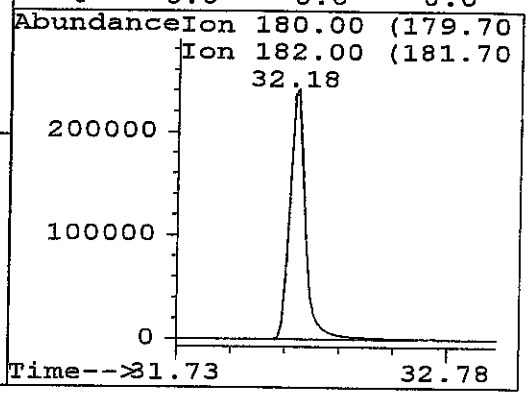


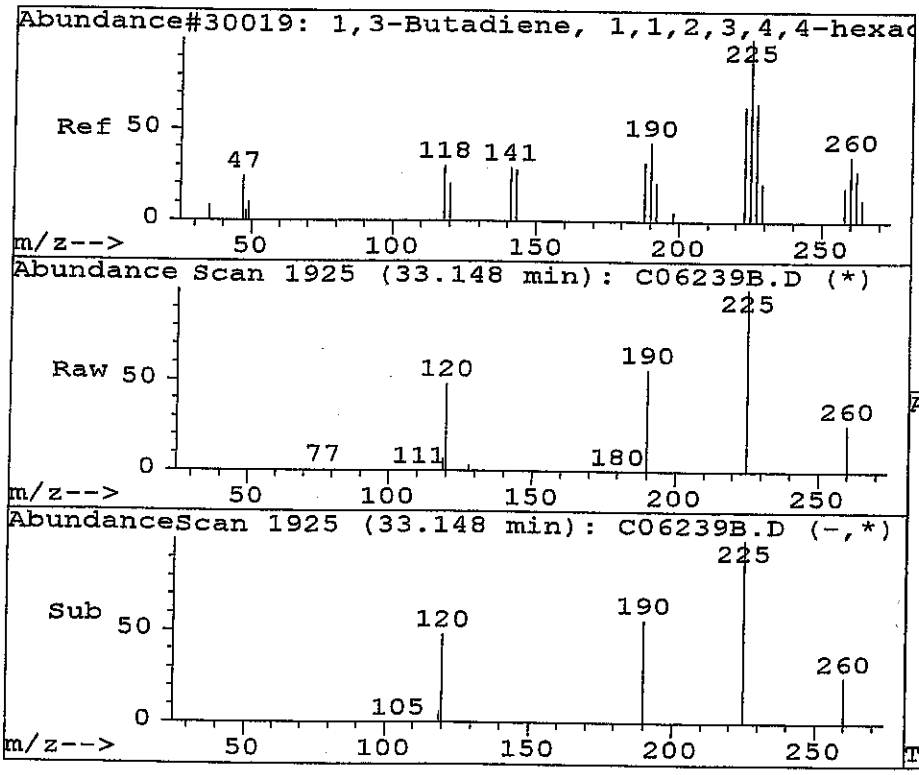


#45
1,2,4-Trichlorobenzene
Concen: 0.08 ppbV
RT: 32.18 min Scan# 1863
Delta R.T. 0.01 min
Lab File: C06239B.D
Acq: 23 Jun 109 10:12 am

Tgt Ion:180 Resp: 1038343

Ion	Ratio	Lower	Upper
180	100		
182	99.2	79.0	118.4
0	0.0	0.0	0.0
0	0.0	0.0	0.0

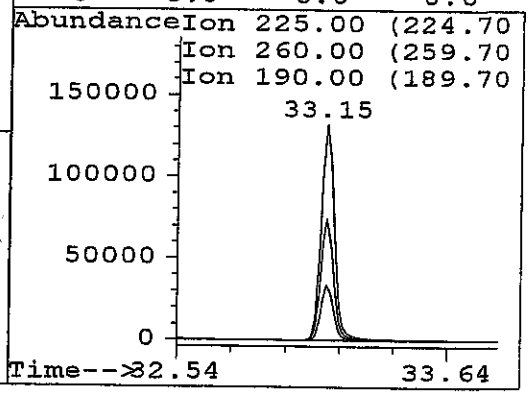


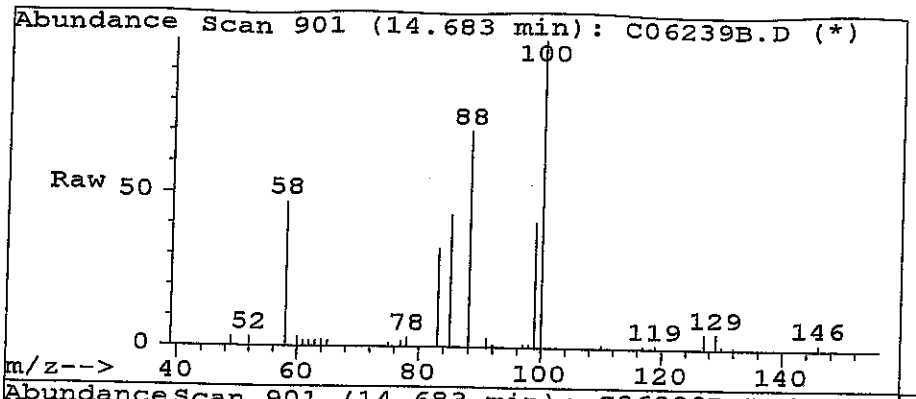


#46
Hexachlorobutadiene
Concen: 0.08 ppbV
RT: 33.15 min Scan# 1925
Delta R.T. 0.02 min
Lab File: C06239B.D
Acq: 23 Jun 109 10:12 am

Tgt Ion:225 Resp: 482470

Ion	Ratio	Lower	Upper
225	100		
260	25.5	20.5	30.7
190	56.1	43.0	64.4
0	0.0	0.0	0.0

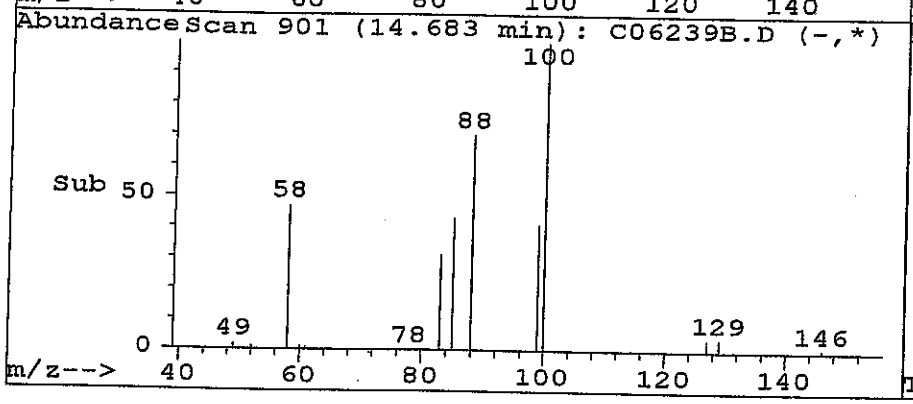


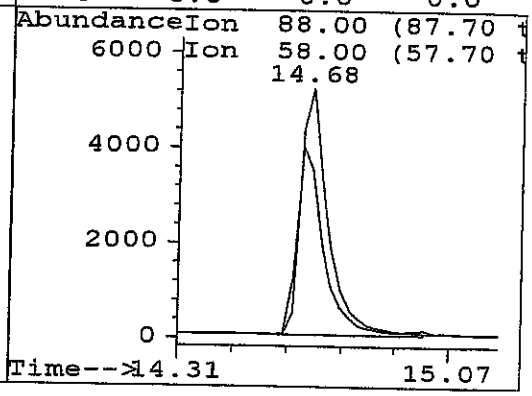


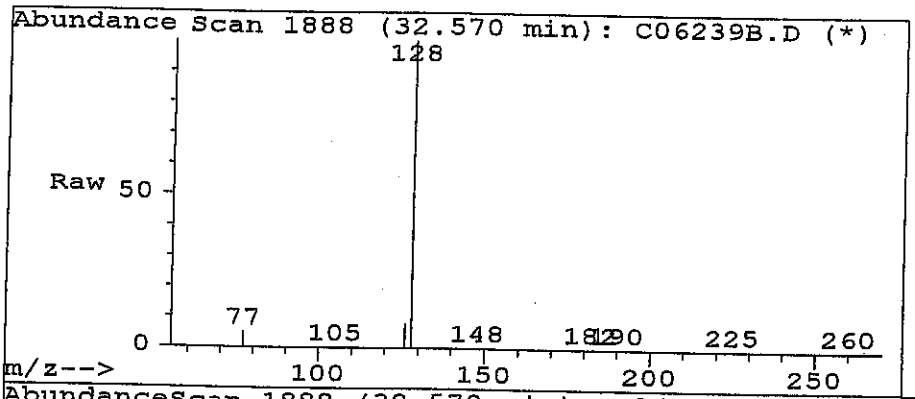
#47
1,4 Dioxane
Concen: 0.06 ppbV
RT: 14.68 min Scan# 901
Delta R.T. 0.11 min
Lab File: C06239B.D
Acq: 23 Jun 109 10:12 am

Tgt Ion:88 Resp: 27834

Ion	Ratio	Lower	Upper
88	100		
58	74.3	54.9	82.3
0	0.0	0.0	0.0
0	0.0	0.0	0.0



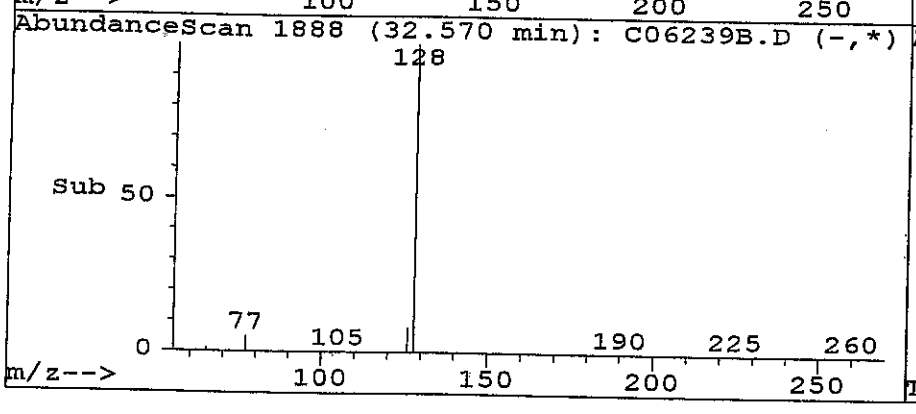


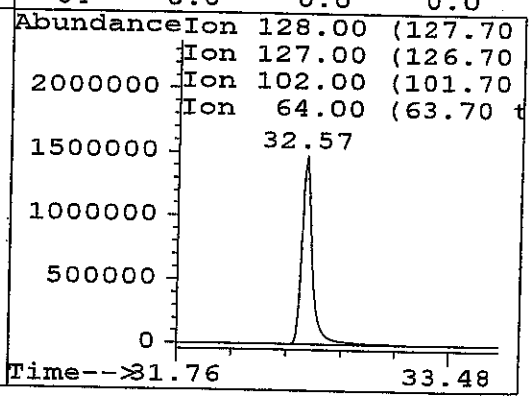


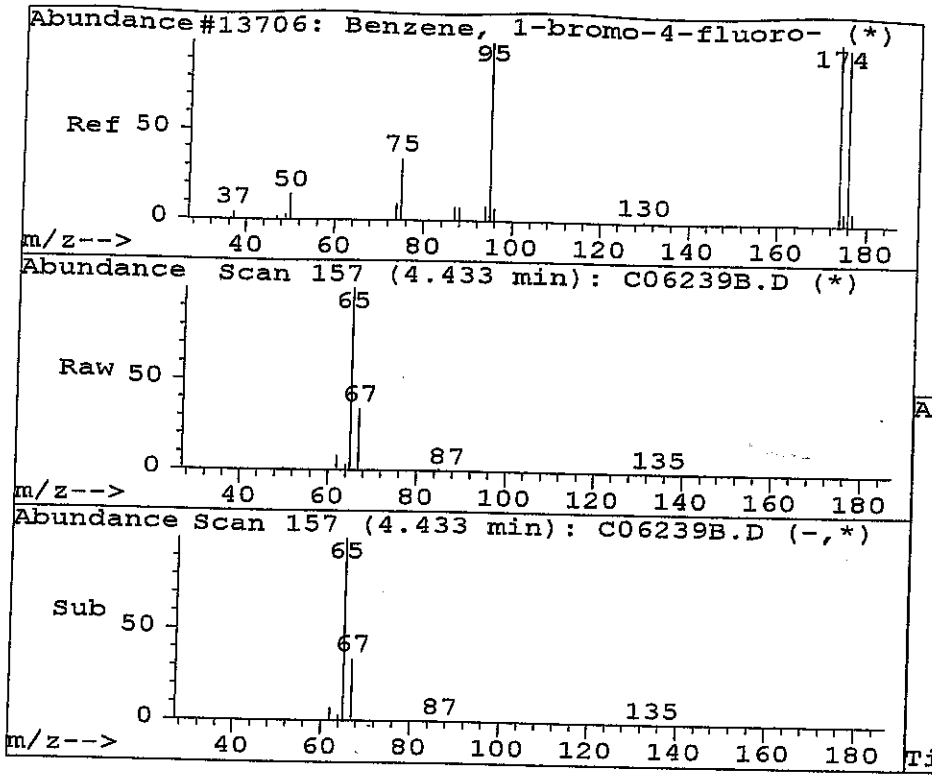
#48
Naphthalene
Concen: 0.15 ppbV m
RT: 32.57 min Scan# 1888
Delta R.T. -0.21 min
Lab File: C06239B.D
Acq: 23 Jun 109 10:12 am

Tgt Ion:128 Resp: 7033626

Ion	Ratio	Lower	Upper
128	100		
127	0.0	0.0	0.0
102	0.0	0.0	0.0
64	0.0	0.0	0.0



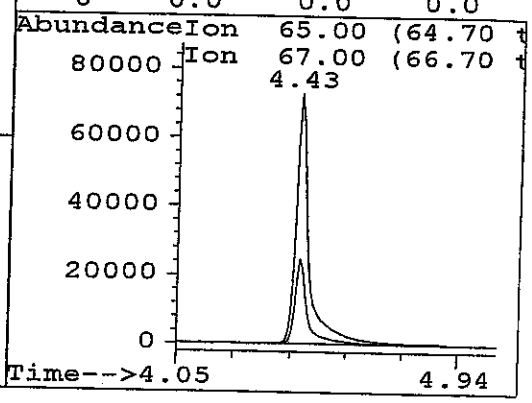




#49
Vinyl Chloride-d3
Concen: 0.19 ppbV
RT: 4.43 min Scan# 157
Delta R.T. 0.08 min
Lab File: C06239B.D
Acq: 23 Jun 109 10:12 am

Tgt Ion:65 Resp: 217982

Ion	Ratio	Lower	Upper
65	100		
67	34.2	26.6	40.0
0	0.0	0.0	0.0
0	0.0	0.0	0.0



Quantitation Report

Data File : C:\MSCHEM\2\DATA\06239M~1\B06239A.D
Acq Time : 23 Jun 109 1:09 pm
Sample : METHOD BLANK
Misc :
Quant Time: Jun 29 16:39 19109

Operator: JF
Inst : MS2
Multiplr: 1.00

Method : C:\MSCHEM\2\METHODS\1T15EXAY.M
Title : EPA TO-15
Last Update : Tue Mar 17 14:18:15 2009
Response via : Multiple Level Calibration

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Chlorobenzene-d5	20.55	117	1135862	0.20 ppbV	0.04
System Monitoring Compounds					%Recovery
16) Toluene-d8	17.11	98	480756	0.20 ppbV	
49) Vinyl Chloride-d3	4.40	65	189554	0.20 ppbV	
Target Compounds					Qvalue
11) Dichloromethane	7.49	84	596	0.00 ppbV	96
15) cis-1,2-Dichloroethene	10.33	96	1185	0.00 ppbV	90
17) Chloroform	10.73	83	1327	0.00 ppbV	98
18) 1,1,1-Trichloroethane	11.96	97	458	0.00 ppbV #	68
19) 1,2-Dichloroethane	12.10	62	7537	0.01 ppbV	98
20) Benzene	12.68	78	5359	0.01 ppbV	97
21) Carbon tetrachloride	12.71	117	281	0.00 ppbV #	79
23) Trichloroethene	14.31	130	2158	0.01 ppbV	94
26) Toluene	17.27	91	8107	0.01 ppbV m	92
28) 1,1,2-Trichloroethane	17.40	97	3839	0.01 ppbV	95
29) 1,2-Dibromoethane	19.05	107	10698	0.01 ppbV	99
30) Tetrachloroethene	19.12	166	2265	0.00 ppbV	94
31) Chlorobenzene	20.64	112	13149	0.01 ppbV	96
32) 1,1,1,2-Tetrachloroethane	20.70	131	316	0.00 ppbV	87
33) Ethylbenzene	21.12	91	15830	0.01 ppbV	93
34) m & p-Xylene	21.41	91	32402	0.02 ppbV	86
35) Styrene	22.28	104	21065	0.01 ppbV #	90
36) o-Xylene	22.37	91	16952	0.01 ppbV	90
38) 4-Ethyltoluene	24.85	105	8875	0.00 ppbV	96
39) 1,3,5-Trimethylbenzene	25.00	105	26522	0.01 ppbV	96
40) 1,2,4-Trimethylbenzene	25.95	105	47627	0.01 ppbV #	90
41) 1,3-Dichlorobenzene	26.58	146	49737	0.01 ppbV	94
42) Benzyl chloride	26.78	91	3119	0.00 ppbV	96
43) 1,4-Dichlorobenzene	26.78	146	63608	0.02 ppbV	94
44) 1,2-Dichlorobenzene	27.66	146	61095	0.01 ppbV	94
45) 1,2,4-Trichlorobenzene	32.18	180	271547	0.02 ppbV	100
46) Hexachlorobutadiene	33.15	225	41004	0.01 ppbV	98
47) 1,4 Dioxane	14.71	88	2198	0.01 ppbV	93
48) Naphthalene	32.57	128	297245	0.01 ppbV m	0

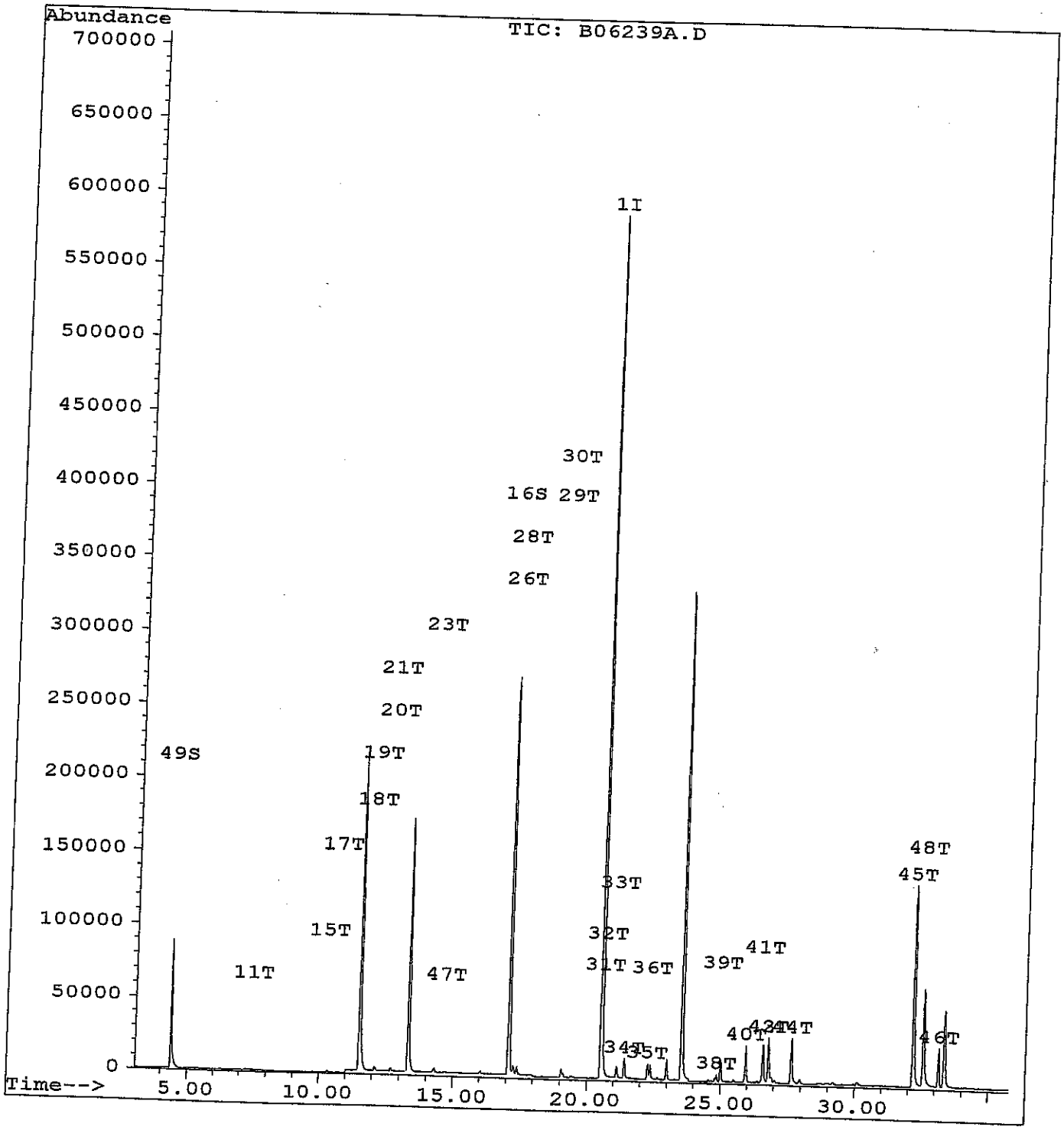
(#) = qualifier out of range (m) = manual integration

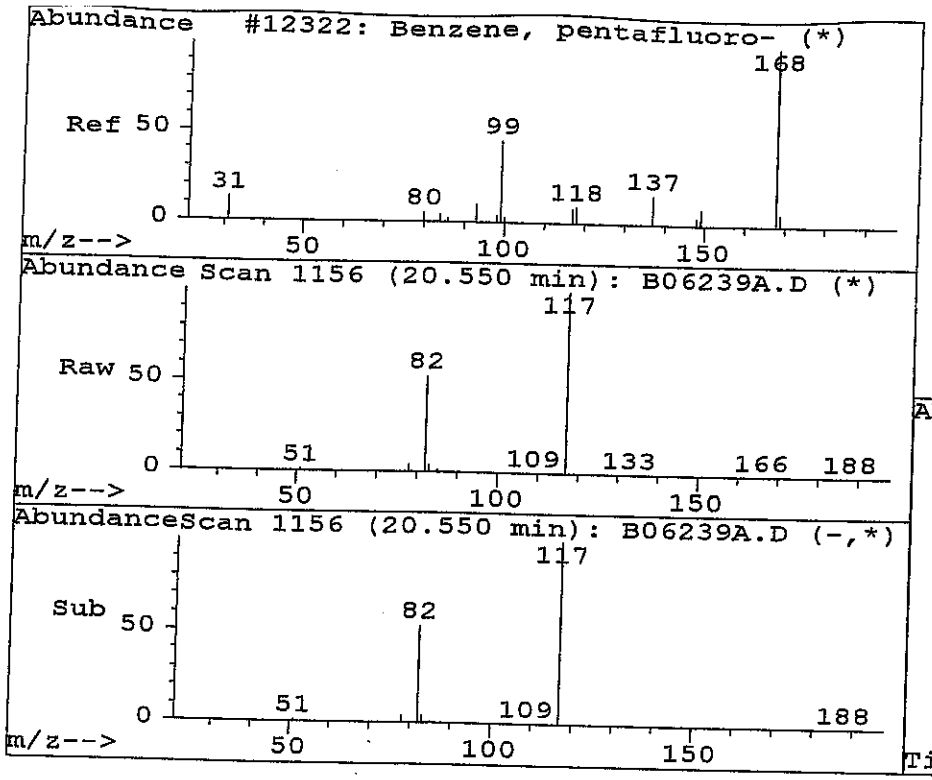
Quantitation Report

Data File : C:\MSCHEM\2\DATA\06239M~1\B06239A.D
Acq Time : 23 Jun 109 1:09 pm
Sample : METHOD BLANK
Misc :
Quant Time: Jun 29 16:39 19109

Operator: JF
Inst : MS2
Multiplr: 1.00

Method : C:\MSCHEM\2\METHODS\1T15EXAY.M
Title : EPA TO-15
Last Update : Tue Mar 17 14:18:15 2009
Response via : Multiple Level Calibration

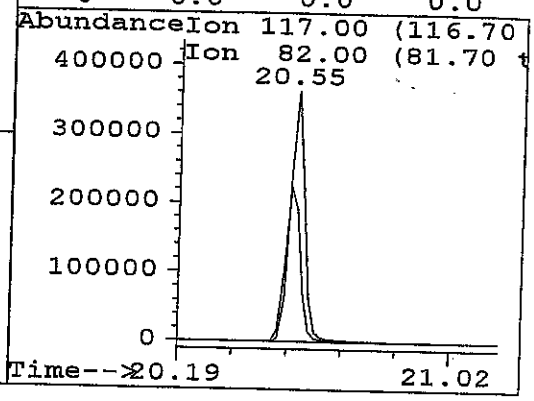


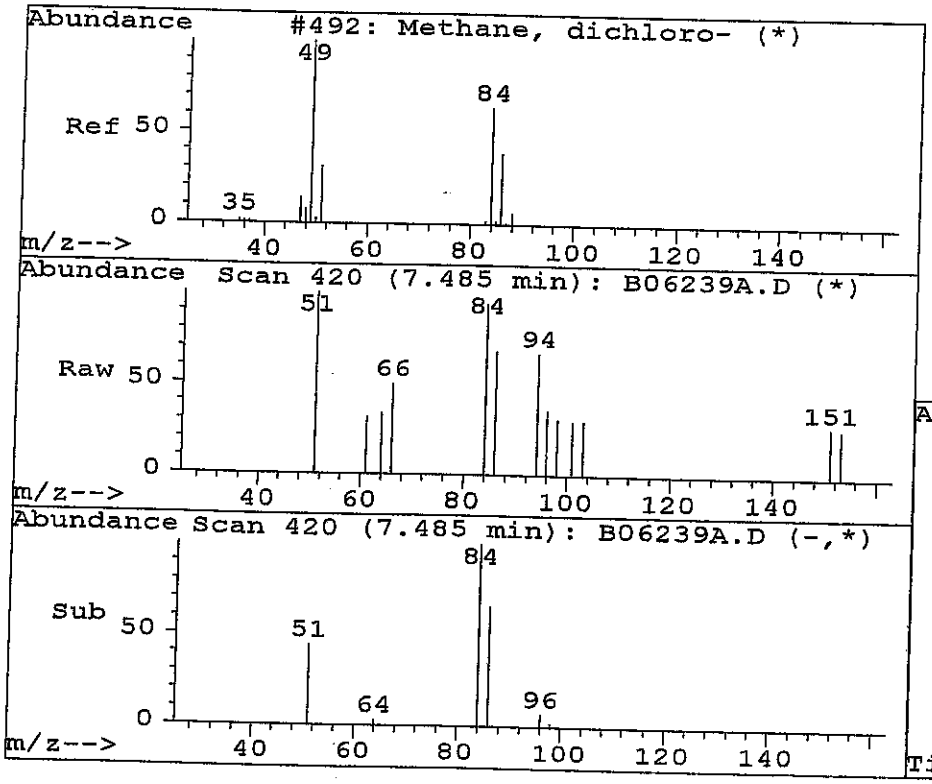


#1
Chlorobenzene-d5
Concen: 0.20 ppbV
RT: 20.55 min Scan# 1156
Delta R.T. 0.04 min
Lab File: B06239A.D
Acq: 23 Jun 109 1:09 pm

Tgt Ion:117 Resp: 1135862

Ion	Ratio	Lower	Upper
117	100		
82	53.0	43.5	65.3
0	0.0	0.0	0.0
0	0.0	0.0	0.0

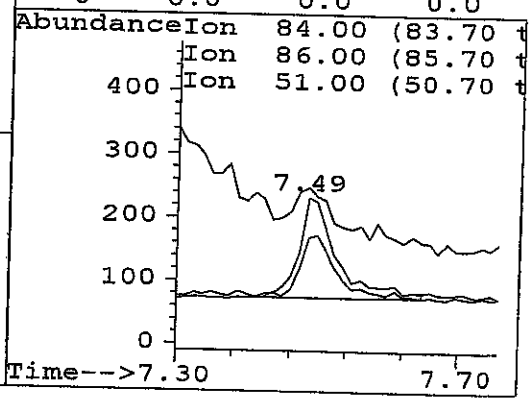


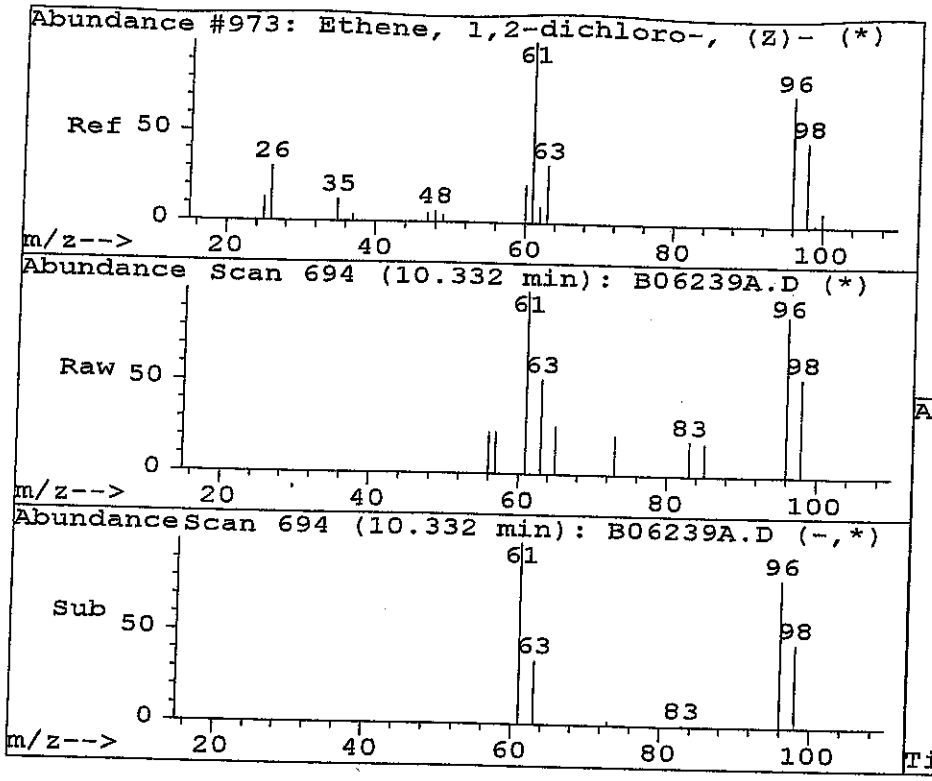


#11
Dichloromethane
Concen: 0.00 ppbV
RT: 7.49 min Scan# 420
Delta R.T. 0.07 min
Lab File: B06239A.D
Acq: 23 Jun 109 1:09 pm

Tgt Ion:84 Resp: 596

Ion	Ratio	Lower	Upper
84	100		
86	62.1	51.3	76.9
51	30.7	27.4	41.0
0	0.0	0.0	0.0

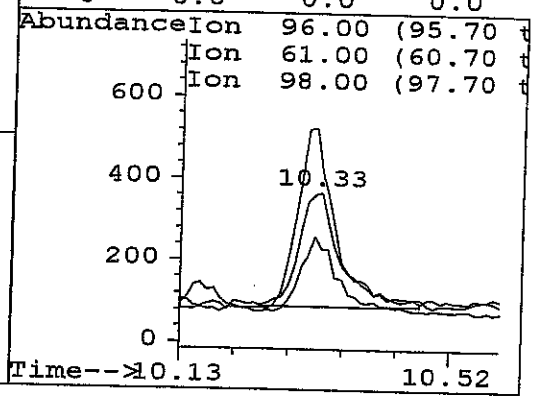


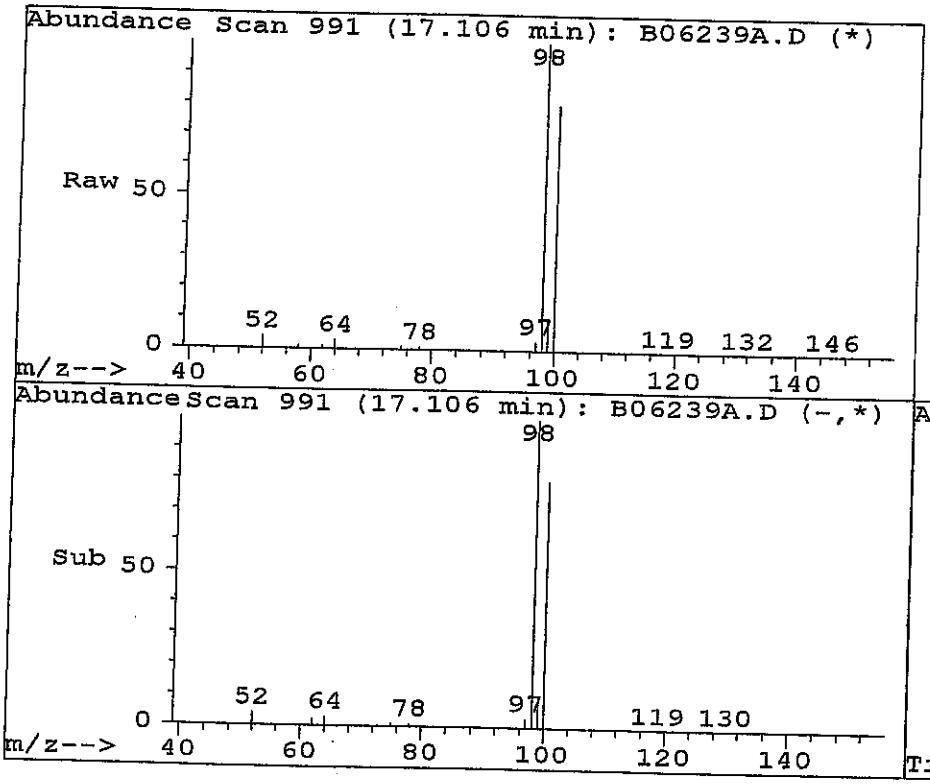


#15
cis-1,2-Dichloroethene
Concen: 0.00 ppbV
RT: 10.33 min Scan# 694
Delta R.T. 0.09 min
Lab File: B06239A.D
Acq: 23 Jun 109 1:09 pm

Tgt Ion:96 Resp: 1185

Ion	Ratio	Lower	Upper
96	100		
61	117.5	102.0	153.0
98	54.6	52.2	78.2
0	0.0	0.0	0.0

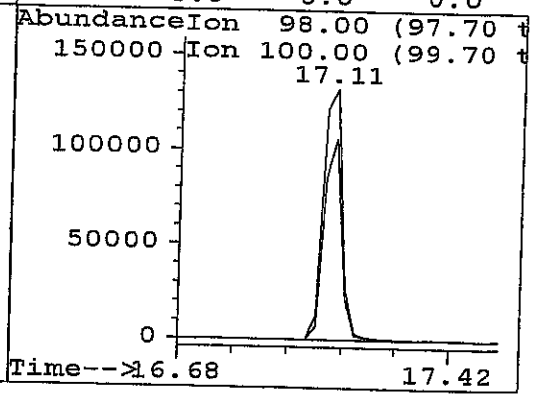


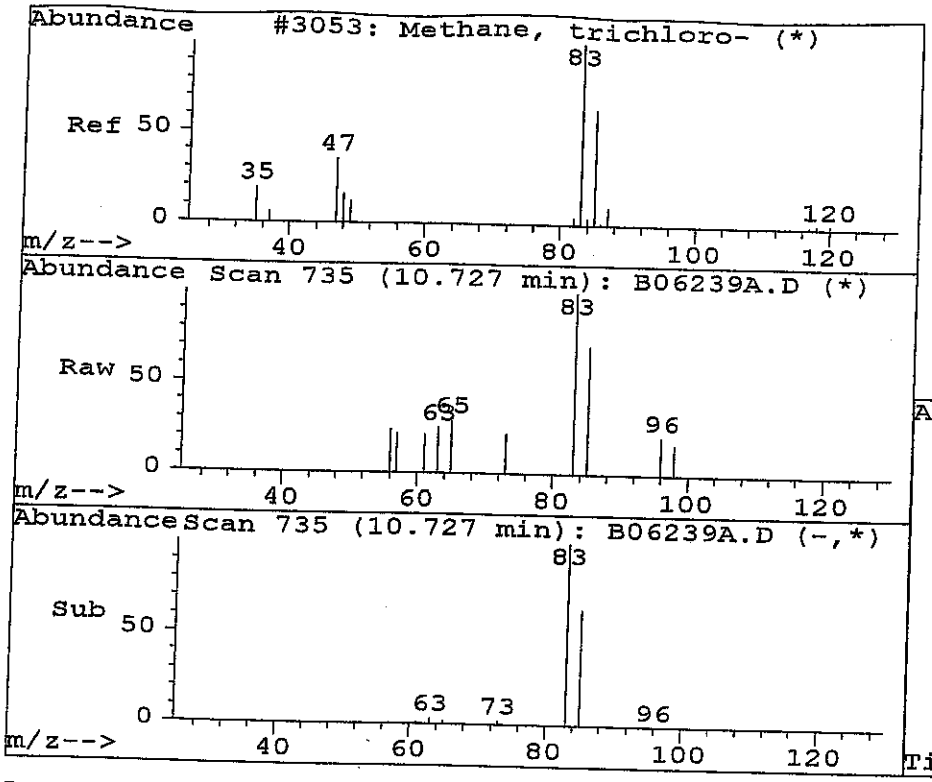


#16
Toluene-d8
Concen: 0.20 ppbV
RT: 17.11 min Scan# 991
Delta R.T. 0.06 min
Lab File: B06239A.D
Acq: 23 Jun 109 1:09 pm

Tgt Ion:98 Resp: 480756

Ion	Ratio	Lower	Upper
98	100		
100	75.7	59.5	89.3
0	0.0	0.0	0.0
0	0.0	0.0	0.0

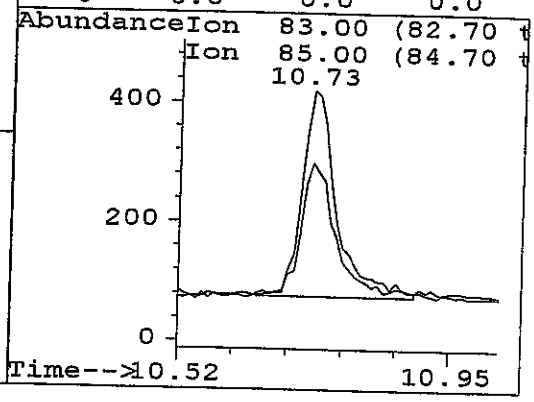


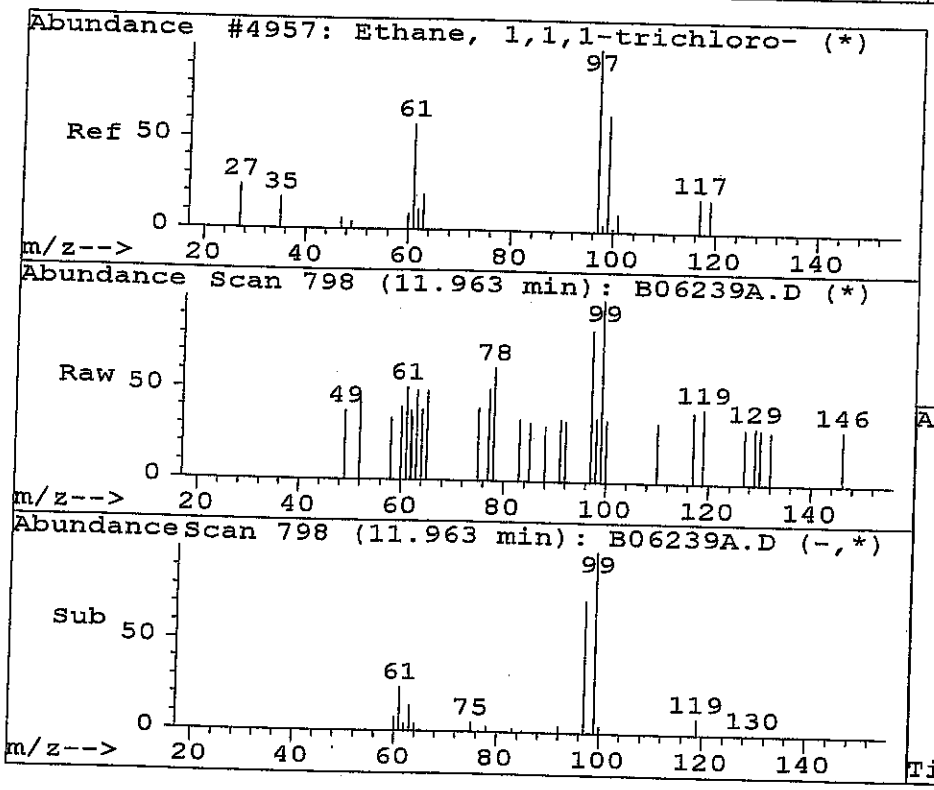


#17
Chloroform
Concen: 0.00 ppbV
RT: 10.73 min Scan# 735
Delta R.T. 0.07 min
Lab File: B06239A.D
Acq: 23 Jun 109 1:09 pm

Tgt Ion:83 Resp: 1327

Ion	Ratio	Lower	Upper
83	100		
85	64.0	52.2	78.4
0	0.0	0.0	0.0
0	0.0	0.0	0.0

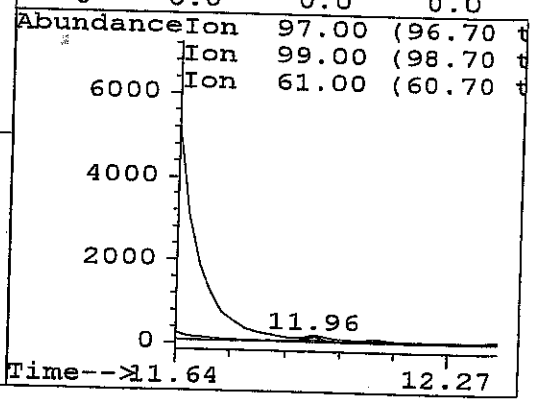


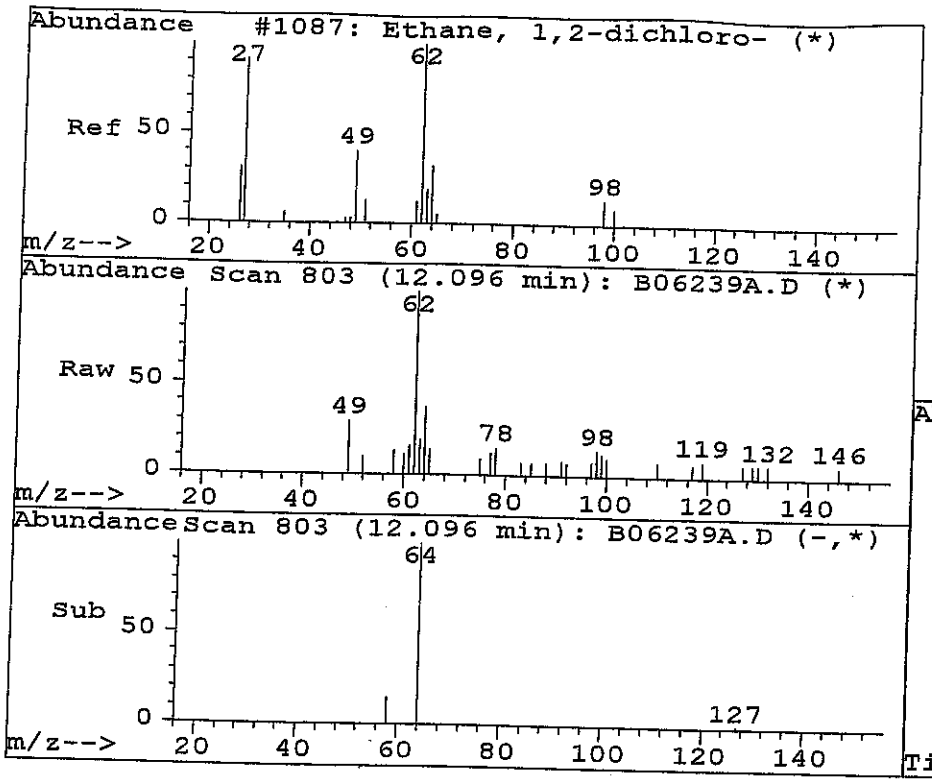


#18
1,1,1-Trichloroethane
Concen: 0.00 ppbV
RT: 11.96 min Scan# 798
Delta R.T. 0.05 min
Lab File: B06239A.D
Acq: 23 Jun 109 1:09 pm

Tgt Ion:97 Resp: 458

Ion	Ratio	Lower	Upper
97	100		
99	32.4	53.2	79.8#
61	25.2	24.2	36.4
0	0.0	0.0	0.0

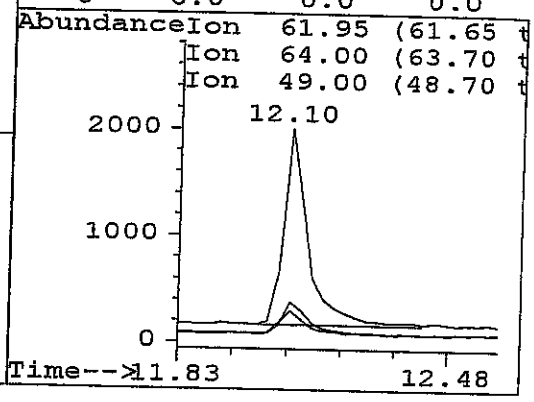


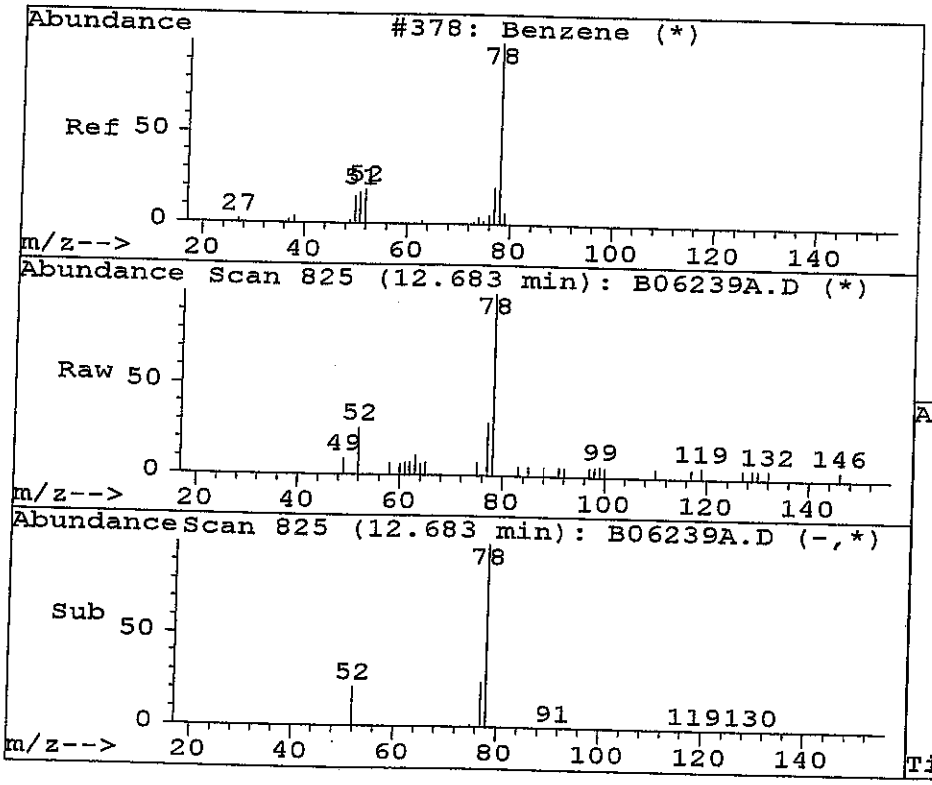


#19
1,2-Dichloroethane
Concen: 0.01 ppbV
RT: 12.10 min Scan# 803
Delta R.T. 0.08 min
Lab File: B06239A.D
Acq: 23 Jun 109 1:09 pm

Tgt Ion:61.95 Resp: 753

Ion	Ratio	Lower	Upper
62	100		
64	16.1	13.8	20.6
49	11.6	8.9	13.3
0	0.0	0.0	0.0

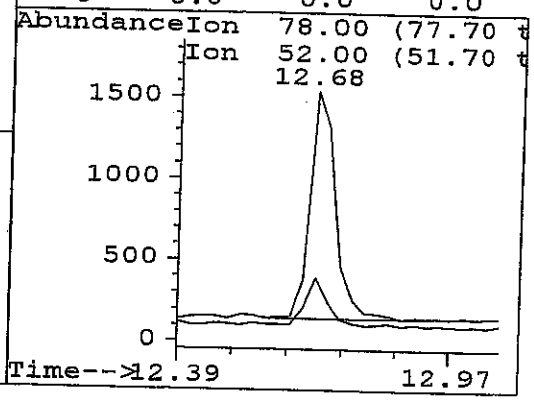


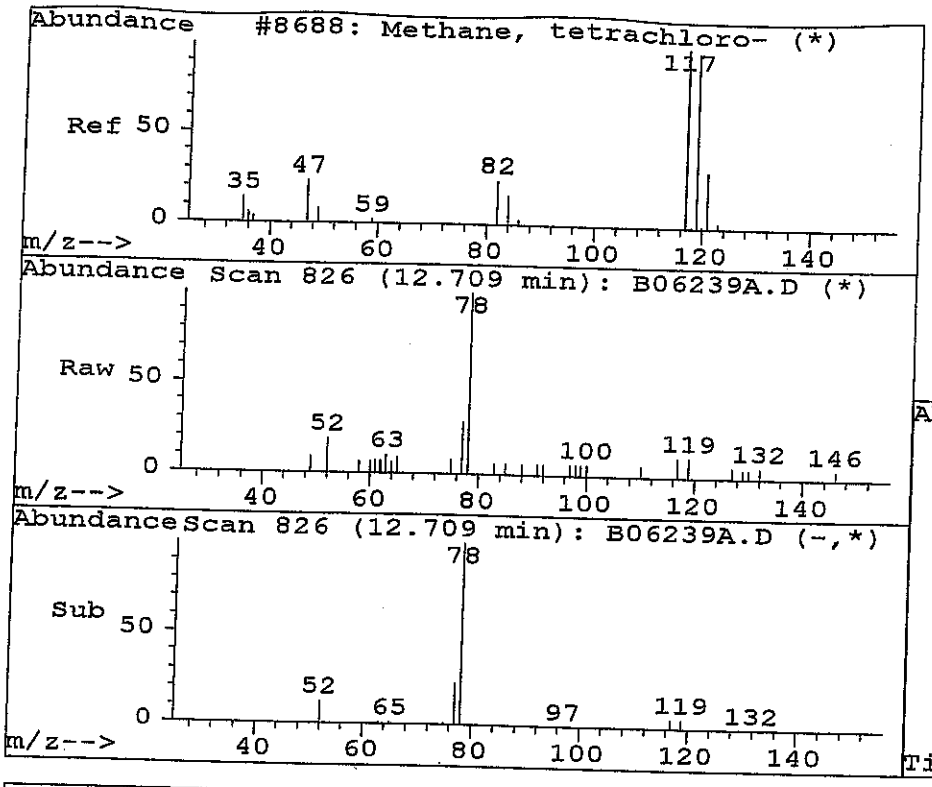


#20
Benzene
Concen: 0.01 ppbV
RT: 12.68 min Scan# 825
Delta R.T. 0.05 min
Lab File: B06239A.D
Acq: 23 Jun 109 1:09 pm

Tgt Ion:78 Resp: 5359

Ion	Ratio	Lower	Upper
78	100		
52	20.7	15.6	23.4
0	0.0	0.0	0.0
0	0.0	0.0	0.0

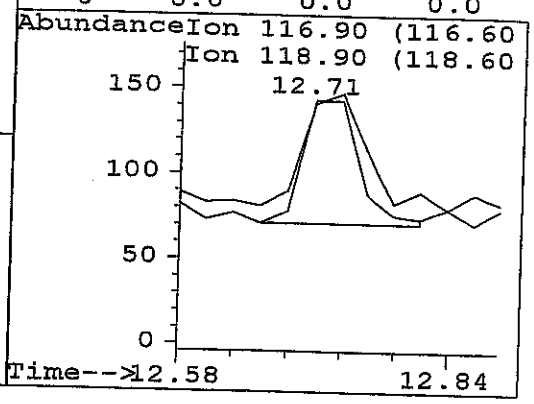


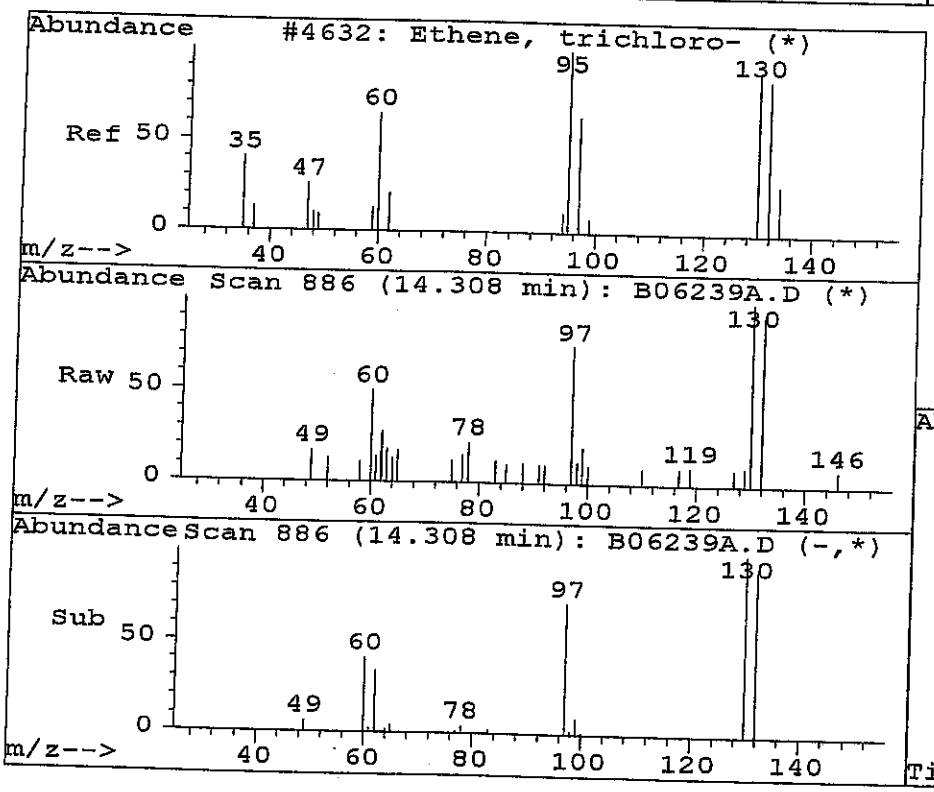


#21
Carbon tetrachloride
Concen: 0.00 ppbV
RT: 12.71 min Scan# 826
Delta R.T. 0.05 min
Lab File: B06239A.D
Acq: 23 Jun 109 1:09 pm

Tgt Ion:116.9 Resp: 28

Ion	Ratio	Lower	Upper
117	100		
119	78.7	79.4	119.2#
0	0.0	0.0	0.0
0	0.0	0.0	0.0

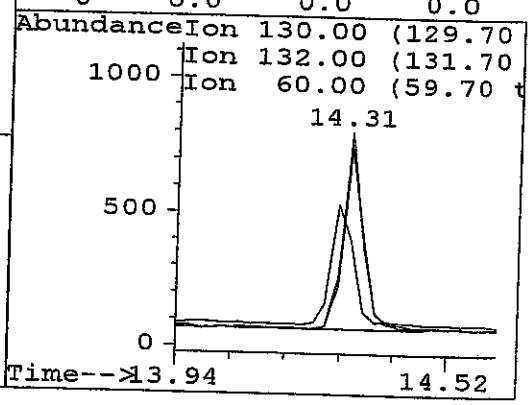


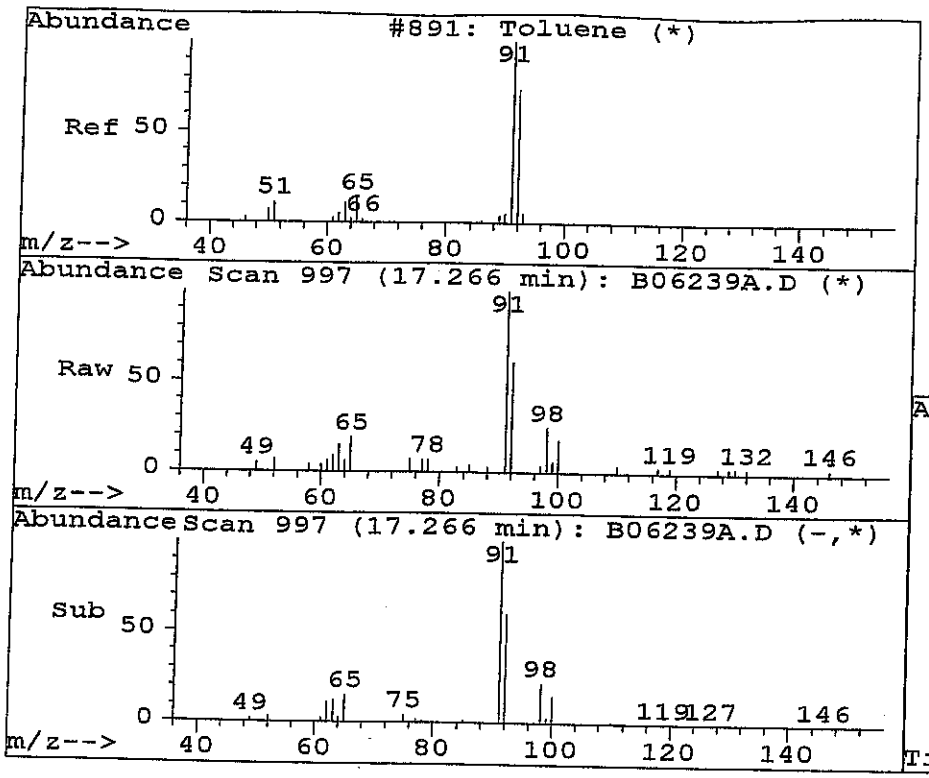


#23
Trichloroethene
Concen: 0.01 ppbV
RT: 14.31 min Scan# 886
Delta R.T. 0.05 min
Lab File: B06239A.D
Acq: 23 Jun 109 1:09 pm

Tgt Ion:130 Resp: 2158

Ion	Ratio	Lower	Upper
130	100		
132	91.7	74.6	112.0
60	42.4	41.6	62.4
0	0.0	0.0	0.0

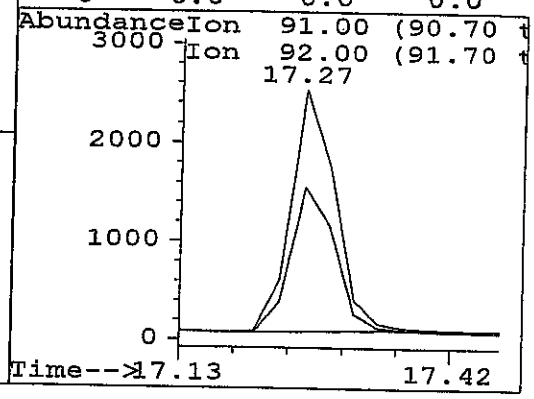


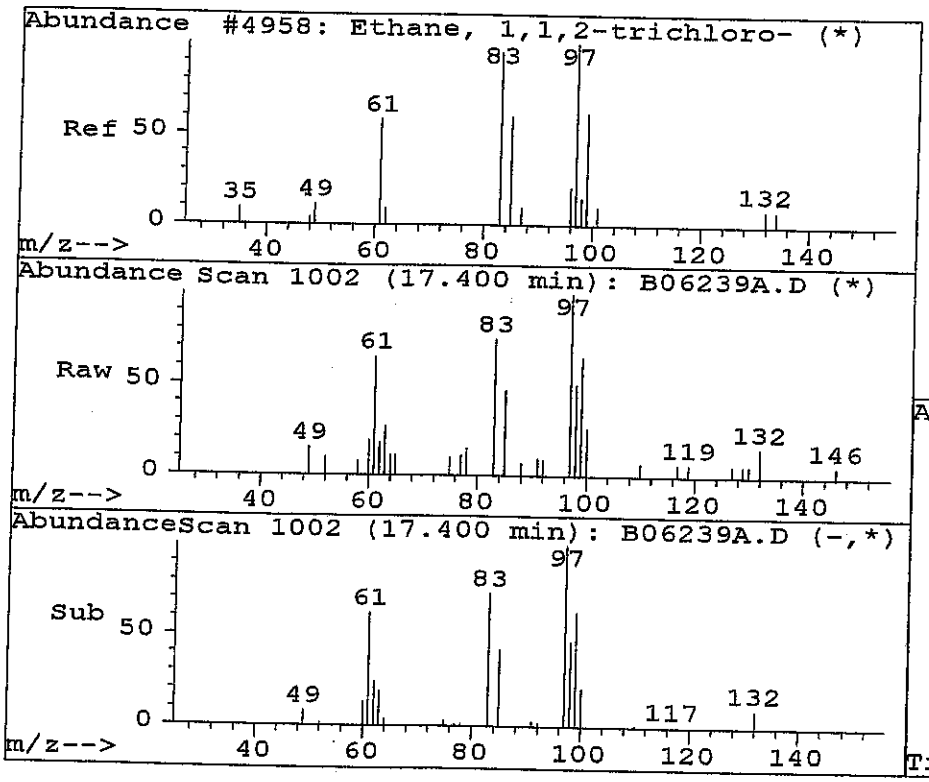


#26
Toluene
Concen: 0.01 ppbV m
RT: 17.27 min Scan# 997
Delta R.T. 0.06 min
Lab File: B06239A.D
Acq: 23 Jun 109 1:09 pm

Tgt Ion:91 Resp: 8107

Ion	Ratio	Lower	Upper
91	100		
92	61.3	53.2	79.8
0	0.0	0.0	0.0
0	0.0	0.0	0.0

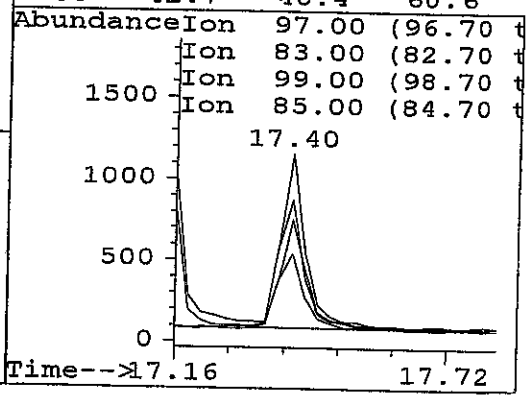


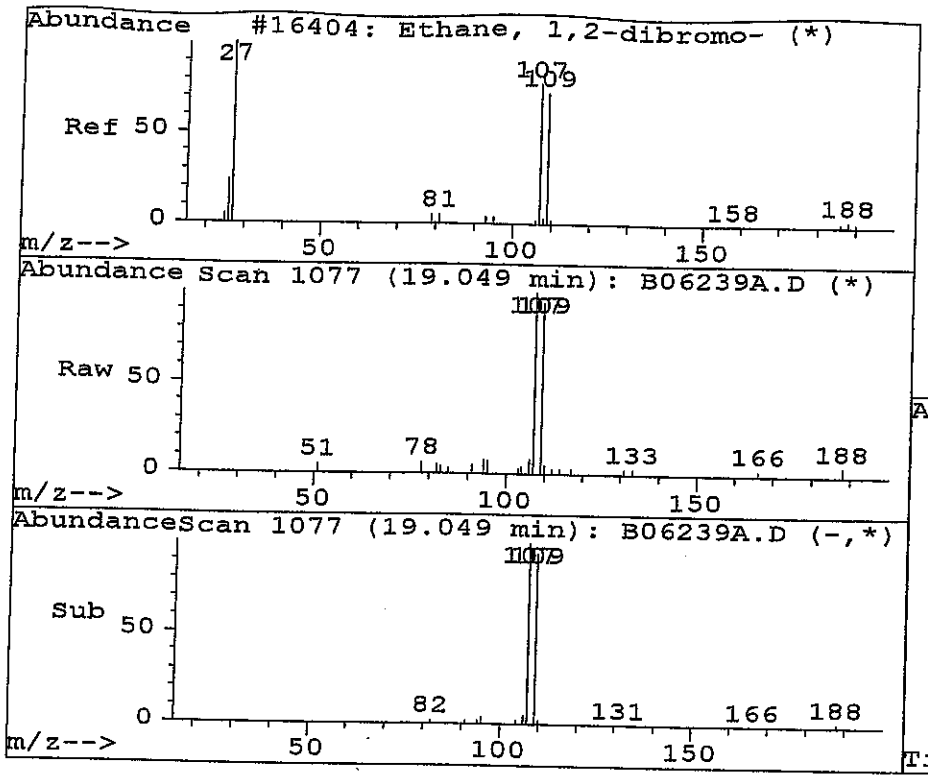


#28
1,1,2-Trichloroethane
Concen: 0.01 ppbV
RT: 17.40 min Scan# 1002
Delta R.T. 0.05 min
Lab File: B06239A.D
Acq: 23 Jun 109 1:09 pm

Tgt Ion:97 Resp: 3839

Ion	Ratio	Lower	Upper
97	100		
83	73.9	62.7	94.1
99	60.8	48.7	73.1
85	42.7	40.4	60.6

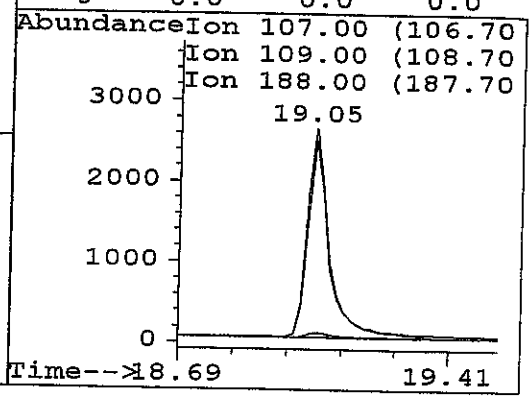


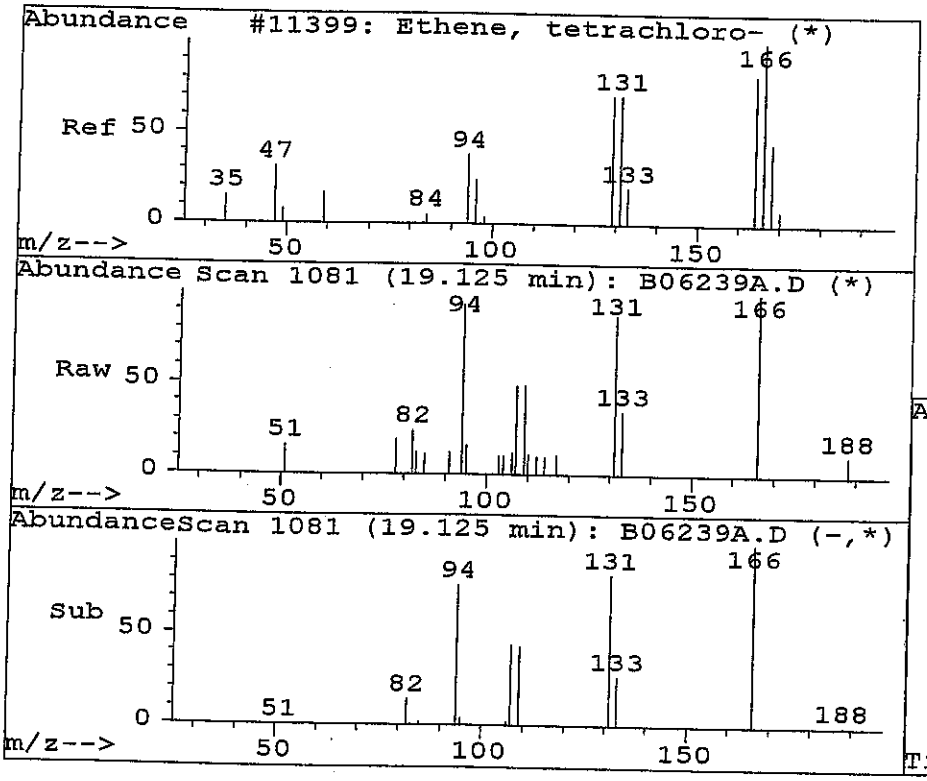


#29
1,2-Dibromoethane
Concen: 0.01 ppbV
RT: 19.05 min Scan# 1077
Delta R.T. 0.06 min
Lab File: B06239A.D
Acq: 23 Jun 109 1:09 pm

Tgt Ion:107 Resp: 10698

Ion	Ratio	Lower	Upper
107	100		
109	93.7	75.9	113.9
188	2.3	1.7	2.5
0	0.0	0.0	0.0

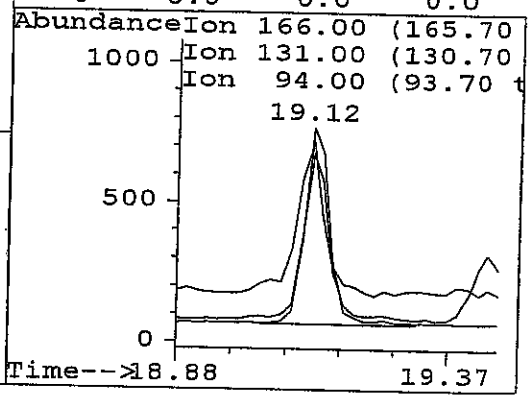


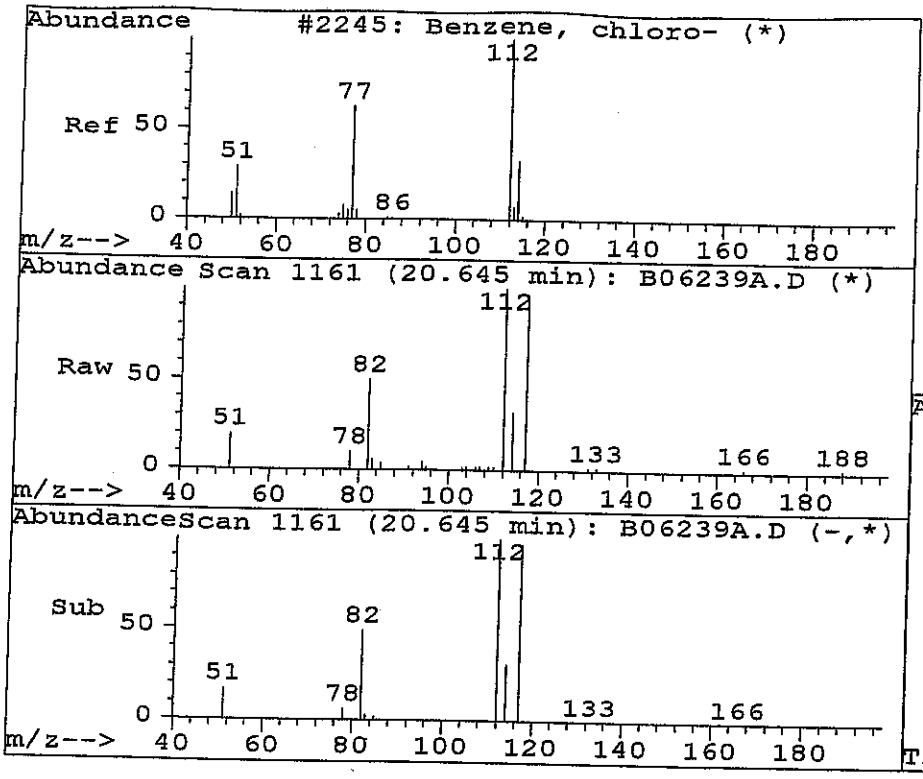


#30
Tetrachloroethene
Concen: 0.00 ppbV
RT: 19.12 min Scan# 1081
Delta R.T. 0.03 min
Lab File: B06239A.D
Acq: 23 Jun 109 1:09 pm

Tgt Ion:166 Resp: 2265

Ion	Ratio	Lower	Upper
166	100		
131	83.9	64.4	96.6
94	74.1	53.6	80.4
0	0.0	0.0	0.0

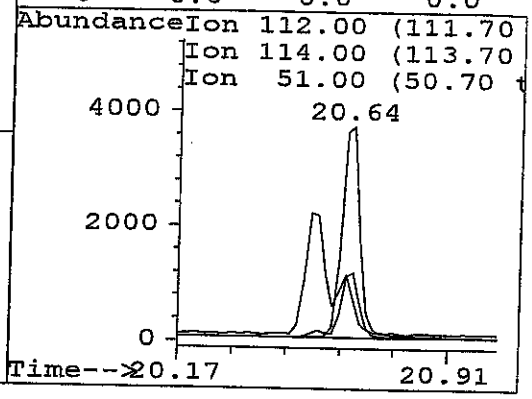


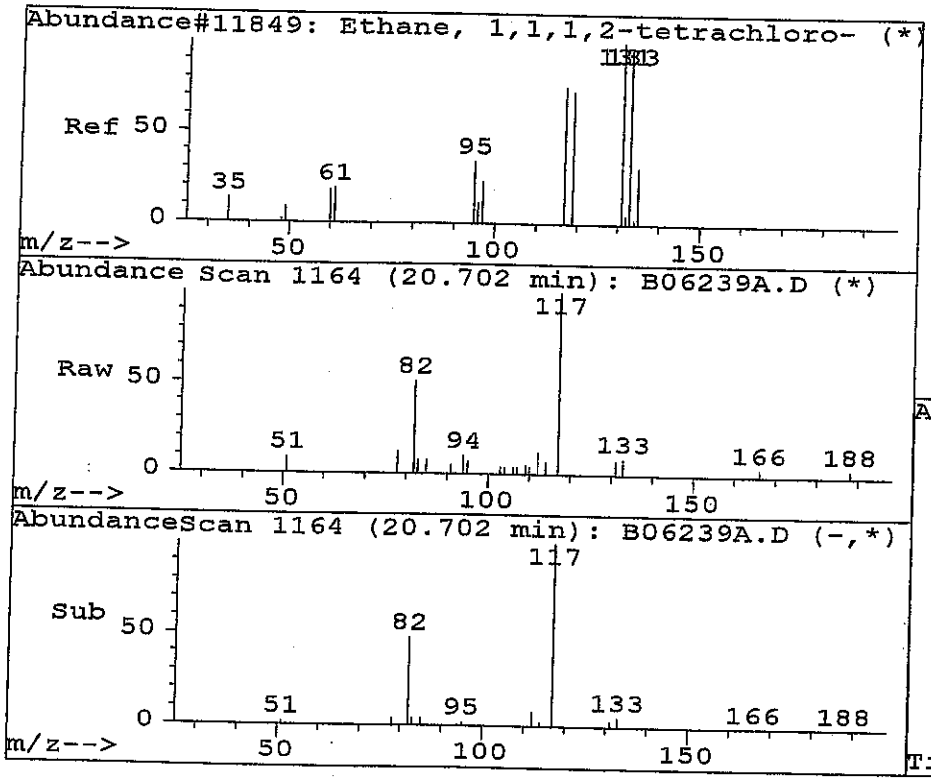


#31
Chlorobenzene
Concen: 0.01 ppbV
RT: 20.64 min Scan# 1161
Delta R.T. 0.05 min
Lab File: B06239A.D
Acq: 23 Jun 109 1:09 pm

Tgt Ion:112 Resp: 13149

Ion	Ratio	Lower	Upper
112	100		
114	30.6	26.6	39.8
51	16.4	12.4	18.6
0	0.0	0.0	0.0

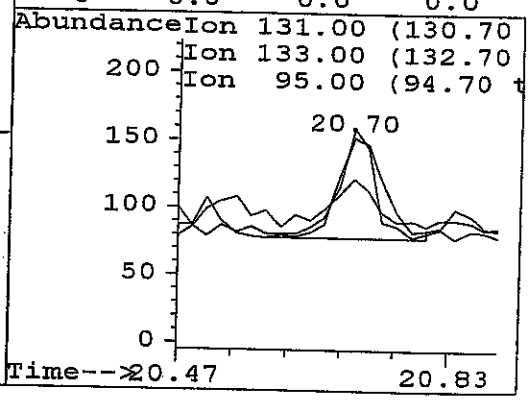


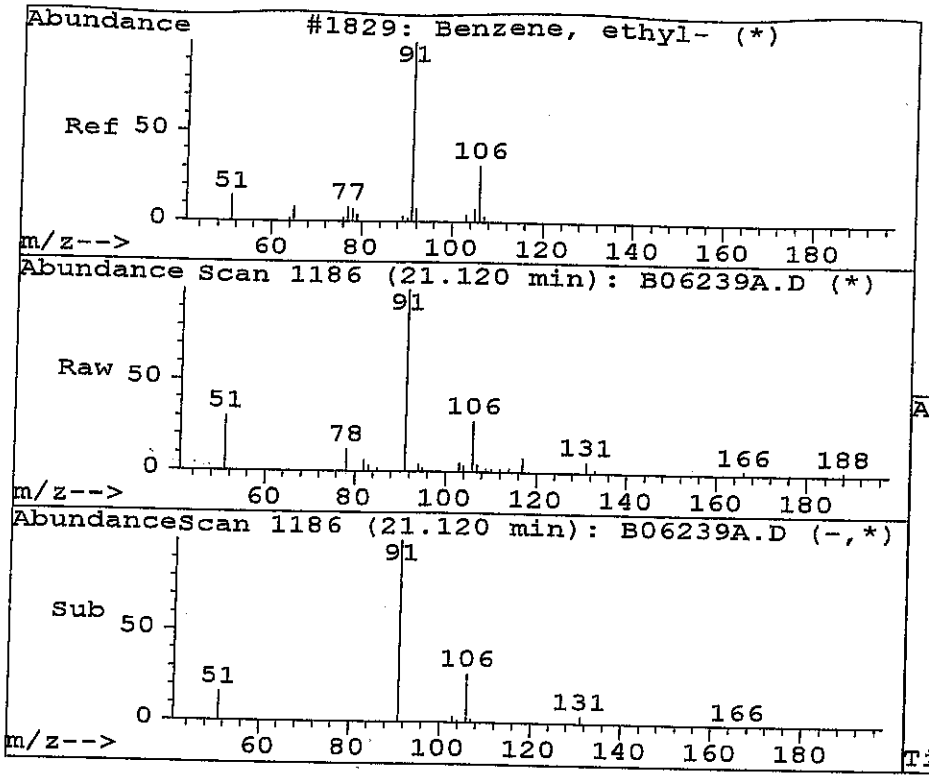


#32
1,1,1,2-Tetrachloroethane
Concen: 0.00 ppbV
RT: 20.70 min Scan# 1164
Delta R.T. 0.03 min
Lab File: B06239A.D
Acq: 23 Jun 109 1:09 pm

Tgt Ion:131 Resp: 316

Ion	Ratio	Lower	Upper
131	100		
133	109.2	76.6	114.8
95	41.5	38.7	58.1
0	0.0	0.0	0.0

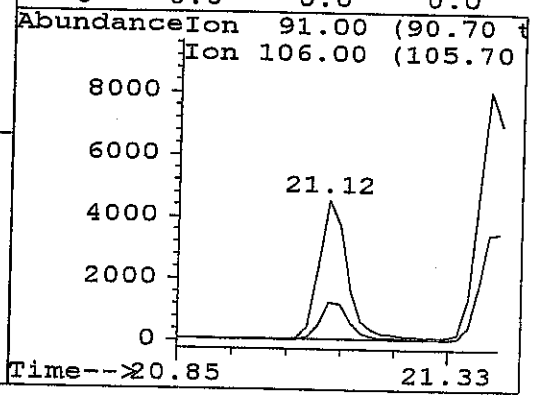


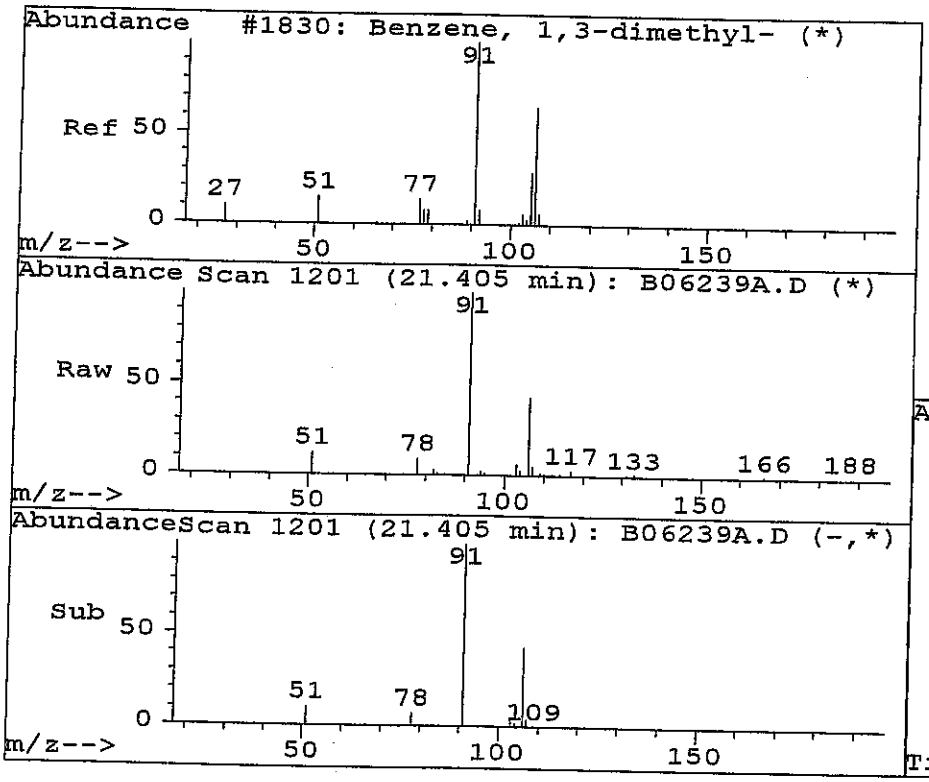


#33
Ethylbenzene
Concen: 0.01 ppbV
RT: 21.12 min Scan# 1186
Delta R.T. 0.04 min
Lab File: B06239A.D
Acq: 23 Jun 109 1:09 pm

Tgt Ion:91 Resp: 15830

Ion	Ratio	Lower	Upper
91	100		
106	26.5	24.2	36.4
0	0.0	0.0	0.0
0	0.0	0.0	0.0

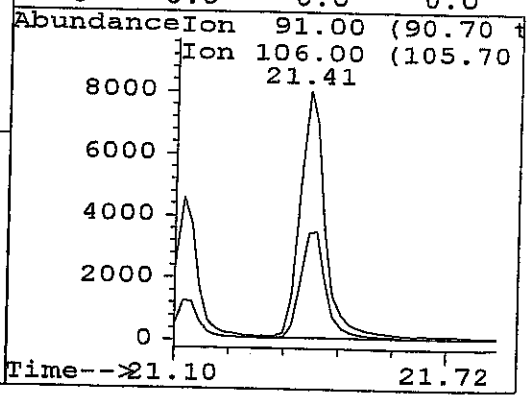


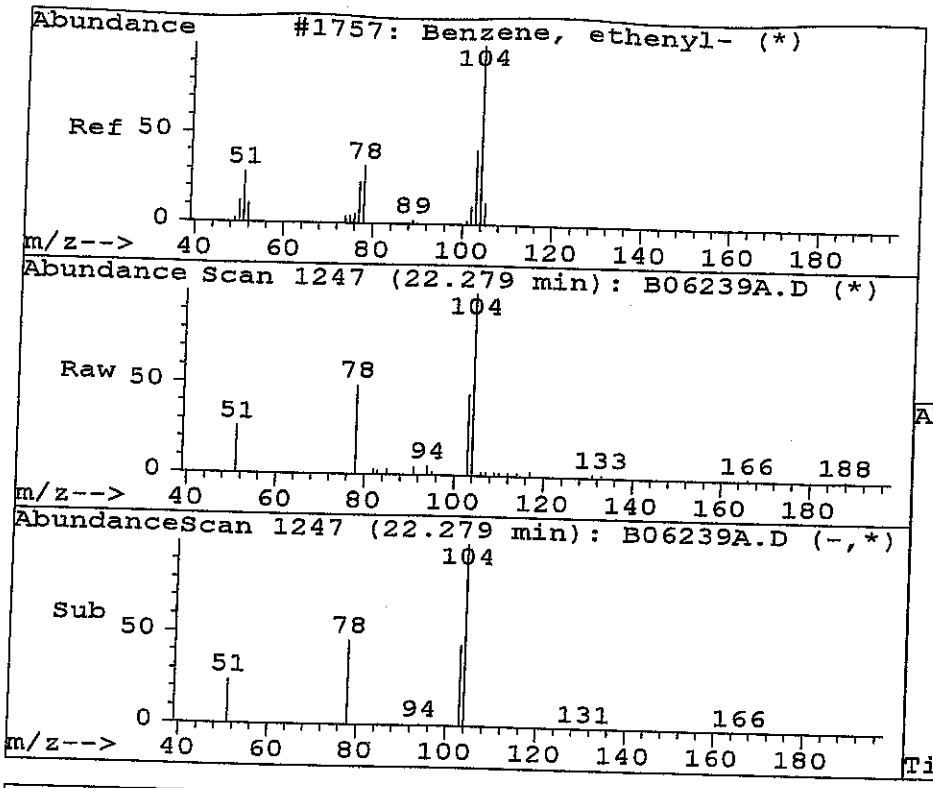


#34
m & p-Xylene
Concen: 0.02 ppbV
RT: 21.41 min Scan# 1201
Delta R.T. 0.04 min
Lab File: B06239A.D
Acq: 23 Jun 109 1:09 pm

Tgt Ion:91 Resp: 32402

Ion	Ratio	Lower	Upper
91	100		
106	42.6	41.7	62.5
0	0.0	0.0	0.0
0	0.0	0.0	0.0

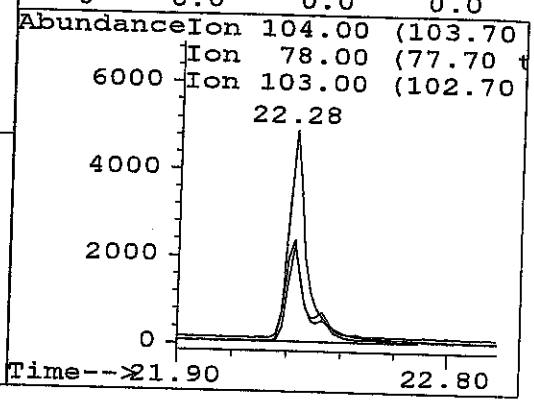


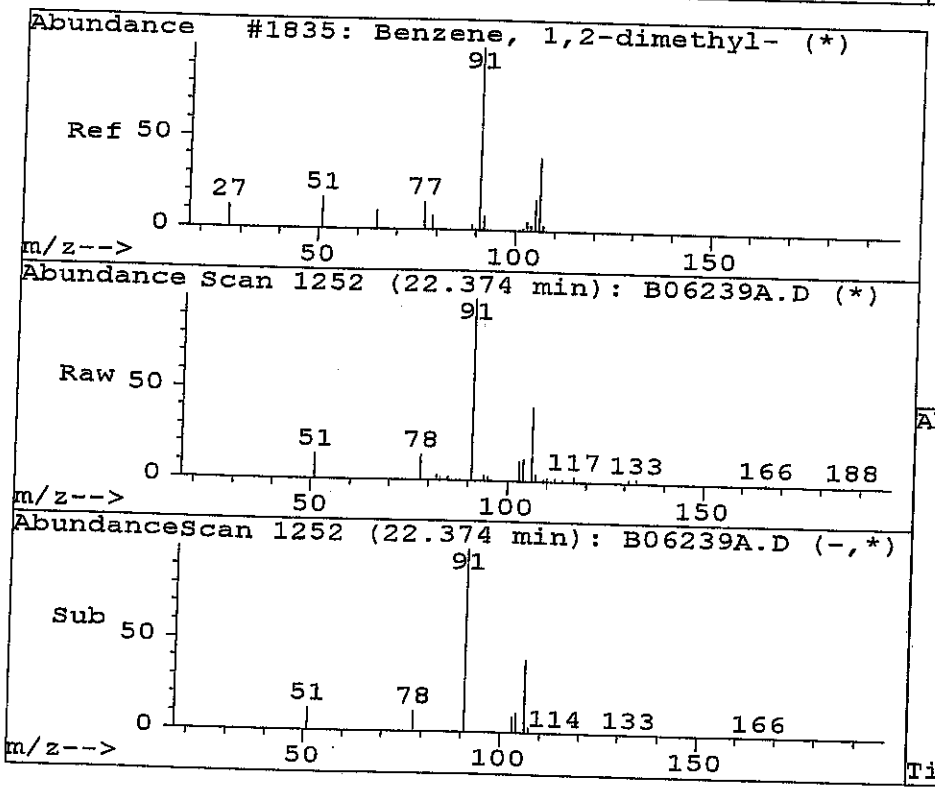


#35
Styrene
Concen: 0.01 ppbV
RT: 22.28 min Scan# 1247
Delta R.T. 0.06 min
Lab File: B06239A.D
Acq: 23 Jun 109 1:09 pm

Tgt Ion:104 Resp: 21065

Ion	Ratio	Lower	Upper
104	100		
78	46.0	28.2	42.2#
103	44.3	33.8	50.6
0	0.0	0.0	0.0

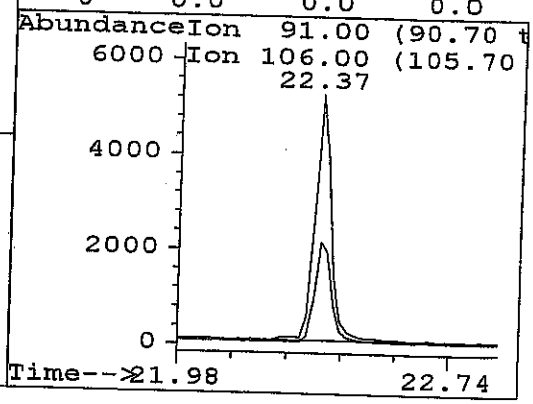


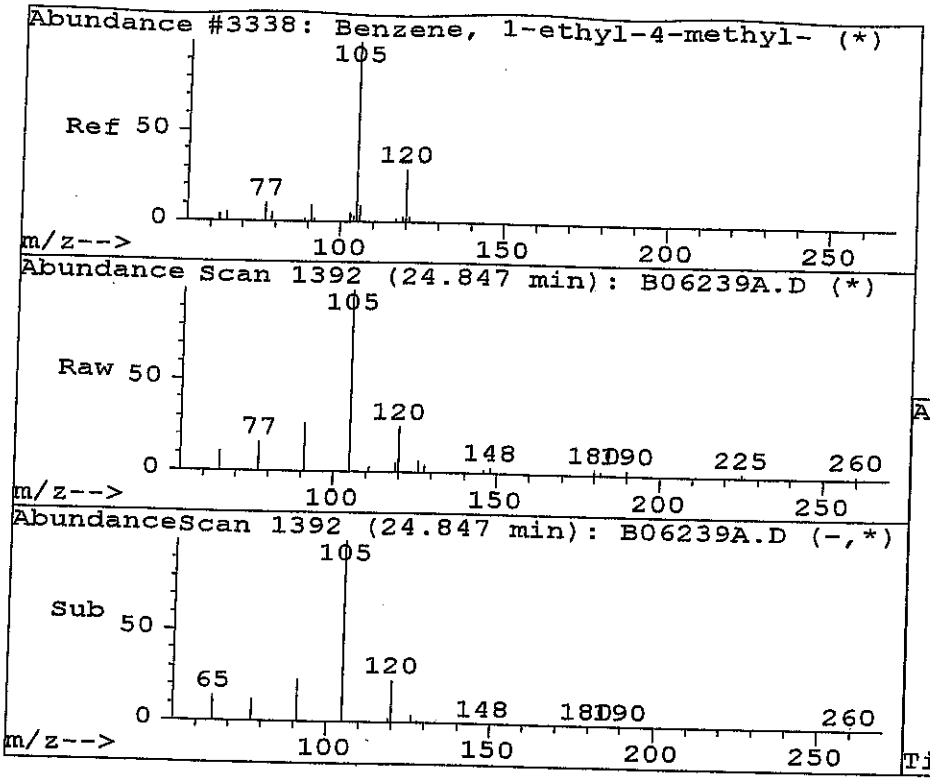


#36
o-Xylene
Concen: 0.01 ppbV
RT: 22.37 min Scan# 1252
Delta R.T. 0.03 min
Lab File: B06239A.D
Acq: 23 Jun 109 1:09 pm

Tgt Ion:91 Resp: 16952

Ion	Ratio	Lower	Upper
91	100		
106	40.5	37.5	56.3
0	0.0	0.0	0.0
0	0.0	0.0	0.0

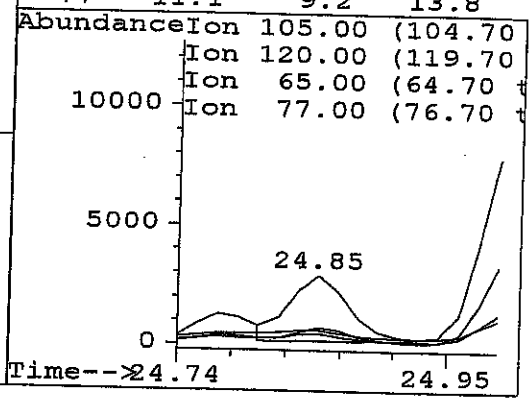


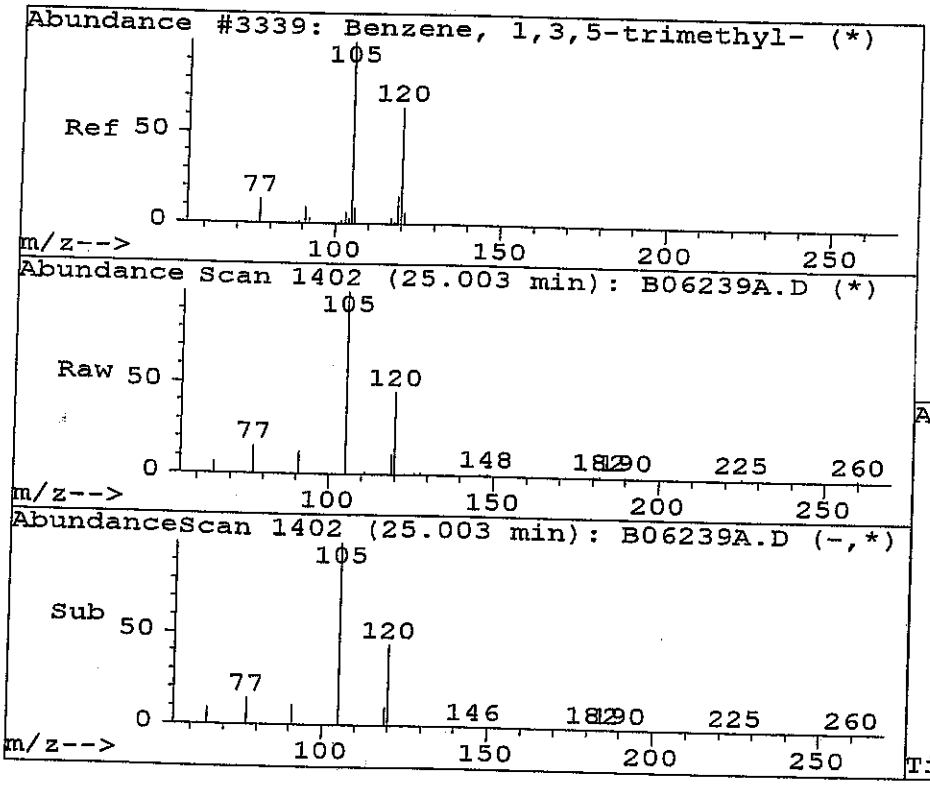


#38
4-Ethyltoluene
Concen: 0.00 ppbV
RT: 24.85 min Scan# 1392
Delta R.T. 0.05 min
Lab File: B06239A.D
Acq: 23 Jun 109 1:09 pm

Tgt Ion:105 Resp: 8875

Ion	Ratio	Lower	Upper
105	100		
120	22.0	19.6	29.4
65	10.2	9.1	13.7
77	11.1	9.2	13.8

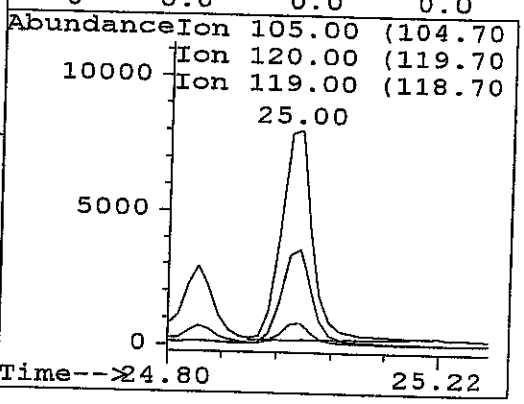


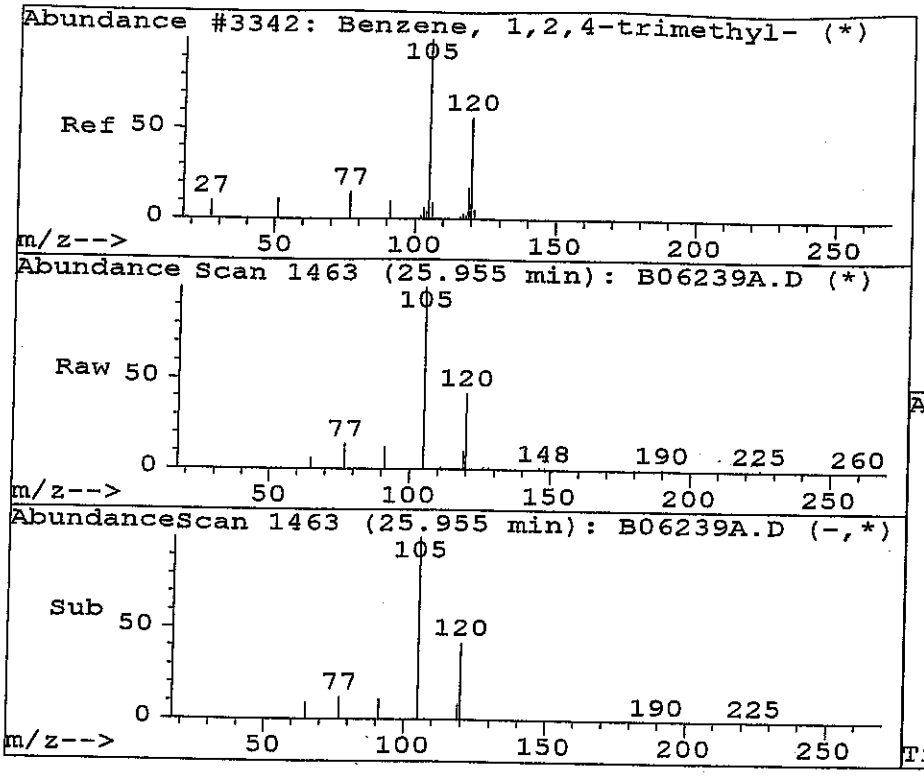


#39
1,3,5-Trimethylbenzene
Concen: 0.01 ppbV
RT: 25.00 min Scan# 1402
Delta R.T. 0.04 min
Lab File: B06239A.D
Acq: 23 Jun 109 1:09 pm

Tgt Ion:105 Resp: 26522

Ion	Ratio	Lower	Upper
105	100		
120	45.0	38.6	57.8
119	10.0	8.6	13.0
0	0.0	0.0	0.0

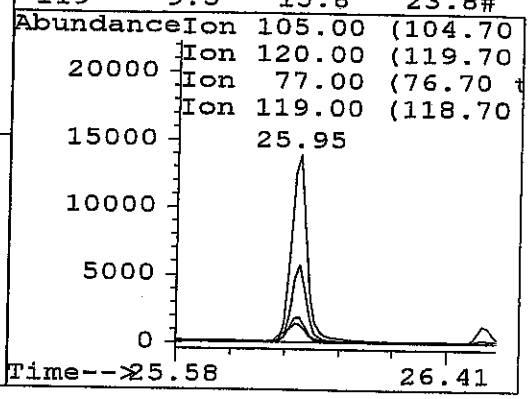


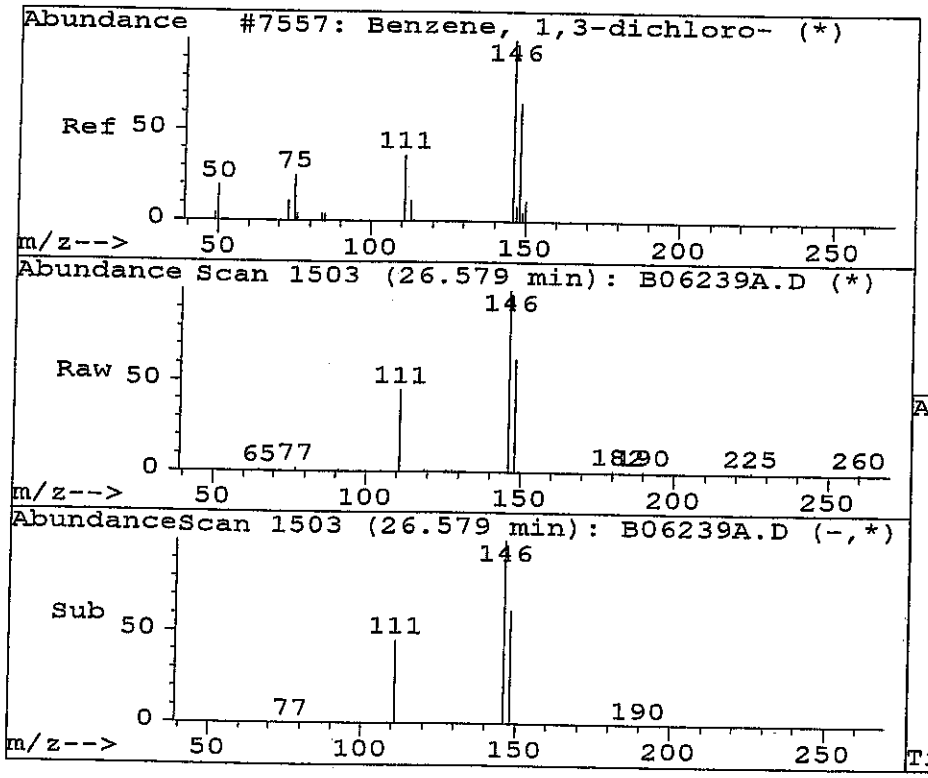


#40
1,2,4-Trimethylbenzene
Concen: 0.01 ppbV
RT: 25.95 min Scan# 1463
Delta R.T. 0.04 min
Lab File: B06239A.D
Acq: 23 Jun 109 1:09 pm

Tgt Ion:105 Resp: 47627

Ion	Ratio	Lower	Upper
105	100		
120	41.4	36.1	54.1
77	12.5	11.7	17.5
119	9.5	15.8	23.8#

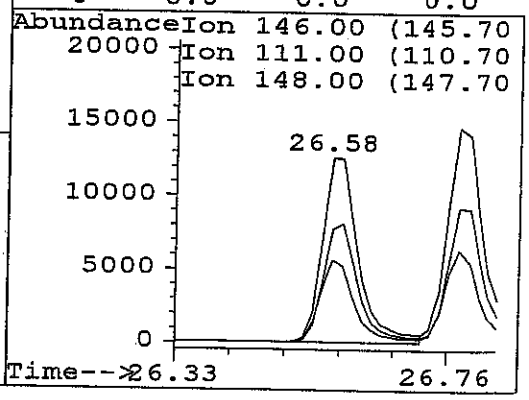


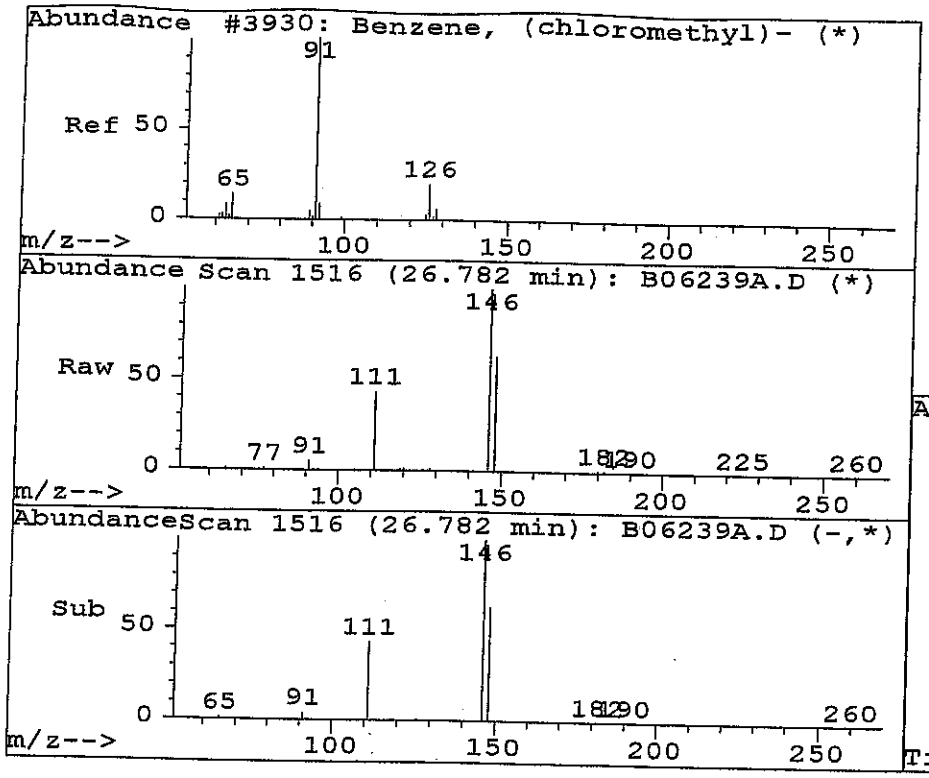


#41
1,3-Dichlorobenzene
Concen: 0.01 ppbV
RT: 26.58 min Scan# 1503
Delta R.T. 0.03 min
Lab File: B06239A.D
Acq: 23 Jun 109 1:09 pm

Tgt Ion:146 Resp: 49737

Ion	Ratio	Lower	Upper
146	100		
111	44.5	34.7	52.1
148	61.4	55.0	82.4
0	0.0	0.0	0.0

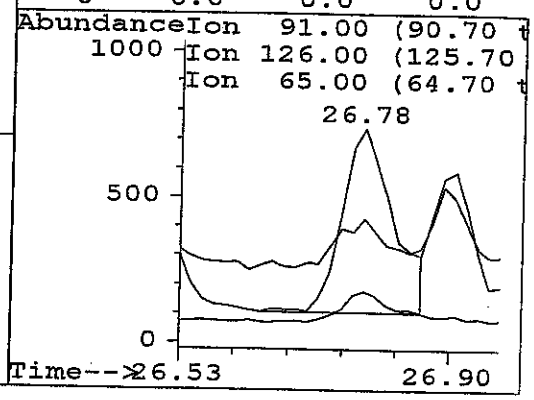


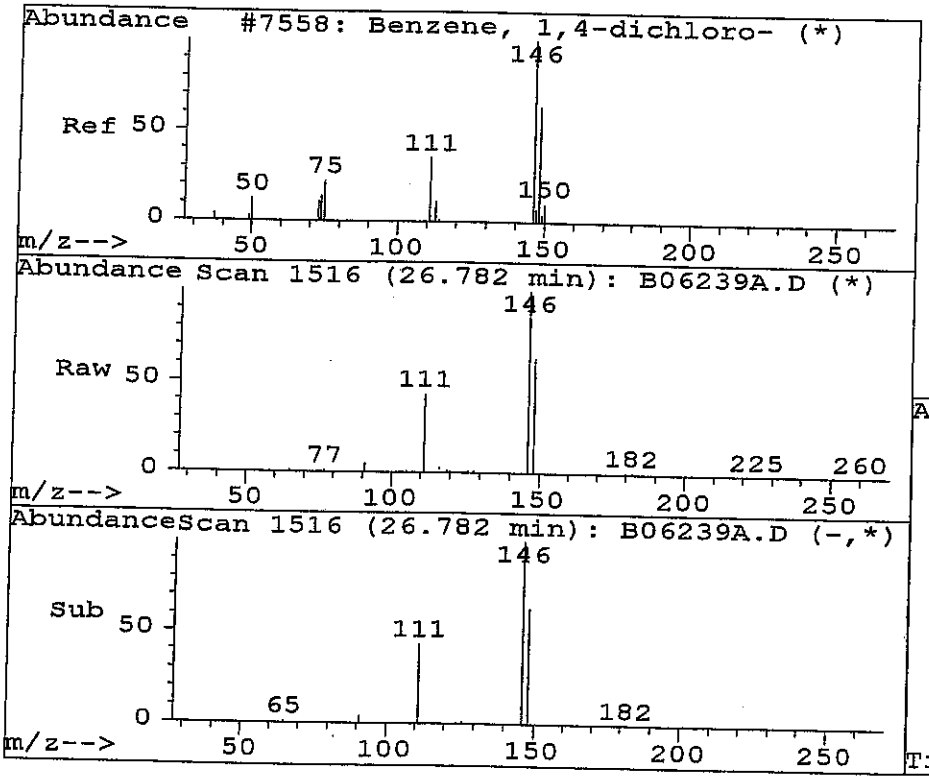


#42
Benzyl chloride
Concen: 0.00 ppbV
RT: 26.78 min Scan# 1516
Delta R.T. 0.08 min
Lab File: B06239A.D
Acq: 23 Jun 109 1:09 pm

Tgt Ion:91 Resp: 3119

Ion	Ratio	Lower	Upper
91	100		
126	16.9	15.4	23.0
65	24.7	18.6	27.8
0	0.0	0.0	0.0

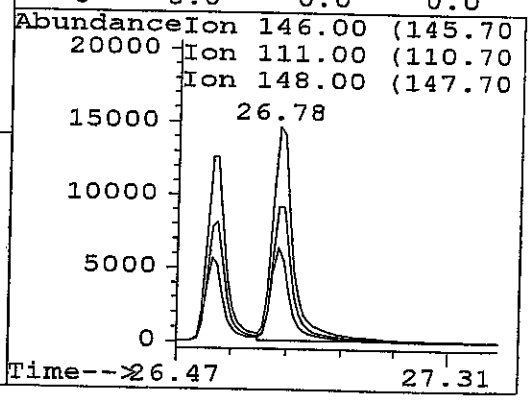


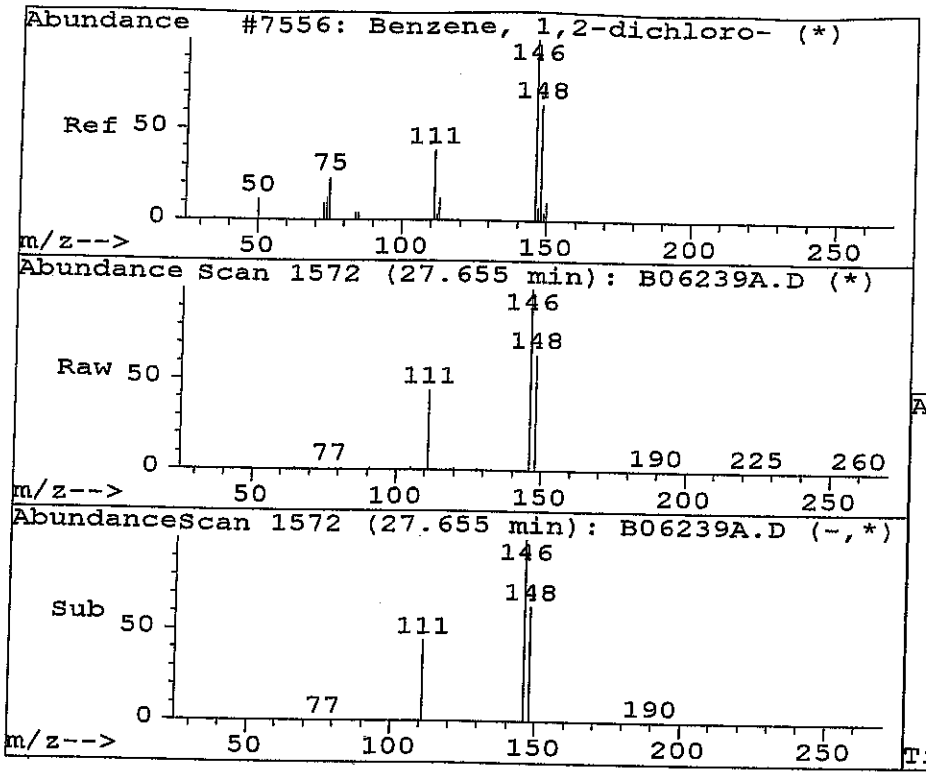


#43
1,4-Dichlorobenzene
Concen: 0.02 ppbV
RT: 26.78 min Scan# 1516
Delta R.T. 0.03 min
Lab File: B06239A.D
Acq: 23 Jun 109 1:09 pm

Tgt Ion:146 Resp: 63608

Ion	Ratio	Lower	Upper
146	100		
111	42.9	32.4	48.6
148	62.5	55.3	82.9
0	0.0	0.0	0.0

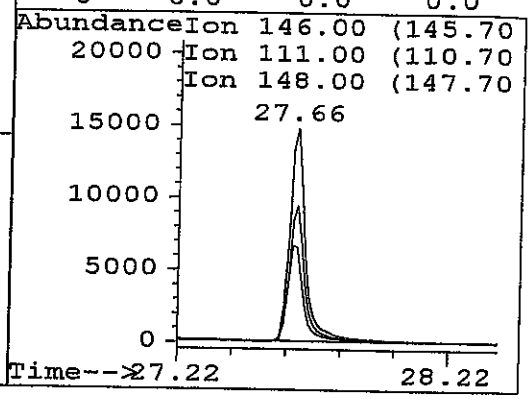


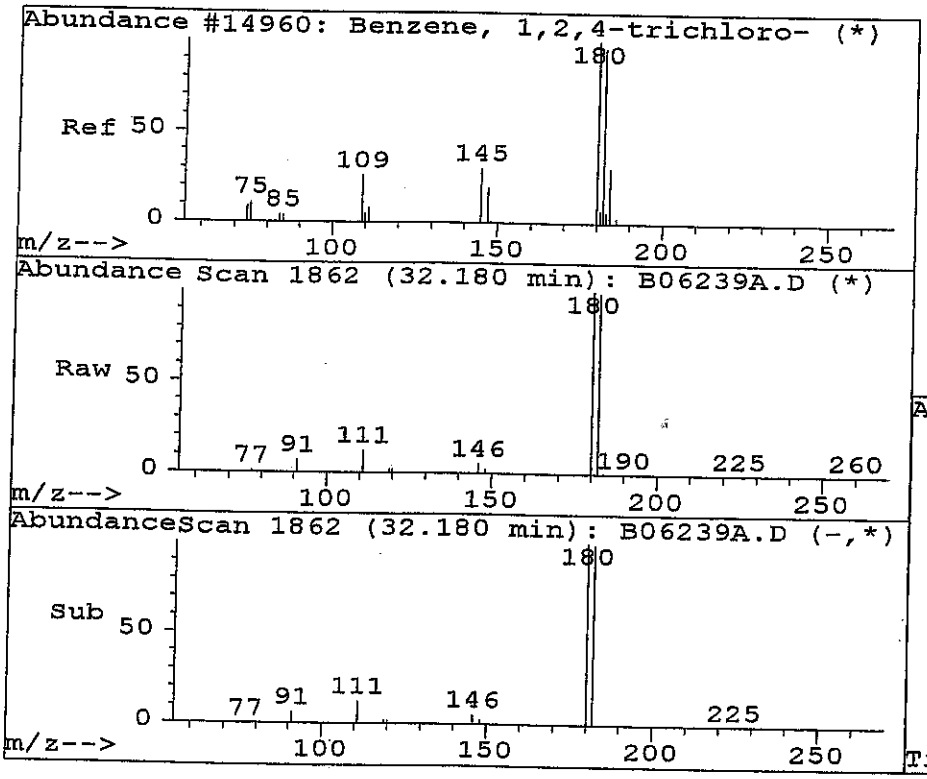


#44
1,2-Dichlorobenzene
Concen: 0.01 ppbV
RT: 27.66 min Scan# 1572
Delta R.T. 0.05 min
Lab File: B06239A.D
Acq: 23 Jun 109 1:09 pm

Tgt Ion:146 Resp: 61095

Ion	Ratio	Lower	Upper
146	100		
111	44.0	38.2	57.2
148	63.4	54.6	81.8
0	0.0	0.0	0.0

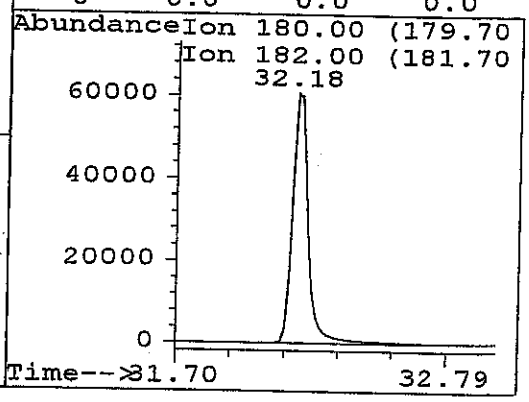


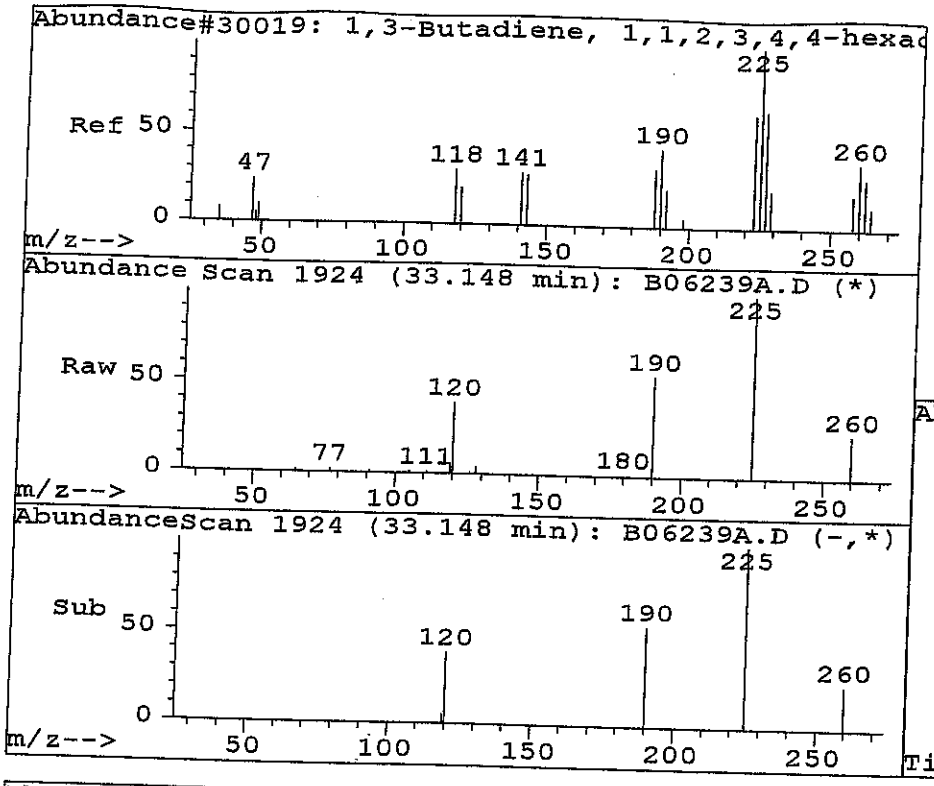


#45
1,2,4-Trichlorobenzene
Concen: 0.02 ppbV
RT: 32.18 min Scan# 1862
Delta R.T. 0.01 min
Lab File: B06239A.D
Acq: 23 Jun 109 1:09 pm

Tgt Ion:180 Resp: 271547

Ion	Ratio	Lower	Upper
180	100		
182	98.5	79.0	118.4
0	0.0	0.0	0.0
0	0.0	0.0	0.0

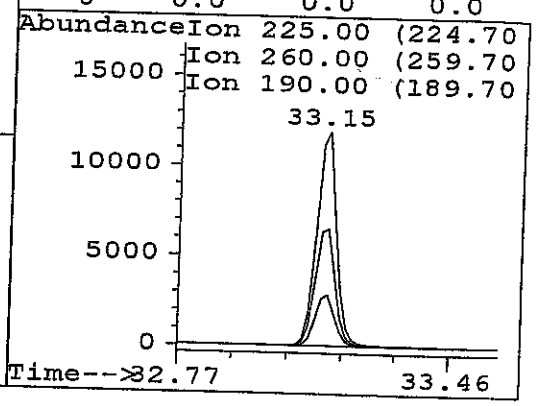


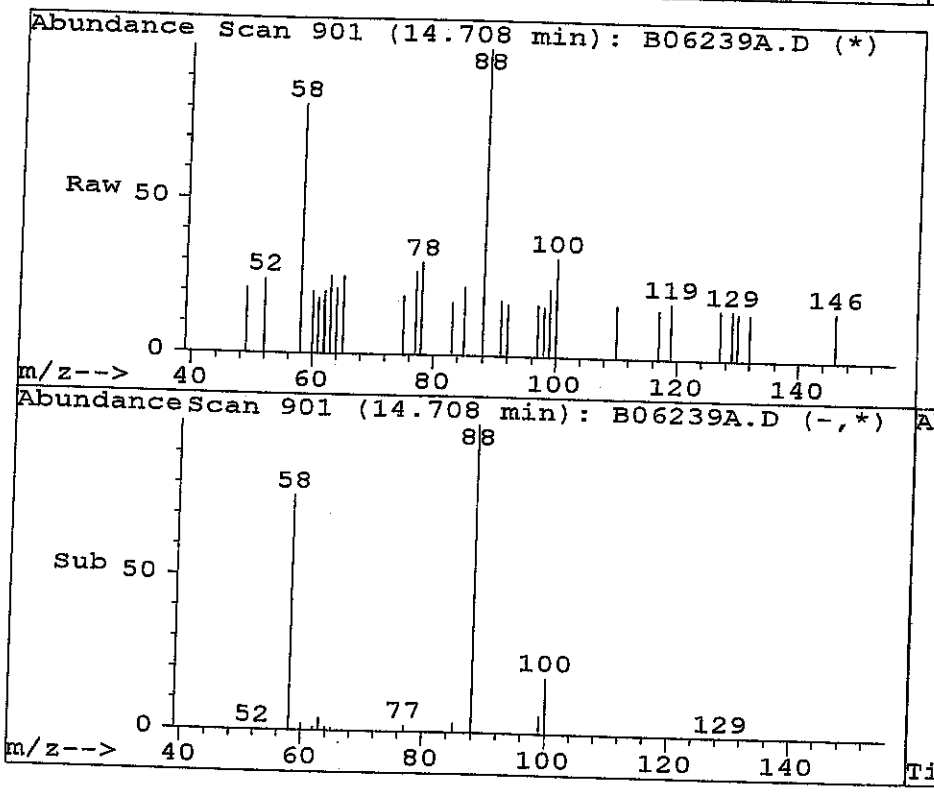


#46
Hexachlorobutadiene
Concen: 0.01 ppbV
RT: 33.15 min Scan# 1924
Delta R.T. 0.02 min
Lab File: B06239A.D
Acq: 23 Jun 109 1:09 pm

Tgt Ion:225 Resp: 41004

Ion	Ratio	Lower	Upper
225	100		
260	23.7	20.5	30.7
190	54.6	43.0	64.4
0	0.0	0.0	0.0

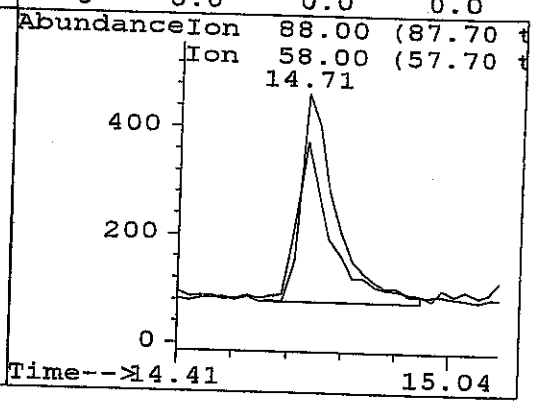


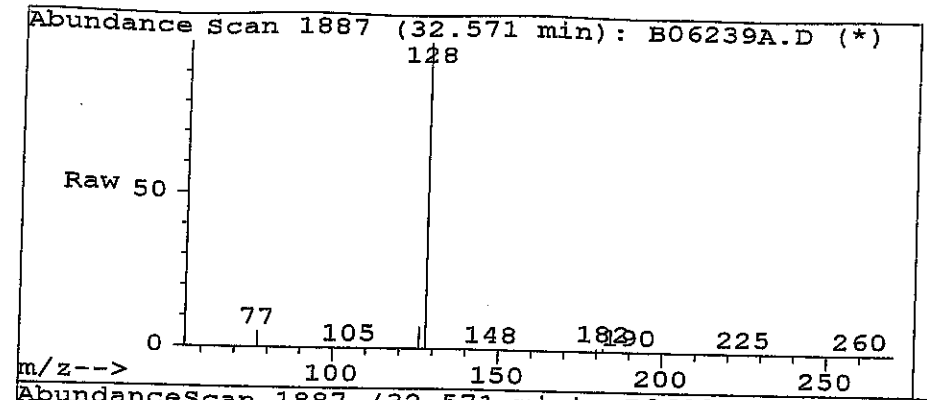


#47
1,4 Dioxane
Concen: 0.01 ppbV
RT: 14.71 min Scan# 901
Delta R.T. 0.14 min
Lab File: B06239A.D
Acq: 23 Jun 109 1:09 pm

Tgt Ion:88 Resp: 2198

Ion	Ratio	Lower	Upper
88	100		
58	74.3	54.9	82.3
0	0.0	0.0	0.0
0	0.0	0.0	0.0

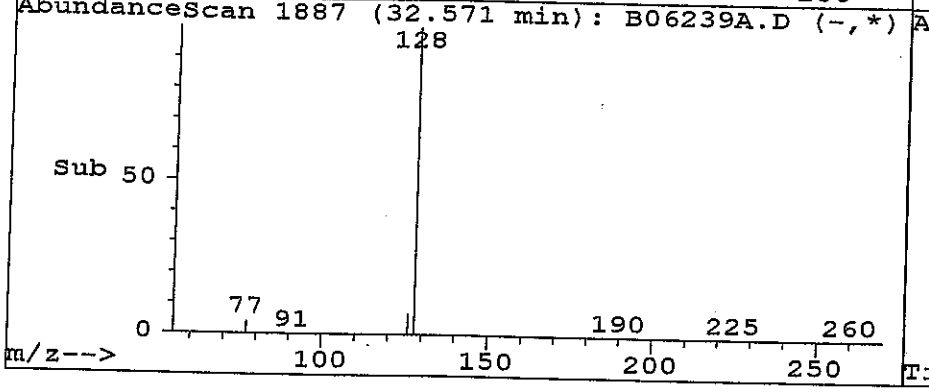


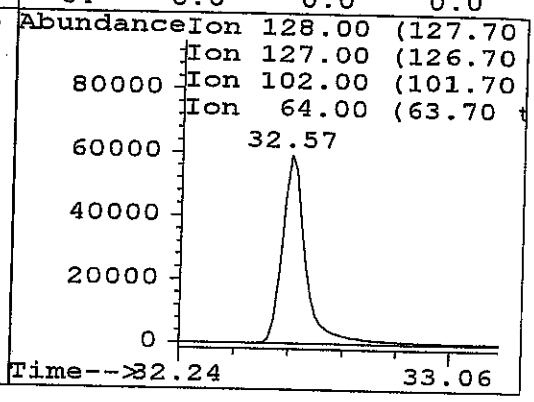


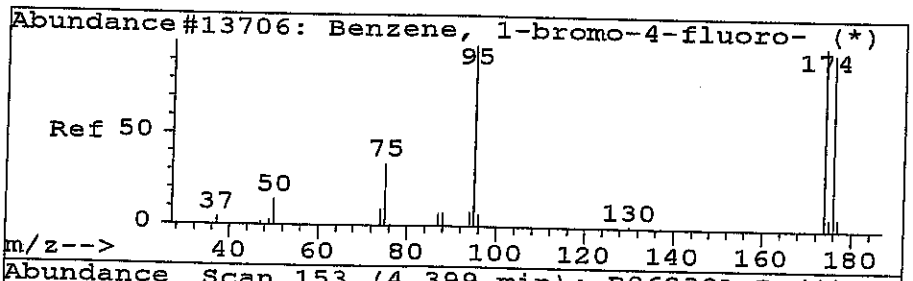
#48
Naphthalene
Concen: 0.01 ppbV m
RT: 32.57 min Scan# 1887
Delta R.T. -0.21 min
Lab File: B06239A.D
Acq: 23 Jun 109 1:09 pm

Tgt Ion:128 Resp: 297245

Ion	Ratio	Lower	Upper
128	100		
127	0.0	0.0	0.0
102	0.0	0.0	0.0
64	0.0	0.0	0.0



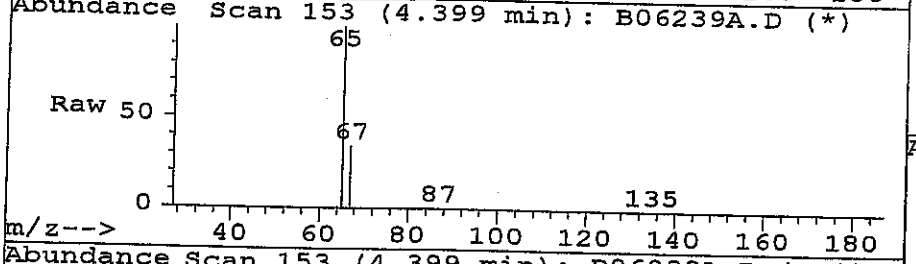


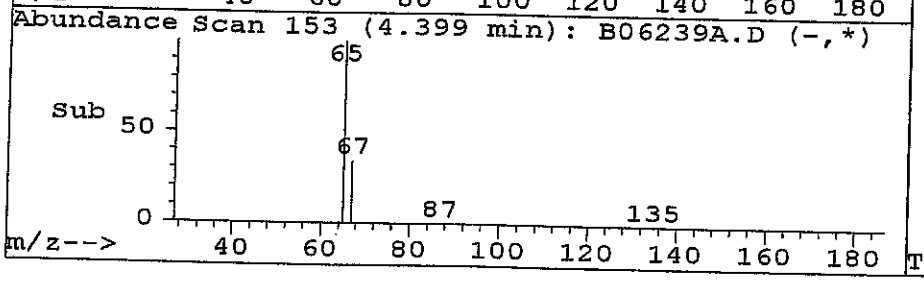


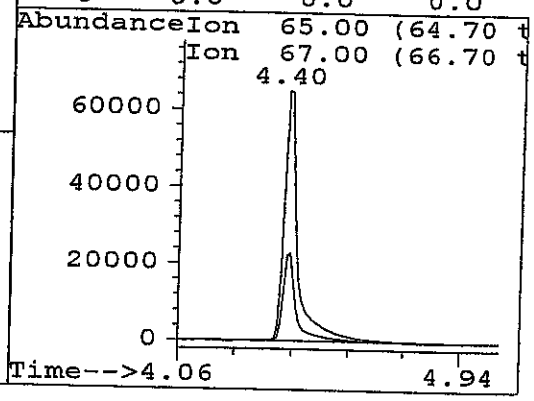
#49
Vinyl Chloride-d3
Concen: 0.20 ppbV
RT: 4.40 min Scan# 153
Delta R.T. 0.05 min
Lab File: B06239A.D
Acq: 23 Jun 109 1:09 pm

Tgt Ion:65 Resp: 189554

Ion	Ratio	Lower	Upper
65	100		
67	34.1	26.6	40.0
0	0.0	0.0	0.0
0	0.0	0.0	0.0







Quantitation Report

Data File : C:\MSCHEM\2\DATA\06239M~1\QC06239B.D
Acq Time : 23 Jun 109 11:39 am
Sample : ~~STC0022~~ ST0623091 KB 6/23/09
Misc :
Quant Time: Jun 29 16:42 19109

Operator: JF
Inst : MS2
Multiplr: 1.00

Method : C:\MSCHEM\2\METHODS\1T15EXAY.M
Title : EPA TO-15
Last Update : Tue Mar 17 14:18:15 2009
Response via : Multiple Level Calibration

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Chlorobenzene-d5	20.55	117	851611	0.20 ppbV	0.04
System Monitoring Compounds					%Recovery
16) Toluene-d8	17.11	98	427649	0.24 ppbV	
49) Vinyl Chloride-d3	4.41	65	197884	0.27 ppbV	
Target Compounds					Qvalue
2) Dichlorodifluoromethane	3.90	85	637960	1.30 ppbV m	0
3) Chloromethane	4.16	50	228800	0.99 ppbV m	95
4) Freon 114	4.17	85	607200	1.25 ppbV	98
5) Vinyl chloride	4.42	62	212308	1.28 ppbV	98
6) Bromomethane	5.02	94	227510	1.43 ppbV	92
7) Chloroethane	5.23	64	132079	0.91 ppbV	99
8) Trichlorofluoromethane	6.04	101	719267	1.25 ppbV	94
9) 1,1-Dichloroethene	7.01	61	430448	1.25 ppbV	97
10) Freon 113	7.24	151	282963	1.10 ppbV	98
11) Dichloromethane	7.48	84	188665	1.08 ppbV #	94
12) trans-1,2-Dichloroethene	8.56	96	5218	0.03 ppbV	87
13) Methyl tert butyl ether	8.62	73	141	0.00 ppbV #	61
14) 1,1-Dichloroethane	9.09	63	439863	1.16 ppbV	96
15) cis-1,2-Dichloroethene	10.31	96	236466	0.98 ppbV	87
17) Chloroform	10.73	83	619529	1.24 ppbV	94
18) 1,1,1-Trichloroethane	11.96	97	632986	1.14 ppbV #	93
19) 1,2-Dichloroethane	12.10	62	847748	0.83 ppbV	98
20) Benzene	12.68	78	617230	0.79 ppbV	97
21) Carbon tetrachloride	12.74	117	541791	1.14 ppbV	94
22) 1,2-Dichloropropane	14.25	63	252919	0.96 ppbV	97
23) Trichloroethene	14.31	130	272978	0.87 ppbV #	87
24) Bromodichloromethane	14.63	83	1920	0.00 ppbV	97
25) cis-1,3-Dichloropropene	16.01	75	388833	1.56 ppbV	98
26) Toluene	17.27	91	738918	0.67 ppbV	96
27) trans-1,3-Dichloropropene	17.05	75	407668	1.53 ppbV #	69
28) 1,1,2-Trichloroethane	17.37	97	290725	0.62 ppbV	92
29) 1,2-Dibromoethane	19.03	107	451534	0.52 ppbV #	95
30) Tetrachloroethene	19.12	166	296064	0.75 ppbV	92
31) Chlorobenzene	20.65	112	611331	0.55 ppbV #	94
32) 1,1,1,2-Tetrachloroethane	20.70	131	2257	0.00 ppbV	95
33) Ethylbenzene	21.12	91	1149886	0.57 ppbV	96
34) m & p-Xylene	21.41	91	1772416	1.16 ppbV	97
35) Styrene	22.26	104	666270	0.36 ppbV #	90
36) o-Xylene	22.37	91	967555	0.49 ppbV	99
37) 1,1,2,2-Tetrachloroethane	22.98	83	750136	0.33 ppbV	96
38) 4-Ethyltoluene	24.85	105	18803	0.01 ppbV #	96
39) 1,3,5-Trimethylbenzene	24.99	105	1203997	0.35 ppbV	98
40) 1,2,4-Trimethylbenzene	25.94	105	1277190	0.32 ppbV #	93
41) 1,3-Dichlorobenzene	26.58	146	830236	0.27 ppbV	97
42) Benzyl chloride	26.75	91	14554	0.00 ppbV #	92
43) 1,4-Dichlorobenzene	26.78	146	852177	0.27 ppbV	98
44) 1,2-Dichlorobenzene	27.64	146	880342	0.23 ppbV	97
45) 1,2,4-Trichlorobenzene	32.18	180	1257089	0.15 ppbV	99
46) Hexachlorobutadiene	33.15	225	747698	0.19 ppbV	97
47) 1,4 Dioxane	14.71	88	2560	0.01 ppbV	88
48) Naphthalene	33.04	128	4171	0.00 ppbV #	100

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

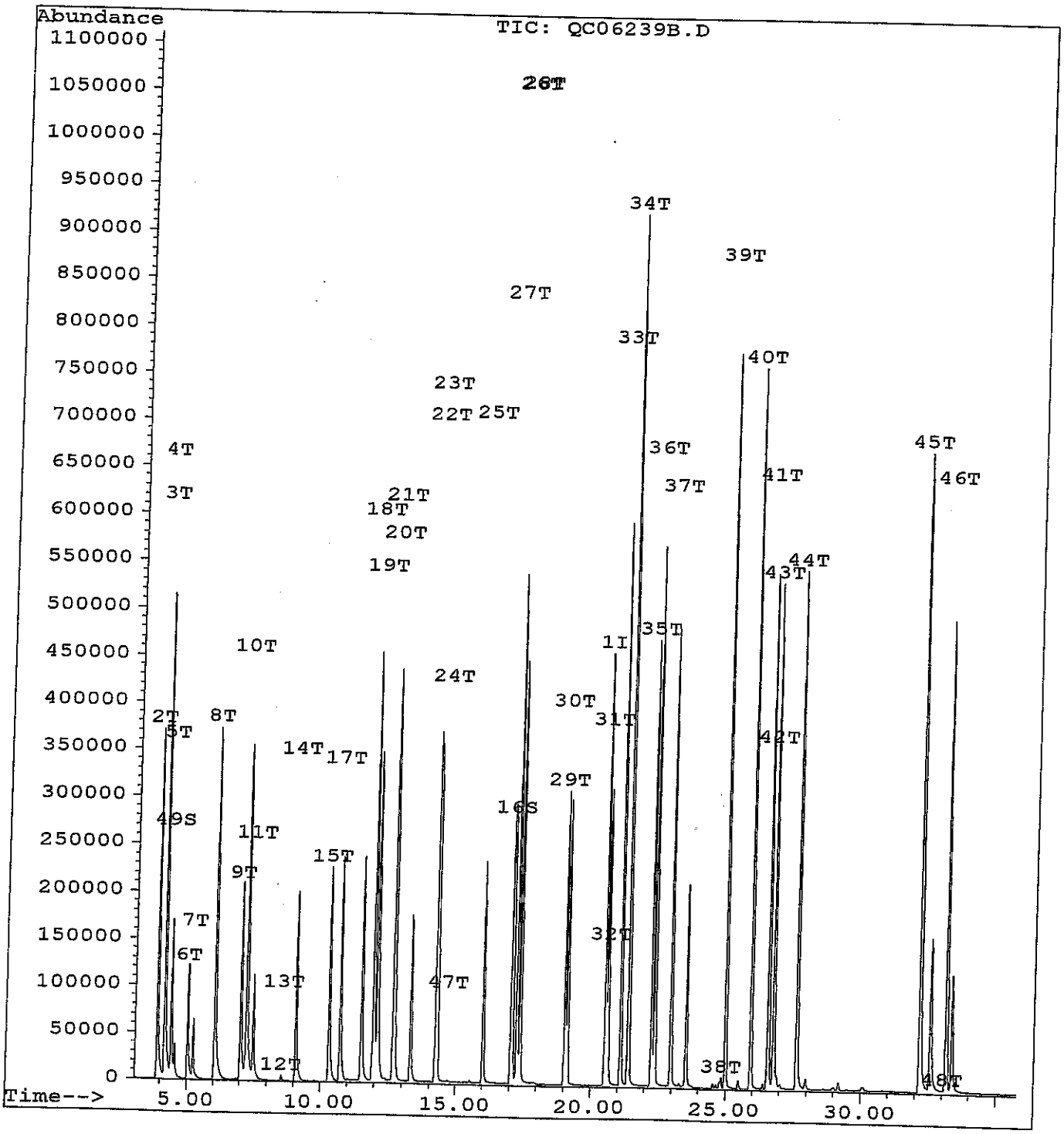
Quantitation Report

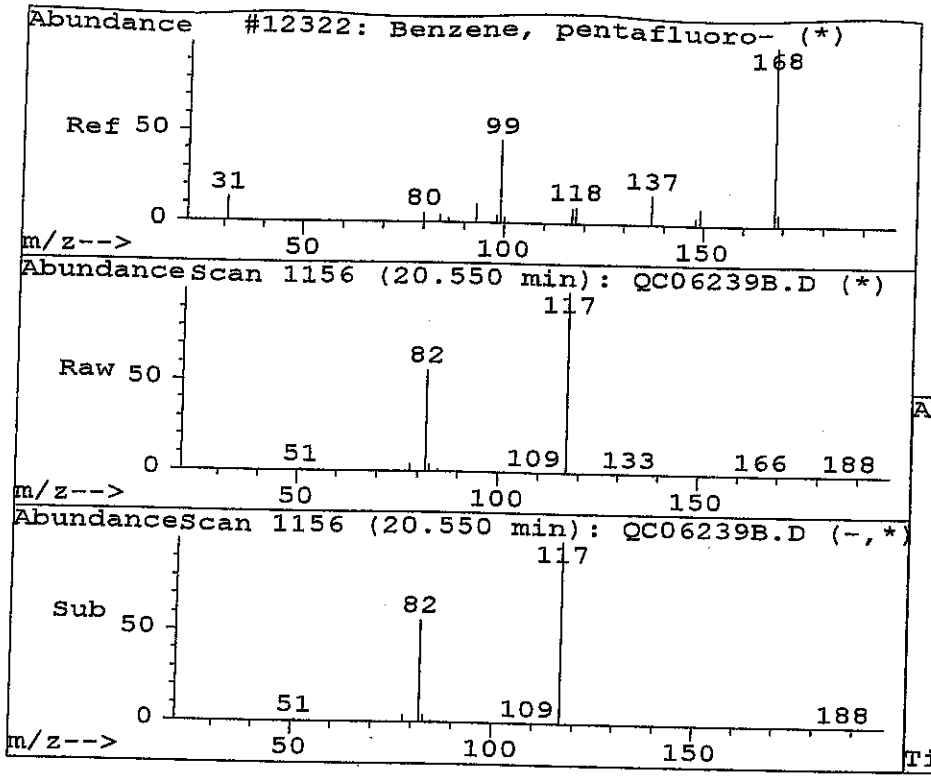
Data File : C:\MSCHEM\2\DATA\06239M~1\QC06239B.D
Acq Time : 23 Jun 109 11:39 am
Sample : ~~ST60022~~ ST0623091
Misc :
Quant Time: Jun 29 16:42 19109

KB 6/23/09

Operator: JF
Inst : MS2
Multiplr: 1.00

Method : C:\MSCHEM\2\METHODS\1T15EXAY.M
Title : EPA TO-15
Last Update : Tue Mar 17 14:18:15 2009
Response via : Multiple Level Calibration

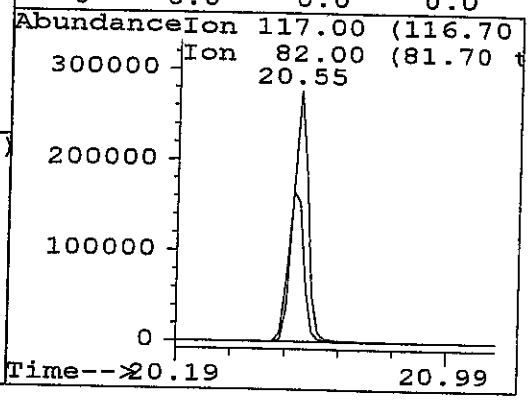


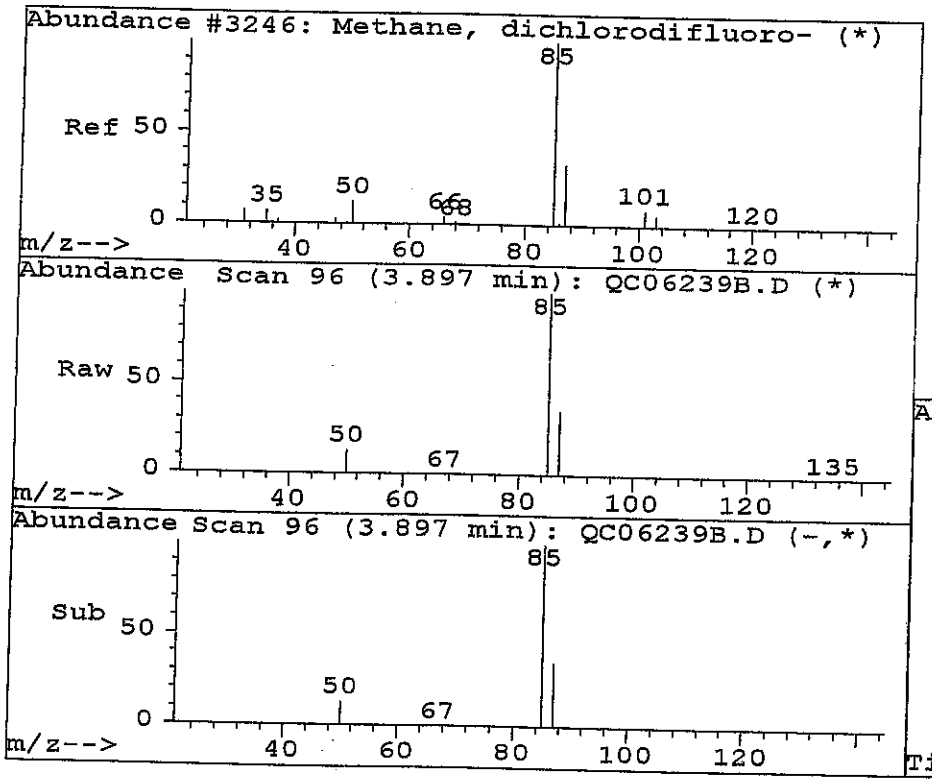


#1
Chlorobenzene-d5
Concen: 0.20 ppbV
RT: 20.55 min Scan# 1156
Delta R.T. 0.04 min
Lab File: QC06239B.D
Acq: 23 Jun 109 11:39 am

Tgt Ion:117 Resp: 851611

Ion	Ratio	Lower	Upper
117	100		
82	55.8	43.5	65.3
0	0.0	0.0	0.0
0	0.0	0.0	0.0

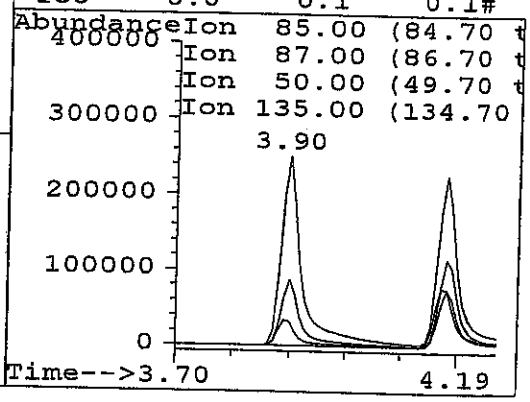


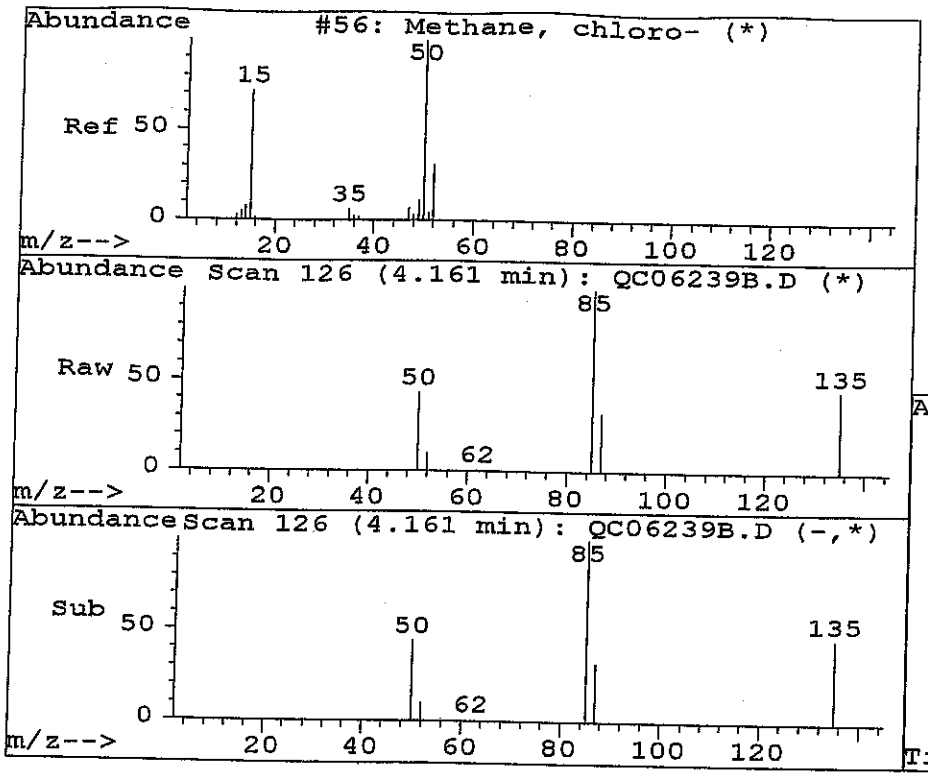


#2
Dichlorodifluoromethane
Concen: 1.30 ppbV m
RT: 3.90 min Scan# 96
Delta R.T. 0.05 min
Lab File: QC06239B.D
Acq: 23 Jun 109 11:39 am

Tgt Ion:85 Resp: 637960

Ion	Ratio	Lower	Upper
85	100		
87	34.9	25.6	38.4
50	12.9	8.6	12.8#
135	0.0	0.1	0.1#

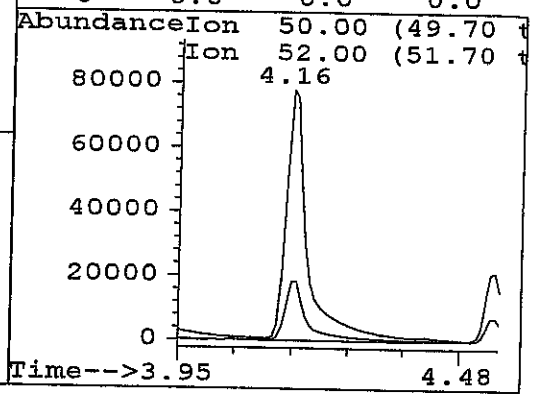


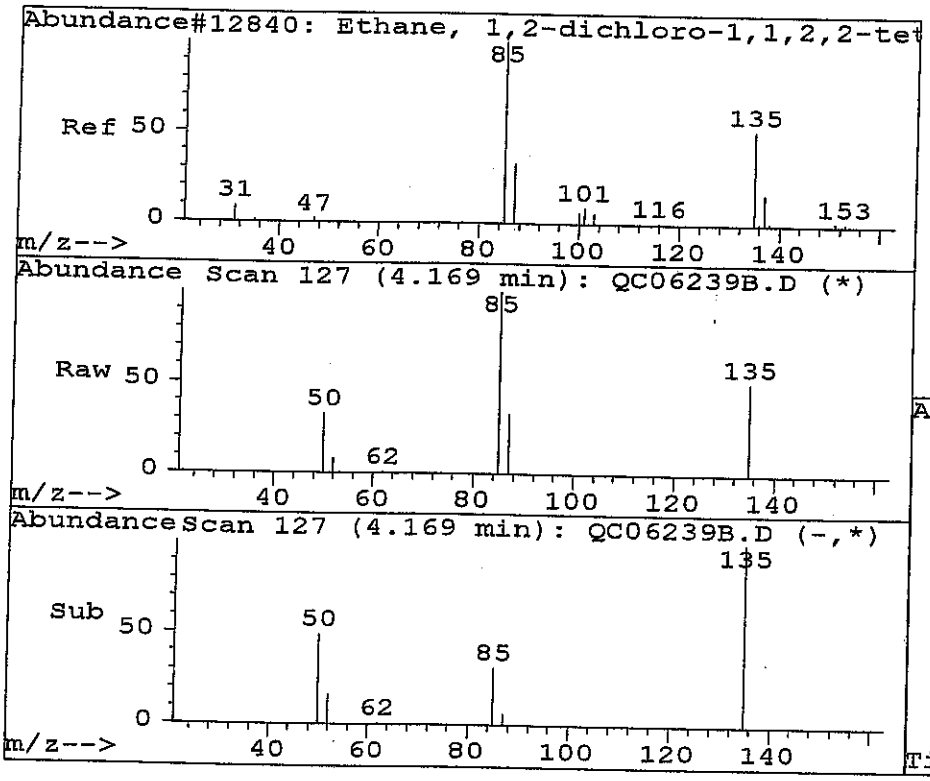


#3
Chloromethane
Concen: 0.99 ppbV m
RT: 4.16 min Scan# 126
Delta R.T. 0.04 min
Lab File: QC06239B.D
Acq: 23 Jun 109 11:39 am

Tgt Ion:50 Resp: 228800

Ion	Ratio	Lower	Upper
50	100		
52	23.5	21.2	31.8
0	0.0	0.0	0.0
0	0.0	0.0	0.0

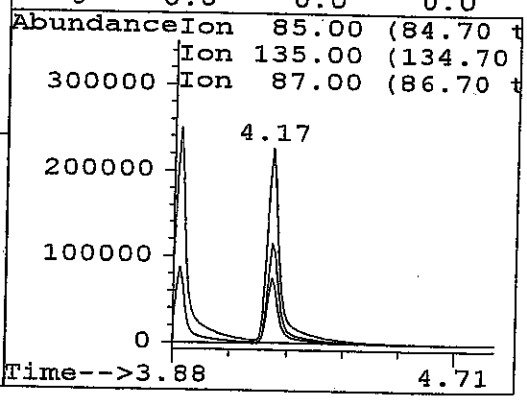


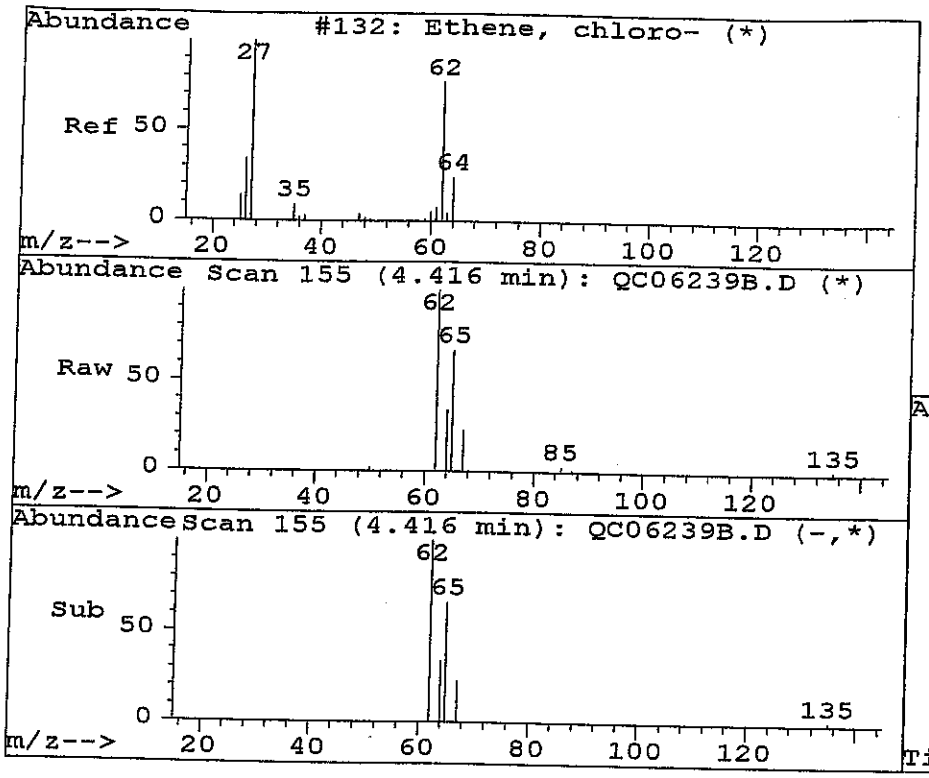


#4
Freon 114
Concen: 1.25 ppbV
RT: 4.17 min Scan# 127
Delta R.T. 0.05 min
Lab File: QC06239B.D
Acq: 23 Jun 109 11:39 am

Tgt Ion:85 Resp: 607200

Ion	Ratio	Lower	Upper
85	100		
135	51.4	42.3	63.5
87	33.4	26.0	39.0
0	0.0	0.0	0.0

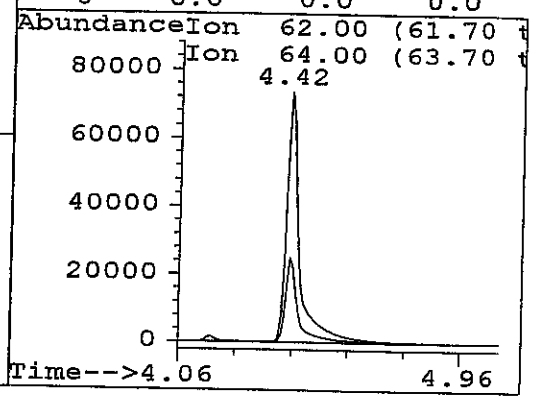


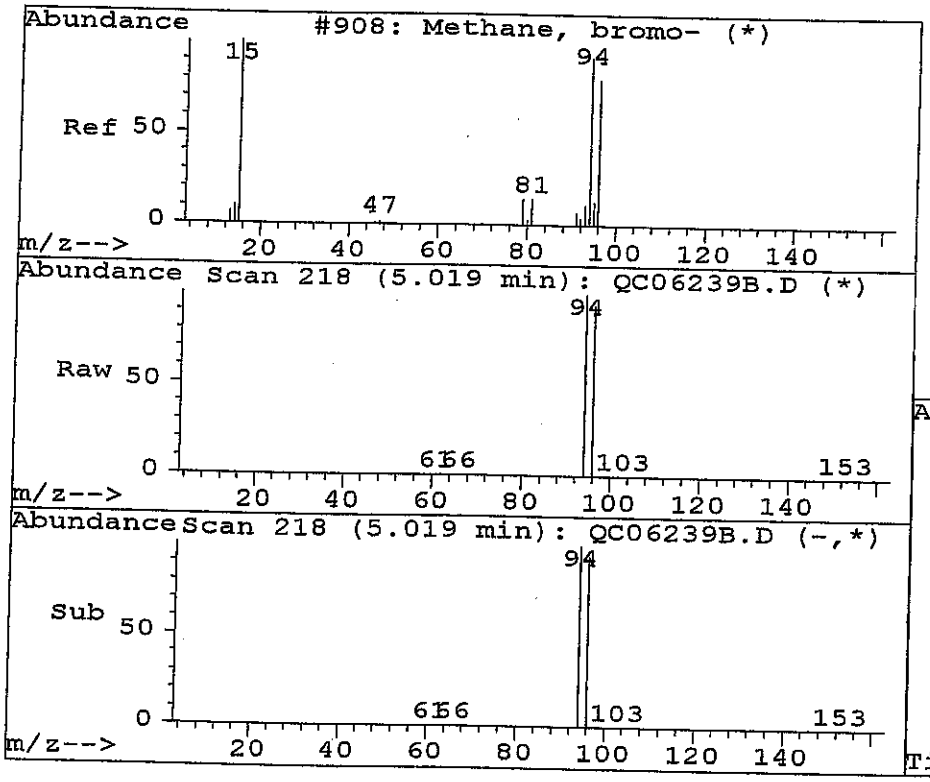


#5
Vinyl chloride
Concen: 1.28 ppbV
RT: 4.42 min Scan# 155
Delta R.T. 0.05 min
Lab File: QC06239B.D
Acq: 23 Jun 109 11:39 am

Tgt Ion:62 Resp: 212308

Ion	Ratio	Lower	Upper
62	100		
64	33.8	28.2	42.2
0	0.0	0.0	0.0
0	0.0	0.0	0.0

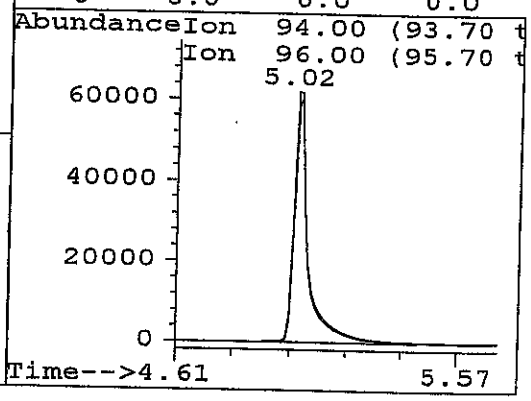


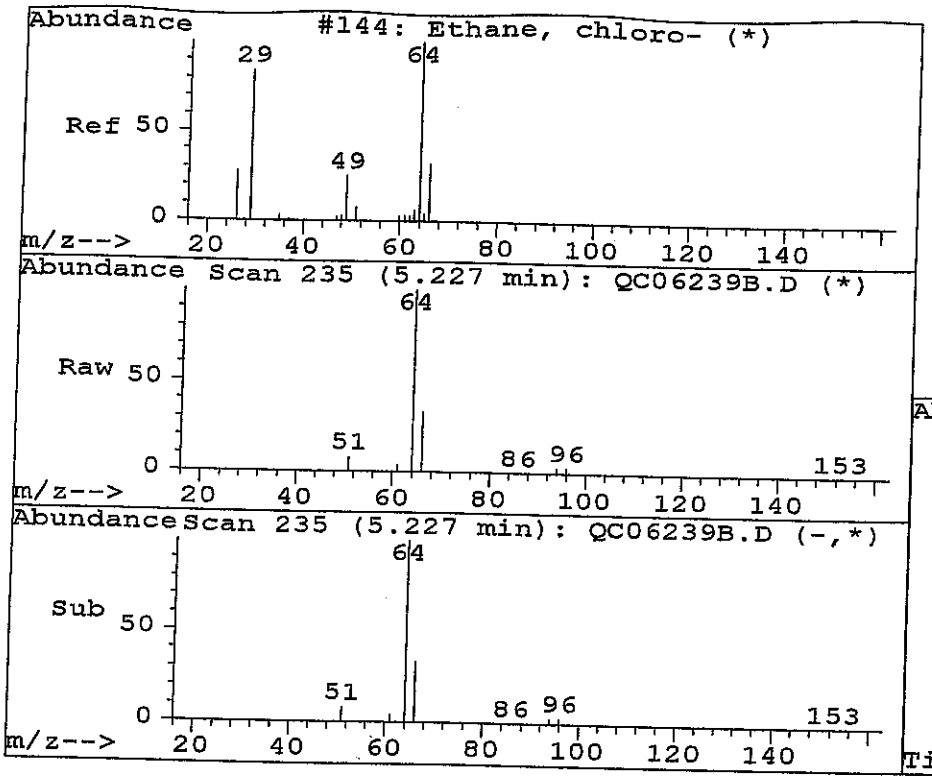


#6
Bromomethane
Concen: 1.43 ppbV
RT: 5.02 min Scan# 218
Delta R.T. 0.05 min
Lab File: QC06239B.D
Acq: 23 Jun 109 11:39 am

Tgt Ion:94 Resp: 227510

Ion	Ratio	Lower	Upper
94	100		
96	93.8	69.4	104.2
0	0.0	0.0	0.0
0	0.0	0.0	0.0

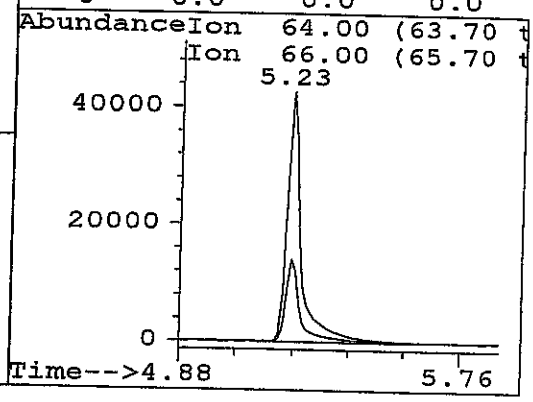


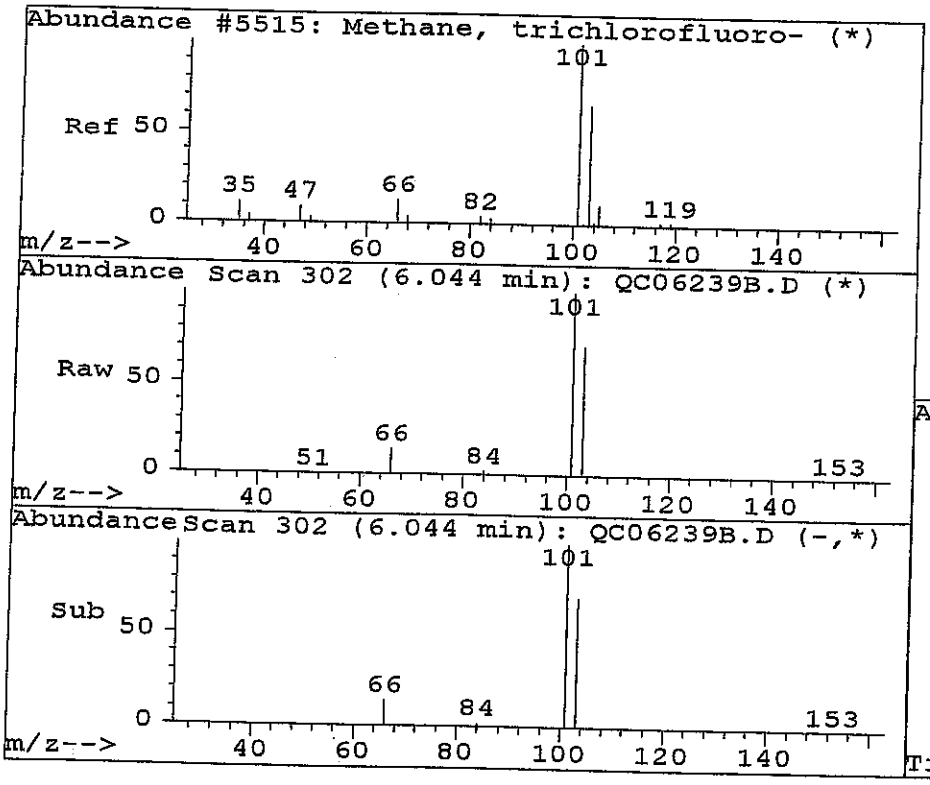


#7
Chloroethane
Concen: 0.91 ppbV
RT: 5.23 min Scan# 235
Delta R.T. 0.05 min
Lab File: QC06239B.D
Acq: 23 Jun 109 11:39 am

Tgt Ion:64 Resp: 132079

Ion	Ratio	Lower	Upper
64	100		
66	32.9	26.6	40.0
0	0.0	0.0	0.0
0	0.0	0.0	0.0

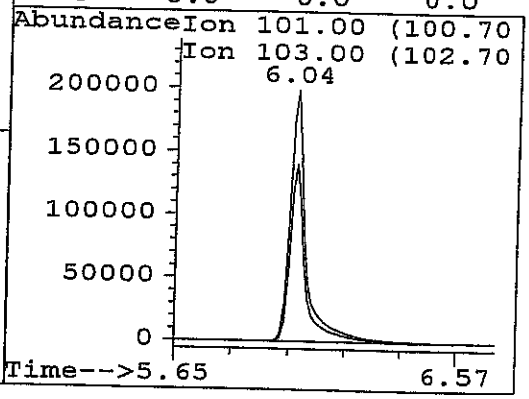


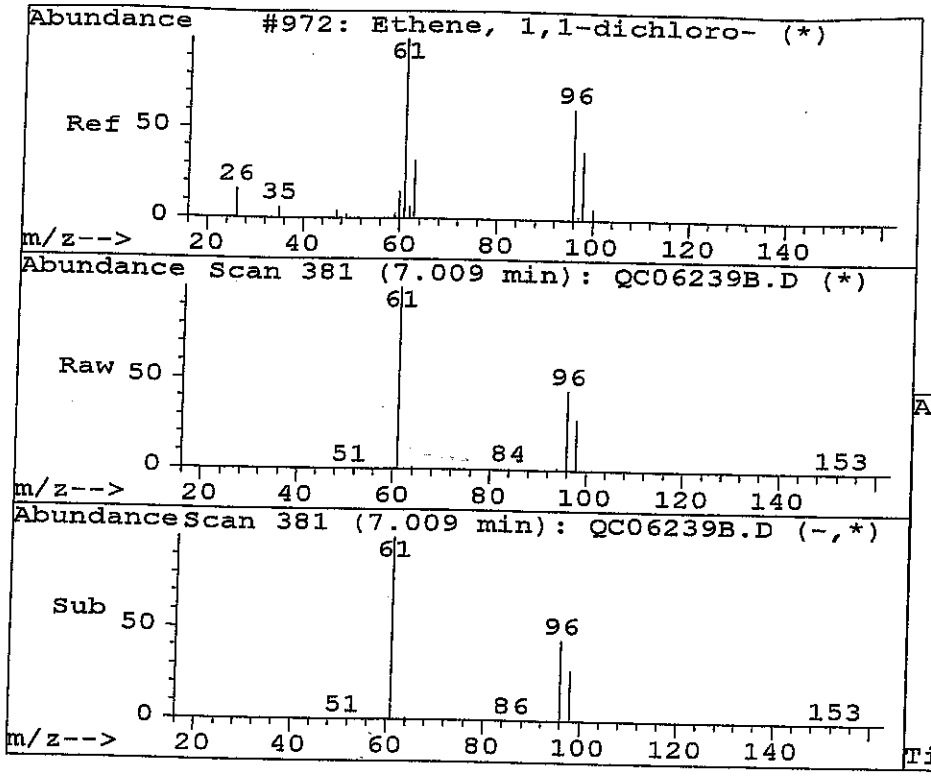


#8
Trichlorofluoromethane
Concen: 1.25 ppbV
RT: 6.04 min Scan# 302
Delta R.T. 0.06 min
Lab File: QC06239B.D
Acq: 23 Jun 109 11:39 am

Tgt Ion:101 Resp: 719267

Ion	Ratio	Lower	Upper
101	100		
103	70.9	53.2	79.8
0	0.0	0.0	0.0
0	0.0	0.0	0.0

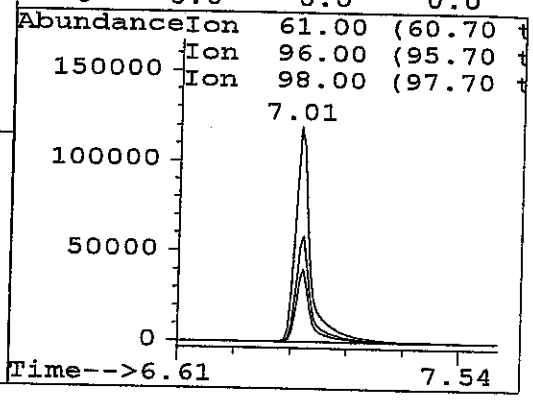


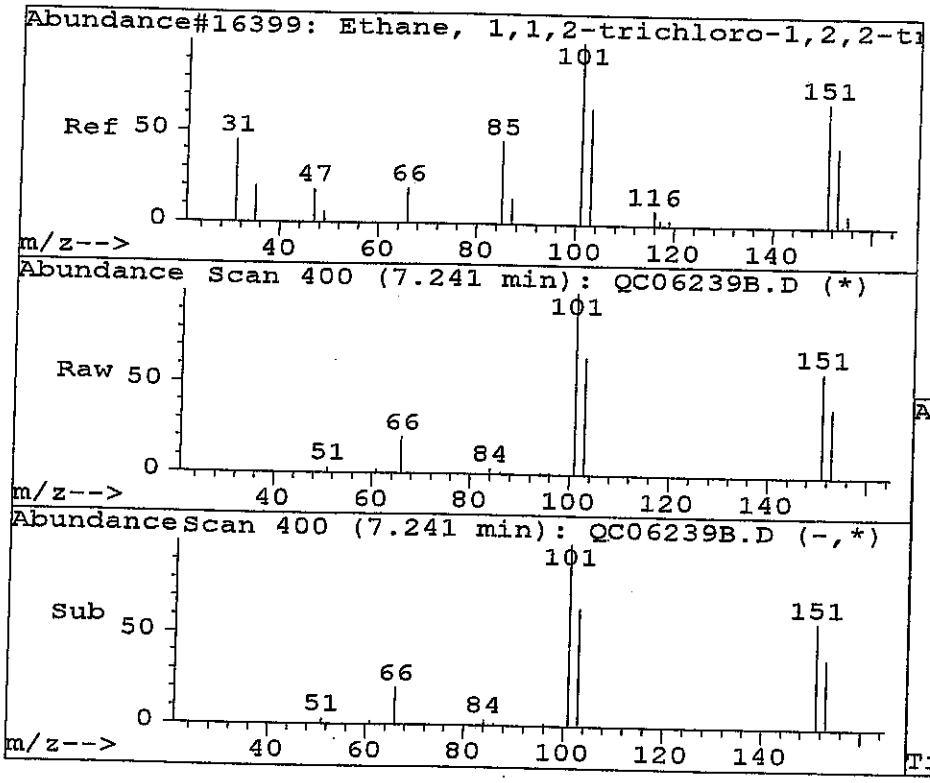


#9
1,1-Dichloroethene
Concen: 1.25 ppbV
RT: 7.01 min Scan# 381
Delta R.T. 0.06 min
Lab File: QC06239B.D
Acq: 23 Jun 109 11:39 am

Tgt Ion:61 Resp: 430448

Ion	Ratio	Lower	Upper
61	100		
96	43.9	37.4	56.0
98	28.4	23.1	34.7
0	0.0	0.0	0.0

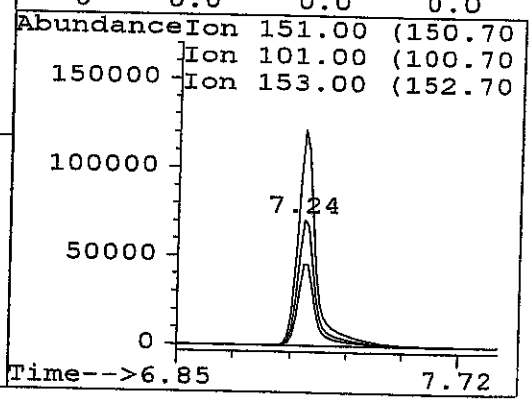


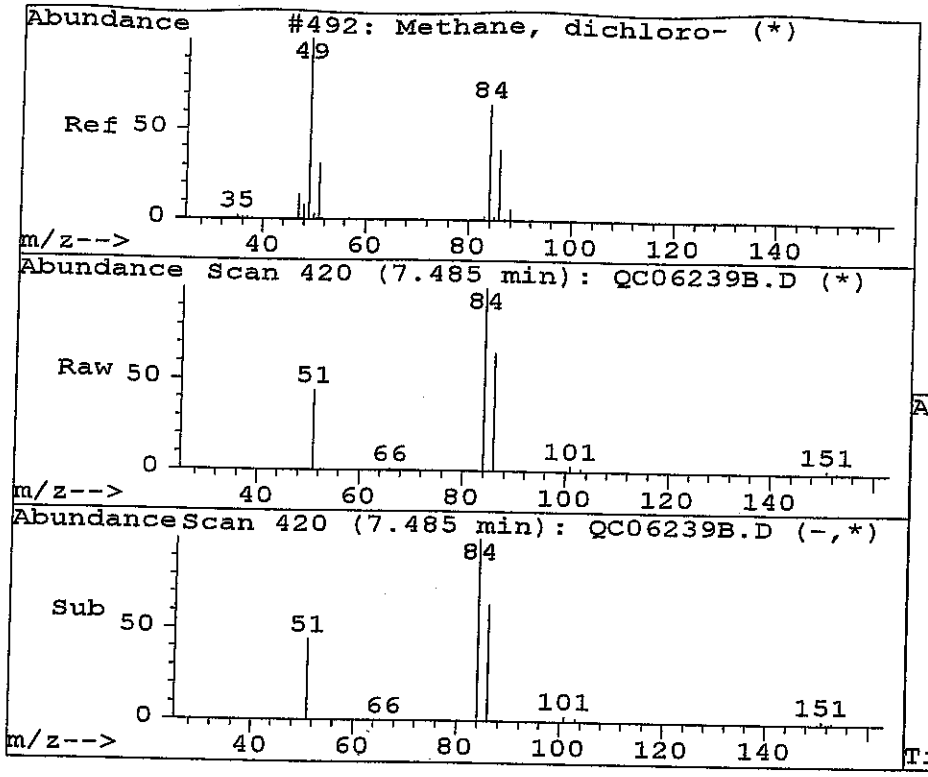


#10
Freon 113
Concen: 1.10 ppbV
RT: 7.24 min Scan# 400
Delta R.T. 0.11 min
Lab File: QC06239B.D
Acq: 23 Jun 109 11:39 am

Tgt Ion:151 Resp: 282963

Ion	Ratio	Lower	Upper
151	100		
101	171.4	135.8	203.6
153	65.0	50.0	75.0
0	0.0	0.0	0.0

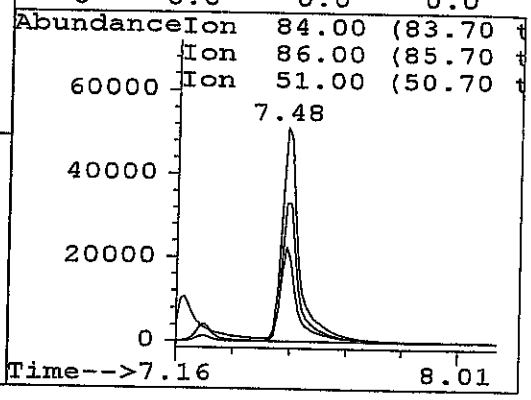


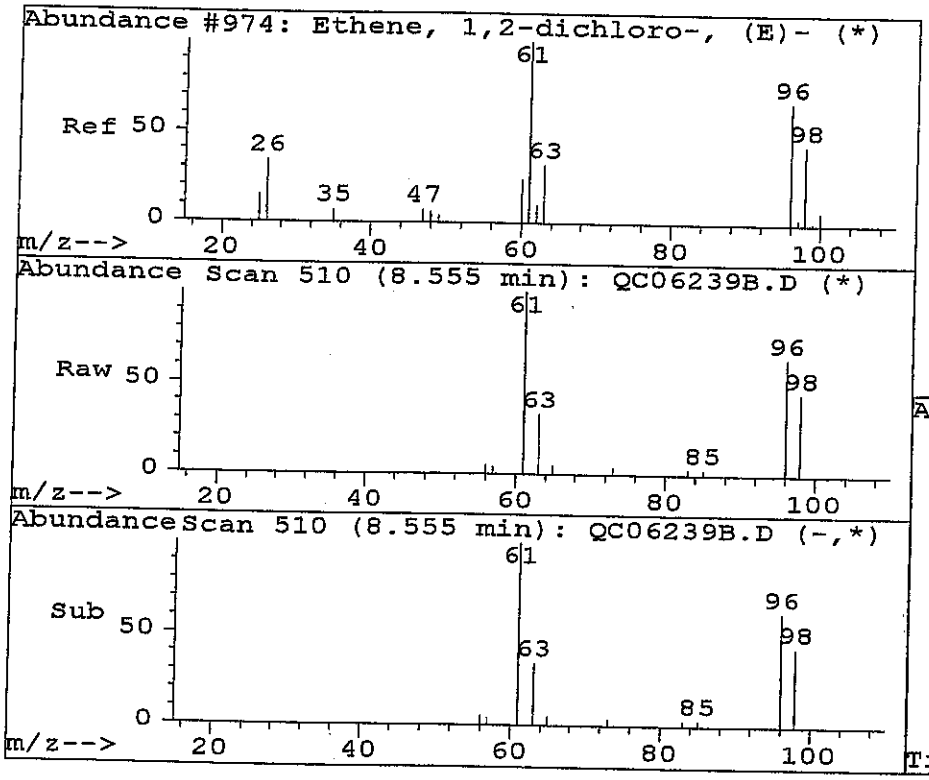


#11
Dichloromethane
Concen: 1.08 ppbV
RT: 7.48 min Scan# 420
Delta R.T. 0.06 min
Lab File: QC06239B.D
Acq: 23 Jun 109 11:39 am

Tgt Ion:84 Resp: 188665

Ion	Ratio	Lower	Upper
84	100		
86	64.5	51.3	76.9
51	43.5	27.4	41.0#
0	0.0	0.0	0.0

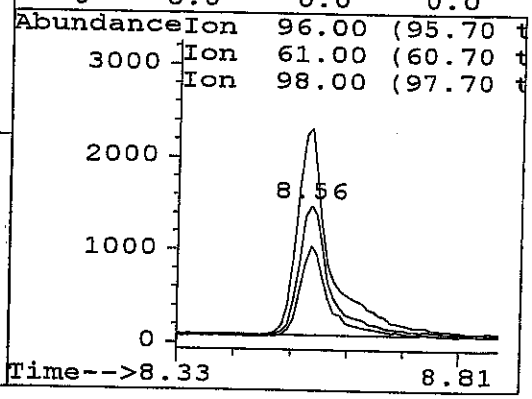


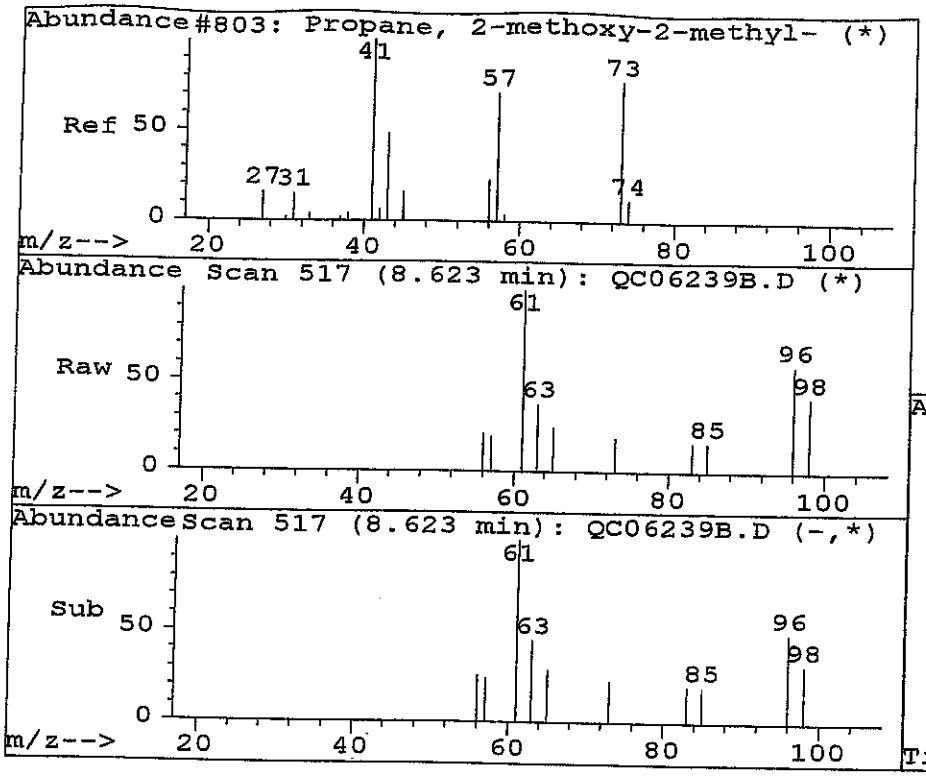


#12
trans-1,2-Dichloroethene
Concen: 0.03 ppbV
RT: 8.56 min Scan# 510
Delta R.T. 0.08 min
Lab File: QC06239B.D
Acq: 23 Jun 109 11:39 am

Tgt Ion:96 Resp: 5218

Ion	Ratio	Lower	Upper
96	100		
61	159.3	111.4	167.2
98	69.4	51.7	77.5
0	0.0	0.0	0.0

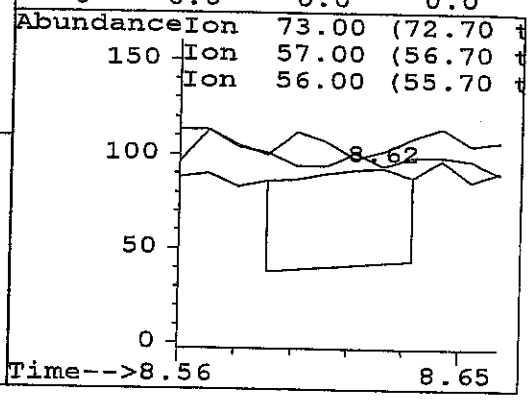


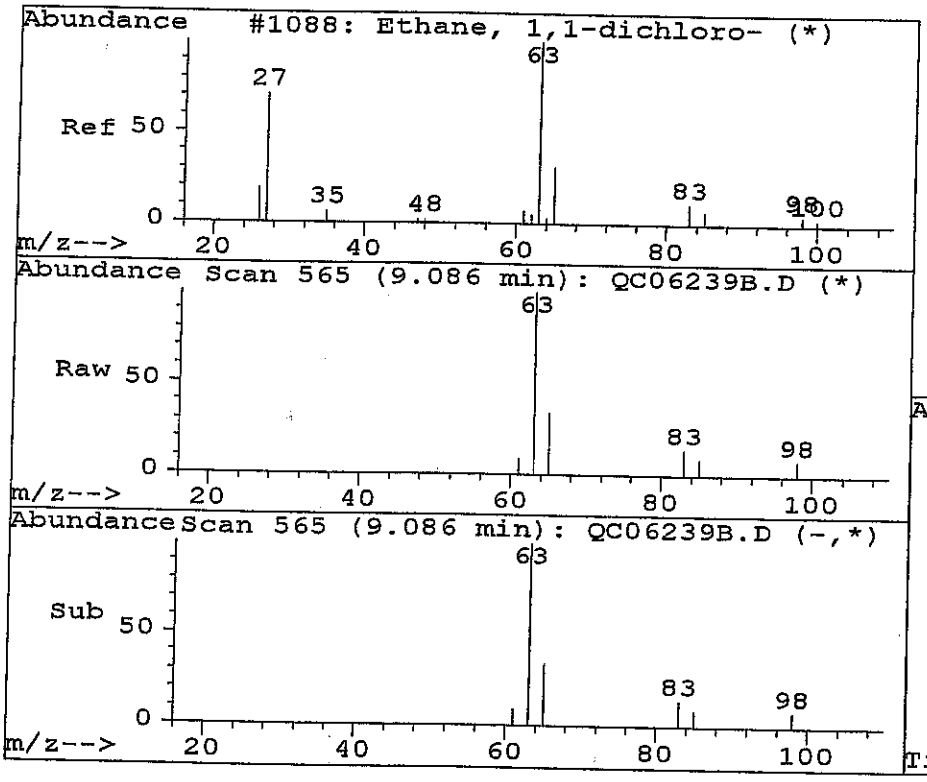


#13
Methyl tert butyl ether
Concen: 0.00 ppbV
RT: 8.62 min Scan# 517
Delta R.T. 0.02 min
Lab File: QC06239B.D
Acq: 23 Jun 109 11:39 am

Tgt Ion:73 Resp: 141

Ion	Ratio	Lower	Upper
73	100		
57	0.0	16.0	24.0#
56	0.0	2.6	3.8#
0	0.0	0.0	0.0

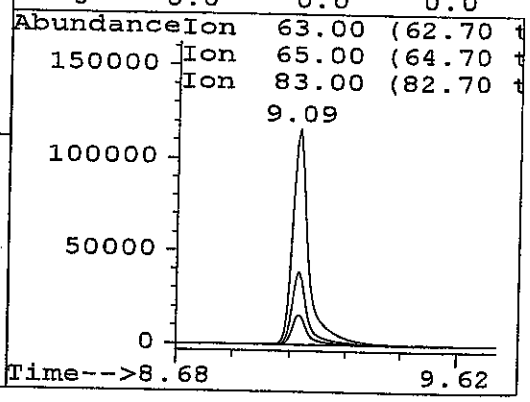


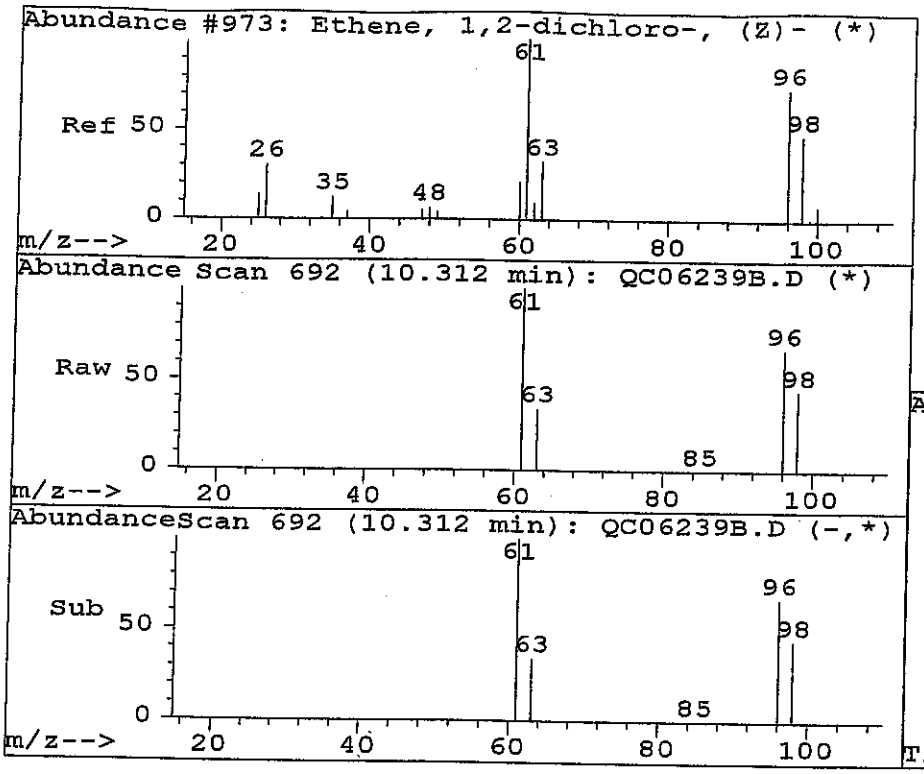


#14
1,1-Dichloroethane
Concen: 1.16 ppbV
RT: 9.09 min Scan# 565
Delta R.T. 0.09 min
Lab File: QC06239B.D
Acq: 23 Jun 109 11:39 am

Tgt Ion:63 Resp: 439863

Ion	Ratio	Lower	Upper
63	100		
65	33.8	24.9	37.3
83	13.9	10.3	15.5
0	0.0	0.0	0.0

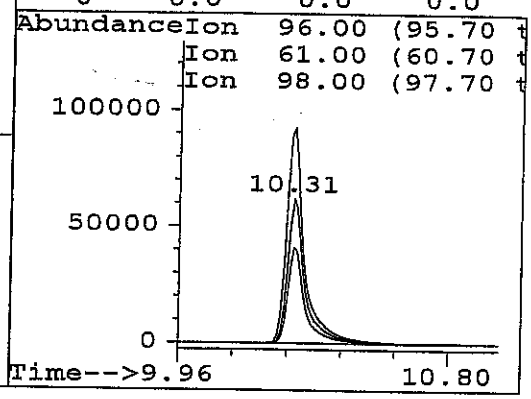


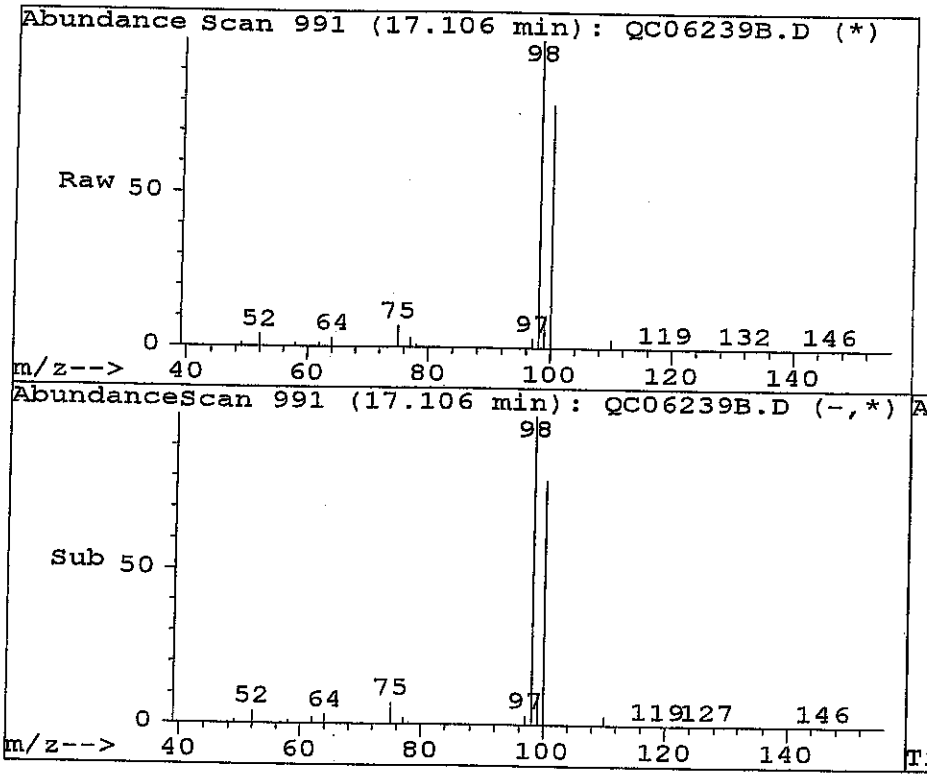


#15
cis-1,2-Dichloroethene
Concen: 0.98 ppbV
RT: 10.31 min Scan# 692
Delta R.T. 0.07 min
Lab File: QC06239B.D
Acq: 23 Jun 109 11:39 am

Tgt Ion:96 Resp: 236466

Ion	Ratio	Lower	Upper
96	100		
61	149.5	102.0	153.0
98	66.4	52.2	78.2
0	0.0	0.0	0.0

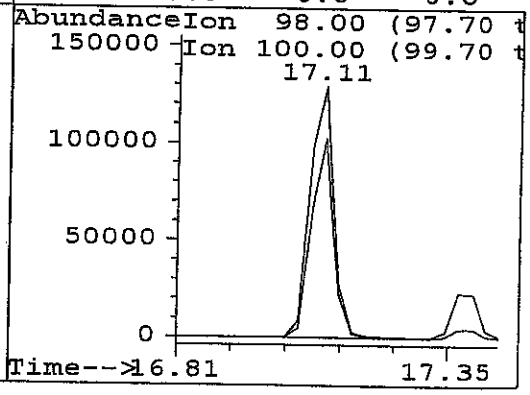


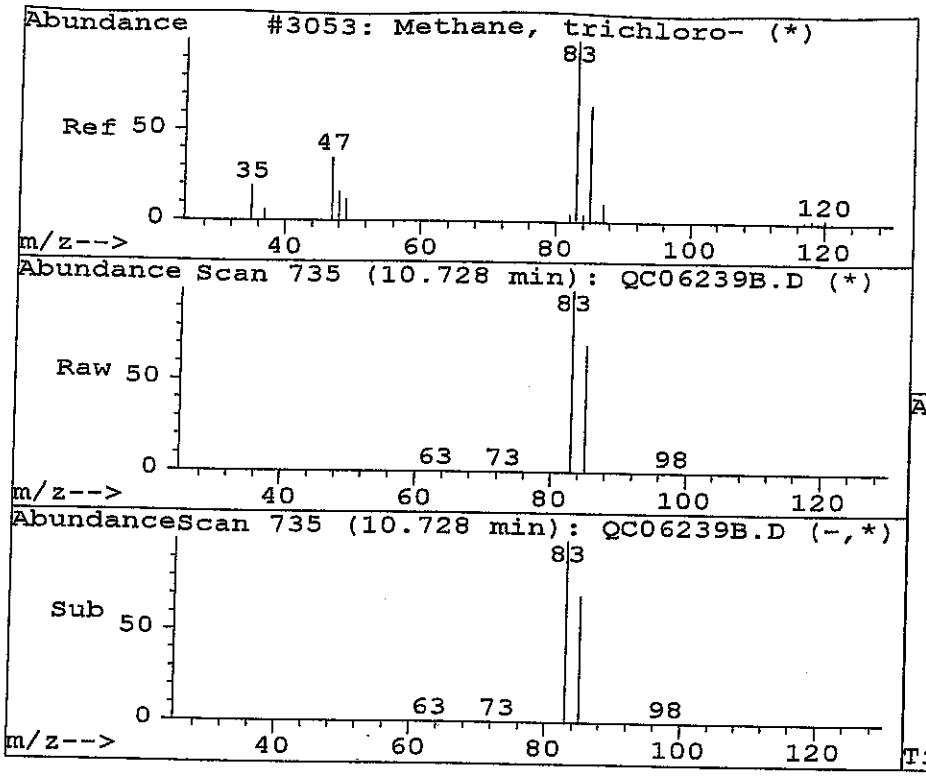


#16
Toluene-d8
Concen: 0.24 ppbV
RT: 17.11 min Scan# 991
Delta R.T. 0.06 min
Lab File: QC06239B.D
Acq: 23 Jun 109 11:39 am

Tgt Ion:98 Resp: 427649

Ion	Ratio	Lower	Upper
98	100		
100	74.7	59.5	89.3
0	0.0	0.0	0.0
0	0.0	0.0	0.0

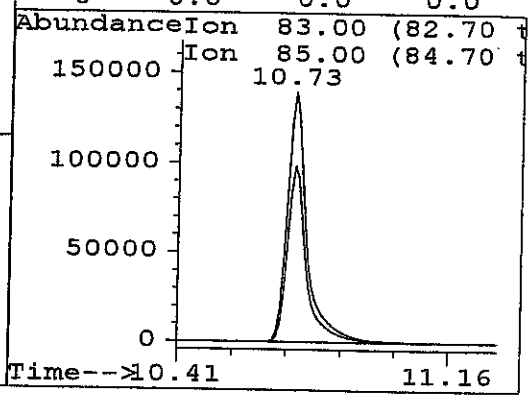


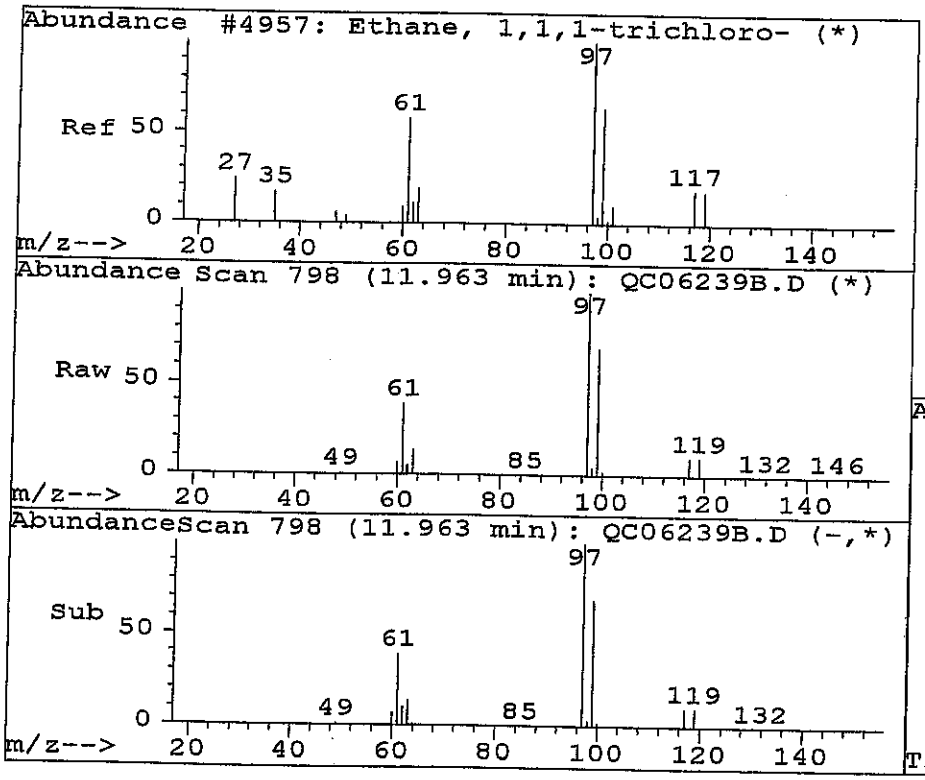


#17
Chloroform
Concen: 1.24 ppbV
RT: 10.73 min Scan# 735
Delta R.T. 0.07 min
Lab File: QC06239B.D
Acq: 23 Jun 109 11:39 am

Tgt Ion:83 Resp: 619529

Ion	Ratio	Lower	Upper
83	100		
85	70.3	52.2	78.4
0	0.0	0.0	0.0
0	0.0	0.0	0.0

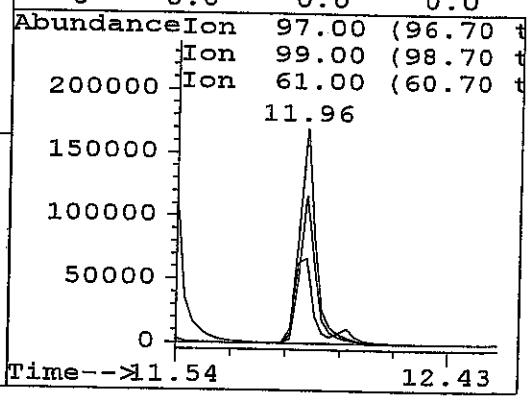


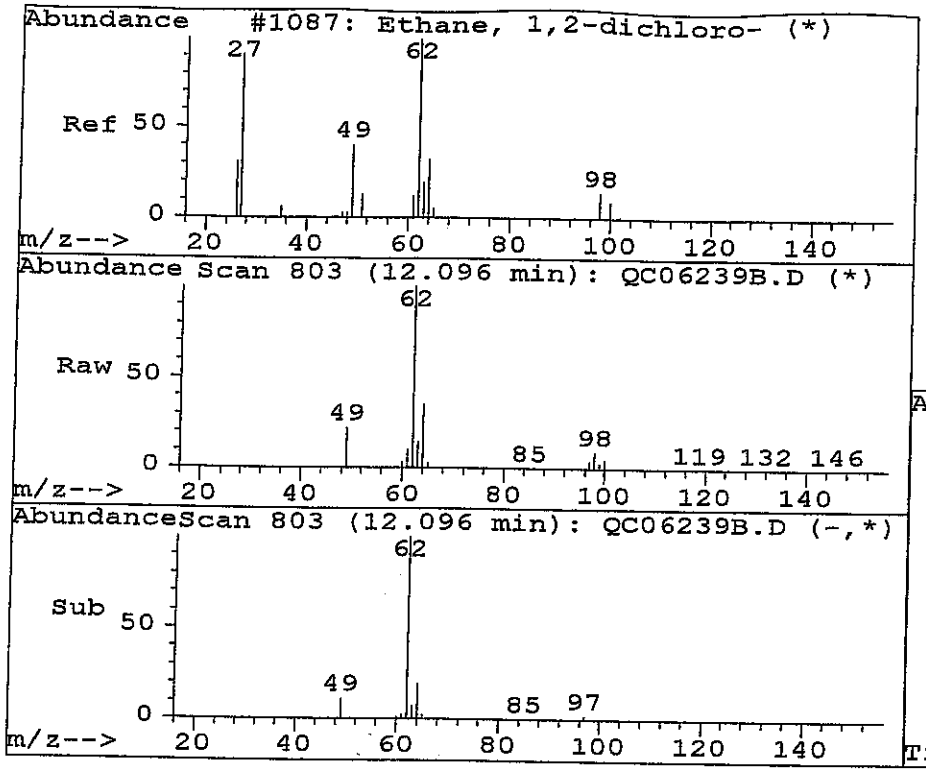


#18
1,1,1-Trichloroethane
Concen: 1.14 ppbV
RT: 11.96 min Scan# 798
Delta R.T. 0.05 min
Lab File: QC06239B.D
Acq: 23 Jun 109 11:39 am

Tgt Ion:97 Resp: 632986

Ion	Ratio	Lower	Upper
97	100		
99	68.7	53.2	79.8
61	39.4	24.2	36.4#
0	0.0	0.0	0.0

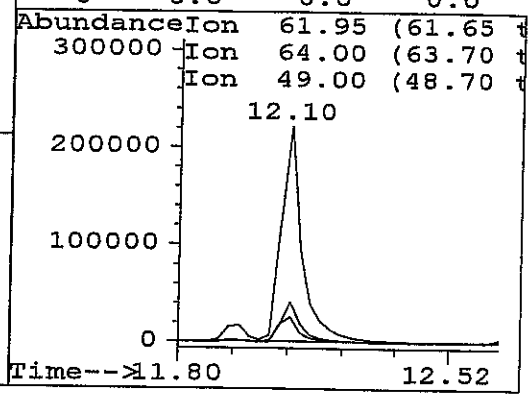


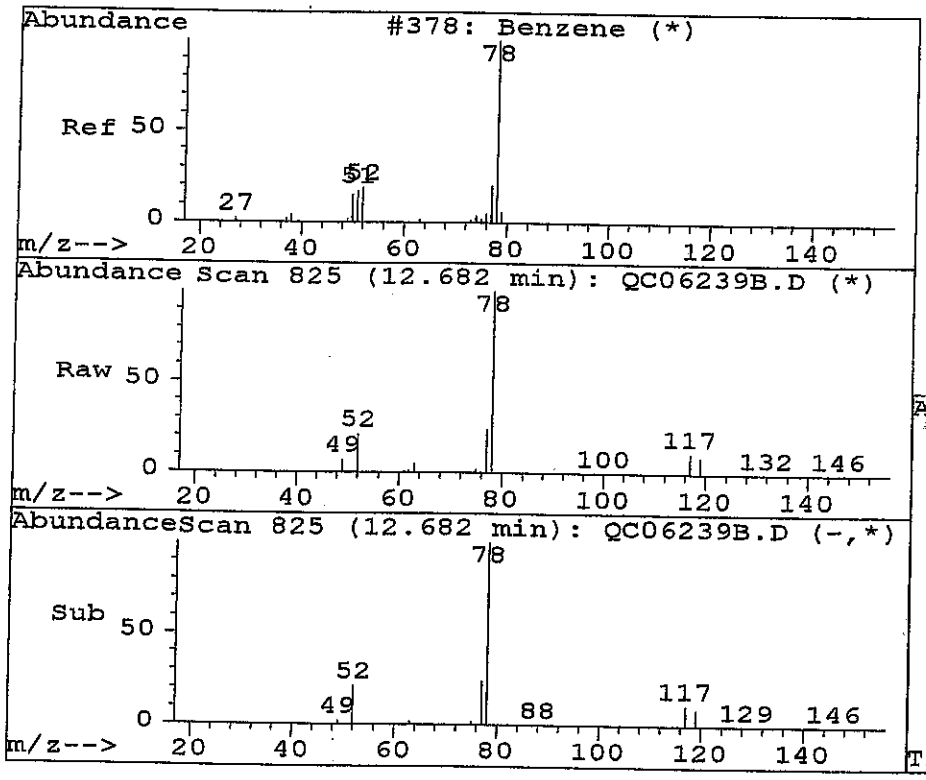


#19
1,2-Dichloroethane
Concen: 0.83 ppbV
RT: 12.10 min Scan# 803
Delta R.T. 0.08 min
Lab File: QC06239B.D
Acq: 23 Jun 109 11:39 am

Tgt Ion:61.95 Resp: 847748

Ion	Ratio	Lower	Upper
62	100		
64	18.5	13.8	20.6
49	11.5	8.9	13.3
0	0.0	0.0	0.0

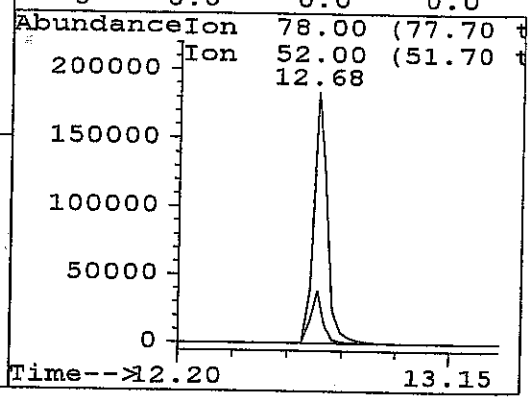


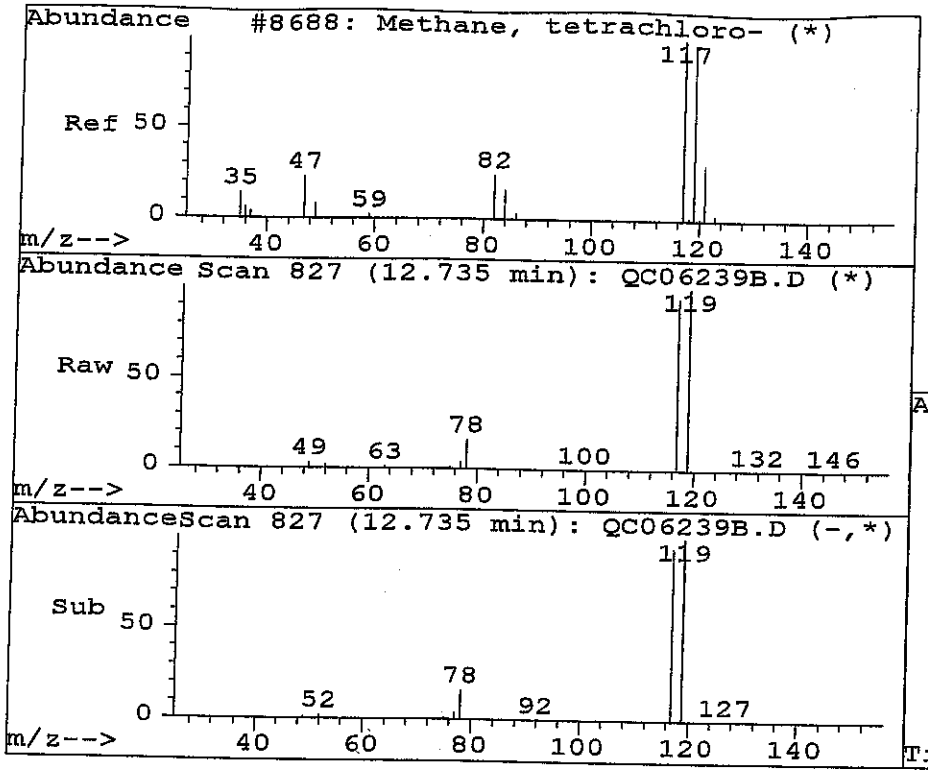


#20
Benzene
Concen: 0.79 ppbV
RT: 12.68 min Scan# 825
Delta R.T. 0.05 min
Lab File: QC06239B.D
Acq: 23 Jun 109 11:39 am

Tgt Ion:78 Resp: 617230

Ion	Ratio	Lower	Upper
78	100		
52	20.9	15.6	23.4
0	0.0	0.0	0.0
0	0.0	0.0	0.0

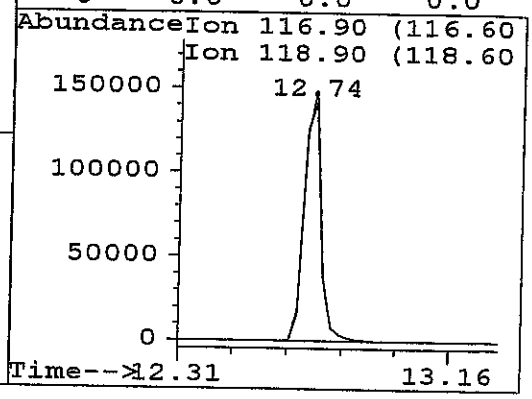


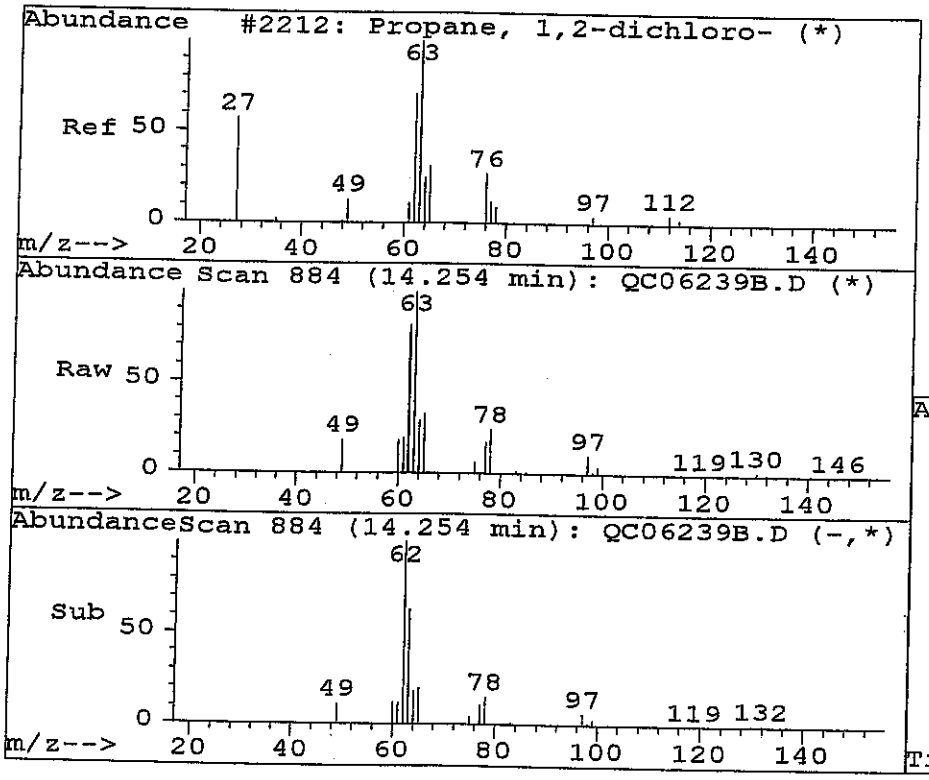


#21
Carbon tetrachloride
Concen: 1.14 ppbV
RT: 12.74 min Scan# 827
Delta R.T. 0.08 min
Lab File: QC06239B.D
Acq: 23 Jun 109 11:39 am

Tgt Ion:116.9 Resp: 54179

Ion	Ratio	Lower	Upper
117	100		
119	104.9	79.4	119.2
0	0.0	0.0	0.0
0	0.0	0.0	0.0

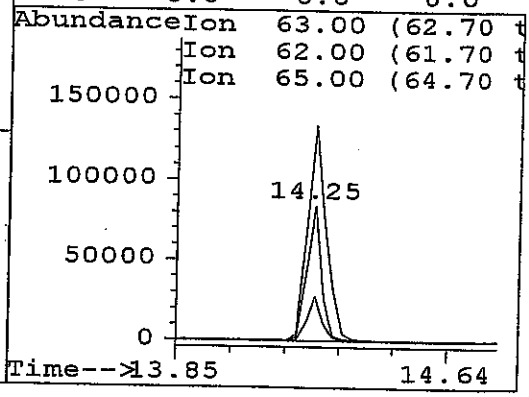


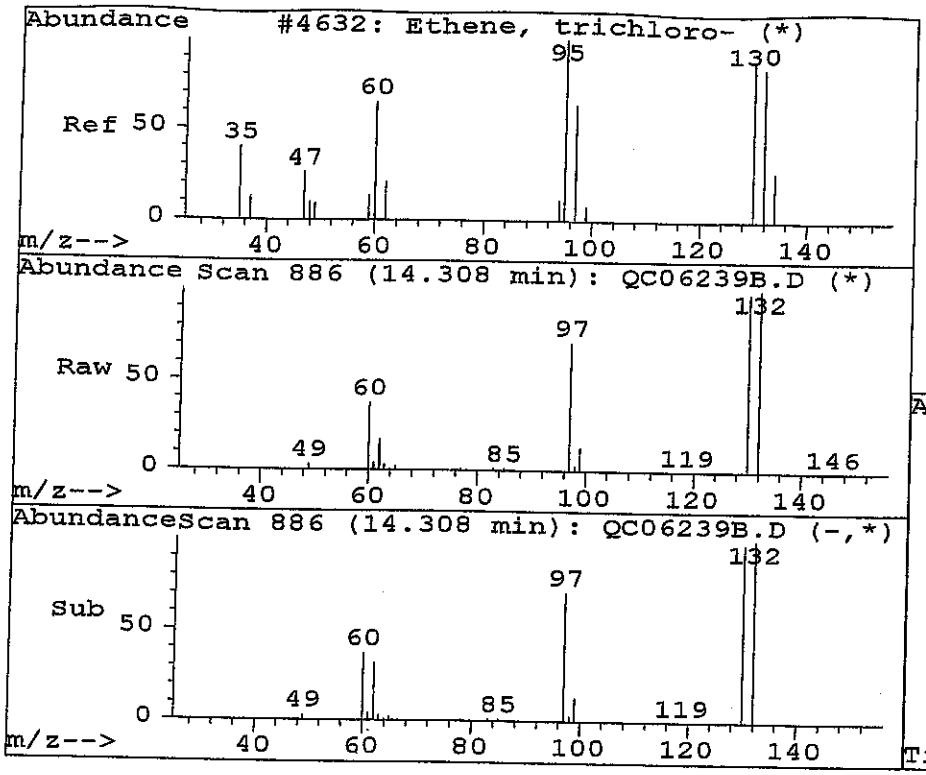


#22
1,2-Dichloropropane
Concen: 0.96 ppbV
RT: 14.25 min Scan# 884
Delta R.T. 0.05 min
Lab File: QC06239B.D
Acq: 23 Jun 109 11:39 am

Tgt Ion:63 Resp: 252919

Ion	Ratio	Lower	Upper
63	100		
62	159.6	125.8	188.6
65	32.7	22.2	33.2
0	0.0	0.0	0.0

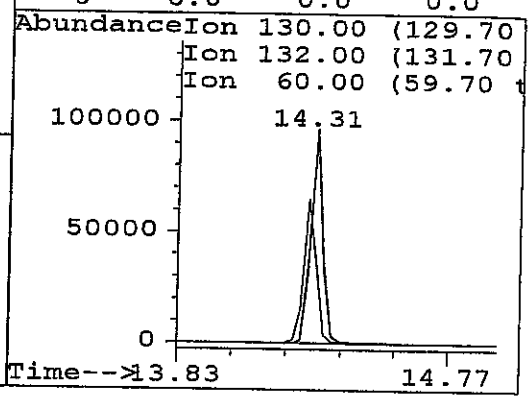


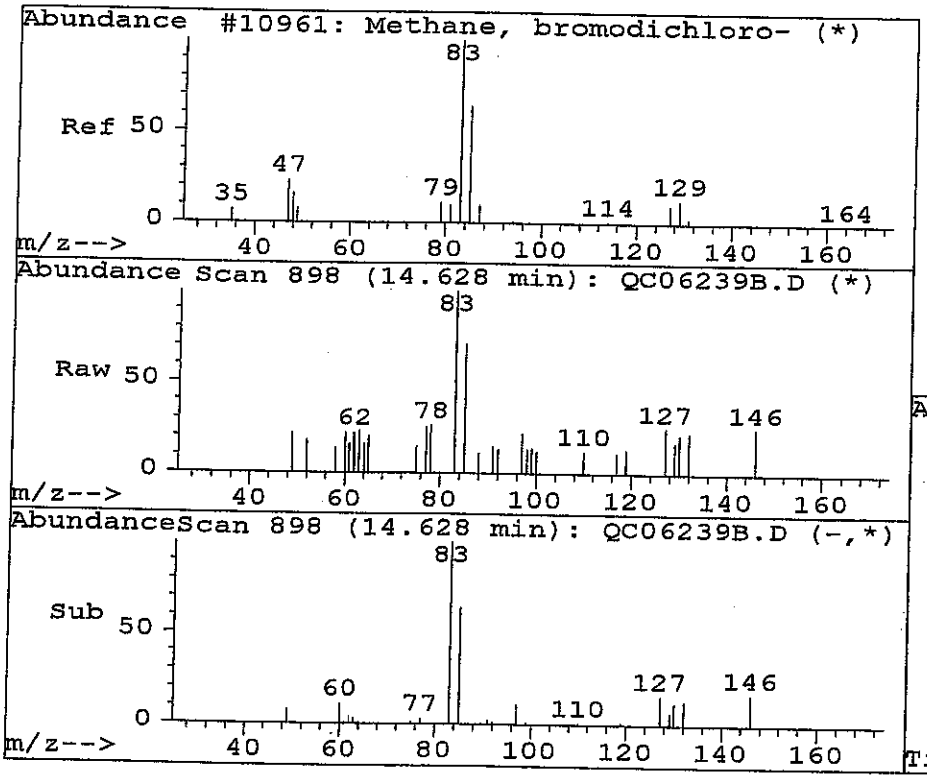


#23
Trichloroethene
Concen: 0.87 ppbV
RT: 14.31 min Scan# 886
Delta R.T. 0.05 min
Lab File: QC06239B.D
Acq: 23 Jun 109 11:39 am

Tgt Ion:130 Resp: 272978

Ion	Ratio	Lower	Upper
130	100		
132	102.3	74.6	112.0
60	37.9	41.6	62.4#
0	0.0	0.0	0.0

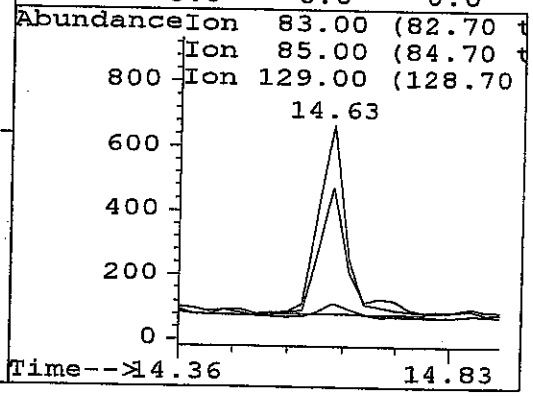


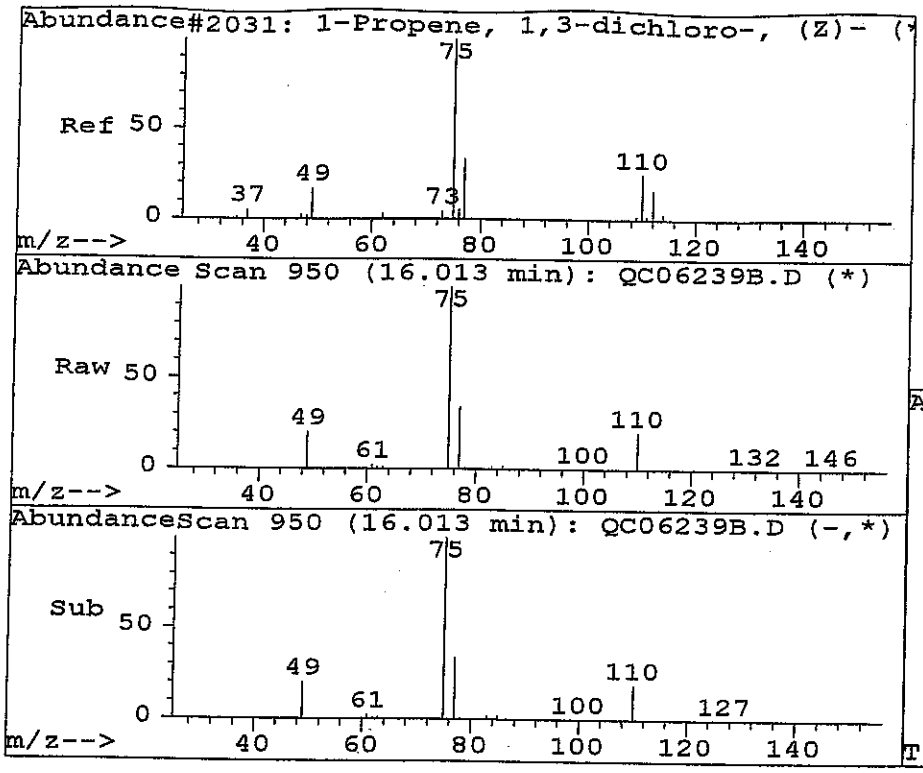


#24
Bromodichloromethane
Concen: 0.00 ppbV
RT: 14.63 min Scan# 898
Delta R.T. 0.06 min
Lab File: QC06239B.D
Acq: 23 Jun 109 11:39 am

Tgt Ion:83 Resp: 1920

Ion	Ratio	Lower	Upper
83	100		
85	67.4	52.0	78.0
129	6.8	5.7	8.5
0	0.0	0.0	0.0

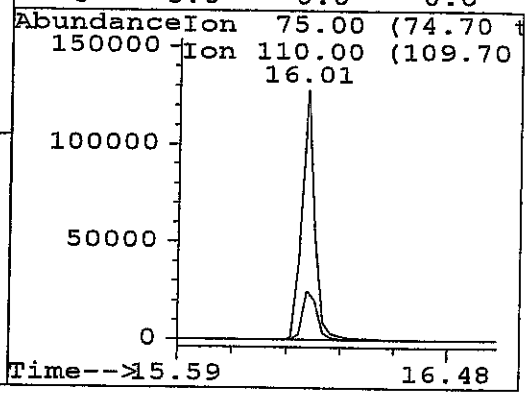


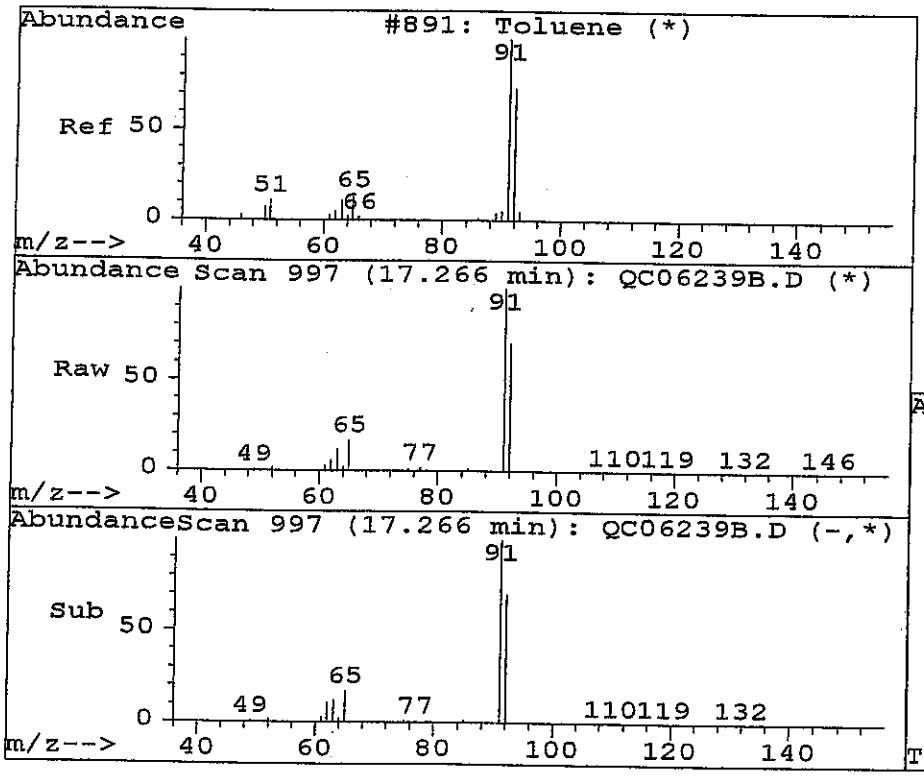


#25
cis-1,3-Dichloropropene
Concen: 1.56 ppbV
RT: 16.01 min Scan# 950
Delta R.T. 0.05 min
Lab File: QC06239B.D
Acq: 23 Jun 109 11:39 am

Tgt Ion:75 Resp: 388833

Ion	Ratio	Lower	Upper
75	100		
110	19.5	16.2	24.2
0	0.0	0.0	0.0
0	0.0	0.0	0.0

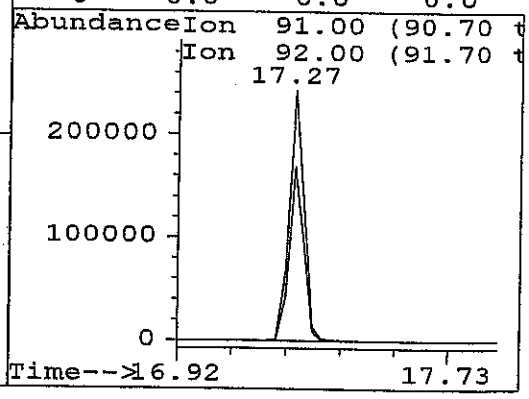


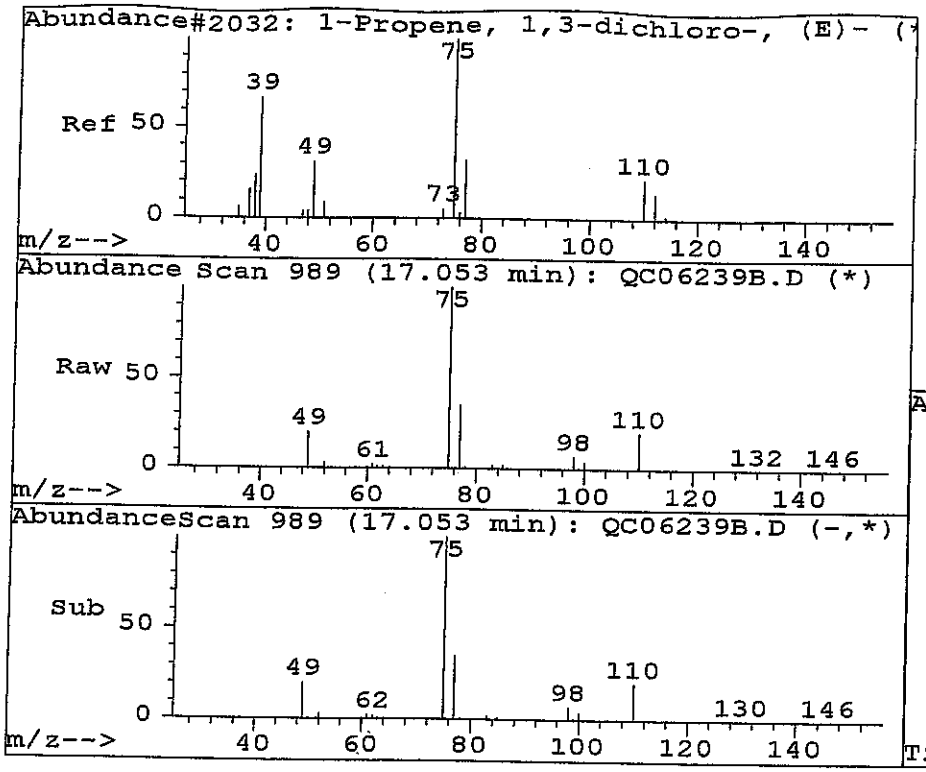


#26
Toluene
Concen: 0.67 ppbV
RT: 17.27 min Scan# 997
Delta R.T. 0.06 min
Lab File: QC06239B.D
Acq: 23 Jun 109 11:39 am

Tgt Ion:91 Resp: 738918

Ion	Ratio	Lower	Upper
91	100		
92	69.5	53.2	79.8
0	0.0	0.0	0.0
0	0.0	0.0	0.0

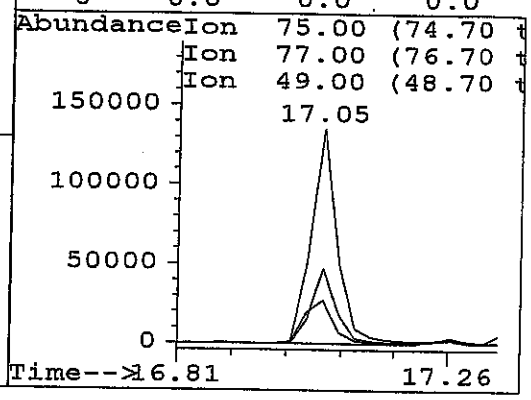


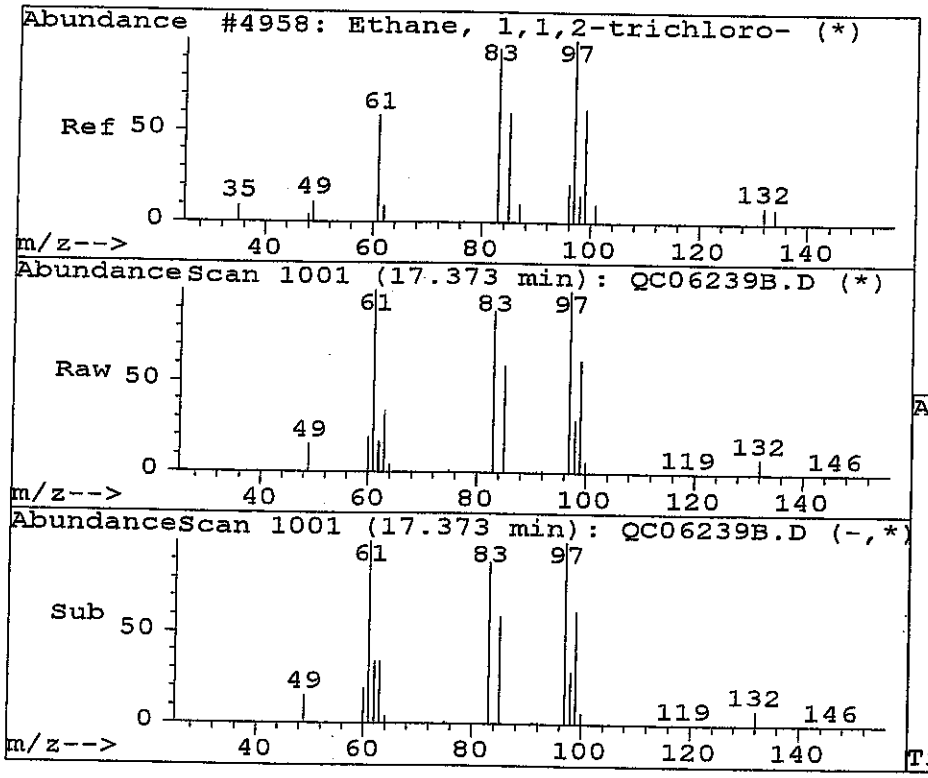


#27
trans-1,3-Dichloropropene
Concen: 1.53 ppbV
RT: 17.05 min Scan# 989
Delta R.T. 0.05 min
Lab File: QC06239B.D
Acq: 23 Jun 109 11:39 am

Tgt Ion:75 Resp: 407668

Ion	Ratio	Lower	Upper
75	100		
77	34.9	30.1	45.1
49	20.0	44.2	66.2#
0	0.0	0.0	0.0

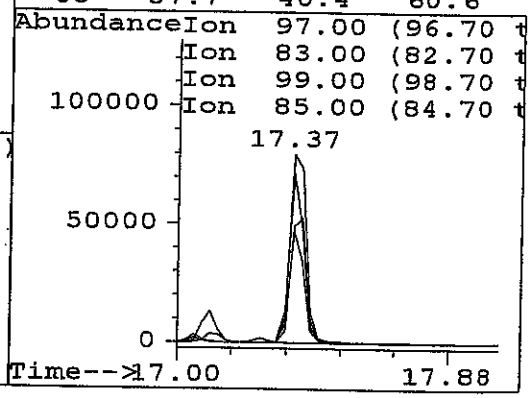


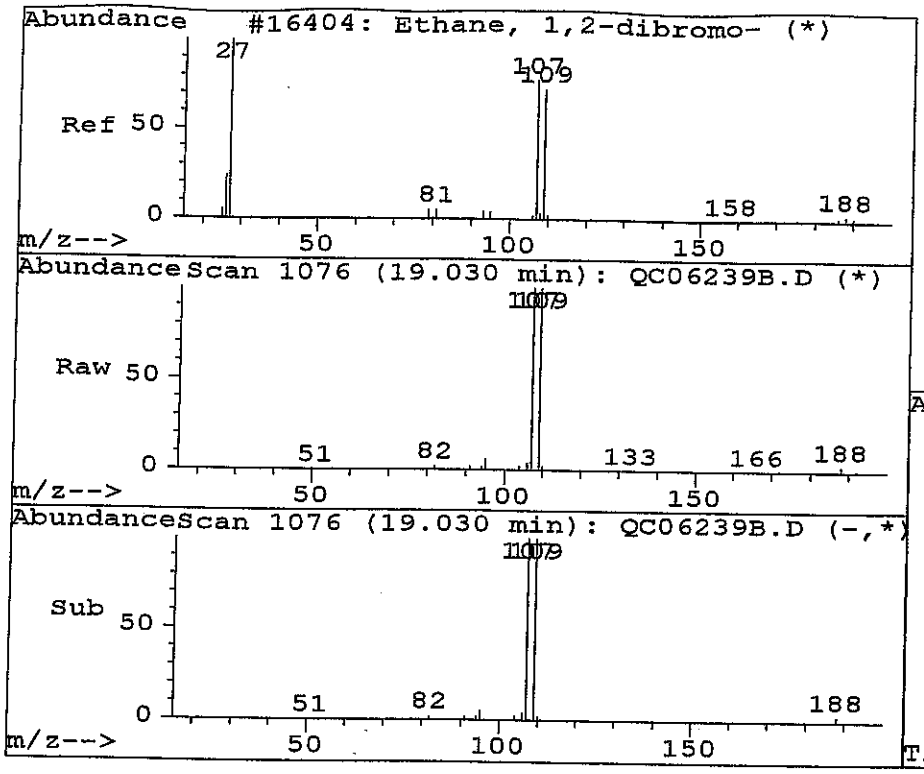


#28
1,1,2-Trichloroethane
Concen: 0.62 ppbV
RT: 17.37 min Scan# 1001
Delta R.T. 0.02 min
Lab File: QC06239B.D
Acq: 23 Jun 109 11:39 am

Tgt Ion:97 Resp: 290725

Ion	Ratio	Lower	Upper
97	100		
83	89.2	62.7	94.1
99	61.8	48.7	73.1
85	57.7	40.4	60.6

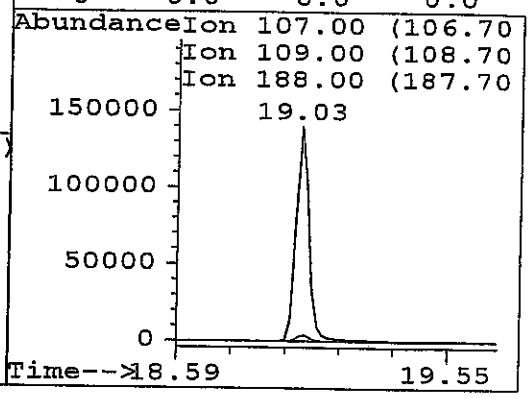


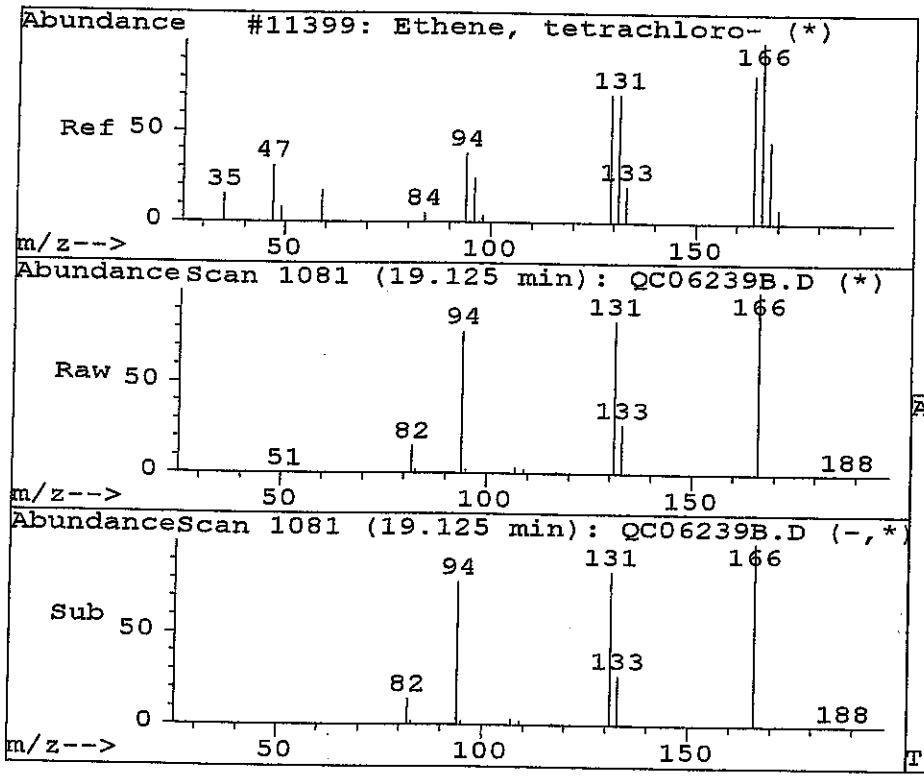


#29
1,2-Dibromoethane
Concen: 0.52 ppbV
RT: 19.03 min Scan# 1076
Delta R.T. 0.04 min
Lab File: QC06239B.D
Acq: 23 Jun 109 11:39 am

Tgt Ion:107 Resp: 451534

Ion	Ratio	Lower	Upper
107	100		
109	99.6	75.9	113.9
188	2.6	1.7	2.5#
0	0.0	0.0	0.0

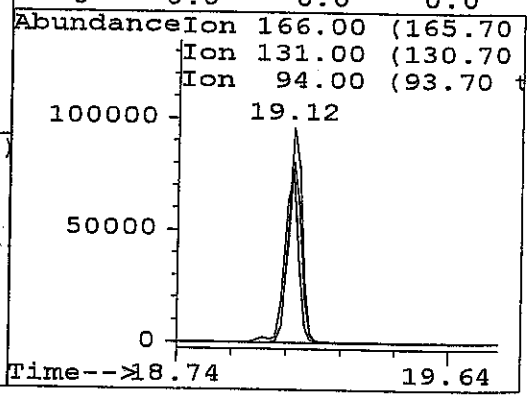


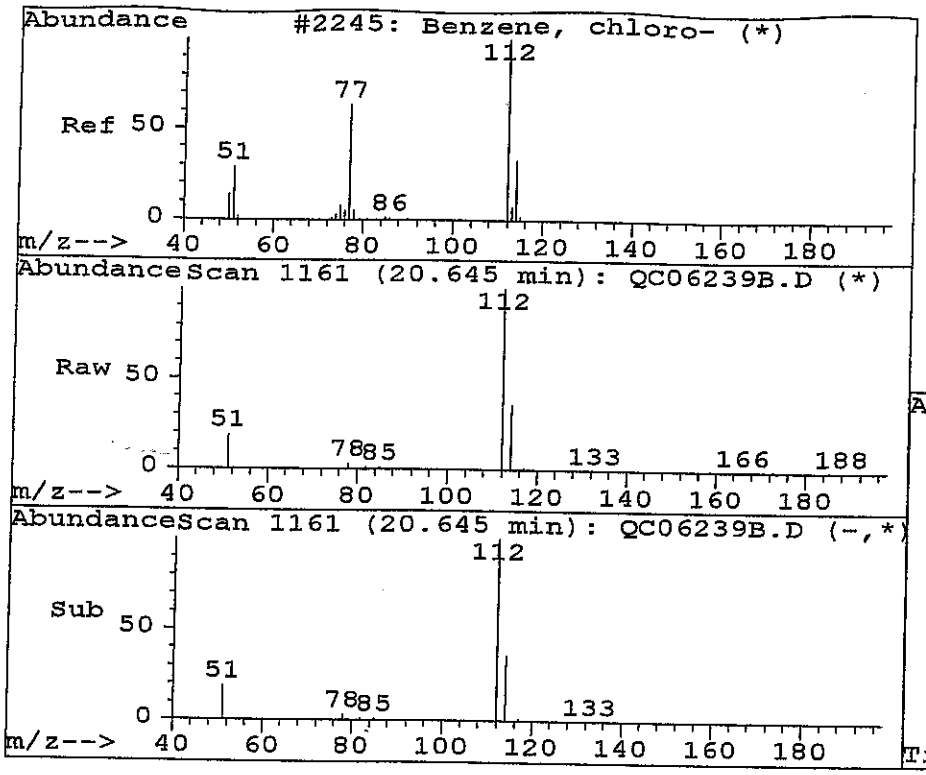


#30
Tetrachloroethene
Concen: 0.75 ppbV
RT: 19.12 min Scan# 1081
Delta R.T. 0.03 min
Lab File: QC06239B.D
Acq: 23 Jun 109 11:39 am

Tgt Ion:166 Resp: 296064

Ion	Ratio	Lower	Upper
166	100		
131	83.8	64.4	96.6
94	77.3	53.6	80.4
0	0.0	0.0	0.0

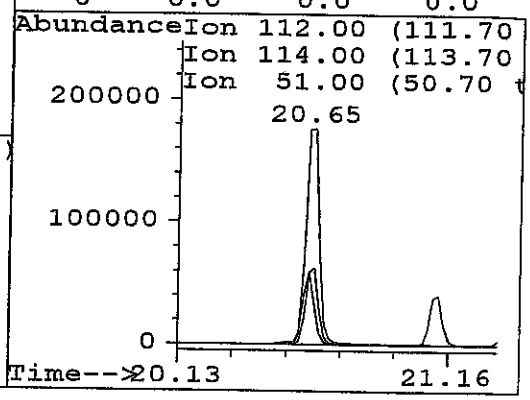


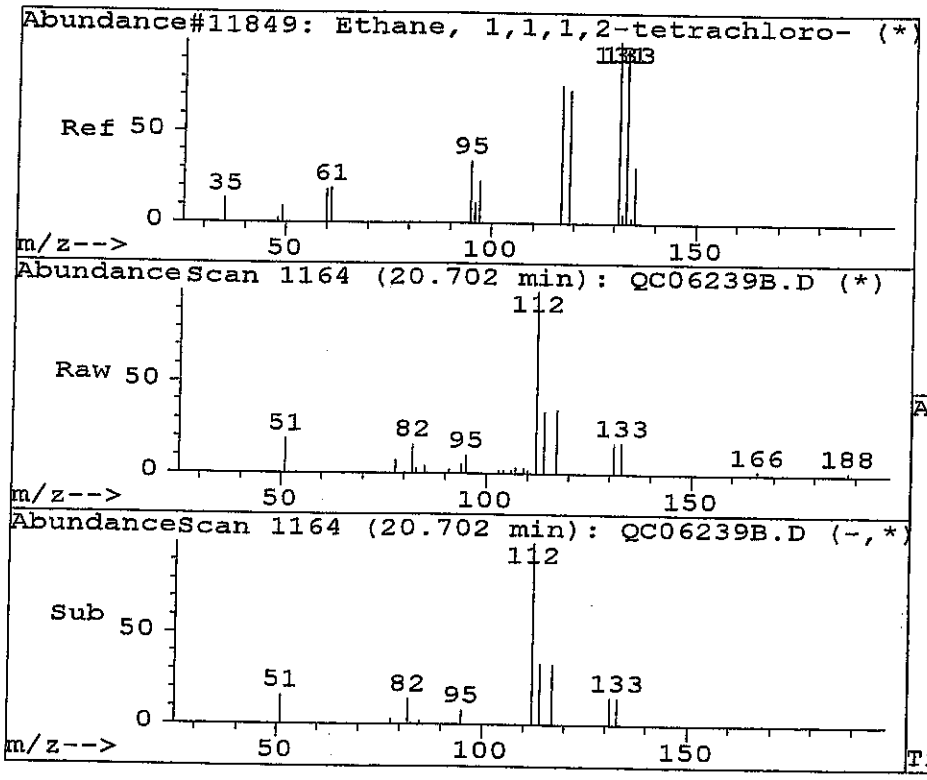


#31
Chlorobenzene
Concen: 0.55 ppbV
RT: 20.65 min Scan# 1161
Delta R.T. 0.06 min
Lab File: QC06239B.D
Acq: 23 Jun 109 11:39 am

Tgt Ion:112 Resp: 611331

Ion	Ratio	Lower	Upper
112	100		
114	35.5	26.6	39.8
51	19.1	12.4	18.6#
0	0.0	0.0	0.0

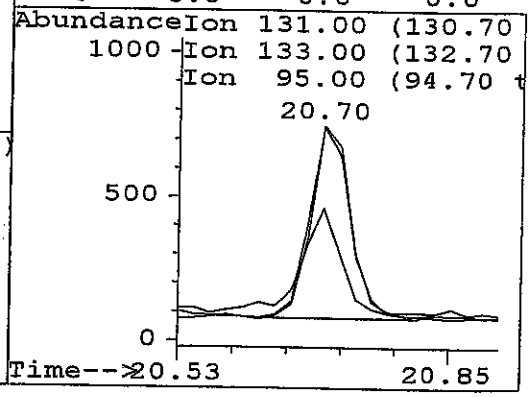


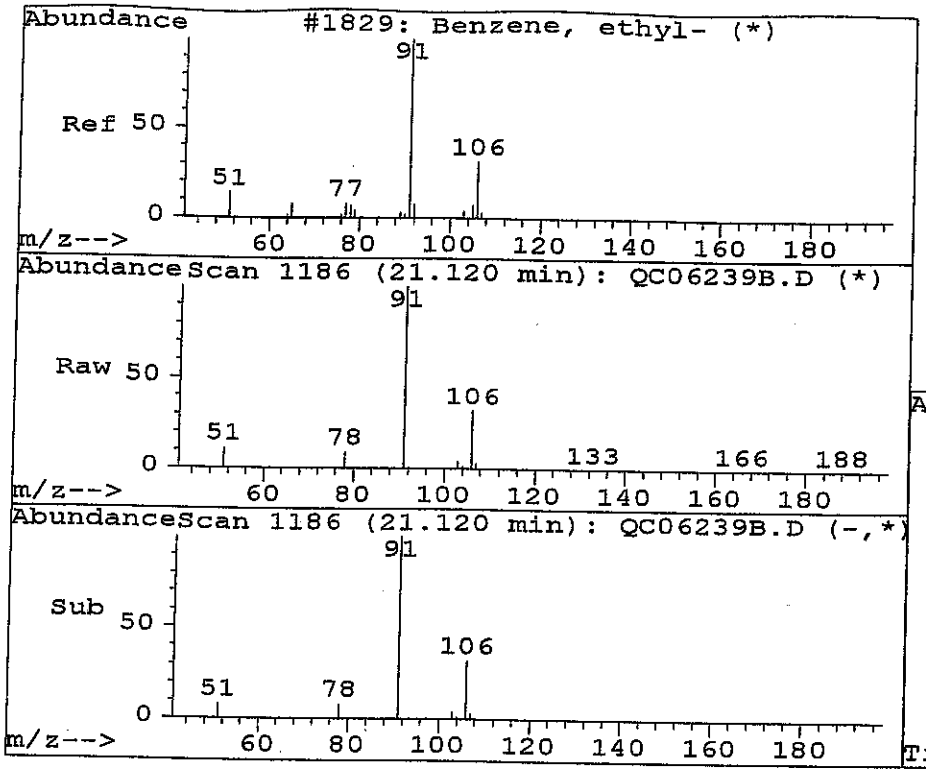


#32
1,1,1,2-Tetrachloroethane
Concen: 0.00 ppbV
RT: 20.70 min Scan# 1164
Delta R.T. 0.03 min
Lab File: QC06239B.D
Acq: 23 Jun 109 11:39 am

Tgt Ion:131 Resp: 2257

Ion	Ratio	Lower	Upper
131	100		
133	99.9	76.6	114.8
95	52.2	38.7	58.1
0	0.0	0.0	0.0

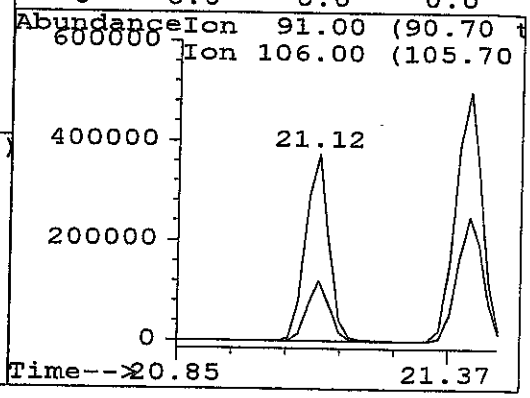


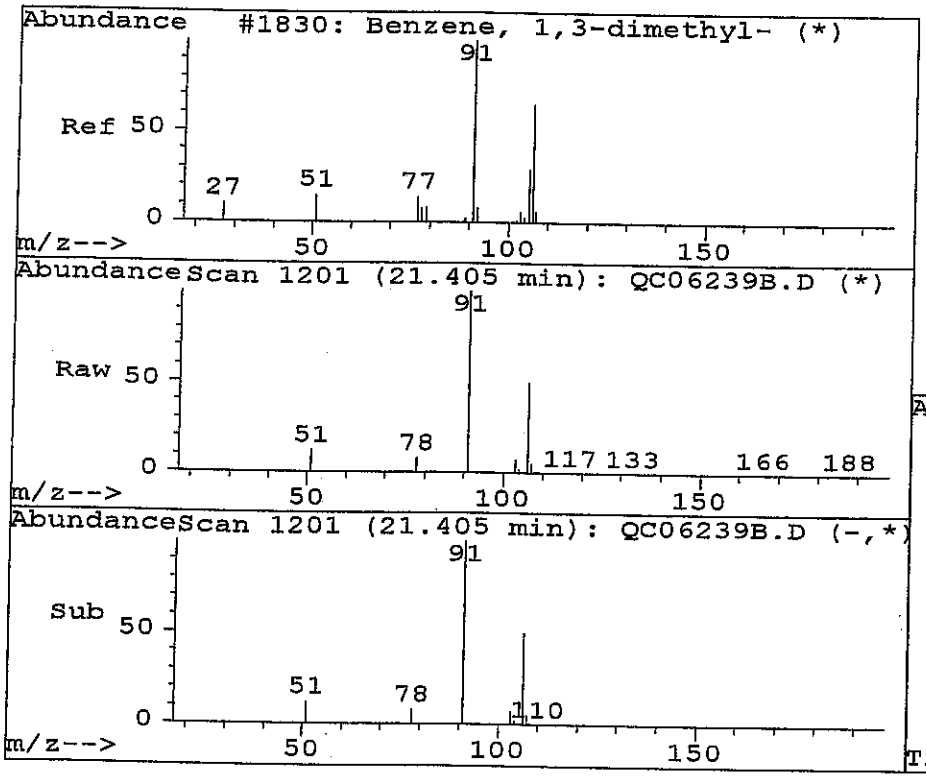


#33
Ethylbenzene
Concen: 0.57 ppbV
RT: 21.12 min Scan# 1186
Delta R.T. 0.04 min
Lab File: QC06239B.D
Acq: 23 Jun 109 11:39 am

Tgt Ion:91 Resp: 1149886

Ion	Ratio	Lower	Upper
91	100		
106	32.2	24.2	36.4
0	0.0	0.0	0.0
0	0.0	0.0	0.0

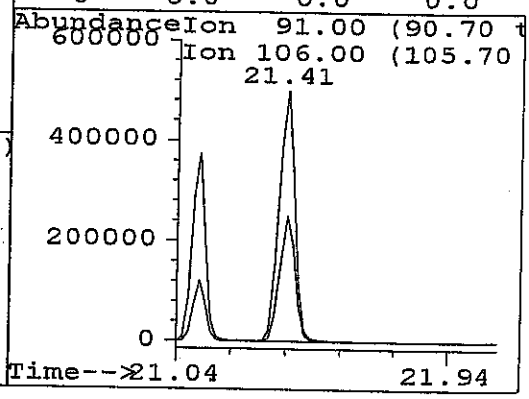


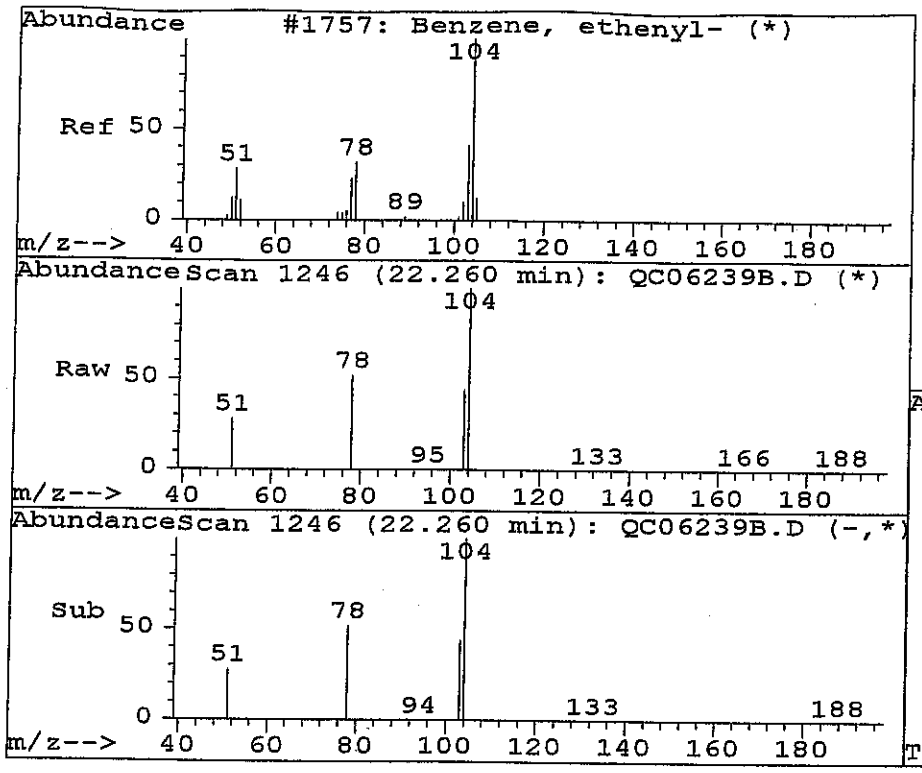


#34
m & p-Xylene
Concen: 1.16 ppbV
RT: 21.41 min Scan# 1201
Delta R.T. 0.04 min
Lab File: QC06239B.D
Acq: 23 Jun 109 11:39 am

Tgt Ion:91 Resp: 1772416

Ion	Ratio	Lower	Upper
91	100		
106	50.0	41.7	62.5
0	0.0	0.0	0.0
0	0.0	0.0	0.0

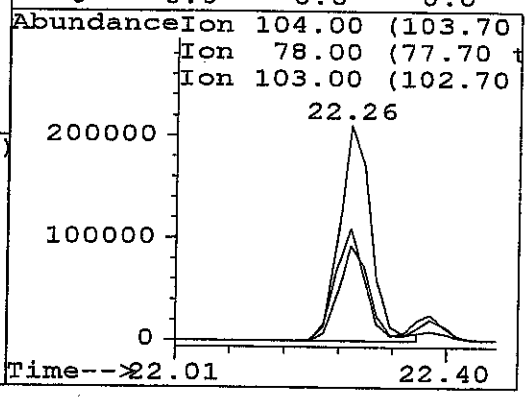


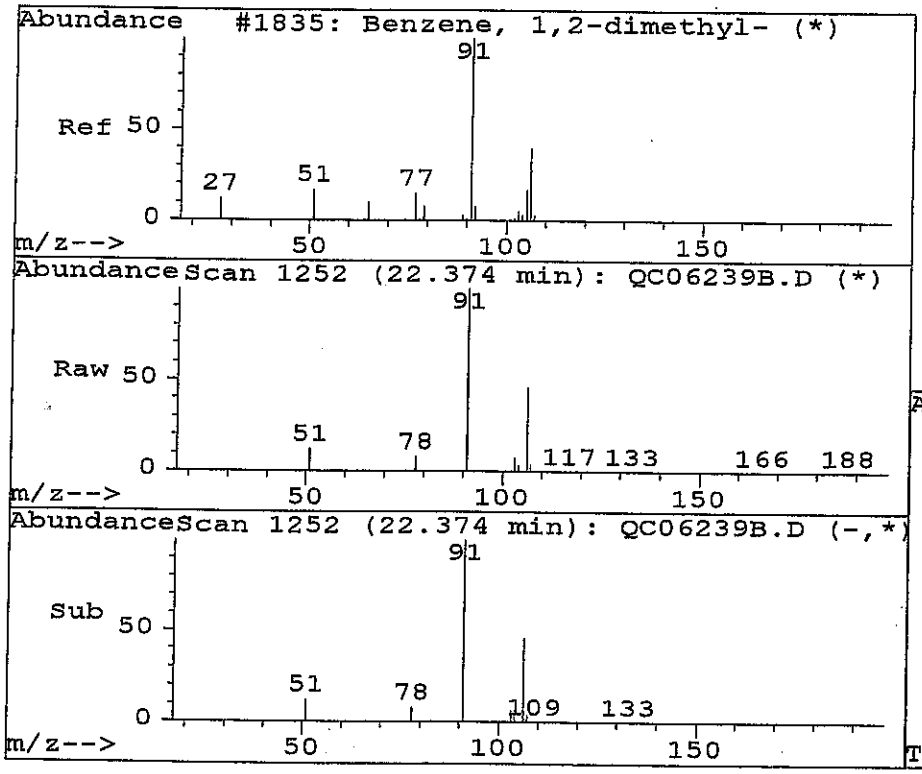


#35
Styrene
Concen: 0.36 ppbV
RT: 22.26 min Scan# 1246
Delta R.T. 0.04 min
Lab File: QC06239B.D
Acq: 23 Jun 109 11:39 am

Tgt Ion:104 Resp: 666270

Ion	Ratio	Lower	Upper
104	100		
78	48.2	28.2	42.2#
103	41.9	33.8	50.6
0	0.0	0.0	0.0

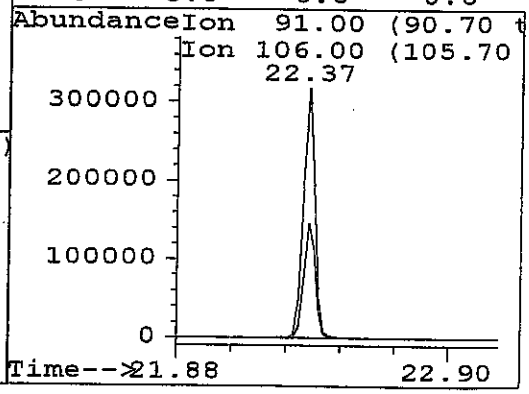


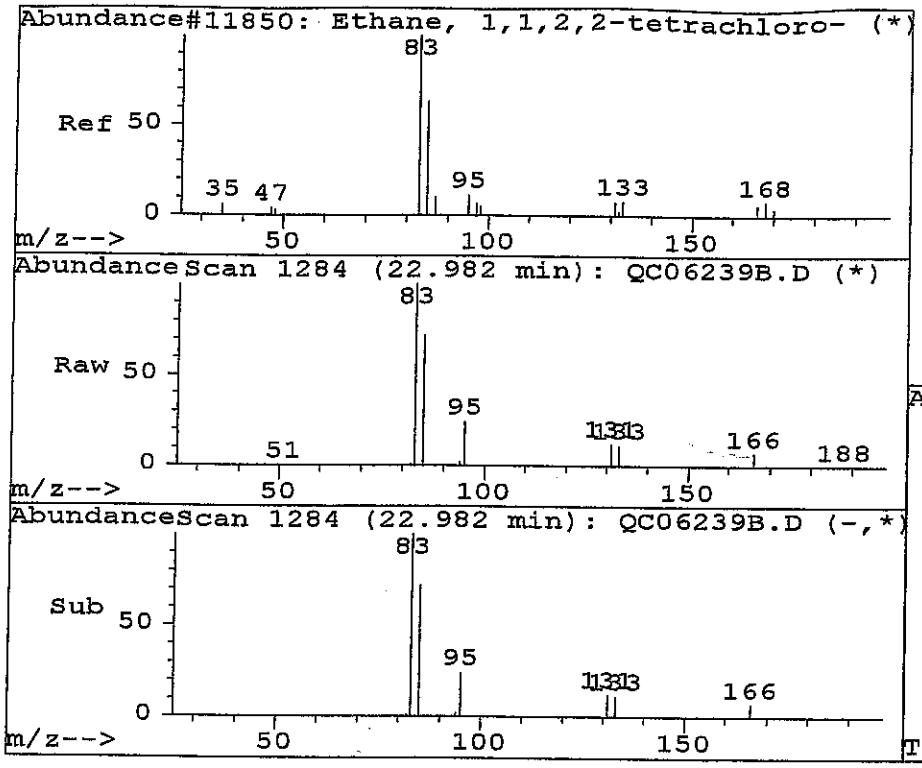


#36
o-Xylene
Concen: 0.49 ppbV
RT: 22.37 min Scan# 1252
Delta R.T. 0.03 min
Lab File: QC06239B.D
Acq: 23 Jun 109 11:39 am

Tgt Ion:91 Resp: 967555

Ion	Ratio	Lower	Upper
91	100		
106	46.0	37.5	56.3
0	0.0	0.0	0.0
0	0.0	0.0	0.0

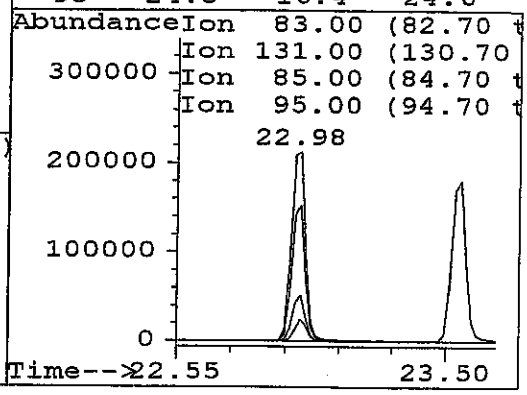


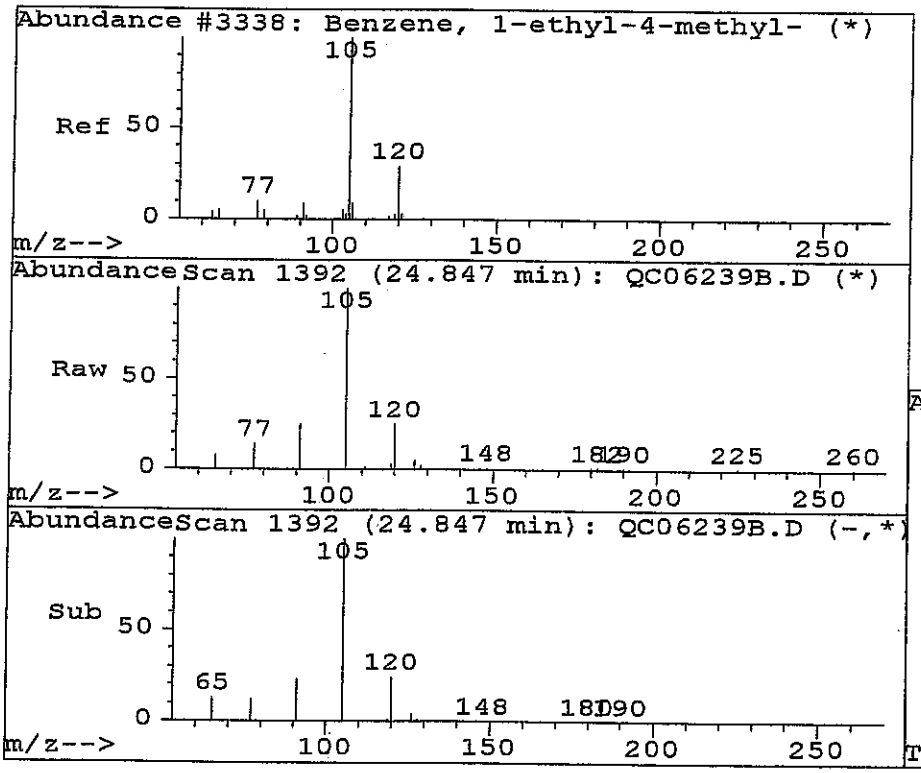


#37
1,1,2,2-Tetrachloroethane
Concen: 0.33 ppbV
RT: 22.98 min Scan# 1284
Delta R.T. 0.05 min
Lab File: QC06239B.D
Acq: 23 Jun 109 11:39 am

Tgt Ion:83 Resp: 750136

Ion	Ratio	Lower	Upper
83	100		
131	11.5	7.8	11.6
85	71.7	55.5	83.3
95	24.3	16.4	24.6

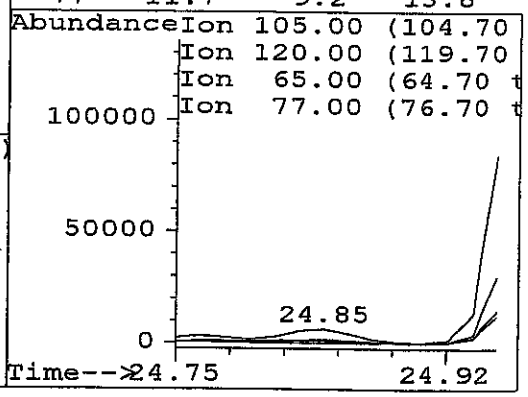


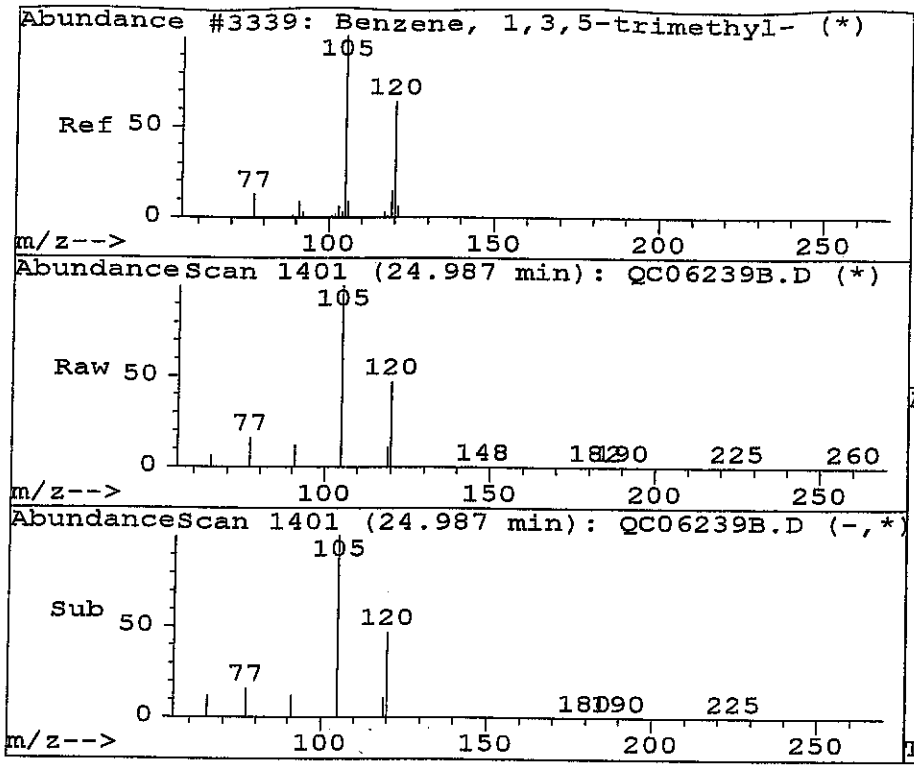


#38
4-Ethyltoluene
Concen: 0.01 ppbV
RT: 24.85 min Scan# 1392
Delta R.T. 0.05 min
Lab File: QC06239B.D
Acq: 23 Jun 109 11:39 am

Tgt Ion:105 Resp: 18803

Ion	Ratio	Lower	Upper
105	100		
120	23.5	19.6	29.4
65	7.6	9.1	13.7#
77	11.7	9.2	13.8

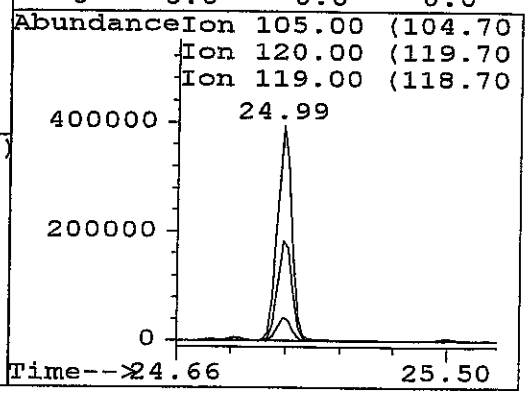


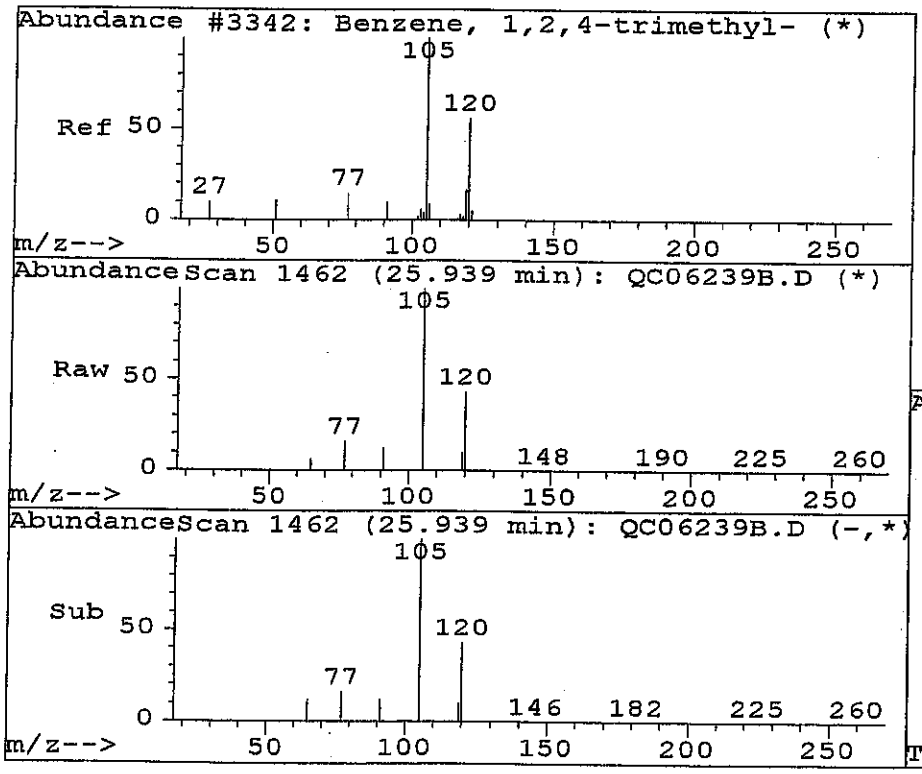


#39
1,3,5-Trimethylbenzene
Concen: 0.35 ppbV
RT: 24.99 min Scan# 1401
Delta R.T. 0.03 min
Lab File: QC06239B.D
Acq: 23 Jun 109 11:39 am

Tgt Ion:105 Resp: 1203997

Ion	Ratio	Lower	Upper
105	100		
120	46.5	38.6	57.8
119	10.7	8.6	13.0
0	0.0	0.0	0.0

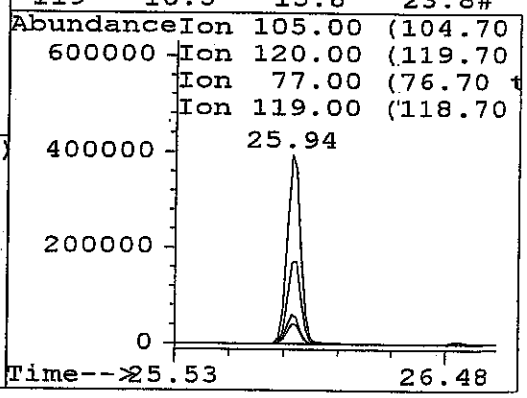


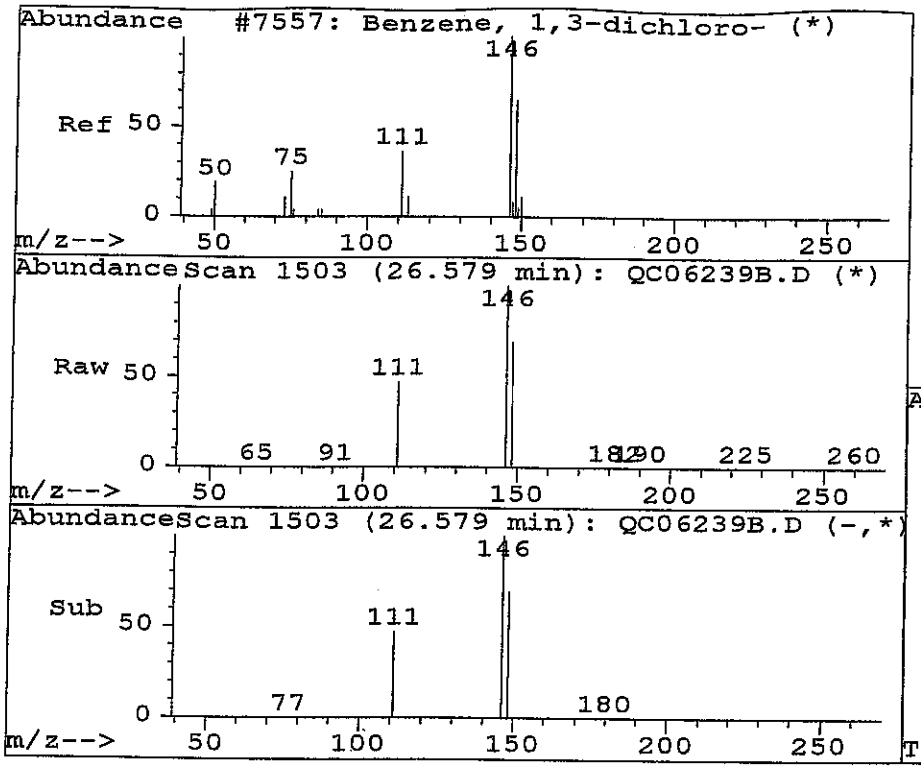


#40
1,2,4-Trimethylbenzene
Concen: 0.32 ppbV
RT: 25.94 min Scan# 1462
Delta R.T. 0.03 min
Lab File: QC06239B.D
Acq: 23 Jun 109 11:39 am

Tgt Ion:105 Resp: 1277190

Ion	Ratio	Lower	Upper
105	100		
120	42.9	36.1	54.1
77	15.5	11.7	17.5
119	10.5	15.8	23.8#

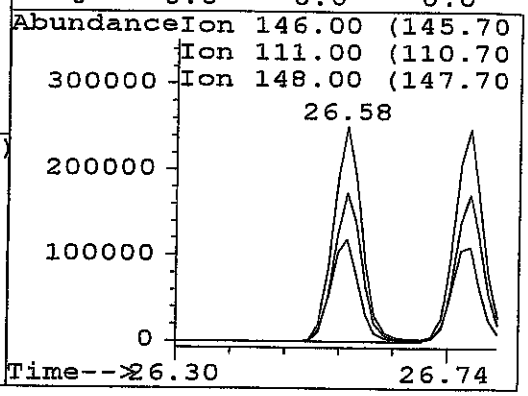


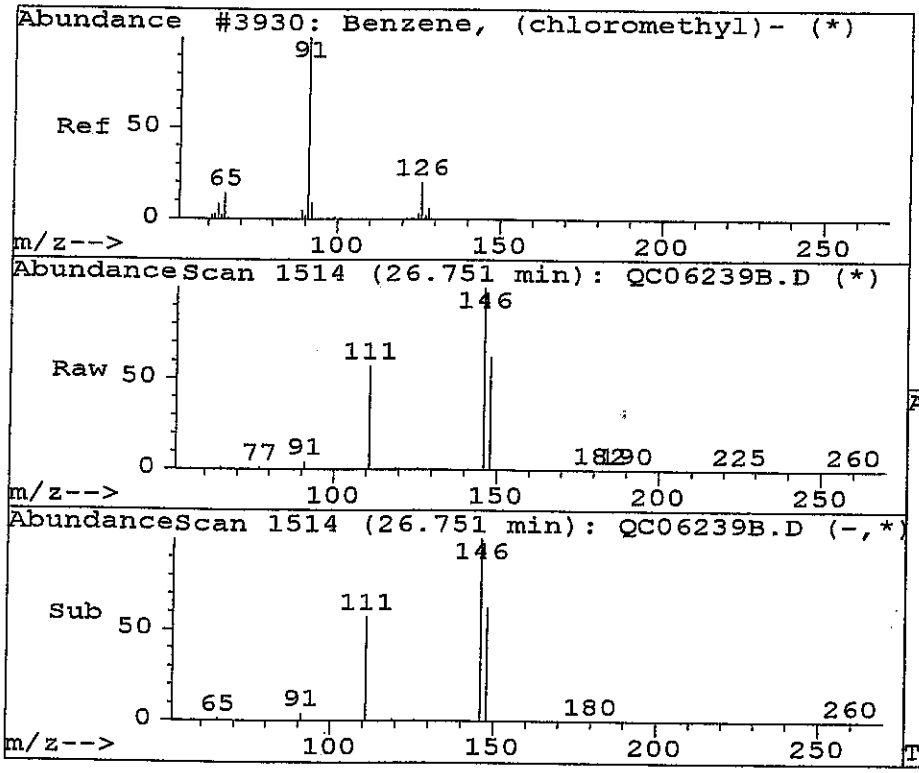


#41
1,3-Dichlorobenzene
Concen: 0.27 ppbV
RT: 26.58 min Scan# 1503
Delta R.T. 0.03 min
Lab File: QC06239B.D
Acq: 23 Jun 109 11:39 am

Tgt Ion:146 Resp: 830236

Ion	Ratio	Lower	Upper
146	100		
111	47.4	34.7	52.1
148	69.3	55.0	82.4
0	0.0	0.0	0.0

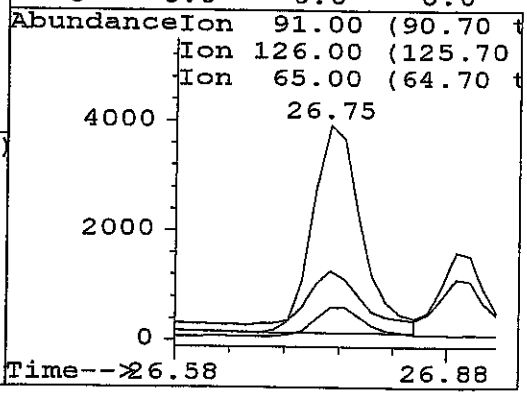


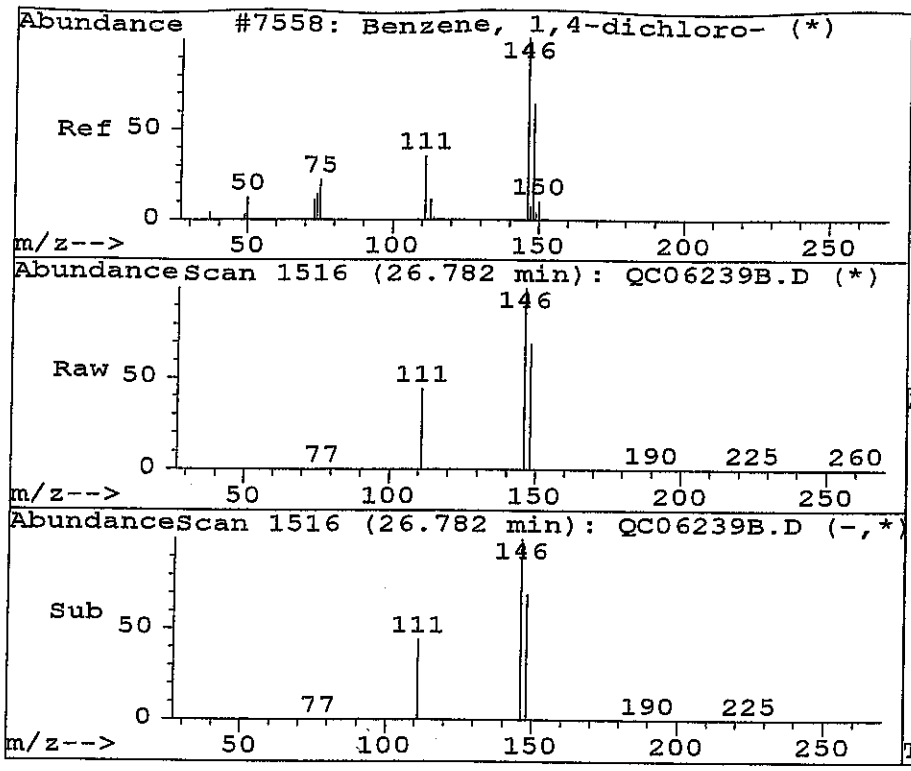


#42
Benzyl chloride
Concen: 0.00 ppbV
RT: 26.75 min Scan# 1514
Delta R.T. 0.05 min
Lab File: QC06239B.D
Acq: 23 Jun 109 11:39 am

Tgt Ion:91 Resp: 14554

Ion	Ratio	Lower	Upper
91	100		
126	14.0	15.4	23.0#
65	25.5	18.6	27.8
0	0.0	0.0	0.0

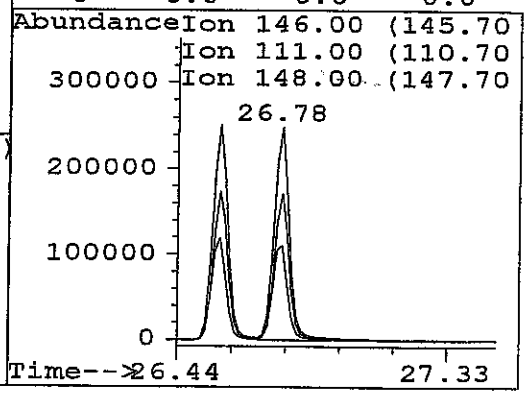


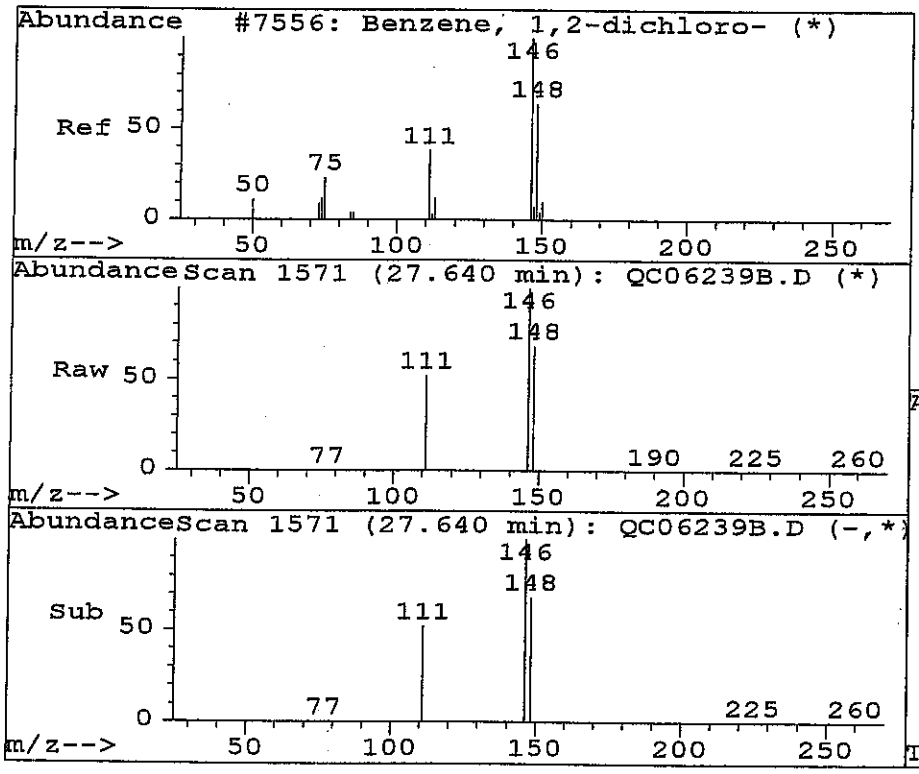


#43
1,4-Dichlorobenzene
Concen: 0.27 ppbV
RT: 26.78 min Scan# 1516
Delta R.T. 0.03 min
Lab File: QC06239B.D
Acq: 23 Jun 109 11:39 am

Tgt Ion:146 Resp: 852177

Ion	Ratio	Lower	Upper
146	100		
111	44.4	32.4	48.6
148	69.1	55.3	82.9
0	0.0	0.0	0.0

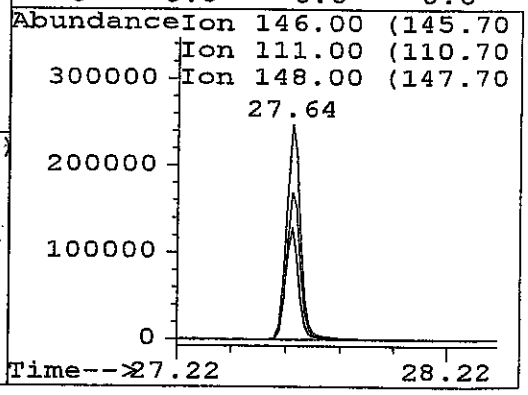


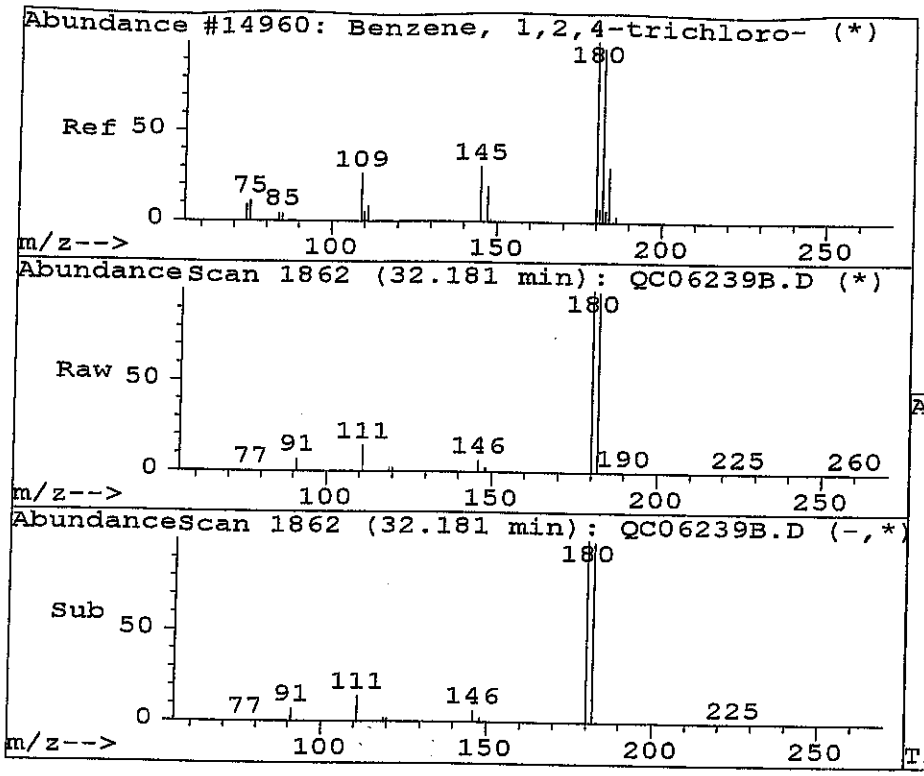


#44
1,2-Dichlorobenzene
Concen: 0.23 ppbV
RT: 27.64 min Scan# 1571
Delta R.T. 0.03 min
Lab File: QC06239B.D
Acq: 23 Jun 109 11:39 am

Tgt Ion:146 Resp: 880342

Ion	Ratio	Lower	Upper
146	100		
111	52.0	38.2	57.2
148	68.2	54.6	81.8
0	0.0	0.0	0.0

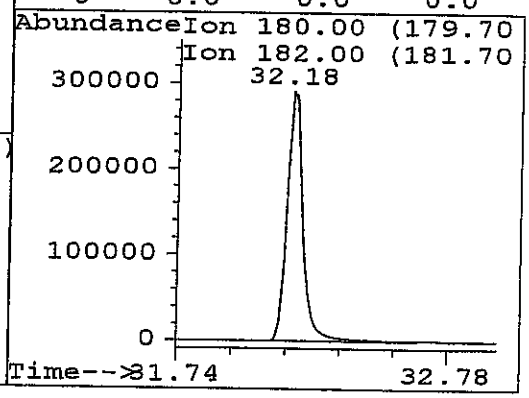


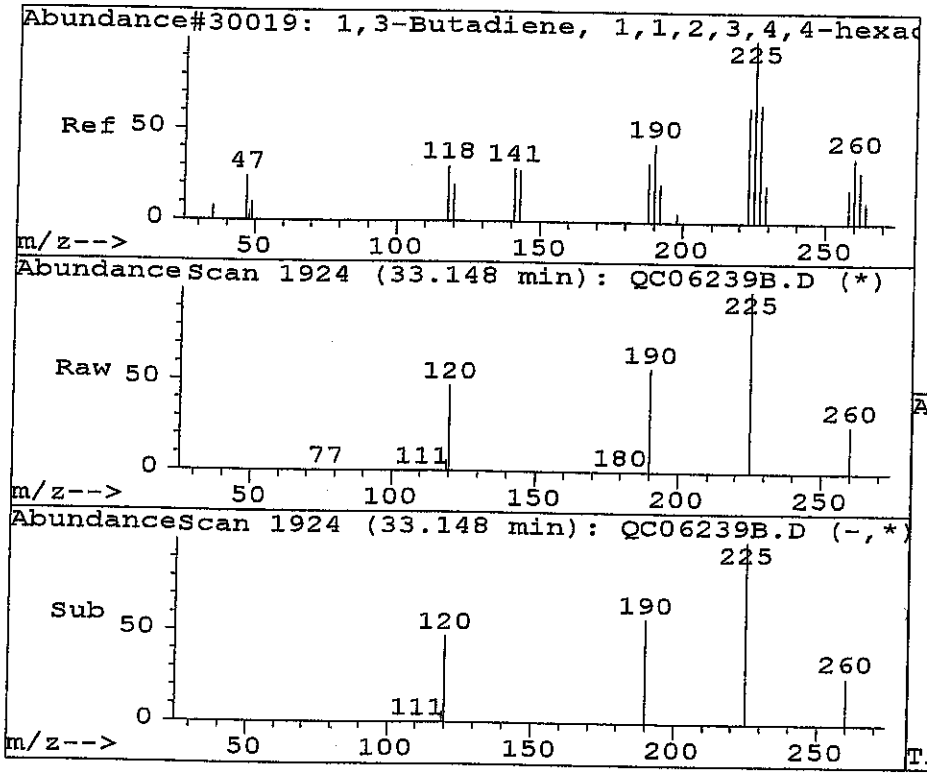


#45
1,2,4-Trichlorobenzene
Concen: 0.15 ppbV
RT: 32.18 min Scan# 1862
Delta R.T. 0.01 min
Lab File: QC06239B.D
Acq: 23 Jun 109 11:39 am

Tgt Ion:180 Resp: 1257089

Ion	Ratio	Lower	Upper
180	100		
182	99.5	79.0	118.4
0	0.0	0.0	0.0
0	0.0	0.0	0.0

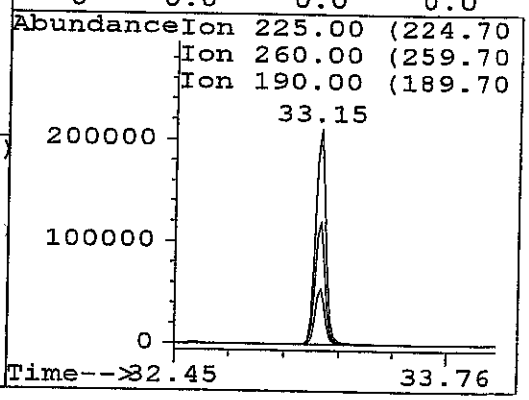


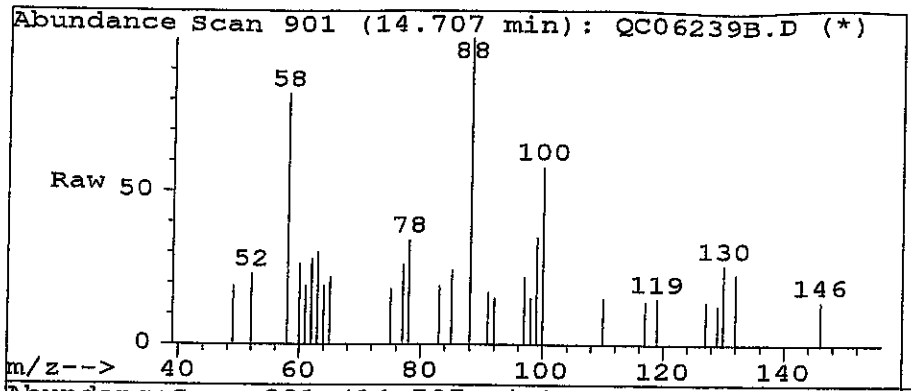


#46
Hexachlorobutadiene
Concen: 0.19 ppbV
RT: 33.15 min Scan# 1924
Delta R.T. 0.02 min
Lab File: QC06239B.D
Acq: 23 Jun 109 11:39 am

Tgt Ion:225 Resp: 747698

Ion	Ratio	Lower	Upper
225	100		
260	26.0	20.5	30.7
190	56.6	43.0	64.4
0	0.0	0.0	0.0

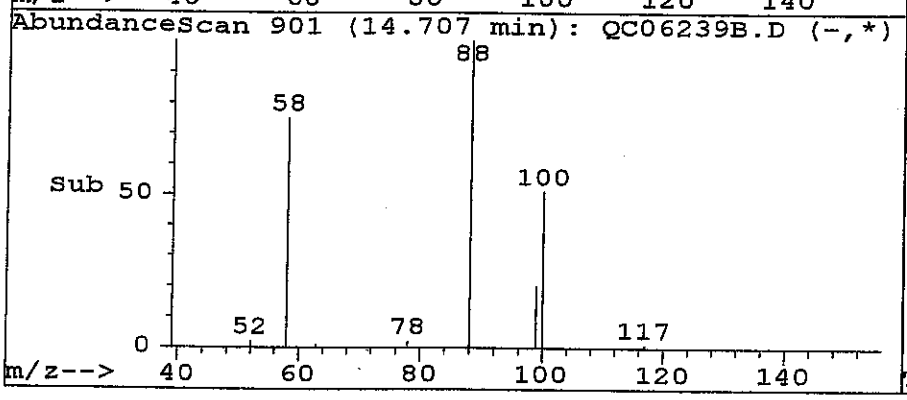


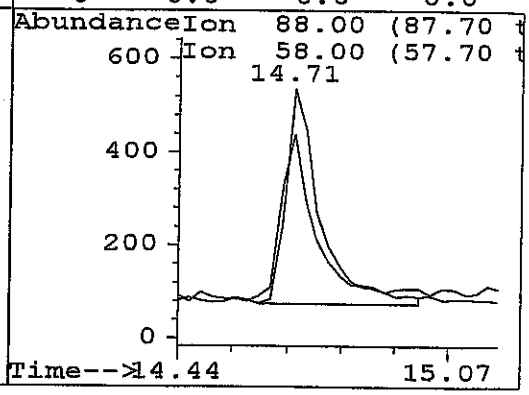


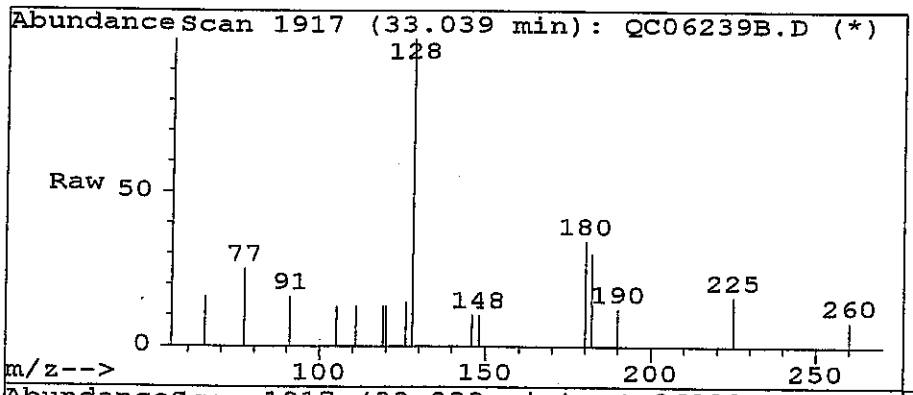
#47
1,4 Dioxane
Concen: 0.01 ppbV
RT: 14.71 min Scan# 901
Delta R.T. 0.14 min
Lab File: QC06239B.D
Acq: 23 Jun 109 11:39 am

Tgt Ion:88 Resp: 2560

Ion	Ratio	Lower	Upper
88	100		
58	78.1	54.9	82.3
0	0.0	0.0	0.0
0	0.0	0.0	0.0



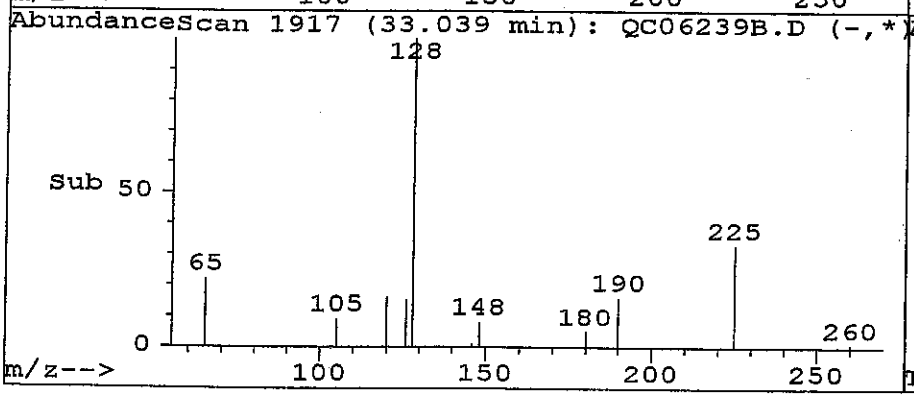


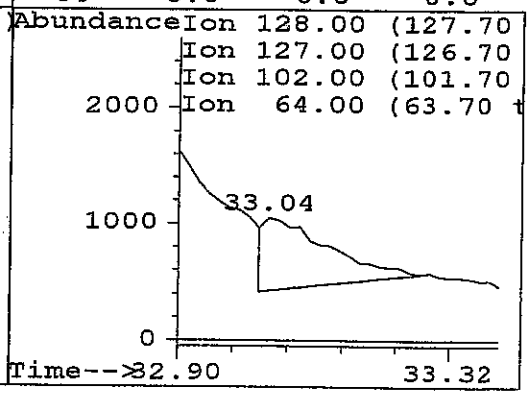


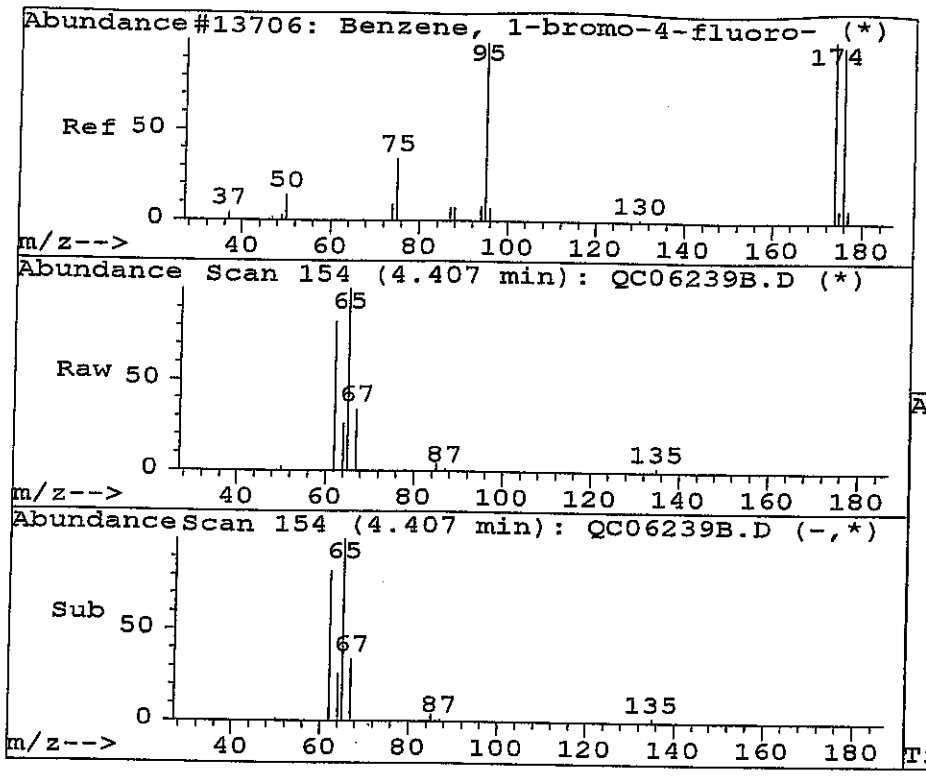
#48
Naphthalene
Concen: 0.00 ppbV
RT: 33.04 min Scan# 1917
Delta R.T. 0.26 min
Lab File: QC06239B.D
Acq: 23 Jun 109 11:39 am

Tgt Ion:128 Resp: 4171

Ion	Ratio	Lower	Upper
128	100		
127	0.0	0.0	0.0
102	0.0	0.0	0.0
64	0.0	0.0	0.0



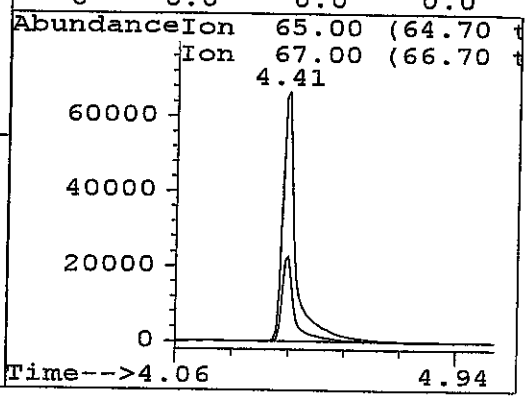




#49
Vinyl Chloride-d3
Concen: 0.27 ppbV
RT: 4.41 min Scan# 154
Delta R.T. 0.06 min
Lab File: QC06239B.D
Acq: 23 Jun 109 11:39 am

Tgt Ion:65 Resp: 197884

Ion	Ratio	Lower	Upper
65	100		
67	34.3	26.6	40.0
0	0.0	0.0	0.0
0	0.0	0.0	0.0



Quantitation Report

Data File : C:\MSCHEM\2\DATA\06239M~1\QC06239C.D
Acq Time : 23 Jun 109 12:25 pm
Sample : ~~ST60022~~ ST0623091 KB 6/23/09
Misc :
Quant Time: Jun 29 16:43 19109

Operator: JF
Inst : MS2
Multiplr: 1.00

Method : C:\MSCHEM\2\METHODS\1T15EXAY.M
Title : EPA TO-15
Last Update : Tue Mar 17 14:18:15 2009
Response via : Multiple Level Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Chlorobenzene-d5	20.55	117	1313676	0.20	ppbV	0.04
System Monitoring Compounds						%Recovery
16) Toluene-d8	17.08	98	606619	0.22	ppbV	
49) Vinyl Chloride-d3	4.40	65	269180	0.24	ppbV	
Target Compounds						Qvalue
2) Dichlorodifluoromethane	3.90	85	859821	1.13	ppbV m	0
3) Chloromethane	4.16	50	308375	0.87	ppbV m	97
4) Freon 114	4.17	85	843326	1.12	ppbV	98
5) Vinyl chloride	4.42	62	282098	1.10	ppbV	98
6) Bromomethane	5.02	94	325020	1.33	ppbV	90
7) Chloroethane	5.23	64	186852	0.84	ppbV	98
8) Trichlorofluoromethane	6.03	101	1002039	1.13	ppbV	97
9) 1,1-Dichloroethene	7.01	61	609481	1.15	ppbV	95
10) Freon 113	7.24	151	404668	1.02	ppbV	96
11) Dichloromethane	7.48	84	274302	1.02	ppbV #	93
12) trans-1,2-Dichloroethene	8.54	96	7305	0.02	ppbV	89
13) Methyl tert butyl ether	8.58	73	184	0.00	ppbV #	94
14) 1,1-Dichloroethane	9.08	63	615275	1.05	ppbV	95
15) cis-1,2-Dichloroethene	10.30	96	346096	0.93	ppbV	86
17) Chloroform	10.72	83	876225	1.13	ppbV	92
18) 1,1,1-Trichloroethane	11.96	97	872209	1.02	ppbV	96
19) 1,2-Dichloroethane	12.07	62	1212929	0.77	ppbV #	96
20) Benzene	12.68	78	871974	0.72	ppbV	96
21) Carbon tetrachloride	12.71	117	766402	1.04	ppbV	99
22) 1,2-Dichloropropane	14.25	63	360256	0.89	ppbV #	93
23) Trichloroethene	14.31	130	394431	0.82	ppbV #	79
24) Bromodichloromethane	14.63	83	1885	0.00	ppbV #	99
25) cis-1,3-Dichloropropene	16.01	75	615973	1.60	ppbV #	89
26) Toluene	17.27	91	1085051	0.64	ppbV	96
27) trans-1,3-Dichloropropene	17.05	75	715793	1.75	ppbV #	68
28) 1,1,2-Trichloroethane	17.37	97	462814	0.64	ppbV	94
29) 1,2-Dibromoethane	19.03	107	768586	0.58	ppbV #	94
30) Tetrachloroethene	19.13	166	445394	0.74	ppbV	98
31) Chlorobenzene	20.63	112	983679	0.58	ppbV #	89
32) 1,1,1,2-Tetrachloroethane	20.70	131	2093	0.00	ppbV	92
33) Ethylbenzene	21.10	91	1802626	0.58	ppbV	96
34) m & p-Xylene	21.41	91	2797614	1.18	ppbV	99
35) Styrene	22.26	104	1187838	0.41	ppbV #	91
36) o-Xylene	22.38	91	1574090	0.52	ppbV	97
37) 1,1,2,2-Tetrachloroethane	22.97	83	1481475	0.42	ppbV	98
38) 4-Ethyltoluene	24.83	105	22837	0.00	ppbV	96
39) 1,3,5-Trimethylbenzene	24.99	105	2180303	0.41	ppbV	98
40) 1,2,4-Trimethylbenzene	25.94	105	2382233	0.39	ppbV #	93
41) 1,3-Dichlorobenzene	26.58	146	1653773	0.35	ppbV	98
42) Benzyl chloride	26.75	91	13014	0.00	ppbV #	89
43) 1,4-Dichlorobenzene	26.78	146	1693268	0.35	ppbV	98
44) 1,2-Dichlorobenzene	27.64	146	1806956	0.31	ppbV	98
45) 1,2,4-Trichlorobenzene	32.18	180	2949319	0.23	ppbV	98
46) Hexachlorobutadiene	33.15	225	1712244	0.28	ppbV	96
47) 1,4 Dioxane	14.71	88	2791	0.01	ppbV	97

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

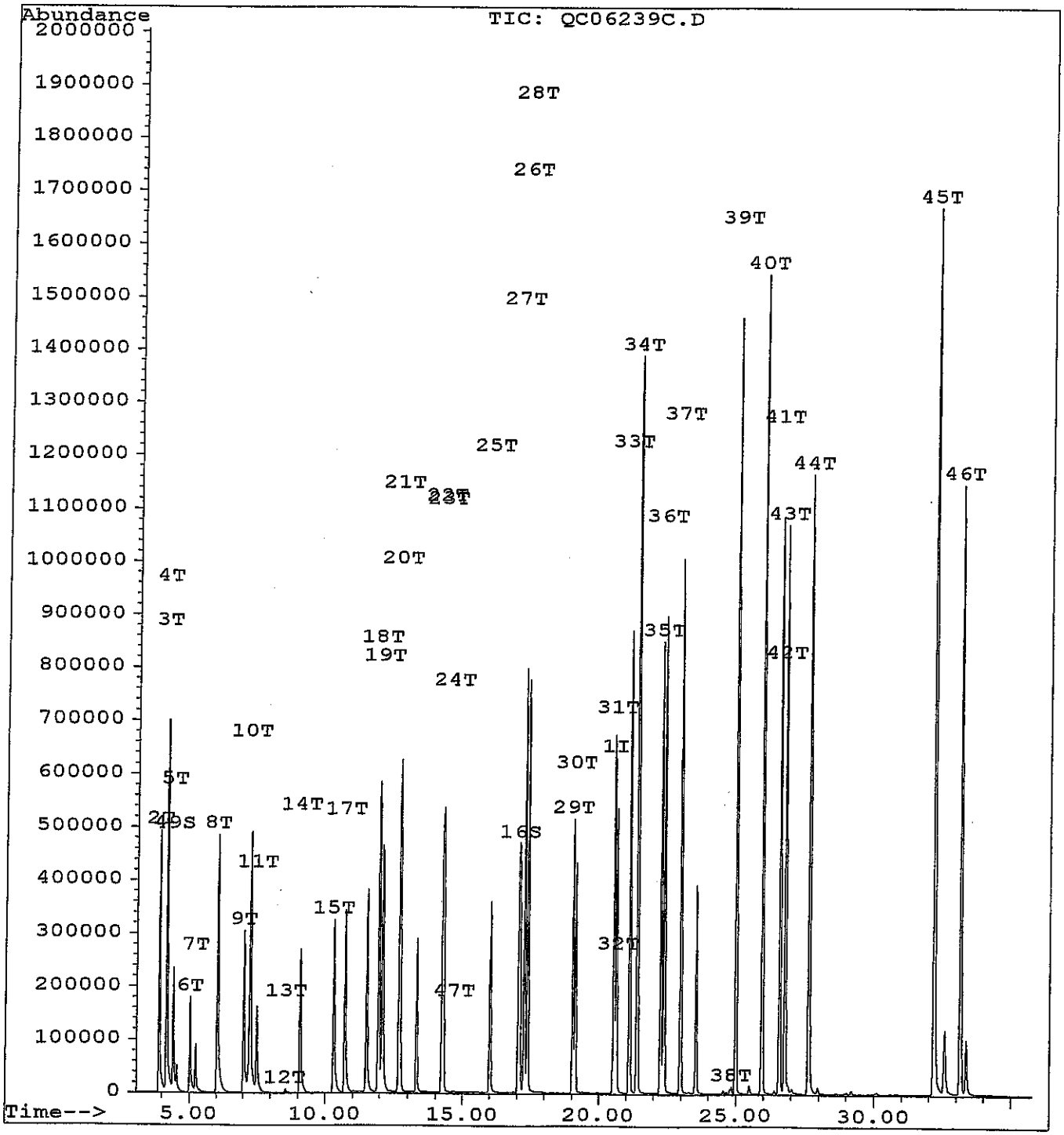
Quantitation Report

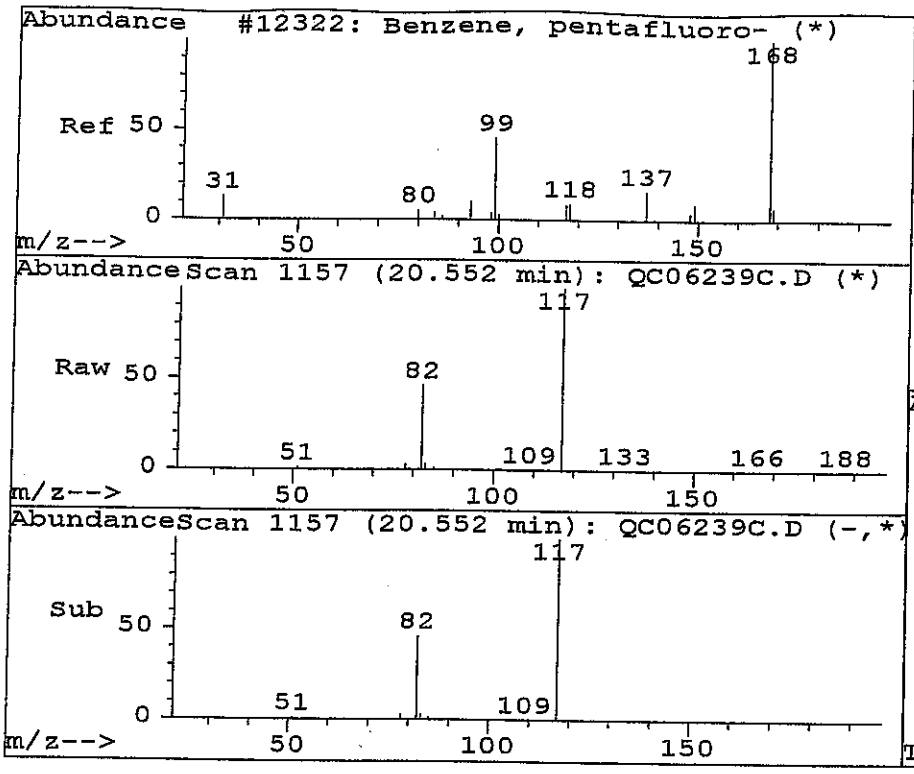
Data File : C:\MSCHEM\2\DATA\06239M~1\QC06239C.D
Acq Time : 23 Jun 109 12:25 pm
Sample : ~~ST60022~~ ST0623091
Misc :
Quant Time: Jun 29 16:43 19109

KB 6/23/09

Operator: JF
Inst : MS2
Multiplr: 1.00

Method : C:\MSCHEM\2\METHODS\1T15EXAY.M
Title : EPA TO-15
Last Update : Tue Mar 17 14:18:15 2009
Response via : Multiple Level Calibration

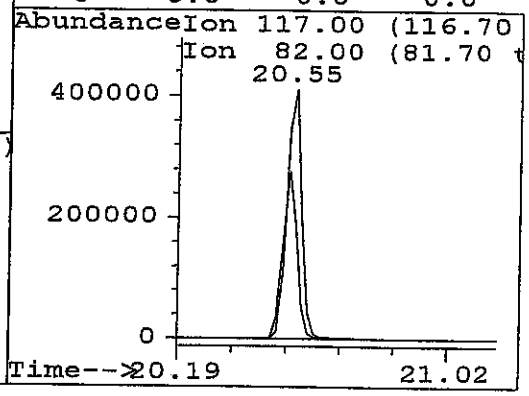


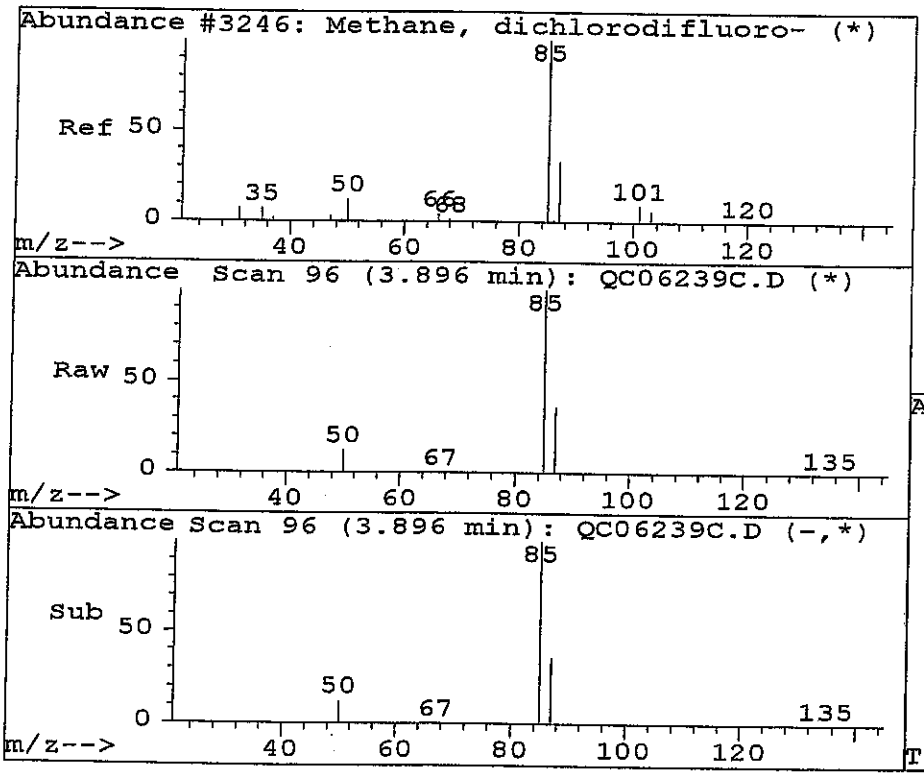


#1
Chlorobenzene-d5
Concen: 0.20 ppbV
RT: 20.55 min Scan# 1157
Delta R.T. 0.04 min
Lab File: QC06239C.D
Acq: 23 Jun 109 12:25 pm

Tgt Ion:117 Resp: 1313676

Ion	Ratio	Lower	Upper
117	100		
82	45.5	43.5	65.3
0	0.0	0.0	0.0
0	0.0	0.0	0.0

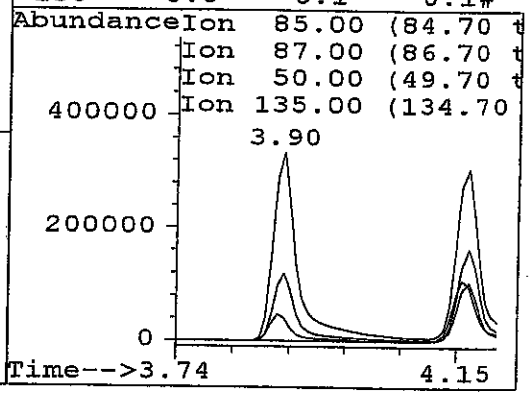


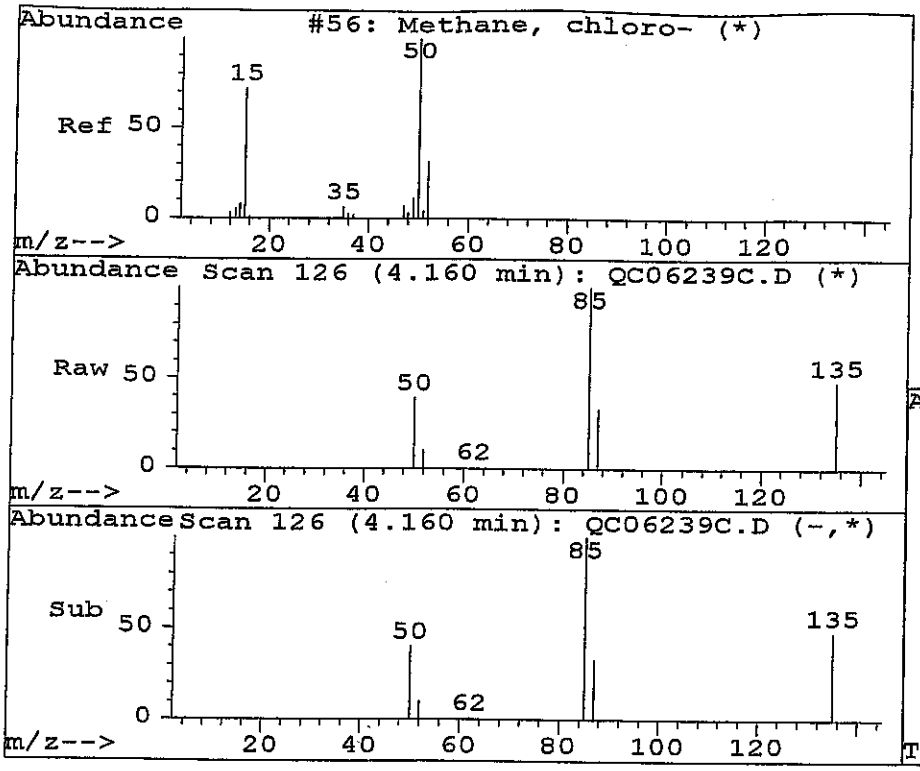


#2
Dichlorodifluoromethane
Concen: 1.13 ppbV m
RT: 3.90 min Scan# 96
Delta R.T. 0.05 min
Lab File: QC06239C.D
Acq: 23 Jun 109 12:25 pm

Tgt Ion:85 Resp: 859821

Ion	Ratio	Lower	Upper
85	100		
87	35.5	25.6	38.4
50	12.2	8.6	12.8
135	0.0	0.1	0.1#

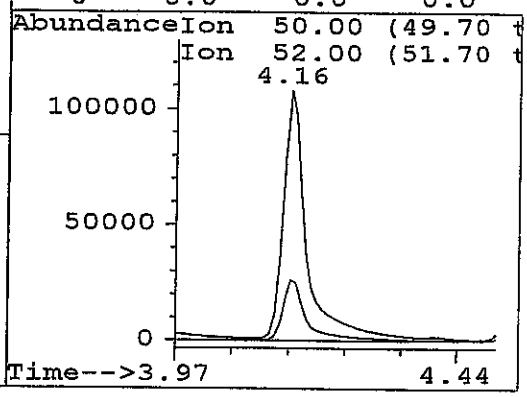


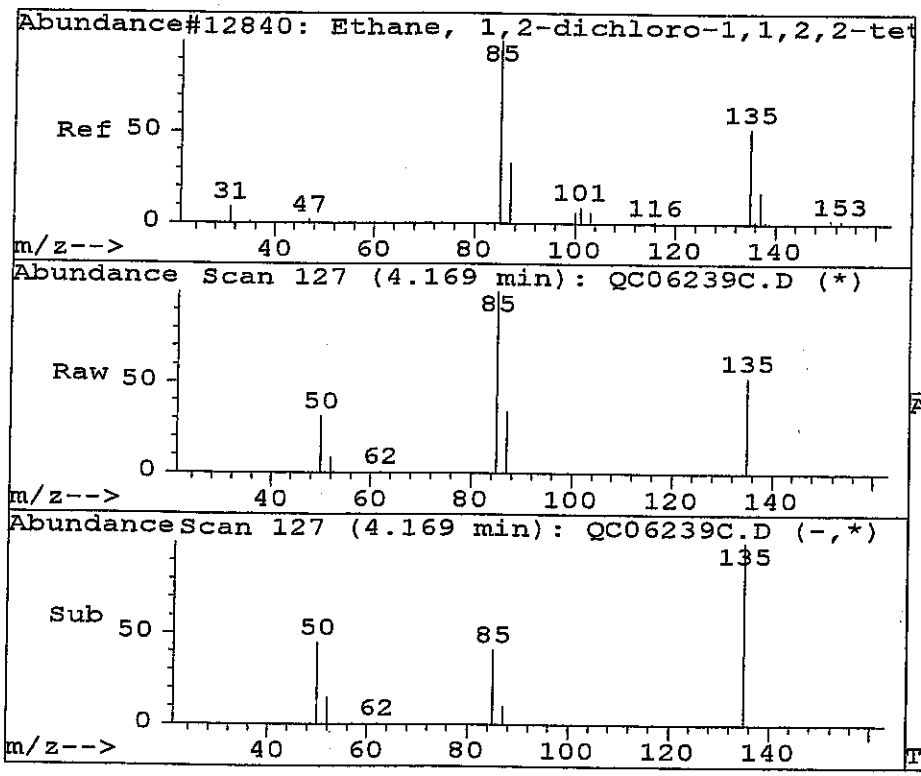


#3
Chloromethane
Concen: 0.87 ppbV m
RT: 4.16 min Scan# 126
Delta R.T. 0.04 min
Lab File: QC06239C.D
Acq: 23 Jun 109 12:25 pm

Tgt Ion:50 Resp: 308375

Ion	Ratio	Lower	Upper
50	100		
52	24.4	21.2	31.8
0	0.0	0.0	0.0
0	0.0	0.0	0.0

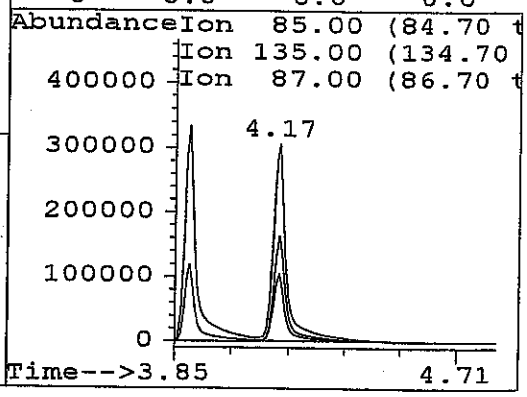


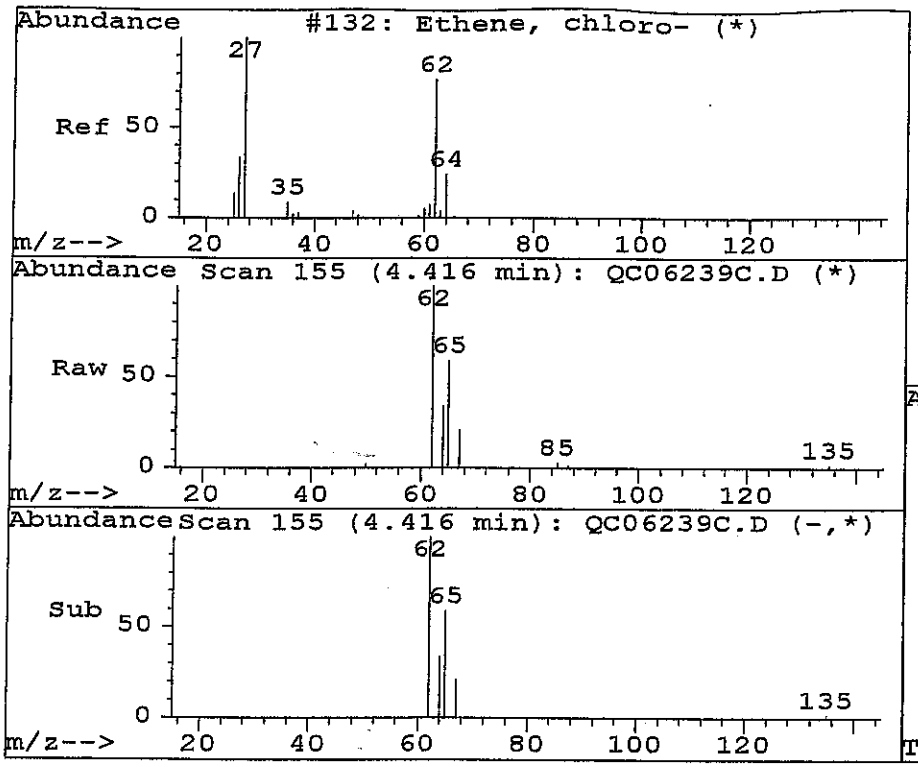


#4
Freon 114
Concen: 1.12 ppbV
RT: 4.17 min Scan# 127
Delta R.T. 0.05 min
Lab File: QC06239C.D
Acq: 23 Jun 109 12:25 pm

Tgt Ion:85 Resp: 843326

Ion	Ratio	Lower	Upper
85	100		
135	53.8	42.3	63.5
87	34.1	26.0	39.0
0	0.0	0.0	0.0

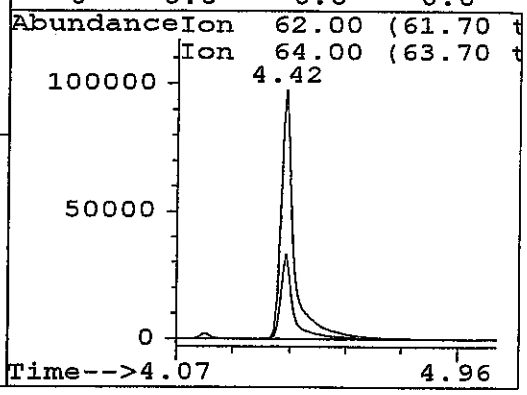


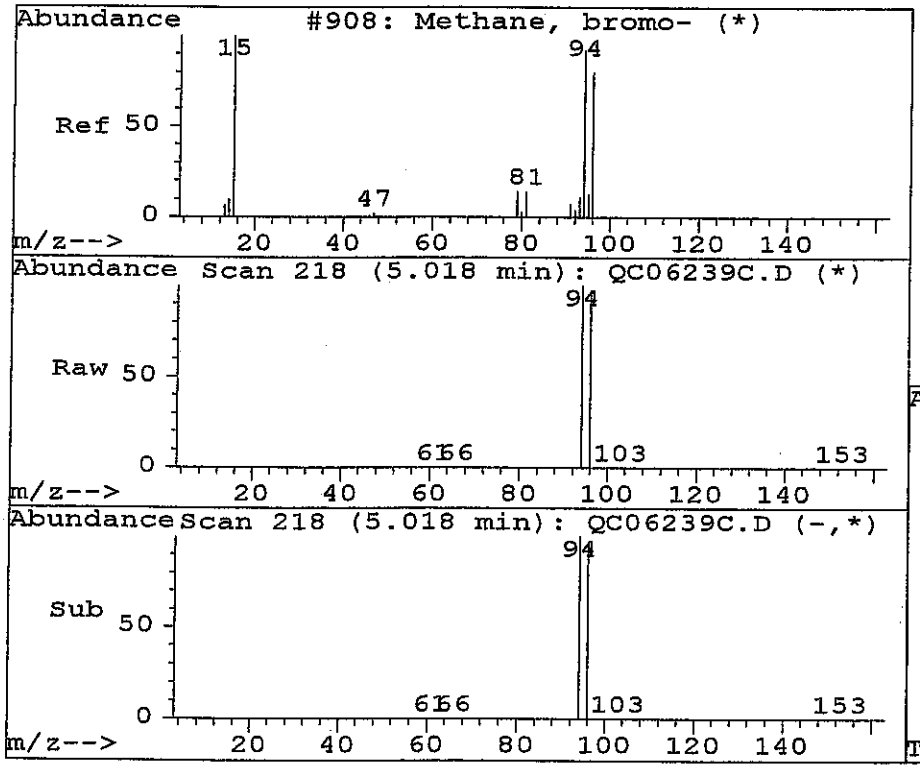


#5
Vinyl chloride
Concen: 1.10 ppbV
RT: 4.42 min Scan# 155
Delta R.T. 0.05 min
Lab File: QC06239C.D
Acq: 23 Jun 109 12:25 pm

Tgt Ion:62 Resp: 282098

Ion	Ratio	Lower	Upper
62	100		
64	34.0	28.2	42.2
0	0.0	0.0	0.0
0	0.0	0.0	0.0

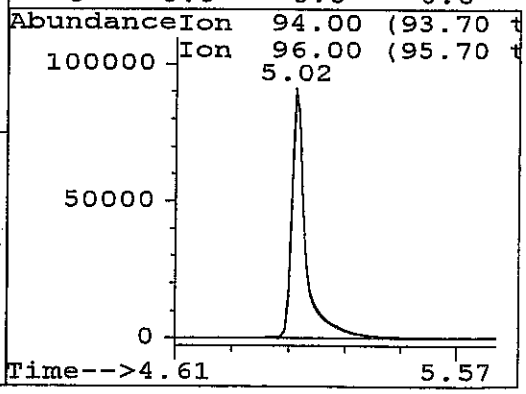


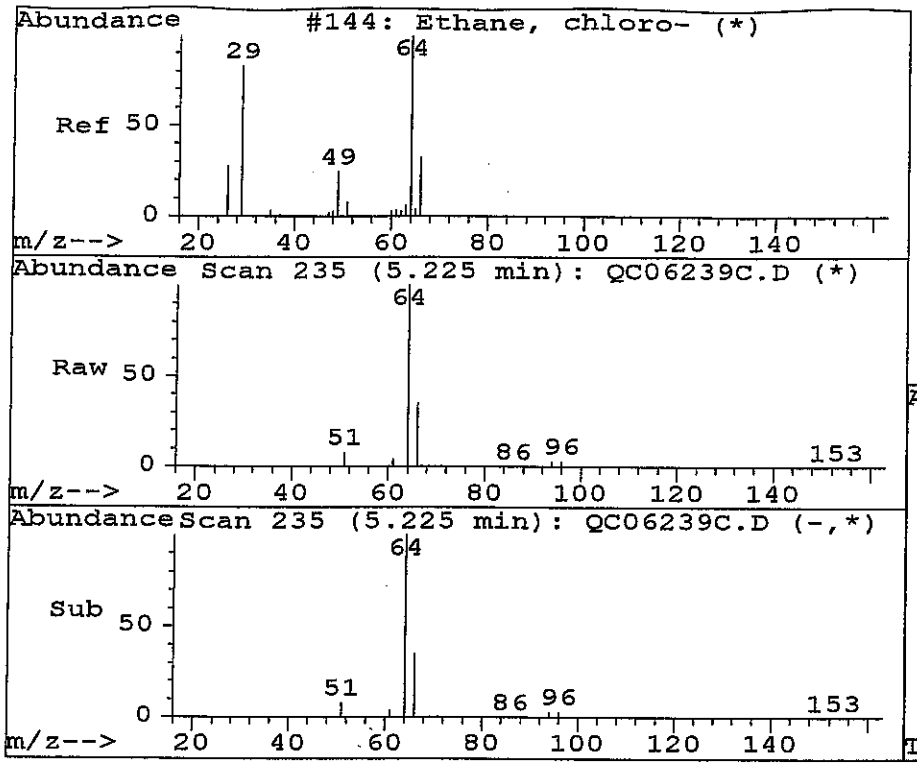


#6
Bromomethane
Concen: 1.33 ppbV
RT: 5.02 min Scan# 218
Delta R.T. 0.05 min
Lab File: QC06239C.D
Acq: 23 Jun 109 12:25 pm

Tgt Ion:94 Resp: 325020

Ion	Ratio	Lower	Upper
94	100		
96	96.0	69.4	104.2
0	0.0	0.0	0.0
0	0.0	0.0	0.0

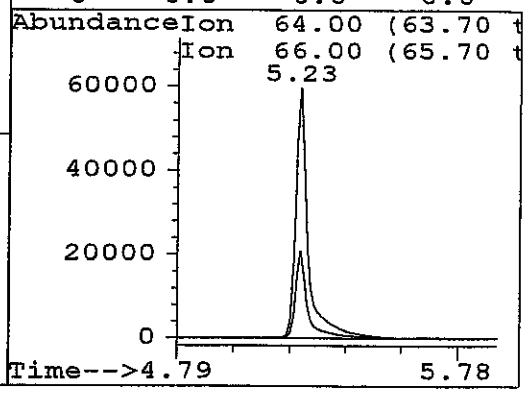


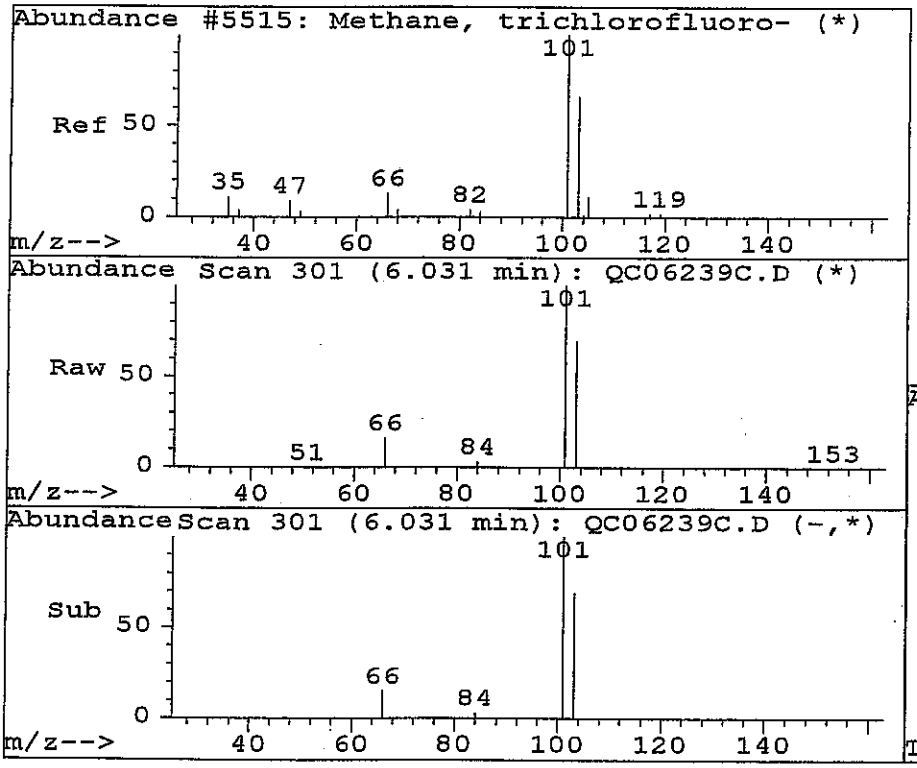


#7
Chloroethane
Concen: 0.84 ppbV
RT: 5.23 min Scan# 235
Delta R.T. 0.05 min
Lab File: QC06239C.D
Acq: 23 Jun 109 12:25 pm

Tgt Ion:64 Resp: 186852

Ion	Ratio	Lower	Upper
64	100		
66	34.6	26.6	40.0
0	0.0	0.0	0.0
0	0.0	0.0	0.0

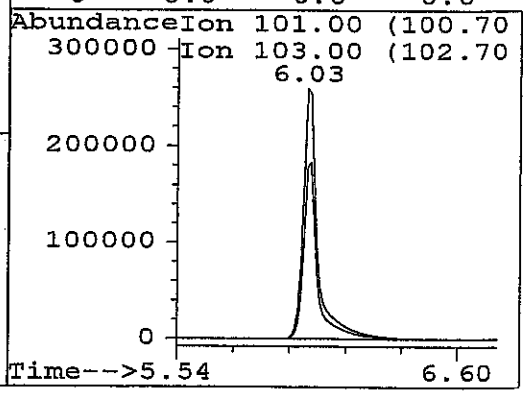


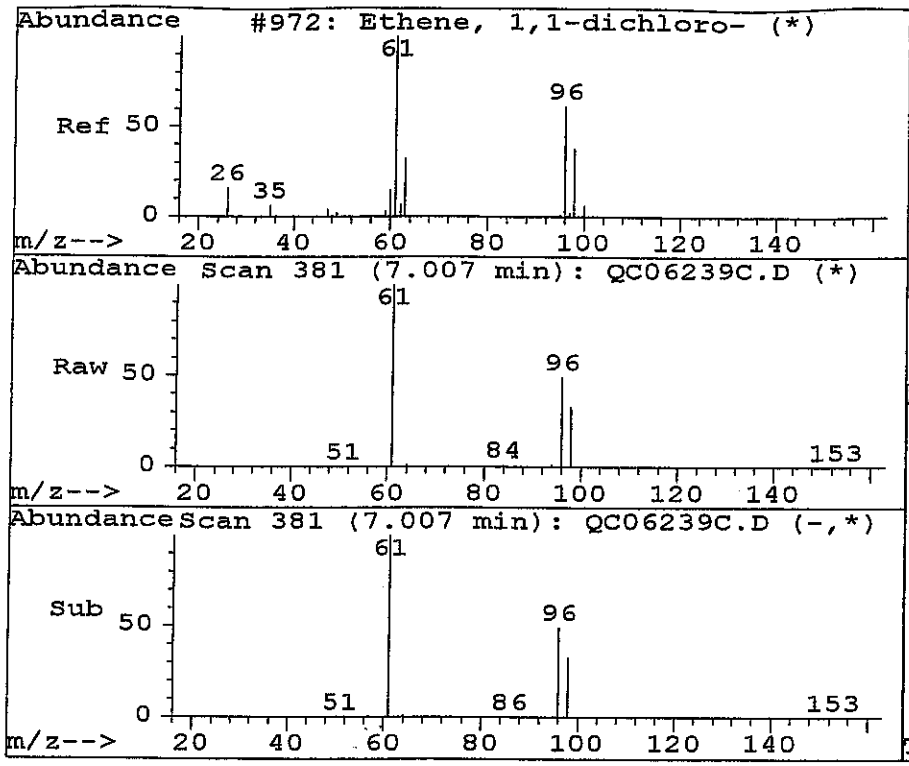


#8
Trichlorofluoromethane
Concen: 1.13 ppbV
RT: 6.03 min Scan# 301
Delta R.T. 0.05 min
Lab File: QC06239C.D
Acq: 23 Jun 109 12:25 pm

Tgt Ion:101 Resp: 1002039

Ion	Ratio	Lower	Upper
101	100		
103	68.9	53.2	79.8
0	0.0	0.0	0.0
0	0.0	0.0	0.0

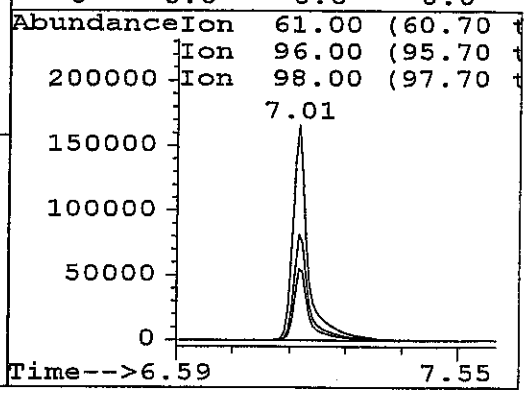


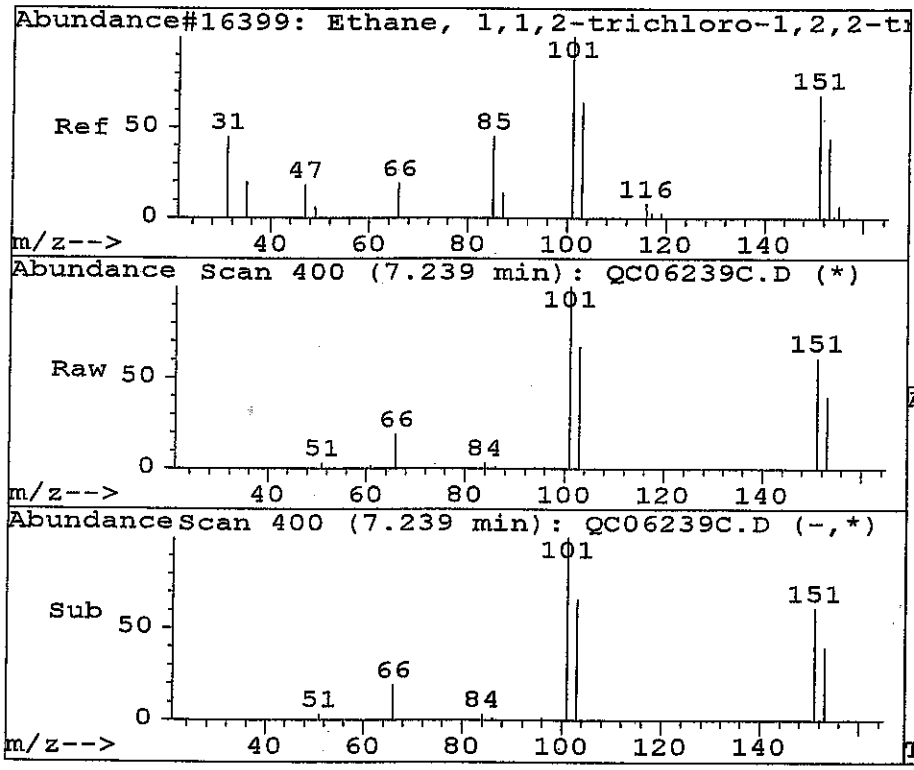


#9
1,1-Dichloroethene
Concen: 1.15 ppbV
RT: 7.01 min Scan# 381
Delta R.T. 0.06 min
Lab File: QC06239C.D
Acq: 23 Jun 109 12:25 pm

Tgt Ion:61 Resp: 609481

Ion	Ratio	Lower	Upper
61	100		
96	49.2	37.4	56.0
98	33.3	23.1	34.7
0	0.0	0.0	0.0

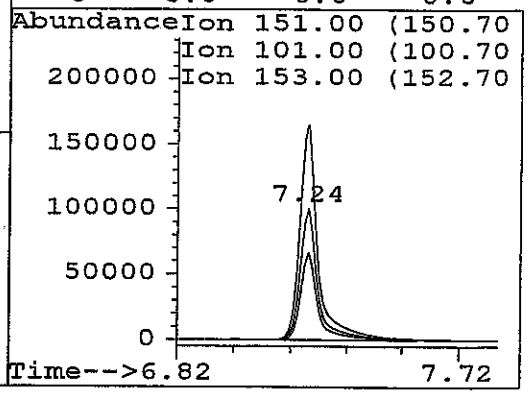


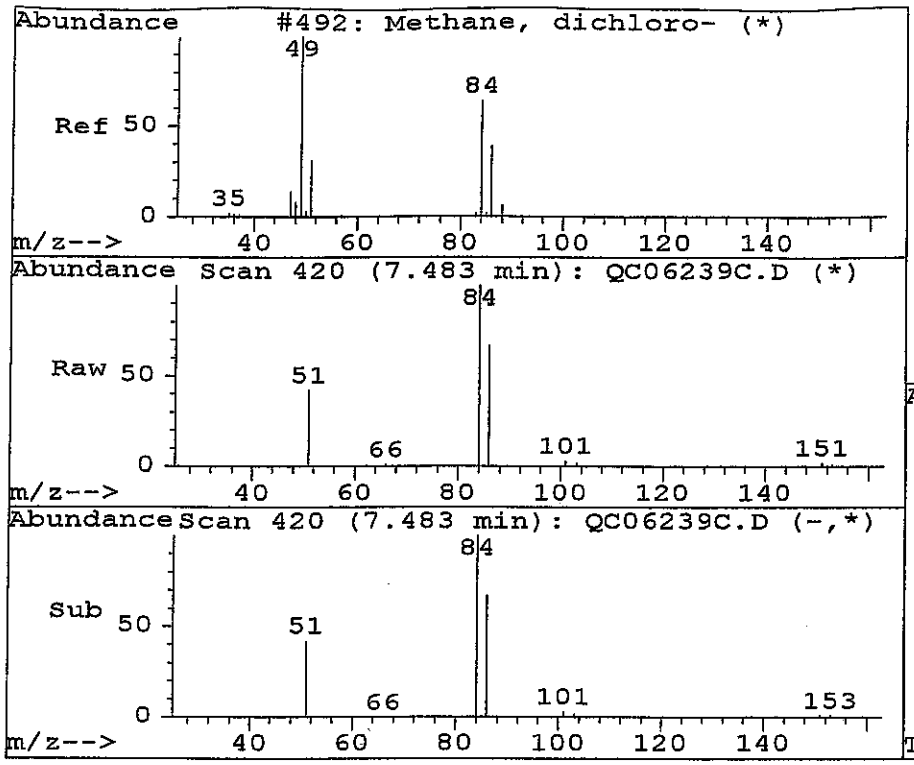


#10
Freon 113
Concen: 1.02 ppbV
RT: 7.24 min Scan# 400
Delta R.T. 0.11 min
Lab File: QC06239C.D
Acq: 23 Jun 109 12:25 pm

Tgt Ion:151 Resp: 404668

Ion	Ratio	Lower	Upper
151	100		
101	164.7	135.8	203.6
153	66.4	50.0	75.0
0	0.0	0.0	0.0

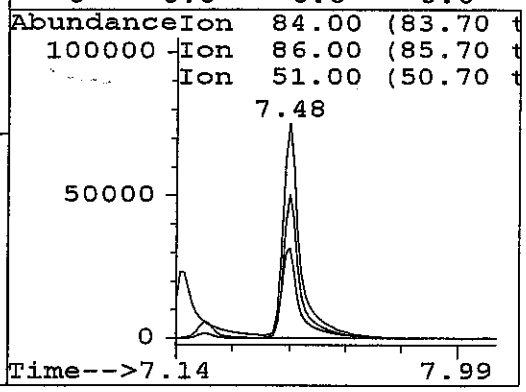


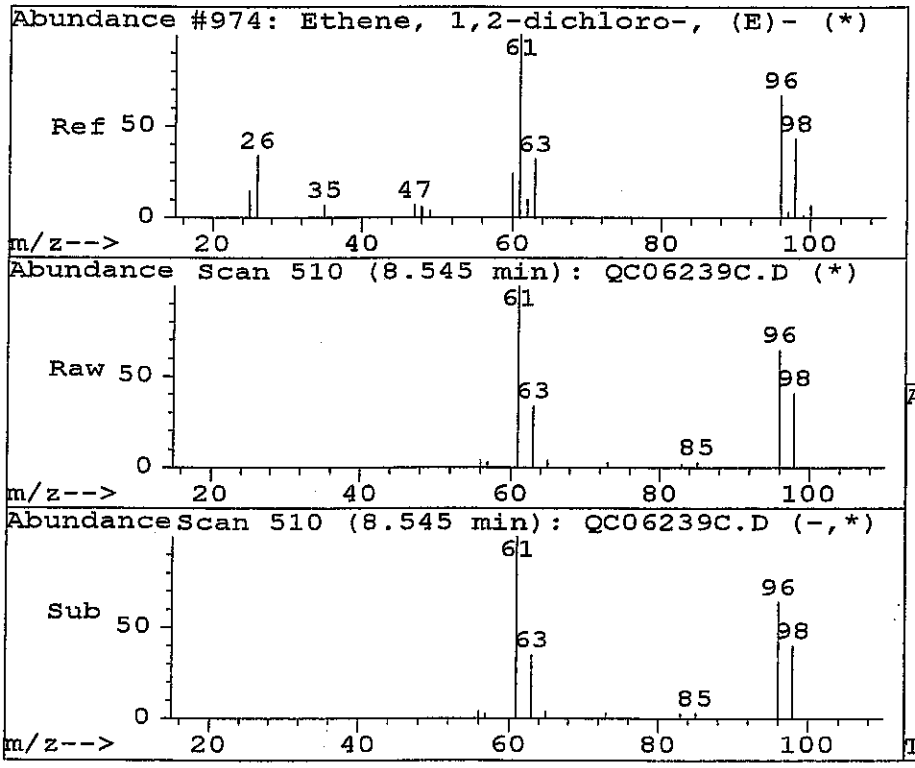


#11
Dichloromethane
Concen: 1.02 ppbV
RT: 7.48 min Scan# 420
Delta R.T. 0.06 min
Lab File: QC06239C.D
Acq: 23 Jun 109 12:25 pm

Tgt Ion:84 Resp: 274302

Ion	Ratio	Lower	Upper
84	100		
86	66.9	51.3	76.9
51	41.2	27.4	41.0#
0	0.0	0.0	0.0

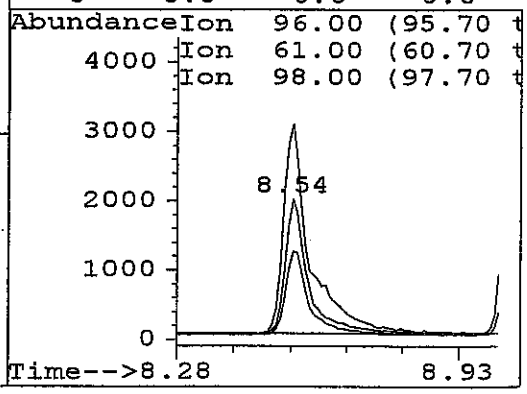


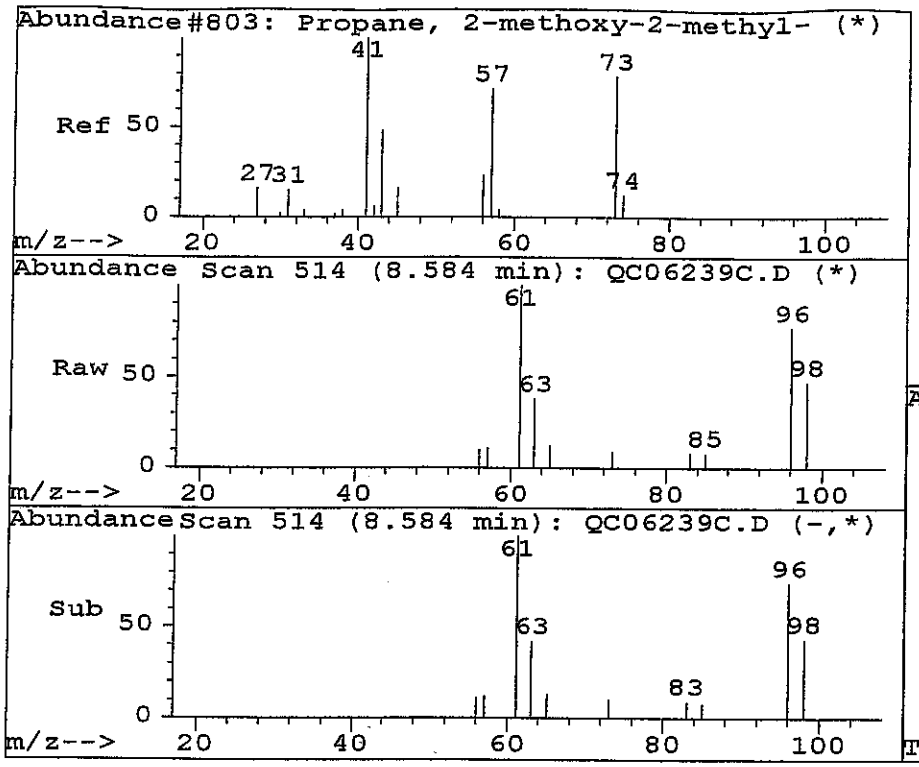


#12
trans-1,2-Dichloroethene
Concen: 0.02 ppbV
RT: 8.54 min Scan# 510
Delta R.T. 0.06 min
Lab File: QC06239C.D
Acq: 23 Jun 109 12:25 pm

Tgt Ion:96 Resp: 7305

Ion	Ratio	Lower	Upper
96	100		
61	156.4	111.4	167.2
98	61.8	51.7	77.5
0	0.0	0.0	0.0

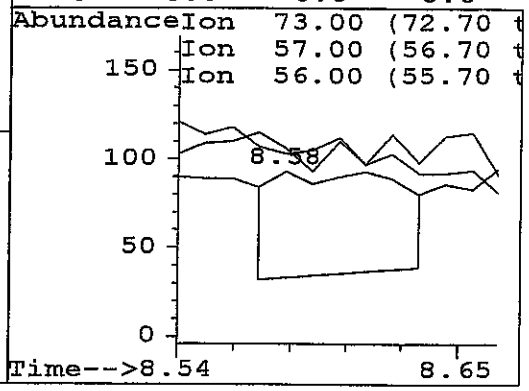


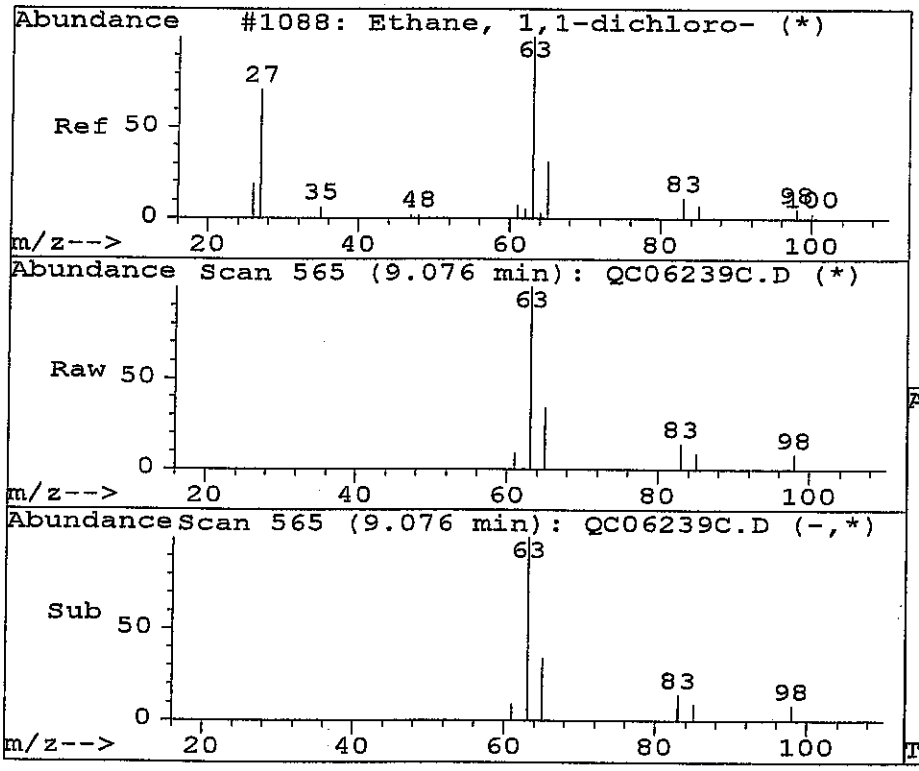


#13
Methyl tert butyl ether
Concen: 0.00 ppbV
RT: 8.58 min Scan# 514
Delta R.T. -0.02 min
Lab File: QC06239C.D
Acq: 23 Jun 109 12:25 pm

Tgt Ion:73 Resp: 184

Ion	Ratio	Lower	Upper
73	100		
57	22.7	16.0	24.0
56	4.5	2.6	3.8#
0	0.0	0.0	0.0

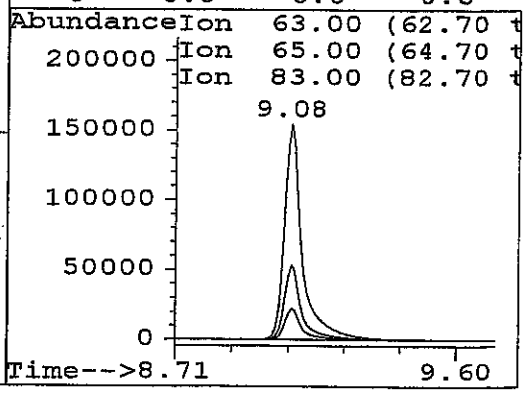


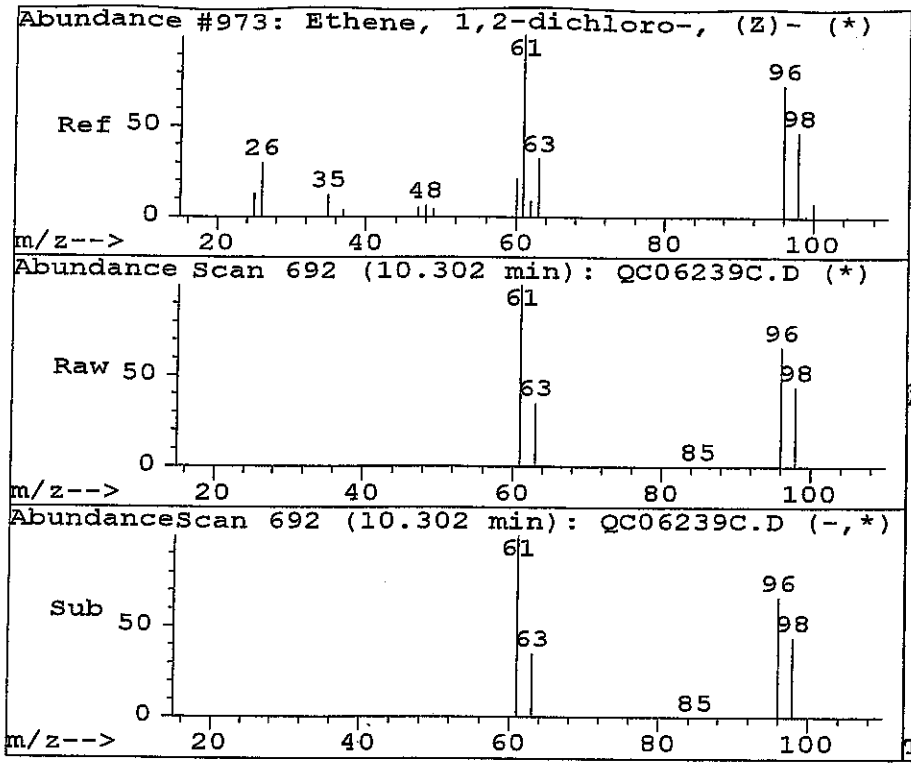


#14
1,1-Dichloroethane
Concen: 1.05 ppbV
RT: 9.08 min Scan# 565
Delta R.T. 0.08 min
Lab File: QC06239C.D
Acq: 23 Jun 109 12:25 pm

Tgt Ion:63 Resp: 615275

Ion	Ratio	Lower	Upper
63	100		
65	34.4	24.9	37.3
83	14.3	10.3	15.5
0	0.0	0.0	0.0

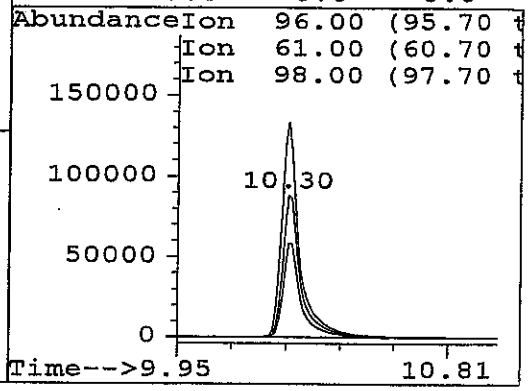


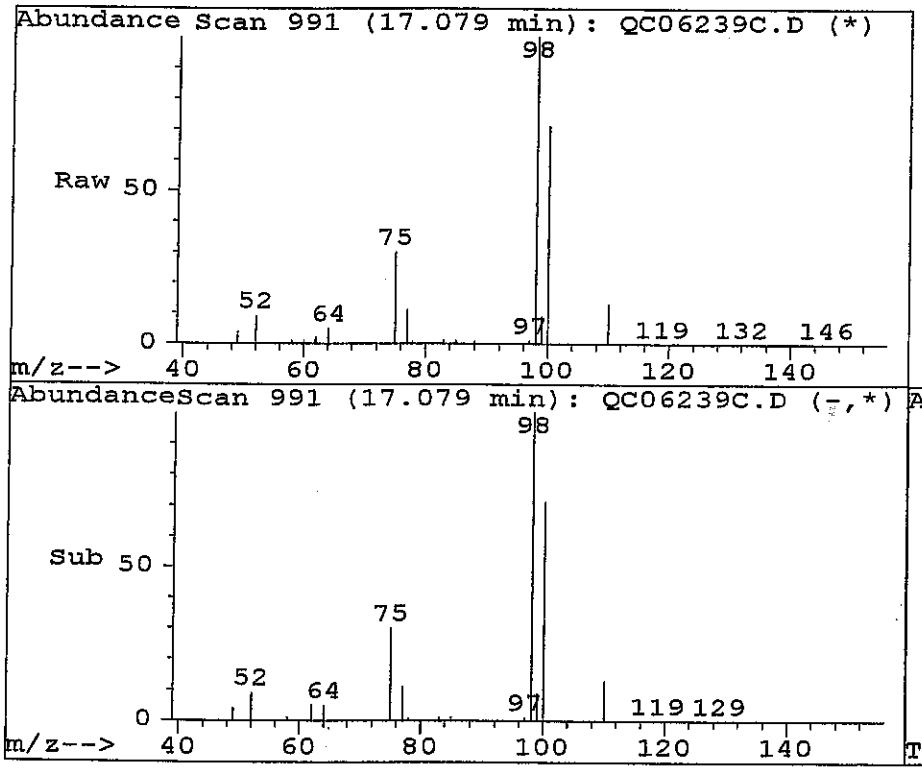


#15
cis-1,2-Dichloroethene
Concen: 0.93 ppbV
RT: 10.30 min Scan# 692
Delta R.T. 0.06 min
Lab File: QC06239C.D
Acq: 23 Jun 109 12:25 pm

Tgt Ion:96 Resp: 346096

Ion	Ratio	Lower	Upper
96	100		
61	151.4	102.0	153.0
98	65.9	52.2	78.2
0	0.0	0.0	0.0

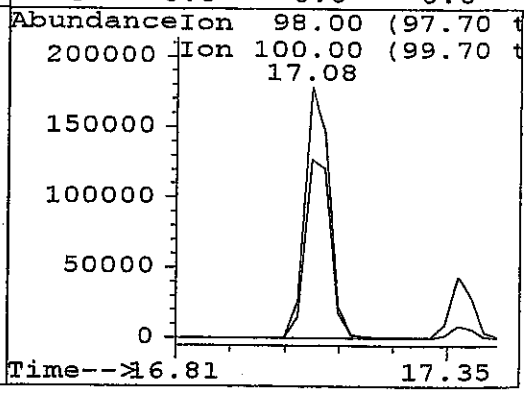


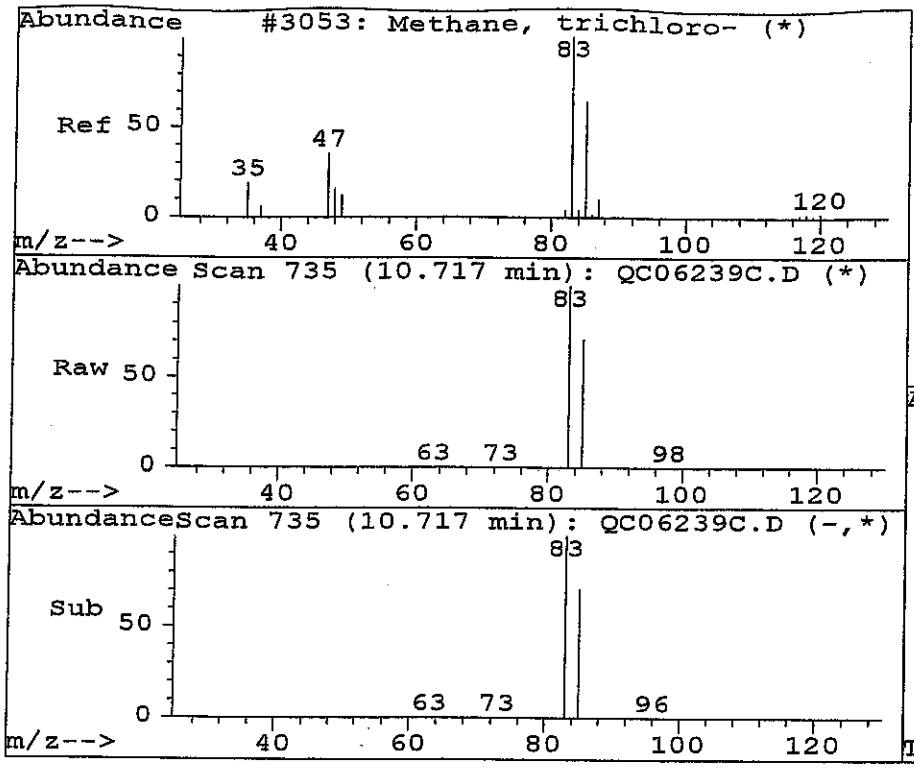


#16
Toluene-d8
Concen: 0.22 ppbV
RT: 17.08 min Scan# 991
Delta R.T. 0.03 min
Lab File: QC06239C.D
Acq: 23 Jun 109 12:25 pm

Tgt Ion:98 Resp: 606619

Ion	Ratio	Lower	Upper
98	100		
100	75.2	59.5	89.3
0	0.0	0.0	0.0
0	0.0	0.0	0.0

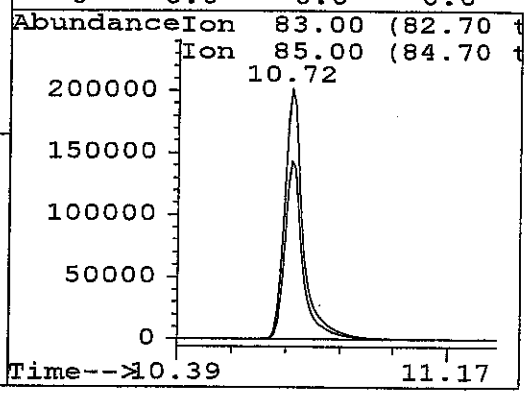


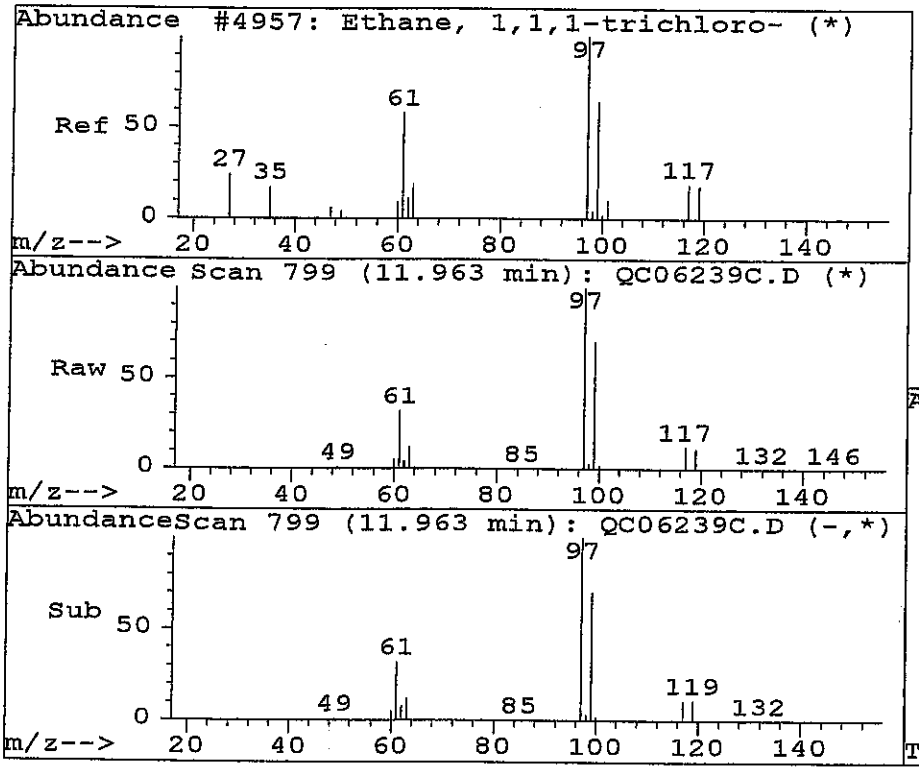


#17
Chloroform
Concen: 1.13 ppbV
RT: 10.72 min Scan# 735
Delta R.T. 0.06 min
Lab File: QC06239C.D
Acq: 23 Jun 109 12:25 pm

Tgt Ion:83 Resp: 876225

Ion	Ratio	Lower	Upper
83	100		
85	71.2	52.2	78.4
0	0.0	0.0	0.0
0	0.0	0.0	0.0

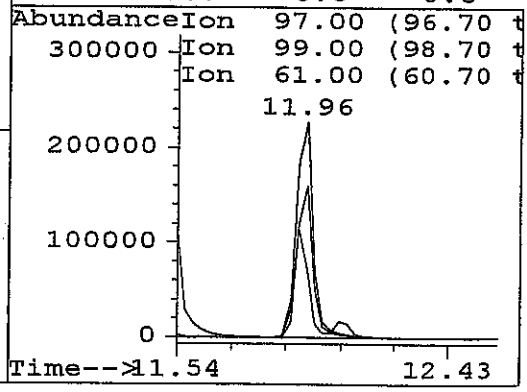


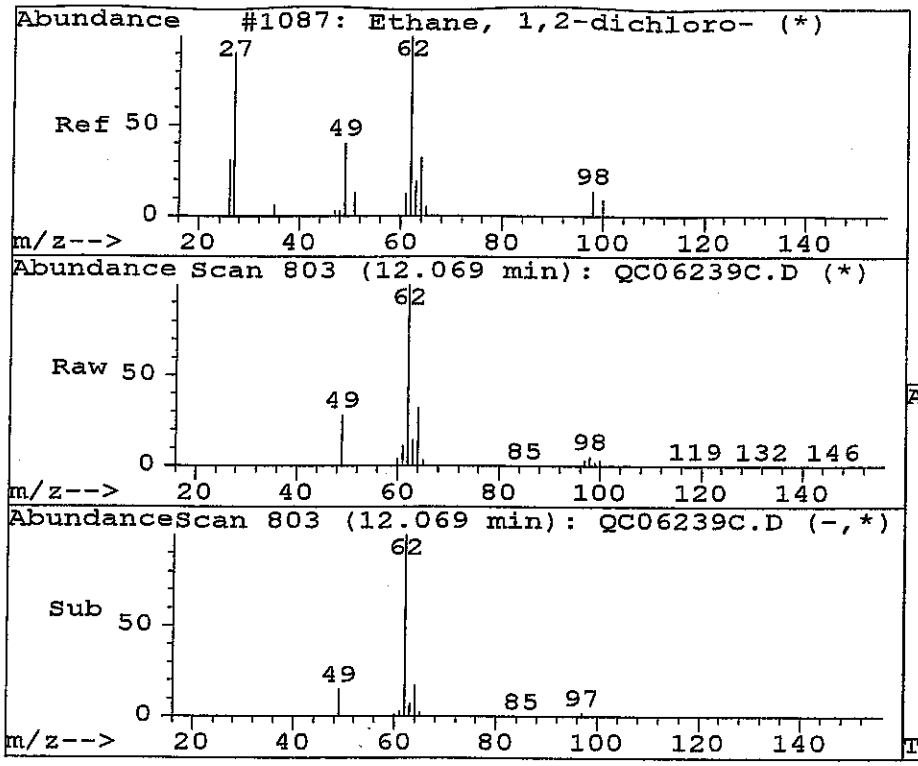


#18
1,1,1-Trichloroethane
Concen: 1.02 ppbV
RT: 11.96 min Scan# 799
Delta R.T. 0.05 min
Lab File: QC06239C.D
Acq: 23 Jun 109 12:25 pm

Tgt Ion:97 Resp: 872209

Ion	Ratio	Lower	Upper
97	100		
99	70.4	53.2	79.8
61	31.5	24.2	36.4
0	0.0	0.0	0.0

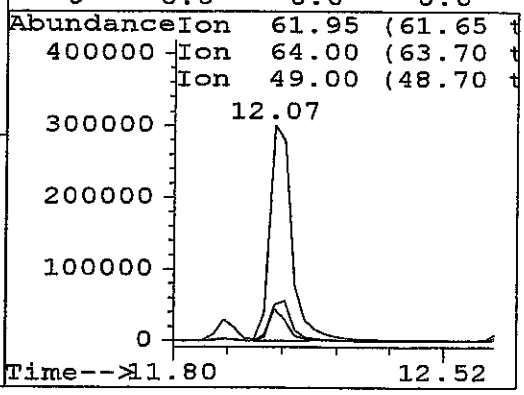


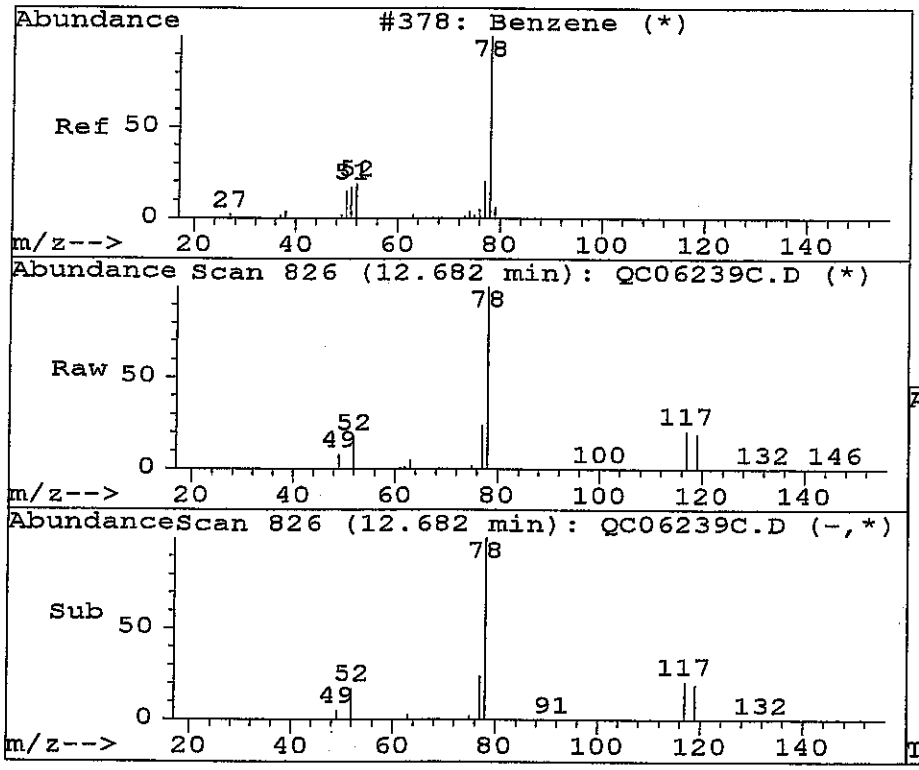


#19
1,2-Dichloroethane
Concen: 0.77 ppbV
RT: 12.07 min Scan# 803
Delta R.T. 0.05 min
Lab File: QC06239C.D
Acq: 23 Jun 109 12:25 pm

Tgt Ion:61.95 Resp: 1212929

Ion	Ratio	Lower	Upper
62	100		
64	16.8	13.8	20.6
49	14.7	8.9	13.3#
0	0.0	0.0	0.0

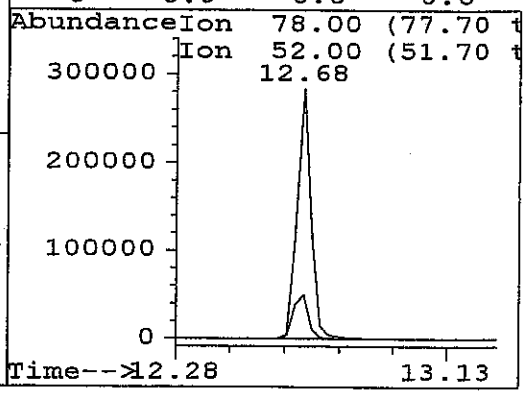


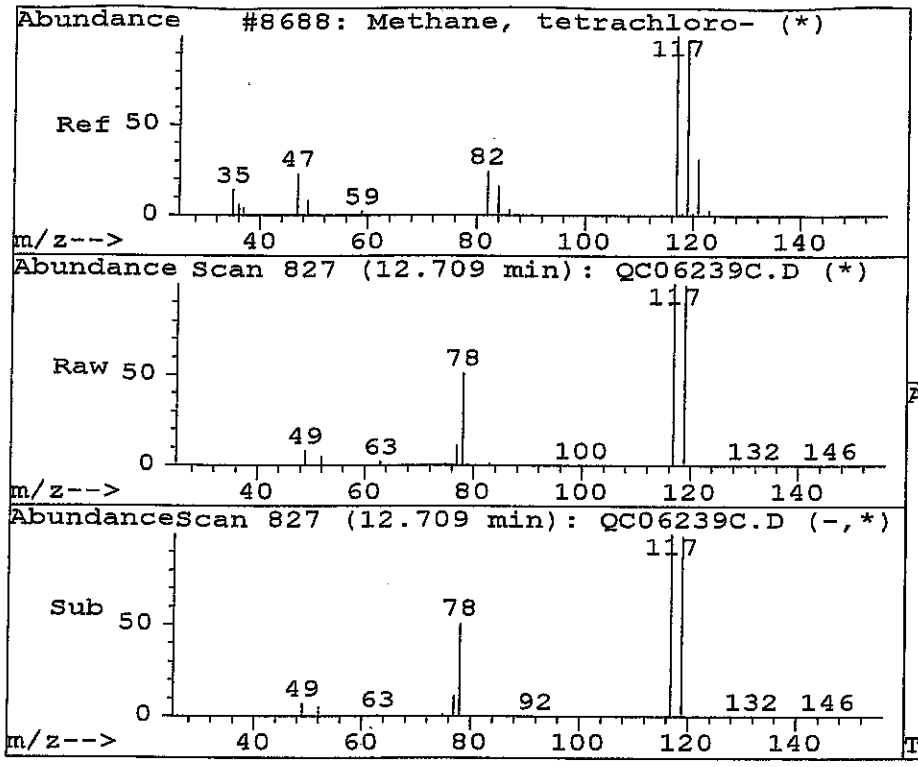


#20
Benzene
Concen: 0.72 ppbV
RT: 12.68 min Scan# 826
Delta R.T. 0.05 min
Lab File: QC06239C.D
Acq: 23 Jun 109 12:25 pm

Tgt Ion:78 Resp: 871974

Ion	Ratio	Lower	Upper
78	100		
52	17.5	15.6	23.4
0	0.0	0.0	0.0
0	0.0	0.0	0.0

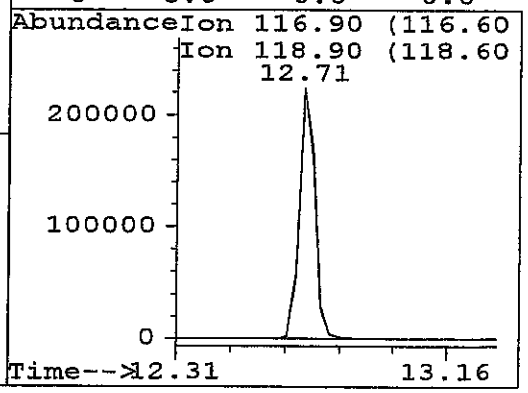


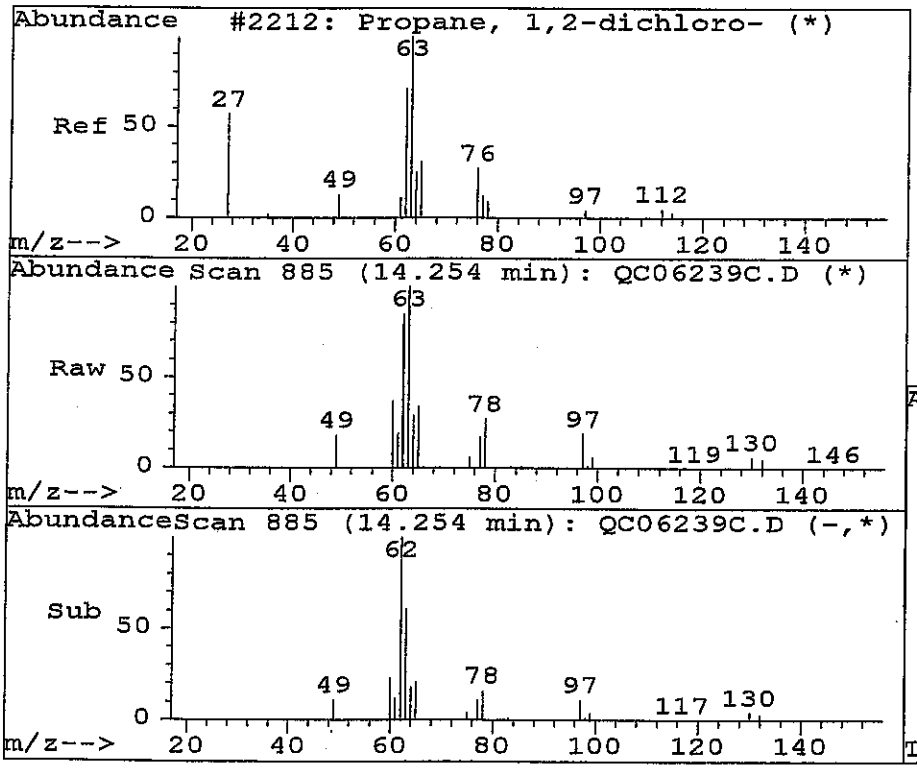


#21
Carbon tetrachloride
Concen: 1.04 ppbV
RT: 12.71 min Scan# 827
Delta R.T. 0.05 min
Lab File: QC06239C.D
Acq: 23 Jun 109 12:25 pm

Tgt Ion:116.9 Resp: 766402

Ion	Ratio	Lower	Upper
117	100		
119	98.7	79.4	119.2
0	0.0	0.0	0.0
0	0.0	0.0	0.0

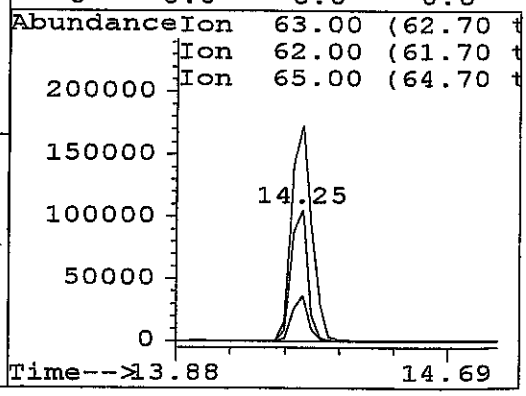


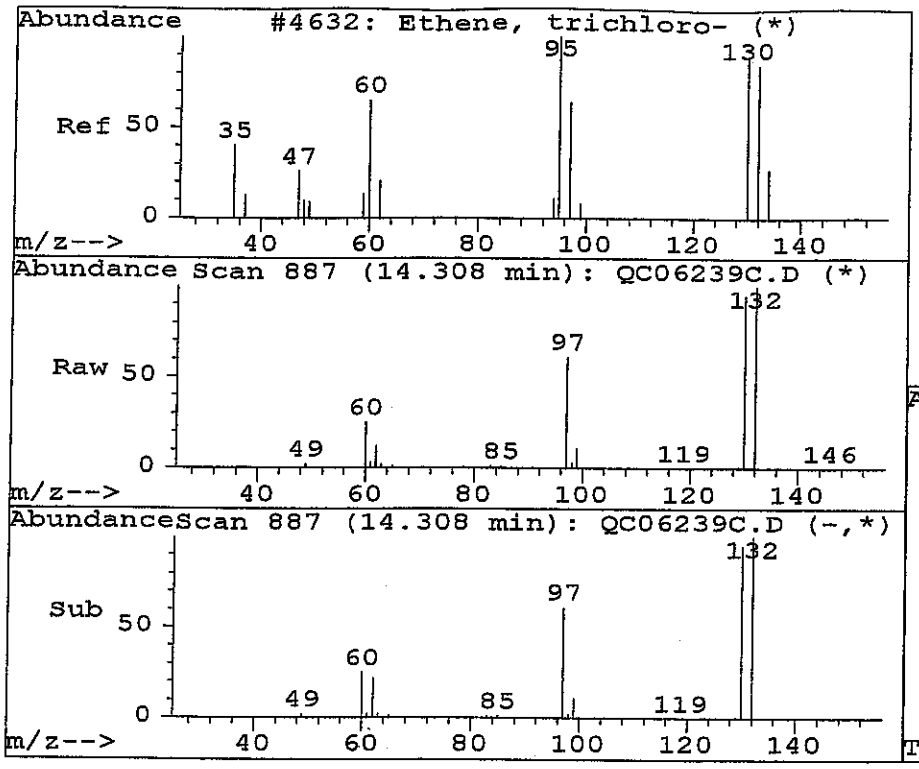


#22
1,2-Dichloropropane
Concen: 0.89 ppbV
RT: 14.25 min Scan# 885
Delta R.T. 0.05 min
Lab File: QC06239C.D
Acq: 23 Jun 109 12:25 pm

Tgt Ion:63 Resp: 360256

Ion	Ratio	Lower	Upper
63	100		
62	164.5	125.8	188.6
65	34.3	22.2	33.2#
0	0.0	0.0	0.0

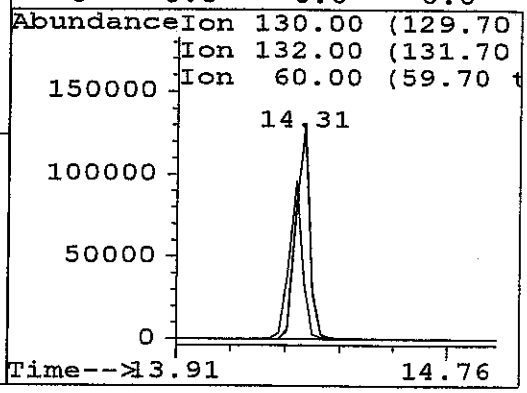


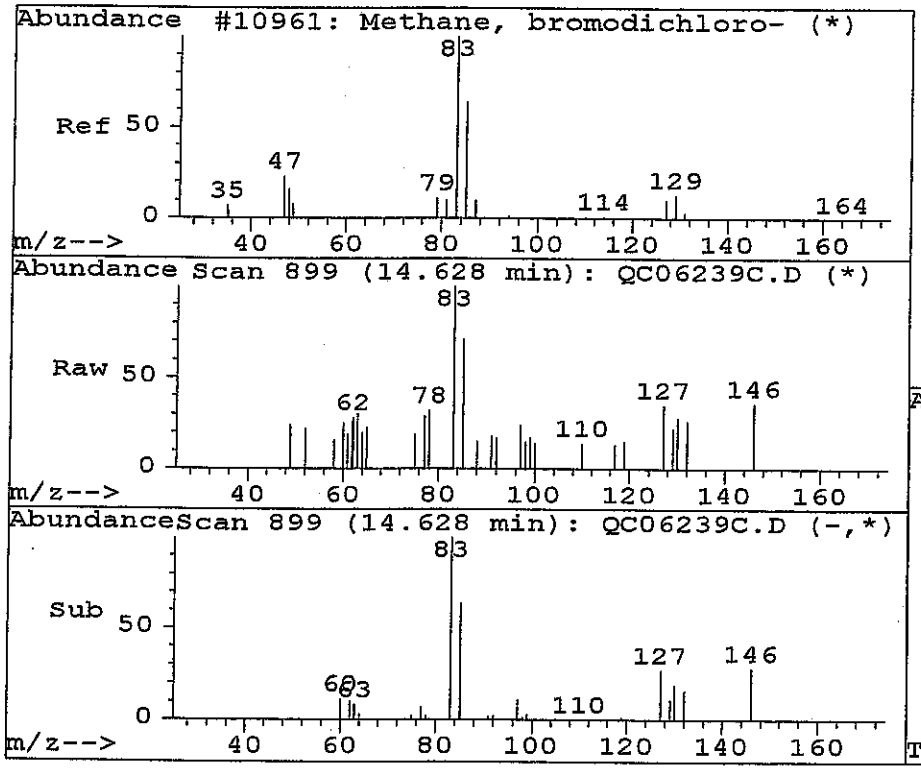


#23
Trichloroethene
Concen: 0.82 ppbV
RT: 14.31 min Scan# 887
Delta R.T. 0.05 min
Lab File: QC06239C.D
Acq: 23 Jun 109 12:25 pm

Tgt Ion:130 Resp: 394431

Ion	Ratio	Lower	Upper
130	100		
132	104.8	74.6	112.0
60	26.0	41.6	62.4#
0	0.0	0.0	0.0

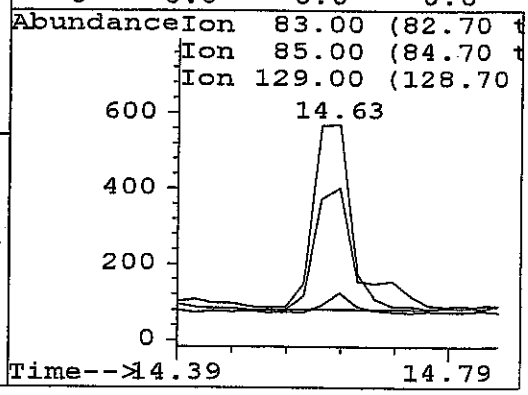


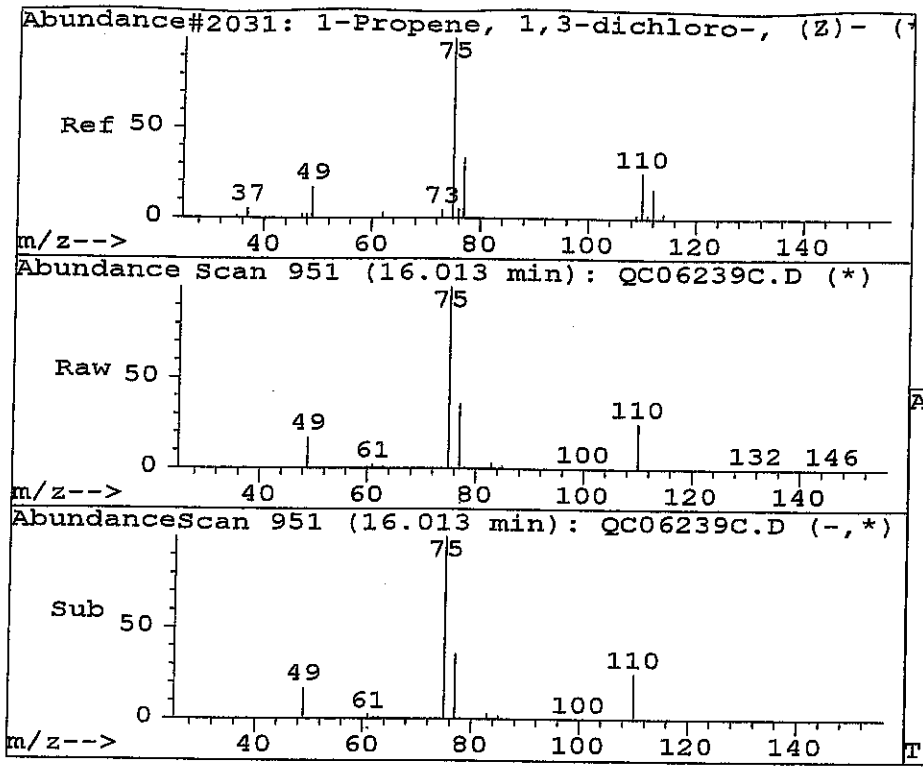


#24
Bromodichloromethane
Concen: 0.00 ppbV
RT: 14.63 min Scan# 899
Delta R.T. 0.06 min
Lab File: QC06239C.D
Acq: 23 Jun 109 12:25 pm

Tgt Ion:83 Resp: 1885

Ion	Ratio	Lower	Upper
83	100		
85	65.4	52.0	78.0
129	10.1	5.7	8.5#
0	0.0	0.0	0.0

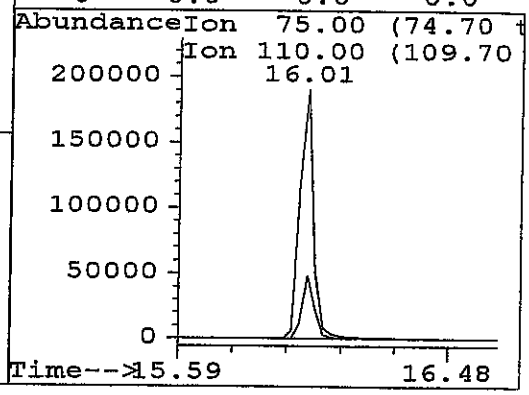


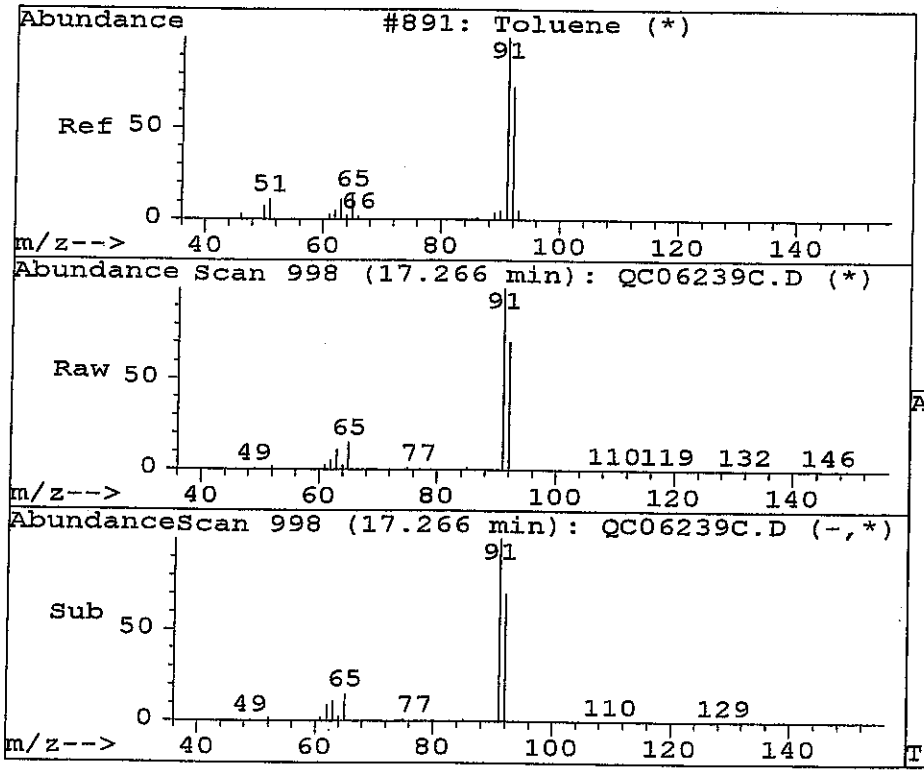


#25
cis-1,3-Dichloropropene
Concen: 1.60 ppbV
RT: 16.01 min Scan# 951
Delta R.T. 0.05 min
Lab File: QC06239C.D
Acq: 23 Jun 109 12:25 pm

Tgt Ion:75 Resp: 615973

Ion	Ratio	Lower	Upper
75	100		
110	25.3	16.2	24.2#
0	0.0	0.0	0.0
0	0.0	0.0	0.0

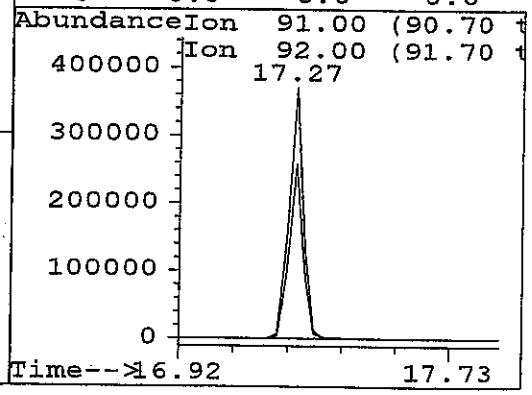


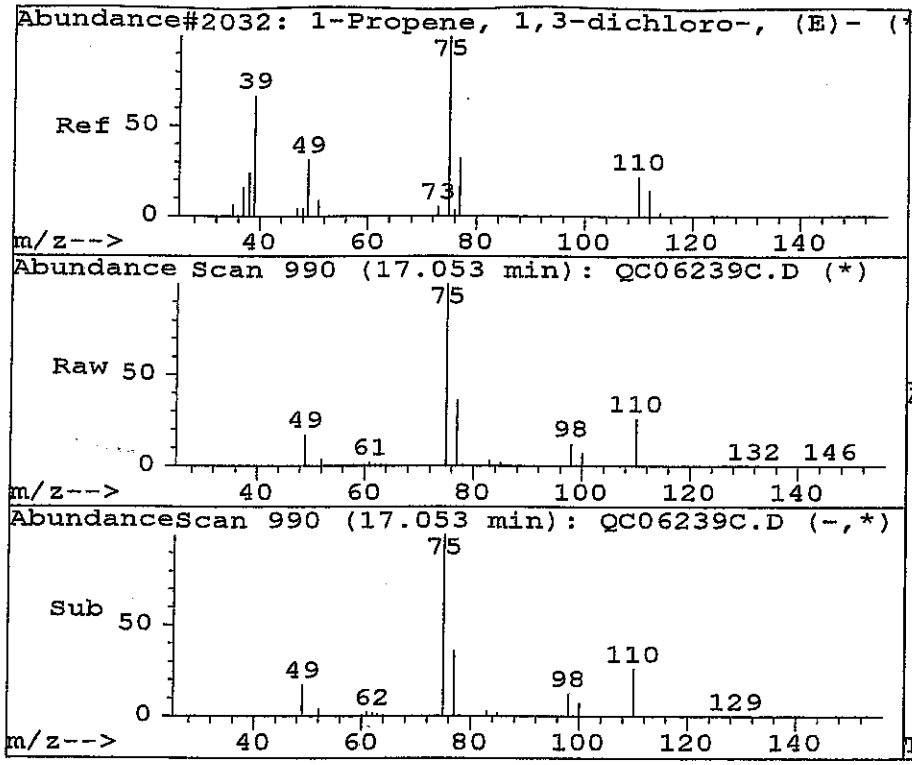


#26
Toluene
Concen: 0.64 ppbV
RT: 17.27 min Scan# 998
Delta R.T. 0.06 min
Lab File: QC06239C.D
Acq: 23 Jun 109 12:25 pm

Tgt Ion:91 Resp: 1085051

Ion	Ratio	Lower	Upper
91	100		
92	69.7	53.2	79.8
0	0.0	0.0	0.0
0	0.0	0.0	0.0

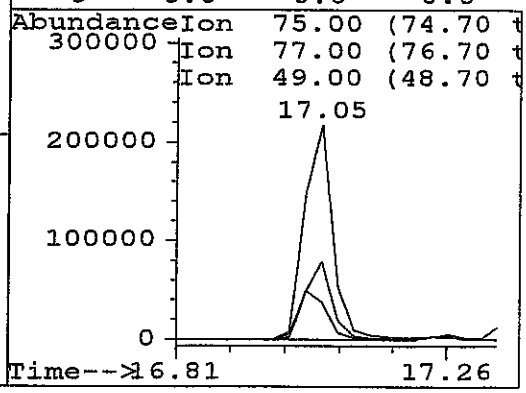


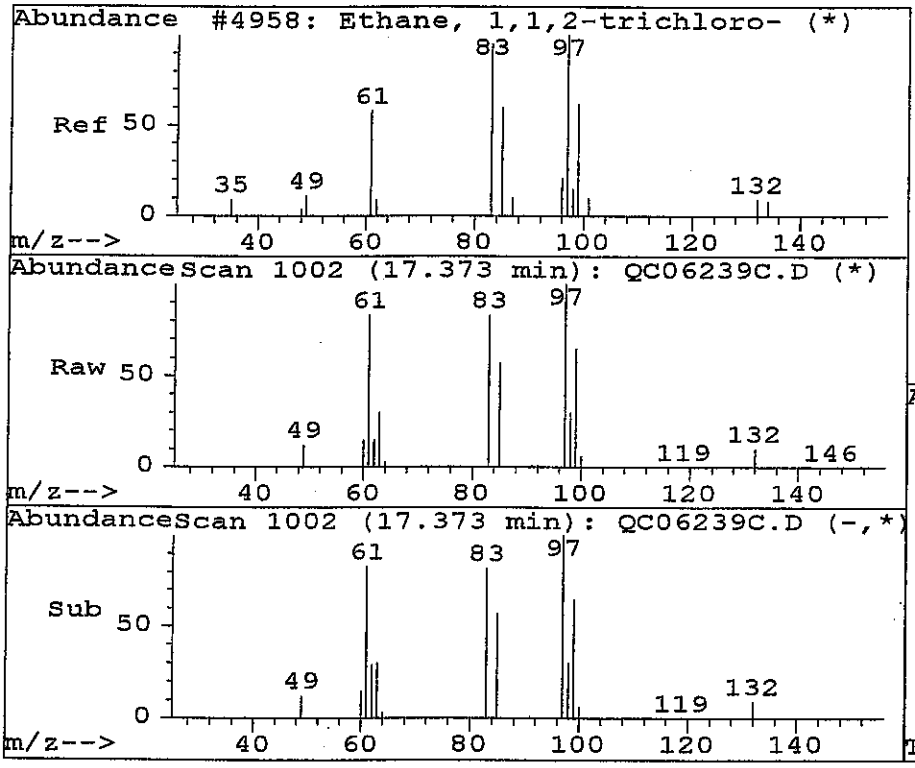


#27
trans-1,3-Dichloropropene
Concen: 1.75 ppbV
RT: 17.05 min Scan# 990
Delta R.T. 0.05 min
Lab File: QC06239C.D
Acq: 23 Jun 109 12:25 pm

Tgt Ion:75 Resp: 715793

Ion	Ratio	Lower	Upper
75	100		
77	36.1	30.1	45.1
49	17.4	44.2	66.2#
0	0.0	0.0	0.0

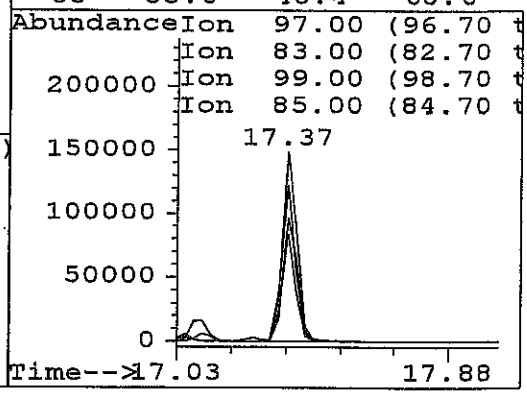


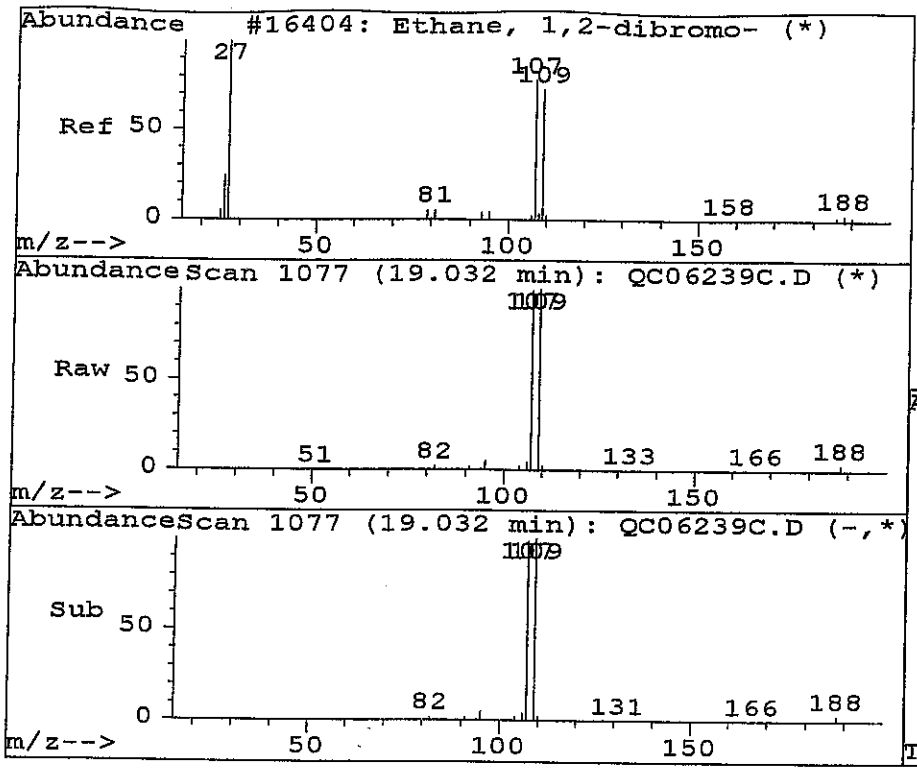


#28
1,1,2-Trichloroethane
Concen: 0.64 ppbV
RT: 17.37 min Scan# 1002
Delta R.T. 0.02 min
Lab File: QC06239C.D
Acq: 23 Jun 109 12:25 pm

Tgt Ion:97 Resp: 462814

Ion	Ratio	Lower	Upper
97	100		
83	82.5	62.7	94.1
99	64.9	48.7	73.1
85	55.6	40.4	60.6

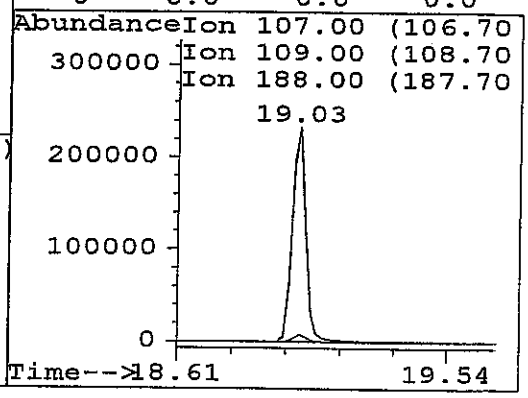


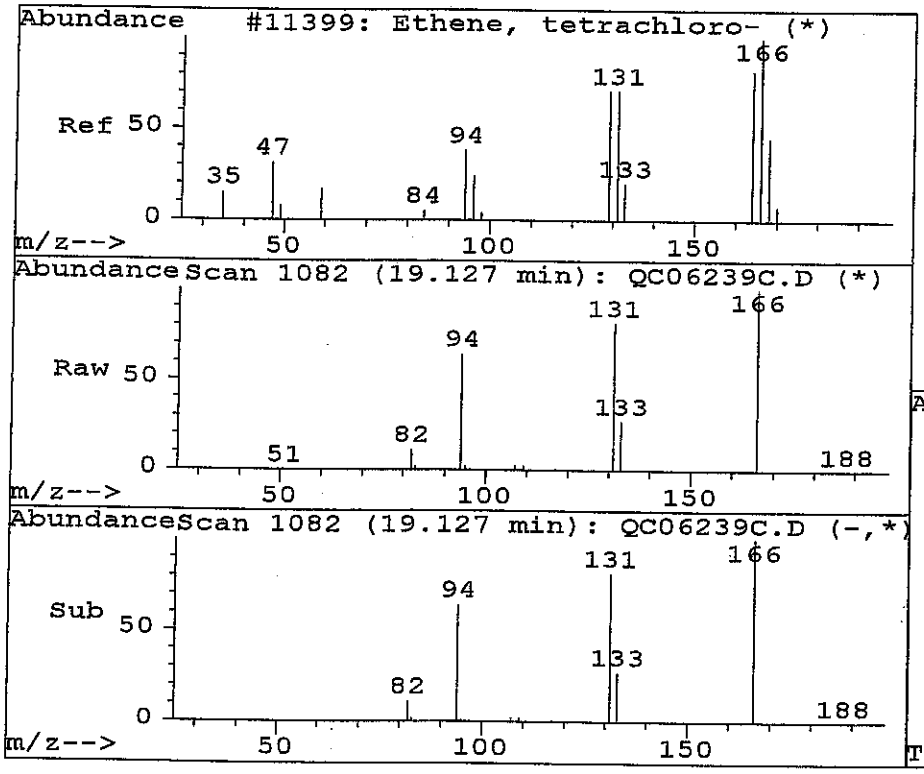


#29
1,2-Dibromoethane
Concen: 0.58 ppbV
RT: 19.03 min Scan# 1077
Delta R.T. 0.04 min
Lab File: QC06239C.D
Acq: 23 Jun 109 12:25 pm

Tgt Ion:107 Resp: 768586

Ion	Ratio	Lower	Upper
107	100		
109	100.9	75.9	113.9
188	3.3	1.7	2.5#
0	0.0	0.0	0.0

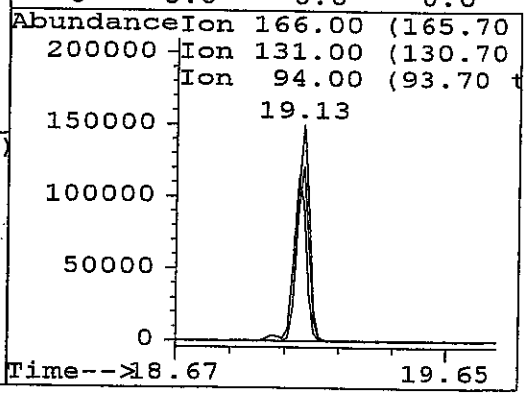


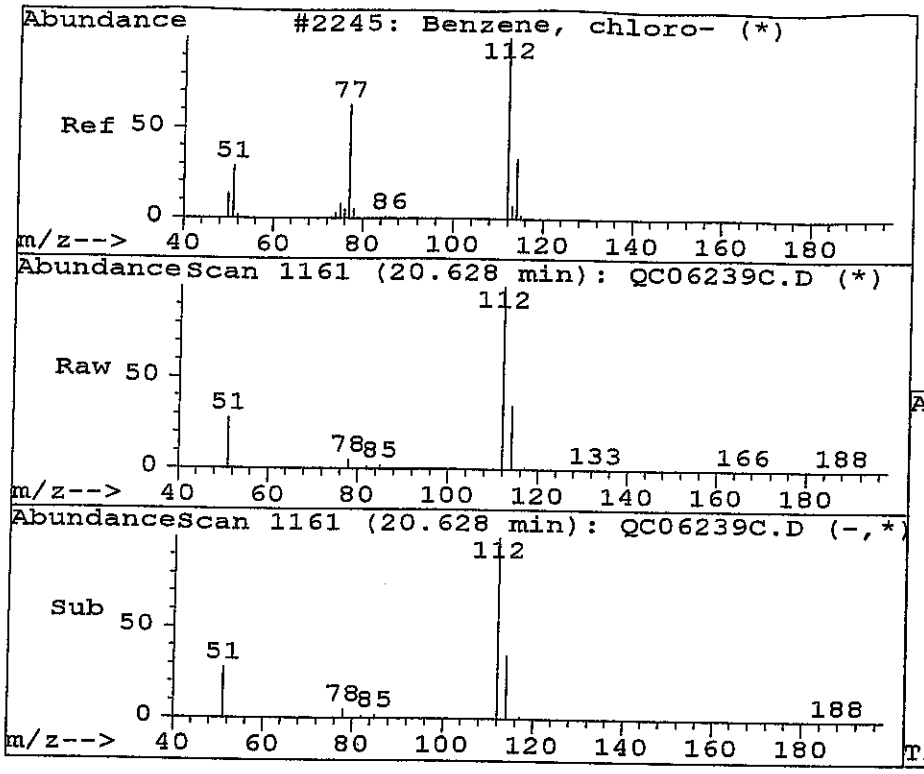


#30
Tetrachloroethene
Concen: 0.74 ppbV
RT: 19.13 min Scan# 1082
Delta R.T. 0.04 min
Lab File: QC06239C.D
Acq: 23 Jun 109 12:25 pm

Tgt Ion:166 Resp: 445394

Ion	Ratio	Lower	Upper
166	100		
131	80.8	64.4	96.6
94	63.8	53.6	80.4
0	0.0	0.0	0.0

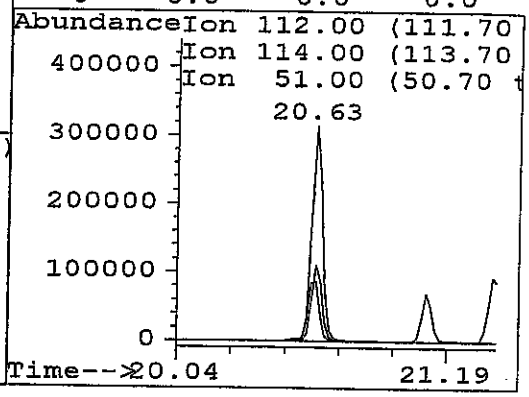


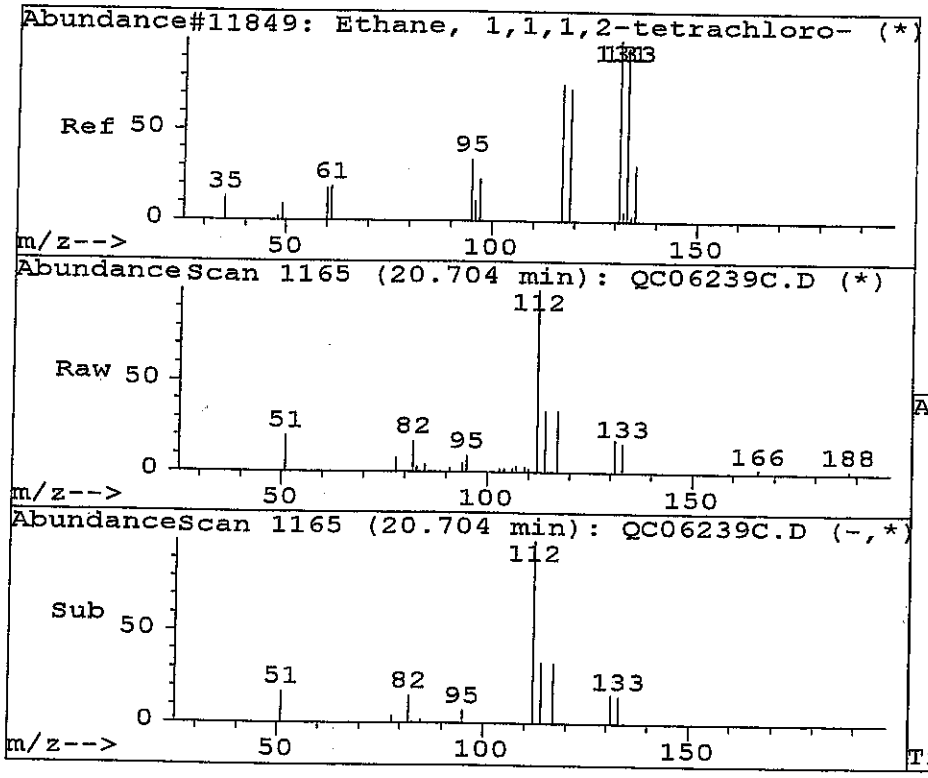


#31
Chlorobenzene
Concen: 0.58 ppbV
RT: 20.63 min Scan# 1161
Delta R.T. 0.04 min
Lab File: QC06239C.D
Acq: 23 Jun 109 12:25 pm

Tgt Ion:112 Resp: 983679

Ion	Ratio	Lower	Upper
112	100		
114	35.2	26.6	39.8
51	26.7	12.4	18.6#
0	0.0	0.0	0.0

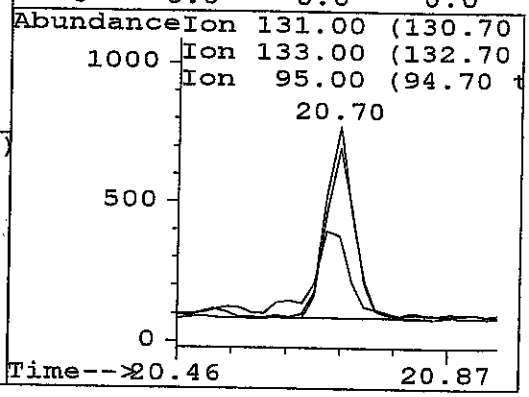


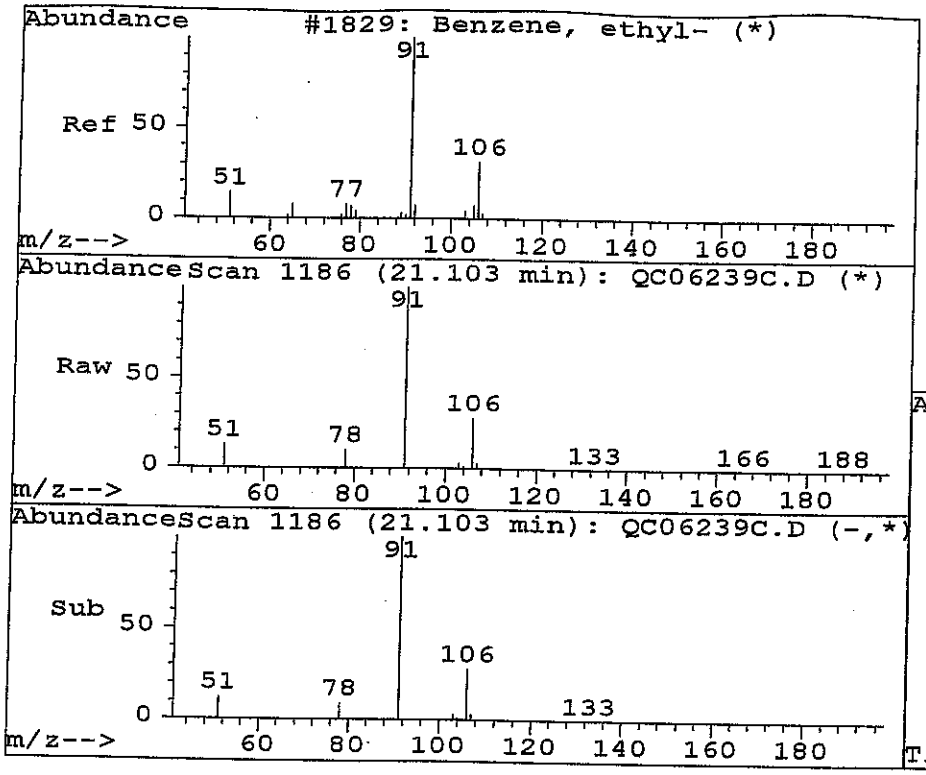


#32
1,1,1,2-Tetrachloroethane
Concen: 0.00 ppbV
RT: 20.70 min Scan# 1165
Delta R.T. 0.03 min
Lab File: QC06239C.D
Acq: 23 Jun 109 12:25 pm

Tgt Ion:131 Resp: 2093

Ion	Ratio	Lower	Upper
131	100		
133	89.6	76.6	114.8
95	41.0	38.7	58.1
0	0.0	0.0	0.0

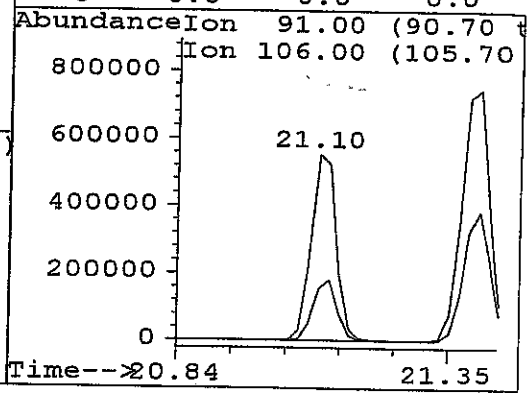


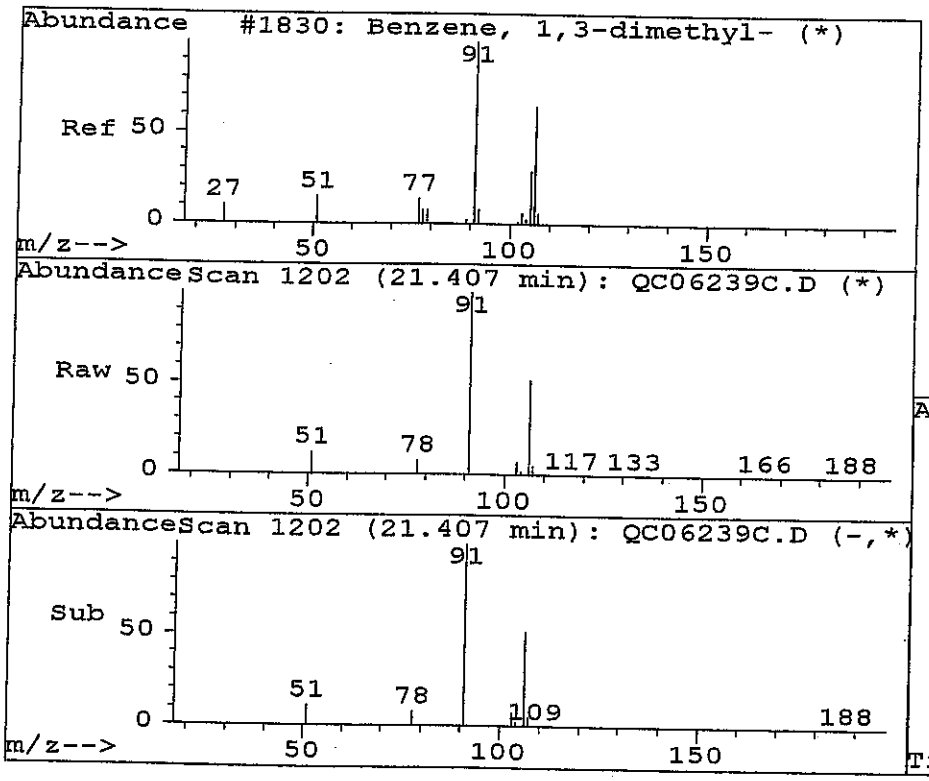


#33
Ethylbenzene
Concen: 0.58 ppbV
RT: 21.10 min Scan# 1186
Delta R.T. 0.02 min
Lab File: QC06239C.D
Acq: 23 Jun 109 12:25 pm

Tgt Ion:91 Resp: 1802626

Ion	Ratio	Lower	Upper
91	100		
106	27.9	24.2	36.4
0	0.0	0.0	0.0
0	0.0	0.0	0.0

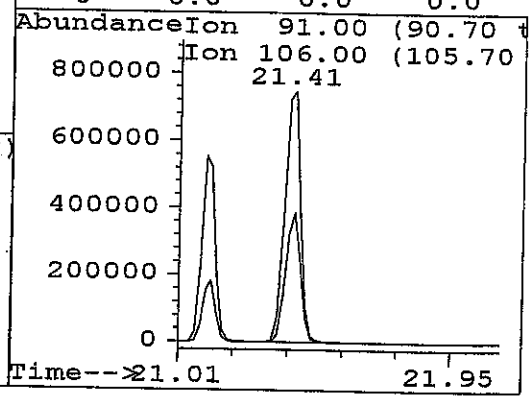


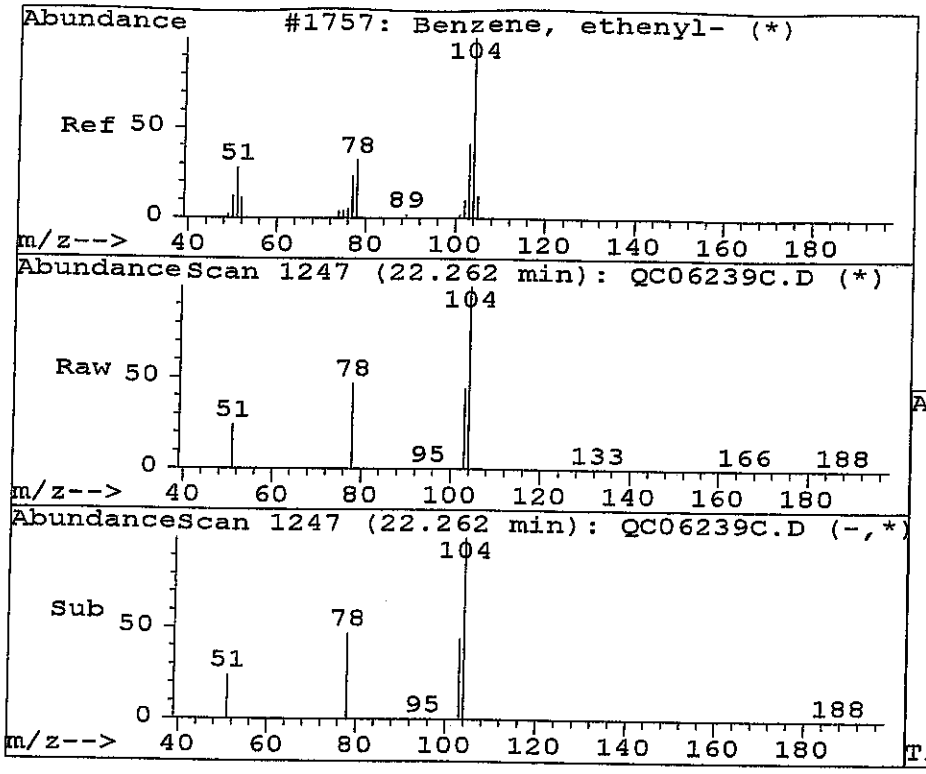


#34
m & p-Xylene
Concen: 1.18 ppbV
RT: 21.41 min Scan# 1202
Delta R.T. 0.04 min
Lab File: QC06239C.D
Acq: 23 Jun 109 12:25 pm

Tgt Ion:91 Resp: 2797614

Ion	Ratio	Lower	Upper
91	100		
106	51.7	41.7	62.5
0	0.0	0.0	0.0
0	0.0	0.0	0.0

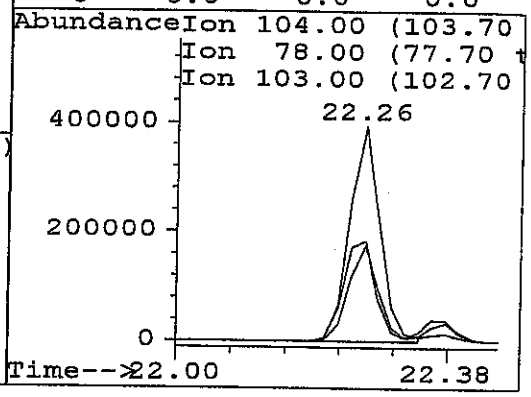


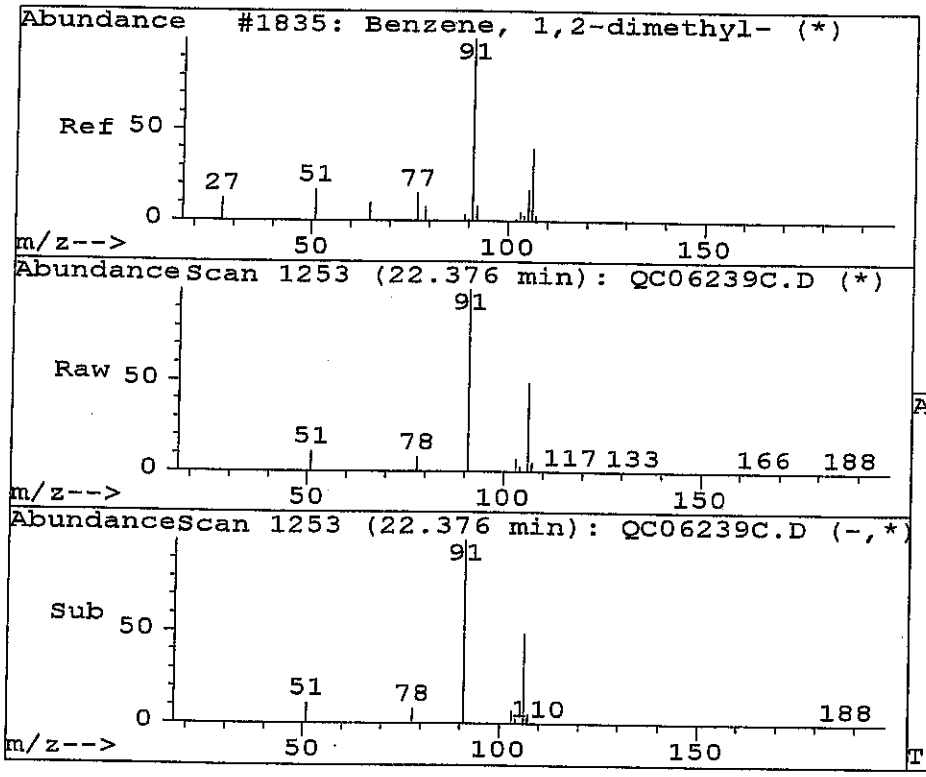


#35
Styrene
Concen: 0.41 ppbV
RT: 22.26 min Scan# 1247
Delta R.T. 0.04 min
Lab File: QC06239C.D
Acq: 23 Jun 109 12:25 pm

Tgt Ion:104 Resp: 1187838

Ion	Ratio	Lower	Upper
104	100		
78	45.0	28.2	42.2#
103	43.6	33.8	50.6
0	0.0	0.0	0.0

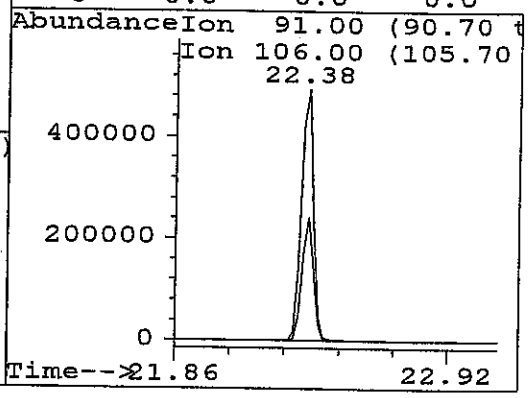


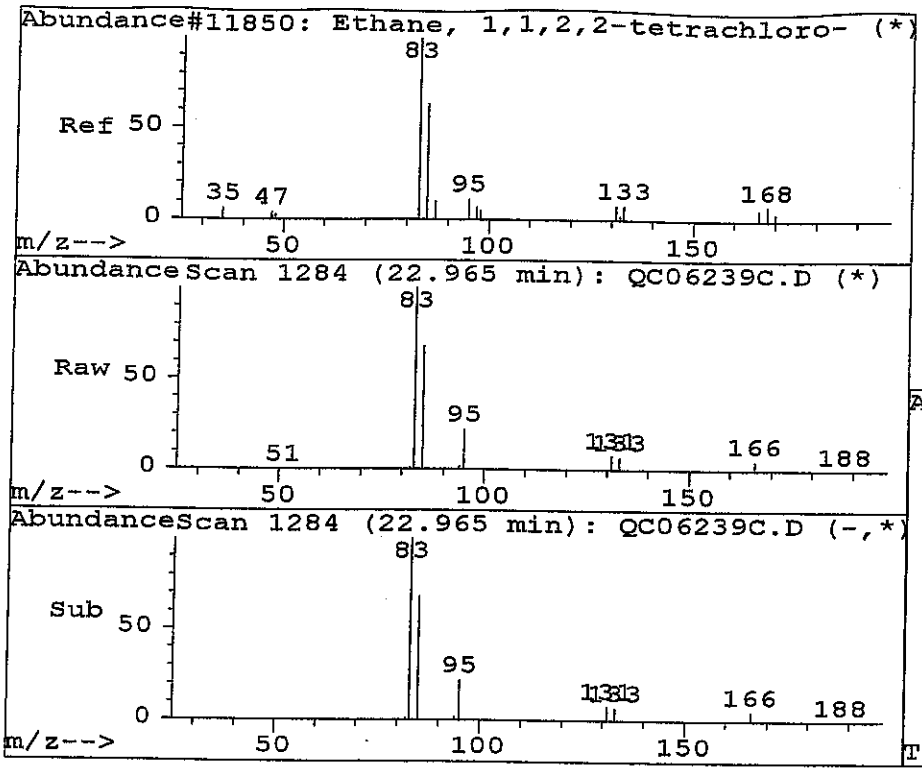


#36
o-Xylene
Concen: 0.52 ppbV
RT: 22.38 min Scan# 1253
Delta R.T. 0.04 min
Lab File: QC06239C.D
Acq: 23 Jun 109 12:25 pm

Tgt Ion:91 Resp: 1574090

Ion	Ratio	Lower	Upper
91	100		
106	49.1	37.5	56.3
0	0.0	0.0	0.0
0	0.0	0.0	0.0

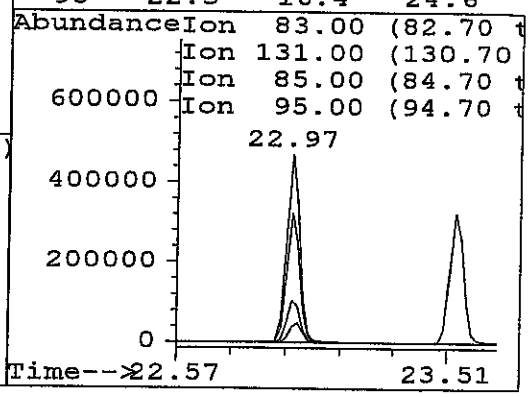


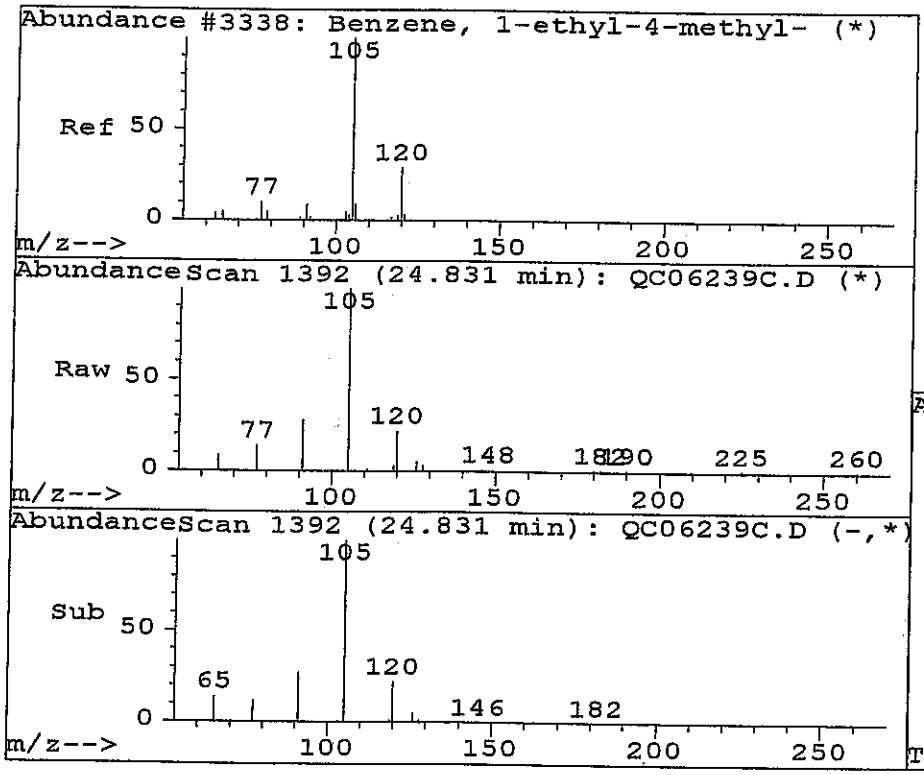


#37
1,1,2,2-Tetrachloroethane
Concen: 0.42 ppbV
RT: 22.97 min Scan# 1284
Delta R.T. 0.04 min
Lab File: QC06239C.D
Acq: 23 Jun 109 12:25 pm

Tgt Ion:83 Resp: 1481475

Ion	Ratio	Lower	Upper
83	100		
131	8.1	7.8	11.6
85	68.2	55.5	83.3
95	22.3	16.4	24.6

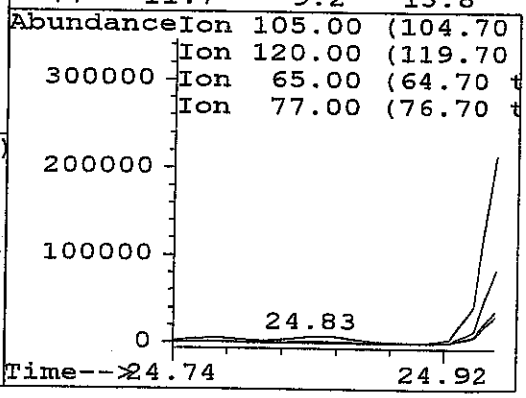


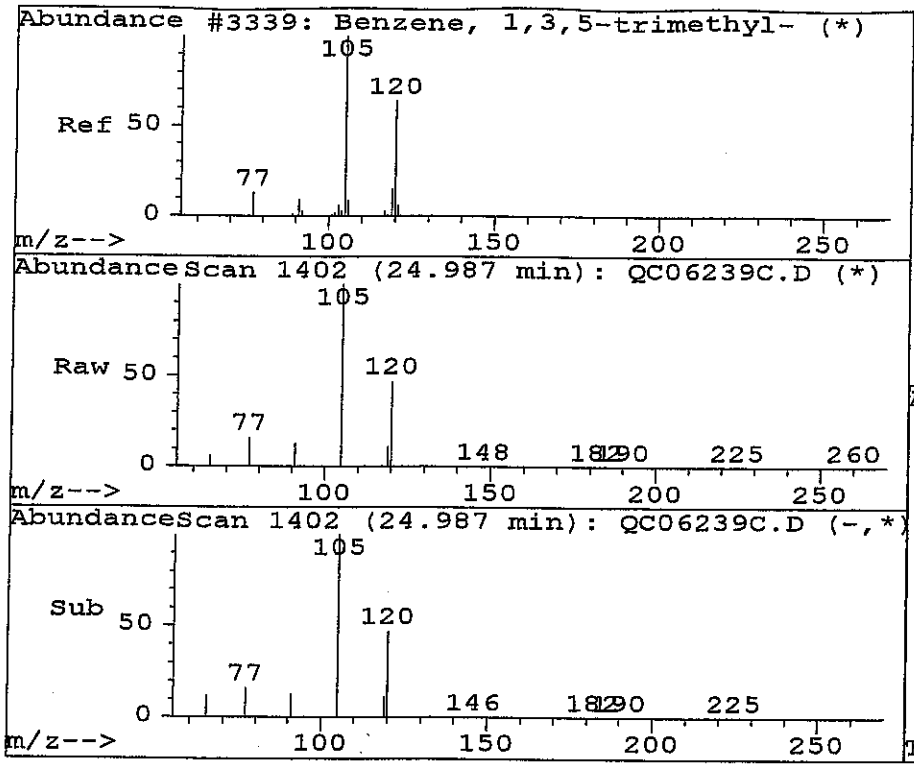


#38
4-Ethyltoluene
Concen: 0.00 ppbV
RT: 24.83 min Scan# 1392
Delta R.T. 0.03 min
Lab File: QC06239C.D
Acq: 23 Jun 109 12:25 pm

Tgt Ion:105 Resp: 22837

Ion	Ratio	Lower	Upper
105	100		
120	20.9	19.6	29.4
65	10.4	9.1	13.7
77	11.7	9.2	13.8

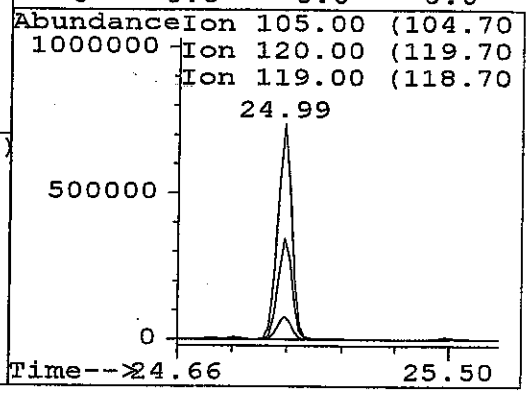


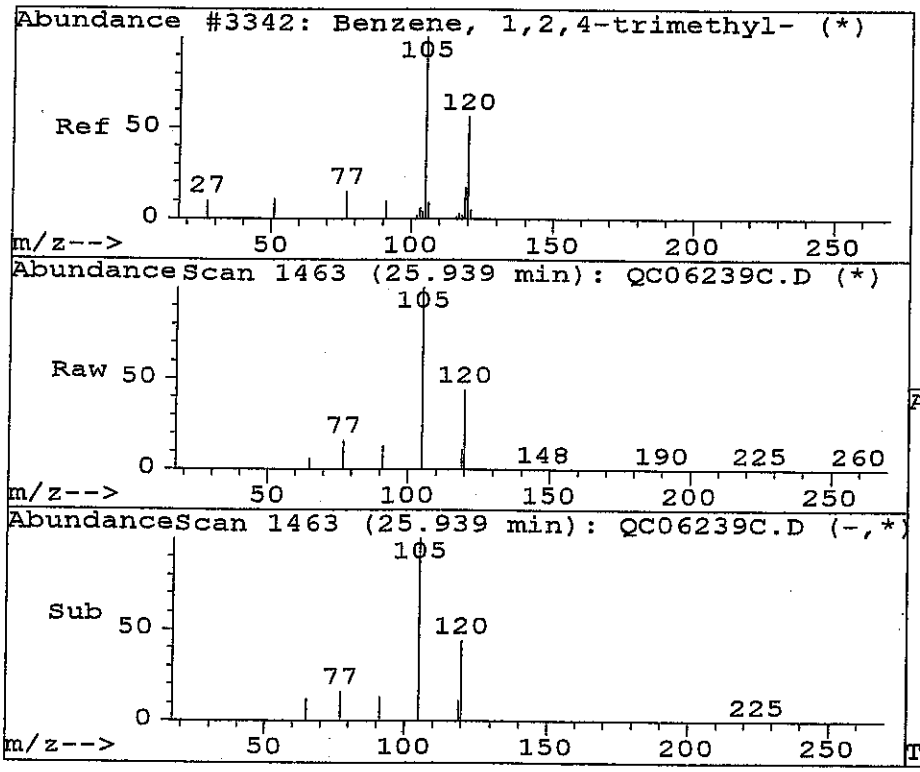


#39
1,3,5-Trimethylbenzene
Concen: 0.41 ppbV
RT: 24.99 min Scan# 1402
Delta R.T. 0.03 min
Lab File: QC06239C.D
Acq: 23 Jun 109 12:25 pm

Tgt Ion:105 Resp: 2180303

Ion	Ratio	Lower	Upper
105	100		
120	46.9	38.6	57.8
119	10.9	8.6	13.0
0	0.0	0.0	0.0

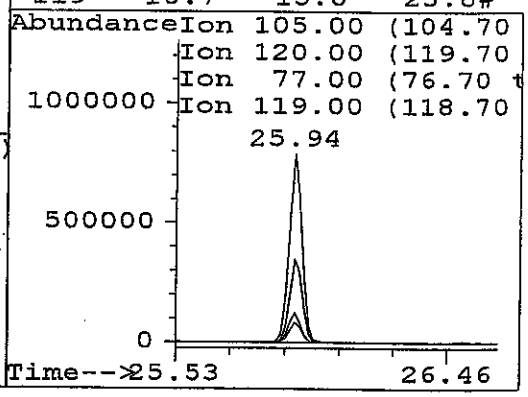


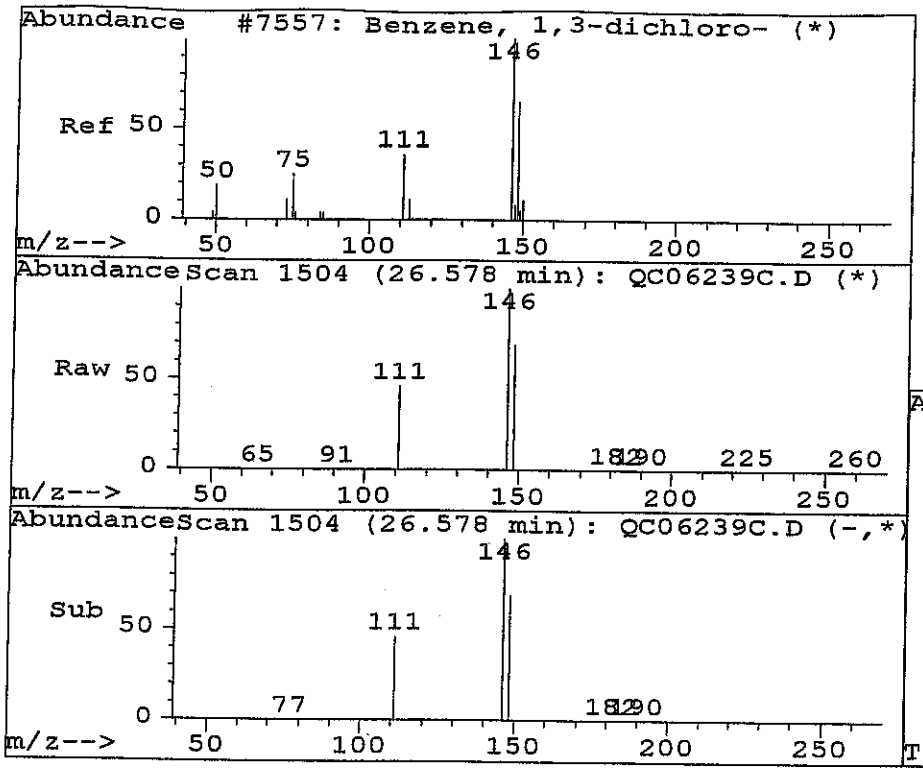


#40
1,2,4-Trimethylbenzene
Concen: 0.39 ppbV
RT: 25.94 min Scan# 1463
Delta R.T. 0.03 min
Lab File: QC06239C.D
Acq: 23 Jun 109 12:25 pm

Tgt Ion:105 Resp: 2382233

Ion	Ratio	Lower	Upper
105	100		
120	43.8	36.1	54.1
77	15.6	11.7	17.5
119	10.7	15.8	23.8#

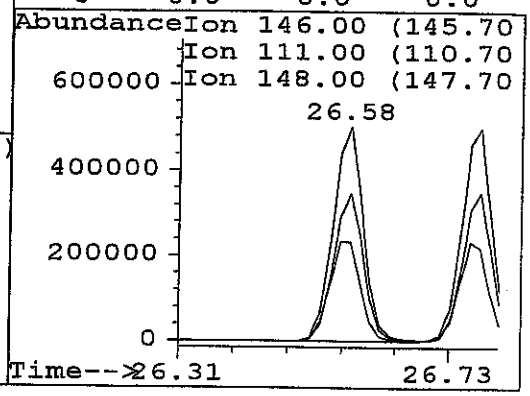


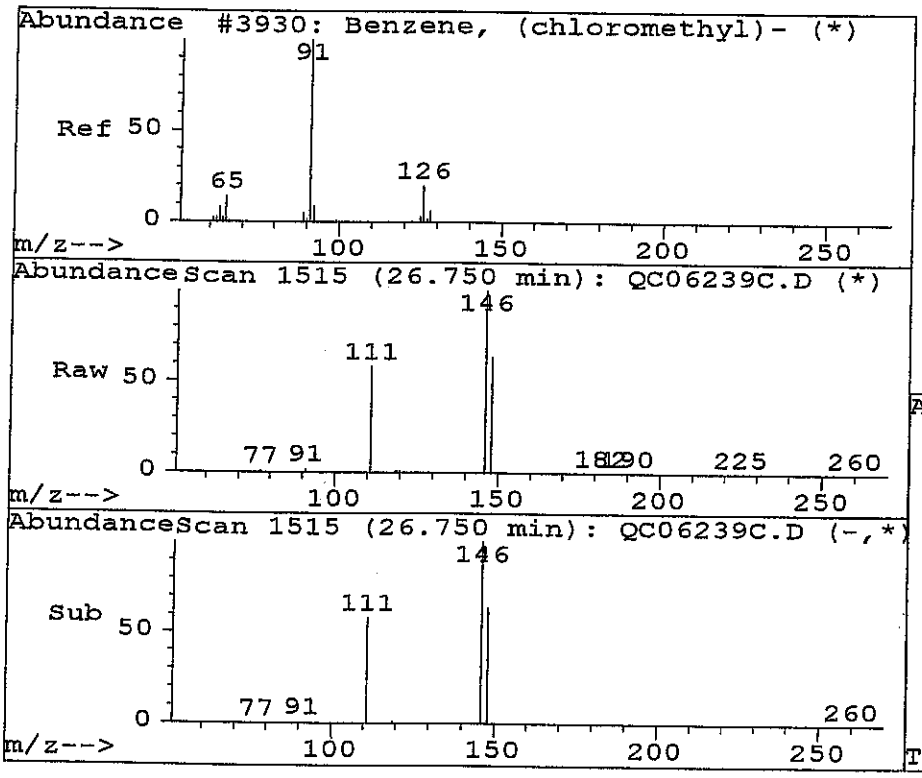


#41
1,3-Dichlorobenzene
Concen: 0.35 ppbV
RT: 26.58 min Scan# 1504
Delta R.T. 0.03 min
Lab File: QC06239C.D
Acq: 23 Jun 109 12:25 pm

Tgt Ion:146 Resp: 1653773

Ion	Ratio	Lower	Upper
146	100		
111	46.2	34.7	52.1
148	69.0	55.0	82.4
0	0.0	0.0	0.0

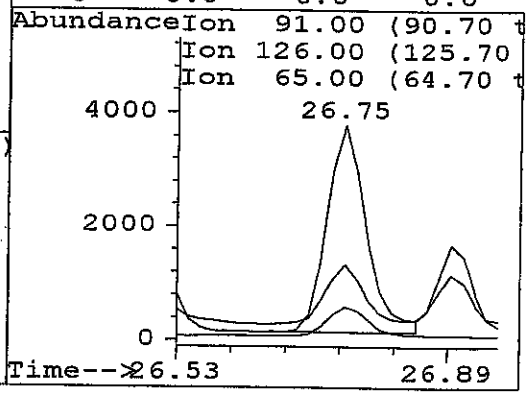


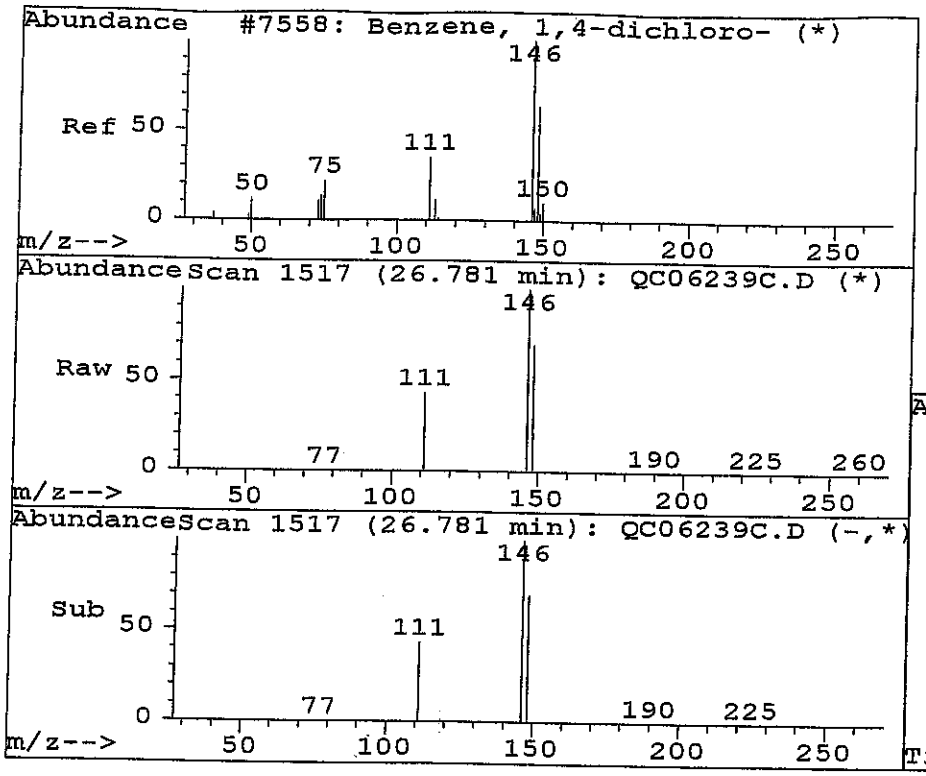


#42
Benzyl chloride
Concen: 0.00 ppbV
RT: 26.75 min Scan# 1515
Delta R.T. 0.05 min
Lab File: QC06239C.D
Acq: 23 Jun 109 12:25 pm

Tgt Ion:91 Resp: 13014

Ion	Ratio	Lower	Upper
91	100		
126	14.1	15.4	23.0#
65	28.3	18.6	27.8#
0	0.0	0.0	0.0

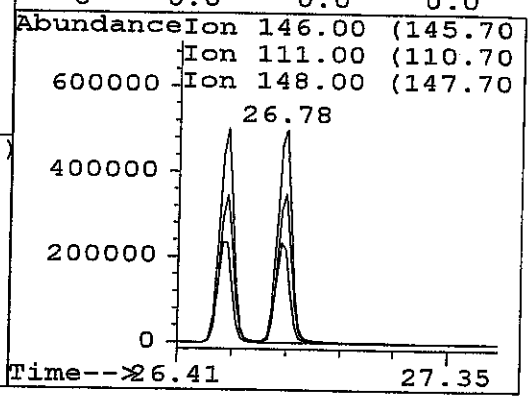


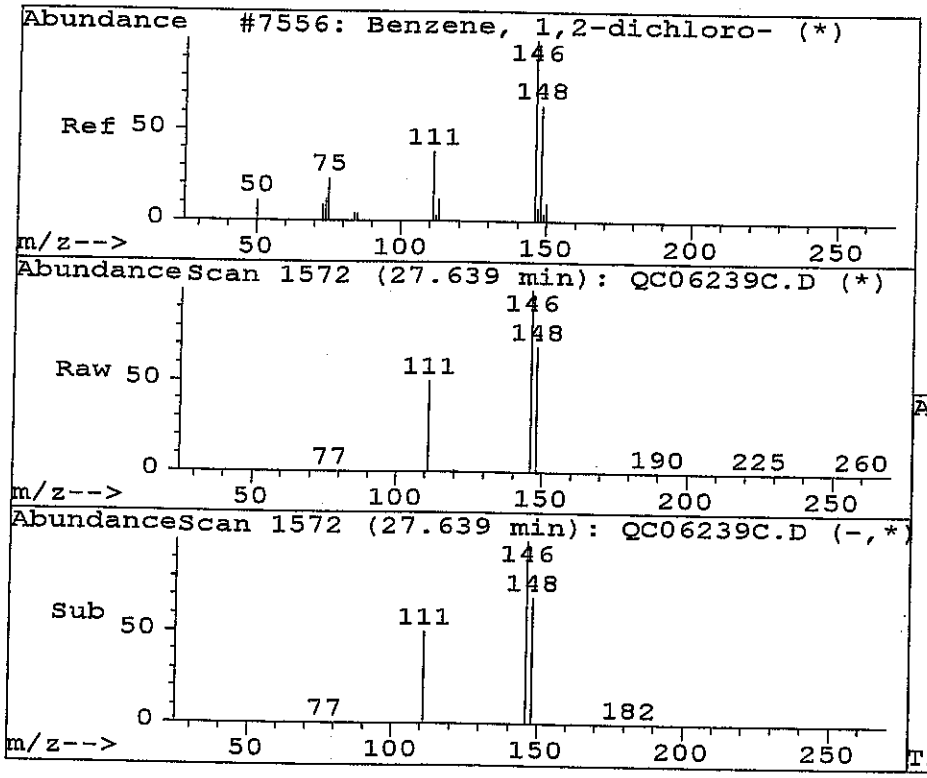


#43
1,4-Dichlorobenzene
Concen: 0.35 ppbV
RT: 26.78 min Scan# 1517
Delta R.T. 0.03 min
Lab File: QC06239C.D
Acq: 23 Jun 109 12:25 pm

Tgt Ion:146 Resp: 1693268

Ion	Ratio	Lower	Upper
146	100		
111	43.5	32.4	48.6
148	69.8	55.3	82.9
0	0.0	0.0	0.0

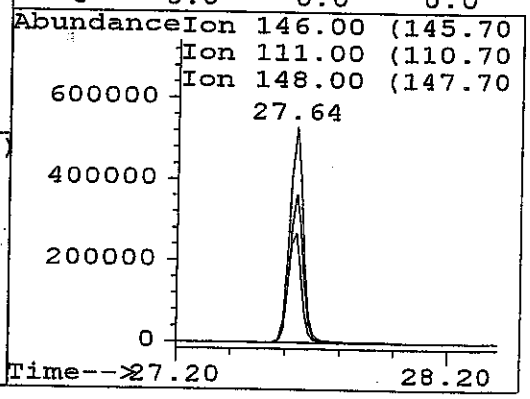


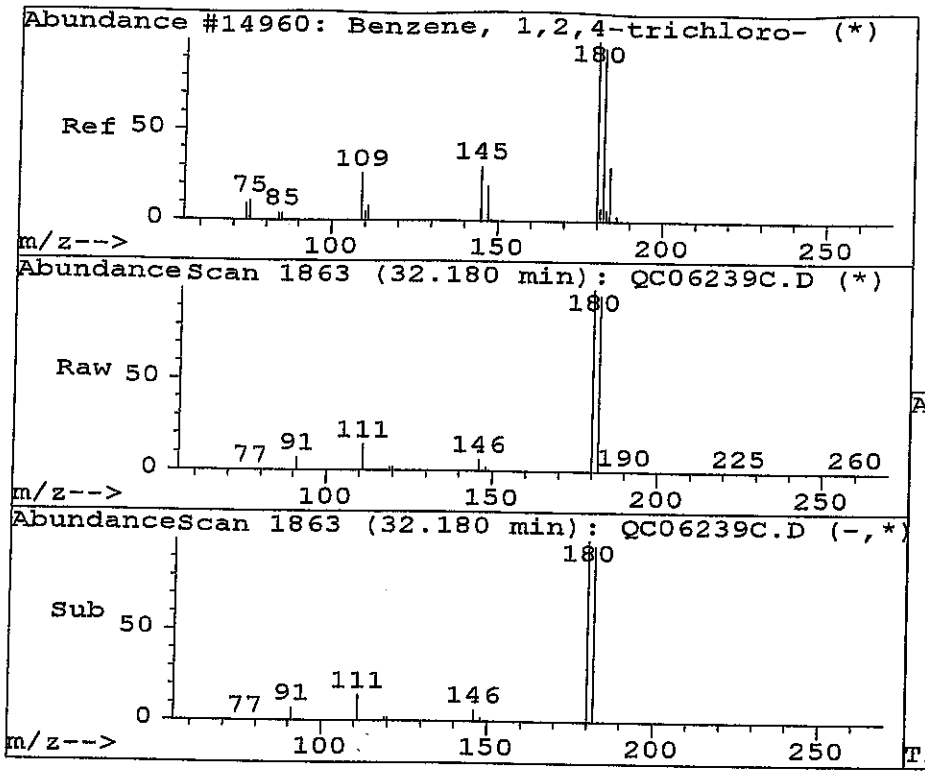


#44
1,2-Dichlorobenzene
Concen: 0.31 ppbV
RT: 27.64 min Scan# 1572
Delta R.T. 0.03 min
Lab File: QC06239C.D
Acq: 23 Jun 109 12:25 pm

Tgt Ion:146 Resp: 1806956

Ion	Ratio	Lower	Upper
146	100		
111	50.4	38.2	57.2
148	68.7	54.6	81.8
0	0.0	0.0	0.0

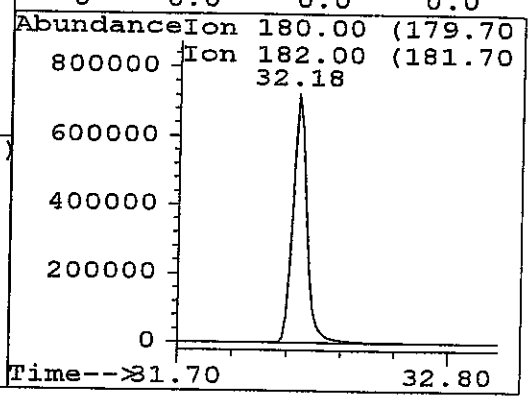


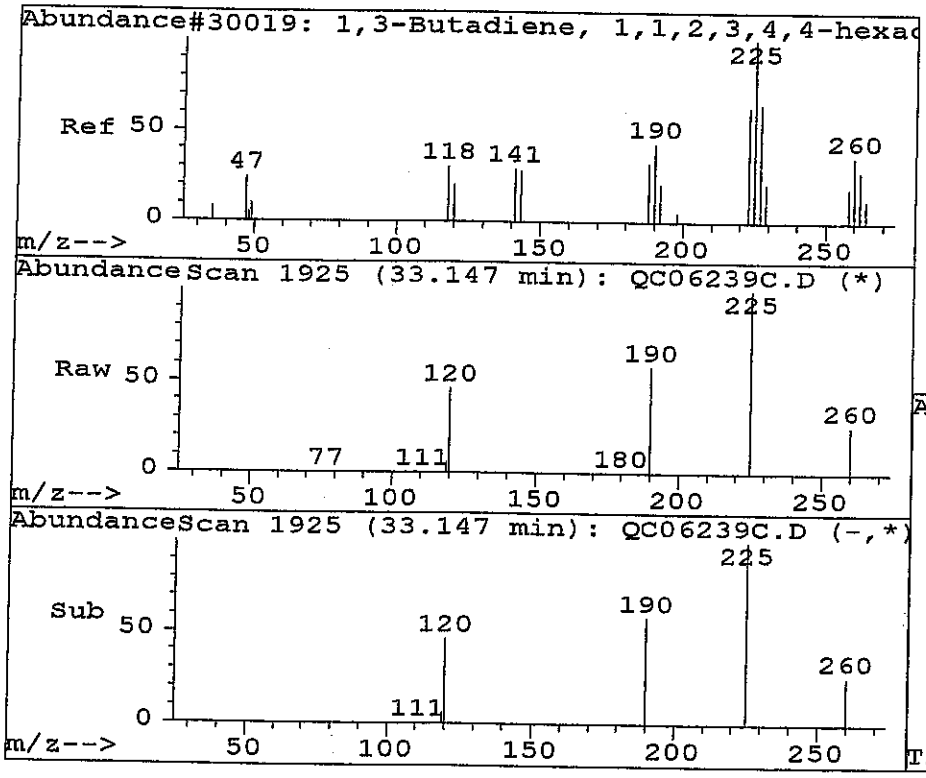


#45
1,2,4-Trichlorobenzene
Concen: 0.23 ppbV
RT: 32.18 min Scan# 1863
Delta R.T. 0.01 min
Lab File: QC06239C.D
Acq: 23 Jun 109 12:25 pm

Tgt Ion:180 Resp: 2949319

Ion	Ratio	Lower	Upper
180	100		
182	97.1	79.0	118.4
0	0.0	0.0	0.0
0	0.0	0.0	0.0

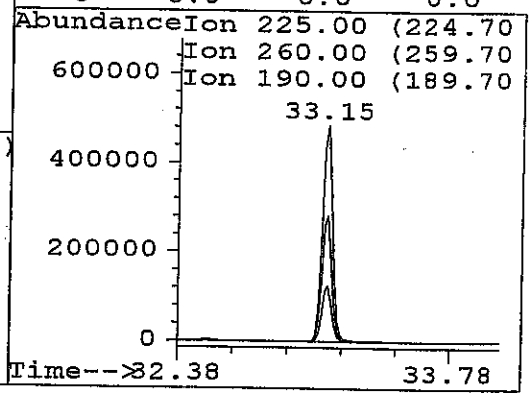


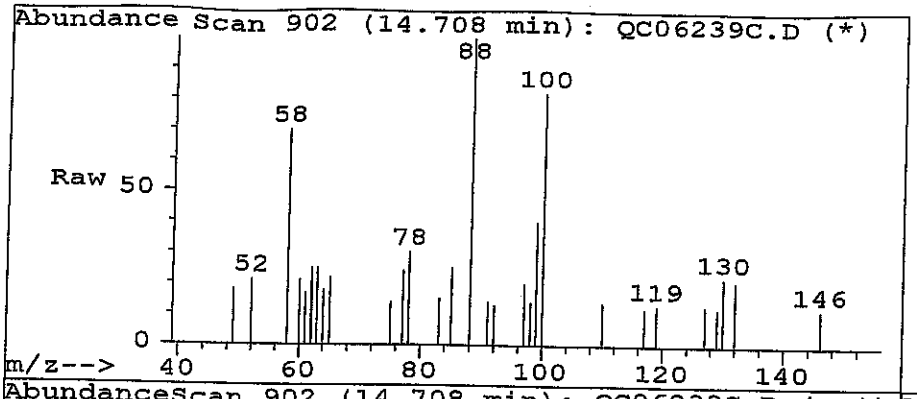


#46
Hexachlorobutadiene
Concen: 0.28 ppbV
RT: 33.15 min Scan# 1925
Delta R.T. 0.02 min
Lab File: QC06239C.D
Acq: 23 Jun 109 12:25 pm

Tgt Ion:225 Resp: 1712244

Ion	Ratio	Lower	Upper
225	100		
260	25.8	20.5	30.7
190	58.2	43.0	64.4
0	0.0	0.0	0.0

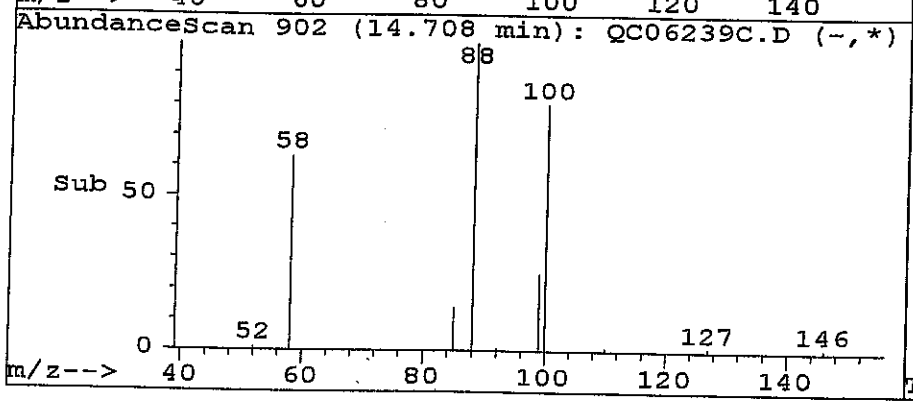


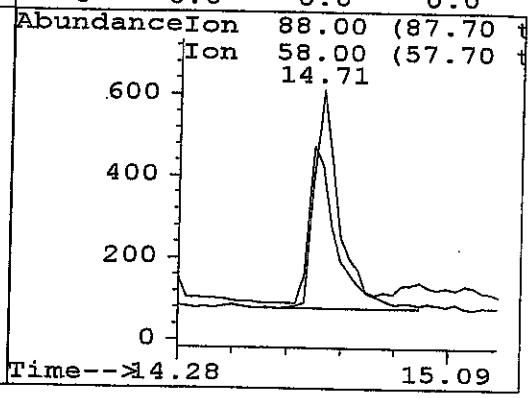


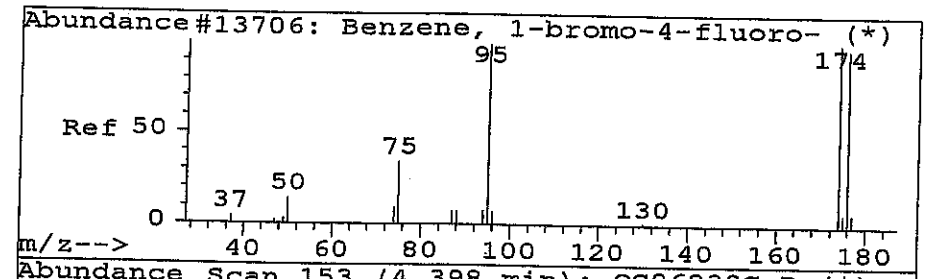
#47
1,4 Dioxane
Concen: 0.01 ppbV
RT: 14.71 min Scan# 902
Delta R.T. 0.14 min
Lab File: QC06239C.D
Acq: 23 Jun 109 12:25 pm

Tgt Ion:88 Resp: 2791

Ion	Ratio	Lower	Upper
88	100		
58	71.0	54.9	82.3
0	0.0	0.0	0.0
0	0.0	0.0	0.0



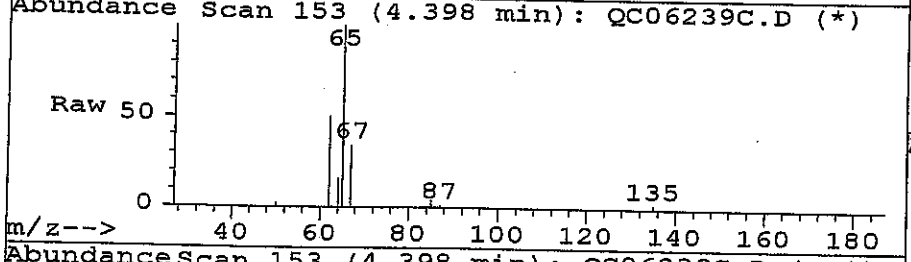


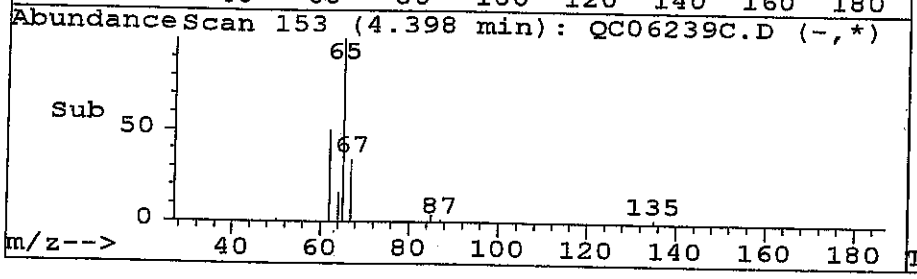


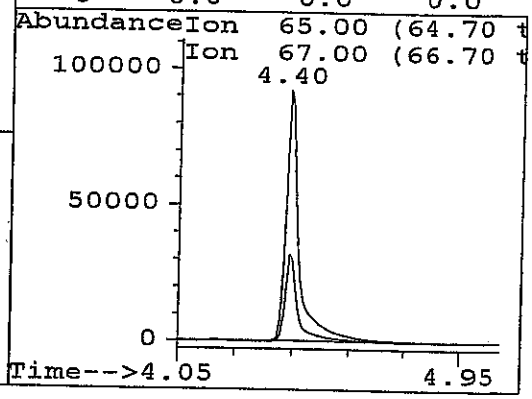
#49
Vinyl Chloride-d3
Concen: 0.24 ppbV
RT: 4.40 min Scan# 153
Delta R.T. 0.05 min
Lab File: QC06239C.D
Acq: 23 Jun 109 12:25 pm

Tgt Ion:65 Resp: 269180

Ion	Ratio	Lower	Upper
65	100		
67	34.4	26.6	40.0
0	0.0	0.0	0.0
0	0.0	0.0	0.0







Quantitation Report

Data File : C:\MSCHEM\2\DATA\06239M~1\0927010A.D
Acq Time : 23 Jun 109 7:10 pm
Sample : 44-015
Misc : SEALASKA
Quant Time: Jul 1 15:33 19109

Operator: SG
Inst : MS2
Multiplr: 1.00

Method : C:\MSCHEM\2\METHODS\1T15EXAY.M
Title : EPA TO-15
Last Update : Tue Mar 17 14:18:15 2009
Response via : Multiple Level Calibration

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Chlorobenzene-d5	20.55	117	310499	0.20 ppbV	0.04
System Monitoring Compounds					%Recovery
16) Toluene-d8	17.11	98	133946	0.20 ppbV	
49) Vinyl Chloride-d3	4.40	65	43704	0.16 ppbV	
Target Compounds					Qvalue
2) Dichlorodifluoromethane	3.90	85	23453	0.13 ppbV m	0
3) Chloromethane	4.16	50	9244	0.11 ppbV m	85
4) Freon 114	4.16	85	1019	0.01 ppbV m	38
7) Chloroethane	5.23	64	2758	0.05 ppbV	98
8) Trichlorofluoromethane	6.03	101	18356	0.09 ppbV	96
10) Freon 113	7.23	151	1867	0.02 ppbV	95
11) Dichloromethane	7.48	84	5599	0.09 ppbV	94
13) Methyl tert butyl ether	8.73	73	2201	0.01 ppbV m	1
15) cis-1,2-Dichloroethene	10.31	96	572	0.01 ppbV #	88
17) Chloroform	10.73	83	1092	0.01 ppbV	92
18) 1,1,1-Trichloroethane	11.96	97	717	0.00 ppbV #	89
20) Benzene	12.68	78	16735	0.06 ppbV	94
21) Carbon tetrachloride	12.71	117	2684	0.02 ppbV	94
23) Trichloroethene	14.31	130	5989	0.05 ppbV #	94
26) Toluene	17.27	91	21530	0.05 ppbV	95
29) 1,2-Dibromoethane	19.03	107	337	0.00 ppbV #	92
30) Tetrachloroethene	19.12	166	288	0.00 ppbV	88
31) Chlorobenzene	20.65	112	583	0.00 ppbV #	88
33) Ethylbenzene	21.12	91	3569	0.00 ppbV	93
34) m & p-Xylene	21.41	91	9183	0.02 ppbV	86
35) Styrene	22.28	104	1453	0.00 ppbV #	85
36) o-Xylene	22.37	91	4317	0.01 ppbV	90
37) 1,1,2,2-Tetrachloroethane	22.98	83	609	0.00 ppbV #	81
38) 4-Ethyltoluene	24.85	105	1537	0.00 ppbV #	92
39) 1,3,5-Trimethylbenzene	24.99	105	17201	0.01 ppbV #	47
40) 1,2,4-Trimethylbenzene	25.95	105	6803	0.00 ppbV #	91
41) 1,3-Dichlorobenzene	26.59	146	2949	0.00 ppbV	93
42) Benzyl chloride	26.77	91	906	0.00 ppbV #	77
43) 1,4-Dichlorobenzene	26.80	146	4038	0.00 ppbV	93
44) 1,2-Dichlorobenzene	27.66	146	3609	0.00 ppbV	99
45) 1,2,4-Trichlorobenzene	32.20	180	20106	0.01 ppbV	98
46) Hexachlorobutadiene	33.15	225	1940	0.00 ppbV	94
48) Naphthalene	32.57	128	73703	0.01 ppbV m	0

Qedited 6/29/09

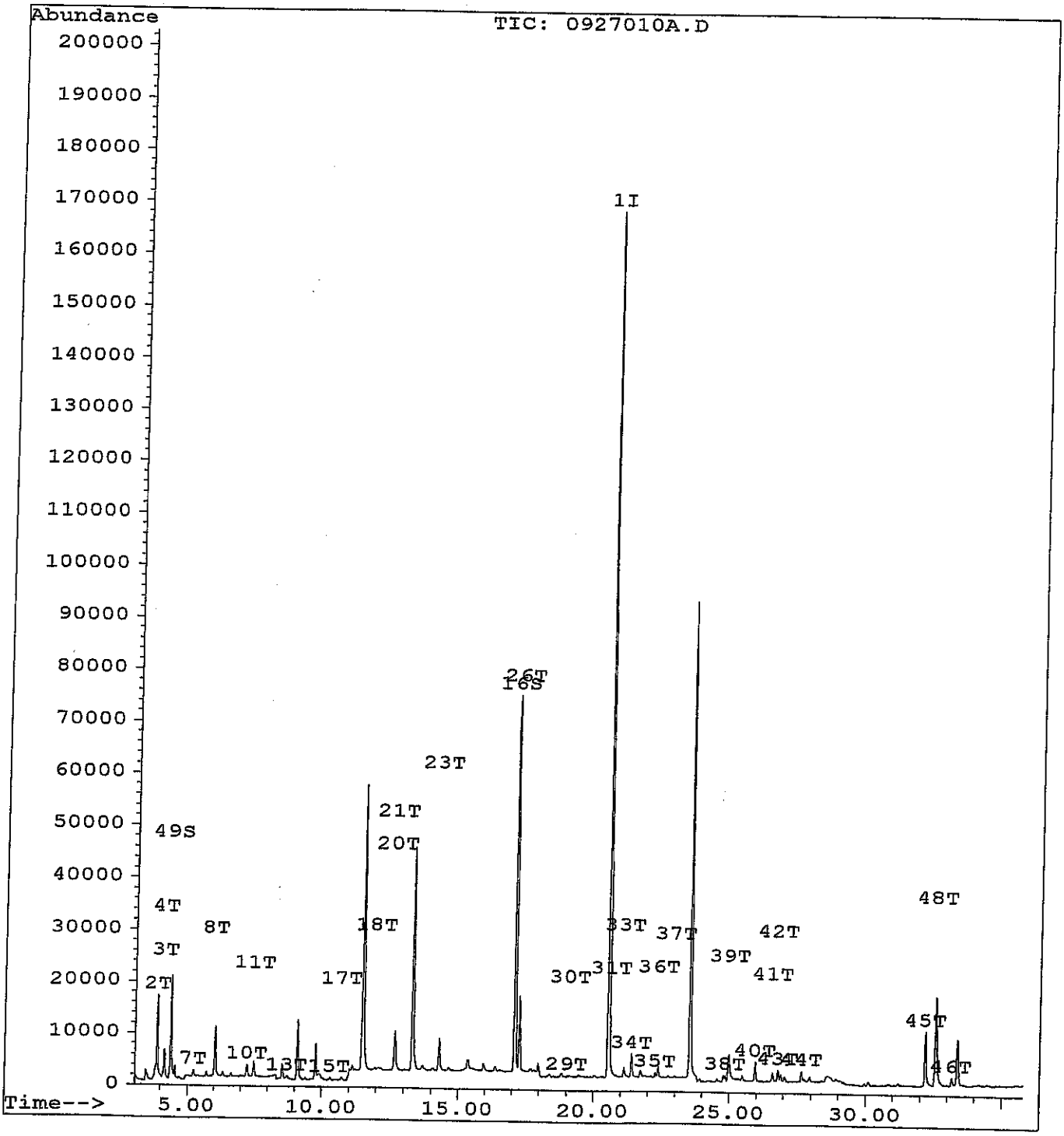
(#) = qualifier out of range (m) = manual integration
0927010A.D 1T15EXAY.M Wed Jul 01 15:33:57 2009

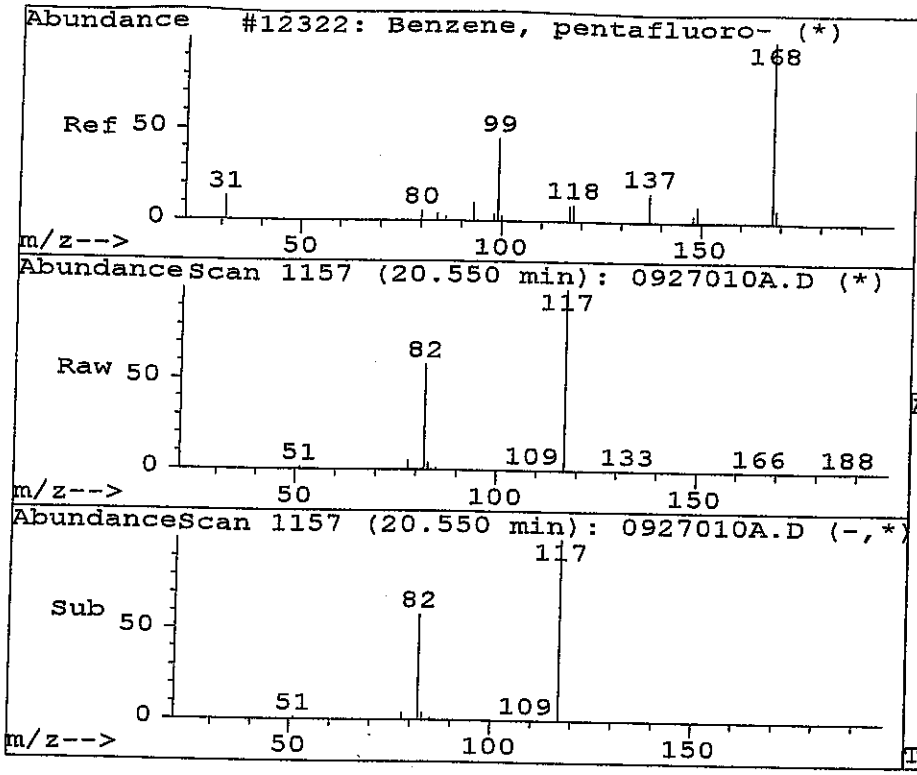
Quantitation Report

Data File : C:\MSCHEM\2\DATA\06239M~1\0927010A.D
Acq Time : 23 Jun 109 7:10 pm
Sample : 44-015
Misc : SEALASKA
Quant Time: Jul 1 15:33 19109

Operator: SG
Inst : MS2
Multiplr: 1.00

Method : C:\MSCHEM\2\METHODS\1T15EXAY.M
Title : EPA TO-15
Last Update : Tue Mar 17 14:18:15 2009
Response via : Multiple Level Calibration

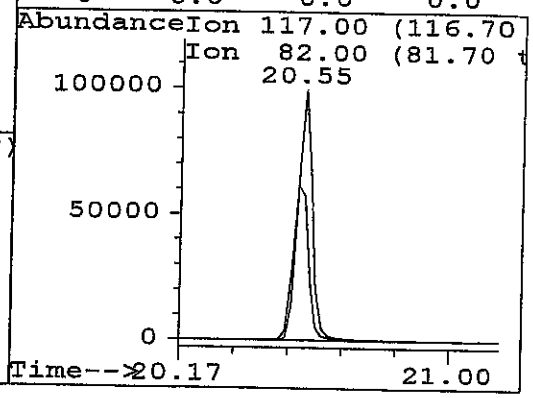


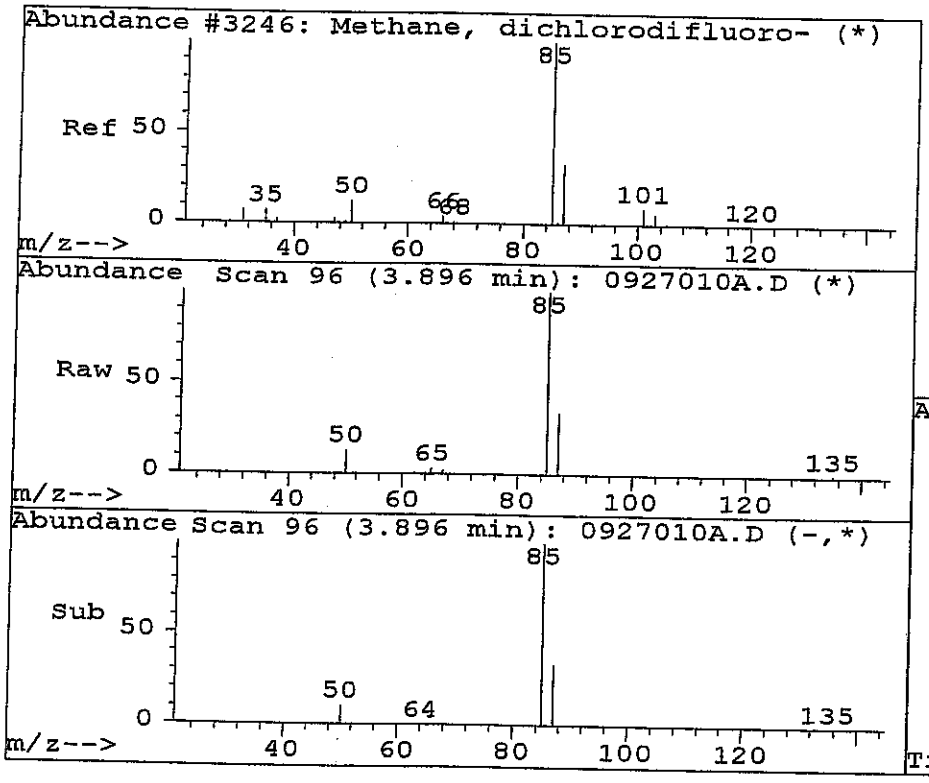


#1
Chlorobenzene-d5
Concen: 0.20 ppbV
RT: 20.55 min Scan# 1157
Delta R.T. 0.04 min
Lab File: 0927010A.D
Acq: 23 Jun 109 7:10 pm

Tgt Ion:117 Resp: 310499

Ion	Ratio	Lower	Upper
117	100		
82	58.0	43.5	65.3
0	0.0	0.0	0.0
0	0.0	0.0	0.0

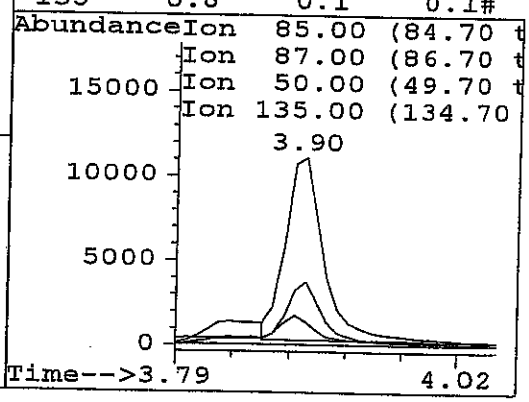


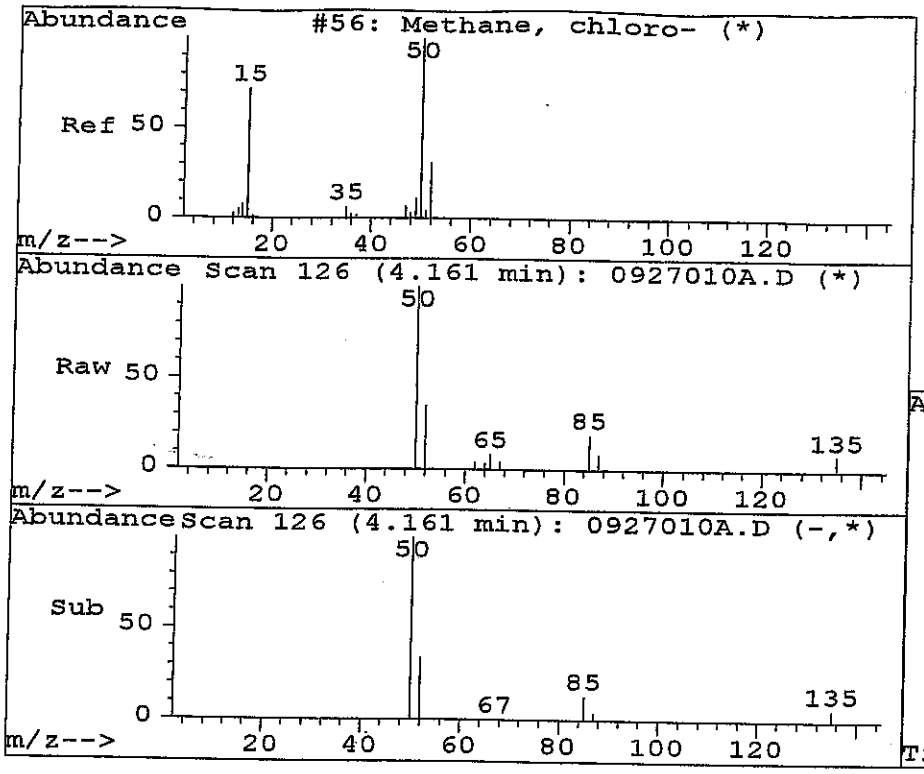


#2
Dichlorodifluoromethane
Concen: 0.13 ppbV m
RT: 3.90 min Scan# 96
Delta R.T. 0.05 min
Lab File: 0927010A.D
Acq: 23 Jun 109 7:10 pm

Tgt Ion:85 Resp: 23453

Ion	Ratio	Lower	Upper
85	100		
87	33.9	25.6	38.4
50	12.8	8.6	12.8
135	0.8	0.1	0.1#

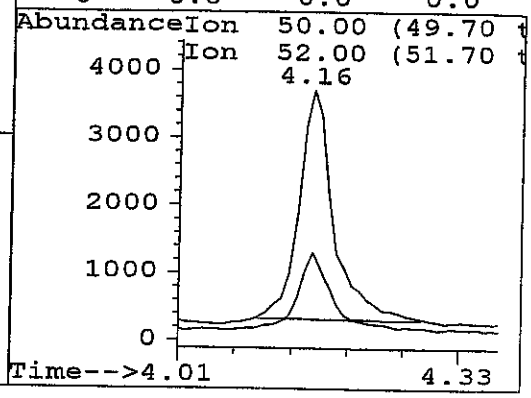


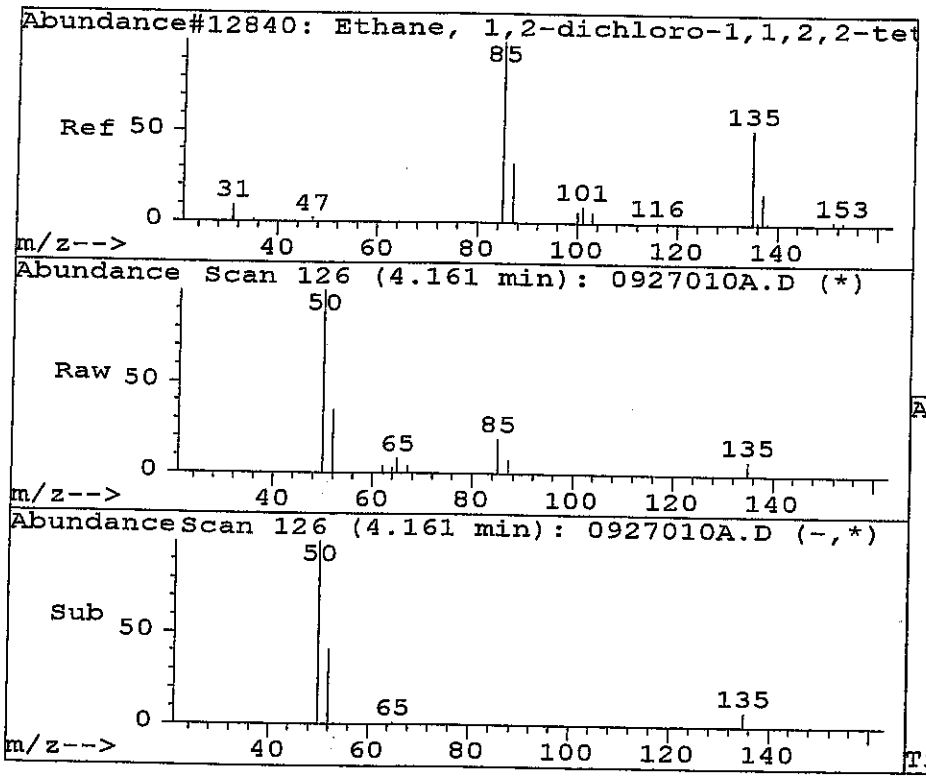


#3
Chloromethane
Concen: 0.11 ppbV m
RT: 4.16 min Scan# 126
Delta R.T. 0.04 min
Lab File: 0927010A.D
Acq: 23 Jun 109 7:10 pm

Tgt Ion:50 Resp: 9244

Ion	Ratio	Lower	Upper
50	100		
52	35.3	21.2	31.8#
0	0.0	0.0	0.0
0	0.0	0.0	0.0

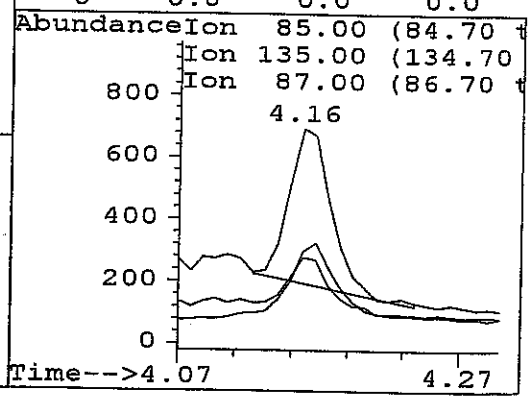


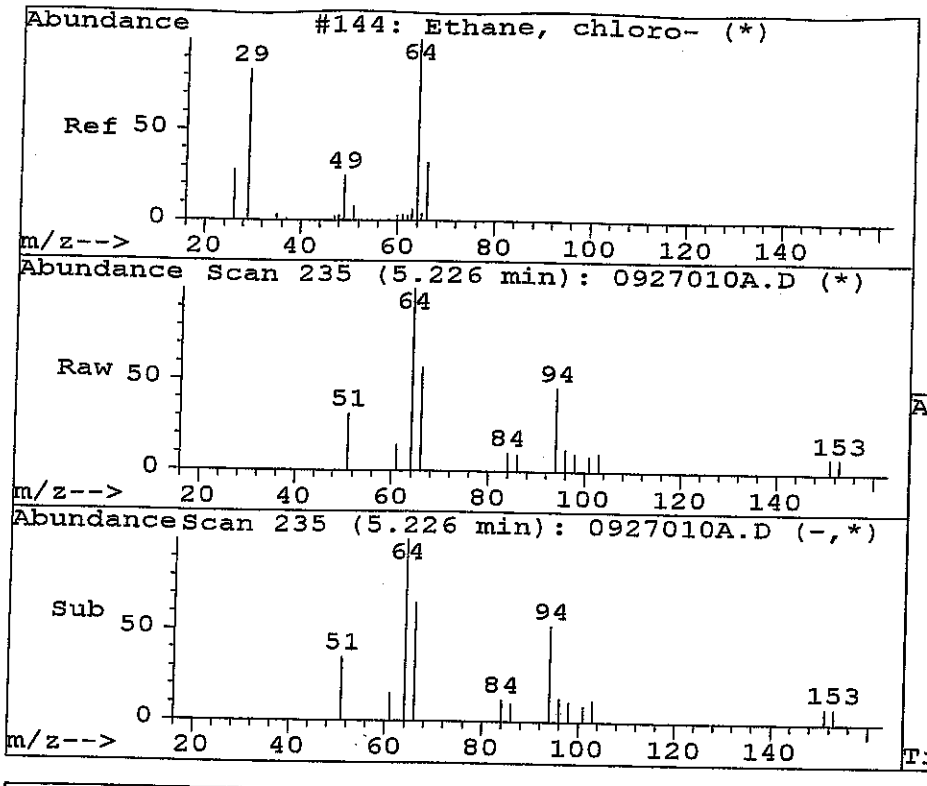


#4
Freon 114
Concen: 0.01 ppbV m
RT: 4.16 min Scan# 126
Delta R.T. 0.04 min
Lab File: 0927010A.D
Acq: 23 Jun 109 7:10 pm

Tgt Ion:85 Resp: 1019

Ion	Ratio	Lower	Upper
85	100		
135	42.9	42.3	63.5
87	40.1	26.0	39.0#
0	0.0	0.0	0.0

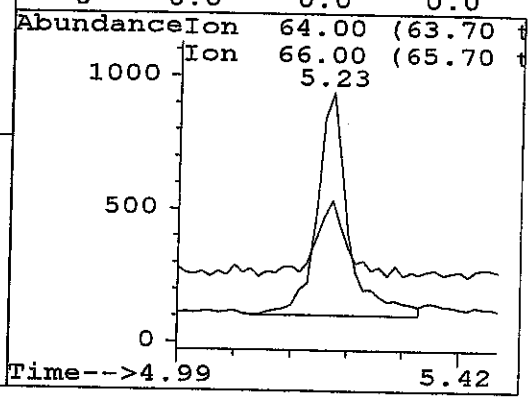


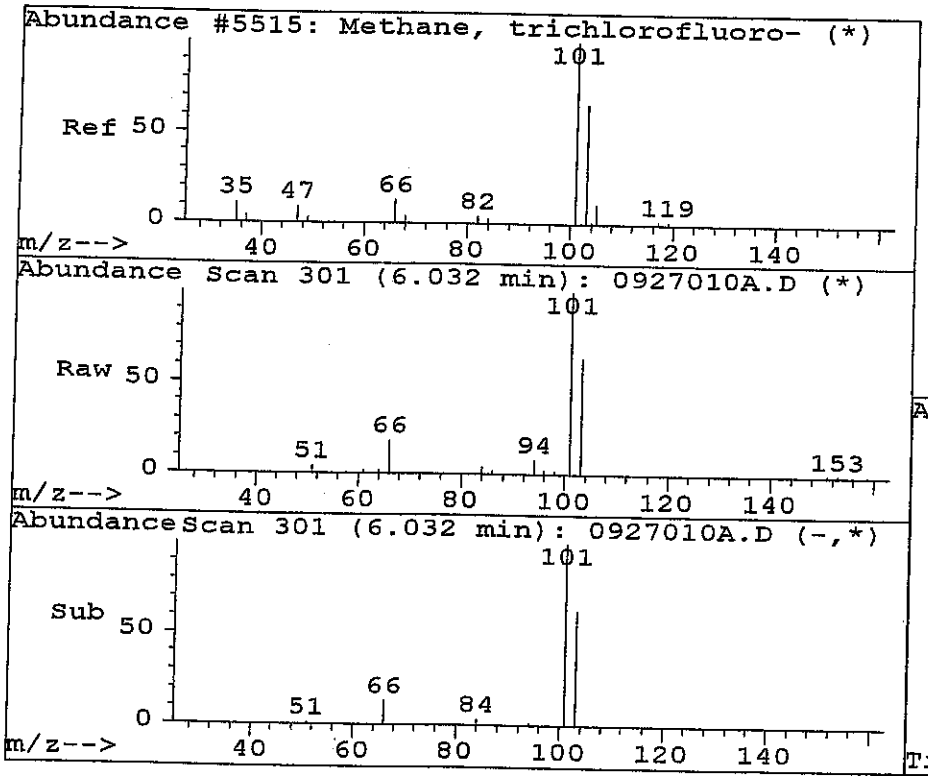


#7
Chloroethane
Concen: 0.05 ppbV
RT: 5.23 min Scan# 235
Delta R.T. 0.05 min
Lab File: 0927010A.D
Acq: 23 Jun 109 7:10 pm

Tgt Ion:64 Resp: 2758

Ion	Ratio	Lower	Upper
64	100		
66	34.5	26.6	40.0
0	0.0	0.0	0.0
0	0.0	0.0	0.0

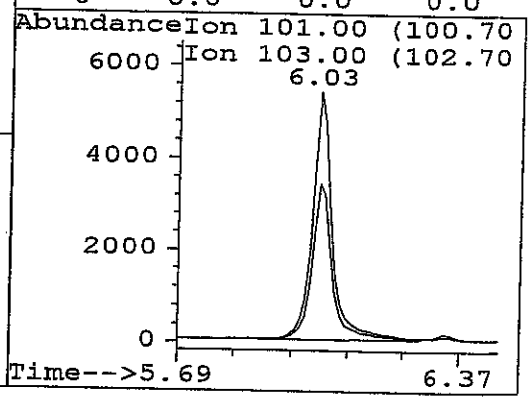


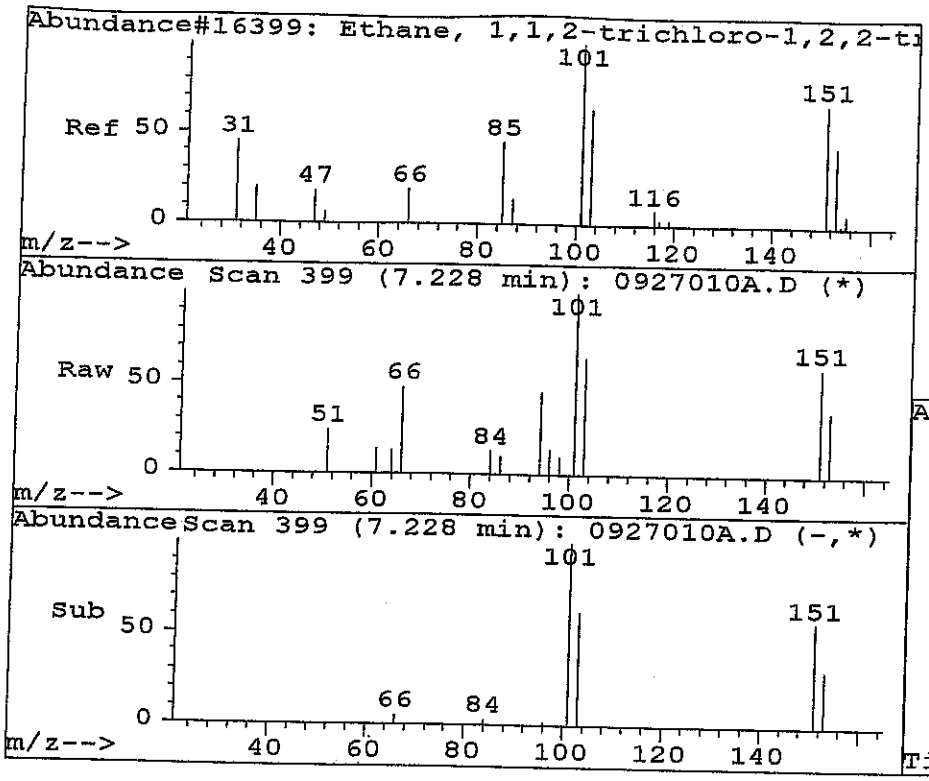


#8
Trichlorofluoromethane
Concen: 0.09 ppbV
RT: 6.03 min Scan# 301
Delta R.T. 0.05 min
Lab File: 0927010A.D
Acq: 23 Jun 109 7:10 pm

Tgt Ion:101 Resp: 18356

Ion	Ratio	Lower	Upper
101	100		
103	63.0	53.2	79.8
0	0.0	0.0	0.0
0	0.0	0.0	0.0

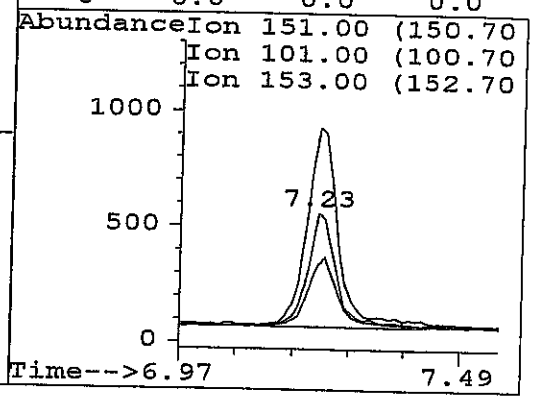


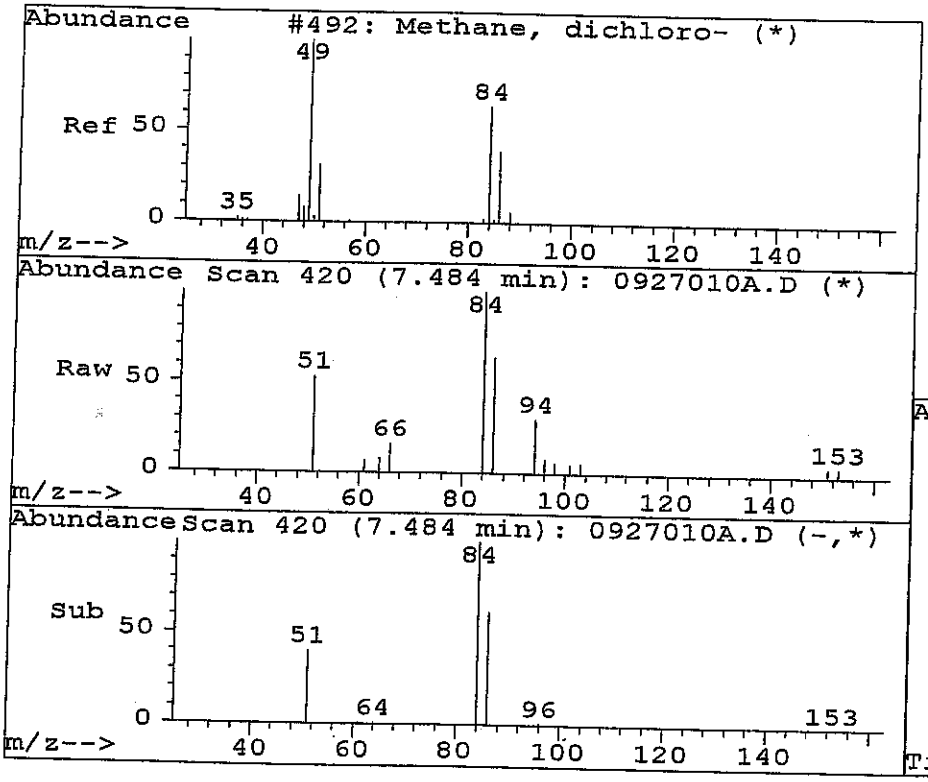


#10
Freon 113
Concen: 0.02 ppbV
RT: 7.23 min Scan# 399
Delta R.T. 0.10 min
Lab File: 0927010A.D
Acq: 23 Jun 109 7:10 pm

Tgt Ion:151 Resp: 1867

Ion	Ratio	Lower	Upper
151	100		
101	173.5	135.8	203.6
153	54.8	50.0	75.0
0	0.0	0.0	0.0

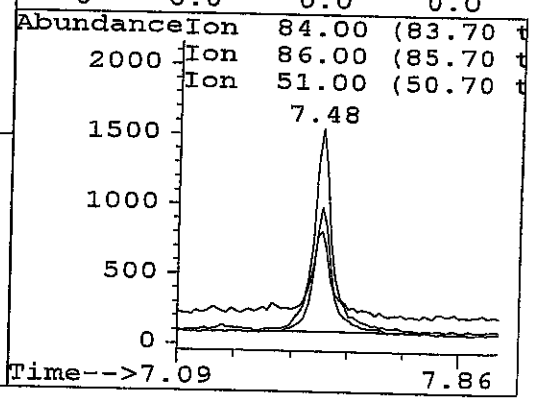


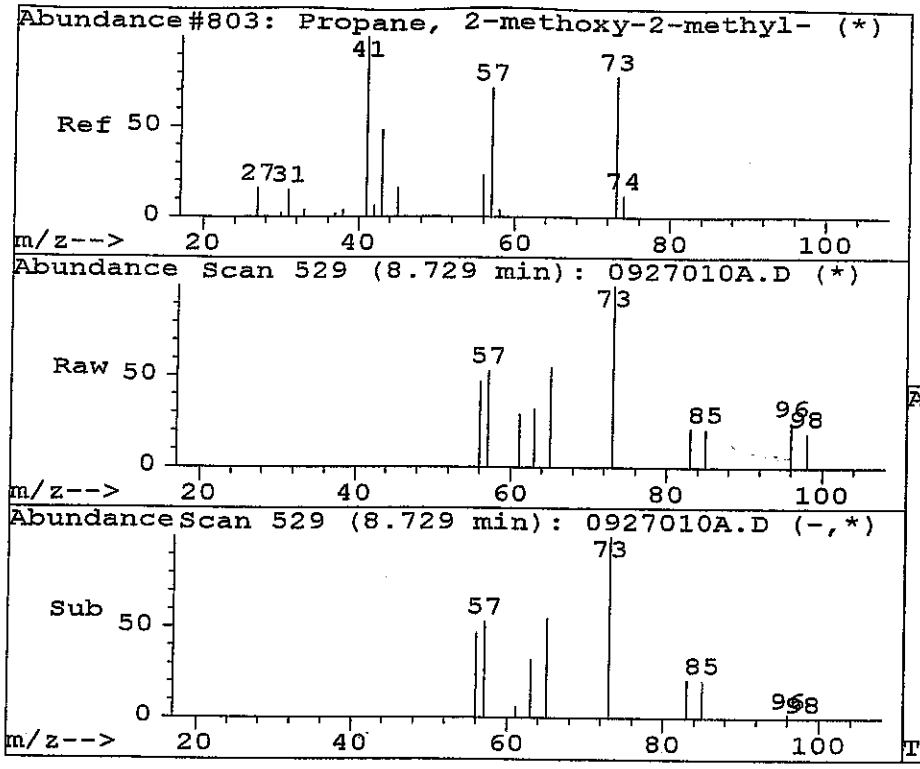


#11
Dichloromethane
Concen: 0.09 ppbV
RT: 7.48 min Scan# 420
Delta R.T. 0.06 min
Lab File: 0927010A.D
Acq: 23 Jun 109 7:10 pm

Tgt Ion:84 Resp: 5599

Ion	Ratio	Lower	Upper
84	100		
86	62.0	51.3	76.9
51	40.8	27.4	41.0
0	0.0	0.0	0.0

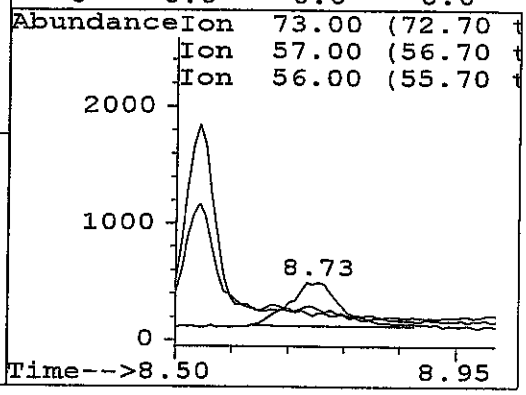


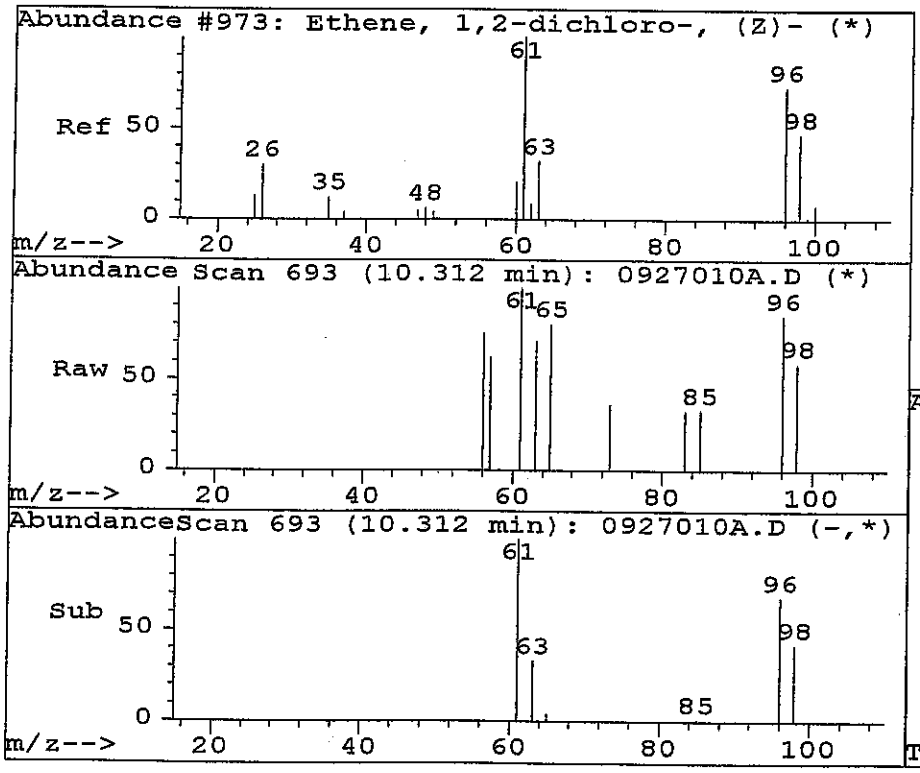


#13
Methyl tert butyl ether
Concen: 0.01 ppbV m
RT: 8.73 min Scan# 529
Delta R.T. 0.13 min
Lab File: 0927010A.D
Acq: 23 Jun 109 7:10 pm

Tgt Ion:73 Resp: 2201

Ion	Ratio	Lower	Upper
73	100		
57	52.7	16.0	24.0#
56	47.3	2.6	3.8#
0	0.0	0.0	0.0

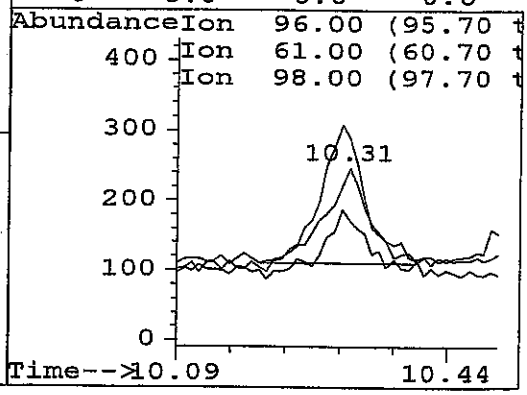


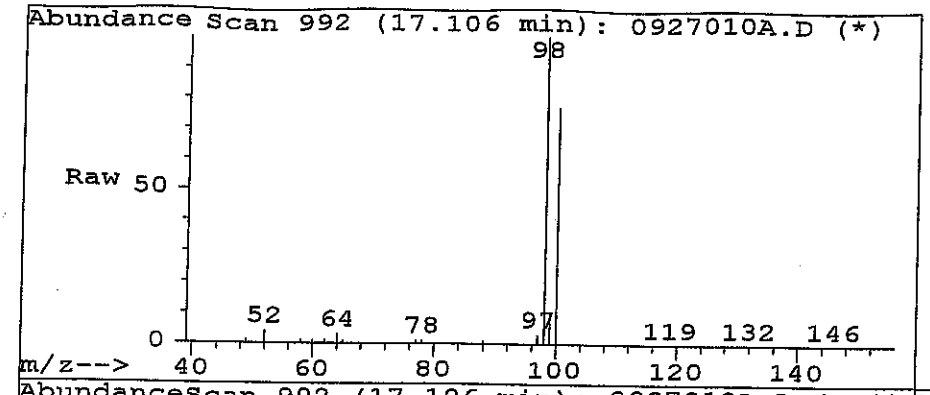


#15
cis-1,2-Dichloroethene
Concen: 0.01 ppbV
RT: 10.31 min Scan# 693
Delta R.T. 0.07 min
Lab File: 0927010A.D
Acq: 23 Jun 109 7:10 pm

Tgt Ion:96 Resp: 572

Ion	Ratio	Lower	Upper
96	100		
61	135.4	102.0	153.0
98	47.8	52.2	78.2#
0	0.0	0.0	0.0

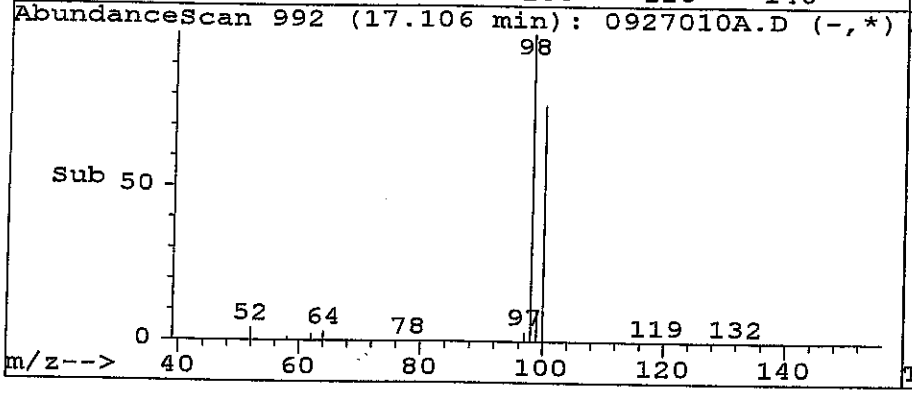


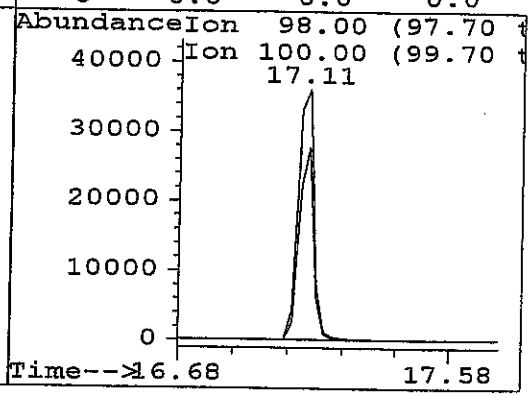


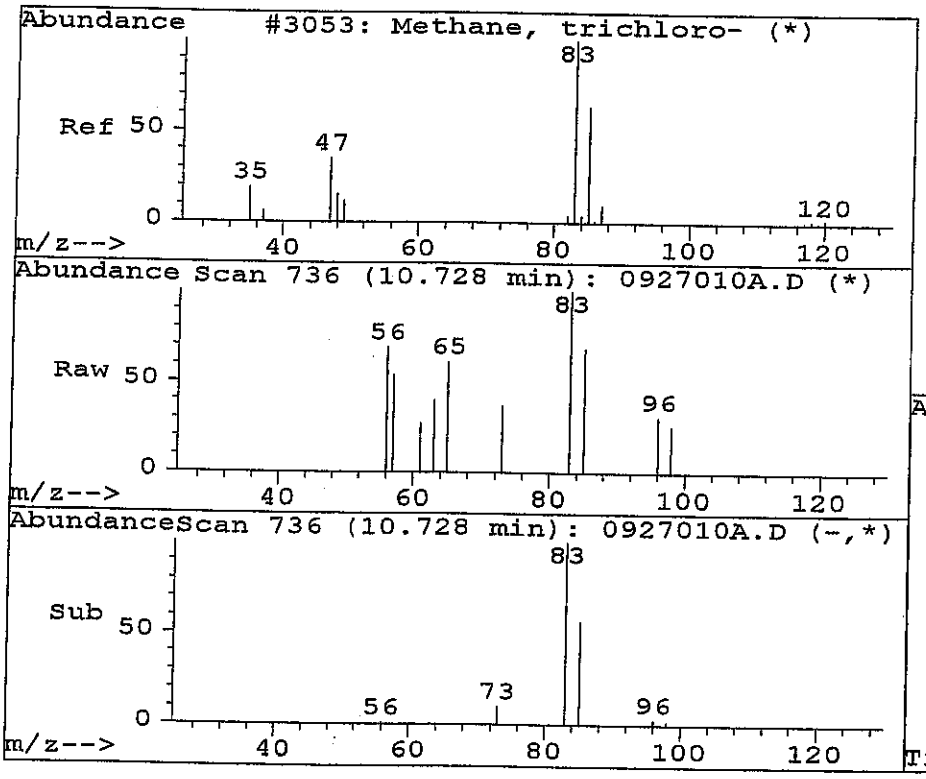
#16
Toluene-d8
Concen: 0.20 ppbV
RT: 17.11 min Scan# 992
Delta R.T. 0.06 min
Lab File: 0927010A.D
Acq: 23 Jun 109 7:10 pm

Tgt Ion:98 Resp: 133946

Ion	Ratio	Lower	Upper
98	100		
100	71.7	59.5	89.3
0	0.0	0.0	0.0
0	0.0	0.0	0.0



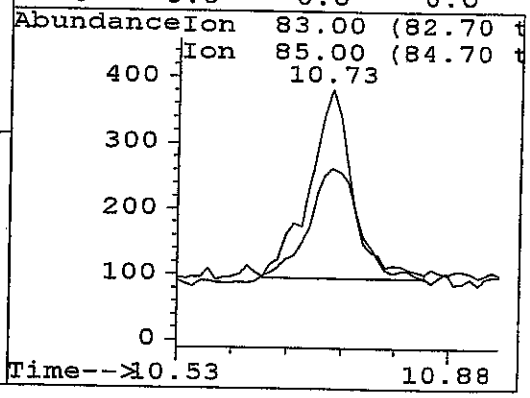


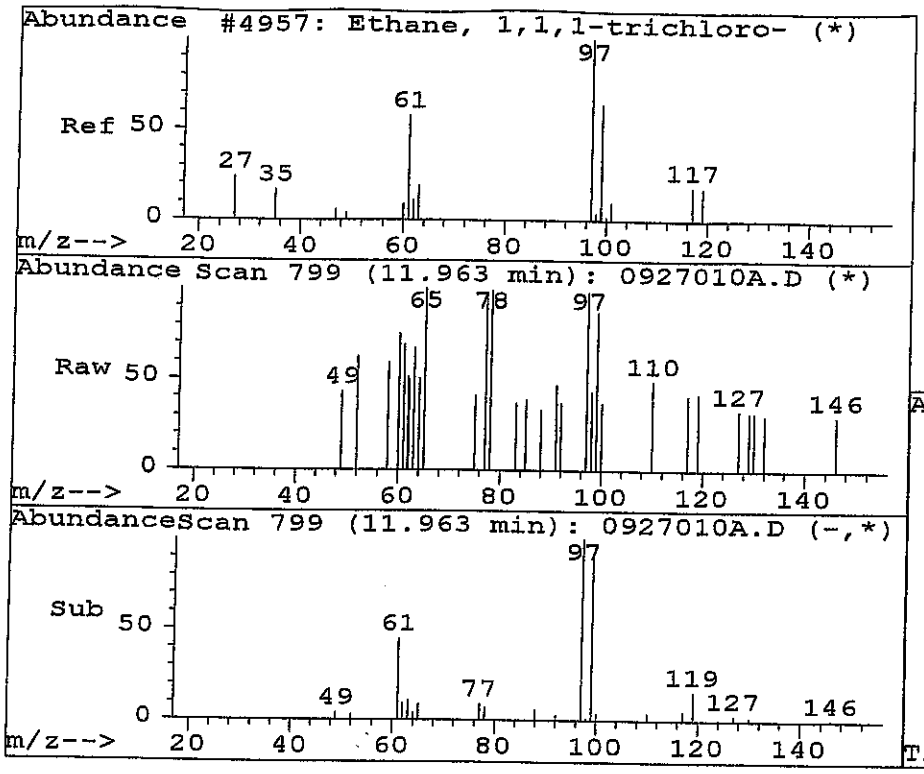


#17
Chloroform
Concen: 0.01 ppbV
RT: 10.73 min Scan# 736
Delta R.T. 0.07 min
Lab File: 0927010A.D
Acq: 23 Jun 109 7:10 pm

Tgt Ion:83 Resp: 1092

Ion	Ratio	Lower	Upper
83	100		
85	58.6	52.2	78.4
0	0.0	0.0	0.0
0	0.0	0.0	0.0

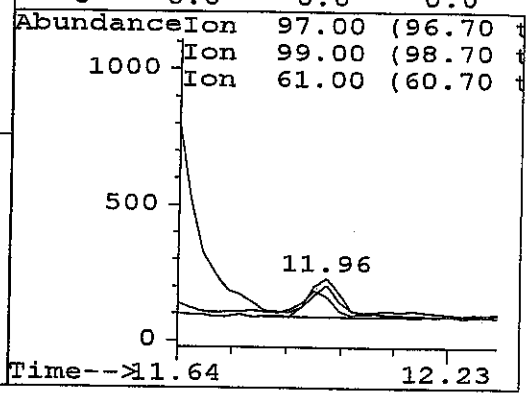


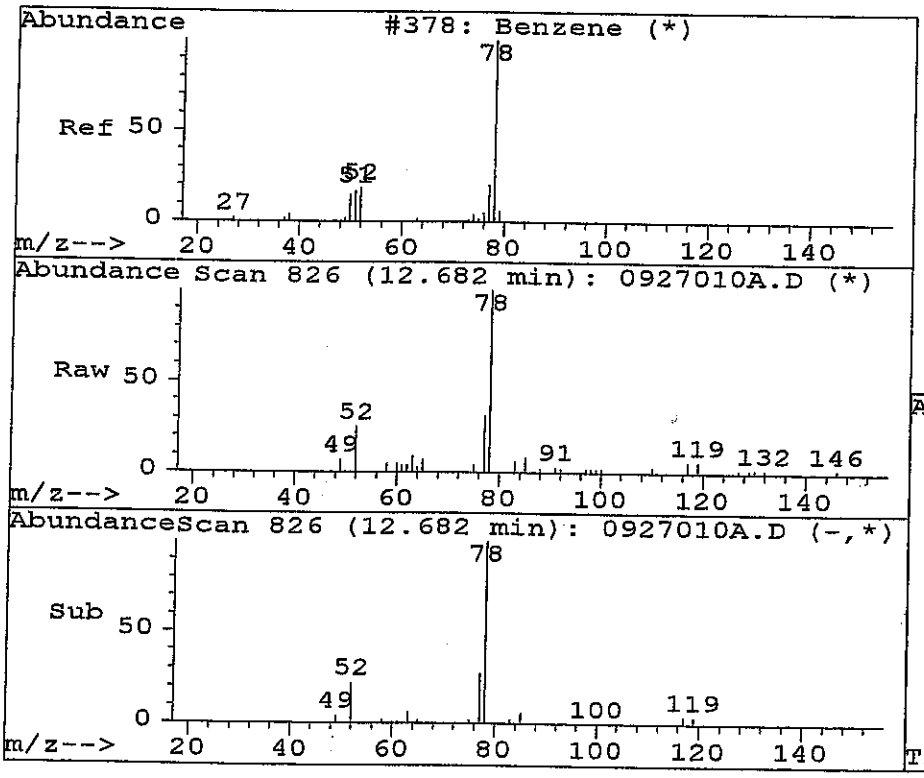


#18
1,1,1-Trichloroethane
Concen: 0.00 ppbV
RT: 11.96 min Scan# 799
Delta R.T. 0.05 min
Lab File: 0927010A.D
Acq: 23 Jun 109 7:10 pm

Tgt Ion:97 Resp: 717

Ion	Ratio	Lower	Upper
97	100		
99	72.4	53.2	79.8
61	39.9	24.2	36.4#
0	0.0	0.0	0.0

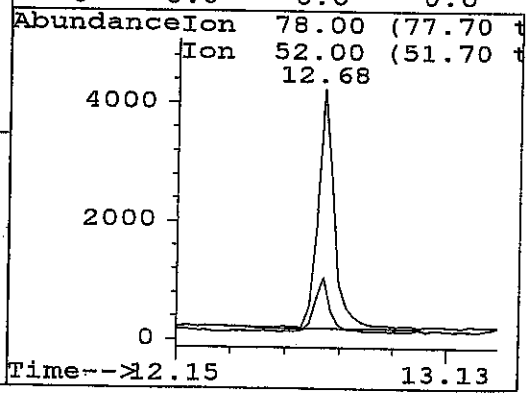


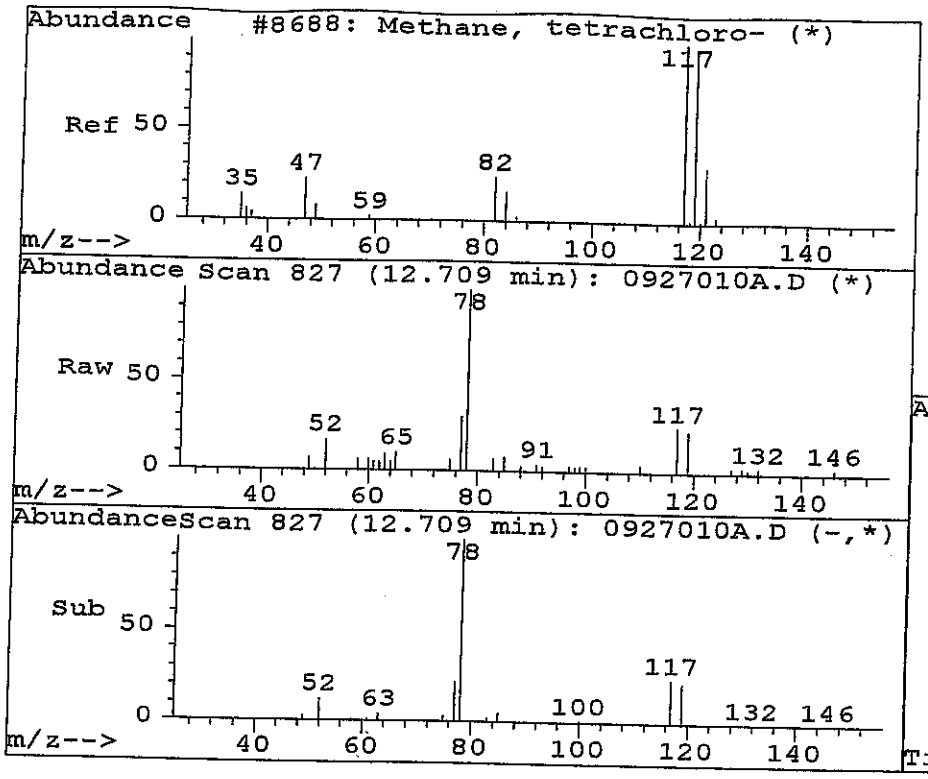


#20
Benzene
Concen: 0.06 ppbV
RT: 12.68 min Scan# 826
Delta R.T. 0.05 min
Lab File: 0927010A.D
Acq: 23 Jun 109 7:10 pm

Tgt Ion:78 Resp: 16735

Ion	Ratio	Lower	Upper
78	100		
52	22.0	15.6	23.4
0	0.0	0.0	0.0
0	0.0	0.0	0.0

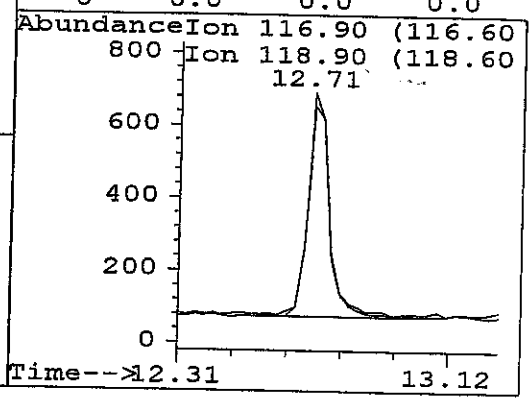


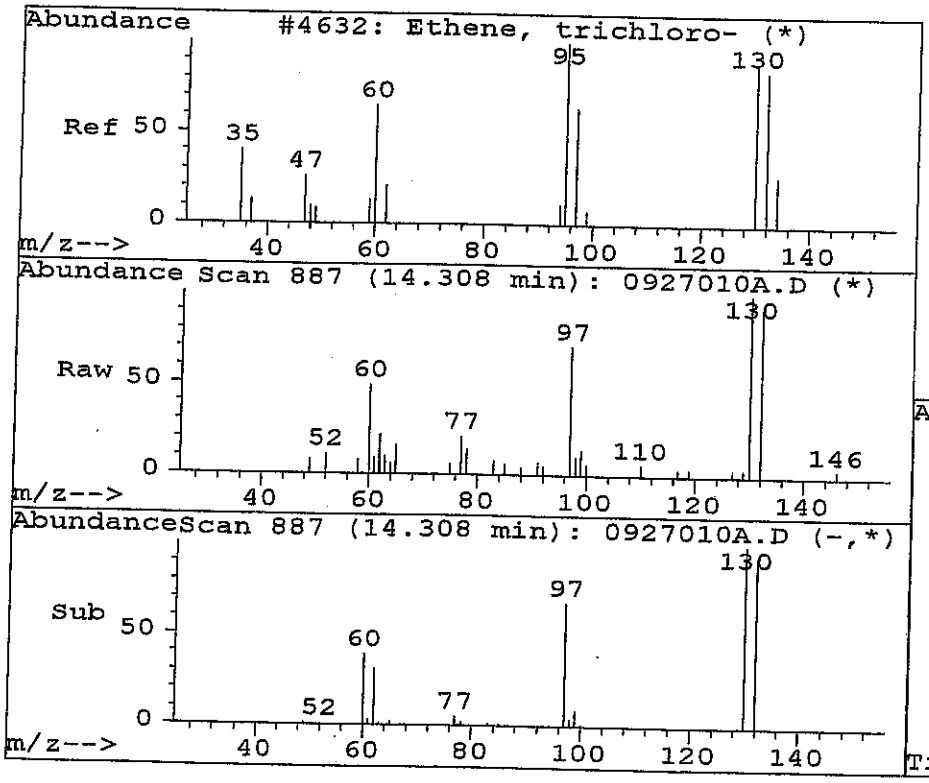


#21
Carbon tetrachloride
Concen: 0.02 ppbV
RT: 12.71 min Scan# 827
Delta R.T. 0.05 min
Lab File: 0927010A.D
Acq: 23 Jun 109 7:10 pm

Tgt Ion:116.9 Resp: 2684

Ion	Ratio	Lower	Upper
117	100		
119	93.3	79.4	119.2
0	0.0	0.0	0.0
0	0.0	0.0	0.0

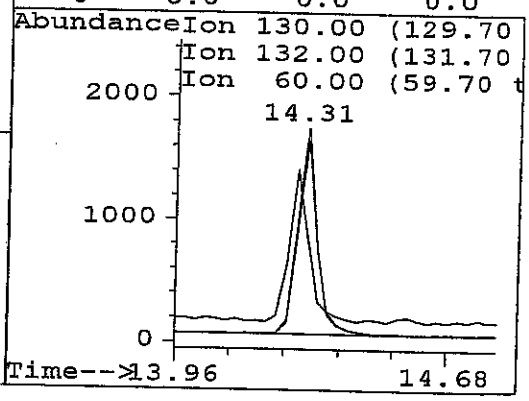


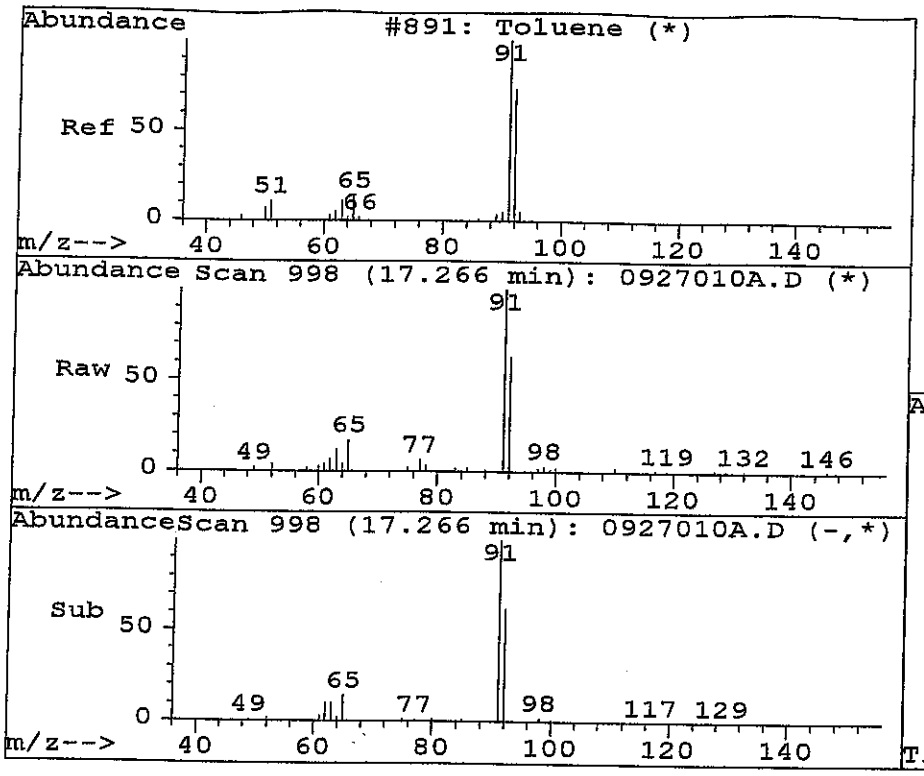


#23
Trichloroethene
Concen: 0.05 ppbV
RT: 14.31 min Scan# 887
Delta R.T. 0.05 min
Lab File: 0927010A.D
Acq: 23 Jun 109 7:10 pm

Tgt Ion:130 Resp: 5989

Ion	Ratio	Lower	Upper
130	100		
132	93.7	74.6	112.0
60	39.8	41.6	62.4#
0	0.0	0.0	0.0

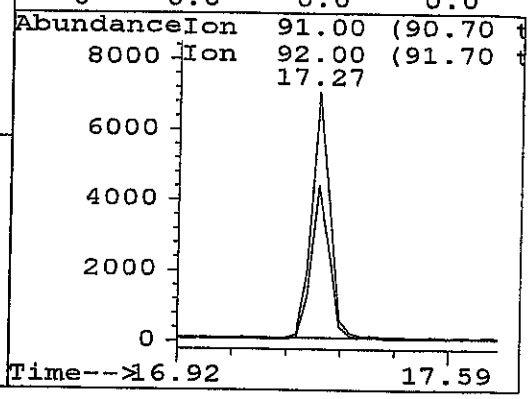


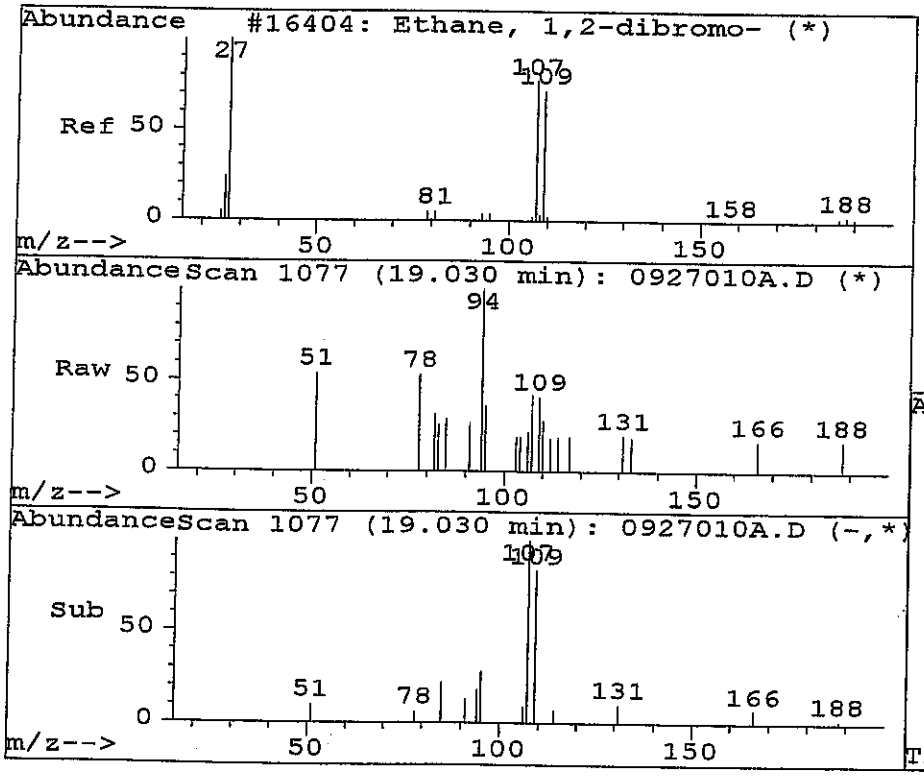


#26
Toluene
Concen: 0.05 ppbV
RT: 17.27 min Scan# 998
Delta R.T. 0.06 min
Lab File: 0927010A.D
Acq: 23 Jun 109 7:10 pm

Tgt Ion:91 Resp: 21530

Ion	Ratio	Lower	Upper
91	100		
92	62.3	53.2	79.8
0	0.0	0.0	0.0
0	0.0	0.0	0.0

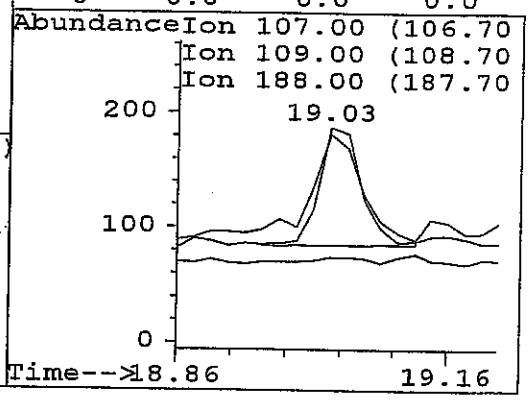


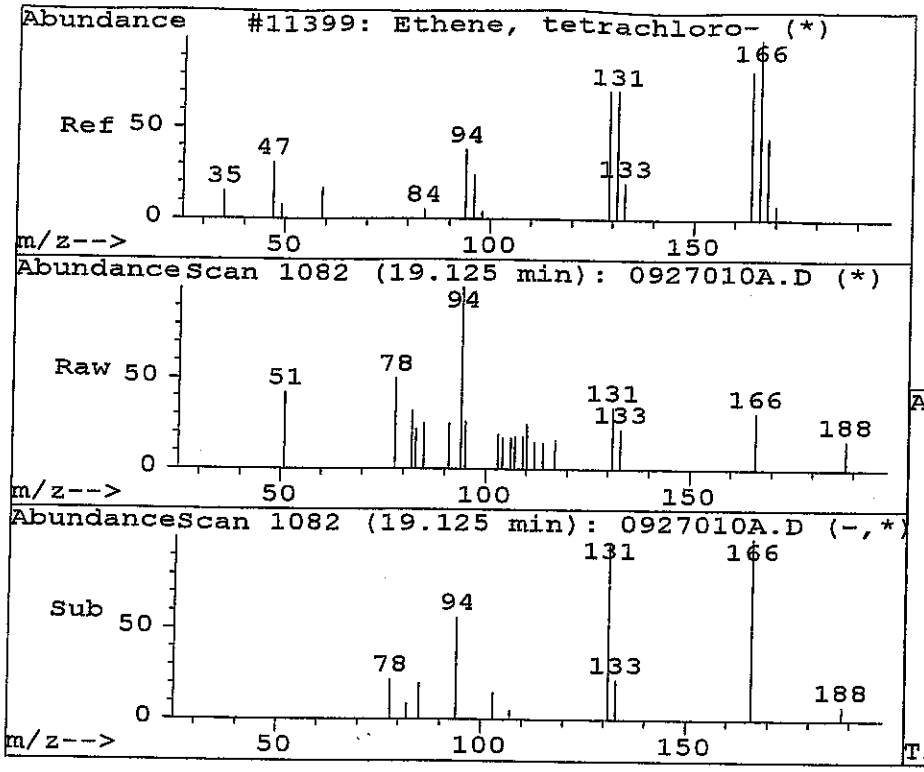


#29
1,2-Dibromoethane
Concen: 0.00 ppbV
RT: 19.03 min Scan# 1077
Delta R.T. 0.04 min
Lab File: 0927010A.D
Acq: 23 Jun 109 7:10 pm

Tgt Ion:107 Resp: 337

Ion	Ratio	Lower	Upper
107	100		
109	87.1	75.9	113.9
188	0.5	1.7	2.5#
0	0.0	0.0	0.0

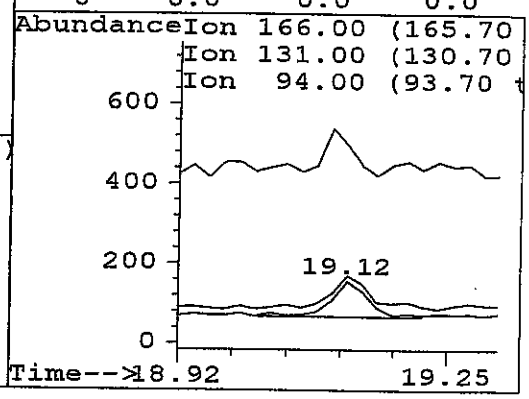


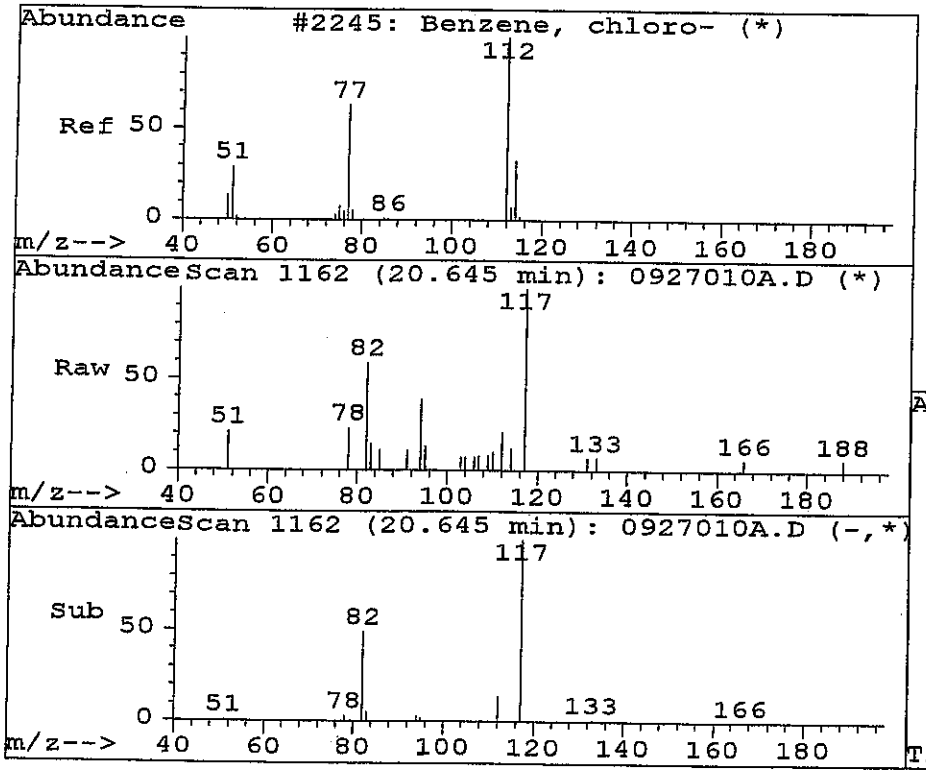


#30
Tetrachloroethene
Concen: 0.00 ppbV
RT: 19.12 min Scan# 1082
Delta R.T. 0.03 min
Lab File: 0927010A.D
Acq: 23 Jun 109 7:10 pm

Tgt Ion:166 Resp: 288

Ion	Ratio	Lower	Upper
166	100		
131	94.8	64.4	96.6
94	72.7	53.6	80.4
0	0.0	0.0	0.0

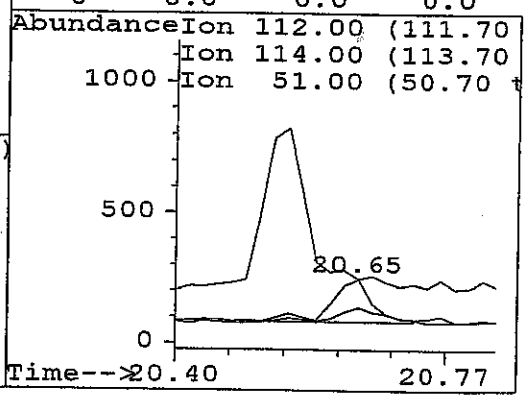


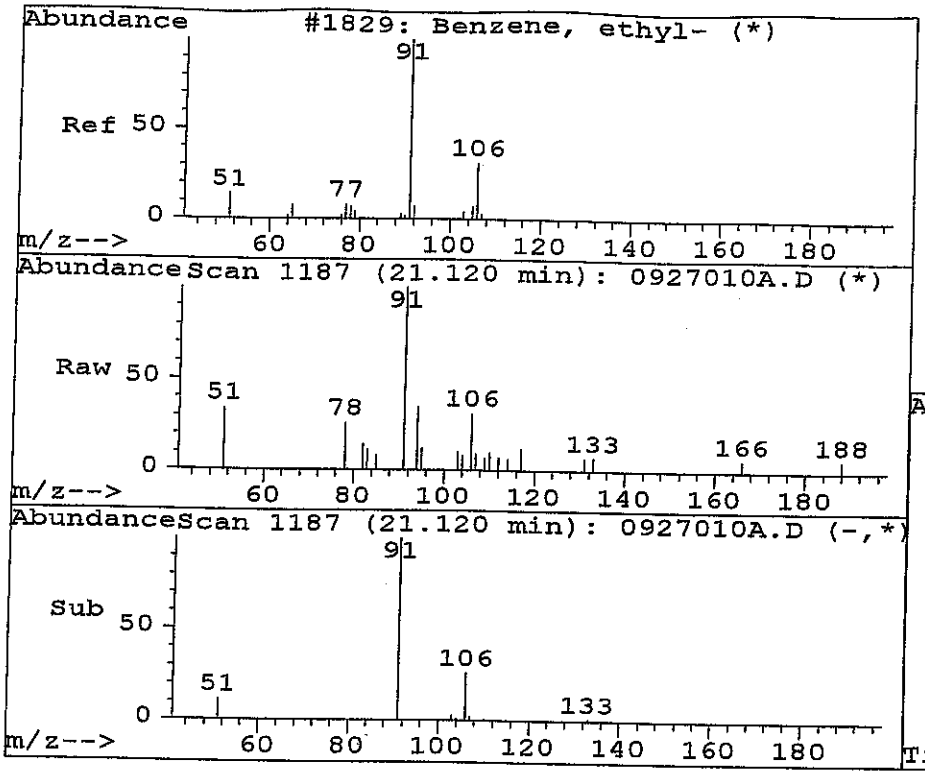


#31
Chlorobenzene
Concen: 0.00 ppbV
RT: 20.65 min Scan# 1162
Delta R.T. 0.06 min
Lab File: 0927010A.D
Acq: 23 Jun 109 7:10 pm

Tgt Ion:112 Resp: 583

Ion	Ratio	Lower	Upper
112	100		
114	33.7	26.6	39.8
51	0.0	12.4	18.6#
0	0.0	0.0	0.0

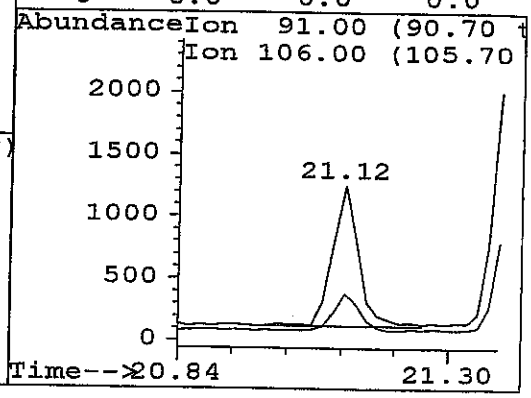


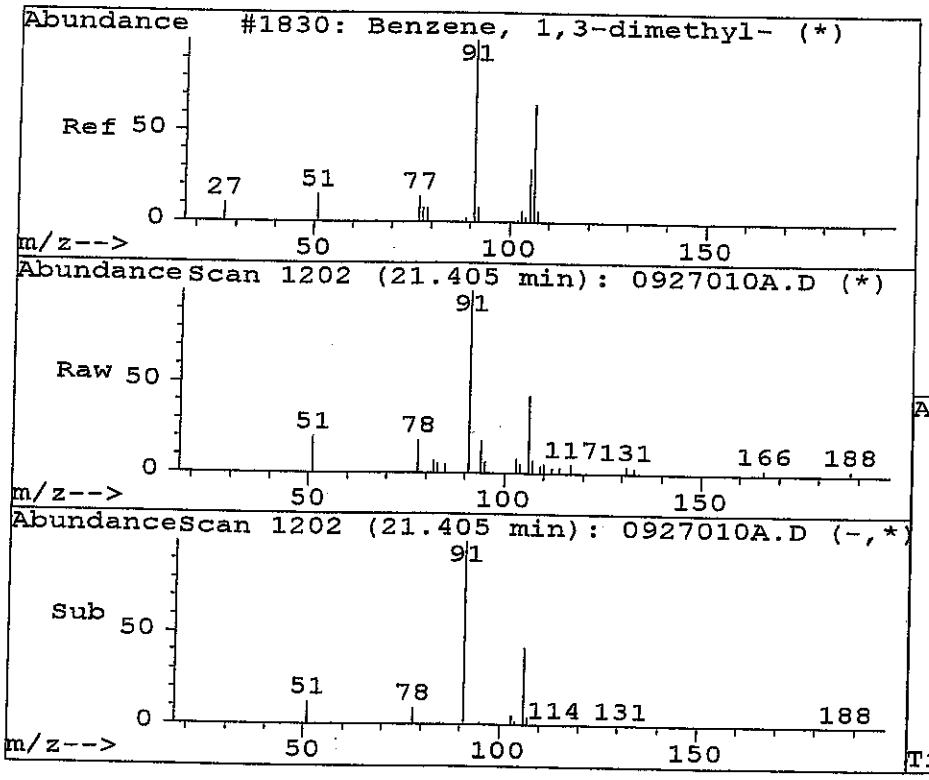


#33
Ethylbenzene
Concen: 0.00 ppbV
RT: 21.12 min Scan# 1187
Delta R.T. 0.04 min
Lab File: 0927010A.D
Acq: 23 Jun 109 7:10 pm

Tgt Ion:91 Resp: 3569

Ion	Ratio	Lower	Upper
91	100		
106	26.4	24.2	36.4
0	0.0	0.0	0.0
0	0.0	0.0	0.0

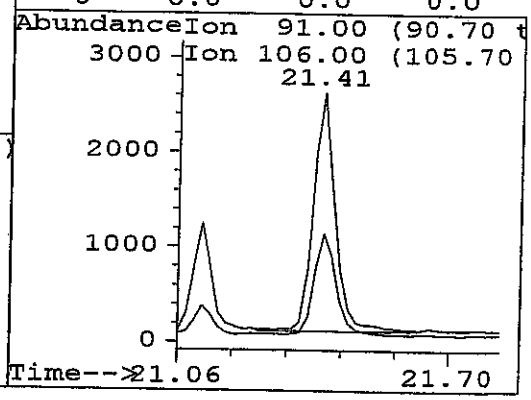


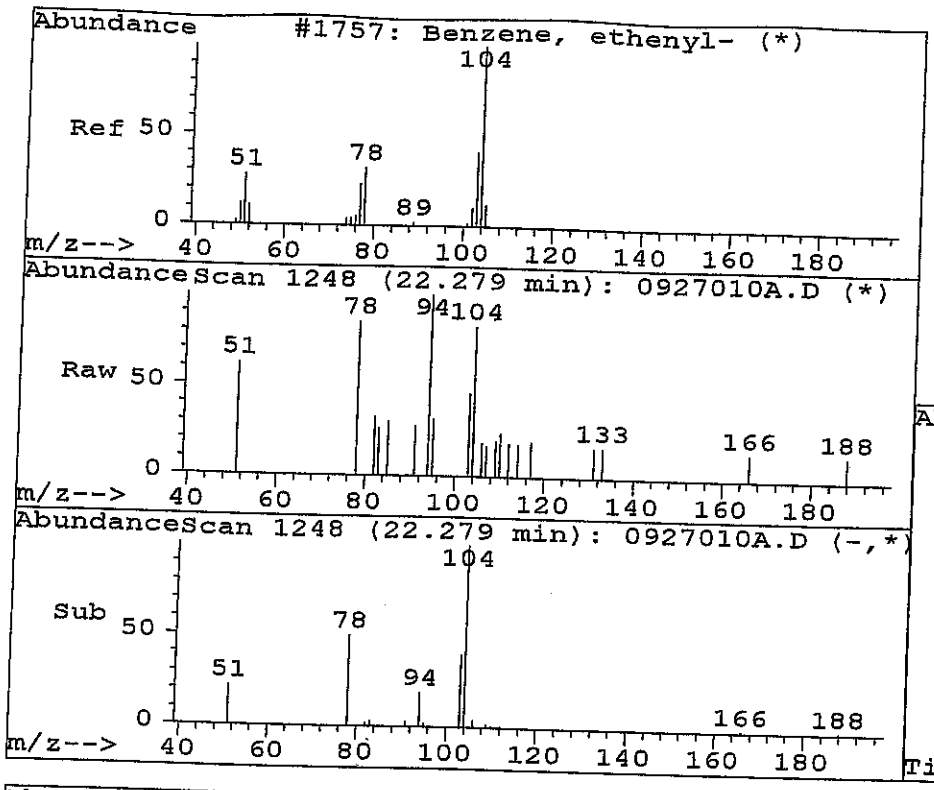


#34
m & p-Xylene
Concen: 0.02 ppbV
RT: 21.41 min Scan# 1202
Delta R.T. 0.04 min
Lab File: 0927010A.D
Acq: 23 Jun 109 7:10 pm

Tgt Ion:91 Resp: 9183

Ion	Ratio	Lower	Upper
91	100		
106	42.0	41.7	62.5
0	0.0	0.0	0.0
0	0.0	0.0	0.0

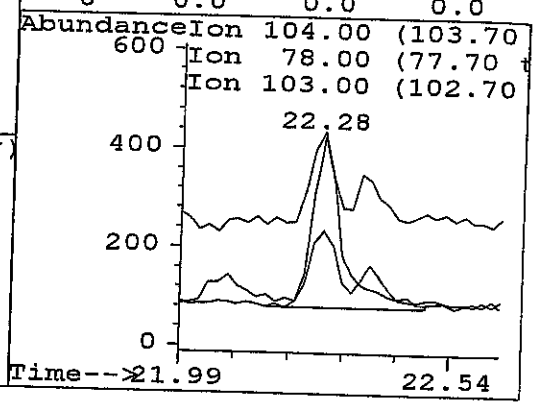


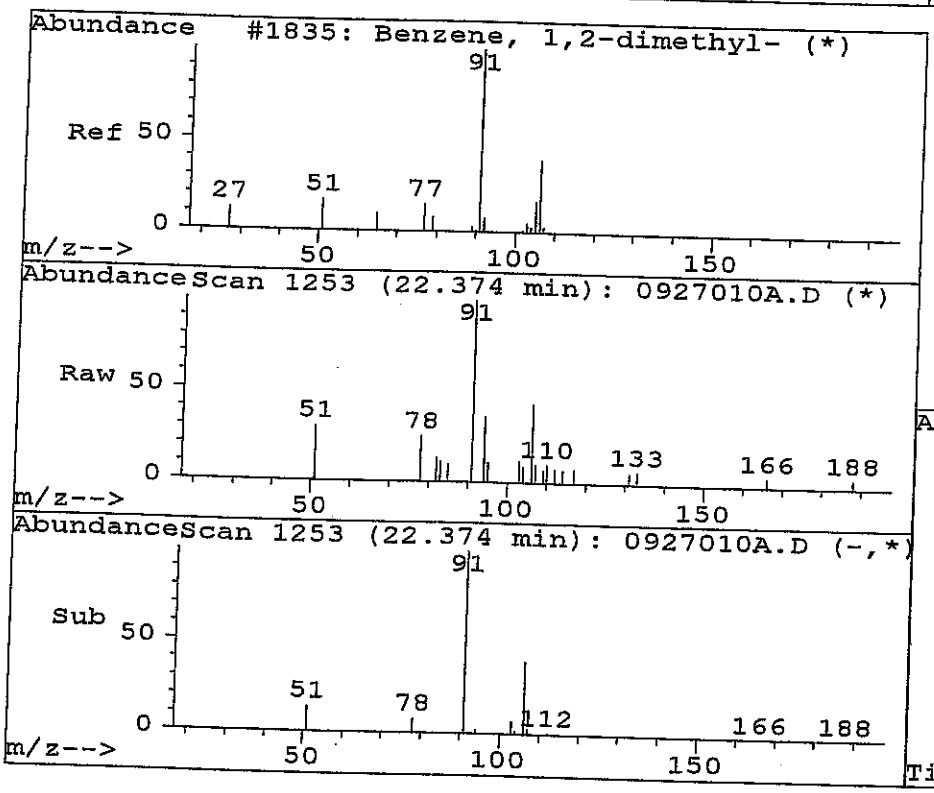


#35
Styrene
Concen: 0.00 ppbV
RT: 22.28 min Scan# 1248
Delta R.T. 0.06 min
Lab File: 0927010A.D
Acq: 23 Jun 109 7:10 pm

Tgt Ion:104 Resp: 1453

Ion	Ratio	Lower	Upper
104	100		
78	51.2	28.2	42.2#
103	39.4	33.8	50.6
0	0.0	0.0	0.0

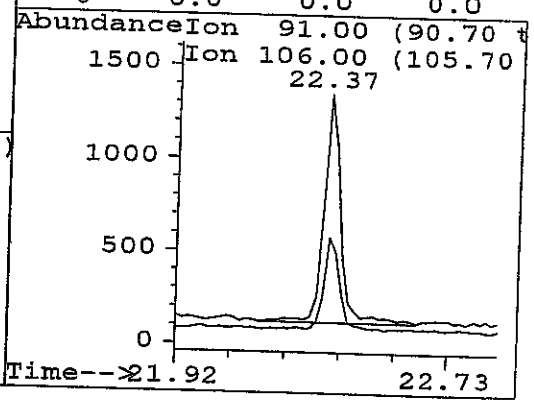


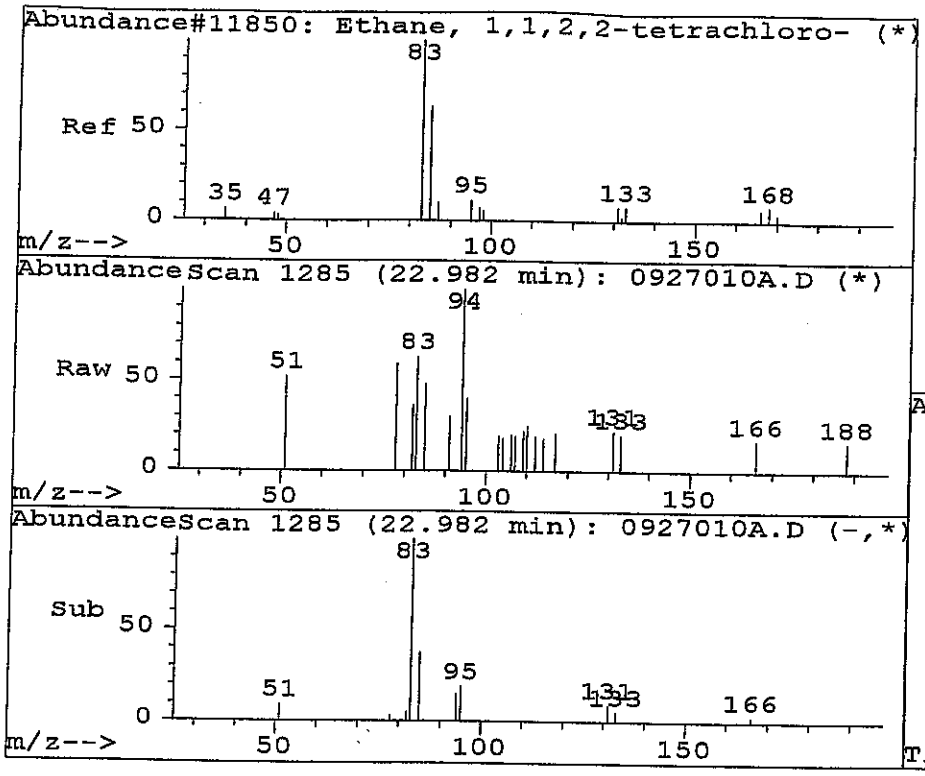


#36
o-Xylene
Concen: 0.01 ppbV
RT: 22.37 min Scan# 1253
Delta R.T. 0.03 min
Lab File: 0927010A.D
Acq: 23 Jun 109 7:10 pm

Tgt Ion:91 Resp: 4317

Ion	Ratio	Lower	Upper
91	100		
106	40.3	37.5	56.3
0	0.0	0.0	0.0
0	0.0	0.0	0.0

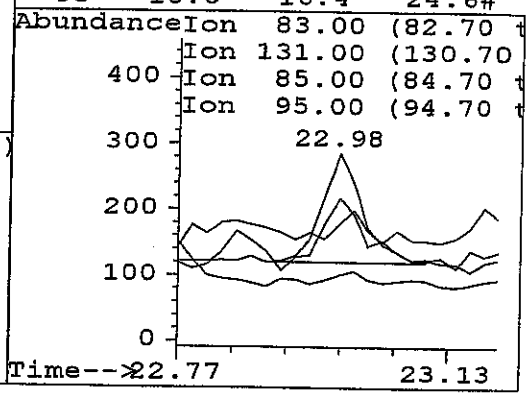


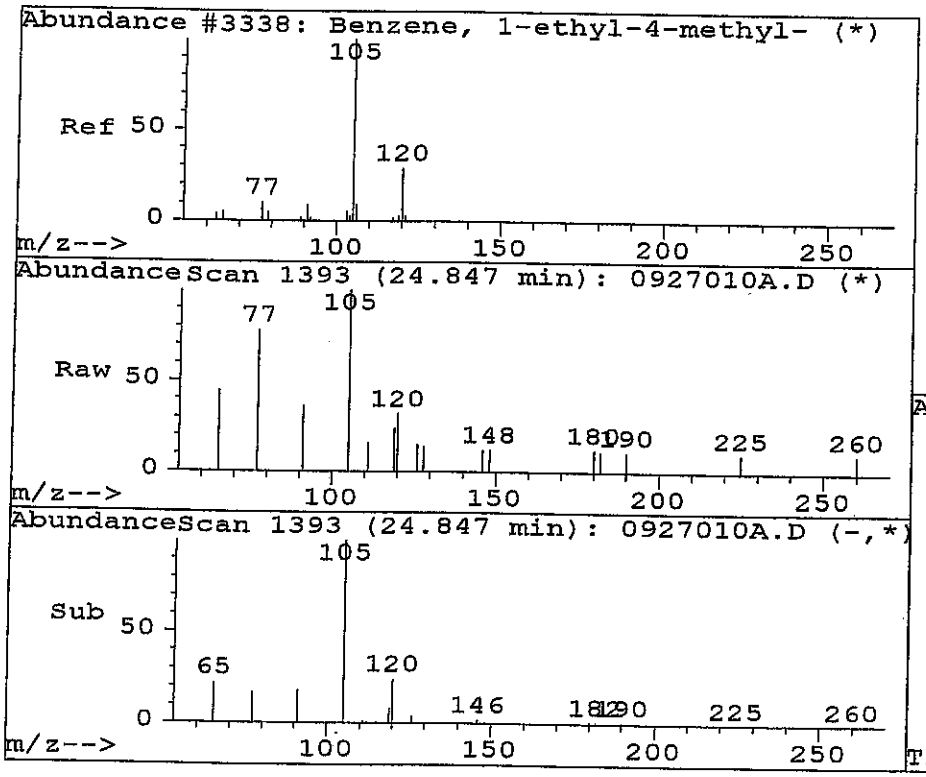


#37
1,1,2,2-Tetrachloroethane
Concen: 0.00 ppbV
RT: 22.98 min Scan# 1285
Delta R.T. 0.05 min
Lab File: 0927010A.D
Acq: 23 Jun 109 7:10 pm

Tgt Ion:83 Resp: 609

Ion	Ratio	Lower	Upper
83	100		
131	7.9	7.8	11.6
85	52.9	55.5	83.3#
95	10.0	16.4	24.6#

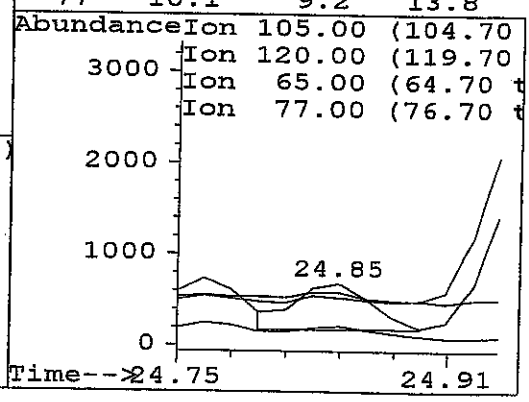


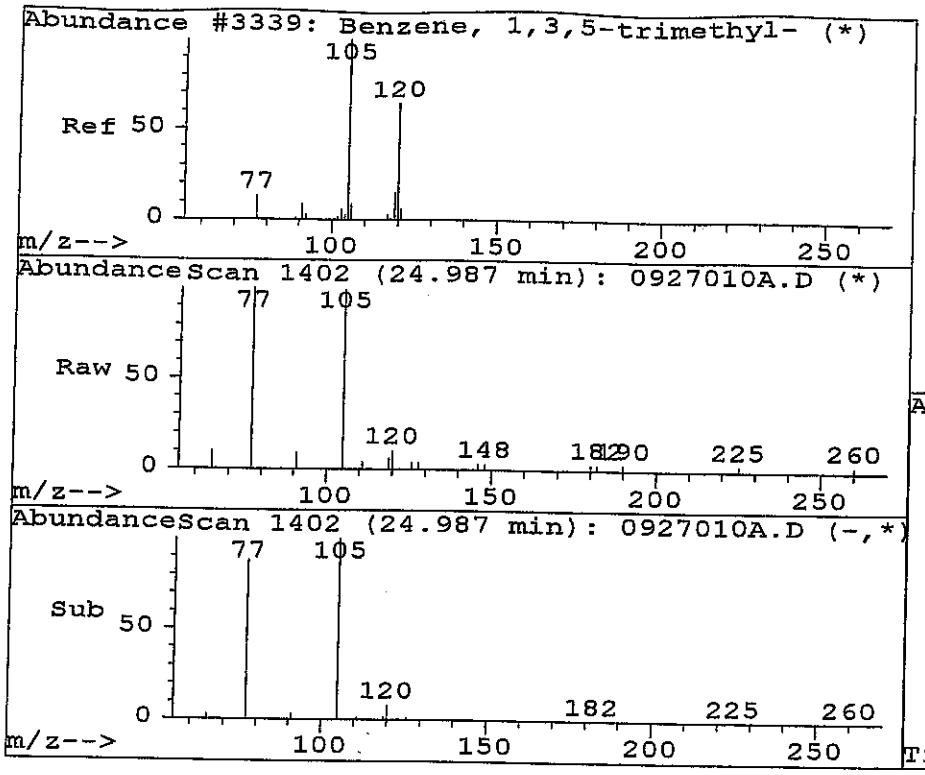


#38
4-Ethyltoluene
Concen: 0.00 ppbV
RT: 24.85 min Scan# 1393
Delta R.T. 0.05 min
Lab File: 0927010A.D
Acq: 23 Jun 109 7:10 pm

Tgt Ion:105 Resp: 1537

Ion	Ratio	Lower	Upper
105	100		
120	21.5	19.6	29.4
65	17.6	9.1	13.7#
77	10.1	9.2	13.8

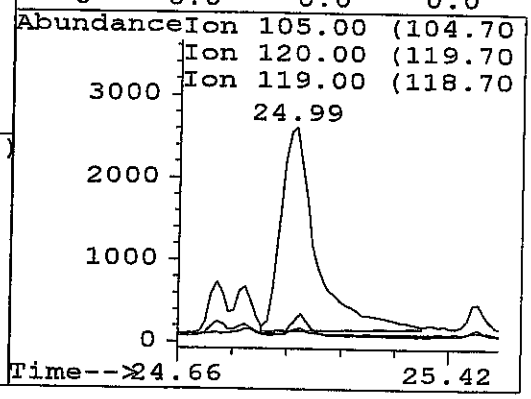


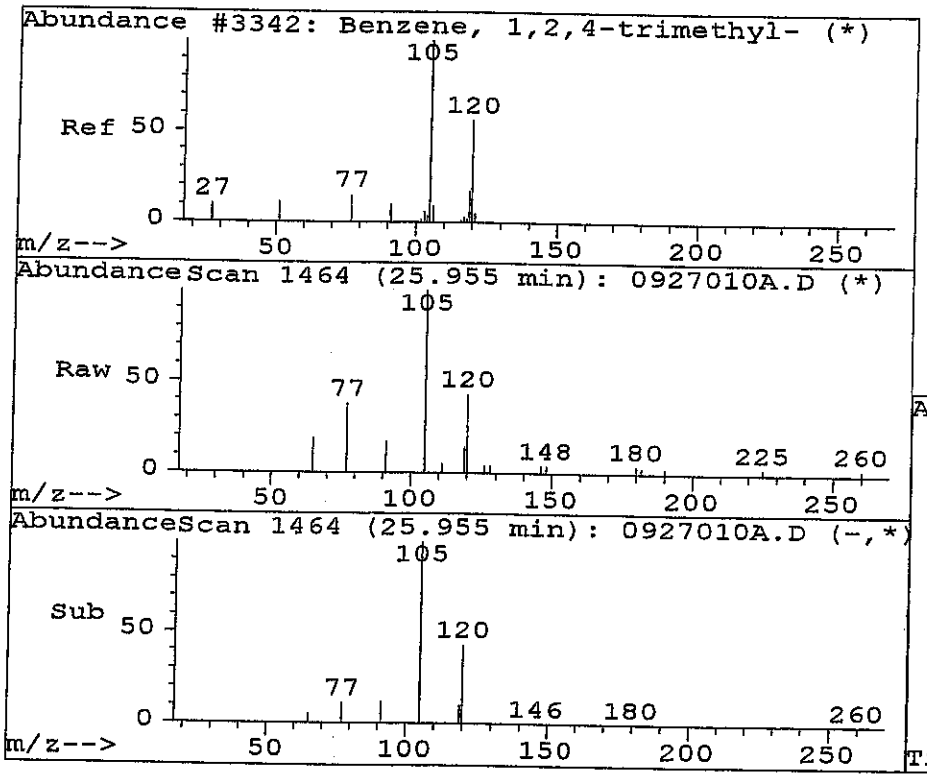


#39
1,3,5-Trimethylbenzene
Concen: 0.01 ppbV
RT: 24.99 min Scan# 1402
Delta R.T. 0.03 min
Lab File: 0927010A.D
Acq: 23 Jun 109 7:10 pm

Tgt Ion:105 Resp: 17201

Ion	Ratio	Lower	Upper
105	100		
120	7.6	38.6	57.8#
119	2.3	8.6	13.0#
0	0.0	0.0	0.0

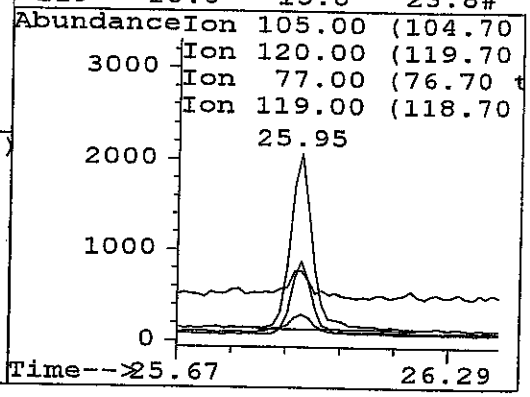


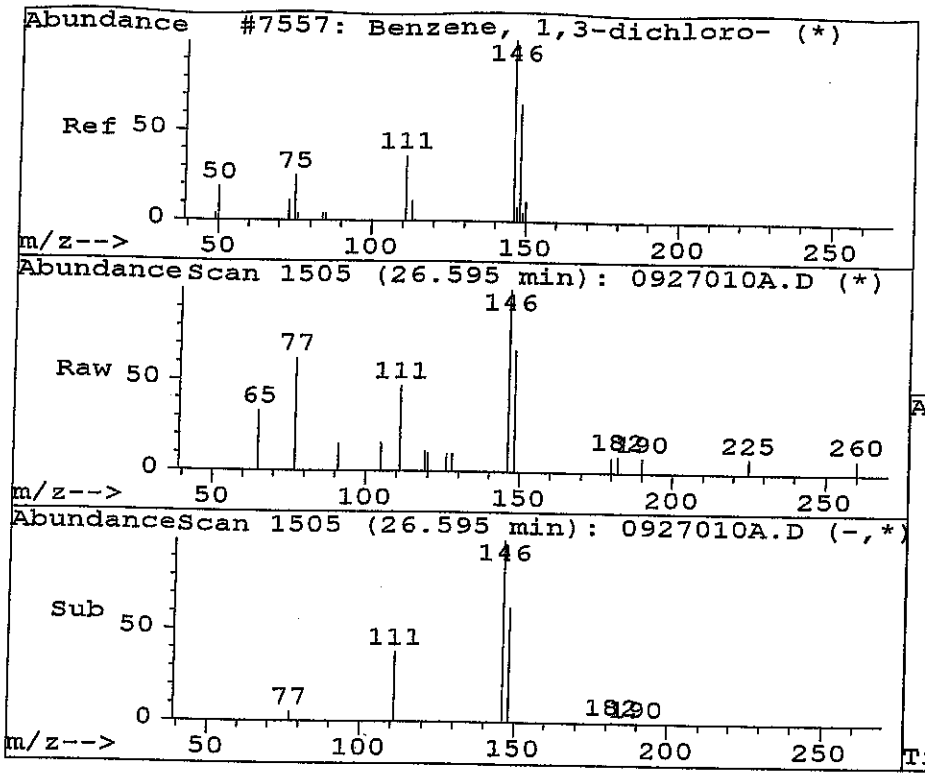


#40
1,2,4-Trimethylbenzene
Concen: 0.00 ppbV
RT: 25.95 min Scan# 1464
Delta R.T. 0.04 min
Lab File: 0927010A.D
Acq: 23 Jun 109 7:10 pm

Tgt Ion:105 Resp: 6803

Ion	Ratio	Lower	Upper
105	100		
120	41.2	36.1	54.1
77	13.7	11.7	17.5
119	10.0	15.8	23.8#

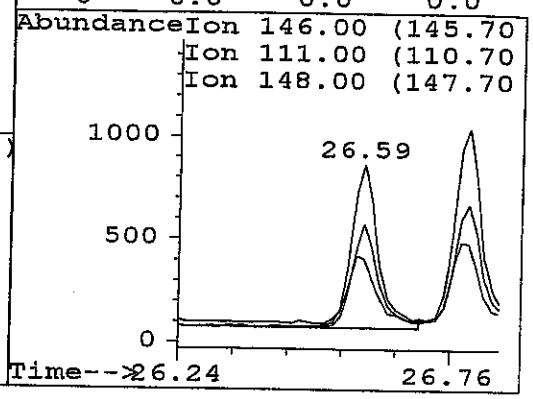


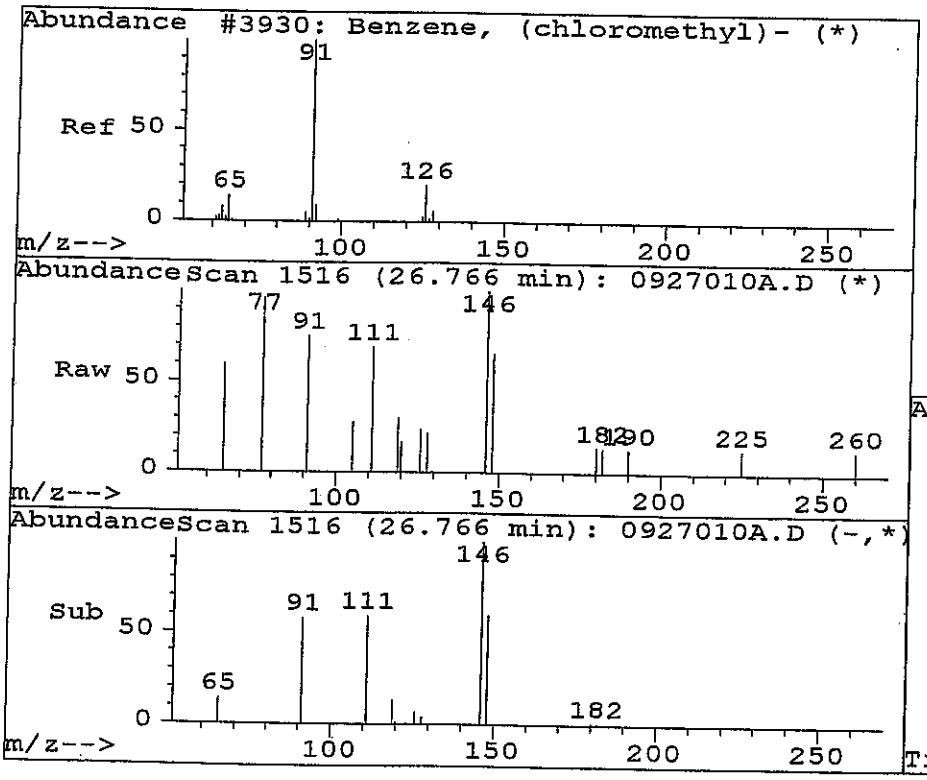


#41
1,3-Dichlorobenzene
Concen: 0.00 ppbV
RT: 26.59 min Scan# 1505
Delta R.T. 0.04 min
Lab File: 0927010A.D
Acq: 23 Jun 109 7:10 pm

Tgt Ion:146 Resp: 2949

Ion	Ratio	Lower	Upper
146	100		
111	38.6	34.7	52.1
148	63.2	55.0	82.4
0	0.0	0.0	0.0

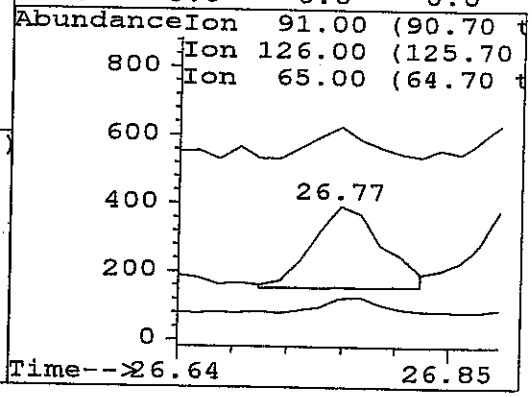


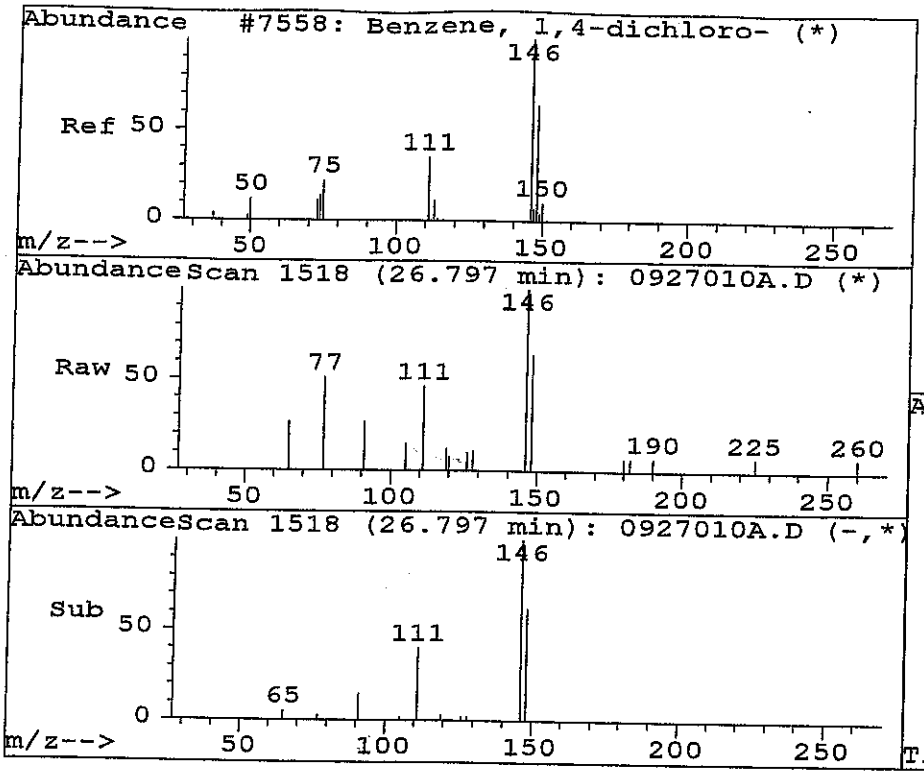


#42
Benzyl chloride
Concen: 0.00 ppbV
RT: 26.77 min Scan# 1516
Delta R.T. 0.07 min
Lab File: 0927010A.D
Acq: 23 Jun 109 7:10 pm

Tgt Ion:91 Resp: 906

Ion	Ratio	Lower	Upper
91	100		
126	17.7	15.4	23.0
65	42.3	18.6	27.8#
0	0.0	0.0	0.0

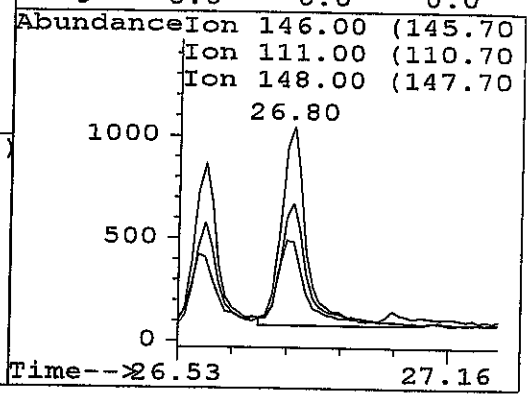


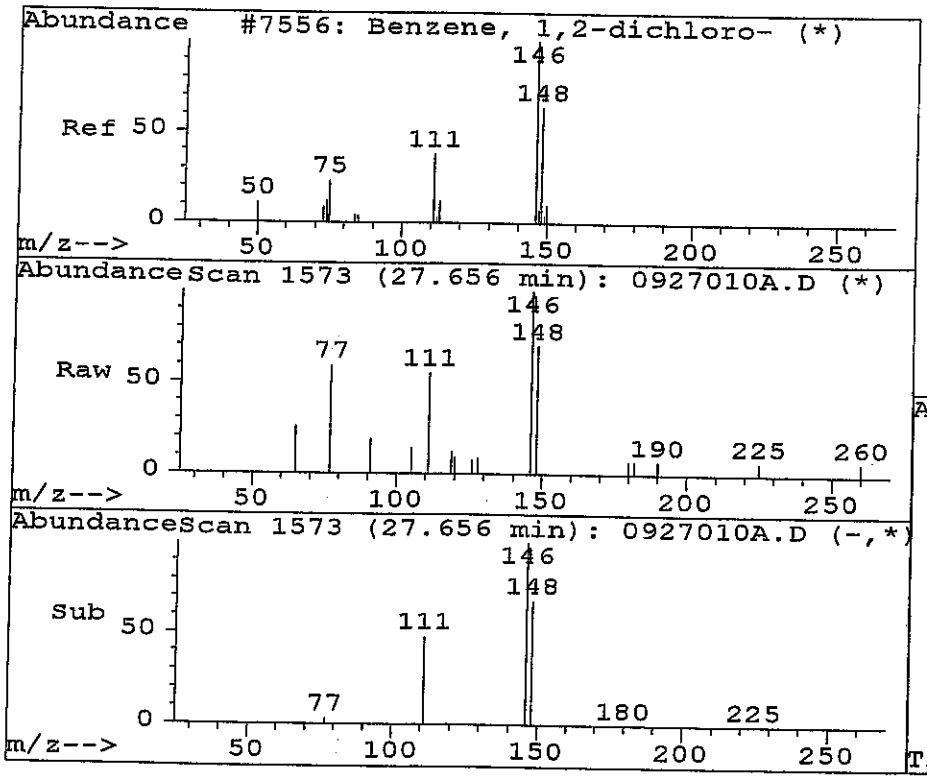


#43
1,4-Dichlorobenzene
Concen: 0.00 ppbV
RT: 26.80 min Scan# 1518
Delta R.T. 0.05 min
Lab File: 0927010A.D
Acq: 23 Jun 109 7:10 pm

Tgt Ion:146 Resp: 4038

Ion	Ratio	Lower	Upper
146	100		
111	38.9	32.4	48.6
148	60.7	55.3	82.9
0	0.0	0.0	0.0

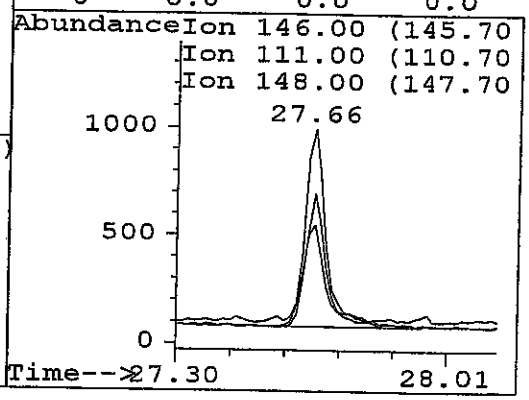


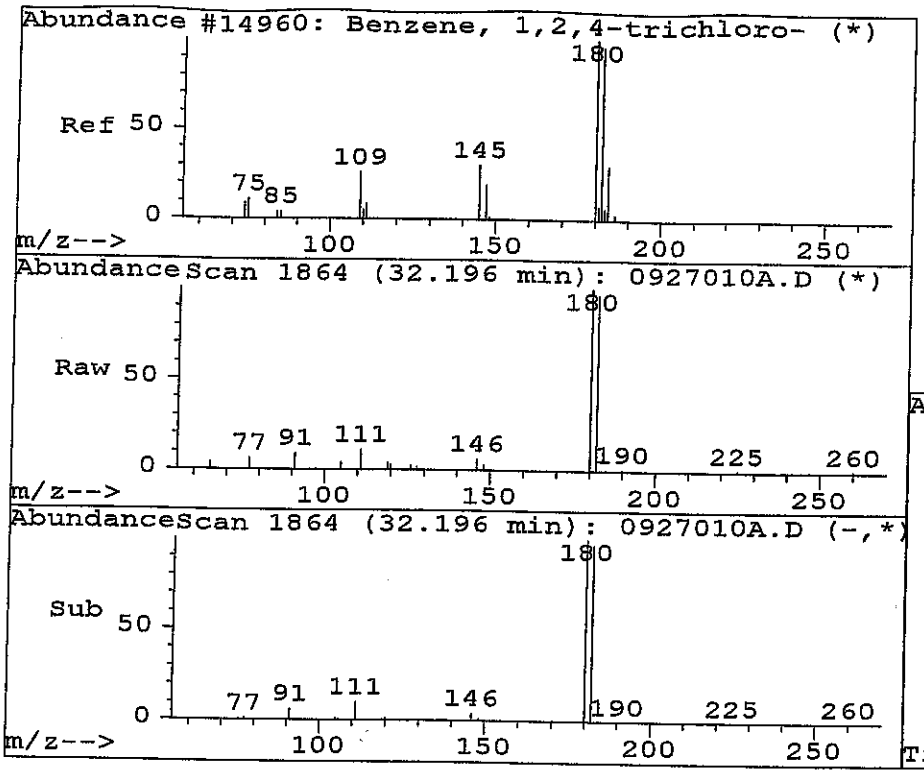


#44
1,2-Dichlorobenzene
Concen: 0.00 ppbV
RT: 27.66 min Scan# 1573
Delta R.T. 0.05 min
Lab File: 0927010A.D
Acq: 23 Jun 109 7:10 pm

Tgt Ion:146 Resp: 3609

Ion	Ratio	Lower	Upper
146	100		
111	47.7	38.2	57.2
148	66.9	54.6	81.8
0	0.0	0.0	0.0

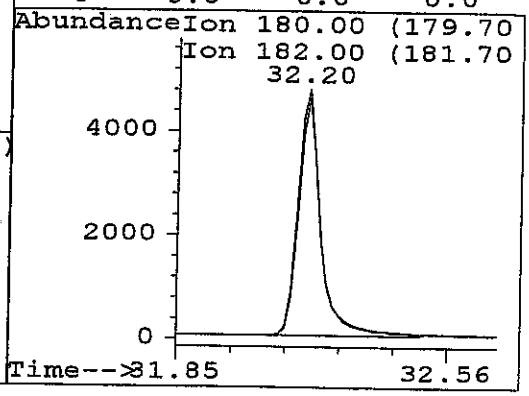


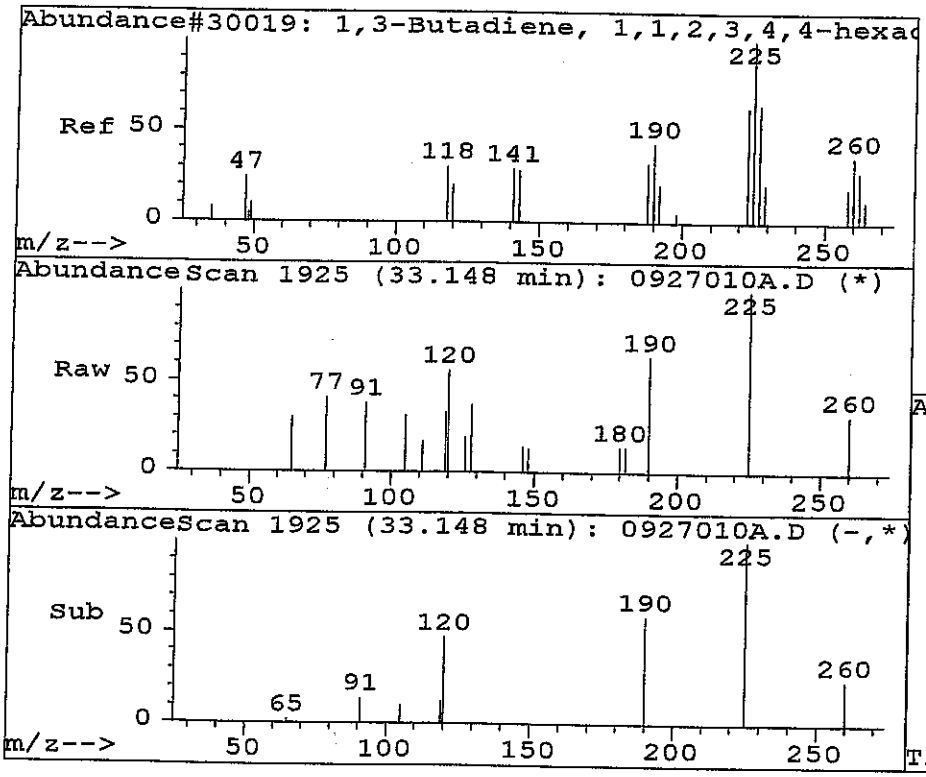


#45
1,2,4-Trichlorobenzene
Concen: 0.01 ppbV
RT: 32.20 min Scan# 1864
Delta R.T. 0.03 min
Lab File: 0927010A.D
Acq: 23 Jun 109 7:10 pm

Tgt Ion:180 Resp: 20106

Ion	Ratio	Lower	Upper
180	100		
182	96.5	79.0	118.4
0	0.0	0.0	0.0
0	0.0	0.0	0.0

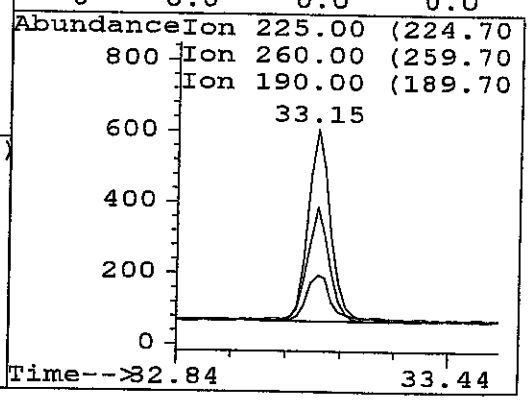


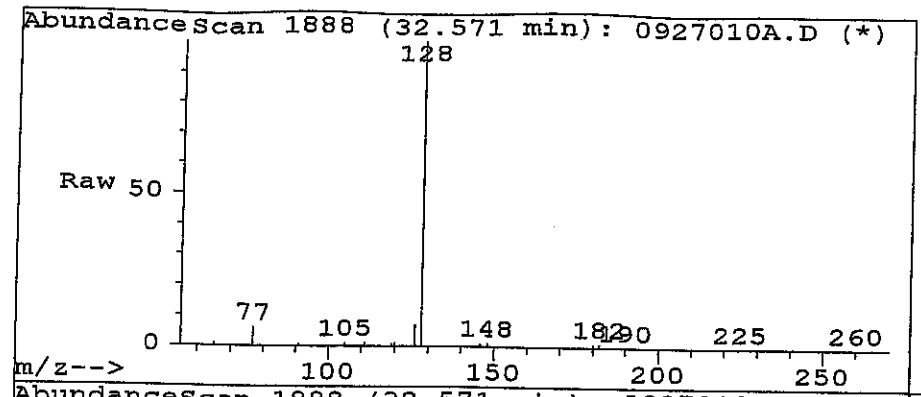


#46
Hexachlorobutadiene
Concen: 0.00 ppbV
RT: 33.15 min Scan# 1925
Delta R.T. 0.02 min
Lab File: 0927010A.D
Acq: 23 Jun 109 7:10 pm

Tgt Ion:225 Resp: 1940

Ion	Ratio	Lower	Upper
225	100		
260	23.5	20.5	30.7
190	58.2	43.0	64.4
0	0.0	0.0	0.0

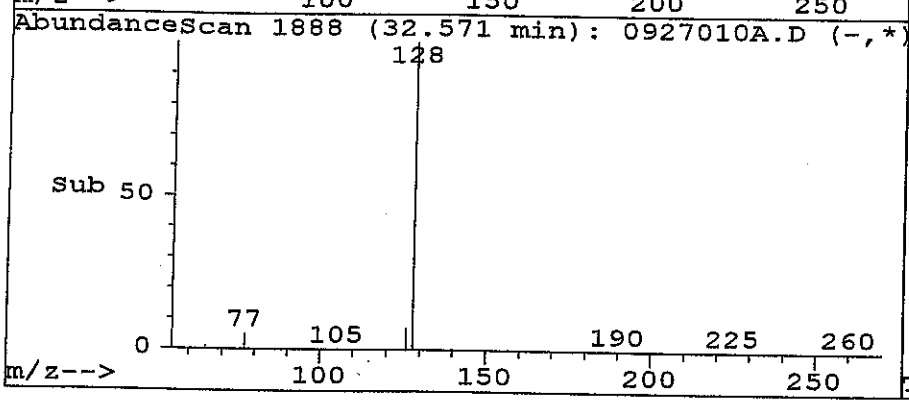


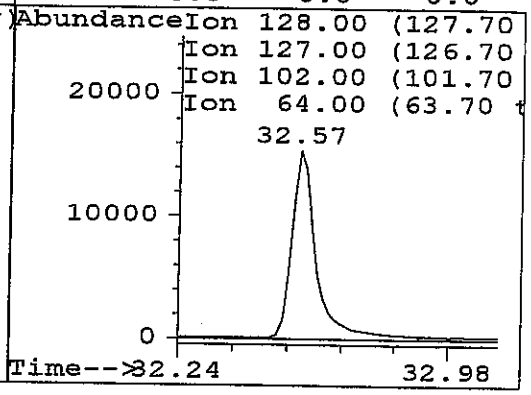


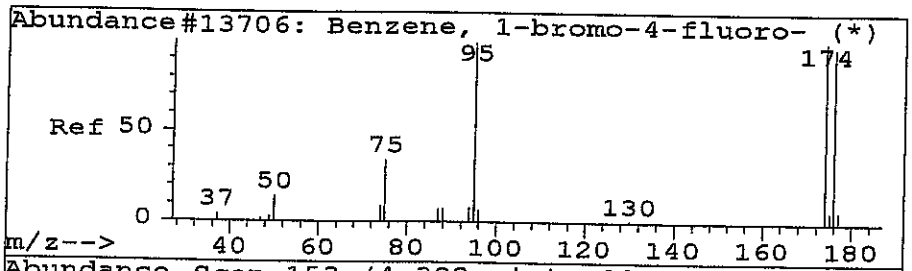
#48
Naphthalene
Concen: 0.01 ppbV m
RT: 32.57 min Scan# 1888
Delta R.T. -0.21 min
Lab File: 0927010A.D
Acq: 23 Jun 109 7:10 pm

Tgt Ion:128 Resp: 73703

Ion	Ratio	Lower	Upper
128	100		
127	0.0	0.0	0.0
102	0.0	0.0	0.0
64	0.0	0.0	0.0



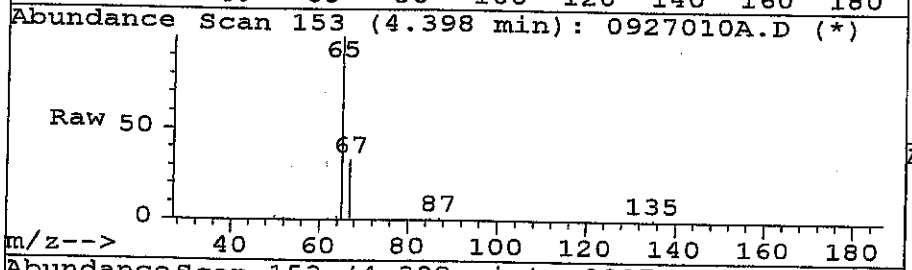


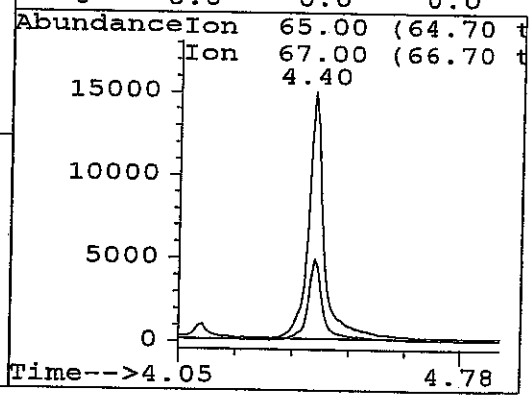


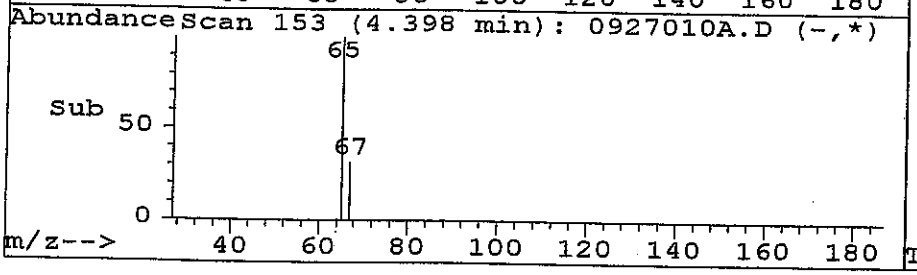
#49
Vinyl Chloride-d3
Concen: 0.16 ppbV
RT: 4.40 min Scan# 153
Delta R.T. 0.05 min
Lab File: 0927010A.D
Acq: 23 Jun 109 7:10 pm

Tgt Ion:65 Resp: 43704

Ion	Ratio	Lower	Upper
65	100		
67	32.6	26.6	40.0
0	0.0	0.0	0.0
0	0.0	0.0	0.0







7.2: Ion Spectra for Initial Calibration
Initial Calibration Title: 1T15EXAY.M

Quantitation Report

Data File : C:\MSCHEM\2\DATA\03179M~1\C03169H.D
Acq Time : 16 Mar 109 7:21 pm
Sample : ST60022 + ST60350
Misc : 10.0 ML
Quant Time: Mar 17 10:13 19109

Operator: CM
Inst : 5970 - In
Multiplr: 1.00

Method : C:\MSCHEM\2\METHODS\1T15EXAY.M
Title : EPA TO-15
Last Update : Tue Mar 17 14:18:15 2009
Response via : Multiple Level Calibration

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Pentafluorobenzene	11.20	168	2737194	20.00 ppbV	-0.18
35) 1,4-Difluorobenzene	12.99	114	2706138	20.00 ppbV	-0.18
System Monitoring Compounds					%Recovery
94) Toluene-d8	16.75	98	1546296	10.56 ppbV	211.21%
95) Chlorobenzene-d5	20.17	117	2900630	22.73 ppbV	227.26%
96) 1,4-Bromofluorobenzene	23.19	95	2163994	10.64 ppbV	212.81%
Target Compounds					Qvalue
2) Dichlorodifluoromethane	3.74	85	840988	13.04 ppbV	98
3) Chloromethane	3.99	50	505057	12.83 ppbV	96
4) Freon 114	4.01	85	861160	13.07 ppbV	89
5) Vinyl chloride	4.22	62	285530	12.21 ppbV	98
6) Bromomethane	4.80	94	274473	10.80 ppbV	93
7) Chloroethane	4.99	64	141439	12.27 ppbV	96
8) Ethanol	5.05	45	1626206	61.82 ppbV	99
9) Acrolein	5.74	56	363529	58.70 ppbV	92
10) Trichlorofluoromethane	5.80	101	716396	9.44 ppbV	97
11) Acetonitrile	5.79	41	1344233	38.36 ppbV	98
12) Acetone	5.87	43	770083	6.01 ppbV	97
13) 2-propanol	5.98	45	1427833	25.00 ppbV #	100
14) Methyl iodide	6.82	142	874608	26.12 ppbV	99
15) 1,1-Dichloroethene	6.74	61	730028	13.19 ppbV	100
16) Acrylonitrile	6.78	53	1312482	48.50 ppbV	98
17) Freon 113	7.02	151	591375	11.11 ppbV	96
18) Allyl chloride	7.19	41	716230	18.11 ppbV	91
19) Dichloromethane	7.15	84	330491	14.23 ppbV	93
20) Carbon disulfide	7.39	76	313353	15.63 ppbV	99
21) trans-1,2-Dichloroethene	8.21	96	230621	11.10 ppbV	95
22) Methyl tert butyl ether	8.37	73	967308	9.54 ppbV	94
23) Propionitrile	8.64	54	1209148	45.50 ppbV	98
24) 1,1-Dichloroethane	8.72	63	871129	13.77 ppbV	96
25) Vinyl acetate	10.13	43	1560060	14.49 ppbV	98
26) 2-Butanone	9.36	72	205517	11.28 ppbV #	39
27) Hexane	9.54	57	409529	8.44 ppbV	74
28) Bromochloromethane	10.31	49	729979	13.22 ppbV #	81
29) Tetrahydrofuran	10.74	42	5179960	24.89 ppbV m	91
30) Isobutyl alcohol	10.74	74	411535	57.39 ppbV	95
31) Methacrylonitrile	9.54	67	731423	40.99 ppbV	99
32) cis-1,2-Dichloroethene	9.92	96	421914	12.42 ppbV	90
33) 2,2-Dichloropropane	10.23	77	713261	10.34 ppbV #	93
34) Chloroform	10.34	83	959204	11.94 ppbV	100
36) 1,1,1-Trichloroethane	11.61	97	970639	9.90 ppbV	94
37) 1,2-Dichloroethane	11.68	62	920839	10.77 ppbV #	95
38) 1,1-Dichloropropene	12.06	75	616834	10.31 ppbV	97
39) Cyclohexane	12.39	56	691589	11.95 ppbV	91
40) Benzene	12.33	78	1387400	10.39 ppbV	95
41) Carbon tetrachloride	12.38	117	931992	8.90 ppbV	94
42) n-Heptane	13.86	43	1176503	12.21 ppbV #	87
43) 1,2-Dichloropropane	13.88	63	598806	13.14 ppbV	93
44) 1,4 Dioxane	14.20	88	540834	16.53 ppbV #	99
45) Dibromomethane	14.00	174	786579	9.29 ppbV	98
46) Trichloroethene	13.94	130	666308	8.13 ppbV	95
47) Bromodichloromethane	14.22	83	885573	9.40 ppbV	96
48) Methyl methacrylate	14.34	69	1334867	30.88 ppbV	81
49) Methyl Isobutyl Ketone	15.55	43	2505790	14.35 ppbV	92

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

Quantitation Report

Data File : C:\MSCHEM\2\DATA\03179M~1\C03169H.D
Acq Time : 16 Mar 109 7:21 pm
Sample : ST60022 + ST60350
Misc : 10.0 ML
Quant Time: Mar 17 10:13 19109

Operator: CM
Inst : 5970 - In
Multiplr: 1.00

Method : C:\MSCHEM\2\METHODS\1T15EXAY.M
Title : EPA TO-15
Last Update : Tue Mar 17 14:18:15 2009
Response via : Multiple Level Calibration

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
50)	cis-1,3-Dichloropropene	15.63	75	1010236	13.06	ppbV	99
51)	Toluene	16.93	91	1877014	10.85	ppbV	98
52)	trans-1,3-Dichloropropene	16.66	75	1205186	12.30	ppbV	99
53)	1,1,2-Trichloroethane	16.97	61	608914	11.97	ppbV	96
54)	2-Hexanone	17.59	43	3278869	14.71	ppbV	98
55)	1,3-Dichloropropane	17.54	76	989685	12.63	ppbV	99
56)	Octane	18.08	57	525459	8.28	ppbV	94
57)	Dibromochloromethane	18.11	129	1316838	9.73	ppbV	100
58)	1,2-Dibromoethane	18.59	107	1505940	12.10	ppbV #	99
59)	Tetrachloroethene	18.78	166	1126037	9.31	ppbV	92
60)	Chlorobenzene	20.26	112	1818049	11.41	ppbV	98
61)	1,1,1,2-Tetrachloroethane	20.32	131	921637	10.15	ppbV	97
62)	Ethylbenzene	20.79	91	3108186	12.07	ppbV	100
63)	m & p-Xylene	21.09	91	4725274	20.91	ppbV	99
64)	Styrene	21.92	104	1812012	11.40	ppbV	98
65)	Bromoform	21.81	173	2416870	11.24	ppbV	97
66)	o-Xylene	22.05	91	2817484	11.50	ppbV	98
67)	1,1,2,2-Tetrachloroethane	22.56	83	3385910	18.54	ppbV #	98
68)	1,2,3-Trichloropropane	22.88	110	714721	13.56	ppbV	96
69)	t-1,4-Dichloro-2-butene	23.03	53	2007908	39.27	ppbV	97
70)	n-Propylbenzene	24.23	91	5124406	12.35	ppbV	96
71)	Isopropylbenzene	24.54	105	3712735	11.44	ppbV	100
72)	4-Ethyltoluene	24.54	105	3712735	11.34	ppbV	98
73)	1,3,5-Trimethylbenzene	24.71	105	3957960	11.91	ppbV	98
74)	Methylstyrene	25.17	118	1746656	13.61	ppbV	97
75)	tert-butyl benzene	25.62	119	2904495	9.67	ppbV	99
76)	1,2,4-Trimethylbenzene	25.66	105	3635276	9.88	ppbV	95
77)	sec-butylbenzene	26.27	105	4221559	10.51	ppbV	99
78)	1,3-Dichlorobenzene	26.22	146	3205866	10.75	ppbV	97
79)	Isopropyltoluene	26.64	119	4292399	10.83	ppbV	97
80)	Benzyl chloride	26.38	91	4463720	13.58	ppbV	97
81)	1,4-Dichlorobenzene	26.43	146	3091714	9.84	ppbV m	96
82)	n-Butylbenzene	27.69	91	5393478	12.90	ppbV	98
83)	1,2-Dichlorobenzene	27.28	146	4272294	12.28	ppbV	95
84)	1,2-Dibromo-3-chloropropan	28.81	75	7308444	36.97	ppbV m	1
85)	Tetraethyl lead	30.77	237	3224507	11.51	ppbV m	96
86)	1,2,4-Trichlorobenzene	31.86	180	7156710	11.67	ppbV	92
87)	Naphthalene	32.27	128	24925580	37.90	ppbV #	97
88)	Hexachlorobutadiene	32.89	225	4177636	8.74	ppbV	98
89)	Propylene	3.67	40	191557	17.14	ppbV	94
90)	1,3-Butadiene	4.36	54	318019	13.49	ppbV	97
92)	2-Chlorotoluene	24.29	91	3030861	9.98	ppbV m	100
93)	4-Chlorotoluene	24.44	91	3768334	11.79	ppbV	100

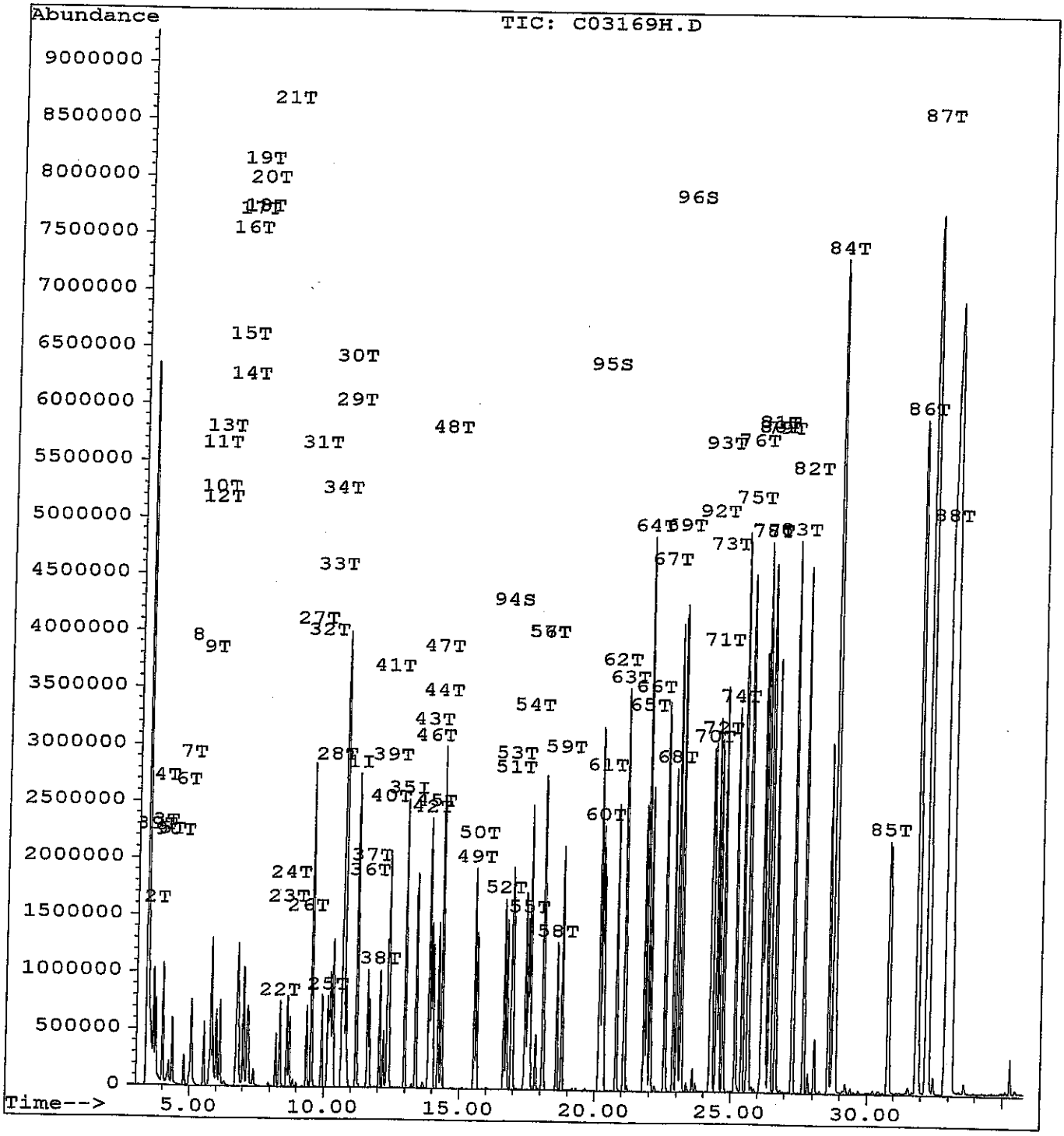
(#) = qualifier out of range (m) = manual integration

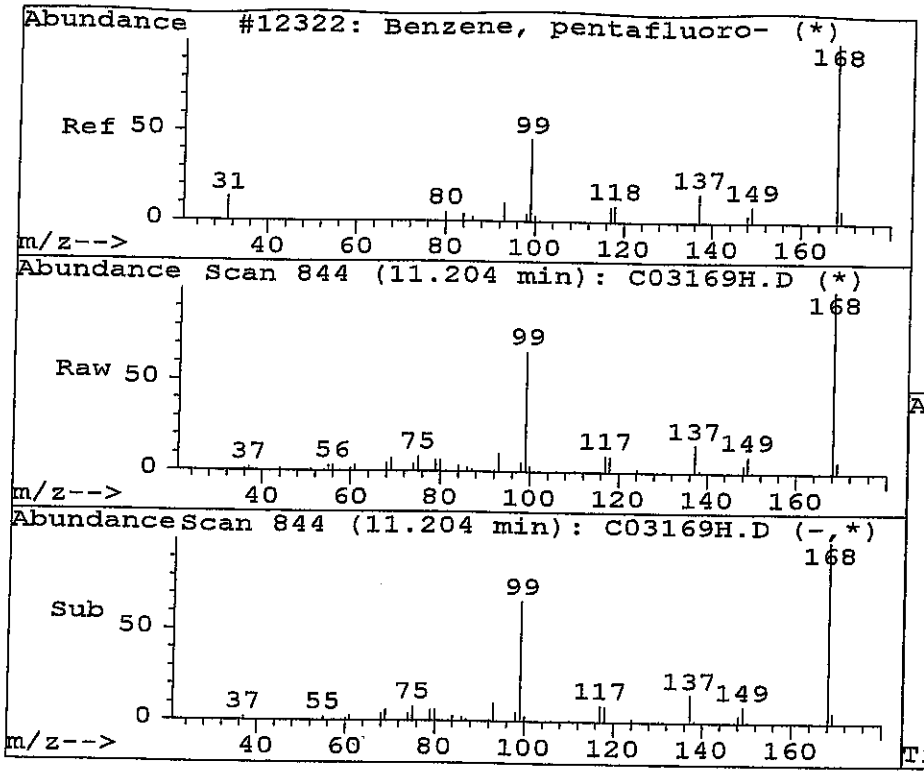
Quantitation Report

Data File : C:\MSCHEM\2\DATA\03179M~1\C03169H.D
Acq Time : 16 Mar 109 7:21 pm
Sample : ST60022 + ST60350
Misc : 10.0 ML
Quant Time: Mar 17 10:13 19109

Operator: CM
Inst : 5970 - In
Multiplr: 1.00

Method : C:\MSCHEM\2\METHODS\1T15EXAY.M
Title : EPA TO-15
Last Update : Tue Mar 17 14:18:15 2009
Response via : Multiple Level Calibration

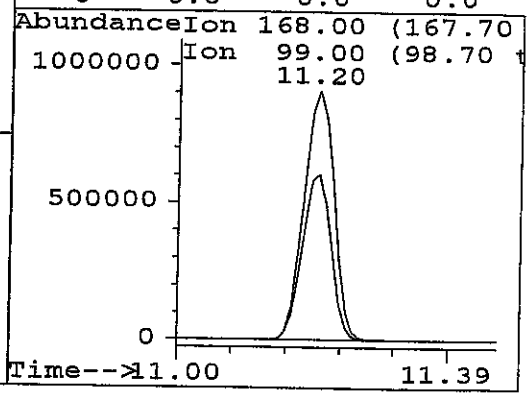


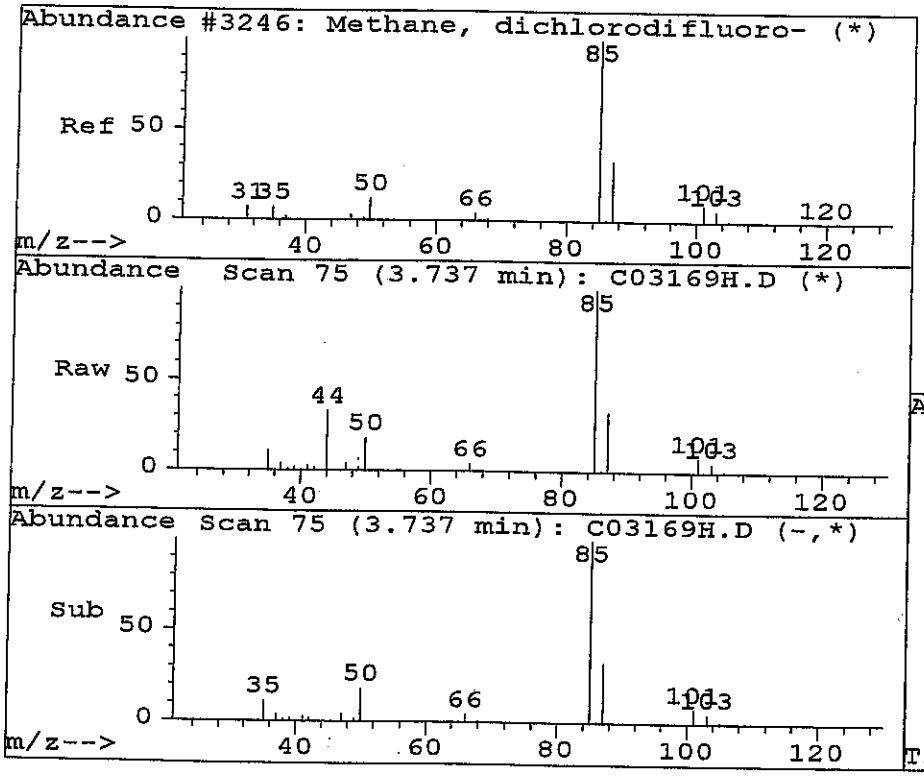


#1
Pentafluorobenzene
Concen: 20.00 ppbV
RT: 11.20 min Scan# 844
Delta R.T. -0.18 min
Lab File: C03169H.D
Acq: 16 Mar 109 7:21 pm

Tgt Ion:168 Resp: 2737194

Ion	Ratio	Lower	Upper
168	100		
99	66.4	46.6	70.0
0	0.0	0.0	0.0
0	0.0	0.0	0.0

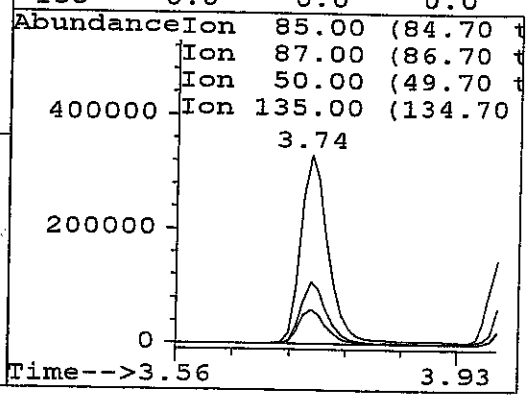


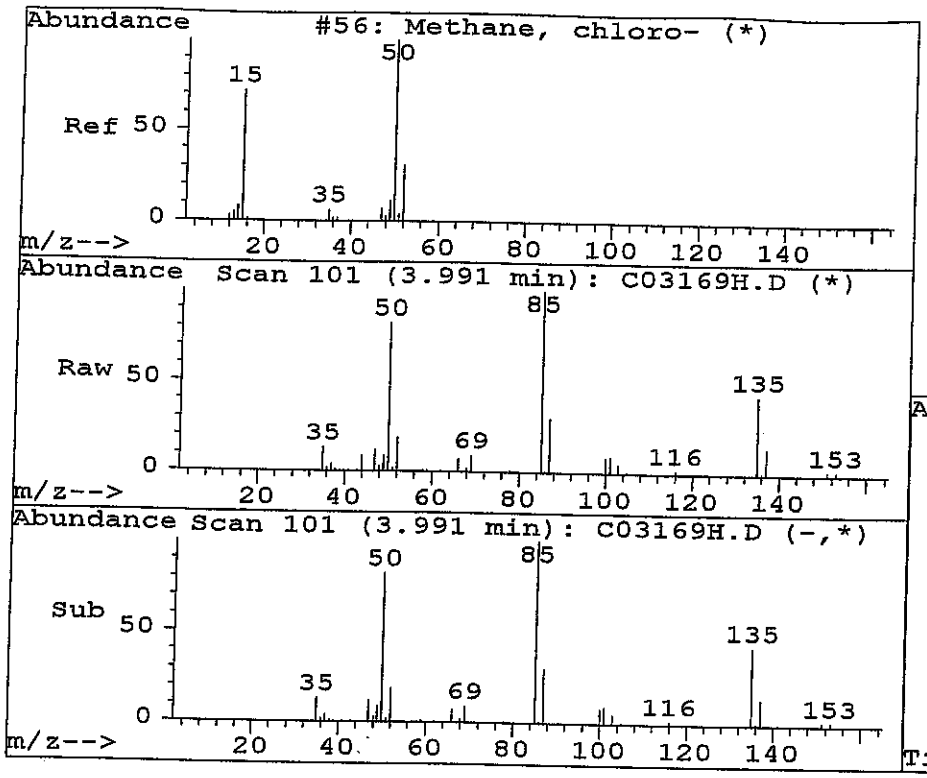


#2
Dichlorodifluoromethane
Concen: 13.04 ppbV
RT: 3.74 min Scan# 75
Delta R.T. -0.09 min
Lab File: C03169H.D
Acq: 16 Mar 109 7:21 pm

Tgt Ion:85 Resp: 840988

Ion	Ratio	Lower	Upper
85	100		
87	32.6	25.6	38.4
50	18.1	13.4	20.2
135	0.0	0.0	0.0

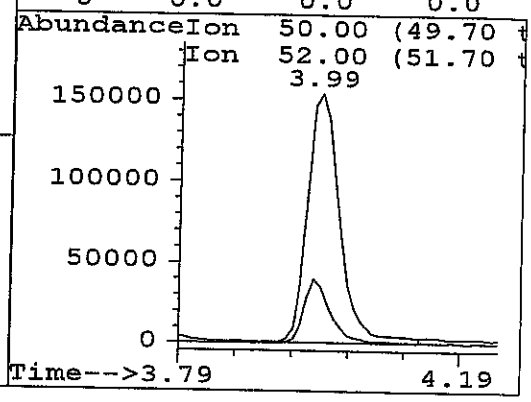


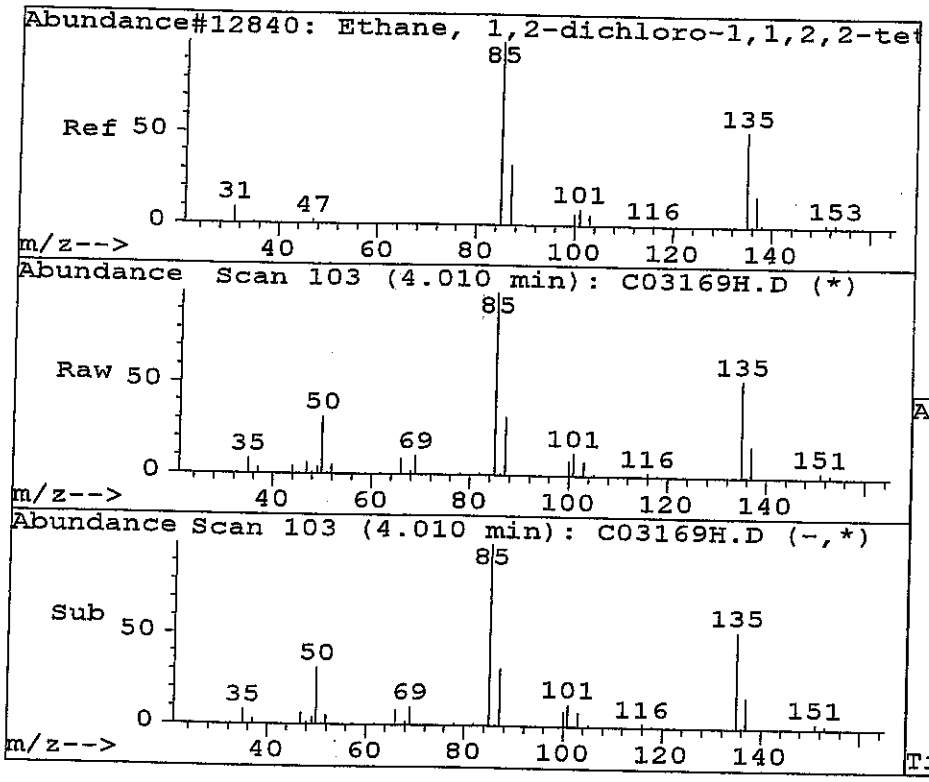


#3
Chloromethane
Concen: 12.83 ppbV
RT: 3.99 min Scan# 101
Delta R.T. -0.10 min
Lab File: C03169H.D
Acq: 16 Mar 109 7:21 pm

Tgt Ion:50 Resp: 505057

Ion	Ratio	Lower	Upper
50	100		
52	23.1	20.2	30.2
0	0.0	0.0	0.0
0	0.0	0.0	0.0

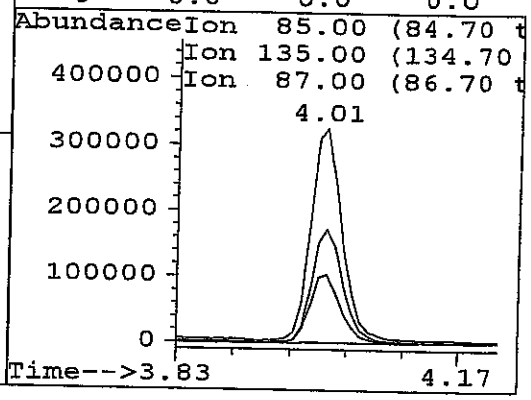


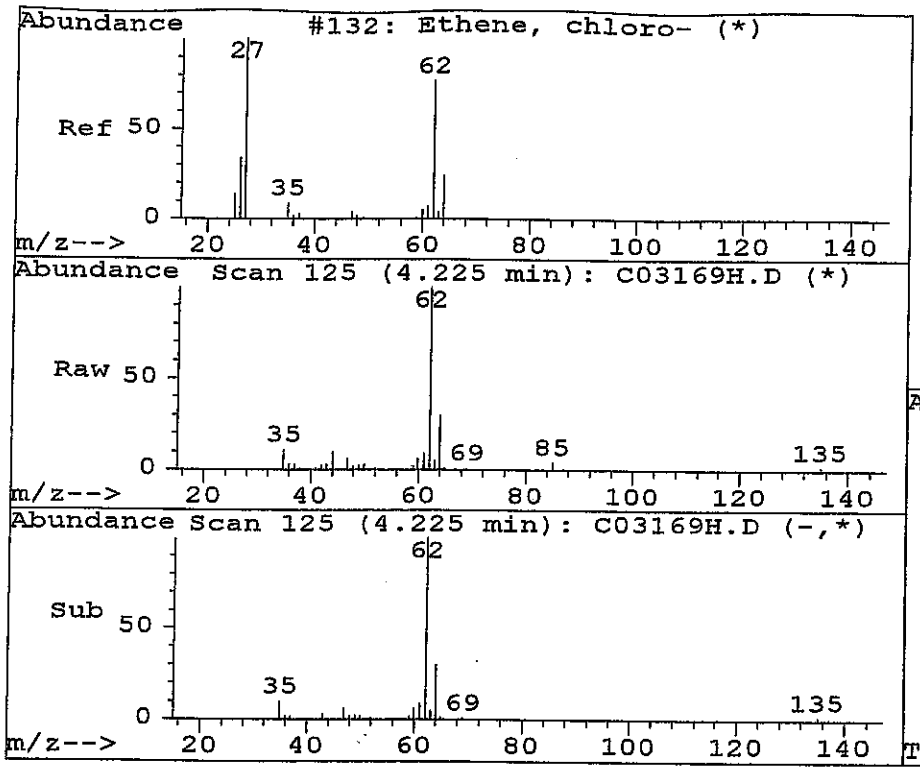


#4
Freon 114
Concen: 13.07 ppbV
RT: 4.01 min Scan# 103
Delta R.T. -0.10 min
Lab File: C03169H.D
Acq: 16 Mar 109 7:21 pm

Tgt Ion:85 Resp: 861160

Ion	Ratio	Lower	Upper
85	100		
135	53.4	53.3	79.9
87	31.7	25.2	37.8
0	0.0	0.0	0.0

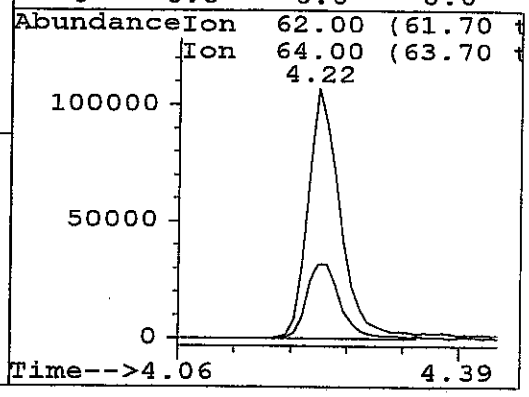


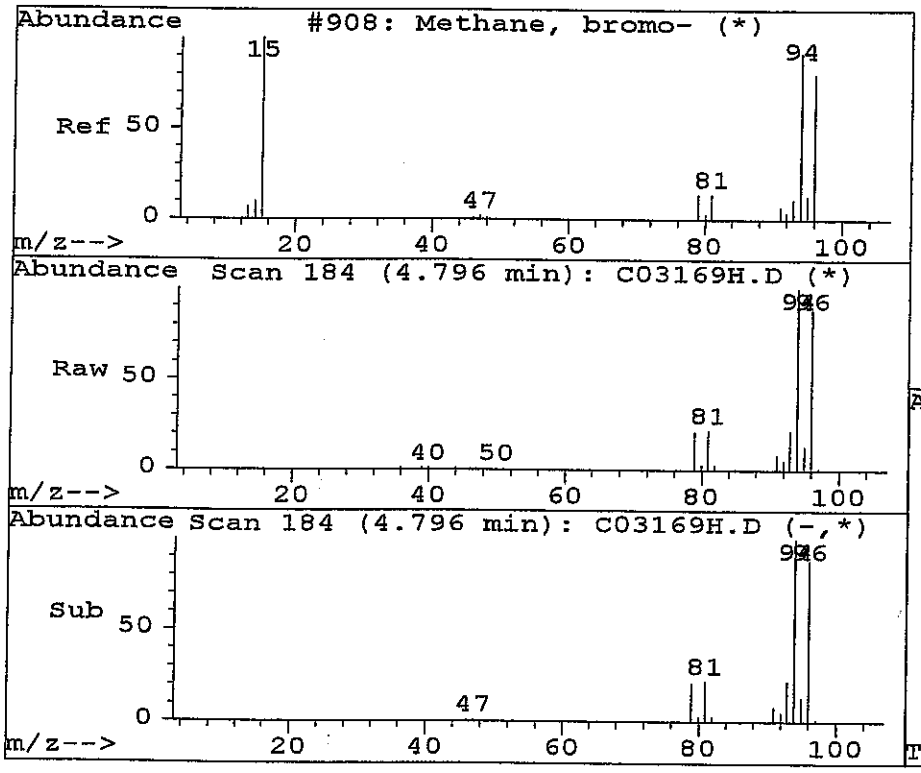


#5
Vinyl chloride
Concen: 12.21 ppbV
RT: 4.22 min Scan# 125
Delta R.T. -0.11 min
Lab File: C03169H.D
Acq: 16 Mar 109 7:21 pm

Tgt Ion:62 Resp: 285530

Ion	Ratio	Lower	Upper
62	100		
64	29.6	24.5	36.7
0	0.0	0.0	0.0
0	0.0	0.0	0.0

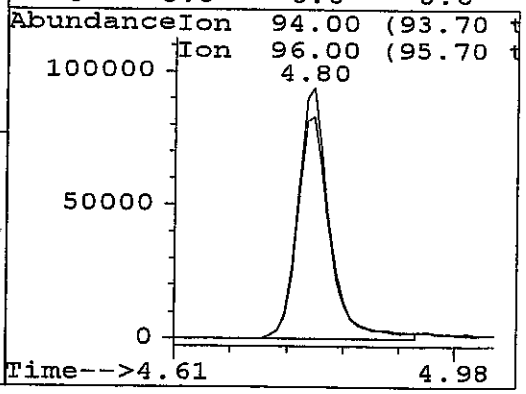


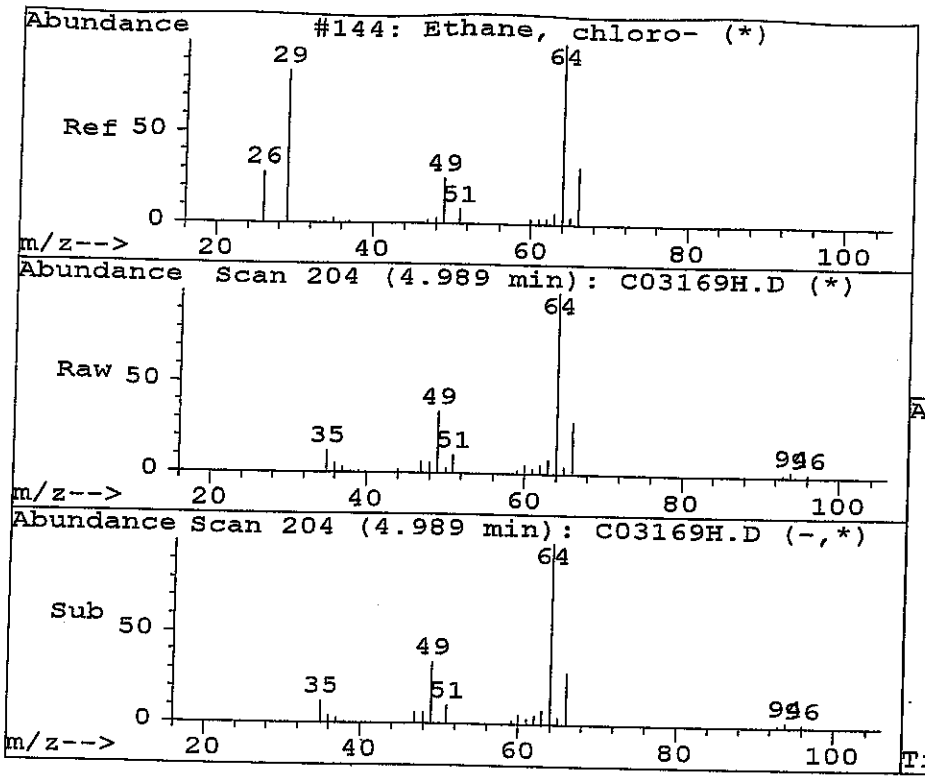


#6
Bromomethane
Concen: 10.80 ppbV
RT: 4.80 min Scan# 184
Delta R.T. -0.12 min
Lab File: C03169H.D
Acq: 16 Mar 109 7:21 pm

Tgt Ion:94 Resp: 274473

Ion	Ratio	Lower	Upper
94	100		
96	88.0	75.8	113.6
0	0.0	0.0	0.0
0	0.0	0.0	0.0

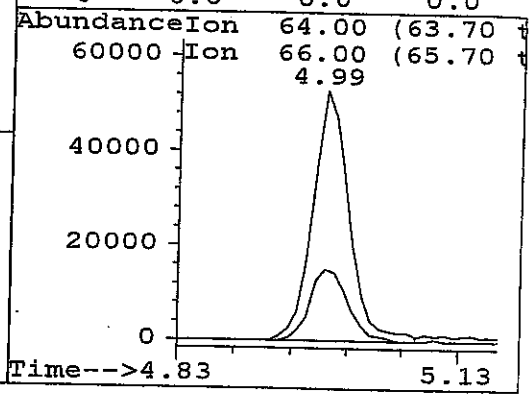


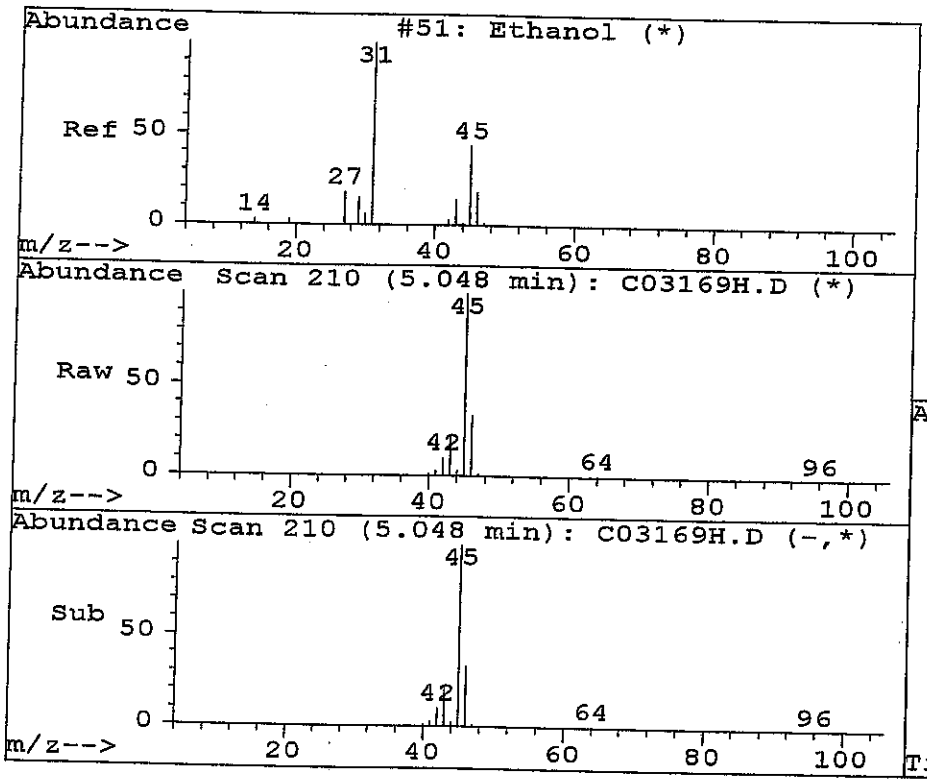


#7
Chloroethane
Concen: 12.27 ppbV
RT: 4.99 min Scan# 204
Delta R.T. -0.13 min
Lab File: C03169H.D
Acq: 16 Mar 109 7:21 pm

Tgt Ion:64 Resp: 141439

Ion	Ratio	Lower	Upper
64	100		
66	28.9	24.9	37.3
0	0.0	0.0	0.0
0	0.0	0.0	0.0

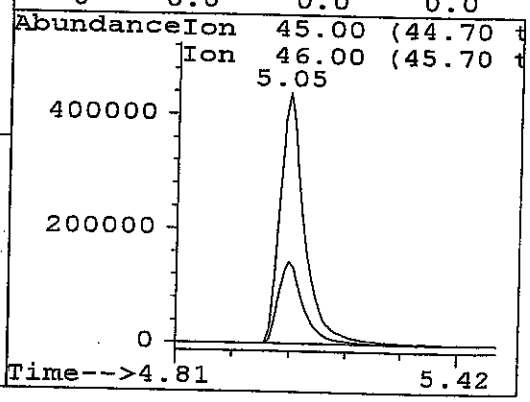


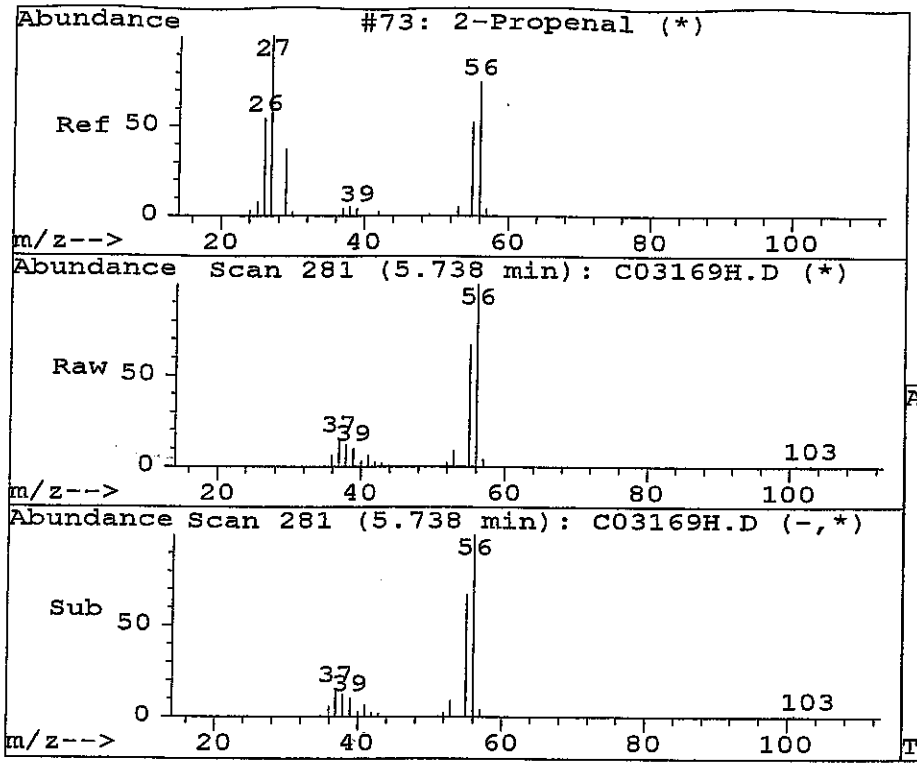


#8
Ethanol
Concen: 61.82 ppbV
RT: 5.05 min Scan# 210
Delta R.T. -0.15 min
Lab File: C03169H.D
Acq: 16 Mar 109 7:21 pm

Tgt Ion:45 Resp: 1626206

Ion	Ratio	Lower	Upper
45	100		
46	33.7	26.4	39.6
0	0.0	0.0	0.0
0	0.0	0.0	0.0

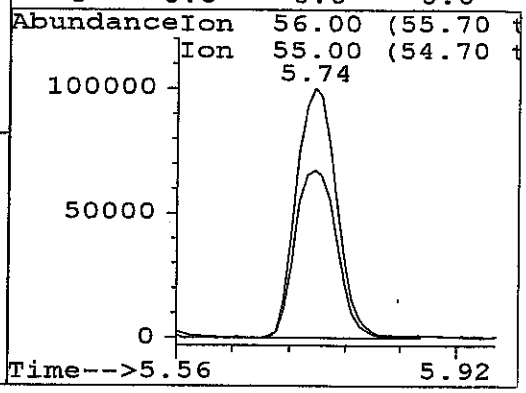


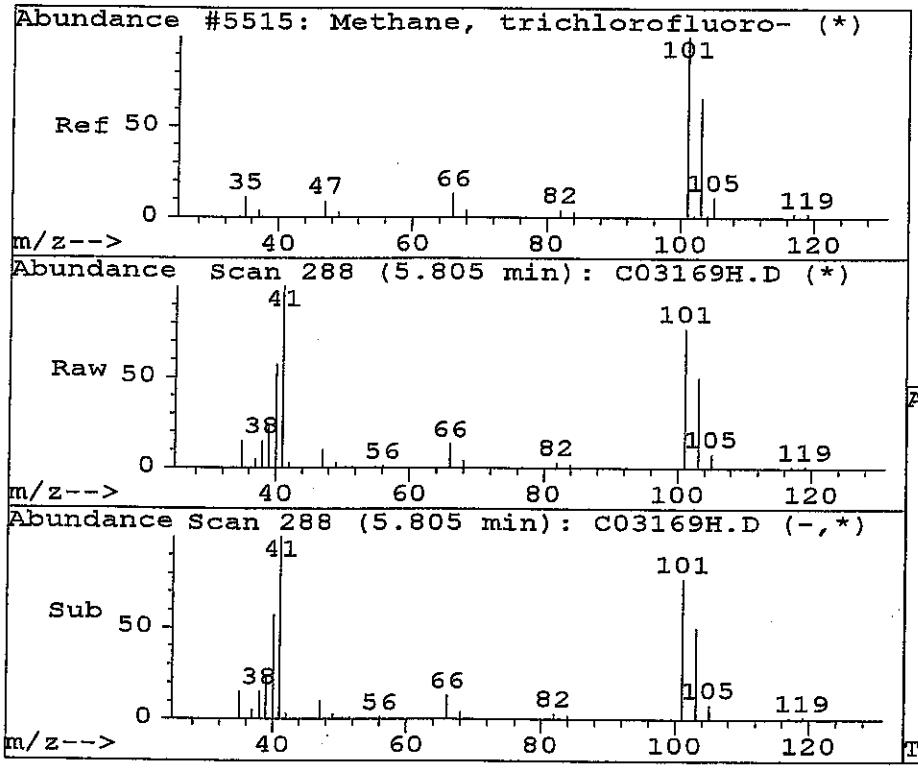


#9
Acrolein
Concen: 58.70 ppbV
RT: 5.74 min Scan# 281
Delta R.T. -0.15 min
Lab File: C03169H.D
Acq: 16 Mar 109 7:21 pm

Tgt Ion:56 Resp: 363529

Ion	Ratio	Lower	Upper
56	100		
55	66.8	48.6	72.8
0	0.0	0.0	0.0
0	0.0	0.0	0.0

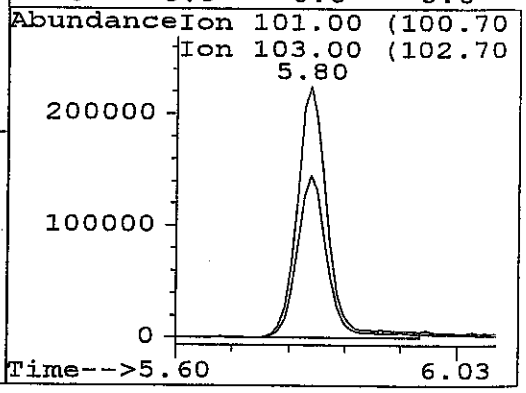


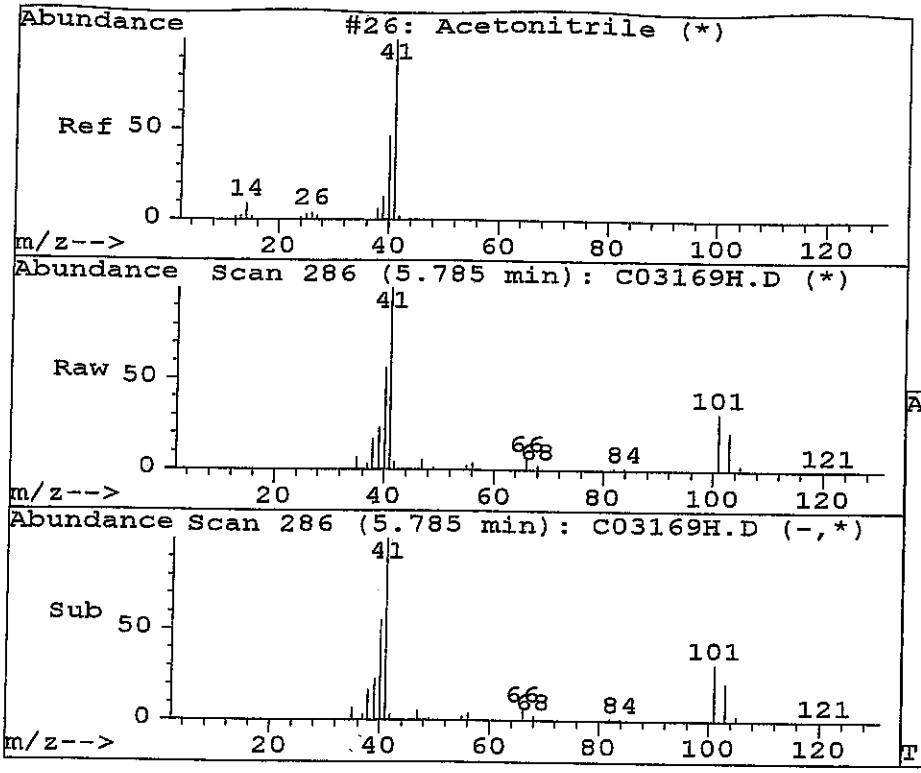


#10
Trichlorofluoromethane
Concen: 9.44 ppbV
RT: 5.80 min Scan# 288
Delta R.T. -0.14 min
Lab File: C03169H.D
Acq: 16 Mar 109 7:21 pm

Tgt Ion:101 Resp: 716396

Ion	Ratio	Lower	Upper
101	100		
103	64.8	49.8	74.6
0	0.0	0.0	0.0
0	0.0	0.0	0.0

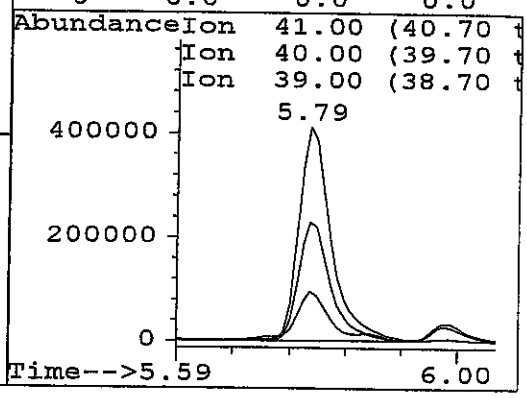


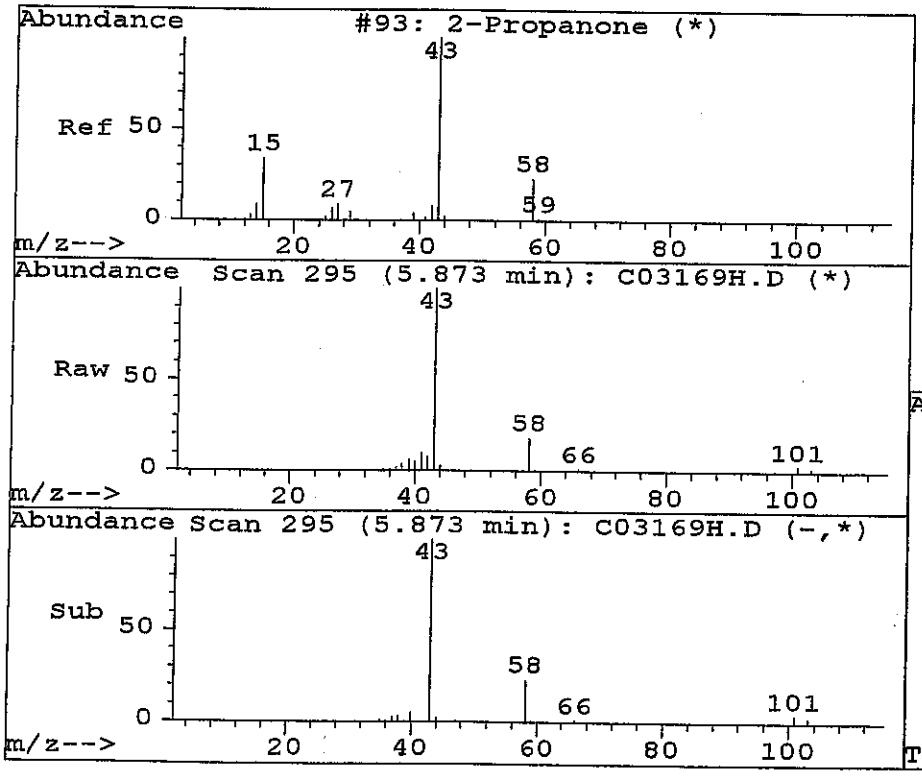


#11
Acetonitrile
Concen: 38.36 ppbV
RT: 5.79 min Scan# 286
Delta R.T. -0.17 min
Lab File: C03169H.D
Acq: 16 Mar 109 7:21 pm

Tgt Ion:41 Resp: 1344233

Ion	Ratio	Lower	Upper
41	100		
40	55.7	46.1	69.1
39	22.5	17.9	26.9
0	0.0	0.0	0.0

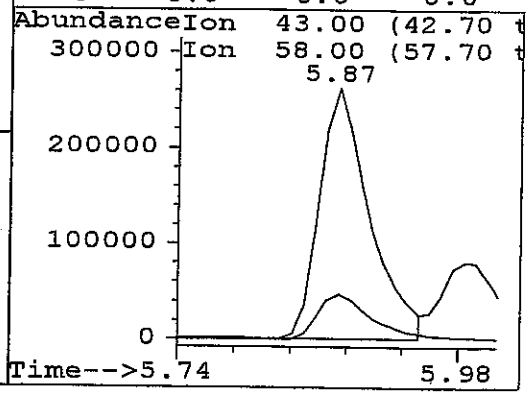


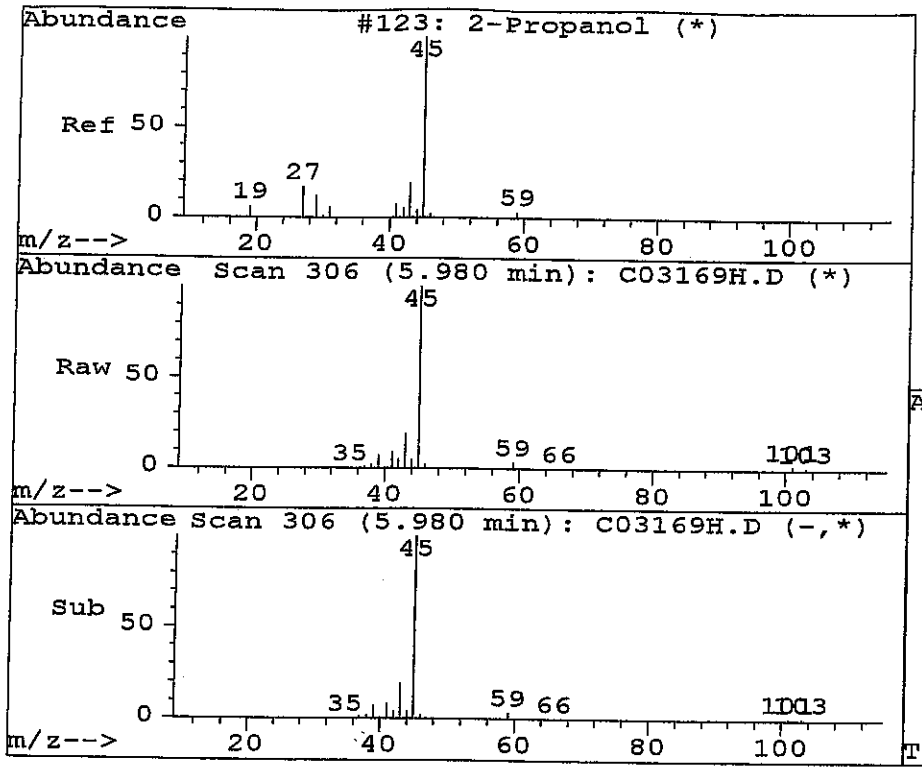


#12
Acetone
Concen: 6.01 ppbV
RT: 5.87 min Scan# 295
Delta R.T. -0.17 min
Lab File: C03169H.D
Acq: 16 Mar 109 7:21 pm

Tgt Ion:43 Resp: 770083

Ion	Ratio	Lower	Upper
43	100		
58	17.7	15.0	22.6
0	0.0	0.0	0.0
0	0.0	0.0	0.0

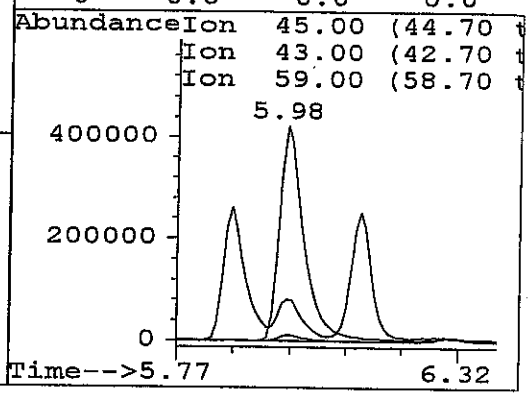


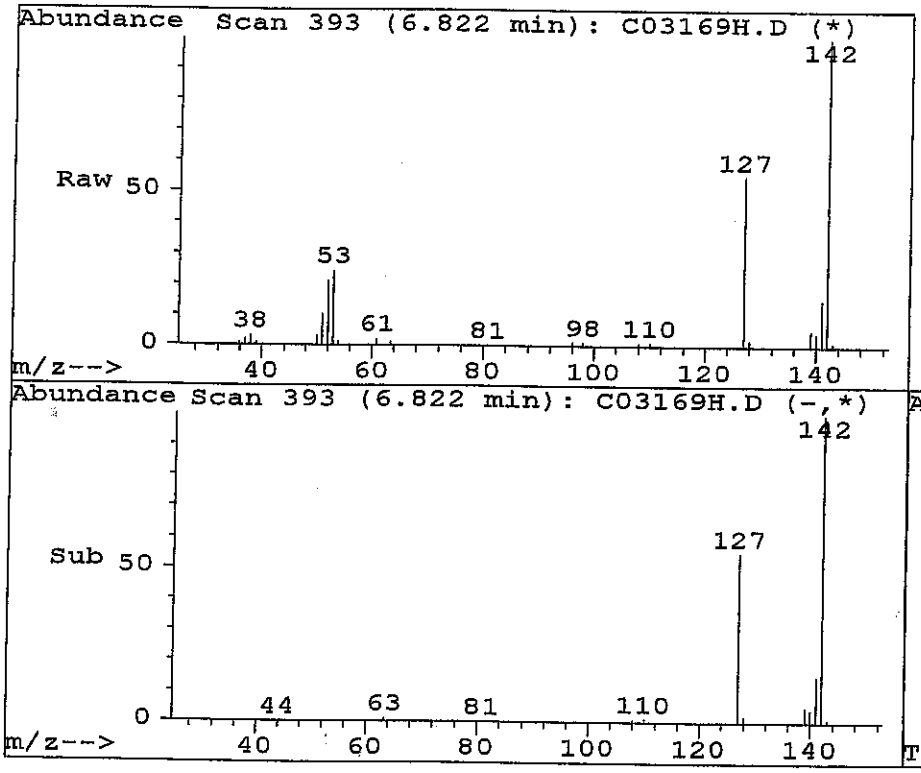


#13
2-propanol
Concen: 25.00 ppbV
RT: 5.98 min Scan# 306
Delta R.T. -0.16 min
Lab File: C03169H.D
Acq: 16 Mar 109 7:21 pm

Tgt Ion:45 Resp: 1427833

Ion	Ratio	Lower	Upper
45	100		
43	20.1	0.0	0.0#
59	2.6	0.0	0.0#
0	0.0	0.0	0.0

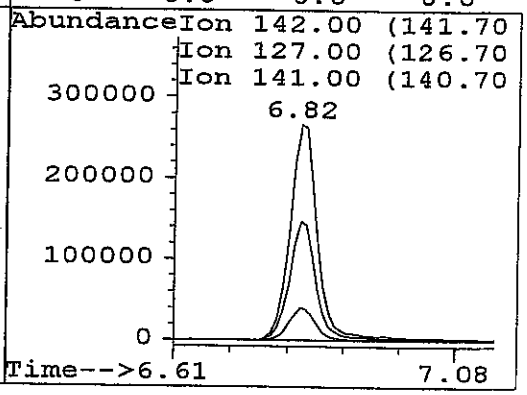


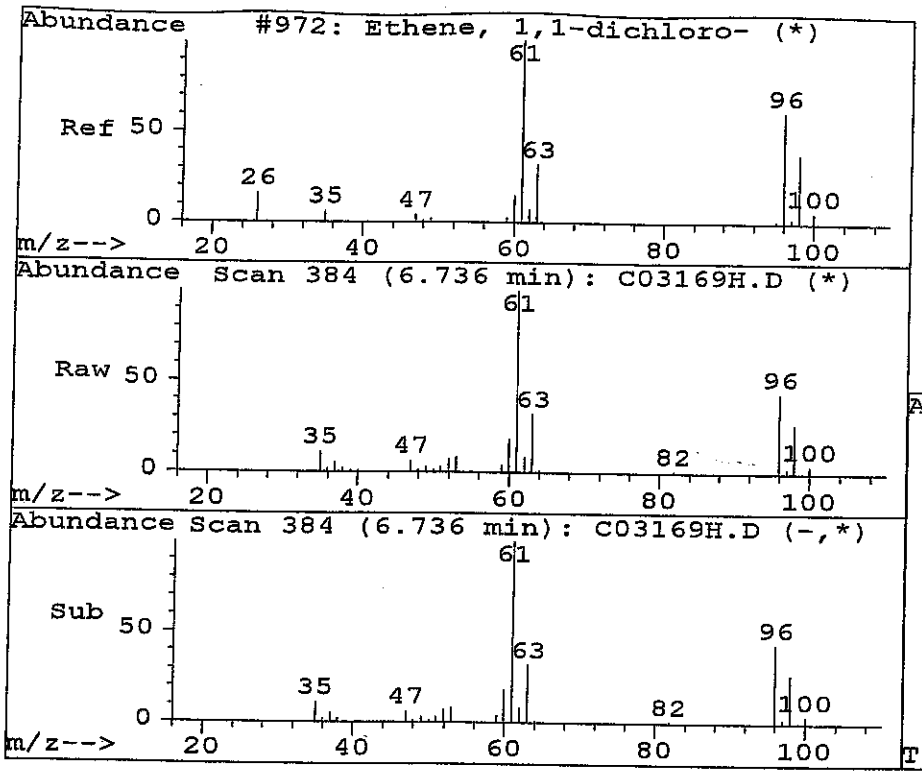


#14
Methyl iodide
Concen: 26.12 ppbV
RT: 6.82 min Scan# 393
Delta R.T. -0.17 min
Lab File: C03169H.D
Acq: 16 Mar 109 7:21 pm

Tgt Ion:142 Resp: 874608

Ion	Ratio	Lower	Upper
142	100		
127	55.2	44.2	66.4
141	15.1	11.1	16.7
0	0.0	0.0	0.0

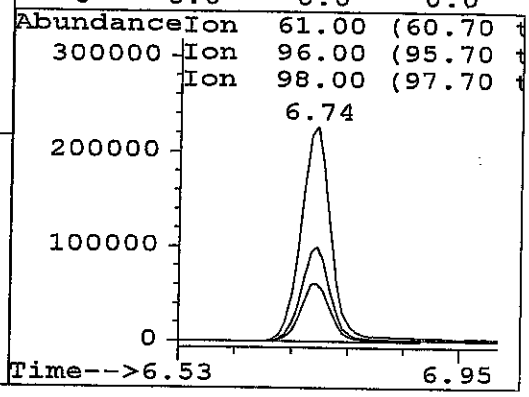


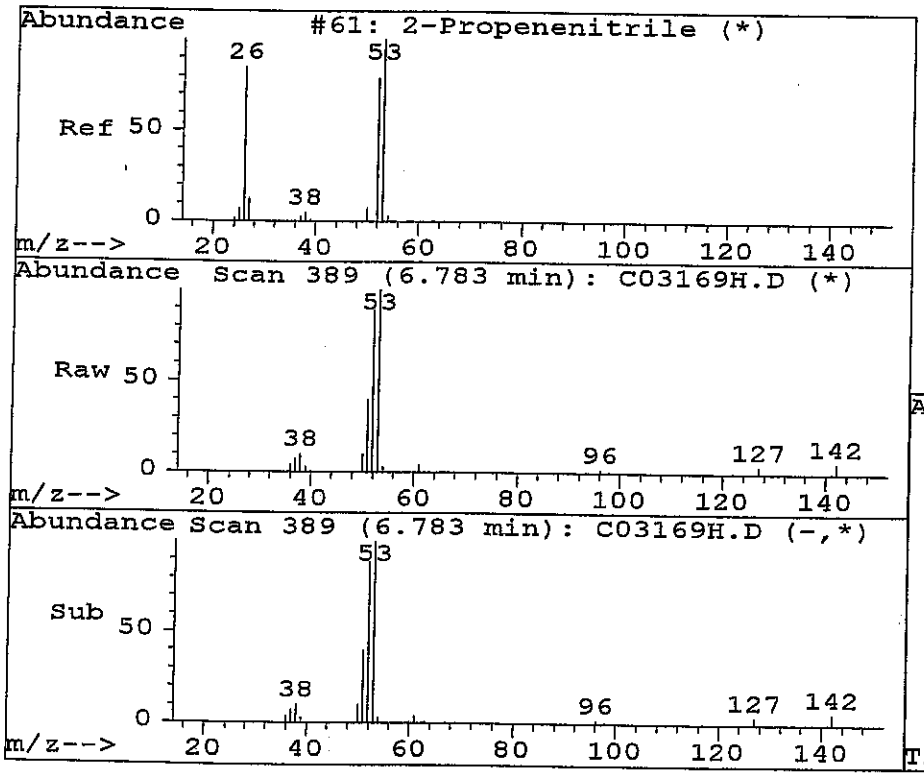


#15
1,1-Dichloroethene
Concen: 13.19 ppbV
RT: 6.74 min Scan# 384
Delta R.T. -0.15 min
Lab File: C03169H.D
Acq: 16 Mar 109 7:21 pm

Tgt Ion:61 Resp: 730028

Ion	Ratio	Lower	Upper
61	100		
96	44.0	35.0	52.6
98	27.0	21.7	32.5
0	0.0	0.0	0.0

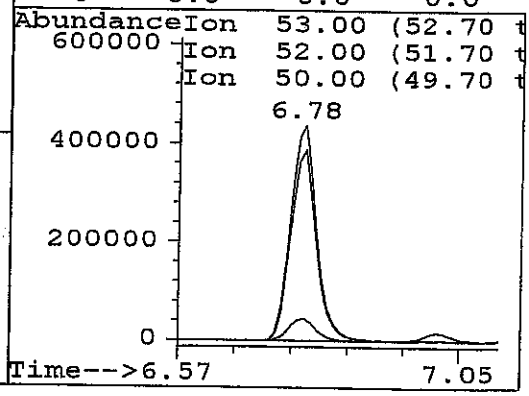


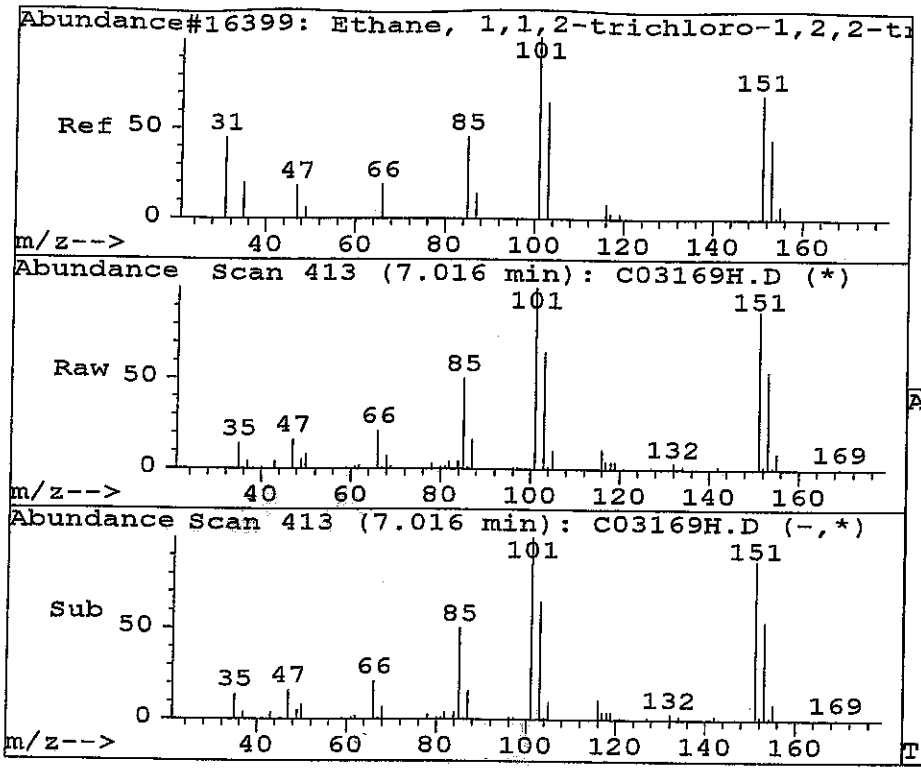


#16
Acrylonitrile
Concen: 48.50 ppbV
RT: 6.78 min Scan# 389
Delta R.T. -0.18 min
Lab File: C03169H.D
Acq: 16 Mar 109 7:21 pm

Tgt Ion:53 Resp: 1312482

Ion	Ratio	Lower	Upper
53	100		
52	88.7	69.3	103.9
50	9.5	7.7	11.5
0	0.0	0.0	0.0

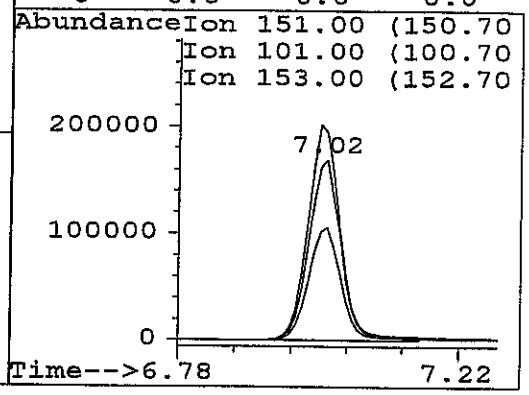


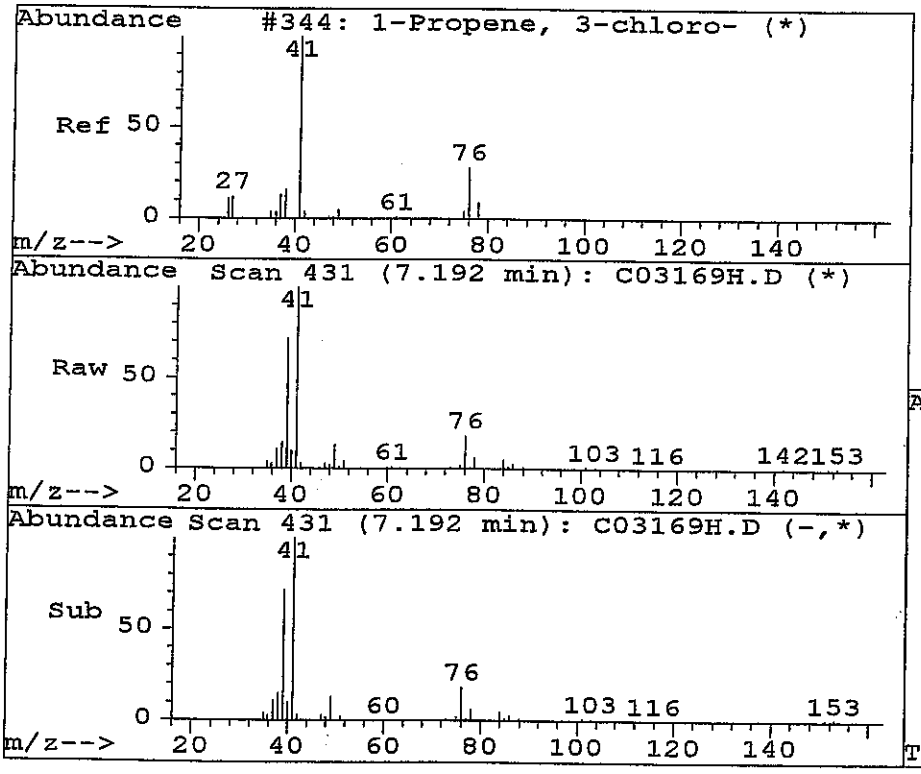


#17
Freon 113
Concen: 11.11 ppbV
RT: 7.02 min Scan# 413
Delta R.T. -0.14 min
Lab File: C03169H.D
Acq: 16 Mar 109 7:21 pm

Tgt Ion:151 Resp: 591375

Ion	Ratio	Lower	Upper
151	100		
101	114.9	96.2	144.4
153	62.5	52.2	78.2
0	0.0	0.0	0.0

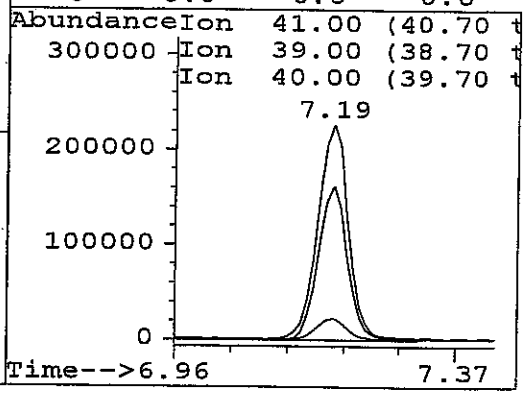


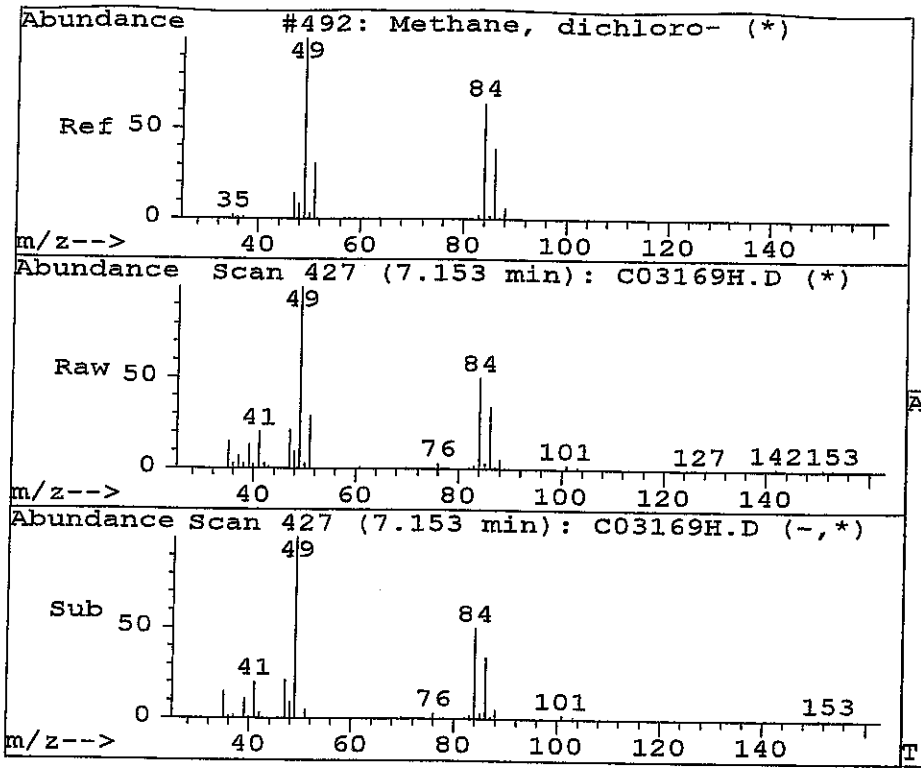


#18
Allyl chloride
Concen: 18.11 ppbV
RT: 7.19 min Scan# 431
Delta R.T. -0.16 min
Lab File: C03169H.D
Acq: 16 Mar 109 7:21 pm

Tgt Ion:41 Resp: 716230

Ion	Ratio	Lower	Upper
41	100		
39	71.6	63.9	95.9
40	9.7	8.5	12.7
0	0.0	0.0	0.0

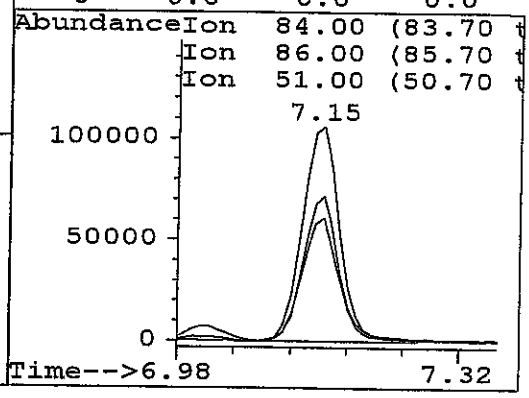


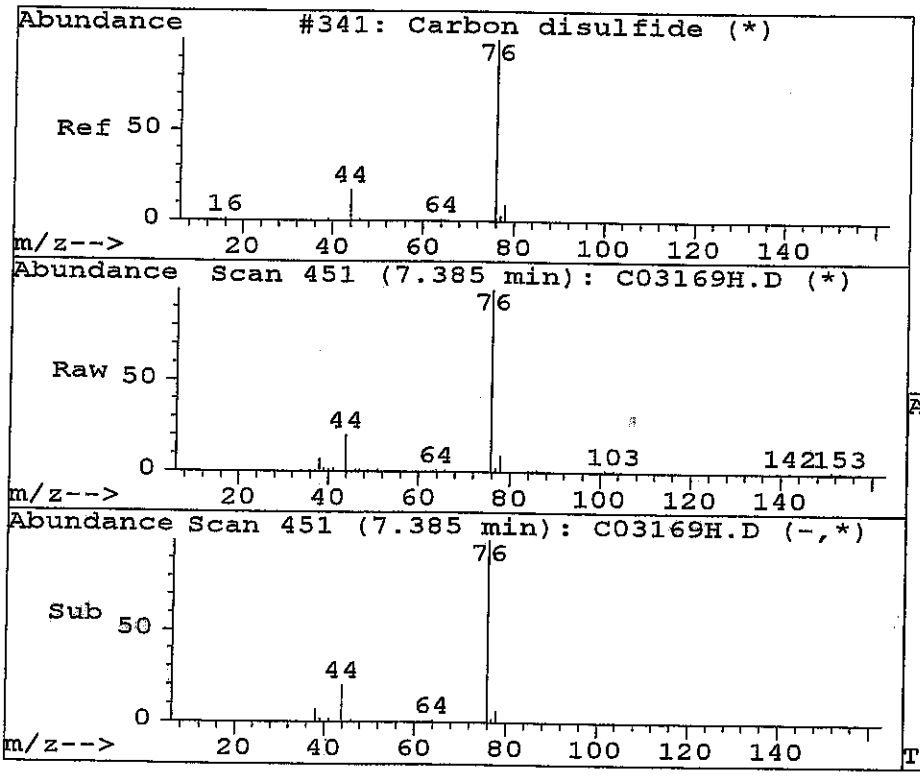


#19
Dichloromethane
Concen: 14.23 ppbV
RT: 7.15 min Scan# 427
Delta R.T. -0.16 min
Lab File: C03169H.D
Acq: 16 Mar 109 7:21 pm

Tgt Ion:84 Resp: 330491

Ion	Ratio	Lower	Upper
84	100		
86	67.7	49.6	74.4
51	57.3	42.2	63.4
0	0.0	0.0	0.0

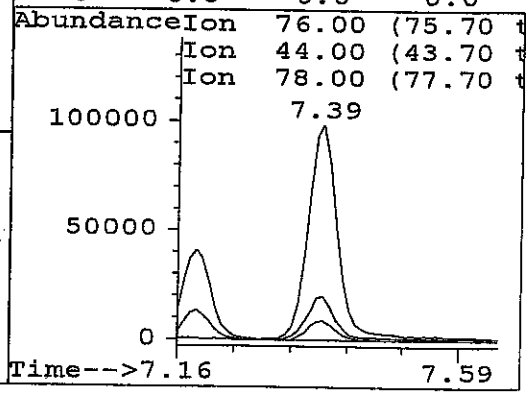


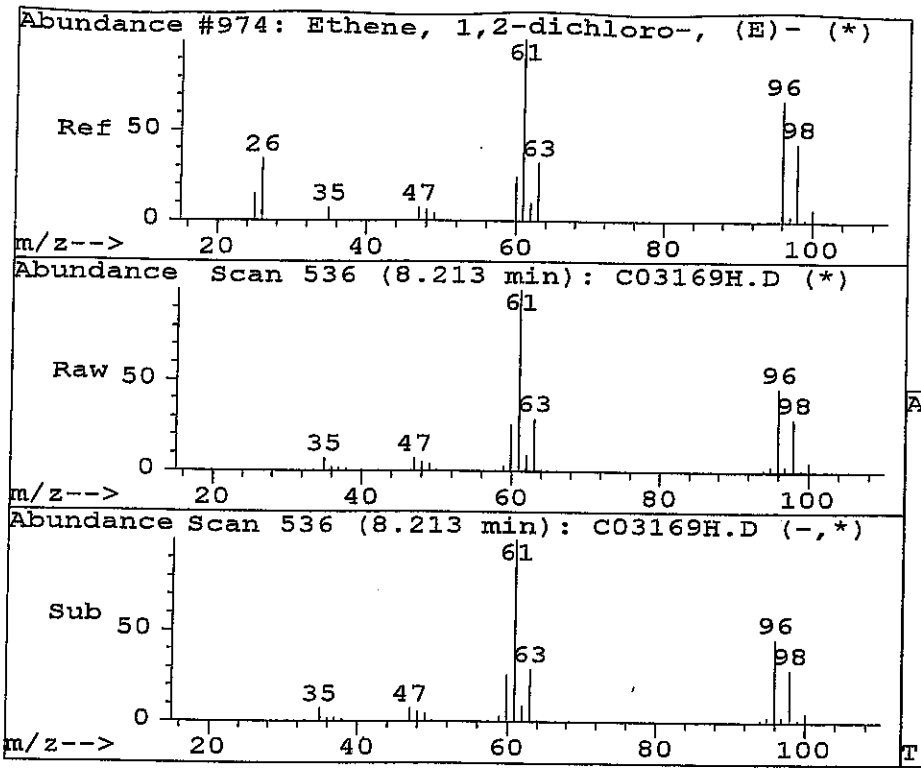


#20
Carbon disulfide
Concen: 15.63 ppbV
RT: 7.39 min Scan# 451
Delta R.T. -0.15 min
Lab File: C03169H.D
Acq: 16 Mar 109 7:21 pm

Tgt Ion:76 Resp: 313353

Ion	Ratio	Lower	Upper
76	100		
44	19.9	16.6	25.0
78	8.9	6.7	11.1
0	0.0	0.0	0.0

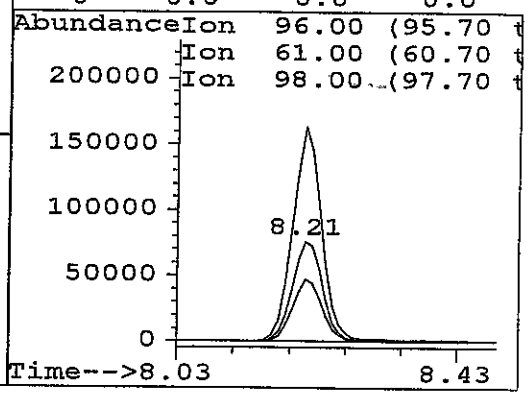


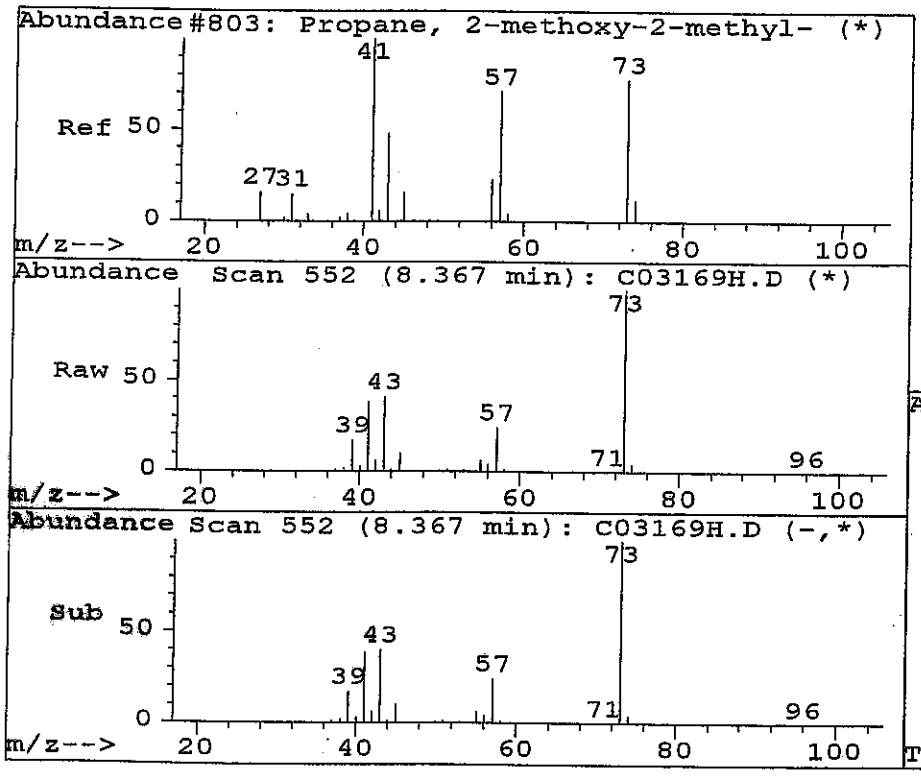


#21
trans-1,2-Dichloroethene
Concen: 11.10 ppbV
RT: 8.21 min Scan# 536
Delta R.T. -0.17 min
Lab File: C03169H.D
Acq: 16 Mar 109 7:21 pm

Tgt Ion:96 Resp: 230621

Ion	Ratio	Lower	Upper
96	100		
61	215.6	164.1	246.1
98	62.1	50.2	75.2
0	0.0	0.0	0.0

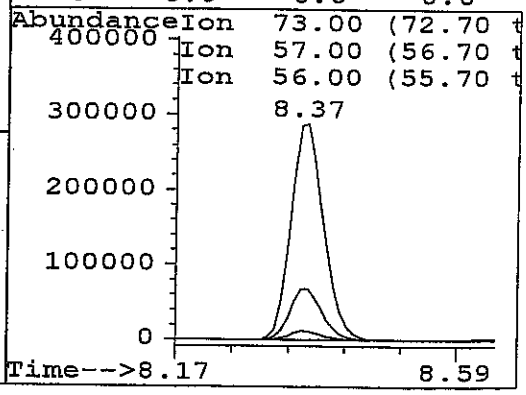


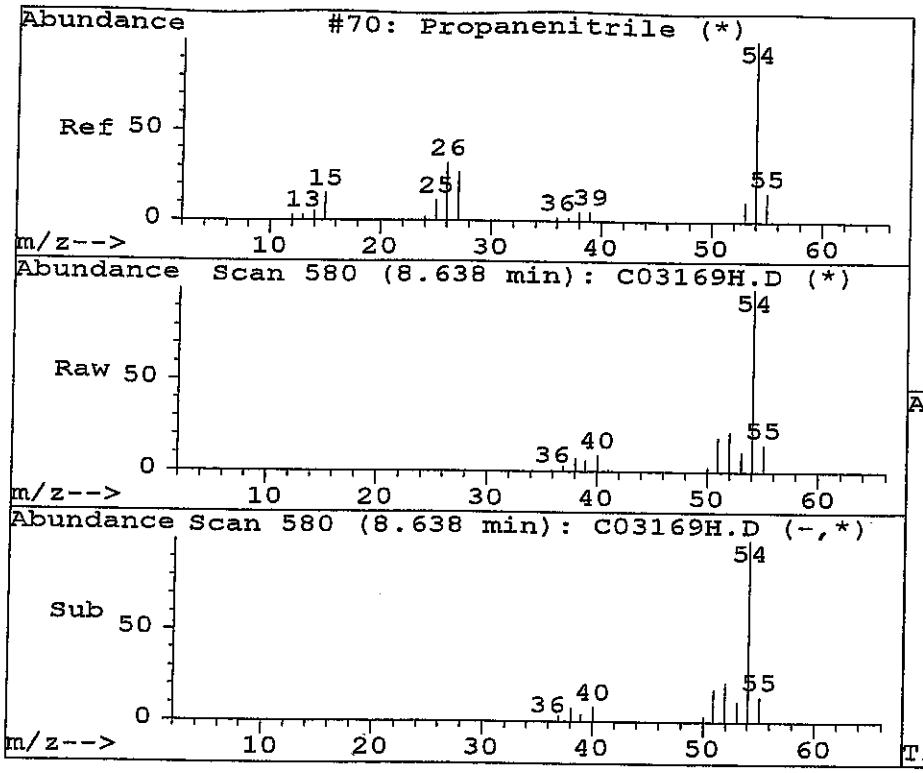


#22
Methyl tert butyl ether
Concen: 9.54 ppbV
RT: 8.37 min Scan# 552
Delta R.T. -0.17 min
Lab File: C03169H.D
Acq: 16 Mar 109 7:21 pm

Tgt Ion:73 Resp: 967308

Ion	Ratio	Lower	Upper
73	100		
57	23.5	16.3	24.5
56	3.9	3.0	4.4
0	0.0	0.0	0.0

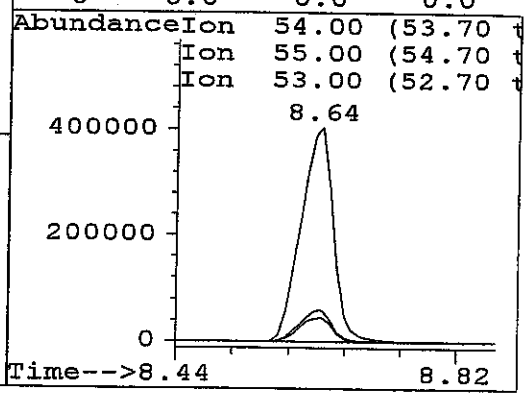


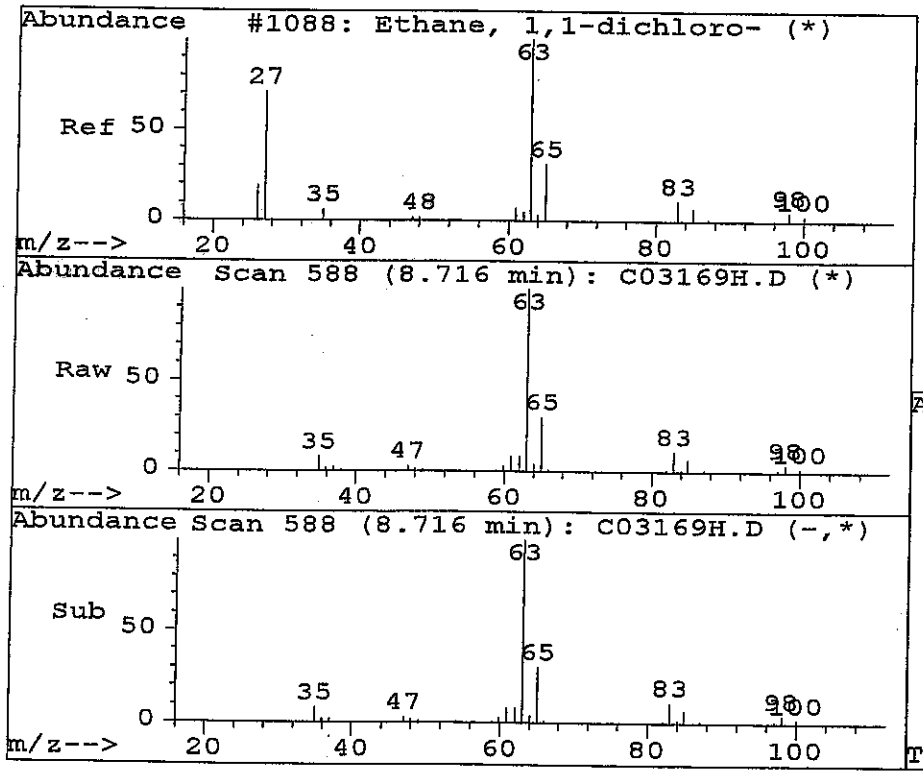


#23
Propionitrile
Concen: 45.50 ppbV
RT: 8.64 min Scan# 580
Delta R.T. -0.19 min
Lab File: C03169H.D
Acq: 16 Mar 109 7:21 pm

Tgt Ion:54 Resp: 1209148

Ion	Ratio	Lower	Upper
54	100		
55	14.7	11.9	17.9
53	11.2	10.0	15.0
0	0.0	0.0	0.0

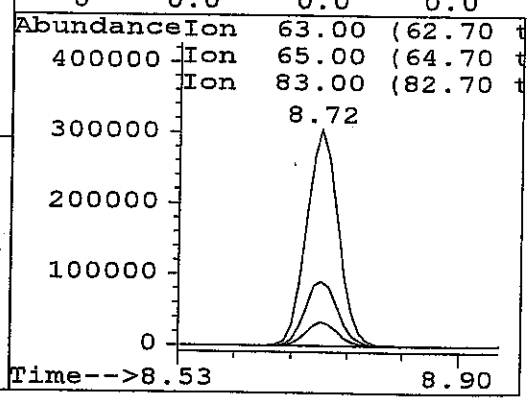


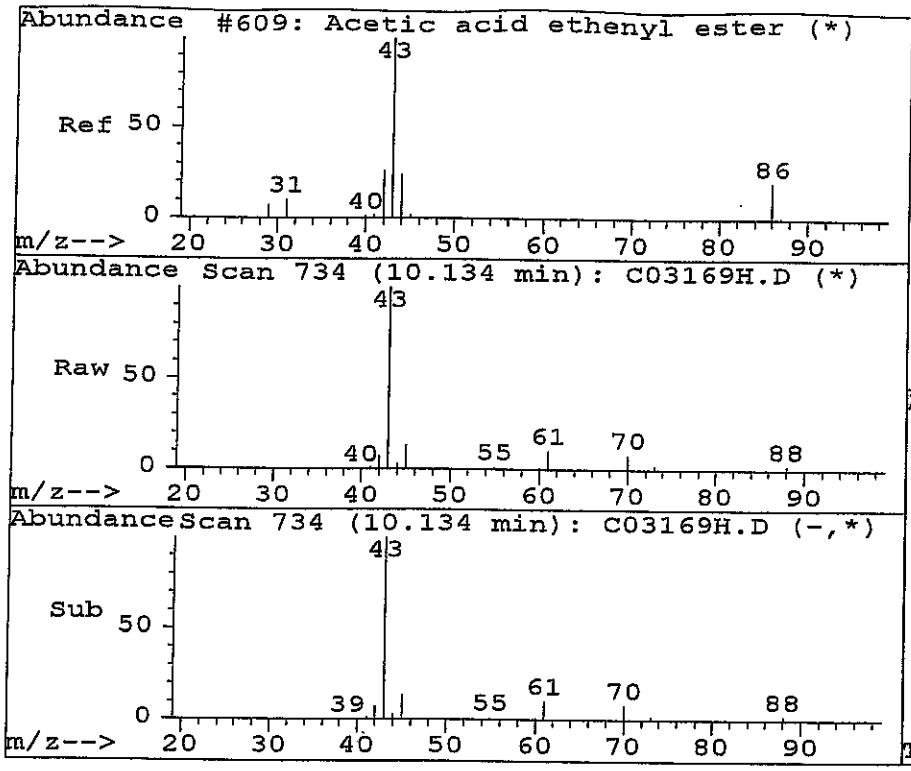


#24
1,1-Dichloroethane
Concen: 13.77 ppbV
RT: 8.72 min Scan# 588
Delta R.T. -0.18 min
Lab File: C03169H.D
Acq: 16 Mar 109 7:21 pm

Tgt Ion:63 Resp: 871129

Ion	Ratio	Lower	Upper
63	100		
65	29.6	25.4	38.2
83	11.1	10.6	15.8
0	0.0	0.0	0.0

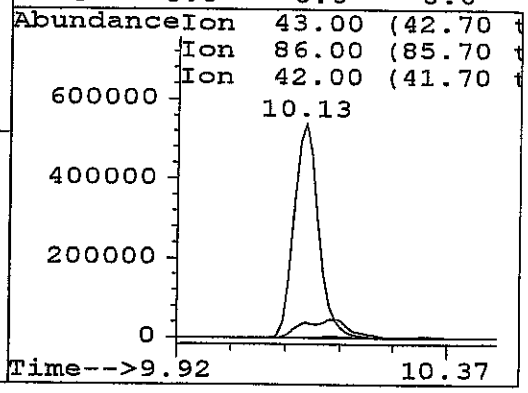


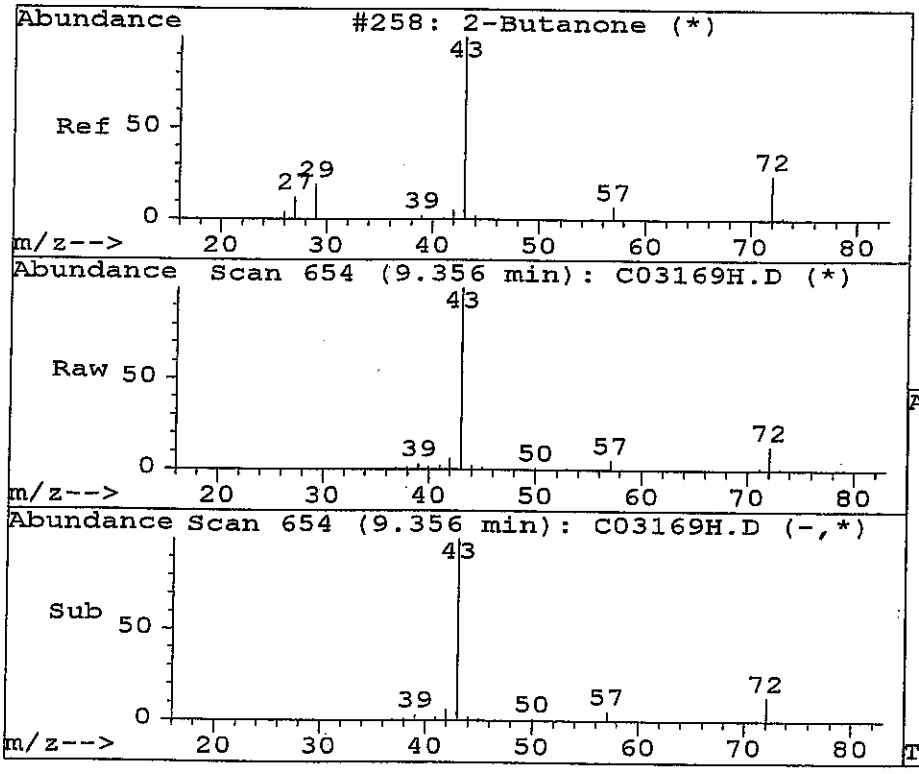


#25
Vinyl acetate
Concen: 14.49 ppbV
RT: 10.13 min Scan# 734
Delta R.T. -0.19 min
Lab File: C03169H.D
Acq: 16 Mar 109 7:21 pm

Tgt Ion:43 Resp: 1560060

Ion	Ratio	Lower	Upper
43	100		
86	0.0	0.0	0.0
42	7.1	6.2	9.2
0	0.0	0.0	0.0

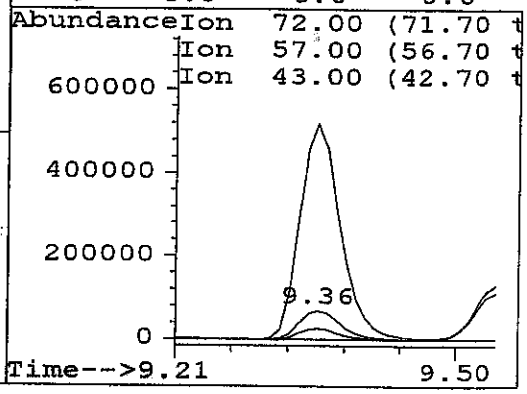


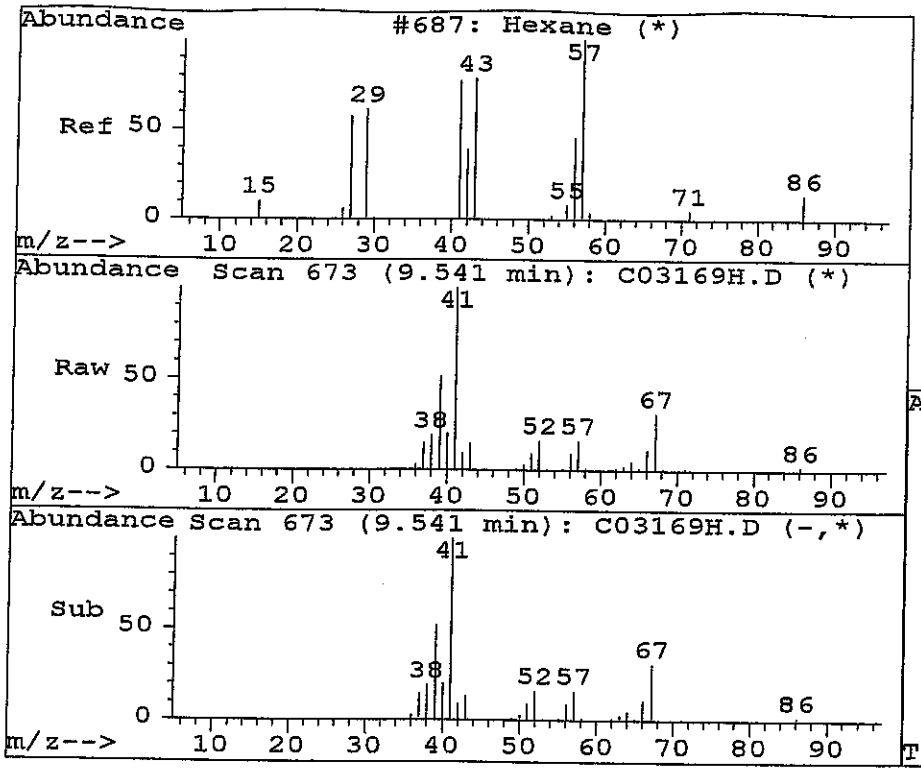


#26
2-Butanone
Concen: 11.28 ppbV
RT: 9.36 min Scan# 654
Delta R.T. -0.18 min
Lab File: C03169H.D
Acq: 16 Mar 109 7:21 pm

Tgt Ion:72 Resp: 205517

Ion	Ratio	Lower	Upper
72	100		
57	38.3	19.3	28.9#
43	751.9	452.8	679.2#
0	0.0	0.0	0.0

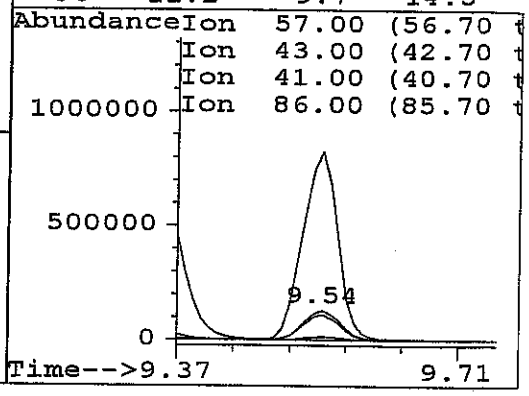


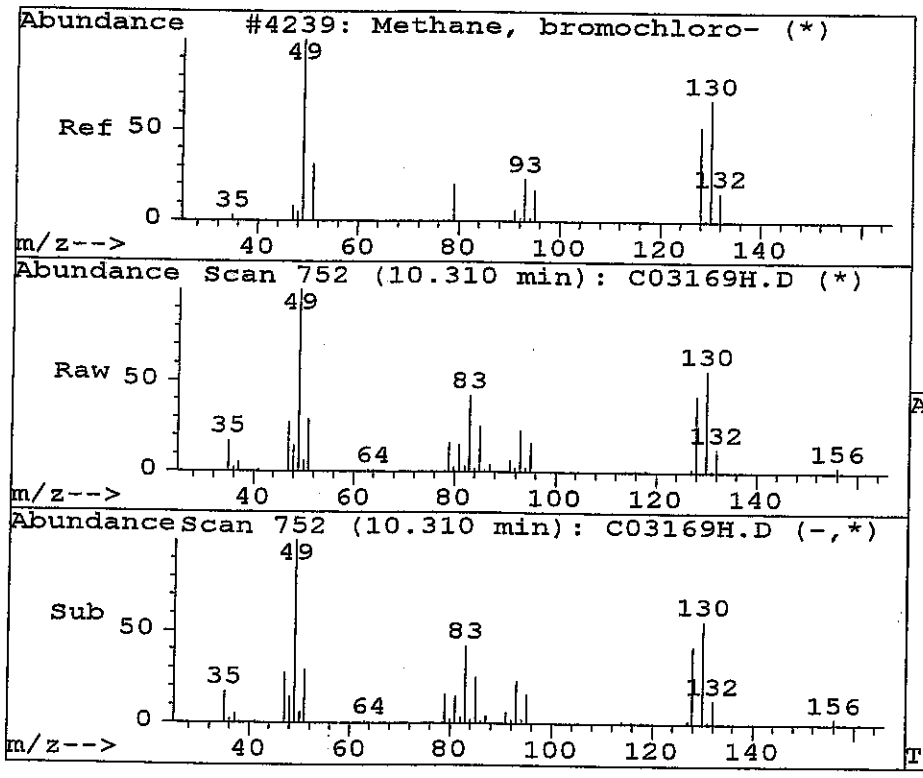


#27
Hexane
Concen: 8.44 ppbV
RT: 9.54 min Scan# 673
Delta R.T. -0.17 min
Lab File: C03169H.D
Acq: 16 Mar 109 7:21 pm

Tgt Ion:57 Resp: 409529

Ion	Ratio	Lower	Upper
57	100		
43	85.6	63.1	94.7
41	593.6	408.8	613.2
86	11.2	9.7	14.5

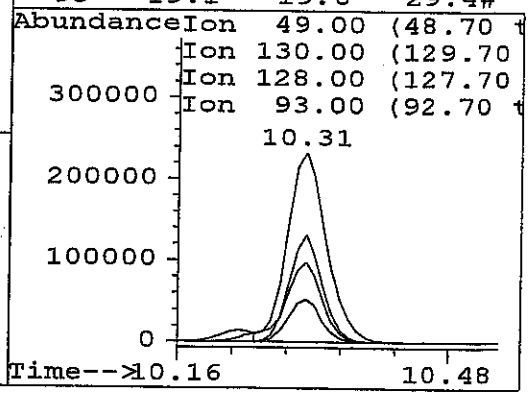


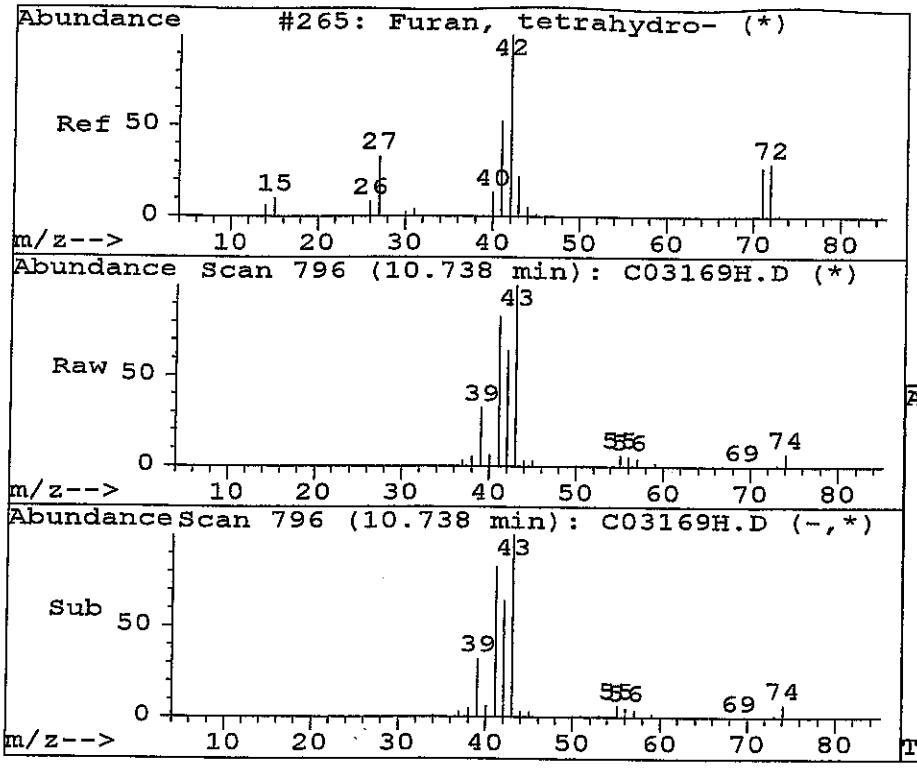


#28
Bromochloromethane
Concen: 13.22 ppbV
RT: 10.31 min Scan# 752
Delta R.T. -0.19 min
Lab File: C03169H.D
Acq: 16 Mar 109 7:21 pm

Tgt Ion:49 Resp: 729979

Ion	Ratio	Lower	Upper
49	100		
130	47.4	51.4	77.2#
128	40.7	44.3	66.5#
93	19.1	19.6	29.4#

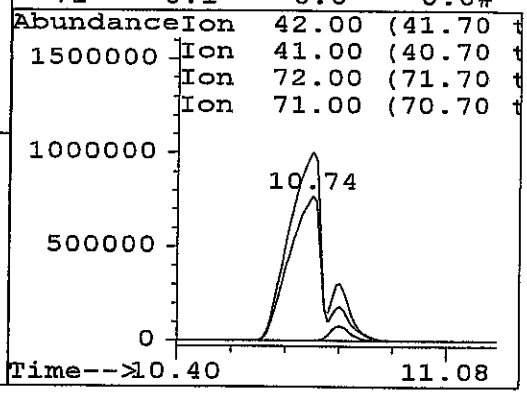


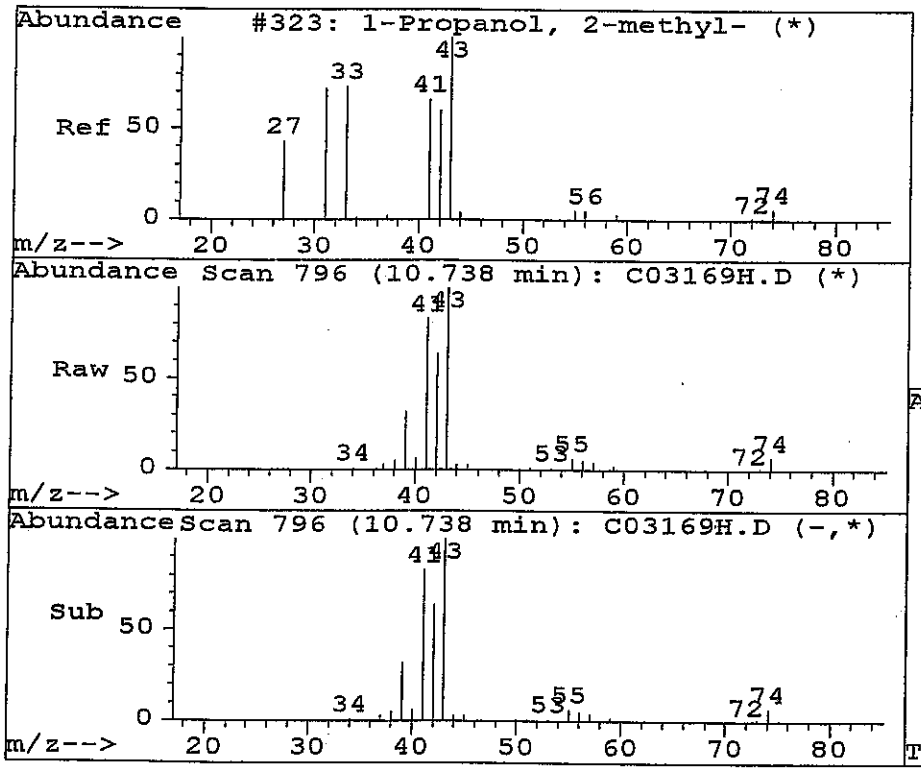


#29
Tetrahydrofuran
Concen: 24.89 ppbV m
RT: 10.74 min Scan# 796
Delta R.T. -0.18 min
Lab File: C03169H.D
Acq: 16 Mar 109 7:21 pm

Tgt Ion:42 Resp: 5179960

Ion	Ratio	Lower	Upper
42	100		
41	130.8	112.3	168.5
72	0.3	0.4	0.6#
71	0.1	0.0	0.0#

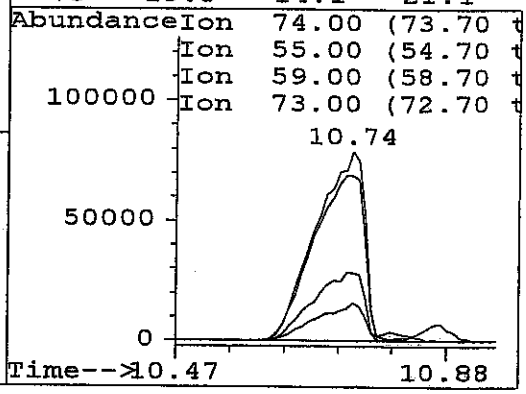


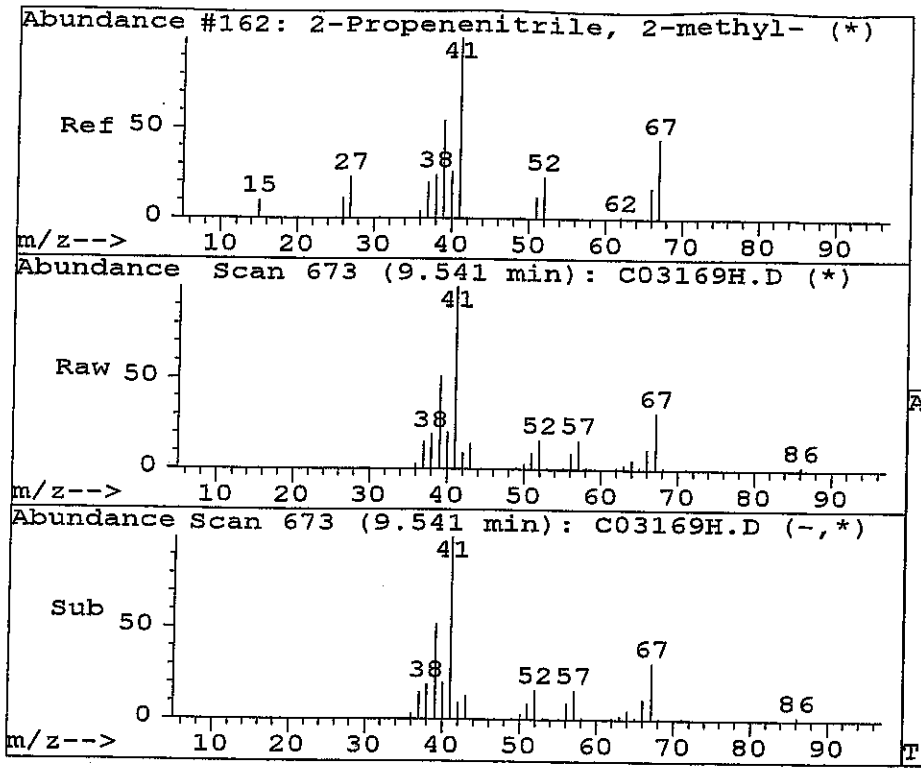


#30
Isobutyl alcohol
Concen: 57.39 ppbV
RT: 10.74 min Scan# 796
Delta R.T. -0.18 min
Lab File: C03169H.D
Acq: 16 Mar 109 7:21 pm

Tgt Ion:74 Resp: 411535

Ion	Ratio	Lower	Upper
74	100		
55	85.8	64.8	97.2
59	35.9	30.2	45.2
73	19.3	14.1	21.1

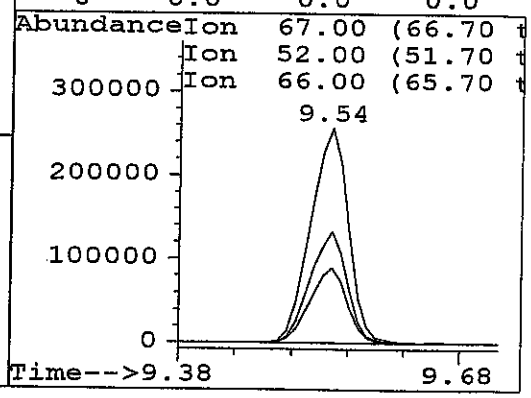


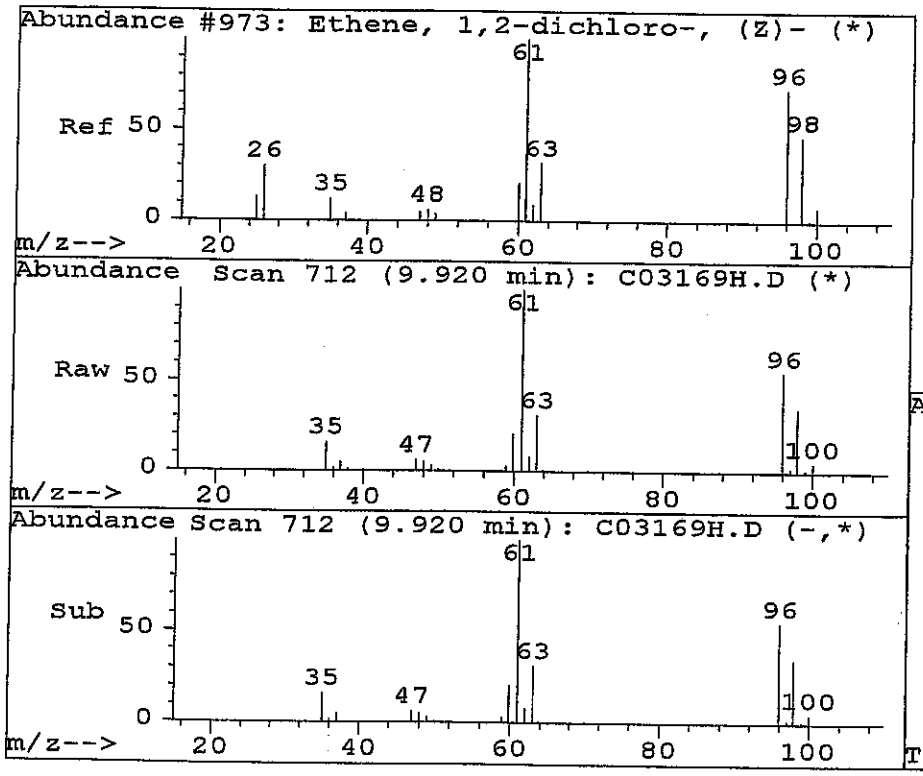


#31
Methacrylonitrile
Concen: 40.99 ppbV
RT: 9.54 min Scan# 673
Delta R.T. -0.20 min
Lab File: C03169H.D
Acq: 16 Mar 109 7:21 pm

Tgt Ion:67 Resp: 731423

Ion	Ratio	Lower	Upper
67	100		
52	51.7	41.0	61.6
66	34.8	26.8	40.2
0	0.0	0.0	0.0

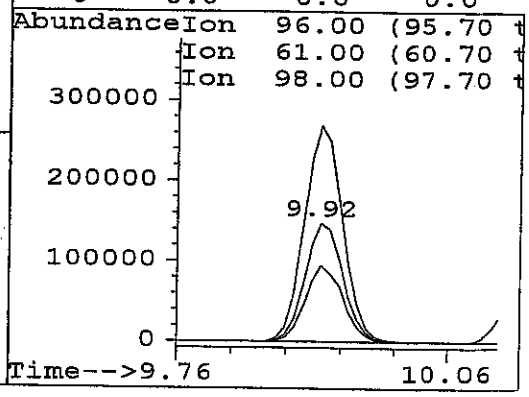


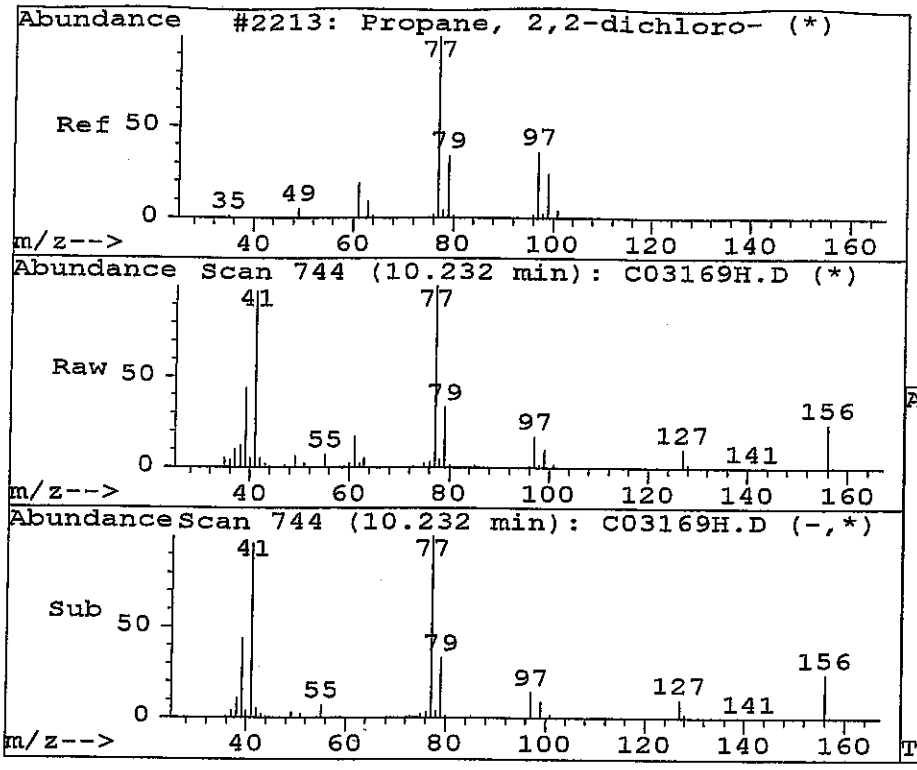


#32
cis-1,2-Dichloroethene
Concen: 12.42 ppbV
RT: 9.92 min Scan# 712
Delta R.T. -0.19 min
Lab File: C03169H.D
Acq: 16 Mar 109 7:21 pm

Tgt Ion:96 Resp: 421914

Ion	Ratio	Lower	Upper
96	100		
61	182.4	132.6	198.8
98	64.1	49.3	73.9
0	0.0	0.0	0.0

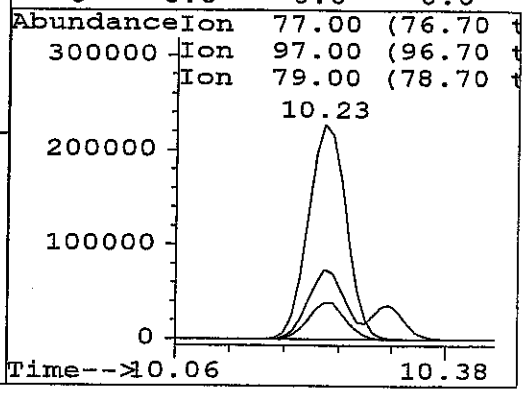


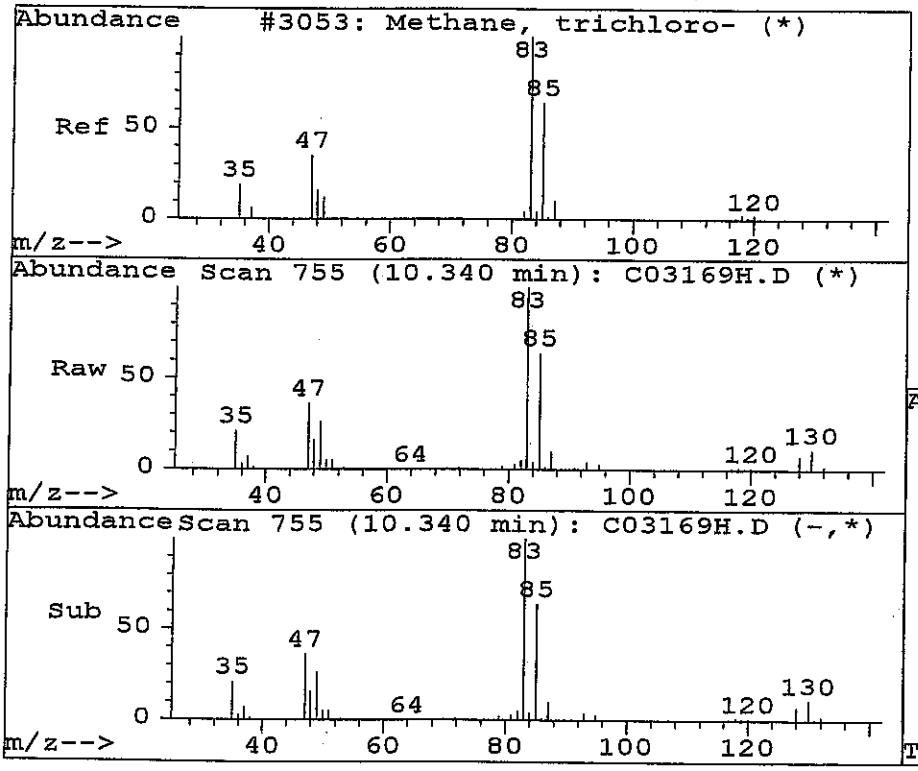


#33
2,2-Dichloropropane
Concen: 10.34 ppbV
RT: 10.23 min Scan# 744
Delta R.T. -0.19 min
Lab File: C03169H.D
Acq: 16 Mar 109 7:21 pm

Tgt Ion:77 Resp: 713261

Ion	Ratio	Lower	Upper
77	100		
97	16.9	13.0	19.6
79	31.0	20.5	30.7#
0	0.0	0.0	0.0

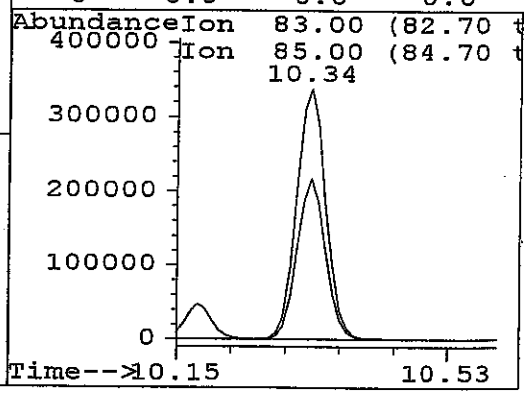


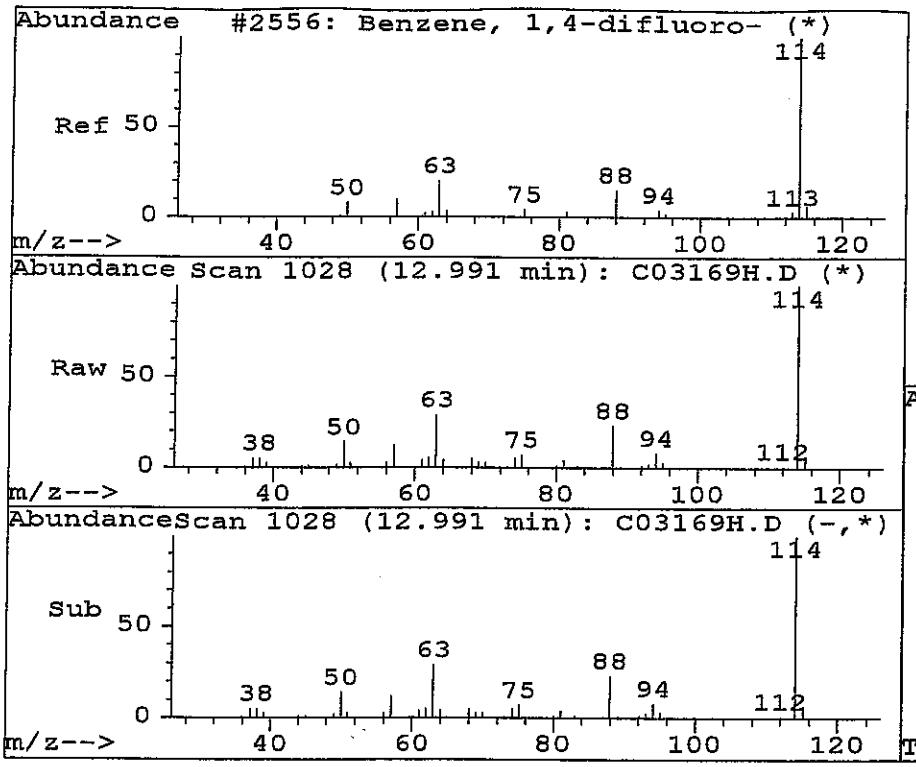


#34
Chloroform
Concen: 11.94 ppbV
RT: 10.34 min Scan# 755
Delta R.T. -0.19 min
Lab File: C03169H.D
Acq: 16 Mar 109 7:21 pm

Tgt Ion:83 Resp: 959204

Ion	Ratio	Lower	Upper
83	100		
85	64.4	51.3	76.9
0	0.0	0.0	0.0
0	0.0	0.0	0.0

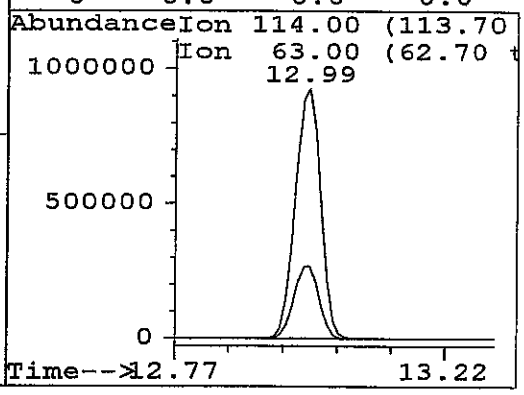


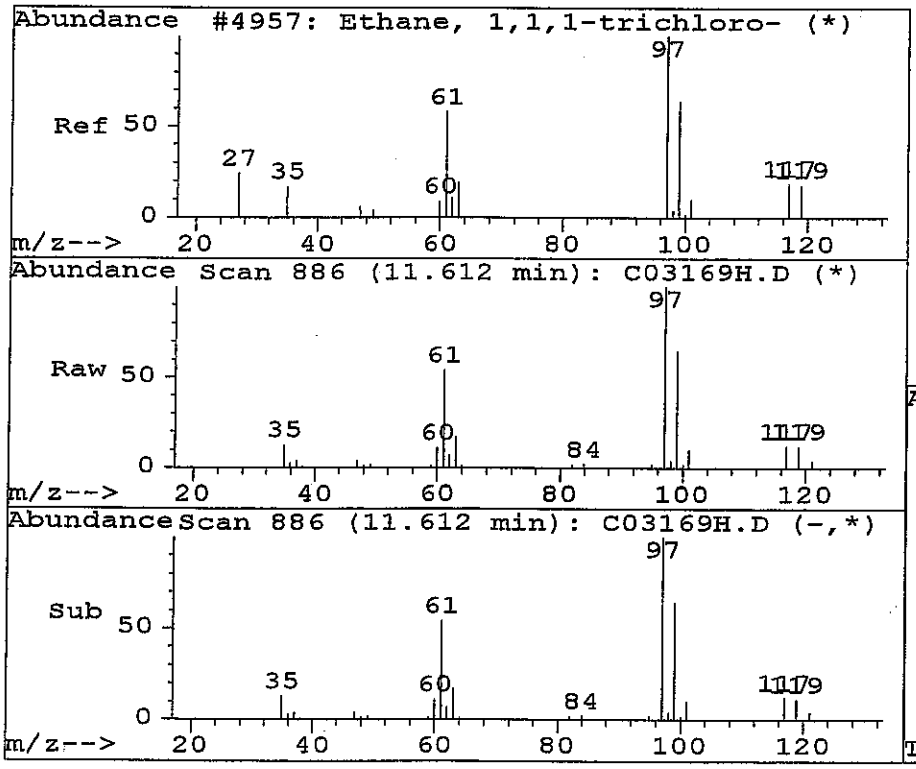


#35
1,4-Difluorobenzene
Concen: 20.00 ppbV
RT: 12.99 min Scan# 1028
Delta R.T. -0.18 min
Lab File: C03169H.D
Acq: 16 Mar 109 7:21 pm

Tgt Ion:114 Resp: 2706138

Ion	Ratio	Lower	Upper
114	100		
63	29.3	19.8	33.0
0	0.0	0.0	0.0
0	0.0	0.0	0.0

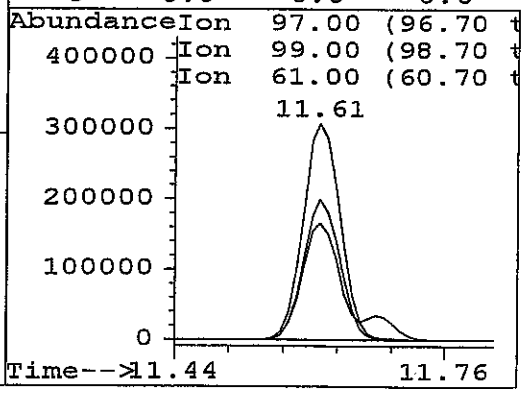


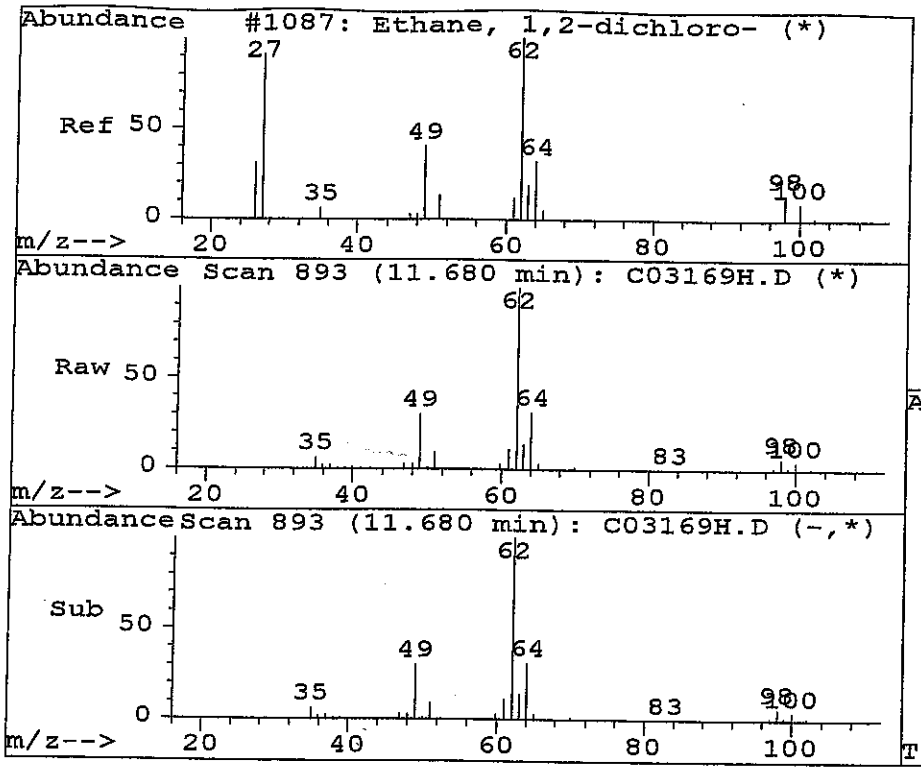


#36
1,1,1-Trichloroethane
Concen: 9.90 ppbV
RT: 11.61 min Scan# 886
Delta R.T. -0.19 min
Lab File: C03169H.D
Acq: 16 Mar 109 7:21 pm

Tgt Ion:97 Resp: 970639

Ion	Ratio	Lower	Upper
97	100		
99	65.0	49.2	73.8
61	53.8	38.8	58.2
0	0.0	0.0	0.0

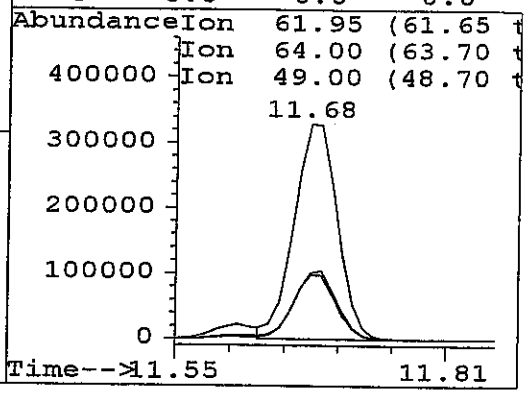


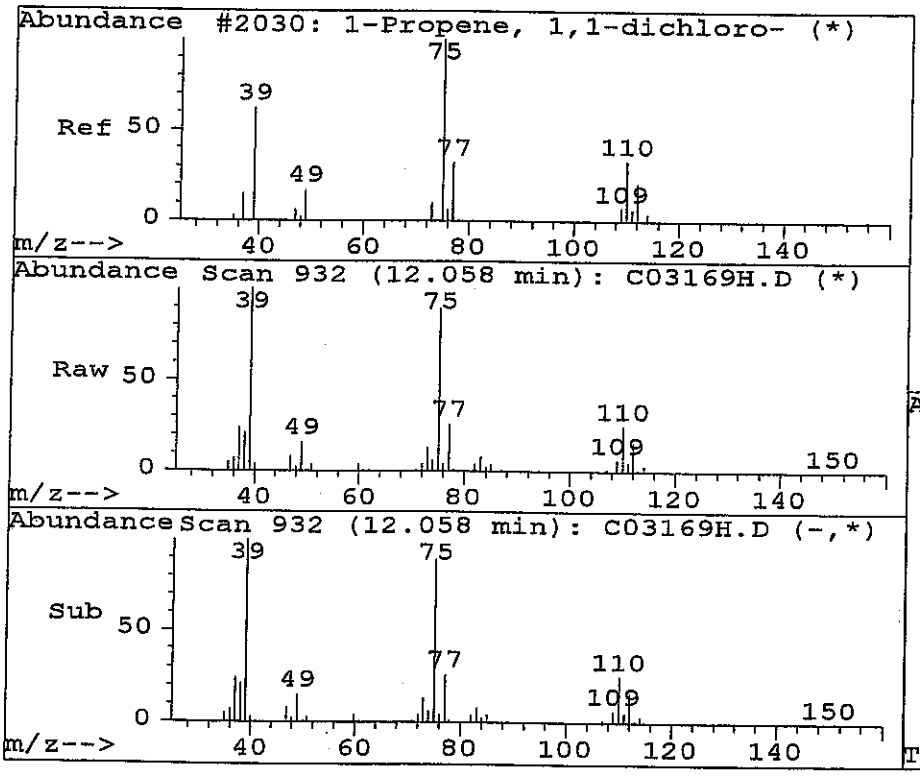


#37
1,2-Dichloroethane
Concen: 10.77 ppbV
RT: 11.68 min Scan# 893
Delta R.T. -0.19 min
Lab File: C03169H.D
Acq: 16 Mar 109 7:21 pm

Tgt Ion:61.95 Resp: 920839

Ion	Ratio	Lower	Upper
62	100		
64	31.0	25.0	37.4
49	29.9	19.9	29.9#
0	0.0	0.0	0.0

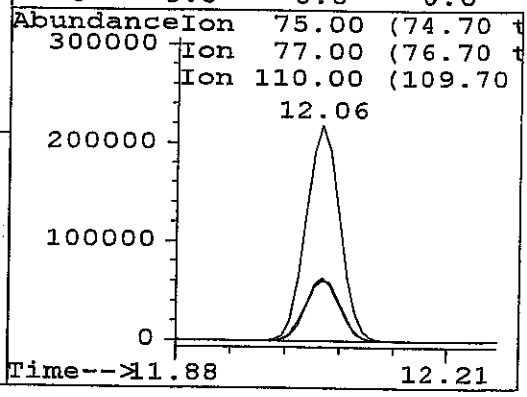


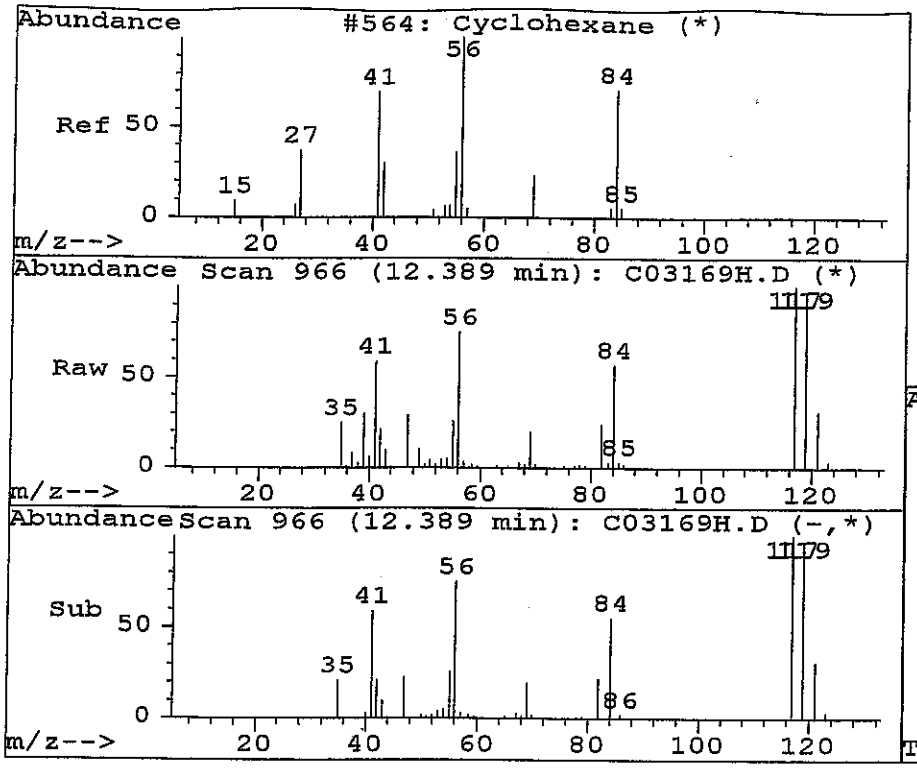


#38
1,1-Dichloropropene
Concen: 10.31 ppbV
RT: 12.06 min Scan# 932
Delta R.T. -0.18 min
Lab File: C03169H.D
Acq: 16 Mar 109 7:21 pm

Tgt Ion:75 Resp: 616834

Ion	Ratio	Lower	Upper
75	100		
77	29.0	23.0	34.4
110	27.8	24.9	37.3
0	0.0	0.0	0.0

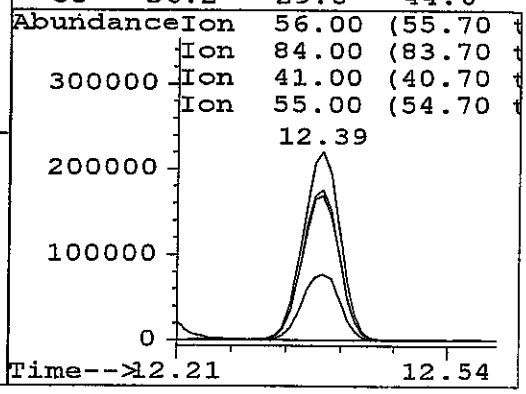


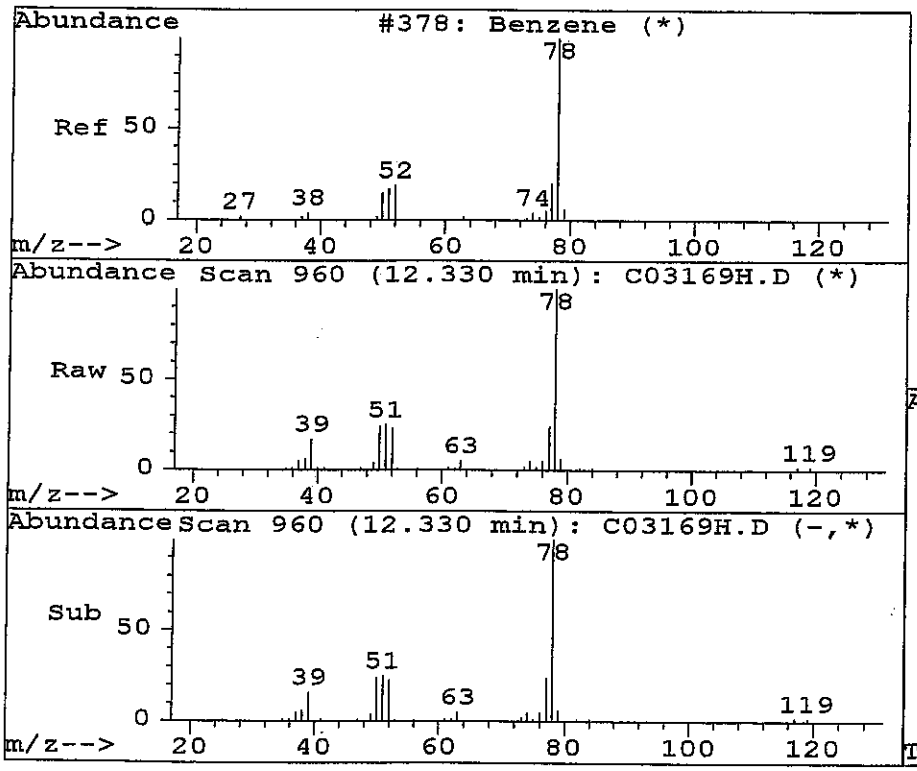


#39
Cyclohexane
Concen: 11.95 ppbV
RT: 12.39 min Scan# 966
Delta R.T. -0.16 min
Lab File: C03169H.D
Acq: 16 Mar 109 7:21 pm

Tgt Ion:56 Resp: 691589

Ion	Ratio	Lower	Upper
56	100		
84	77.7	74.2	111.4
41	80.2	60.4	90.6
55	36.2	29.8	44.6

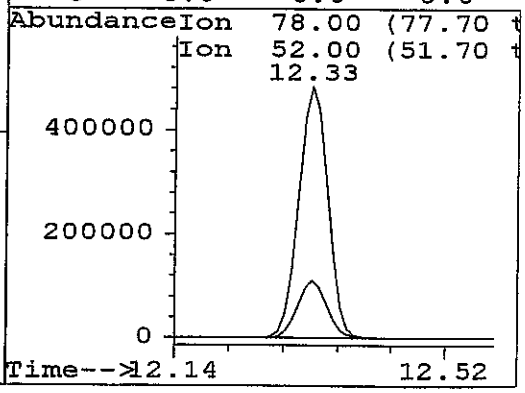


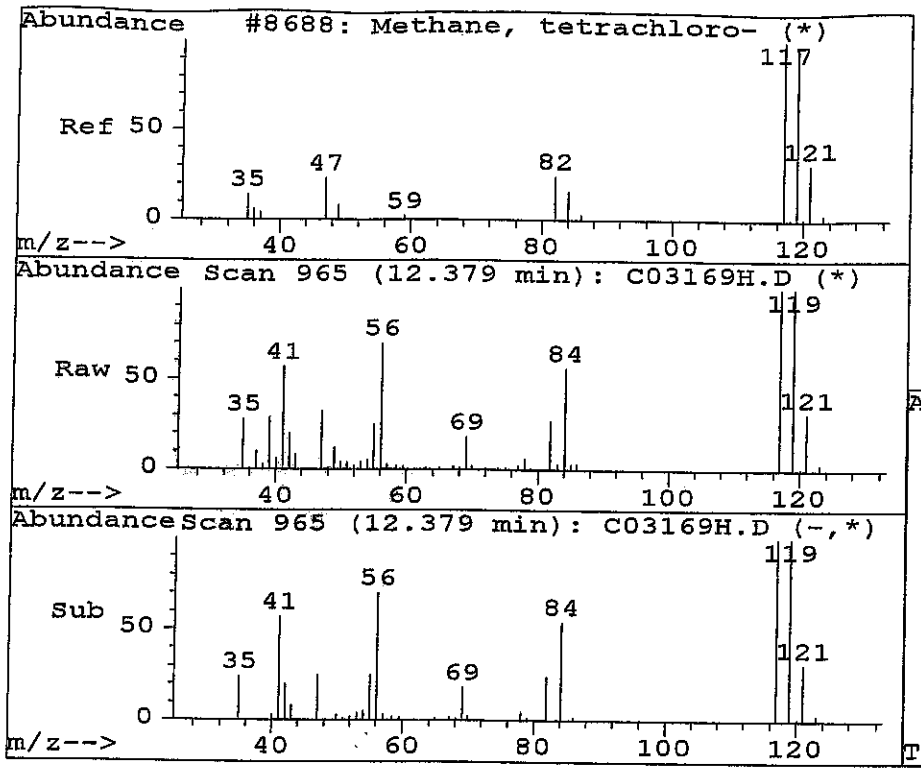


#40
Benzene
Concen: 10.39 ppbV
RT: 12.33 min Scan# 960
Delta R.T. -0.18 min
Lab File: C03169H.D
Acq: 16 Mar 109 7:21 pm

Tgt Ion:78 Resp: 1387400

Ion	Ratio	Lower	Upper
78	100		
52	22.9	16.4	24.6
0	0.0	0.0	0.0
0	0.0	0.0	0.0

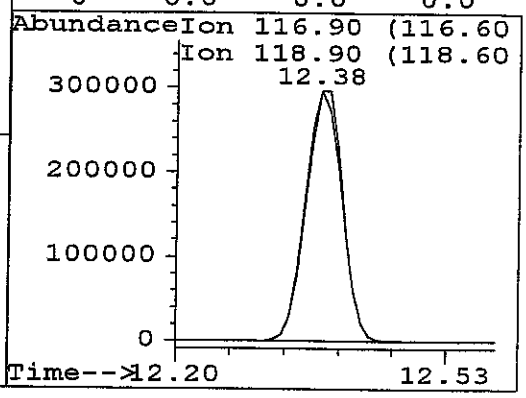


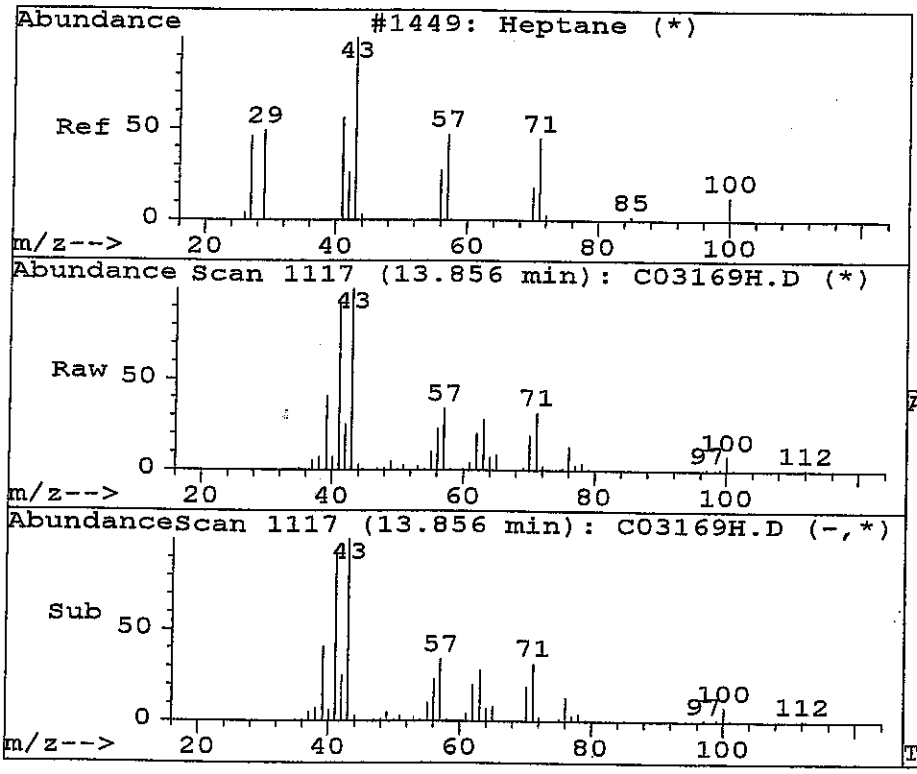


#41
Carbon tetrachloride
Concen: 8.90 ppbV
RT: 12.38 min Scan# 965
Delta R.T. -0.18 min
Lab File: C03169H.D
Acq: 16 Mar 109 7:21 pm

Tgt Ion:116.9 Resp: 931992

Ion	Ratio	Lower	Upper
117	100		
119	100.0	75.3	112.9
0	0.0	0.0	0.0
0	0.0	0.0	0.0

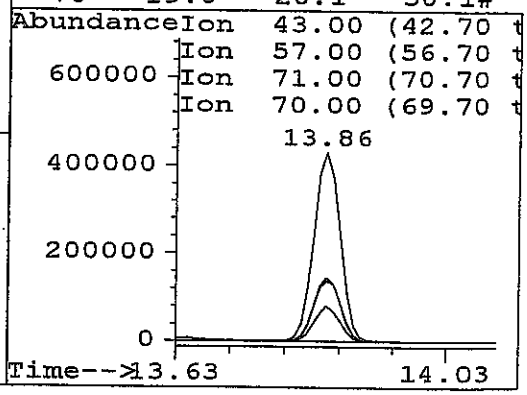


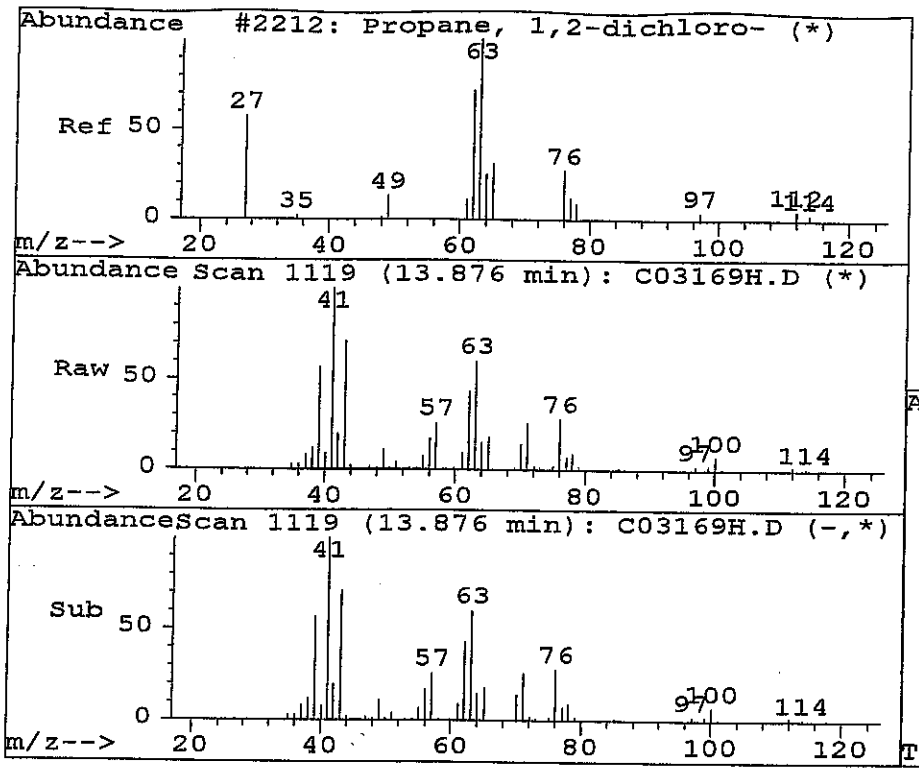


#42
n-Heptane
Concen: 12.21 ppbV
RT: 13.86 min Scan# 1117
Delta R.T. -0.18 min
Lab File: C03169H.D
Acq: 16 Mar 109 7:21 pm

Tgt Ion:43 Resp: 1176503

Ion	Ratio	Lower	Upper
43	100		
57	33.8	33.0	49.6
71	32.1	33.4	50.0#
70	19.0	20.1	30.1#

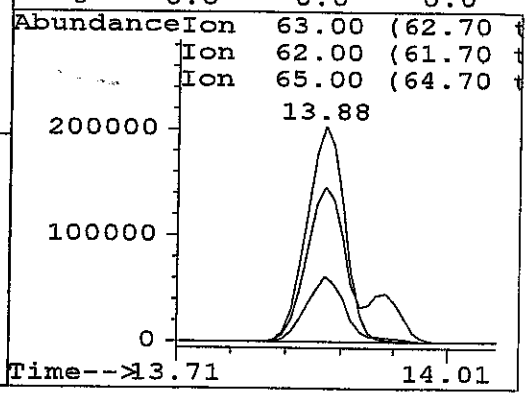


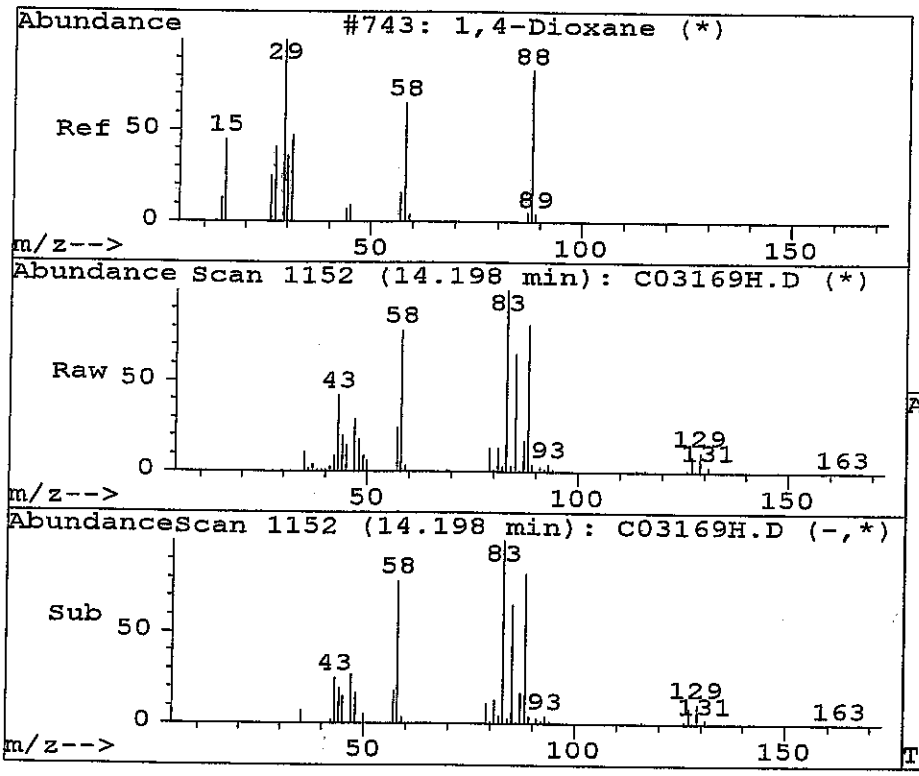


#43
1,2-Dichloropropane
Concen: 13.14 ppbV
RT: 13.88 min Scan# 1119
Delta R.T. -0.19 min
Lab File: C03169H.D
Acq: 16 Mar 109 7:21 pm

Tgt Ion:63 Resp: 598806

Ion	Ratio	Lower	Upper
63	100		
62	70.7	51.3	76.9
65	30.3	23.1	34.7
0	0.0	0.0	0.0

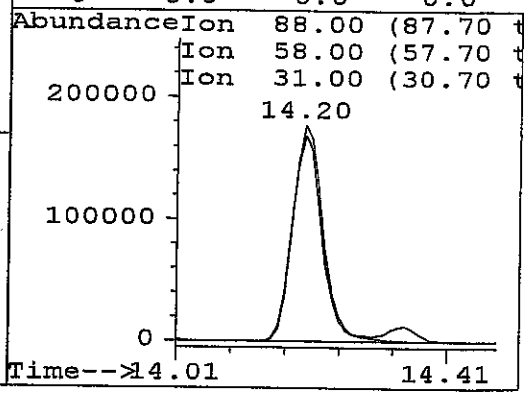


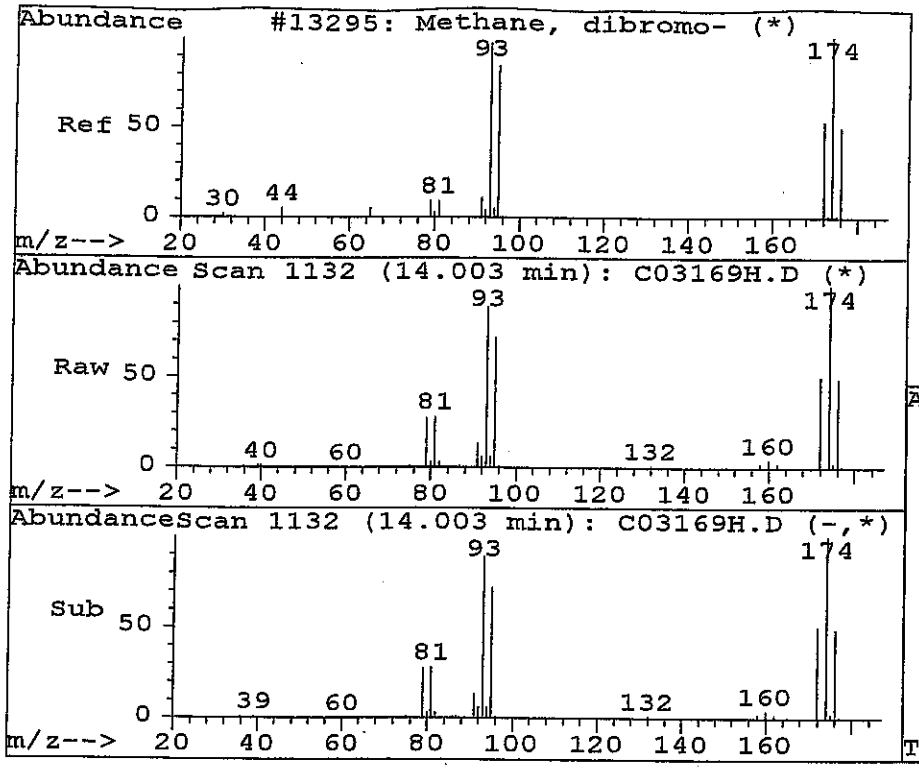


#44
1,4 Dioxane
Concen: 16.53 ppbV
RT: 14.20 min Scan# 1152
Delta R.T. -0.20 min
Lab File: C03169H.D
Acq: 16 Mar 109 7:21 pm

Tgt Ion:88 Resp: 540834

Ion	Ratio	Lower	Upper
88	100		
58	95.6	75.6	113.4
31	0.0	0.0	0.0
0	0.0	0.0	0.0

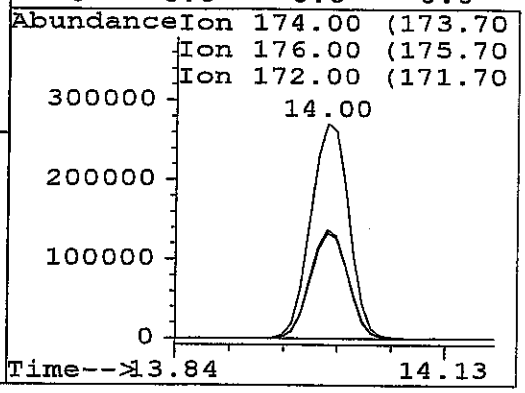


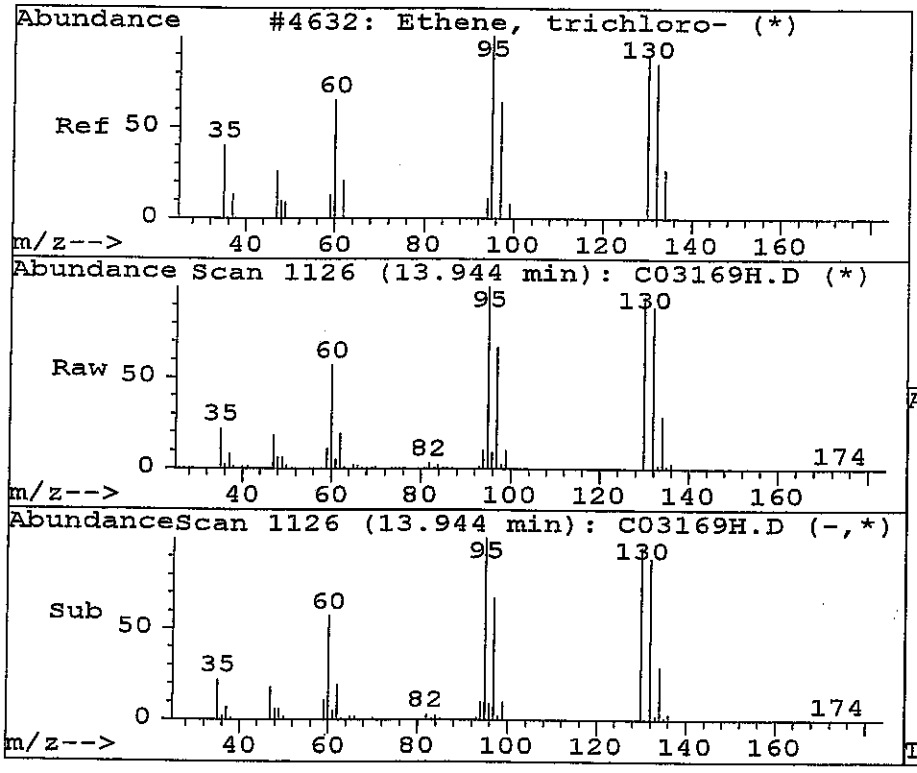


#45
Dibromomethane
Concen: 9.29 ppbV
RT: 14.00 min Scan# 1132
Delta R.T. -0.20 min
Lab File: C03169H.D
Acq: 16 Mar 109 7:21 pm

Tgt Ion:174 Resp: 786579

Ion	Ratio	Lower	Upper
174	100		
176	49.1	39.1	58.7
172	50.5	42.4	63.6
0	0.0	0.0	0.0

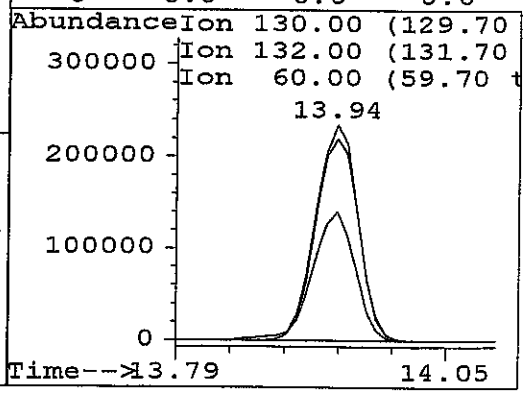


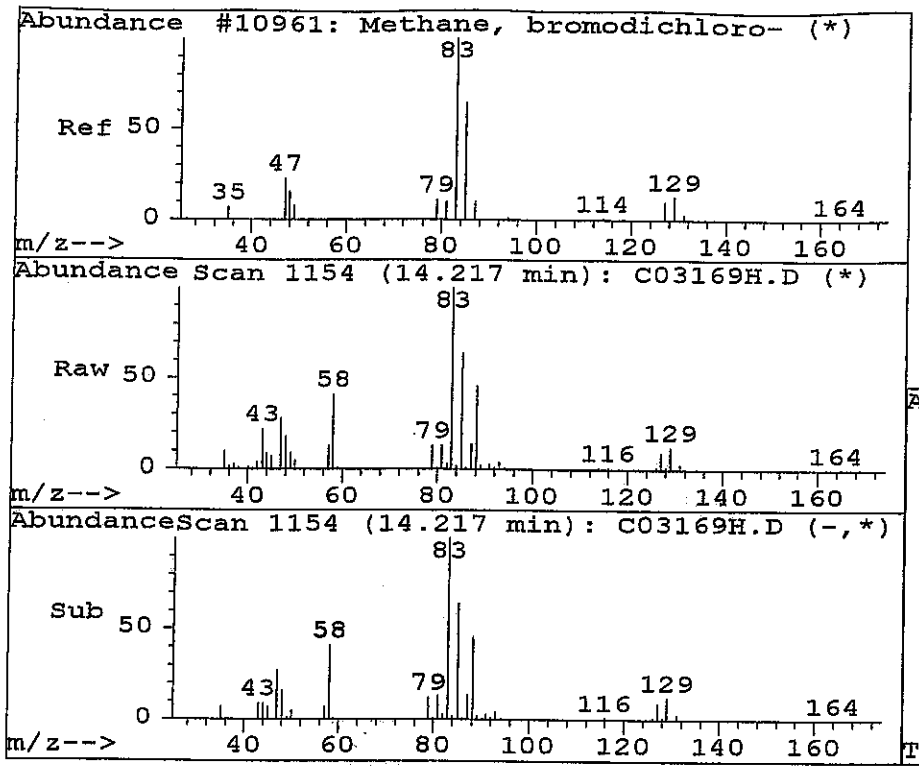


#46
Trichloroethene
Concen: 8.13 ppbV
RT: 13.94 min Scan# 1126
Delta R.T. -0.19 min
Lab File: C03169H.D
Acq: 16 Mar 109 7:21 pm

Tgt Ion:130 Resp: 666308

Ion	Ratio	Lower	Upper
130	100		
132	93.7	78.5	117.7
60	59.2	44.2	66.4
0	0.0	0.0	0.0

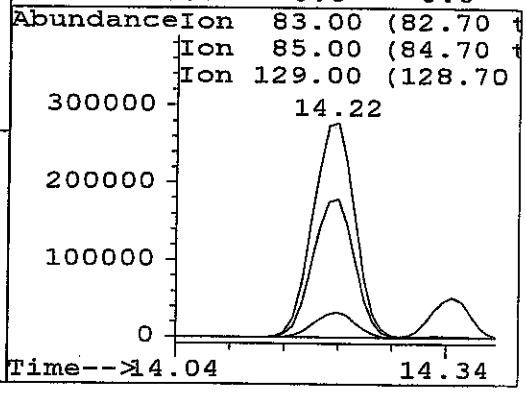


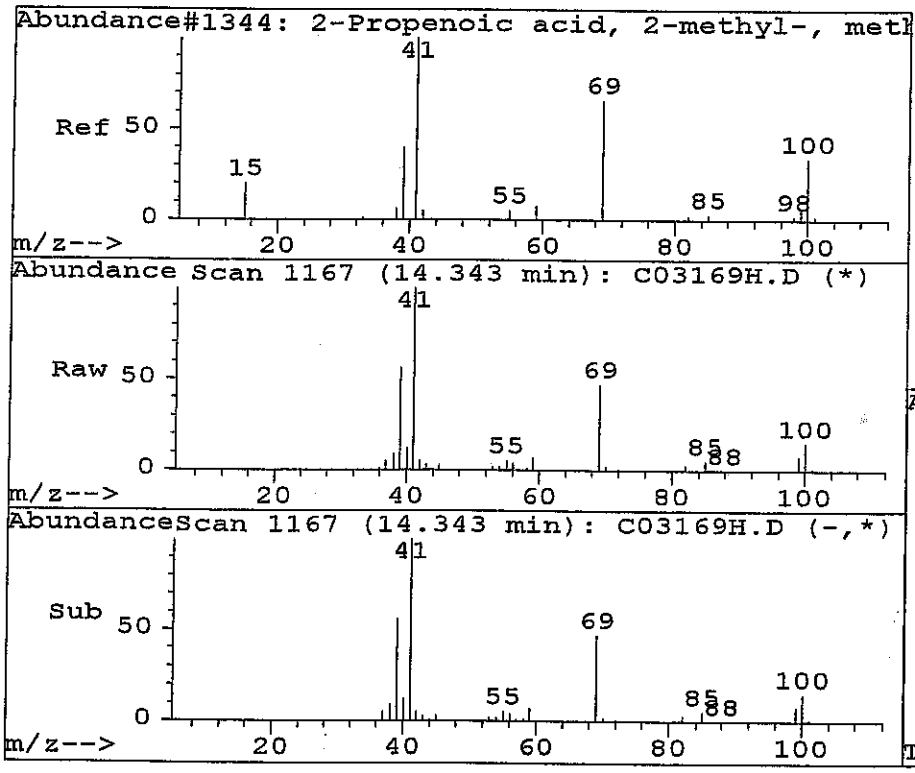


#47
Bromodichloromethane
Concen: 9.40 ppbV
RT: 14.22 min Scan# 1154
Delta R.T. -0.18 min
Lab File: C03169H.D
Acq: 16 Mar 109 7:21 pm

Tgt Ion:83 Resp: 885573

Ion	Ratio	Lower	Upper
83	100		
85	63.0	47.5	71.3
129	11.8	10.2	15.4
0	0.0	0.0	0.0

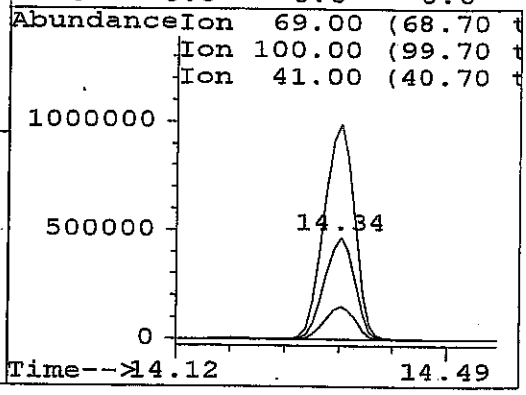


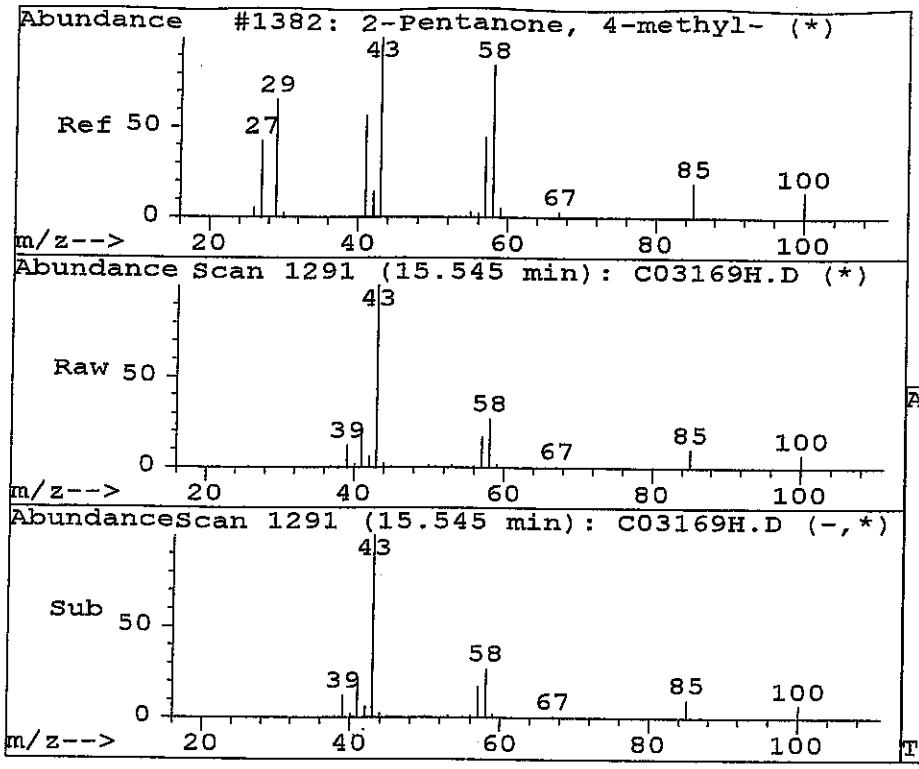


#48
Methyl methacrylate
Concen: 30.88 ppbV
RT: 14.34 min Scan# 1167
Delta R.T. -0.21 min
Lab File: C03169H.D
Acq: 16 Mar 109 7:21 pm

Tgt Ion:69 Resp: 1334867

Ion	Ratio	Lower	Upper
69	100		
100	32.1	29.5	44.3
41	211.5	144.6	217.0
0	0.0	0.0	0.0

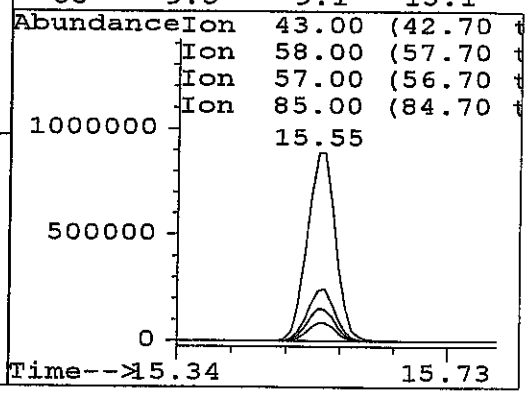


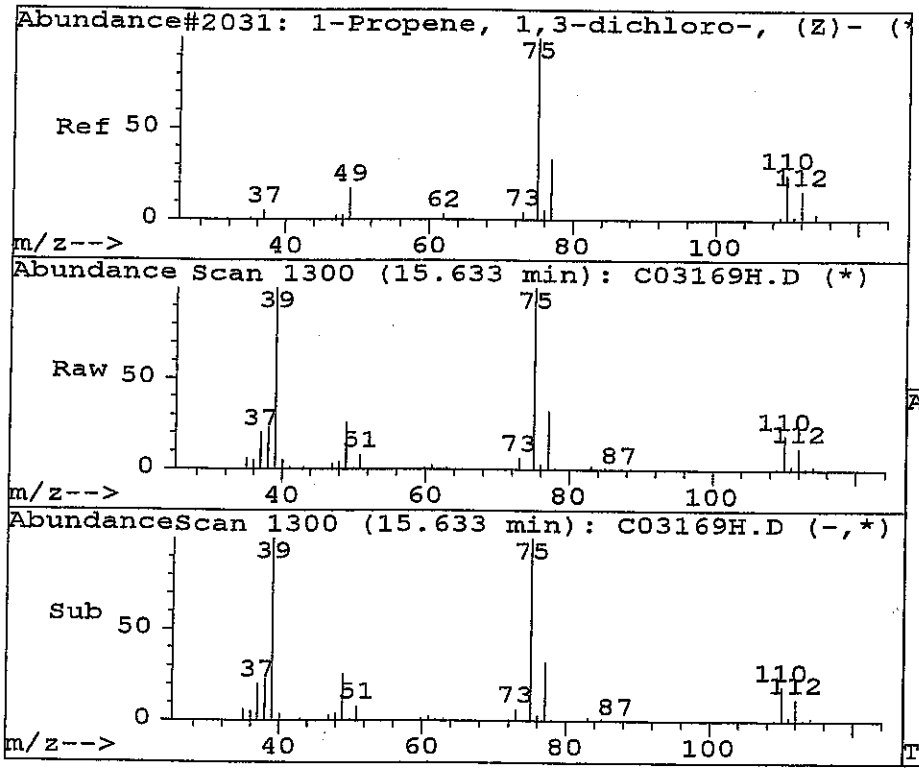


#49
Methyl Isobutyl Ketone
Concen: 14.35 ppbV
RT: 15.55 min Scan# 1291
Delta R.T. -0.15 min
Lab File: C03169H.D
Acq: 16 Mar 109 7:21 pm

Tgt Ion:43 Resp: 2505790

Ion	Ratio	Lower	Upper
43	100		
58	26.6	23.0	38.4
57	17.3	15.9	26.5
85	9.5	9.1	15.1

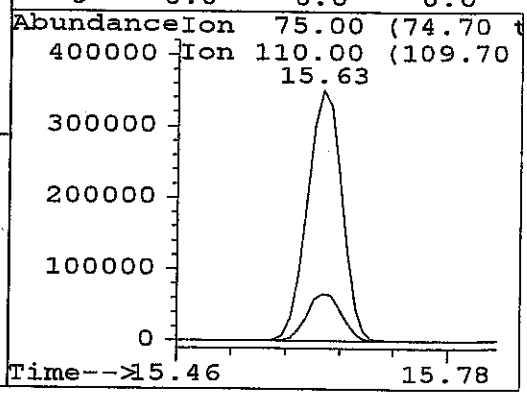


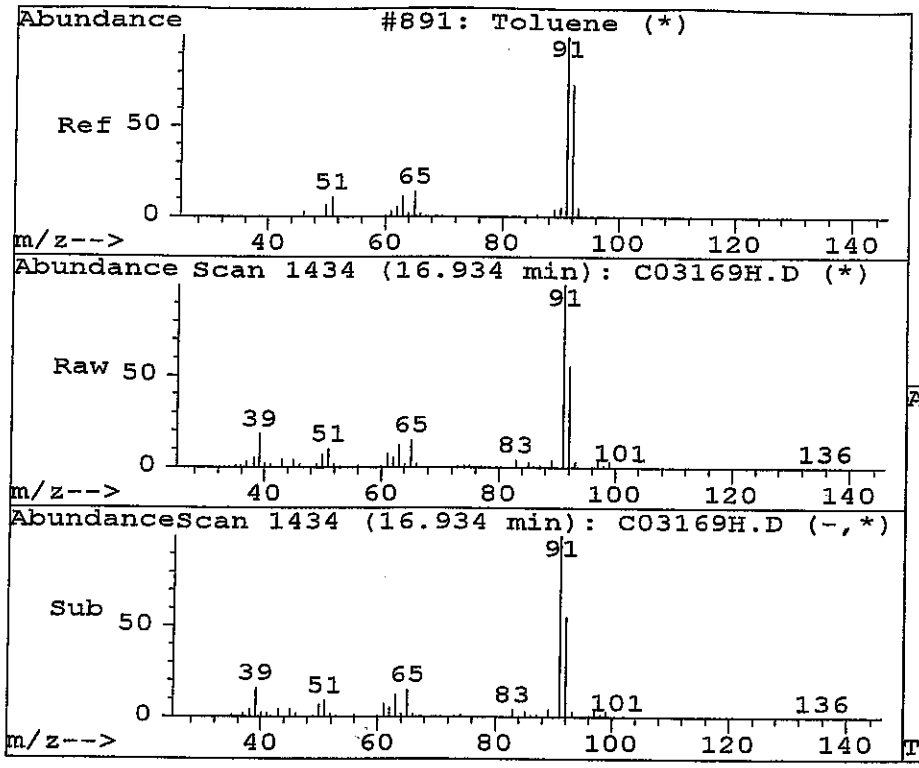


#50
cis-1,3-Dichloropropene
Concen: 13.06 ppbV
RT: 15.63 min Scan# 1300
Delta R.T. -0.19 min
Lab File: C03169H.D
Acq: 16 Mar 109 7:21 pm

Tgt Ion:75 Resp: 1010236

Ion	Ratio	Lower	Upper
75	100		
110	18.9	15.4	23.2
0	0.0	0.0	0.0
0	0.0	0.0	0.0

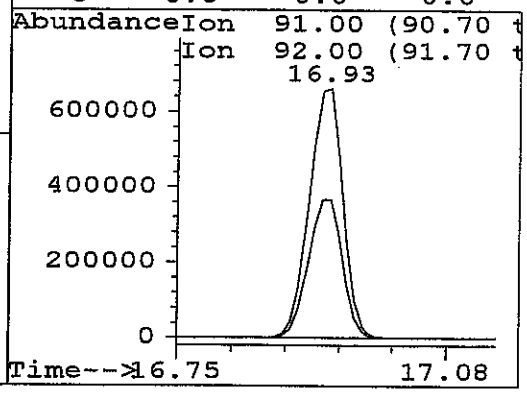


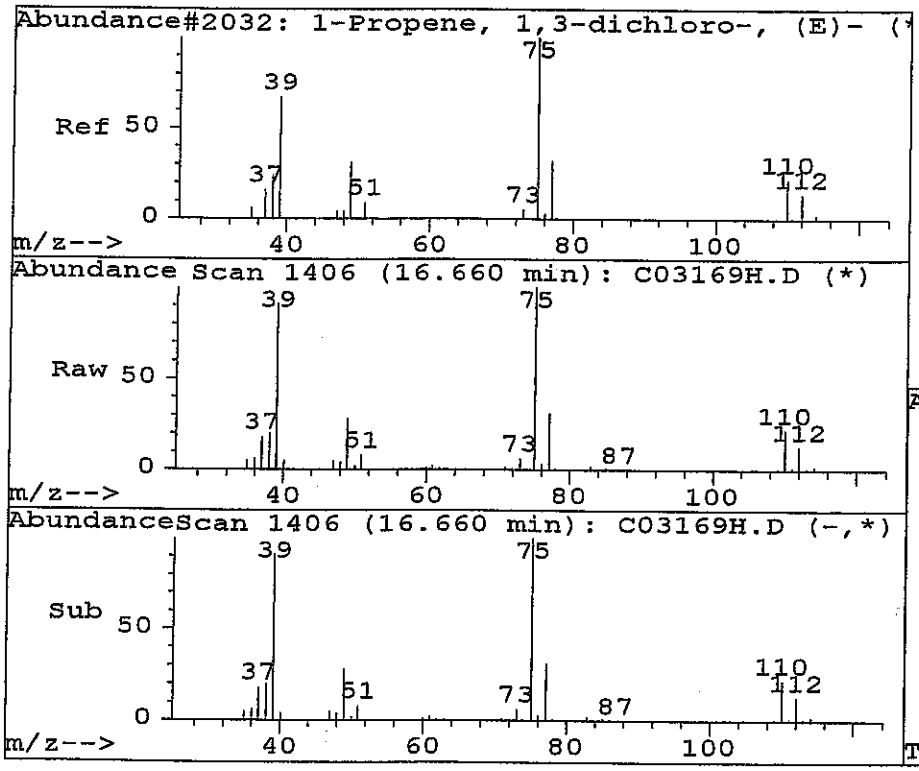


#51
Toluene
Concen: 10.85 ppbV
RT: 16.93 min Scan# 1434
Delta R.T. -0.18 min
Lab File: C03169H.D
Acq: 16 Mar 109 7:21 pm

Tgt Ion:91 Resp: 1877014

Ion	Ratio	Lower	Upper
91	100		
92	55.4	45.5	68.3
0	0.0	0.0	0.0
0	0.0	0.0	0.0

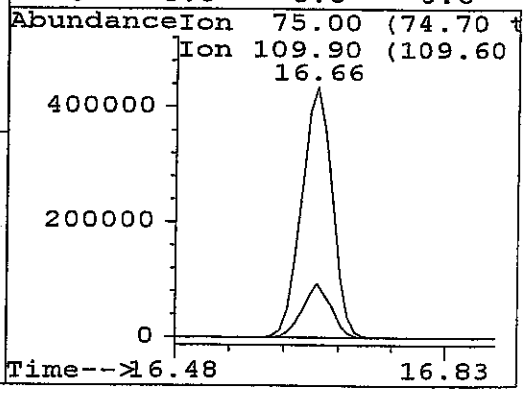


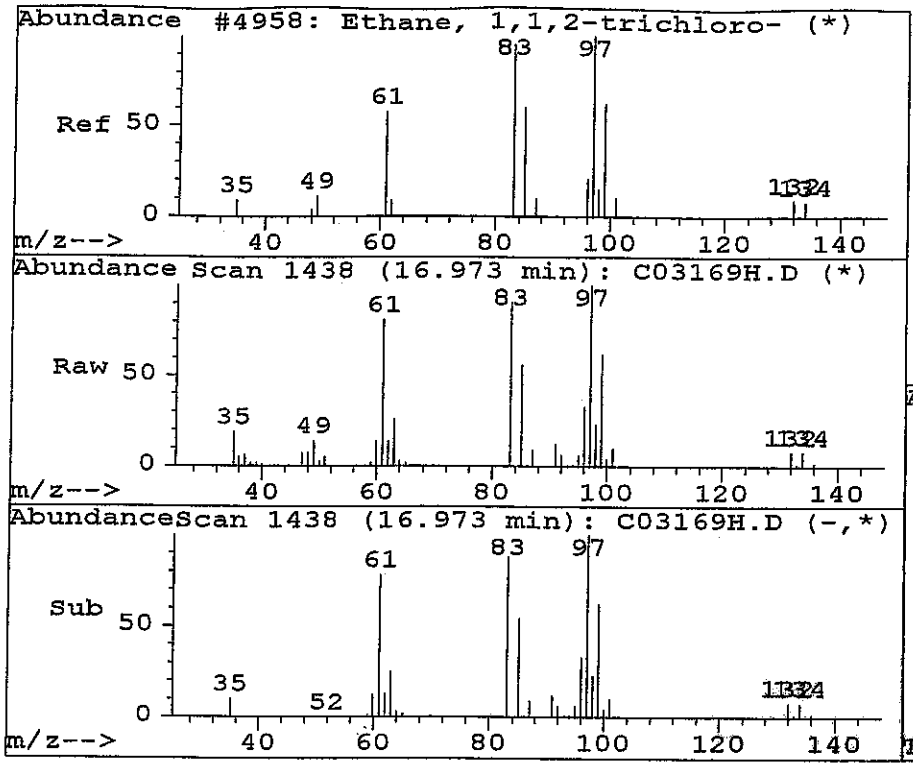


#52
trans-1,3-Dichloropropene
Concen: 12.30 ppbV
RT: 16.66 min Scan# 1406
Delta R.T. -0.19 min
Lab File: C03169H.D
Acq: 16 Mar 109 7:21 pm

Tgt Ion:75 Resp: 1205186

Ion	Ratio	Lower	Upper
75	100		
110	21.5	17.4	26.2
0	0.0	0.0	0.0
0	0.0	0.0	0.0

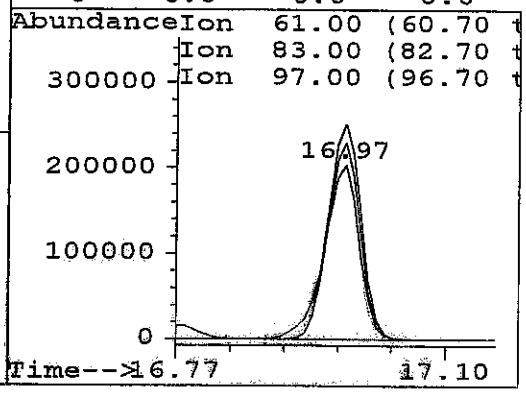


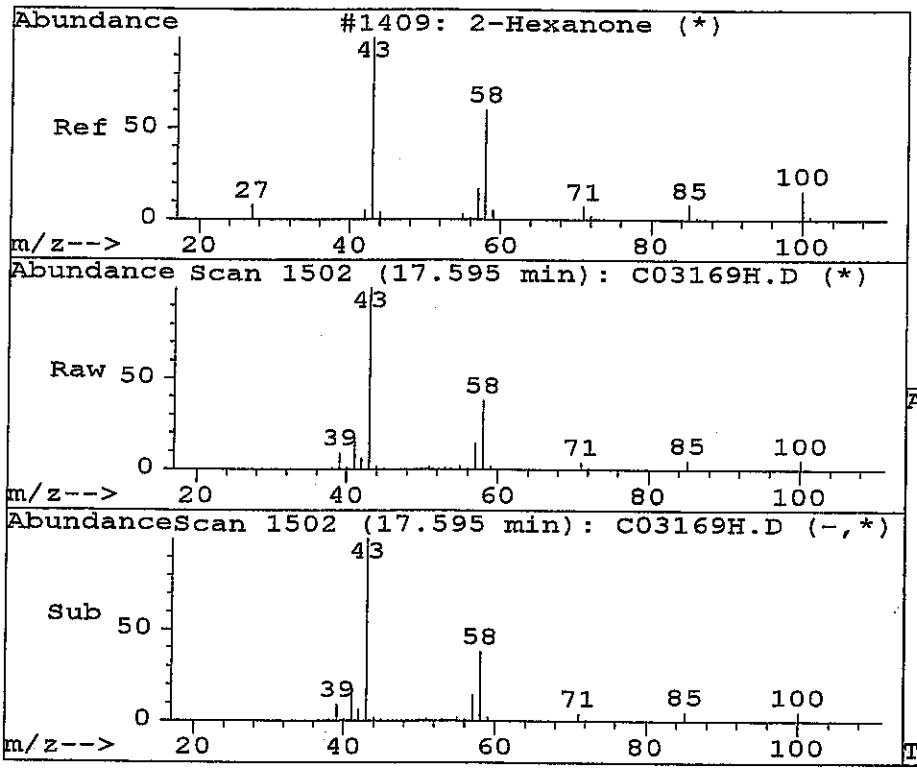


#53
1,1,2-Trichloroethane
Concen: 11.97 ppbV
RT: 16.97 min Scan# 1438
Delta R.T. -0.19 min
Lab File: C03169H.D
Acq: 16 Mar 109 7:21 pm

Tgt Ion:61 Resp: 608914

Ion	Ratio	Lower	Upper
61	100		
83	113.0	83.1	124.7
97	123.9	99.4	149.2
0	0.0	0.0	0.0

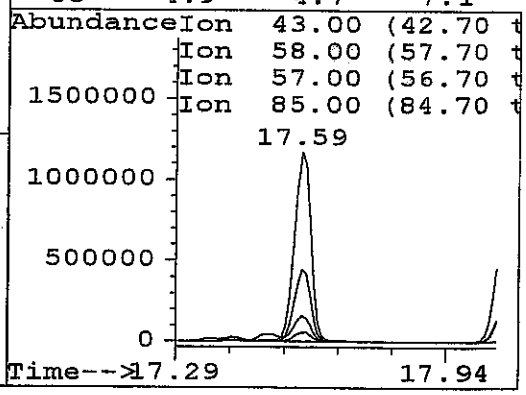


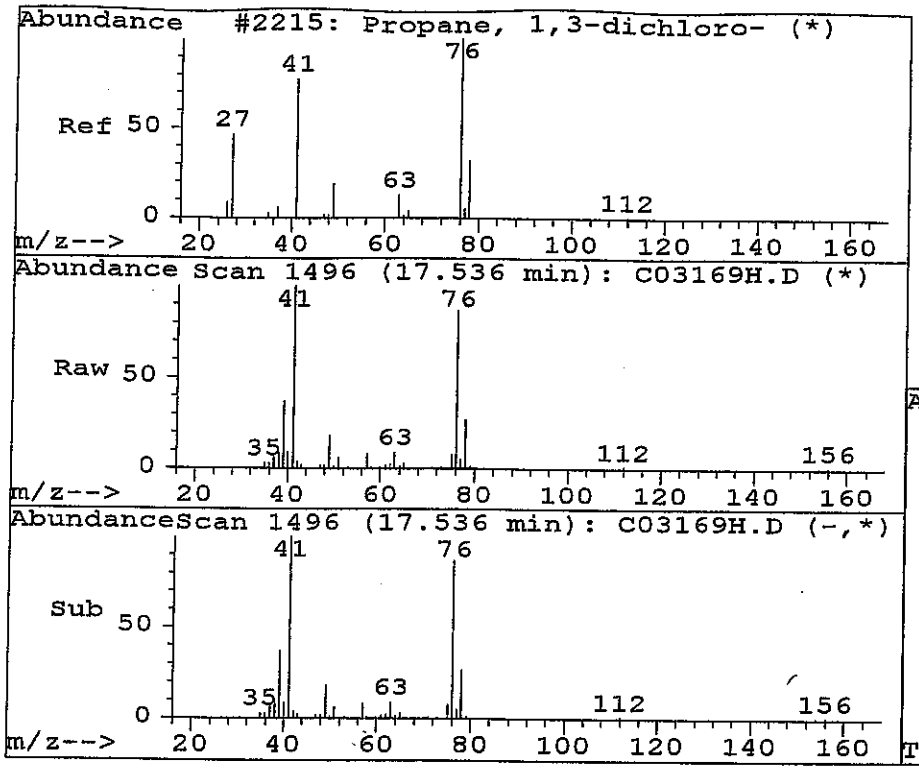


#54
2-Hexanone
Concen: 14.71 ppbV
RT: 17.59 min Scan# 1502
Delta R.T. -0.21 min
Lab File: C03169H.D
Acq: 16 Mar 109 7:21 pm

Tgt Ion:43 Resp: 3278869

Ion	Ratio	Lower	Upper
43	100		
58	38.2	28.1	46.9
57	12.9	10.4	17.4
85	4.9	4.7	7.1

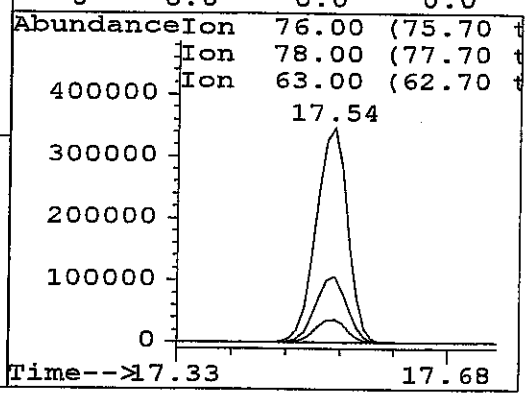


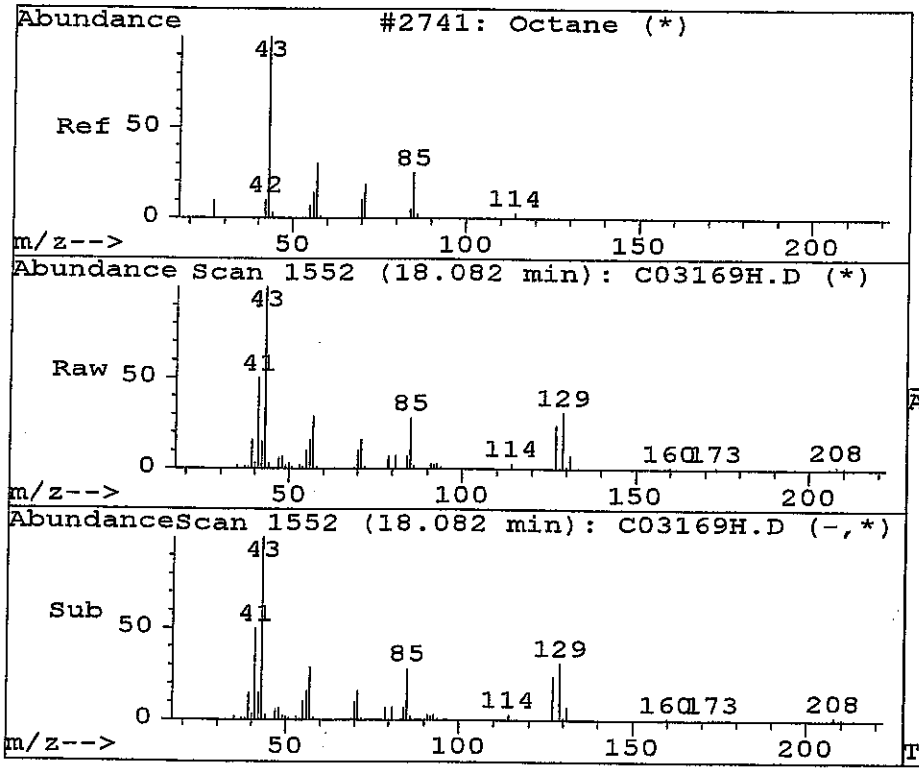


#55
1,3-Dichloropropane
Concen: 12.63 ppbV
RT: 17.54 min Scan# 1496
Delta R.T. -0.18 min
Lab File: C03169H.D
Acq: 16 Mar 109 7:21 pm

Tgt Ion:76 Resp: 989685

Ion	Ratio	Lower	Upper
76	100		
78	30.7	25.4	38.0
63	10.6	8.3	12.5
0	0.0	0.0	0.0

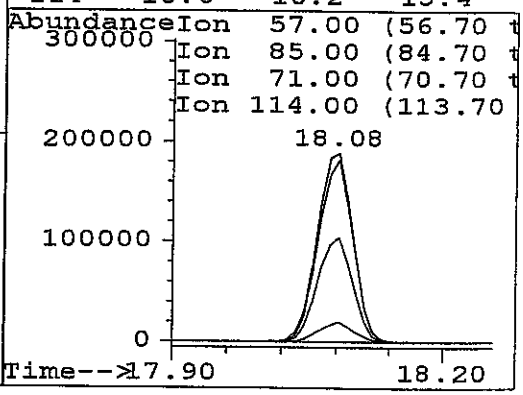


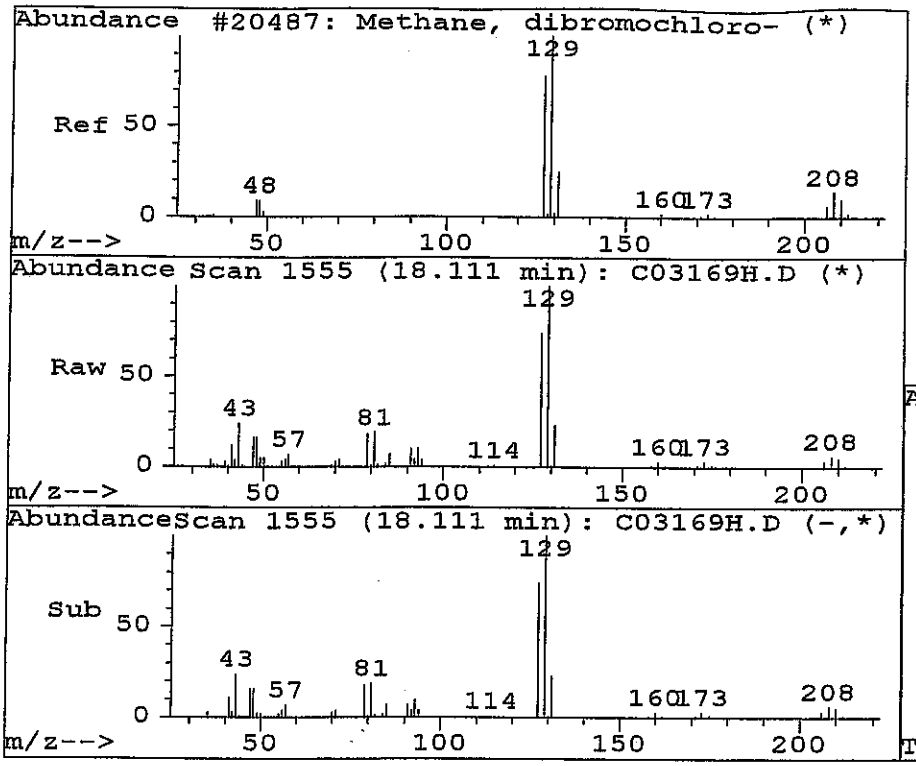


#56
Octane
Concen: 8.28 ppbV
RT: 18.08 min Scan# 1552
Delta R.T. -0.18 min
Lab File: C03169H.D
Acq: 16 Mar 109 7:21 pm

Tgt Ion:57 Resp: 525459

Ion	Ratio	Lower	Upper
57	100		
85	96.3	84.5	126.7
71	55.4	44.1	66.1
114	10.6	10.2	15.4

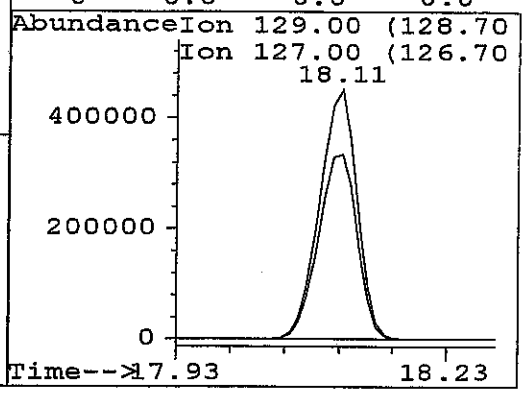


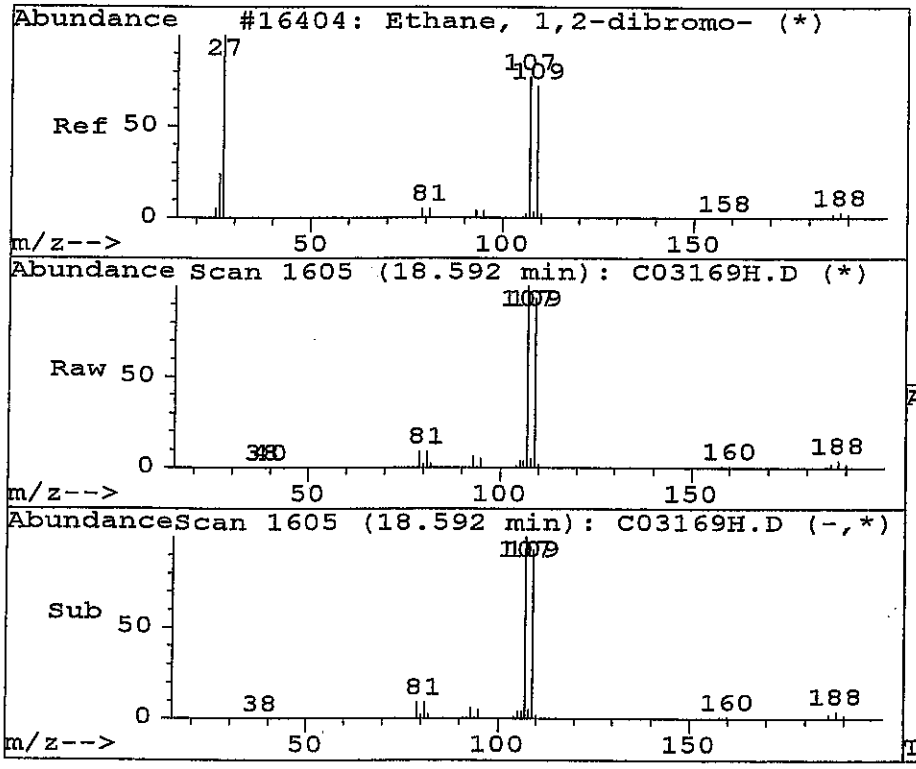


#57
Dibromochloromethane
Concen: 9.73 ppbV
RT: 18.11 min Scan# 1555
Delta R.T. -0.19 min
Lab File: C03169H.D
Acq: 16 Mar 109 7:21 pm

Tgt Ion:129 Resp: 1316838

Ion	Ratio	Lower	Upper
129	100		
127	74.2	59.7	89.5
0	0.0	0.0	0.0
0	0.0	0.0	0.0

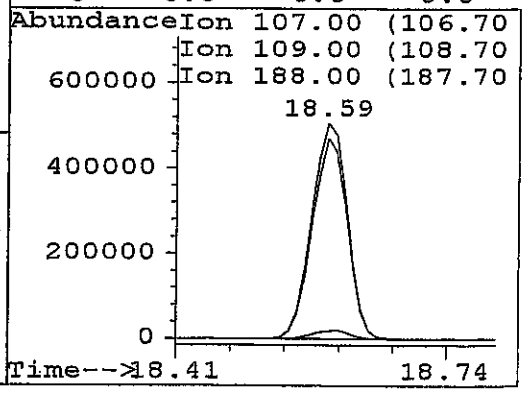


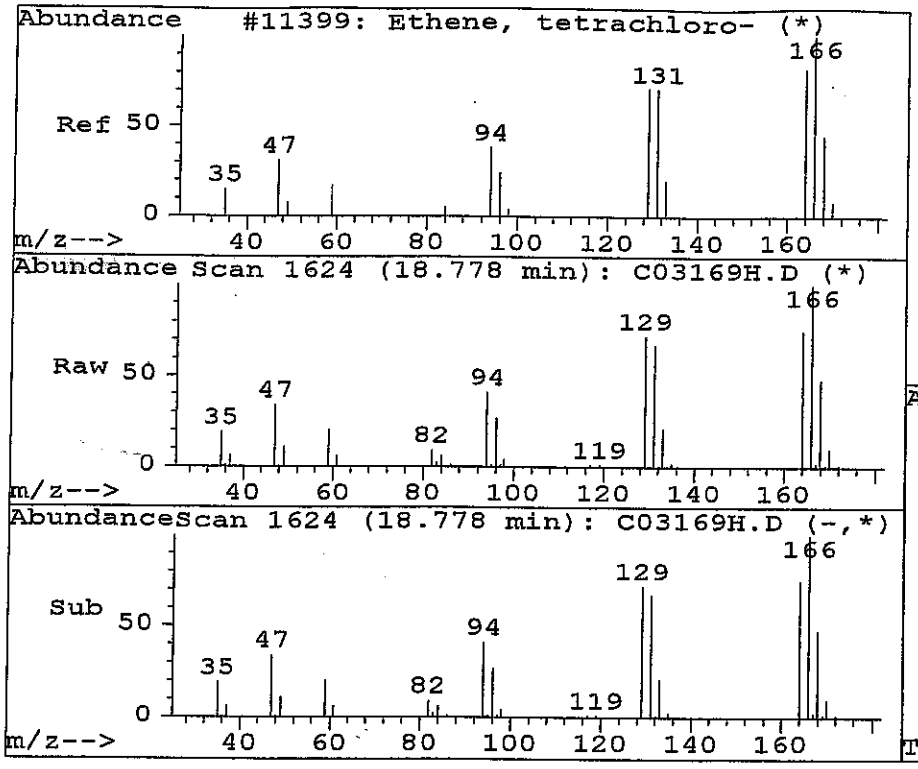


#58
1,2-Dibromoethane
Concen: 12.10 ppbV
RT: 18.59 min Scan# 1605
Delta R.T. -0.21 min
Lab File: C03169H.D
Acq: 16 Mar 109 7:21 pm

Tgt Ion:107 Resp: 1505940

Ion	Ratio	Lower	Upper
107	100		
109	93.2	75.4	113.0
188	3.6	3.8	5.6#
0	0.0	0.0	0.0

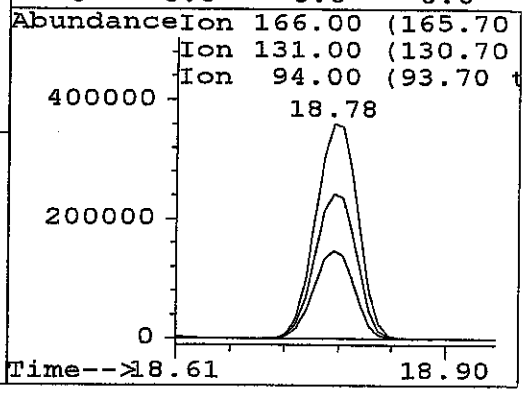


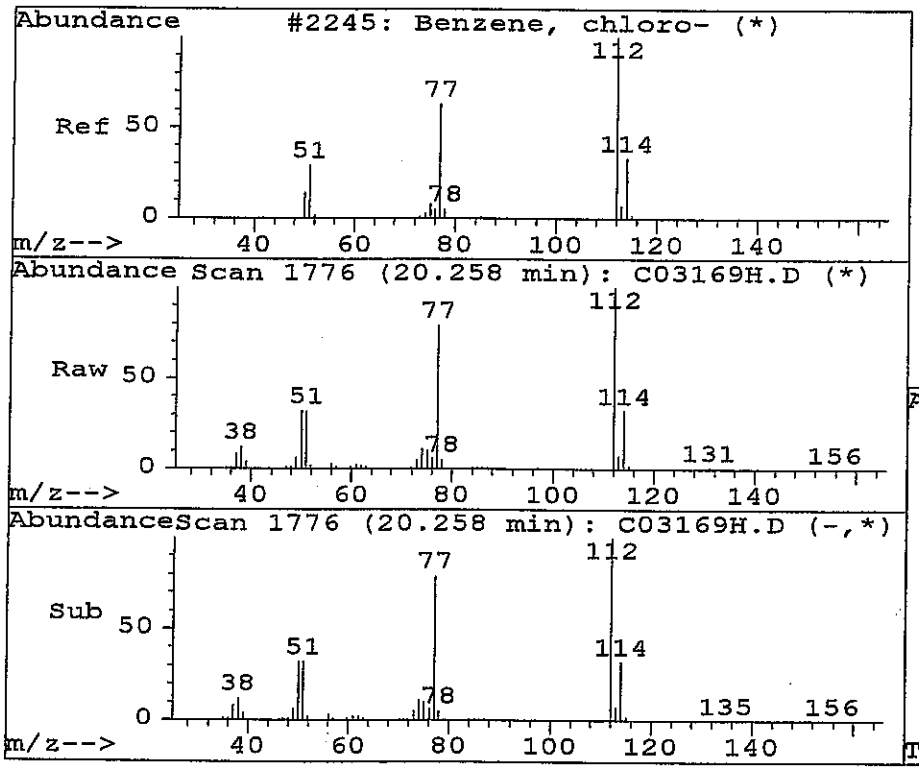


#59
Tetrachloroethene
Concen: 9.31 ppbV
RT: 18.78 min Scan# 1624
Delta R.T. -0.19 min
Lab File: C03169H.D
Acq: 16 Mar 109 7:21 pm

Tgt Ion:166 Resp: 1126037

Ion	Ratio	Lower	Upper
166	100		
131	67.2	49.8	74.8
94	41.0	28.2	42.4
0	0.0	0.0	0.0

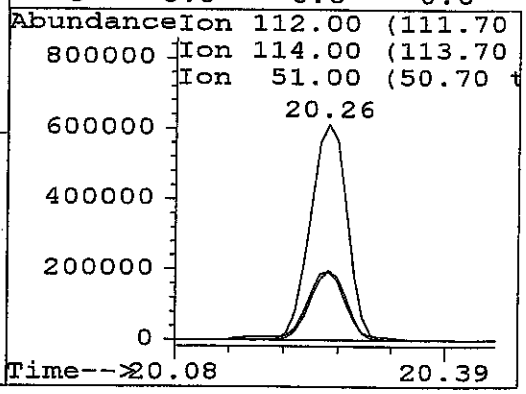


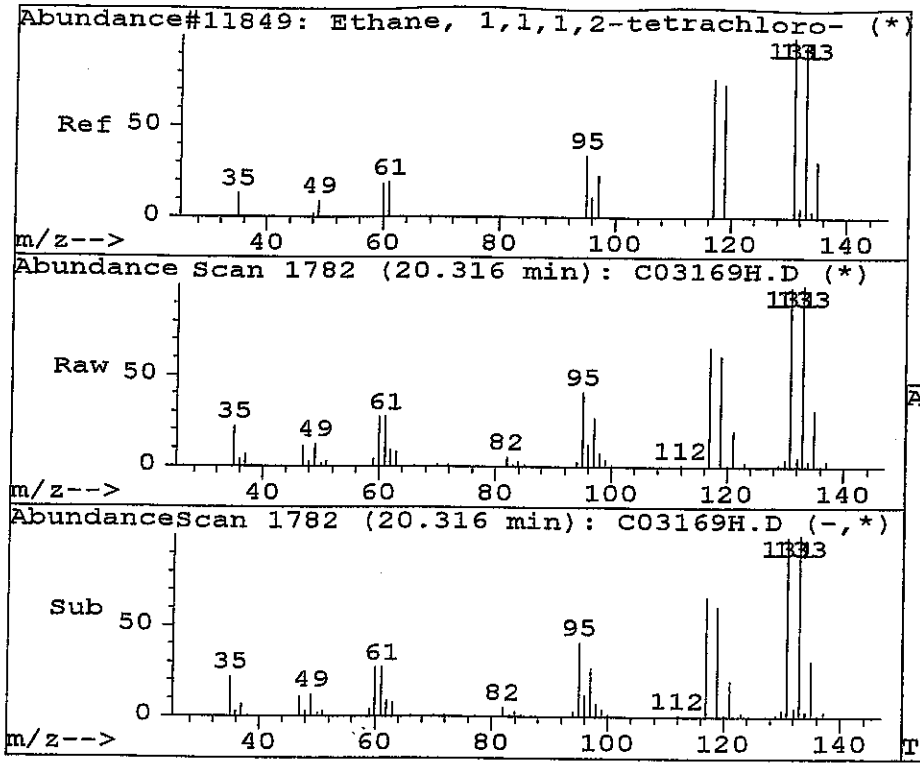


#60
Chlorobenzene
Concen: 11.41 ppbV
RT: 20.26 min Scan# 1776
Delta R.T. -0.19 min
Lab File: C03169H.D
Acq: 16 Mar 109 7:21 pm

Tgt Ion:112 Resp: 1818049

Ion	Ratio	Lower	Upper
112	100		
114	32.1	25.0	37.4
51	30.9	23.3	34.9
0	0.0	0.0	0.0

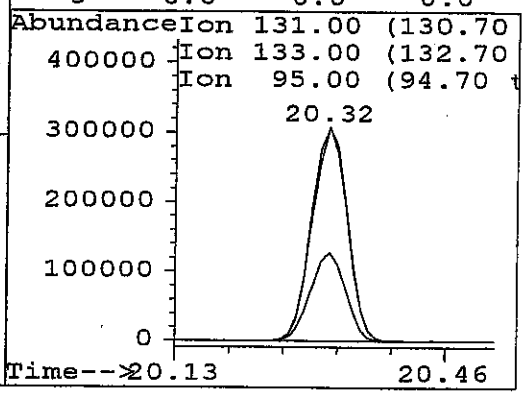


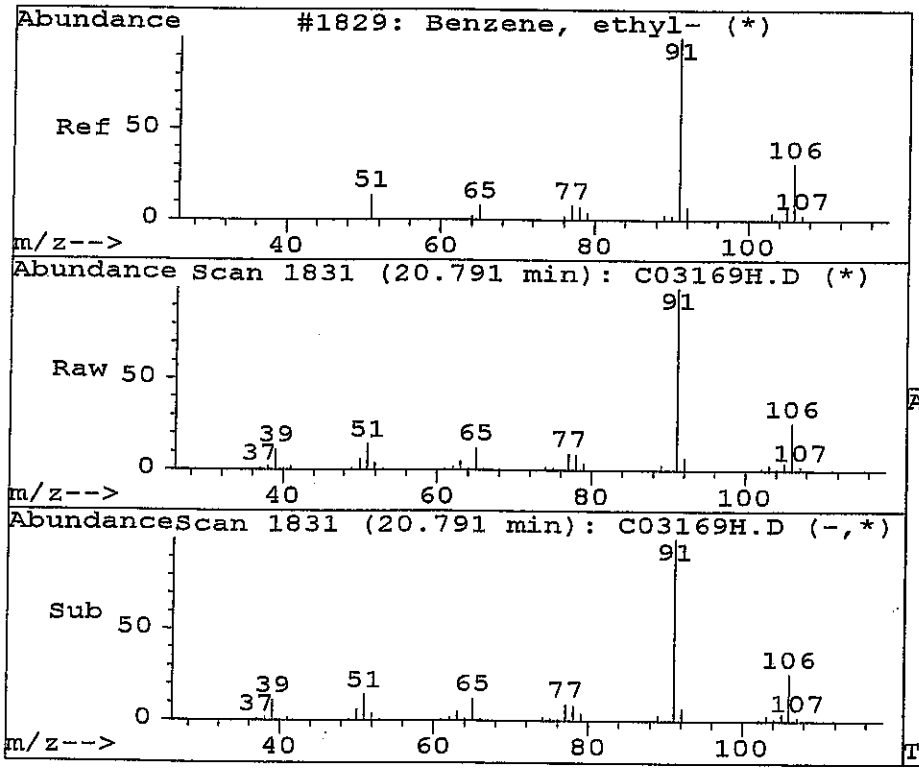


#61
1,1,1,2-Tetrachloroethane
Concen: 10.15 ppbV
RT: 20.32 min Scan# 1782
Delta R.T. -0.19 min
Lab File: C03169H.D
Acq: 16 Mar 109 7:21 pm

Tgt Ion:131 Resp: 921637

Ion	Ratio	Lower	Upper
131	100		
133	100.8	78.9	118.3
95	41.8	30.4	45.6
0	0.0	0.0	0.0

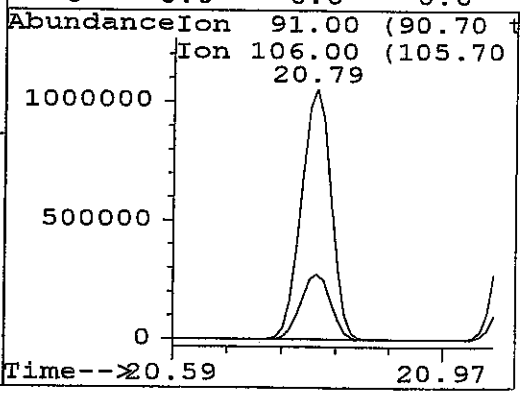


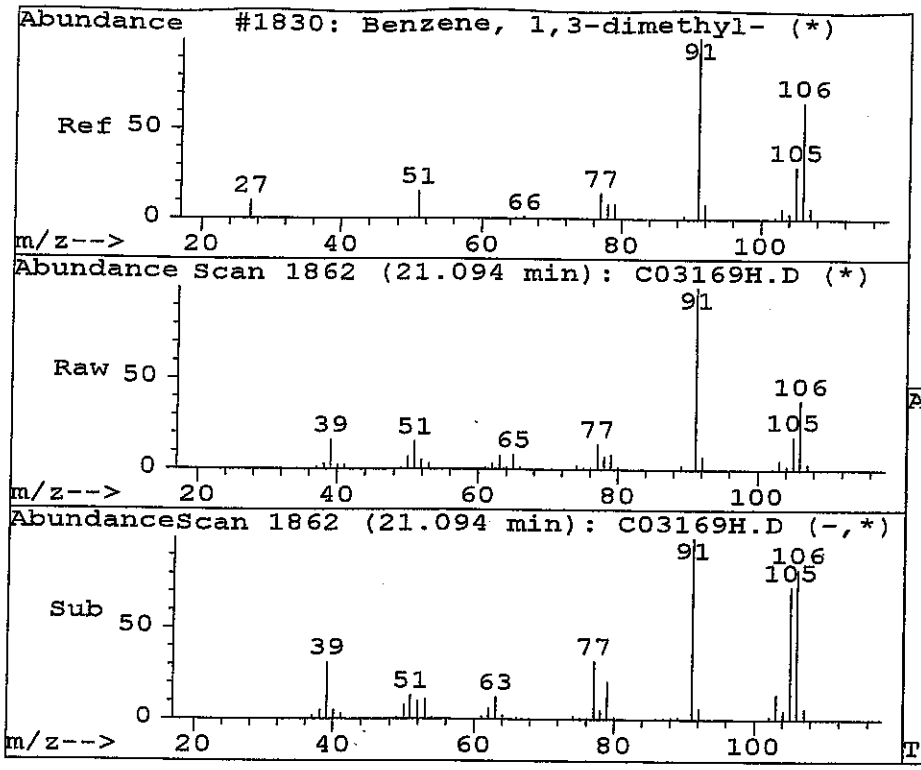


#62
Ethylbenzene
Concen: 12.07 ppbV
RT: 20.79 min Scan# 1831
Delta R.T. -0.20 min
Lab File: C03169H.D
Acq: 16 Mar 109 7:21 pm

Tgt Ion:91 Resp: 3108186

Ion	Ratio	Lower	Upper
91	100		
106	26.0	20.9	31.3
0	0.0	0.0	0.0
0	0.0	0.0	0.0

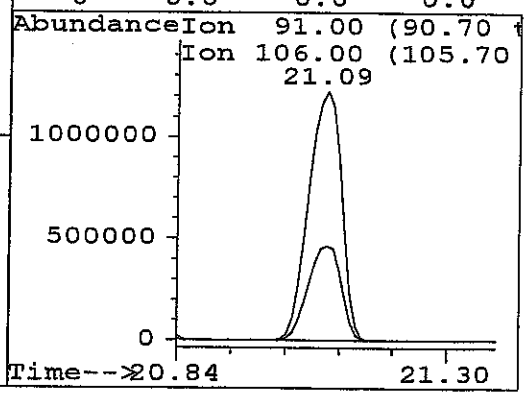


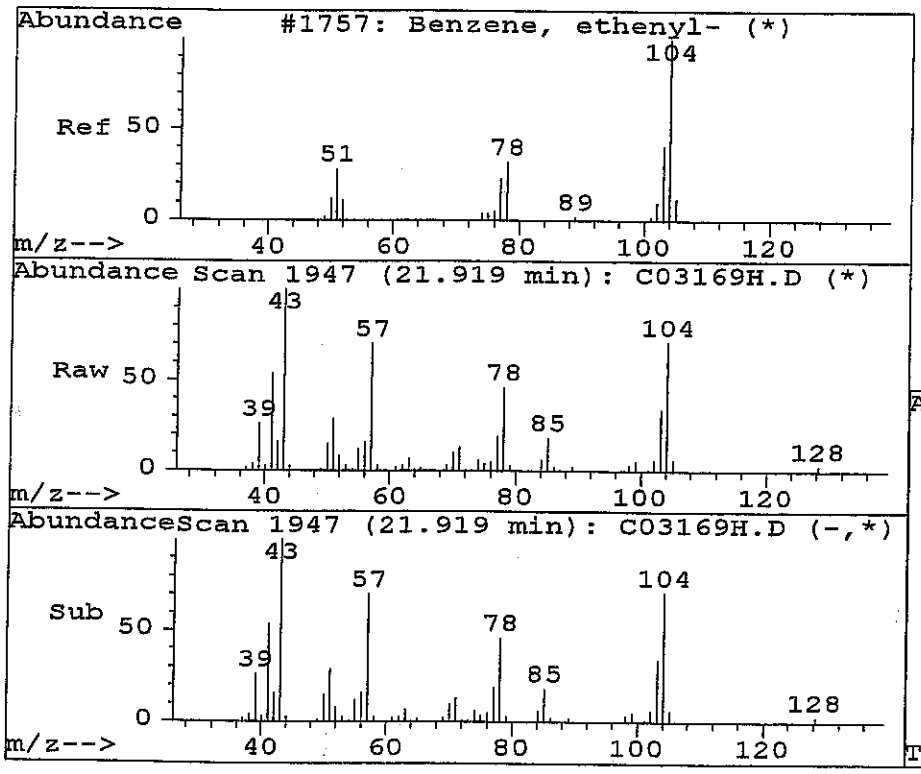


#63
m & p-Xylene
Concen: 20.91 ppbV
RT: 21.09 min Scan# 1862
Delta R.T. -0.19 min
Lab File: C03169H.D
Acq: 16 Mar 109 7:21 pm

Tgt Ion:91 Resp: 4725274

Ion	Ratio	Lower	Upper
91	100		
106	37.7	30.8	46.2
0	0.0	0.0	0.0
0	0.0	0.0	0.0

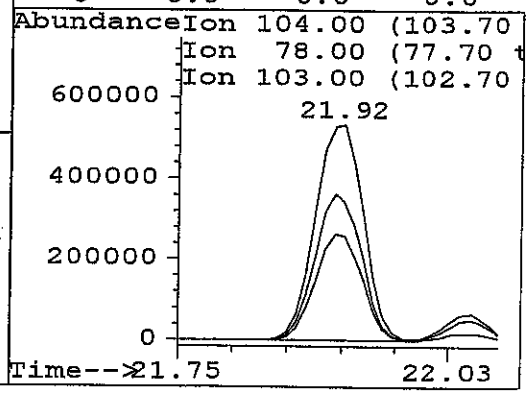


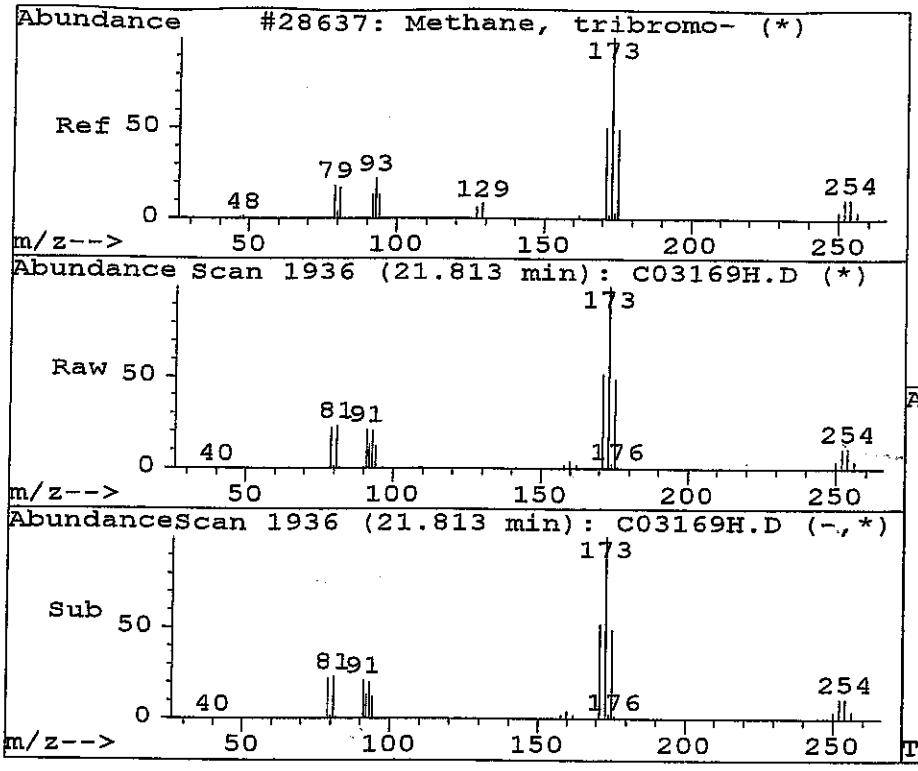


#64
Styrene
Concen: 11.40 ppbV
RT: 21.92 min Scan# 1947
Delta R.T. -0.22 min
Lab File: C03169H.D
Acq: 16 Mar 109 7:21 pm

Tgt Ion:104 Resp: 1812012

Ion	Ratio	Lower	Upper
104	100		
78	63.5	52.3	78.5
103	48.0	37.7	56.5
0	0.0	0.0	0.0

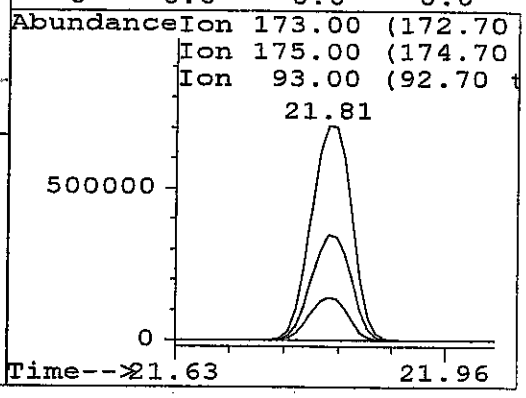


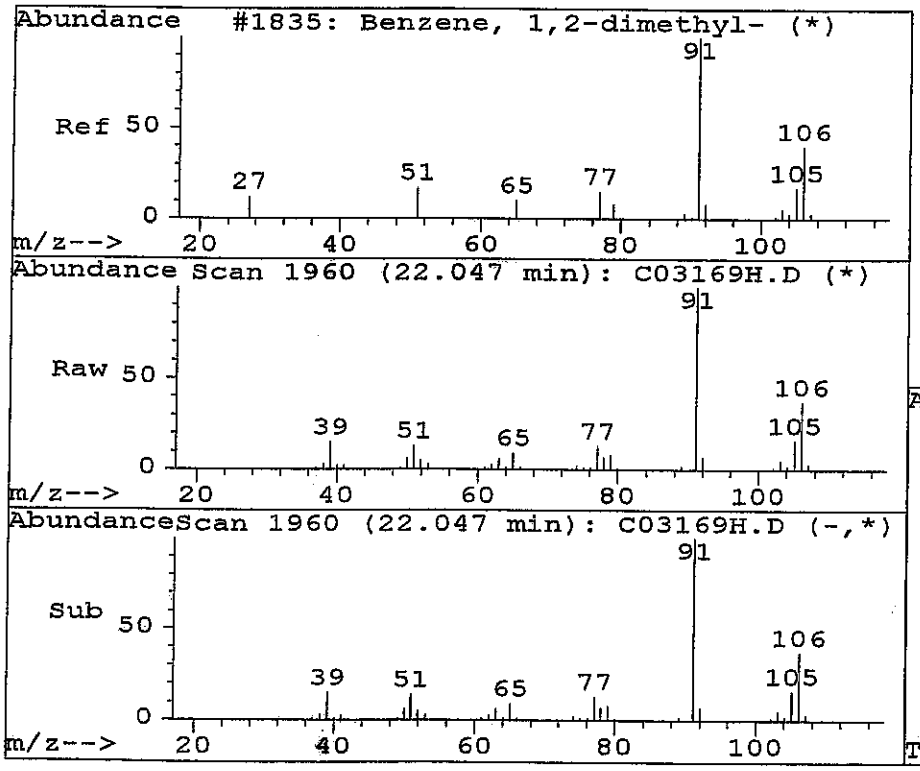


#65
Bromoform
Concen: 11.24 ppbV
RT: 21.81 min Scan# 1936
Delta R.T. -0.19 min
Lab File: C03169H.D
Acq: 16 Mar 109 7:21 pm

Tgt Ion:173 Resp: 2416870

Ion	Ratio	Lower	Upper
173	100		
175	49.2	38.6	57.8
93	20.0	14.0	21.0
0	0.0	0.0	0.0

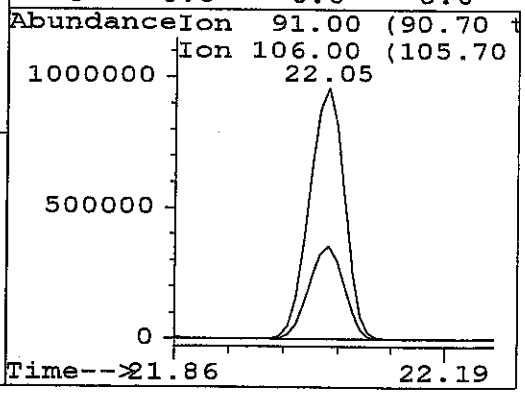


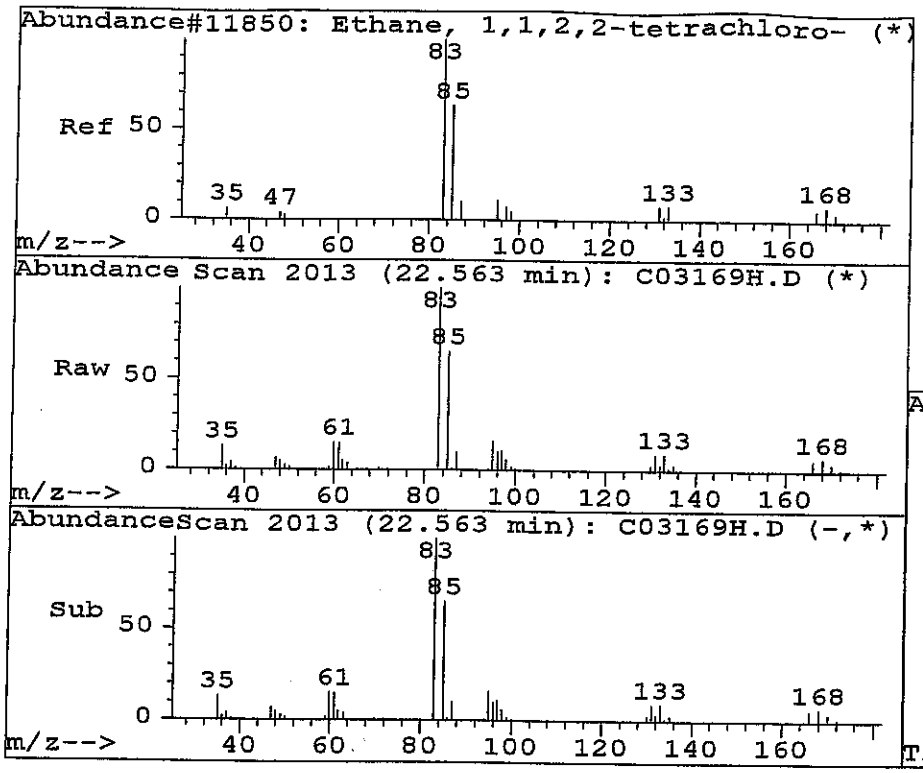


#66
o-Xylene
Concen: 11.50 ppbV
RT: 22.05 min Scan# 1960
Delta R.T. -0.20 min
Lab File: C03169H.D
Acq: 16 Mar 109 7:21 pm

Tgt Ion:91 Resp: 2817484

Ion	Ratio	Lower	Upper
91	100		
106	37.0	28.6	42.8
0	0.0	0.0	0.0
0	0.0	0.0	0.0

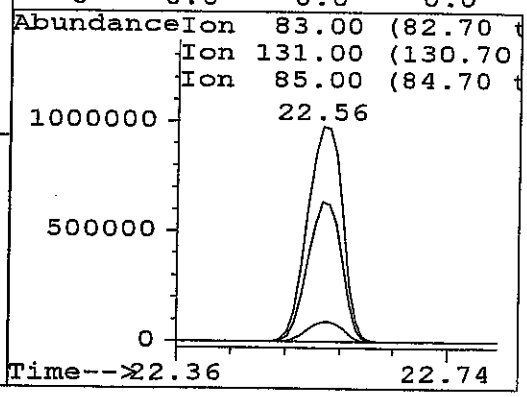


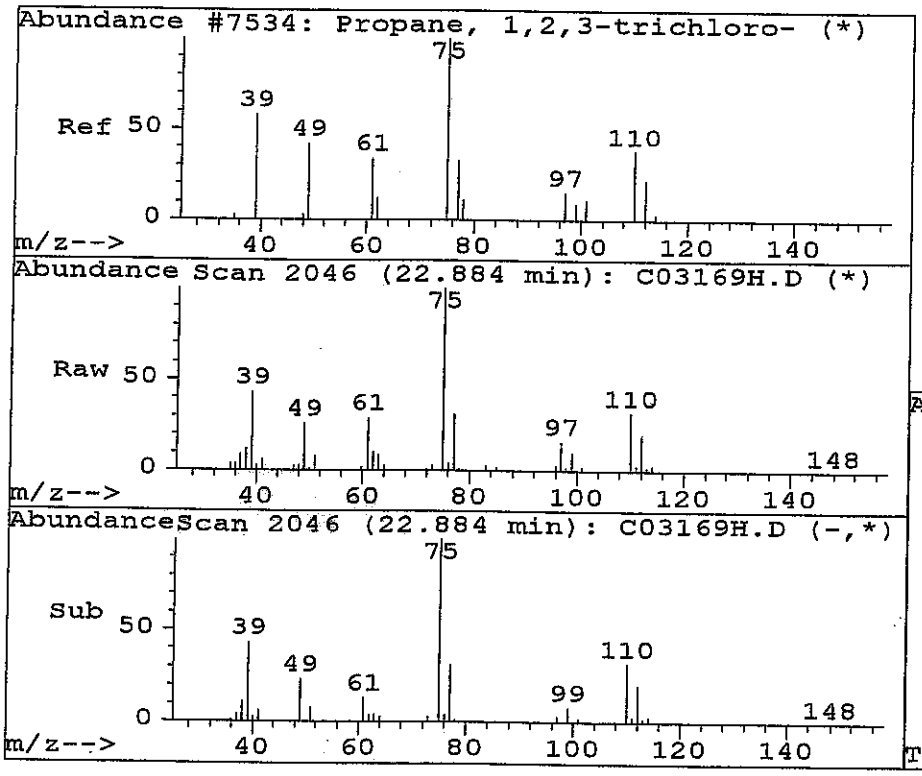


#67
1,1,2,2-Tetrachloroethane
Concen: 18.54 ppbV
RT: 22.56 min Scan# 2013
Delta R.T. -0.19 min
Lab File: C03169H.D
Acq: 16 Mar 109 7:21 pm

Tgt Ion:83 Resp: 3385910

Ion	Ratio	Lower	Upper
83	100		
131	9.1	10.1	15.1#
85	65.2	52.4	78.6
0	0.0	0.0	0.0

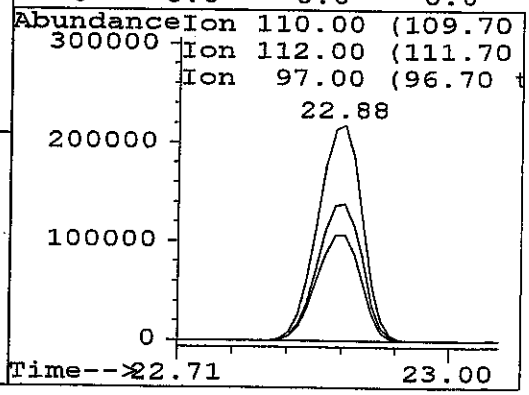


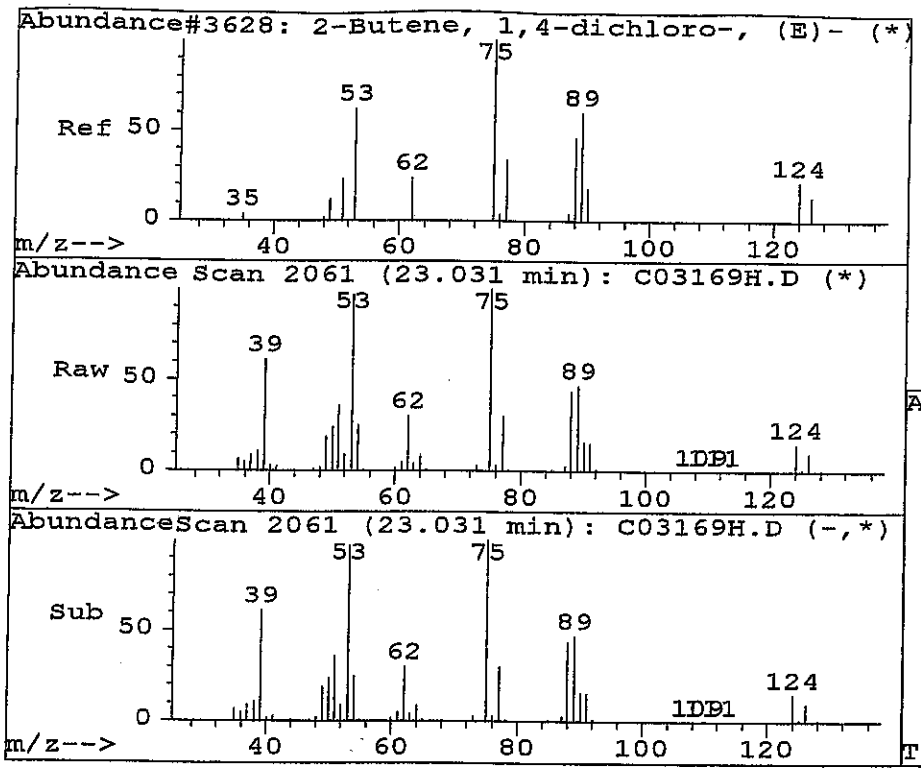


#68
1,2,3-Trichloropropane
Concen: 13.56 ppbV
RT: 22.88 min Scan# 2046
Delta R.T. -0.20 min
Lab File: C03169H.D
Acq: 16 Mar 109 7:21 pm

Tgt Ion:110 Resp: 714721

Ion	Ratio	Lower	Upper
110	100		
112	63.4	51.6	77.4
97	49.1	35.4	53.2
0	0.0	0.0	0.0

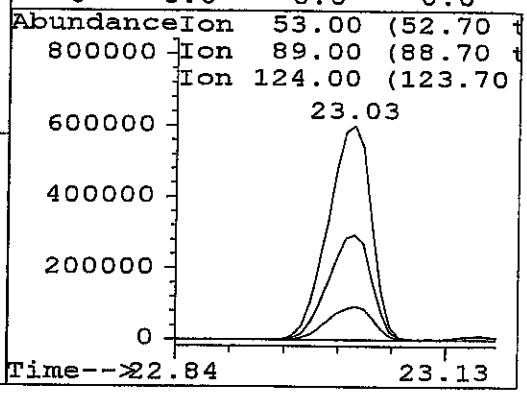


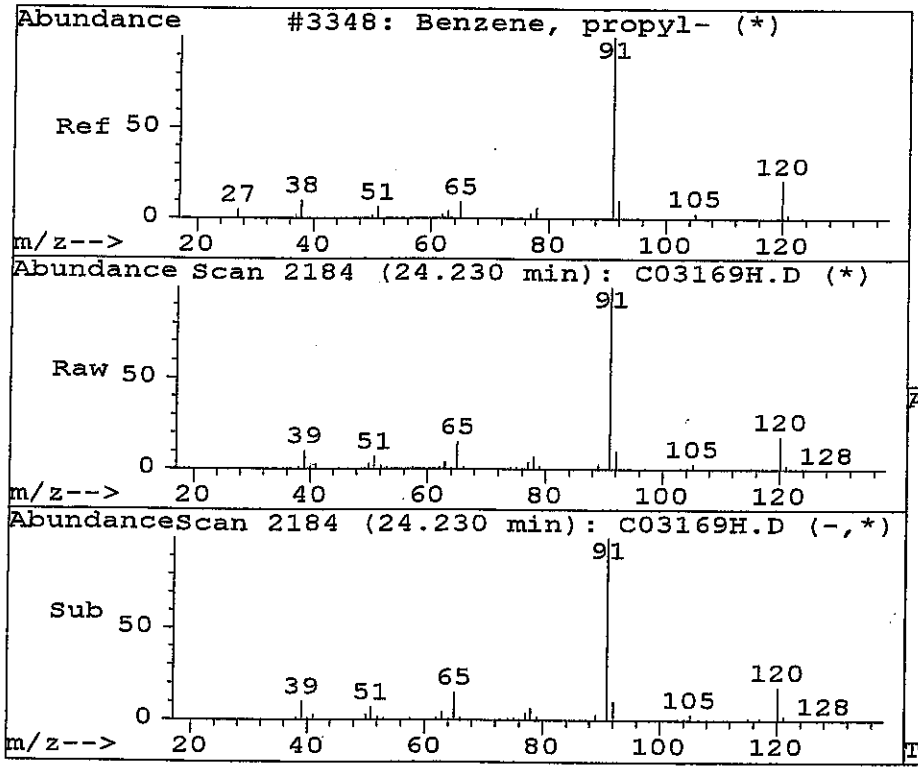


#69
t-1,4-Dichloro-2-butene
Concen: 39.27 ppbV
RT: 23.03 min Scan# 2061
Delta R.T. -0.20 min
Lab File: C03169H.D
Acq: 16 Mar 109 7:21 pm

Tgt Ion:53 Resp: 2007908

Ion	Ratio	Lower	Upper
53	100		
89	48.9	40.2	60.2
124	15.7	15.0	22.4
0	0.0	0.0	0.0

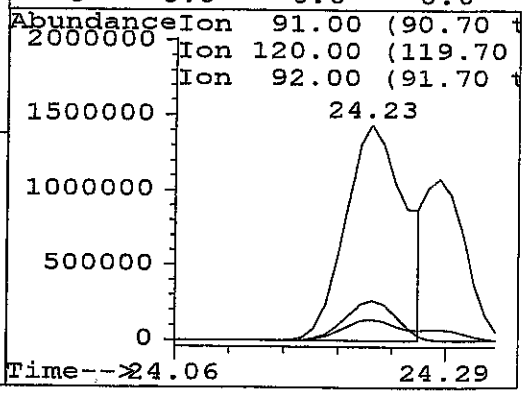


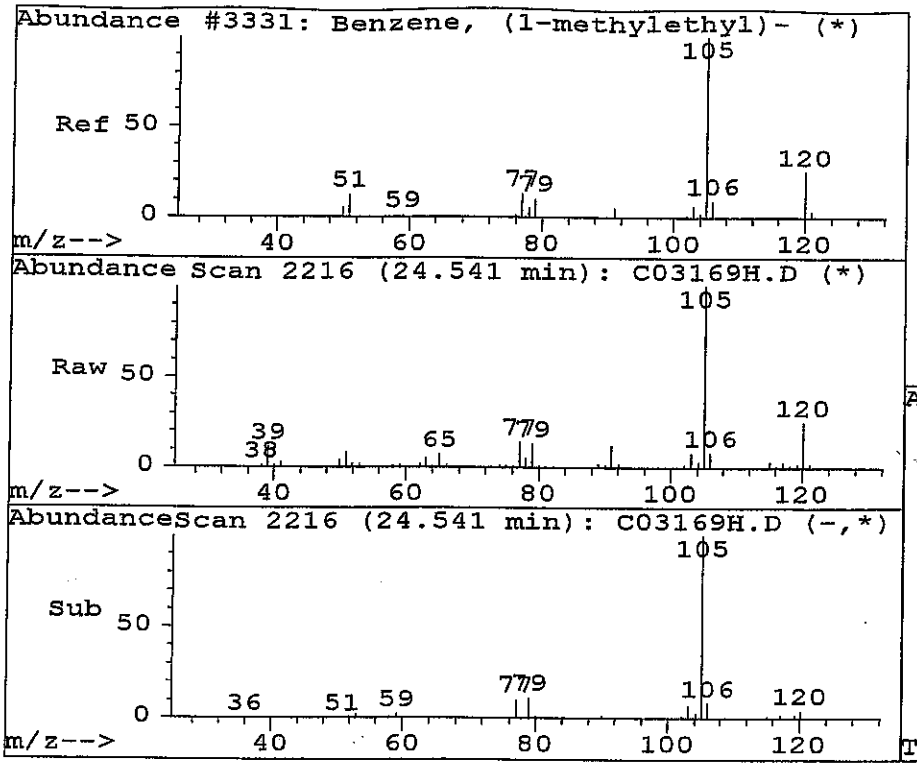


#70
n-Propylbenzene
Concen: 12.35 ppbV
RT: 24.23 min Scan# 2184
Delta R.T. -0.20 min
Lab File: C03169H.D
Acq: 16 Mar 109 7:21 pm

Tgt Ion:91 Resp: 5124406

Ion	Ratio	Lower	Upper
91	100		
120	15.6	14.3	21.5
92	9.6	7.9	11.9
0	0.0	0.0	0.0

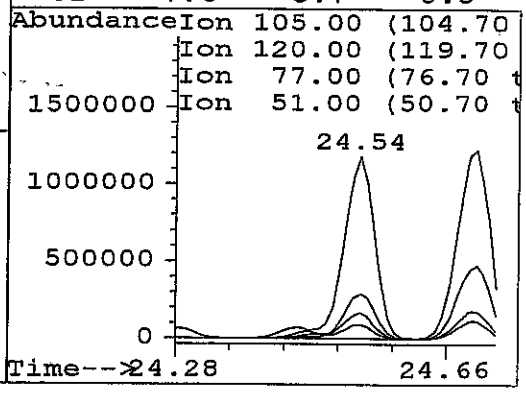


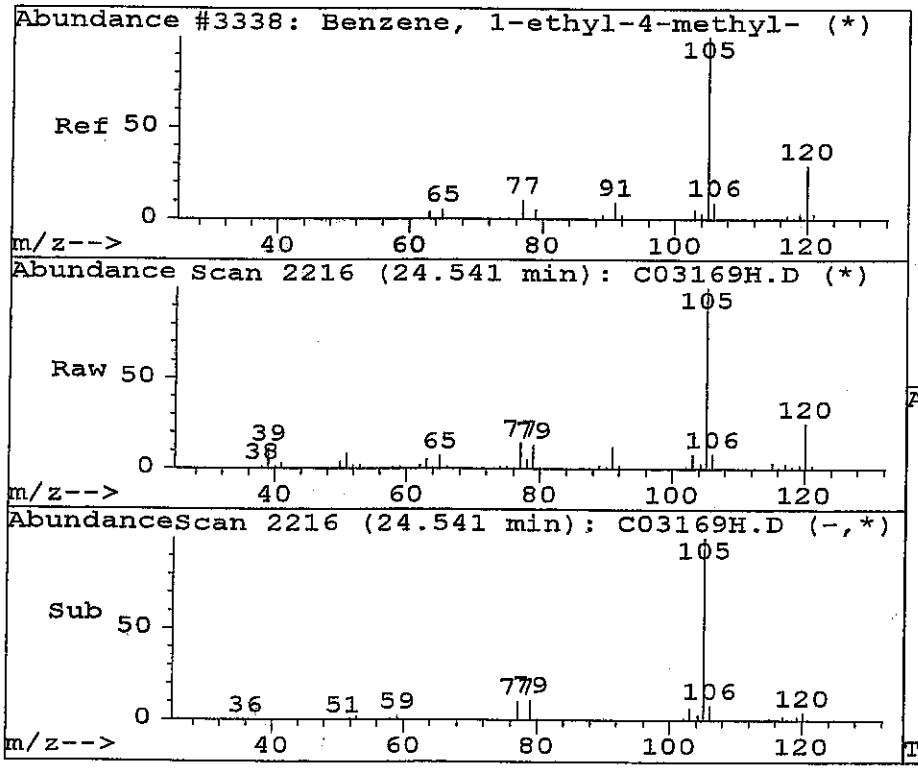


#71
Isopropylbenzene
Concen: 11.44 ppbV
RT: 24.54 min Scan# 2216
Delta R.T. -0.20 min
Lab File: C03169H.D
Acq: 16 Mar 109 7:21 pm

Tgt Ion:105 Resp: 3712735

Ion	Ratio	Lower	Upper
105	100		
120	25.3	20.2	30.4
77	15.9	12.5	18.7
51	7.6	5.7	8.5

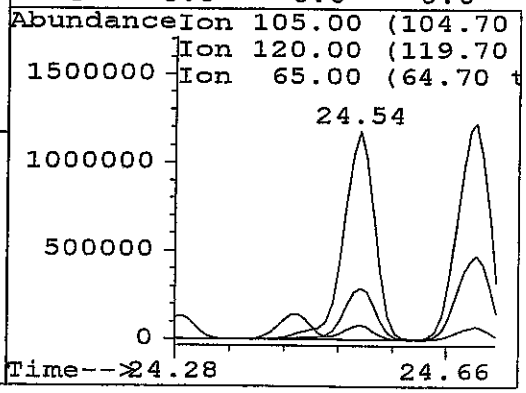


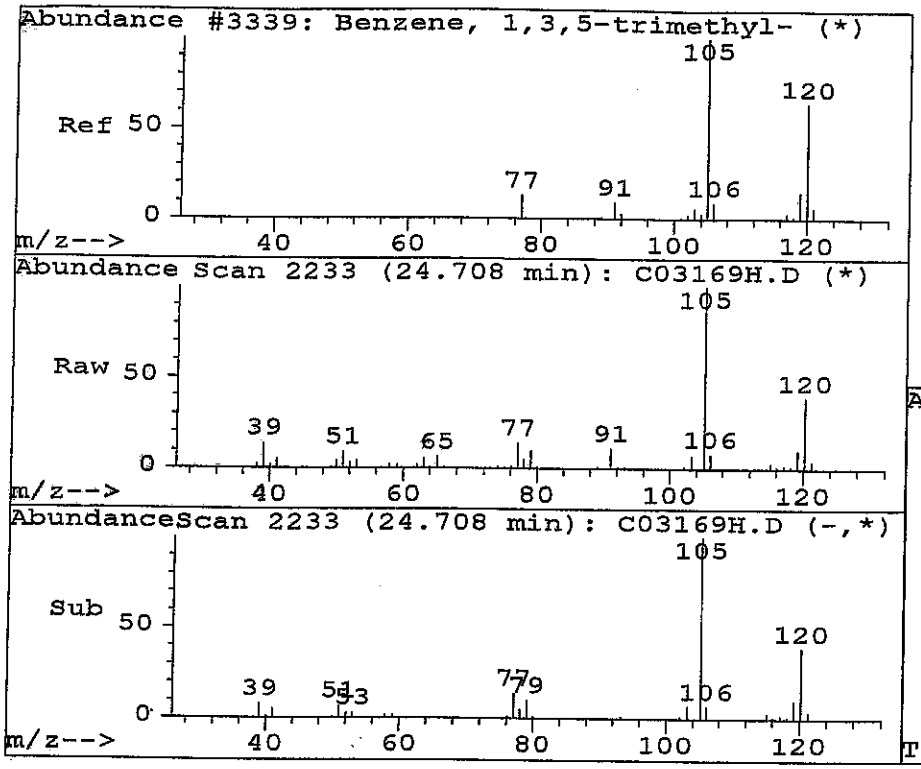


#72
4-Ethyltoluene
Concen: 11.34 ppbV
RT: 24.54 min Scan# 2216
Delta R.T. -0.20 min
Lab File: C03169H.D
Acq: 16 Mar 109 7:21 pm

Tgt Ion:105 Resp: 3712735

Ion	Ratio	Lower	Upper
105	100		
120	24.5	20.4	30.6
65	6.8	5.4	8.0
0	0.0	0.0	0.0

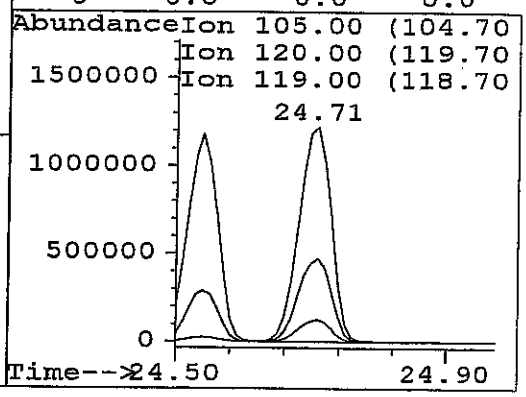


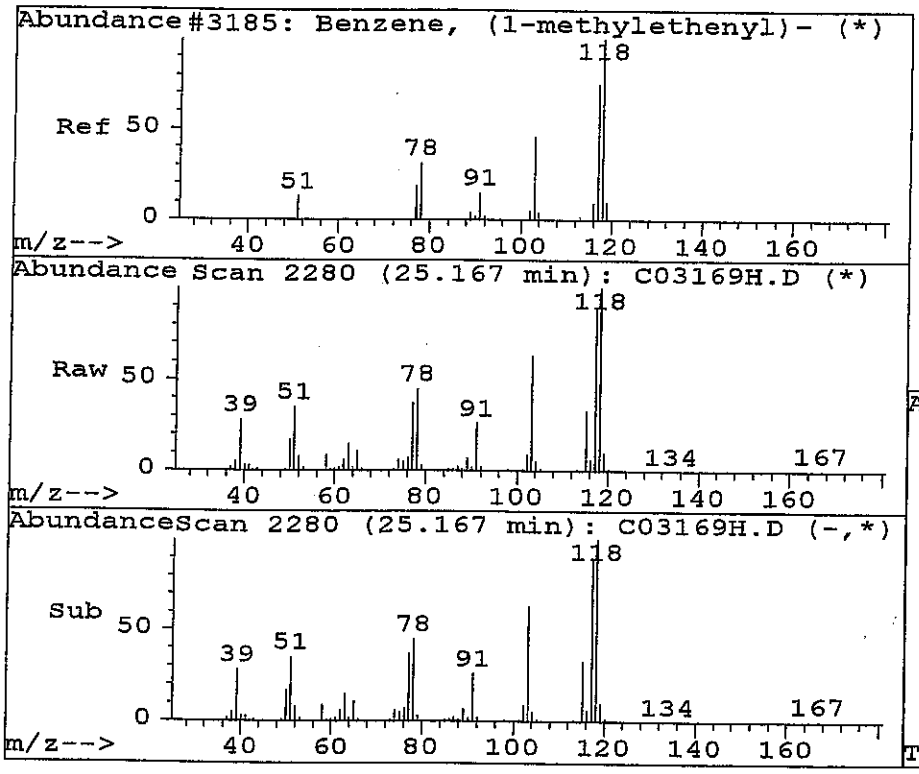


#73
1,3,5-Trimethylbenzene
Concen: 11.91 ppbV
RT: 24.71 min Scan# 2233
Delta R.T. -0.21 min
Lab File: C03169H.D
Acq: 16 Mar 109 7:21 pm

Tgt Ion:105 Resp: 3957960

Ion	Ratio	Lower	Upper
105	100		
120	38.9	32.1	48.1
119	10.3	8.2	12.4
0	0.0	0.0	0.0

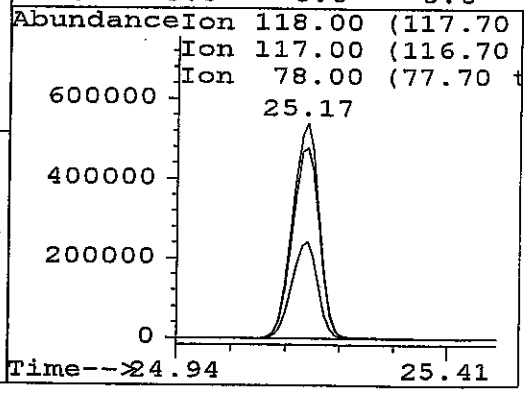


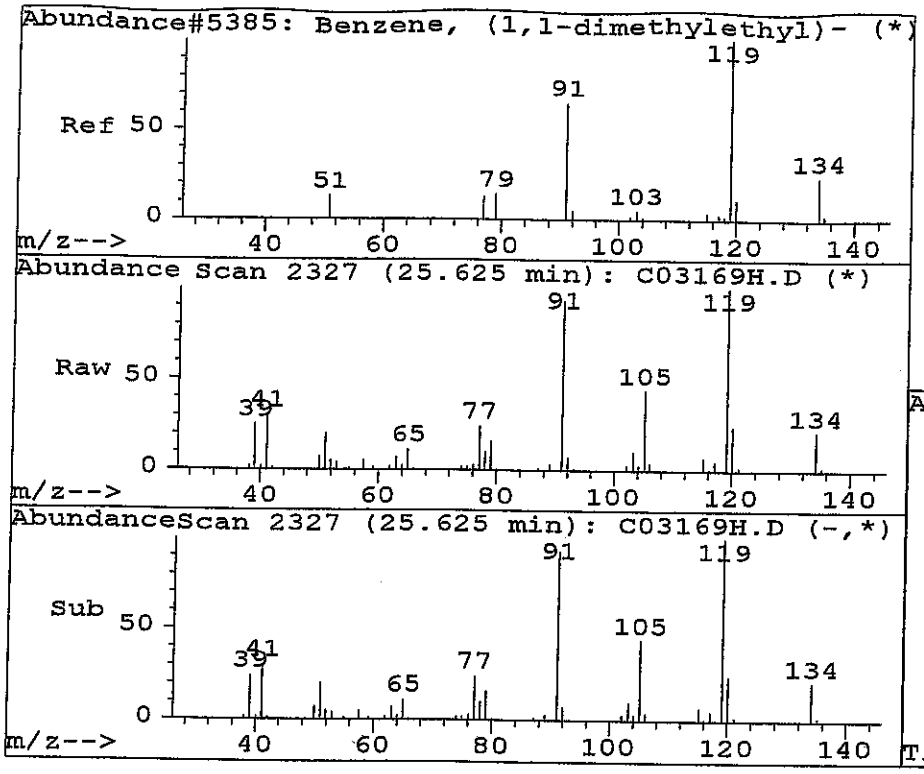


#74
Methylstyrene
Concen: 13.61 ppbV
RT: 25.17 min Scan# 2280
Delta R.T. -0.19 min
Lab File: C03169H.D
Acq: 16 Mar 109 7:21 pm

Tgt Ion:118 Resp: 1746656

Ion	Ratio	Lower	Upper
118	100		
117	88.5	71.4	107.0
78	45.2	32.2	48.2
0	0.0	0.0	0.0

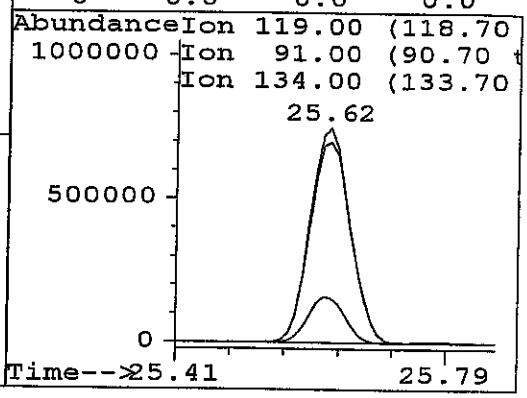


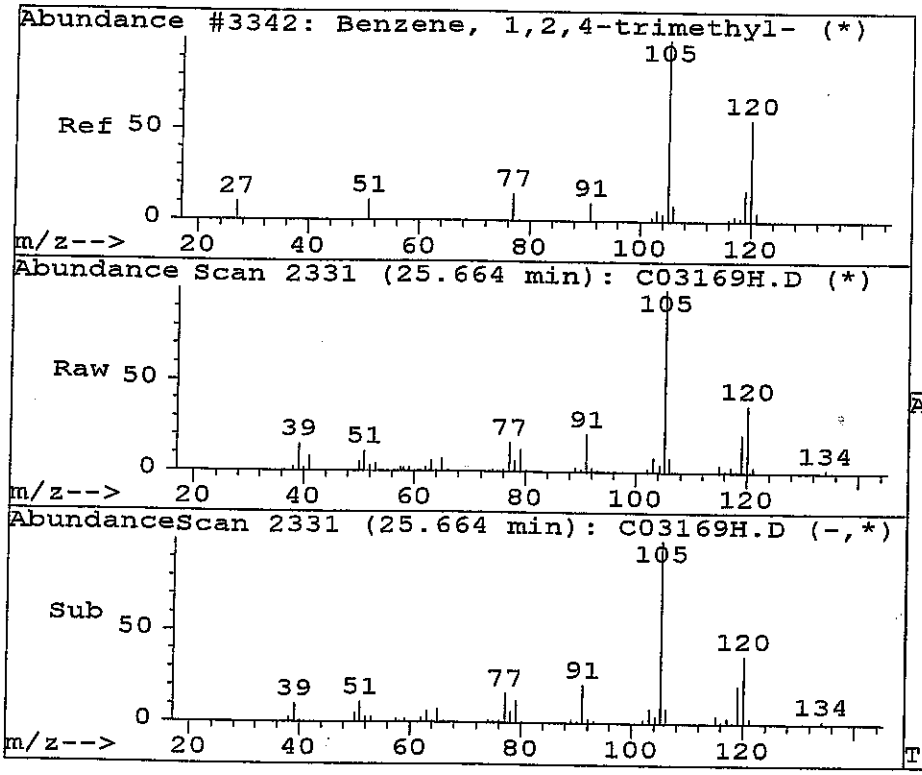


#75
tert-butyl benzene
Concen: 9.67 ppbV
RT: 25.62 min Scan# 2327
Delta R.T. -0.19 min
Lab File: C03169H.D
Acq: 16 Mar 109 7:21 pm

Tgt Ion:119 Resp: 2904495

Ion	Ratio	Lower	Upper
119	100		
91	96.1	75.7	113.5
134	19.6	15.6	23.4
0	0.0	0.0	0.0

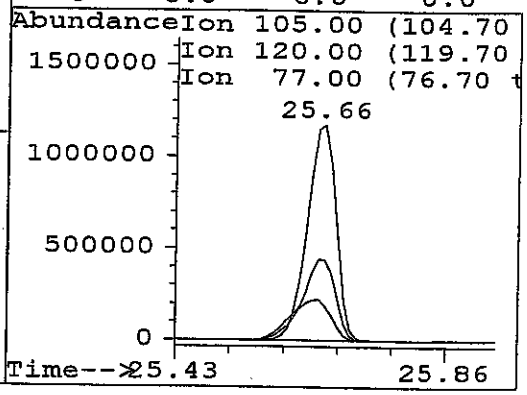


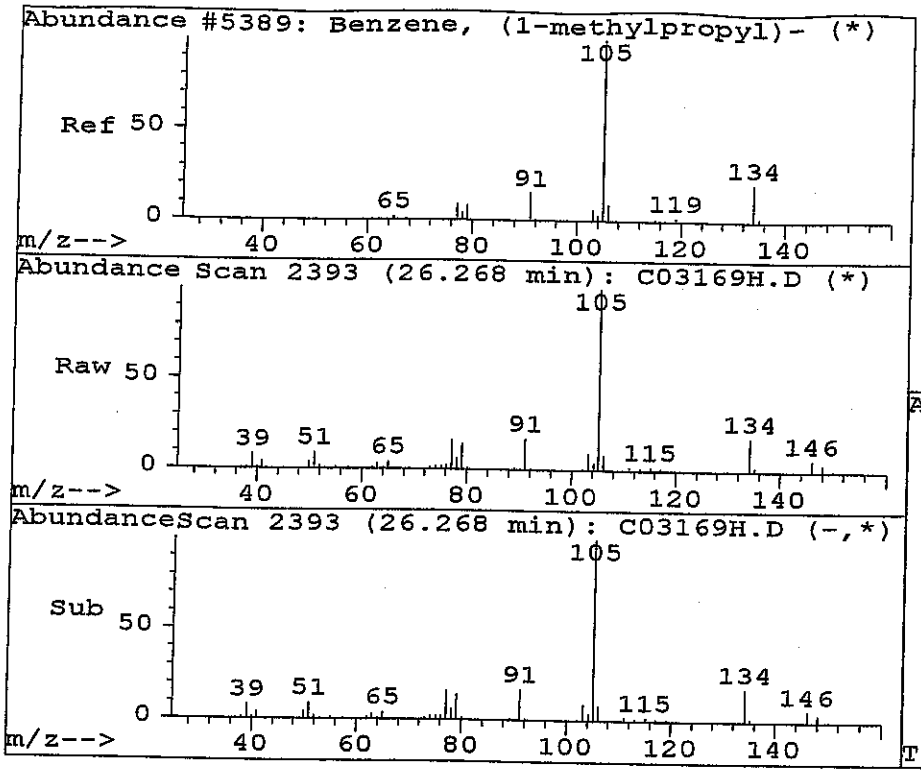


#76
1,2,4-Trimethylbenzene
Concen: 9.88 ppbV
RT: 25.66 min Scan# 2331
Delta R.T. -0.23 min
Lab File: C03169H.D
Acq: 16 Mar 109 7:21 pm

Tgt Ion:105 Resp: 3635276

Ion	Ratio	Lower	Upper
105	100		
120	37.3	32.2	48.4
77	16.2	15.0	22.4
0	0.0	0.0	0.0

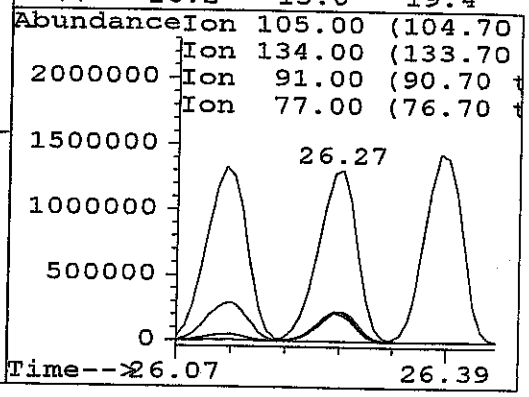


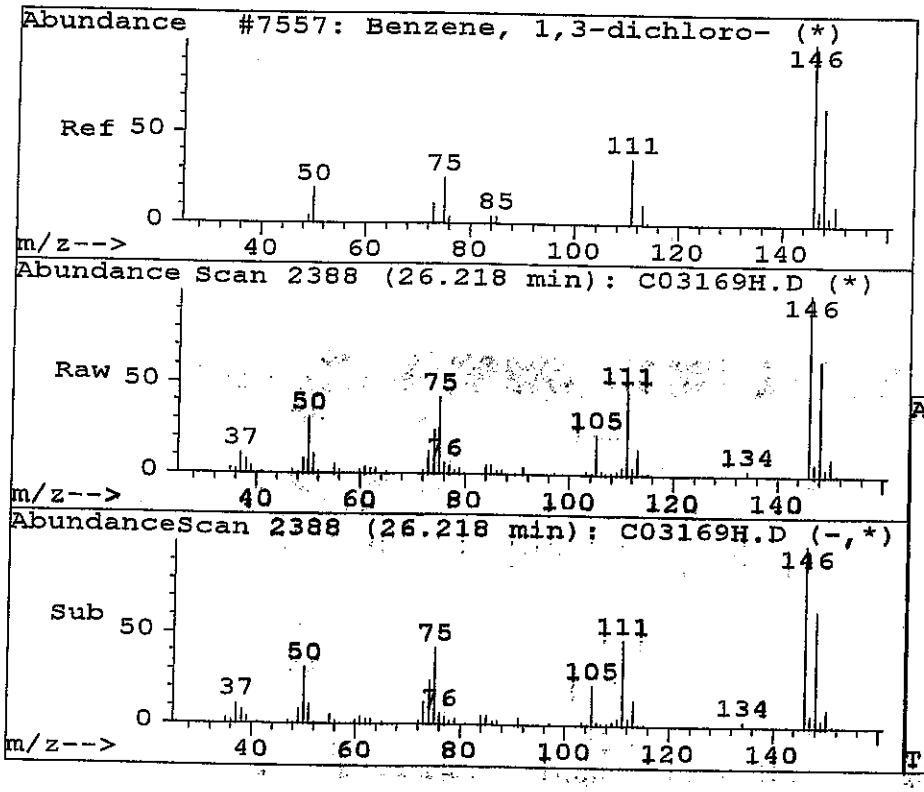


#77
sec-butylbenzene
Concen: 10.51 ppbV
RT: 26.27 min Scan# 2393
Delta R.T. -0.23 min
Lab File: C03169H.D
Acq: 16 Mar 109 7:21 pm

Tgt Ion:105 Resp: 4221559

Ion	Ratio	Lower	Upper
105	100		
134	17.4	15.2	22.8
91	17.4	13.8	20.8
77	16.2	13.0	19.4

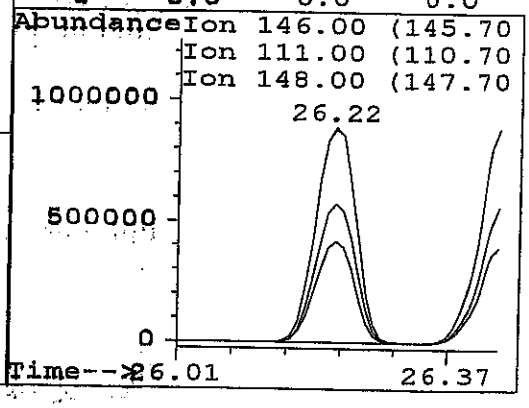


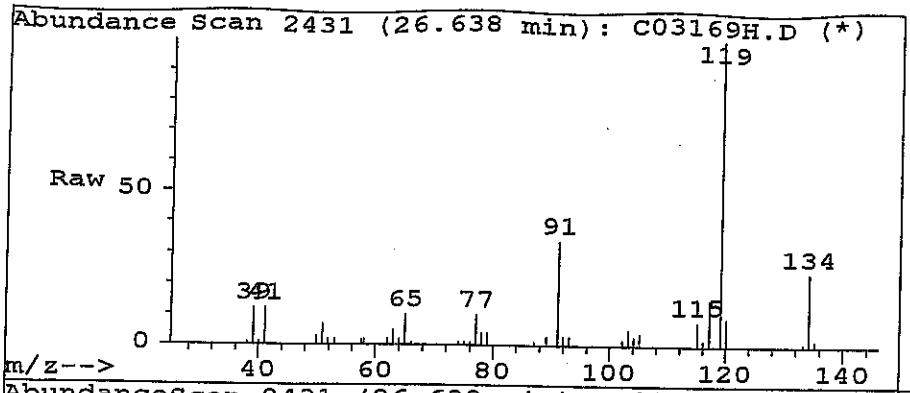


#78
1,3-Dichlorobenzene
Concen: 10.75 ppbV
RT: 26.22 min Scan# 2388
Delta R.T. -0.19 min
Lab File: C03169H.D
Acq: 16 Mar 109 7:21 pm

Tgt Ion:146 Resp: 3205866

Ion	Ratio	Lower	Upper
146	100		
111	47.1	34.6	52.0
148	64.5	52.2	78.2
0	0.0	0.0	0.0

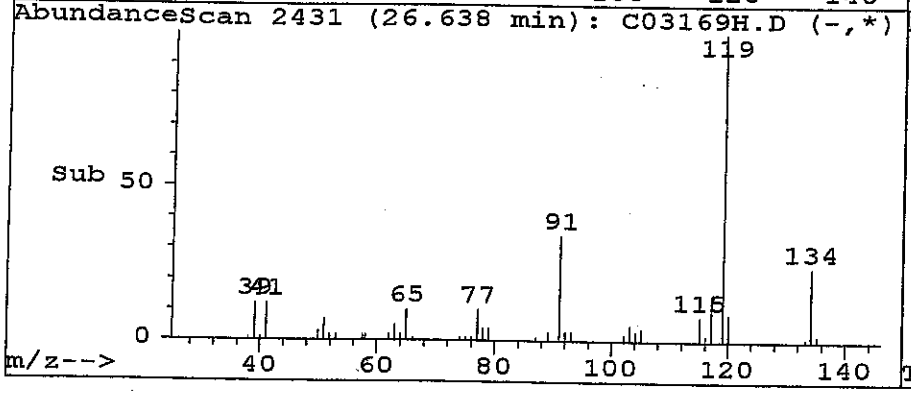


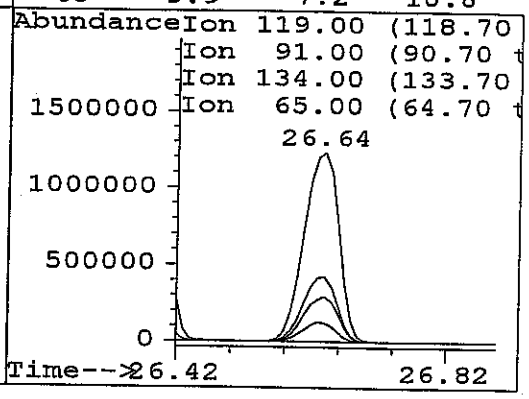


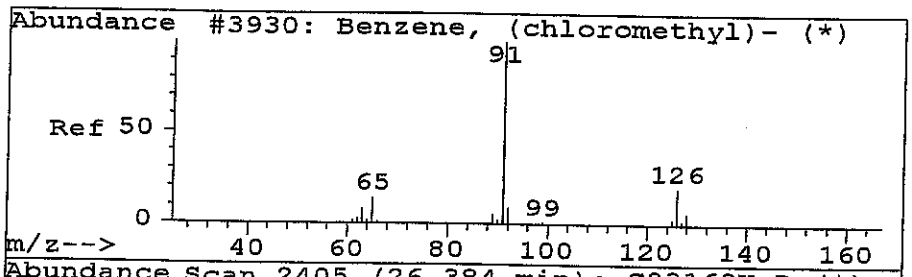
#79
Isopropyltoluene
Concen: 10.83 ppbV
RT: 26.64 min Scan# 2431
Delta R.T. -0.19 min
Lab File: C03169H.D
Acq: 16 Mar 109 7:21 pm

Tgt Ion:119 Resp: 4292399

Ion	Ratio	Lower	Upper
119	100		
91	33.5	25.7	38.5
134	23.6	20.0	30.0
65	9.9	7.2	10.8



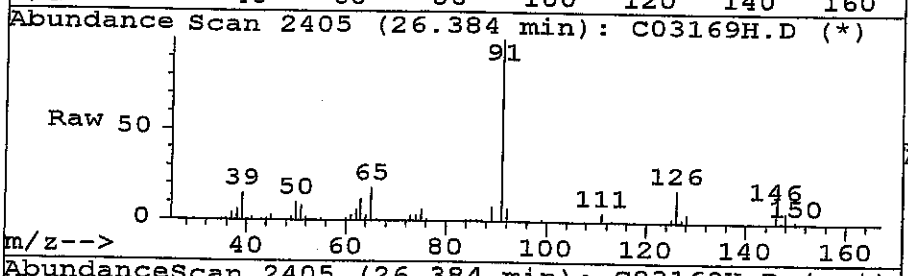


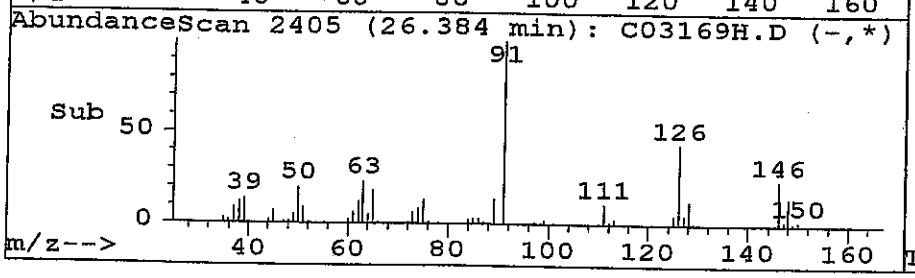


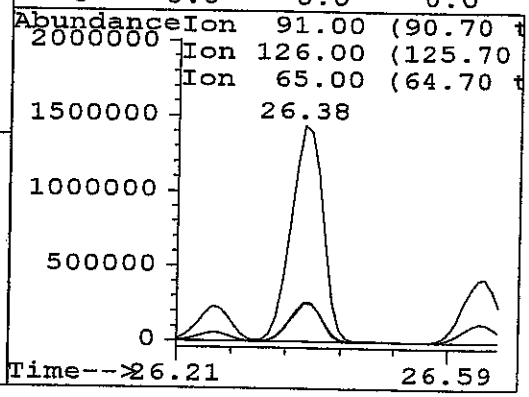
#80
Benzyl chloride
Concen: 13.58 ppbV
RT: 26.38 min Scan# 2405
Delta R.T. -0.23 min
Lab File: C03169H.D
Acq: 16 Mar 109 7:21 pm

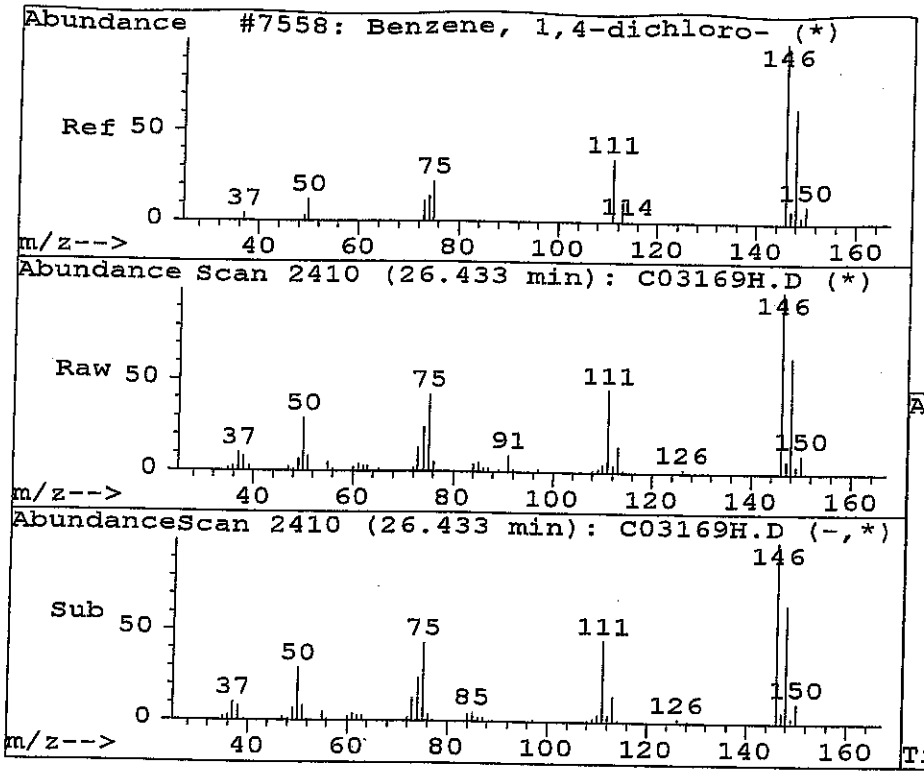
Tgt Ion:91 Resp: 4463720

Ion	Ratio	Lower	Upper
91	100		
126	17.6	16.0	24.0
65	18.0	14.4	21.6
0	0.0	0.0	0.0





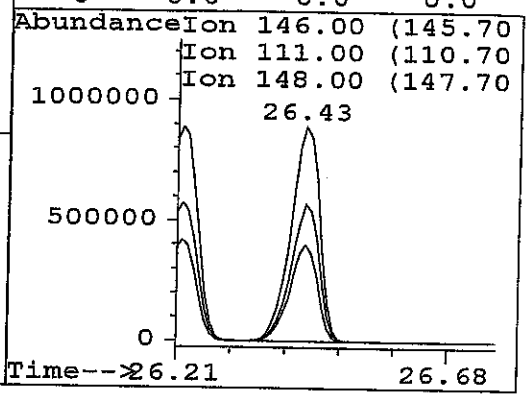


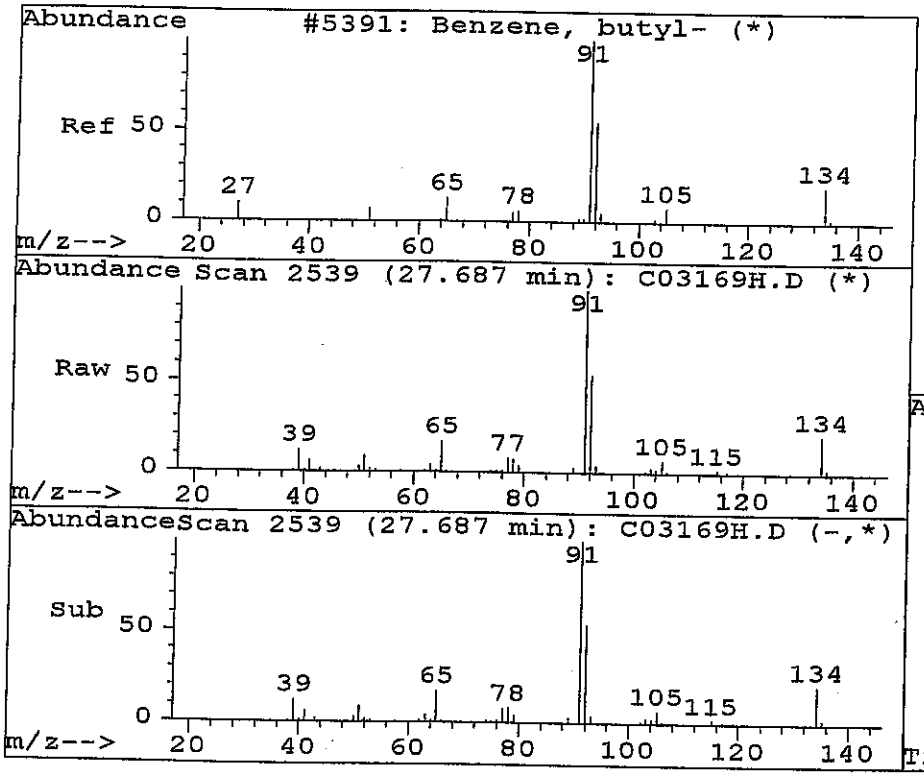


#81
1,4-Dichlorobenzene
Concen: 9.84 ppbV m
RT: 26.43 min Scan# 2410
Delta R.T. -0.25 min
Lab File: C03169H.D
Acq: 16 Mar 109 7:21 pm

Tgt Ion:146 Resp: 3091714

Ion	Ratio	Lower	Upper
146	100		
111	45.0	34.3	51.5
148	63.8	52.6	78.8
0	0.0	0.0	0.0

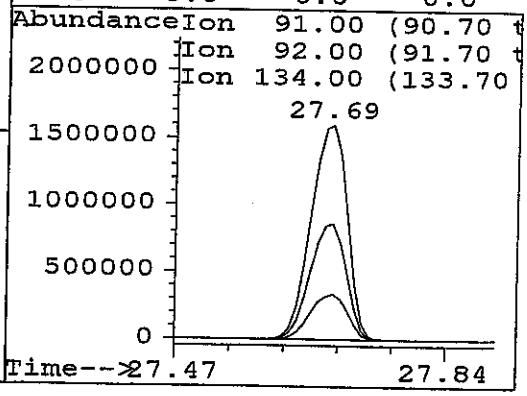


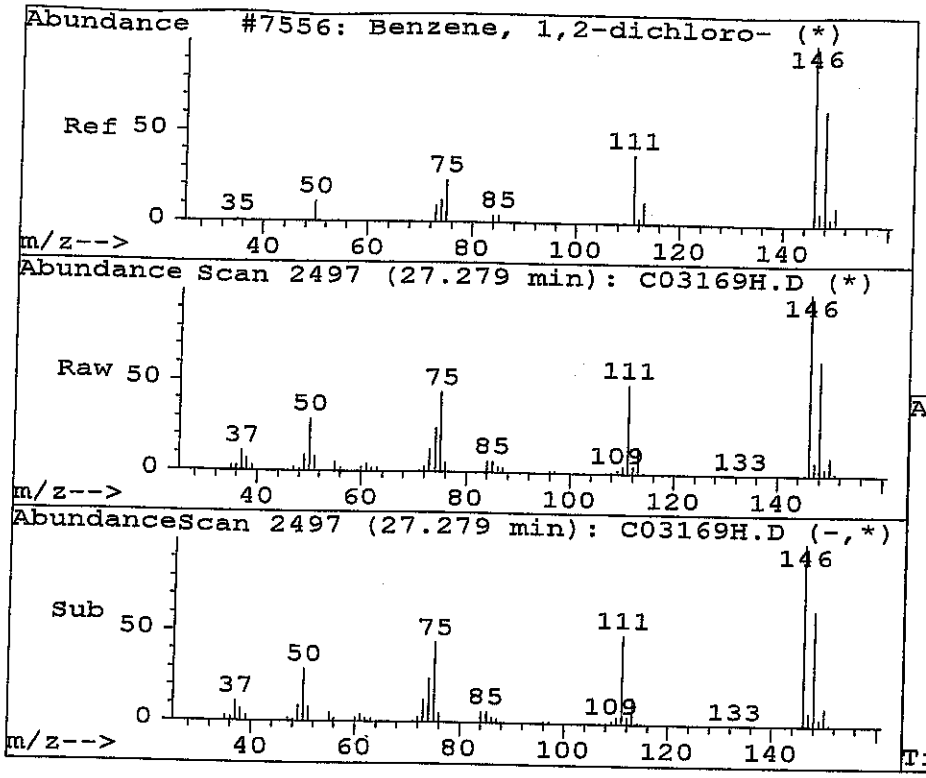


#82
n-Butylbenzene
Concen: 12.90 ppbV
RT: 27.69 min Scan# 2539
Delta R.T. -0.19 min
Lab File: C03169H.D
Acq: 16 Mar 109 7:21 pm

Tgt Ion:91 Resp: 5393478

Ion	Ratio	Lower	Upper
91	100		
92	53.9	43.4	65.2
134	21.7	19.8	29.6
0	0.0	0.0	0.0

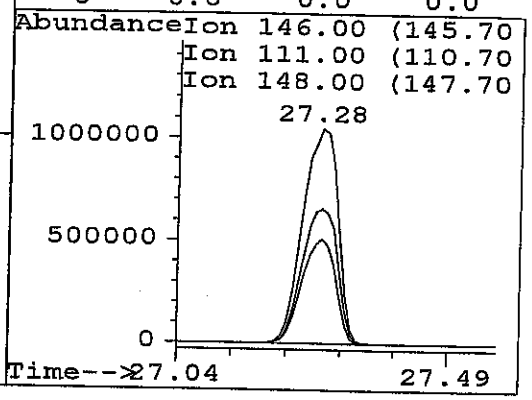


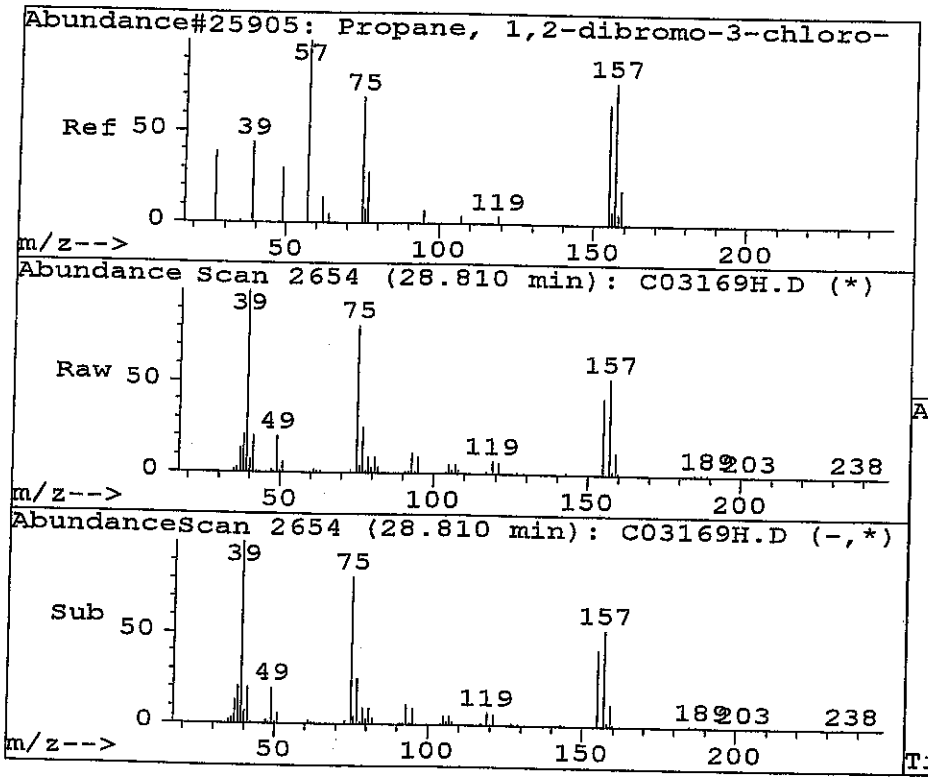


#83
1,2-Dichlorobenzene
Concen: 12.28 ppbV
RT: 27.28 min Scan# 2497
Delta R.T. -0.19 min
Lab File: C03169H.D
Acq: 16 Mar 109 7:21 pm

Tgt Ion:146 Resp: 4272294

Ion	Ratio	Lower	Upper
146	100		
111	48.7	35.0	52.6
148	62.6	48.5	72.7
0	0.0	0.0	0.0

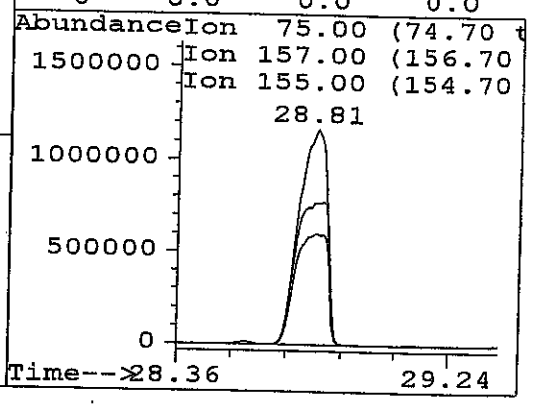


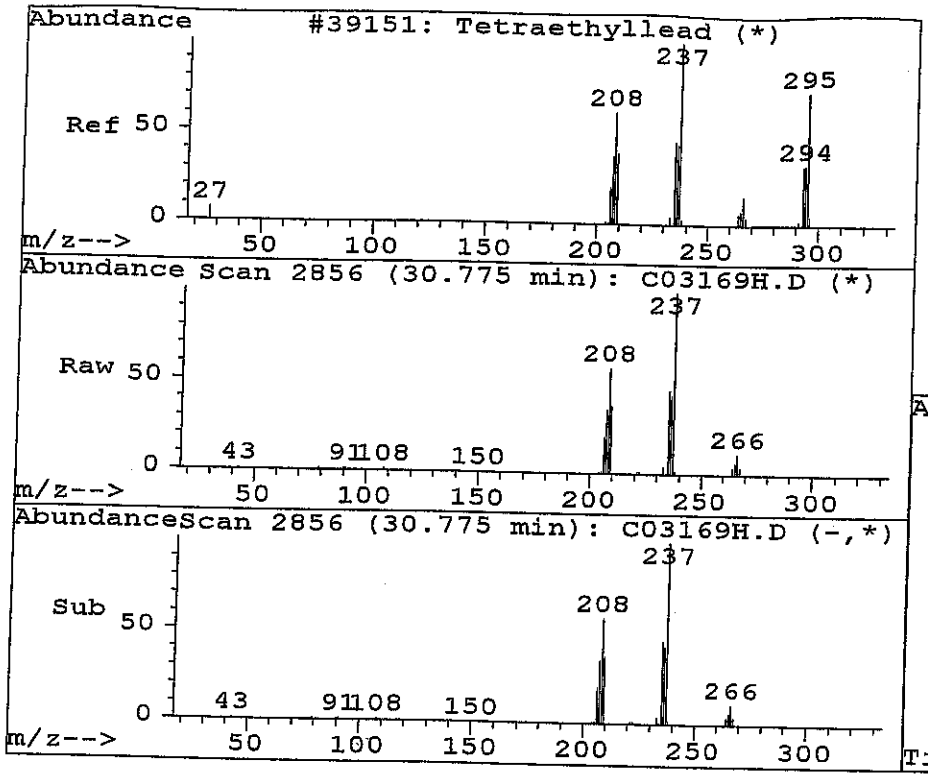


#84
1,2-Dibromo-3-chloropropane
Concen: 36.97 ppbV m
RT: 28.81 min Scan# 2654
Delta R.T. -0.15 min
Lab File: C03169H.D
Acq: 16 Mar 109 7:21 pm

Tgt Ion:75 Resp: 7308444

Ion	Ratio	Lower	Upper
75	100		
157	65.7	87.7	131.5#
155	51.6	65.6	98.4#
0	0.0	0.0	0.0

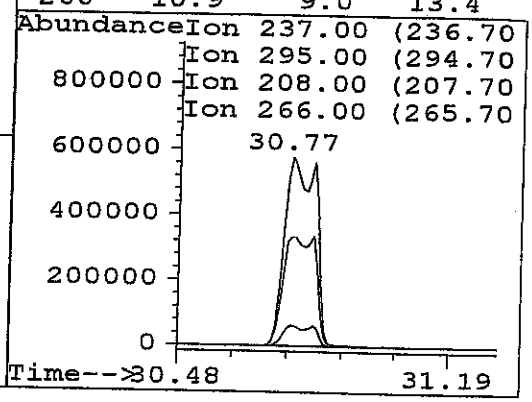


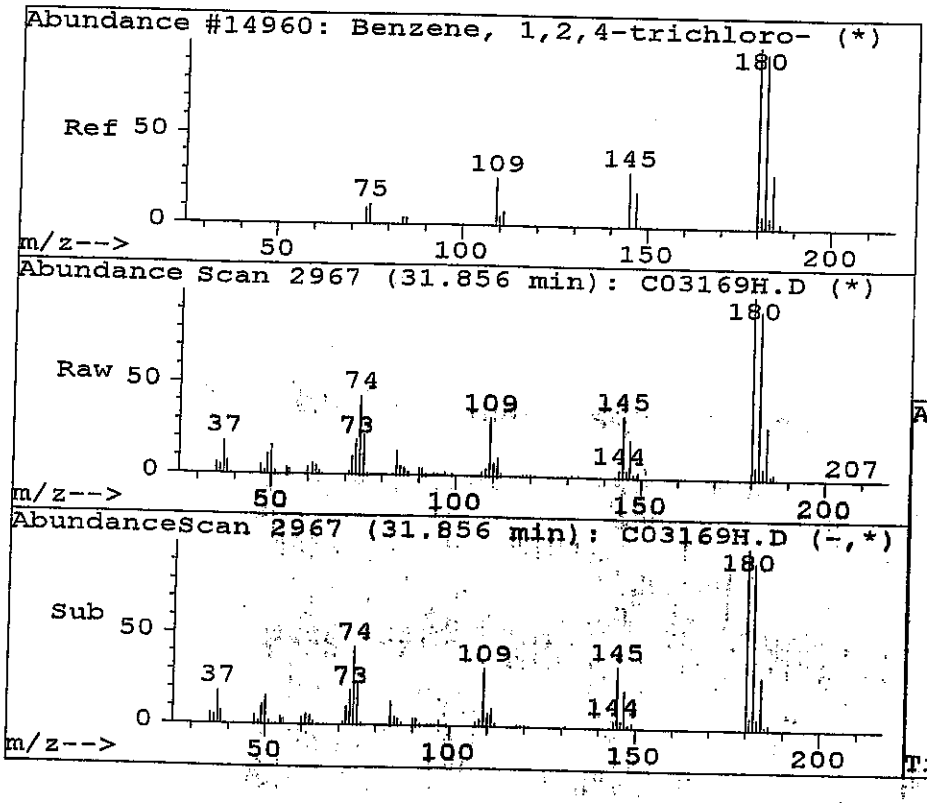


#85
Tetraethyl lead
Concen: 11.51 ppbV m
RT: 30.77 min Scan# 2856
Delta R.T. -0.21 min
Lab File: C03169H.D
Acq: 16 Mar 109 7:21 pm

Tgt Ion:237 Resp: 3224507

Ion	Ratio	Lower	Upper
237	100		
295	0.0	0.0	0.0
208	57.7	47.4	71.2
266	10.9	9.0	13.4

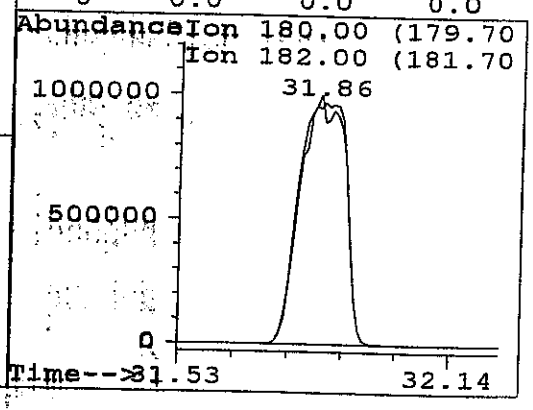


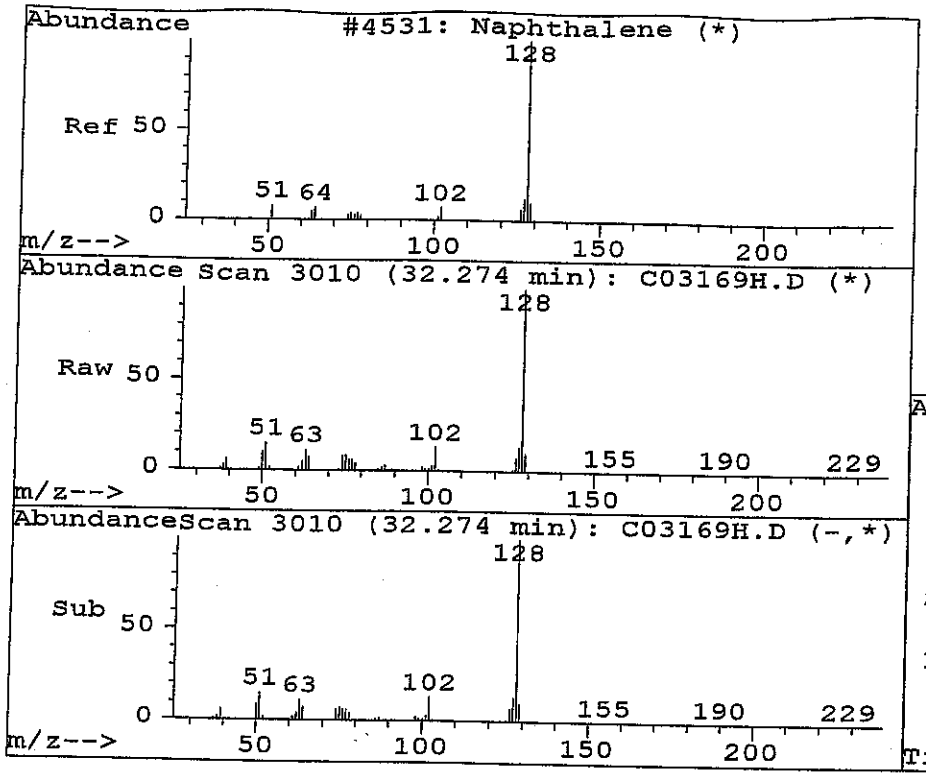


#86
1,2,4-Trichlorobenzene
Concen: 11.67 ppbV
RT: 31.86 min Scan# 2967
Delta R.T. -0.32 min
Lab File: C03169H.D
Acq: 16 Mar 109 7:21 pm

Tgt Ion:180 Resp: 7156710

Ion	Ratio	Lower	Upper
180	100		
182	91.9	67.8	101.6
0	0.0	0.0	0.0
0	0.0	0.0	0.0

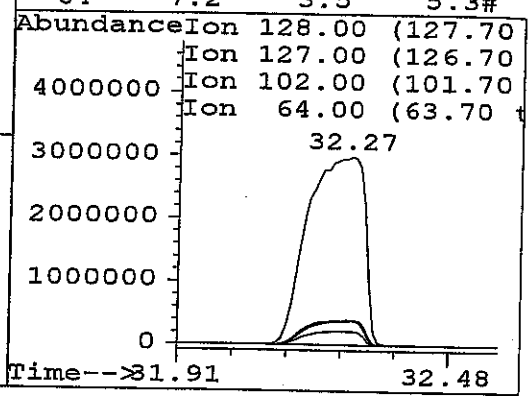


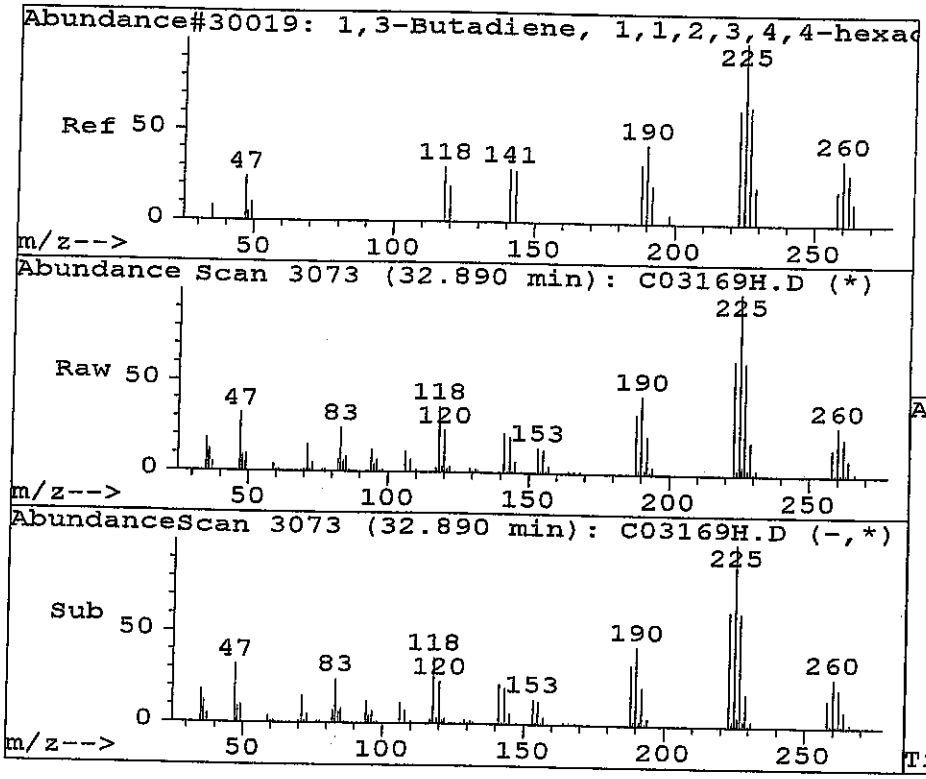


#87
Naphthalene
Concen: 37.90 ppbV
RT: 32.27 min Scan# 3010
Delta R.T. -0.14 min
Lab File: C03169H.D
Acq: 16 Mar 109 7:21 pm

Tgt Ion:128 Resp:24925580

Ion	Ratio	Lower	Upper
128	100		
127	13.0	10.6	16.0
102	12.9	9.3	13.9
64	7.2	3.5	5.3#

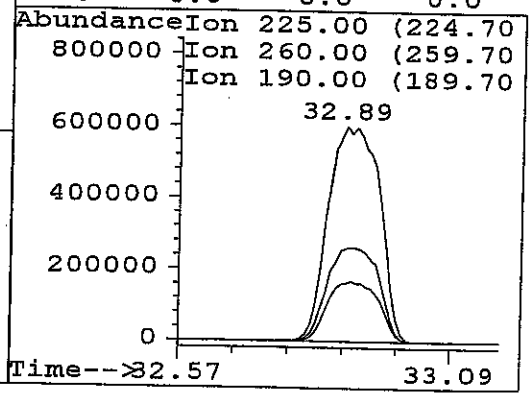


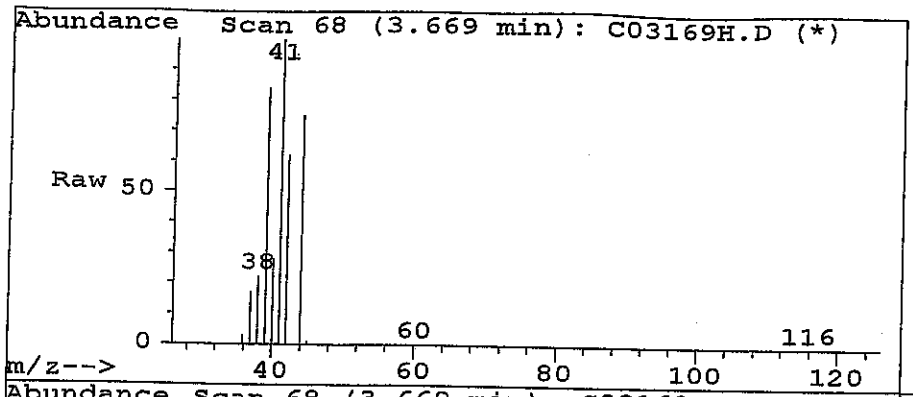


#88
Hexachlorobutadiene
Concen: 8.74 ppbV
RT: 32.89 min Scan# 3073
Delta R.T. -0.19 min
Lab File: C03169H.D
Acq: 16 Mar 109 7:21 pm

Tgt Ion:225 Resp: 4177636

Ion	Ratio	Lower	Upper
225	100		
260	27.2	21.0	31.6
190	43.2	36.0	54.0
0	0.0	0.0	0.0

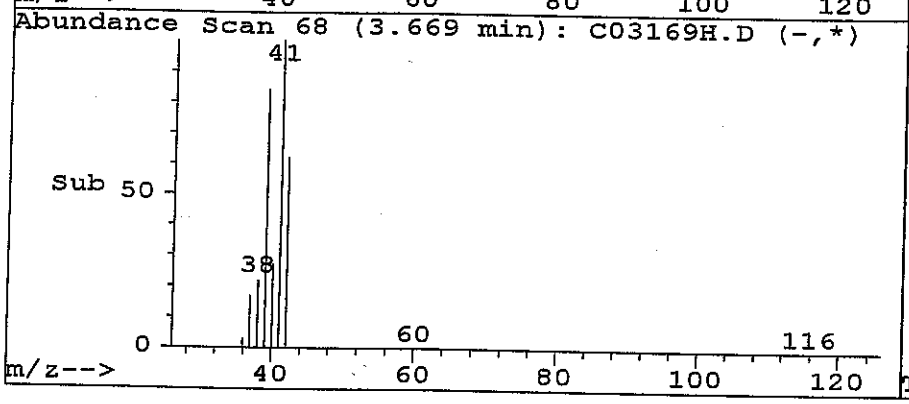


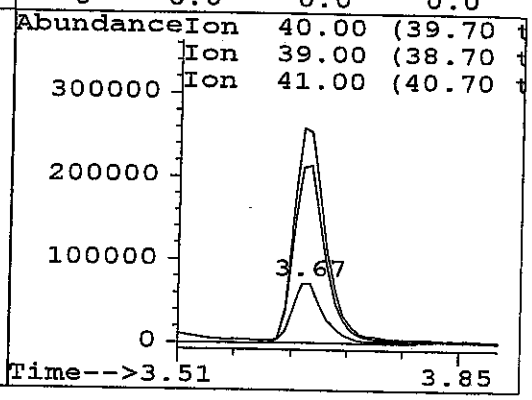


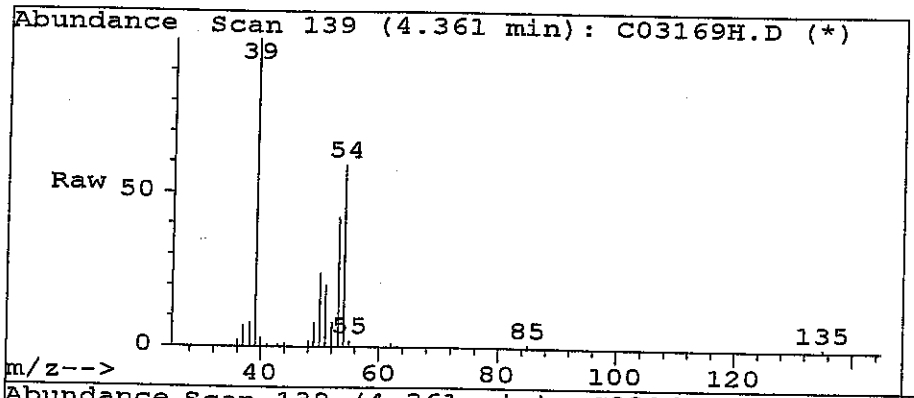
#89
Propylene
Concen: 17.14 ppbV
RT: 3.67 min Scan# 68
Delta R.T. -0.09 min
Lab File: C03169H.D
Acq: 16 Mar 109 7:21 pm

Tgt Ion:40 Resp: 191557

Ion	Ratio	Lower	Upper
40	100		
39	301.9	238.8	358.2
41	379.7	287.0	430.4
0	0.0	0.0	0.0



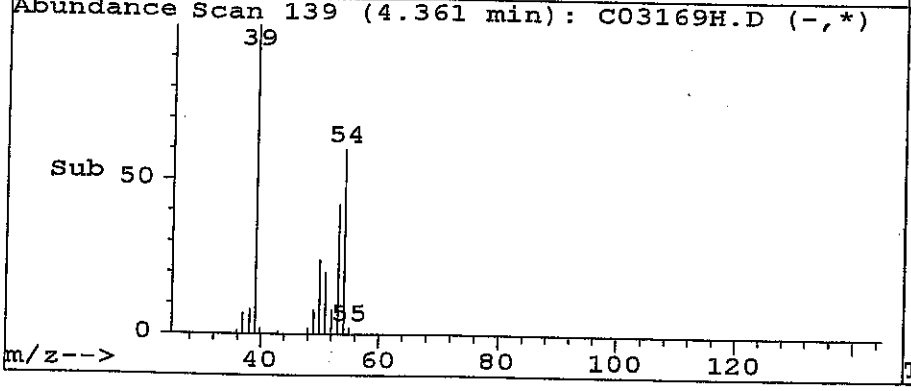


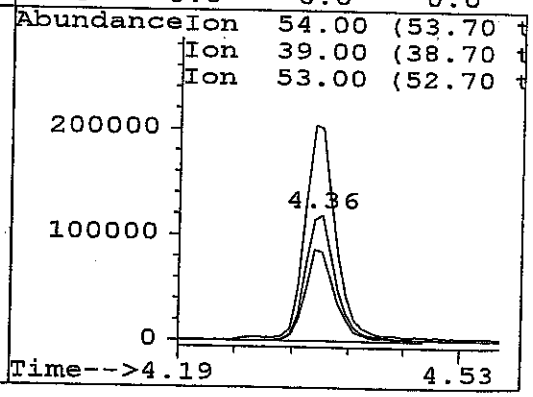


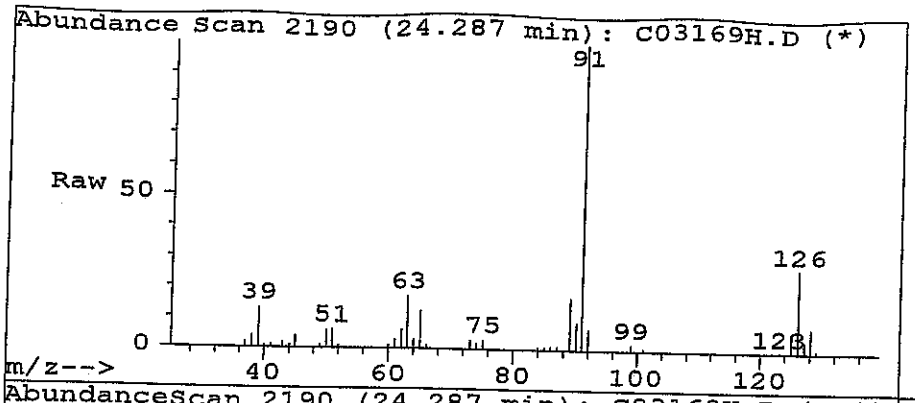
#90
1,3-Butadiene
Concen: 13.49 ppbV
RT: 4.36 min Scan# 139
Delta R.T. -0.11 min
Lab File: C03169H.D
Acq: 16 Mar 109 7:21 pm

Tgt Ion:54 Resp: 318019

Ion	Ratio	Lower	Upper
54	100		
39	169.4	140.9	211.3
53	72.4	58.1	87.1
0	0.0	0.0	0.0



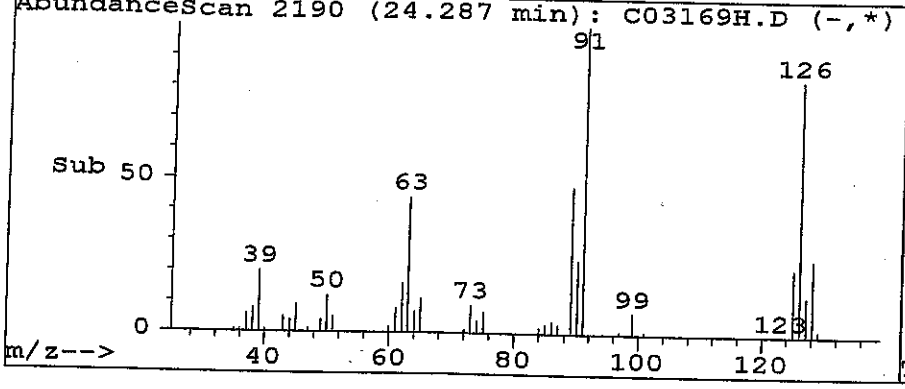


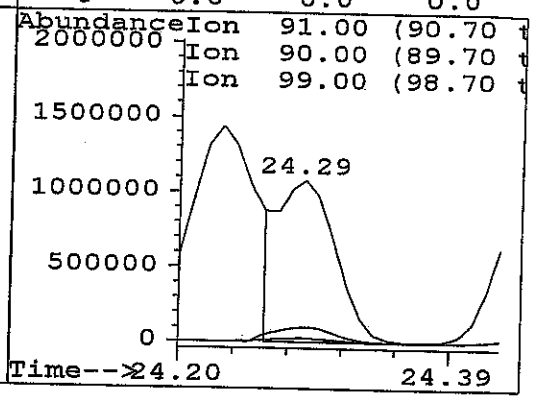


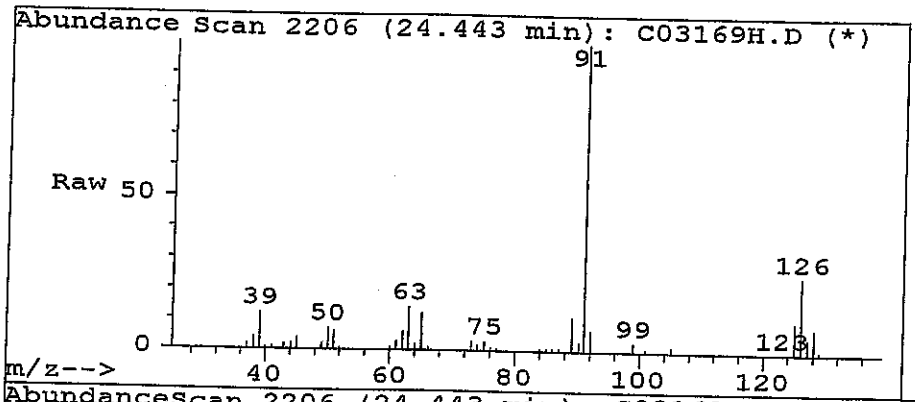
#92
2-Chlorotoluene
Concen: 9.98 ppbV m
RT: 24.29 min Scan# 2190
Delta R.T. -0.17 min
Lab File: C03169H.D
Acq: 16 Mar 109 7:21 pm

Tgt Ion:91 Resp: 3030861

Ion	Ratio	Lower	Upper
91	100		
90	9.1	0.0	0.0#
99	2.2	0.0	0.0#
0	0.0	0.0	0.0



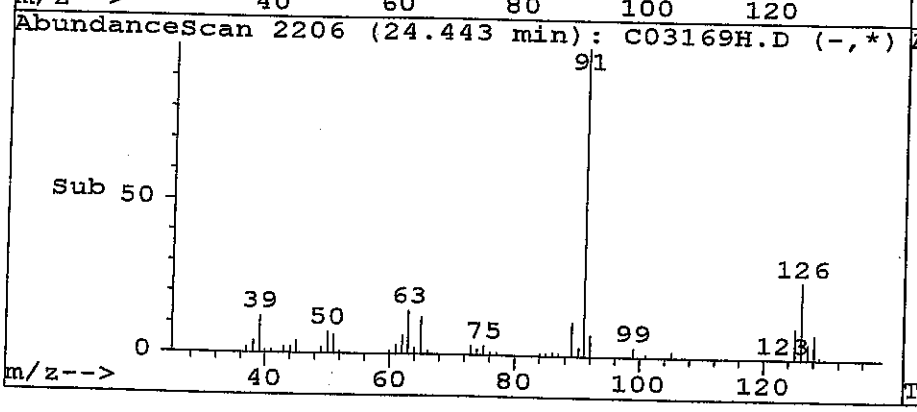


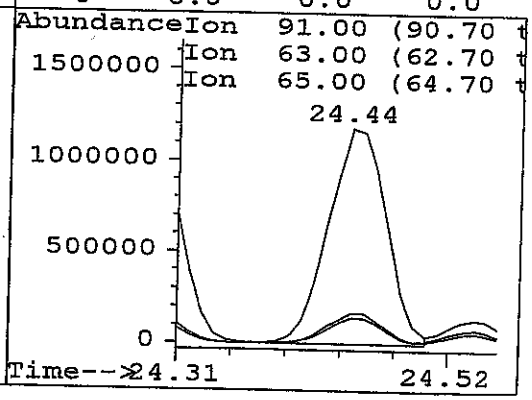


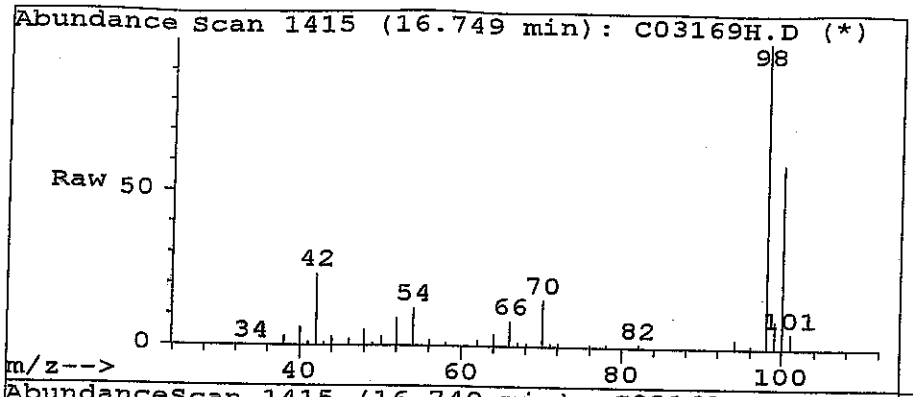
#93
4-Chlorotoluene
Concen: 11.79 ppbV
RT: 24.44 min Scan# 2206
Delta R.T. -0.21 min
Lab File: C03169H.D
Acq: 16 Mar 109 7:21 pm

Tgt Ion:91 Resp: 3768334

Ion	Ratio	Lower	Upper
91	100		
63	14.2	11.4	17.2
65	12.0	9.6	14.4
0	0.0	0.0	0.0



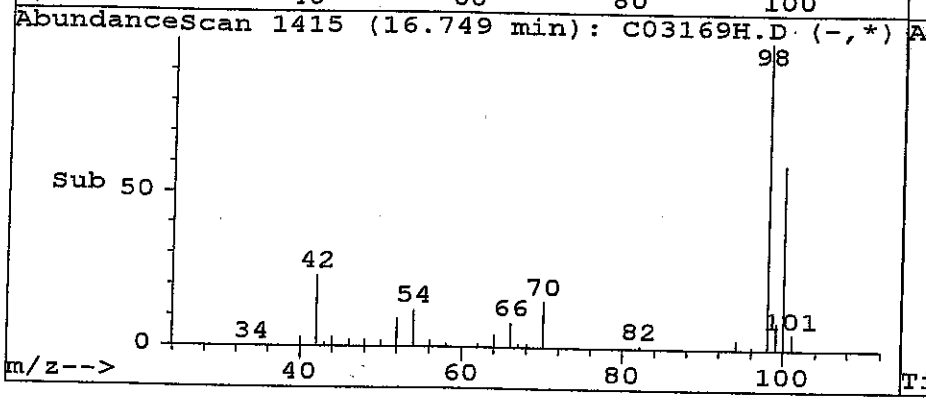


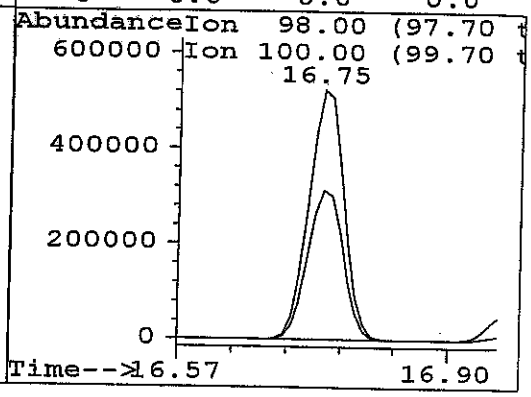


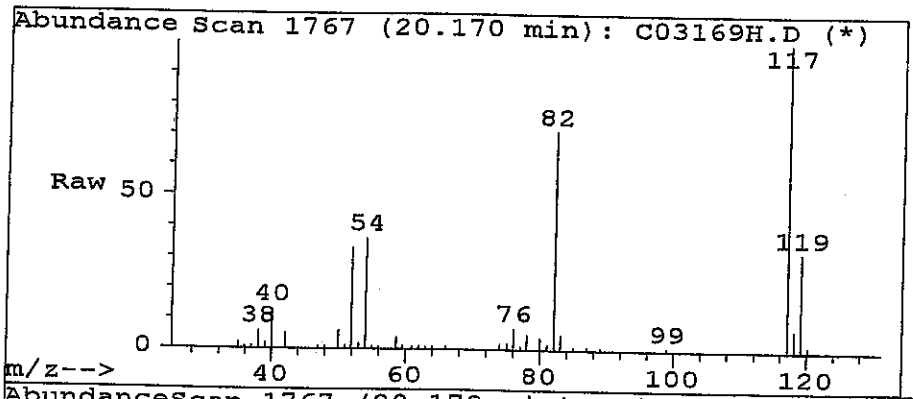
#94
Toluene-d8
Concen: 10.56 ppbV
RT: 16.75 min Scan# 1415
Delta R.T. -0.19 min
Lab File: C03169H.D
Acq: 16 Mar 109 7:21 pm

Tgt Ion:98 Resp: 1546296

Ion	Ratio	Lower	Upper
98	100		
100	59.8	50.2	75.2
0	0.0	0.0	0.0
0	0.0	0.0	0.0



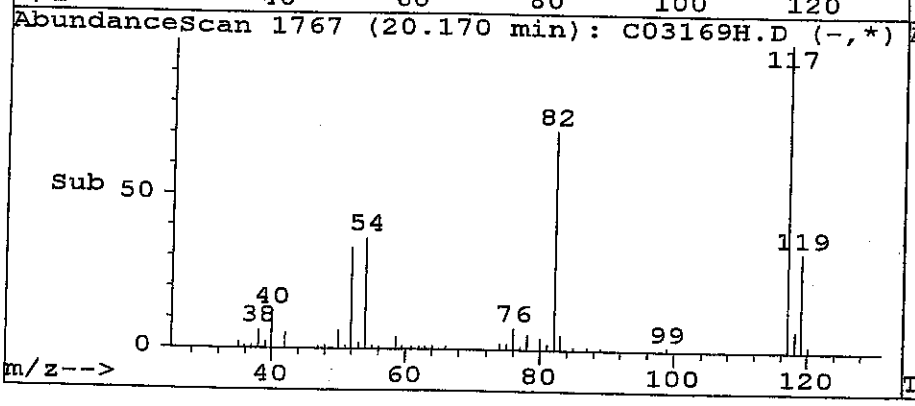


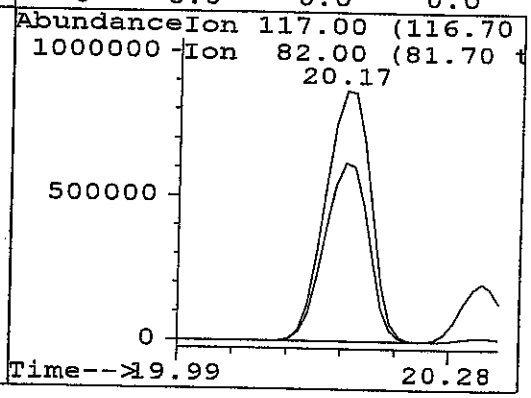


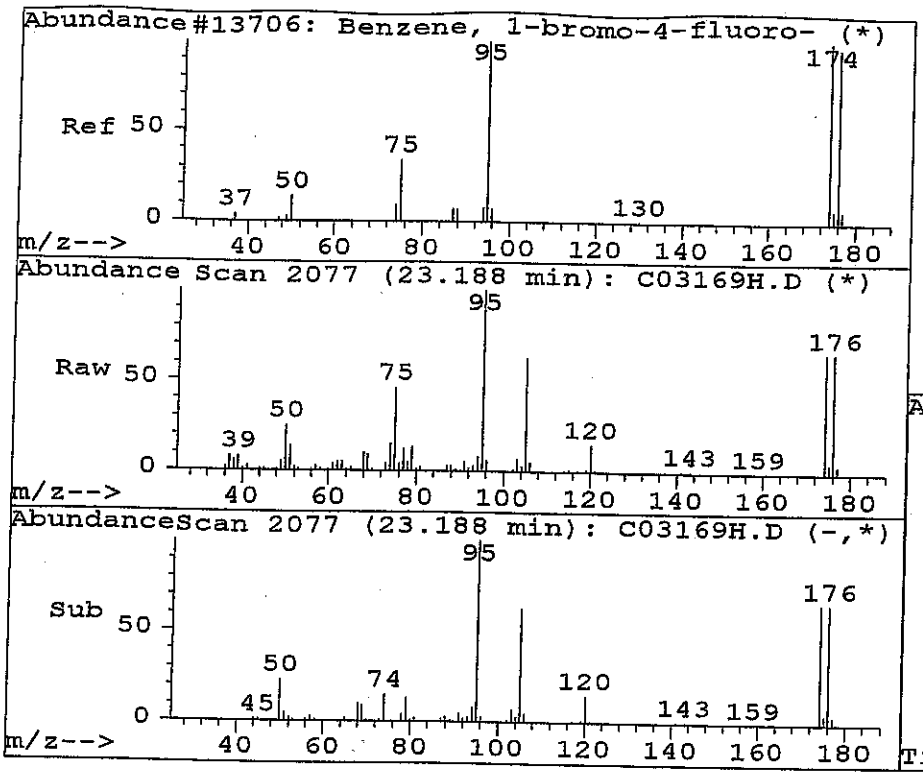
#95
Chlorobenzene-d5
Concen: 22.73 ppbV
RT: 20.17 min Scan# 1767
Delta R.T. -0.19 min
Lab File: C03169H.D
Acq: 16 Mar 109 7:21 pm

Tgt Ion:117 Resp: 2900630

Ion	Ratio	Lower	Upper
117	100		
82	71.5	54.6	82.0
0	0.0	0.0	0.0
0	0.0	0.0	0.0



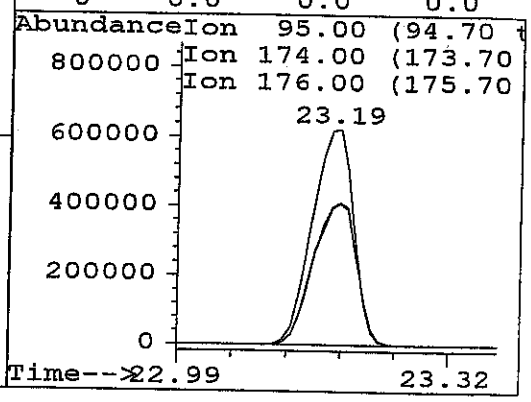




#96
1,4-Bromofluorobenzene
Concen: 10.64 ppbV
RT: 23.19 min Scan# 2077
Delta R.T. -0.19 min
Lab File: C03169H.D
Acq: 16 Mar 109 7:21 pm

Tgt Ion:95 Resp: 2163994

Ion	Ratio	Lower	Upper
95	100		
174	66.2	56.4	84.6
176	65.9	56.7	85.1
0	0.0	0.0	0.0



Quantitation Report

Data File : C:\MSCHEM\2\DATA\03179M~1\C03179A.D
Acq Time : 17 Mar 109 8:47 am
Sample : ST60022 + ST60350
Misc :
Quant Time: Mar 17 10:41 19109

Operator: KB
Inst : 5970 - In
Multiplr: 1.00

Method : C:\MSCHEM\2\METHODS\1T15EXAY.M
Title : EPA TO-15
Last Update : Tue Mar 17 14:18:15 2009
Response via : Multiple Level Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene	11.18	168	2719013	20.00	ppbV	-0.20
35) 1,4-Difluorobenzene	12.97	114	2720455	20.00	ppbV	-0.20
System Monitoring Compounds						%Recovery
94) Toluene-d8	16.73	98	1469067	3.30	ppbV	65.99%
95) Chlorobenzene-d5	20.15	117	2602948	3.97	ppbV	39.67%
96) 1,4-Bromofluorobenzene	23.15	95	2001651	6.29	ppbV	125.86%
Target Compounds						Qvalue
2) Dichlorodifluoromethane	3.72	85	436110	0.25	ppbV	99
3) Chloromethane	3.97	50	272653	0.29	ppbV	93
4) Freon 114	3.99	85	464176	5.80	ppbV	95
5) Vinyl chloride	4.21	62	150492	0.26	ppbV	99
6) Bromomethane	4.78	94	149016	0.26	ppbV	95
7) Chloroethane	4.98	64	78611	0.25	ppbV	99
8) Ethanol	5.02	45	336921	1.83	ppbV	95
9) Acrolein	5.73	56	106554	0.53	ppbV	97
10) Trichlorofluoromethane	5.78	101	431144	0.27	ppbV	97
11) Acetonitrile	5.77	41	509363	0.58	ppbV	98
12) Acetone	5.86	43	494726	0.31	ppbV m	93
13) 2-propanol	5.96	45	289890	1.11	ppbV #	90
14) Methyl iodide	6.81	142	339051	0.38	ppbV	98
15) 1,1-Dichloroethene	6.71	61	305424	0.21	ppbV	98
16) Acrylonitrile	6.76	53	482925	0.74	ppbV #	99
17) Freon 113	6.99	151	205080	0.17	ppbV #	84
18) Allyl chloride	7.18	41	248581	0.19	ppbV	96
19) Dichloromethane	7.13	84	120655	0.19	ppbV	93
20) Carbon disulfide	7.36	76	122015	0.18	ppbV	98
21) trans-1,2-Dichloroethene	8.20	96	80889	0.15	ppbV	97
22) Methyl tert butyl ether	8.36	73	369980	0.15	ppbV	99
23) Propionitrile	8.61	54	316585	0.43	ppbV	98
24) 1,1-Dichloroethane	8.71	63	331041	0.19	ppbV	98
25) Vinyl acetate	10.12	43	676740	0.21	ppbV	97
26) 2-Butanone	9.34	72	71425	0.19	ppbV	82
27) Hexane	9.51	57	162303	0.15	ppbV	93
28) Bromochloromethane	10.29	49	370225	0.23	ppbV	97
29) Tetrahydrofuran	10.64	42	1122494	0.56	ppbV m	44
30) Isobutyl alcohol	10.64	74	79891	0.60	ppbV	98
31) Methacrylonitrile	9.51	67	274466	0.58	ppbV	98
32) cis-1,2-Dichloroethene	9.91	96	224404	0.28	ppbV	97
33) 2,2-Dichloropropane	10.22	77	359345	0.23	ppbV	97
34) Chloroform	10.32	83	516969	0.28	ppbV	98
36) 1,1,1-Trichloroethane	11.59	97	509527	0.12	ppbV	98
37) 1,2-Dichloroethane	11.66	62	495766	0.13	ppbV	98
38) 1,1-Dichloropropene	12.04	75	310573	0.11	ppbV	96
39) Cyclohexane	12.37	56	373616	0.12	ppbV	98
40) Benzene	12.31	78	782160	0.13	ppbV	99
41) Carbon tetrachloride	12.36	117	518753	0.12	ppbV	96
42) n-Heptane	13.83	43	586493	0.11	ppbV	96
43) 1,2-Dichloropropane	13.85	63	305497	0.12	ppbV	92
44) 1,4 Dioxane	14.18	88	161310	0.11	ppbV #	96
45) Dibromomethane	13.98	174	358053	0.10	ppbV	98
46) Trichloroethene	13.92	130	364698	0.12	ppbV	99
47) Bromodichloromethane	14.19	83	417248	0.10	ppbV	95
48) Methyl methacrylate	14.31	69	637368	0.28	ppbV	95
49) Methyl Isobutyl Ketone	15.53	43	1039898	0.11	ppbV	99

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

Quantitation Report

Data File : C:\MSCHEM\2\DATA\03179M~1\C03179A.D
Acq Time : 17 Mar 109 8:47 am
Sample : ST60022 + ST60350
Misc :
Quant Time: Mar 17 10:41 19109

Operator: KB
Inst : 5970 - In
Multiplr: 1.00

Method : C:\MSCHEM\2\METHODS\1T15EXAY.M
Title : EPA T0-15
Last Update : Tue Mar 17 14:18:15 2009
Response via : Multiple Level Calibration

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
50) cis-1,3-Dichloropropene	15.60	75	492454	0.12 ppbV	99
51) Toluene	16.90	91	1033029	0.13 ppbV	98
52) trans-1,3-Dichloropropene	16.63	75	538174	0.12 ppbV	97
53) 1,1,2-Trichloroethane	16.94	61	281046	0.12 ppbV	95
54) 2-Hexanone	17.56	43	1112452	0.10 ppbV	99
55) 1,3-Dichloropropane	17.51	76	402983	0.10 ppbV	98
56) Octane	18.05	57	274693	0.09 ppbV	97
57) Dibromochloromethane	18.08	129	558917	0.10 ppbV	100
58) 1,2-Dibromoethane	18.57	107	701472	0.12 ppbV	99
59) Tetrachloroethene	18.76	166	627137	0.13 ppbV	98
60) Chlorobenzene	20.23	112	862738	0.12 ppbV	99
61) 1,1,1,2-Tetrachloroethane	20.30	131	408032	0.10 ppbV	97
62) Ethylbenzene	20.77	91	1548148	0.13 ppbV	100
63) m & p-Xylene	21.07	91	2542524	0.26 ppbV	97
64) Styrene	21.89	104	840176	0.13 ppbV	98
65) Bromoform	21.79	173	958925	0.11 ppbV	97
66) o-Xylene	22.02	91	1384162	0.12 ppbV	100
67) 1,1,2,2-Tetrachloroethane	22.54	83	1042229	0.10 ppbV	96
68) 1,2,3-Trichloropropane	22.85	110	231249	0.10 ppbV	98
69) t-1,4-Dichloro-2-butene	22.98	53	614970	0.30 ppbV	99
70) n-Propylbenzene	24.20	91	1871406	0.09 ppbV	95
71) Isopropylbenzene	24.51	105	1573293	0.11 ppbV	100
72) 4-Ethyltoluene	24.51	105	1573293	0.11 ppbV	99
73) 1,3,5-Trimethylbenzene	24.68	105	1778188	0.11 ppbV	99
74) Methylstyrene	25.14	118	700556	0.11 ppbV	99
75) tert-butyl benzene	25.60	119	1302134	0.09 ppbV	96
76) 1,2,4-Trimethylbenzene	25.63	105	1766777	0.11 ppbV	97
77) sec-butylbenzene	26.22	105	1874067	0.10 ppbV	99
78) 1,3-Dichlorobenzene	26.19	146	1325016	0.11 ppbV	97
79) Isopropyltoluene	26.60	119	1772233	0.10 ppbV	98
80) Benzyl chloride	26.35	91	1580130	0.10 ppbV	97
81) 1,4-Dichlorobenzene	26.39	146	1362139	0.11 ppbV m	98
82) n-Butylbenzene	27.66	91	2064802	0.10 ppbV	98
83) 1,2-Dichlorobenzene	27.24	146	1374687	0.10 ppbV	96
84) 1,2-Dibromo-3-chloropropan	28.74	75	2420308	0.32 ppbV m	21
85) Tetraethyl lead	30.77	237	1960424	0.23 ppbV #	95
86) 1,2,4-Trichlorobenzene	31.80	180	2236815	0.12 ppbV	91
87) Naphthalene	32.18	128	10074168	0.34 ppbV	98
88) Hexachlorobutadiene	32.84	225	1914490	0.11 ppbV	99
89) Propylene	3.65	40	103546	0.21 ppbV	93
90) 1,3-Butadiene	4.34	54	157819	0.12 ppbV	93
92) 2-Chlorotoluene	24.26	91	1196093	0.06 ppbV m	79
93) 4-Chlorotoluene	24.42	91	1485093	0.09 ppbV	99

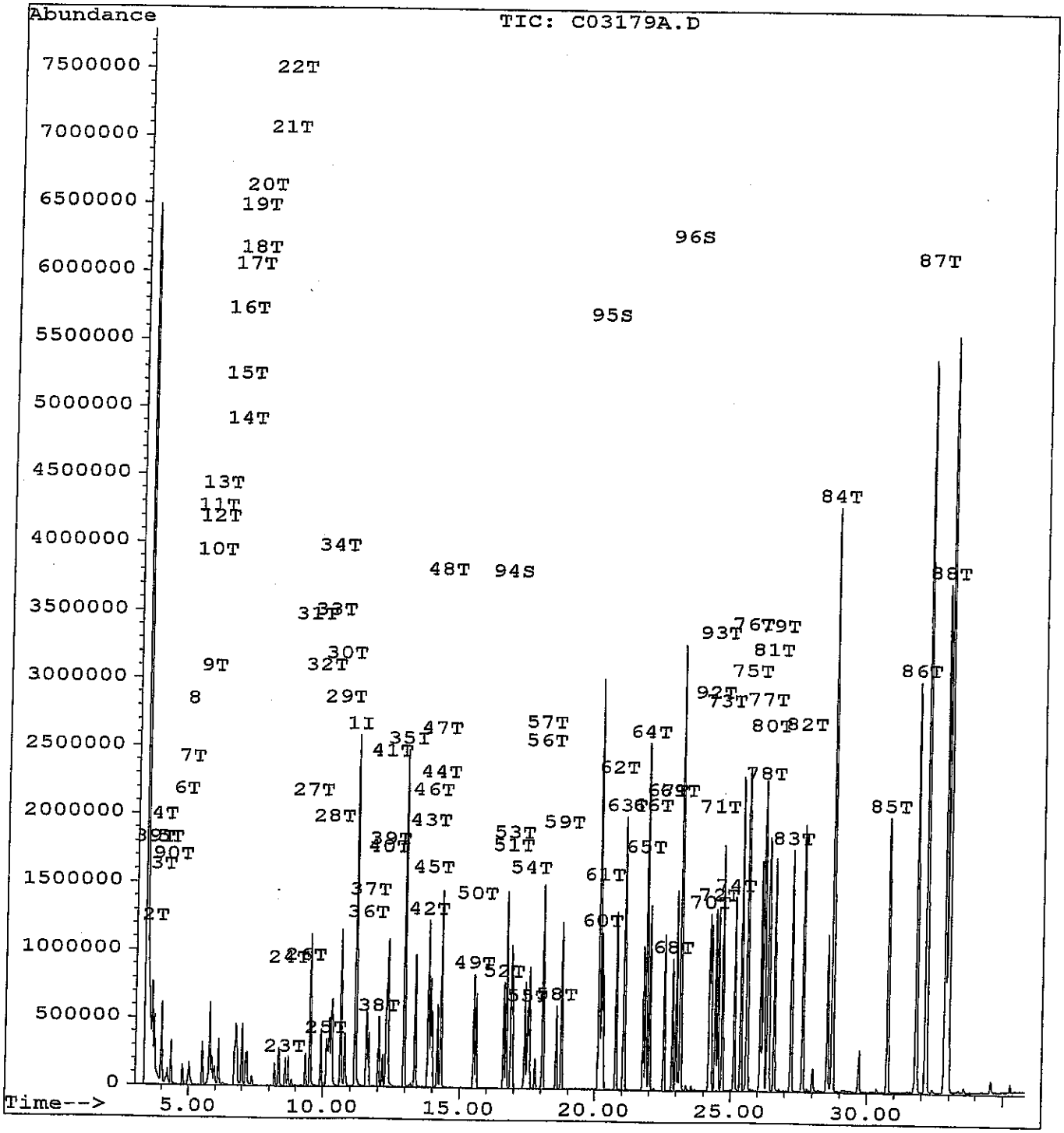
(#) = qualifier out of range (m) = manual integration

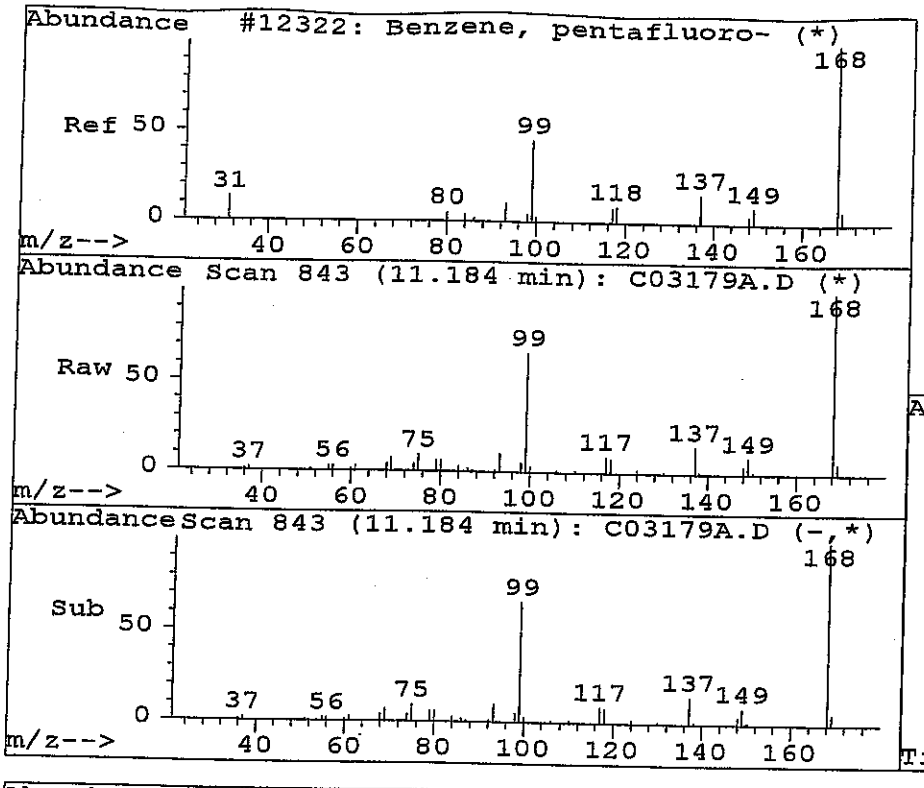
Quantitation Report

Data File : C:\MSCHEM\2\DATA\03179M~1\C03179A.D
Acq Time : 17 Mar 109 8:47 am
Sample : ST60022 + ST60350
Misc :
Quant Time: Mar 17 10:41 19109

Operator: KB
Inst : 5970 - In
Multiplr: 1.00

Method : C:\MSCHEM\2\METHODS\1T15EXAY.M
Title : EPA TO-15
Last Update : Tue Mar 17 14:18:15 2009
Response via : Multiple Level Calibration

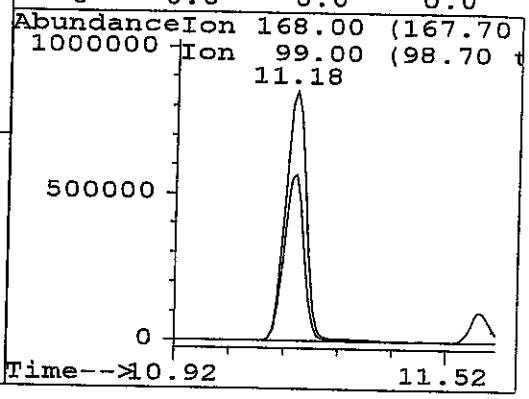


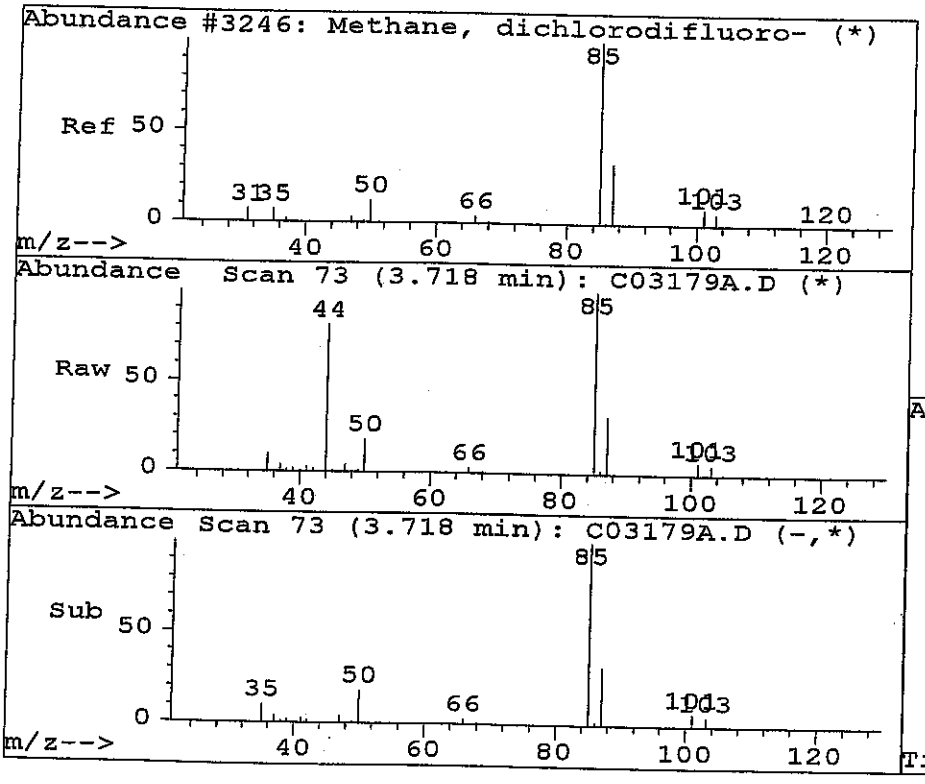


#1
Pentafluorobenzene
Concen: 20.00 ppbV
RT: 11.18 min Scan# 843
Delta R.T. -0.20 min
Lab File: C03179A.D
Acq: 17 Mar 109 8:47 am

Tgt Ion:168 Resp: 2719013

Ion	Ratio	Lower	Upper
168	100		
99	66.4	53.1	79.7
0	0.0	0.0	0.0
0	0.0	0.0	0.0

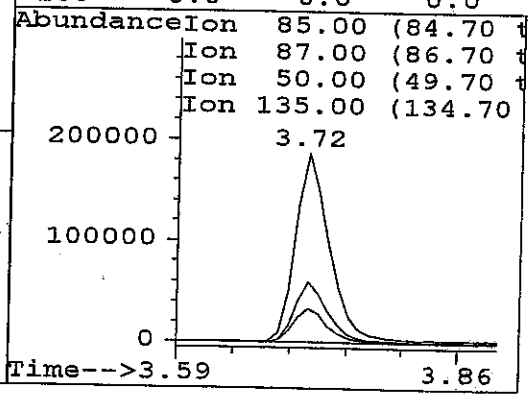


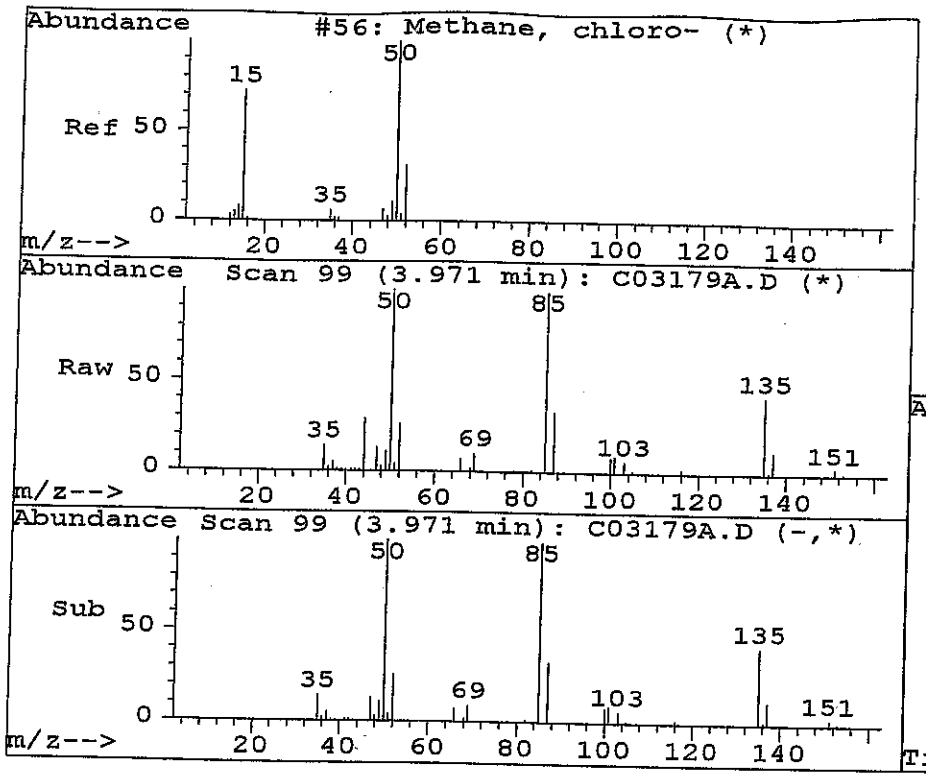


#2
Dichlorodifluoromethane
Concen: 0.25 ppbV
RT: 3.72 min Scan# 73
Delta R.T. -0.11 min
Lab File: C03179A.D
Acq: 17 Mar 109 8:47 am

Tgt Ion:85 Resp: 436110

Ion	Ratio	Lower	Upper
85	100		
87	31.8	26.1	39.1
50	17.9	14.5	21.7
135	0.0	0.0	0.0

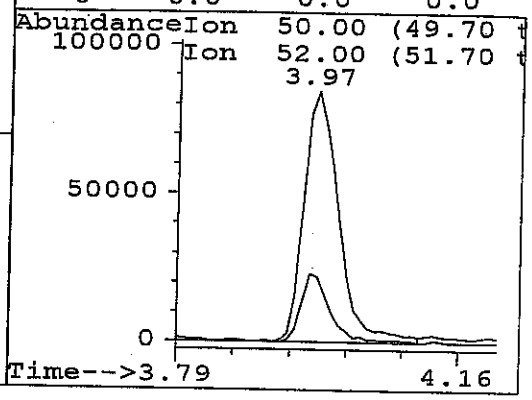


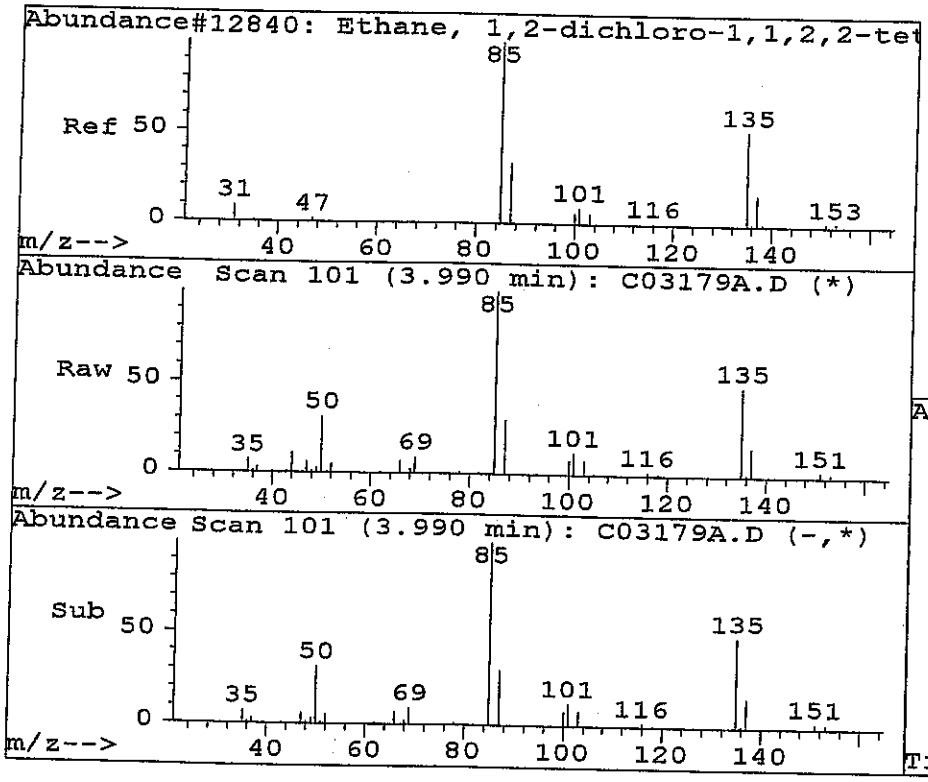


#3
Chloromethane
Concen: 0.29 ppbV
RT: 3.97 min Scan# 99
Delta R.T. -0.12 min
Lab File: C03179A.D
Acq: 17 Mar 109 8:47 am

Tgt Ion:50 Resp: 272653

Ion	Ratio	Lower	Upper
50	100		
52	26.4	18.5	27.7
0	0.0	0.0	0.0
0	0.0	0.0	0.0

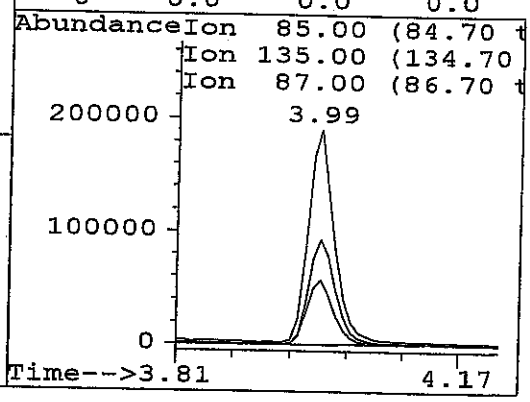


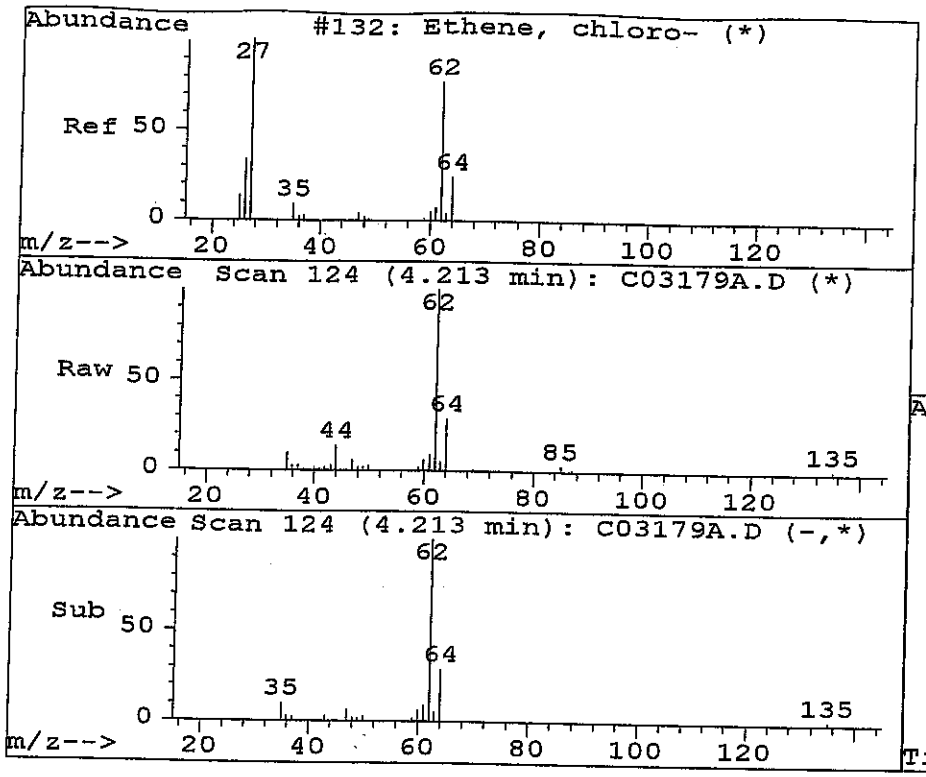


#4
Freon 114
Concen: 5.80 ppbV
RT: 3.99 min Scan# 101
Delta R.T. -0.12 min
Lab File: C03179A.D
Acq: 17 Mar 109 8:47 am

Tgt Ion:85 Resp: 464176

Ion	Ratio	Lower	Upper
85	100		
135	49.0	42.7	64.1
87	29.9	25.4	38.0
0	0.0	0.0	0.0

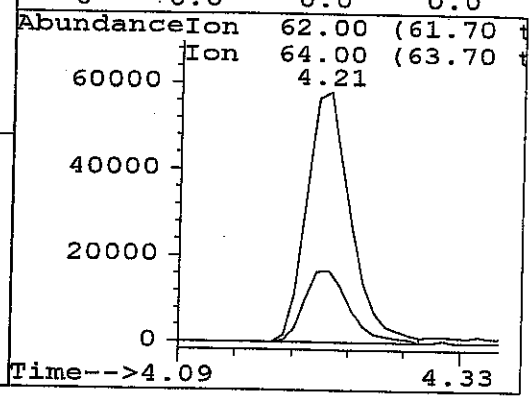


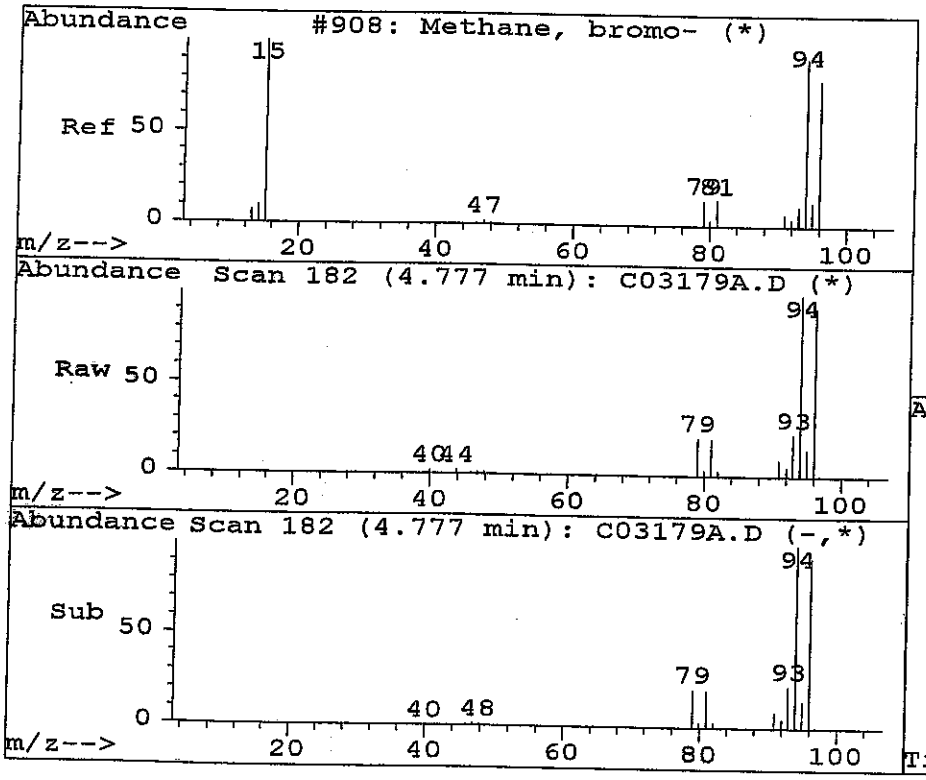


#5
Vinyl chloride
Concen: 0.26 ppbV
RT: 4.21 min Scan# 124
Delta R.T. -0.12 min
Lab File: C03179A.D
Acq: 17 Mar 109 8:47 am

Tgt Ion:62 Resp: 150492

Ion	Ratio	Lower	Upper
62	100		
64	29.0	23.7	35.5
0	0.0	0.0	0.0
0	0.0	0.0	0.0

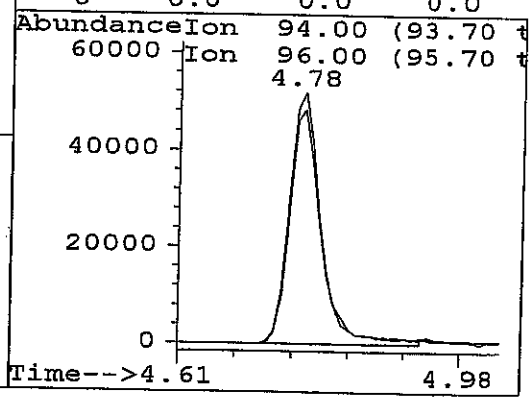


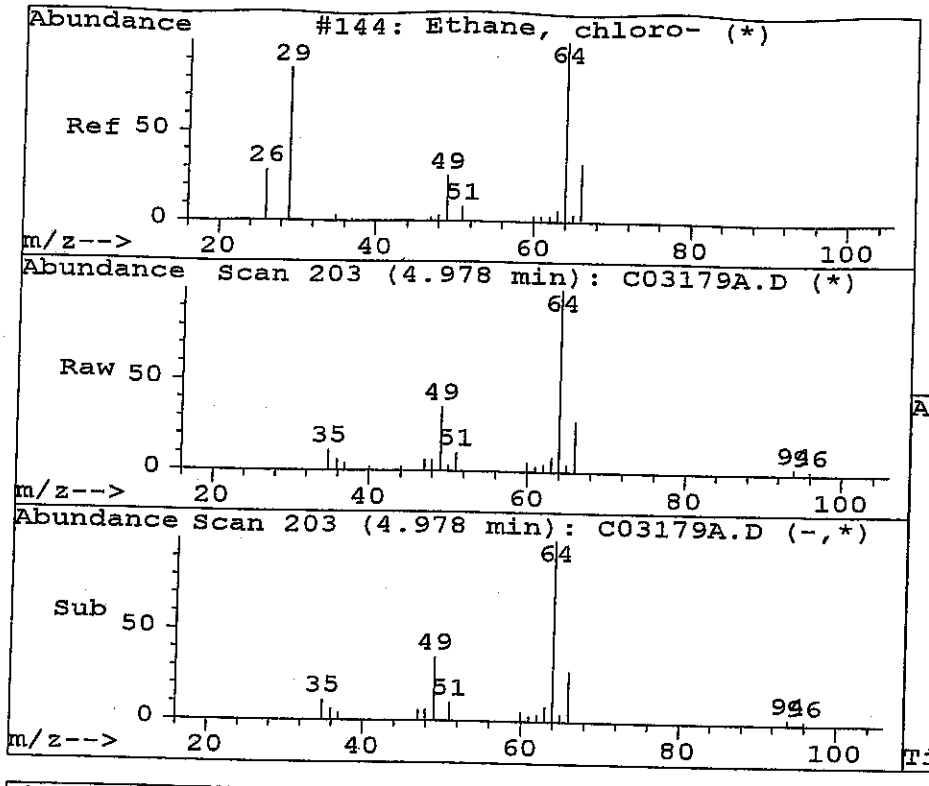


#6
Bromomethane
Concen: 0.26 ppbV
RT: 4.78 min Scan# 182
Delta R.T. -0.14 min
Lab File: C03179A.D
Acq: 17 Mar 109 8:47 am

Tgt Ion:94 Resp: 149016

Ion	Ratio	Lower	Upper
94	100		
96	92.8	70.4	105.6
0	0.0	0.0	0.0
0	0.0	0.0	0.0

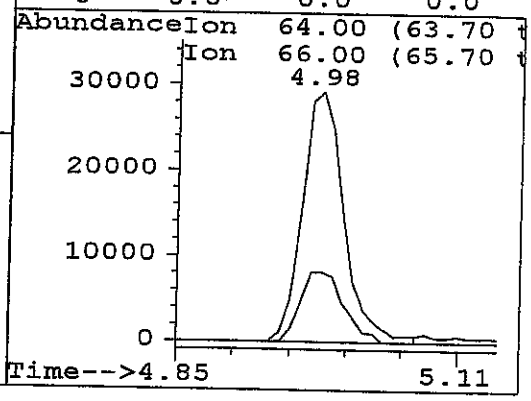


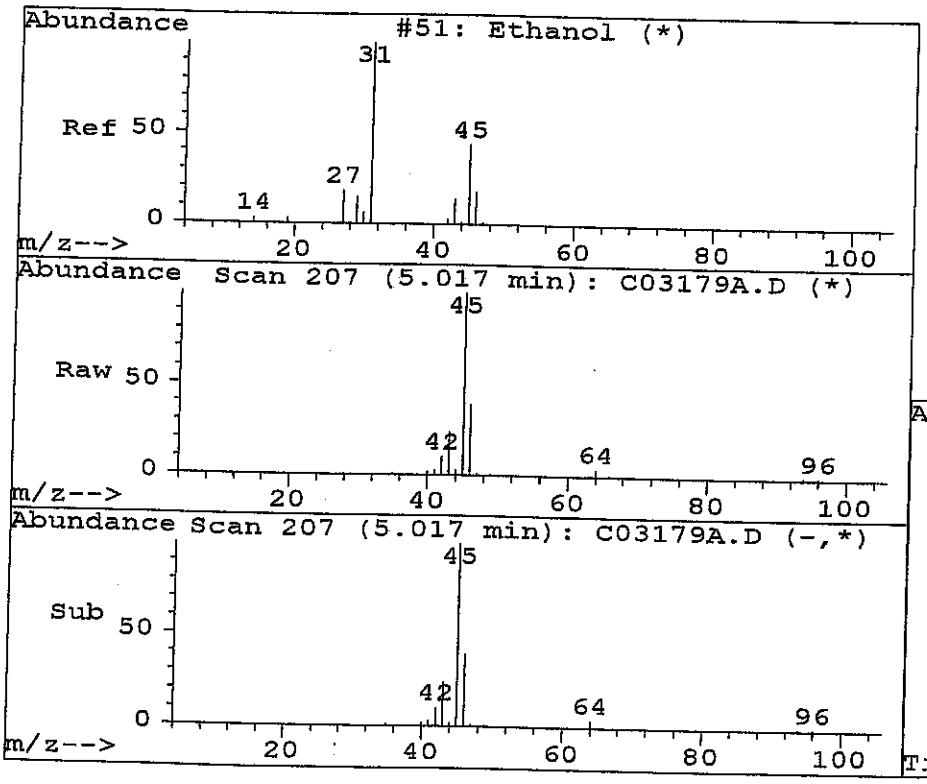


#7
Chloroethane
Concen: 0.25 ppbV
RT: 4.98 min Scan# 203
Delta R.T. -0.14 min
Lab File: C03179A.D
Acq: 17 Mar 109 8:47 am

Tgt Ion:64 Resp: 78611

Ion	Ratio	Lower	Upper
64	100		
66	28.4	23.1	34.7
0	0.0	0.0	0.0
0	0.0	0.0	0.0

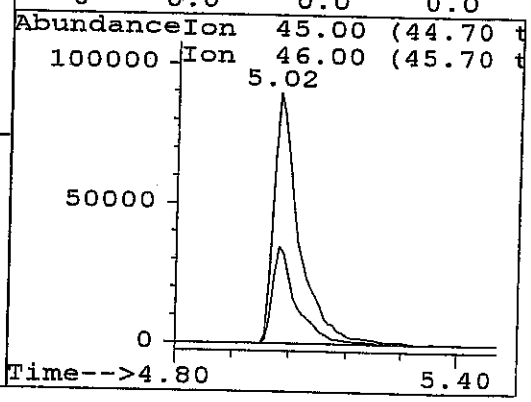


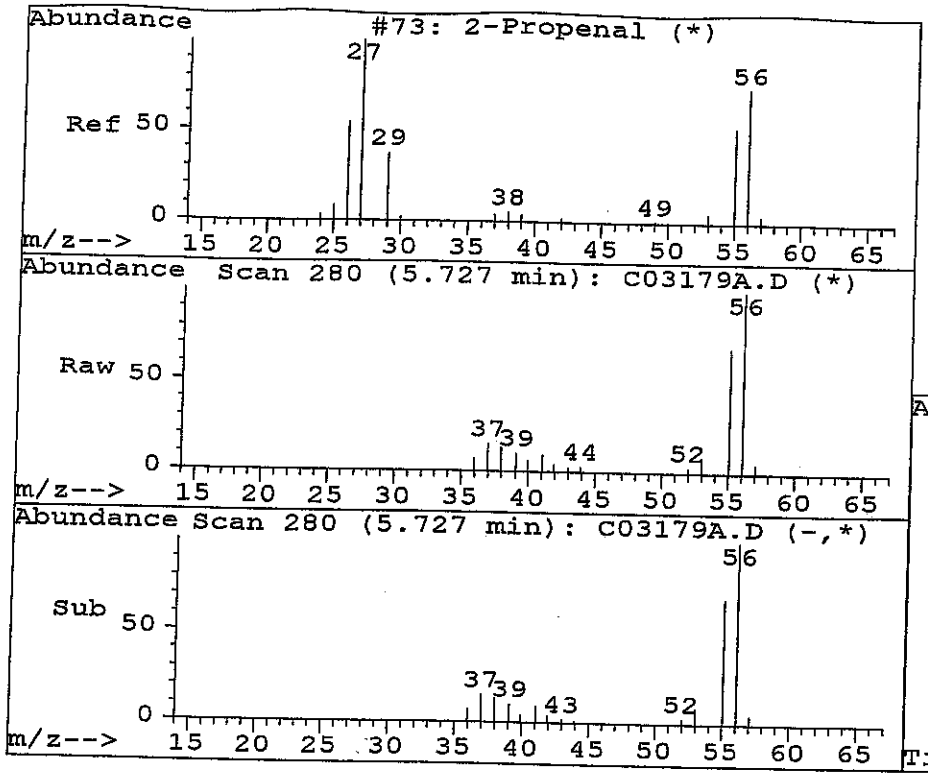


#8
Ethanol
Concen: 1.83 ppbV
RT: 5.02 min Scan# 207
Delta R.T. -0.18 min
Lab File: C03179A.D
Acq: 17 Mar 109 8:47 am

Tgt Ion:45 Resp: 336921

Ion	Ratio	Lower	Upper
45	100		
46	36.5	27.0	40.4
0	0.0	0.0	0.0
0	0.0	0.0	0.0

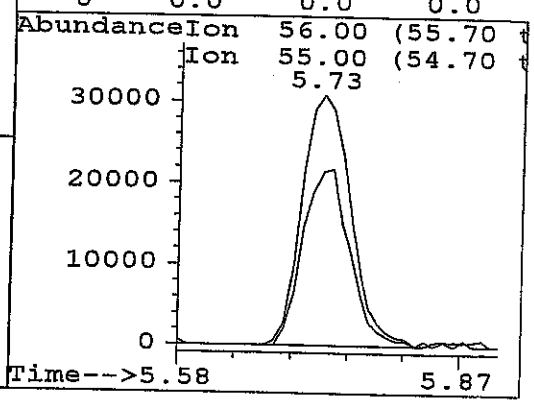


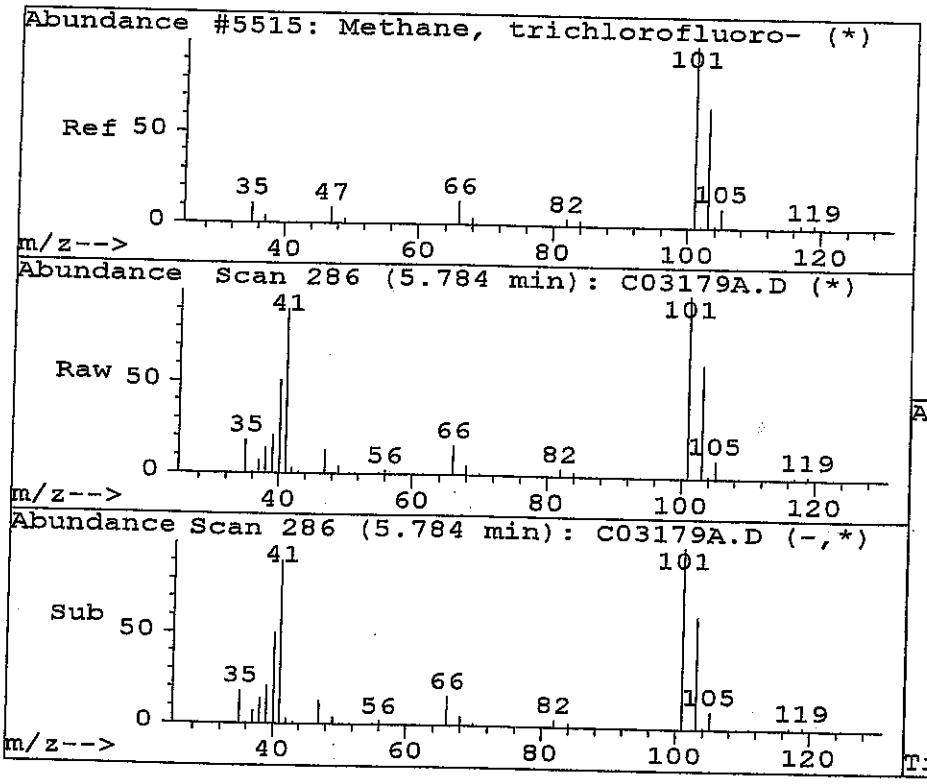


#9
Acrolein
Concen: 0.53 ppbV
RT: 5.73 min Scan# 280
Delta R.T. -0.16 min
Lab File: C03179A.D
Acq: 17 Mar 109 8:47 am

Tgt Ion:56 Resp: 106554

Ion	Ratio	Lower	Upper
56	100		
55	69.5	53.4	80.2
0	0.0	0.0	0.0
0	0.0	0.0	0.0

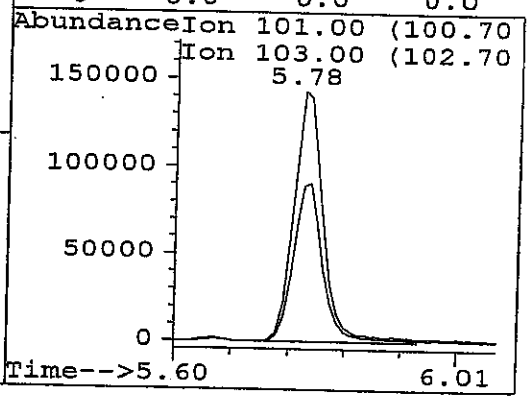


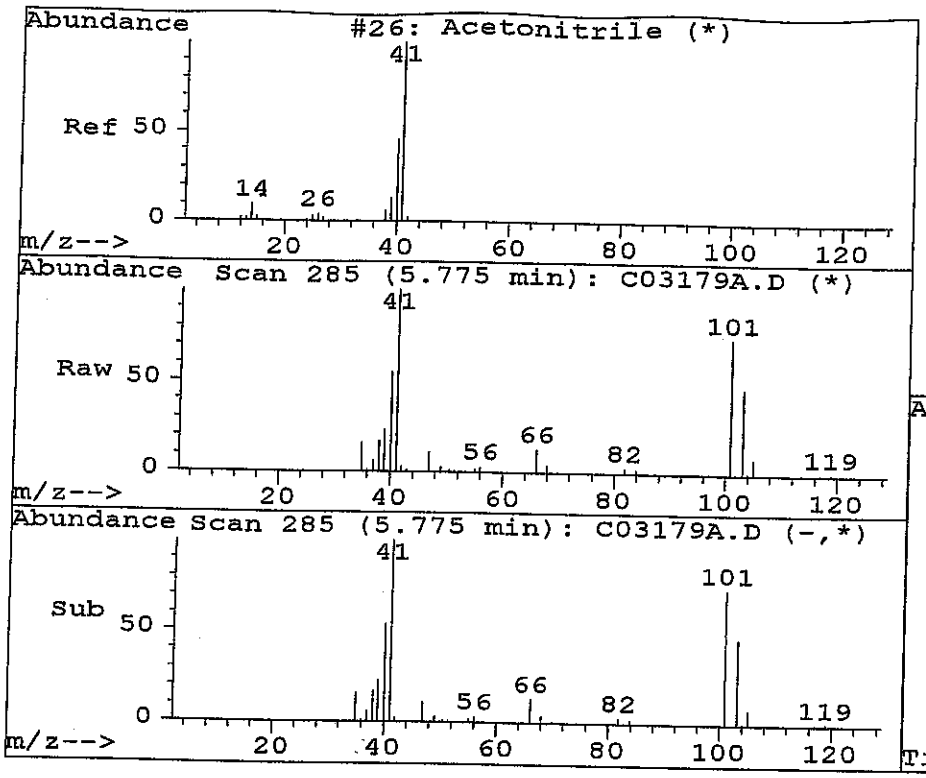


#10
Trichlorofluoromethane
Concen: 0.27 ppbV
RT: 5.78 min Scan# 286
Delta R.T. -0.16 min
Lab File: C03179A.D
Acq: 17 Mar 109 8:47 am

Tgt Ion:101 Resp: 431144

Ion	Ratio	Lower	Upper
101	100		
103	62.3	51.8	77.8
0	0.0	0.0	0.0
0	0.0	0.0	0.0

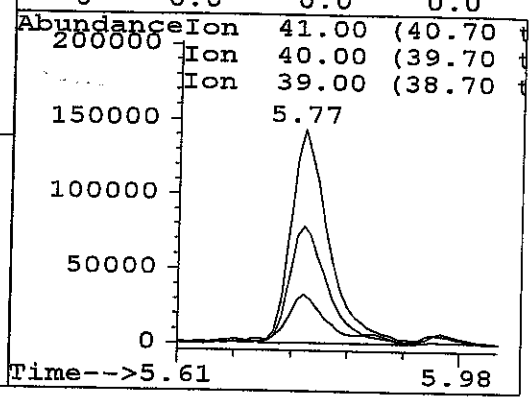


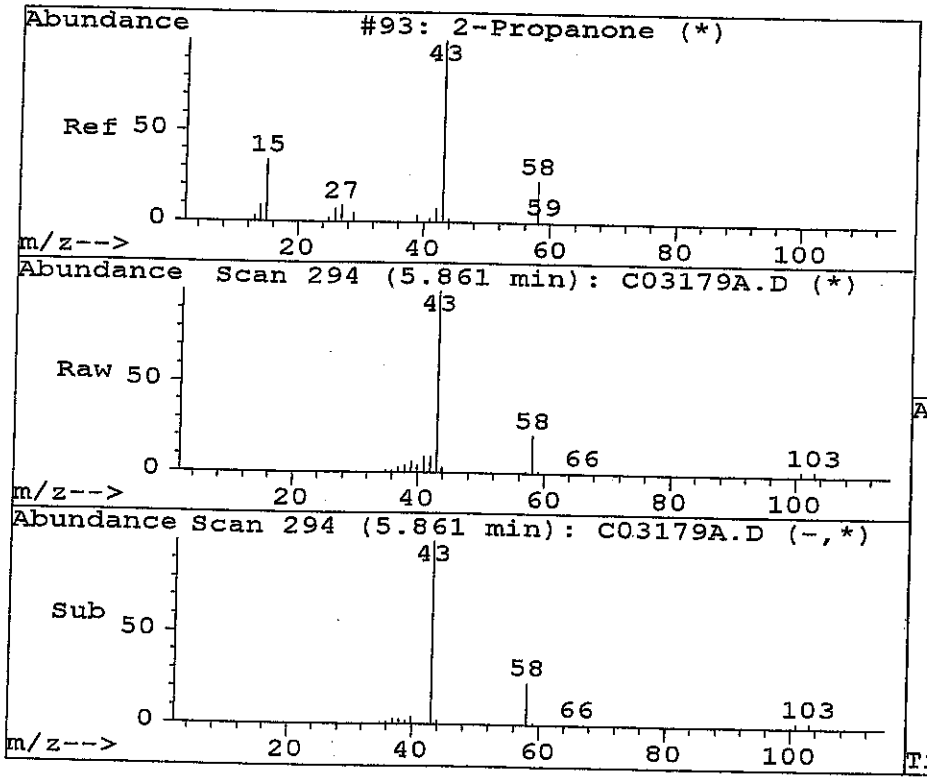


#11
Acetonitrile
Concen: 0.58 ppbV
RT: 5.77 min Scan# 285
Delta R.T. -0.19 min
Lab File: C03179A.D
Acq: 17 Mar 109 8:47 am

Tgt Ion:41 Resp: 509363

Ion	Ratio	Lower	Upper
41	100		
40	54.4	44.6	66.8
39	21.3	18.0	27.0
0	0.0	0.0	0.0

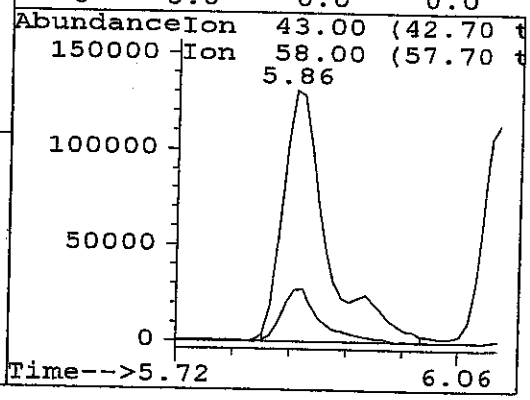


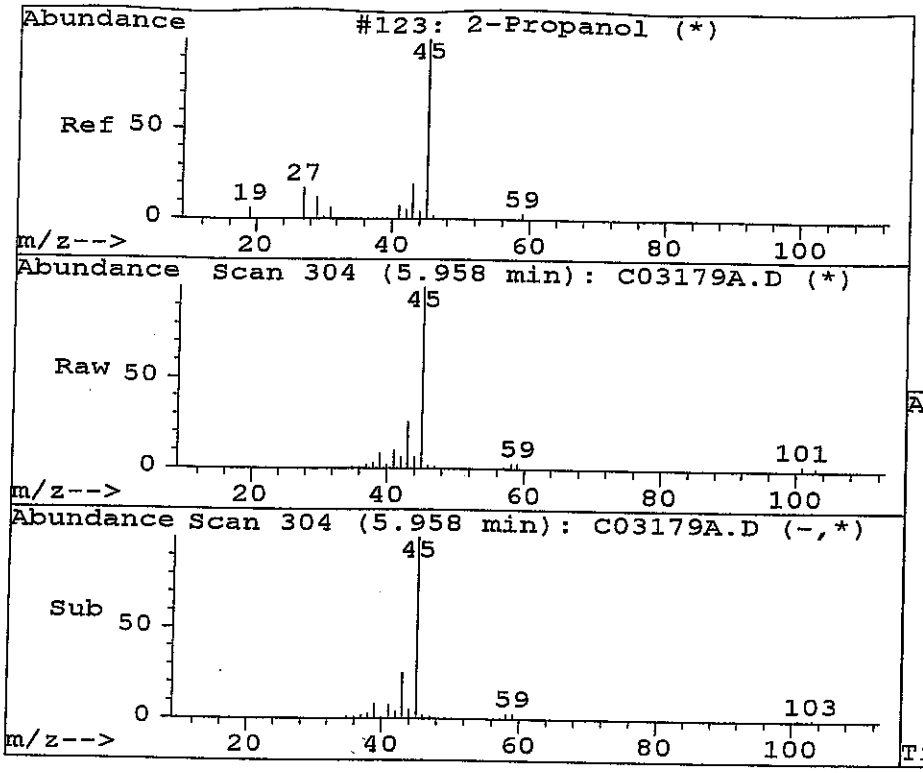


#12
Acetone
Concen: 0.31 ppbV m
RT: 5.86 min Scan# 294
Delta R.T. -0.18 min
Lab File: C03179A.D
Acq: 17 Mar 109 8:47 am

Tgt Ion:43 Resp: 494726

Ion	Ratio	Lower	Upper
43	100		
58	20.6	14.2	21.2
0	0.0	0.0	0.0
0	0.0	0.0	0.0

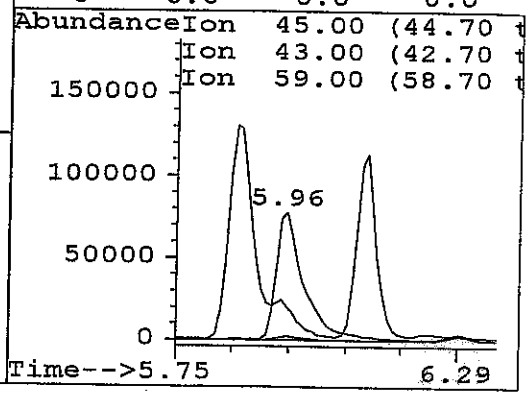


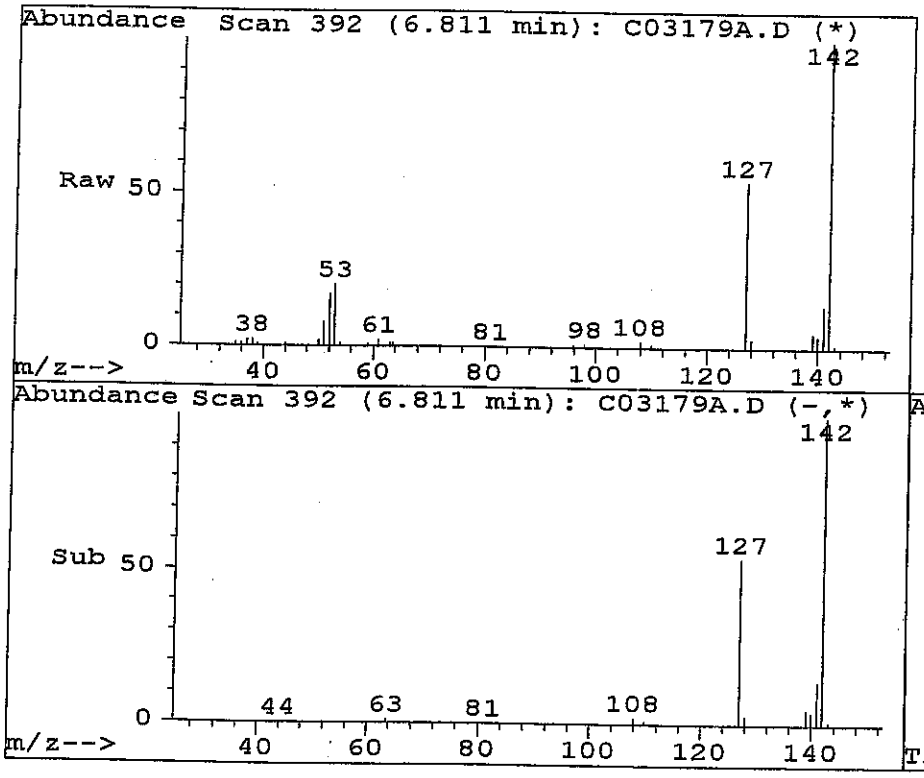


#13
2-propanol
Concen: 1.11 ppbV
RT: 5.96 min Scan# 304
Delta R.T. -0.18 min
Lab File: C03179A.D
Acq: 17 Mar 109 8:47 am

Tgt Ion:45 Resp: 289890

Ion	Ratio	Lower	Upper
45	100		
43	25.4	16.1	24.1#
59	2.4	2.1	3.1
0	0.0	0.0	0.0

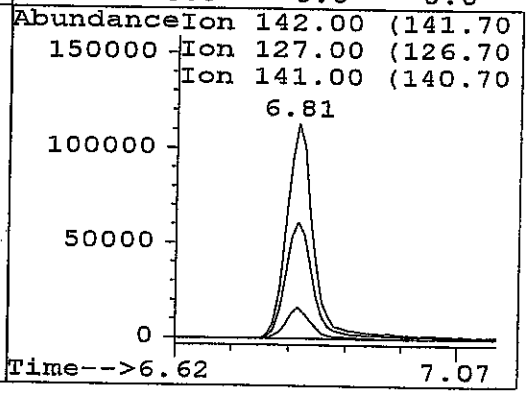


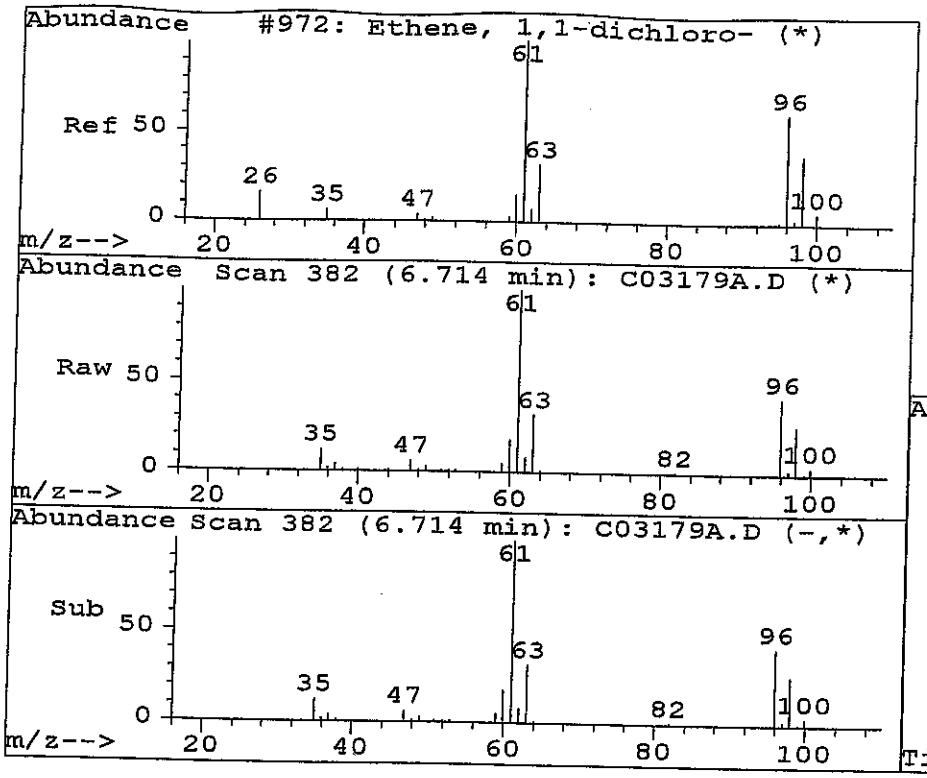


#14
Methyl iodide
Concen: 0.38 ppbV
RT: 6.81 min Scan# 392
Delta R.T. -0.18 min
Lab File: C03179A.D
Acq: 17 Mar 109 8:47 am

Tgt Ion:142 Resp: 339051

Ion	Ratio	Lower	Upper
142	100		
127	53.9	44.2	66.2
141	14.5	12.1	18.1
0	0.0	0.0	0.0

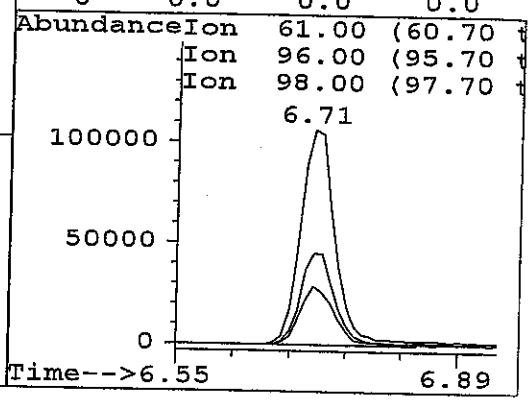


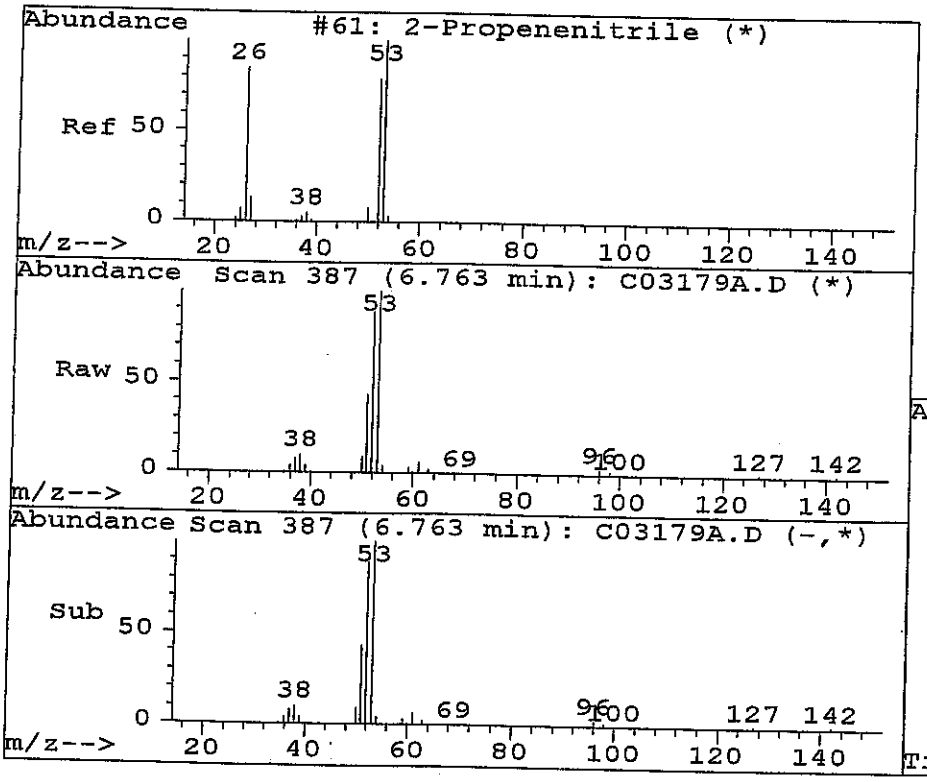


#15
1,1-Dichloroethene
Concen: 0.21 ppbV
RT: 6.71 min Scan# 382
Delta R.T. -0.18 min
Lab File: C03179A.D
Acq: 17 Mar 109 8:47 am

Tgt Ion:61 Resp: 305424

Ion	Ratio	Lower	Upper
61	100		
96	42.1	35.2	52.8
98	27.2	21.6	32.4
0	0.0	0.0	0.0

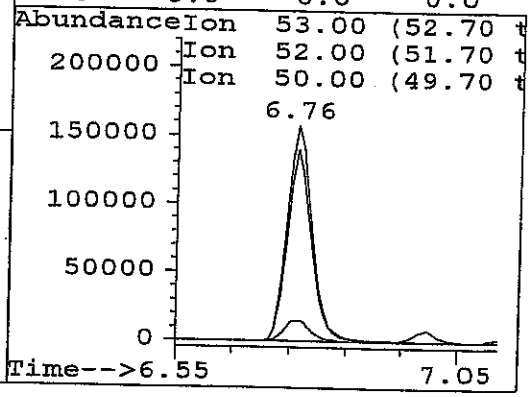


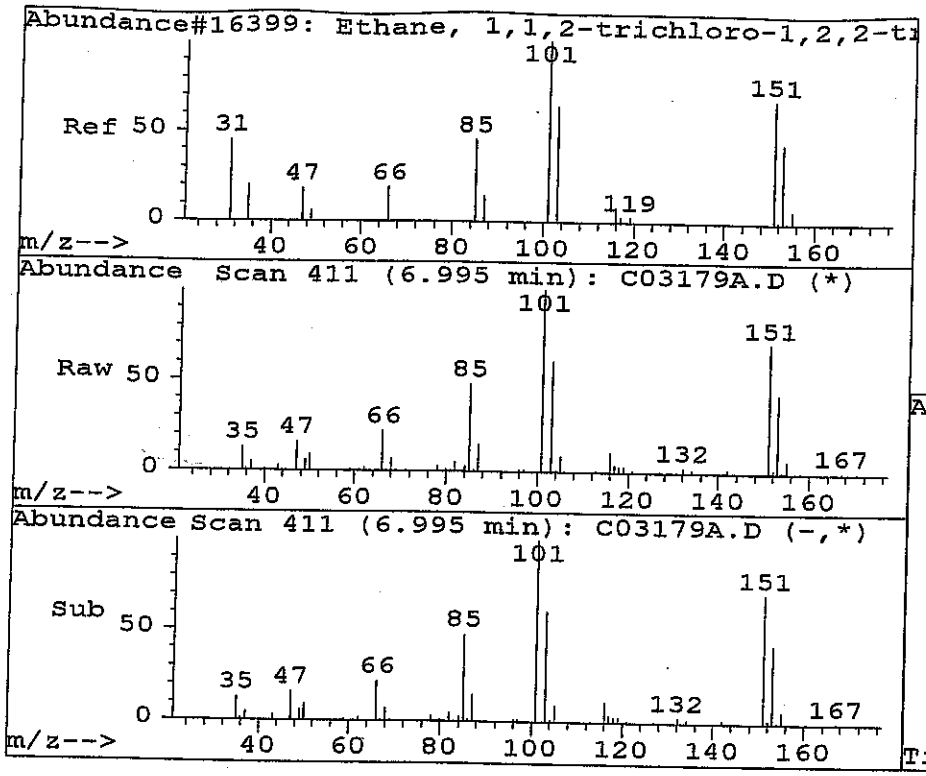


#16
Acrylonitrile
Concen: 0.74 ppbV
RT: 6.76 min Scan# 387
Delta R.T. -0.20 min
Lab File: C03179A.D
Acq: 17 Mar 109 8:47 am

Tgt Ion:53 Resp: 482925

Ion	Ratio	Lower	Upper
53	100		
52	89.0	71.0	106.4
50	7.4	7.6	11.4#
0	0.0	0.0	0.0

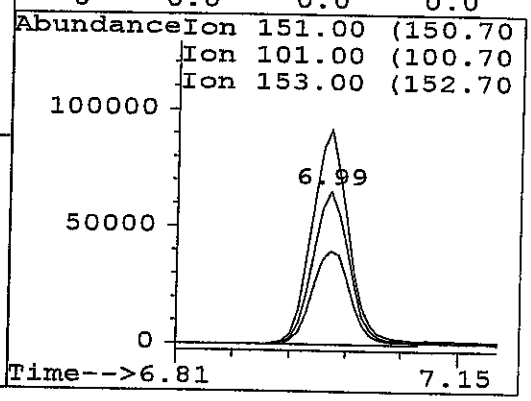


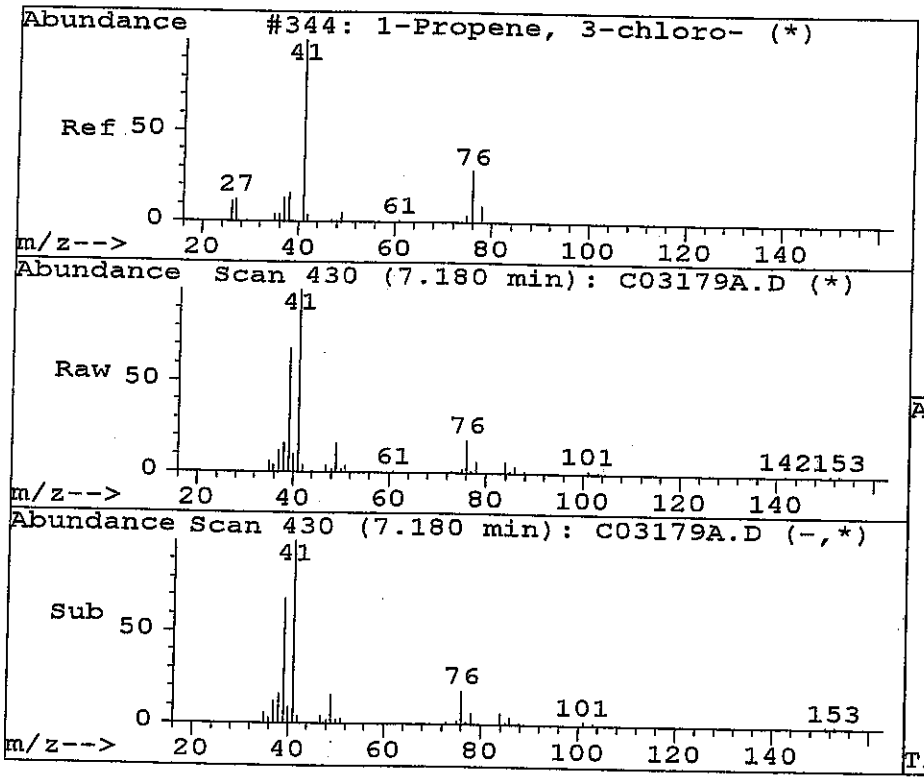


#17
Freon 113
Concen: 0.17 ppbV
RT: 6.99 min Scan# 411
Delta R.T. -0.17 min
Lab File: C03179A.D
Acq: 17 Mar 109 8:47 am

Tgt Ion:151 Resp: 205080

Ion	Ratio	Lower	Upper
151	100		
101	140.4	91.9	137.9#
153	60.8	50.0	75.0
0	0.0	0.0	0.0

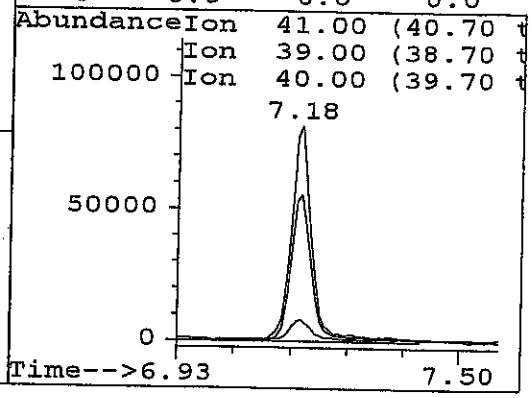


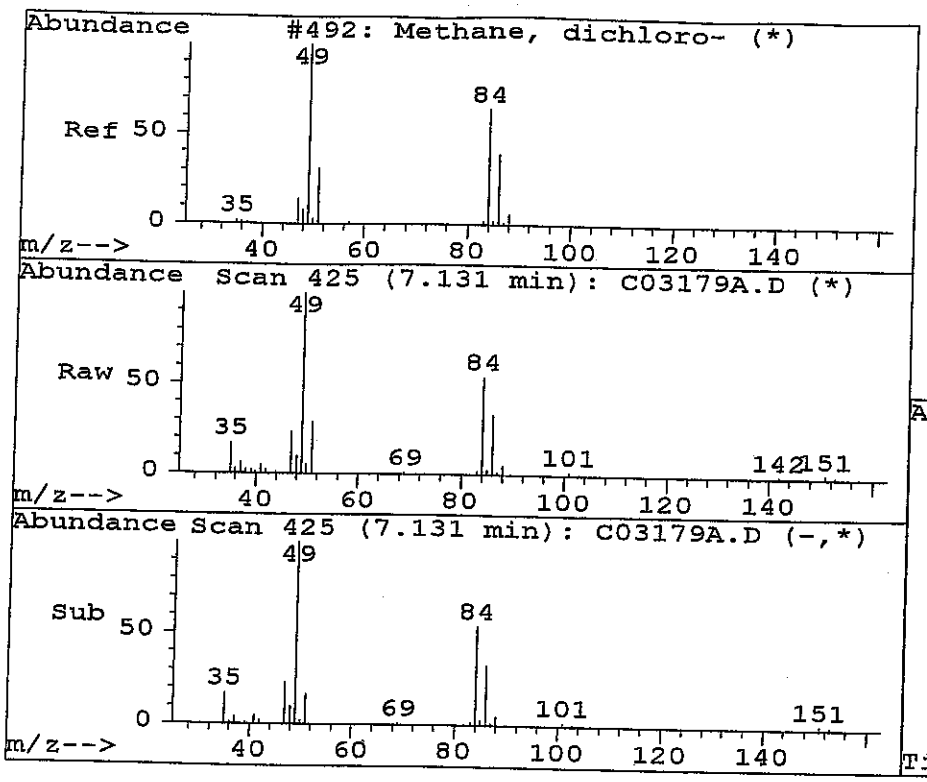


#18
Allyl chloride
Concen: 0.19 ppbV
RT: 7.18 min Scan# 430
Delta R.T. -0.17 min
Lab File: C03179A.D
Acq: 17 Mar 109 8:47 am

Tgt Ion:41 Resp: 248581

Ion	Ratio	Lower	Upper
41	100		
39	67.9	57.3	85.9
40	9.0	7.8	11.6
0	0.0	0.0	0.0

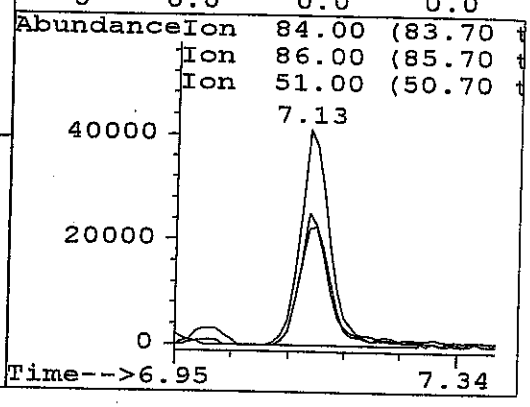


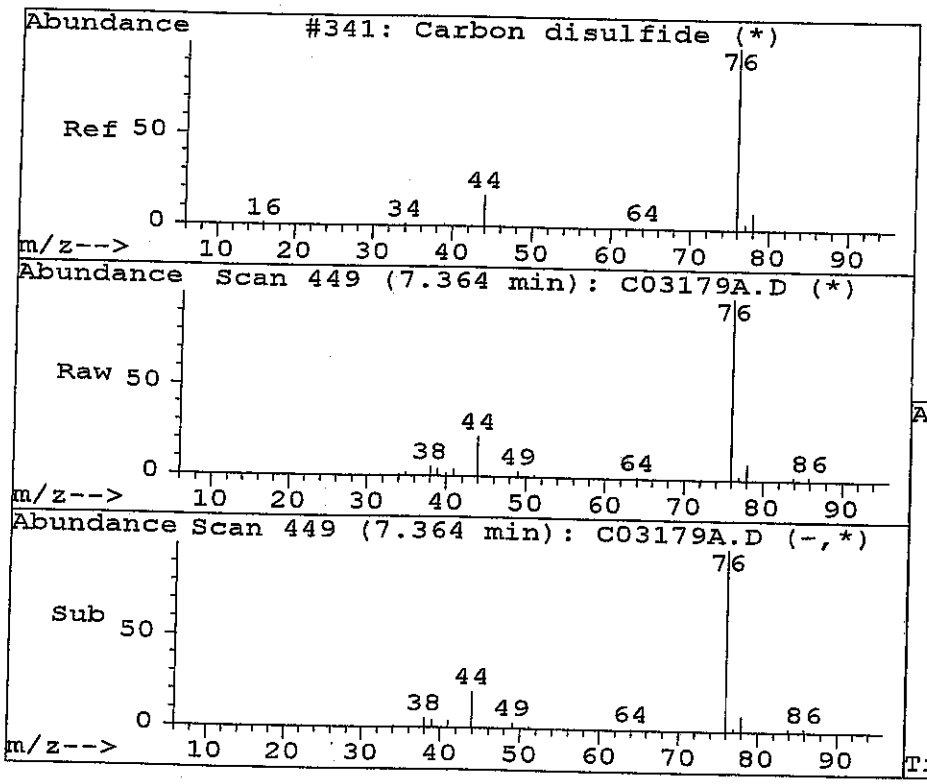


#19
Dichloromethane
Concen: 0.19 ppbV
RT: 7.13 min Scan# 425
Delta R.T. -0.18 min
Lab File: C03179A.D
Acq: 17 Mar 109 8:47 am

Tgt Ion:84 Resp: 120655

Ion	Ratio	Lower	Upper
84	100		
86	61.2	54.2	81.2
51	53.4	45.8	68.8
0	0.0	0.0	0.0

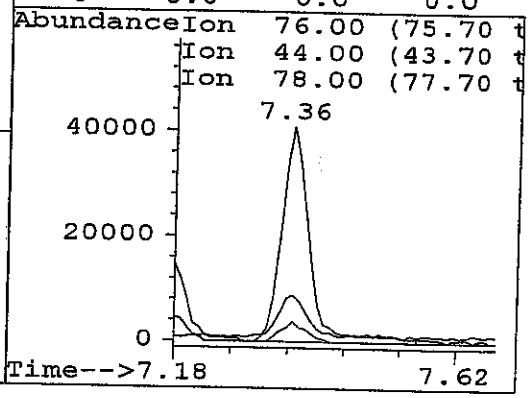


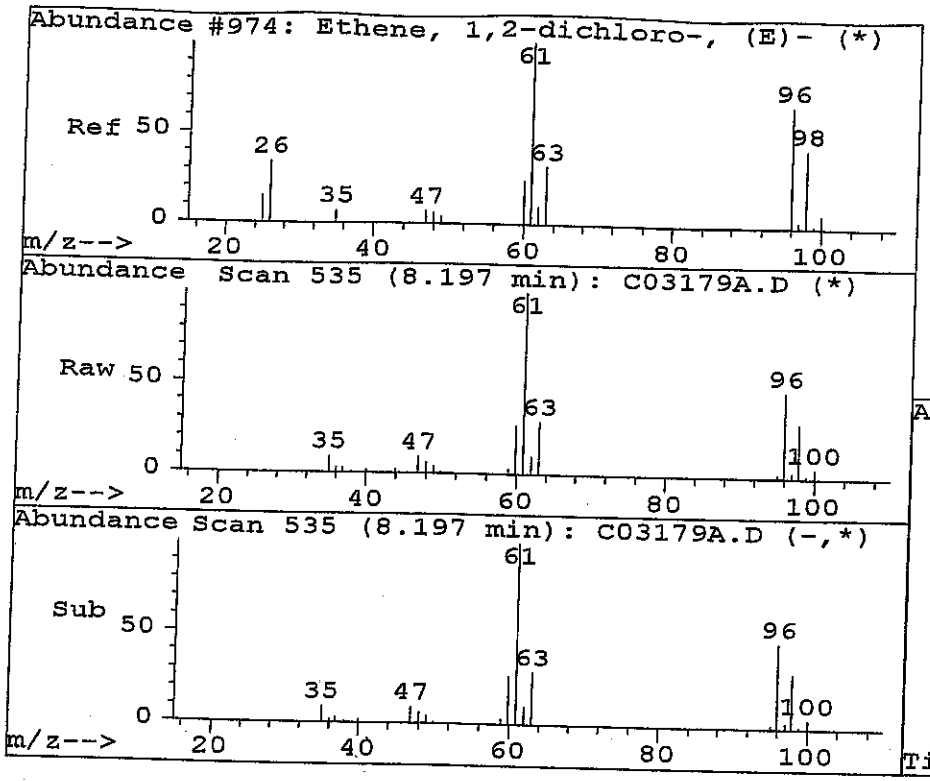


#20
Carbon disulfide
Concen: 0.18 ppbV
RT: 7.36 min Scan# 449
Delta R.T. -0.18 min
Lab File: C03179A.D
Acq: 17 Mar 109 8:47 am

Tgt Ion:76 Resp: 122015

Ion	Ratio	Lower	Upper
76	100		
44	19.0	15.9	23.9
78	9.5	6.7	11.1
0	0.0	0.0	0.0

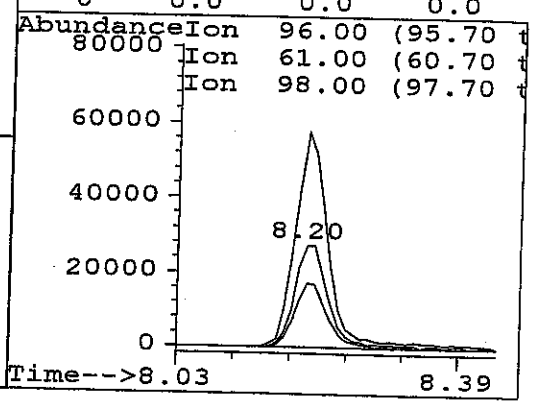


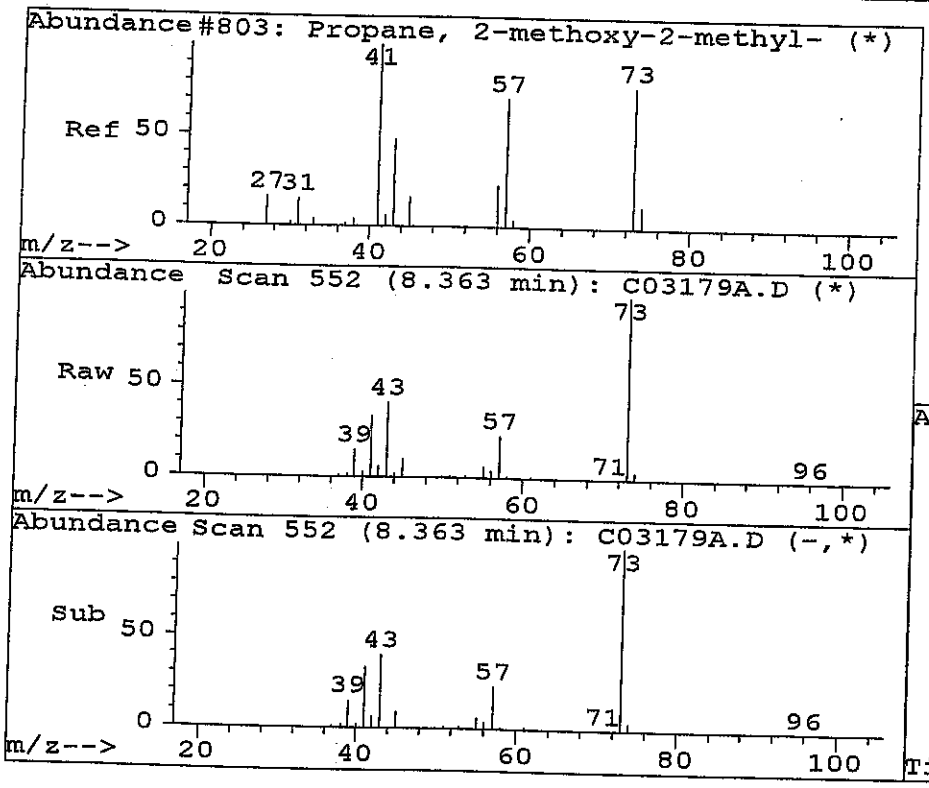


#21
trans-1,2-Dichloroethene
Concen: 0.15 ppbV
RT: 8.20 min Scan# 535
Delta R.T. -0.18 min
Lab File: C03179A.D
Acq: 17 Mar 109 8:47 am

Tgt Ion:96 Resp: 80889

Ion	Ratio	Lower	Upper
96	100		
61	209.2	172.5	258.7
98	63.3	49.7	74.5
0	0.0	0.0	0.0

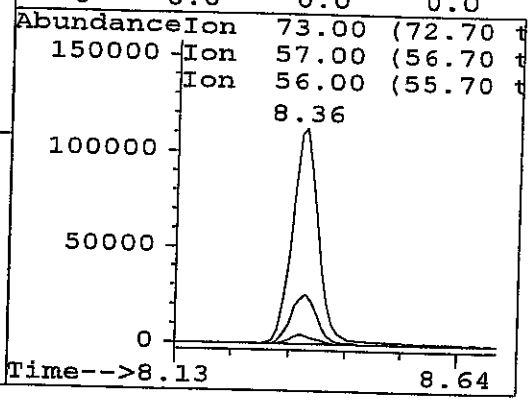


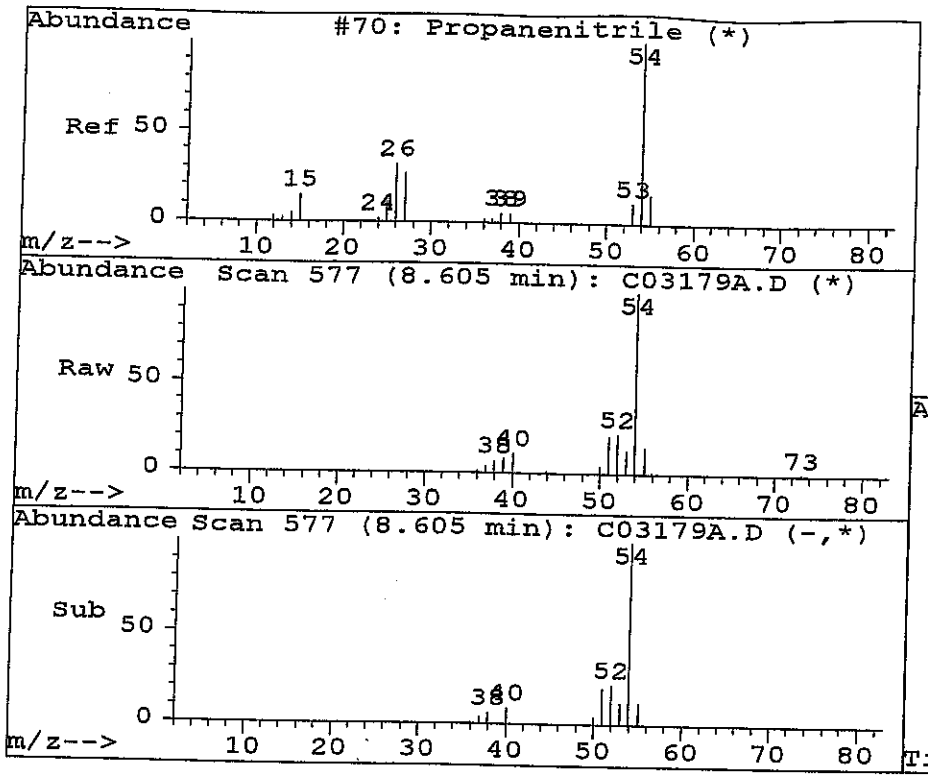


#22
Methyl tert butyl ether
Concen: 0.15 ppbV
RT: 8.36 min Scan# 552
Delta R.T. -0.18 min
Lab File: C03179A.D
Acq: 17 Mar 109 8:47 am

Tgt Ion:73 Resp: 369980

Ion	Ratio	Lower	Upper
73	100		
57	23.2	18.8	28.2
56	3.7	3.1	4.7
0	0.0	0.0	0.0

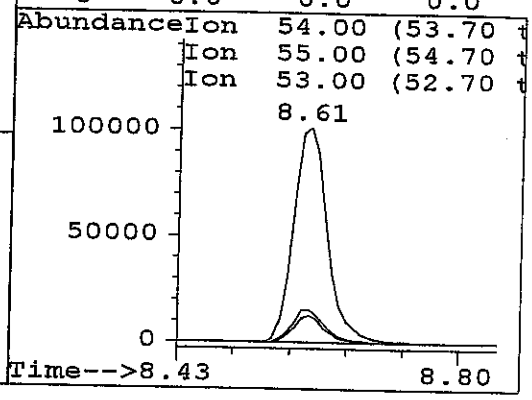


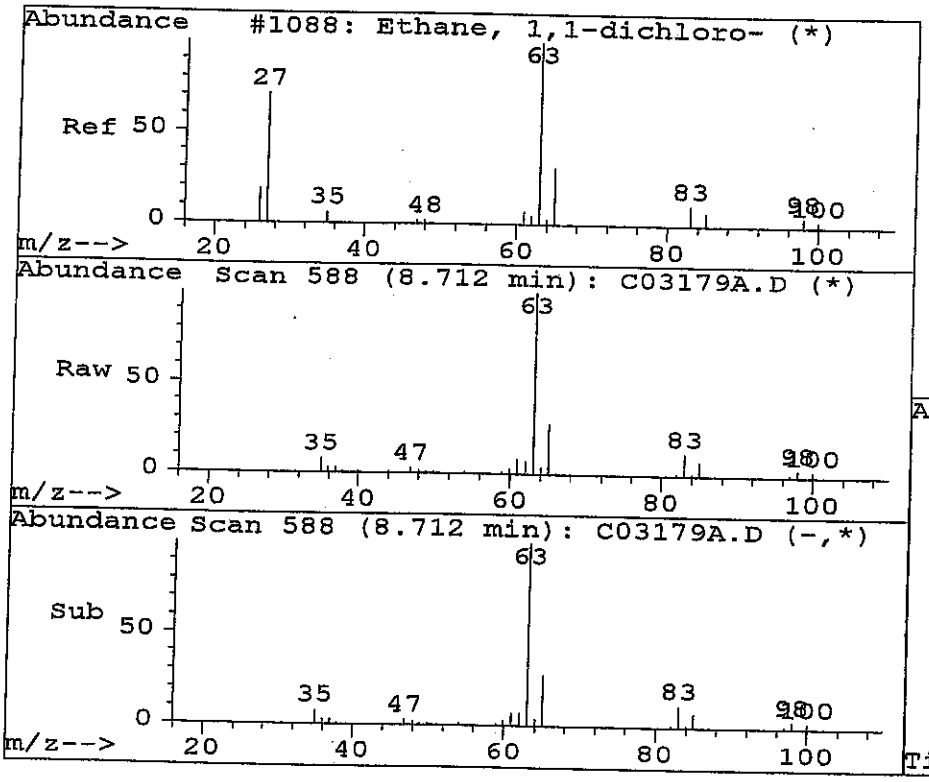


#23
Propionitrile
Concen: 0.43 ppbV
RT: 8.61 min Scan# 577
Delta R.T. -0.22 min
Lab File: C03179A.D
Acq: 17 Mar 109 8:47 am

Tgt Ion:54 Resp: 316585

Ion	Ratio	Lower	Upper
54	100		
55	15.3	11.8	17.6
53	12.5	9.0	13.4
0	0.0	0.0	0.0

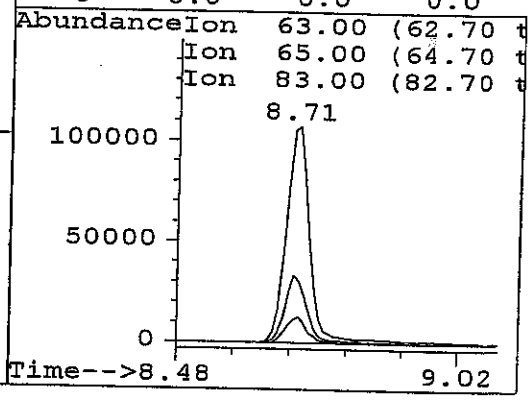


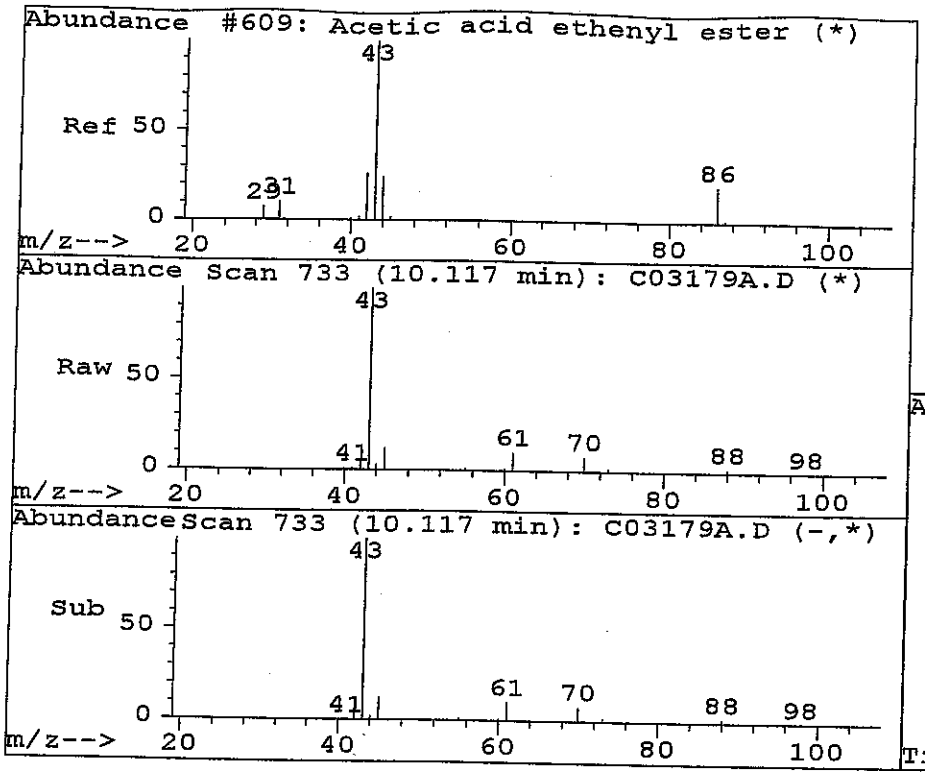


#24
1,1-Dichloroethane
Concen: 0.19 ppbV
RT: 8.71 min Scan# 588
Delta R.T. -0.19 min
Lab File: C03179A.D
Acq: 17 Mar 109 8:47 am

Tgt Ion:63 Resp: 331041

Ion	Ratio	Lower	Upper
63	100		
65	28.3	23.7	35.5
83	12.1	8.9	13.3
0	0.0	0.0	0.0

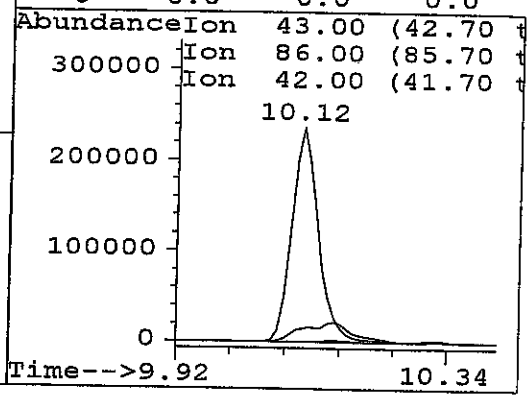


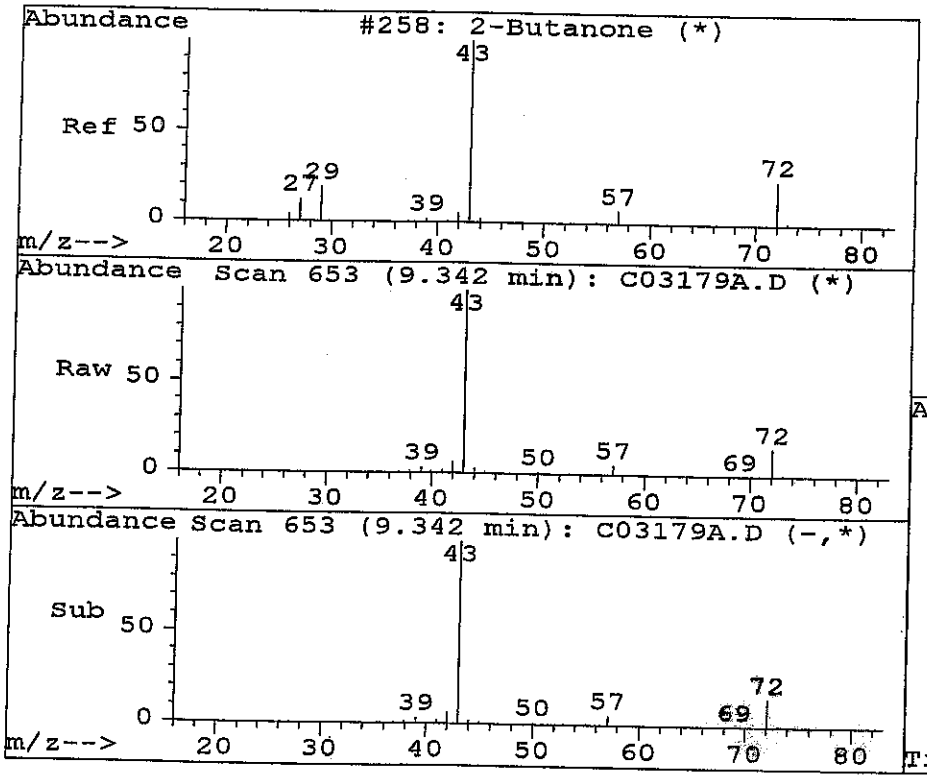


#25
Vinyl acetate
Concen: 0.21 ppbV
RT: 10.12 min Scan# 733
Delta R.T. -0.20 min
Lab File: C03179A.D
Acq: 17 Mar 109 8:47 am

Tgt Ion:43 Resp: 676740

Ion	Ratio	Lower	Upper
43	100		
86	0.0	0.0	0.0
42	6.2	5.7	8.5
0	0.0	0.0	0.0

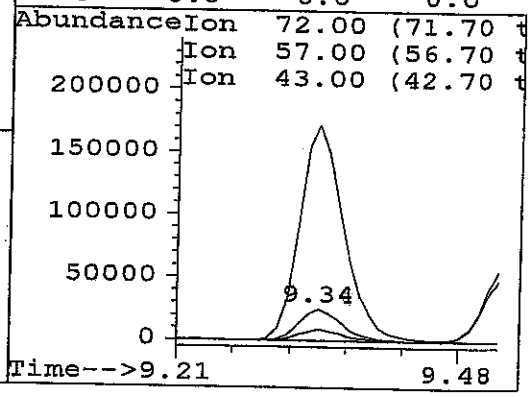


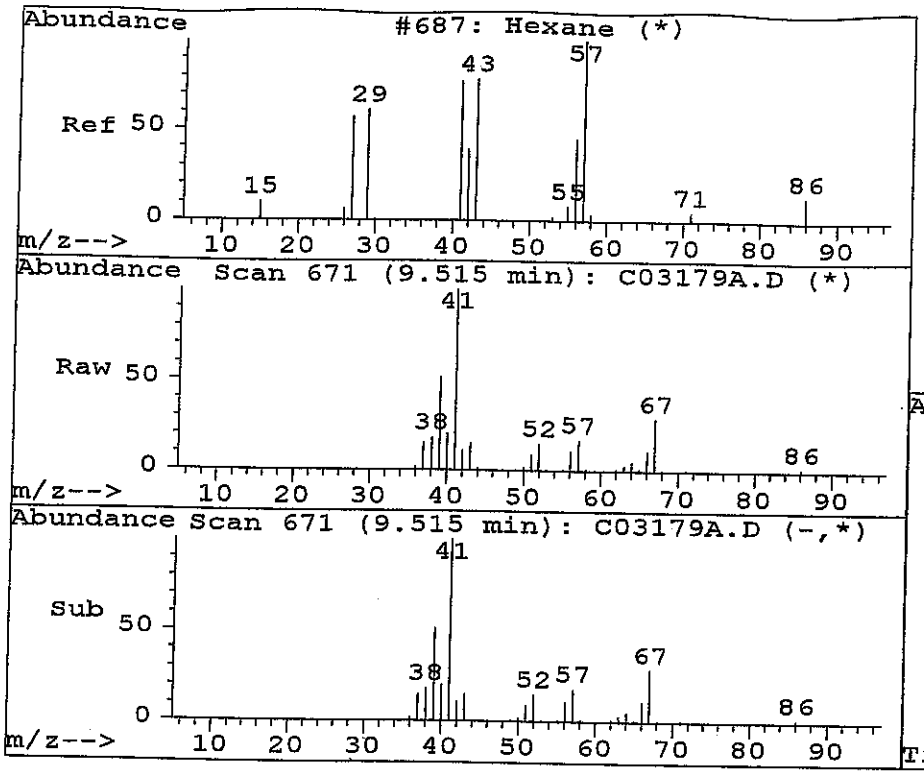


#26
2-Butanone
Concen: 0.19 ppbV
RT: 9.34 min Scan# 653
Delta R.T. -0.20 min
Lab File: C03179A.D
Acq: 17 Mar 109 8:47 am

Tgt Ion:72 Resp: 71425

Ion	Ratio	Lower	Upper
72	100		
57	36.2	30.6	46.0
43	685.3	601.5	902.3
0	0.0	0.0	0.0

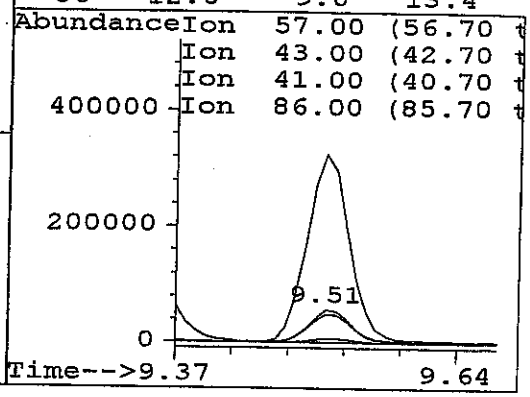


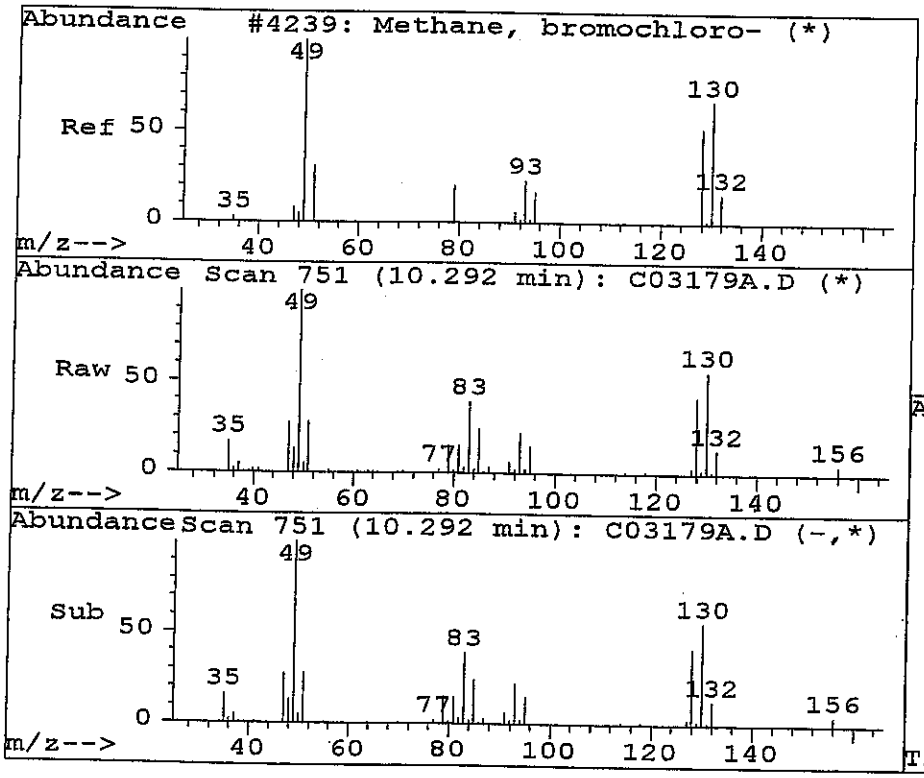


#27
Hexane
Concen: 0.15 ppbV
RT: 9.51 min Scan# 671
Delta R.T. -0.20 min
Lab File: C03179A.D
Acq: 17 Mar 109 8:47 am

Tgt Ion:57 Resp: 162303

Ion	Ratio	Lower	Upper
57	100		
43	94.2	68.5	102.7
41	571.6	474.9	712.3
86	12.0	9.0	13.4

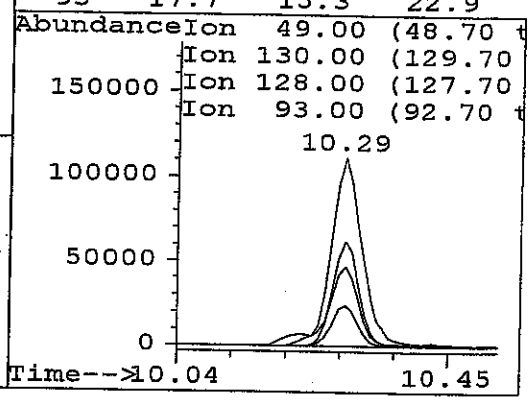


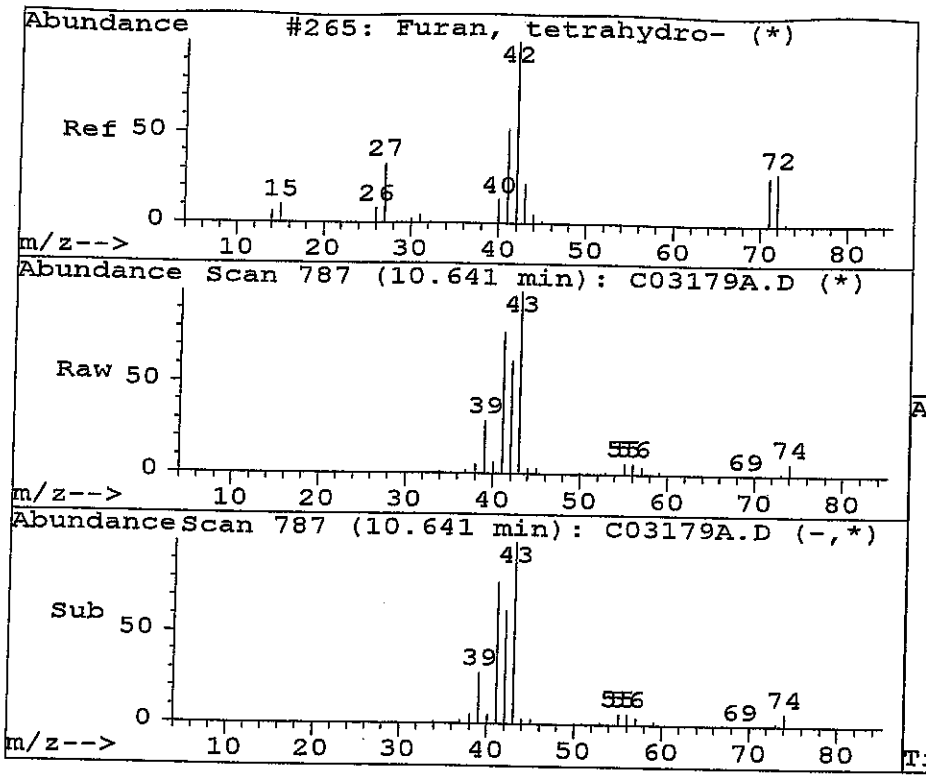


#28
Bromochloromethane
Concen: 0.23 ppbV
RT: 10.29 min Scan# 751
Delta R.T. -0.21 min
Lab File: C03179A.D
Acq: 17 Mar 109 8:47 am

Tgt Ion:49 Resp: 370225

Ion	Ratio	Lower	Upper
49	100		
130	45.6	37.9	56.9
128	39.4	32.6	48.8
93	17.7	15.3	22.9

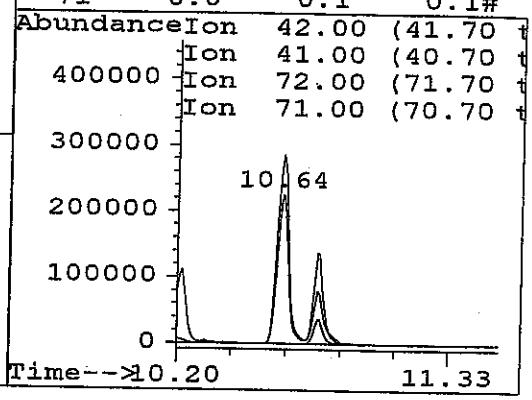


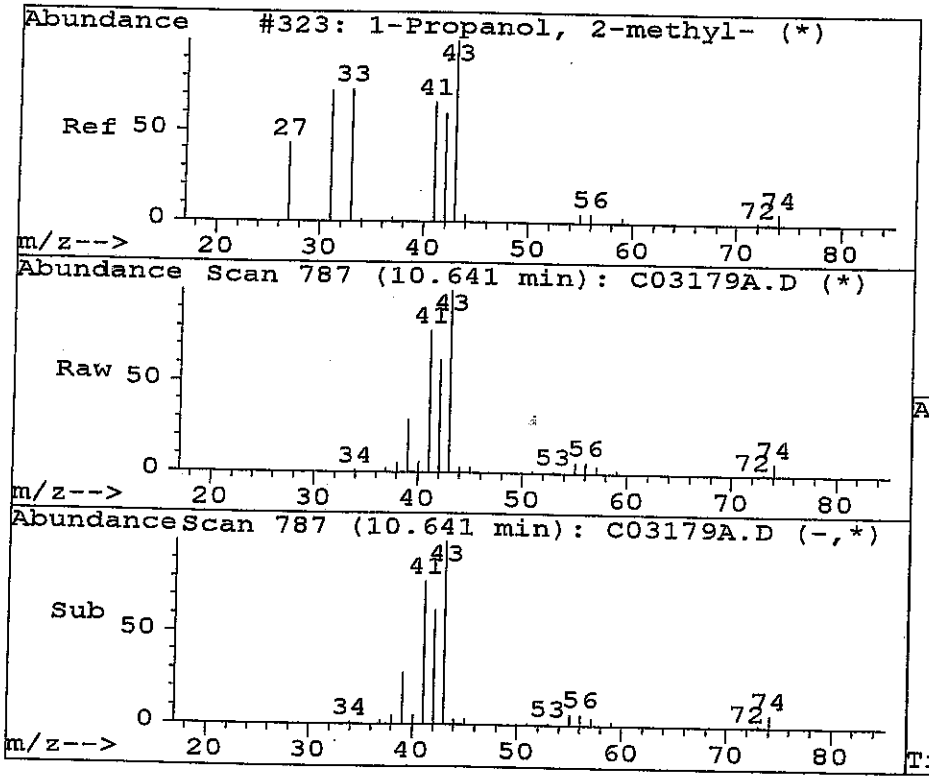


#29
Tetrahydrofuran
Concen: 0.56 ppbV m
RT: 10.64 min Scan# 787
Delta R.T. -0.28 min
Lab File: C03179A.D
Acq: 17 Mar 109 8:47 am

Tgt Ion:42 Resp: 1122494

Ion	Ratio	Lower	Upper
42	100		
41	126.6	104.6	157.0
72	0.5	0.2	0.4#
71	0.0	0.1	0.1#

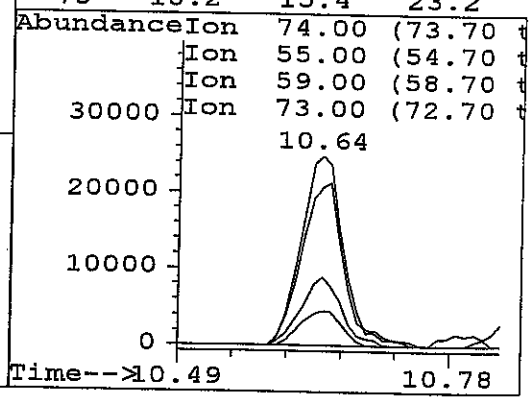


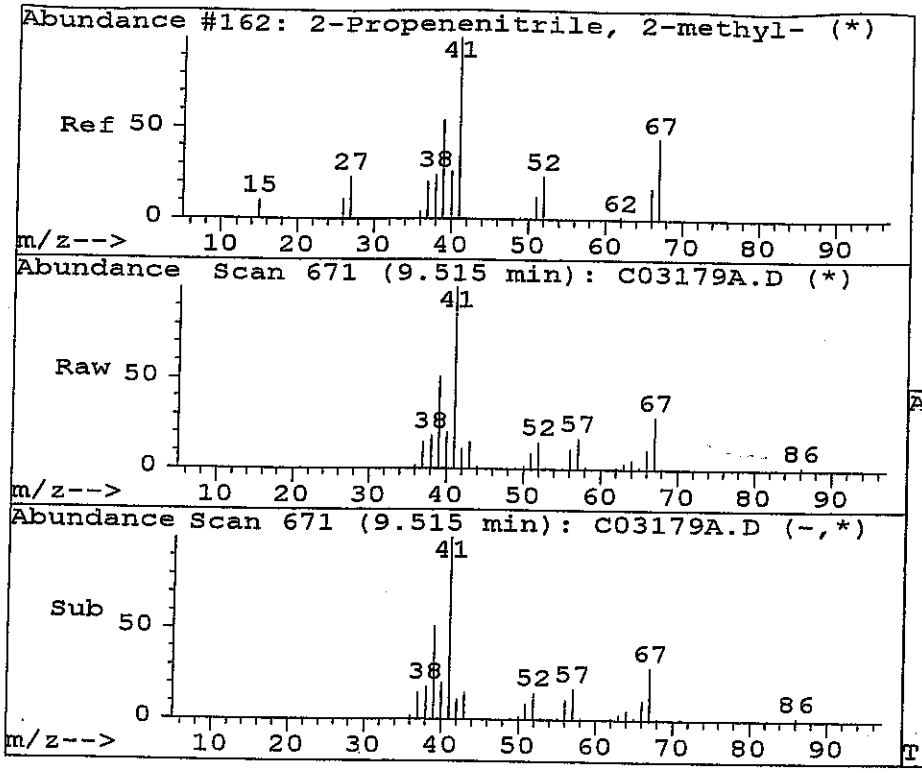


#30
Isobutyl alcohol
Concen: 0.60 ppbV
RT: 10.64 min Scan# 787
Delta R.T. -0.28 min
Lab File: C03179A.D
Acq: 17 Mar 109 8:47 am

Tgt Ion:74 Resp: 79891

Ion	Ratio	Lower	Upper
74	100		
55	83.2	68.6	103.0
59	35.8	28.7	43.1
73	18.2	15.4	23.2

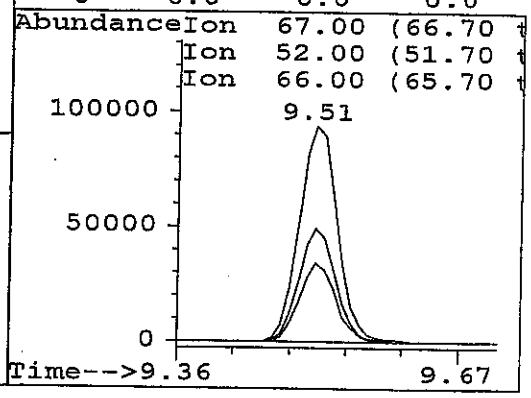


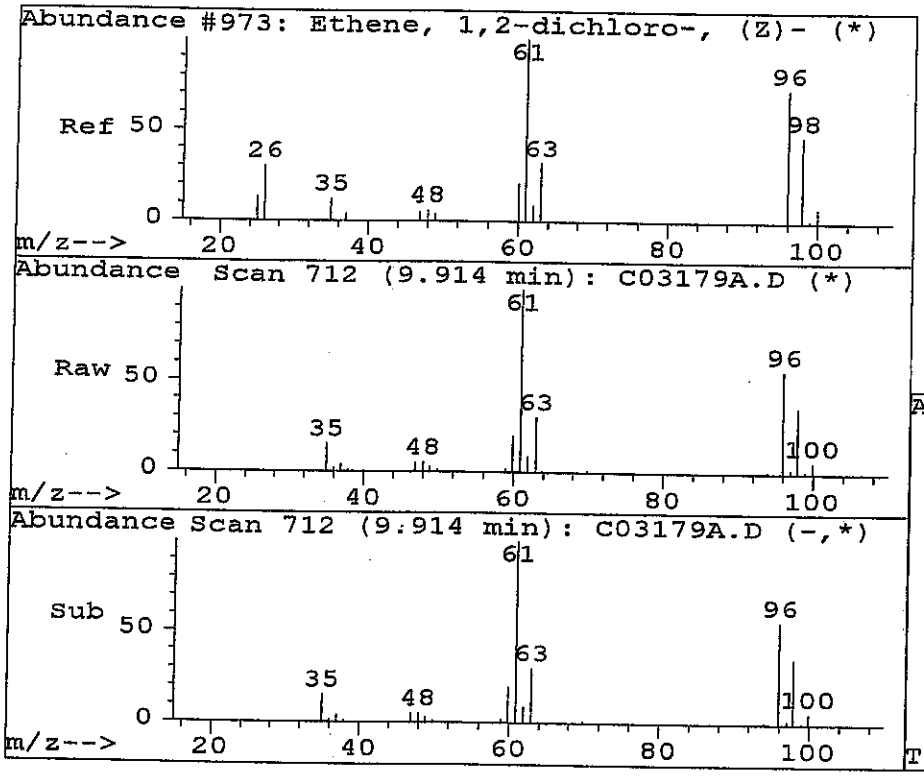


#31
Methacrylonitrile
Concen: 0.58 ppbV
RT: 9.51 min Scan# 671
Delta R.T. -0.23 min
Lab File: C03179A.D
Acq: 17 Mar 109 8:47 am

Tgt Ion:67 Resp: 274466

Ion	Ratio	Lower	Upper
67	100		
52	52.6	41.4	62.0
66	36.5	27.8	41.8
0	0.0	0.0	0.0

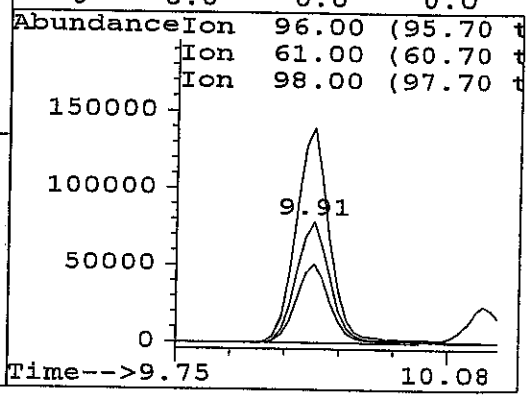


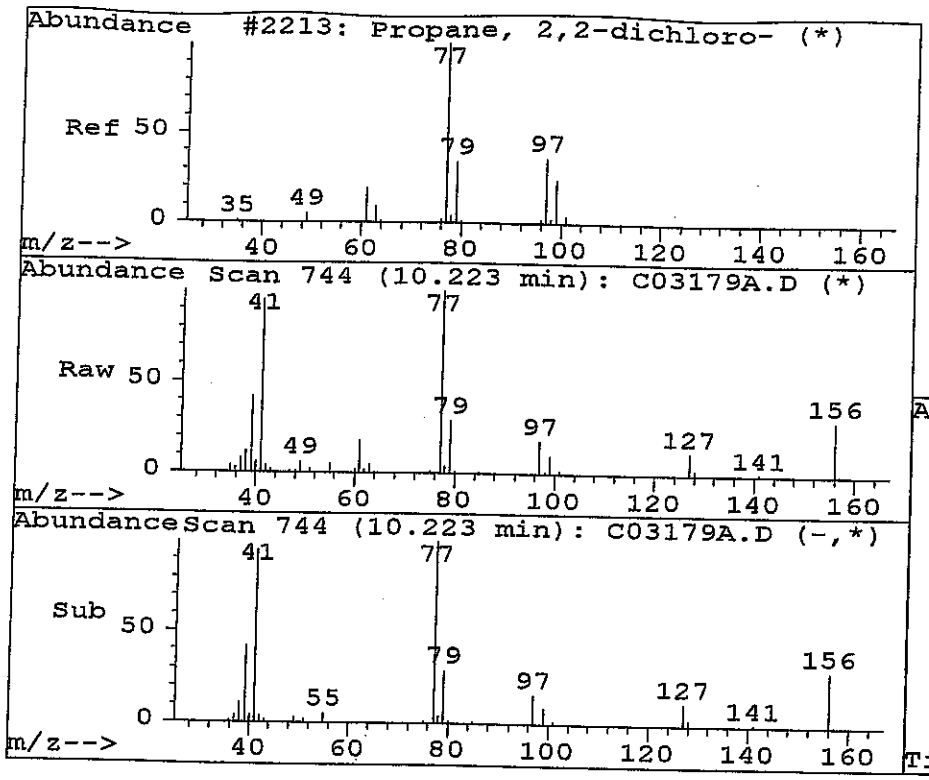


#32
cis-1,2-Dichloroethene
Concen: 0.28 ppbV
RT: 9.91 min Scan# 712
Delta R.T. -0.20 min
Lab File: C03179A.D
Acq: 17 Mar 109 8:47 am

Tgt Ion:96 Resp: 224404

Ion	Ratio	Lower	Upper
96	100		
61	177.6	145.9	218.9
98	64.7	51.3	76.9
0	0.0	0.0	0.0

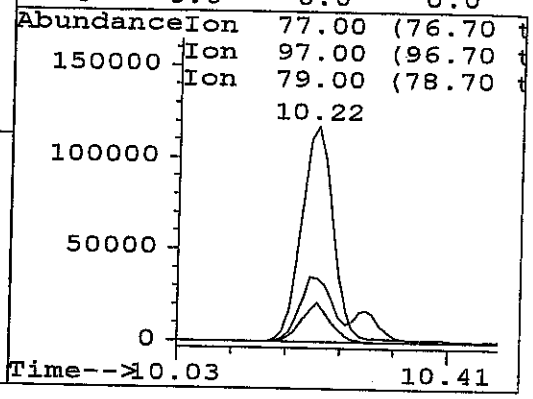


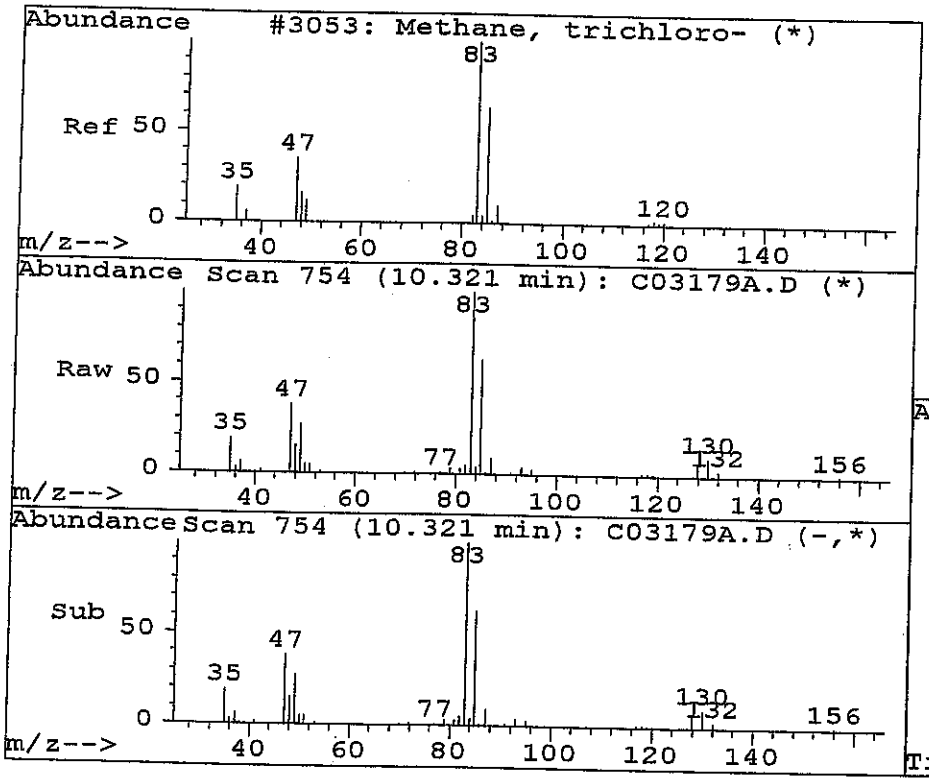


#33
2,2-Dichloropropane
Concen: 0.23 ppbV
RT: 10.22 min Scan# 744
Delta R.T. -0.20 min
Lab File: C03179A.D
Acq: 17 Mar 109 8:47 am

Tgt Ion:77 Resp: 359345

Ion	Ratio	Lower	Upper
77	100		
97	18.2	13.5	20.3
79	29.1	24.8	37.2
0	0.0	0.0	0.0

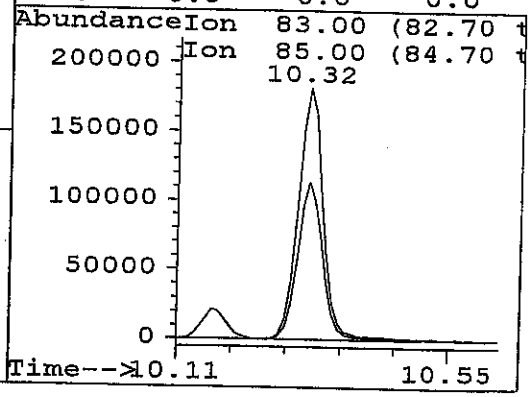


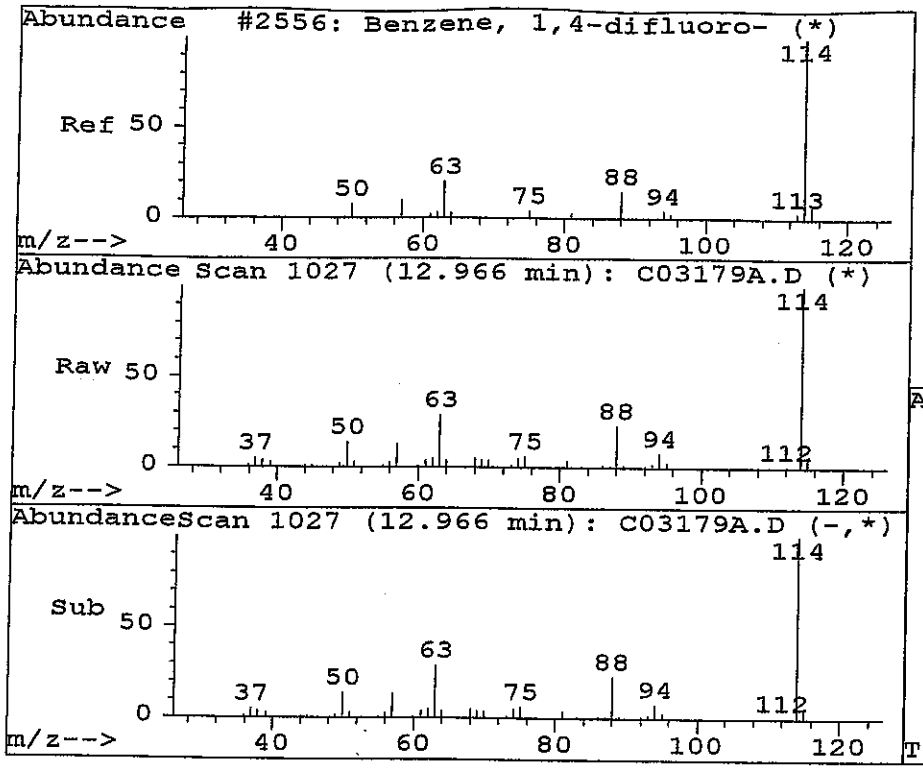


#34
Chloroform
Concen: 0.28 ppbV
RT: 10.32 min Scan# 754
Delta R.T. -0.21 min
Lab File: C03179A.D
Acq: 17 Mar 109 8:47 am

Tgt Ion:83 Resp: 516969

Ion	Ratio	Lower	Upper
83	100		
85	62.8	51.5	77.3
0	0.0	0.0	0.0
0	0.0	0.0	0.0

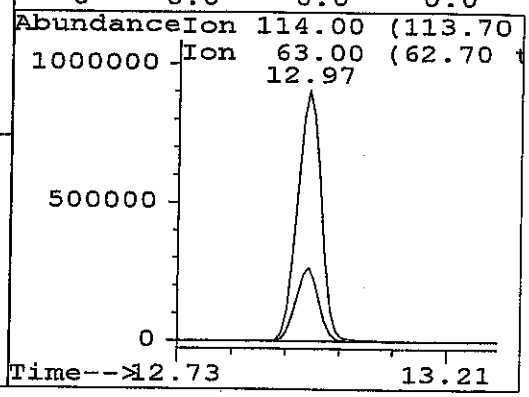


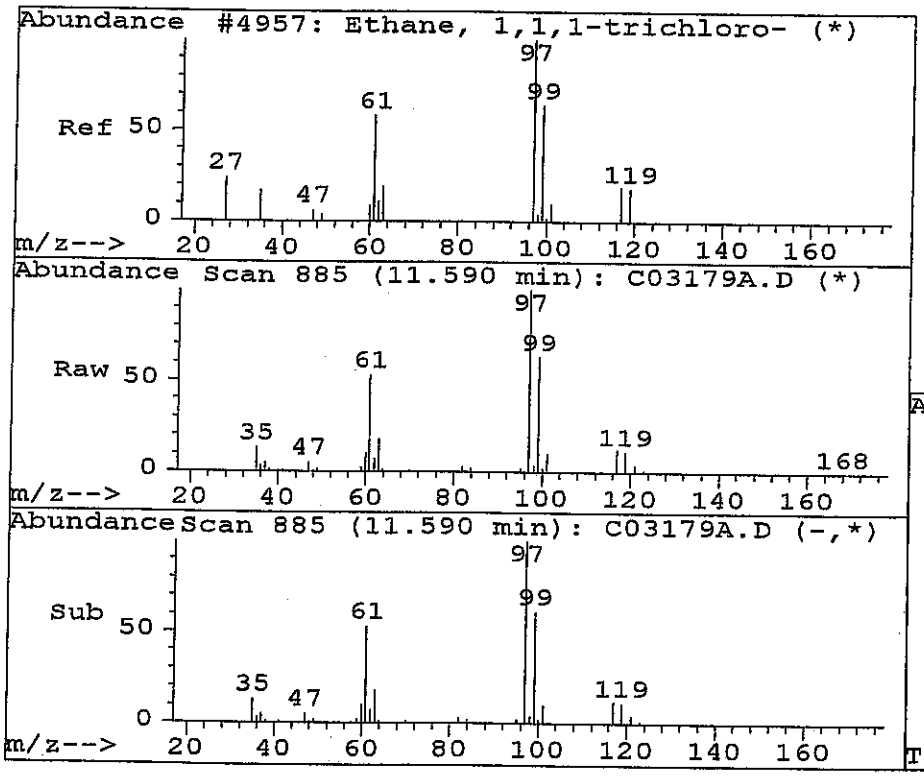


#35
1,4-Difluorobenzene
Concen: 20.00 ppbV
RT: 12.97 min Scan# 1027
Delta R.T. -0.20 min
Lab File: C03179A.D
Acq: 17 Mar 109 8:47 am

Tgt Ion:114 Resp: 2720455

Ion	Ratio	Lower	Upper
114	100		
63	29.4	22.0	36.6
0	0.0	0.0	0.0
0	0.0	0.0	0.0

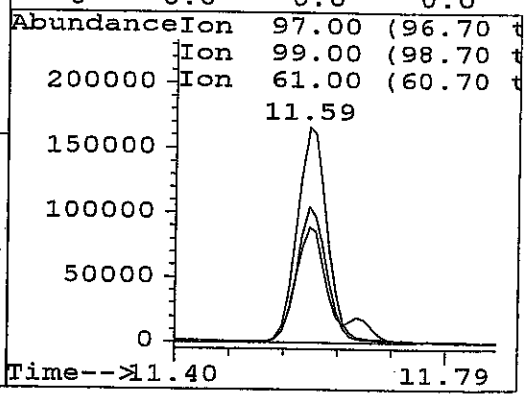


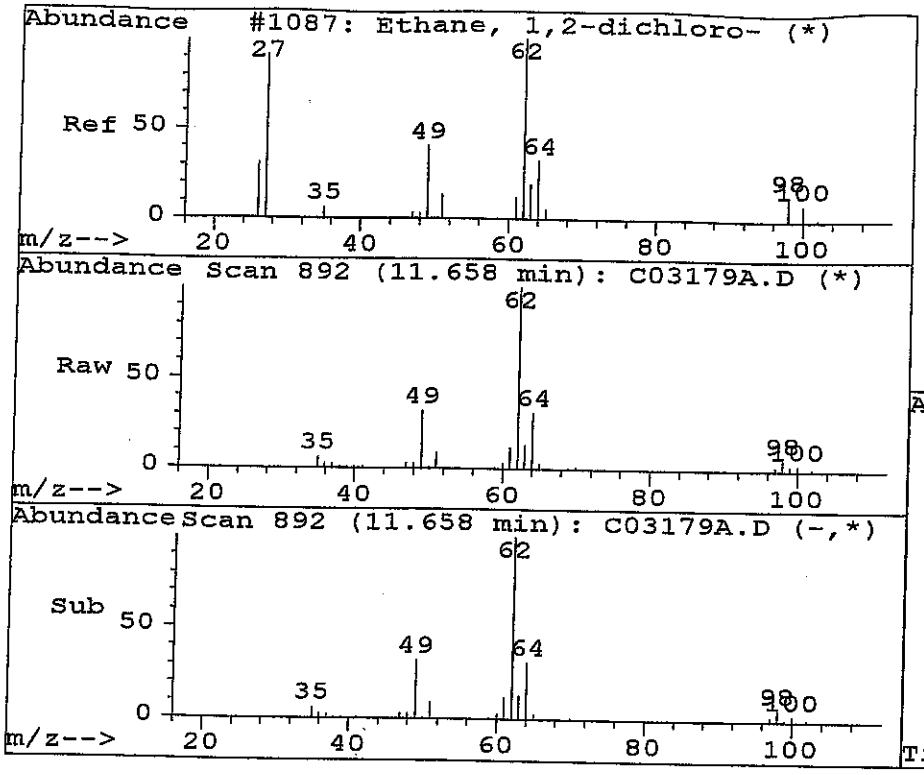


#36
1,1,1-Trichloroethane
Concen: 0.12 ppbV
RT: 11.59 min Scan# 885
Delta R.T. -0.21 min
Lab File: C03179A.D
Acq: 17 Mar 109 8:47 am

Tgt Ion:97 Resp: 509527

Ion	Ratio	Lower	Upper
97	100		
99	62.7	52.0	78.0
61	53.2	43.0	64.6
0	0.0	0.0	0.0

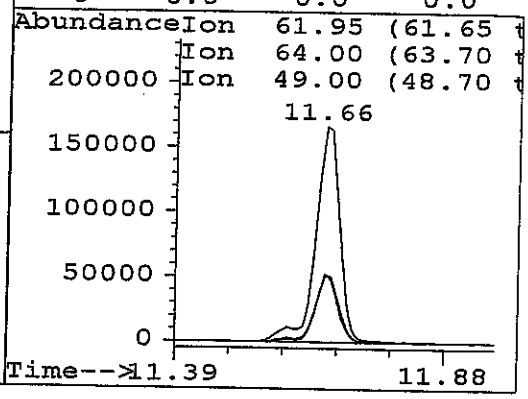


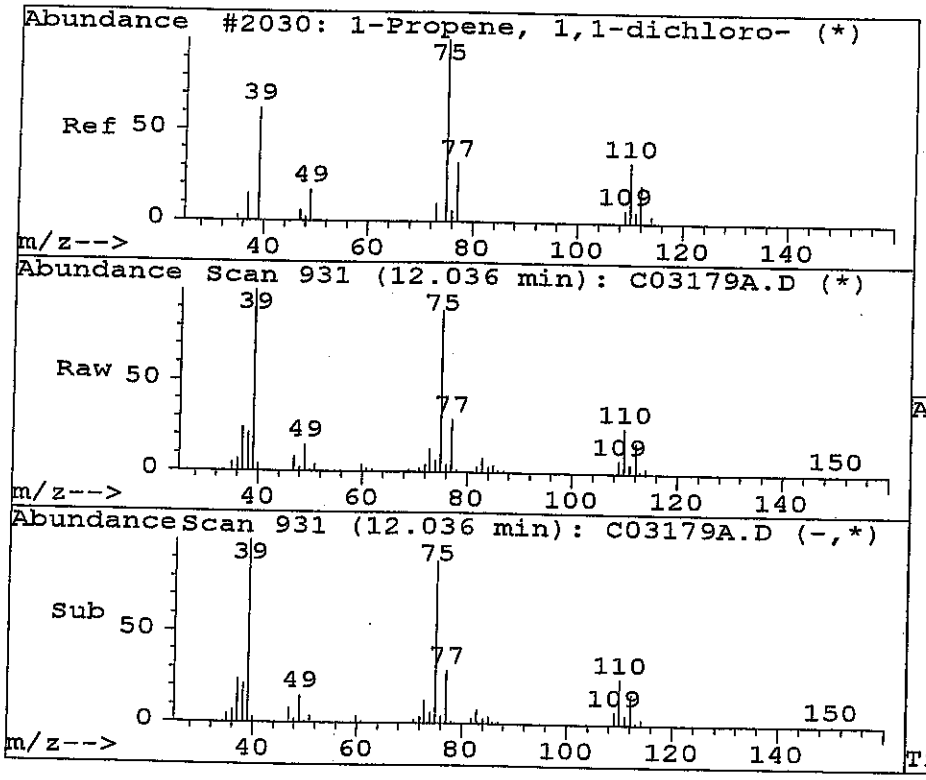


#37
1,2-Dichloroethane
Concen: 0.13 ppbV
RT: 11.66 min Scan# 892
Delta R.T. -0.21 min
Lab File: C03179A.D
Acq: 17 Mar 109 8:47 am

Tgt Ion:61.95 Resp: 49576

Ion	Ratio	Lower	Upper
62	100		
64	30.9	24.8	37.2
49	31.7	23.9	35.9
0	0.0	0.0	0.0

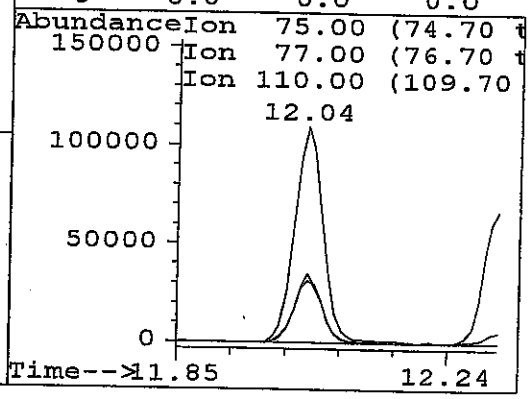


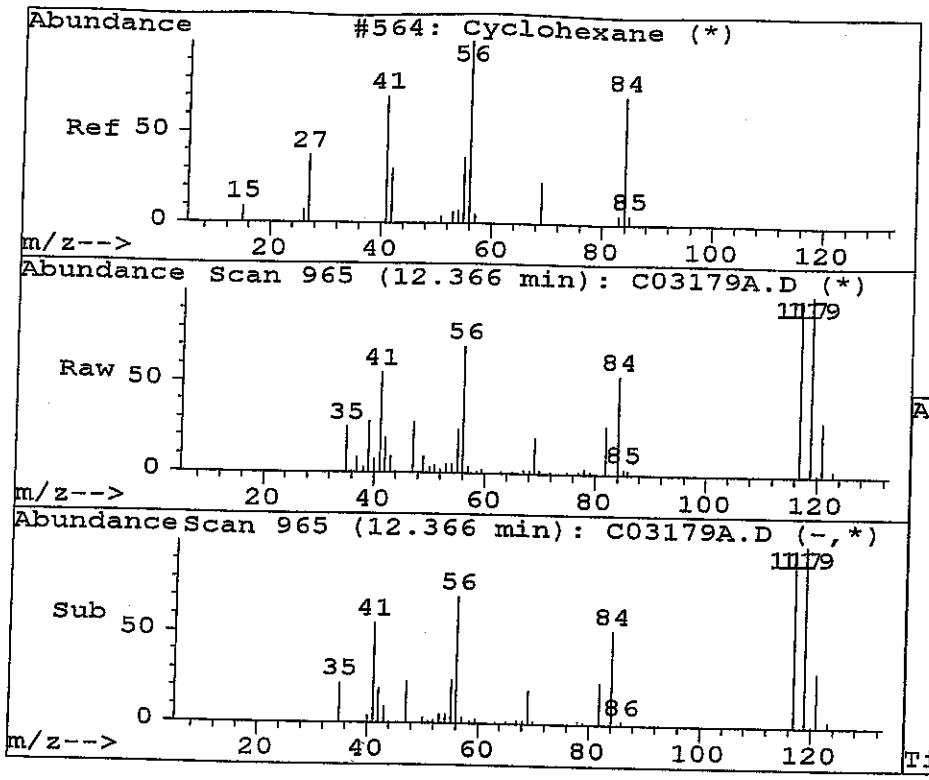


#38
1,1-Dichloropropene
Concen: 0.11 ppbV
RT: 12.04 min Scan# 931
Delta R.T. -0.20 min
Lab File: C03179A.D
Acq: 17 Mar 109 8:47 am

Tgt Ion:75 Resp: 310573

Ion	Ratio	Lower	Upper
75	100		
77	32.1	23.2	34.8
110	28.5	22.2	33.4
0	0.0	0.0	0.0

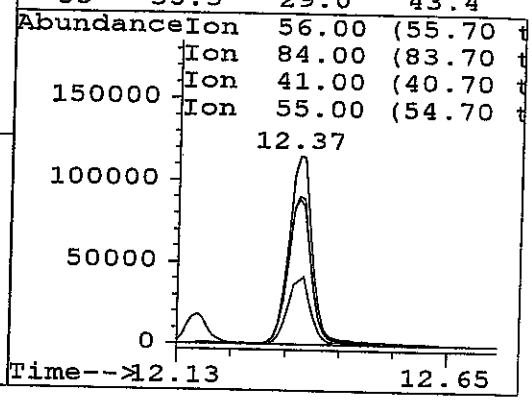


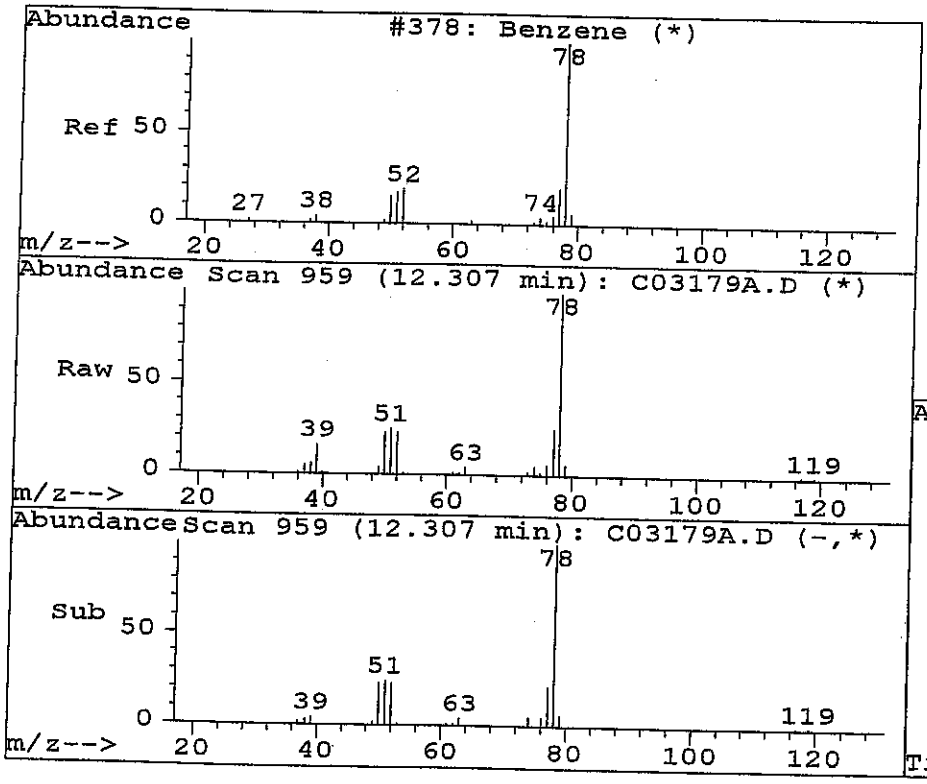


#39
Cyclohexane
Concen: 0.12 ppbV
RT: 12.37 min Scan# 965
Delta R.T. -0.18 min
Lab File: C03179A.D
Acq: 17 Mar 109 8:47 am

Tgt Ion:56 Resp: 373616

Ion	Ratio	Lower	Upper
56	100		
84	77.8	62.2	93.2
41	77.5	64.2	96.2
55	35.3	29.0	43.4

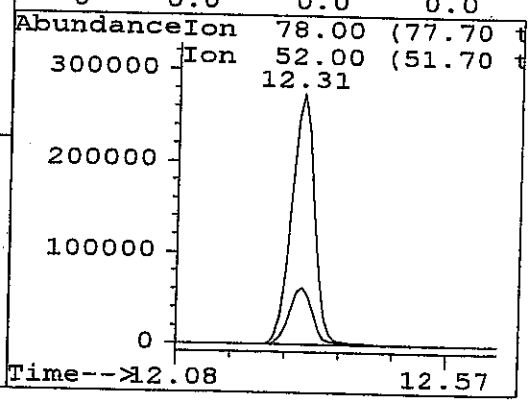


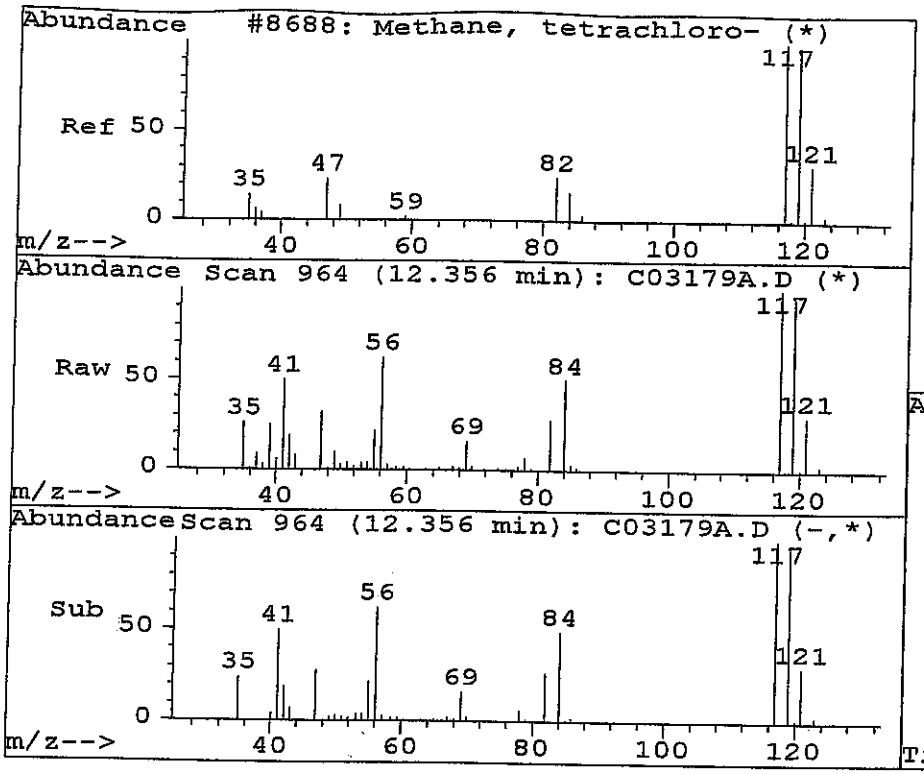


#40
Benzene
Concen: 0.13 ppbV
RT: 12.31 min Scan# 959
Delta R.T. -0.20 min
Lab File: C03179A.D
Acq: 17 Mar 109 8:47 am

Tgt Ion:78 Resp: 782160

Ion	Ratio	Lower	Upper
78	100		
52	22.6	18.3	27.5
0	0.0	0.0	0.0
0	0.0	0.0	0.0

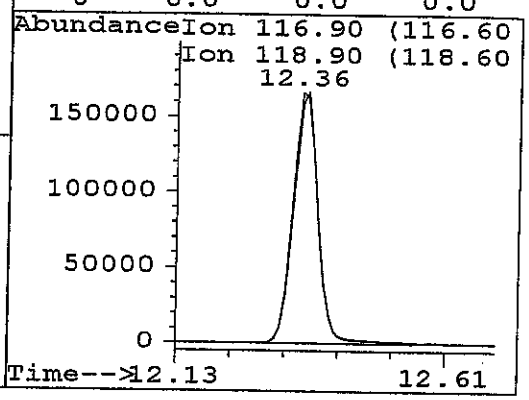


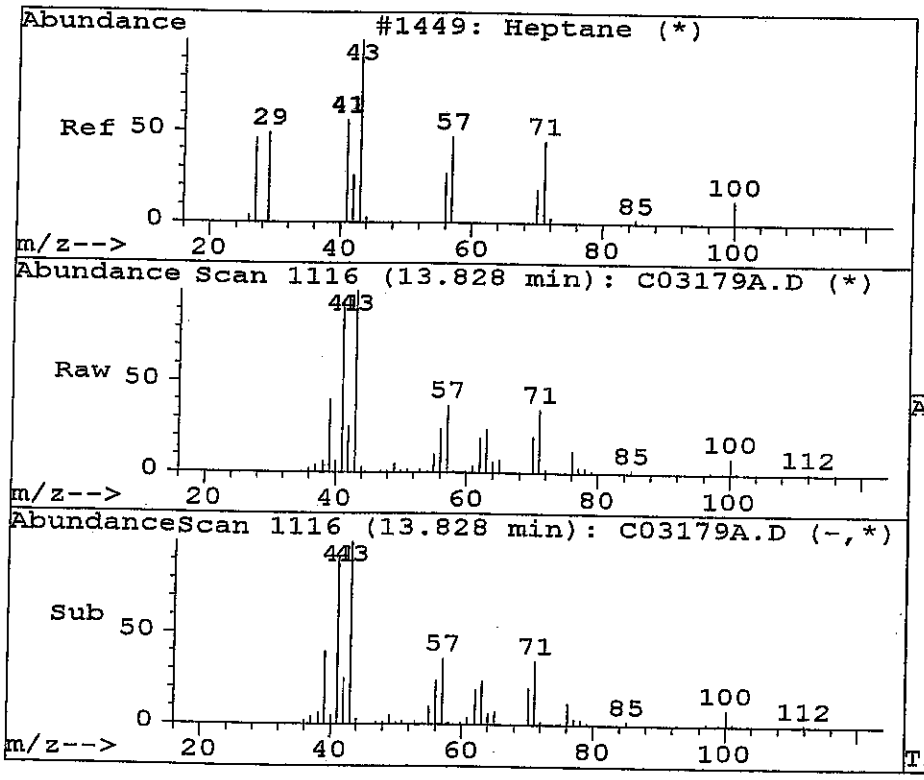


#41
Carbon tetrachloride
Concen: 0.12 ppbV
RT: 12.36 min Scan# 964
Delta R.T. -0.20 min
Lab File: C03179A.D
Acq: 17 Mar 109 8:47 am

Tgt Ion:116.9 Resp: 518753

Ion	Ratio	Lower	Upper
117	100		
119	95.7	80.0	120.0
0	0.0	0.0	0.0
0	0.0	0.0	0.0

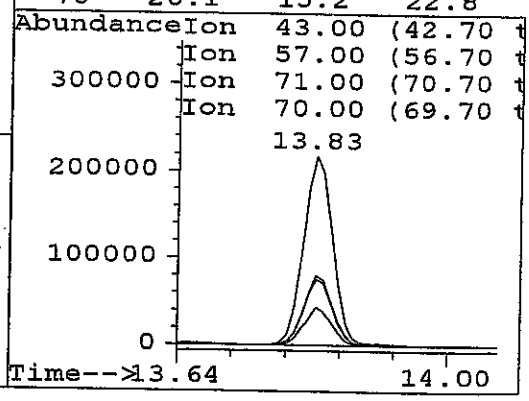


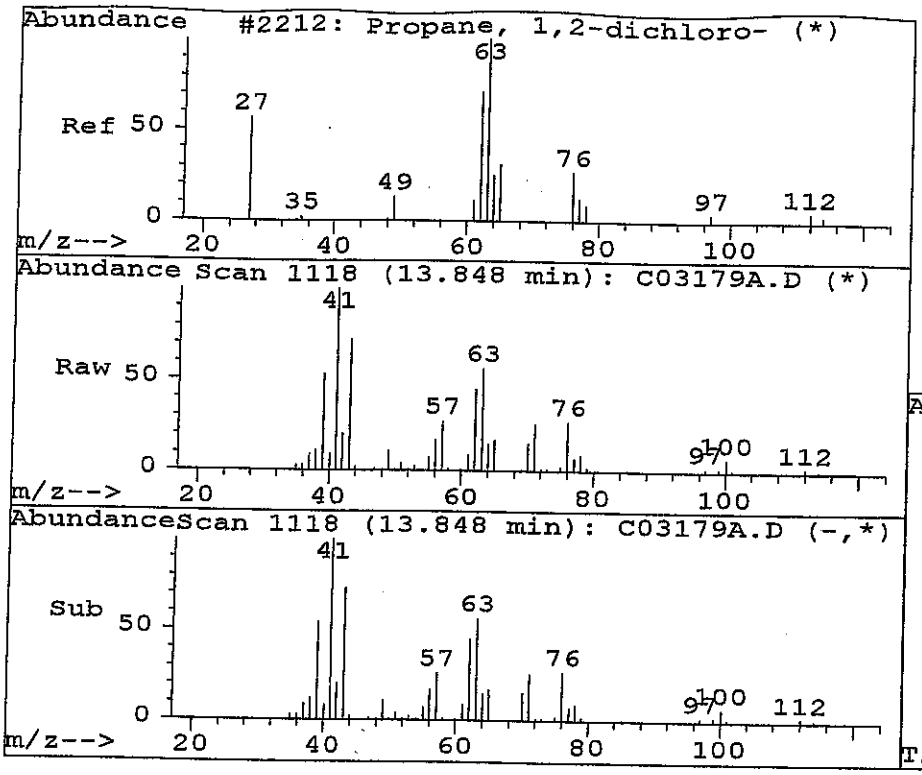


#42
n-Heptane
Concen: 0.11 ppbV
RT: 13.83 min Scan# 1116
Delta R.T. -0.21 min
Lab File: C03179A.D
Acq: 17 Mar 109 8:47 am

Tgt Ion:43 Resp: 586493

Ion	Ratio	Lower	Upper
43	100		
57	36.8	27.0	40.6
71	34.8	25.7	38.5
70	20.1	15.2	22.8

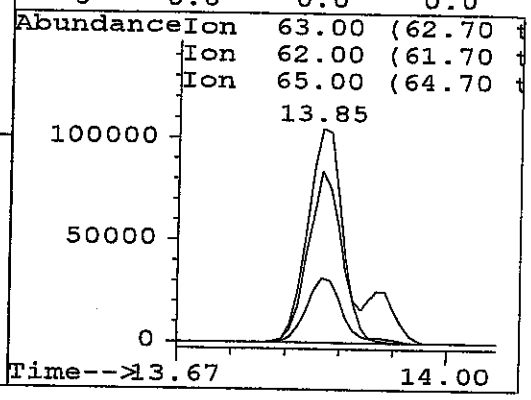


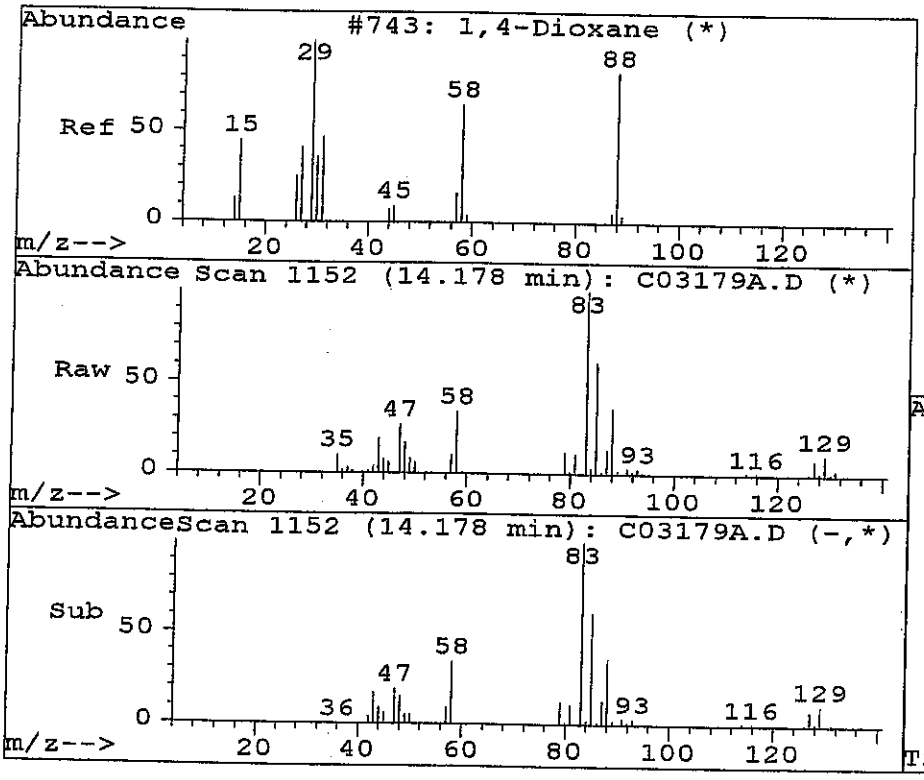


#43
1,2-Dichloropropane
Concen: 0.12 ppbV
RT: 13.85 min Scan# 1118
Delta R.T. -0.22 min
Lab File: C03179A.D
Acq: 17 Mar 109 8:47 am

Tgt Ion:63 Resp: 305497

Ion	Ratio	Lower	Upper
63	100		
62	79.4	56.6	84.8
65	30.1	24.2	36.4
0	0.0	0.0	0.0

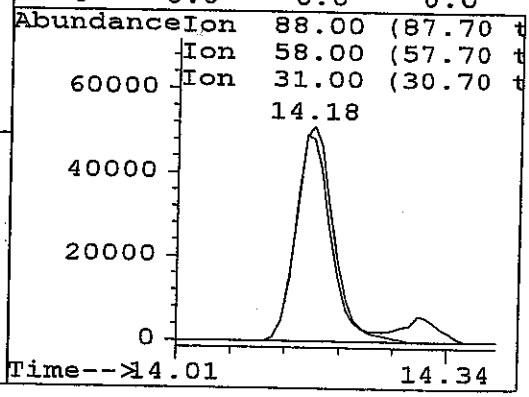


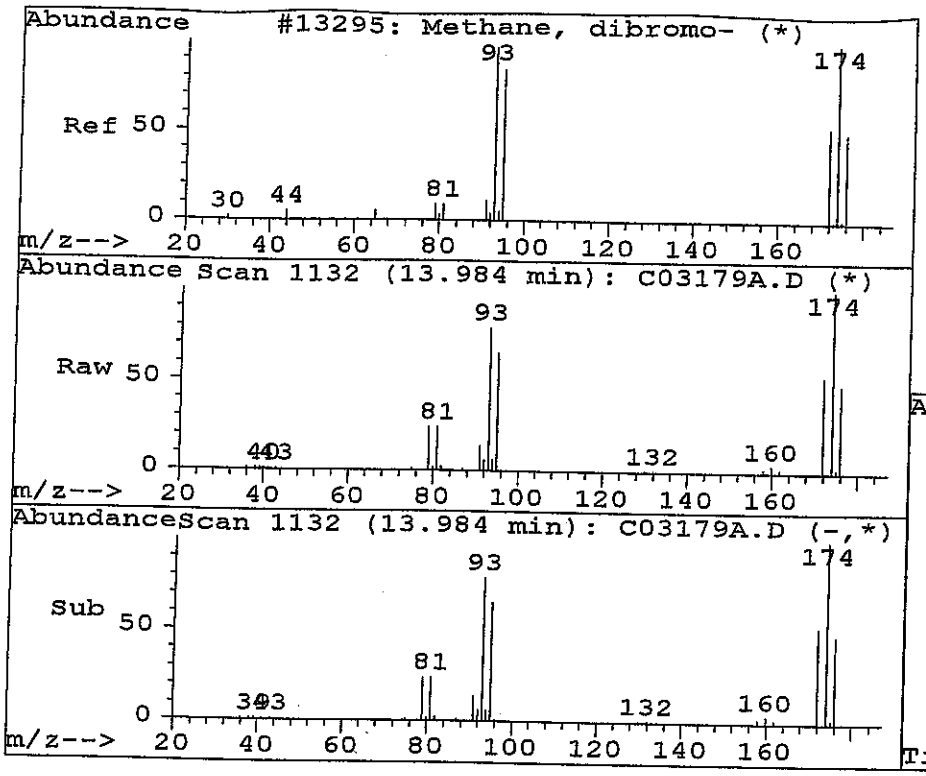


#44
1,4 Dioxane
Concen: 0.11 ppbV
RT: 14.18 min Scan# 1152
Delta R.T. -0.22 min
Lab File: C03179A.D
Acq: 17 Mar 109 8:47 am

Tgt Ion:88 Resp: 161310

Ion	Ratio	Lower	Upper
88	100		
58	91.4	76.5	114.7
31	0.0	0.0	0.0
0	0.0	0.0	0.0

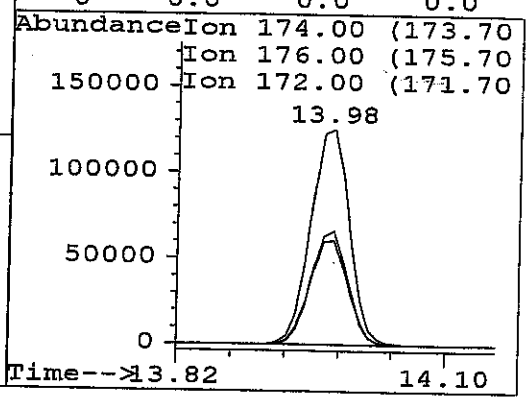


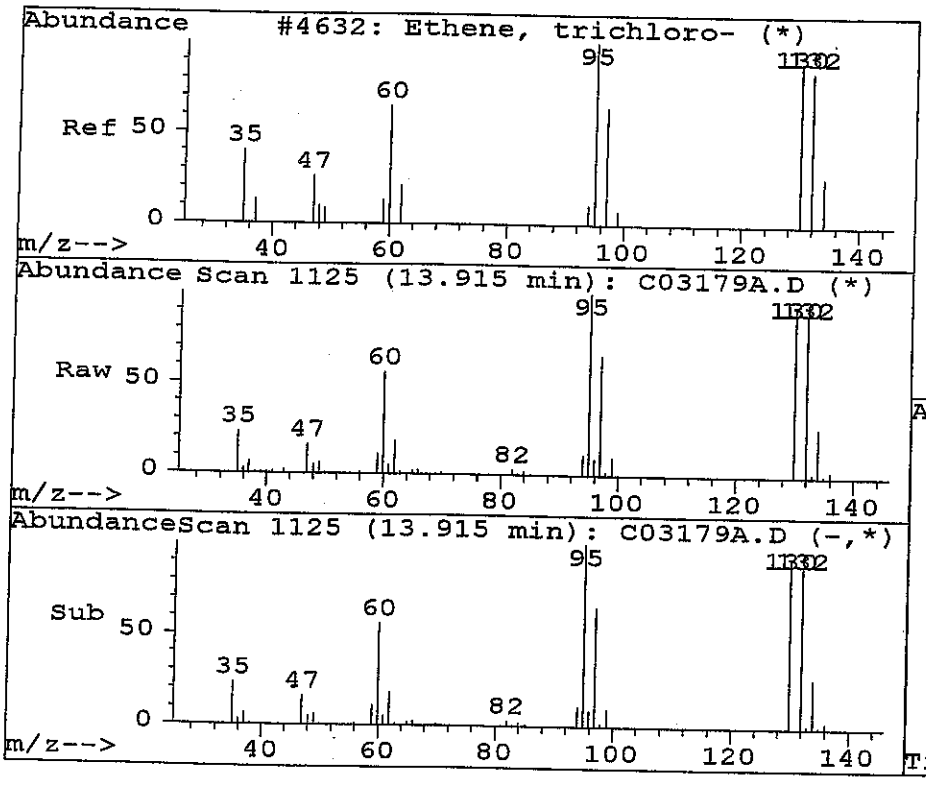


#45
Dibromomethane
Concen: 0.10 ppbV
RT: 13.98 min Scan# 1132
Delta R.T. -0.22 min
Lab File: C03179A.D
Acq: 17 Mar 109 8:47 am

Tgt Ion:174 Resp: 358053

Ion	Ratio	Lower	Upper
174	100		
176	48.3	39.3	58.9
172	52.8	40.4	60.6
0	0.0	0.0	0.0

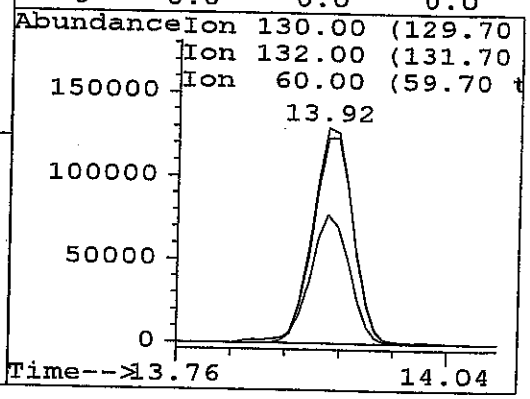


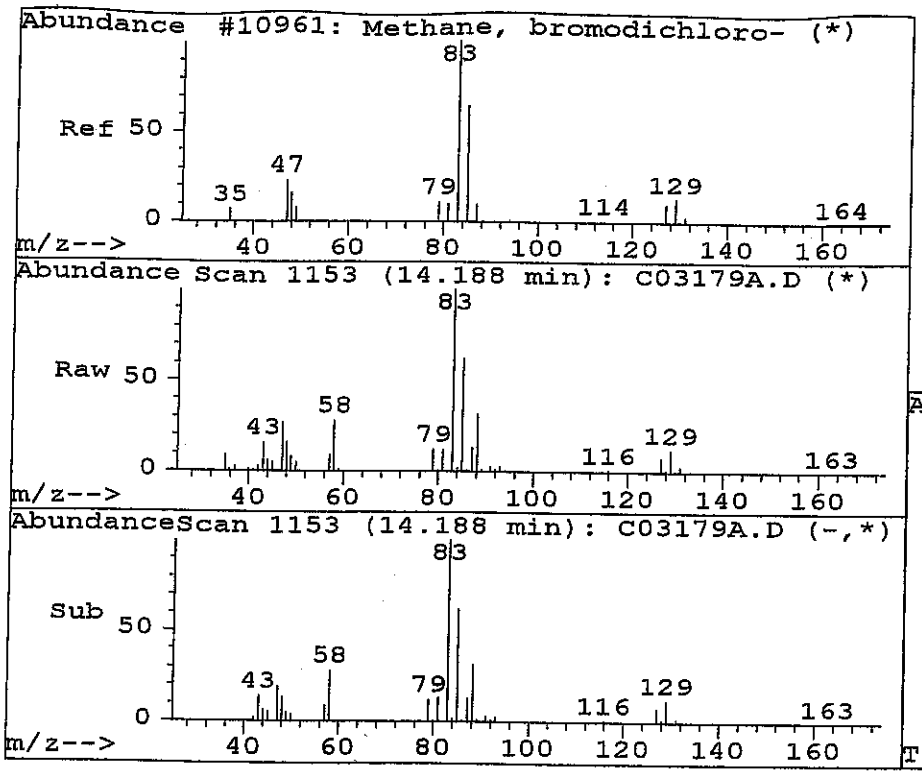


#46
Trichloroethene
Concen: 0.12 ppbV
RT: 13.92 min Scan# 1125
Delta R.T. -0.21 min
Lab File: C03179A.D
Acq: 17 Mar 109 8:47 am

Tgt Ion:130 Resp: 364698

Ion	Ratio	Lower	Upper
130	100		
132	95.2	75.0	112.4
60	59.4	47.4	71.0
0	0.0	0.0	0.0

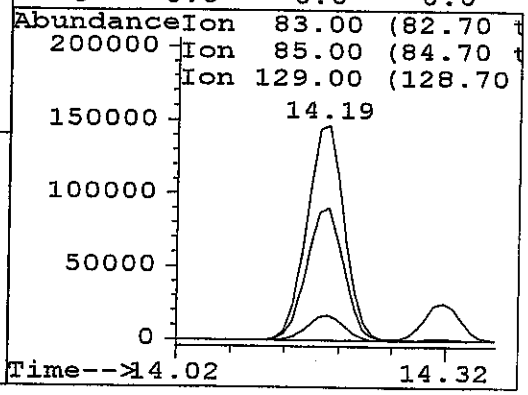


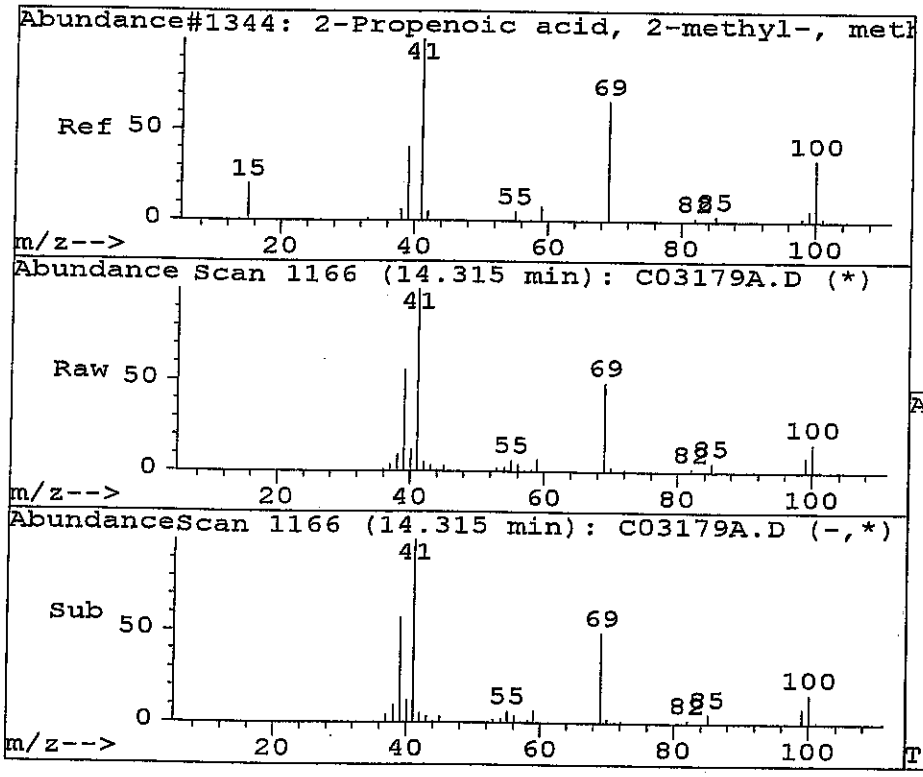


#47
Bromodichloromethane
Concen: 0.10 ppbV
RT: 14.19 min Scan# 1153
Delta R.T. -0.21 min
Lab File: C03179A.D
Acq: 17 Mar 109 8:47 am

Tgt Ion:83 Resp: 417248

Ion	Ratio	Lower	Upper
83	100		
85	58.9	50.4	75.6
129	11.6	9.4	14.2
0	0.0	0.0	0.0

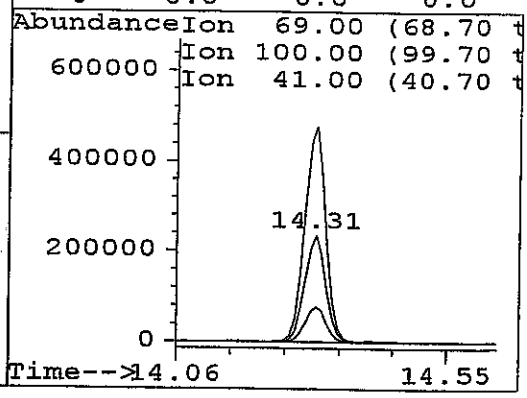


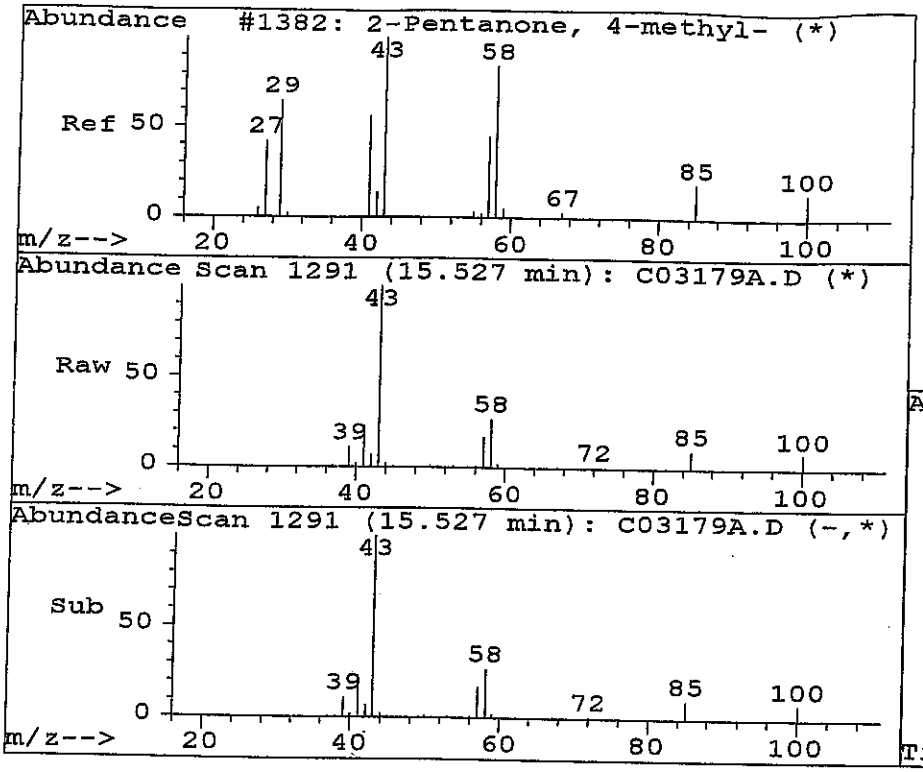


#48
Methyl methacrylate
Concen: 0.28 ppbV
RT: 14.31 min Scan# 1166
Delta R.T. -0.24 min
Lab File: C03179A.D
Acq: 17 Mar 109 8:47 am

Tgt Ion:69 Resp: 637368

Ion	Ratio	Lower	Upper
69	100		
100	32.6	25.7	38.5
41	202.9	169.2	253.8
0	0.0	0.0	0.0

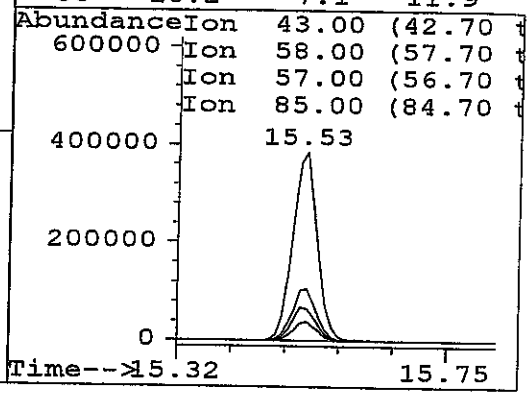


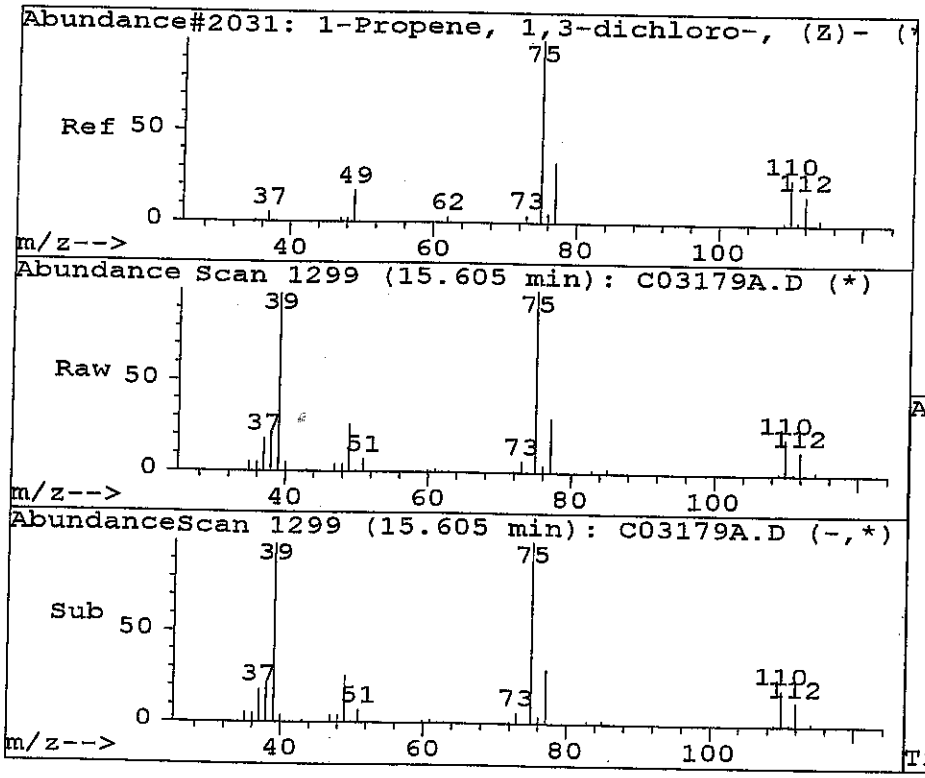


#49
Methyl Isobutyl Ketone
Concen: 0.11 ppbV
RT: 15.53 min Scan# 1291
Delta R.T. -0.17 min
Lab File: C03179A.D
Acq: 17 Mar 109 8:47 am

Tgt Ion:43 Resp: 1039898

Ion	Ratio	Lower	Upper
43	100		
58	27.4	20.0	33.3
57	16.9	13.0	21.6
85	10.2	7.1	11.9

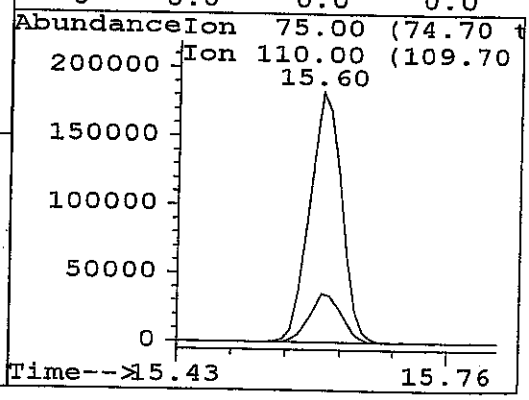


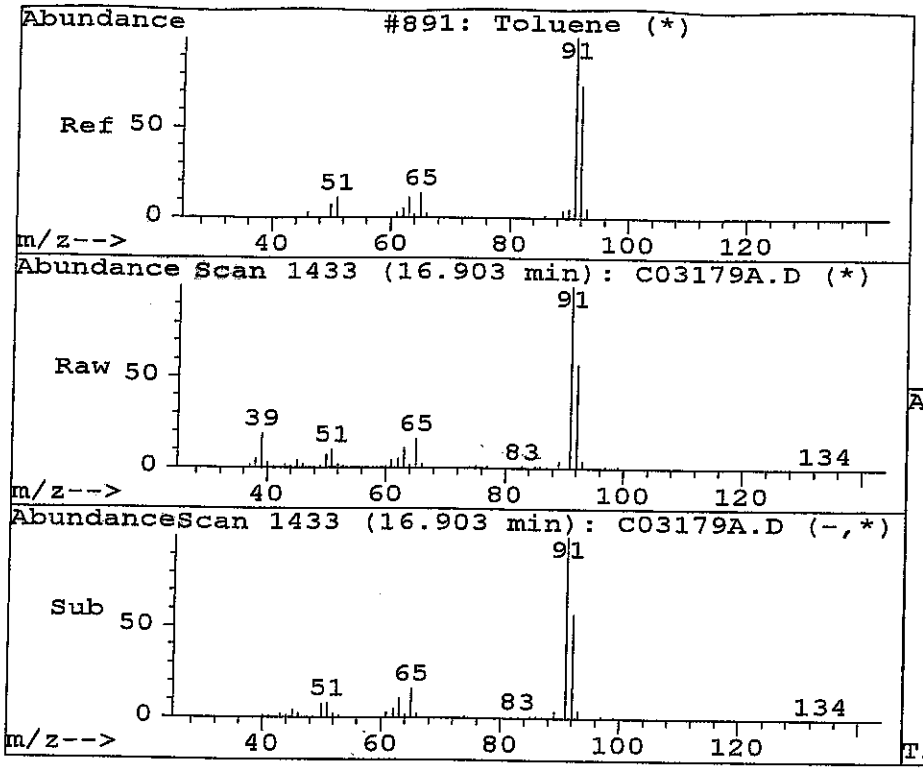


#50
cis-1,3-Dichloropropene
Concen: 0.12 ppbV
RT: 15.60 min Scan# 1299
Delta R.T. -0.22 min
Lab File: C03179A.D
Acq: 17 Mar 109 8:47 am

Tgt Ion:75 Resp: 492454

Ion	Ratio	Lower	Upper
75	100		
110	19.5	15.1	22.7
0	0.0	0.0	0.0
0	0.0	0.0	0.0

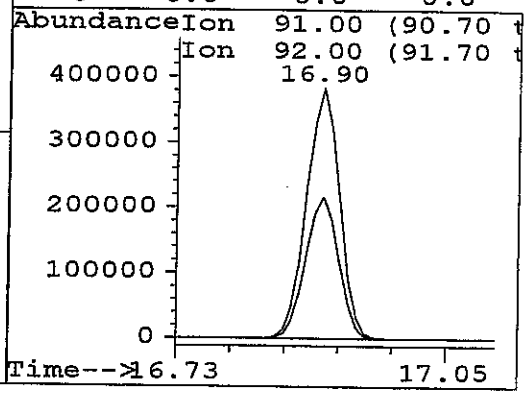


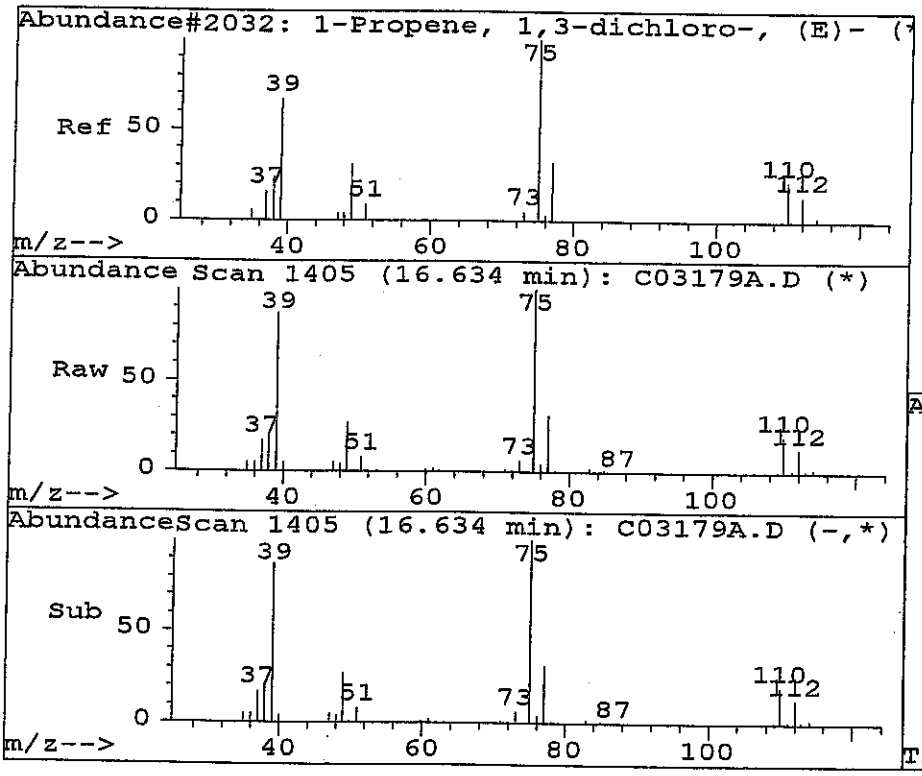


#51
Toluene
Concen: 0.13 ppbV
RT: 16.90 min Scan# 1433
Delta R.T. -0.21 min
Lab File: C03179A.D
Acq: 17 Mar 109 8:47 am

Tgt Ion:91 Resp: 1033029

Ion	Ratio	Lower	Upper
91	100		
92	56.6	44.3	66.5
0	0.0	0.0	0.0
0	0.0	0.0	0.0

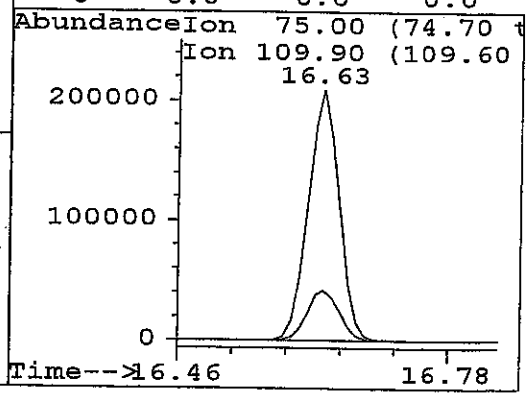


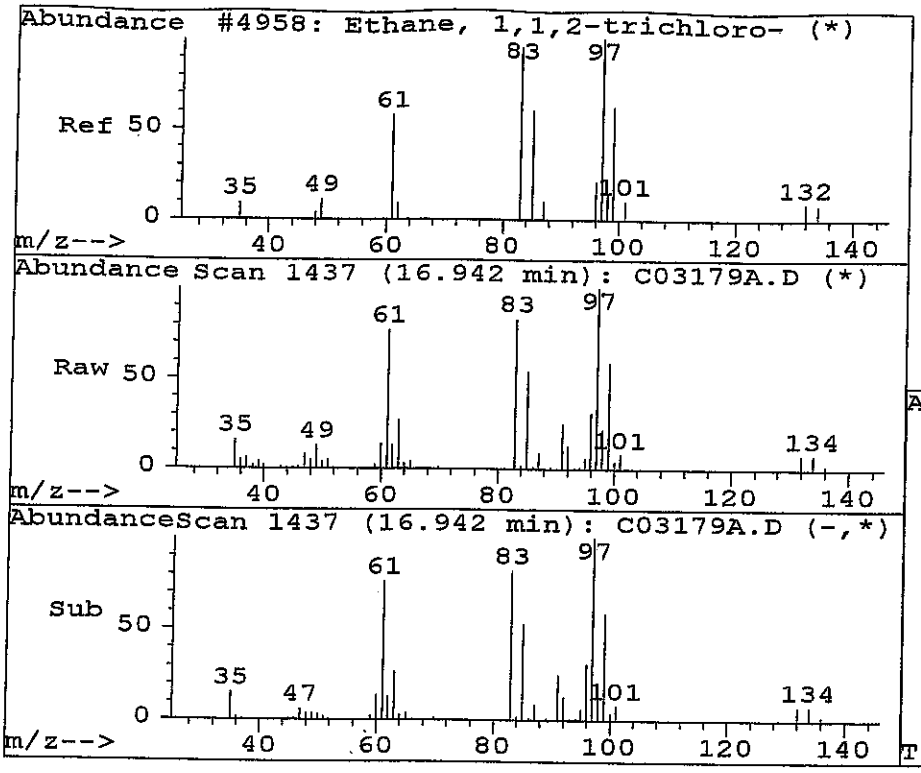


#52
trans-1,3-Dichloropropene
Concen: 0.12 ppbV
RT: 16.63 min Scan# 1405
Delta R.T. -0.22 min
Lab File: C03179A.D
Acq: 17 Mar 109 8:47 am

Tgt Ion:75 Resp: 538174

Ion	Ratio	Lower	Upper
75	100		
110	19.9	17.2	25.8
0	0.0	0.0	0.0
0	0.0	0.0	0.0

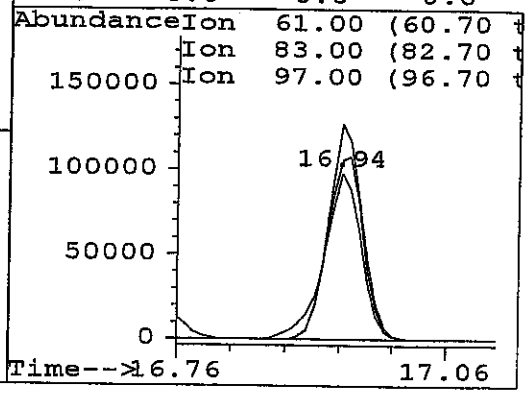


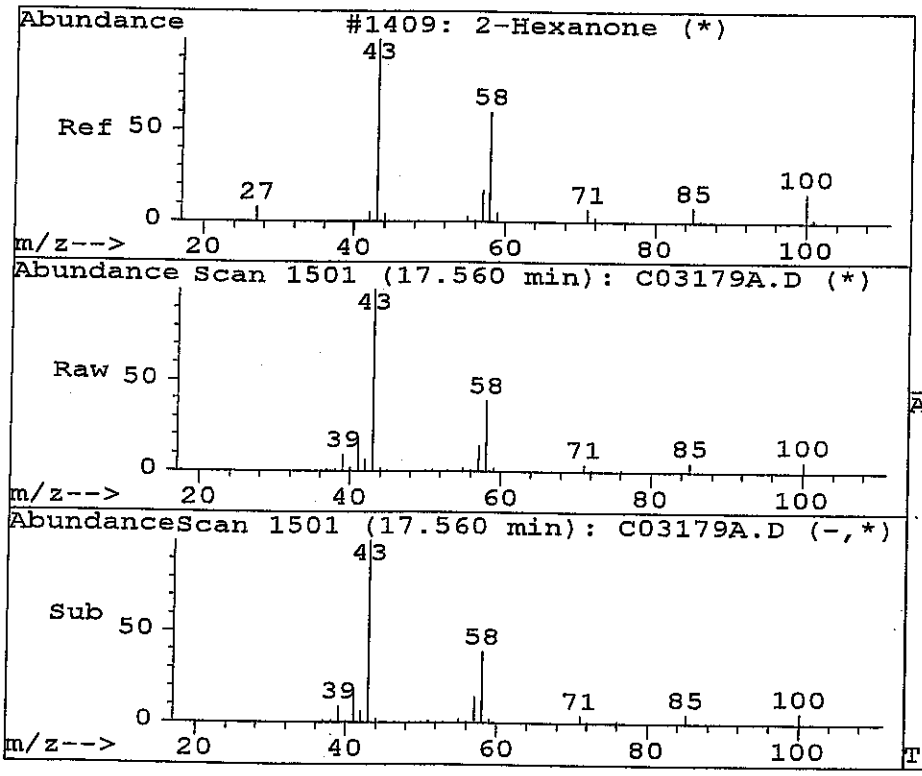


#53
1,1,2-Trichloroethane
Concen: 0.12 ppbV
RT: 16.94 min Scan# 1437
Delta R.T. -0.22 min
Lab File: C03179A.D
Acq: 17 Mar 109 8:47 am

Tgt Ion:61 Resp: 281046

Ion	Ratio	Lower	Upper
61	100		
83	107.9	90.4	135.6
97	129.8	99.1	148.7
0	0.0	0.0	0.0

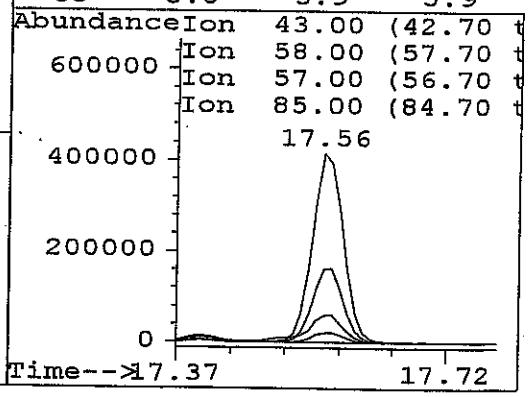


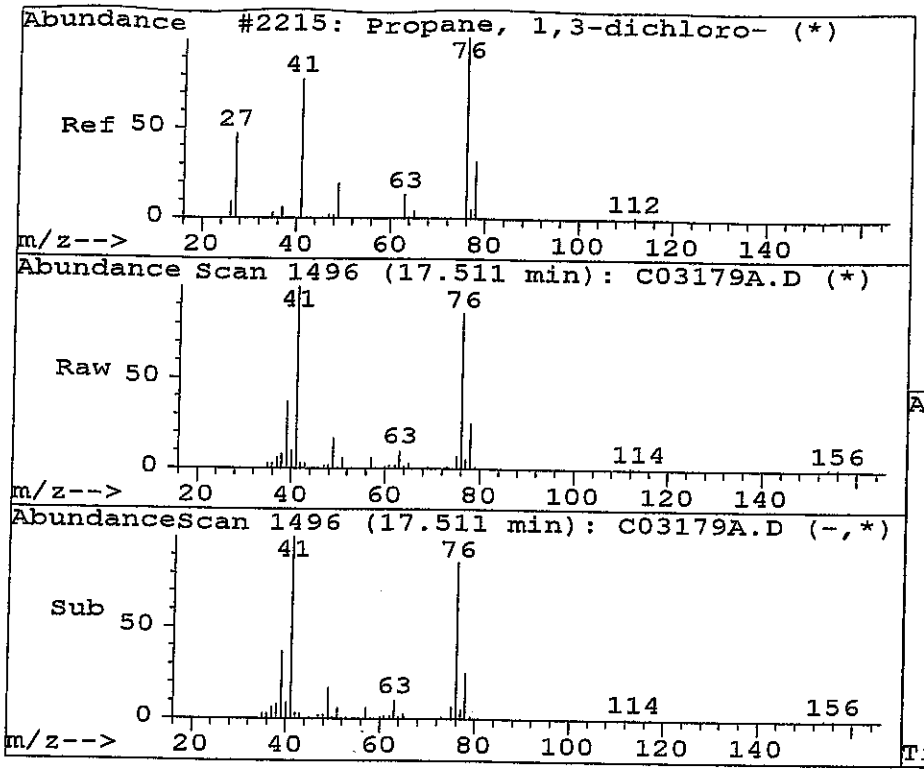


#54
2-Hexanone
Concen: 0.10 ppbV
RT: 17.56 min Scan# 1501
Delta R.T. -0.24 min
Lab File: C03179A.D
Acq: 17 Mar 109 8:47 am

Tgt Ion:43 Resp: 1112452

Ion	Ratio	Lower	Upper
43	100		
58	38.5	28.7	47.8
57	13.8	9.7	16.1
85	5.0	3.9	5.9

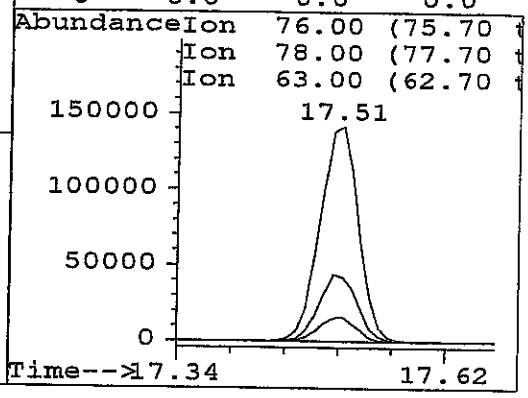


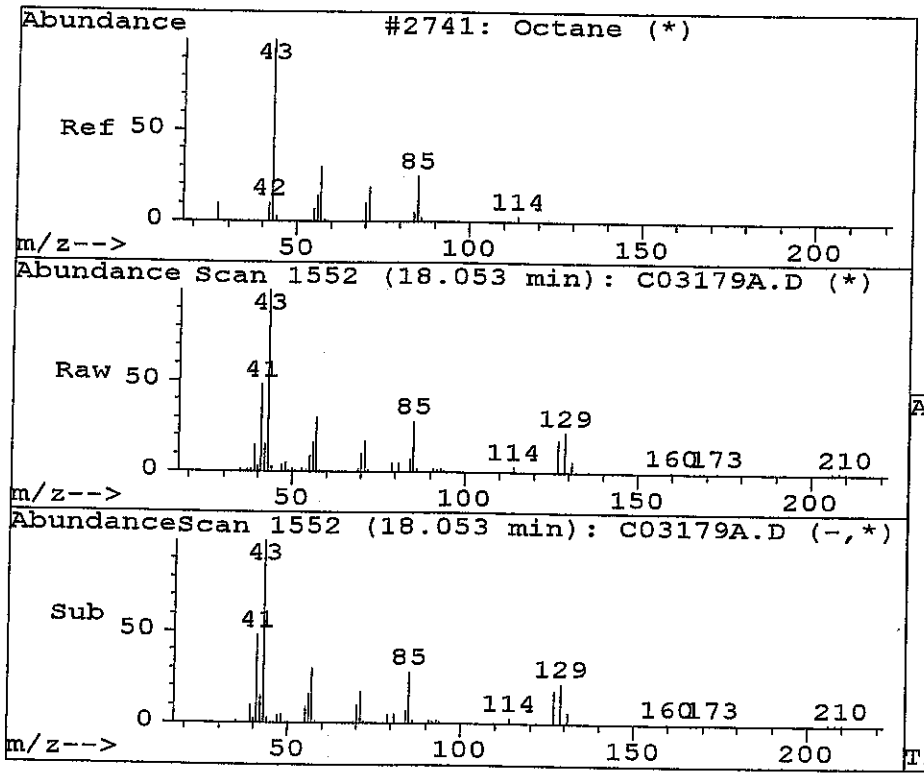


#55
1,3-Dichloropropane
Concen: 0.10 ppbV
RT: 17.51 min Scan# 1496
Delta R.T. -0.21 min
Lab File: C03179A.D
Acq: 17 Mar 109 8:47 am

Tgt Ion:76 Resp: 402983

Ion	Ratio	Lower	Upper
76	100		
78	29.8	24.6	36.8
63	11.5	8.5	12.7
0	0.0	0.0	0.0

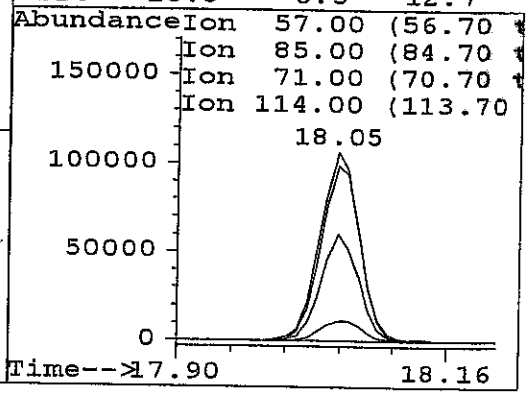


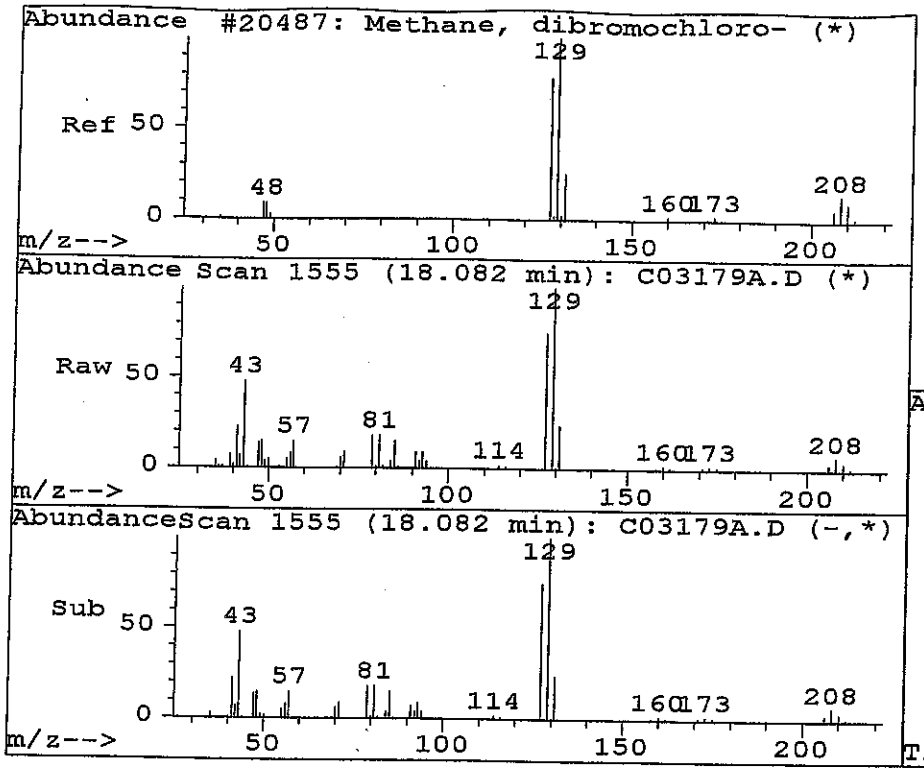


#56
Octane
Concen: 0.09 ppbV
RT: 18.05 min Scan# 1552
Delta R.T. -0.21 min
Lab File: C03179A.D
Acq: 17 Mar 109 8:47 am

Tgt Ion:57 Resp: 274693

Ion	Ratio	Lower	Upper
57	100		
85	92.1	77.0	115.6
71	56.5	44.3	66.5
114	10.5	8.5	12.7

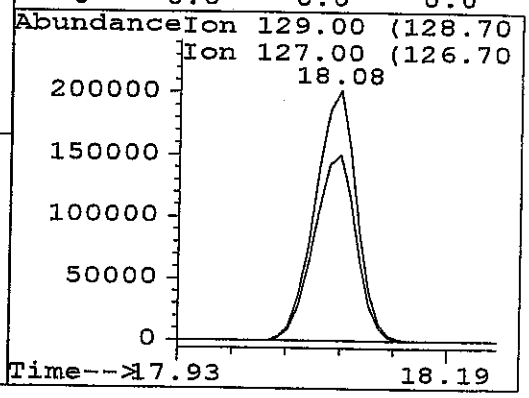


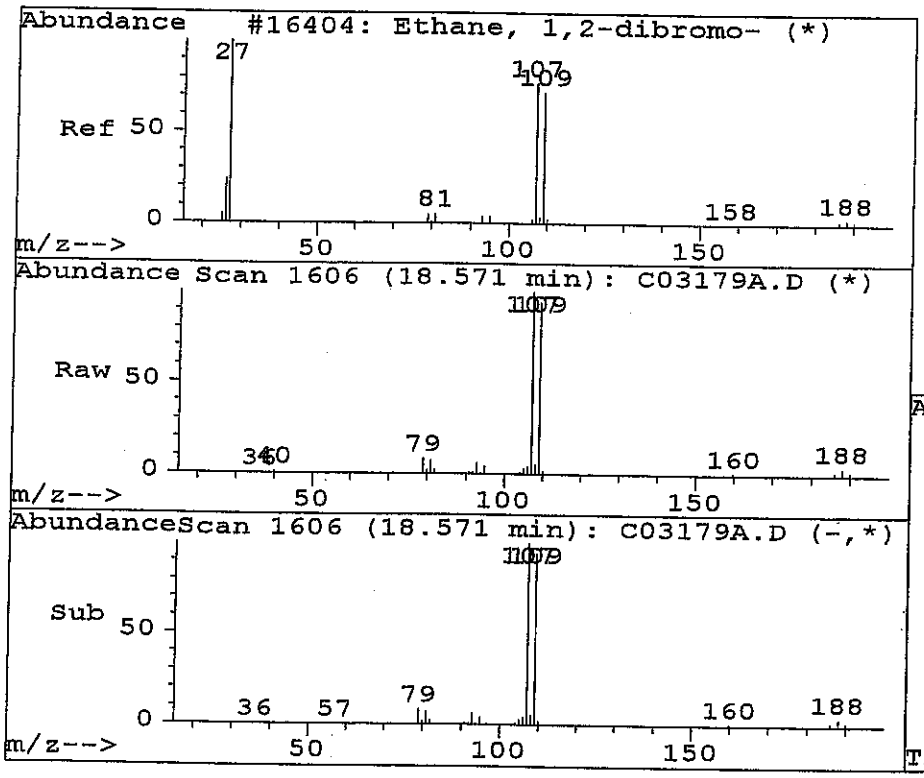


#57
Dibromochloromethane
Concen: 0.10 ppbV
RT: 18.08 min Scan# 1555
Delta R.T. -0.22 min
Lab File: C03179A.D
Acq: 17 Mar 109 8:47 am

Tgt Ion:129 Resp: 558917

Ion	Ratio	Lower	Upper
129	100		
127	74.6	59.4	89.0
0	0.0	0.0	0.0
0	0.0	0.0	0.0

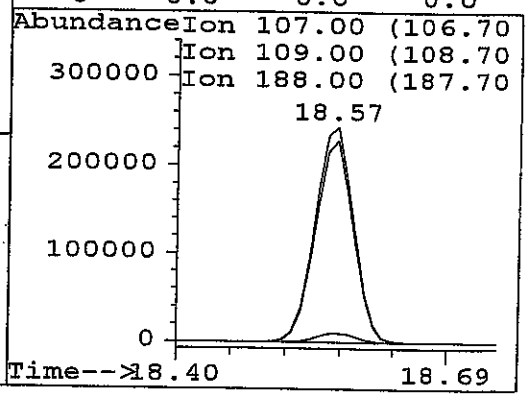


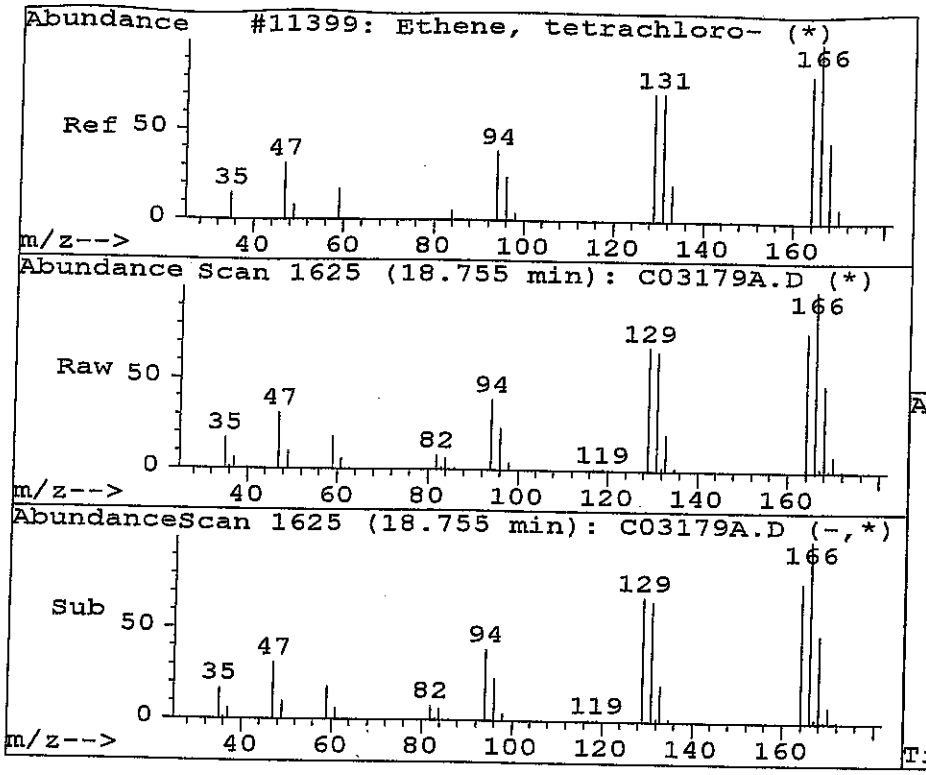


#58
1,2-Dibromoethane
Concen: 0.12 ppbV
RT: 18.57 min Scan# 1606
Delta R.T. -0.23 min
Lab File: C03179A.D
Acq: 17 Mar 109 8:47 am

Tgt Ion:107 Resp: 701472

Ion	Ratio	Lower	Upper
107	100		
109	93.9	74.6	111.8
188	4.1	2.9	4.3
0	0.0	0.0	0.0

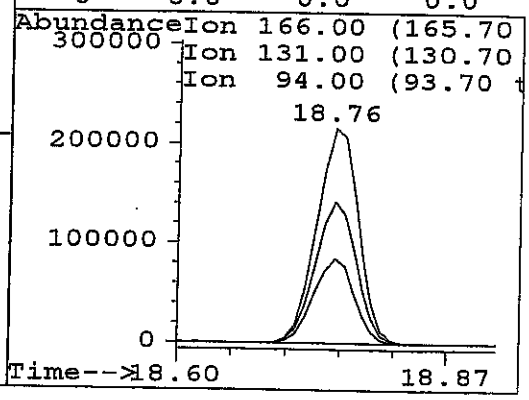


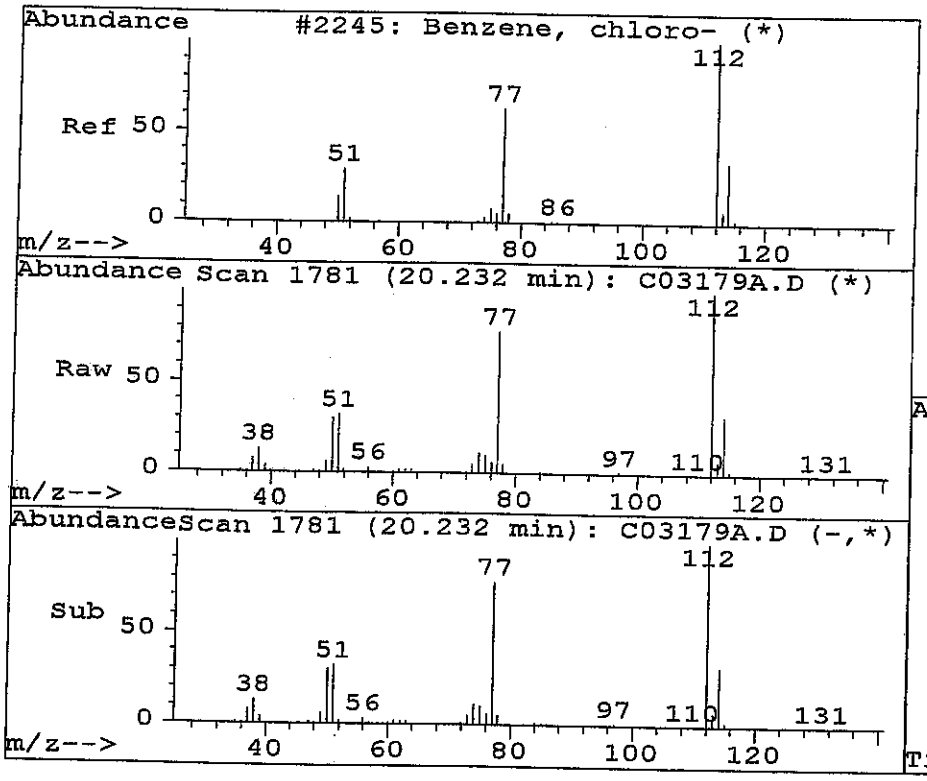


#59
Tetrachloroethene
Concen: 0.13 ppbV
RT: 18.76 min Scan# 1625
Delta R.T. -0.21 min
Lab File: C03179A.D
Acq: 17 Mar 109 8:47 am

Tgt Ion:166 Resp: 627137

Ion	Ratio	Lower	Upper
166	100		
131	65.6	53.8	80.6
94	39.2	32.8	49.2
0	0.0	0.0	0.0

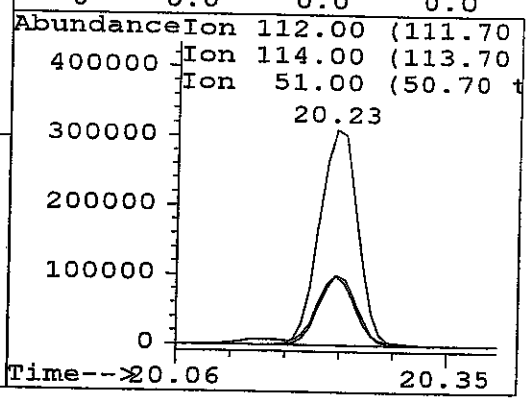


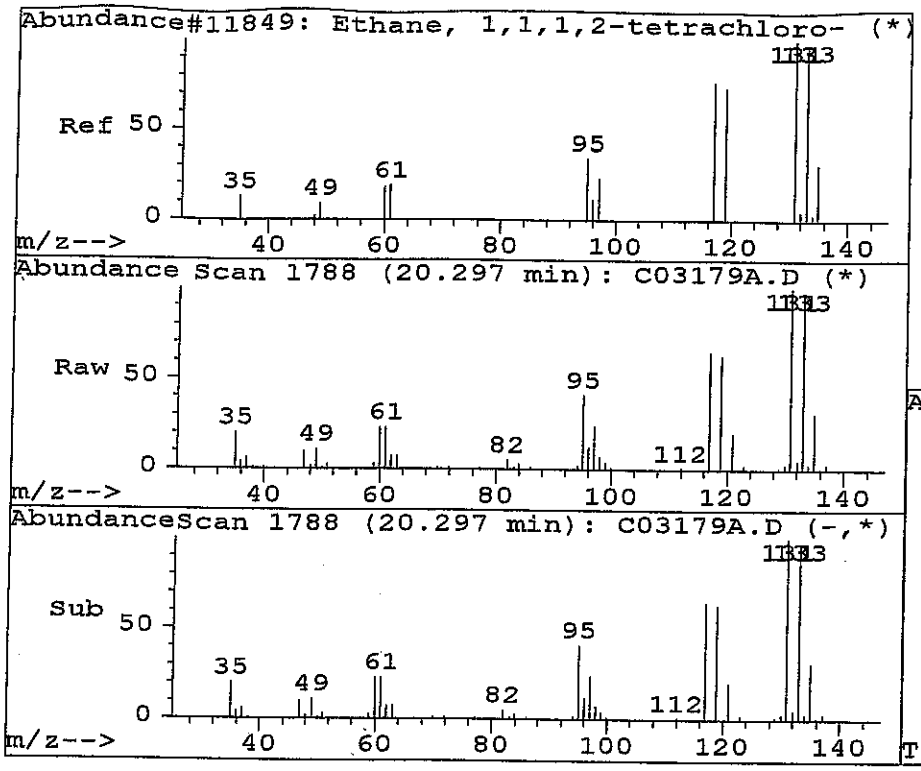


#60
Chlorobenzene
Concen: 0.12 ppbV
RT: 20.23 min Scan# 1781
Delta R.T. -0.22 min
Lab File: C03179A.D
Acq: 17 Mar 109 8:47 am

Tgt Ion:112 Resp: 862738

Ion	Ratio	Lower	Upper
112	100		
114	32.4	25.7	38.5
51	30.5	24.7	37.1
0	0.0	0.0	0.0

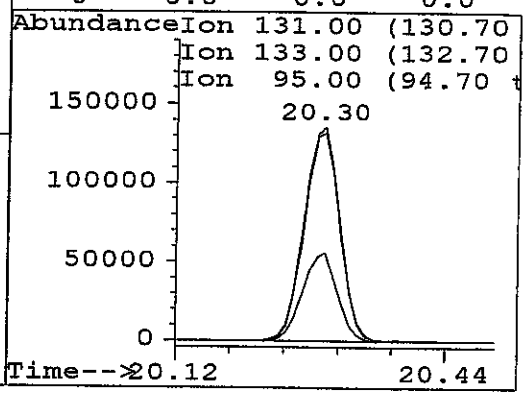


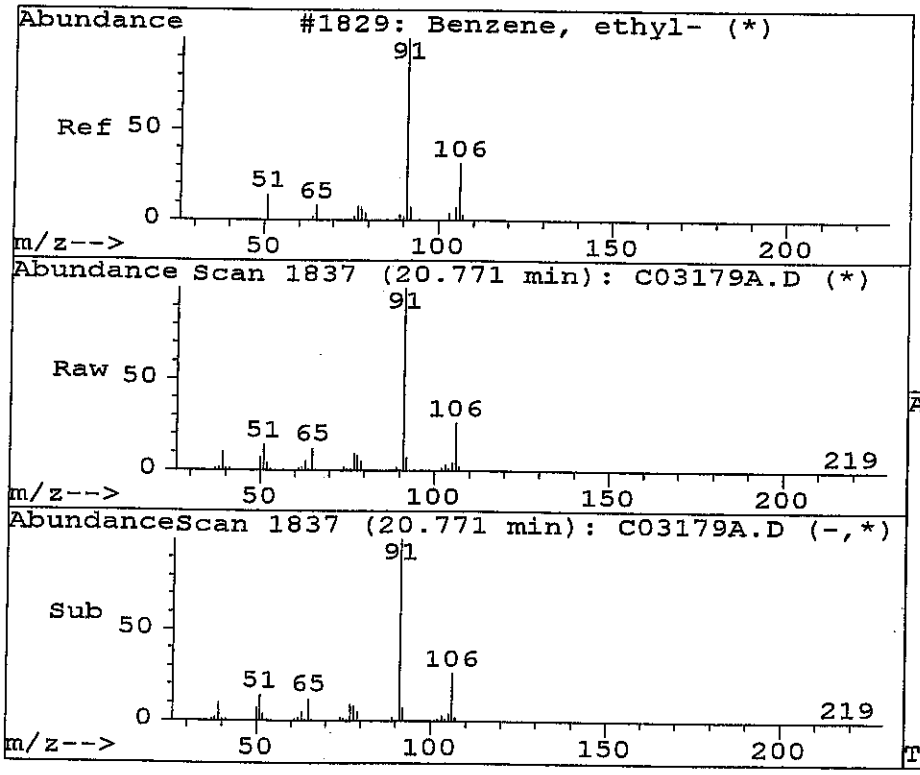


#61
1,1,1,2-Tetrachloroethane
Concen: 0.10 ppbV
RT: 20.30 min Scan# 1788
Delta R.T. -0.21 min
Lab File: C03179A.D
Acq: 17 Mar 109 8:47 am

Tgt Ion:131 Resp: 408032

Ion	Ratio	Lower	Upper
131	100		
133	97.1	80.6	121.0
95	41.1	33.4	50.2
0	0.0	0.0	0.0

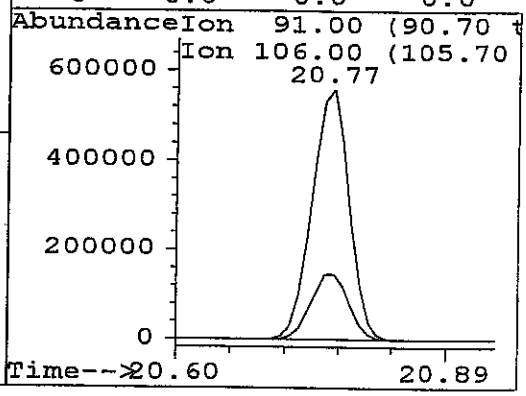


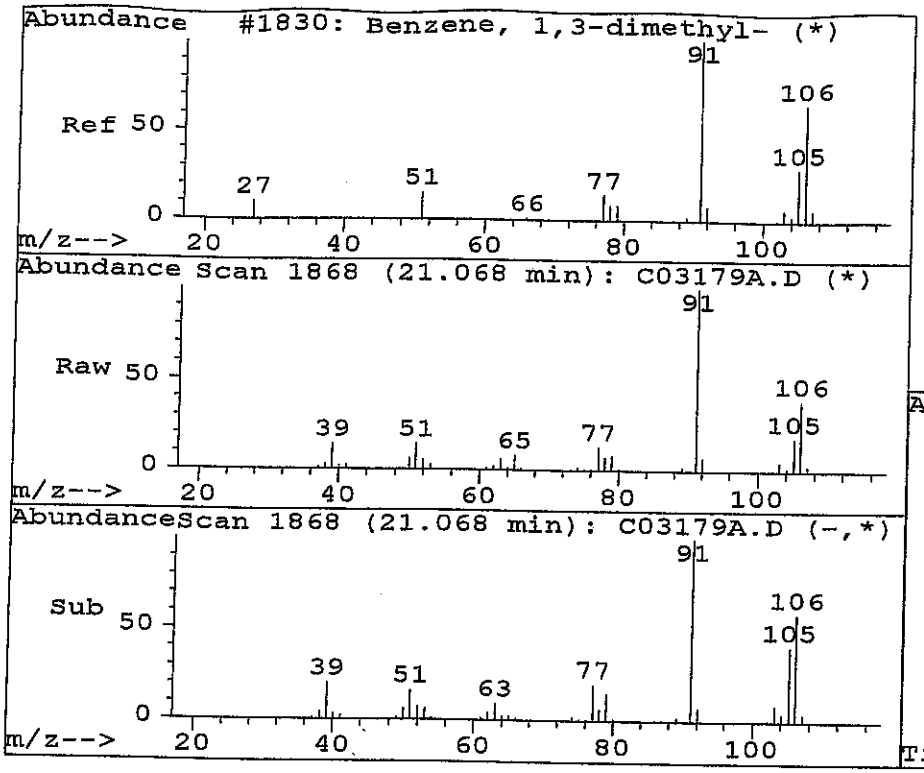


#62
Ethylbenzene
Concen: 0.13 ppbV
RT: 20.77 min Scan# 1837
Delta R.T. -0.22 min
Lab File: C03179A.D
Acq: 17 Mar 109 8:47 am

Tgt Ion:91 Resp: 1548148

Ion	Ratio	Lower	Upper
91	100		
106	26.1	20.8	31.2
0	0.0	0.0	0.0
0	0.0	0.0	0.0

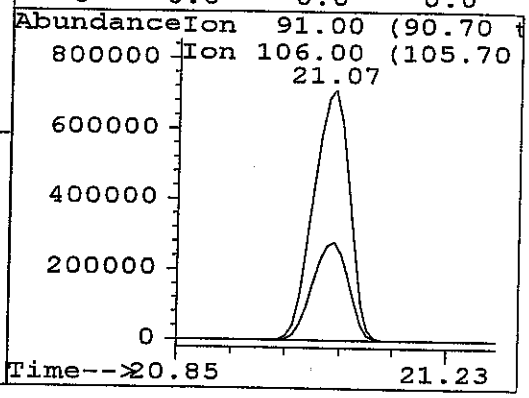


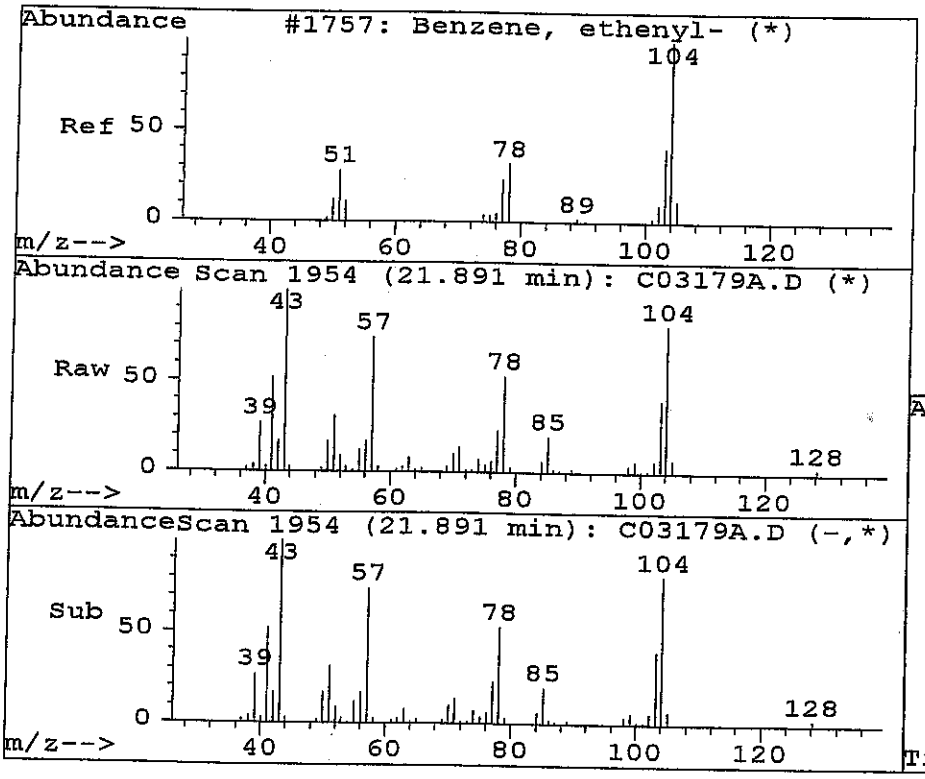


#63
m & p-Xylene
Concen: 0.26 ppbV
RT: 21.07 min Scan# 1868
Delta R.T. -0.21 min
Lab File: C03179A.D
Acq: 17 Mar 109 8:47 am

Tgt Ion:91 Resp: 2542524

Ion	Ratio	Lower	Upper
91	100		
106	39.3	30.2	45.2
0	0.0	0.0	0.0
0	0.0	0.0	0.0

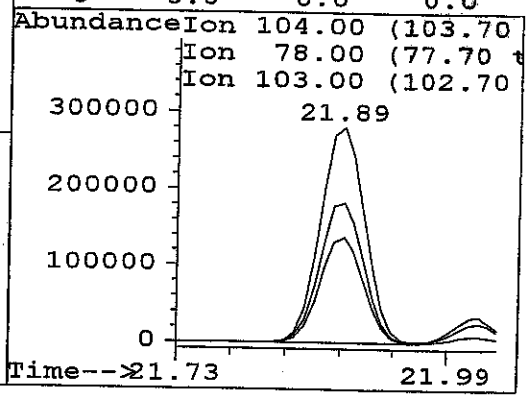


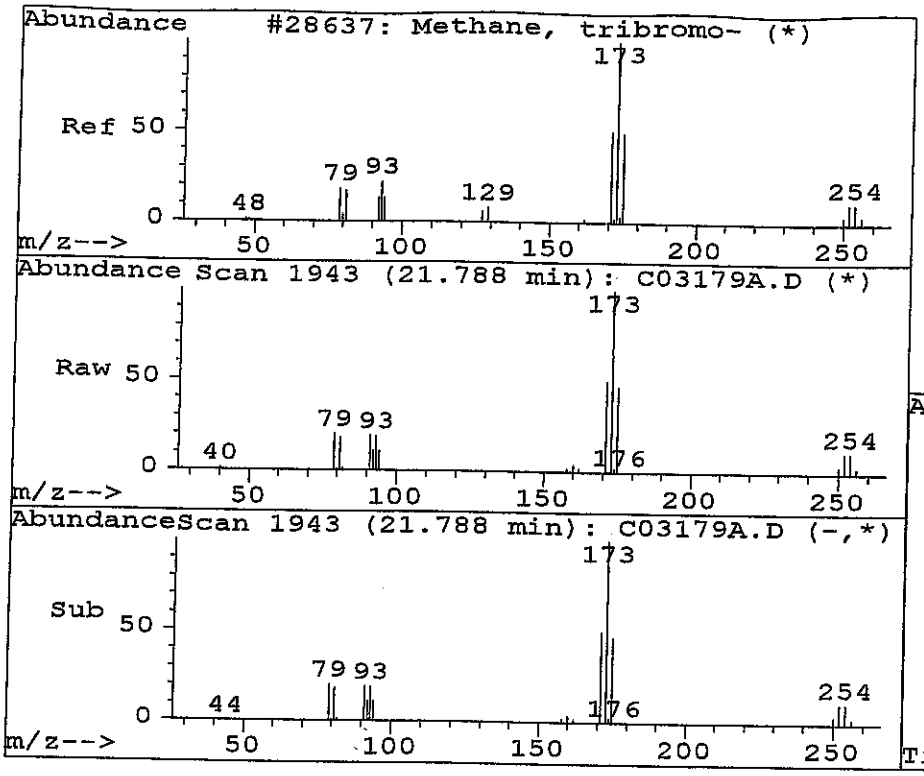


#64
Styrene
Concen: 0.13 ppbV
RT: 21.89 min Scan# 1954
Delta R.T. -0.25 min
Lab File: C03179A.D
Acq: 17 Mar 109 8:47 am

Tgt Ion:104 Resp: 840176

Ion	Ratio	Lower	Upper
104	100		
78	64.8	50.8	76.2
103	48.8	38.4	57.6
0	0.0	0.0	0.0

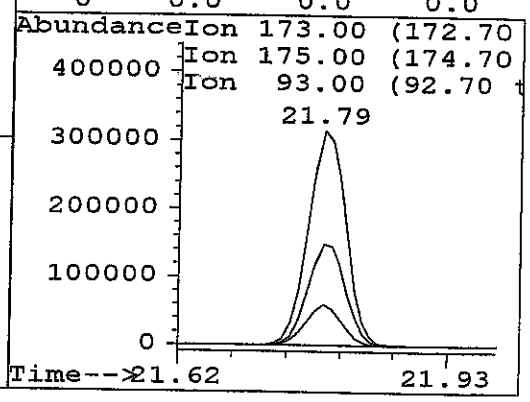


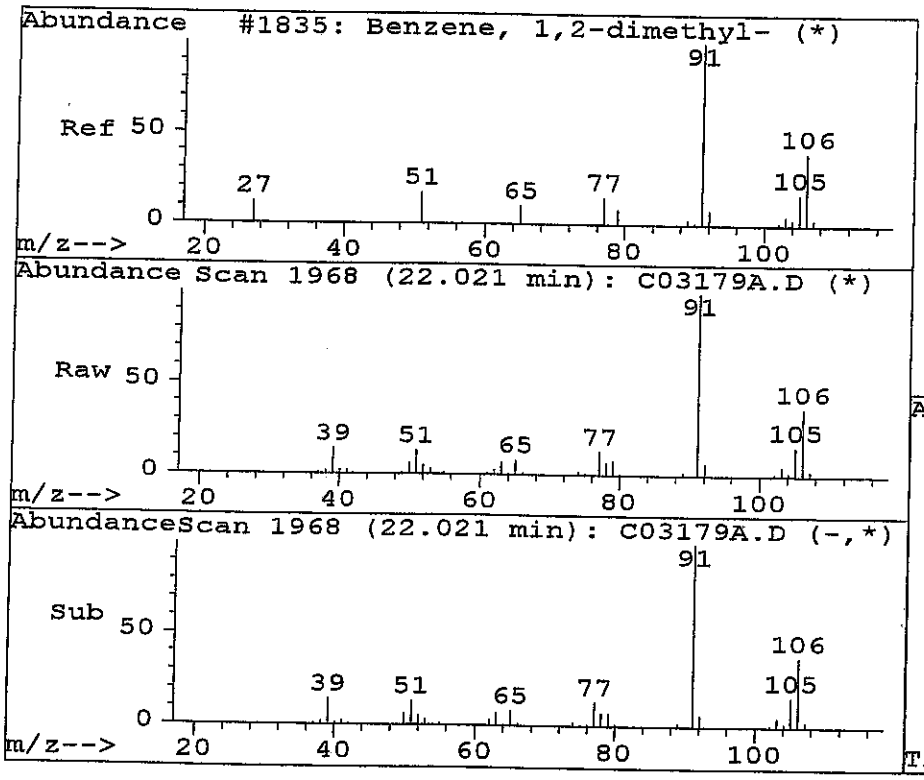


#65
Bromoform
Concen: 0.11 ppbV
RT: 21.79 min Scan# 1943
Delta R.T. -0.21 min
Lab File: C03179A.D
Acq: 17 Mar 109 8:47 am

Tgt Ion:173 Resp: 958925

Ion	Ratio	Lower	Upper
173	100		
175	47.1	39.4	59.0
93	18.9	16.0	24.0
0	0.0	0.0	0.0

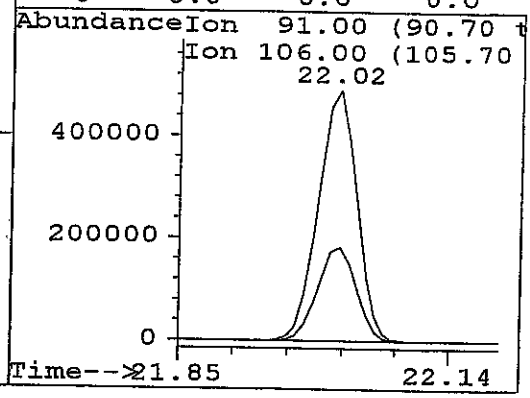


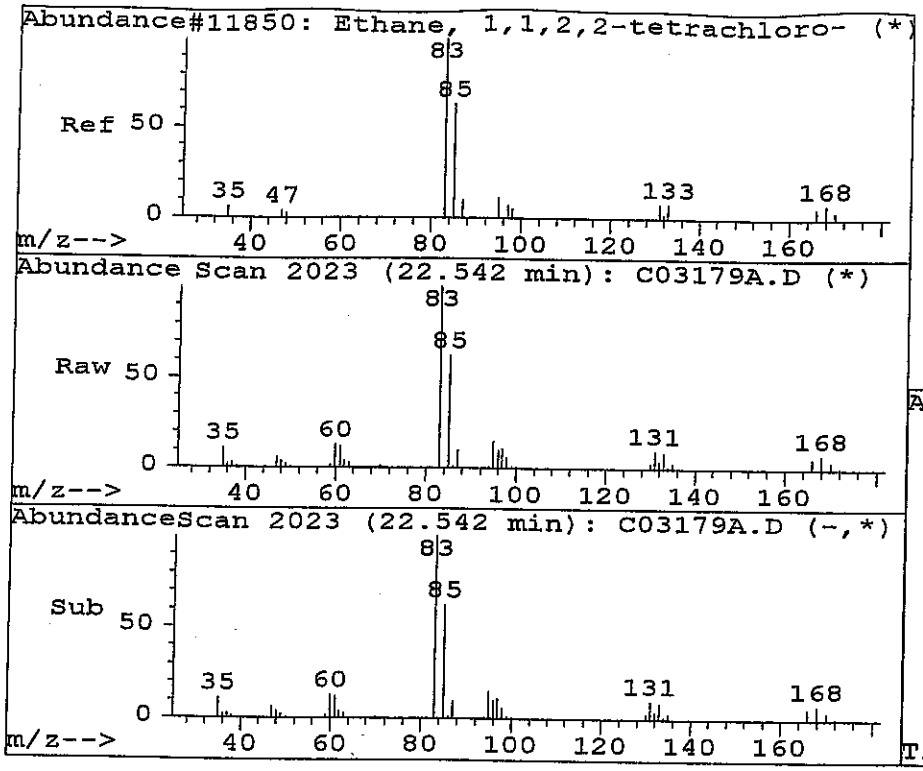


#66
o-Xylene
Concen: 0.12 ppbV
RT: 22.02 min Scan# 1968
Delta R.T. -0.23 min
Lab File: C03179A.D
Acq: 17 Mar 109 8:47 am

Tgt Ion:91 Resp: 1384162

Ion	Ratio	Lower	Upper
91	100		
106	37.3	29.6	44.4
0	0.0	0.0	0.0
0	0.0	0.0	0.0

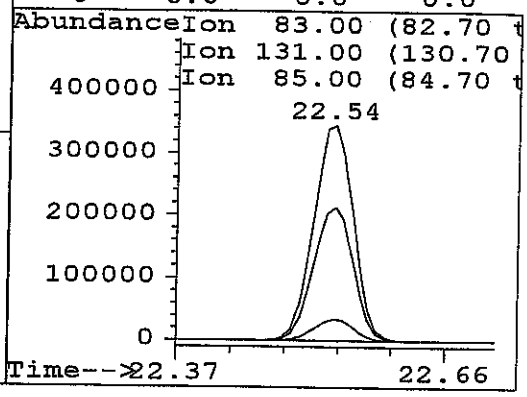


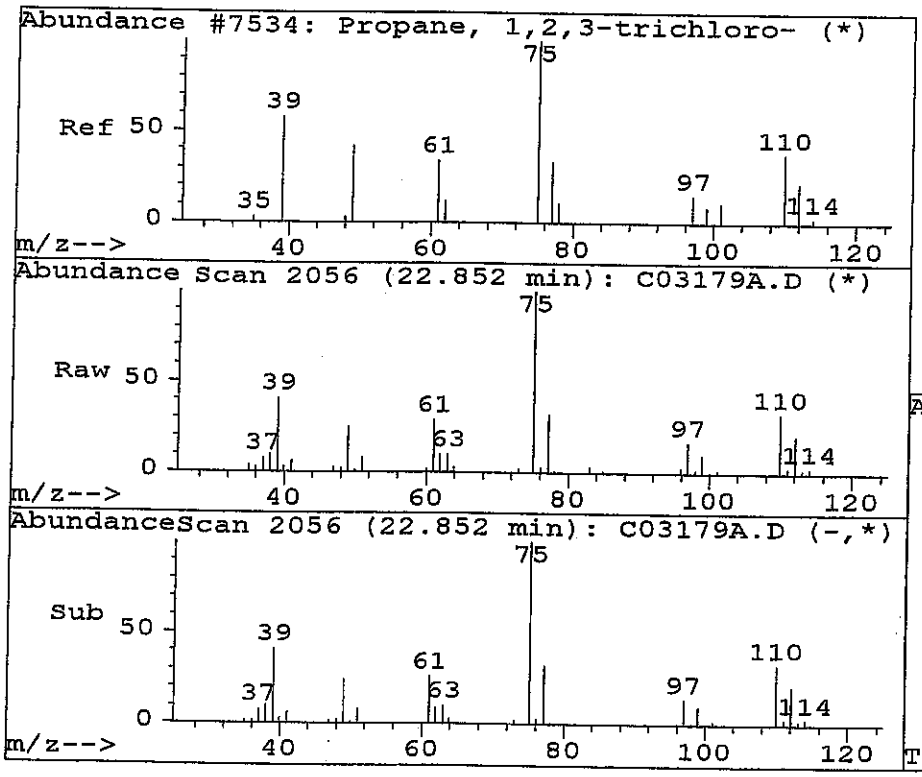


#67
1,1,2,2-Tetrachloroethane
Concen: 0.10 ppbV
RT: 22.54 min Scan# 2023
Delta R.T. -0.21 min
Lab File: C03179A.D
Acq: 17 Mar 109 8:47 am

Tgt Ion:83 Resp: 1042229

Ion	Ratio	Lower	Upper
83	100		
131	10.1	7.3	10.9
85	61.9	52.2	78.2
0	0.0	0.0	0.0

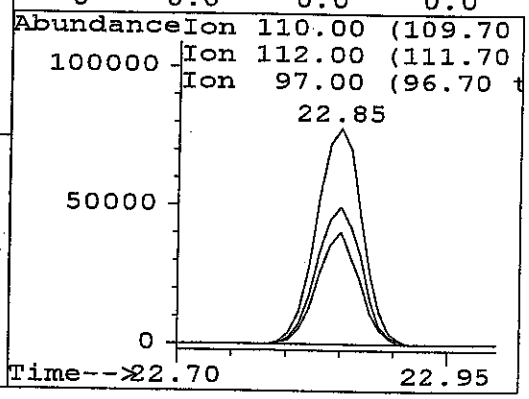


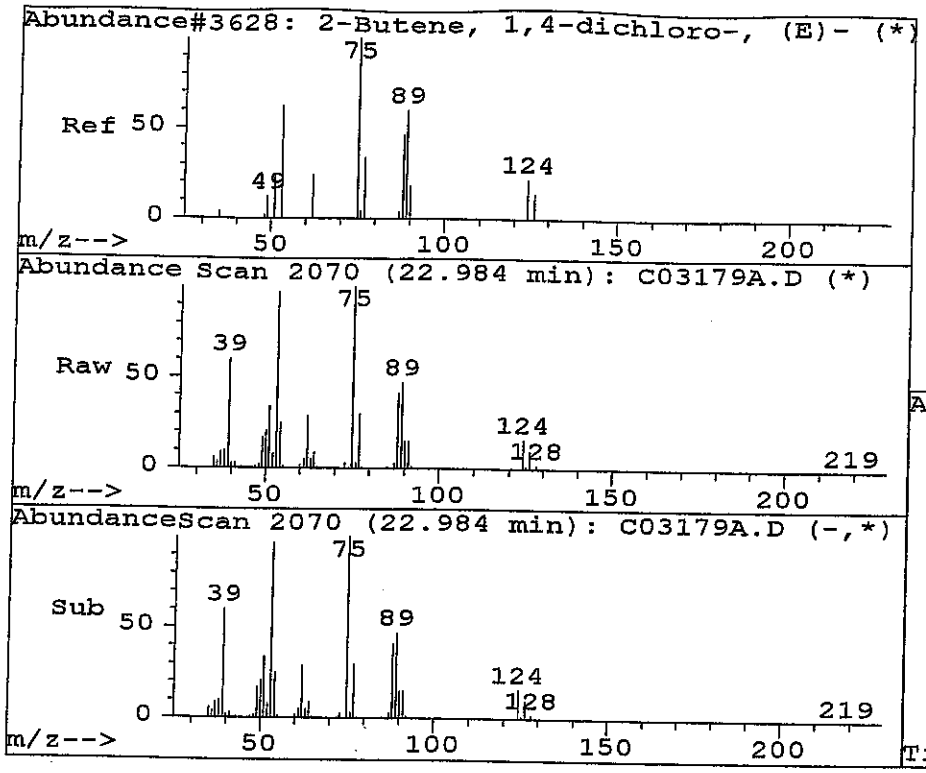


#68
1,2,3-Trichloropropane
Concen: 0.10 ppbV
RT: 22.85 min Scan# 2056
Delta R.T. -0.23 min
Lab File: C03179A.D
Acq: 17 Mar 109 8:47 am

Tgt Ion:110 Resp: 231249

Ion	Ratio	Lower	Upper
110	100		
112	63.5	50.7	76.1
97	52.2	39.3	58.9
0	0.0	0.0	0.0

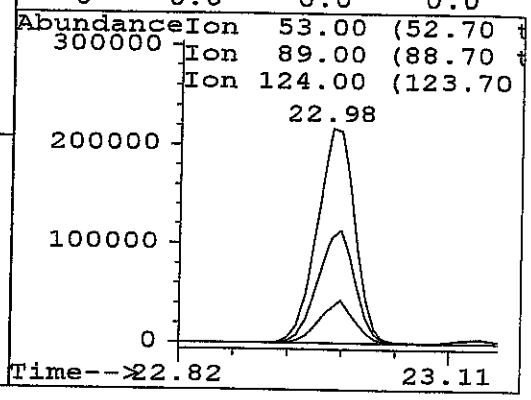


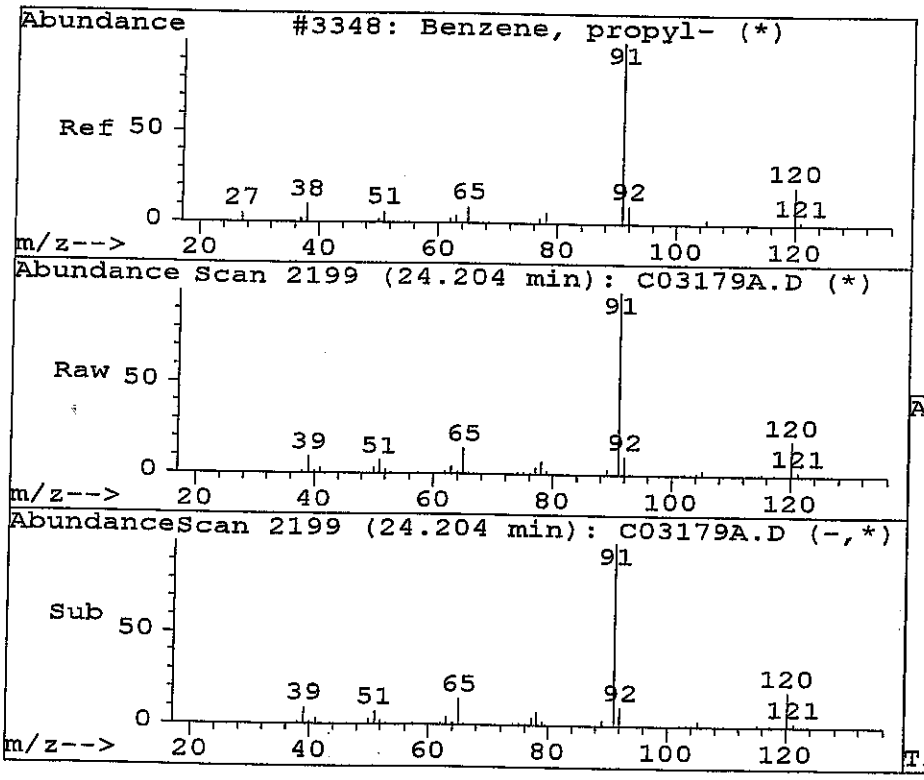


#69
t-1,4-Dichloro-2-butene
Concen: 0.30 ppbV
RT: 22.98 min Scan# 2070
Delta R.T. -0.25 min
Lab File: C03179A.D
Acq: 17 Mar 109 8:47 am

Tgt Ion:53 Resp: 614970

Ion	Ratio	Lower	Upper
53	100		
89	49.1	39.1	58.7
124	16.5	12.6	18.8
0	0.0	0.0	0.0

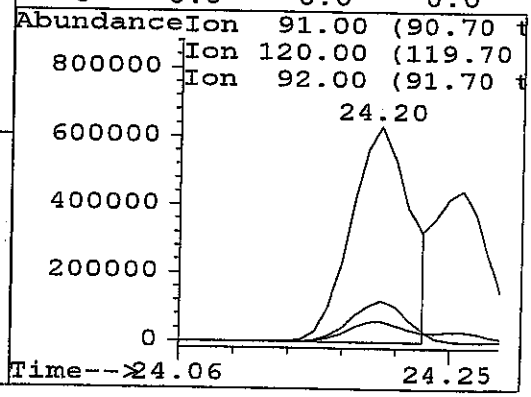


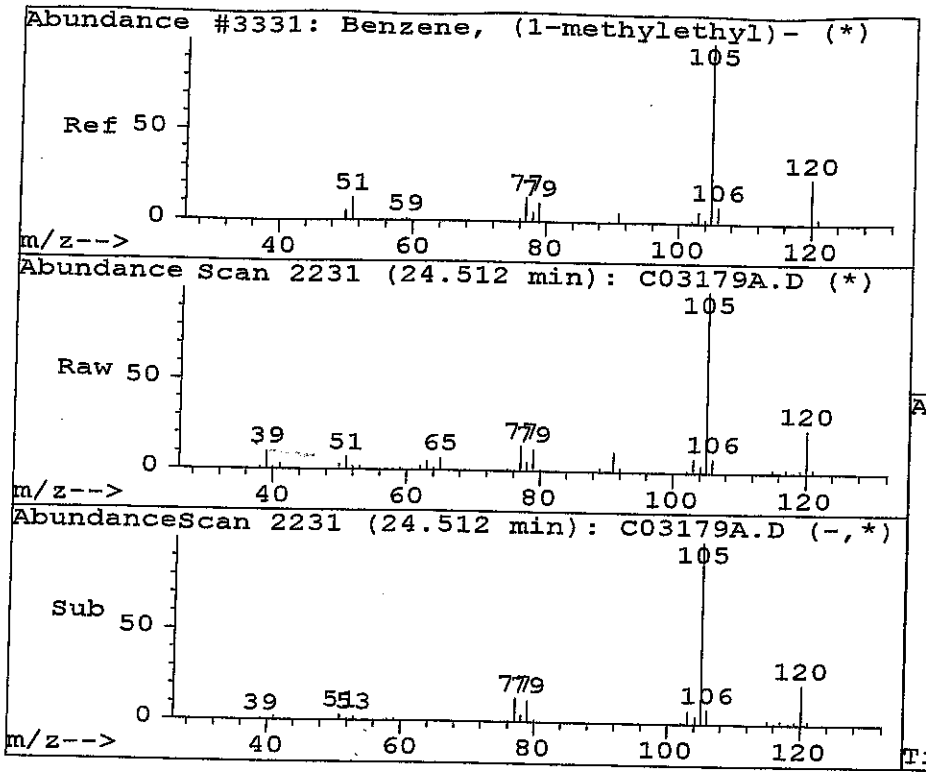


#70
n-Propylbenzene
Concen: 0.09 ppbV
RT: 24.20 min Scan# 2199
Delta R.T. -0.23 min
Lab File: C03179A.D
Acq: 17 Mar 109 8:47 am

Tgt Ion:91 Resp: 1871406

Ion	Ratio	Lower	Upper
91	100		
120	18.1	12.5	18.7
92	10.7	7.7	11.5
0	0.0	0.0	0.0

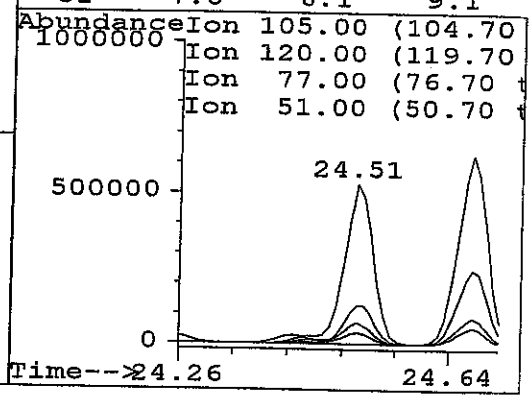


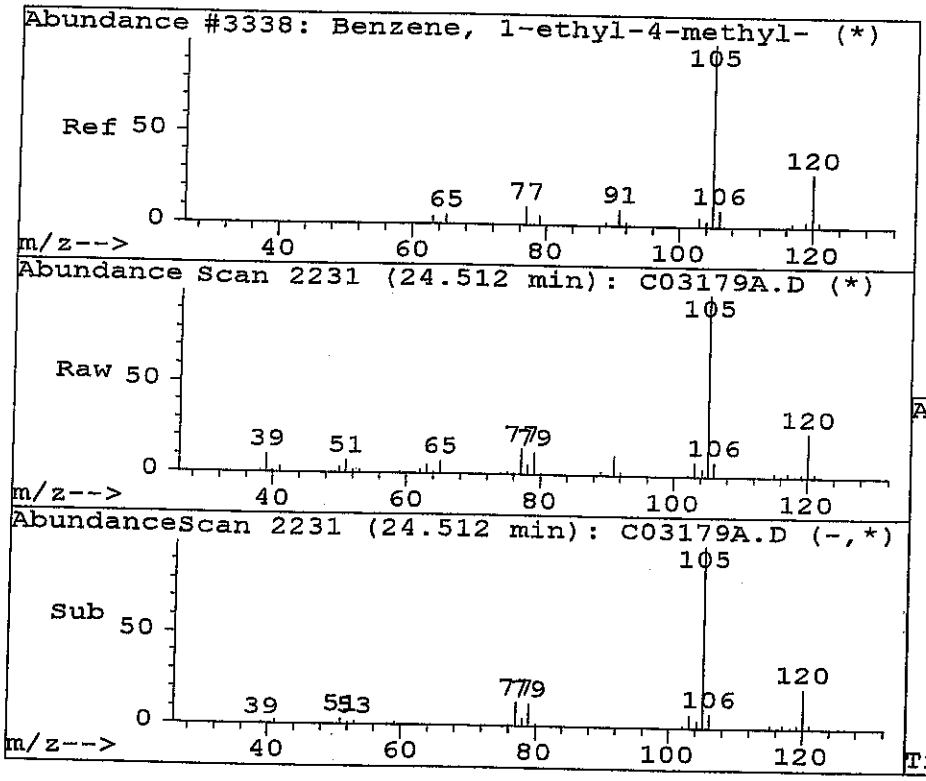


#71
Isopropylbenzene
Concen: 0.11 ppbV
RT: 24.51 min Scan# 2231
Delta R.T. -0.23 min
Lab File: C03179A.D
Acq: 17 Mar 109 8:47 am

Tgt Ion:105 Resp: 1573293

Ion	Ratio	Lower	Upper
105	100		
120	25.2	20.2	30.4
77	15.8	12.7	19.1
51	7.0	6.1	9.1

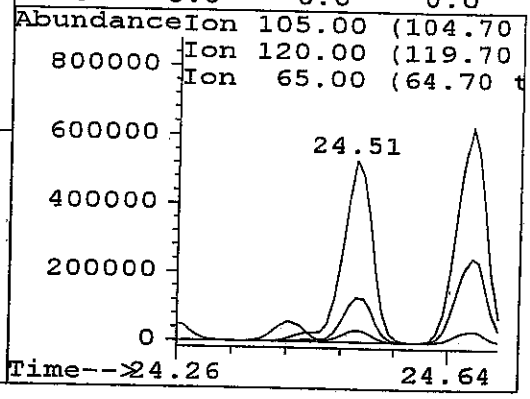


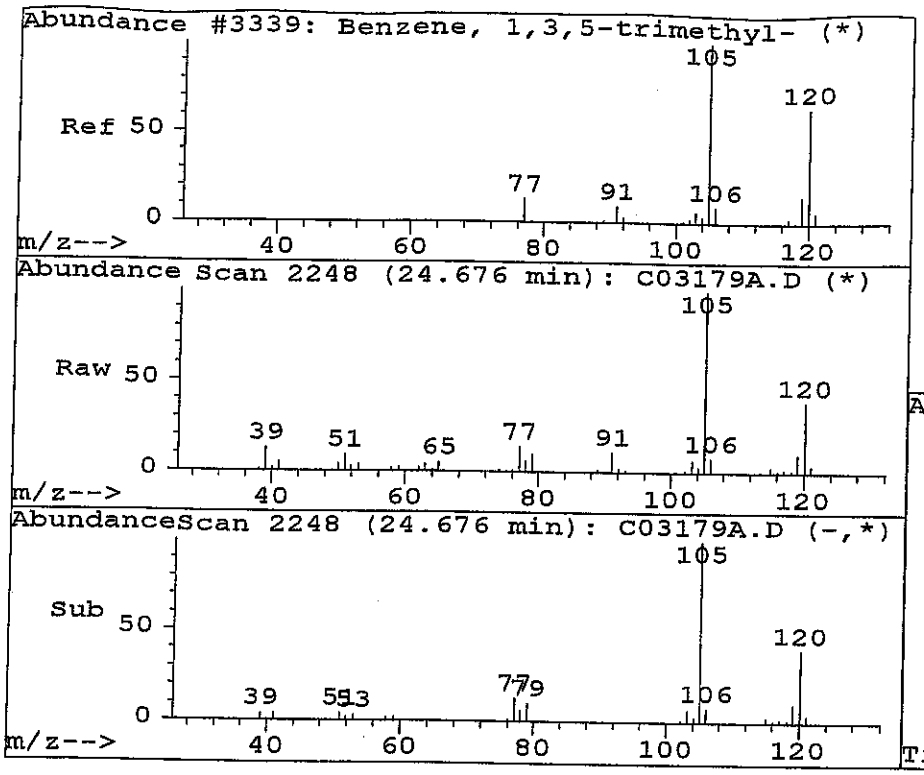


#72
4-Ethyltoluene
Concen: 0.11 ppbV
RT: 24.51 min Scan# 2231
Delta R.T. -0.23 min
Lab File: C03179A.D
Acq: 17 Mar 109 8:47 am

Tgt Ion:105 Resp: 1573293

Ion	Ratio	Lower	Upper
105	100		
120	24.4	19.6	29.4
65	6.0	5.4	8.2
0	0.0	0.0	0.0

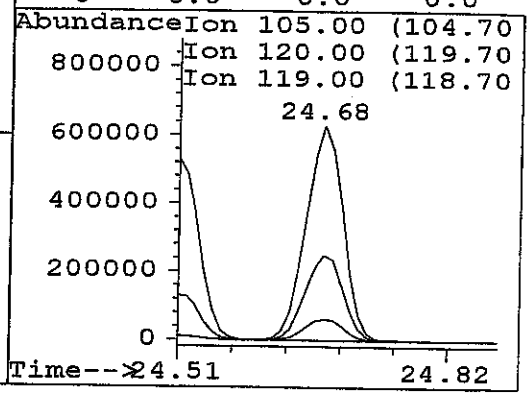


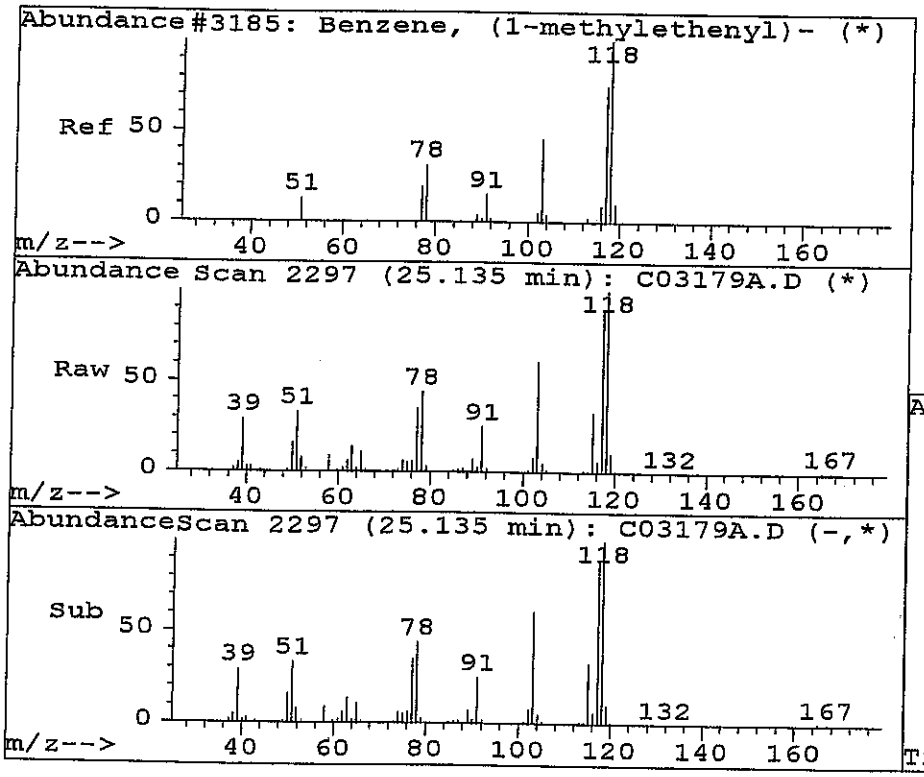


#73
1,3,5-Trimethylbenzene
Concen: 0.11 ppbV
RT: 24.68 min Scan# 2248
Delta R.T. -0.24 min
Lab File: C03179A.D
Acq: 17 Mar 109 8:47 am

Tgt Ion:105 Resp: 1778188

Ion	Ratio	Lower	Upper
105	100		
120	39.5	31.1	46.7
119	9.7	8.2	12.4
0	0.0	0.0	0.0

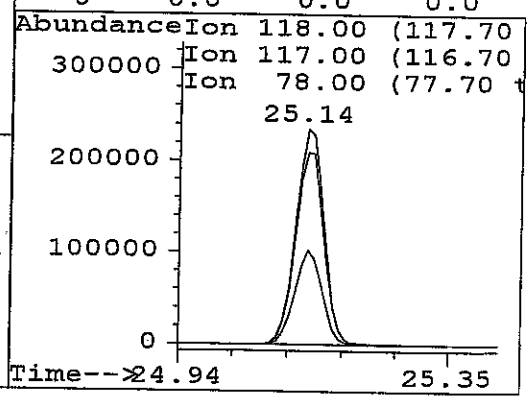


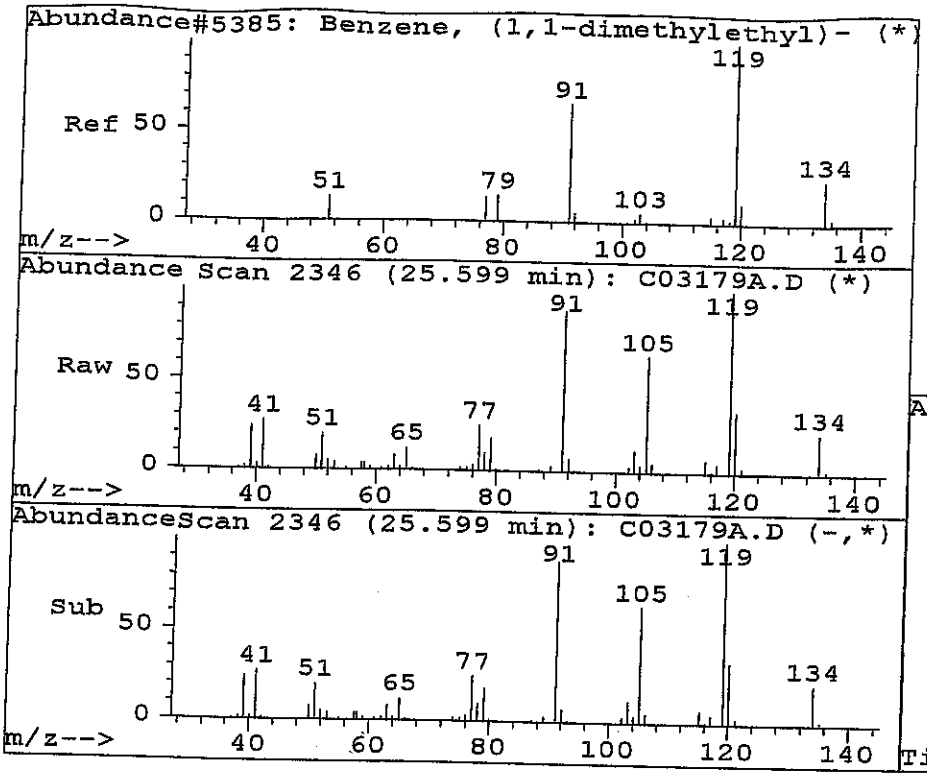


#74
Methylstyrene
Concen: 0.11 ppbV
RT: 25.14 min Scan# 2297
Delta R.T. -0.22 min
Lab File: C03179A.D
Acq: 17 Mar 109 8:47 am

Tgt Ion:118 Resp: 700556

Ion	Ratio	Lower	Upper
118	100		
117	89.0	70.8	106.2
78	43.6	36.2	54.2
0	0.0	0.0	0.0

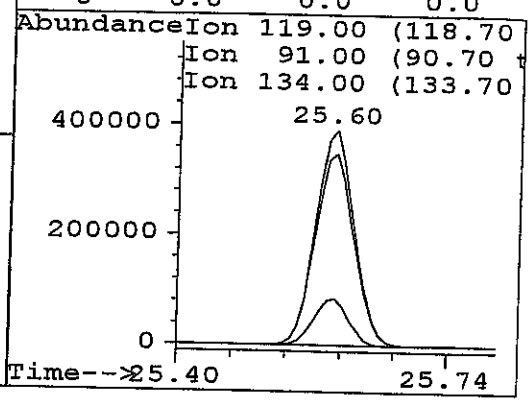


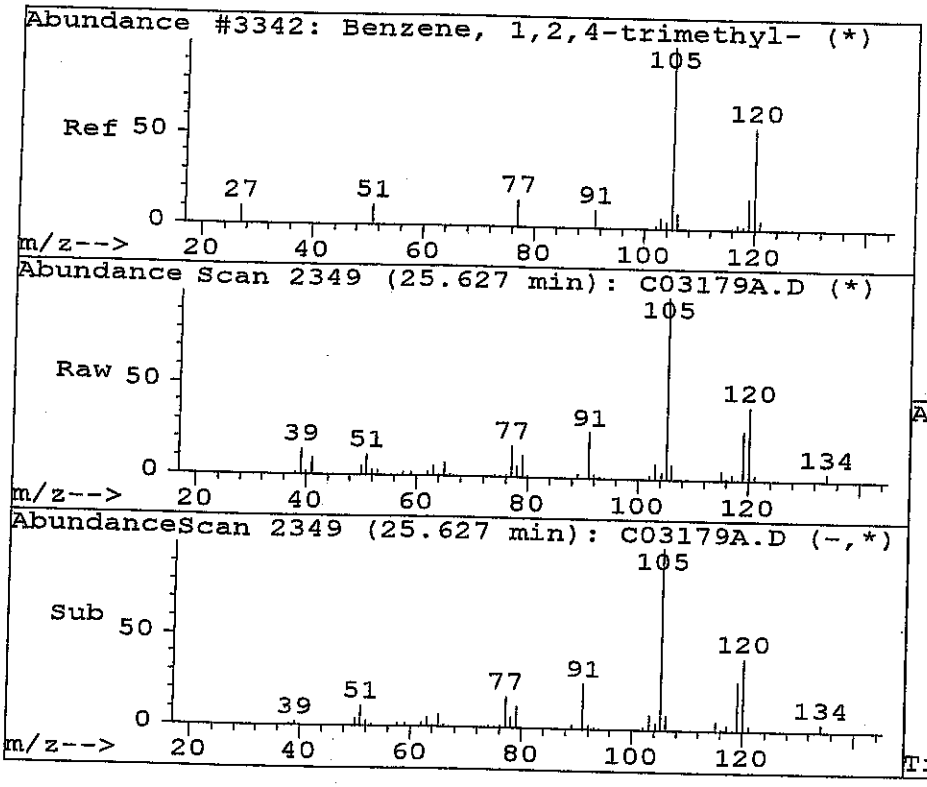


#75
tert-butyl benzene
Concen: 0.09 ppbV
RT: 25.60 min Scan# 2346
Delta R.T. -0.21 min
Lab File: C03179A.D
Acq: 17 Mar 109 8:47 am

Tgt Ion:119 Resp: 1302134

Ion	Ratio	Lower	Upper
119	100		
91	91.0	76.9	115.3
134	19.5	15.7	23.5
0	0.0	0.0	0.0

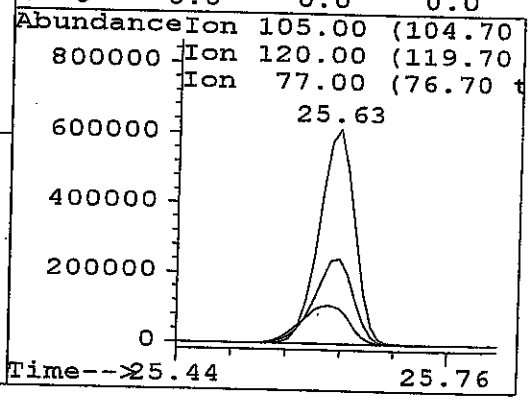


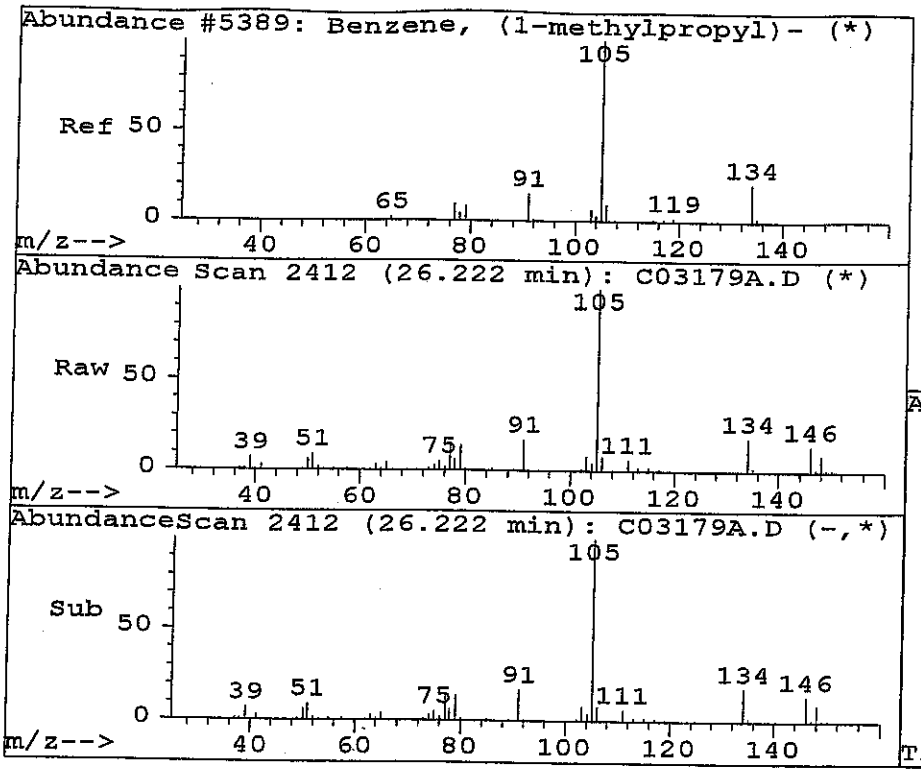


#76
1,2,4-Trimethylbenzene
Concen: 0.11 ppbV
RT: 25.63 min Scan# 2349
Delta R.T. -0.26 min
Lab File: C03179A.D
Acq: 17 Mar 109 8:47 am

Tgt Ion:105 Resp: 1766777

Ion	Ratio	Lower	Upper
105	100		
120	39.6	29.8	44.8
77	16.5	13.0	19.4
0	0.0	0.0	0.0

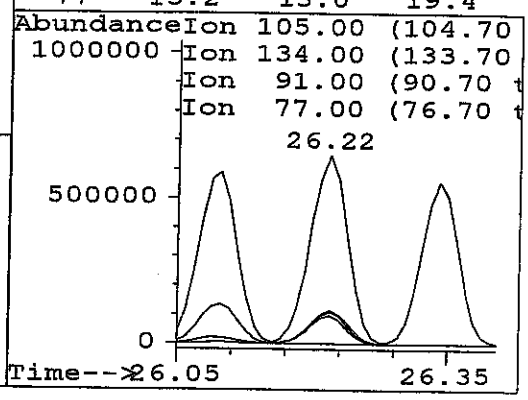


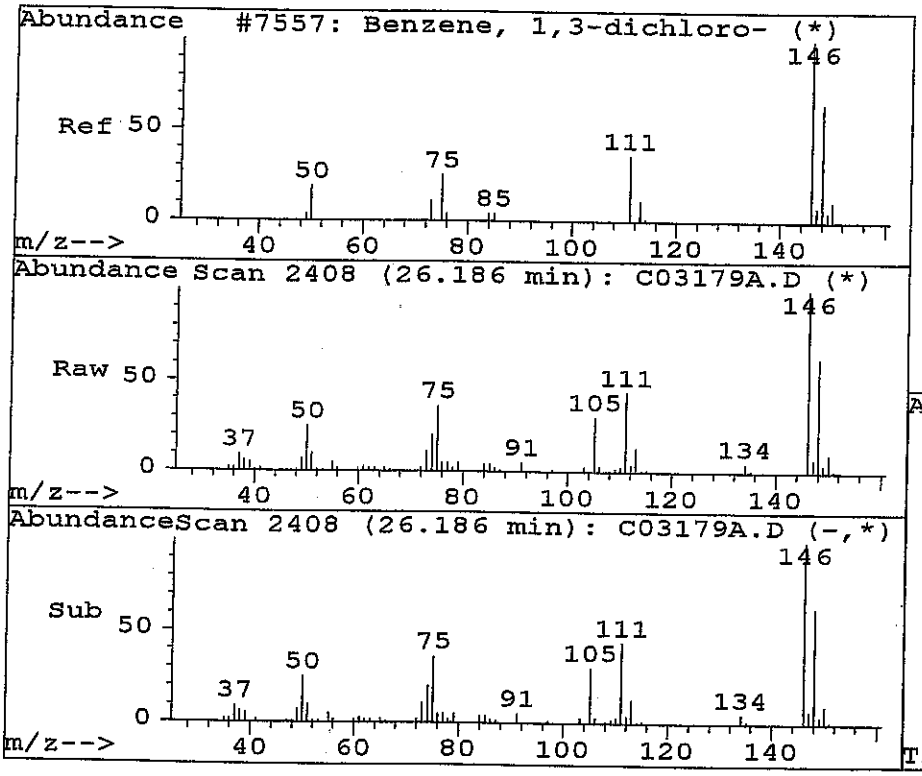


#77
sec-butylbenzene
Concen: 0.10 ppbV
RT: 26.22 min Scan# 2412
Delta R.T. -0.28 min
Lab File: C03179A.D
Acq: 17 Mar 109 8:47 am

Tgt Ion:105 Resp: 1874067

Ion	Ratio	Lower	Upper
105	100		
134	17.7	13.9	20.9
91	17.1	13.9	20.9
77	15.2	13.0	19.4

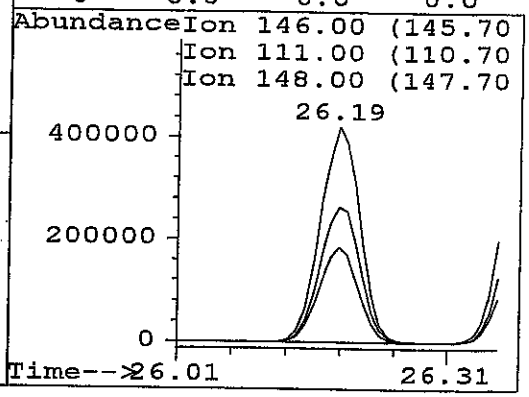


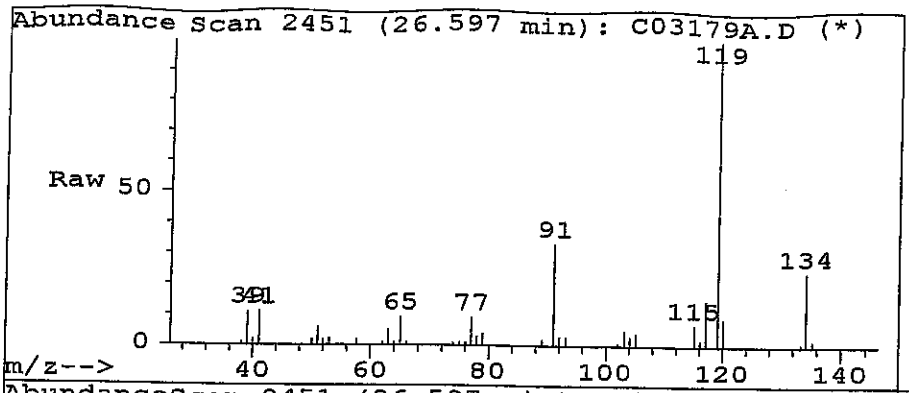


#78
1,3-Dichlorobenzene
Concen: 0.11 ppbV
RT: 26.19 min Scan# 2408
Delta R.T. -0.22 min
Lab File: C03179A.D
Acq: 17 Mar 109 8:47 am

Tgt Ion:146 Resp: 1325016

Ion	Ratio	Lower	Upper
146	100		
111	44.0	37.7	56.5
148	62.6	51.6	77.4
0	0.0	0.0	0.0

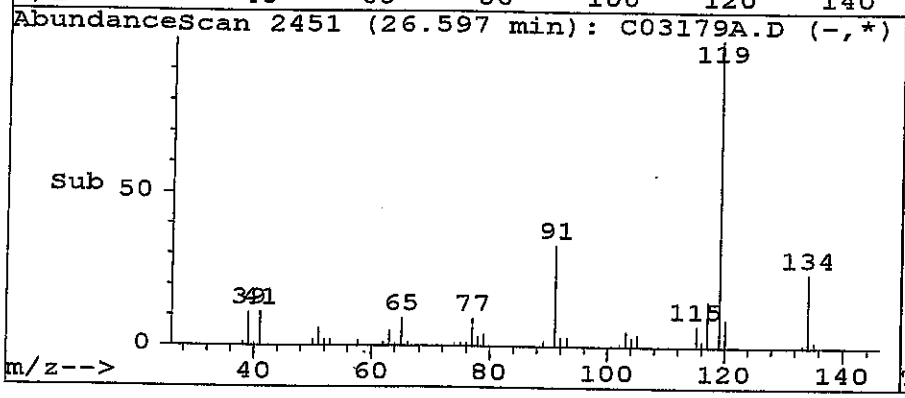


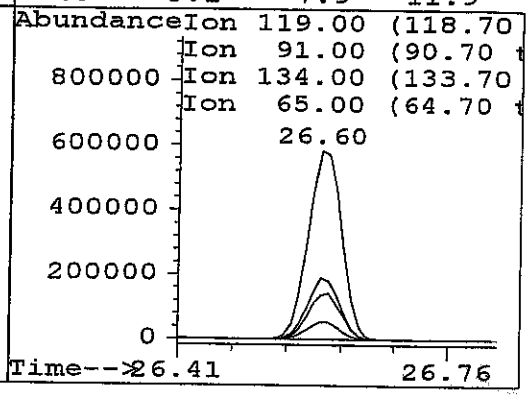


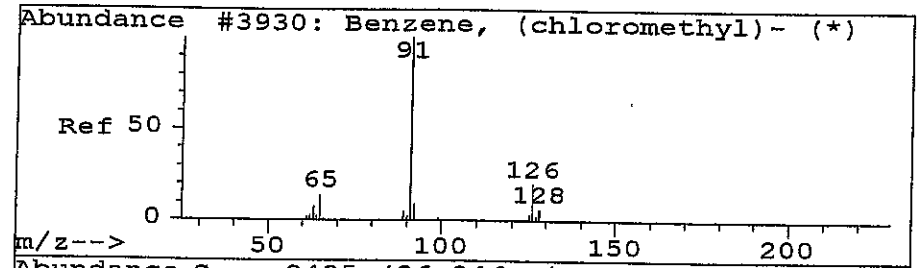
#79
Isopropyltoluene
Concen: 0.10 ppbV
RT: 26.60 min Scan# 2451
Delta R.T. -0.23 min
Lab File: C03179A.D
Acq: 17 Mar 109 8:47 am

Tgt Ion:119 Resp: 1772233

Ion	Ratio	Lower	Upper
119	100		
91	31.5	26.8	40.2
134	24.1	18.9	28.3
65	9.1	7.9	11.9



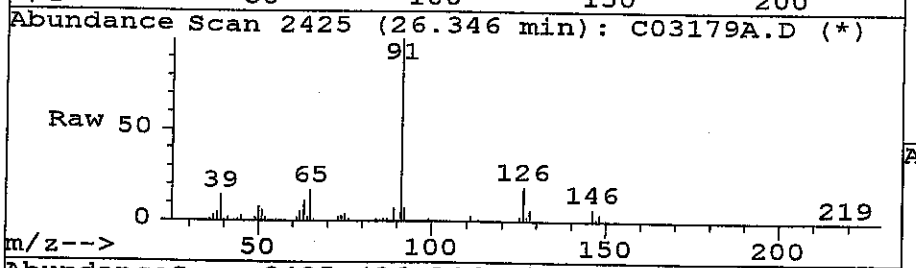


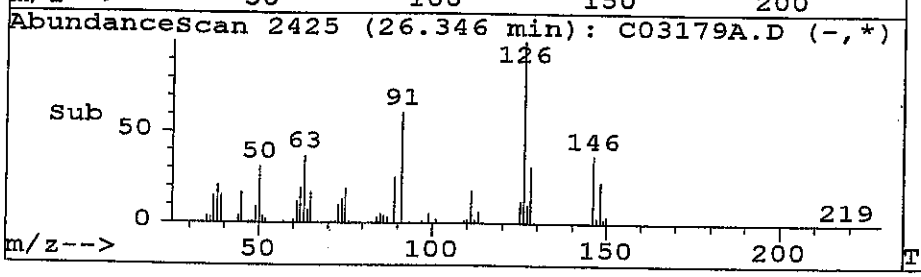


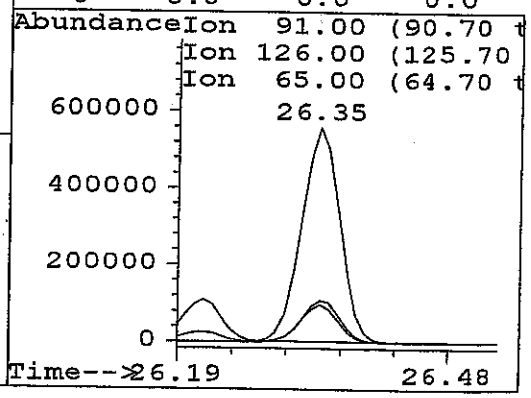
#80
Benzyl chloride
Concen: 0.10 ppbV
RT: 26.35 min Scan# 2425
Delta R.T. -0.26 min
Lab File: C03179A.D
Acq: 17 Mar 109 8:47 am

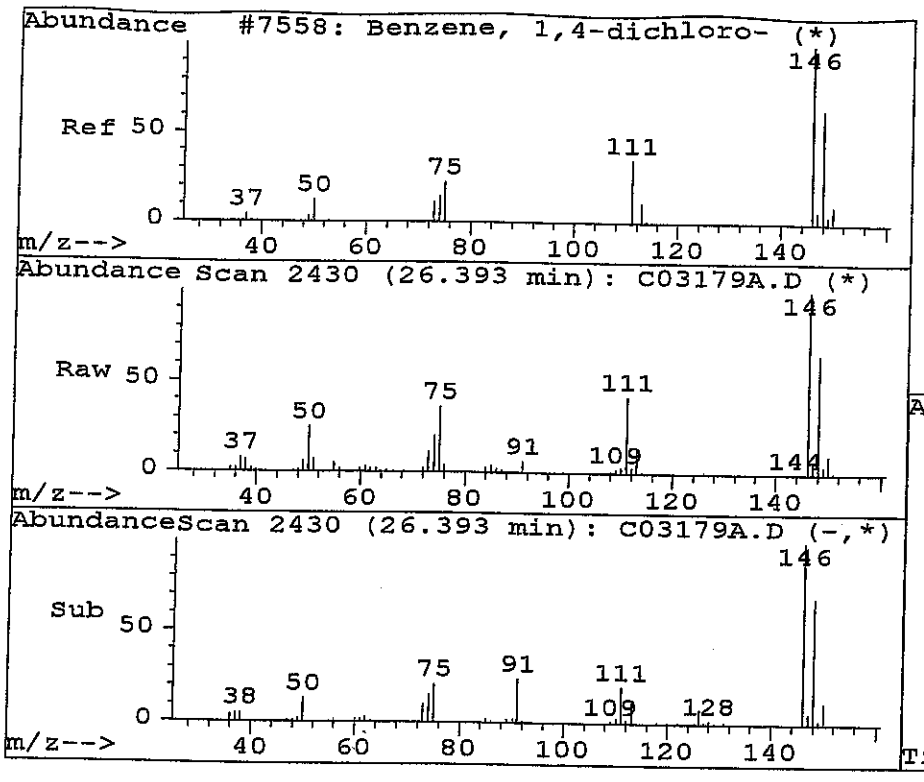
Tgt Ion:91 Resp: 1580130

Ion	Ratio	Lower	Upper
91	100		
126	19.4	14.1	21.1
65	17.5	14.4	21.6
0	0.0	0.0	0.0





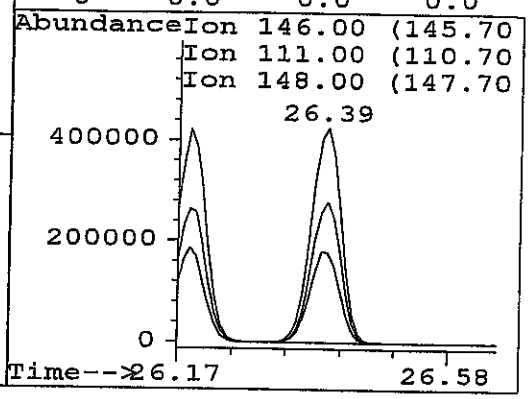


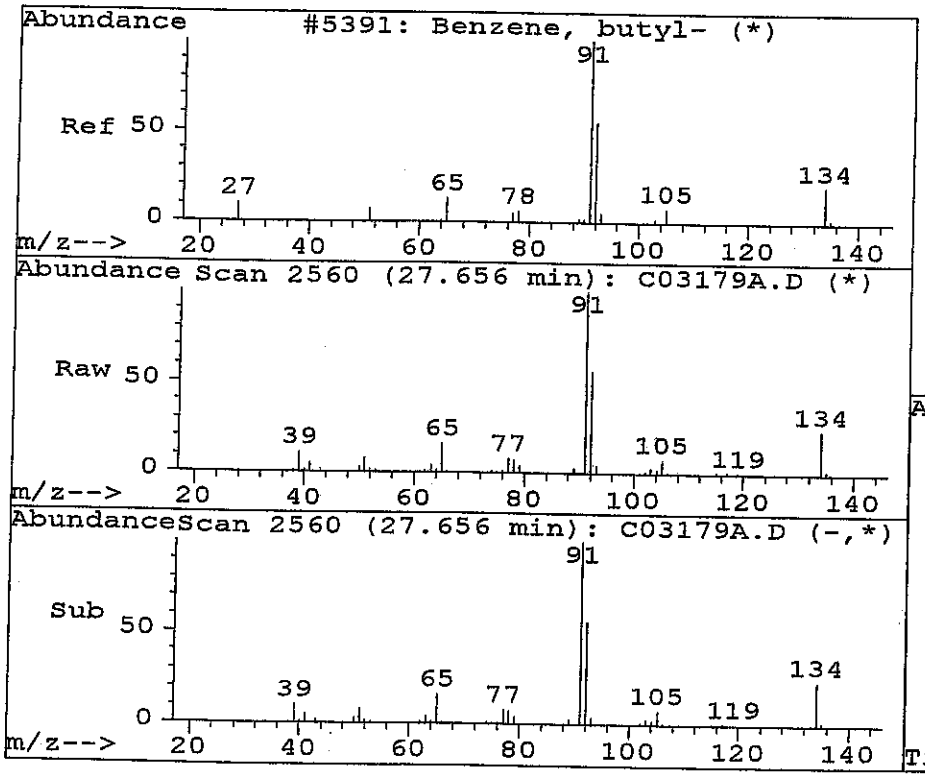


#81
1,4-Dichlorobenzene
Concen: 0.11 ppbV m
RT: 26.39 min Scan# 2430
Delta R.T. -0.29 min
Lab File: C03179A.D
Acq: 17 Mar 109 8:47 am

Tgt Ion:146 Resp: 1362139

Ion	Ratio	Lower	Upper
146	100		
111	41.9	36.0	54.0
148	65.3	51.0	76.6
0	0.0	0.0	0.0

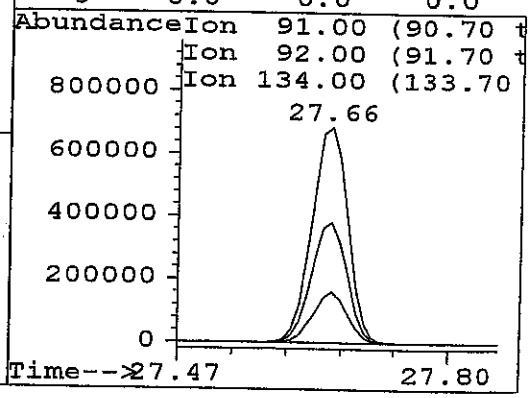


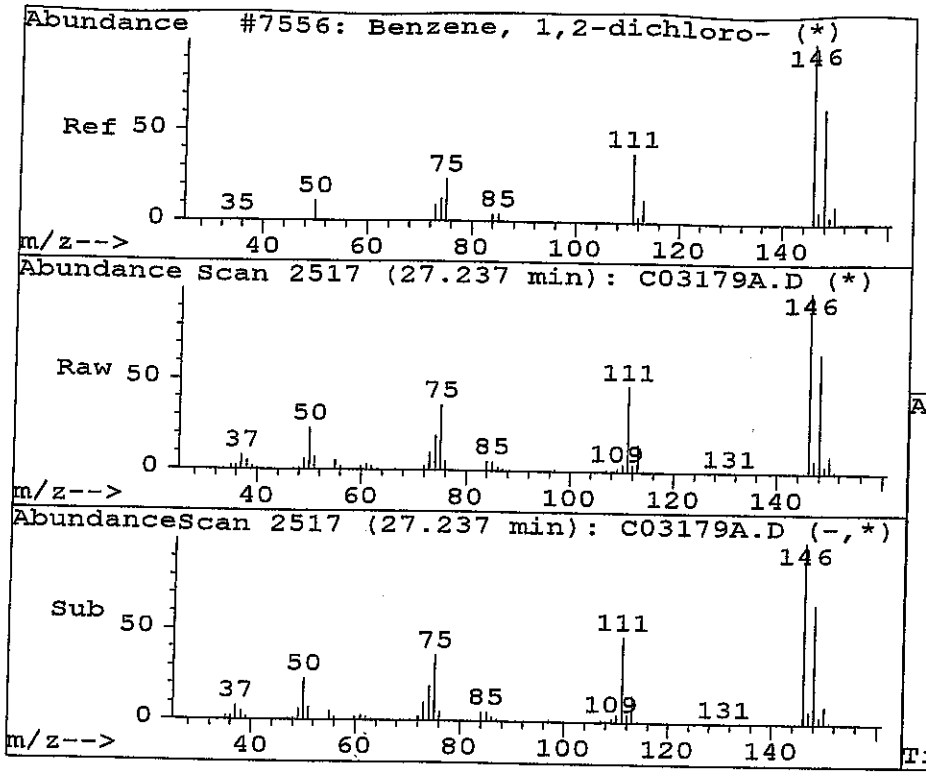


#82
n-Butylbenzene
Concen: 0.10 ppbV
RT: 27.66 min Scan# 2560
Delta R.T. -0.22 min
Lab File: C03179A.D
Acq: 17 Mar 109 8:47 am

Tgt Ion:91 Resp: 2064802

Ion	Ratio	Lower	Upper
91	100		
92	55.3	43.1	64.7
134	22.6	17.4	26.0
0	0.0	0.0	0.0

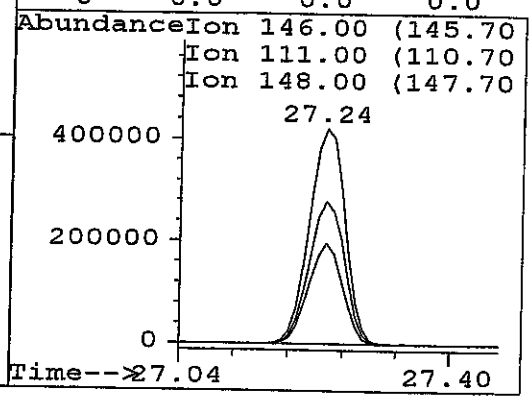


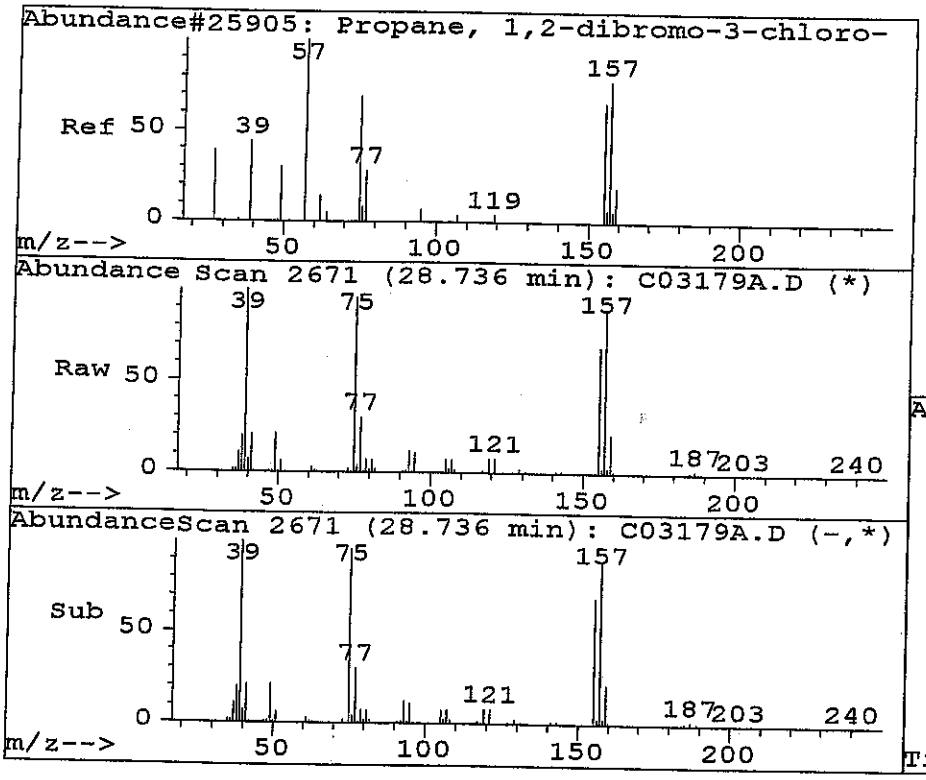


#83
1,2-Dichlorobenzene
Concen: 0.10 ppbV
RT: 27.24 min Scan# 2517
Delta R.T. -0.23 min
Lab File: C03179A.D
Acq: 17 Mar 109 8:47 am

Tgt Ion:146 Resp: 1374687

Ion	Ratio	Lower	Upper
146	100		
111	46.8	39.0	58.4
148	66.2	50.1	75.1
0	0.0	0.0	0.0

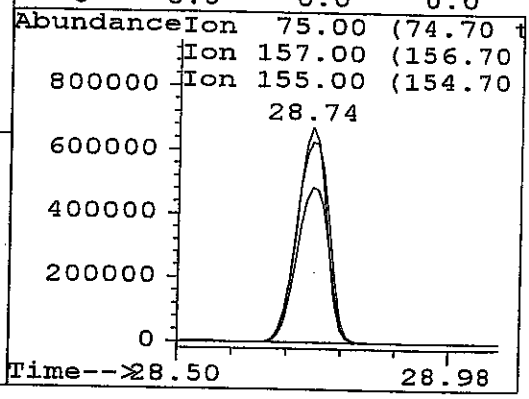


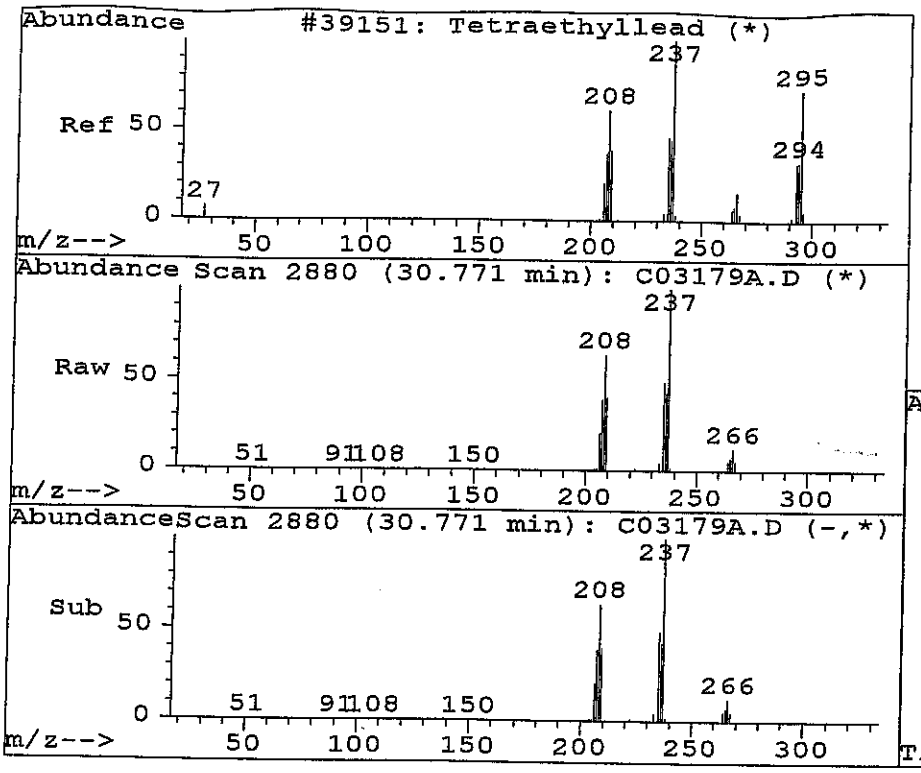


#84
1,2-Dibromo-3-chloropropane
Concen: 0.32 ppbV m
RT: 28.74 min Scan# 2671
Delta R.T. -0.22 min
Lab File: C03179A.D
Acq: 17 Mar 109 8:47 am

Tgt Ion:75 Resp: 2420308

Ion	Ratio	Lower	Upper
75	100		
157	92.9	52.6	78.8#
155	72.0	41.3	61.9#
0	0.0	0.0	0.0

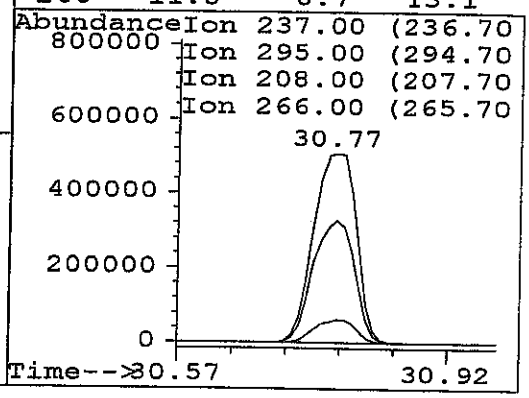


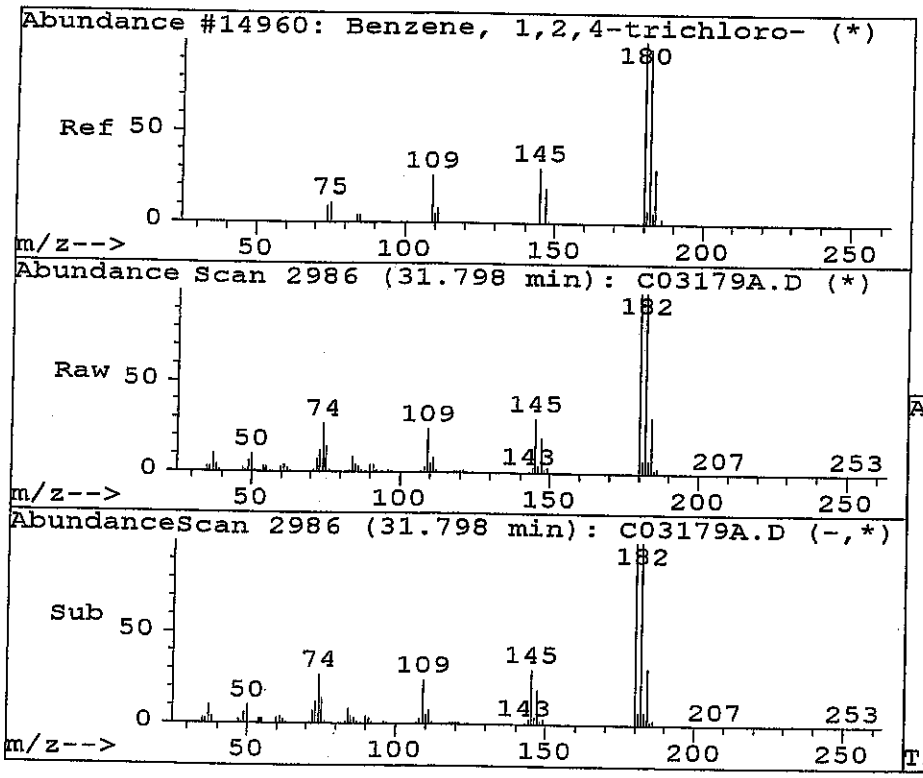


#85
Tetraethyl lead
Concen: 0.23 ppbV
RT: 30.77 min Scan# 2880
Delta R.T. -0.21 min
Lab File: C03179A.D
Acq: 17 Mar 109 8:47 am

Tgt Ion:237 Resp: 1960424

Ion	Ratio	Lower	Upper
237	100		
295	0.0	0.0	0.0
208	62.1	46.2	69.2
266	11.8	8.7	13.1

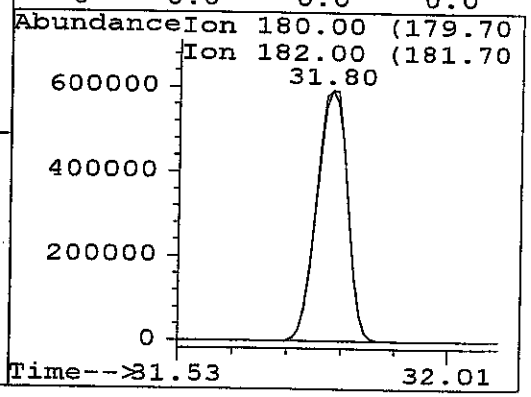


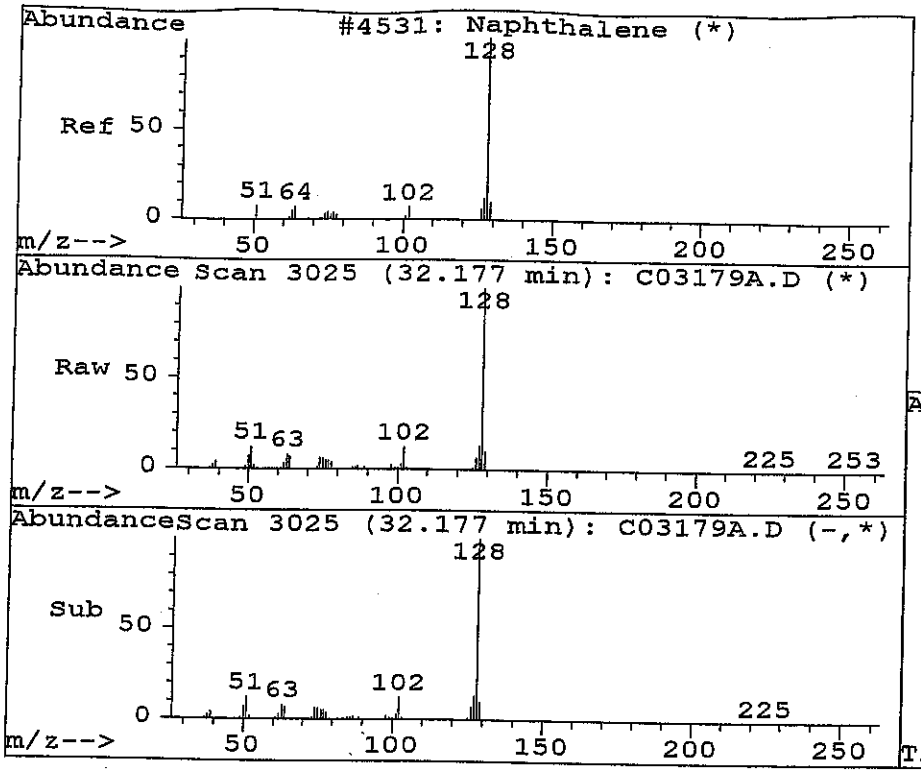


#86
1,2,4-Trichlorobenzene
Concen: 0.12 ppbV
RT: 31.80 min Scan# 2986
Delta R.T. -0.38 min
Lab File: C03179A.D
Acq: 17 Mar 109 8:47 am

Tgt Ion:180 Resp: 2236815

Ion	Ratio	Lower	Upper
180	100		
182	100.3	73.5	110.3
0	0.0	0.0	0.0
0	0.0	0.0	0.0

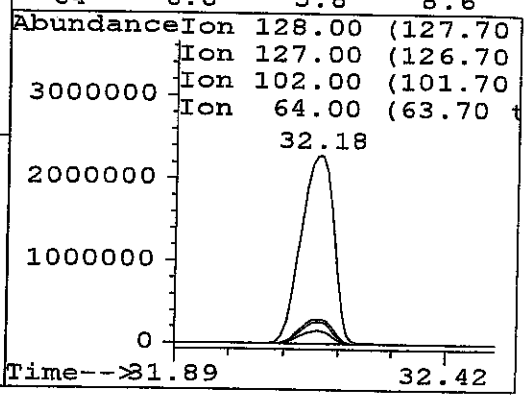


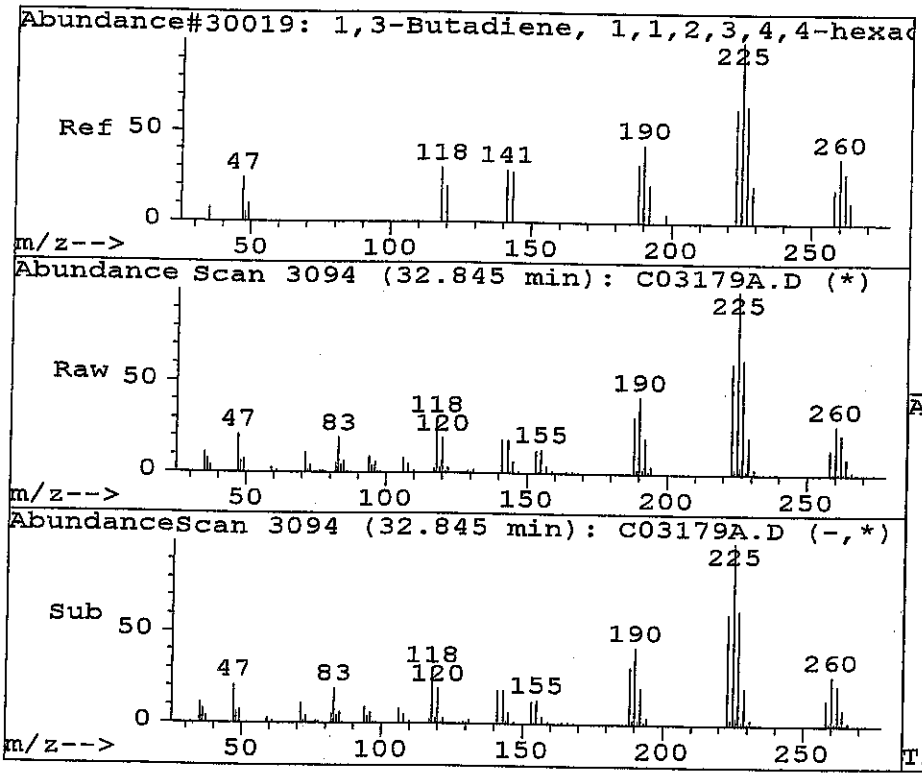


#87
Naphthalene
Concen: 0.34 ppbV
RT: 32.18 min Scan# 3025
Delta R.T. -0.23 min
Lab File: C03179A.D
Acq: 17 Mar 109 8:47 am

Tgt Ion:128 Resp:10074168

Ion	Ratio	Lower	Upper
128	100		
127	13.0	10.4	15.6
102	11.6	10.3	15.5
64	6.8	5.8	8.6

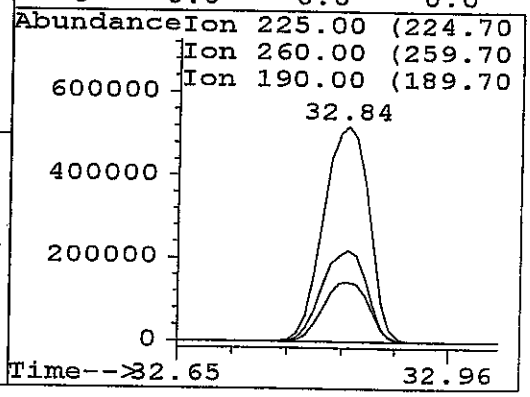


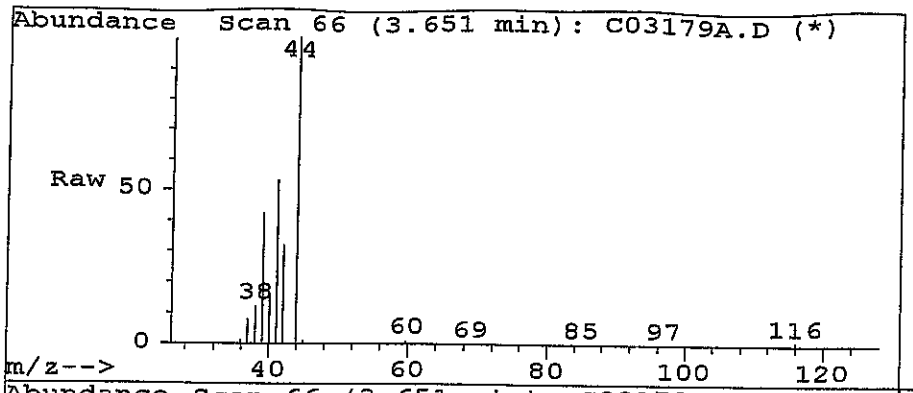


#88
Hexachlorobutadiene
Concen: 0.11 ppbV
RT: 32.84 min Scan# 3094
Delta R.T. -0.24 min
Lab File: C03179A.D
Acq: 17 Mar 109 8:47 am

Tgt Ion:225 Resp: 1914490

Ion	Ratio	Lower	Upper
225	100		
260	27.4	21.8	32.6
190	42.2	34.6	51.8
0	0.0	0.0	0.0

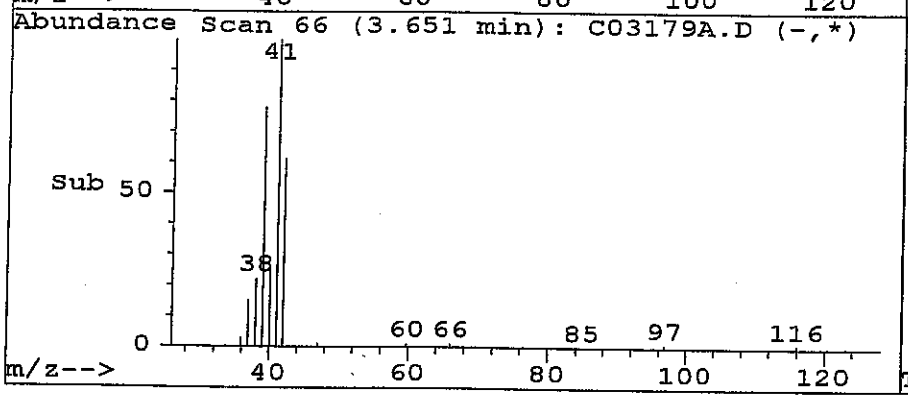


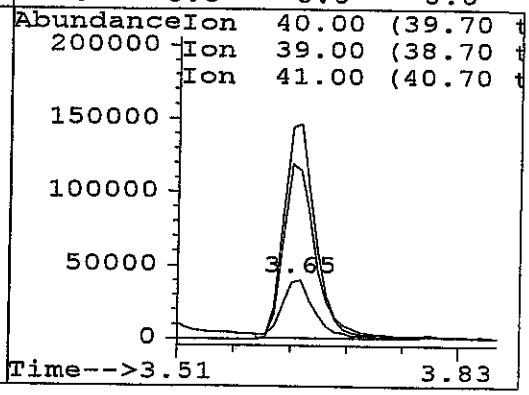


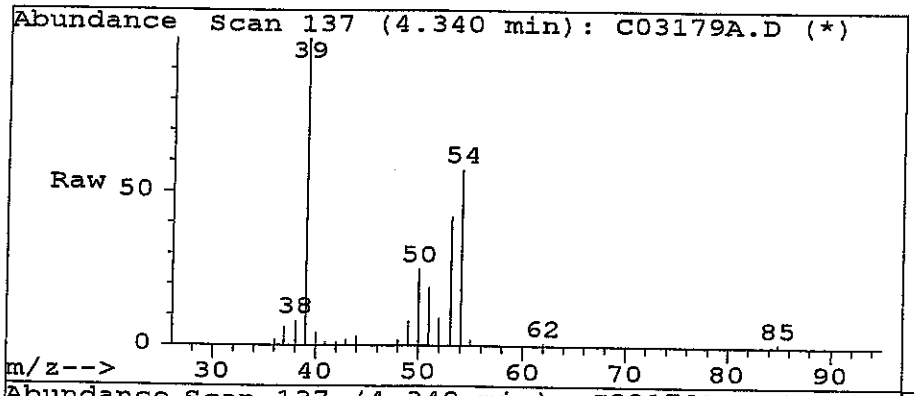
#89
Propylene
Concen: 0.21 ppbV
RT: 3.65 min Scan# 66
Delta R.T. -0.11 min
Lab File: C03179A.D
Acq: 17 Mar 109 8:47 am

Tgt Ion:40 Resp: 103546

Ion	Ratio	Lower	Upper
40	100		
39	292.6	241.5	362.3
41	359.5	303.8	455.6
0	0.0	0.0	0.0



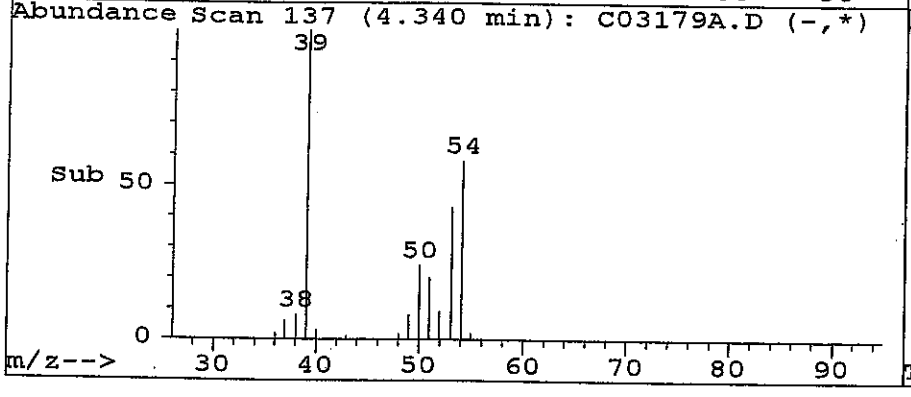


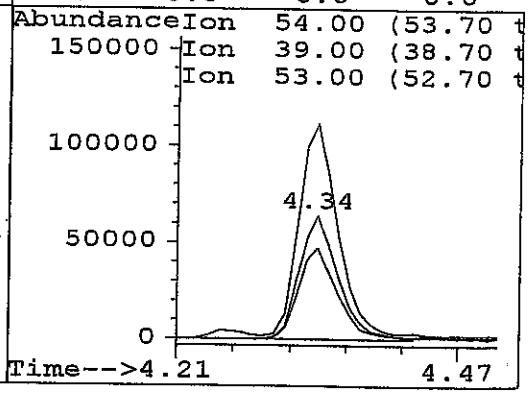


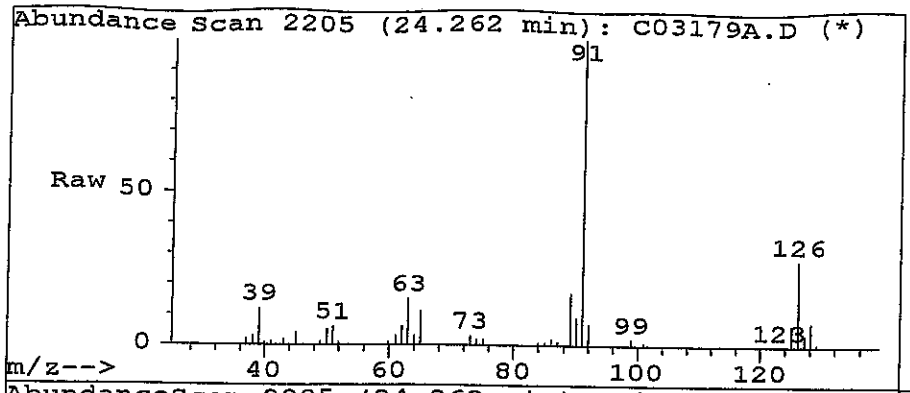
#90
1,3-Butadiene
Concen: 0.12 ppbV
RT: 4.34 min Scan# 137
Delta R.T. -0.13 min
Lab File: C03179A.D
Acq: 17 Mar 109 8:47 am

Tgt Ion:54 Resp: 157819

Ion	Ratio	Lower	Upper
54	100		
39	179.5	135.5	203.3
53	76.5	57.9	86.9
0	0.0	0.0	0.0



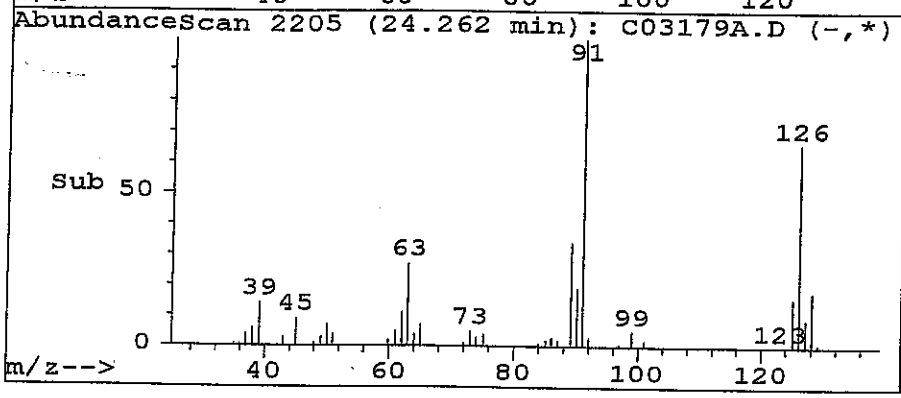


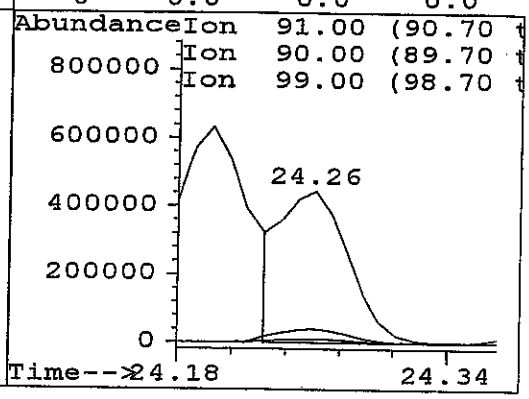


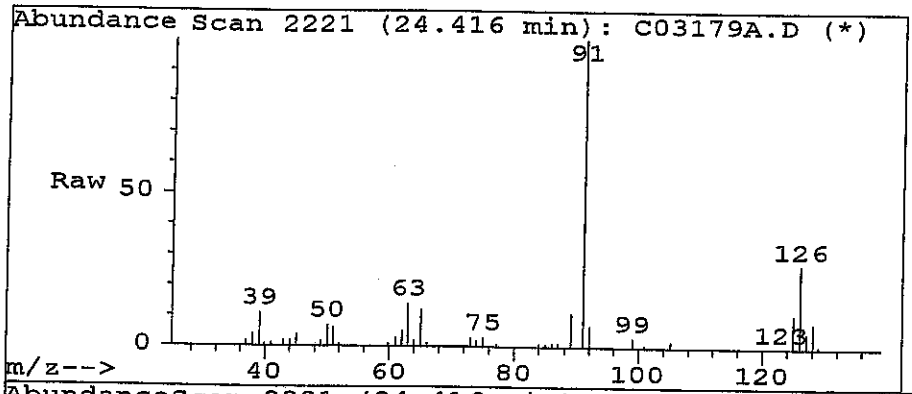
#92
2-Chlorotoluene
Concen: 0.06 ppbV m
RT: 24.26 min Scan# 2205
Delta R.T. -0.20 min
Lab File: C03179A.D
Acq: 17 Mar 109 8:47 am

Tgt Ion:91 Resp: 1196093

Ion	Ratio	Lower	Upper
91	100		
90	9.1	7.3	10.9
99	2.3	1.8	2.6
0	0.0	0.0	0.0



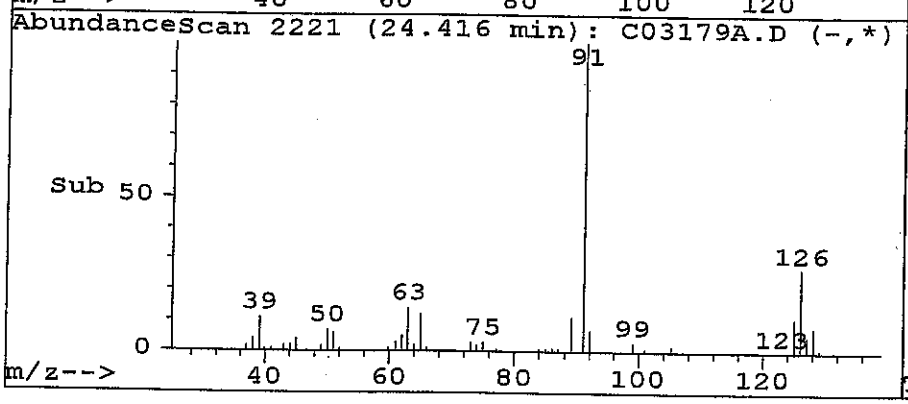


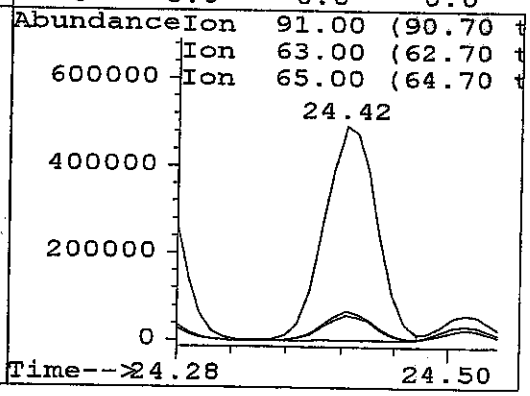


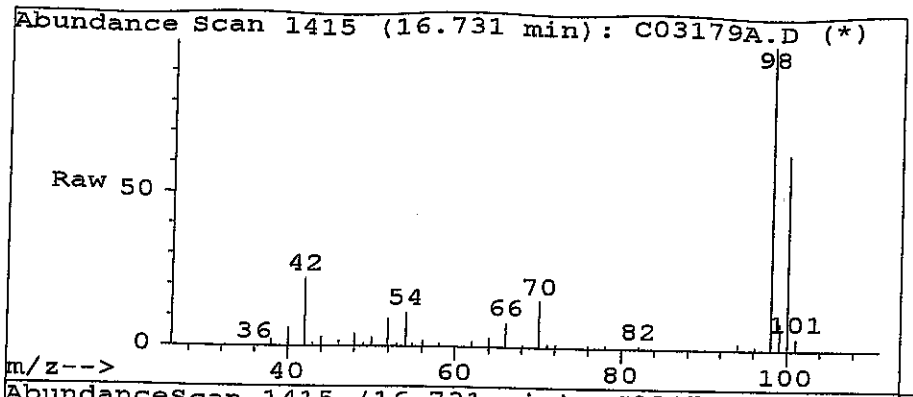
#93
4-Chlorotoluene
Concen: 0.09 ppbV
RT: 24.42 min Scan# 2221
Delta R.T. -0.23 min
Lab File: C03179A.D
Acq: 17 Mar 109 8:47 am

Tgt Ion:91 Resp: 1485093

Ion	Ratio	Lower	Upper
91	100		
63	13.5	11.4	17.0
65	11.9	9.6	14.4
0	0.0	0.0	0.0



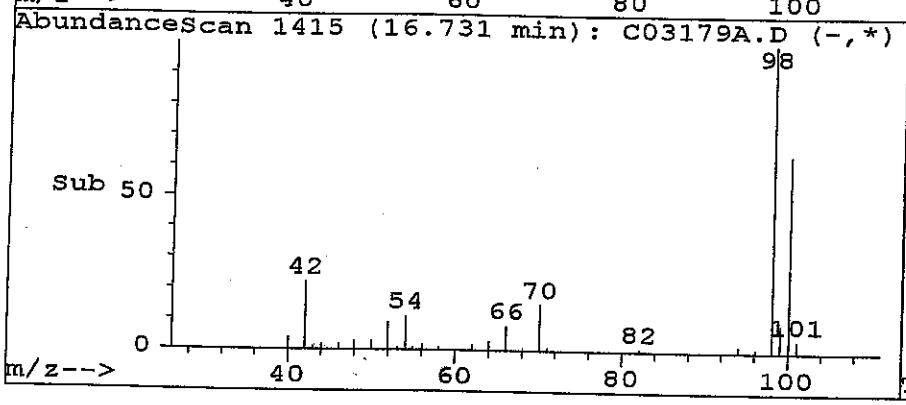


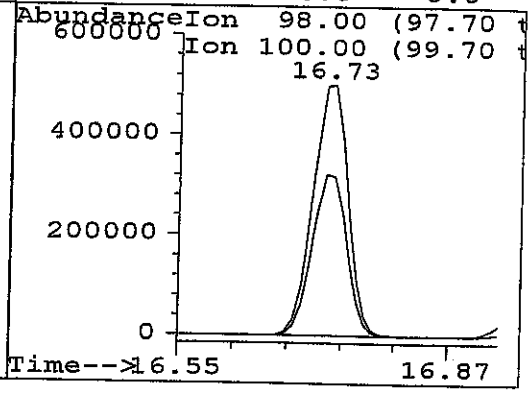


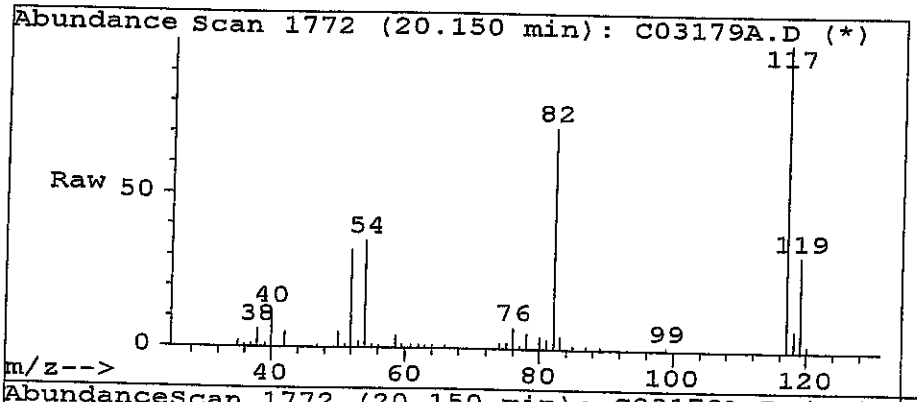
#94
Toluene-d8
Concen: 3.30 ppbV
RT: 16.73 min Scan# 1415
Delta R.T. -0.21 min
Lab File: C03179A.D
Acq: 17 Mar 109 8:47 am

Tgt Ion:98 Resp: 1469067

Ion	Ratio	Lower	Upper
98	100		
100	63.6	47.8	71.8
0	0.0	0.0	0.0
0	0.0	0.0	0.0



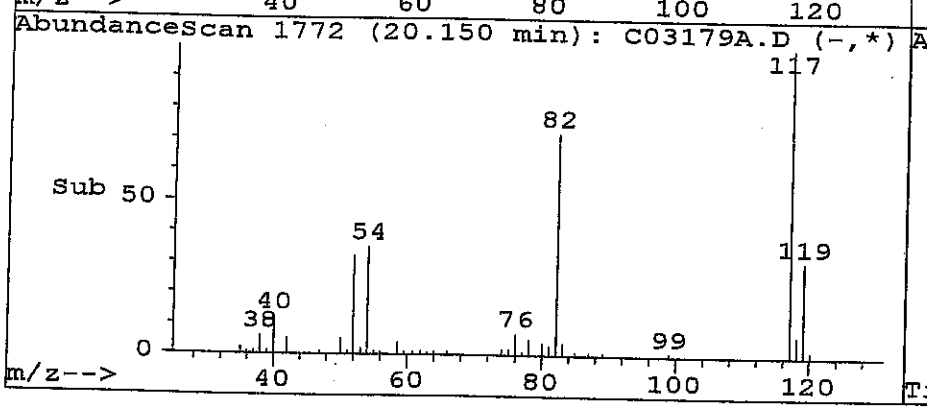


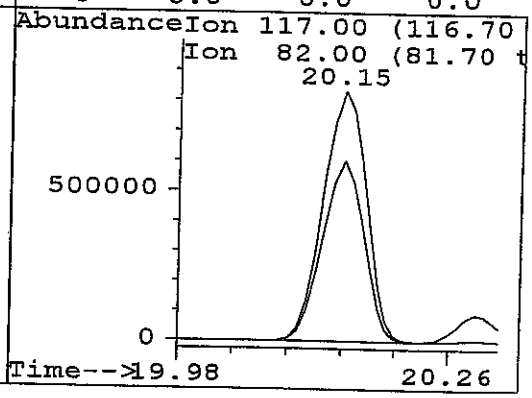


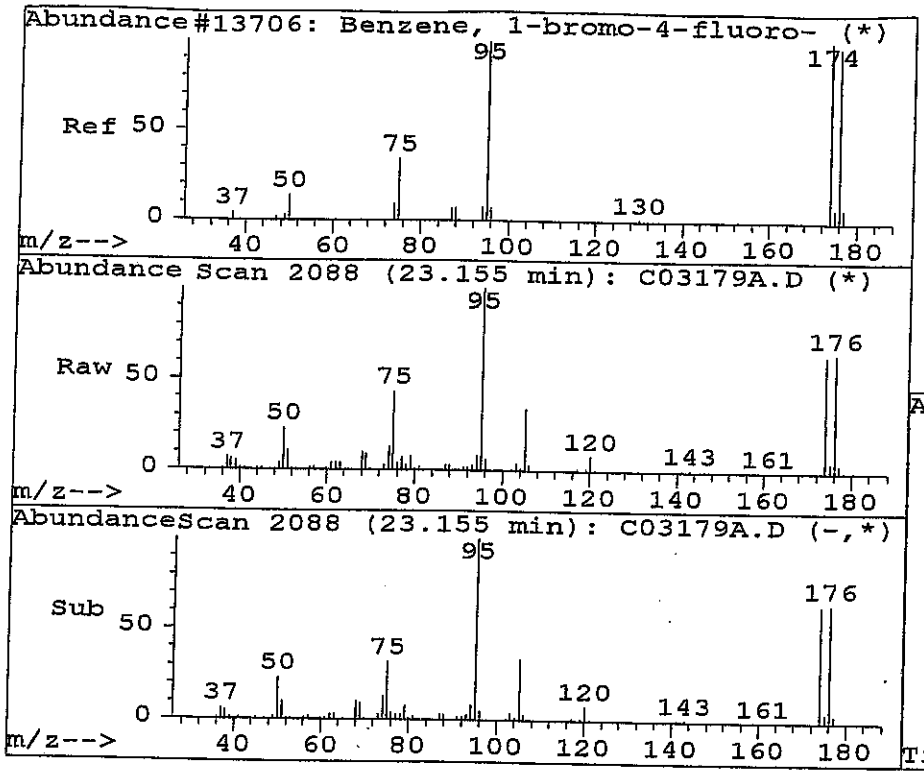
#95
Chlorobenzene-d5
Concen: 3.97 ppbV
RT: 20.15 min Scan# 1772
Delta R.T. -0.21 min
Lab File: C03179A.D
Acq: 17 Mar 109 8:47 am

Tgt Ion:117 Resp: 2602948

Ion	Ratio	Lower	Upper
117	100		
82	72.4	57.2	85.8
0	0.0	0.0	0.0
0	0.0	0.0	0.0



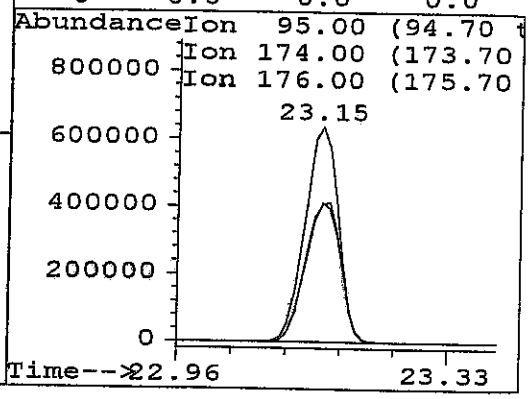




#96
1,4-Bromofluorobenzene
Concen: 6.29 ppbV
RT: 23.15 min Scan# 2088
Delta R.T. -0.23 min
Lab File: C03179A.D
Acq: 17 Mar 109 8:47 am

Tgt Ion:95 Resp: 2001651

Ion	Ratio	Lower	Upper
95	100		
174	64.0	53.0	79.4
176	64.6	52.7	79.1
0	0.0	0.0	0.0



Quantitation Report

Data File : C:\MSCHEM\2\DATA\03179M~1\C03179B.D
Acq Time : 17 Mar 109 9:42 am
Sample : ST60022 + ST60350
Misc : 1.0
Quant Time: Mar 17 11:22 19109

Operator: KB
Inst : 5970 - In
Multiplr: 1.00

Method : C:\MSCHEM\2\METHODS\1T15EXAY.M
Title : EPA TO-15
Last Update : Tue Mar 17 14:18:15 2009
Response via : Multiple Level Calibration

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Pentafluorobenzene	11.20	168	2871816	20.00 ppbV	-0.18
35) 1,4-Difluorobenzene	12.98	114	2814997	20.00 ppbV	-0.19
System Monitoring Compounds					%Recovery
94) Toluene-d8	16.72	98	1590486	10.44 ppbV	208.85%
95) Chlorobenzene-d5	20.15	117	2937451	22.12 ppbV	221.24%
96) 1,4-Bromofluorobenzene	23.15	95	2352342	11.12 ppbV	222.39%
Target Compounds					Qvalue
2) Dichlorodifluoromethane	3.73	85	88898	1.31 ppbV	99
3) Chloromethane	3.98	50	55434	1.34 ppbV	99
4) Freon 114	4.00	85	94441	1.37 ppbV #	88
5) Vinyl chloride	4.22	62	32643	1.33 ppbV	96
6) Bromomethane	4.78	94	28890	1.08 ppbV	96
7) Chloroethane	4.98	64	16630	1.38 ppbV #	84
8) Ethanol	5.03	45	163073	5.91 ppbV	98
9) Acrolein	5.75	56	46235	7.12 ppbV #	78
10) Trichlorofluoromethane	5.80	101	85037	1.07 ppbV	98
11) Acetonitrile	5.80	41	174401	4.74 ppbV	97
12) Acetone	5.88	43	113697	0.85 ppbV	97
13) 2-propanol	5.97	45	75563	1.26 ppbV #	100
14) Methyl iodide	6.82	142	72721	2.07 ppbV	99
15) 1,1-Dichloroethene	6.72	61	63935	1.10 ppbV	98
16) Acrylonitrile	6.78	53	141541	4.98 ppbV	97
17) Freon 113	7.00	151	45725	0.82 ppbV	91
18) Allyl chloride	7.19	41	54211	1.31 ppbV	89
19) Dichloromethane	7.15	84	26131	1.07 ppbV	92
20) Carbon disulfide	7.38	76	33136	1.57 ppbV	94
21) trans-1,2-Dichloroethene	8.21	96	23397	1.07 ppbV	94
22) Methyl tert butyl ether	8.38	73	97431	0.92 ppbV #	95
23) Propionitrile	8.63	54	109954	3.94 ppbV	95
24) 1,1-Dichloroethane	8.73	63	85531	1.29 ppbV	98
25) Vinyl acetate	10.12	43	149287	1.32 ppbV	100
26) 2-Butanone	9.36	72	22013	1.15 ppbV #	83
27) Hexane	9.53	57	47026	0.92 ppbV	78
28) Bromochloromethane	10.31	49	80833	1.39 ppbV #	76
29) Tetrahydrofuran	10.64	42	383009	1.75 ppbV m	44
30) Isobutyl alcohol	10.64	74	30717	4.08 ppbV #	97
31) Methacrylonitrile	9.53	67	81589	4.36 ppbV #	90
32) cis-1,2-Dichloroethene	9.92	96	43510	1.22 ppbV	93
33) 2,2-Dichloropropane	10.23	77	72177	1.00 ppbV #	91
34) Chloroform	10.33	83	101707	1.21 ppbV	99
36) 1,1,1-Trichloroethane	11.61	97	100881	0.99 ppbV	92
37) 1,2-Dichloroethane	11.67	62	96975	1.09 ppbV	94
38) 1,1-Dichloropropene	12.05	75	62476	1.00 ppbV	98
39) Cyclohexane	12.38	56	83495	1.39 ppbV	90
40) Benzene	12.31	78	206967	1.49 ppbV	94
41) Carbon tetrachloride	12.37	117	105798	0.97 ppbV	95
42) n-Heptane	13.83	43	135509	1.35 ppbV #	90
43) 1,2-Dichloropropane	13.85	63	66789	1.41 ppbV	98
44) 1,4 Dioxane	14.18	88	43700	1.28 ppbV #	99
45) Dibromomethane	13.99	174	87600	0.99 ppbV	95
46) Trichloroethene	13.92	130	83100	0.97 ppbV	98
47) Bromodichloromethane	14.19	83	96325	0.98 ppbV	98
48) Methyl methacrylate	14.32	69	161809	3.60 ppbV	88
49) Methyl Isobutyl Ketone	15.52	43	250239	1.38 ppbV	95

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

Quantitation Report

Data File : C:\MSCHEM\2\DATA\03179M~1\C03179B.D
Acq Time : 17 Mar 109 9:42 am
Sample : ST60022 + ST60350
Misc : 1.0
Quant Time: Mar 17 11:22 19109

Operator: KB
Inst : 5970 - In
Multiplr: 1.00

Method : C:\MSCHEM\2\METHODS\1T15EXAY.M
Title : EPA TO-15
Last Update : Tue Mar 17 14:18:15 2009
Response via : Multiple Level Calibration

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
50)	cis-1,3-Dichloropropene	15.61	75	107039	1.33	ppbV		100
51)	Toluene	16.91	91	257501	1.43	ppbV		99
52)	trans-1,3-Dichloropropene	16.63	75	127376	1.25	ppbV		97
53)	1,1,2-Trichloroethane	16.94	61	68163	1.29	ppbV		92
54)	2-Hexanone	17.55	43	311524	1.34	ppbV	#	98
55)	1,3-Dichloropropane	17.51	76	102447	1.26	ppbV		98
56)	Octane	18.05	57	67553	1.02	ppbV		95
57)	Dibromochloromethane	18.07	129	150691	1.07	ppbV		97
58)	1,2-Dibromoethane	18.57	107	169213	1.31	ppbV		97
59)	Tetrachloroethene	18.76	166	145069	1.15	ppbV		92
60)	Chlorobenzene	20.23	112	208106	1.26	ppbV		95
61)	1,1,1,2-Tetrachloroethane	20.29	131	104954	1.11	ppbV		92
62)	Ethylbenzene	20.76	91	359496	1.34	ppbV		98
63)	m & p-Xylene	21.06	91	617919	2.63	ppbV		99
64)	Styrene	21.88	104	224026	1.35	ppbV		99
65)	Bromoform	21.79	173	243927	1.09	ppbV		97
66)	o-Xylene	22.01	91	329821	1.29	ppbV		93
67)	1,1,2,2-Tetrachloroethane	22.54	83	274703	1.45	ppbV		97
68)	1,2,3-Trichloropropane	22.84	110	64244	1.17	ppbV		98
69)	t-1,4-Dichloro-2-butene	22.98	53	171723	3.23	ppbV		96
70)	n-Propylbenzene	24.20	91	514907	1.19	ppbV		97
71)	Isopropylbenzene	24.51	105	437379	1.30	ppbV		98
72)	4-Ethyltoluene	24.51	105	437379	1.28	ppbV	#	97
73)	1,3,5-Trimethylbenzene	24.66	105	488965	1.41	ppbV		99
74)	Methylstyrene	25.14	118	252870	1.89	ppbV		100
75)	tert-butyl benzene	25.58	119	390637	1.25	ppbV		96
76)	1,2,4-Trimethylbenzene	25.61	105	501359	1.31	ppbV		97
77)	sec-butylbenzene	26.21	105	578680	1.39	ppbV		98
78)	1,3-Dichlorobenzene	26.18	146	411700	1.33	ppbV		97
79)	Isopropyltoluene	26.59	119	552096	1.34	ppbV		99
80)	Benzyl chloride	26.33	91	459781	1.34	ppbV		99
81)	1,4-Dichlorobenzene	26.37	146	417021	1.28	ppbV		95
82)	n-Butylbenzene	27.65	91	640508	1.47	ppbV		98
83)	1,2-Dichlorobenzene	27.23	146	429307	1.19	ppbV		96
84)	1,2-Dibromo-3-chloropropan	28.72	75	795765	3.87	ppbV		97
85)	Tetraethyl lead	30.76	237	750701	2.58	ppbV	#	95
86)	1,2,4-Trichlorobenzene	31.79	180	905400	1.42	ppbV		89
87)	Naphthalene	32.15	128	4198495	6.14	ppbV	#	98
88)	Hexachlorobutadiene	32.83	225	758051	1.52	ppbV		96
89)	Propylene	3.65	40	34907	3.00	ppbV	#	47
90)	1,3-Butadiene	4.34	54	32969	1.34	ppbV		95
92)	2-Chlorotoluene	24.25	91	342293	1.08	ppbV	m	100
93)	4-Chlorotoluene	24.41	91	427755	1.29	ppbV		99

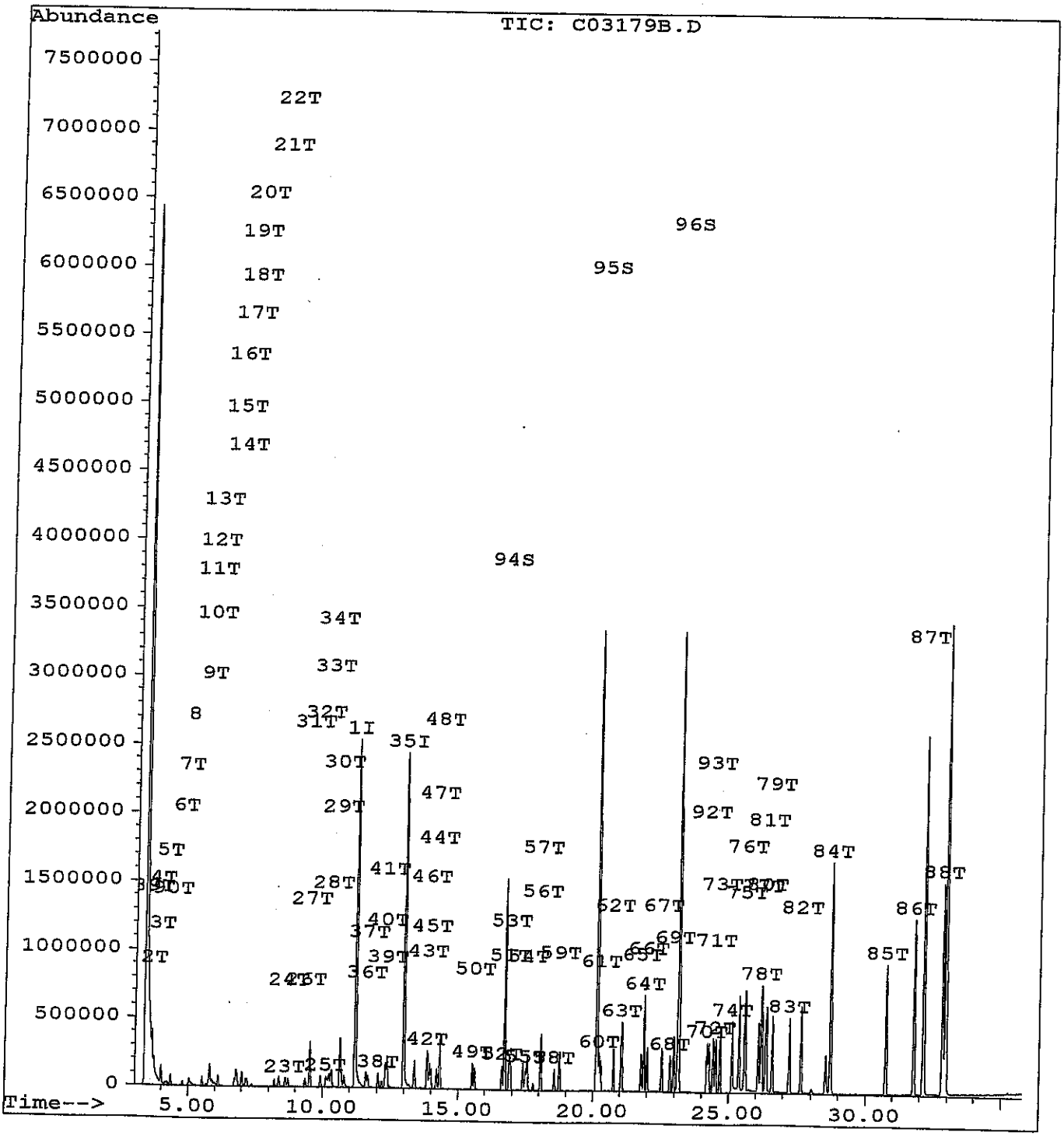
(#) = qualifier out of range (m) = manual integration

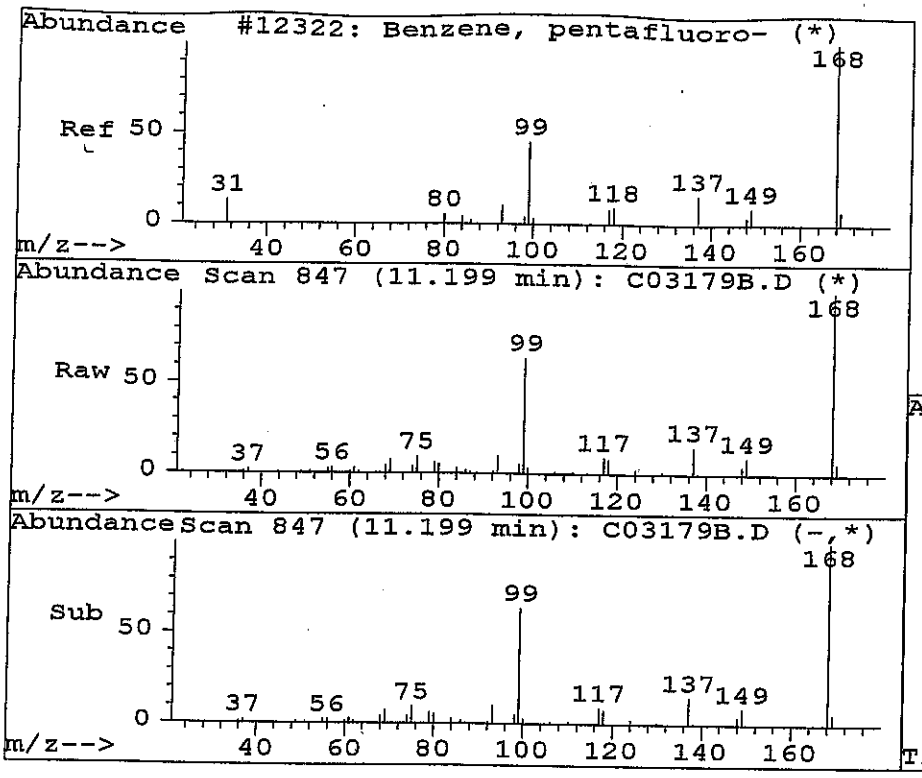
Quantitation Report

Data File : C:\MSCHEM\2\DATA\03179M~1\C03179B.D
Acq Time : 17 Mar 109 9:42 am
Sample : ST60022 + ST60350
Misc : 1.0
Quant Time: Mar 17 11:22 19109

Operator: KB
Inst : 5970 - In
Multiplr: 1.00

Method : C:\MSCHEM\2\METHODS\1T15EXAY.M
Title : EPA TO-15
Last Update : Tue Mar 17 14:18:15 2009
Response via : Multiple Level Calibration

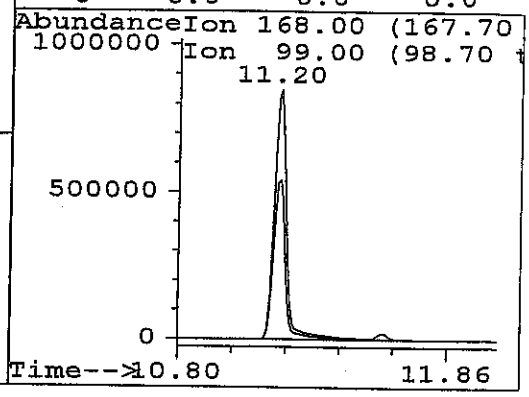


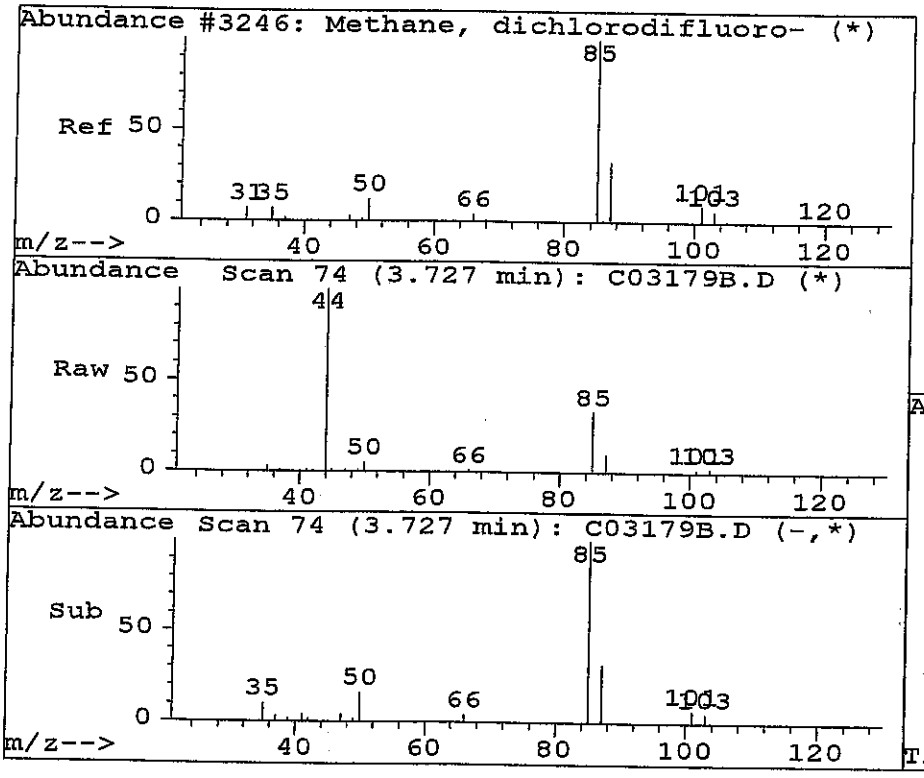


#1
Pentafluorobenzene
Concen: 20.00 ppbV
RT: 11.20 min Scan# 847
Delta R.T. -0.18 min
Lab File: C03179B.D
Acq: 17 Mar 109 9:42 am

Tgt Ion:168 Resp: 2871816

Ion	Ratio	Lower	Upper
168	100		
99	63.9	46.6	70.0
0	0.0	0.0	0.0
0	0.0	0.0	0.0

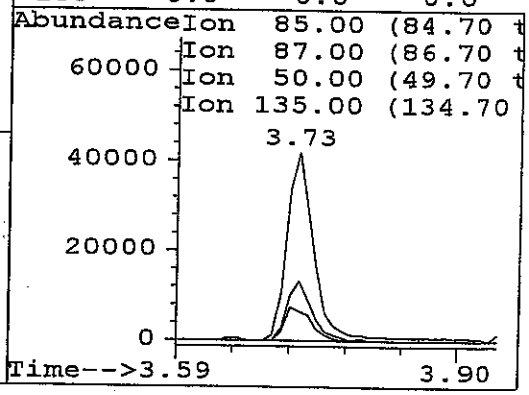


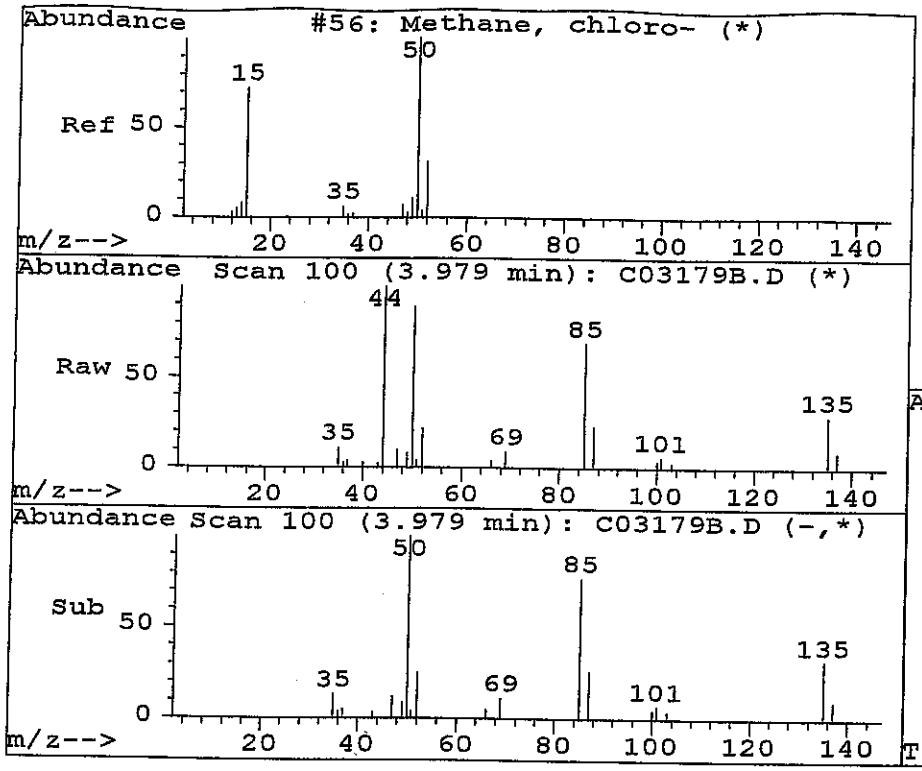


#2
Dichlorodifluoromethane
Concen: 1.31 ppbV
RT: 3.73 min Scan# 74
Delta R.T. -0.10 min
Lab File: C03179B.D
Acq: 17 Mar 109 9:42 am

Tgt Ion:85 Resp: 88898

Ion	Ratio	Lower	Upper
85	100		
87	31.8	25.6	38.4
50	15.8	13.4	20.2
135	0.0	0.0	0.0

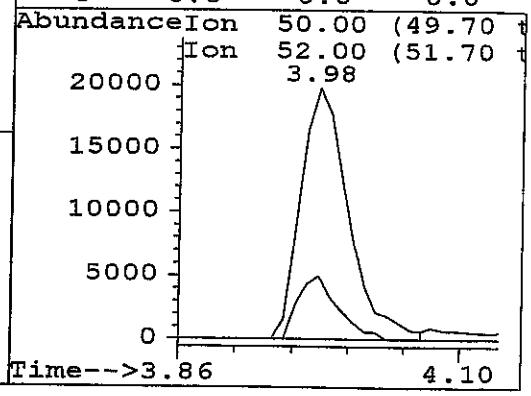


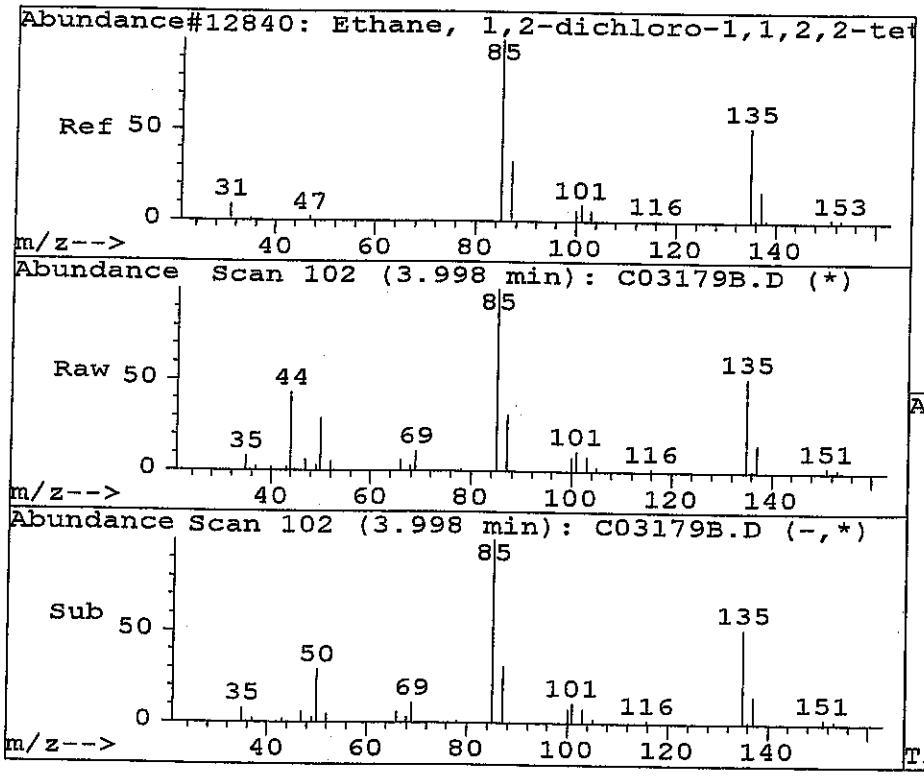


#3
Chloromethane
Concen: 1.34 ppbV
RT: 3.98 min Scan# 100
Delta R.T. -0.11 min
Lab File: C03179B.D
Acq: 17 Mar 109 9:42 am

Tgt Ion:50 Resp: 55434

Ion	Ratio	Lower	Upper
50	100		
52	25.6	20.2	30.2
0	0.0	0.0	0.0
0	0.0	0.0	0.0

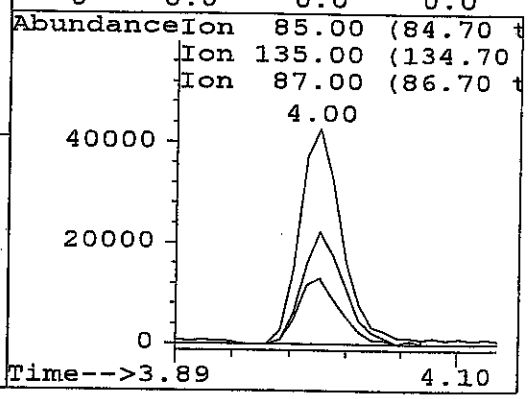


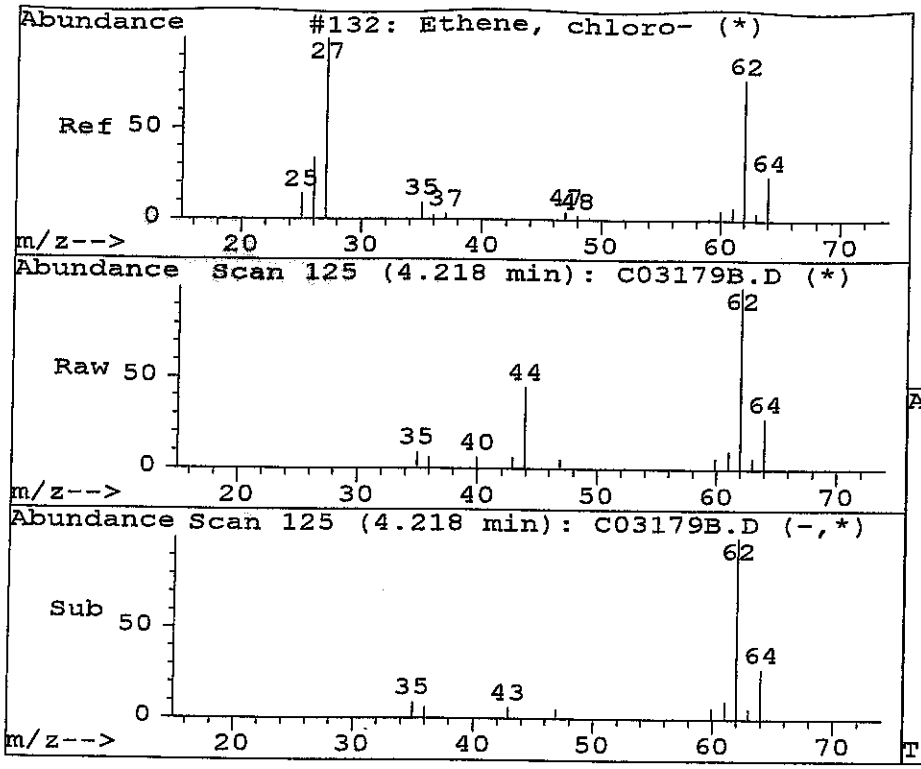


#4
Freon 114
Concen: 1.37 ppbV
RT: 4.00 min Scan# 102
Delta R.T. -0.11 min
Lab File: C03179B.D
Acq: 17 Mar 109 9:42 am

Tgt Ion:85 Resp: 94441

Ion	Ratio	Lower	Upper
85	100		
135	52.7	53.3	79.9#
87	30.8	25.2	37.8
0	0.0	0.0	0.0

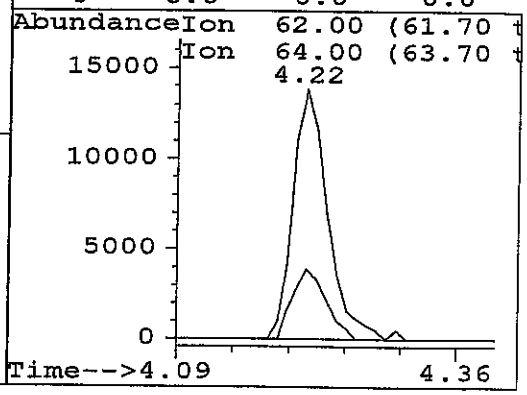


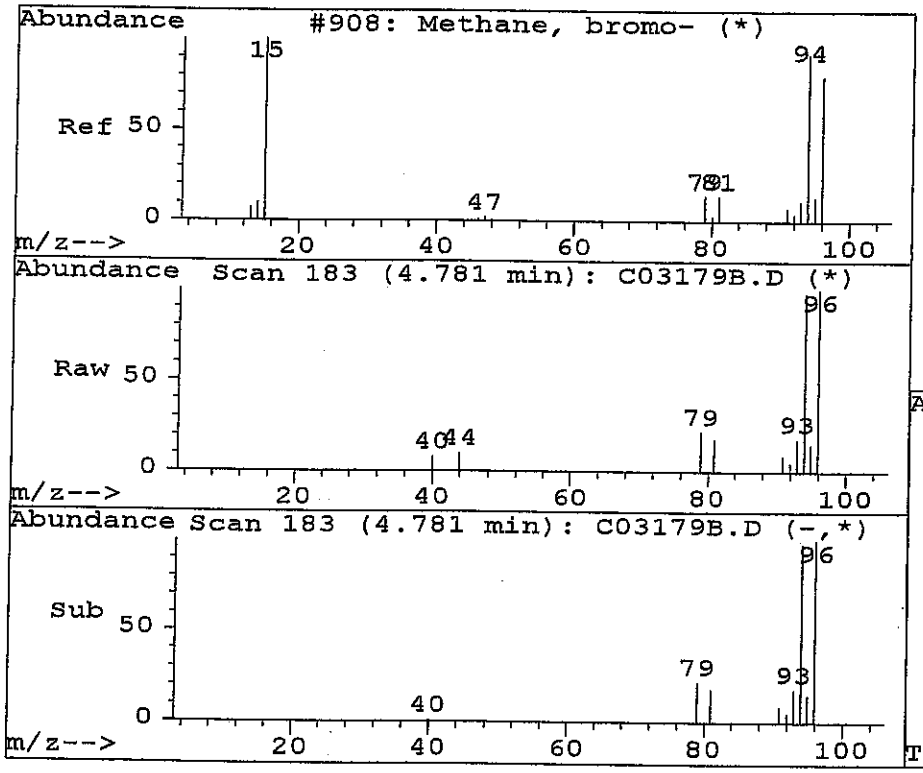


#5
Vinyl chloride
Concen: 1.33 ppbV
RT: 4.22 min Scan# 125
Delta R.T. -0.11 min
Lab File: C03179B.D
Acq: 17 Mar 109 9:42 am

Tgt Ion:62 Resp: 32643

Ion	Ratio	Lower	Upper
62	100		
64	28.2	24.5	36.7
0	0.0	0.0	0.0
0	0.0	0.0	0.0

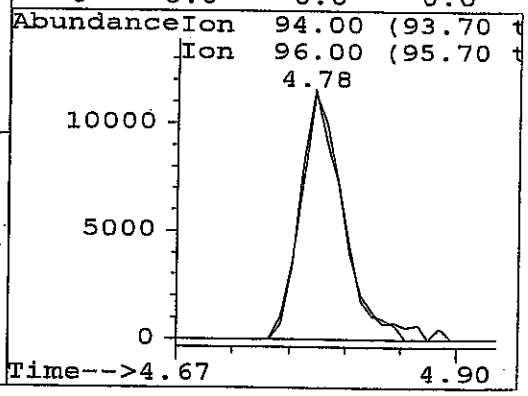


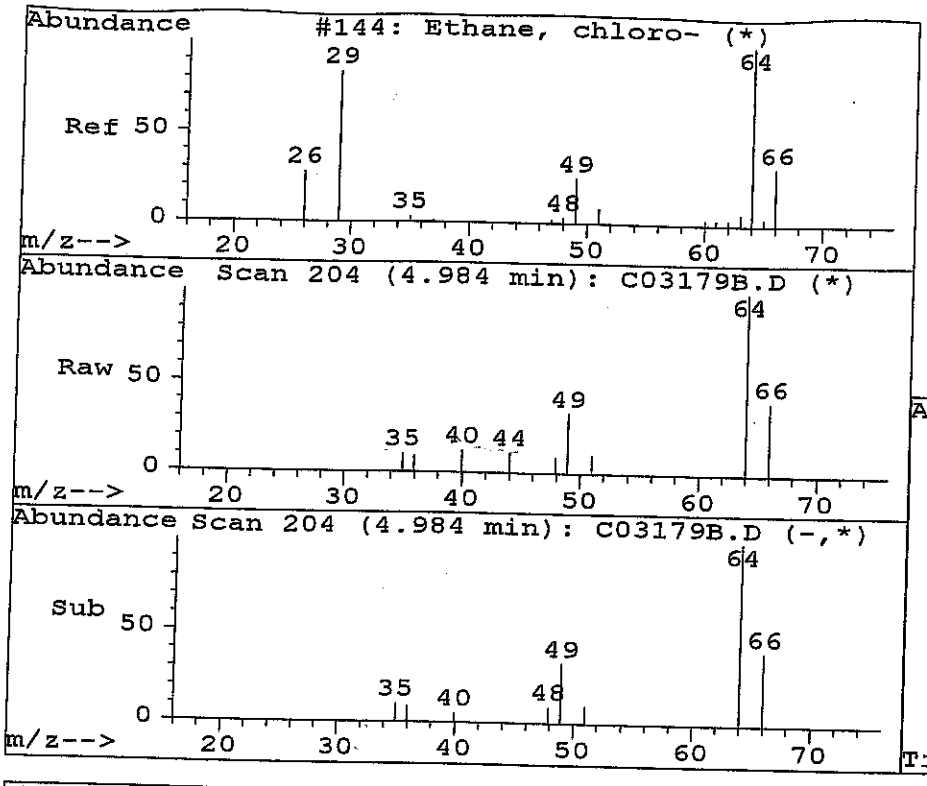


#6
Bromomethane
Concen: 1.08 ppbV
RT: 4.78 min Scan# 183
Delta R.T. -0.14 min
Lab File: C03179B.D
Acq: 17 Mar 109 9:42 am

Tgt Ion:94 Resp: 28890

Ion	Ratio	Lower	Upper
94	100		
96	98.9	75.8	113.6
0	0.0	0.0	0.0
0	0.0	0.0	0.0

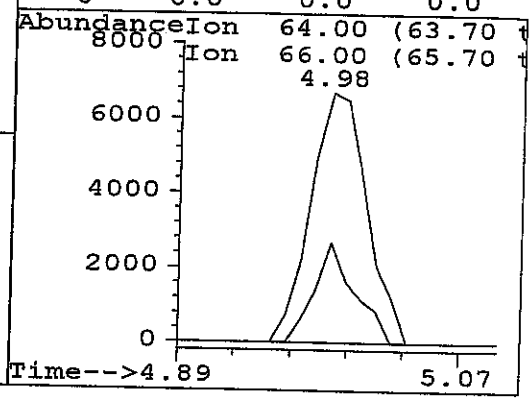


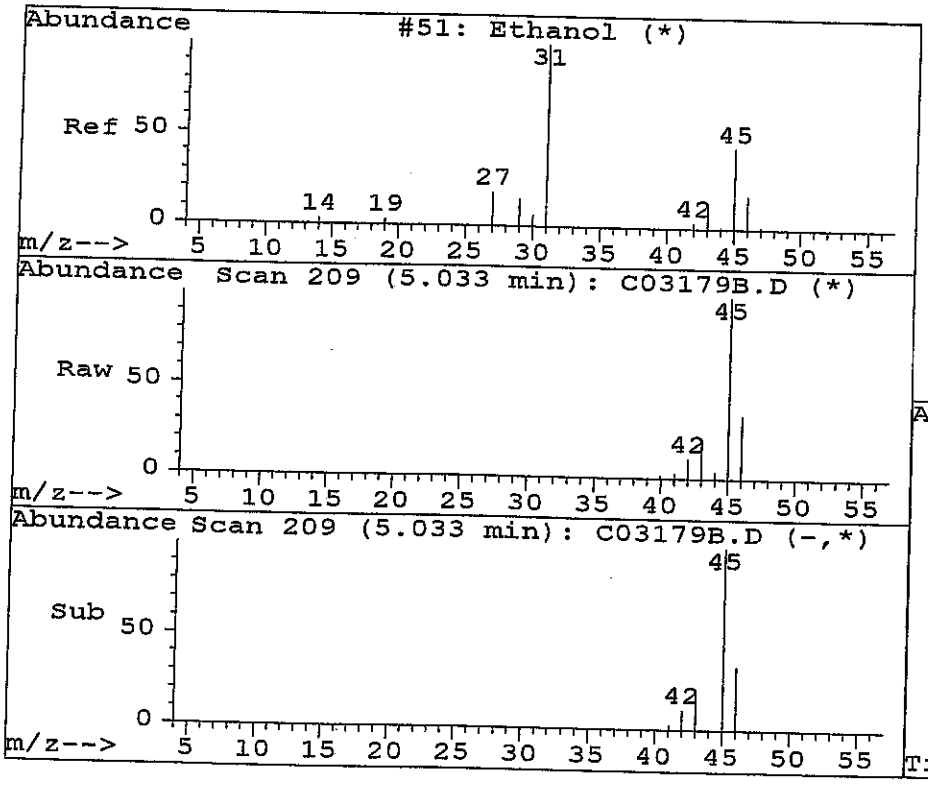


#7
Chloroethane
Concen: 1.38 ppbV
RT: 4.98 min Scan# 204
Delta R.T. -0.14 min
Lab File: C03179B.D
Acq: 17 Mar 109 9:42 am

Tgt Ion:64 Resp: 16630

Ion	Ratio	Lower	Upper
64	100		
66	39.8	24.9	37.3#
0	0.0	0.0	0.0
0	0.0	0.0	0.0

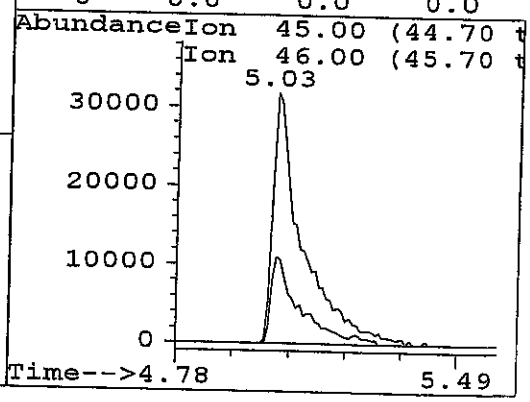


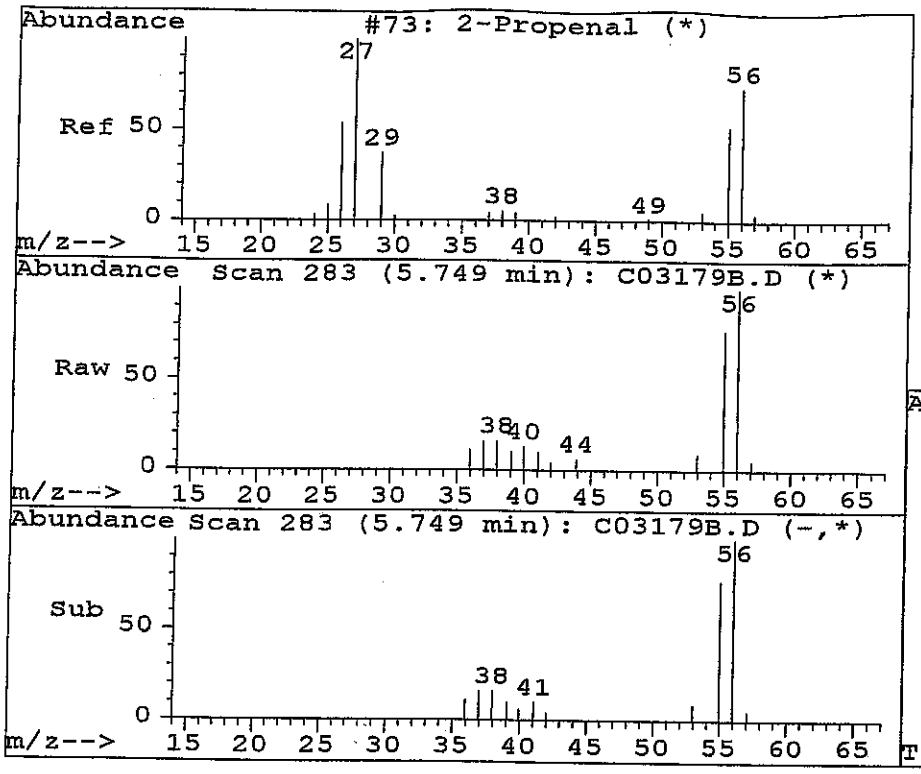


#8
Ethanol
Concen: 5.91 ppbV
RT: 5.03 min Scan# 209
Delta R.T. -0.17 min
Lab File: C03179B.D
Acq: 17 Mar 109 9:42 am

Tgt Ion:45 Resp: 163073

Ion	Ratio	Lower	Upper
45	100		
46	32.0	26.4	39.6
0	0.0	0.0	0.0
0	0.0	0.0	0.0

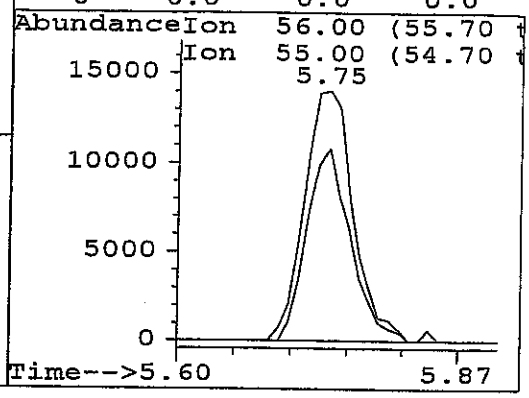


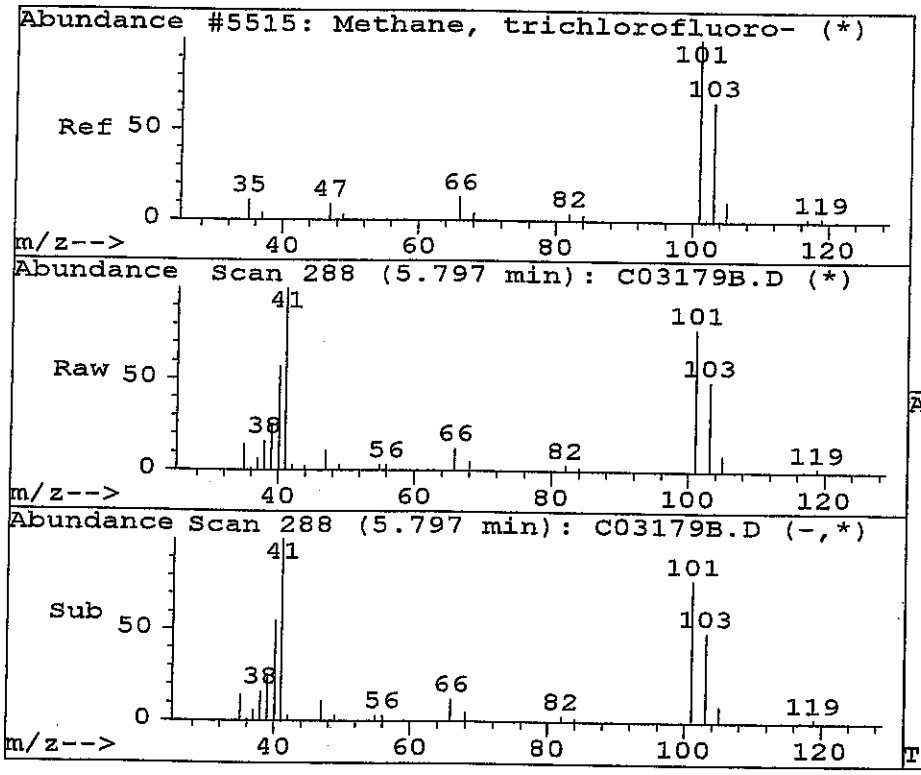


#9
Acrolein
Concen: 7.12 ppbV
RT: 5.75 min Scan# 283
Delta R.T. -0.14 min
Lab File: C03179B.D
Acq: 17 Mar 109 9:42 am

Tgt Ion:56 Resp: 46235

Ion	Ratio	Lower	Upper
56	100		
55	77.1	48.6	72.8#
0	0.0	0.0	0.0
0	0.0	0.0	0.0

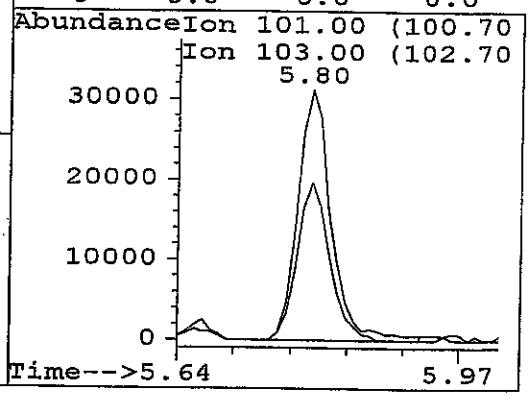


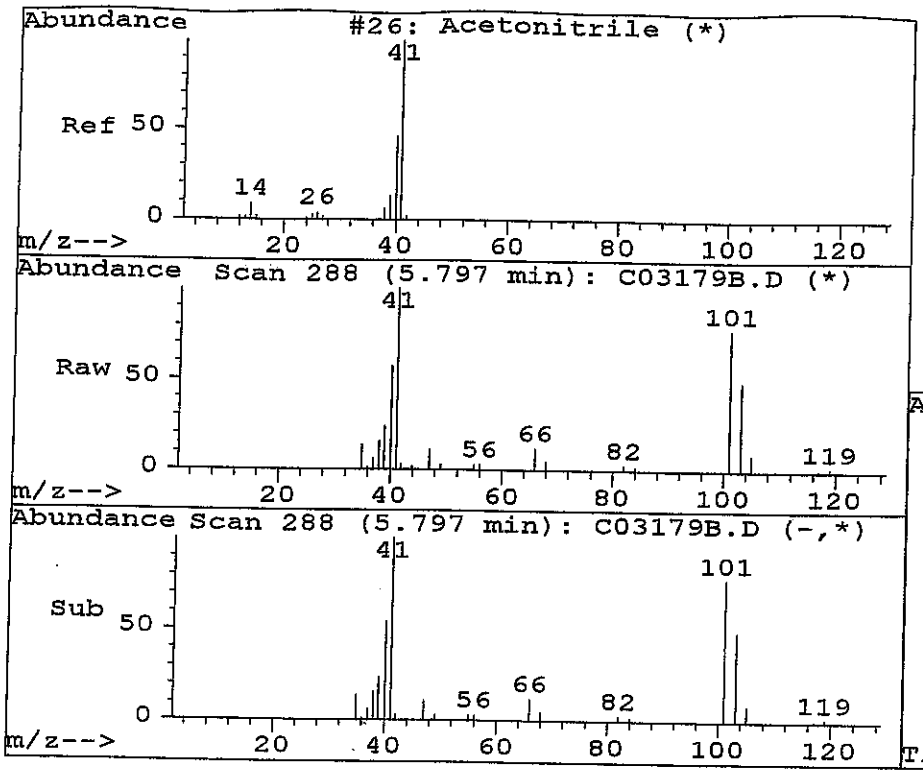


#10
Trichlorofluoromethane
Concen: 1.07 ppbV
RT: 5.80 min Scan# 288
Delta R.T. -0.14 min
Lab File: C03179B.D
Acq: 17 Mar 109 9:42 am

Tgt Ion:101 Resp: 85037

Ion	Ratio	Lower	Upper
101	100		
103	63.9	49.8	74.6
0	0.0	0.0	0.0
0	0.0	0.0	0.0

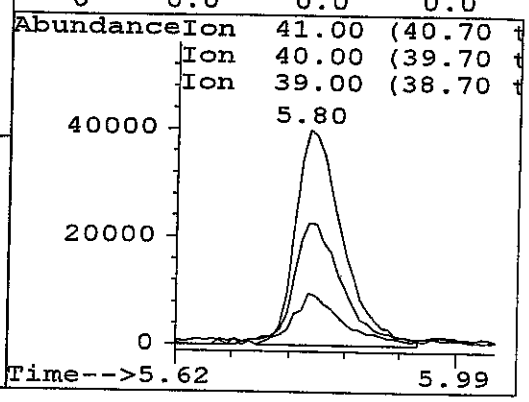


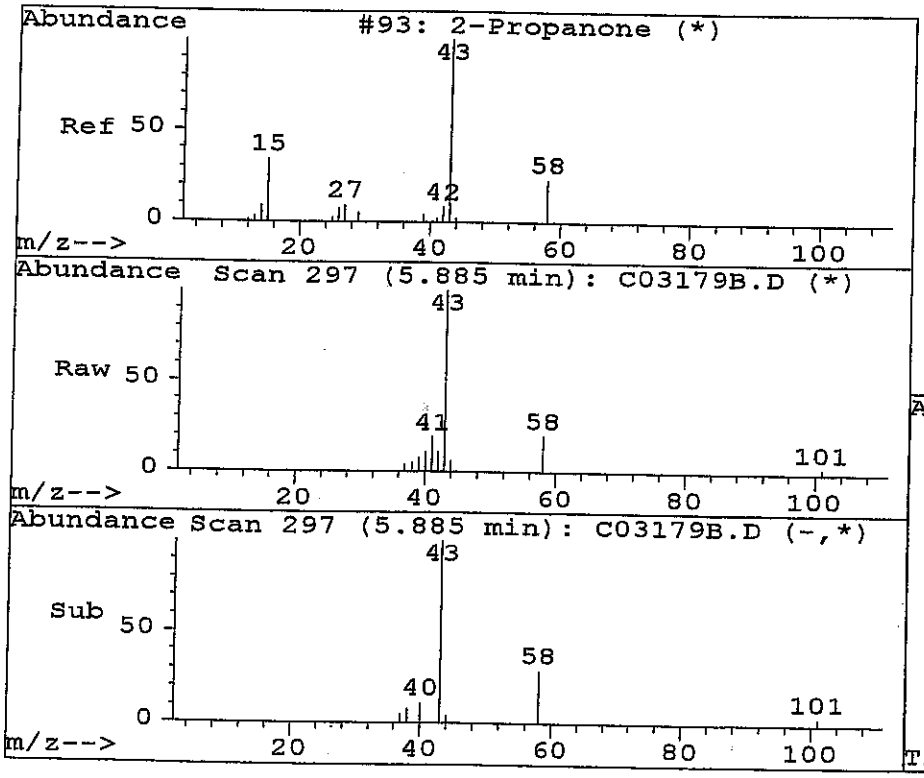


#11
Acetonitrile
Concen: 4.74 ppbV
RT: 5.80 min Scan# 288
Delta R.T. -0.16 min
Lab File: C03179B.D
Acq: 17 Mar 109 9:42 am

Tgt Ion:41 Resp: 174401

Ion	Ratio	Lower	Upper
41	100		
40	54.7	46.1	69.1
39	22.3	17.9	26.9
0	0.0	0.0	0.0

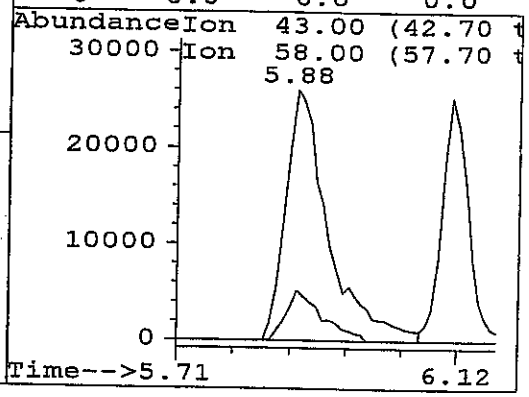


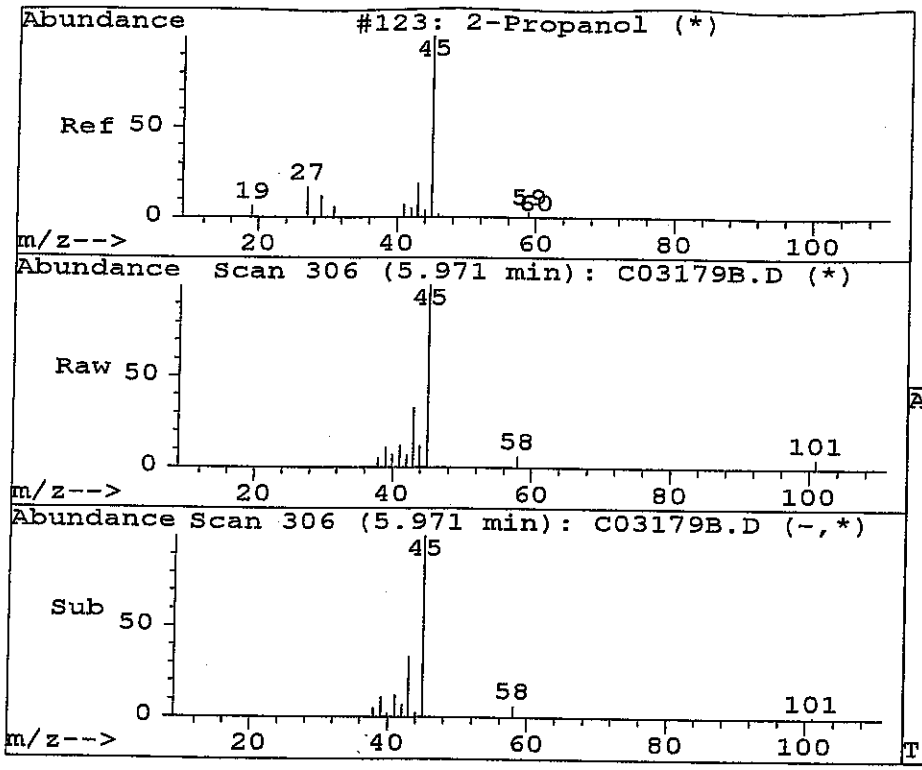


#12
Acetone
Concen: 0.85 ppbV
RT: 5.88 min Scan# 297
Delta R.T. -0.16 min
Lab File: C03179B.D
Acq: 17 Mar 109 9:42 am

Tgt Ion:43 Resp: 113697

Ion	Ratio	Lower	Upper
43	100		
58	20.3	15.0	22.6
0	0.0	0.0	0.0
0	0.0	0.0	0.0

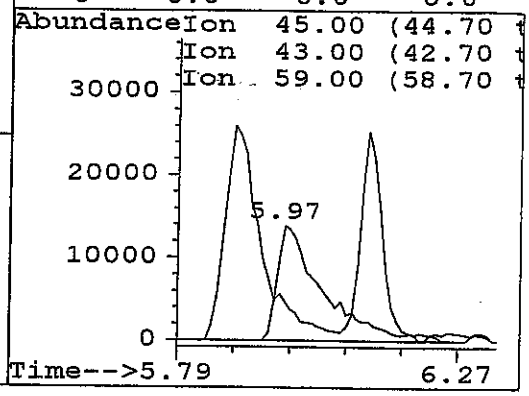


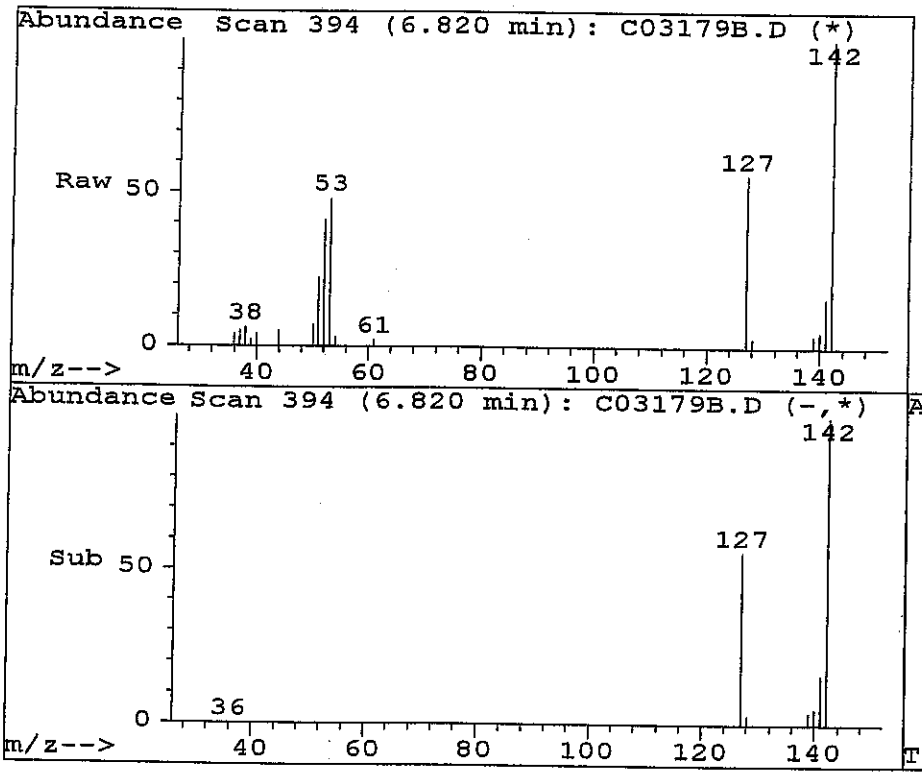


#13
2-propanol
Concen: 1.26 ppbV
RT: 5.97 min Scan# 306
Delta R.T. -0.17 min
Lab File: C03179B.D
Acq: 17 Mar 109 9:42 am

Tgt Ion:45 Resp: 75563

Ion	Ratio	Lower	Upper
45	100		
43	0.0	0.0	0.0
59	0.0	0.0	0.0
0	0.0	0.0	0.0

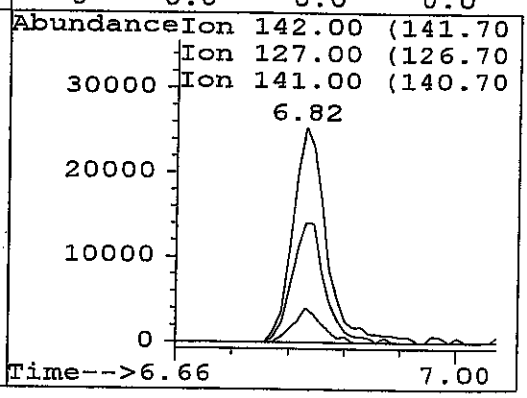


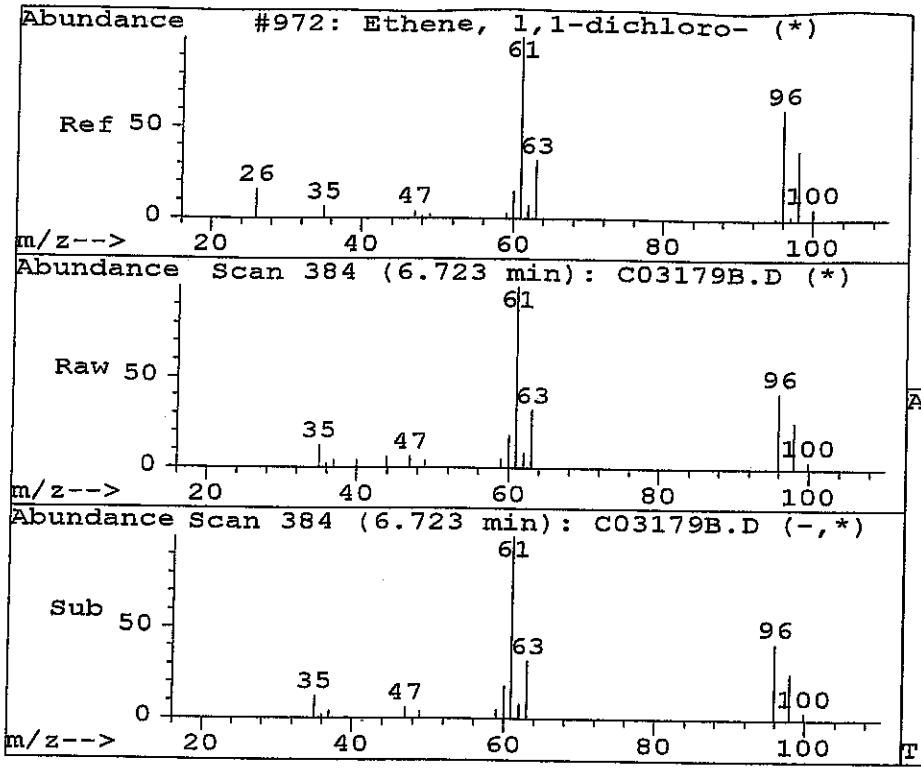


#14
Methyl iodide
Concen: 2.07 ppbV
RT: 6.82 min Scan# 394
Delta R.T. -0.17 min
Lab File: C03179B.D
Acq: 17 Mar 109 9:42 am

Tgt Ion:142 Resp: 72721

Ion	Ratio	Lower	Upper
142	100		
127	55.5	44.2	66.4
141	15.8	11.1	16.7
0	0.0	0.0	0.0

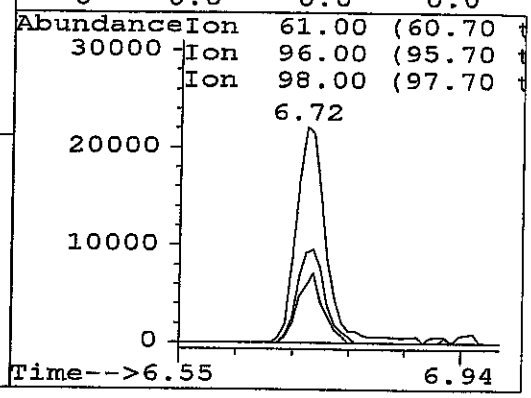


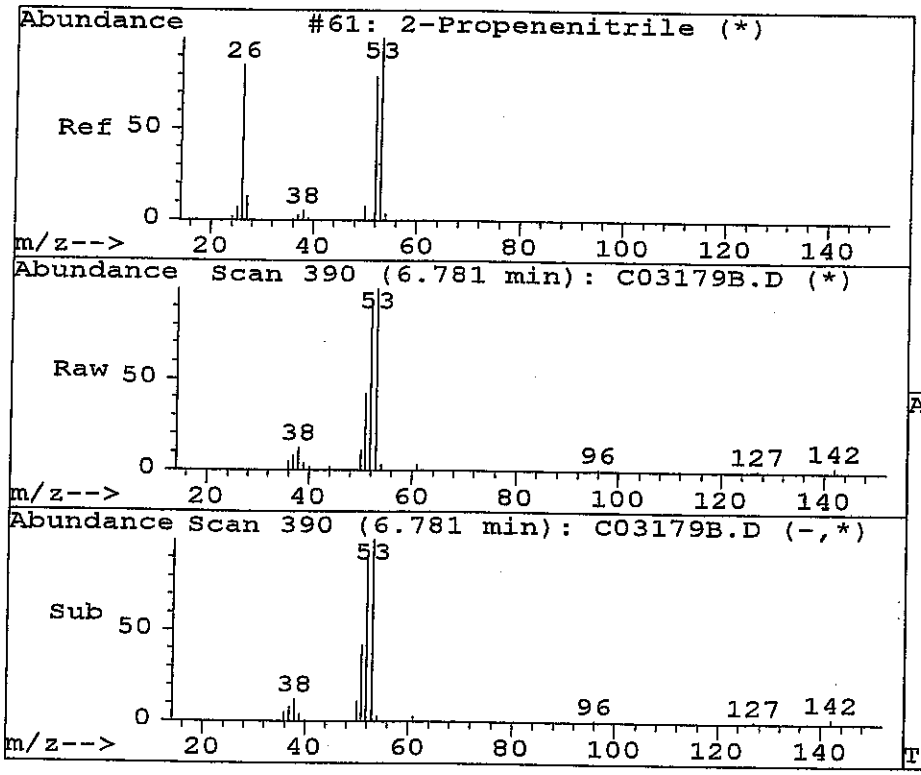


#15
1,1-Dichloroethene
Concen: 1.10 ppbV
RT: 6.72 min Scan# 384
Delta R.T. -0.17 min
Lab File: C03179B.D
Acq: 17 Mar 109 9:42 am

Tgt Ion:61 Resp: 63935

Ion	Ratio	Lower	Upper
61	100		
96	41.9	35.0	52.6
98	26.4	21.7	32.5
0	0.0	0.0	0.0

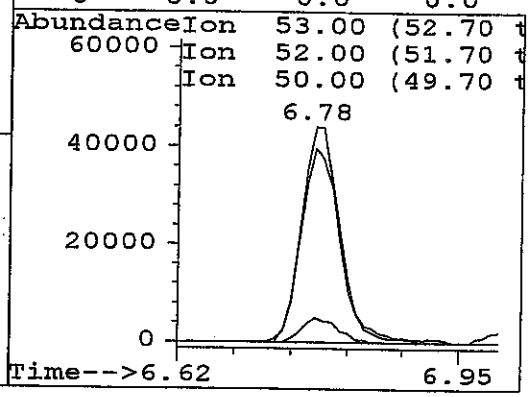


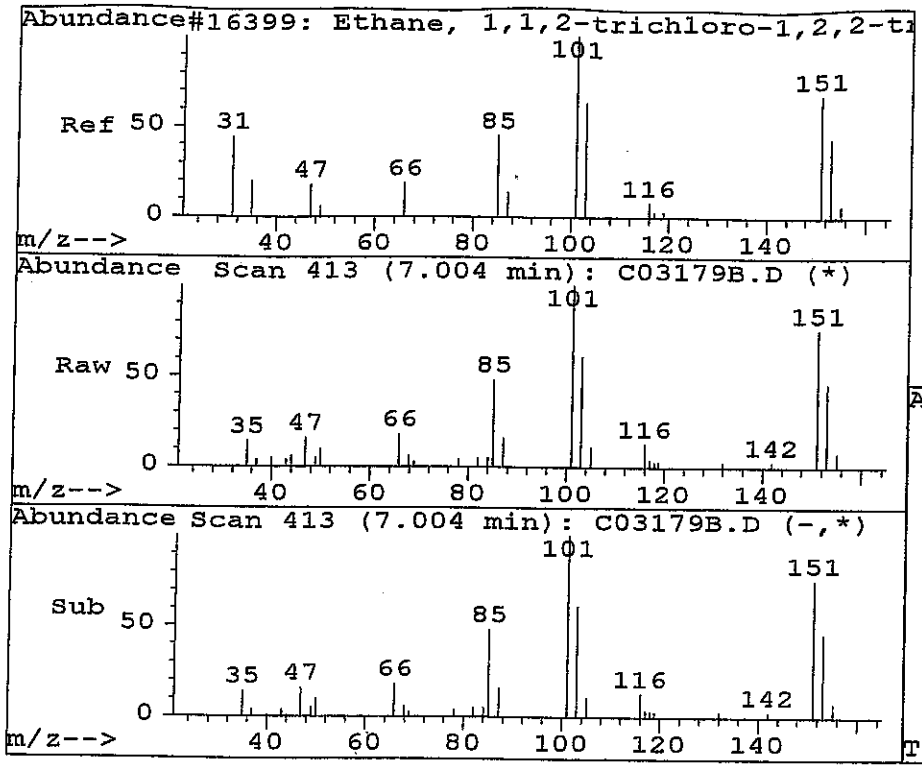


#16
Acrylonitrile
Concen: 4.98 ppbV
RT: 6.78 min Scan# 390
Delta R.T. -0.18 min
Lab File: C03179B.D
Acq: 17 Mar 109 9:42 am

Tgt Ion:53 Resp: 141541

Ion	Ratio	Lower	Upper
53	100		
52	89.4	69.3	103.9
50	11.4	7.7	11.5
0	0.0	0.0	0.0

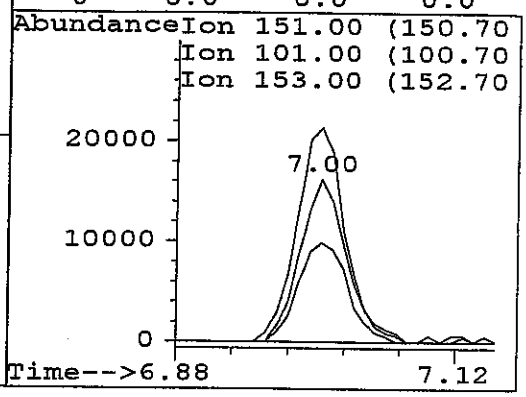


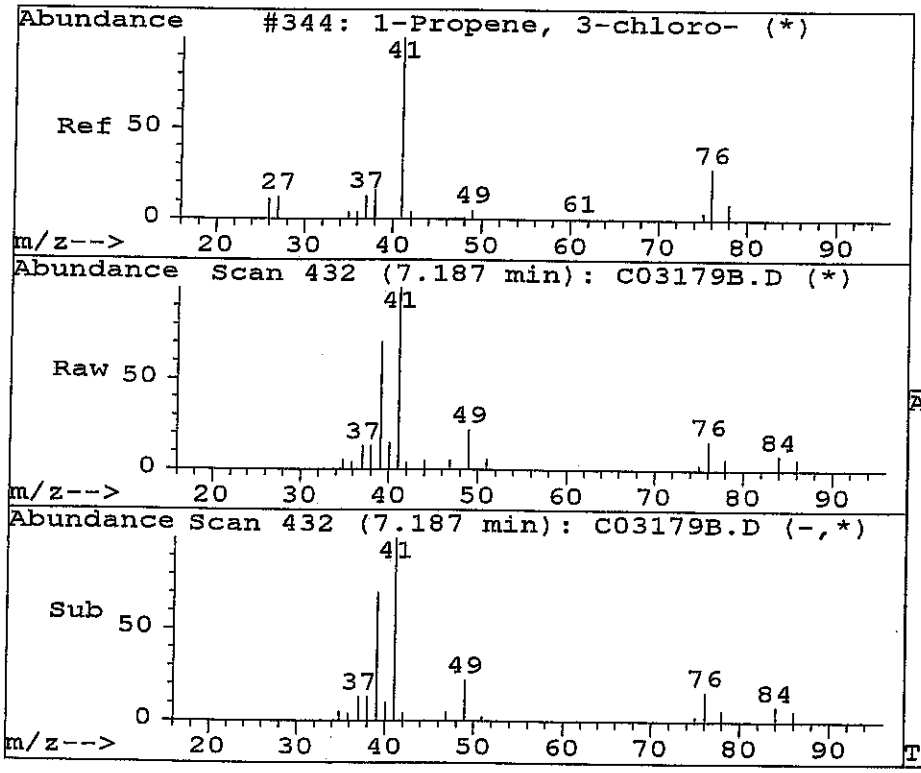


#17
Freon 113
Concen: 0.82 ppbV
RT: 7.00 min Scan# 413
Delta R.T. -0.16 min
Lab File: C03179B.D
Acq: 17 Mar 109 9:42 am

Tgt Ion:151 Resp: 45725

Ion	Ratio	Lower	Upper
151	100		
101	131.6	96.2	144.4
153	60.8	52.2	78.2
0	0.0	0.0	0.0

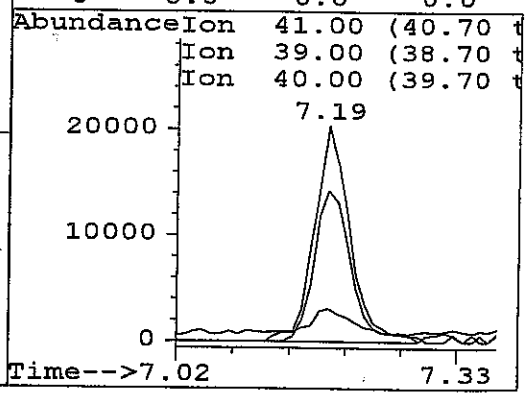


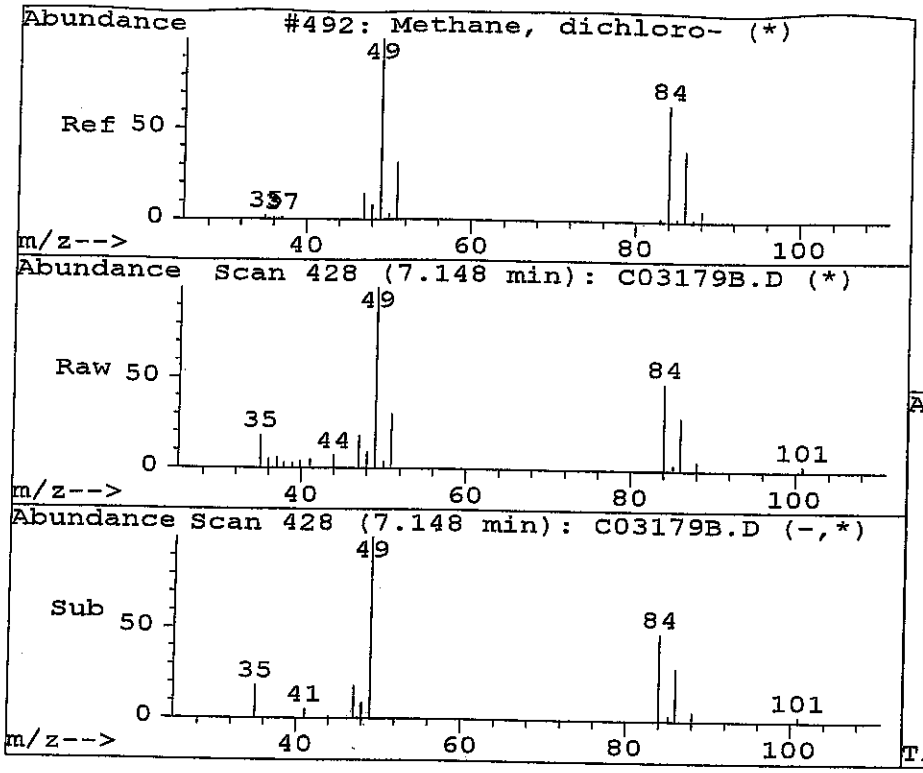


#18
Allyl chloride
Concen: 1.31 ppbV
RT: 7.19 min Scan# 432
Delta R.T. -0.16 min
Lab File: C03179B.D
Acq: 17 Mar 109 9:42 am

Tgt Ion:41 Resp: 54211

Ion	Ratio	Lower	Upper
41	100		
39	68.7	63.9	95.9
40	10.8	8.5	12.7
0	0.0	0.0	0.0

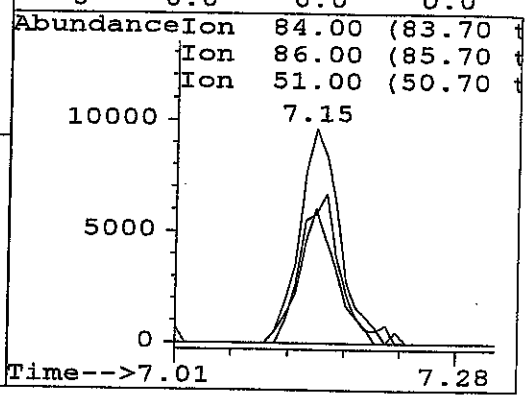


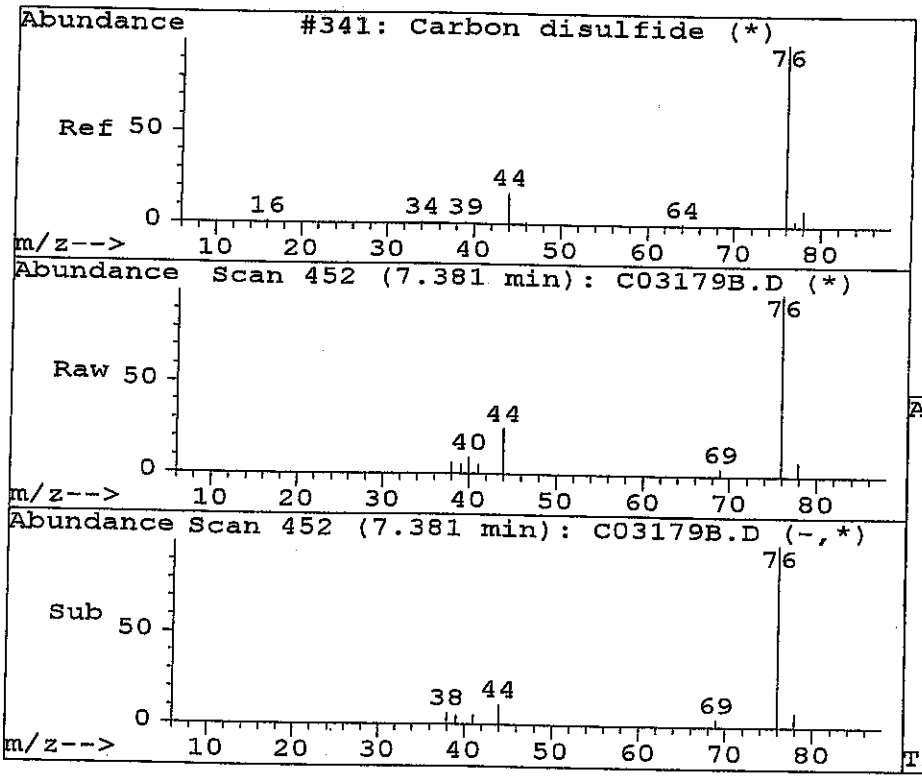


#19
Dichloromethane
Concen: 1.07 ppbV
RT: 7.15 min Scan# 428
Delta R.T. -0.16 min
Lab File: C03179B.D
Acq: 17 Mar 109 9:42 am

Tgt Ion:84 Resp: 26131

Ion	Ratio	Lower	Upper
84	100		
86	60.0	49.6	74.4
51	62.6	42.2	63.4
0	0.0	0.0	0.0

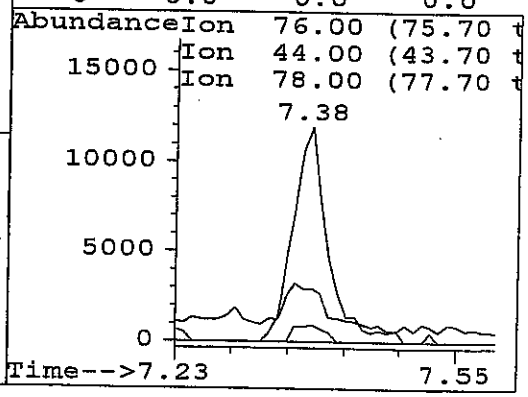


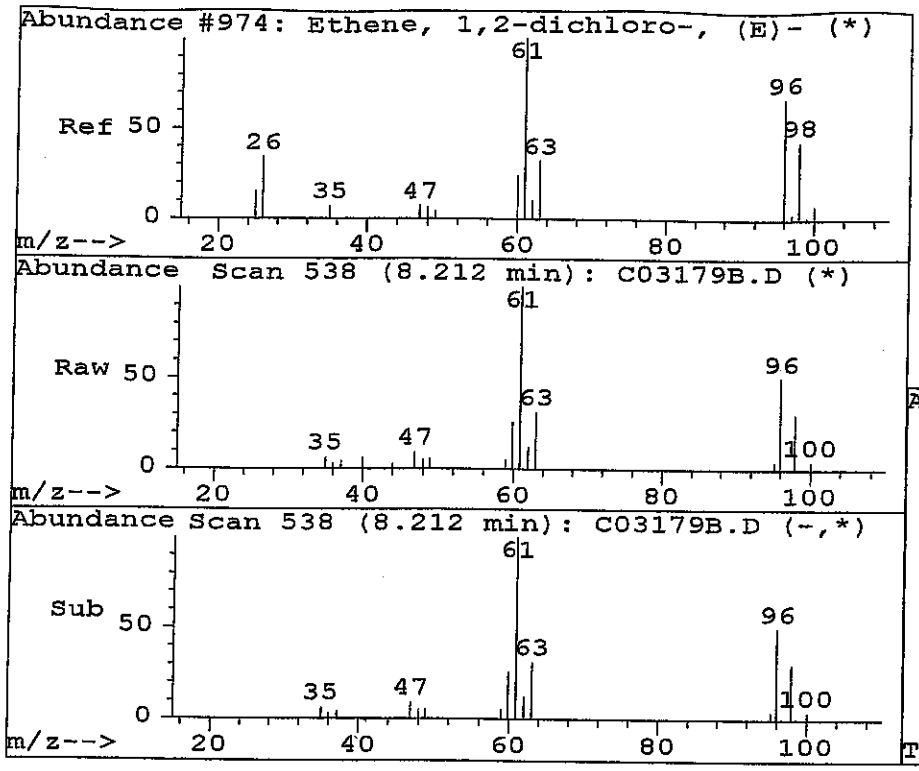


#20
Carbon disulfide
Concen: 1.57 ppbV
RT: 7.38 min Scan# 452
Delta R.T. -0.16 min
Lab File: C03179B.D
Acq: 17 Mar 109 9:42 am

Tgt Ion:76 Resp: 33136

Ion	Ratio	Lower	Upper
76	100		
44	17.7	16.6	25.0
78	7.8	6.7	11.1
0	0.0	0.0	0.0

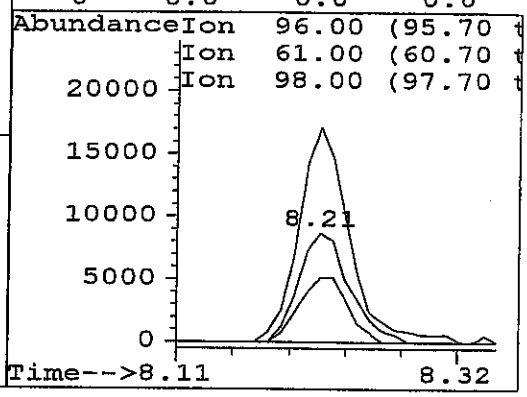


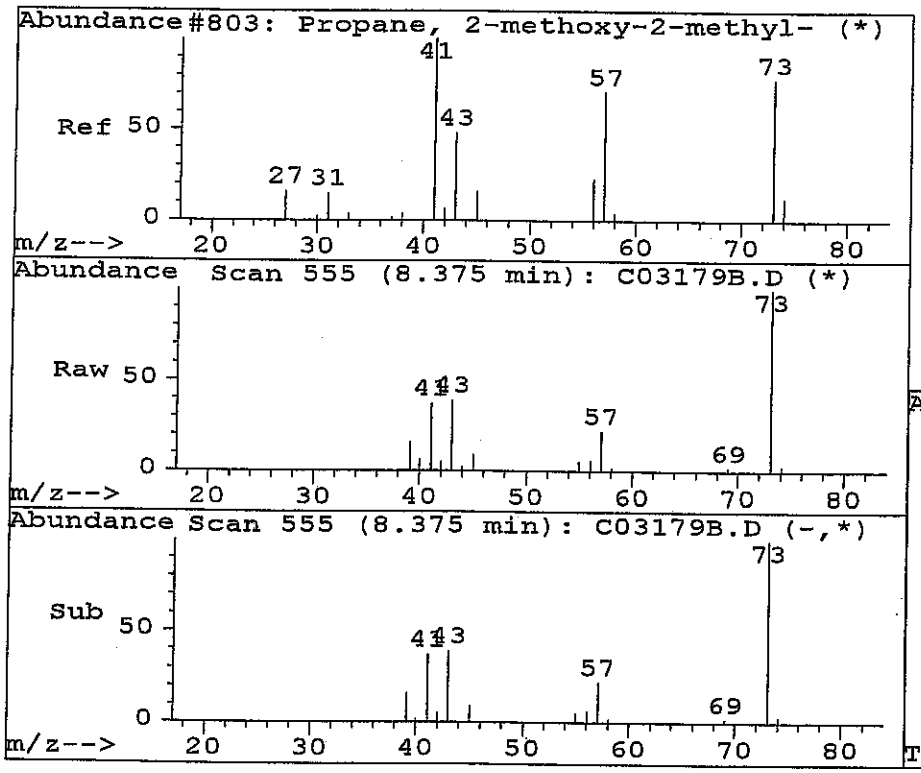


#21
trans-1,2-Dichloroethene
Concen: 1.07 ppbV
RT: 8.21 min Scan# 538
Delta R.T. -0.17 min
Lab File: C03179B.D
Acq: 17 Mar 109 9:42 am

Tgt Ion:96 Resp: 23397

Ion	Ratio	Lower	Upper
96	100		
61	194.6	164.1	246.1
98	59.3	50.2	75.2
0	0.0	0.0	0.0

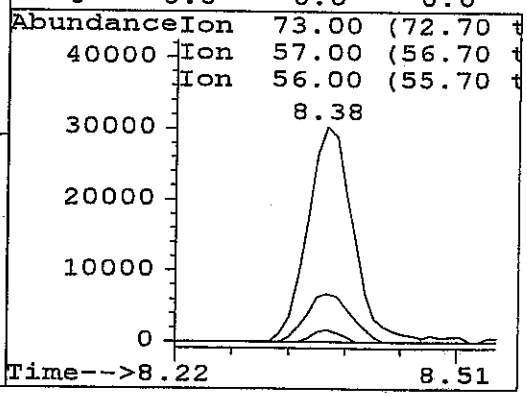


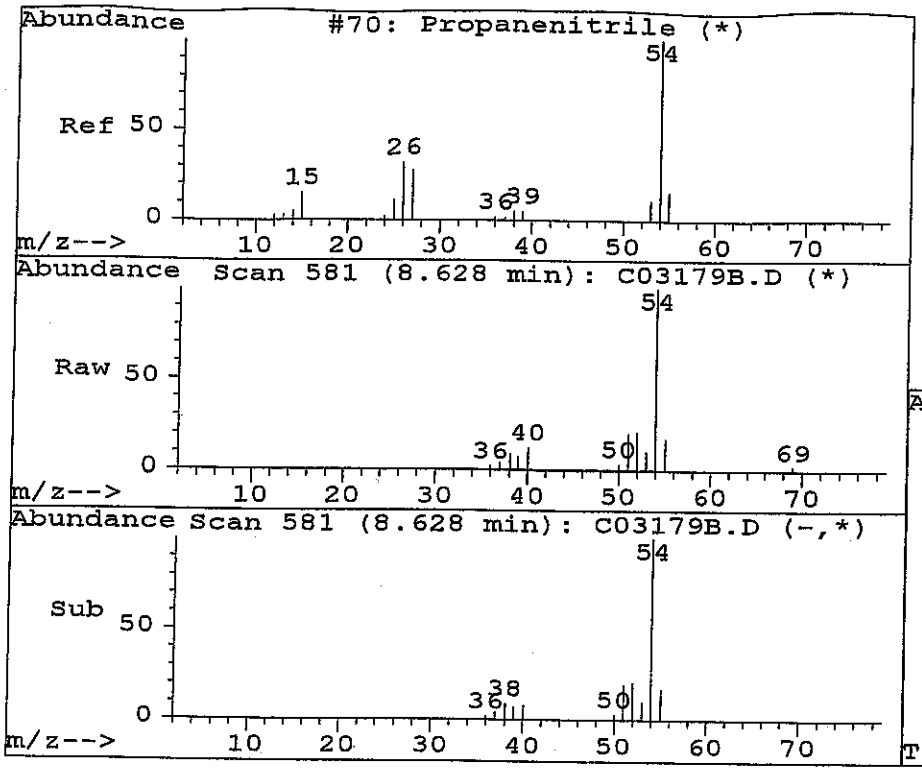


#22
Methyl tert butyl ether
Concen: 0.92 ppbV
RT: 8.38 min Scan# 555
Delta R.T. -0.16 min
Lab File: C03179B.D
Acq: 17 Mar 109 9:42 am

Tgt Ion:73 Resp: 97431

Ion	Ratio	Lower	Upper
73	100		
57	22.7	16.3	24.5
56	5.7	3.0	4.4#
0	0.0	0.0	0.0

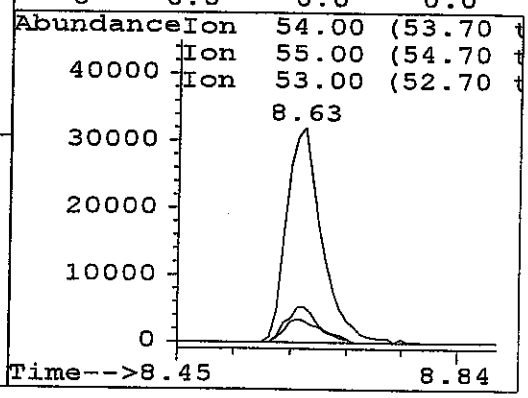


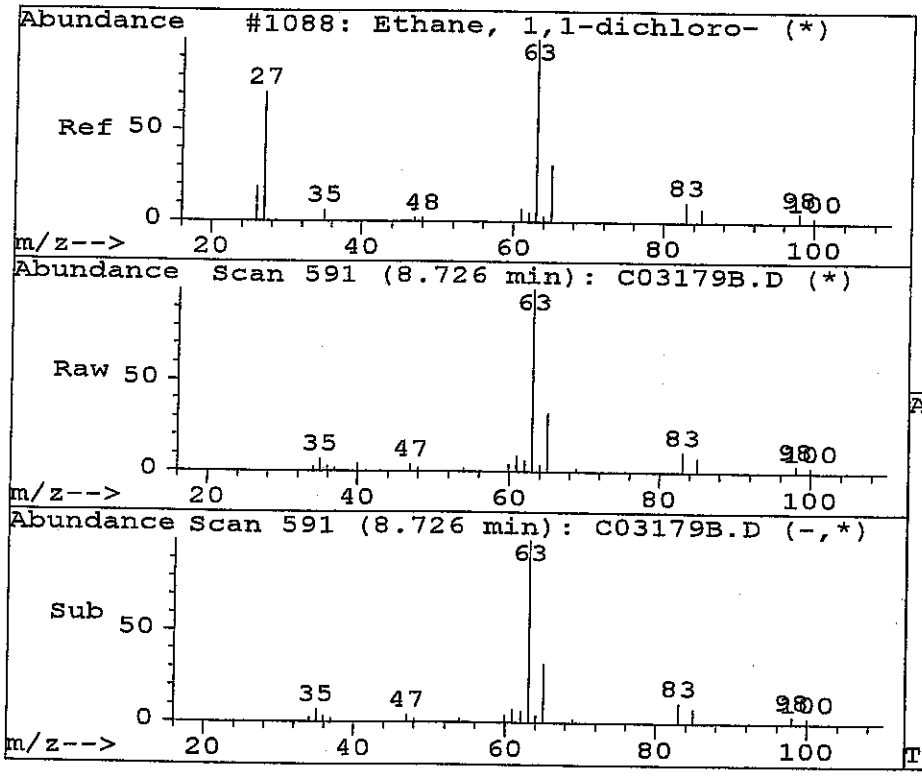


#23
Propionitrile
Concen: 3.94 ppbV
RT: 8.63 min Scan# 581
Delta R.T. -0.20 min
Lab File: C03179B.D
Acq: 17 Mar 109 9:42 am

Tgt Ion:54 Resp: 109954

Ion	Ratio	Lower	Upper
54	100		
55	16.6	11.9	17.9
53	10.0	10.0	15.0
0	0.0	0.0	0.0

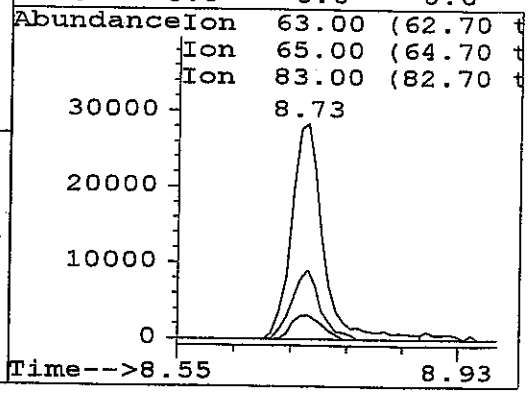


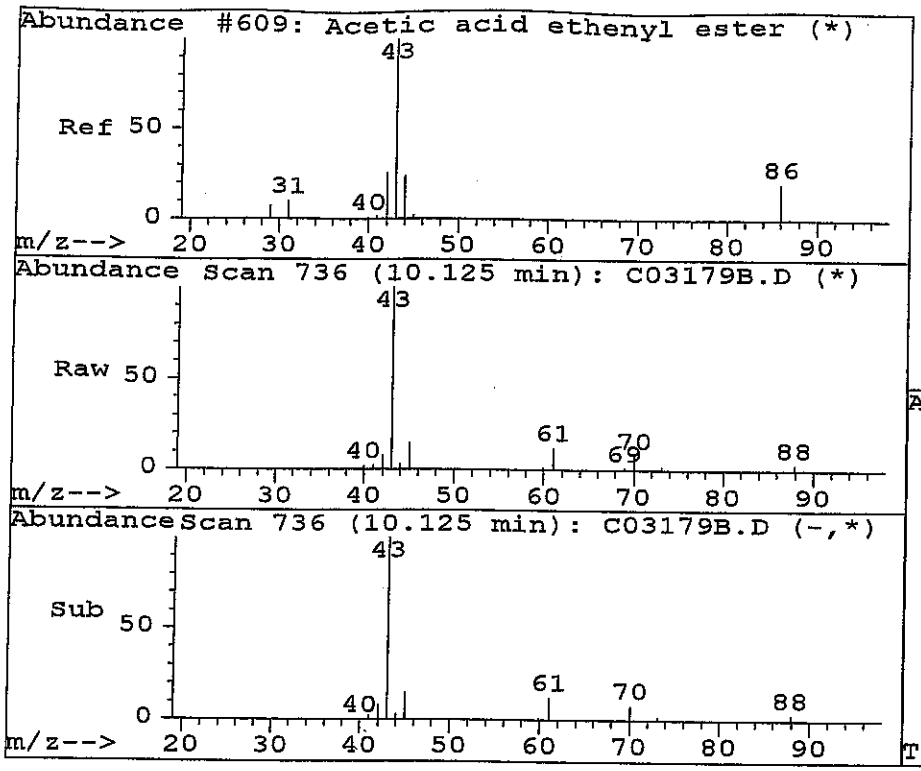


#24
1,1-Dichloroethane
Concen: 1.29 ppbV
RT: 8.73 min Scan# 591
Delta R.T. -0.17 min
Lab File: C03179B.D
Acq: 17 Mar 109 9:42 am

Tgt Ion:63 Resp: 85531

Ion	Ratio	Lower	Upper
63	100		
65	32.3	25.4	38.2
83	11.3	10.6	15.8
0	0.0	0.0	0.0

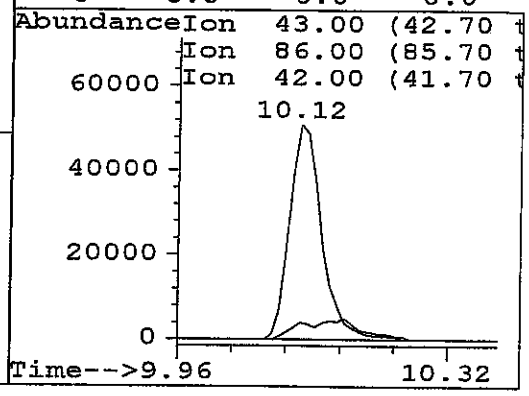


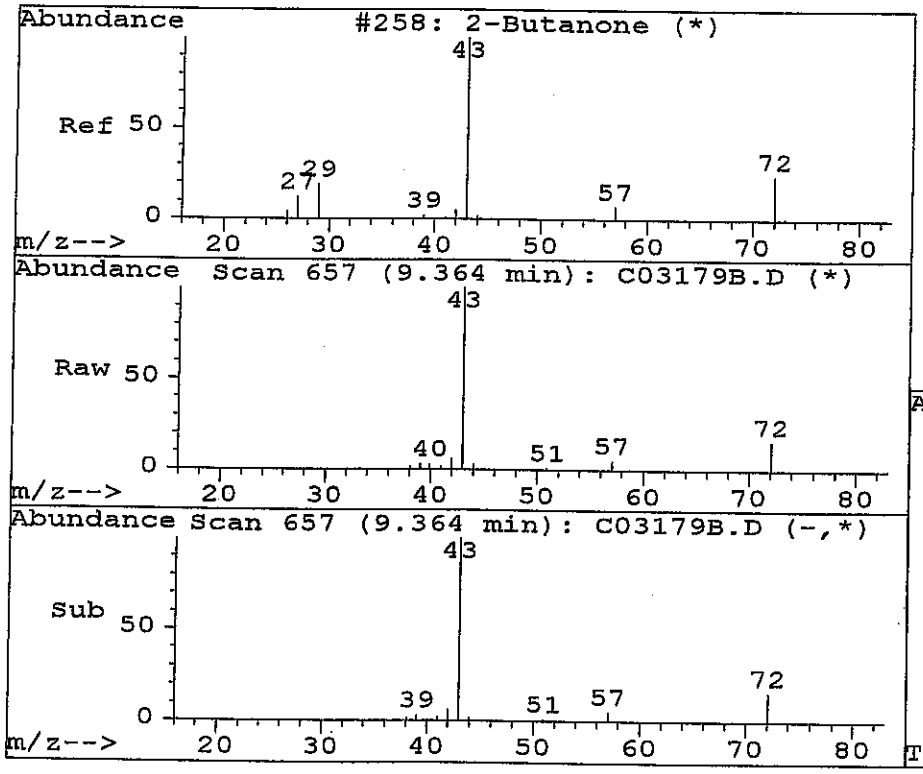


#25
Vinyl acetate
Concen: 1.32 ppbV
RT: 10.12 min Scan# 736
Delta R.T. -0.20 min
Lab File: C03179B.D
Acq: 17 Mar 109 9:42 am

Tgt Ion:43 Resp: 149287

Ion	Ratio	Lower	Upper
43	100		
86	0.0	0.0	0.0
42	7.7	6.2	9.2
0	0.0	0.0	0.0

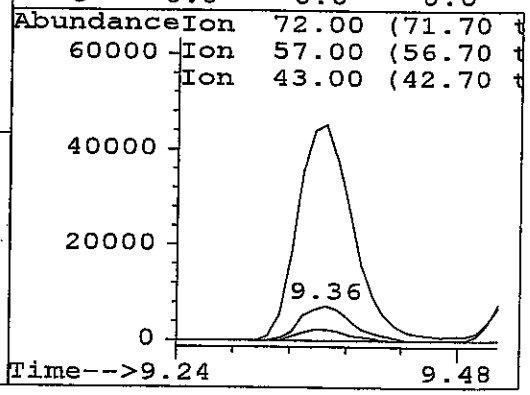


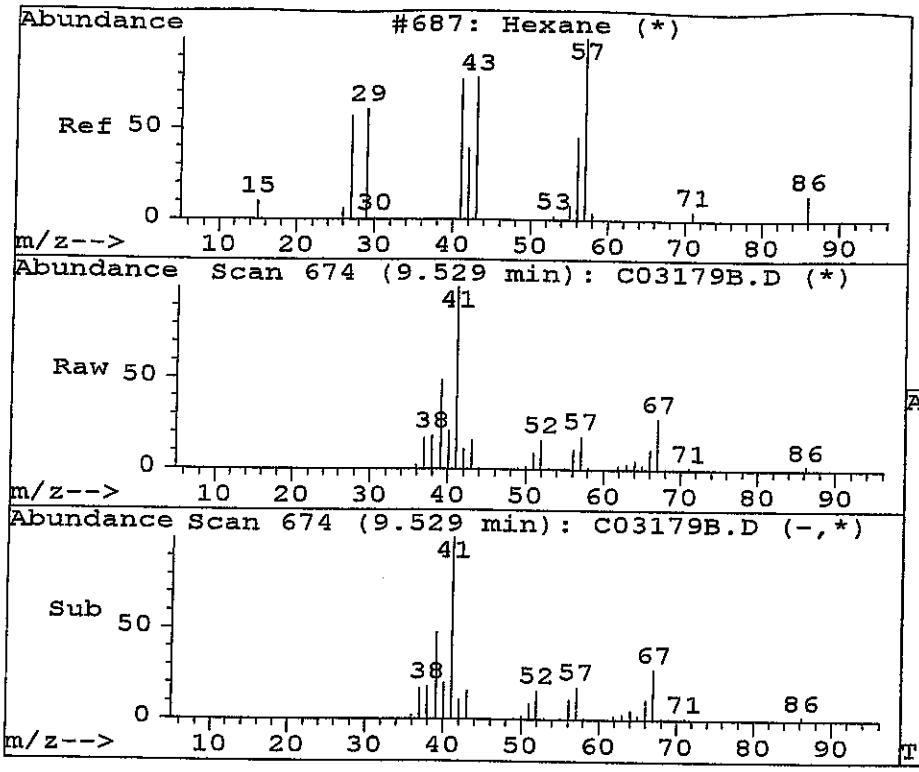


#26
2-Butanone
Concen: 1.15 ppbV
RT: 9.36 min Scan# 657
Delta R.T. -0.18 min
Lab File: C03179B.D
Acq: 17 Mar 109 9:42 am

Tgt Ion:72 Resp: 22013

Ion	Ratio	Lower	Upper
72	100		
57	32.2	19.3	28.9#
43	616.6	452.8	679.2
0	0.0	0.0	0.0

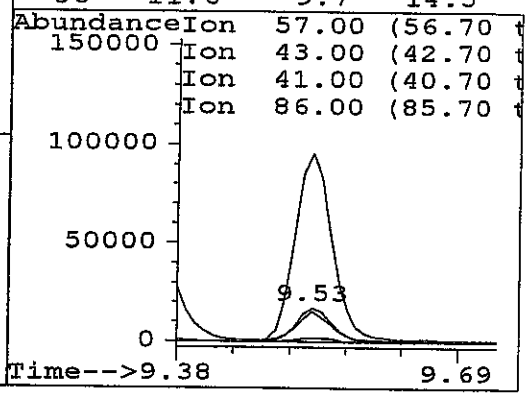


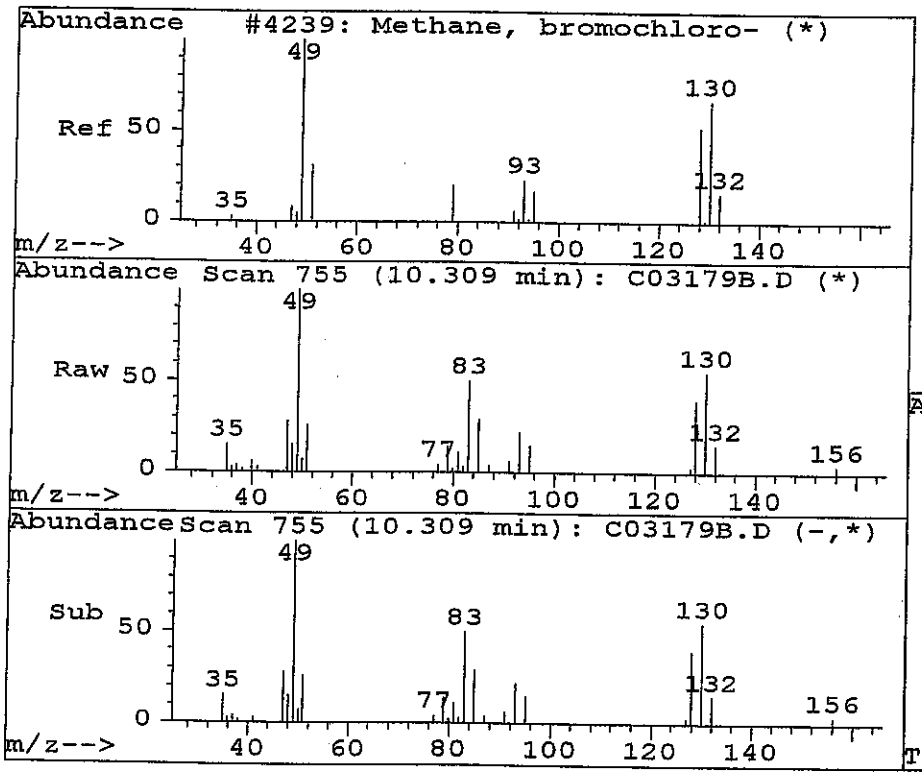


#27
Hexane
Concen: 0.92 ppbV
RT: 9.53 min Scan# 674
Delta R.T. -0.18 min
Lab File: C03179B.D
Acq: 17 Mar 109 9:42 am

Tgt Ion:57 Resp: 47026

Ion	Ratio	Lower	Upper
57	100		
43	93.7	63.1	94.7
41	576.4	408.8	613.2
86	11.6	9.7	14.5

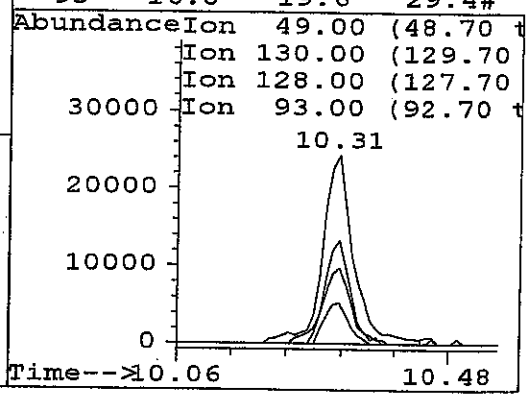


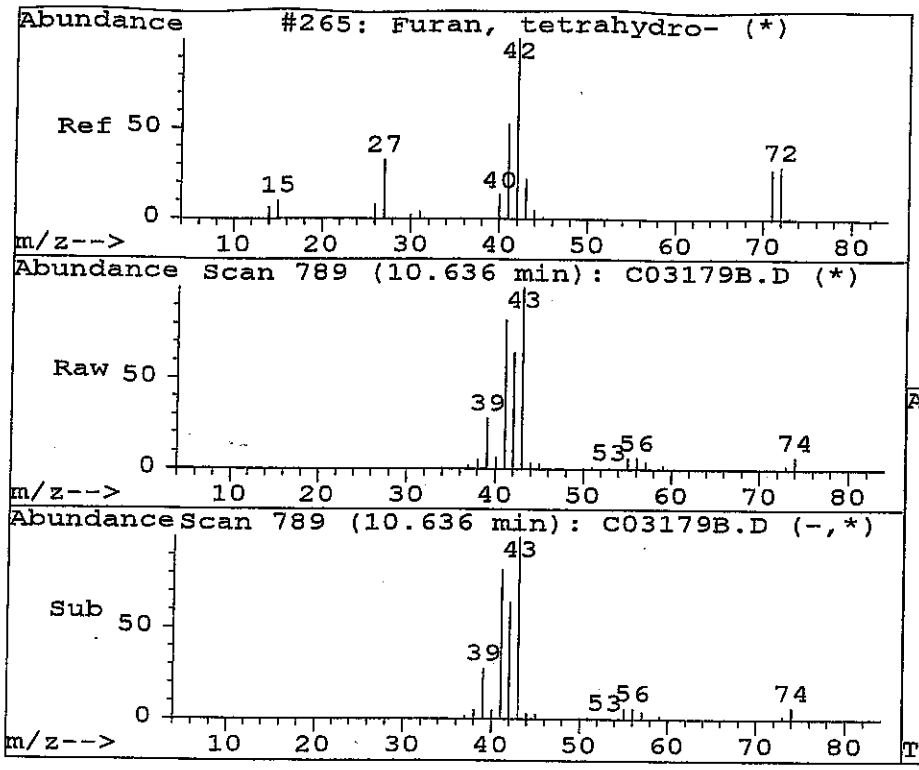


#28
Bromochloromethane
Concen: 1.39 ppbV
RT: 10.31 min Scan# 755
Delta R.T. -0.19 min
Lab File: C03179B.D
Acq: 17 Mar 109 9:42 am

Tgt Ion:49 Resp: 80833

Ion	Ratio	Lower	Upper
49	100		
130	44.1	51.4	77.2#
128	37.5	44.3	66.5#
93	16.8	19.6	29.4#

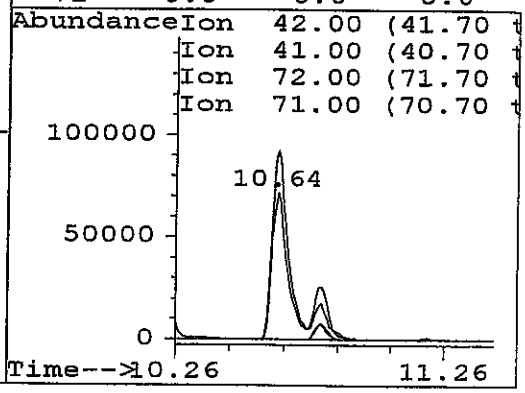


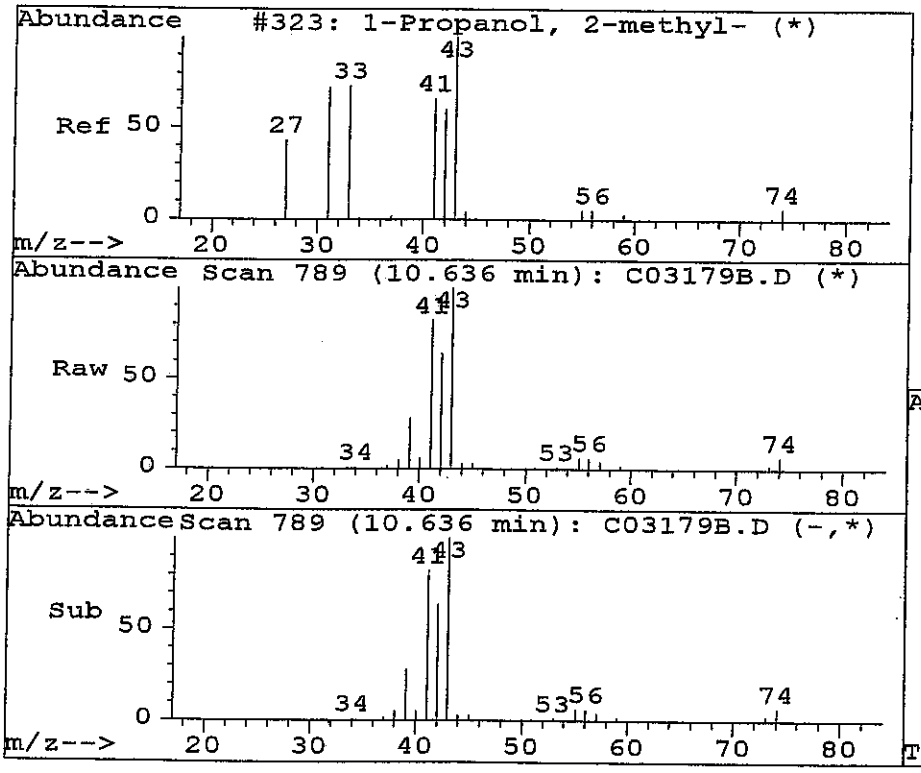


#29
Tetrahydrofuran
Concen: 1.75 ppbV m
RT: 10.64 min Scan# 789
Delta R.T. -0.28 min
Lab File: C03179B.D
Acq: 17 Mar 109 9:42 am

Tgt Ion:42 Resp: 383009

Ion	Ratio	Lower	Upper
42	100		
41	129.1	112.3	168.5
72	0.0	0.4	0.6#
71	0.0	0.0	0.0

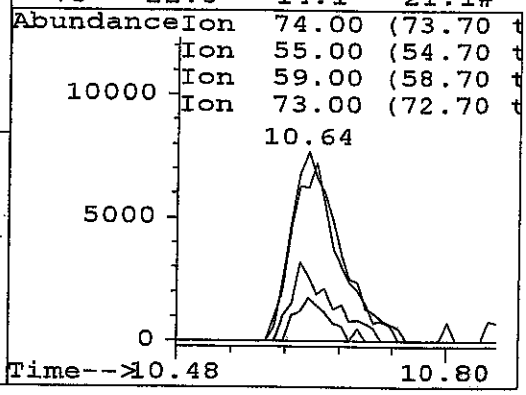


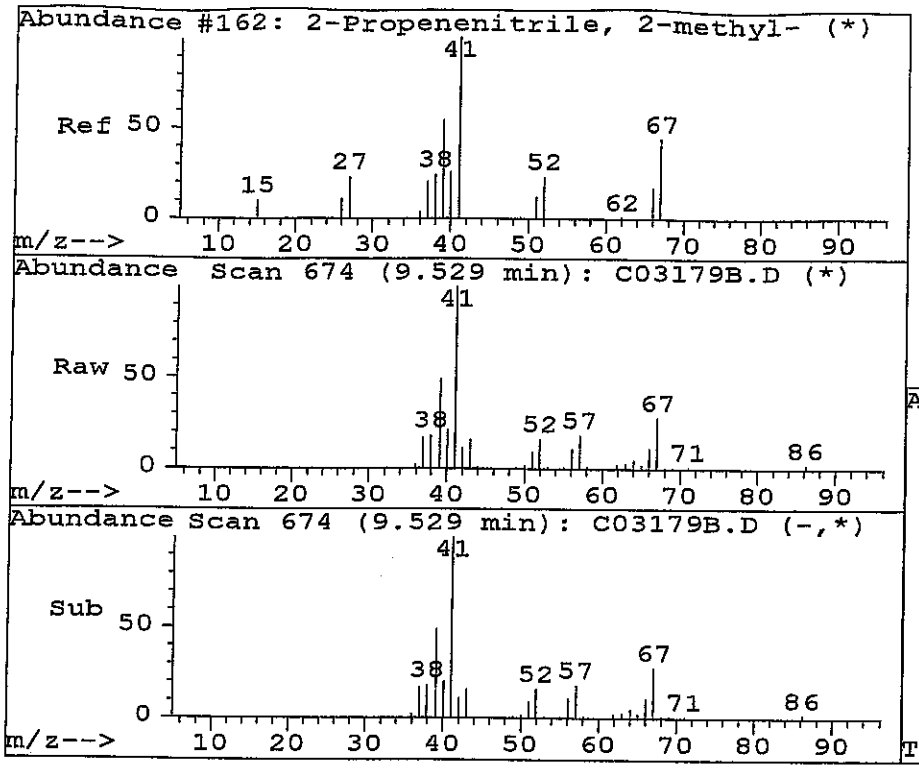


#30
Isobutyl alcohol
Concen: 4.08 ppbV
RT: 10.64 min Scan# 789
Delta R.T. -0.28 min
Lab File: C03179B.D
Acq: 17 Mar 109 9:42 am

Tgt Ion:74 Resp: 30717

Ion	Ratio	Lower	Upper
74	100		
55	81.0	64.8	97.2
59	33.9	30.2	45.2
73	22.8	14.1	21.1#

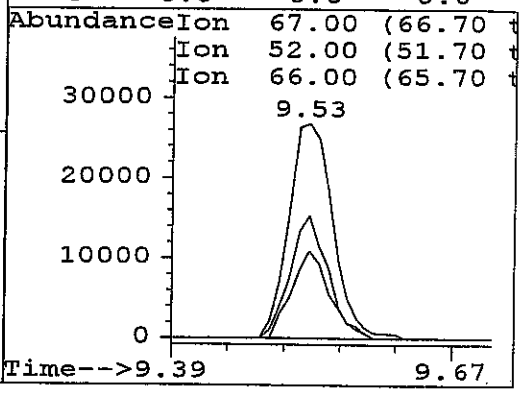


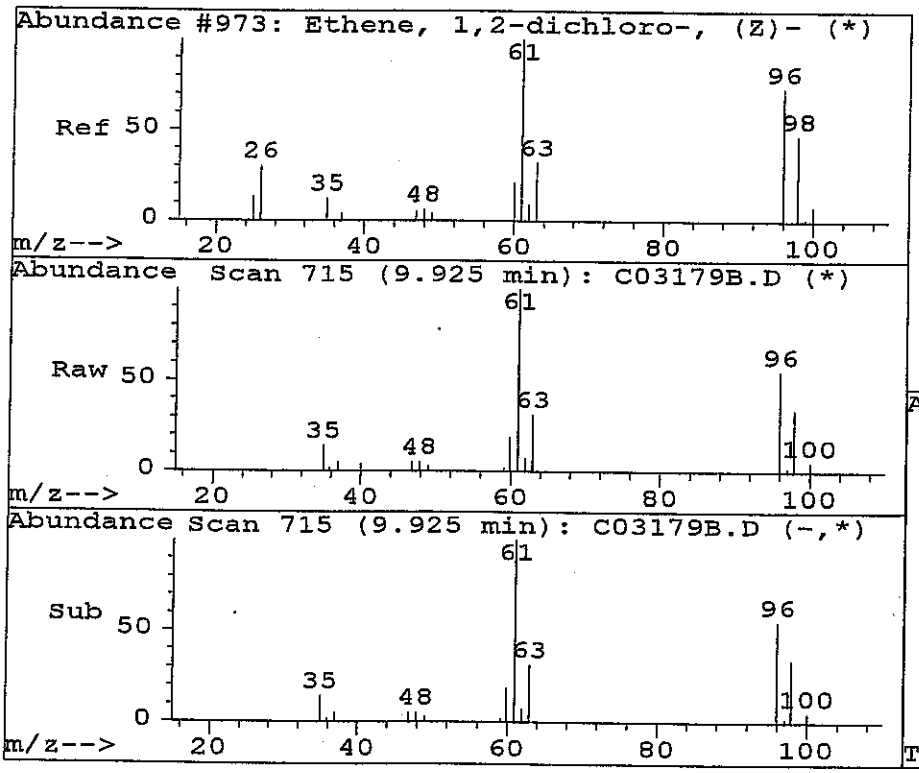


#31
Methacrylonitrile
Concen: 4.36 ppbV
RT: 9.53 min Scan# 674
Delta R.T. -0.21 min
Lab File: C03179B.D
Acq: 17 Mar 109 9:42 am

Tgt Ion:67 Resp: 81589

Ion	Ratio	Lower	Upper
67	100		
52	56.8	41.0	61.6
66	40.6	26.8	40.2#
0	0.0	0.0	0.0

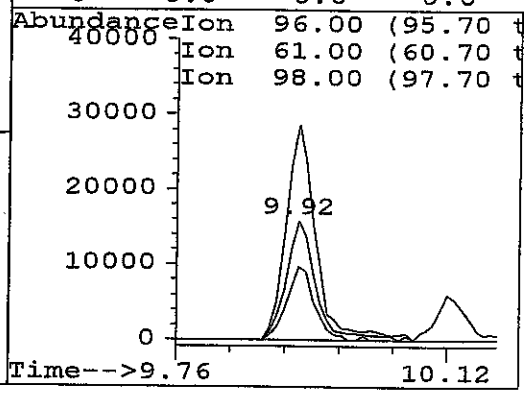


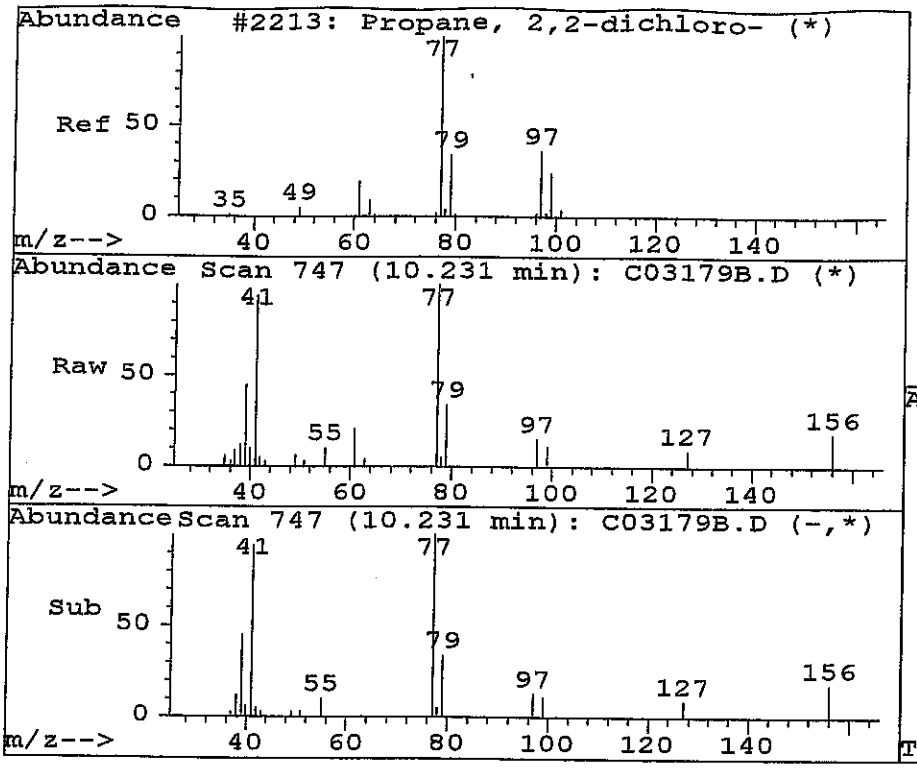


#32
cis-1,2-Dichloroethene
Concen: 1.22 ppbV
RT: 9.92 min Scan# 715
Delta R.T. -0.19 min
Lab File: C03179B.D
Acq: 17 Mar 109 9:42 am

Tgt Ion:96 Resp: 43510

Ion	Ratio	Lower	Upper
96	100		
61	178.9	132.6	198.8
98	61.4	49.3	73.9
0	0.0	0.0	0.0

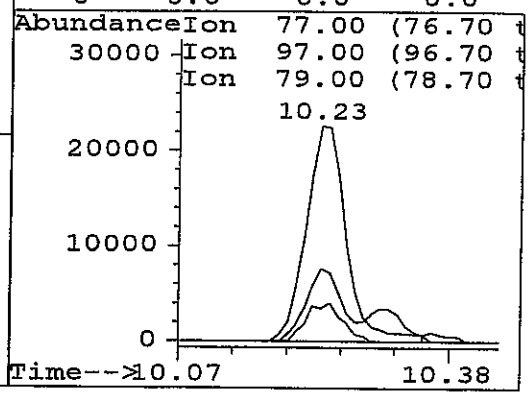


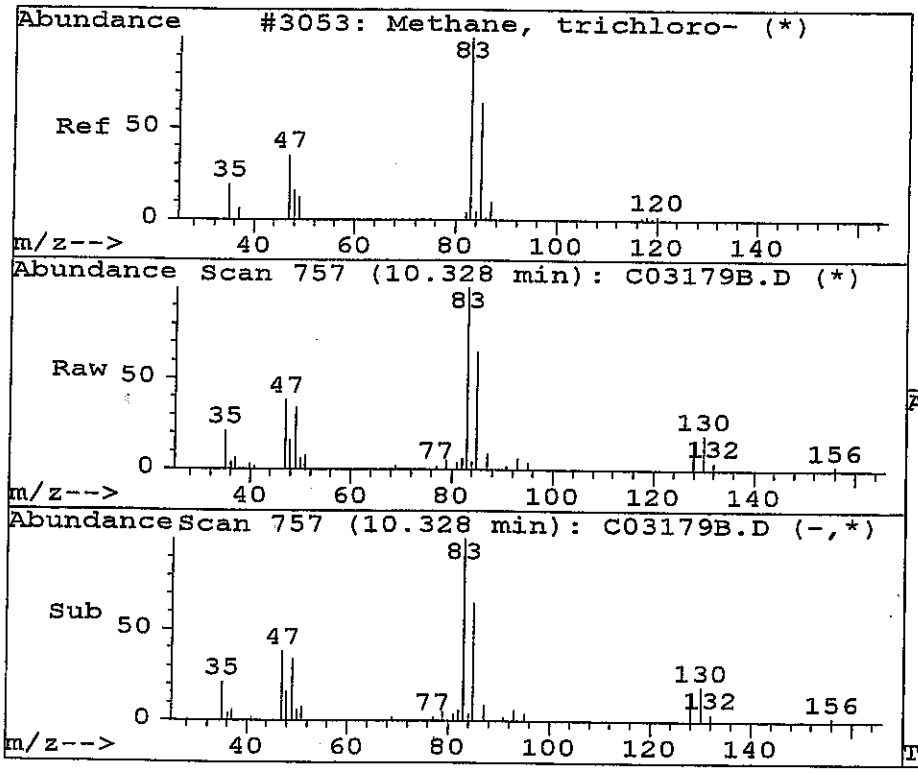


#33
2,2-Dichloropropane
Concen: 1.00 ppbV
RT: 10.23 min Scan# 747
Delta R.T. -0.19 min
Lab File: C03179B.D
Acq: 17 Mar 109 9:42 am

Tgt Ion:77 Resp: 72177

Ion	Ratio	Lower	Upper
77	100		
97	15.5	13.0	19.6
79	32.9	20.5	30.7#
0	0.0	0.0	0.0

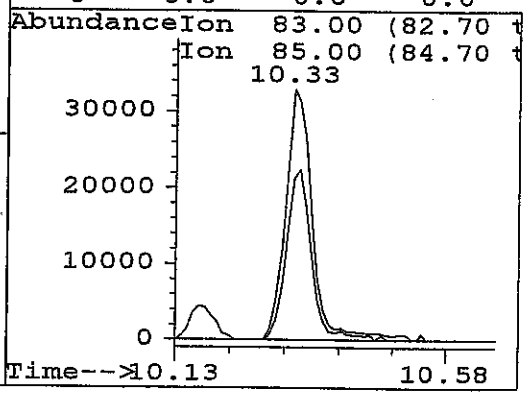


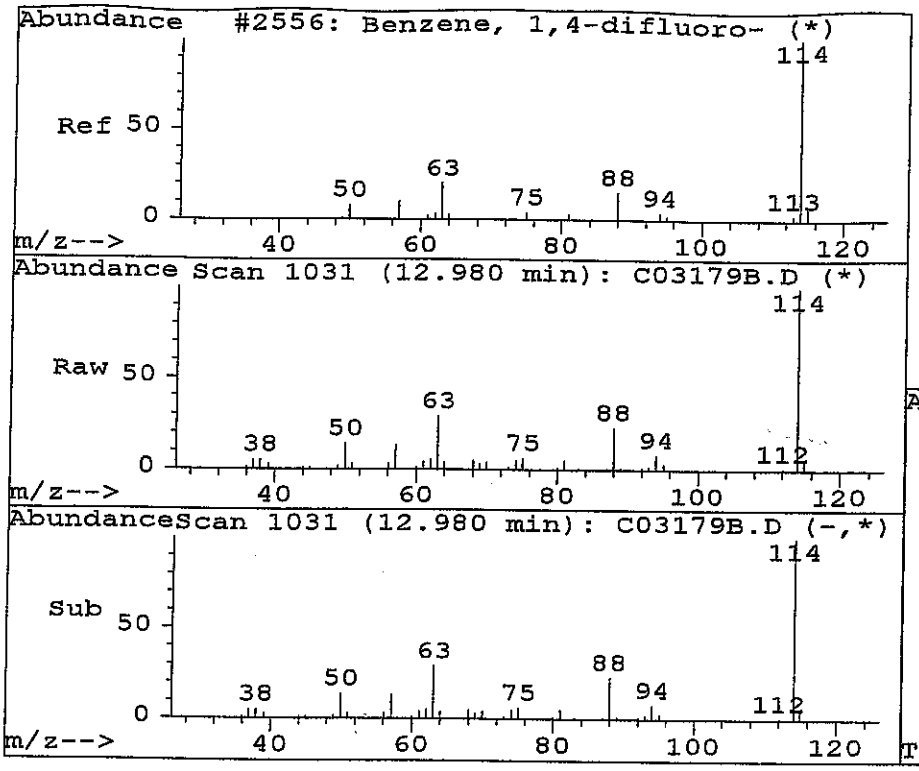


#34
Chloroform
Concen: 1.21 ppbV
RT: 10.33 min Scan# 757
Delta R.T. -0.20 min
Lab File: C03179B.D
Acq: 17 Mar 109 9:42 am

Tgt Ion:83 Resp: 101707

Ion	Ratio	Lower	Upper
83	100		
85	64.7	51.3	76.9
0	0.0	0.0	0.0
0	0.0	0.0	0.0

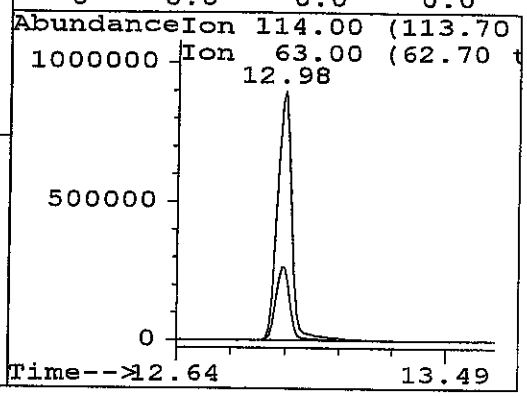


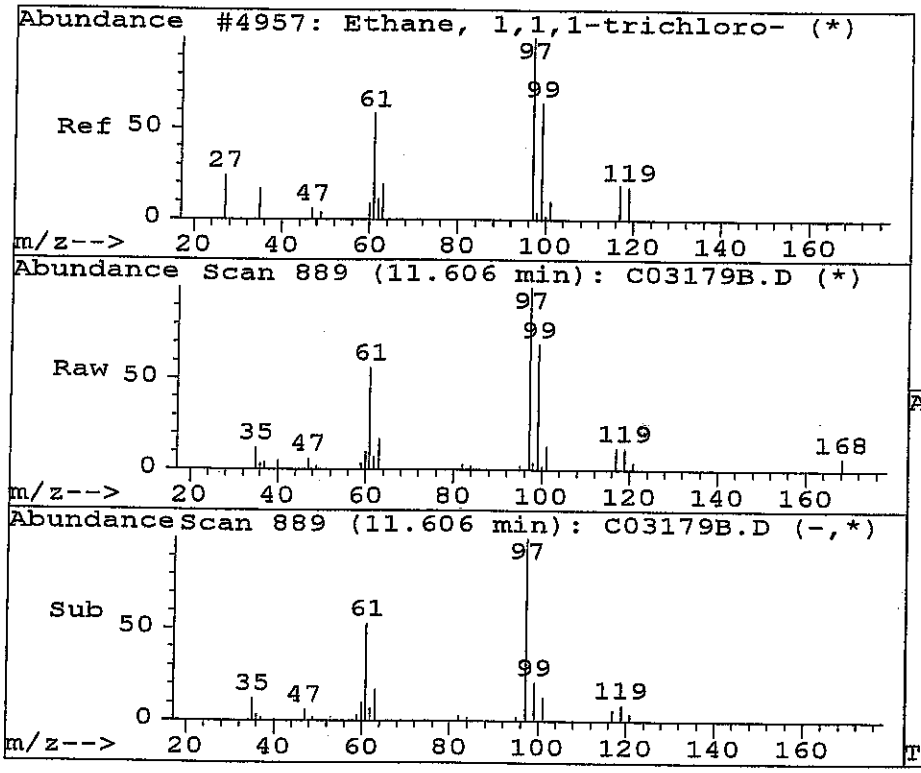


#35
1,4-Difluorobenzene
Concen: 20.00 ppbV
RT: 12.98 min Scan# 1031
Delta R.T. -0.19 min
Lab File: C03179B.D
Acq: 17 Mar 109 9:42 am

Tgt Ion:114 Resp: 2814997

Ion	Ratio	Lower	Upper
114	100		
63	29.1	19.8	33.0
0	0.0	0.0	0.0
0	0.0	0.0	0.0

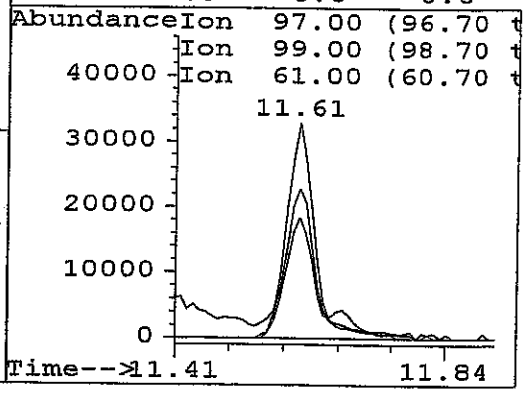


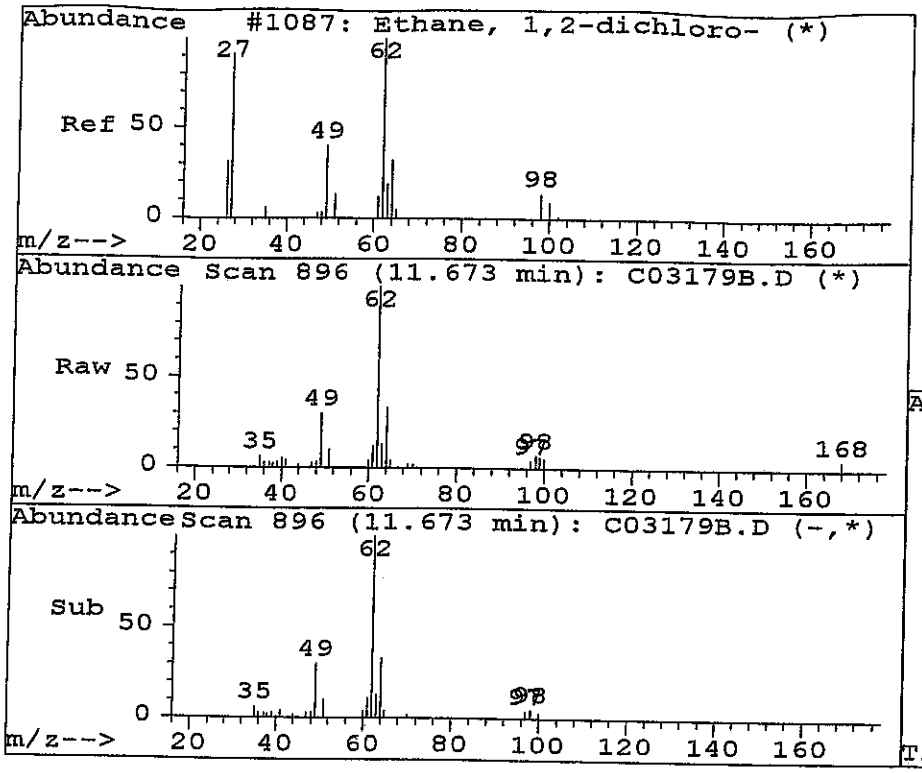


#36
1,1,1-Trichloroethane
Concen: 0.99 ppbV
RT: 11.61 min Scan# 889
Delta R.T. -0.19 min
Lab File: C03179B.D
Acq: 17 Mar 109 9:42 am

Tgt Ion:97 Resp: 100881

Ion	Ratio	Lower	Upper
97	100		
99	66.5	49.2	73.8
61	55.8	38.8	58.2
0	0.0	0.0	0.0

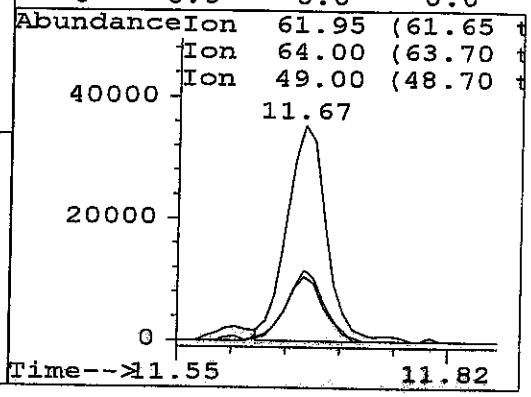


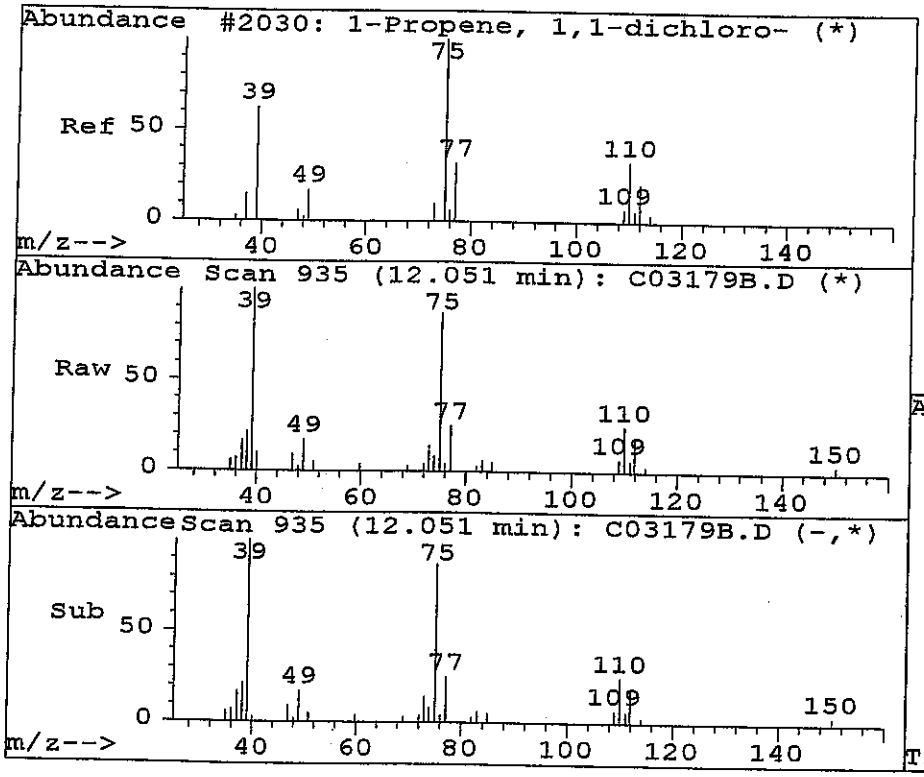


#37
1,2-Dichloroethane
Concen: 1.09 ppbV
RT: 11.67 min Scan# 896
Delta R.T. -0.20 min
Lab File: C03179B.D
Acq: 17 Mar 109 9:42 am

Tgt Ion:61.95 Resp: 96975

Ion	Ratio	Lower	Upper
62	100		
64	33.0	25.0	37.4
49	29.7	19.9	29.9
0	0.0	0.0	0.0

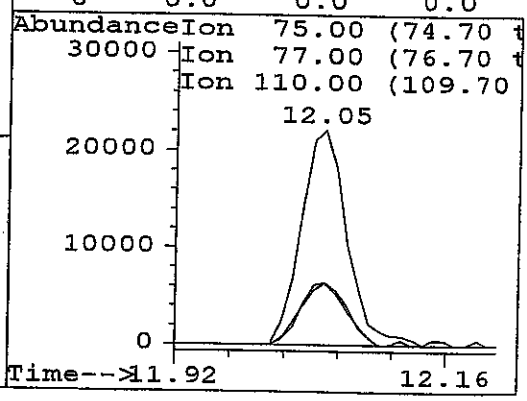


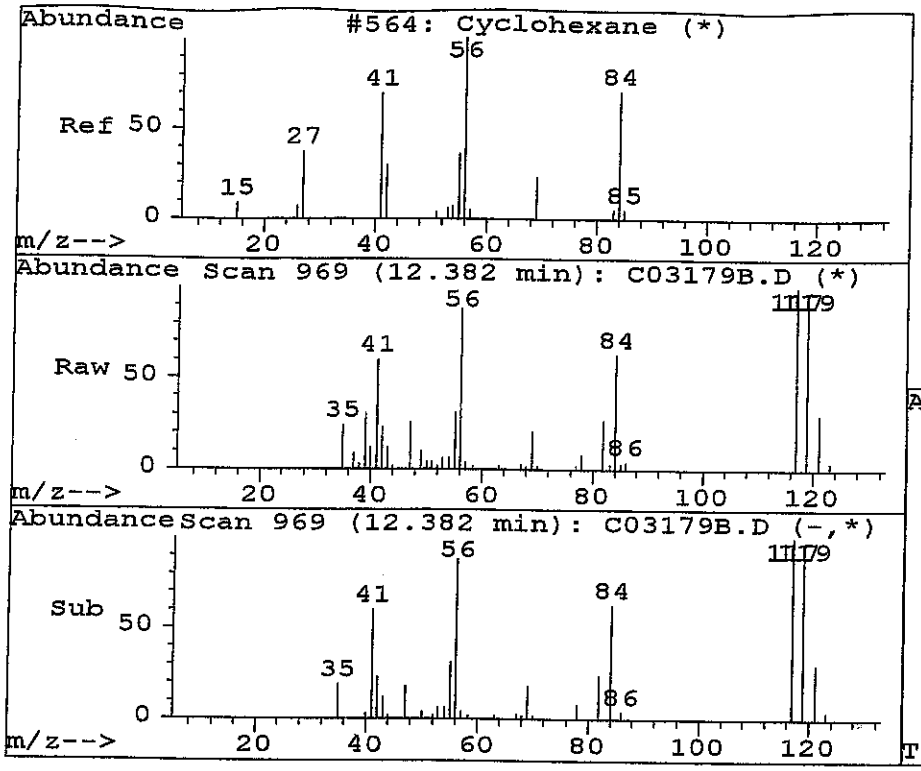


#38
1,1-Dichloropropene
Concen: 1.00 ppbV
RT: 12.05 min Scan# 935
Delta R.T. -0.19 min
Lab File: C03179B.D
Acq: 17 Mar 109 9:42 am

Tgt Ion:75 Resp: 62476

Ion	Ratio	Lower	Upper
75	100		
77	28.7	23.0	34.4
110	28.9	24.9	37.3
0	0.0	0.0	0.0

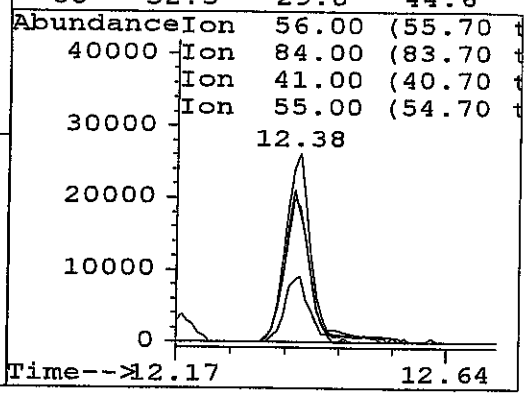


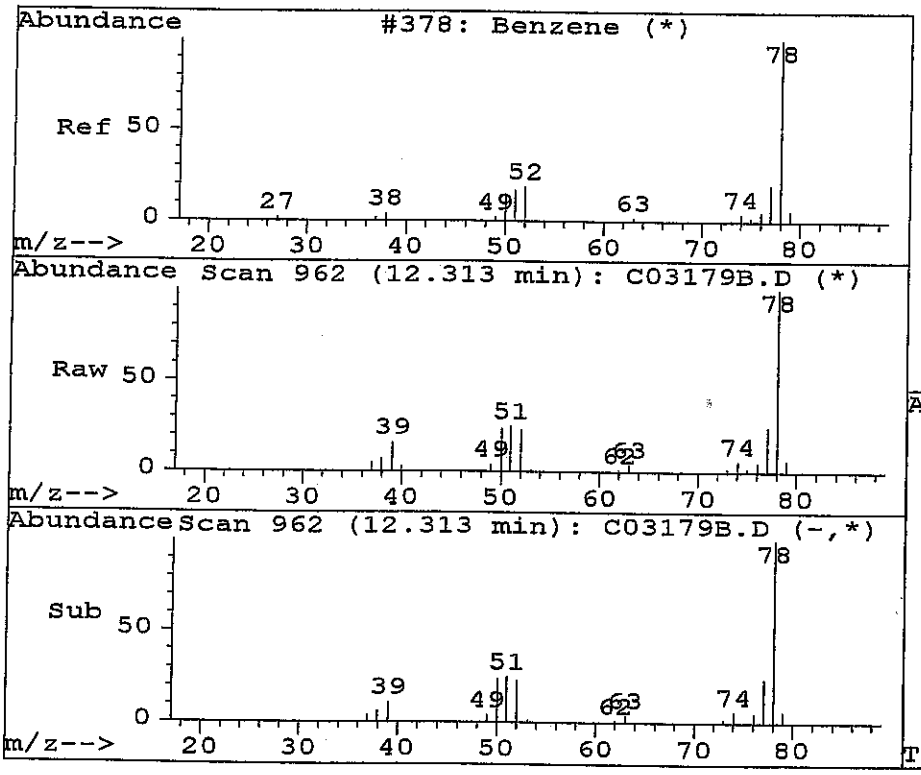


#39
Cyclohexane
Concen: 1.39 ppbV
RT: 12.38 min Scan# 969
Delta R.T. -0.17 min
Lab File: C03179B.D
Acq: 17 Mar 109 9:42 am

Tgt Ion:56 Resp: 83495

Ion	Ratio	Lower	Upper
56	100		
84	75.4	74.2	111.4
41	74.7	60.4	90.6
55	32.3	29.8	44.6

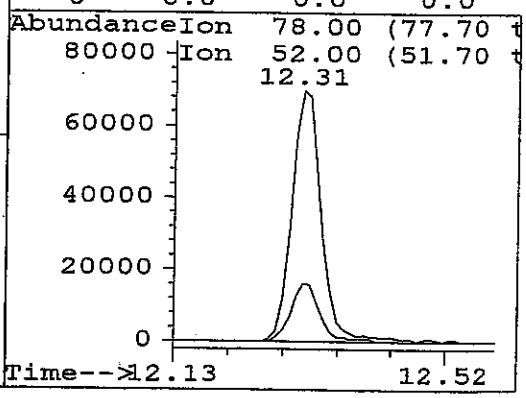


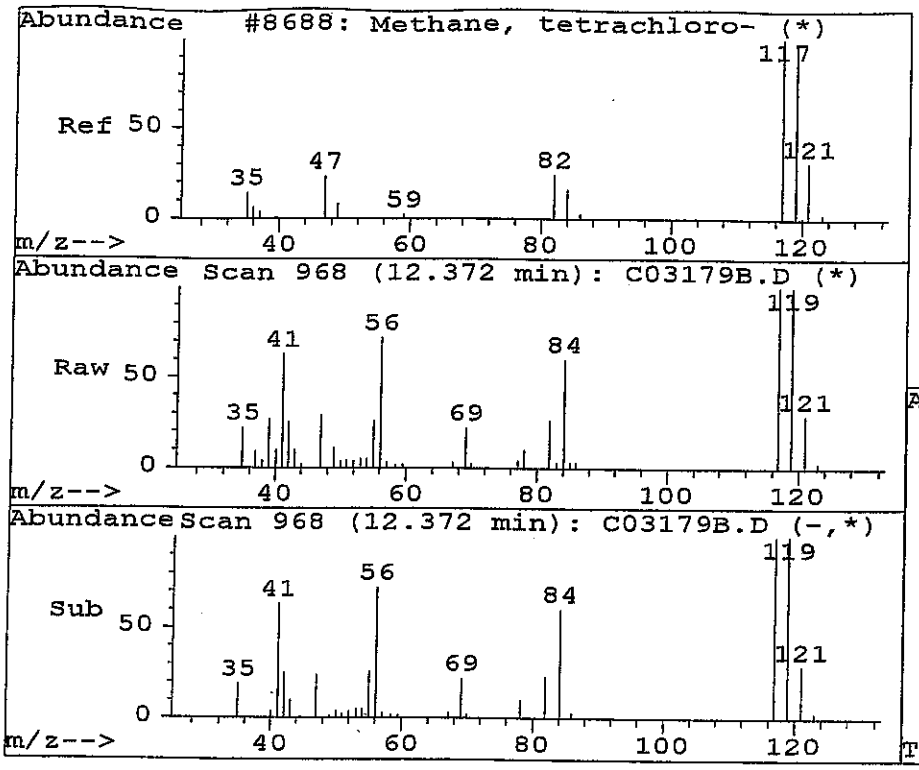


#40
Benzene
Concen: 1.49 ppbV
RT: 12.31 min Scan# 962
Delta R.T. -0.20 min
Lab File: C03179B.D
Acq: 17 Mar 109 9:42 am

Tgt Ion:78 Resp: 206967

Ion	Ratio	Lower	Upper
78	100		
52	23.2	16.4	24.6
0	0.0	0.0	0.0
0	0.0	0.0	0.0

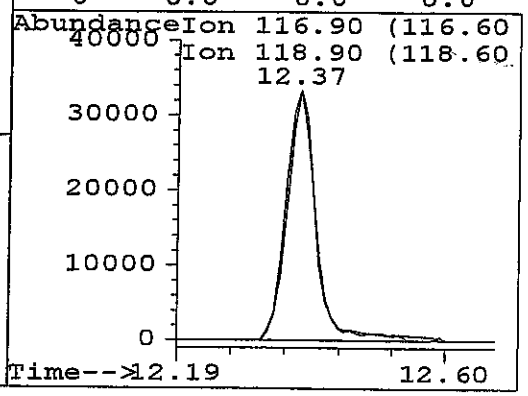


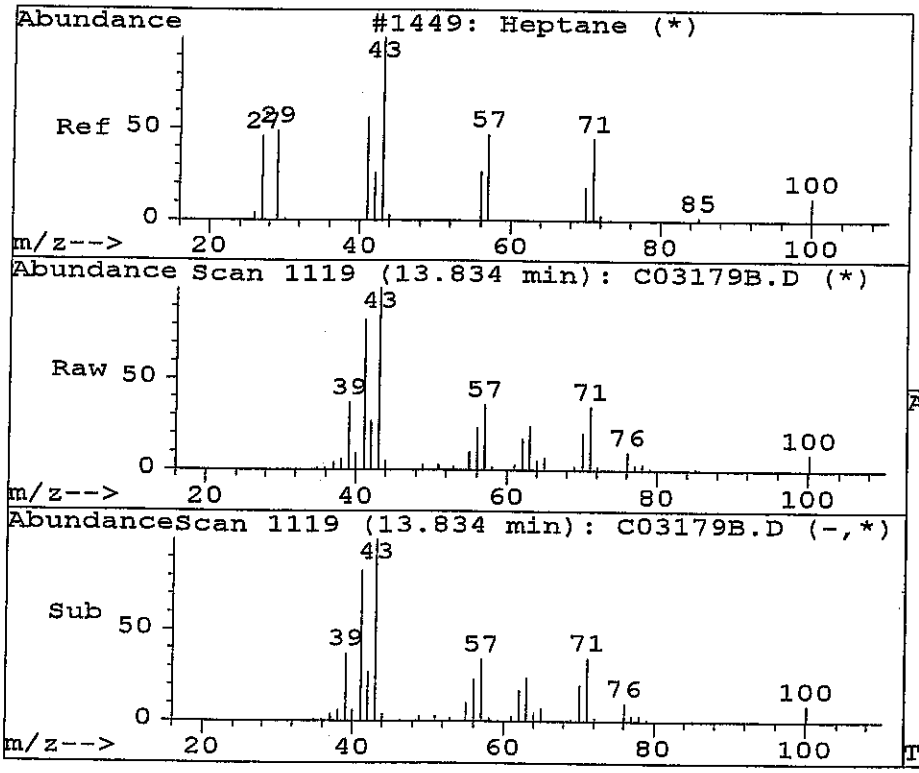


#41
Carbon tetrachloride
Concen: 0.97 ppbV
RT: 12.37 min Scan# 968
Delta R.T. -0.19 min
Lab File: C03179B.D
Acq: 17 Mar 109 9:42 am

Tgt Ion:116.9 Resp: 105798

Ion	Ratio	Lower	Upper
117	100		
119	99.4	75.3	112.9
0	0.0	0.0	0.0
0	0.0	0.0	0.0

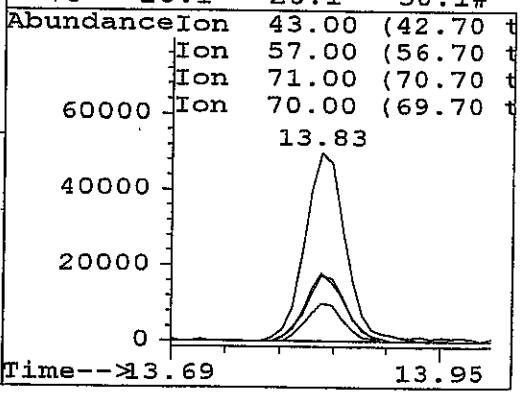


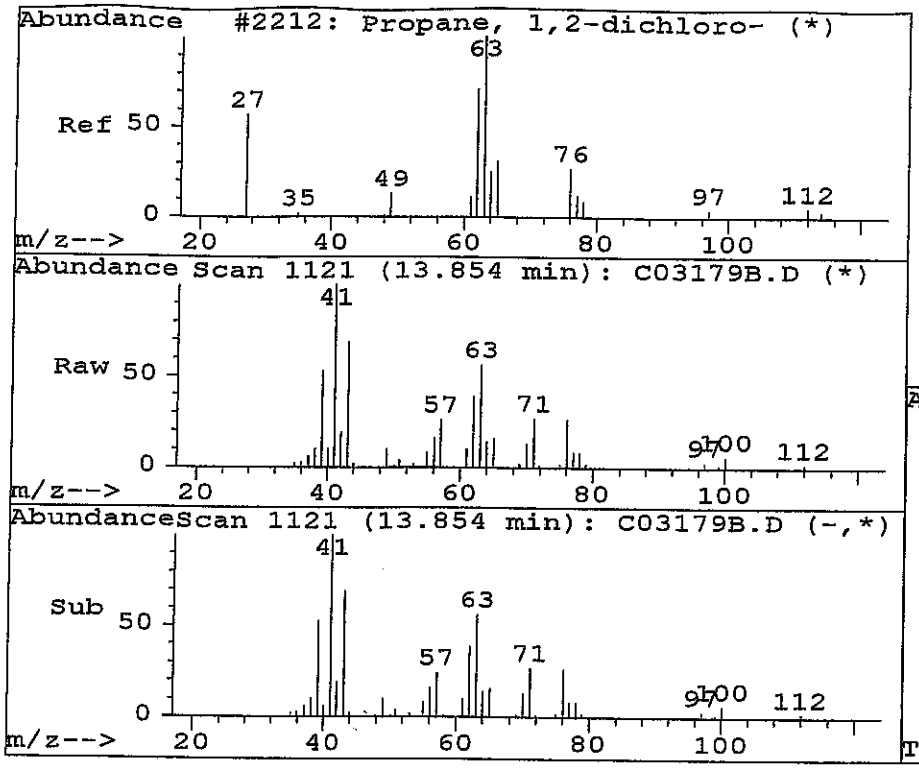


#42
n-Heptane
Concen: 1.35 ppbV
RT: 13.83 min Scan# 1119
Delta R.T. -0.21 min
Lab File: C03179B.D
Acq: 17 Mar 109 9:42 am

Tgt Ion:43 Resp: 135509

Ion	Ratio	Lower	Upper
43	100		
57	36.1	33.0	49.6
71	34.4	33.4	50.0
70	20.1	20.1	30.1#

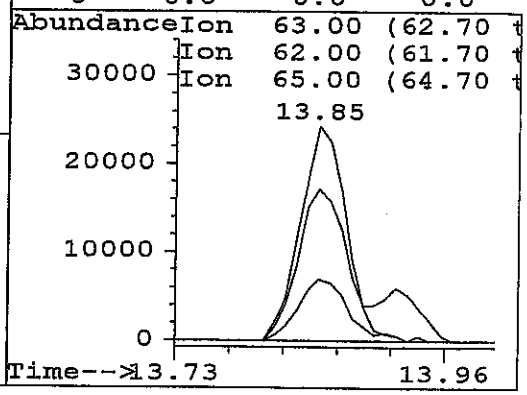


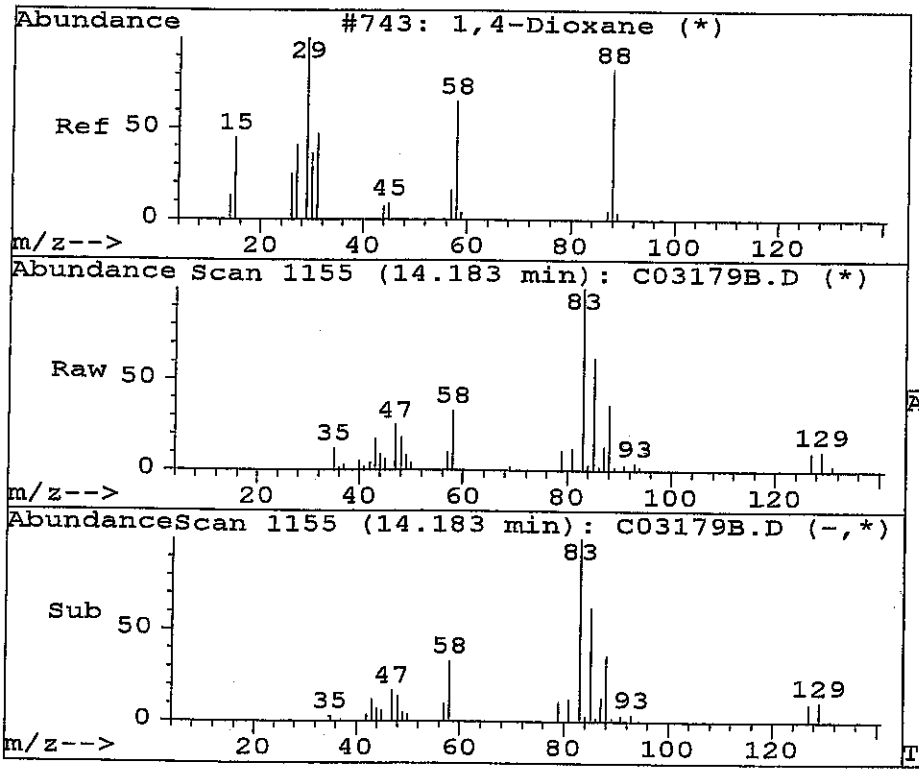


#43
1,2-Dichloropropane
Concen: 1.41 ppbV
RT: 13.85 min Scan# 1121
Delta R.T. -0.22 min
Lab File: C03179B.D
Acq: 17 Mar 109 9:42 am

Tgt Ion:63 Resp: 66789

Ion	Ratio	Lower	Upper
63	100		
62	62.9	51.3	76.9
65	27.5	23.1	34.7
0	0.0	0.0	0.0

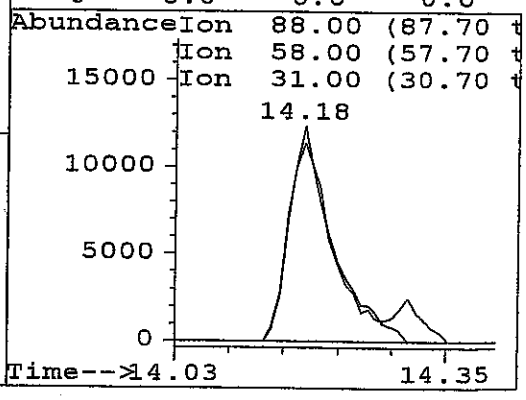


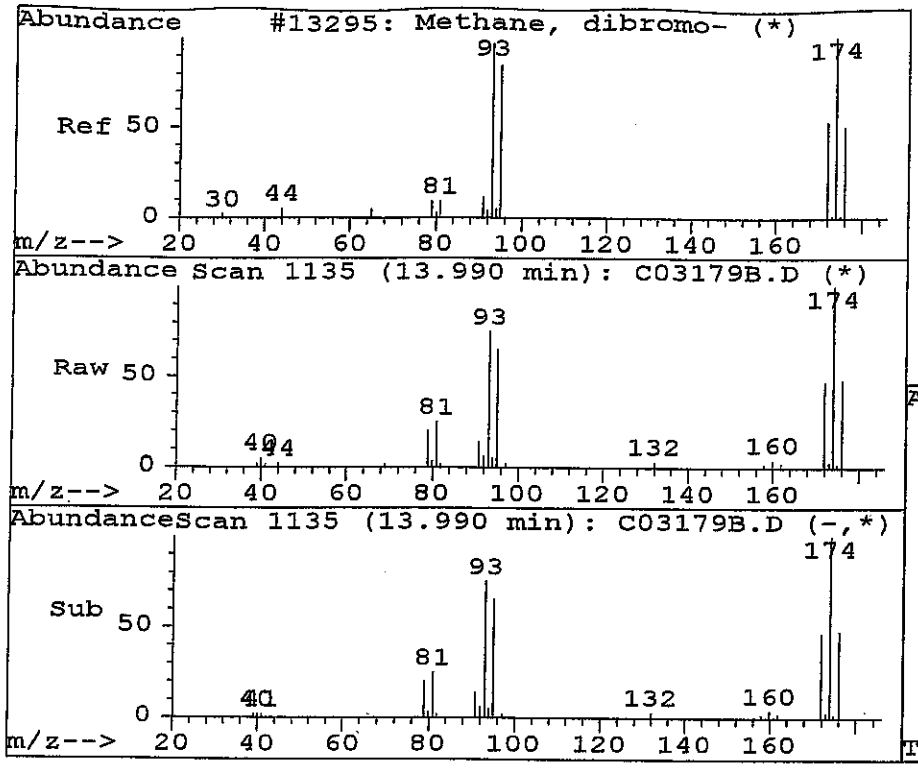


#44
1,4 Dioxane
Concen: 1.28 ppbV
RT: 14.18 min Scan# 1155
Delta R.T. -0.22 min
Lab File: C03179B.D
Acq: 17 Mar 109 9:42 am

Tgt Ion:88 Resp: 43700

Ion	Ratio	Lower	Upper
88	100		
58	95.8	75.6	113.4
31	0.0	0.0	0.0
0	0.0	0.0	0.0

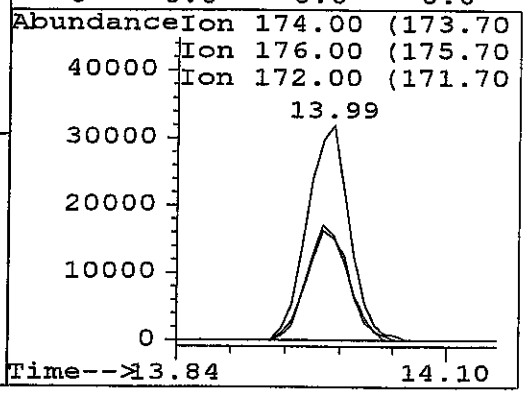


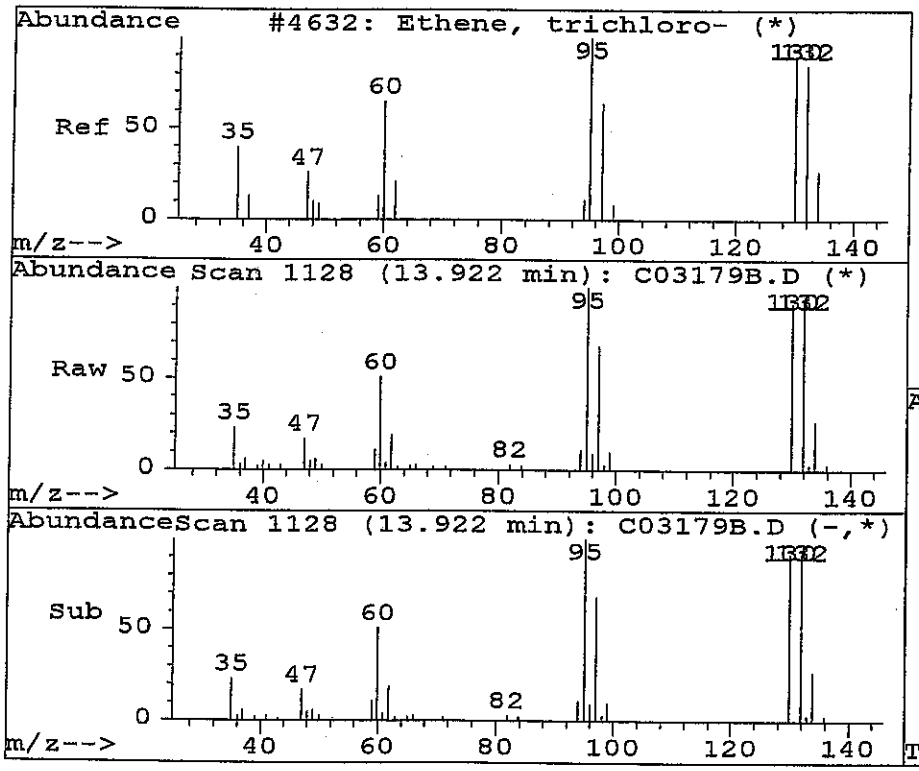


#45
Dibromomethane
Concen: 0.99 ppbV
RT: 13.99 min Scan# 1135
Delta R.T. -0.21 min
Lab File: C03179B.D
Acq: 17 Mar 109 9:42 am

Tgt Ion:174 Resp: 87600

Ion	Ratio	Lower	Upper
174	100		
176	48.4	39.1	58.7
172	47.2	42.4	63.6
0	0.0	0.0	0.0

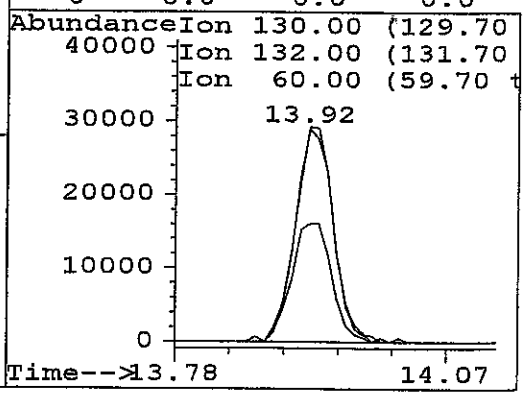


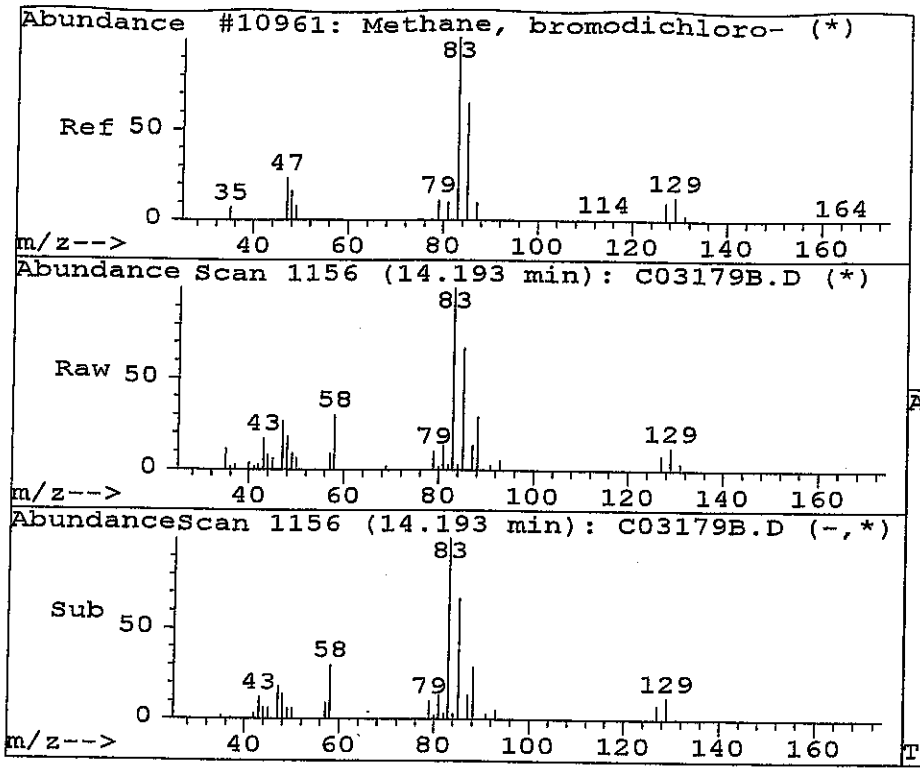


#46
Trichloroethene
Concen: 0.97 ppbV
RT: 13.92 min Scan# 1128
Delta R.T. -0.21 min
Lab File: C03179B.D
Acq: 17 Mar 109 9:42 am

Tgt Ion:130 Resp: 83100

Ion	Ratio	Lower	Upper
130	100		
132	101.1	78.5	117.7
60	54.2	44.2	66.4
0	0.0	0.0	0.0

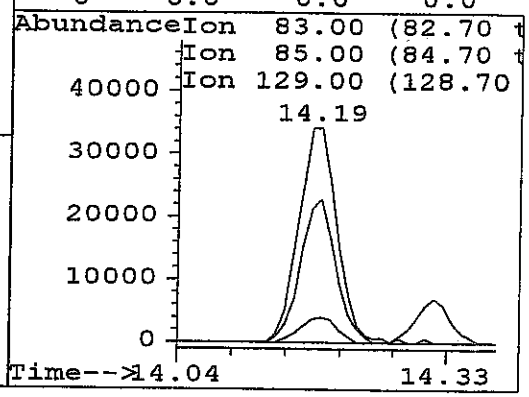


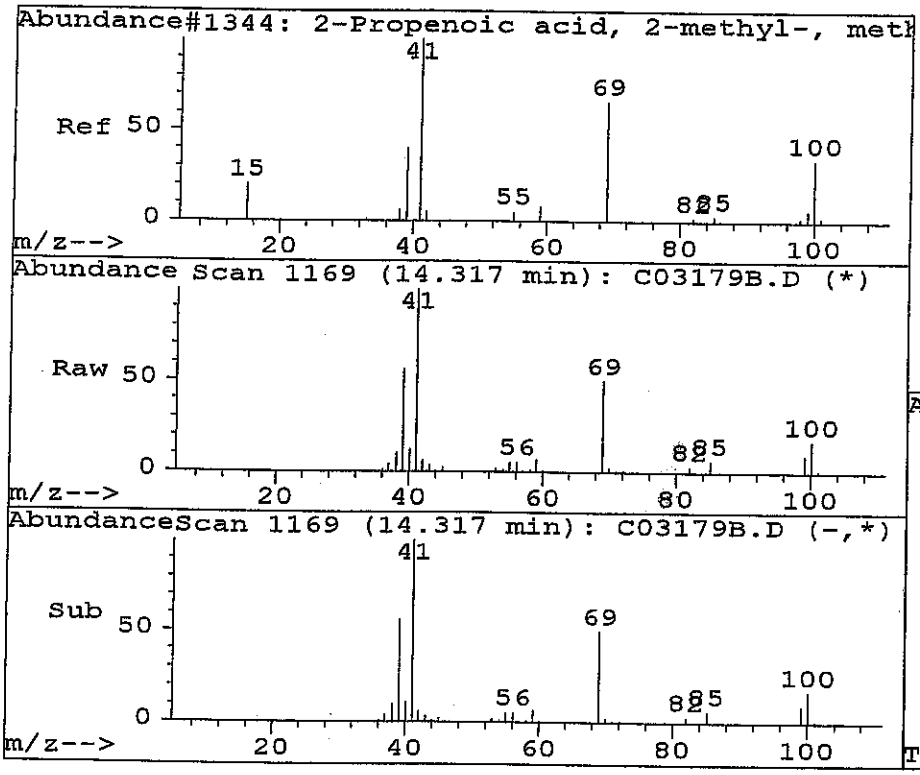


#47
Bromodichloromethane
Concen: 0.98 ppbV
RT: 14.19 min Scan# 1156
Delta R.T. -0.21 min
Lab File: C03179B.D
Acq: 17 Mar 109 9:42 am

Tgt Ion:83 Resp: 96325

Ion	Ratio	Lower	Upper
83	100		
85	61.0	47.5	71.3
129	11.6	10.2	15.4
0	0.0	0.0	0.0

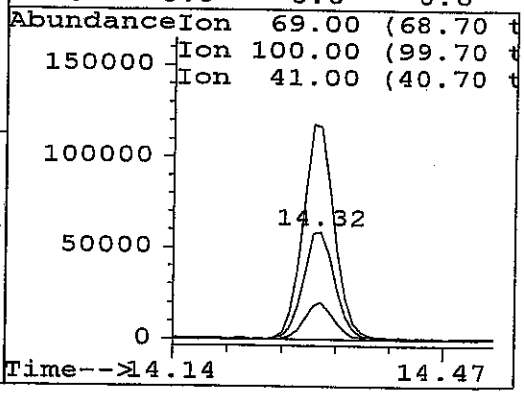


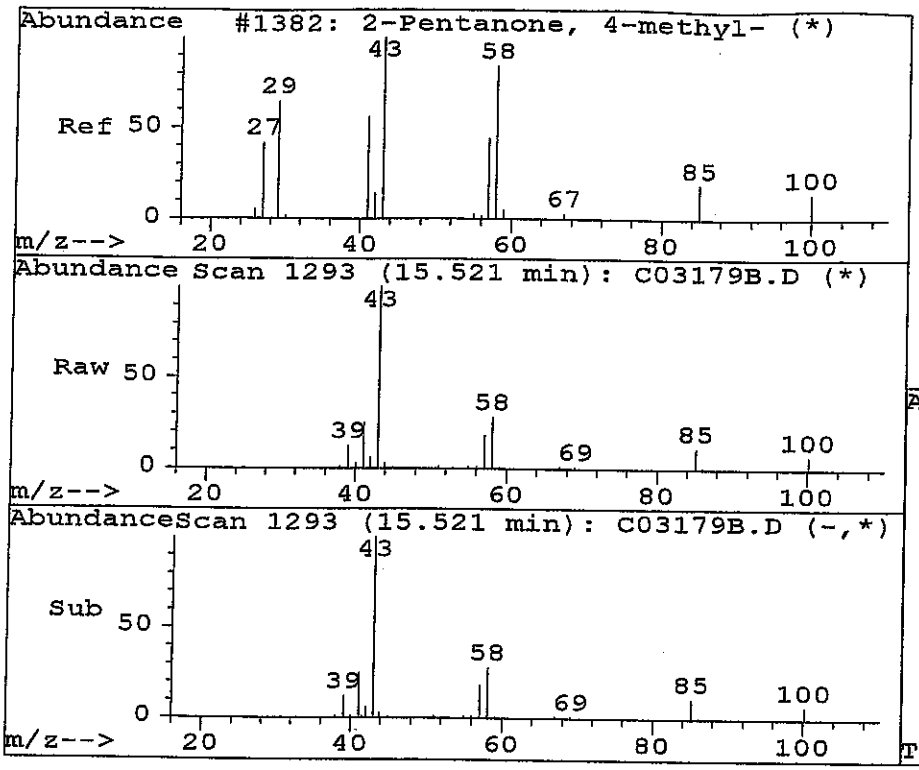


#48
Methyl methacrylate
Concen: 3.60 ppbV
RT: 14.32 min Scan# 1169
Delta R.T. -0.23 min
Lab File: C03179B.D
Acq: 17 Mar 109 9:42 am

Tgt Ion:69 Resp: 161809

Ion	Ratio	Lower	Upper
69	100		
100	34.6	29.5	44.3
41	200.3	144.6	217.0
0	0.0	0.0	0.0

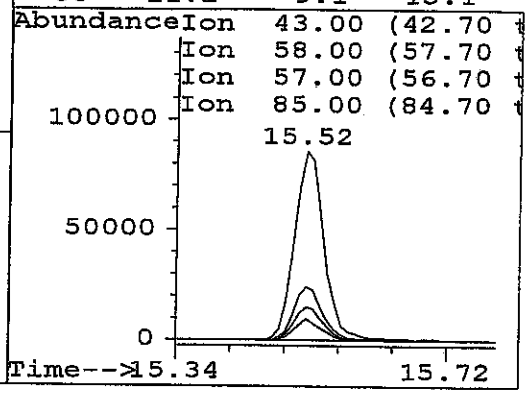


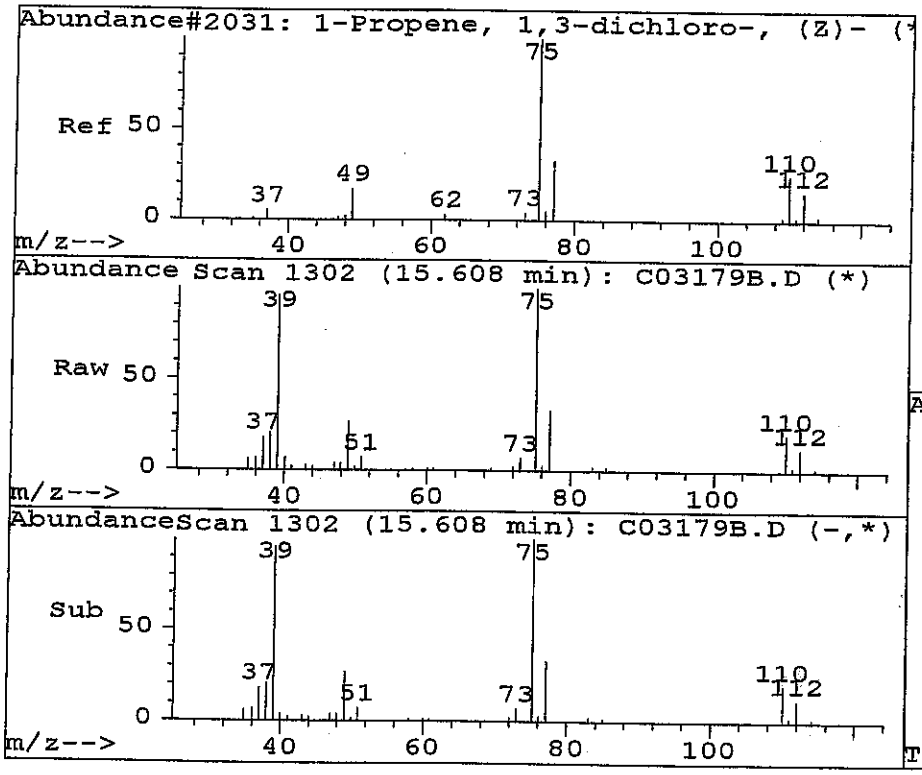


#49
Methyl Isobutyl Ketone
Concen: 1.38 ppbV
RT: 15.52 min Scan# 1293
Delta R.T. -0.18 min
Lab File: C03179B.D
Acq: 17 Mar 109 9:42 am

Tgt Ion:43 Resp: 250239

Ion	Ratio	Lower	Upper
43	100		
58	28.4	23.0	38.4
57	17.6	15.9	26.5
85	11.2	9.1	15.1

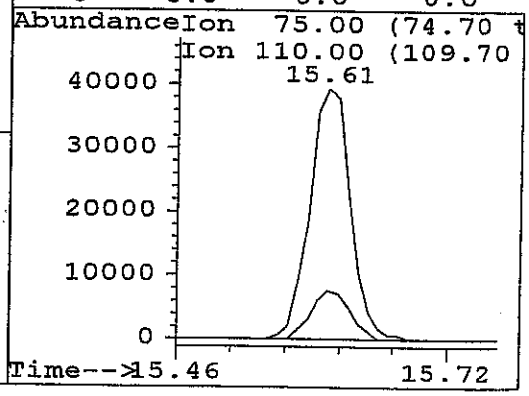


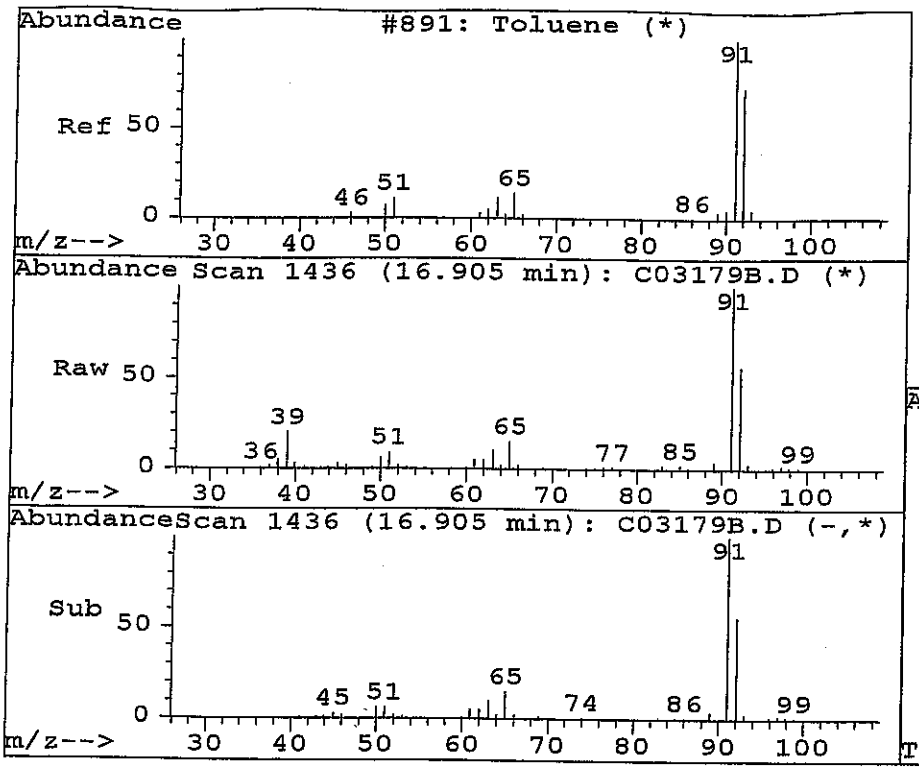


#50
cis-1,3-Dichloropropene
Concen: 1.33 ppbV
RT: 15.61 min Scan# 1302
Delta R.T. -0.21 min
Lab File: C03179B.D
Acq: 17 Mar 109 9:42 am

Tgt Ion:75 Resp: 107039

Ion	Ratio	Lower	Upper
75	100		
110	19.5	15.4	23.2
0	0.0	0.0	0.0
0	0.0	0.0	0.0

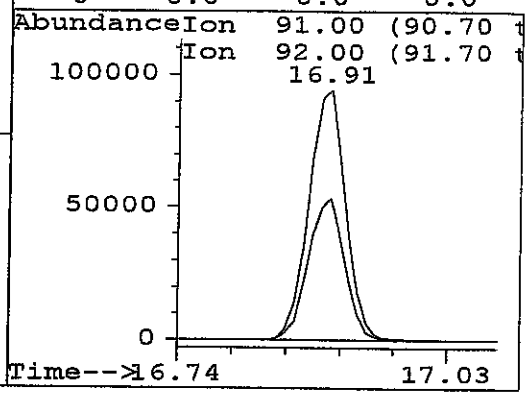


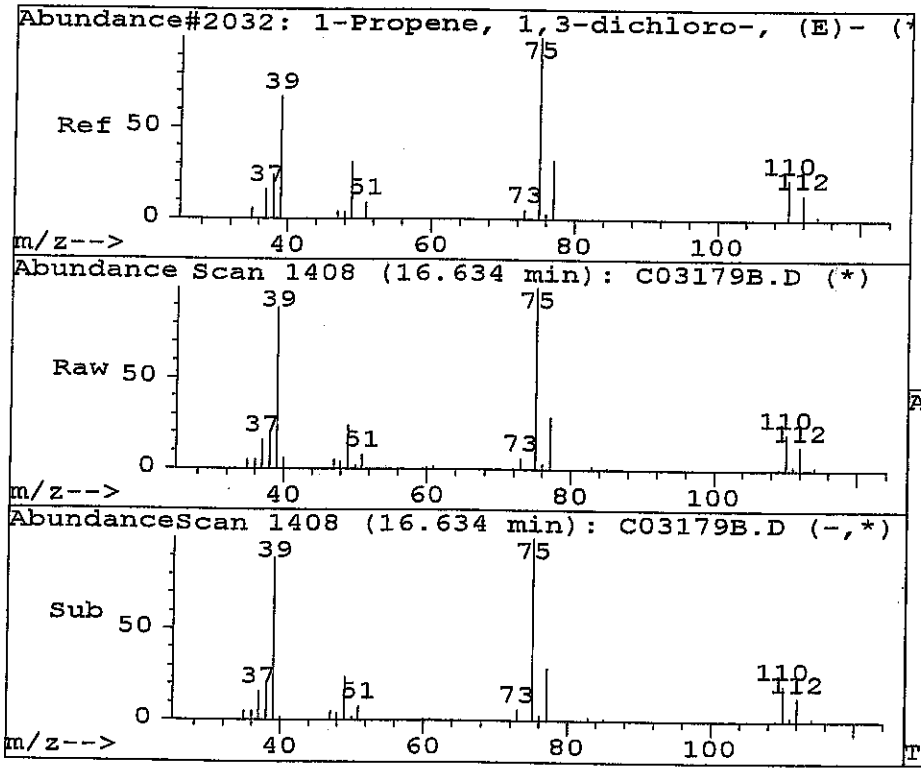


#51
Toluene
Concen: 1.43 ppbV
RT: 16.91 min Scan# 1436
Delta R.T. -0.20 min
Lab File: C03179B.D
Acq: 17 Mar 109 9:42 am

Tgt Ion:91 Resp: 257501

Ion	Ratio	Lower	Upper
91	100		
92	56.3	45.5	68.3
0	0.0	0.0	0.0
0	0.0	0.0	0.0

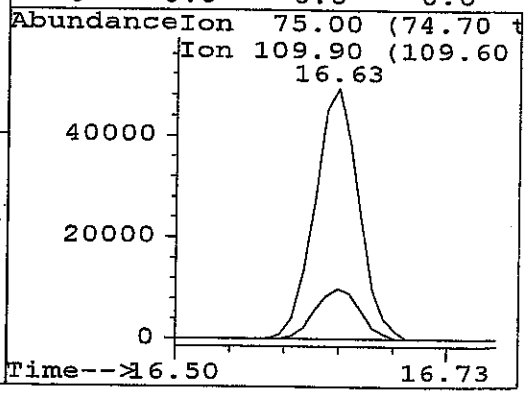


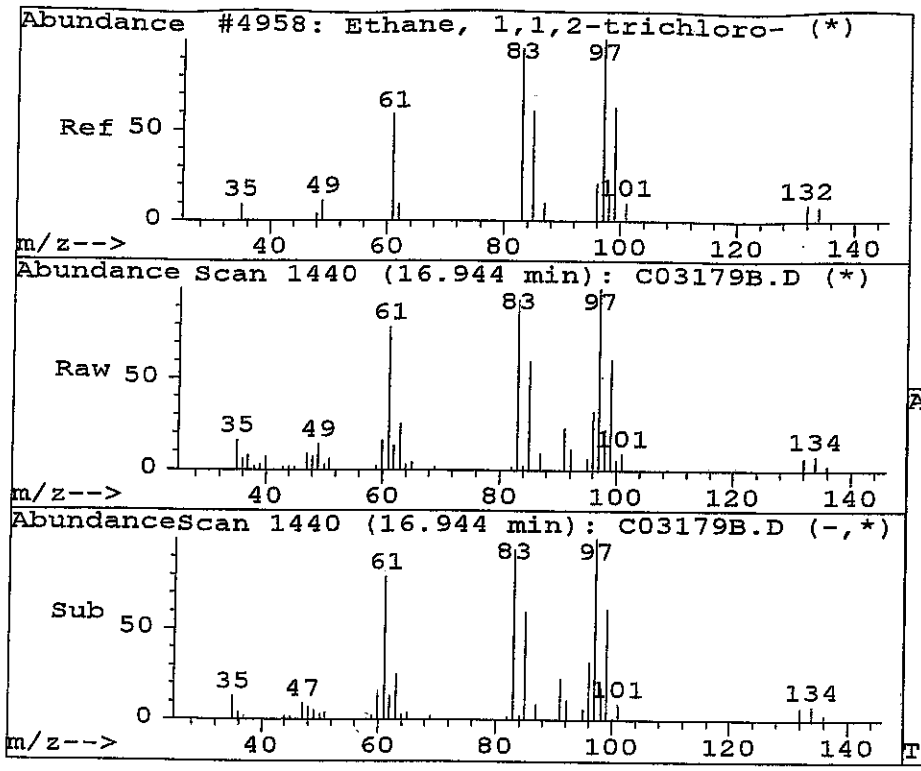


#52
trans-1,3-Dichloropropene
Concen: 1.25 ppbV
RT: 16.63 min Scan# 1408
Delta R.T. -0.22 min
Lab File: C03179B.D
Acq: 17 Mar 109 9:42 am

Tgt Ion:75 Resp: 127376

Ion	Ratio	Lower	Upper
75	100		
110	20.2	17.4	26.2
0	0.0	0.0	0.0
0	0.0	0.0	0.0

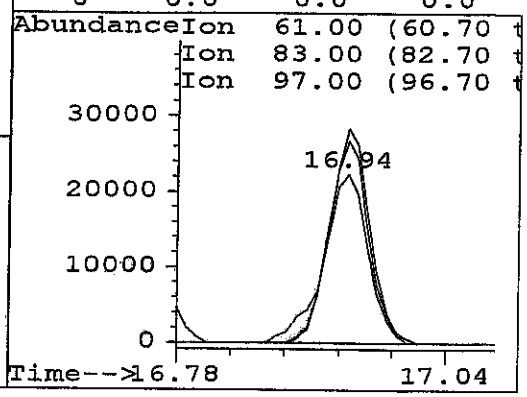


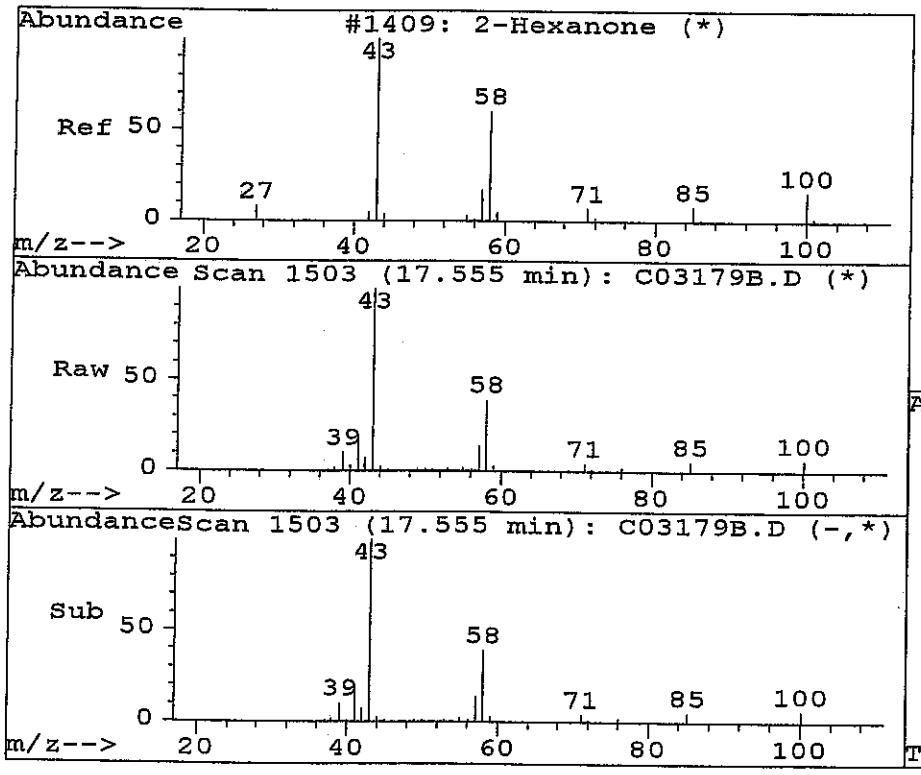


#53
1,1,2-Trichloroethane
Concen: 1.29 ppbV
RT: 16.94 min Scan# 1440
Delta R.T. -0.22 min
Lab File: C03179B.D
Acq: 17 Mar 109 9:42 am

Tgt Ion:61 Resp: 68163

Ion	Ratio	Lower	Upper
61	100		
83	119.8	83.1	124.7
97	127.2	99.4	149.2
0	0.0	0.0	0.0

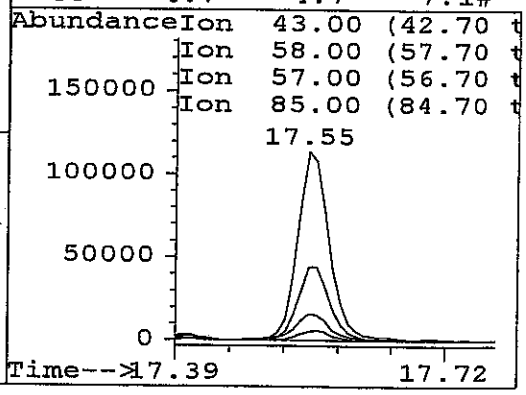


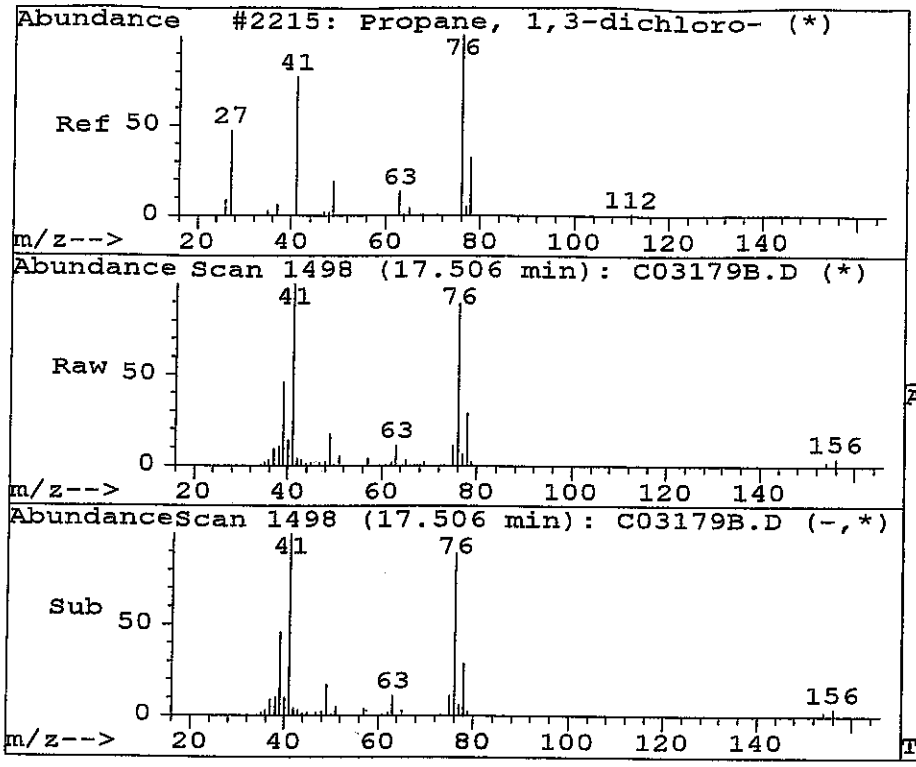


#54
2-Hexanone
Concen: 1.34 ppbV
RT: 17.55 min Scan# 1503
Delta R.T. -0.25 min
Lab File: C03179B.D
Acq: 17 Mar 109 9:42 am

Tgt Ion:43 Resp: 311524

Ion	Ratio	Lower	Upper
43	100		
58	39.0	28.1	46.9
57	13.7	10.4	17.4
85	4.7	4.7	7.1#

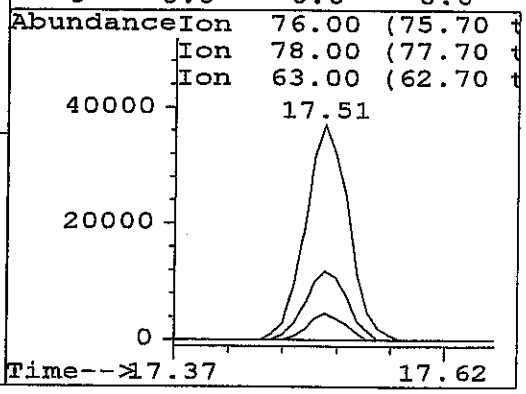


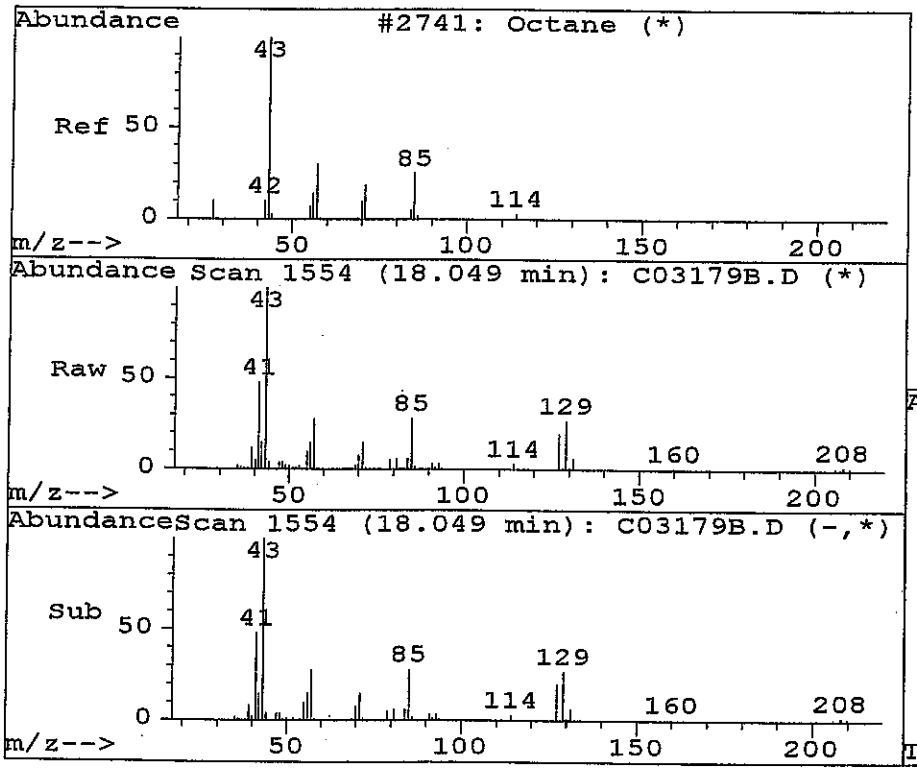


#55
1,3-Dichloropropane
Concen: 1.26 ppbV
RT: 17.51 min Scan# 1498
Delta R.T. -0.21 min
Lab File: C03179B.D
Acq: 17 Mar 109 9:42 am

Tgt Ion:76 Resp: 102447

Ion	Ratio	Lower	Upper
76	100		
78	32.0	25.4	38.0
63	12.5	8.3	12.5
0	0.0	0.0	0.0

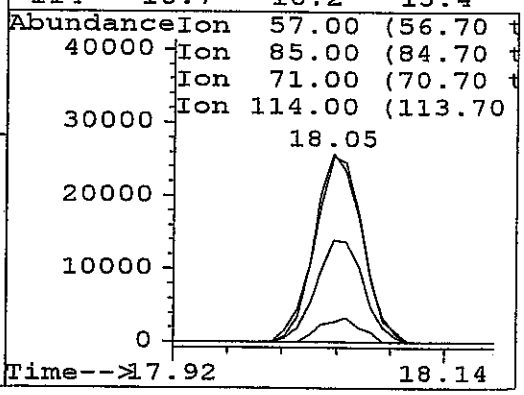


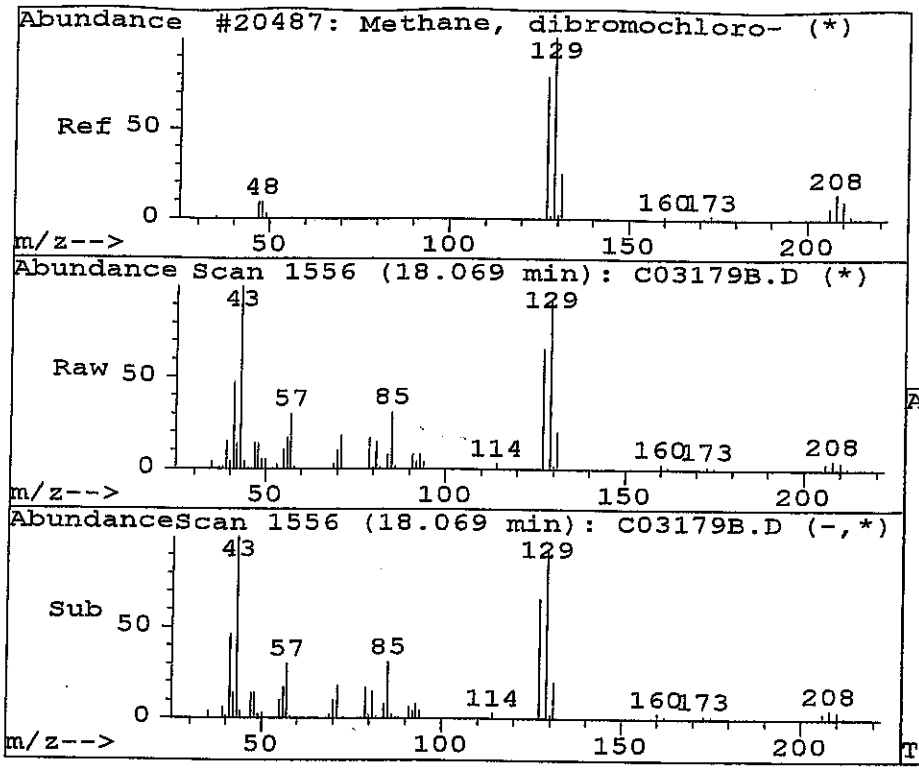


#56
Octane
Concen: 1.02 ppbV
RT: 18.05 min Scan# 1554
Delta R.T. -0.21 min
Lab File: C03179B.D
Acq: 17 Mar 109 9:42 am

Tgt Ion:57 Resp: 67553

Ion	Ratio	Lower	Upper
57	100		
85	98.4	84.5	126.7
71	54.0	44.1	66.1
114	10.7	10.2	15.4

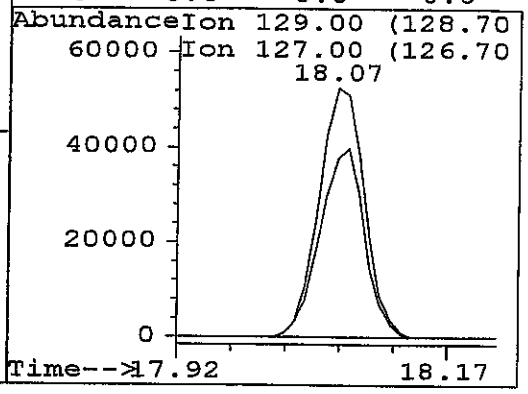


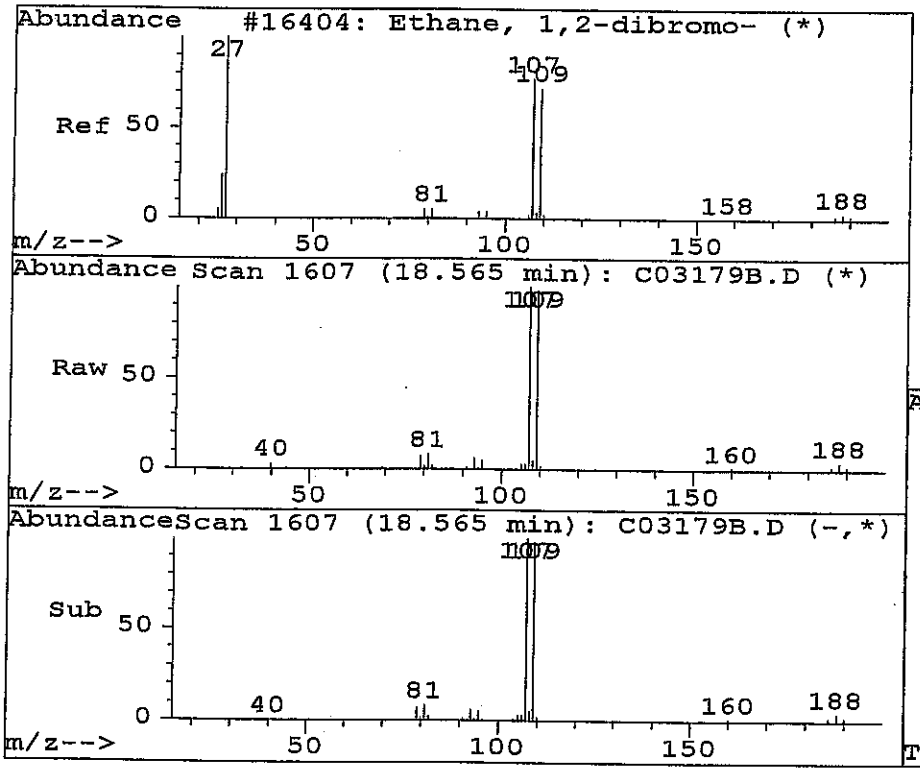


#57
Dibromochloromethane
Concen: 1.07 ppbV
RT: 18.07 min Scan# 1556
Delta R.T. -0.23 min
Lab File: C03179B.D
Acq: 17 Mar 109 9:42 am

Tgt Ion:129 Resp: 150691

Ion	Ratio	Lower	Upper
129	100		
127	71.7	59.7	89.5
0	0.0	0.0	0.0
0	0.0	0.0	0.0

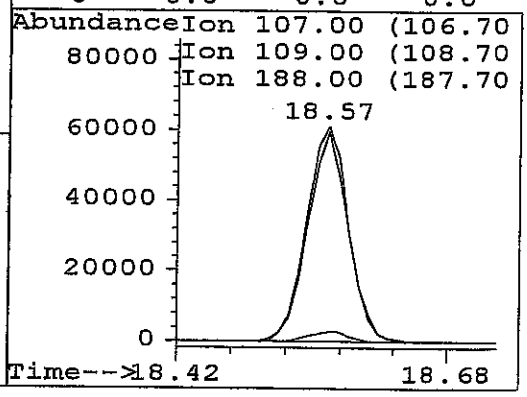


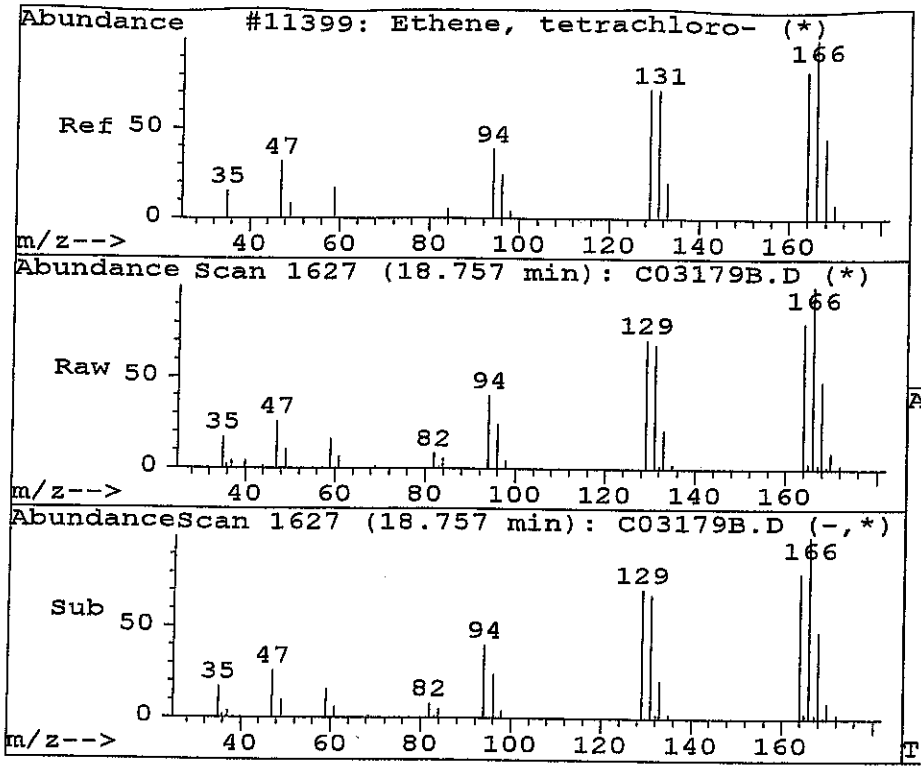


#58
1,2-Dibromoethane
Concen: 1.31 ppbV
RT: 18.57 min Scan# 1607
Delta R.T. -0.23 min
Lab File: C03179B.D
Acq: 17 Mar 109 9:42 am

Tgt Ion:107 Resp: 169213

Ion	Ratio	Lower	Upper
107	100		
109	97.6	75.4	113.0
188	4.5	3.8	5.6
0	0.0	0.0	0.0

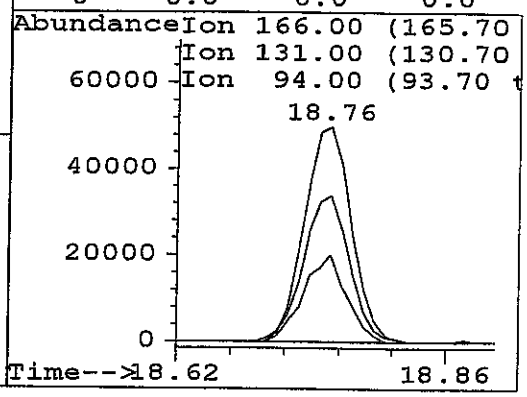


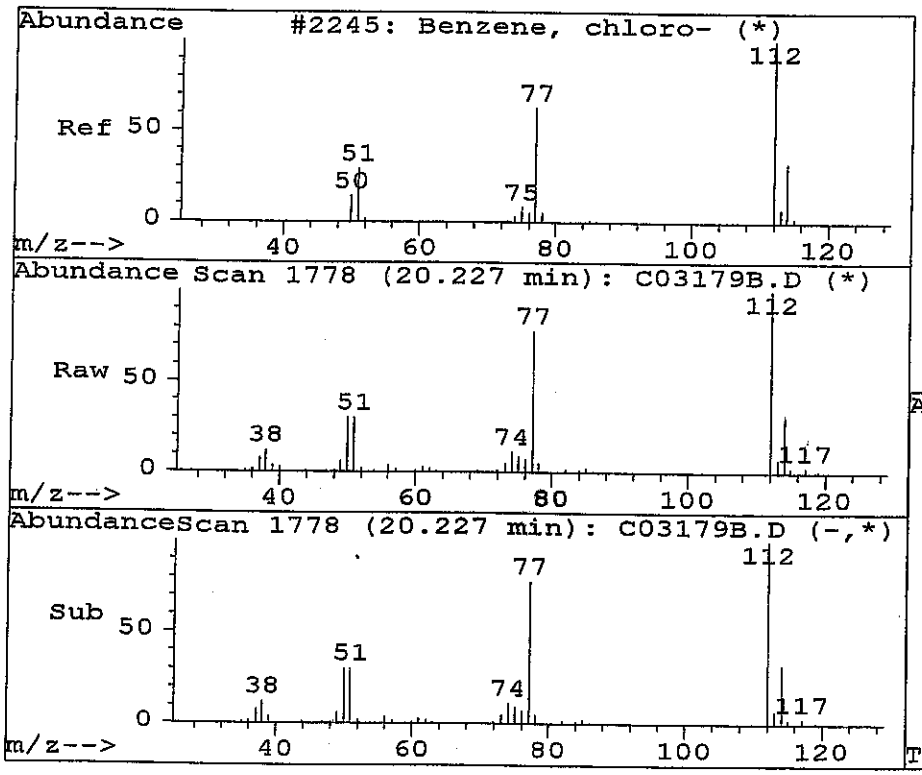


#59
Tetrachloroethene
Concen: 1.15 ppbV
RT: 18.76 min Scan# 1627
Delta R.T. -0.21 min
Lab File: C03179B.D
Acq: 17 Mar 109 9:42 am

Tgt Ion:166 Resp: 145069

Ion	Ratio	Lower	Upper
166	100		
131	67.9	49.8	74.8
94	40.4	28.2	42.4
0	0.0	0.0	0.0

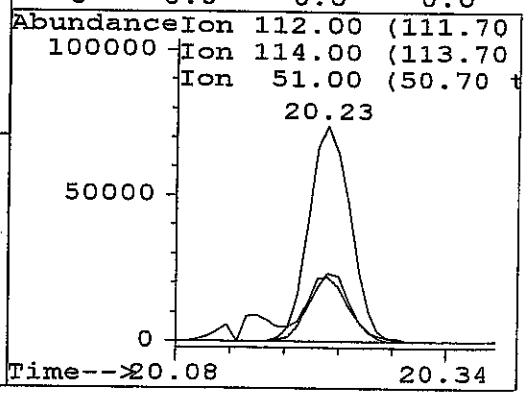


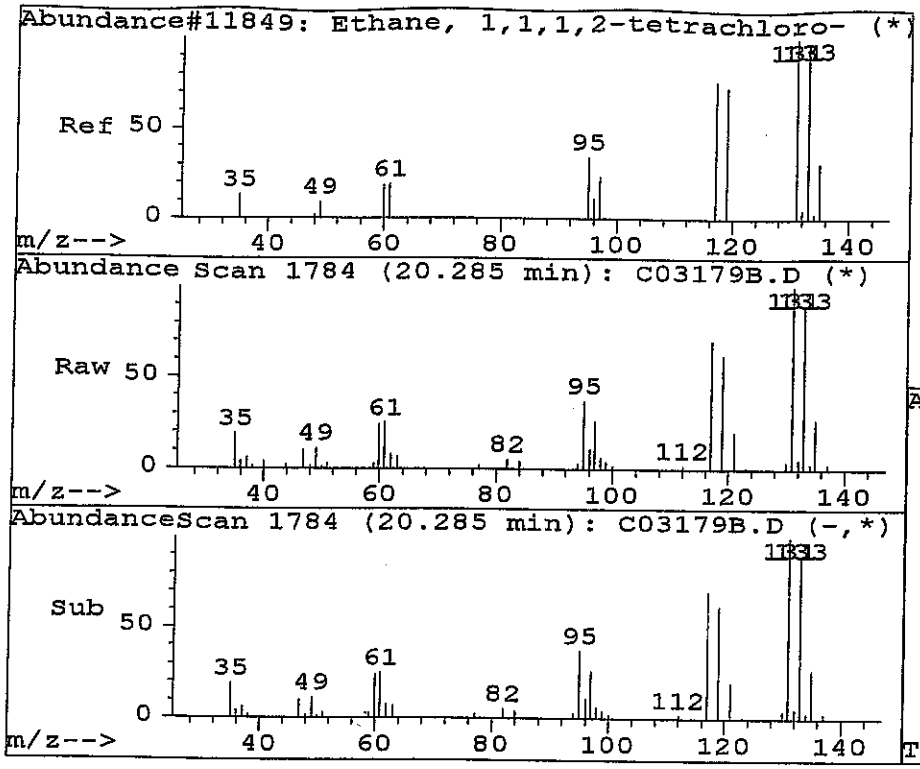


#60
Chlorobenzene
Concen: 1.26 ppbV
RT: 20.23 min Scan# 1778
Delta R.T. -0.22 min
Lab File: C03179B.D
Acq: 17 Mar 109 9:42 am

Tgt Ion:112 Resp: 208106

Ion	Ratio	Lower	Upper
112	100		
114	31.6	25.0	37.4
51	23.8	23.3	34.9
0	0.0	0.0	0.0

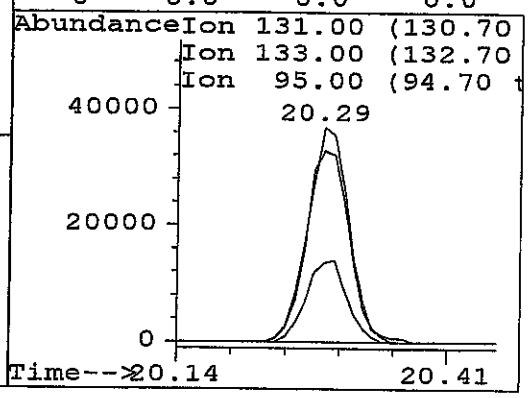


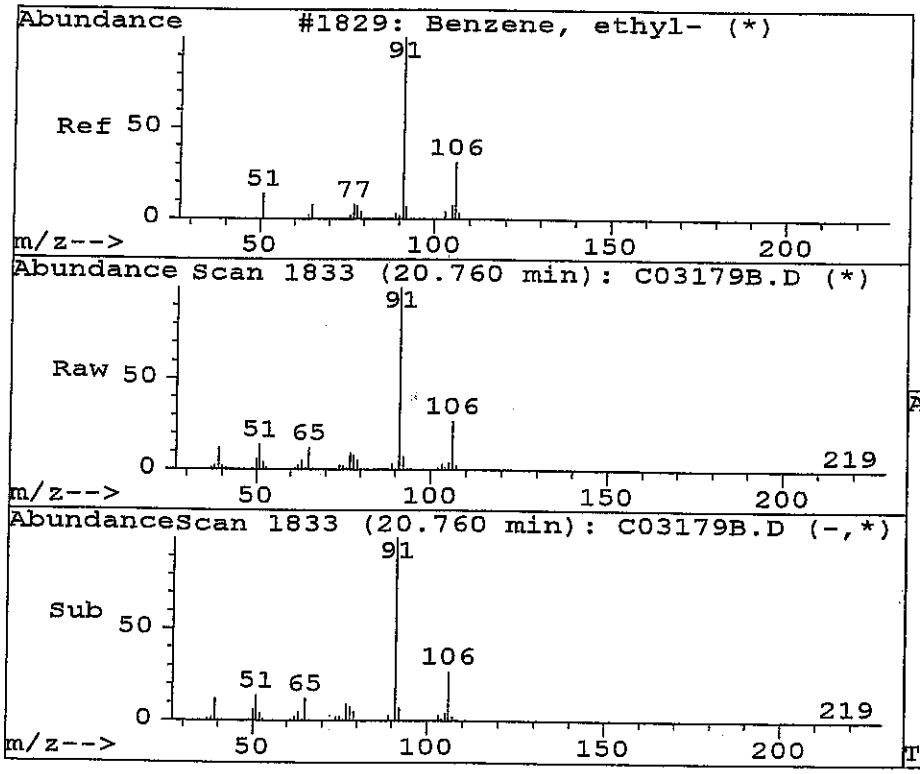


#61
1,1,1,2-Tetrachloroethane
Concen: 1.11 ppbV
RT: 20.29 min Scan# 1784
Delta R.T. -0.22 min
Lab File: C03179B.D
Acq: 17 Mar 109 9:42 am

Tgt Ion:131 Resp: 104954

Ion	Ratio	Lower	Upper
131	100		
133	88.9	78.9	118.3
95	36.9	30.4	45.6
0	0.0	0.0	0.0

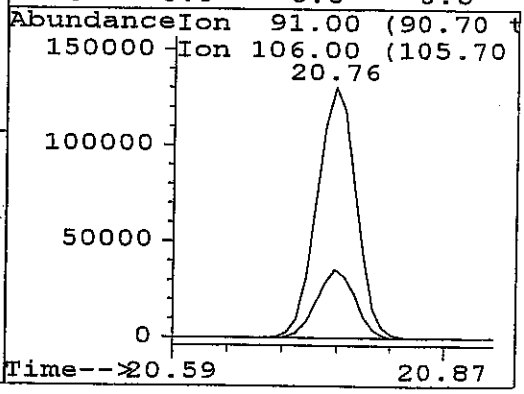


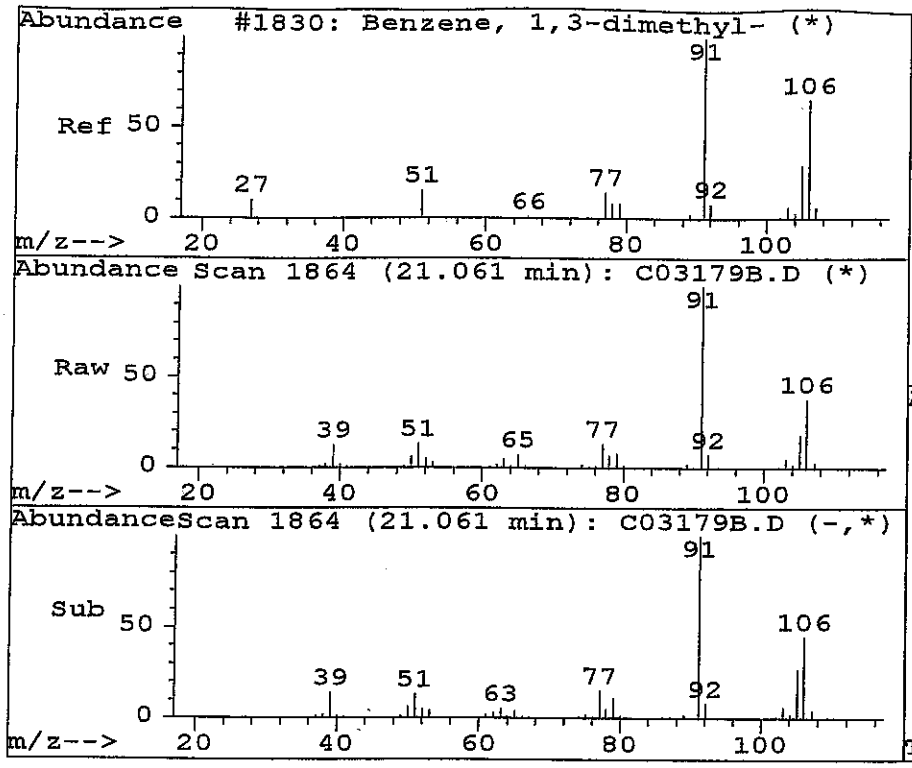


#62
Ethylbenzene
Concen: 1.34 ppbV
RT: 20.76 min Scan# 1833
Delta R.T. -0.23 min
Lab File: C03179B.D
Acq: 17 Mar 109 9:42 am

Tgt Ion:91 Resp: 359496

Ion	Ratio	Lower	Upper
91	100		
106	27.2	20.9	31.3
0	0.0	0.0	0.0
0	0.0	0.0	0.0

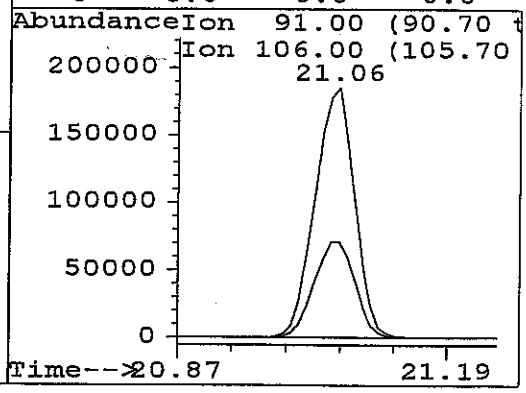


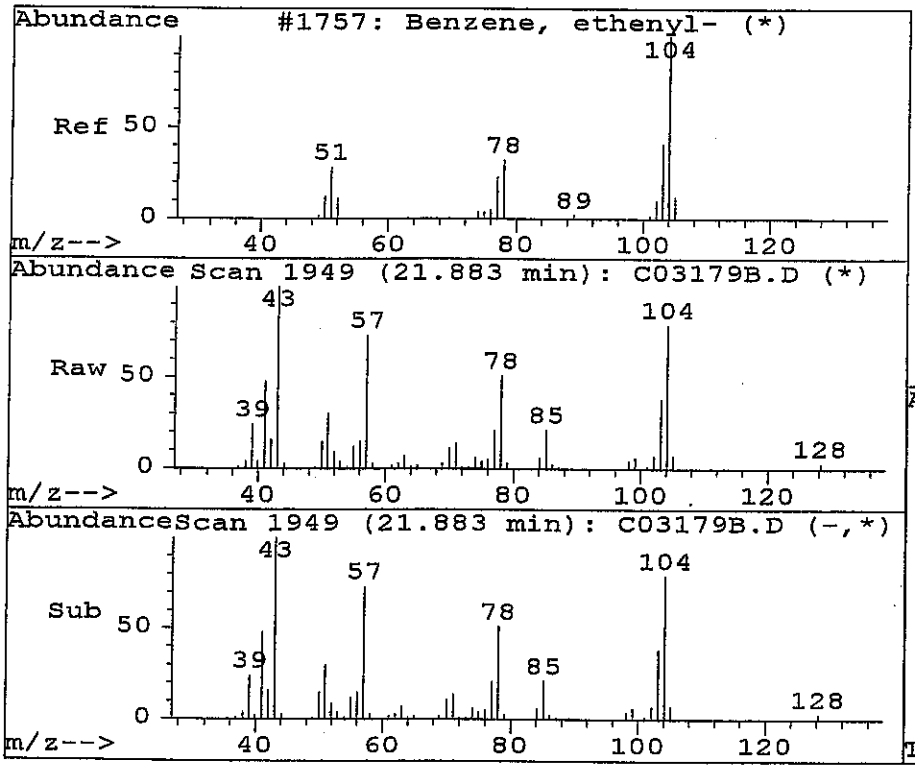


#63
m & p-Xylene
Concen: 2.63 ppbV
RT: 21.06 min Scan# 1864
Delta R.T. -0.22 min
Lab File: C03179B.D
Acq: 17 Mar 109 9:42 am

Tgt Ion:91 Resp: 617919

Ion	Ratio	Lower	Upper
91	100		
106	38.2	30.8	46.2
0	0.0	0.0	0.0
0	0.0	0.0	0.0

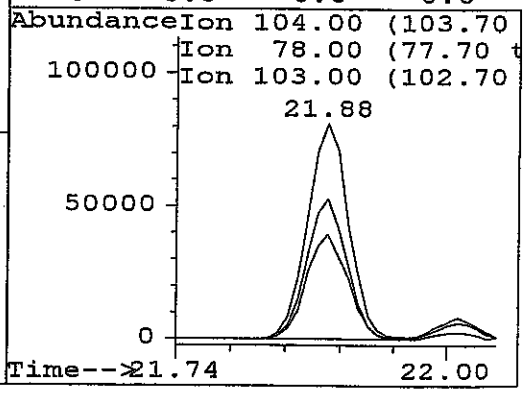


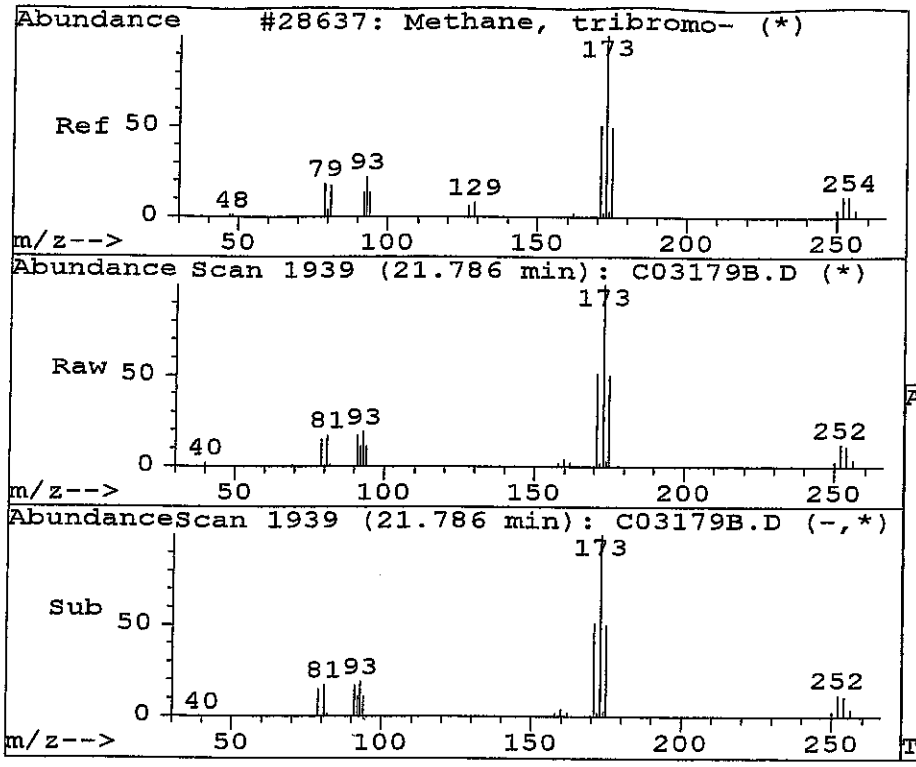


#64
Styrene
Concen: 1.35 ppbV
RT: 21.88 min Scan# 1949
Delta R.T. -0.26 min
Lab File: C03179B.D
Acq: 17 Mar 109 9:42 am

Tgt Ion:104 Resp: 224026

Ion	Ratio	Lower	Upper
104	100		
78	64.5	52.3	78.5
103	48.0	37.7	56.5
0	0.0	0.0	0.0

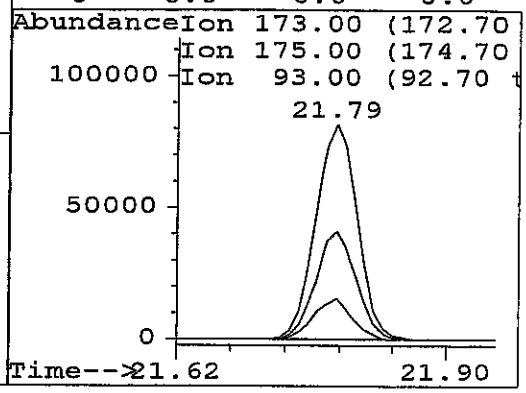


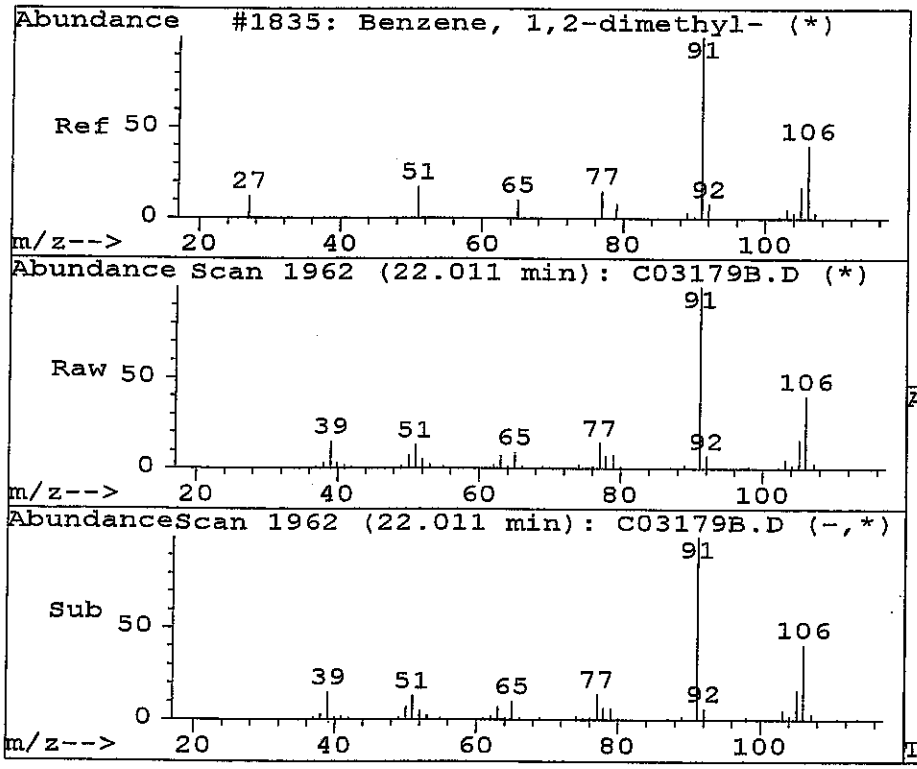


#65
Bromoform
Concen: 1.09 ppbV
RT: 21.79 min Scan# 1939
Delta R.T. -0.21 min
Lab File: C03179B.D
Acq: 17 Mar 109 9:42 am

Tgt Ion:173 Resp: 243927

Ion	Ratio	Lower	Upper
173	100		
175	50.0	38.6	57.8
93	18.9	14.0	21.0
0	0.0	0.0	0.0

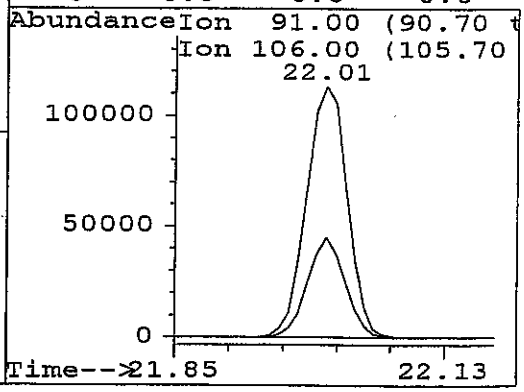


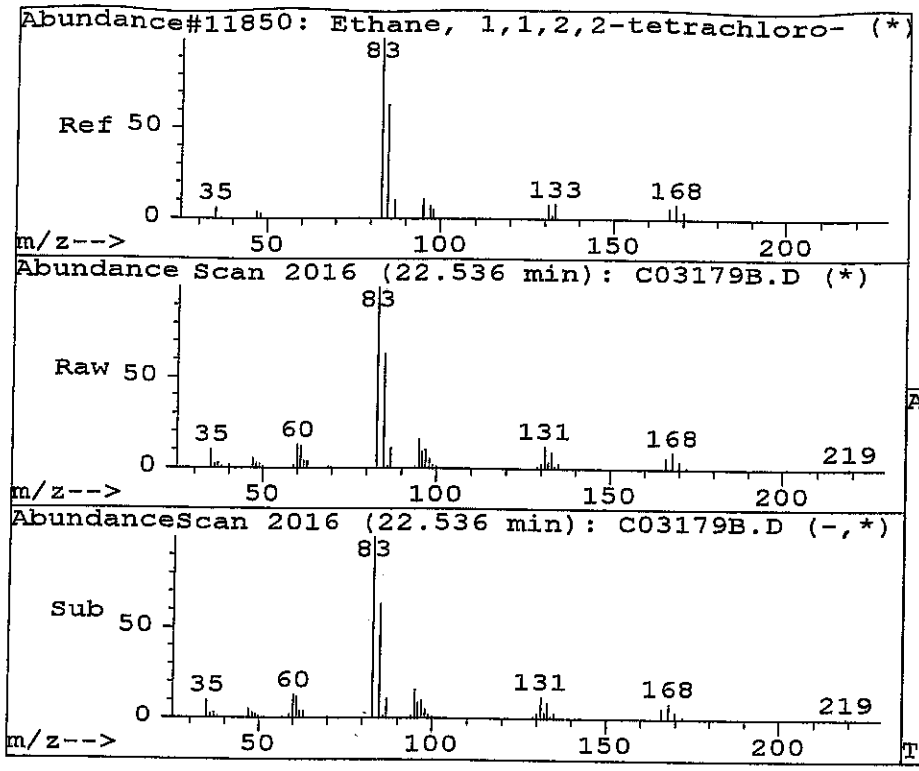


#66
o-Xylene
Concen: 1.29 ppbV
RT: 22.01 min Scan# 1962
Delta R.T. -0.24 min
Lab File: C03179B.D
Acq: 17 Mar 109 9:42 am

Tgt Ion:91 Resp: 329821

Ion	Ratio	Lower	Upper
91	100		
106	39.8	28.6	42.8
0	0.0	0.0	0.0
0	0.0	0.0	0.0

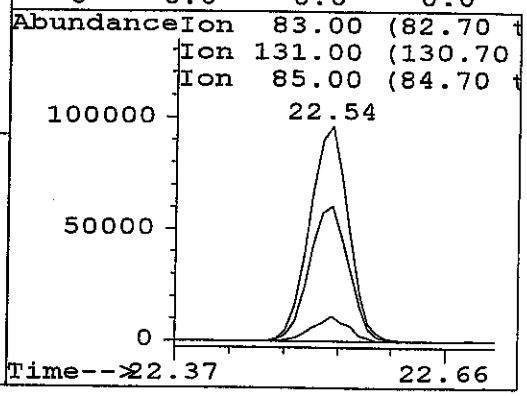


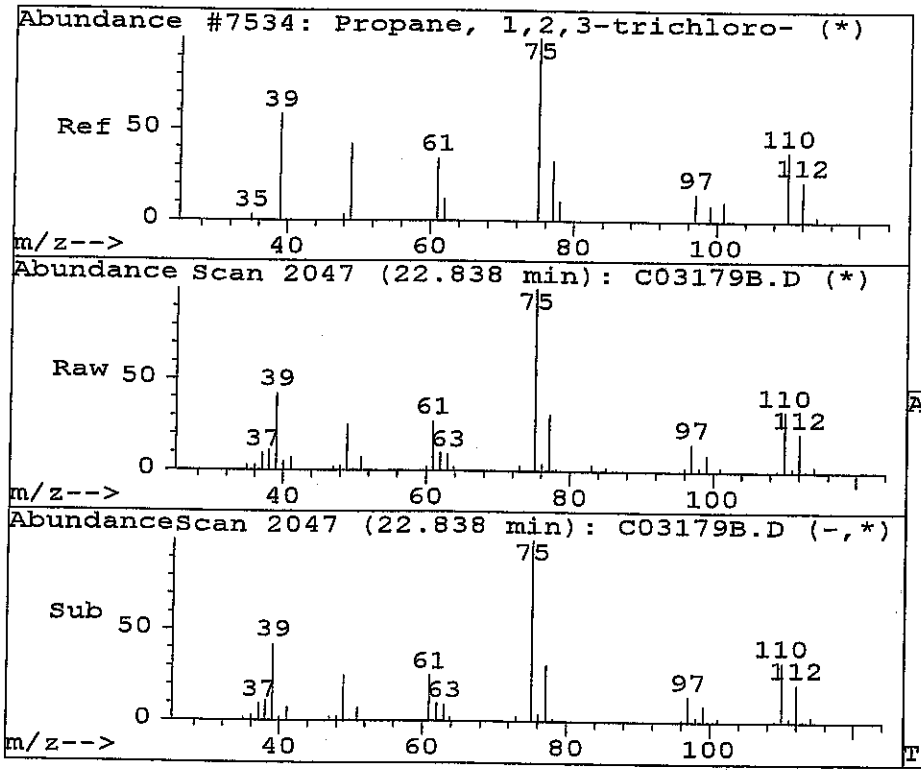


#67
1,1,2,2-Tetrachloroethane
Concen: 1.45 ppbV
RT: 22.54 min Scan# 2016
Delta R.T. -0.21 min
Lab File: C03179B.D
Acq: 17 Mar 109 9:42 am

Tgt Ion:83 Resp: 274703

Ion	Ratio	Lower	Upper
83	100		
131	11.7	10.1	15.1
85	62.8	52.4	78.6
0	0.0	0.0	0.0

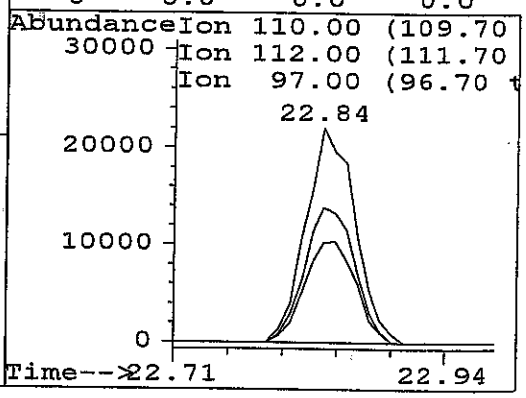


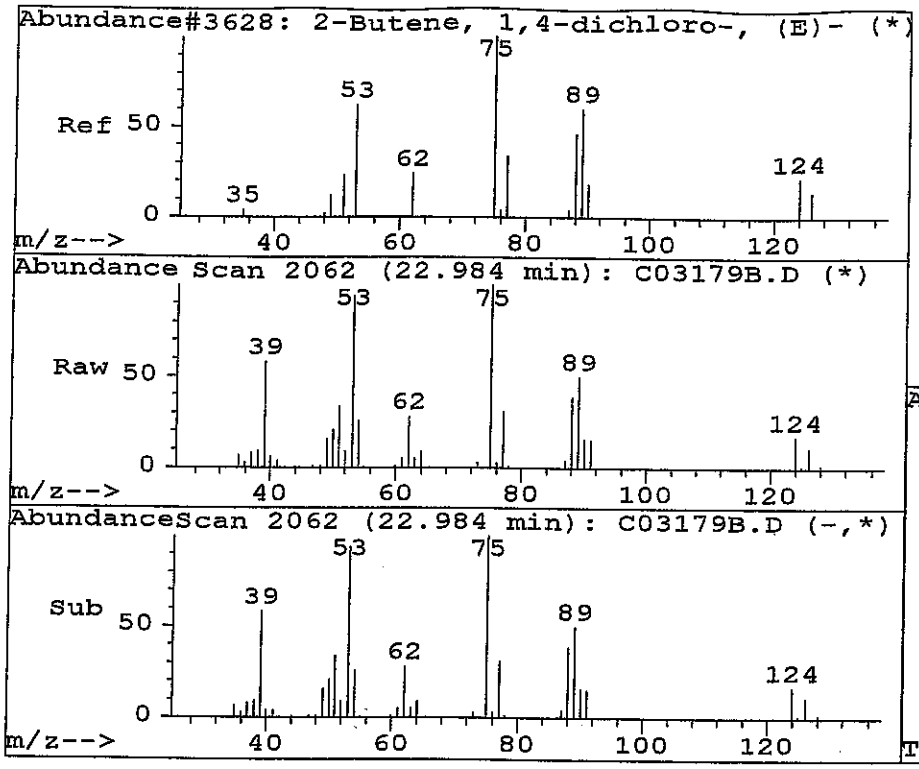


#68
1,2,3-Trichloropropane
Concen: 1.17 ppbV
RT: 22.84 min Scan# 2047
Delta R.T. -0.24 min
Lab File: C03179B.D
Acq: 17 Mar 109 9:42 am

Tgt Ion:110 Resp: 64244

Ion	Ratio	Lower	Upper
110	100		
112	63.0	51.6	77.4
97	46.3	35.4	53.2
0	0.0	0.0	0.0

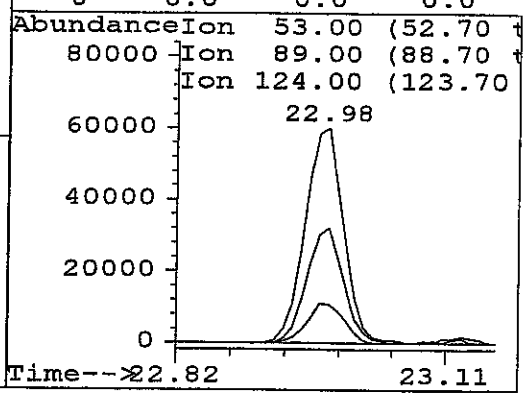


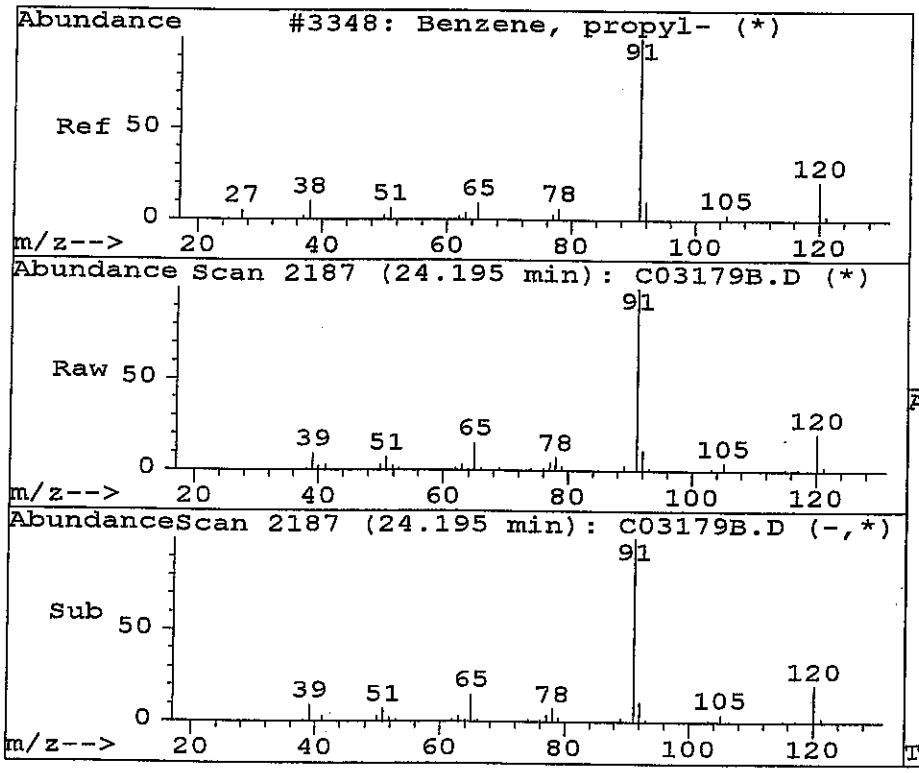


#69
t-1,4-Dichloro-2-butene
Concen: 3.23 ppbV
RT: 22.98 min Scan# 2062
Delta R.T. -0.25 min
Lab File: C03179B.D
Acq: 17 Mar 109 9:42 am

Tgt Ion:53 Resp: 171723

Ion	Ratio	Lower	Upper
53	100		
89	53.3	40.2	60.2
124	17.9	15.0	22.4
0	0.0	0.0	0.0

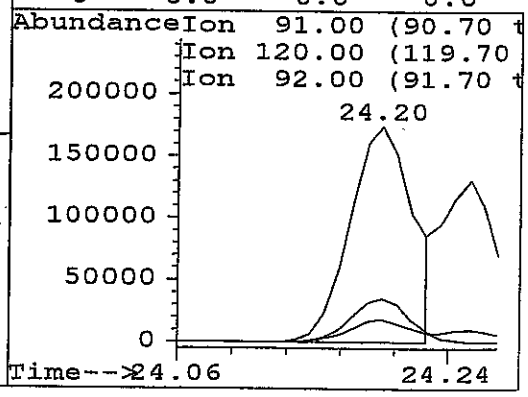


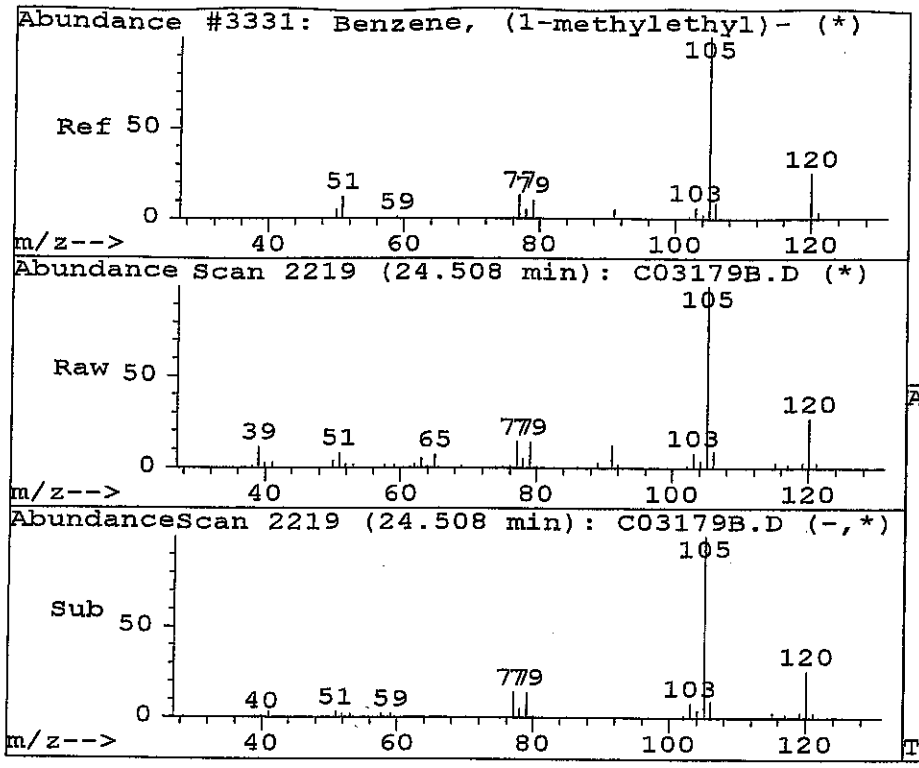


#70
n-Propylbenzene
Concen: 1.19 ppbV
RT: 24.20 min Scan# 2187
Delta R.T. -0.23 min
Lab File: C03179B.D
Acq: 17 Mar 109 9:42 am

Tgt Ion:91 Resp: 514907

Ion	Ratio	Lower	Upper
91	100		
120	18.9	14.3	21.5
92	11.1	7.9	11.9
0	0.0	0.0	0.0

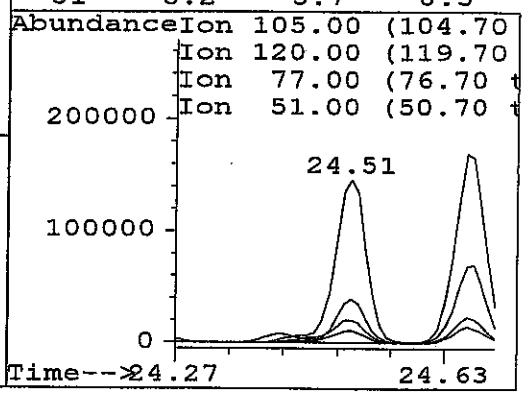


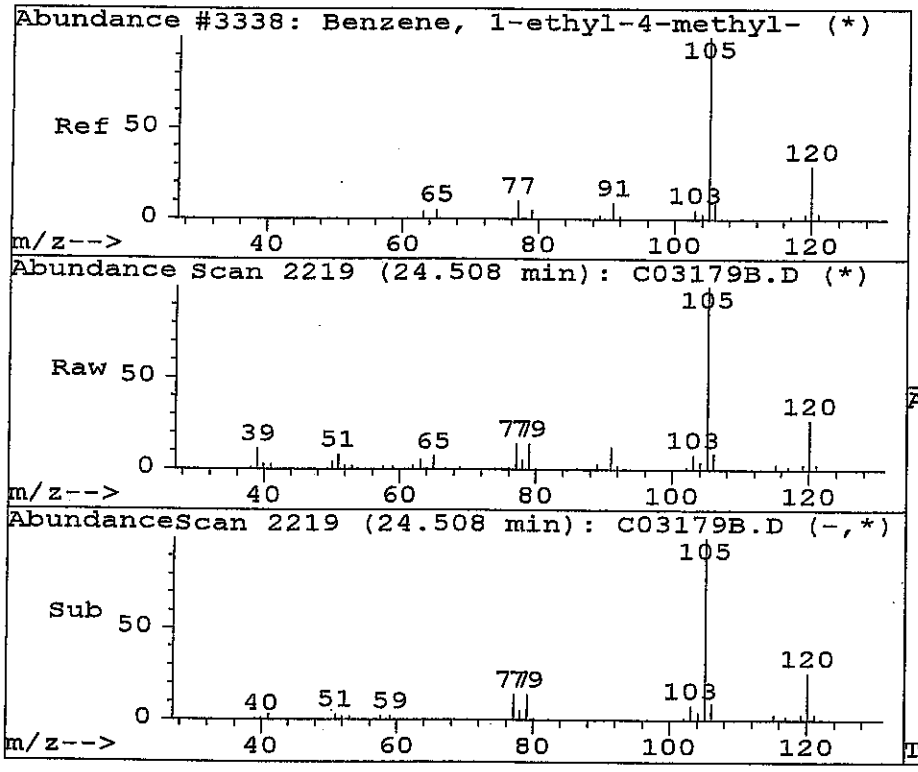


#71
Isopropylbenzene
Concen: 1.30 ppbV
RT: 24.51 min Scan# 2219
Delta R.T. -0.23 min
Lab File: C03179B.D
Acq: 17 Mar 109 9:42 am

Tgt Ion:105 Resp: 437379

Ion	Ratio	Lower	Upper
105	100		
120	25.5	20.2	30.4
77	16.7	12.5	18.7
51	8.2	5.7	8.5

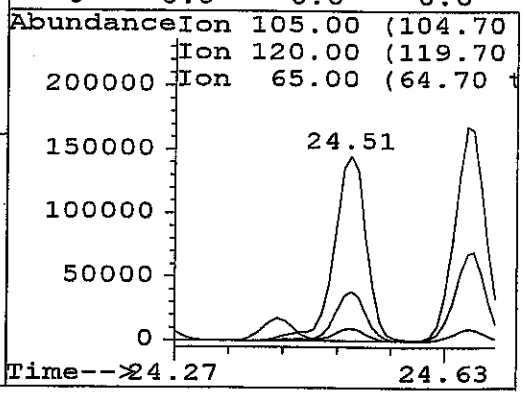


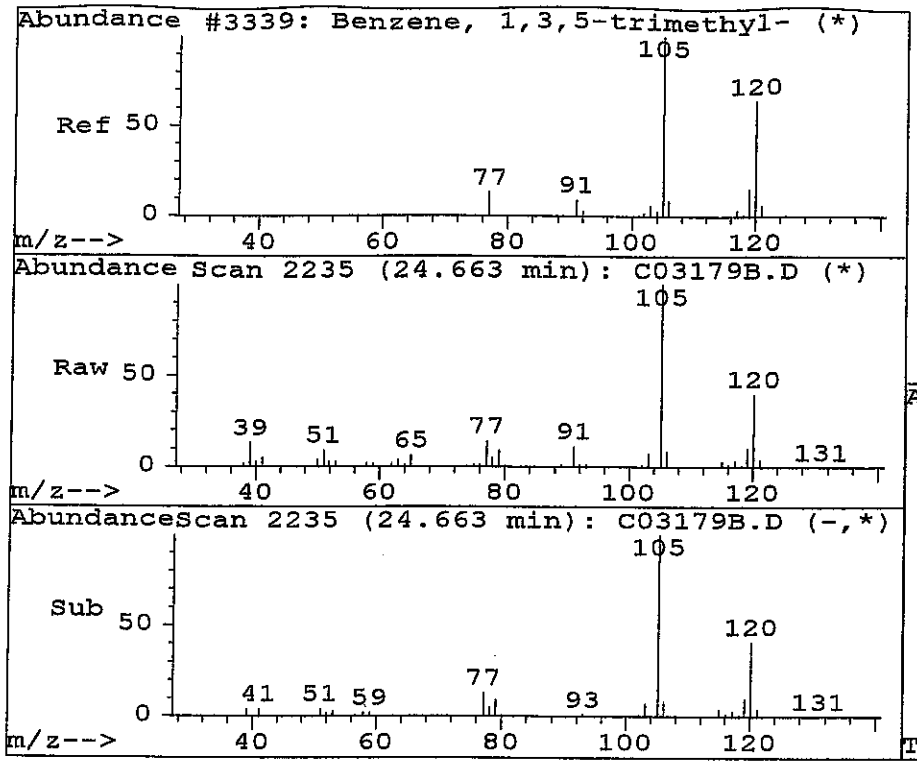


#72
4-Ethyltoluene
Concen: 1.28 ppbV
RT: 24.51 min Scan# 2219
Delta R.T. -0.23 min
Lab File: C03179B.D
Acq: 17 Mar 109 9:42 am

Tgt Ion:105 Resp: 437379

Ion	Ratio	Lower	Upper
105	100		
120	27.0	20.4	30.6
65	4.9	5.4	8.0#
0	0.0	0.0	0.0

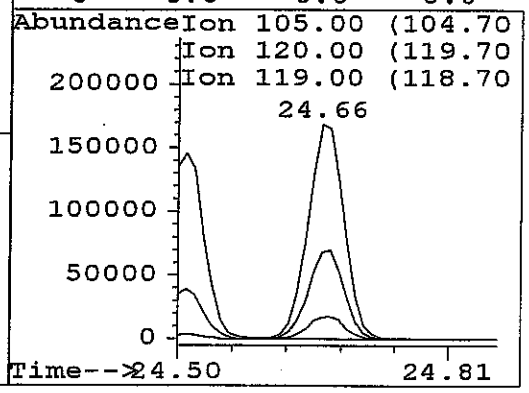


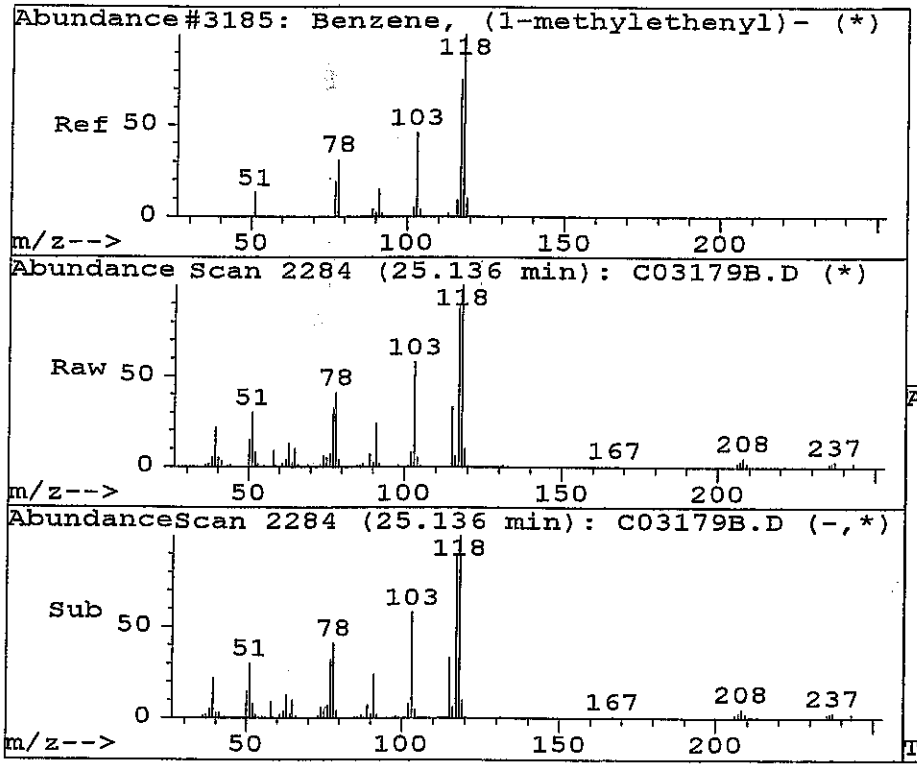


#73
1,3,5-Trimethylbenzene
Concen: 1.41 ppbV
RT: 24.66 min Scan# 2235
Delta R.T. -0.26 min
Lab File: C03179B.D
Acq: 17 Mar 109 9:42 am

Tgt Ion:105 Resp: 488965

Ion	Ratio	Lower	Upper
105	100		
120	40.5	32.1	48.1
119	10.1	8.2	12.4
0	0.0	0.0	0.0

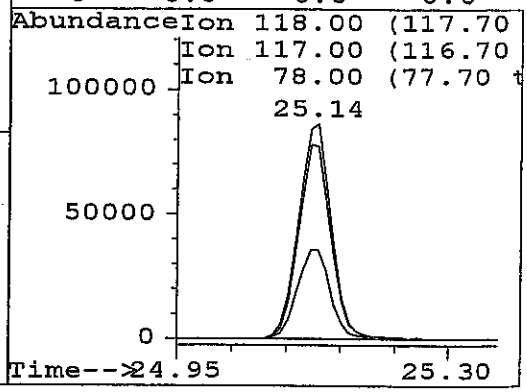


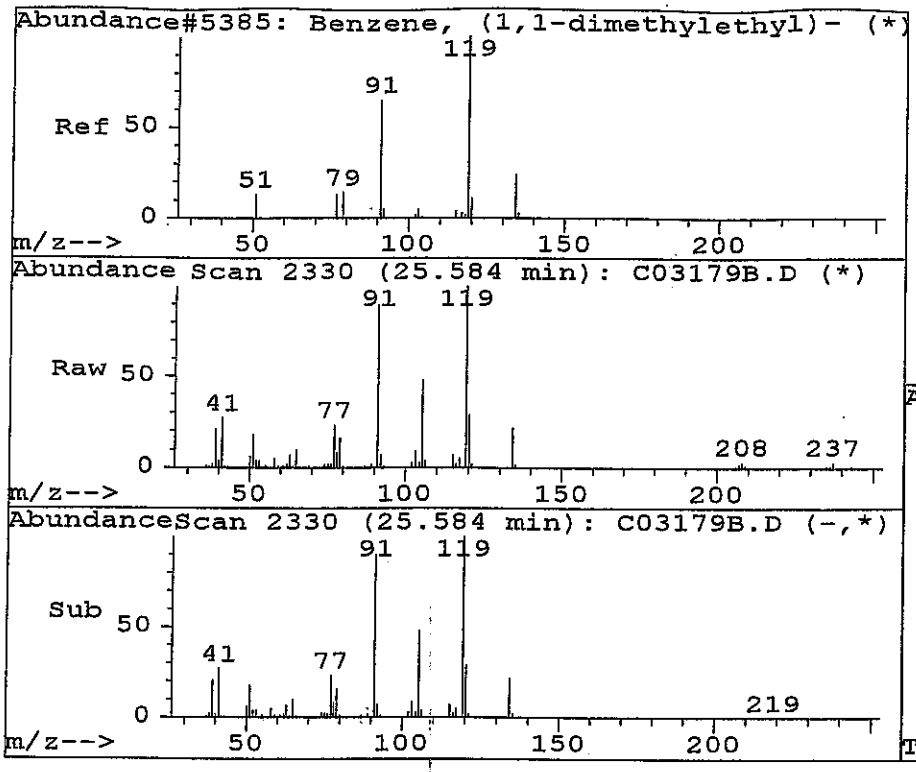


#74
Methylstyrene
Concen: 1.89 ppbV
RT: 25.14 min Scan# 2284
Delta R.T. -0.22 min
Lab File: C03179B.D
Acq: 17 Mar 109 9:42 am

Tgt Ion:118 Resp: 252870

Ion	Ratio	Lower	Upper
118	100		
117	89.1	71.4	107.0
78	40.9	32.2	48.2
0	0.0	0.0	0.0

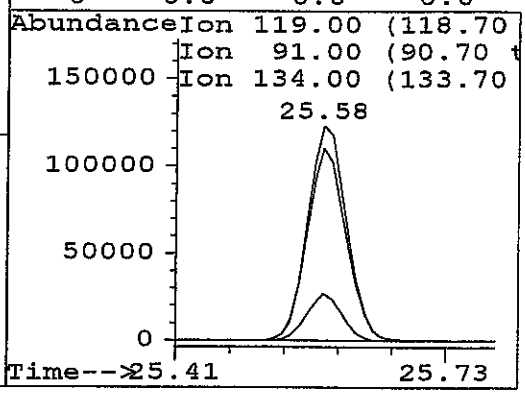


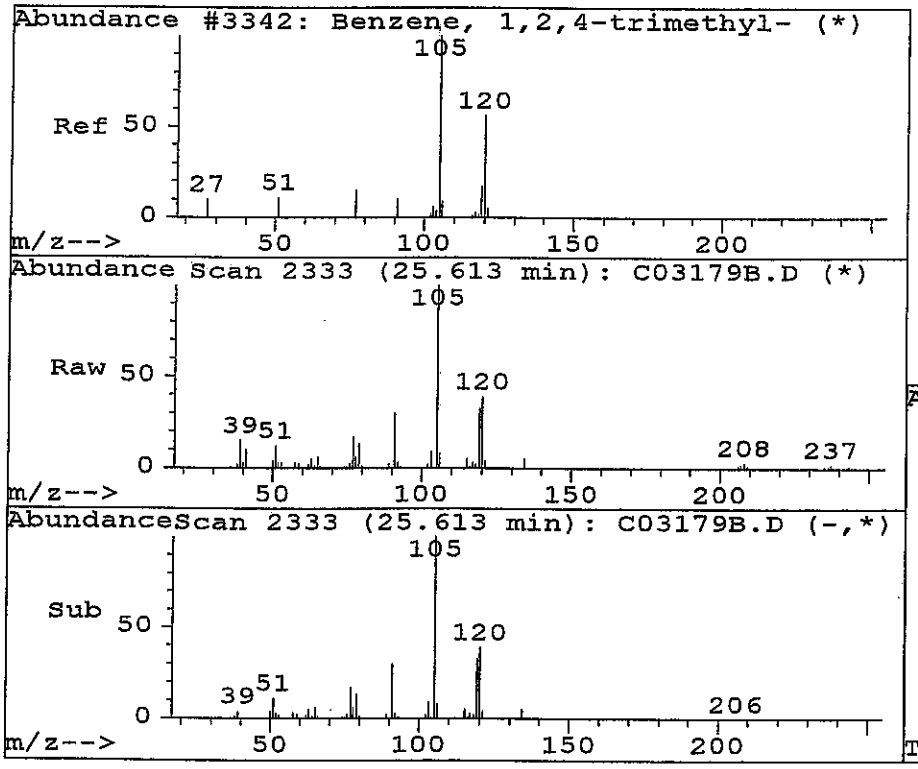


#75
tert-butyl benzene
Concen: 1.25 ppbV
RT: 25.58 min Scan# 2330
Delta R.T. -0.23 min
Lab File: C03179B.D
Acq: 17 Mar 109 9:42 am

Tgt Ion:119 Resp: 390637

Ion	Ratio	Lower	Upper
119	100		
91	90.3	75.7	113.5
134	19.6	15.6	23.4
0	0.0	0.0	0.0

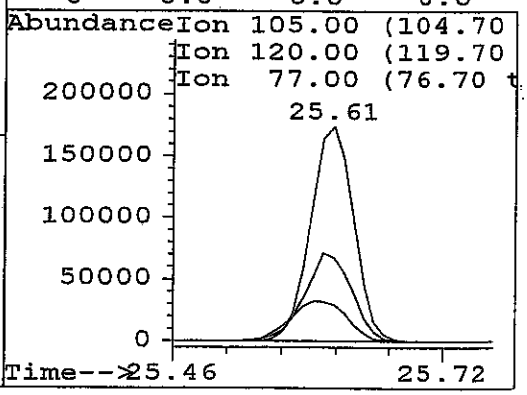


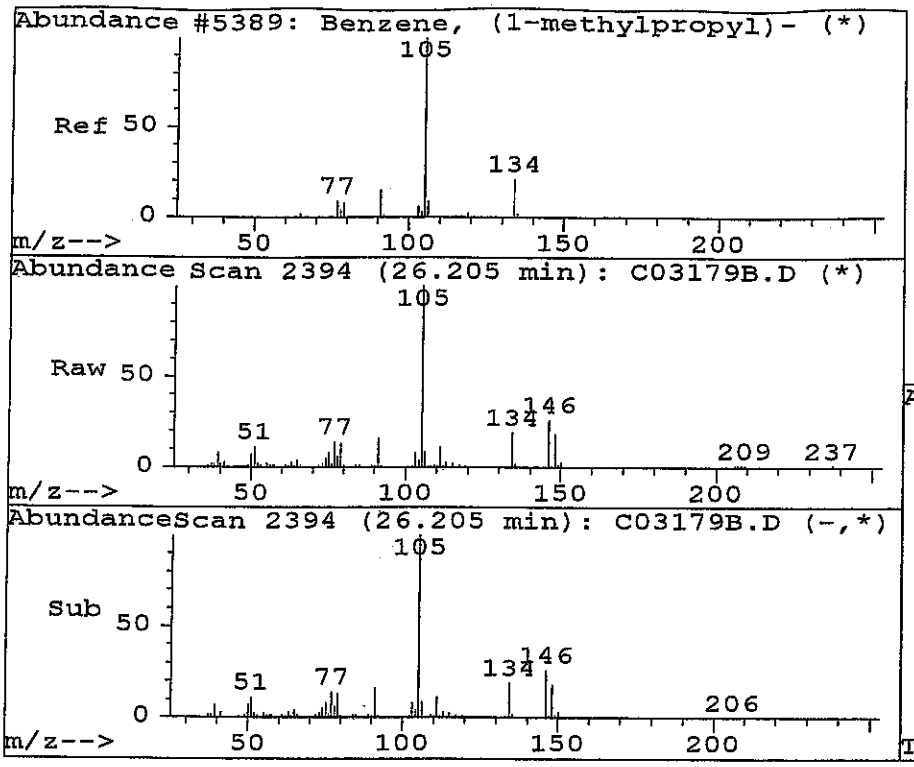


#76
1,2,4-Trimethylbenzene
Concen: 1.31 ppbV
RT: 25.61 min Scan# 2333
Delta R.T. -0.28 min
Lab File: C03179B.D
Acq: 17 Mar 109 9:42 am

Tgt Ion:105 Resp: 501359

Ion	Ratio	Lower	Upper
105	100		
120	38.7	32.2	48.4
77	16.6	15.0	22.4
0	0.0	0.0	0.0

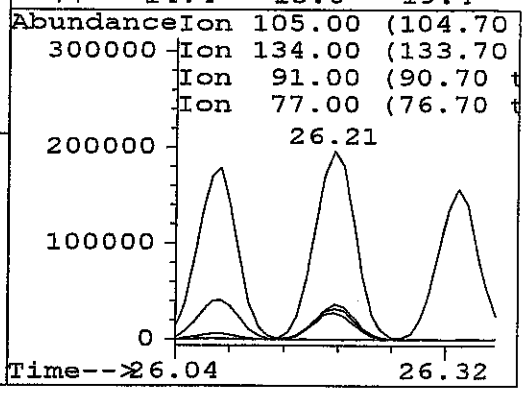


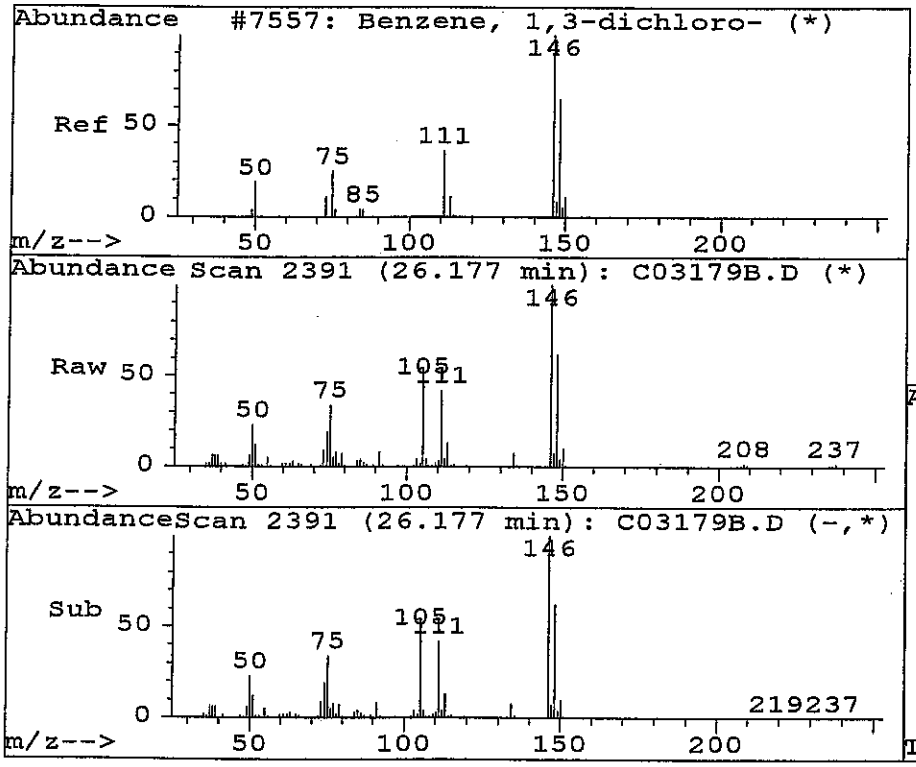


#77
sec-butylbenzene
Concen: 1.39 ppbV
RT: 26.21 min Scan# 2394
Delta R.T. -0.29 min
Lab File: C03179B.D
Acq: 17 Mar 109 9:42 am

Tgt Ion:105 Resp: 578680

Ion	Ratio	Lower	Upper
105	100		
134	18.1	15.2	22.8
91	16.8	13.8	20.8
77	14.4	13.0	19.4

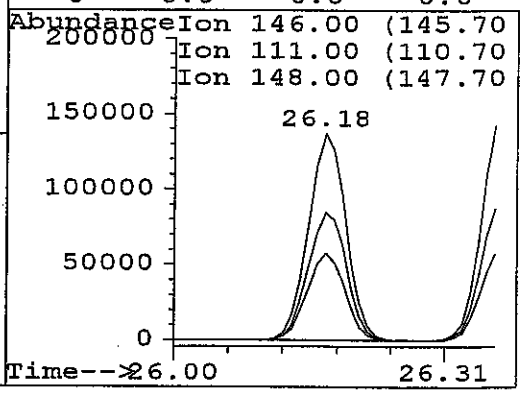


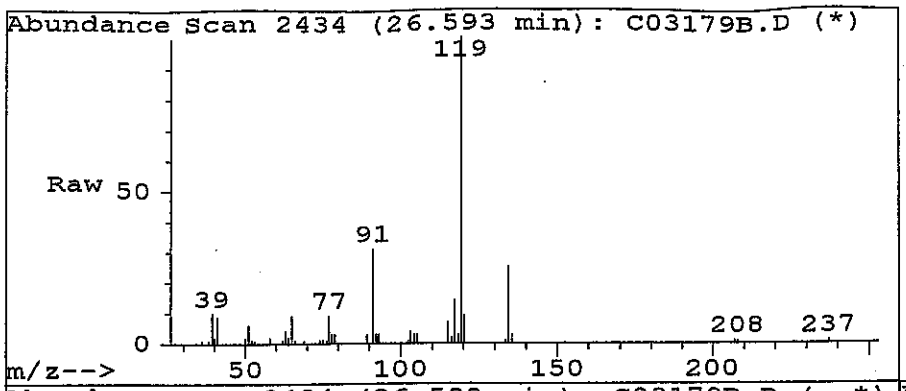


#78
1,3-Dichlorobenzene
Concen: 1.33 ppbV
RT: 26.18 min Scan# 2391
Delta R.T. -0.23 min
Lab File: C03179B.D
Acq: 17 Mar 109 9:42 am

Tgt Ion:146 Resp: 411700

Ion	Ratio	Lower	Upper
146	100		
111	42.1	34.6	52.0
148	61.7	52.2	78.2
0	0.0	0.0	0.0

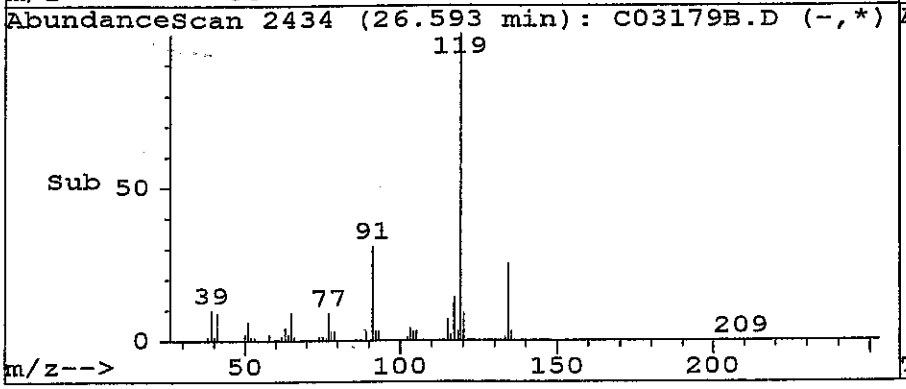


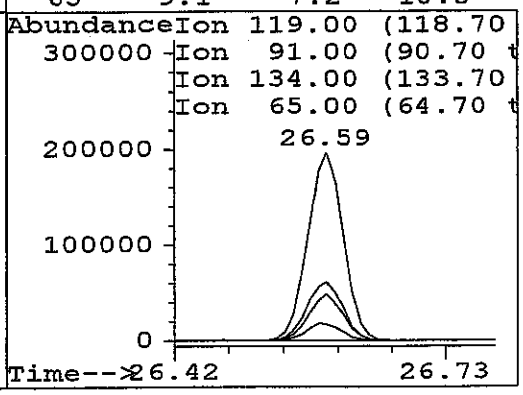


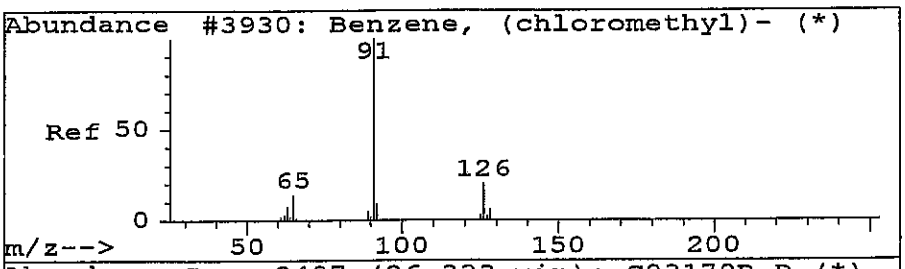
#79
Isopropyltoluene
Concen: 1.34 ppbV
RT: 26.59 min Scan# 2434
Delta R.T. -0.24 min
Lab File: C03179B.D
Acq: 17 Mar 109 9:42 am

Tgt Ion:119 Resp: 552096

Ion	Ratio	Lower	Upper
119	100		
91	31.8	25.7	38.5
134	24.1	20.0	30.0
65	9.1	7.2	10.8



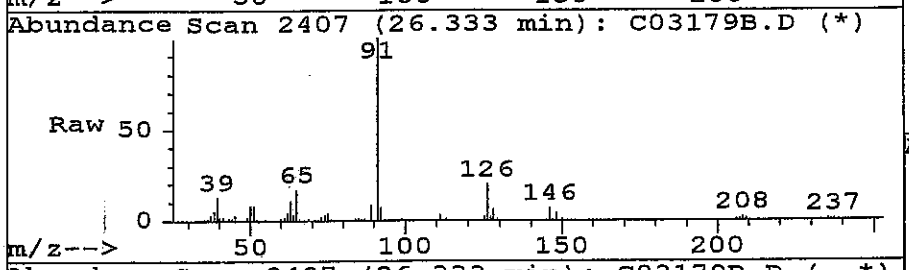


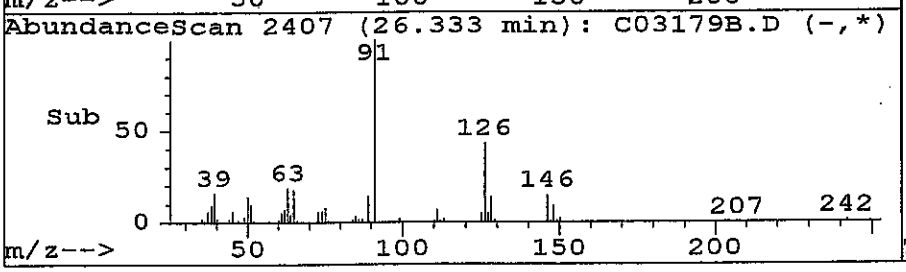


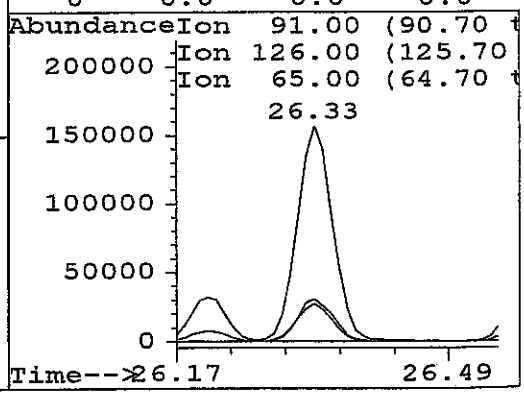
#80
Benzyl chloride
Concen: 1.34 ppbV
RT: 26.33 min Scan# 2407
Delta R.T. -0.28 min
Lab File: C03179B.D
Acq: 17 Mar 109 9:42 am

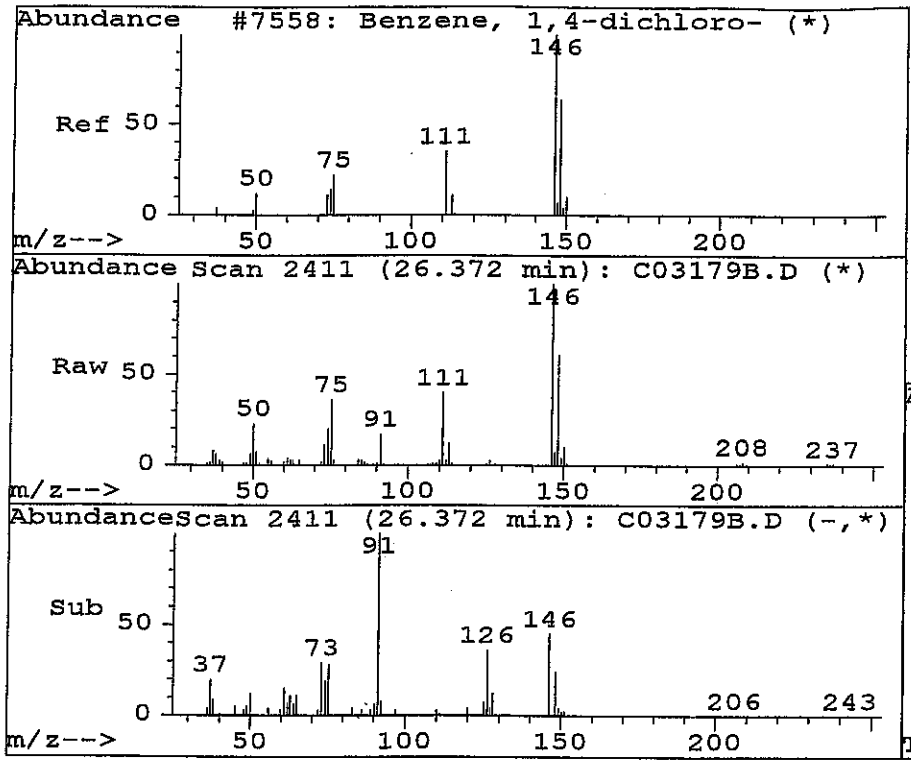
Tgt Ion:91 Resp: 459781

Ion	Ratio	Lower	Upper
91	100		
126	19.6	16.0	24.0
65	17.5	14.4	21.6
0	0.0	0.0	0.0





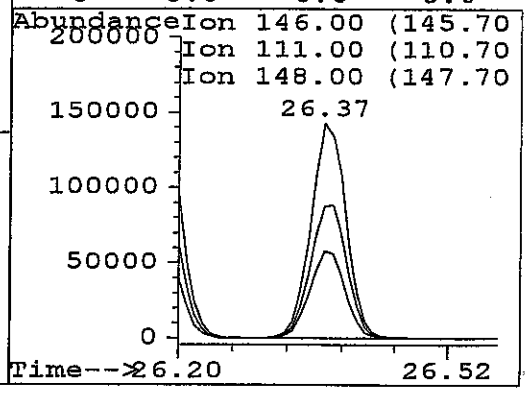


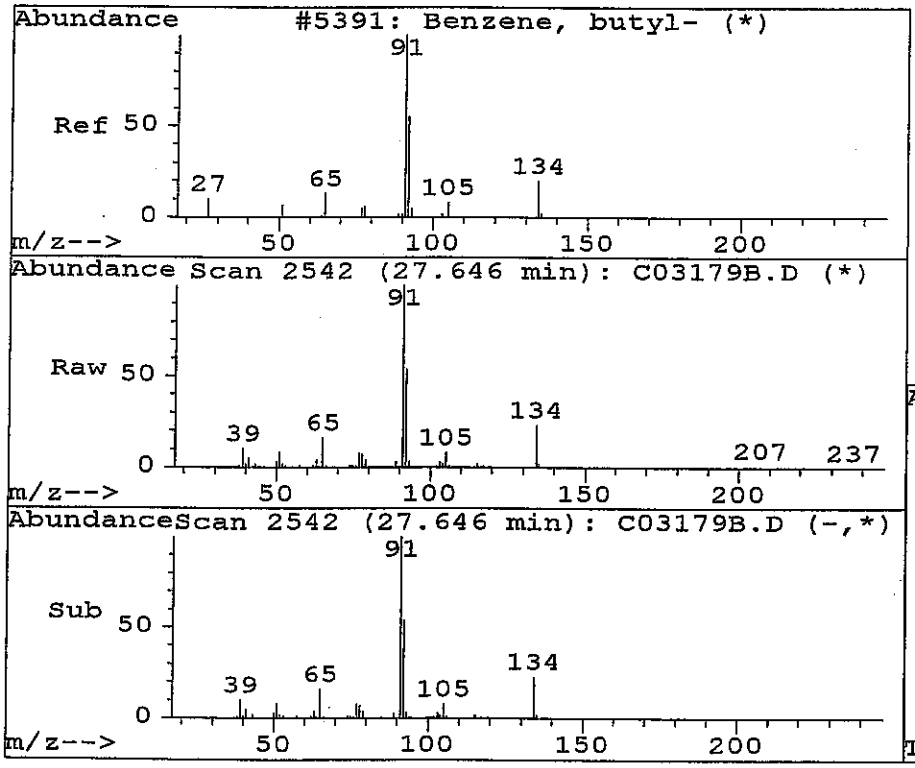


#81
1,4-Dichlorobenzene
Concen: 1.28 ppbV
RT: 26.37 min Scan# 2411
Delta R.T. -0.31 min
Lab File: C03179B.D
Acq: 17 Mar 109 9:42 am

Tgt Ion:146 Resp: 417021

Ion	Ratio	Lower	Upper
146	100		
111	40.5	34.3	51.5
148	61.4	52.6	78.8
0	0.0	0.0	0.0

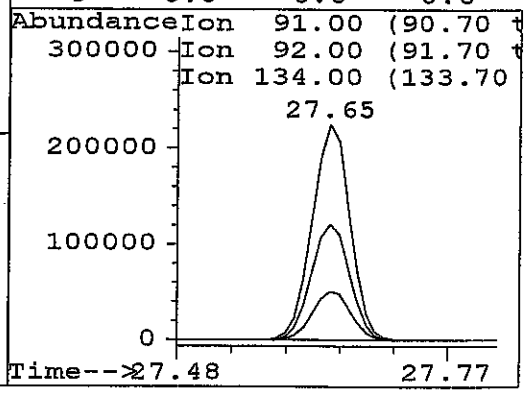


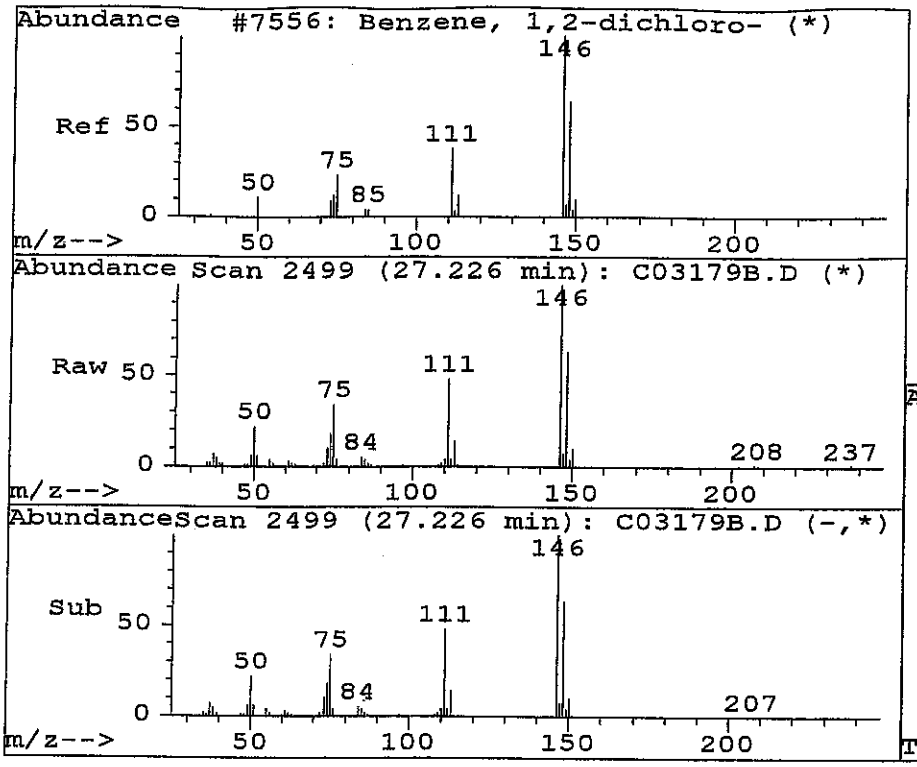


#82
n-Butylbenzene
Concen: 1.47 ppbV
RT: 27.65 min Scan# 2542
Delta R.T. -0.23 min
Lab File: C03179B.D
Acq: 17 Mar 109 9:42 am

Tgt Ion:91 Resp: 640508

Ion	Ratio	Lower	Upper
91	100		
92	54.9	43.4	65.2
134	23.0	19.8	29.6
0	0.0	0.0	0.0

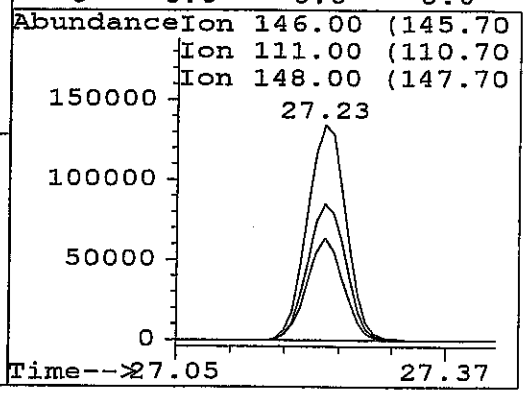


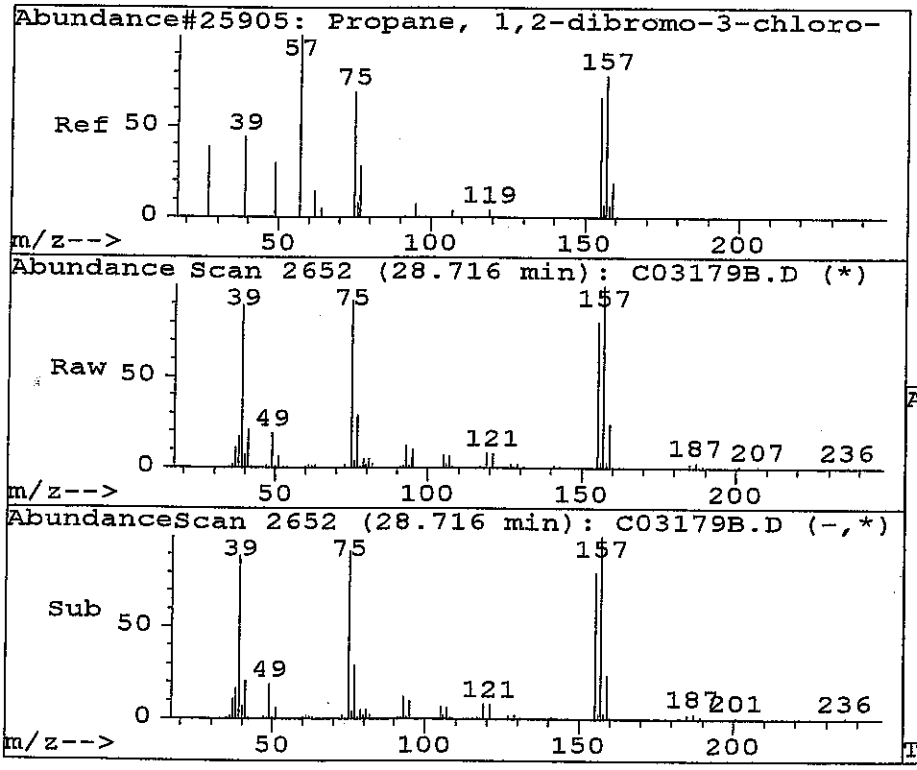


#83
1,2-Dichlorobenzene
Concen: 1.19 ppbV
RT: 27.23 min Scan# 2499
Delta R.T. -0.24 min
Lab File: C03179B.D
Acq: 17 Mar 109 9:42 am

Tgt Ion:146 Resp: 429307

Ion	Ratio	Lower	Upper
146	100		
111	47.5	35.0	52.6
148	63.2	48.5	72.7
0	0.0	0.0	0.0

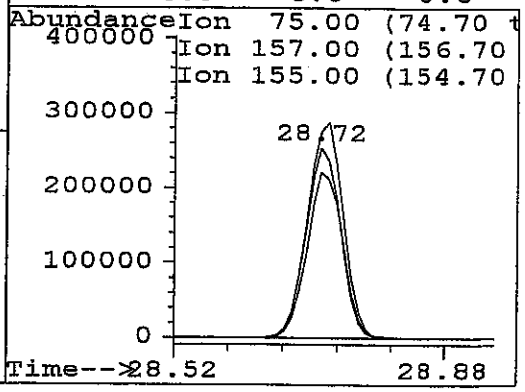


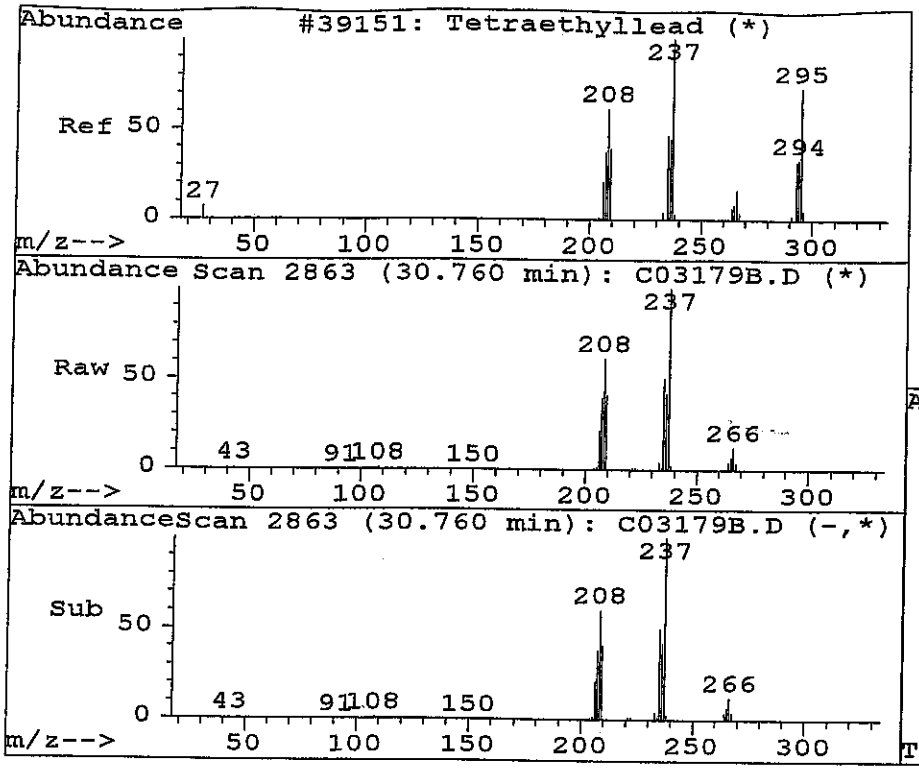


#84
1,2-Dibromo-3-chloropropane
Concen: 3.87 ppbV
RT: 28.72 min Scan# 2652
Delta R.T. -0.24 min
Lab File: C03179B.D
Acq: 17 Mar 109 9:42 am

Tgt Ion:75 Resp: 795765

Ion	Ratio	Lower	Upper
75	100		
157	108.8	87.7	131.5
155	87.3	65.6	98.4
0	0.0	0.0	0.0

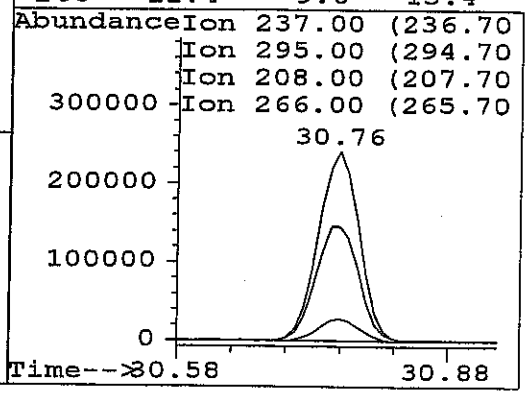


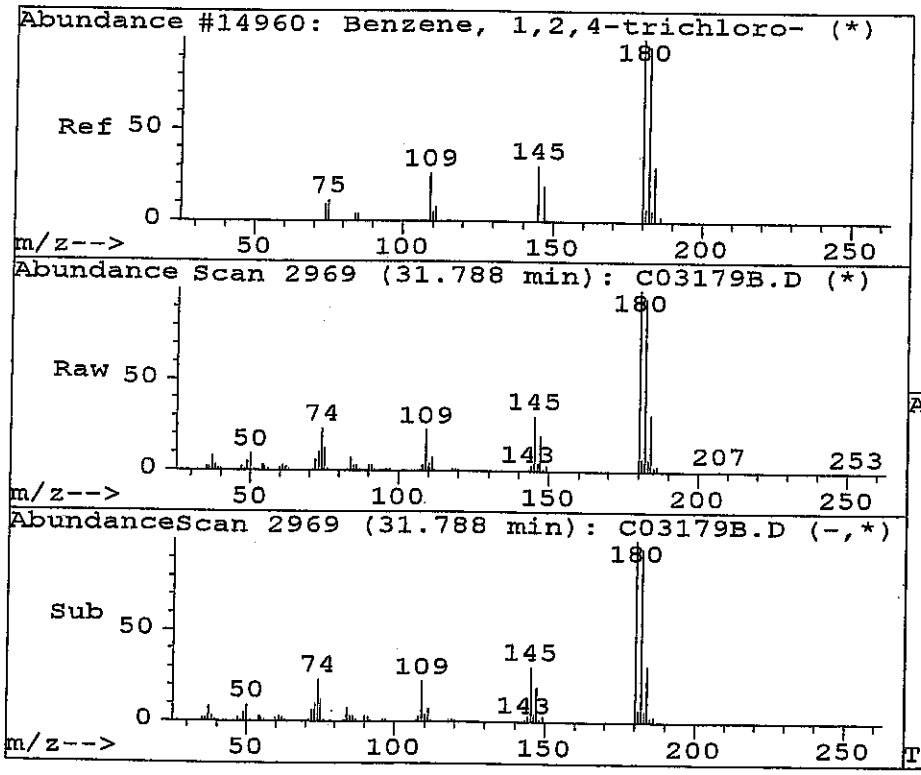


#85
Tetraethyl lead
Concen: 2.58 ppbV
RT: 30.76 min Scan# 2863
Delta R.T. -0.22 min
Lab File: C03179B.D
Acq: 17 Mar 109 9:42 am

Tgt Ion:237 Resp: 750701

Ion	Ratio	Lower	Upper
237	100		
295	0.0	0.0	0.0
208	64.0	47.4	71.2
266	11.4	9.0	13.4

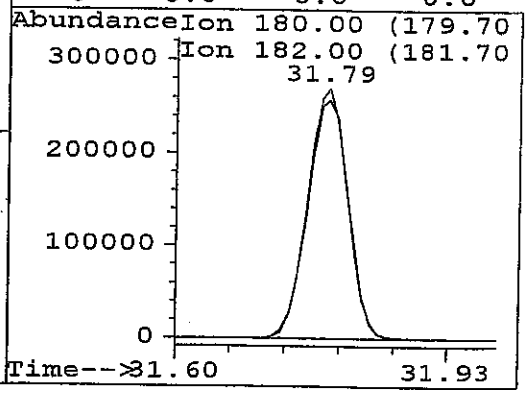


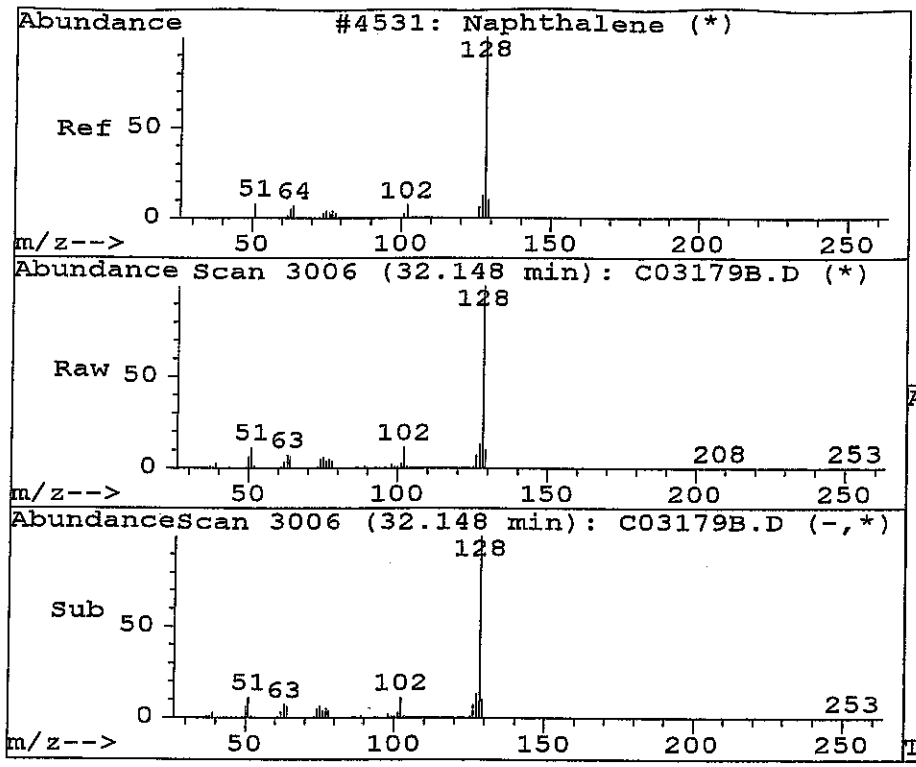


#86
1,2,4-Trichlorobenzene
Concen: 1.42 ppbV
RT: 31.79 min Scan# 2969
Delta R.T. -0.39 min
Lab File: C03179B.D
Acq: 17 Mar 109 9:42 am

Tgt Ion:180 Resp: 905400

Ion	Ratio	Lower	Upper
180	100		
182	95.1	67.8	101.6
0	0.0	0.0	0.0
0	0.0	0.0	0.0

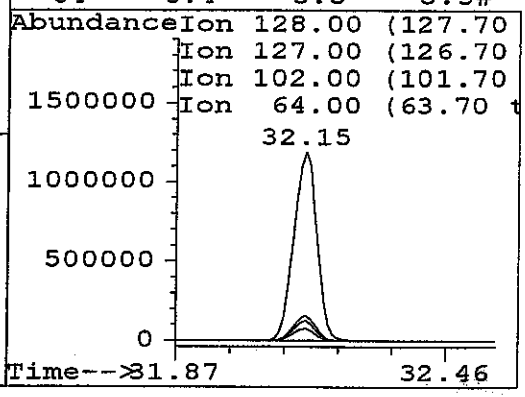


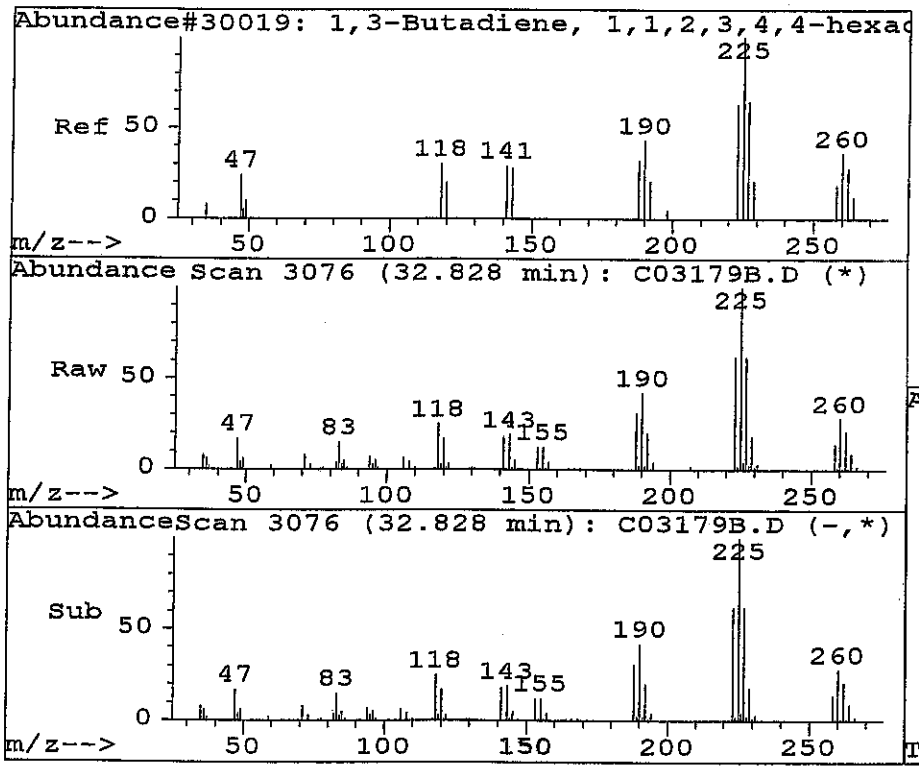


#87
Naphthalene
Concen: 6.14 ppbV
RT: 32.15 min Scan# 3006
Delta R.T. -0.26 min
Lab File: C03179B.D
Acq: 17 Mar 109 9:42 am

Tgt Ion:128 Resp: 4198495

Ion	Ratio	Lower	Upper
128	100		
127	13.3	10.6	16.0
102	10.6	9.3	13.9
64	6.4	3.5	5.3#

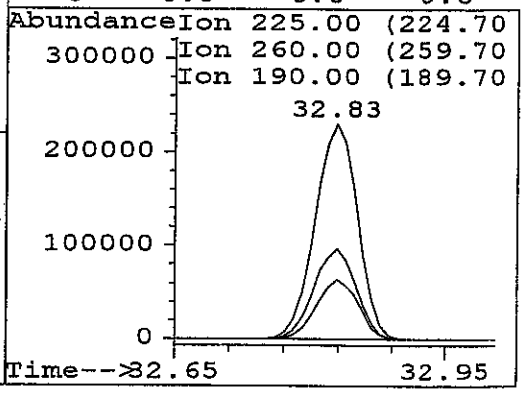


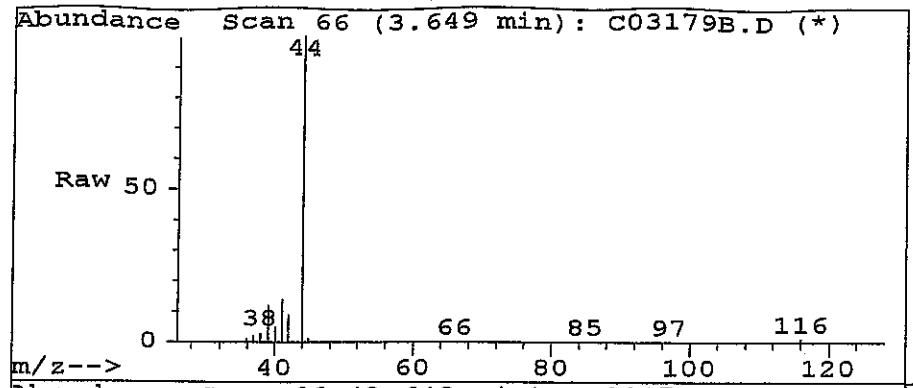


#88
Hexachlorobutadiene
Concen: 1.52 ppbV
RT: 32.83 min Scan# 3076
Delta R.T. -0.25 min
Lab File: C03179B.D
Acq: 17 Mar 109 9:42 am

Tgt Ion:225 Resp: 758051

Ion	Ratio	Lower	Upper
225	100		
260	27.8	21.0	31.6
190	42.0	36.0	54.0
0	0.0	0.0	0.0

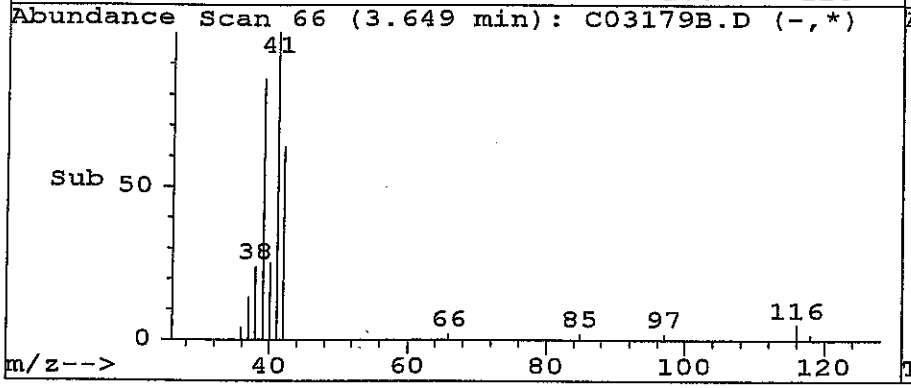


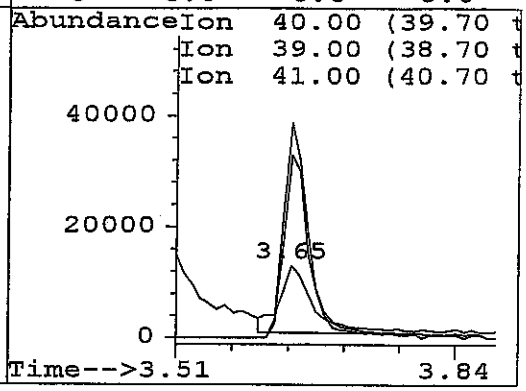


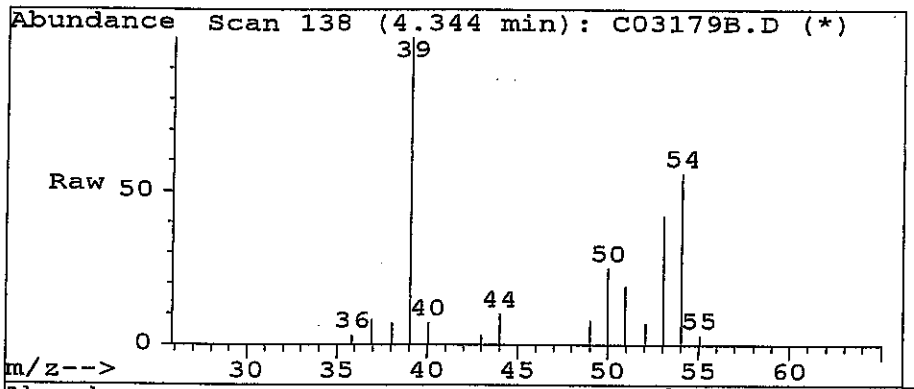
#89
Propylene
Concen: 3.00 ppbV
RT: 3.65 min Scan# 66
Delta R.T. -0.11 min
Lab File: C03179B.D
Acq: 17 Mar 109 9:42 am

Tgt Ion:40 Resp: 34907

Ion	Ratio	Lower	Upper
40	100		
39	199.3	238.8	358.2#
41	236.9	287.0	430.4#
0	0.0	0.0	0.0



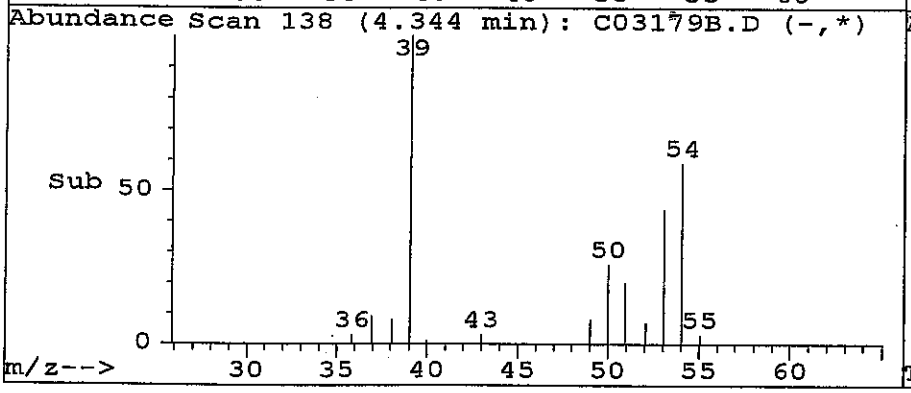


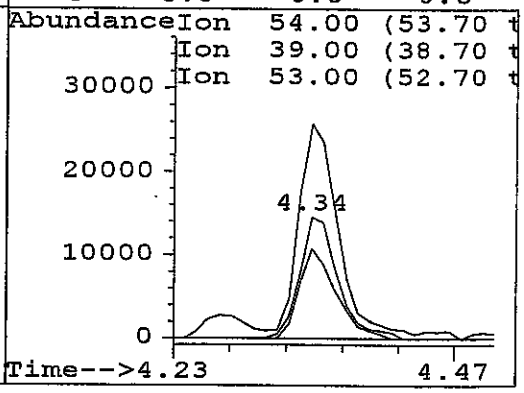


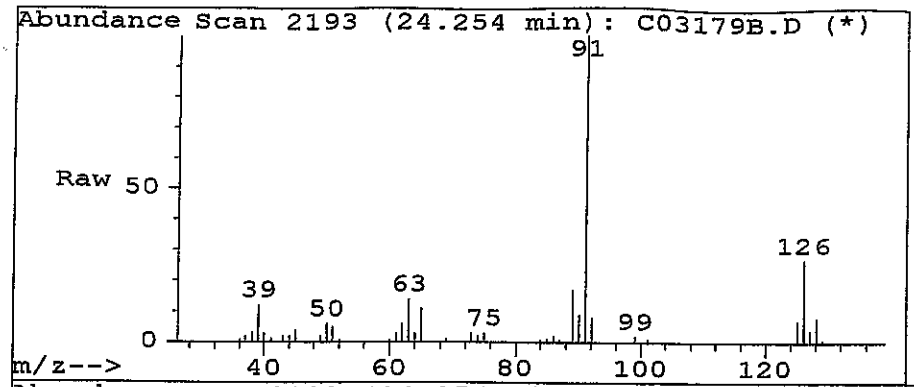
#90
1,3-Butadiene
Concen: 1.34 ppbV
RT: 4.34 min Scan# 138
Delta R.T. -0.13 min
Lab File: C03179B.D
Acq: 17 Mar 109 9:42 am

Tgt Ion:54 Resp: 32969

Ion	Ratio	Lower	Upper
54	100		
39	185.2	140.9	211.3
53	71.3	58.1	87.1
0	0.0	0.0	0.0



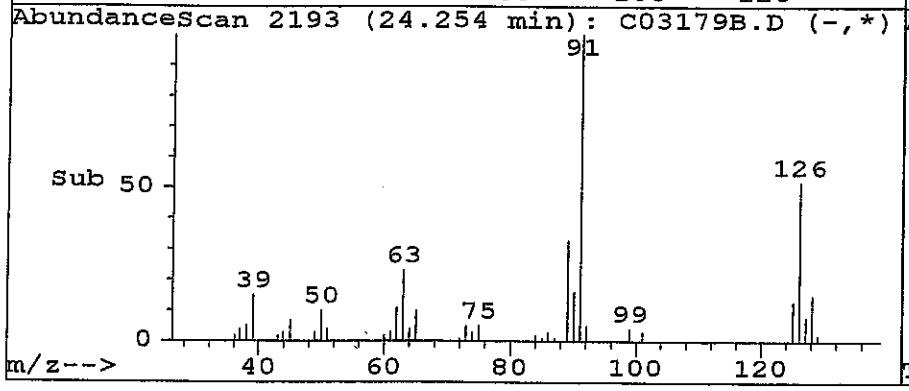


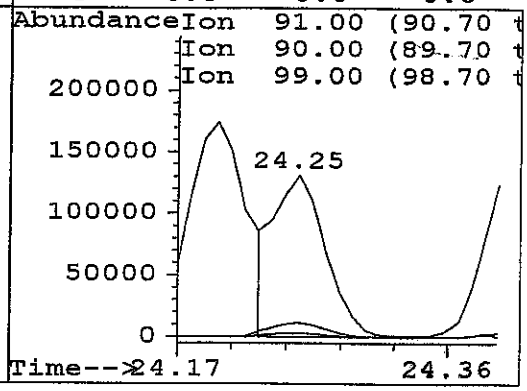


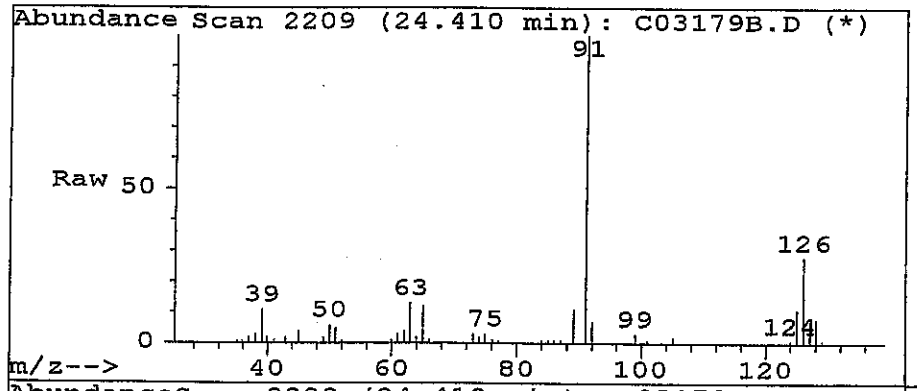
#92
2-Chlorotoluene
Concen: 1.08 ppbV m
RT: 24.25 min Scan# 2193
Delta R.T. -0.21 min
Lab File: C03179B.D
Acq: 17 Mar 109 9:42 am

Tgt Ion:91 Resp: 342293

Ion	Ratio	Lower	Upper
91	100		
90	8.7	0.0	0.0#
99	2.0	0.0	0.0#
0	0.0	0.0	0.0



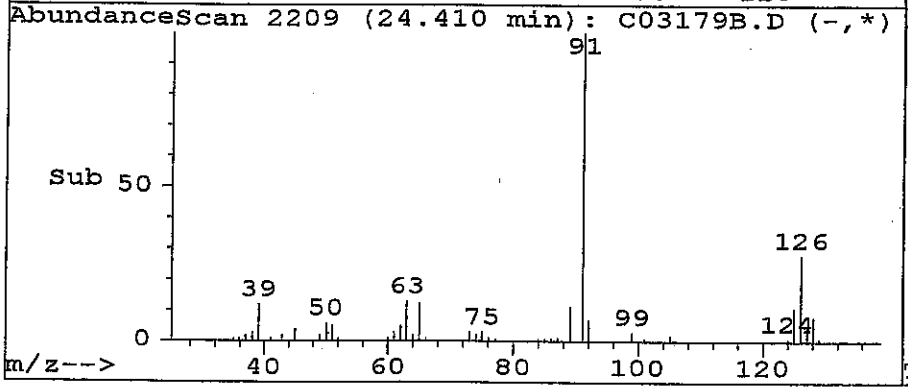


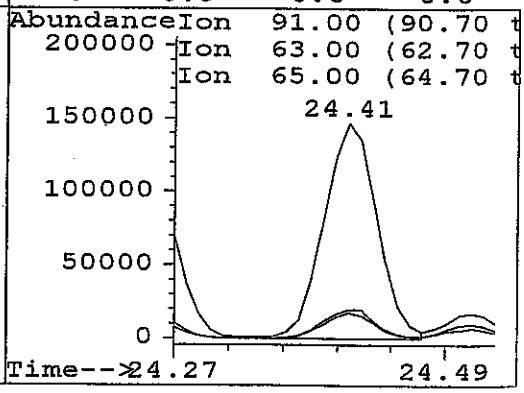


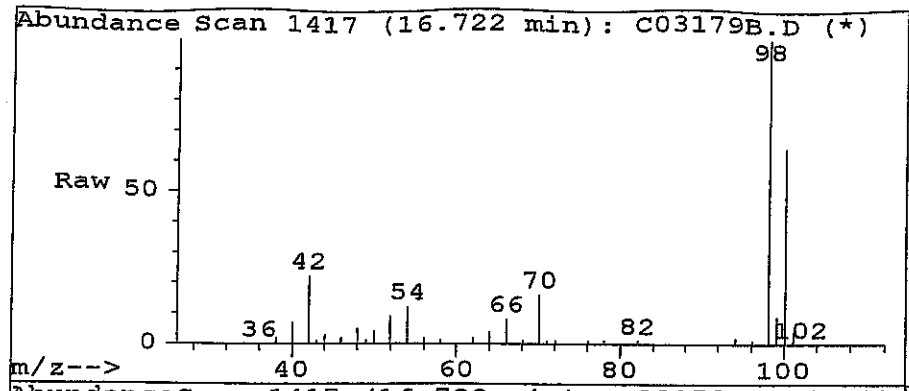
#93
4-Chlorotoluene
Concen: 1.29 ppbV
RT: 24.41 min Scan# 2209
Delta R.T. -0.24 min
Lab File: C03179B.D
Acq: 17 Mar 109 9:42 am

Tgt Ion:91 Resp: 427755

Ion	Ratio	Lower	Upper
91	100		
63	13.7	11.4	17.2
65	11.7	9.6	14.4
0	0.0	0.0	0.0



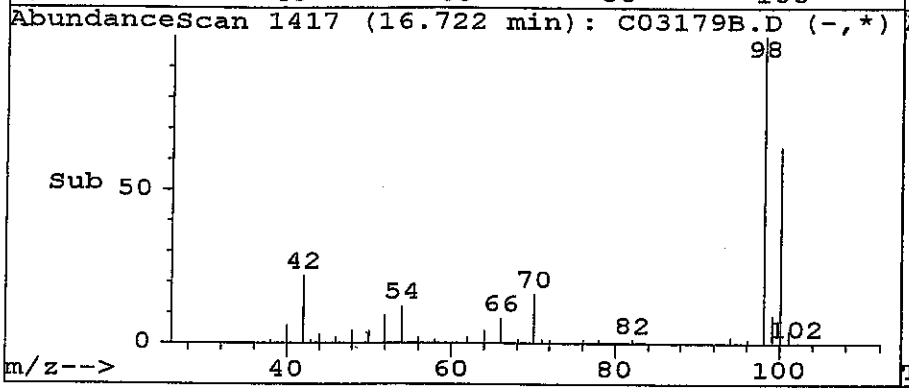


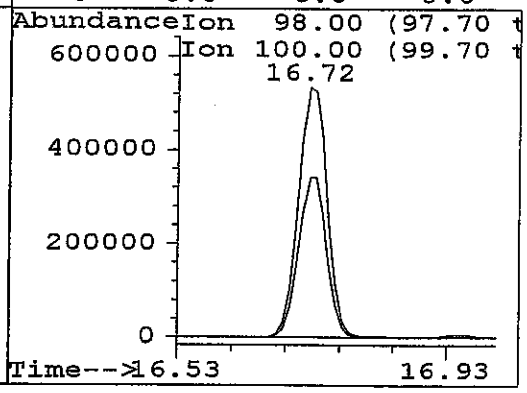


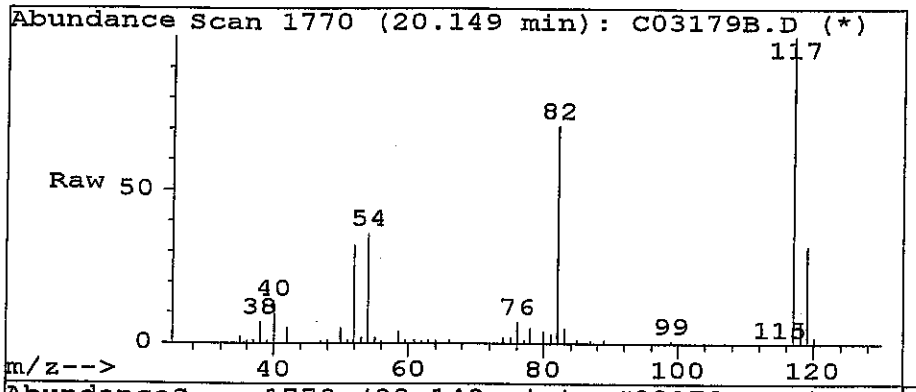
#94
Toluene-d8
Concen: 10.44 ppbV
RT: 16.72 min Scan# 1417
Delta R.T. -0.22 min
Lab File: C03179B.D
Acq: 17 Mar 109 9:42 am

Tgt Ion:98 Resp: 1590486

Ion	Ratio	Lower	Upper
98	100		
100	63.8	50.2	75.2
0	0.0	0.0	0.0
0	0.0	0.0	0.0



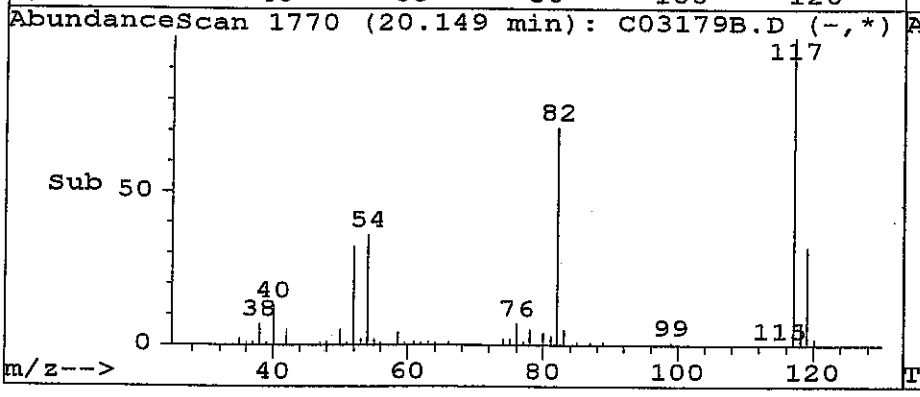


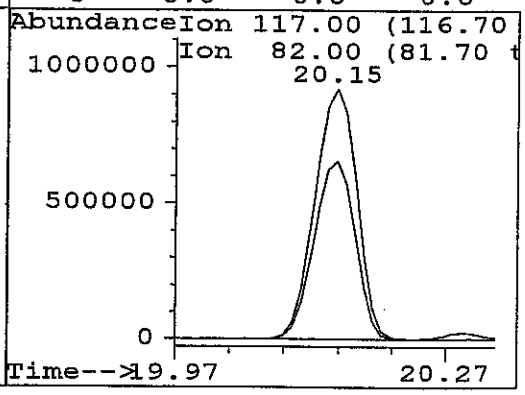


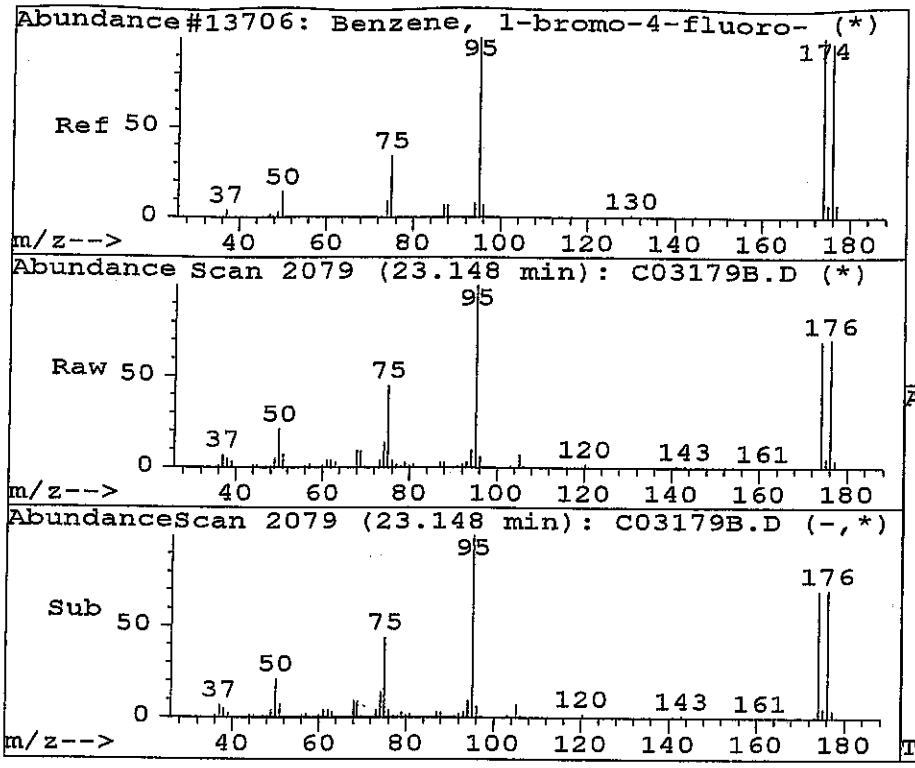
#95
Chlorobenzene-d5
Concen: 22.12 ppbV
RT: 20.15 min Scan# 1770
Delta R.T. -0.21 min
Lab File: C03179B.D
Acq: 17 Mar 109 9:42 am

Tgt Ion:117 Resp: 2937451

Ion	Ratio	Lower	Upper
117	100		
82	71.3	54.6	82.0
0	0.0	0.0	0.0
0	0.0	0.0	0.0



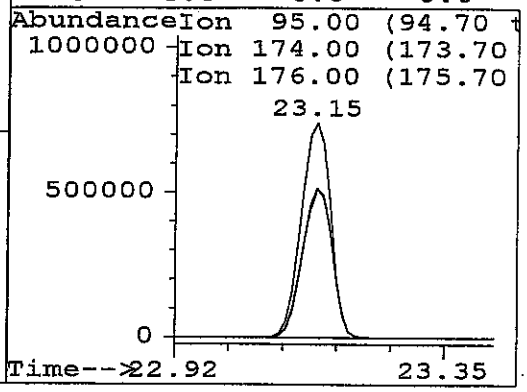




#96
1,4-Bromofluorobenzene
Concen: 11.12 ppbV
RT: 23.15 min Scan# 2079
Delta R.T. -0.23 min
Lab File: C03179B.D
Acq: 17 Mar 109 9:42 am

Tgt Ion:95 Resp: 2352342

Ion	Ratio	Lower	Upper
95	100		
174	69.2	56.4	84.6
176	69.6	56.7	85.1
0	0.0	0.0	0.0



Quantitation Report

Data File : C:\MSCHEM\2\DATA\03179M~1\C03179C.D
Acq Time : 17 Mar 109 10:25 am
Sample : ST60022 + ST60350
Misc : 0.25
Quant Time: Mar 17 12:04 19109

Operator: KB
Inst : 5970 - In
Multiplr: 1.00

Method : C:\MSCHEM\2\METHODS\1T15EXAY.M
Title : EPA TO-15
Last Update : Tue Mar 17 14:18:15 2009
Response via : Multiple Level Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Pentafluorobenzene	11.16	168	2643183	20.00	ppbV		-0.22
35) 1,4-Difluorobenzene	12.94	114	2659938	20.00	ppbV		-0.23
System Monitoring Compounds							%Recovery
94) Toluene-d8	16.72	98	1479389	9.89	ppbV		197.78%
95) Chlorobenzene-d5	20.15	117	2736627	19.78	ppbV		197.77%
96) 1,4-Bromofluorobenzene	23.16	95	2176179	10.27	ppbV		205.46%
Target Compounds							Qvalue
2) Dichlorodifluoromethane	3.74	85	22559	0.31	ppbV	#	89
3) Chloromethane	3.99	50	15230	0.26	ppbV	#	89
4) Freon 114	4.01	85	25317	0.33	ppbV		93
5) Vinyl chloride	4.22	62	7909	0.31	ppbV		92
6) Bromomethane	4.78	94	8153	0.32	ppbV		89
7) Chloroethane	4.99	64	4307	0.31	ppbV		88
8) Ethanol	5.05	45	39087	0.60	ppbV		89
9) Acrolein	5.72	56	12977	0.59	ppbV	#	76
10) Trichlorofluoromethane	5.79	101	22371	0.32	ppbV		88
11) Acetonitrile	5.77	41	51682	0.49	ppbV		99
12) Acetone	5.86	43	42851	0.35	ppbV		93
13) 2-propanol	5.97	45	19578	0.11	ppbV	#	100
14) Methyl iodide	6.80	142	20175	0.16	ppbV		97
15) 1,1-Dichloroethene	6.71	61	16793	0.27	ppbV	#	90
16) Acrylonitrile	6.75	53	36242	0.58	ppbV	#	94
17) Freon 113	6.98	151	13083	0.25	ppbV	#	80
18) Allyl chloride	7.16	41	21580	0.12	ppbV	#	91
19) Dichloromethane	7.11	84	8354	0.32	ppbV	#	81
20) Carbon disulfide	7.36	76	8703	0.10	ppbV	#	93
21) trans-1,2-Dichloroethene	8.18	96	5940	0.17	ppbV		86
22) Methyl tert butyl ether	8.33	73	24271	0.14	ppbV	#	88
23) Propionitrile	8.58	54	28323	0.30	ppbV		98
24) 1,1-Dichloroethane	8.68	63	22823	0.31	ppbV		97
25) Vinyl acetate	10.09	43	40148	0.18	ppbV		97
26) 2-Butanone	9.33	72	5400	0.11	ppbV		74
27) Hexane	9.50	57	15036	0.10	ppbV	#	77
28) Bromochloromethane	10.27	49	22610	0.11	ppbV	#	93
29) Tetrahydrofuran	10.61	42	81815	0.20	ppbV	m	49
30) Isobutyl alcohol	10.62	74	4214	0.39	ppbV	#	82
31) Methacrylonitrile	9.48	67	21857	0.69	ppbV		95
32) cis-1,2-Dichloroethene	9.89	96	11695	0.30	ppbV		96
33) 2,2-Dichloropropane	10.20	77	18638	0.17	ppbV	#	89
34) Chloroform	10.30	83	27147	0.30	ppbV		94
36) 1,1,1-Trichloroethane	11.58	97	26931	0.29	ppbV	#	86
37) 1,2-Dichloroethane	11.64	62	26512	0.30	ppbV		96
38) 1,1-Dichloropropene	12.01	75	18414	0.09	ppbV		95
39) Cyclohexane	12.35	56	21052	0.09	ppbV		95
40) Benzene	12.29	78	87322	0.44	ppbV		98
41) Carbon tetrachloride	12.35	117	26276	0.28	ppbV		82
42) n-Heptane	13.81	43	41261	0.10	ppbV	#	95
43) 1,2-Dichloropropane	13.83	63	18588	0.33	ppbV		97
44) 1,4 Dioxane	14.17	88	11252	0.10	ppbV	#	93
45) Dibromomethane	13.97	174	25221	0.08	ppbV		98
46) Trichloroethene	13.90	130	27013	0.35	ppbV		91
47) Bromodichloromethane	14.17	83	27507	0.08	ppbV	#	89
48) Methyl methacrylate	14.30	69	43778	0.26	ppbV		98
49) Methyl Isobutyl Ketone	15.51	43	67434	0.09	ppbV		95

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

Quantitation Report

Data File : C:\MSCHEM\2\DATA\03179M~1\C03179C.D
Acq Time : 17 Mar 109 10:25 am
Sample : ST60022 + ST60350
Misc : 0.25
Quant Time: Mar 17 12:04 19109

Operator: KB
Inst : 5970 - In
Multiplr: 1.00

Method : C:\MSCHEM\2\METHODS\1T15EXAY.M
Title : EPA TO-15
Last Update : Tue Mar 17 14:18:15 2009
Response via : Multiple Level Calibration

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
50)	cis-1,3-Dichloropropene	15.60	75	28339	0.31 ppbV	96
51)	Toluene	16.89	91	97636	0.41 ppbV	96
52)	trans-1,3-Dichloropropene	16.62	75	33546	0.31 ppbV	99
53)	1,1,2-Trichloroethane	16.94	61	18573	0.31 ppbV	94
54)	2-Hexanone	17.56	43	84018	0.10 ppbV	98
55)	1,3-Dichloropropane	17.51	76	29285	0.09 ppbV	98
56)	Octane	18.05	57	19635	0.20 ppbV #	91
57)	Dibromochloromethane	18.06	129	43801	0.09 ppbV	89
58)	1,2-Dibromoethane	18.56	107	46912	0.31 ppbV	95
59)	Tetrachloroethene	18.75	166	40710	0.30 ppbV	95
60)	Chlorobenzene	20.23	112	64660	0.33 ppbV #	93
61)	1,1,1,2-Tetrachloroethane	20.29	131	33923	0.09 ppbV	92
62)	Ethylbenzene	20.77	91	107037	0.33 ppbV	99
63)	m & p-Xylene	21.06	91	192864	0.69 ppbV	100
64)	Styrene	21.90	104	70964	0.36 ppbV	94
65)	Bromoform	21.79	173	90991	0.10 ppbV	100
66)	o-Xylene	22.02	91	105567	0.34 ppbV	99
67)	1,1,2,2-Tetrachloroethane	22.54	83	102201	0.39 ppbV	99
68)	1,2,3-Trichloropropane	22.86	110	25437	0.12 ppbV	96
69)	t-1,4-Dichloro-2-butene	22.99	53	61455	0.38 ppbV	98
70)	n-Propylbenzene	24.20	91	190755	0.10 ppbV	98
71)	Isopropylbenzene	24.52	105	177029	0.13 ppbV m	1
72)	4-Ethyltoluene	24.52	105	177076	0.13 ppbV m	1
73)	1,3,5-Trimethylbenzene	24.67	105	184274	0.46 ppbV	95
74)	Methylstyrene	25.14	118	112656	0.19 ppbV	97
75)	tert-butyl benzene	25.59	119	158367	0.34 ppbV	97
76)	1,2,4-Trimethylbenzene	25.62	105	209998	0.51 ppbV	98
77)	sec-butylbenzene	26.21	105	238727	0.35 ppbV	99
78)	1,3-Dichlorobenzene	26.18	146	173602	0.51 ppbV	97
79)	Isopropyltoluene	26.60	119	241584	0.38 ppbV	99
80)	Benzyl chloride	26.34	91	203166	0.38 ppbV	99
81)	1,4-Dichlorobenzene	26.38	146	179740	0.51 ppbV m	96
82)	n-Butylbenzene	27.65	91	311314	0.43 ppbV	98
83)	1,2-Dichlorobenzene	27.23	146	199190	0.50 ppbV	96
84)	1,2-Dibromo-3-chloropropan	28.72	75	449541	1.56 ppbV	91
85)	Tetraethyl lead	30.76	237	364827	1.40 ppbV #	99
86)	1,2,4-Trichlorobenzene	31.78	180	468171	0.65 ppbV	99
87)	Naphthalene	32.14	128	2349483	1.87 ppbV	99
88)	Hexachlorobutadiene	32.82	225	442421	0.81 ppbV	99
89)	Propylene	3.67	40	4399	0.29 ppbV m	70
90)	1,3-Butadiene	4.36	54	9949	0.23 ppbV	95
92)	2-Chlorotoluene	24.26	91	128657	0.31 ppbV	97
93)	4-Chlorotoluene	24.42	91	166049	0.31 ppbV	99

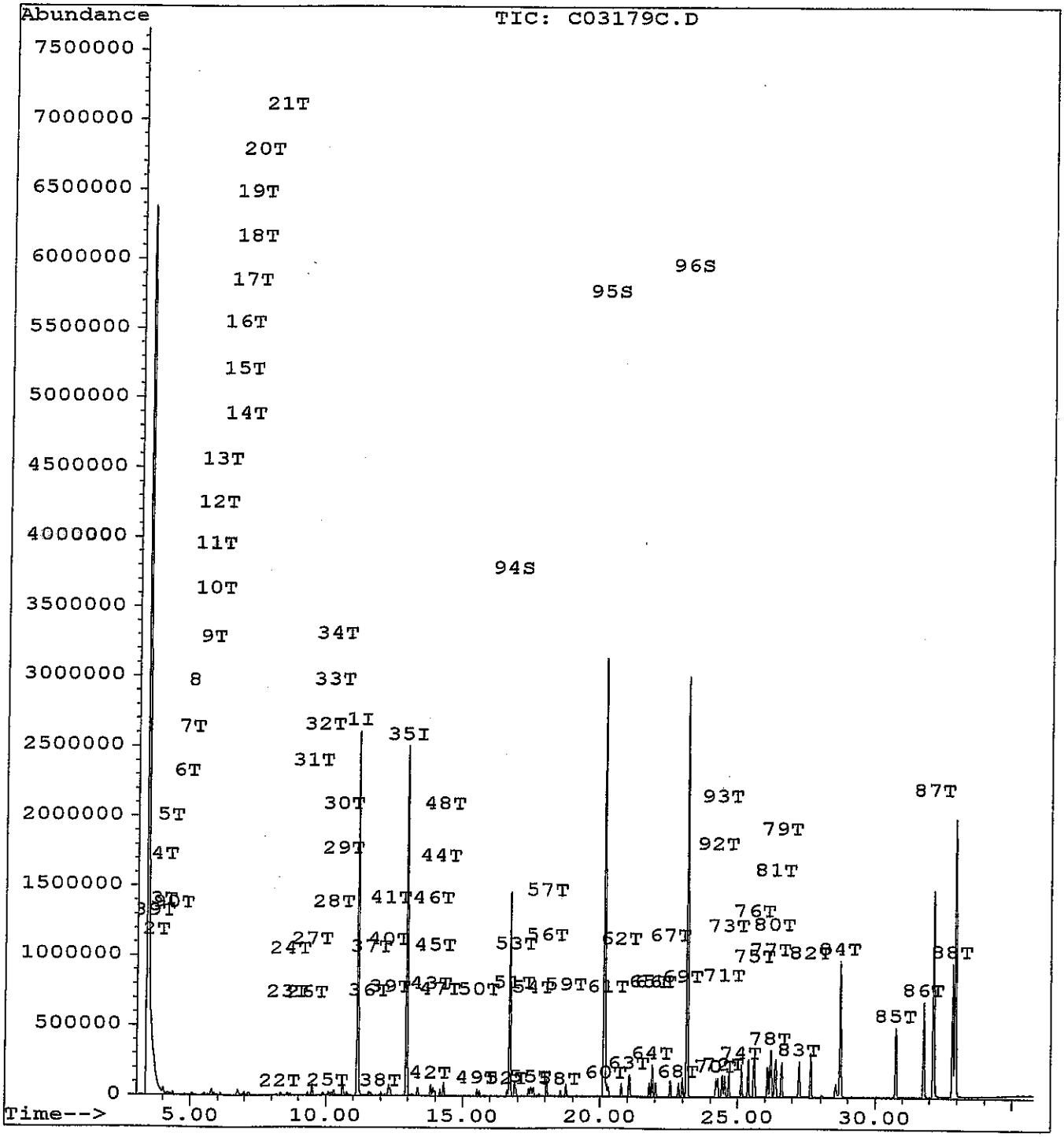
(#) = qualifier out of range (m) = manual integration

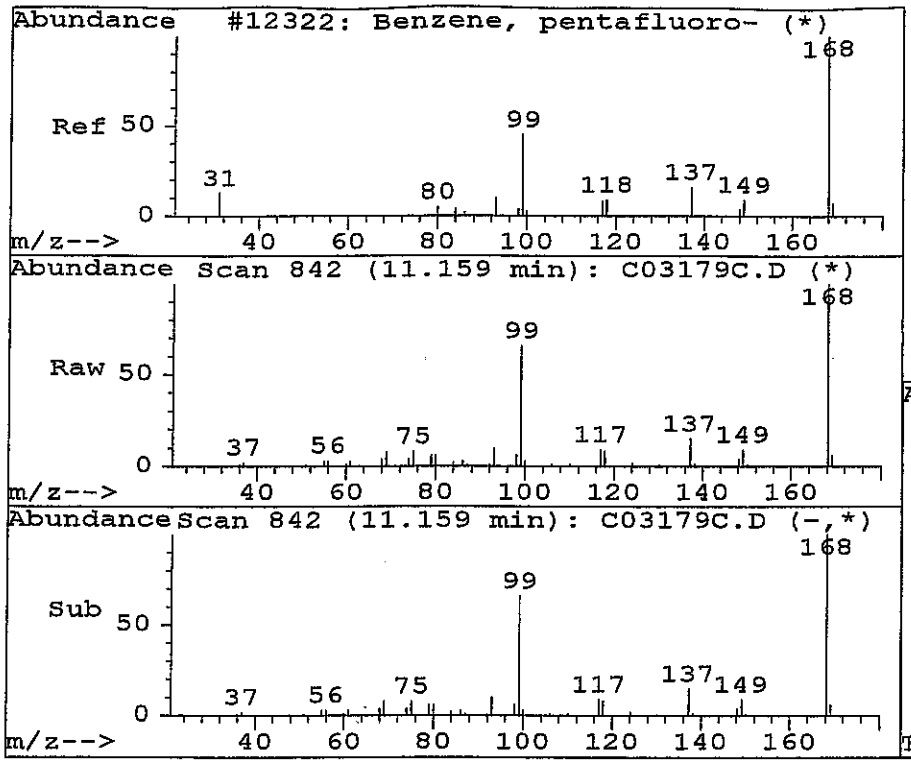
Quantitation Report

Data File : C:\MSCHEM\2\DATA\03179M~1\C03179C.D
Acq Time : 17 Mar 109 10:25 am
Sample : ST60022 + ST60350
Misc : 0.25
Quant Time: Mar 17 12:04 19109

Operator: KB
Inst : 5970 - In
Multiplr: 1.00

Method : C:\MSCHEM\2\METHODS\1T15EXAY.M
Title : EPA T0-15
Last Update : Tue Mar 17 14:18:15 2009
Response via : Multiple Level Calibration

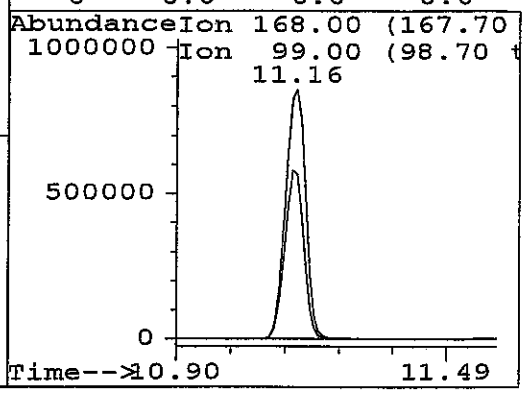


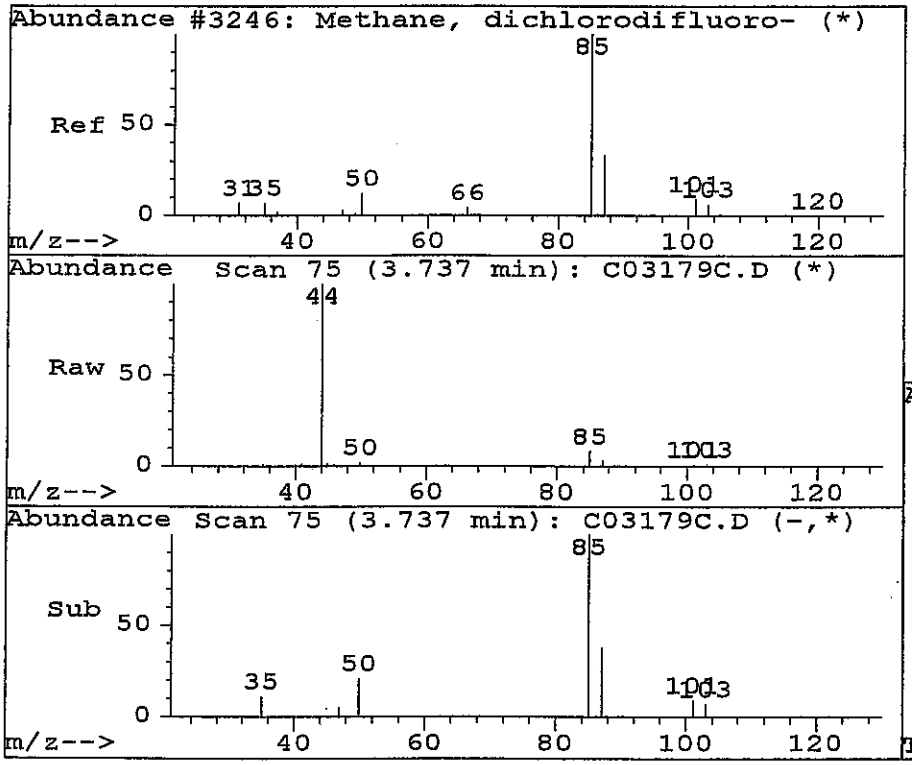


#1
Pentafluorobenzene
Concen: 20.00 ppbV
RT: 11.16 min Scan# 842
Delta R.T. -0.22 min
Lab File: C03179C.D
Acq: 17 Mar 109 10:25 am

Tgt Ion:168 Resp: 2643183

Ion	Ratio	Lower	Upper
168	100		
99	66.3	51.1	76.7
0	0.0	0.0	0.0
0	0.0	0.0	0.0

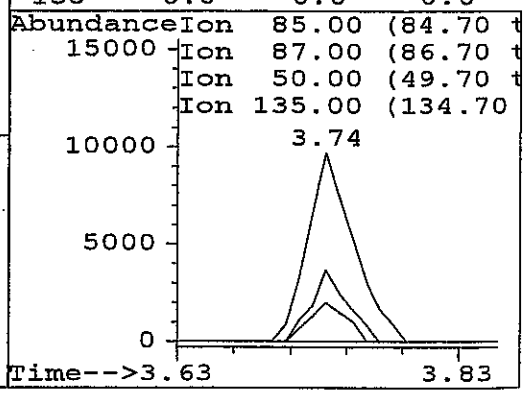


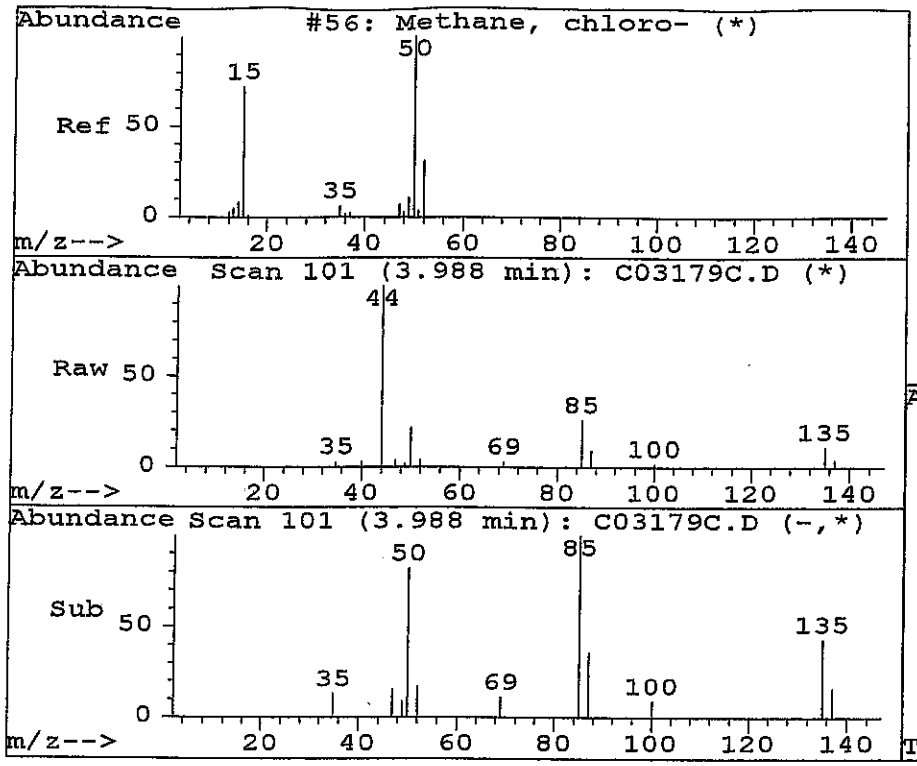


#2
Dichlorodifluoromethane
Concen: 0.31 ppbV
RT: 3.74 min Scan# 75
Delta R.T. -0.09 min
Lab File: C03179C.D
Acq: 17 Mar 109 10:25 am

Tgt Ion:85 Resp: 22559

Ion	Ratio	Lower	Upper
85	100		
87	37.7	25.4	38.2
50	20.5	12.6	19.0#
135	0.0	0.0	0.0

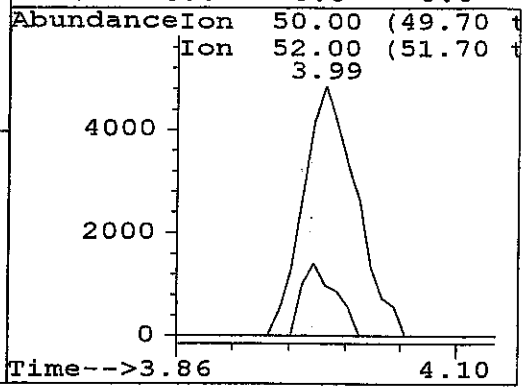


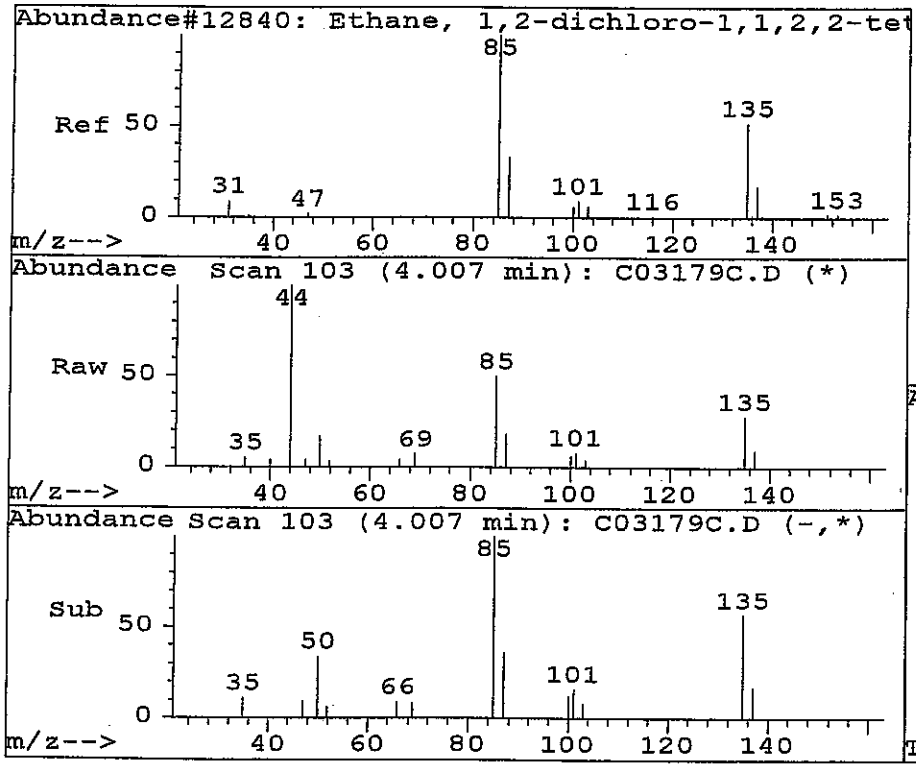


#3
Chloromethane
Concen: 0.26 ppbV
RT: 3.99 min Scan# 101
Delta R.T. -0.10 min
Lab File: C03179C.D
Acq: 17 Mar 109 10:25 am

Tgt Ion:50 Resp: 15230

Ion	Ratio	Lower	Upper
50	100		
52	20.3	20.5	30.7#
0	0.0	0.0	0.0
0	0.0	0.0	0.0

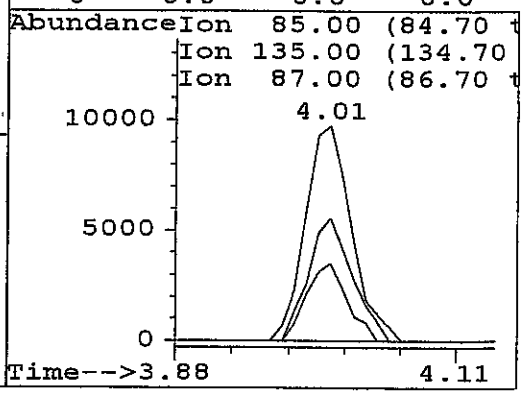


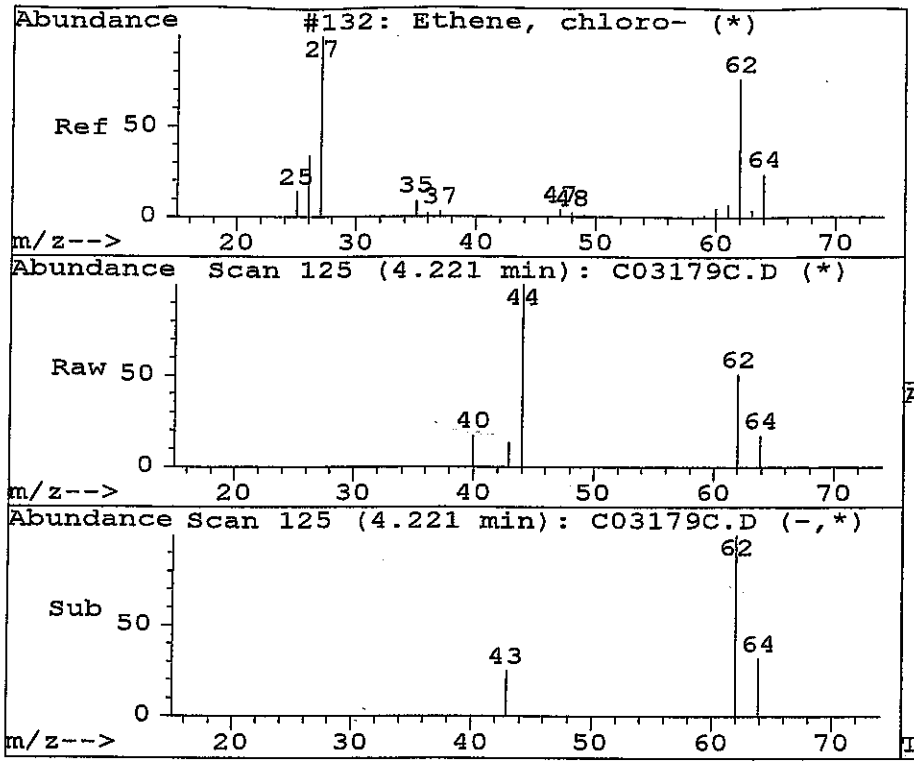


#4
Freon 114
Concen: 0.33 ppbV
RT: 4.01 min Scan# 103
Delta R.T. -0.10 min
Lab File: C03179C.D
Acq: 17 Mar 109 10:25 am

Tgt Ion:85 Resp: 25317

Ion	Ratio	Lower	Upper
85	100		
135	57.1	42.2	63.2
87	35.9	24.6	37.0
0	0.0	0.0	0.0

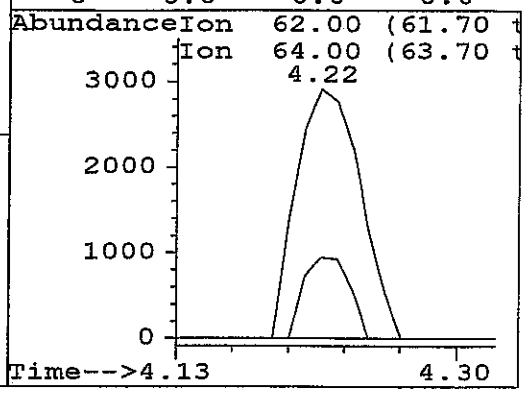


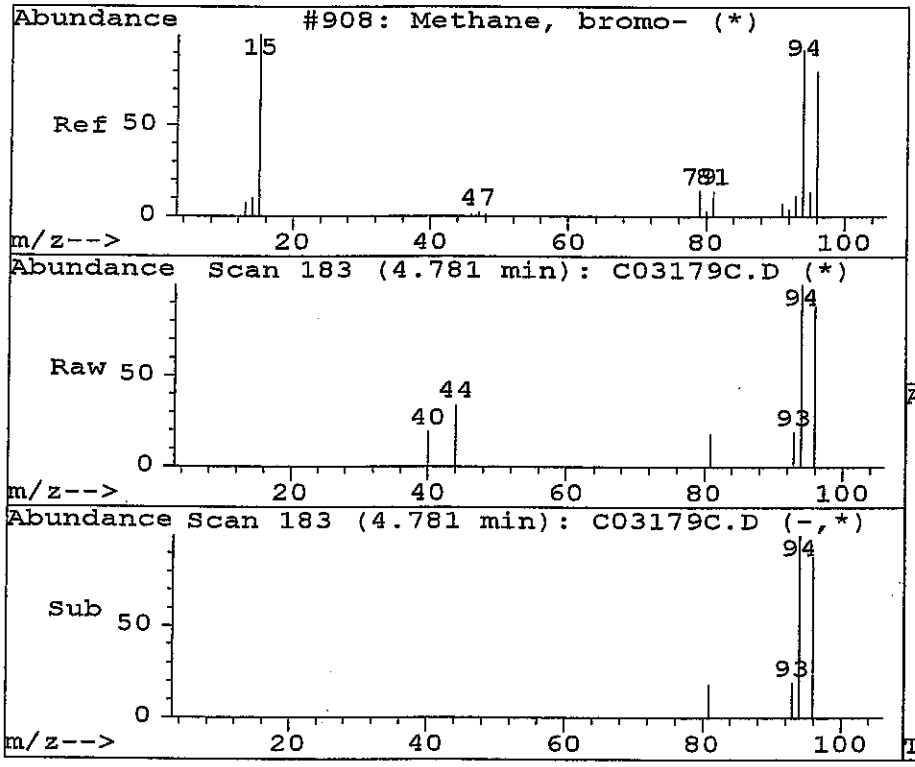


#5
Vinyl chloride
Concen: 0.31 ppbV
RT: 4.22 min Scan# 125
Delta R.T. -0.11 min
Lab File: C03179C.D
Acq: 17 Mar 109 10:25 am

Tgt Ion:62 Resp: 7909

Ion	Ratio	Lower	Upper
62	100		
64	32.4	22.6	33.8
0	0.0	0.0	0.0
0	0.0	0.0	0.0

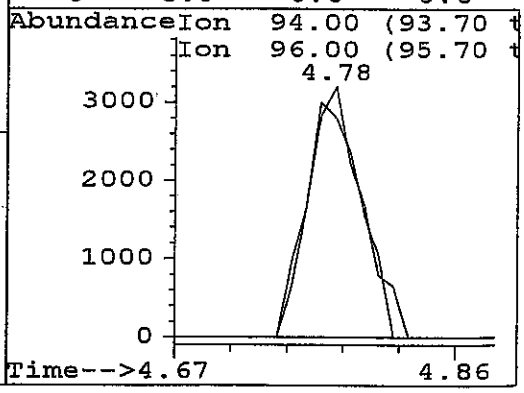


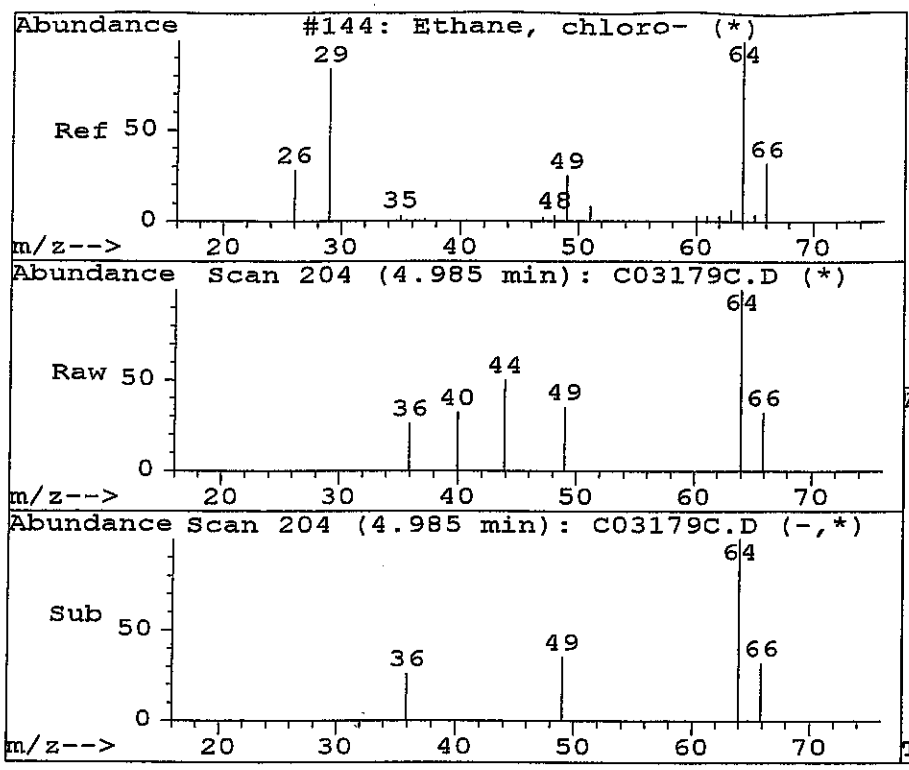


#6
Bromomethane
Concen: 0.32 ppbV
RT: 4.78 min Scan# 183
Delta R.T. -0.14 min
Lab File: C03179C.D
Acq: 17 Mar 109 10:25 am

Tgt Ion:94 Resp: 8153

Ion	Ratio	Lower	Upper
94	100		
96	87.8	79.1	118.7
0	0.0	0.0	0.0
0	0.0	0.0	0.0

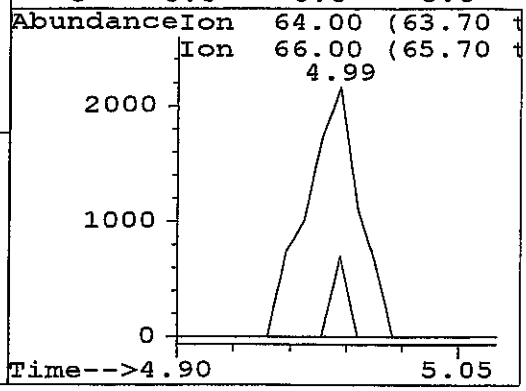


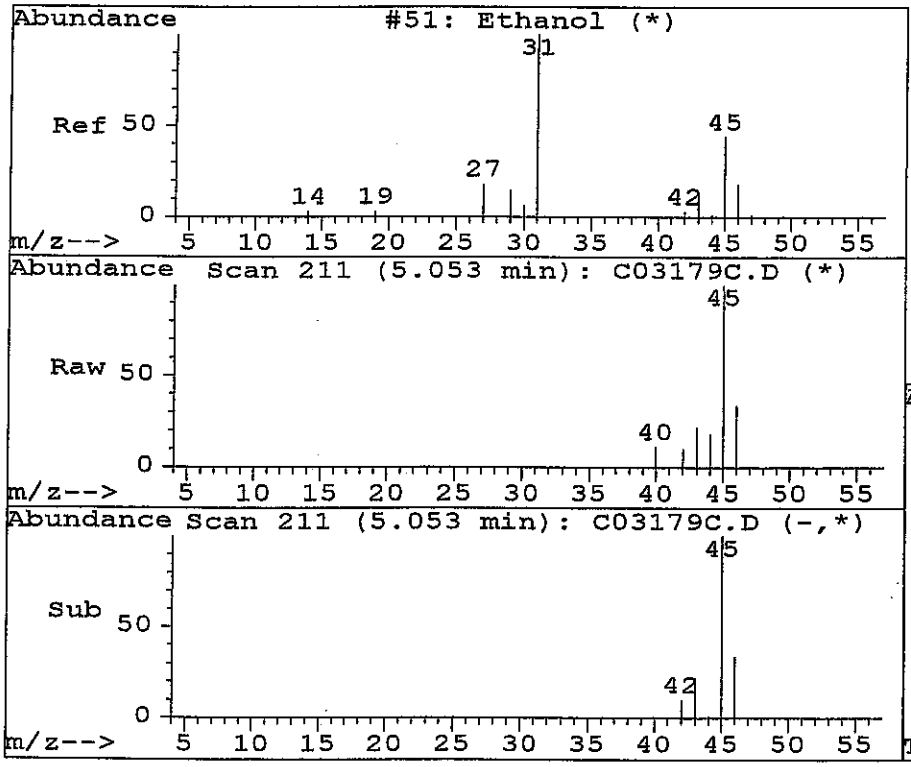


#7
Chloroethane
Concen: 0.31 ppbV
RT: 4.99 min Scan# 204
Delta R.T. -0.13 min
Lab File: C03179C.D
Acq: 17 Mar 109 10:25 am

Tgt Ion:64 Resp: 4307

Ion	Ratio	Lower	Upper
64	100		
66	32.4	31.8	47.8
0	0.0	0.0	0.0
0	0.0	0.0	0.0

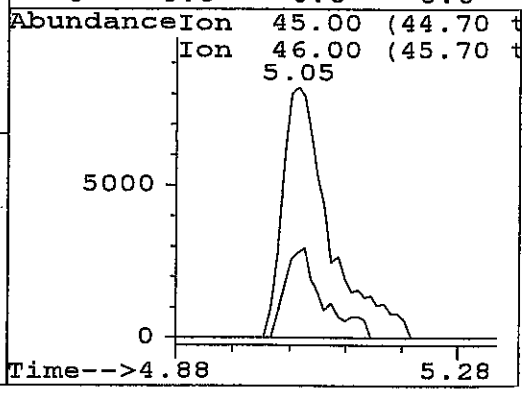


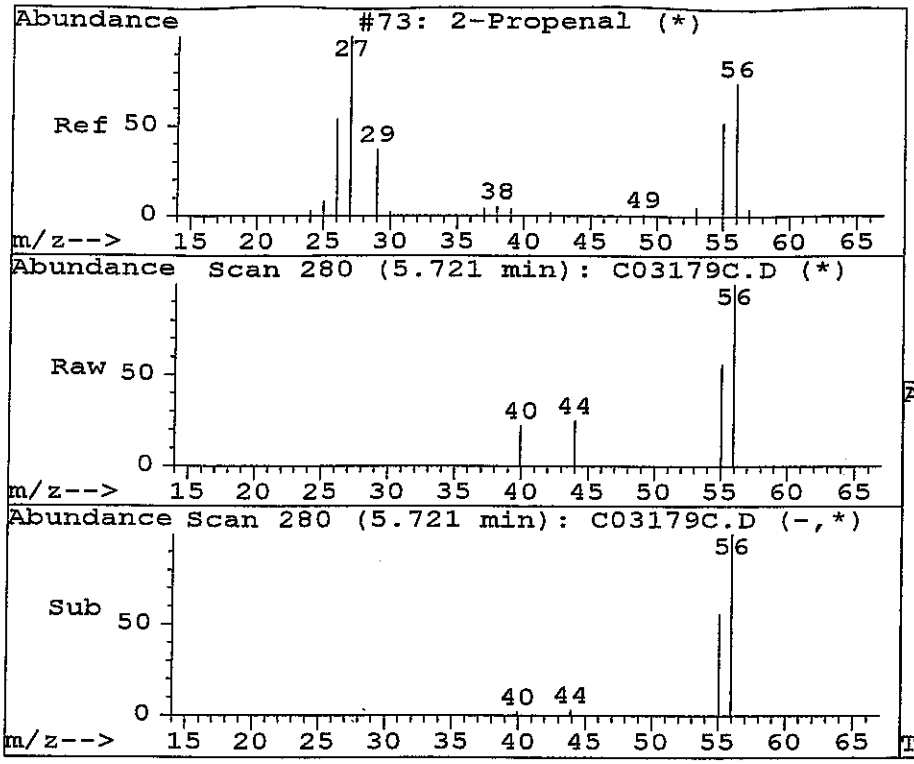


#8
Ethanol
Concen: 0.60 ppbV
RT: 5.05 min Scan# 211
Delta R.T. -0.15 min
Lab File: C03179C.D
Acq: 17 Mar 109 10:25 am

Tgt Ion:45 Resp: 39087

Ion	Ratio	Lower	Upper
45	100		
46	26.1	25.6	38.4
0	0.0	0.0	0.0
0	0.0	0.0	0.0

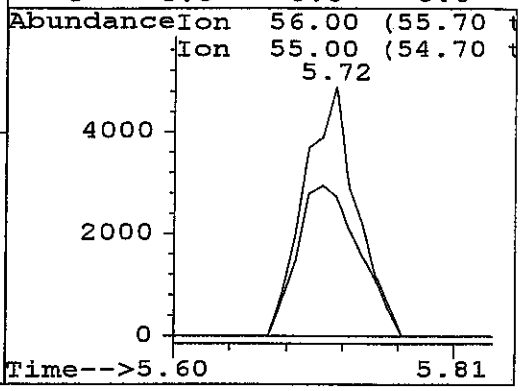


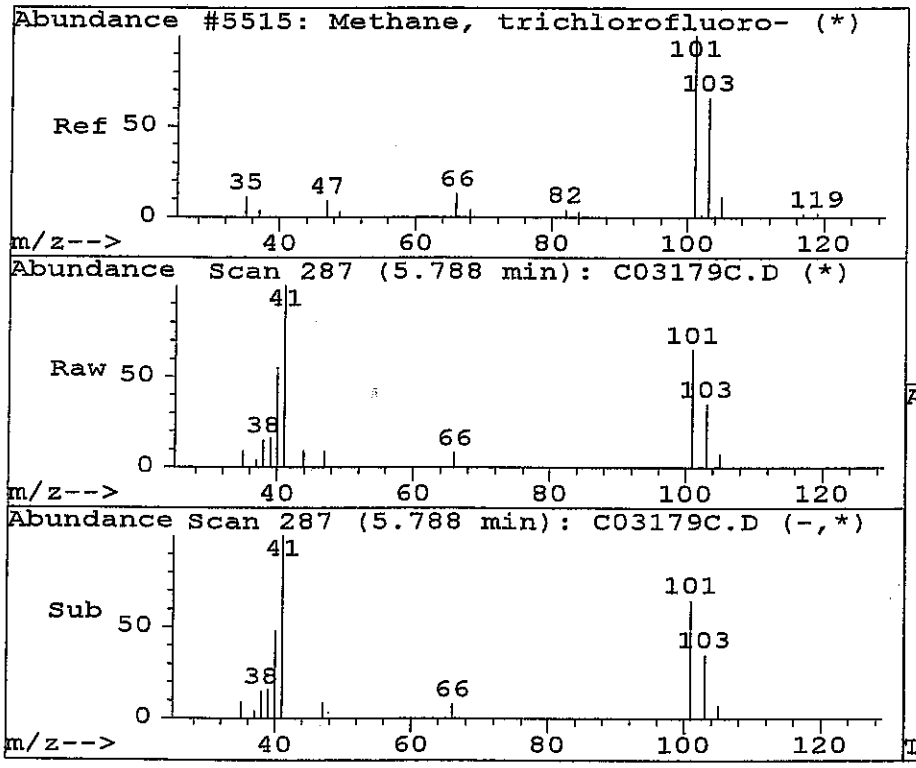


#9
Acrolein
Concen: 0.59 ppbV
RT: 5.72 min Scan# 280
Delta R.T. -0.17 min
Lab File: C03179C.D
Acq: 17 Mar 109 10:25 am

Tgt Ion:56 Resp: 12977

Ion	Ratio	Lower	Upper
56	100		
55	55.9	61.7	92.5#
0	0.0	0.0	0.0
0	0.0	0.0	0.0

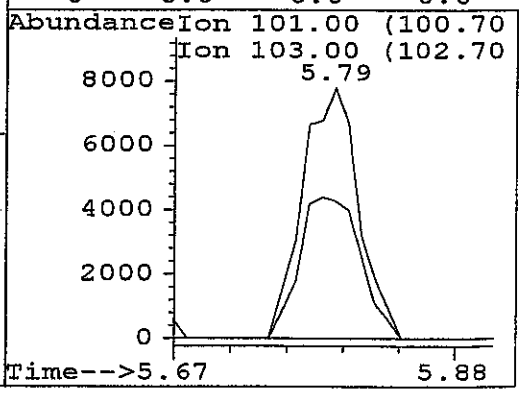


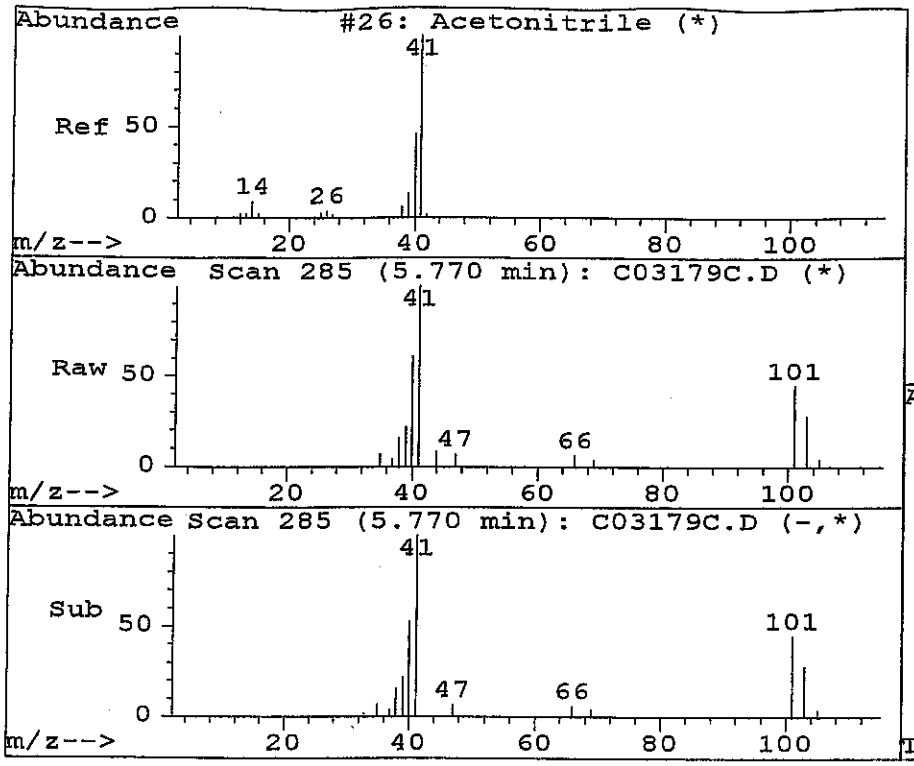


#10
Trichlorofluoromethane
Concen: 0.32 ppbV
RT: 5.79 min Scan# 287
Delta R.T. -0.15 min
Lab File: C03179C.D
Acq: 17 Mar 109 10:25 am

Tgt Ion:101 Resp: 22371

Ion	Ratio	Lower	Upper
101	100		
103	54.9	51.1	76.7
0	0.0	0.0	0.0
0	0.0	0.0	0.0

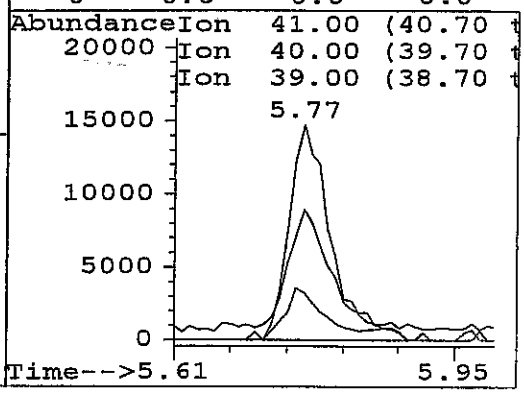


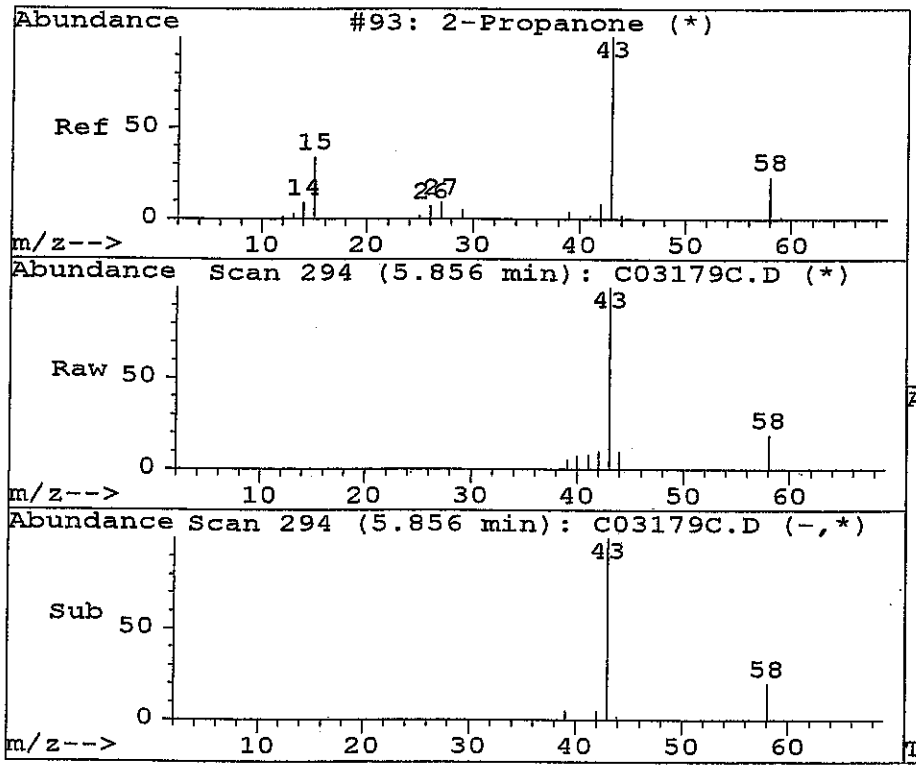


#11
Acetonitrile
Concen: 0.49 ppbV
RT: 5.77 min Scan# 285
Delta R.T. -0.19 min
Lab File: C03179C.D
Acq: 17 Mar 109 10:25 am

Tgt Ion:41 Resp: 51682

Ion	Ratio	Lower	Upper
41	100		
40	54.8	43.8	65.6
39	20.4	17.8	26.8
0	0.0	0.0	0.0

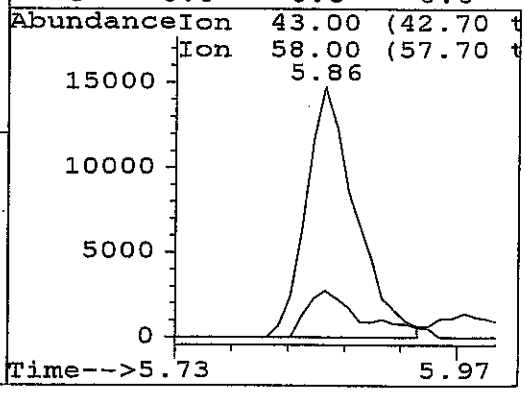


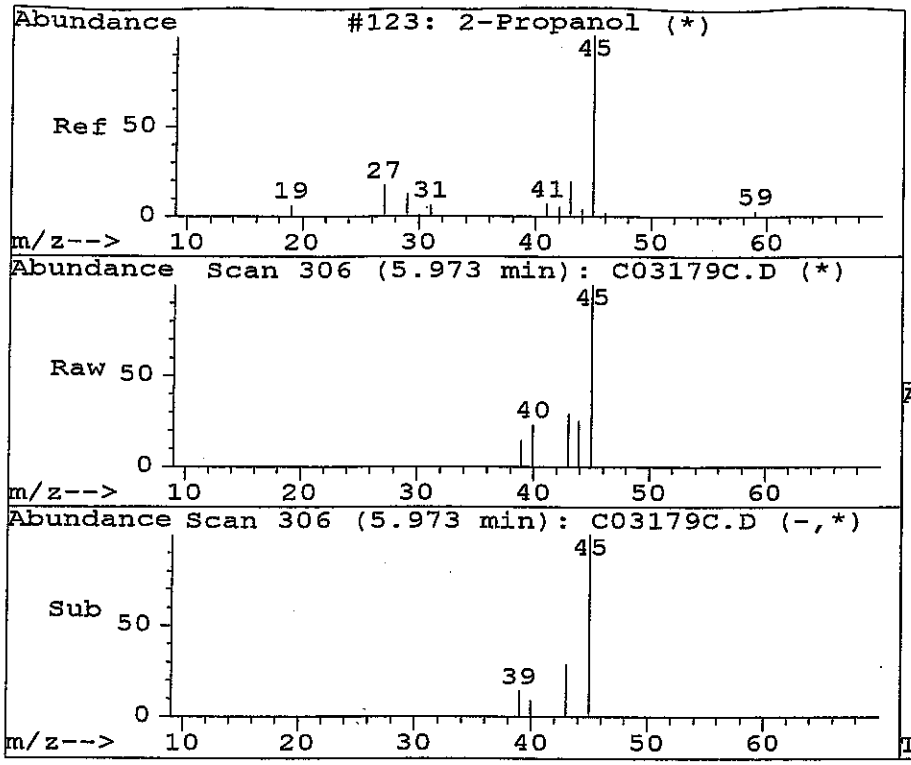


#12
Acetone
Concen: 0.35 ppbV
RT: 5.86 min Scan# 294
Delta R.T. -0.18 min
Lab File: C03179C.D
Acq: 17 Mar 109 10:25 am

Tgt Ion:43 Resp: 42851

Ion	Ratio	Lower	Upper
43	100		
58	17.2	16.2	24.4
0	0.0	0.0	0.0
0	0.0	0.0	0.0

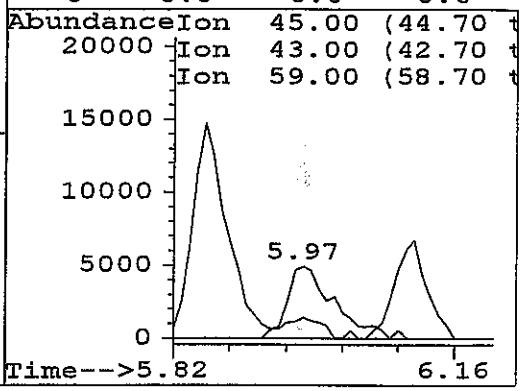


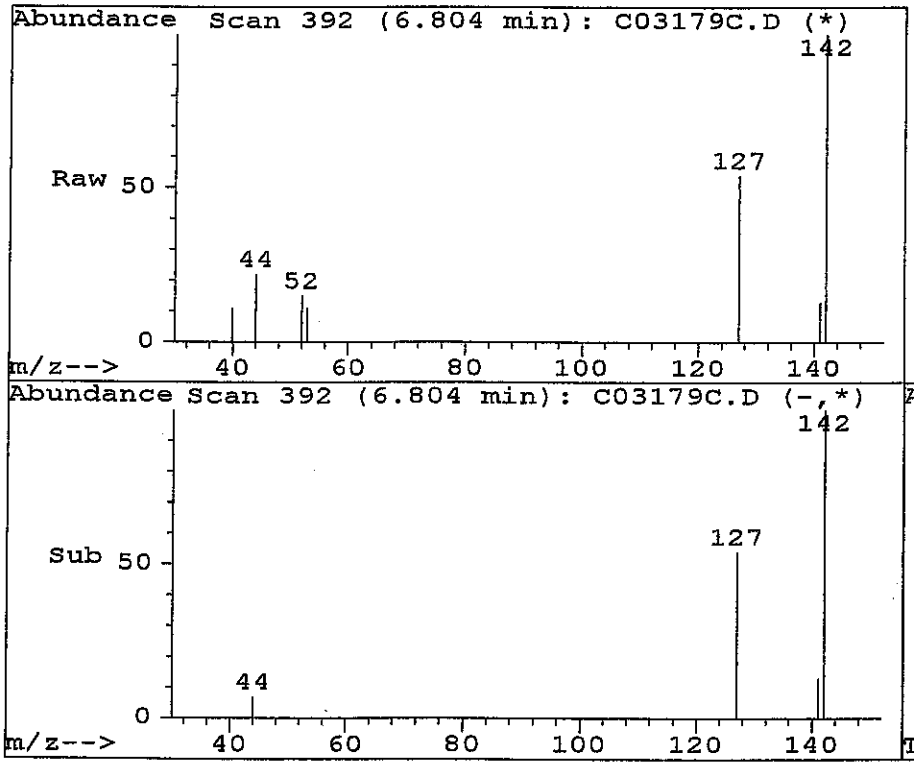


#13
2-propanol
Concen: 0.11 ppbV
RT: 5.97 min Scan# 306
Delta R.T. -0.17 min
Lab File: C03179C.D
Acq: 17 Mar 109 10:25 am

Tgt Ion:45 Resp: 19578

Ion	Ratio	Lower	Upper
45	100		
43	22.1	0.0	0.0#
59	0.0	0.0	0.0
0	0.0	0.0	0.0

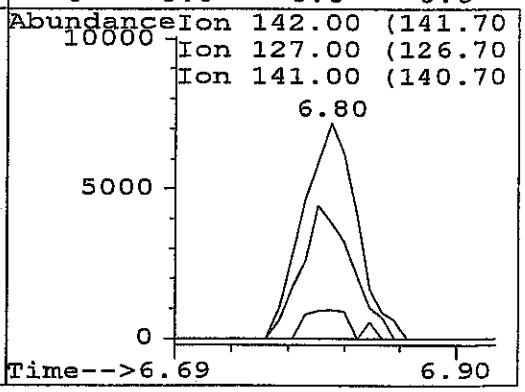


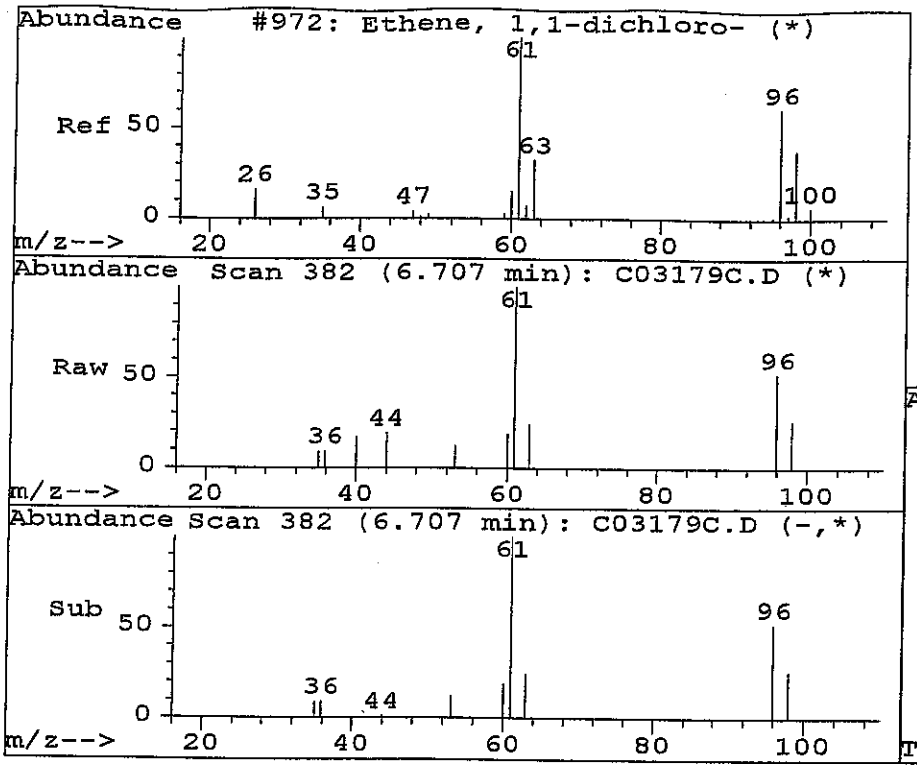


#14
Methyl iodide
Concen: 0.16 ppbV
RT: 6.80 min Scan# 392
Delta R.T. -0.19 min
Lab File: C03179C.D
Acq: 17 Mar 109 10:25 am

Tgt Ion:142 Resp: 20175

Ion	Ratio	Lower	Upper
142	100		
127	53.8	44.4	66.6
141	13.4	12.6	19.0
0	0.0	0.0	0.0

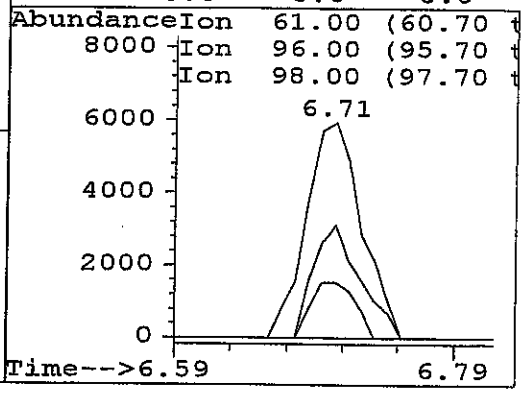


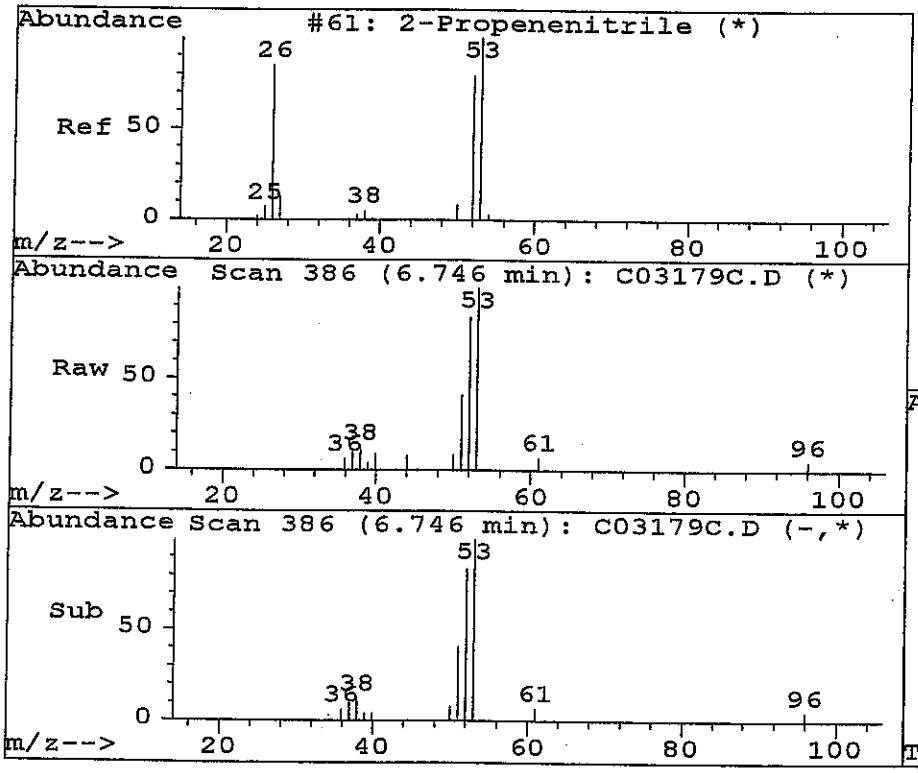


#15
1,1-Dichloroethene
Concen: 0.27 ppbV
RT: 6.71 min Scan# 382
Delta R.T. -0.18 min
Lab File: C03179C.D
Acq: 17 Mar 109 10:25 am

Tgt Ion:61 Resp: 16793

Ion	Ratio	Lower	Upper
61	100		
96	52.3	33.5	50.3#
98	25.9	21.1	31.7
0	0.0	0.0	0.0

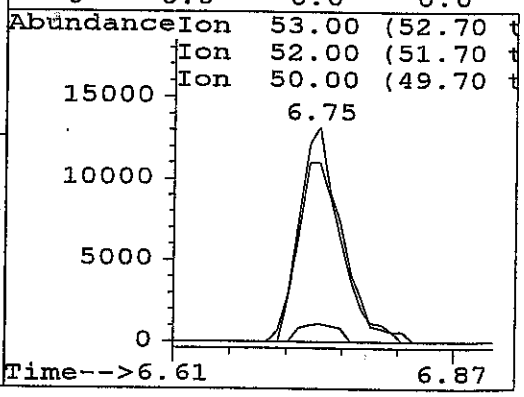


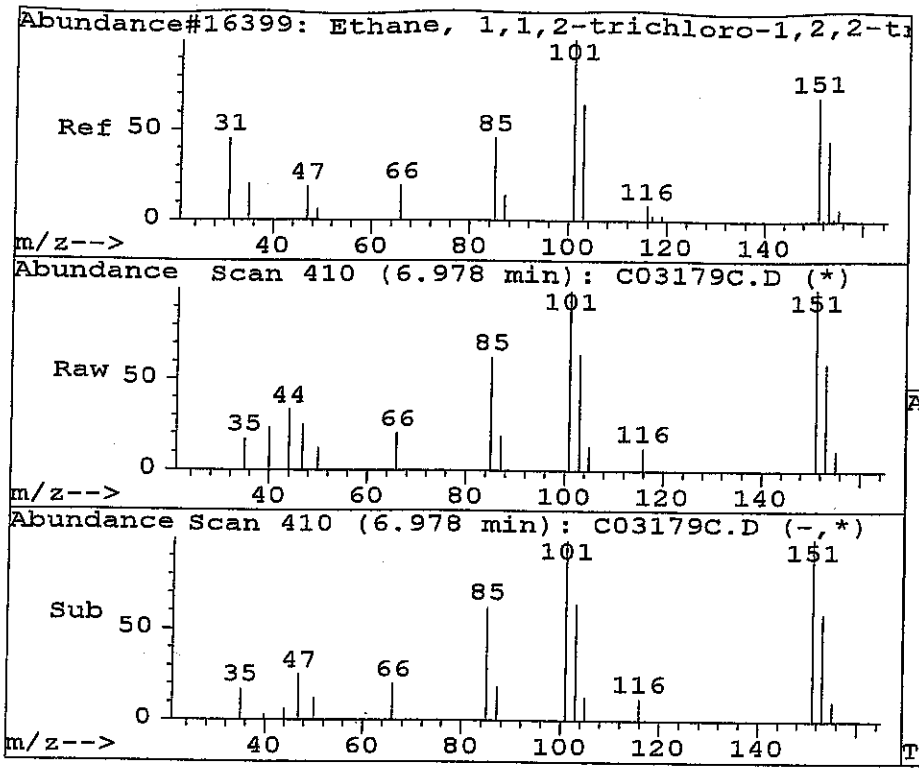


#16
Acrylonitrile
Concen: 0.58 ppbV
RT: 6.75 min Scan# 386
Delta R.T. -0.21 min
Lab File: C03179C.D
Acq: 17 Mar 109 10:25 am

Tgt Ion:53 Resp: 36242

Ion	Ratio	Lower	Upper
53	100		
52	83.5	71.5	107.3
50	8.4	9.1	13.7#
0	0.0	0.0	0.0

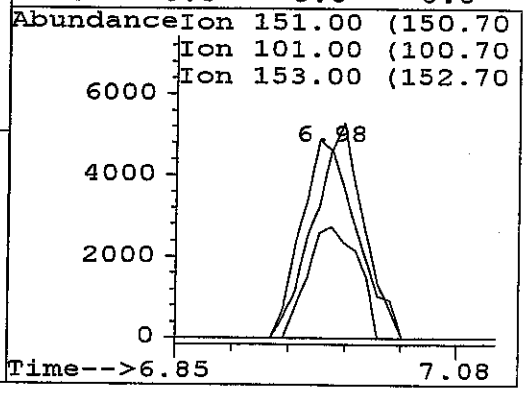


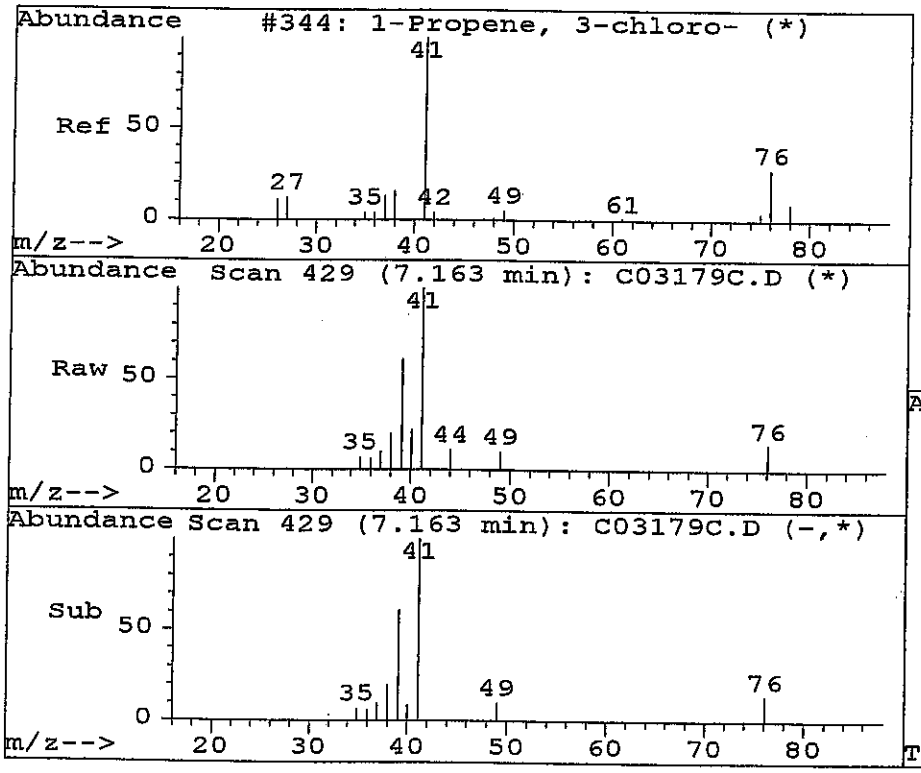


#17
Freon 113
Concen: 0.25 ppbV
RT: 6.98 min Scan# 410
Delta R.T. -0.18 min
Lab File: C03179C.D
Acq: 17 Mar 109 10:25 am

Tgt Ion:151 Resp: 13083

Ion	Ratio	Lower	Upper
151	100		
101	99.1	105.3	157.9#
153	58.9	48.6	73.0
0	0.0	0.0	0.0

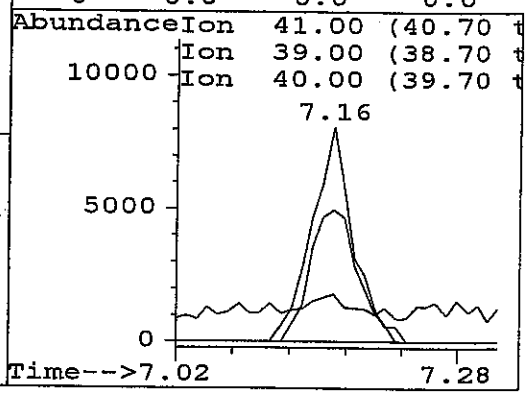


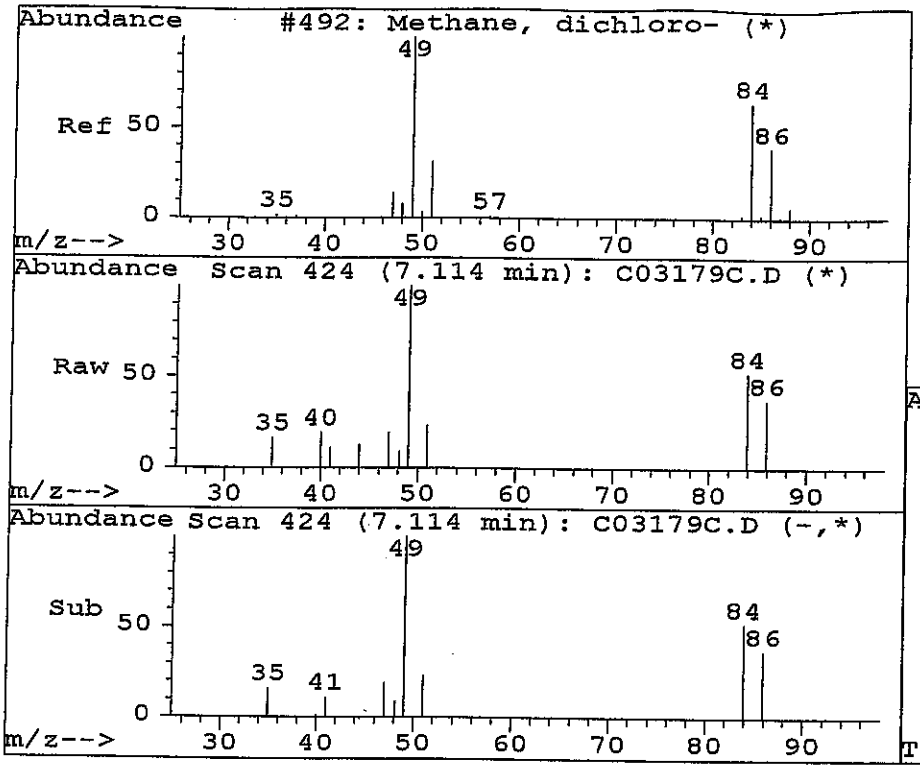


#18
Allyl chloride
Concen: 0.12 ppbV
RT: 7.16 min Scan# 429
Delta R.T. -0.19 min
Lab File: C03179C.D
Acq: 17 Mar 109 10:25 am

Tgt Ion:41 Resp: 21580

Ion	Ratio	Lower	Upper
41	100		
39	61.3	55.0	82.4
40	7.0	8.6	13.0#
0	0.0	0.0	0.0

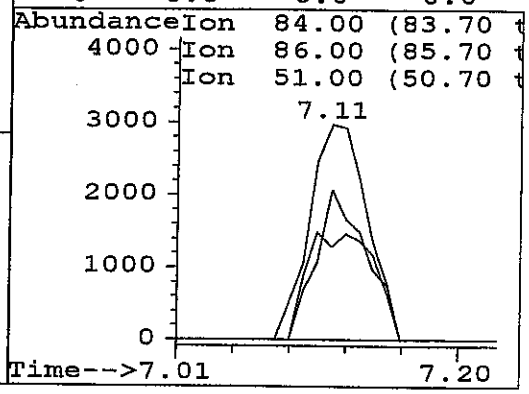


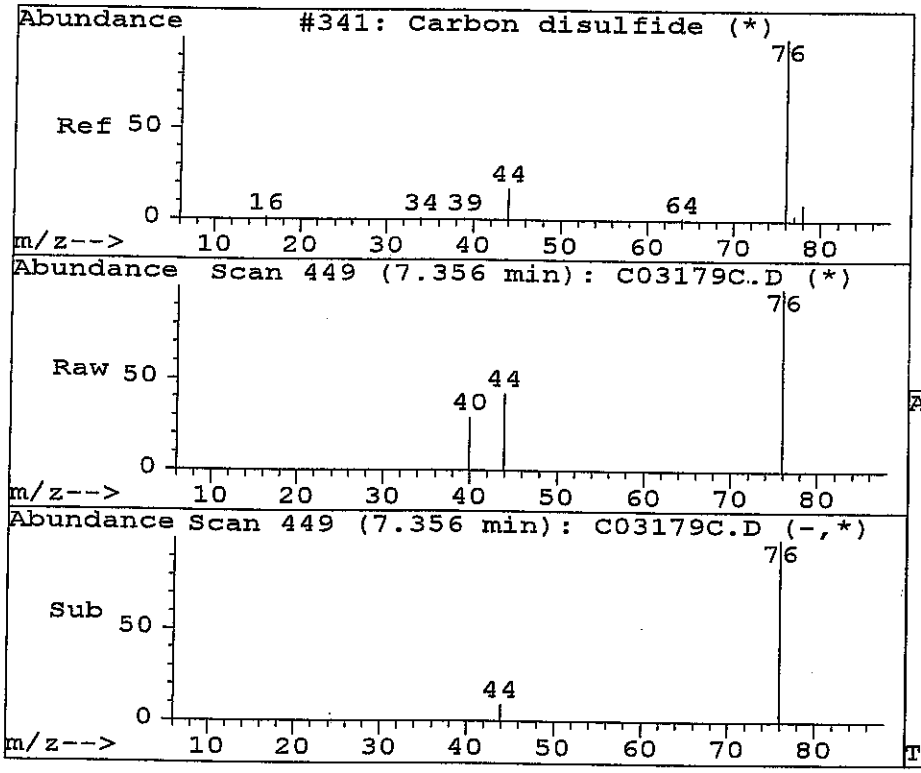


#19
Dichloromethane
Concen: 0.32 ppbV
RT: 7.11 min Scan# 424
Delta R.T. -0.20 min
Lab File: C03179C.D
Acq: 17 Mar 109 10:25 am

Tgt Ion:84 Resp: 8354

Ion	Ratio	Lower	Upper
84	100		
86	69.8	48.0	72.0
51	43.3	50.1	75.1#
0	0.0	0.0	0.0

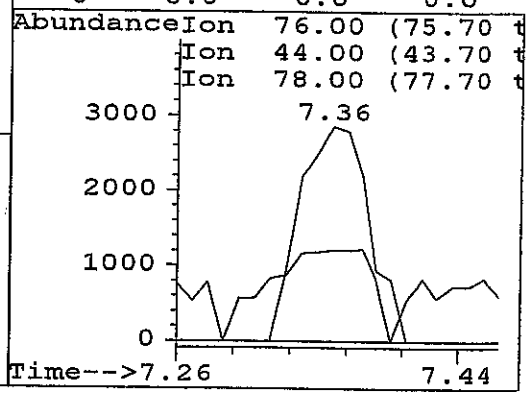


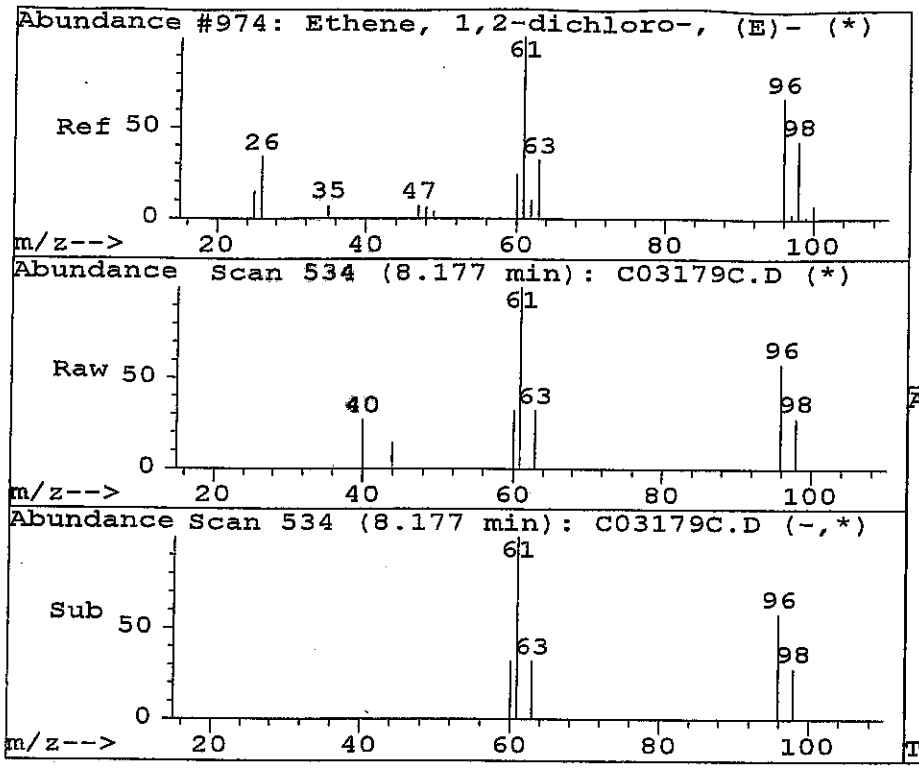


#20
Carbon disulfide
Concen: 0.10 ppbV
RT: 7.36 min Scan# 449
Delta R.T. -0.18 min
Lab File: C03179C.D
Acq: 17 Mar 109 10:25 am

Tgt Ion:76 Resp: 8703

Ion	Ratio	Lower	Upper
76	100		
44	17.6	14.2	21.2
78	0.0	5.8	9.7#
0	0.0	0.0	0.0

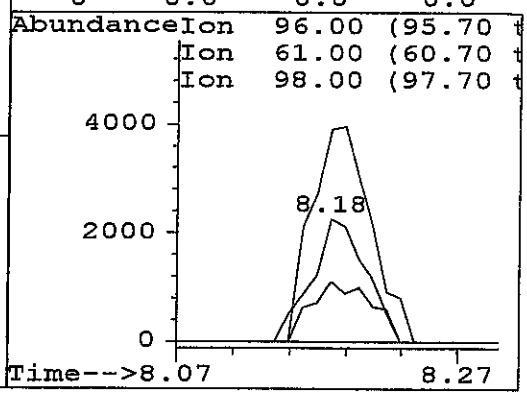


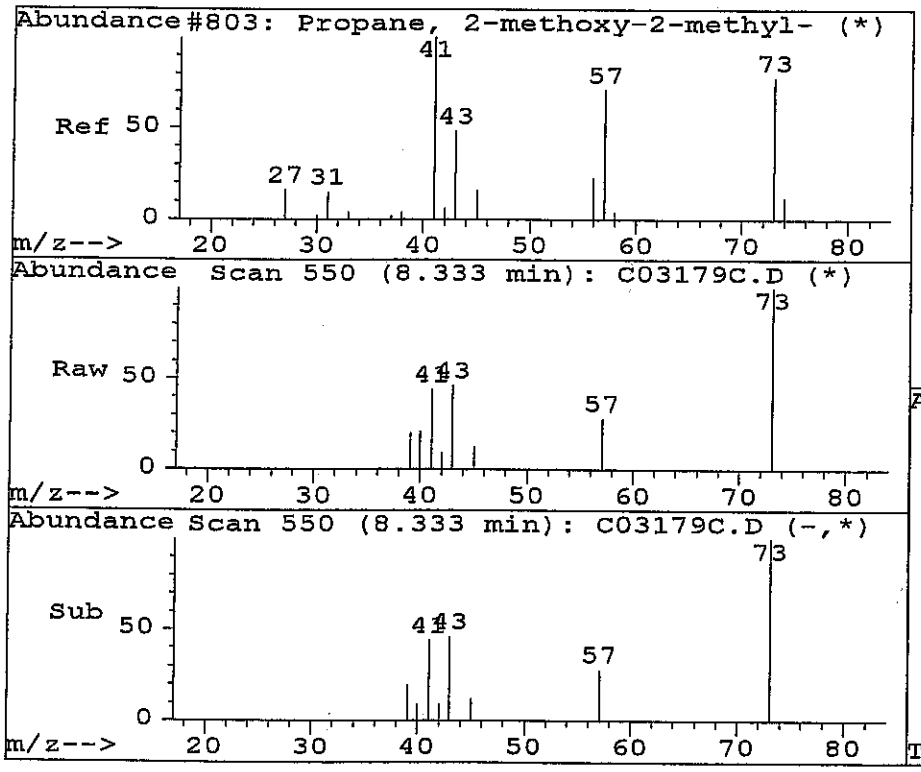


#21
trans-1,2-Dichloroethene
Concen: 0.17 ppbV
RT: 8.18 min Scan# 534
Delta R.T. -0.20 min
Lab File: C03179C.D
Acq: 17 Mar 109 10:25 am

Tgt Ion:96 Resp: 5940

Ion	Ratio	Lower	Upper
96	100		
61	173.2	155.7	233.5
98	49.3	47.4	71.2
0	0.0	0.0	0.0

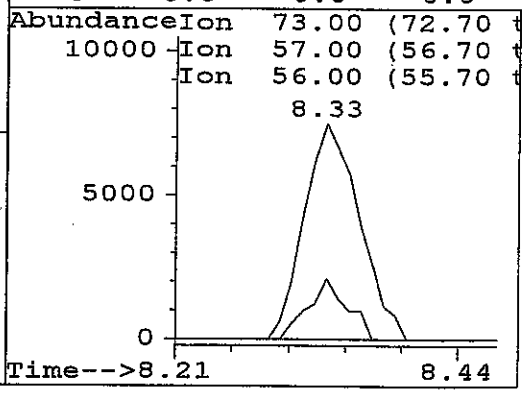


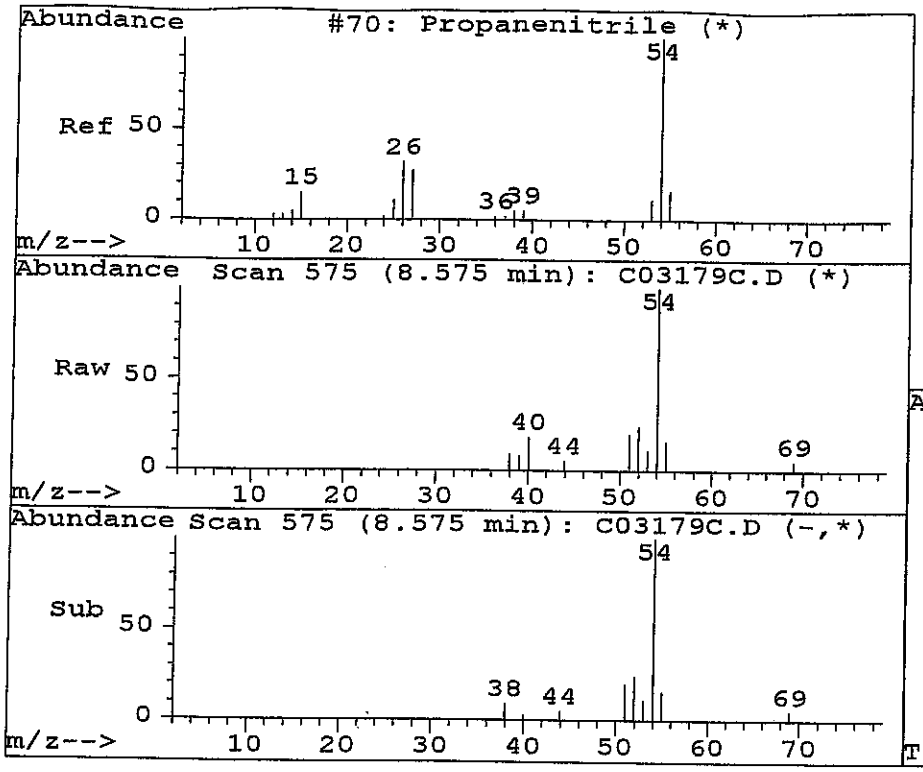


#22
Methyl tert butyl ether
Concen: 0.14 ppbV
RT: 8.33 min Scan# 550
Delta R.T. -0.21 min
Lab File: C03179C.D
Acq: 17 Mar 109 10:25 am

Tgt Ion:73 Resp: 24271

Ion	Ratio	Lower	Upper
73	100		
57	28.1	18.2	27.2#
56	0.0	4.6	6.8#
0	0.0	0.0	0.0

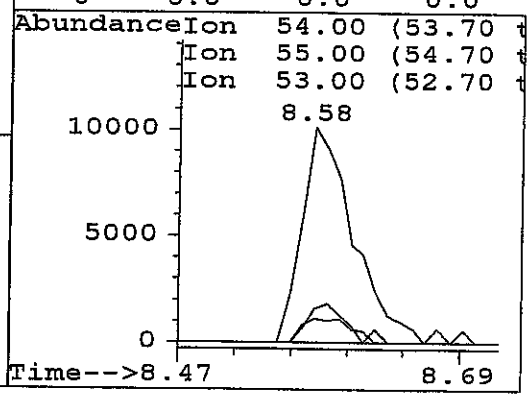


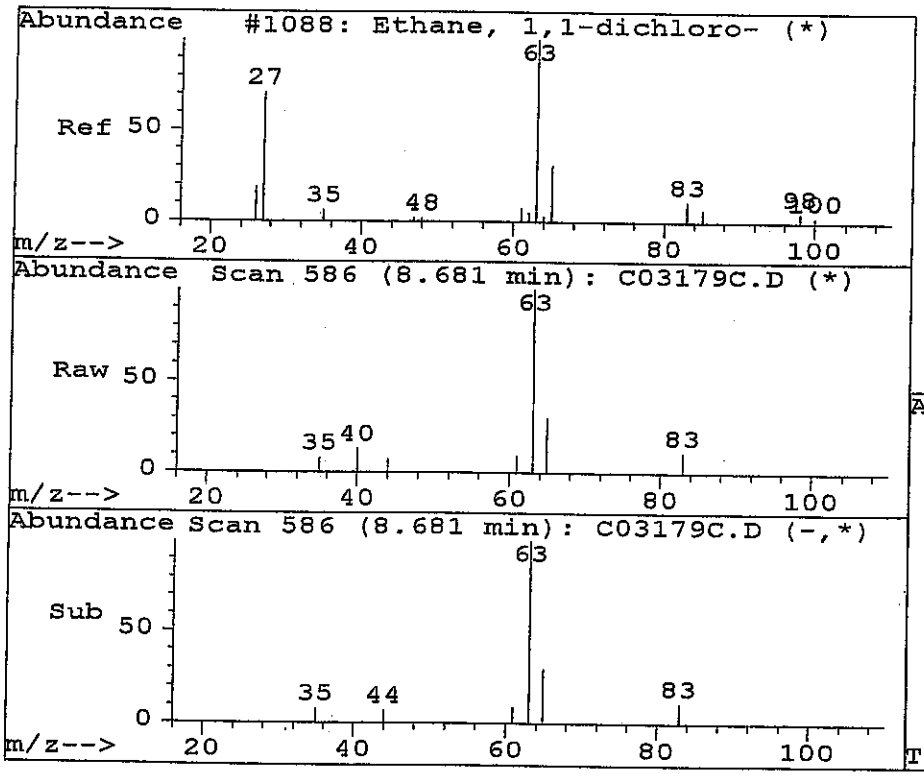


#23
Propionitrile
Concen: 0.30 ppbV
RT: 8.58 min Scan# 575
Delta R.T. -0.25 min
Lab File: C03179C.D
Acq: 17 Mar 109 10:25 am

Tgt Ion:54 Resp: 28323

Ion	Ratio	Lower	Upper
54	100		
55	15.7	13.3	19.9
53	11.1	8.0	12.0
0	0.0	0.0	0.0

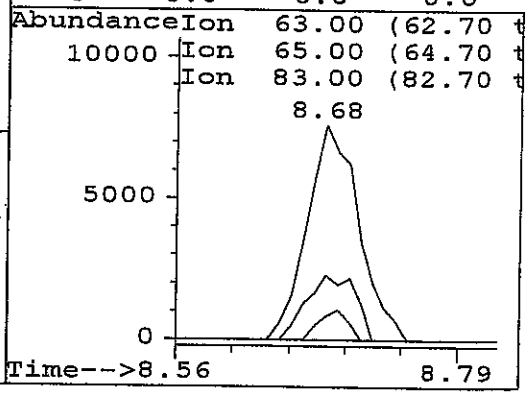


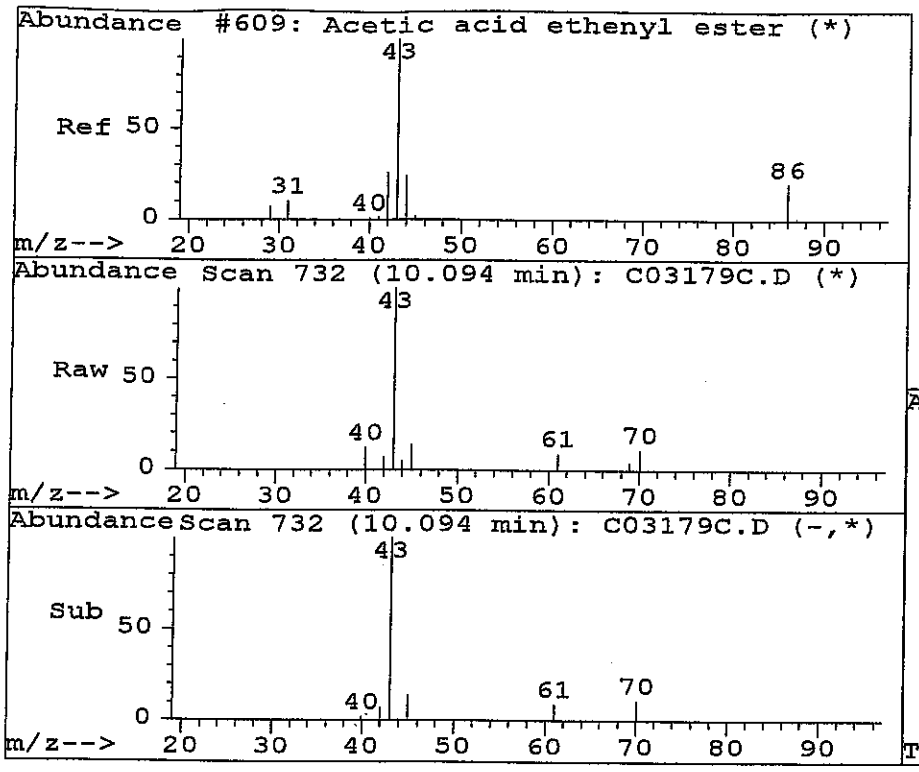


#24
1,1-Dichloroethane
Concen: 0.31 ppbV
RT: 8.68 min Scan# 586
Delta R.T. -0.22 min
Lab File: C03179C.D
Acq: 17 Mar 109 10:25 am

Tgt Ion:63 Resp: 22823

Ion	Ratio	Lower	Upper
63	100		
65	30.0	25.8	38.8
83	10.9	9.0	13.6
0	0.0	0.0	0.0

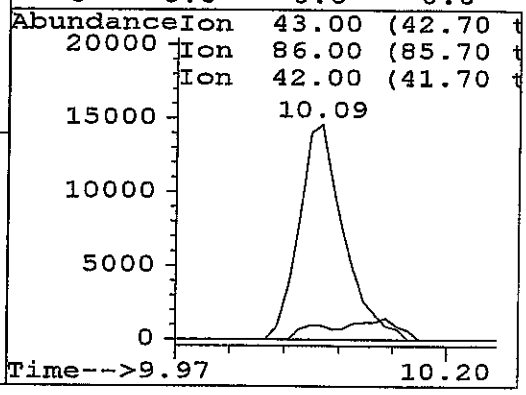


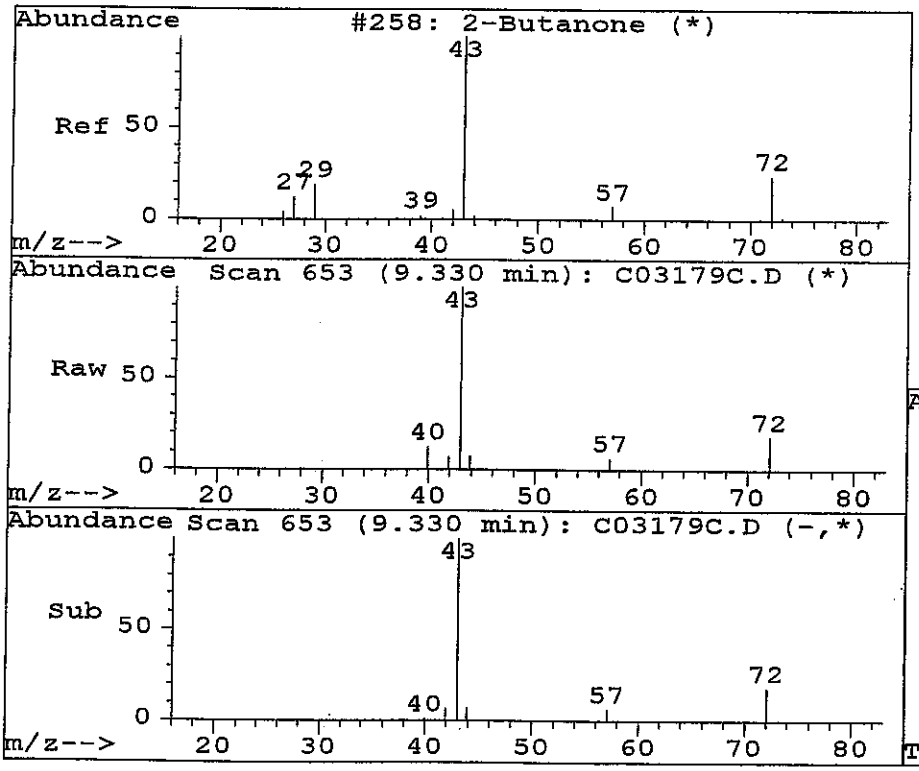


#25
Vinyl acetate
Concen: 0.18 ppbV
RT: 10.09 min Scan# 732
Delta R.T. -0.23 min
Lab File: C03179C.D
Acq: 17 Mar 109 10:25 am

Tgt Ion:43 Resp: 40148

Ion	Ratio	Lower	Upper
43	100		
86	0.0	0.0	0.0
42	6.7	6.2	9.2
0	0.0	0.0	0.0

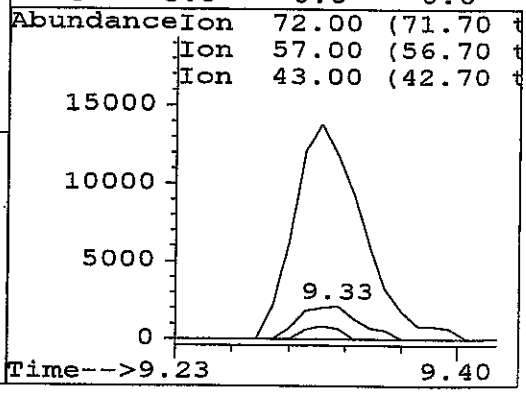


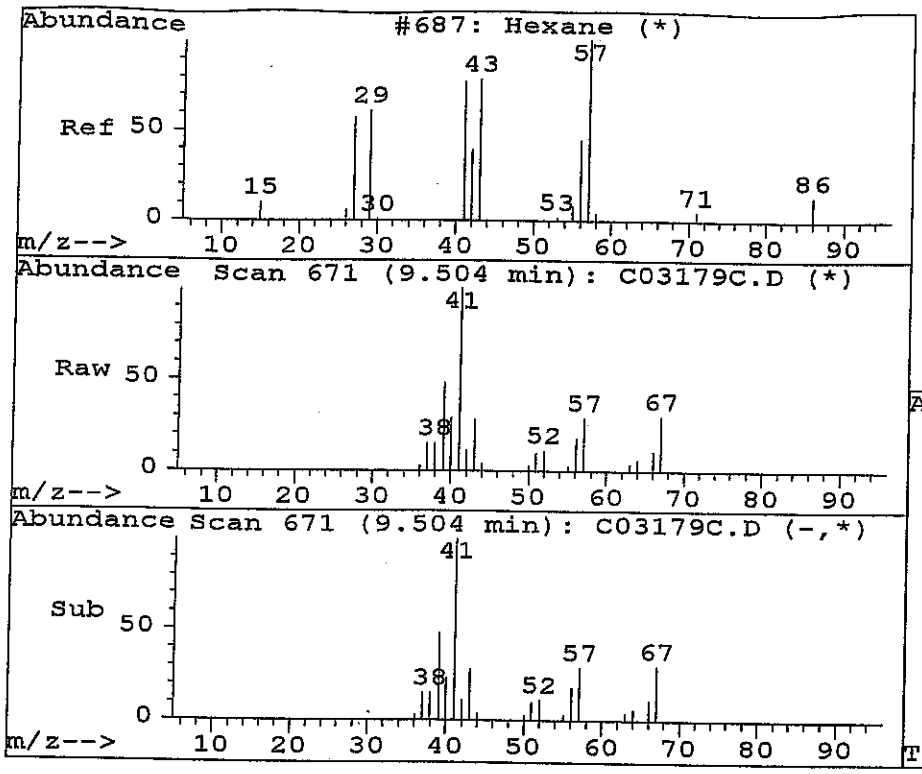


#26
2-Butanone
Concen: 0.11 ppbV
RT: 9.33 min Scan# 653
Delta R.T. -0.21 min
Lab File: C03179C.D
Acq: 17 Mar 109 10:25 am

Tgt Ion:72 Resp: 5400

Ion	Ratio	Lower	Upper
72	100		
57	31.6	25.8	38.6
43	531.3	493.3	739.9
0	0.0	0.0	0.0

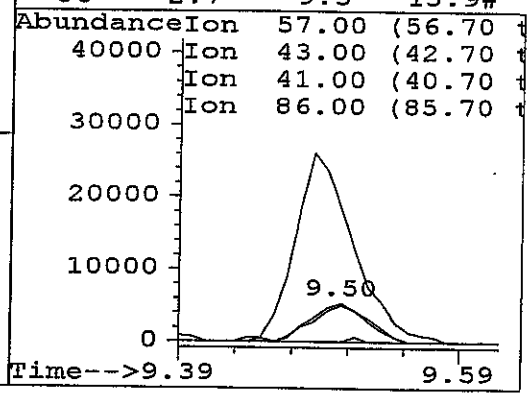


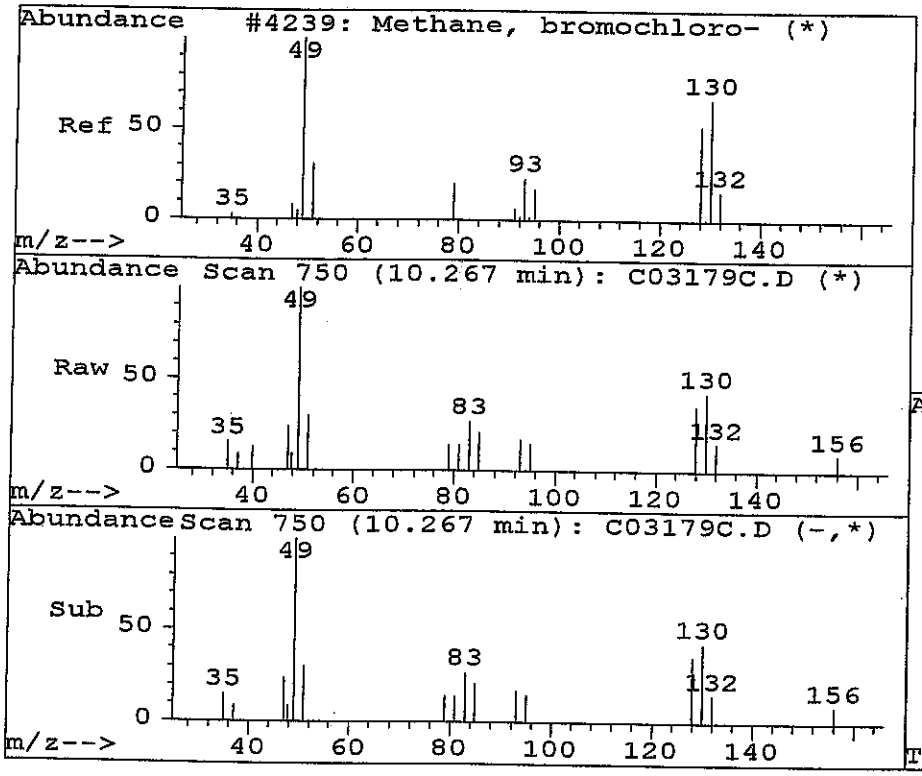


#27
Hexane
Concen: 0.10 ppbV
RT: 9.50 min Scan# 671
Delta R.T. -0.21 min
Lab File: C03179C.D
Acq: 17 Mar 109 10:25 am

Tgt Ion:57 Resp: 15036

Ion	Ratio	Lower	Upper
57	100		
43	97.5	75.0	112.4
41	498.9	461.1	691.7
86	2.7	9.3	13.9#

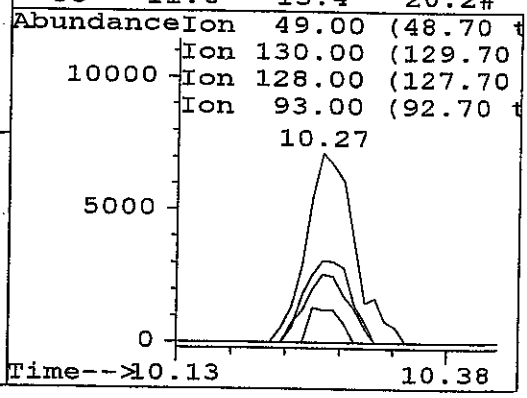


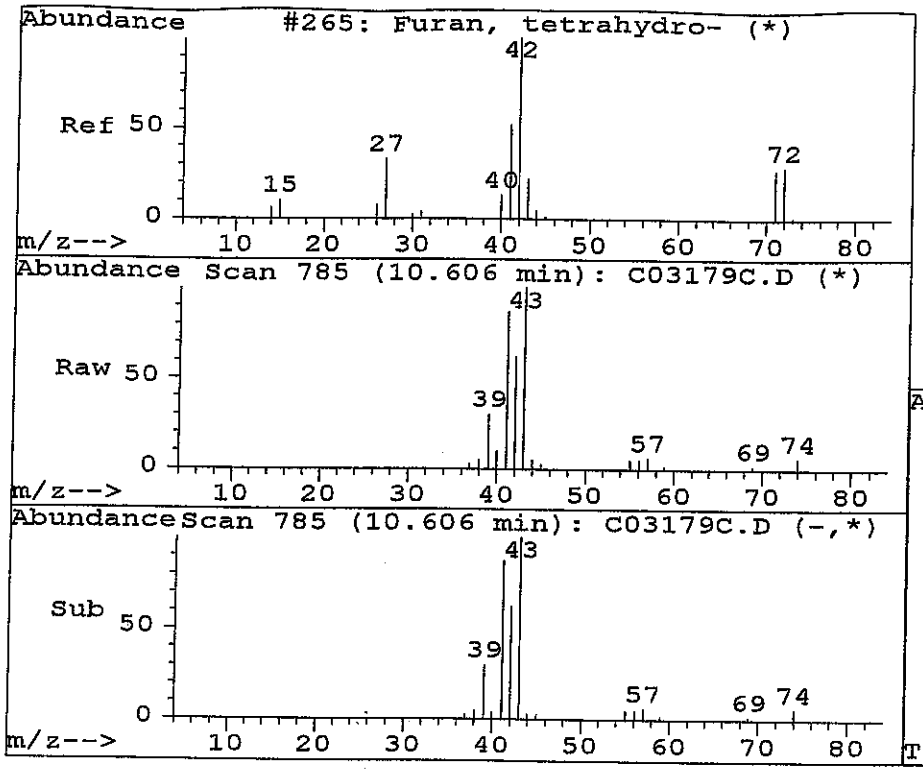


#28
Bromochloromethane
Concen: 0.11 ppbV
RT: 10.27 min Scan# 750
Delta R.T. -0.23 min
Lab File: C03179C.D
Acq: 17 Mar 109 10:25 am

Tgt Ion:49 Resp: 22610

Ion	Ratio	Lower	Upper
49	100		
130	41.6	35.3	52.9
128	32.7	30.0	45.0
93	11.6	13.4	20.2#

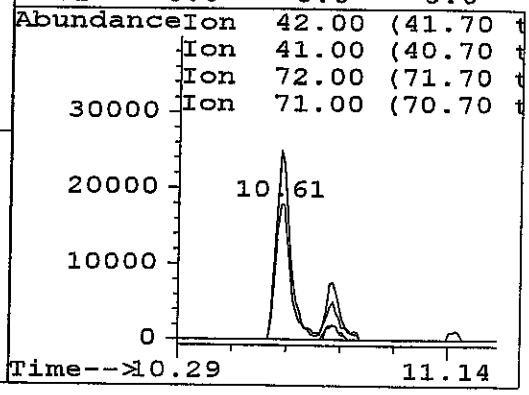


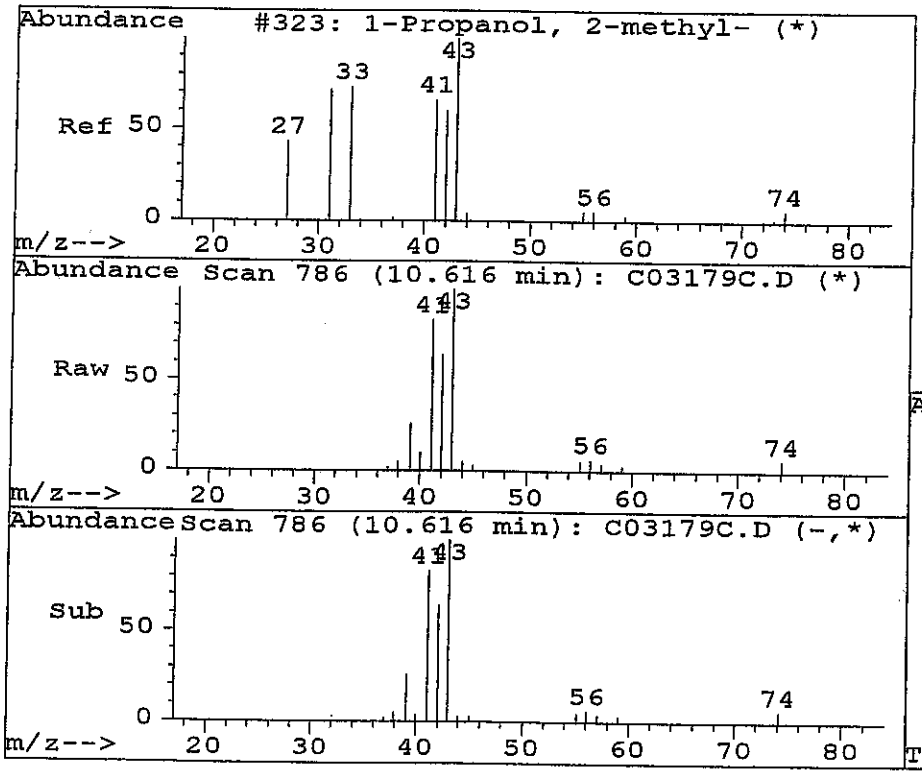


#29
Tetrahydrofuran
Concen: 0.20 ppbV m
RT: 10.61 min Scan# 785
Delta R.T. -0.31 min
Lab File: C03179C.D
Acq: 17 Mar 109 10:25 am

Tgt Ion:42 Resp: 81815

Ion	Ratio	Lower	Upper
42	100		
41	139.8	103.3	154.9
72	0.0	0.0	0.0
71	0.0	0.0	0.0

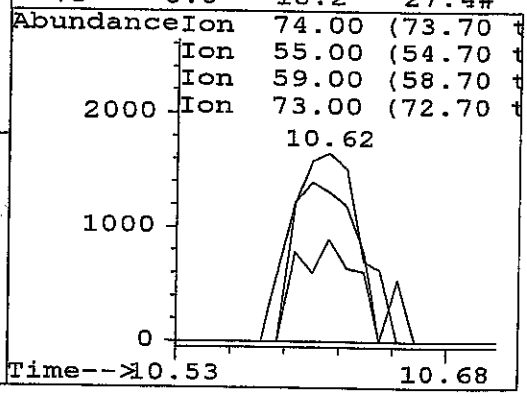


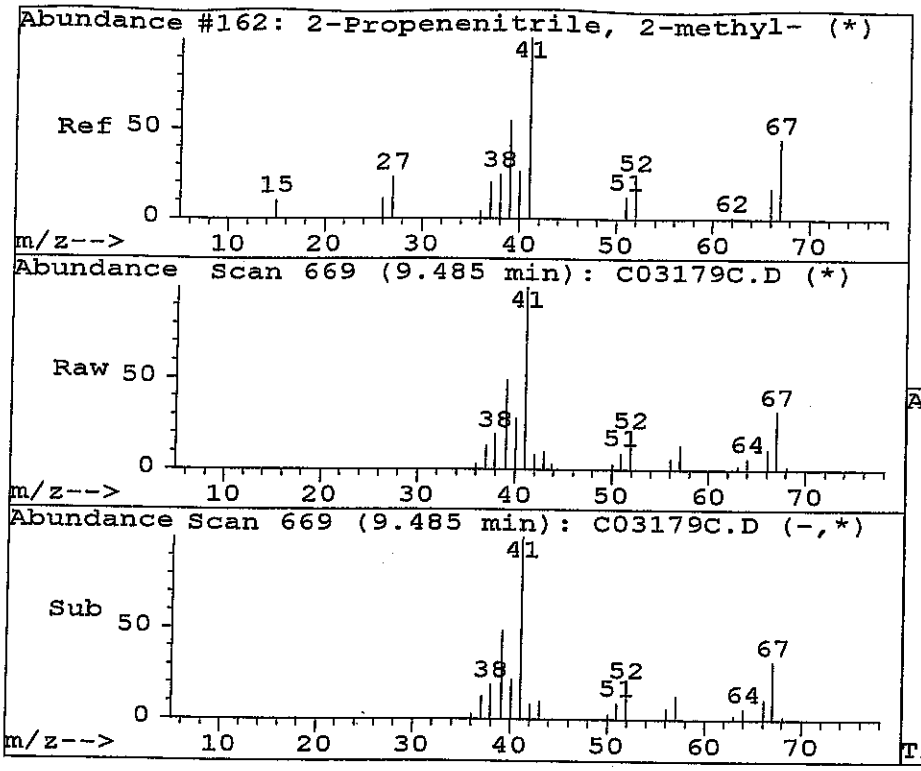


#30
Isobutyl alcohol
Concen: 0.39 ppbV
RT: 10.62 min Scan# 786
Delta R.T. -0.30 min
Lab File: C03179C.D
Acq: 17 Mar 109 10:25 am

Tgt Ion:74 Resp: 4214

Ion	Ratio	Lower	Upper
74	100		
55	79.5	64.8	97.2
59	54.2	27.1	40.7#
73	0.0	18.2	27.4#

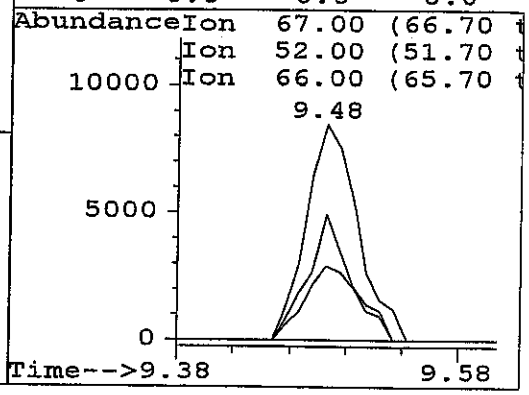


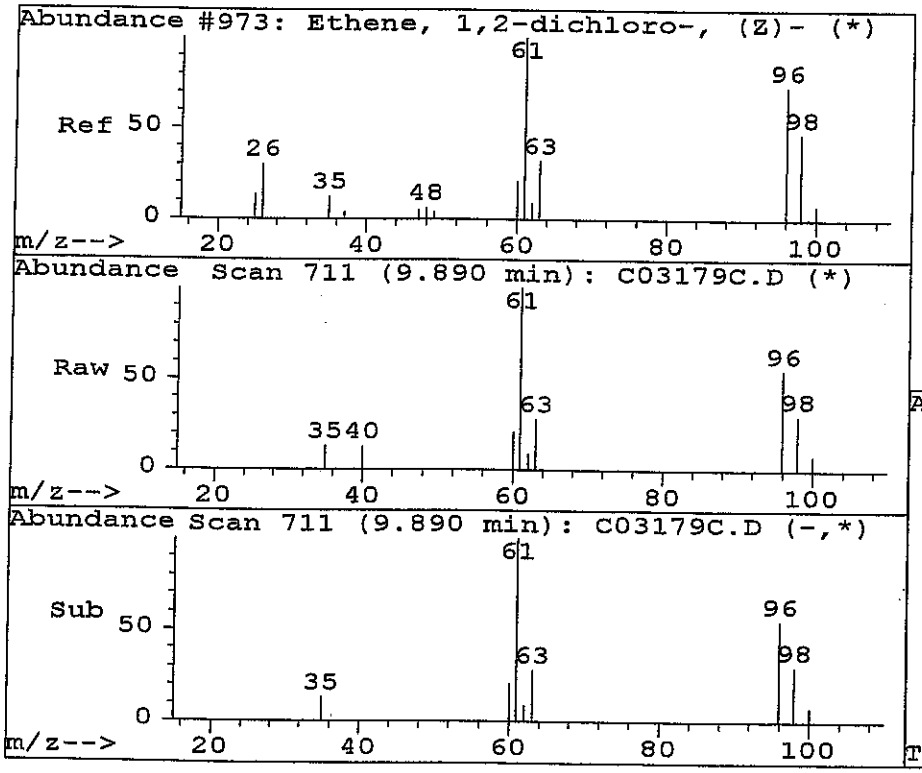


#31
Methacrylonitrile
Concen: 0.69 ppbV
RT: 9.48 min Scan# 669
Delta R.T. -0.26 min
Lab File: C03179C.D
Acq: 17 Mar 109 10:25 am

Tgt Ion:67 Resp: 21857

Ion	Ratio	Lower	Upper
67	100		
52	58.1	45.4	68.2
66	34.3	32.5	48.7
0	0.0	0.0	0.0

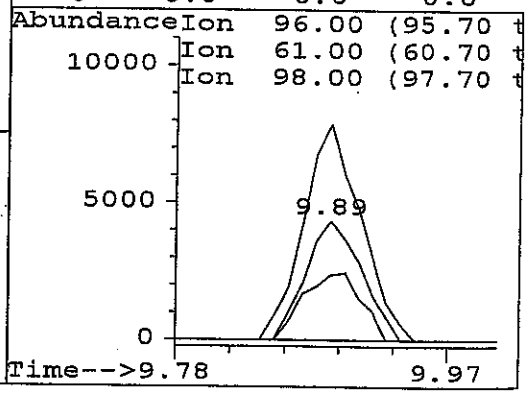


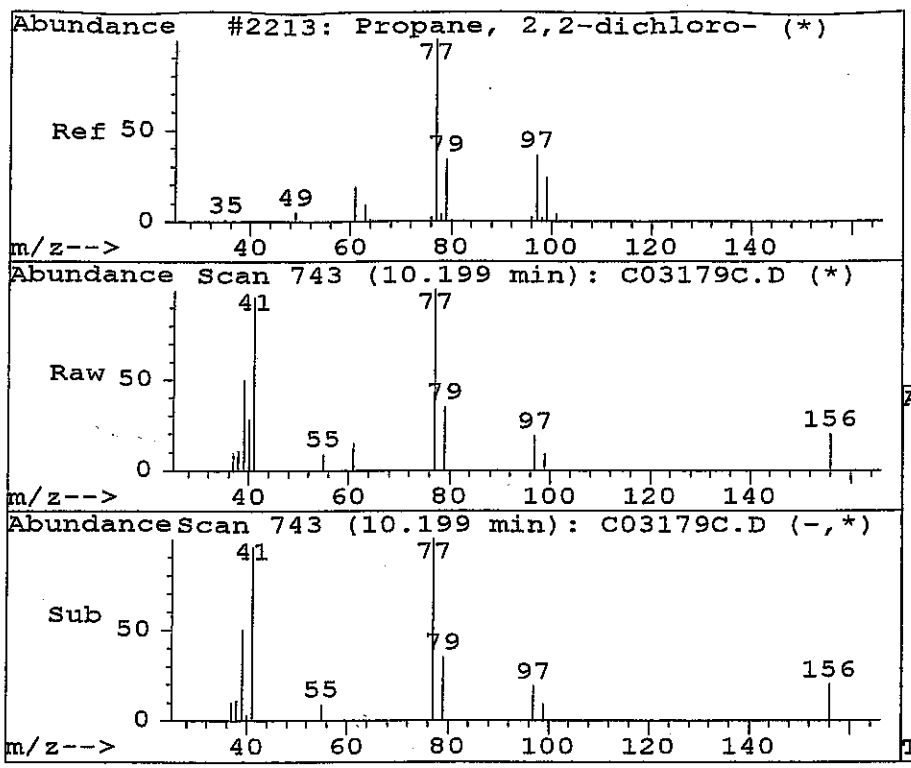


#32
cis-1,2-Dichloroethene
Concen: 0.30 ppbV
RT: 9.89 min Scan# 711
Delta R.T. -0.22 min
Lab File: C03179C.D
Acq: 17 Mar 109 10:25 am

Tgt Ion:96 Resp: 11695

Ion	Ratio	Lower	Upper
96	100		
61	181.6	143.1	214.7
98	54.9	49.1	73.7
0	0.0	0.0	0.0

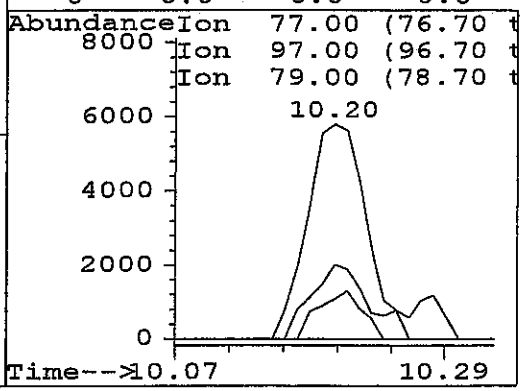


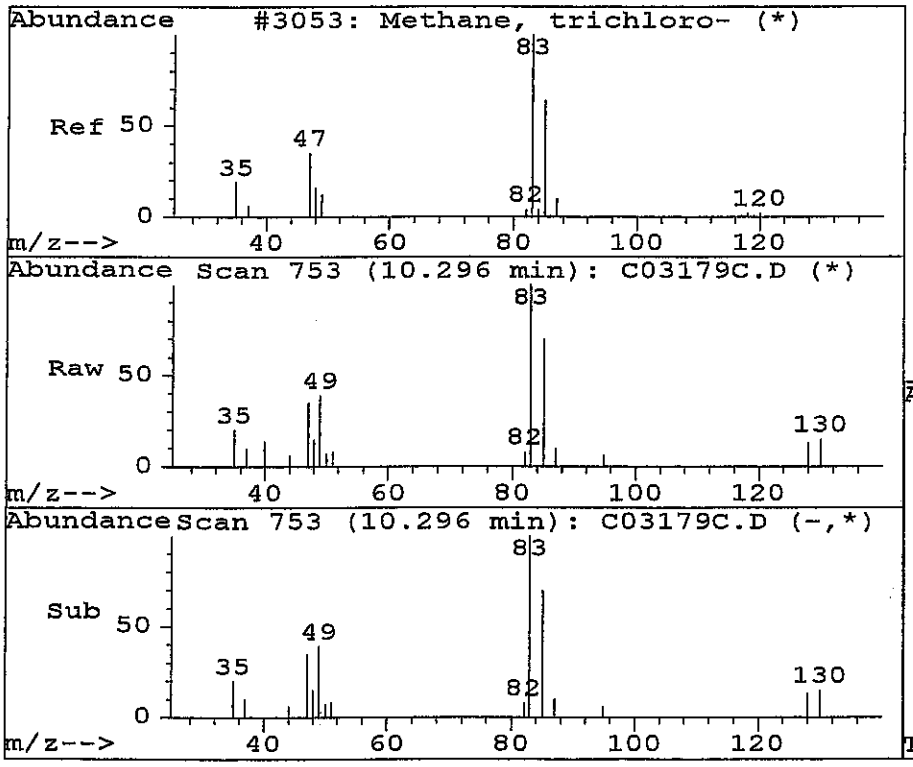


#33
2,2-Dichloropropane
Concen: 0.17 ppbV
RT: 10.20 min Scan# 743
Delta R.T. -0.22 min
Lab File: C03179C.D
Acq: 17 Mar 109 10:25 am

Tgt Ion:77 Resp: 18638

Ion	Ratio	Lower	Upper
77	100		
97	18.7	12.4	18.6#
79	25.9	26.3	39.5#
0	0.0	0.0	0.0

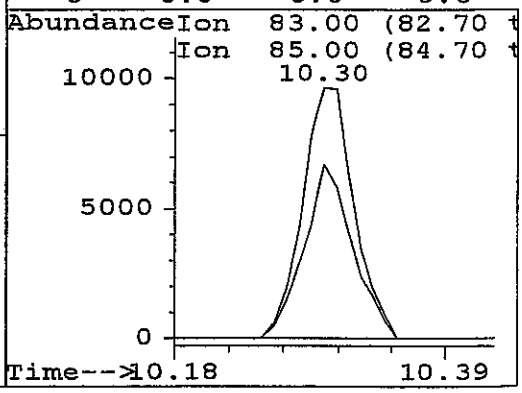


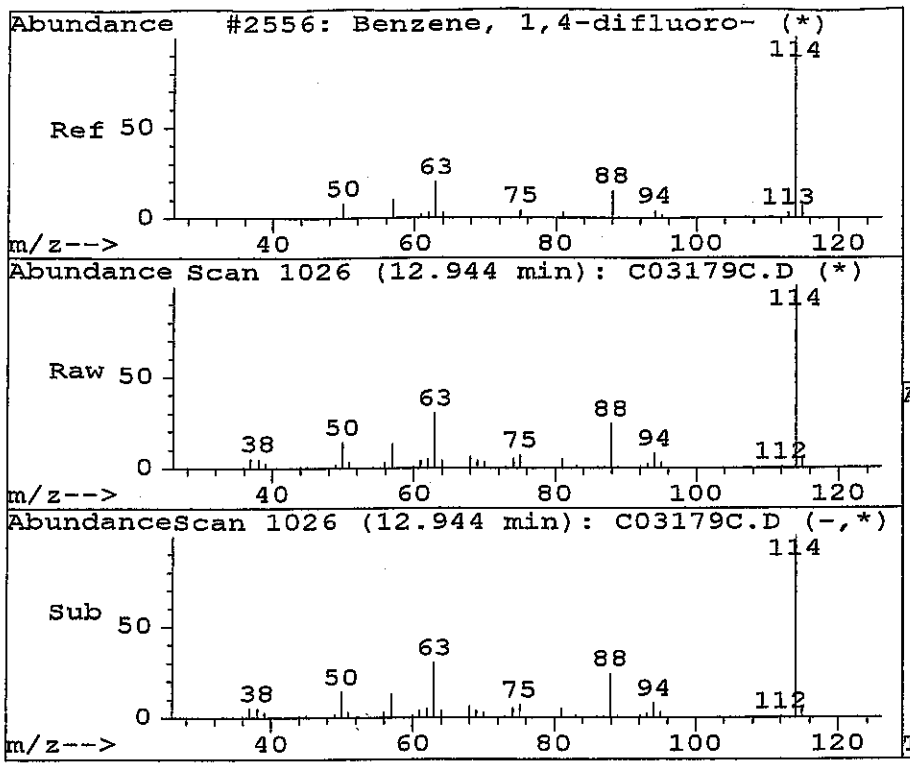


#34
Chloroform
Concen: 0.30 ppbV
RT: 10.30 min Scan# 753
Delta R.T. -0.23 min
Lab File: C03179C.D
Acq: 17 Mar 109 10:25 am

Tgt Ion:83 Resp: 27147

Ion	Ratio	Lower	Upper
83	100		
85	69.6	51.8	77.6
0	0.0	0.0	0.0
0	0.0	0.0	0.0

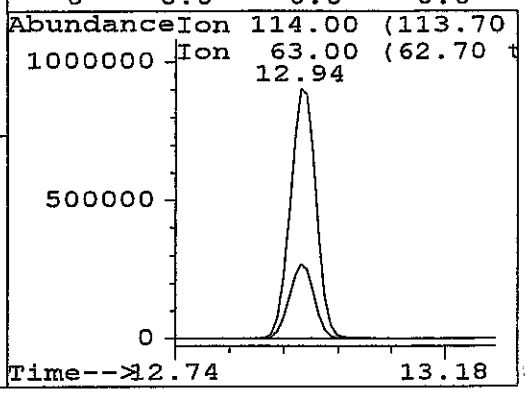


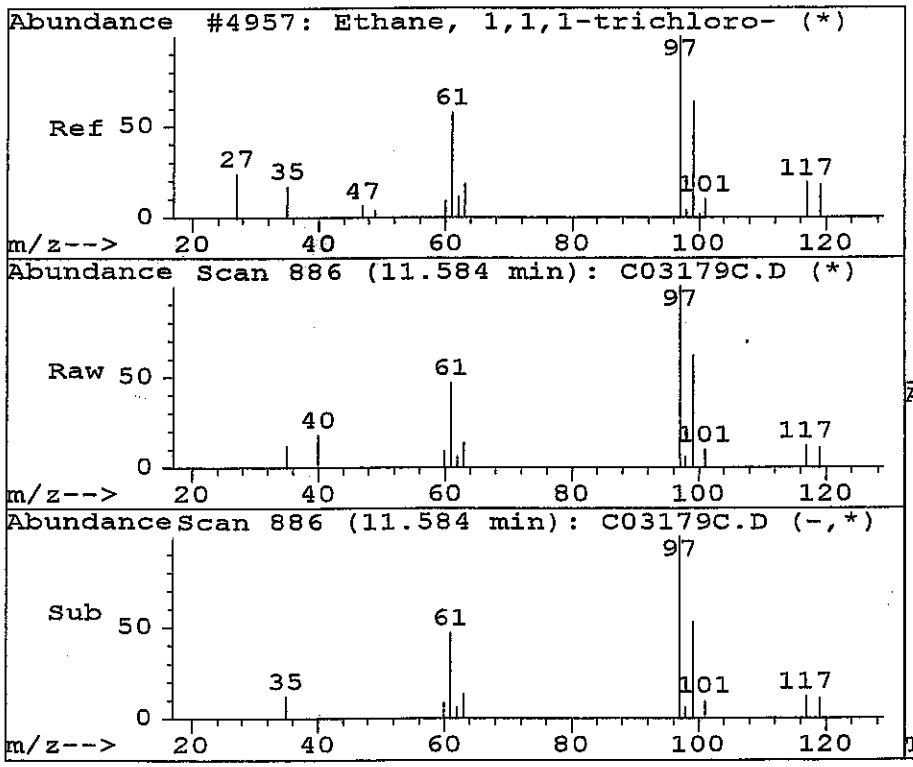


#35
1,4-Difluorobenzene
Concen: 20.00 ppbV
RT: 12.94 min Scan# 1026
Delta R.T. -0.23 min
Lab File: C03179C.D
Acq: 17 Mar 109 10:25 am

Tgt Ion:114 Resp: 2659938

Ion	Ratio	Lower	Upper
114	100		
63	29.9	21.8	36.4
0	0.0	0.0	0.0
0	0.0	0.0	0.0

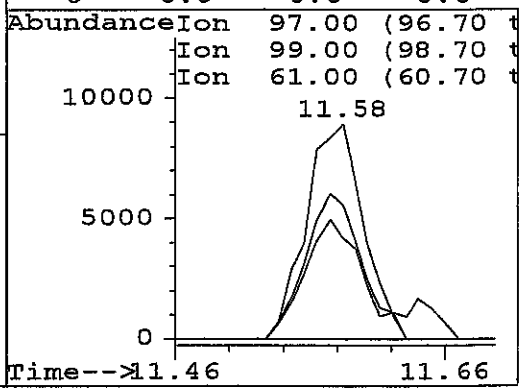


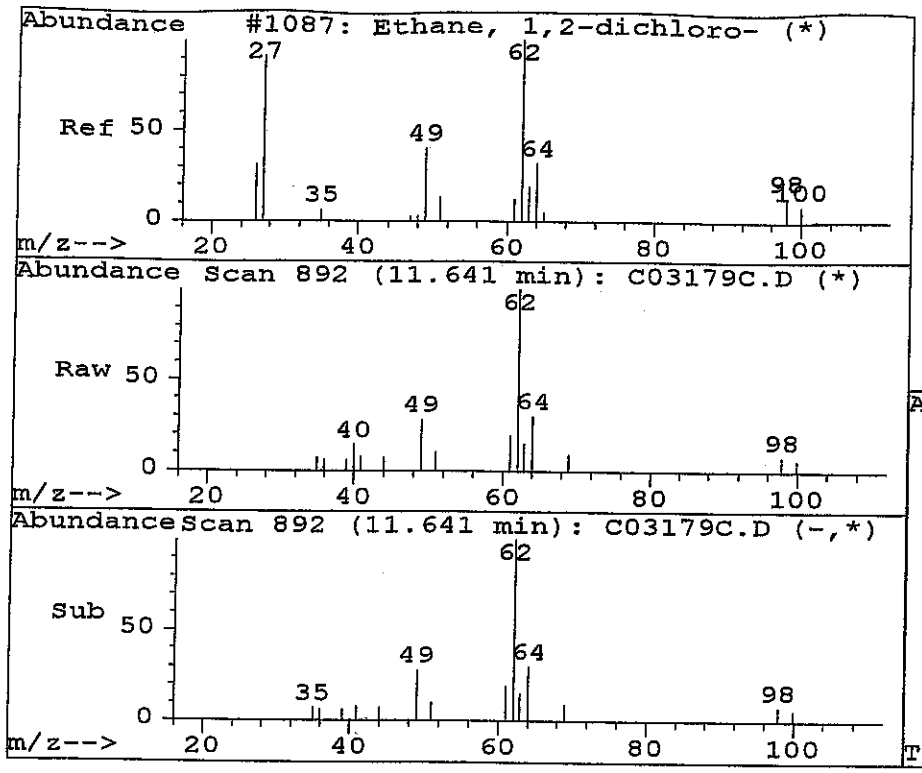


#36
1,1,1-Trichloroethane
Concen: 0.29 ppbV
RT: 11.58 min Scan# 886
Delta R.T. -0.22 min
Lab File: C03179C.D
Acq: 17 Mar 109 10:25 am

Tgt Ion:97 Resp: 26931

Ion	Ratio	Lower	Upper
97	100		
99	62.3	53.2	79.8
61	37.4	44.6	67.0#
0	0.0	0.0	0.0

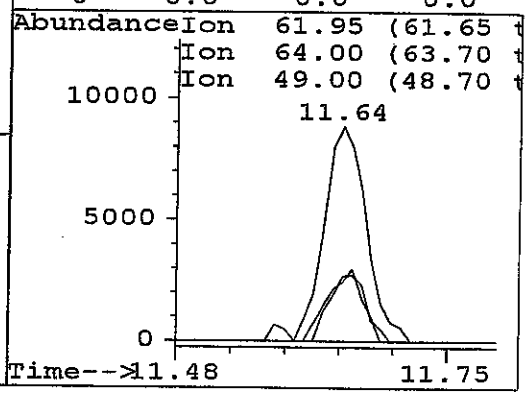


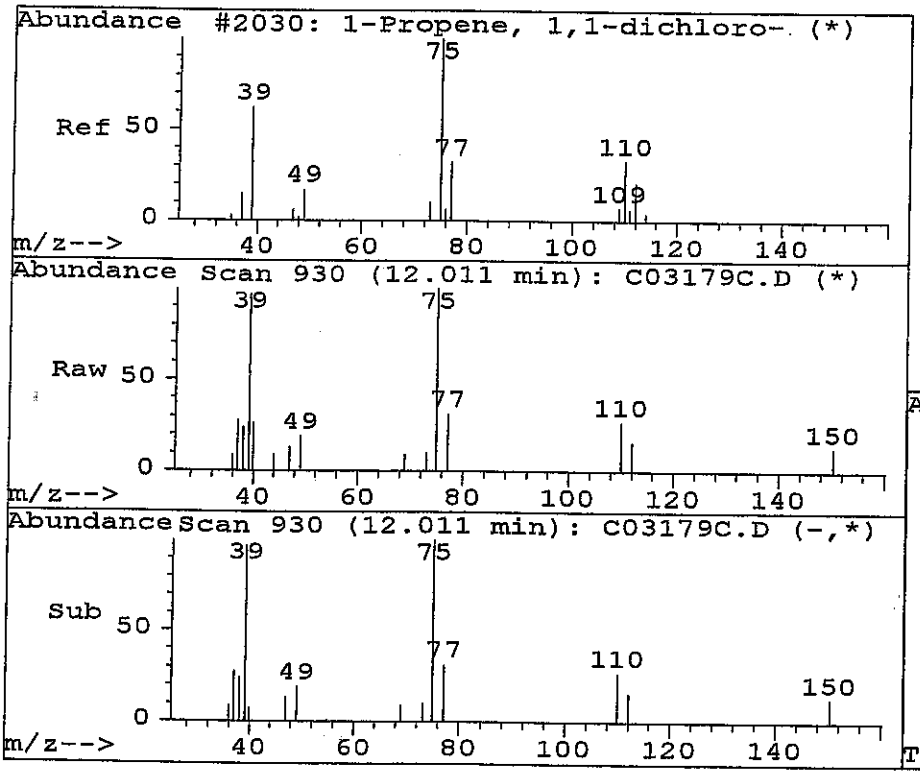


#37
1,2-Dichloroethane
Concen: 0.30 ppbV
RT: 11.64 min Scan# 892
Delta R.T. -0.23 min
Lab File: C03179C.D
Acq: 17 Mar 109 10:25 am

Tgt Ion:61.95 Resp: 26512

Ion	Ratio	Lower	Upper
62	100		
64	30.4	26.4	39.6
49	28.0	23.8	35.6
0	0.0	0.0	0.0

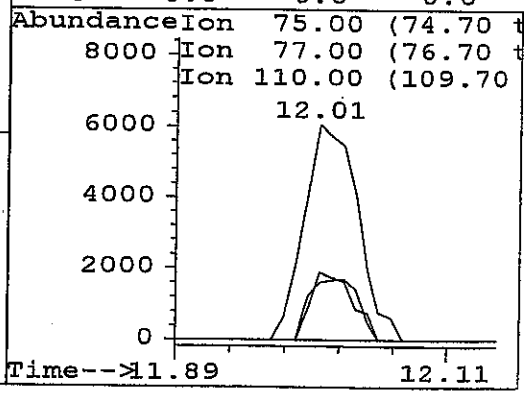


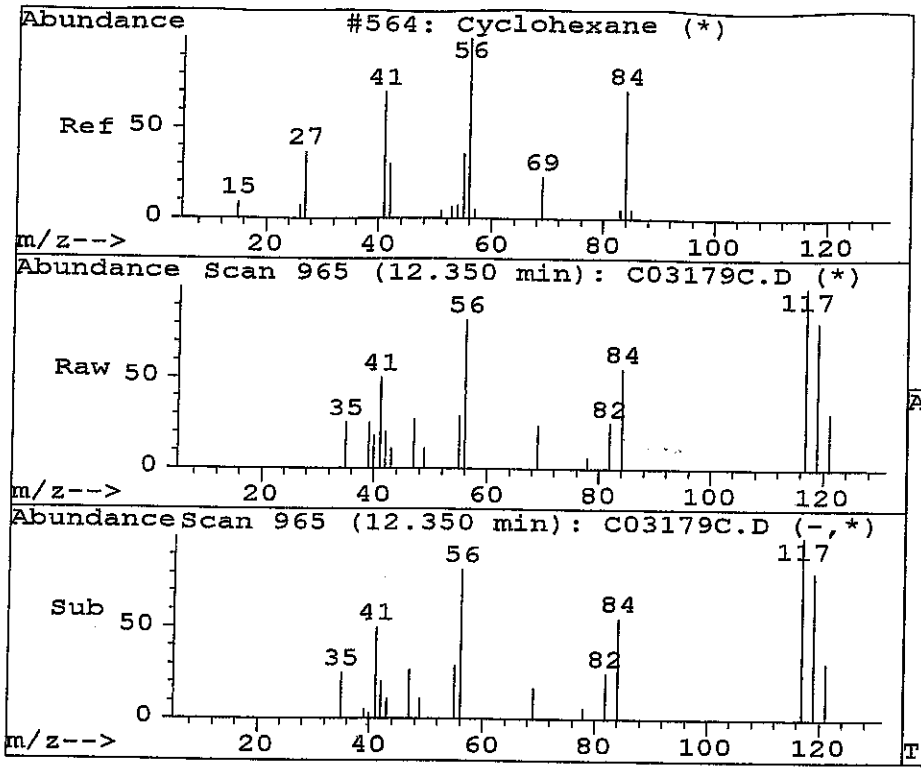


#38
1,1-Dichloropropene
Concen: 0.09 ppbV
RT: 12.01 min Scan# 930
Delta R.T. -0.23 min
Lab File: C03179C.D
Acq: 17 Mar 109 10:25 am

Tgt Ion:75 Resp: 18414

Ion	Ratio	Lower	Upper
75	100		
77	31.2	23.0	34.4
110	26.6	23.1	34.7
0	0.0	0.0	0.0

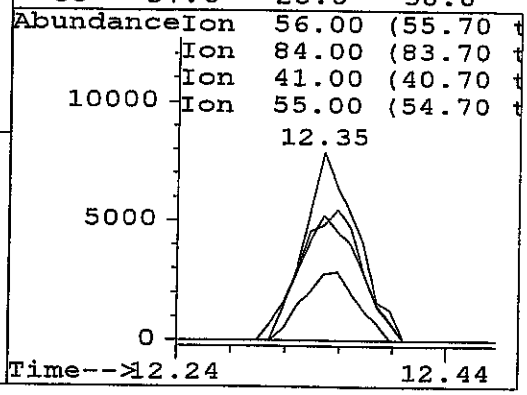


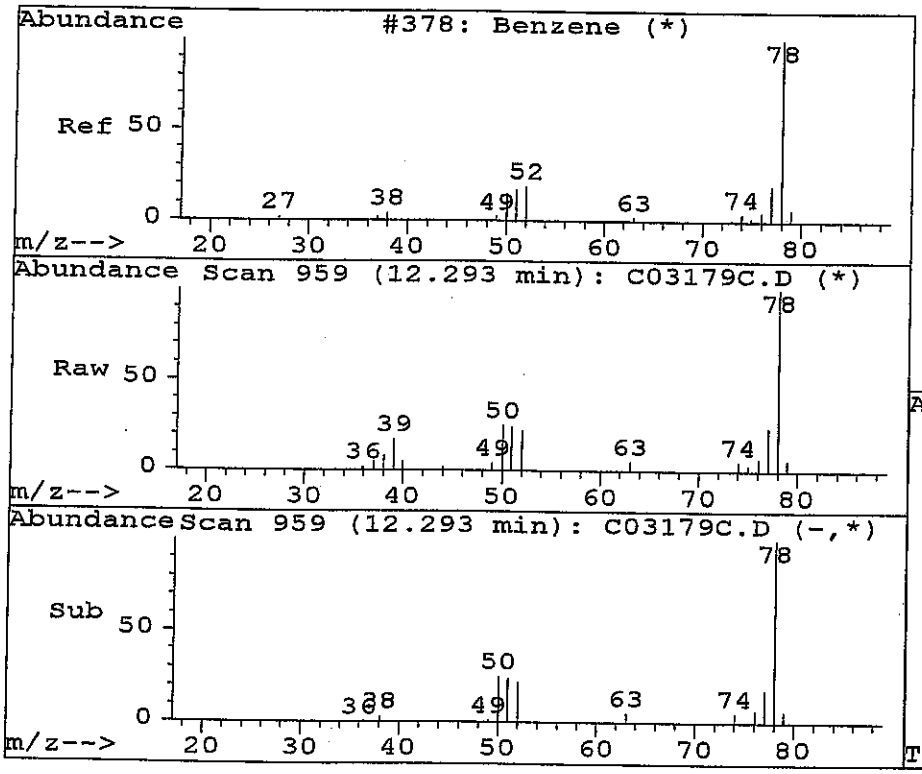


#39
Cyclohexane
Concen: 0.09 ppbV
RT: 12.35 min Scan# 965
Delta R.T. -0.20 min
Lab File: C03179C.D
Acq: 17 Mar 109 10:25 am

Tgt Ion:56 Resp: 21052

Ion	Ratio	Lower	Upper
56	100		
84	75.4	60.3	90.5
41	81.7	59.8	89.6
55	37.6	25.8	38.8

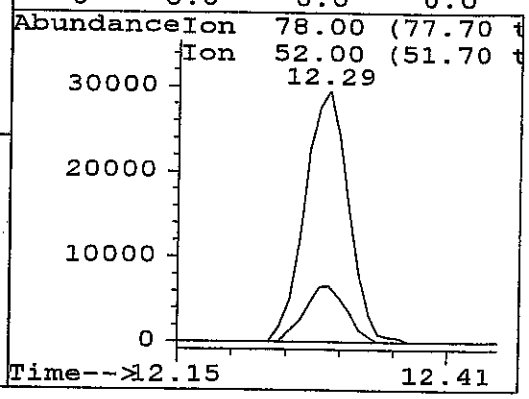


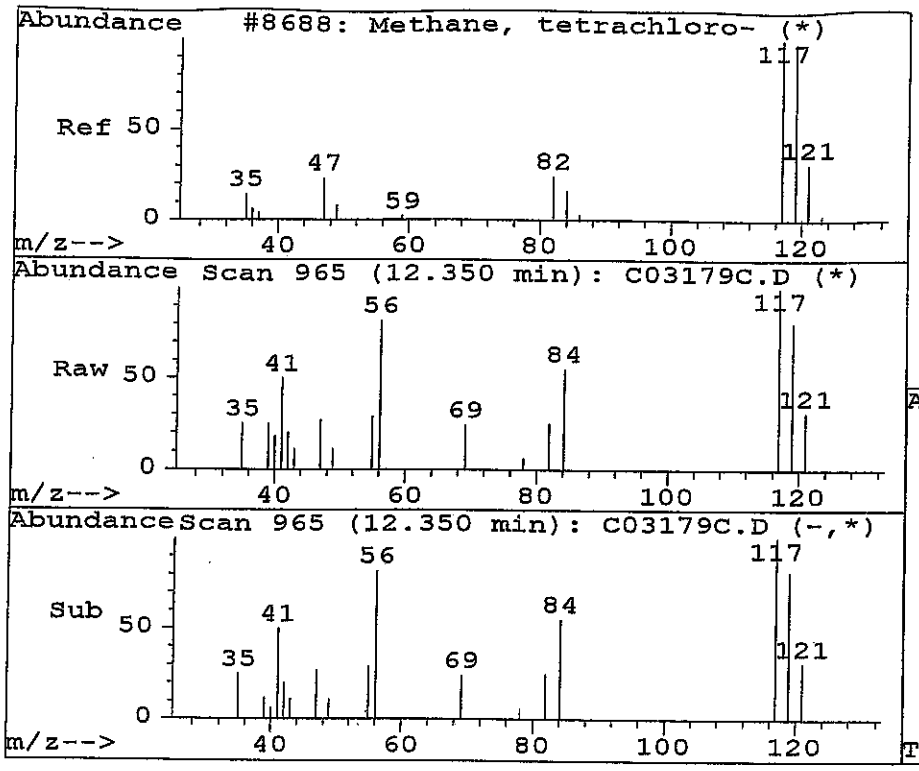


#40
Benzene
Concen: 0.44 ppbV
RT: 12.29 min Scan# 959
Delta R.T. -0.22 min
Lab File: C03179C.D
Acq: 17 Mar 109 10:25 am

Tgt Ion:78 Resp: 87322

Ion	Ratio	Lower	Upper
78	100		
52	22.3	18.6	27.8
0	0.0	0.0	0.0
0	0.0	0.0	0.0

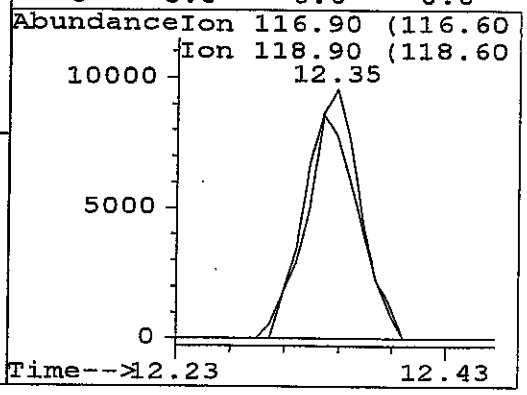


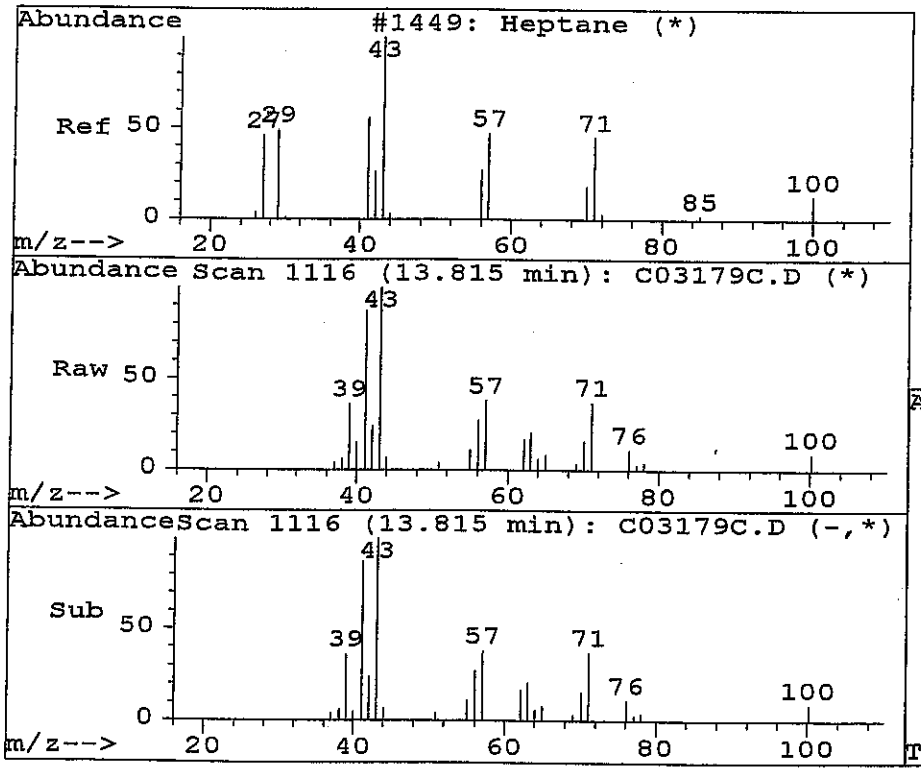


#41
Carbon tetrachloride
Concen: 0.28 ppbV
RT: 12.35 min Scan# 965
Delta R.T. -0.21 min
Lab File: C03179C.D
Acq: 17 Mar 109 10:25 am

Tgt Ion:116.9 Resp: 2627

Ion	Ratio	Lower	Upper
117	100		
119	81.3	79.5	119.3
0	0.0	0.0	0.0
0	0.0	0.0	0.0

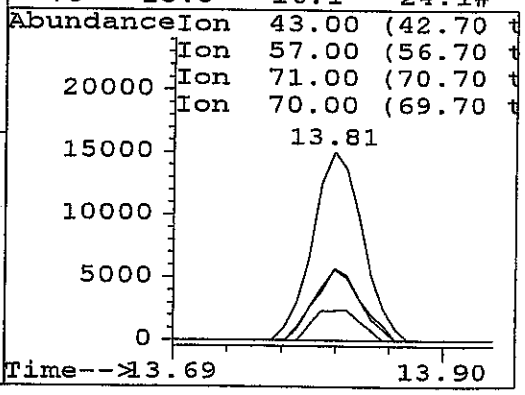


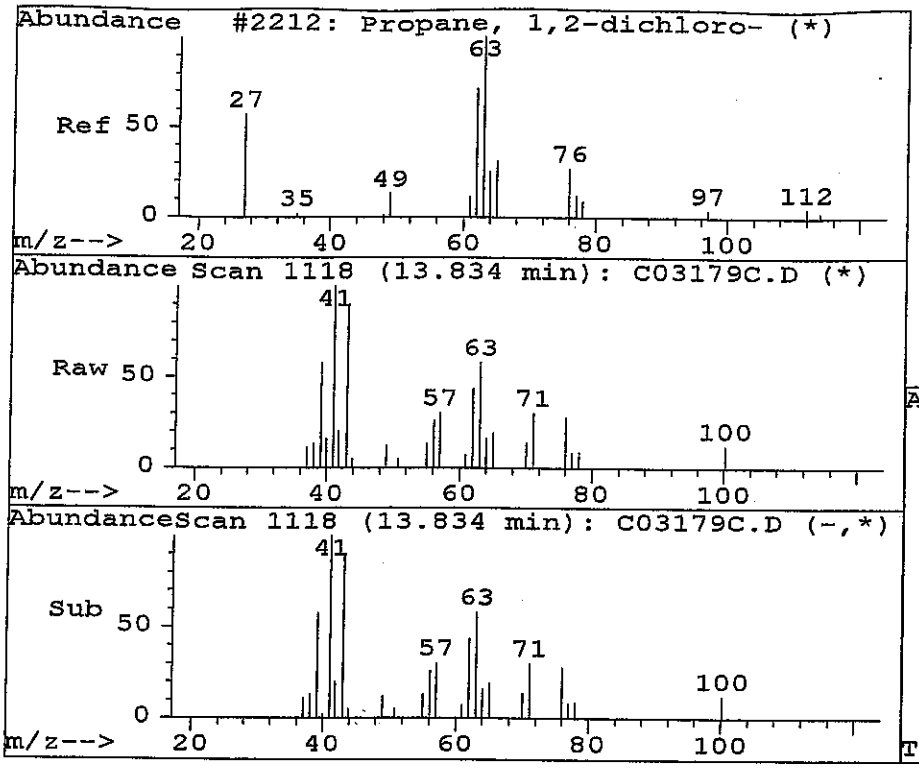


#42
n-Heptane
Concen: 0.10 ppbV
RT: 13.81 min Scan# 1116
Delta R.T. -0.23 min
Lab File: C03179C.D
Acq: 17 Mar 109 10:25 am

Tgt Ion:43 Resp: 41261

Ion	Ratio	Lower	Upper
43	100		
57	37.9	28.9	43.3
71	37.4	27.5	41.3
70	15.8	16.1	24.1#

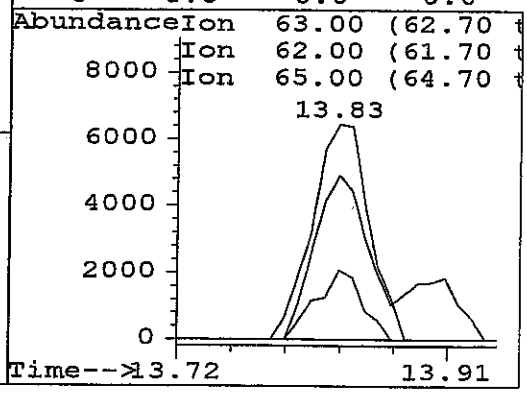


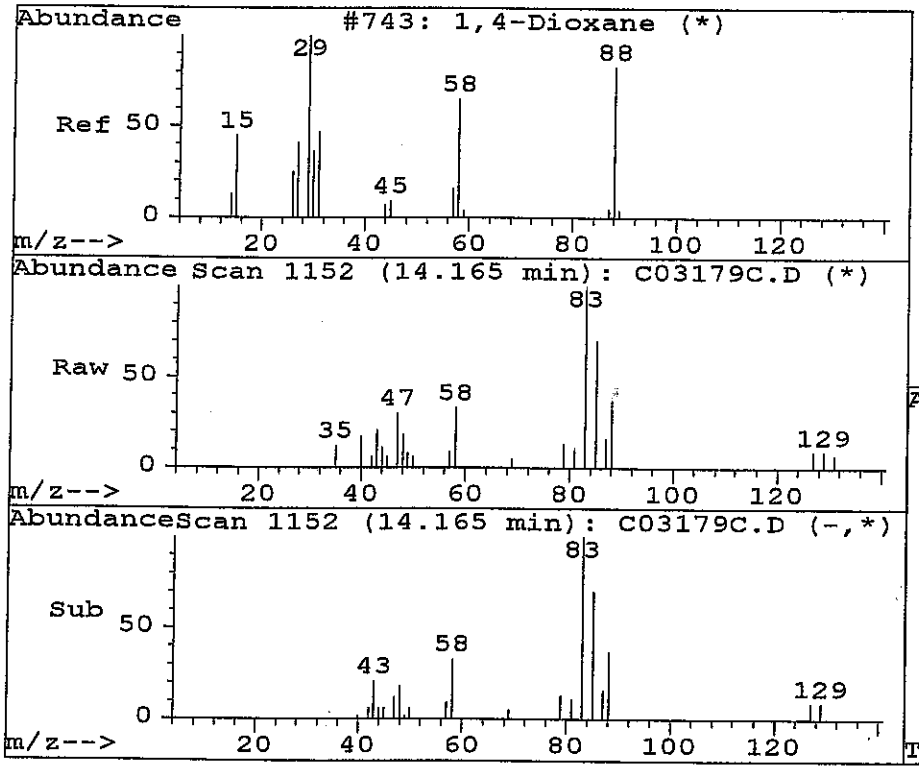


#43
1,2-Dichloropropane
Concen: 0.33 ppbV
RT: 13.83 min Scan# 1118
Delta R.T. -0.24 min
Lab File: C03179C.D
Acq: 17 Mar 109 10:25 am

Tgt Ion:63 Resp: 18588

Ion	Ratio	Lower	Upper
63	100		
62	63.0	50.3	75.5
65	32.2	22.0	33.0
0	0.0	0.0	0.0

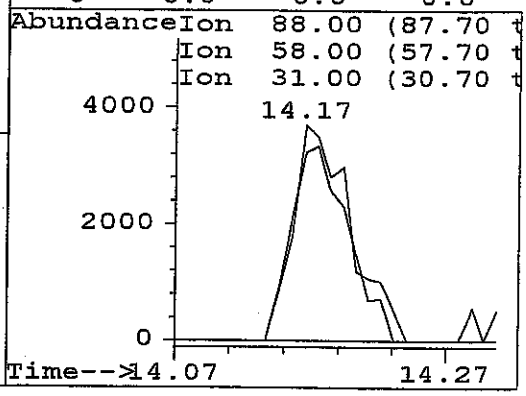


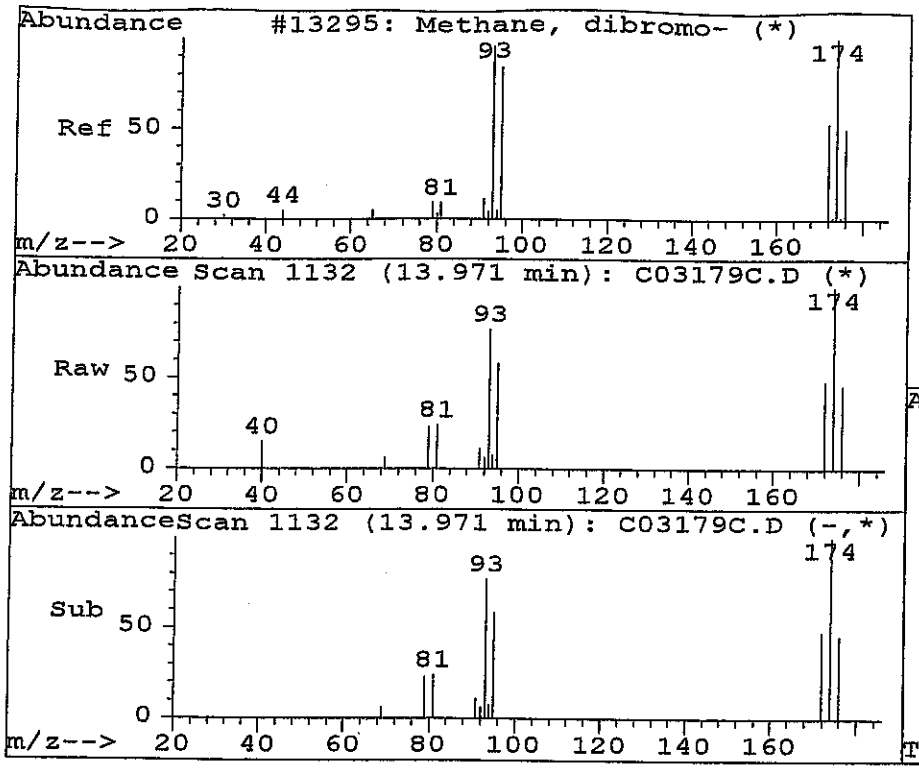


#44
1,4 Dioxane
Concen: 0.10 ppbV
RT: 14.17 min Scan# 1152
Delta R.T. -0.23 min
Lab File: C03179C.D
Acq: 17 Mar 109 10:25 am

Tgt Ion:88 Resp: 11252

Ion	Ratio	Lower	Upper
88	100		
58	89.4	76.6	115.0
31	0.0	0.0	0.0
0	0.0	0.0	0.0

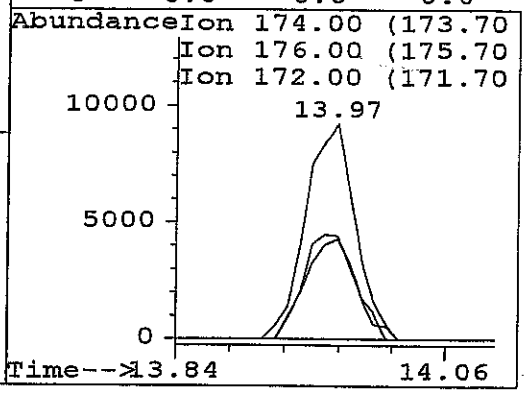


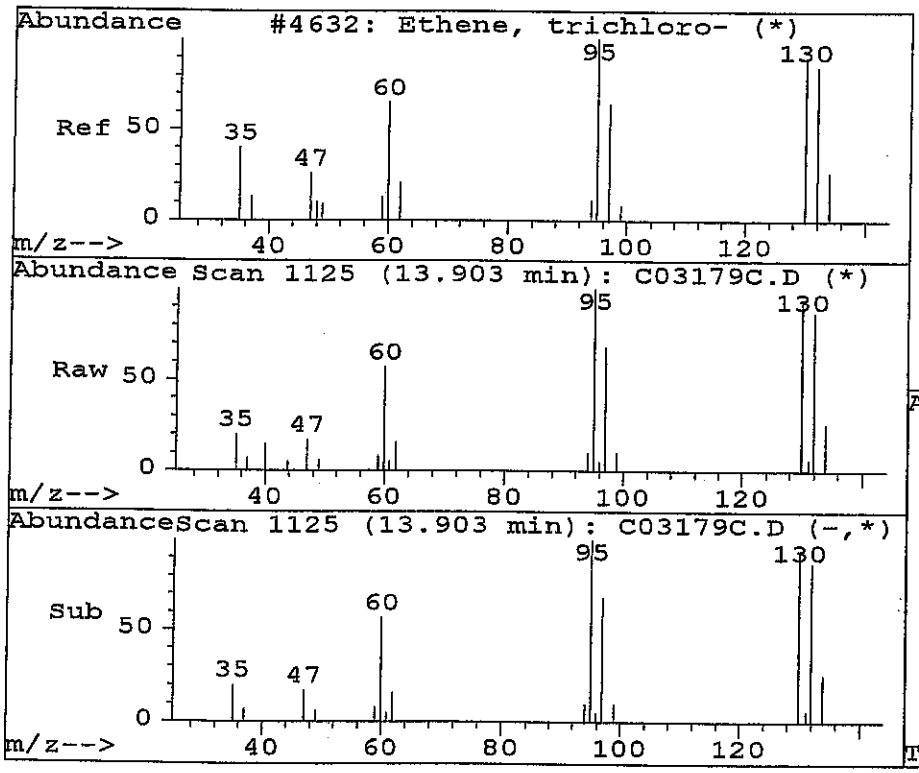


#45
Dibromomethane
Concen: 0.08 ppbV
RT: 13.97 min Scan# 1132
Delta R.T. -0.23 min
Lab File: C03179C.D
Acq: 17 Mar 109 10:25 am

Tgt Ion:174 Resp: 25221

Ion	Ratio	Lower	Upper
174	100		
176	46.4	38.7	58.1
172	48.0	37.8	56.6
0	0.0	0.0	0.0

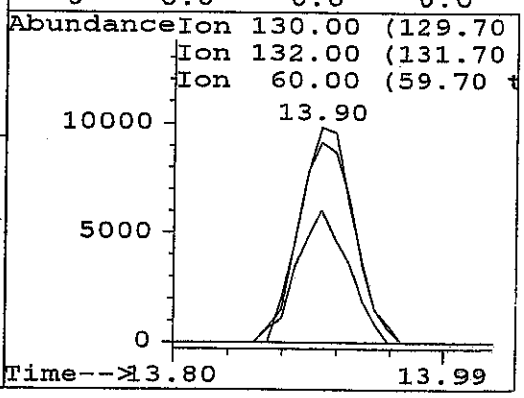


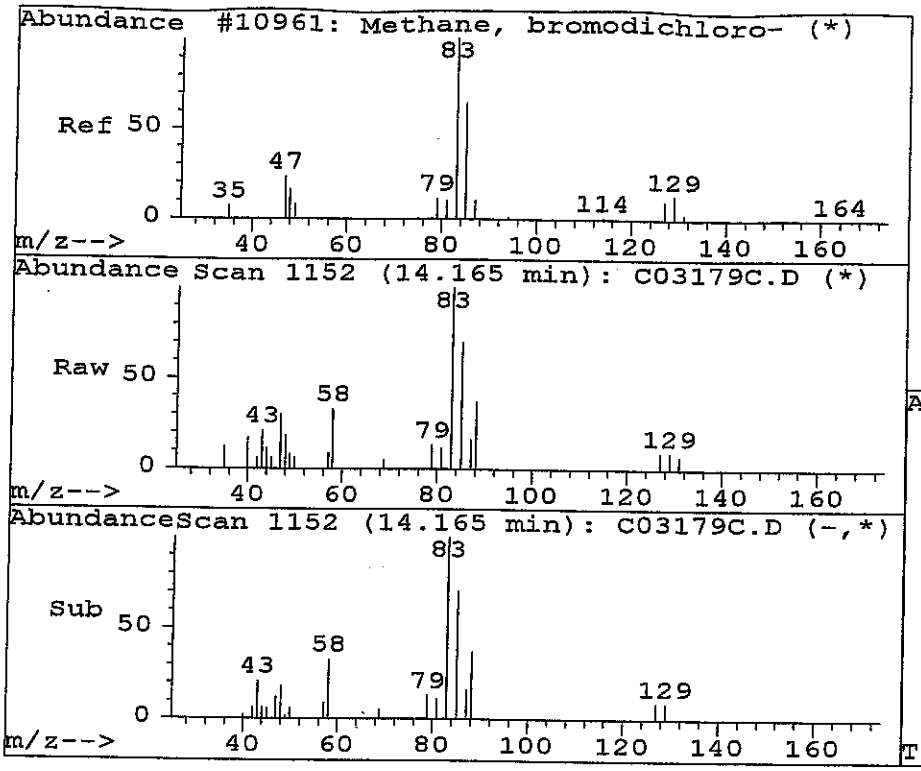


#46
Trichloroethene
Concen: 0.35 ppbV
RT: 13.90 min Scan# 1125
Delta R.T. -0.23 min
Lab File: C03179C.D
Acq: 17 Mar 109 10:25 am

Tgt Ion:130 Resp: 27013

Ion	Ratio	Lower	Upper
130	100		
132	93.0	80.9	121.3
60	61.5	43.4	65.0
0	0.0	0.0	0.0

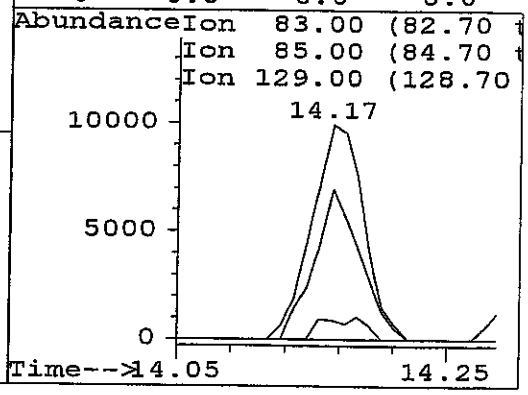


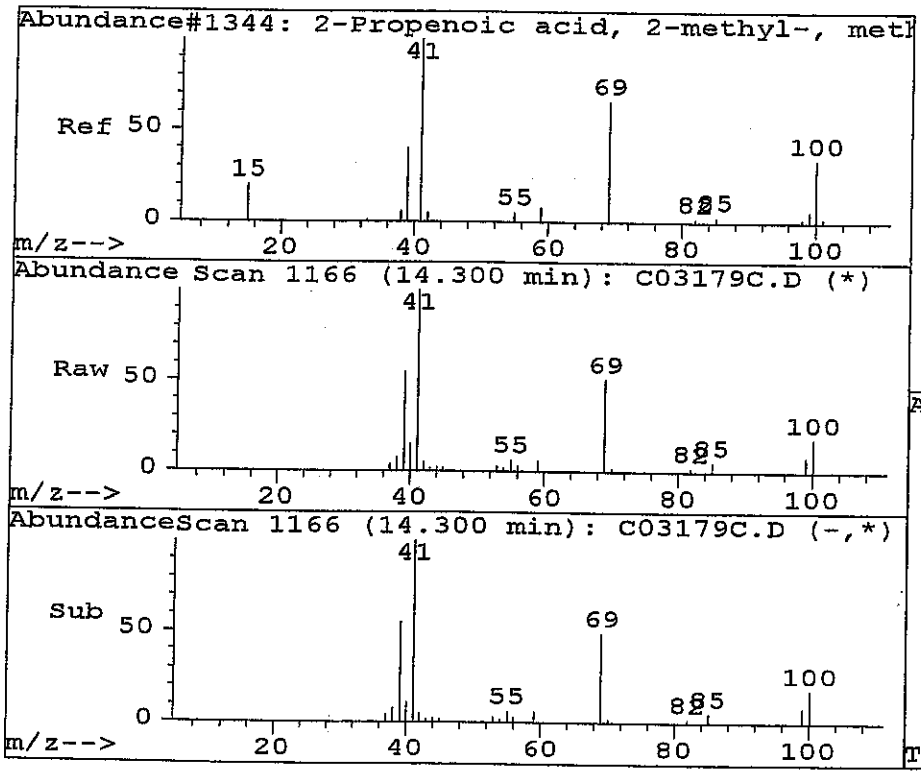


#47
Bromodichloromethane
Concen: 0.08 ppbV
RT: 14.17 min Scan# 1152
Delta R.T. -0.23 min
Lab File: C03179C.D
Acq: 17 Mar 109 10:25 am

Tgt Ion:83 Resp: 27507

Ion	Ratio	Lower	Upper
83	100		
85	70.1	48.8	73.2
129	9.0	9.3	13.9#
0	0.0	0.0	0.0

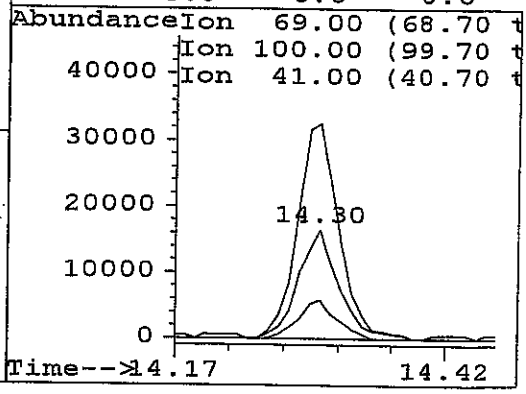


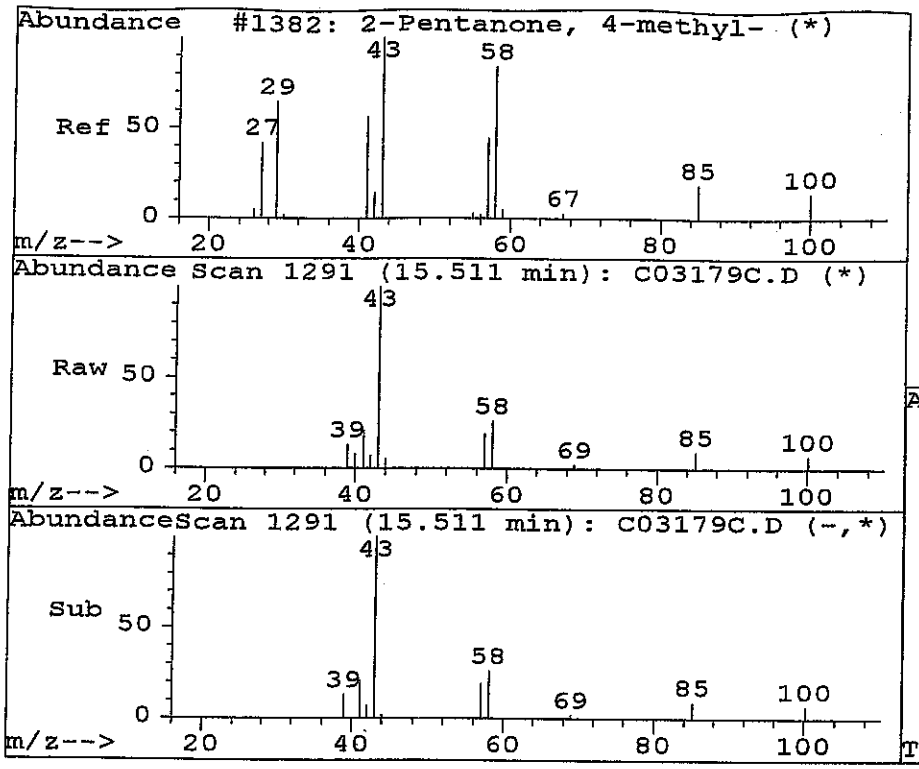


#48
Methyl methacrylate
Concen: 0.26 ppbV
RT: 14.30 min Scan# 1166
Delta R.T. -0.25 min
Lab File: C03179C.D
Acq: 17 Mar 109 10:25 am

Tgt Ion:69 Resp: 43778

Ion	Ratio	Lower	Upper
69	100		
100	35.4	27.7	41.5
41	197.3	160.2	240.4
0	0.0	0.0	0.0

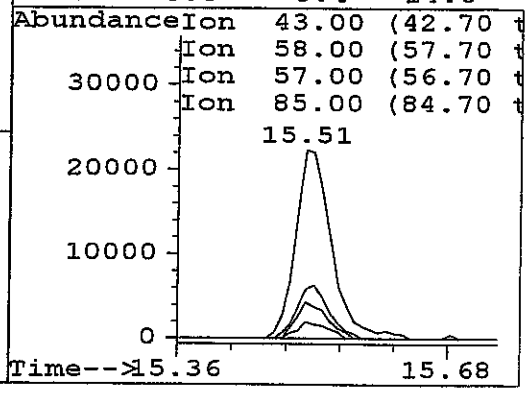


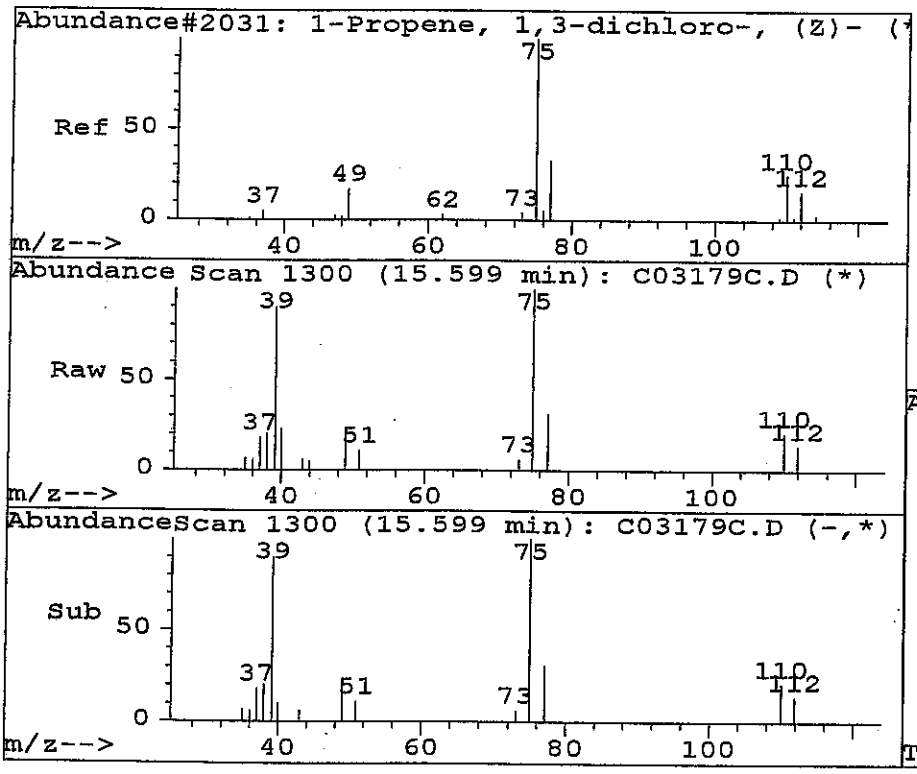


#49
Methyl Isobutyl Ketone
Concen: 0.09 ppbV
RT: 15.51 min Scan# 1291
Delta R.T. -0.19 min
Lab File: C03179C.D
Acq: 17 Mar 109 10:25 am

Tgt Ion:43 Resp: 67434

Ion	Ratio	Lower	Upper
43	100		
58	26.1	21.3	35.5
57	19.2	13.2	22.0
85	8.8	8.4	14.0

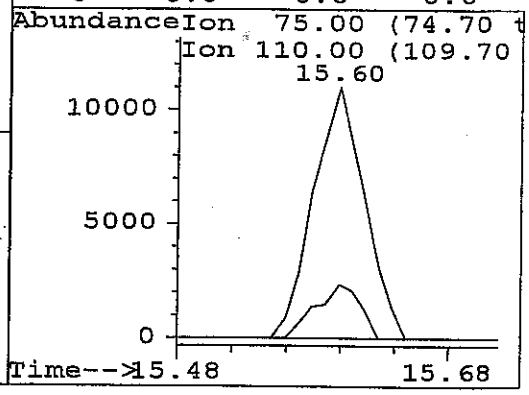


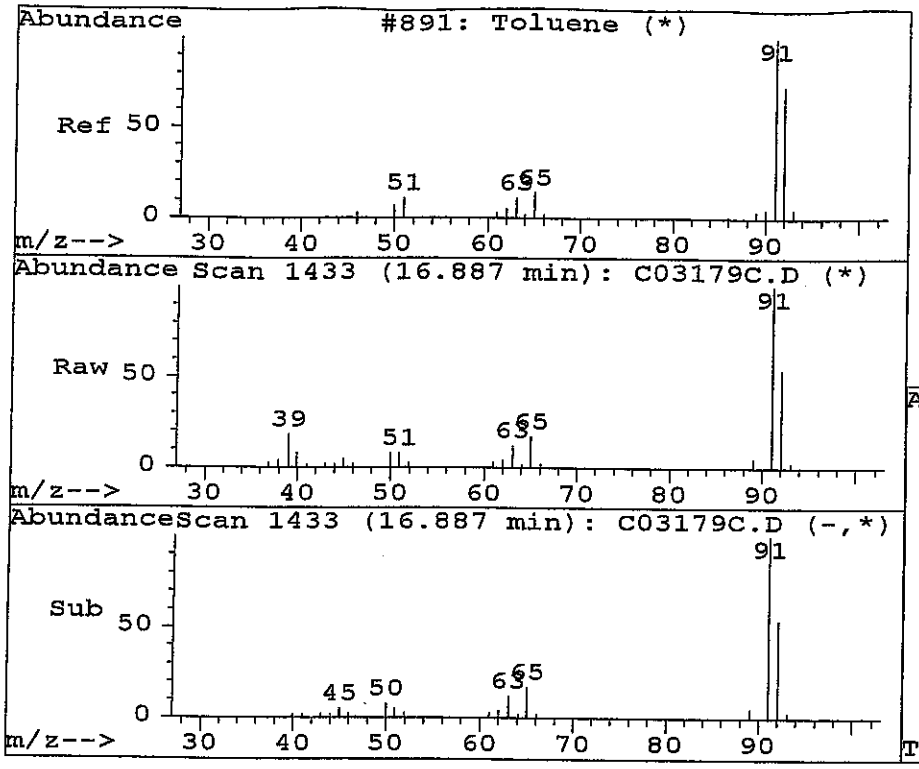


#50
cis-1,3-Dichloropropene
Concen: 0.31 ppbV
RT: 15.60 min Scan# 1300
Delta R.T. -0.22 min
Lab File: C03179C.D
Acq: 17 Mar 109 10:25 am

Tgt Ion:75 Resp: 28339

Ion	Ratio	Lower	Upper
75	100		
110	21.4	15.6	23.4
0	0.0	0.0	0.0
0	0.0	0.0	0.0

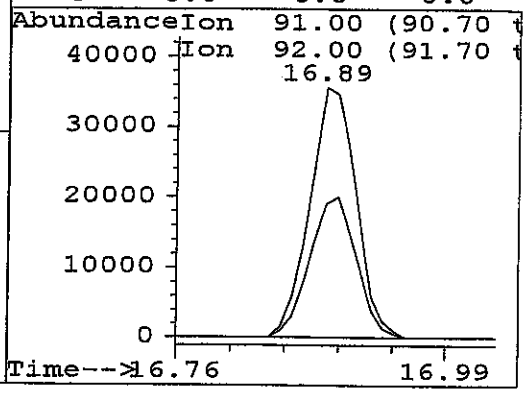


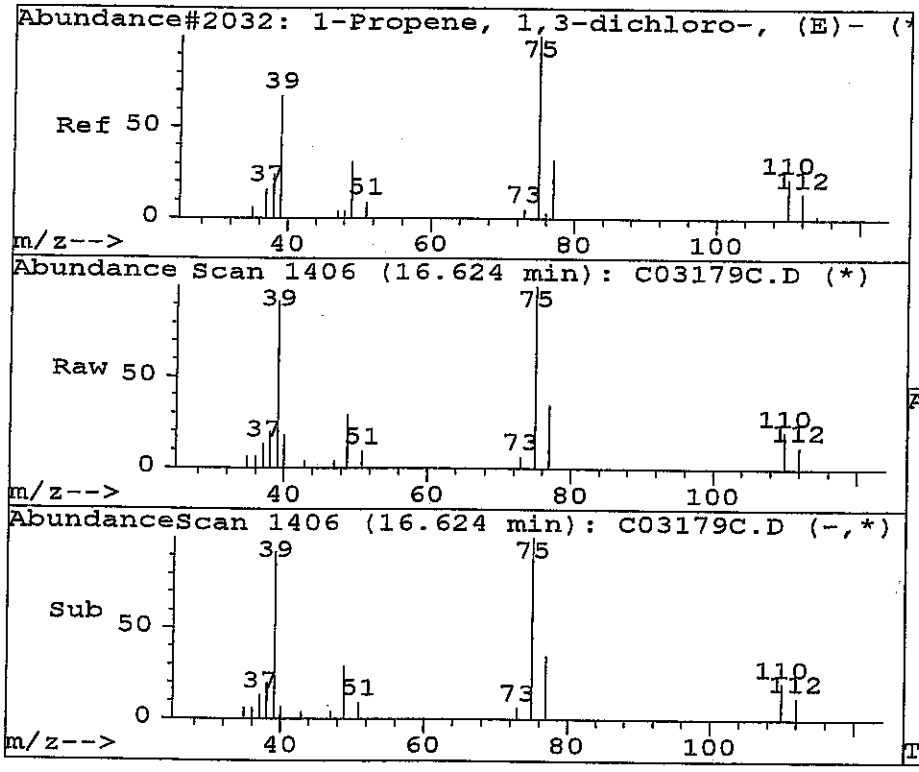


#51
Toluene
Concen: 0.41 ppbV
RT: 16.89 min Scan# 1433
Delta R.T. -0.22 min
Lab File: C03179C.D
Acq: 17 Mar 109 10:25 am

Tgt Ion:91 Resp: 97636

Ion	Ratio	Lower	Upper
91	100		
92	53.6	45.0	67.6
0	0.0	0.0	0.0
0	0.0	0.0	0.0

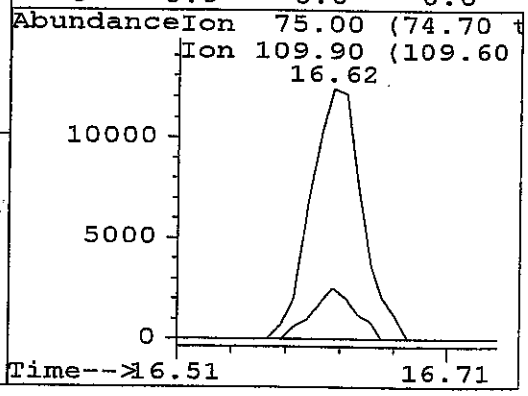


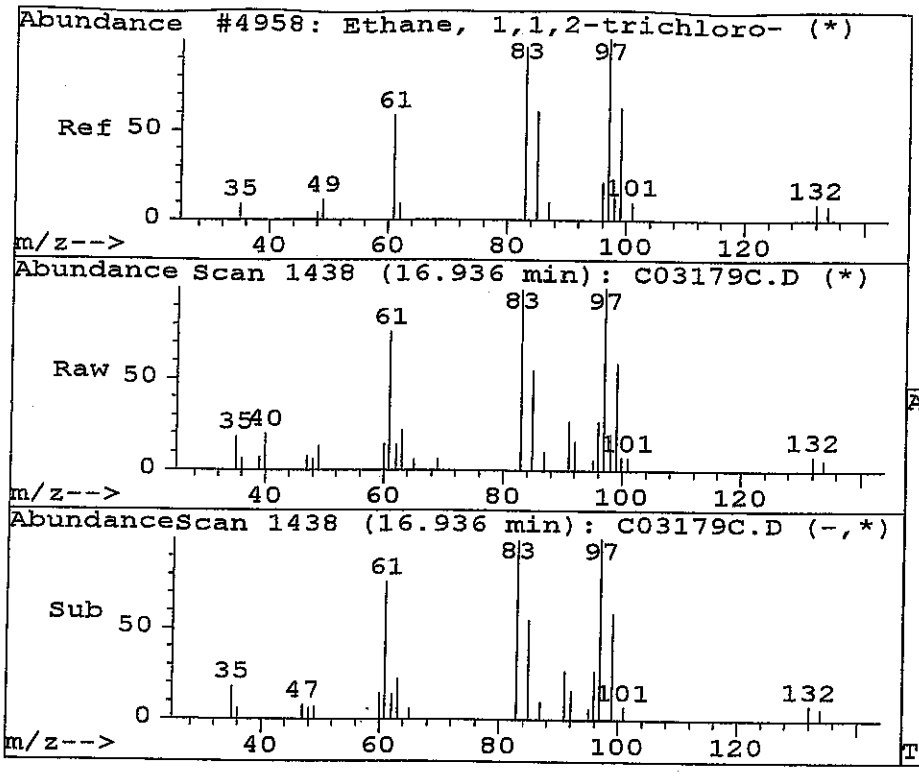


#52
trans-1,3-Dichloropropene
Concen: 0.31 ppbV
RT: 16.62 min Scan# 1406
Delta R.T. -0.23 min
Lab File: C03179C.D
Acq: 17 Mar 109 10:25 am

Tgt Ion:75 Resp: 33546

Ion	Ratio	Lower	Upper
75	100		
110	20.5	16.2	24.2
0	0.0	0.0	0.0
0	0.0	0.0	0.0

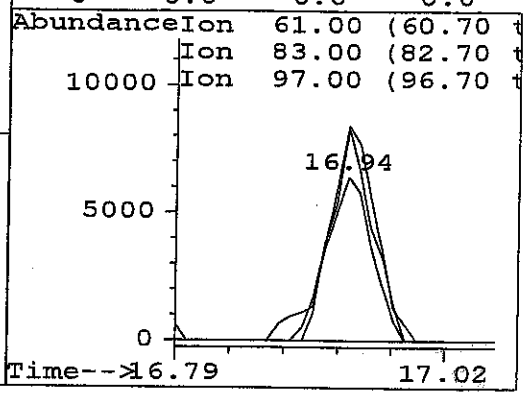


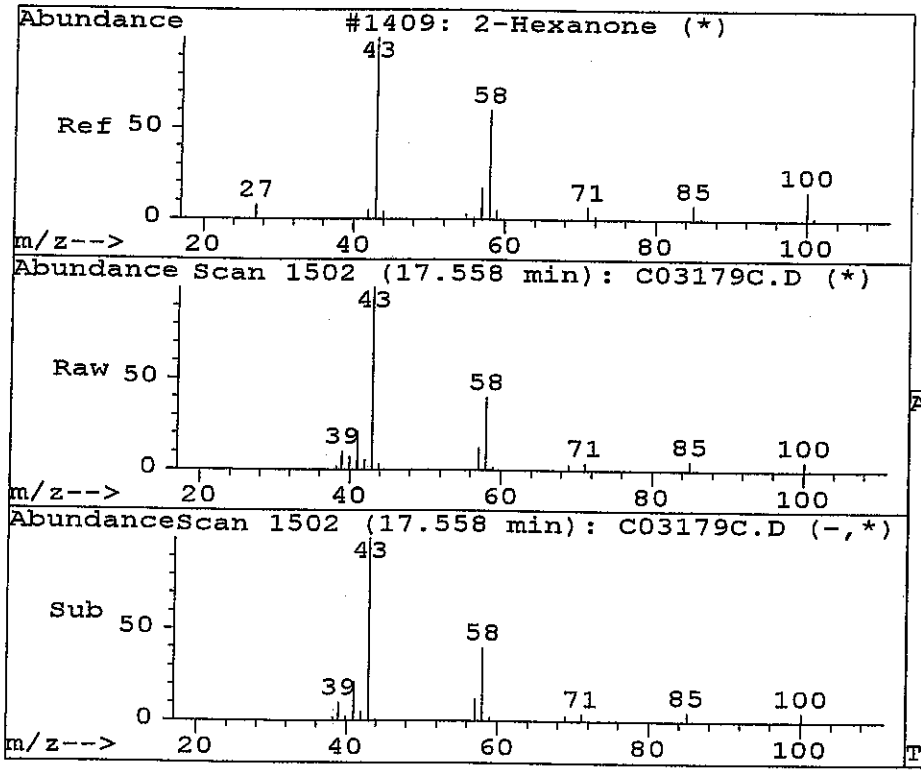


#53
1,1,2-Trichloroethane
Concen: 0.31 ppbV
RT: 16.94 min Scan# 1438
Delta R.T. -0.22 min
Lab File: C03179C.D
Acq: 17 Mar 109 10:25 am

Tgt Ion:61 Resp: 18573

Ion	Ratio	Lower	Upper
61	100		
83	129.5	95.8	143.8
97	131.0	101.8	152.6
0	0.0	0.0	0.0

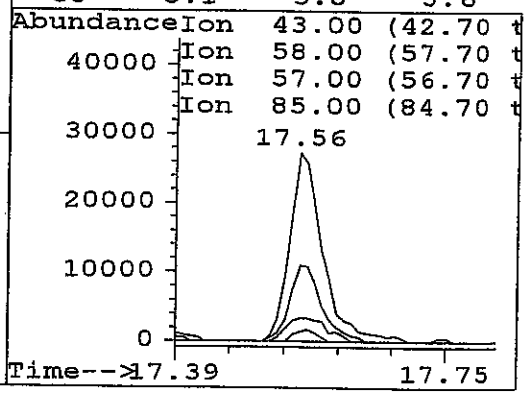


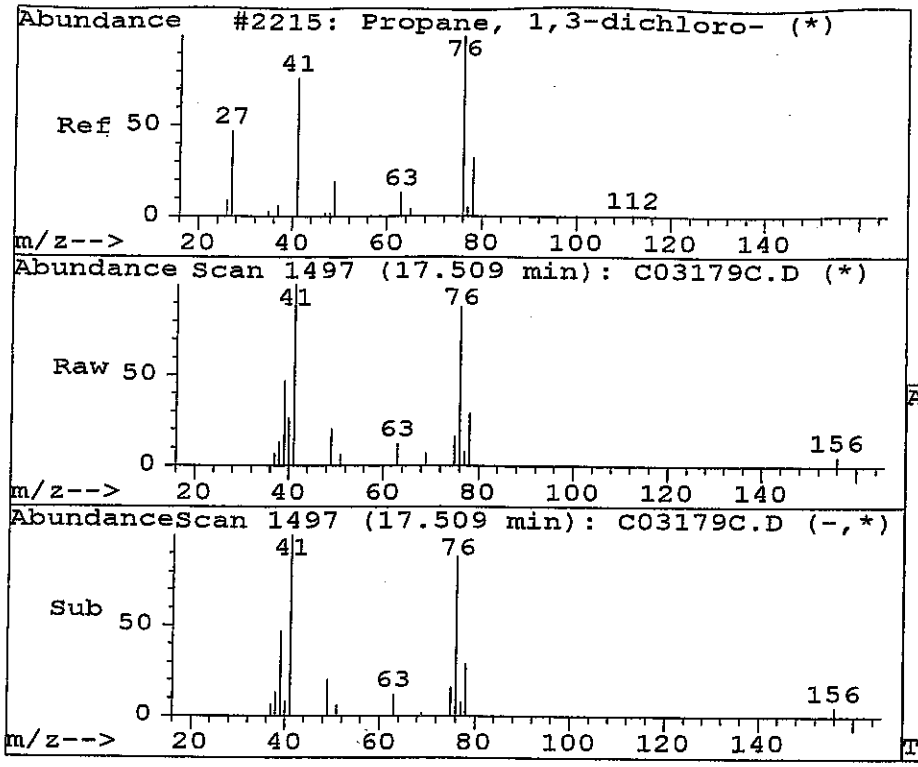


#54
2-Hexanone
Concen: 0.10 ppbV
RT: 17.56 min Scan# 1502
Delta R.T. -0.24 min
Lab File: C03179C.D
Acq: 17 Mar 109 10:25 am

Tgt Ion:43 Resp: 84018

Ion	Ratio	Lower	Upper
43	100		
58	40.0	29.3	48.8
57	12.5	10.3	17.1
85	5.1	3.8	5.6

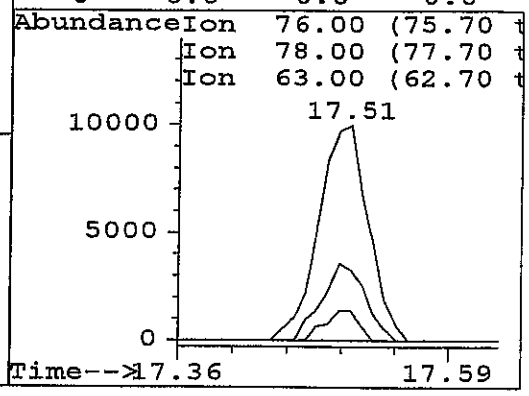


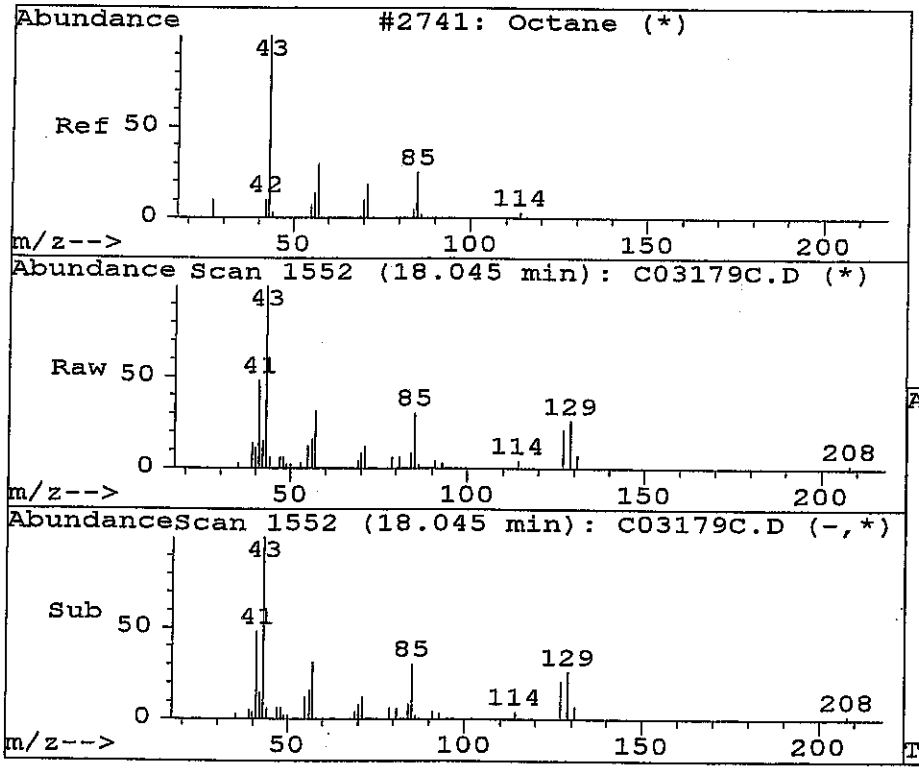


#55
1,3-Dichloropropane
Concen: 0.09 ppbV
RT: 17.51 min Scan# 1497
Delta R.T. -0.21 min
Lab File: C03179C.D
Acq: 17 Mar 109 10:25 am

Tgt Ion:76 Resp: 29285

Ion	Ratio	Lower	Upper
76	100		
78	32.7	25.6	38.4
63	13.9	10.0	15.0
0	0.0	0.0	0.0

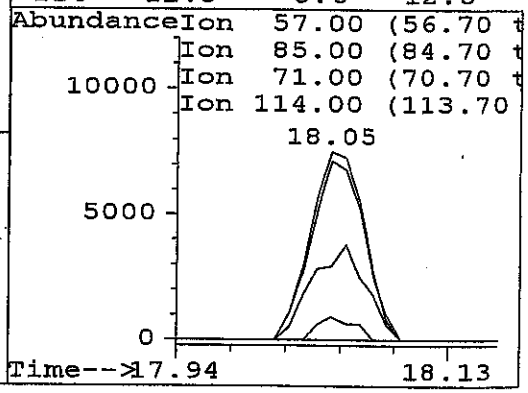


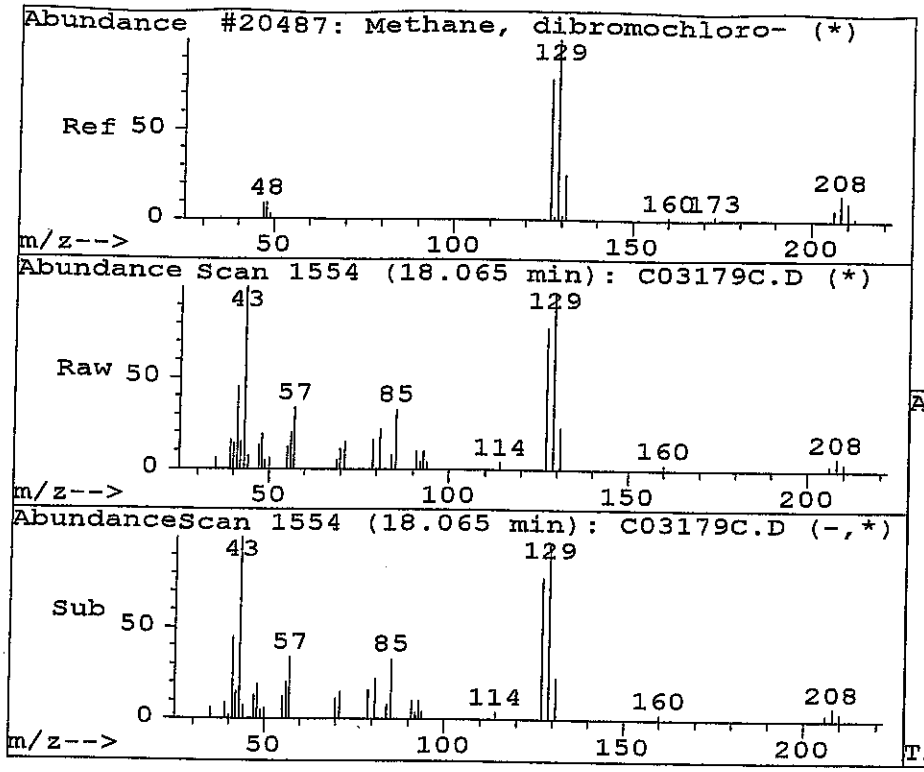


#56
Octane
Concen: 0.20 ppbV
RT: 18.05 min Scan# 1552
Delta R.T. -0.21 min
Lab File: C03179C.D
Acq: 17 Mar 109 10:25 am

Tgt Ion:57 Resp: 19635

Ion	Ratio	Lower	Upper
57	100		
85	95.1	78.7	118.1
71	39.0	43.2	64.8#
114	12.3	8.6	12.8

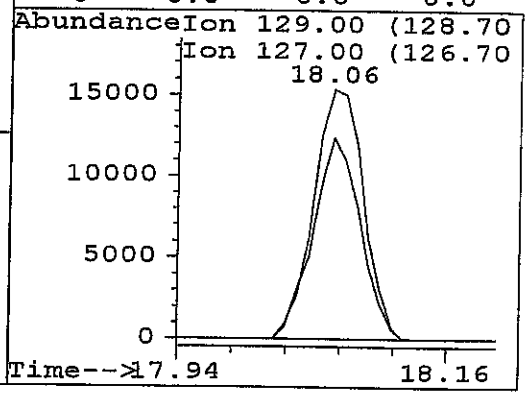


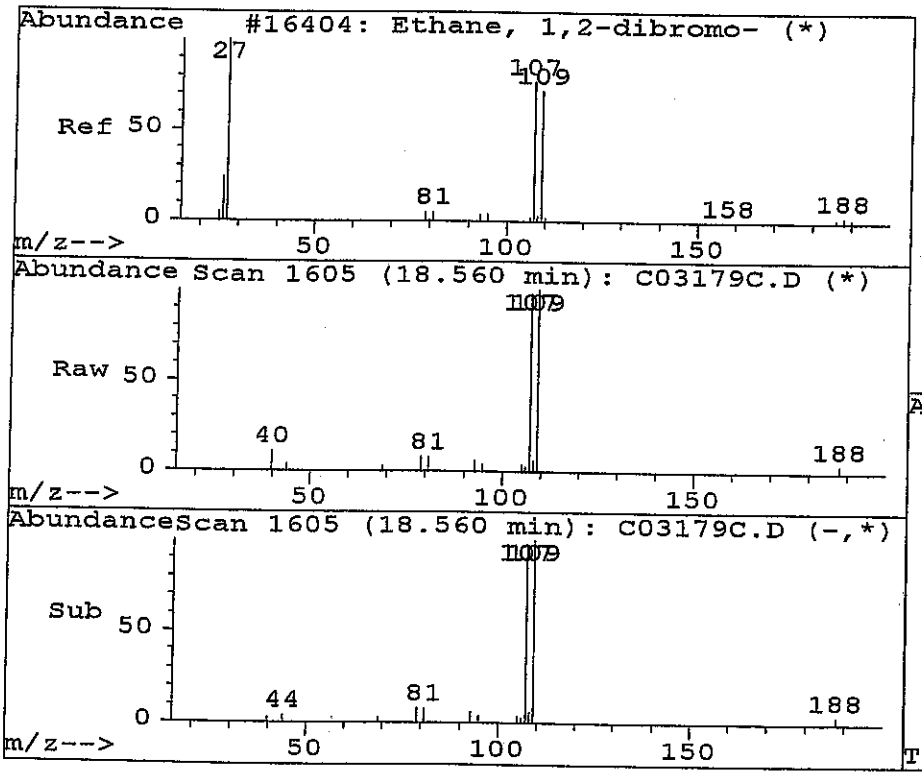


#57
Dibromochloromethane
Concen: 0.09 ppbV
RT: 18.06 min Scan# 1554
Delta R.T. -0.24 min
Lab File: C03179C.D
Acq: 17 Mar 109 10:25 am

Tgt Ion:129 Resp: 43801

Ion	Ratio	Lower	Upper
129	100		
127	80.6	57.4	86.0
0	0.0	0.0	0.0
0	0.0	0.0	0.0

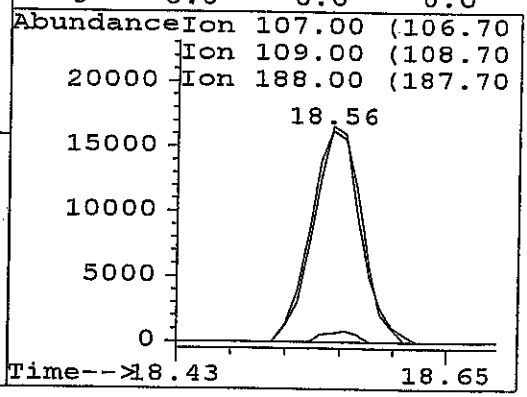


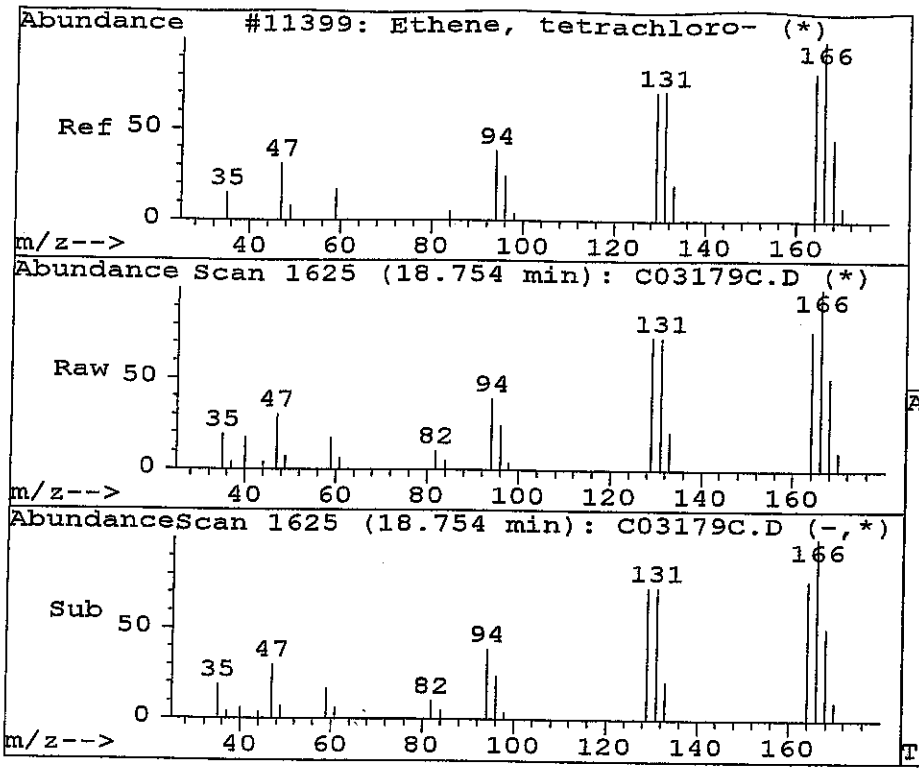


#58
1,2-Dibromoethane
Concen: 0.31 ppbV
RT: 18.56 min Scan# 1605
Delta R.T. -0.24 min
Lab File: C03179C.D
Acq: 17 Mar 109 10:25 am

Tgt Ion:107 Resp: 46912

Ion	Ratio	Lower	Upper
107	100		
109	102.2	78.1	117.1
188	4.2	3.6	5.4
0	0.0	0.0	0.0

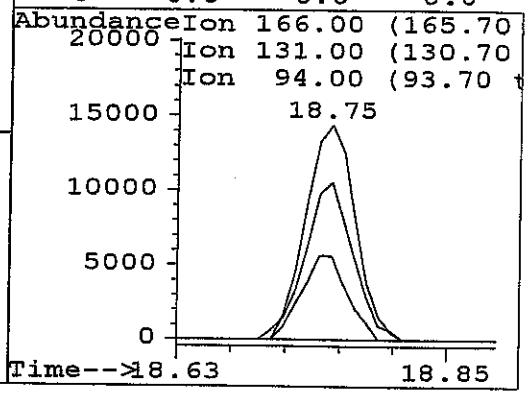


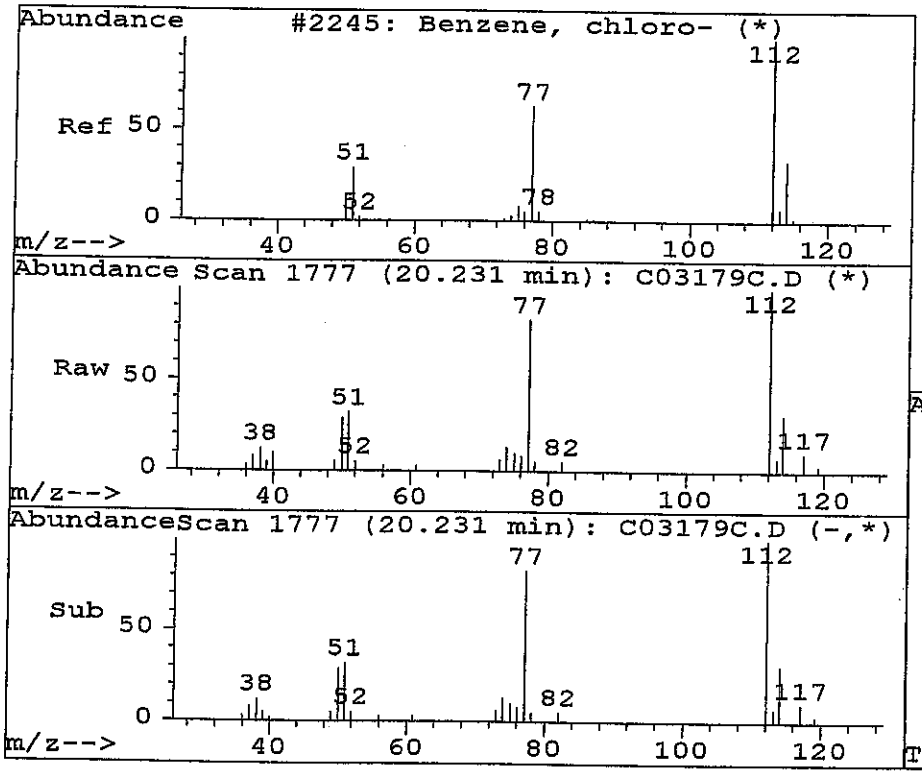


#59
Tetrachloroethene
Concen: 0.30 ppbV
RT: 18.75 min Scan# 1625
Delta R.T. -0.22 min
Lab File: C03179C.D
Acq: 17 Mar 109 10:25 am

Tgt Ion:166 Resp: 40710

Ion	Ratio	Lower	Upper
166	100		
131	73.3	54.3	81.5
94	39.0	32.3	48.5
0	0.0	0.0	0.0

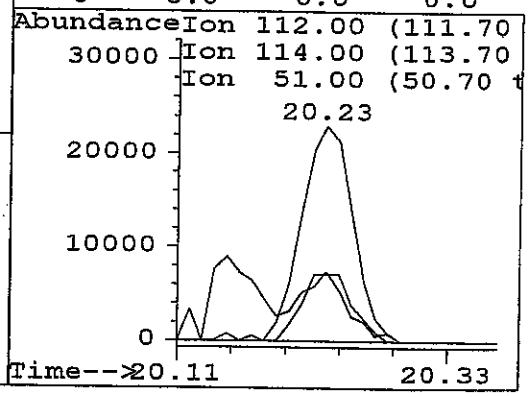


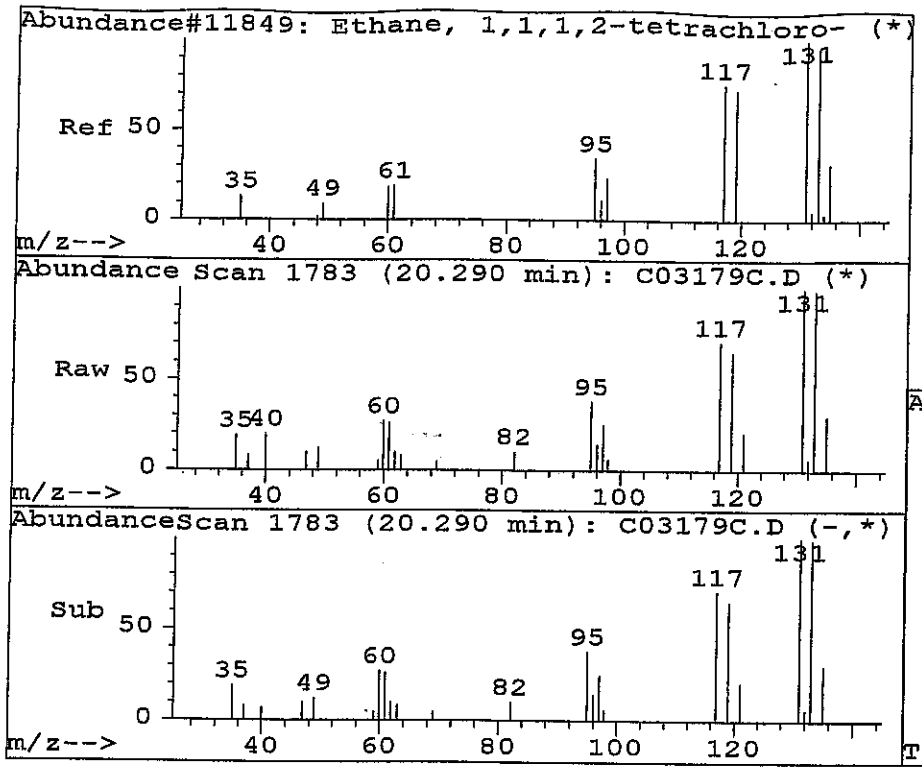


#60
Chlorobenzene
Concen: 0.33 ppbV
RT: 20.23 min Scan# 1777
Delta R.T. -0.22 min
Lab File: C03179C.D
Acq: 17 Mar 109 10:25 am

Tgt Ion:112 Resp: 64660

Ion	Ratio	Lower	Upper
112	100		
114	29.8	25.3	37.9
51	18.2	19.0	28.6#
0	0.0	0.0	0.0

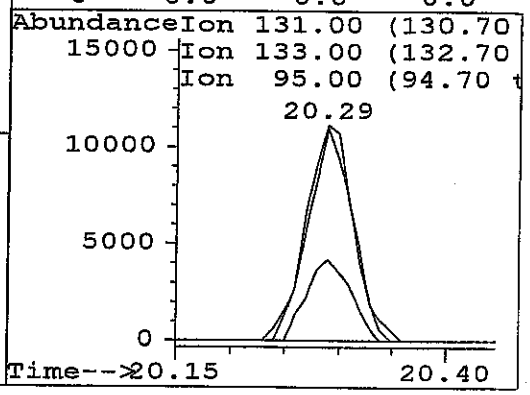


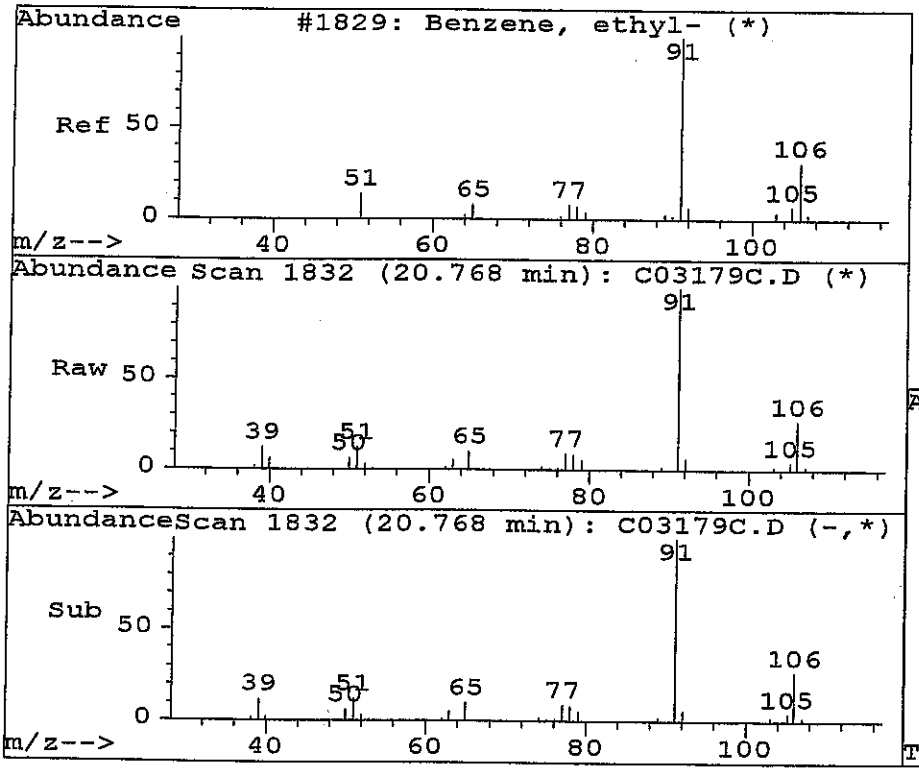


#61
1,1,1,2-Tetrachloroethane
Concen: 0.09 ppbV
RT: 20.29 min Scan# 1783
Delta R.T. -0.22 min
Lab File: C03179C.D
Acq: 17 Mar 109 10:25 am

Tgt Ion:131 Resp: 33923

Ion	Ratio	Lower	Upper
131	100		
133	98.6	71.1	106.7
95	37.7	29.5	44.3
0	0.0	0.0	0.0

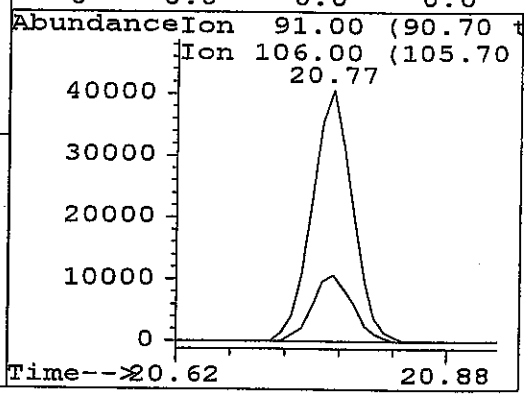


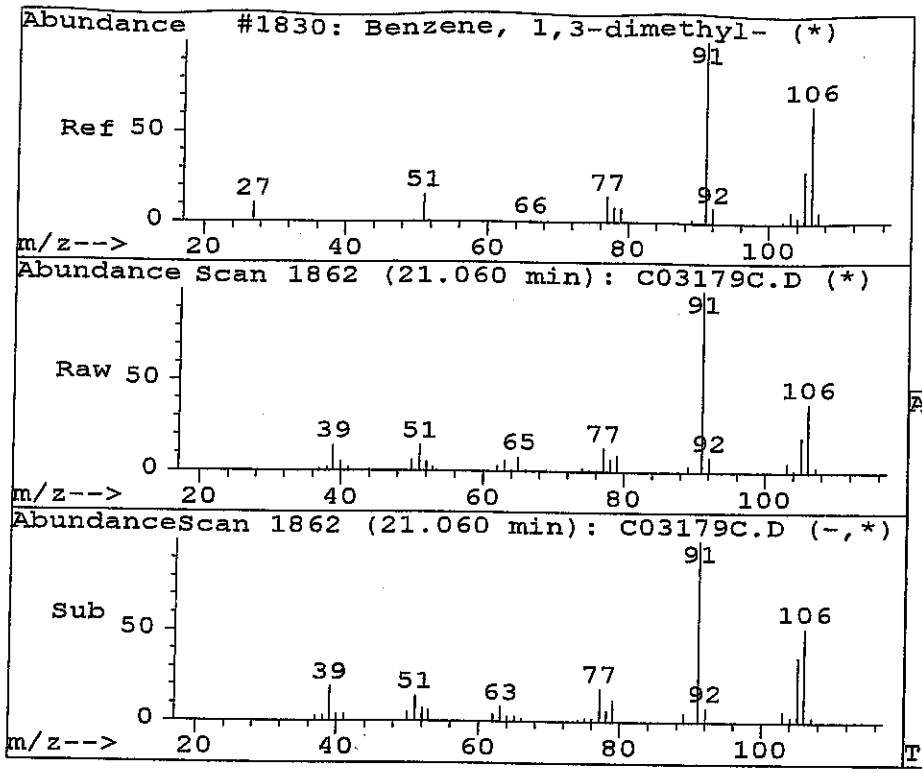


#62
Ethylbenzene
Concen: 0.33 ppbV
RT: 20.77 min Scan# 1832
Delta R.T. -0.22 min
Lab File: C03179C.D
Acq: 17 Mar 109 10:25 am

Tgt Ion:91 Resp: 107037

Ion	Ratio	Lower	Upper
91	100		
106	26.6	21.8	32.6
0	0.0	0.0	0.0
0	0.0	0.0	0.0

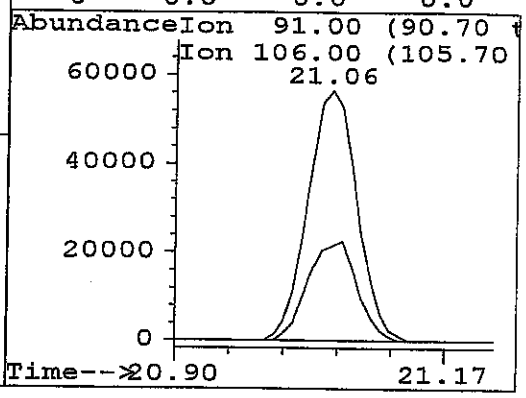


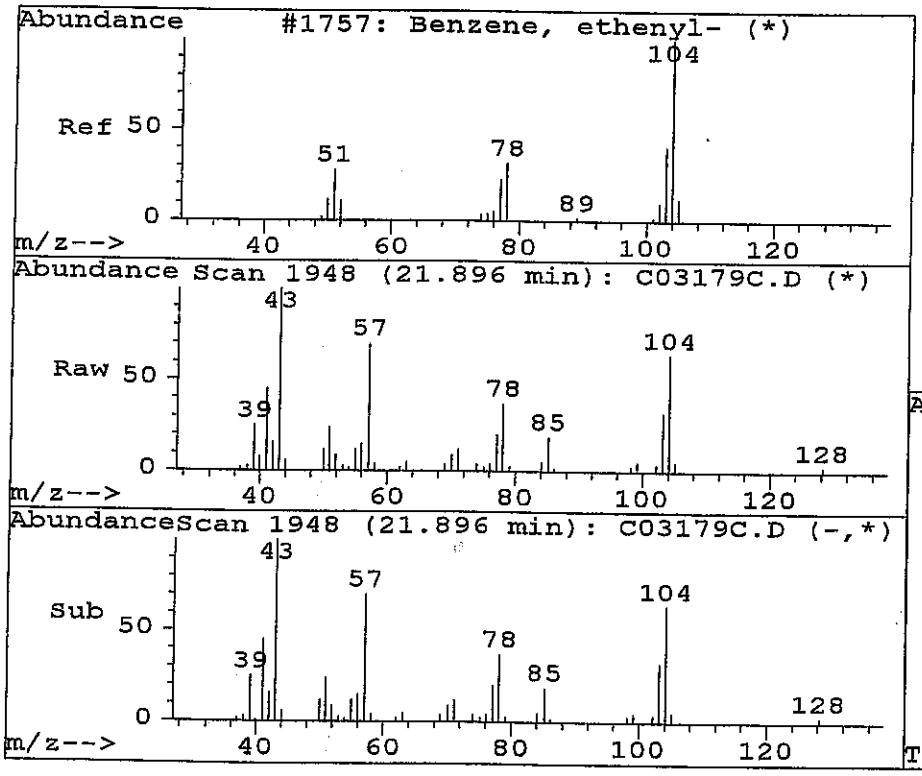


#63
m & p-Xylene
Concen: 0.69 ppbV
RT: 21.06 min Scan# 1862
Delta R.T. -0.22 min
Lab File: C03179C.D
Acq: 17 Mar 109 10:25 am

Tgt Ion:91 Resp: 192864

Ion	Ratio	Lower	Upper
91	100		
106	37.9	30.6	45.8
0	0.0	0.0	0.0
0	0.0	0.0	0.0

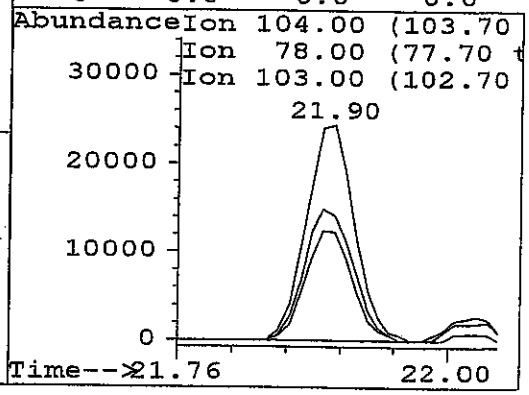


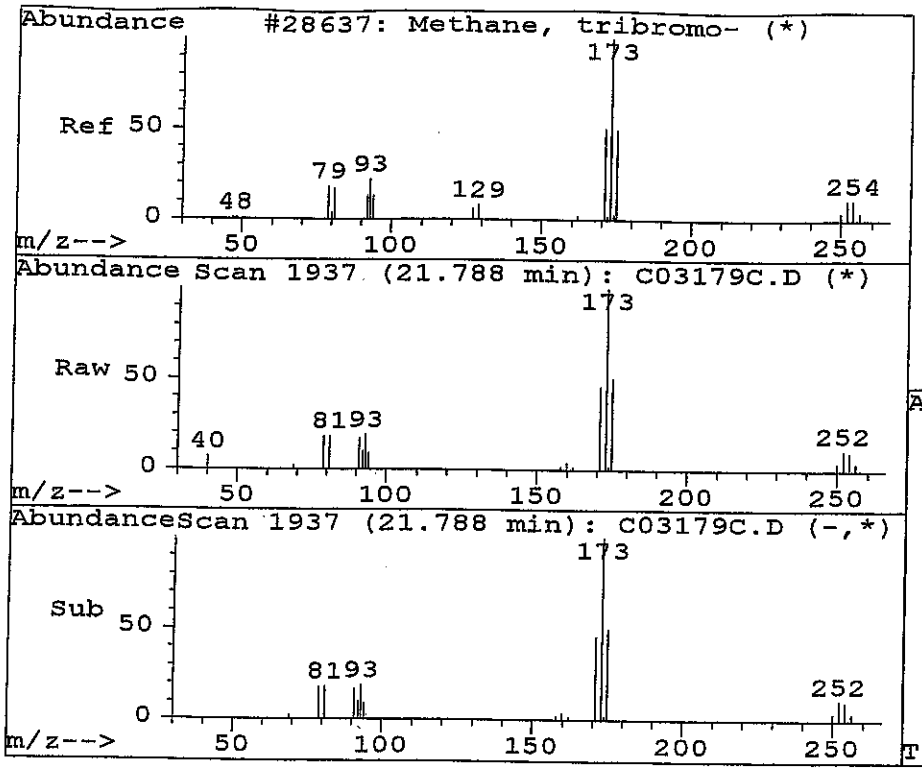


#64
Styrene
Concen: 0.36 ppbV
RT: 21.90 min Scan# 1948
Delta R.T. -0.24 min
Lab File: C03179C.D
Acq: 17 Mar 109 10:25 am

Tgt Ion:104 Resp: 70964

Ion	Ratio	Lower	Upper
104	100		
78	58.0	51.6	77.4
103	50.4	38.4	57.6
0	0.0	0.0	0.0

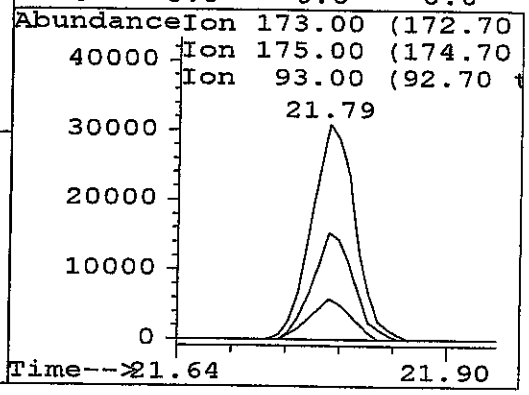


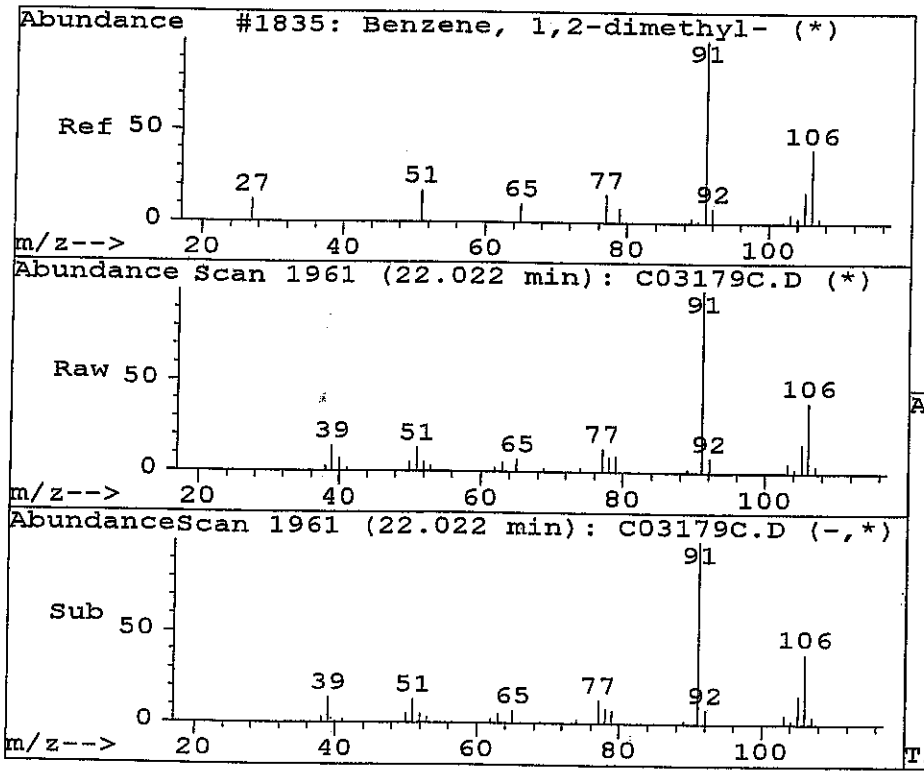


#65
Bromoform
Concen: 0.10 ppbV
RT: 21.79 min Scan# 1937
Delta R.T. -0.21 min
Lab File: C03179C.D
Acq: 17 Mar 109 10:25 am

Tgt Ion:173 Resp: 90991

Ion	Ratio	Lower	Upper
173	100		
175	49.6	40.0	60.0
93	18.9	15.1	22.7
0	0.0	0.0	0.0

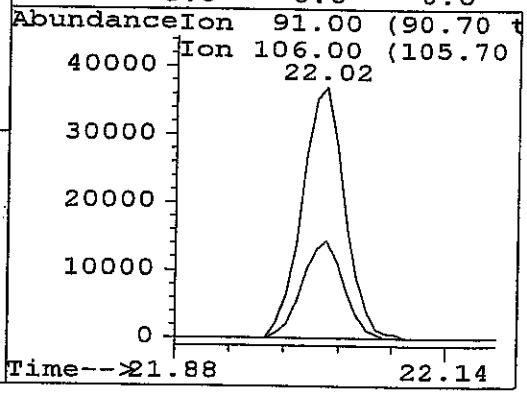


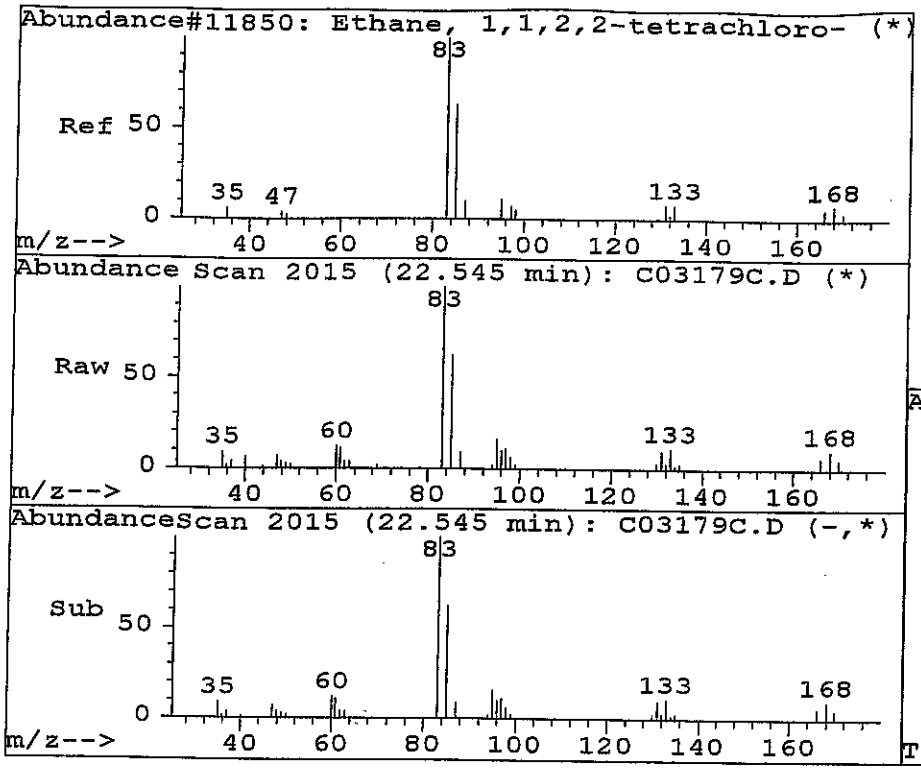


#66
o-Xylene
Concen: 0.34 ppbV
RT: 22.02 min Scan# 1961
Delta R.T. -0.23 min
Lab File: C03179C.D
Acq: 17 Mar 109 10:25 am

Tgt Ion:91 Resp: 105567

Ion	Ratio	Lower	Upper
91	100		
106	39.0	31.8	47.8
0	0.0	0.0	0.0
0	0.0	0.0	0.0

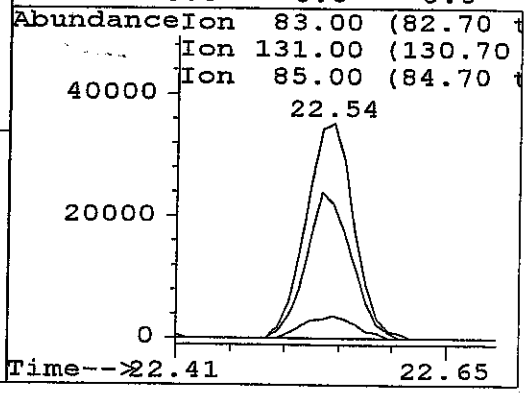


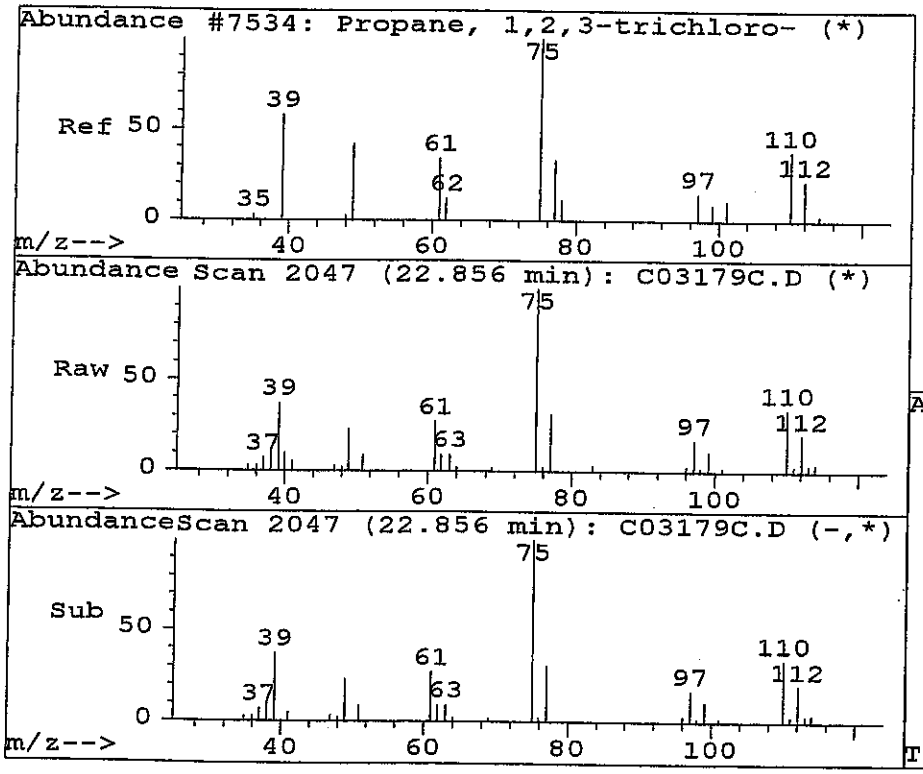


#67
1,1,2,2-Tetrachloroethane
Concen: 0.39 ppbV
RT: 22.54 min Scan# 2015
Delta R.T. -0.21 min
Lab File: C03179C.D
Acq: 17 Mar 109 10:25 am

Tgt Ion:83 Resp: 102201

Ion	Ratio	Lower	Upper
83	100		
131	10.4	9.4	14.0
85	62.5	50.2	75.4
0	0.0	0.0	0.0

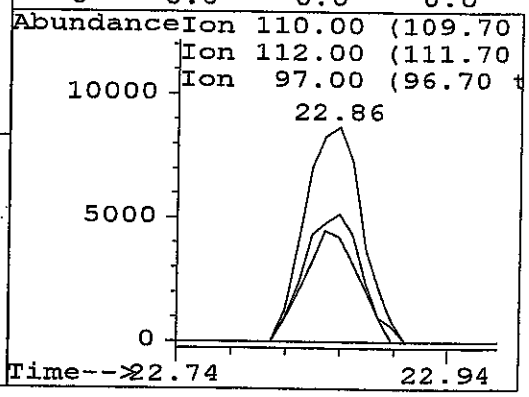


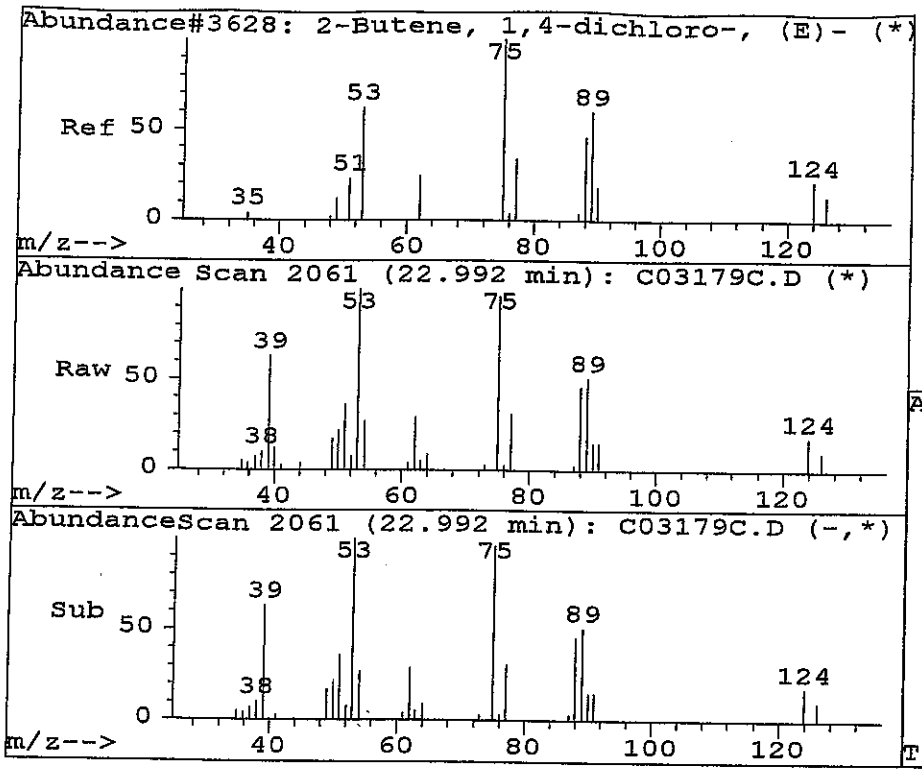


#68
1,2,3-Trichloropropane
Concen: 0.12 ppbV
RT: 22.86 min Scan# 2047
Delta R.T. -0.22 min
Lab File: C03179C.D
Acq: 17 Mar 109 10:25 am

Tgt Ion:110 Resp: 25437

Ion	Ratio	Lower	Upper
110	100		
112	59.5	50.4	75.6
97	48.6	37.0	55.6
0	0.0	0.0	0.0

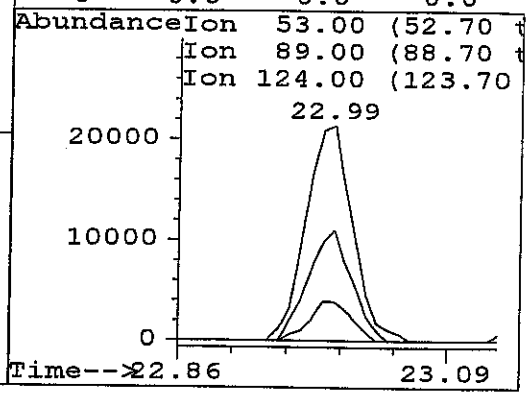


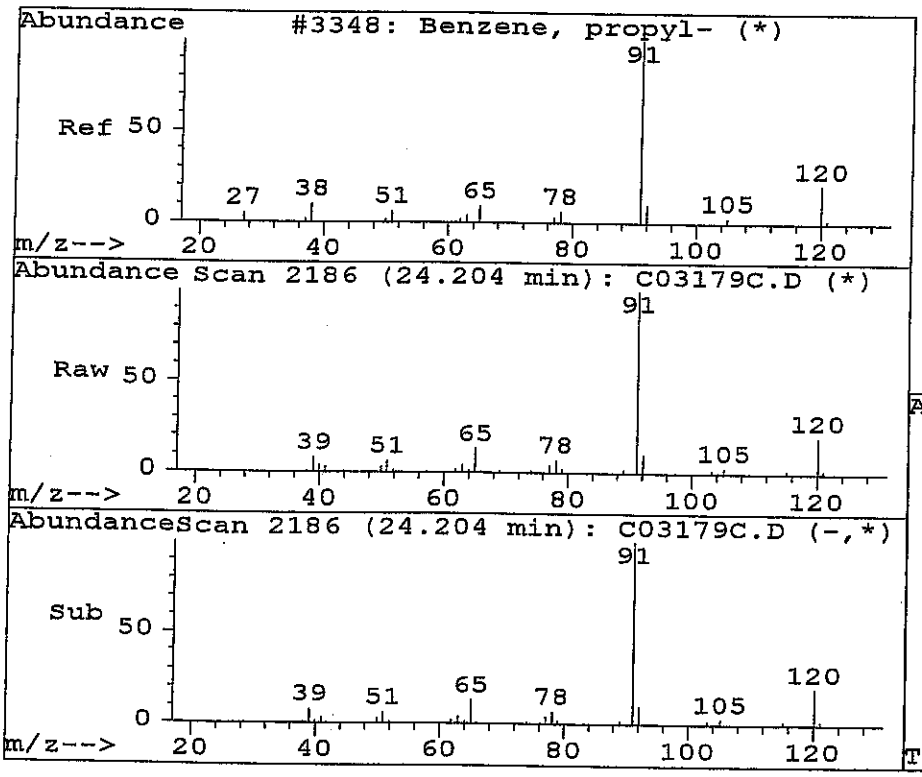


#69
t-1,4-Dichloro-2-butene
Concen: 0.38 ppbV
RT: 22.99 min Scan# 2061
Delta R.T. -0.24 min
Lab File: C03179C.D
Acq: 17 Mar 109 10:25 am

Tgt Ion:53 Resp: 61455

Ion	Ratio	Lower	Upper
53	100		
89	51.4	42.6	64.0
124	18.3	14.3	21.5
0	0.0	0.0	0.0

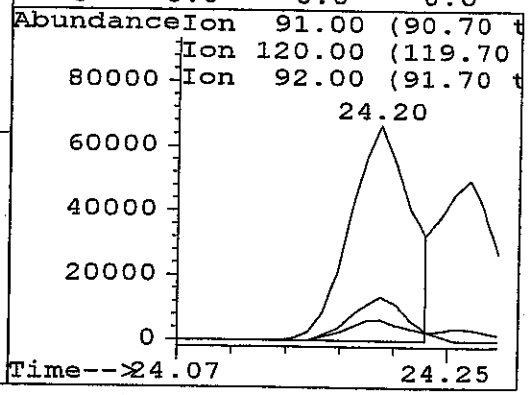


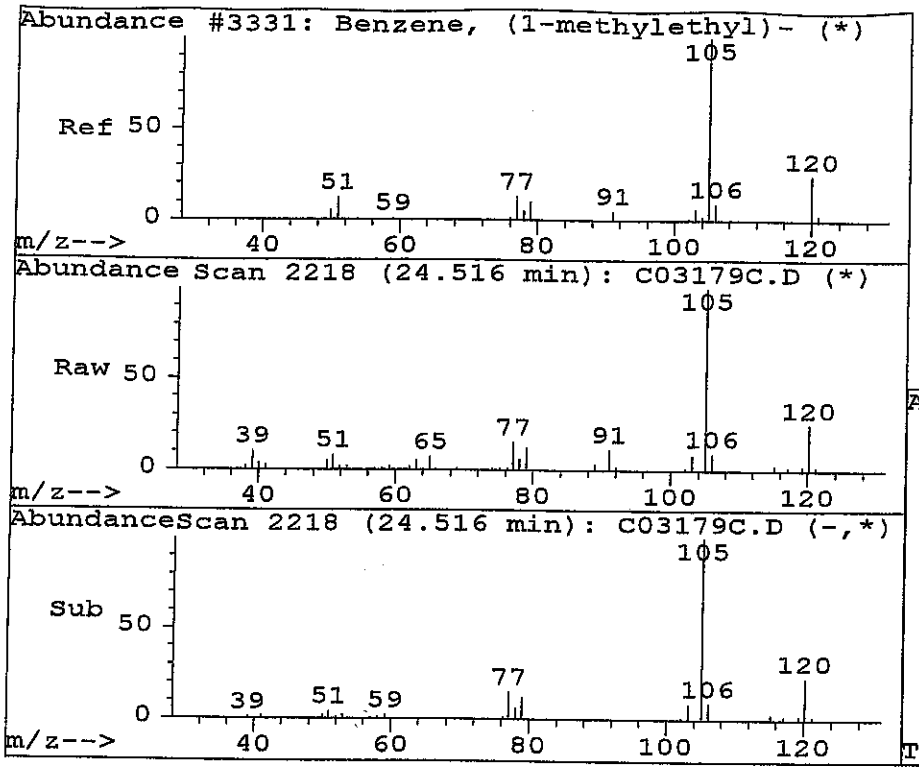


#70
n-Propylbenzene
Concen: 0.10 ppbV
RT: 24.20 min Scan# 2186
Delta R.T. -0.23 min
Lab File: C03179C.D
Acq: 17 Mar 109 10:25 am

Tgt Ion:91 Resp: 190755

Ion	Ratio	Lower	Upper
91	100		
120	18.4	15.1	22.7
92	9.7	8.9	13.3
0	0.0	0.0	0.0

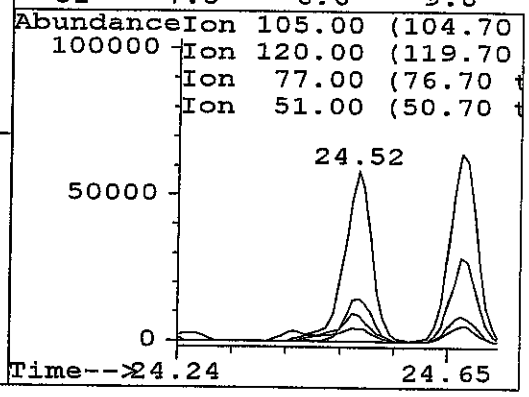


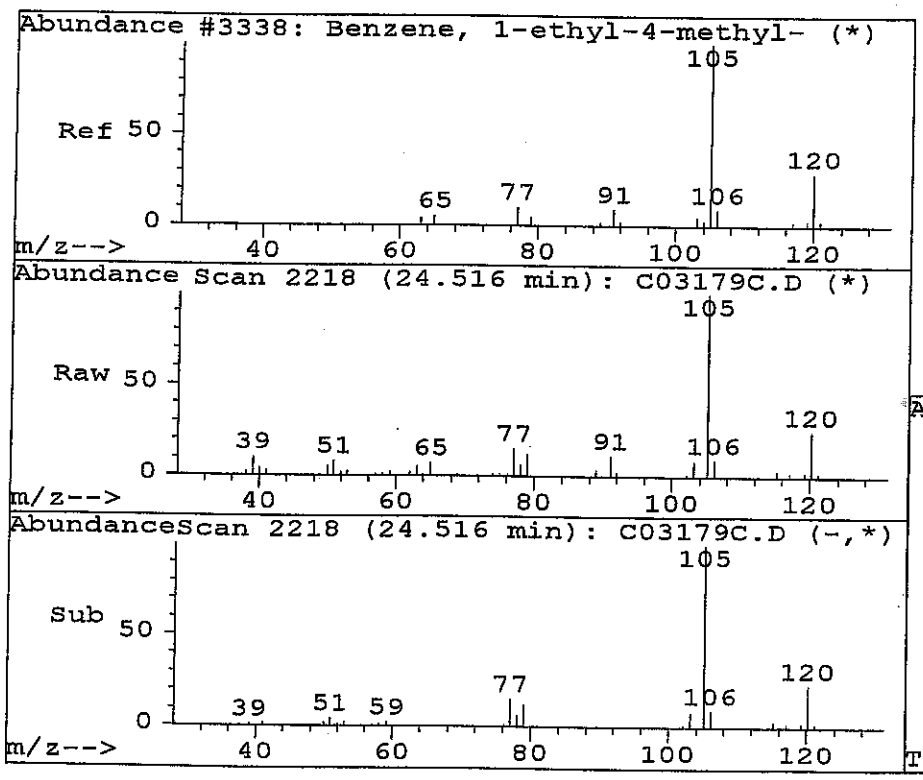


#71
Isopropylbenzene
Concen: 0.13 ppbV m
RT: 24.52 min Scan# 2218
Delta R.T. -0.22 min
Lab File: C03179C.D
Acq: 17 Mar 109 10:25 am

Tgt Ion:105 Resp: 177029

Ion	Ratio	Lower	Upper
105	100		
120	25.3	20.4	30.6
77	15.3	13.4	20.0
51	7.5	6.6	9.8

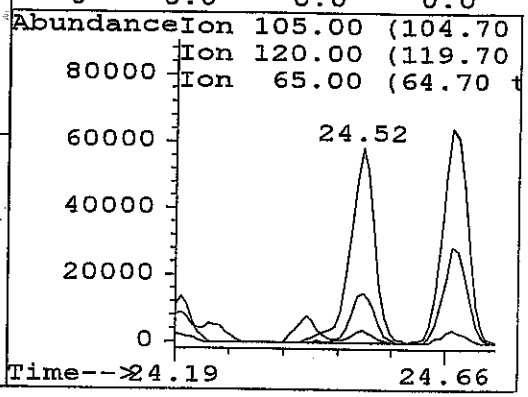


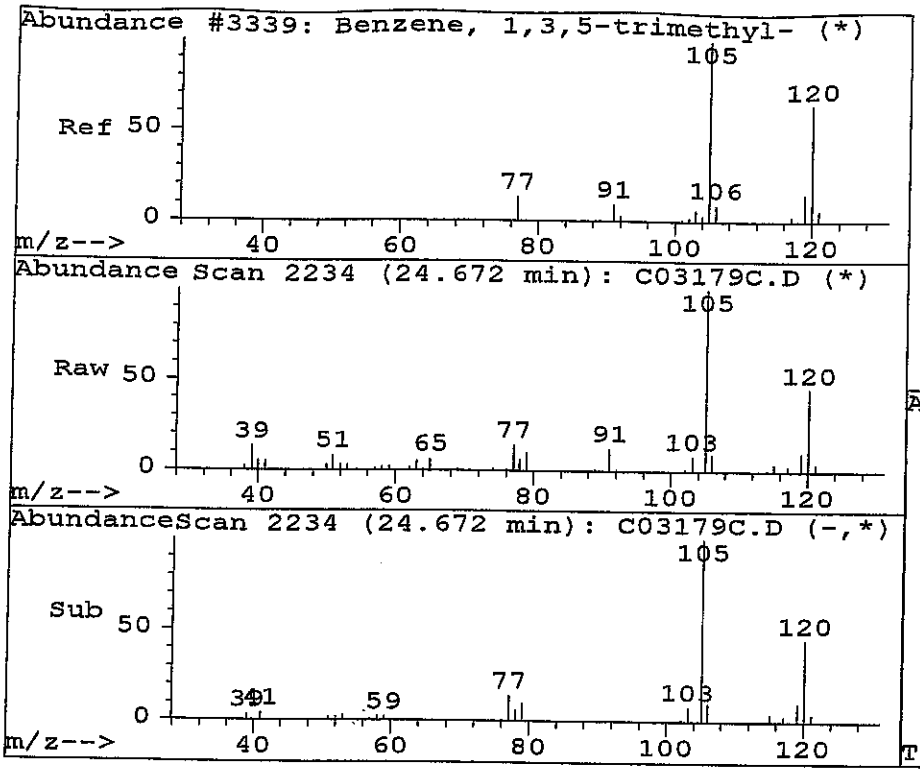


#72
4-Ethyltoluene
Concen: 0.13 ppbV m
RT: 24.52 min Scan# 2218
Delta R.T. -0.22 min
Lab File: C03179C.D
Acq: 17 Mar 109 10:25 am

Tgt Ion:105 Resp: 177076

Ion	Ratio	Lower	Upper
105	100		
120	25.3	21.6	32.4
65	6.5	3.9	5.9#
0	0.0	0.0	0.0

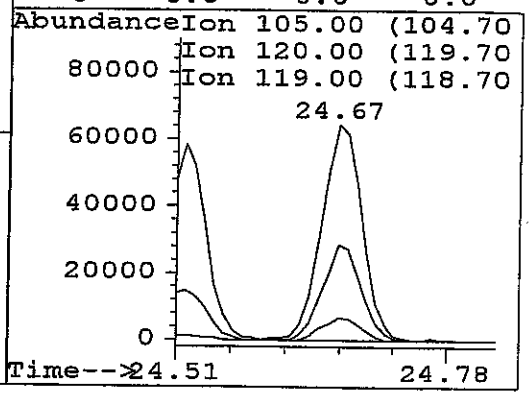


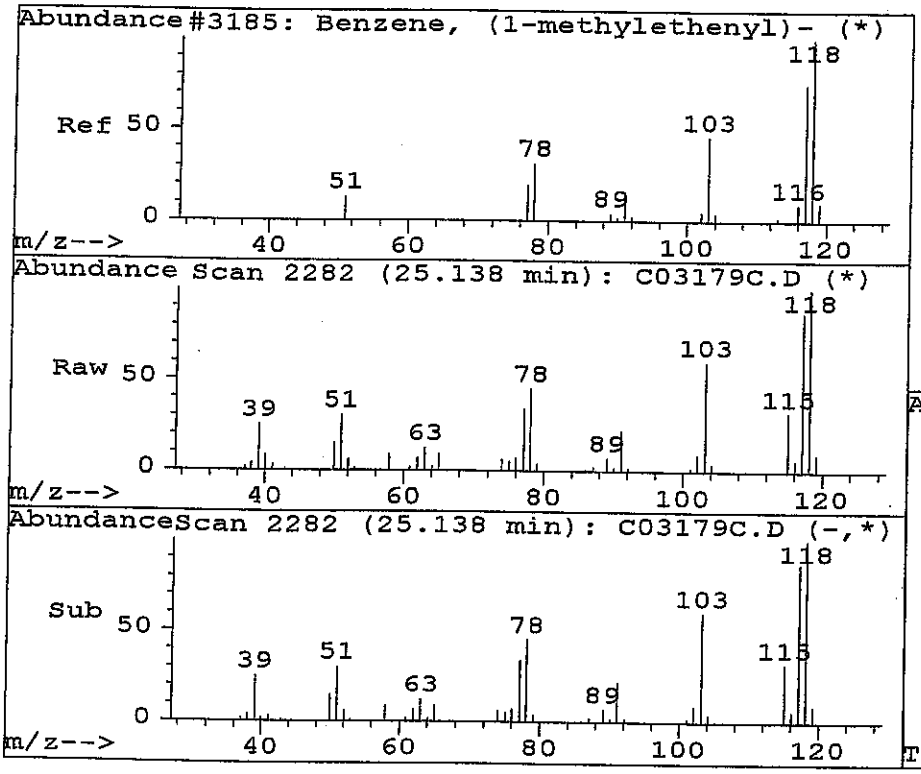


#73
1,3,5-Trimethylbenzene
Concen: 0.46 ppbV
RT: 24.67 min Scan# 2234
Delta R.T. -0.25 min
Lab File: C03179C.D
Acq: 17 Mar 109 10:25 am

Tgt Ion:105 Resp: 184274

Ion	Ratio	Lower	Upper
105	100		
120	44.5	32.4	48.6
119	10.3	8.1	12.1
0	0.0	0.0	0.0

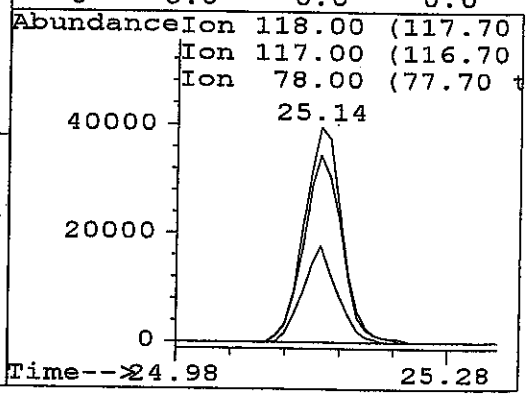


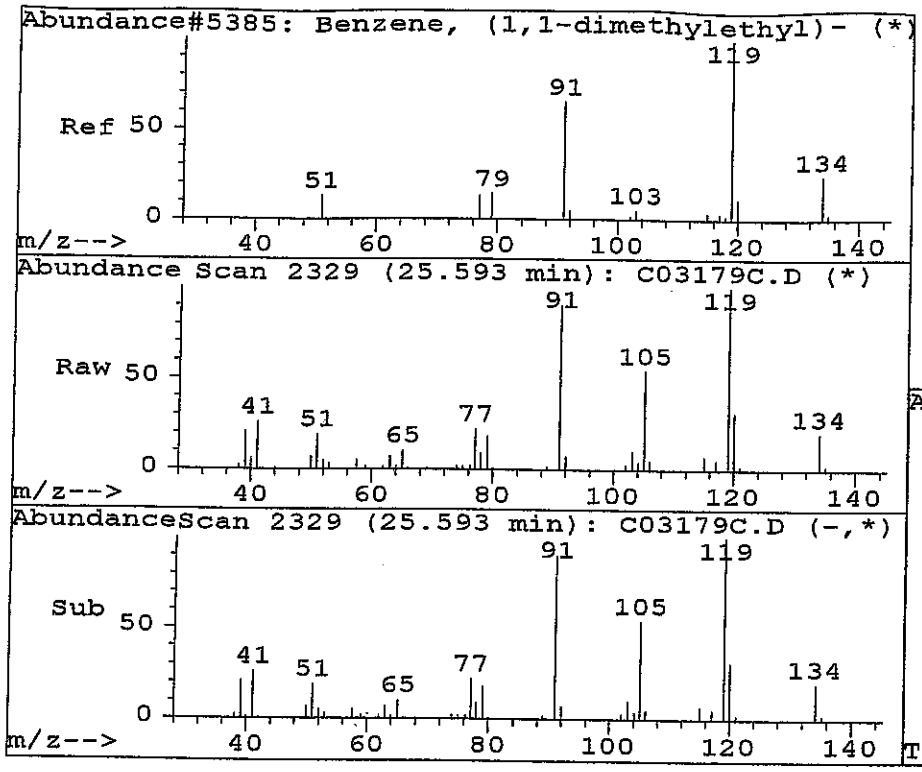


#74
Methylstyrene
Concen: 0.19 ppbV
RT: 25.14 min Scan# 2282
Delta R.T. -0.22 min
Lab File: C03179C.D
Acq: 17 Mar 109 10:25 am

Tgt Ion:118 Resp: 112656

Ion	Ratio	Lower	Upper
118	100		
117	87.0	71.3	106.9
78	44.7	32.7	49.1
0	0.0	0.0	0.0

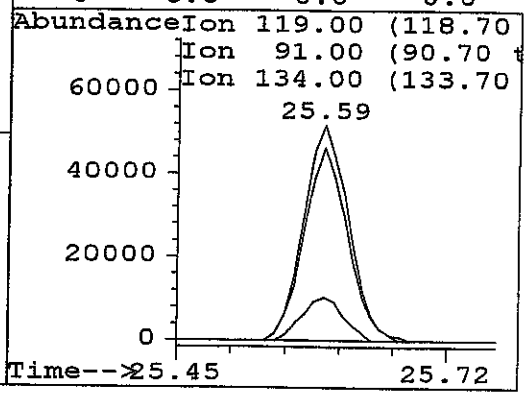


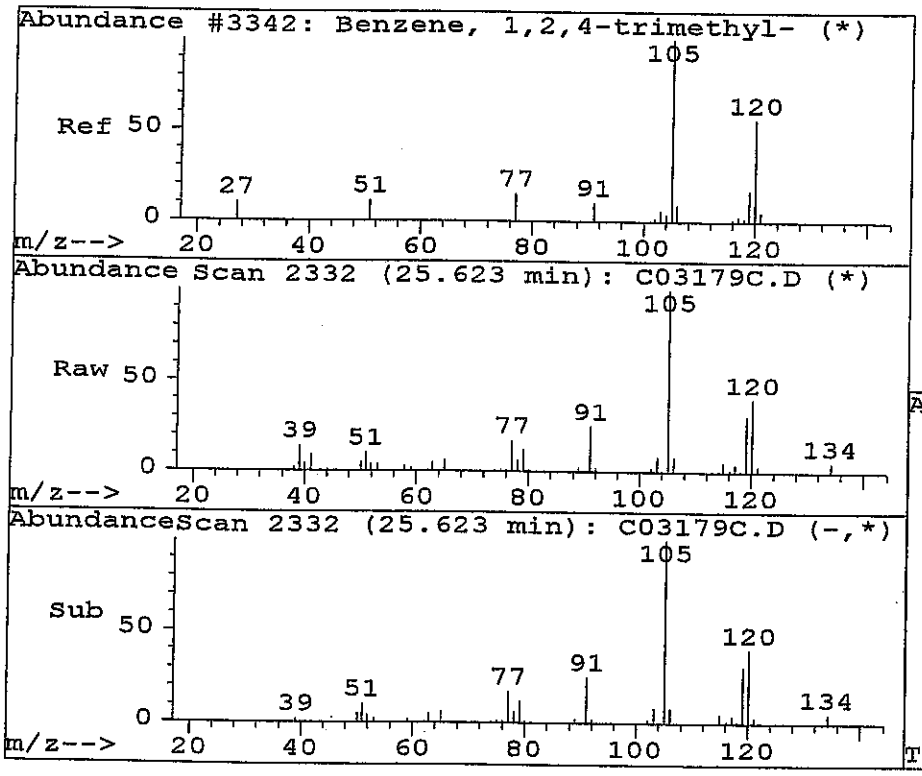


#75
tert-butyl benzene
Concen: 0.34 ppbV
RT: 25.59 min Scan# 2329
Delta R.T. -0.22 min
Lab File: C03179C.D
Acq: 17 Mar 109 10:25 am

Tgt Ion:119 Resp: 158367

Ion	Ratio	Lower	Upper
119	100		
91	87.2	72.2	108.4
134	18.4	15.7	23.5
0	0.0	0.0	0.0

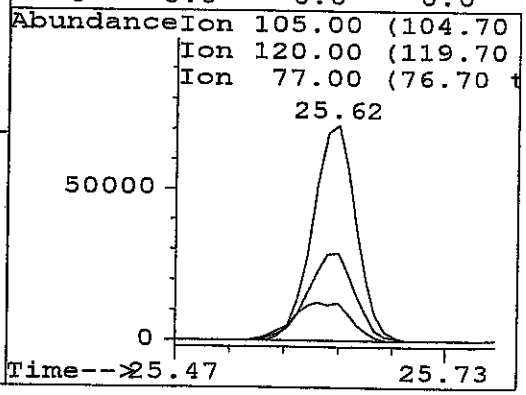


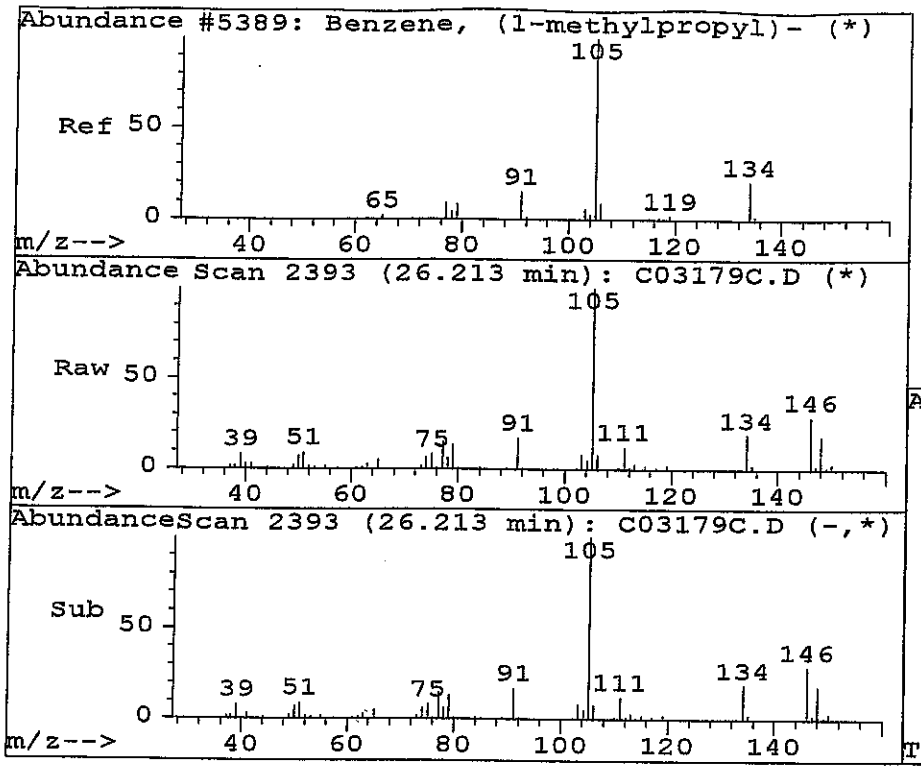


#76
1,2,4-Trimethylbenzene
Concen: 0.51 ppbV
RT: 25.62 min Scan# 2332
Delta R.T. -0.27 min
Lab File: C03179C.D
Acq: 17 Mar 109 10:25 am

Tgt Ion:105 Resp: 209998

Ion	Ratio	Lower	Upper
105	100		
120	40.3	31.0	46.4
77	17.0	13.3	19.9
0	0.0	0.0	0.0

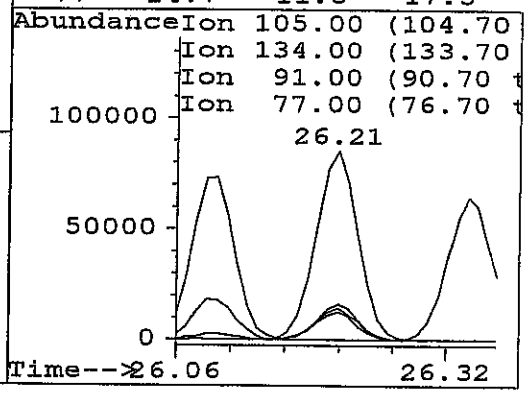


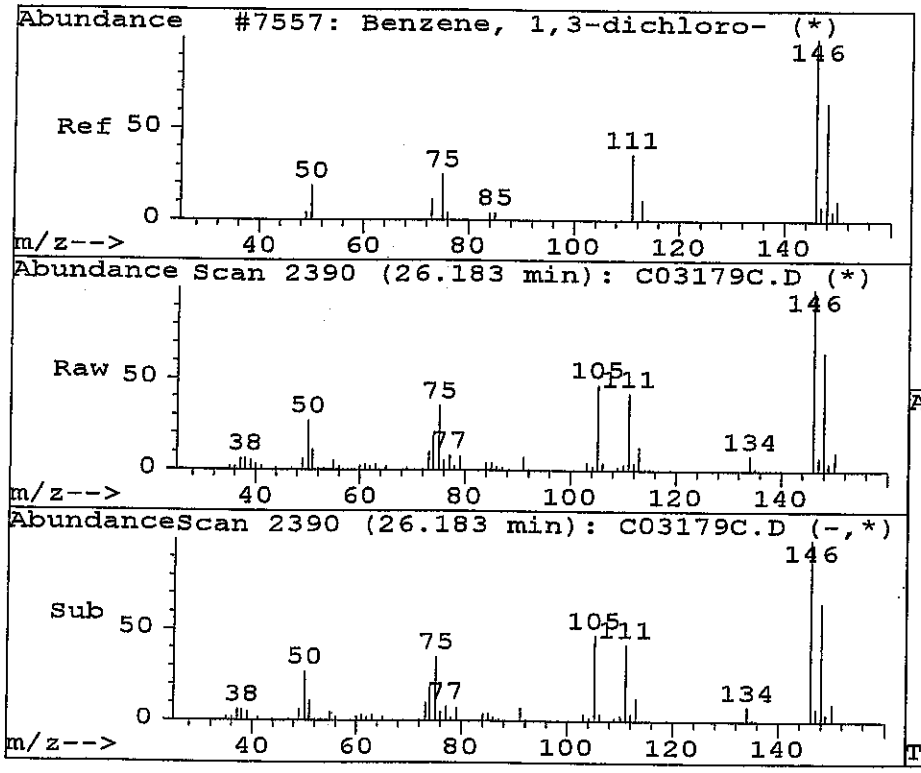


#77
sec-butylbenzene
Concen: 0.35 ppbV
RT: 26.21 min Scan# 2393
Delta R.T. -0.29 min
Lab File: C03179C.D
Acq: 17 Mar 109 10:25 am

Tgt Ion:105 Resp: 238727

Ion	Ratio	Lower	Upper
105	100		
134	18.5	14.5	21.7
91	16.5	13.4	20.2
77	14.7	11.5	17.3

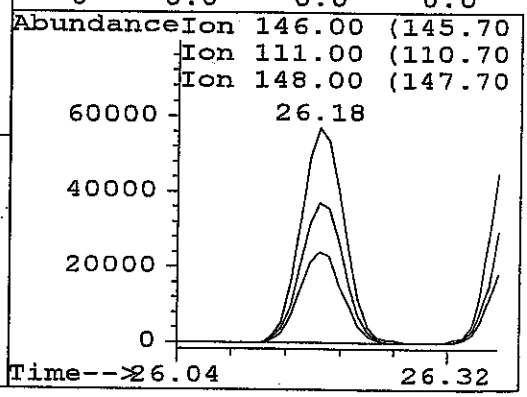


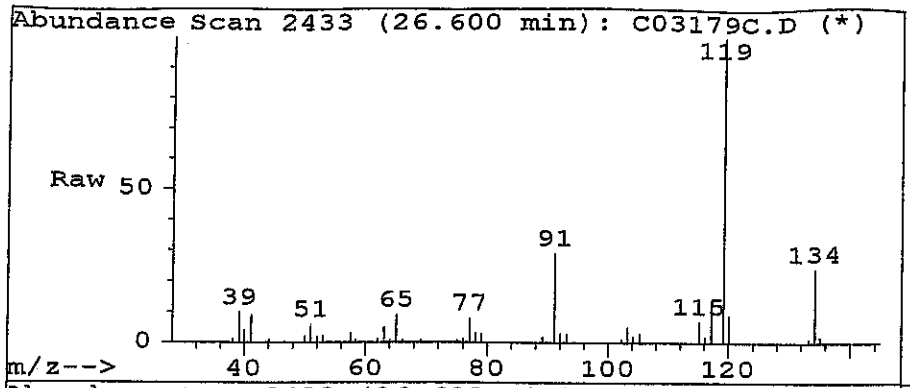


#78
1,3-Dichlorobenzene
Concen: 0.51 ppbV
RT: 26.18 min Scan# 2390
Delta R.T. -0.23 min
Lab File: C03179C.D
Acq: 17 Mar 109 10:25 am

Tgt Ion:146 Resp: 173602

Ion	Ratio	Lower	Upper
146	100		
111	42.1	33.7	50.5
148	65.0	49.4	74.0
0	0.0	0.0	0.0

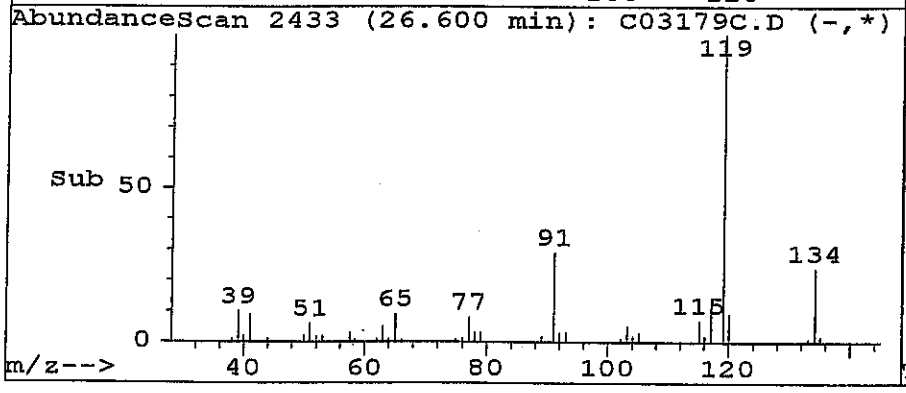


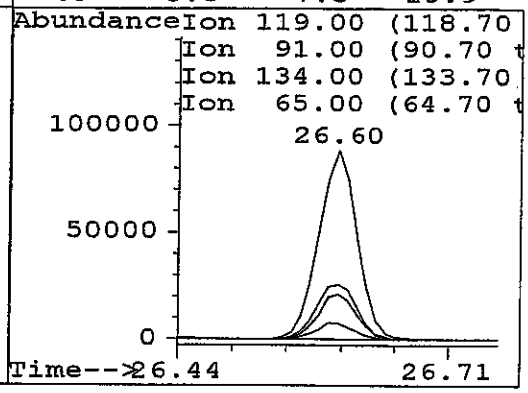


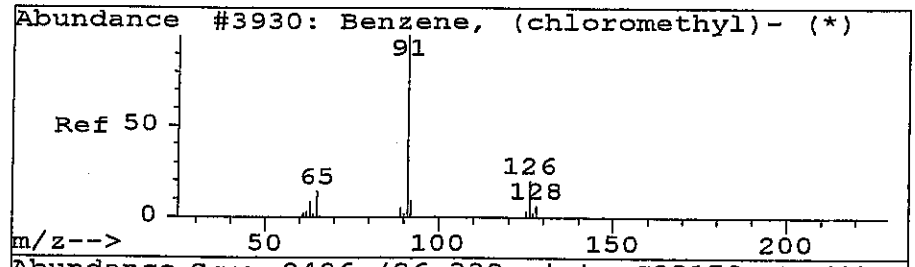
#79
Isopropyltoluene
Concen: 0.38 ppbV
RT: 26.60 min Scan# 2433
Delta R.T. -0.23 min
Lab File: C03179C.D
Acq: 17 Mar 109 10:25 am

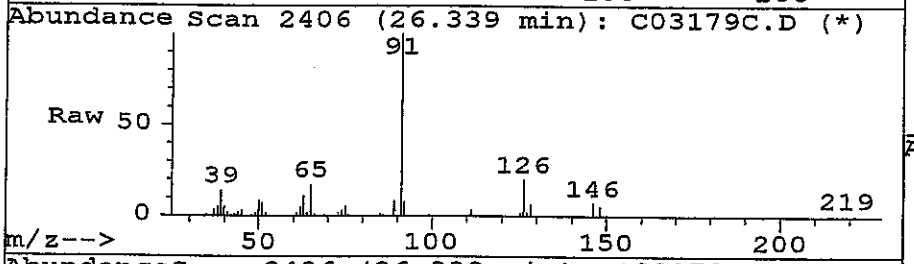
Tgt Ion:119 Resp: 241584

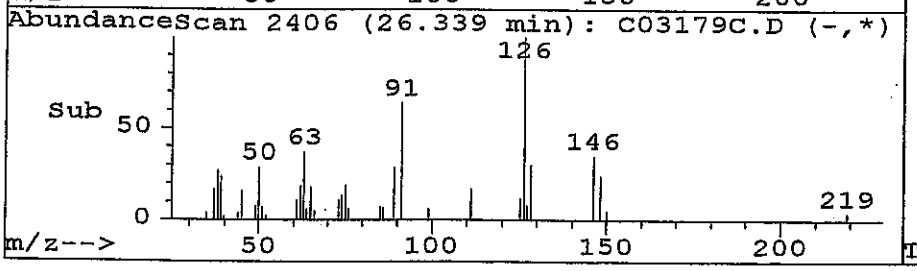
Ion	Ratio	Lower	Upper
119	100		
91	31.3	25.4	38.2
134	24.1	19.3	28.9
65	8.8	7.3	10.9







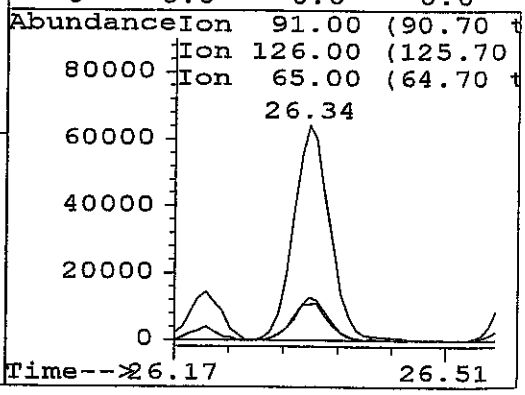


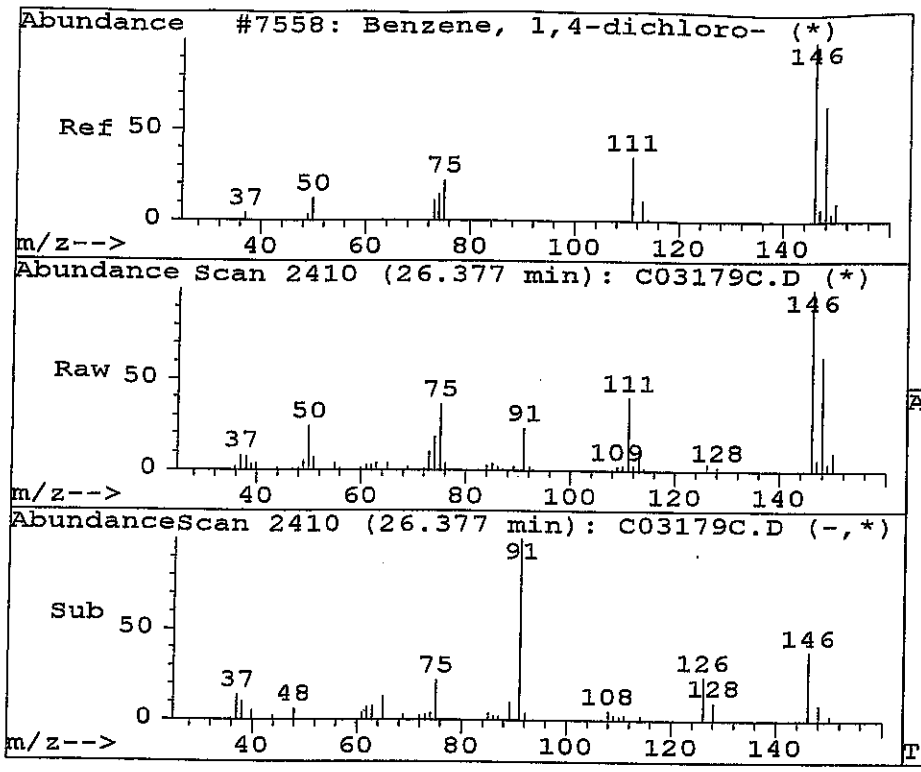


#80
Benzyl chloride
Concen: 0.38 ppbV
RT: 26.34 min Scan# 2406
Delta R.T. -0.27 min
Lab File: C03179C.D
Acq: 17 Mar 109 10:25 am

Tgt Ion:91 Resp: 203166

Ion	Ratio	Lower	Upper
91	100		
126	19.9	15.7	23.5
65	16.5	14.0	21.0
0	0.0	0.0	0.0

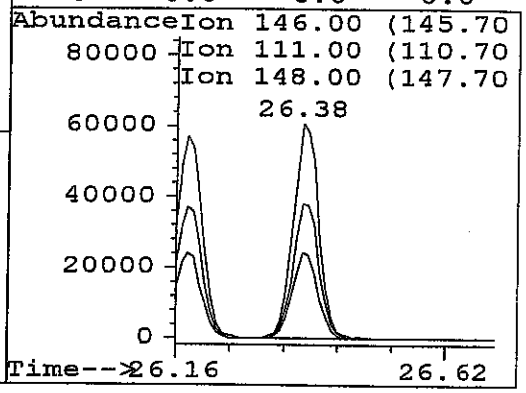


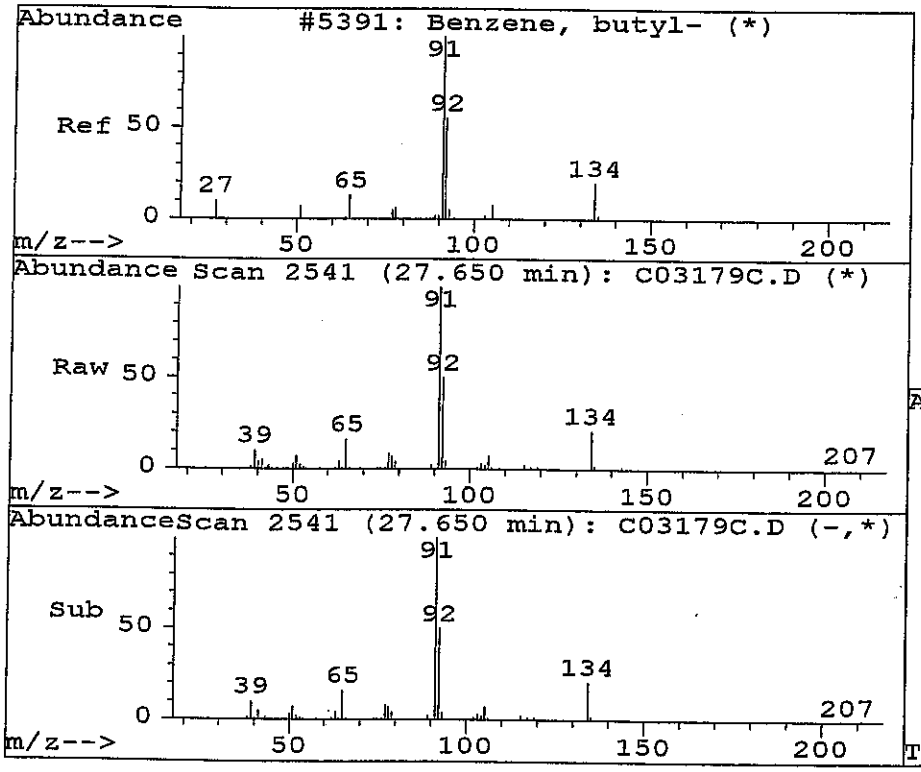


#81
1,4-Dichlorobenzene
Concen: 0.51 ppbV m
RT: 26.38 min Scan# 2410
Delta R.T. -0.30 min
Lab File: C03179C.D
Acq: 17 Mar 109 10:25 am

Tgt Ion:146 Resp: 179740

Ion	Ratio	Lower	Upper
146	100		
111	40.1	32.4	48.6
148	62.6	49.1	73.7
0	0.0	0.0	0.0

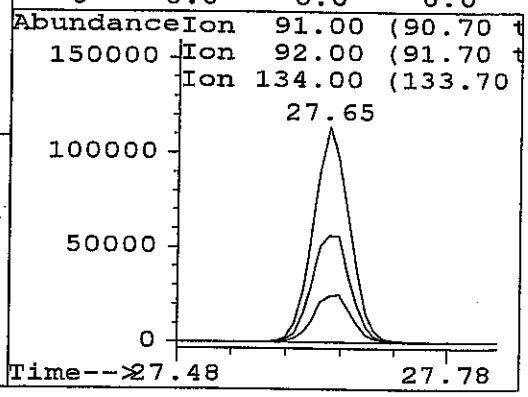


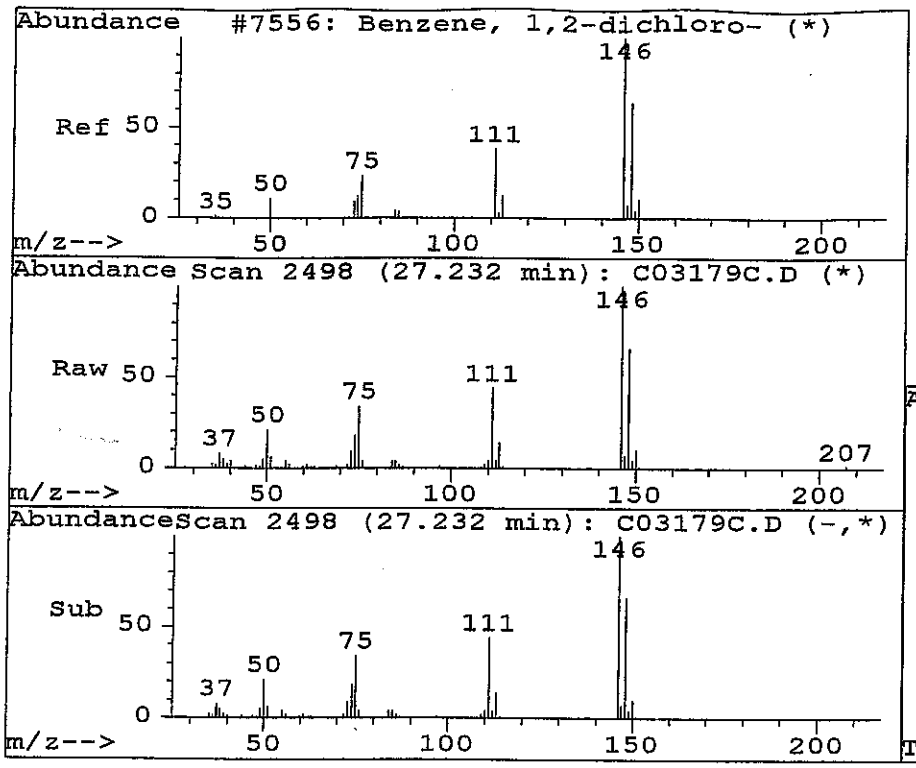


#82
n-Butylbenzene
Concen: 0.43 ppbV
RT: 27.65 min Scan# 2541
Delta R.T. -0.23 min
Lab File: C03179C.D
Acq: 17 Mar 109 10:25 am

Tgt Ion:91 Resp: 311314

Ion	Ratio	Lower	Upper
91	100		
92	53.5	43.9	65.9
134	23.4	18.4	27.6
0	0.0	0.0	0.0

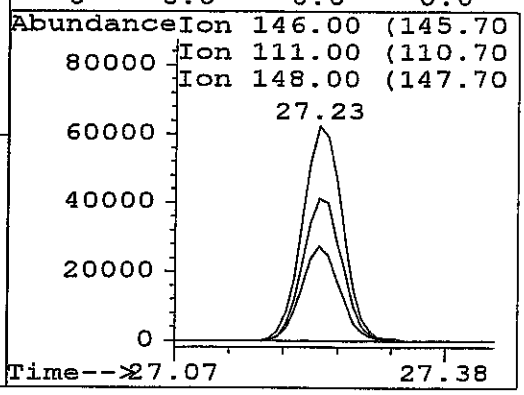


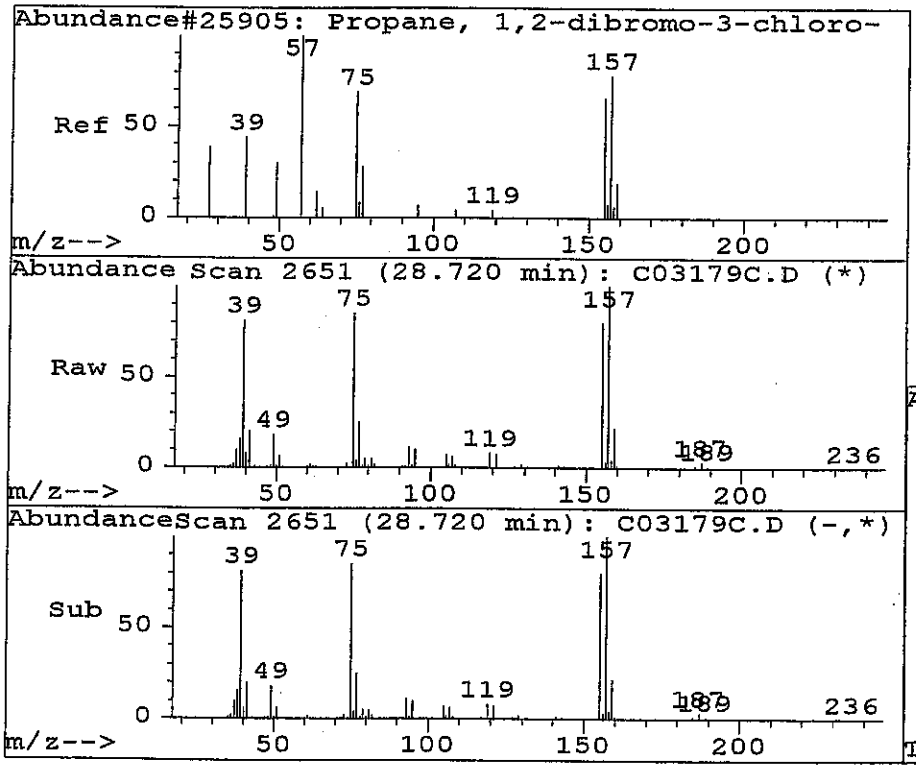


#83
1,2-Dichlorobenzene
Concen: 0.50 ppbV
RT: 27.23 min Scan# 2498
Delta R.T. -0.24 min
Lab File: C03179C.D
Acq: 17 Mar 109 10:25 am

Tgt Ion:146 Resp: 199190

Ion	Ratio	Lower	Upper
146	100		
111	44.0	38.0	57.0
148	66.1	50.6	75.8
0	0.0	0.0	0.0

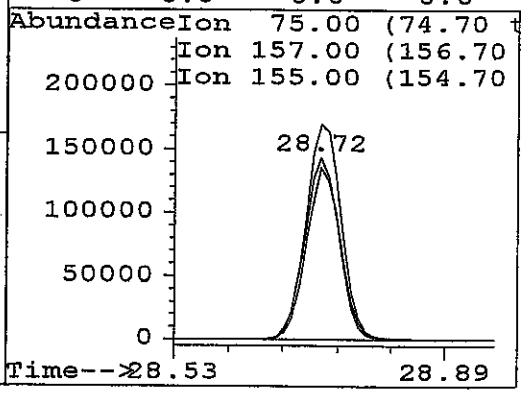


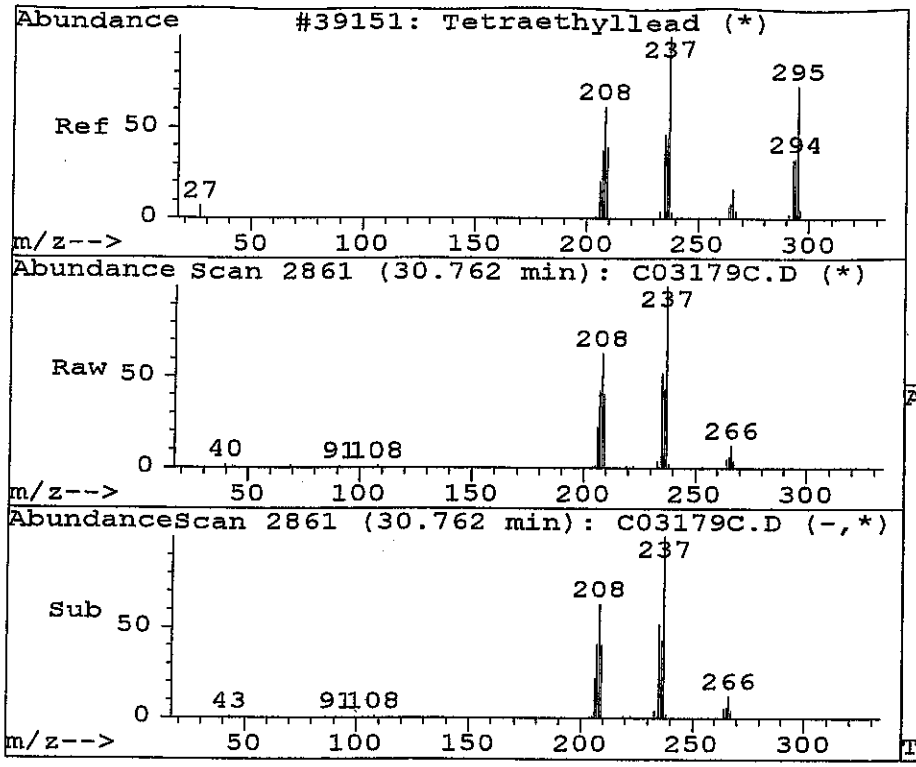


#84
1,2-Dibromo-3-chloropropane
Concen: 1.56 ppbV
RT: 28.72 min Scan# 2651
Delta R.T. -0.24 min
Lab File: C03179C.D
Acq: 17 Mar 109 10:25 am

Tgt Ion:75 Resp: 449541

Ion	Ratio	Lower	Upper
75	100		
157	118.3	87.0	130.6
155	94.7	69.8	104.8
0	0.0	0.0	0.0

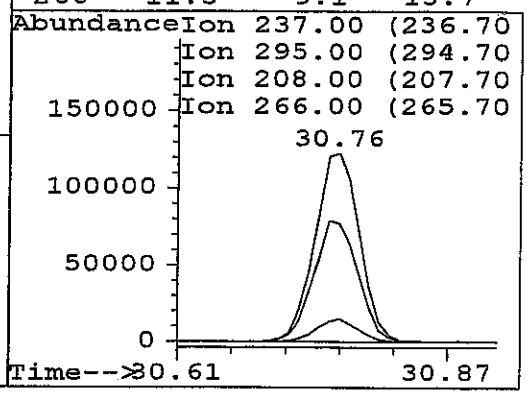


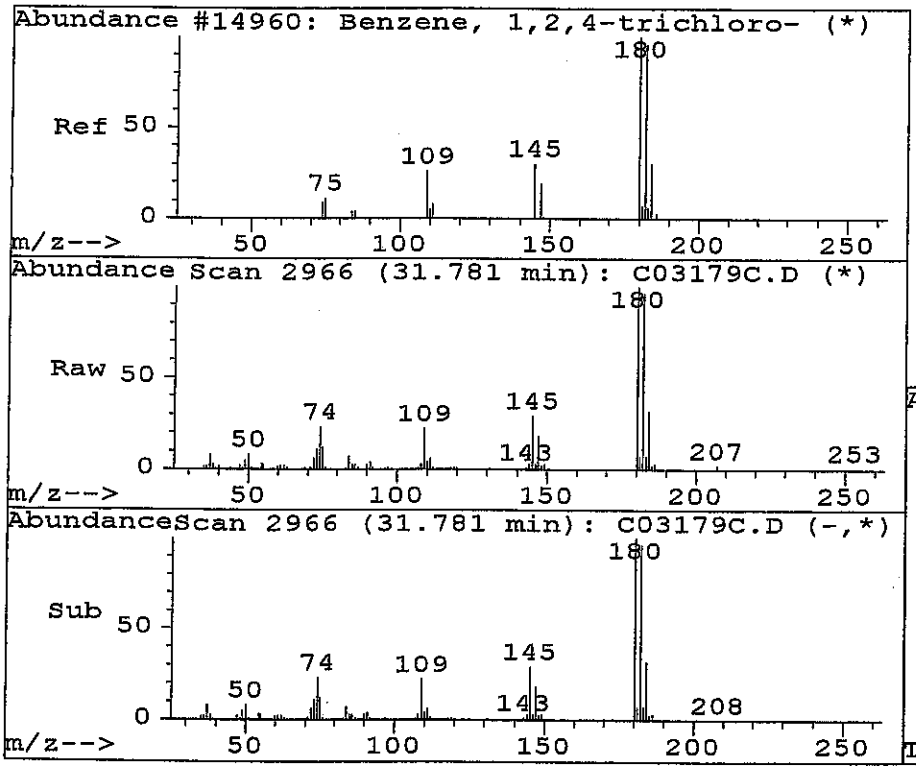


#85
Tetraethyl lead
Concen: 1.40 ppbV
RT: 30.76 min Scan# 2861
Delta R.T. -0.22 min
Lab File: C03179C.D
Acq: 17 Mar 109 10:25 am

Tgt Ion:237 Resp: 364827

Ion	Ratio	Lower	Upper
237	100		
295	0.0	0.0	0.0
208	64.5	51.2	76.8
266	11.3	9.1	13.7

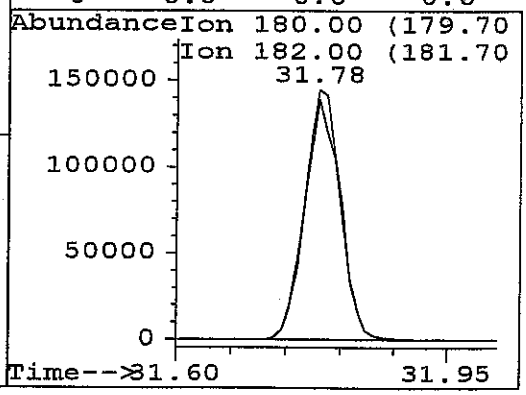


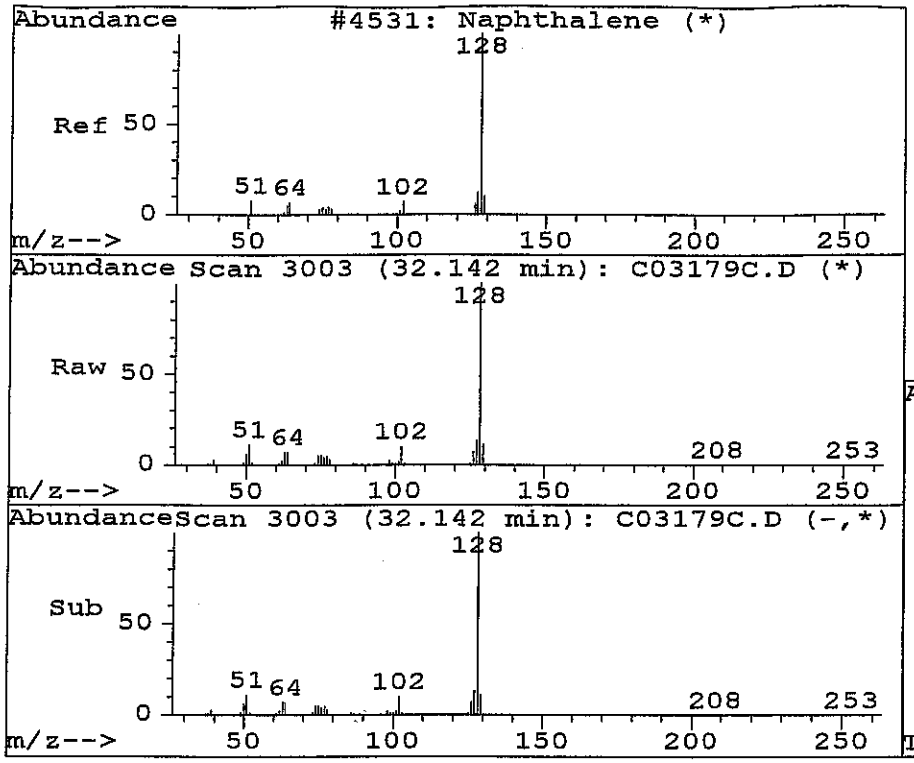


#86
1,2,4-Trichlorobenzene
Concen: 0.65 ppbV
RT: 31.78 min Scan# 2966
Delta R.T. -0.40 min
Lab File: C03179C.D
Acq: 17 Mar 109 10:25 am

Tgt Ion:180 Resp: 468171

Ion	Ratio	Lower	Upper
180	100		
182	96.0	76.1	114.1
0	0.0	0.0	0.0
0	0.0	0.0	0.0

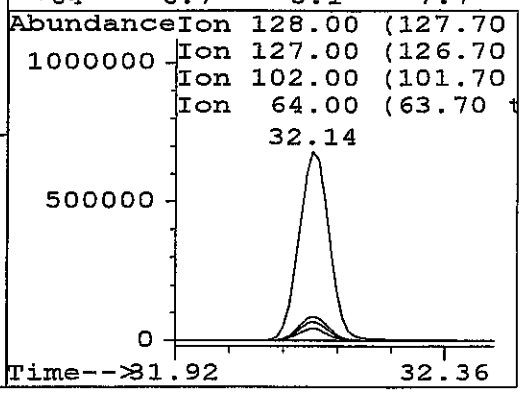


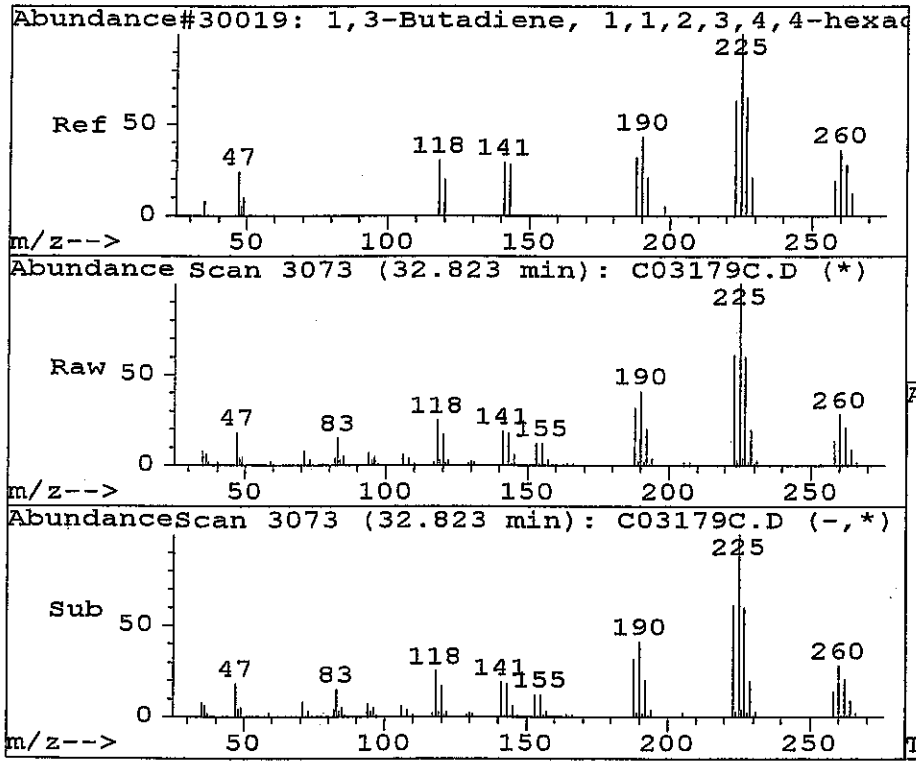


#87
Naphthalene
Concen: 1.87 ppbV
RT: 32.14 min Scan# 3003
Delta R.T. -0.27 min
Lab File: C03179C.D
Acq: 17 Mar 109 10:25 am

Tgt Ion:128 Resp: 2349483

Ion	Ratio	Lower	Upper
128	100		
127	12.9	10.6	16.0
102	10.2	8.5	12.7
64	6.7	5.1	7.7

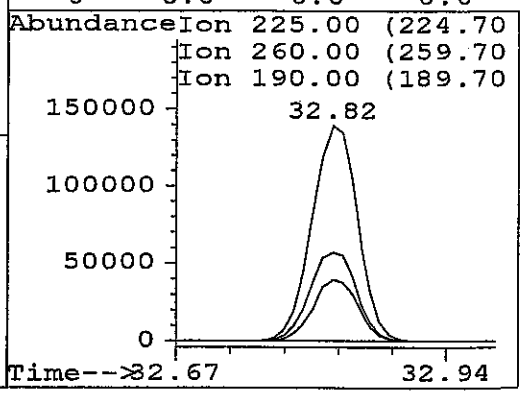


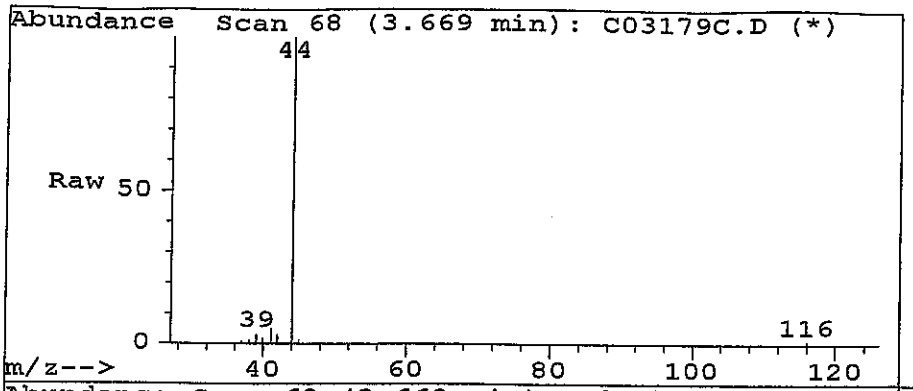


#88
Hexachlorobutadiene
Concen: 0.81 ppbV
RT: 32.82 min Scan# 3073
Delta R.T. -0.26 min
Lab File: C03179C.D
Acq: 17 Mar 109 10:25 am

Tgt Ion:225 Resp: 442421

Ion	Ratio	Lower	Upper
225	100		
260	28.3	22.2	33.4
190	40.9	33.6	50.4
0	0.0	0.0	0.0

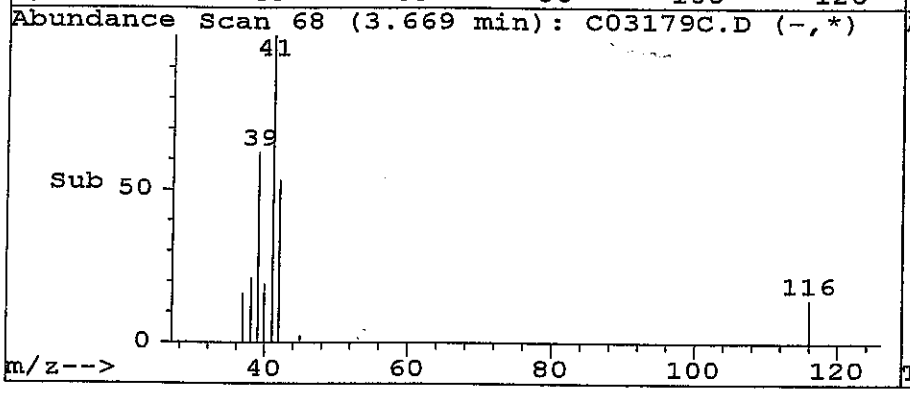


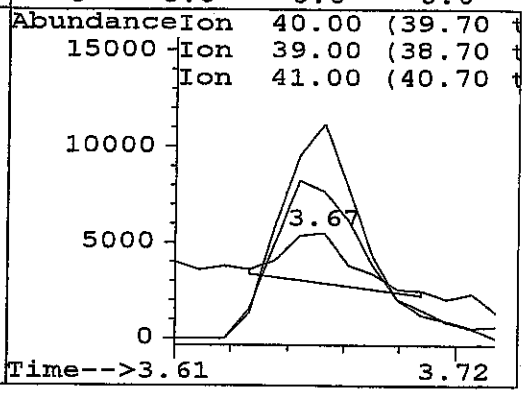


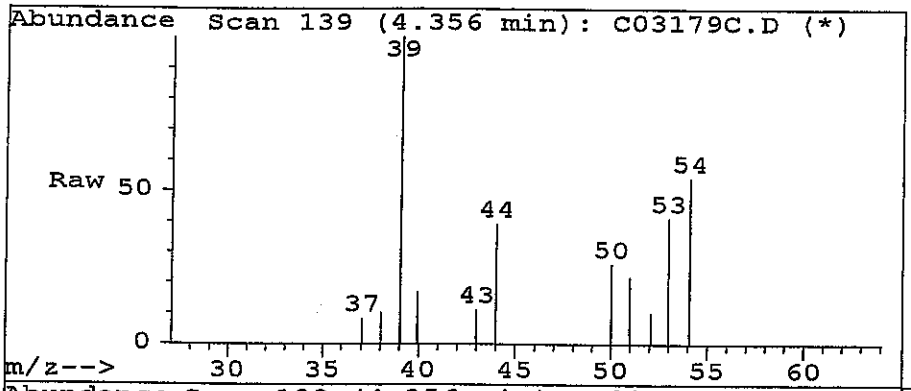
#89
Propylene
Concen: 0.29 ppbV m
RT: 3.67 min Scan# 68
Delta R.T. -0.09 min
Lab File: C03179C.D
Acq: 17 Mar 109 10:25 am

Tgt Ion:40 Resp: 4399

Ion	Ratio	Lower	Upper
40	100		
39	139.2	159.4	239.2#
41	202.9	189.5	284.3
0	0.0	0.0	0.0



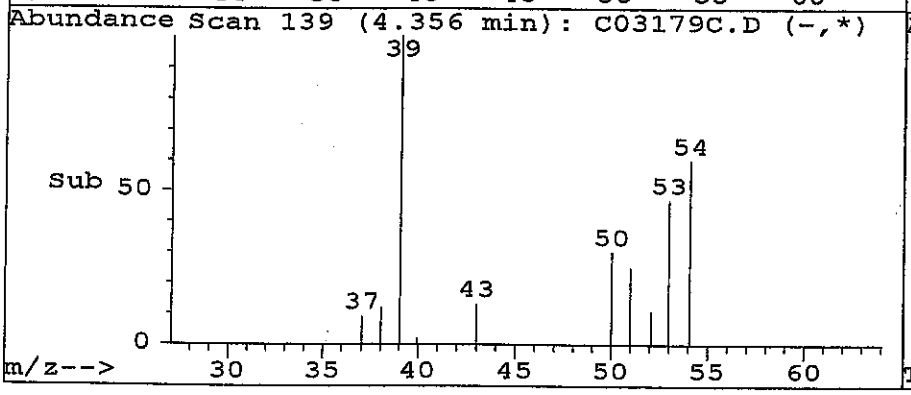


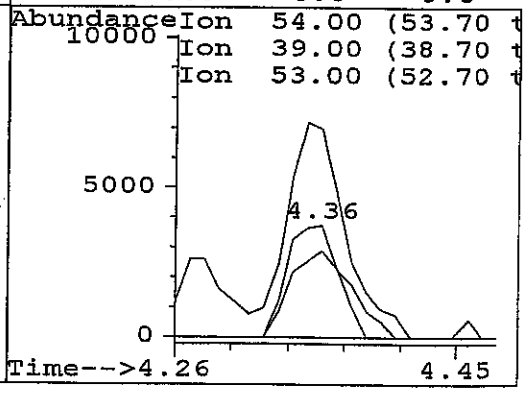


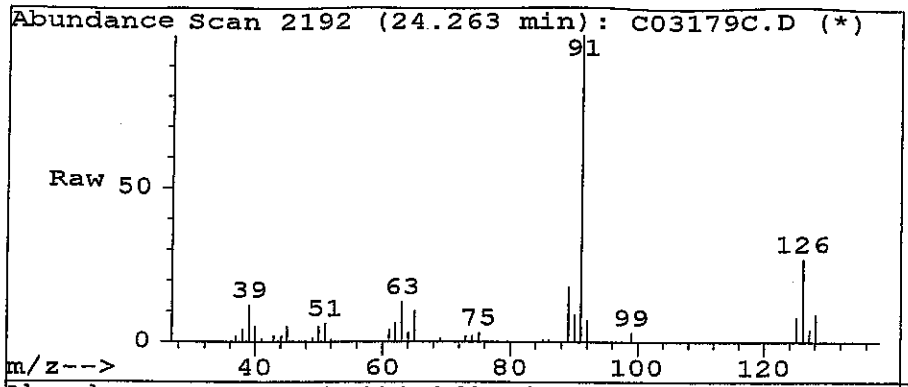
#90
1,3-Butadiene
Concen: 0.23 ppbV
RT: 4.36 min Scan# 139
Delta R.T. -0.11 min
Lab File: C03179C.D
Acq: 17 Mar 109 10:25 am

Tgt Ion:54 Resp: 9949

Ion	Ratio	Lower	Upper
54	100		
39	193.4	148.2	222.2
53	68.0	57.0	85.6
0	0.0	0.0	0.0



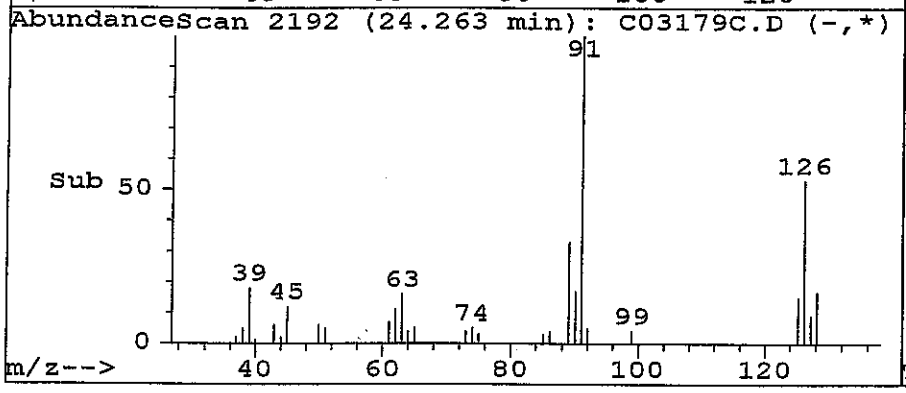


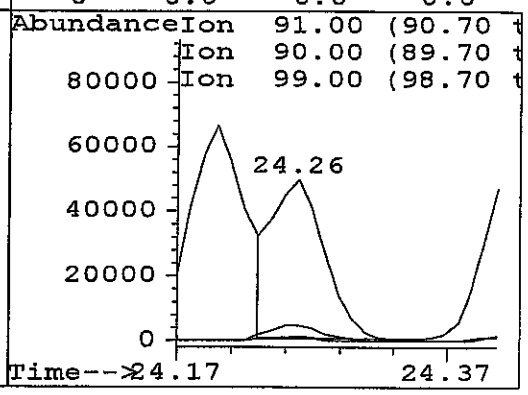


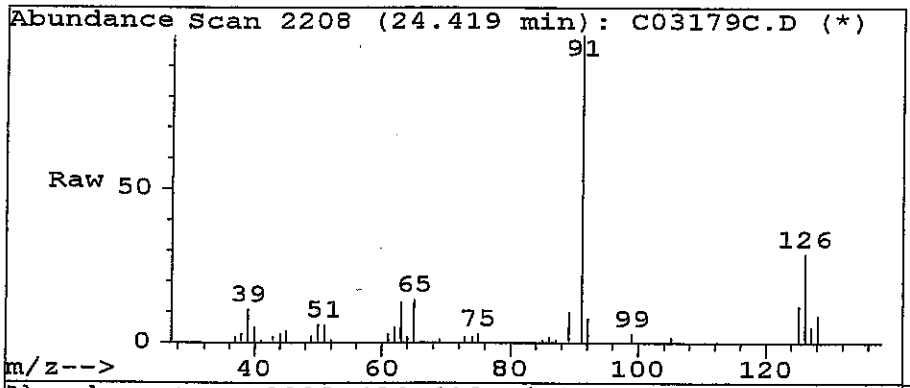
#92
2-Chlorotoluene
Concen: 0.31 ppbV
RT: 24.26 min Scan# 2192
Delta R.T. -0.20 min
Lab File: C03179C.D
Acq: 17 Mar 109 10:25 am

Tgt Ion:91 Resp: 128657

Ion	Ratio	Lower	Upper
91	100		
90	9.8	7.0	10.4
99	2.0	1.6	2.4
0	0.0	0.0	0.0



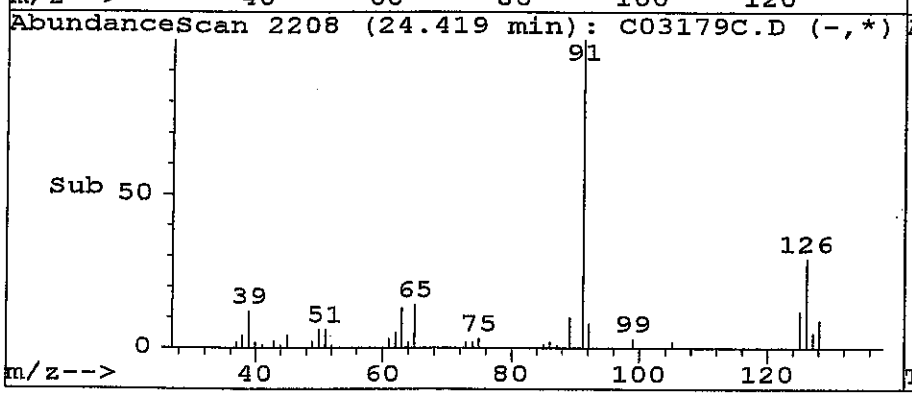


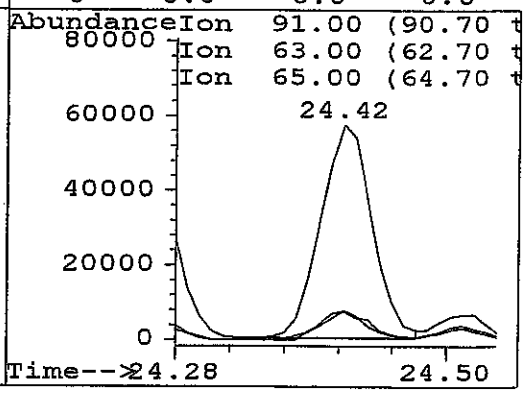


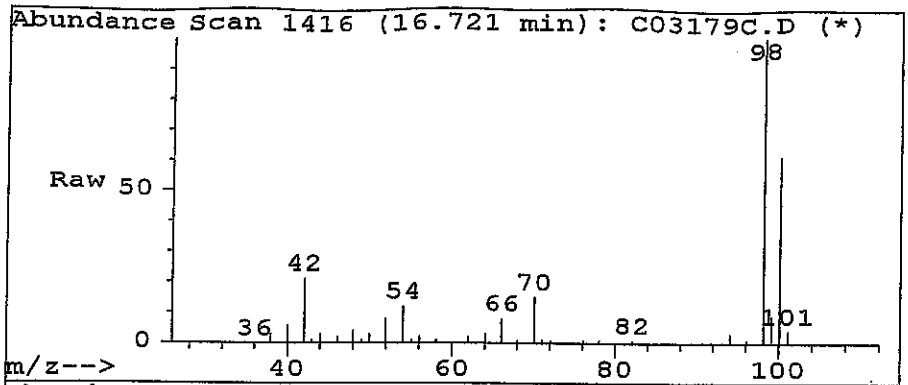
#93
4-Chlorotoluene
Concen: 0.31 ppbV
RT: 24.42 min Scan# 2208
Delta R.T. -0.23 min
Lab File: C03179C.D
Acq: 17 Mar 109 10:25 am

Tgt Ion:91 Resp: 166049

Ion	Ratio	Lower	Upper
91	100		
63	13.4	11.0	16.4
65	12.3	9.4	14.0
0	0.0	0.0	0.0



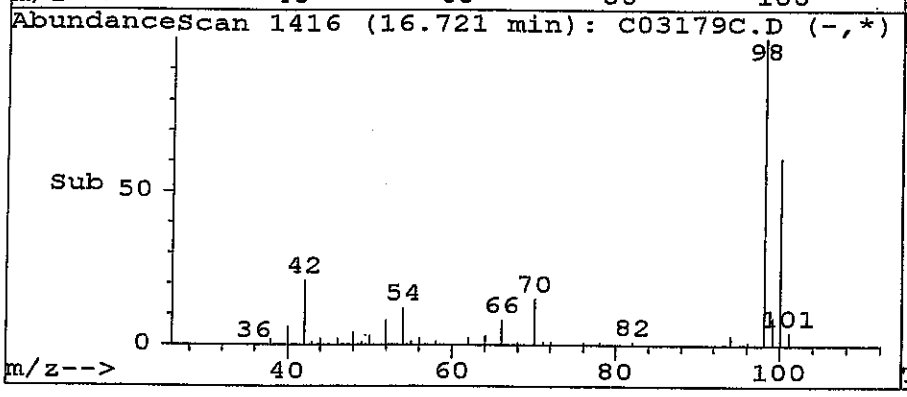


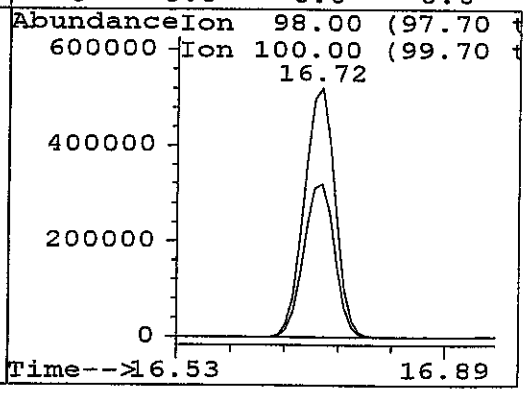


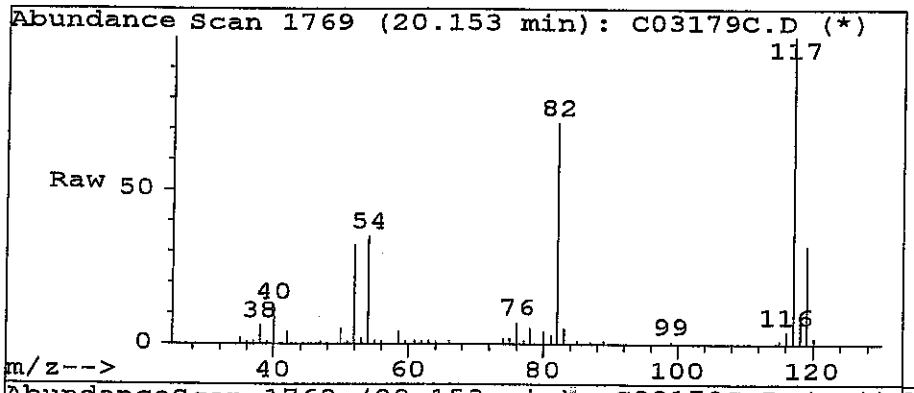
#94
Toluene-d8
Concen: 9.89 ppbV
RT: 16.72 min Scan# 1416
Delta R.T. -0.22 min
Lab File: C03179C.D
Acq: 17 Mar 109 10:25 am

Tgt Ion:98 Resp: 1479389

Ion	Ratio	Lower	Upper
98	100		
100	61.4	51.0	76.6
0	0.0	0.0	0.0
0	0.0	0.0	0.0



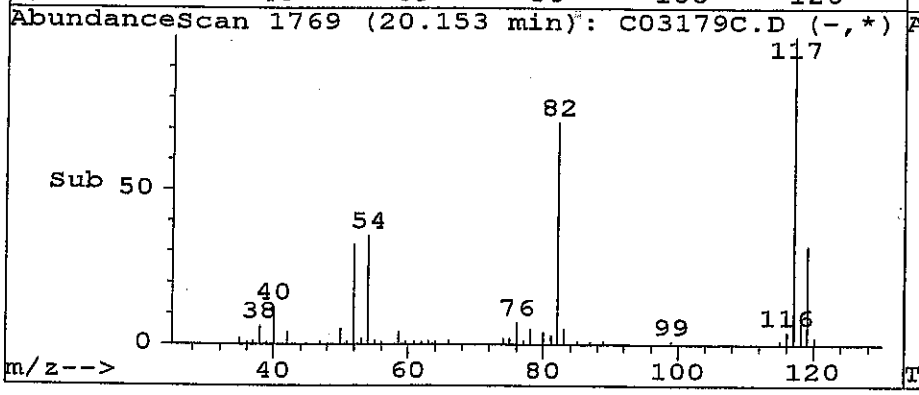


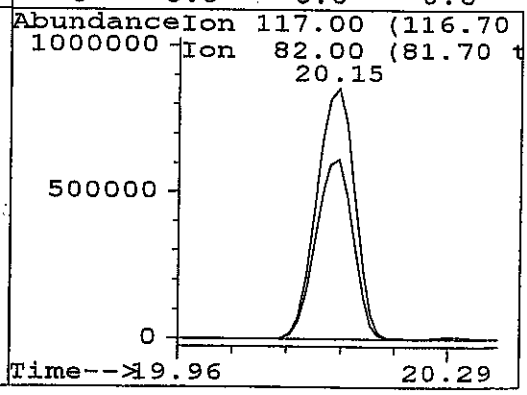


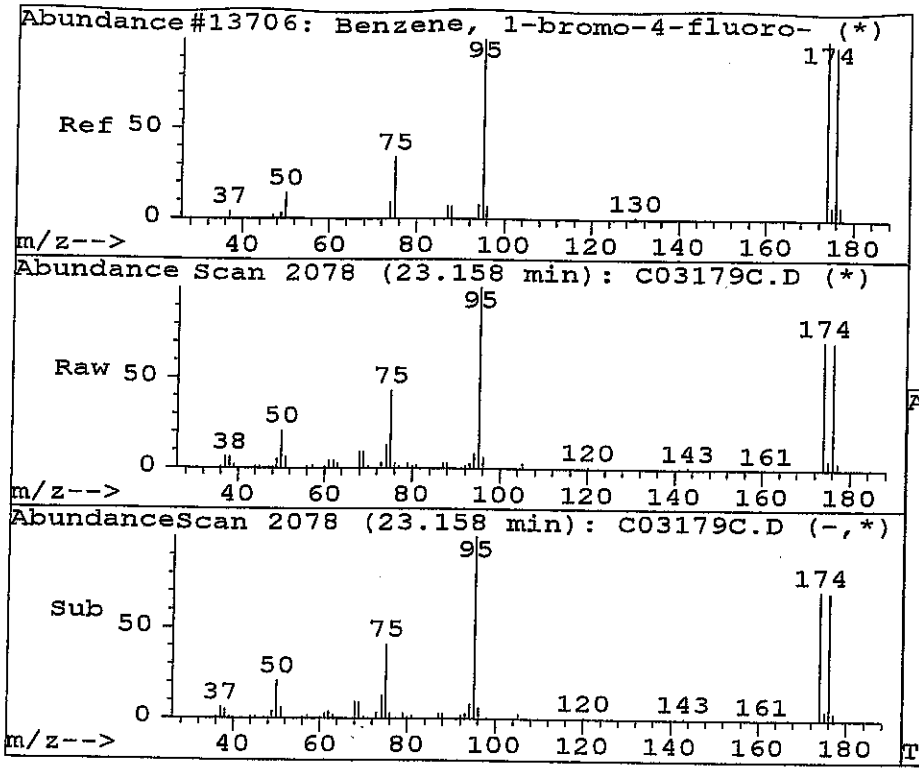
#95
Chlorobenzene-d5
Concen: 19.78 ppbV
RT: 20.15 min Scan# 1769
Delta R.T. -0.21 min
Lab File: C03179C.D
Acq: 17 Mar 109 10:25 am

Tgt Ion:117 Resp: 2736627

Ion	Ratio	Lower	Upper
117	100		
82	71.7	57.0	85.6
0	0.0	0.0	0.0
0	0.0	0.0	0.0



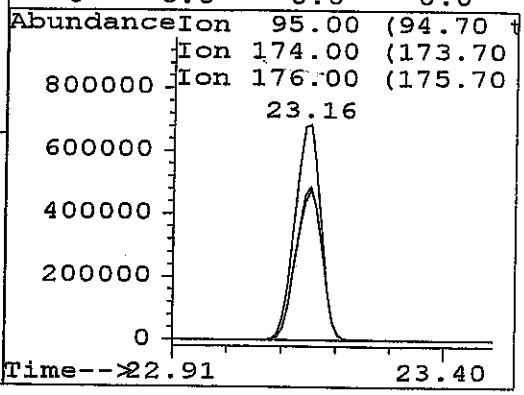




#96
1,4-Bromofluorobenzene
Concen: 10.27 ppbV
RT: 23.16 min Scan# 2078
Delta R.T. -0.22 min
Lab File: C03179C.D
Acq: 17 Mar 109 10:25 am

Tgt Ion:95 Resp: 2176179

Ion	Ratio	Lower	Upper
95	100		
174	71.3	55.4	83.0
176	69.7	55.7	83.5
0	0.0	0.0	0.0



Quantitation Report

Data File : C:\MSCHEM\2\DATA\03179M~1\C03179D.D
Acq Time : 17 Mar 109 11:35 am
Sample : ST60022 + ST60350
Misc : 2.0 ML
Quant Time: Mar 17 13:44 19109

Operator: KB
Inst : 5970 - In
Multiplr: 1.00

Method : C:\MSCHEM\2\METHODS\1T15EXAY.M
Title : EPA TO-15
Last Update : Tue Mar 17 14:18:15 2009
Response via : Multiple Level Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Pentafluorobenzene	11.18	168	3022845	20.00	ppbV		-0.20
35) 1,4-Difluorobenzene	12.96	114	3020264	20.00	ppbV		-0.21
System Monitoring Compounds							%Recovery
94) Toluene-d8	16.72	98	1730275	10.13	ppbV		202.62%
95) Chlorobenzene-d5	20.15	117	3122484	19.94	ppbV		199.35%
96) 1,4-Bromofluorobenzene	23.16	95	2472723	10.20	ppbV		203.98%
Target Compounds							Qvalue
2) Dichlorodifluoromethane	3.72	85	185058	2.16	ppbV		92
3) Chloromethane	3.97	50	113562	1.90	ppbV		93
4) Freon 114	3.99	85	193013	2.12	ppbV		95
5) Vinyl chloride	4.20	62	62953	2.09	ppbV		92
6) Bromomethane	4.77	94	66325	2.25	ppbV		98
7) Chloroethane	4.98	64	32925	2.12	ppbV		93
8) Ethanol	5.09	45	165280	2.87	ppbV	#	83
9) Acrolein	5.73	56	60990	3.80	ppbV		89
10) Trichlorofluoromethane	5.78	101	179451	2.19	ppbV	m	88
11) Acetonitrile	5.78	41	253782	3.36	ppbV		98
12) Acetone	5.87	43	184591	1.33	ppbV		99
13) 2-propanol	6.01	45	154437	1.34	ppbV	m	89
14) Methyl iodide	6.81	142	247256	2.79	ppbV		99
15) 1,1-Dichloroethene	6.71	61	150732	2.08	ppbV		94
16) Acrylonitrile	6.76	53	287296	5.82	ppbV		96
17) Freon 113	6.99	151	132996	2.31	ppbV	#	82
18) Allyl chloride	7.18	41	155953	1.43	ppbV	#	93
19) Dichloromethane	7.14	84	71297	2.27	ppbV	#	86
20) Carbon disulfide	7.36	76	78232	1.44	ppbV	#	98
21) trans-1,2-Dichloroethene	8.20	96	52404	1.27	ppbV	#	76
22) Methyl tert butyl ether	8.35	73	233954	1.21	ppbV	#	89
23) Propionitrile	8.60	54	217366	3.51	ppbV		99
24) 1,1-Dichloroethane	8.70	63	183187	2.09	ppbV		97
25) Vinyl acetate	10.11	43	338492	1.33	ppbV		100
26) 2-Butanone	9.34	72	45058	1.35	ppbV	#	47
27) Hexane	9.52	57	106477	1.09	ppbV	#	76
28) Bromochloromethane	10.29	49	177279	1.37	ppbV	#	85
29) Tetrahydrofuran	10.62	42	617718	1.32	ppbV	m	41
30) Isobutyl alcohol	10.63	74	45653	3.69	ppbV	#	89
31) Methacrylonitrile	9.51	67	179608	4.98	ppbV		93
32) cis-1,2-Dichloroethene	9.91	96	95703	2.09	ppbV		92
33) 2,2-Dichloropropane	10.22	77	171804	1.37	ppbV		96
34) Chloroform	10.32	83	213353	2.02	ppbV		92
36) 1,1,1-Trichloroethane	11.60	97	210683	1.97	ppbV	#	86
37) 1,2-Dichloroethane	11.66	62	187037	1.85	ppbV		94
38) 1,1-Dichloropropene	12.04	75	151371	1.28	ppbV		96
39) Cyclohexane	12.37	56	182159	1.34	ppbV		98
40) Benzene	12.30	78	364766	1.77	ppbV		100
41) Carbon tetrachloride	12.36	117	220983	2.07	ppbV	#	79
42) n-Heptane	13.83	43	300149	1.27	ppbV	#	95
43) 1,2-Dichloropropane	13.85	63	132416	1.98	ppbV		95
44) 1,4 Dioxane	14.17	88	80192	1.21	ppbV	#	89
45) Dibromomethane	13.98	174	200417	1.32	ppbV		97
46) Trichloroethene	13.92	130	165489	1.88	ppbV		96
47) Bromodichloromethane	14.18	83	218119	1.21	ppbV	#	89
48) Methyl methacrylate	14.31	69	346363	3.74	ppbV		89
49) Methyl Isobutyl Ketone	15.52	43	566705	1.44	ppbV		97

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

Quantitation Report

Data File : C:\MSCHEM\2\DATA\03179M~1\C03179D.D
Acq Time : 17 Mar 109 11:35 am
Sample : ST60022 + ST60350
Misc : 2.0 ML
Quant Time: Mar 17 13:44 19109

Operator: KB
Inst : 5970 - In
Multiplr: 1.00

Method : C:\MSCHEM\2\METHODS\1T15EXAY.M
Title : EPA TO-15
Last Update : Tue Mar 17 14:18:15 2009
Response via : Multiple Level Calibration

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
50)	cis-1,3-Dichloropropene	15.60	75	206495	1.95	ppbV		94
51)	Toluene	16.90	91	478350	1.81	ppbV		96
52)	trans-1,3-Dichloropropene	16.63	75	242137	1.92	ppbV		98
53)	1,1,2-Trichloroethane	16.94	61	127239	1.87	ppbV		90
54)	2-Hexanone	17.56	43	678898	1.44	ppbV		97
55)	1,3-Dichloropropane	17.51	76	220671	1.24	ppbV	#	96
56)	Octane	18.06	57	146267	1.31	ppbV	#	92
57)	Dibromochloromethane	18.08	129	322250	1.35	ppbV		94
58)	1,2-Dibromoethane	18.57	107	324567	1.90	ppbV		89
59)	Tetrachloroethene	18.76	166	300057	1.98	ppbV		93
60)	Chlorobenzene	20.23	112	410336	1.86	ppbV	#	87
61)	1,1,1,2-Tetrachloroethane	20.30	131	228762	1.32	ppbV		98
62)	Ethylbenzene	20.77	91	722767	1.95	ppbV		99
63)	m & p-Xylene	21.06	91	1220126	3.86	ppbV		98
64)	Styrene	21.89	104	428714	1.93	ppbV		94
65)	Bromoform	21.79	173	530300	1.34	ppbV		96
66)	o-Xylene	22.02	91	643280	1.83	ppbV		99
67)	1,1,2,2-Tetrachloroethane	22.54	83	560899	1.90	ppbV		99
68)	1,2,3-Trichloropropane	22.85	110	128657	1.19	ppbV		95
69)	t-1,4-Dichloro-2-butene	22.98	53	351682	3.85	ppbV		98
70)	n-Propylbenzene	24.20	91	1169202	1.28	ppbV		99
71)	Isopropylbenzene	24.51	105	943267	1.46	ppbV		99
72)	4-Ethyltoluene	24.51	105	943267	1.40	ppbV		100
73)	1,3,5-Trimethylbenzene	24.67	105	994445	2.17	ppbV		95
74)	Methylstyrene	25.13	118	416310	1.22	ppbV		99
75)	tert-butyl benzene	25.60	119	821357	1.57	ppbV		98
76)	1,2,4-Trimethylbenzene	25.62	105	1033463	2.22	ppbV		99
77)	sec-butylbenzene	26.22	105	1215111	1.57	ppbV		100
78)	1,3-Dichlorobenzene	26.18	146	837609	2.15	ppbV		98
79)	Isopropyltoluene	26.60	119	1156820	1.60	ppbV		100
80)	Benzyl chloride	26.34	91	884546	1.47	ppbV		97
81)	1,4-Dichlorobenzene	26.39	146	896732	2.24	ppbV	m	95
82)	n-Butylbenzene	27.65	91	1379437	1.68	ppbV		99
83)	1,2-Dichlorobenzene	27.24	146	912351	2.00	ppbV		98
84)	1,2-Dibromo-3-chloropropan	28.73	75	1381868	4.23	ppbV		91
85)	Tetraethyl lead	30.77	237	1570438	5.29	ppbV	#	98
86)	1,2,4-Trichlorobenzene	31.79	180	1987175	2.42	ppbV		99
87)	Naphthalene	32.16	128	6661715	4.68	ppbV		99
88)	Hexachlorobutadiene	32.83	225	1622637	2.61	ppbV		97
89)	Propylene	3.64	40	46990	2.73	ppbV	m	84
90)	1,3-Butadiene	4.34	54	70986	1.96	ppbV		90
92)	2-Chlorotoluene	24.25	91	676208	1.42	ppbV	m	77
93)	4-Chlorotoluene	24.42	91	884150	1.47	ppbV		99

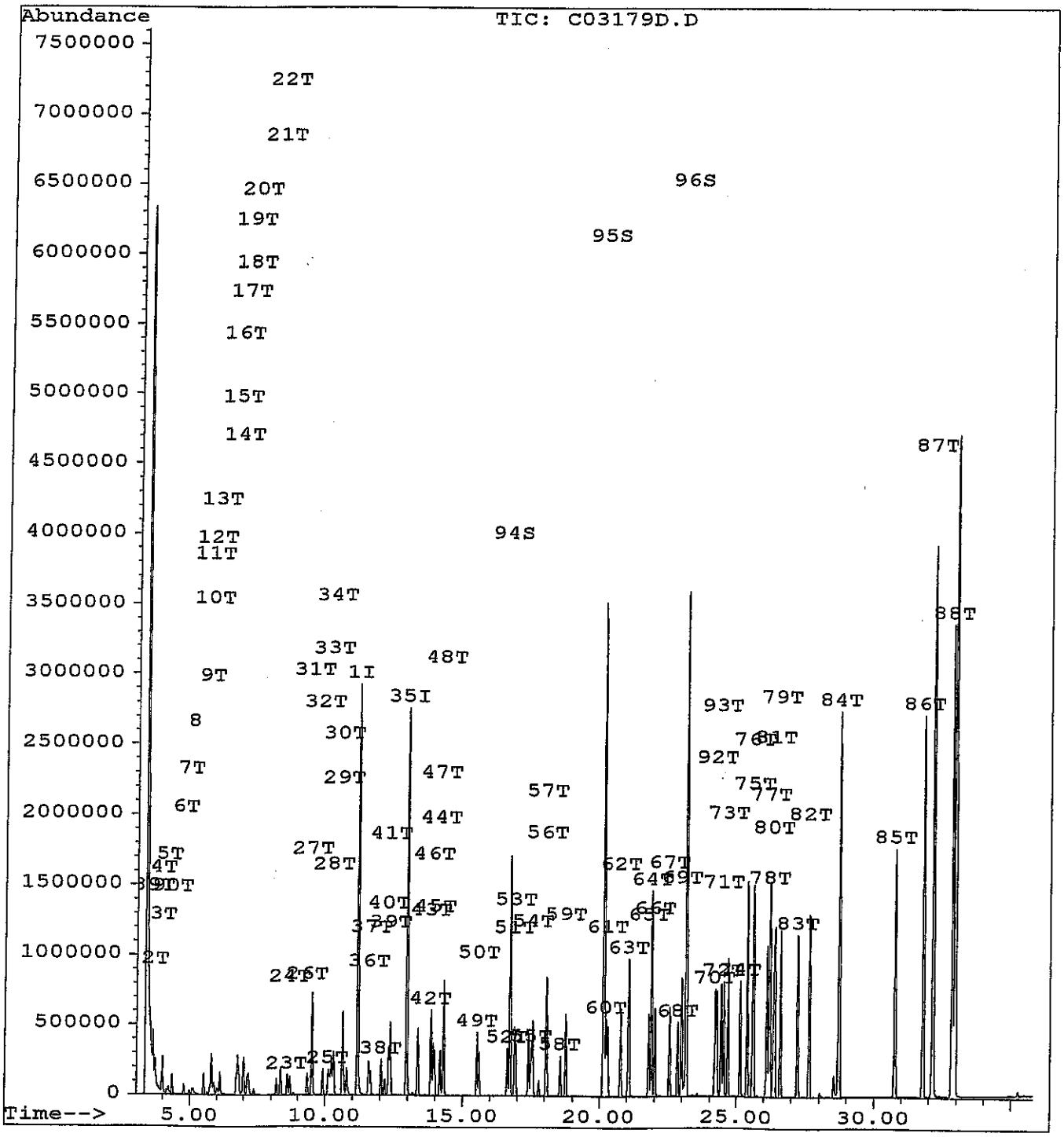
(#) = qualifier out of range (m) = manual integration

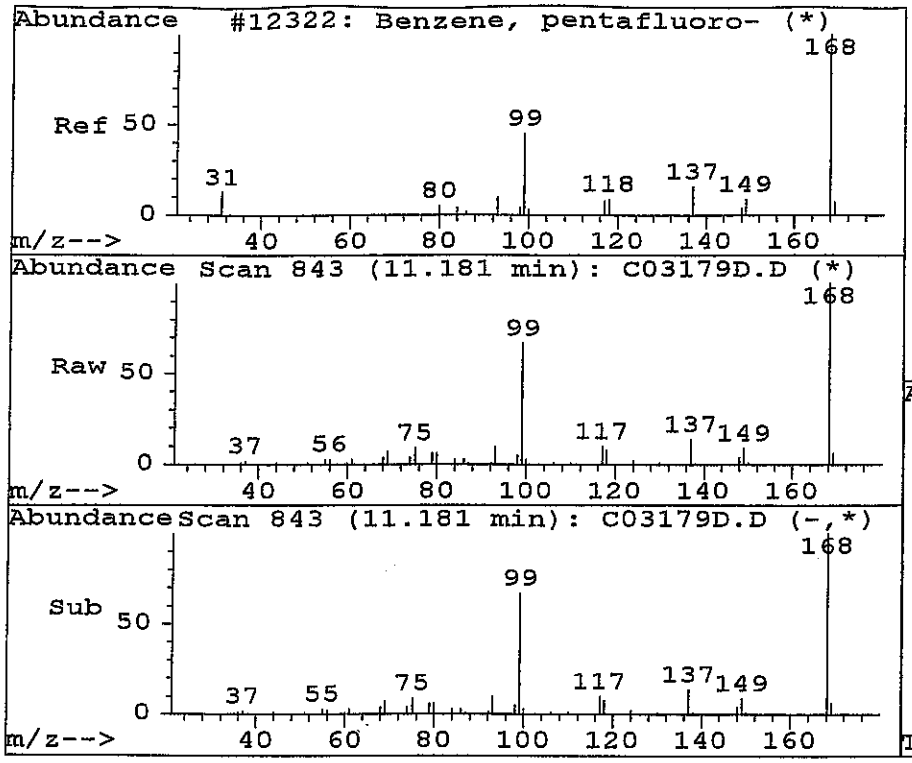
Quantitation Report

Data File : C:\MSCHEM\2\DATA\03179M~1\C03179D.D
Acq Time : 17 Mar 109 11:35 am
Sample : ST60022 + ST60350
Misc : 2.0 ML
Quant Time: Mar 17 13:44 19109

Operator: KB
Inst : 5970 - In
Multiplr: 1.00

Method : C:\MSCHEM\2\METHODS\1T15EXAY.M
Title : EPA TO-15
Last Update : Tue Mar 17 14:18:15 2009
Response via : Multiple Level Calibration

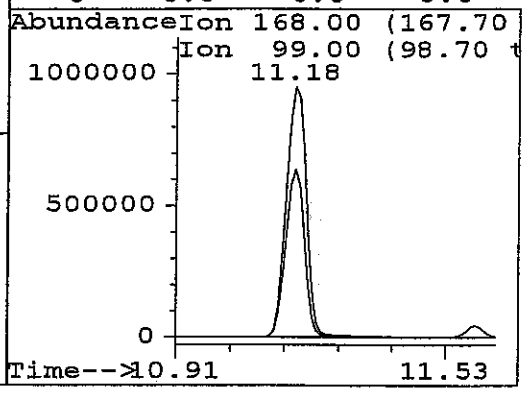


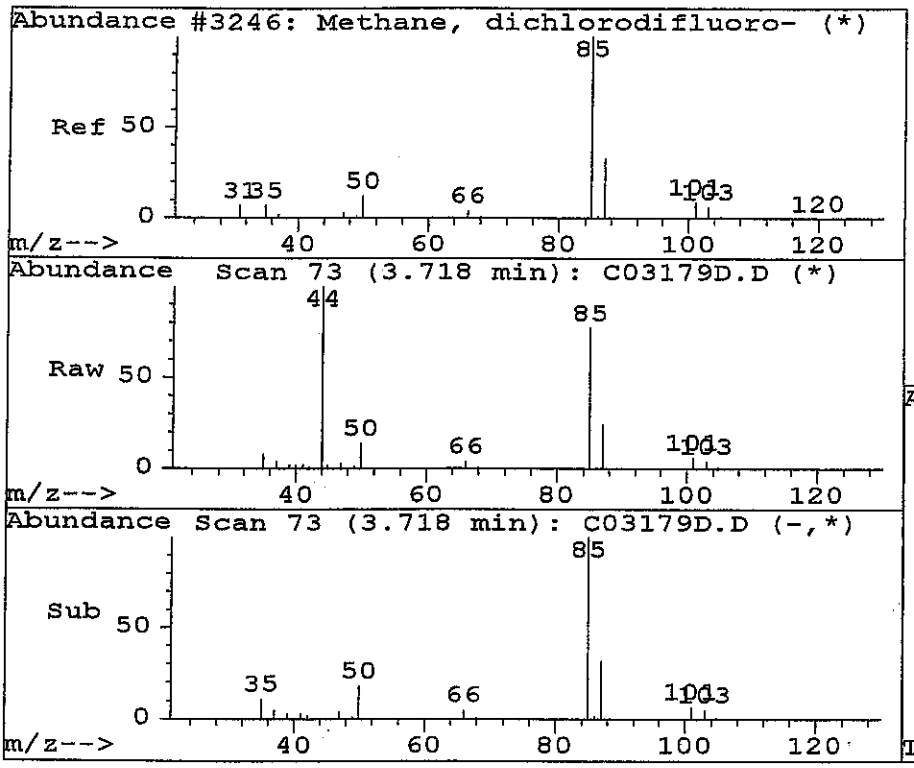


#1
Pentafluorobenzene
Concen: 20.00 ppbV
RT: 11.18 min Scan# 843
Delta R.T. -0.20 min
Lab File: C03179D.D
Acq: 17 Mar 109 11:35 am

Tgt Ion:168 Resp: 3022845

Ion	Ratio	Lower	Upper
168	100		
99	67.3	53.0	79.6
0	0.0	0.0	0.0
0	0.0	0.0	0.0

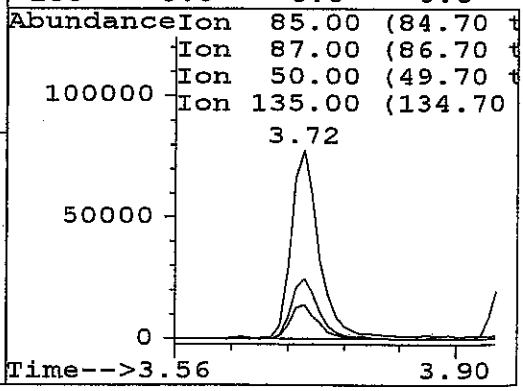


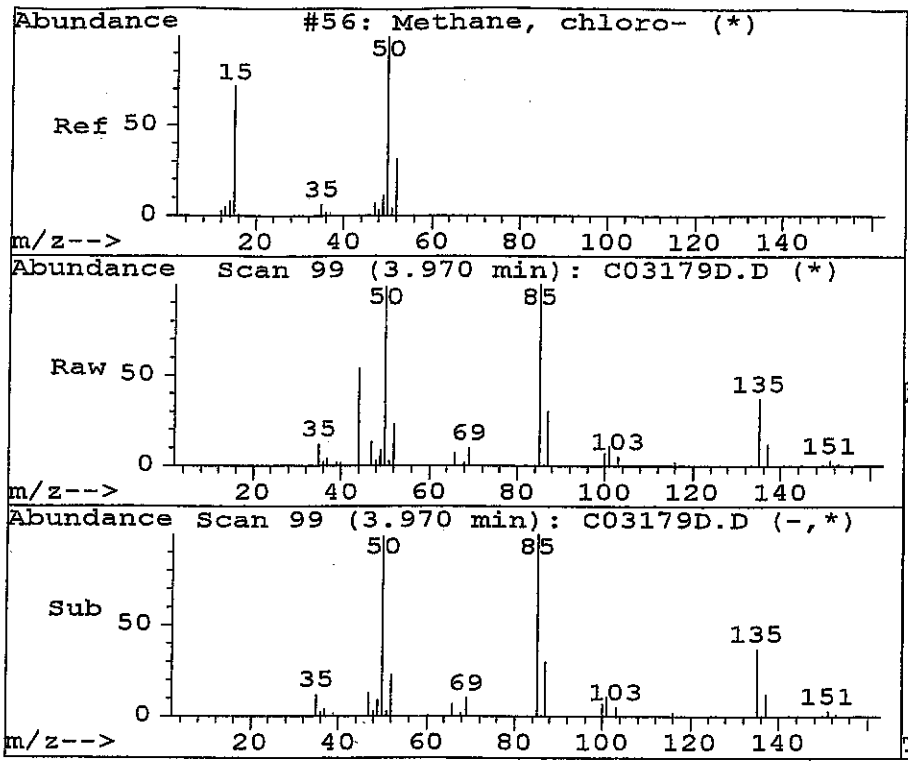


#2
Dichlorodifluoromethane
Concen: 2.16 ppbV
RT: 3.72 min Scan# 73
Delta R.T. -0.11 min
Lab File: C03179D.D
Acq: 17 Mar 109 11:35 am

Tgt Ion:85 Resp: 185058

Ion	Ratio	Lower	Upper
85	100		
87	31.8	30.2	45.2
50	18.2	16.4	24.6
135	0.0	0.0	0.0

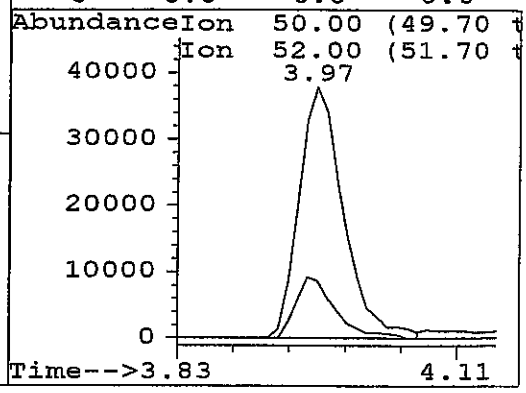


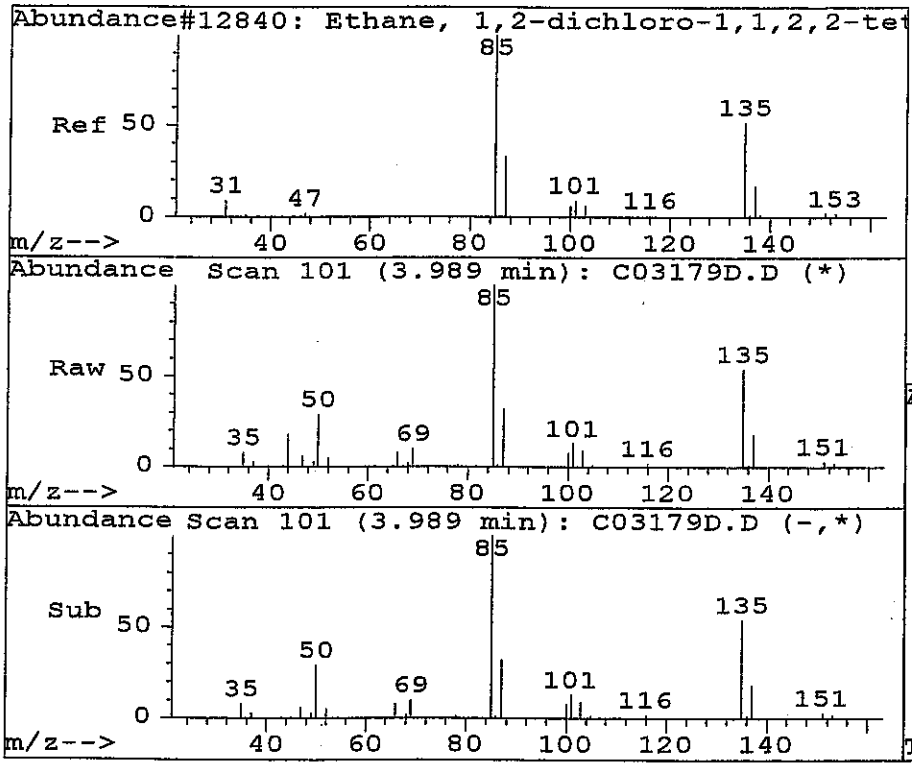


#3
Chloromethane
Concen: 1.90 ppbV
RT: 3.97 min Scan# 99
Delta R.T. -0.12 min
Lab File: C03179D.D
Acq: 17 Mar 109 11:35 am

Tgt Ion:50 Resp: 113562

Ion	Ratio	Lower	Upper
50	100		
52	23.4	16.2	24.4
0	0.0	0.0	0.0
0	0.0	0.0	0.0

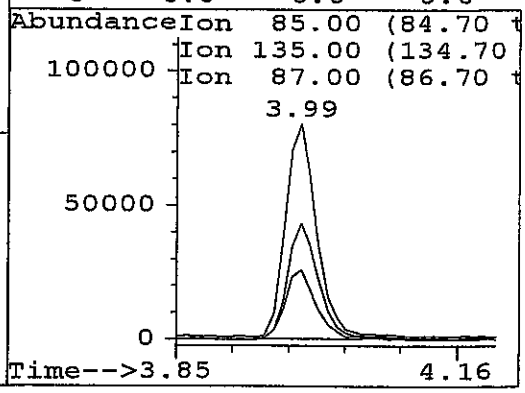


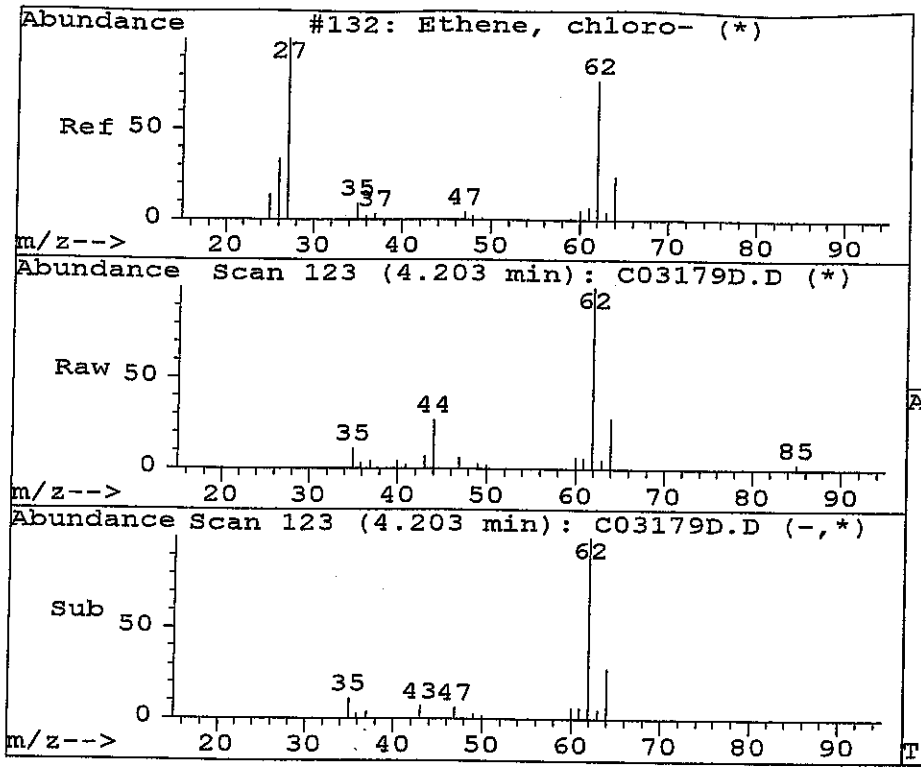


#4
Freon 114
Concen: 2.12 ppbV
RT: 3.99 min Scan# 101
Delta R.T. -0.12 min
Lab File: C03179D.D
Acq: 17 Mar 109 11:35 am

Tgt Ion:85 Resp: 193013

Ion	Ratio	Lower	Upper
85	100		
135	54.2	45.7	68.5
87	32.7	28.7	43.1
0	0.0	0.0	0.0

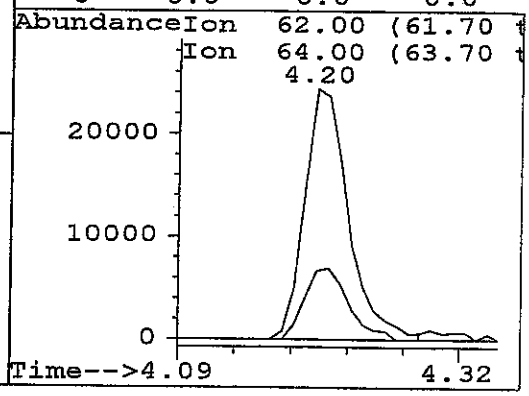


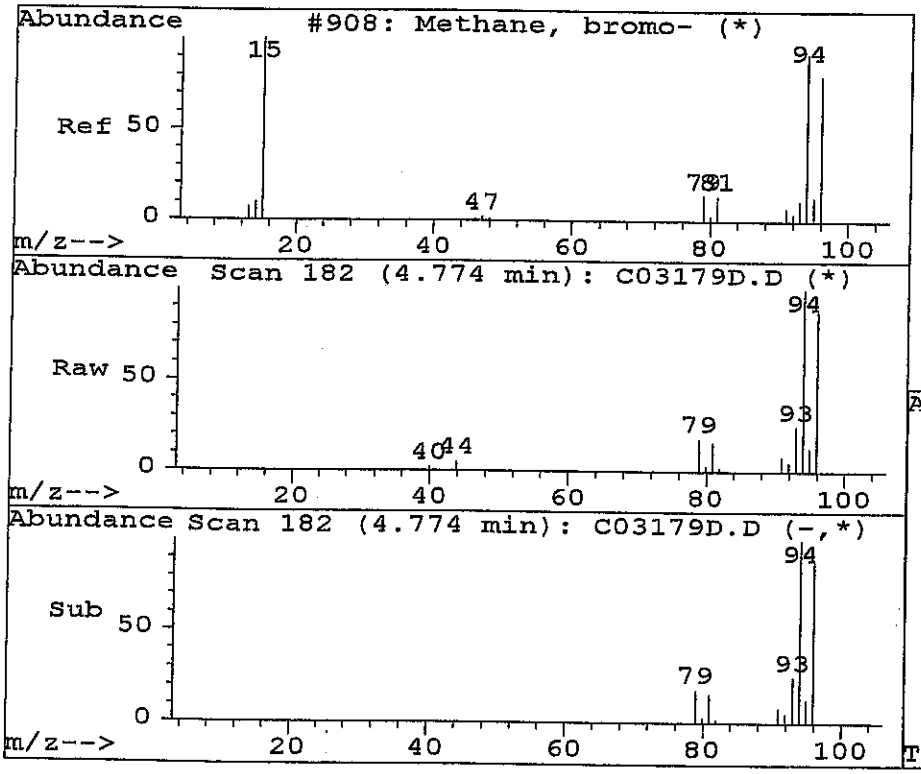


#5
Vinyl chloride
Concen: 2.09 ppbV
RT: 4.20 min Scan# 123
Delta R.T. -0.13 min
Lab File: C03179D.D
Acq: 17 Mar 109 11:35 am

Tgt Ion:62 Resp: 62953

Ion	Ratio	Lower	Upper
62	100		
64	27.9	25.9	38.9
0	0.0	0.0	0.0
0	0.0	0.0	0.0

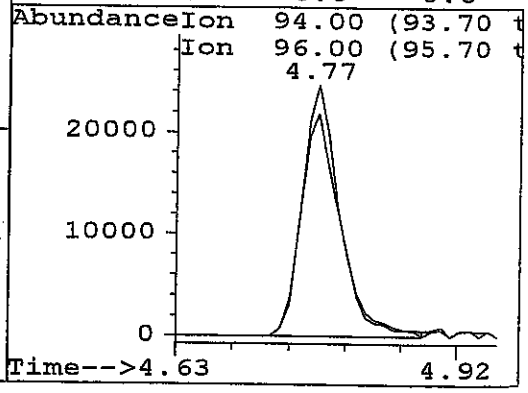


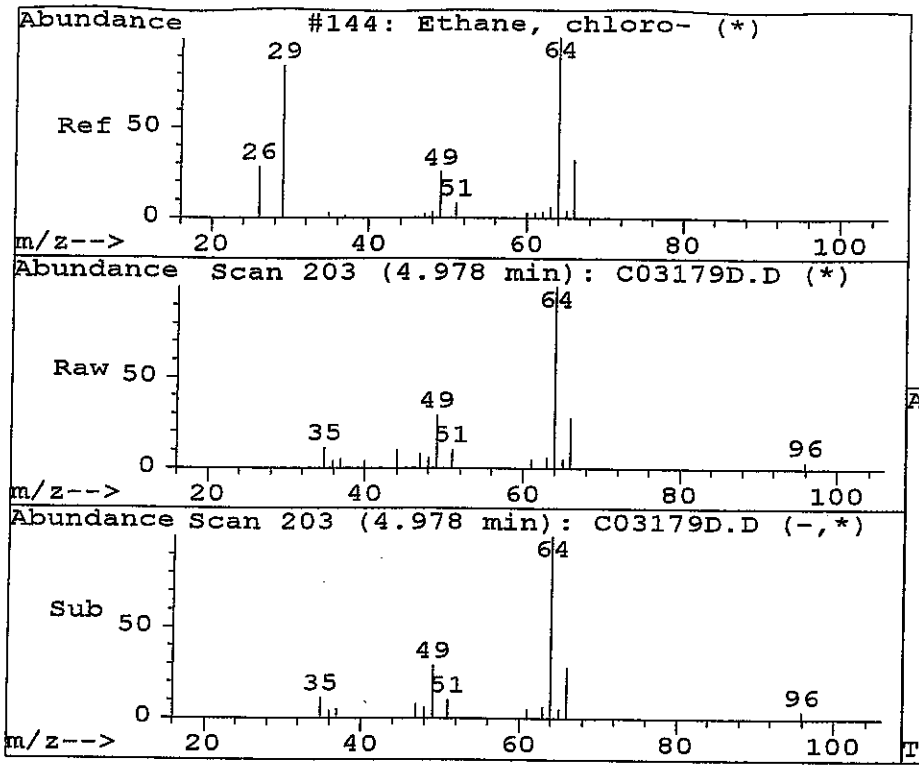


#6
Bromomethane
Concen: 2.25 ppbV
RT: 4.77 min Scan# 182
Delta R.T. -0.15 min
Lab File: C03179D.D
Acq: 17 Mar 109 11:35 am

Tgt Ion:94 Resp: 66325

Ion	Ratio	Lower	Upper
94	100		
96	89.9	70.2	105.4
0	0.0	0.0	0.0
0	0.0	0.0	0.0

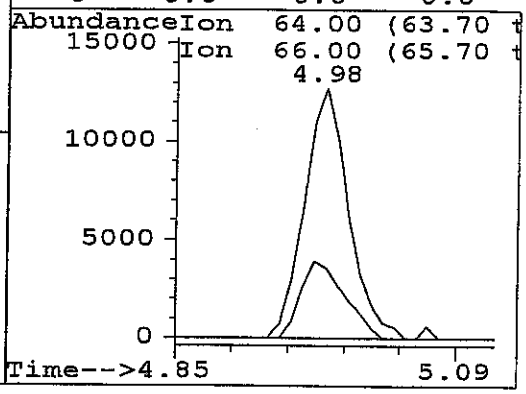


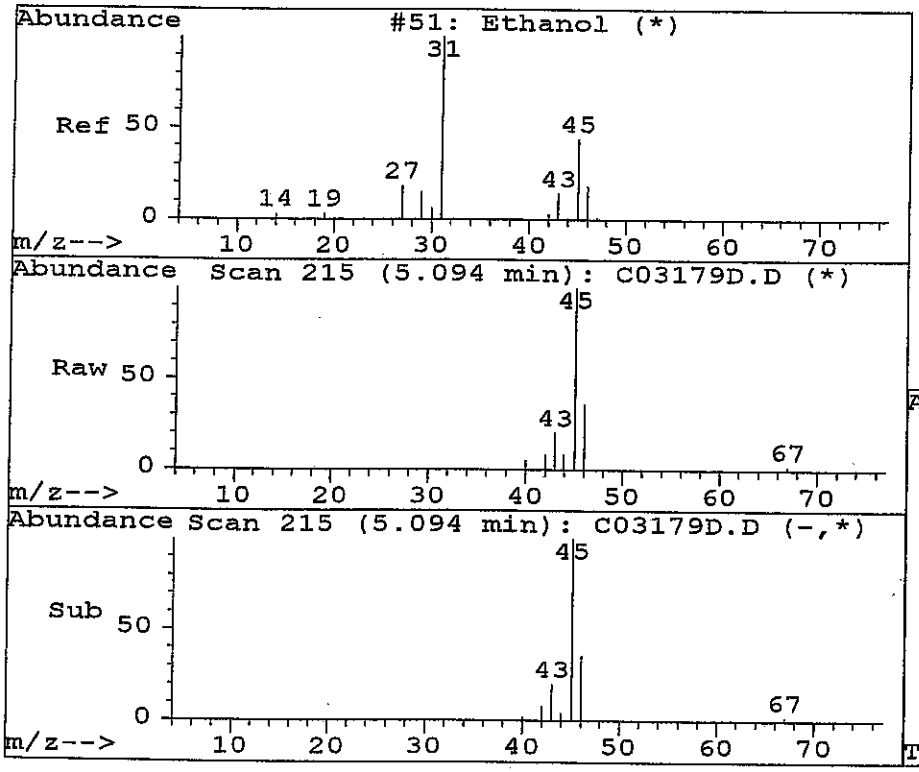


#7
Chloroethane
Concen: 2.12 ppbV
RT: 4.98 min Scan# 203
Delta R.T. -0.14 min
Lab File: C03179D.D
Acq: 17 Mar 109 11:35 am

Tgt Ion:64 Resp: 32925

Ion	Ratio	Lower	Upper
64	100		
66	28.3	25.9	38.9
0	0.0	0.0	0.0
0	0.0	0.0	0.0

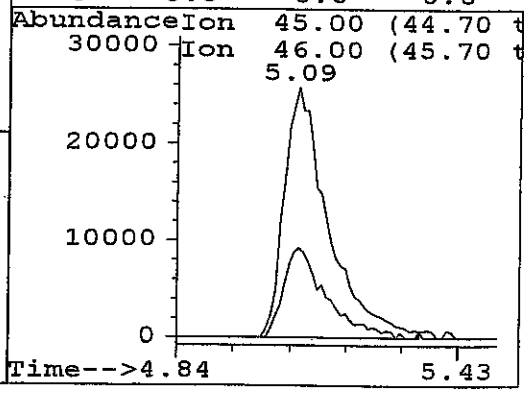


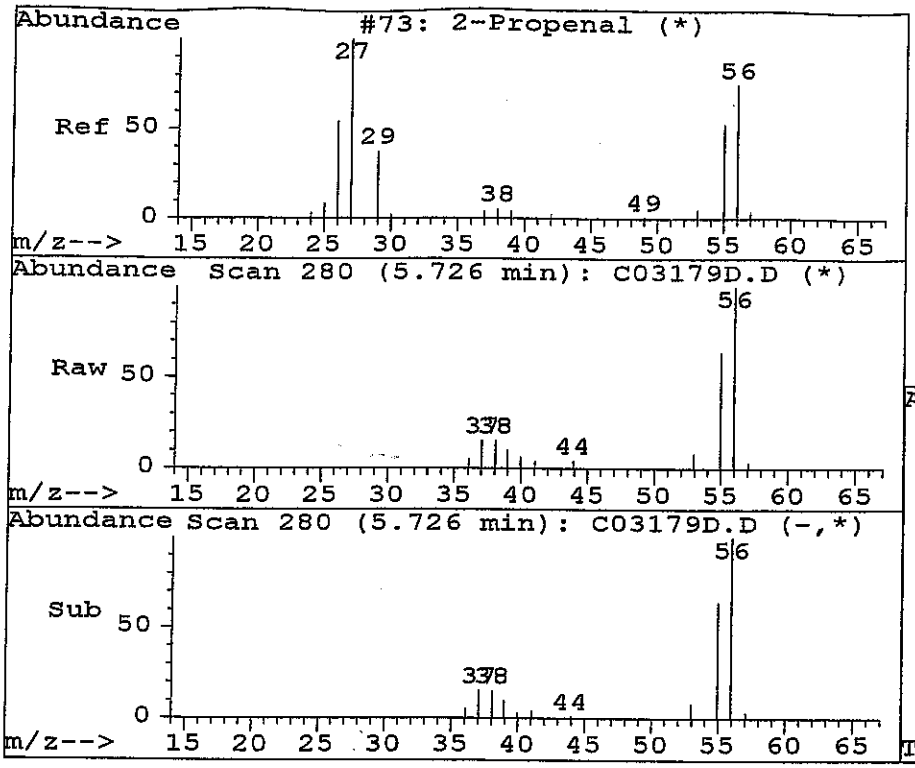


#8
Ethanol
Concen: 2.87 ppbV
RT: 5.09 min Scan# 215
Delta R.T. -0.11 min
Lab File: C03179D.D
Acq: 17 Mar 109 11:35 am

Tgt Ion:45 Resp: 165280

Ion	Ratio	Lower	Upper
45	100		
46	34.9	20.9	31.3#
0	0.0	0.0	0.0
0	0.0	0.0	0.0

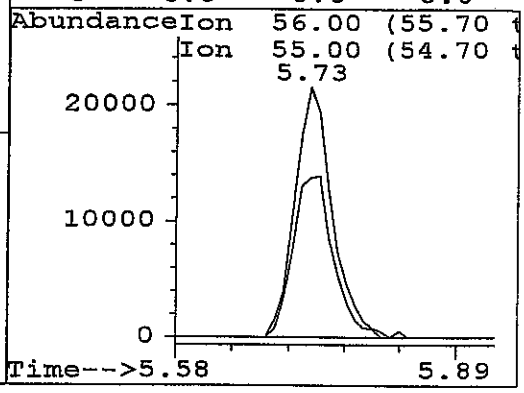


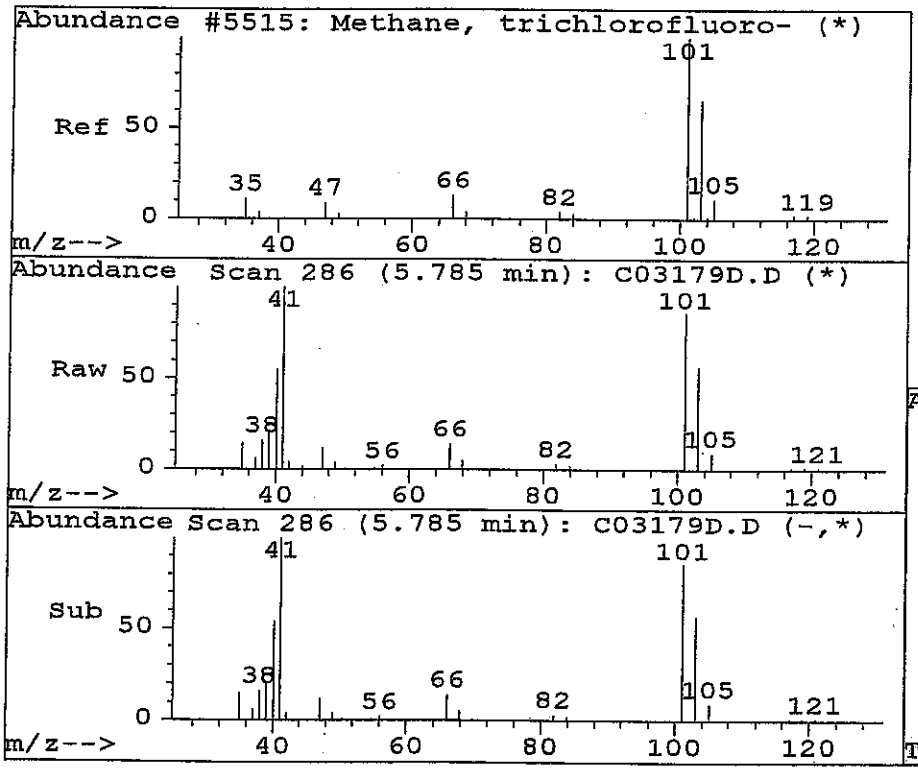


#9
Acrolein
Concen: 3.80 ppbV
RT: 5.73 min Scan# 280
Delta R.T. -0.16 min
Lab File: C03179D.D
Acq: 17 Mar 109 11:35 am

Tgt Ion:56 Resp: 60990

Ion	Ratio	Lower	Upper
56	100		
55	64.0	44.7	67.1
0	0.0	0.0	0.0
0	0.0	0.0	0.0

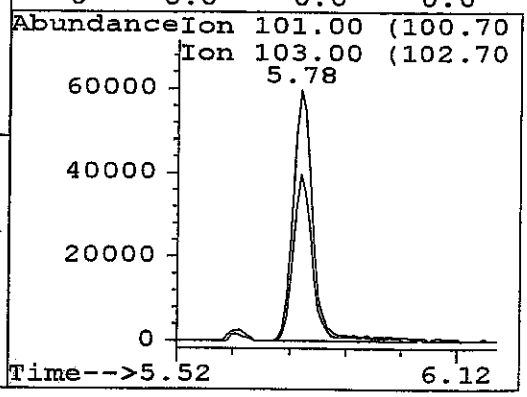


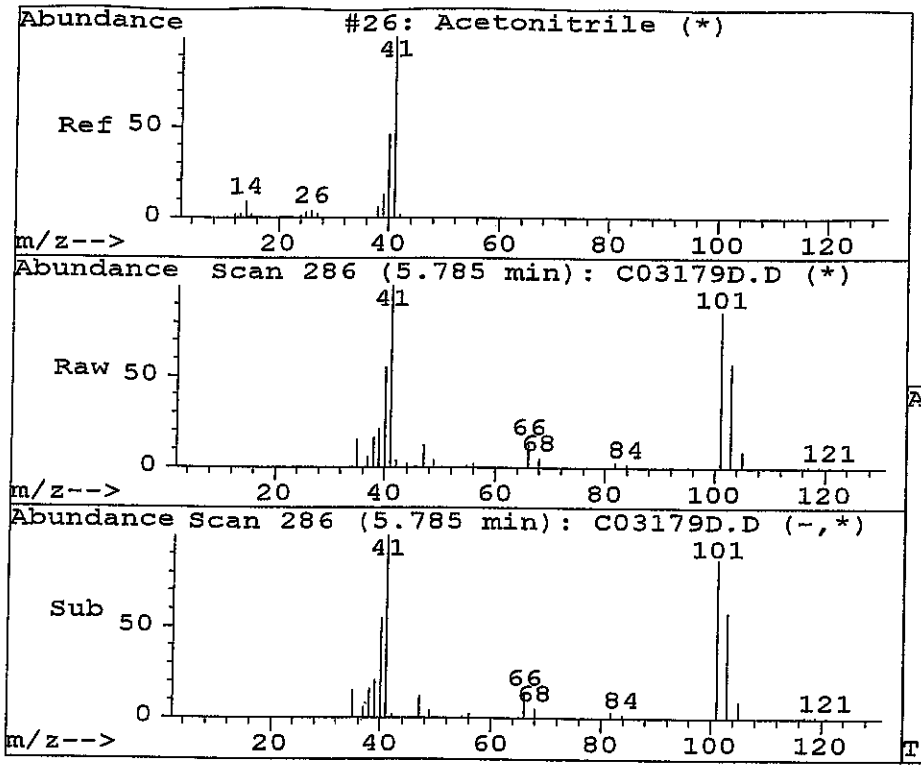


#10
Trichlorofluoromethane
Concen: 2.19 ppbV m
RT: 5.78 min Scan# 286
Delta R.T. -0.16 min
Lab File: C03179D.D
Acq: 17 Mar 109 11:35 am

Tgt Ion:101 Resp: 179451

Ion	Ratio	Lower	Upper
101	100		
103	66.5	43.9	65.9#
0	0.0	0.0	0.0
0	0.0	0.0	0.0

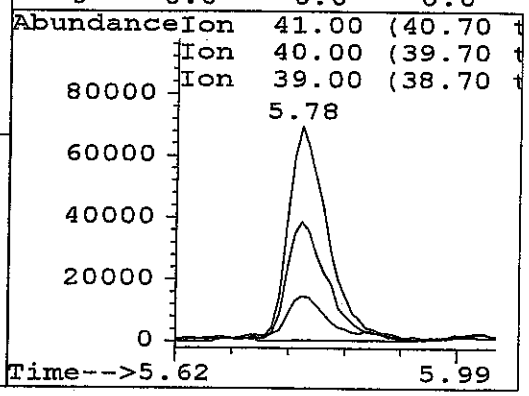


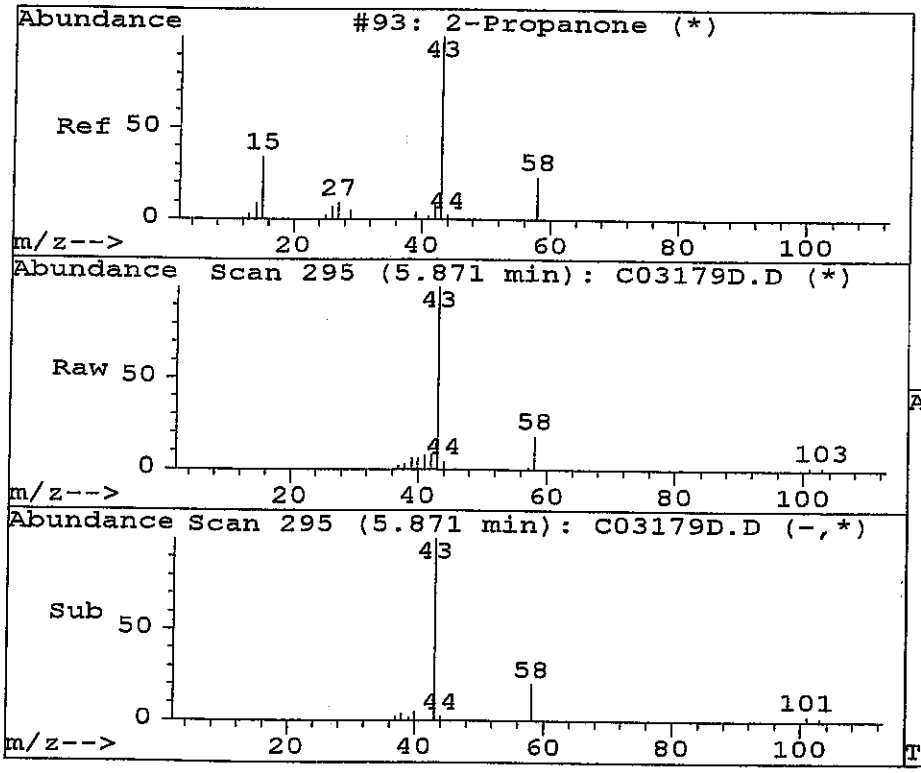


#11
Acetonitrile
Concen: 3.36 ppbV
RT: 5.78 min Scan# 286
Delta R.T. -0.18 min
Lab File: C03179D.D
Acq: 17 Mar 109 11:35 am

Tgt Ion:41 Resp: 253782

Ion	Ratio	Lower	Upper
41	100		
40	54.0	43.8	65.8
39	19.2	16.3	24.5
0	0.0	0.0	0.0

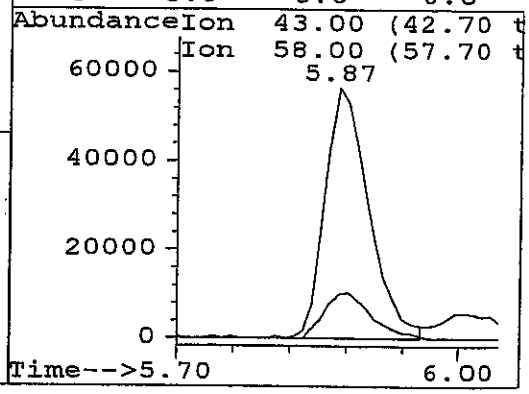


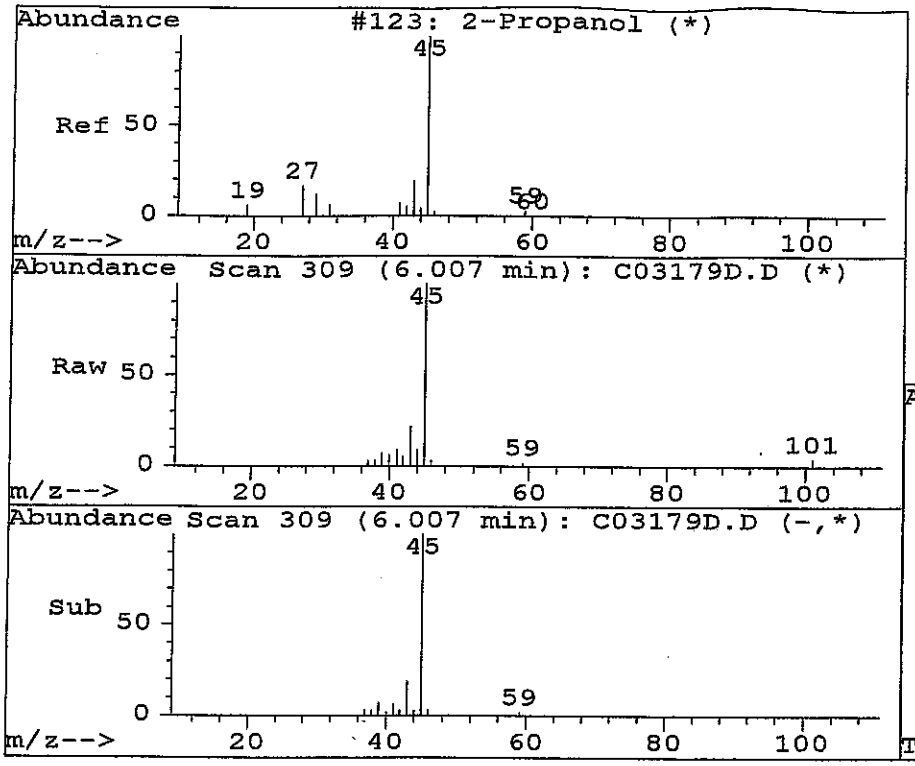


#12
Acetone
Concen: 1.33 ppbV
RT: 5.87 min Scan# 295
Delta R.T. -0.17 min
Lab File: C03179D.D
Acq: 17 Mar 109 11:35 am

Tgt Ion:43 Resp: 184591

Ion	Ratio	Lower	Upper
43	100		
58	17.7	13.8	20.6
0	0.0	0.0	0.0
0	0.0	0.0	0.0

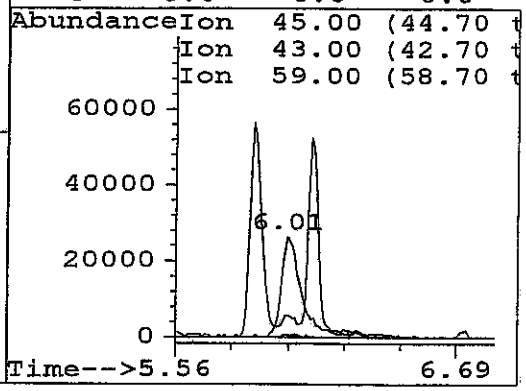


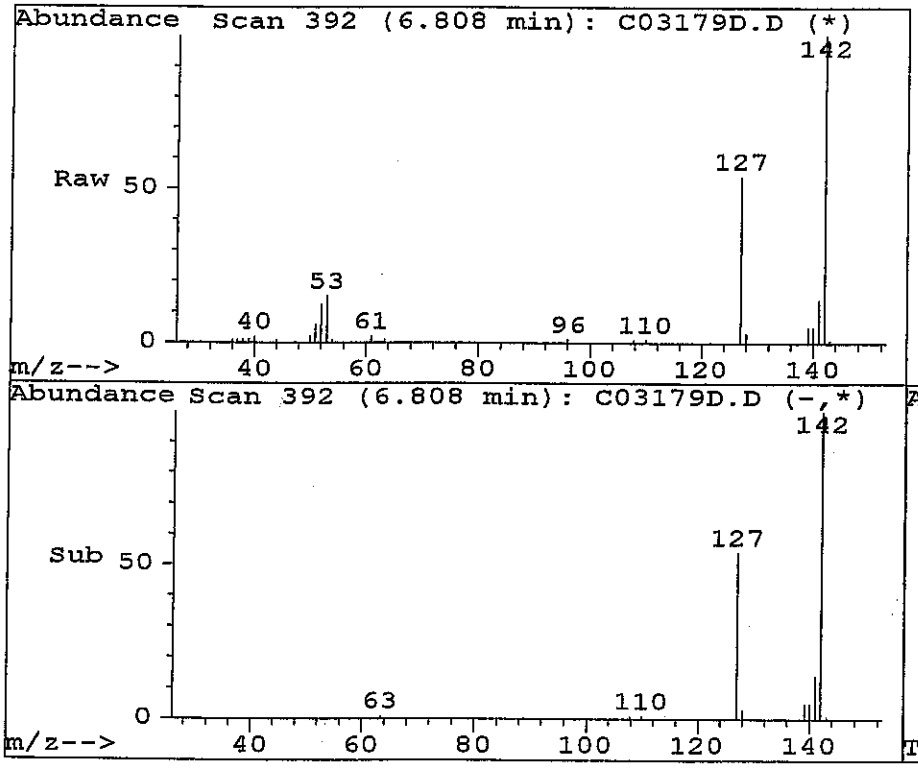


#13
2-propanol
Concen: 1.34 ppbV m
RT: 6.01 min Scan# 309
Delta R.T. -0.13 min
Lab File: C03179D.D
Acq: 17 Mar 109 11:35 am

Tgt Ion:45 Resp: 154437

Ion	Ratio	Lower	Upper
45	100		
43	21.7	17.7	26.5
59	2.2	0.0	0.0#
0	0.0	0.0	0.0

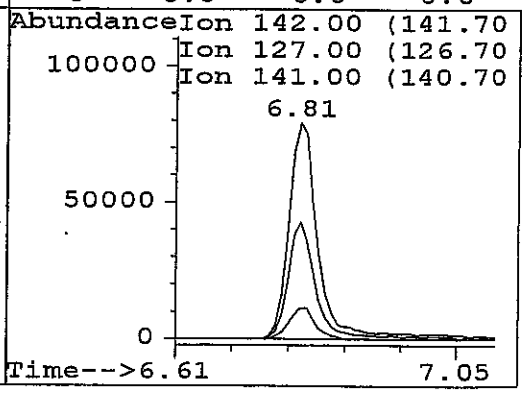


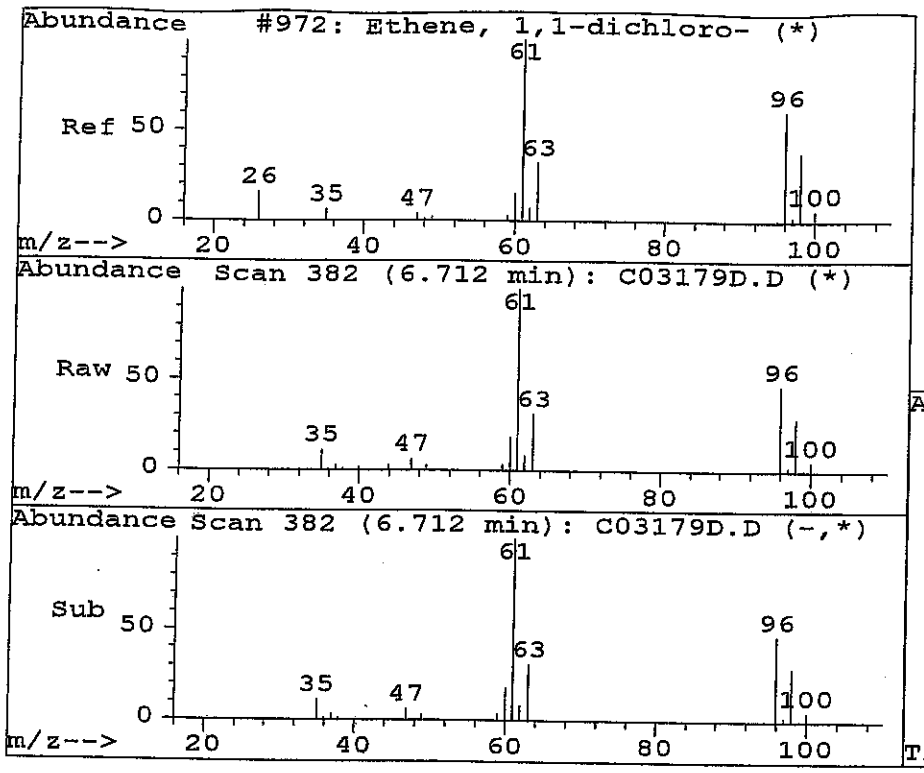


#14
Methyl iodide
Concen: 2.79 ppbV
RT: 6.81 min Scan# 392
Delta R.T. -0.18 min
Lab File: C03179D.D
Acq: 17 Mar 109 11:35 am

Tgt Ion:142 Resp: 247256

Ion	Ratio	Lower	Upper
142	100		
127	53.8	43.0	64.6
141	14.5	10.7	16.1
0	0.0	0.0	0.0

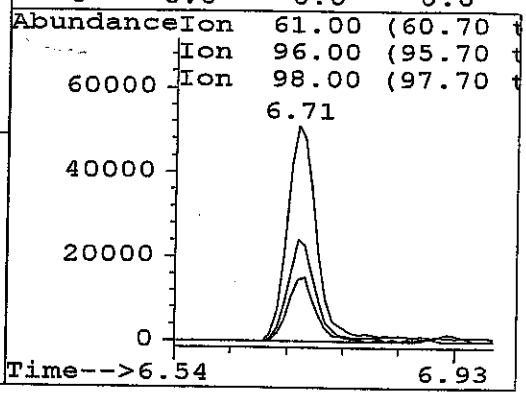


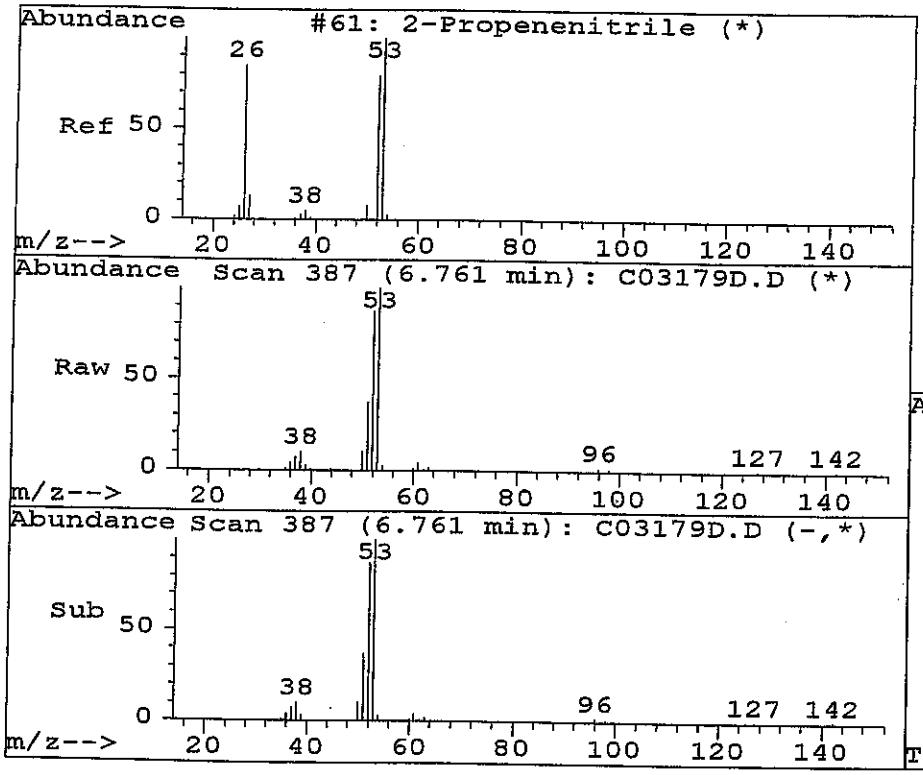


#15
1,1-Dichloroethene
Concen: 2.08 ppbV
RT: 6.71 min Scan# 382
Delta R.T. -0.18 min
Lab File: C03179D.D
Acq: 17 Mar 109 11:35 am

Tgt Ion:61 Resp: 150732

Ion	Ratio	Lower	Upper
61	100		
96	47.4	41.8	62.8
98	28.8	20.7	31.1
0	0.0	0.0	0.0

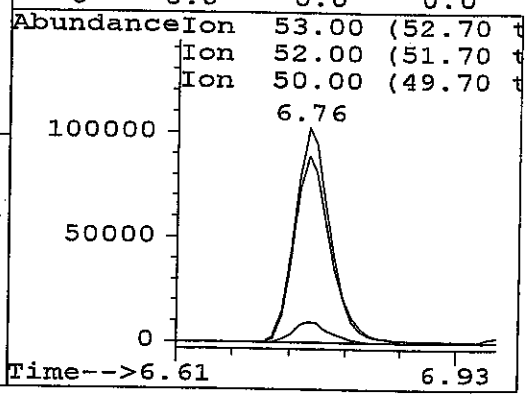


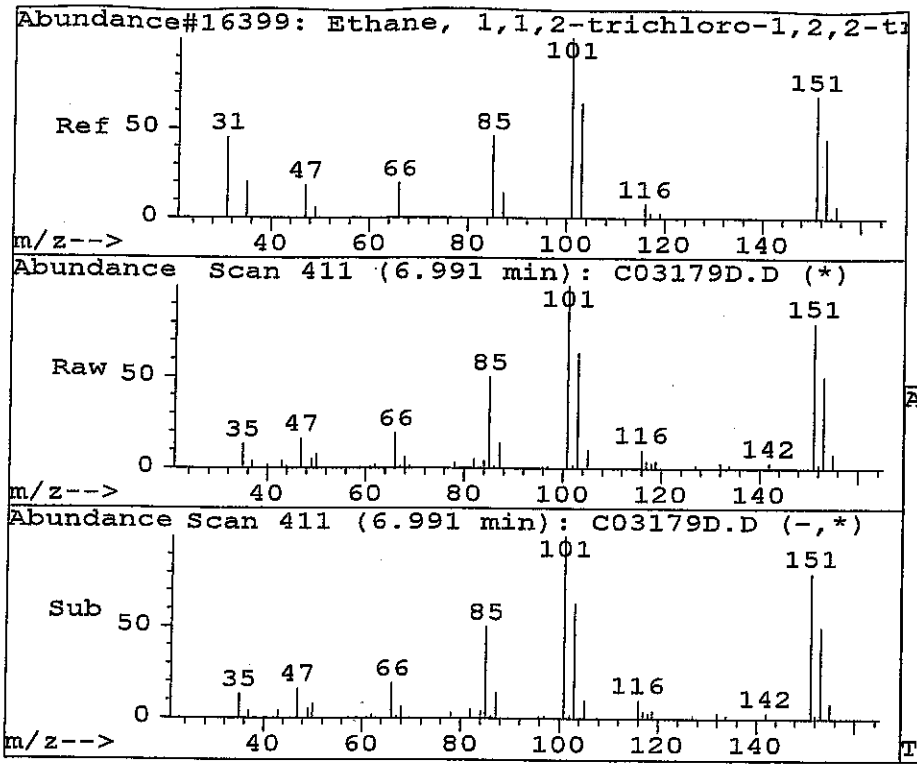


#16
Acrylonitrile
Concen: 5.82 ppbV
RT: 6.76 min Scan# 387
Delta R.T. -0.20 min
Lab File: C03179D.D
Acq: 17 Mar 109 11:35 am

Tgt Ion:53 Resp: 287296

Ion	Ratio	Lower	Upper
53	100		
52	86.9	66.8	100.2
50	9.7	6.7	10.1
0	0.0	0.0	0.0

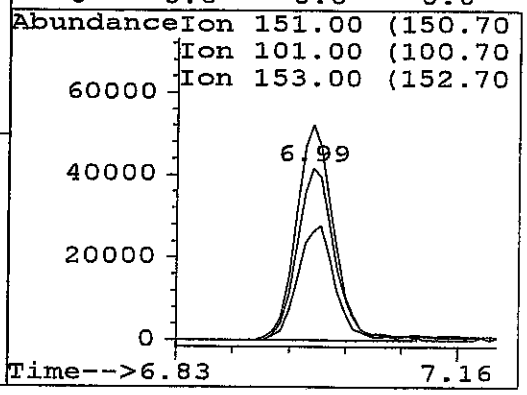


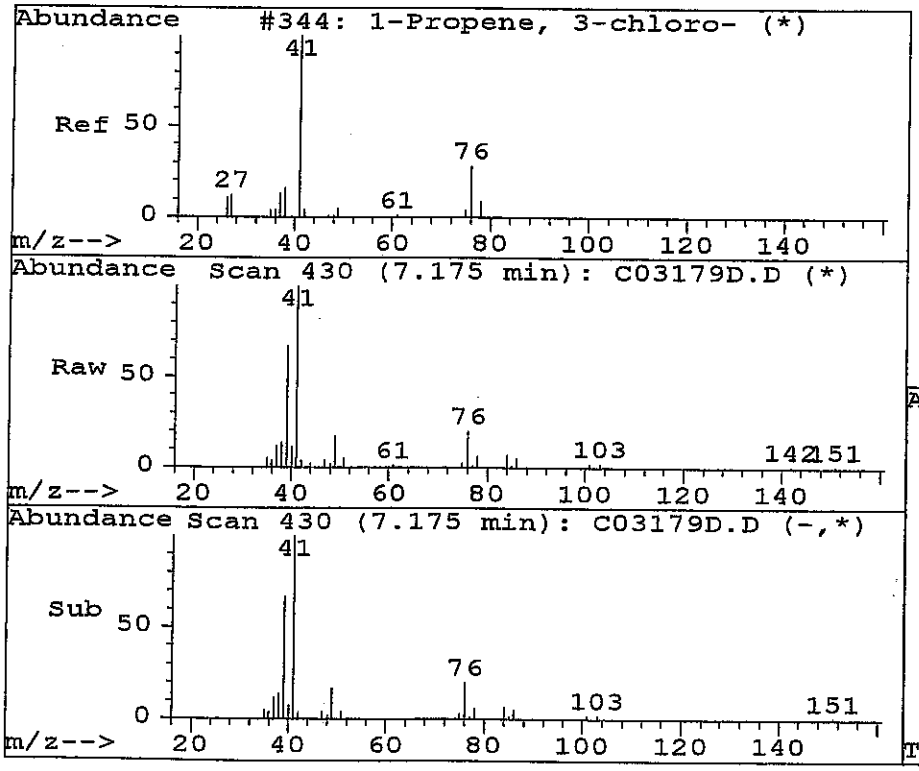


#17
Freon 113
Concen: 2.31 ppbV
RT: 6.99 min Scan# 411
Delta R.T. -0.17 min
Lab File: C03179D.D
Acq: 17 Mar 109 11:35 am

Tgt Ion:151 Resp: 132996

Ion	Ratio	Lower	Upper
151	100		
101	124.9	79.3	118.9#
153	62.6	47.1	70.7
0	0.0	0.0	0.0

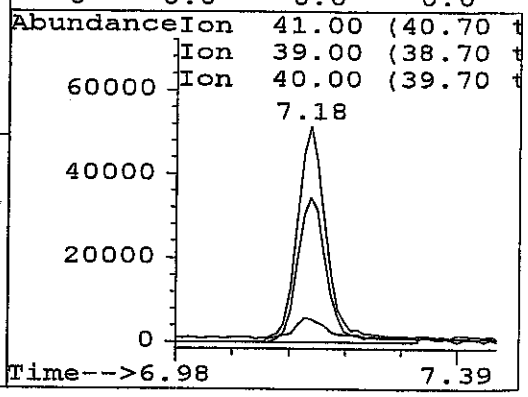


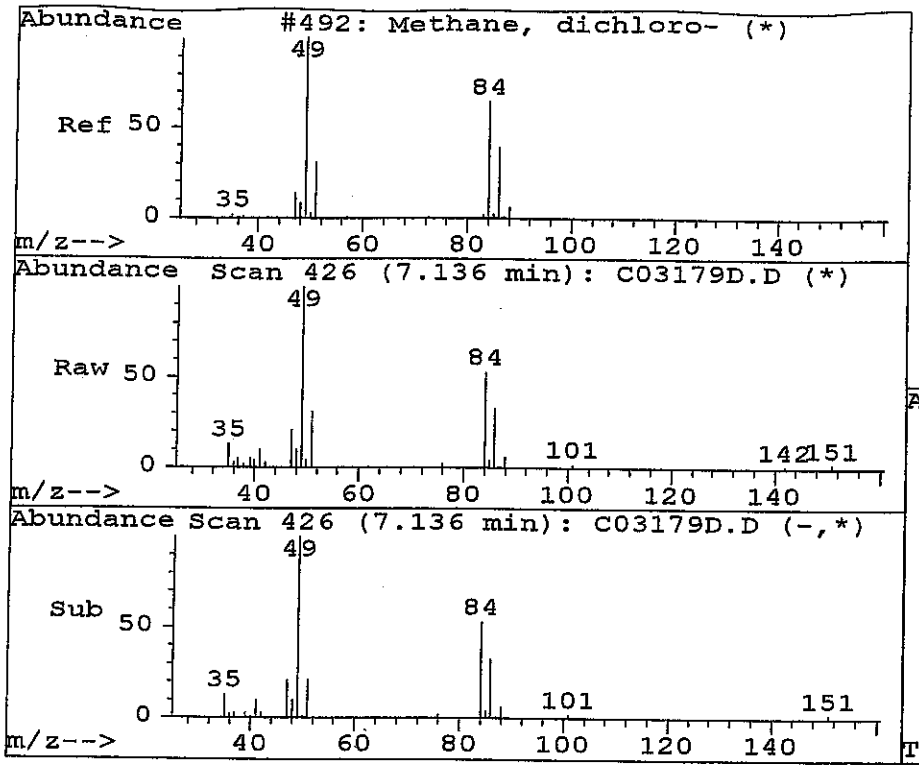


#18
Allyl chloride
Concen: 1.43 ppbV
RT: 7.18 min Scan# 430
Delta R.T. -0.17 min
Lab File: C03179D.D
Acq: 17 Mar 109 11:35 am

Tgt Ion:41 Resp: 155953

Ion	Ratio	Lower	Upper
41	100		
39	66.8	49.0	73.6
40	8.9	5.6	8.4#
0	0.0	0.0	0.0

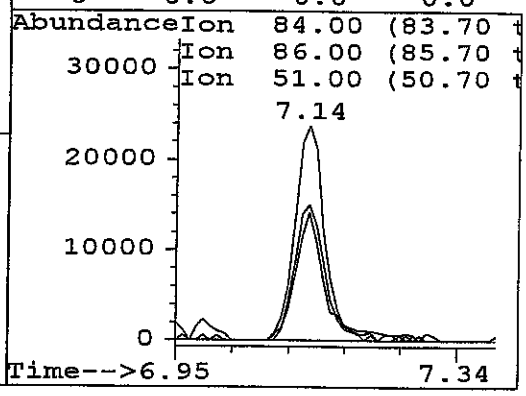


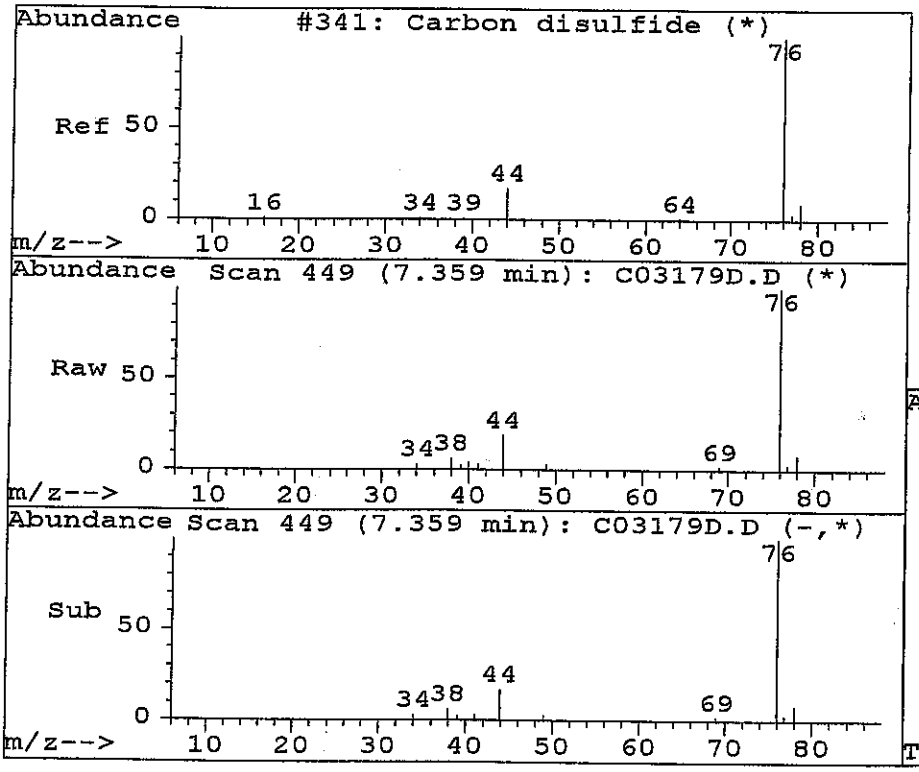


#19
Dichloromethane
Concen: 2.27 ppbV
RT: 7.14 min Scan# 426
Delta R.T. -0.17 min
Lab File: C03179D.D
Acq: 17 Mar 109 11:35 am

Tgt Ion:84 Resp: 71297

Ion	Ratio	Lower	Upper
84	100		
86	63.0	55.8	83.8
51	58.3	34.6	52.0#
0	0.0	0.0	0.0

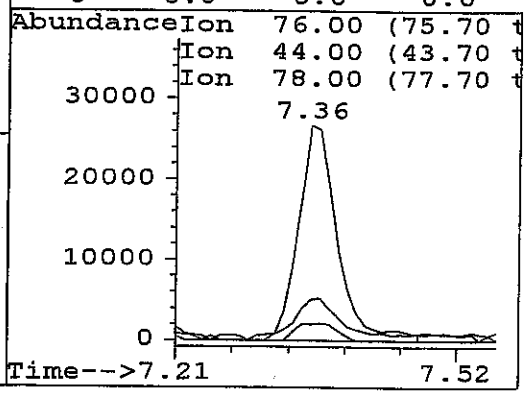


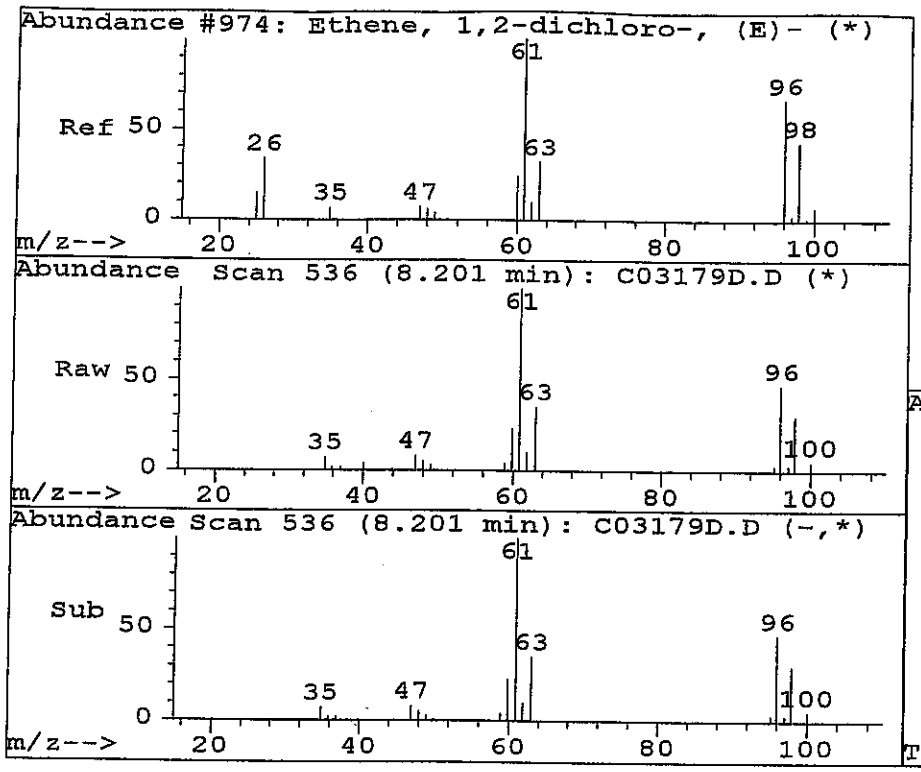


#20
Carbon disulfide
Concen: 1.44 ppbV
RT: 7.36 min Scan# 449
Delta R.T. -0.18 min
Lab File: C03179D.D
Acq: 17 Mar 109 11:35 am

Tgt Ion:76 Resp: 78232

Ion	Ratio	Lower	Upper
76	100		
44	16.5	14.1	21.1
78	7.7	0.0	0.0#
0	0.0	0.0	0.0

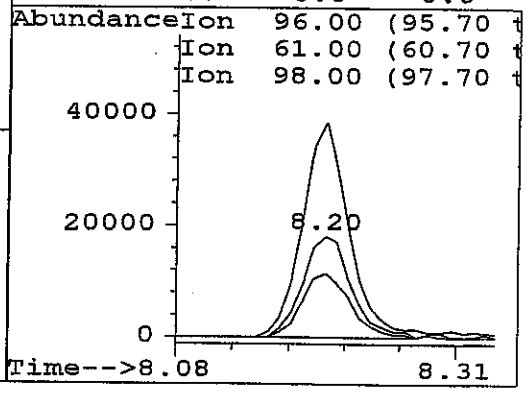


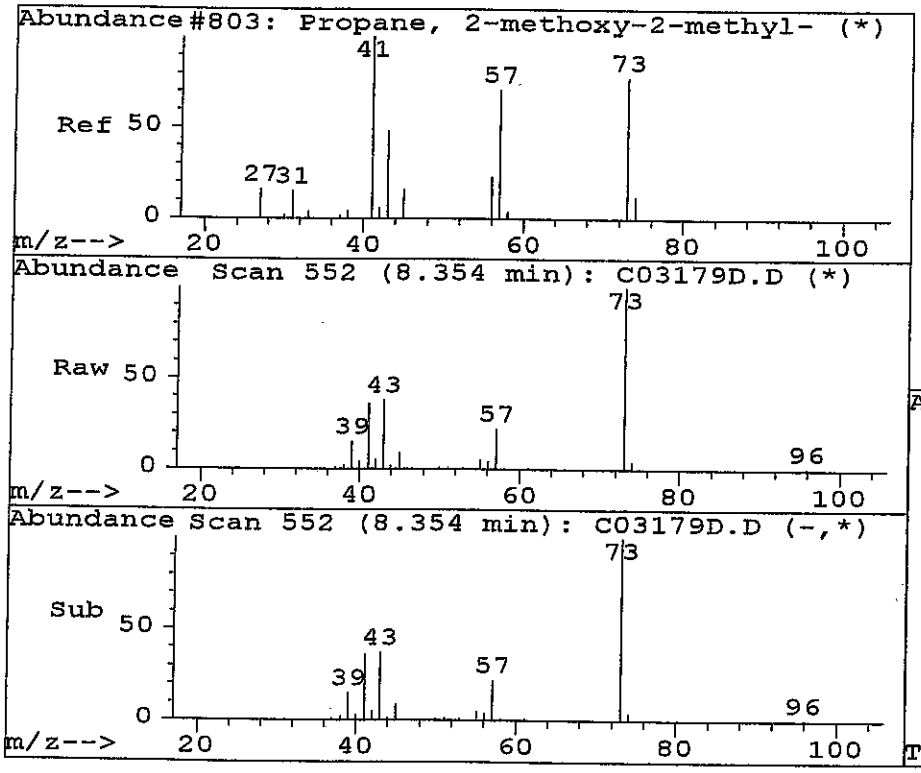


#21
trans-1,2-Dichloroethene
Concen: 1.27 ppbV
RT: 8.20 min Scan# 536
Delta R.T. -0.18 min
Lab File: C03179D.D
Acq: 17 Mar 109 11:35 am

Tgt Ion:96 Resp: 52404

Ion	Ratio	Lower	Upper
96	100		
61	208.7	138.6	207.8#
98	63.3	39.4	59.2#
0	0.0	0.0	0.0

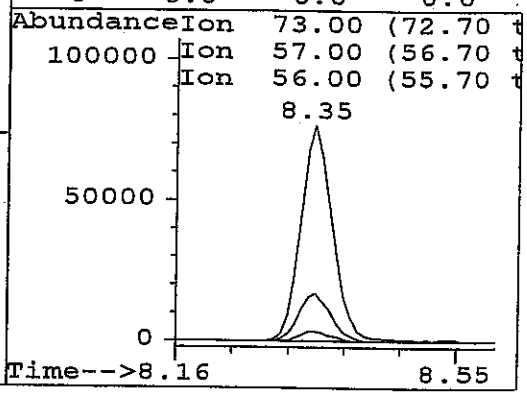


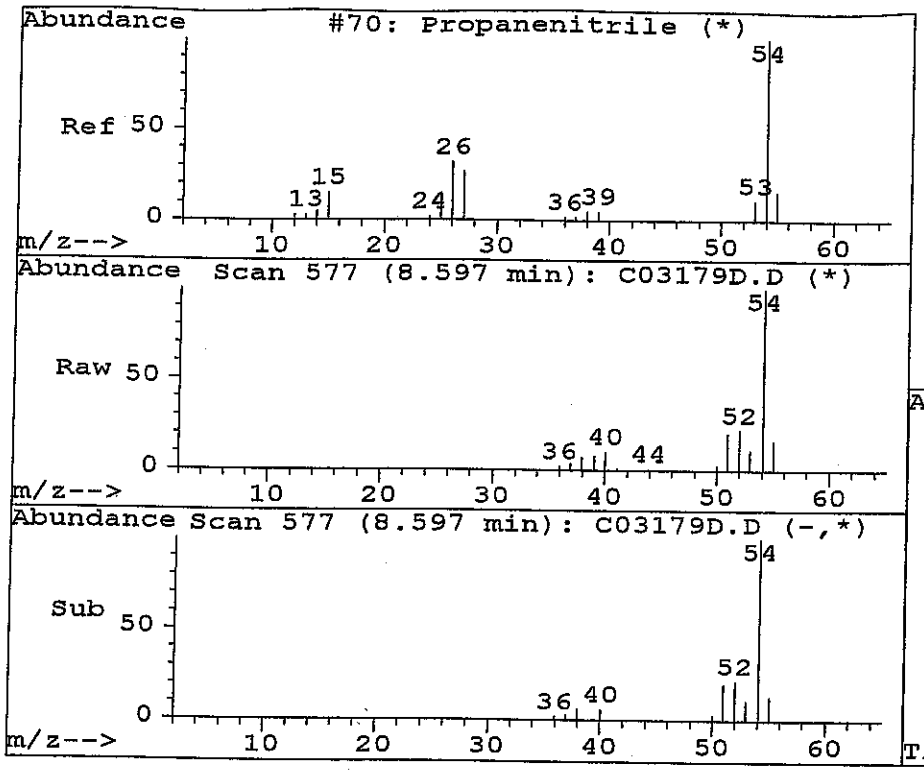


#22
Methyl tert butyl ether
Concen: 1.21 ppbV
RT: 8.35 min Scan# 552
Delta R.T. -0.19 min
Lab File: C03179D.D
Acq: 17 Mar 109 11:35 am

Tgt Ion:73 Resp: 233954

Ion	Ratio	Lower	Upper
73	100		
57	22.1	22.5	33.7#
56	4.4	0.0	0.0#
0	0.0	0.0	0.0

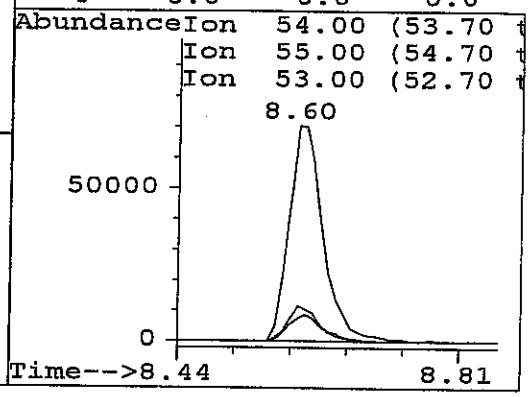


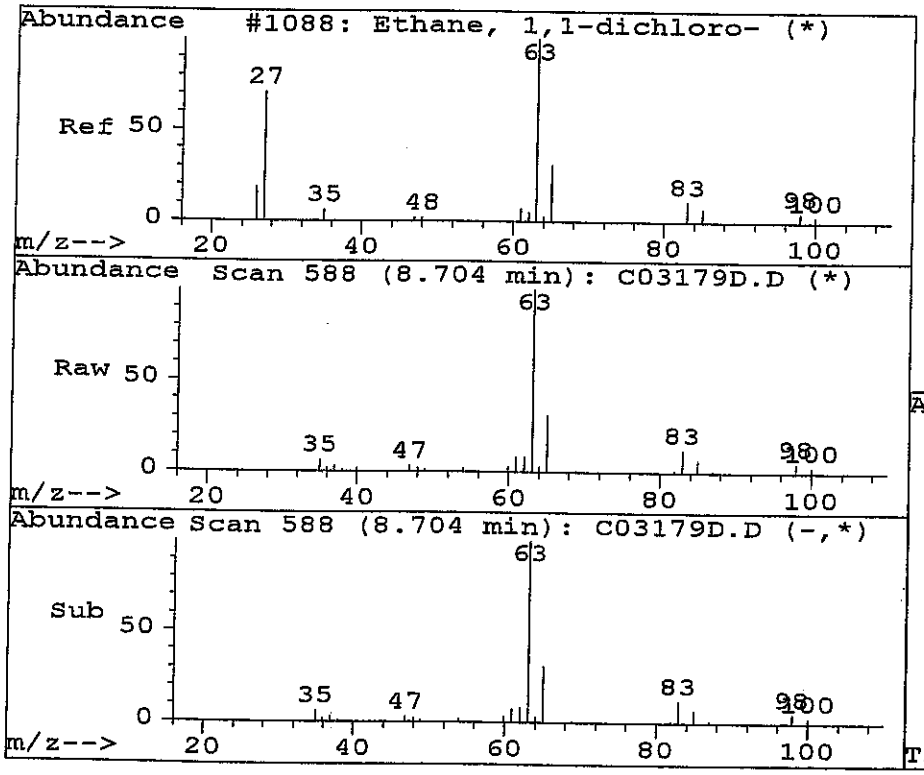


#23
Propionitrile
Concen: 3.51 ppbV
RT: 8.60 min Scan# 577
Delta R.T. -0.23 min
Lab File: C03179D.D
Acq: 17 Mar 109 11:35 am

Tgt Ion:54 Resp: 217366

Ion	Ratio	Lower	Upper
54	100		
55	16.4	12.6	18.8
53	10.7	8.9	13.3
0	0.0	0.0	0.0

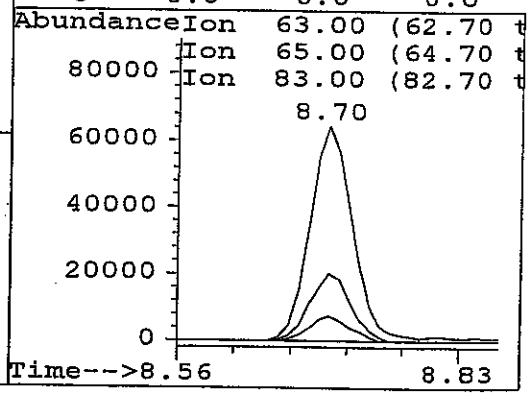


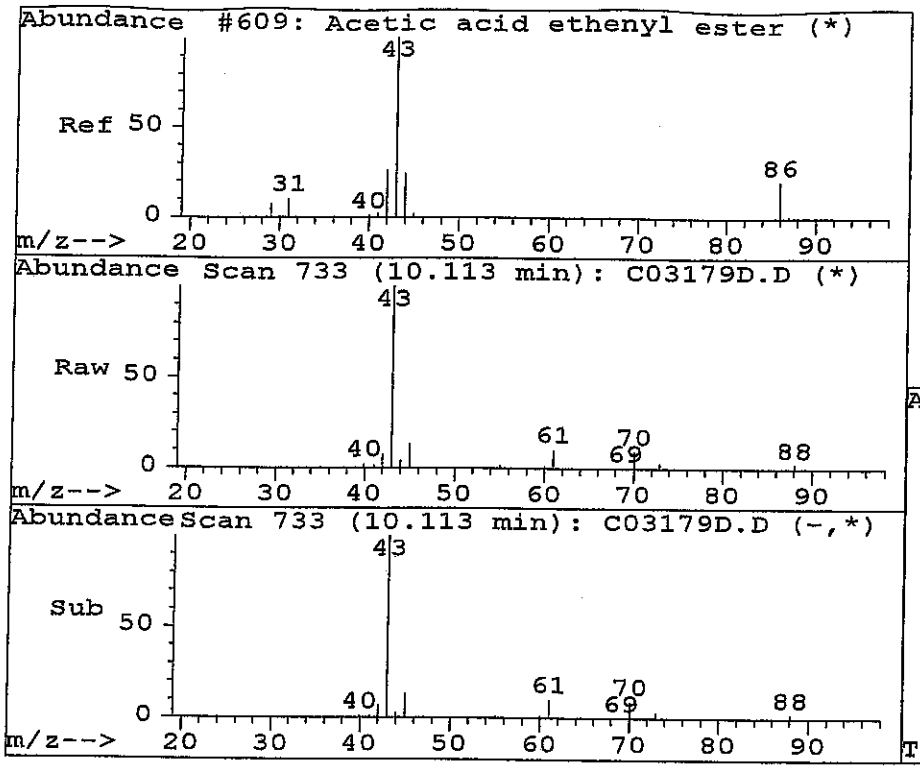


#24
1,1-Dichloroethane
Concen: 2.09 ppbV
RT: 8.70 min Scan# 588
Delta R.T. -0.20 min
Lab File: C03179D.D
Acq: 17 Mar 109 11:35 am

Tgt Ion:63 Resp: 183187

Ion	Ratio	Lower	Upper
63	100		
65	31.5	24.0	36.0
83	11.8	8.7	13.1
0	0.0	0.0	0.0

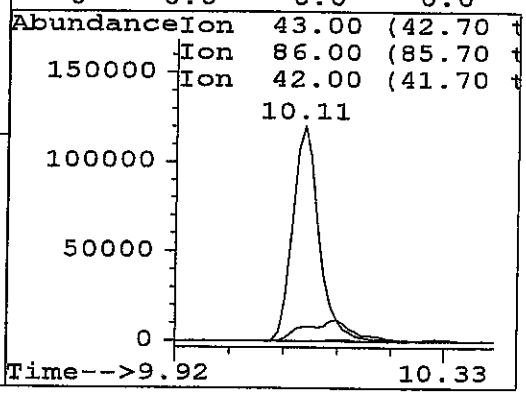


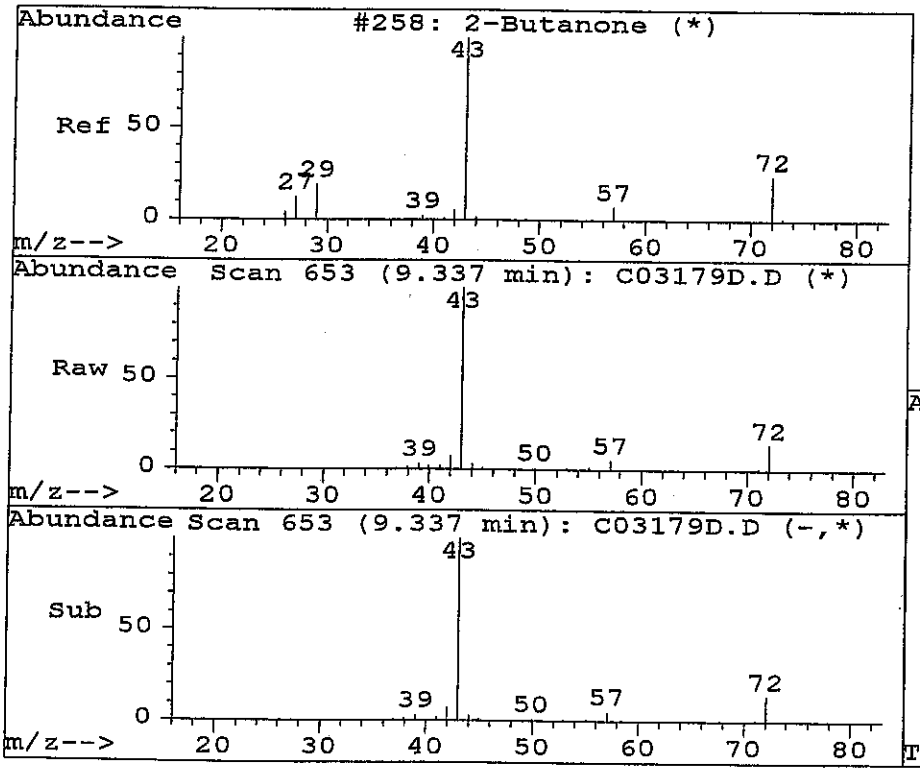


#25
Vinyl acetate
Concen: 1.33 ppbV
RT: 10.11 min Scan# 733
Delta R.T. -0.21 min
Lab File: C03179D.D
Acq: 17 Mar 109 11:35 am

Tgt Ion:43 Resp: 338492

Ion	Ratio	Lower	Upper
43	100		
86	0.0	0.0	0.0
42	6.5	5.4	8.0
0	0.0	0.0	0.0

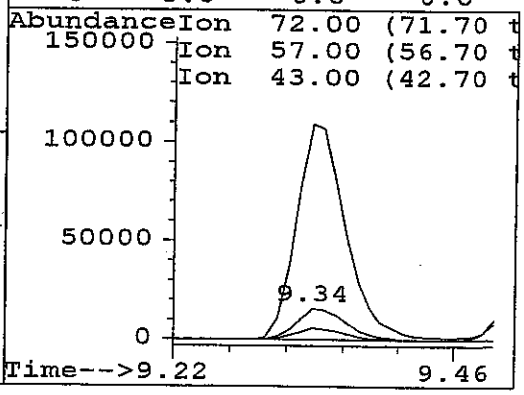


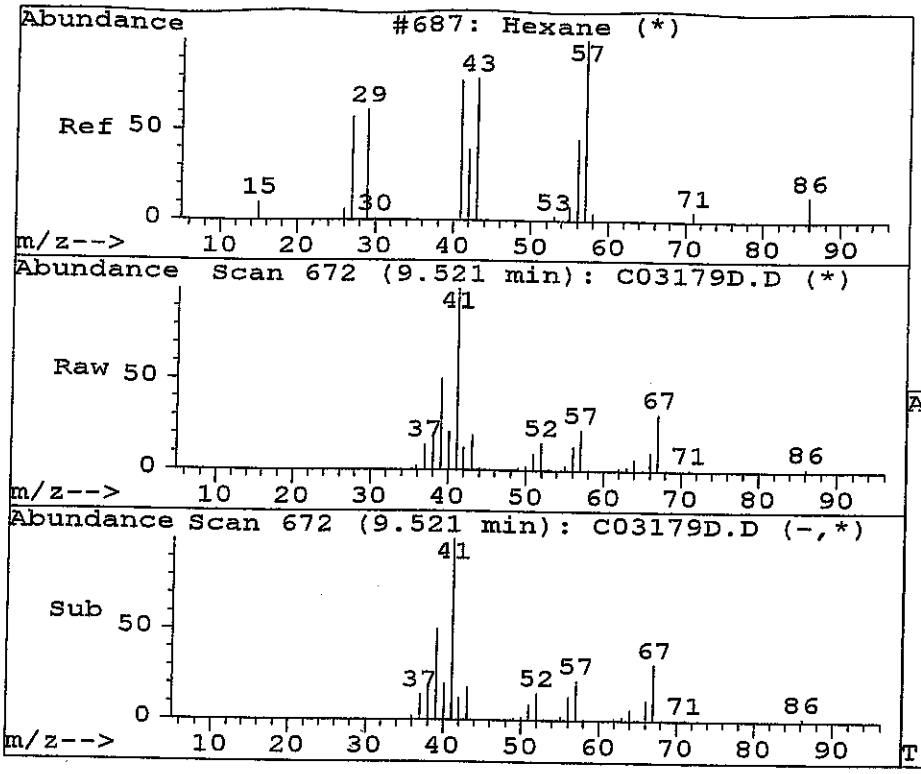


#26
2-Butanone
Concen: 1.35 ppbV
RT: 9.34 min Scan# 653
Delta R.T. -0.20 min
Lab File: C03179D.D
Acq: 17 Mar 109 11:35 am

Tgt Ion:72 Resp: 45058

Ion	Ratio	Lower	Upper
72	100		
57	37.9	25.3	37.9
43	690.5	425.0	637.6#
0	0.0	0.0	0.0

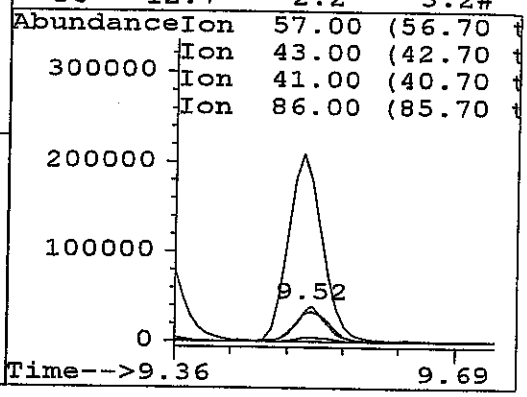


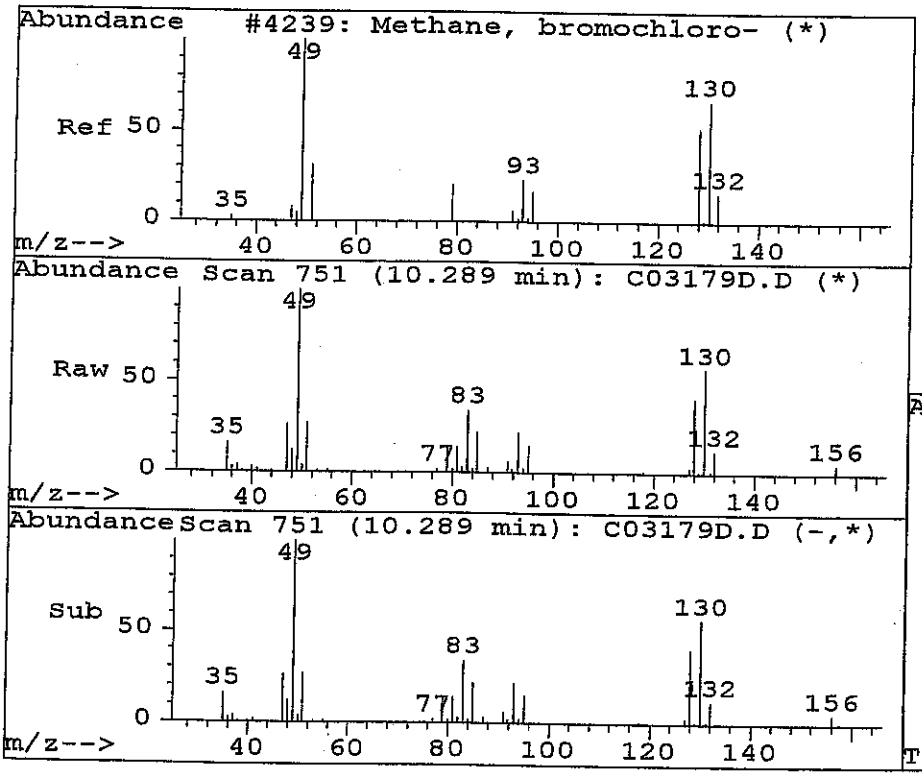


#27
Hexane
Concen: 1.09 ppbV
RT: 9.52 min Scan# 672
Delta R.T. -0.19 min
Lab File: C03179D.D
Acq: 17 Mar 109 11:35 am

Tgt Ion:57 Resp: 106477

Ion	Ratio	Lower	Upper
57	100		
43	92.4	78.0	117.0
41	573.9	399.1	598.7
86	12.7	2.2	3.2#

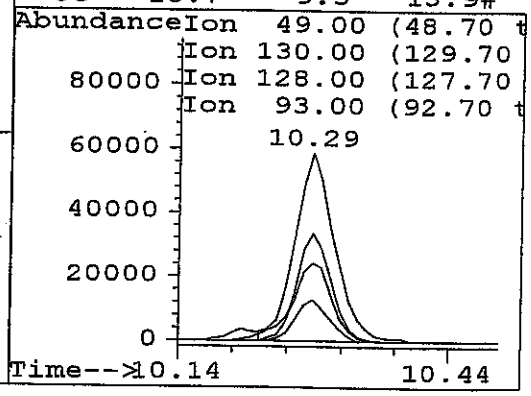


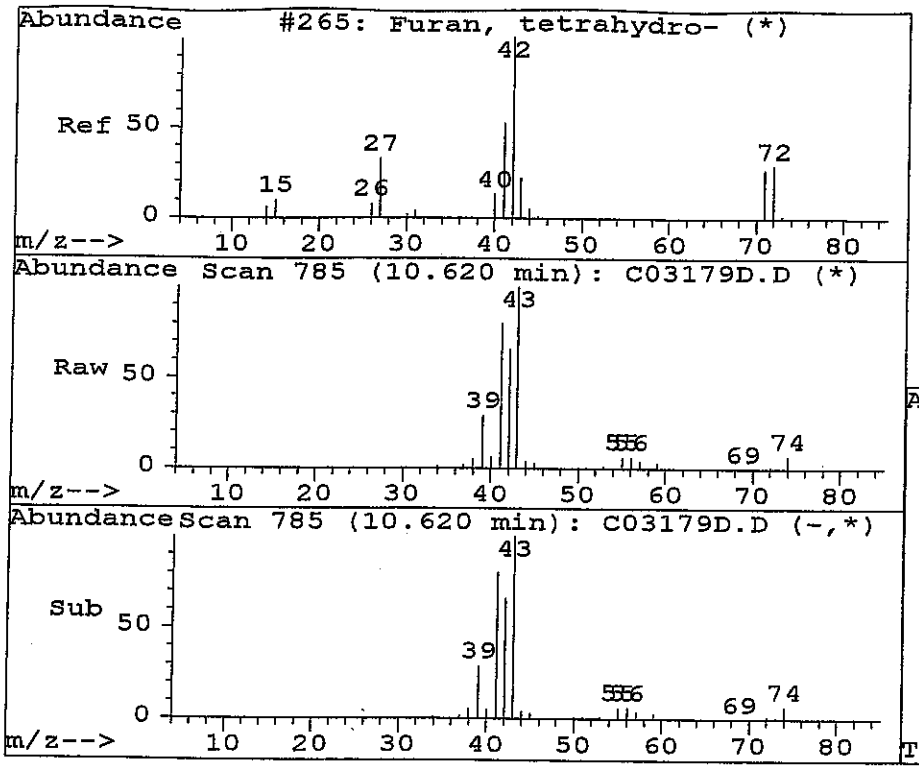


#28
Bromochloromethane
Concen: 1.37 ppbV
RT: 10.29 min Scan# 751
Delta R.T. -0.21 min
Lab File: C03179D.D
Acq: 17 Mar 109 11:35 am

Tgt Ion:49 Resp: 177279

Ion	Ratio	Lower	Upper
49	100		
130	49.8	33.3	49.9
128	41.8	26.2	39.2#
93	18.7	9.3	13.9#

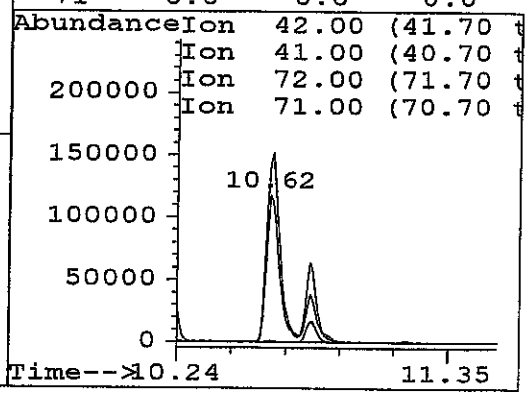


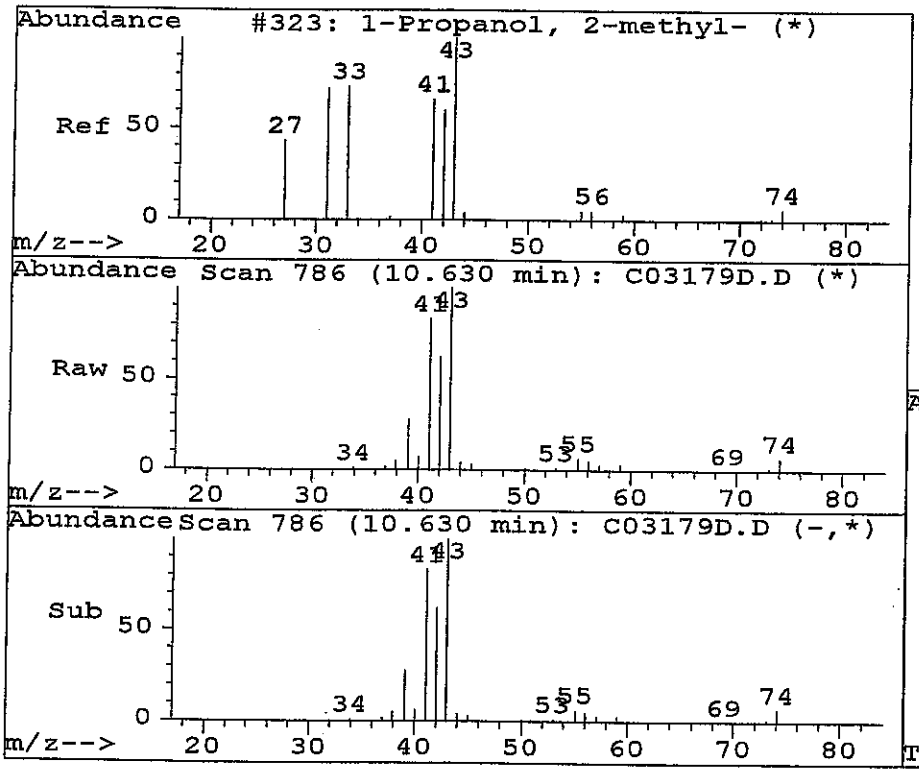


#29
Tetrahydrofuran
Concen: 1.32 ppbV m
RT: 10.62 min Scan# 785
Delta R.T. -0.30 min
Lab File: C03179D.D
Acq: 17 Mar 109 11:35 am

Tgt Ion:42 Resp: 617718

Ion	Ratio	Lower	Upper
42	100		
41	121.5	111.8	167.8
72	0.8	0.0	0.0#
71	0.0	0.0	0.0

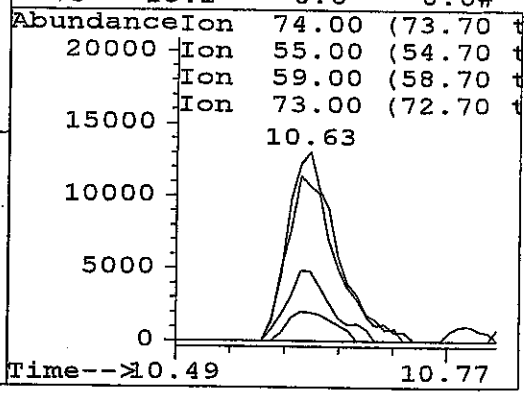


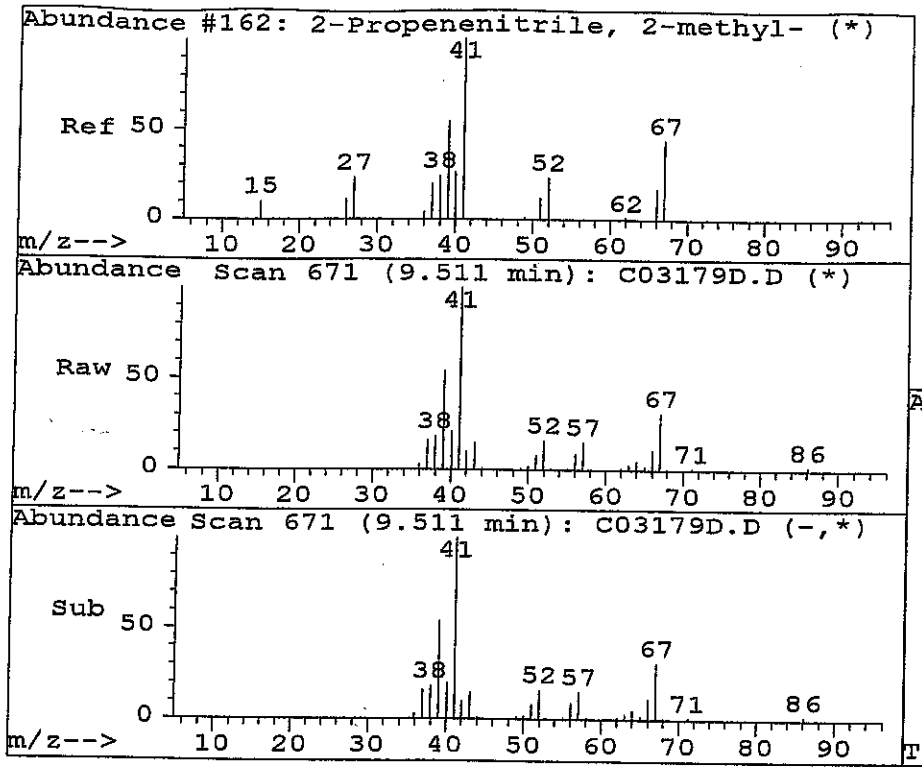


#30
Isobutyl alcohol
Concen: 3.69 ppbV
RT: 10.63 min Scan# 786
Delta R.T. -0.29 min
Lab File: C03179D.D
Acq: 17 Mar 109 11:35 am

Tgt Ion:74 Resp: 45653

Ion	Ratio	Lower	Upper
74	100		
55	81.9	63.6	95.4
59	36.8	43.4	65.0#
73	15.2	0.0	0.0#

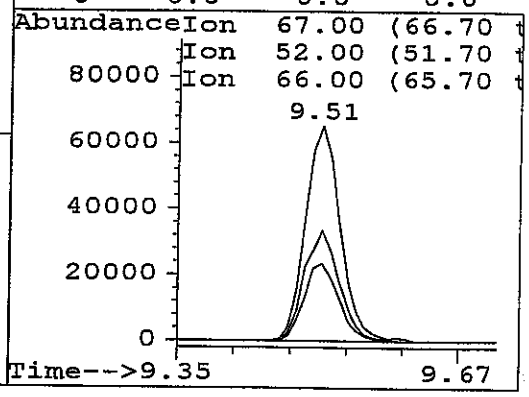


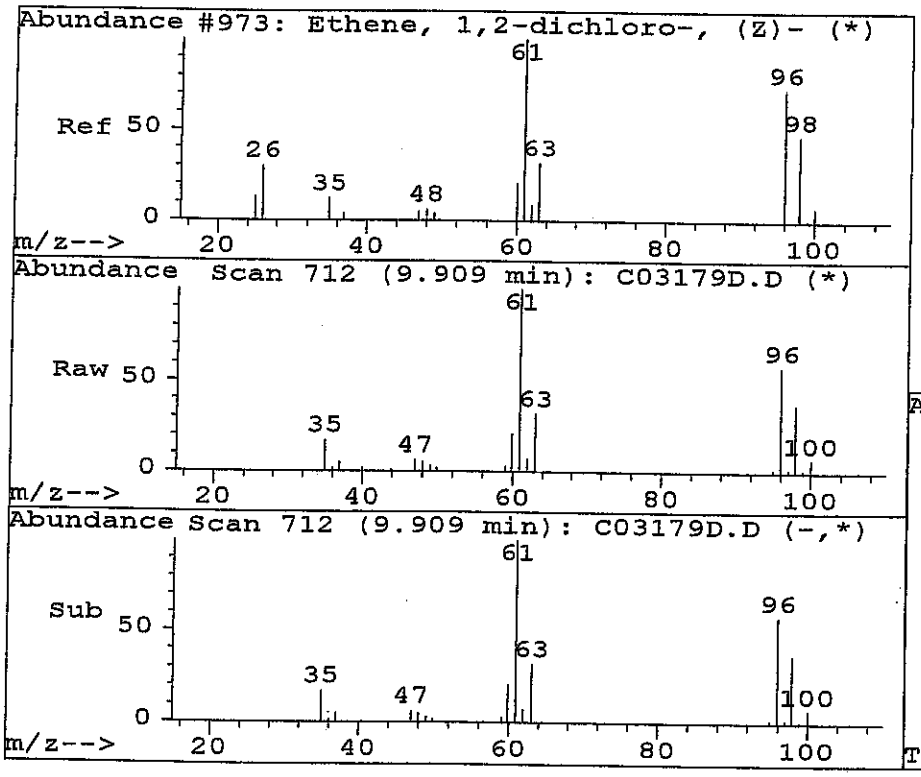


#31
Methacrylonitrile
Concen: 4.98 ppbV
RT: 9.51 min Scan# 671
Delta R.T. -0.23 min
Lab File: C03179D.D
Acq: 17 Mar 109 11:35 am

Tgt Ion:67 Resp: 179608

Ion	Ratio	Lower	Upper
67	100		
52	51.4	46.5	69.7
66	36.0	27.4	41.2
0	0.0	0.0	0.0

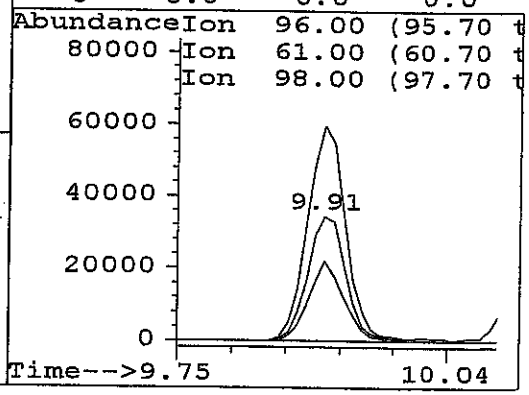


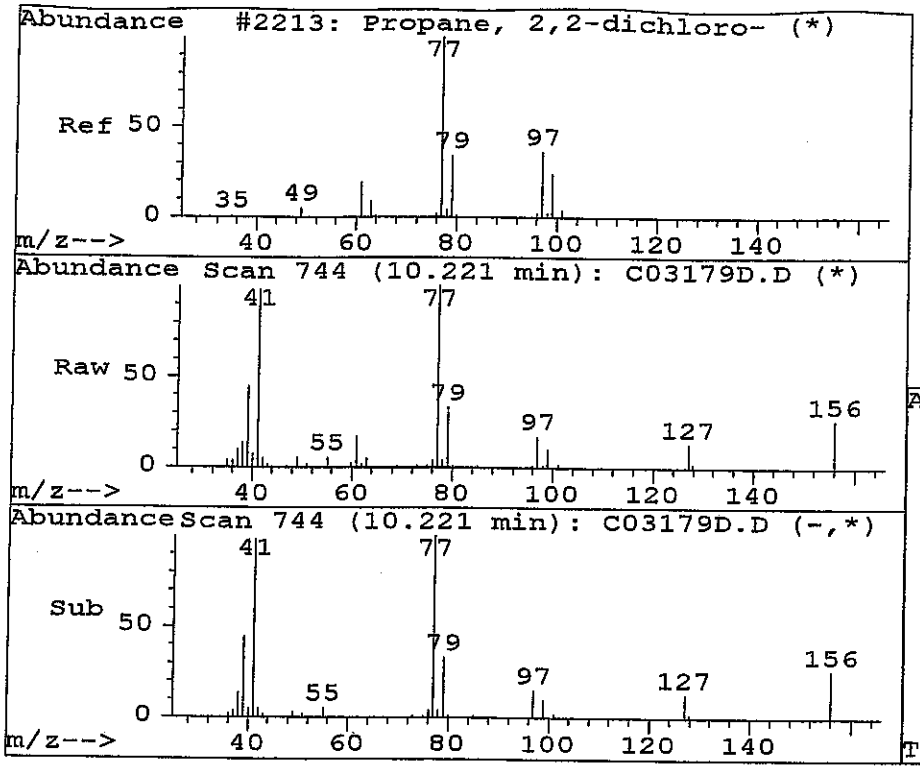


#32
cis-1,2-Dichloroethene
Concen: 2.09 ppbV
RT: 9.91 min Scan# 712
Delta R.T. -0.20 min
Lab File: C03179D.D
Acq: 17 Mar 109 11:35 am

Tgt Ion:96 Resp: 95703

Ion	Ratio	Lower	Upper
96	100		
61	172.8	145.3	217.9
98	63.9	43.9	65.9
0	0.0	0.0	0.0

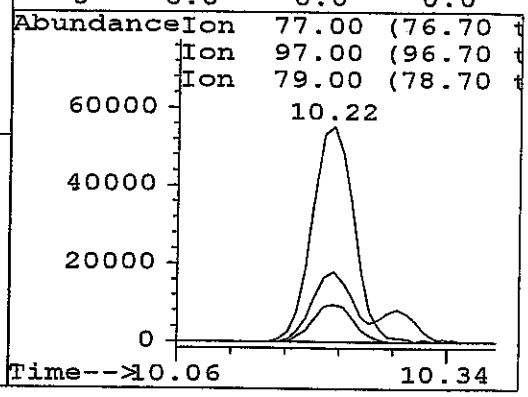


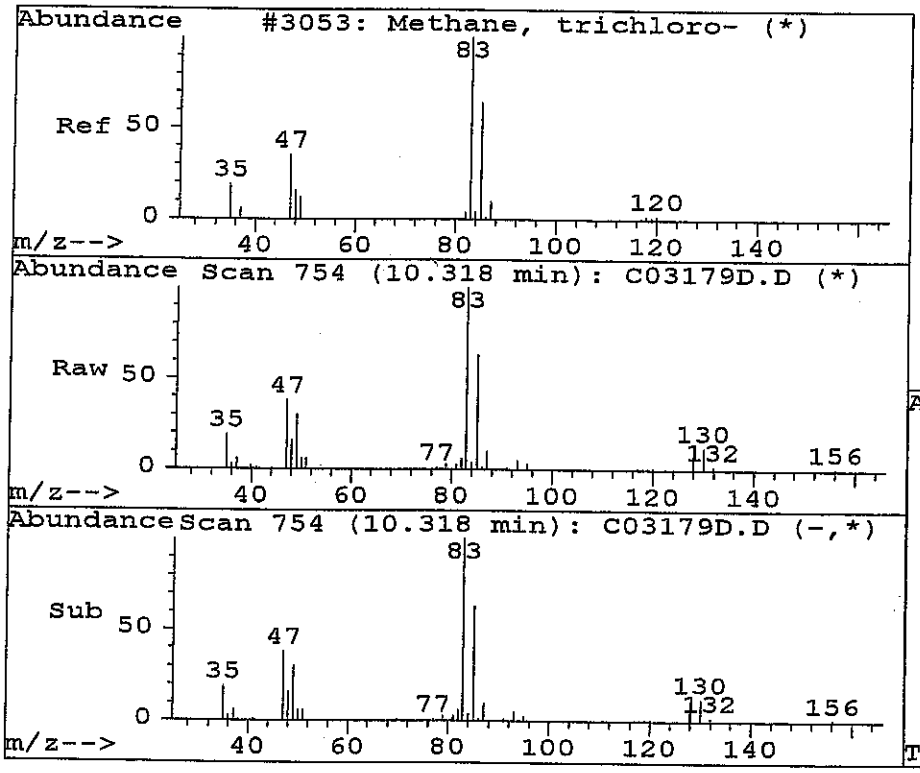


#33
2,2-Dichloropropane
Concen: 1.37 ppbV
RT: 10.22 min Scan# 744
Delta R.T. -0.20 min
Lab File: C03179D.D
Acq: 17 Mar 109 11:35 am

Tgt Ion:77 Resp: 171804

Ion	Ratio	Lower	Upper
77	100		
97	17.3	15.0	22.4
79	27.8	20.7	31.1
0	0.0	0.0	0.0

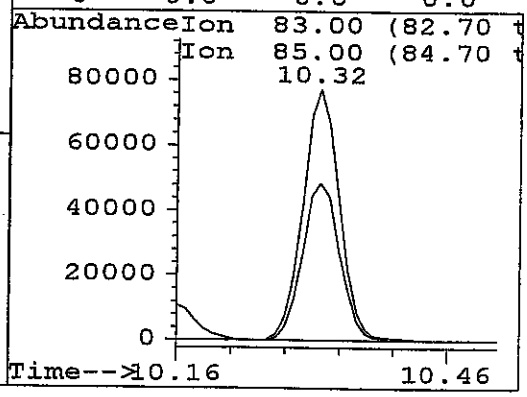


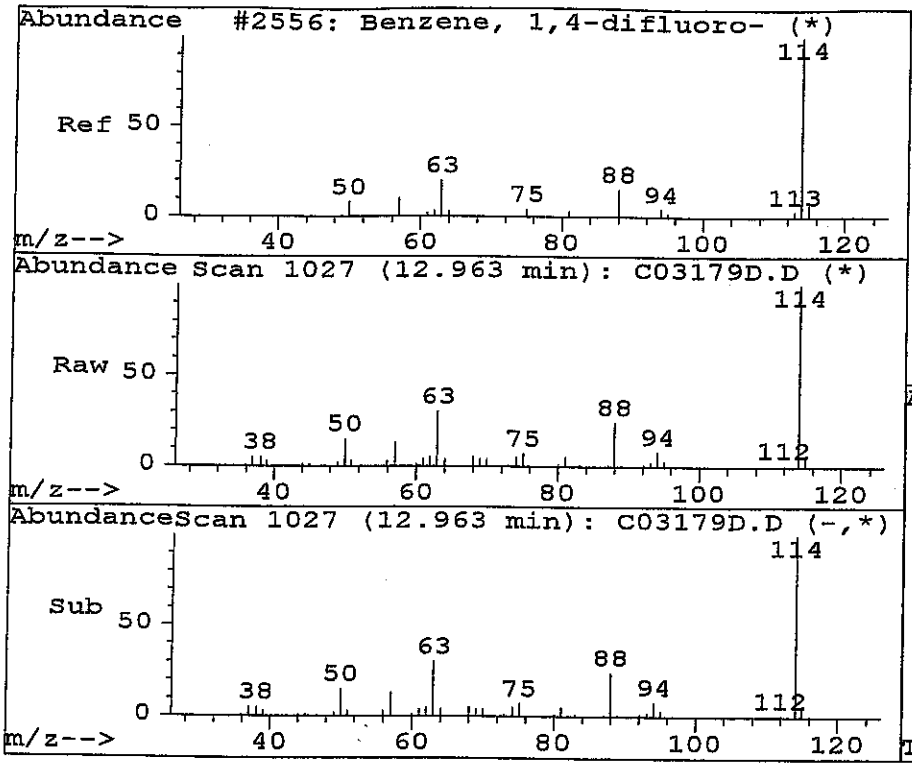


#34
Chloroform
Concen: 2.02 ppbV
RT: 10.32 min Scan# 754
Delta R.T. -0.21 min
Lab File: C03179D.D
Acq: 17 Mar 109 11:35 am

Tgt Ion:83 Resp: 213353

Ion	Ratio	Lower	Upper
83	100		
85	62.8	55.7	83.5
0	0.0	0.0	0.0
0	0.0	0.0	0.0

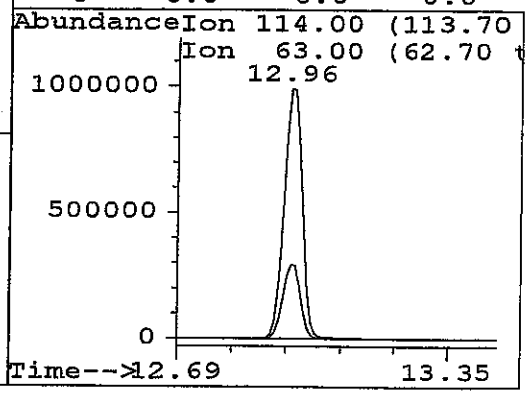


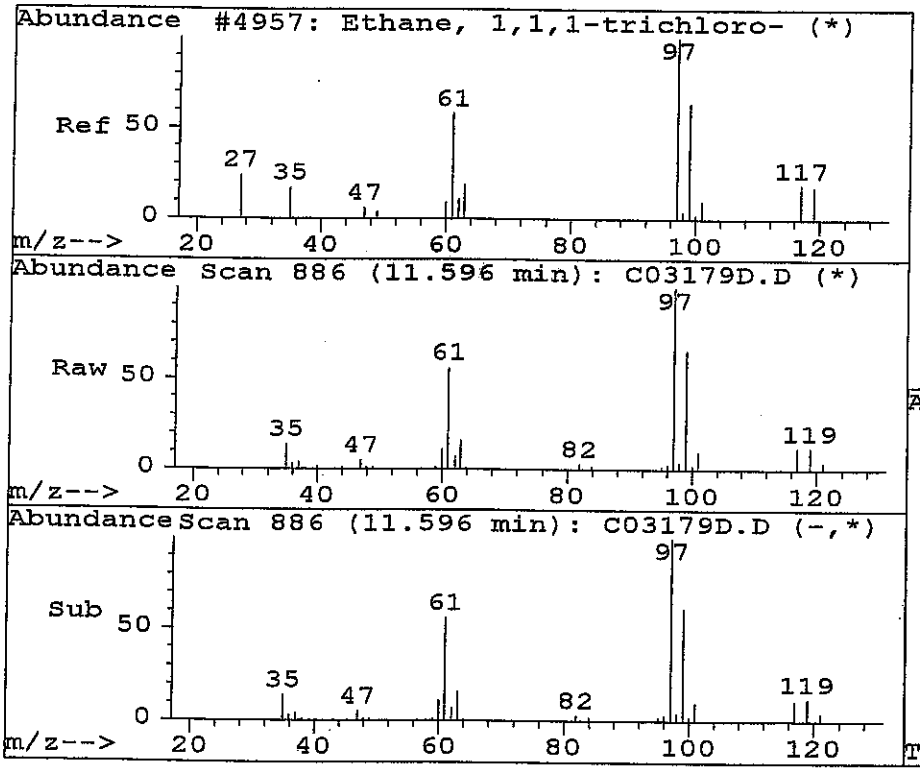


#35
1,4-Difluorobenzene
Concen: 20.00 ppbV
RT: 12.96 min Scan# 1027
Delta R.T. -0.21 min
Lab File: C03179D.D
Acq: 17 Mar 109 11:35 am

Tgt Ion:114 Resp: 3020264

Ion	Ratio	Lower	Upper
114	100		
63	29.5	22.4	37.4
0	0.0	0.0	0.0
0	0.0	0.0	0.0

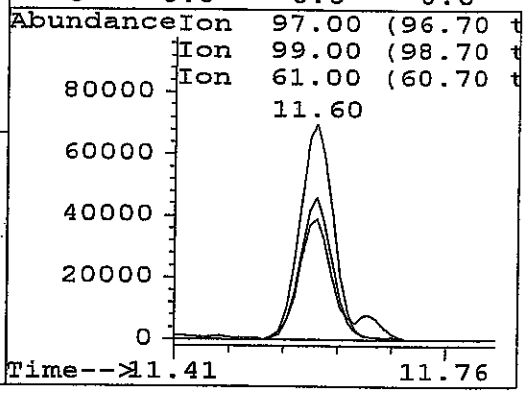


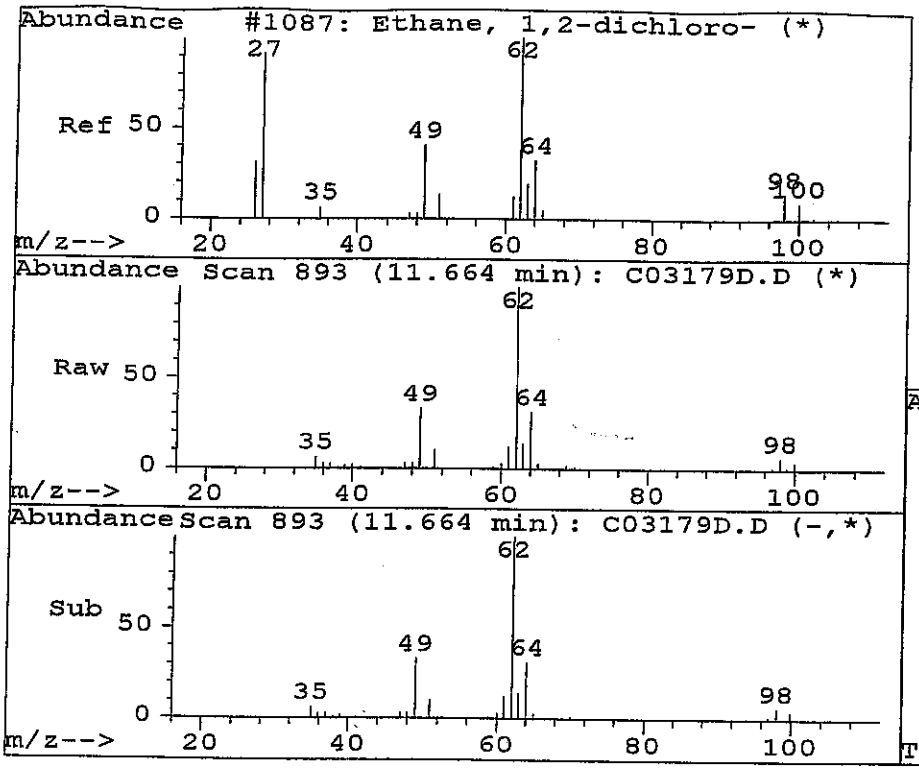


#36
1,1,1-Trichloroethane
Concen: 1.97 ppbV
RT: 11.60 min Scan# 886
Delta R.T. -0.20 min
Lab File: C03179D.D
Acq: 17 Mar 109 11:35 am

Tgt Ion:97 Resp: 210683

Ion	Ratio	Lower	Upper
97	100		
99	65.5	49.8	74.8
61	55.7	29.9	44.9#
0	0.0	0.0	0.0

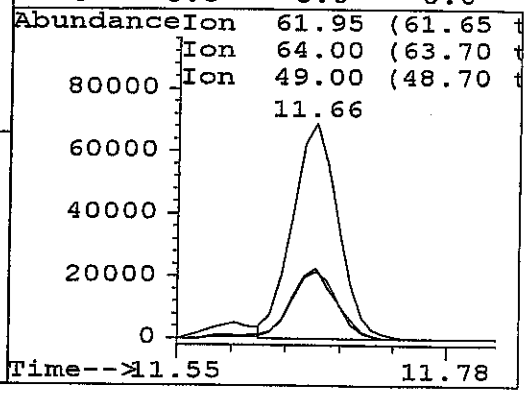


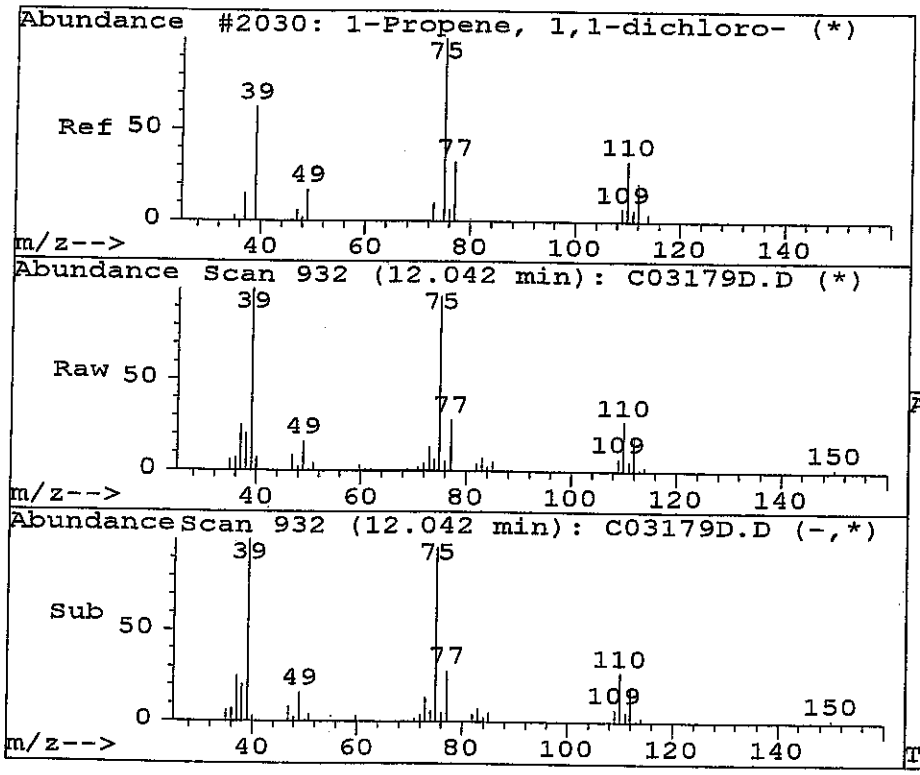


#37
1,2-Dichloroethane
Concen: 1.85 ppbV
RT: 11.66 min Scan# 893
Delta R.T. -0.21 min
Lab File: C03179D.D
Acq: 17 Mar 109 11:35 am

Tgt Ion:61.95 Resp: 187037

Ion	Ratio	Lower	Upper
62	100		
64	31.6	24.3	36.5
49	32.8	22.4	33.6
0	0.0	0.0	0.0

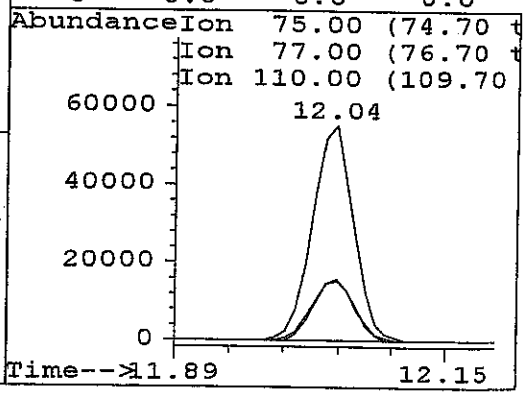


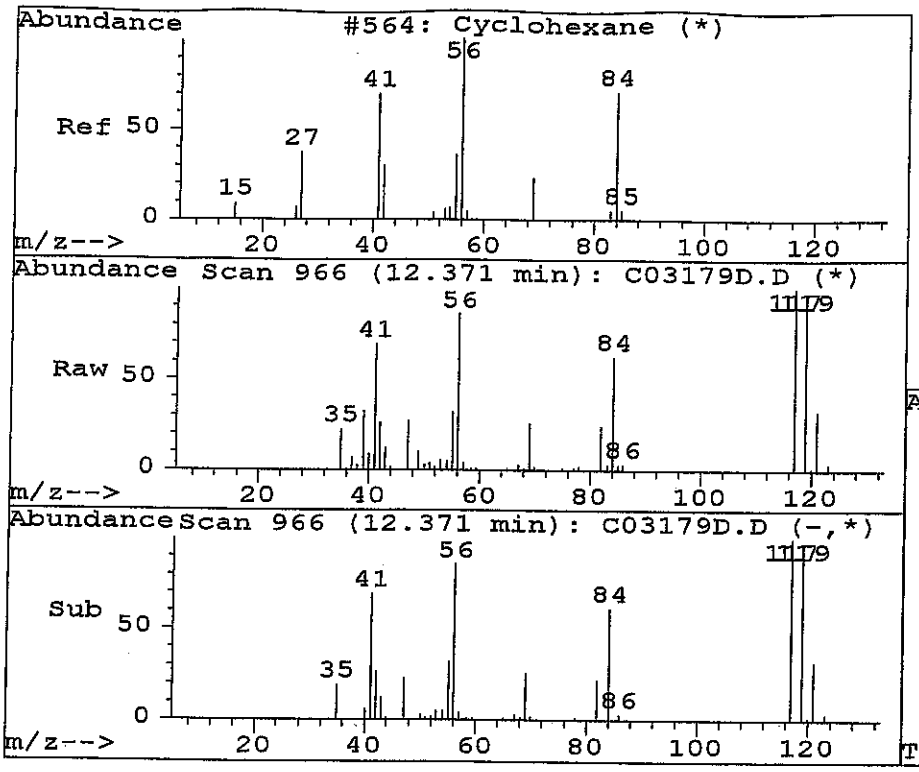


#38
1,1-Dichloropropene
Concen: 1.28 ppbV
RT: 12.04 min Scan# 932
Delta R.T. -0.20 min
Lab File: C03179D.D
Acq: 17 Mar 109 11:35 am

Tgt Ion:75 Resp: 151371

Ion	Ratio	Lower	Upper
75	100		
77	28.7	25.0	37.4
110	27.8	21.3	31.9
0	0.0	0.0	0.0

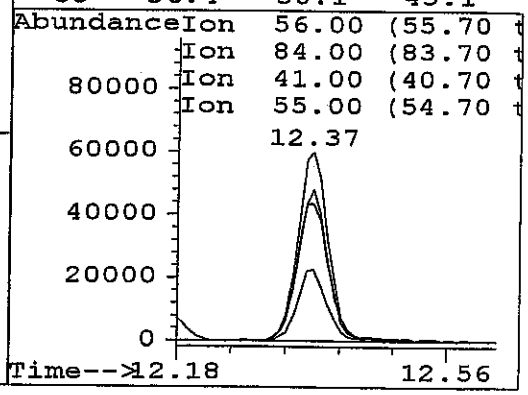


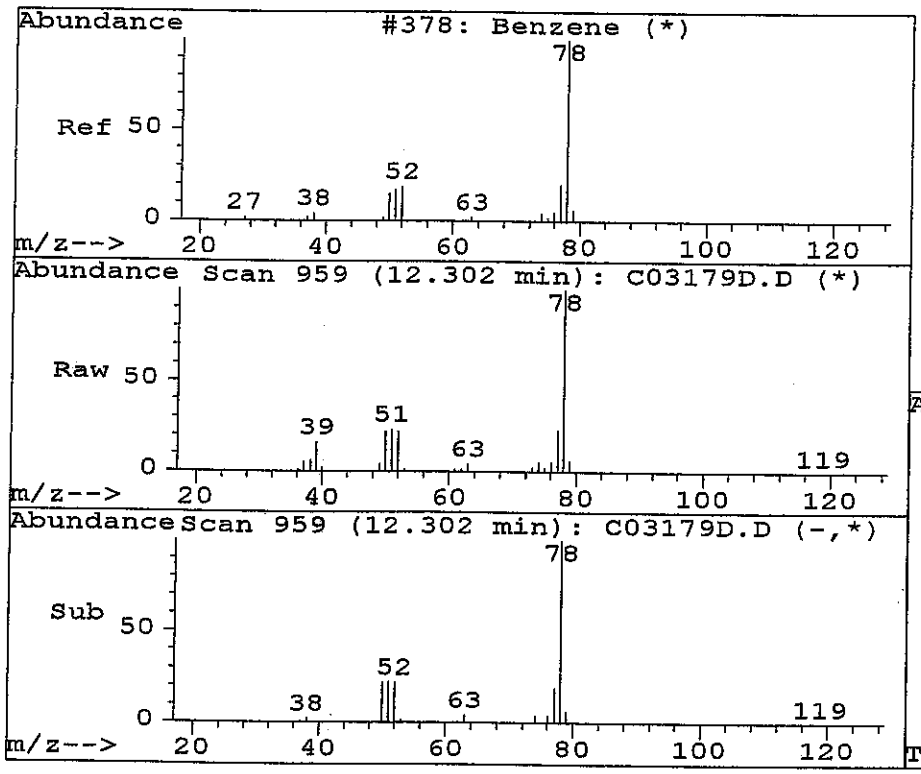


#39
Cyclohexane
Concen: 1.34 ppbV
RT: 12.37 min Scan# 966
Delta R.T. -0.18 min
Lab File: C03179D.D
Acq: 17 Mar 109 11:35 am

Tgt Ion:56 Resp: 182159

Ion	Ratio	Lower	Upper
56	100		
84	76.1	60.3	90.5
41	78.3	65.4	98.0
55	36.4	30.1	45.1

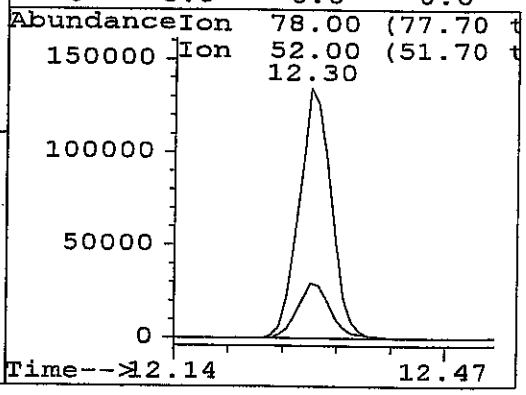


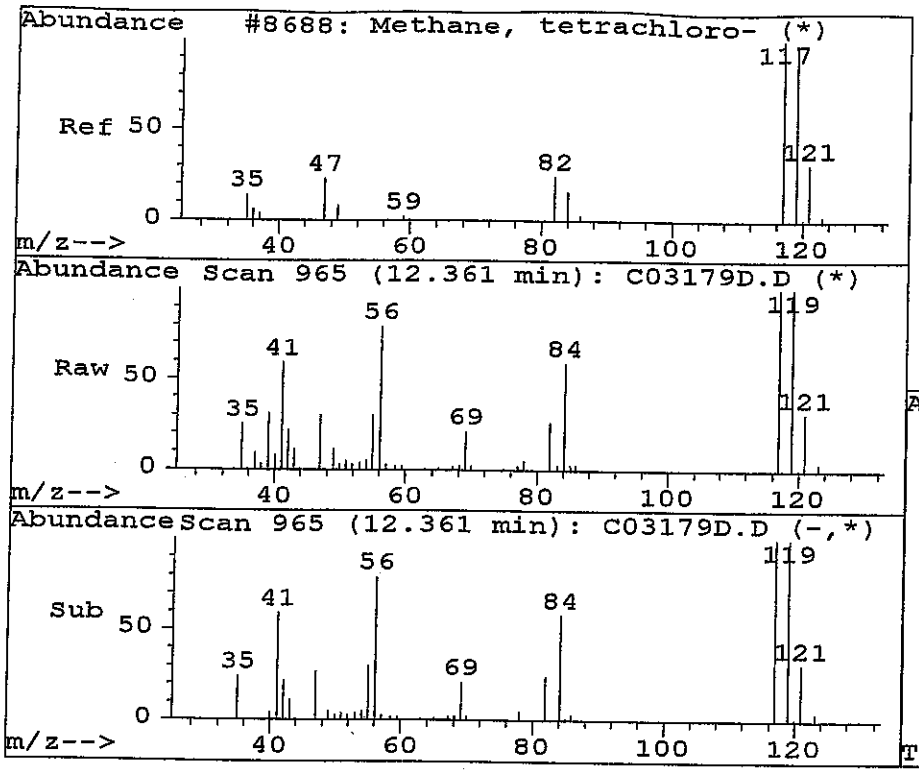


#40
Benzene
Concen: 1.77 ppbV
RT: 12.30 min Scan# 959
Delta R.T. -0.21 min
Lab File: C03179D.D
Acq: 17 Mar 109 11:35 am

Tgt Ion:78 Resp: 364766

Ion	Ratio	Lower	Upper
78	100		
52	22.1	17.8	26.8
0	0.0	0.0	0.0
0	0.0	0.0	0.0

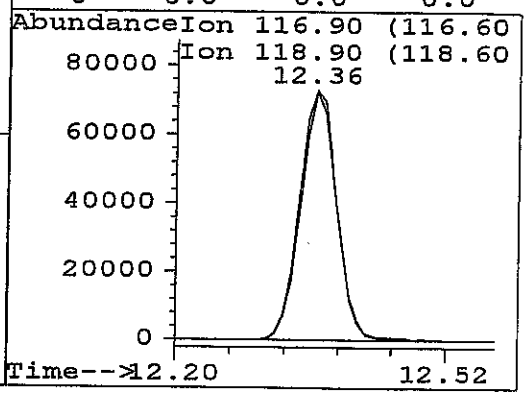


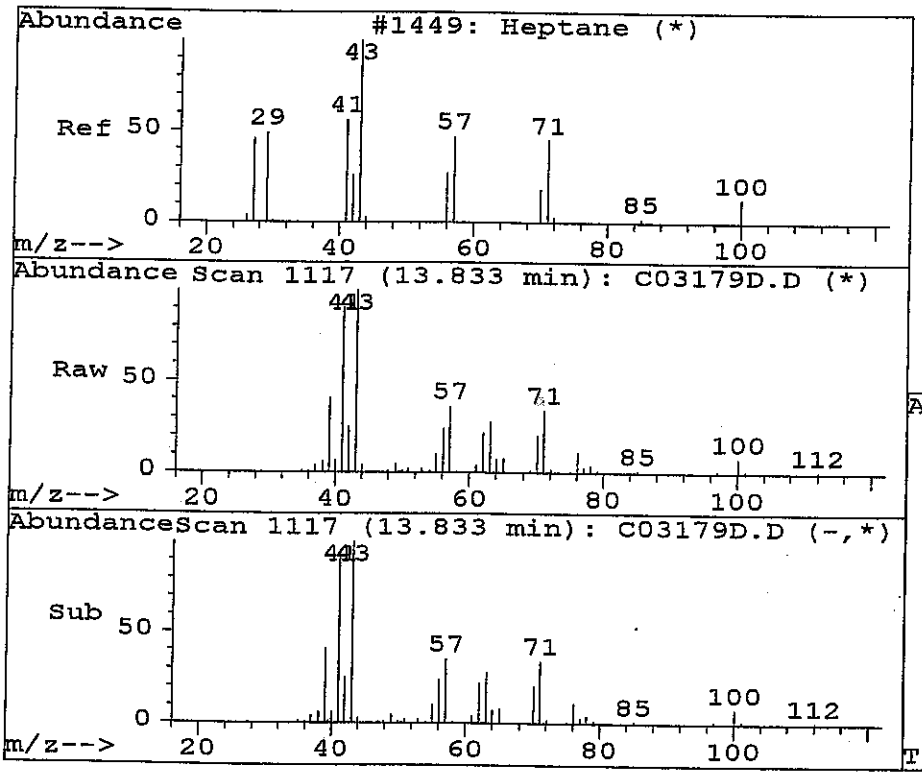


#41
Carbon tetrachloride
Concen: 2.07 ppbV
RT: 12.36 min Scan# 965
Delta R.T. -0.20 min
Lab File: C03179D.D
Acq: 17 Mar 109 11:35 am

Tgt Ion:116.9 Resp: 220983

Ion	Ratio	Lower	Upper
117	100		
119	99.7	65.0	97.6#
0	0.0	0.0	0.0
0	0.0	0.0	0.0

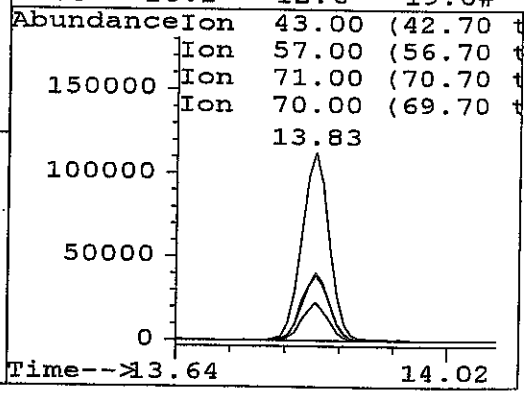


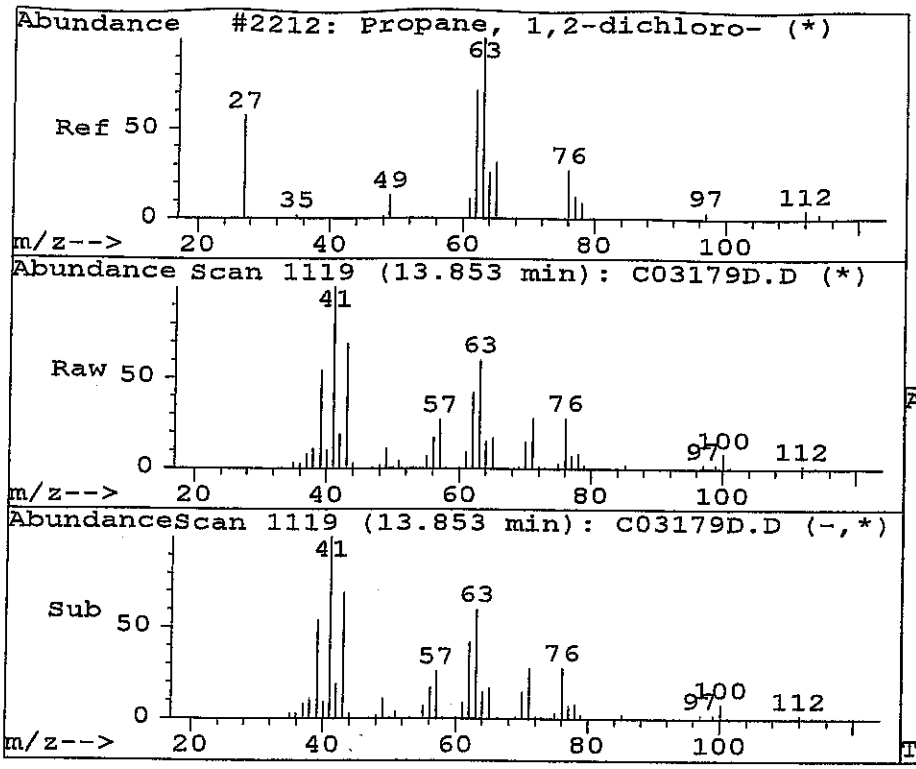


#42
n-Heptane
Concen: 1.27 ppbV
RT: 13.83 min Scan# 1117
Delta R.T. -0.21 min
Lab File: C03179D.D
Acq: 17 Mar 109 11:35 am

Tgt Ion:43 Resp: 300149

Ion	Ratio	Lower	Upper
43	100		
57	35.8	30.3	45.5
71	34.3	29.9	44.9
70	20.2	12.6	19.0#

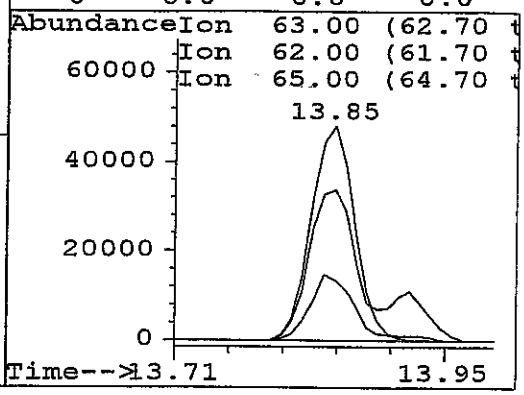


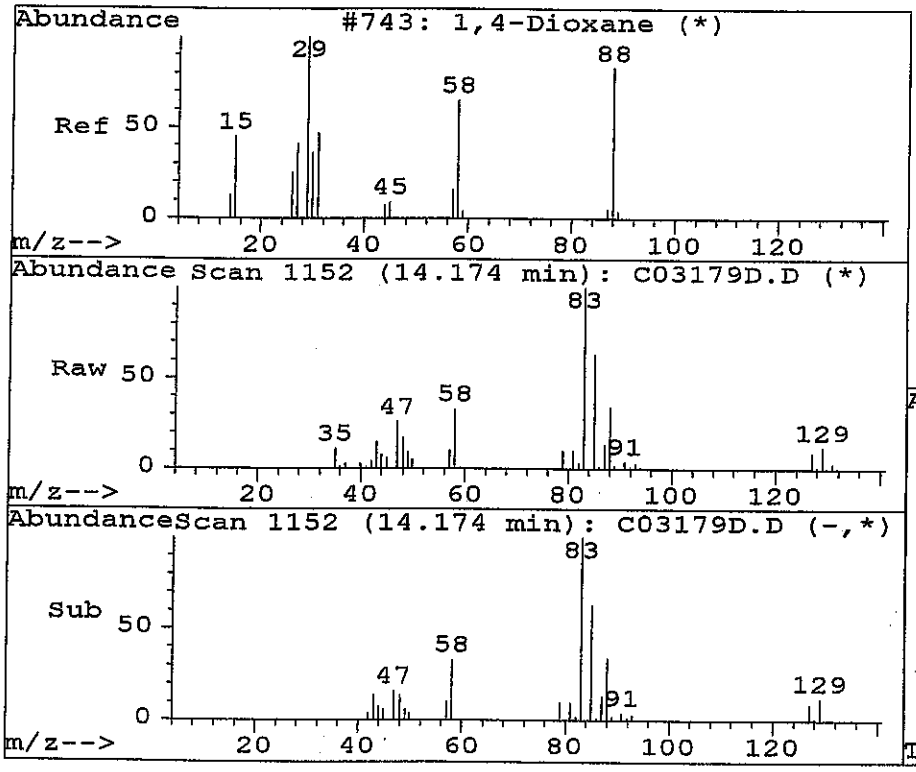


#43
1,2-Dichloropropane
Concen: 1.98 ppbV
RT: 13.85 min Scan# 1119
Delta R.T. -0.22 min
Lab File: C03179D.D
Acq: 17 Mar 109 11:35 am

Tgt Ion:63 Resp: 132416

Ion	Ratio	Lower	Upper
63	100		
62	61.4	50.4	75.6
65	26.9	25.8	38.6
0	0.0	0.0	0.0

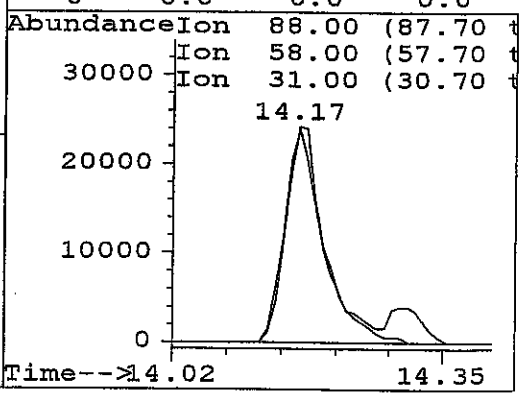


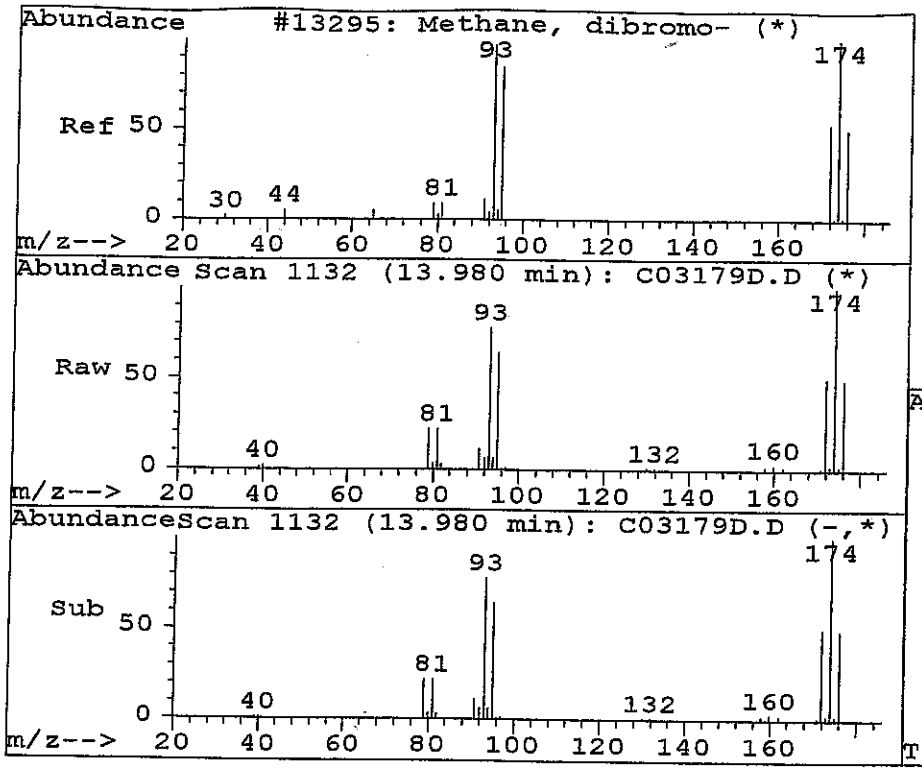


#44
1,4 Dioxane
Concen: 1.21 ppbV
RT: 14.17 min Scan# 1152
Delta R.T. -0.23 min
Lab File: C03179D.D
Acq: 17 Mar 109 11:35 am

Tgt Ion:88 Resp: 80192

Ion	Ratio	Lower	Upper
88	100		
58	100.0	71.5	107.3
31	0.0	0.0	0.0
0	0.0	0.0	0.0

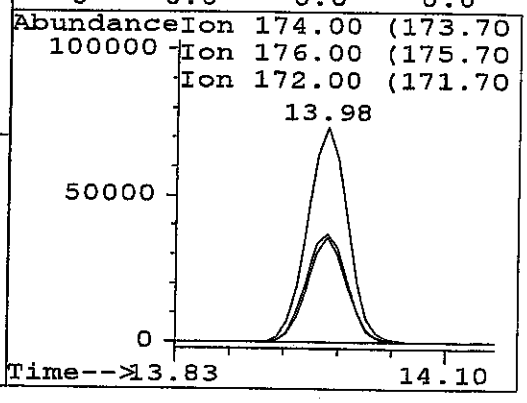


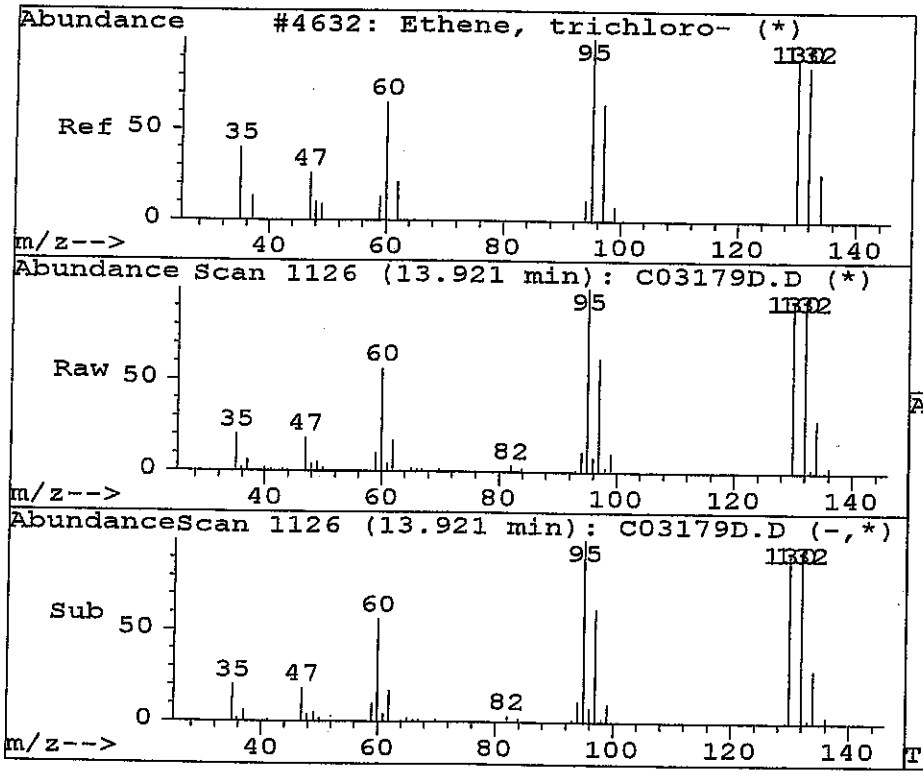


#45
Dibromomethane
Concen: 1.32 ppbV
RT: 13.98 min Scan# 1132
Delta R.T. -0.22 min
Lab File: C03179D.D
Acq: 17 Mar 109 11:35 am

Tgt Ion:174 Resp: 200417

Ion	Ratio	Lower	Upper
174	100		
176	48.9	37.1	55.7
172	50.2	38.4	57.6
0	0.0	0.0	0.0

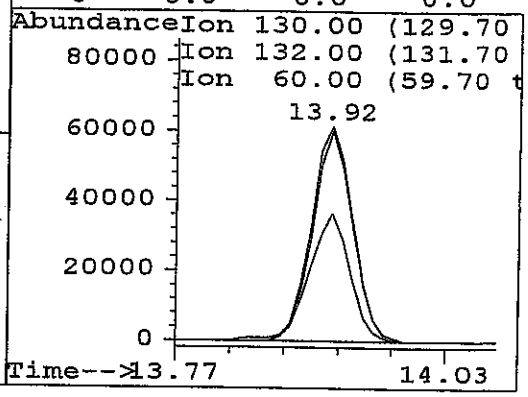


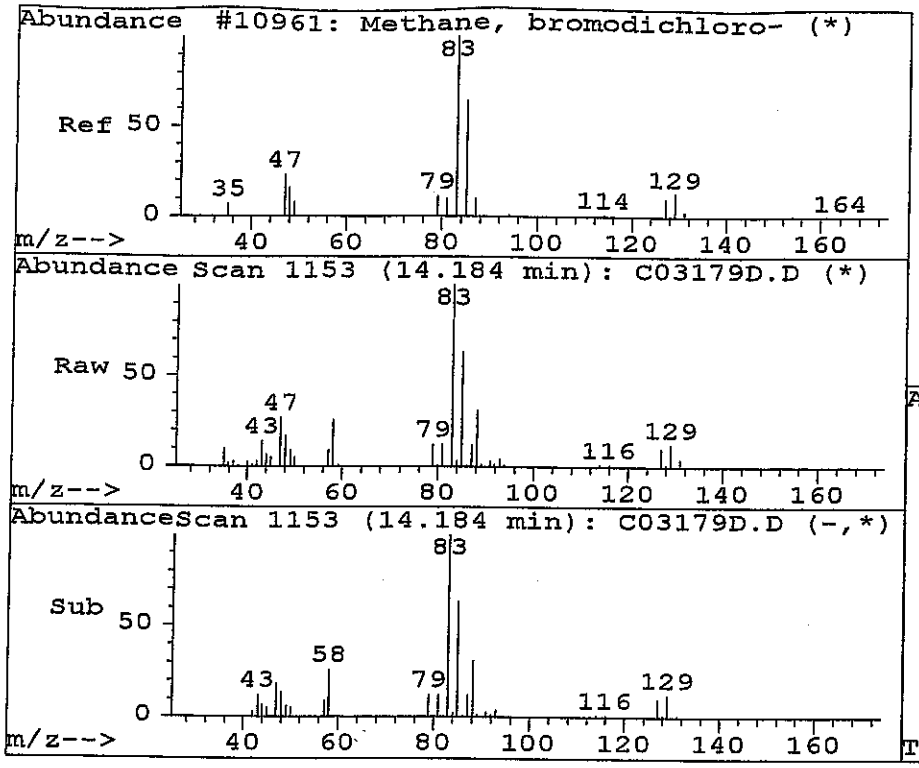


#46
Trichloroethene
Concen: 1.88 ppbV
RT: 13.92 min Scan# 1126
Delta R.T. -0.21 min
Lab File: C03179D.D
Acq: 17 Mar 109 11:35 am

Tgt Ion:130 Resp: 165489

Ion	Ratio	Lower	Upper
130	100		
132	97.9	74.4	111.6
60	58.7	49.2	73.8
0	0.0	0.0	0.0

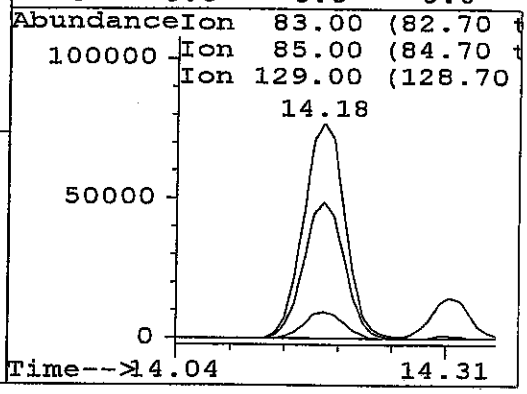


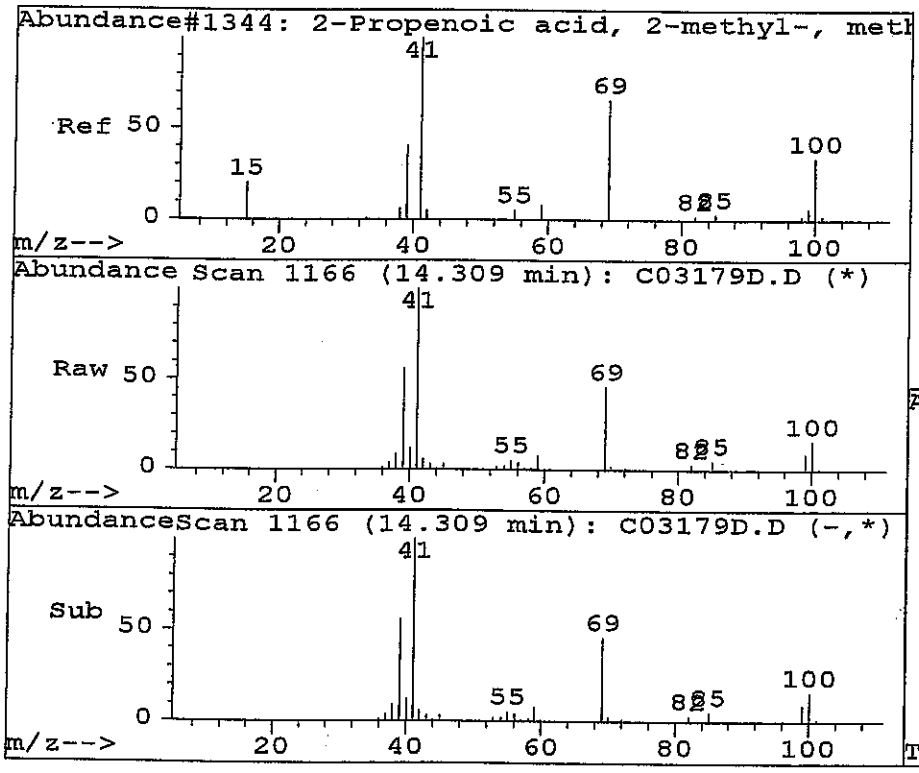


#47
Bromodichloromethane
Concen: 1.21 ppbV
RT: 14.18 min Scan# 1153
Delta R.T. -0.22 min
Lab File: C03179D.D
Acq: 17 Mar 109 11:35 am

Tgt Ion:83 Resp: 218119

Ion	Ratio	Lower	Upper
83	100		
85	61.1	56.1	84.1
129	12.2	7.2	10.8#
0	0.0	0.0	0.0

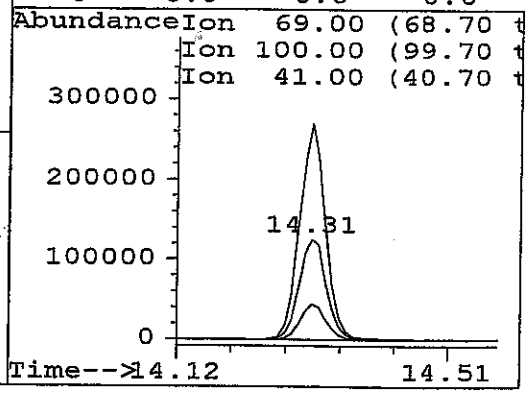


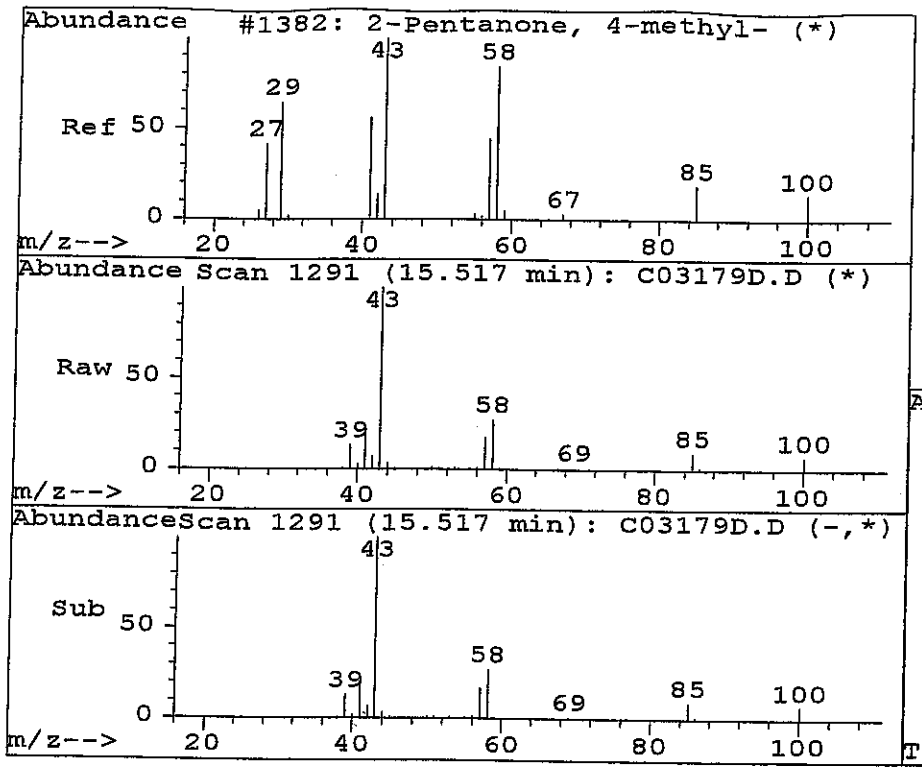


#48
Methyl methacrylate
Concen: 3.74 ppbV
RT: 14.31 min Scan# 1166
Delta R.T. -0.24 min
Lab File: C03179D.D
Acq: 17 Mar 109 11:35 am

Tgt Ion:69 Resp: 346363

Ion	Ratio	Lower	Upper
69	100		
100	35.4	28.3	42.5
41	216.0	157.8	236.8
0	0.0	0.0	0.0

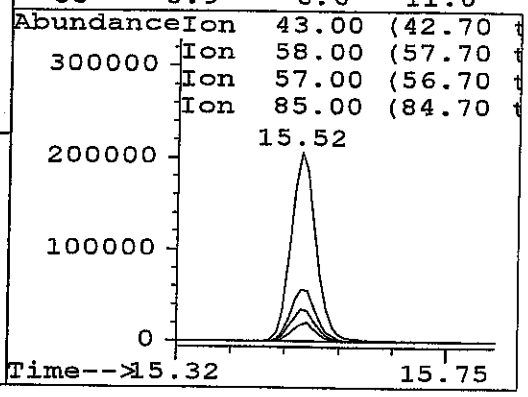


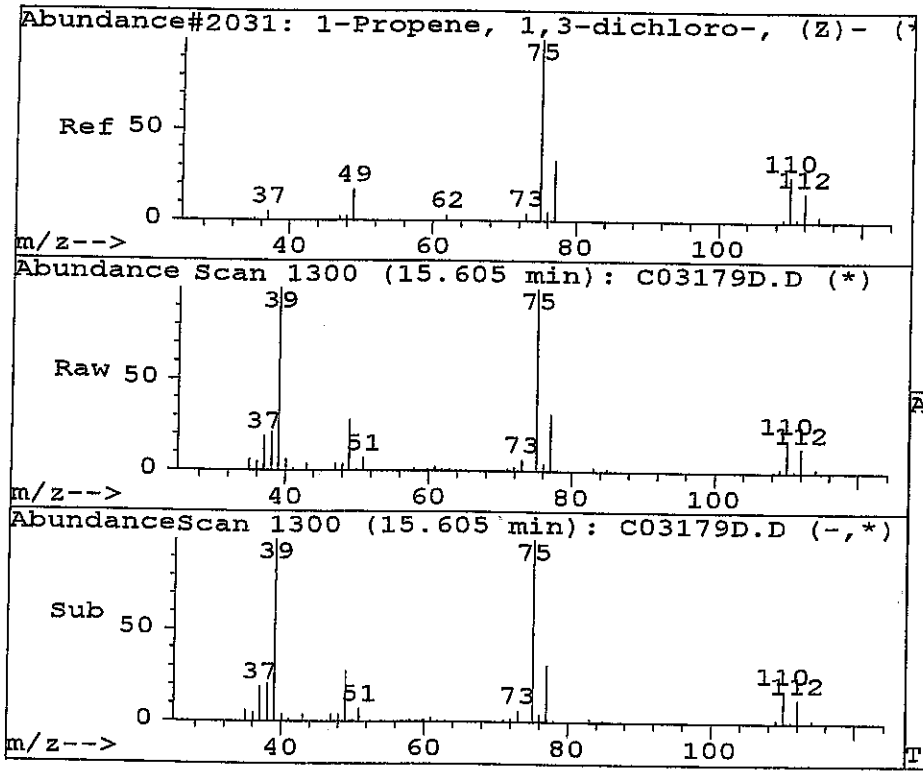


#49
Methyl Isobutyl Ketone
Concen: 1.44 ppbV
RT: 15.52 min Scan# 1291
Delta R.T. -0.18 min
Lab File: C03179D.D
Acq: 17 Mar 109 11:35 am

Tgt Ion:43 Resp: 566705

Ion	Ratio	Lower	Upper
43	100		
58	27.4	19.6	32.6
57	17.0	14.4	24.0
85	8.9	6.6	11.0

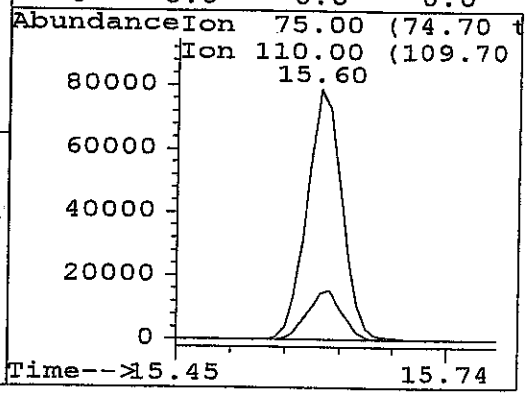


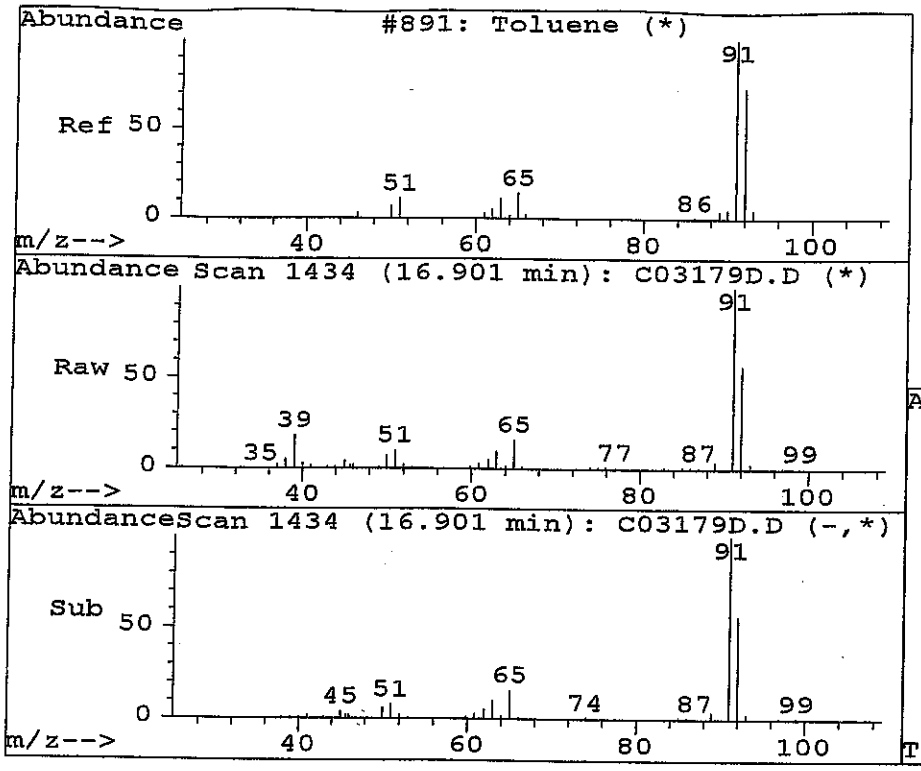


#50
cis-1,3-Dichloropropene
Concen: 1.95 ppbV
RT: 15.60 min Scan# 1300
Delta R.T. -0.22 min
Lab File: C03179D.D
Acq: 17 Mar 109 11:35 am

Tgt Ion:75 Resp: 206495

Ion	Ratio	Lower	Upper
75	100		
110	18.4	17.1	25.7
0	0.0	0.0	0.0
0	0.0	0.0	0.0

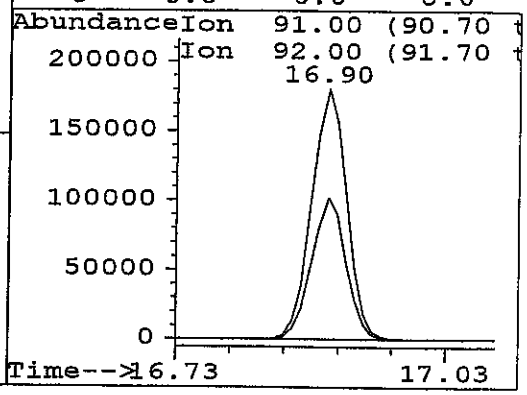


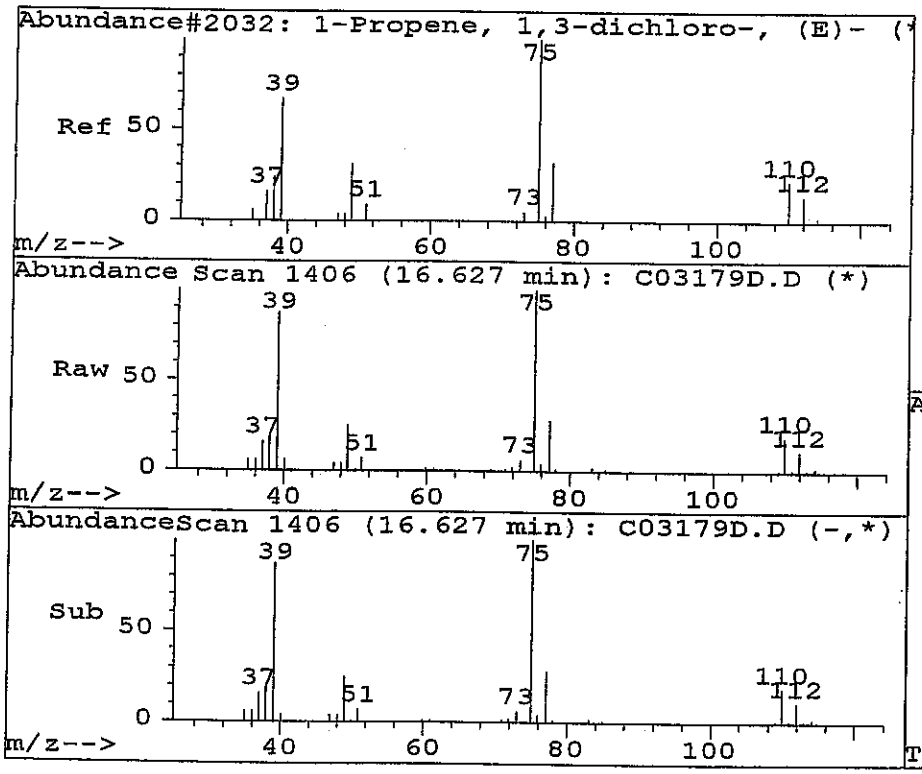


#51
Toluene
Concen: 1.81 ppbV
RT: 16.90 min Scan# 1434
Delta R.T. -0.21 min
Lab File: C03179D.D
Acq: 17 Mar 109 11:35 am

Tgt Ion:91 Resp: 478350

Ion	Ratio	Lower	Upper
91	100		
92	56.6	42.9	64.3
0	0.0	0.0	0.0
0	0.0	0.0	0.0

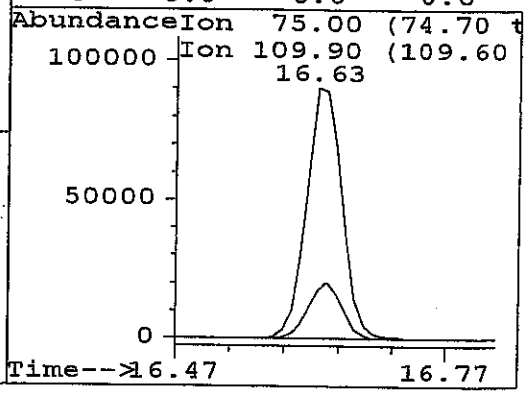


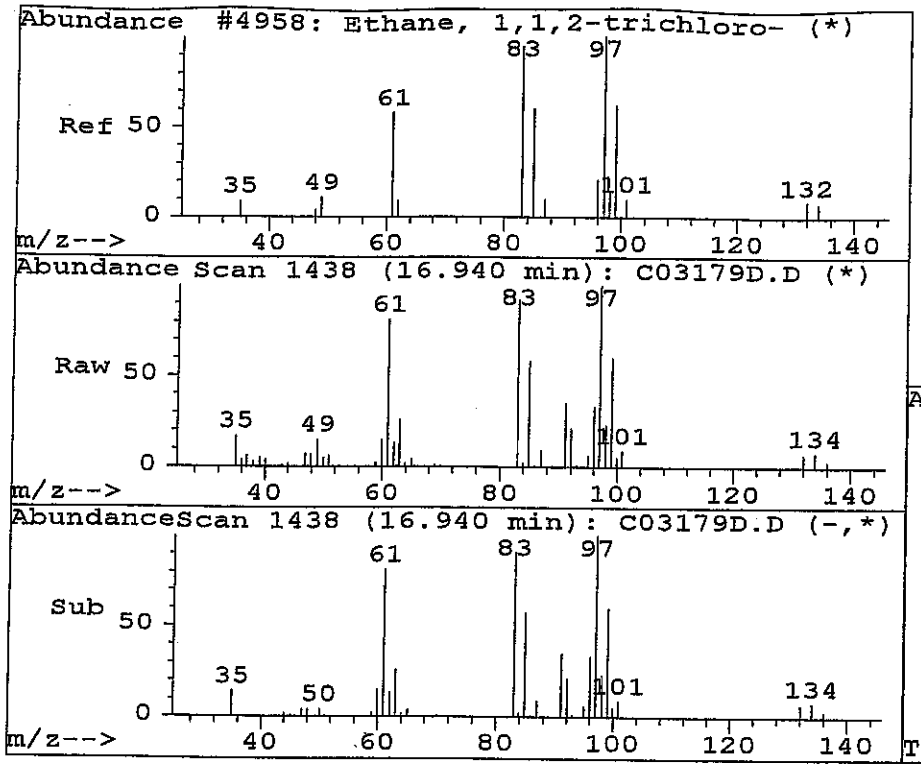


#52
trans-1,3-Dichloropropene
Concen: 1.92 ppbV
RT: 16.63 min Scan# 1406
Delta R.T. -0.22 min
Lab File: C03179D.D
Acq: 17 Mar 109 11:35 am

Tgt Ion:75 Resp: 242137

Ion	Ratio	Lower	Upper
75	100		
110	19.3	16.4	24.6
0	0.0	0.0	0.0
0	0.0	0.0	0.0

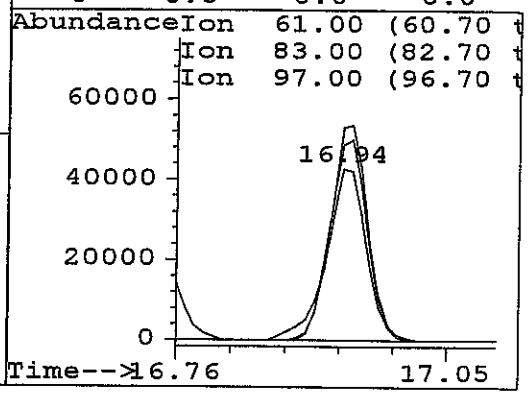


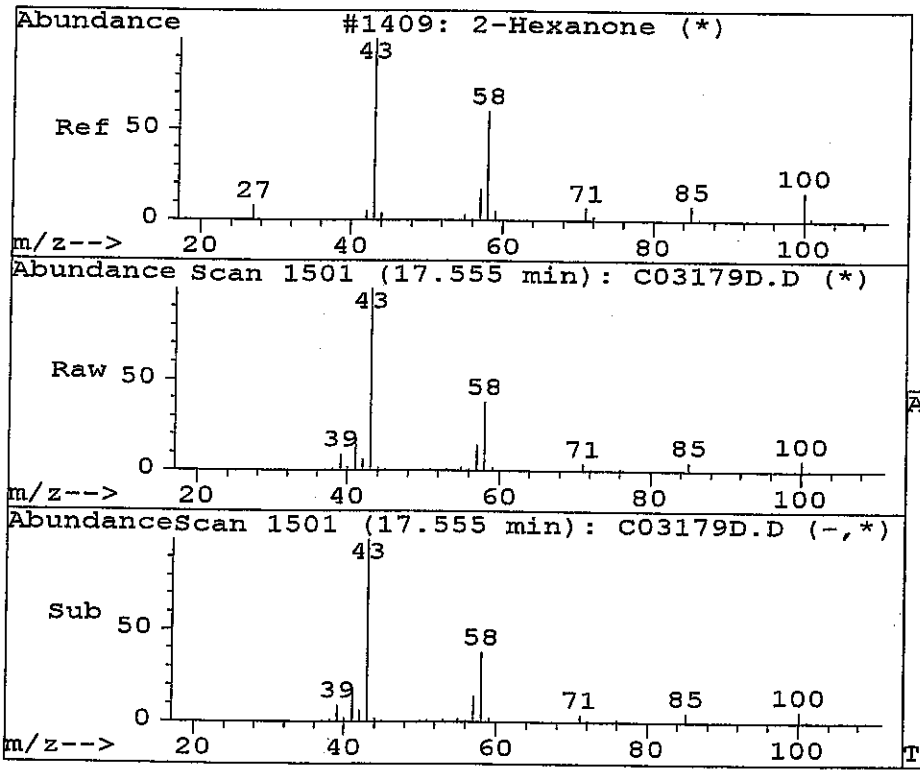


#53
1,1,2-Trichloroethane
Concen: 1.87 ppbV
RT: 16.94 min Scan# 1438
Delta R.T. -0.22 min
Lab File: C03179D.D
Acq: 17 Mar 109 11:35 am

Tgt Ion:61 Resp: 127239

Ion	Ratio	Lower	Upper
61	100		
83	114.0	103.6	155.4
97	124.0	104.8	157.2
0	0.0	0.0	0.0

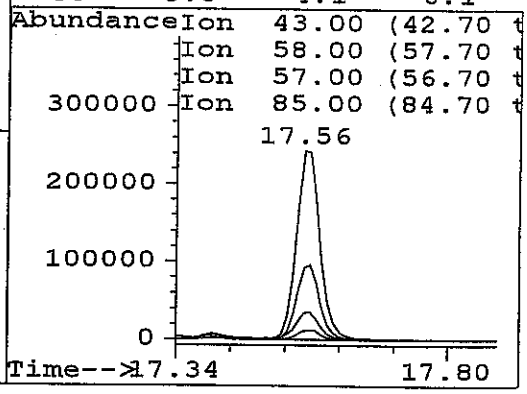


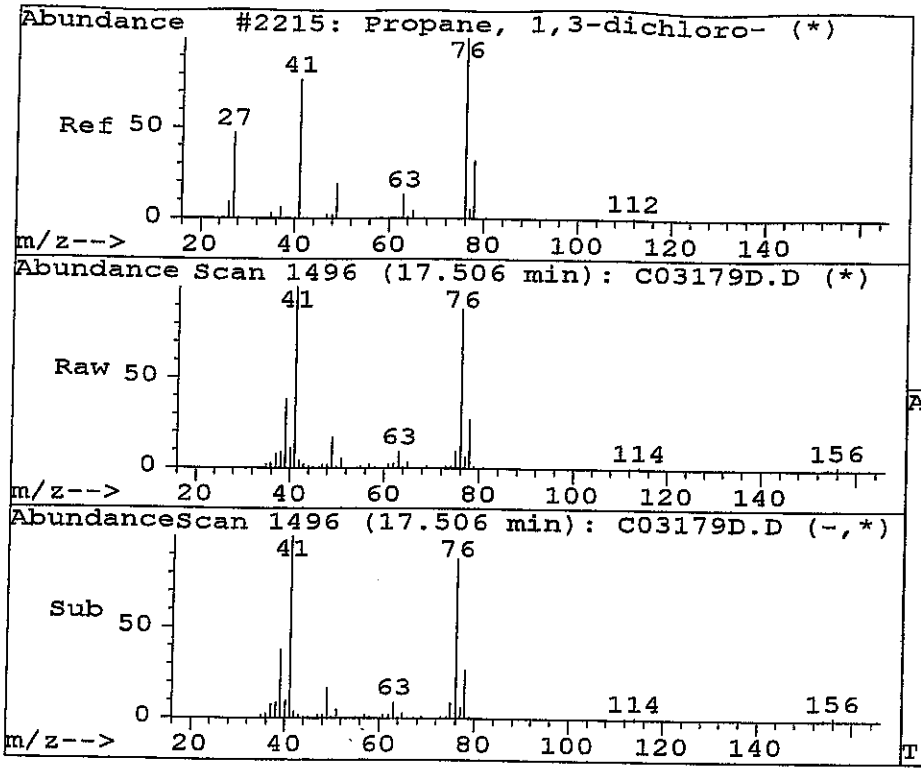


#54
2-Hexanone
Concen: 1.44 ppbV
RT: 17.56 min Scan# 1501
Delta R.T. -0.25 min
Lab File: C03179D.D
Acq: 17 Mar 109 11:35 am

Tgt Ion:43 Resp: 678898

Ion	Ratio	Lower	Upper
43	100		
58	38.1	30.0	50.0
57	14.2	9.4	15.6
85	5.0	4.1	6.1

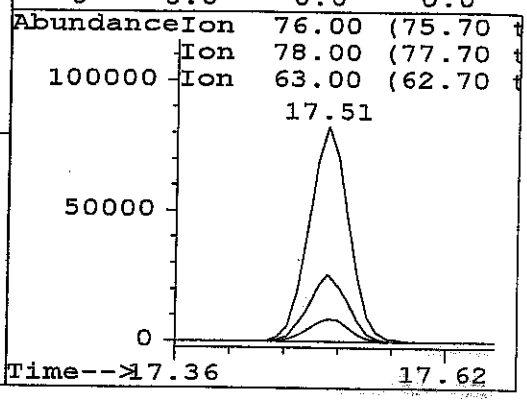


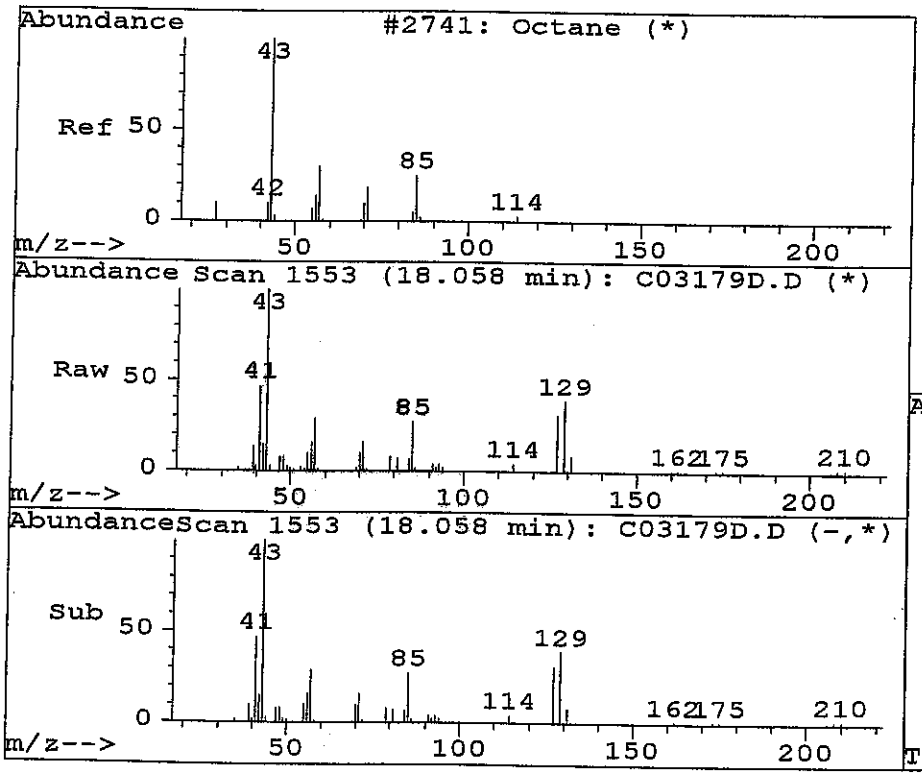


#55
1,3-Dichloropropane
Concen: 1.24 ppbV
RT: 17.51 min Scan# 1496
Delta R.T. -0.21 min
Lab File: C03179D.D
Acq: 17 Mar 109 11:35 am

Tgt Ion:76 Resp: 220671

Ion	Ratio	Lower	Upper
76	100		
78	31.2	26.2	39.2
63	10.5	11.1	16.7#
0	0.0	0.0	0.0

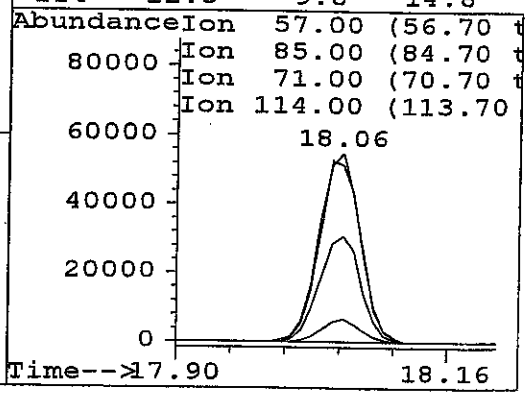


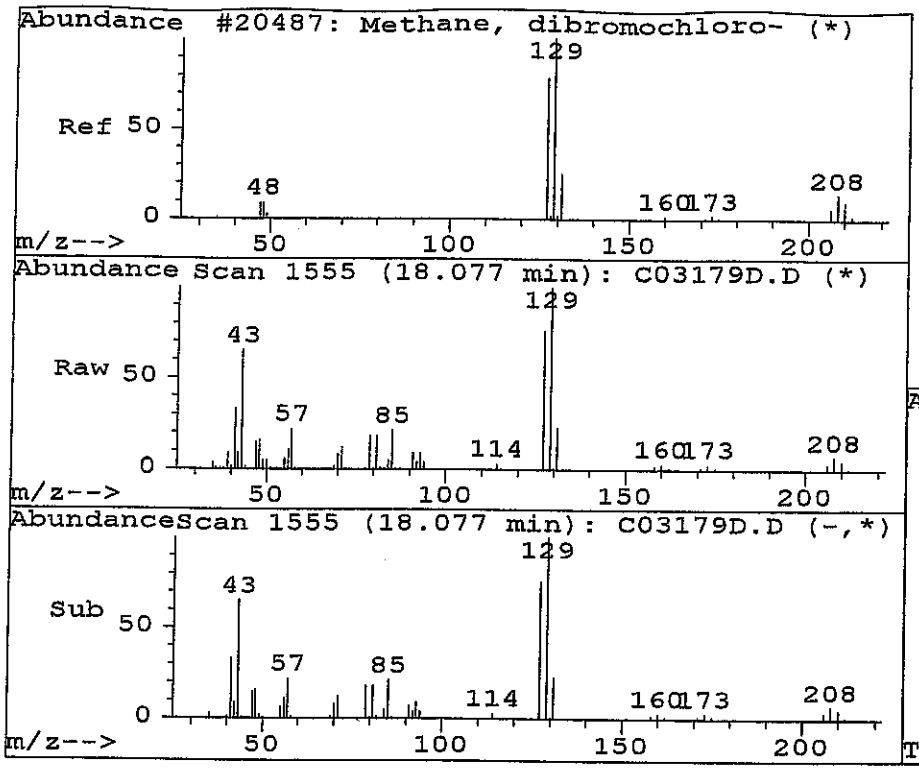


#56
Octane
Concen: 1.31 ppbV
RT: 18.06 min Scan# 1553
Delta R.T. -0.20 min
Lab File: C03179D.D
Acq: 17 Mar 109 11:35 am

Tgt Ion:57 Resp: 146267

Ion	Ratio	Lower	Upper
57	100		
85	93.7	76.1	114.1
71	56.1	31.2	46.8#
114	12.3	9.8	14.8

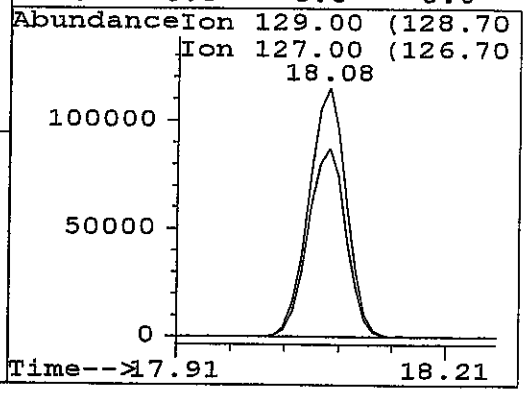


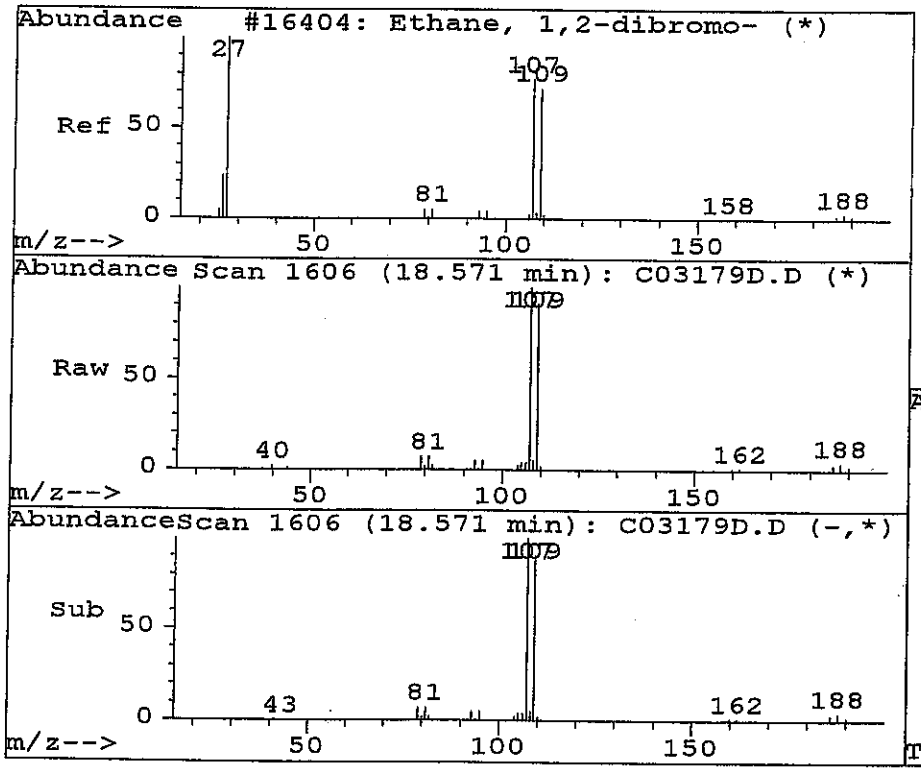


#57
Dibromochloromethane
Concen: 1.35 ppbV
RT: 18.08 min Scan# 1555
Delta R.T. -0.22 min
Lab File: C03179D.D
Acq: 17 Mar 109 11:35 am

Tgt Ion:129 Resp: 322250

Ion	Ratio	Lower	Upper
129	100		
127	75.6	64.5	96.7
0	0.0	0.0	0.0
0	0.0	0.0	0.0

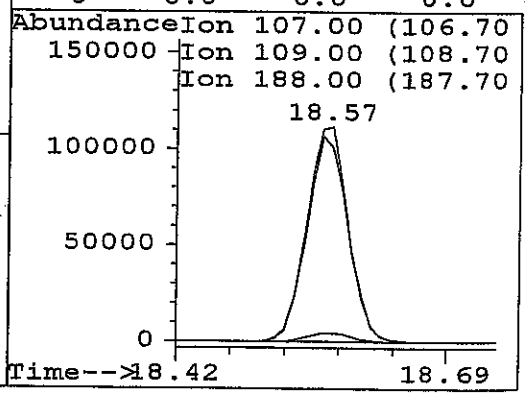


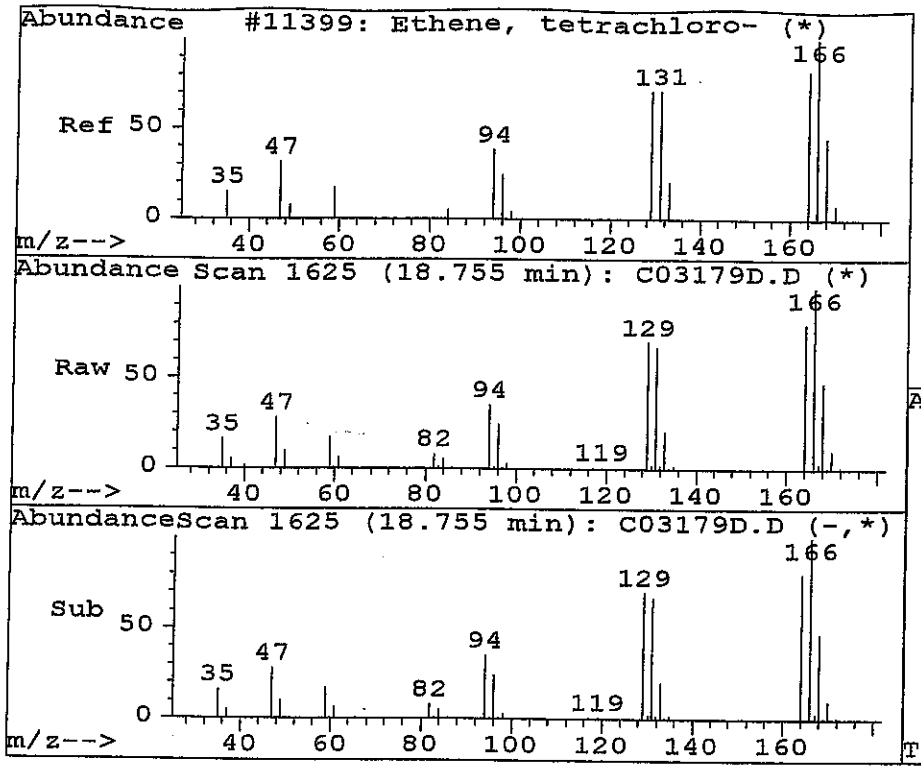


#58
1,2-Dibromoethane
Concen: 1.90 ppbV
RT: 18.57 min Scan# 1606
Delta R.T. -0.23 min
Lab File: C03179D.D
Acq: 17 Mar 109 11:35 am

Tgt Ion:107 Resp: 324567

Ion	Ratio	Lower	Upper
107	100		
109	90.7	81.8	122.6
188	4.0	3.4	5.0
0	0.0	0.0	0.0

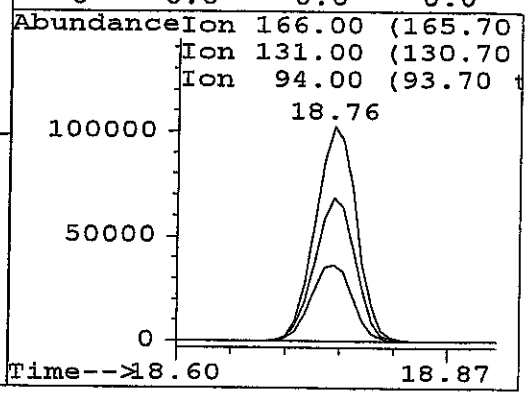


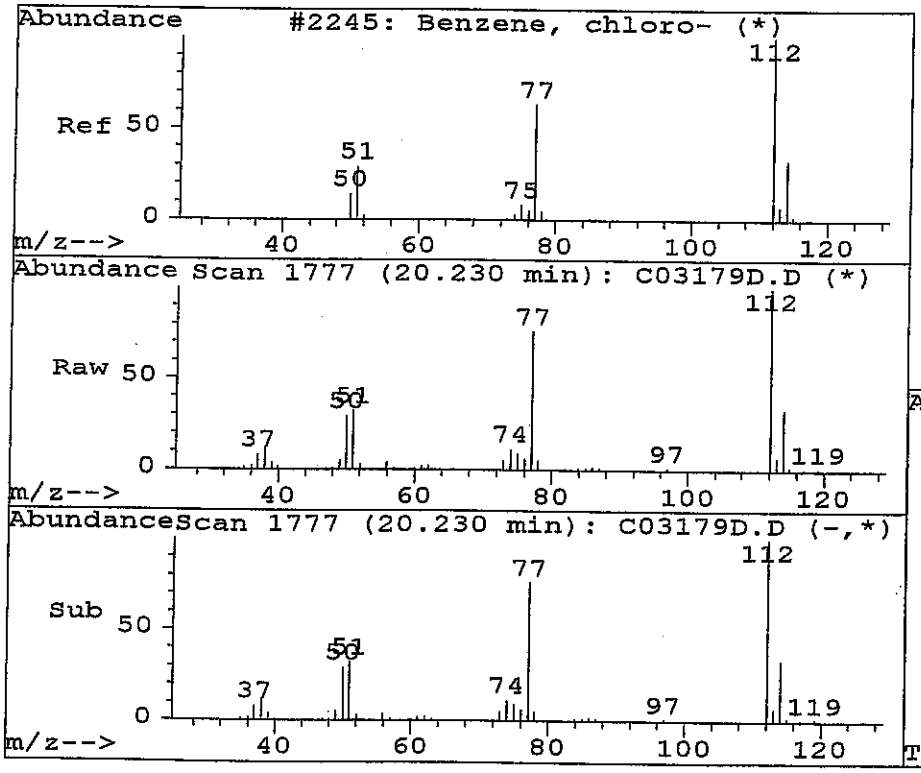


#59
Tetrachloroethene
Concen: 1.98 ppbV
RT: 18.76 min Scan# 1625
Delta R.T. -0.21 min
Lab File: C03179D.D
Acq: 17 Mar 109 11:35 am

Tgt Ion:166 Resp: 300057

Ion	Ratio	Lower	Upper
166	100		
131	66.9	58.6	88.0
94	35.5	31.2	46.8
0	0.0	0.0	0.0

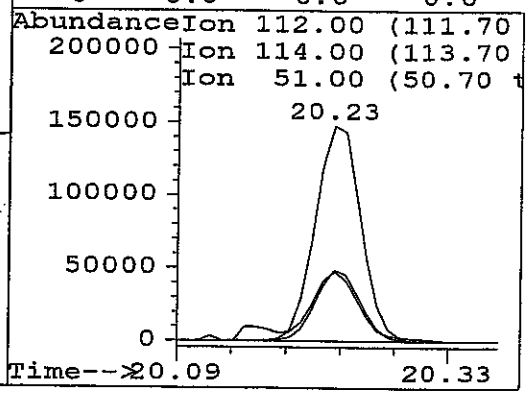


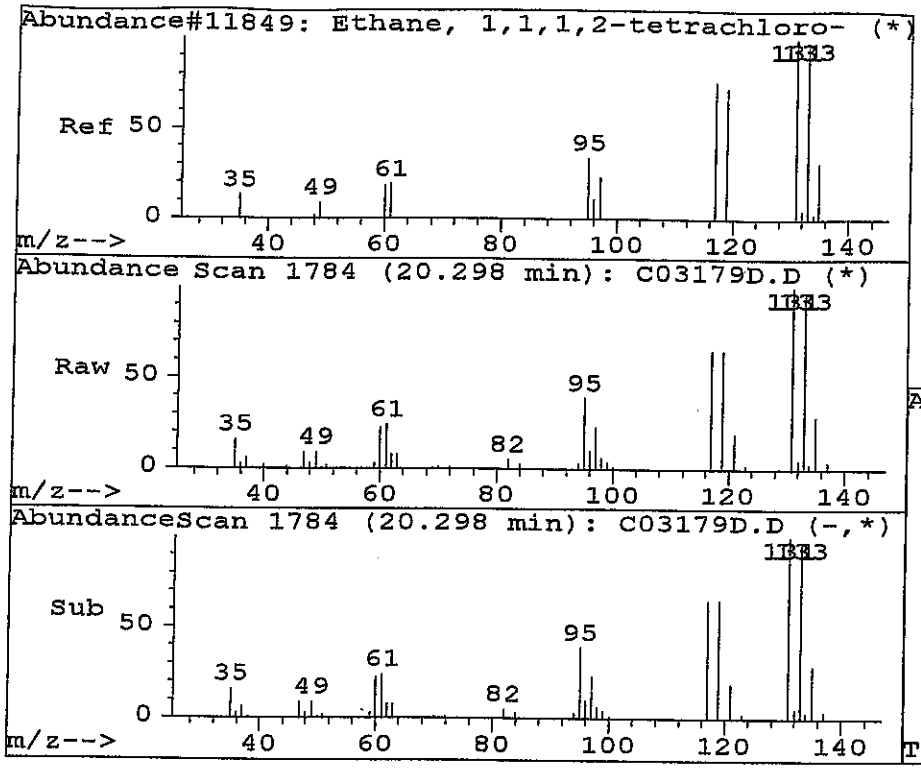


#60
Chlorobenzene
Concen: 1.86 ppbV
RT: 20.23 min Scan# 1777
Delta R.T. -0.22 min
Lab File: C03179D.D
Acq: 17 Mar 109 11:35 am

Tgt Ion:112 Resp: 410336

Ion	Ratio	Lower	Upper
112	100		
114	32.9	23.8	35.8
51	28.7	14.6	21.8#
0	0.0	0.0	0.0

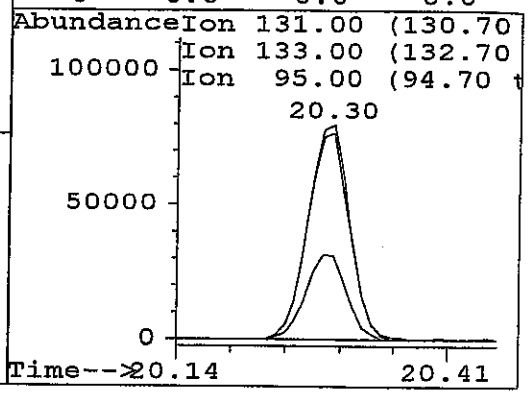


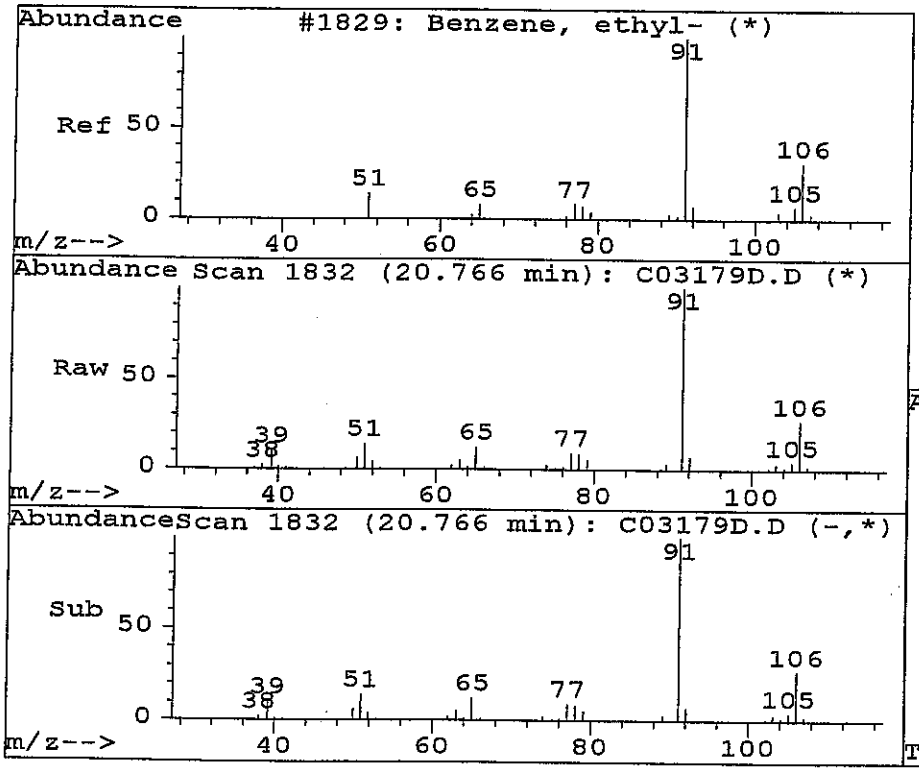


#61
1,1,1,2-Tetrachloroethane
Concen: 1.32 ppbV
RT: 20.30 min Scan# 1784
Delta R.T. -0.21 min
Lab File: C03179D.D
Acq: 17 Mar 109 11:35 am

Tgt Ion:131 Resp: 228762

Ion	Ratio	Lower	Upper
131	100		
133	96.3	78.9	118.3
95	38.6	30.2	45.2
0	0.0	0.0	0.0

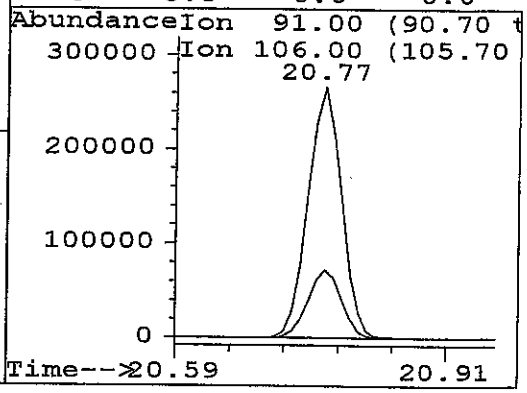


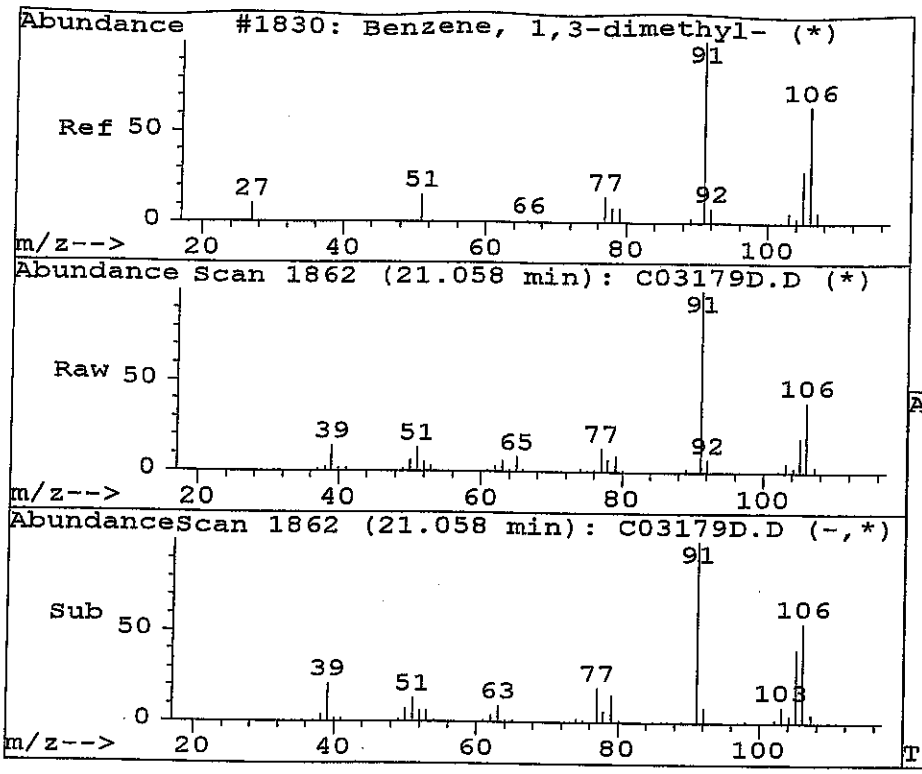


#62
Ethylbenzene
Concen: 1.95 ppbV
RT: 20.77 min Scan# 1832
Delta R.T. -0.22 min
Lab File: C03179D.D
Acq: 17 Mar 109 11:35 am

Tgt Ion:91 Resp: 722767

Ion	Ratio	Lower	Upper
91	100		
106	27.3	21.3	31.9
0	0.0	0.0	0.0
0	0.0	0.0	0.0

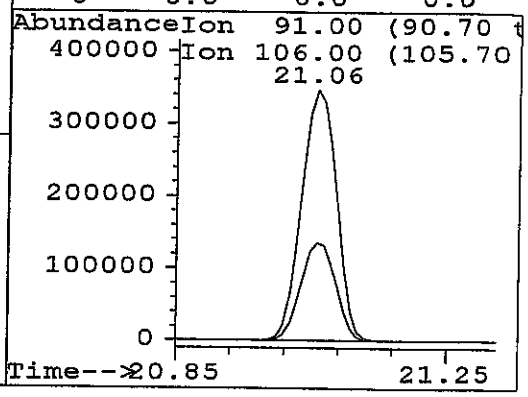


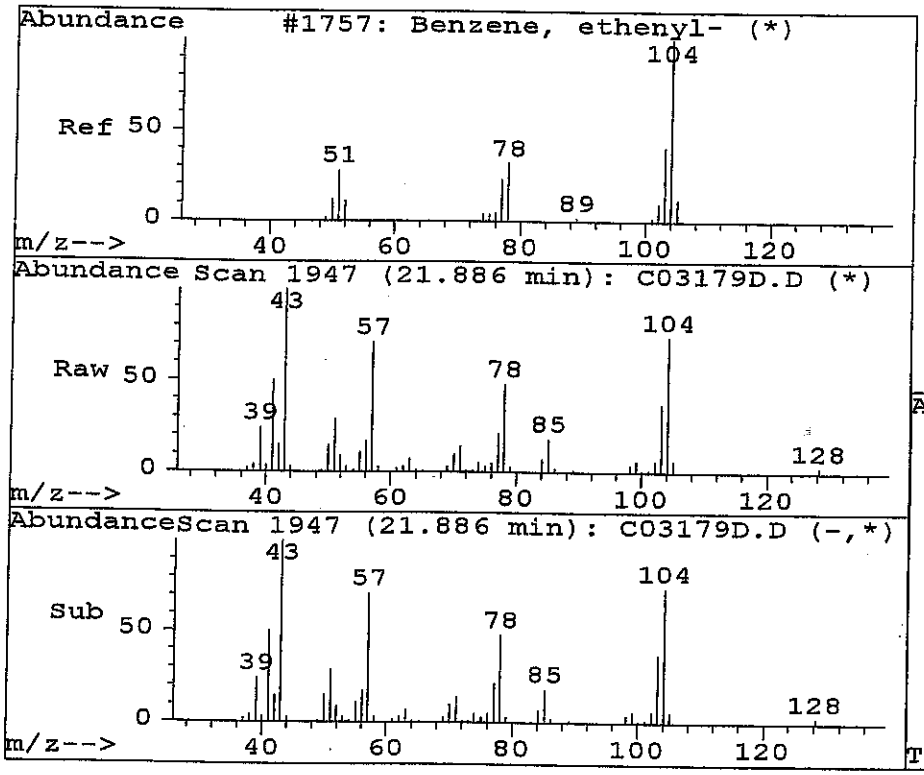


#63
m & p-Xylene
Concen: 3.86 ppbV
RT: 21.06 min Scan# 1862
Delta R.T. -0.22 min
Lab File: C03179D.D
Acq: 17 Mar 109 11:35 am

Tgt Ion:91 Resp: 1220126

Ion	Ratio	Lower	Upper
91	100		
106	39.0	30.3	45.5
0	0.0	0.0	0.0
0	0.0	0.0	0.0

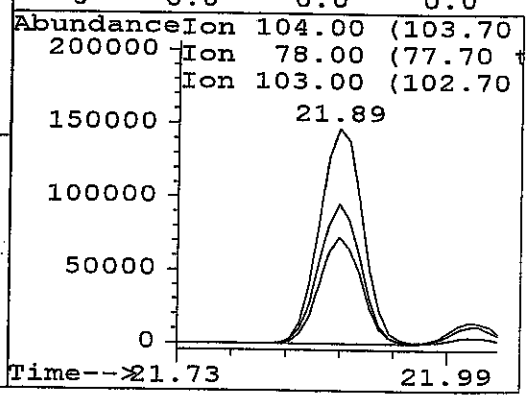


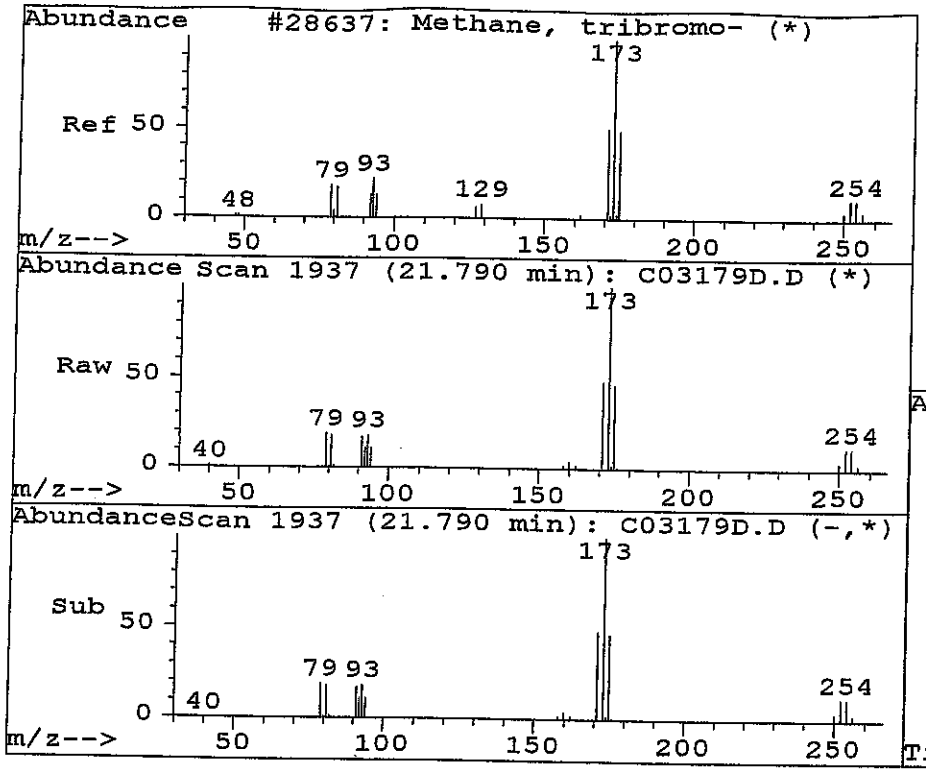


#64
Styrene
Concen: 1.93 ppbV
RT: 21.89 min Scan# 1947
Delta R.T. -0.25 min
Lab File: C03179D.D
Acq: 17 Mar 109 11:35 am

Tgt Ion:104 Resp: 428714

Ion	Ratio	Lower	Upper
104	100		
78	65.1	46.4	69.6
103	49.4	40.3	60.5
0	0.0	0.0	0.0

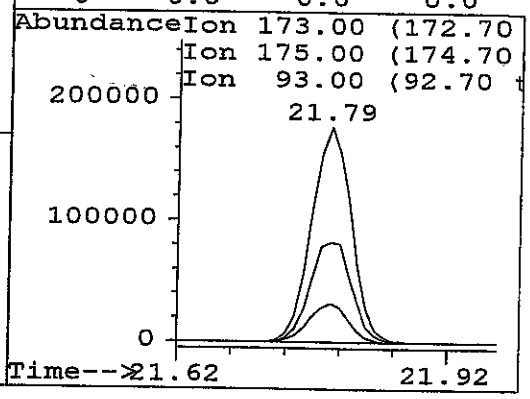


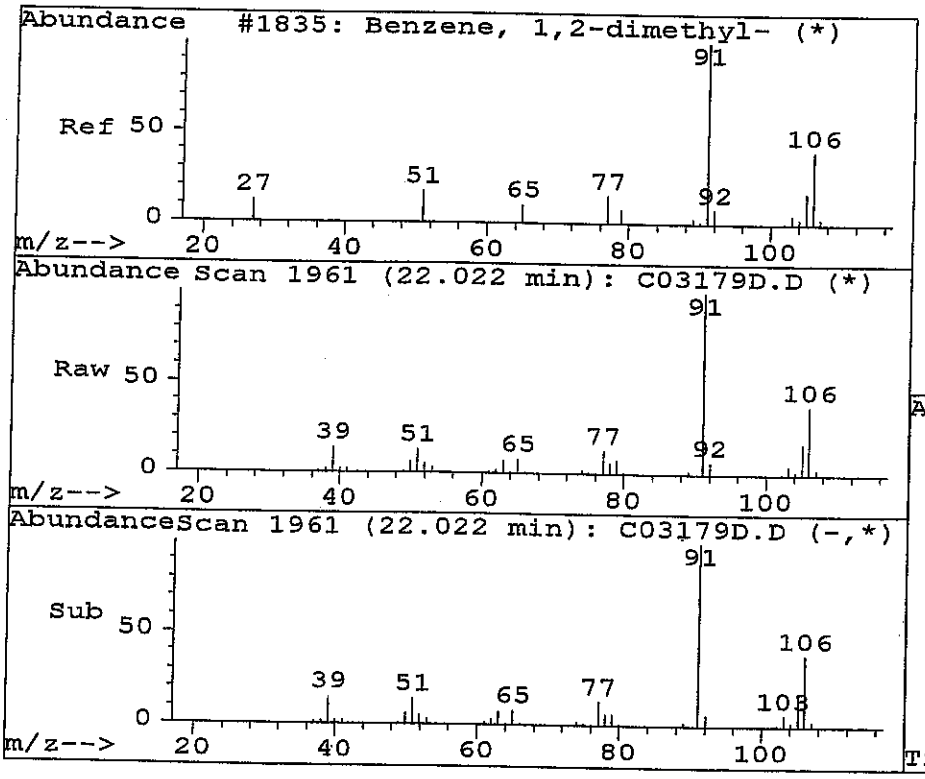


#65
Bromoform
Concen: 1.34 ppbV
RT: 21.79 min Scan# 1937
Delta R.T. -0.21 min
Lab File: C03179D.D
Acq: 17 Mar 109 11:35 am

Tgt Ion:173 Resp: 530300

Ion	Ratio	Lower	Upper
173	100		
175	46.1	39.7	59.5
93	17.9	15.1	22.7
0	0.0	0.0	0.0

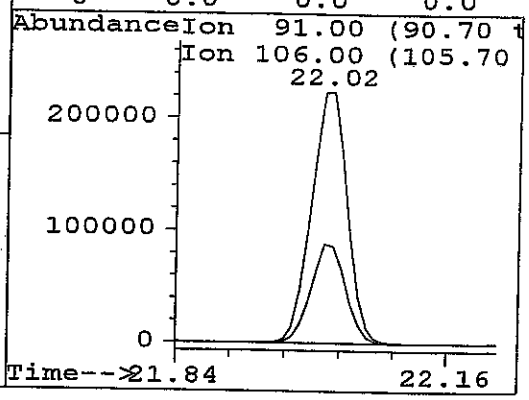


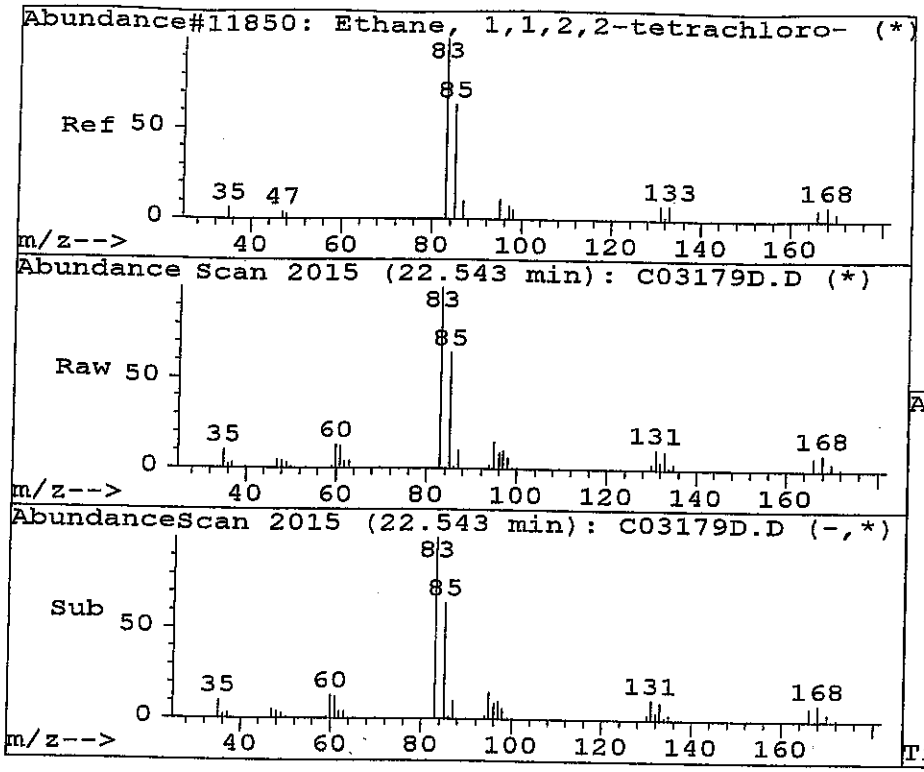


#66
o-Xylene
Concen: 1.83 ppbV
RT: 22.02 min Scan# 1961
Delta R.T. -0.23 min
Lab File: C03179D.D
Acq: 17 Mar 109 11:35 am

Tgt Ion:91 Resp: 643280

Ion	Ratio	Lower	Upper
91	100		
106	38.5	31.2	46.8
0	0.0	0.0	0.0
0	0.0	0.0	0.0

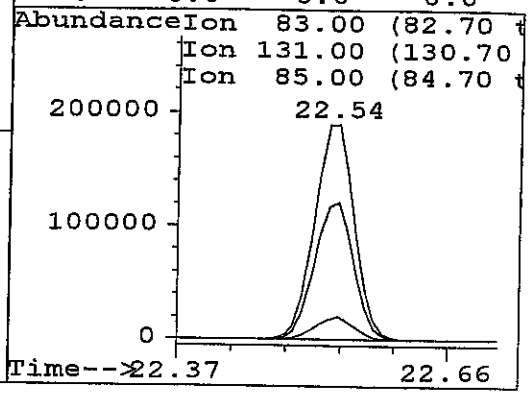


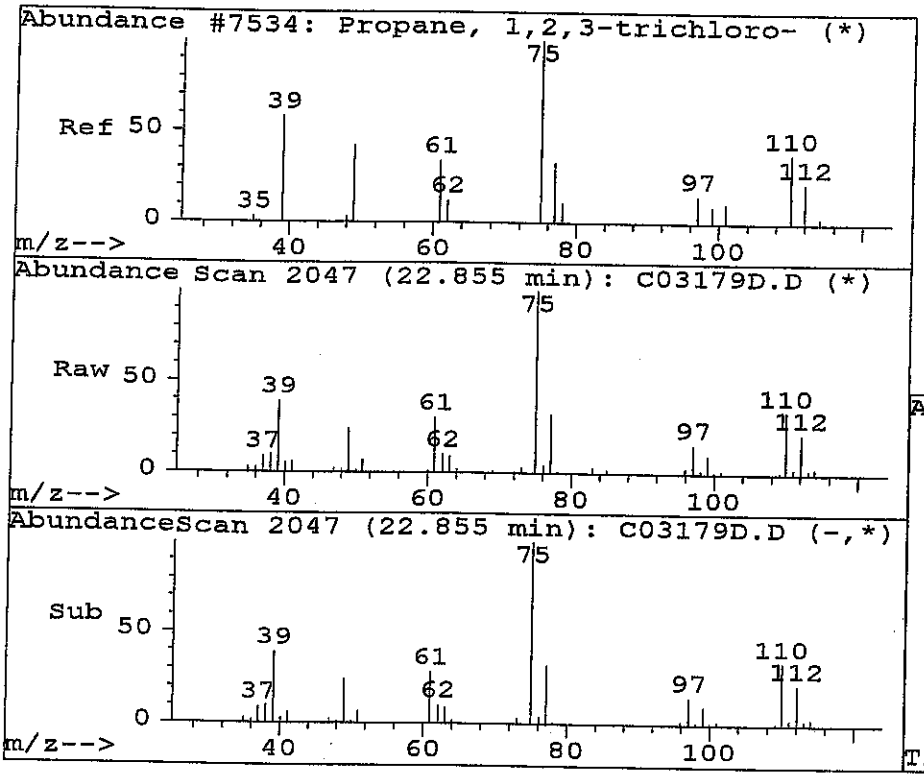


#67
1,1,2,2-Tetrachloroethane
Concen: 1.90 ppbV
RT: 22.54 min Scan# 2015
Delta R.T. -0.21 min
Lab File: C03179D.D
Acq: 17 Mar 109 11:35 am

Tgt Ion:83 Resp: 560899

Ion	Ratio	Lower	Upper
83	100		
131	10.6	8.3	12.5
85	63.8	50.0	75.0
0	0.0	0.0	0.0

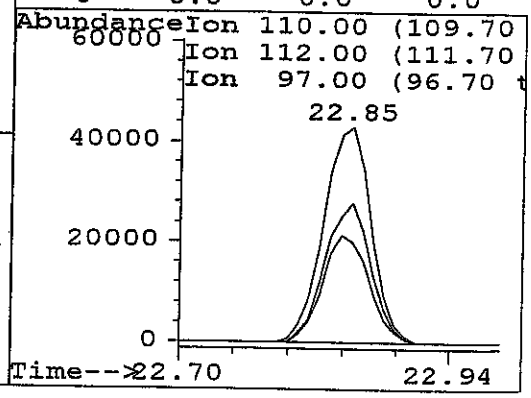


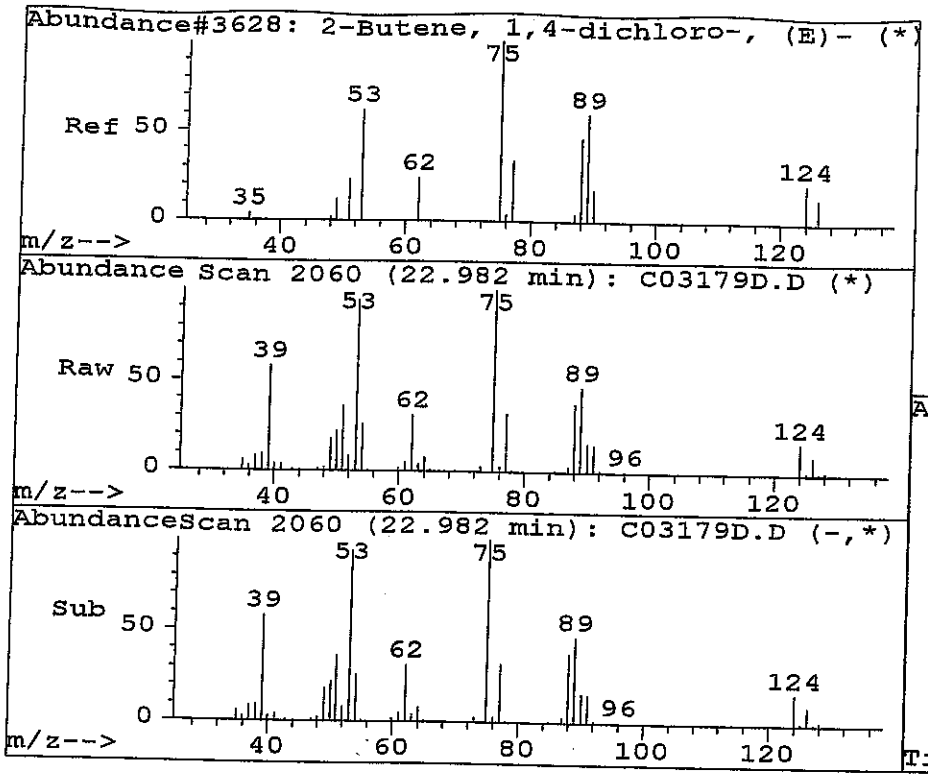


#68
1,2,3-Trichloropropane
Concen: 1.19 ppbV
RT: 22.85 min Scan# 2047
Delta R.T. -0.23 min
Lab File: C03179D.D
Acq: 17 Mar 109 11:35 am

Tgt Ion:110 Resp: 128657

Ion	Ratio	Lower	Upper
110	100		
112	64.8	47.6	71.4
97	46.4	38.9	58.3
0	0.0	0.0	0.0

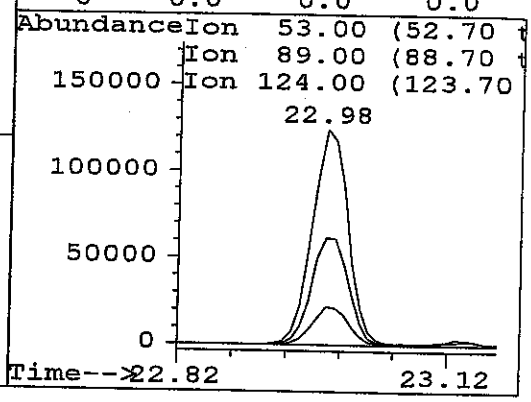


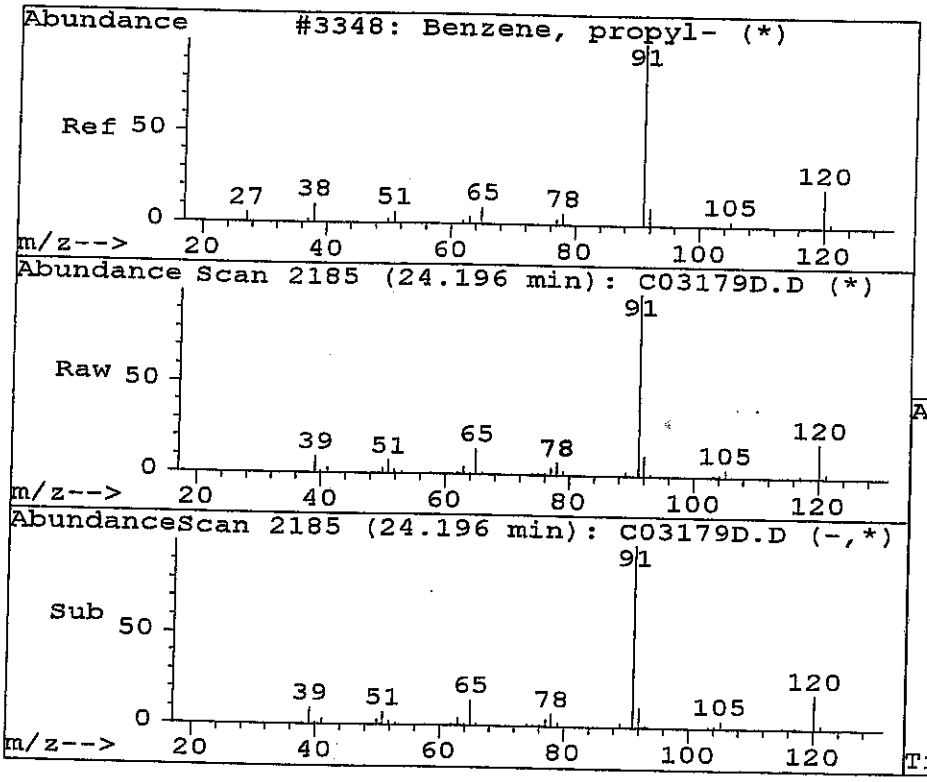


#69
t-1,4-Dichloro-2-butene
Concen: 3.85 ppbV
RT: 22.98 min Scan# 2060
Delta R.T. -0.25 min
Lab File: C03179D.D
Acq: 17 Mar 109 11:35 am

Tgt Ion:53 Resp: 351682

Ion	Ratio	Lower	Upper
53	100		
89	49.8	41.1	61.7
124	17.7	14.6	22.0
0	0.0	0.0	0.0

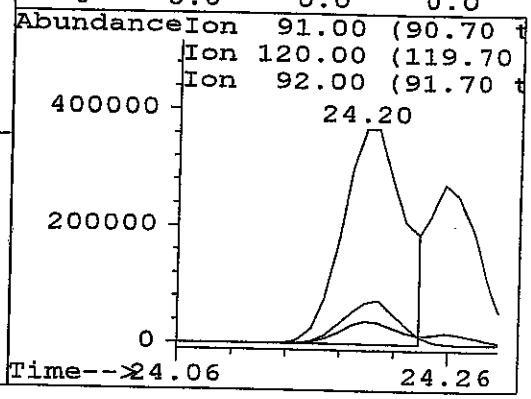


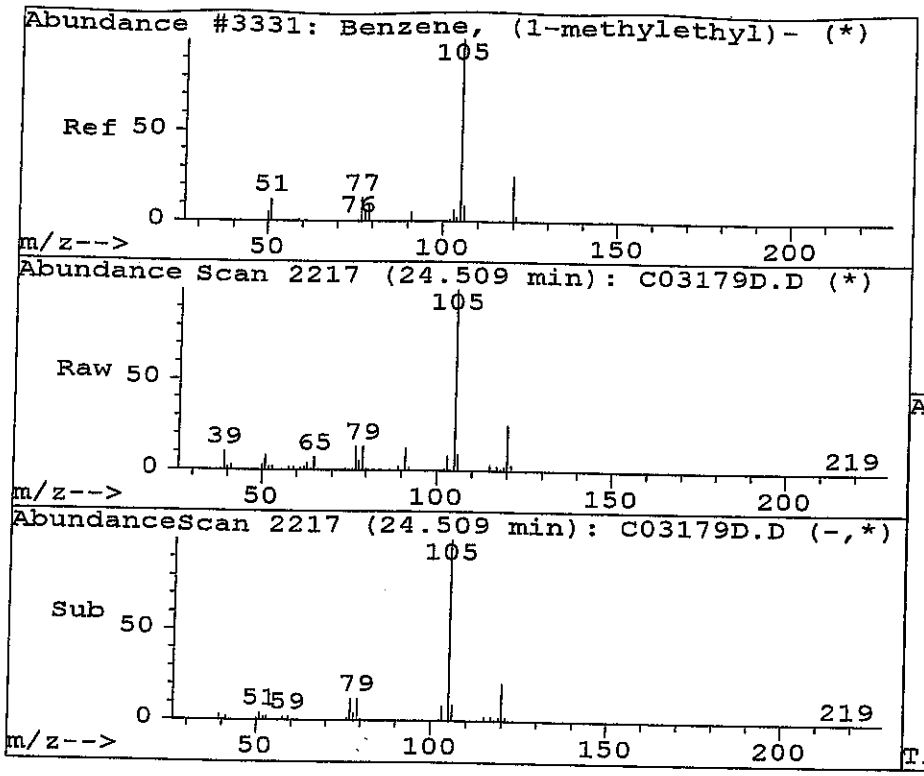


#70
n-Propylbenzene
Concen: 1.28 ppbV
RT: 24.20 min Scan# 2185
Delta R.T. -0.23 min
Lab File: C03179D.D
Acq: 17 Mar 109 11:35 am

Tgt Ion:91 Resp: 1169202

Ion	Ratio	Lower	Upper
91	100		
120	18.0	14.7	22.1
92	10.3	7.8	11.6
0	0.0	0.0	0.0

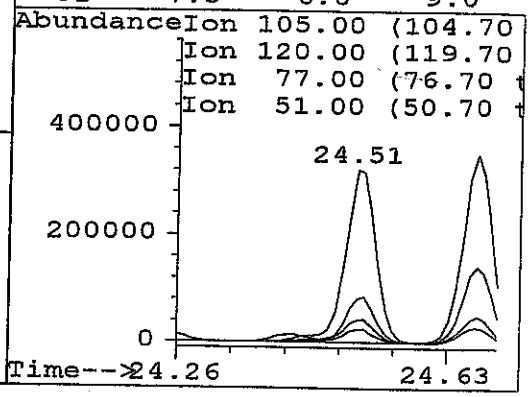


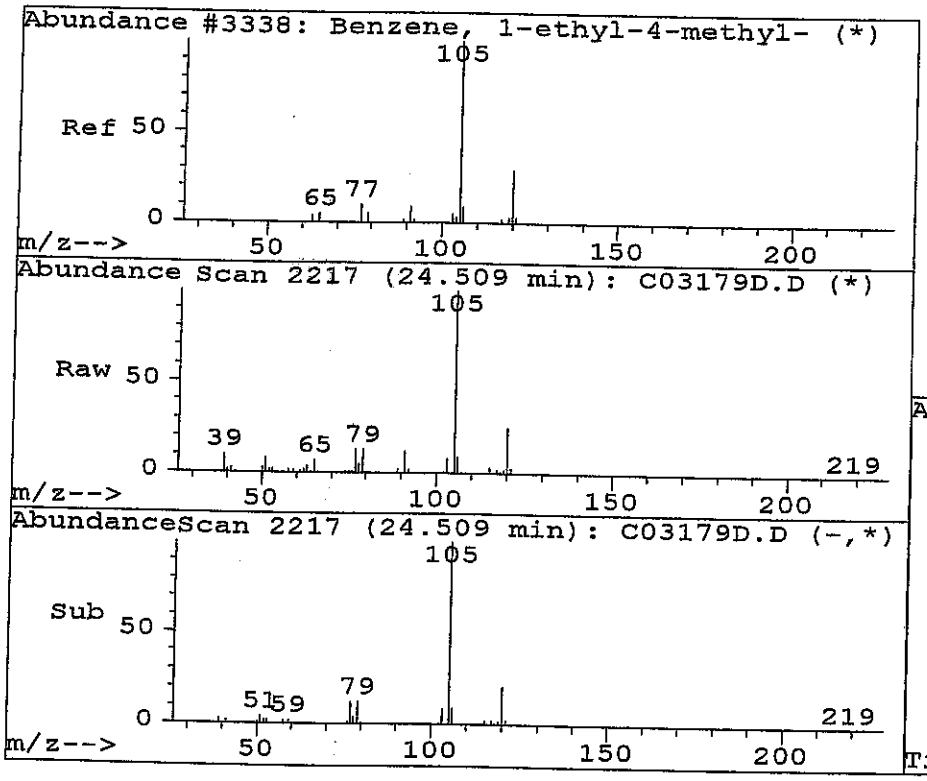


#71
Isopropylbenzene
Concen: 1.46 ppbV
RT: 24.51 min Scan# 2217
Delta R.T. -0.23 min
Lab File: C03179D.D
Acq: 17 Mar 109 11:35 am

Tgt Ion:105 Resp: 943267

Ion	Ratio	Lower	Upper
105	100		
120	26.0	20.2	30.4
77	15.0	12.2	18.4
51	7.5	6.0	9.0

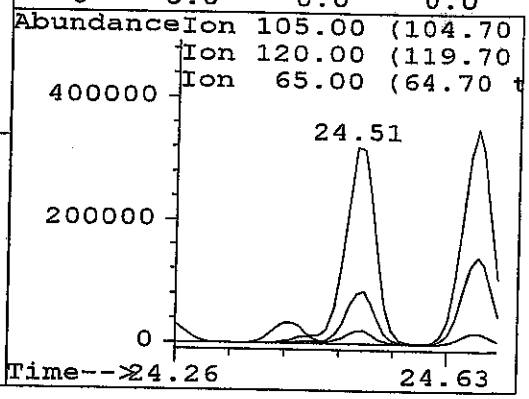


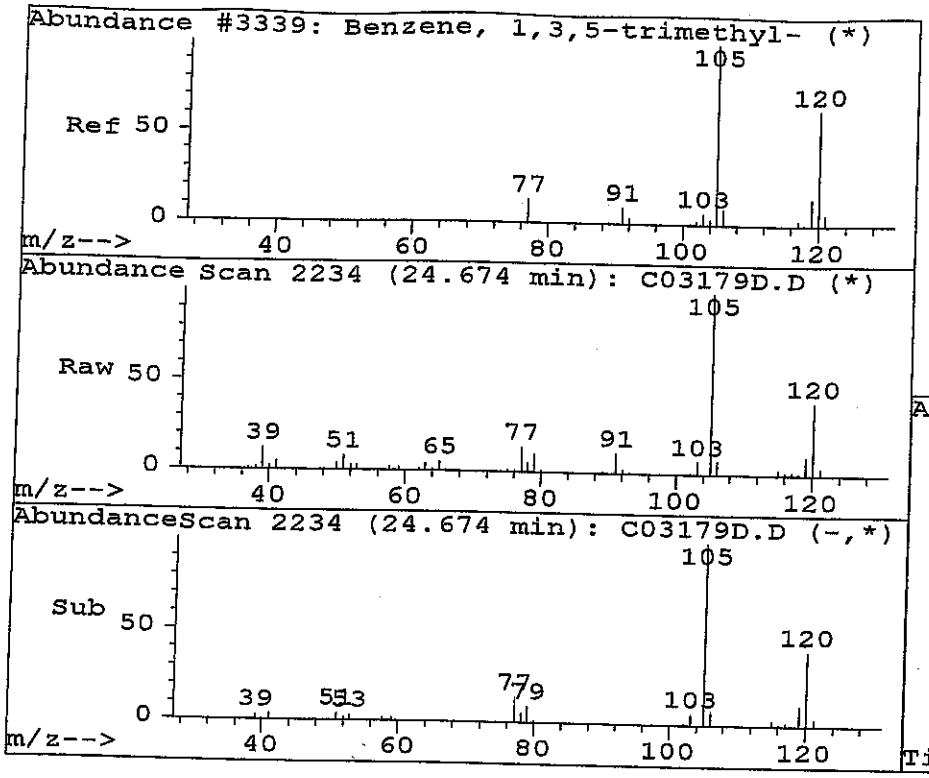


#72
4-Ethyltoluene
Concen: 1.40 ppbV
RT: 24.51 min Scan# 2217
Delta R.T. -0.23 min
Lab File: C03179D.D
Acq: 17 Mar 109 11:35 am

Tgt Ion:105 Resp: 943267

Ion	Ratio	Lower	Upper
105	100		
120	25.4	20.2	30.4
65	6.3	5.2	7.8
0	0.0	0.0	0.0

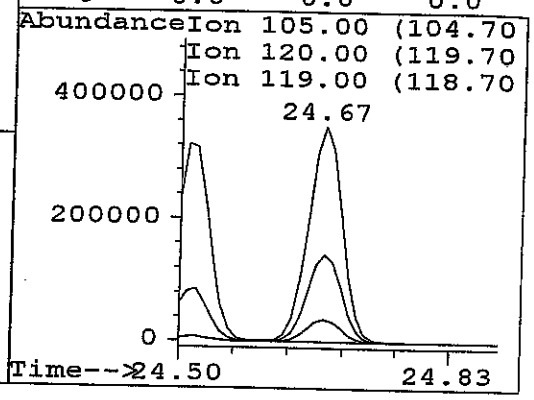


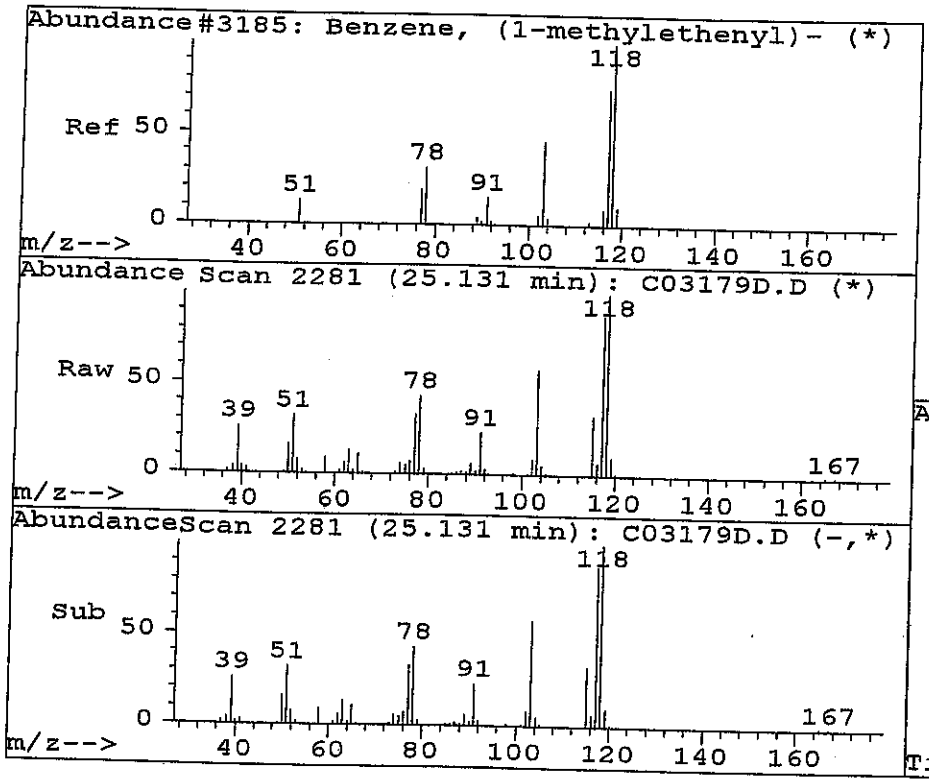


#73
1,3,5-Trimethylbenzene
Concen: 2.17 ppbV
RT: 24.67 min Scan# 2234
Delta R.T. -0.25 min
Lab File: C03179D.D
Acq: 17 Mar 109 11:35 am

Tgt Ion:105 Resp: 994445

Ion	Ratio	Lower	Upper
105	100		
120	40.5	35.6	53.4
119	10.4	8.2	12.4
0	0.0	0.0	0.0

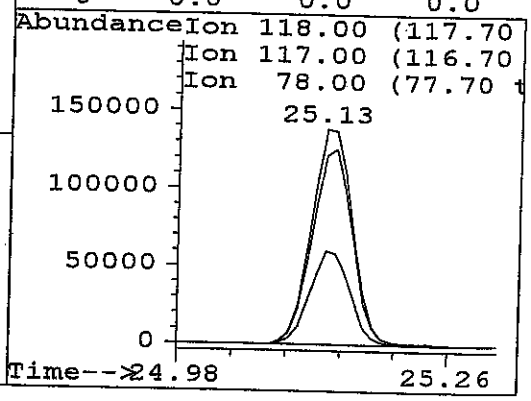


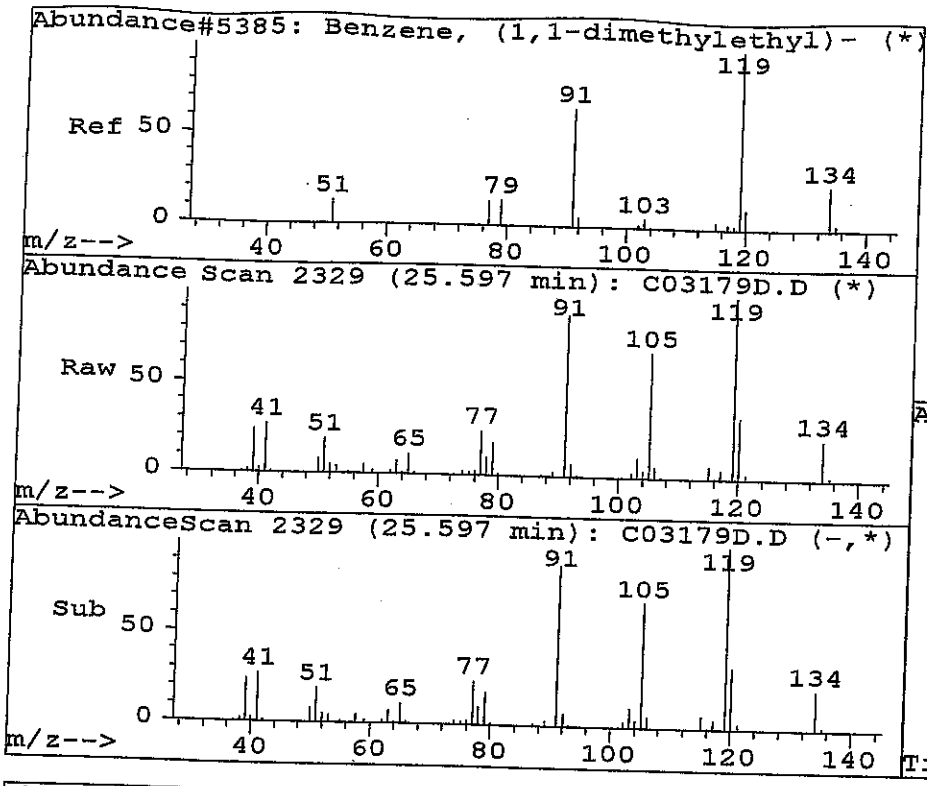


#74
Methylstyrene
Concen: 1.22 ppbV
RT: 25.13 min Scan# 2281
Delta R.T. -0.23 min
Lab File: C03179D.D
Acq: 17 Mar 109 11:35 am

Tgt Ion:118 Resp: 416310

Ion	Ratio	Lower	Upper
118	100		
117	87.8	69.6	104.4
78	43.6	35.8	53.6
0	0.0	0.0	0.0

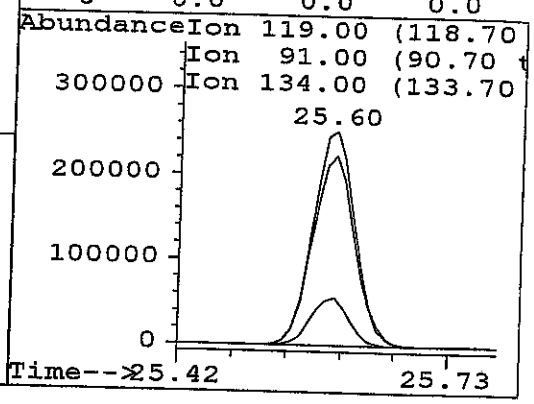


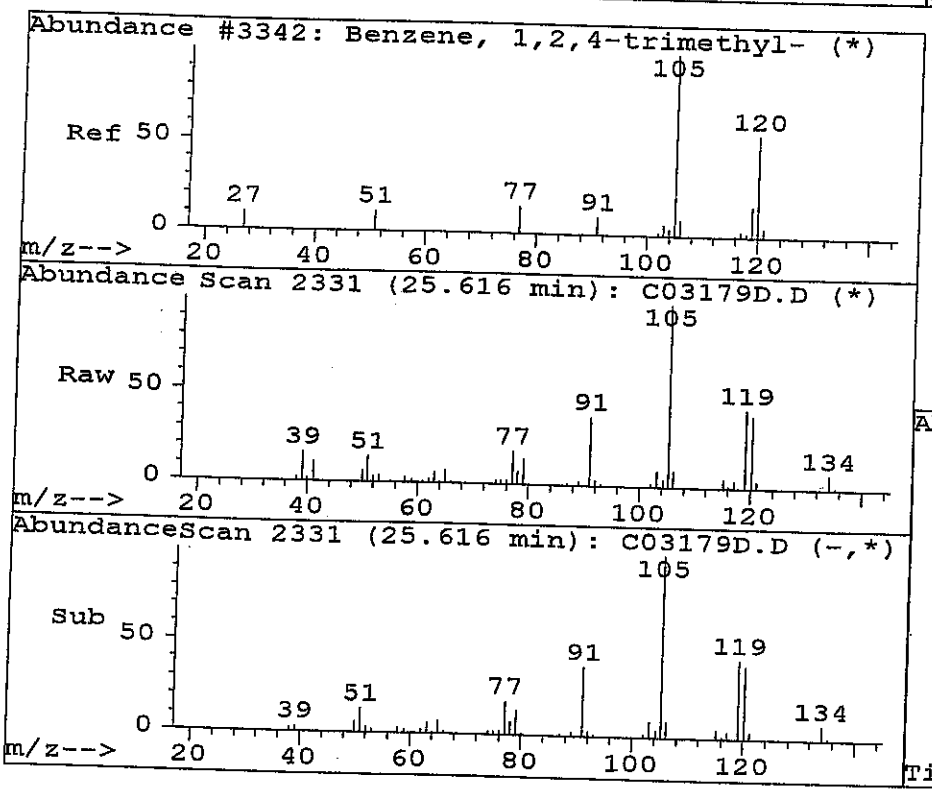


#75
tert-butyl benzene
Concen: 1.57 ppbV
RT: 25.60 min Scan# 2329
Delta R.T. -0.21 min
Lab File: C03179D.D
Acq: 17 Mar 109 11:35 am

Tgt Ion:119 Resp: 821357

Ion	Ratio	Lower	Upper
119	100		
91	88.9	69.8	104.6
134	20.0	14.7	22.1
0	0.0	0.0	0.0

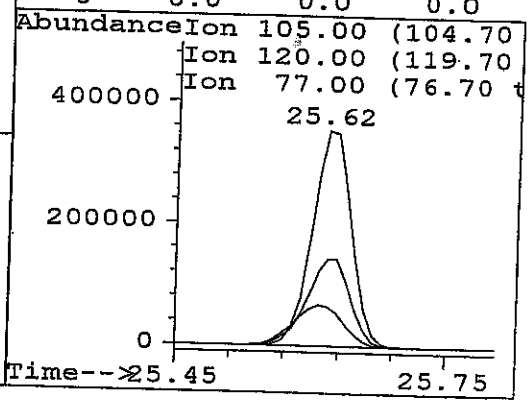


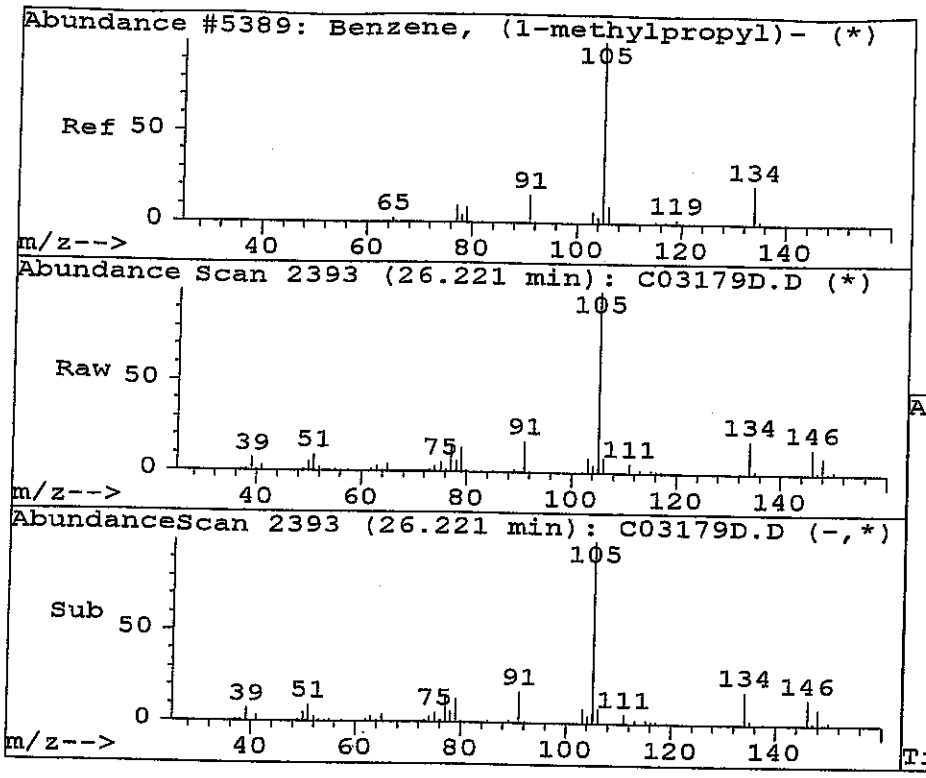


#76
1,2,4-Trimethylbenzene
Concen: 2.22 ppbV
RT: 25.62 min Scan# 2331
Delta R.T. -0.27 min
Lab File: C03179D.D
Acq: 17 Mar 109 11:35 am

Tgt Ion:105 Resp: 1033463

Ion	Ratio	Lower	Upper
105	100		
120	40.0	32.2	48.4
77	18.1	13.6	20.4
0	0.0	0.0	0.0

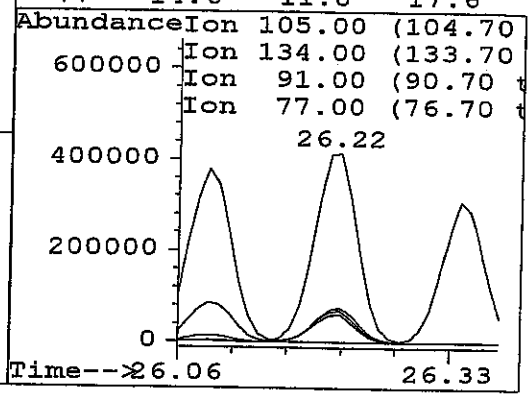


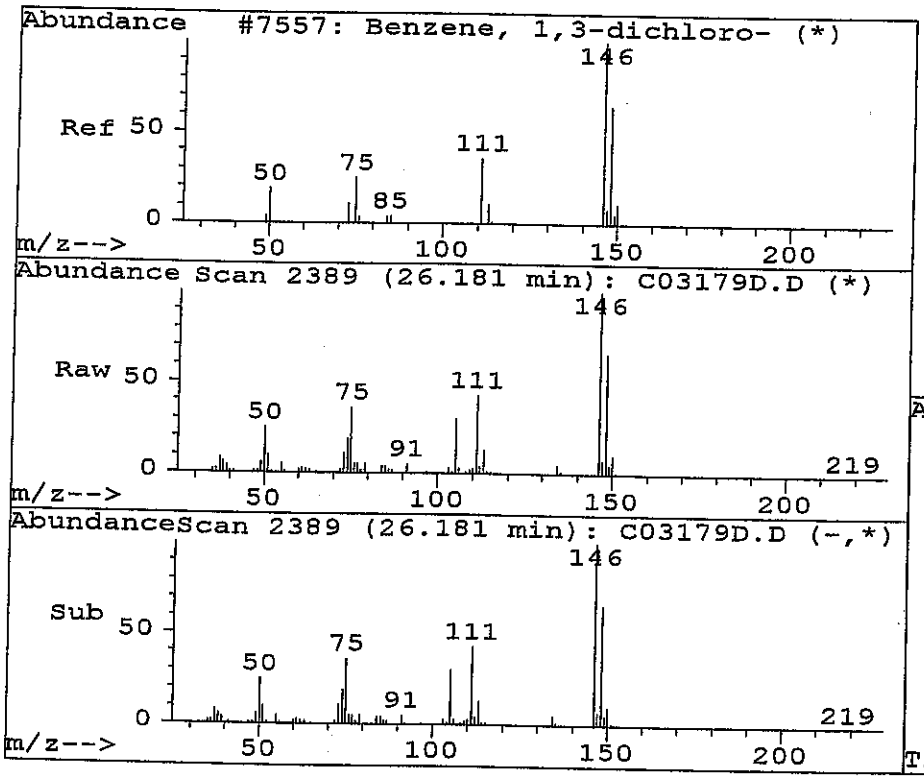


#77
sec-butylbenzene
Concen: 1.57 ppbV
RT: 26.22 min Scan# 2393
Delta R.T. -0.28 min
Lab File: C03179D.D
Acq: 17 Mar 109 11:35 am

Tgt Ion:105 Resp: 1215111

Ion	Ratio	Lower	Upper
105	100		
134	18.0	14.8	22.2
91	16.5	13.2	19.8
77	14.6	11.8	17.6

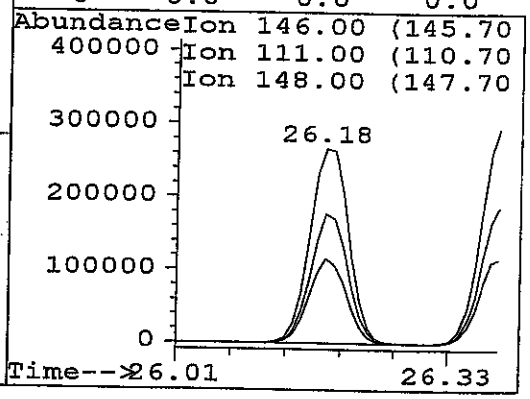


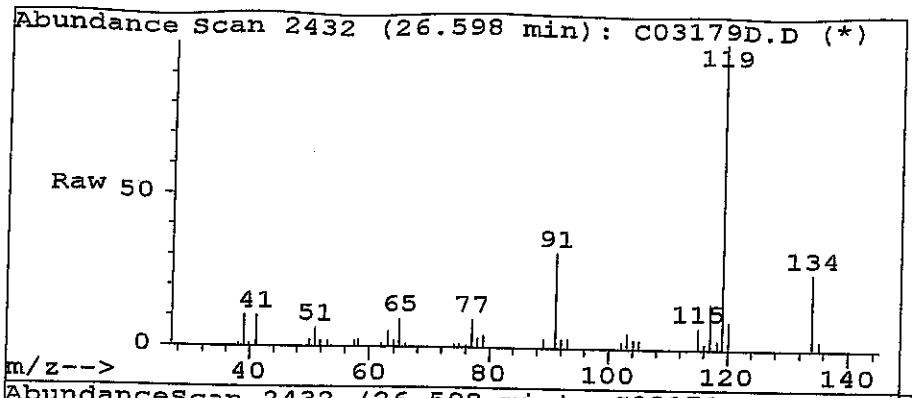


#78
1,3-Dichlorobenzene
Concen: 2.15 ppbV
RT: 26.18 min Scan# 2389
Delta R.T. -0.23 min
Lab File: C03179D.D
Acq: 17 Mar 109 11:35 am

Tgt Ion:146 Resp: 837609

Ion	Ratio	Lower	Upper
146	100		
111	43.5	33.7	50.5
148	66.4	52.0	78.0
0	0.0	0.0	0.0

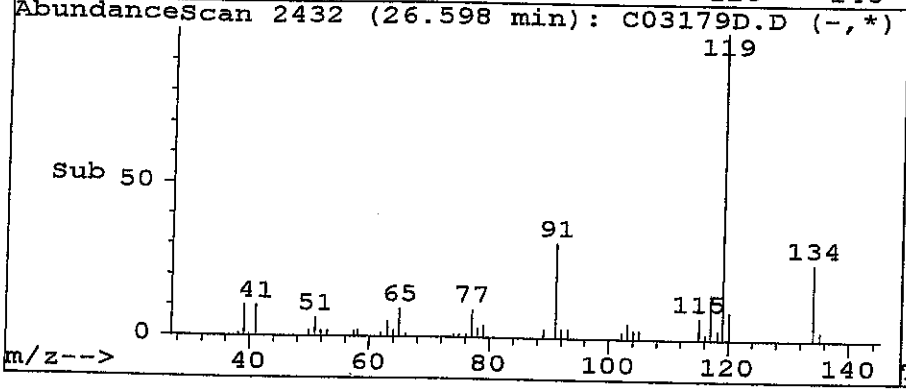


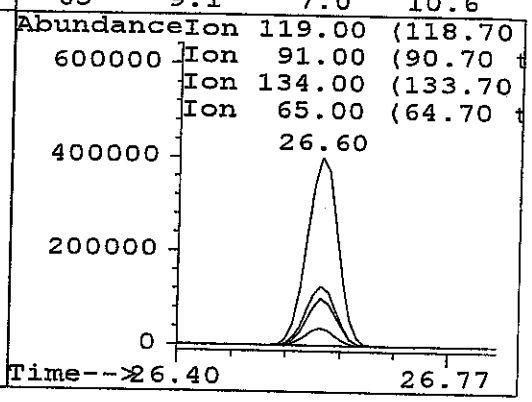


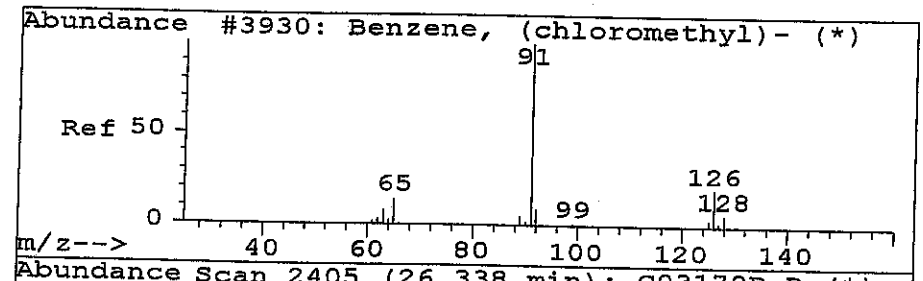
#79
Isopropyltoluene
Concen: 1.60 ppbV
RT: 26.60 min Scan# 2432
Delta R.T. -0.23 min
Lab File: C03179D.D
Acq: 17 Mar 109 11:35 am

Tgt Ion:119 Resp: 1156820

Ion	Ratio	Lower	Upper
119	100		
91	31.3	25.0	37.6
134	24.6	19.3	28.9
65	9.1	7.0	10.6



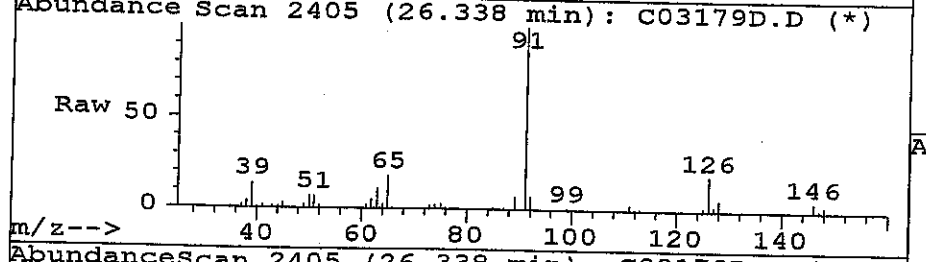


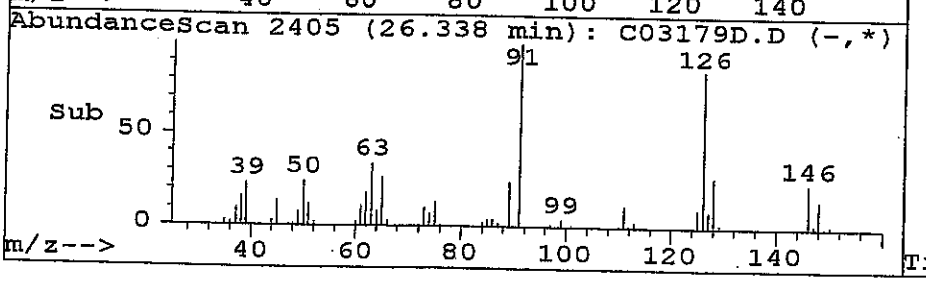


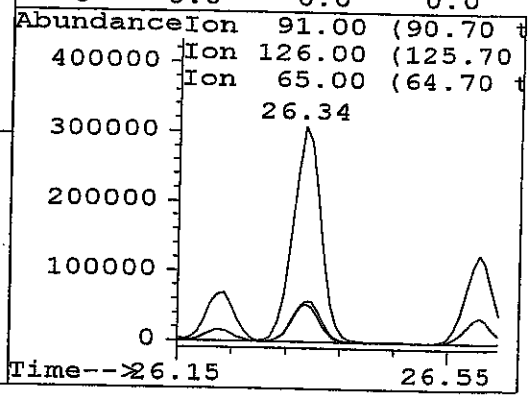
#80
Benzyl chloride
Concen: 1.47 ppbV
RT: 26.34 min Scan# 2405
Delta R.T. -0.27 min
Lab File: C03179D.D
Acq: 17 Mar 109 11:35 am

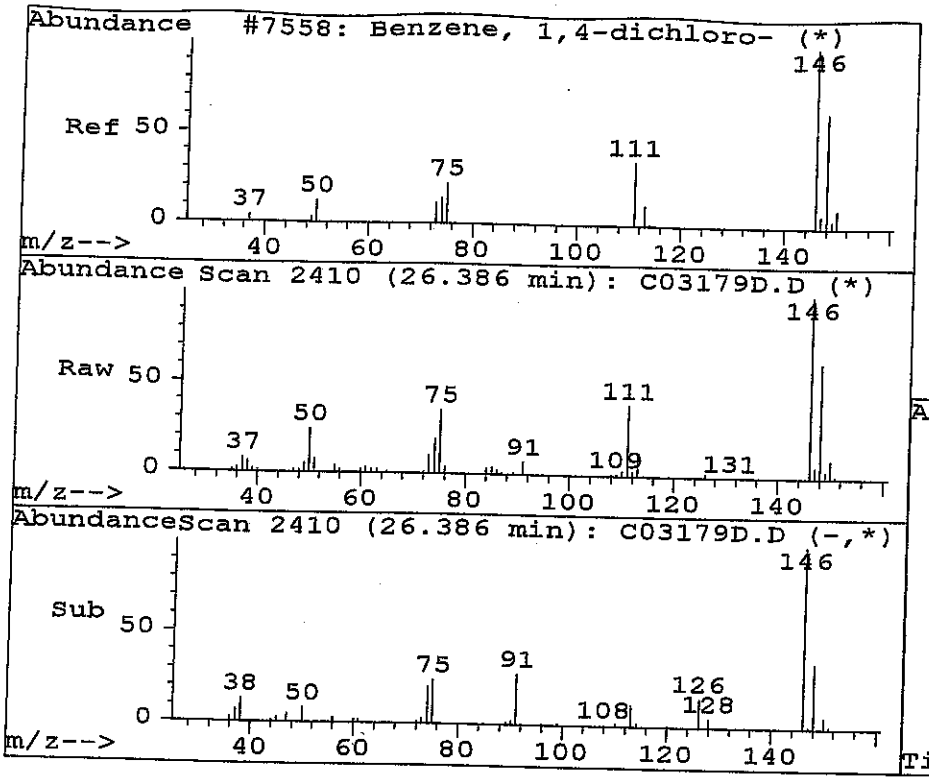
Tgt Ion:91 Resp: 884546

Ion	Ratio	Lower	Upper
91	100		
126	18.6	15.9	23.9
65	17.6	13.2	19.8
0	0.0	0.0	0.0





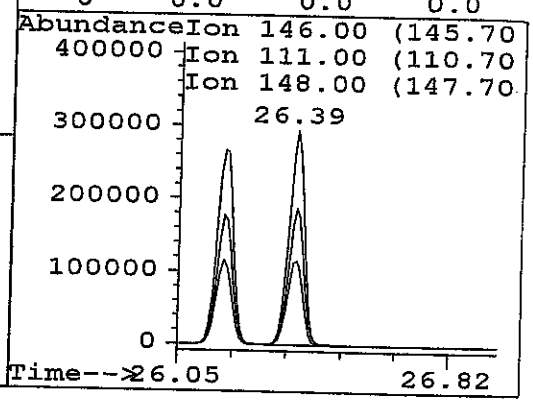


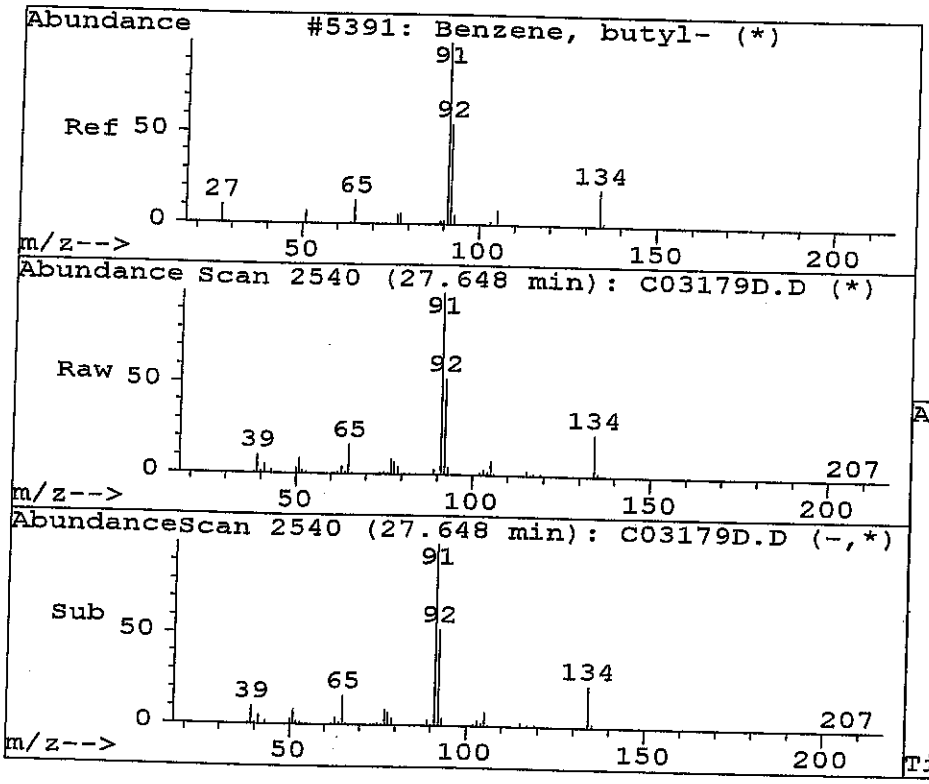


#81
1,4-Dichlorobenzene
Concen: 2.24 ppbV m
RT: 26.39 min Scan# 2410
Delta R.T. -0.29 min
Lab File: C03179D.D
Acq: 17 Mar 109 11:35 am

Tgt Ion:146 Resp: 896732

Ion	Ratio	Lower	Upper
146	100		
111	39.2	32.1	48.1
148	63.4	50.1	75.1
0	0.0	0.0	0.0

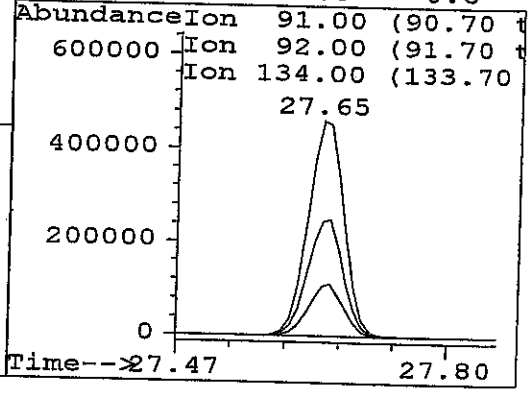


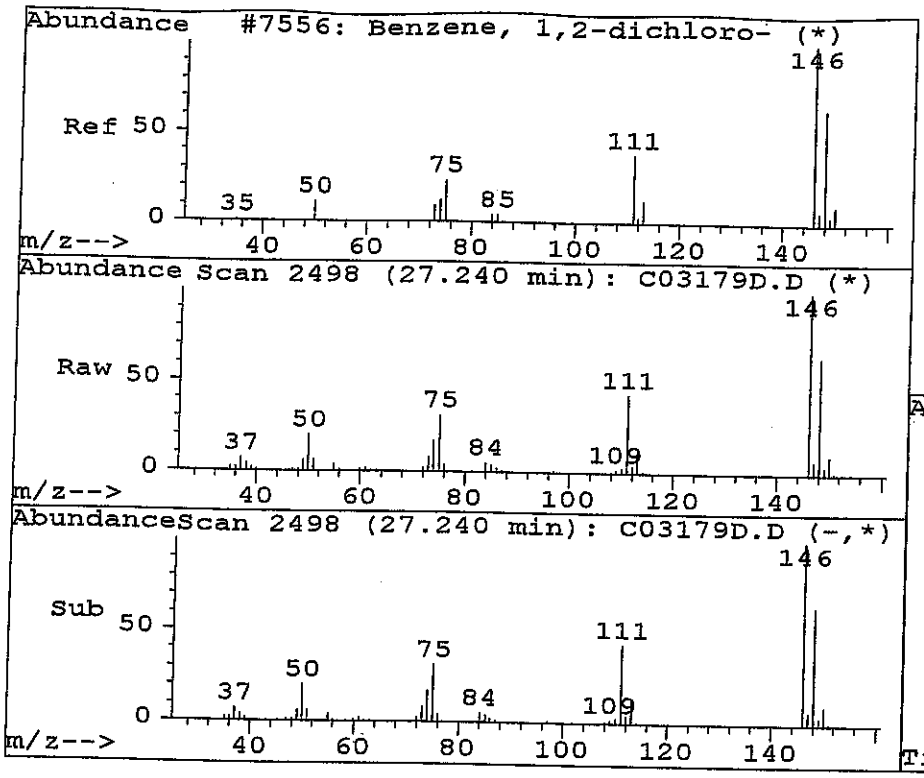


#82
n-Butylbenzene
Concen: 1.68 ppbV
RT: 27.65 min Scan# 2540
Delta R.T. -0.23 min
Lab File: C03179D.D
Acq: 17 Mar 109 11:35 am

Tgt Ion:91 Resp: 1379437

Ion	Ratio	Lower	Upper
91	100		
92	53.9	42.8	64.2
134	23.6	18.7	28.1
0	0.0	0.0	0.0

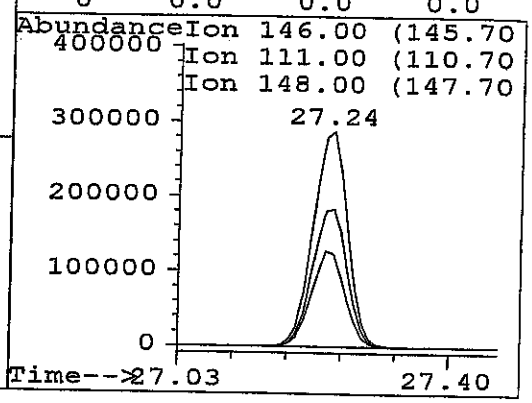


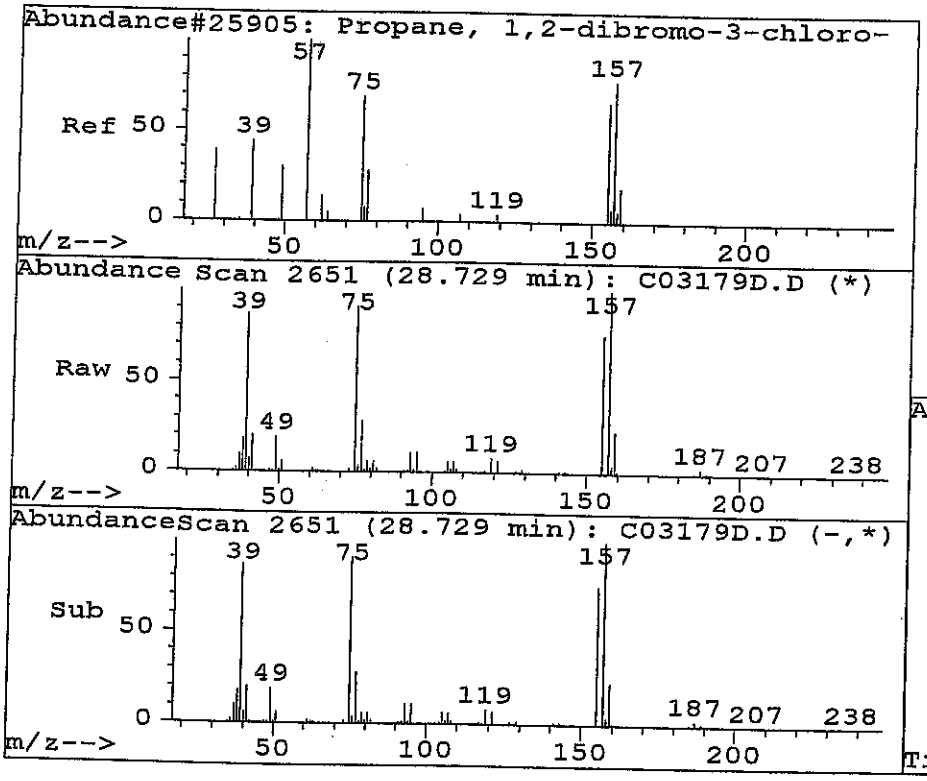


#83
1,2-Dichlorobenzene
Concen: 2.00 ppbV
RT: 27.24 min Scan# 2498
Delta R.T. -0.23 min
Lab File: C03179D.D
Acq: 17 Mar 109 11:35 am

Tgt Ion:146 Resp: 912351

Ion	Ratio	Lower	Upper
146	100		
111	42.9	35.2	52.8
148	63.9	52.9	79.3
0	0.0	0.0	0.0

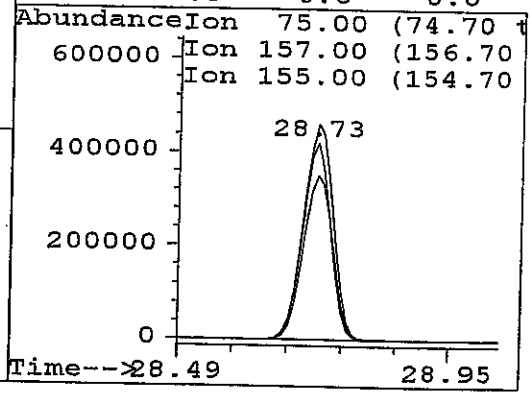


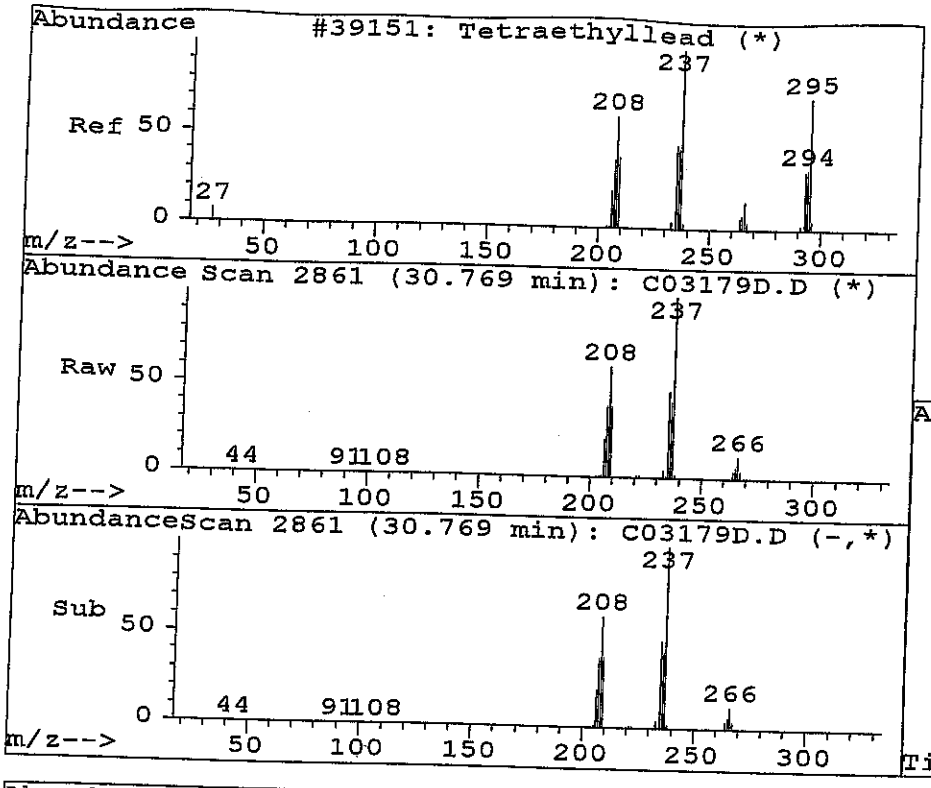


#84
1,2-Dibromo-3-chloropropane
Concen: 4.23 ppbV
RT: 28.73 min Scan# 2651
Delta R.T. -0.23 min
Lab File: C03179D.D
Acq: 17 Mar 109 11:35 am

Tgt Ion:75 Resp: 1381868

Ion	Ratio	Lower	Upper
75	100		
157	109.9	94.6	142.0
155	83.4	75.8	113.6
0	0.0	0.0	0.0

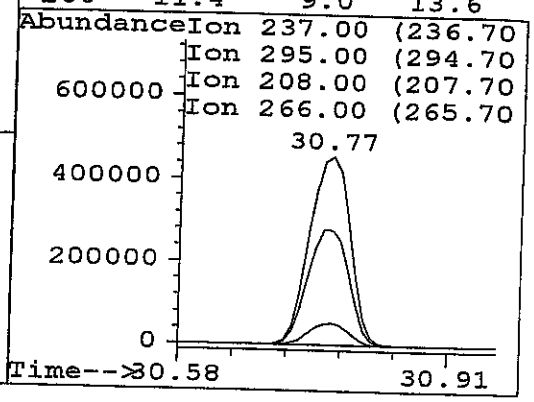


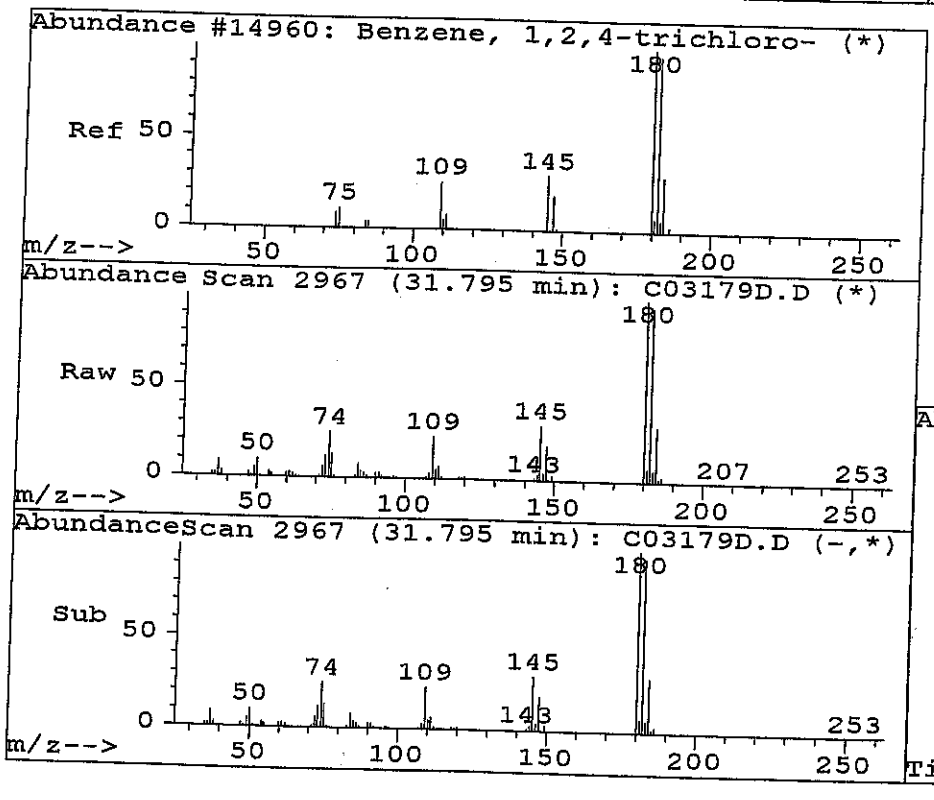


#85
Tetraethyl lead
Concen: 5.29 ppbV
RT: 30.77 min Scan# 2861
Delta R.T. -0.21 min
Lab File: C03179D.D
Acq: 17 Mar 109 11:35 am

Tgt Ion:237 Resp: 1570438

Ion	Ratio	Lower	Upper
237	100		
295	0.0	0.0	0.0
208	62.5	51.6	77.4
266	11.4	9.0	13.6

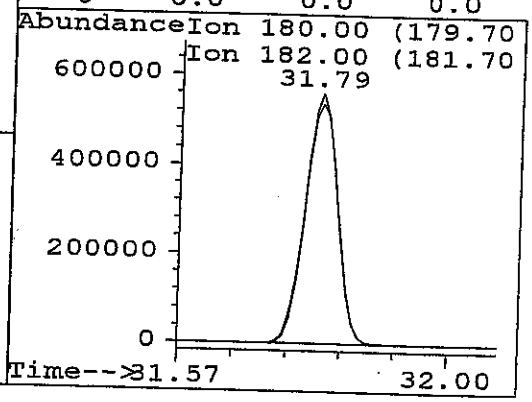


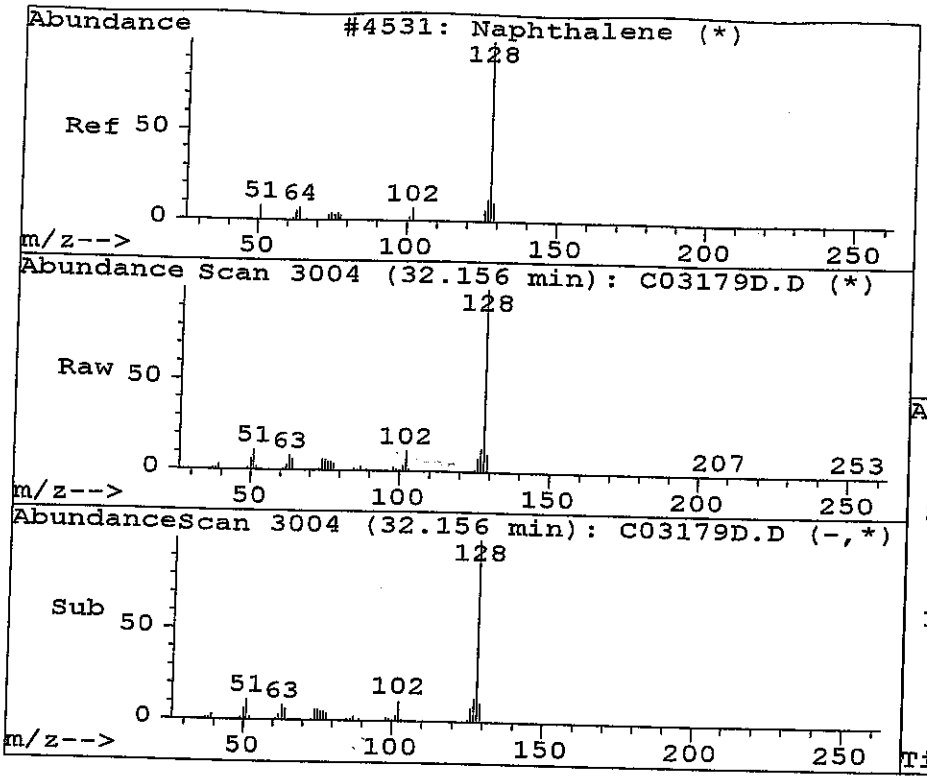


#86
1,2,4-Trichlorobenzene
Concen: 2.42 ppbV
RT: 31.79 min Scan# 2967
Delta R.T. -0.39 min
Lab File: C03179D.D
Acq: 17 Mar 109 11:35 am

Tgt Ion:180 Resp: 1987175

Ion	Ratio	Lower	Upper
180	100		
182	95.5	76.8	115.2
0	0.0	0.0	0.0
0	0.0	0.0	0.0

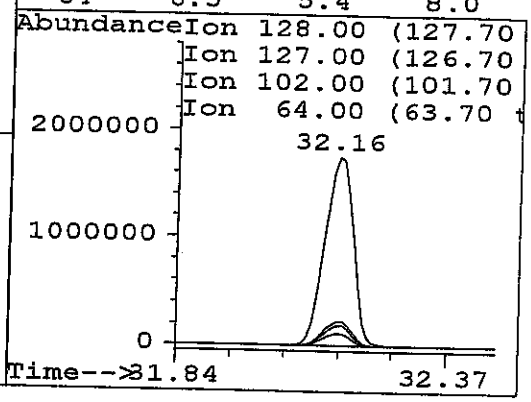


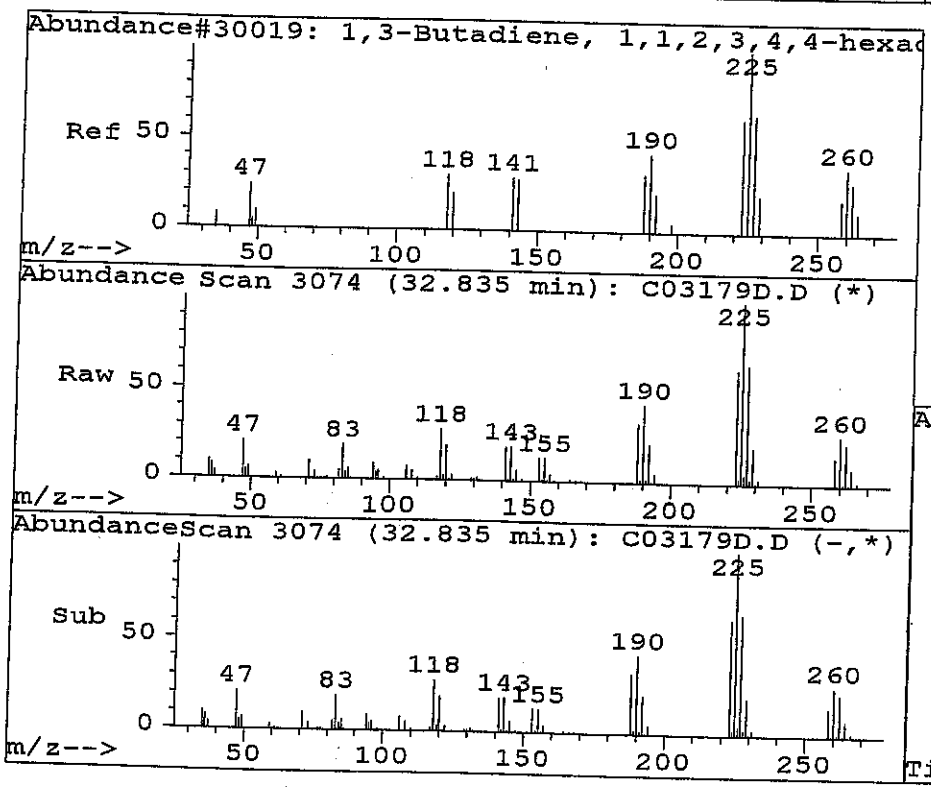


#87
Naphthalene
Concen: 4.68 ppbV
RT: 32.16 min Scan# 3004
Delta R.T. -0.25 min
Lab File: C03179D.D
Acq: 17 Mar 109 11:35 am

Tgt Ion:128 Resp: 6661715

Ion	Ratio	Lower	Upper
128	100		
127	13.0	10.3	15.5
102	10.7	8.2	12.2
64	6.5	5.4	8.0

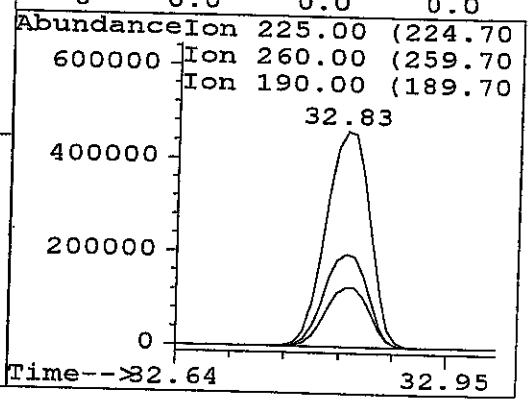


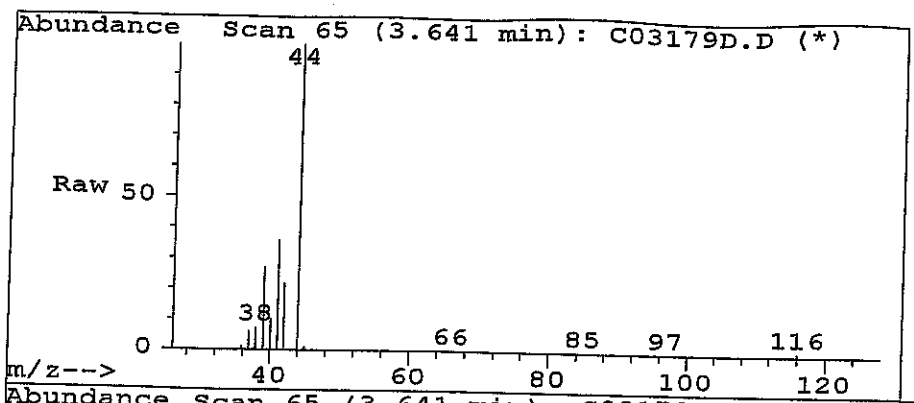


#88
Hexachlorobutadiene
Concen: 2.61 ppbV
RT: 32.83 min Scan# 3074
Delta R.T. -0.25 min
Lab File: C03179D.D
Acq: 17 Mar 109 11:35 am

Tgt Ion:225 Resp: 1622637

Ion	Ratio	Lower	Upper
225	100		
260	27.4	22.6	34.0
190	42.9	32.7	49.1
0	0.0	0.0	0.0

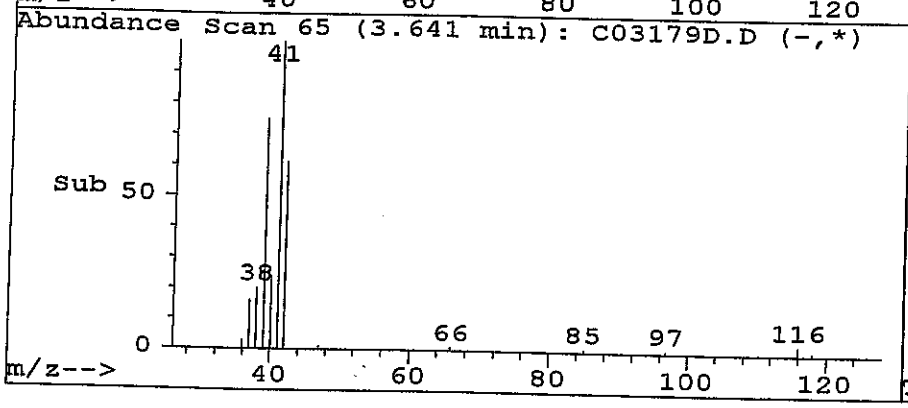


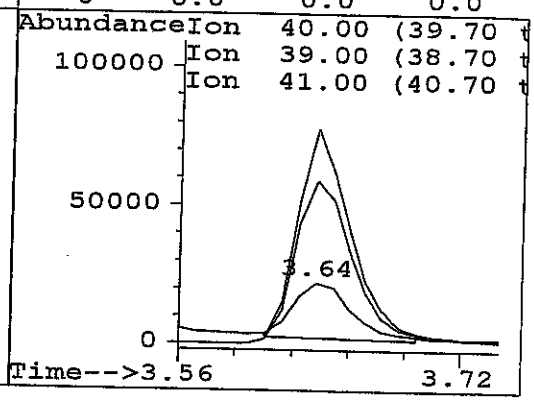


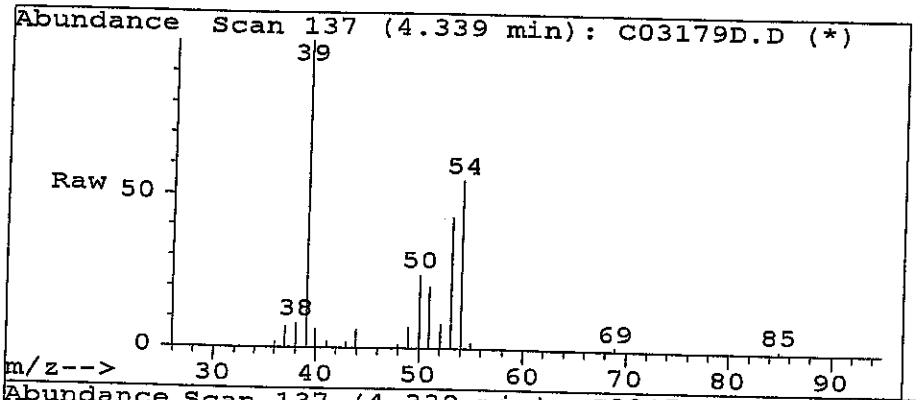
#89
Propylene
Concen: 2.73 ppbV m
RT: 3.64 min Scan# 65
Delta R.T. -0.12 min
Lab File: C03179D.D
Acq: 17 Mar 109 11:35 am

Tgt Ion:40 Resp: 46990

Ion	Ratio	Lower	Upper
40	100		
39	267.2	111.4	167.0#
41	352.6	162.3	243.5#
0	0.0	0.0	0.0



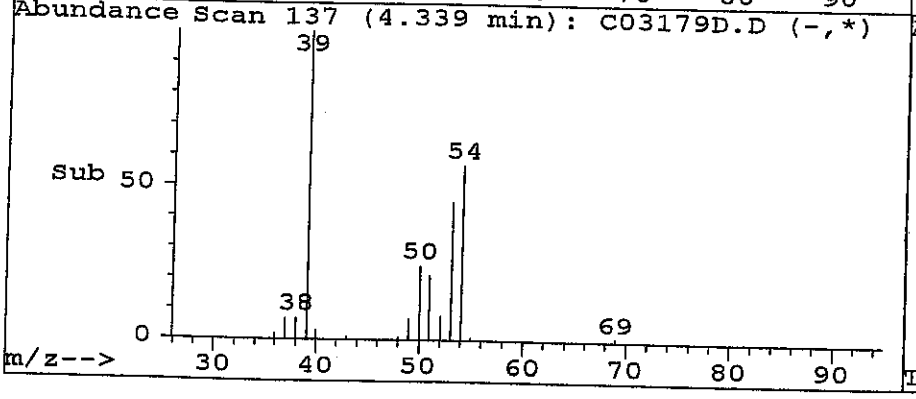


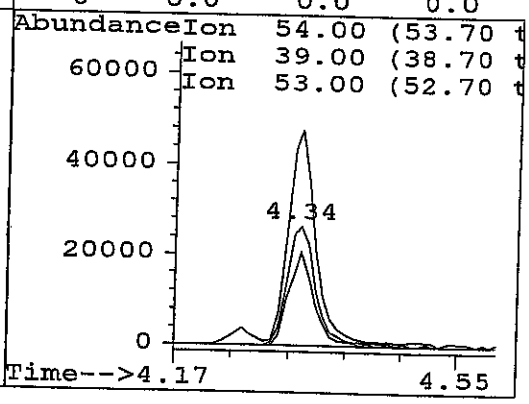


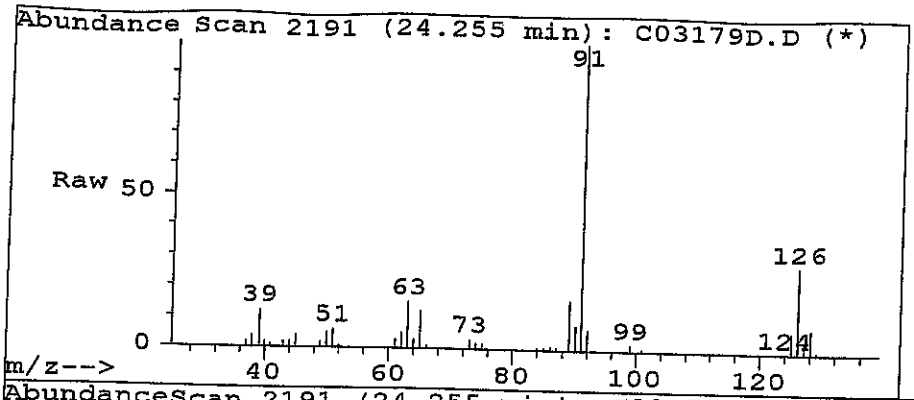
#90
1,3-Butadiene
Concen: 1.96 ppbV
RT: 4.34 min Scan# 137
Delta R.T. -0.13 min
Lab File: C03179D.D
Acq: 17 Mar 109 11:35 am

Tgt Ion:54 Resp: 70986

Ion	Ratio	Lower	Upper
54	100		
39	173.6	154.7	232.1
53	68.6	54.4	81.6
0	0.0	0.0	0.0



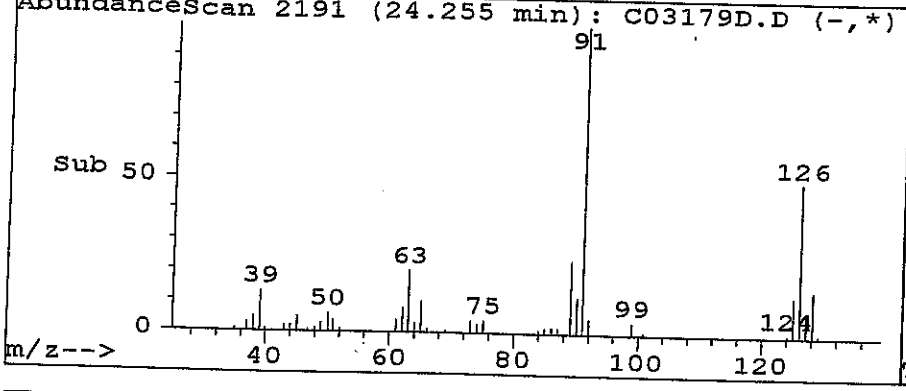


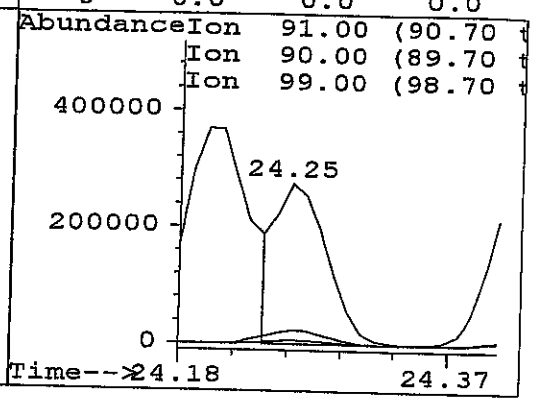


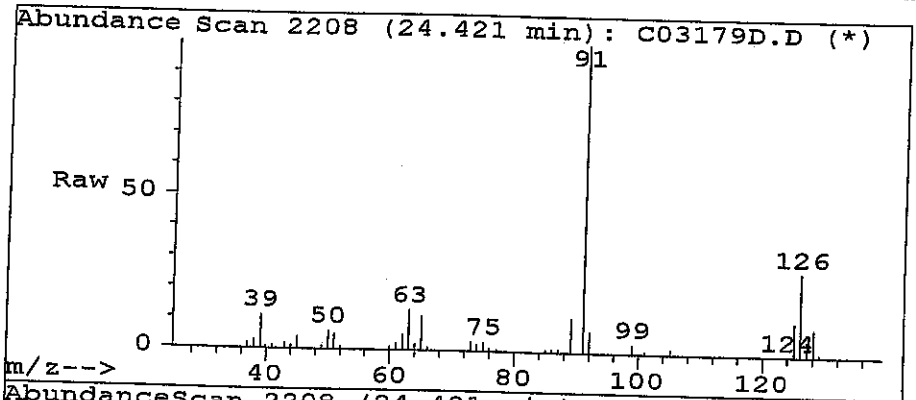
#92
2-Chlorotoluene
Concen: 1.42 ppbV m
RT: 24.25 min Scan# 2191
Delta R.T. -0.21 min
Lab File: C03179D.D
Acq: 17 Mar 109 11:35 am

Tgt Ion:91 Resp: 676208

Ion	Ratio	Lower	Upper
91	100		
90	8.4	7.8	11.8
99	2.4	1.6	2.4
0	0.0	0.0	0.0



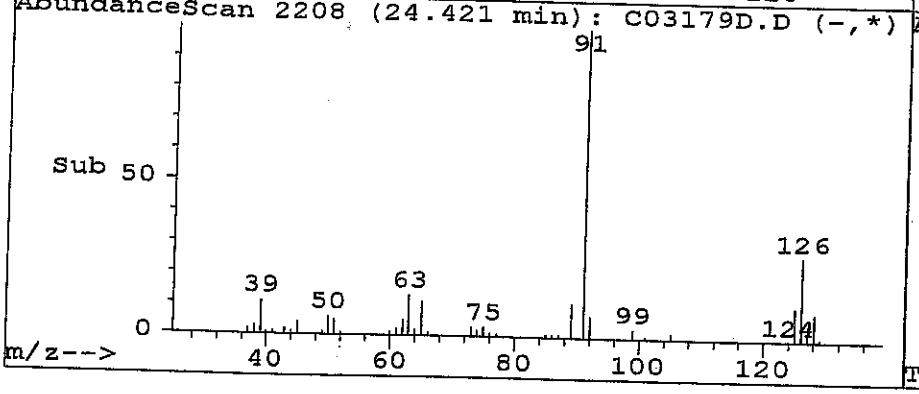


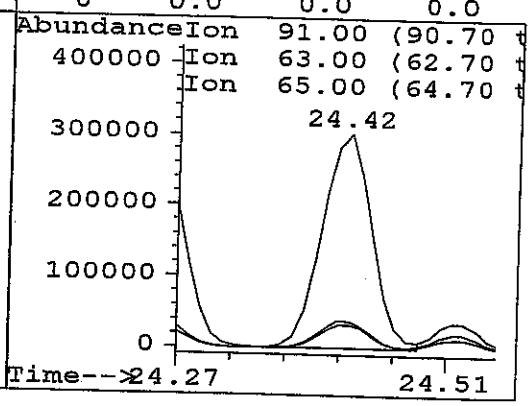


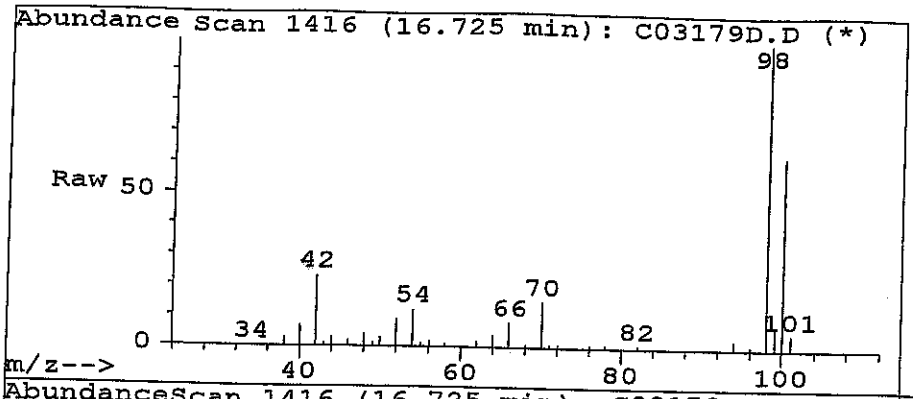
#93
4-Chlorotoluene
Concen: 1.47 ppbV
RT: 24.42 min Scan# 2208
Delta R.T. -0.23 min
Lab File: C03179D.D
Acq: 17 Mar 109 11:35 am

Tgt Ion:91 Resp: 884150

Ion	Ratio	Lower	Upper
91	100		
63	13.4	10.7	16.1
65	11.7	9.8	14.8
0	0.0	0.0	0.0



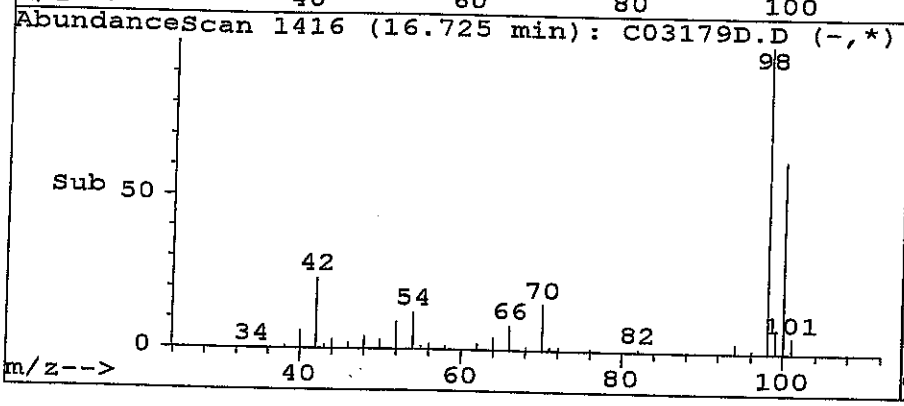


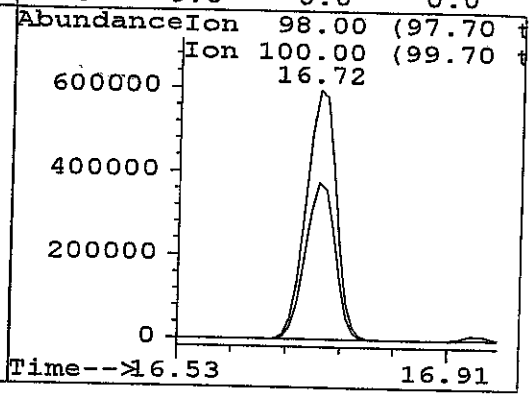


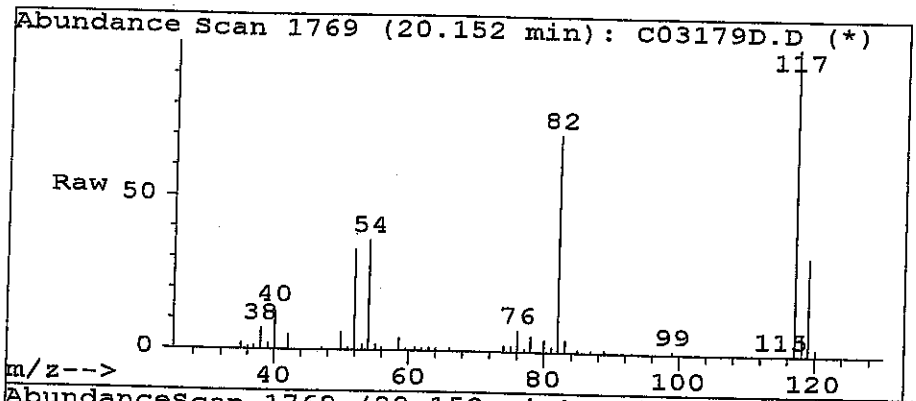
#94
Toluene-d8
Concen: 10.13 ppbV
RT: 16.72 min Scan# 1416
Delta R.T. -0.22 min
Lab File: C03179D.D
Acq: 17 Mar 109 11:35 am

Tgt Ion:98 Resp: 1730275

Ion	Ratio	Lower	Upper
98	100		
100	63.1	49.1	73.7
0	0.0	0.0	0.0
0	0.0	0.0	0.0



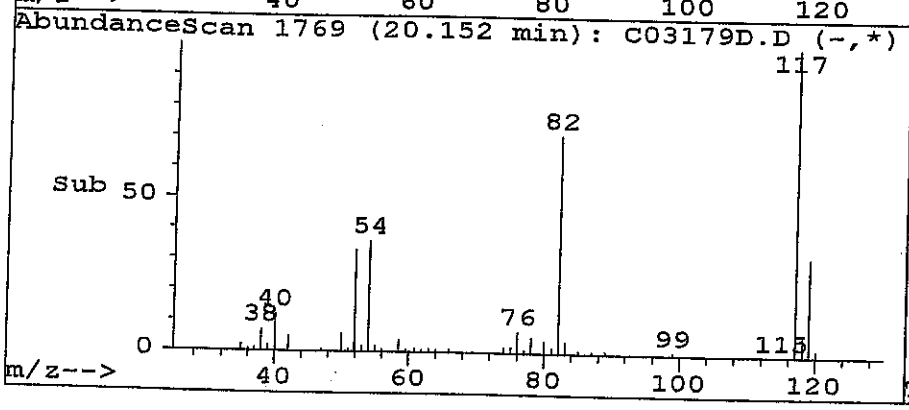


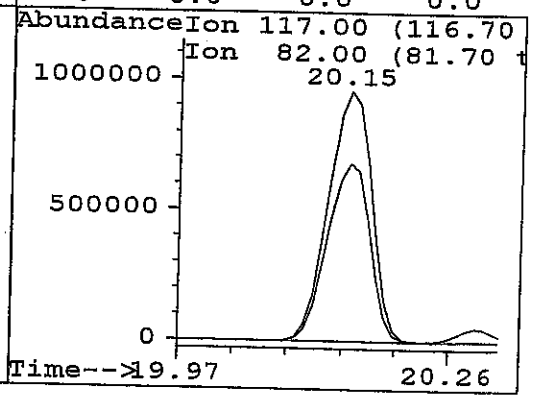


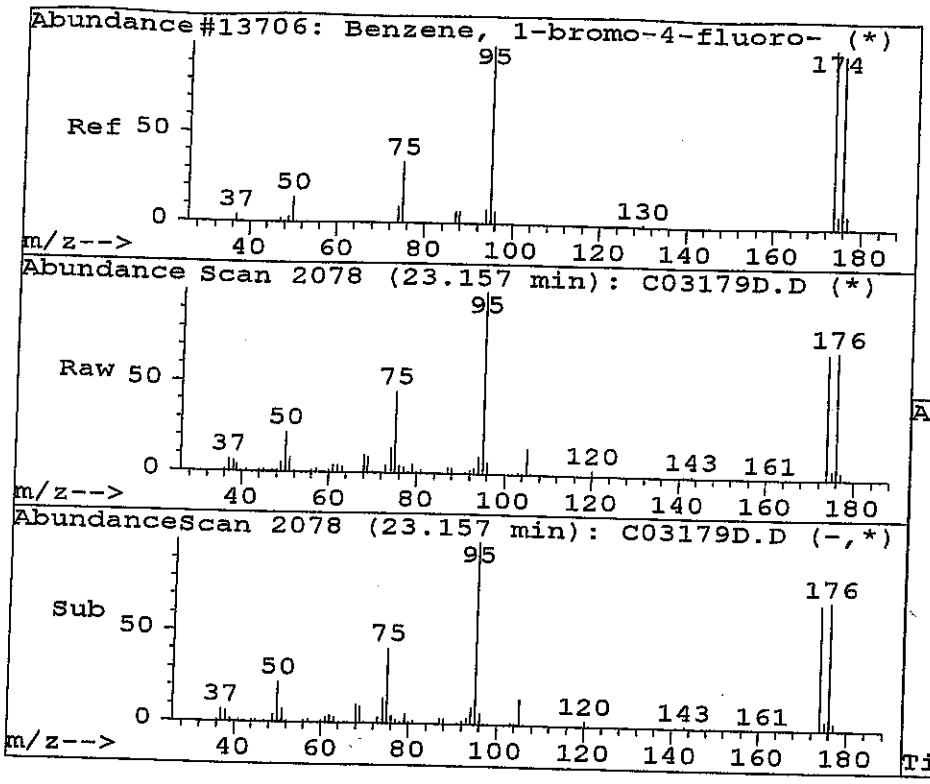
#95
Chlorobenzene-d5
Concen: 19.94 ppbV
RT: 20.15 min Scan# 1769
Delta R.T. -0.21 min
Lab File: C03179D.D
Acq: 17 Mar 109 11:35 am

Tgt Ion:117 Resp: 3122484

Ion	Ratio	Lower	Upper
117	100		
82	71.3	57.4	86.0
0	0.0	0.0	0.0
0	0.0	0.0	0.0



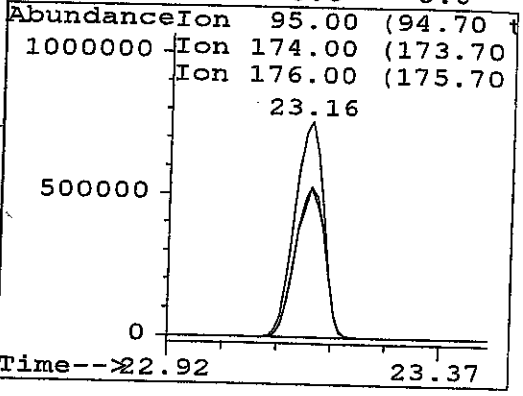




#96
1,4-Bromofluorobenzene
Concen: 10.20 ppbV
RT: 23.16 min Scan# 2078
Delta R.T. -0.22 min
Lab File: C03179D.D
Acq: 17 Mar 109 11:35 am

Tgt Ion:95 Resp: 2472723

Ion	Ratio	Lower	Upper
95	100		
174	69.4	57.0	85.6
176	69.7	55.8	83.6
0	0.0	0.0	0.0



Quantitation Report

Data File : C:\MSCHEM\2\DATA\03179M~1\C03179E.D
Acq Time : 17 Mar 109 1:25 pm
Sample : ST60022 + ST60350
Misc : 4.0 ML
Quant Time: Mar 17 15:03 19109

Operator: KB
Inst : 5970 - In
Multiplr: 1.00

Method : C:\MSCHEM\2\METHODS\1T15EXAY.M
Title : EPA TO-15
Last Update : Tue Mar 17 14:18:15 2009
Response via : Multiple Level Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene	11.16	168	2935915	20.00	ppbV	-0.22
35) 1,4-Difluorobenzene	12.95	114	2870629	20.00	ppbV	-0.22
System Monitoring Compounds						%Recovery
94) Toluene-d8	16.72	98	1629143	9.98	ppbV	199.69%
95) Chlorobenzene-d5	20.15	117	3026382	20.57	ppbV	205.68%
96) 1,4-Bromofluorobenzene	23.15	95	2385587	10.50	ppbV	210.10%
Target Compounds						Qvalue
2) Dichlorodifluoromethane	3.69	85	398558	4.80	ppbV	91
3) Chloromethane	3.94	50	241294	4.40	ppbV m	29
4) Freon 114	3.96	85	399238	4.53	ppbV	96
5) Vinyl chloride	4.17	62	132864	4.56	ppbV	95
6) Bromomethane	4.74	94	136639	4.77	ppbV	96
7) Chloroethane	4.94	64	71497	4.73	ppbV	99
8) Ethanol	4.99	45	337417	6.32	ppbV m	83
9) Acrolein	5.69	56	168949	11.11	ppbV #	84
10) Trichlorofluoromethane	5.75	101	364524	4.63	ppbV	92
11) Acetonitrile	5.75	41	532977	8.07	ppbV	99
12) Acetone	5.83	43	442389	3.37	ppbV m	95
13) 2-propanol	5.92	45	321532	3.17	ppbV m	73
14) Methyl iodide	6.77	142	321955	5.36	ppbV	94
15) 1,1-Dichloroethene	6.68	61	248606	3.69	ppbV	90
16) Acrylonitrile	6.72	53	435309	10.32	ppbV #	92
17) Freon 113	6.95	151	220191	4.16	ppbV #	79
18) Allyl chloride	7.13	41	282890	3.30	ppbV #	84
19) Dichloromethane	7.09	84	124766	4.23	ppbV #	86
20) Carbon disulfide	7.32	76	137347	3.23	ppbV #	95
21) trans-1,2-Dichloroethene	8.16	96	117954	3.83	ppbV #	72
22) Methyl tert butyl ether	8.32	73	482973	3.30	ppbV #	90
23) Propionitrile	8.57	54	434833	8.39	ppbV	98
24) 1,1-Dichloroethane	8.67	63	387657	4.66	ppbV	99
25) Vinyl acetate	10.09	43	687529	3.37	ppbV	99
26) 2-Butanone	9.31	72	92652	3.44	ppbV #	48
27) Hexane	9.49	57	226768	2.85	ppbV #	82
28) Bromochloromethane	10.27	49	372741	3.53	ppbV #	84
29) Tetrahydrofuran	10.62	42	1207319	2.97	ppbV m	40
30) Isobutyl alcohol	10.62	74	90372	8.44	ppbV #	84
31) Methacrylonitrile	9.49	67	367703	12.65	ppbV	94
32) cis-1,2-Dichloroethene	9.88	96	190337	4.40	ppbV	94
33) 2,2-Dichloropropane	10.19	77	370695	3.89	ppbV	99
34) Chloroform	10.30	83	449509	4.50	ppbV	93
36) 1,1,1-Trichloroethane	11.57	97	432442	4.42	ppbV #	88
37) 1,2-Dichloroethane	11.64	62	398927	4.35	ppbV	98
38) 1,1-Dichloropropene	12.02	75	325075	3.59	ppbV	97
39) Cyclohexane	12.35	56	380141	3.71	ppbV	97
40) Benzene	12.28	78	712515	3.73	ppbV	96
41) Carbon tetrachloride	12.34	117	451629	4.58	ppbV #	80
42) n-Heptane	13.81	43	616569	3.38	ppbV	96
43) 1,2-Dichloropropane	13.83	63	266688	4.34	ppbV	90
44) 1,4 Dioxane	14.15	88	171544	3.22	ppbV #	94
45) Dibromomethane	13.97	174	411463	3.66	ppbV	97
46) Trichloroethene	13.90	130	323273	4.15	ppbV	94
47) Bromodichloromethane	14.16	83	476051	3.47	ppbV	90
48) Methyl methacrylate	14.30	69	694276	9.46	ppbV	96
49) Methyl Isobutyl Ketone	15.50	43	1179200	3.85	ppbV	97

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

Quantitation Report

Data File : C:\MSCHEM\2\DATA\03179M~1\C03179E.D
Acq Time : 17 Mar 109 1:25 pm
Sample : ST60022 + ST60350
Misc : 4.0 ML
Quant Time: Mar 17 15:03 19109

Operator: KB
Inst : 5970 - In
Multiplr: 1.00

Method : C:\MSCHEM\2\METHODS\1T15EXAY.M
Title : EPA TO-15
Last Update : Tue Mar 17 14:18:15 2009
Response via : Multiple Level Calibration

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
50) cis-1,3-Dichloropropene	15.59	75	441906	4.61	ppbV	95
51) Toluene	16.89	91	944443	3.94	ppbV	98
52) trans-1,3-Dichloropropene	16.62	75	509168	4.47	ppbV	98
53) 1,1,2-Trichloroethane	16.93	61	263308	4.29	ppbV	89
54) 2-Hexanone	17.55	43	1413472	3.69	ppbV	97
55) 1,3-Dichloropropane	17.50	76	468984	3.44	ppbV #	97
56) Octane	18.05	57	297294	3.43	ppbV #	88
57) Dibromochloromethane	18.07	129	688881	3.80	ppbV	94
58) 1,2-Dibromoethane	18.55	107	660815	4.37	ppbV	92
59) Tetrachloroethene	18.75	166	589393	4.40	ppbV	93
60) Chlorobenzene	20.22	112	836027	4.27	ppbV #	89
61) 1,1,1,2-Tetrachloroethane	20.28	131	487316	3.72	ppbV	96
62) Ethylbenzene	20.76	91	1527752	4.62	ppbV	100
63) m & p-Xylene	21.06	91	2440351	8.66	ppbV	97
64) Styrene	21.88	104	837020	4.20	ppbV	92
65) Bromoform	21.78	173	1151698	3.78	ppbV	99
66) o-Xylene	22.01	91	1325719	4.26	ppbV	97
67) 1,1,2,2-Tetrachloroethane	22.53	83	1142635	3.99	ppbV	100
68) 1,2,3-Trichloropropane	22.84	110	265915	3.08	ppbV	95
69) t-1,4-Dichloro-2-butene	22.99	53	736289	9.62	ppbV	99
70) n-Propylbenzene	24.19	91	2547503	3.56	ppbV	98
71) Isopropylbenzene	24.50	105	1912961	3.72	ppbV	100
72) 4-Ethyltoluene	24.50	105	1912961	3.56	ppbV	100
73) 1,3,5-Trimethylbenzene	24.67	105	1936506	4.28	ppbV	95
74) Methylstyrene	25.13	118	837727	3.00	ppbV	98
75) tert-butyl benzene	25.59	119	1667799	3.63	ppbV	95
76) 1,2,4-Trimethylbenzene	25.62	105	1979227	4.09	ppbV	99
77) sec-butylbenzene	26.21	105	2467689	3.64	ppbV	99
78) 1,3-Dichlorobenzene	26.18	146	1499786	3.75	ppbV	99
79) Isopropyltoluene	26.59	119	2332248	3.55	ppbV	99
80) Benzyl chloride	26.34	91	1944712	3.41	ppbV	98
81) 1,4-Dichlorobenzene	26.39	146	1616283	3.93	ppbV m	97
82) n-Butylbenzene	27.64	91	2765408	3.49	ppbV	98
83) 1,2-Dichlorobenzene	27.23	146	1708595	3.69	ppbV	96
84) 1,2-Dibromo-3-chloropropan	28.73	75	2702050	7.31	ppbV #	79
85) Tetraethyl lead	30.76	237	2512900	7.55	ppbV #	99
86) 1,2,4-Trichlorobenzene	31.80	180	3172331	3.43	ppbV	99
87) Naphthalene	32.16	128	11453402	6.59	ppbV	98
88) Hexachlorobutadiene	32.84	225	2443776	3.22	ppbV	99
89) Propylene	3.62	40	100226	7.89	ppbV #	1
90) 1,3-Butadiene	4.31	54	134305	4.21	ppbV	86
92) 2-Chlorotoluene	24.25	91	1357175	3.64	ppbV m	77
93) 4-Chlorotoluene	24.42	91	1836466	3.94	ppbV	99

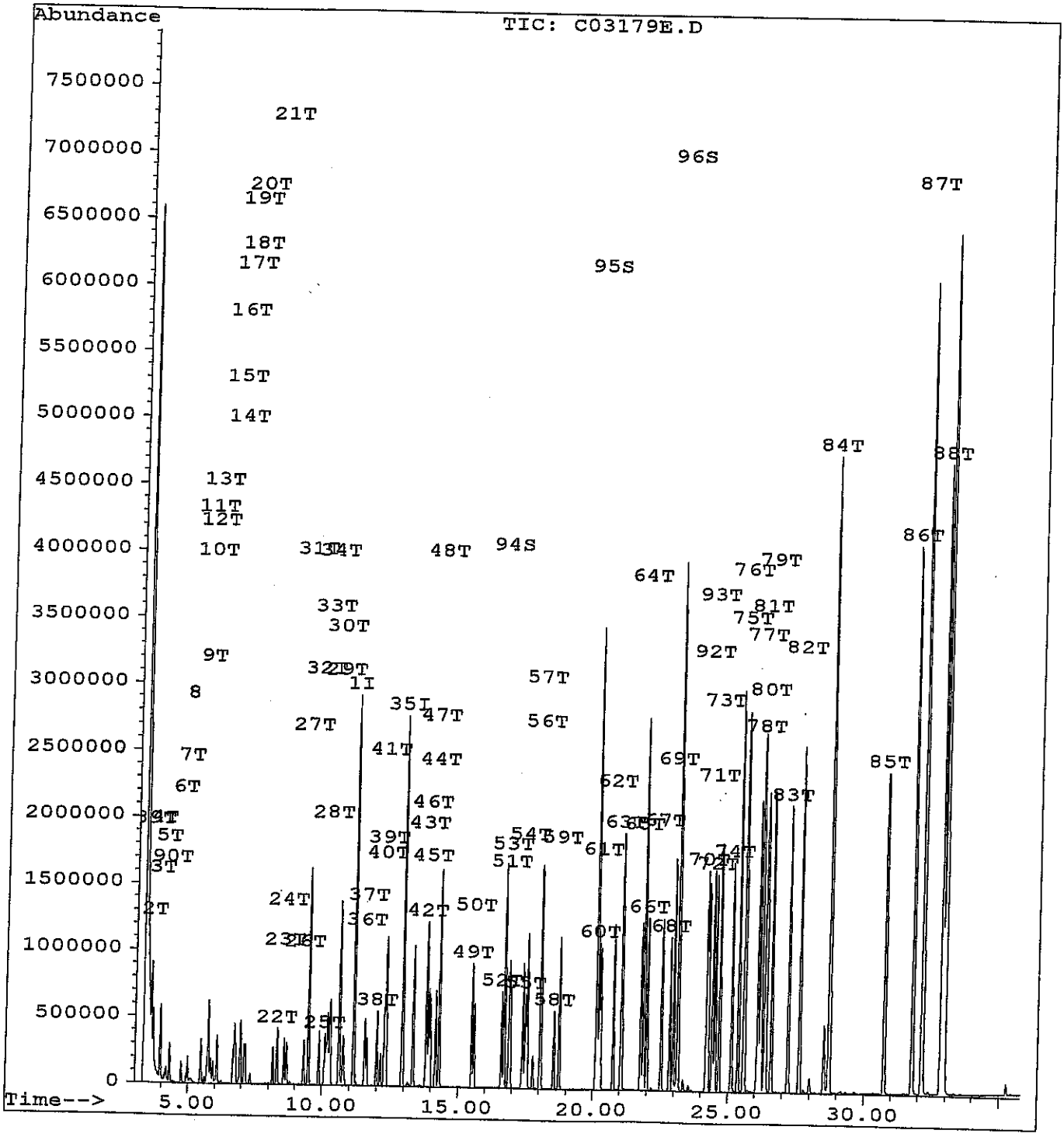
(#) = qualifier out of range (m) = manual integration

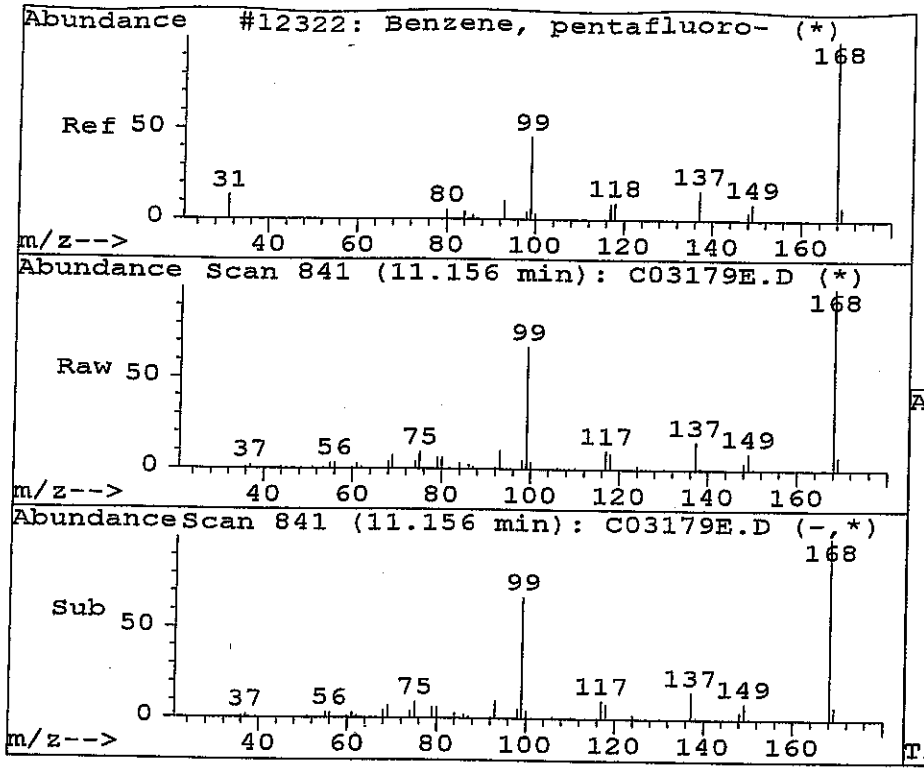
Quantitation Report

Data File : C:\MSCHEM\2\DATA\03179M~1\C03179E.D
Acq Time : 17 Mar 109 1:25 pm
Sample : ST60022 + ST60350
Misc : 4.0 ML
Quant Time: Mar 17 15:03 19109

Operator: KB
Inst : 5970 - In
Multiplr: 1.00

Method : C:\MSCHEM\2\METHODS\1T15EXAY.M
Title : EPA TO-15
Last Update : Tue Mar 17 14:18:15 2009
Response via : Multiple Level Calibration

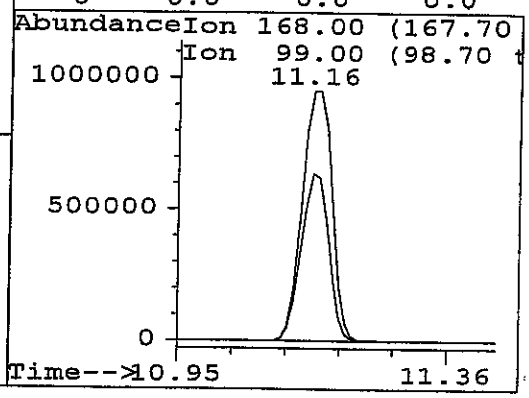


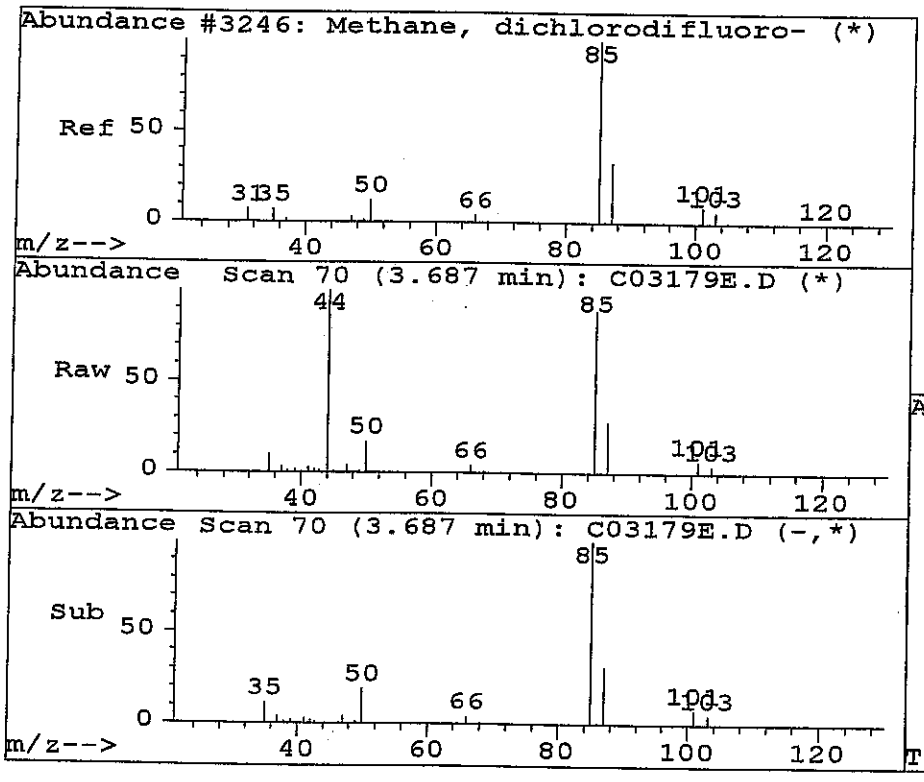


#1
Pentafluorobenzene
Concen: 20.00 ppbV
RT: 11.16 min Scan# 841
Delta R.T. -0.22 min
Lab File: C03179E.D
Acq: 17 Mar 109 1:25 pm

Tgt Ion:168 Resp: 2935915

Ion	Ratio	Lower	Upper
168	100		
99	67.0	53.0	79.6
0	0.0	0.0	0.0
0	0.0	0.0	0.0

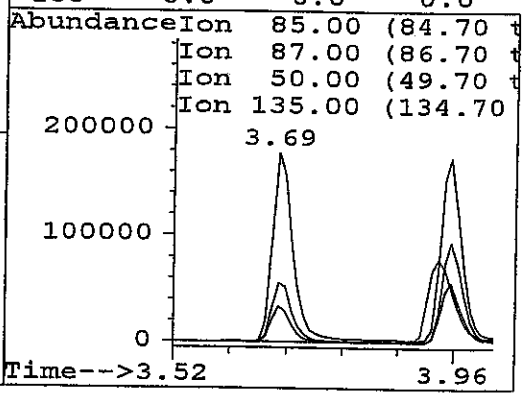


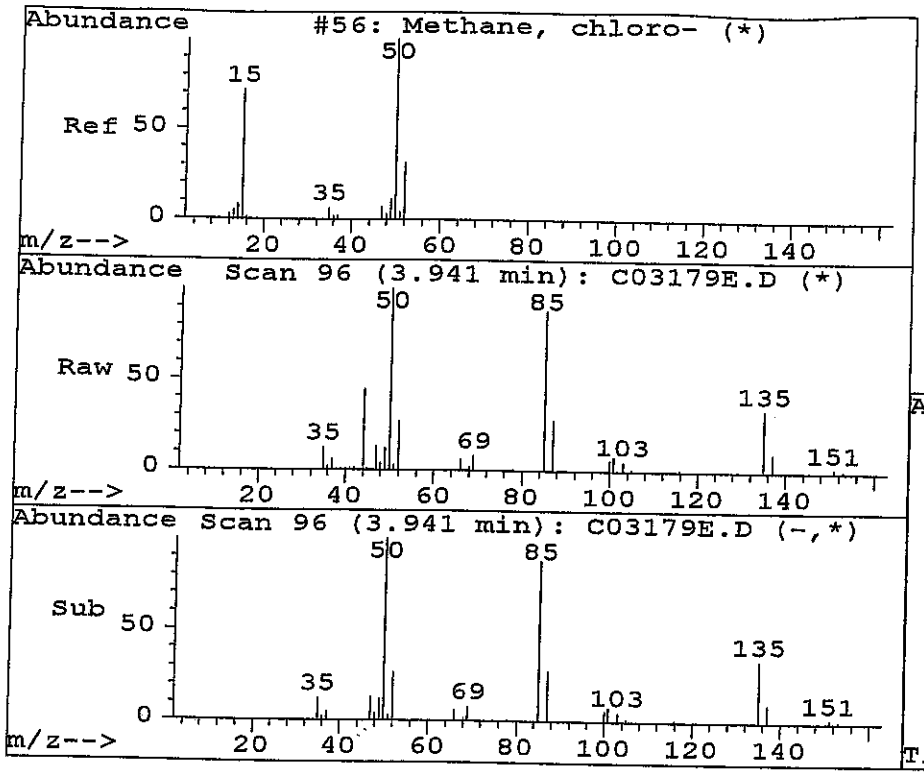


#2
Dichlorodifluoromethane
Concen: 4.80 ppbV
RT: 3.69 min Scan# 70
Delta R.T. -0.14 min
Lab File: C03179E.D
Acq: 17 Mar 109 1:25 pm

Tgt Ion:85 Resp: 398558

Ion	Ratio	Lower	Upper
85	100		
87	31.1	30.2	45.2
50	18.6	16.4	24.6
135	0.0	0.0	0.0

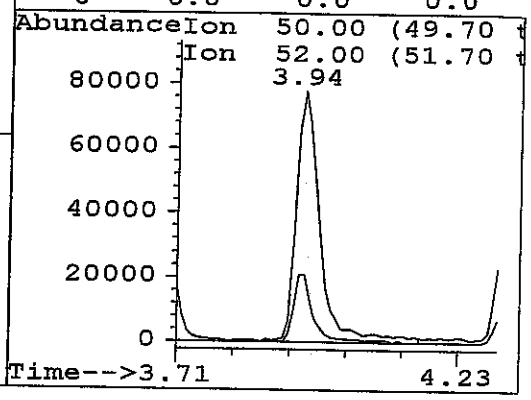


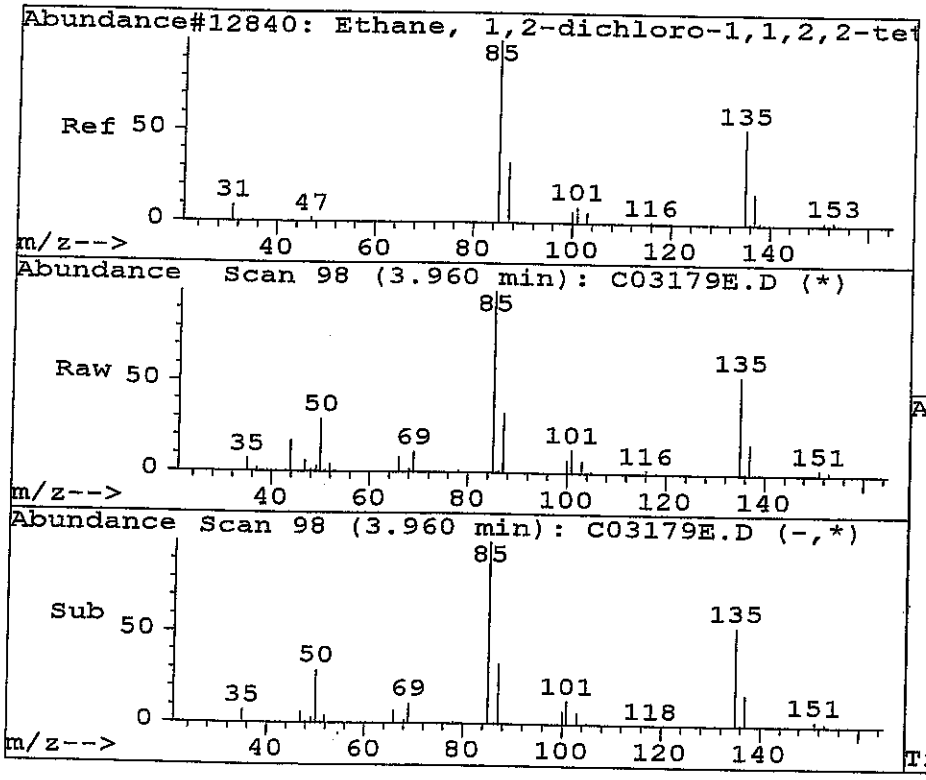


#3
Chloromethane
Concen: 4.40 ppbV m
RT: 3.94 min Scan# 96
Delta R.T. -0.15 min
Lab File: C03179E.D
Acq: 17 Mar 109 1:25 pm

Tgt Ion:50 Resp: 241294

Ion	Ratio	Lower	Upper
50	100		
52	26.9	16.2	24.4#
0	0.0	0.0	0.0
0	0.0	0.0	0.0

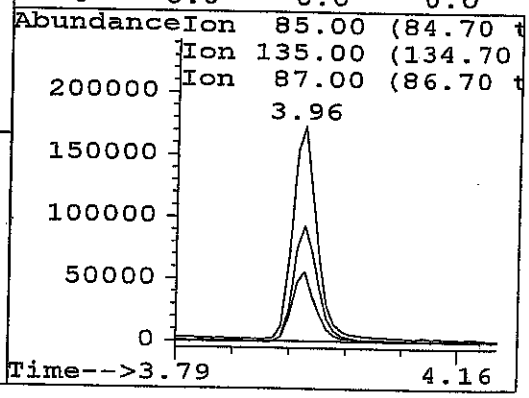


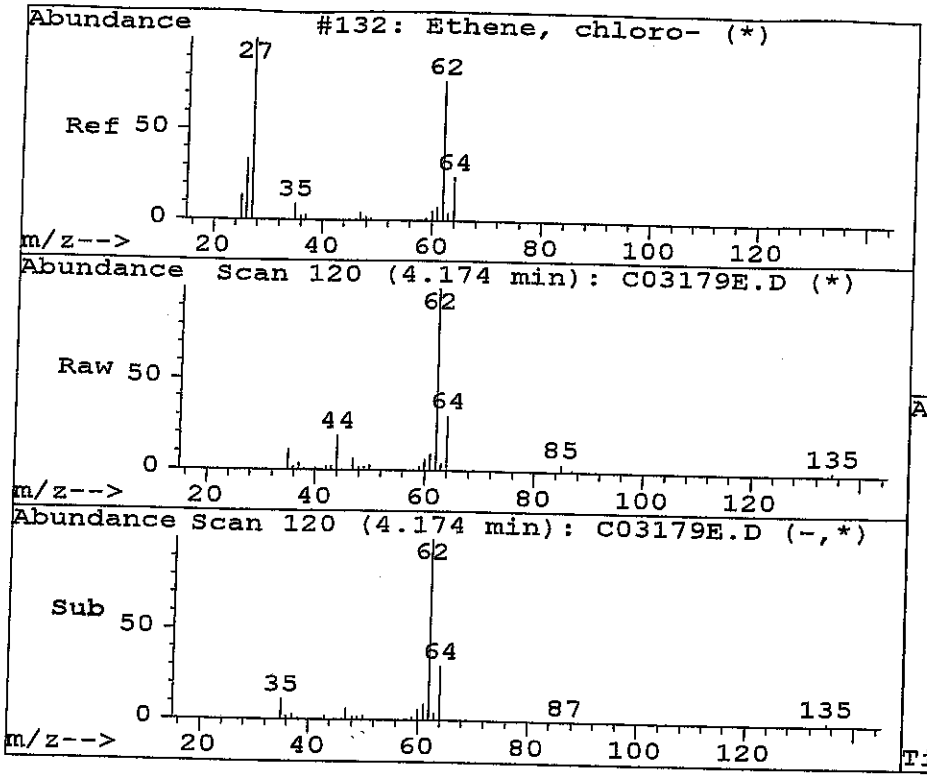


#4
Freon 114
Concen: 4.53 ppbV
RT: 3.96 min Scan# 98
Delta R.T. -0.15 min
Lab File: C03179E.D
Acq: 17 Mar 109 1:25 pm

Tgt Ion:85 Resp: 399238

Ion	Ratio	Lower	Upper
85	100		
135	54.4	45.7	68.5
87	32.6	28.7	43.1
0	0.0	0.0	0.0

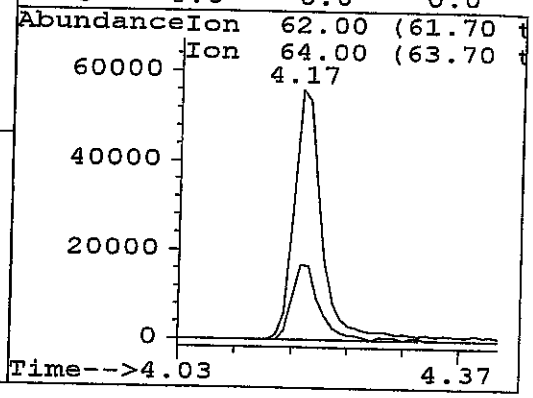


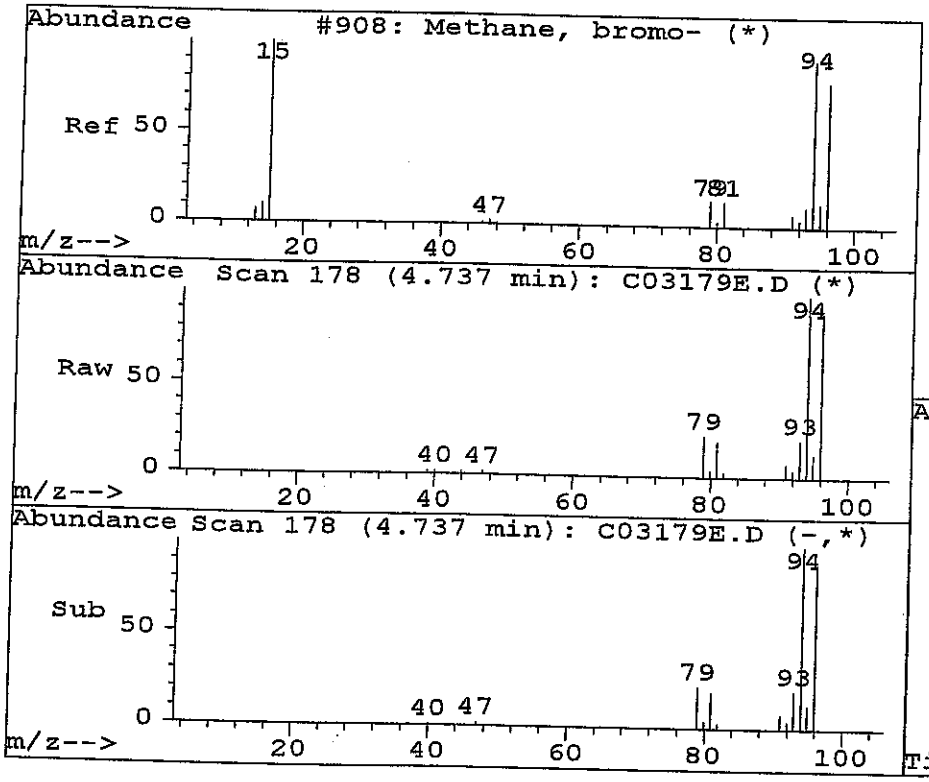


#5
Vinyl chloride
Concen: 4.56 ppbV
RT: 4.17 min Scan# 120
Delta R.T. -0.16 min
Lab File: C03179E.D
Acq: 17 Mar 109 1:25 pm

Tgt Ion:62 Resp: 132864

Ion	Ratio	Lower	Upper
62	100		
64	29.8	25.9	38.9
0	0.0	0.0	0.0
0	0.0	0.0	0.0

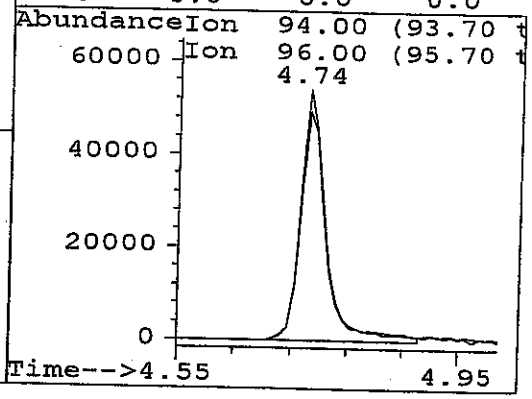


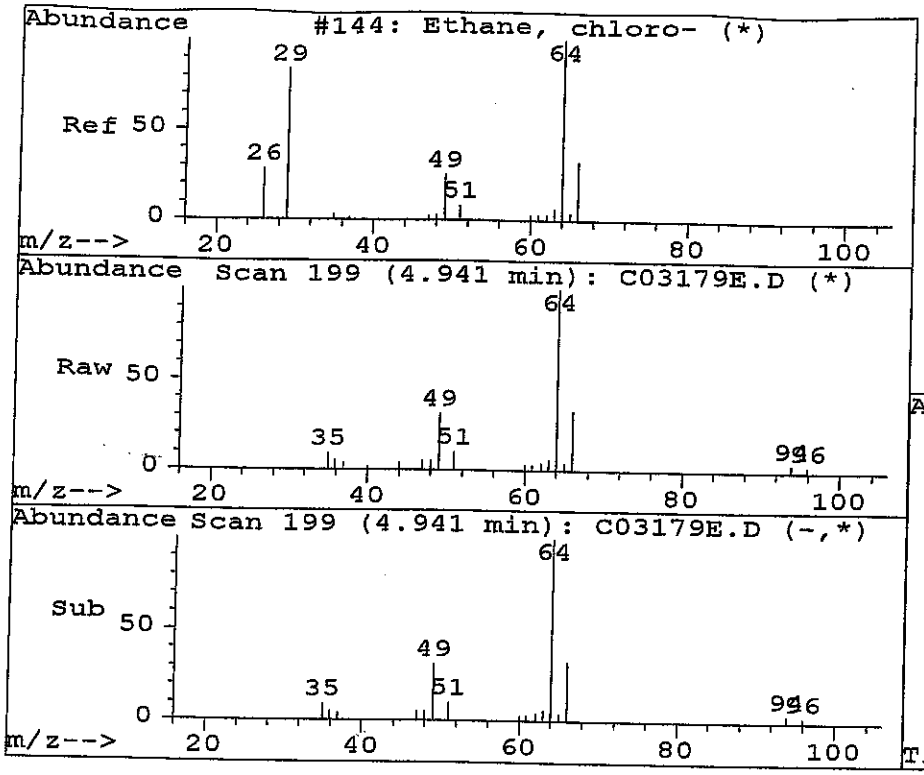


#6
Bromomethane
Concen: 4.77 ppbV
RT: 4.74 min Scan# 178
Delta R.T. -0.18 min
Lab File: C03179E.D
Acq: 17 Mar 109 1:25 pm

Tgt Ion:94 Resp: 136639

Ion	Ratio	Lower	Upper
94	100		
96	91.2	70.2	105.4
0	0.0	0.0	0.0
0	0.0	0.0	0.0

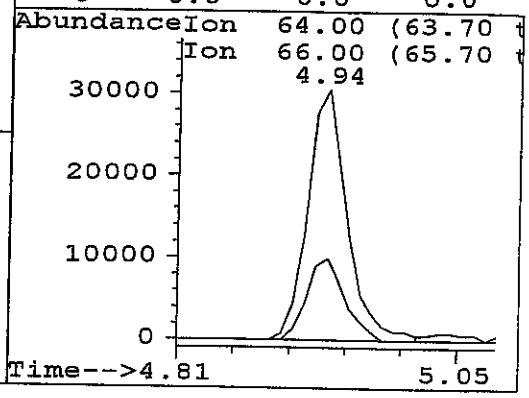


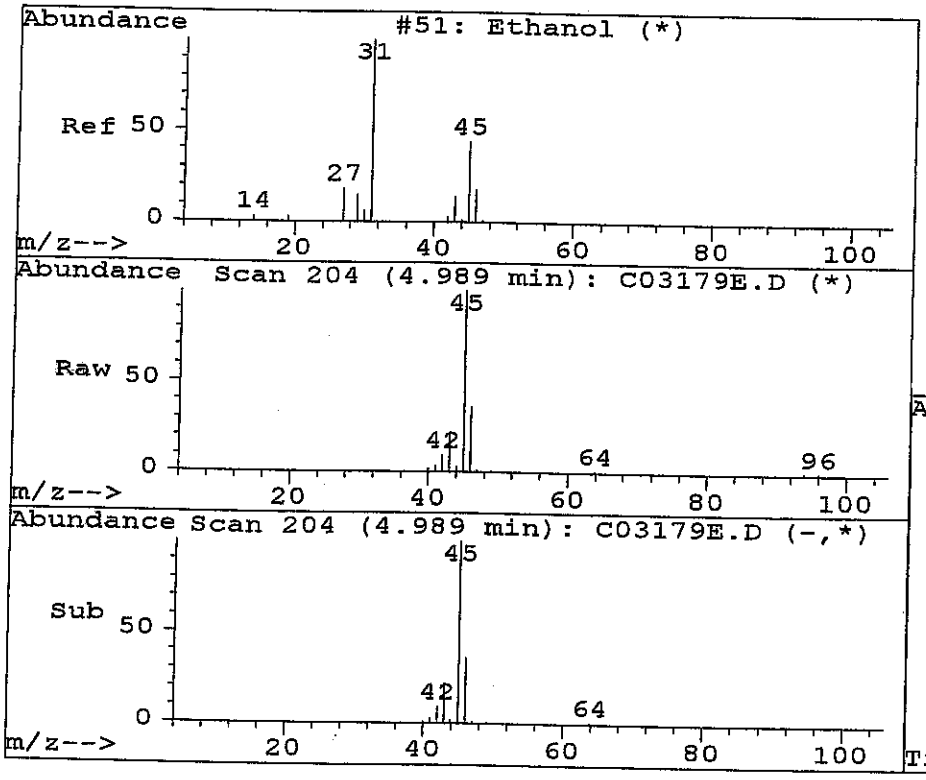


#7
Chloroethane
Concen: 4.73 ppbV
RT: 4.94 min Scan# 199
Delta R.T. -0.18 min
Lab File: C03179E.D
Acq: 17 Mar 109 1:25 pm

Tgt Ion:64 Resp: 71497

Ion	Ratio	Lower	Upper
64	100		
66	33.0	25.9	38.9
0	0.0	0.0	0.0
0	0.0	0.0	0.0

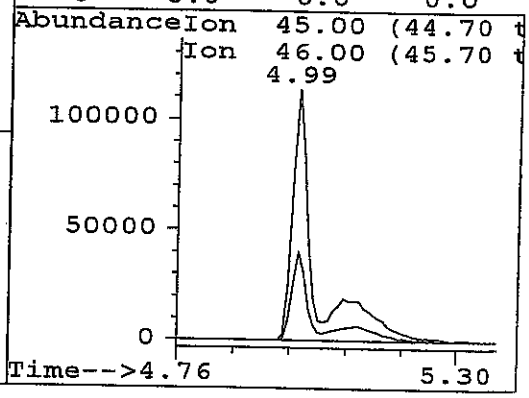


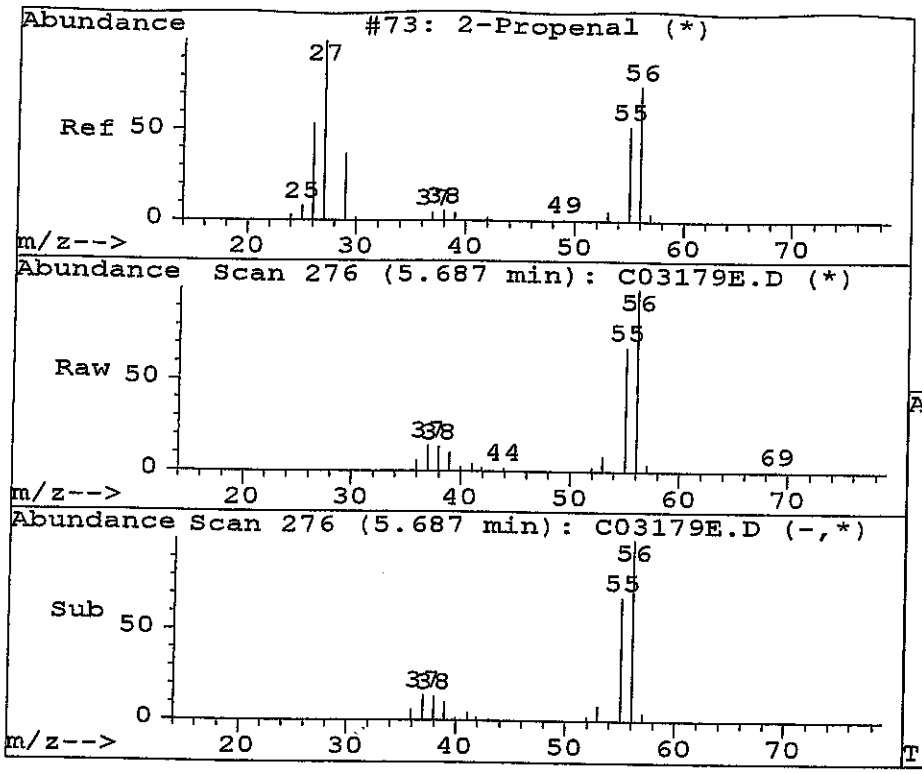


#8
Ethanol
Concen: 6.32 ppbV m
RT: 4.99 min Scan# 204
Delta R.T. -0.21 min
Lab File: C03179E.D
Acq: 17 Mar 109 1:25 pm

Tgt Ion:45 Resp: 337417

Ion	Ratio	Lower	Upper
45	100		
46	35.6	20.9	31.3#
0	0.0	0.0	0.0
0	0.0	0.0	0.0

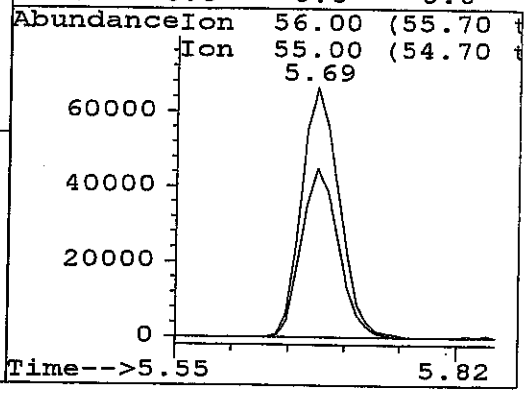


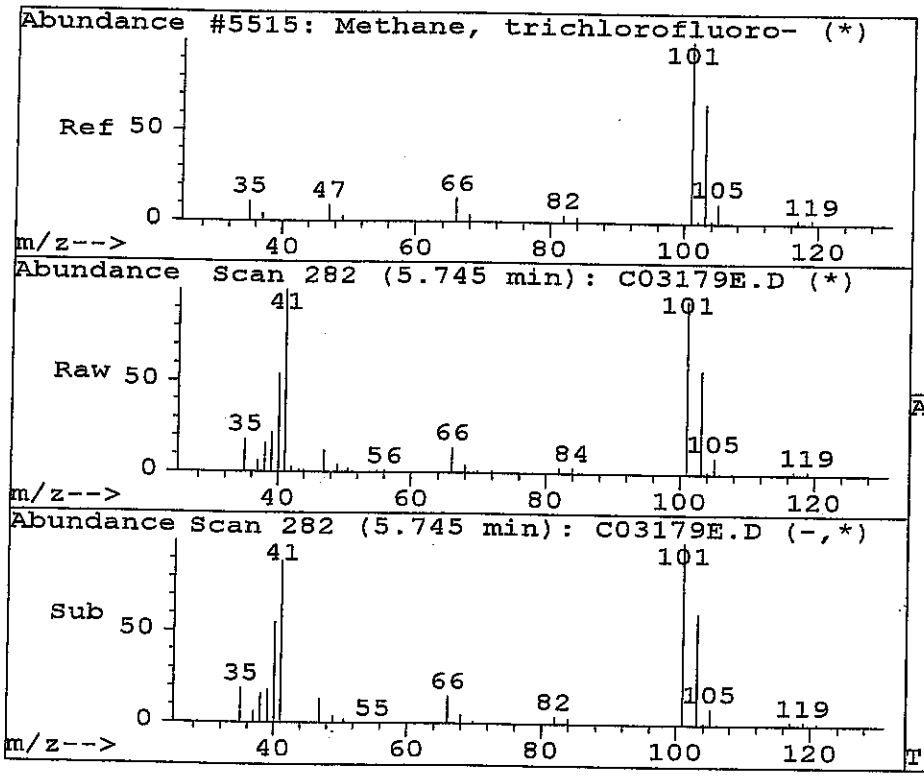


#9
Acrolein
Concen: 11.11 ppbV
RT: 5.69 min Scan# 276
Delta R.T. -0.20 min
Lab File: C03179E.D
Acq: 17 Mar 109 1:25 pm

Tgt Ion:56 Resp: 168949

Ion	Ratio	Lower	Upper
56	100		
55	67.8	44.7	67.1#
0	0.0	0.0	0.0
0	0.0	0.0	0.0

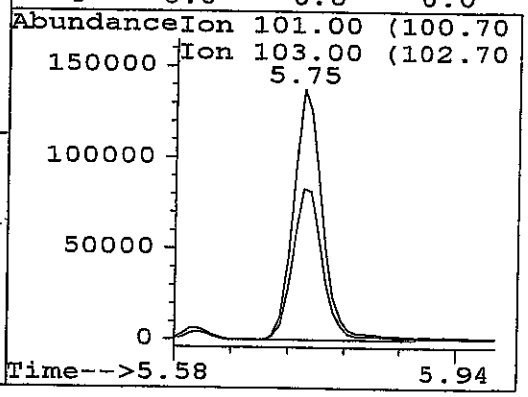


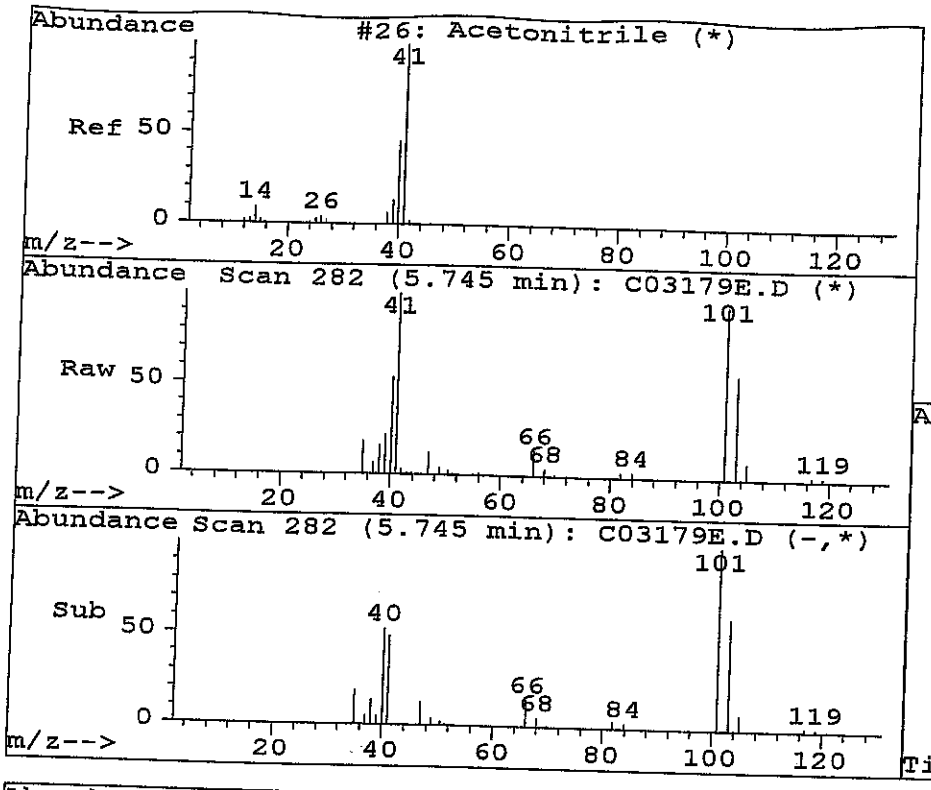


#10
Trichlorofluoromethane
Concen: 4.63 ppbV
RT: 5.75 min Scan# 282
Delta R.T. -0.19 min
Lab File: C03179E.D
Acq: 17 Mar 109 1:25 pm

Tgt Ion:101 Resp: 364524

Ion	Ratio	Lower	Upper
101	100		
103	60.5	43.9	65.9
0	0.0	0.0	0.0
0	0.0	0.0	0.0

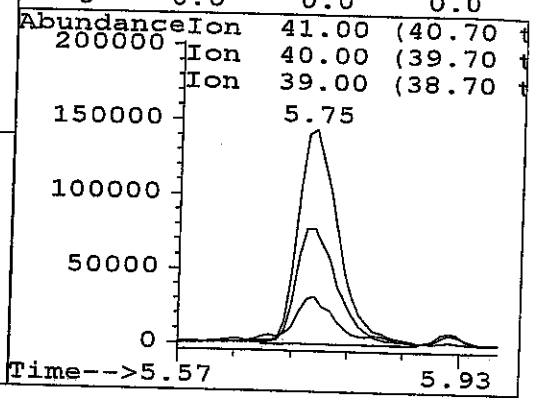


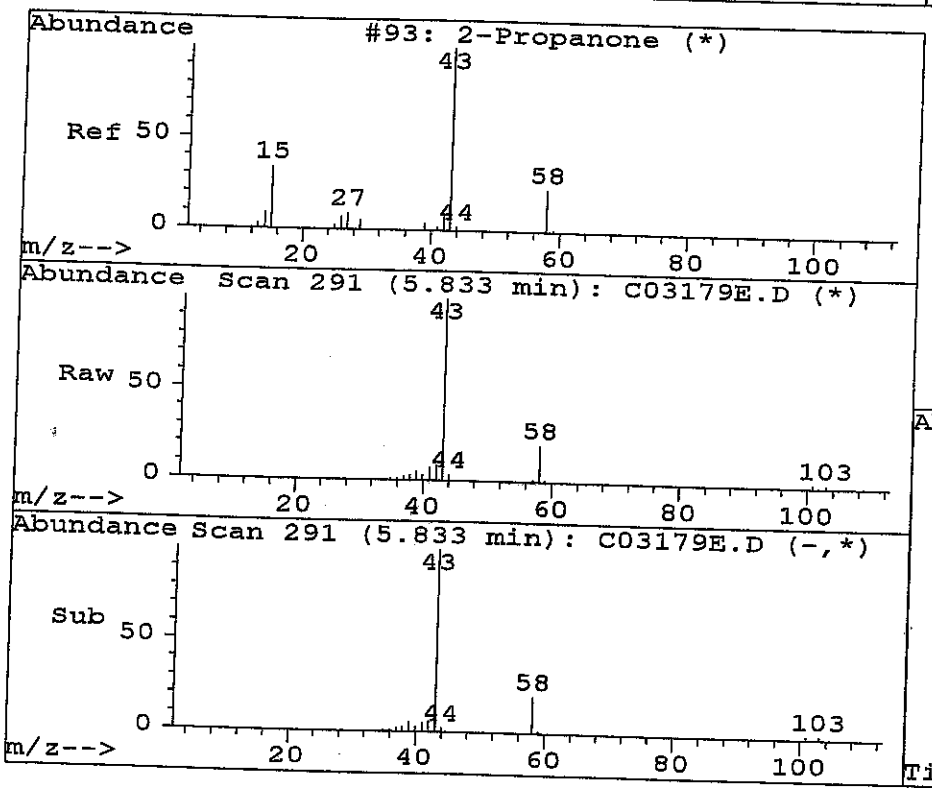


#11
Acetonitrile
Concen: 8.07 ppbV
RT: 5.75 min Scan# 282
Delta R.T. -0.21 min
Lab File: C03179E.D
Acq: 17 Mar 109 1:25 pm

Tgt Ion:41 Resp: 532977

Ion	Ratio	Lower	Upper
41	100		
40	53.6	43.8	65.8
39	20.5	16.3	24.5
0	0.0	0.0	0.0

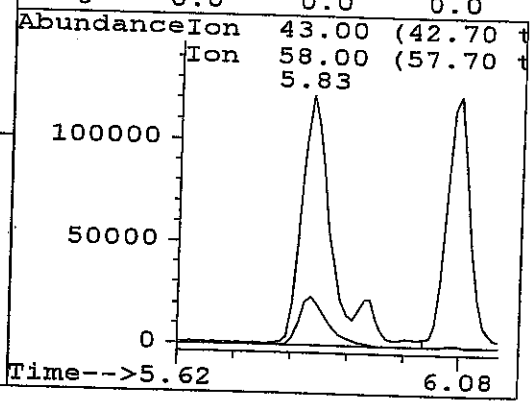


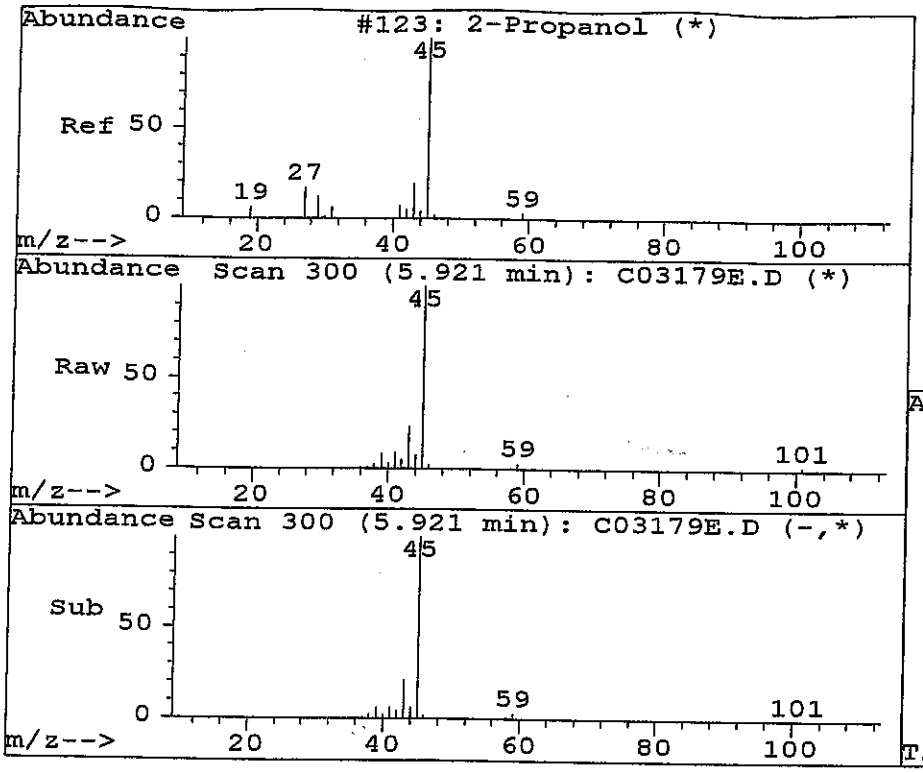


#12
Acetone
Concen: 3.37 ppbV m
RT: 5.83 min Scan# 291
Delta R.T. -0.21 min
Lab File: C03179E.D
Acq: 17 Mar 109 1:25 pm

Tgt Ion:43 Resp: 442389

Ion	Ratio	Lower	Upper
43	100		
58	19.6	13.8	20.6
0	0.0	0.0	0.0
0	0.0	0.0	0.0

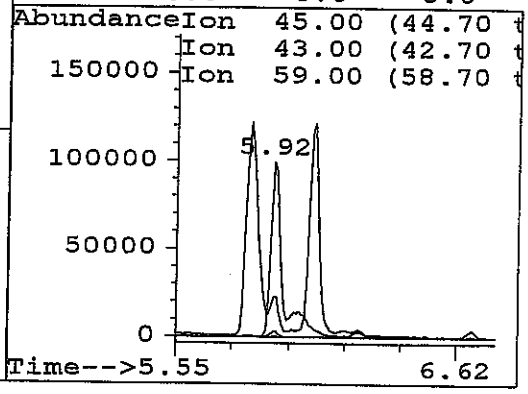


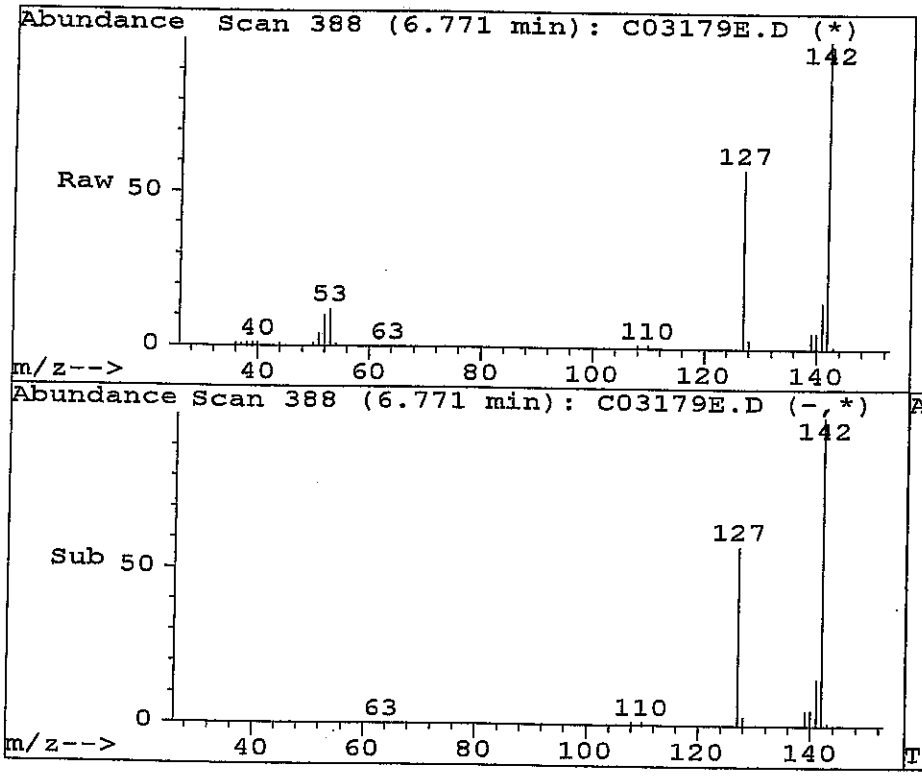


#13
2-propanol
Concen: 3.17 ppbV m
RT: 5.92 min Scan# 300
Delta R.T. -0.22 min
Lab File: C03179E.D
Acq: 17 Mar 109 1:25 pm

Tgt Ion:45 Resp: 321532

Ion	Ratio	Lower	Upper
45	100		
43	22.7	17.7	26.5
59	3.2	0.0	0.0#
0	0.0	0.0	0.0

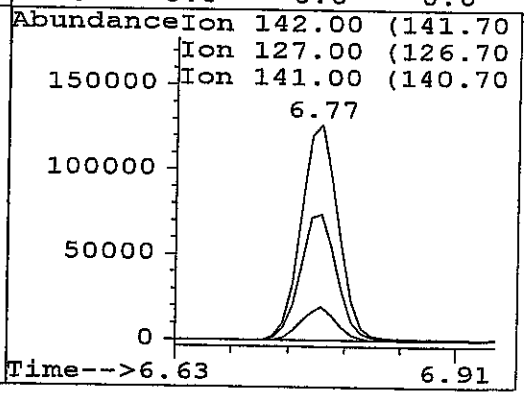


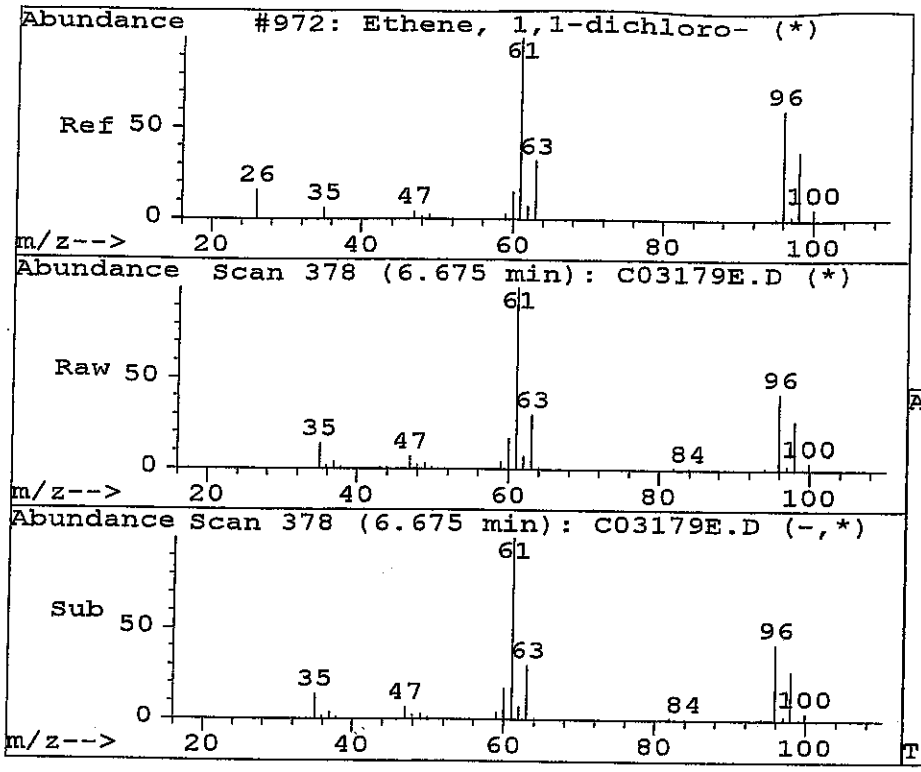


#14
Methyl iodide
Concen: 5.36 ppbV
RT: 6.77 min Scan# 388
Delta R.T. -0.22 min
Lab File: C03179E.D
Acq: 17 Mar 109 1:25 pm

Tgt Ion:142 Resp: 321955

Ion	Ratio	Lower	Upper
142	100		
127	58.2	43.0	64.6
141	15.5	10.7	16.1
0	0.0	0.0	0.0

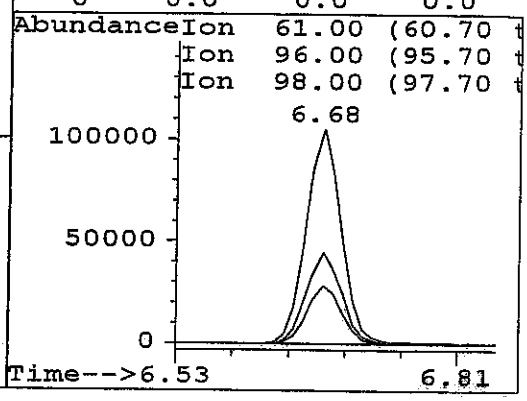


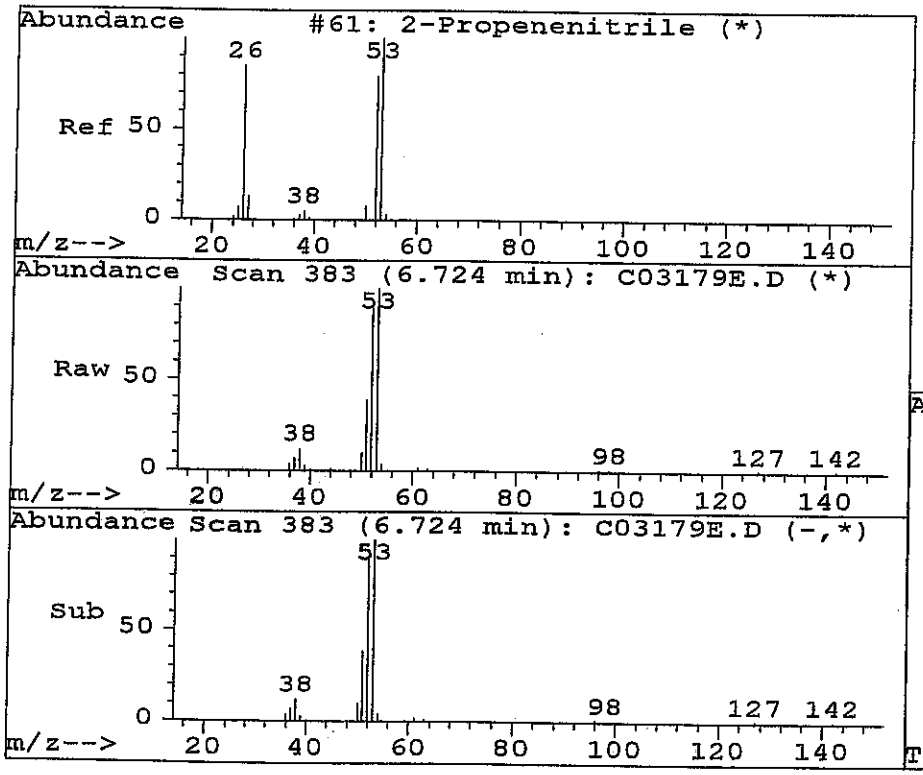


#15
1,1-Dichloroethene
Concen: 3.69 ppbV
RT: 6.68 min Scan# 378
Delta R.T. -0.21 min
Lab File: C03179E.D
Acq: 17 Mar 109 1:25 pm

Tgt Ion:61 Resp: 248606

Ion	Ratio	Lower	Upper
61	100		
96	42.6	41.8	62.8
98	27.1	20.7	31.1
0	0.0	0.0	0.0

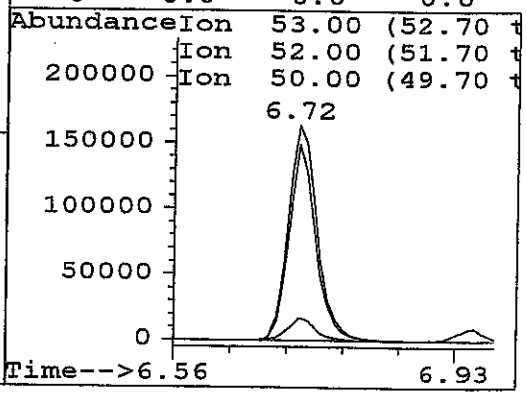


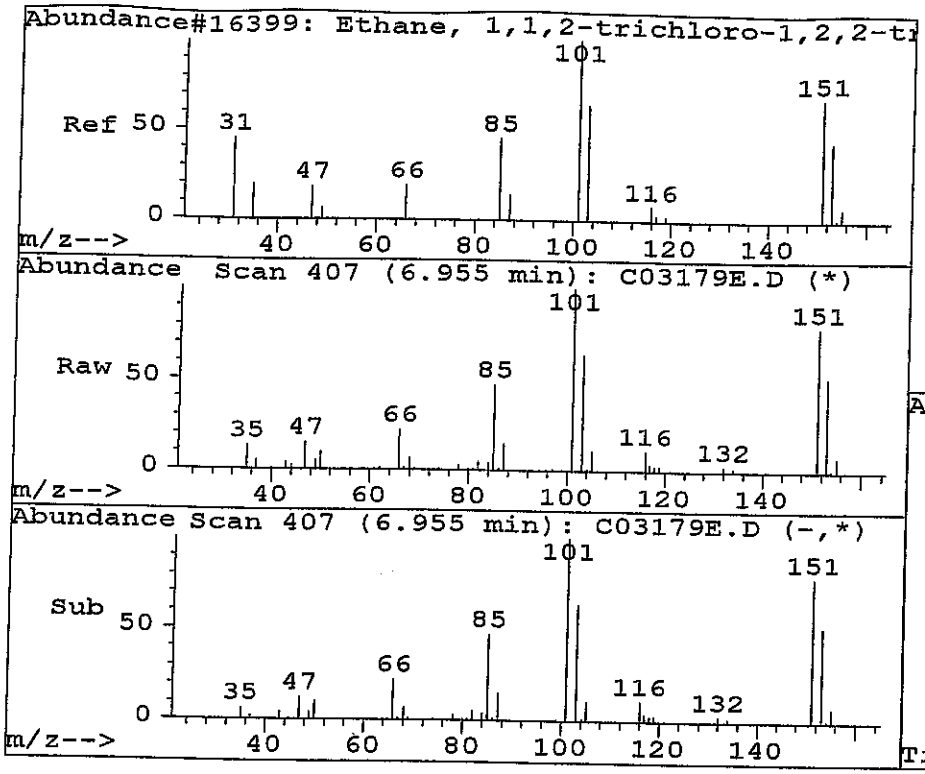


#16
Acrylonitrile
Concen: 10.32 ppbV
RT: 6.72 min Scan# 383
Delta R.T. -0.24 min
Lab File: C03179E.D
Acq: 17 Mar 109 1:25 pm

Tgt Ion:53 Resp: 435309

Ion	Ratio	Lower	Upper
53	100		
52	91.2	66.8	100.2
50	10.4	6.7	10.1#
0	0.0	0.0	0.0

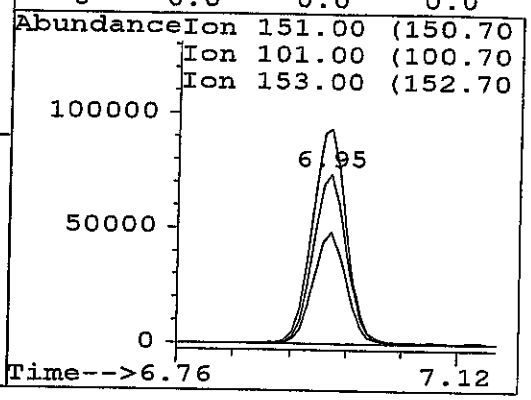


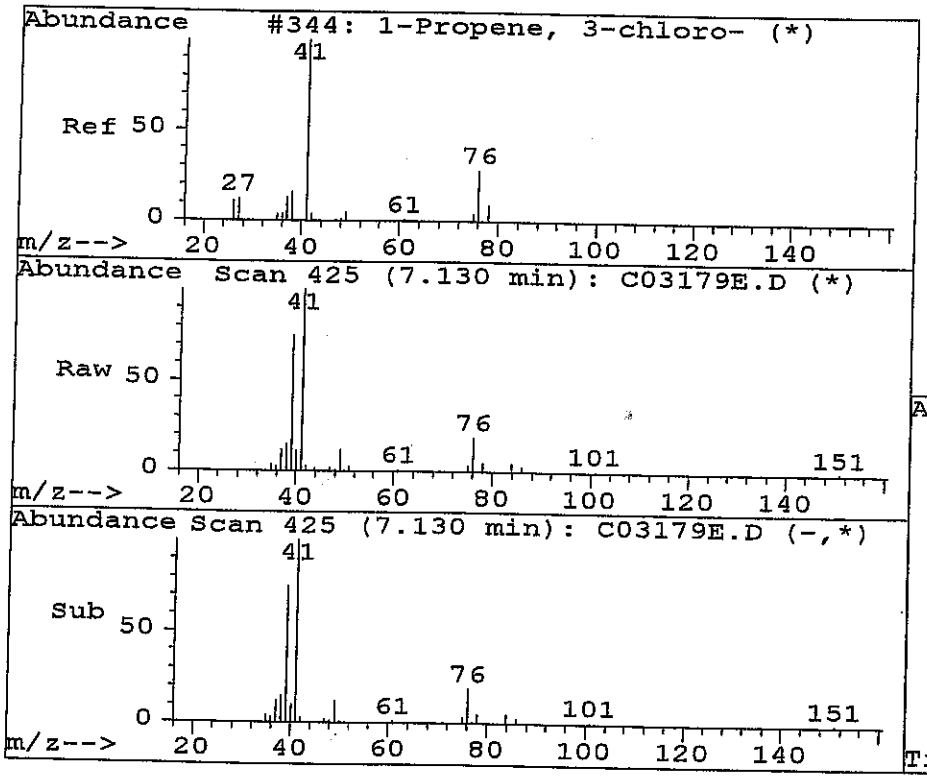


#17
Freon 113
Concen: 4.16 ppbV
RT: 6.95 min Scan# 407
Delta R.T. -0.21 min
Lab File: C03179E.D
Acq: 17 Mar 109 1:25 pm

Tgt Ion:151 Resp: 220191

Ion	Ratio	Lower	Upper
151	100		
101	126.6	79.3	118.9#
153	65.4	47.1	70.7
0	0.0	0.0	0.0

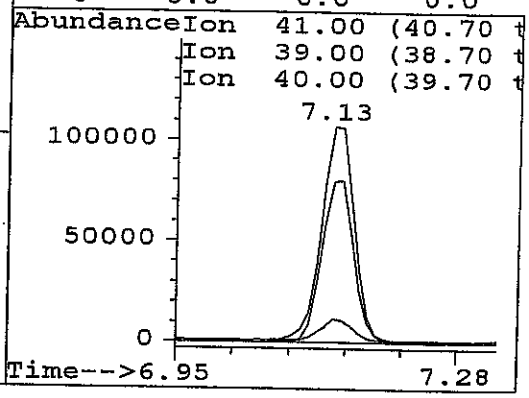


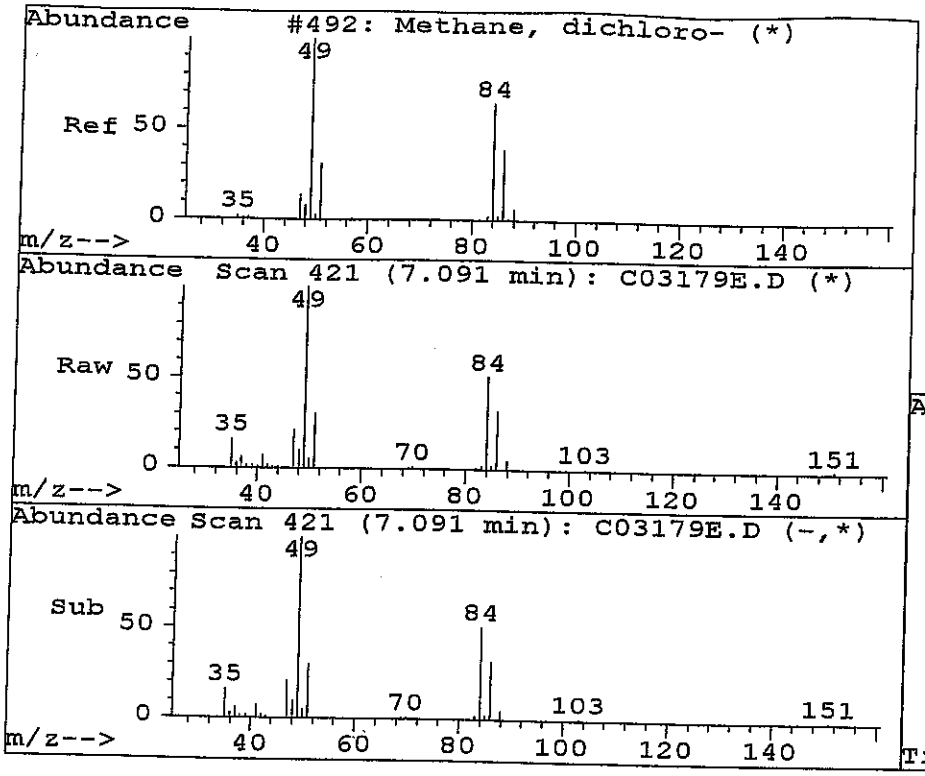


#18
Allyl chloride
Concen: 3.30 ppbV
RT: 7.13 min Scan# 425
Delta R.T. -0.22 min
Lab File: C03179E.D
Acq: 17 Mar 109 1:25 pm

Tgt Ion:41 Resp: 282890

Ion	Ratio	Lower	Upper
41	100		
39	74.3	49.0	73.6#
40	9.8	5.6	8.4#
0	0.0	0.0	0.0

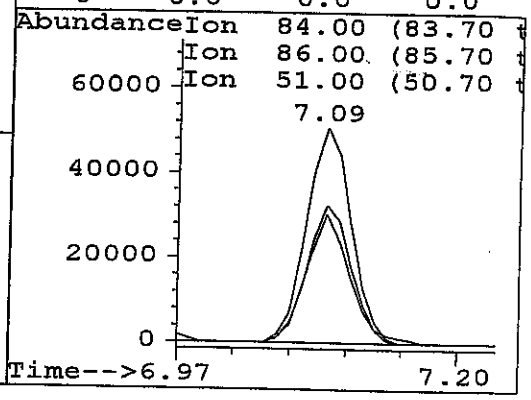


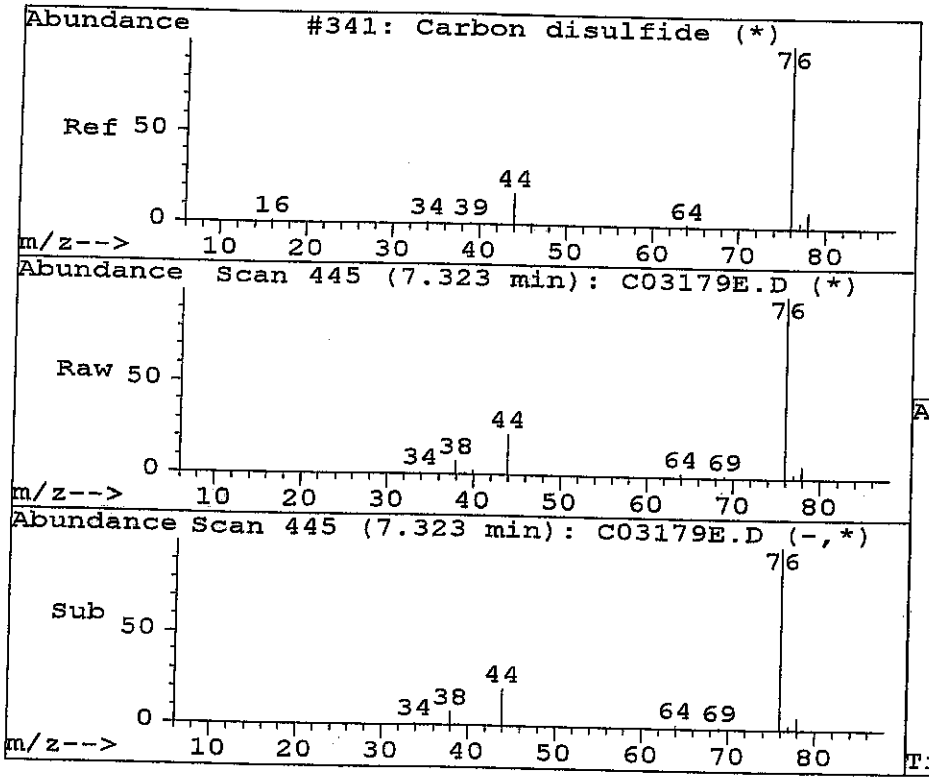


#19
Dichloromethane
Concen: 4.23 ppbV
RT: 7.09 min Scan# 421
Delta R.T. -0.22 min
Lab File: C03179E.D
Acq: 17 Mar 109 1:25 pm

Tgt Ion:84 Resp: 124766

Ion	Ratio	Lower	Upper
84	100		
86	63.9	55.8	83.8
51	59.0	34.6	52.0#
0	0.0	0.0	0.0

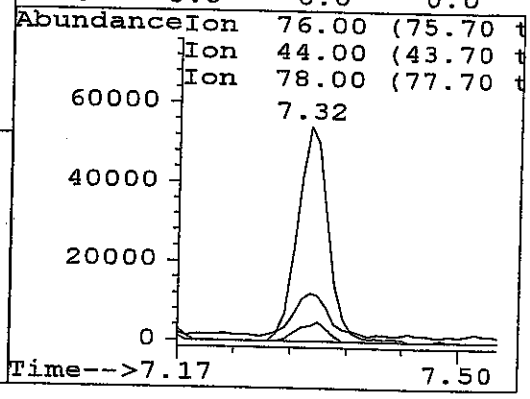


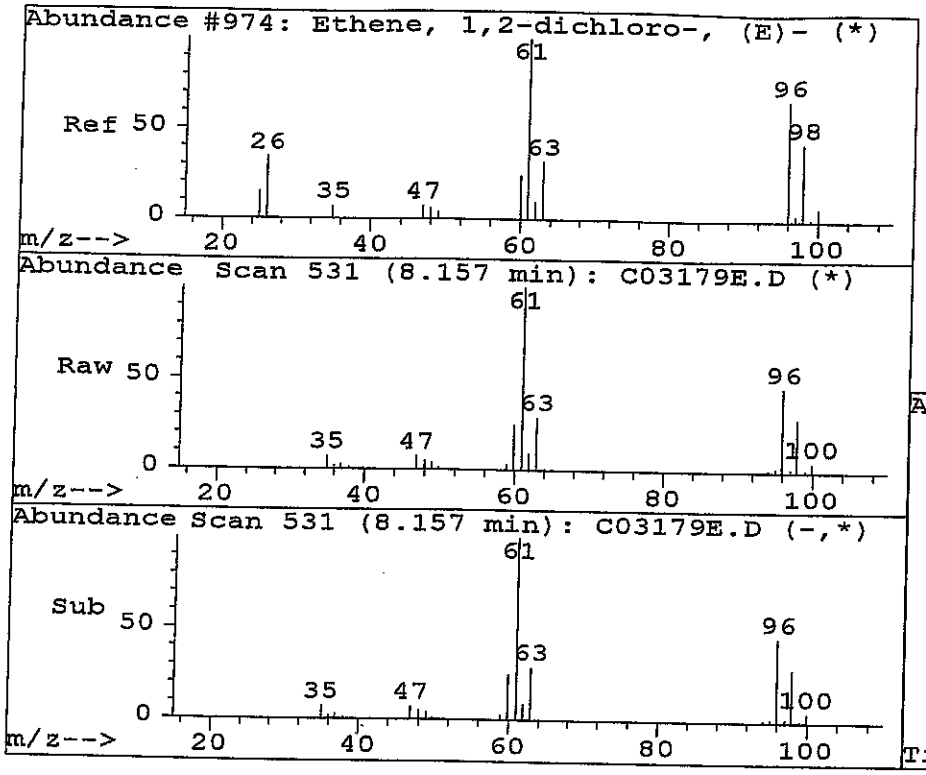


#20
Carbon disulfide
Concen: 3.23 ppbV
RT: 7.32 min Scan# 445
Delta R.T. -0.22 min
Lab File: C03179E.D
Acq: 17 Mar 109 1:25 pm

Tgt Ion:76 Resp: 137347

Ion	Ratio	Lower	Upper
76	100		
44	19.7	14.1	21.1
78	7.1	0.0	0.0#
0	0.0	0.0	0.0

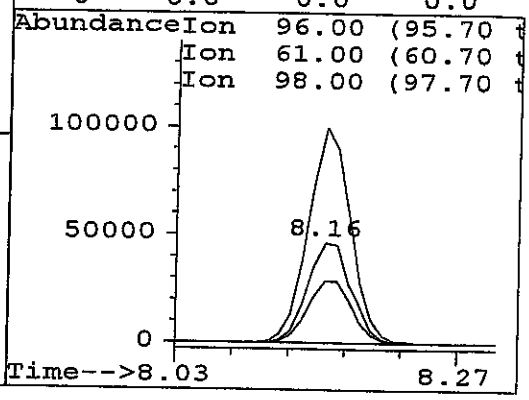


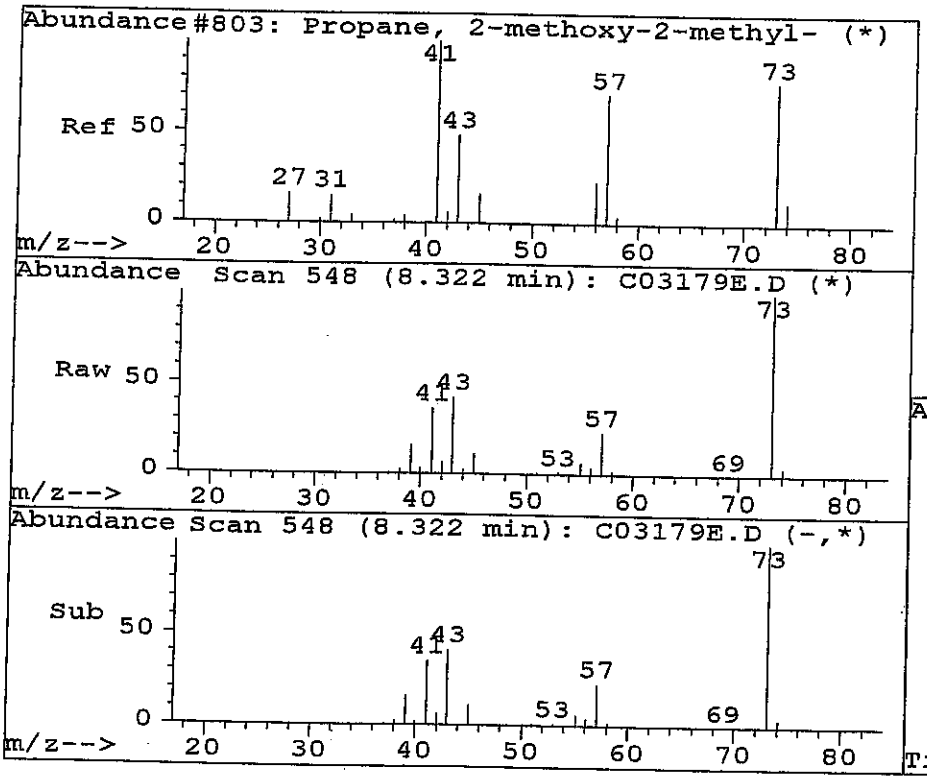


#21
trans-1,2-Dichloroethene
Concen: 3.83 ppbV
RT: 8.16 min Scan# 531
Delta R.T. -0.22 min
Lab File: C03179E.D
Acq: 17 Mar 109 1:25 pm

Tgt Ion:96 Resp: 117954

Ion	Ratio	Lower	Upper
96	100		
61	215.3	138.6	207.8#
98	62.0	39.4	59.2#
0	0.0	0.0	0.0

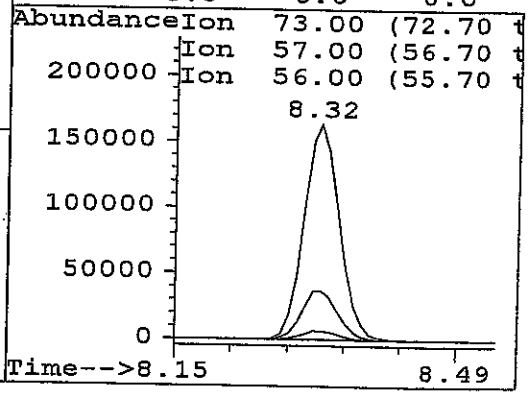


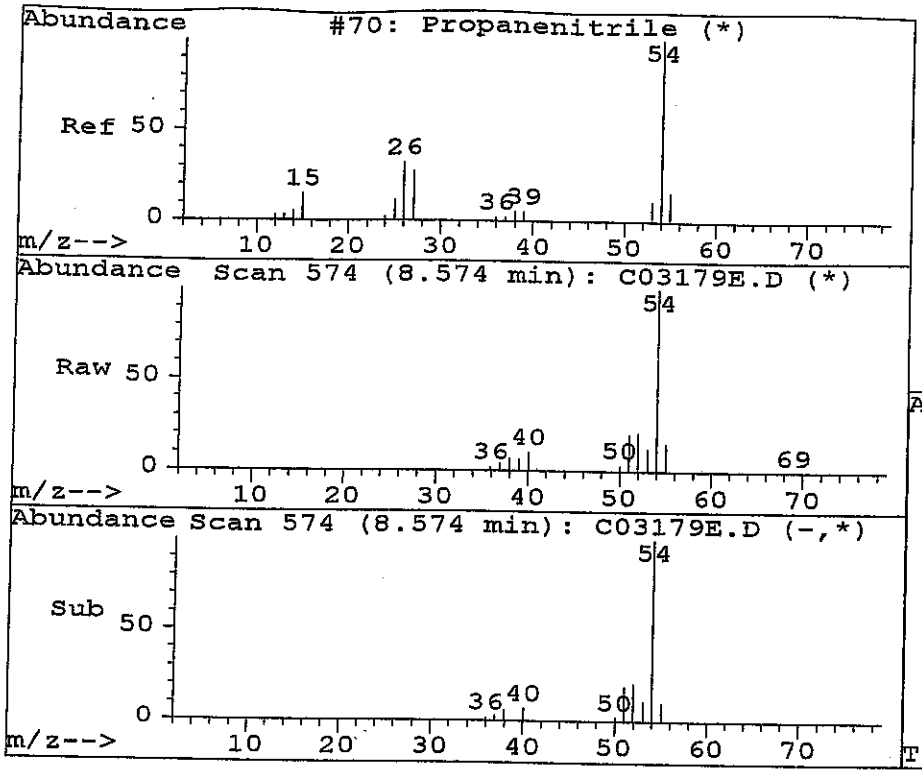


#22
Methyl tert butyl ether
Concen: 3.30 ppbV
RT: 8.32 min Scan# 548
Delta R.T. -0.22 min
Lab File: C03179E.D
Acq: 17 Mar 109 1:25 pm

Tgt Ion:73 Resp: 482973

Ion	Ratio	Lower	Upper
73	100		
57	22.7	22.5	33.7
56	3.8	0.0	0.0#
0	0.0	0.0	0.0

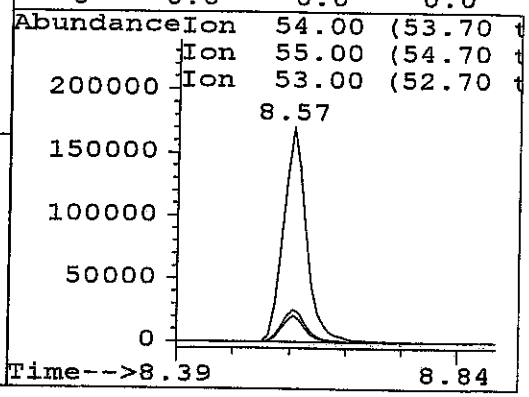


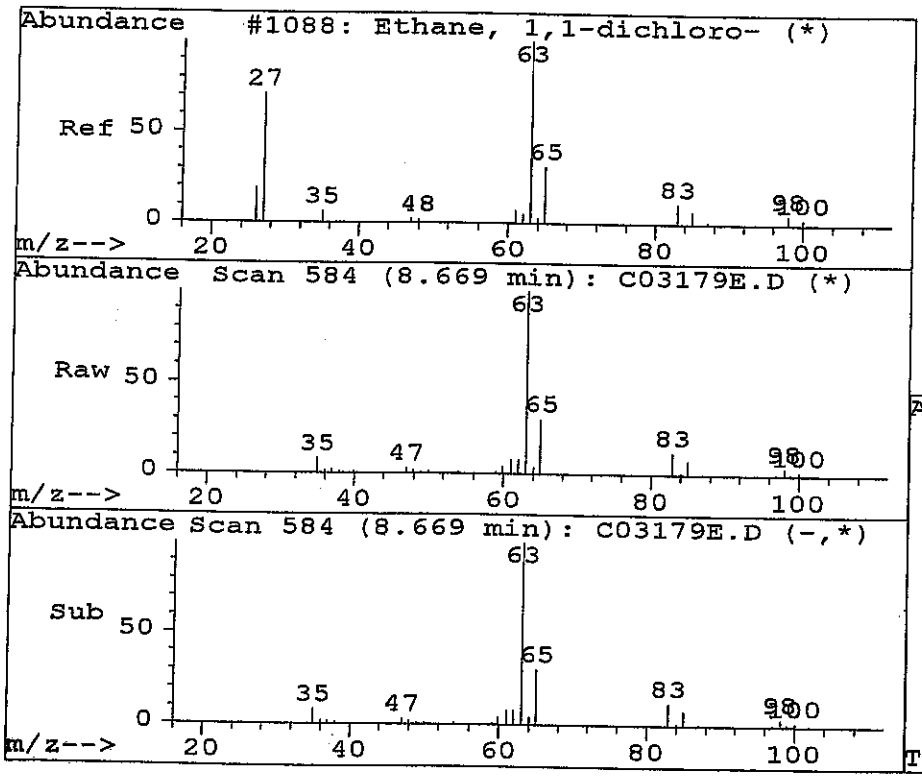


#23
Propionitrile
Concen: 8.39 ppbV
RT: 8.57 min Scan# 574
Delta R.T. -0.26 min
Lab File: C03179E.D
Acq: 17 Mar 109 1:25 pm

Tgt Ion:54 Resp: 434833

Ion	Ratio	Lower	Upper
54	100		
55	15.1	12.6	18.8
53	12.3	8.9	13.3
0	0.0	0.0	0.0

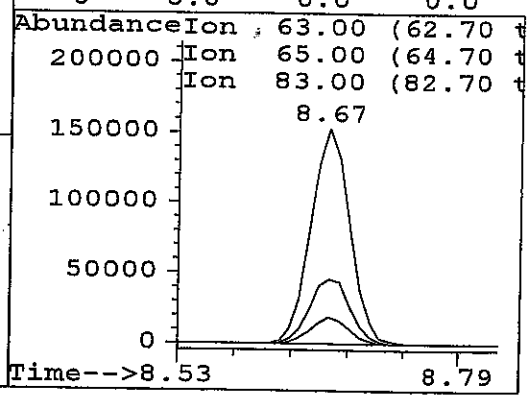


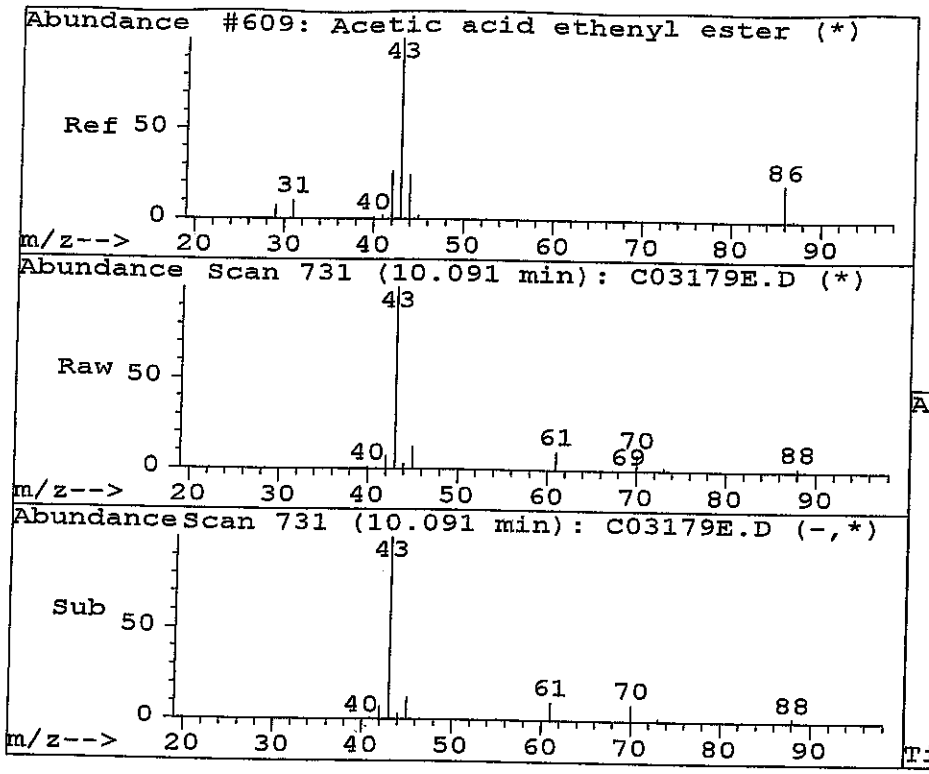


#24
1,1-Dichloroethane
Concen: 4.66 ppbV
RT: 8.67 min Scan# 584
Delta R.T. -0.23 min
Lab File: C03179E.D
Acq: 17 Mar 109 1:25 pm

Tgt Ion:63 Resp: 387657

Ion	Ratio	Lower	Upper
63	100		
65	29.8	24.0	36.0
83	12.3	8.7	13.1
0	0.0	0.0	0.0

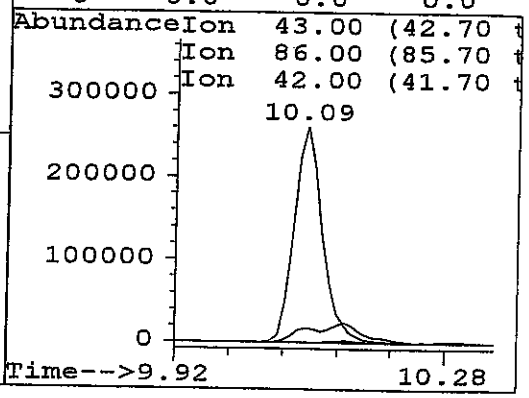


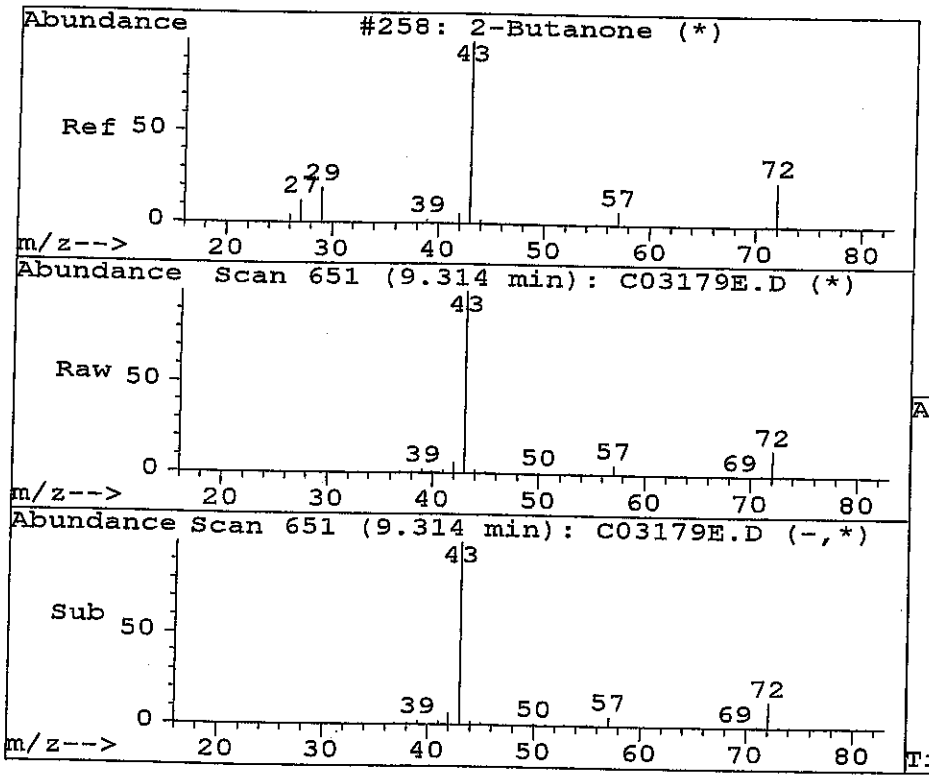


#25
Vinyl acetate
Concen: 3.37 ppbV
RT: 10.09 min Scan# 731
Delta R.T. -0.23 min
Lab File: C03179E.D
Acq: 17 Mar 109 1:25 pm

Tgt Ion:43 Resp: 687529

Ion	Ratio	Lower	Upper
43	100		
86	0.0	0.0	0.0
42	6.5	5.4	8.0
0	0.0	0.0	0.0

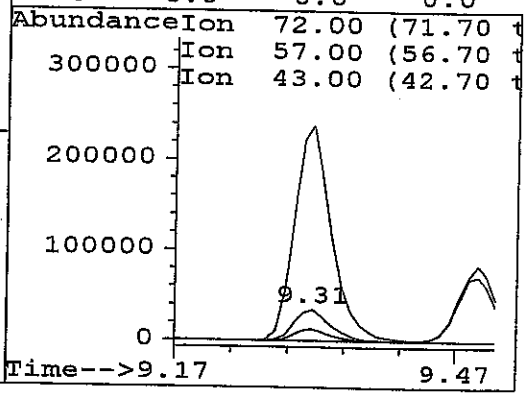


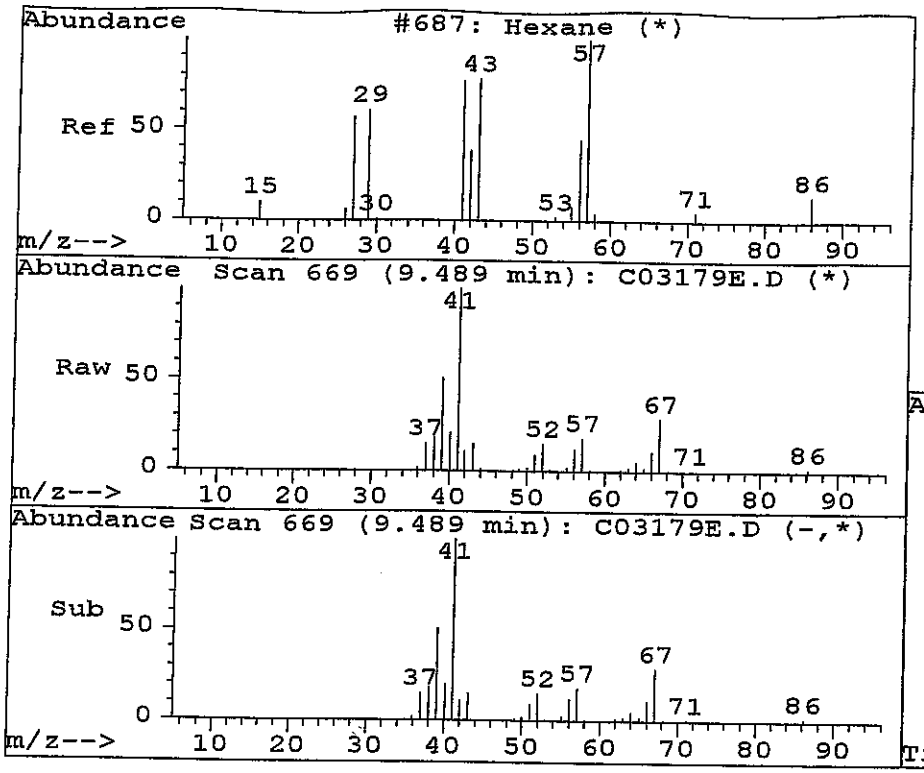


#26
2-Butanone
Concen: 3.44 ppbV
RT: 9.31 min Scan# 651
Delta R.T. -0.23 min
Lab File: C03179E.D
Acq: 17 Mar 109 1:25 pm

Tgt Ion:72 Resp: 92652

Ion	Ratio	Lower	Upper
72	100		
57	37.2	25.3	37.9
43	689.2	425.0	637.6#
0	0.0	0.0	0.0

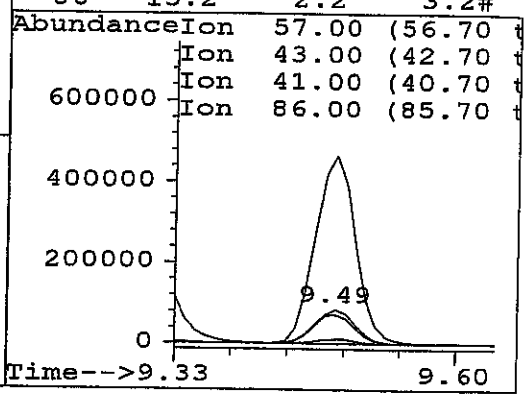


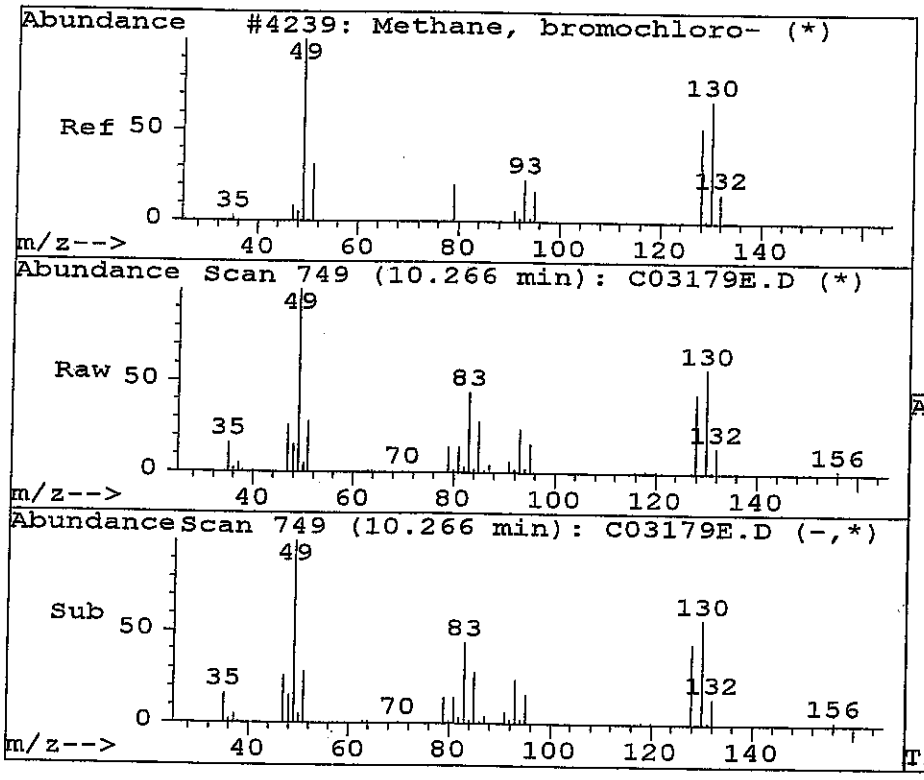


#27
Hexane
Concen: 2.85 ppbV
RT: 9.49 min Scan# 669
Delta R.T. -0.22 min
Lab File: C03179E.D
Acq: 17 Mar 109 1:25 pm

Tgt Ion:57 Resp: 226768

Ion	Ratio	Lower	Upper
57	100		
43	89.0	78.0	117.0
41	552.9	399.1	598.7
86	13.2	2.2	3.2#

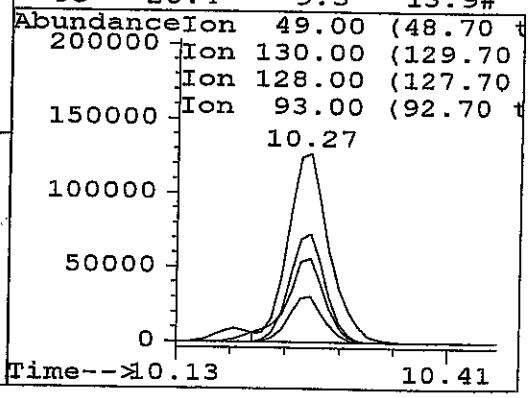


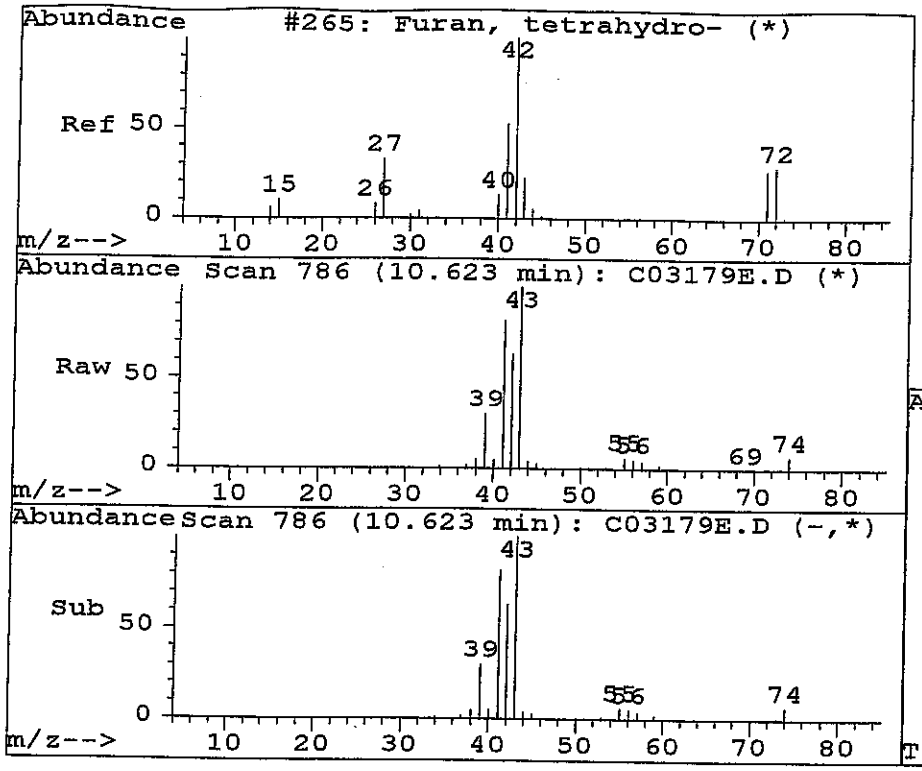


#28
Bromochloromethane
Concen: 3.53 ppbV
RT: 10.27 min Scan# 749
Delta R.T. -0.23 min
Lab File: C03179E.D
Acq: 17 Mar 109 1:25 pm

Tgt Ion:49 Resp: 372741

Ion	Ratio	Lower	Upper
49	100		
130	50.0	33.3	49.9#
128	42.7	26.2	39.2#
93	20.4	9.3	13.9#

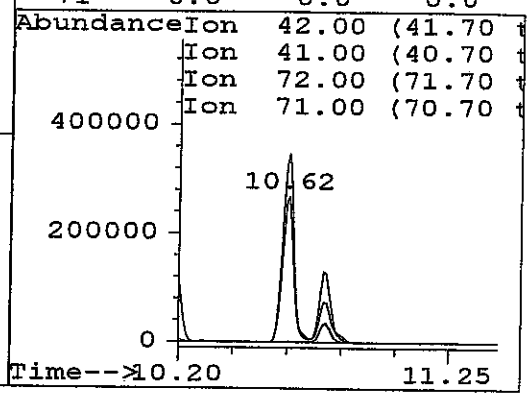


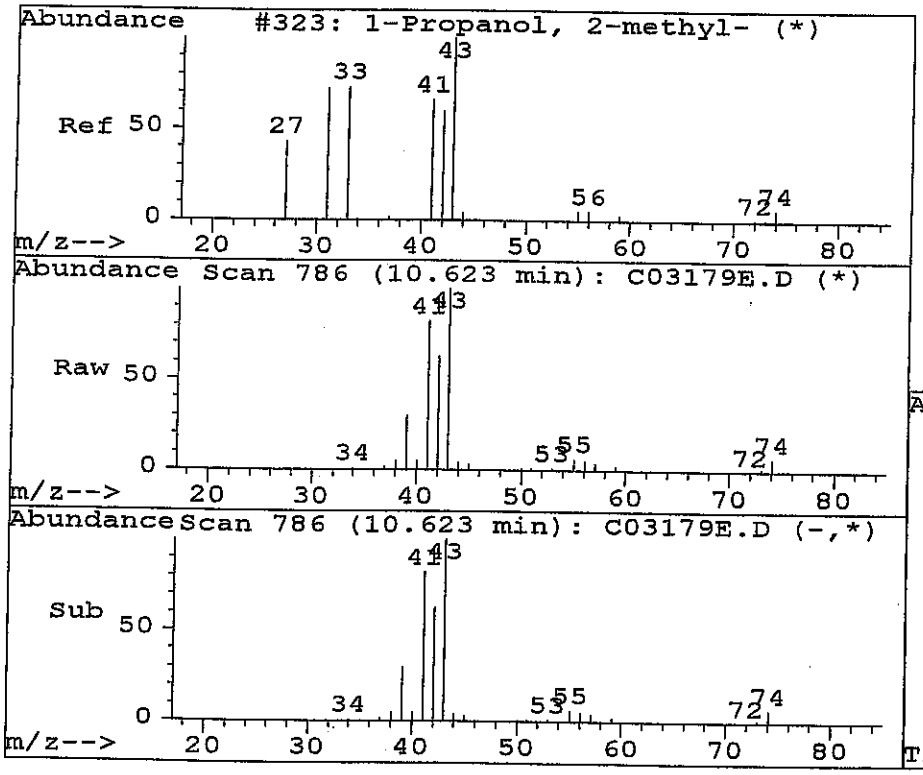


#29
Tetrahydrofuran
Concen: 2.97 ppbV m
RT: 10.62 min Scan# 786
Delta R.T. -0.30 min
Lab File: C03179E.D
Acq: 17 Mar 109 1:25 pm

Tgt Ion:42 Resp: 1207319

Ion	Ratio	Lower	Upper
42	100		
41	129.4	111.8	167.8
72	0.4	0.0	0.0#
71	0.0	0.0	0.0

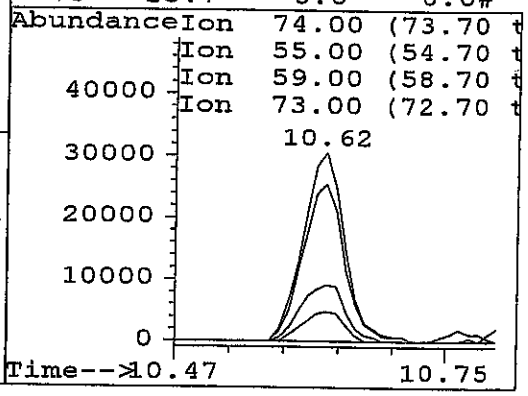


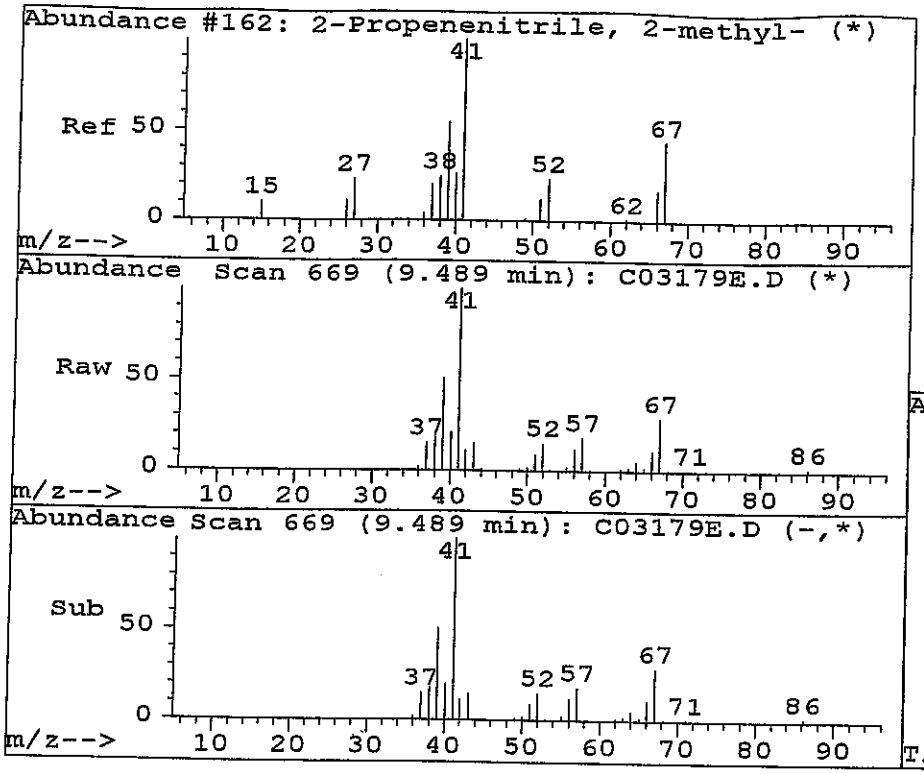


#30
Isobutyl alcohol
Concen: 8.44 ppbV
RT: 10.62 min Scan# 786
Delta R.T. -0.30 min
Lab File: C03179E.D
Acq: 17 Mar 109 1:25 pm

Tgt Ion:74 Resp: 90372

Ion	Ratio	Lower	Upper
74	100		
55	83.5	63.6	95.4
59	29.9	43.4	65.0#
73	15.7	0.0	0.0#

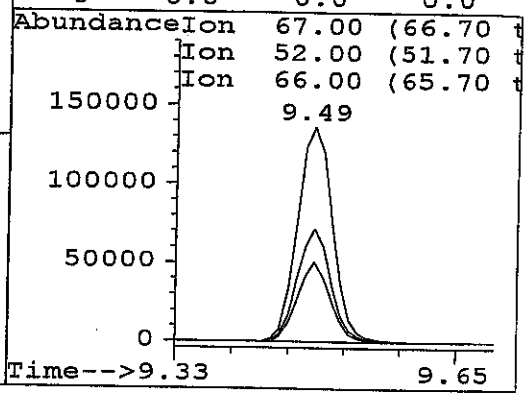


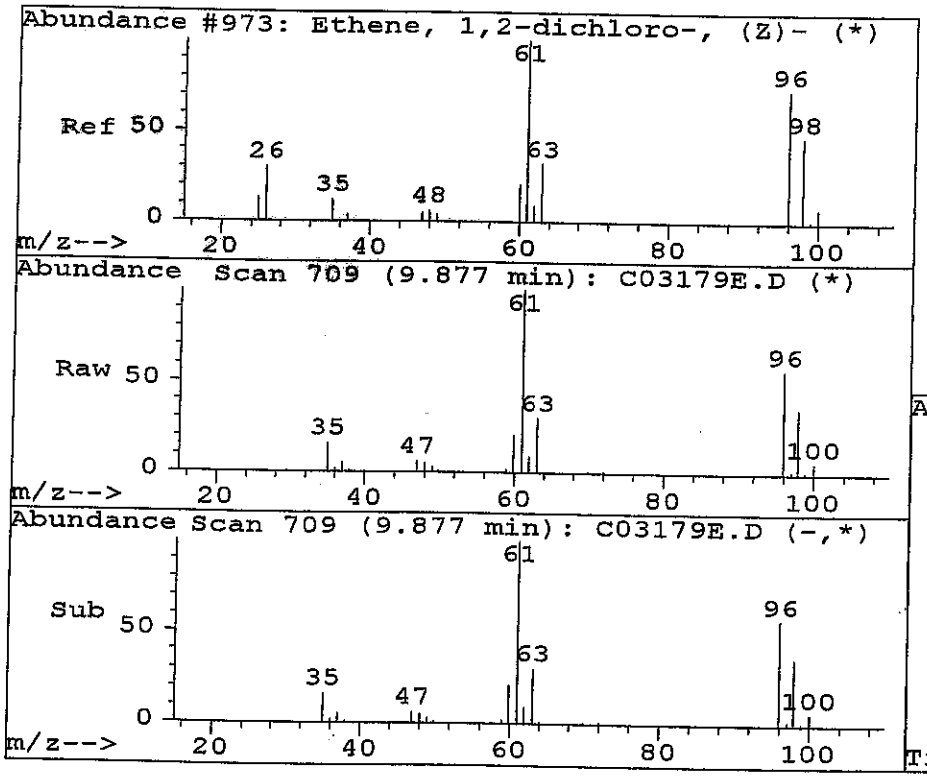


#31
Methacrylonitrile
Concen: 12.65 ppbV
RT: 9.49 min Scan# 669
Delta R.T. -0.25 min
Lab File: C03179E.D
Acq: 17 Mar 109 1:25 pm

Tgt Ion:67 Resp: 367703

Ion	Ratio	Lower	Upper
67	100		
52	52.6	46.5	69.7
66	37.1	27.4	41.2
0	0.0	0.0	0.0

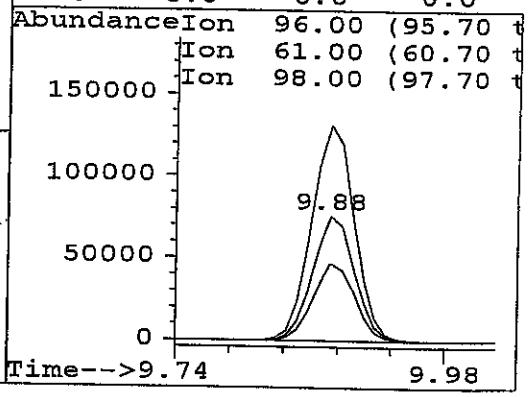


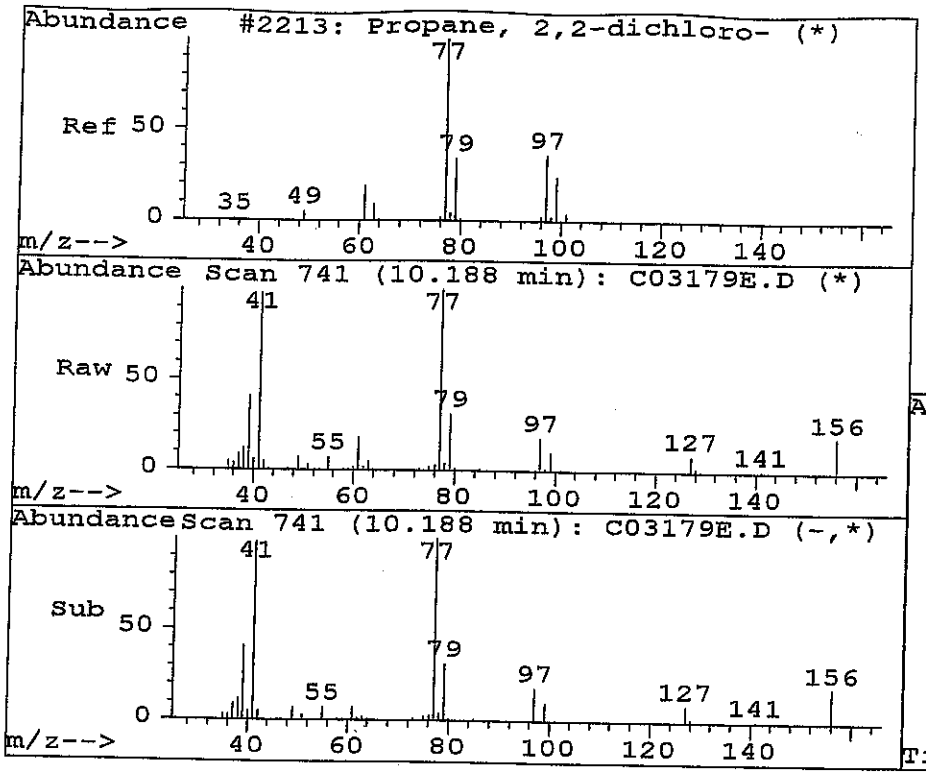


#32
cis-1,2-Dichloroethene
Concen: 4.40 ppbV
RT: 9.88 min Scan# 709
Delta R.T. -0.23 min
Lab File: C03179E.D
Acq: 17 Mar 109 1:25 pm

Tgt Ion:96 Resp: 190337

Ion	Ratio	Lower	Upper
96	100		
61	173.9	145.3	217.9
98	61.9	43.9	65.9
0	0.0	0.0	0.0

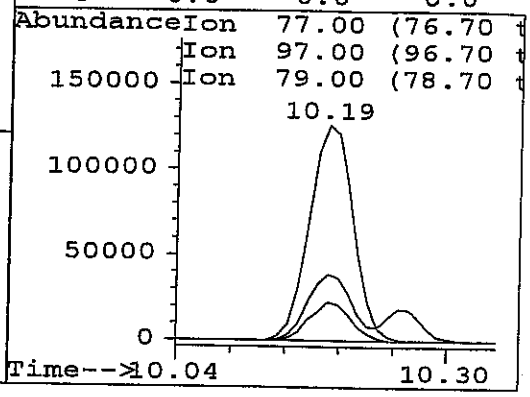


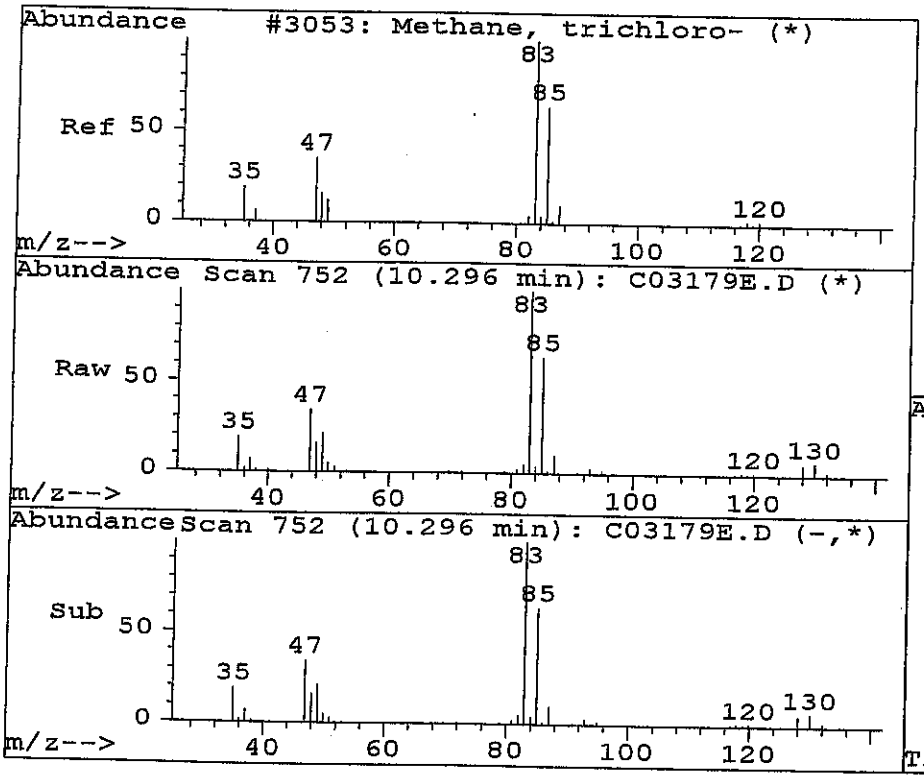


#33
2,2-Dichloropropane
Concen: 3.89 ppbV
RT: 10.19 min Scan# 741
Delta R.T. -0.23 min
Lab File: C03179E.D
Acq: 17 Mar 109 1:25 pm

Tgt Ion:77 Resp: 370695

Ion	Ratio	Lower	Upper
77	100		
97	17.9	15.0	22.4
79	25.3	20.7	31.1
0	0.0	0.0	0.0

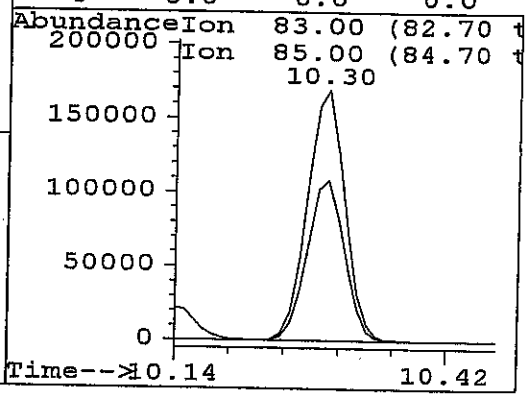


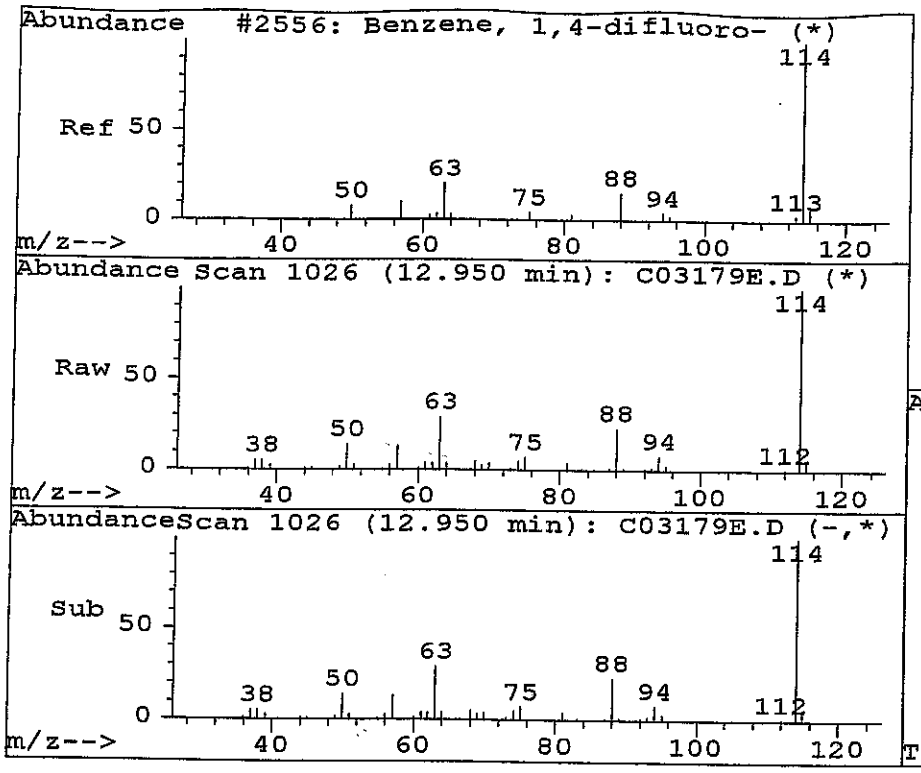


#34
Chloroform
Concen: 4.50 ppbV
RT: 10.30 min Scan# 752
Delta R.T. -0.23 min
Lab File: C03179E.D
Acq: 17 Mar 109 1:25 pm

Tgt Ion:83 Resp: 449509

Ion	Ratio	Lower	Upper
83	100		
85	64.1	55.7	83.5
0	0.0	0.0	0.0
0	0.0	0.0	0.0

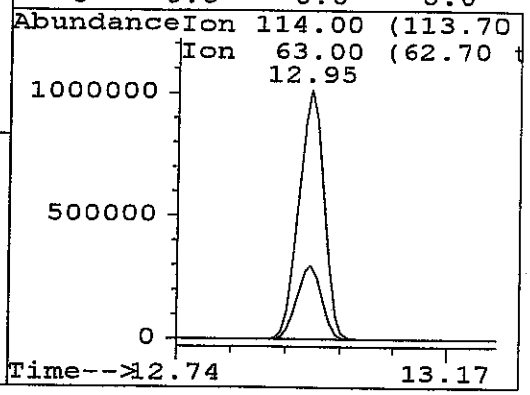


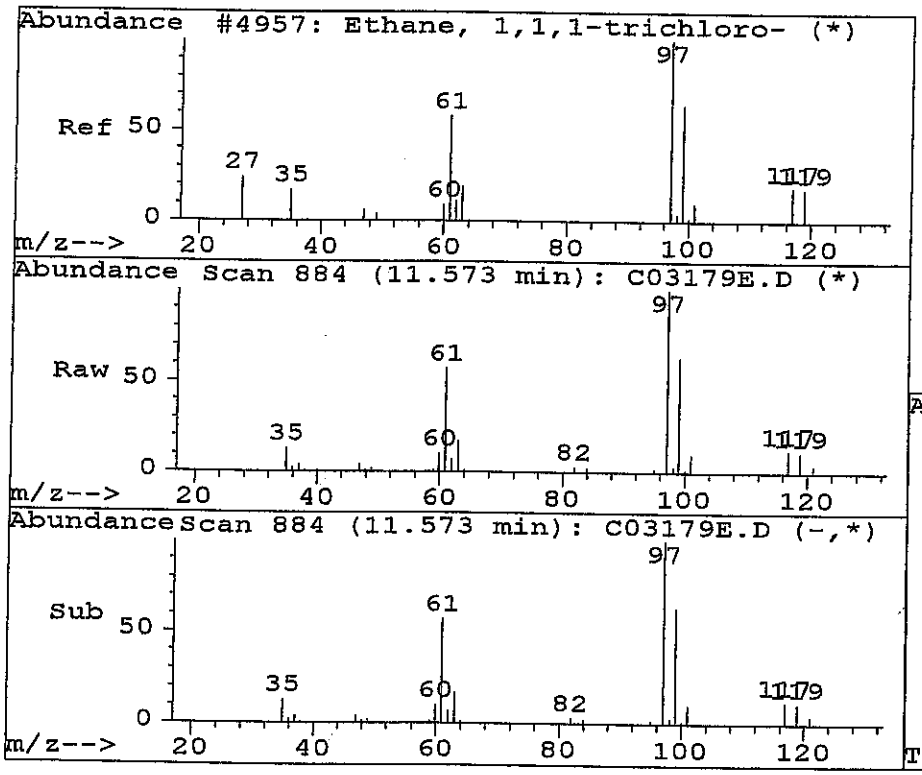


#35
1,4-Difluorobenzene
Concen: 20.00 ppbV
RT: 12.95 min Scan# 1026
Delta R.T. -0.22 min
Lab File: C03179E.D
Acq: 17 Mar 109 1:25 pm

Tgt Ion:114 Resp: 2870629

Ion	Ratio	Lower	Upper
114	100		
63	29.3	22.4	37.4
0	0.0	0.0	0.0
0	0.0	0.0	0.0

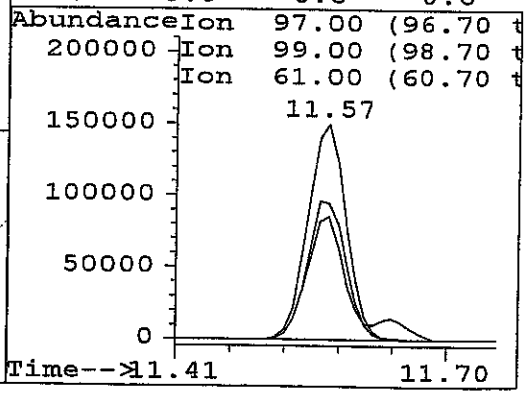


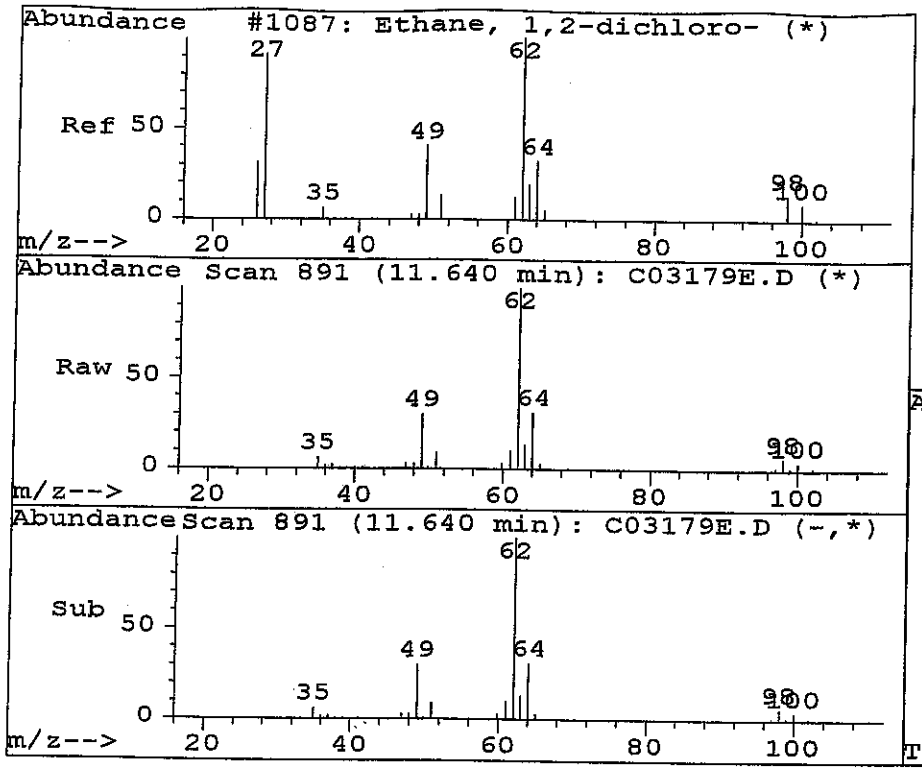


#36
1,1,1-Trichloroethane
Concen: 4.42 ppbV
RT: 11.57 min Scan# 884
Delta R.T. -0.23 min
Lab File: C03179E.D
Acq: 17 Mar 109 1:25 pm

Tgt Ion:97 Resp: 432442

Ion	Ratio	Lower	Upper
97	100		
99	63.2	49.8	74.8
61	55.4	29.9	44.9#
0	0.0	0.0	0.0

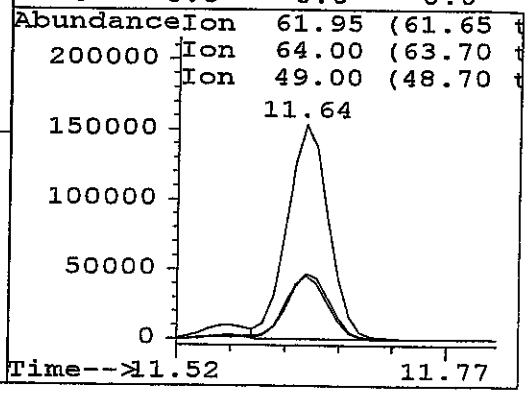


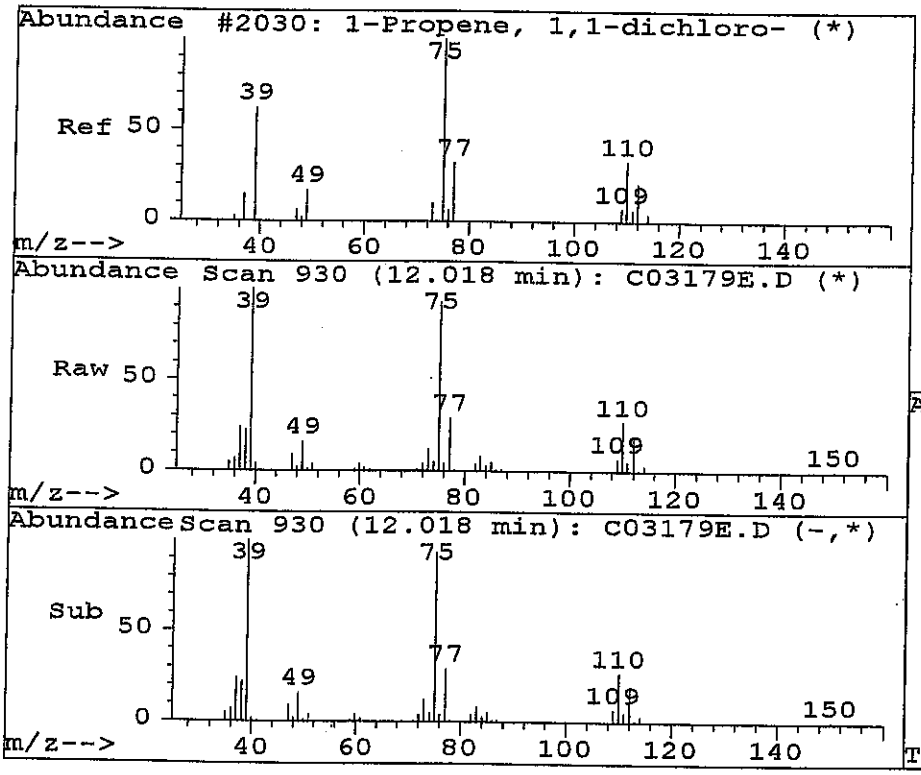


#37
1,2-Dichloroethane
Concen: 4.35 ppbV
RT: 11.64 min Scan# 891
Delta R.T. -0.23 min
Lab File: C03179E.D
Acq: 17 Mar 109 1:25 pm

Tgt Ion:61.95 Resp: 39892

Ion	Ratio	Lower	Upper
62	100		
64	30.9	24.3	36.5
49	29.7	22.4	33.6
0	0.0	0.0	0.0

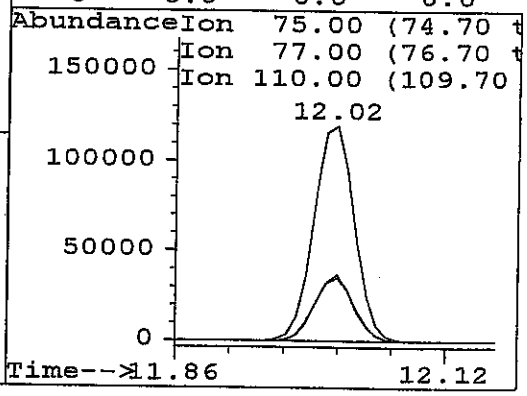


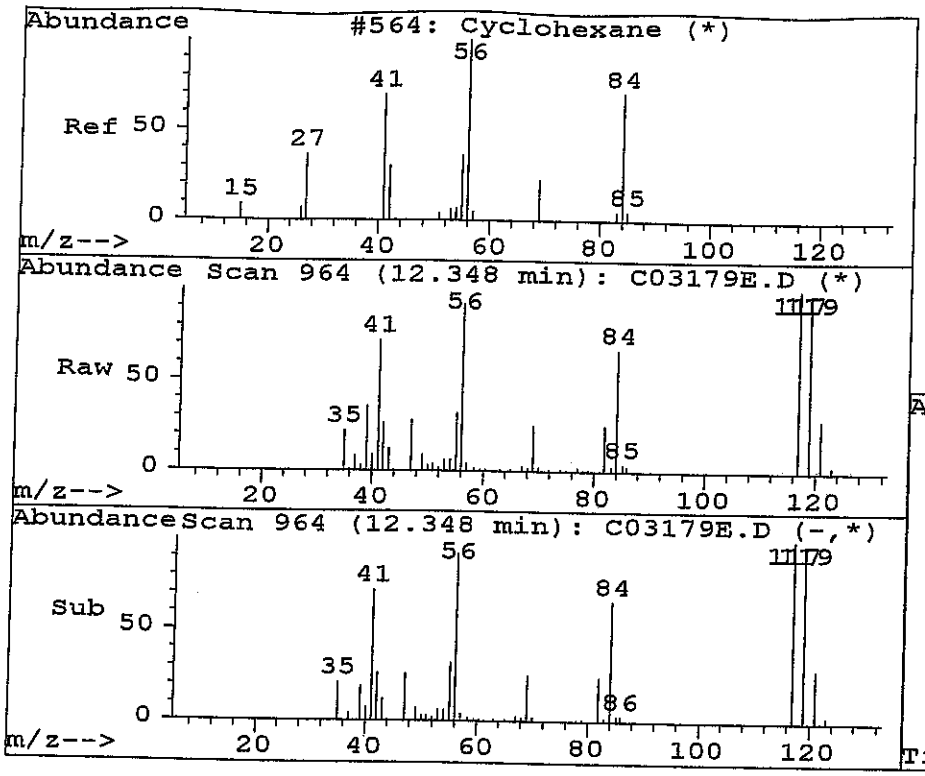


#38
1,1-Dichloropropene
Concen: 3.59 ppbV
RT: 12.02 min Scan# 930
Delta R.T. -0.22 min
Lab File: C03179E.D
Acq: 17 Mar 109 1:25 pm

Tgt Ion:75 Resp: 325075

Ion	Ratio	Lower	Upper
75	100		
77	30.9	25.0	37.4
110	29.4	21.3	31.9
0	0.0	0.0	0.0

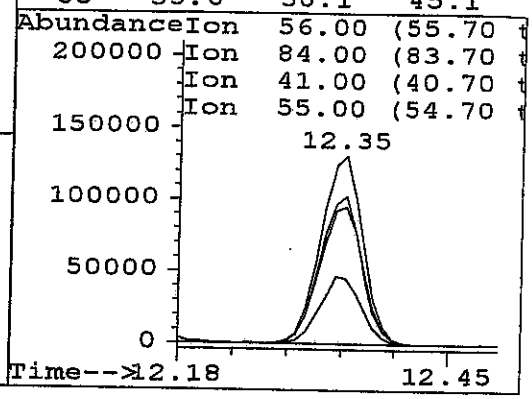


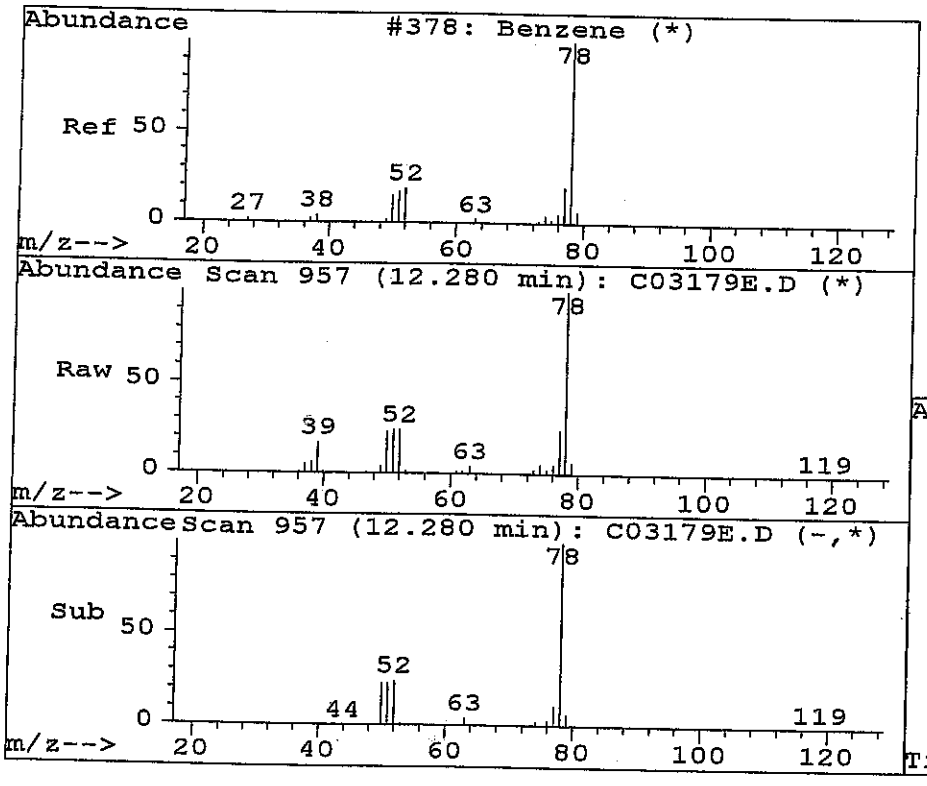


#39
Cyclohexane
Concen: 3.71 ppbV
RT: 12.35 min Scan# 964
Delta R.T. -0.20 min
Lab File: C03179E.D
Acq: 17 Mar 109 1:25 pm

Tgt Ion:56 Resp: 380141

Ion	Ratio	Lower	Upper
56	100		
84	75.7	60.3	90.5
41	78.0	65.4	98.0
55	35.6	30.1	45.1

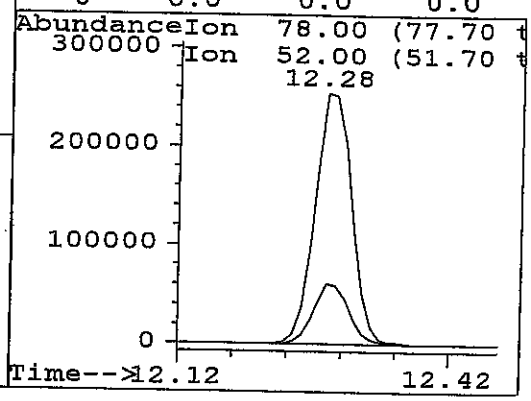


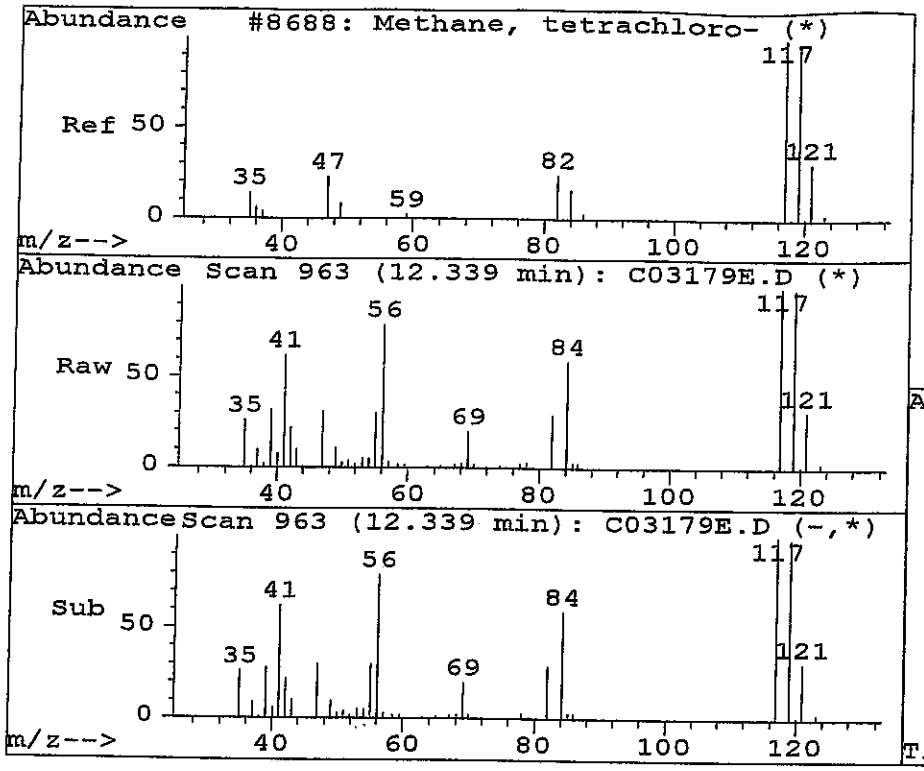


#40
Benzene
Concen: 3.73 ppbV
RT: 12.28 min Scan# 957
Delta R.T. -0.23 min
Lab File: C03179E.D
Acq: 17 Mar 109 1:25 pm

Tgt Ion:78 Resp: 712515

Ion	Ratio	Lower	Upper
78	100		
52	24.0	17.8	26.8
0	0.0	0.0	0.0
0	0.0	0.0	0.0

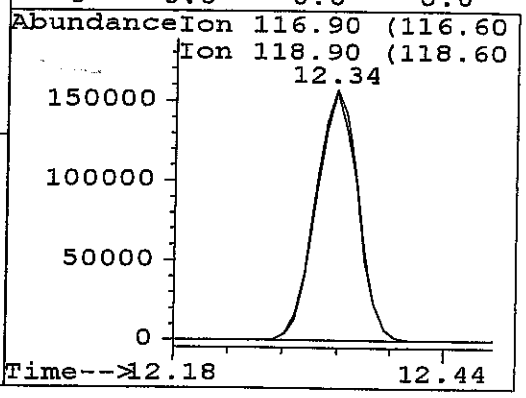


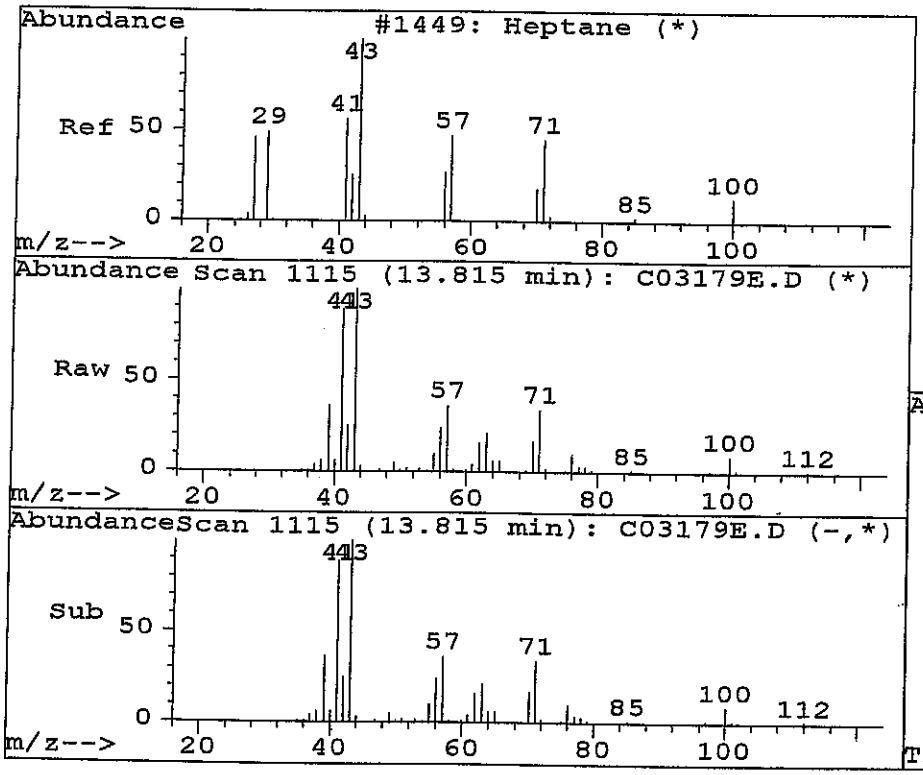


#41
Carbon tetrachloride
Concen: 4.58 ppbV
RT: 12.34 min Scan# 963
Delta R.T. -0.22 min
Lab File: C03179E.D
Acq: 17 Mar 109 1:25 pm

Tgt Ion:116.9 Resp: 45162

Ion	Ratio	Lower	Upper
117	100		
119	99.2	65.0	97.6#
0	0.0	0.0	0.0
0	0.0	0.0	0.0

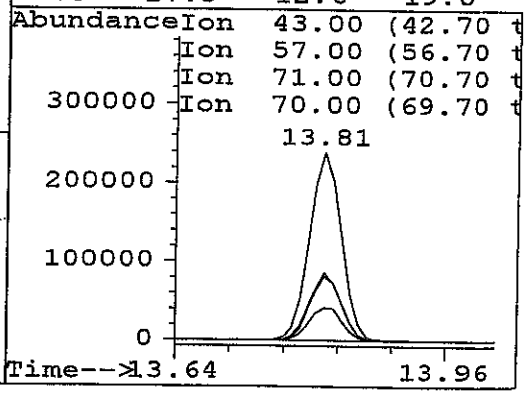


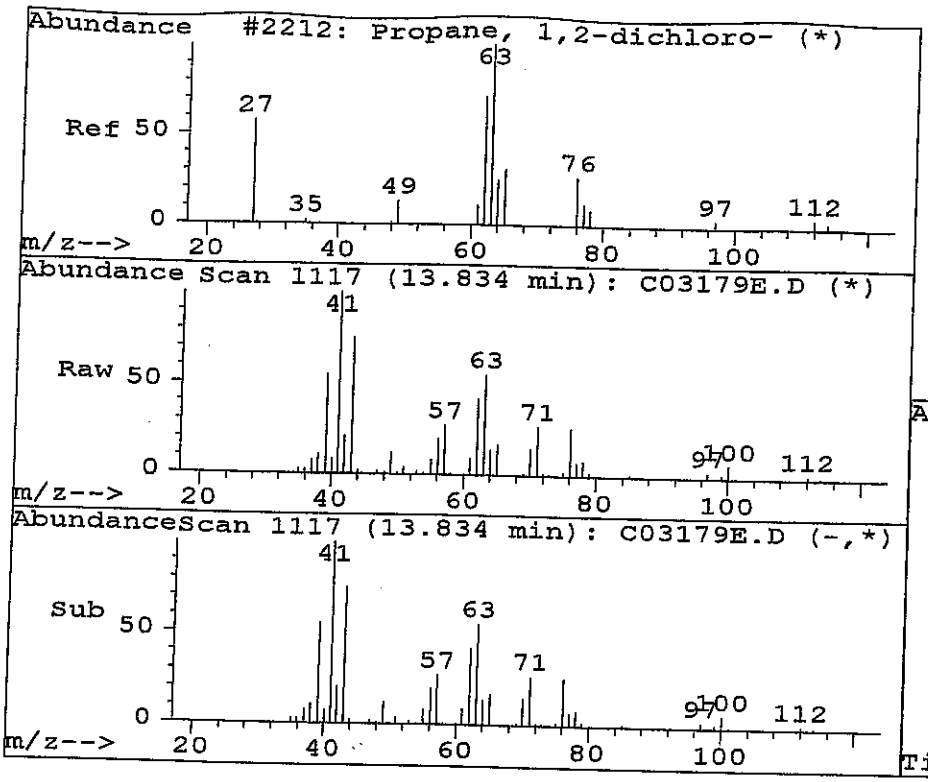


#42
n-Heptane
Concen: 3.38 ppbV
RT: 13.81 min Scan# 1115
Delta R.T. -0.23 min
Lab File: C03179E.D
Acq: 17 Mar 109 1:25 pm

Tgt Ion:43 Resp: 616569

Ion	Ratio	Lower	Upper
43	100		
57	35.9	30.3	45.5
71	34.2	29.9	44.9
70	17.3	12.6	19.0

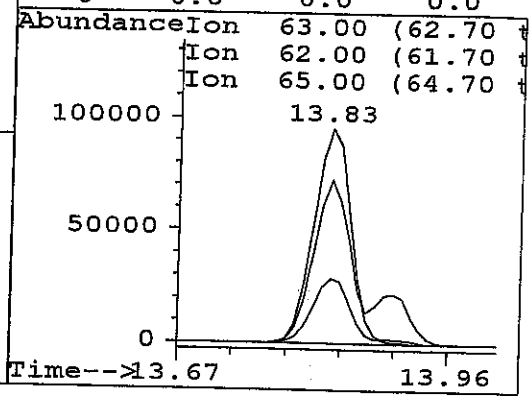


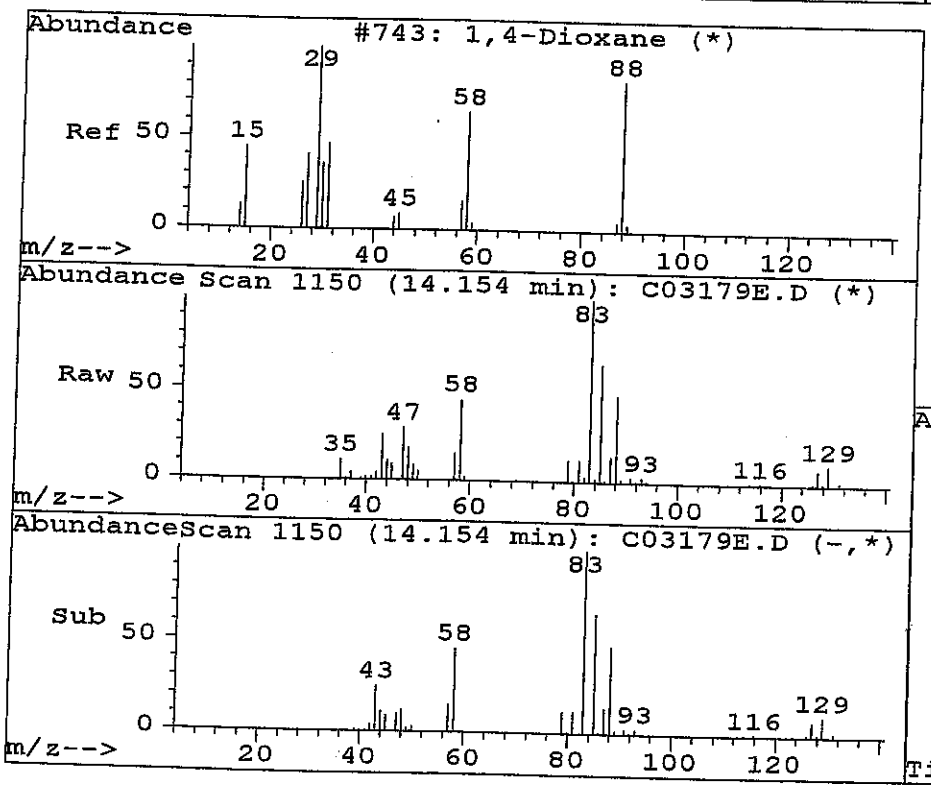


#43
1,2-Dichloropropane
Concen: 4.34 ppbV
RT: 13.83 min Scan# 1117
Delta R.T. -0.24 min
Lab File: C03179E.D
Acq: 17 Mar 109 1:25 pm

Tgt Ion:63 Resp: 266688

Ion	Ratio	Lower	Upper
63	100		
62	72.9	50.4	75.6
65	29.8	25.8	38.6
0	0.0	0.0	0.0

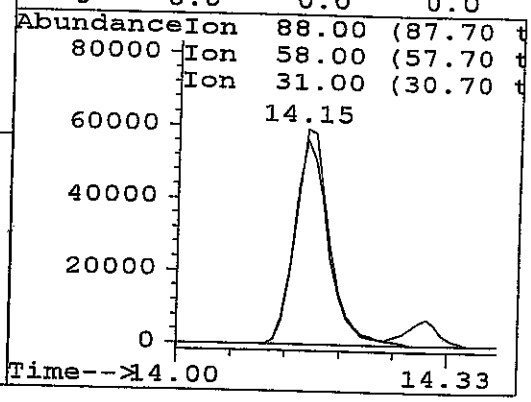


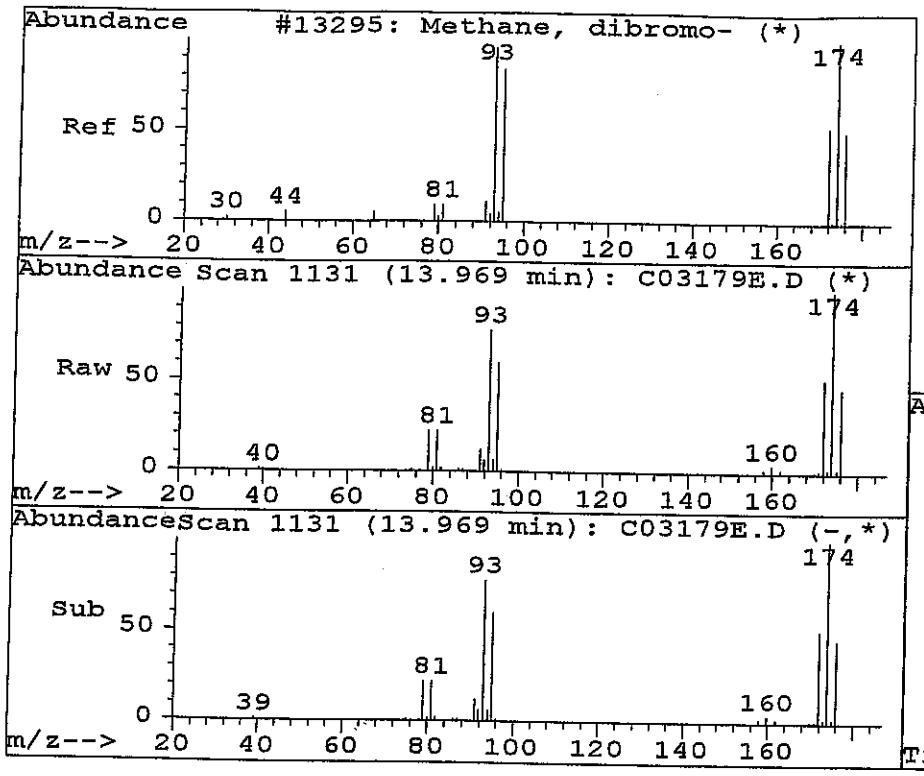


#44
1,4 Dioxane
Concen: 3.22 ppbV
RT: 14.15 min Scan# 1150
Delta R.T. -0.25 min
Lab File: C03179E.D
Acq: 17 Mar 109 1:25 pm

Tgt Ion:88 Resp: 171544

Ion	Ratio	Lower	Upper
88	100		
58	94.7	71.5	107.3
31	0.0	0.0	0.0
0	0.0	0.0	0.0

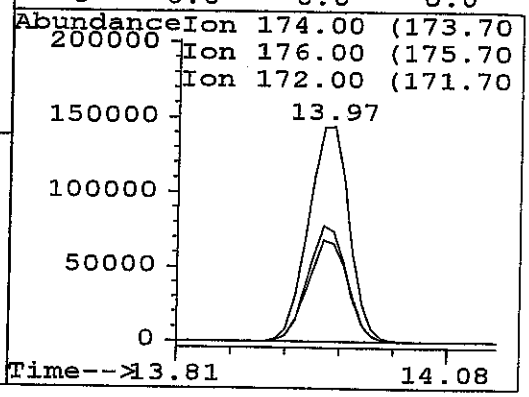


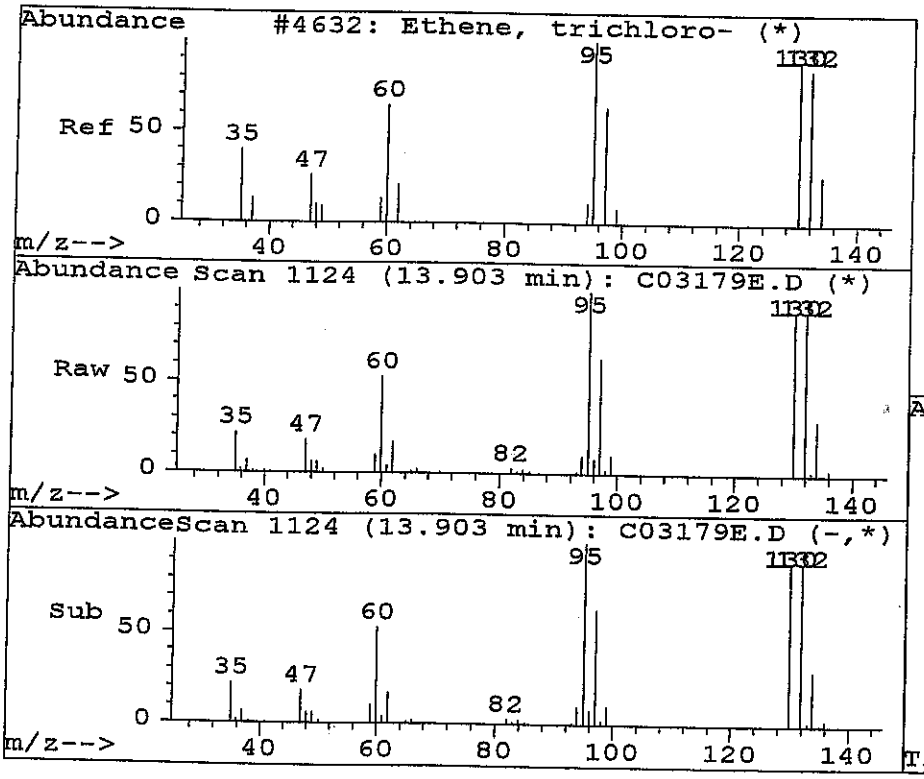


#45
Dibromomethane
Concen: 3.66 ppbV
RT: 13.97 min Scan# 1131
Delta R.T. -0.23 min
Lab File: C03179E.D
Acq: 17 Mar 109 1:25 pm

Tgt Ion:174 Resp: 411463

Ion	Ratio	Lower	Upper
174	100		
176	45.7	37.1	55.7
172	51.1	38.4	57.6
0	0.0	0.0	0.0

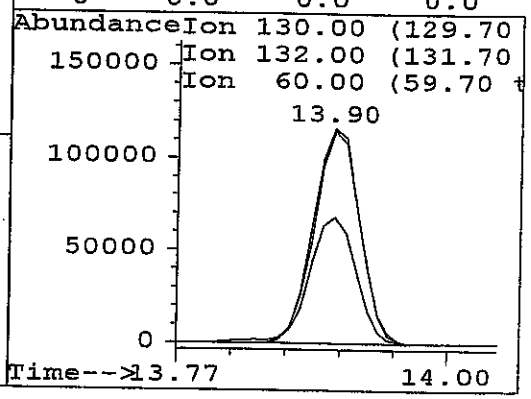


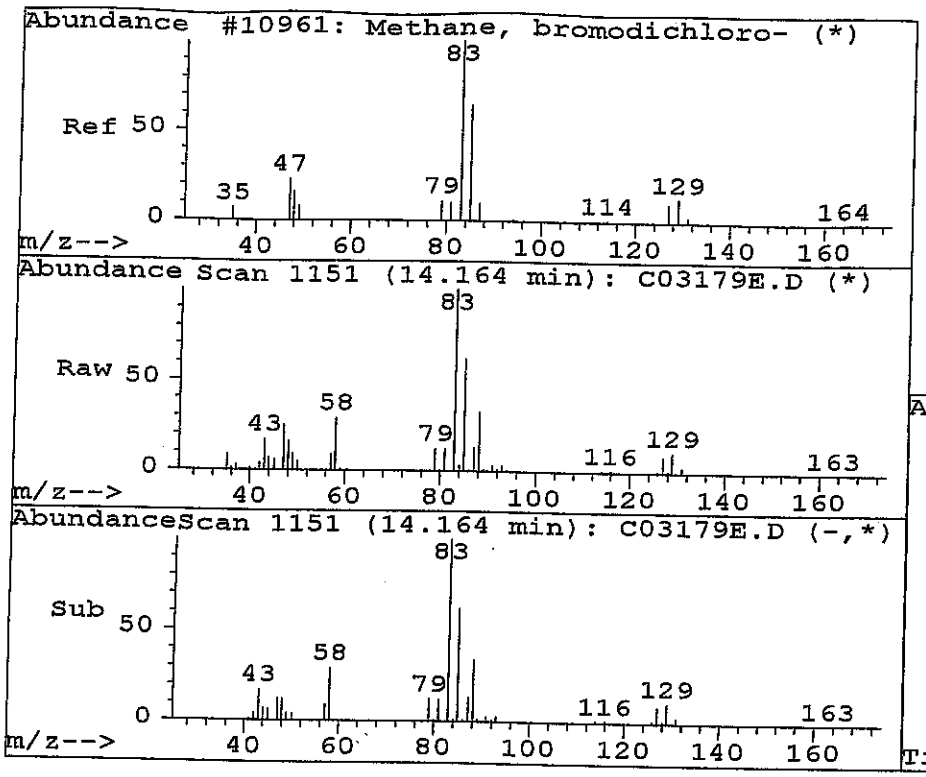


#46
Trichloroethene
Concen: 4.15 ppbV
RT: 13.90 min Scan# 1124
Delta R.T. -0.23 min
Lab File: C03179E.D
Acq: 17 Mar 109 1:25 pm

Tgt Ion:130 Resp: 323273

Ion	Ratio	Lower	Upper
130	100		
132	98.9	74.4	111.6
60	57.9	49.2	73.8
0	0.0	0.0	0.0

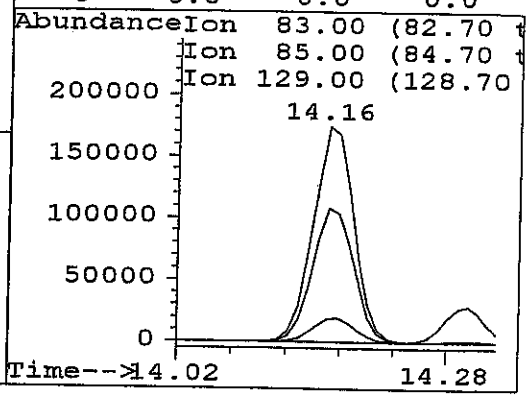


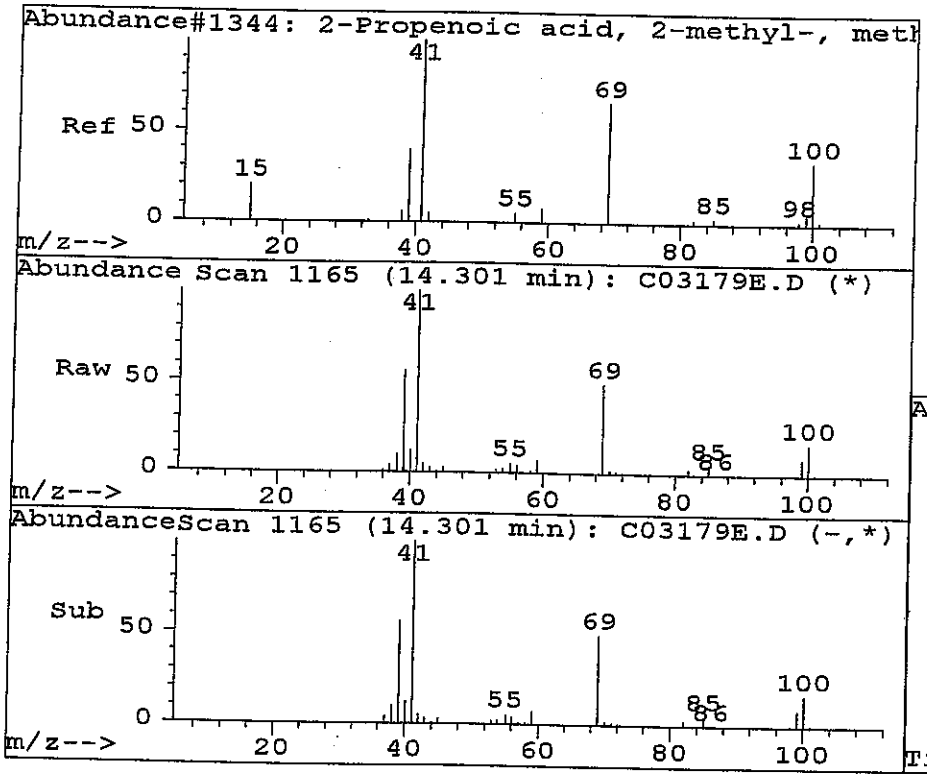


#47
Bromodichloromethane
Concen: 3.47 ppbV
RT: 14.16 min Scan# 1151
Delta R.T. -0.24 min
Lab File: C03179E.D
Acq: 17 Mar 109 1:25 pm

Tgt Ion:83 Resp: 476051

Ion	Ratio	Lower	Upper
83	100		
85	61.6	56.1	84.1
129	10.8	7.2	10.8
0	0.0	0.0	0.0

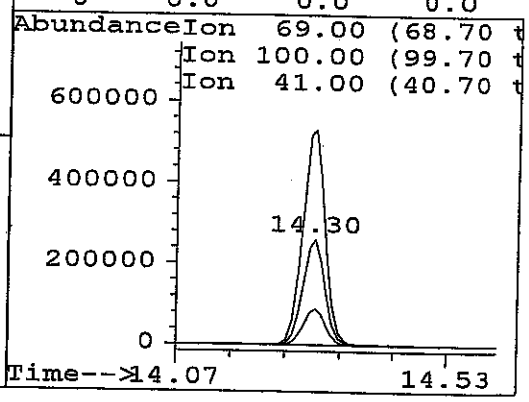


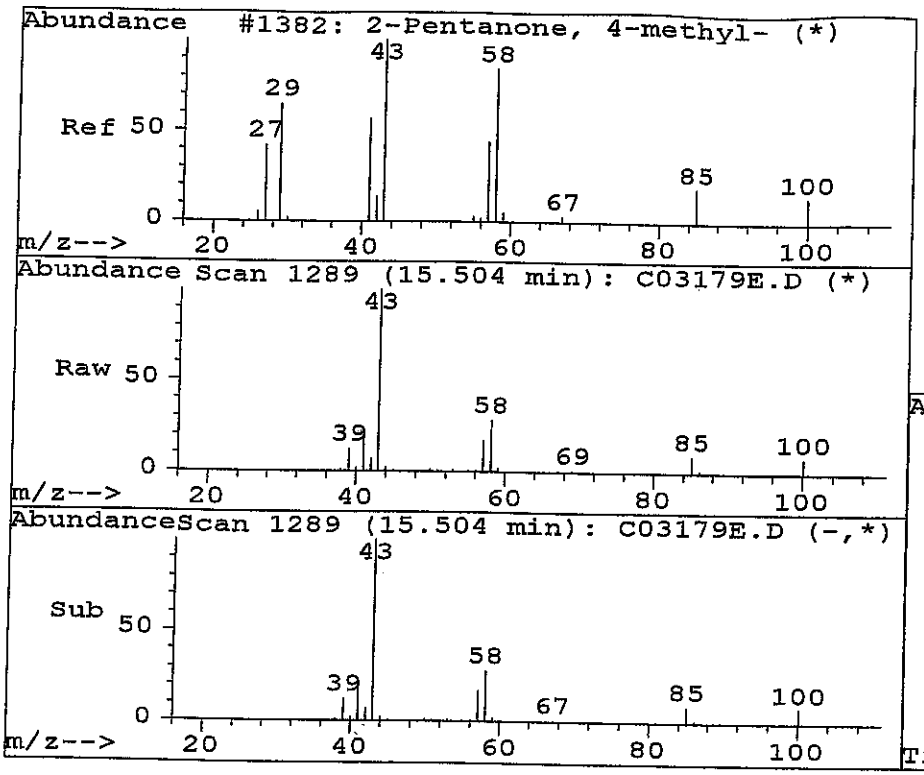


#48
Methyl methacrylate
Concen: 9.46 ppbV
RT: 14.30 min Scan# 1165
Delta R.T. -0.25 min
Lab File: C03179E.D
Acq: 17 Mar 109 1:25 pm

Tgt Ion:69 Resp: 694276

Ion	Ratio	Lower	Upper
69	100		
100	34.4	28.3	42.5
41	203.9	157.8	236.8
0	0.0	0.0	0.0

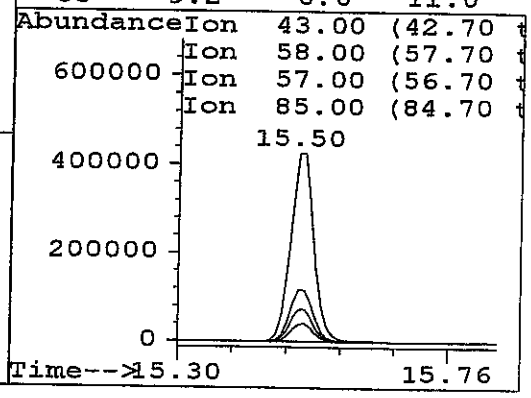


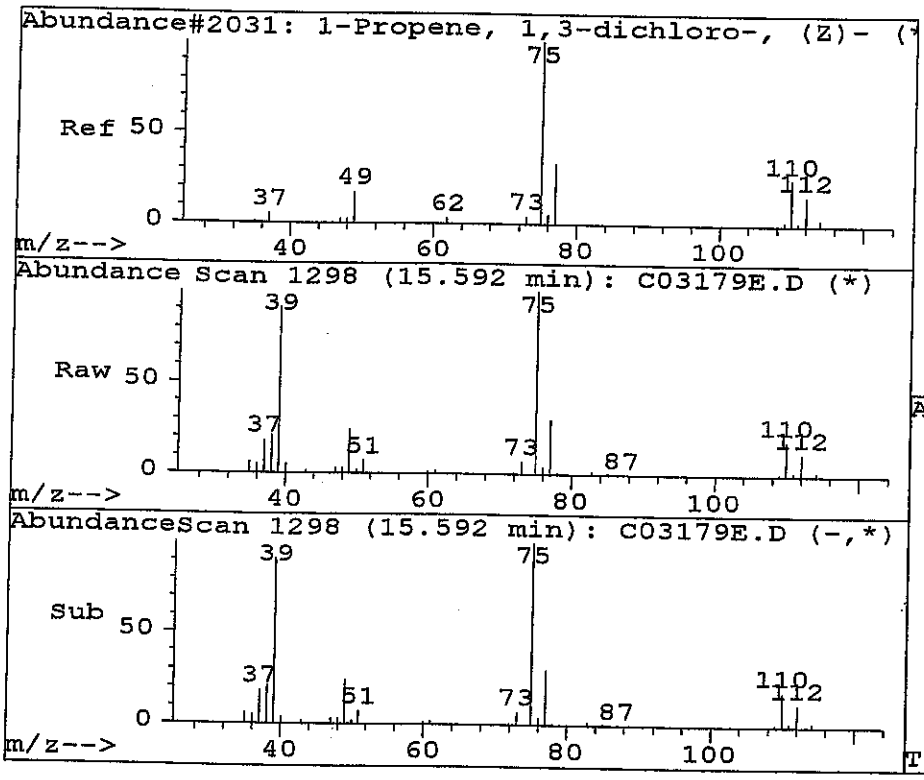


#49
Methyl Isobutyl Ketone
Concen: 3.85 ppbV
RT: 15.50 min Scan# 1289
Delta R.T. -0.20 min
Lab File: C03179E.D
Acq: 17 Mar 109 1:25 pm

Tgt Ion:43 Resp: 1179200

Ion	Ratio	Lower	Upper
43	100		
58	27.6	19.6	32.6
57	17.1	14.4	24.0
85	9.2	6.6	11.0

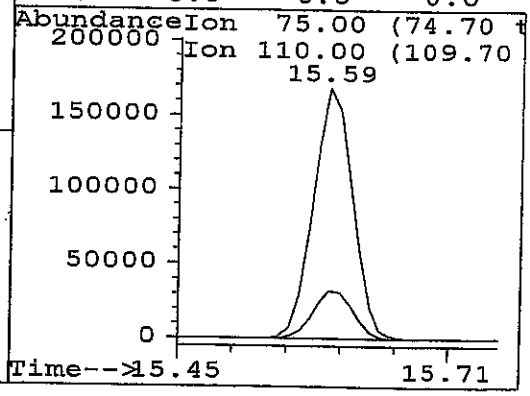


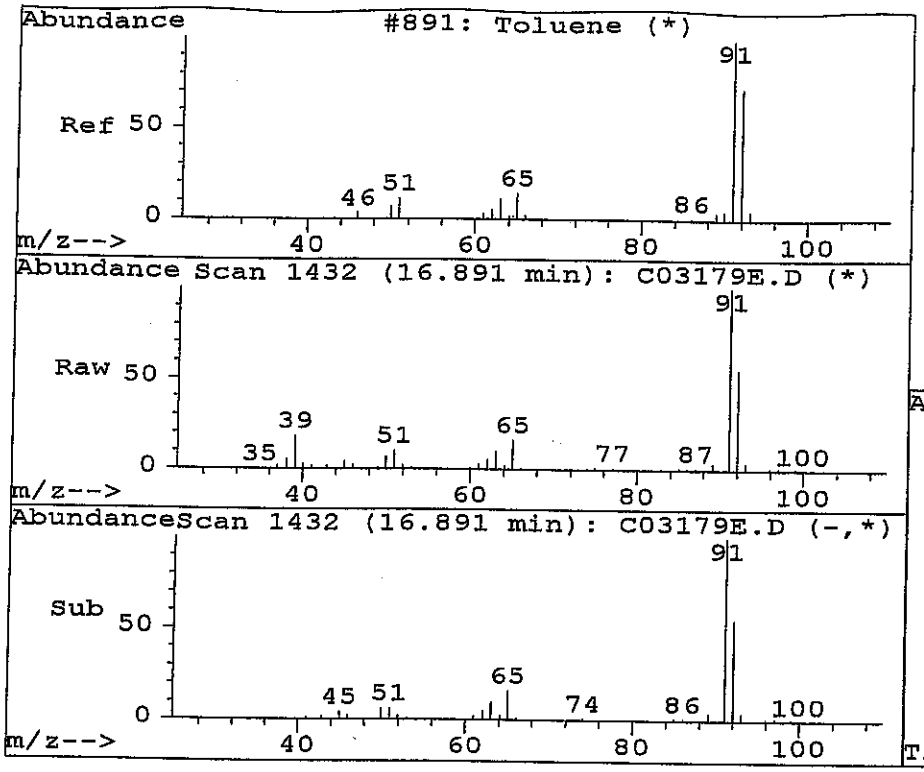


#50
cis-1,3-Dichloropropene
Concen: 4.61 ppbV
RT: 15.59 min Scan# 1298
Delta R.T. -0.23 min
Lab File: C03179E.D
Acq: 17 Mar 109 1:25 pm

Tgt Ion:75 Resp: 441906

Ion	Ratio	Lower	Upper
75	100		
110	19.1	17.1	25.7
0	0.0	0.0	0.0
0	0.0	0.0	0.0

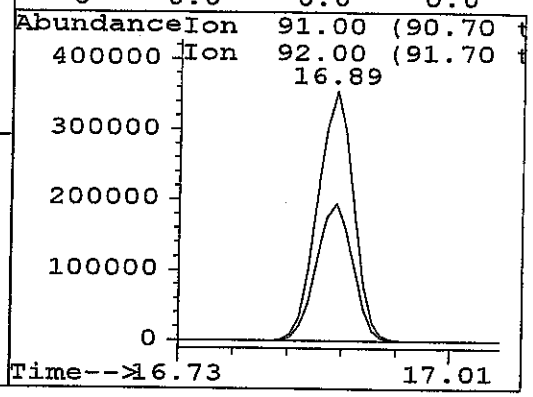


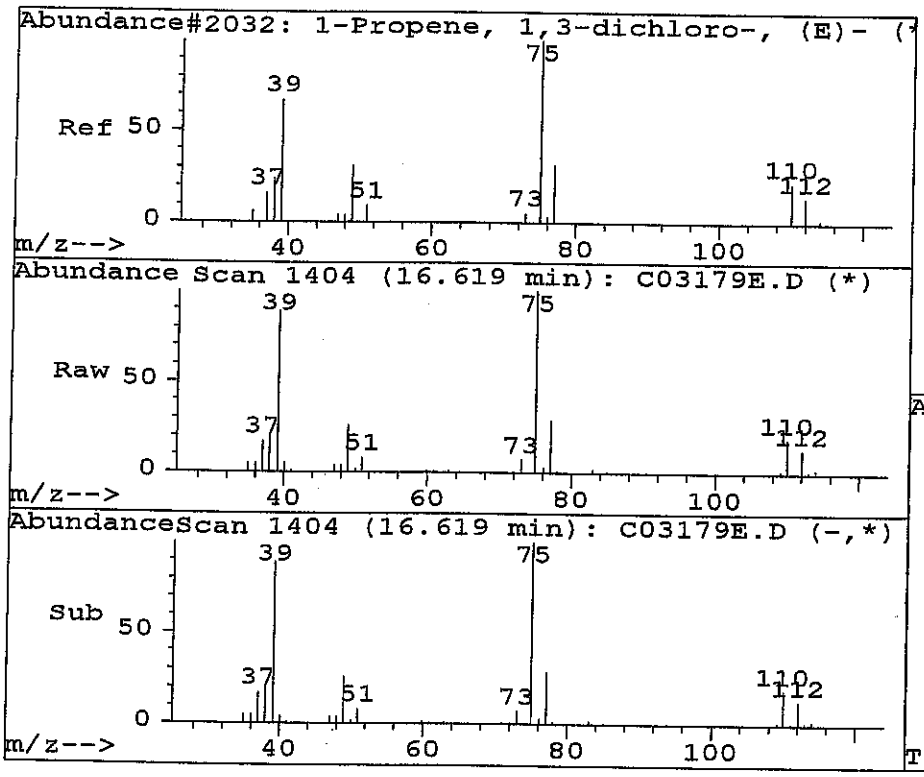


#51
Toluene
Concen: 3.94 ppbV
RT: 16.89 min Scan# 1432
Delta R.T. -0.22 min
Lab File: C03179E.D
Acq: 17 Mar 109 1:25 pm

Tgt Ion:91 Resp: 944443

Ion	Ratio	Lower	Upper
91	100		
92	54.9	42.9	64.3
0	0.0	0.0	0.0
0	0.0	0.0	0.0

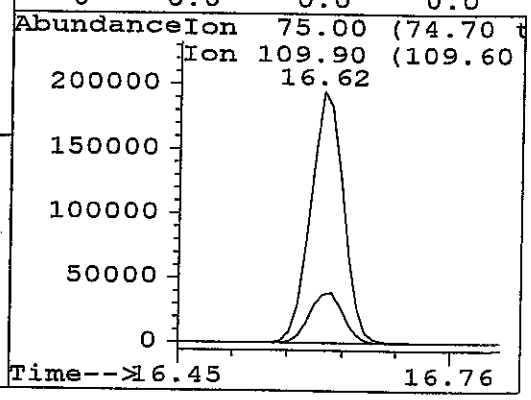


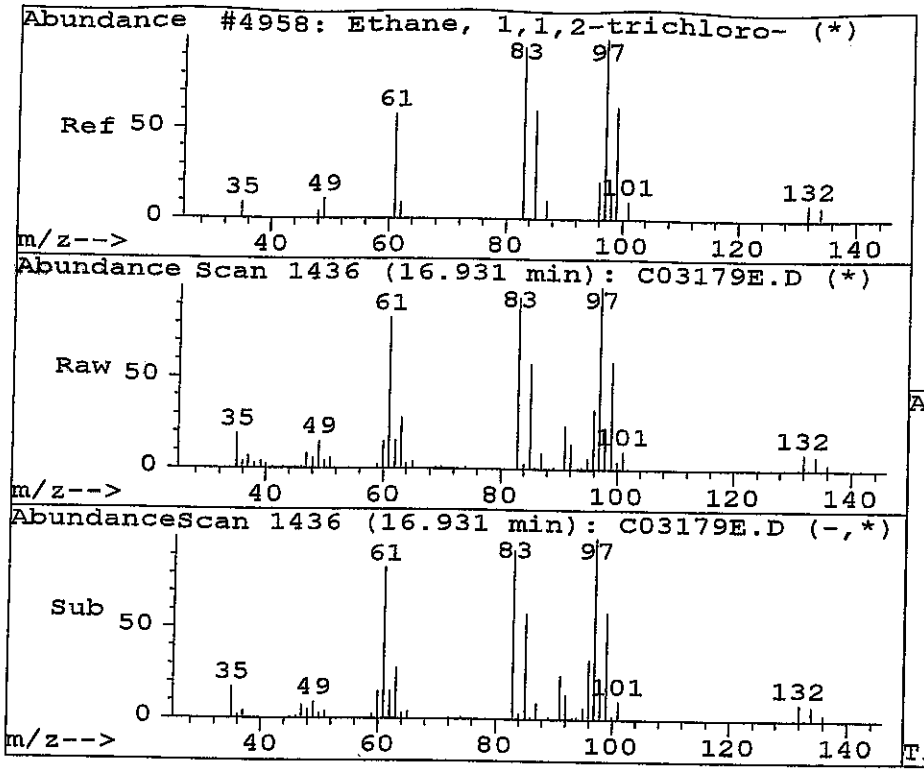


#52
trans-1,3-Dichloropropene
Concen: 4.47 ppbV
RT: 16.62 min Scan# 1404
Delta R.T. -0.23 min
Lab File: C03179E.D
Acq: 17 Mar 109 1:25 pm

Tgt Ion:75 Resp: 509168

Ion	Ratio	Lower	Upper
75	100		
110	19.4	16.4	24.6
0	0.0	0.0	0.0
0	0.0	0.0	0.0

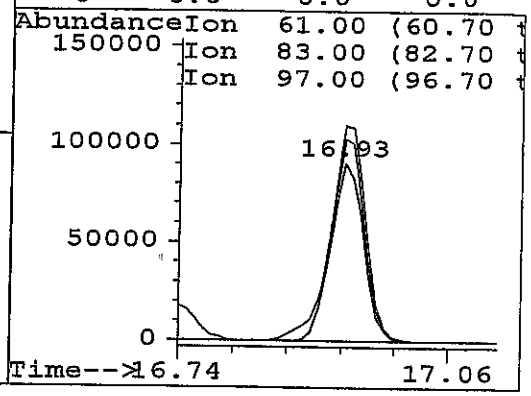


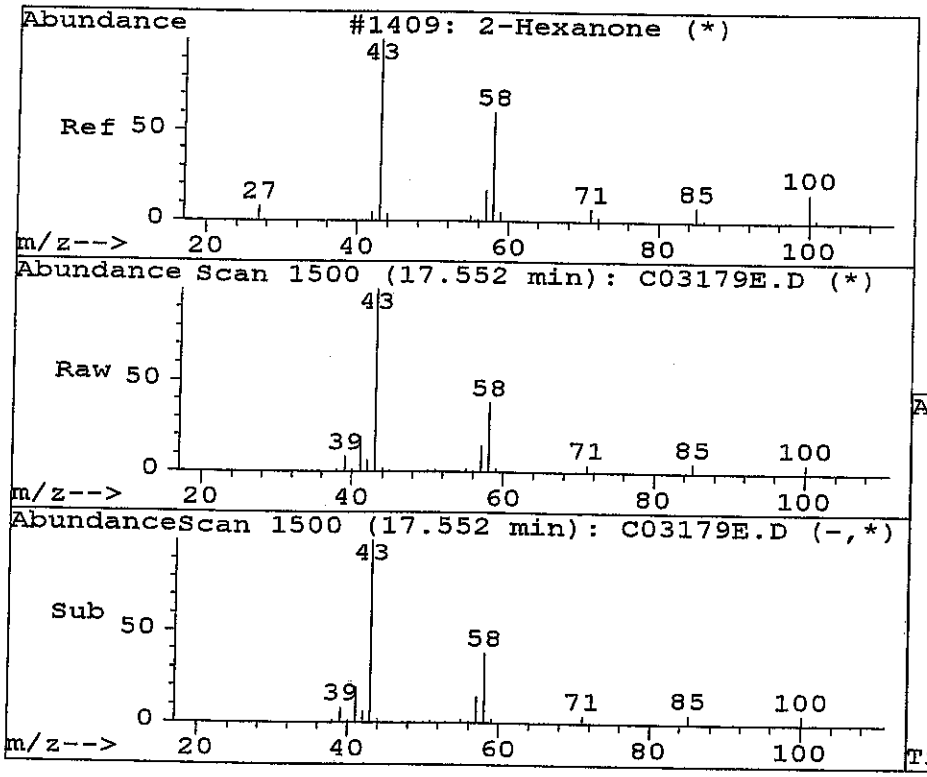


#53
1,1,2-Trichloroethane
Concen: 4.29 ppbV
RT: 16.93 min Scan# 1436
Delta R.T. -0.23 min
Lab File: C03179E.D
Acq: 17 Mar 109 1:25 pm

Tgt Ion:61 Resp: 263308

Ion	Ratio	Lower	Upper
61	100		
83	113.6	103.6	155.4
97	120.9	104.8	157.2
0	0.0	0.0	0.0

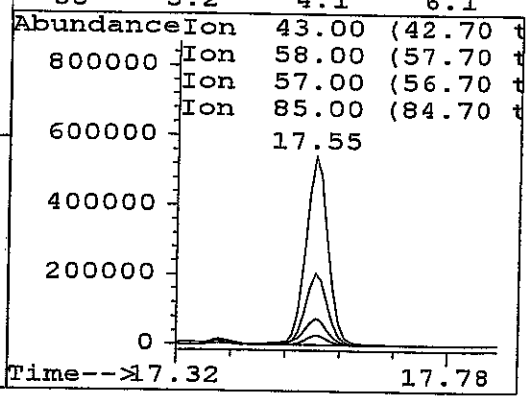


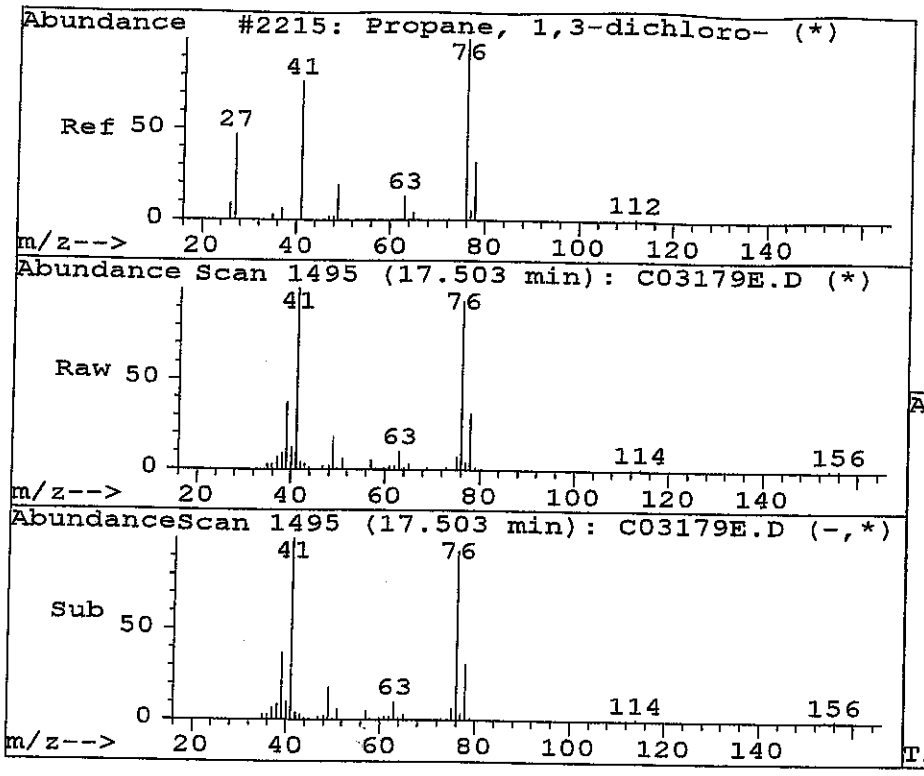


#54
2-Hexanone
Concen: 3.69 ppbV
RT: 17.55 min Scan# 1500
Delta R.T. -0.25 min
Lab File: C03179E.D
Acq: 17 Mar 109 1:25 pm

Tgt Ion:43 Resp: 1413472

Ion	Ratio	Lower	Upper
43	100		
58	37.6	30.0	50.0
57	13.8	9.4	15.6
85	5.2	4.1	6.1

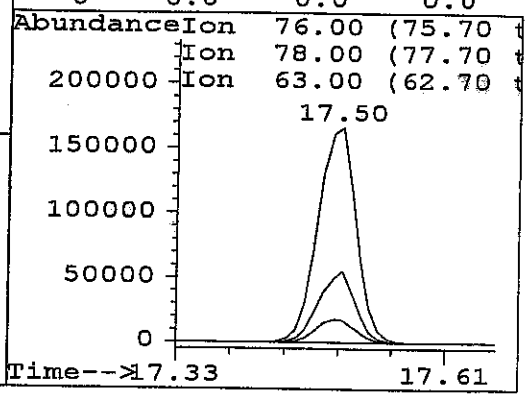


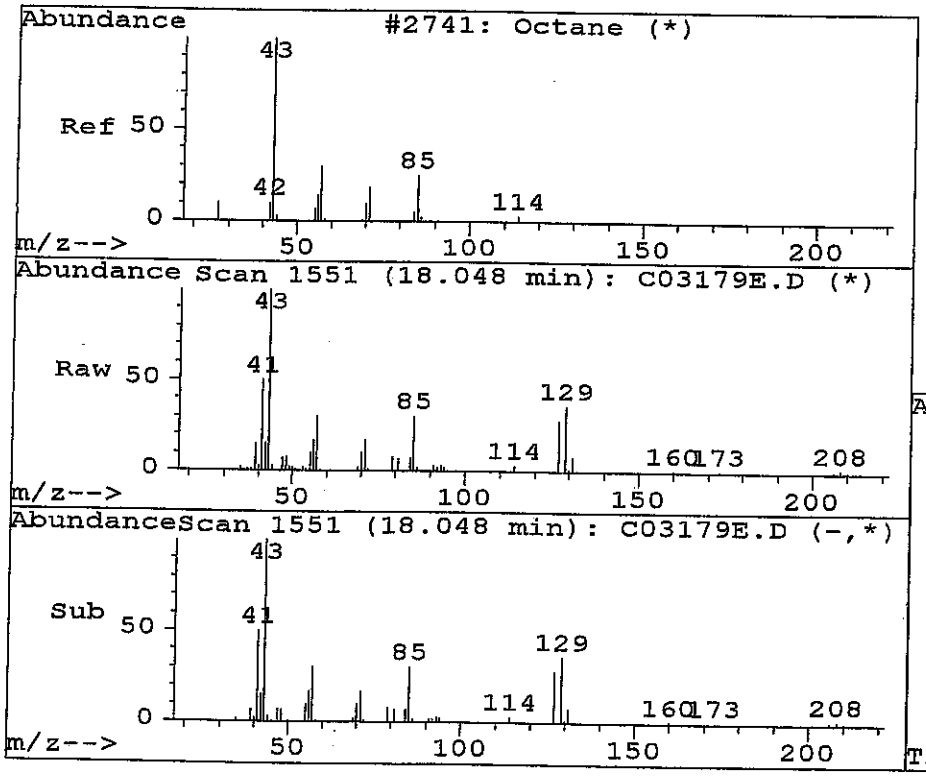


#55
1,3-Dichloropropane
Concen: 3.44 ppbV
RT: 17.50 min Scan# 1495
Delta R.T. -0.22 min
Lab File: C03179E.D
Acq: 17 Mar 109 1:25 pm

Tgt Ion:76 Resp: 468984

Ion	Ratio	Lower	Upper
76	100		
78	33.3	26.2	39.2
63	10.6	11.1	16.7#
0	0.0	0.0	0.0

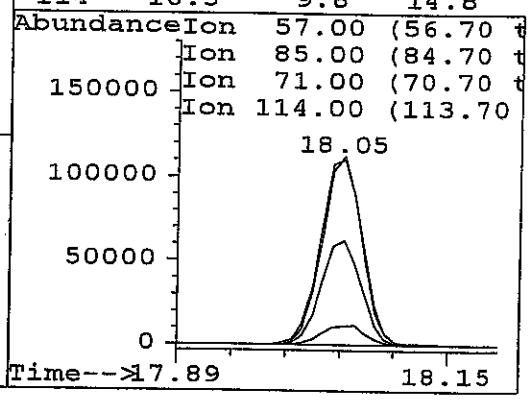


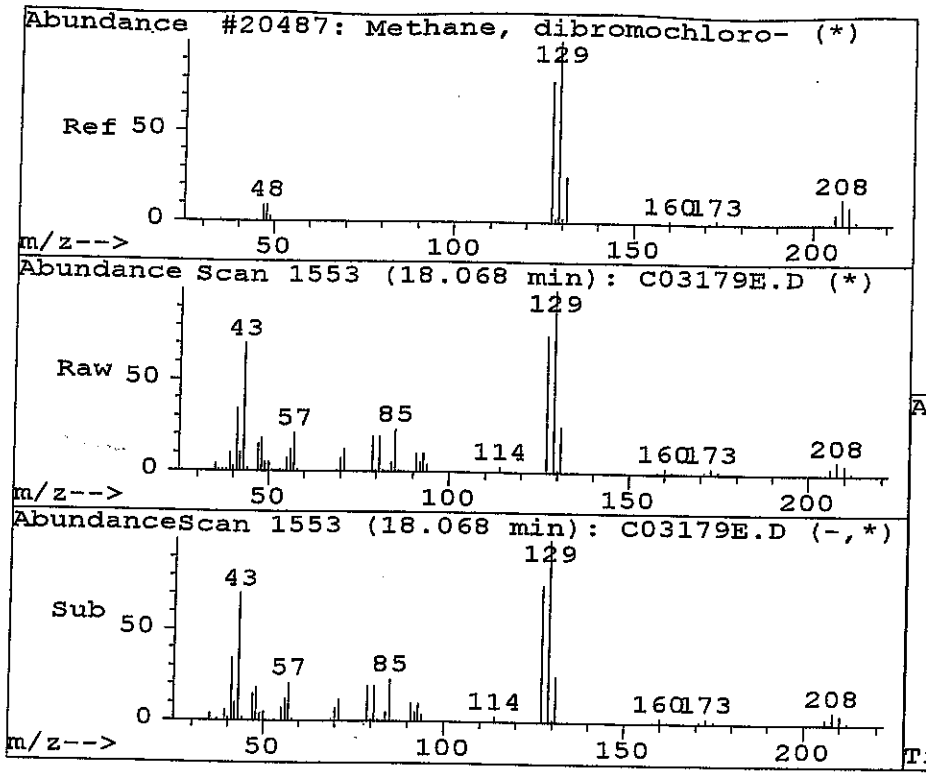


#56
Octane
Concen: 3.43 ppbV
RT: 18.05 min Scan# 1551
Delta R.T. -0.21 min
Lab File: C03179E.D
Acq: 17 Mar 109 1:25 pm

Tgt Ion:57 Resp: 297294

Ion	Ratio	Lower	Upper
57	100		
85	101.6	76.1	114.1
71	56.2	31.2	46.8#
114	10.3	9.8	14.8

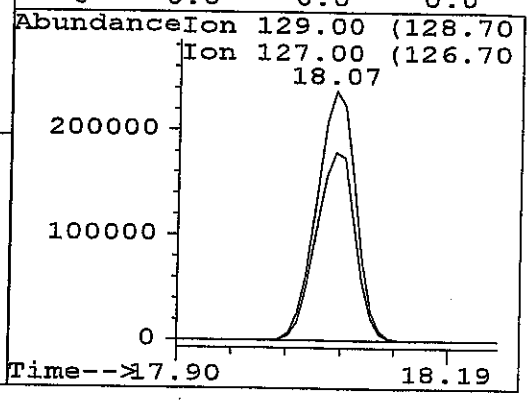


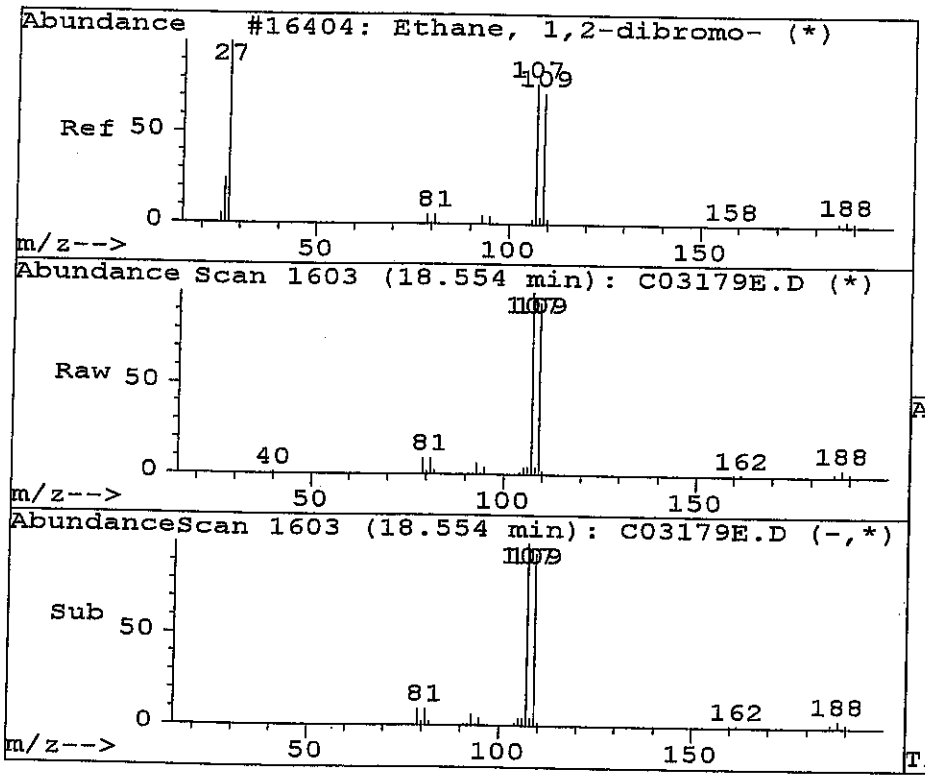


#57
Dibromochloromethane
Concen: 3.80 ppbV
RT: 18.07 min Scan# 1553
Delta R.T. -0.23 min
Lab File: C03179E.D
Acq: 17 Mar 109 1:25 pm

Tgt Ion:129 Resp: 688881

Ion	Ratio	Lower	Upper
129	100		
127	75.4	64.5	96.7
0	0.0	0.0	0.0
0	0.0	0.0	0.0

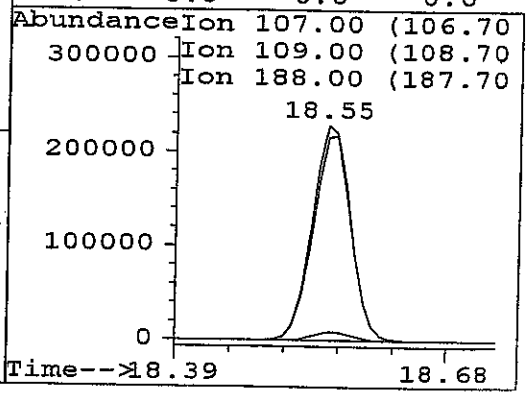


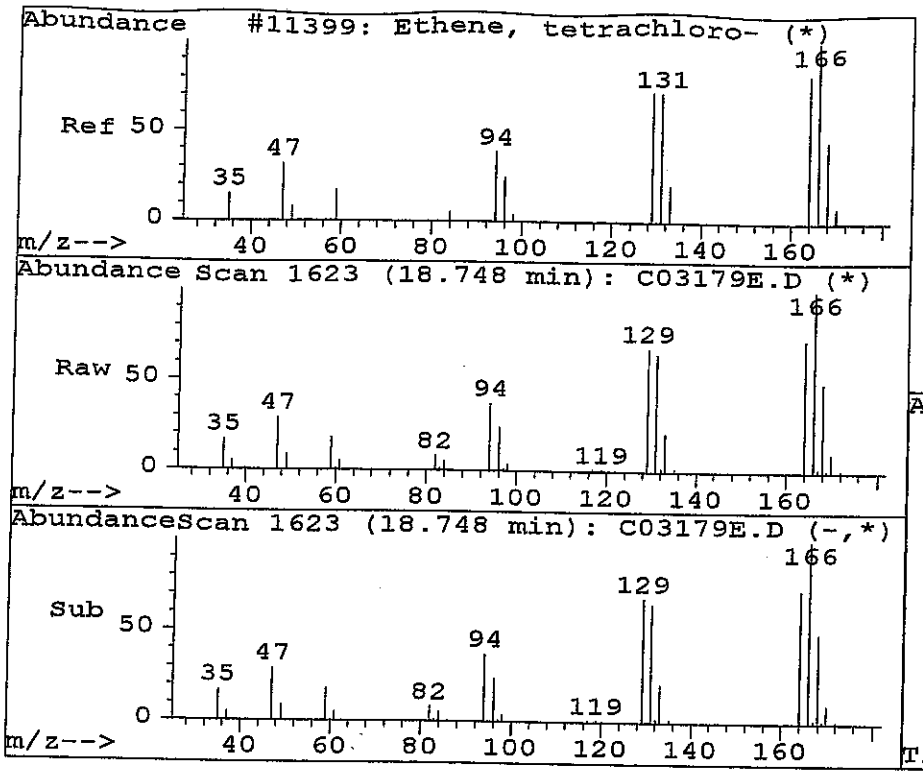


#58
1,2-Dibromoethane
Concen: 4.37 ppbV
RT: 18.55 min Scan# 1603
Delta R.T. -0.25 min
Lab File: C03179E.D
Acq: 17 Mar 109 1:25 pm

Tgt Ion:107 Resp: 660815

Ion	Ratio	Lower	Upper
107	100		
109	94.2	81.8	122.6
188	3.8	3.4	5.0
0	0.0	0.0	0.0

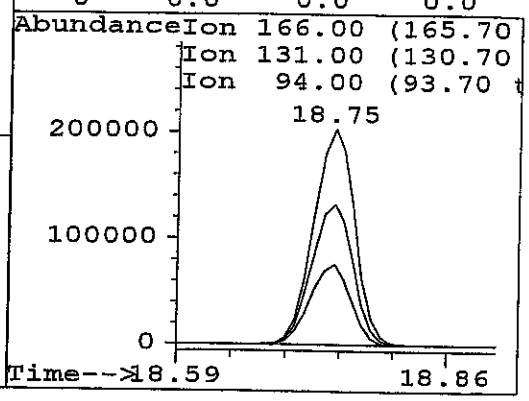


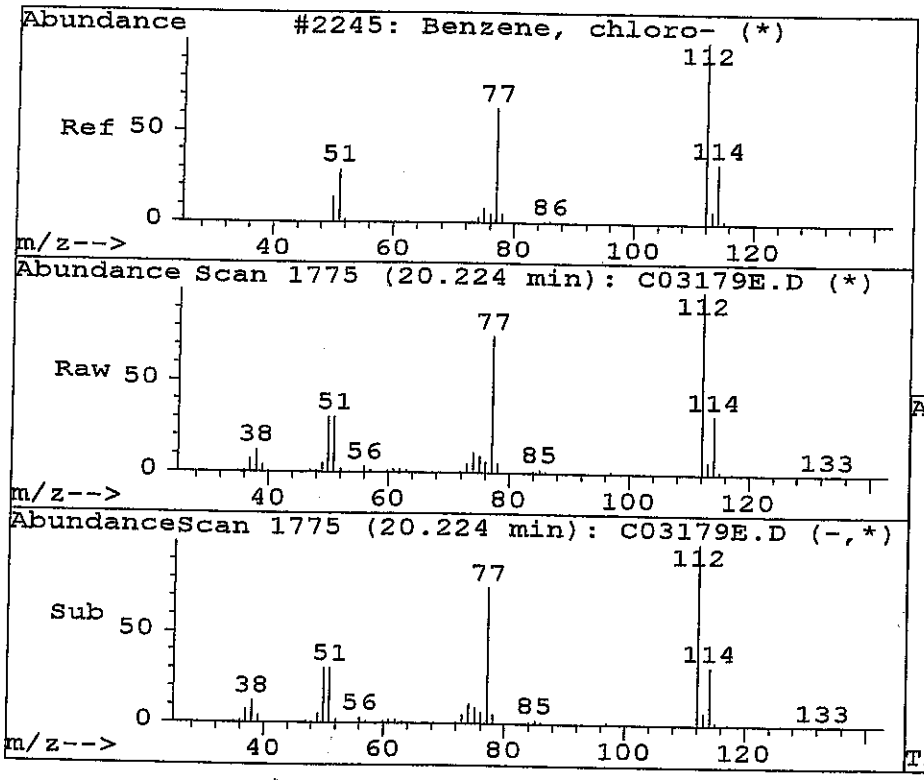


#59
Tetrachloroethene
Concen: 4.40 ppbV
RT: 18.75 min Scan# 1623
Delta R.T. -0.22 min
Lab File: C03179E.D
Acq: 17 Mar 109 1:25 pm

Tgt Ion:166 Resp: 589393

Ion	Ratio	Lower	Upper
166	100		
131	65.1	58.6	88.0
94	37.4	31.2	46.8
0	0.0	0.0	0.0

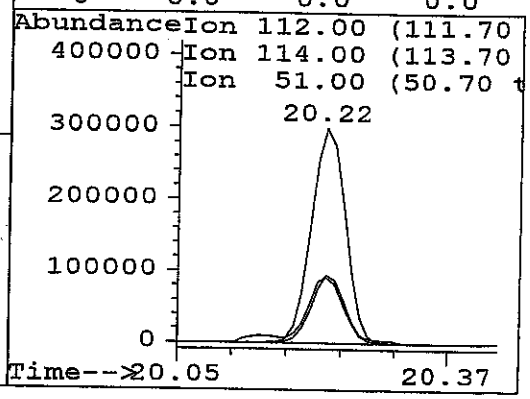


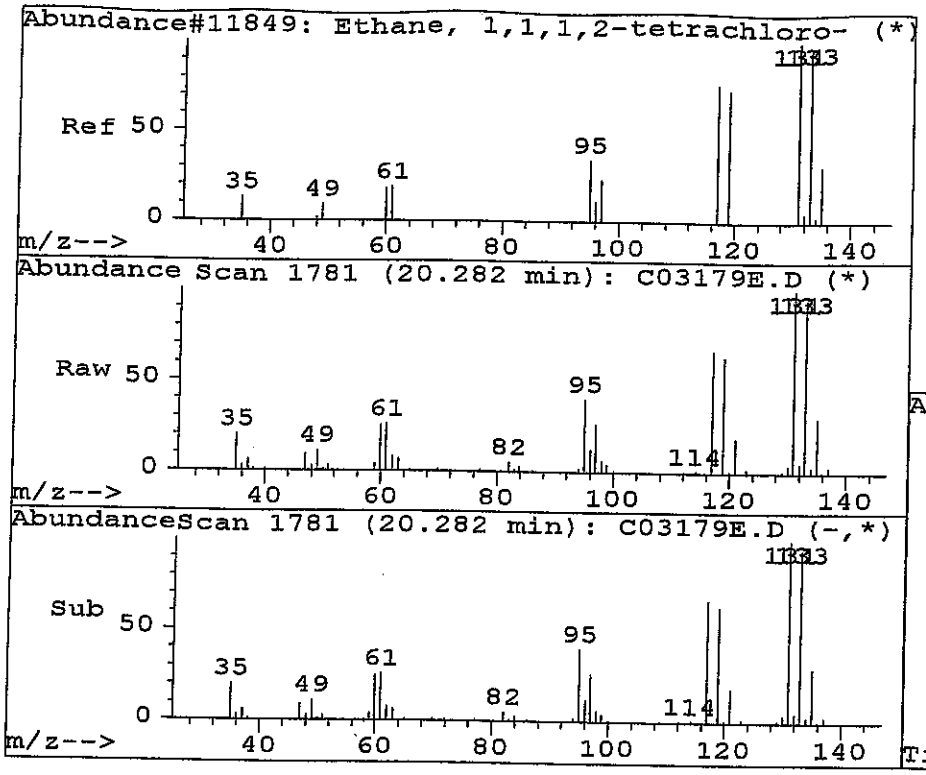


#60
Chlorobenzene
Concen: 4.27 ppbV
RT: 20.22 min Scan# 1775
Delta R.T. -0.23 min
Lab File: C03179E.D
Acq: 17 Mar 109 1:25 pm

Tgt Ion:112 Resp: 836027

Ion	Ratio	Lower	Upper
112	100		
114	31.6	23.8	35.8
51	28.8	14.6	21.8#
0	0.0	0.0	0.0

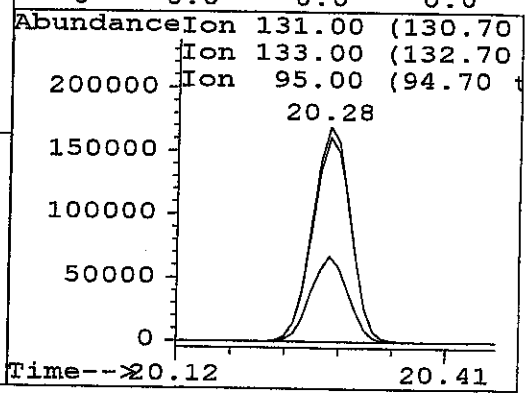


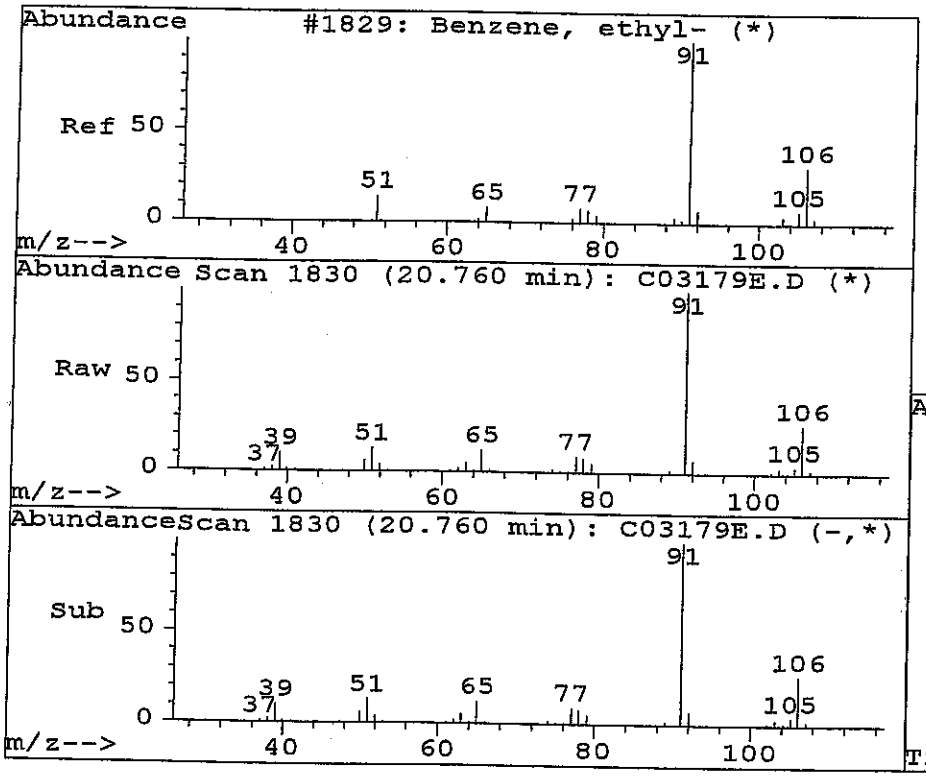


#61
1,1,1,2-Tetrachloroethane
Concen: 3.72 ppbV
RT: 20.28 min Scan# 1781
Delta R.T. -0.23 min
Lab File: C03179E.D
Acq: 17 Mar 109 1:25 pm

Tgt Ion:131 Resp: 487316

Ion	Ratio	Lower	Upper
131	100		
133	95.0	78.9	118.3
95	39.7	30.2	45.2
0	0.0	0.0	0.0

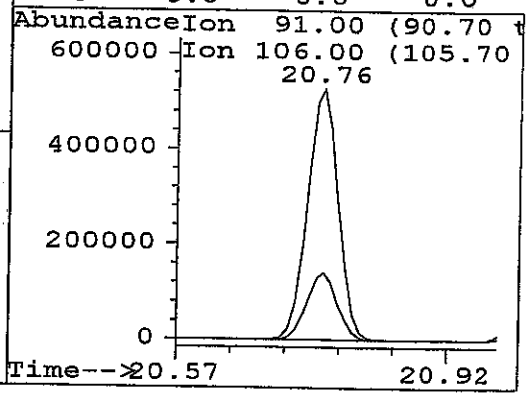


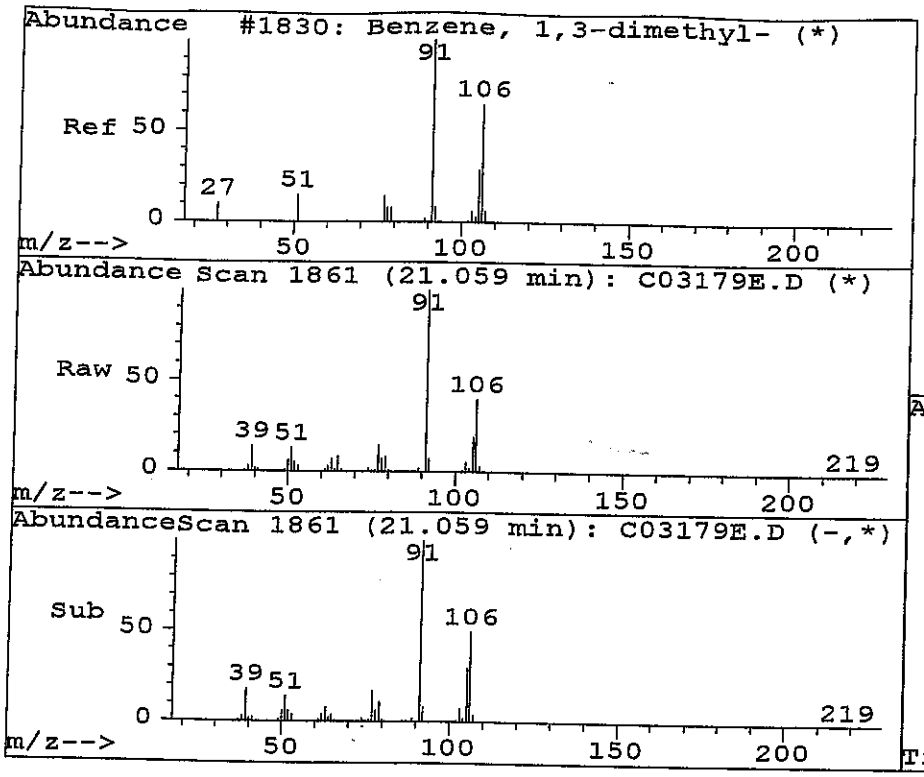


#62
Ethylbenzene
Concen: 4.62 ppbV
RT: 20.76 min Scan# 1830
Delta R.T. -0.23 min
Lab File: C03179E.D
Acq: 17 Mar 109 1:25 pm

Tgt Ion:91 Resp: 1527752

Ion	Ratio	Lower	Upper
91	100		
106	26.7	21.3	31.9
0	0.0	0.0	0.0
0	0.0	0.0	0.0

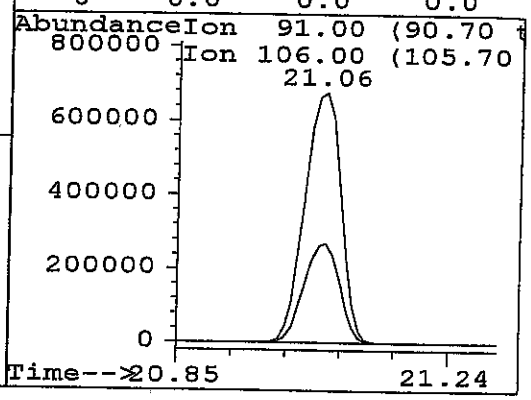


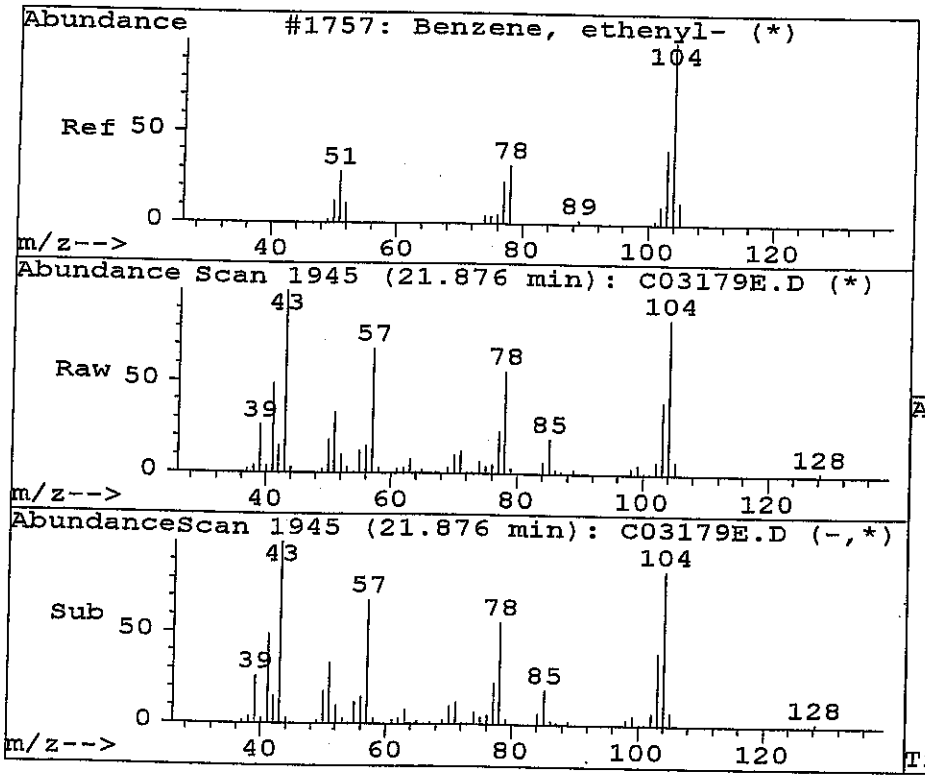


#63
m & p-Xylene
Concen: 8.66 ppbV
RT: 21.06 min Scan# 1861
Delta R.T. -0.22 min
Lab File: C03179E.D
Acq: 17 Mar 109 1:25 pm

Tgt Ion:91 Resp: 2440351

Ion	Ratio	Lower	Upper
91	100		
106	39.9	30.3	45.5
0	0.0	0.0	0.0
0	0.0	0.0	0.0

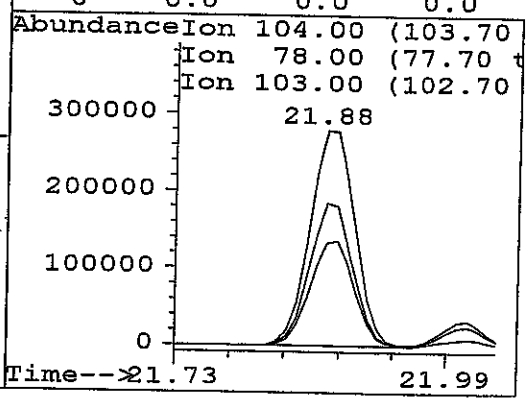


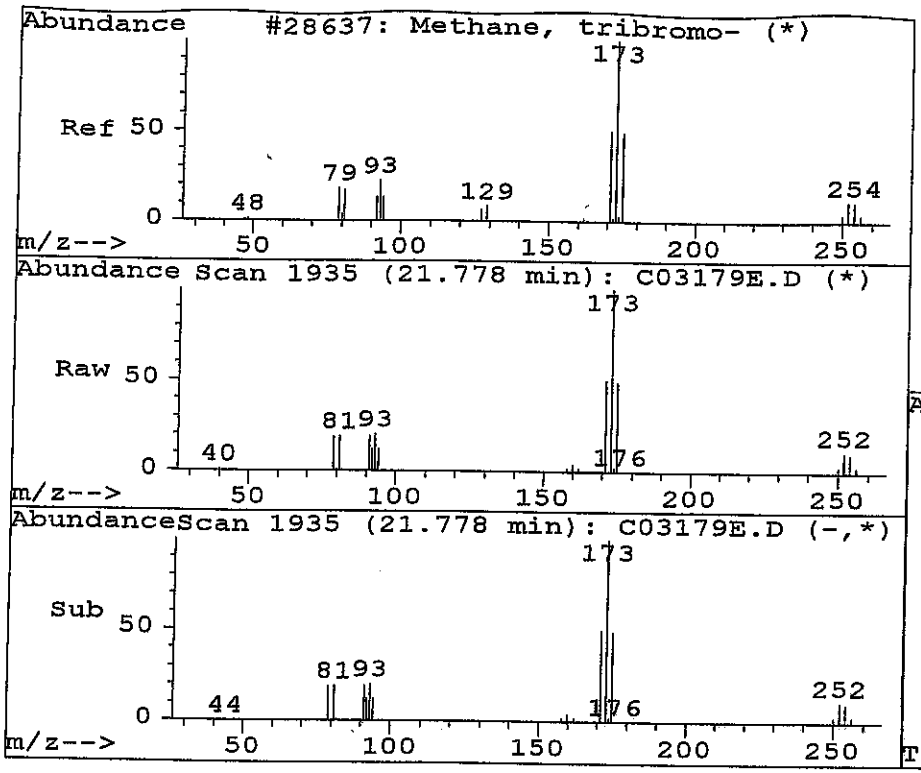


#64
Styrene
Concen: 4.20 ppbV
RT: 21.88 min Scan# 1945
Delta R.T. -0.26 min
Lab File: C03179E.D
Acq: 17 Mar 109 1:25 pm

Tgt Ion:104 Resp: 837020

Ion	Ratio	Lower	Upper
104	100		
78	66.0	46.4	69.6
103	47.4	40.3	60.5
0	0.0	0.0	0.0

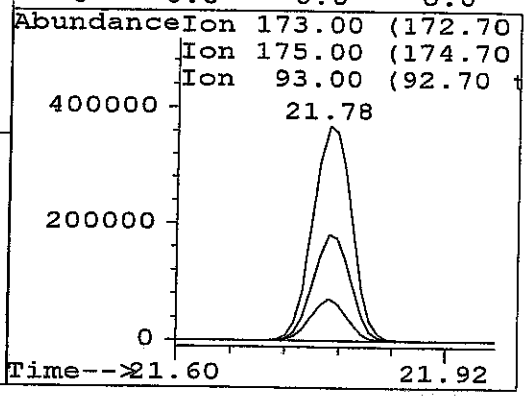


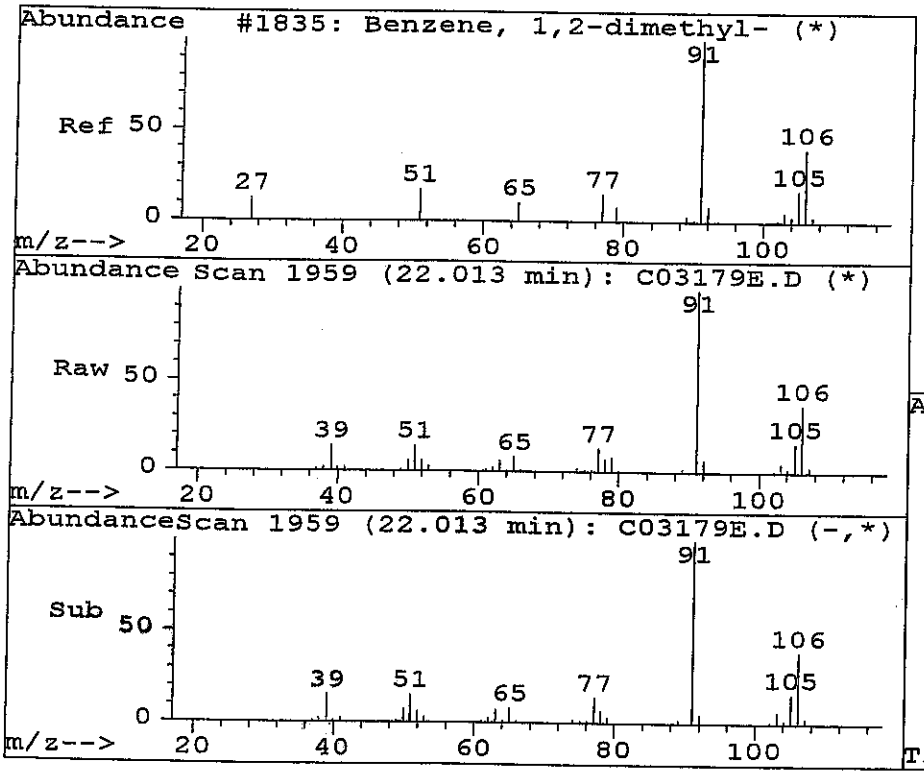


#65
Bromoform
Concen: 3.78 ppbV
RT: 21.78 min Scan# 1935
Delta R.T. -0.22 min
Lab File: C03179E.D
Acq: 17 Mar 109 1:25 pm

Tgt Ion:173 Resp: 1151698

Ion	Ratio	Lower	Upper
173	100		
175	49.2	39.7	59.5
93	19.5	15.1	22.7
0	0.0	0.0	0.0

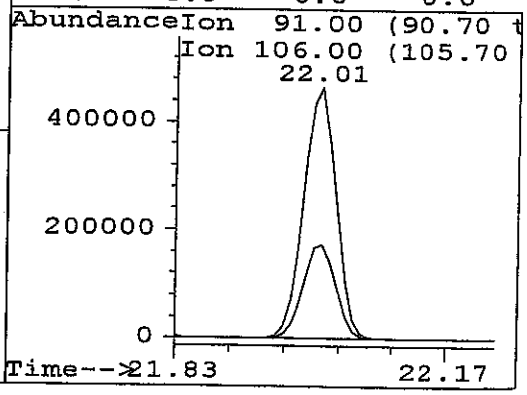


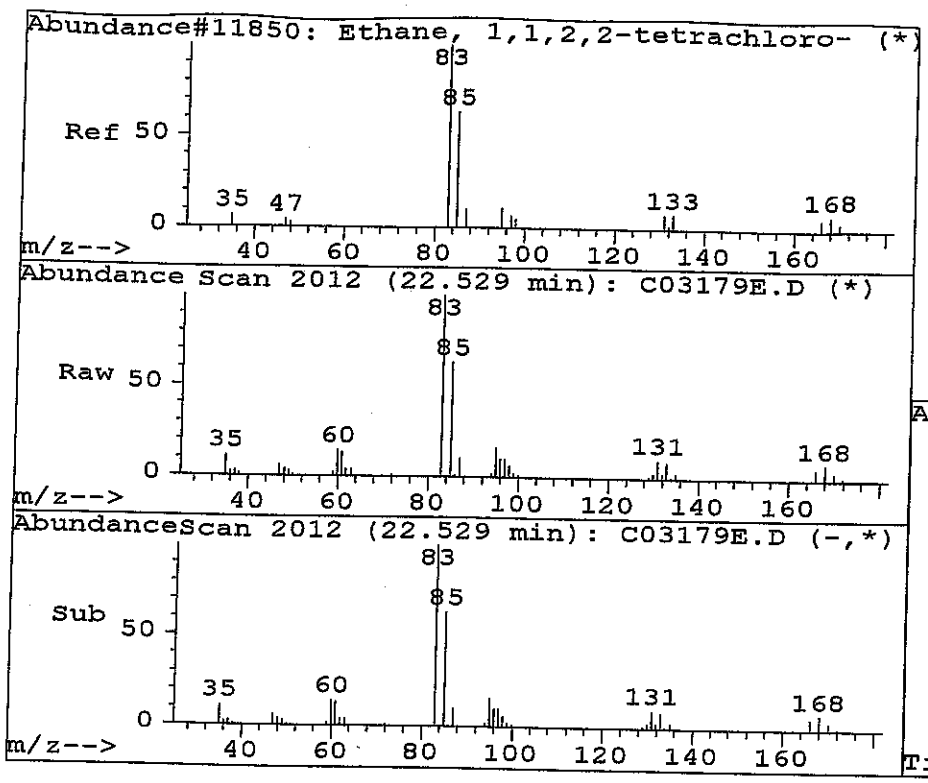


#66
o-Xylene
Concen: 4.26 ppbV
RT: 22.01 min Scan# 1959
Delta R.T. -0.24 min
Lab File: C03179E.D
Acq: 17 Mar 109 1:25 pm

Tgt Ion:91 Resp: 1325719

Ion	Ratio	Lower	Upper
91	100		
106	37.3	31.2	46.8
0	0.0	0.0	0.0
0	0.0	0.0	0.0

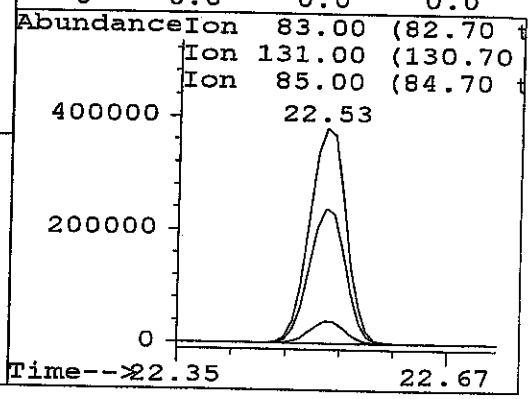


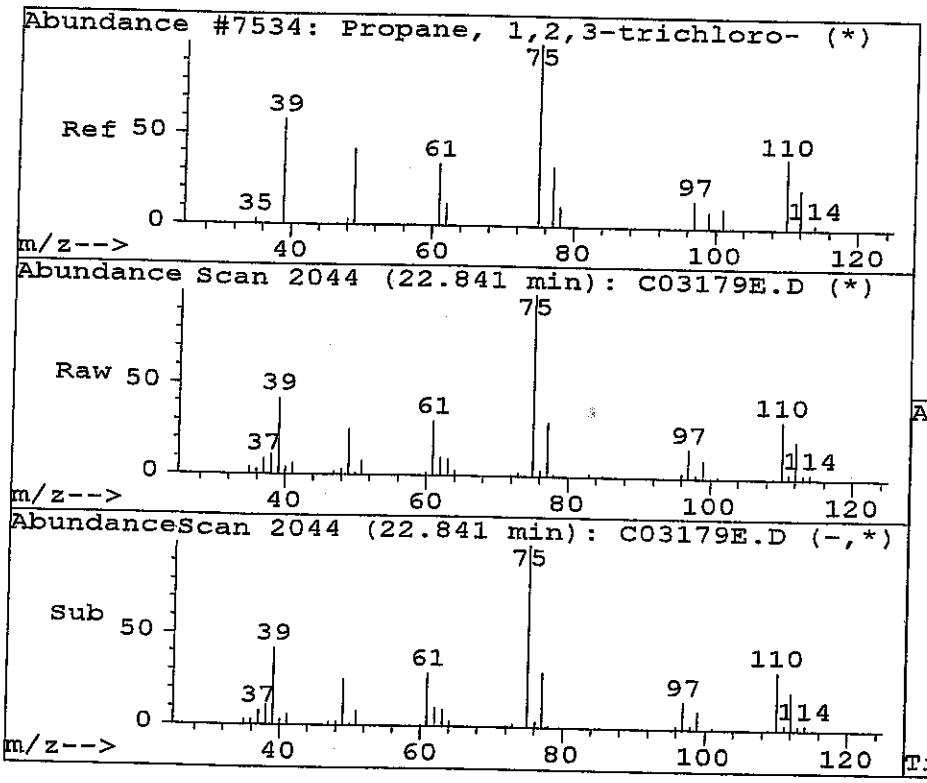


#67
1,1,2,2-Tetrachloroethane
Concen: 3.99 ppbV
RT: 22.53 min Scan# 2012
Delta R.T. -0.22 min
Lab File: C03179E.D
Acq: 17 Mar 109 1:25 pm

Tgt Ion:83 Resp: 1142635

Ion	Ratio	Lower	Upper
83	100		
131	10.4	8.3	12.5
85	62.7	50.0	75.0
0	0.0	0.0	0.0

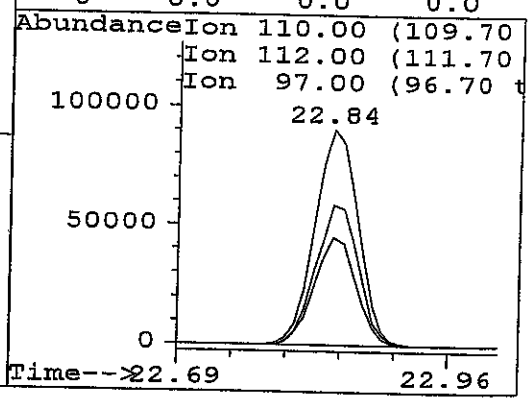


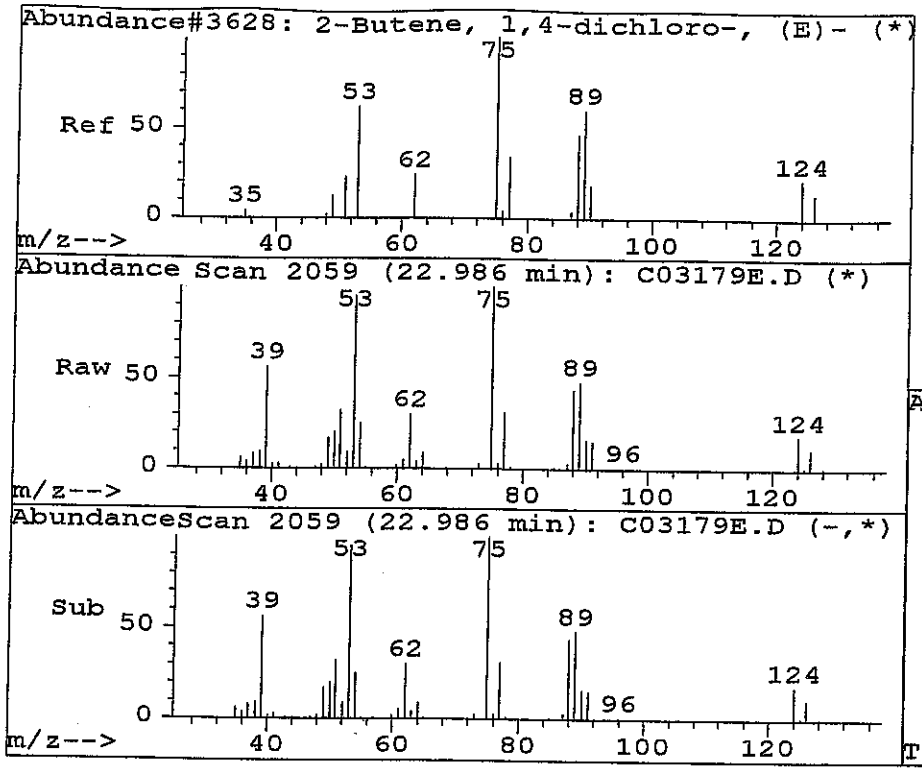


#68
1,2,3-Trichloropropane
Concen: 3.08 ppbV
RT: 22.84 min Scan# 2044
Delta R.T. -0.24 min
Lab File: C03179E.D
Acq: 17 Mar 109 1:25 pm

Tgt Ion:110 Resp: 265915

Ion	Ratio	Lower	Upper
110	100		
112	64.9	47.6	71.4
97	49.7	38.9	58.3
0	0.0	0.0	0.0

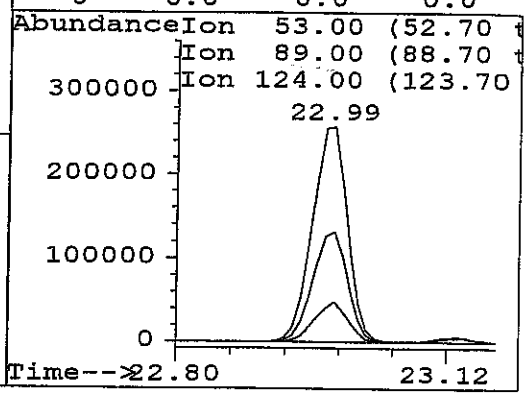


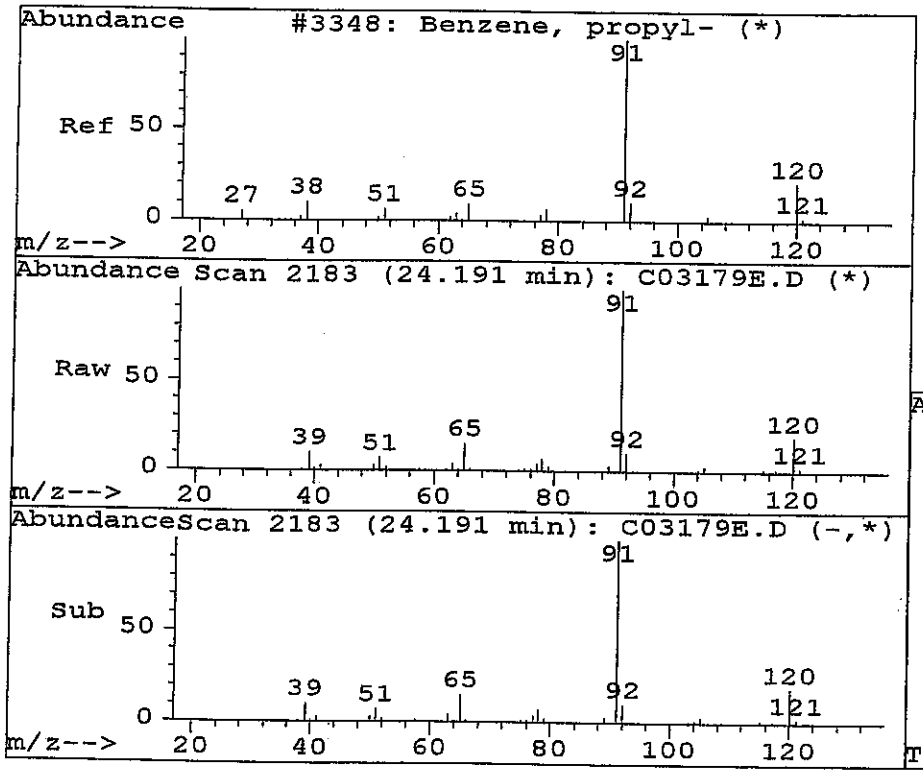


#69
t-1,4-Dichloro-2-butene
Concen: 9.62 ppbV
RT: 22.99 min Scan# 2059
Delta R.T. -0.24 min
Lab File: C03179E.D
Acq: 17 Mar 109 1:25 pm

Tgt Ion:53 Resp: 736289

Ion	Ratio	Lower	Upper
53	100		
89	51.0	41.1	61.7
124	18.7	14.6	22.0
0	0.0	0.0	0.0

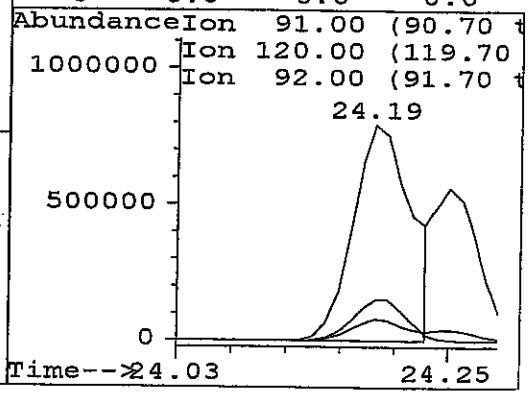


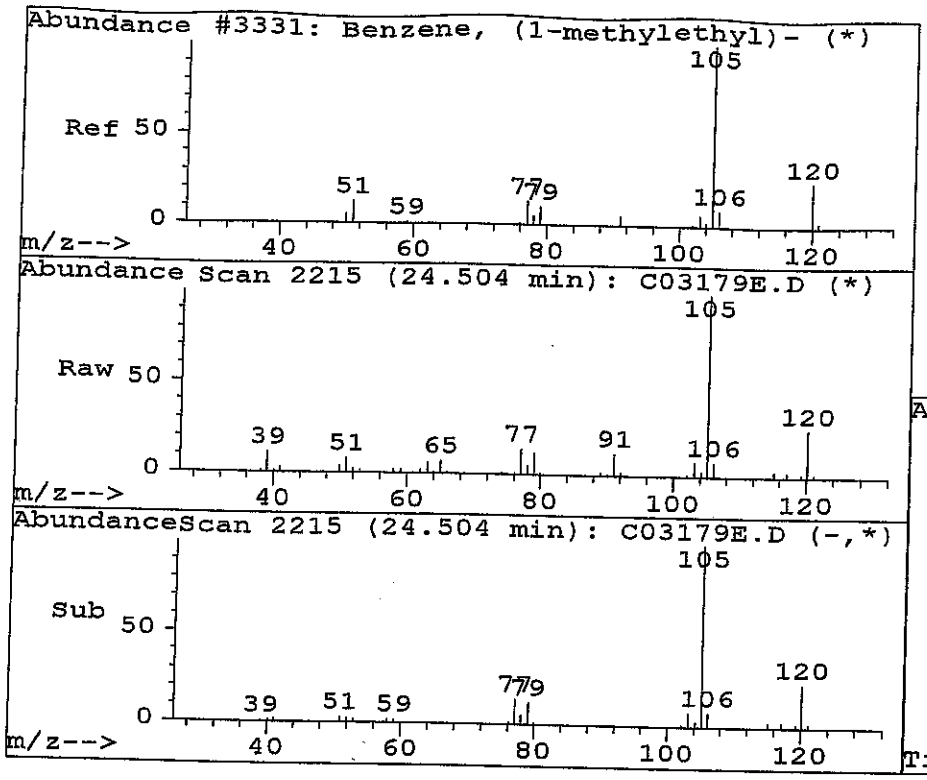


#70
n-Propylbenzene
Concen: 3.56 ppbV
RT: 24.19 min Scan# 2183
Delta R.T. -0.24 min
Lab File: C03179E.D
Acq: 17 Mar 109 1:25 pm

Tgt Ion:91 Resp: 2547503

Ion	Ratio	Lower	Upper
91	100		
120	17.4	14.7	22.1
92	9.7	7.8	11.6
0	0.0	0.0	0.0

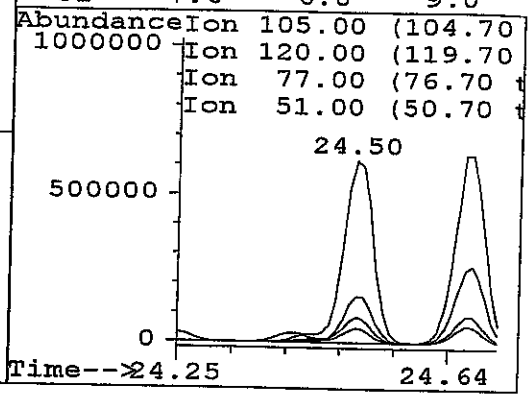


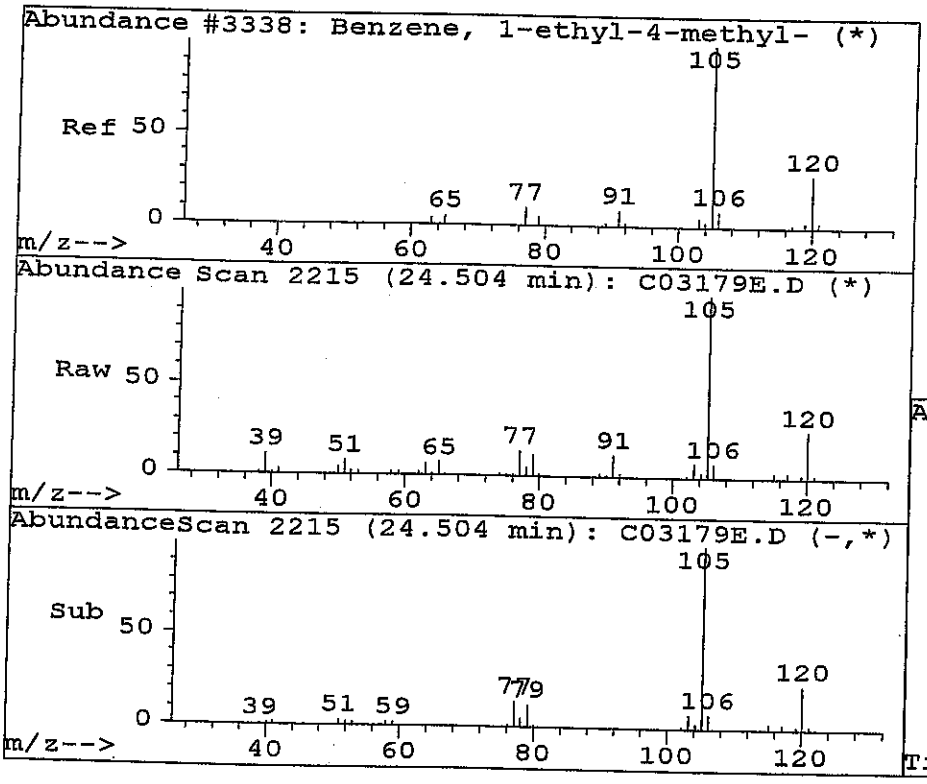


#71
Isopropylbenzene
Concen: 3.72 ppbV
RT: 24.50 min Scan# 2215
Delta R.T. -0.24 min
Lab File: C03179E.D
Acq: 17 Mar 109 1:25 pm

Tgt Ion:105 Resp: 1912961

Ion	Ratio	Lower	Upper
105	100		
120	25.4	20.2	30.4
77	15.1	12.2	18.4
51	7.6	6.0	9.0

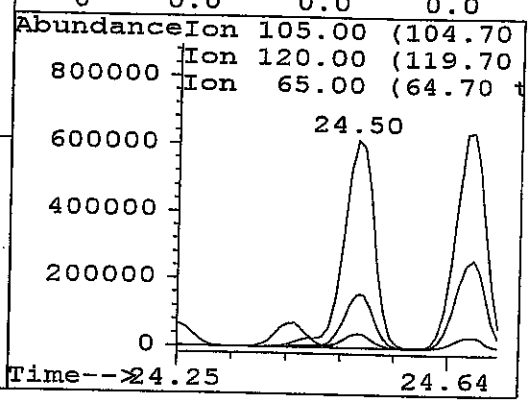


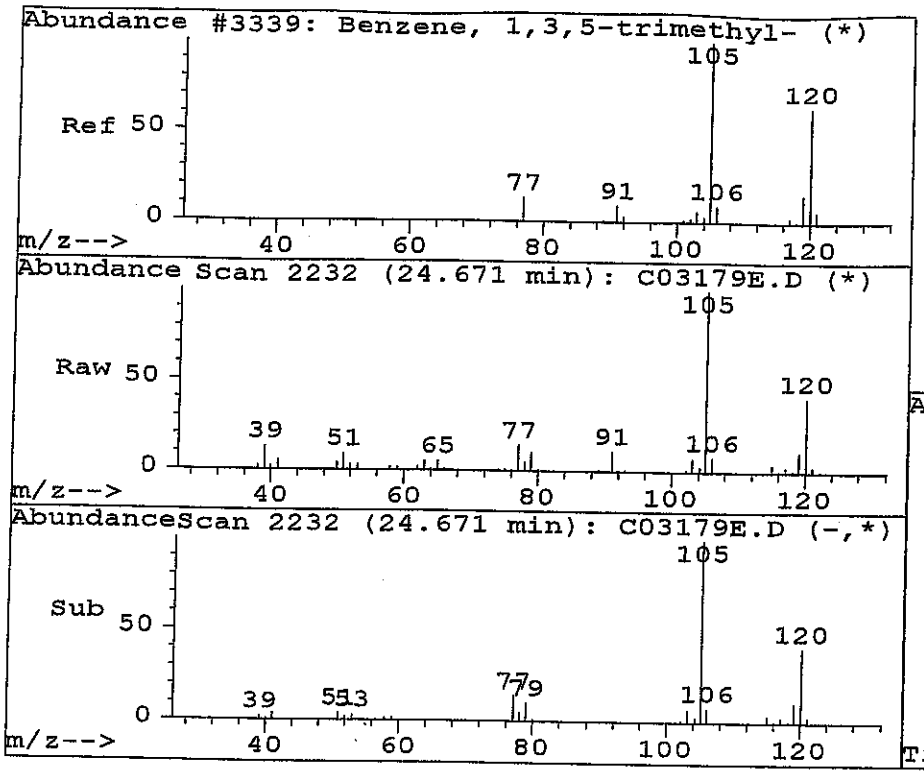


#72
4-Ethyltoluene
Concen: 3.56 ppbV
RT: 24.50 min Scan# 2215
Delta R.T. -0.24 min
Lab File: C03179E.D
Acq: 17 Mar 109 1:25 pm

Tgt Ion:105 Resp: 1912961

Ion	Ratio	Lower	Upper
105	100		
120	25.5	20.2	30.4
65	6.4	5.2	7.8
0	0.0	0.0	0.0

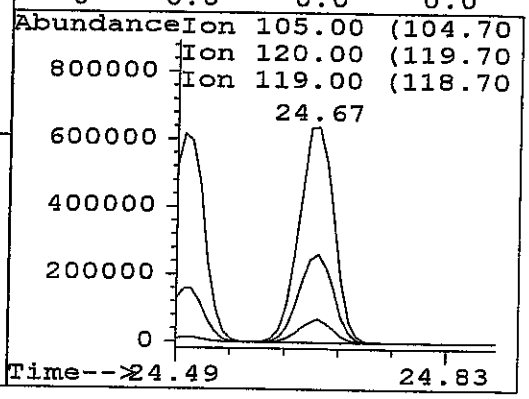


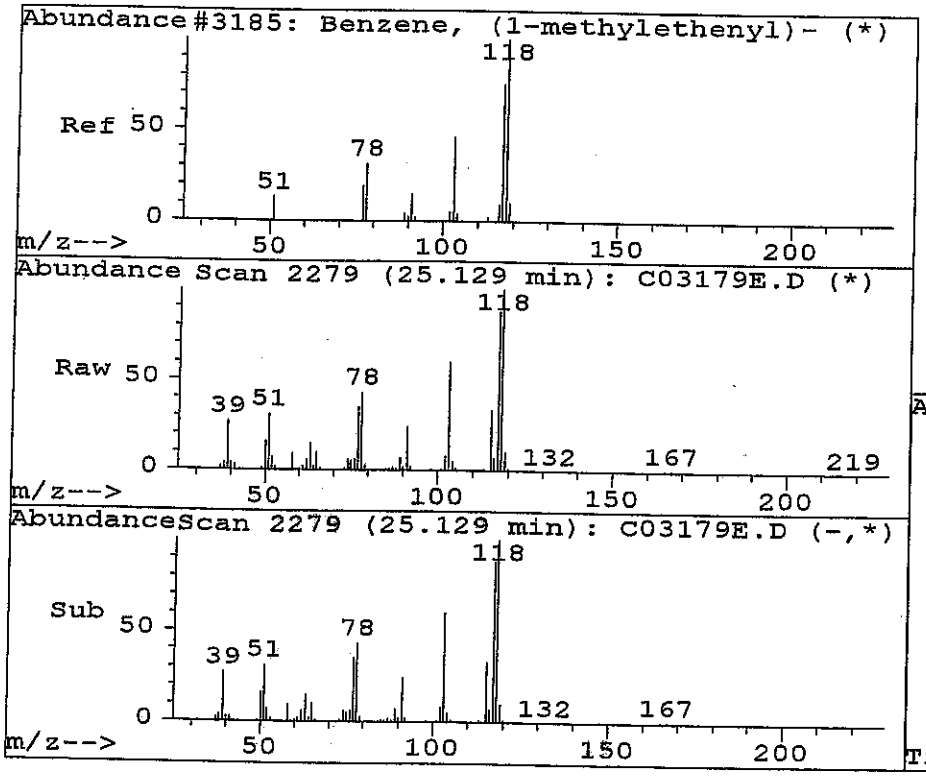


#73
1,3,5-Trimethylbenzene
Concen: 4.28 ppbV
RT: 24.67 min Scan# 2232
Delta R.T. -0.25 min
Lab File: C03179E.D
Acq: 17 Mar 109 1:25 pm

Tgt Ion:105 Resp: 1936506

Ion	Ratio	Lower	Upper
105	100		
120	41.0	35.6	53.4
119	10.9	8.2	12.4
0	0.0	0.0	0.0

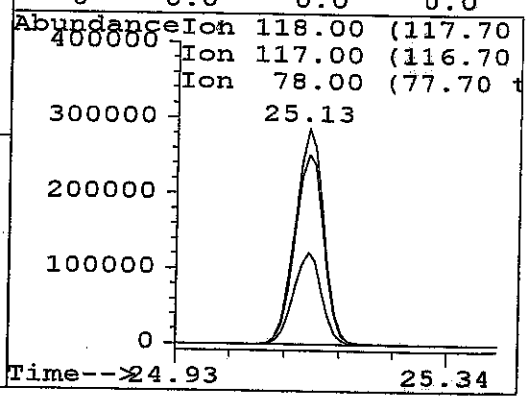


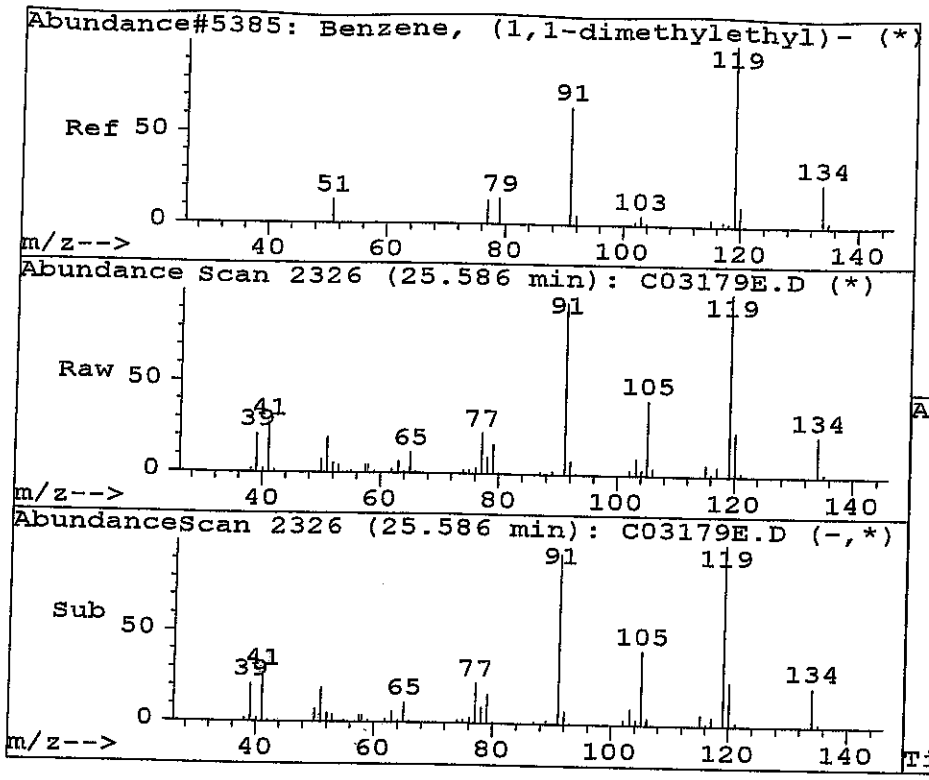


#74
Methylstyrene
Concen: 3.00 ppbV
RT: 25.13 min Scan# 2279
Delta R.T. -0.23 min
Lab File: C03179E.D
Acq: 17 Mar 109 1:25 pm

Tgt Ion:118 Resp: 837727

Ion	Ratio	Lower	Upper
118	100		
117	87.9	69.6	104.4
78	42.7	35.8	53.6
0	0.0	0.0	0.0

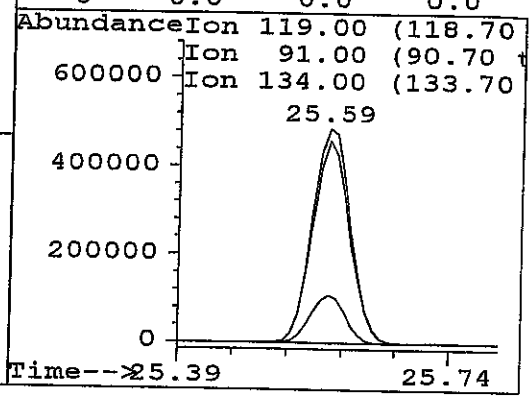


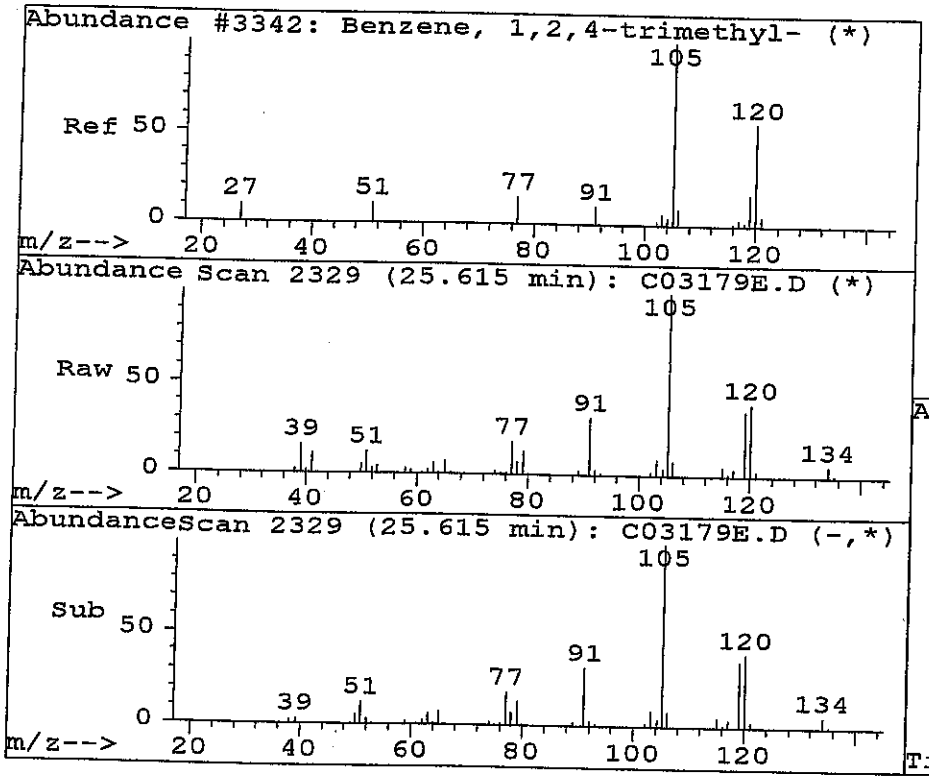


#75
tert-butyl benzene
Concen: 3.63 ppbV
RT: 25.59 min Scan# 2326
Delta R.T. -0.22 min
Lab File: C03179E.D
Acq: 17 Mar 109 1:25 pm

Tgt Ion:119 Resp: 1667799

Ion	Ratio	Lower	Upper
119	100		
91	92.2	69.8	104.6
134	20.3	14.7	22.1
0	0.0	0.0	0.0

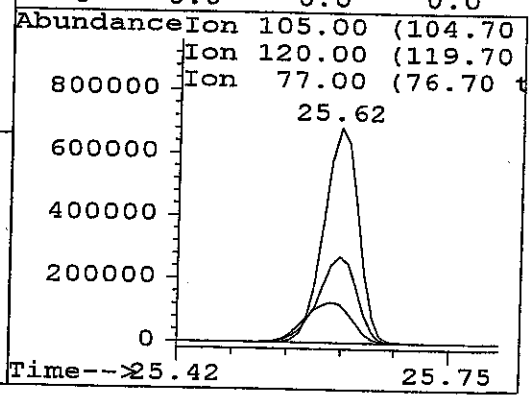


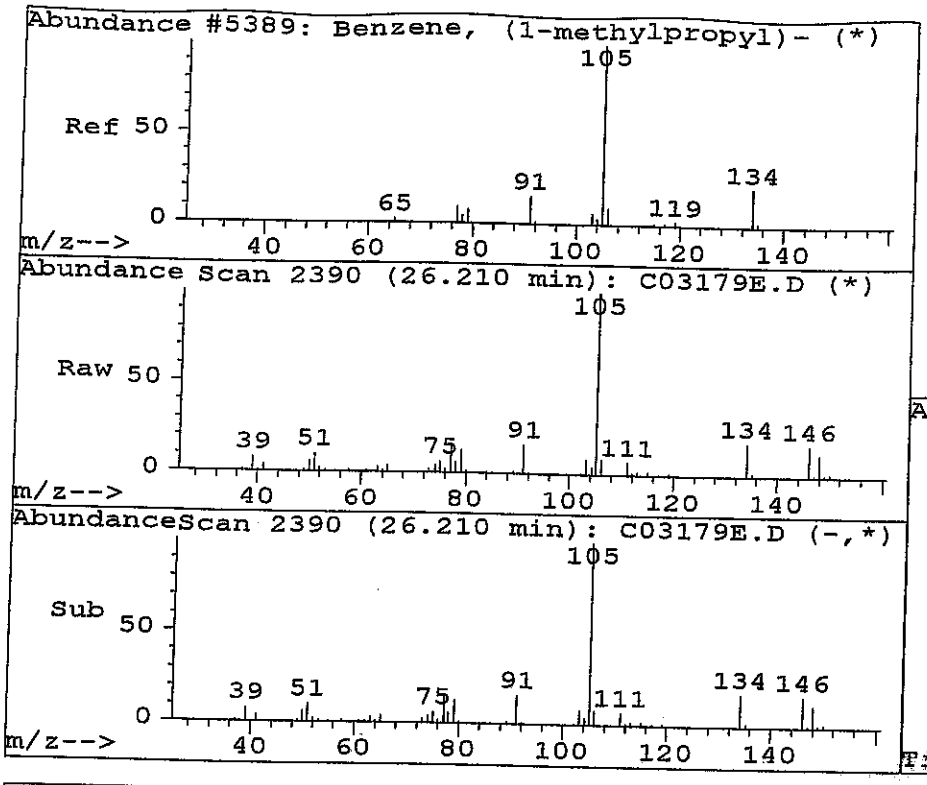


#76
1,2,4-Trimethylbenzene
Concen: 4.09 ppbV
RT: 25.62 min Scan# 2329
Delta R.T. -0.27 min
Lab File: C03179E.D
Acq: 17 Mar 109 1:25 pm

Tgt Ion:105 Resp: 1979227

Ion	Ratio	Lower	Upper
105	100		
120	39.9	32.2	48.4
77	17.7	13.6	20.4
0	0.0	0.0	0.0

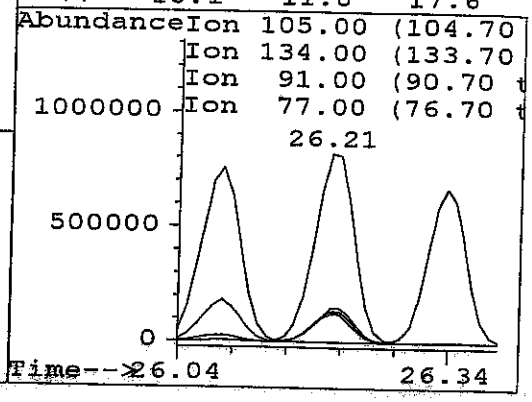


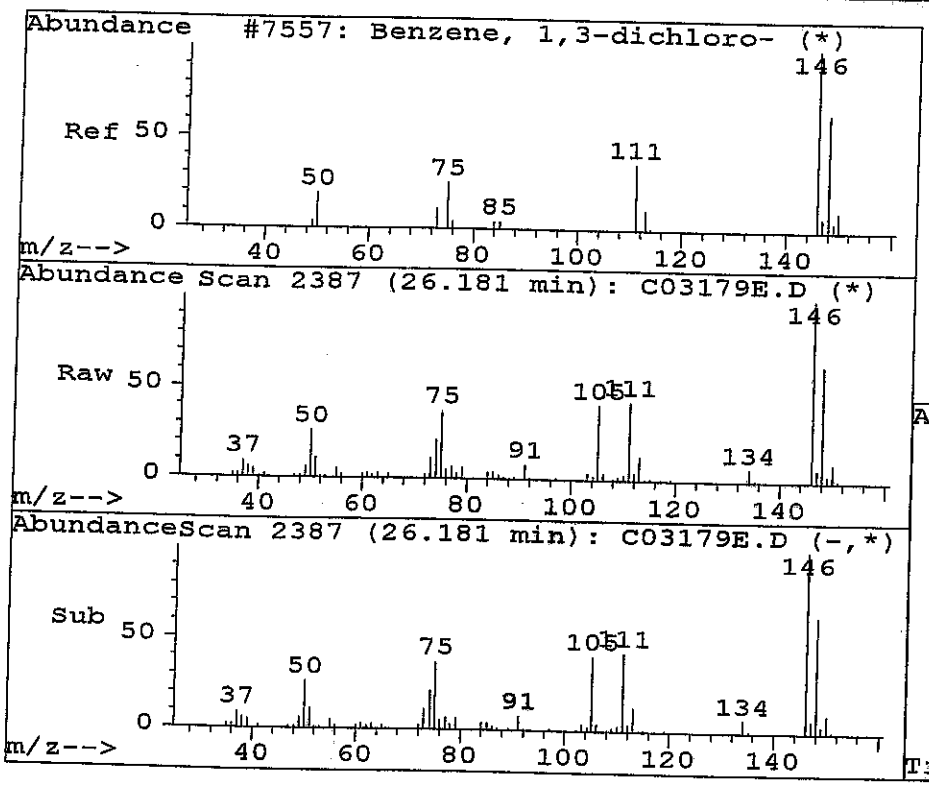


#77
sec-butylbenzene
Concen: 3.64 ppbV
RT: 26.21 min Scan# 2390
Delta R.T. -0.29 min
Lab File: C03179E.D
Acq: 17 Mar 109 1:25 pm

Tgt Ion:105 Resp: 2467689

Ion	Ratio	Lower	Upper
105	100		
134	18.0	14.8	22.2
91	16.7	13.2	19.8
77	15.1	11.8	17.6

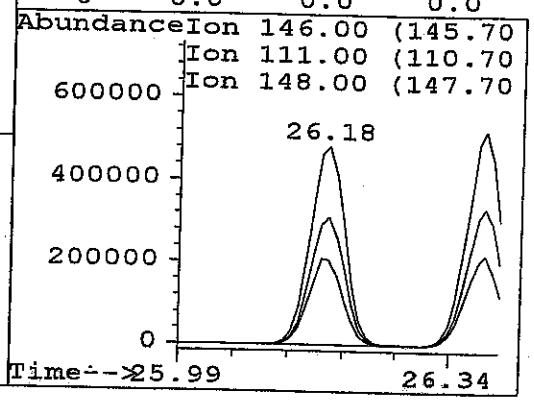


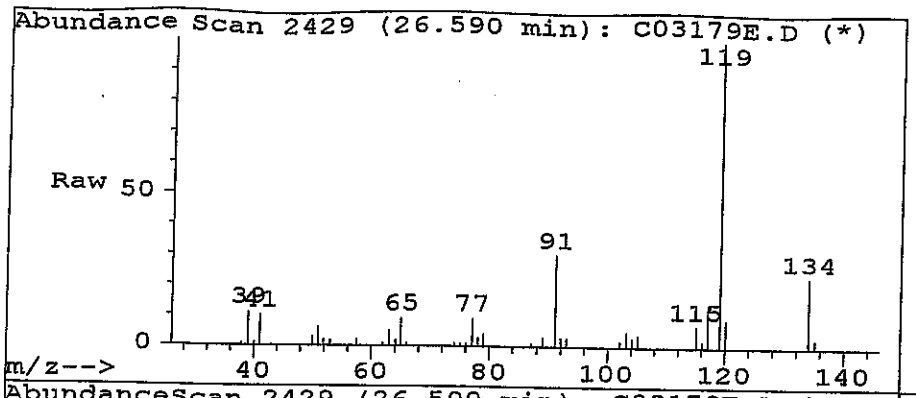


#78
1,3-Dichlorobenzene
Concen: 3.75 ppbV
RT: 26.18 min Scan# 2387
Delta R.T. -0.23 min
Lab File: C03179E.D
Acq: 17 Mar 109 1:25 pm

Tgt Ion:146 Resp: 1499786

Ion	Ratio	Lower	Upper
146	100		
111	42.8	33.7	50.5
148	64.5	52.0	78.0
0	0.0	0.0	0.0

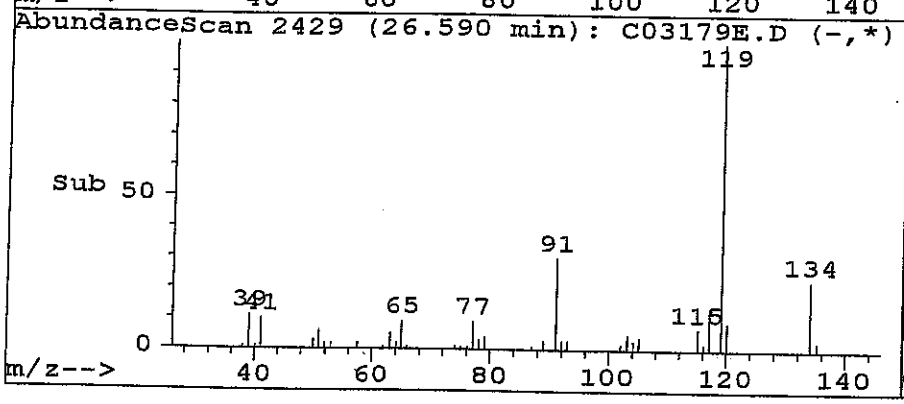


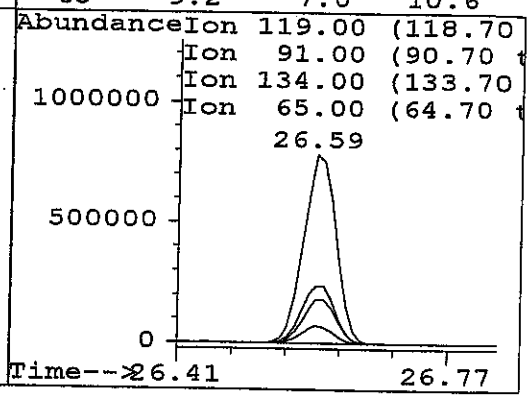


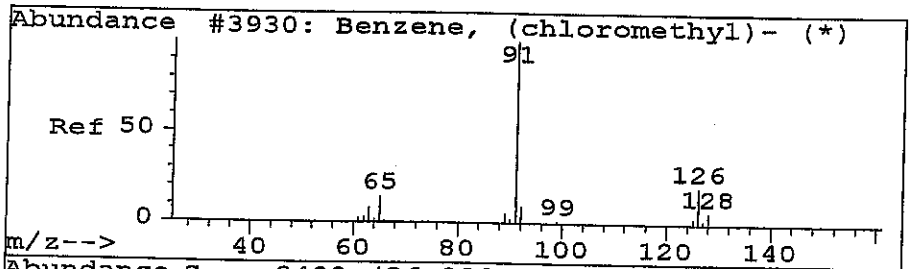
#79
Isopropyltoluene
Concen: 3.55 ppbV
RT: 26.59 min Scan# 2429
Delta R.T. -0.24 min
Lab File: C03179E.D
Acq: 17 Mar 109 1:25 pm

Tgt Ion:119 Resp: 2332248

Ion	Ratio	Lower	Upper
119	100		
91	31.7	25.0	37.6
134	23.8	19.3	28.9
65	9.2	7.0	10.6



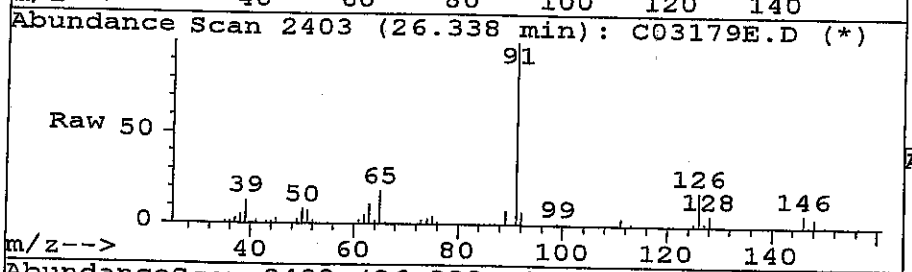


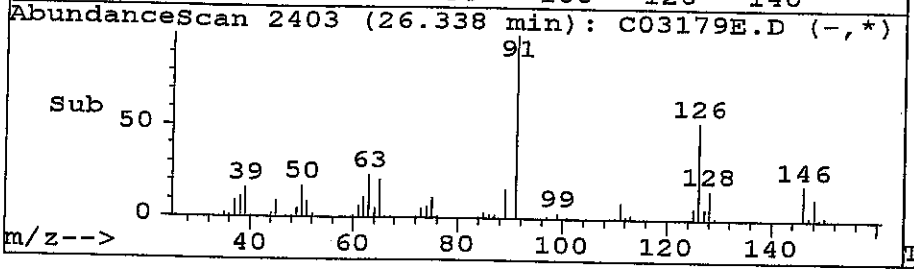


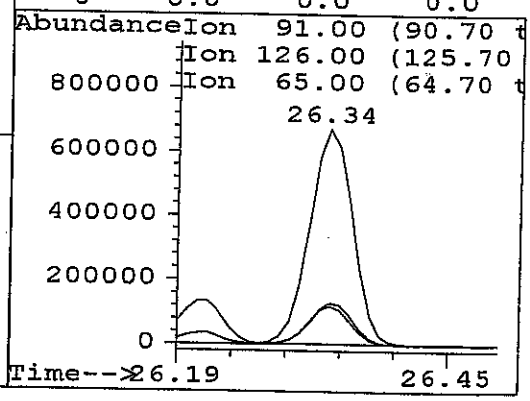
#80
Benzyl chloride
Concen: 3.41 ppbV
RT: 26.34 min Scan# 2403
Delta R.T. -0.27 min
Lab File: C03179E.D
Acq: 17 Mar 109 1:25 pm

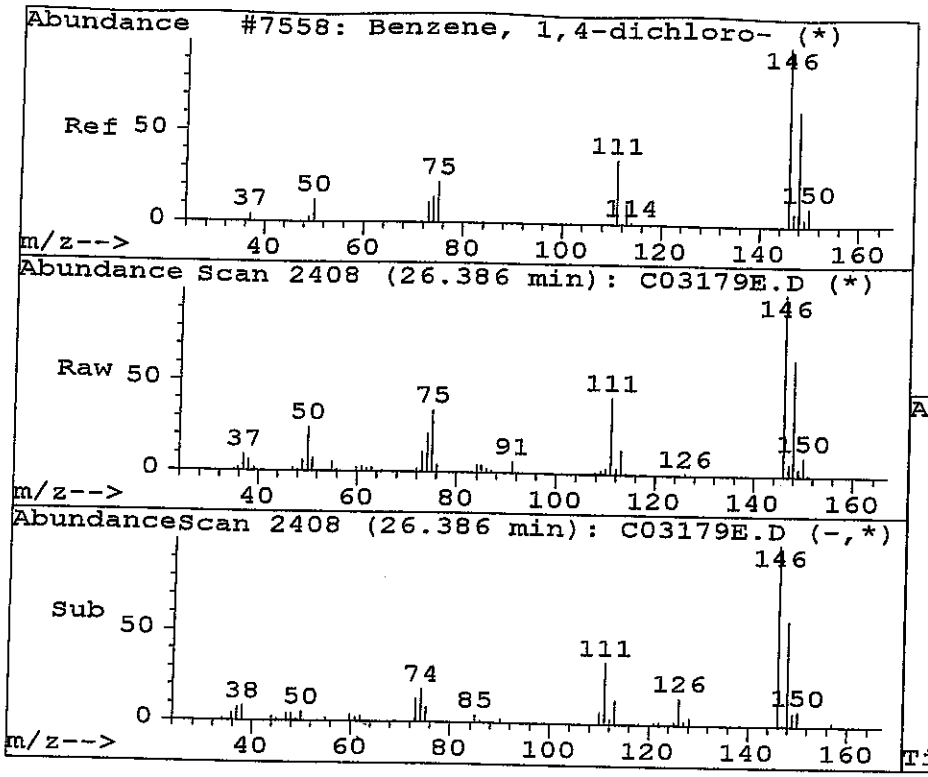
Tgt Ion:91 Resp: 1944712

Ion	Ratio	Lower	Upper
91	100		
126	19.2	15.9	23.9
65	17.8	13.2	19.8
0	0.0	0.0	0.0





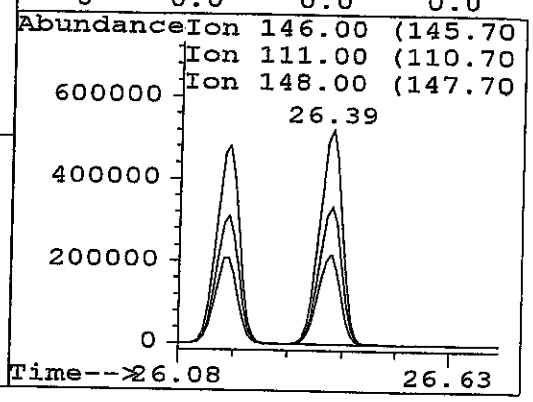


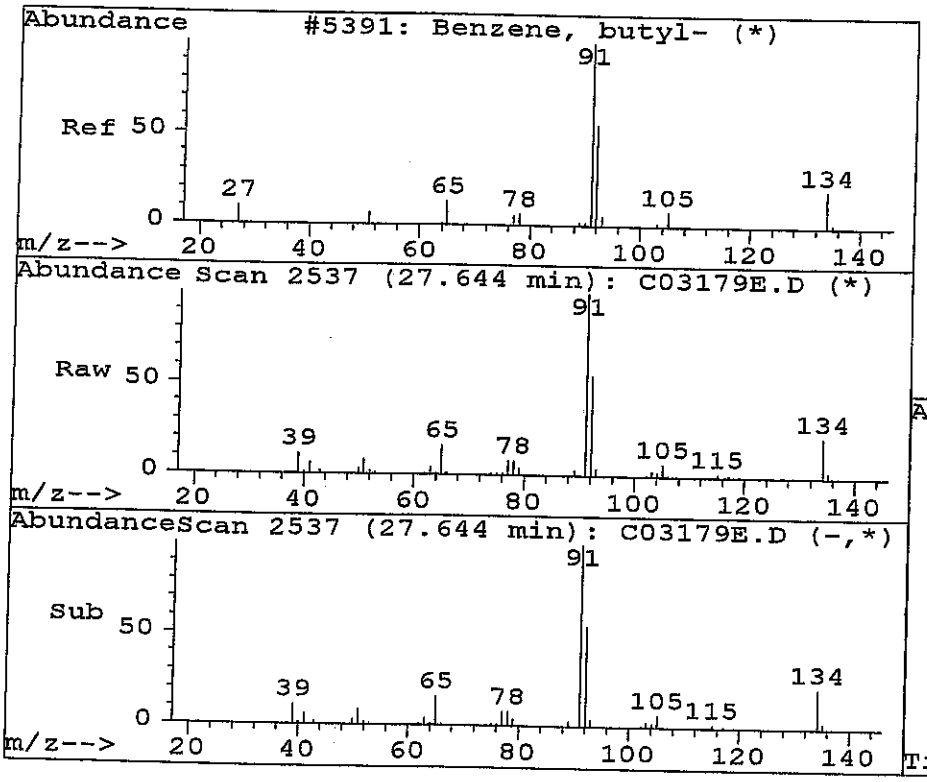


#81
1,4-Dichlorobenzene
Concen: 3.93 ppbV m
RT: 26.39 min Scan# 2408
Delta R.T. -0.29 min
Lab File: C03179E.D
Acq: 17 Mar 109 1:25 pm

Tgt Ion:146 Resp: 1616283

Ion	Ratio	Lower	Upper
146	100		
111	42.1	32.1	48.1
148	64.0	50.1	75.1
0	0.0	0.0	0.0

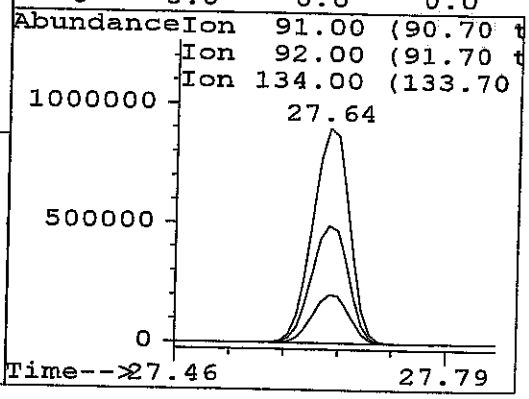


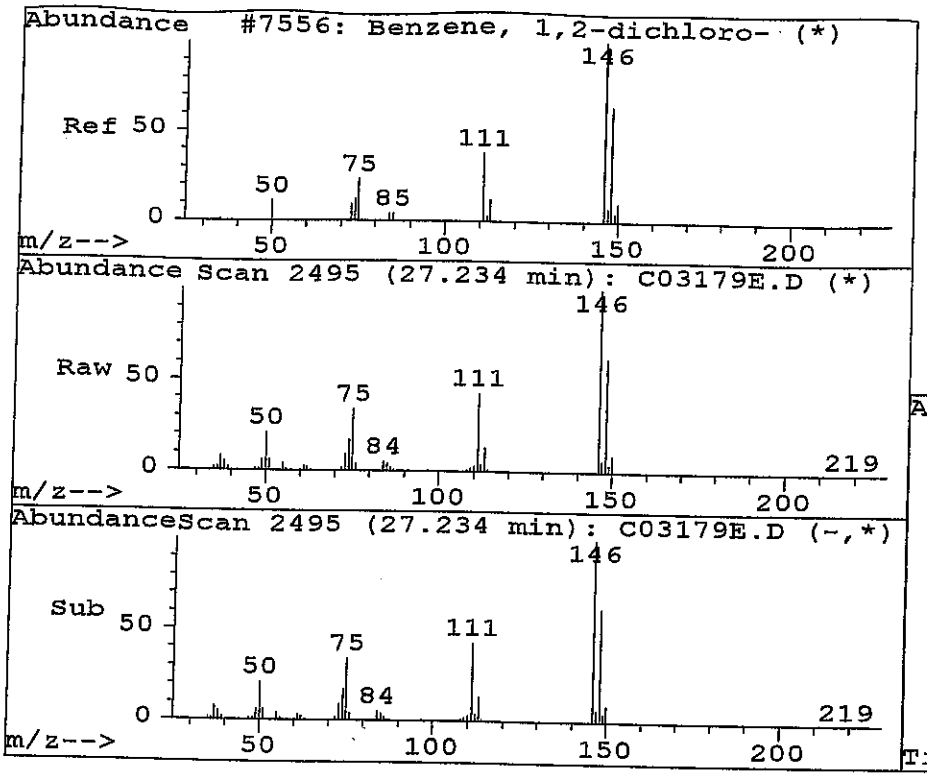


#82
n-Butylbenzene
Concen: 3.49 ppbV
RT: 27.64 min Scan# 2537
Delta R.T. -0.24 min
Lab File: C03179E.D
Acq: 17 Mar 109 1:25 pm

Tgt Ion:91 Resp: 2765408

Ion	Ratio	Lower	Upper
91	100		
92	55.3	42.8	64.2
134	22.8	18.7	28.1
0	0.0	0.0	0.0

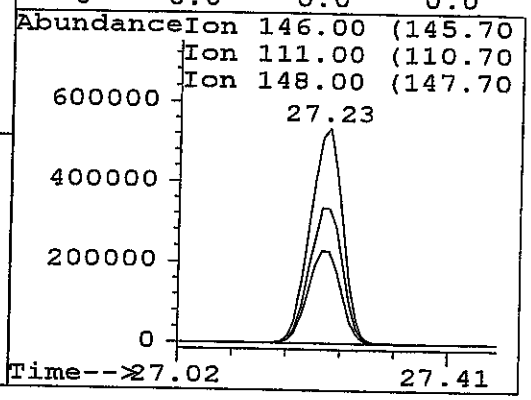


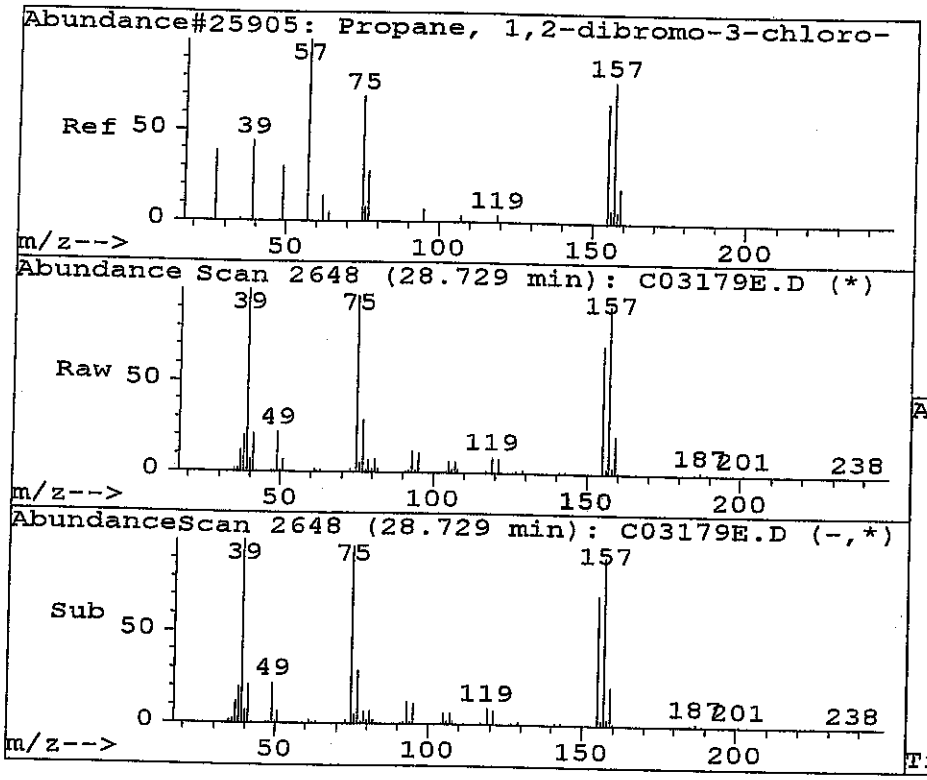


#83
1,2-Dichlorobenzene
Concen: 3.69 ppbV
RT: 27.23 min Scan# 2495
Delta R.T. -0.24 min
Lab File: C03179E.D
Acq: 17 Mar 109 1:25 pm

Tgt Ion:146 Resp: 1708595

Ion	Ratio	Lower	Upper
146	100		
111	42.6	35.2	52.8
148	62.4	52.9	79.3
0	0.0	0.0	0.0

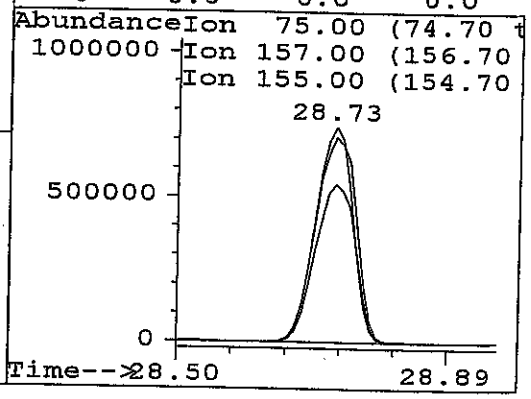


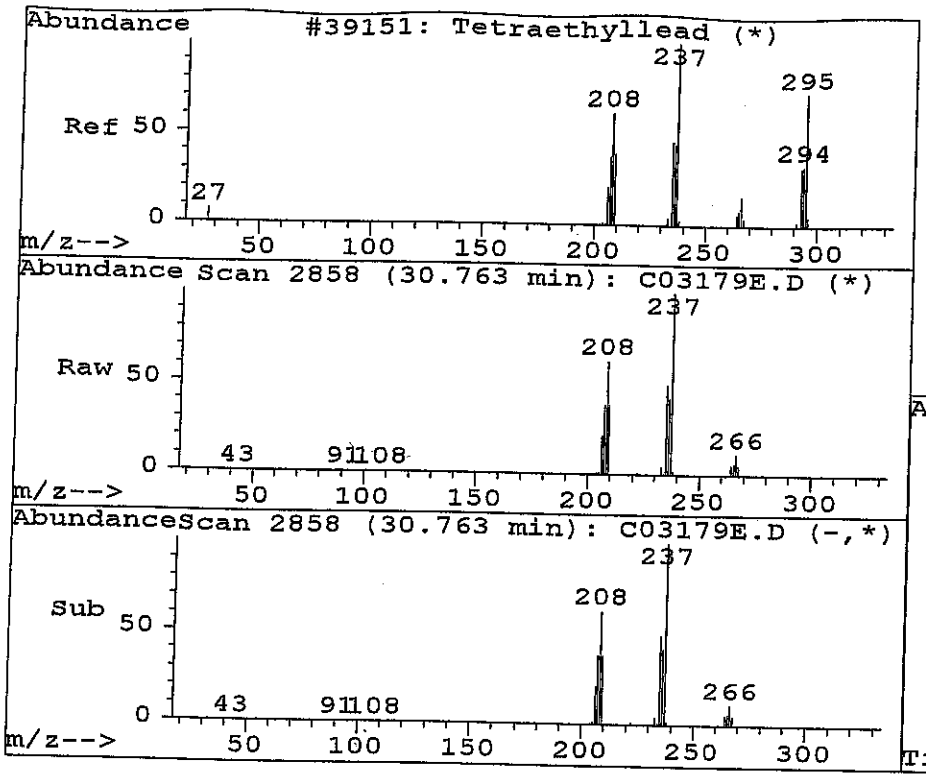


#84
1,2-Dibromo-3-chloropropane
Concen: 7.31 ppbV
RT: 28.73 min Scan# 2648
Delta R.T. -0.23 min
Lab File: C03179E.D
Acq: 17 Mar 109 1:25 pm

Tgt Ion:75 Resp: 2702050

Ion	Ratio	Lower	Upper
75	100		
157	95.2	94.6	142.0
155	73.2	75.8	113.6#
0	0.0	0.0	0.0

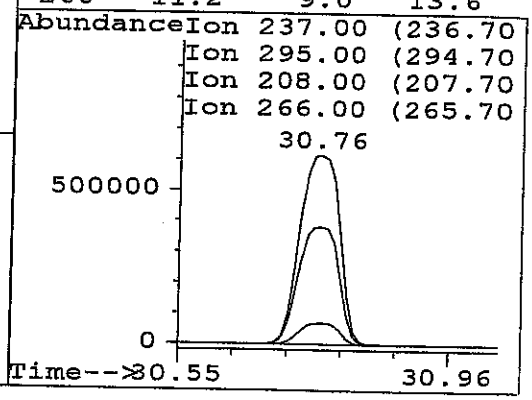


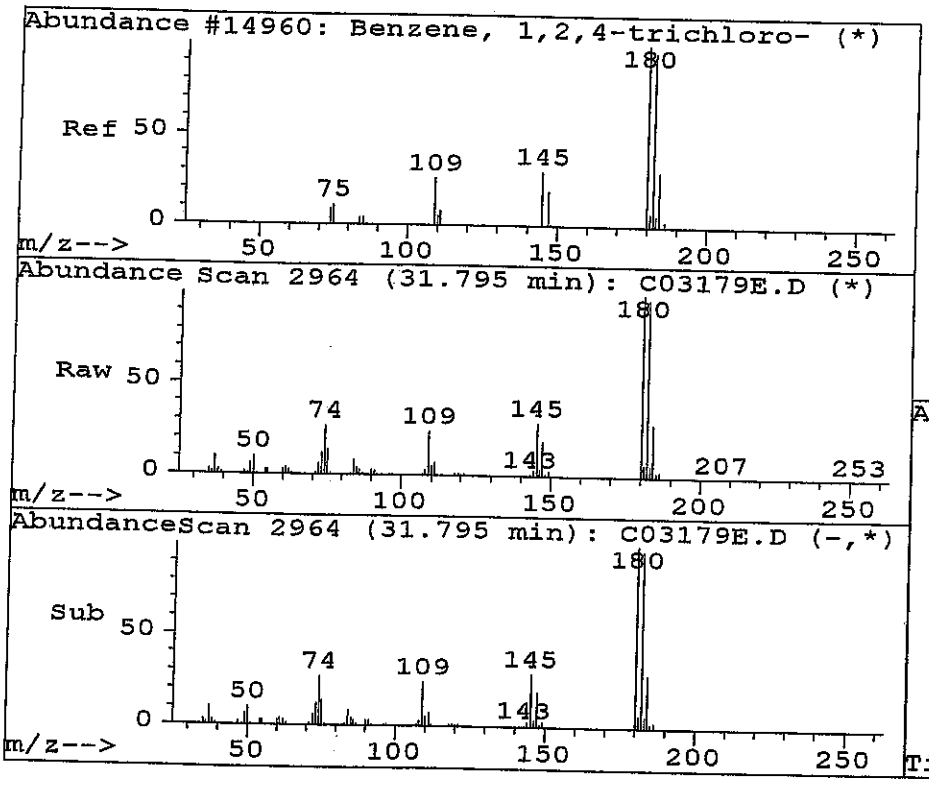


#85
Tetraethyl lead
Concen: 7.55 ppbV
RT: 30.76 min Scan# 2858
Delta R.T. -0.22 min
Lab File: C03179E.D
Acq: 17 Mar 109 1:25 pm

Tgt Ion:237 Resp: 2512900

Ion	Ratio	Lower	Upper
237	100		
295	0.0	0.0	0.0
208	63.2	51.6	77.4
266	11.2	9.0	13.6

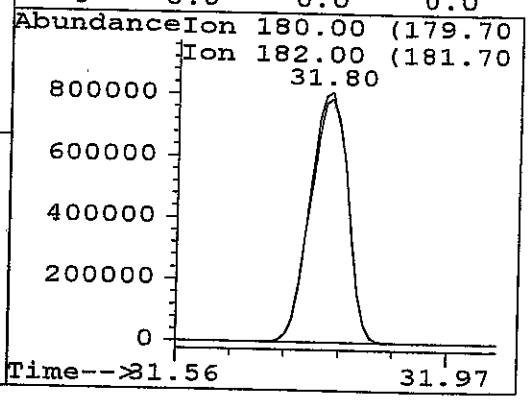


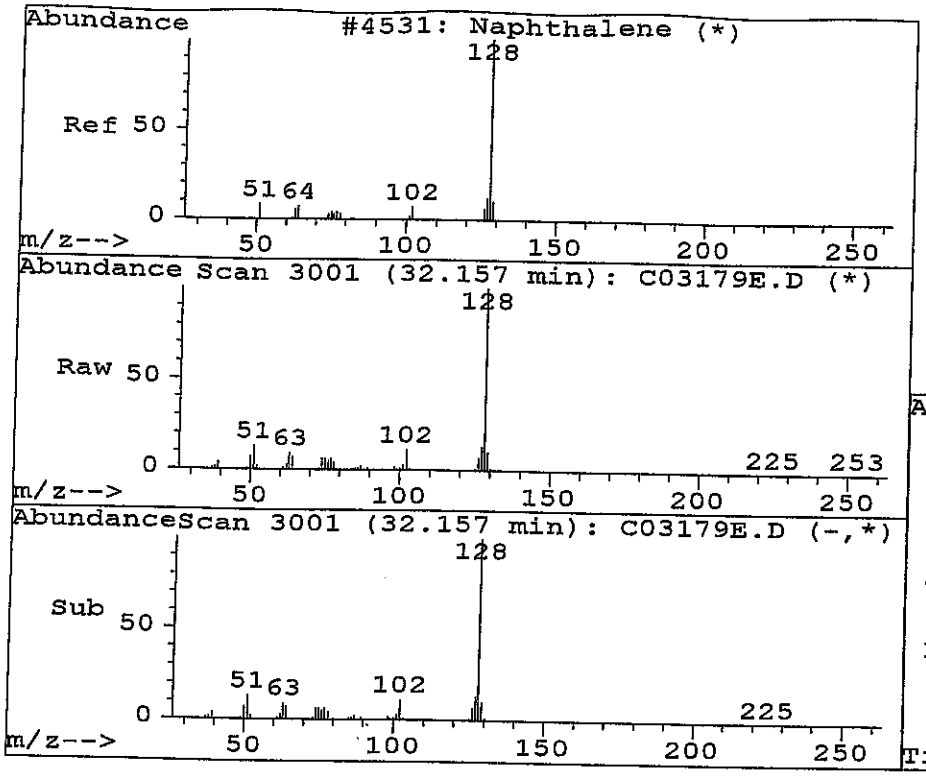


#86
1,2,4-Trichlorobenzene
Concen: 3.43 ppbV
RT: 31.80 min Scan# 2964
Delta R.T. -0.38 min
Lab File: C03179E.D
Acq: 17 Mar 109 1:25 pm

Tgt Ion:180 Resp: 3172331

Ion	Ratio	Lower	Upper
180	100		
182	97.3	76.8	115.2
0	0.0	0.0	0.0
0	0.0	0.0	0.0

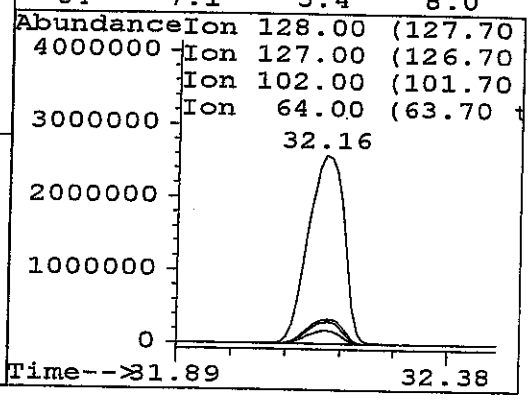


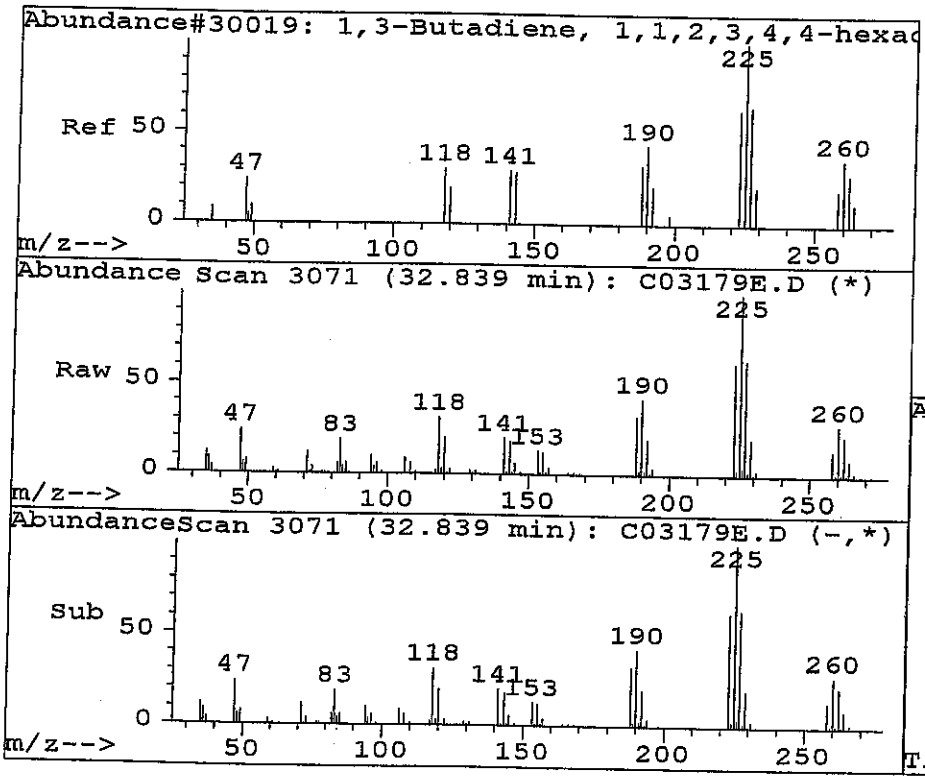


#87
Naphthalene
Concen: 6.59 ppbV
RT: 32.16 min Scan# 3001
Delta R.T. -0.25 min
Lab File: C03179E.D
Acq: 17 Mar 109 1:25 pm

Tgt Ion:128 Resp:11453402

Ion	Ratio	Lower	Upper
128	100		
127	13.0	10.3	15.5
102	11.5	8.2	12.2
64	7.1	5.4	8.0

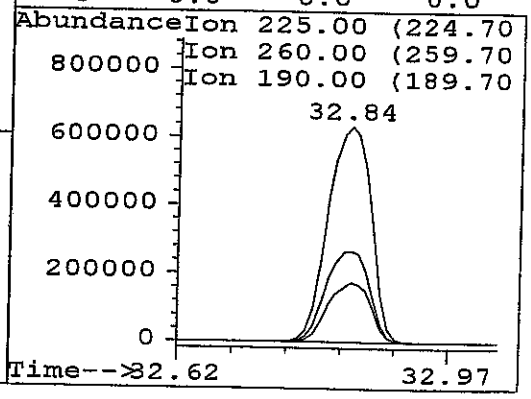


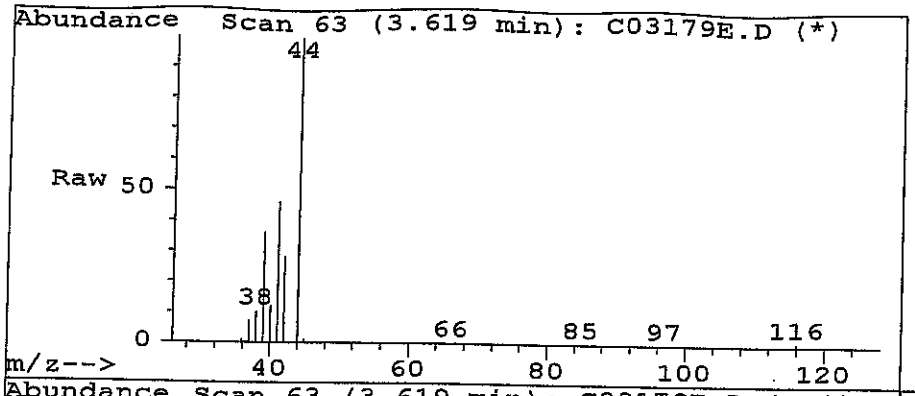


#88
Hexachlorobutadiene
Concen: 3.22 ppbV
RT: 32.84 min Scan# 3071
Delta R.T. -0.24 min
Lab File: C03179E.D
Acq: 17 Mar 109 1:25 pm

Tgt Ion:225 Resp: 2443776

Ion	Ratio	Lower	Upper
225	100		
260	27.7	22.6	34.0
190	42.0	32.7	49.1
0	0.0	0.0	0.0

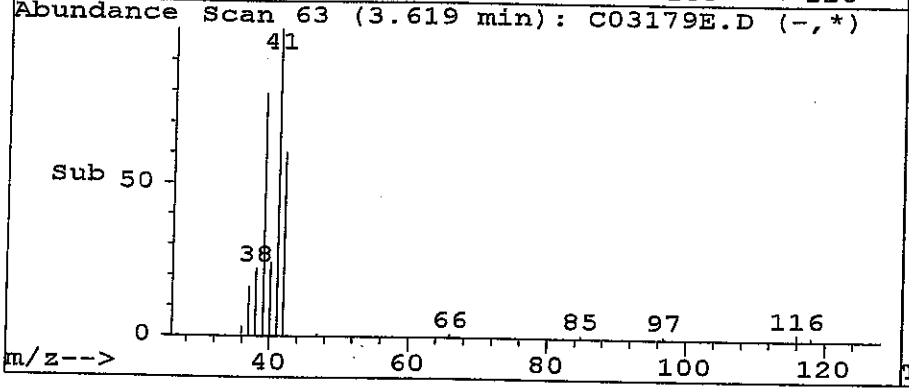


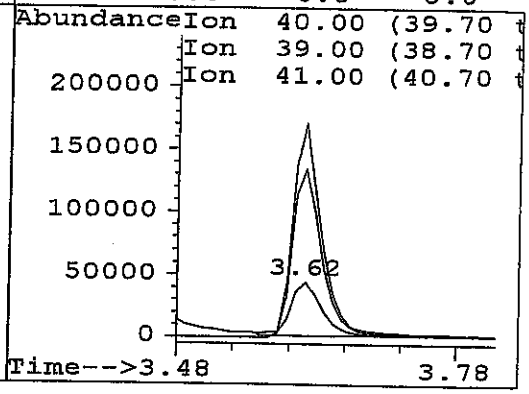


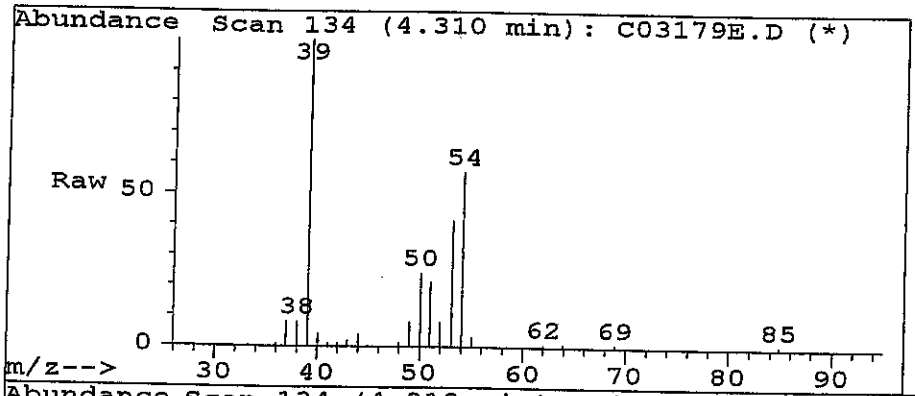
#89
Propylene
Concen: 7.89 ppbV
RT: 3.62 min Scan# 63
Delta R.T. -0.14 min
Lab File: C03179E.D
Acq: 17 Mar 109 1:25 pm

Tgt Ion:40 Resp: 100226

Ion	Ratio	Lower	Upper
40	100		
39	298.6	111.4	167.0#
41	387.8	162.3	243.5#
0	0.0	0.0	0.0



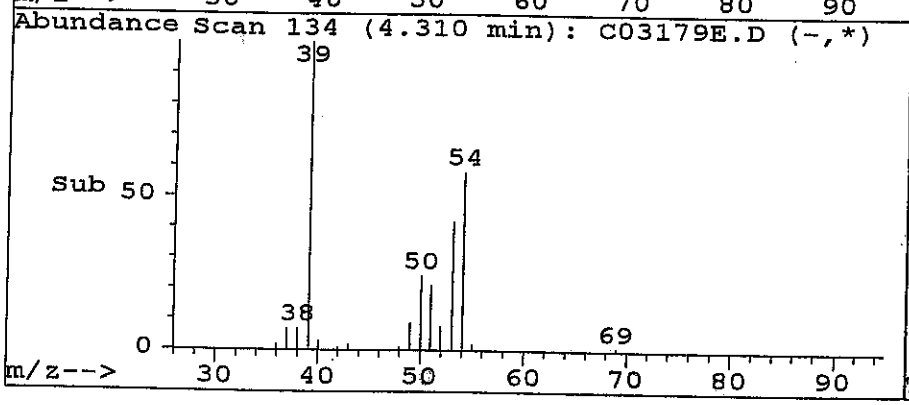


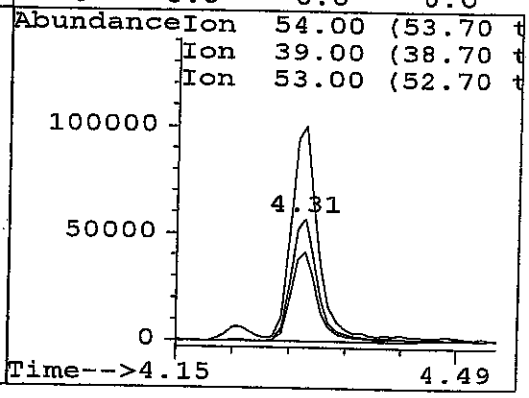


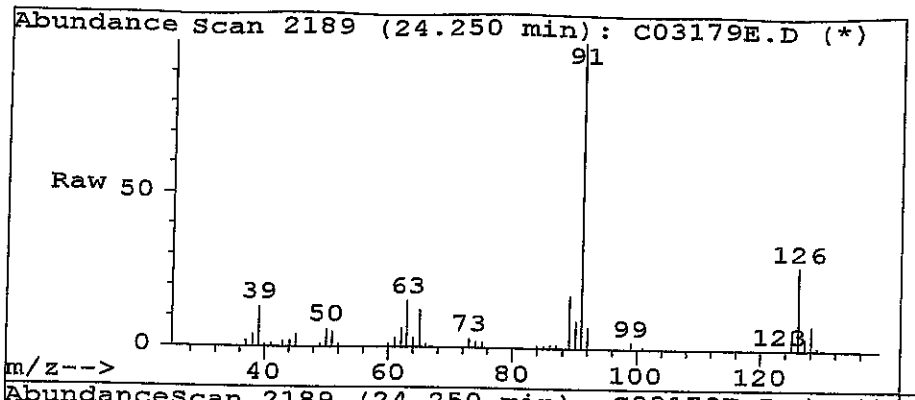
#90
1,3-Butadiene
Concen: 4.21 ppbV
RT: 4.31 min Scan# 134
Delta R.T. -0.16 min
Lab File: C03179E.D
Acq: 17 Mar 109 1:25 pm

Tgt Ion:54 Resp: 134305

Ion	Ratio	Lower	Upper
54	100		
39	169.9	154.7	232.1
53	73.7	54.4	81.6
0	0.0	0.0	0.0



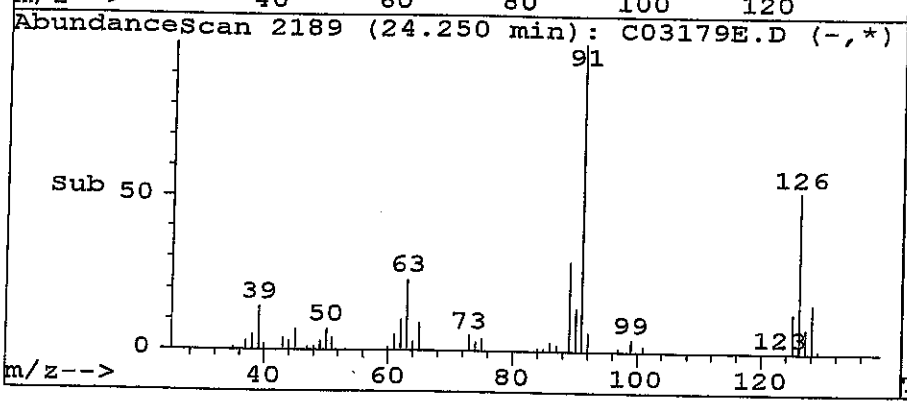


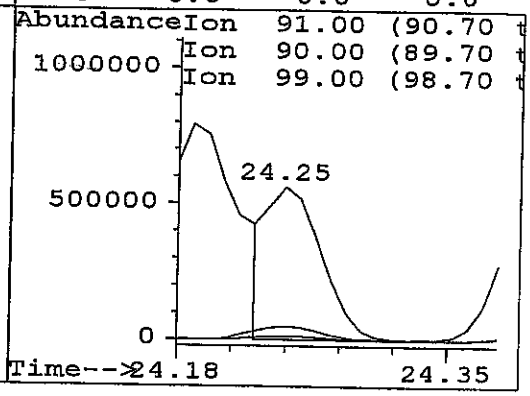


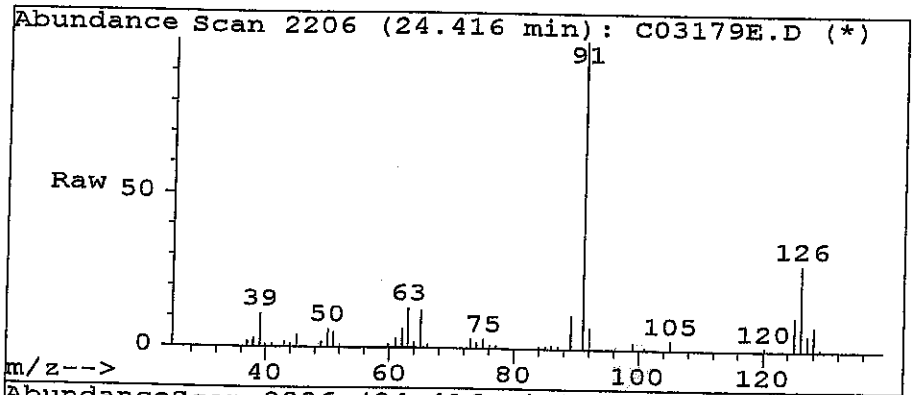
#92
2-Chlorotoluene
Concen: 3.64 ppbV m
RT: 24.25 min Scan# 2189
Delta R.T. -0.21 min
Lab File: C03179E.D
Acq: 17 Mar 109 1:25 pm

Tgt Ion:91 Resp: 1357175

Ion	Ratio	Lower	Upper
91	100		
90	8.7	7.8	11.8
99	2.3	1.6	2.4
0	0.0	0.0	0.0



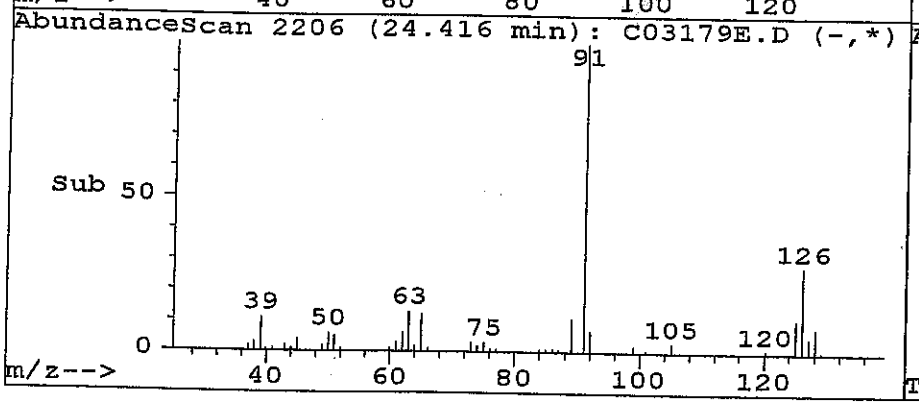


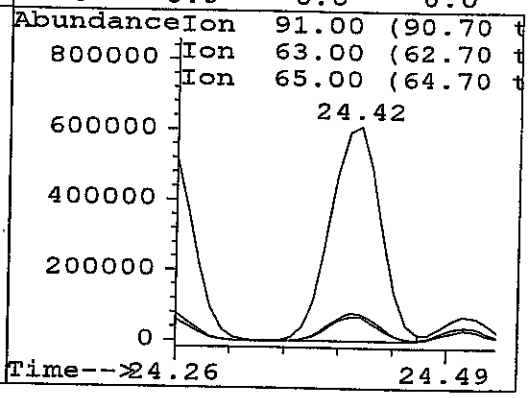


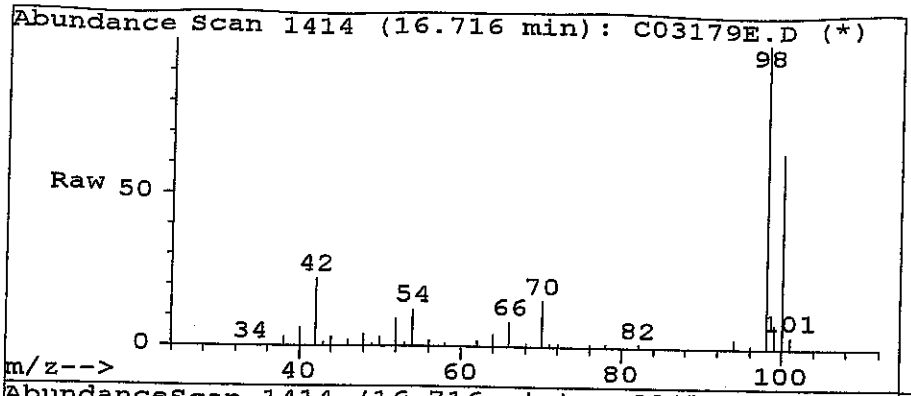
#93
4-Chlorotoluene
Concen: 3.94 ppbV
RT: 24.42 min Scan# 2206
Delta R.T. -0.23 min
Lab File: C03179E.D
Acq: 17 Mar 109 1:25 pm

Tgt Ion:91 Resp: 1836466

Ion	Ratio	Lower	Upper
91	100		
63	13.3	10.7	16.1
65	11.9	9.8	14.8
0	0.0	0.0	0.0



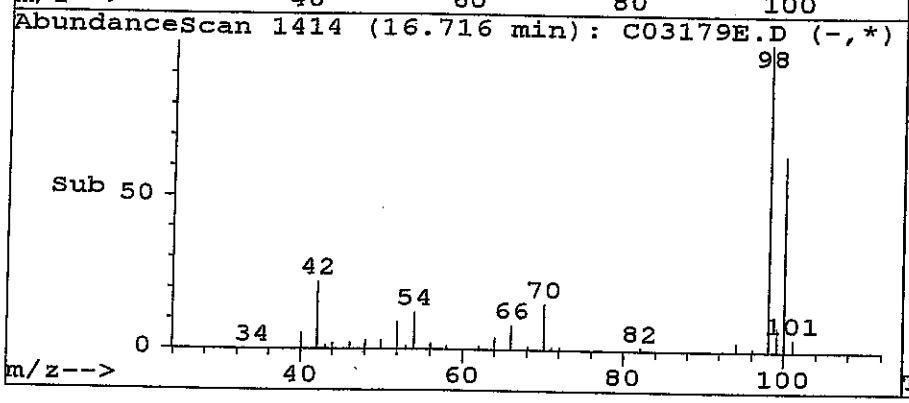


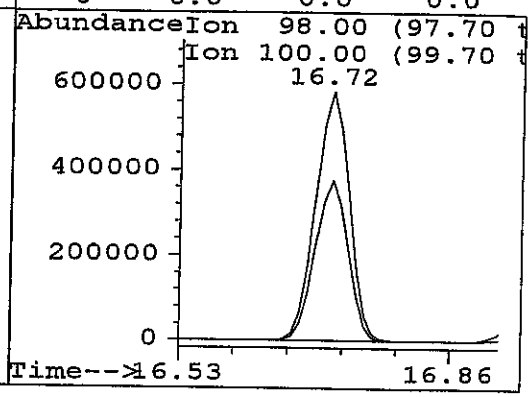


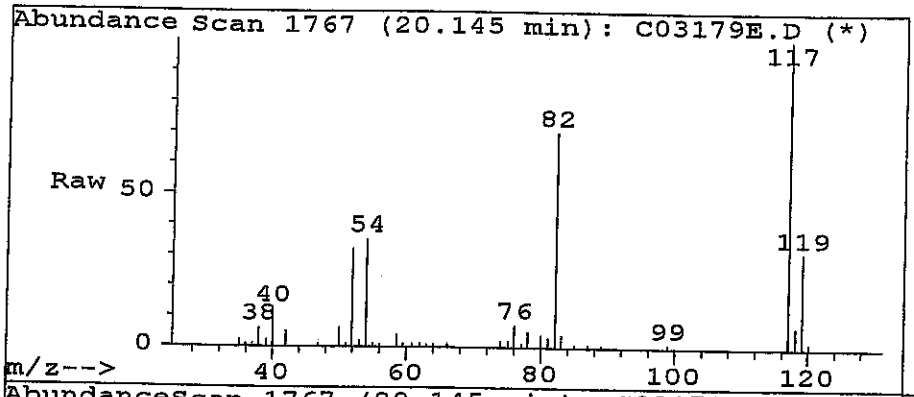
#94
Toluene-d8
Concen: 9.98 ppbV
RT: 16.72 min Scan# 1414
Delta R.T. -0.22 min
Lab File: C03179E.D
Acq: 17 Mar 109 1:25 pm

Tgt Ion:98 Resp: 1629143

Ion	Ratio	Lower	Upper
98	100		
100	64.3	49.1	73.7
0	0.0	0.0	0.0
0	0.0	0.0	0.0



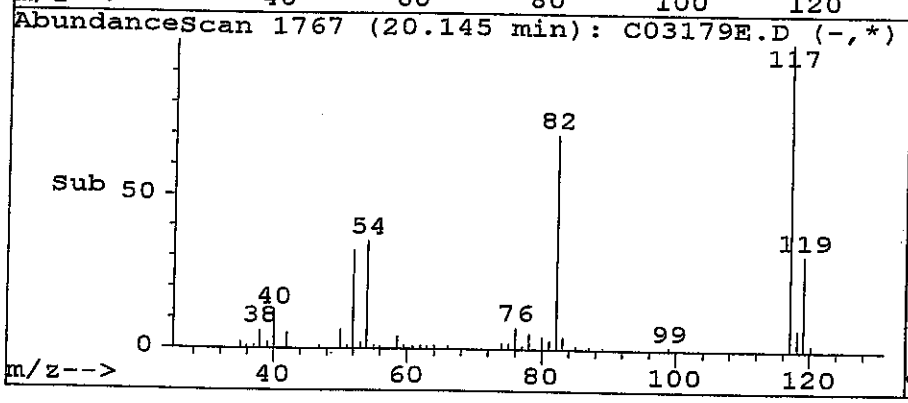


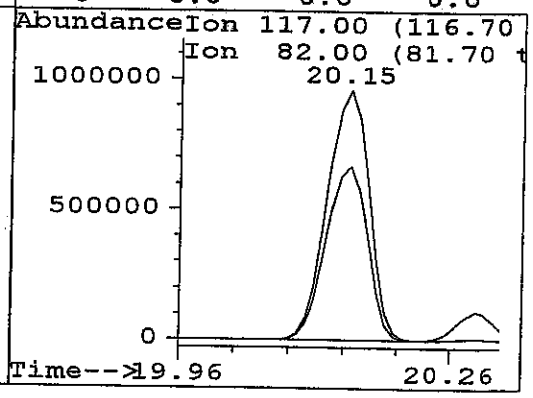


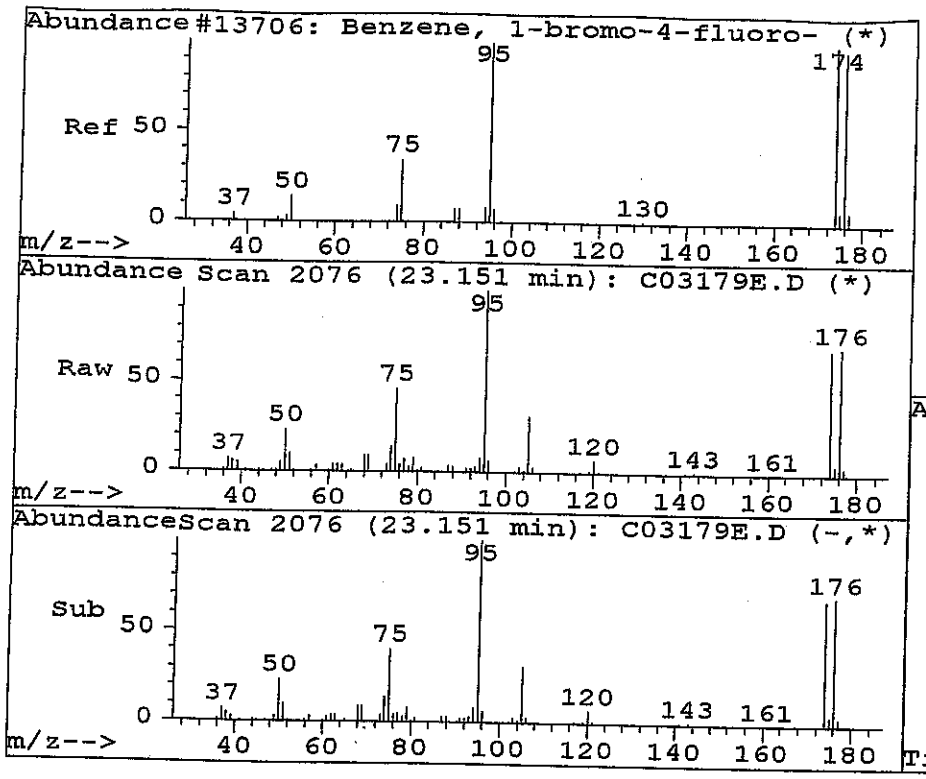
#95
Chlorobenzene-d5
Concen: 20.57 ppbV
RT: 20.15 min Scan# 1767
Delta R.T. -0.21 min
Lab File: C03179E.D
Acq: 17 Mar 109 1:25 pm

Tgt Ion:117 Resp: 3026382

Ion	Ratio	Lower	Upper
117	100		
82	69.6	57.4	86.0
0	0.0	0.0	0.0
0	0.0	0.0	0.0



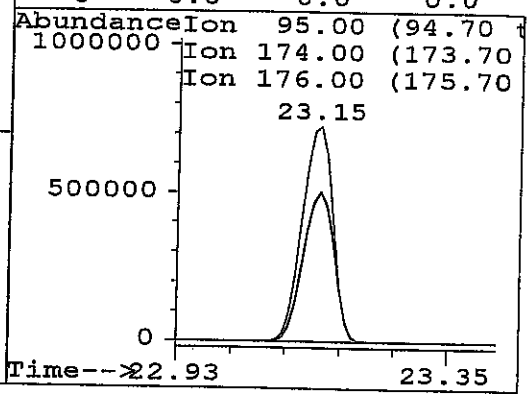




#96
1,4-Bromofluorobenzene
Concen: 10.50 ppbV
RT: 23.15 min Scan# 2076
Delta R.T. -0.23 min
Lab File: C03179E.D
Acq: 17 Mar 109 1:25 pm

Tgt Ion:95 Resp: 2385587

Ion	Ratio	Lower	Upper
95	100		
174	69.4	57.0	85.6
176	69.6	55.8	83.6
0	0.0	0.0	0.0



Initial Calibration Title: 2EXSIM_I.M

Quantitation Report

Data File : C:\MSCHEM\2\DATA\06199MS2\C06199A.D
Acq Time : 19 Jun 109 9:50 am
Sample : ST60032 + ST60250
Misc : 20
Quant Time: Jun 22 9:09 19109

Operator: KB
Inst : MS2
Multiplr: 1.00

Method : C:\MSCHEM\2\METHODS\2EXSIM_I.M
Title : EPA T0-15
Last Update : Mon Jun 22 09:18:18 2009
Response via : Multiple Level Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Chlorobenzene-d5	20.51	117	1660044	0.20	ppbV	0.00
System Monitoring Compounds						%Recovery
16) Toluene-d8	17.05	98	652462	0.18	ppbV	
49) Vinyl Chloride-d3	4.35	65	271414	0.19	ppbV	
Target Compounds						Qvalue
2) Dichlorodifluoromethane	3.85	85	1705728	1.72	ppbV m	0
3) Chloromethane	4.12	50	877342	1.93	ppbV m	0
4) Freon 114	4.12	85	1797893	1.86	ppbV	92
5) Vinyl chloride	4.37	62	596605	1.80	ppbV	95
6) Bromomethane	4.97	94	547447	1.72	ppbV m	88
7) Chloroethane	5.18	64	584817	2.07	ppbV	91
8) Trichlorofluoromethane	5.98	101	1969166	1.70	ppbV	94
9) 1,1-Dichloroethene	6.95	61	1185798	1.72	ppbV	97
10) Freon 113	7.18	151	826803	1.59	ppbV	99
11) Dichloromethane	7.42	84	530282	1.48	ppbV	92
12) trans-1,2-Dichloroethene	8.48	96	384125	0.93	ppbV	99
13) Methyl tert butyl ether	8.60	73	2309675	1.73	ppbV #	89
14) 1,1-Dichloroethane	9.02	63	1225807	1.60	ppbV #	93
15) cis-1,2-Dichloroethene	10.24	96	758337	1.55	ppbV	95
17) Chloroform	10.66	83	1697577	1.69	ppbV	95
18) 1,1,1-Trichloroethane	11.91	97	1955378	1.77	ppbV #	91
19) 1,2-Dichloroethane	12.02	62	4935278	2.59	ppbV #	94
20) Benzene	12.63	78	3573129	2.42	ppbV #	77
21) Carbon tetrachloride	12.66	117	1579809	1.64	ppbV	99
22) 1,2-Dichloropropane	14.20	63	957916	1.83	ppbV	98
23) Trichloroethene	14.26	130	968228	1.52	ppbV #	83
24) Bromodichloromethane	14.57	83	980125	0.83	ppbV #	92
25) cis-1,3-Dichloropropene	15.96	75	507174	1.11	ppbV	98
26) Toluene	17.21	91	4659514	2.19	ppbV	100
27) trans-1,3-Dichloropropene	17.00	75	428351	1.00	ppbV #	33
28) 1,1,2-Trichloroethane	17.35	97	1655491	1.78	ppbV	93
29) 1,2-Dibromoethane	18.99	107	3403871	2.01	ppbV #	96
30) Tetrachloroethene	19.09	166	1224836	1.54	ppbV	97
31) Chlorobenzene	20.59	112	3390004	1.50	ppbV #	88
32) 1,1,1,2-Tetrachloroethane	20.67	131	1296234	1.40	ppbV	97
33) Ethylbenzene	21.08	91	7709871	1.94	ppbV	95
34) m & p-Xylene	21.37	91	10312056	3.34	ppbV	99
35) Styrene	22.22	104	6660464	1.80	ppbV	97
36) o-Xylene	22.34	91	6920115	1.77	ppbV	97
37) 1,1,2,2-Tetrachloroethane	22.93	83	6988630	1.50	ppbV #	96
38) 4-Ethyltoluene	24.80	105	9342797	1.28	ppbV m	95
39) 1,3,5-Trimethylbenzene	24.96	105	9985329	1.41	ppbV	98
40) 1,2,4-Trimethylbenzene	25.91	105	10120607	1.21	ppbV #	93
41) 1,3-Dichlorobenzene	26.55	146	7032467	1.10	ppbV	96
42) Benzyl chloride	26.70	91	6118543	0.92	ppbV	93
43) 1,4-Dichlorobenzene	26.75	146	6500736	0.97	ppbV	97
44) 1,2-Dichlorobenzene	27.61	146	9089085	1.15	ppbV	96
45) 1,2,4-Trichlorobenzene	32.17	180	14261028	0.77	ppbV	94
46) Hexachlorobutadiene	33.13	225	6890127	0.80	ppbV	96
47) 1,4 Dioxane	14.57	88	450267	0.79	ppbV	96
48) Naphthalene	32.53	128	45318334	0.81	ppbV m	0

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

Quantitation Report

Data File : C:\MSCHEM\2\DATA\06199MS2\C06199A.D
Acq Time : 19 Jun 109 9:50 am
Sample : ST60032 + ST60250
Misc : 20
Quant Time: Jun 22 9:09 19109

Operator: KB
Inst : MS2
Multiplr: 1.00

Method : C:\MSCHEM\2\METHODS\2EXSIM_I.M
Title : EPA T0-15
Last Update : Mon Jun 22 09:18:18 2009
Response via : Multiple Level Calibration

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue

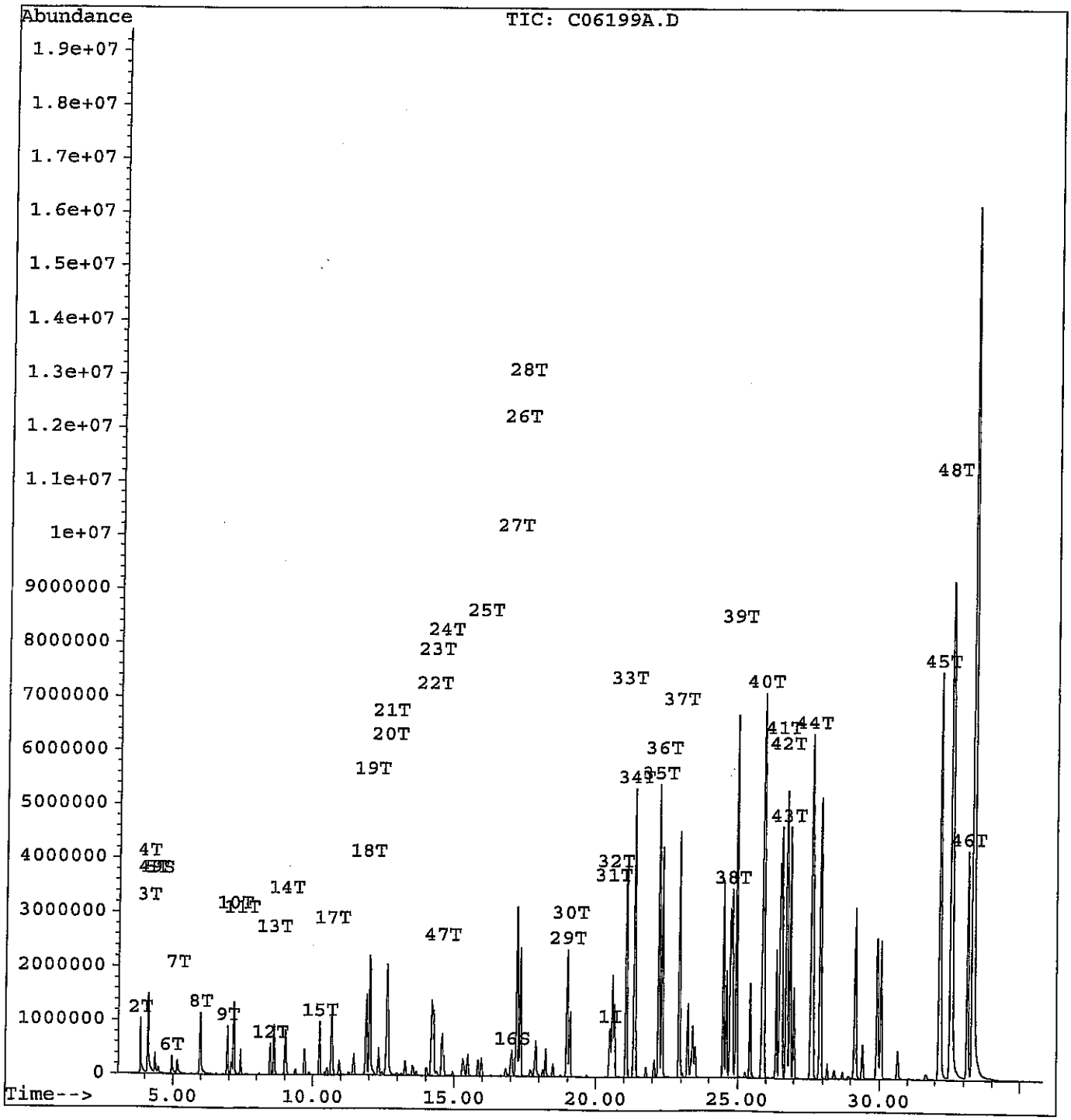
(#) = qualifier out of range (m) = manual integration

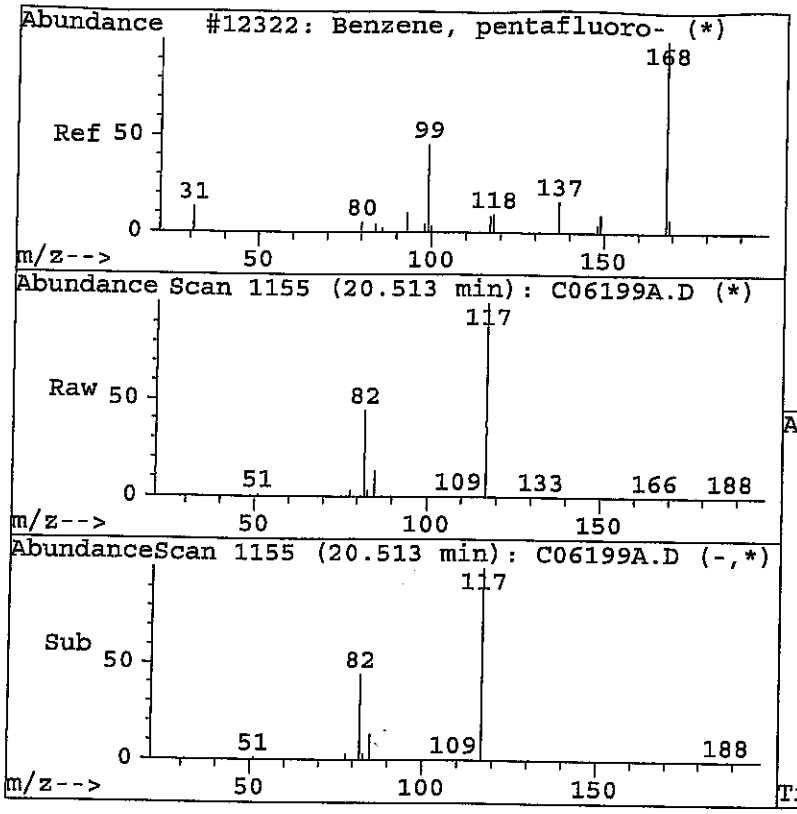
Quantitation Report

Data File : C:\MSCHEM\2\DATA\06199MS2\C06199A.D
Acq Time : 19 Jun 109 9:50 am
Sample : ST60032 + ST60250
Misc : 20
Quant Time: Jun 22 9:09 19109

Operator: KB
Inst : MS2
Multiplr: 1.00

Method : C:\MSCHEM\2\METHODS\2EXSIM_I.M
Title : EPA T0-15
Last Update : Mon Jun 22 09:18:18 2009
Response via : Multiple Level Calibration

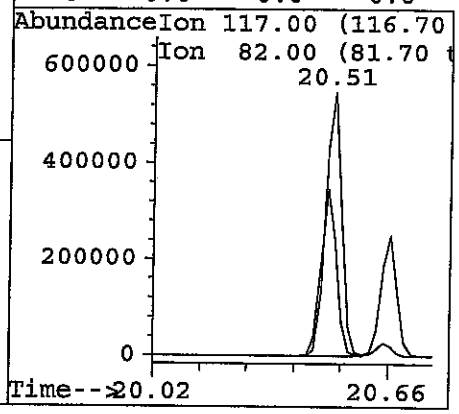


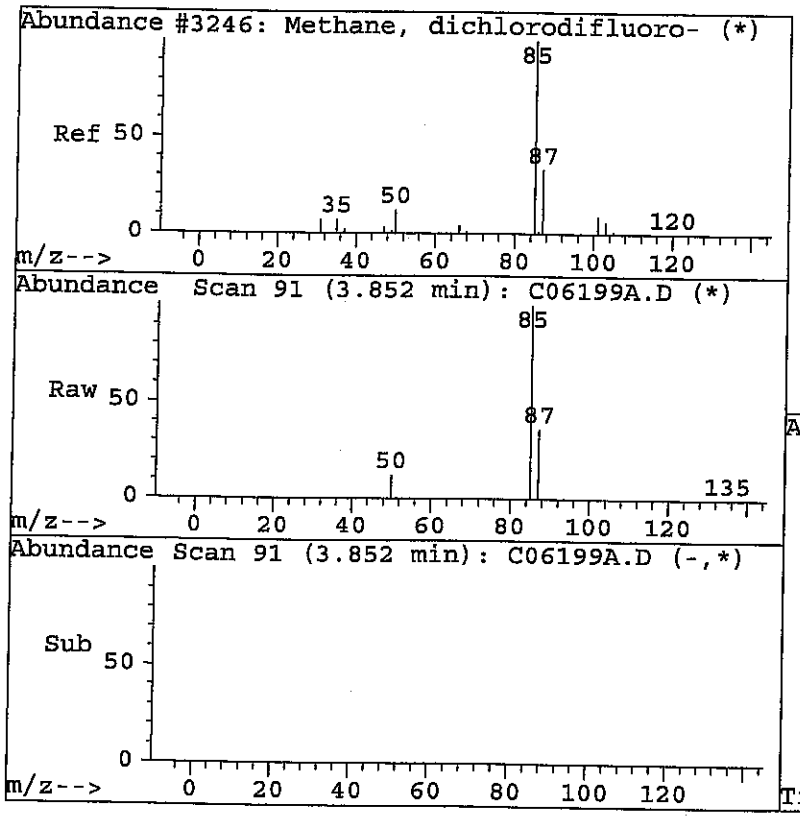


#1
Chlorobenzene-d5
Concen: 0.20 ppbV
RT: 20.51 min Scan# 1155
Delta R.T. 0.00 min
Lab File: C06199A.D
Acq: 19 Jun 109 9:50 am

Tgt Ion:117 Resp: 1660044

Ion	Ratio	Lower	Upper
117	100		
82	44.1	40.2	60.2
0	0.0	0.0	0.0
0	0.0	0.0	0.0

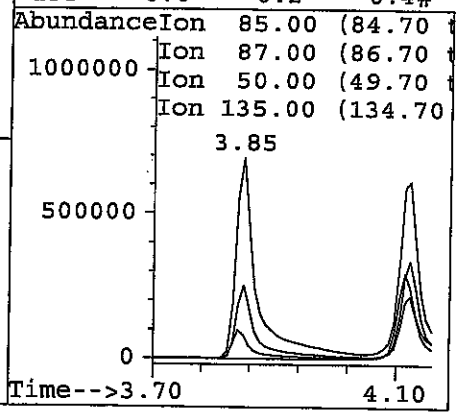


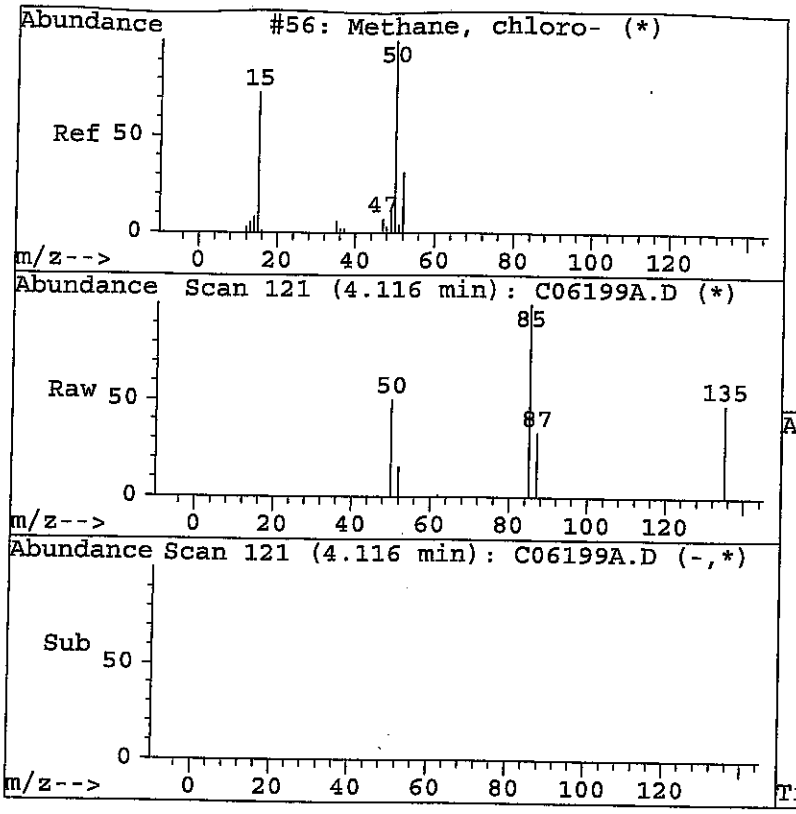


#2
Dichlorodifluoromethane
Concen: 1.72 ppbV m
RT: 3.85 min Scan# 91
Delta R.T. 0.00 min
Lab File: C06199A.D
Acq: 19 Jun 109 9:50 am

Tgt Ion:85 Resp: 1705728

Ion	Ratio	Lower	Upper
85	100		
87	36.0	26.2	39.2
50	11.6	7.4	11.0#
135	0.0	0.2	0.4#

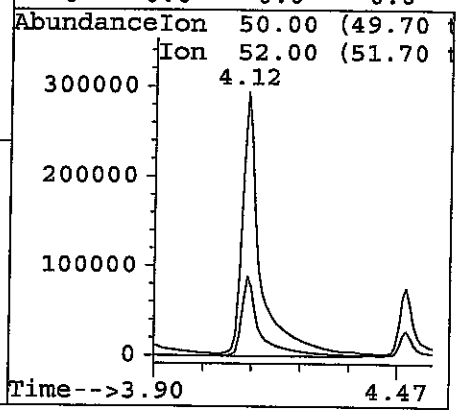


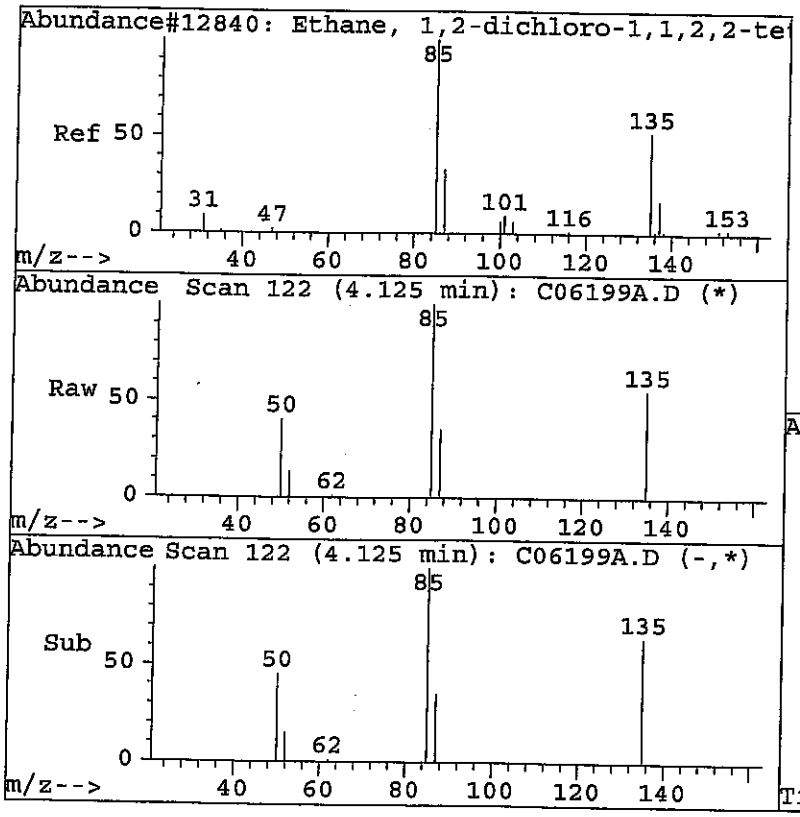


#3
Chloromethane
Concen: 1.93 ppbV m
RT: 4.12 min Scan# 121
Delta R.T. -0.00 min
Lab File: C06199A.D
Acq: 19 Jun 109 9:50 am

Tgt Ion:50 Resp: 877342

Ion	Ratio	Lower	Upper
50	100		
52	30.0	21.8	32.8
0	0.0	0.0	0.0
0	0.0	0.0	0.0

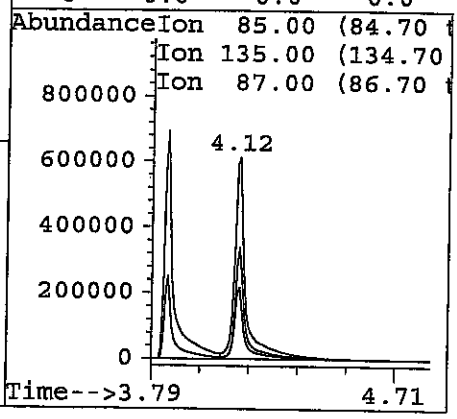


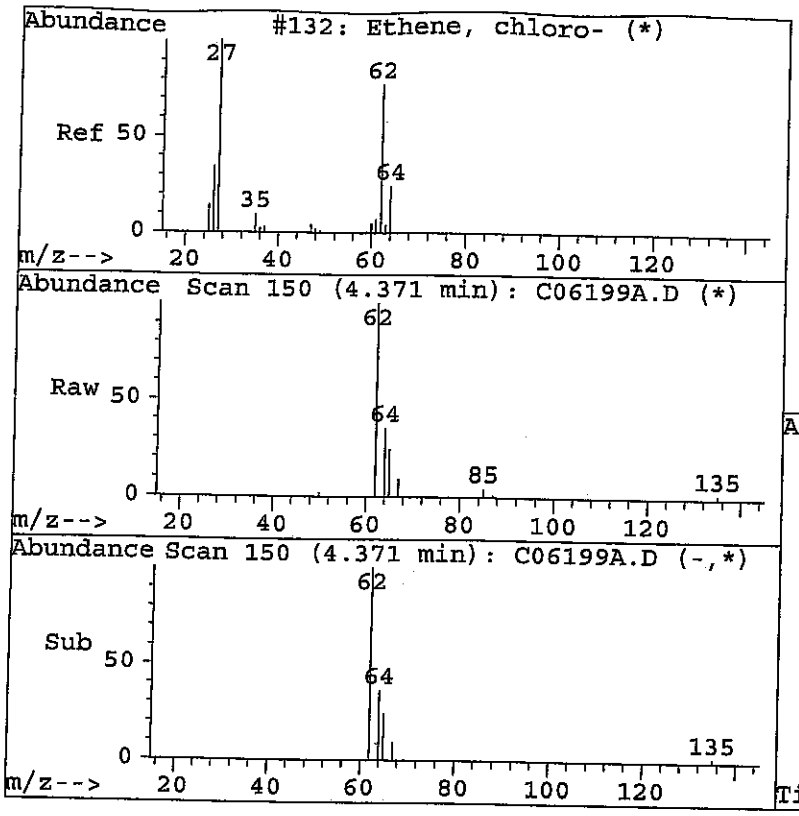


#4
Freon 114
Concen: 1.86 ppbV
RT: 4.12 min Scan# 122
Delta R.T. 0.00 min
Lab File: C06199A.D
Acq: 19 Jun 109 9:50 am

Tgt Ion:85 Resp: 1797893

Ion	Ratio	Lower	Upper
85	100		
135	55.8	39.6	59.4
87	35.3	25.2	37.8
0	0.0	0.0	0.0

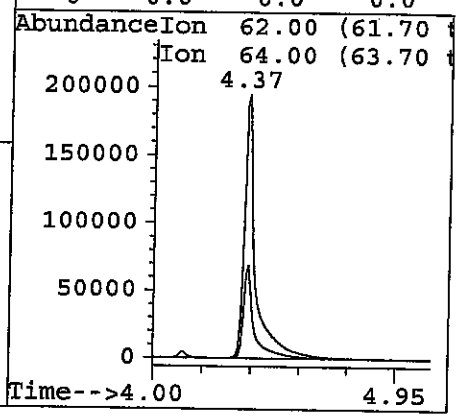


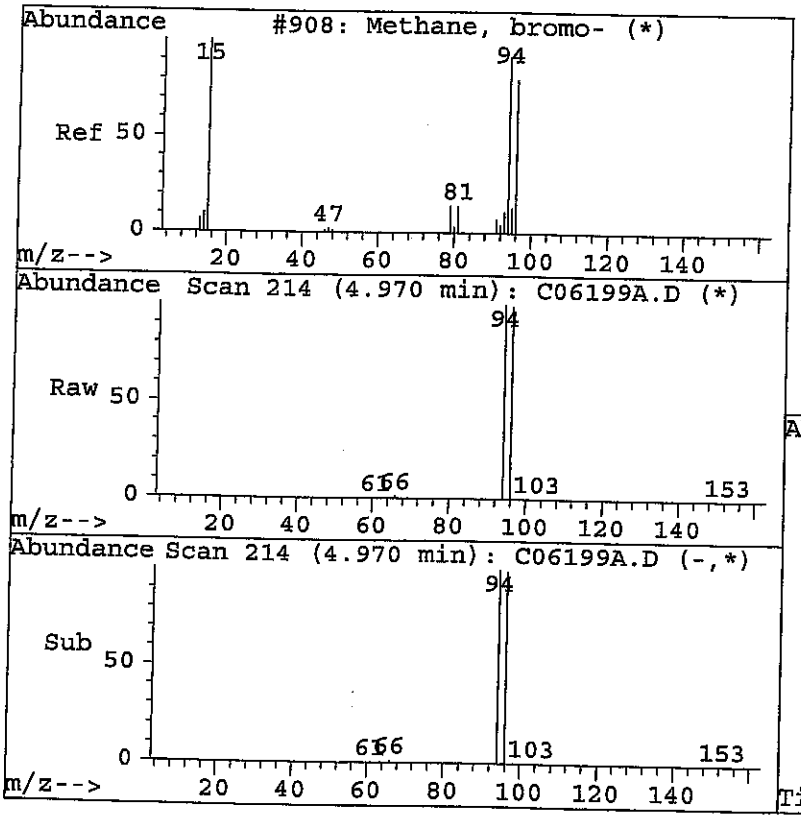


#5
Vinyl chloride
Concen: 1.80 ppbV
RT: 4.37 min Scan# 150
Delta R.T. 0.00 min
Lab File: C06199A.D
Acq: 19 Jun 109 9:50 am

Tgt Ion:62 Resp: 596605

Ion	Ratio	Lower	Upper
62	100		
64	35.3	30.8	46.2
0	0.0	0.0	0.0
0	0.0	0.0	0.0

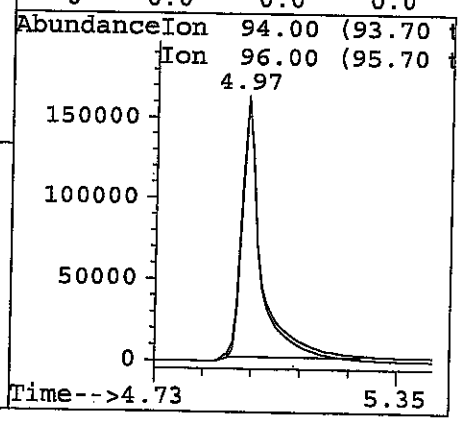


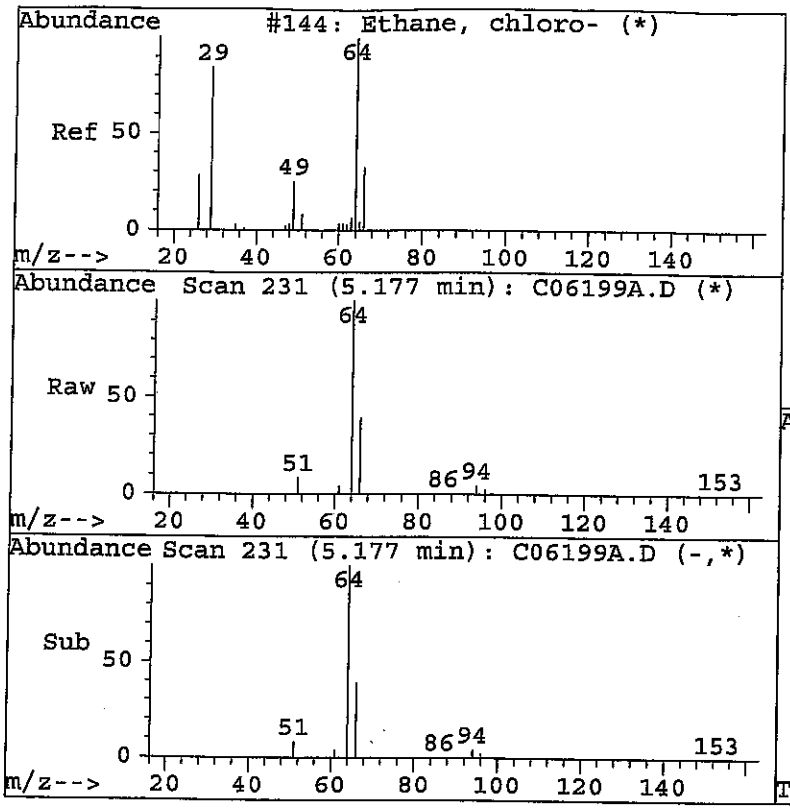


#6
Bromomethane
Concen: 1.72 ppbV m
RT: 4.97 min Scan# 214
Delta R.T. -0.00 min
Lab File: C06199A.D
Acq: 19 Jun 109 9:50 am

Tgt Ion:94 Resp: 547447

Ion	Ratio	Lower	Upper
94	100		
96	98.6	70.8	106.2
0	0.0	0.0	0.0
0	0.0	0.0	0.0

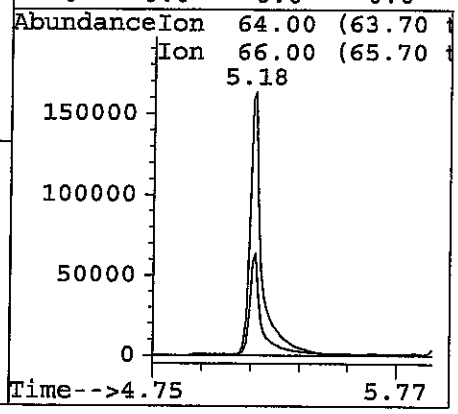


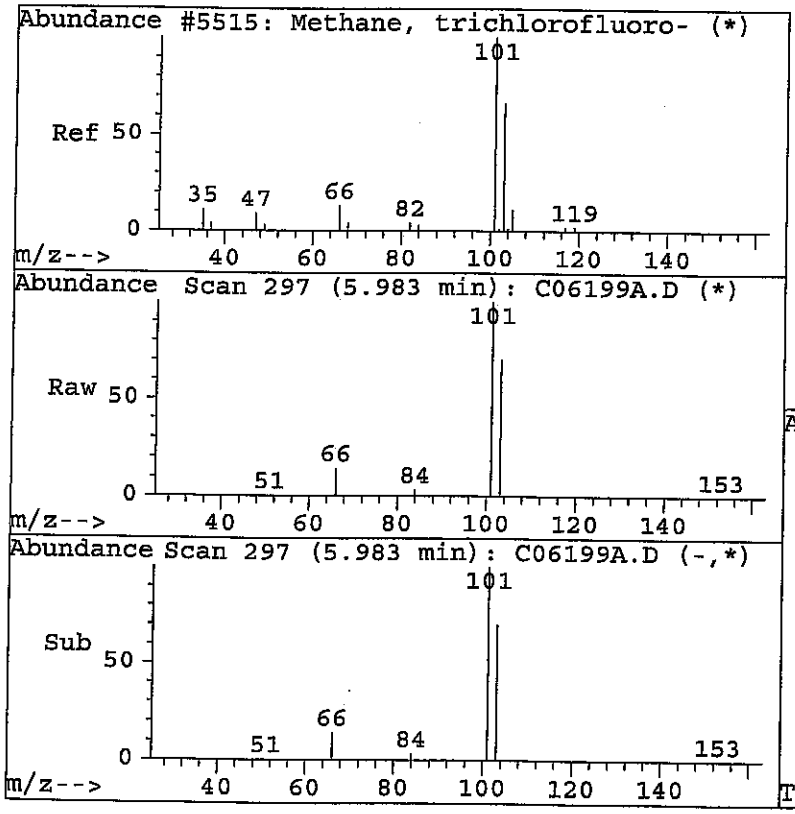


#7
Chloroethane
Concen: 2.07 ppbV
RT: 5.18 min Scan# 231
Delta R.T. -0.00 min
Lab File: C06199A.D
Acq: 19 Jun 109 9:50 am

Tgt Ion:64 Resp: 584817

Ion	Ratio	Lower	Upper
64	100		
66	38.4	26.5	39.7
0	0.0	0.0	0.0
0	0.0	0.0	0.0

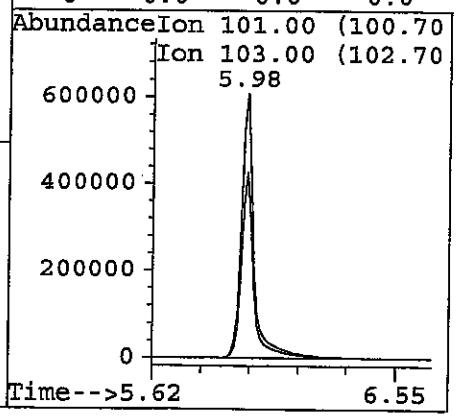


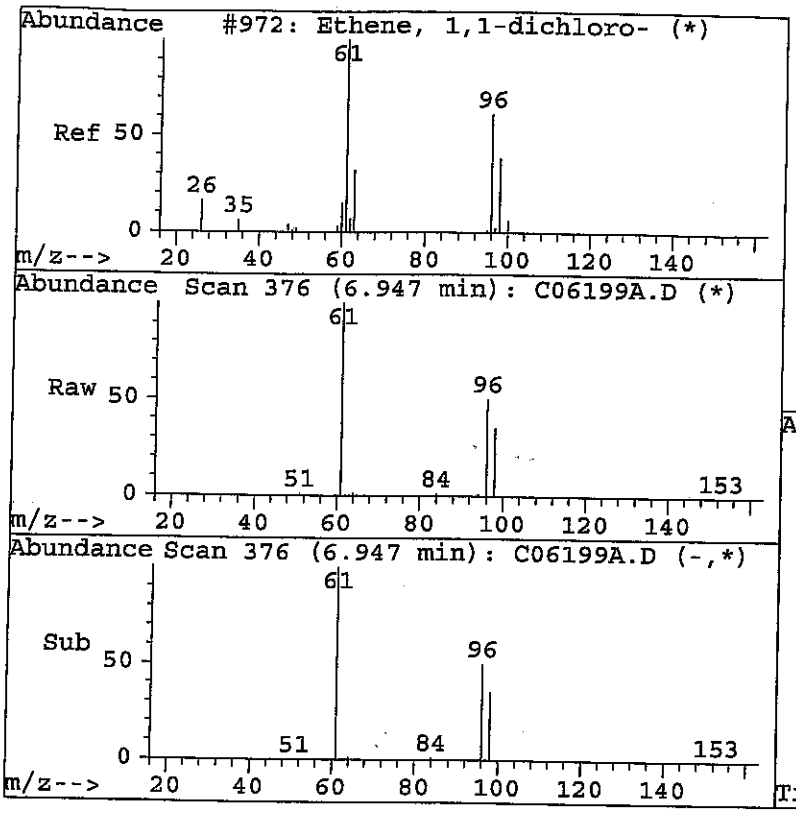


#8
Trichlorofluoromethane
Concen: 1.70 ppbV
RT: 5.98 min Scan# 297
Delta R.T. 0.00 min
Lab File: C06199A.D
Acq: 19 Jun 109 9:50 am

Tgt Ion:101 Resp: 1969166

Ion	Ratio	Lower	Upper
101	100		
103	70.1	52.2	78.2
0	0.0	0.0	0.0
0	0.0	0.0	0.0

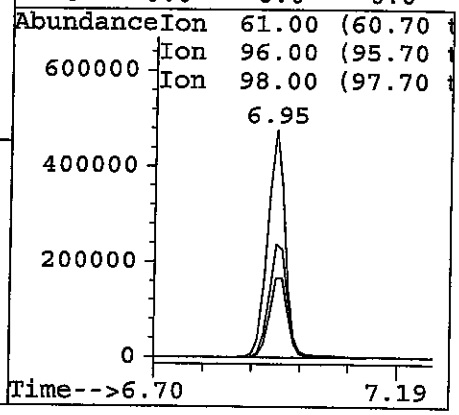


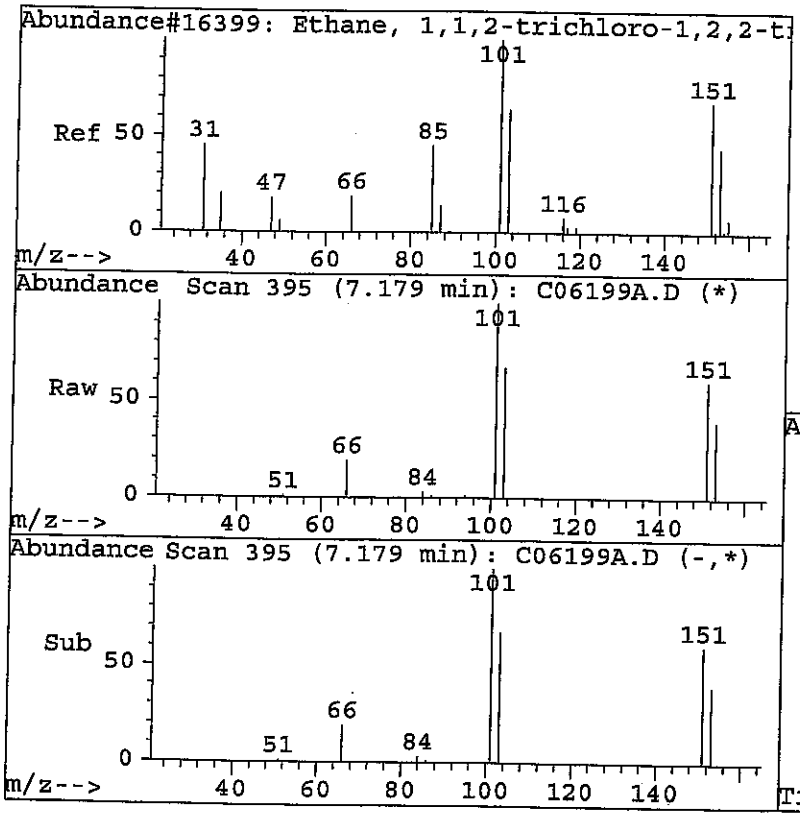


#9
1,1-Dichloroethene
Concen: 1.72 ppbV
RT: 6.95 min Scan# 376
Delta R.T. -0.00 min
Lab File: C06199A.D
Acq: 19 Jun 109 9:50 am

Tgt Ion:61 Resp: 1185798

Ion	Ratio	Lower	Upper
61	100		
96	49.9	41.6	62.4
98	34.7	26.9	40.3
0	0.0	0.0	0.0

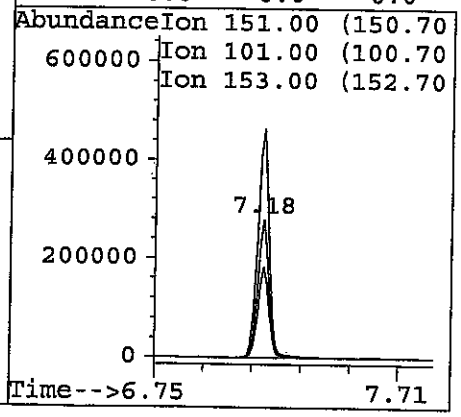


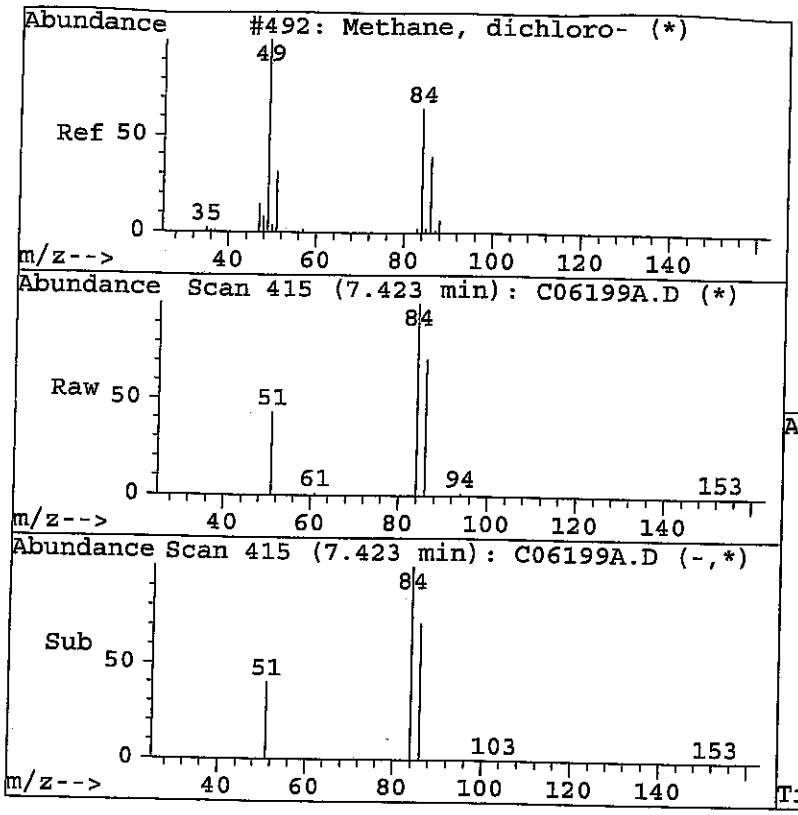


#10
Freon 113
Concen: 1.59 ppbV
RT: 7.18 min Scan# 395
Delta R.T. 0.05 min
Lab File: C06199A.D
Acq: 19 Jun 109 9:50 am

Tgt Ion:151 Resp: 826803

Ion	Ratio	Lower	Upper
151	100		
101	167.0	133.6	200.4
153	65.5	50.0	75.0
0	0.0	0.0	0.0

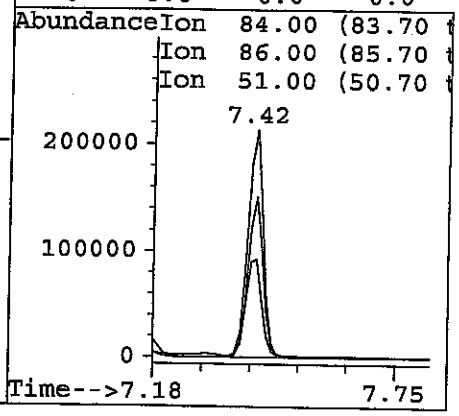


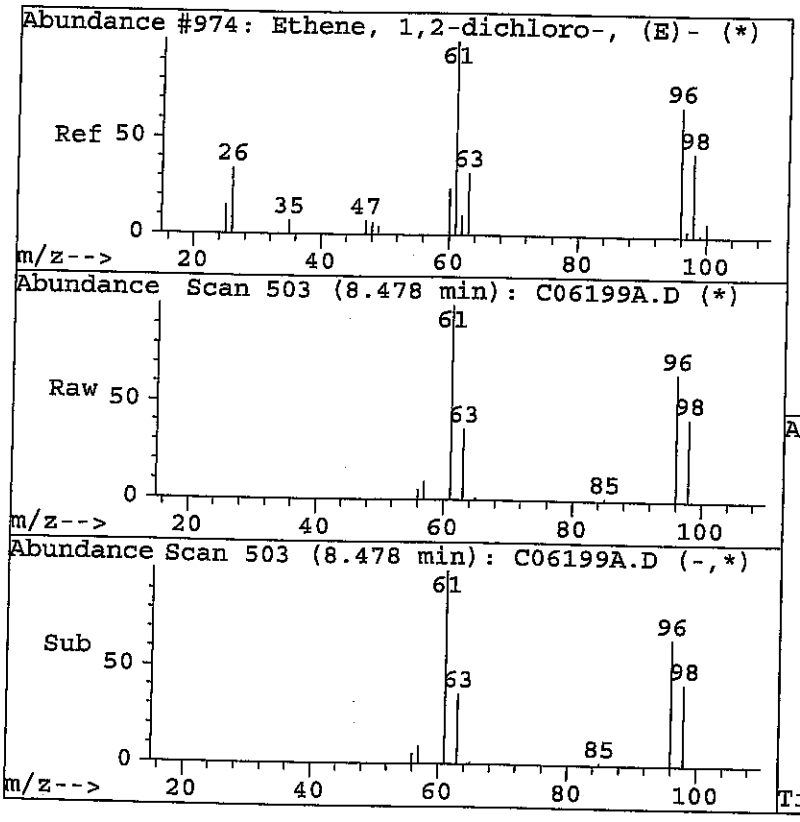


#11
Dichloromethane
Concen: 1.48 ppbV
RT: 7.42 min Scan# 415
Delta R.T. 0.00 min
Lab File: C06199A.D
Acq: 19 Jun 109 9:50 am

Tgt Ion:84 Resp: 530282

Ion	Ratio	Lower	Upper
84	100		
86	71.0	50.6	75.8
51	42.8	31.8	47.8
0	0.0	0.0	0.0

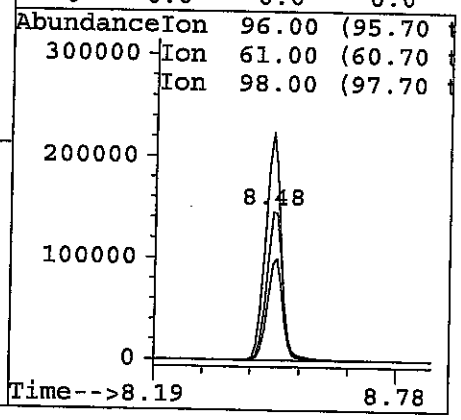


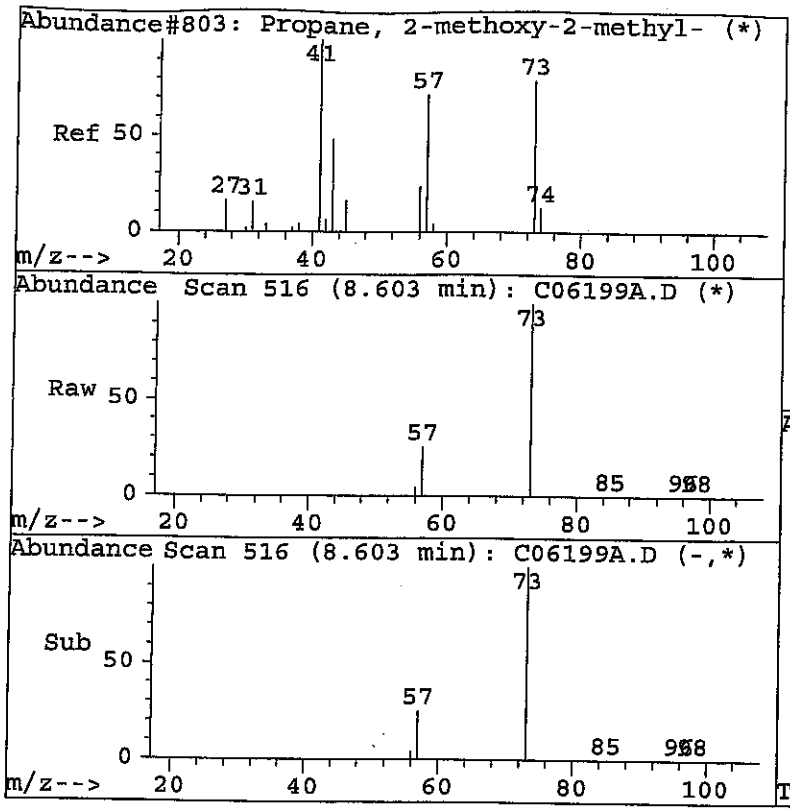


#12
trans-1,2-Dichloroethene
Concen: 0.93 ppbV
RT: 8.48 min Scan# 503
Delta R.T. -0.00 min
Lab File: C06199A.D
Acq: 19 Jun 109 9:50 am

Tgt Ion:96 Resp: 384125

Ion	Ratio	Lower	Upper
96	100		
61	153.7	124.3	186.5
98	64.9	51.1	76.7
0	0.0	0.0	0.0

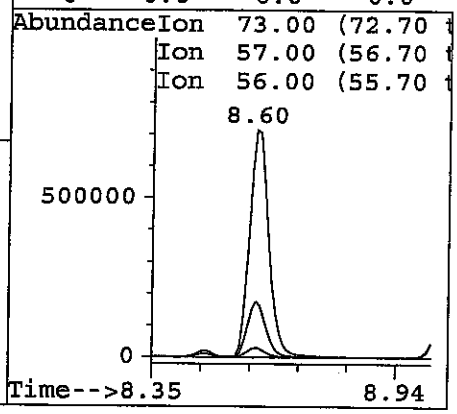


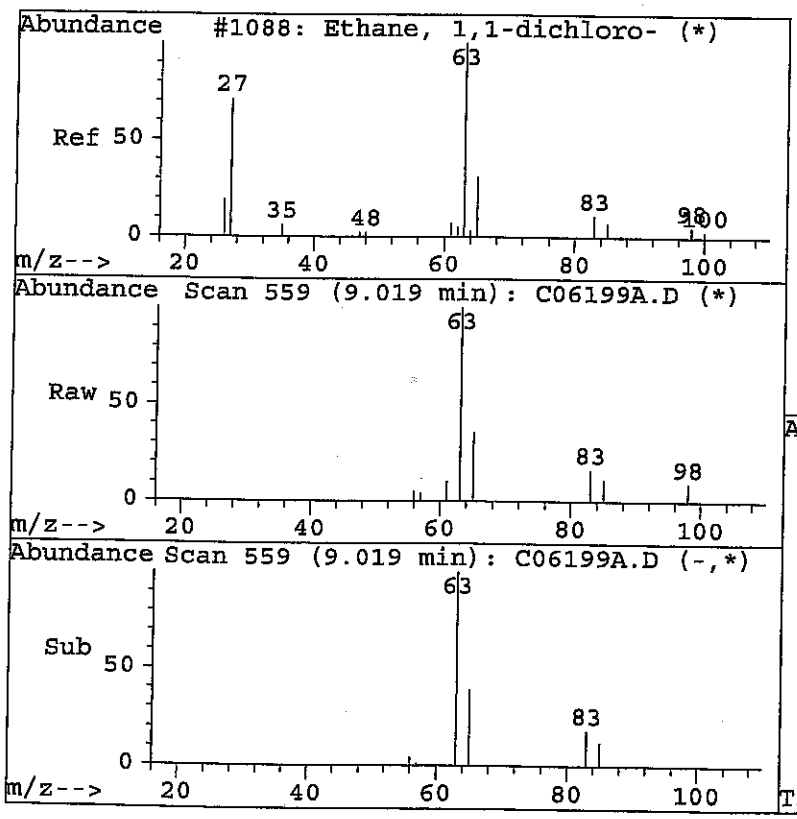


#13
Methyl tert butyl ether
Concen: 1.73 ppbV
RT: 8.60 min Scan# 516
Delta R.T. 0.00 min
Lab File: C06199A.D
Acq: 19 Jun 109 9:50 am

Tgt Ion:73 Resp: 2309675

Ion	Ratio	Lower	Upper
73	100		
57	24.5	15.2	22.8#
56	4.0	2.0	3.0#
0	0.0	0.0	0.0

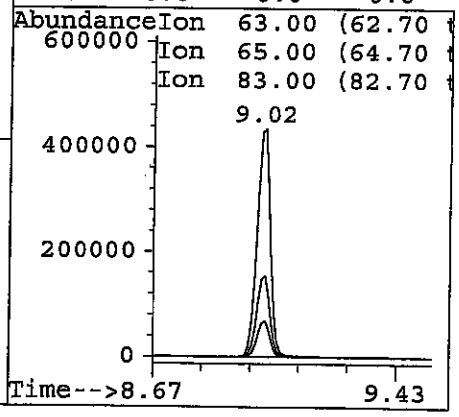


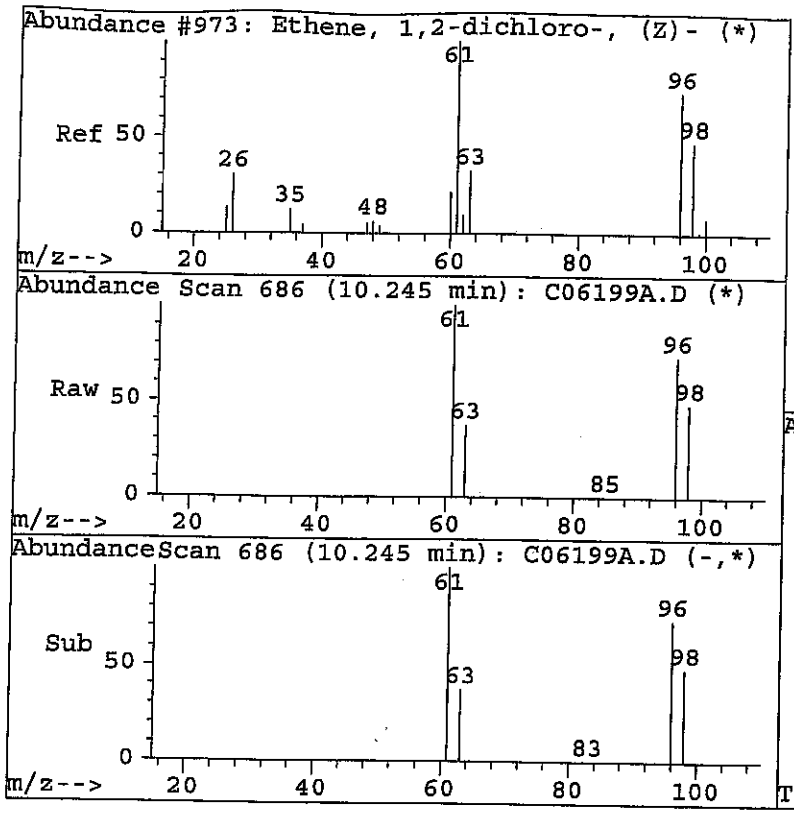


#14
1,1-Dichloroethane
Concen: 1.60 ppbV
RT: 9.02 min Scan# 559
Delta R.T. 0.02 min
Lab File: C06199A.D
Acq: 19 Jun 109 9:50 am

Tgt Ion:63 Resp: 1225807

Ion	Ratio	Lower	Upper
63	100		
65	35.3	25.1	37.7
83	15.8	10.4	15.6#
0	0.0	0.0	0.0

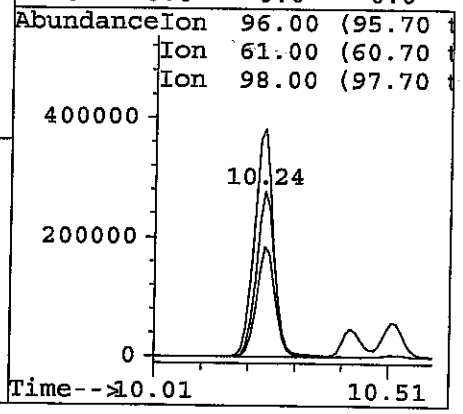


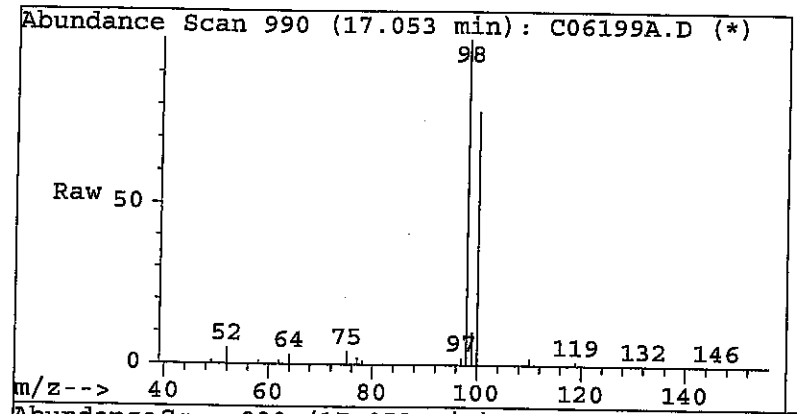


#15
cis-1,2-Dichloroethene
Concen: 1.55 ppbV
RT: 10.24 min Scan# 686
Delta R.T. 0.00 min
Lab File: C06199A.D
Acq: 19 Jun 109 9:50 am

Tgt Ion:96 Resp: 758337

Ion	Ratio	Lower	Upper
96	100		
61	134.7	103.0	154.4
98	66.5	50.2	75.4
0	0.0	0.0	0.0

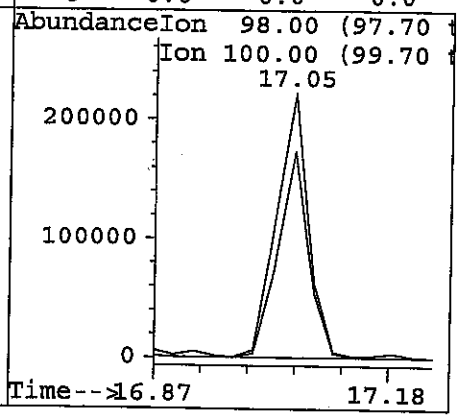


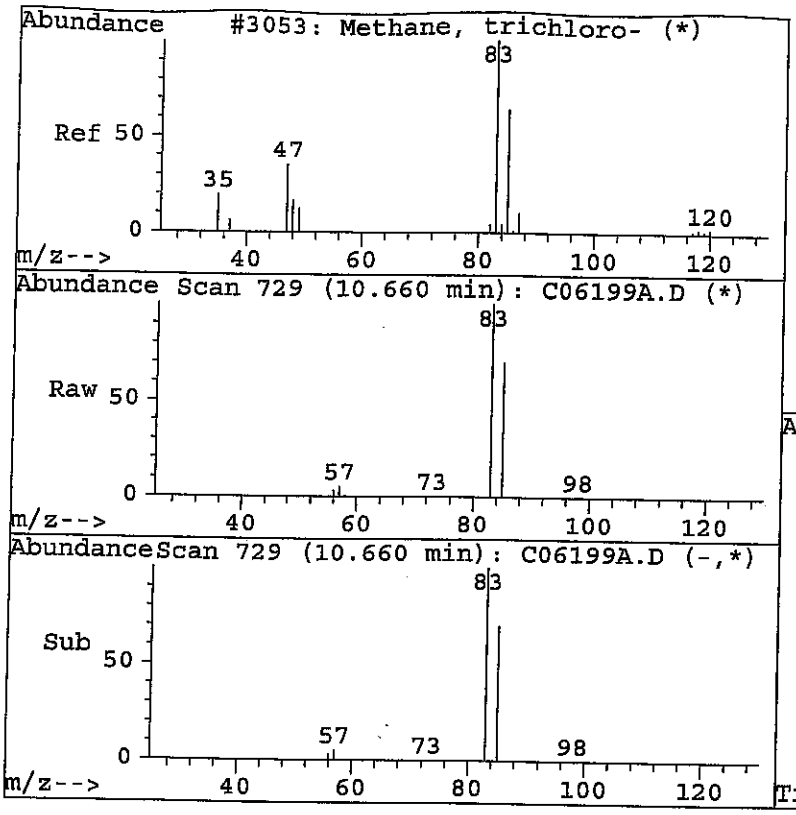


#16
Toluene-d8
Concen: 0.18 ppbV
RT: 17.05 min Scan# 990
Delta R.T. 0.00 min
Lab File: C06199A.D
Acq: 19 Jun 109 9:50 am

Tgt Ion:98 Resp: 652462

Ion	Ratio	Lower	Upper
98	100		
100	76.1	60.2	90.4
0	0.0	0.0	0.0
0	0.0	0.0	0.0

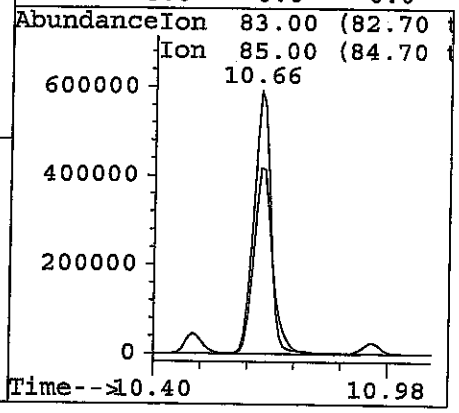


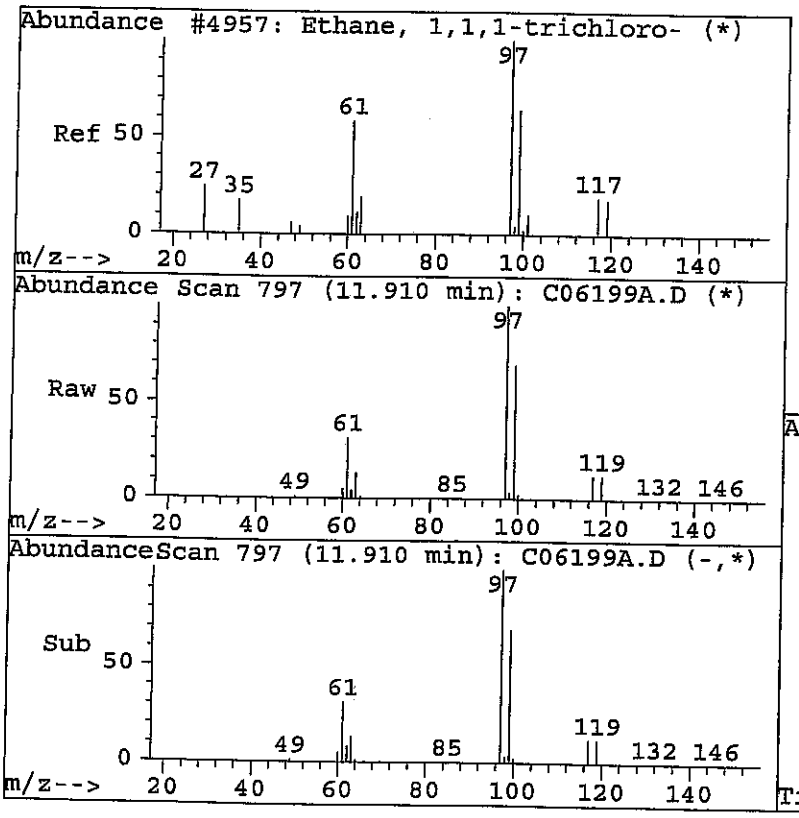


#17
Chloroform
Concen: 1.69 ppbV
RT: 10.66 min Scan# 729
Delta R.T. -0.00 min
Lab File: C06199A.D
Acq: 19 Jun 109 9:50 am

Tgt Ion:83 Resp: 1697577

Ion	Ratio	Lower	Upper
83	100		
85	69.4	52.5	78.7
0	0.0	0.0	0.0
0	0.0	0.0	0.0

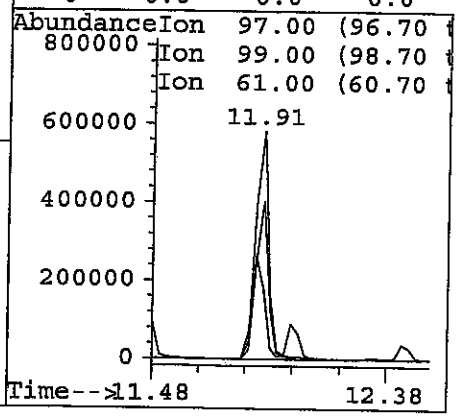


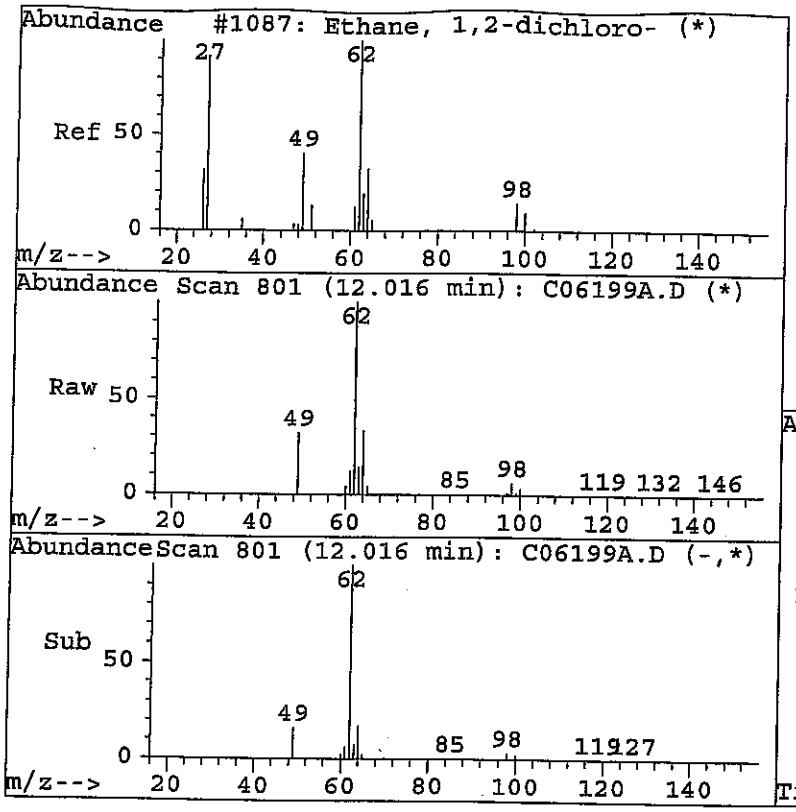


#18
1,1,1-Trichloroethane
Concen: 1.77 ppbV
RT: 11.91 min Scan# 797
Delta R.T. -0.00 min
Lab File: C06199A.D
Acq: 19 Jun 109 9:50 am

Tgt Ion:97 Resp: 1955378

Ion	Ratio	Lower	Upper
97	100		
99	69.2	51.4	77.0
61	30.6	30.8	46.2#
0	0.0	0.0	0.0

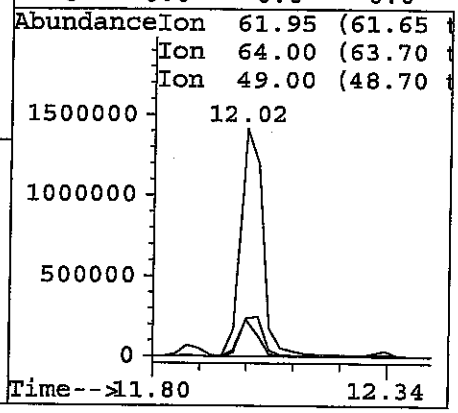


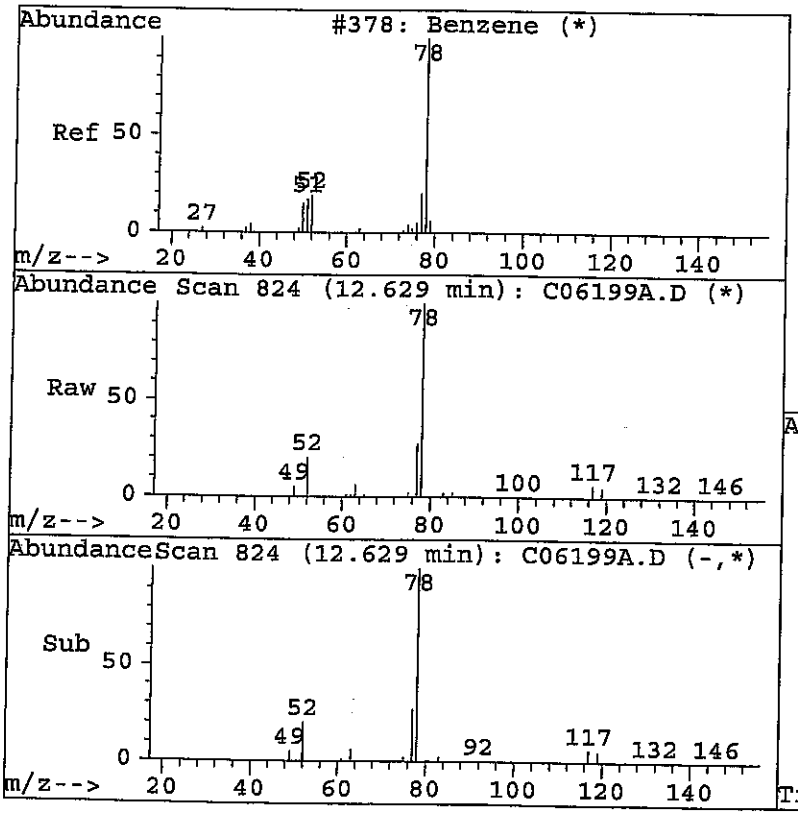


#19
1,2-Dichloroethane
Concen: 2.59 ppbV
RT: 12.02 min Scan# 801
Delta R.T. -0.00 min
Lab File: C06199A.D
Acq: 19 Jun 109 9:50 am

Tgt Ion:61.95 Resp: 4935278

Ion	Ratio	Lower	Upper
62	100		
64	16.8	12.9	19.3
49	16.3	9.4	14.0#
0	0.0	0.0	0.0

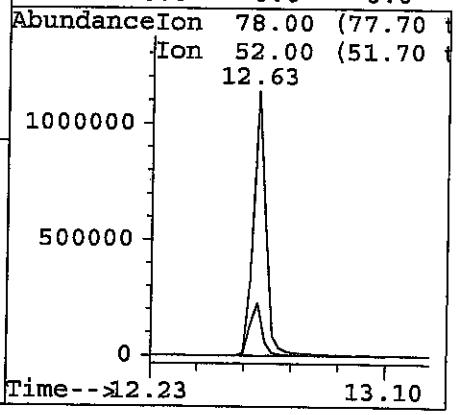


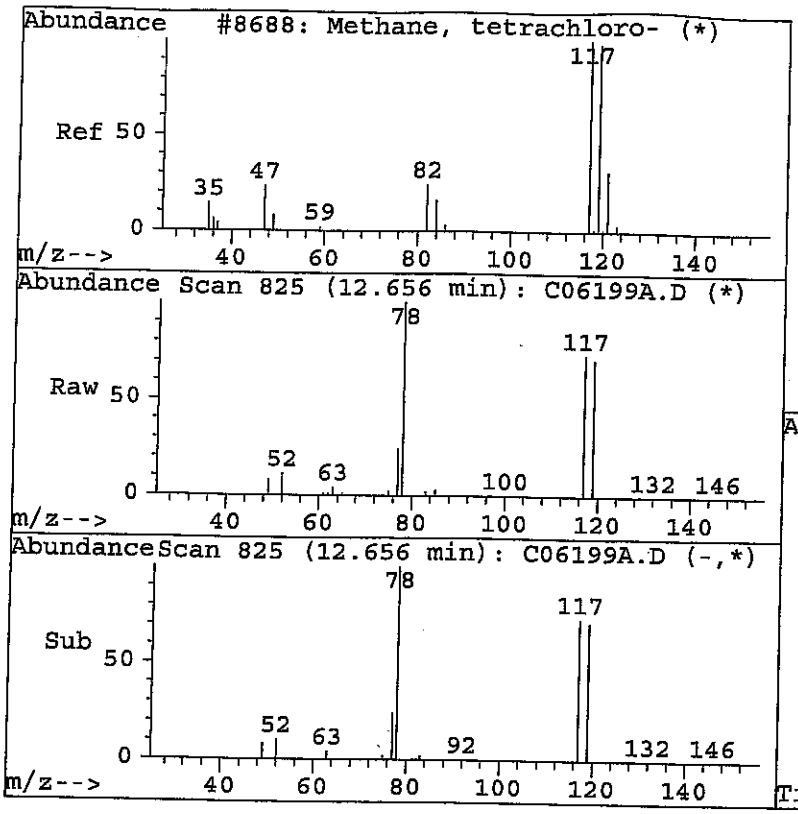


#20
Benzene
Concen: 2.42 ppbV
RT: 12.63 min Scan# 824
Delta R.T. -0.00 min
Lab File: C06199A.D
Acq: 19 Jun 109 9:50 am

Tgt Ion:78 Resp: 3573129

Ion	Ratio	Lower	Upper
78	100		
52	19.9	8.8	13.2#
0	0.0	0.0	0.0
0	0.0	0.0	0.0

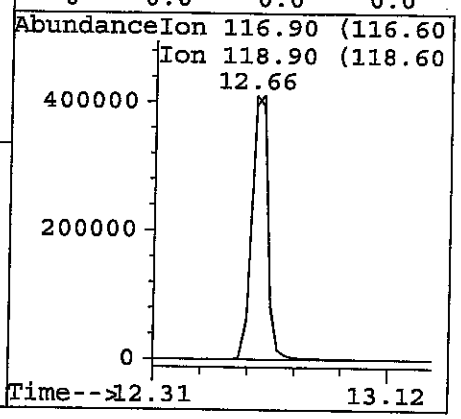


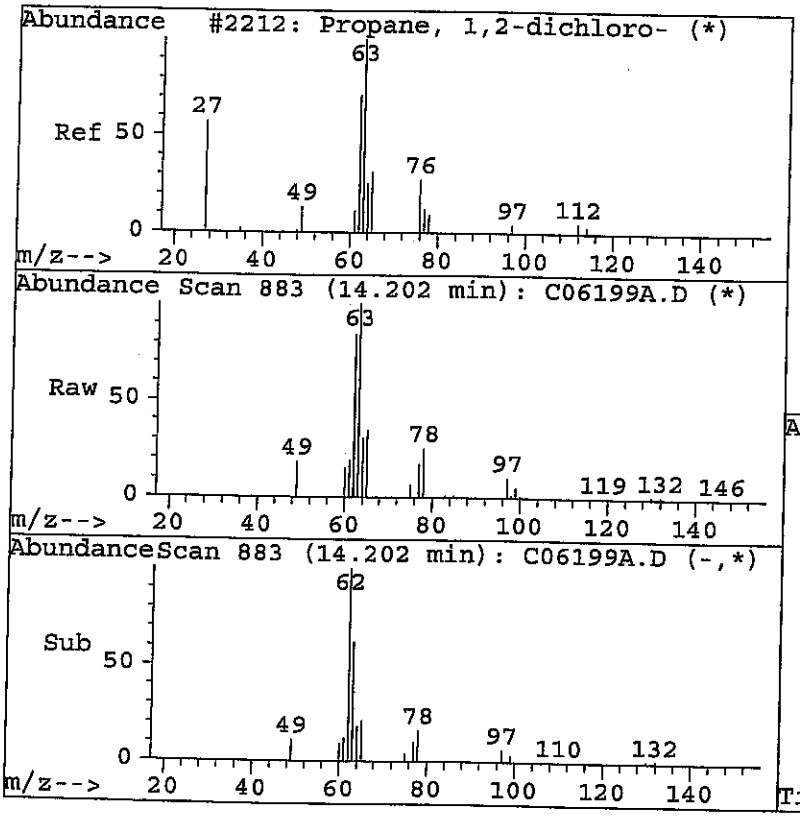


#21
Carbon tetrachloride
Concen: 1.64 ppbV
RT: 12.66 min Scan# 825
Delta R.T. -0.00 min
Lab File: C06199A.D
Acq: 19 Jun 109 9:50 am

Tgt Ion:116.9 Resp: 1579809

Ion	Ratio	Lower	Upper
117	100		
119	96.5	78.2	117.4
0	0.0	0.0	0.0
0	0.0	0.0	0.0

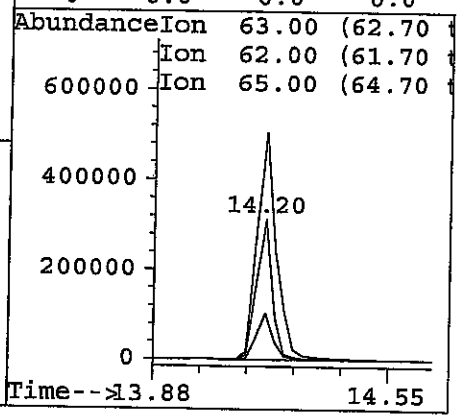


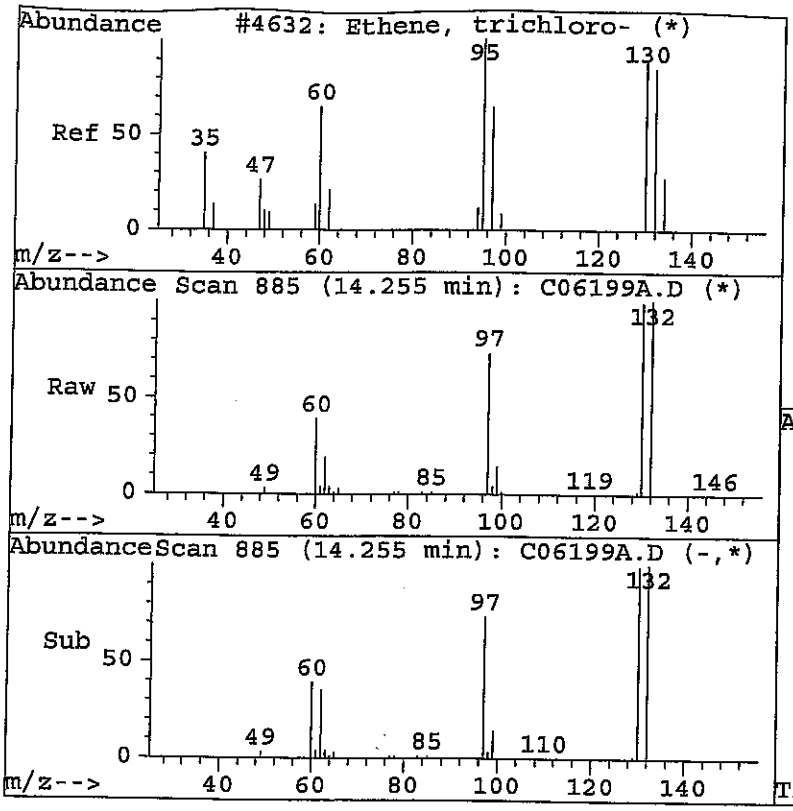


#22
1,2-Dichloropropane
Concen: 1.83 ppbV
RT: 14.20 min Scan# 883
Delta R.T. 0.00 min
Lab File: C06199A.D
Acq: 19 Jun 109 9:50 am

Tgt Ion:63 Resp: 957916

Ion	Ratio	Lower	Upper
63	100		
62	162.3	131.0	196.4
65	33.5	22.9	34.3
0	0.0	0.0	0.0

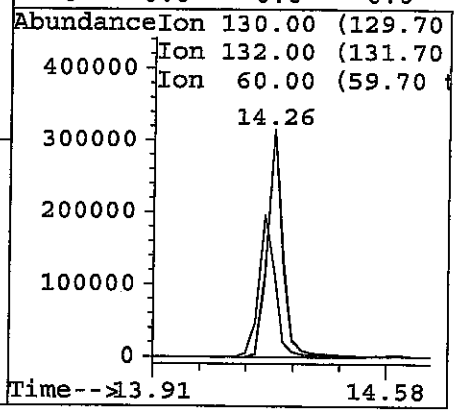


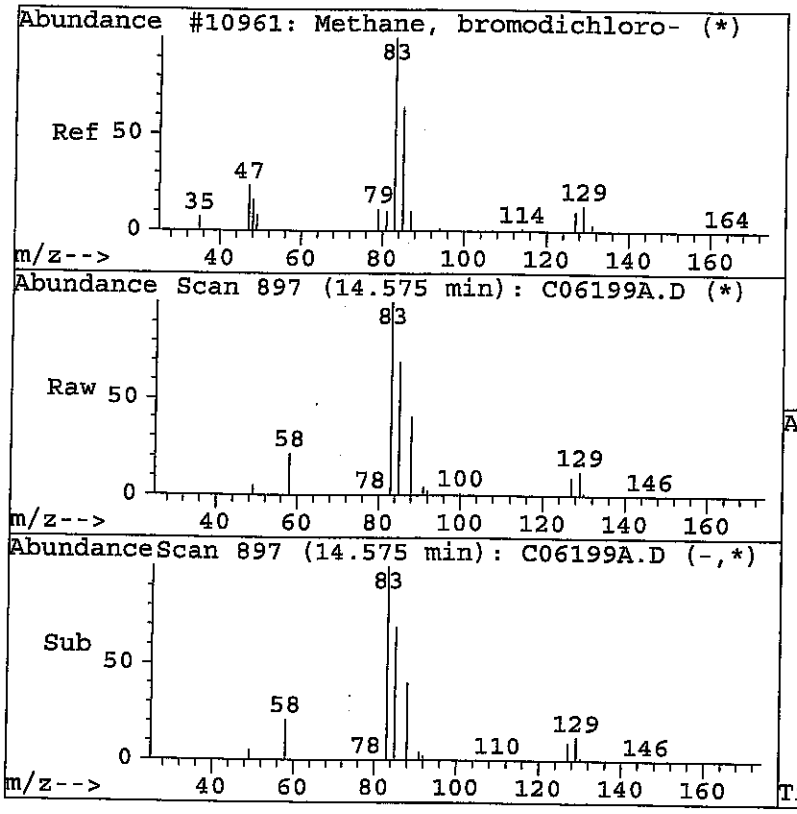


#23
Trichloroethene
Concen: 1.52 ppbV
RT: 14.26 min Scan# 885
Delta R.T. -0.00 min
Lab File: C06199A.D
Acq: 19 Jun 109 9:50 am

Tgt Ion:130 Resp: 968228

Ion	Ratio	Lower	Upper
130	100		
132	101.0	73.4	110.0
60	39.1	48.6	72.8#
0	0.0	0.0	0.0

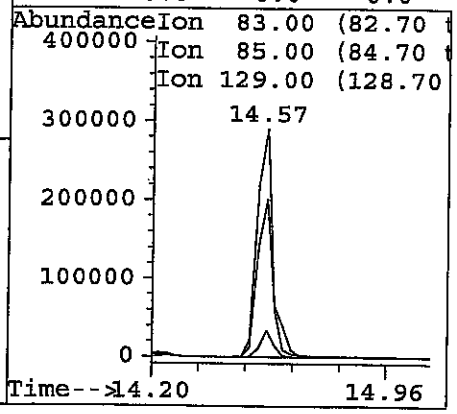


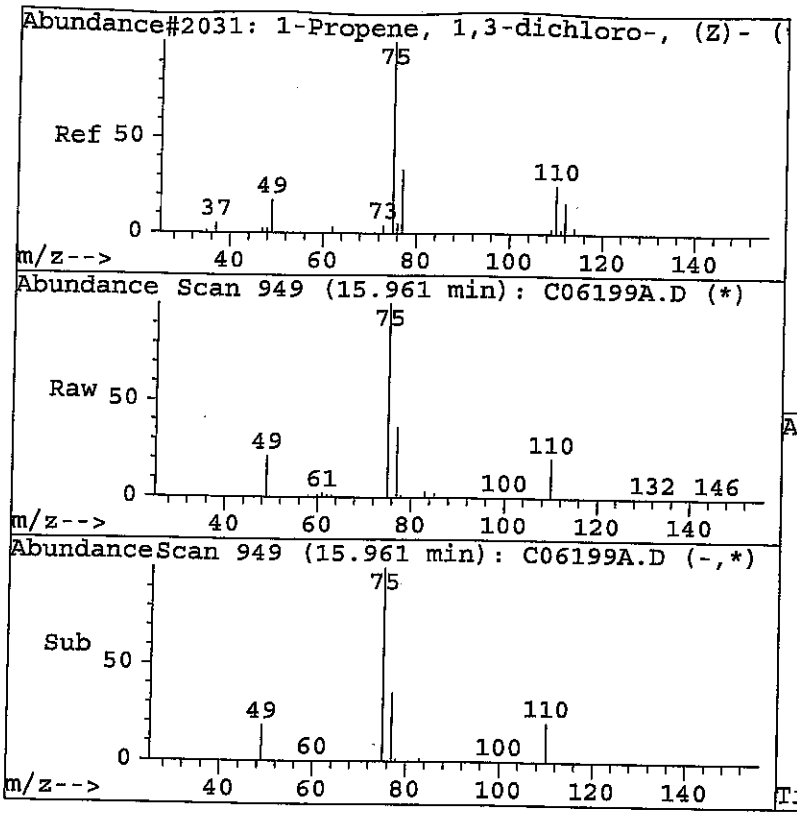


#24
Bromodichloromethane
Concen: 0.83 ppbV
RT: 14.57 min Scan# 897
Delta R.T. 0.00 min
Lab File: C06199A.D
Acq: 19 Jun 109 9:50 am

Tgt Ion:83 Resp: 980125

Ion	Ratio	Lower	Upper
83	100		
85	69.5	50.9	76.3
129	11.8	5.0	7.4#
0	0.0	0.0	0.0

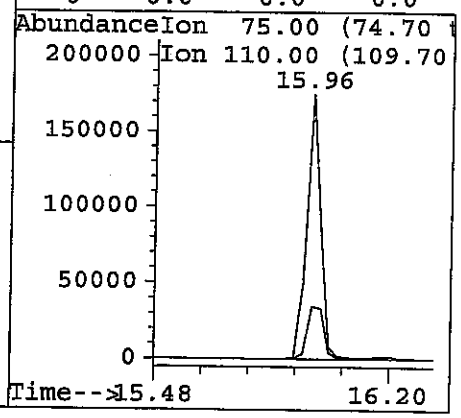


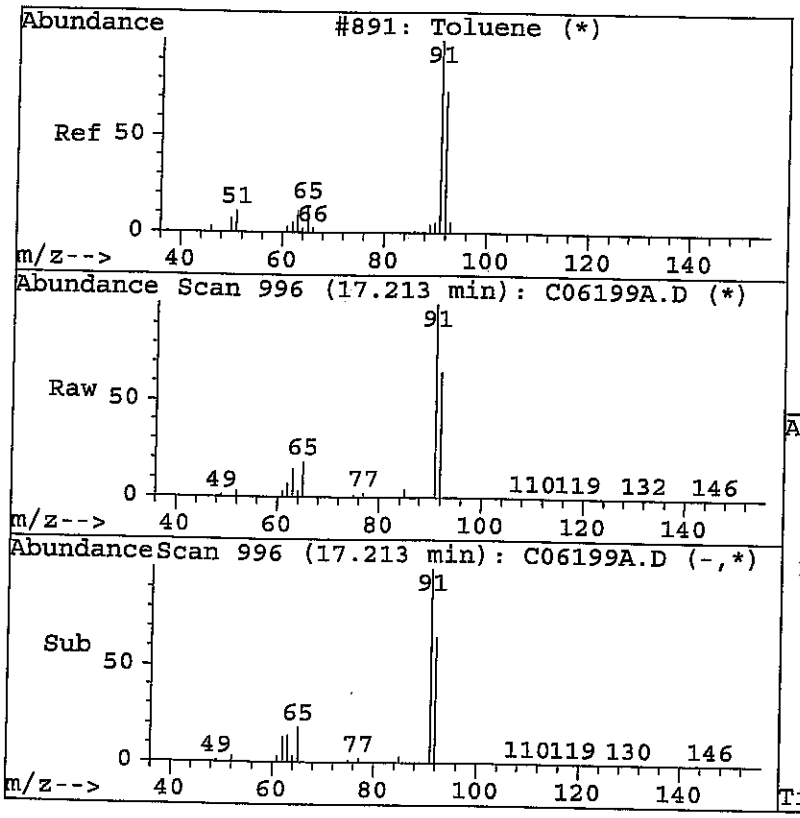


#25
cis-1,3-Dichloropropene
Concen: 1.11 ppbV
RT: 15.96 min Scan# 949
Delta R.T. 0.00 min
Lab File: C06199A.D
Acq: 19 Jun 109 9:50 am

Tgt Ion:75 Resp: 507174

Ion	Ratio	Lower	Upper
75	100		
110	19.6	15.0	22.6
0	0.0	0.0	0.0
0	0.0	0.0	0.0

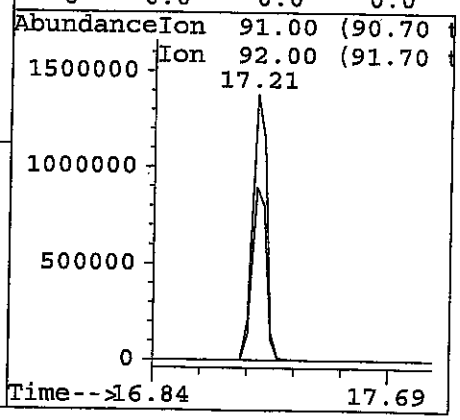


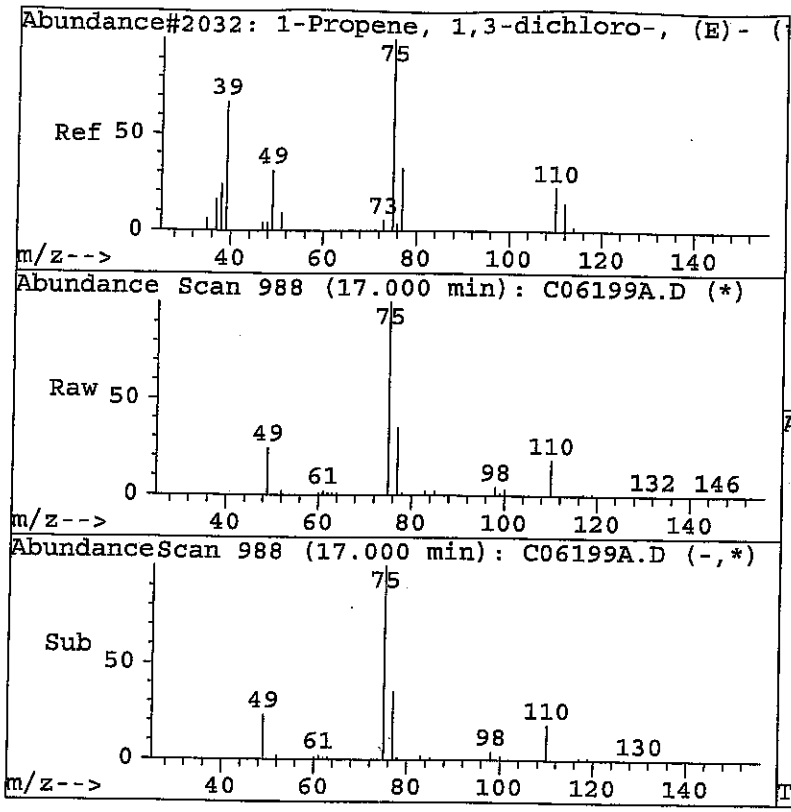


#26
Toluene
Concen: 2.19 ppbV
RT: 17.21 min Scan# 996
Delta R.T. 0.00 min
Lab File: C06199A.D
Acq: 19 Jun 109 9:50 am

Tgt Ion:91 Resp: 4659514

Ion	Ratio	Lower	Upper
91	100		
92	64.9	52.2	78.4
0	0.0	0.0	0.0
0	0.0	0.0	0.0

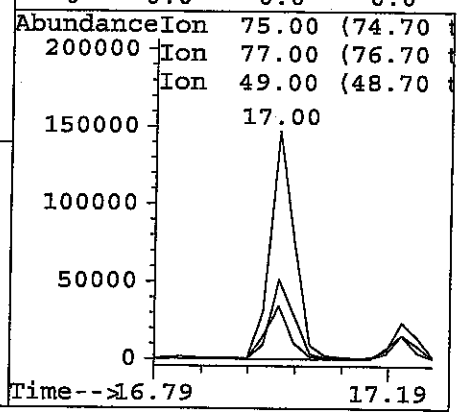


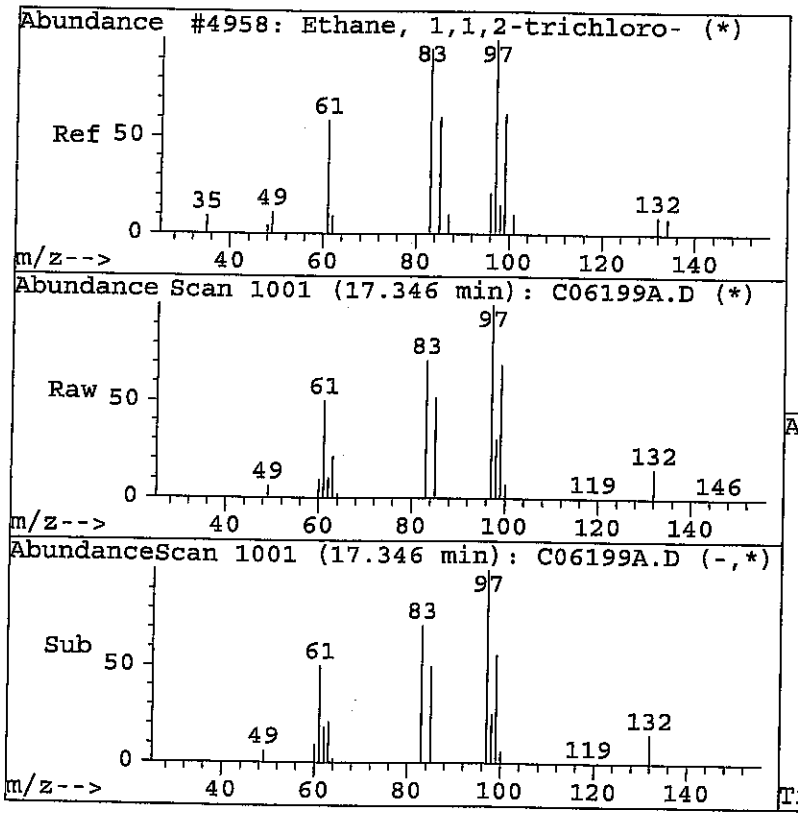


#27
trans-1,3-Dichloropropene
Concen: 1.00 ppbV
RT: 17.00 min Scan# 988
Delta R.T. -0.00 min
Lab File: C06199A.D
Acq: 19 Jun 109 9:50 am

Tgt Ion:75 Resp: 428351

Ion	Ratio	Lower	Upper
75	100		
77	34.3	34.2	51.4
49	23.4	95.3	142.9#
0	0.0	0.0	0.0

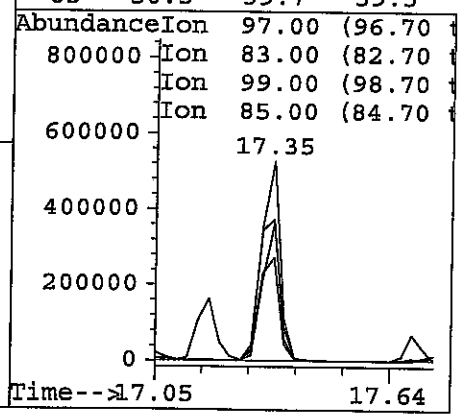


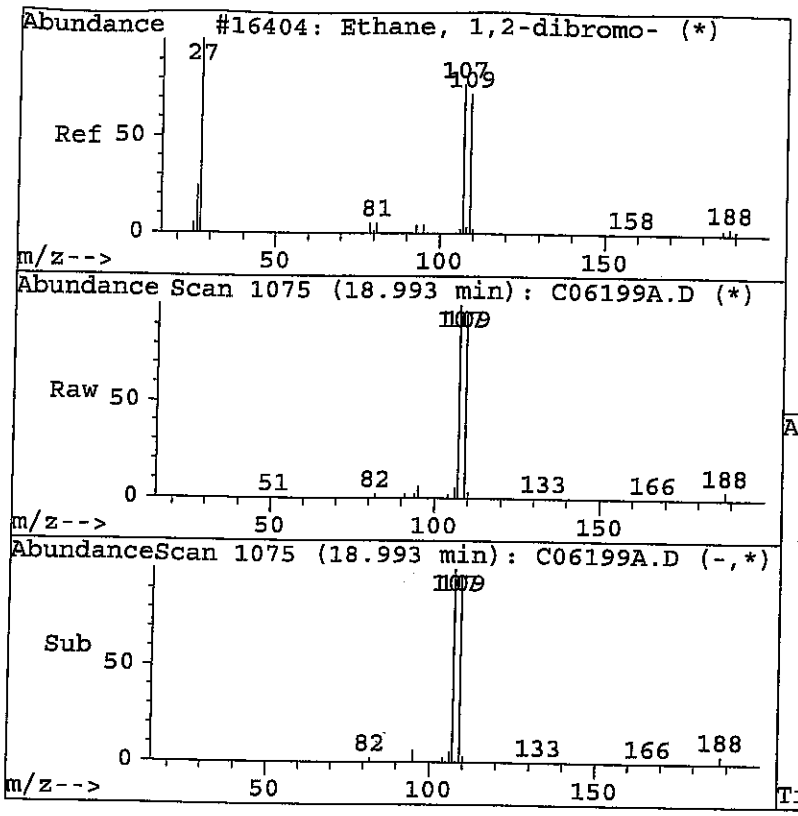


#28
1,1,2-Trichloroethane
Concen: 1.78 ppbV
RT: 17.35 min Scan# 1001
Delta R.T. -0.00 min
Lab File: C06199A.D
Acq: 19 Jun 109 9:50 am

Tgt Ion:97 Resp: 1655491

Ion	Ratio	Lower	Upper
97	100		
83	70.8	61.7	92.5
99	69.0	49.0	73.6
85	50.5	39.7	59.5

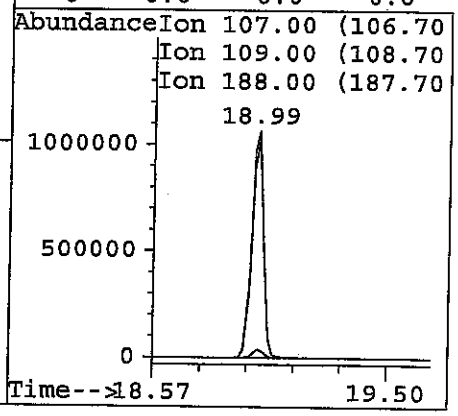


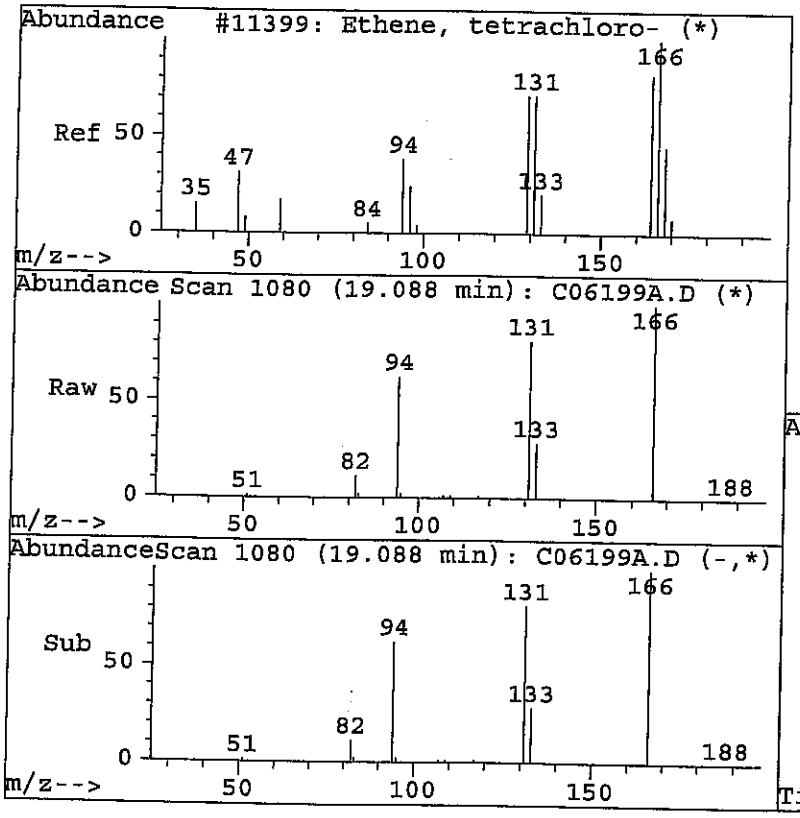


#29
1,2-Dibromoethane
Concen: 2.01 ppbV
RT: 18.99 min Scan# 1075
Delta R.T. 0.00 min
Lab File: C06199A.D
Acq: 19 Jun 109 9:50 am

Tgt Ion:107 Resp: 3403871

Ion	Ratio	Lower	Upper
107	100		
109	96.2	73.9	110.9
188	3.8	1.7	2.5#
0	0.0	0.0	0.0

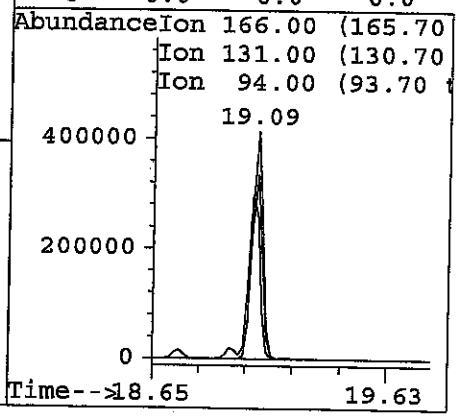


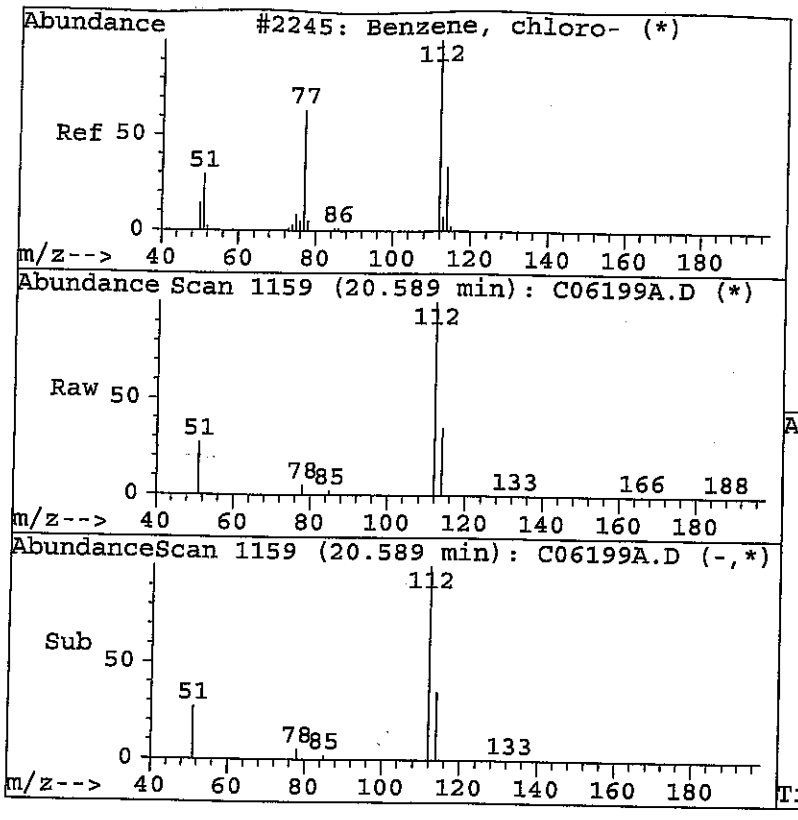


#30
Tetrachloroethene
Concen: 1.54 ppbV
RT: 19.09 min Scan# 1080
Delta R.T. -0.00 min
Lab File: C06199A.D
Acq: 19 Jun 109 9:50 am

Tgt Ion:166 Resp: 1224836

Ion	Ratio	Lower	Upper
166	100		
131	80.9	62.8	94.2
94	61.9	51.8	77.6
0	0.0	0.0	0.0

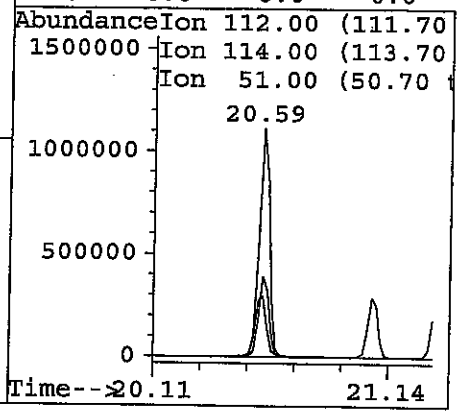


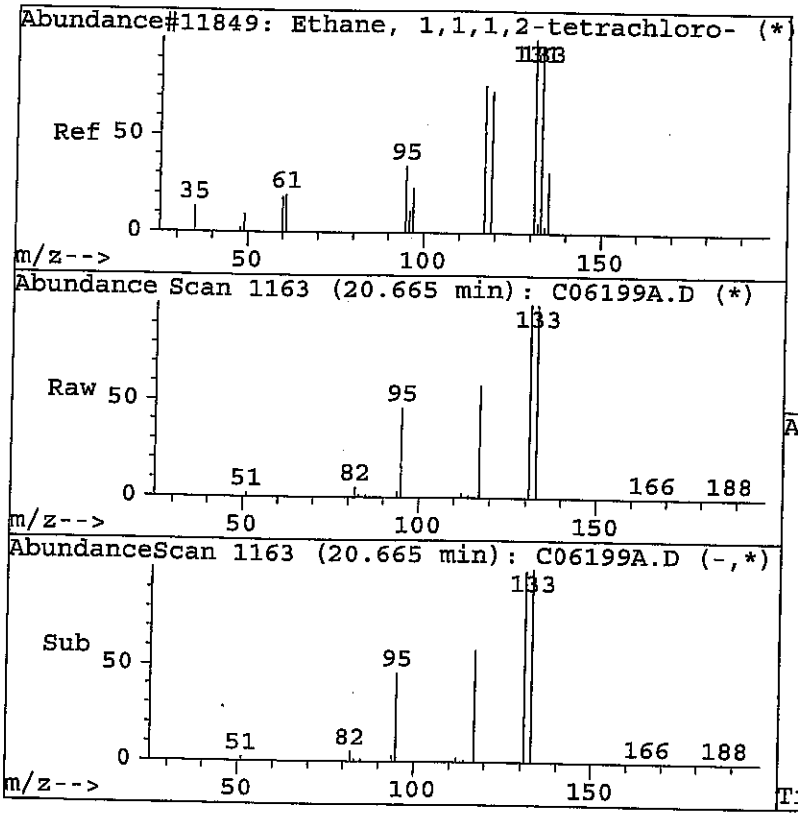


#31
Chlorobenzene
Concen: 1.50 ppbV
RT: 20.59 min Scan# 1159
Delta R.T. -0.00 min
Lab File: C06199A.D
Acq: 19 Jun 109 9:50 am

Tgt Ion:112 Resp: 3390004

Ion	Ratio	Lower	Upper
112	100		
114	35.2	25.8	38.6
51	25.9	11.7	17.5#
0	0.0	0.0	0.0

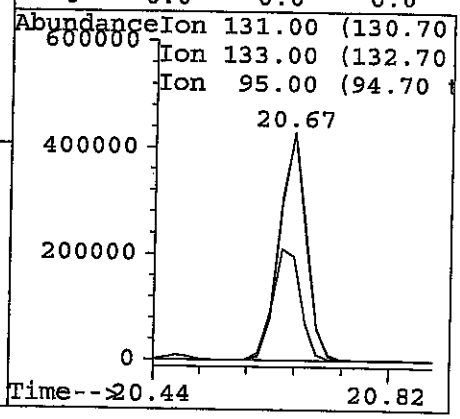


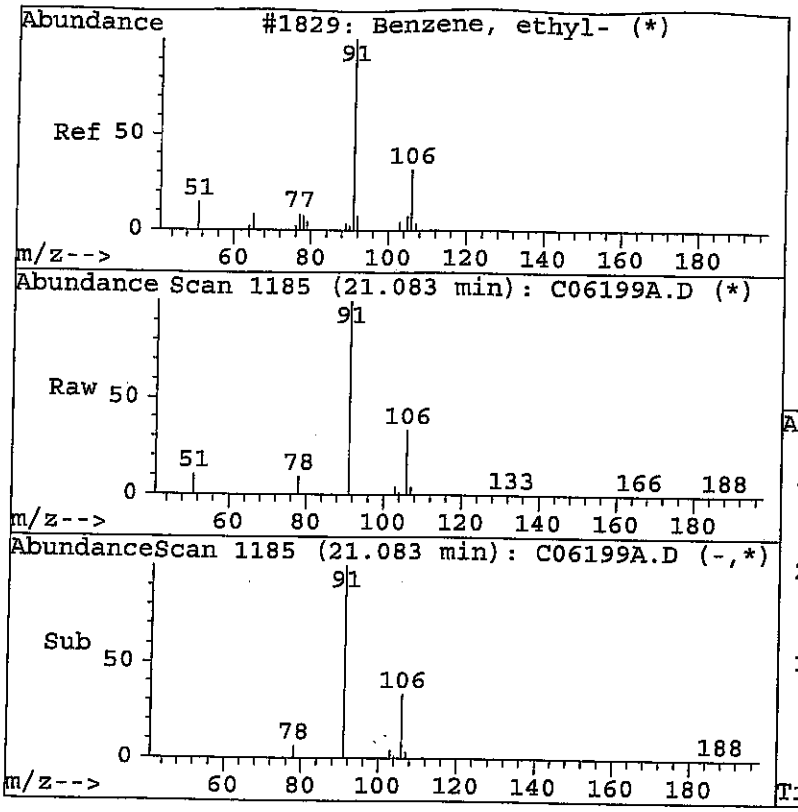


#32
1,1,1,2-Tetrachloroethane
Concen: 1.40 ppbV
RT: 20.67 min Scan# 1163
Delta R.T. -0.00 min
Lab File: C06199A.D
Acq: 19 Jun 109 9:50 am

Tgt Ion:131 Resp: 1296234

Ion	Ratio	Lower	Upper
131	100		
133	100.5	77.0	115.6
95	45.9	37.0	55.4
0	0.0	0.0	0.0

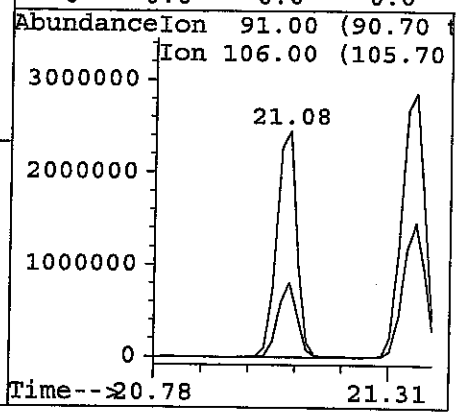


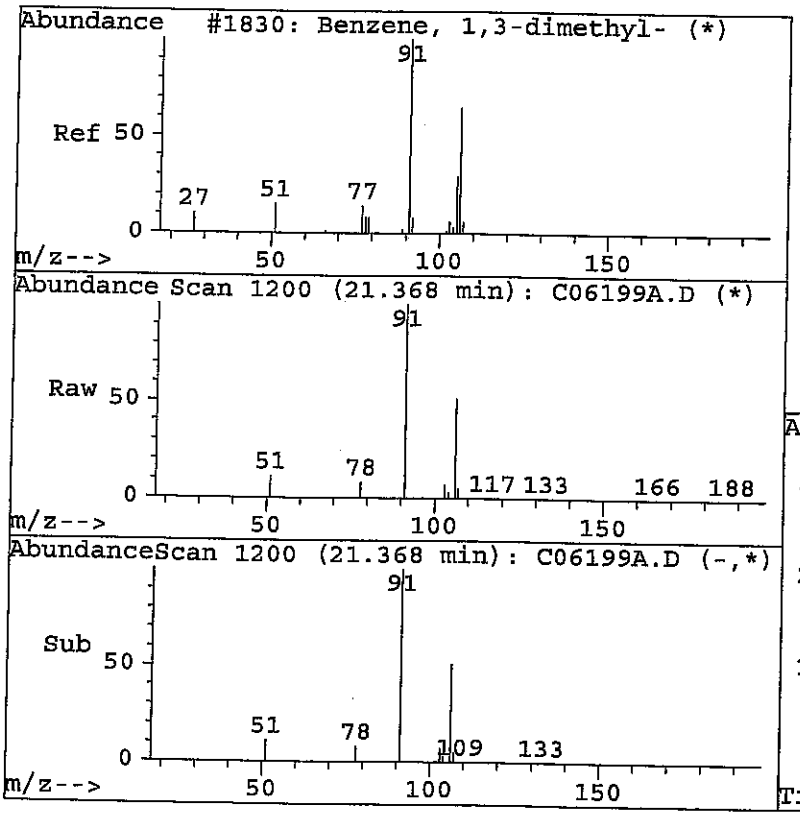


#33
Ethylbenzene
Concen: 1.94 ppbV
RT: 21.08 min Scan# 1185
Delta R.T. 0.00 min
Lab File: C06199A.D
Acq: 19 Jun 109 9:50 am

Tgt Ion:91 Resp: 7709871

Ion	Ratio	Lower	Upper
91	100		
106	33.0	24.2	36.4
0	0.0	0.0	0.0
0	0.0	0.0	0.0

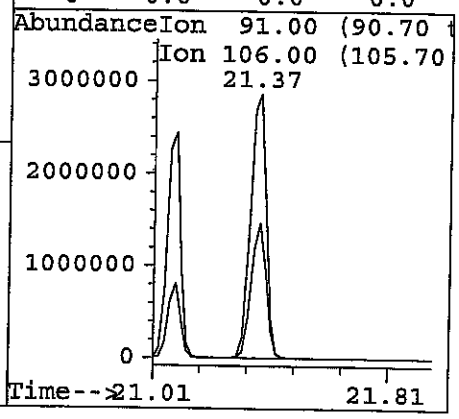


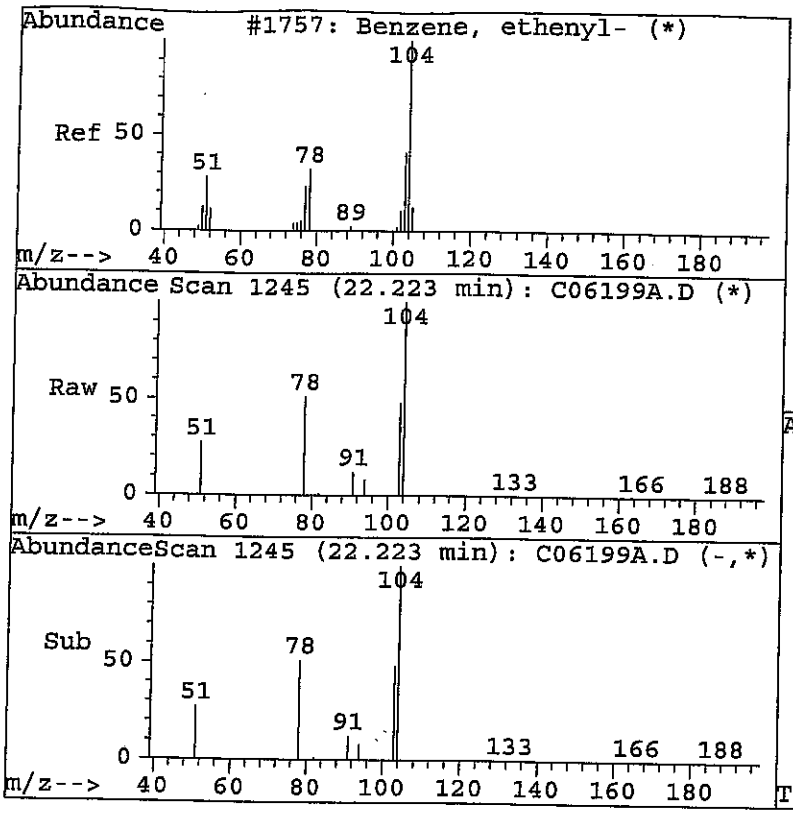


#34
m & p-Xylene
Concen: 3.34 ppbV
RT: 21.37 min Scan# 1200
Delta R.T. -0.00 min
Lab File: C06199A.D
Acq: 19 Jun 109 9:50 am

Tgt Ion:91 Resp:10312056

Ion	Ratio	Lower	Upper
91	100		
106	51.1	40.6	60.8
0	0.0	0.0	0.0
0	0.0	0.0	0.0

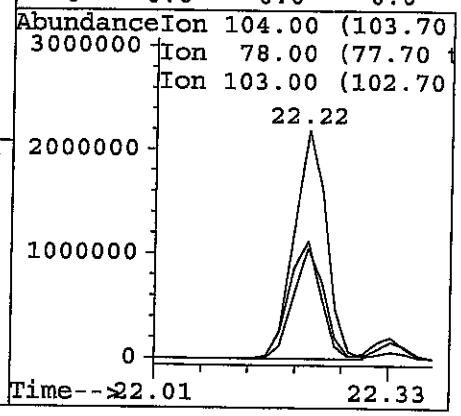


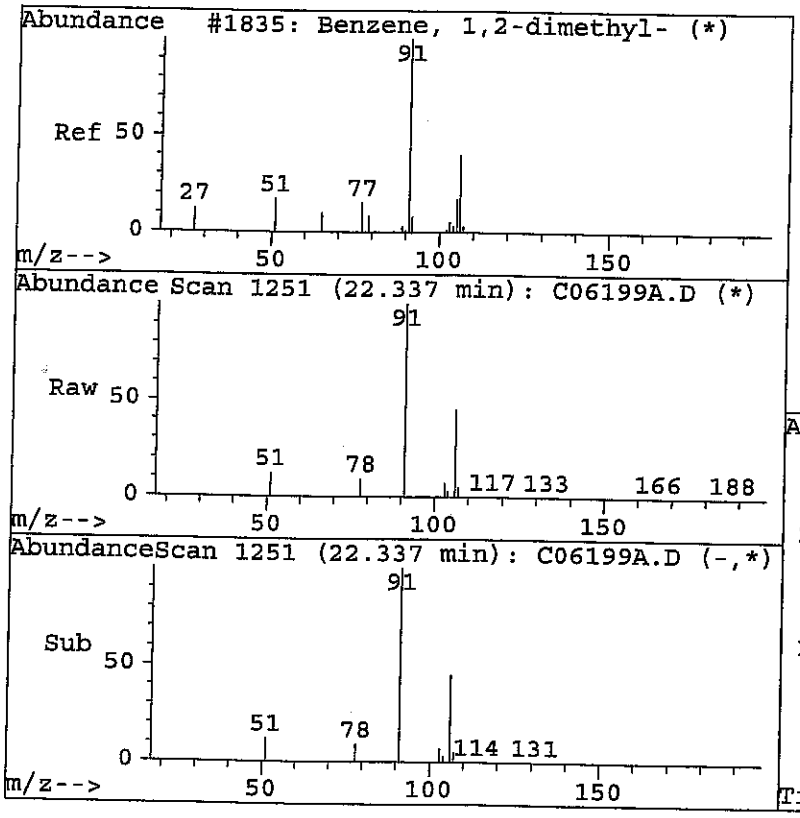


#35
Styrene
Concen: 1.80 ppbV
RT: 22.22 min Scan# 1245
Delta R.T. 0.00 min
Lab File: C06199A.D
Acq: 19 Jun 109 9:50 am

Tgt Ion:104 Resp: 6660464

Ion	Ratio	Lower	Upper
104	100		
78	50.2	39.2	58.8
103	47.7	35.8	53.6
0	0.0	0.0	0.0

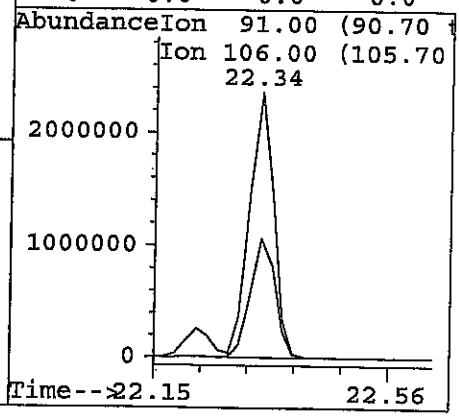


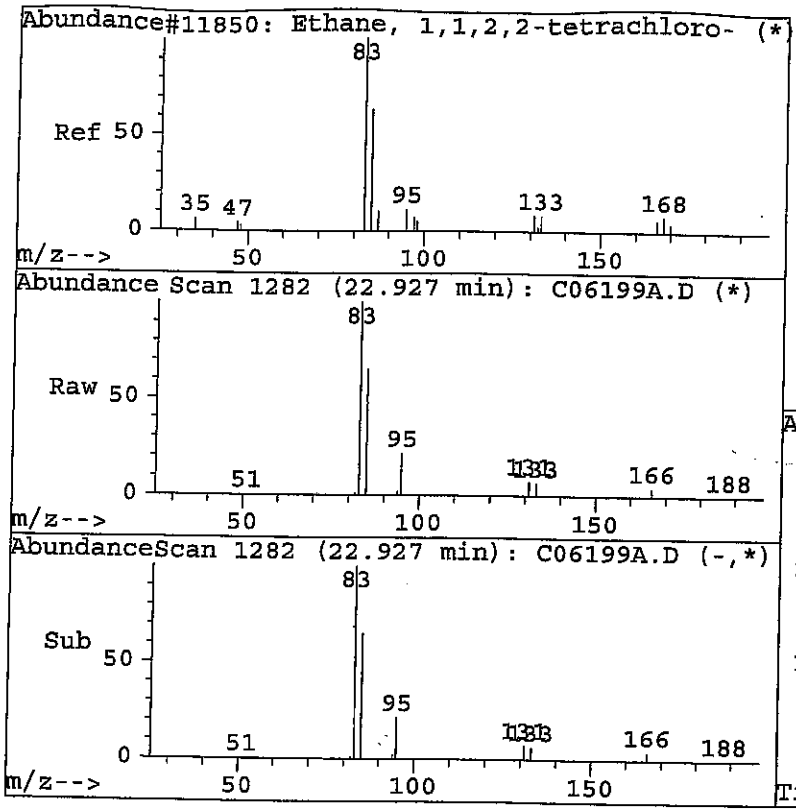


#36
o-Xylene
Concen: 1.77 ppbV
RT: 22.34 min Scan# 1251
Delta R.T. -0.00 min
Lab File: C06199A.D
Acq: 19 Jun 109 9:50 am

Tgt Ion:91 Resp: 6920115

Ion	Ratio	Lower	Upper
91	100		
106	45.4	37.7	56.5
0	0.0	0.0	0.0
0	0.0	0.0	0.0

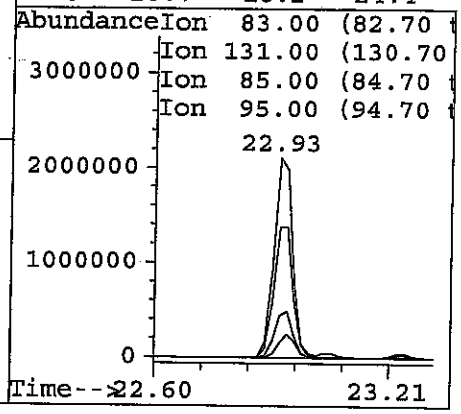


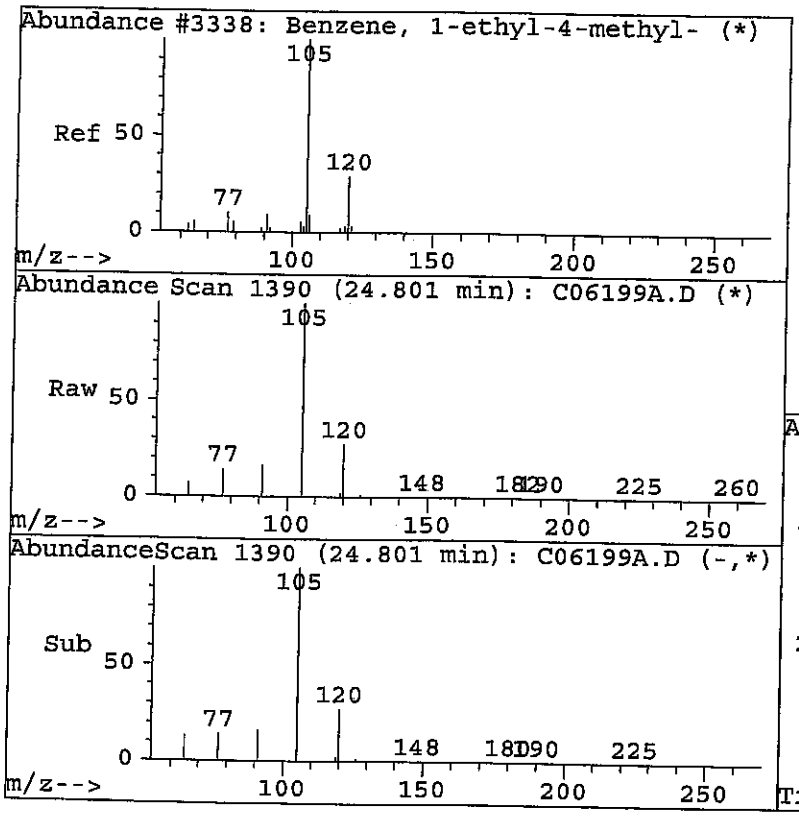


#37
1,1,2,2-Tetrachloroethane
Concen: 1.50 ppbV
RT: 22.93 min Scan# 1282
Delta R.T. -0.00 min
Lab File: C06199A.D
Acq: 19 Jun 109 9:50 am

Tgt Ion:83 Resp: 6988630

Ion	Ratio	Lower	Upper
83	100		
131	7.1	7.7	11.5#
85	65.1	55.1	82.7
95	20.7	16.2	24.4

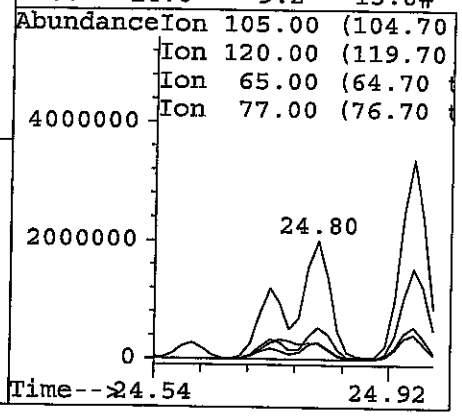


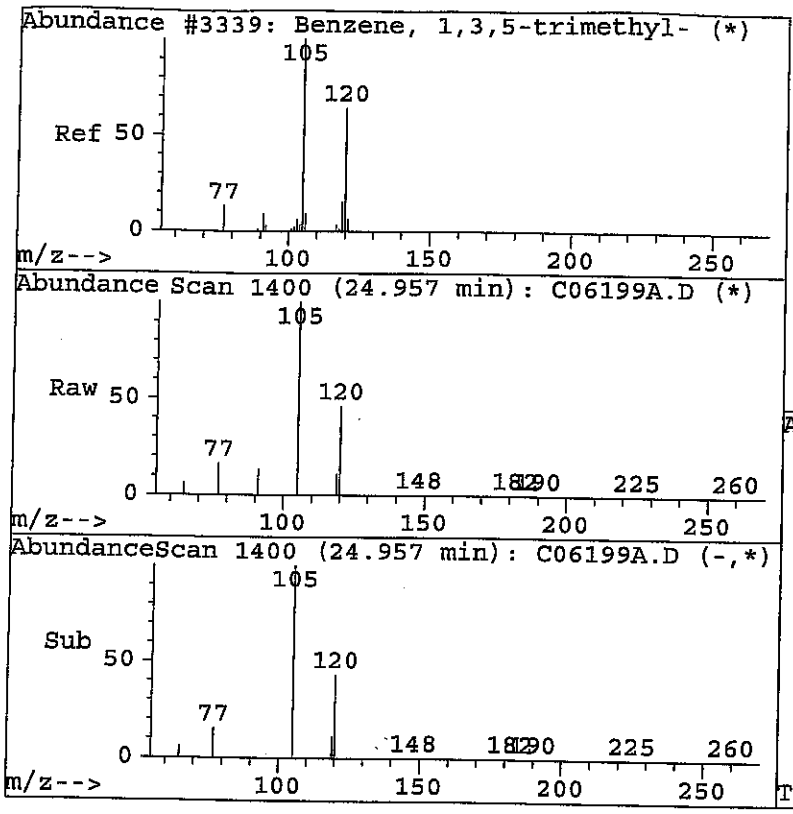


#38
4-Ethyltoluene
Concen: 1.28 ppbV m
RT: 24.80 min Scan# 1390
Delta R.T. 0.00 min
Lab File: C06199A.D
Acq: 19 Jun 109 9:50 am

Tgt Ion:105 Resp: 9342797

Ion	Ratio	Lower	Upper
105	100		
120	26.8	19.8	29.6
65	6.8	7.7	11.5#
77	14.0	9.2	13.8#

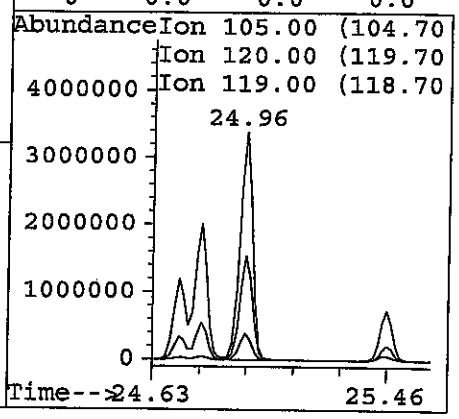


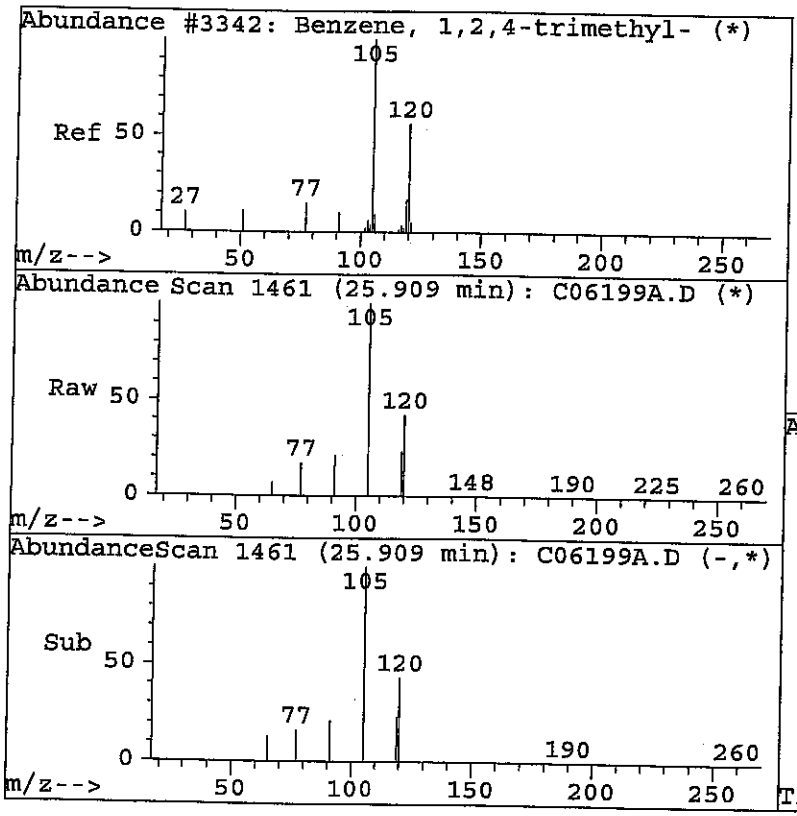


#39
1,3,5-Trimethylbenzene
Concen: 1.41 ppbV
RT: 24.96 min Scan# 1400
Delta R.T. -0.00 min
Lab File: C06199A.D
Acq: 19 Jun 109 9:50 am

Tgt Ion:105 Resp: 9985329

Ion	Ratio	Lower	Upper
105	100		
120	45.7	37.8	56.8
119	11.4	8.5	12.7
0	0.0	0.0	0.0

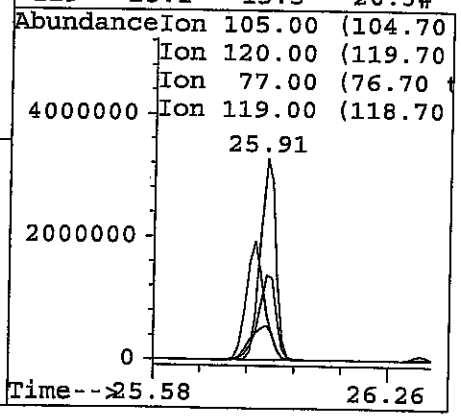


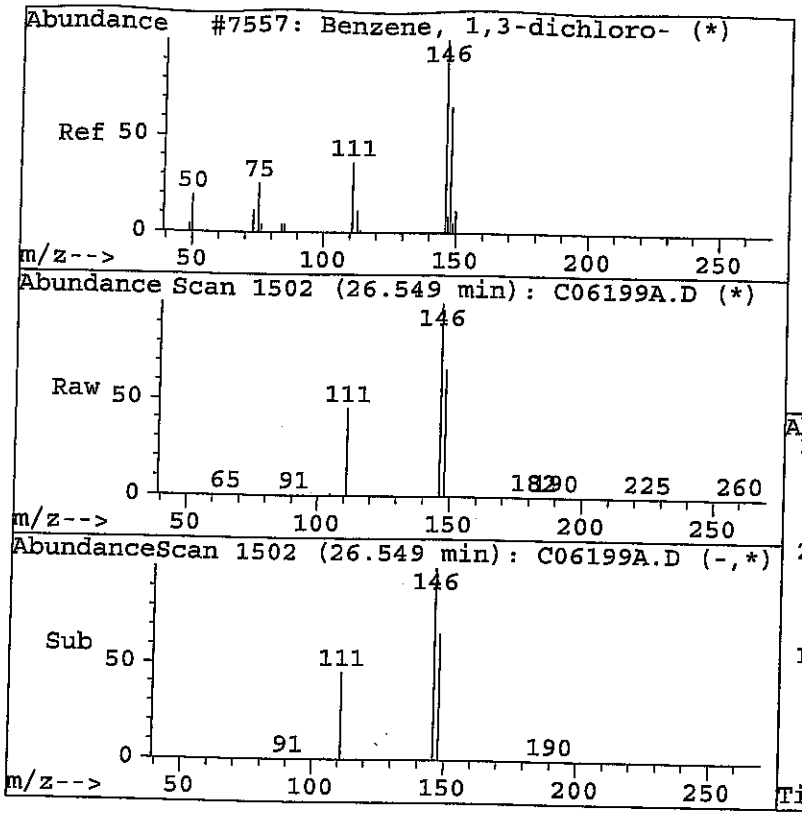


#40
1,2,4-Trimethylbenzene
Concen: 1.21 ppbV
RT: 25.91 min Scan# 1461
Delta R.T. -0.00 min
Lab File: C06199A.D
Acq: 19 Jun 109 9:50 am

Tgt Ion:105 Resp:10120607

Ion	Ratio	Lower	Upper
105	100		
120	42.1	35.4	53.2
77	17.4	10.9	16.3#
119	23.1	13.5	20.3#

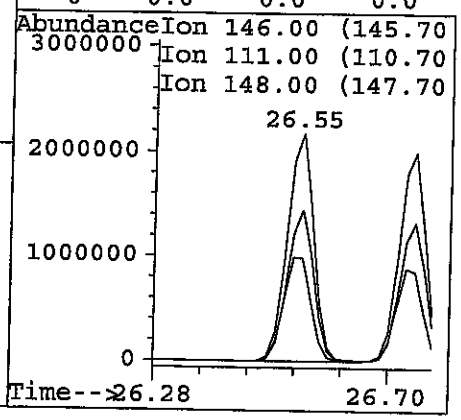


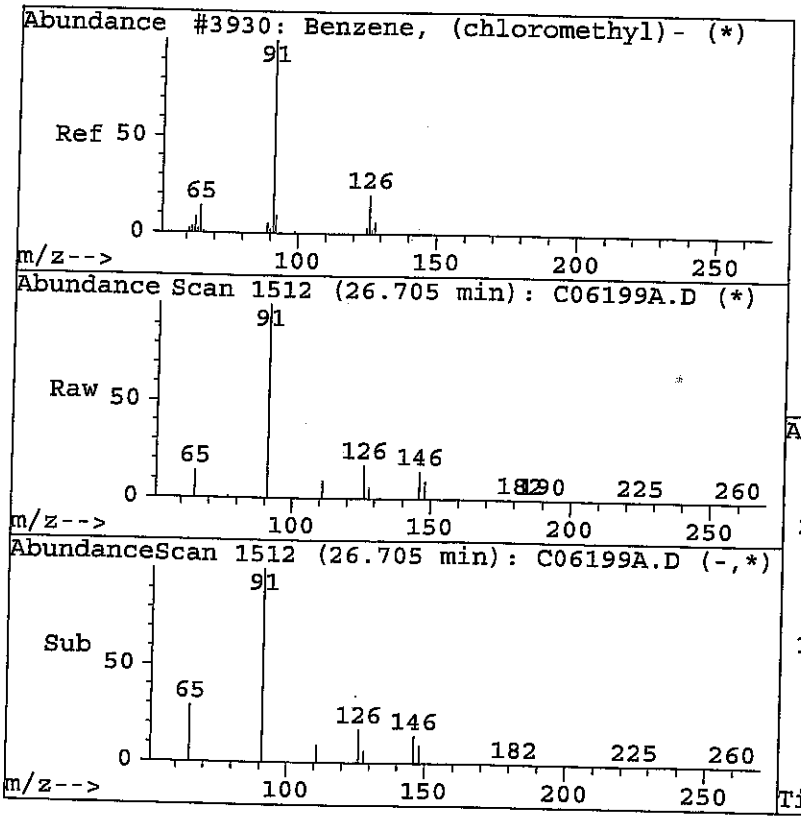


#41
1,3-Dichlorobenzene
Concen: 1.10 ppbV
RT: 26.55 min Scan# 1502
Delta R.T. -0.00 min
Lab File: C06199A.D
Acq: 19 Jun 109 9:50 am

Tgt Ion:146 Resp: 7032467

Ion	Ratio	Lower	Upper
146	100		
111	45.2	32.4	48.6
148	66.4	53.9	80.9
0	0.0	0.0	0.0

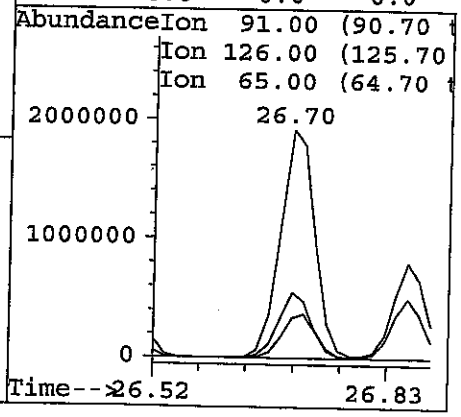


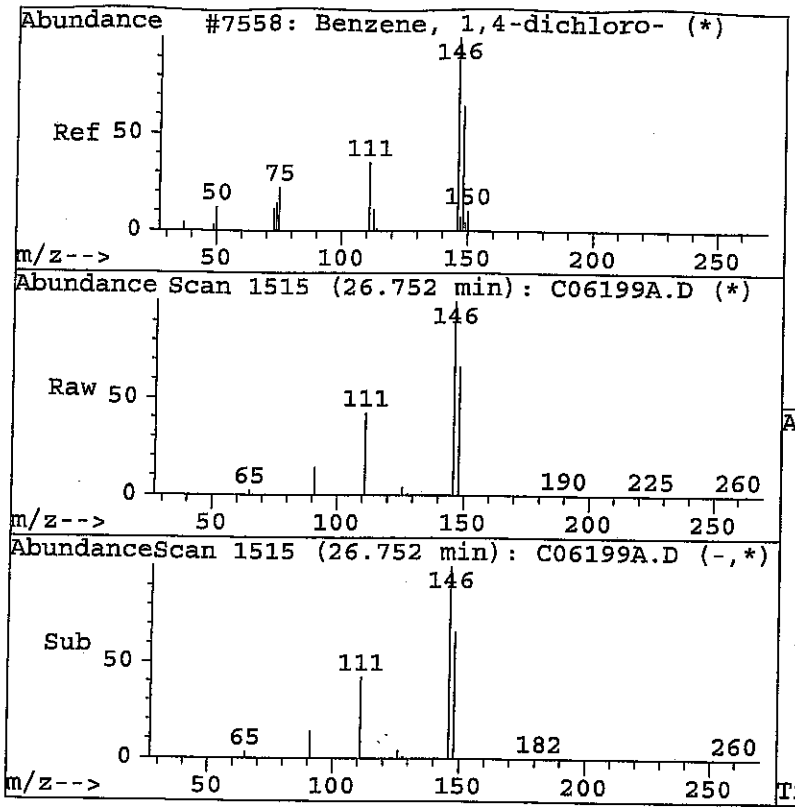


#42
Benzyl chloride
Concen: 0.92 ppbV
RT: 26.70 min Scan# 1512
Delta R.T. 0.00 min
Lab File: C06199A.D
Acq: 19 Jun 109 9:50 am

Tgt Ion:91 Resp: 6118543

Ion	Ratio	Lower	Upper
91	100		
126	17.5	12.6	19.0
65	28.6	19.4	29.0
0	0.0	0.0	0.0

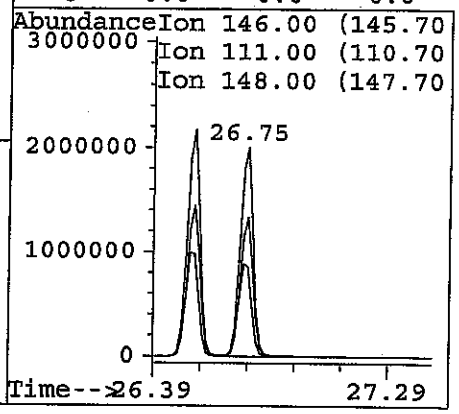


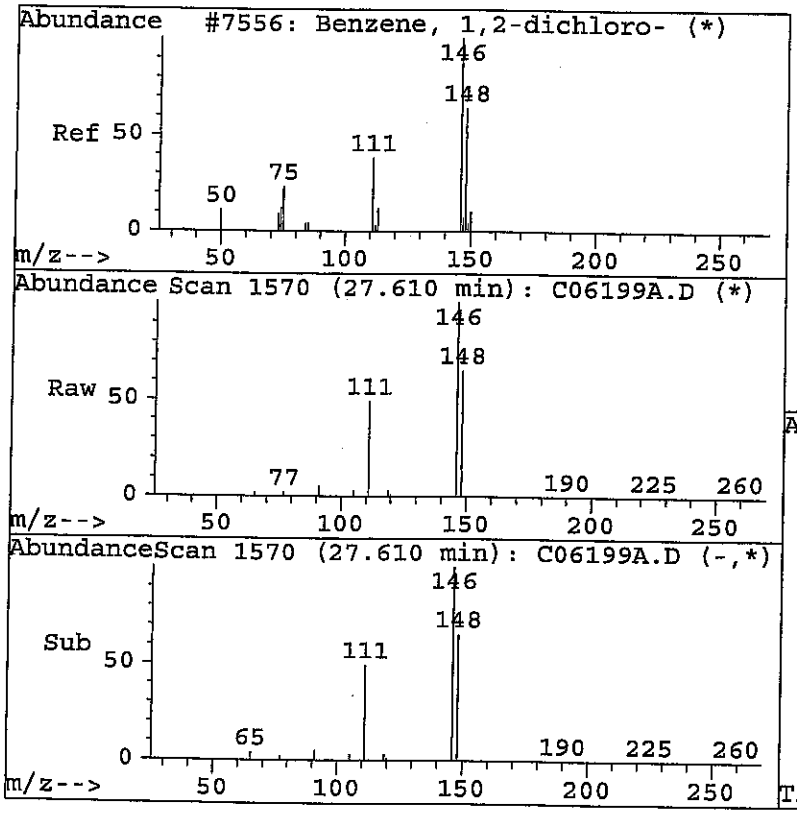


#43
1,4-Dichlorobenzene
Concen: 0.97 ppbV
RT: 26.75 min Scan# 1515
Delta R.T. 0.00 min
Lab File: C06199A.D
Acq: 19 Jun 109 9:50 am

Tgt Ion:146 Resp: 6500736

Ion	Ratio	Lower	Upper
146	100		
111	42.5	35.8	53.6
148	66.3	51.5	77.3
0	0.0	0.0	0.0

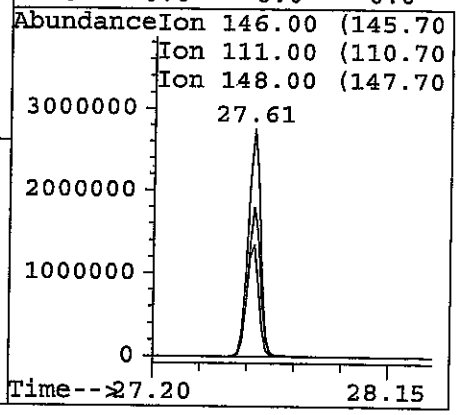


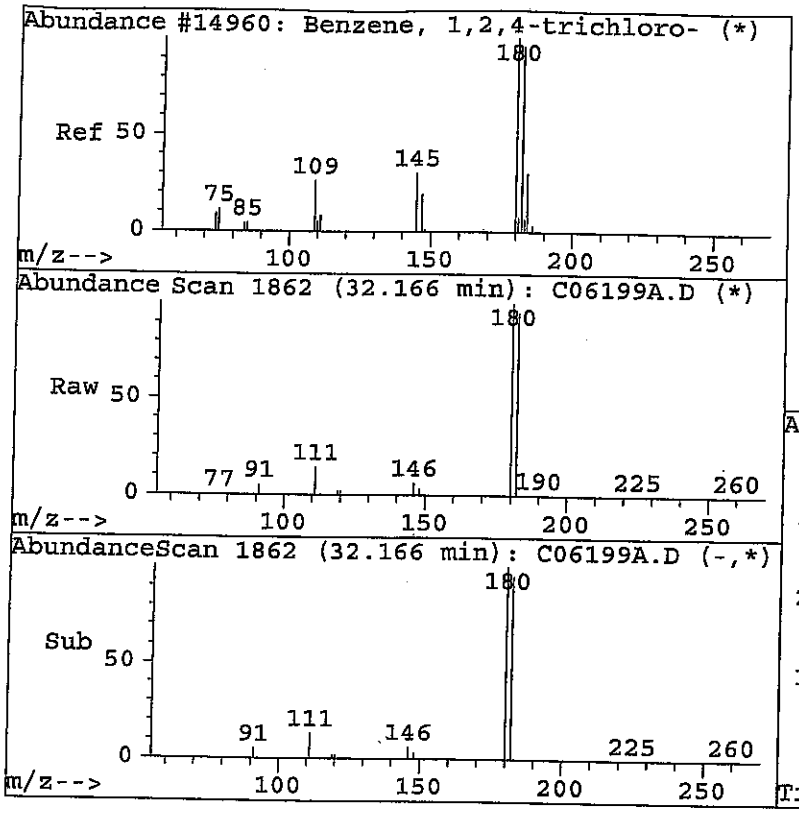


#44
1,2-Dichlorobenzene
Concen: 1.15 ppbV
RT: 27.61 min Scan# 1570
Delta R.T. -0.00 min
Lab File: C06199A.D
Acq: 19 Jun 109 9:50 am

Tgt Ion:146 Resp: 9089085

Ion	Ratio	Lower	Upper
146	100		
111	48.9	35.7	53.5
148	65.3	53.8	80.6
0	0.0	0.0	0.0

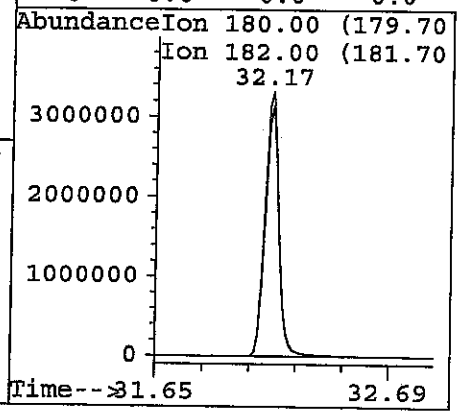


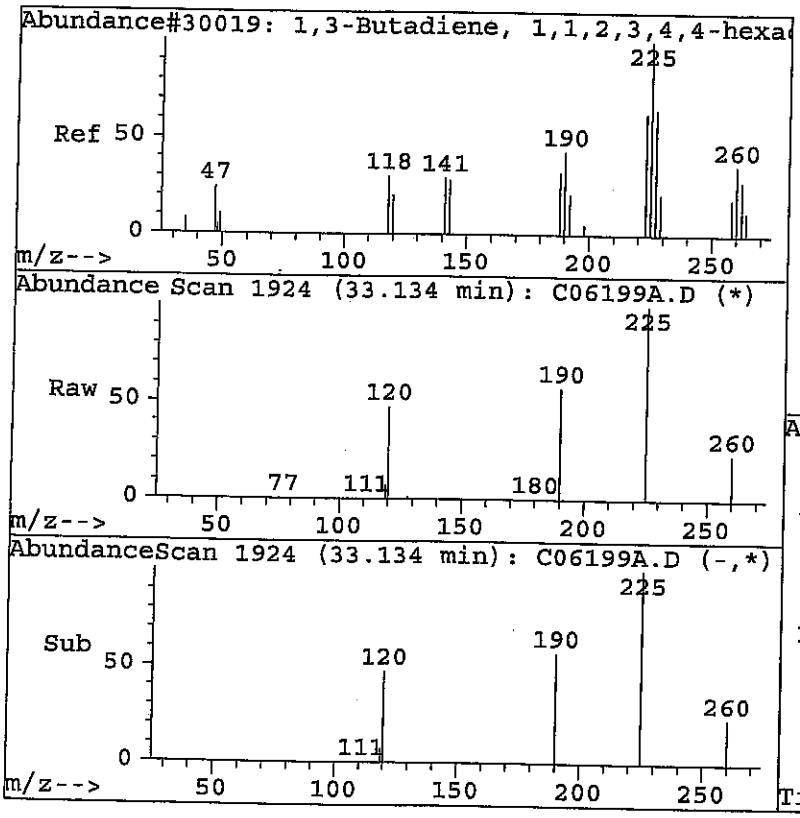


#45
1,2,4-Trichlorobenzene
Concen: 0.77 ppbV
RT: 32.17 min Scan# 1862
Delta R.T. -0.00 min
Lab File: C06199A.D
Acq: 19 Jun 109 9:50 am

Tgt Ion:180 Resp:14261028

Ion	Ratio	Lower	Upper
180	100		
182	94.8	80.9	121.3
0	0.0	0.0	0.0
0	0.0	0.0	0.0

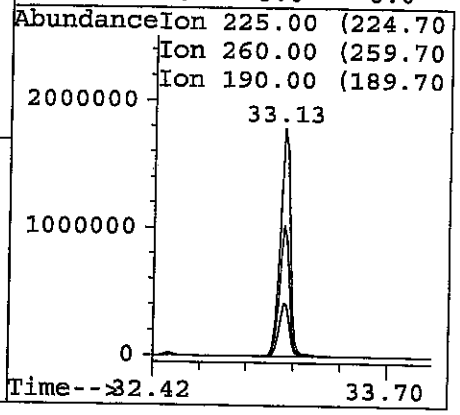


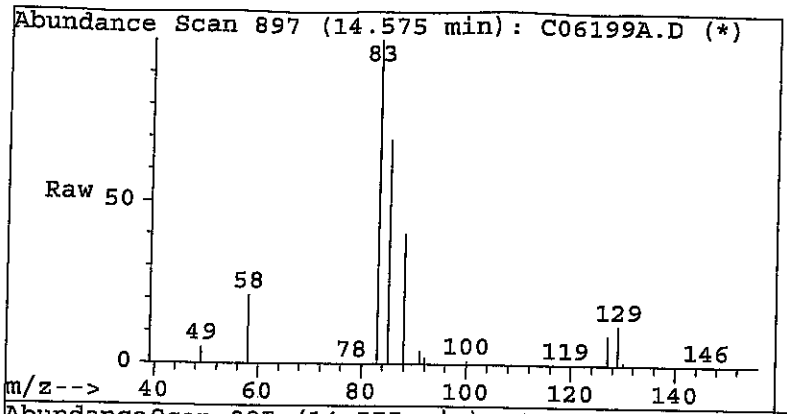


#46
Hexachlorobutadiene
Concen: 0.80 ppbV
RT: 33.13 min Scan# 1924
Delta R.T. 0.00 min
Lab File: C06199A.D
Acq: 19 Jun 109 9:50 am

Tgt Ion:225 Resp: 6890127

Ion	Ratio	Lower	Upper
225	100		
260	23.3	19.3	28.9
190	57.2	42.5	63.7
0	0.0	0.0	0.0

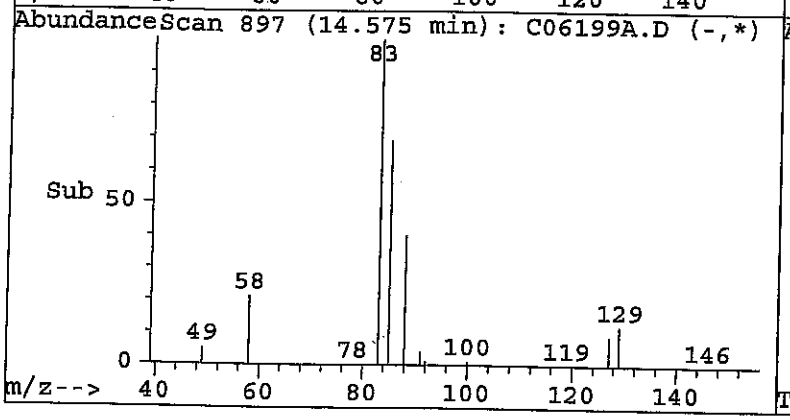


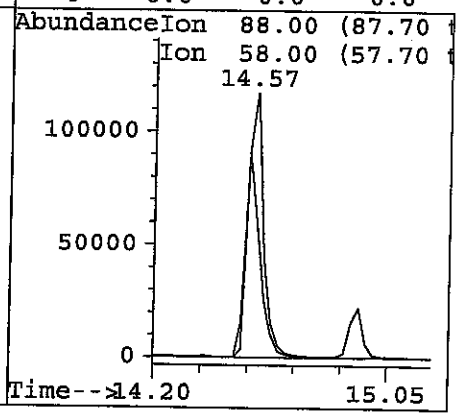


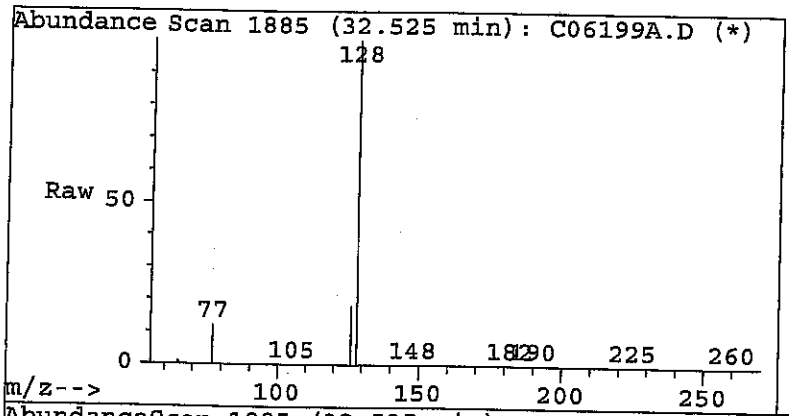
#47
1,4 Dioxane
Concen: 0.79 ppbV
RT: 14.57 min Scan# 897
Delta R.T. 0.00 min
Lab File: C06199A.D
Acq: 19 Jun 109 9:50 am

Tgt Ion:88 Resp: 450267

Ion	Ratio	Lower	Upper
88	100		
58	74.1	56.3	84.5
0	0.0	0.0	0.0
0	0.0	0.0	0.0



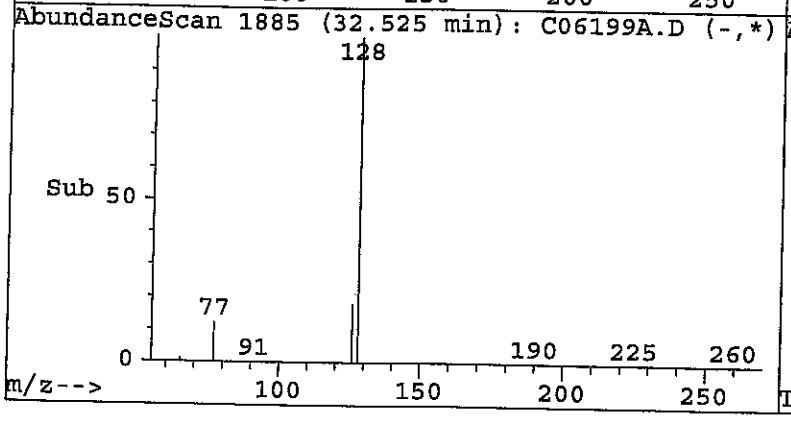


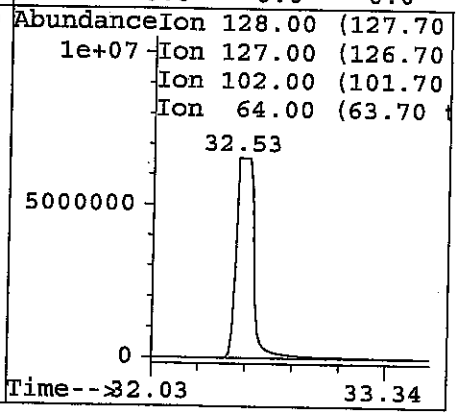


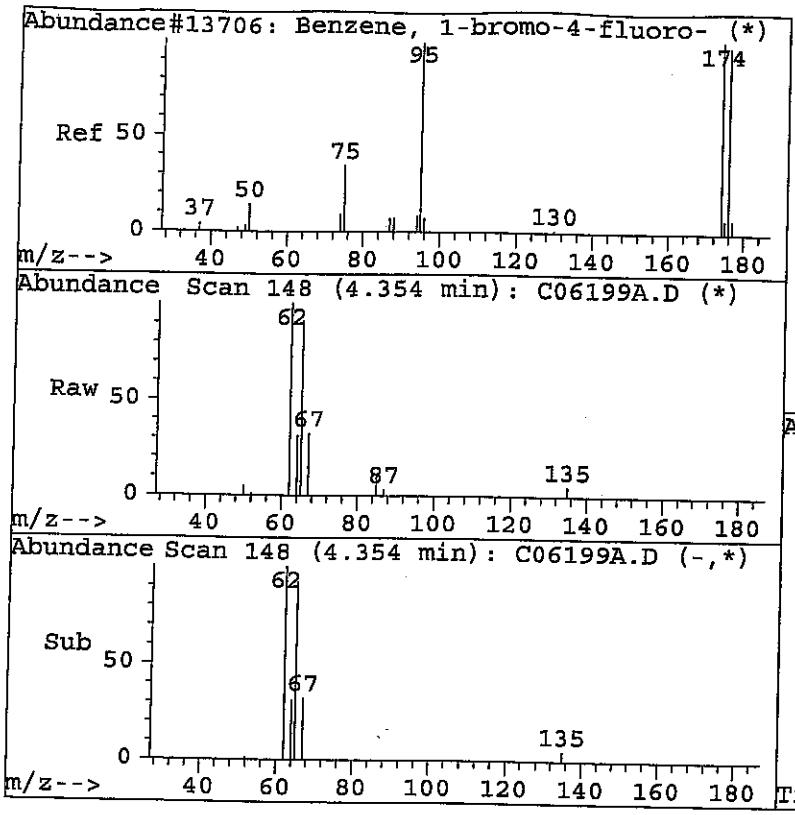
#48
Naphthalene
Concen: 0.81 ppbV m
RT: 32.53 min Scan# 1885
Delta R.T. -0.25 min
Lab File: C06199A.D
Acq: 19 Jun 109 9:50 am

Tgt Ion:128 Resp:45318334

Ion	Ratio	Lower	Upper
128	100		
127	0.0	0.0	0.0
102	0.0	0.0	0.0
64	0.0	0.0	0.0



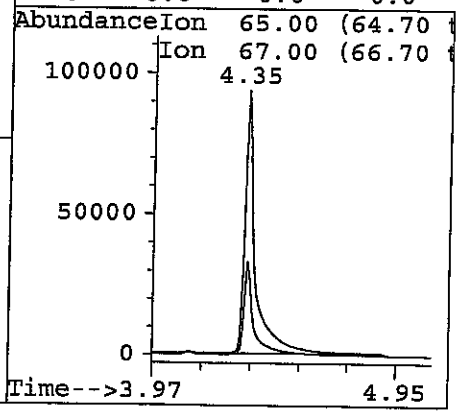




#49
Vinyl Chloride-d3
Concen: 0.19 ppbV
RT: 4.35 min Scan# 148
Delta R.T. 0.00 min
Lab File: C06199A.D
Acq: 19 Jun 109 9:50 am

Tgt Ion:65 Resp: 271414

Ion	Ratio	Lower	Upper
65	100		
67	35.4	28.0	42.0
0	0.0	0.0	0.0
0	0.0	0.0	0.0



Quantitation Report

Data File : C:\MSCHEM\2\DATA\06199MS2\C06199B.D
Acq Time : 19 Jun 109 10:33 am
Sample : ST60032 + ST60250
Misc : 10
Quant Time: Jun 22 8:49 19109

Operator: KB
Inst : MS2
Multiplr: 1.00

Method : C:\MSCHEM\2\METHODS\2EXSIM_I.M
Title : EPA T0-15
Last Update : Mon Jun 22 09:18:18 2009
Response via : Multiple Level Calibration

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Chlorobenzene-d5	20.51	117	877690	0.20 ppbV	0.00
System Monitoring Compounds					%Recovery
16) Toluene-d8	17.05	98	389596	0.21 ppbV	
49) Vinyl Chloride-d3	4.34	65	164313	0.20 ppbV	
Target Compounds					Qvalue
2) Dichlorodifluoromethane	3.84	85	534841	0.96 ppbV m	0
3) Chloromethane	4.11	50	268477	1.03 ppbV m	0
4) Freon 114	4.11	85	549359	1.00 ppbV	95
5) Vinyl chloride	4.36	62	184476	1.07 ppbV	97
6) Bromomethane	4.96	94	193900	1.20 ppbV	92
7) Chloroethane	5.15	64	180453	1.09 ppbV	97
8) Trichlorofluoromethane	5.96	101	631888	1.00 ppbV	96
9) 1,1-Dichloroethene	6.92	61	388365	0.97 ppbV	92
10) Freon 113	7.15	151	274663	1.00 ppbV	95
11) Dichloromethane	7.40	84	180065	0.91 ppbV	94
12) trans-1,2-Dichloroethene	8.46	96	142963	0.54 ppbV	94
13) Methyl tert butyl ether	8.59	73	620120	0.59 ppbV #	98
14) 1,1-Dichloroethane	8.99	63	403912	0.93 ppbV	97
15) cis-1,2-Dichloroethene	10.22	96	240146	0.96 ppbV	99
17) Chloroform	10.64	83	510308	0.84 ppbV	95
18) 1,1,1-Trichloroethane	11.88	97	587705	0.95 ppbV #	95
19) 1,2-Dichloroethane	12.02	62	1236150	0.90 ppbV #	76
20) Benzene	12.60	78	967913	1.07 ppbV #	84
21) Carbon tetrachloride	12.66	117	492544	0.97 ppbV	93
22) 1,2-Dichloropropane	14.18	63	280915	0.92 ppbV	94
23) Trichloroethene	14.26	130	305786	0.86 ppbV #	93
24) Bromodichloromethane	14.55	83	349165	0.55 ppbV #	95
25) cis-1,3-Dichloropropene	15.96	75	119127	0.32 ppbV #	92
26) Toluene	17.21	91	1260474	0.95 ppbV	99
27) trans-1,3-Dichloropropene	17.00	75	88418	0.16 ppbV	96
28) 1,1,2-Trichloroethane	17.32	97	480870	1.00 ppbV	97
29) 1,2-Dibromoethane	18.97	107	915216	0.81 ppbV	96
30) Tetrachloroethene	19.09	166	373918	0.90 ppbV #	85
31) Chlorobenzene	20.59	112	1017786	0.78 ppbV #	92
32) 1,1,1,2-Tetrachloroethane	20.66	131	382804	0.74 ppbV	95
33) Ethylbenzene	21.06	91	2140675	0.82 ppbV	91
34) m & p-Xylene	21.35	91	2970894	1.53 ppbV	91
35) Styrene	22.22	104	2090268	0.86 ppbV	96
36) o-Xylene	22.34	91	1996168	0.73 ppbV	98
37) 1,1,2,2-Tetrachloroethane	22.93	83	2273482	0.77 ppbV	98
38) 4-Ethyltoluene	24.80	105	2778042	0.43 ppbV m	95
39) 1,3,5-Trimethylbenzene	24.96	105	3143240	0.61 ppbV	97
40) 1,2,4-Trimethylbenzene	25.91	105	3248488	0.55 ppbV #	94
41) 1,3-Dichlorobenzene	26.55	146	2387618	0.61 ppbV	97
42) Benzyl chloride	26.70	91	2015808	0.41 ppbV	99
43) 1,4-Dichlorobenzene	26.74	146	2189006	0.53 ppbV	96
44) 1,2-Dichlorobenzene	27.61	146	3162973	0.65 ppbV	97
45) 1,2,4-Trichlorobenzene	32.15	180	6381826	0.68 ppbV	98
46) Hexachlorobutadiene	33.12	225	2541100	0.52 ppbV	99
47) 1,4 Dioxane	14.57	88	154378	0.55 ppbV	97

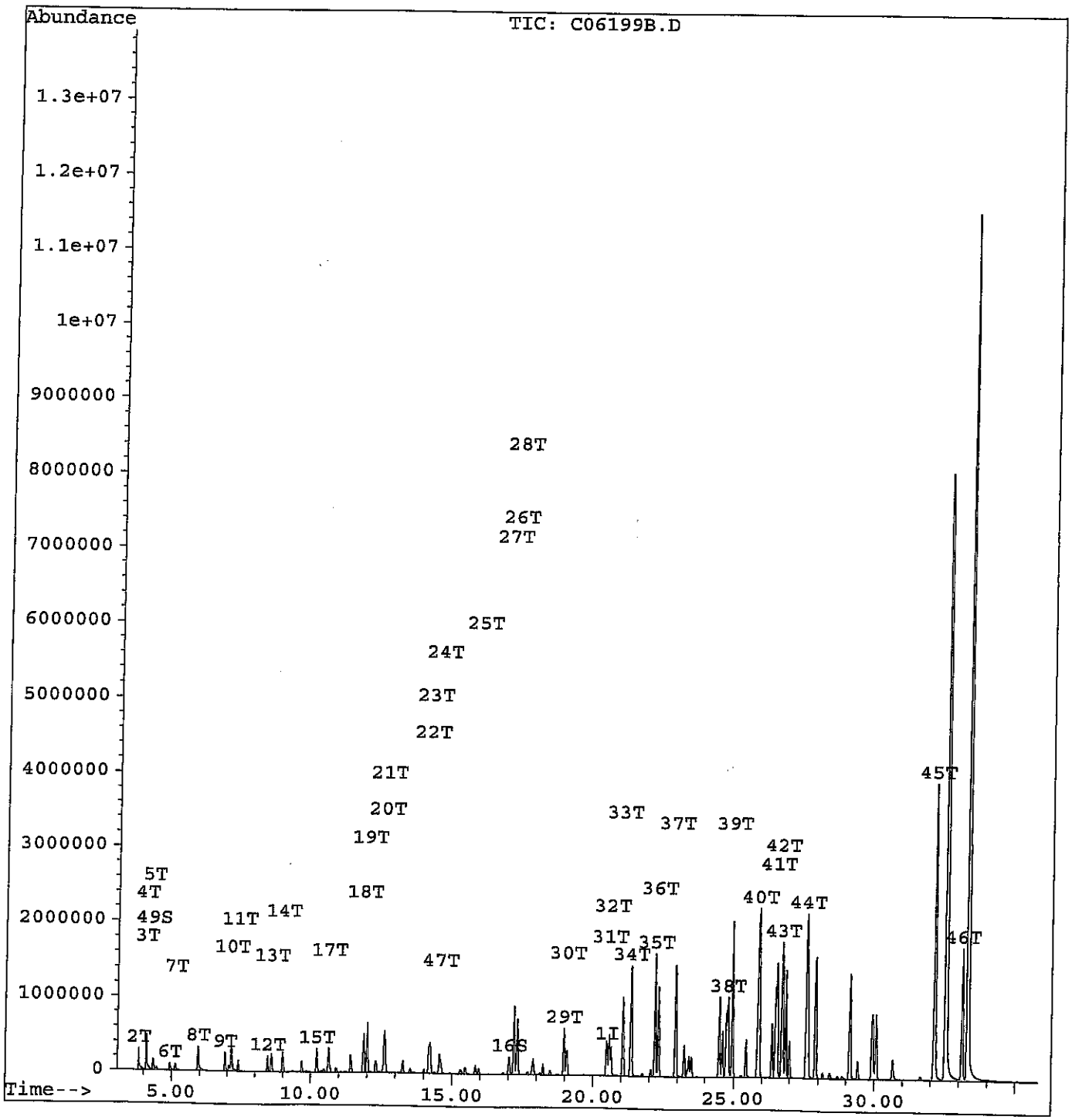
(#) = qualifier out of range (m) = manual integration

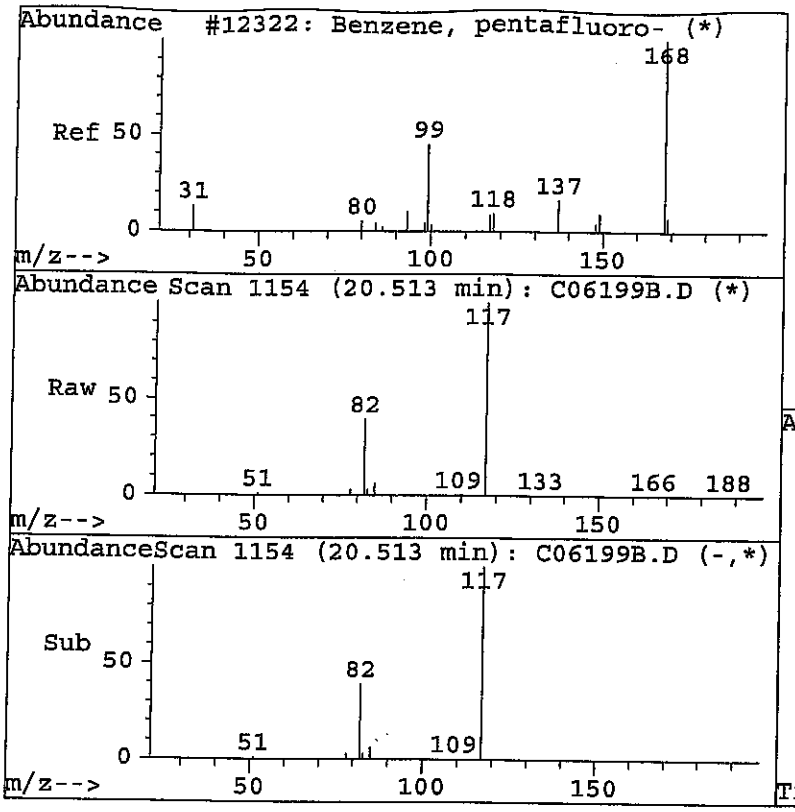
Quantitation Report

Data File : C:\MSCHEM\2\DATA\06199MS2\C06199B.D
Acq Time : 19 Jun 109 10:33 am
Sample : ST60032 + ST60250
Misc : 10
Quant Time: Jun 22 8:49 19109

Operator: KB
Inst : MS2
Multiplr: 1.00

Method : C:\MSCHEM\2\METHODS\2EXSIM_I.M
Title : EPA T0-15
Last Update : Mon Jun 22 09:18:18 2009
Response via : Multiple Level Calibration

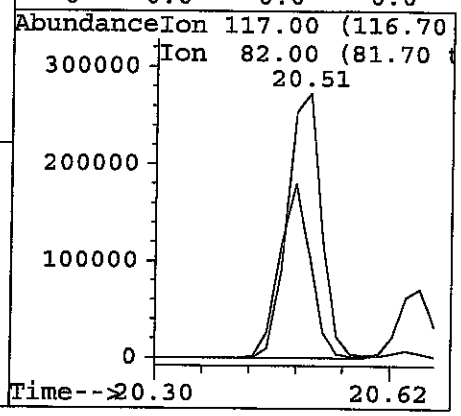


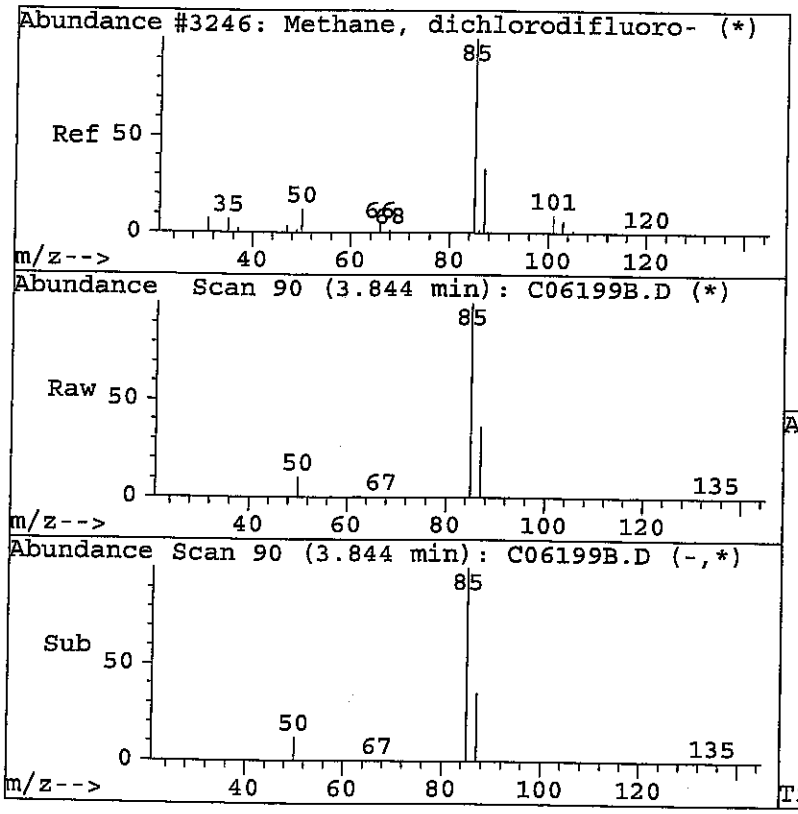


#1
Chlorobenzene-d5
Concen: 0.20 ppbV
RT: 20.51 min Scan# 1154
Delta R.T. 0.00 min
Lab File: C06199B.D
Acq: 19 Jun 109 10:33 am

Tgt Ion:117 Resp: 877690

Ion	Ratio	Lower	Upper
117	100		
82	39.0	39.3	58.9#
0	0.0	0.0	0.0
0	0.0	0.0	0.0

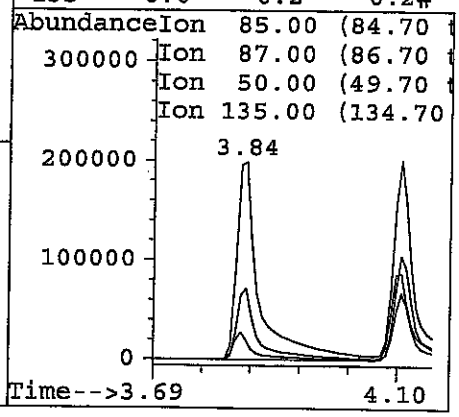


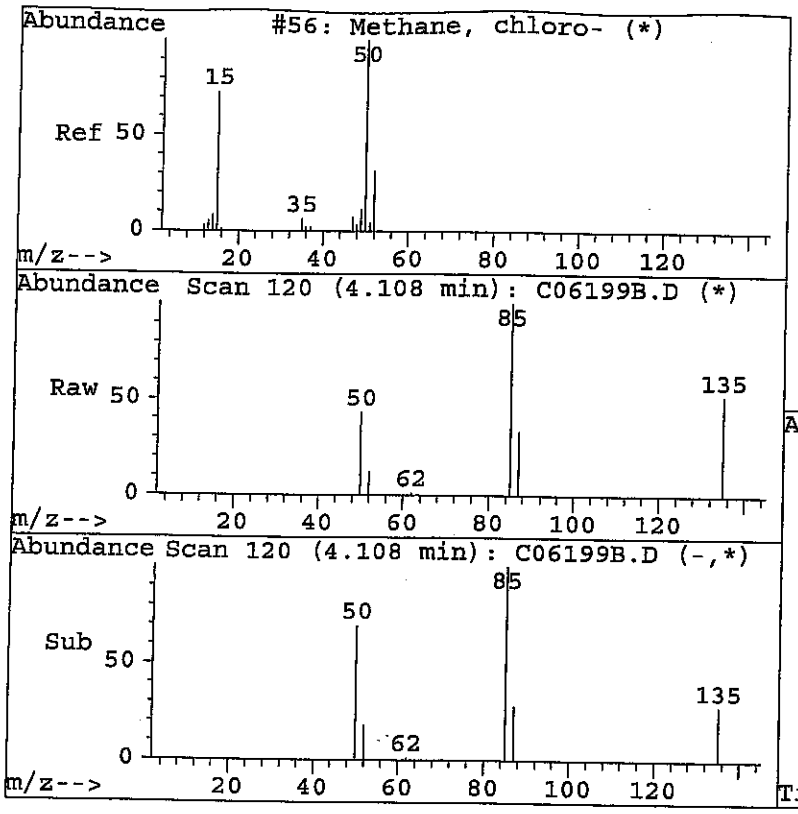


#2
Dichlorodifluoromethane
Concen: 0.96 ppbV m
RT: 3.84 min Scan# 90
Delta R.T. -0.01 min
Lab File: C06199B.D
Acq: 19 Jun 109 10:33 am

Tgt Ion:85 Resp: 534841

Ion	Ratio	Lower	Upper
85	100		
87	35.8	27.0	40.6
50	9.8	8.0	12.0
135	0.0	0.2	0.2#

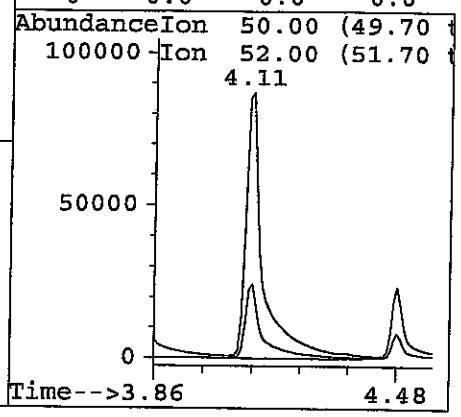


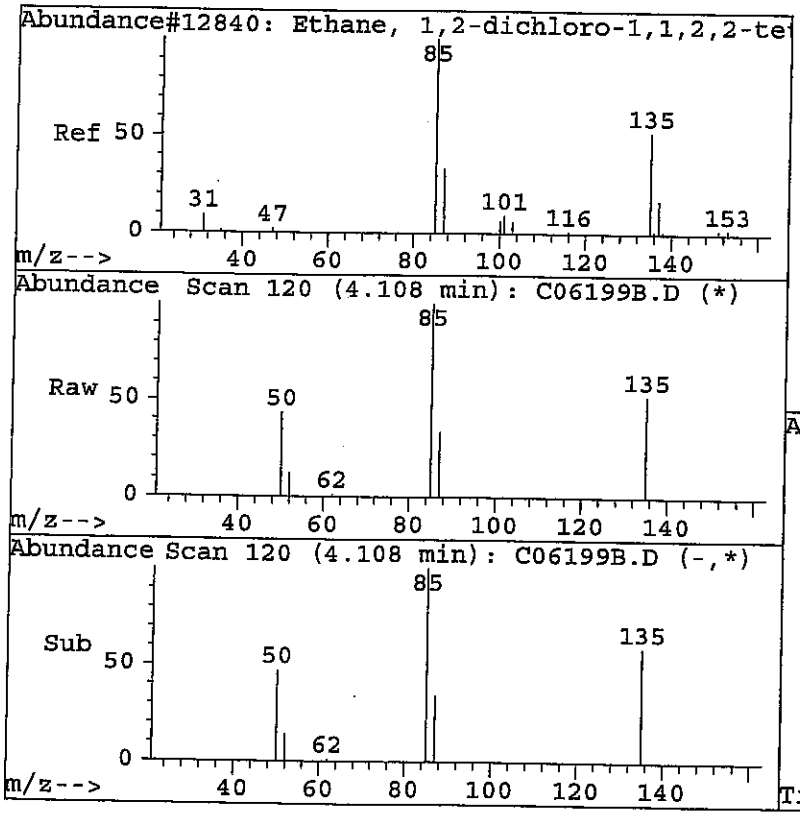


#3
Chloromethane
Concen: 1.03 ppbV m
RT: 4.11 min Scan# 120
Delta R.T. -0.01 min
Lab File: C06199B.D
Acq: 19 Jun 109 10:33 am

Tgt Ion:50 Resp: 268477

Ion	Ratio	Lower	Upper
50	100		
52	28.0	20.6	30.8
0	0.0	0.0	0.0
0	0.0	0.0	0.0

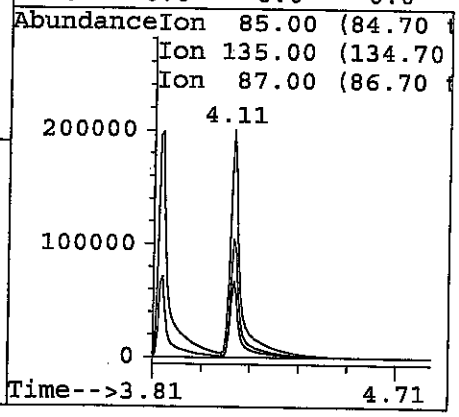


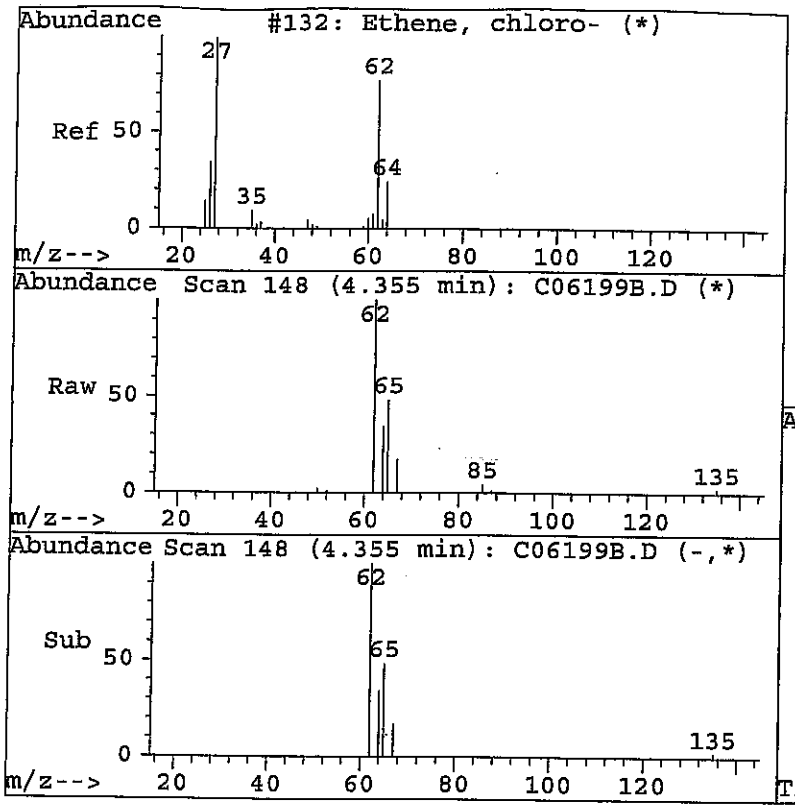


#4
Freon 114
Concen: 1.00 ppbV
RT: 4.11 min Scan# 120
Delta R.T. -0.01 min
Lab File: C06199B.D
Acq: 19 Jun 109 10:33 am

Tgt Ion:85 Resp: 549359

Ion	Ratio	Lower	Upper
85	100		
135	52.5	38.2	57.4
87	33.4	25.6	38.4
0	0.0	0.0	0.0

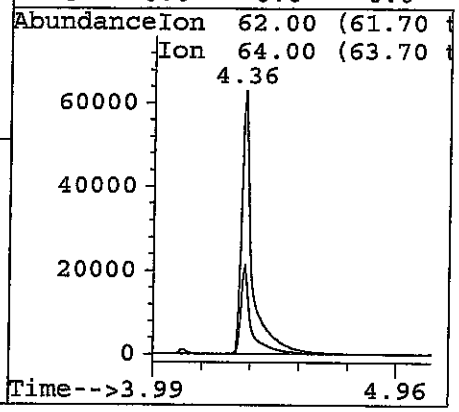


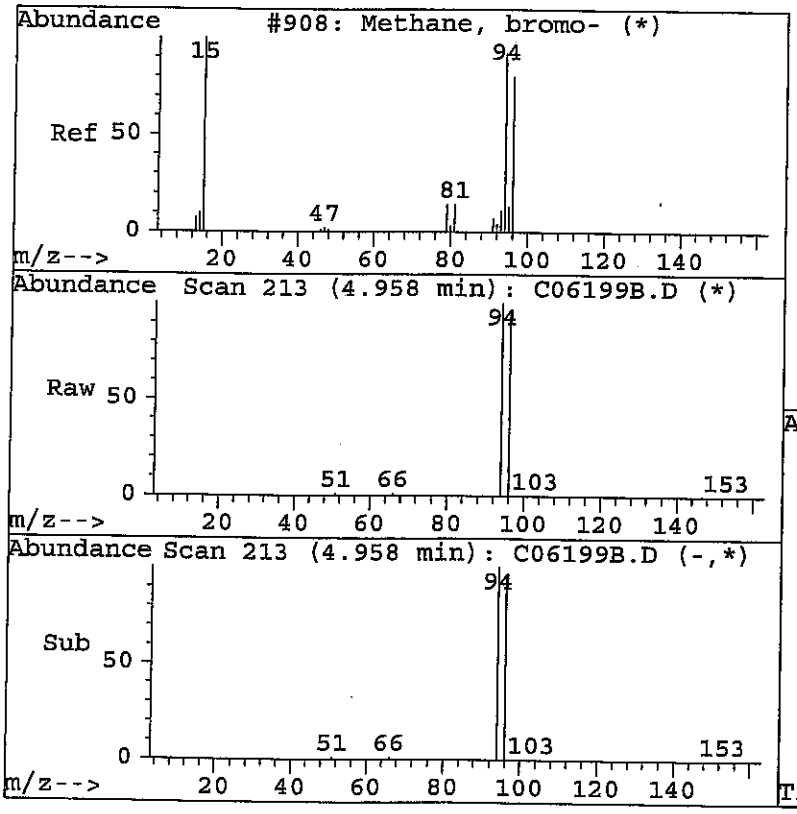


#5
Vinyl chloride
Concen: 1.07 ppbV
RT: 4.36 min Scan# 148
Delta R.T. -0.01 min
Lab File: C06199B.D
Acq: 19 Jun 109 10:33 am

Tgt Ion:62 Resp: 184476

Ion	Ratio	Lower	Upper
62	100		
64	33.9	28.6	42.8
0	0.0	0.0	0.0
0	0.0	0.0	0.0

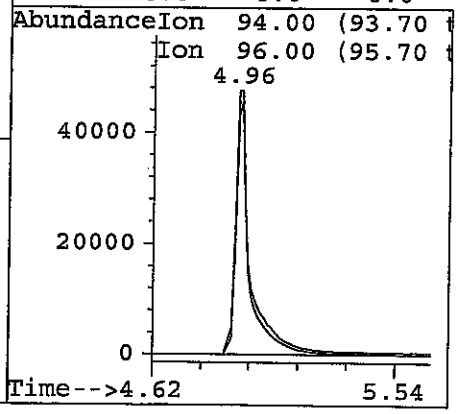


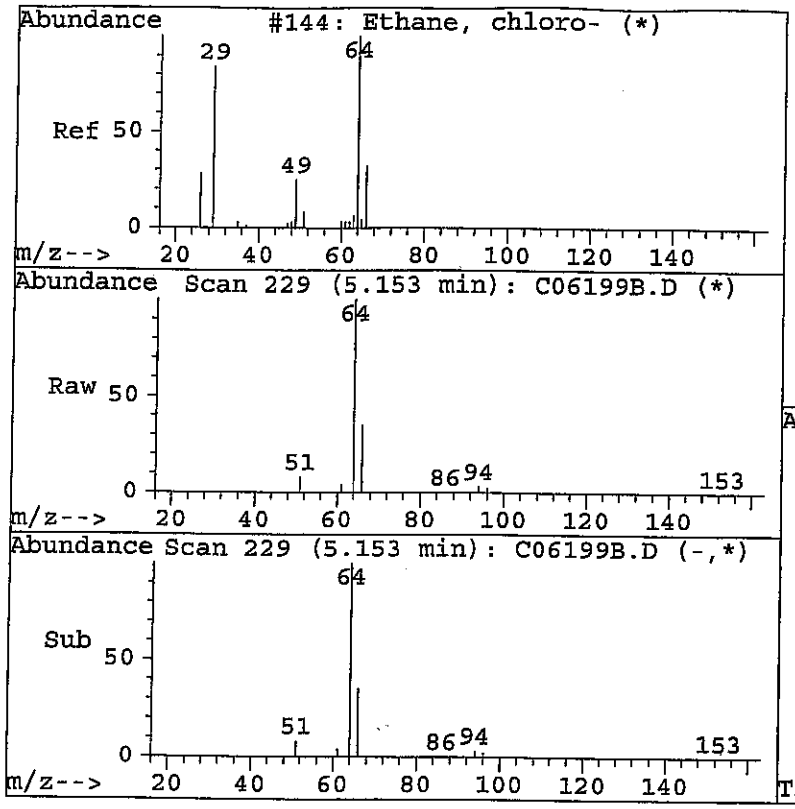


#6
Bromomethane
Concen: 1.20 ppbV
RT: 4.96 min Scan# 213
Delta R.T. -0.01 min
Lab File: C06199B.D
Acq: 19 Jun 109 10:33 am

Tgt Ion:94 Resp: 193900

Ion	Ratio	Lower	Upper
94	100		
96	95.8	71.0	106.4
0	0.0	0.0	0.0
0	0.0	0.0	0.0

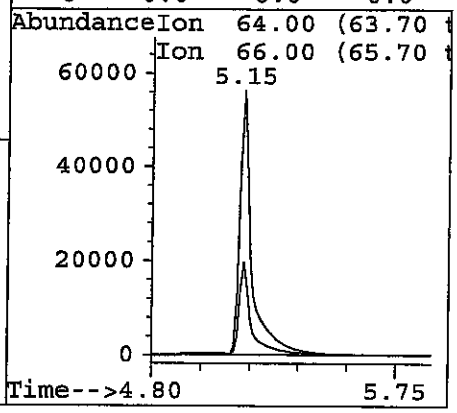


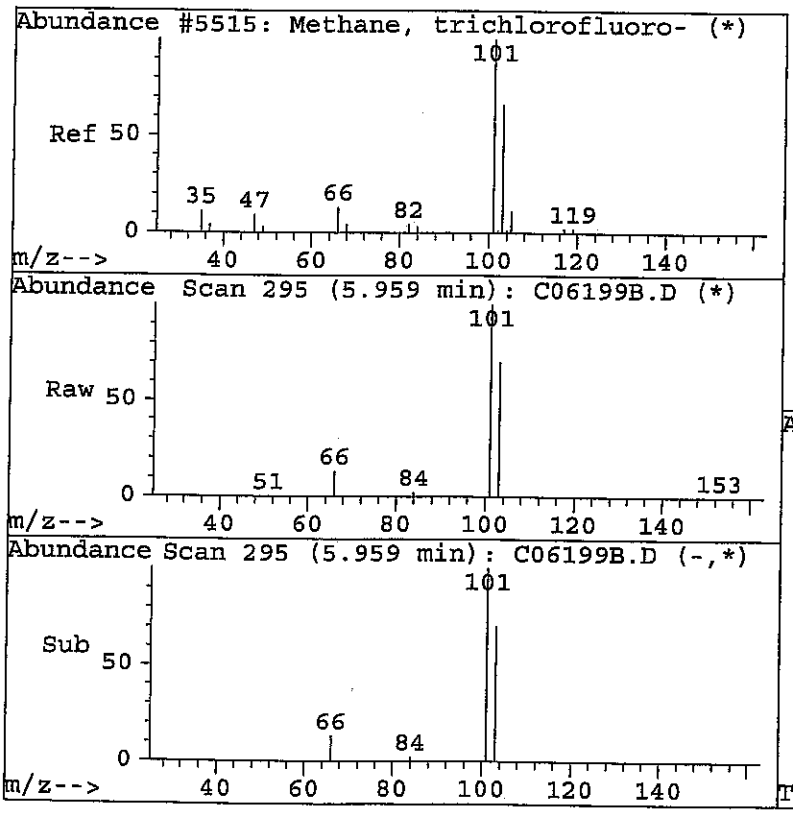


#7
Chloroethane
Concen: 1.09 ppbV
RT: 5.15 min Scan# 229
Delta R.T. -0.03 min
Lab File: C06199B.D
Acq: 19 Jun 109 10:33 am

Tgt Ion:64 Resp: 180453

Ion	Ratio	Lower	Upper
64	100		
66	34.5	26.1	39.1
0	0.0	0.0	0.0
0	0.0	0.0	0.0

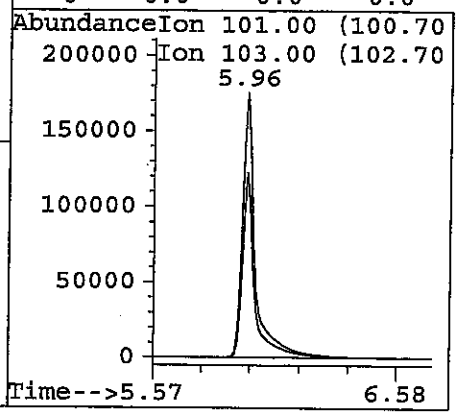


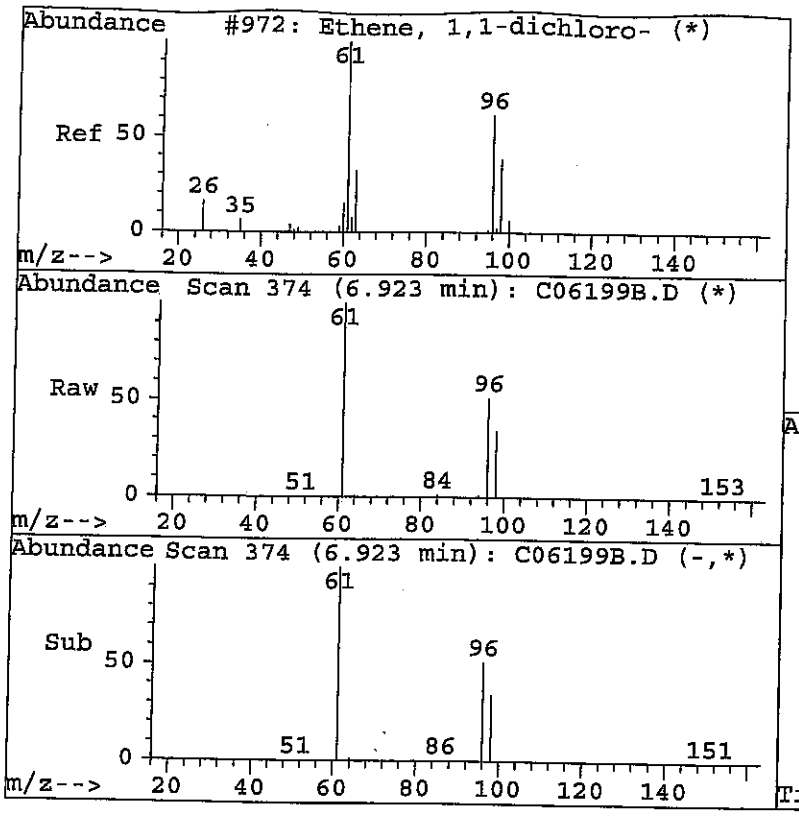


#8
Trichlorofluoromethane
Concen: 1.00 ppbV
RT: 5.96 min Scan# 295
Delta R.T. -0.02 min
Lab File: C06199B.D
Acq: 19 Jun 109 10:33 am

Tgt Ion:101 Resp: 631888

Ion	Ratio	Lower	Upper
101	100		
103	69.9	53.5	80.3
0	0.0	0.0	0.0
0	0.0	0.0	0.0

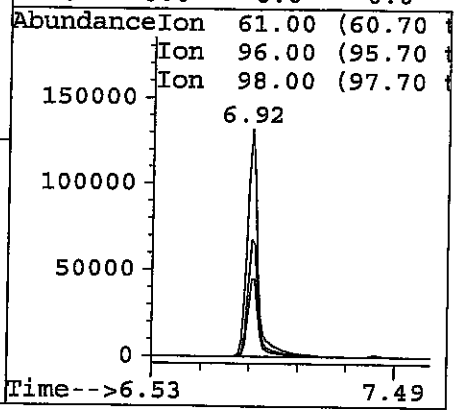


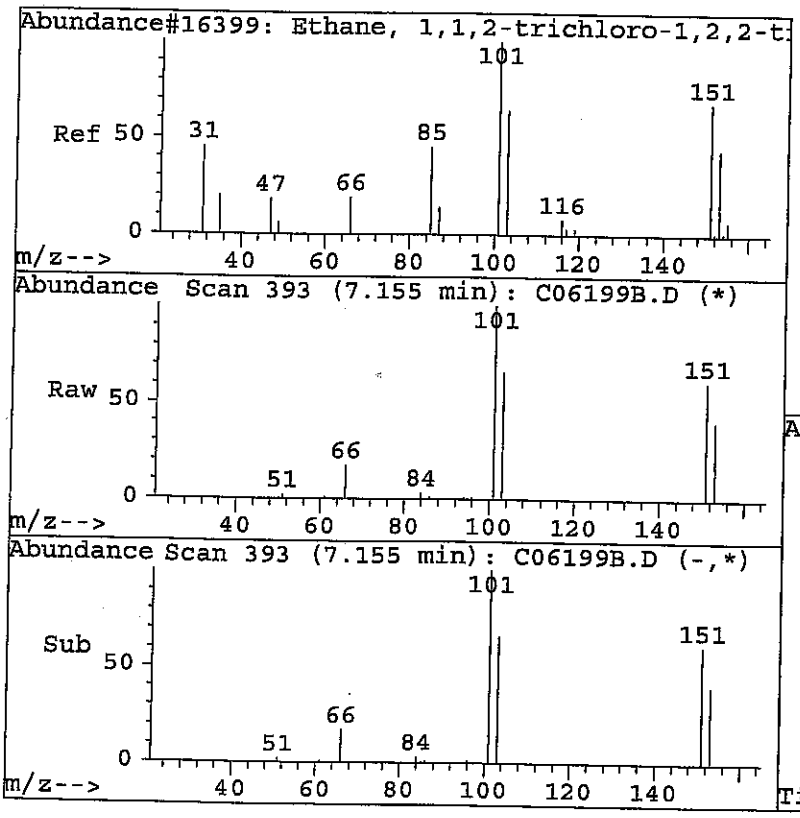


#9
1,1-Dichloroethene
Concen: 0.97 ppbV
RT: 6.92 min Scan# 374
Delta R.T. -0.03 min
Lab File: C06199B.D
Acq: 19 Jun 109 10:33 am

Tgt Ion:61 Resp: 388365

Ion	Ratio	Lower	Upper
61	100		
96	51.3	36.7	55.1
98	33.9	23.4	35.2
0	0.0	0.0	0.0

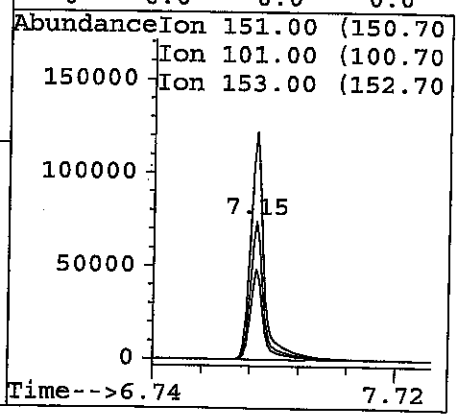


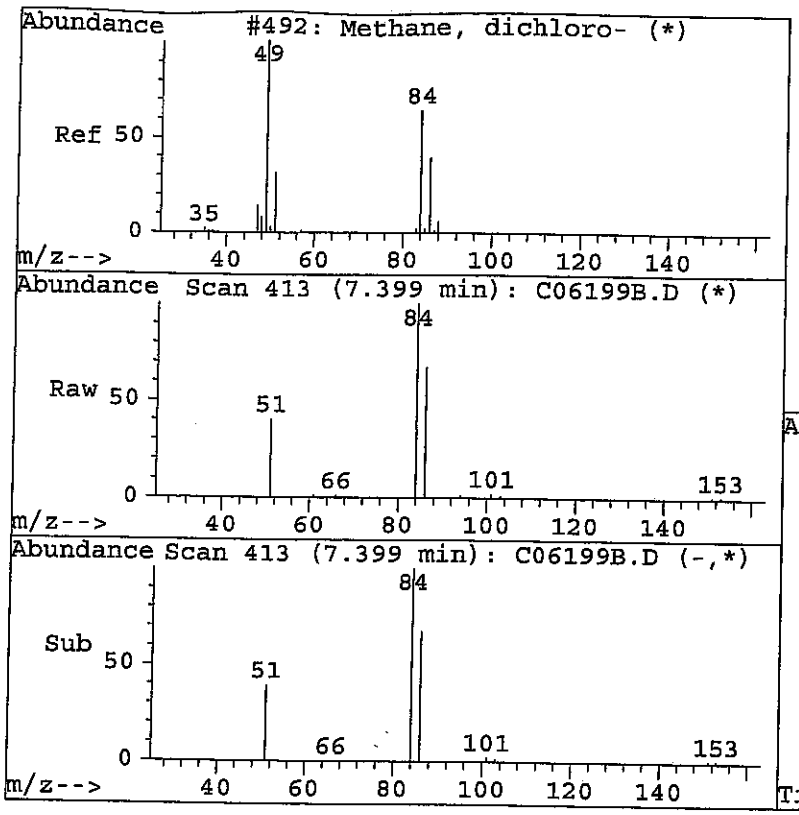


#10
Freon 113
Concen: 1.00 ppbV
RT: 7.15 min Scan# 393
Delta R.T. 0.02 min
Lab File: C06199B.D
Acq: 19 Jun 109 10:33 am

Tgt Ion:151 Resp: 274663

Ion	Ratio	Lower	Upper
151	100		
101	164.0	138.5	207.7
153	65.7	51.6	77.4
0	0.0	0.0	0.0

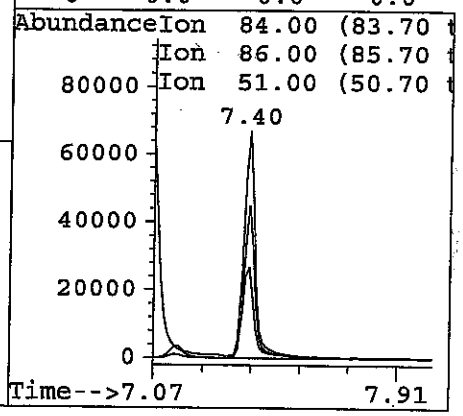


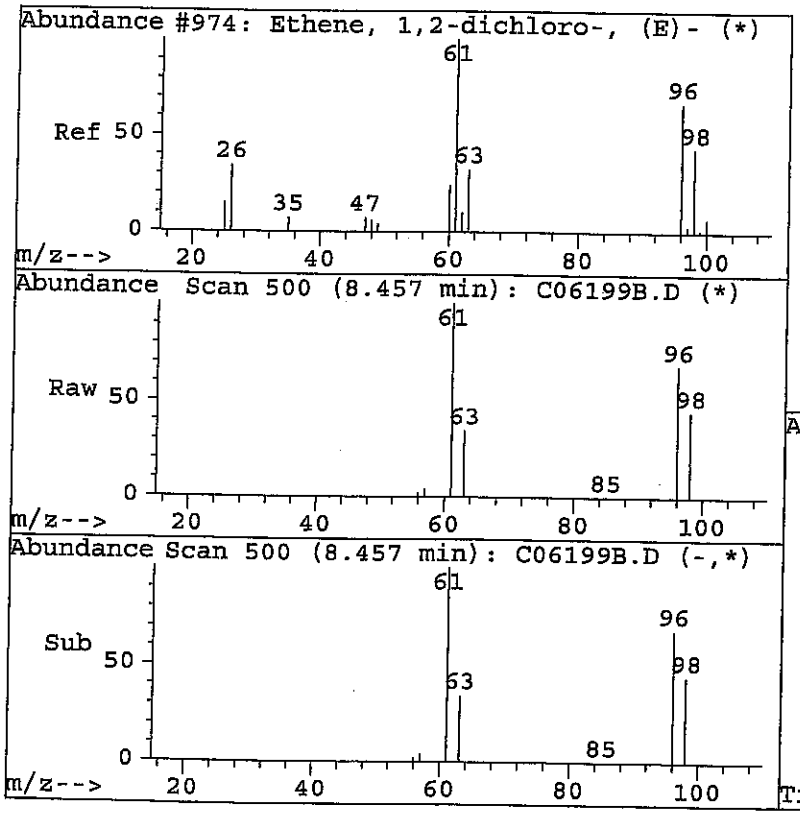


#11
Dichloromethane
Concen: 0.91 ppbV
RT: 7.40 min Scan# 413
Delta R.T. -0.02 min
Lab File: C06199B.D
Acq: 19 Jun 109 10:33 am

Tgt Ion:84 Resp: 180065

Ion	Ratio	Lower	Upper
84	100		
86	66.8	49.2	73.8
51	39.1	33.4	50.0
0	0.0	0.0	0.0

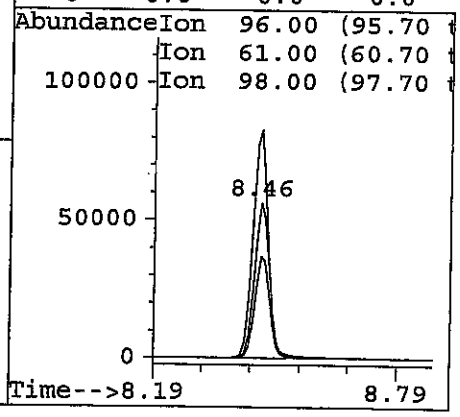


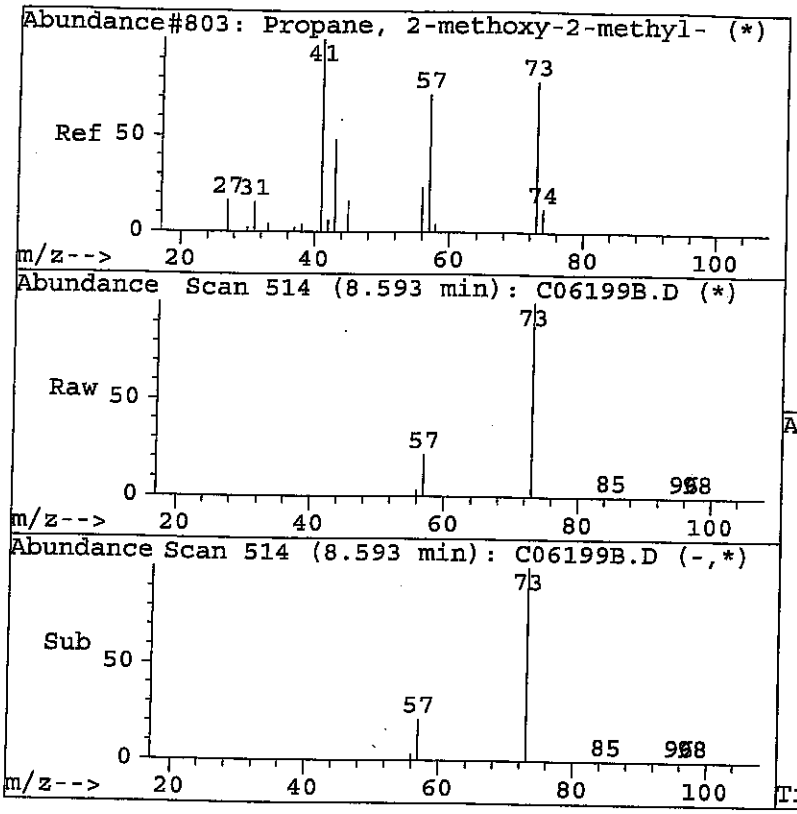


#12
trans-1,2-Dichloroethene
Concen: 0.54 ppbV
RT: 8.46 min Scan# 500
Delta R.T. -0.02 min
Lab File: C06199B.D
Acq: 19 Jun 109 10:33 am

Tgt Ion:96 Resp: 142963

Ion	Ratio	Lower	Upper
96	100		
61	147.6	126.5	189.7
98	65.5	53.8	80.8
0	0.0	0.0	0.0

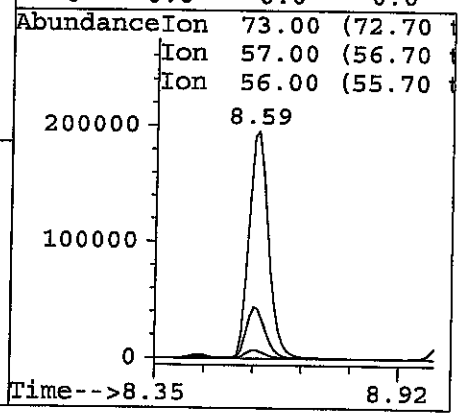


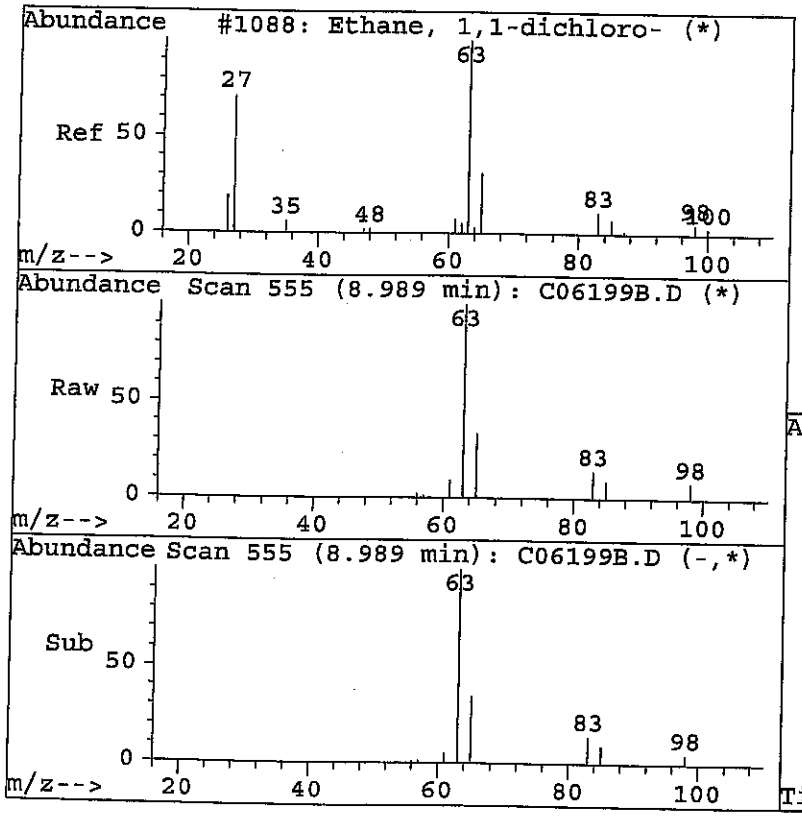


#13
Methyl tert butyl ether
Concen: 0.59 ppbV
RT: 8.59 min Scan# 514
Delta R.T. -0.01 min
Lab File: C06199B.D
Acq: 19 Jun 109 10:33 am

Tgt Ion:73 Resp: 620120

Ion	Ratio	Lower	Upper
73	100		
57	21.3	17.8	26.8
56	3.3	3.3	4.9#
0	0.0	0.0	0.0

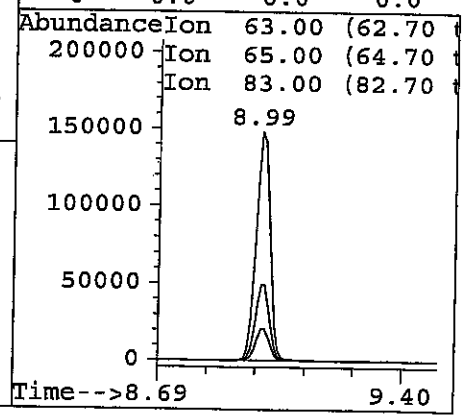


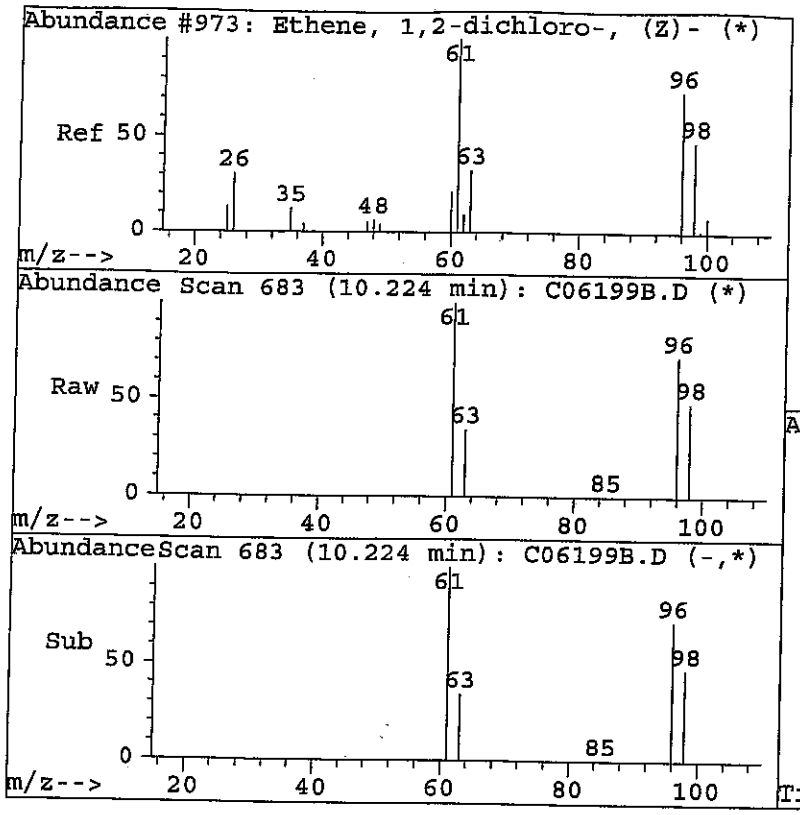


#14
1,1-Dichloroethane
Concen: 0.93 ppbV
RT: 8.99 min Scan# 555
Delta R.T. -0.01 min
Lab File: C06199B.D
Acq: 19 Jun 109 10:33 am

Tgt Ion:63 Resp: 403912

Ion	Ratio	Lower	Upper
63	100		
65	33.2	25.0	37.4
83	13.7	10.4	15.6
0	0.0	0.0	0.0

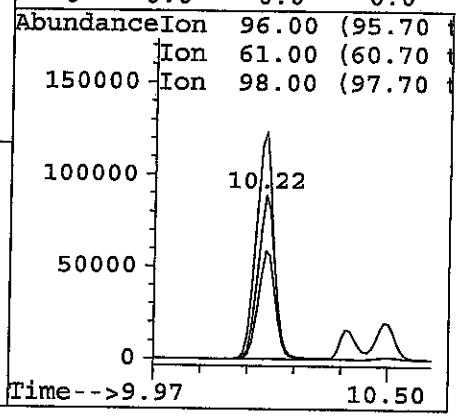


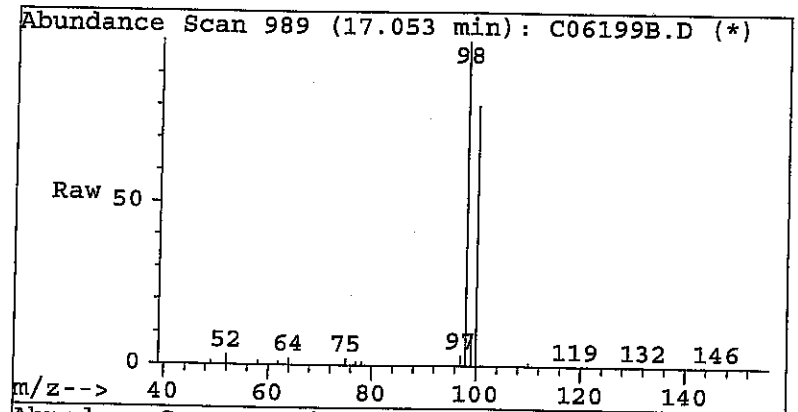


#15
cis-1,2-Dichloroethene
Concen: 0.96 ppbV
RT: 10.22 min Scan# 683
Delta R.T. -0.02 min
Lab File: C06199B.D
Acq: 19 Jun 109 10:33 am

Tgt Ion:96 Resp: 240146

Ion	Ratio	Lower	Upper
96	100		
61	136.5	108.5	162.7
98	65.9	53.5	80.3
0	0.0	0.0	0.0

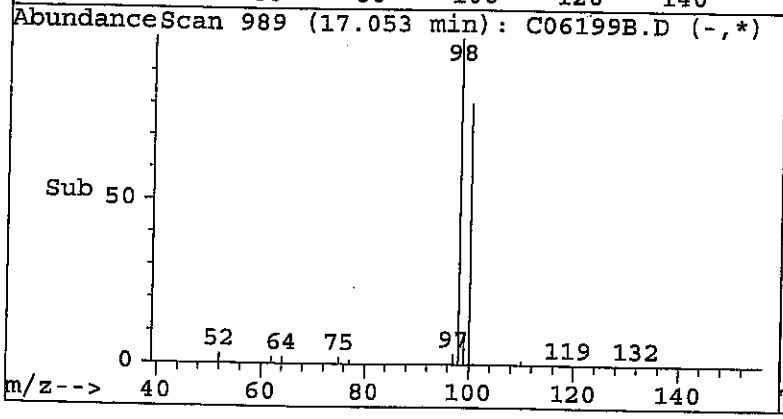


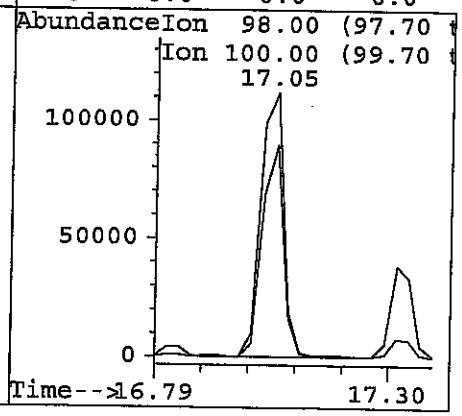


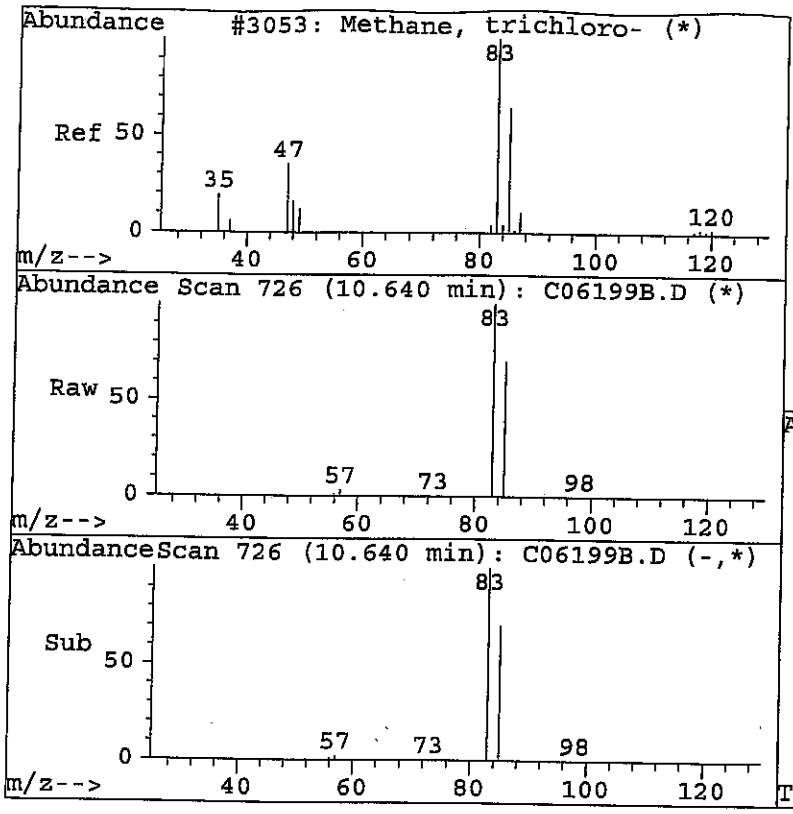
#16
Toluene-d8
Concen: 0.21 ppbV
RT: 17.05 min Scan# 989
Delta R.T. 0.00 min
Lab File: C06199B.D
Acq: 19 Jun 109 10:33 am

Tgt Ion:98 Resp: 389596

Ion	Ratio	Lower	Upper
98	100		
100	75.2	60.6	90.8
0	0.0	0.0	0.0
0	0.0	0.0	0.0



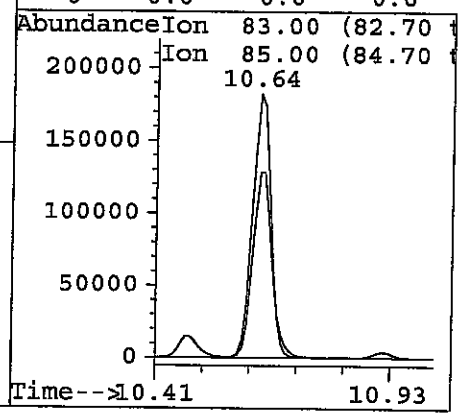


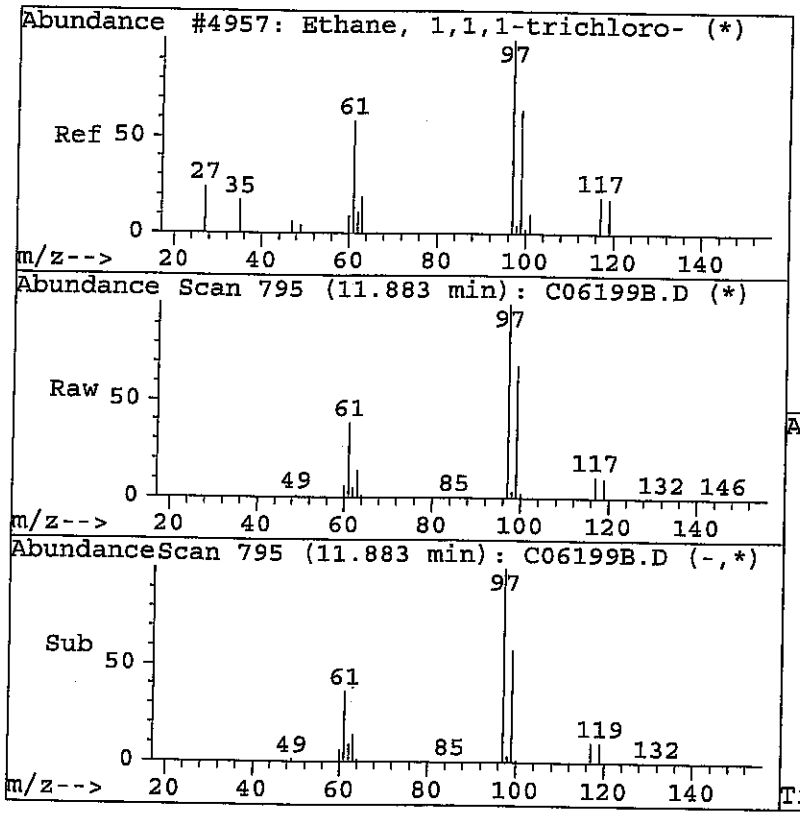


#17
Chloroform
Concen: 0.84 ppbV
RT: 10.64 min Scan# 726
Delta R.T. -0.02 min
Lab File: C06199B.D
Acq: 19 Jun 109 10:33 am

Tgt Ion:83 Resp: 510308

Ion	Ratio	Lower	Upper
83	100		
85	70.2	59.5	89.3
0	0.0	0.0	0.0
0	0.0	0.0	0.0

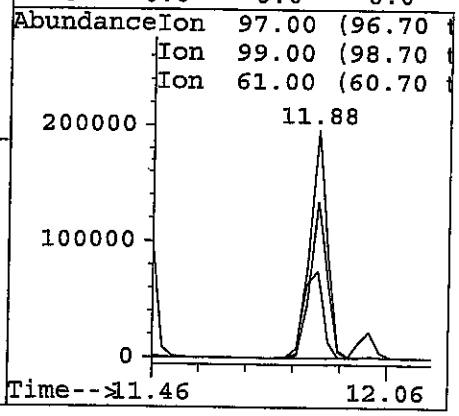


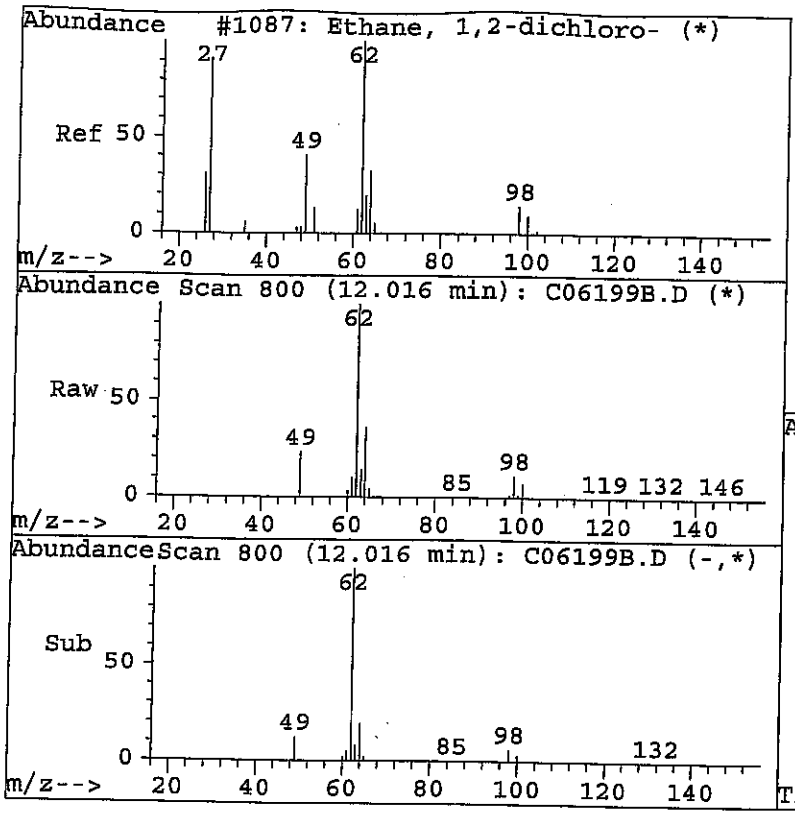


#18
1,1,1-Trichloroethane
Concen: 0.95 ppbV
RT: 11.88 min Scan# 795
Delta R.T. -0.03 min
Lab File: C06199B.D
Acq: 19 Jun 109 10:33 am

Tgt Ion:97 Resp: 587705

Ion	Ratio	Lower	Upper
97	100		
99	68.3	56.2	84.2
61	34.7	23.0	34.4#
0	0.0	0.0	0.0

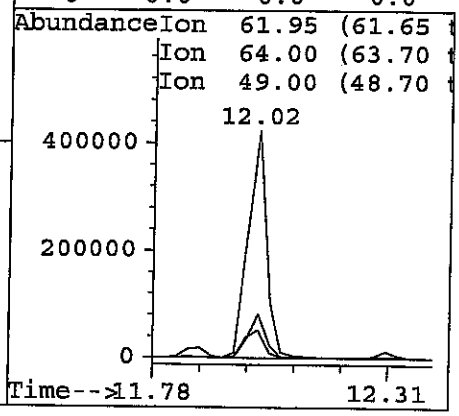


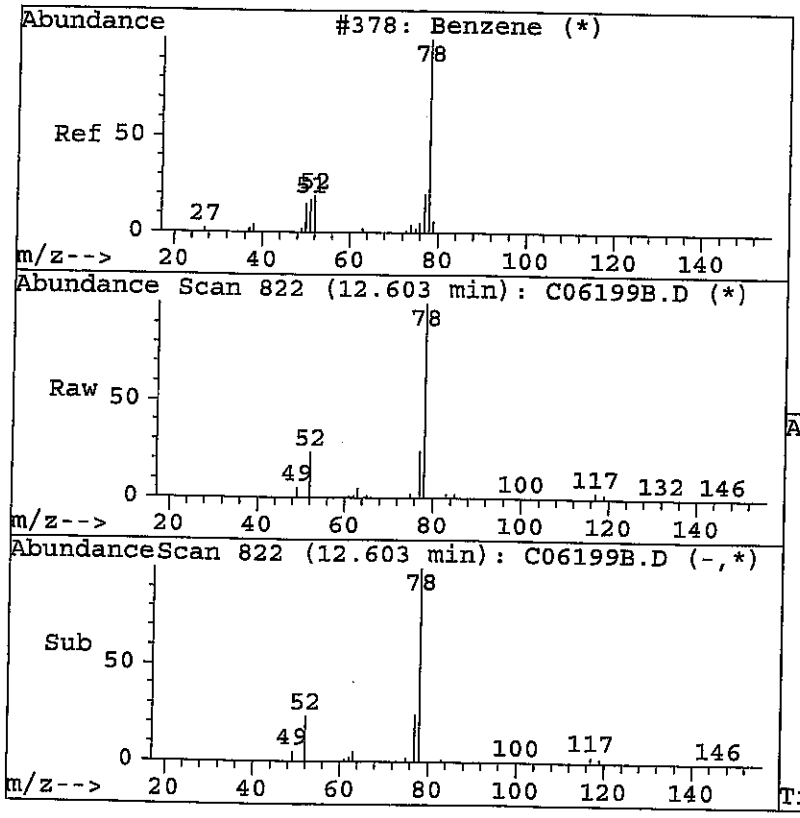


#19
1,2-Dichloroethane
Concen: 0.90 ppbV
RT: 12.02 min Scan# 800
Delta R.T. -0.00 min
Lab File: C06199B.D
Acq: 19 Jun 109 10:33 am

Tgt Ion:61.95 Resp: 1236150

Ion	Ratio	Lower	Upper
62	100		
64	19.3	24.6	37.0#
49	12.1	20.6	30.8#
0	0.0	0.0	0.0

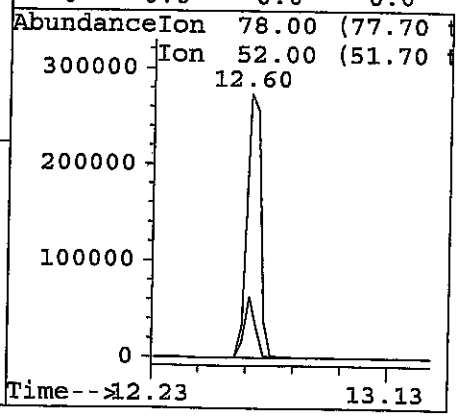


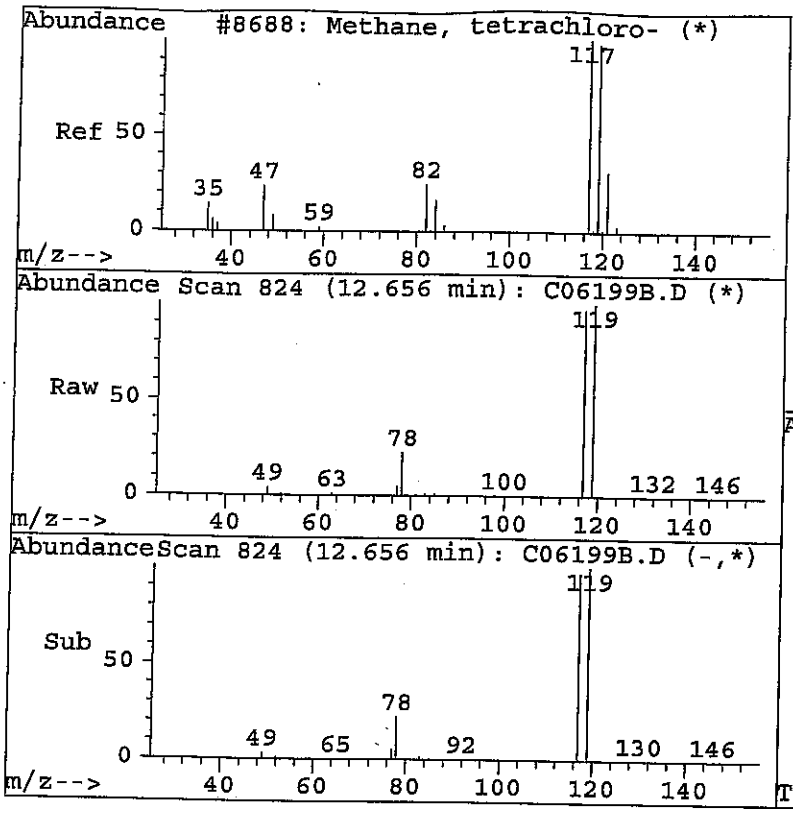


#20
Benzene
Concen: 1.07 ppbV
RT: 12.60 min Scan# 822
Delta R.T. -0.03 min
Lab File: C06199B.D
Acq: 19 Jun 109 10:33 am

Tgt Ion:78 Resp: 967913

Ion	Ratio	Lower	Upper
78	100		
52	22.8	12.8	19.2#
0	0.0	0.0	0.0
0	0.0	0.0	0.0

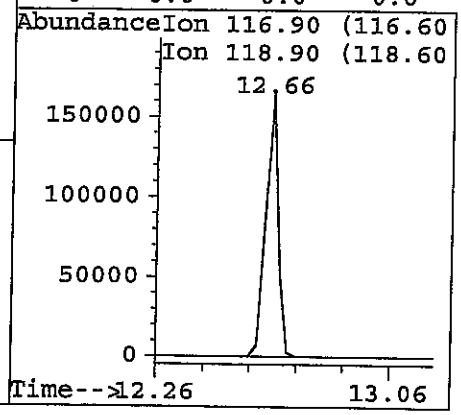


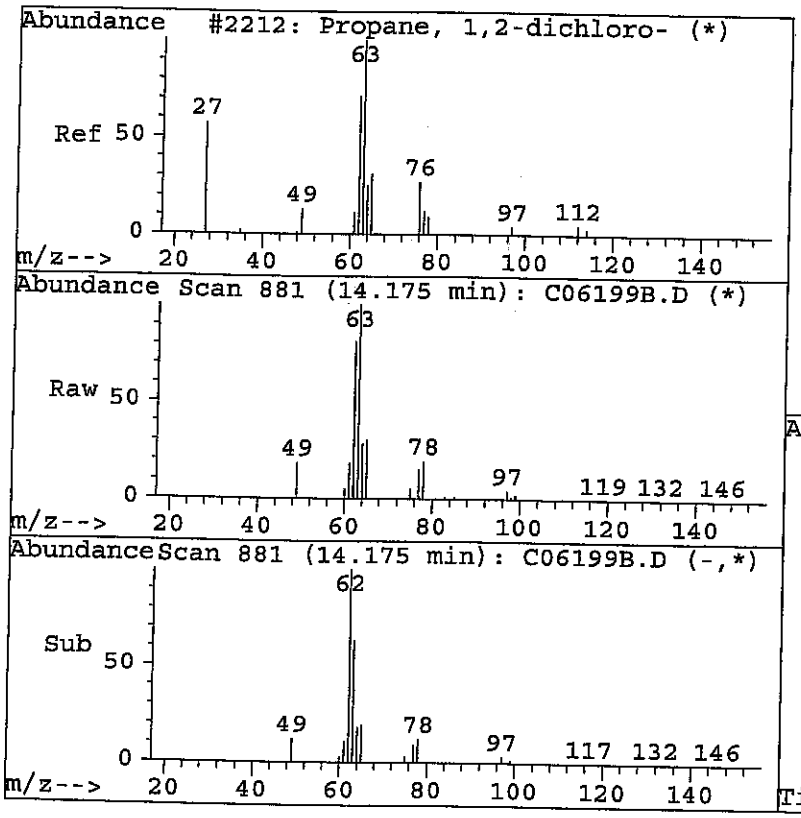


#21
Carbon tetrachloride
Concen: 0.97 ppbV
RT: 12.66 min Scan# 824
Delta R.T. -0.00 min
Lab File: C06199B.D
Acq: 19 Jun 109 10:33 am

Tgt Ion:116.9 Resp: 492544

Ion	Ratio	Lower	Upper
117	100		
119	103.0	76.9	115.3
0	0.0	0.0	0.0
0	0.0	0.0	0.0

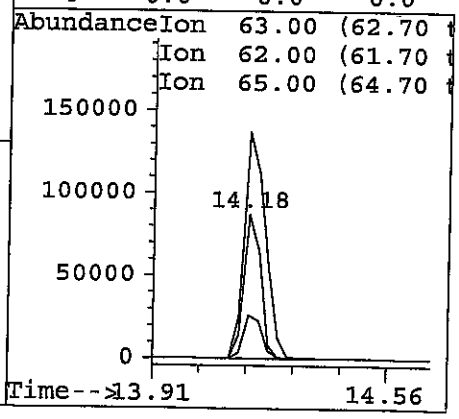


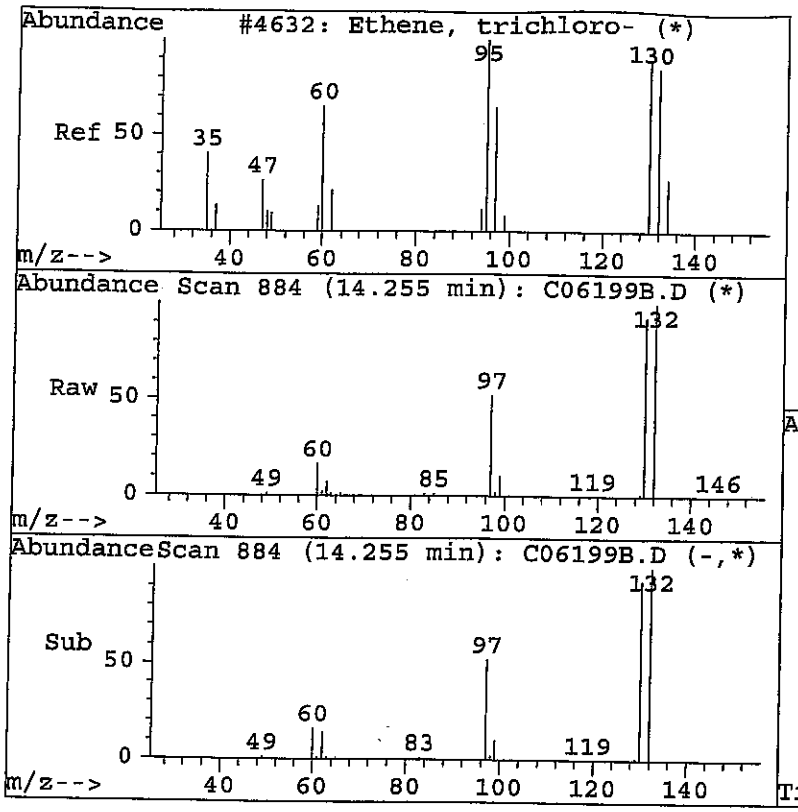


#22
1,2-Dichloropropane
Concen: 0.92 ppbV
RT: 14.18 min Scan# 881
Delta R.T. -0.02 min
Lab File: C06199B.D
Acq: 19 Jun 109 10:33 am

Tgt Ion:63 Resp: 280915

Ion	Ratio	Lower	Upper
63	100		
62	157.6	133.5	200.3
65	30.1	26.2	39.2
0	0.0	0.0	0.0

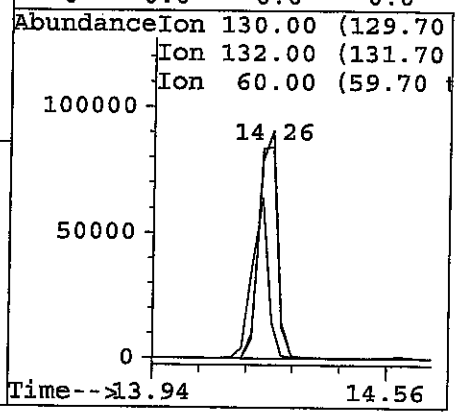


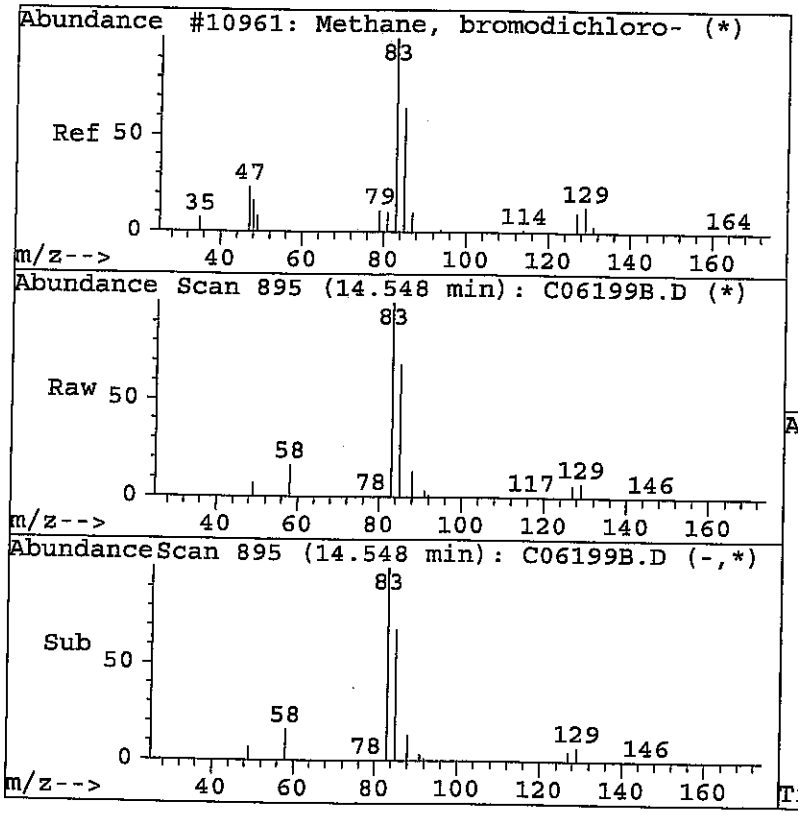


#23
Trichloroethene
Concen: 0.86 ppbV
RT: 14.26 min Scan# 884
Delta R.T. -0.00 min
Lab File: C06199B.D
Acq: 19 Jun 109 10:33 am

Tgt Ion:130 Resp: 305786

Ion	Ratio	Lower	Upper
130	100		
132	107.5	81.9	122.9
60	16.7	18.8	28.2#
0	0.0	0.0	0.0

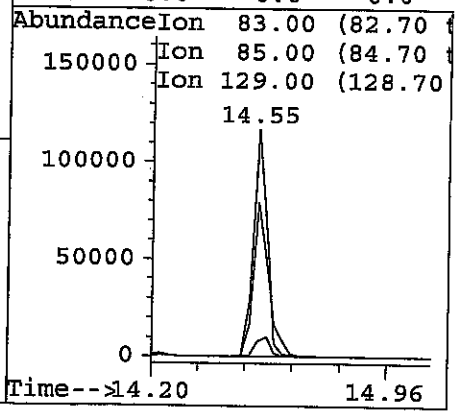


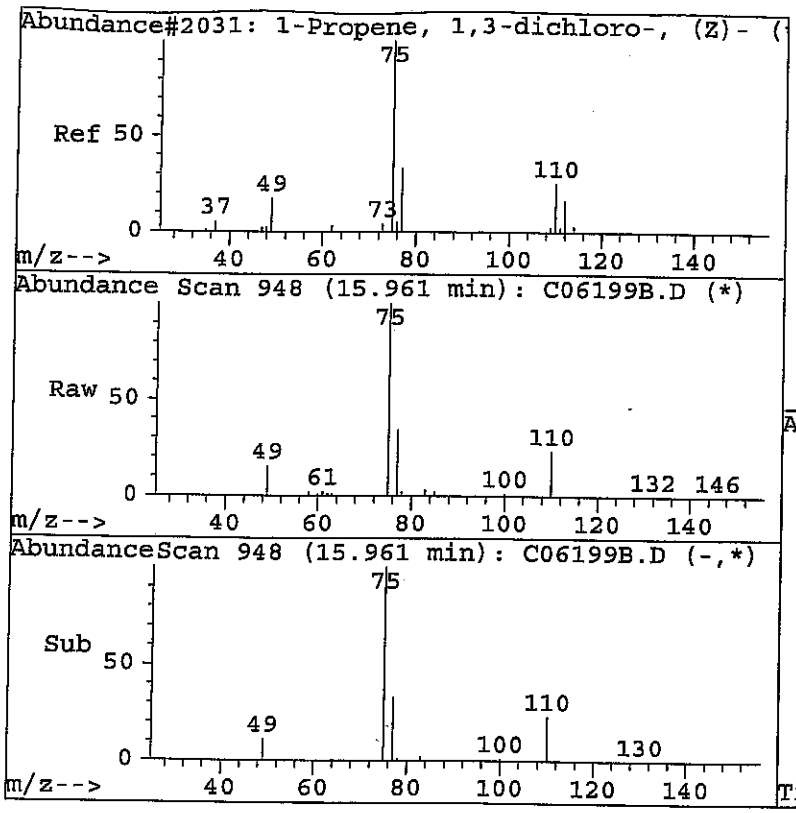


#24
Bromodichloromethane
Concen: 0.55 ppbV
RT: 14.55 min Scan# 895
Delta R.T. -0.02 min
Lab File: C06199B.D
Acq: 19 Jun 109 10:33 am

Tgt Ion:83 Resp: 349165

Ion	Ratio	Lower	Upper
83	100		
85	67.8	51.1	76.7
129	6.6	4.2	6.2#
0	0.0	0.0	0.0

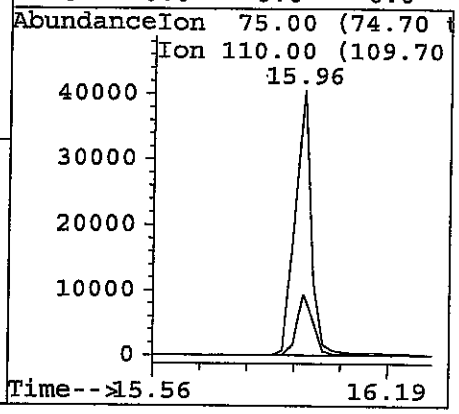


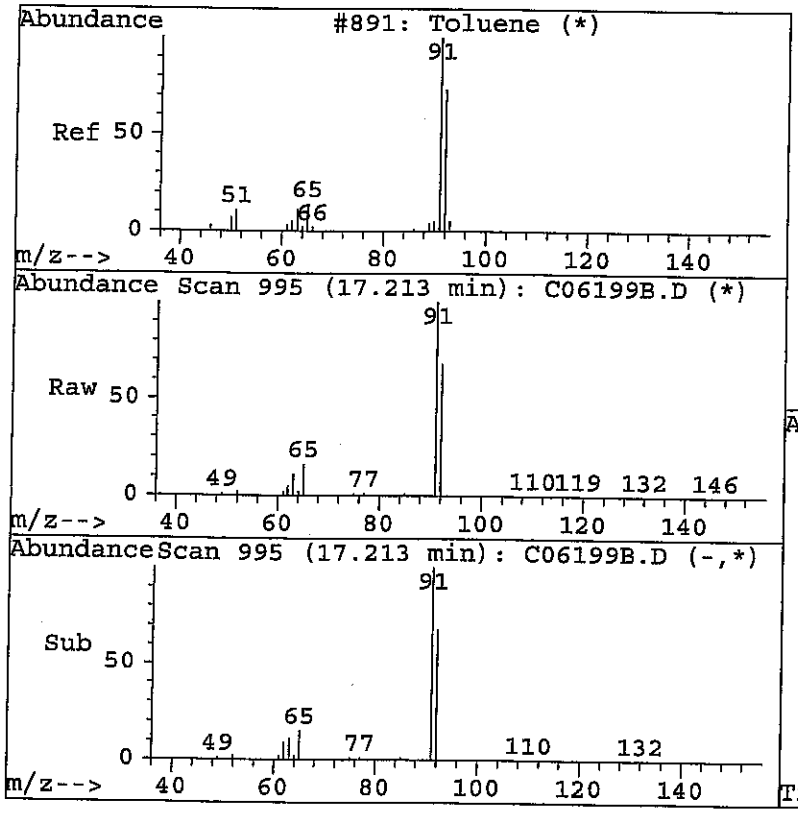


#25
cis-1,3-Dichloropropene
Concen: 0.32 ppbV
RT: 15.96 min Scan# 948
Delta R.T. 0.00 min
Lab File: C06199B.D
Acq: 19 Jun 109 10:33 am

Tgt Ion:75 Resp: 119127

Ion	Ratio	Lower	Upper
75	100		
110	23.0	15.4	23.0#
0	0.0	0.0	0.0
0	0.0	0.0	0.0

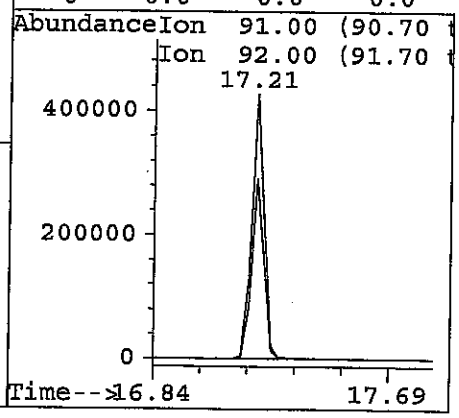


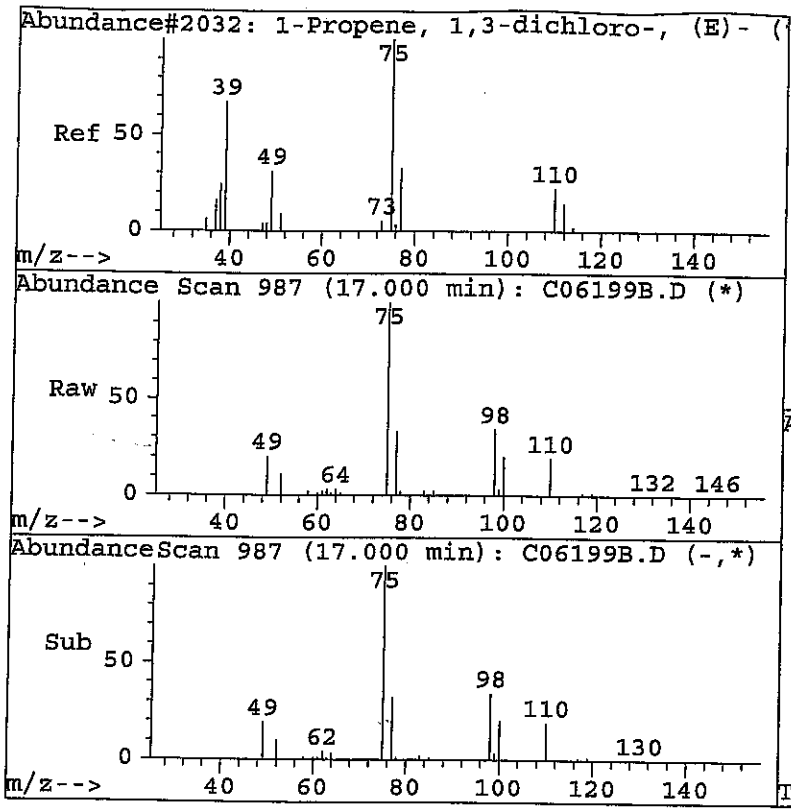


#26
Toluene
Concen: 0.95 ppbV
RT: 17.21 min Scan# 995
Delta R.T. 0.00 min
Lab File: C06199B.D
Acq: 19 Jun 109 10:33 am

Tgt Ion:91 Resp: 1260474

Ion	Ratio	Lower	Upper
91	100		
92	68.5	55.1	82.7
0	0.0	0.0	0.0
0	0.0	0.0	0.0

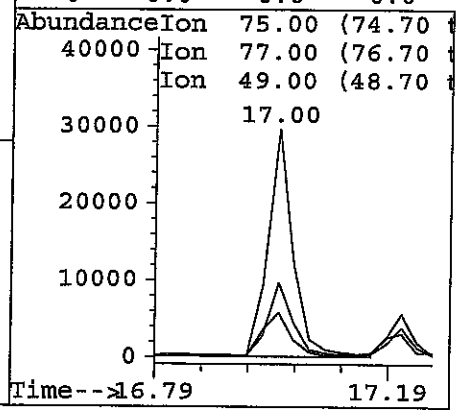


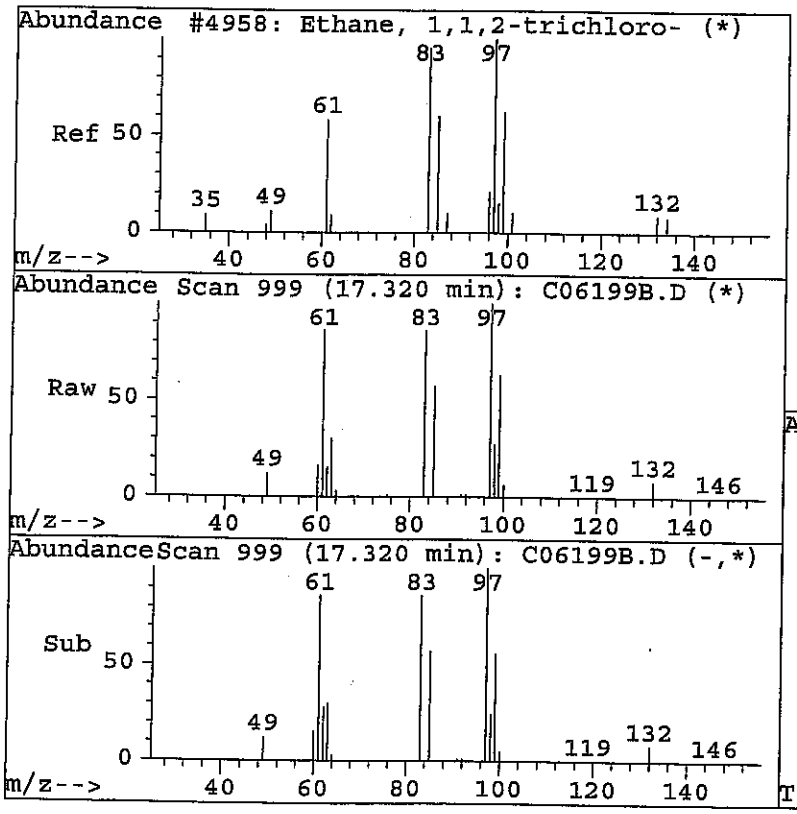


#27
trans-1,3-Dichloropropene
Concen: 0.16 ppbV
RT: 17.00 min Scan# 987
Delta R.T. -0.00 min
Lab File: C06199B.D
Acq: 19 Jun 109 10:33 am

Tgt Ion:75 Resp: 88418

Ion	Ratio	Lower	Upper
75	100		
77	31.6	25.9	38.9
49	18.9	18.4	27.6
0	0.0	0.0	0.0

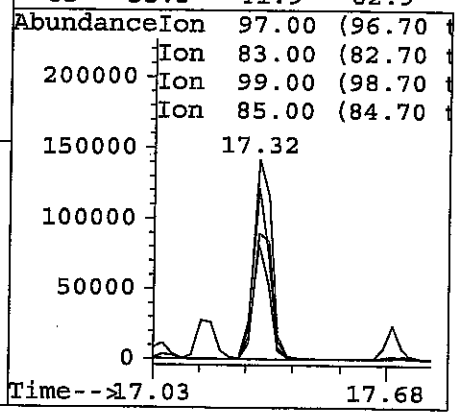


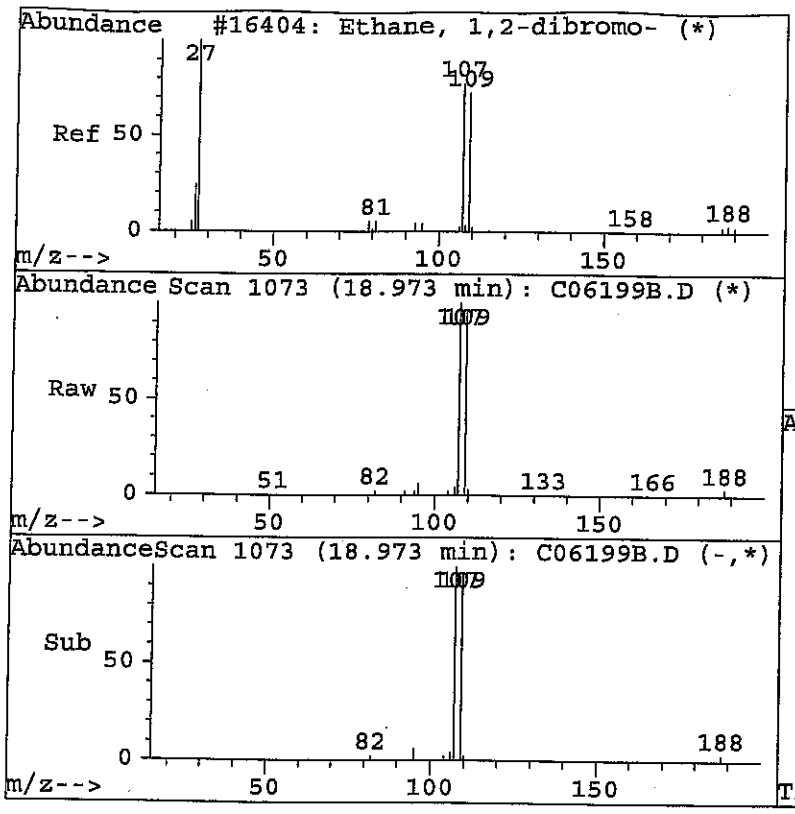


#28
1,1,2-Trichloroethane
Concen: 1.00 ppbV
RT: 17.32 min Scan# 999
Delta R.T. -0.03 min
Lab File: C06199B.D
Acq: 19 Jun 109 10:33 am

Tgt Ion:97 Resp: 480870

Ion	Ratio	Lower	Upper
97	100		
83	85.6	66.6	99.8
99	63.4	48.9	73.3
85	55.3	41.9	62.9

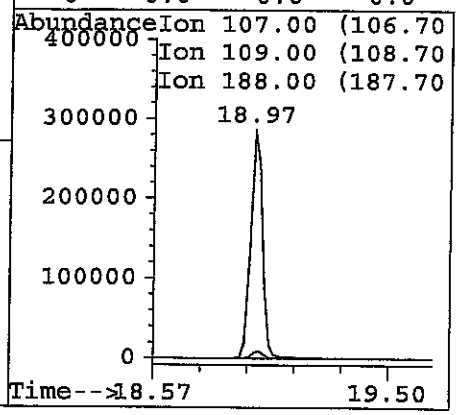


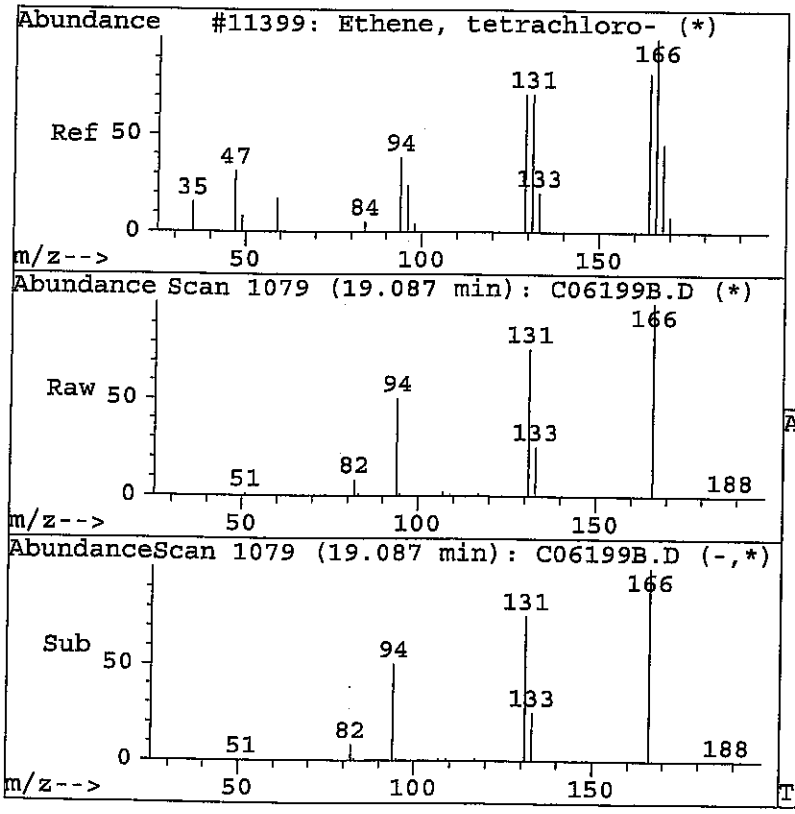


#29
1,2-Dibromoethane
Concen: 0.81 ppbV
RT: 18.97 min Scan# 1073
Delta R.T. -0.02 min
Lab File: C06199B.D
Acq: 19 Jun 109 10:33 am

Tgt Ion:107 Resp: 915216

Ion	Ratio	Lower	Upper
107	100		
109	97.5	81.1	121.7
188	2.6	2.2	3.4
0	0.0	0.0	0.0

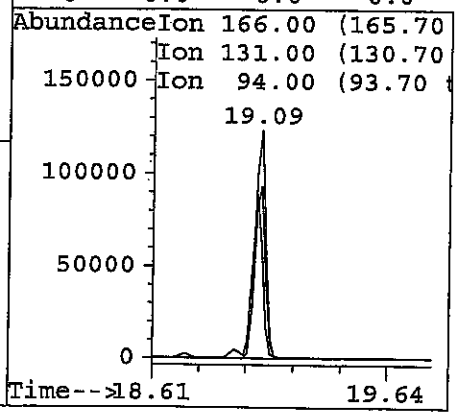


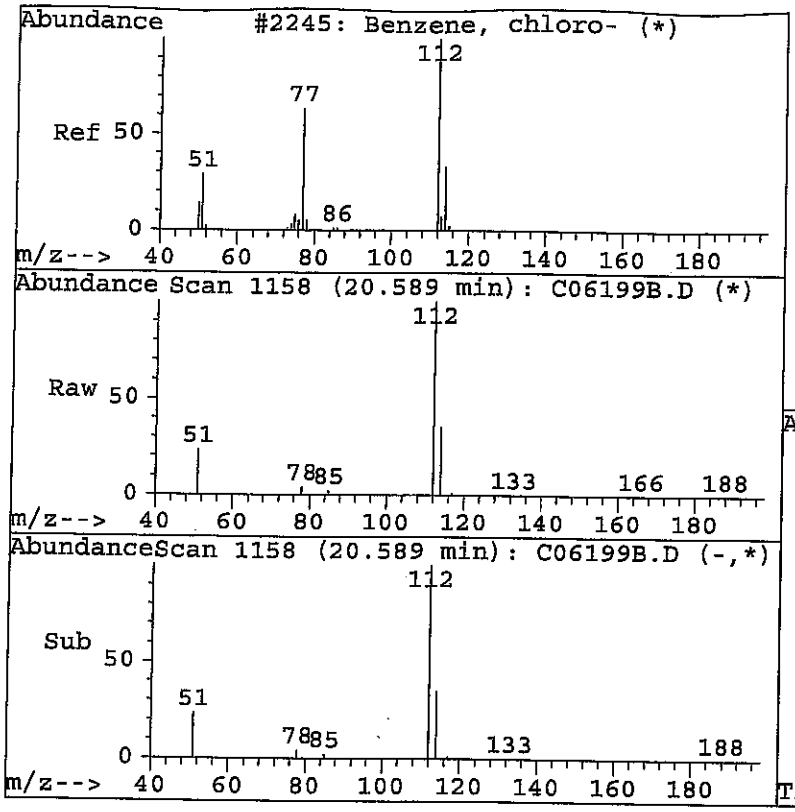


#30
Tetrachloroethene
Concen: 0.90 ppbV
RT: 19.09 min Scan# 1079
Delta R.T. -0.00 min
Lab File: C06199B.D
Acq: 19 Jun 109 10:33 am

Tgt Ion:166 Resp: 373918

Ion	Ratio	Lower	Upper
166	100		
131	75.5	67.3	100.9
94	50.1	53.7	80.5#
0	0.0	0.0	0.0

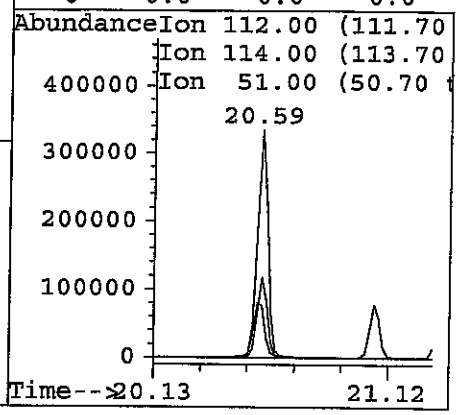


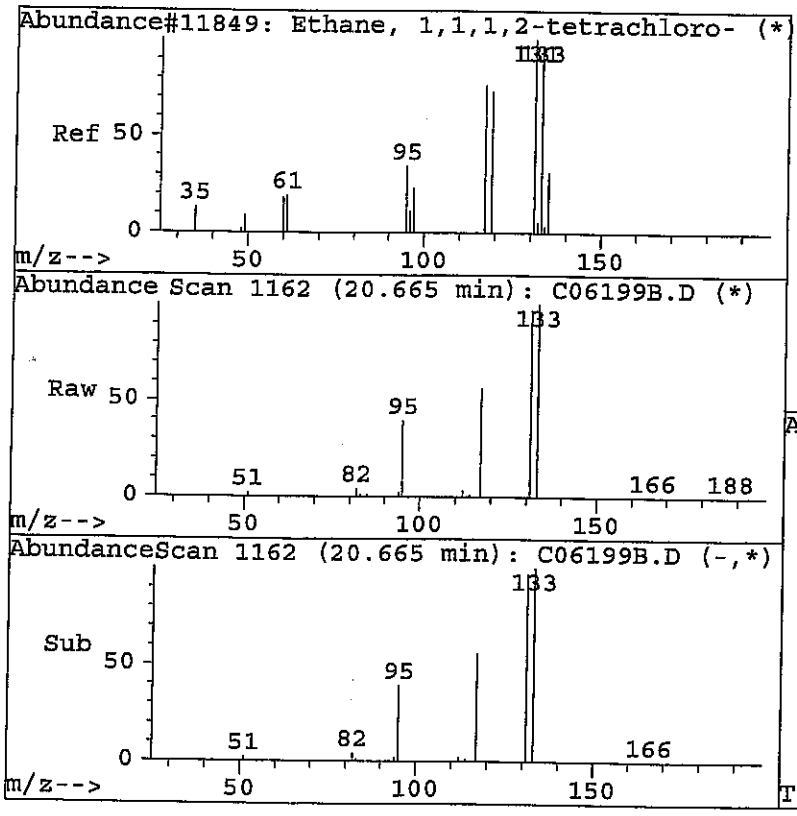


#31
Chlorobenzene
Concen: 0.78 ppbV
RT: 20.59 min Scan# 1158
Delta R.T. -0.00 min
Lab File: C06199B.D
Acq: 19 Jun 109 10:33 am

Tgt Ion:112 Resp: 1017786

Ion	Ratio	Lower	Upper
112	100		
114	35.1	26.3	39.5
51	21.6	22.7	34.1#
0	0.0	0.0	0.0

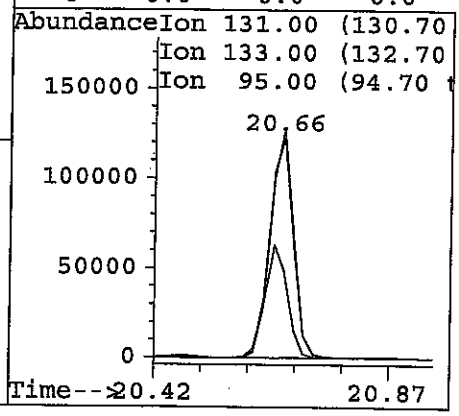


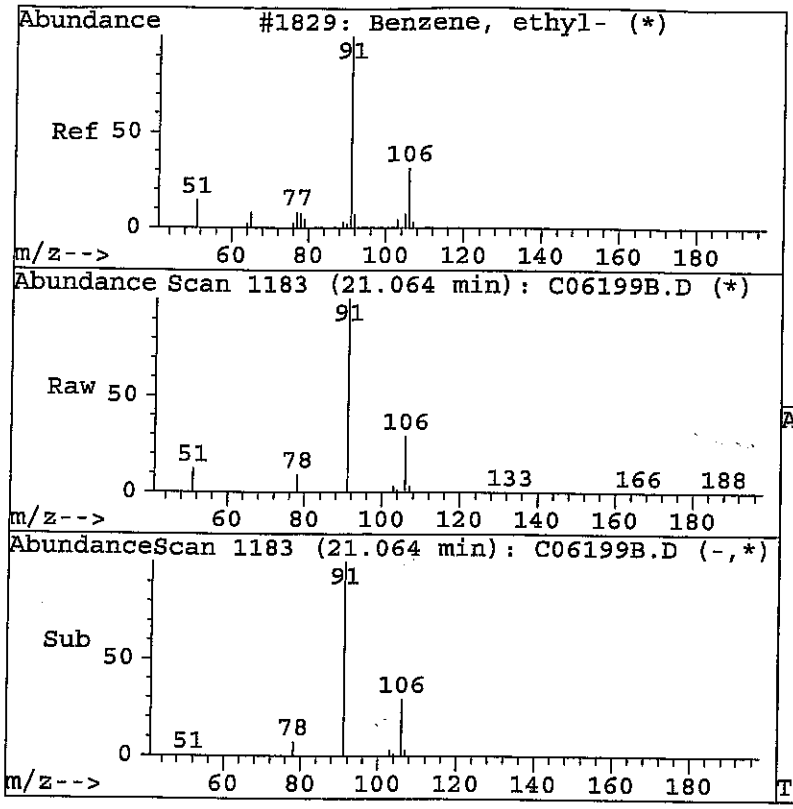


#32
1,1,1,2-Tetrachloroethane
Concen: 0.74 ppbV
RT: 20.66 min Scan# 1162
Delta R.T. -0.01 min
Lab File: C06199B.D
Acq: 19 Jun 109 10:33 am

Tgt Ion:131 Resp: 382804

Ion	Ratio	Lower	Upper
131	100		
133	103.6	78.8	118.2
95	39.9	35.1	52.7
0	0.0	0.0	0.0

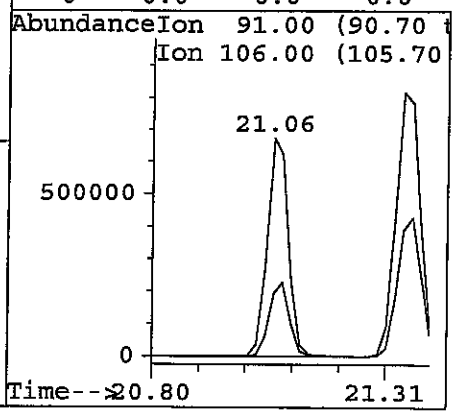


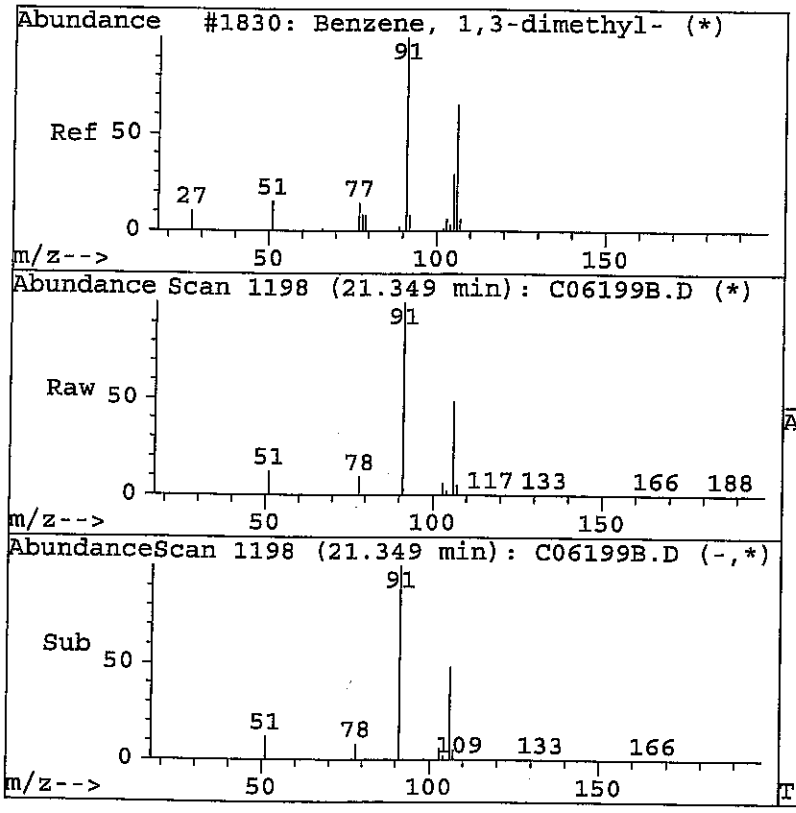


#33
Ethylbenzene
Concen: 0.82 ppbV
RT: 21.06 min Scan# 1183
Delta R.T. -0.02 min
Lab File: C06199B.D
Acq: 19 Jun 109 10:33 am

Tgt Ion:91 Resp: 2140675

Ion	Ratio	Lower	Upper
91	100		
106	28.7	27.1	40.7
0	0.0	0.0	0.0
0	0.0	0.0	0.0

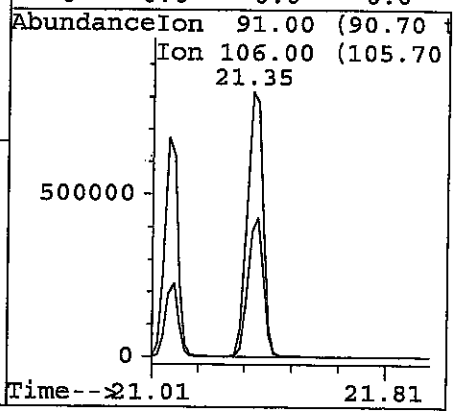


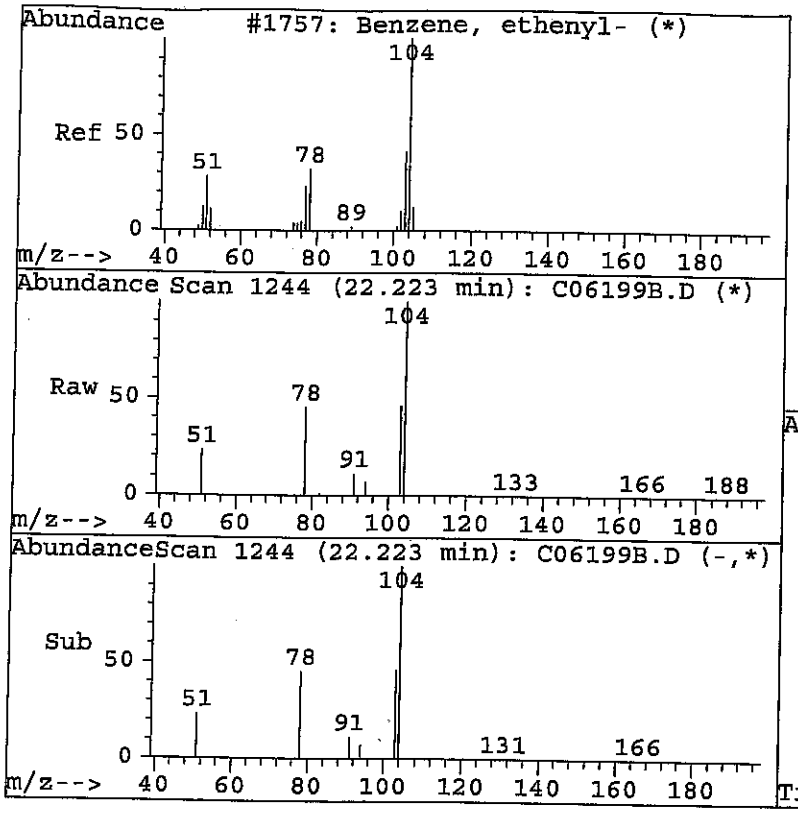


#34
m & p-Xylene
Concen: 1.53 ppbV
RT: 21.35 min Scan# 1198
Delta R.T. -0.02 min
Lab File: C06199B.D
Acq: 19 Jun 109 10:33 am

Tgt Ion:91 Resp: 2970894

Ion	Ratio	Lower	Upper
91	100		
106	47.6	43.3	64.9
0	0.0	0.0	0.0
0	0.0	0.0	0.0

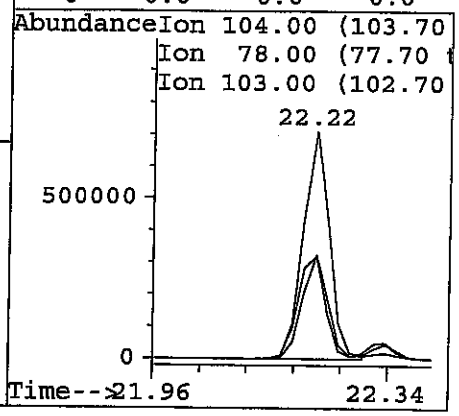


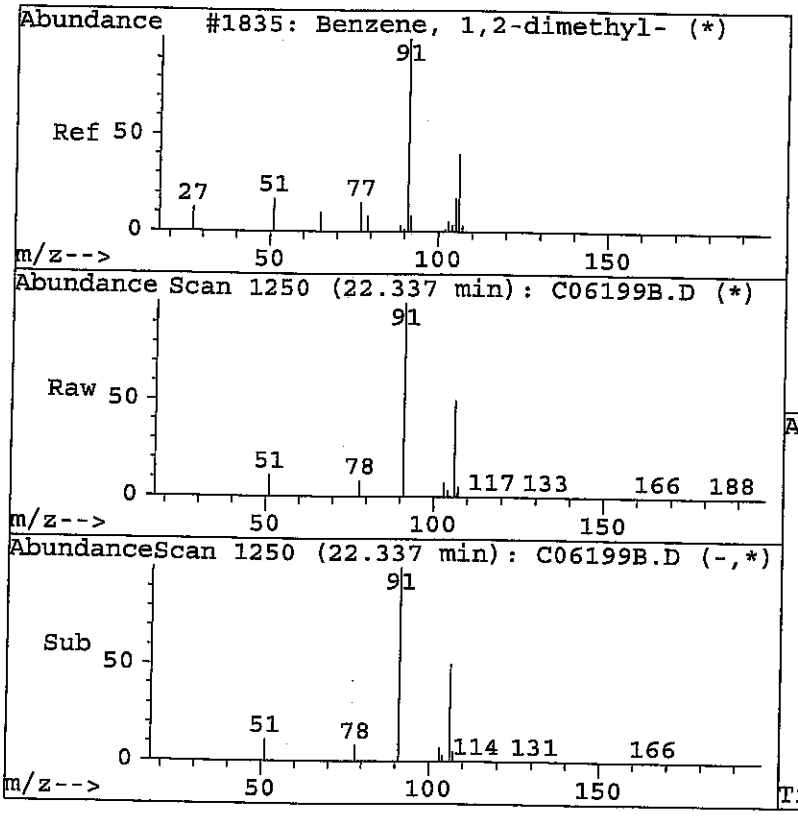


#35
Styrene
Concen: 0.86 ppbV
RT: 22.22 min Scan# 1244
Delta R.T. 0.00 min
Lab File: C06199B.D
Acq: 19 Jun 109 10:33 am

Tgt Ion:104 Resp: 2090268

Ion	Ratio	Lower	Upper
104	100		
78	44.1	38.0	57.0
103	45.2	35.0	52.4
0	0.0	0.0	0.0

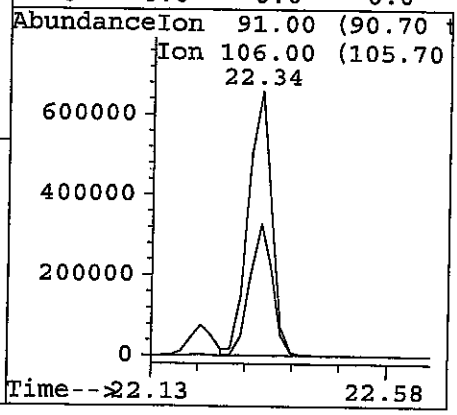


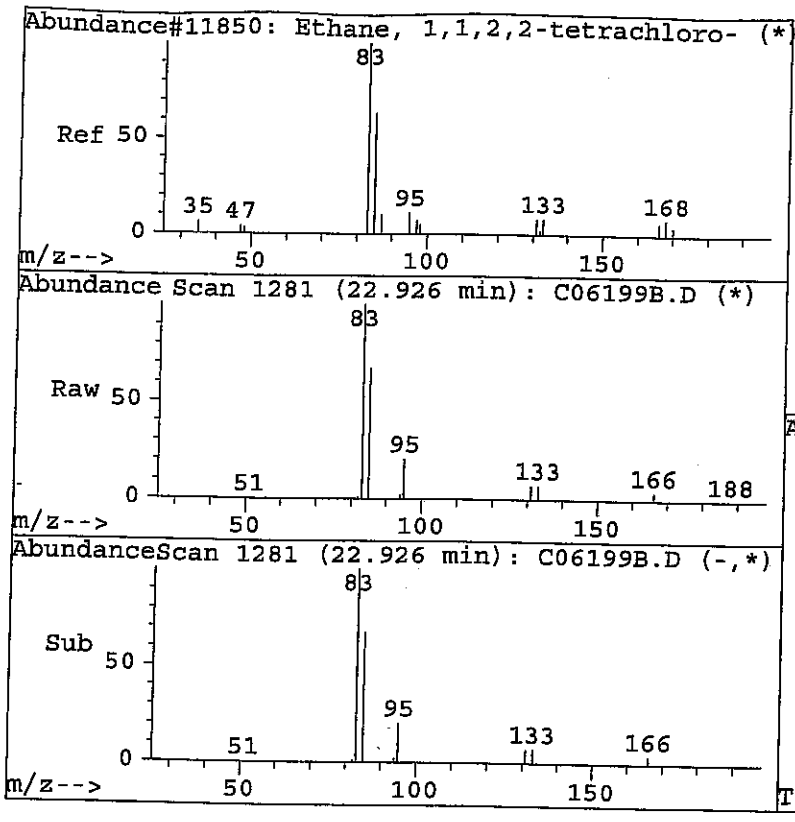


#36
o-Xylene
Concen: 0.73 ppbV
RT: 22.34 min Scan# 1250
Delta R.T. -0.00 min
Lab File: C06199B.D
Acq: 19 Jun 109 10:33 am

Tgt Ion:91 Resp: 1996168

Ion	Ratio	Lower	Upper
91	100		
106	50.7	39.4	59.2
0	0.0	0.0	0.0
0	0.0	0.0	0.0

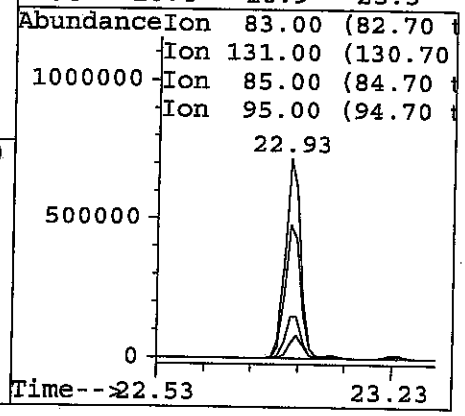


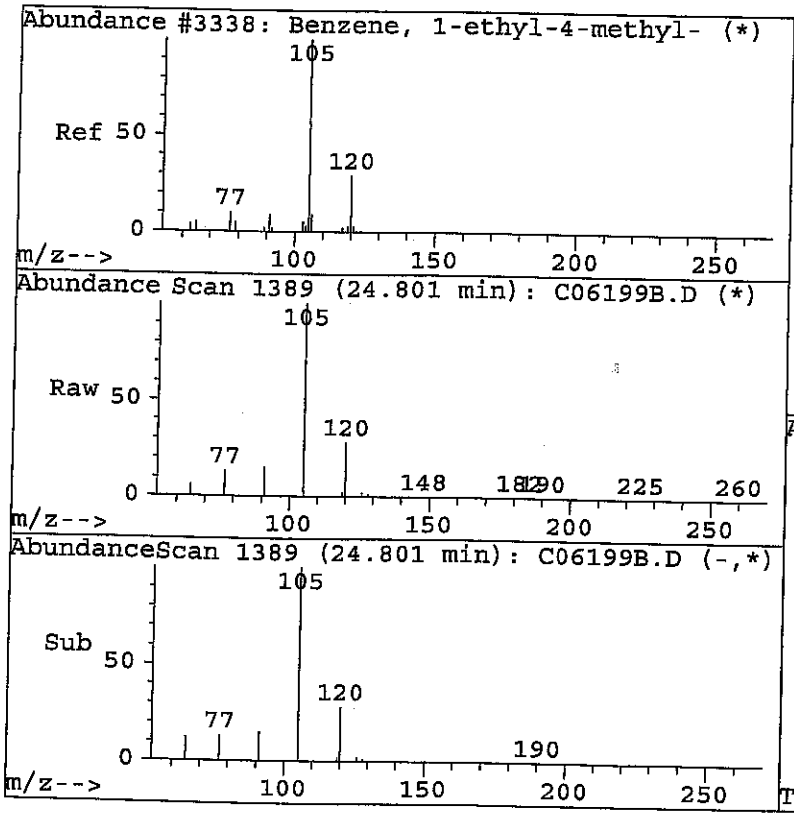


#37
1,1,2,2-Tetrachloroethane
Concen: 0.77 ppbV
RT: 22.93 min Scan# 1281
Delta R.T. -0.00 min
Lab File: C06199B.D
Acq: 19 Jun 109 10:33 am

Tgt Ion:83 Resp: 2273482

Ion	Ratio	Lower	Upper
83	100		
131	7.4	5.8	8.6
85	66.6	55.0	82.6
95	20.4	16.9	25.3

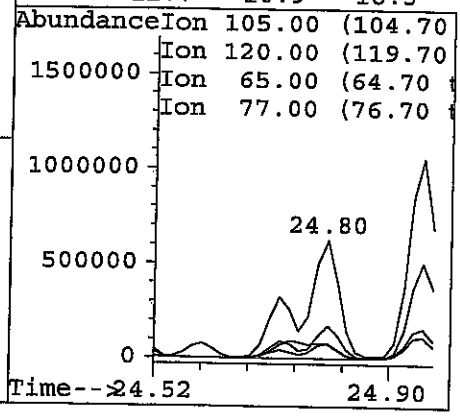


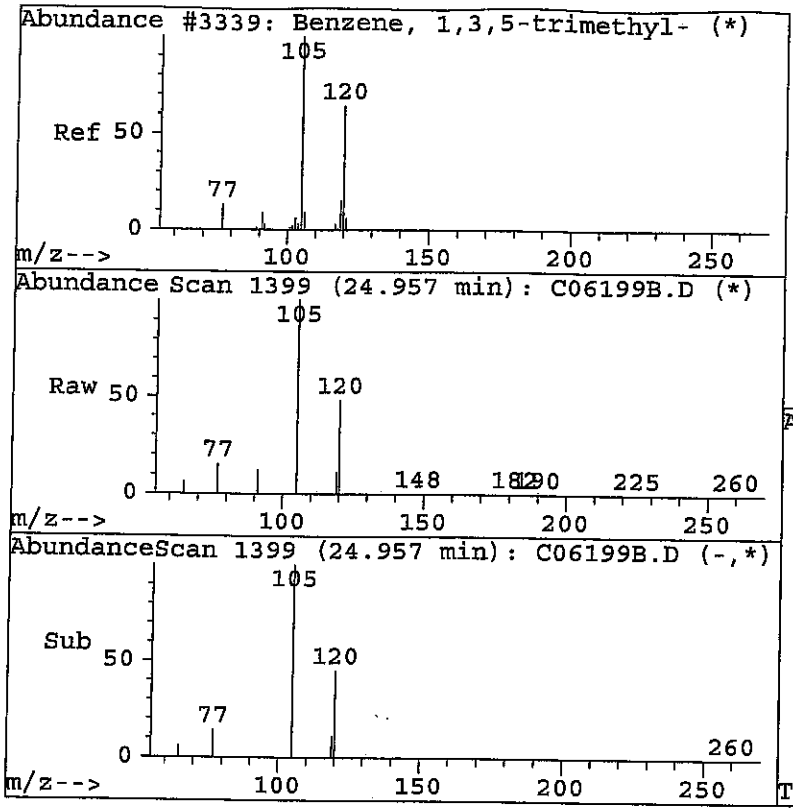


#38
4-Ethyltoluene
Concen: 0.43 ppbV m
RT: 24.80 min Scan# 1389
Delta R.T. 0.00 min
Lab File: C06199B.D
Acq: 19 Jun 109 10:33 am

Tgt Ion:105 Resp: 2778042

Ion	Ratio	Lower	Upper
105	100		
120	27.6	20.0	30.0
65	6.1	5.8	8.8
77	12.7	10.9	16.3

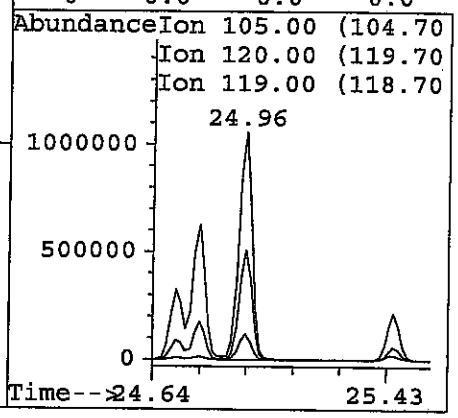


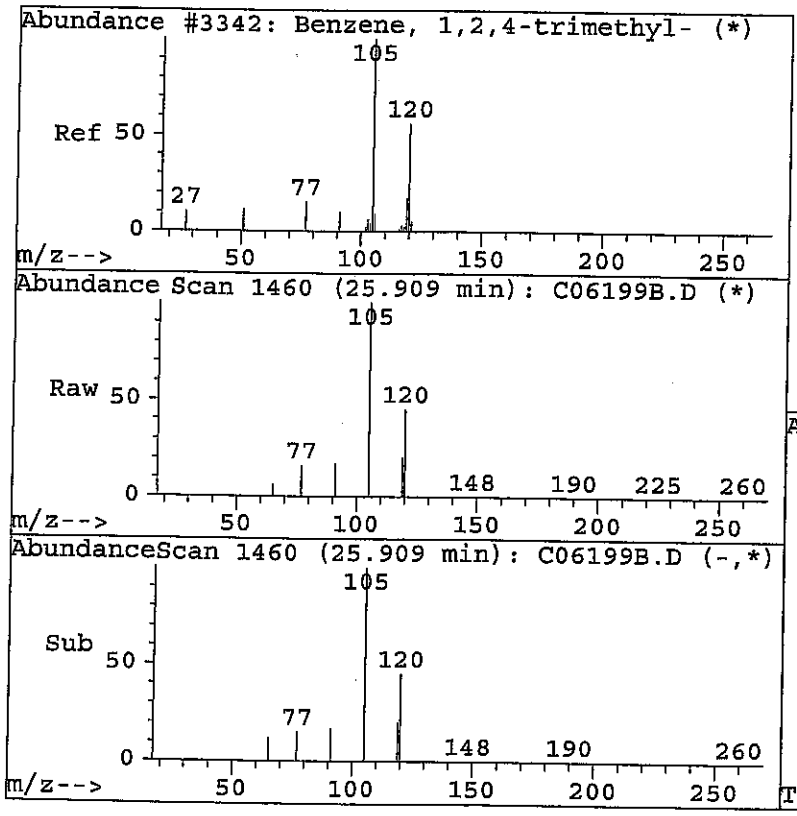


#39
1,3,5-Trimethylbenzene
Concen: 0.61 ppbV
RT: 24.96 min Scan# 1399
Delta R.T. -0.00 min
Lab File: C06199B.D
Acq: 19 Jun 109 10:33 am

Tgt Ion:105 Resp: 3143240

Ion	Ratio	Lower	Upper
105	100		
120	48.2	36.7	55.1
119	11.3	8.4	12.6
0	0.0	0.0	0.0

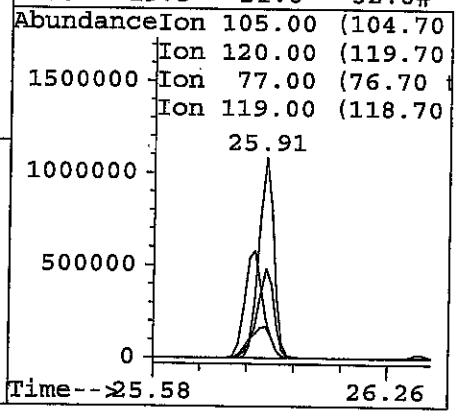


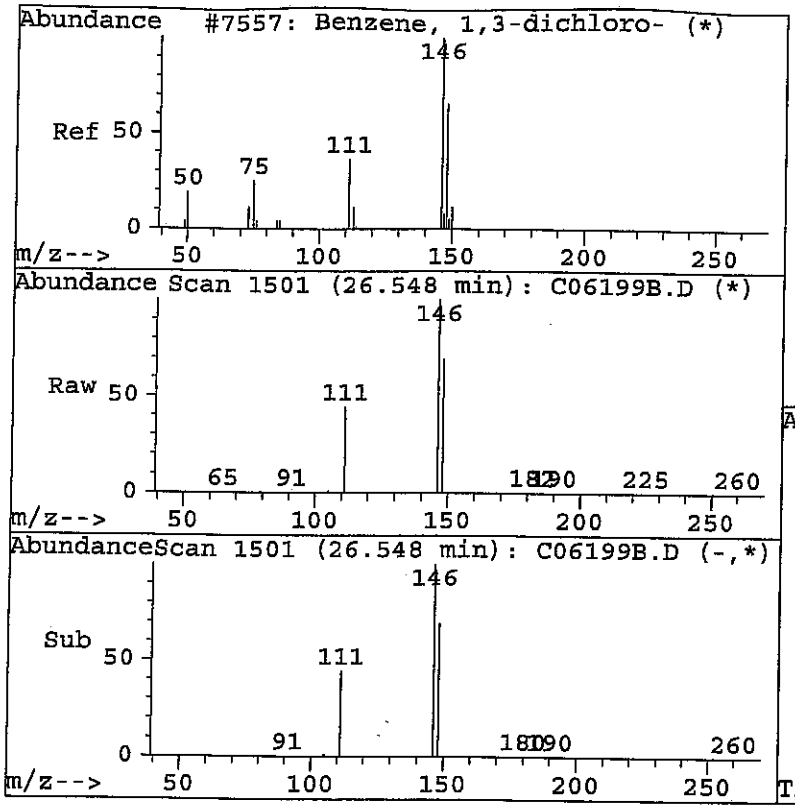


#40
1,2,4-Trimethylbenzene
Concen: 0.55 ppbV
RT: 25.91 min Scan# 1460
Delta R.T. -0.00 min
Lab File: C06199B.D
Acq: 19 Jun 109 10:33 am

Tgt Ion:105 Resp: 3248488

Ion	Ratio	Lower	Upper
105	100		
120	44.6	34.9	52.3
77	15.7	14.2	21.2
119	19.5	21.8	32.6#

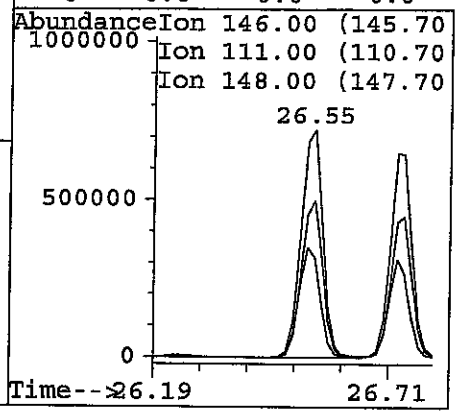


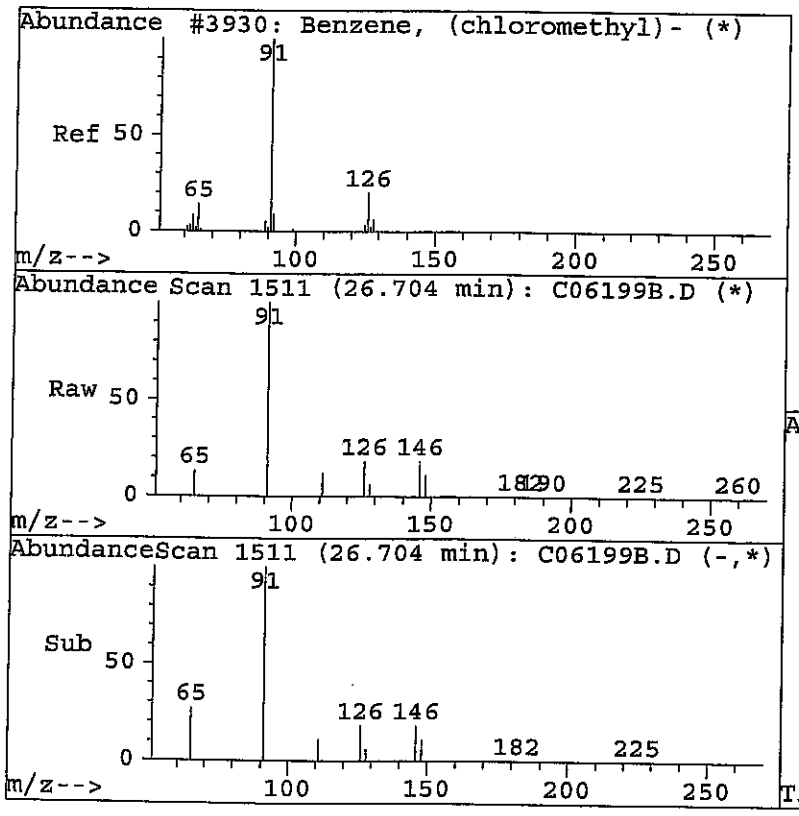


#41
1,3-Dichlorobenzene
Concen: 0.61 ppbV
RT: 26.55 min Scan# 1501
Delta R.T. -0.00 min
Lab File: C06199B.D
Acq: 19 Jun 109 10:33 am

Tgt Ion:146 Resp: 2387618

Ion	Ratio	Lower	Upper
146	100		
111	43.9	38.8	58.2
148	68.8	55.3	82.9
0	0.0	0.0	0.0

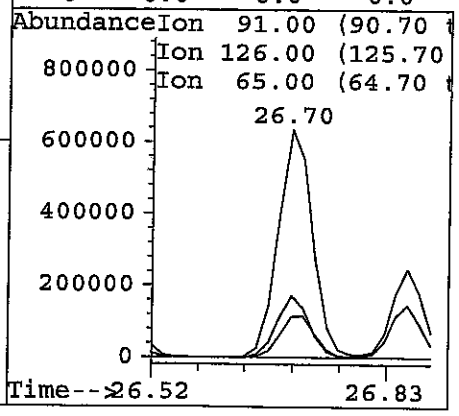


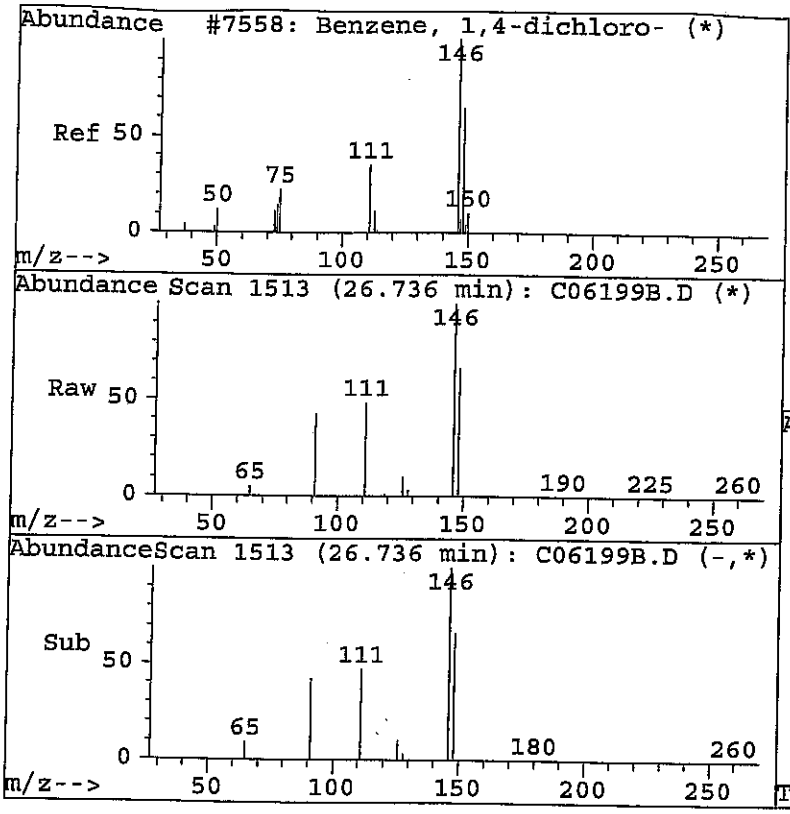


#42
Benzyl chloride
Concen: 0.41 ppbV
RT: 26.70 min Scan# 1511
Delta R.T. 0.00 min
Lab File: C06199B.D
Acq: 19 Jun 109 10:33 am

Tgt Ion:91 Resp: 2015808

Ion	Ratio	Lower	Upper
91	100		
126	18.0	15.0	22.6
65	26.8	21.0	31.6
0	0.0	0.0	0.0

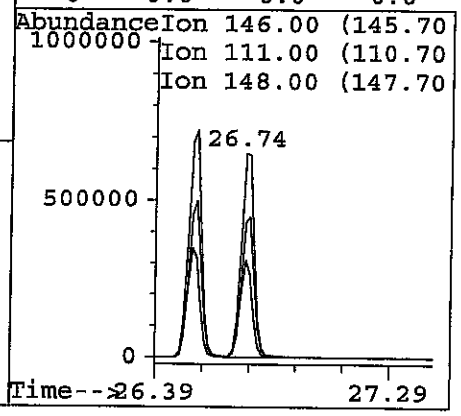


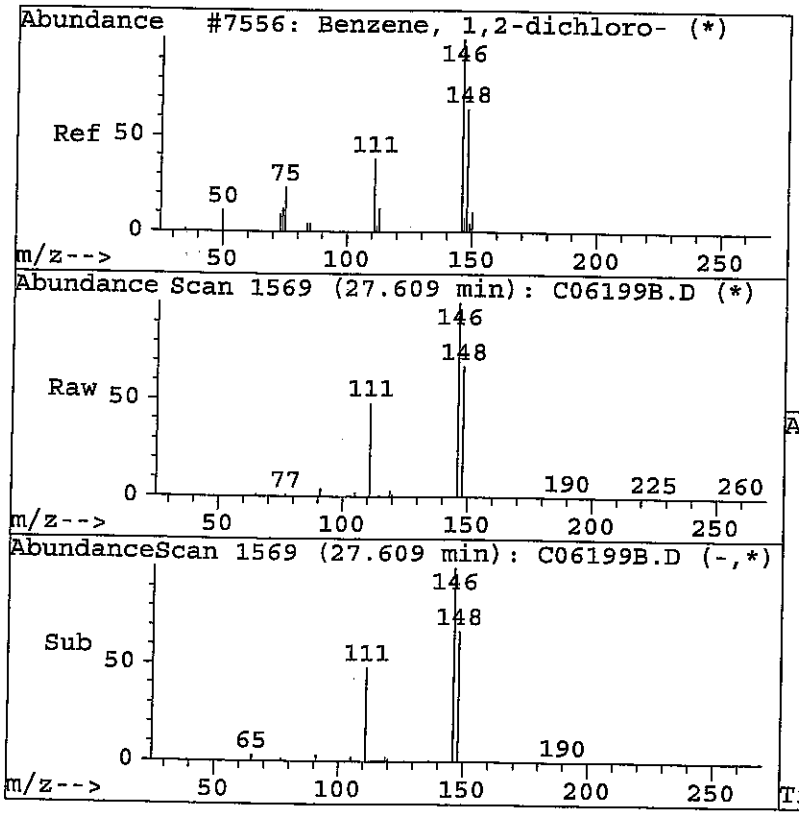


#43
1,4-Dichlorobenzene
Concen: 0.53 ppbV
RT: 26.74 min Scan# 1513
Delta R.T. -0.01 min
Lab File: C06199B.D
Acq: 19 Jun 109 10:33 am

Tgt Ion:146 Resp: 2189006

Ion	Ratio	Lower	Upper
146	100		
111	47.8	36.1	54.1
148	66.1	55.1	82.7
0	0.0	0.0	0.0

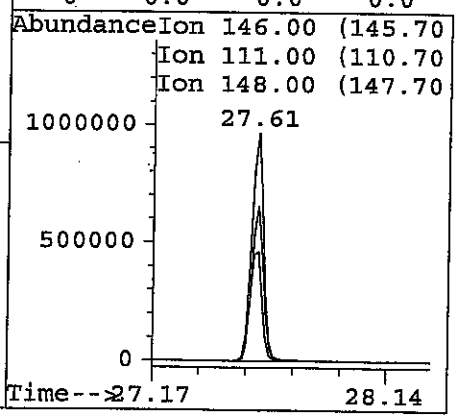


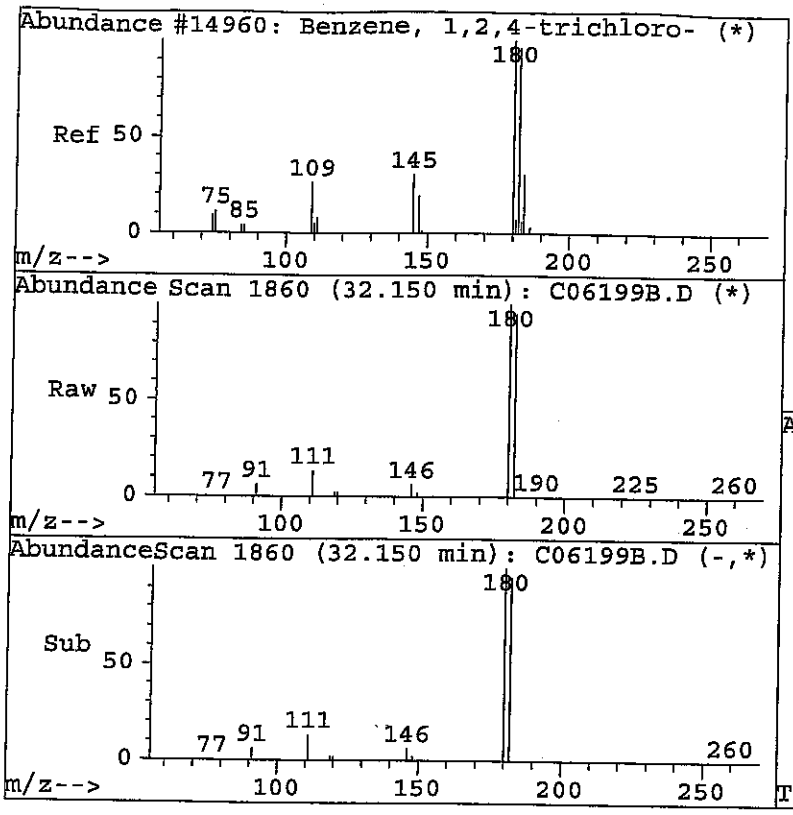


#44
1,2-Dichlorobenzene
Concen: 0.65 ppbV
RT: 27.61 min Scan# 1569
Delta R.T. -0.00 min
Lab File: C06199B.D
Acq: 19 Jun 109 10:33 am

Tgt Ion:146 Resp: 3162973

Ion	Ratio	Lower	Upper
146	100		
111	47.7	41.6	62.4
148	67.4	54.3	81.5
0	0.0	0.0	0.0

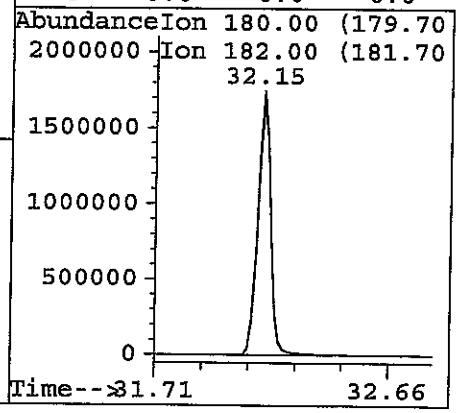


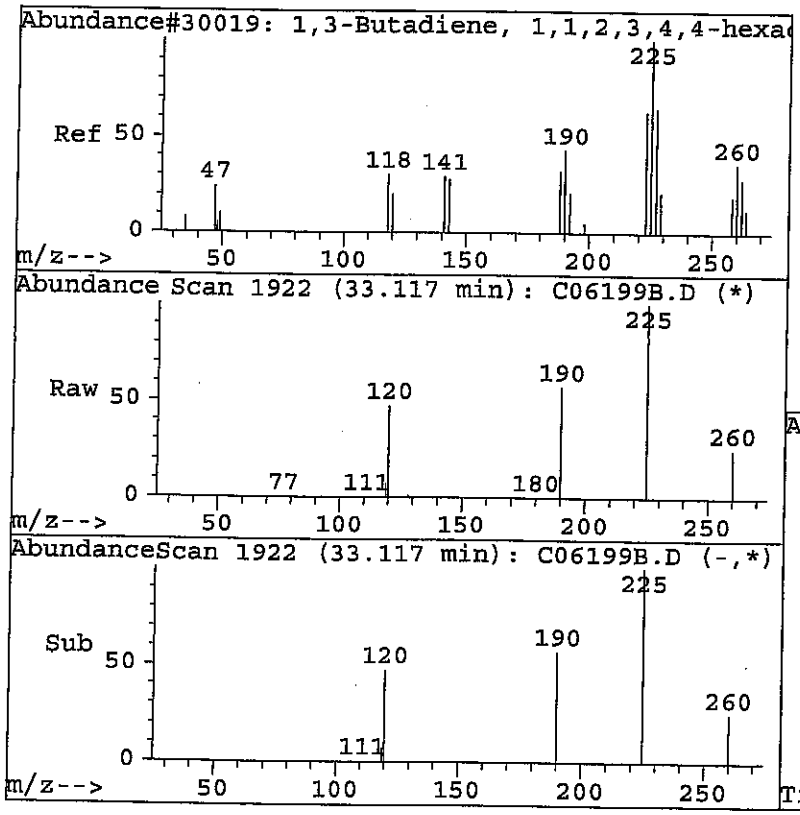


#45
1,2,4-Trichlorobenzene
Concen: 0.68 ppbV
RT: 32.15 min Scan# 1860
Delta R.T. -0.02 min
Lab File: C06199B.D
Acq: 19 Jun 109 10:33 am

Tgt Ion:180 Resp: 6381826

Ion	Ratio	Lower	Upper
180	100		
182	94.7	77.2	115.8
0	0.0	0.0	0.0
0	0.0	0.0	0.0

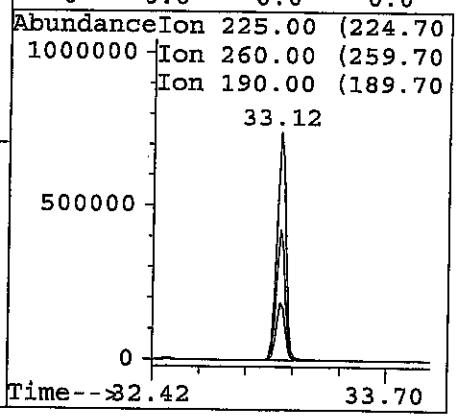


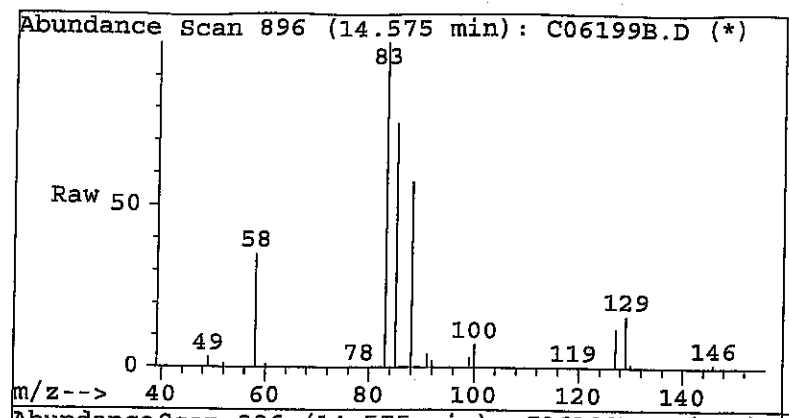


#46
Hexachlorobutadiene
Concen: 0.52 ppbV
RT: 33.12 min Scan# 1922
Delta R.T. -0.01 min
Lab File: C06199B.D
Acq: 19 Jun 109 10:33 am

Tgt Ion:225 Resp: 2541100

Ion	Ratio	Lower	Upper
225	100		
260	25.0	19.8	29.8
190	57.1	46.2	69.4
0	0.0	0.0	0.0

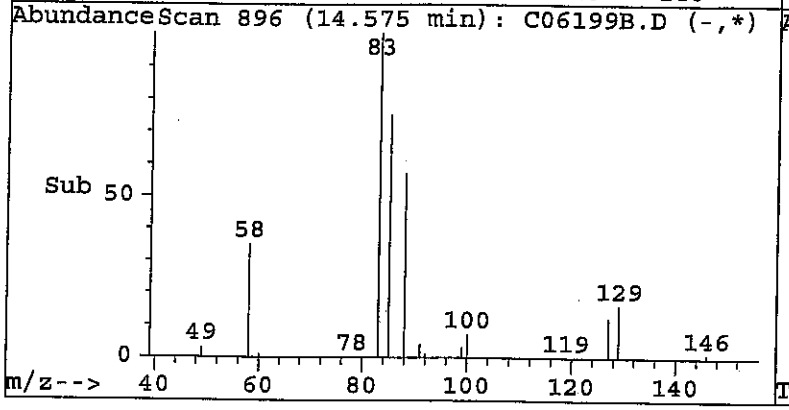


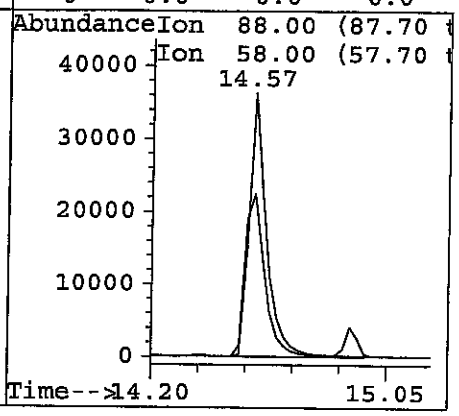


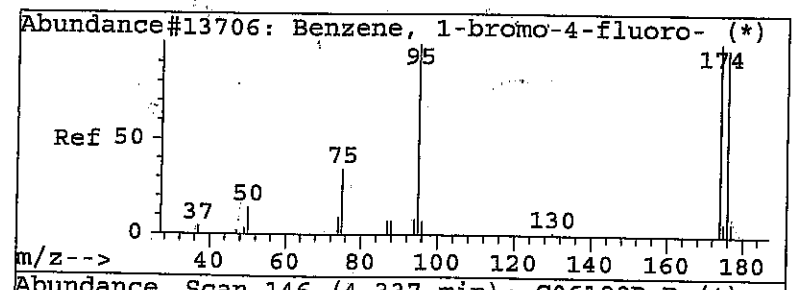
#47
1,4 Dioxane
Concen: 0.55 ppbV
RT: 14.57 min Scan# 896
Delta R.T. 0.00 min
Lab File: C06199B.D
Acq: 19 Jun 109 10:33 am

Tgt Ion:88 Resp: 154378

Ion	Ratio	Lower	Upper
88	100		
58	70.9	58.7	88.1
0	0.0	0.0	0.0
0	0.0	0.0	0.0



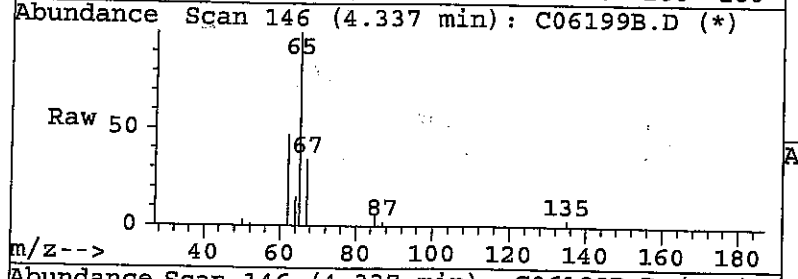


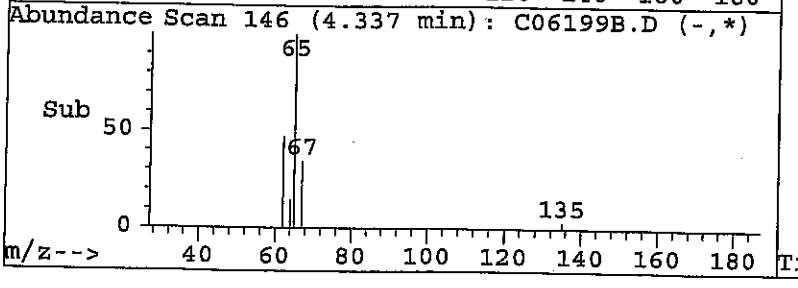


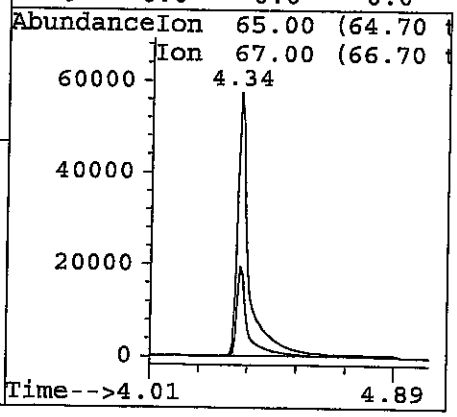
#49
Vinyl Chloride-d3
Concen: 0.20 ppbV
RT: 4.34 min Scan# 146
Delta R.T. -0.01 min
Lab File: C06199B.D
Acq: 19 Jun 109 10:33 am

Tgt Ion:65 Resp: 164313

Ion	Ratio	Lower	Upper
65	100		
67	34.0	27.8	41.6
0	0.0	0.0	0.0
0	0.0	0.0	0.0







Quantitation Report

Data File : C:\MSCHEM\2\DATA\06199MS2\C06199D.D
Acq Time : 19 Jun 109 2:53 pm
Sample : ST60032+ST60250
Misc : 5 ML
Quant Time: Jun 22 8:52 19109

Operator: CM
Inst : MS2
Multiplr: 1.00

Method : C:\MSCHEM\2\METHODS\2EXSIM_I.M
Title : EPA T0-15
Last Update : Mon Jun 22 09:18:18 2009
Response via : Multiple Level Calibration

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Chlorobenzene-d5	20.51	117	906427	0.20 ppbV	0.00
System Monitoring Compounds					%Recovery
16) Toluene-d8	17.05	98	391684	0.20 ppbV	
49) Vinyl Chloride-d3	4.36	65	186524	0.22 ppbV	
Target Compounds					Qvalue
2) Dichlorodifluoromethane	3.86	85	316215	0.54 ppbV m	0
3) Chloromethane	4.13	50	161978	0.59 ppbV m	0
4) Freon 114	4.13	85	317502	0.55 ppbV	94
5) Vinyl chloride	4.37	62	109920	0.61 ppbV	98
6) Bromomethane	4.98	94	99178	0.58 ppbV m	99
7) Chloroethane	5.18	64	95157	0.53 ppbV	97
8) Trichlorofluoromethane	5.99	101	358307	0.55 ppbV	99
9) 1,1-Dichloroethene	6.96	61	222986	0.54 ppbV	96
10) Freon 113	7.19	151	153617	0.53 ppbV	97
11) Dichloromethane	7.43	84	105697	0.51 ppbV	96
12) trans-1,2-Dichloroethene	8.50	96	86514	0.32 ppbV	96
13) Methyl tert butyl ether	8.63	73	279390	0.25 ppbV #	98
14) 1,1-Dichloroethane	9.03	63	230798	0.51 ppbV	99
15) cis-1,2-Dichloroethene	10.26	96	136375	0.52 ppbV	90
17) Chloroform	10.67	83	275875	0.44 ppbV	97
18) 1,1,1-Trichloroethane	11.91	97	312871	0.49 ppbV	98
19) 1,2-Dichloroethane	12.04	62	555975	0.38 ppbV	99
20) Benzene	12.63	78	442083	0.45 ppbV	98
21) Carbon tetrachloride	12.68	117	268764	0.51 ppbV	99
22) 1,2-Dichloropropane	14.20	63	151668	0.47 ppbV	99
23) Trichloroethene	14.25	130	167572	0.47 ppbV #	81
24) Bromodichloromethane	14.57	83	206235	0.32 ppbV	99
25) cis-1,3-Dichloropropene	15.96	75	55087	0.14 ppbV #	78
26) Toluene	17.24	91	587925	0.41 ppbV	97
27) trans-1,3-Dichloropropene	17.03	75	32899	0.06 ppbV	95
28) 1,1,2-Trichloroethane	17.35	97	227376	0.44 ppbV	90
29) 1,2-Dibromoethane	18.99	107	422710	0.35 ppbV	98
30) Tetrachloroethene	19.09	166	195956	0.45 ppbV #	91
31) Chlorobenzene	20.59	112	511515	0.37 ppbV #	94
32) 1,1,1,2-Tetrachloroethane	20.66	131	185903	0.34 ppbV	95
33) Ethylbenzene	21.08	91	1016296	0.37 ppbV	90
34) m & p-Xylene	21.37	91	1457192	0.71 ppbV	91
35) Styrene	22.22	104	770183	0.31 ppbV	97
36) o-Xylene	22.34	91	927010	0.32 ppbV	98
37) 1,1,2,2-Tetrachloroethane	22.94	83	813146	0.26 ppbV #	94
38) 4-Ethyltoluene	24.80	105	1202858	0.18 ppbV m	98
39) 1,3,5-Trimethylbenzene	24.96	105	1380945	0.26 ppbV	99
40) 1,2,4-Trimethylbenzene	25.91	105	1445689	0.23 ppbV	98
41) 1,3-Dichlorobenzene	26.55	146	918189	0.22 ppbV	99
42) Benzyl chloride	26.70	91	751022	0.15 ppbV	98
43) 1,4-Dichlorobenzene	26.75	146	952235	0.22 ppbV	93
44) 1,2-Dichlorobenzene	27.61	146	1003063	0.20 ppbV	99
45) 1,2,4-Trichlorobenzene	32.15	180	1714540	0.17 ppbV	96
46) Hexachlorobutadiene	33.12	225	859486	0.17 ppbV	98
47) 1,4 Dioxane	14.65	88	80159	0.29 ppbV	98
48) Naphthalene	32.52	128	12784877	0.76 ppbV m	0

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

Quantitation Report

Data File : C:\MSCHEM\2\DATA\06199MS2\C06199D.D
Acq Time : 19 Jun 109 2:53 pm
Sample : ST60032+ST60250
Misc : 5 ML
Quant Time: Jun 22 8:52 19109

Operator: CM
Inst : MS2
Multiplr: 1.00

Method : C:\MSCHEM\2\METHODS\2EXSIM_I.M
Title : EPA T0-15
Last Update : Mon Jun 22 09:18:18 2009
Response via : Multiple Level Calibration

Compound	R.T.	QIon	Response	Conc Unit	Qvalue

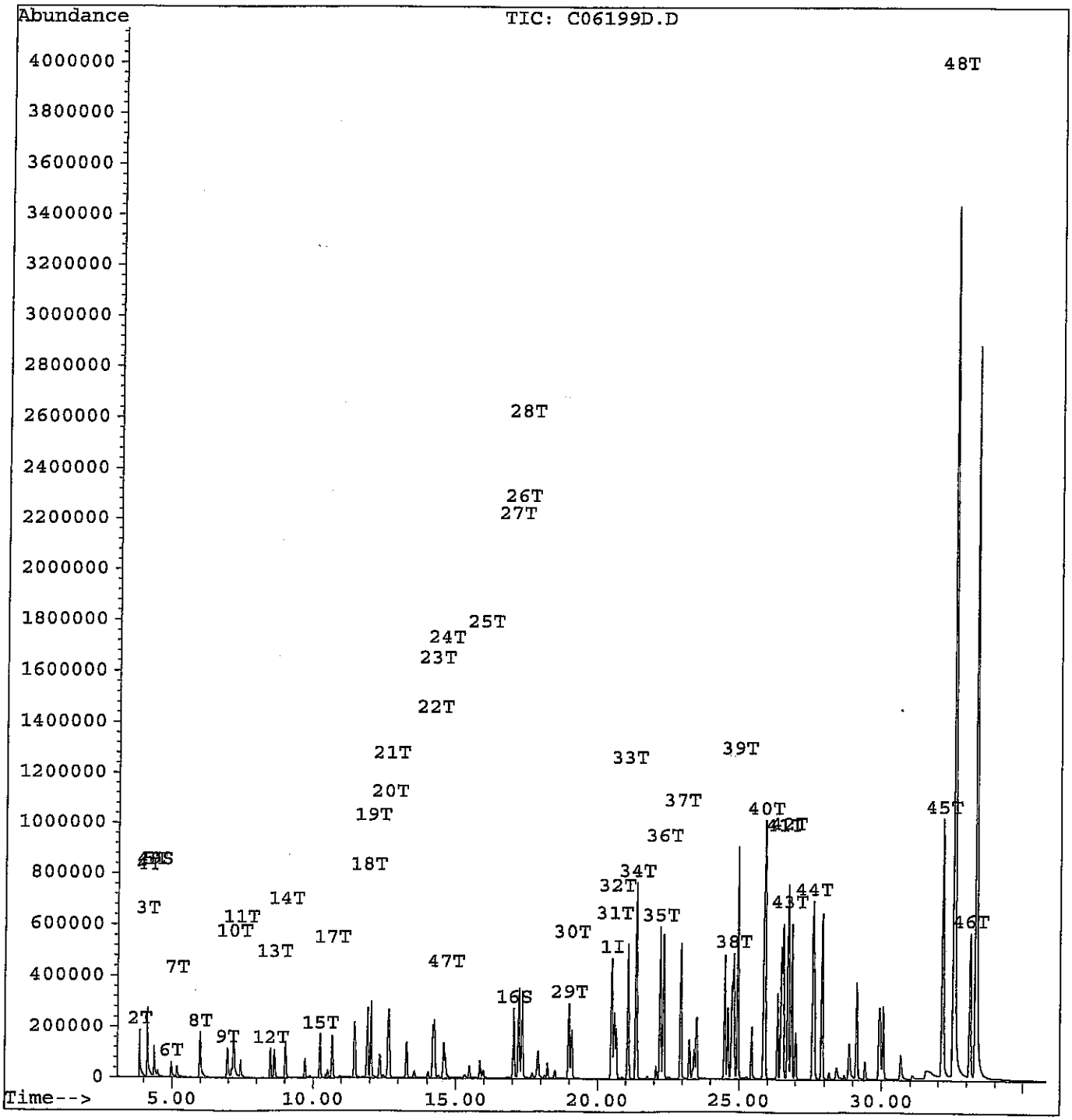
(#) = qualifier out of range (m) = manual integration

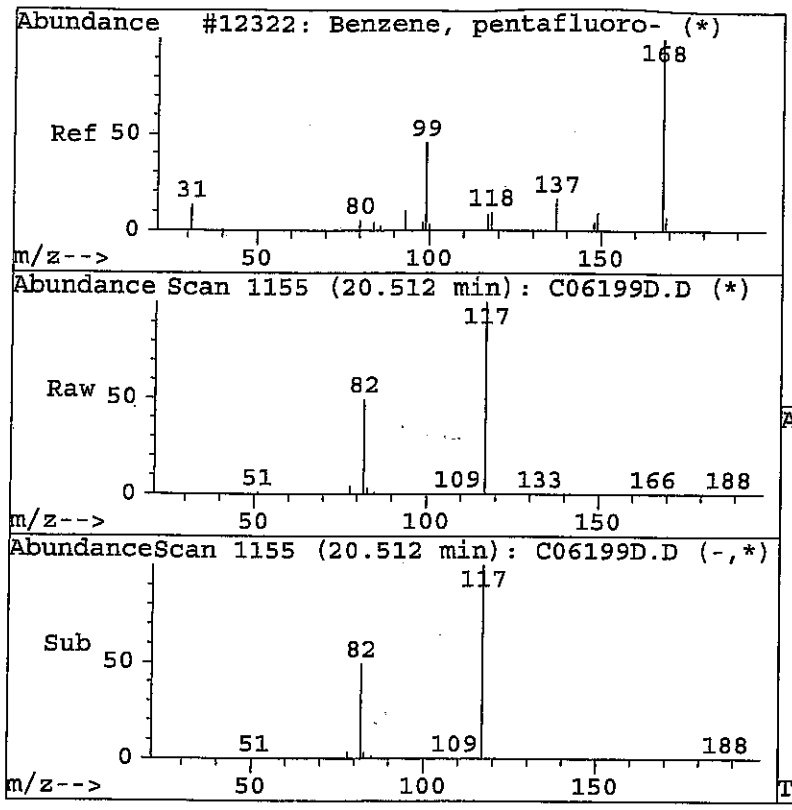
Quantitation Report

Data File : C:\MSCHEM\2\DATA\06199MS2\C06199D.D
Acq Time : 19 Jun 109 2:53 pm
Sample : ST60032+ST60250
Misc : 5 ML
Quant Time: Jun 22 8:52 19109

Operator: CM
Inst : MS2
Multiplr: 1.00

Method : C:\MSCHEM\2\METHODS\2EXSIM_I.M
Title : EPA T0-15
Last Update : Mon Jun 22 09:18:18 2009
Response via : Multiple Level Calibration

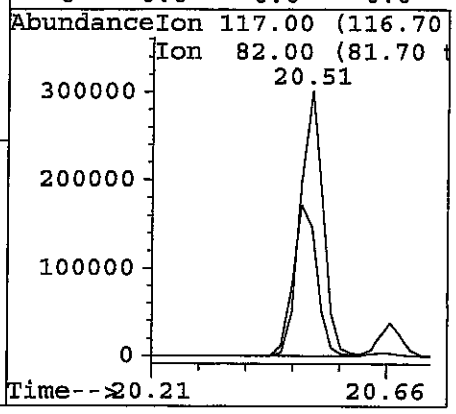


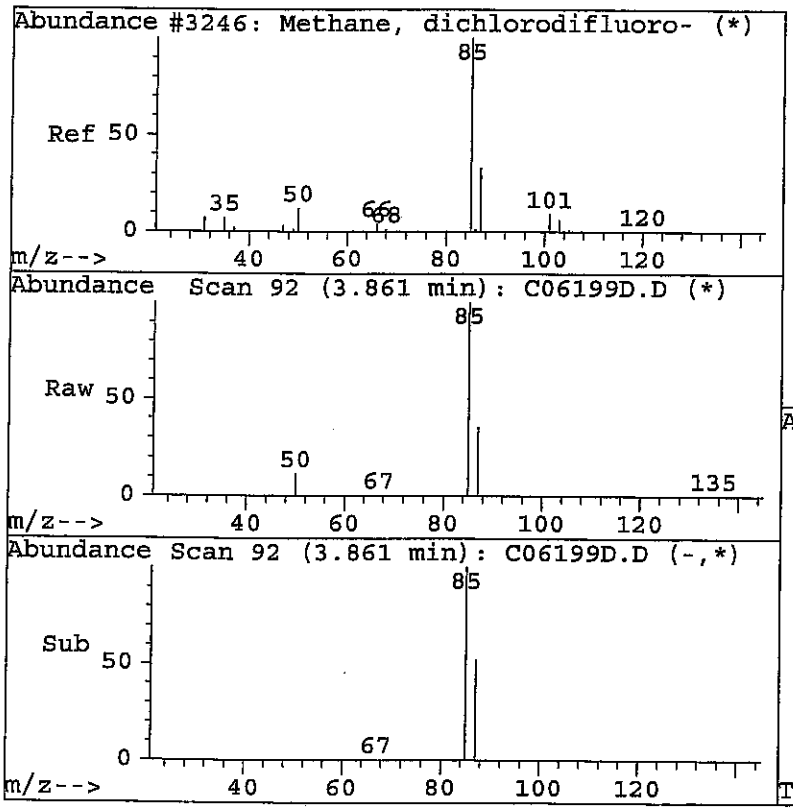


#1
Chlorobenzene-d5
Concen: 0.20 ppbV
RT: 20.51 min Scan# 1155
Delta R.T. 0.00 min
Lab File: C06199D.D
Acq: 19 Jun 109 2:53 pm

Tgt Ion:117 Resp: 906427

Ion	Ratio	Lower	Upper
117	100		
82	48.7	31.2	46.8#
0	0.0	0.0	0.0
0	0.0	0.0	0.0

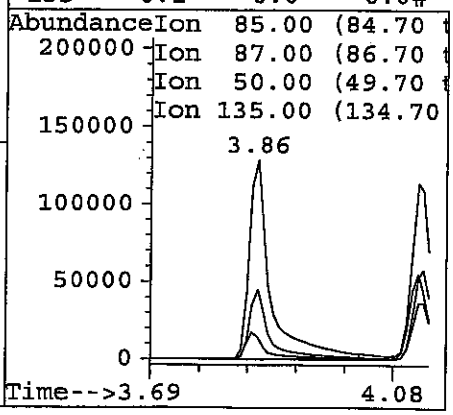


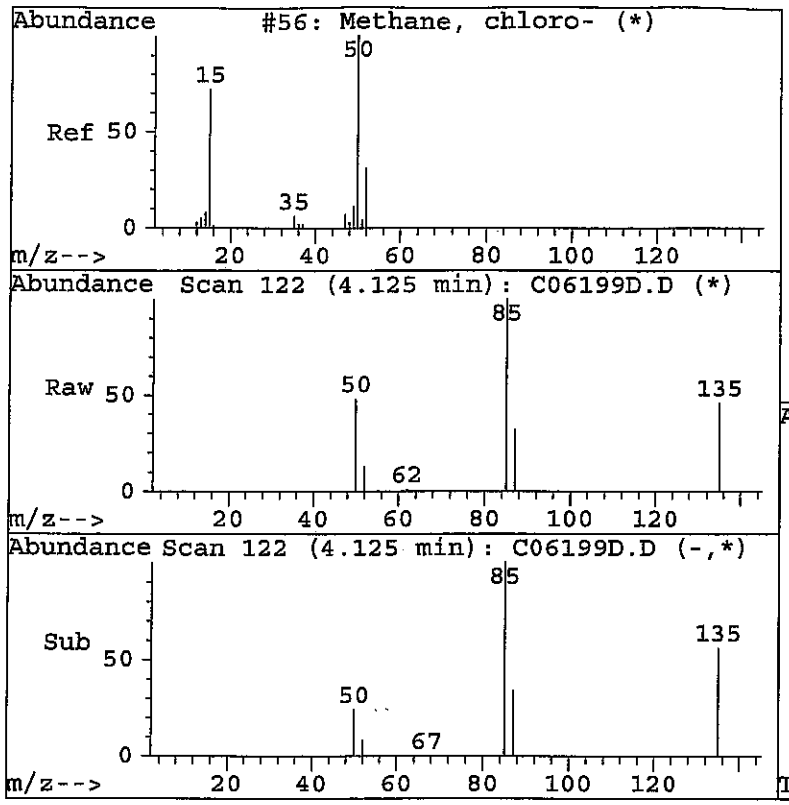


#2
Dichlorodifluoromethane
Concen: 0.54 ppbV m
RT: 3.86 min Scan# 92
Delta R.T. 0.01 min
Lab File: C06199D.D
Acq: 19 Jun 109 2:53 pm

Tgt Ion:85 Resp: 316215

Ion	Ratio	Lower	Upper
85	100		
87	34.7	28.6	43.0
50	10.9	7.8	11.8
135	0.1	0.0	0.0#

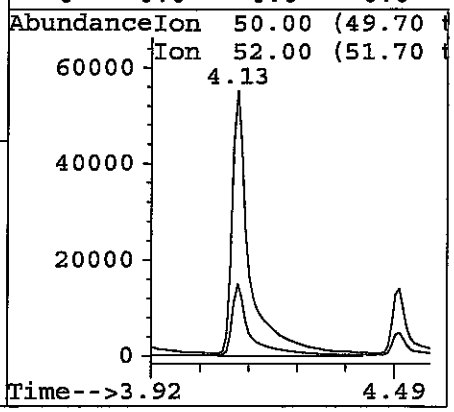


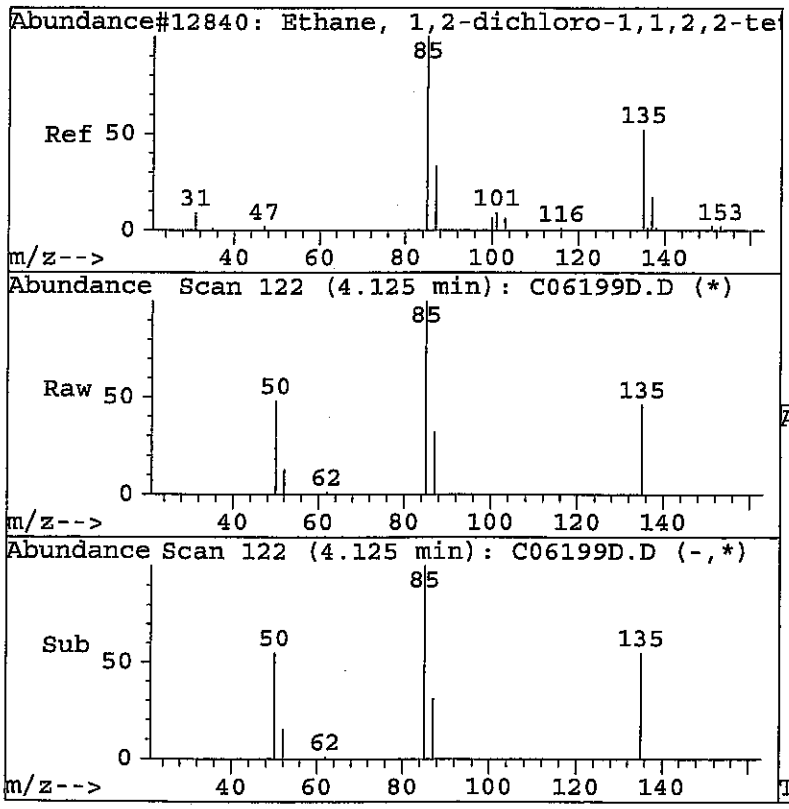


#3
Chloromethane
Concen: 0.59 ppbV m
RT: 4.13 min Scan# 122
Delta R.T. 0.01 min
Lab File: C06199D.D
Acq: 19 Jun 109 2:53 pm

Tgt Ion:50 Resp: 161978

Ion	Ratio	Lower	Upper
50	100		
52	27.1	22.4	33.6
0	0.0	0.0	0.0
0	0.0	0.0	0.0

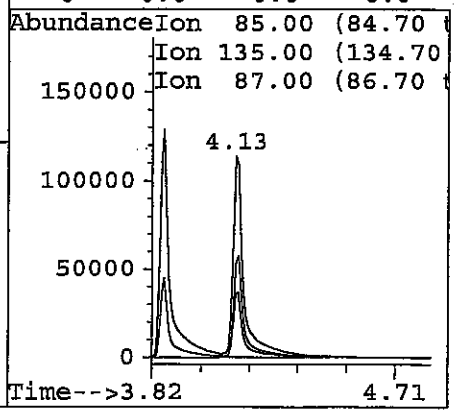


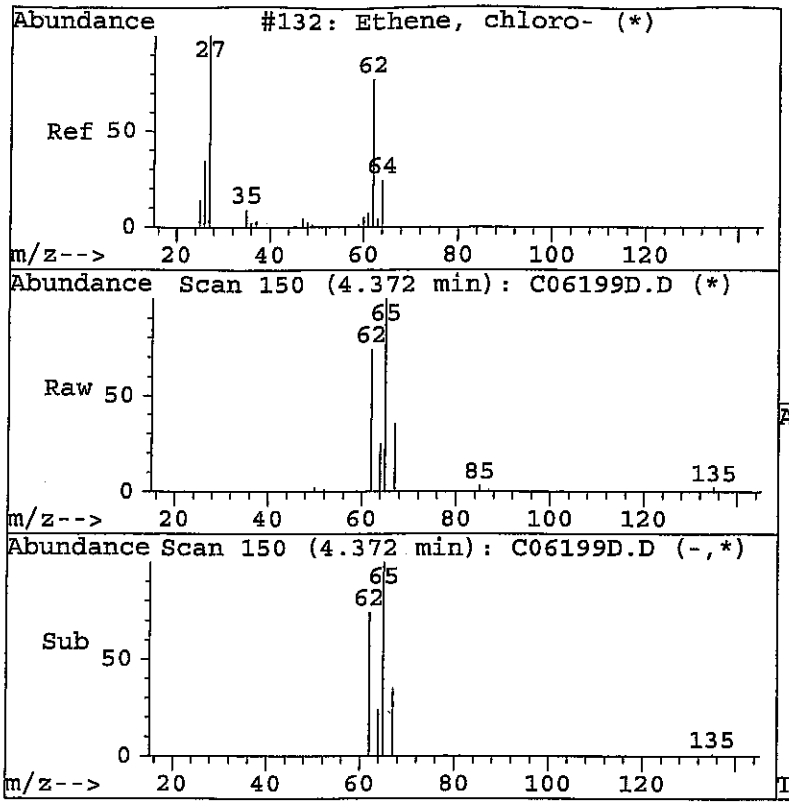


#4
Freon 114
Concen: 0.55 ppbV
RT: 4.13 min Scan# 122
Delta R.T. 0.01 min
Lab File: C06199D.D
Acq: 19 Jun 109 2:53 pm

Tgt Ion:85 Resp: 317502

Ion	Ratio	Lower	Upper
85	100		
135	46.7	42.0	63.0
87	31.7	26.7	40.1
0	0.0	0.0	0.0

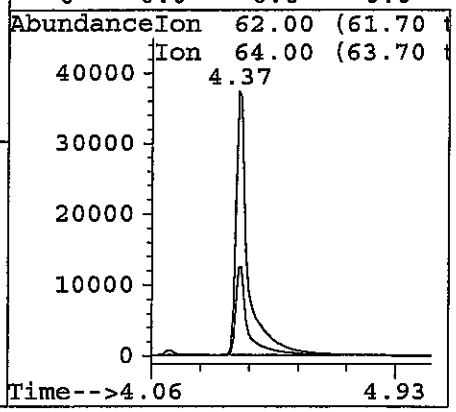


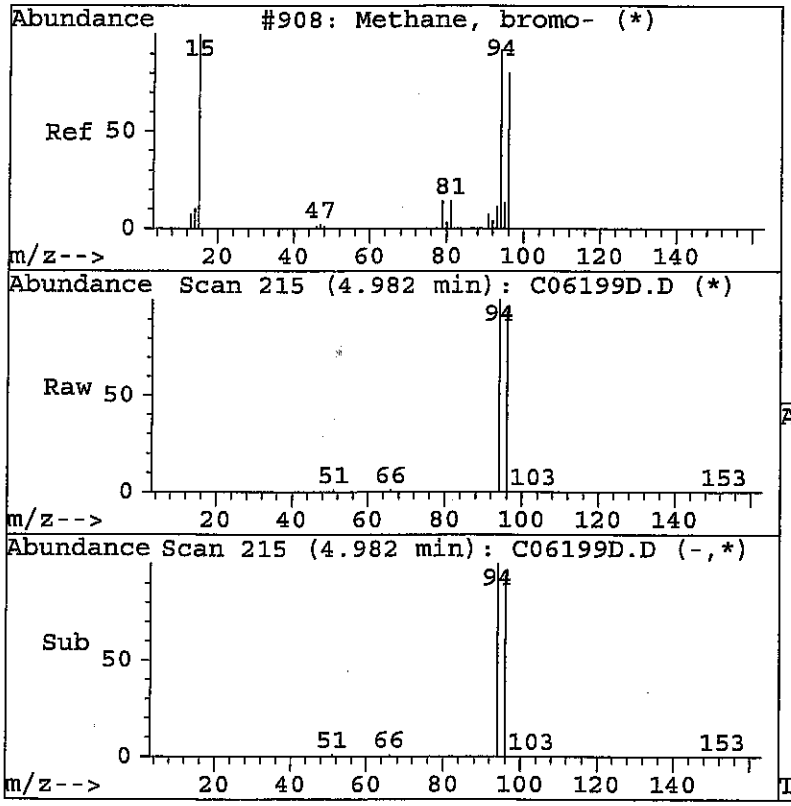


#5
Vinyl chloride
Concen: 0.61 ppbV
RT: 4.37 min Scan# 150
Delta R.T. 0.00 min
Lab File: C06199D.D
Acq: 19 Jun 109 2:53 pm

Tgt Ion:62 Resp: 109920

Ion	Ratio	Lower	Upper
62	100		
64	32.8	27.1	40.7
0	0.0	0.0	0.0
0	0.0	0.0	0.0

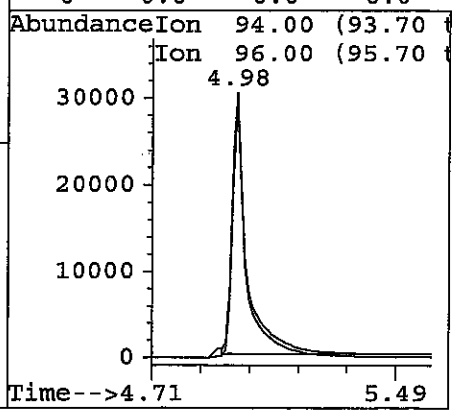


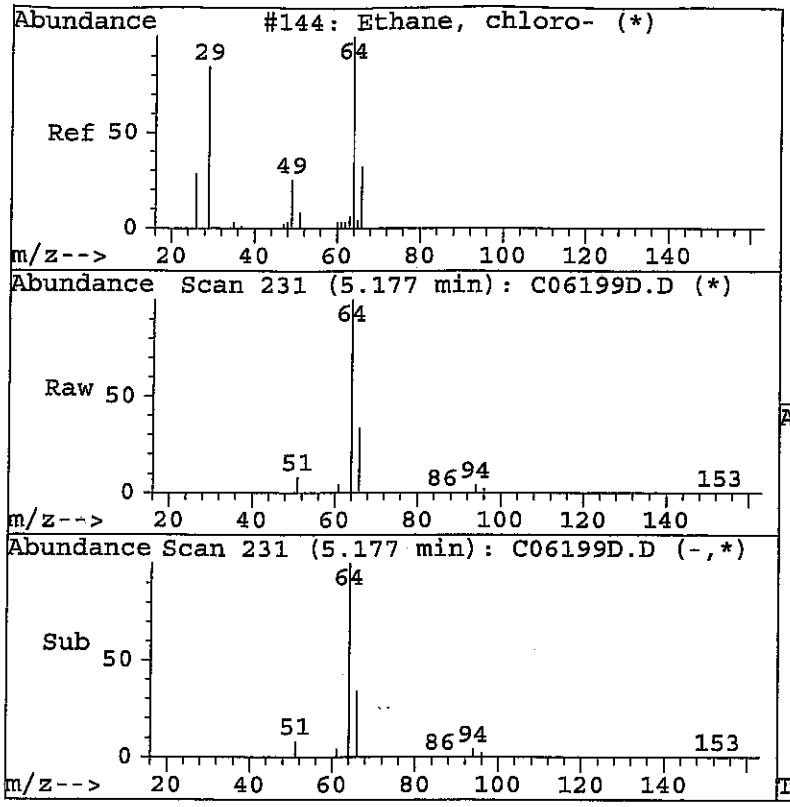


#6
Bromomethane
Concen: 0.58 ppbV m
RT: 4.98 min Scan# 215
Delta R.T. 0.01 min
Lab File: C06199D.D
Acq: 19 Jun 109 2:53 pm

Tgt Ion:94 Resp: 99178

Ion	Ratio	Lower	Upper
94	100		
96	94.4	76.6	115.0
0	0.0	0.0	0.0
0	0.0	0.0	0.0

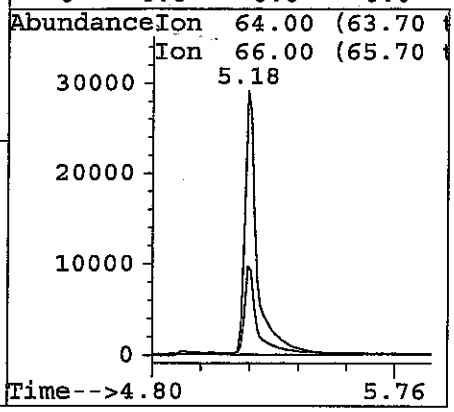


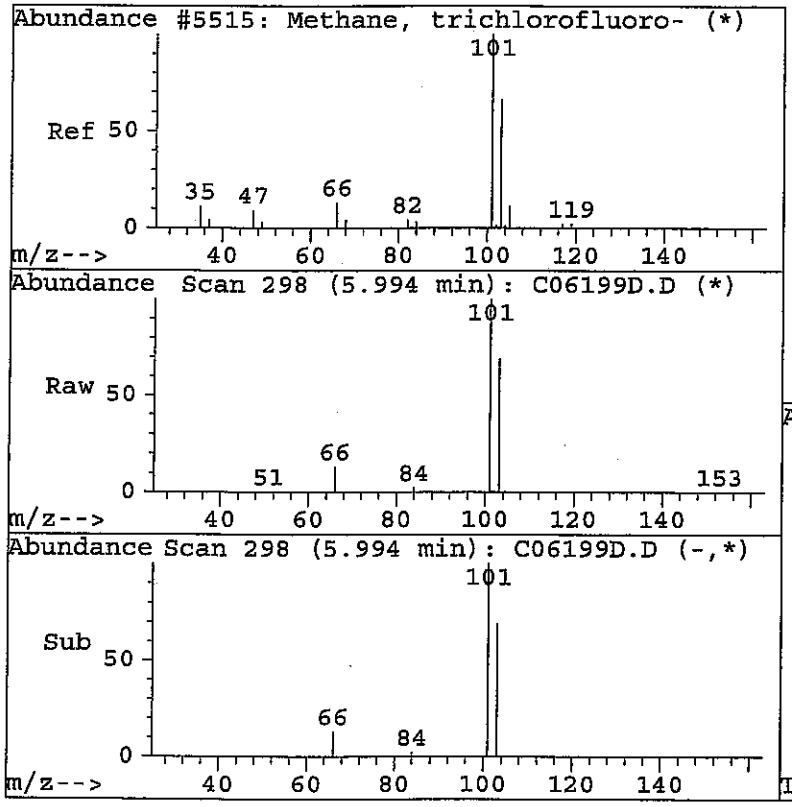


#7
Chloroethane
Concen: 0.53 ppbV
RT: 5.18 min Scan# 231
Delta R.T. -0.00 min
Lab File: C06199D.D
Acq: 19 Jun 109 2:53 pm

Tgt Ion:64 Resp: 95157

Ion	Ratio	Lower	Upper
64	100		
66	32.7	27.6	41.4
0	0.0	0.0	0.0
0	0.0	0.0	0.0

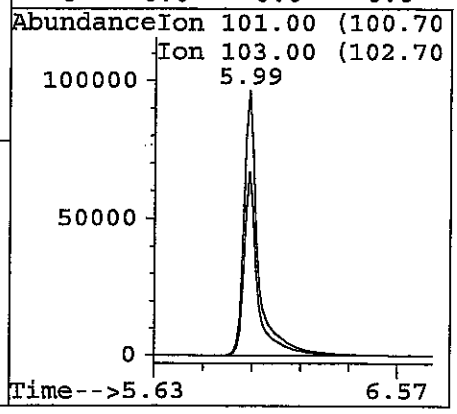


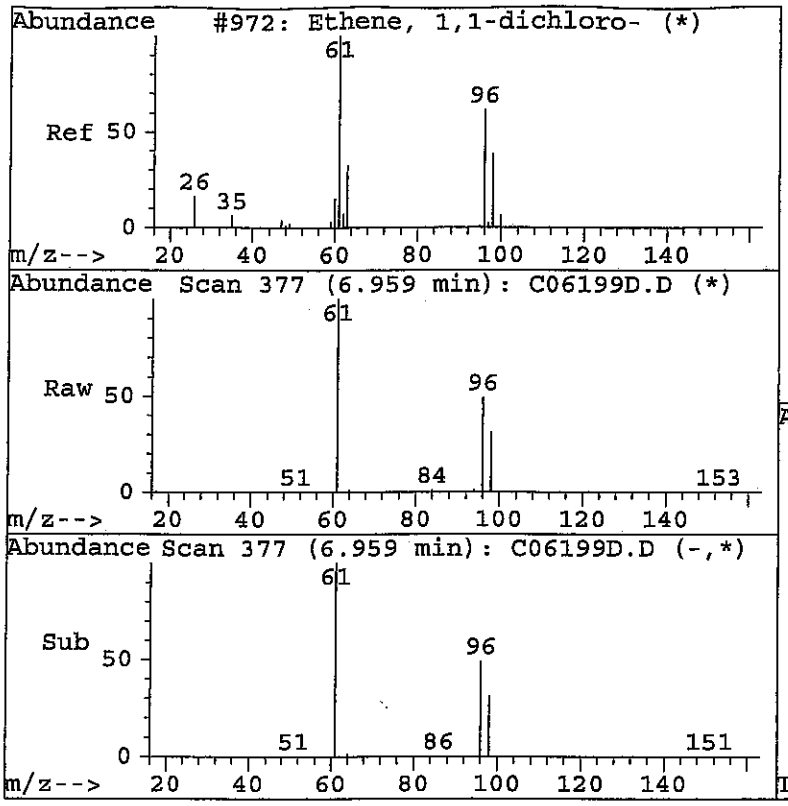


#8
Trichlorofluoromethane
Concen: 0.55 ppbV
RT: 5.99 min Scan# 298
Delta R.T. 0.01 min
Lab File: C06199D.D
Acq: 19 Jun 109 2:53 pm

Tgt Ion:101 Resp: 358307

Ion	Ratio	Lower	Upper
101	100		
103	69.4	55.9	83.9
0	0.0	0.0	0.0
0	0.0	0.0	0.0

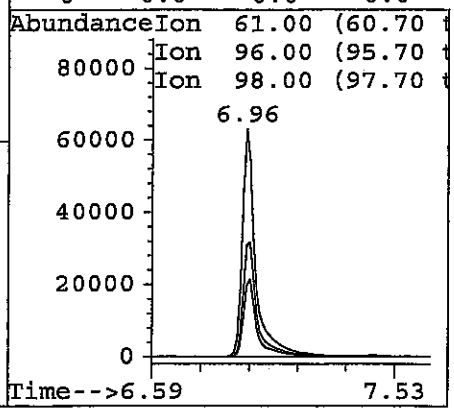


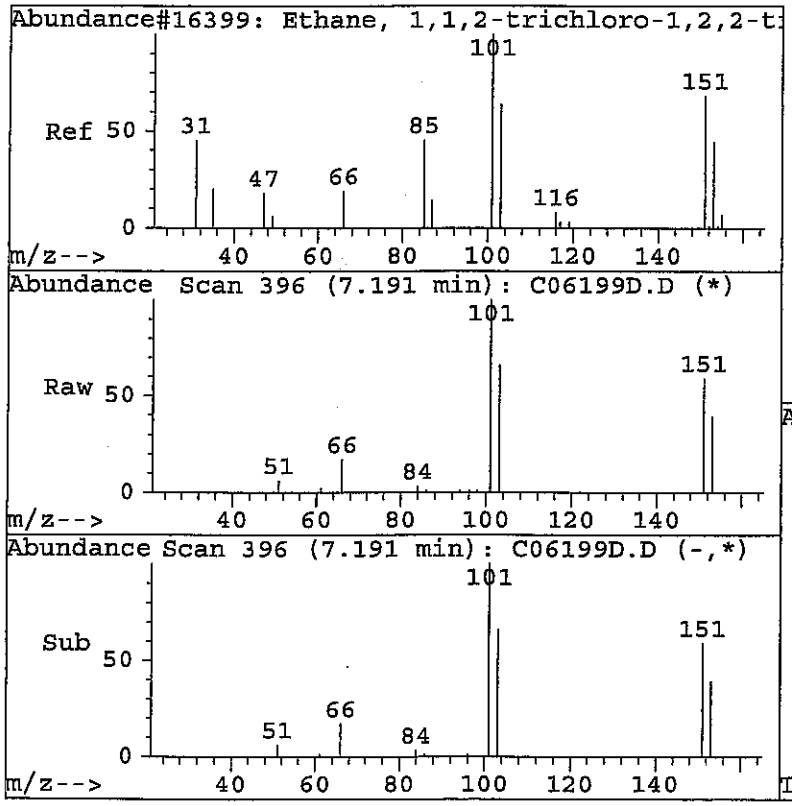


#9
1,1-Dichloroethene
Concen: 0.54 ppbV
RT: 6.96 min Scan# 377
Delta R.T. 0.01 min
Lab File: C06199D.D
Acq: 19 Jun 109 2:53 pm

Tgt Ion:61 Resp: 222986

Ion	Ratio	Lower	Upper
61	100		
96	48.9	41.0	61.6
98	31.3	27.1	40.7
0	0.0	0.0	0.0

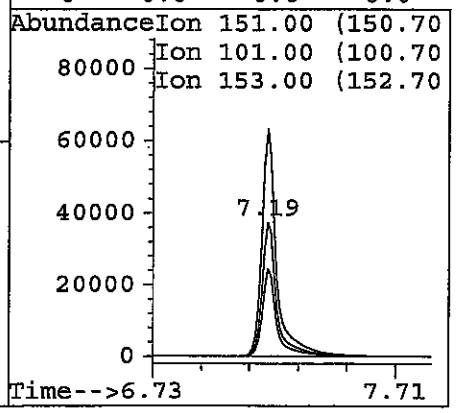


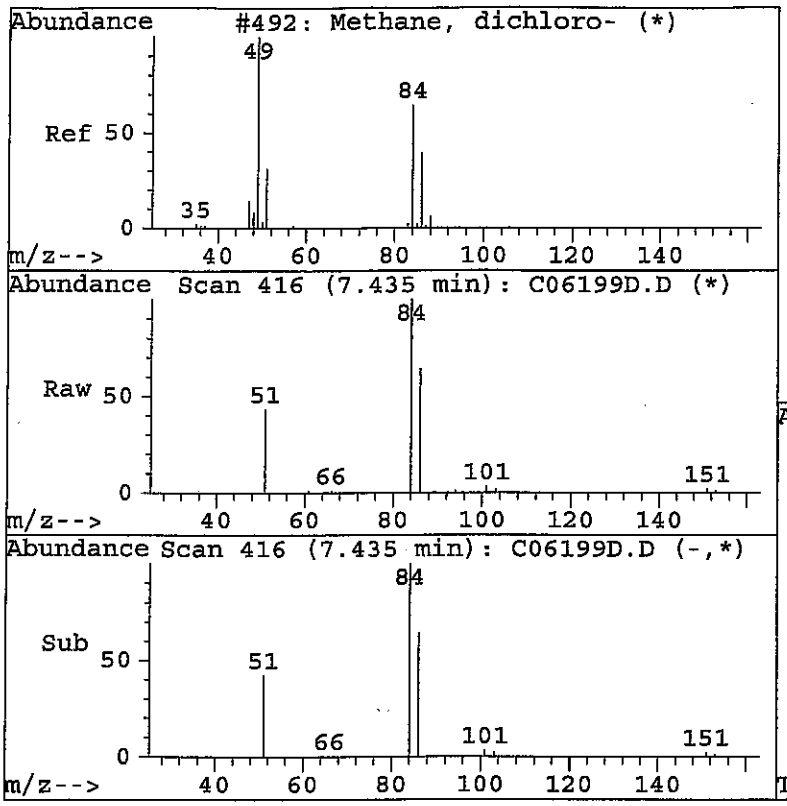


#10
Freon 113
Concen: 0.53 ppbV
RT: 7.19 min Scan# 396
Delta R.T. 0.06 min
Lab File: C06199D.D
Acq: 19 Jun 109 2:53 pm

Tgt Ion:151 Resp: 153617

Ion	Ratio	Lower	Upper
151	100		
101	169.0	131.2	196.8
153	65.2	52.6	78.8
0	0.0	0.0	0.0

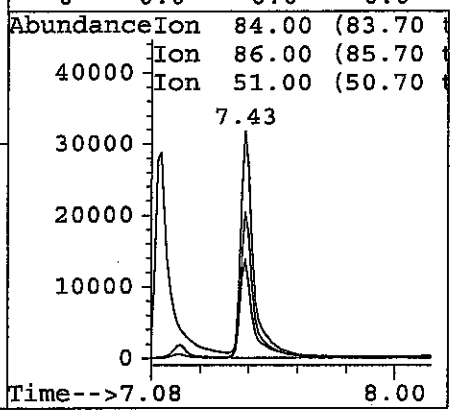


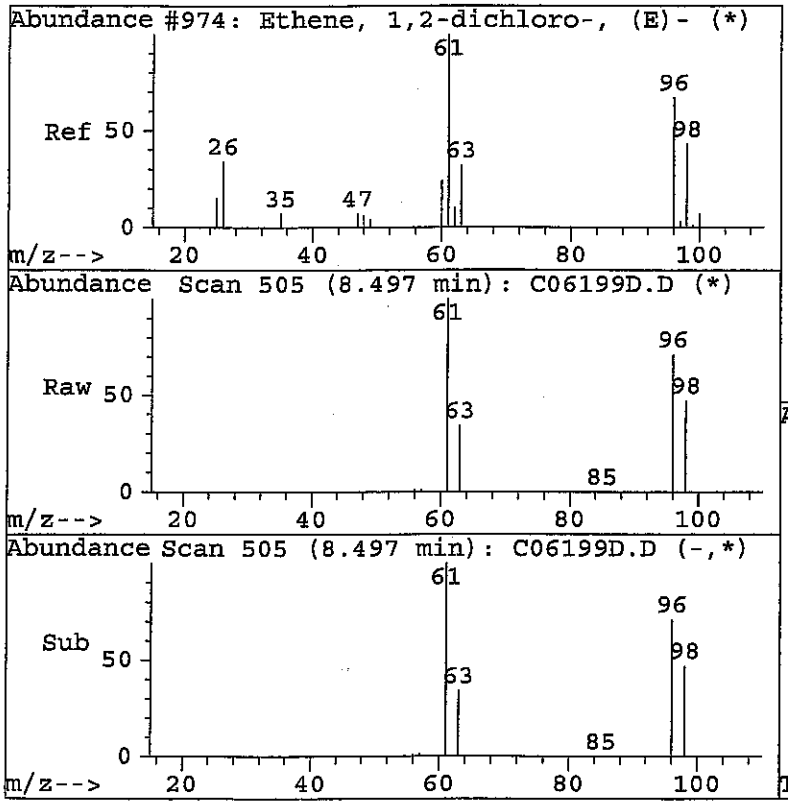


#11
Dichloromethane
Concen: 0.51 ppbV
RT: 7.43 min Scan# 416
Delta R.T. 0.01 min
Lab File: C06199D.D
Acq: 19 Jun 109 2:53 pm

Tgt Ion:84 Resp: 105697

Ion	Ratio	Lower	Upper
84	100		
86	64.2	53.4	80.2
51	41.8	31.3	46.9
0	0.0	0.0	0.0

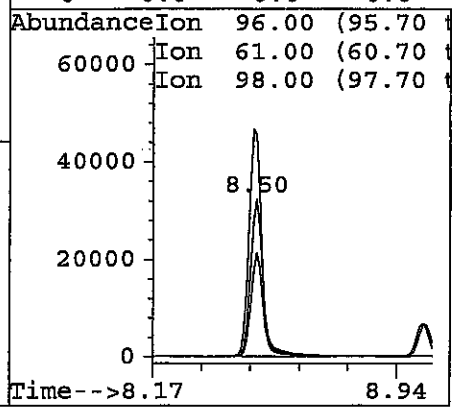


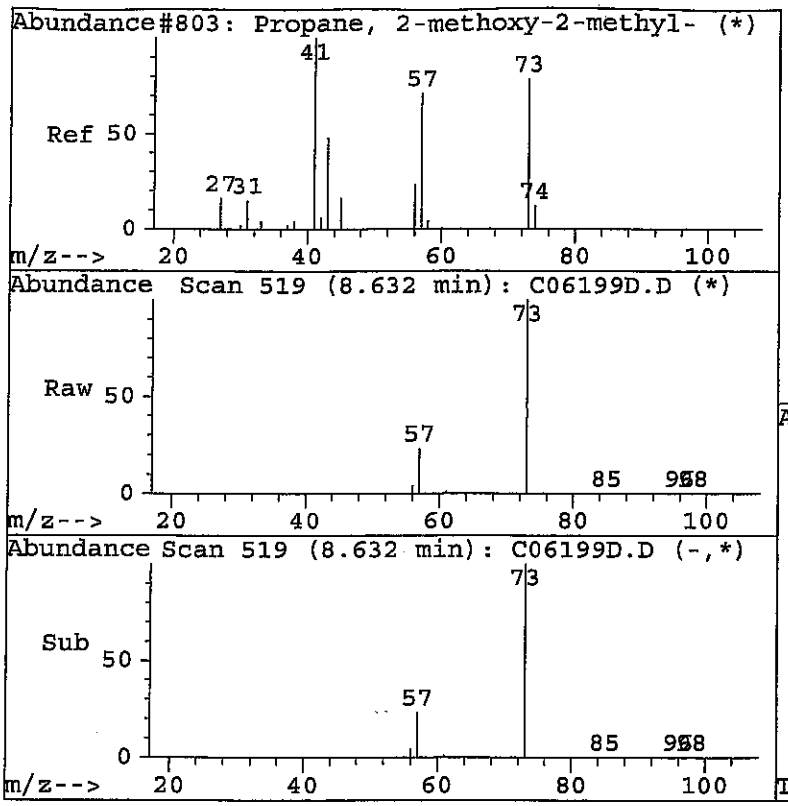


#12
trans-1,2-Dichloroethene
Concen: 0.32 ppbV
RT: 8.50 min Scan# 505
Delta R.T. 0.02 min
Lab File: C06199D.D
Acq: 19 Jun 109 2:53 pm

Tgt Ion:96 Resp: 86514

Ion	Ratio	Lower	Upper
96	100		
61	140.4	118.1	177.1
98	66.1	52.4	78.6
0	0.0	0.0	0.0

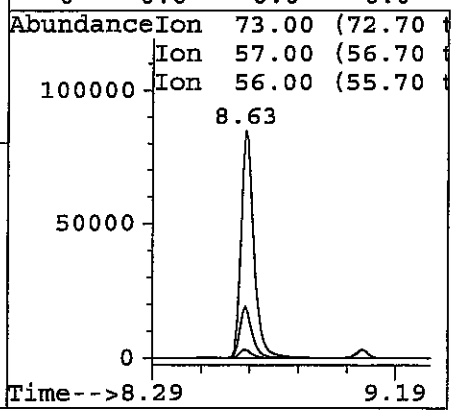


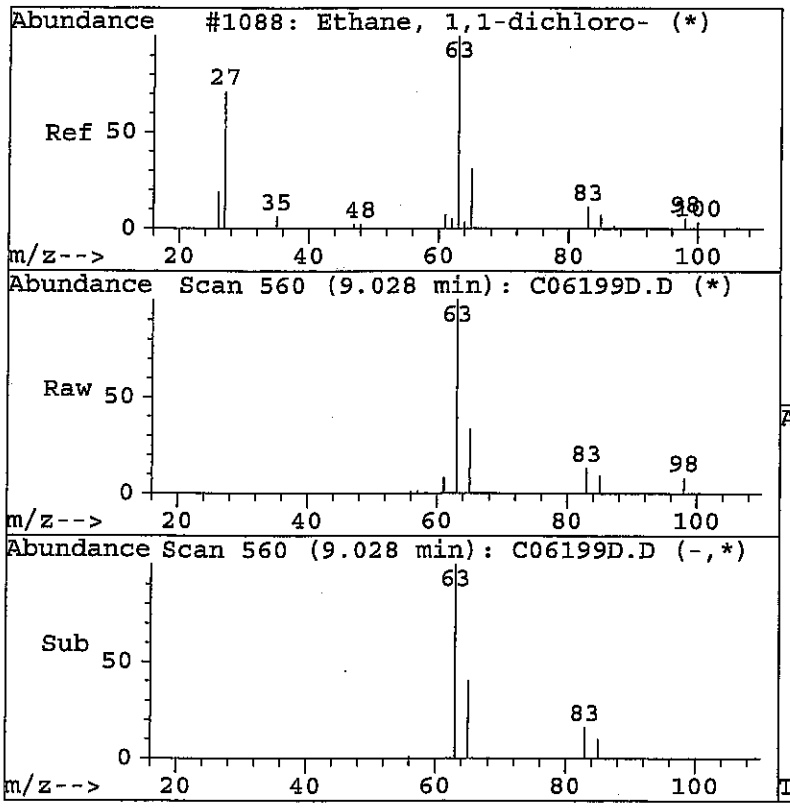


#13
Methyl tert butyl ether
Concen: 0.25 ppbV
RT: 8.63 min Scan# 519
Delta R.T. 0.03 min
Lab File: C06199D.D
Acq: 19 Jun 109 2:53 pm

Tgt Ion:73 Resp: 279390

Ion	Ratio	Lower	Upper
73	100		
57	20.7	17.0	25.6
56	1.7	2.6	4.0#
0	0.0	0.0	0.0

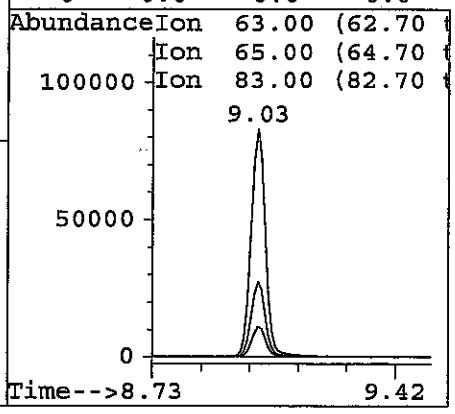


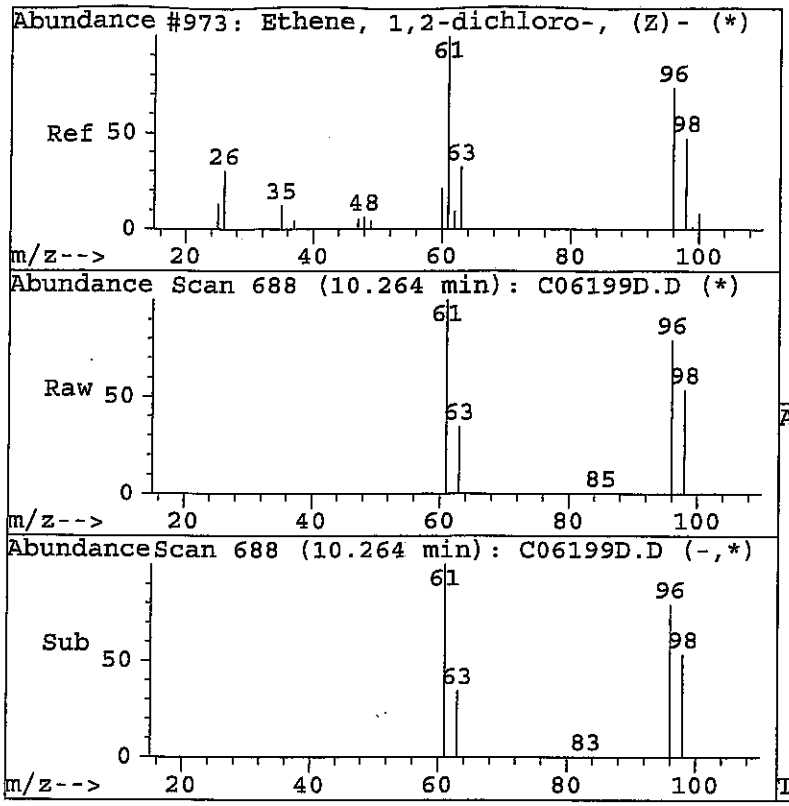


#14
1,1-Dichloroethane
Concen: 0.51 ppbV
RT: 9.03 min Scan# 560
Delta R.T. 0.03 min
Lab File: C06199D.D
Acq: 19 Jun 109 2:53 pm

Tgt Ion:63 Resp: 230798

Ion	Ratio	Lower	Upper
63	100		
65	32.7	26.6	39.8
83	13.4	11.0	16.4
0	0.0	0.0	0.0

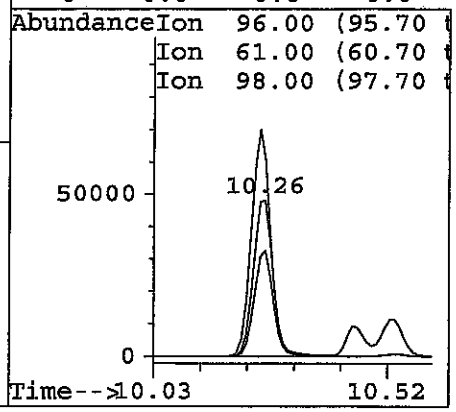


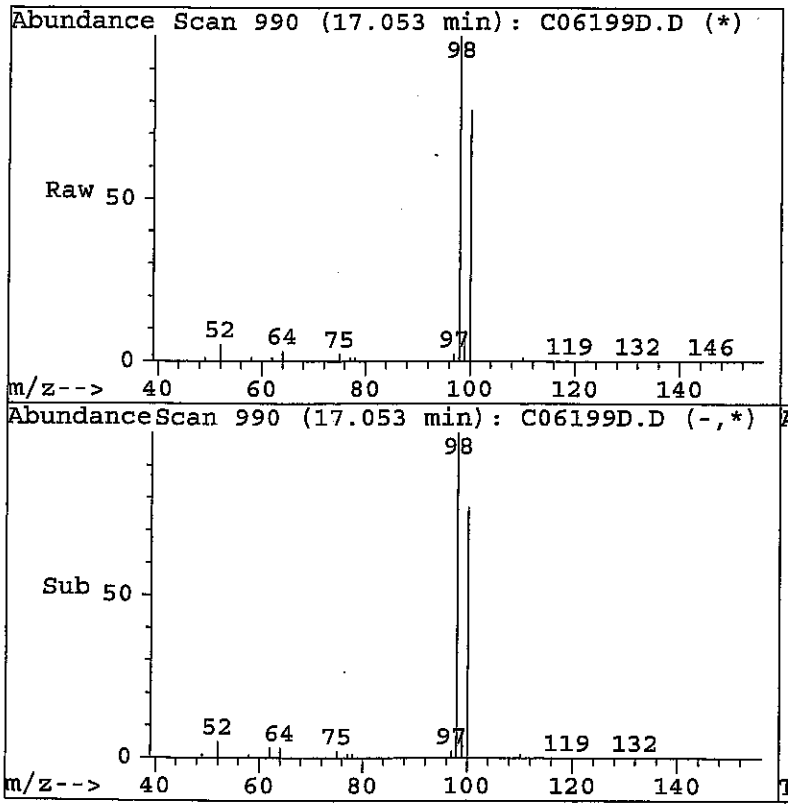


#15
cis-1,2-Dichloroethene
Concen: 0.52 ppbV
RT: 10.26 min Scan# 688
Delta R.T. 0.02 min
Lab File: C06199D.D
Acq: 19 Jun 109 2:53 pm

Tgt Ion:96 Resp: 136375

Ion	Ratio	Lower	Upper
96	100		
61	120.4	109.2	163.8
98	67.6	52.7	79.1
0	0.0	0.0	0.0

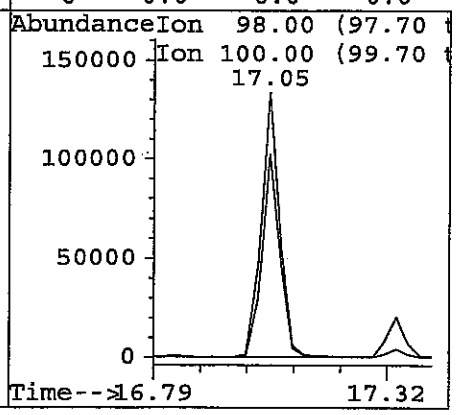


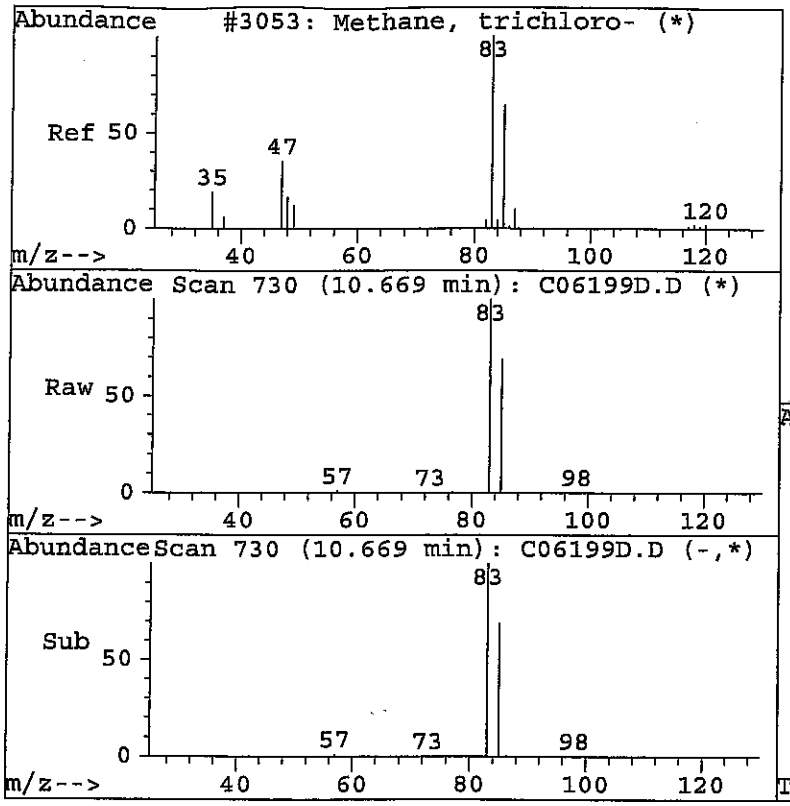


#16
Toluene-d8
Concen: 0.20 ppbV
RT: 17.05 min Scan# 990
Delta R.T. 0.00 min
Lab File: C06199D.D
Acq: 19 Jun 109 2:53 pm

Tgt Ion:98 Resp: 391684

Ion	Ratio	Lower	Upper
98	100		
100	76.2	60.2	90.2
0	0.0	0.0	0.0
0	0.0	0.0	0.0

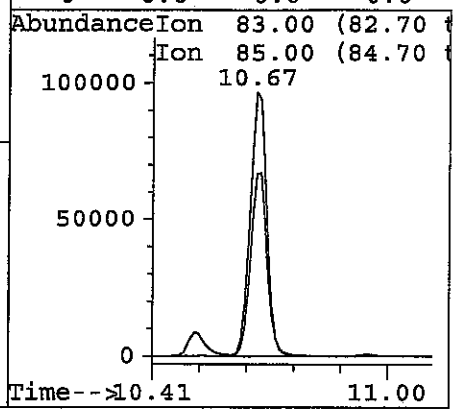


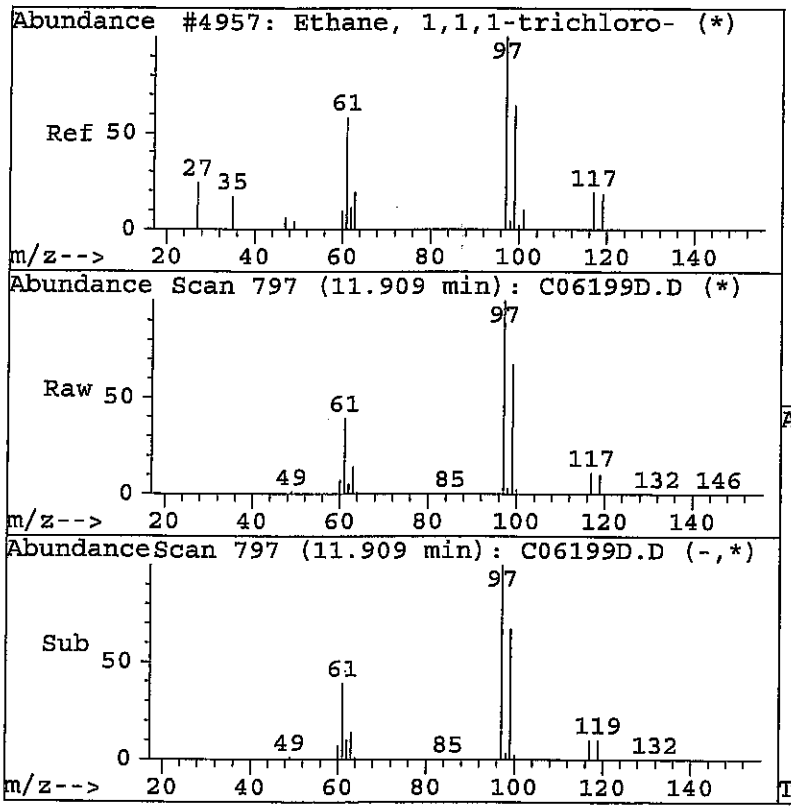


#17
Chloroform
Concen: 0.44 ppbV
RT: 10.67 min Scan# 730
Delta R.T. 0.01 min
Lab File: C06199D.D
Acq: 19 Jun 109 2:53 pm

Tgt Ion:83 Resp: 275875

Ion	Ratio	Lower	Upper
83	100		
85	68.1	56.2	84.2
0	0.0	0.0	0.0
0	0.0	0.0	0.0

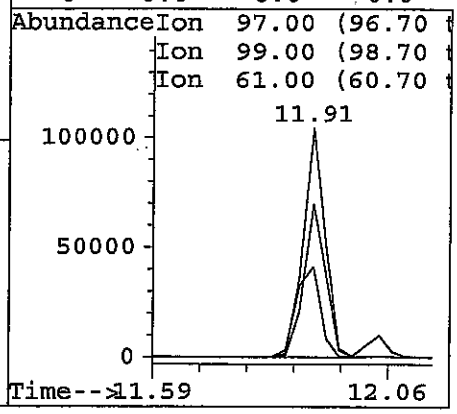


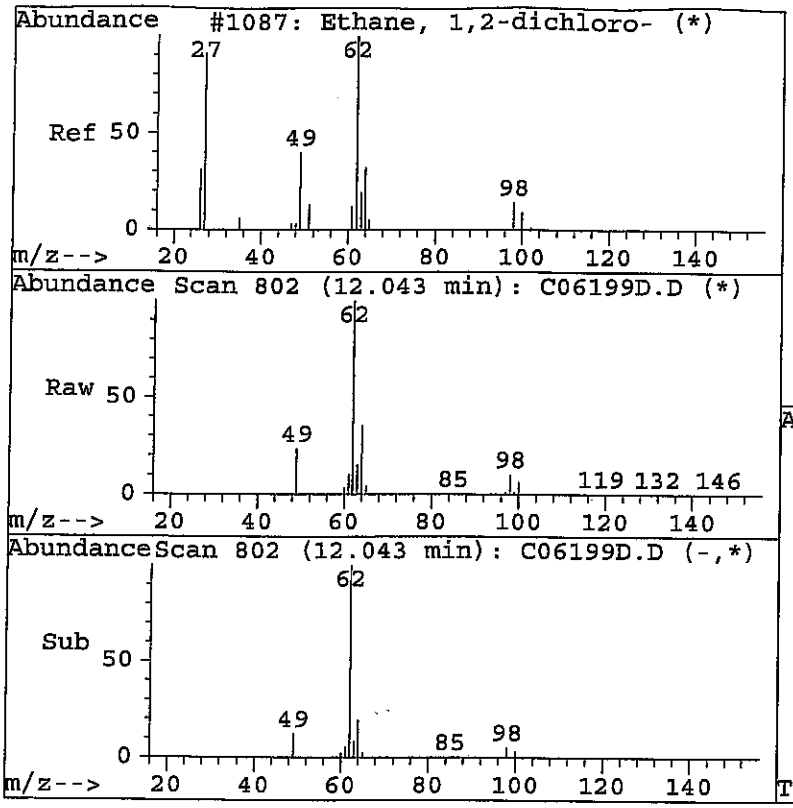


#18
1,1,1-Trichloroethane
Concen: 0.49 ppbV
RT: 11.91 min Scan# 797
Delta R.T. -0.00 min
Lab File: C06199D.D
Acq: 19 Jun 109 2:53 pm

Tgt Ion:97 Resp: 312871

Ion	Ratio	Lower	Upper
97	100		
99	66.9	54.6	82.0
61	36.9	27.8	41.6
0	0.0	0.0	0.0

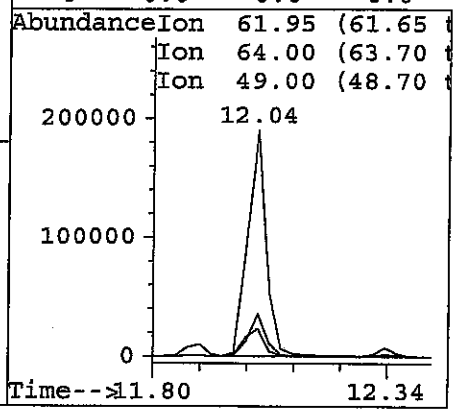


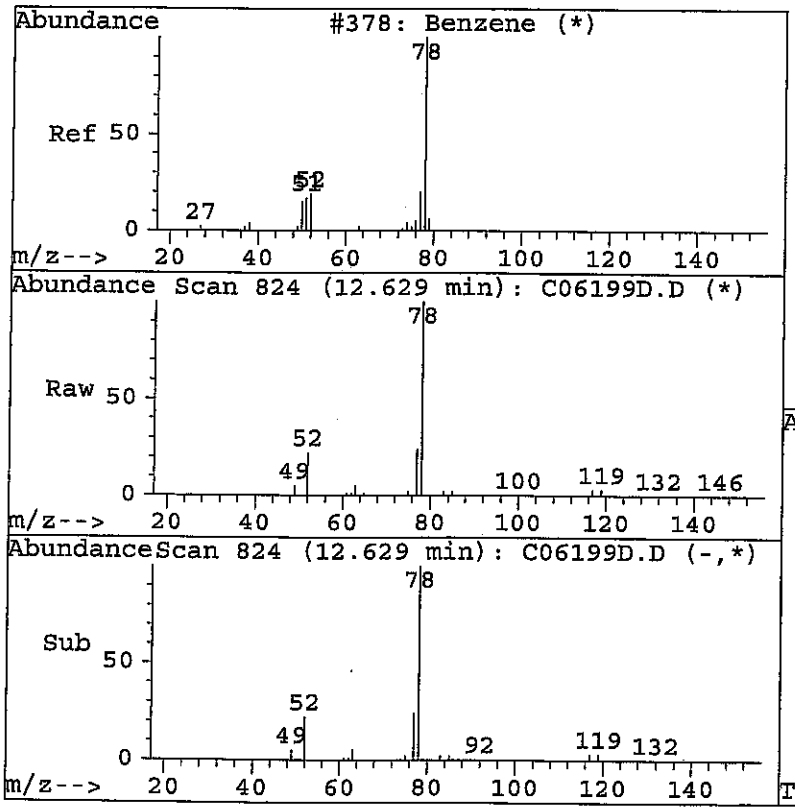


#19
1,2-Dichloroethane
Concen: 0.38 ppbV
RT: 12.04 min Scan# 802
Delta R.T. 0.02 min
Lab File: C06199D.D
Acq: 19 Jun 109 2:53 pm

Tgt Ion:61.95 Resp: 555975

Ion	Ratio	Lower	Upper
62	100		
64	18.7	15.4	23.2
49	12.2	9.7	14.5
0	0.0	0.0	0.0

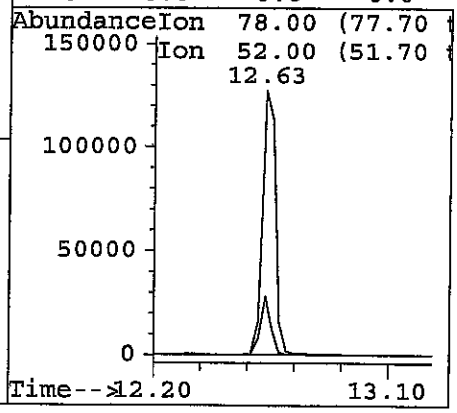


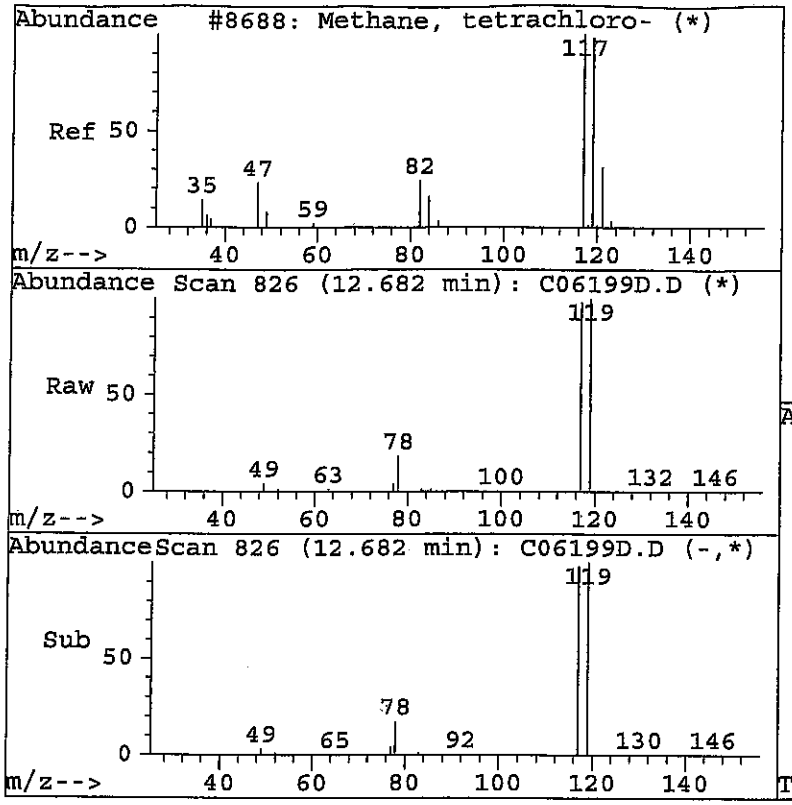


#20
Benzene
Concen: 0.45 ppbV
RT: 12.63 min Scan# 824
Delta R.T. -0.00 min
Lab File: C06199D.D
Acq: 19 Jun 109 2:53 pm

Tgt Ion:78 Resp: 442083

Ion	Ratio	Lower	Upper
78	100		
52	22.1	18.2	27.4
0	0.0	0.0	0.0
0	0.0	0.0	0.0

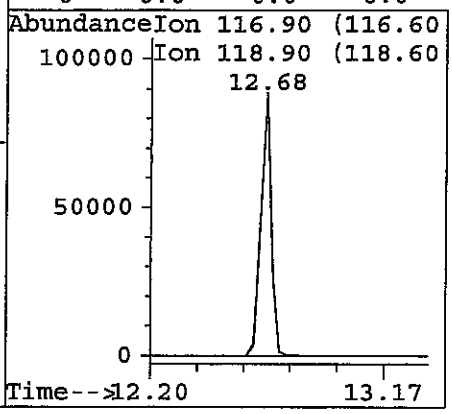


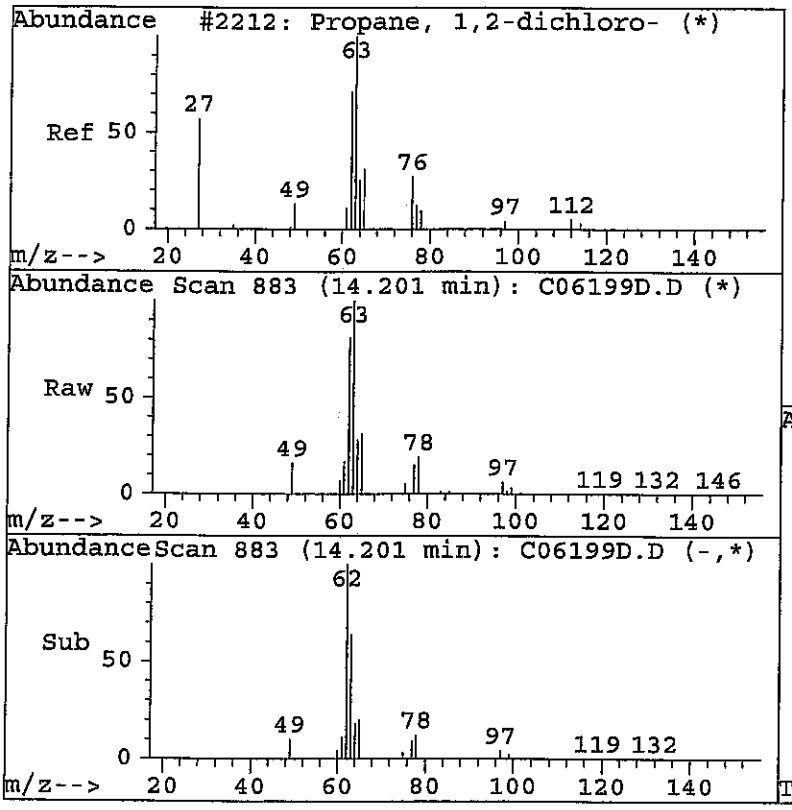


#21
Carbon tetrachloride
Concen: 0.51 ppbV
RT: 12.68 min Scan# 826
Delta R.T. 0.02 min
Lab File: C06199D.D
Acq: 19 Jun 109 2:53 pm

Tgt Ion:116.9 Resp: 268764

Ion	Ratio	Lower	Upper
117	100		
119	101.7	82.4	123.6
0	0.0	0.0	0.0
0	0.0	0.0	0.0

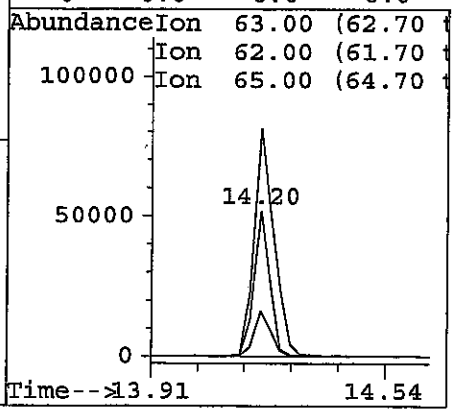


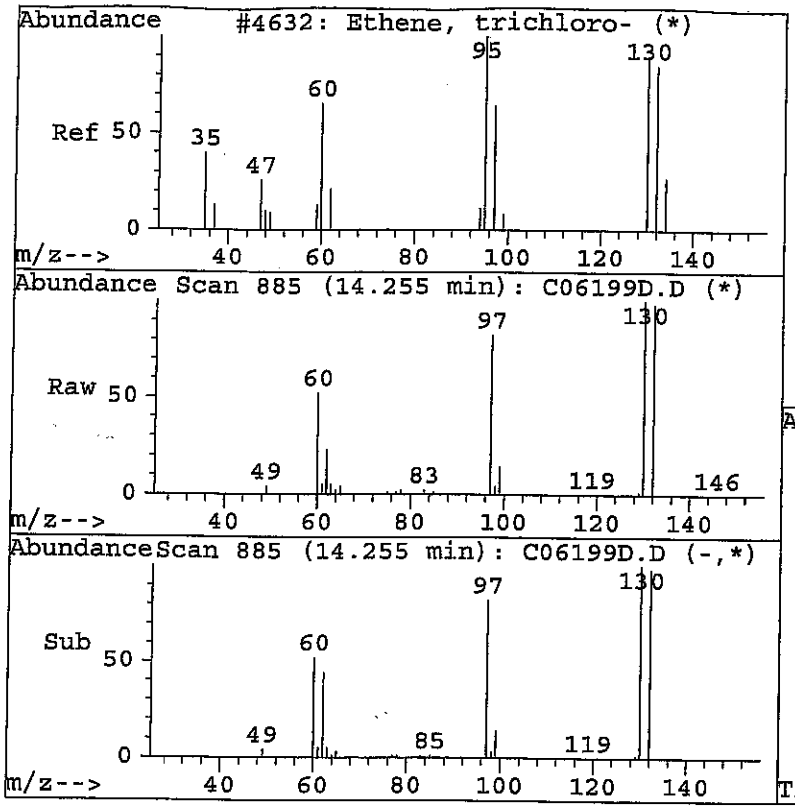


#22
1,2-Dichloropropane
Concen: 0.47 ppbV
RT: 14.20 min Scan# 883
Delta R.T. 0.00 min
Lab File: C06199D.D
Acq: 19 Jun 109 2:53 pm

Tgt Ion:63 Resp: 151668

Ion	Ratio	Lower	Upper
63	100		
62	157.1	126.1	189.1
65	31.0	24.1	36.1
0	0.0	0.0	0.0

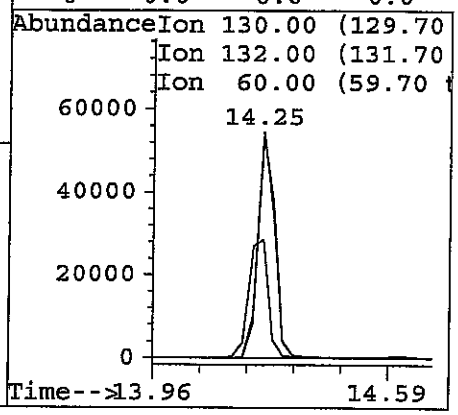


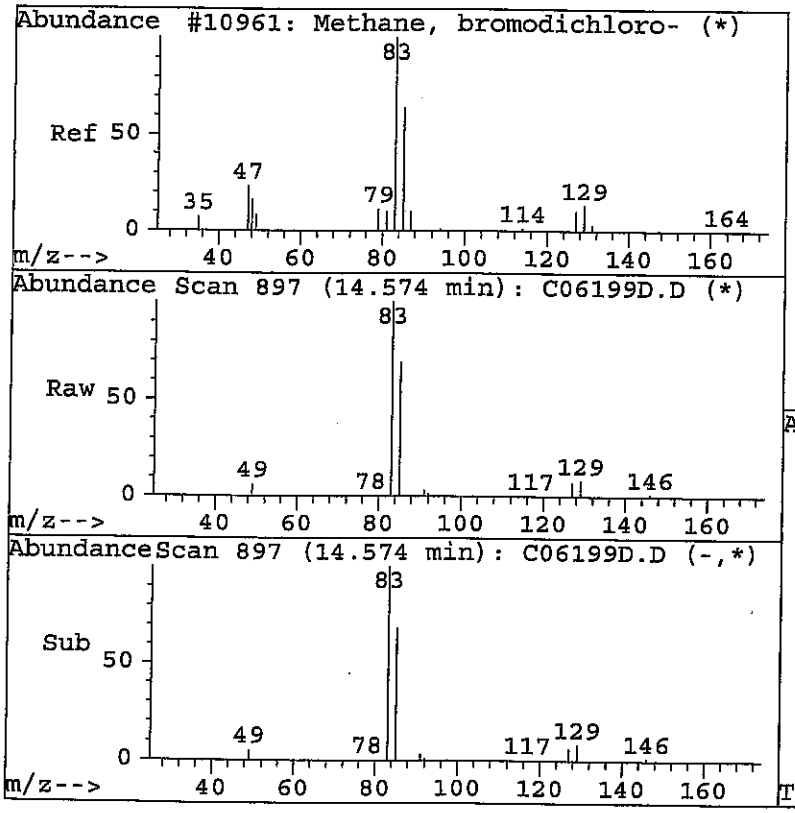


#23
Trichloroethene
Concen: 0.47 ppbV
RT: 14.25 min Scan# 885
Delta R.T. -0.01 min
Lab File: C06199D.D
Acq: 19 Jun 109 2:53 pm

Tgt Ion:130 Resp: 167572

Ion	Ratio	Lower	Upper
130	100		
132	98.1	86.0	129.0
60	52.4	13.4	20.0#
0	0.0	0.0	0.0

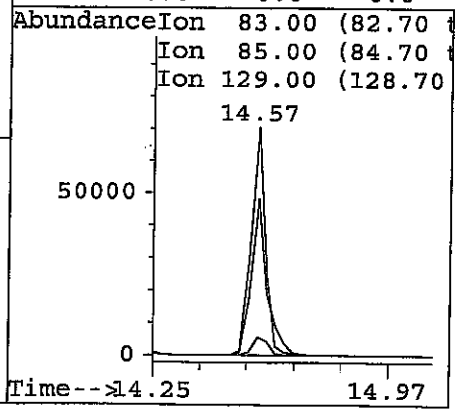


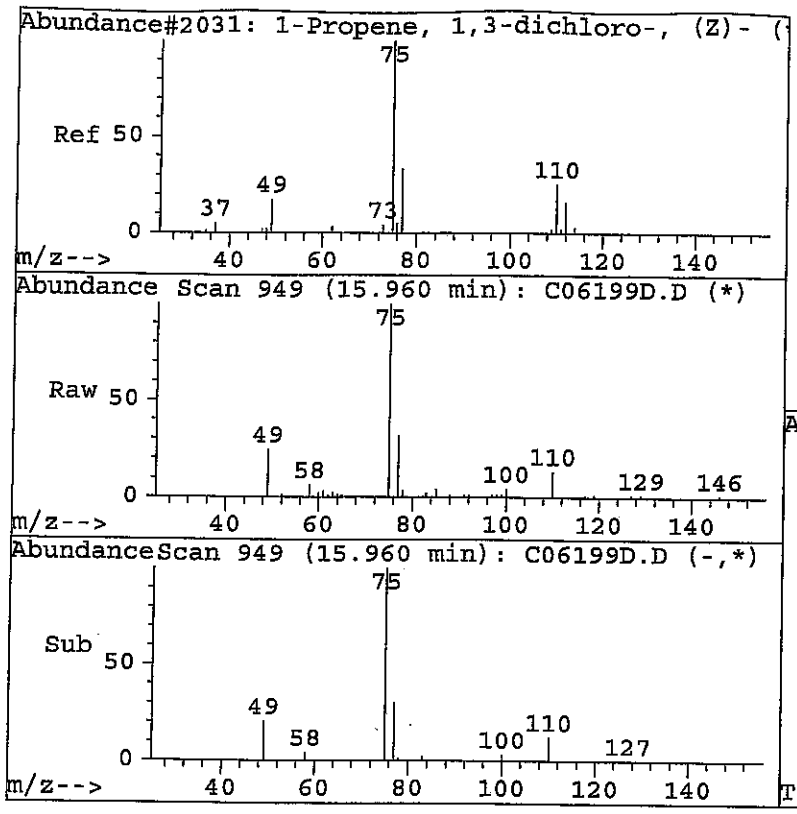


#24
Bromodichloromethane
Concen: 0.32 ppbV
RT: 14.57 min Scan# 897
Delta R.T. 0.00 min
Lab File: C06199D.D
Acq: 19 Jun 109 2:53 pm

Tgt Ion:83 Resp: 206235

Ion	Ratio	Lower	Upper
83	100		
85	68.5	54.2	81.4
129	7.9	5.3	7.9
0	0.0	0.0	0.0

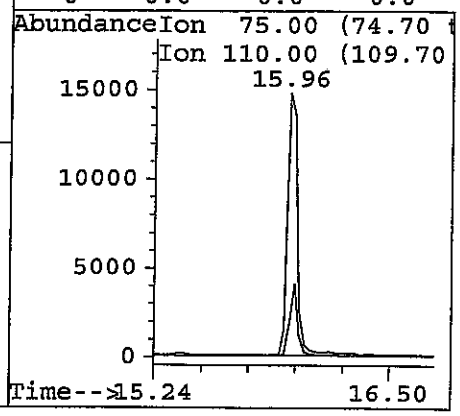


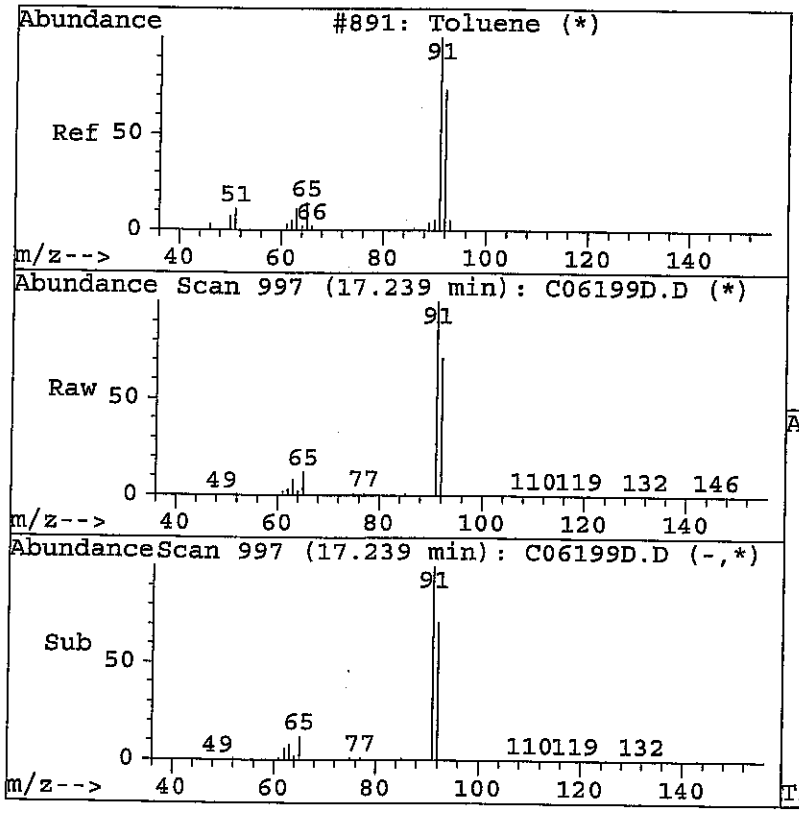


#25
cis-1,3-Dichloropropene
Concen: 0.14 ppbV
RT: 15.96 min Scan# 949
Delta R.T. 0.00 min
Lab File: C06199D.D
Acq: 19 Jun 109 2:53 pm

Tgt Ion:75 Resp: 55087

Ion	Ratio	Lower	Upper
75	100		
110	12.2	18.4	27.6#
0	0.0	0.0	0.0
0	0.0	0.0	0.0

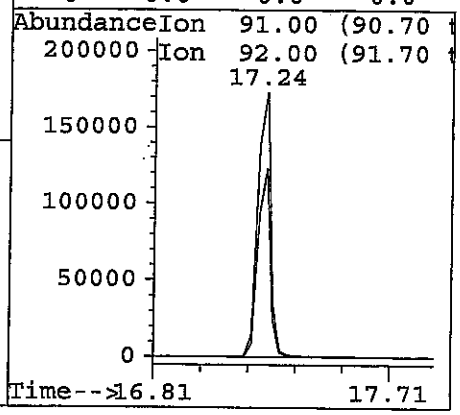


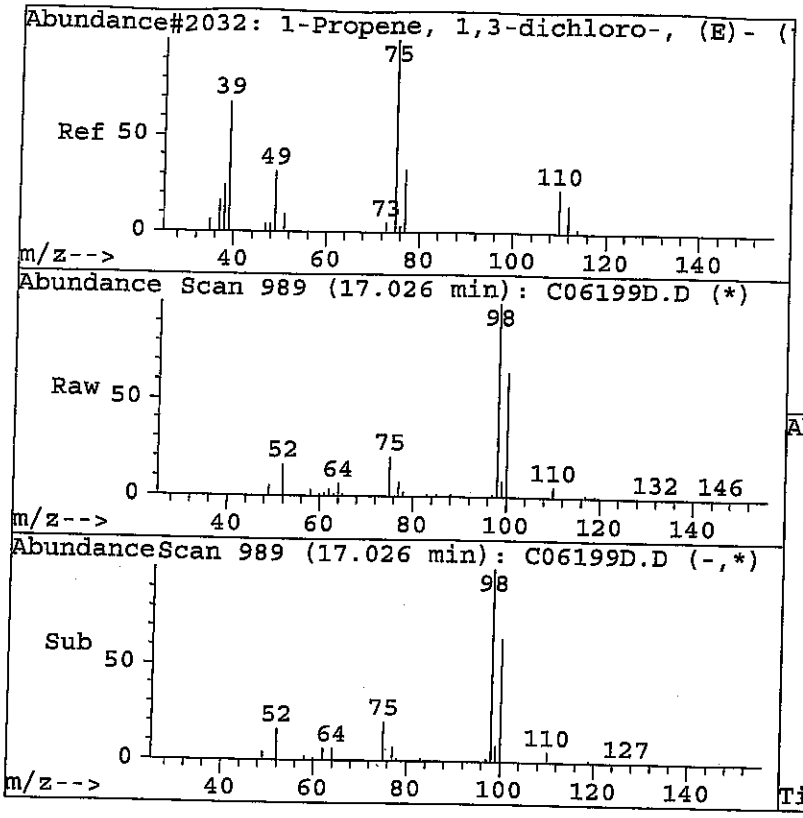


#26
Toluene
Concen: 0.41 ppbV
RT: 17.24 min Scan# 997
Delta R.T. 0.03 min
Lab File: C06199D.D
Acq: 19 Jun 109 2:53 pm

Tgt Ion:91 Resp: 587925

Ion	Ratio	Lower	Upper
91	100		
92	71.1	54.8	82.2
0	0.0	0.0	0.0
0	0.0	0.0	0.0

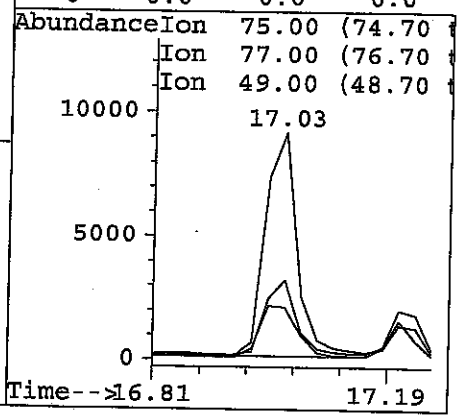


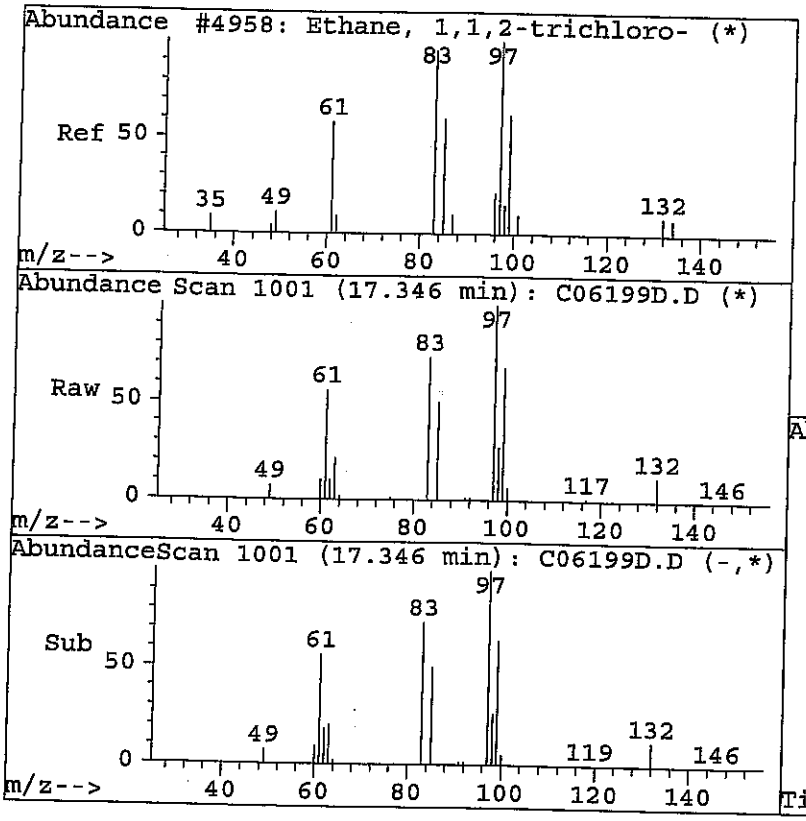


#27
trans-1,3-Dichloropropene
Concen: 0.06 ppbV
RT: 17.03 min Scan# 989
Delta R.T. 0.03 min
Lab File: C06199D.D
Acq: 19 Jun 109 2:53 pm

Tgt Ion:75 Resp: 32899

Ion	Ratio	Lower	Upper
75	100		
77	33.6	25.3	37.9
49	22.3	15.1	22.7
0	0.0	0.0	0.0

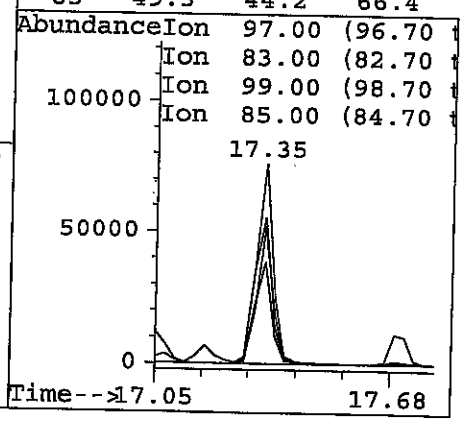


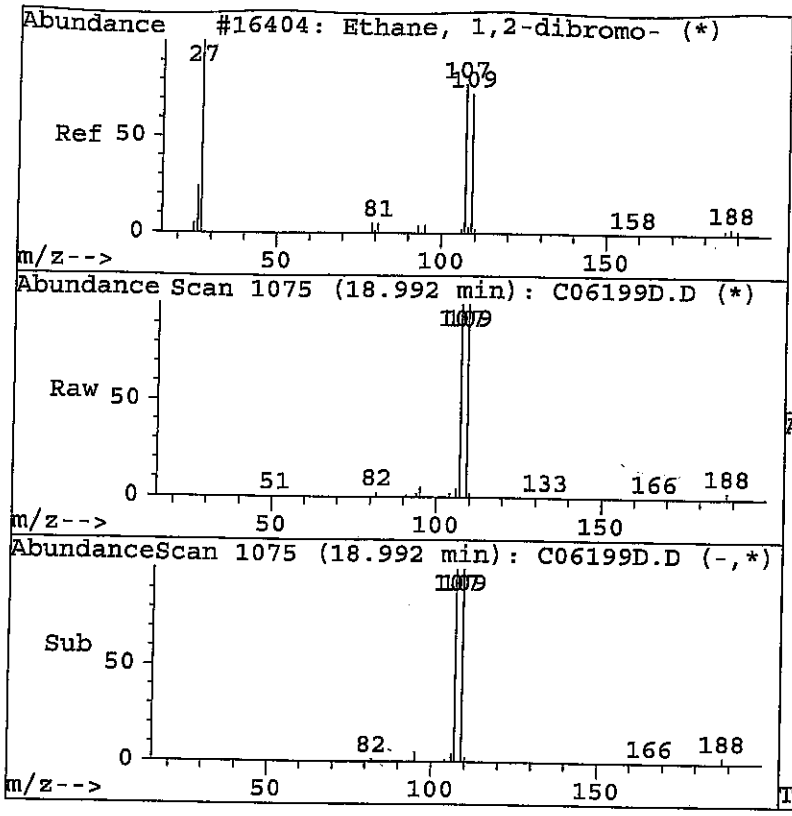


#28
1,1,2-Trichloroethane
Concen: 0.44 ppbV
RT: 17.35 min Scan# 1001
Delta R.T. -0.00 min
Lab File: C06199D.D
Acq: 19 Jun 109 2:53 pm

Tgt Ion:97 Resp: 227376

Ion	Ratio	Lower	Upper
97	100		
83	72.6	68.5	102.7
99	67.5	50.7	76.1
85	49.3	44.2	66.4

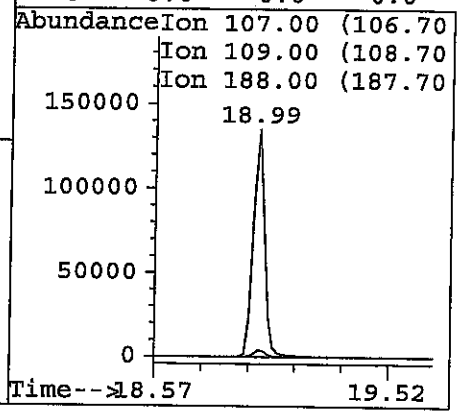


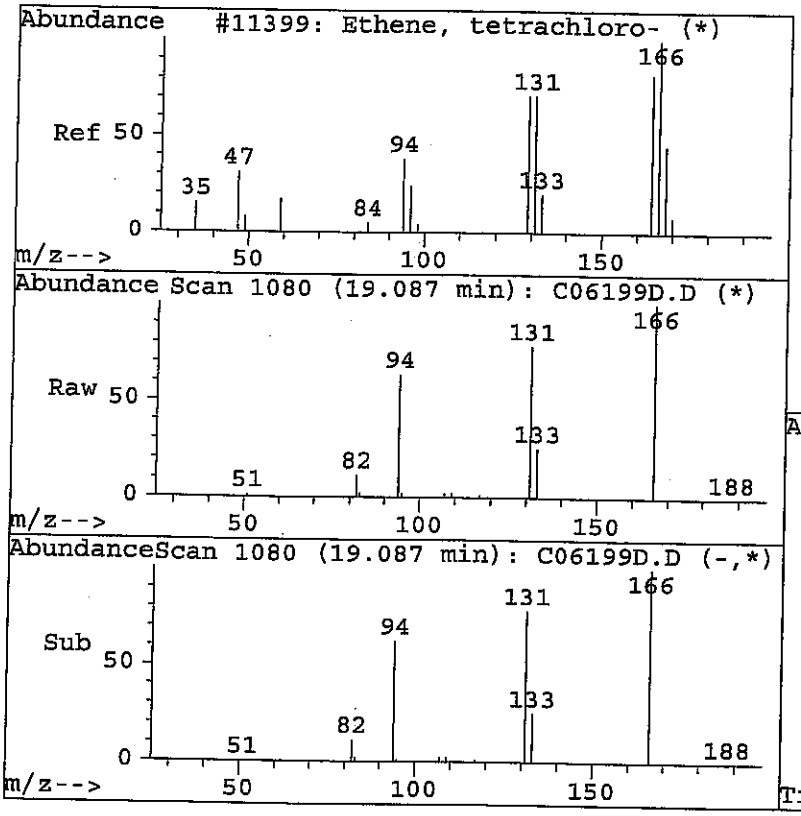


#29
1,2-Dibromoethane
Concen: 0.35 ppbV
RT: 18.99 min Scan# 1075
Delta R.T. 0.00 min
Lab File: C06199D.D
Acq: 19 Jun 109 2:53 pm

Tgt Ion:107 Resp: 422710

Ion	Ratio	Lower	Upper
107	100		
109	99.6	78.0	117.0
188	2.9	2.1	3.1
0	0.0	0.0	0.0

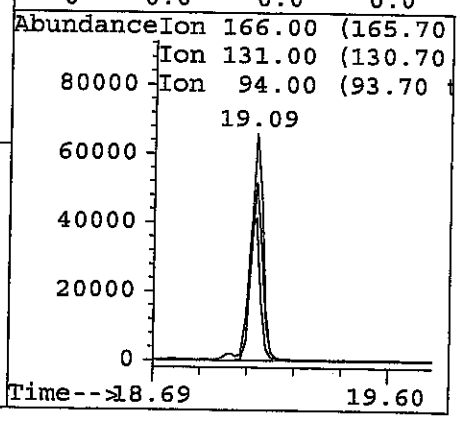


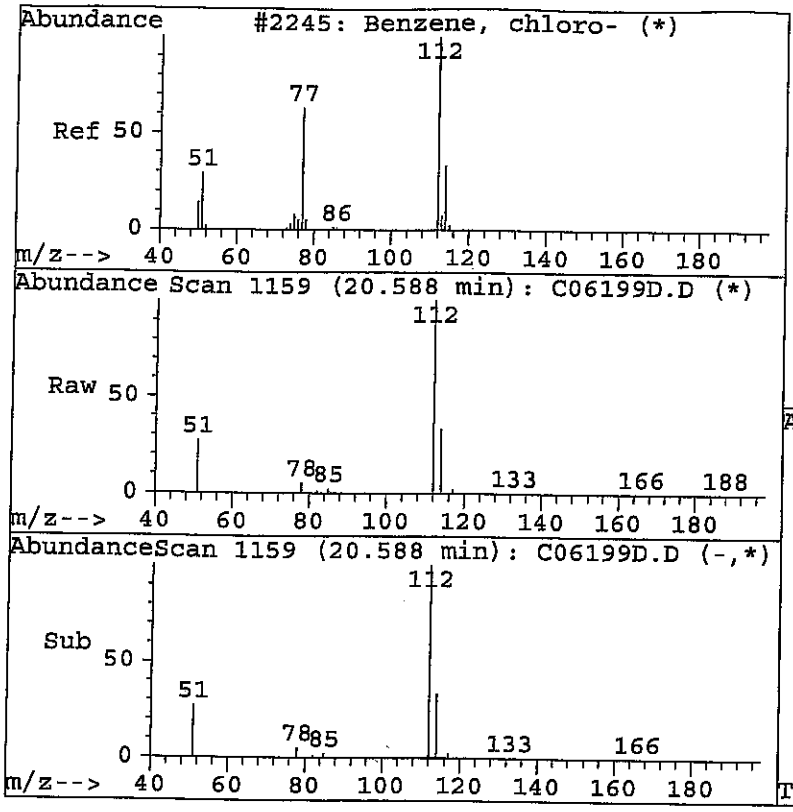


#30
Tetrachloroethene
Concen: 0.45 ppbV
RT: 19.09 min Scan# 1080
Delta R.T. -0.00 min
Lab File: C06199D.D
Acq: 19 Jun 109 2:53 pm

Tgt Ion:166 Resp: 195956

Ion	Ratio	Lower	Upper
166	100		
131	78.1	60.4	90.6
94	61.8	40.1	60.1#
0	0.0	0.0	0.0

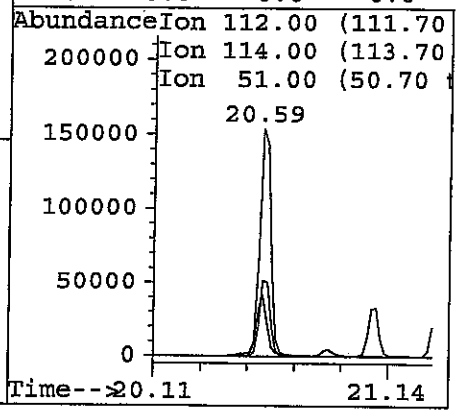


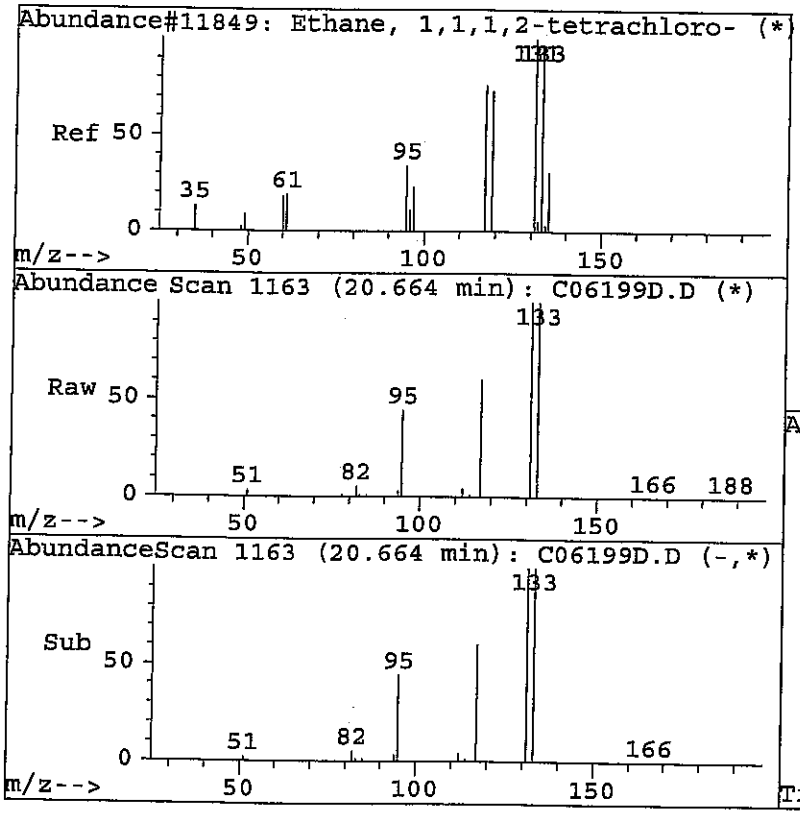


#31
Chlorobenzene
Concen: 0.37 ppbV
RT: 20.59 min Scan# 1159
Delta R.T. -0.00 min
Lab File: C06199D.D
Acq: 19 Jun 109 2:53 pm

Tgt Ion:112 Resp: 511515

Ion	Ratio	Lower	Upper
112	100		
114	33.4	28.1	42.1
51	26.3	17.3	25.9#
0	0.0	0.0	0.0

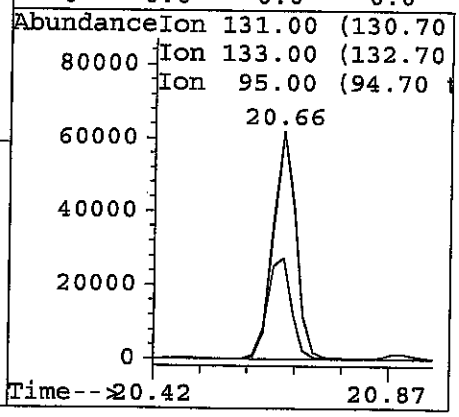


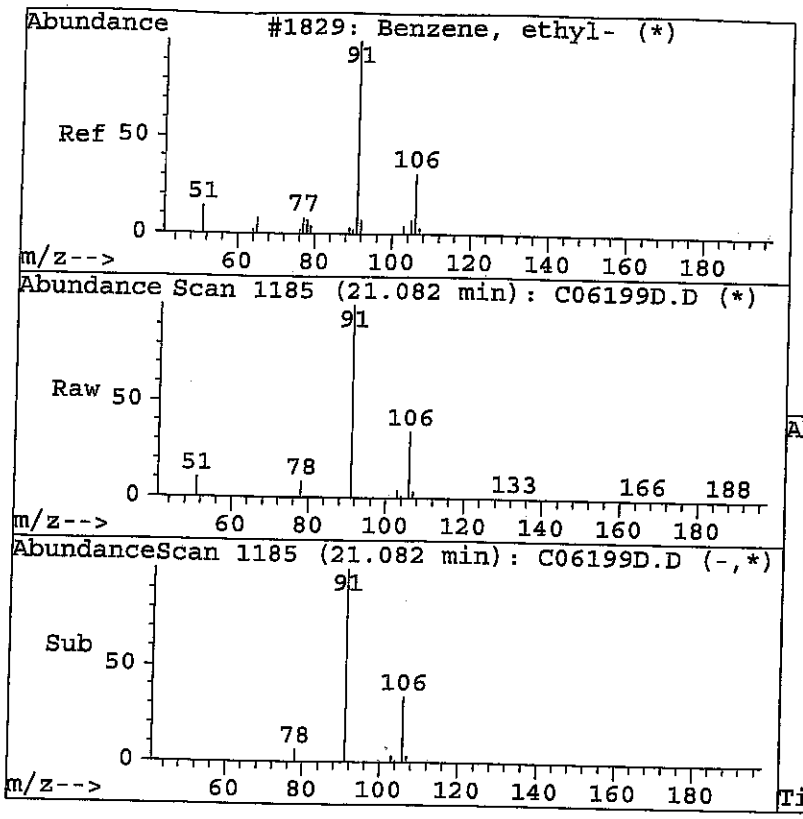


#32
1,1,1,2-Tetrachloroethane
Concen: 0.34 ppbV
RT: 20.66 min Scan# 1163
Delta R.T. -0.01 min
Lab File: C06199D.D
Acq: 19 Jun 109 2:53 pm

Tgt Ion:131 Resp: 185903

Ion	Ratio	Lower	Upper
131	100		
133	99.9	82.9	124.3
95	44.1	31.9	47.9
0	0.0	0.0	0.0

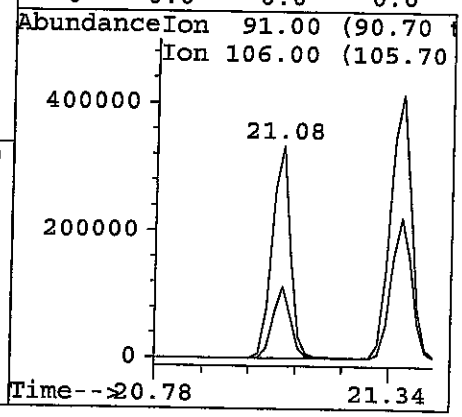


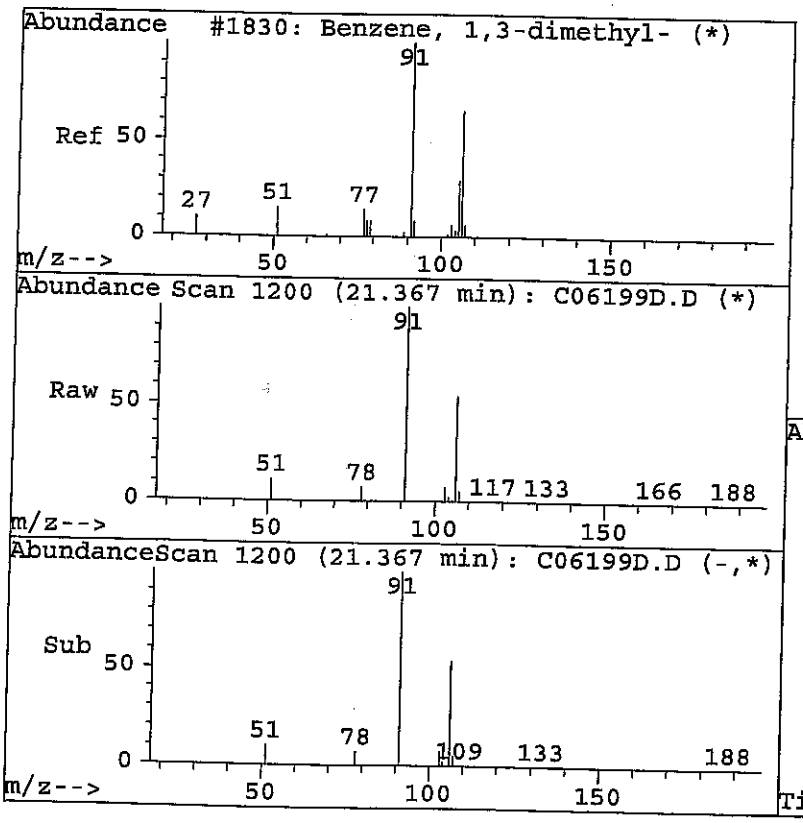


#33
Ethylbenzene
Concen: 0.37 ppbV
RT: 21.08 min Scan# 1185
Delta R.T. 0.00 min
Lab File: C06199D.D
Acq: 19 Jun 109 2:53 pm

Tgt Ion:91 Resp: 1016296

Ion	Ratio	Lower	Upper
91	100		
106	33.8	23.0	34.4
0	0.0	0.0	0.0
0	0.0	0.0	0.0

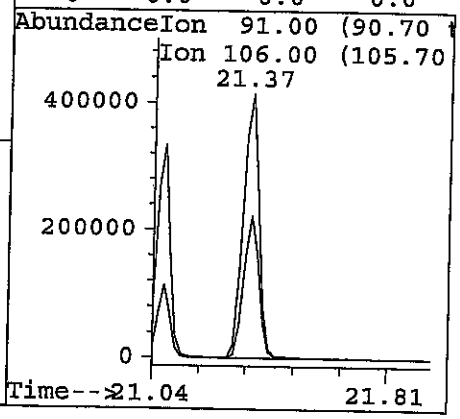


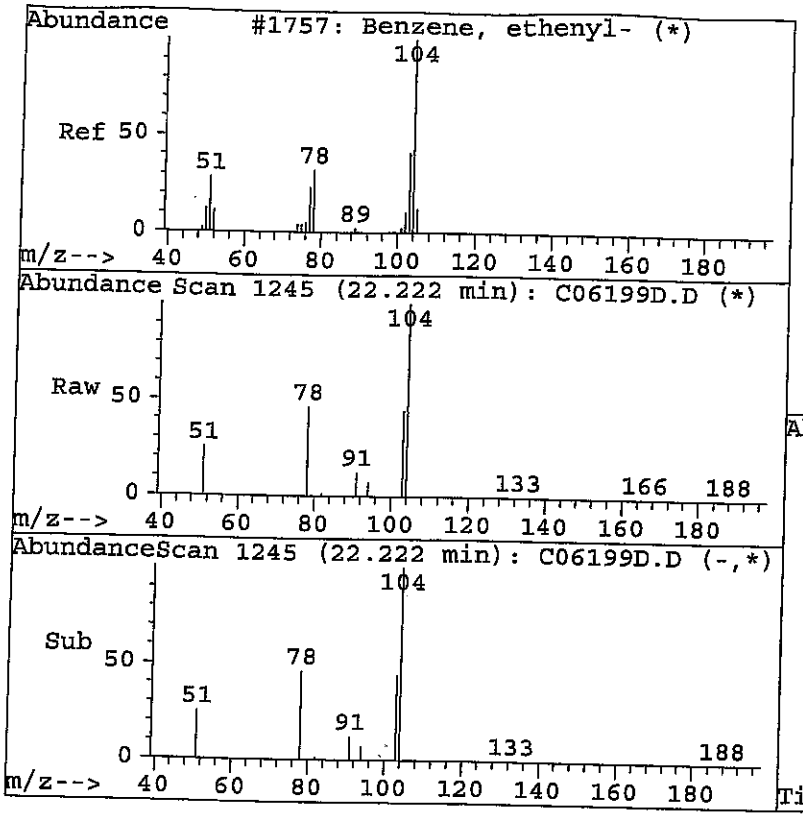


#34
m & p-Xylene
Concen: 0.71 ppbV
RT: 21.37 min Scan# 1200
Delta R.T. -0.00 min
Lab File: C06199D.D
Acq: 19 Jun 109 2:53 pm

Tgt Ion:91 Resp: 1457192

Ion	Ratio	Lower	Upper
91	100		
106	53.6	38.1	57.1
0	0.0	0.0	0.0
0	0.0	0.0	0.0

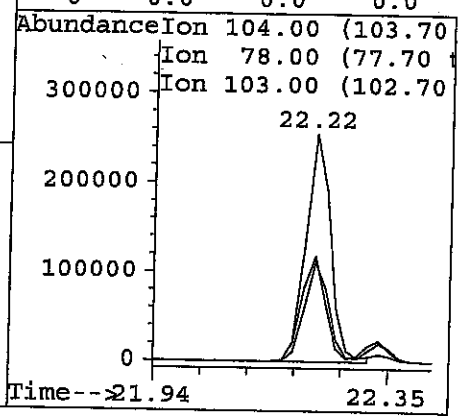


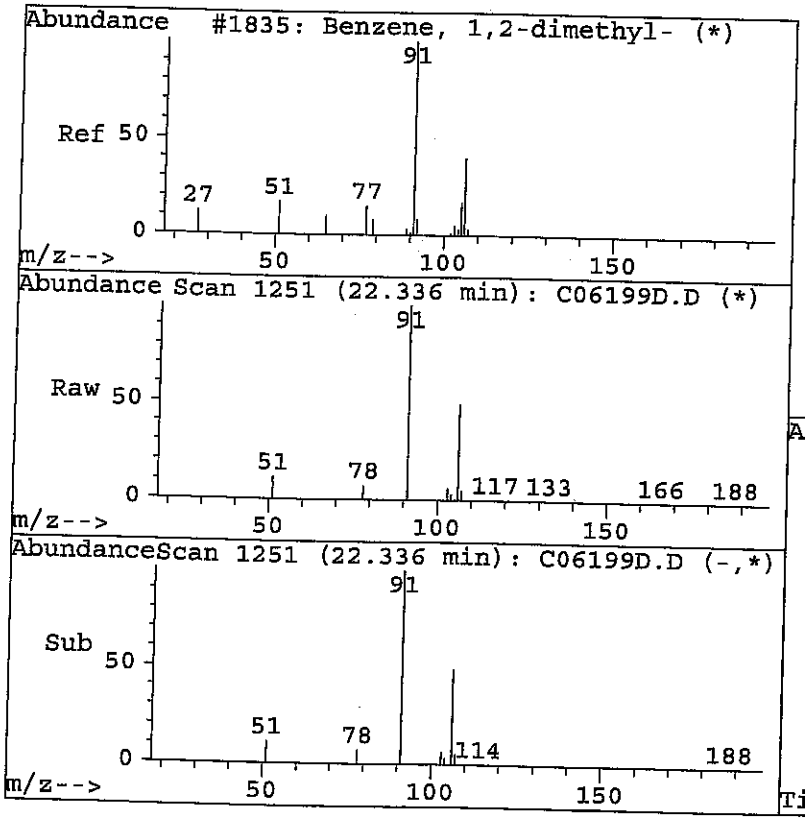


#35
Styrene
Concen: 0.31 ppbV
RT: 22.22 min Scan# 1245
Delta R.T. 0.00 min
Lab File: C06199D.D
Acq: 19 Jun 109 2:53 pm

Tgt Ion:104 Resp: 770183

Ion	Ratio	Lower	Upper
104	100		
78	43.5	35.3	52.9
103	41.9	36.2	54.2
0	0.0	0.0	0.0

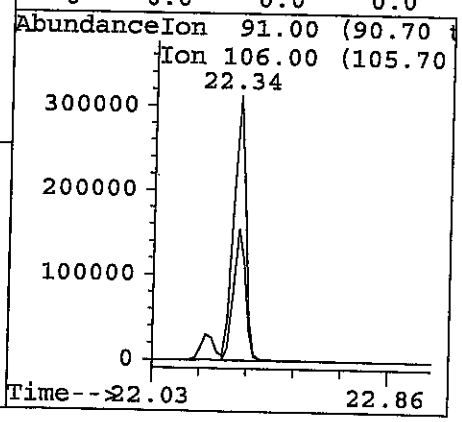


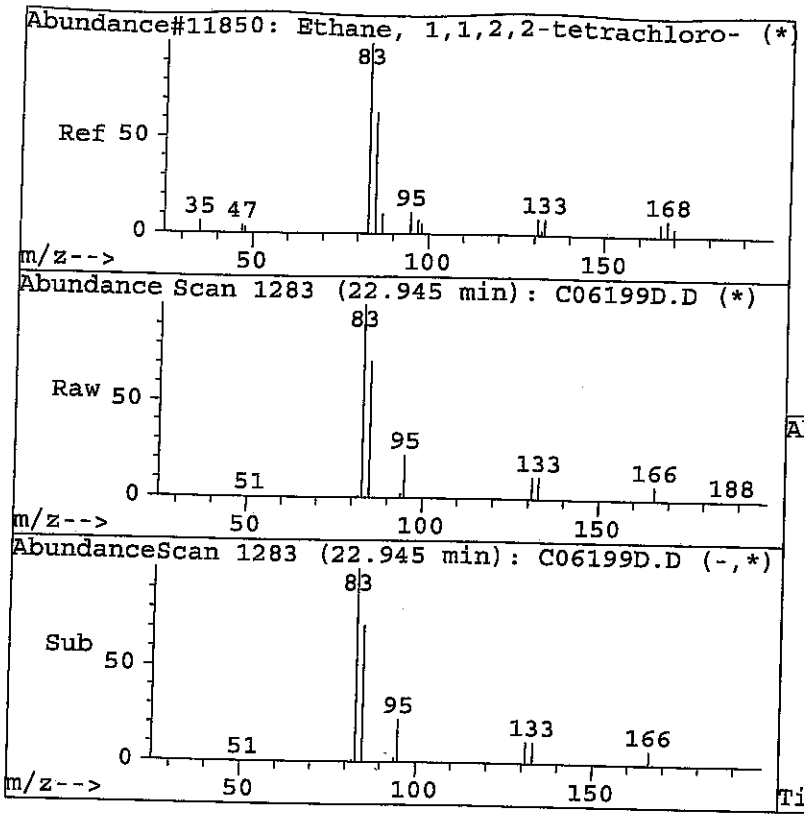


#36
o-Xylene
Concen: 0.32 ppbV
RT: 22.34 min Scan# 1251
Delta R.T. -0.00 min
Lab File: C06199D.D
Acq: 19 Jun 109 2:53 pm

Tgt Ion:91 Resp: 927010

Ion	Ratio	Lower	Upper
91	100		
106	49.6	40.6	60.8
0	0.0	0.0	0.0
0	0.0	0.0	0.0

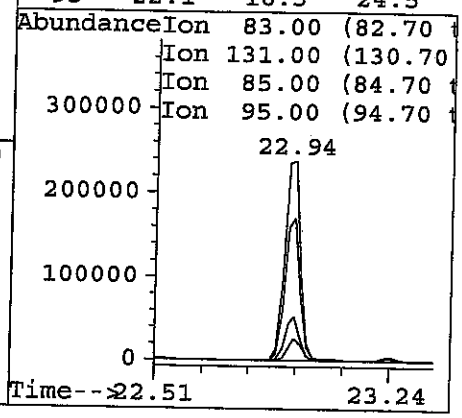


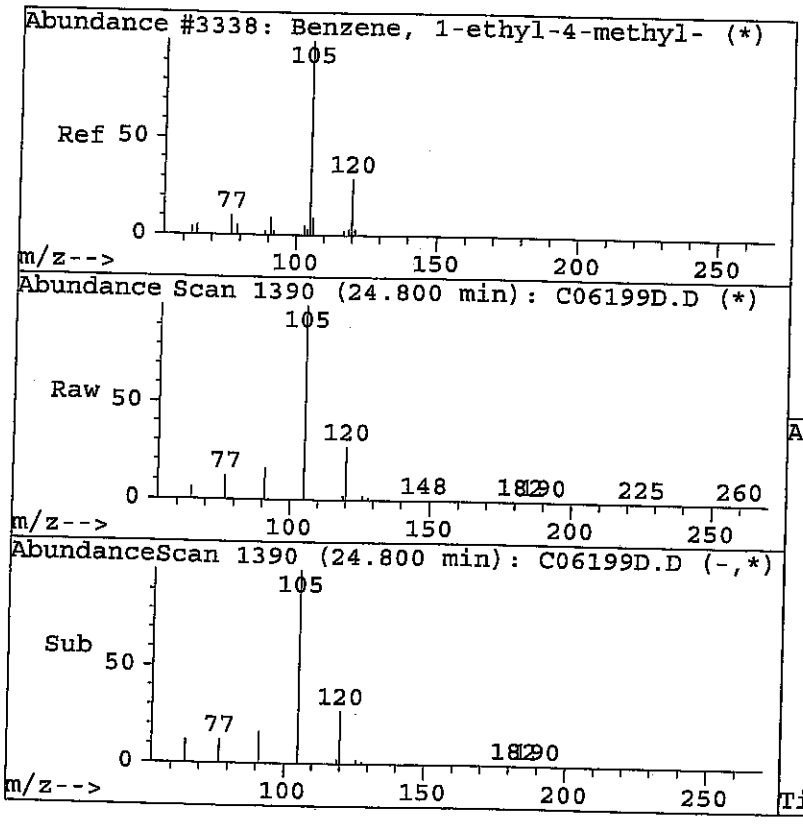


#37
1,1,2,2-Tetrachloroethane
Concen: 0.26 ppbV
RT: 22.94 min Scan# 1283
Delta R.T. 0.01 min
Lab File: C06199D.D
Acq: 19 Jun 109 2:53 pm

Tgt Ion:83 Resp: 813146

Ion	Ratio	Lower	Upper
83	100		
131	11.1	5.9	8.9#
85	71.4	53.3	79.9
95	22.1	16.3	24.5

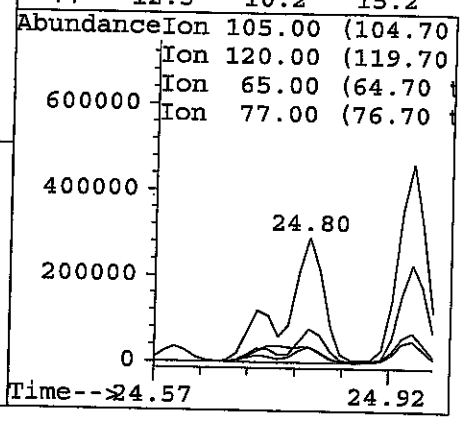


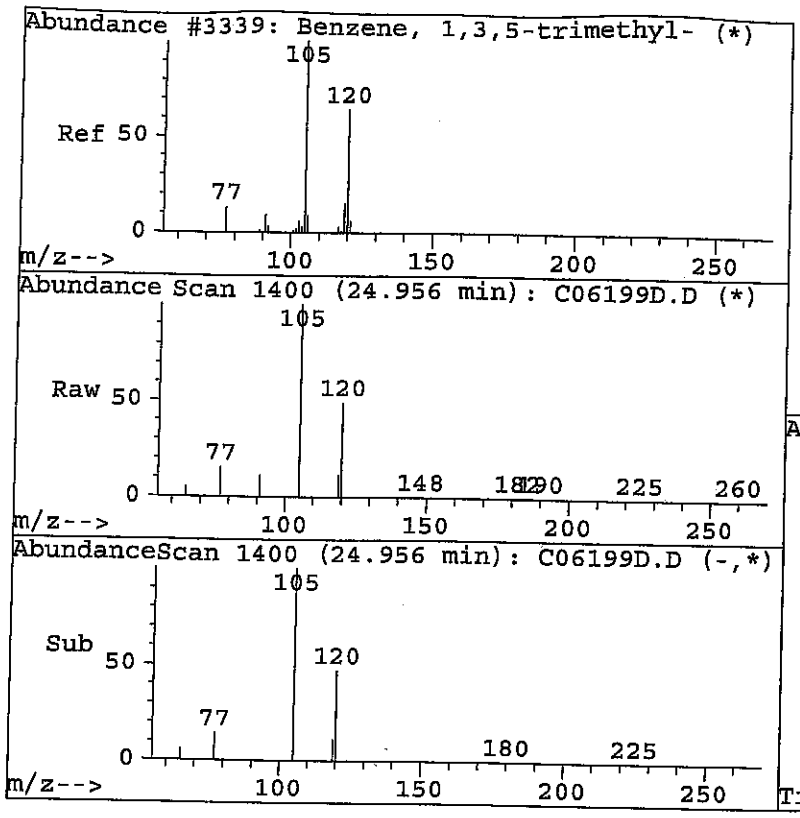


#38
4-Ethyltoluene
Concen: 0.18 ppbV m
RT: 24.80 min Scan# 1390
Delta R.T. -0.00 min
Lab File: C06199D.D
Acq: 19 Jun 109 2:53 pm

Tgt Ion:105 Resp: 1202858

Ion	Ratio	Lower	Upper
105	100		
120	26.8	22.1	33.1
65	6.1	4.9	7.3
77	12.3	10.2	15.2

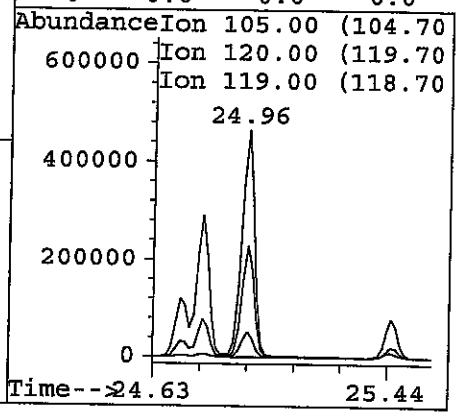


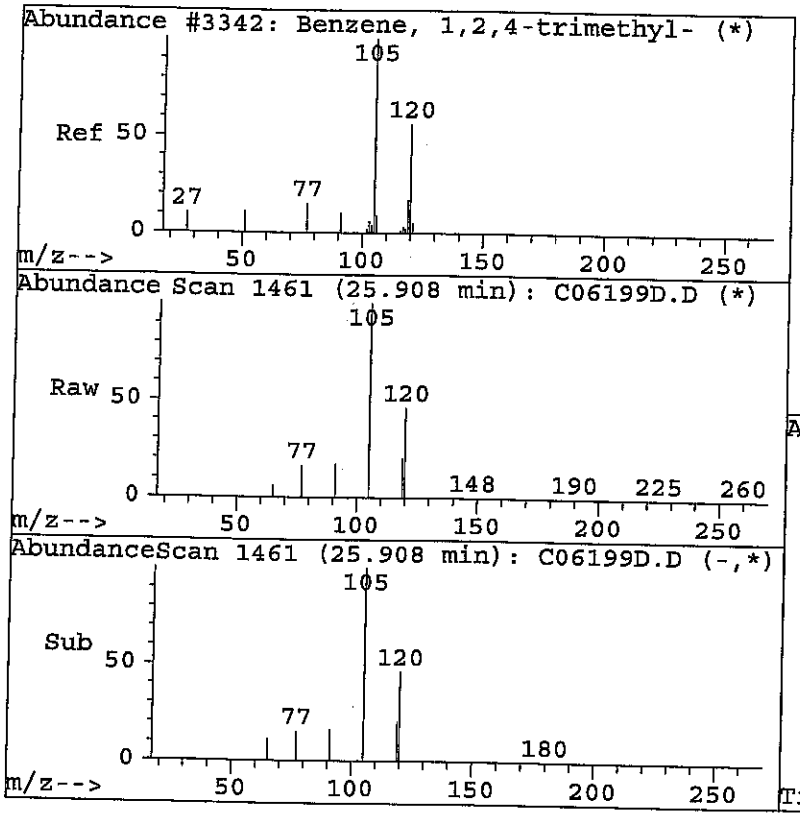


#39
1,3,5-Trimethylbenzene
Concen: 0.26 ppbV
RT: 24.96 min Scan# 1400
Delta R.T. -0.00 min
Lab File: C06199D.D
Acq: 19 Jun 109 2:53 pm

Tgt Ion:105 Resp: 1380945

Ion	Ratio	Lower	Upper
105	100		
120	49.3	38.6	57.8
119	11.0	9.0	13.6
0	0.0	0.0	0.0

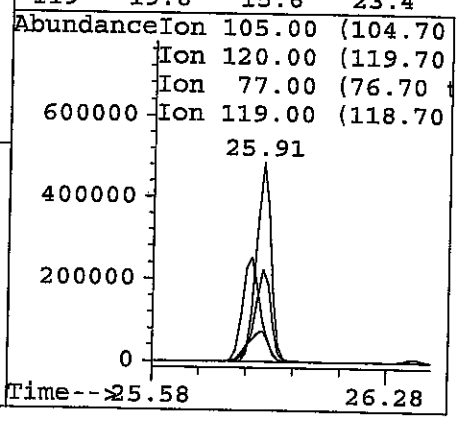


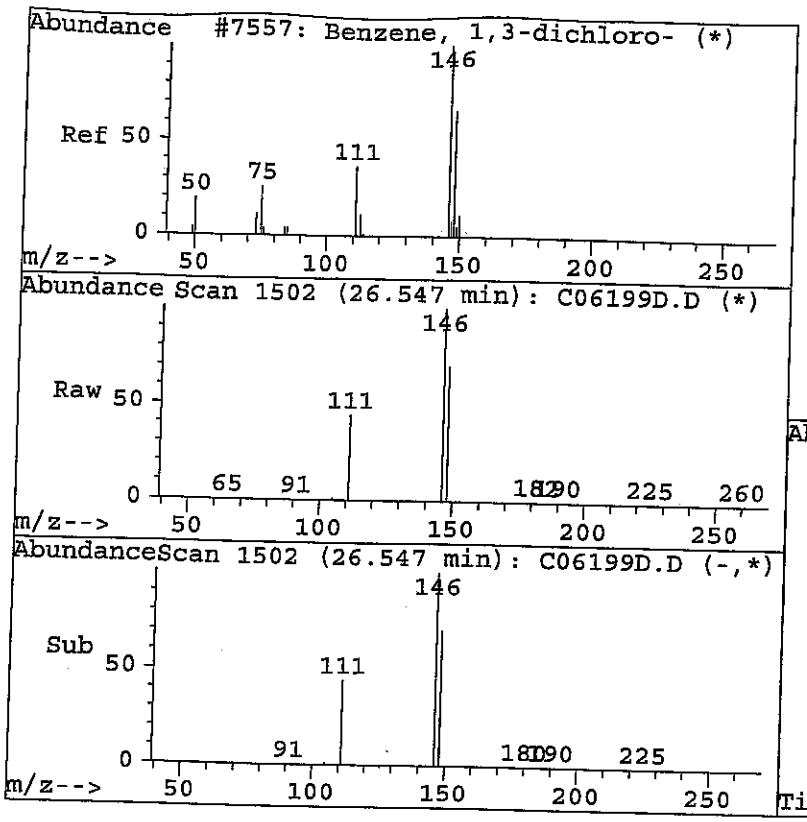


#40
1,2,4-Trimethylbenzene
Concen: 0.23 ppbV
RT: 25.91 min Scan# 1461
Delta R.T. -0.00 min
Lab File: C06199D.D
Acq: 19 Jun 109 2:53 pm

Tgt Ion:105 Resp: 1445689

Ion	Ratio	Lower	Upper
105	100		
120	46.1	35.7	53.5
77	15.5	12.6	18.8
119	19.8	15.6	23.4

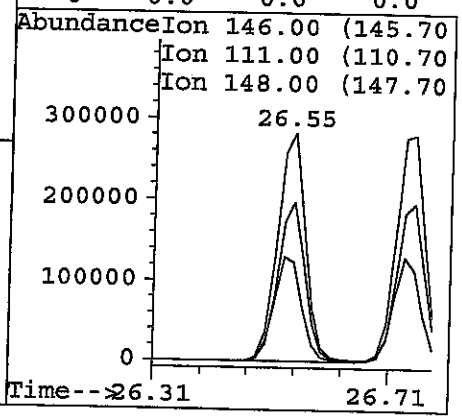


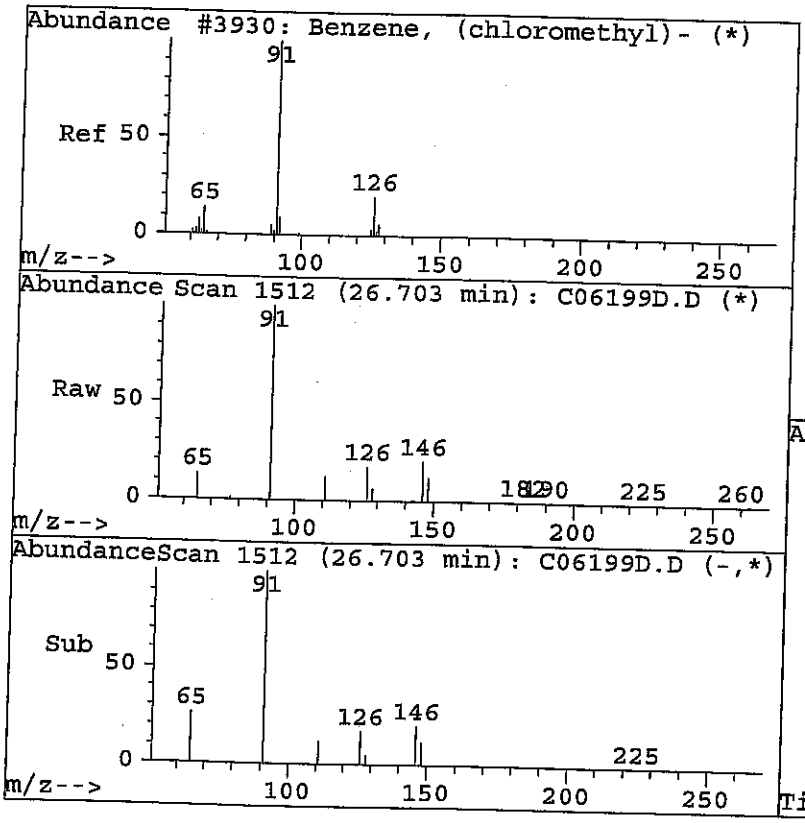


#41
1,3-Dichlorobenzene
Concen: 0.22 ppbV
RT: 26.55 min Scan# 1502
Delta R.T. -0.00 min
Lab File: C06199D.D
Acq: 19 Jun 109 2:53 pm

Tgt Ion:146 Resp: 918189

Ion	Ratio	Lower	Upper
146	100		
111	43.5	35.1	52.7
148	69.9	55.0	82.6
0	0.0	0.0	0.0

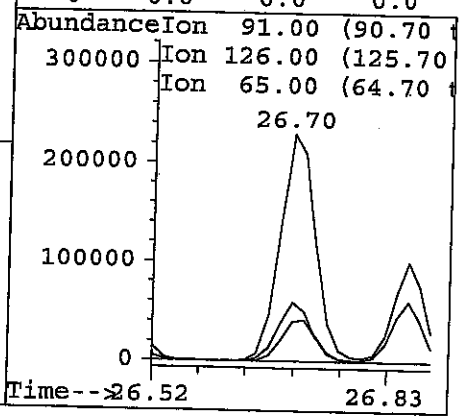


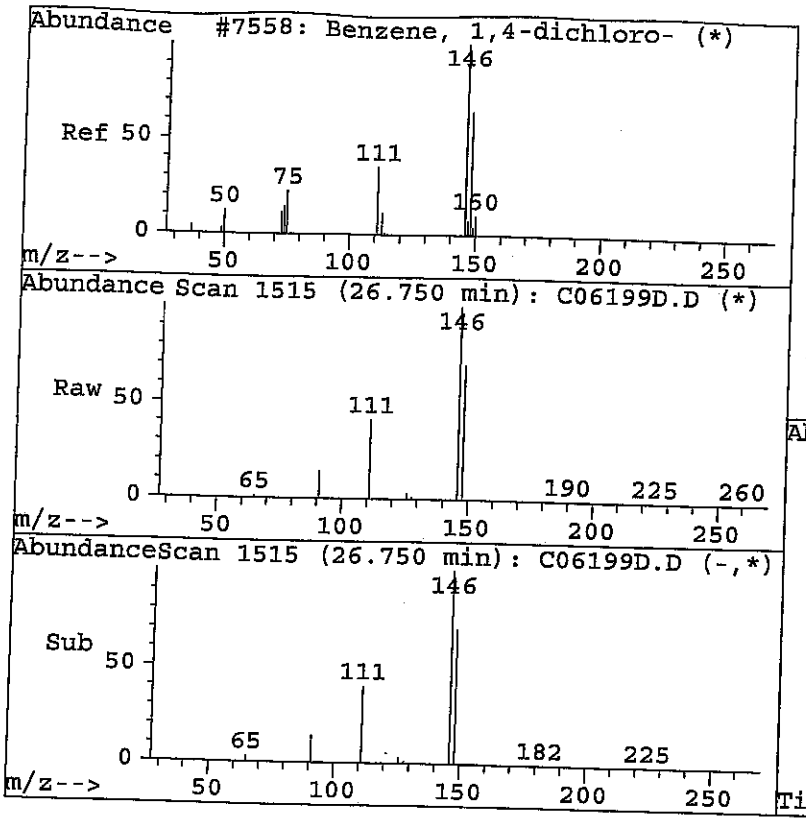


#42
Benzyl chloride
Concen: 0.15 ppbV
RT: 26.70 min Scan# 1512
Delta R.T. 0.00 min
Lab File: C06199D.D
Acq: 19 Jun 109 2:53 pm

Tgt Ion:91 Resp: 751022

Ion	Ratio	Lower	Upper
91	100		
126	17.3	14.4	21.6
65	25.6	21.4	32.2
0	0.0	0.0	0.0

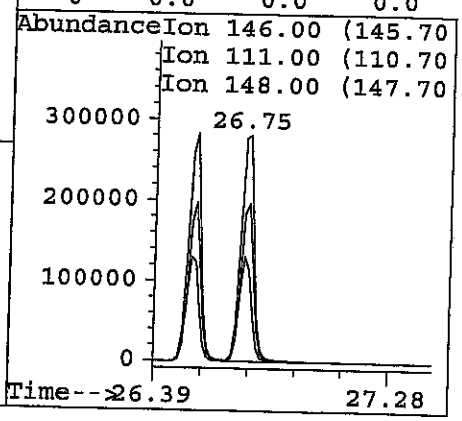


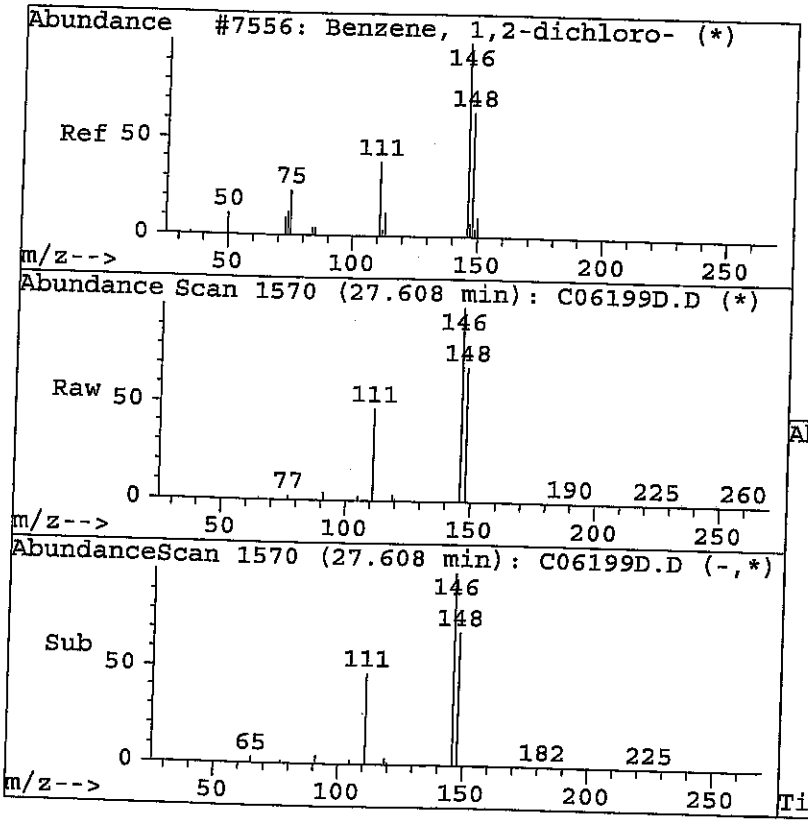


#43
1,4-Dichlorobenzene
Concen: 0.22 ppbV
RT: 26.75 min Scan# 1515
Delta R.T. 0.00 min
Lab File: C06199D.D
Acq: 19 Jun 109 2:53 pm

Tgt Ion:146 Resp: 952235

Ion	Ratio	Lower	Upper
146	100		
111	40.6	38.2	57.4
148	70.0	52.9	79.3
0	0.0	0.0	0.0

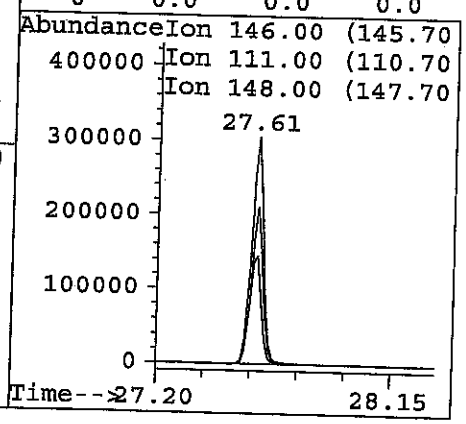


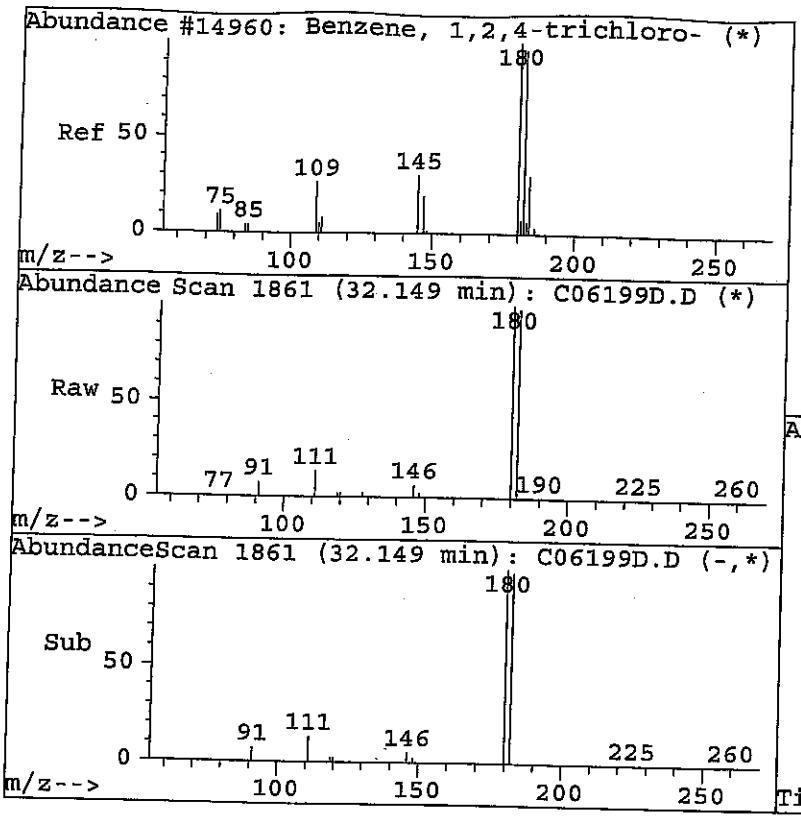


#44
1,2-Dichlorobenzene
Concen: 0.20 ppbV
RT: 27.61 min Scan# 1570
Delta R.T. -0.00 min
Lab File: C06199D.D
Acq: 19 Jun 109 2:53 pm

Tgt Ion:146 Resp: 1003063

Ion	Ratio	Lower	Upper
146	100		
111	47.5	38.2	57.2
148	69.0	53.9	80.9
0	0.0	0.0	0.0

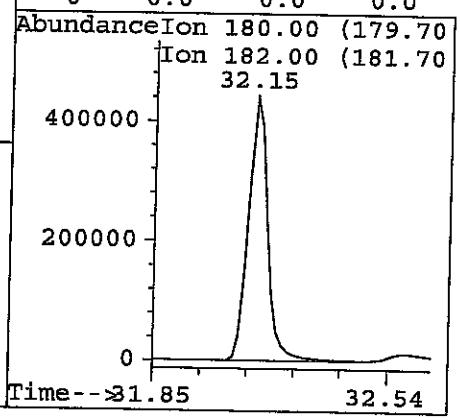


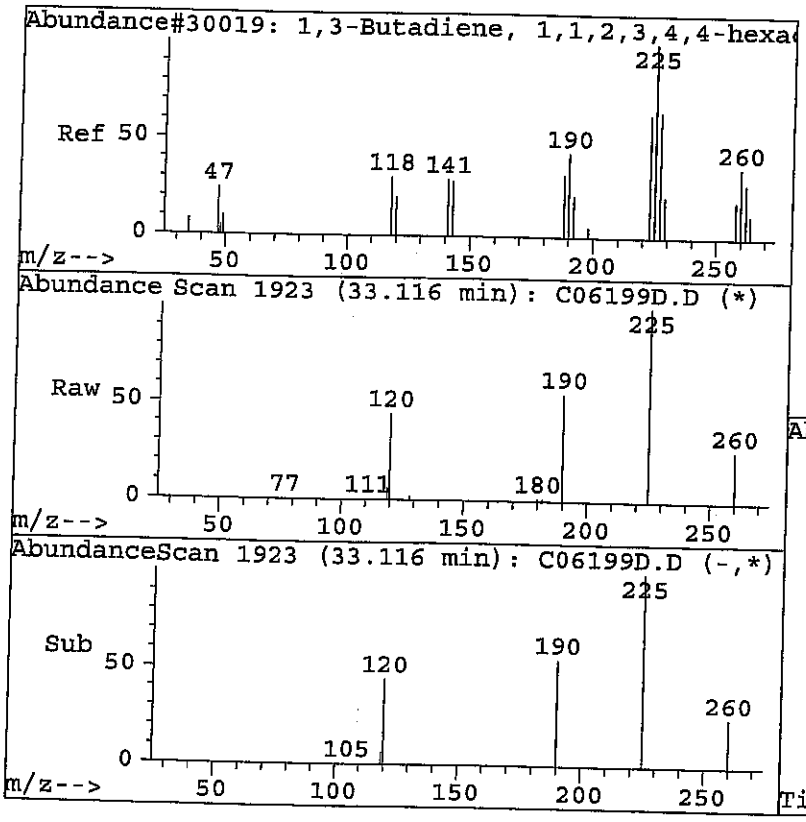


#45
1,2,4-Trichlorobenzene
Concen: 0.17 ppbV
RT: 32.15 min Scan# 1861
Delta R.T. -0.02 min
Lab File: C06199D.D
Acq: 19 Jun 109 2:53 pm

Tgt Ion:180 Resp: 1714540

Ion	Ratio	Lower	Upper
180	100		
182	98.1	75.8	113.6
0	0.0	0.0	0.0
0	0.0	0.0	0.0

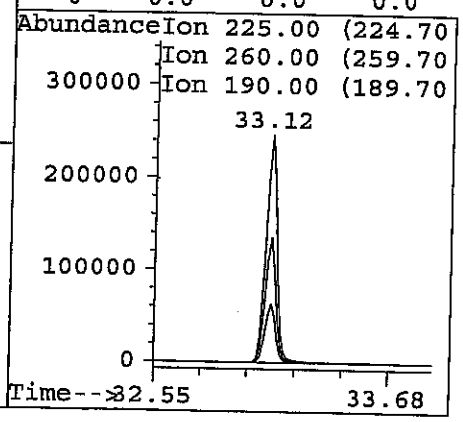


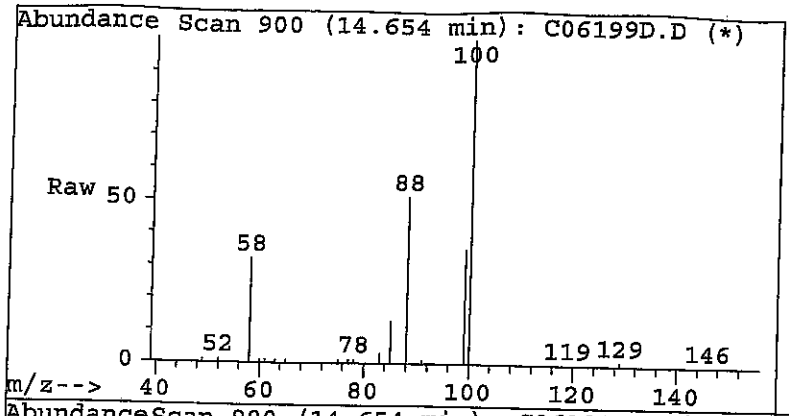


#46
Hexachlorobutadiene
Concen: 0.17 ppbV
RT: 33.12 min Scan# 1923
Delta R.T. -0.01 min
Lab File: C06199D.D
Acq: 19 Jun 109 2:53 pm

Tgt Ion:225 Resp: 859486

Ion	Ratio	Lower	Upper
225	100		
260	25.5	20.0	30.0
190	54.8	45.7	68.5
0	0.0	0.0	0.0

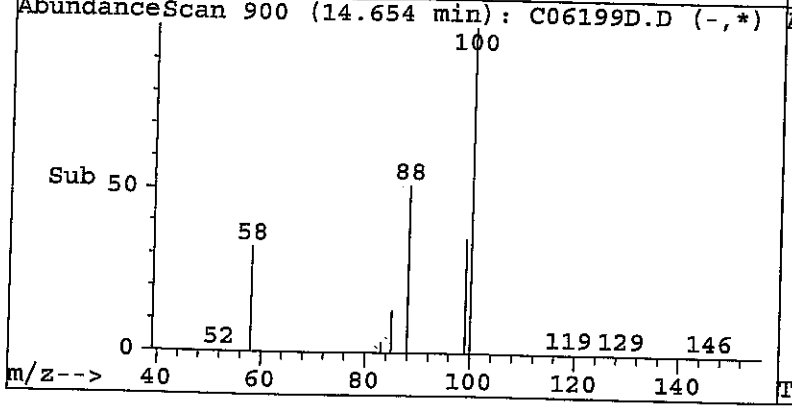


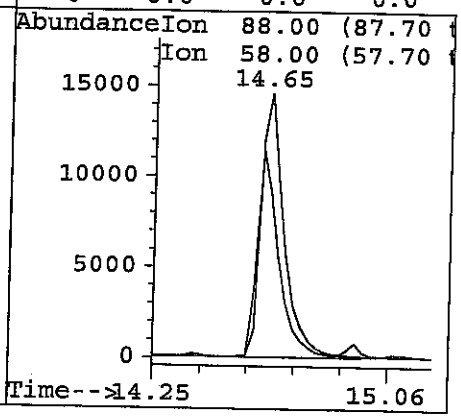


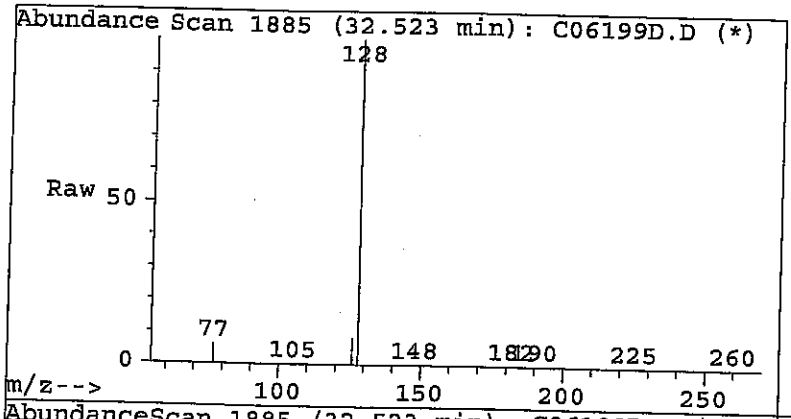
#47
1,4 Dioxane
Concen: 0.29 ppbV
RT: 14.65 min Scan# 900
Delta R.T. 0.08 min
Lab File: C06199D.D
Acq: 19 Jun 109 2:53 pm

Tgt Ion:88 Resp: 80159

Ion	Ratio	Lower	Upper
88	100		
58	72.8	56.7	85.1
0	0.0	0.0	0.0
0	0.0	0.0	0.0



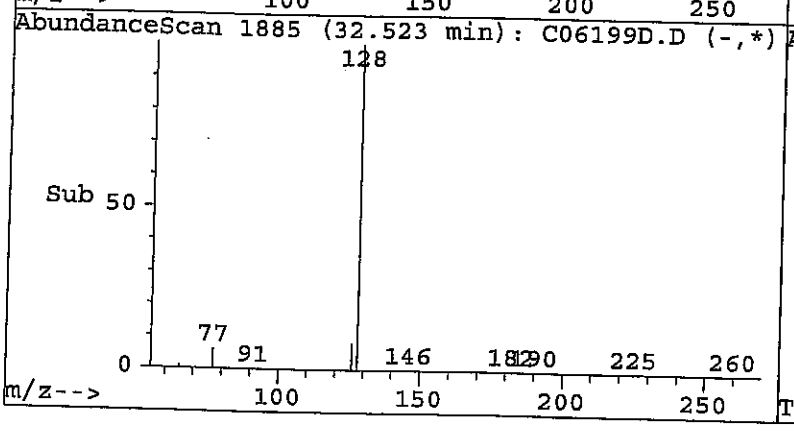


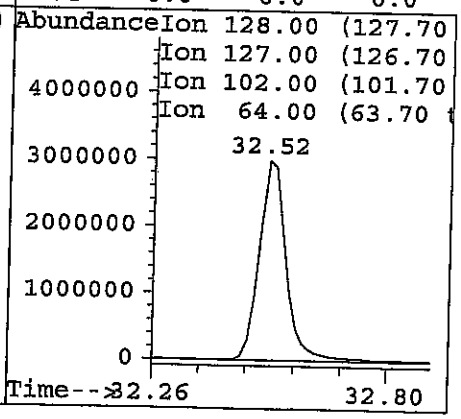


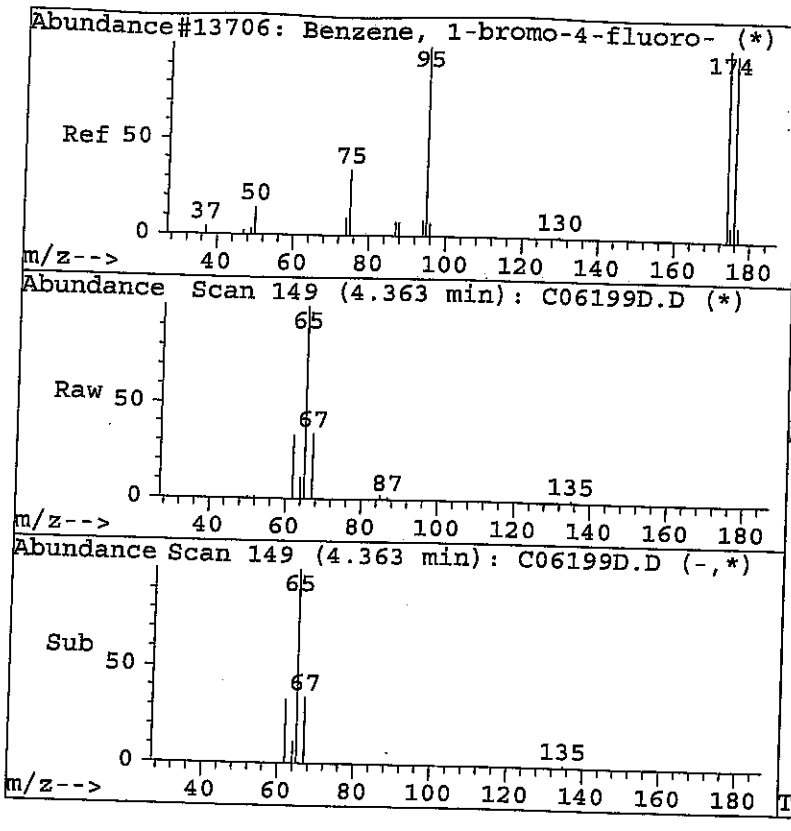
#48
Naphthalene
Concen: 0.76 ppbV m
RT: 32.52 min Scan# 1885
Delta R.T. -0.26 min
Lab File: C06199D.D
Acq: 19 Jun 109 2:53 pm

Tgt Ion:128 Resp:12784877

Ion	Ratio	Lower	Upper
128	100		
127	0.0	0.0	0.0
102	0.0	0.0	0.0
64	0.0	0.0	0.0



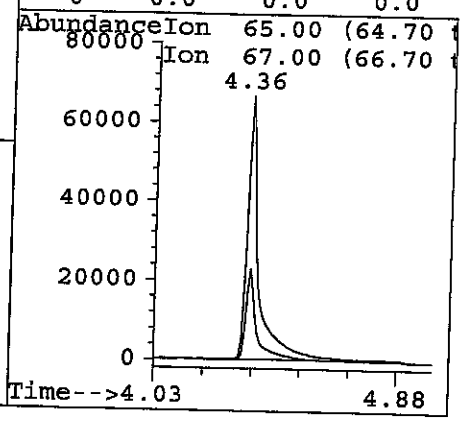




#49
Vinyl Chloride-d3
Concen: 0.22 ppbV
RT: 4.36 min Scan# 149
Delta R.T. 0.01 min
Lab File: C06199D.D
Acq: 19 Jun 109 2:53 pm

Tgt Ion:65 Resp: 186524

Ion	Ratio	Lower	Upper
65	100		
67	34.2	27.2	40.8
0	0.0	0.0	0.0
0	0.0	0.0	0.0



Quantitation Report

Data File : C:\MSCHEM\2\DATA\06199MS2\C06199E.D
Acq Time : 19 Jun 109 4:06 pm
Sample : ST60032+ST60250
Misc : 4 ML
Quant Time: Jun 22 8:54 19109

Operator: CM
Inst : MS2
Multiplr: 1.00

Method : C:\MSCHEM\2\METHODS\2EXSIM_I.M
Title : EPA T0-15
Last Update : Mon Jun 22 09:18:18 2009
Response via : Multiple Level Calibration

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Chlorobenzene-d5	20.51	117	1807068	0.20 ppbV	0.00
System Monitoring Compounds					%Recovery
16) Toluene-d8	17.05	98	753686	0.19 ppbV	
49) Vinyl Chloride-d3	4.35	65	288448	0.17 ppbV	
Target Compounds					Qvalue
2) Dichlorodifluoromethane	3.85	85	400604	0.37 ppbV m	0
3) Chloromethane	4.12	50	189687	0.38 ppbV m	48
4) Freon 114	4.12	85	396868	0.37 ppbV	98
5) Vinyl chloride	4.36	62	140317	0.42 ppbV	99
6) Bromomethane	4.97	94	126567	0.41 ppbV m	97
7) Chloroethane	5.18	64	111983	0.34 ppbV	93
8) Trichlorofluoromethane	5.98	101	475586	0.39 ppbV	99
9) 1,1-Dichloroethene	6.95	61	301017	0.39 ppbV	99
10) Freon 113	7.19	151	228496	0.43 ppbV	92
11) Dichloromethane	7.42	84	167890	0.43 ppbV	98
12) trans-1,2-Dichloroethene	8.49	96	132501	0.26 ppbV	99
13) Methyl tert butyl ether	8.62	73	365659	0.18 ppbV #	97
14) 1,1-Dichloroethane	9.03	63	327340	0.39 ppbV	97
15) cis-1,2-Dichloroethene	10.25	96	226396	0.47 ppbV	95
17) Chloroform	10.67	83	427372	0.36 ppbV	98
18) 1,1,1-Trichloroethane	11.91	97	469425	0.40 ppbV	97
19) 1,2-Dichloroethane	12.04	62	835756	0.31 ppbV	99
20) Benzene	12.63	78	641363	0.37 ppbV	97
21) Carbon tetrachloride	12.68	117	410007	0.42 ppbV	98
22) 1,2-Dichloropropane	14.20	63	236197	0.40 ppbV	99
23) Trichloroethene	14.25	130	286372	0.44 ppbV	99
24) Bromodichloromethane	14.57	83	329960	0.28 ppbV	99
25) cis-1,3-Dichloropropene	15.99	75	84644	0.12 ppbV #	54
26) Toluene	17.24	91	935329	0.36 ppbV	100
27) trans-1,3-Dichloropropene	17.03	75	42733	0.04 ppbV	97
28) 1,1,2-Trichloroethane	17.35	97	441832	0.48 ppbV	98
29) 1,2-Dibromoethane	18.99	107	834780	0.38 ppbV	100
30) Tetrachloroethene	19.09	166	374447	0.47 ppbV	98
31) Chlorobenzene	20.61	112	1040689	0.41 ppbV #	87
32) 1,1,1,2-Tetrachloroethane	20.67	131	334695	0.34 ppbV	98
33) Ethylbenzene	21.08	91	1882967	0.37 ppbV	99
34) m & p-Xylene	21.37	91	2872586	0.77 ppbV	99
35) Styrene	22.22	104	1772326	0.40 ppbV	96
36) o-Xylene	22.34	91	1831287	0.35 ppbV	99
37) 1,1,2,2-Tetrachloroethane	22.95	83	2300254	0.41 ppbV	98
38) 4-Ethyltoluene	24.80	105	2705605	0.22 ppbV m	99
39) 1,3,5-Trimethylbenzene	24.96	105	3708236	0.37 ppbV	98
40) 1,2,4-Trimethylbenzene	25.91	105	4300475	0.37 ppbV	97
41) 1,3-Dichlorobenzene	26.55	146	3179015	0.42 ppbV	97
42) Benzyl chloride	26.72	91	2452250	0.27 ppbV #	96
43) 1,4-Dichlorobenzene	26.75	146	3247824	0.40 ppbV	97
44) 1,2-Dichlorobenzene	27.61	146	3769025	0.40 ppbV	97
45) 1,2,4-Trichlorobenzene	32.16	180	9410822	0.51 ppbV	97
46) Hexachlorobutadiene	33.13	225	4867540	0.50 ppbV	98
47) 1,4 Dioxane	14.57	88	179188	0.36 ppbV	96
48) Naphthalene	32.54	128	37178978	3.11 ppbV #	100

(#) = qualifier out of range (m) = manual integration
C06199E.D 2EXSIM_I.M Wed Jul 15 11:13:49 2009

Data File : C:\MSCHEM\2\DATA\06199MS2\C06199E.D
Acq Time : 19 Jun 109 4:06 pm
Sample : ST60032+ST60250
Misc : 4 ML
Quant Time: Jun 22 8:54 19109

Operator: CM
Inst : MS2
Multiplr: 1.00

Method : C:\MSCHEM\2\METHODS\2EXSIM_I.M
Title : EPA T0-15
Last Update : Mon Jun 22 09:18:18 2009
Response via : Multiple Level Calibration

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue

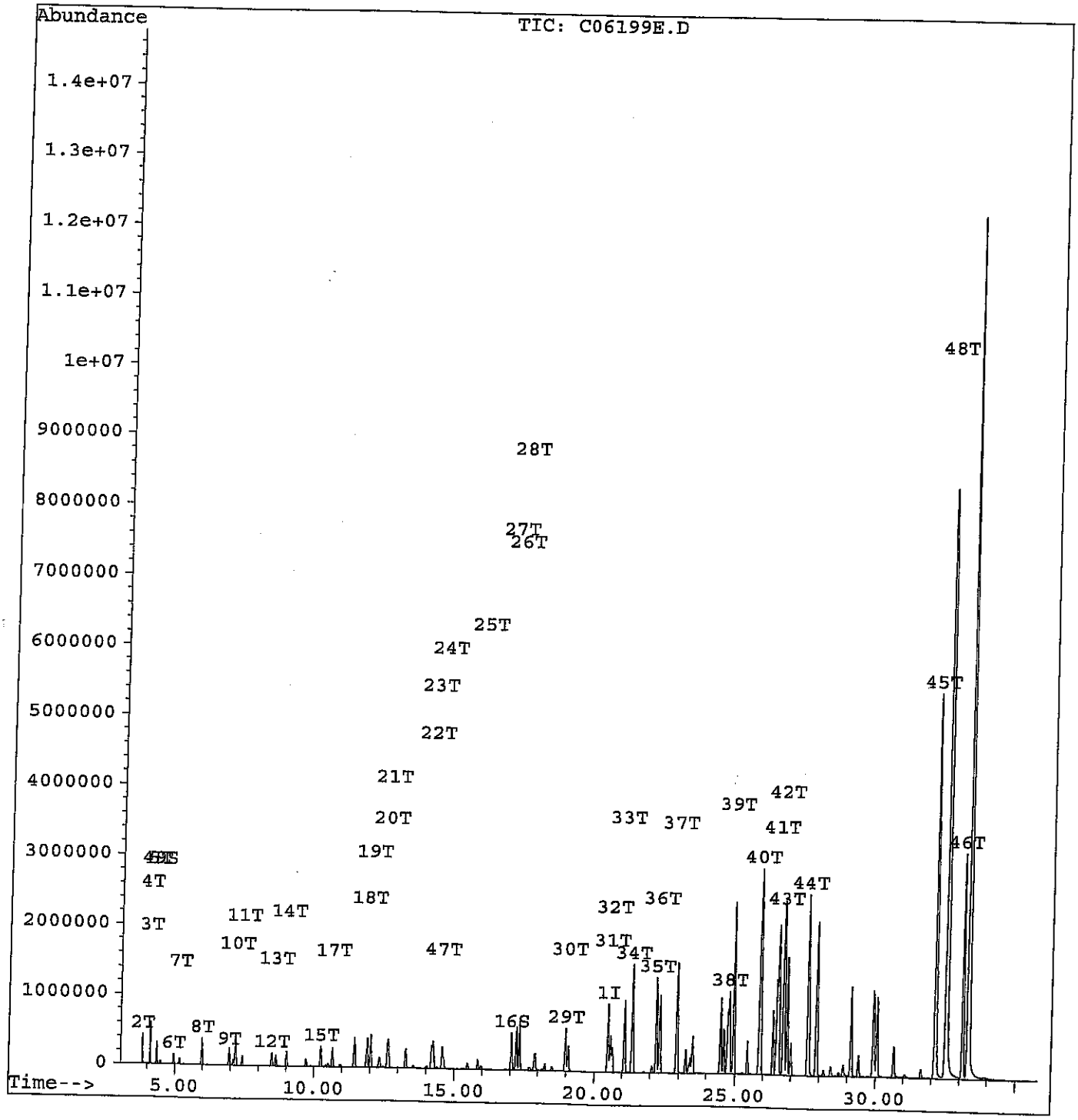
(#) = qualifier out of range (m) = manual integration

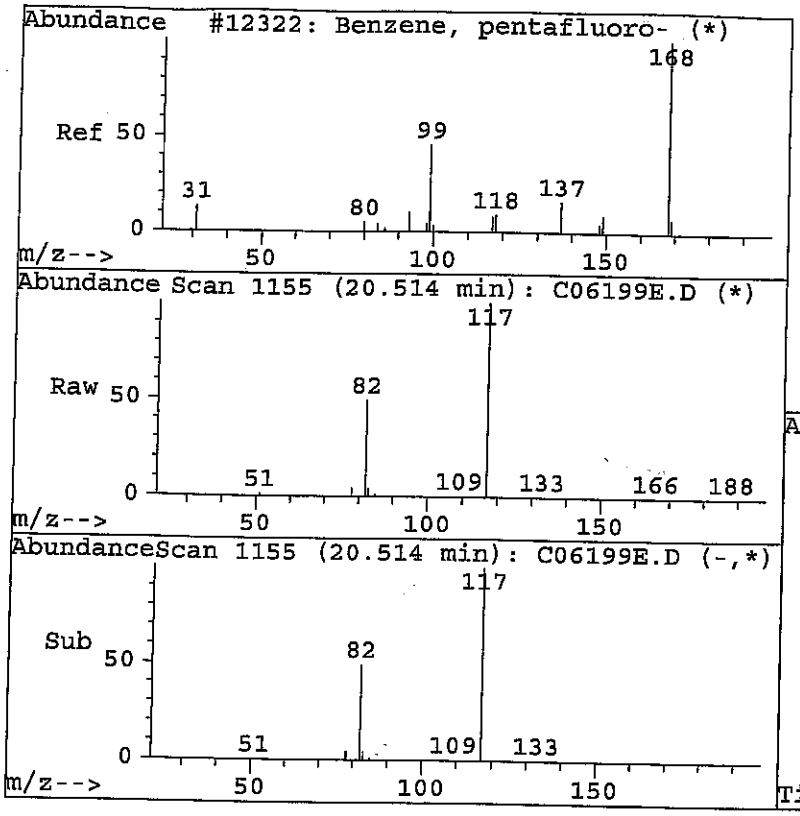
Quantitation Report

Data File : C:\MSCHEM\2\DATA\06199MS2\C06199E.D
Acq Time : 19 Jun 109 4:06 pm
Sample : ST60032+ST60250
Misc : 4 ML
Quant Time: Jun 22 8:54 19109

Operator: CM
Inst : MS2
Multiplr: 1.00

Method : C:\MSCHEM\2\METHODS\2EXSIM_I.M
Title : EPA TO-15
Last Update : Mon Jun 22 09:18:18 2009
Response via : Multiple Level Calibration

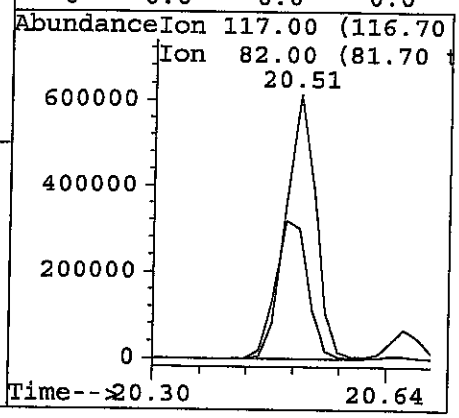


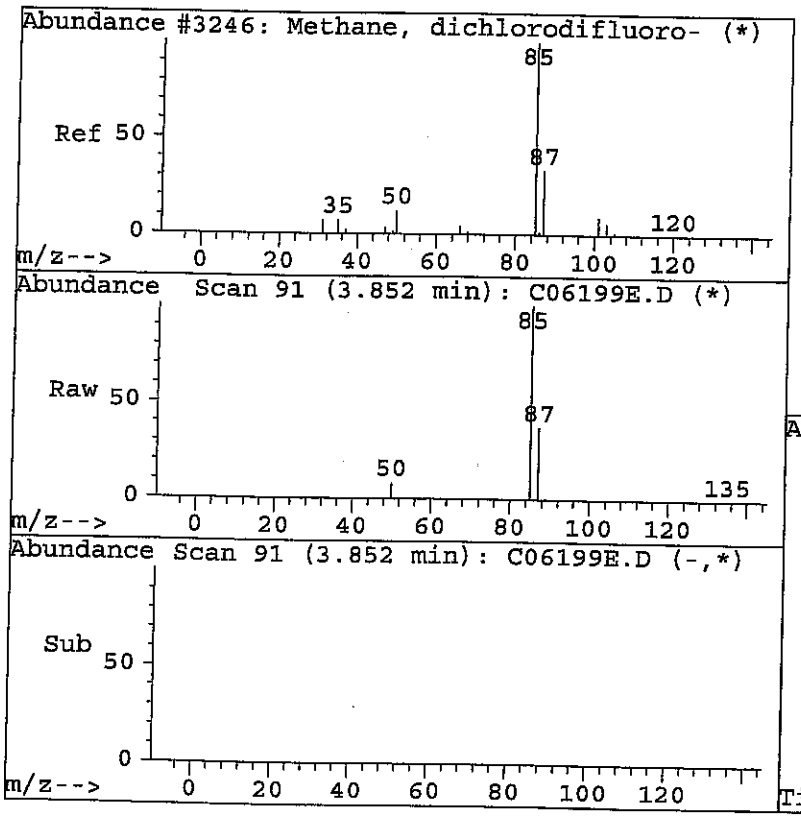


#1
Chlorobenzene-d5
Concen: 0.20 ppbV
RT: 20.51 min Scan# 1155
Delta R.T. 0.00 min
Lab File: C06199E.D
Acq: 19 Jun 109 4:06 pm

Tgt Ion:117 Resp: 1807068

Ion	Ratio	Lower	Upper
117	100		
82	49.0	39.0	58.4
0	0.0	0.0	0.0
0	0.0	0.0	0.0

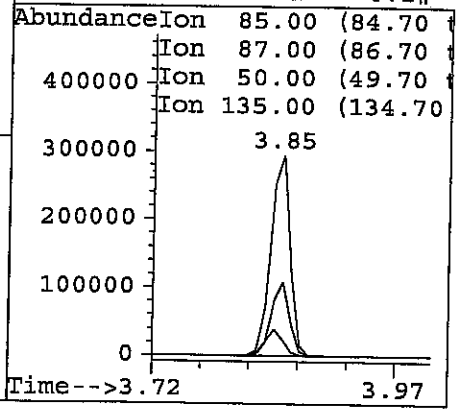


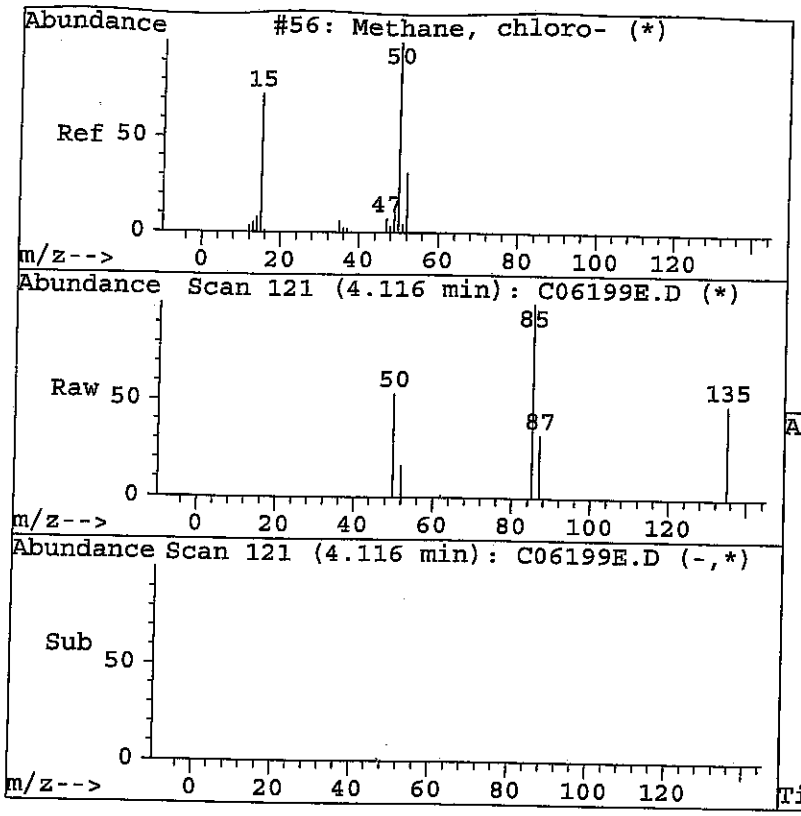


#2
Dichlorodifluoromethane
Concen: 0.37 ppbV m
RT: 3.85 min Scan# 91
Delta R.T. 0.00 min
Lab File: C06199E.D
Acq: 19 Jun 109 4:06 pm

Tgt Ion:85 Resp: 400604

Ion	Ratio	Lower	Upper
85	100		
87	36.6	27.8	41.6
50	8.2	8.7	13.1#
135	0.0	0.1	0.1#

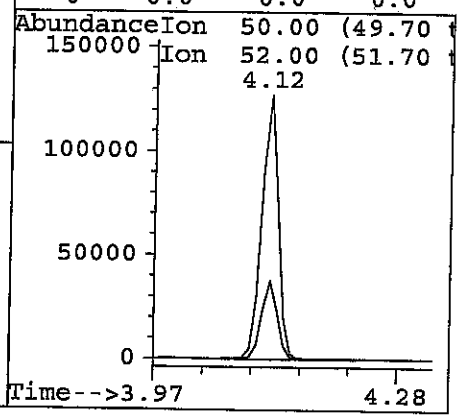


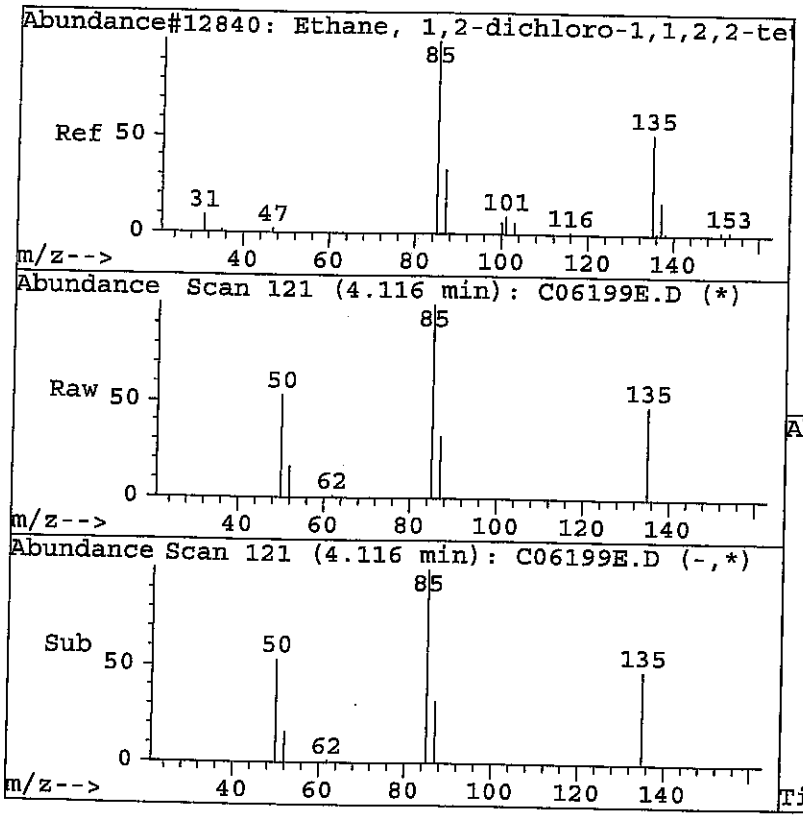


#3
Chloromethane
Concen: 0.38 ppbV m
RT: 4.12 min Scan# 121
Delta R.T. -0.00 min
Lab File: C06199E.D
Acq: 19 Jun 109 4:06 pm

Tgt Ion:50 Resp: 189687

Ion	Ratio	Lower	Upper
50	100		
52	29.5	21.7	32.5
0	0.0	0.0	0.0
0	0.0	0.0	0.0

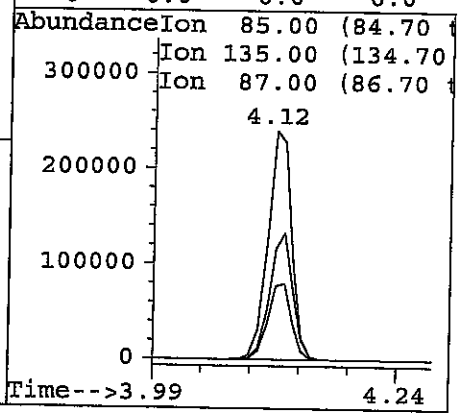


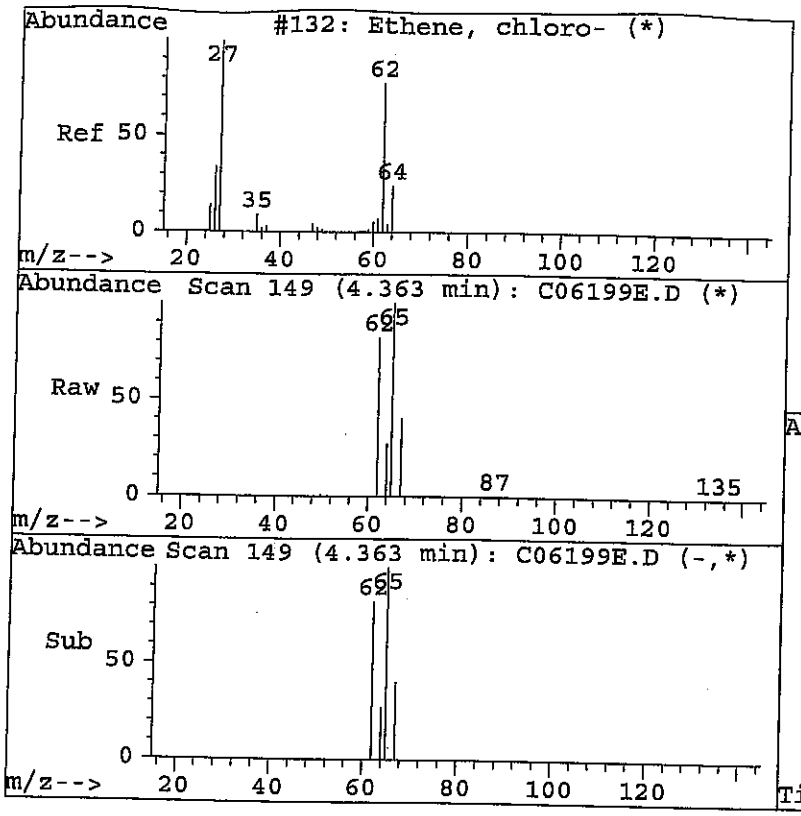


#4
Freon 114
Concen: 0.37 ppbV
RT: 4.12 min Scan# 121
Delta R.T. -0.00 min
Lab File: C06199E.D
Acq: 19 Jun 109 4:06 pm

Tgt Ion:85 Resp: 396868

Ion	Ratio	Lower	Upper
85	100		
135	48.3	37.4	56.0
87	32.2	25.4	38.0
0	0.0	0.0	0.0

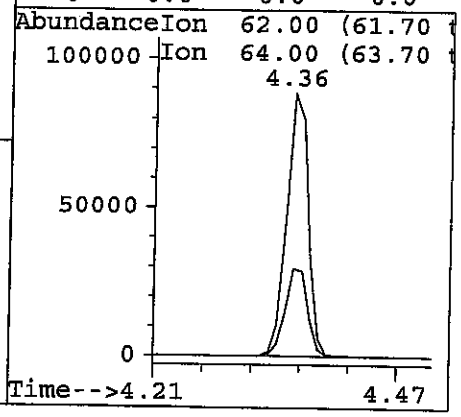


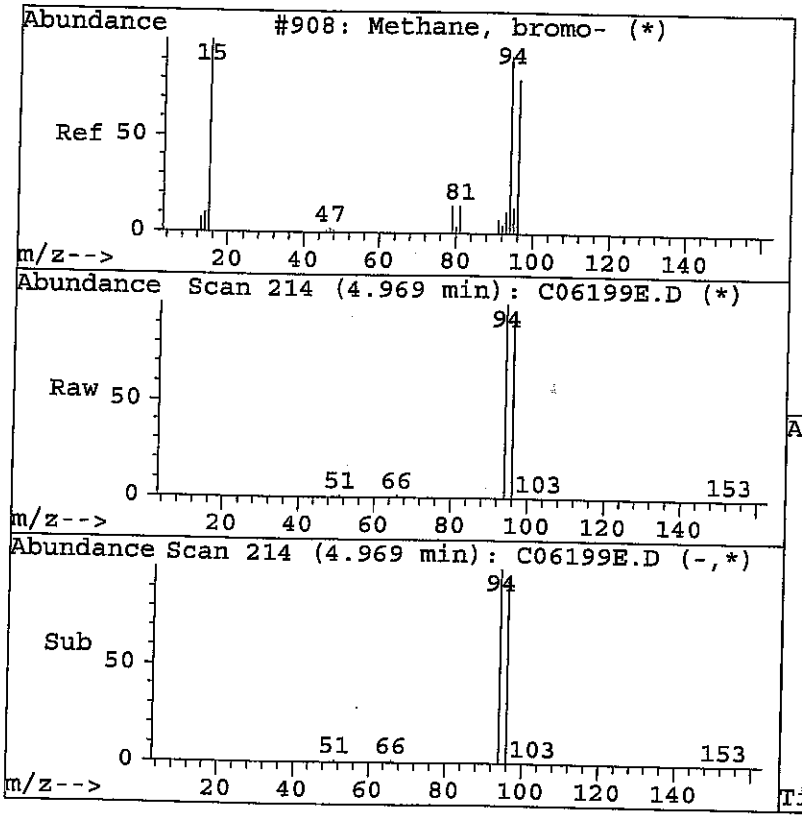


#5
Vinyl chloride
Concen: 0.42 ppbV
RT: 4.36 min Scan# 149
Delta R.T. -0.01 min
Lab File: C06199E.D
Acq: 19 Jun 109 4:06 pm

Tgt Ion:62 Resp: 140317

Ion	Ratio	Lower	Upper
62	100		
64	33.1	26.2	39.4
0	0.0	0.0	0.0
0	0.0	0.0	0.0

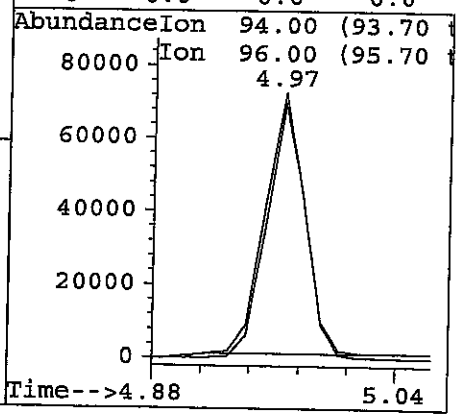


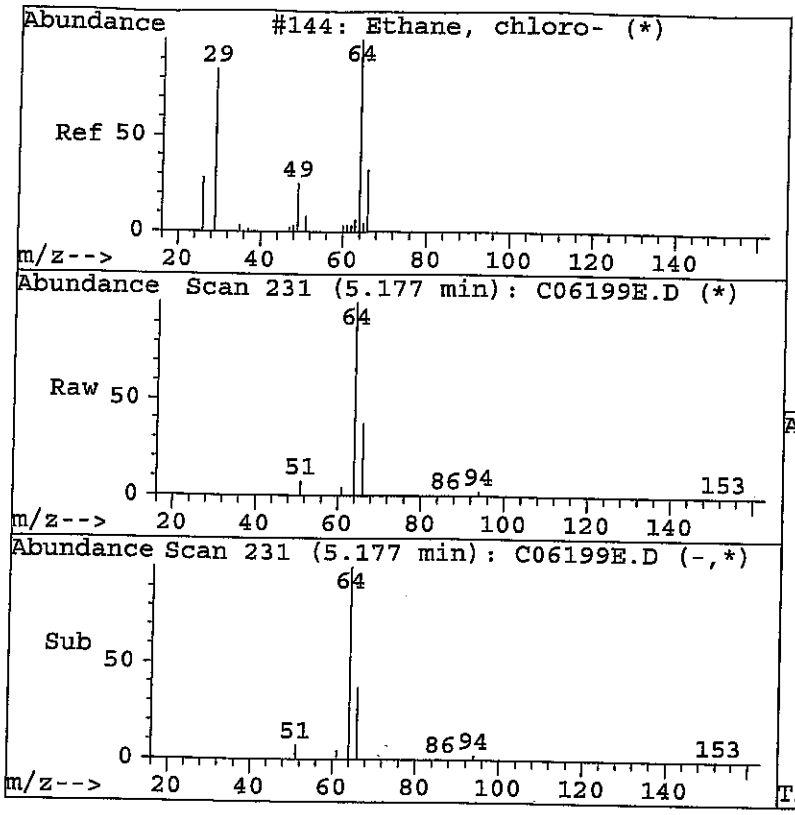


#6
Bromomethane
Concen: 0.41 ppbV m
RT: 4.97 min Scan# 214
Delta R.T. -0.00 min
Lab File: C06199E.D
Acq: 19 Jun 109 4:06 pm

Tgt Ion:94 Resp: 126567

Ion	Ratio	Lower	Upper
94	100		
96	96.3	75.5	113.3
0	0.0	0.0	0.0
0	0.0	0.0	0.0

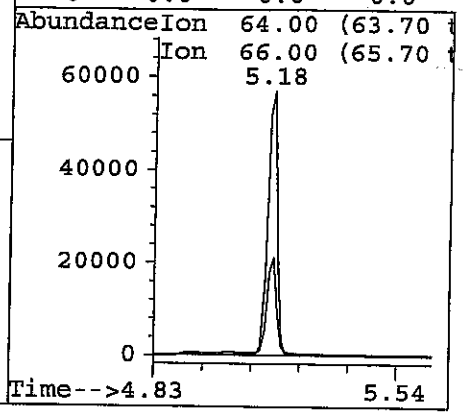


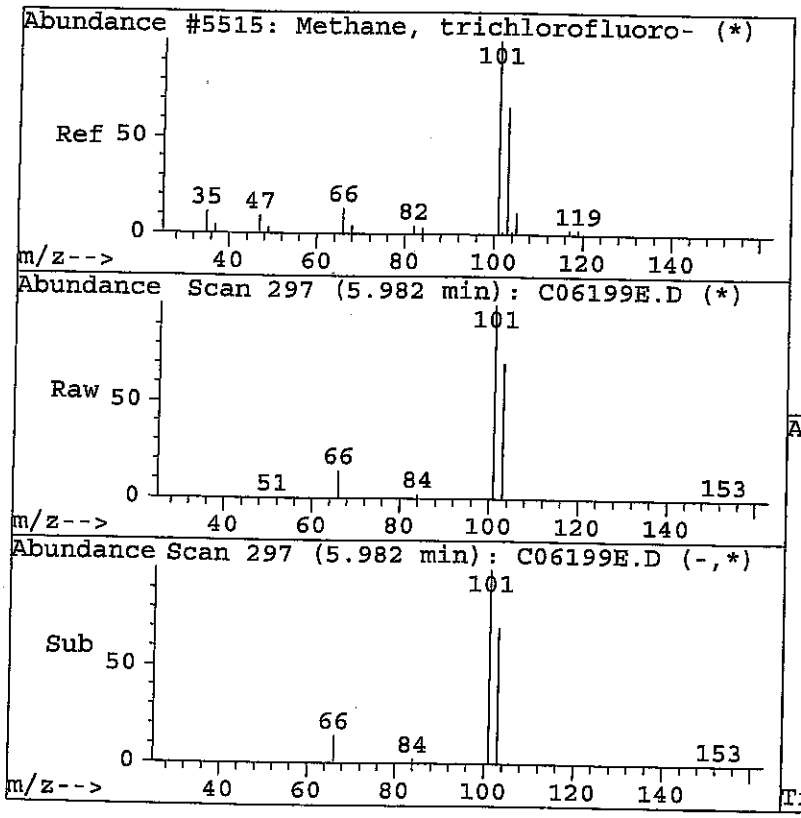


#7
Chloroethane
Concen: 0.34 ppbV
RT: 5.18 min Scan# 231
Delta R.T. -0.00 min
Lab File: C06199E.D
Acq: 19 Jun 109 4:06 pm

Tgt Ion:64 Resp: 111983

Ion	Ratio	Lower	Upper
64	100		
66	36.5	26.2	39.2
0	0.0	0.0	0.0
0	0.0	0.0	0.0

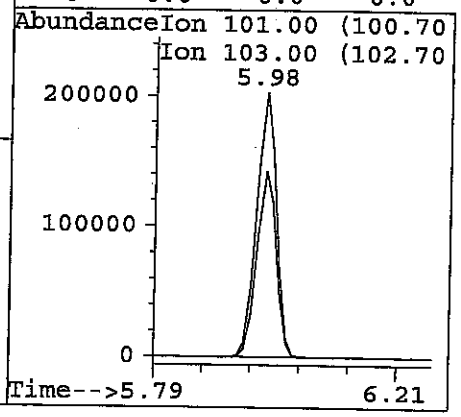


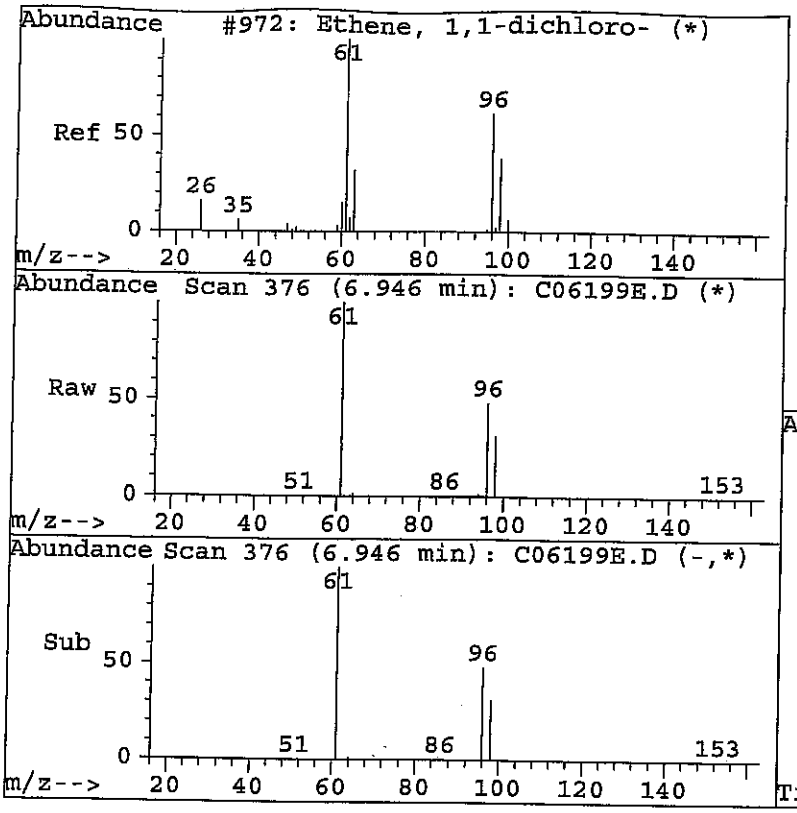


#8
Trichlorofluoromethane
Concen: 0.39 ppbV
RT: 5.98 min Scan# 297
Delta R.T. 0.00 min
Lab File: C06199E.D
Acq: 19 Jun 109 4:06 pm

Tgt Ion:101 Resp: 475586

Ion	Ratio	Lower	Upper
101	100		
103	70.0	55.5	83.3
0	0.0	0.0	0.0
0	0.0	0.0	0.0

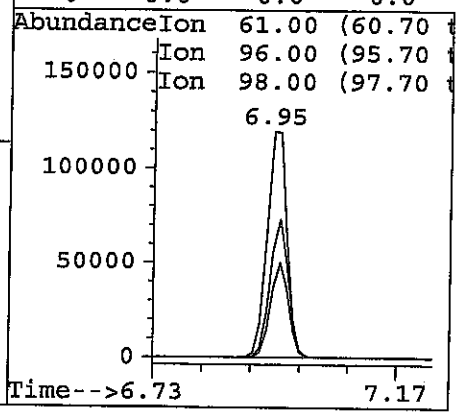


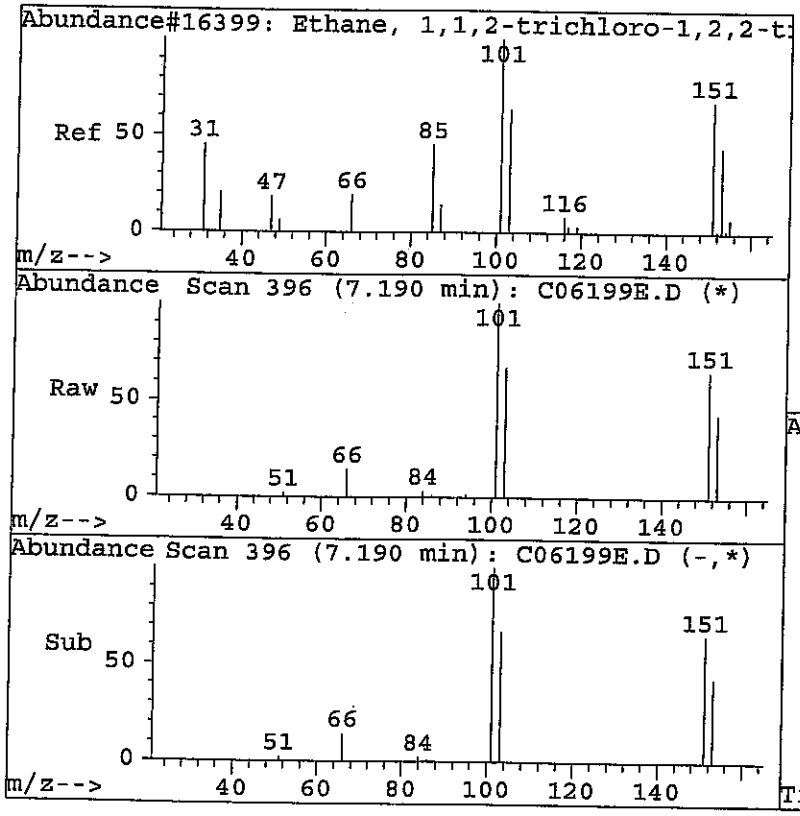


#9
1,1-Dichloroethene
Concen: 0.39 ppbV
RT: 6.95 min Scan# 376
Delta R.T. -0.00 min
Lab File: C06199E.D
Acq: 19 Jun 109 4:06 pm

Tgt Ion:61 Resp: 301017

Ion	Ratio	Lower	Upper
61	100		
96	47.7	39.1	58.7
98	30.8	25.0	37.6
0	0.0	0.0	0.0

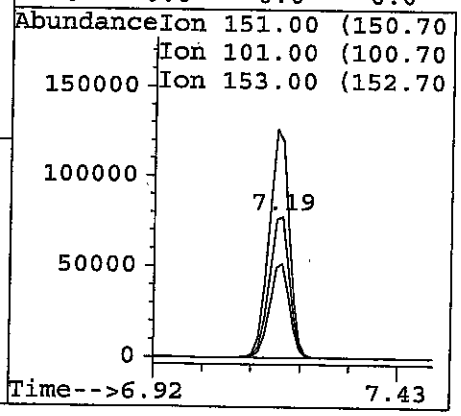


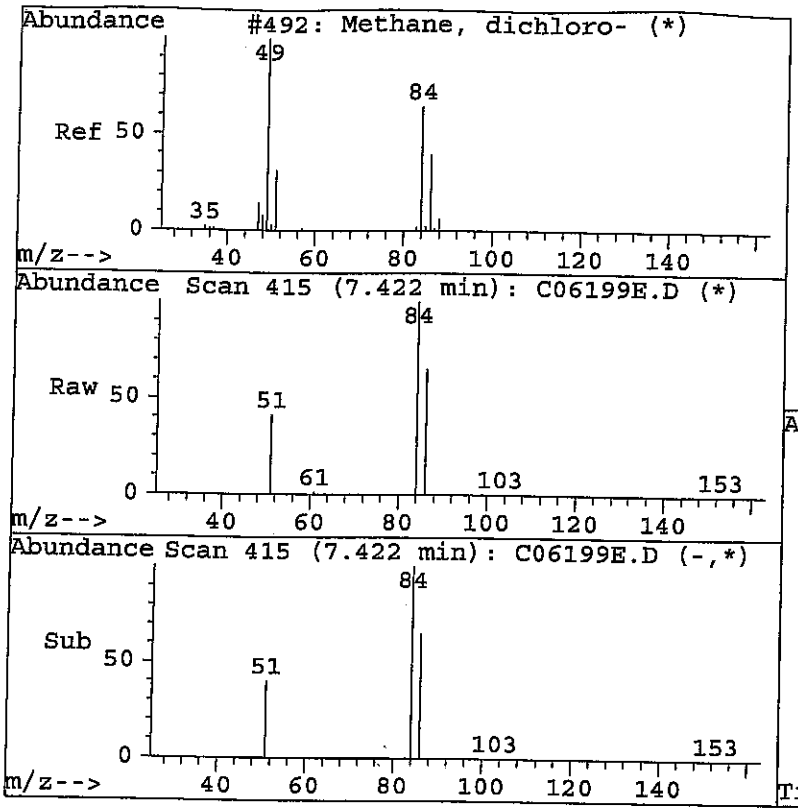


#10
Freon 113
Concen: 0.43 ppbV
RT: 7.19 min Scan# 396
Delta R.T. 0.06 min
Lab File: C06199E.D
Acq: 19 Jun 109 4:06 pm

Tgt Ion:151 Resp: 228496

Ion	Ratio	Lower	Upper
151	100		
101	154.8	135.2	202.8
153	66.8	52.2	78.2
0	0.0	0.0	0.0

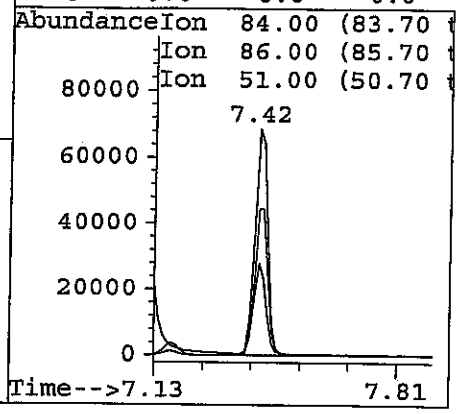


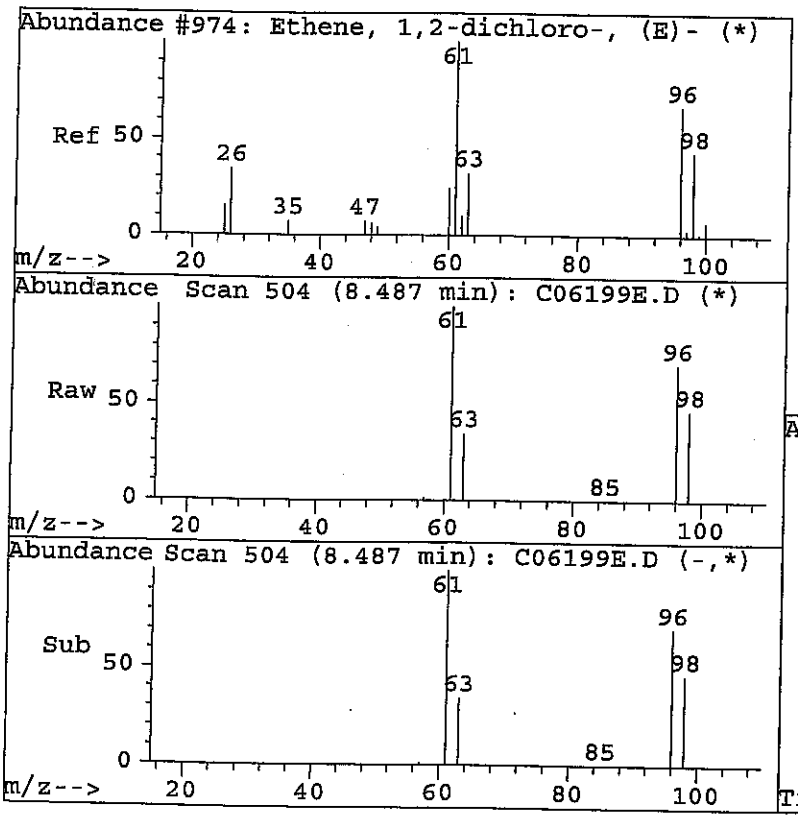


#11
Dichloromethane
Concen: 0.43 ppbV
RT: 7.42 min Scan# 415
Delta R.T. 0.00 min
Lab File: C06199E.D
Acq: 19 Jun 109 4:06 pm

Tgt Ion:84 Resp: 167890

Ion	Ratio	Lower	Upper
84	100		
86	64.9	51.4	77.0
51	40.1	33.4	50.2
0	0.0	0.0	0.0

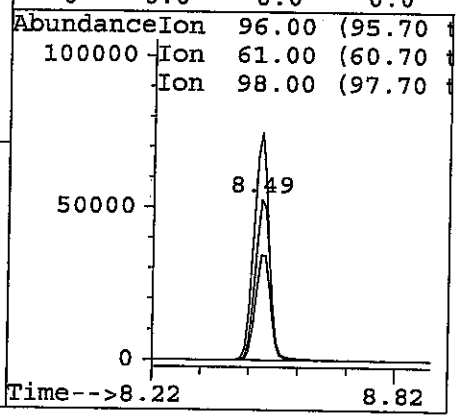


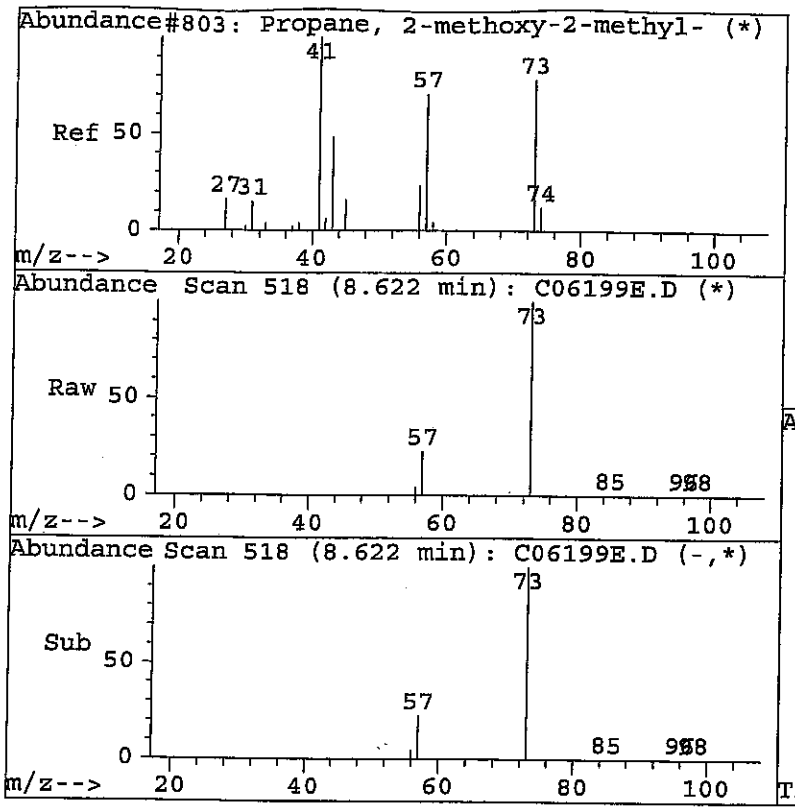


#12
trans-1,2-Dichloroethene
Concen: 0.26 ppbV
RT: 8.49 min Scan# 504
Delta R.T. 0.01 min
Lab File: C06199E.D
Acq: 19 Jun 109 4:06 pm

Tgt Ion:96 Resp: 132501

Ion	Ratio	Lower	Upper
96	100		
61	142.5	112.3	168.5
98	65.4	52.9	79.3
0	0.0	0.0	0.0

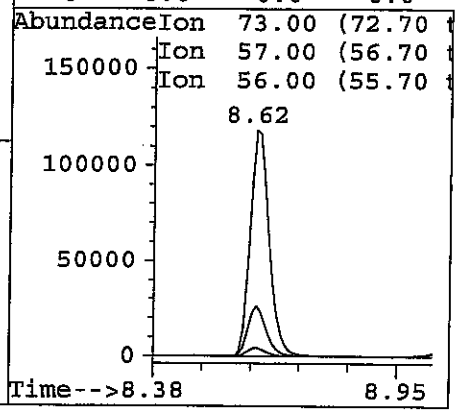


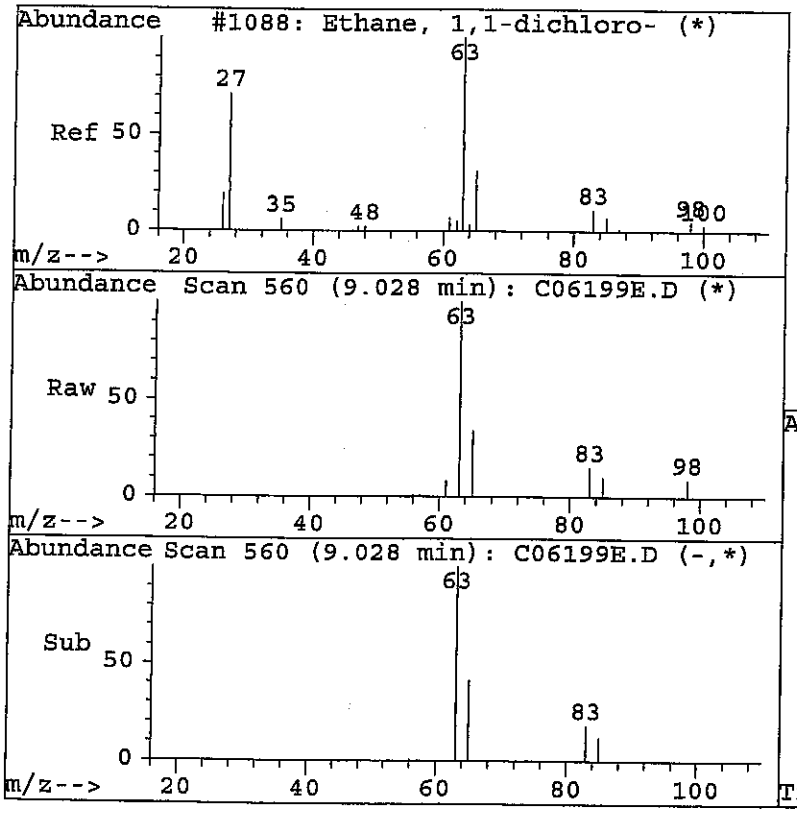


#13
Methyl tert butyl ether
Concen: 0.18 ppbV
RT: 8.62 min Scan# 518
Delta R.T. 0.02 min
Lab File: C06199E.D
Acq: 19 Jun 109 4:06 pm

Tgt Ion:73 Resp: 365659

Ion	Ratio	Lower	Upper
73	100		
57	22.0	16.6	24.8
56	3.6	1.4	2.0#
0	0.0	0.0	0.0

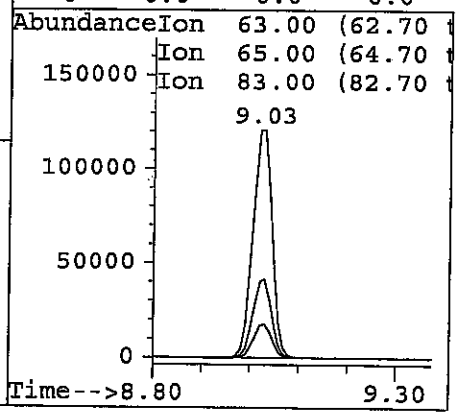


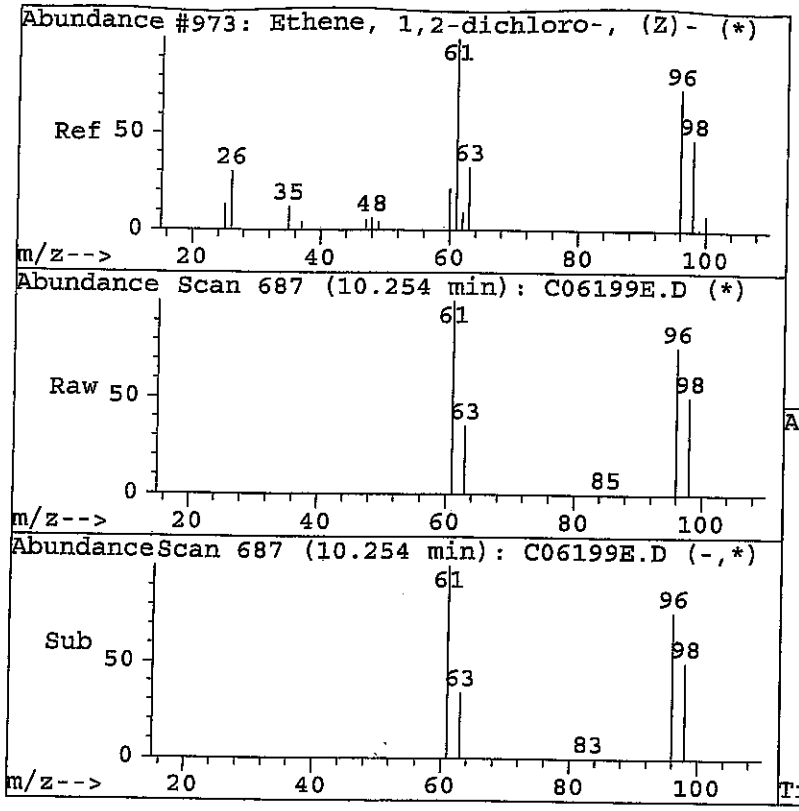


#14
1,1-Dichloroethane
Concen: 0.39 ppbV
RT: 9.03 min Scan# 560
Delta R.T. 0.03 min
Lab File: C06199E.D
Acq: 19 Jun 109 4:06 pm

Tgt Ion:63 Resp: 327340

Ion	Ratio	Lower	Upper
63	100		
65	34.2	26.2	39.2
83	14.8	10.7	16.1
0	0.0	0.0	0.0

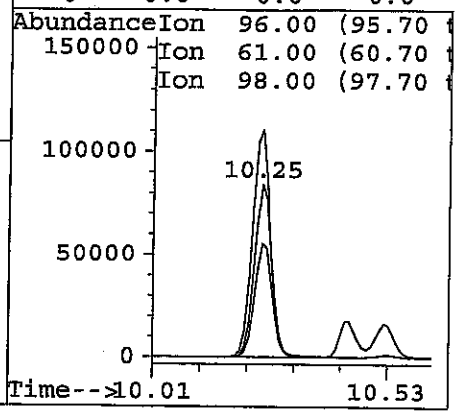


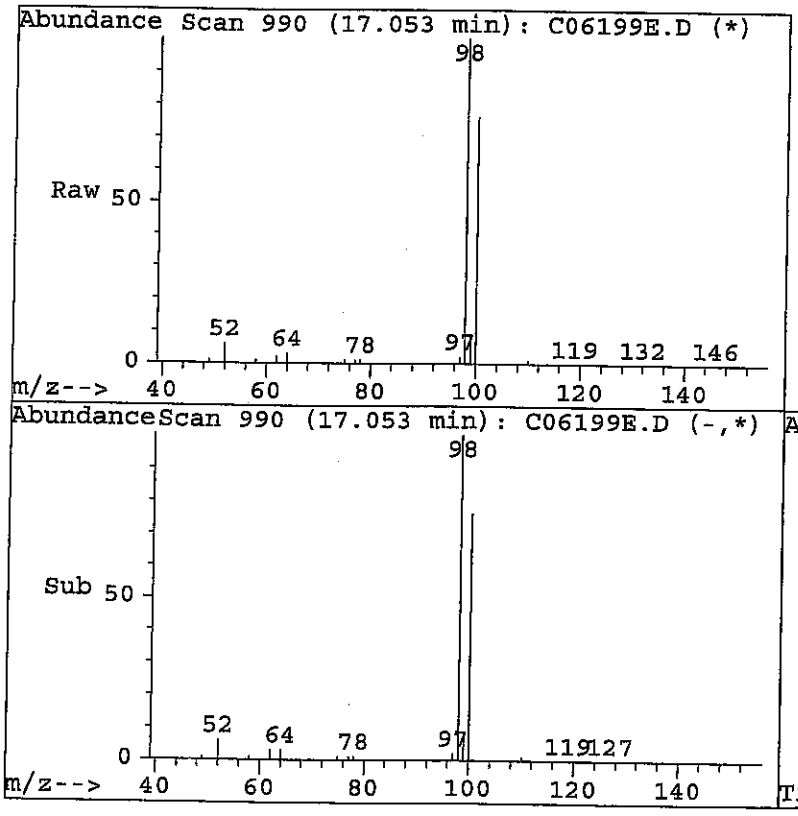


#15
cis-1,2-Dichloroethene
Concen: 0.47 ppbV
RT: 10.25 min Scan# 687
Delta R.T. 0.01 min
Lab File: C06199E.D
Acq: 19 Jun 109 4:06 pm

Tgt Ion:96 Resp: 226396

Ion	Ratio	Lower	Upper
96	100		
61	128.6	96.3	144.5
98	66.3	54.1	81.1
0	0.0	0.0	0.0

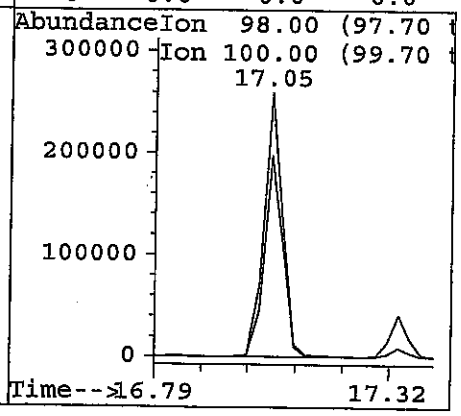


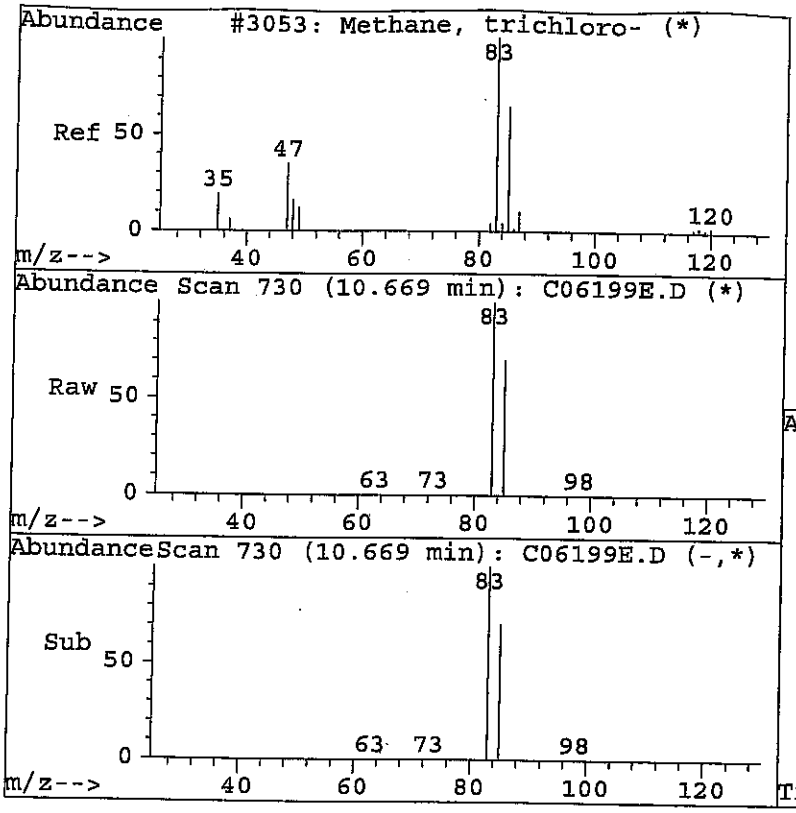


#16
Toluene-d8
Concen: 0.19 ppbV
RT: 17.05 min Scan# 990
Delta R.T. 0.00 min
Lab File: C06199E.D
Acq: 19 Jun 109 4:06 pm

Tgt Ion:98 Resp: 753686

Ion	Ratio	Lower	Upper
98	100		
100	77.1	61.0	91.4
0	0.0	0.0	0.0
0	0.0	0.0	0.0

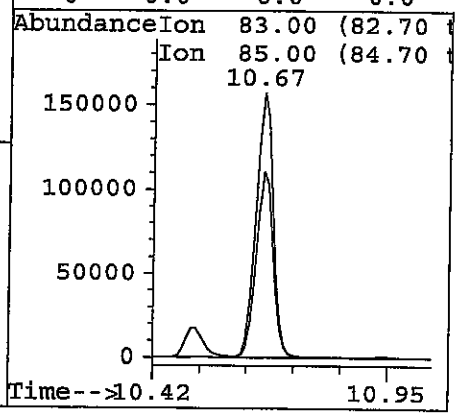


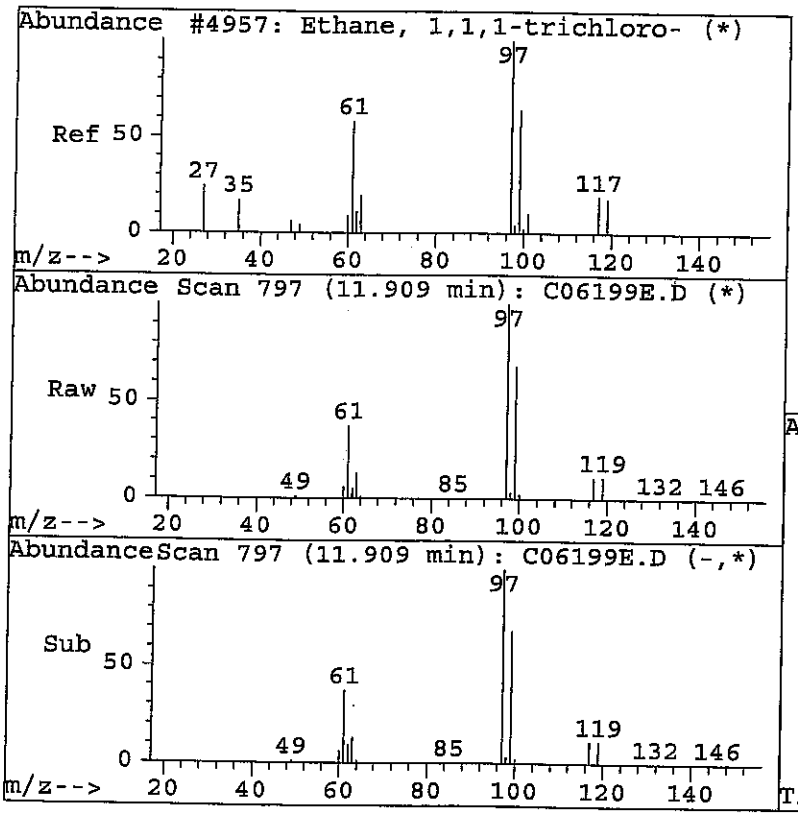


#17
Chloroform
Concen: 0.36 ppbV
RT: 10.67 min Scan# 730
Delta R.T. 0.01 min
Lab File: C06199E.D
Acq: 19 Jun 109 4:06 pm

Tgt Ion:83 Resp: 427372

Ion	Ratio	Lower	Upper
83	100		
85	70.1	54.5	81.7
0	0.0	0.0	0.0
0	0.0	0.0	0.0

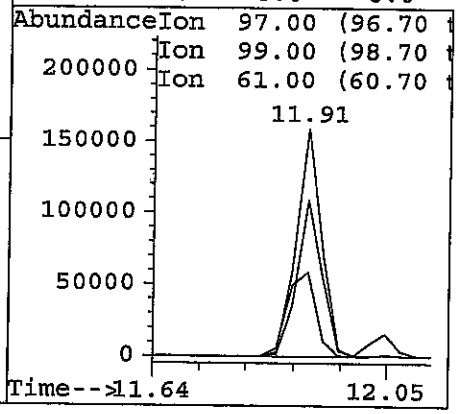


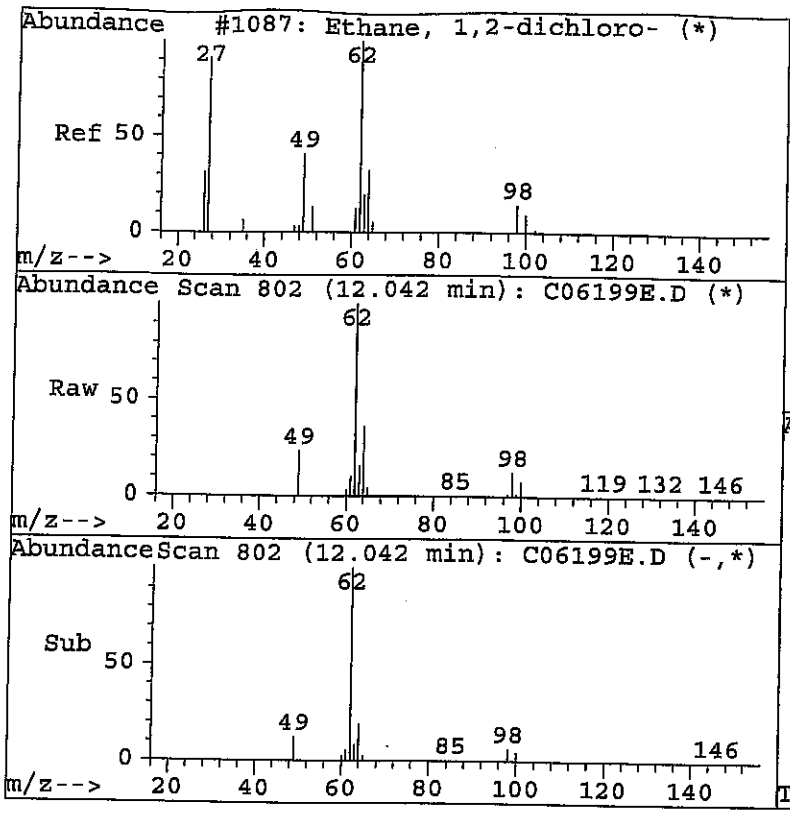


#18
1,1,1-Trichloroethane
Concen: 0.40 ppbV
RT: 11.91 min Scan# 797
Delta R.T. -0.00 min
Lab File: C06199E.D
Acq: 19 Jun 109 4:06 pm

Tgt Ion:97 Resp: 469425

Ion	Ratio	Lower	Upper
97	100		
99	68.1	53.5	80.3
61	34.0	29.5	44.3
0	0.0	0.0	0.0

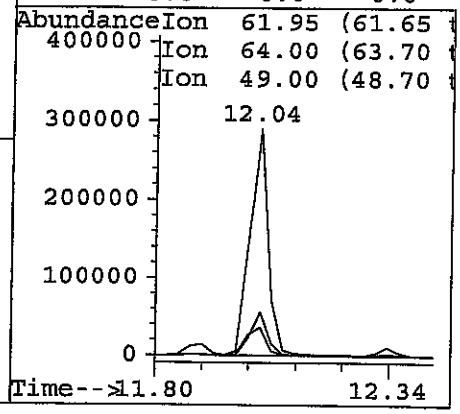


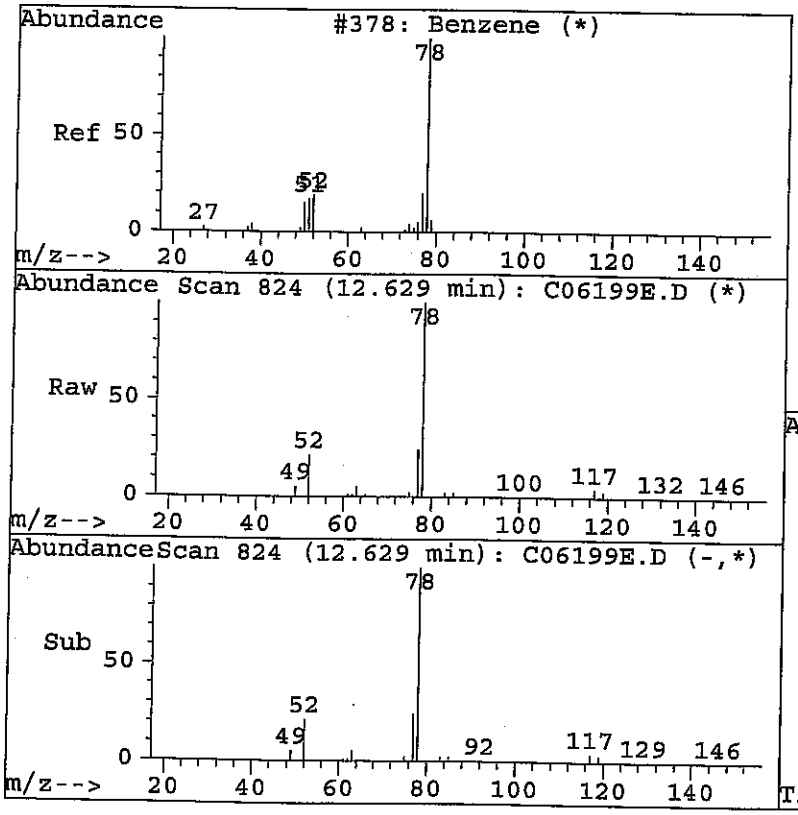


#19
1,2-Dichloroethane
Concen: 0.31 ppbV
RT: 12.04 min Scan# 802
Delta R.T. 0.02 min
Lab File: C06199E.D
Acq: 19 Jun 109 4:06 pm

Tgt Ion:61.95 Resp: 835756

Ion	Ratio	Lower	Upper
62	100		
64	19.3	15.0	22.4
49	12.4	9.8	14.6
0	0.0	0.0	0.0

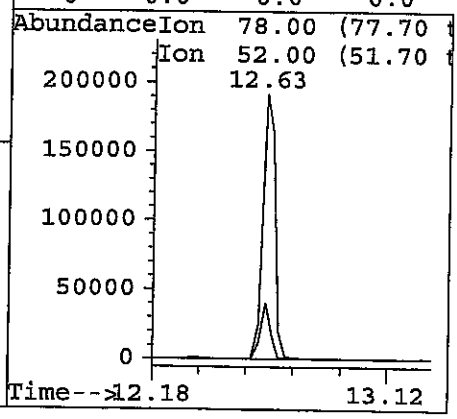


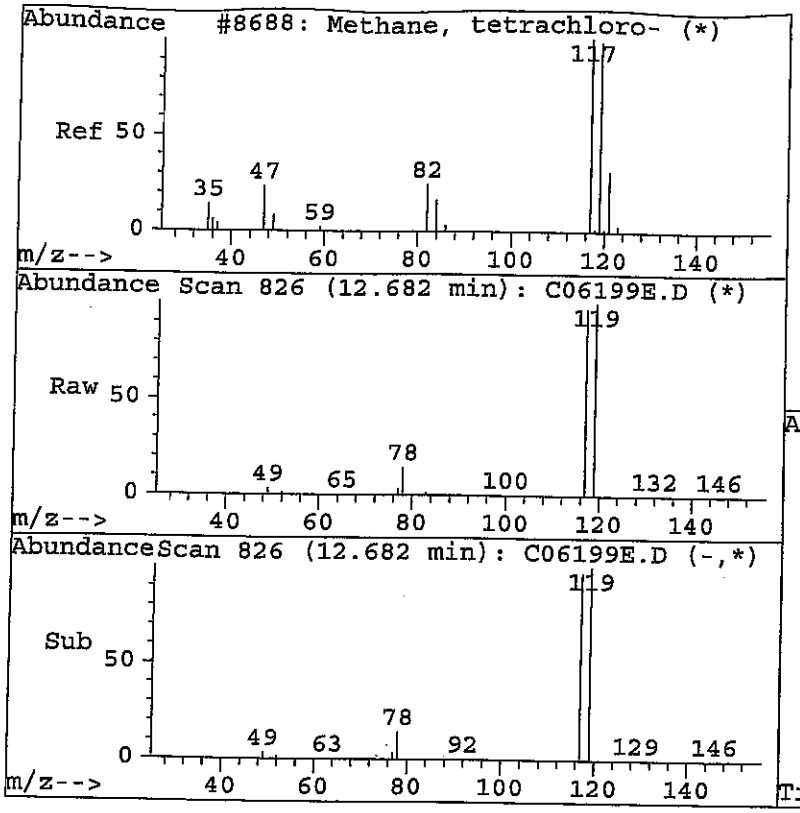


#20
Benzene
Concen: 0.37 ppbV
RT: 12.63 min Scan# 824
Delta R.T. -0.00 min
Lab File: C06199E.D
Acq: 19 Jun 109 4:06 pm

Tgt Ion:78 Resp: 641363

Ion	Ratio	Lower	Upper
78	100		
52	20.7	17.7	26.5
0	0.0	0.0	0.0
0	0.0	0.0	0.0

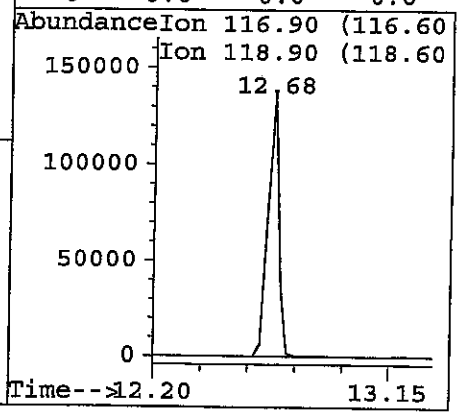


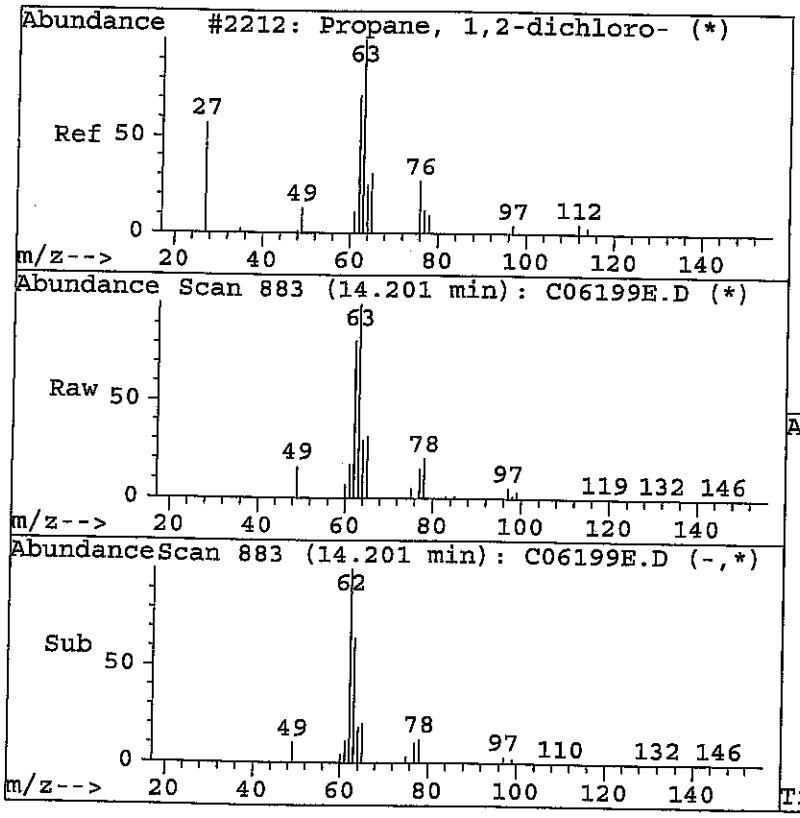


#21
Carbon tetrachloride
Concen: 0.42 ppbV
RT: 12.68 min Scan# 826
Delta R.T. 0.02 min
Lab File: C06199E.D
Acq: 19 Jun 109 4:06 pm

Tgt Ion:116.9 Resp: 410007

Ion	Ratio	Lower	Upper
117	100		
119	103.4	81.4	122.0
0	0.0	0.0	0.0
0	0.0	0.0	0.0

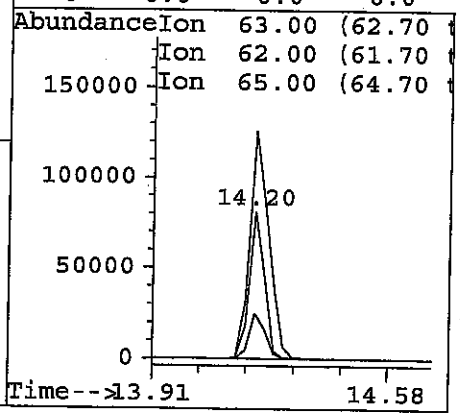


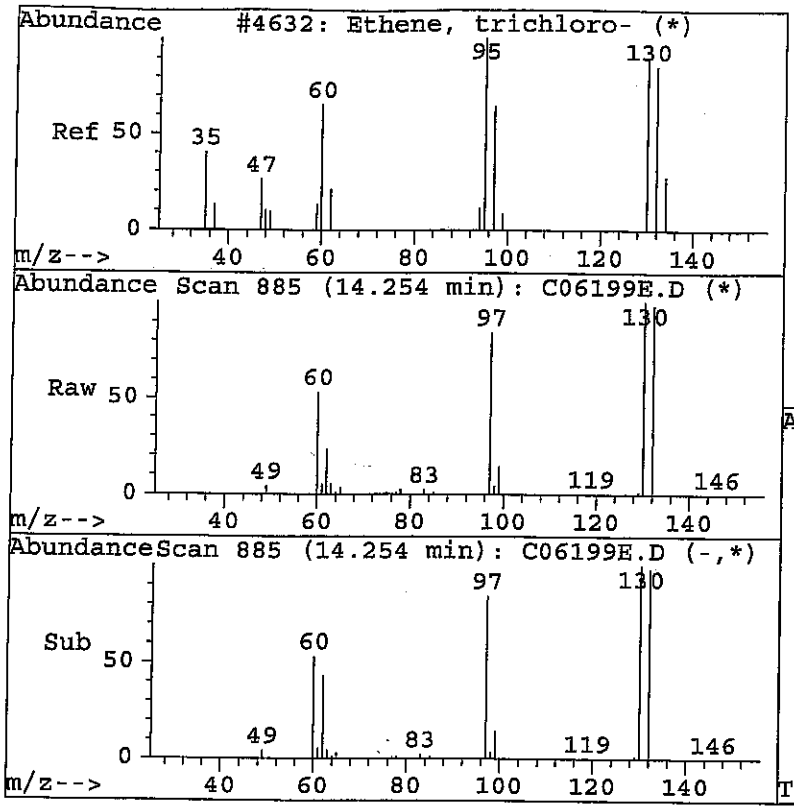


#22
1,2-Dichloropropane
Concen: 0.40 ppbV
RT: 14.20 min Scan# 883
Delta R.T. 0.00 min
Lab File: C06199E.D
Acq: 19 Jun 109 4:06 pm

Tgt Ion:63 Resp: 236197

Ion	Ratio	Lower	Upper
63	100		
62	155.7	125.7	188.5
65	30.6	24.8	37.2
0	0.0	0.0	0.0

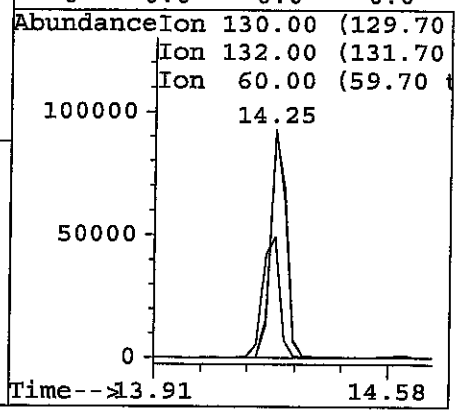


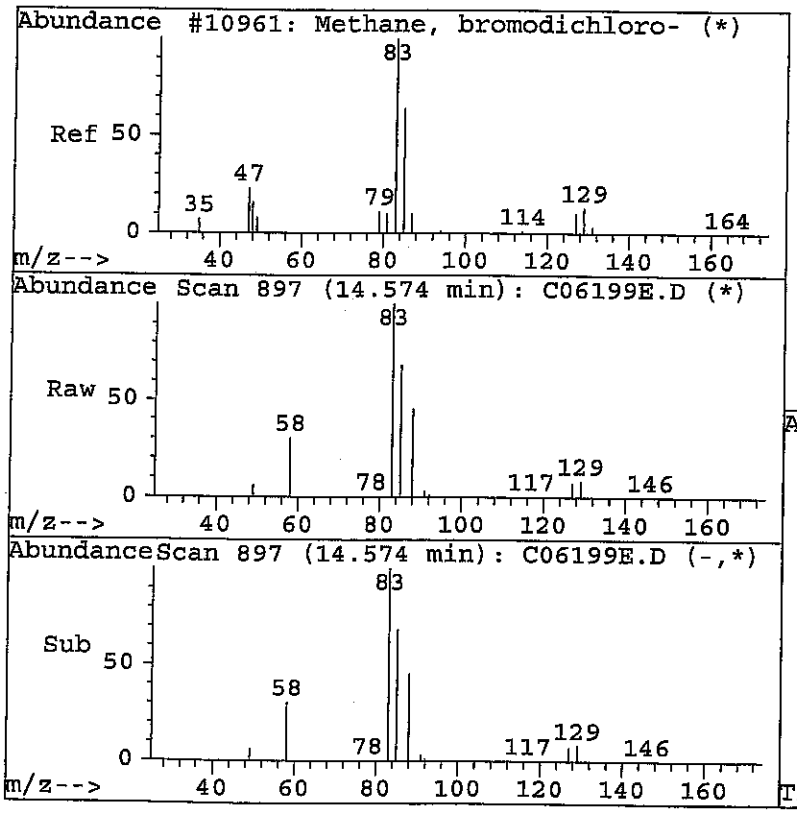


#23
Trichloroethene
Concen: 0.44 ppbV
RT: 14.25 min Scan# 885
Delta R.T. -0.01 min
Lab File: C06199E.D
Acq: 19 Jun 109 4:06 pm

Tgt Ion:130 Resp: 286372

Ion	Ratio	Lower	Upper
130	100		
132	97.6	78.5	117.7
60	52.8	41.9	62.9
0	0.0	0.0	0.0

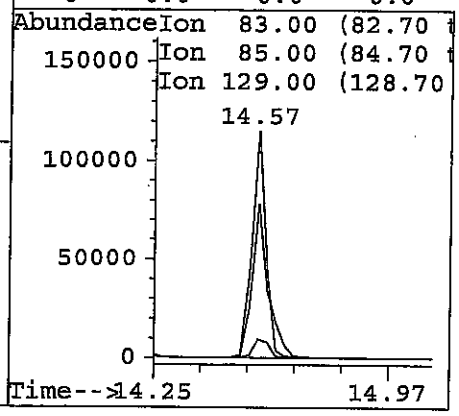


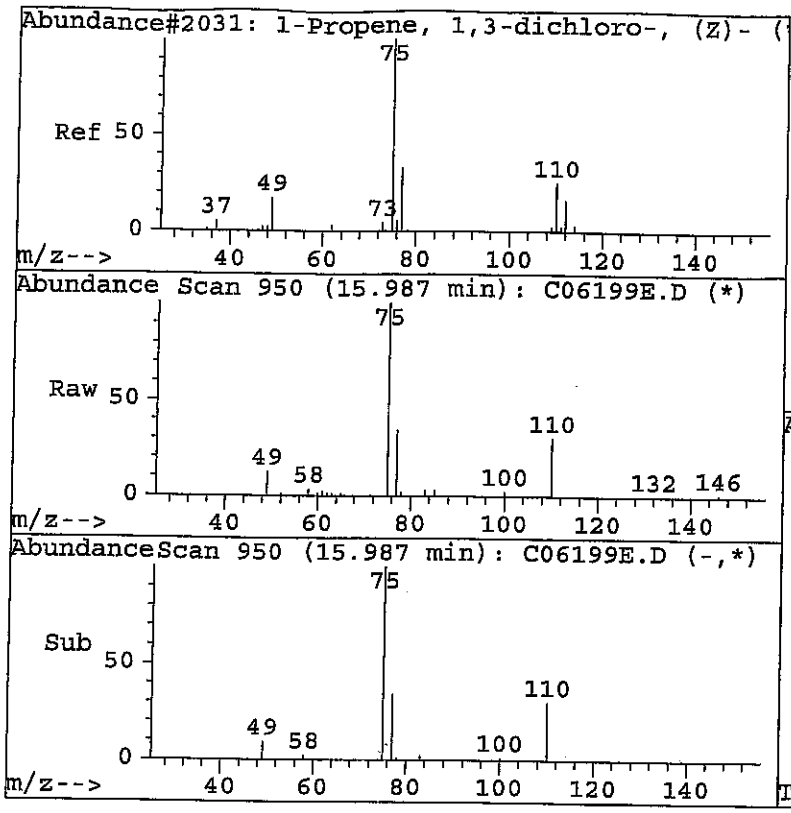


#24
Bromodichloromethane
Concen: 0.28 ppbV
RT: 14.57 min Scan# 897
Delta R.T. 0.00 min
Lab File: C06199E.D
Acq: 19 Jun 109 4:06 pm

Tgt Ion:83 Resp: 329960

Ion	Ratio	Lower	Upper
83	100		
85	67.9	54.8	82.2
129	8.2	6.3	9.5
0	0.0	0.0	0.0

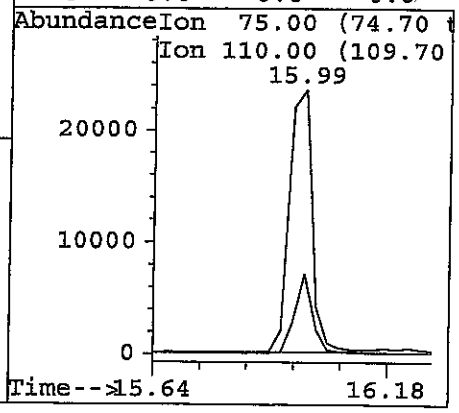


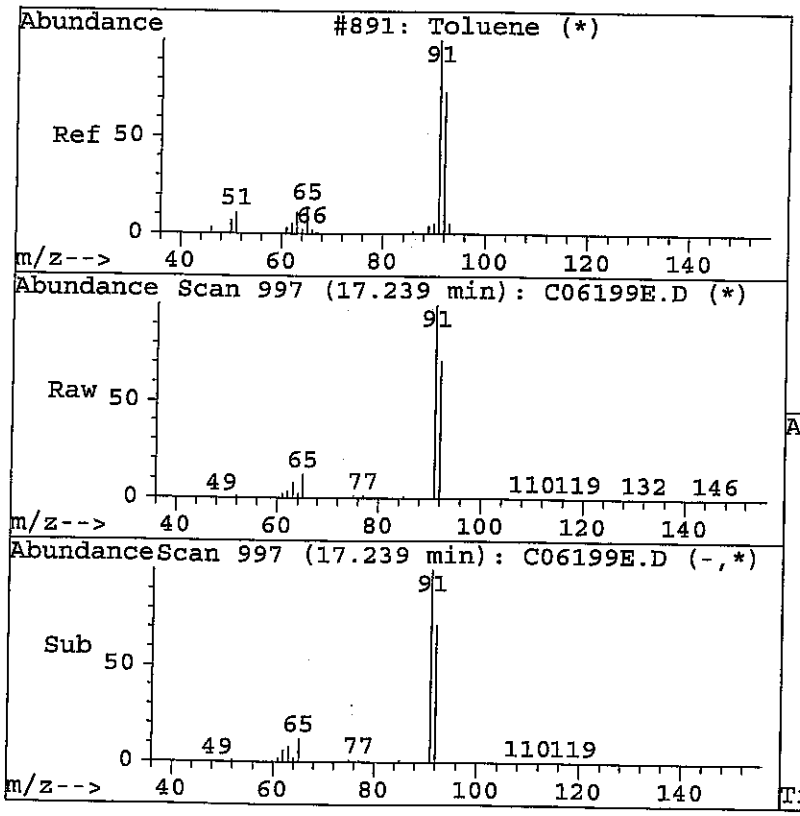


#25
cis-1,3-Dichloropropene
Concen: 0.12 ppbV
RT: 15.99 min Scan# 950
Delta R.T. 0.03 min
Lab File: C06199E.D
Acq: 19 Jun 109 4:06 pm

Tgt Ion:75 Resp: 84644

Ion	Ratio	Lower	Upper
75	100		
110	30.1	9.8	14.6#
0	0.0	0.0	0.0
0	0.0	0.0	0.0

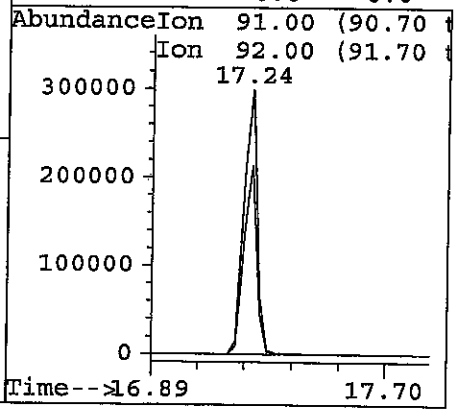


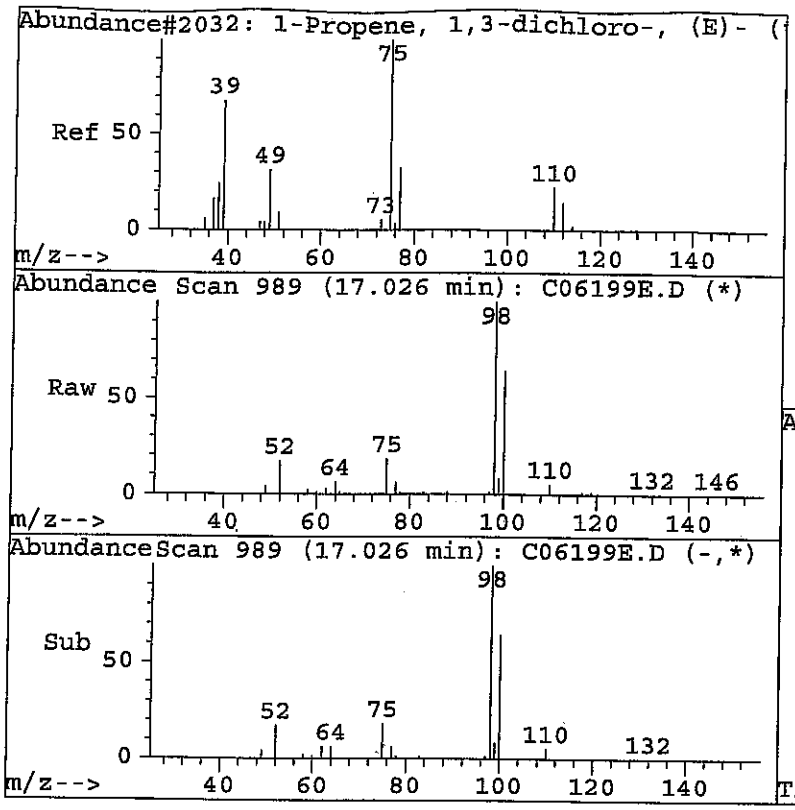


#26
Toluene
Concen: 0.36 ppbV
RT: 17.24 min Scan# 997
Delta R.T. 0.03 min
Lab File: C06199E.D
Acq: 19 Jun 109 4:06 pm

Tgt Ion:91 Resp: 935329

Ion	Ratio	Lower	Upper
91	100		
92	71.4	56.9	85.3
0	0.0	0.0	0.0
0	0.0	0.0	0.0

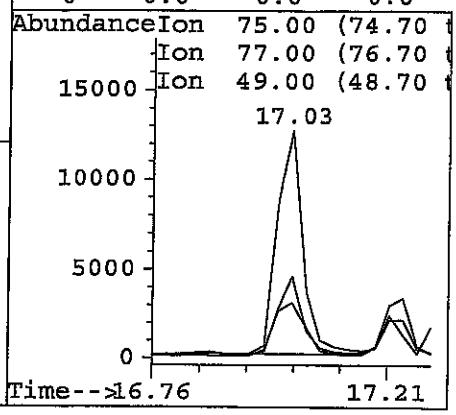


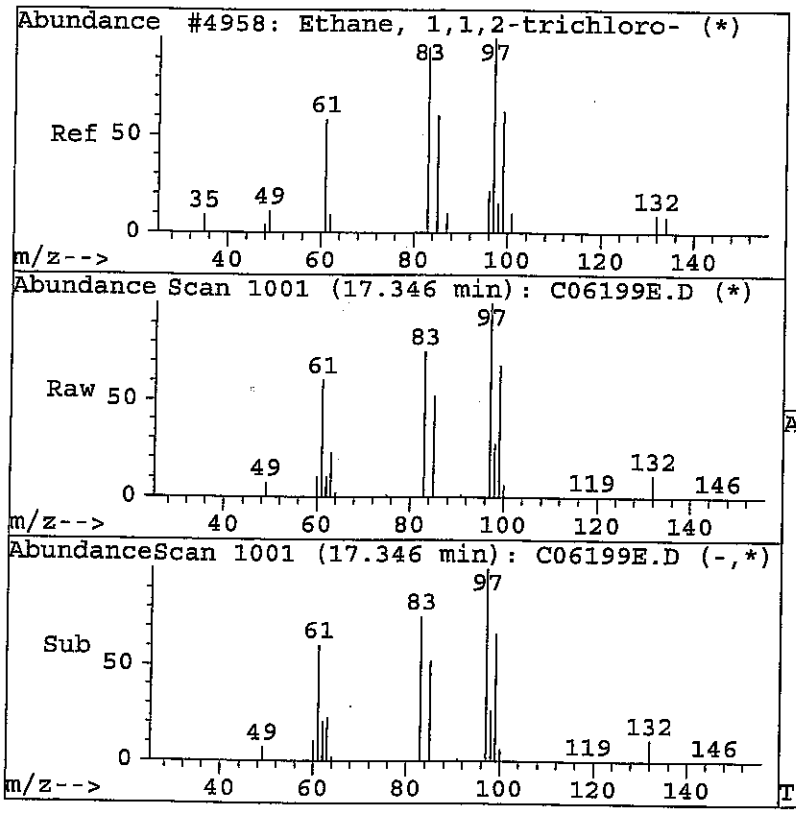


#27
trans-1,3-Dichloropropene
Concen: 0.04 ppbV
RT: 17.03 min Scan# 989
Delta R.T. 0.03 min
Lab File: C06199E.D
Acq: 19 Jun 109 4:06 pm

Tgt Ion:75 Resp: 42733

Ion	Ratio	Lower	Upper
75	100		
77	34.8	26.9	40.3
49	24.0	17.8	26.8
0	0.0	0.0	0.0

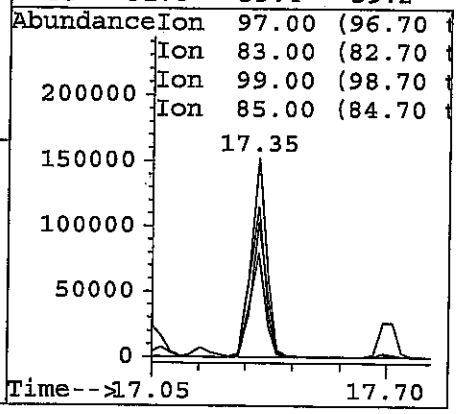


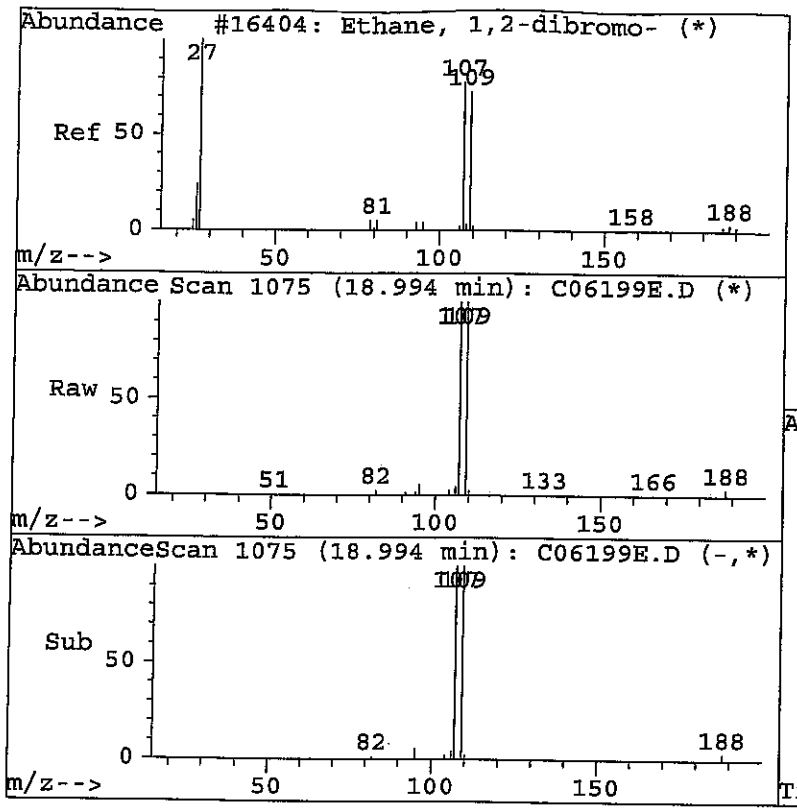


#28
1,1,2-Trichloroethane
Concen: 0.48 ppbV
RT: 17.35 min Scan# 1001
Delta R.T. -0.00 min
Lab File: C06199E.D
Acq: 19 Jun 109 4:06 pm

Tgt Ion:97 Resp: 441832

Ion	Ratio	Lower	Upper
97	100		
83	75.4	58.1	87.1
99	67.5	54.0	81.0
85	51.6	39.4	59.2

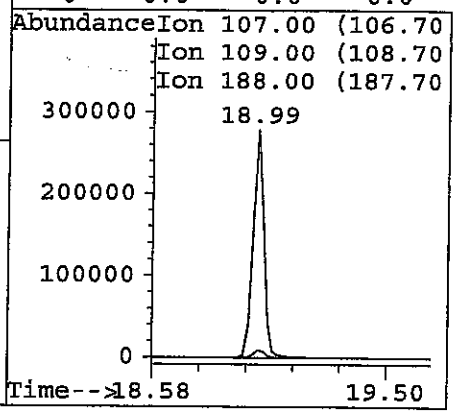


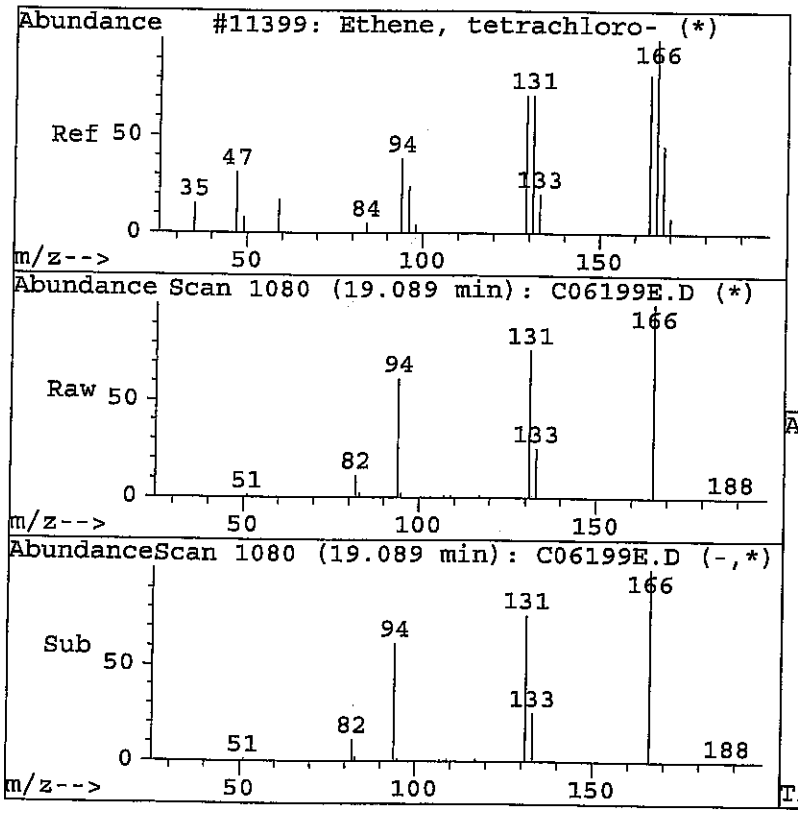


#29
1,2-Dibromoethane
Concen: 0.38 ppbV
RT: 18.99 min Scan# 1075
Delta R.T. 0.00 min
Lab File: C06199E.D
Acq: 19 Jun 109 4:06 pm

Tgt Ion:107 Resp: 834780

Ion	Ratio	Lower	Upper
107	100		
109	99.6	79.7	119.5
188	3.1	2.3	3.5
0	0.0	0.0	0.0

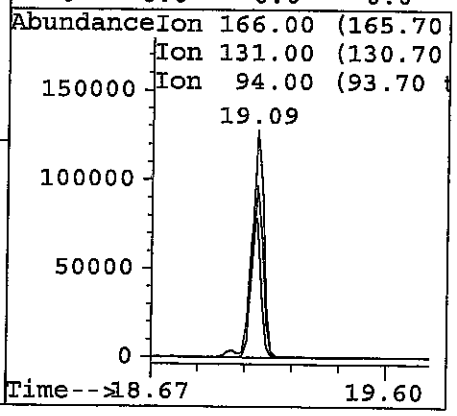


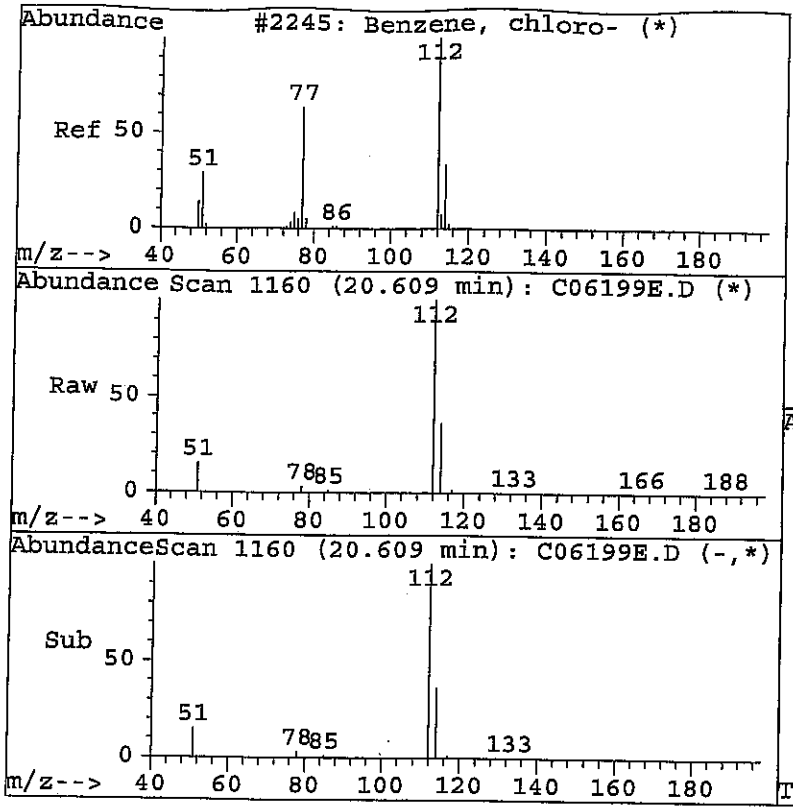


#30
Tetrachloroethene
Concen: 0.47 ppbV
RT: 19.09 min Scan# 1080
Delta R.T. -0.00 min
Lab File: C06199E.D
Acq: 19 Jun 109 4:06 pm

Tgt Ion:166 Resp: 374447

Ion	Ratio	Lower	Upper
166	100		
131	75.6	62.5	93.7
94	60.9	49.4	74.2
0	0.0	0.0	0.0

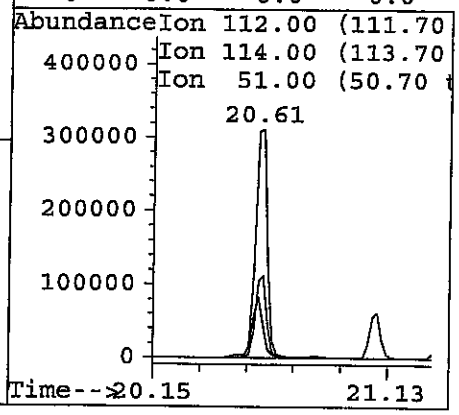


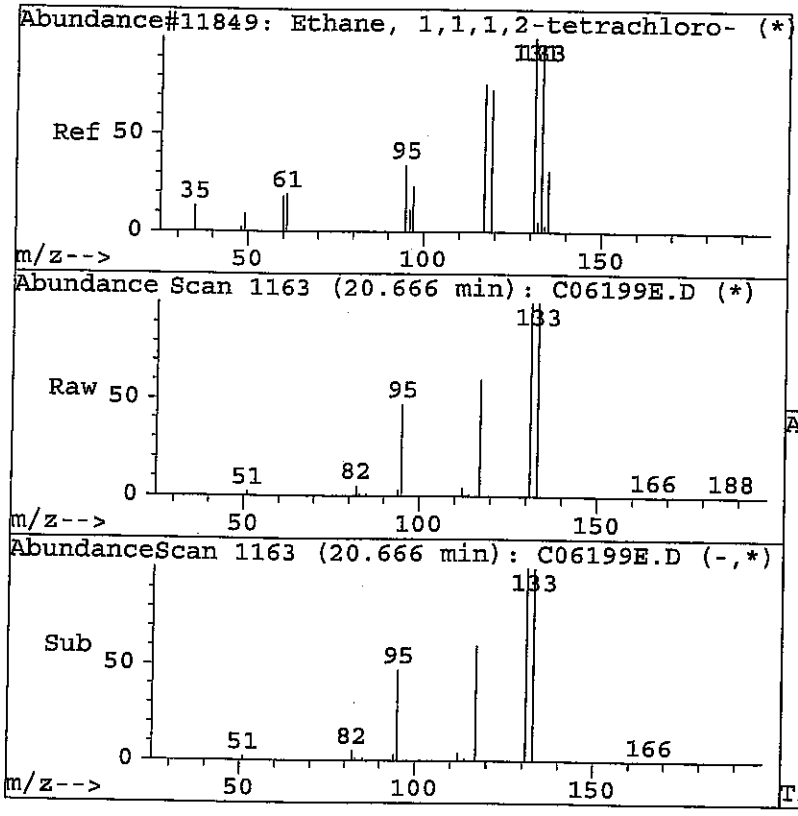


#31
Chlorobenzene
Concen: 0.41 ppbV
RT: 20.61 min Scan# 1160
Delta R.T. 0.02 min
Lab File: C06199E.D
Acq: 19 Jun 109 4:06 pm

Tgt Ion:112 Resp: 1040689

Ion	Ratio	Lower	Upper
112	100		
114	35.9	26.7	40.1
51	14.6	21.0	31.6#
0	0.0	0.0	0.0

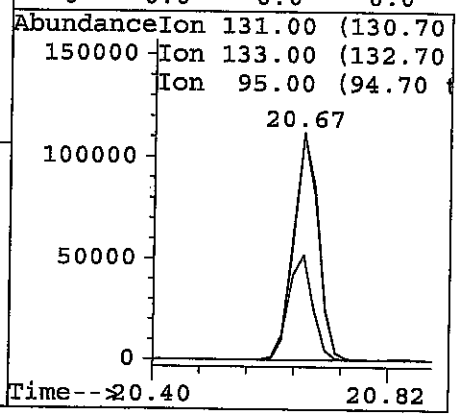


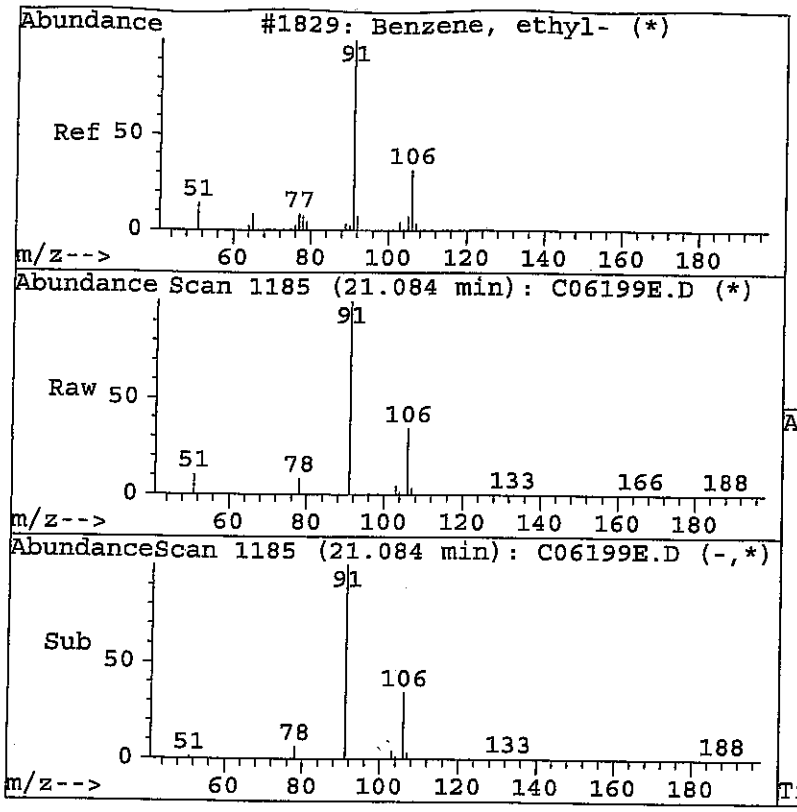


#32
1,1,1,2-Tetrachloroethane
Concen: 0.34 ppbV
RT: 20.67 min Scan# 1163
Delta R.T. -0.00 min
Lab File: C06199E.D
Acq: 19 Jun 109 4:06 pm

Tgt Ion:131 Resp: 334695

Ion	Ratio	Lower	Upper
131	100		
133	100.5	79.9	119.9
95	46.8	35.3	52.9
0	0.0	0.0	0.0

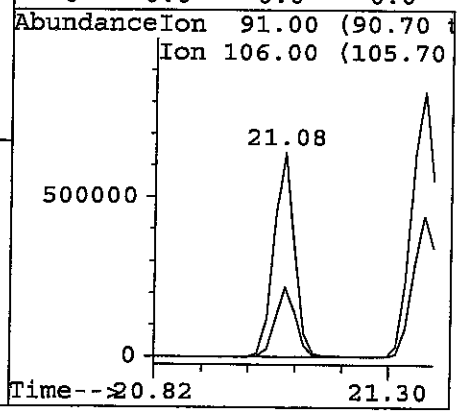


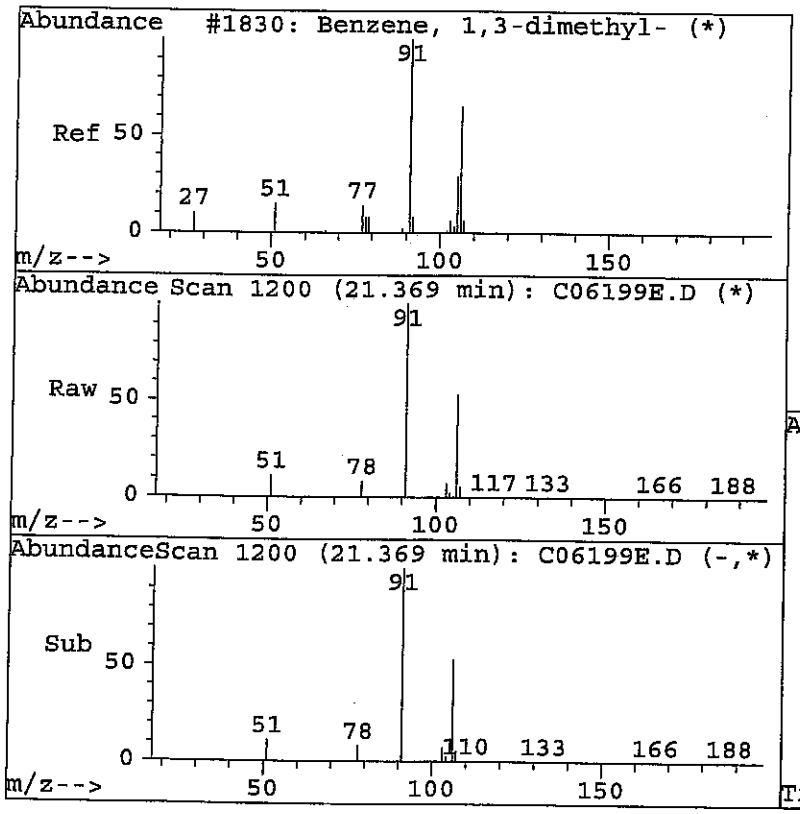


#33
Ethylbenzene
Concen: 0.37 ppbV
RT: 21.08 min Scan# 1185
Delta R.T. 0.00 min
Lab File: C06199E.D
Acq: 19 Jun 109 4:06 pm

Tgt Ion:91 Resp: 1882967

Ion	Ratio	Lower	Upper
91	100		
106	34.1	27.0	40.6
0	0.0	0.0	0.0
0	0.0	0.0	0.0

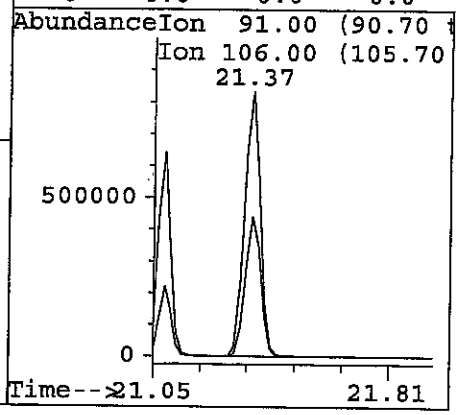


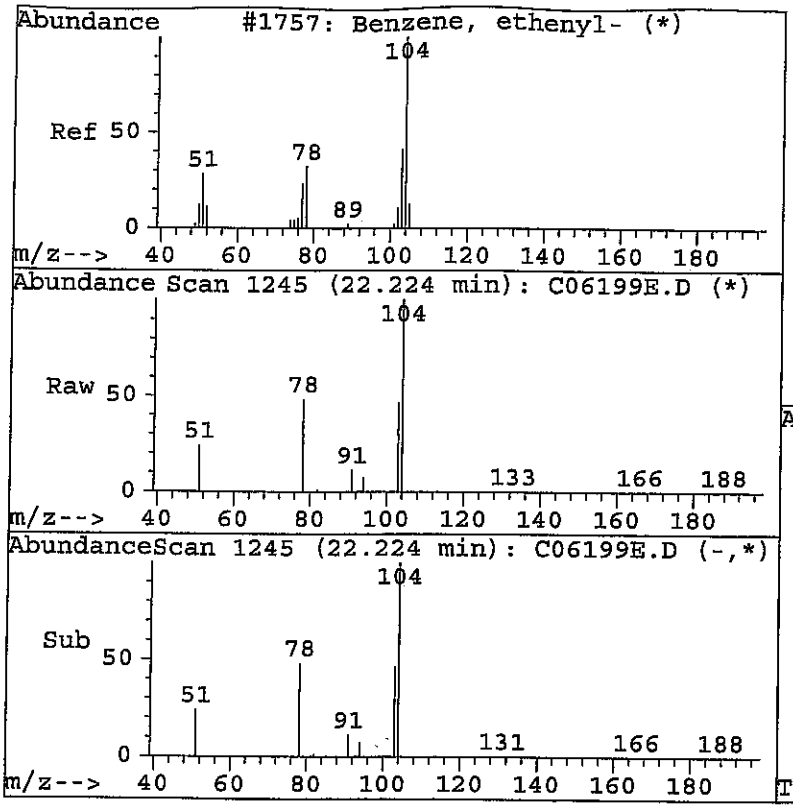


#34
m & p-Xylene
Concen: 0.77 ppbV
RT: 21.37 min Scan# 1200
Delta R.T. -0.00 min
Lab File: C06199E.D
Acq: 19 Jun 109 4:06 pm

Tgt Ion:91 Resp: 2872586

Ion	Ratio	Lower	Upper
91	100		
106	52.9	42.9	64.3
0	0.0	0.0	0.0
0	0.0	0.0	0.0

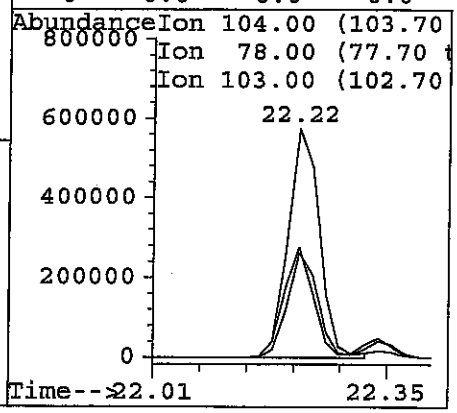


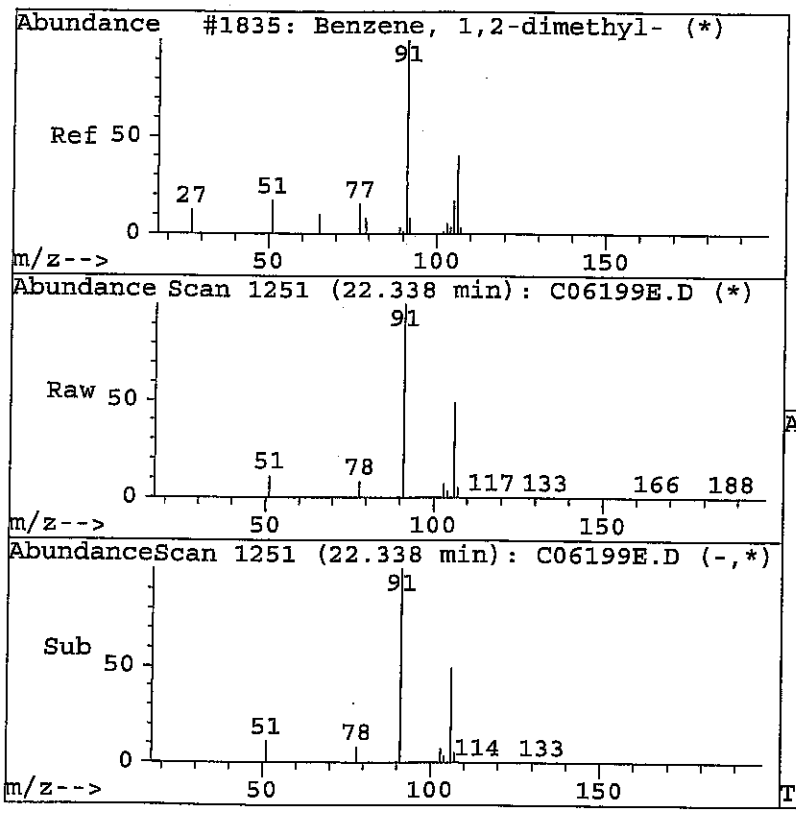


#35
Styrene
Concen: 0.40 ppbV
RT: 22.22 min Scan# 1245
Delta R.T. 0.00 min
Lab File: C06199E.D
Acq: 19 Jun 109 4:06 pm

Tgt Ion:104 Resp: 1772326

Ion	Ratio	Lower	Upper
104	100		
78	45.7	34.8	52.2
103	44.2	33.5	50.3
0	0.0	0.0	0.0

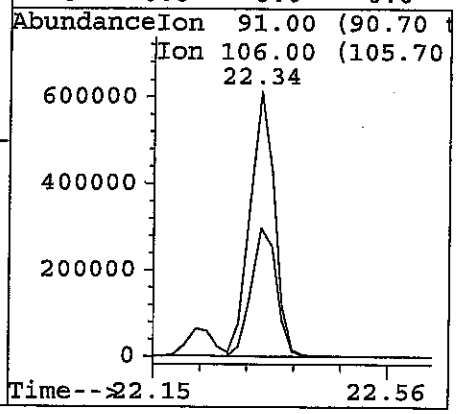


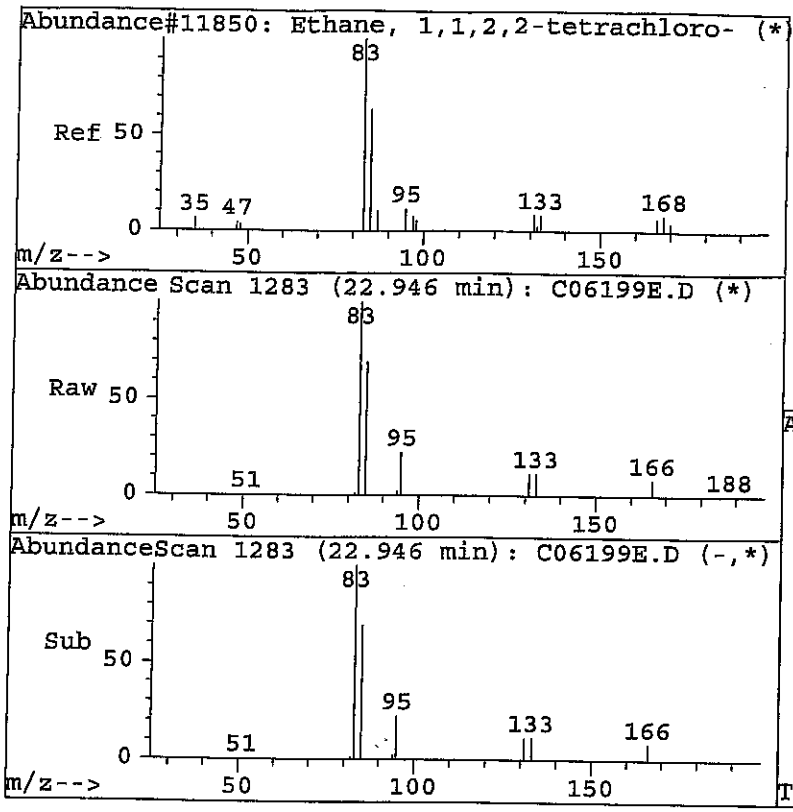


#36
o-Xylene
Concen: 0.35 ppbV
RT: 22.34 min Scan# 1251
Delta R.T. -0.00 min
Lab File: C06199E.D
Acq: 19 Jun 109 4:06 pm

Tgt Ion:91 Resp: 1831287

Ion	Ratio	Lower	Upper
91	100		
106	48.8	39.7	59.5
0	0.0	0.0	0.0
0	0.0	0.0	0.0

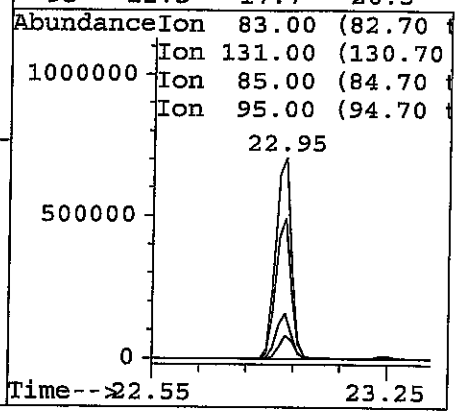


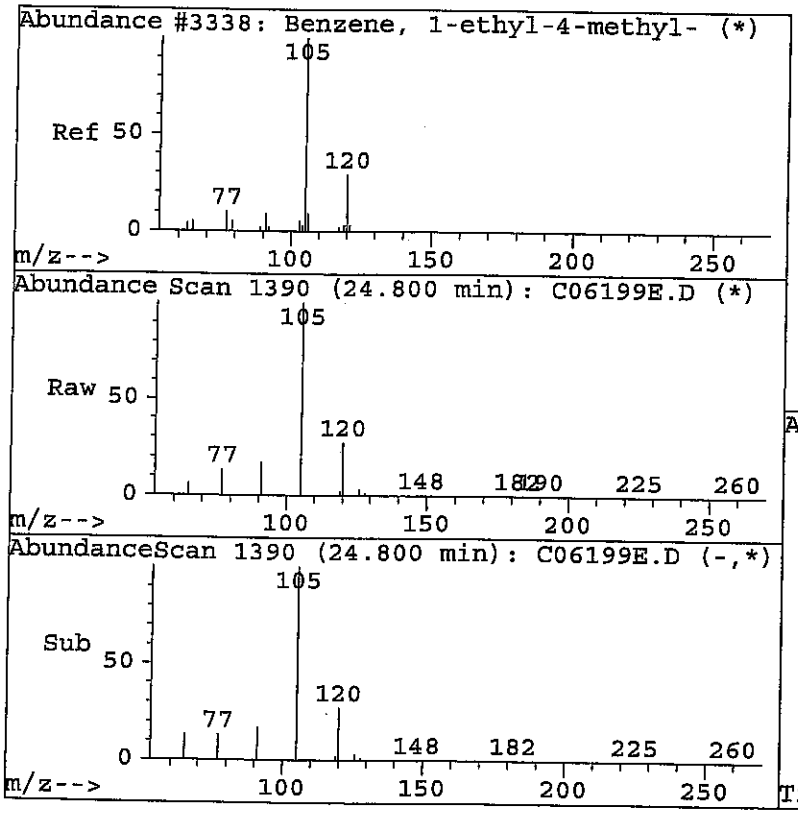


#37
1,1,2,2-Tetrachloroethane
Concen: 0.41 ppbV
RT: 22.95 min Scan# 1283
Delta R.T. 0.02 min
Lab File: C06199E.D
Acq: 19 Jun 109 4:06 pm

Tgt Ion:83 Resp: 2300254

Ion	Ratio	Lower	Upper
83	100		
131	11.3	8.9	13.3
85	69.4	57.1	85.7
95	22.5	17.7	26.5

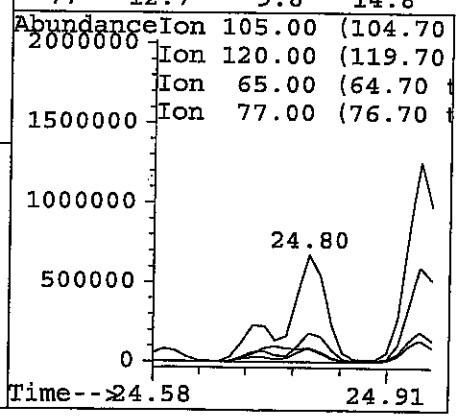


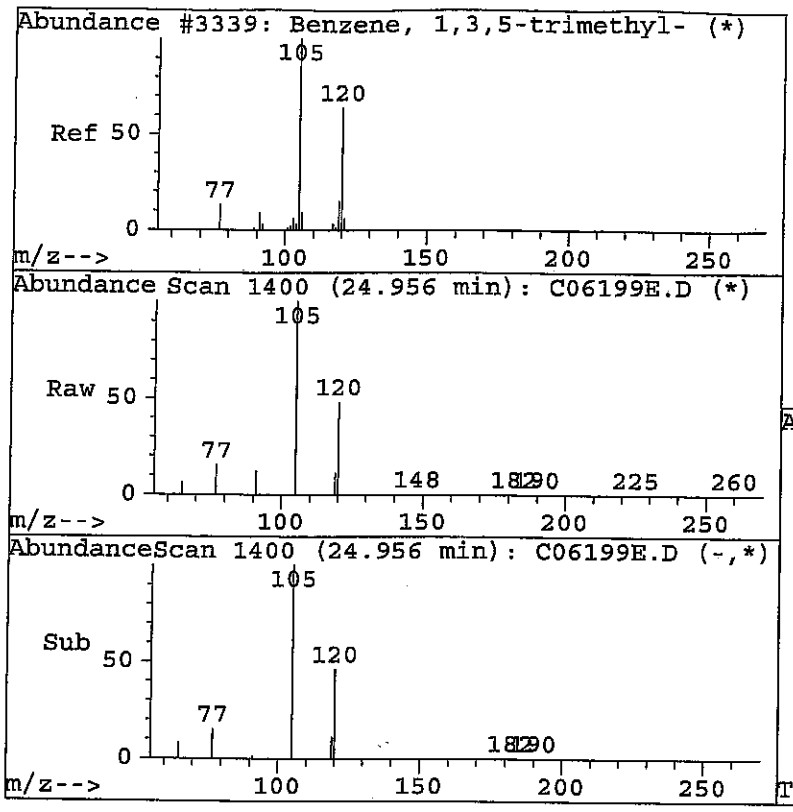


#38
4-Ethyltoluene
Concen: 0.22 ppbV m
RT: 24.80 min Scan# 1390
Delta R.T. 0.00 min
Lab File: C06199E.D
Acq: 19 Jun 109 4:06 pm

Tgt Ion:105 Resp: 2705605

Ion	Ratio	Lower	Upper
105	100		
120	26.7	21.4	32.2
65	6.4	4.9	7.3
77	12.7	9.8	14.8

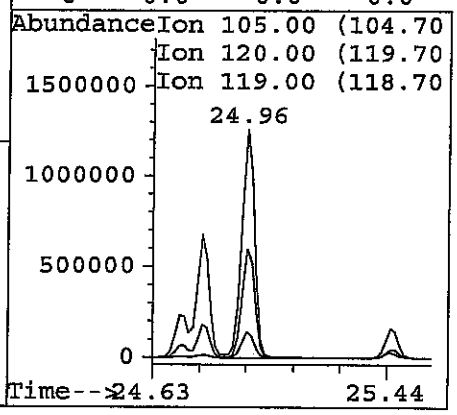


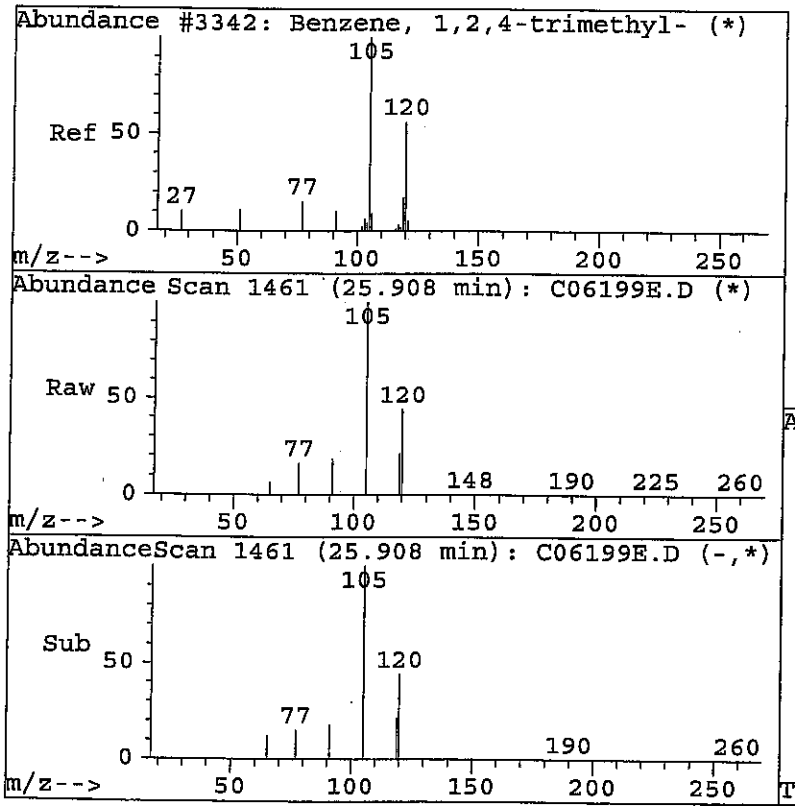


#39
1,3,5-Trimethylbenzene
Concen: 0.37 ppbV
RT: 24.96 min Scan# 1400
Delta R.T. -0.00 min
Lab File: C06199E.D
Acq: 19 Jun 109 4:06 pm

Tgt Ion:105 Resp: 3708236

Ion	Ratio	Lower	Upper
105	100		
120	47.8	39.4	59.2
119	11.3	8.8	13.2
0	0.0	0.0	0.0

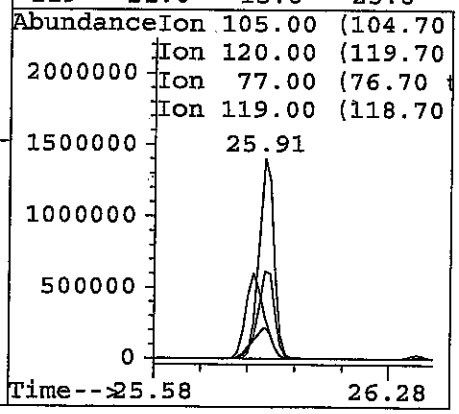


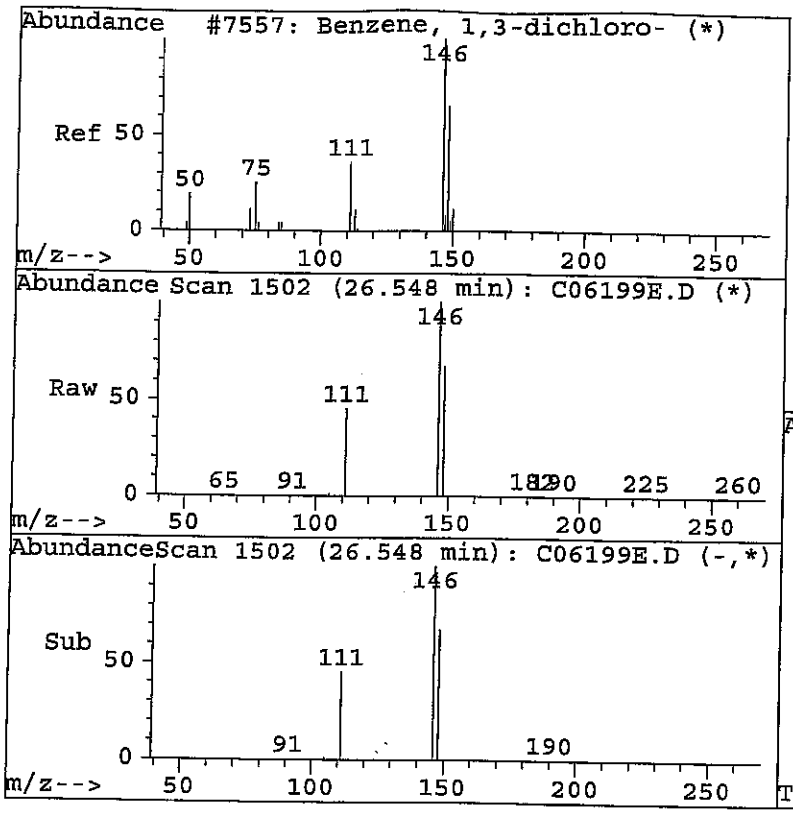


#40
1,2,4-Trimethylbenzene
Concen: 0.37 ppbV
RT: 25.91 min Scan# 1461
Delta R.T. -0.00 min
Lab File: C06199E.D
Acq: 19 Jun 109 4:06 pm

Tgt Ion:105 Resp: 4300475

Ion	Ratio	Lower	Upper
105	100		
120	43.9	36.9	55.3
77	15.8	12.4	18.6
119	21.0	15.8	23.8

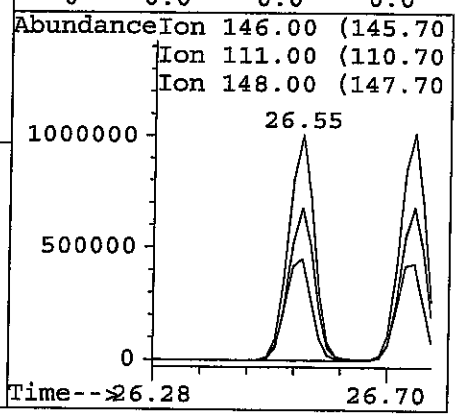


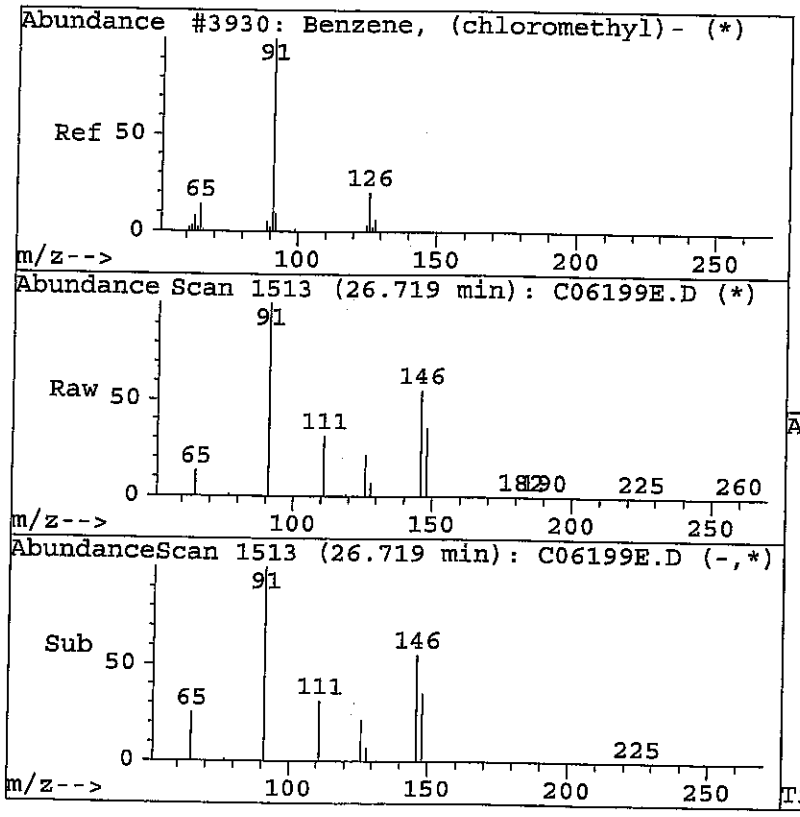


#41
1,3-Dichlorobenzene
Concen: 0.42 ppbV
RT: 26.55 min Scan# 1502
Delta R.T. -0.00 min
Lab File: C06199E.D
Acq: 19 Jun 109 4:06 pm

Tgt Ion:146 Resp: 3179015

Ion	Ratio	Lower	Upper
146	100		
111	44.8	34.8	52.2
148	67.2	55.9	83.9
0	0.0	0.0	0.0

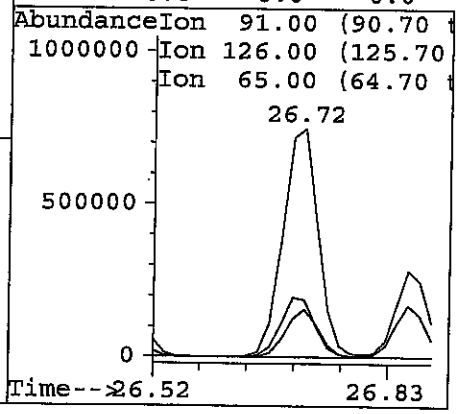


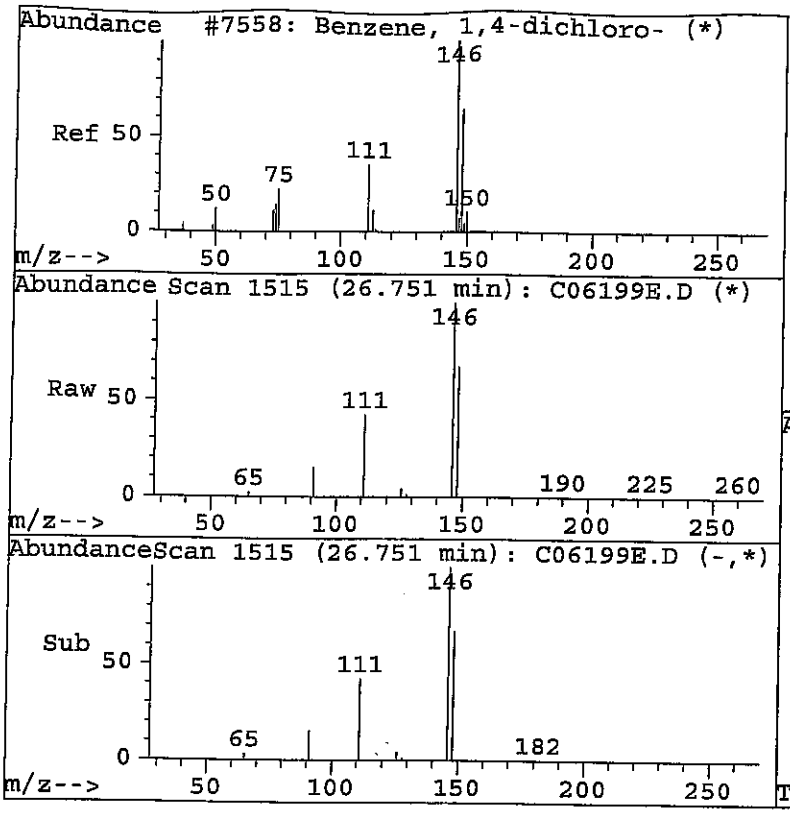


#42
Benzyl chloride
Concen: 0.27 ppbV
RT: 26.72 min Scan# 1513
Delta R.T. 0.02 min
Lab File: C06199E.D
Acq: 19 Jun 109 4:06 pm

Tgt Ion:91 Resp: 2452250

Ion	Ratio	Lower	Upper
91	100		
126	20.9	13.8	20.8#
65	25.0	20.5	30.7
0	0.0	0.0	0.0

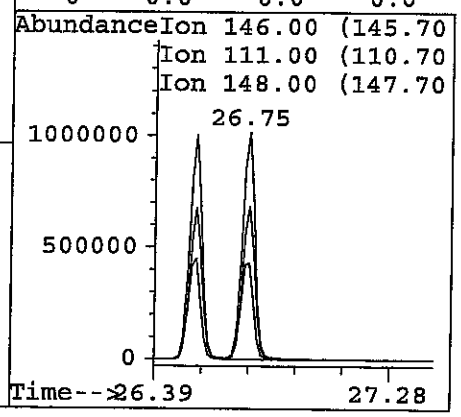


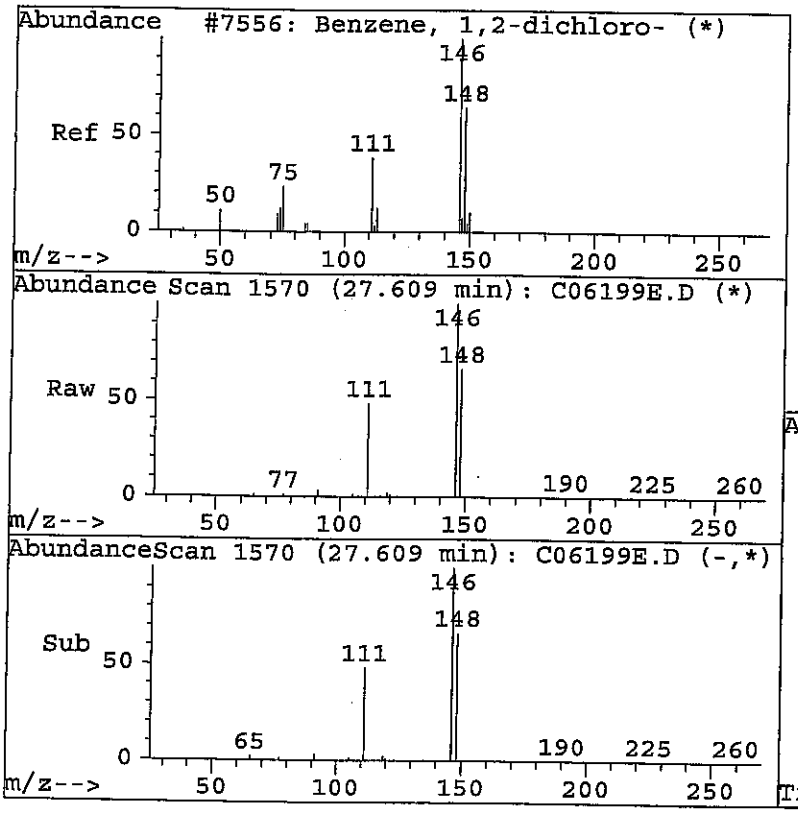


#43
1,4-Dichlorobenzene
Concen: 0.40 ppbV
RT: 26.75 min Scan# 1515
Delta R.T. 0.00 min
Lab File: C06199E.D
Acq: 19 Jun 109 4:06 pm

Tgt Ion:146 Resp: 3247824

Ion	Ratio	Lower	Upper
146	100		
111	42.2	32.5	48.7
148	67.2	56.0	84.0
0	0.0	0.0	0.0

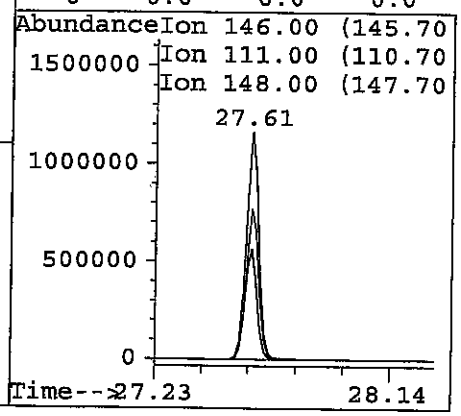


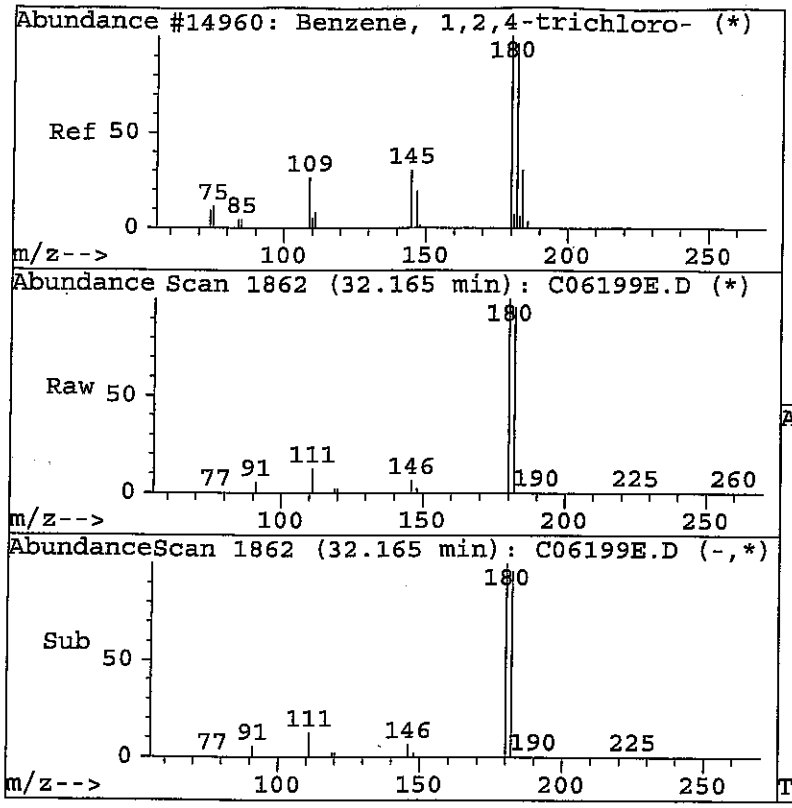


#44
1,2-Dichlorobenzene
Concen: 0.40 ppbV
RT: 27.61 min Scan# 1570
Delta R.T. -0.00 min
Lab File: C06199E.D
Acq: 19 Jun 109 4:06 pm

Tgt Ion:146 Resp: 3769025

Ion	Ratio	Lower	Upper
146	100		
111	48.4	38.0	57.0
148	66.2	55.2	82.8
0	0.0	0.0	0.0

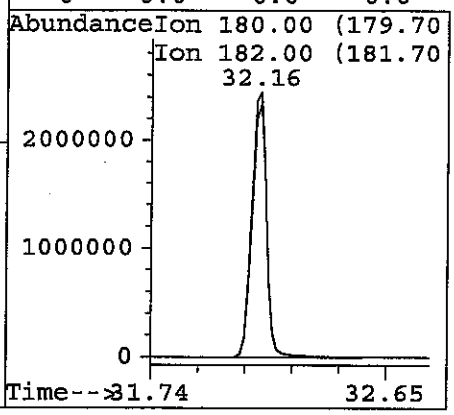


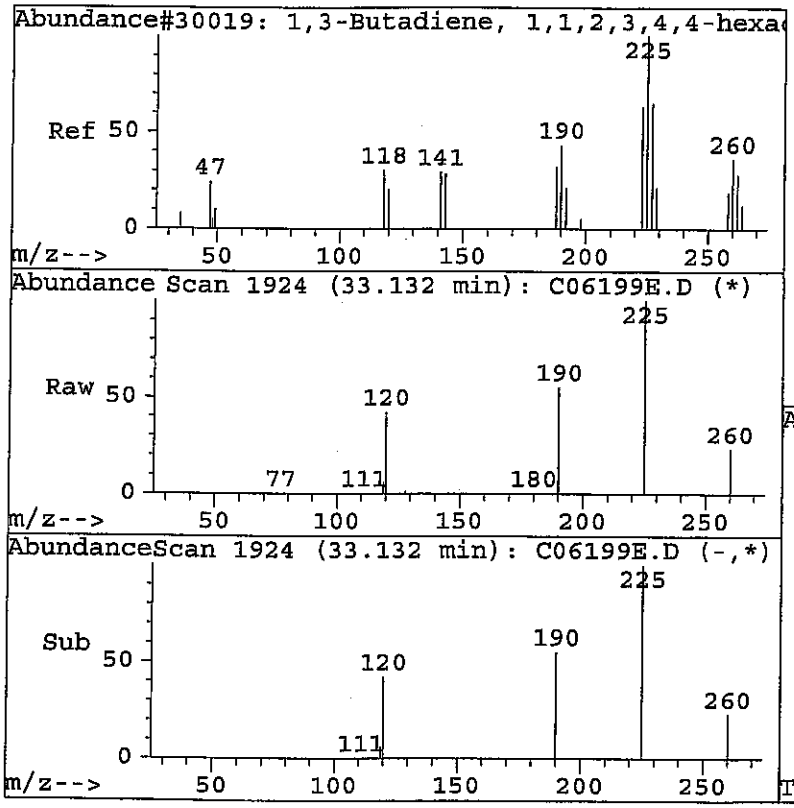


#45
1,2,4-Trichlorobenzene
Concen: 0.51 ppbV
RT: 32.16 min Scan# 1862
Delta R.T. -0.01 min
Lab File: C06199E.D
Acq: 19 Jun 109 4:06 pm

Tgt Ion:180 Resp: 9410822

Ion	Ratio	Lower	Upper
180	100		
182	95.6	78.5	117.7
0	0.0	0.0	0.0
0	0.0	0.0	0.0

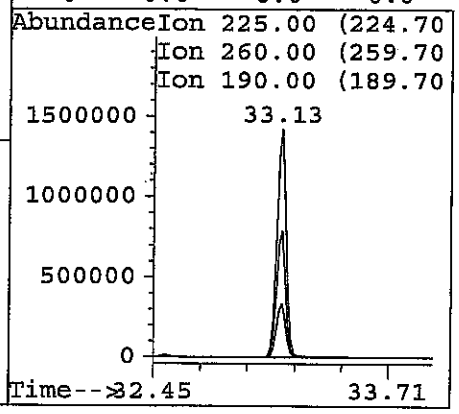


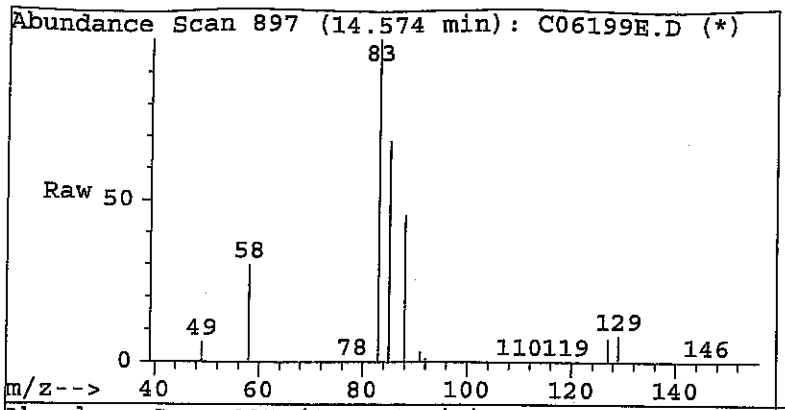


#46
Hexachlorobutadiene
Concen: 0.50 ppbV
RT: 33.13 min Scan# 1924
Delta R.T. 0.00 min
Lab File: C06199E.D
Acq: 19 Jun 109 4:06 pm

Tgt Ion:225 Resp: 4867540

Ion	Ratio	Lower	Upper
225	100		
260	23.5	20.4	30.6
190	55.4	43.8	65.8
0	0.0	0.0	0.0

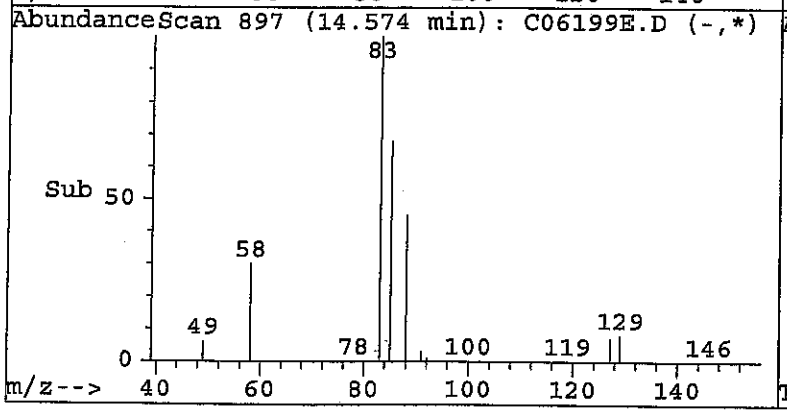


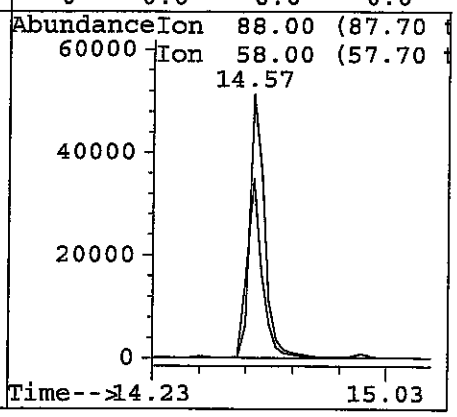


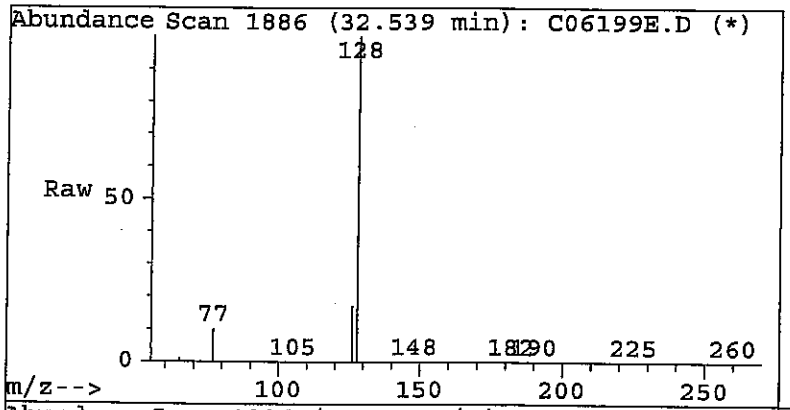
#47
1,4 Dioxane
Concen: 0.36 ppbV
RT: 14.57 min Scan# 897
Delta R.T. 0.00 min
Lab File: C06199E.D
Acq: 19 Jun 109 4:06 pm

Tgt Ion:88 Resp: 179188

Ion	Ratio	Lower	Upper
88	100		
58	69.4	58.2	87.4
0	0.0	0.0	0.0
0	0.0	0.0	0.0



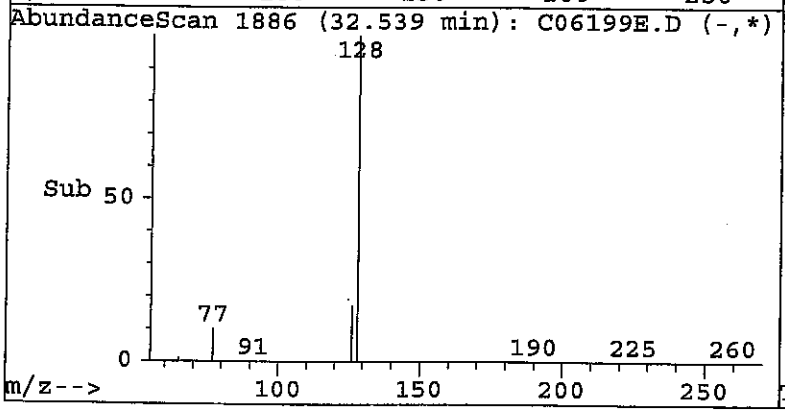


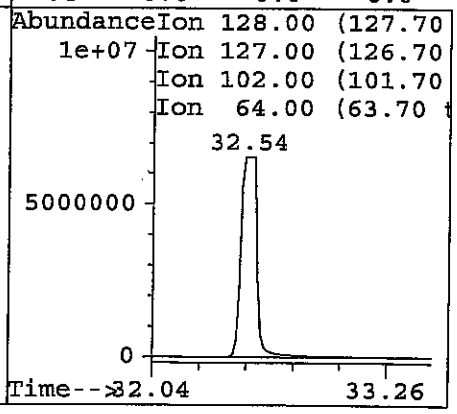


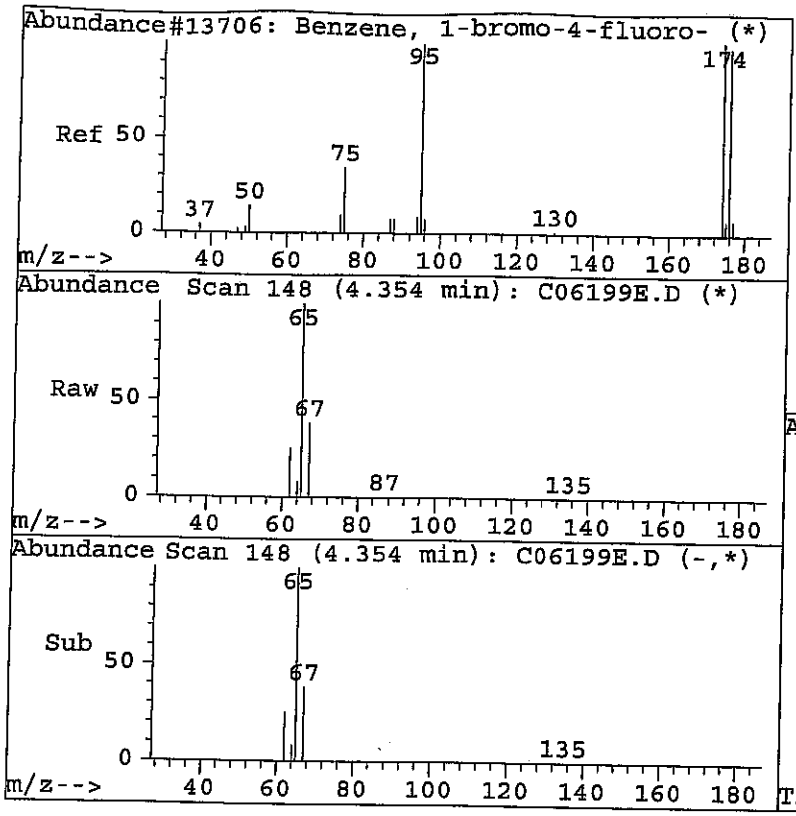
#48
Naphthalene
Concen: 3.11 ppbV
RT: 32.54 min Scan# 1886
Delta R.T. -0.24 min
Lab File: C06199E.D
Acq: 19 Jun 109 4:06 pm

Tgt Ion:128 Resp:37178978

Ion	Ratio	Lower	Upper
128	100		
127	0.0	0.0	0.0
102	0.0	0.0	0.0
64	0.0	0.0	0.0



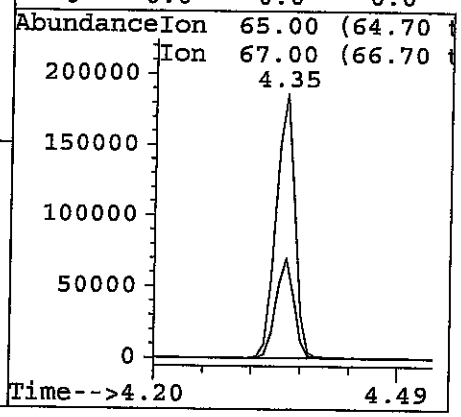




#49
Vinyl Chloride-d3
Concen: 0.17 ppbV
RT: 4.35 min Scan# 148
Delta R.T. 0.00 min
Lab File: C06199E.D
Acq: 19 Jun 109 4:06 pm

Tgt Ion:65 Resp: 288448

Ion	Ratio	Lower	Upper
65	100		
67	37.7	27.4	41.0
0	0.0	0.0	0.0
0	0.0	0.0	0.0



Quantitation Report

Data File : C:\MSCHEM\2\DATA\06199MS2\C06199H.D
Acq Time : 19 Jun 109 6:46 pm
Sample : ST60032 + ST60250
Misc : 0.5 ML
Quant Time: Jun 22 9:00 19109

Operator: CM
Inst : MS2
Multiplr: 1.00

Method : C:\MSCHEM\2\METHODS\2EXSIM_I.M
Title : EPA T0-15
Last Update : Mon Jun 22 09:18:18 2009
Response via : Multiple Level Calibration

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Chlorobenzene-d5	20.51	117	1273169	0.20 ppbV	0.00
System Monitoring Compounds					%Recovery
16) Toluene-d8	17.05	98	565545	0.20 ppbV	
49) Vinyl Chloride-d3	4.34	65	193684	0.16 ppbV	
Target Compounds					Qvalue
2) Dichlorodifluoromethane	3.84	85	38986	0.05 ppbV m	0
3) Chloromethane	4.10	50	16811	0.04 ppbV m	92
4) Freon 114	4.11	85	36985	0.05 ppbV	100
5) Vinyl chloride	4.36	62	12222	0.05 ppbV m	96
6) Bromomethane	4.96	94	12685	0.05 ppbV m	100
7) Chloroethane	5.16	64	11984	0.05 ppbV	97
8) Trichlorofluoromethane	5.98	101	46620	0.05 ppbV	100
9) 1,1-Dichloroethene	6.95	61	27969	0.05 ppbV	99
10) Freon 113	7.19	151	20804	0.05 ppbV	92
11) Dichloromethane	7.43	84	15163	0.05 ppbV	99
12) trans-1,2-Dichloroethene	8.50	96	12852	0.03 ppbV	98
13) Methyl tert butyl ether	8.65	73	31056	0.02 ppbV	98
14) 1,1-Dichloroethane	9.03	63	31159	0.05 ppbV	100
15) cis-1,2-Dichloroethene	10.26	96	21098	0.05 ppbV	98
17) Chloroform	10.68	83	42620	0.05 ppbV	99
18) 1,1,1-Trichloroethane	11.91	97	46722	0.05 ppbV #	90
19) 1,2-Dichloroethane	12.04	62	74052	0.04 ppbV	96
20) Benzene	12.66	78	60686	0.05 ppbV #	82
21) Carbon tetrachloride	12.68	117	40672	0.05 ppbV	96
22) 1,2-Dichloropropane	14.23	63	22034	0.05 ppbV	92
23) Trichloroethene	14.28	130	29555	0.06 ppbV #	77
24) Bromodichloromethane	14.57	83	34872	0.04 ppbV #	97
25) cis-1,3-Dichloropropene	15.99	75	7107	0.02 ppbV	95
26) Toluene	17.24	91	90214	0.05 ppbV	98
27) trans-1,3-Dichloropropene	17.05	75	3373	0.01 ppbV #	16
28) 1,1,2-Trichloroethane	17.35	97	37160	0.05 ppbV	96
29) 1,2-Dibromoethane	19.01	107	67709	0.04 ppbV #	97
30) Tetrachloroethene	19.11	166	35806	0.06 ppbV #	81
31) Chlorobenzene	20.61	112	104021	0.05 ppbV	98
32) 1,1,1,2-Tetrachloroethane	20.66	131	32649	0.05 ppbV	97
33) Ethylbenzene	21.08	91	173953	0.05 ppbV	98
34) m & p-Xylene	21.37	91	279033	0.10 ppbV	96
35) Styrene	22.24	104	153303	0.05 ppbV	98
36) o-Xylene	22.34	91	168269	0.05 ppbV	97
37) 1,1,2,2-Tetrachloroethane	22.94	83	192188	0.05 ppbV	97
38) 4-Ethyltoluene	24.80	105	228508	0.03 ppbV	98
39) 1,3,5-Trimethylbenzene	24.96	105	323037	0.05 ppbV	97
40) 1,2,4-Trimethylbenzene	25.91	105	373791	0.05 ppbV	98
41) 1,3-Dichlorobenzene	26.55	146	303170	0.05 ppbV	98
42) Benzyl chloride	26.72	91	210430	0.04 ppbV	99
43) 1,4-Dichlorobenzene	26.75	146	331504	0.06 ppbV	98
44) 1,2-Dichlorobenzene	27.61	146	359724	0.05 ppbV	98
45) 1,2,4-Trichlorobenzene	32.15	180	918959	0.06 ppbV	98
46) Hexachlorobutadiene	33.12	225	386167	0.05 ppbV	98
47) 1,4 Dioxane	14.63	88	17449	0.04 ppbV	98
48) Naphthalene	32.52	128	6597377	0.16 ppbV m	0

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

Quantitation Report

Data File : C:\MSCHEM\2\DATA\06199MS2\C06199H.D
Acq Time : 19 Jun 109 6:46 pm
Sample : ST60032 + ST60250
Misc : 0.5 ML
Quant Time: Jun 22 9:00 19109

Operator: CM
Inst : MS2
Multiplr: 1.00

Method : C:\MSCHEM\2\METHODS\2EXSIM_I.M
Title : EPA T0-15
Last Update : Mon Jun 22 09:18:18 2009
Response via : Multiple Level Calibration

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue

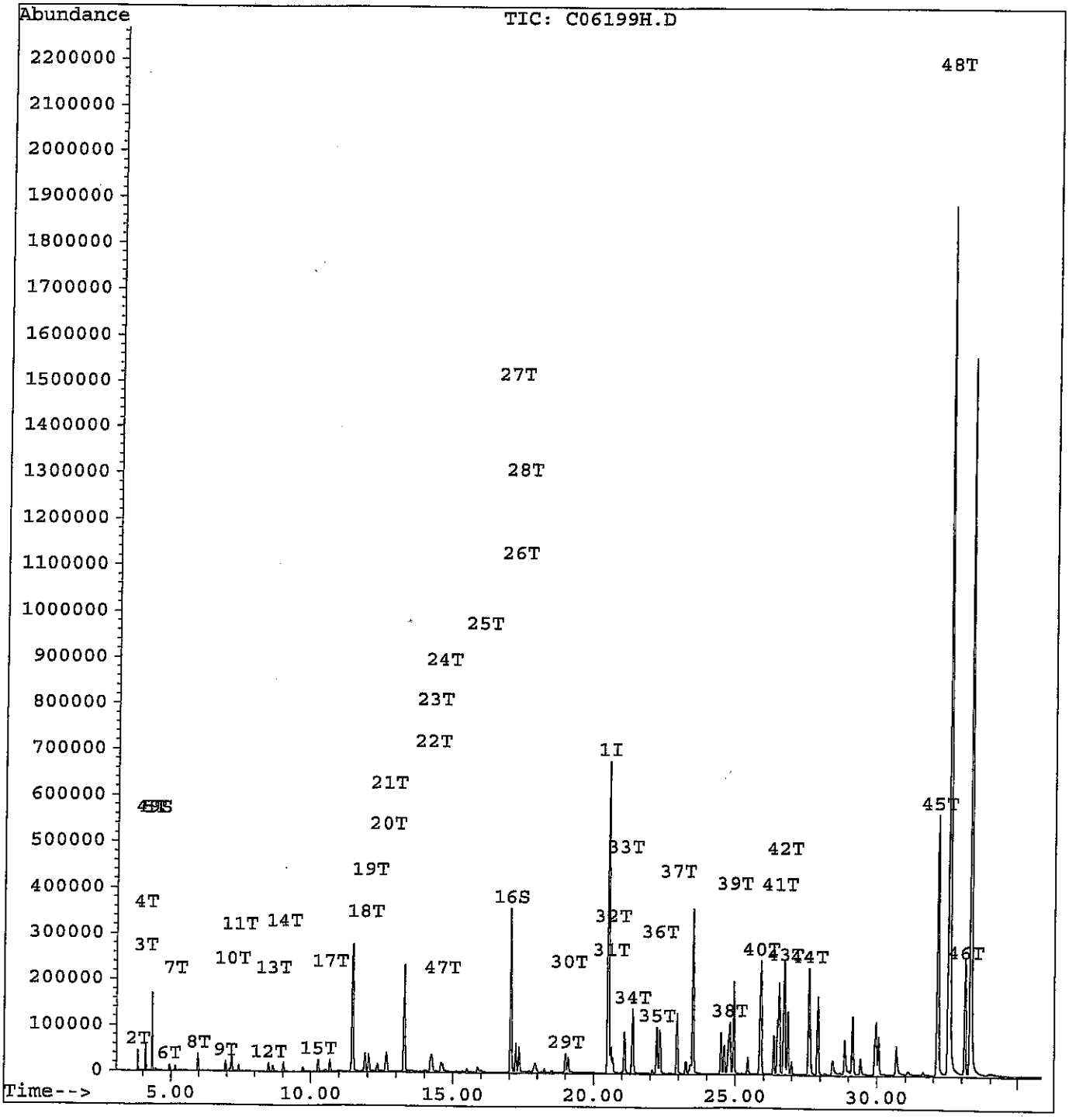
(#) = qualifier out of range (m) = manual integration

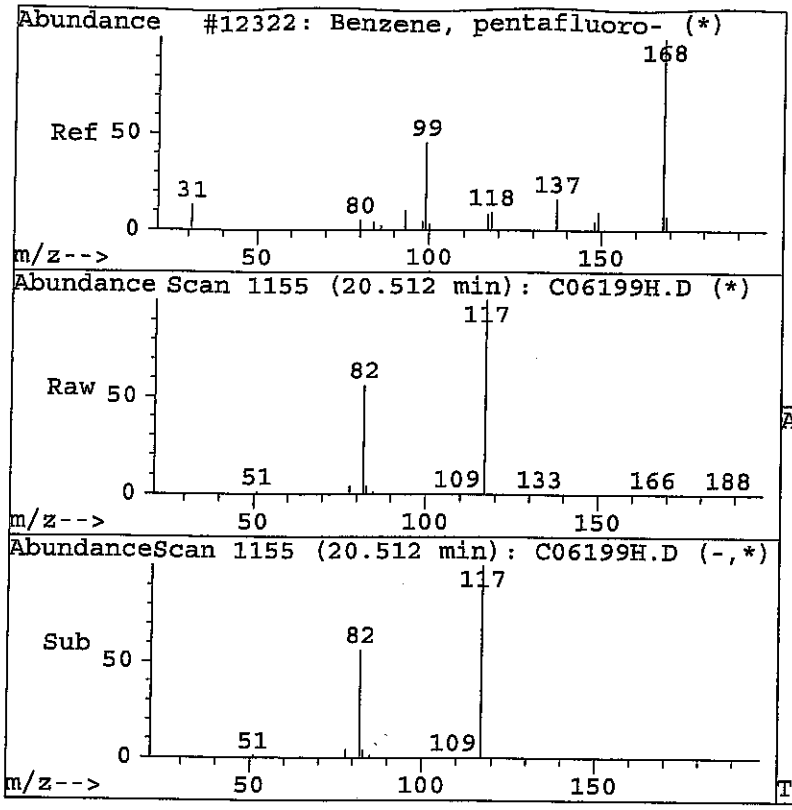
Quantitation Report

Data File : C:\MSCHEM\2\DATA\06199MS2\C06199H.D
Acq Time : 19 Jun 109 6:46 pm
Sample : ST60032 + ST60250
Misc : 0.5 ML
Quant Time: Jun 22 9:00 19109

Operator: CM
Inst : MS2
Multiplr: 1.00

Method : C:\MSCHEM\2\METHODS\2EXSIM_I.M
Title : EPA T0-15
Last Update : Mon Jun 22 09:18:18 2009
Response via : Multiple Level Calibration

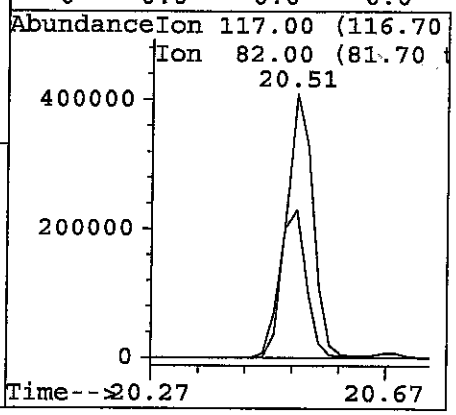


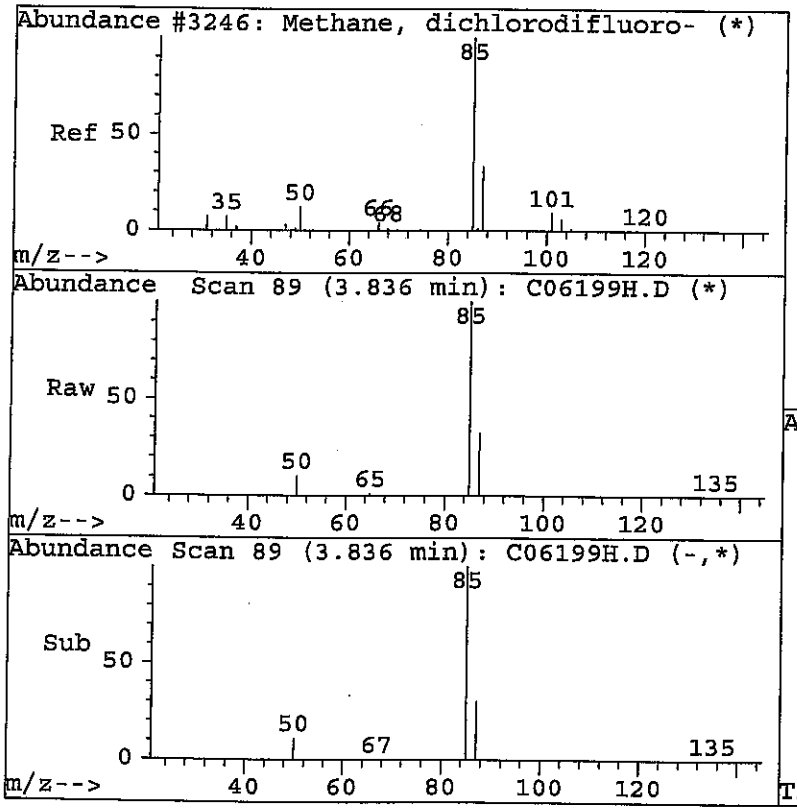


#1
Chlorobenzene-d5
Concen: 0.20 ppbV
RT: 20.51 min Scan# 1155
Delta R.T. 0.00 min
Lab File: C06199H.D
Acq: 19 Jun 109 6:46 pm

Tgt Ion:117 Resp: 1273169

Ion	Ratio	Lower	Upper
117	100		
82	56.0	43.5	65.3
0	0.0	0.0	0.0
0	0.0	0.0	0.0

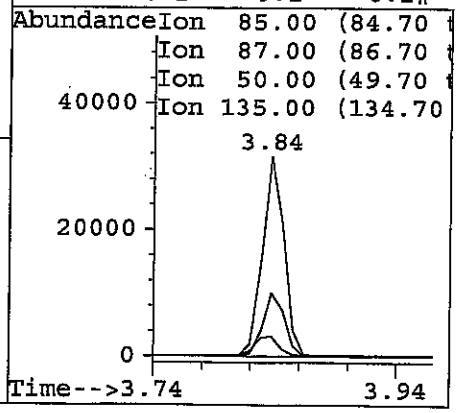


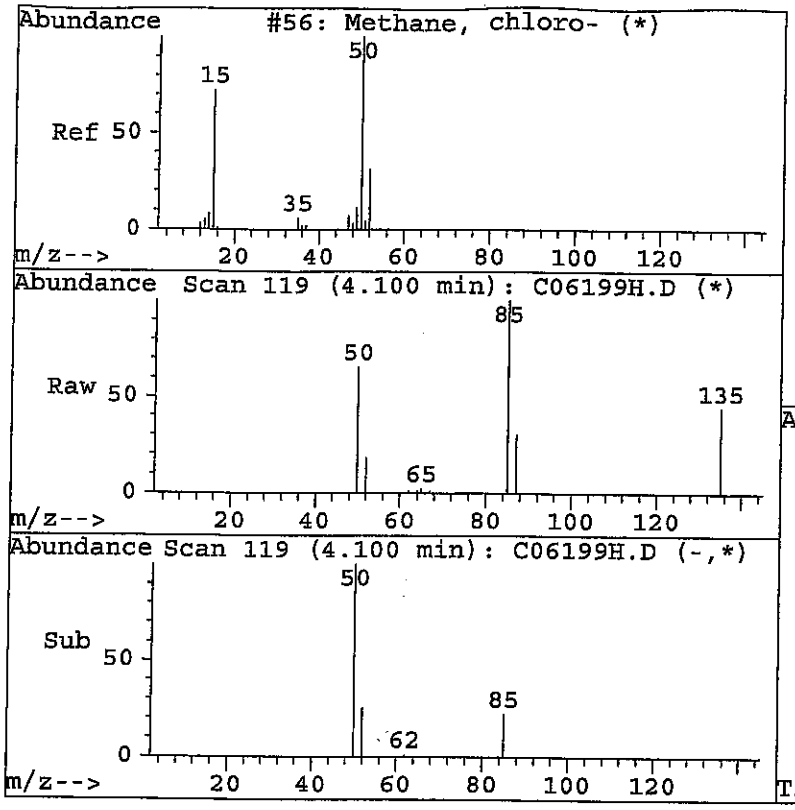


#2
Dichlorodifluoromethane
Concen: 0.05 ppbV m
RT: 3.84 min Scan# 89
Delta R.T. -0.01 min
Lab File: C06199H.D
Acq: 19 Jun 109 6:46 pm

Tgt Ion:85 Resp: 38986

Ion	Ratio	Lower	Upper
85	100		
87	31.8	25.6	38.4
50	10.3	8.6	12.8
135	0.2	0.1	0.1#

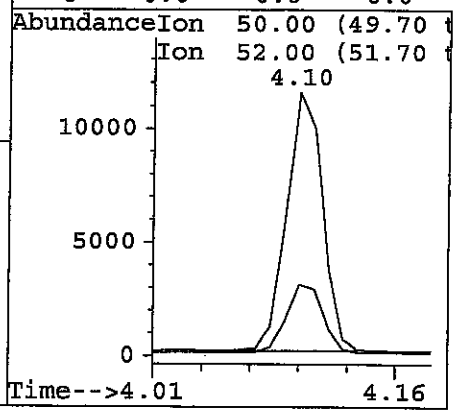


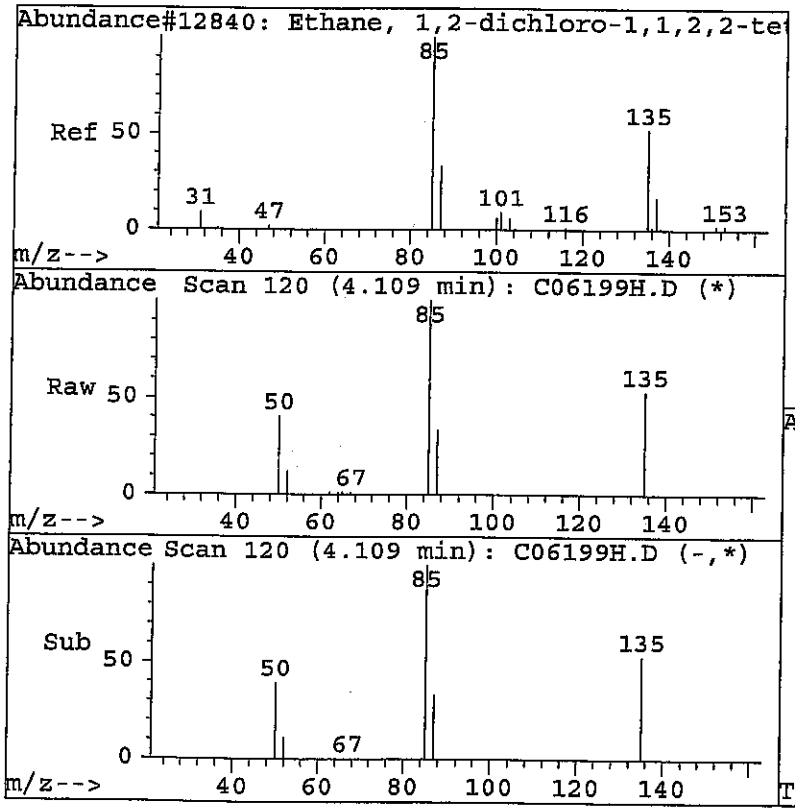


#3
Chloromethane
Concen: 0.04 ppbV m
RT: 4.10 min Scan# 119
Delta R.T. -0.02 min
Lab File: C06199H.D
Acq: 19 Jun 109 6:46 pm

Tgt Ion:50 Resp: 16811

Ion	Ratio	Lower	Upper
50	100		
52	27.1	21.2	31.8
0	0.0	0.0	0.0
0	0.0	0.0	0.0

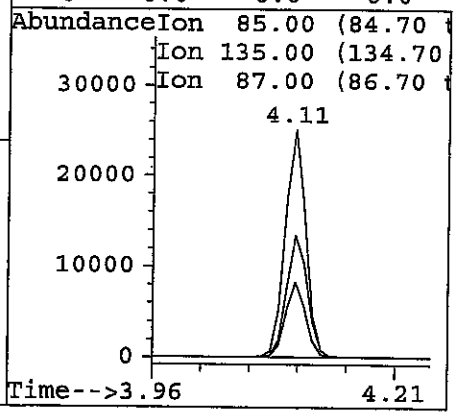


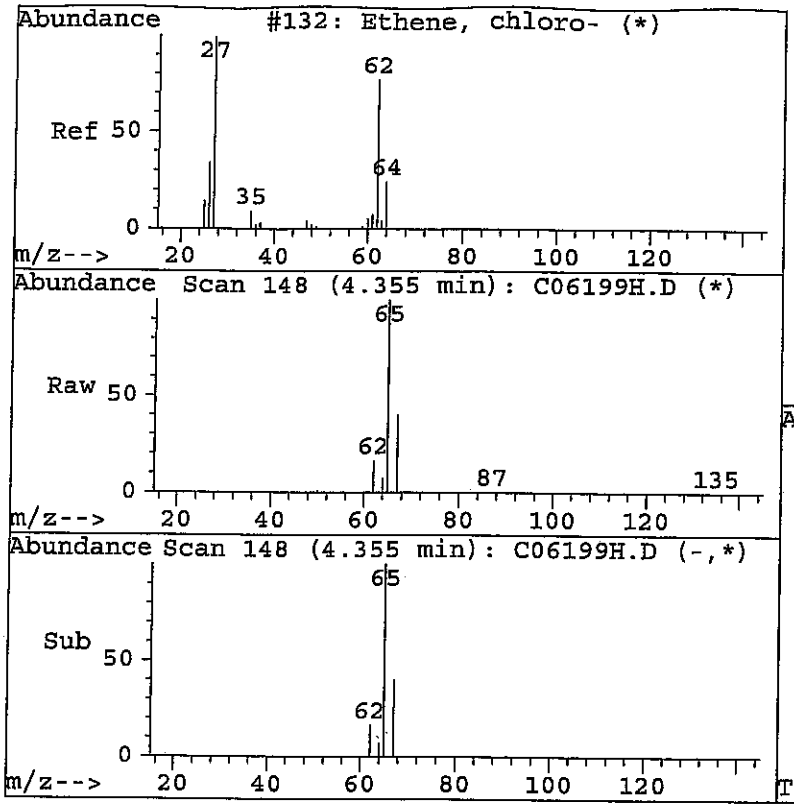


#4
Freon 114
Concen: 0.05 ppbV
RT: 4.11 min Scan# 120
Delta R.T. -0.01 min
Lab File: C06199H.D
Acq: 19 Jun 109 6:46 pm

Tgt Ion:85 Resp: 36985

Ion	Ratio	Lower	Upper
85	100		
135	53.3	42.3	63.5
87	32.7	26.0	39.0
0	0.0	0.0	0.0

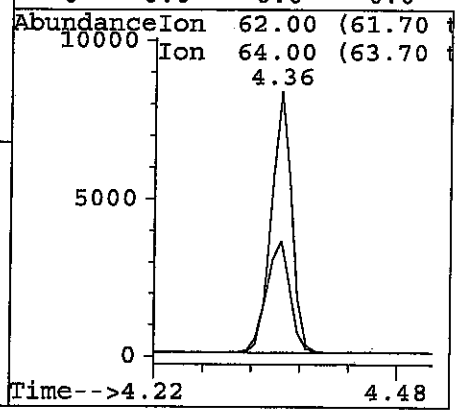


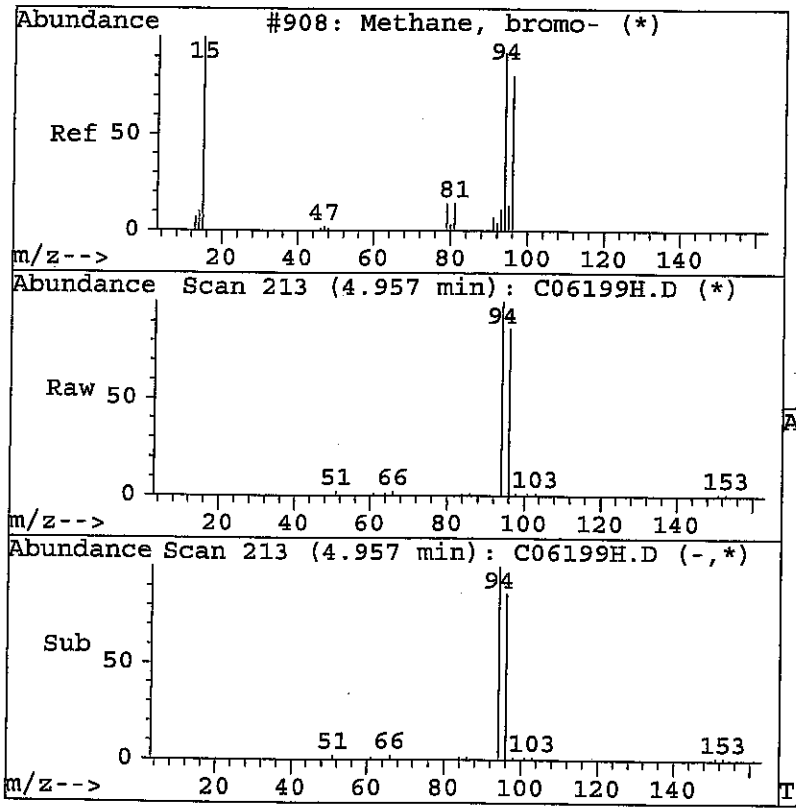


#5
Vinyl chloride
Concen: 0.05 ppbV m
RT: 4.36 min Scan# 148
Delta R.T. -0.01 min
Lab File: C06199H.D
Acq: 19 Jun 109 6:46 pm

Tgt Ion:62 Resp: 12222

Ion	Ratio	Lower	Upper
62	100		
64	43.8	28.2	42.2#
0	0.0	0.0	0.0
0	0.0	0.0	0.0

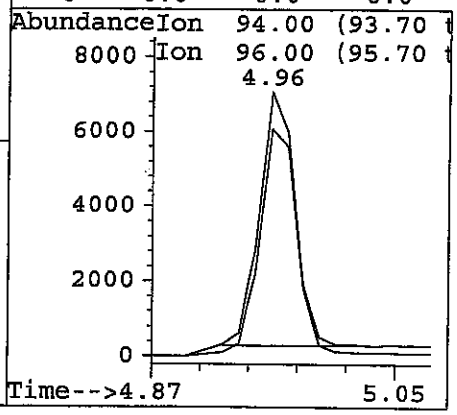


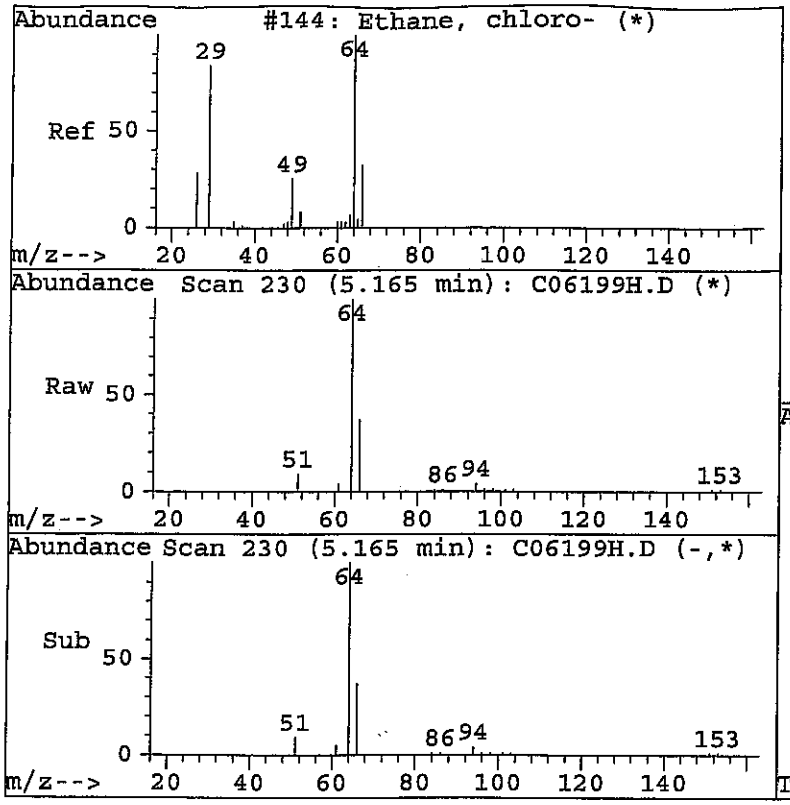


#6
Bromomethane
Concen: 0.05 ppbV m
RT: 4.96 min Scan# 213
Delta R.T. -0.01 min
Lab File: C06199H.D
Acq: 19 Jun 109 6:46 pm

Tgt Ion:94 Resp: 12685

Ion	Ratio	Lower	Upper
94	100		
96	86.1	69.4	104.2
0	0.0	0.0	0.0
0	0.0	0.0	0.0

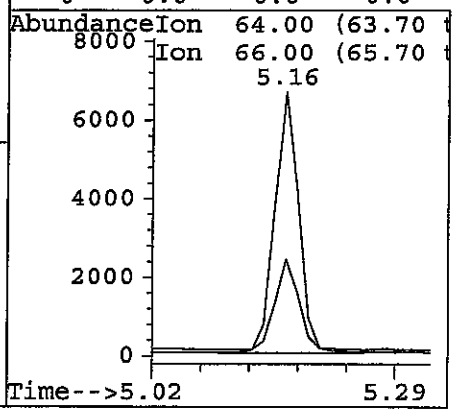


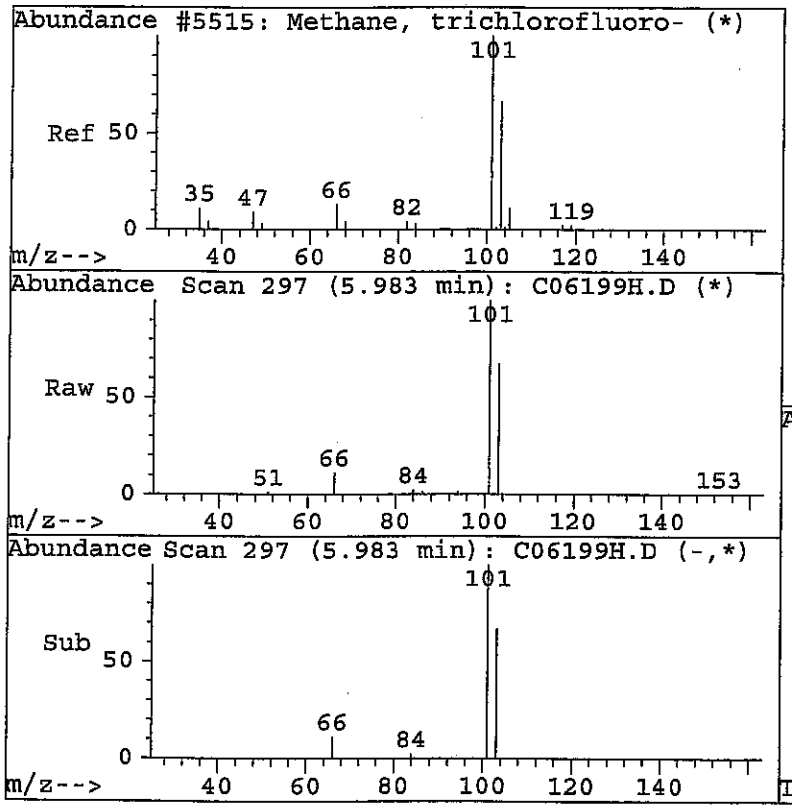


#7
Chloroethane
Concen: 0.05 ppbV
RT: 5.16 min Scan# 230
Delta R.T. -0.02 min
Lab File: C06199H.D
Acq: 19 Jun 109 6:46 pm

Tgt Ion:64 Resp: 11984

Ion	Ratio	Lower	Upper
64	100		
66	34.9	26.6	40.0
0	0.0	0.0	0.0
0	0.0	0.0	0.0

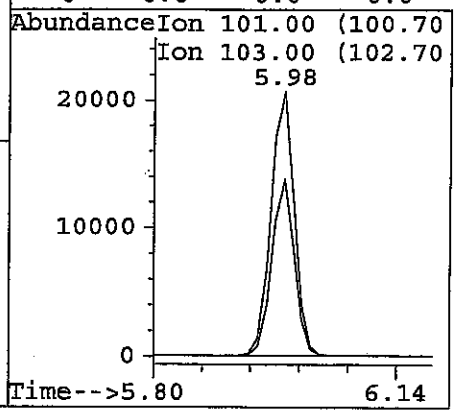


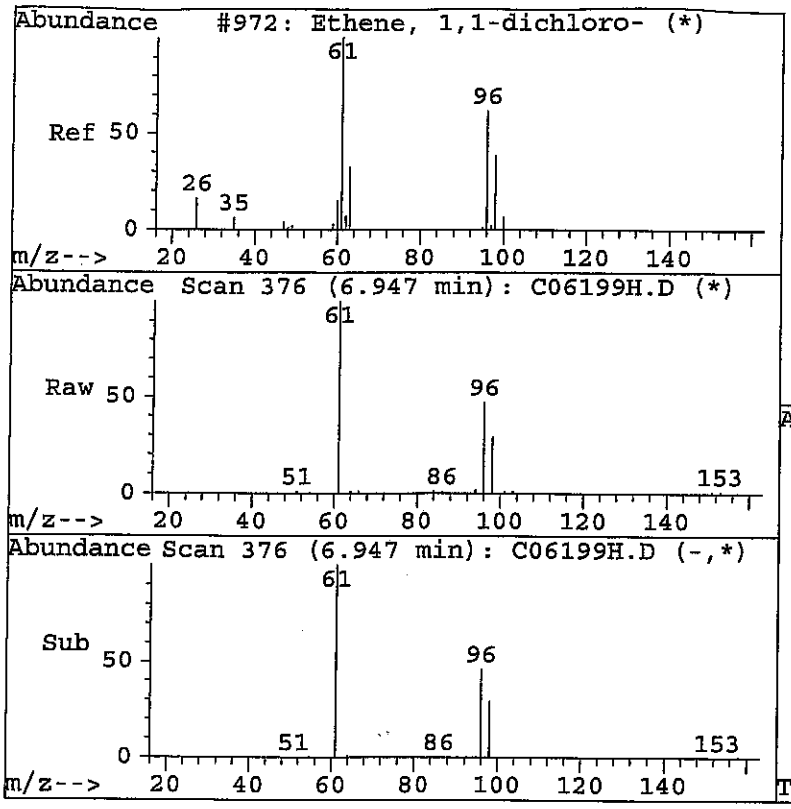


#8
Trichlorofluoromethane
Concen: 0.05 ppbV
RT: 5.98 min Scan# 297
Delta R.T. 0.00 min
Lab File: C06199H.D
Acq: 19 Jun 109 6:46 pm

Tgt Ion:101 Resp: 46620

Ion	Ratio	Lower	Upper
101	100		
103	66.7	53.2	79.8
0	0.0	0.0	0.0
0	0.0	0.0	0.0

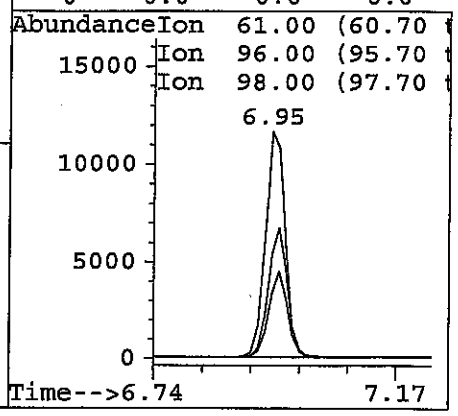


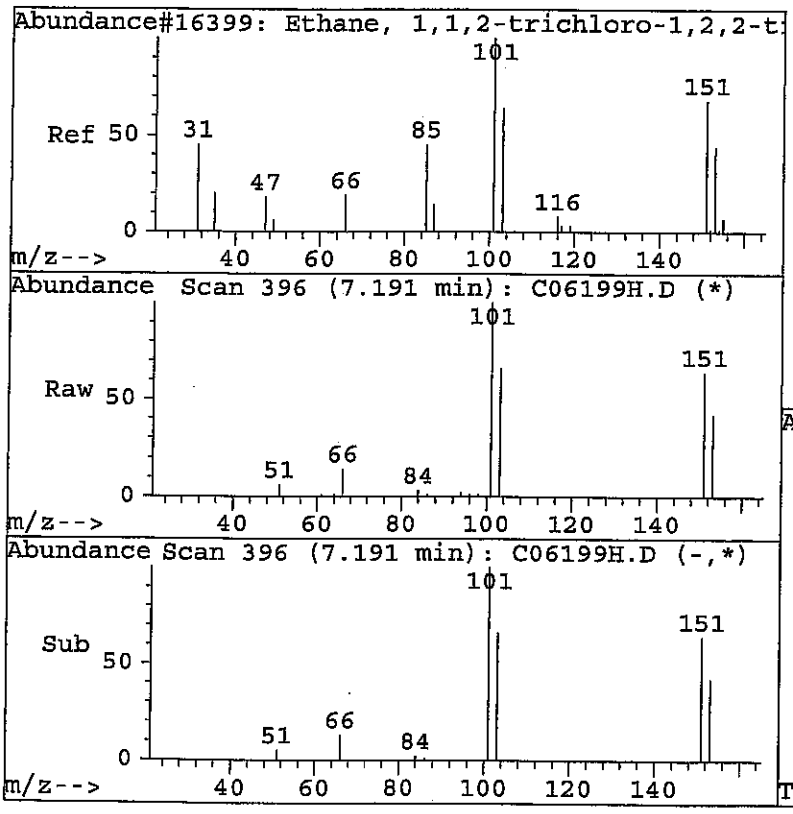


#9
1,1-Dichloroethene
Concen: 0.05 ppbV
RT: 6.95 min Scan# 376
Delta R.T. -0.00 min
Lab File: C06199H.D
Acq: 19 Jun 109 6:46 pm

Tgt Ion:61 Resp: 27969

Ion	Ratio	Lower	Upper
61	100		
96	46.1	37.4	56.0
98	28.6	23.1	34.7
0	0.0	0.0	0.0

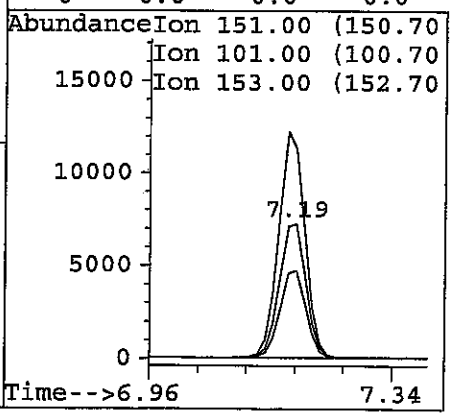


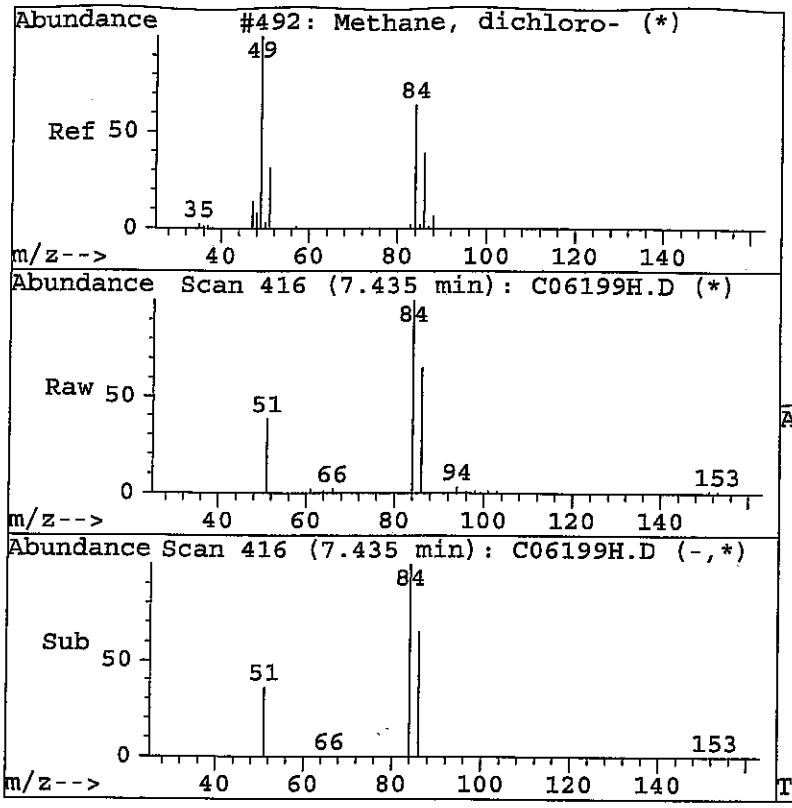


#10
Freon 113
Concen: 0.05 ppbV
RT: 7.19 min Scan# 396
Delta R.T. 0.06 min
Lab File: C06199H.D
Acq: 19 Jun 109 6:46 pm

Tgt Ion:151 Resp: 20804

Ion	Ratio	Lower	Upper
151	100		
101	157.1	135.8	203.6
153	65.3	50.0	75.0
0	0.0	0.0	0.0

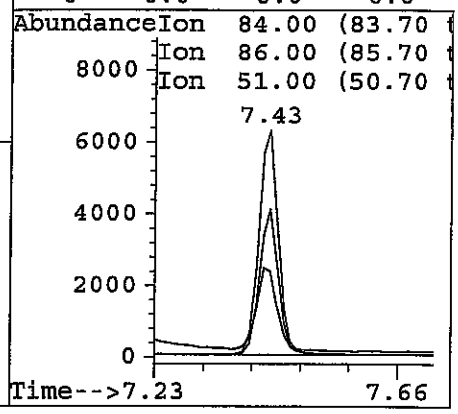


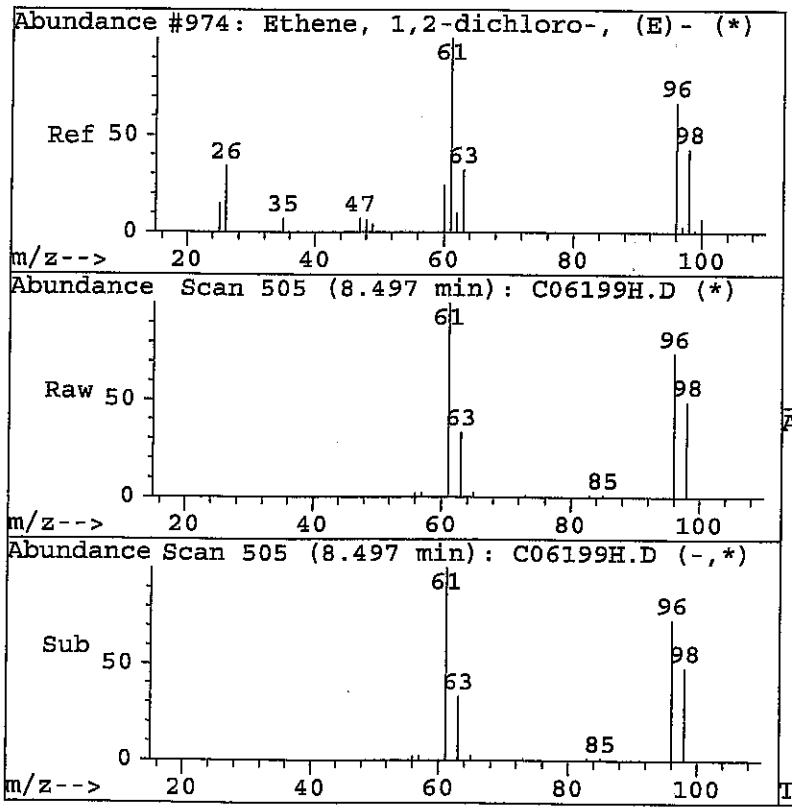


#11
Dichloromethane
Concen: 0.05 ppbV
RT: 7.43 min Scan# 416
Delta R.T. 0.01 min
Lab File: C06199H.D
Acq: 19 Jun 109 6:46 pm

Tgt Ion:84 Resp: 15163

Ion	Ratio	Lower	Upper
84	100		
86	64.9	51.3	76.9
51	34.7	27.4	41.0
0	0.0	0.0	0.0

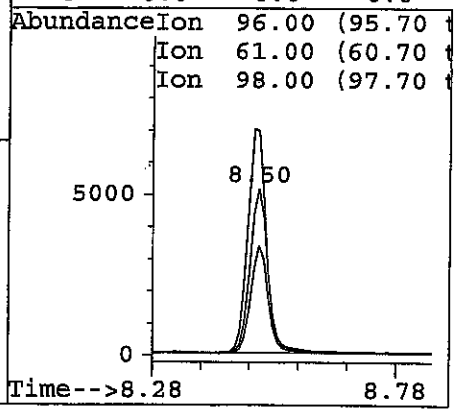


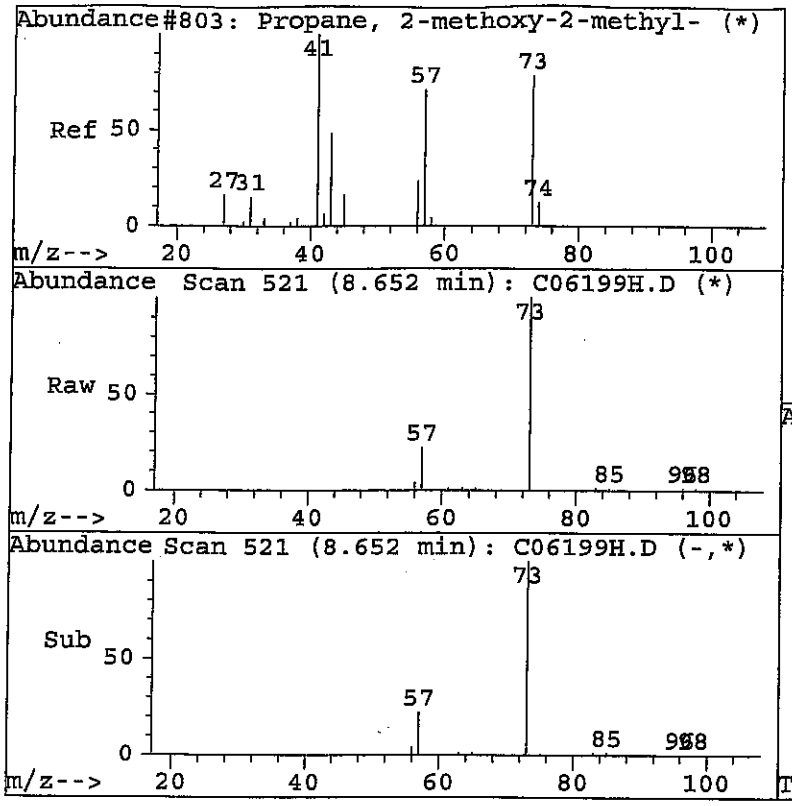


#12
trans-1,2-Dichloroethene
Concen: 0.03 ppbV
RT: 8.50 min Scan# 505
Delta R.T. 0.02 min
Lab File: C06199H.D
Acq: 19 Jun 109 6:46 pm

Tgt Ion:96 Resp: 12852

Ion	Ratio	Lower	Upper
96	100		
61	136.0	111.4	167.2
98	65.6	51.7	77.5
0	0.0	0.0	0.0

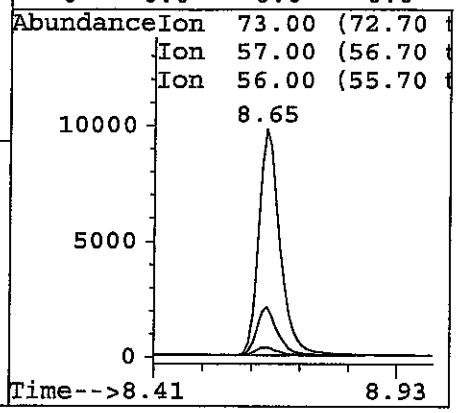


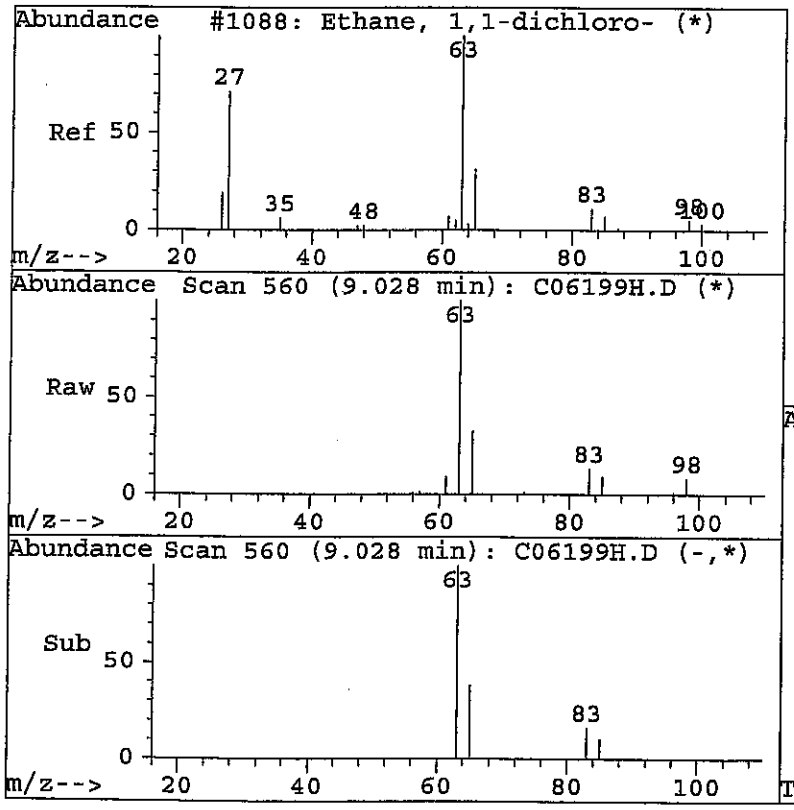


#13
Methyl tert butyl ether
Concen: 0.02 ppbV
RT: 8.65 min Scan# 521
Delta R.T. 0.05 min
Lab File: C06199H.D
Acq: 19 Jun 109 6:46 pm

Tgt Ion:73 Resp: 31056

Ion	Ratio	Lower	Upper
73	100		
57	21.3	16.0	24.0
56	3.2	2.6	3.8
0	0.0	0.0	0.0

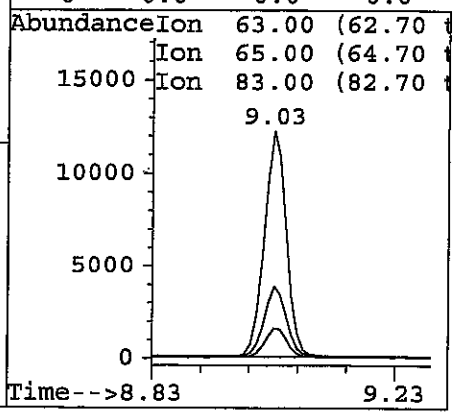


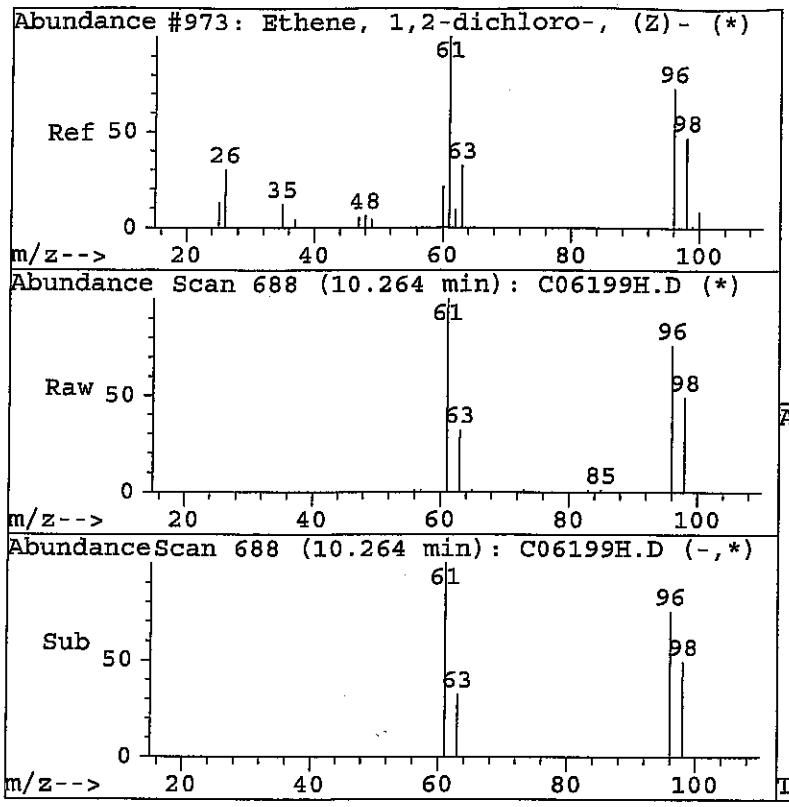


#14
1,1-Dichloroethane
Concen: 0.05 ppbV
RT: 9.03 min Scan# 560
Delta R.T. 0.03 min
Lab File: C06199H.D
Acq: 19 Jun 109 6:46 pm

Tgt Ion:63 Resp: 31159

Ion	Ratio	Lower	Upper
63	100		
65	31.1	24.9	37.3
83	12.8	10.3	15.5
0	0.0	0.0	0.0

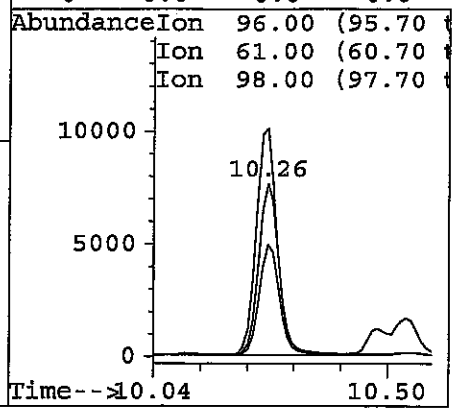


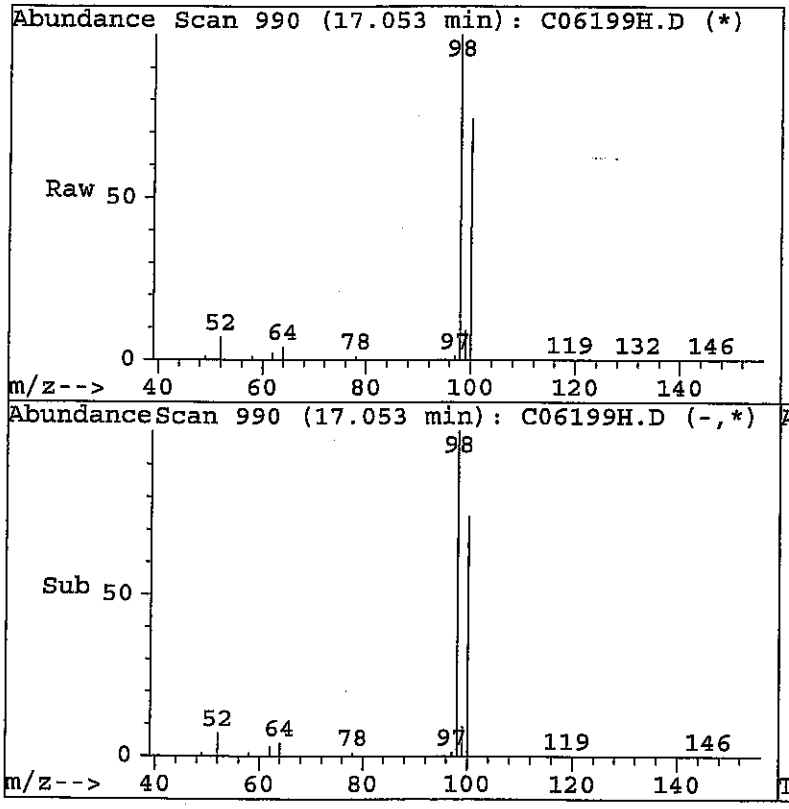


#15
cis-1,2-Dichloroethene
Concen: 0.05 ppbV
RT: 10.26 min Scan# 688
Delta R.T. 0.02 min
Lab File: C06199H.D
Acq: 19 Jun 109 6:46 pm

Tgt Ion:96 Resp: 21098

Ion	Ratio	Lower	Upper
96	100		
61	131.5	102.0	153.0
98	64.8	52.2	78.2
0	0.0	0.0	0.0

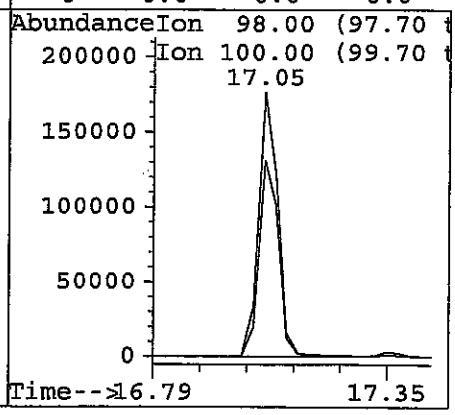


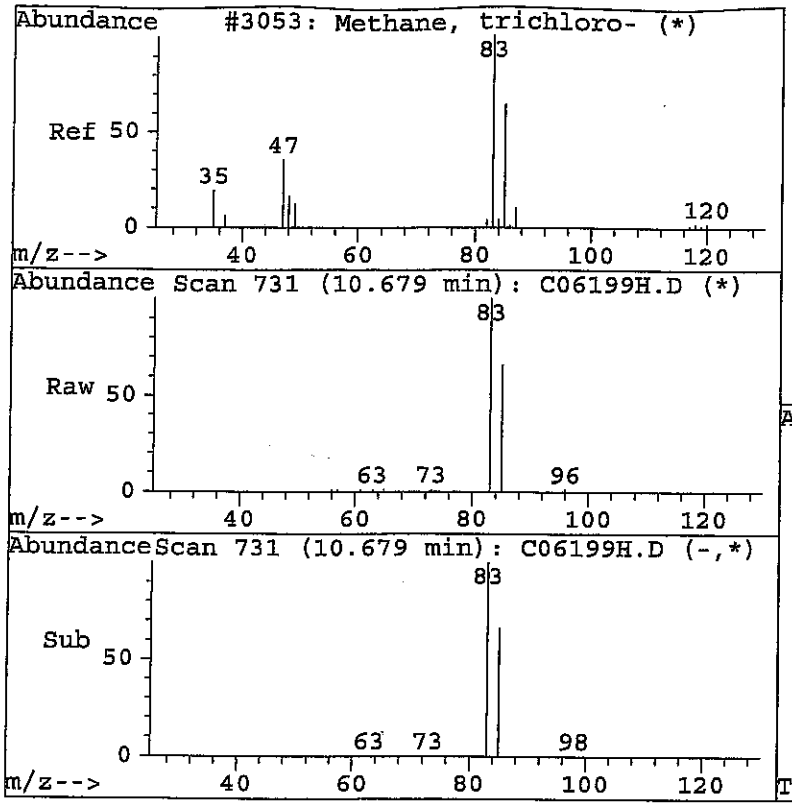


#16
Toluene-d8
Concen: 0.20 ppbV
RT: 17.05 min Scan# 990
Delta R.T. 0.00 min
Lab File: C06199H.D
Acq: 19 Jun 109 6:46 pm

Tgt Ion:98 Resp: 565545

Ion	Ratio	Lower	Upper
98	100		
100	76.2	59.5	89.3
0	0.0	0.0	0.0
0	0.0	0.0	0.0

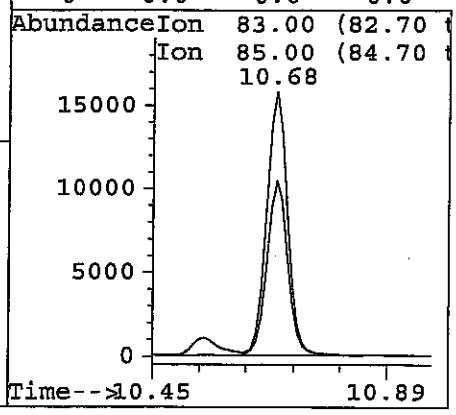


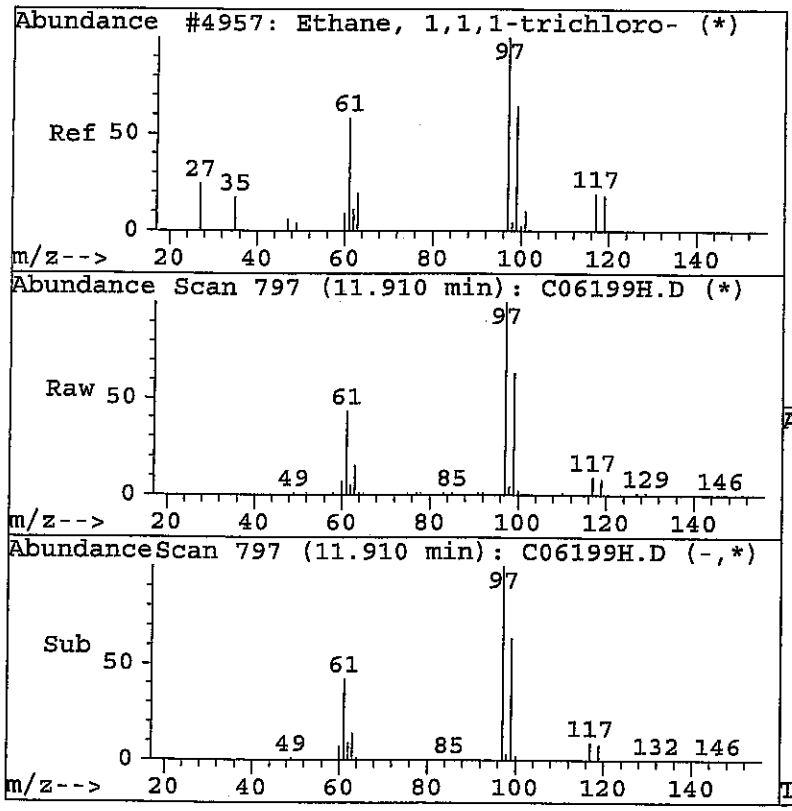


#17
Chloroform
Concen: 0.05 ppbV
RT: 10.68 min Scan# 731
Delta R.T. 0.02 min
Lab File: C06199H.D
Acq: 19 Jun 109 6:46 pm

Tgt Ion:83 Resp: 42620

Ion	Ratio	Lower	Upper
83	100		
85	64.7	52.2	78.4
0	0.0	0.0	0.0
0	0.0	0.0	0.0

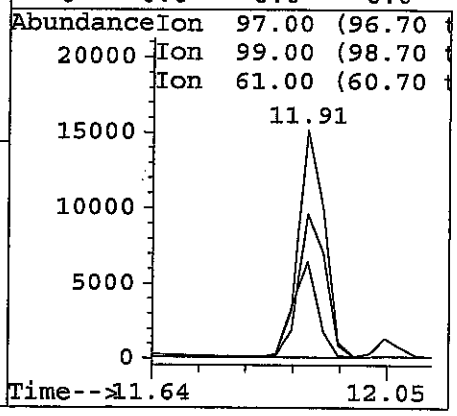


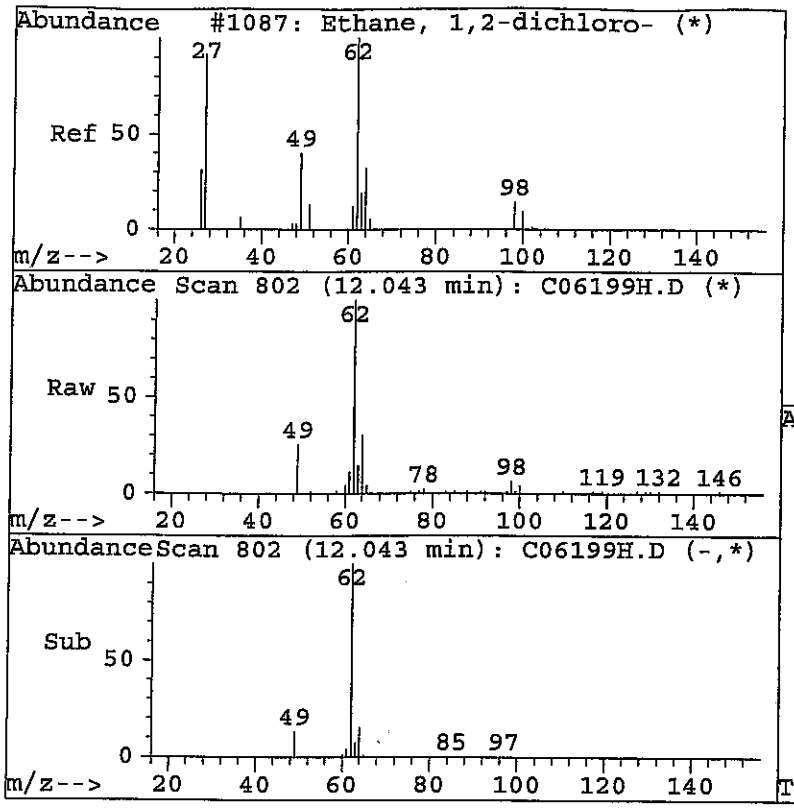


#18
1,1,1-Trichloroethane
Concen: 0.05 ppbV
RT: 11.91 min Scan# 797
Delta R.T. -0.00 min
Lab File: C06199H.D
Acq: 19 Jun 109 6:46 pm

Tgt Ion:97 Resp: 46722

Ion	Ratio	Lower	Upper
97	100		
99	62.9	53.2	79.8
61	41.5	24.2	36.4#
0	0.0	0.0	0.0

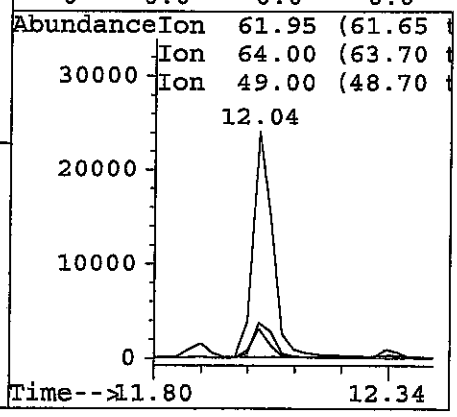


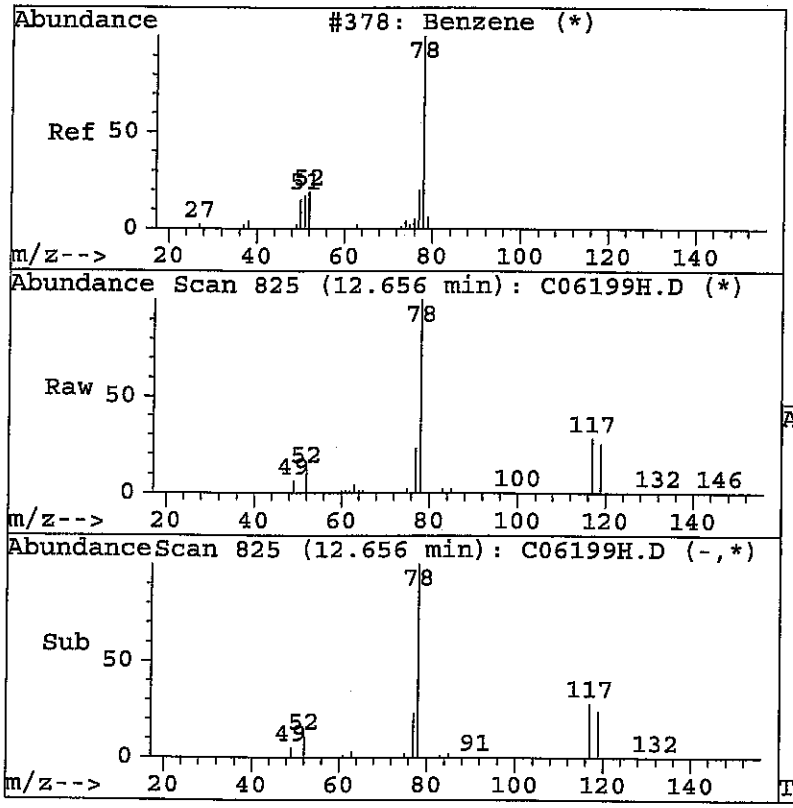


#19
1,2-Dichloroethane
Concen: 0.04 ppbV
RT: 12.04 min Scan# 802
Delta R.T. 0.02 min
Lab File: C06199H.D
Acq: 19 Jun 109 6:46 pm

Tgt Ion:61.95 Resp: 74052

Ion	Ratio	Lower	Upper
62	100		
64	15.4	13.8	20.6
49	12.8	8.9	13.3
0	0.0	0.0	0.0

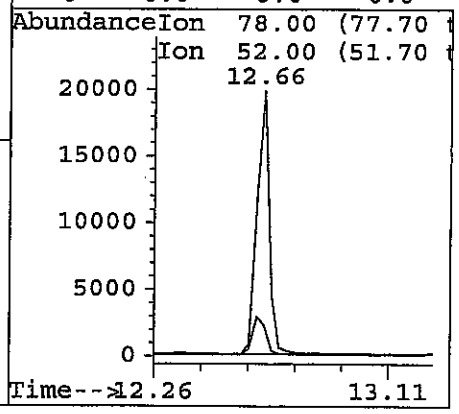


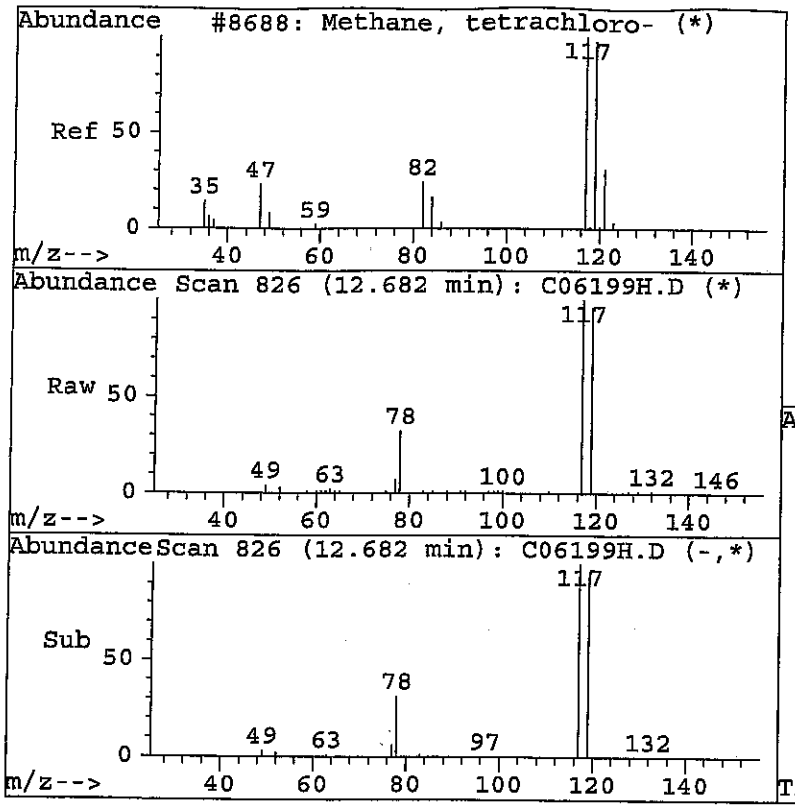


#20
Benzene
Concen: 0.05 ppbV
RT: 12.66 min Scan# 825
Delta R.T. 0.03 min
Lab File: C06199H.D
Acq: 19 Jun 109 6:46 pm

Tgt Ion:78 Resp: 60686

Ion	Ratio	Lower	Upper
78	100		
52	11.2	15.6	23.4#
0	0.0	0.0	0.0
0	0.0	0.0	0.0

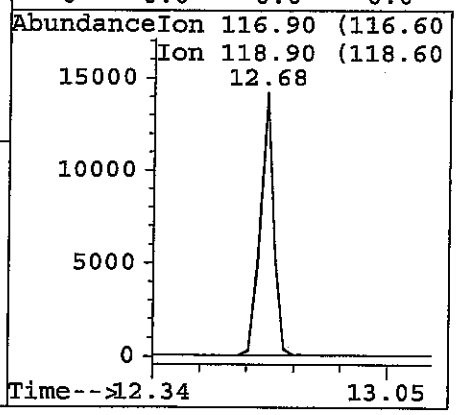


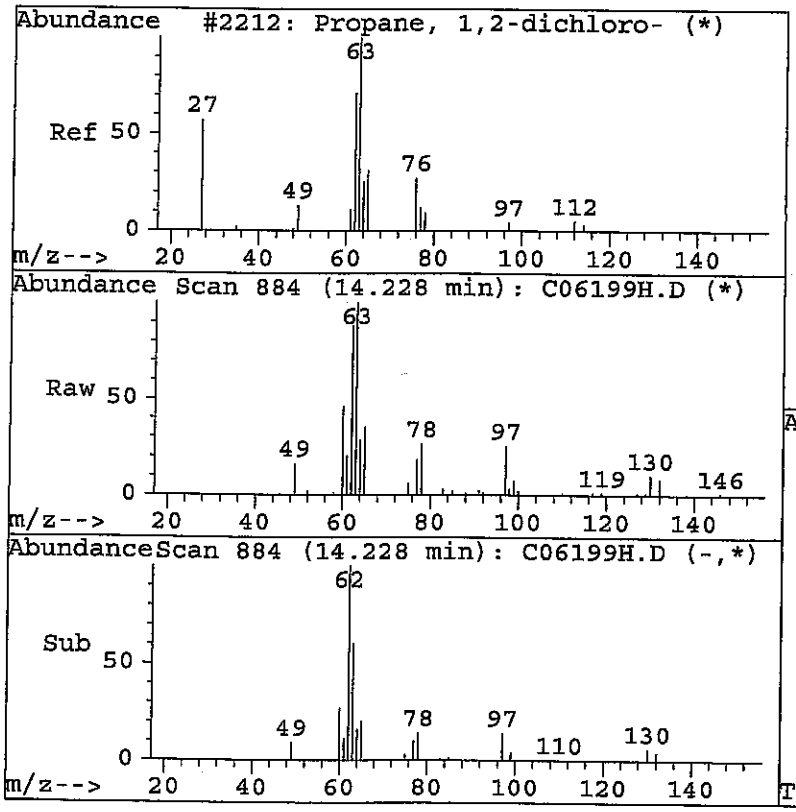


#21
Carbon tetrachloride
Concen: 0.05 ppbV
RT: 12.68 min Scan# 826
Delta R.T. 0.02 min
Lab File: C06199H.D
Acq: 19 Jun 109 6:46 pm

Tgt Ion:116.9 Resp: 40672

Ion	Ratio	Lower	Upper
117	100		
119	95.8	79.4	119.2
0	0.0	0.0	0.0
0	0.0	0.0	0.0

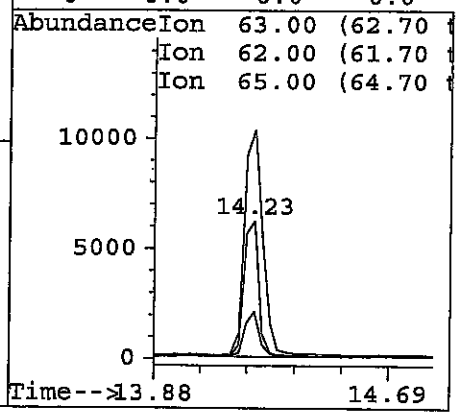


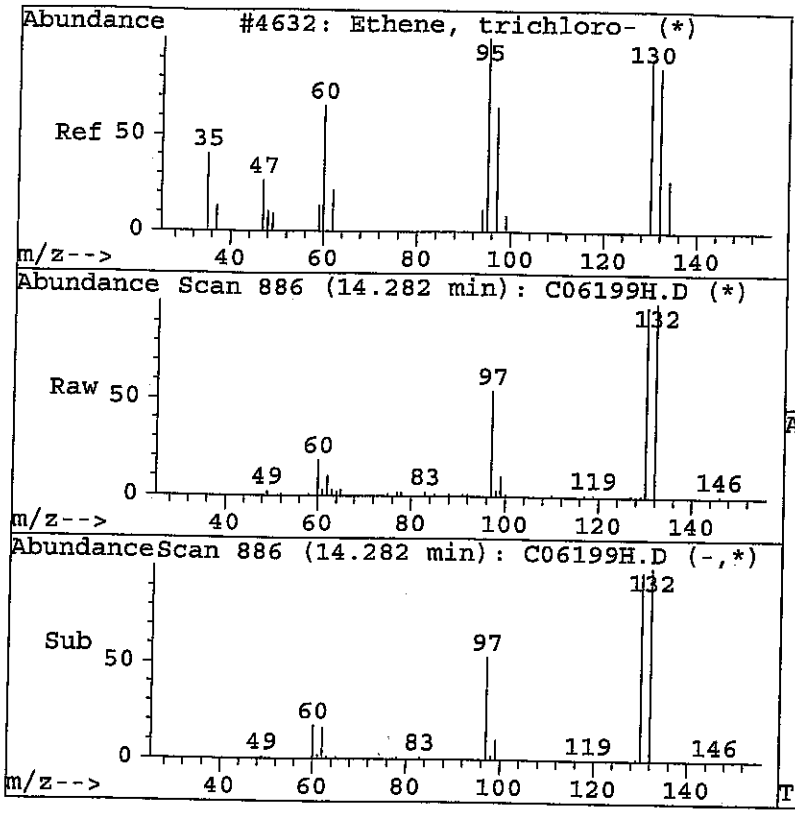


#22
1,2-Dichloropropane
Concen: 0.05 ppbV
RT: 14.23 min Scan# 884
Delta R.T. 0.03 min
Lab File: C06199H.D
Acq: 19 Jun 109 6:46 pm

Tgt Ion:63 Resp: 22034

Ion	Ratio	Lower	Upper
63	100		
62	166.4	125.8	188.6
65	33.0	22.2	33.2
0	0.0	0.0	0.0

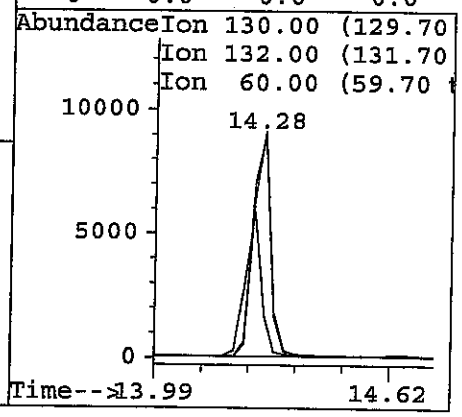


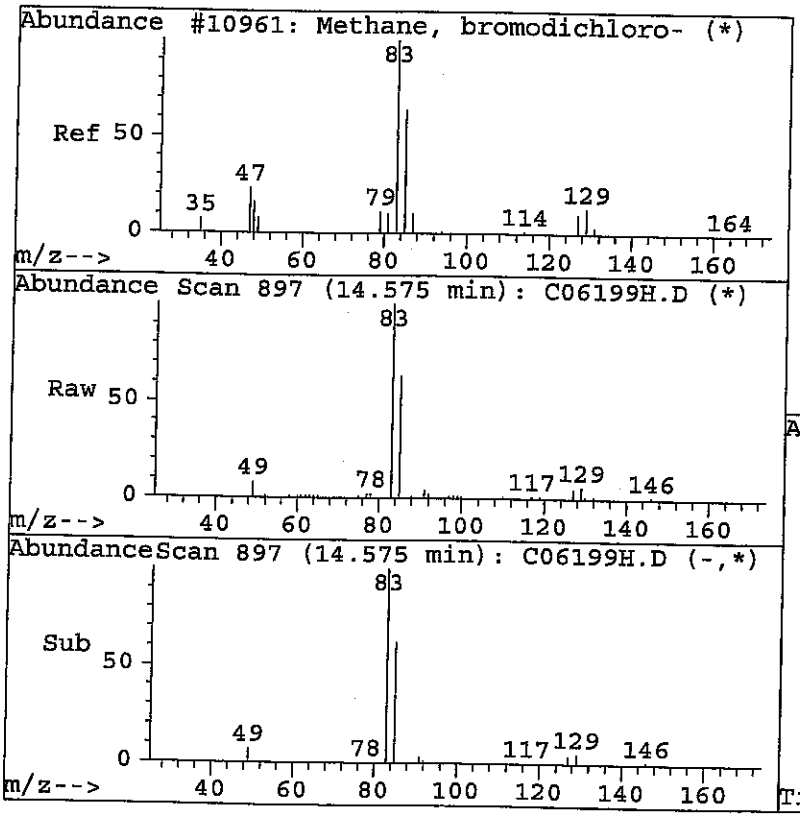


#23
Trichloroethene
Concen: 0.06 ppbV
RT: 14.28 min Scan# 886
Delta R.T. 0.02 min
Lab File: C06199H.D
Acq: 19 Jun 109 6:46 pm

Tgt Ion:130 Resp: 29555

Ion	Ratio	Lower	Upper
130	100		
132	101.8	74.6	112.0
60	17.6	41.6	62.4#
0	0.0	0.0	0.0

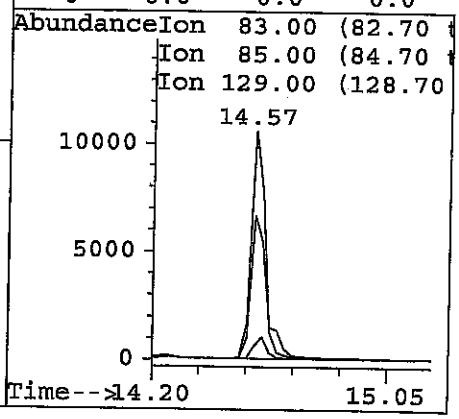


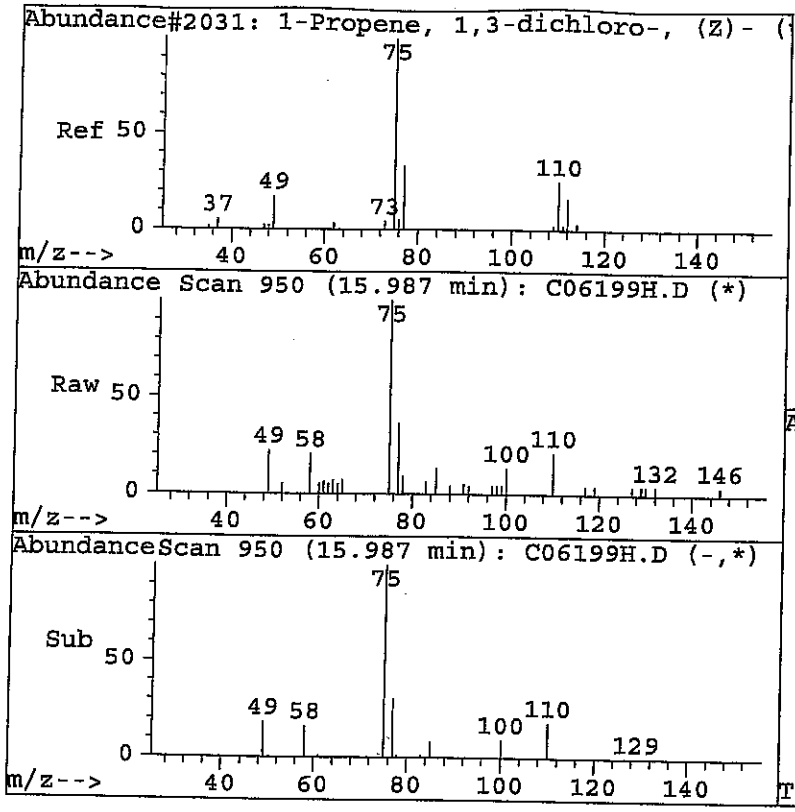


#24
Bromodichloromethane
Concen: 0.04 ppbV
RT: 14.57 min Scan# 897
Delta R.T. 0.00 min
Lab File: C06199H.D
Acq: 19 Jun 109 6:46 pm

Tgt Ion:83 Resp: 34872

Ion	Ratio	Lower	Upper
83	100		
85	62.5	52.0	78.0
129	5.4	5.7	8.5#
0	0.0	0.0	0.0

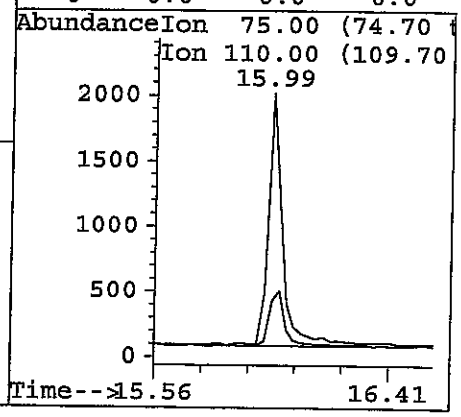


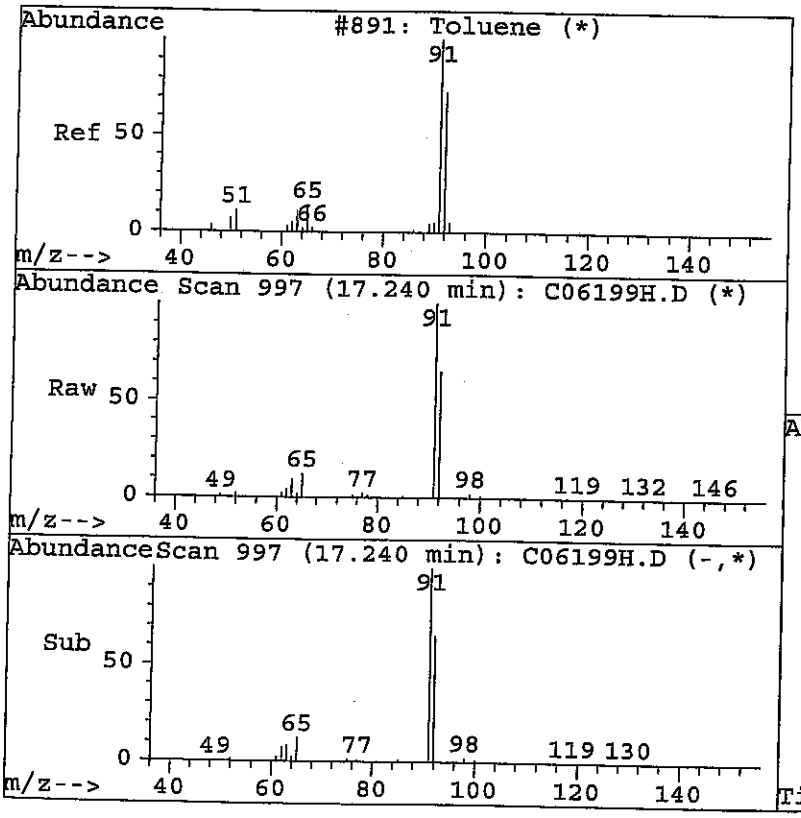


#25
cis-1,3-Dichloropropene
Concen: 0.02 ppbV
RT: 15.99 min Scan# 950
Delta R.T. 0.03 min
Lab File: C06199H.D
Acq: 19 Jun 109 6:46 pm

Tgt Ion:75 Resp: 7107

Ion	Ratio	Lower	Upper
75	100		
110	17.7	16.2	24.2
0	0.0	0.0	0.0
0	0.0	0.0	0.0

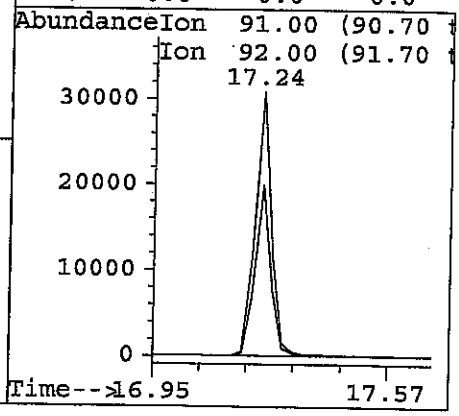


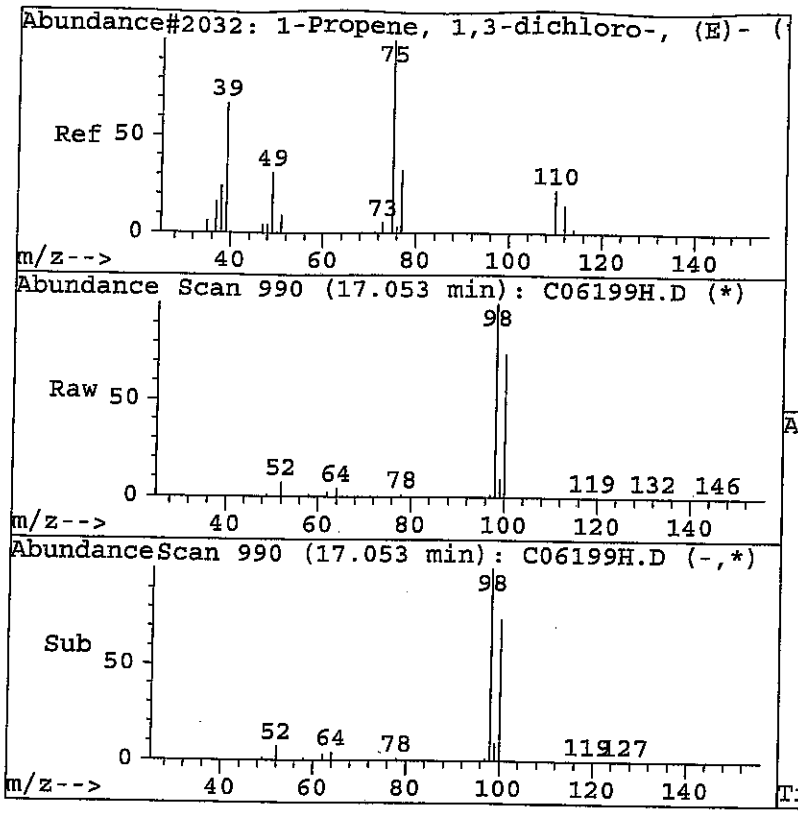


#26
Toluene
Concen: 0.05 ppbV
RT: 17.24 min Scan# 997
Delta R.T. 0.03 min
Lab File: C06199H.D
Acq: 19 Jun 109 6:46 pm

Tgt Ion:91 Resp: 90214

Ion	Ratio	Lower	Upper
91	100		
92	64.6	53.2	79.8
0	0.0	0.0	0.0
0	0.0	0.0	0.0

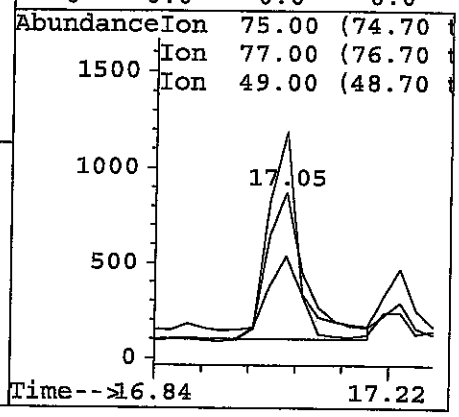


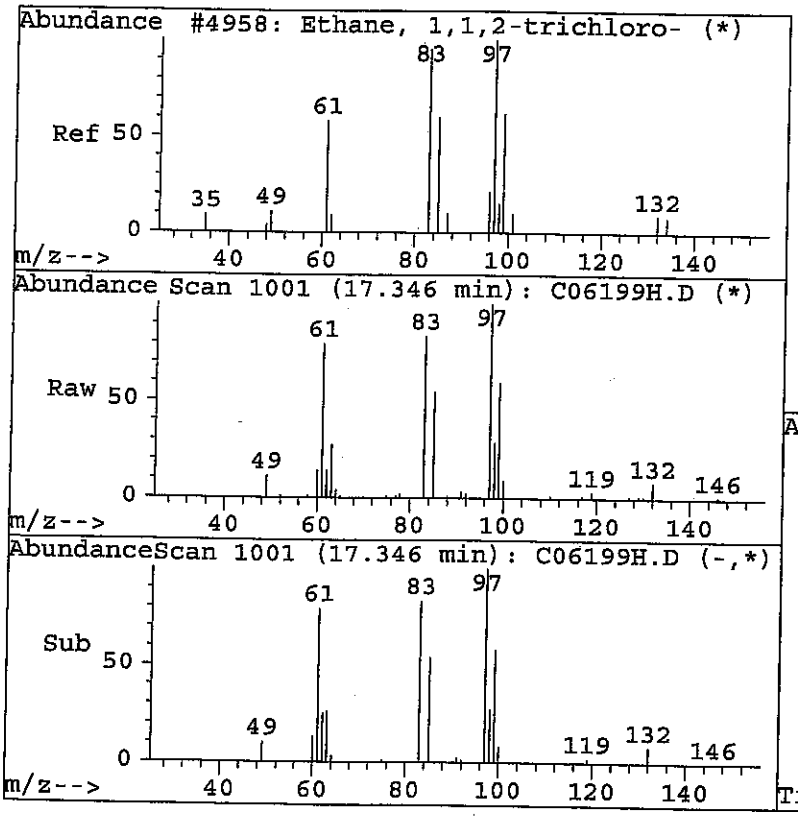


#27
trans-1,3-Dichloropropene
Concen: 0.01 ppbV
RT: 17.05 min Scan# 990
Delta R.T. 0.05 min
Lab File: C06199H.D
Acq: 19 Jun 109 6:46 pm

Tgt Ion:75 Resp: 3373

Ion	Ratio	Lower	Upper
75	100		
77	51.4	30.1	45.1#
49	145.8	44.2	66.2#
0	0.0	0.0	0.0

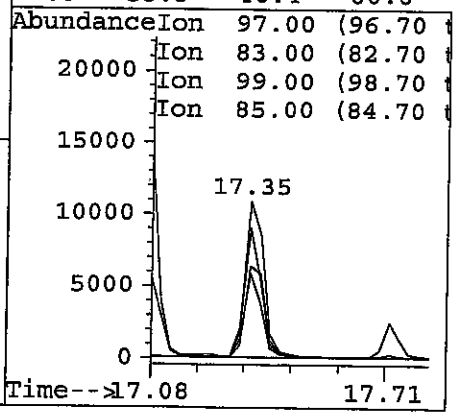


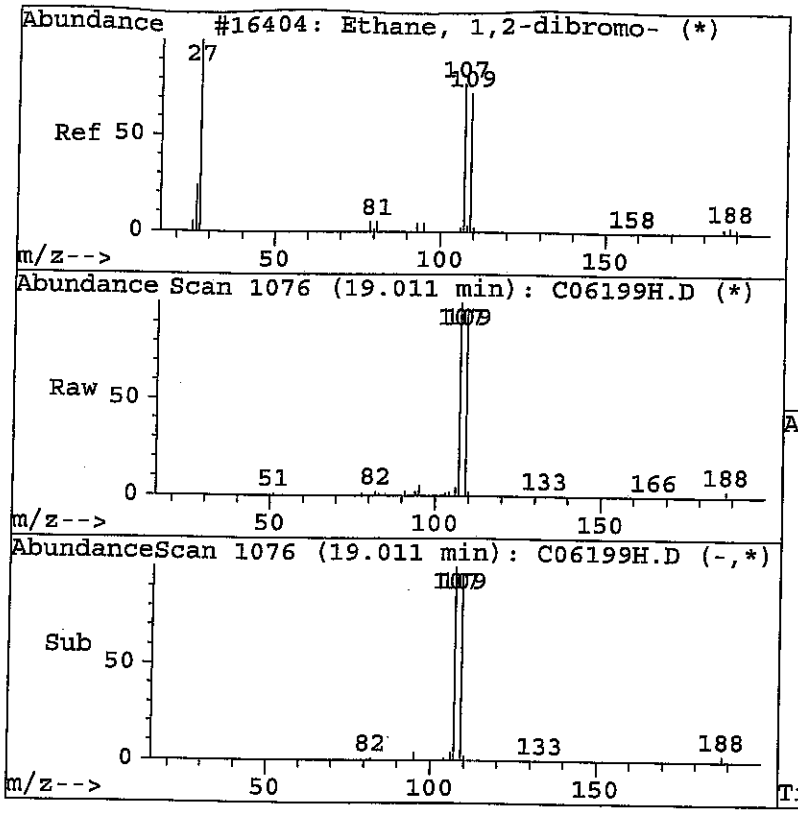


#28
1,1,2-Trichloroethane
Concen: 0.05 ppbV
RT: 17.35 min Scan# 1001
Delta R.T. -0.00 min
Lab File: C06199H.D
Acq: 19 Jun 109 6:46 pm

Tgt Ion:97 Resp: 37160

Ion	Ratio	Lower	Upper
97	100		
83	82.9	62.7	94.1
99	58.2	48.7	73.1
85	53.3	40.4	60.6

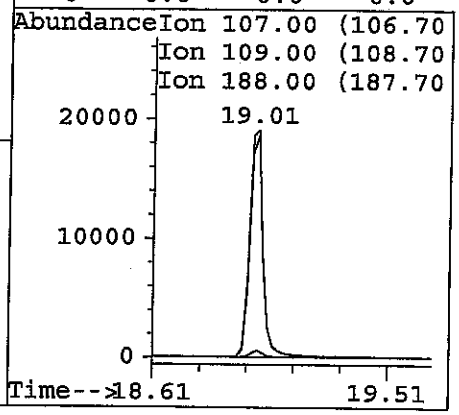


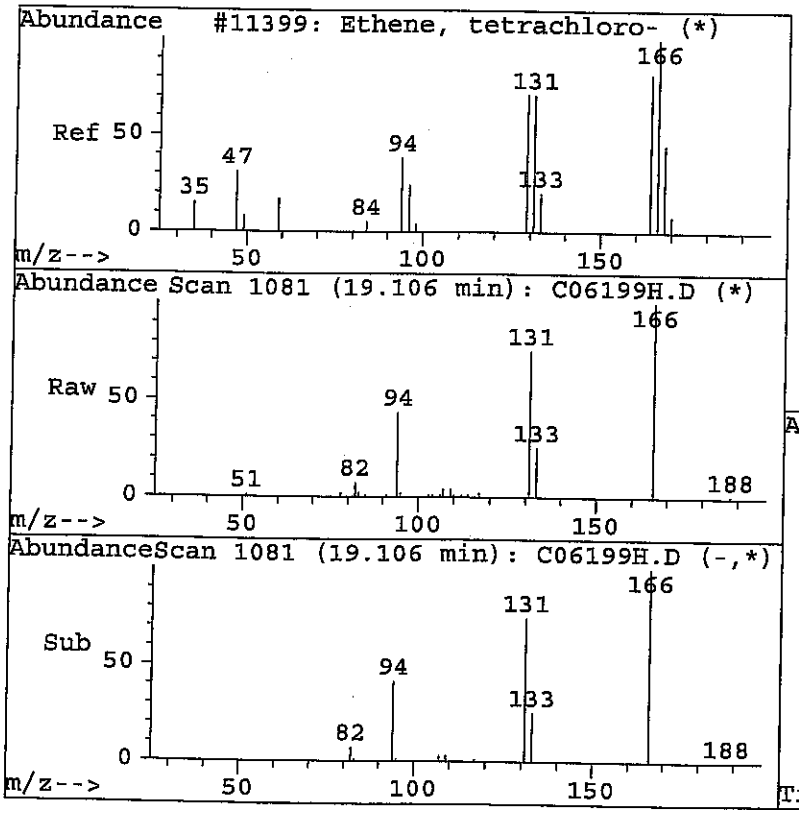


#29
1,2-Dibromoethane
Concen: 0.04 ppbV
RT: 19.01 min Scan# 1076
Delta R.T. 0.02 min
Lab File: C06199H.D
Acq: 19 Jun 109 6:46 pm

Tgt Ion:107 Resp: 67709

Ion	Ratio	Lower	Upper
107	100		
109	97.4	75.9	113.9
188	2.8	1.7	2.5#
0	0.0	0.0	0.0

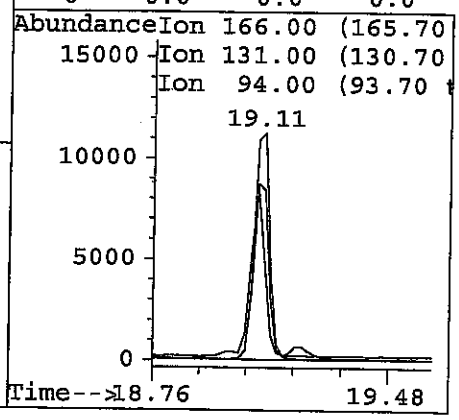


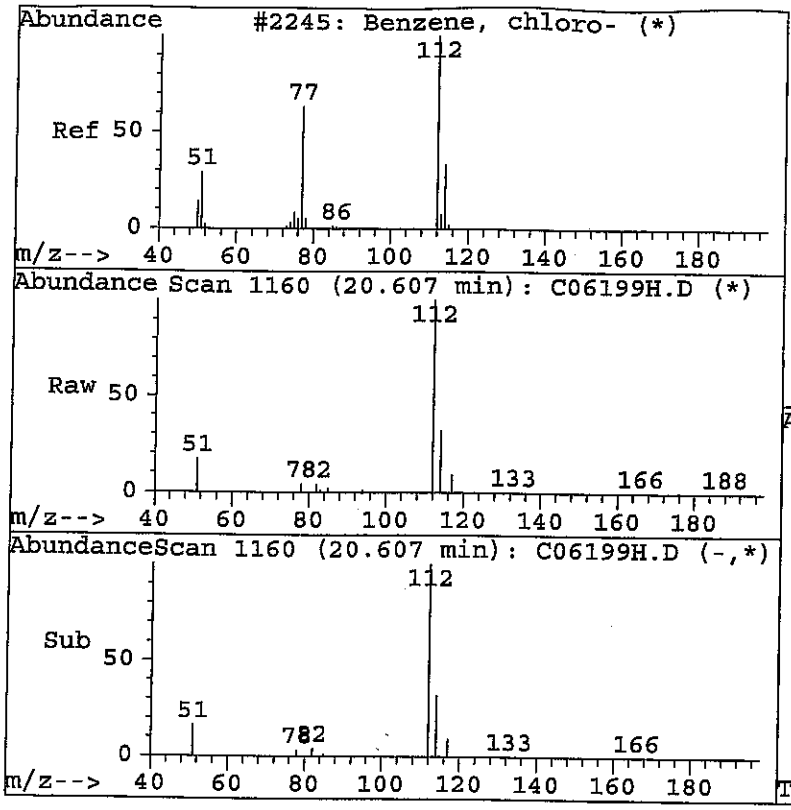


#30
Tetrachloroethene
Concen: 0.06 ppbV
RT: 19.11 min Scan# 1081
Delta R.T. 0.02 min
Lab File: C06199H.D
Acq: 19 Jun 109 6:46 pm

Tgt Ion:166 Resp: 35806

Ion	Ratio	Lower	Upper
166	100		
131	74.3	64.4	96.6
94	40.5	53.6	80.4#
0	0.0	0.0	0.0

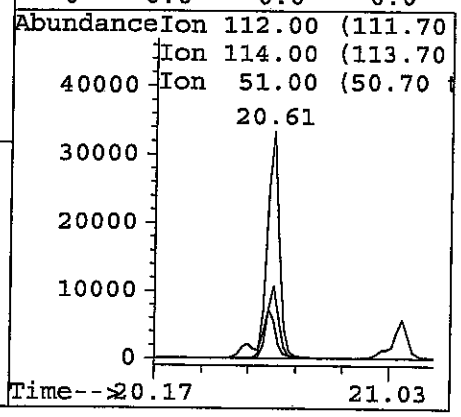


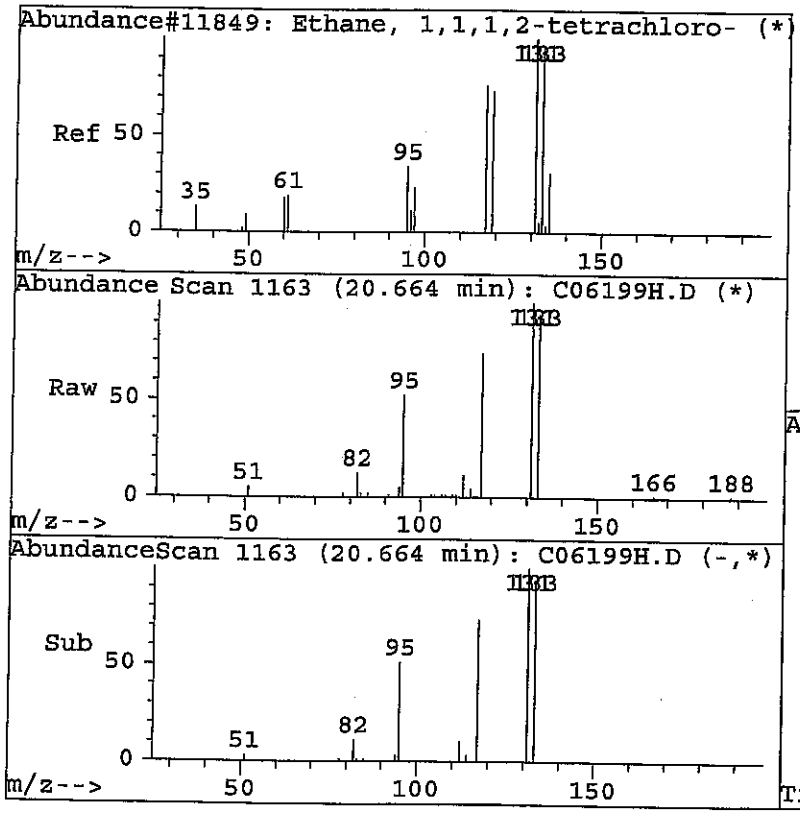


#31
Chlorobenzene
Concen: 0.05 ppbV
RT: 20.61 min Scan# 1160
Delta R.T. 0.02 min
Lab File: C06199H.D
Acq: 19 Jun 109 6:46 pm

Tgt Ion:112 Resp: 104021

Ion	Ratio	Lower	Upper
112	100		
114	31.9	26.6	39.8
51	16.1	12.4	18.6
0	0.0	0.0	0.0

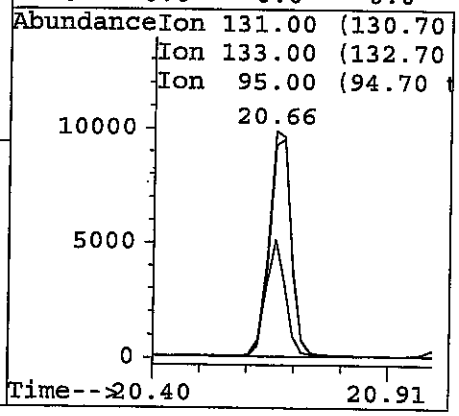


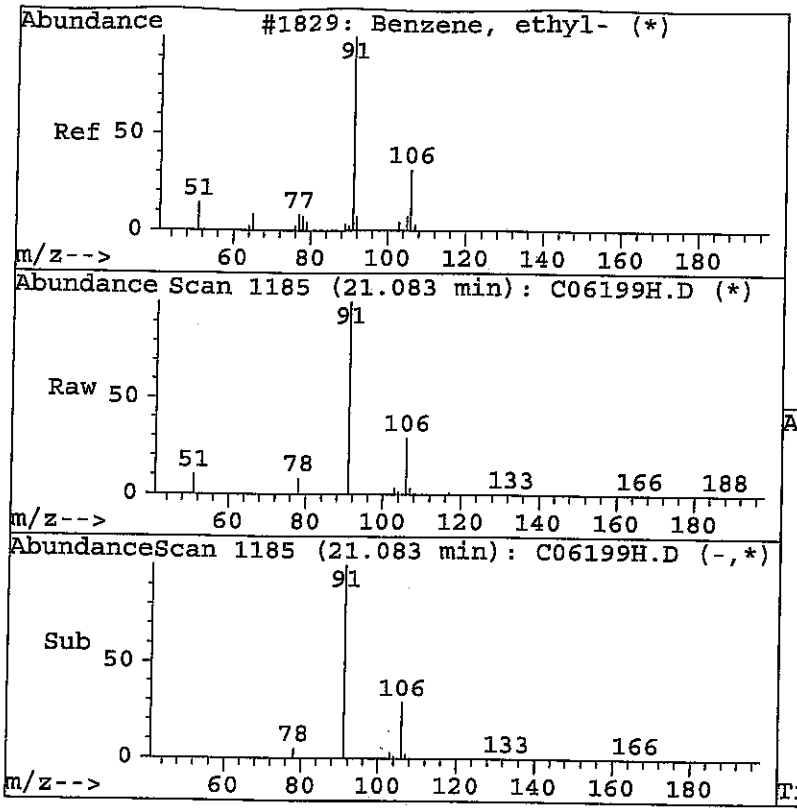


#32
1,1,1,2-Tetrachloroethane
Concen: 0.05 ppbV
RT: 20.66 min Scan# 1163
Delta R.T. -0.01 min
Lab File: C06199H.D
Acq: 19 Jun 109 6:46 pm

Tgt Ion:131 Resp: 32649

Ion	Ratio	Lower	Upper
131	100		
133	93.6	76.6	114.8
95	51.3	38.7	58.1
0	0.0	0.0	0.0

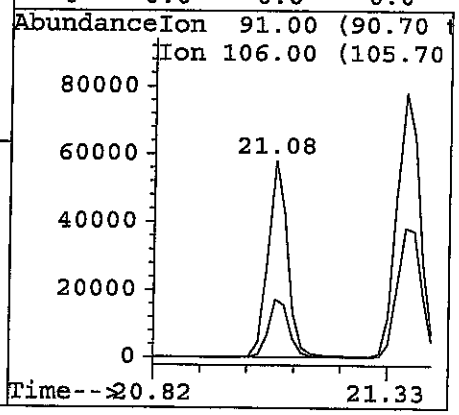


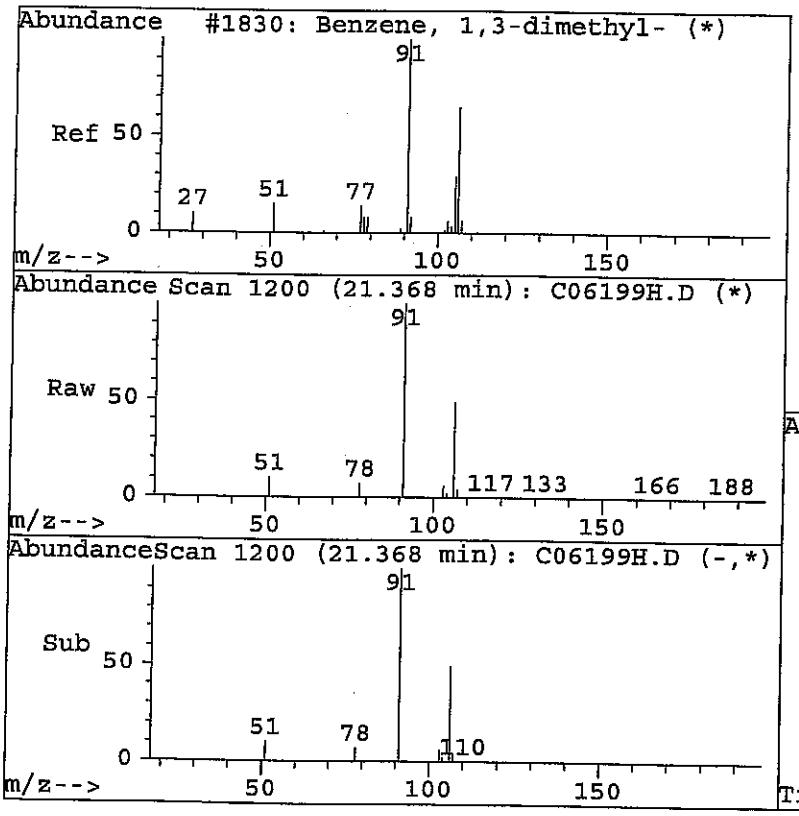


#33
Ethylbenzene
Concen: 0.05 ppbV
RT: 21.08 min Scan# 1185
Delta R.T. 0.00 min
Lab File: C06199H.D
Acq: 19 Jun 109 6:46 pm

Tgt Ion:91 Resp: 173953

Ion	Ratio	Lower	Upper
91	100		
106	29.4	24.2	36.4
0	0.0	0.0	0.0
0	0.0	0.0	0.0

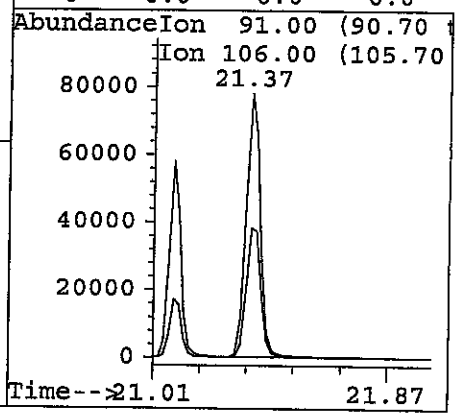


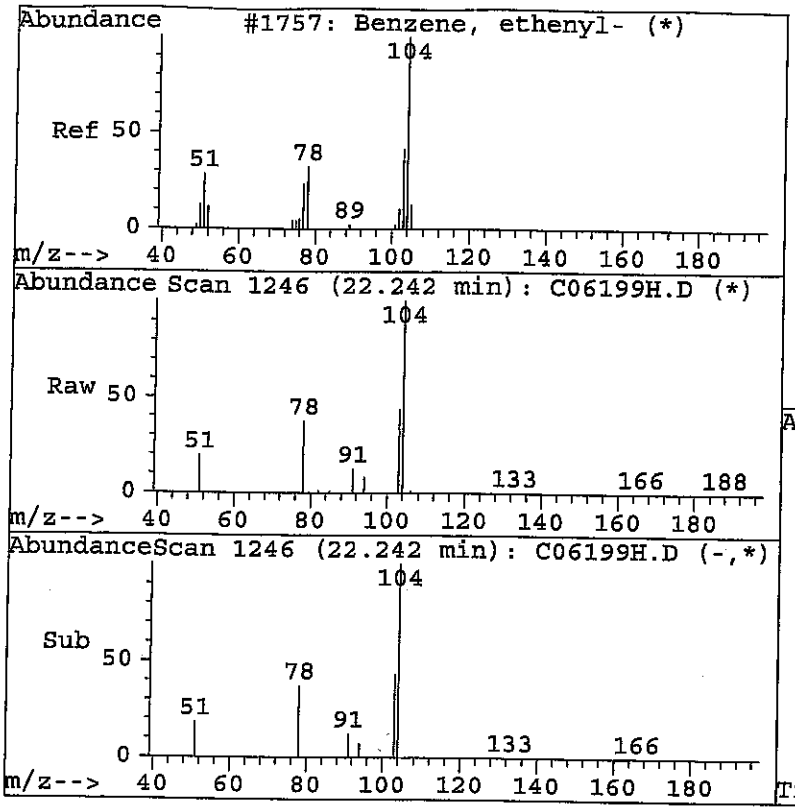


#34
m & p-Xylene
Concen: 0.10 ppbV
RT: 21.37 min Scan# 1200
Delta R.T. -0.00 min
Lab File: C06199H.D
Acq: 19 Jun 109 6:46 pm

Tgt Ion:91 Resp: 279033

Ion	Ratio	Lower	Upper
91	100		
106	49.0	41.7	62.5
0	0.0	0.0	0.0
0	0.0	0.0	0.0

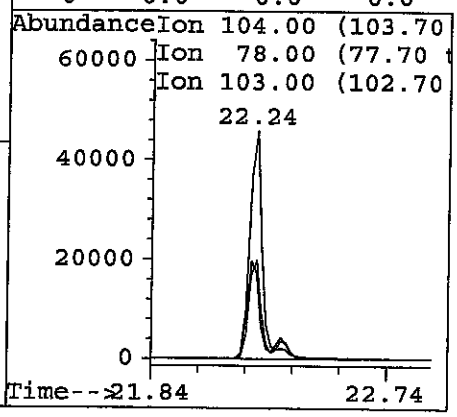


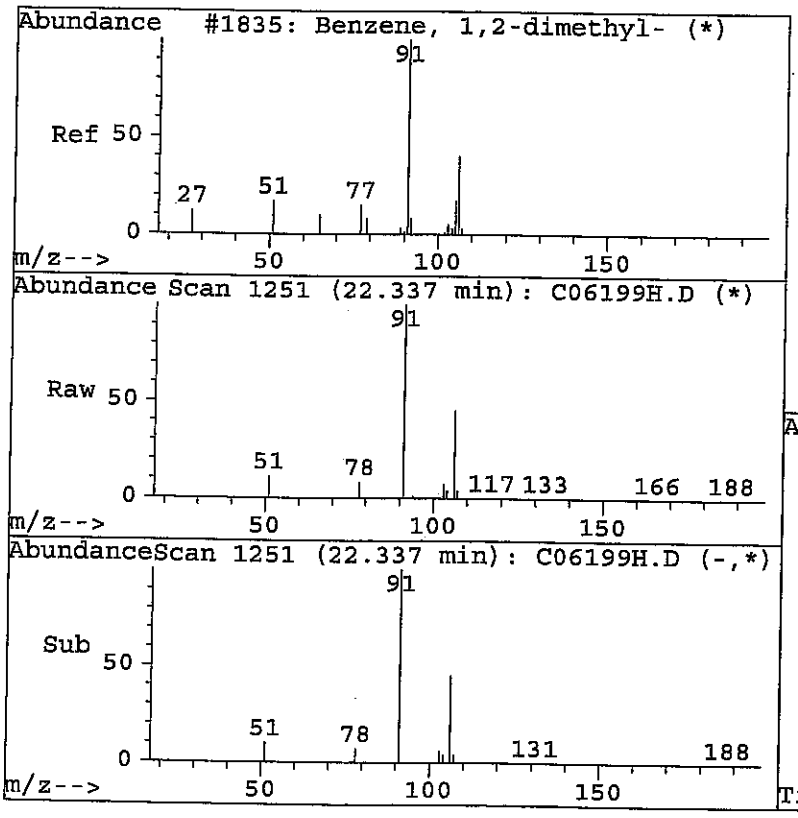


#35
Styrene
Concen: 0.05 ppbV
RT: 22.24 min Scan# 1246
Delta R.T. 0.02 min
Lab File: C06199H.D
Acq: 19 Jun 109 6:46 pm

Tgt Ion:104 Resp: 153303

Ion	Ratio	Lower	Upper
104	100		
78	37.1	28.2	42.2
103	43.1	33.8	50.6
0	0.0	0.0	0.0

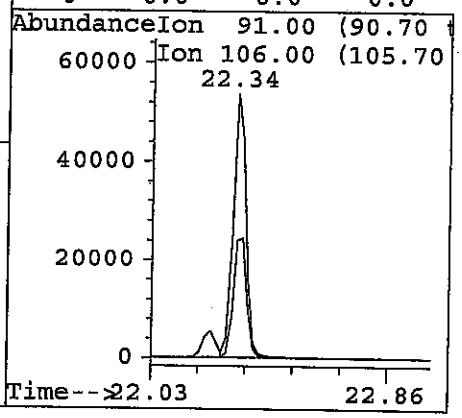


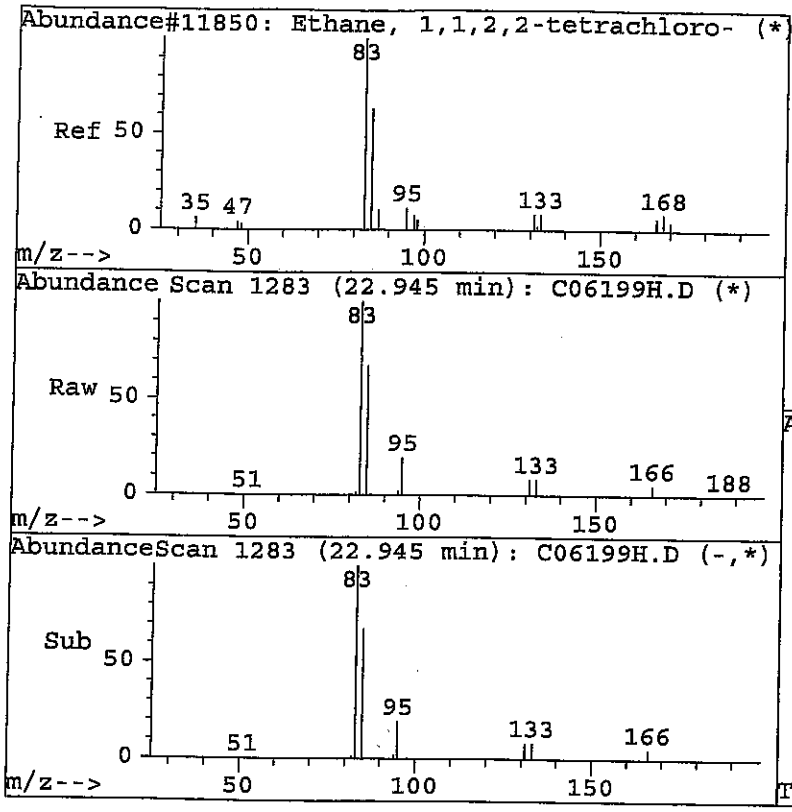


#36
o-Xylene
Concen: 0.05 ppbV
RT: 22.34 min Scan# 1251
Delta R.T. -0.00 min
Lab File: C06199H.D
Acq: 19 Jun 109 6:46 pm

Tgt Ion:91 Resp: 168269

Ion	Ratio	Lower	Upper
91	100		
106	45.0	37.5	56.3
0	0.0	0.0	0.0
0	0.0	0.0	0.0

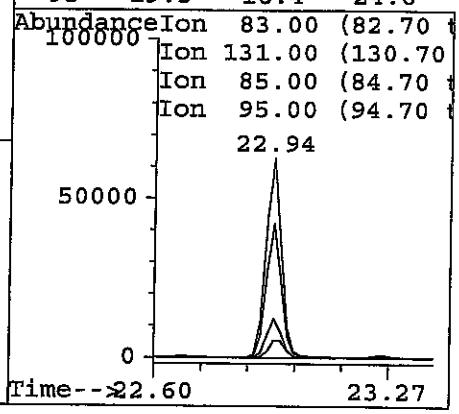


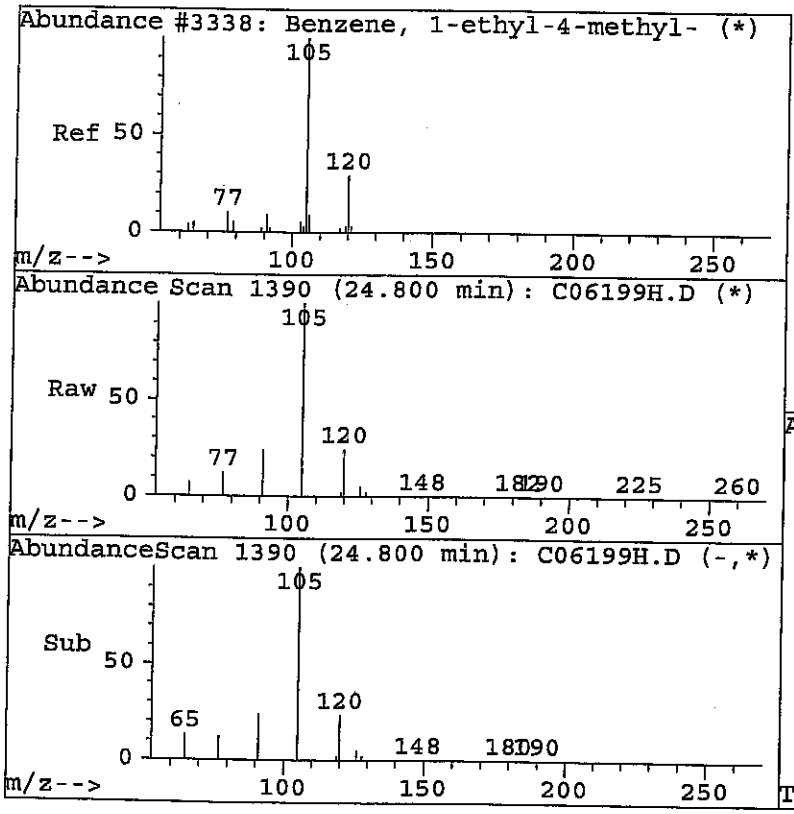


#37
1,1,2,2-Tetrachloroethane
Concen: 0.05 ppbV
RT: 22.94 min Scan# 1283
Delta R.T. 0.01 min
Lab File: C06199H.D
Acq: 19 Jun 109 6:46 pm

Tgt Ion:83 Resp: 192188

Ion	Ratio	Lower	Upper
83	100		
131	8.3	7.8	11.6
85	67.3	55.5	83.3
95	19.3	16.4	24.6

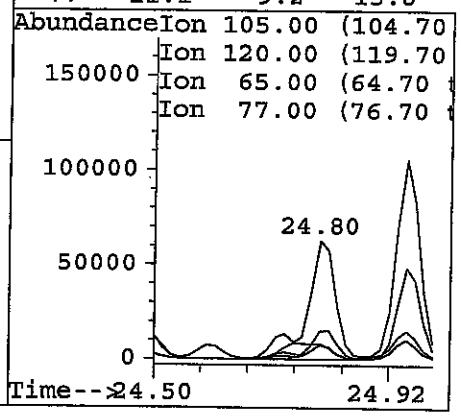


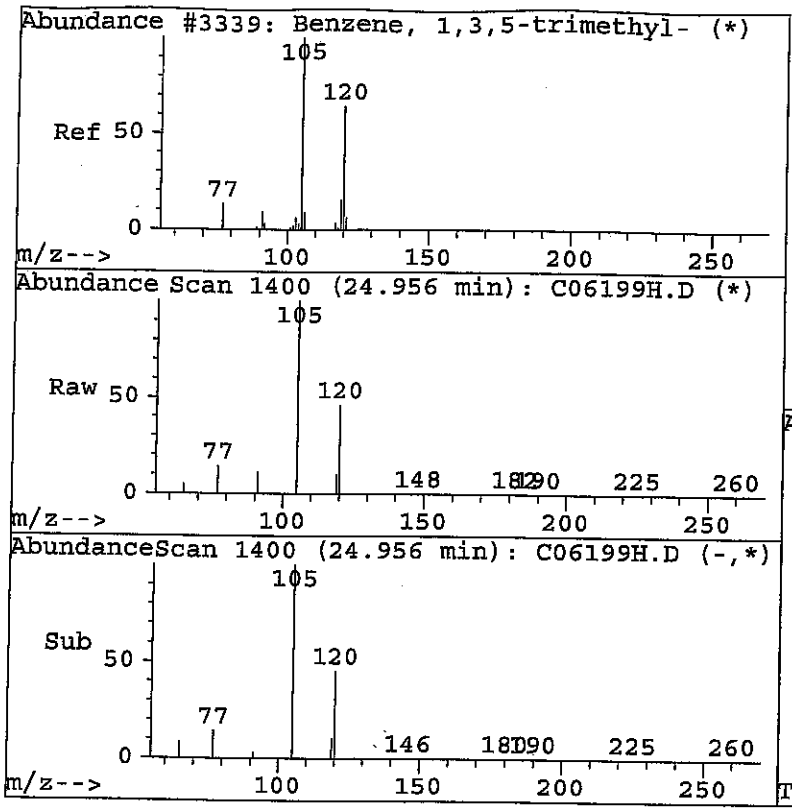


#38
4-Ethyltoluene
Concen: 0.03 ppbV
RT: 24.80 min Scan# 1390
Delta R.T. -0.00 min
Lab File: C06199H.D
Acq: 19 Jun 109 6:46 pm

Tgt Ion:105 Resp: 228508

Ion	Ratio	Lower	Upper
105	100		
120	23.4	19.6	29.4
65	9.7	9.1	13.7
77	11.1	9.2	13.8

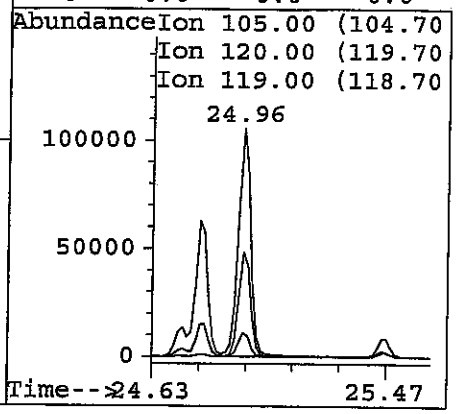


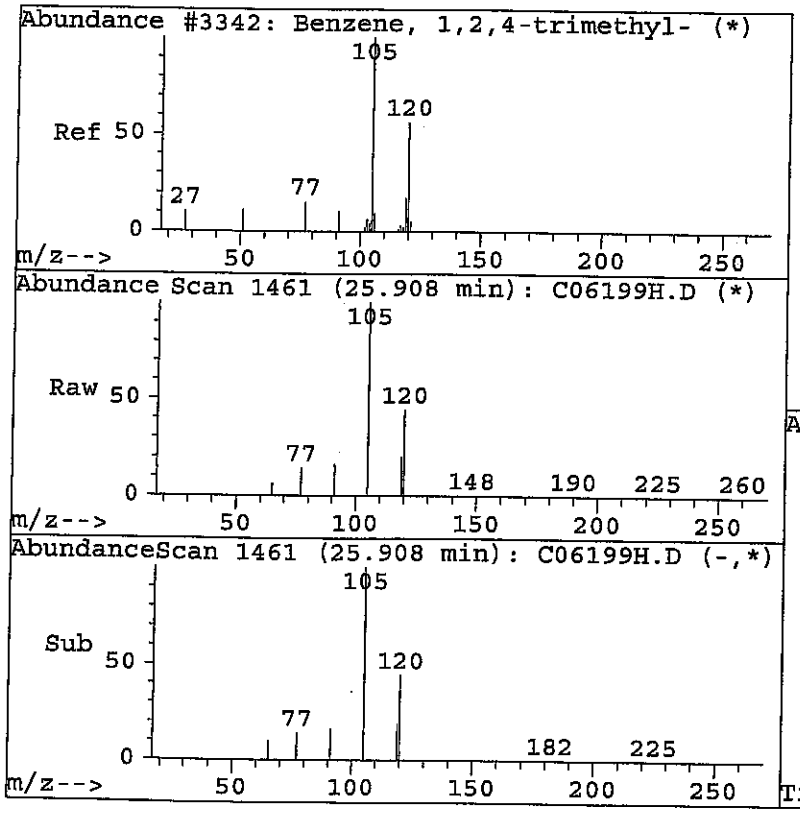


#39
1,3,5-Trimethylbenzene
Concen: 0.05 ppbV
RT: 24.96 min Scan# 1400
Delta R.T. -0.00 min
Lab File: C06199H.D
Acq: 19 Jun 109 6:46 pm

Tgt Ion:105 Resp: 323037

Ion	Ratio	Lower	Upper
105	100		
120	46.1	38.6	57.8
119	10.4	8.6	13.0
0	0.0	0.0	0.0

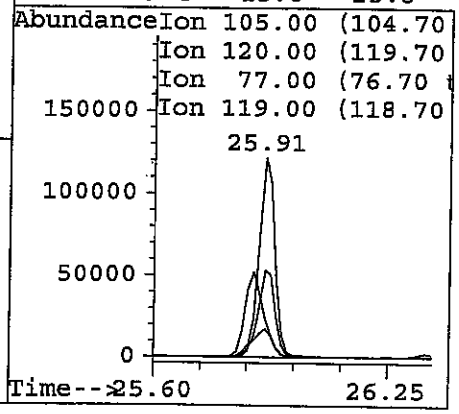


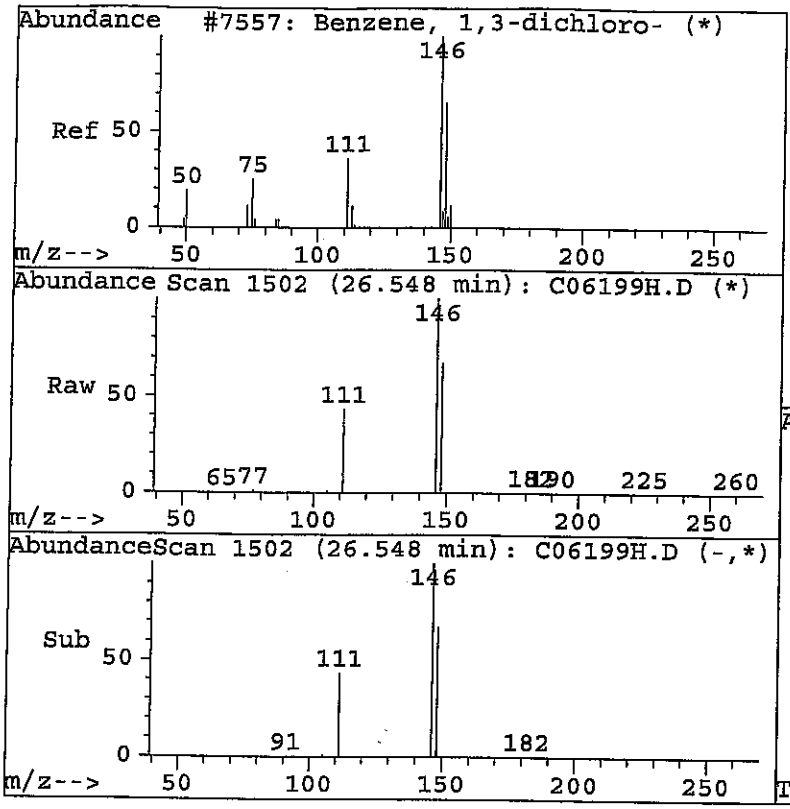


#40
1,2,4-Trimethylbenzene
Concen: 0.05 ppbV
RT: 25.91 min Scan# 1461
Delta R.T. -0.00 min
Lab File: C06199H.D
Acq: 19 Jun 109 6:46 pm

Tgt Ion:105 Resp: 373791

Ion	Ratio	Lower	Upper
105	100		
120	43.7	36.1	54.1
77	14.2	11.7	17.5
119	19.4	15.8	23.8

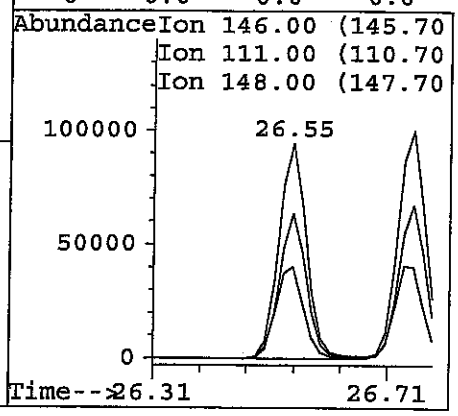


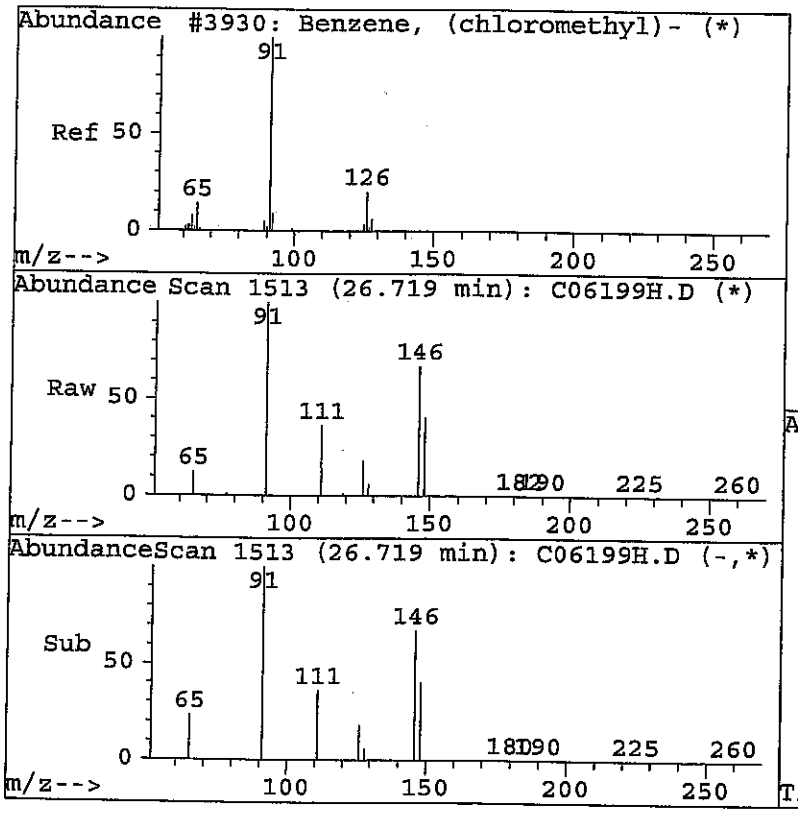


#41
1,3-Dichlorobenzene
Concen: 0.05 ppbV
RT: 26.55 min Scan# 1502
Delta R.T. -0.00 min
Lab File: C06199H.D
Acq: 19 Jun 109 6:46 pm

Tgt Ion:146 Resp: 303170

Ion	Ratio	Lower	Upper
146	100		
111	42.6	34.7	52.1
148	67.2	55.0	82.4
0	0.0	0.0	0.0

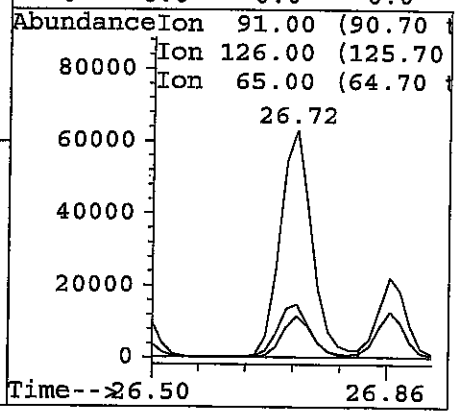


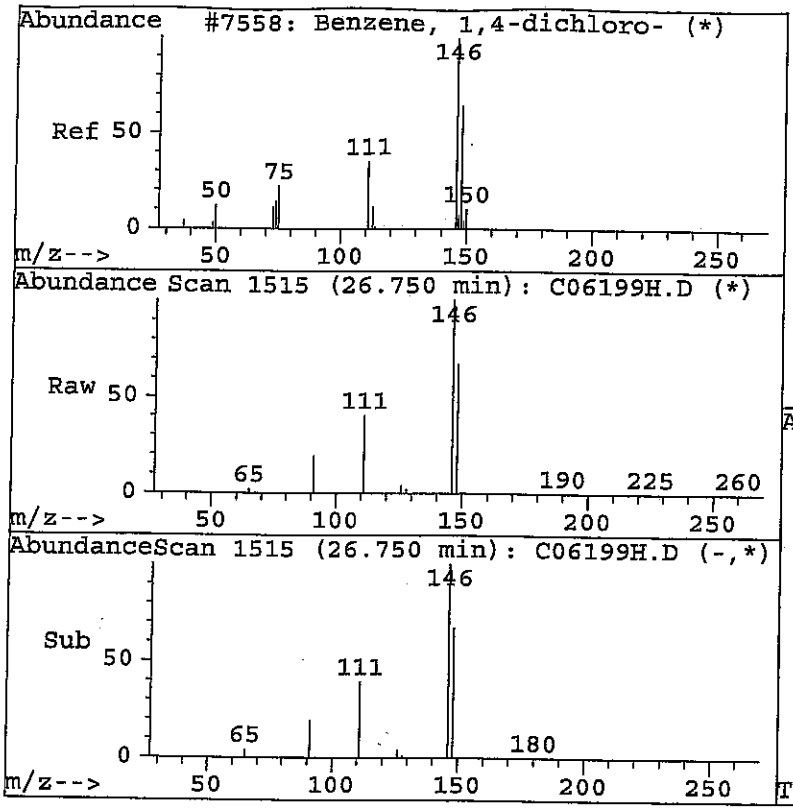


#42
Benzyl chloride
Concen: 0.04 ppbV
RT: 26.72 min Scan# 1513
Delta R.T. 0.02 min
Lab File: C06199H.D
Acq: 19 Jun 109 6:46 pm

Tgt Ion:91 Resp: 210430

Ion	Ratio	Lower	Upper
91	100		
126	18.5	15.4	23.0
65	22.7	18.6	27.8
0	0.0	0.0	0.0

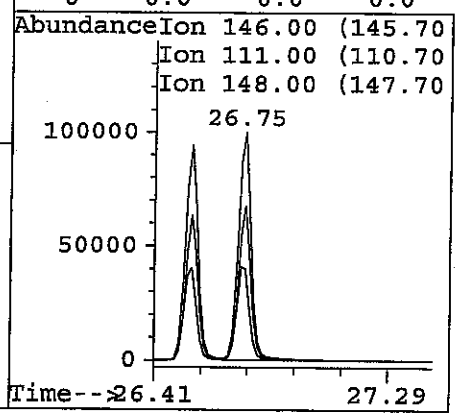


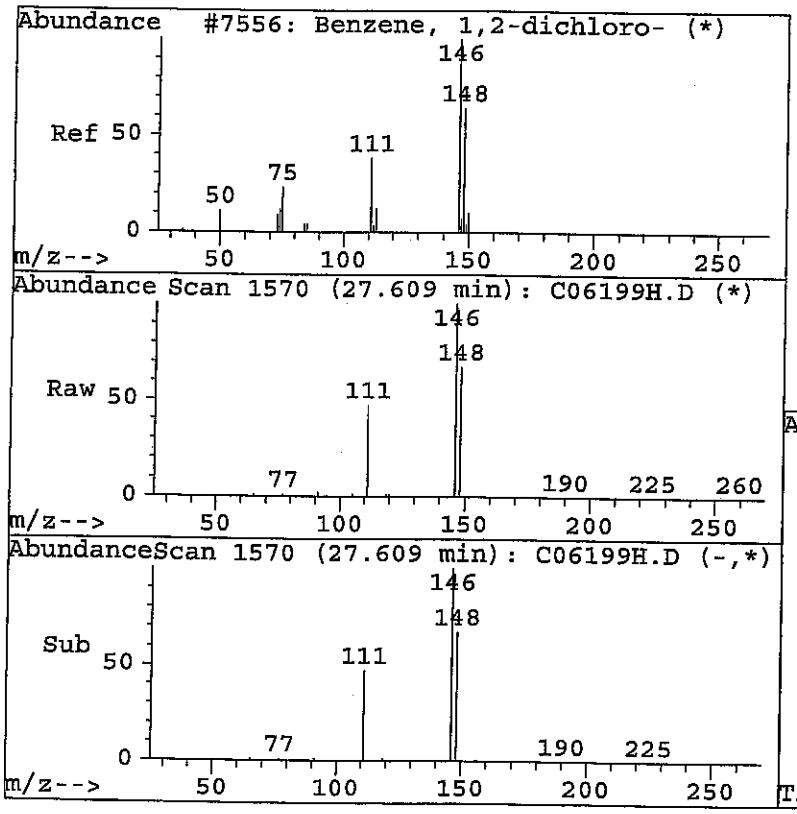


#43
1,4-Dichlorobenzene
Concen: 0.06 ppbV
RT: 26.75 min Scan# 1515
Delta R.T. 0.00 min
Lab File: C06199H.D
Acq: 19 Jun 109 6:46 pm

Tgt Ion:146 Resp: 331504

Ion	Ratio	Lower	Upper
146	100		
111	39.9	32.4	48.6
148	67.4	55.3	82.9
0	0.0	0.0	0.0

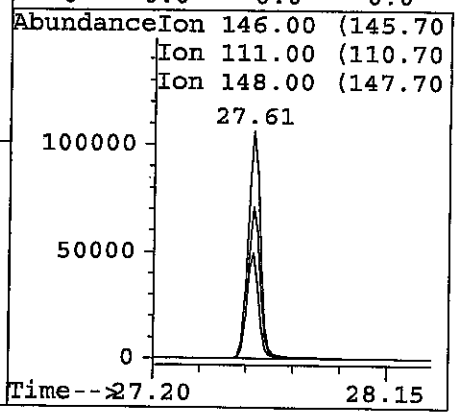


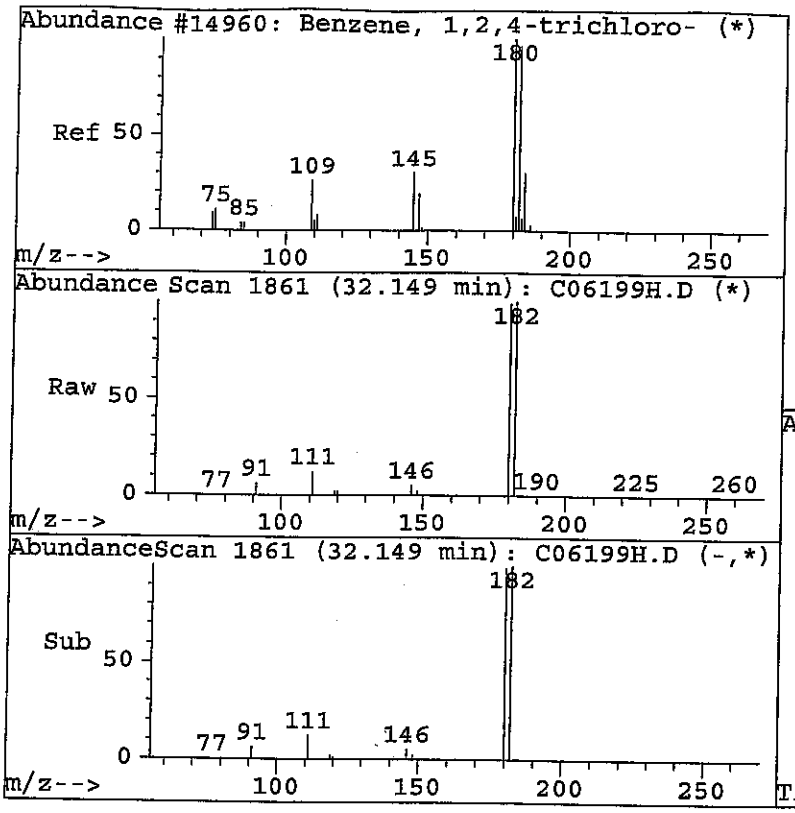


#44
1,2-Dichlorobenzene
Concen: 0.05 ppbV
RT: 27.61 min Scan# 1570
Delta R.T. -0.00 min
Lab File: C06199H.D
Acq: 19 Jun 109 6:46 pm

Tgt Ion:146 Resp: 359724

Ion	Ratio	Lower	Upper
146	100		
111	46.6	38.2	57.2
148	66.9	54.6	81.8
0	0.0	0.0	0.0

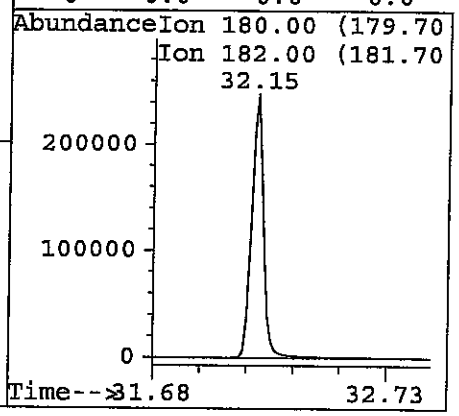


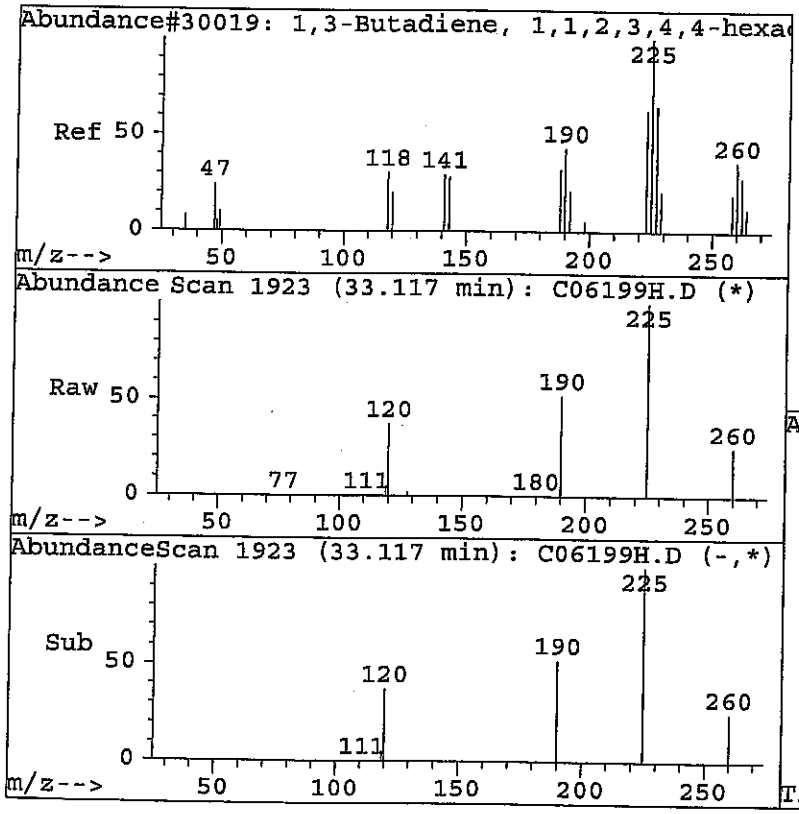


#45
1,2,4-Trichlorobenzene
Concen: 0.06 ppbV
RT: 32.15 min Scan# 1861
Delta R.T. -0.02 min
Lab File: C06199H.D
Acq: 19 Jun 109 6:46 pm

Tgt Ion:180 Resp: 918959

Ion	Ratio	Lower	Upper
180	100		
182	100.7	79.0	118.4
0	0.0	0.0	0.0
0	0.0	0.0	0.0

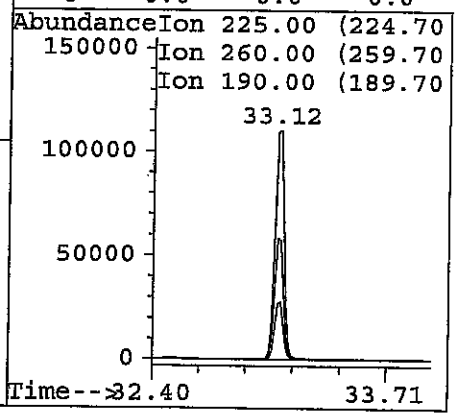


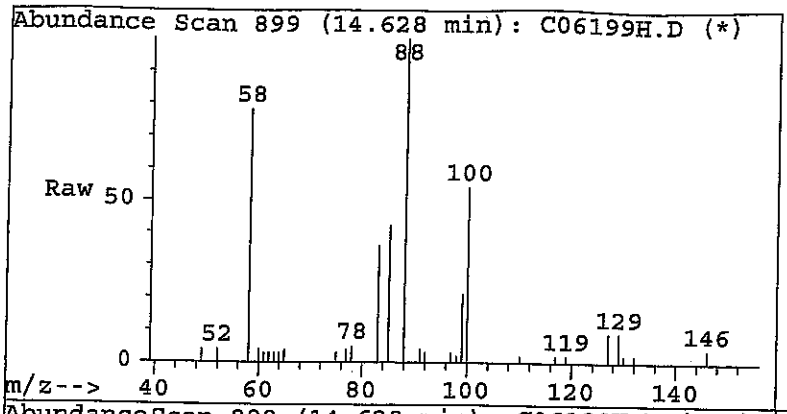


#46
Hexachlorobutadiene
Concen: 0.05 ppbV
RT: 33.12 min Scan# 1923
Delta R.T. -0.01 min
Lab File: C06199H.D
Acq: 19 Jun 109 6:46 pm

Tgt Ion:225 Resp: 386167

Ion	Ratio	Lower	Upper
225	100		
260	25.1	20.5	30.7
190	51.7	43.0	64.4
0	0.0	0.0	0.0

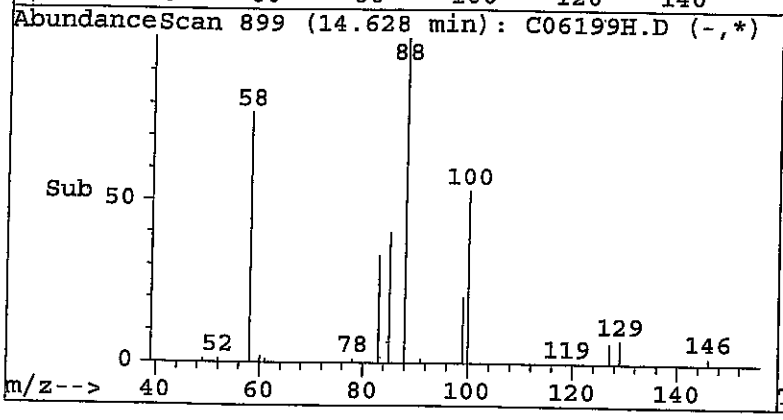


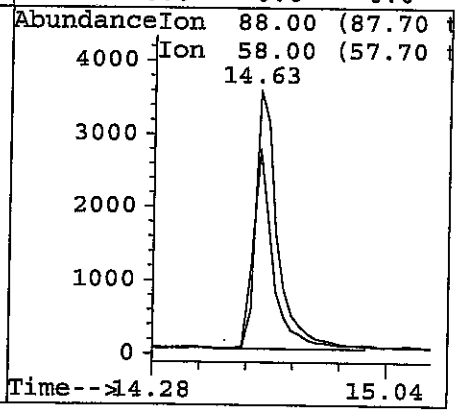


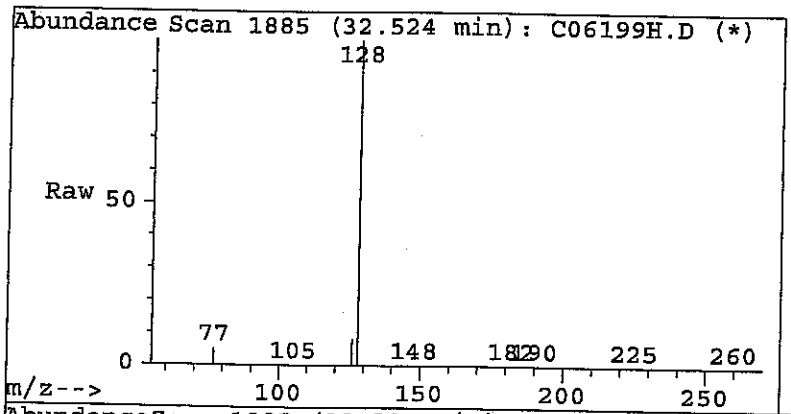
#47
1,4 Dioxane
Concen: 0.04 ppbV
RT: 14.63 min Scan# 899
Delta R.T. 0.06 min
Lab File: C06199H.D
Acq: 19 Jun 109 6:46 pm

Tgt Ion:88 Resp: 17449

Ion	Ratio	Lower	Upper
88	100		
58	70.1	54.9	82.3
0	0.0	0.0	0.0
0	0.0	0.0	0.0



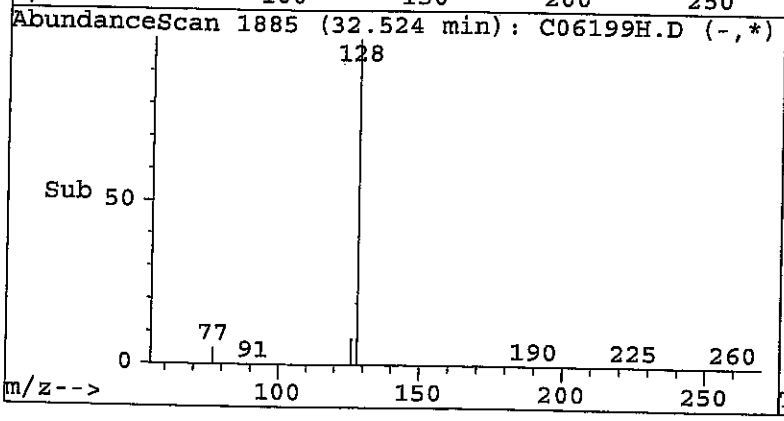


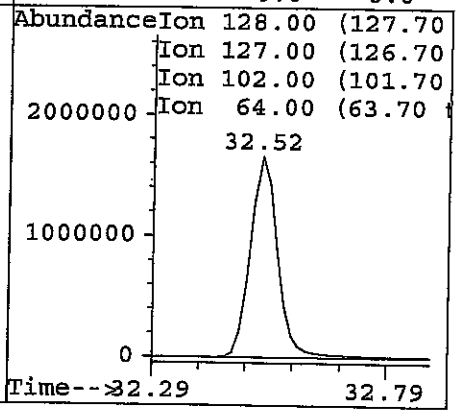


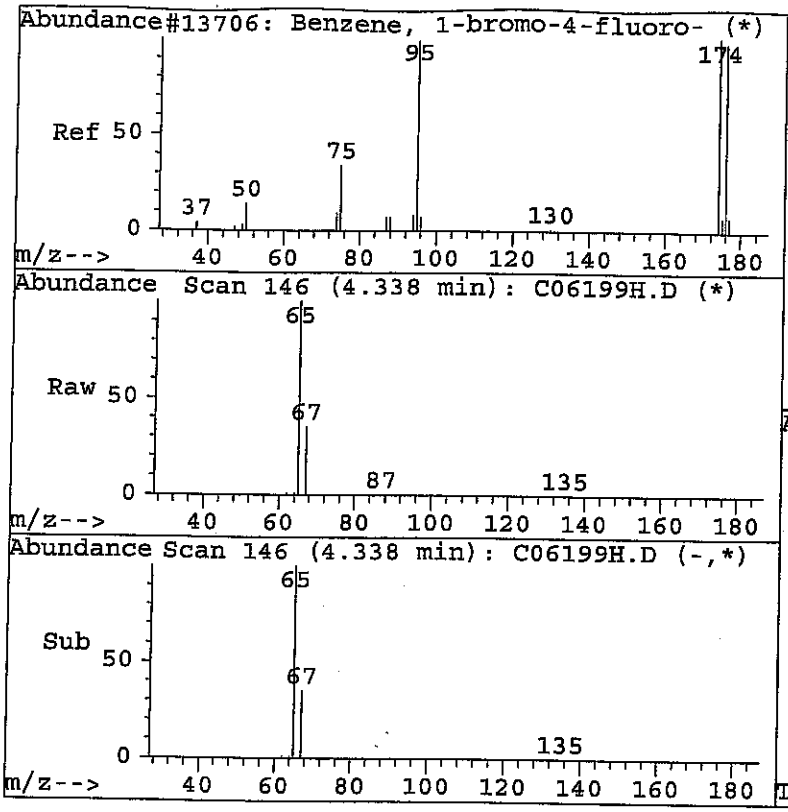
#48
Naphthalene
Concen: 0.16 ppbV m
RT: 32.52 min Scan# 1885
Delta R.T. -0.26 min
Lab File: C06199H.D
Acq: 19 Jun 109 6:46 pm

Tgt Ion:128 Resp: 6597377

Ion	Ratio	Lower	Upper
128	100		
127	0.0	0.0	0.0
102	0.0	0.0	0.0
64	0.0	0.0	0.0



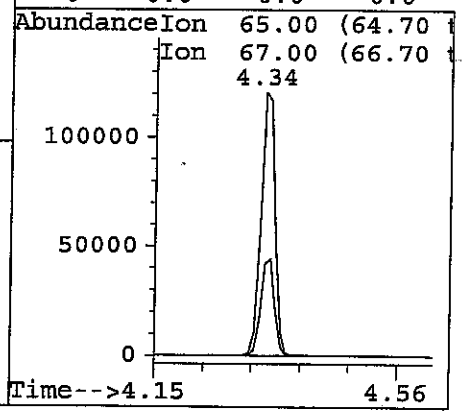




#49
Vinyl Chloride-d3
Concen: 0.16 ppbV
RT: 4.34 min Scan# 146
Delta R.T. -0.01 min
Lab File: C06199H.D
Acq: 19 Jun 109 6:46 pm

Tgt Ion:65 Resp: 193684

Ion	Ratio	Lower	Upper
65	100		
67	34.7	26.6	40.0
0	0.0	0.0	0.0
0	0.0	0.0	0.0



Quantitation Report

Data File : C:\MSCHEM\2\DATA\06199MS2\C06199K.D
Acq Time : 19 Jun 109 9:02 pm
Sample : ST60032 + ST60250
Misc : 1.0 ML
Quant Time: Jun 22 9:04 19109

Operator: CM
Inst : MS2
Multiplr: 1.00

Method : C:\MSCHEM\2\METHODS\2EXSIM_I.M
Title : EPA T0-15
Last Update : Mon Jun 22 09:18:18 2009
Response via : Multiple Level Calibration

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Chlorobenzene-d5	20.51	117	927887	0.20 ppbV	0.00
System Monitoring Compounds					%Recovery
16) Toluene-d8	17.05	98	395034	0.20 ppbV	
49) Vinyl Chloride-d3	4.35	65	161846	0.20 ppbV	
Target Compounds					Qvalue
2) Dichlorodifluoromethane	3.85	85	64289	0.11 ppbV m	0
3) Chloromethane	4.12	50	27154	0.10 ppbV m	44
4) Freon 114	4.12	85	62110	0.11 ppbV	97
5) Vinyl chloride	4.36	62	19936	0.10 ppbV #	77
6) Bromomethane	4.97	94	19683	0.11 ppbV m	96
7) Chloroethane	5.18	64	15560	0.09 ppbV	99
8) Trichlorofluoromethane	5.98	101	72646	0.11 ppbV	98
9) 1,1-Dichloroethene	6.96	61	40726	0.10 ppbV	94
10) Freon 113	7.19	151	30309	0.10 ppbV	98
11) Dichloromethane	7.43	84	19971	0.10 ppbV	96
12) trans-1,2-Dichloroethene	8.50	96	16643	0.07 ppbV	94
13) Methyl tert butyl ether	8.66	73	44883	0.06 ppbV #	89
14) 1,1-Dichloroethane	9.04	63	43151	0.10 ppbV	97
15) cis-1,2-Dichloroethene	10.26	96	27004	0.10 ppbV	94
17) Chloroform	10.68	83	57851	0.10 ppbV	97
18) 1,1,1-Trichloroethane	11.91	97	61727	0.10 ppbV #	95
19) 1,2-Dichloroethane	12.04	62	97954	0.09 ppbV	97
20) Benzene	12.66	78	73510	0.09 ppbV	98
21) Carbon tetrachloride	12.68	117	53667	0.10 ppbV	98
22) 1,2-Dichloropropane	14.20	63	27080	0.09 ppbV	93
23) Trichloroethene	14.26	130	33459	0.09 ppbV #	80
24) Bromodichloromethane	14.58	83	43188	0.07 ppbV	100
25) cis-1,3-Dichloropropene	15.99	75	7561	0.03 ppbV	94
26) Toluene	17.24	91	102952	0.08 ppbV	97
27) trans-1,3-Dichloropropene	17.05	75	2820	0.01 ppbV #	59
28) 1,1,2-Trichloroethane	17.35	97	43484	0.08 ppbV	91
29) 1,2-Dibromoethane	18.99	107	79525	0.08 ppbV	98
30) Tetrachloroethene	19.09	166	38753	0.09 ppbV	97
31) Chlorobenzene	20.61	112	105228	0.08 ppbV	99
32) 1,1,1,2-Tetrachloroethane	20.67	131	37246	0.07 ppbV	95
33) Ethylbenzene	21.08	91	181776	0.08 ppbV	95
34) m & p-Xylene	21.37	91	284680	0.16 ppbV	94
35) Styrene	22.22	104	150847	0.07 ppbV #	93
36) o-Xylene	22.34	91	166711	0.07 ppbV	94
37) 1,1,2,2-Tetrachloroethane	22.95	83	180334	0.07 ppbV	96
38) 4-Ethyltoluene	24.80	105	217540	0.05 ppbV	99
39) 1,3,5-Trimethylbenzene	24.96	105	280478	0.07 ppbV	96
40) 1,2,4-Trimethylbenzene	25.91	105	315230	0.06 ppbV	96
41) 1,3-Dichlorobenzene	26.55	146	243933	0.07 ppbV	97
42) Benzyl chloride	26.70	91	191598	0.05 ppbV	97
43) 1,4-Dichlorobenzene	26.74	146	271163	0.07 ppbV	97
44) 1,2-Dichlorobenzene	27.61	146	288406	0.06 ppbV	97
45) 1,2,4-Trichlorobenzene	32.15	180	617532	0.06 ppbV	99
46) Hexachlorobutadiene	33.10	225	269777	0.05 ppbV	98
47) 1,4 Dioxane	14.63	88	26330	0.09 ppbV	93
48) Naphthalene	32.52	128	4780301	0.10 ppbV m	0

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

Quantitation Report

Data File : C:\MSCHEM\2\DATA\06199MS2\C06199K.D
Acq Time : 19 Jun 109 9:02 pm
Sample : ST60032 + ST60250
Misc : 1.0 ML
Quant Time: Jun 22 9:04 19109

Operator: CM
Inst : MS2
Multiplr: 1.00

Method : C:\MSCHEM\2\METHODS\2EXSIM_I.M
Title : EPA T0-15
Last Update : Mon Jun 22 09:18:18 2009
Response via : Multiple Level Calibration

Compound	R.T.	QIon	Response	Conc Unit	Qvalue

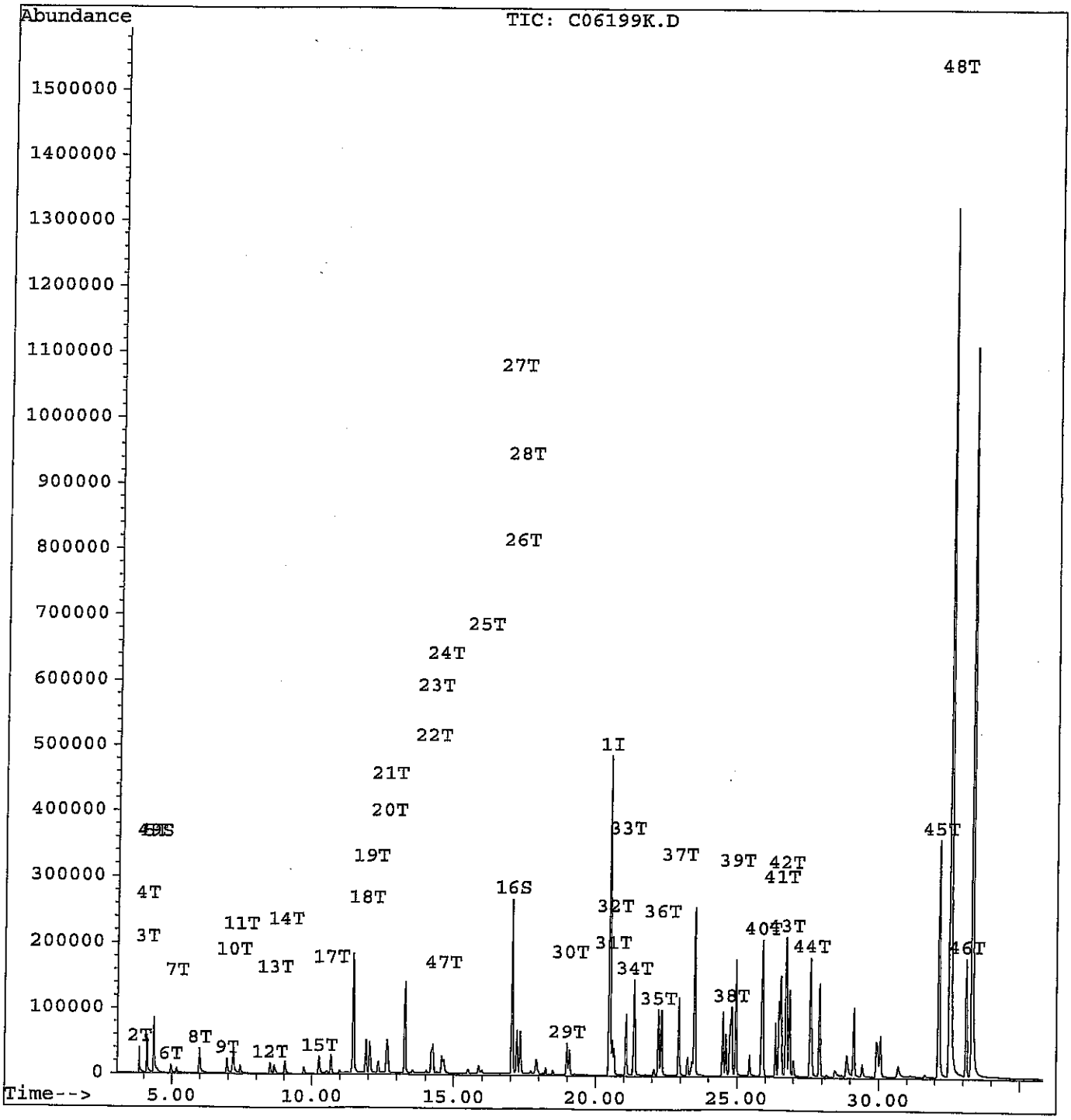
(#) = qualifier out of range (m) = manual integration

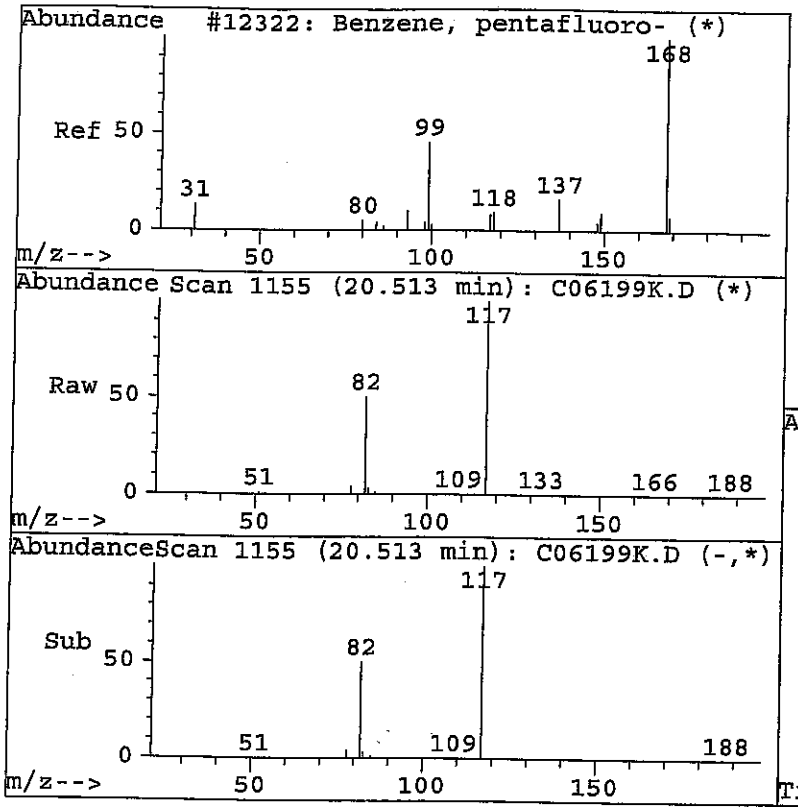
Quantitation Report

Data File : C:\MSCHEM\2\DATA\06199MS2\C06199K.D
Acq Time : 19 Jun 109 9:02 pm
Sample : ST60032 + ST60250
Misc : 1.0 ML
Quant Time: Jun 22 9:04 19109

Operator: CM
Inst : MS2
Multiplr: 1.00

Method : C:\MSCHEM\2\METHODS\2EXSIM_I.M
Title : EPA T0-15
Last Update : Mon Jun 22 09:18:18 2009
Response via : Multiple Level Calibration

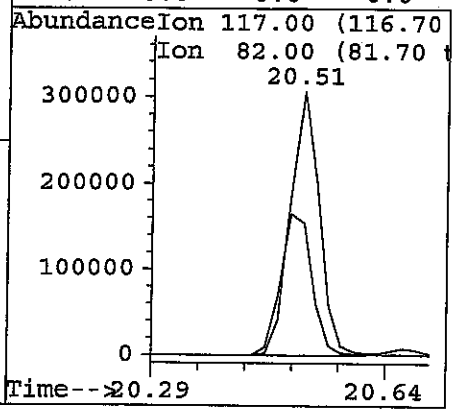


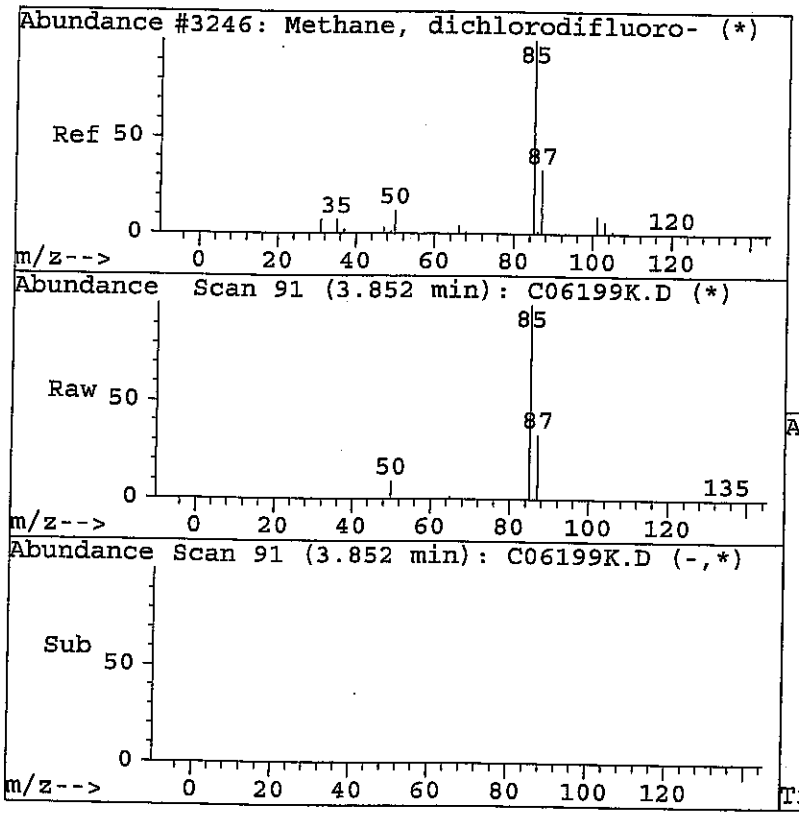


#1
Chlorobenzene-d5
Concen: 0.20 ppbV
RT: 20.51 min Scan# 1155
Delta R.T. 0.00 min
Lab File: C06199K.D
Acq: 19 Jun 109 9:02 pm

Tgt Ion:117 Resp: 927887

Ion	Ratio	Lower	Upper
117	100		
82	50.2	43.4	65.0
0	0.0	0.0	0.0
0	0.0	0.0	0.0

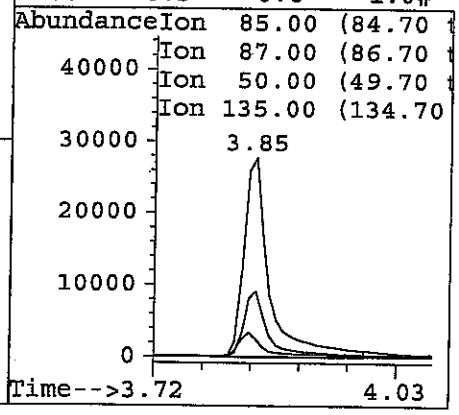


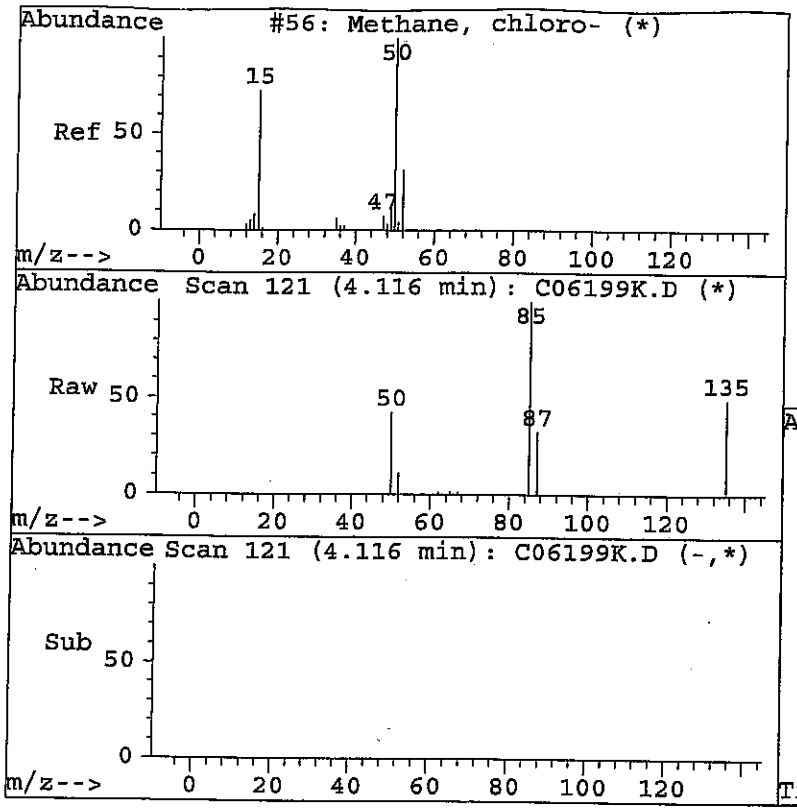


#2
Dichlorodifluoromethane
Concen: 0.11 ppbV m
RT: 3.85 min Scan# 91
Delta R.T. 0.00 min
Lab File: C06199K.D
Acq: 19 Jun 109 9:02 pm

Tgt Ion:85 Resp: 64289

Ion	Ratio	Lower	Upper
85	100		
87	32.7	27.0	40.6
50	9.2	6.5	9.7
135	0.3	0.6	1.0#

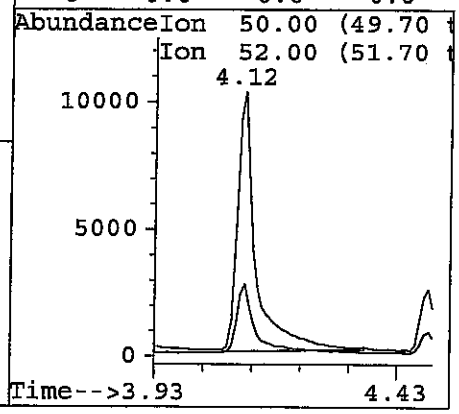


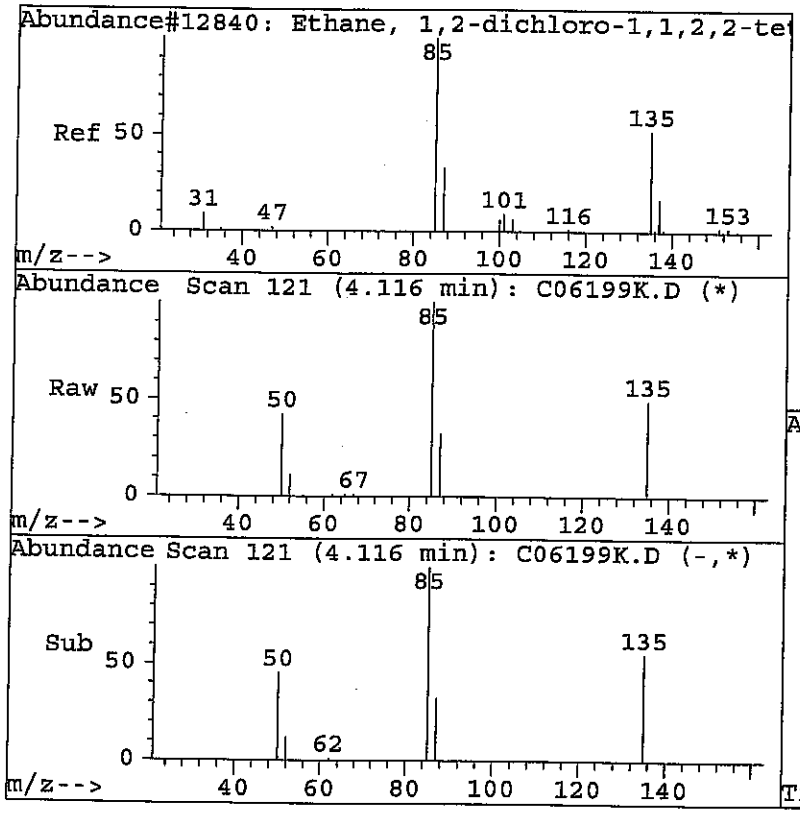


#3
Chloromethane
Concen: 0.10 ppbV m
RT: 4.12 min Scan# 121
Delta R.T. -0.00 min
Lab File: C06199K.D
Acq: 19 Jun 109 9:02 pm

Tgt Ion:50 Resp: 27154

Ion	Ratio	Lower	Upper
50	100		
52	27.3	24.6	37.0
0	0.0	0.0	0.0
0	0.0	0.0	0.0

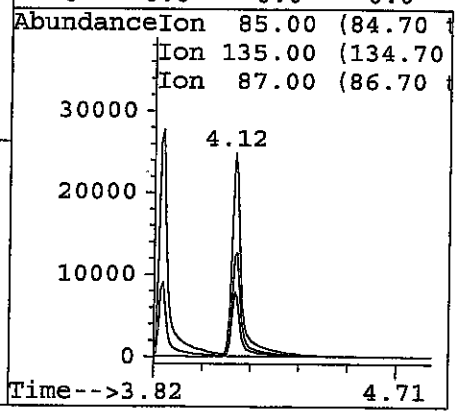


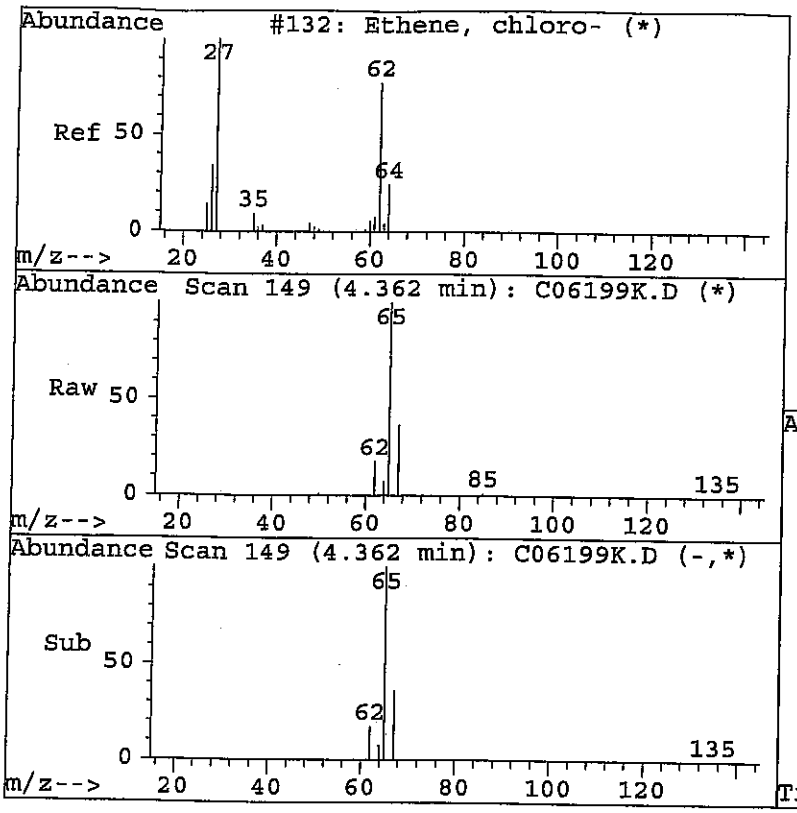


#4
Freon 114
Concen: 0.11 ppbV
RT: 4.12 min Scan# 121
Delta R.T. -0.00 min
Lab File: C06199K.D
Acq: 19 Jun 109 9:02 pm

Tgt Ion:85 Resp: 62110

Ion	Ratio	Lower	Upper
85	100		
135	49.5	37.2	55.8
87	31.5	24.4	36.6
0	0.0	0.0	0.0

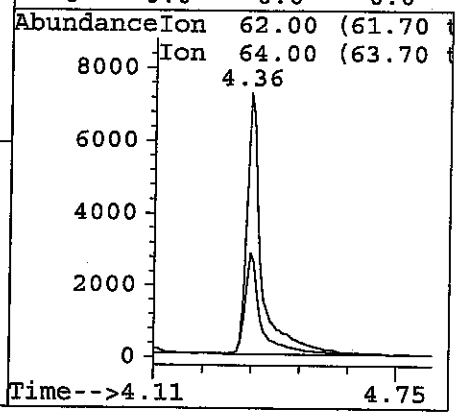


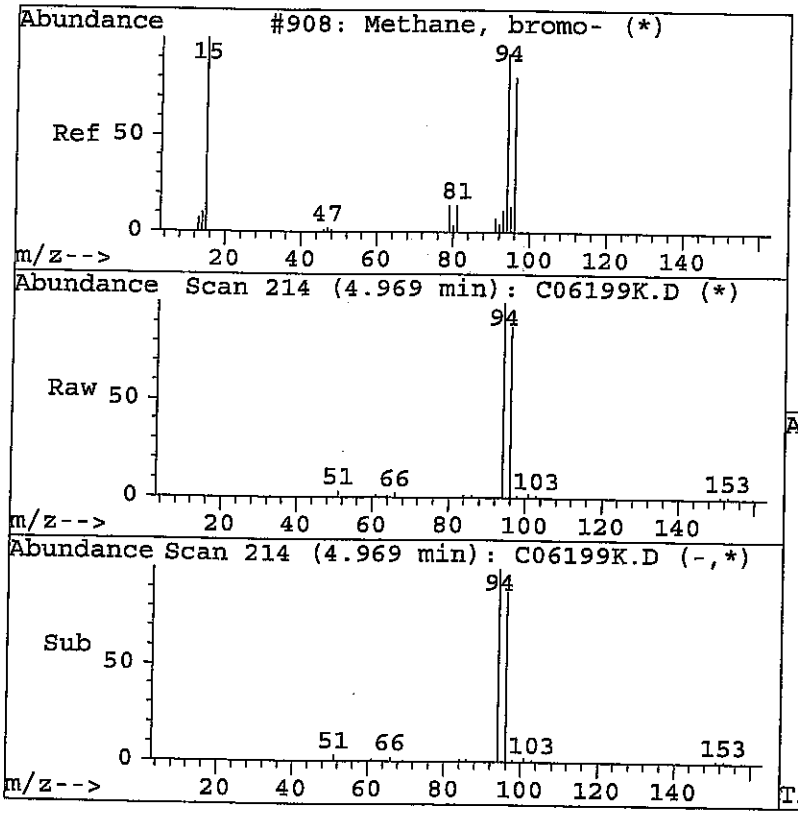


#5
Vinyl chloride
Concen: 0.10 ppbV
RT: 4.36 min Scan# 149
Delta R.T. -0.01 min
Lab File: C06199K.D
Acq: 19 Jun 109 9:02 pm

Tgt Ion:62 Resp: 19936

Ion	Ratio	Lower	Upper
62	100		
64	38.5	44.2	66.2#
0	0.0	0.0	0.0
0	0.0	0.0	0.0

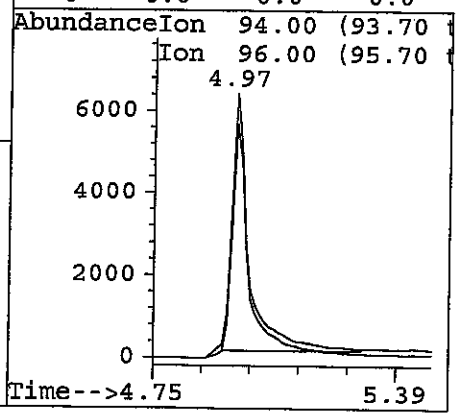


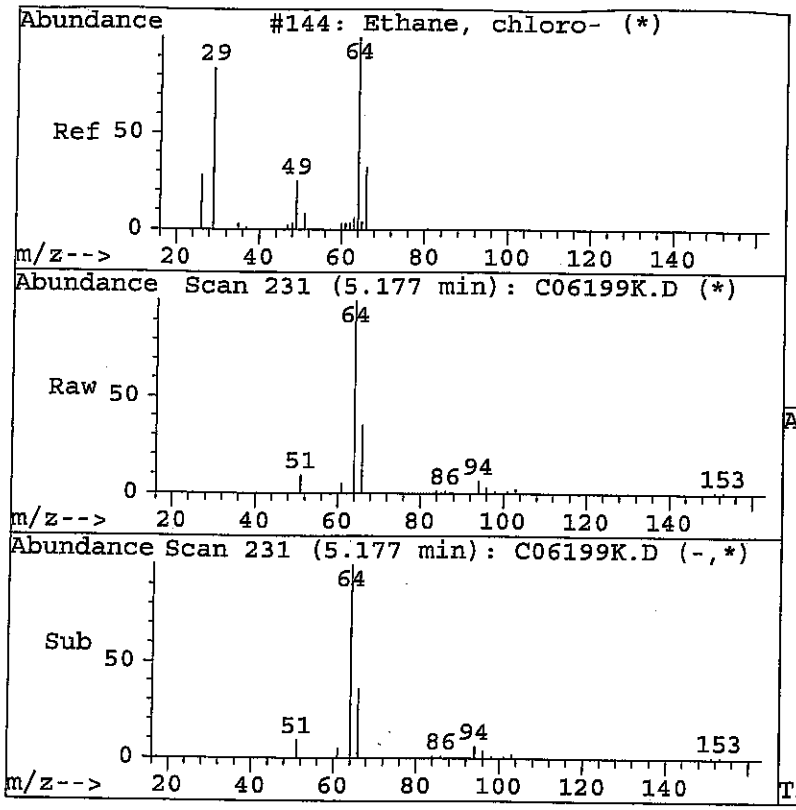


#6
Bromomethane
Concen: 0.11 ppbV m
RT: 4.97 min Scan# 214
Delta R.T. -0.00 min
Lab File: C06199K.D
Acq: 19 Jun 109 9:02 pm

Tgt Ion:94 Resp: 19683

Ion	Ratio	Lower	Upper
94	100		
96	88.5	68.1	102.1
0	0.0	0.0	0.0
0	0.0	0.0	0.0

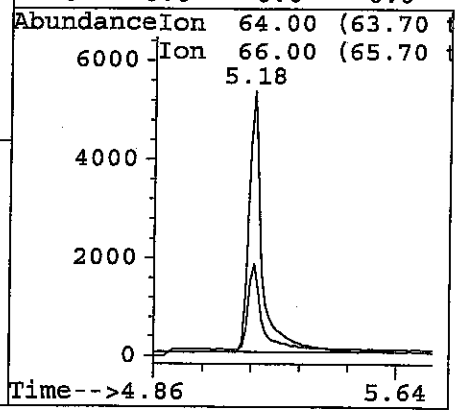


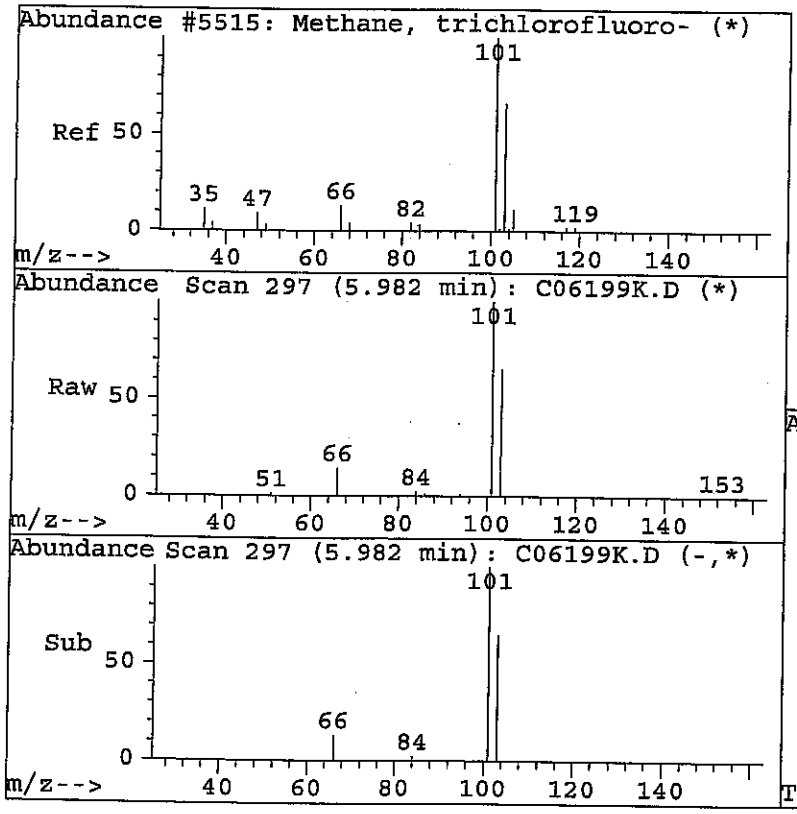


#7
Chloroethane
Concen: 0.09 ppbV
RT: 5.18 min Scan# 231
Delta R.T. -0.00 min
Lab File: C06199K.D
Acq: 19 Jun 109 9:02 pm

Tgt Ion:64 Resp: 15560

Ion	Ratio	Lower	Upper
64	100		
66	33.1	26.7	40.1
0	0.0	0.0	0.0
0	0.0	0.0	0.0

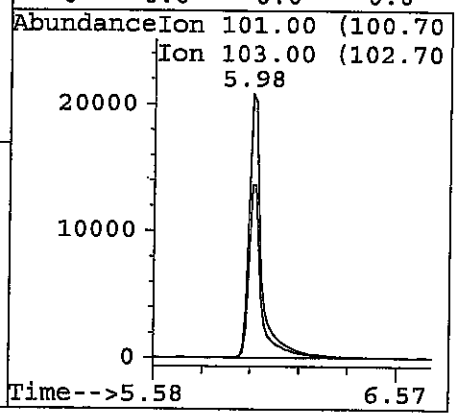


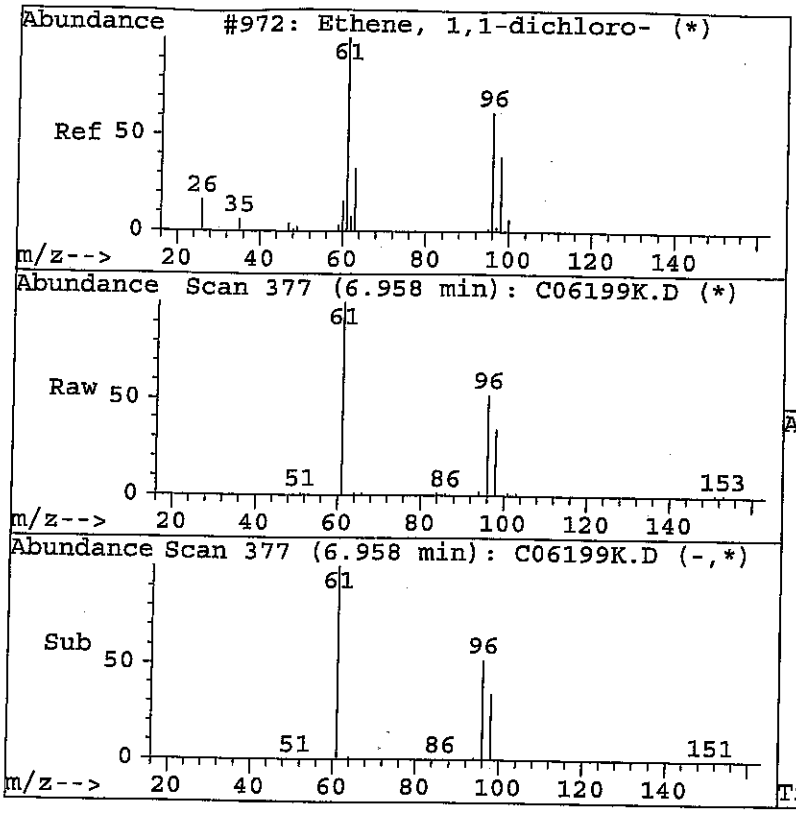


#8
Trichlorofluoromethane
Concen: 0.11 ppbV
RT: 5.98 min Scan# 297
Delta R.T. 0.00 min
Lab File: C06199K.D
Acq: 19 Jun 109 9:02 pm

Tgt Ion:101 Resp: 72646

Ion	Ratio	Lower	Upper
101	100		
103	65.2	51.0	76.4
0	0.0	0.0	0.0
0	0.0	0.0	0.0

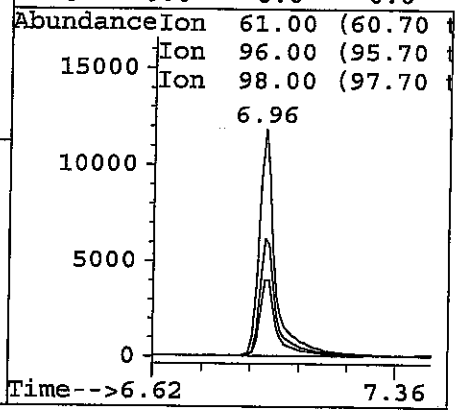


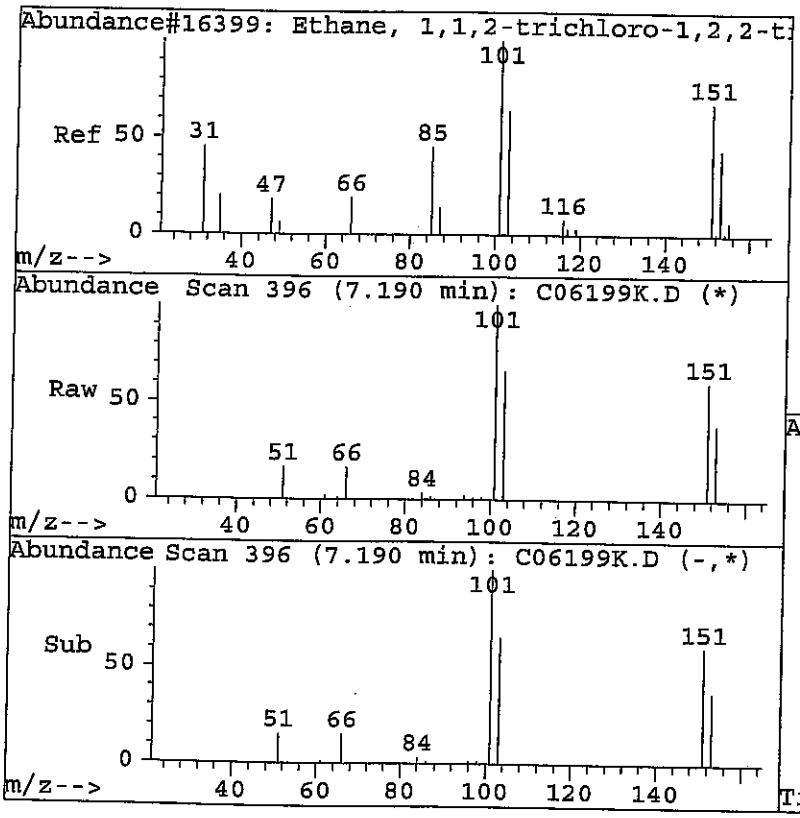


#9
1,1-Dichloroethene
Concen: 0.10 ppbV
RT: 6.96 min Scan# 377
Delta R.T. 0.01 min
Lab File: C06199K.D
Acq: 19 Jun 109 9:02 pm

Tgt Ion:61 Resp: 40726

Ion	Ratio	Lower	Upper
61	100		
96	52.0	38.2	57.2
98	33.6	24.8	37.2
0	0.0	0.0	0.0

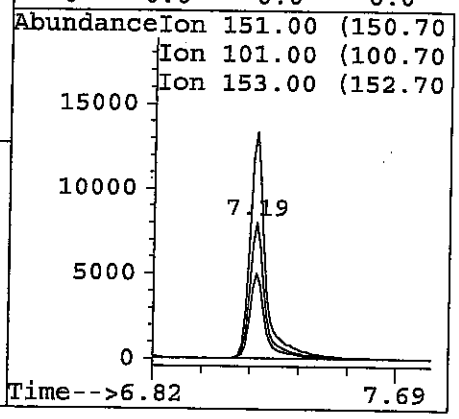


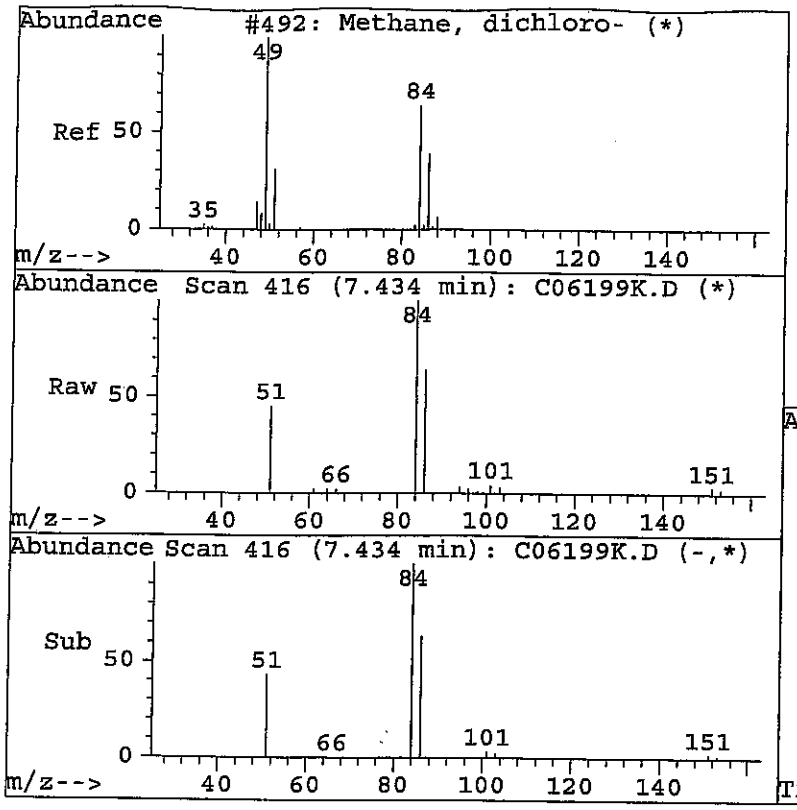


#10
Freon 113
Concen: 0.10 ppbV
RT: 7.19 min Scan# 396
Delta R.T. 0.06 min
Lab File: C06199K.D
Acq: 19 Jun 109 9:02 pm

Tgt Ion:151 Resp: 30309

Ion	Ratio	Lower	Upper
151	100		
101	167.0	131.1	196.7
153	62.5	49.5	74.3
0	0.0	0.0	0.0

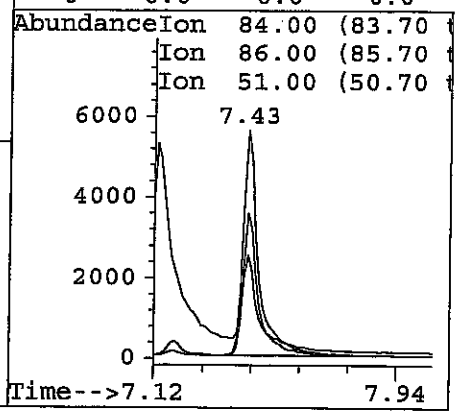


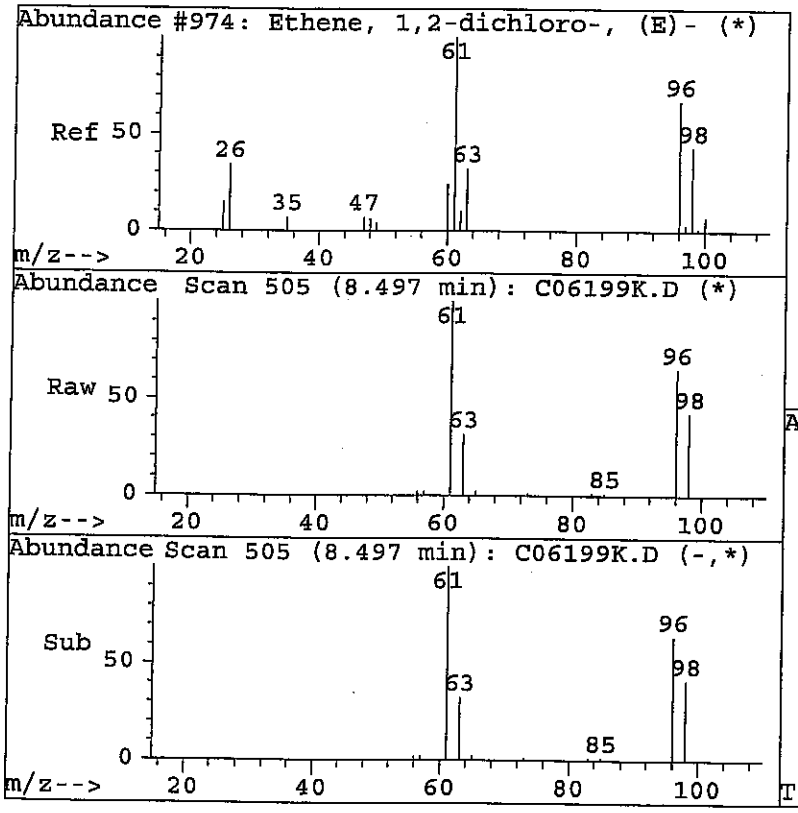


#11
Dichloromethane
Concen: 0.10 ppbV
RT: 7.43 min Scan# 416
Delta R.T. 0.01 min
Lab File: C06199K.D
Acq: 19 Jun 109 9:02 pm

Tgt Ion:84 Resp: 19971

Ion	Ratio	Lower	Upper
84	100		
86	63.2	52.7	79.1
51	39.8	29.5	44.3
0	0.0	0.0	0.0

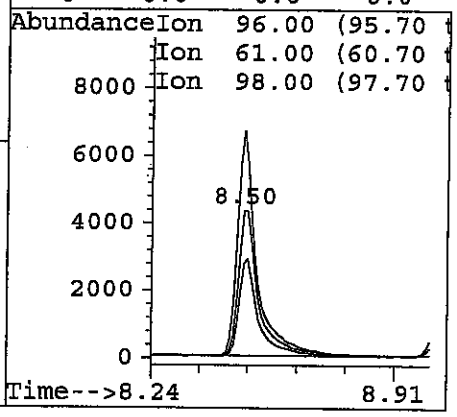


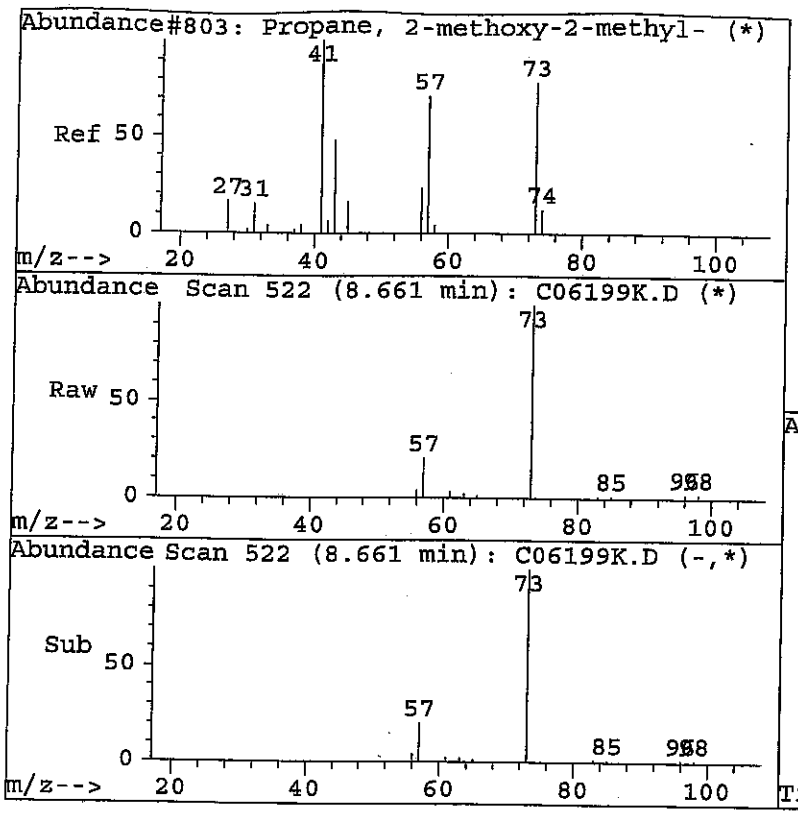


#12
trans-1,2-Dichloroethene
Concen: 0.07 ppbV
RT: 8.50 min Scan# 505
Delta R.T. 0.02 min
Lab File: C06199K.D
Acq: 19 Jun 109 9:02 pm

Tgt Ion:96 Resp: 16643

Ion	Ratio	Lower	Upper
96	100		
61	155.4	118.6	177.8
98	63.9	55.7	83.5
0	0.0	0.0	0.0

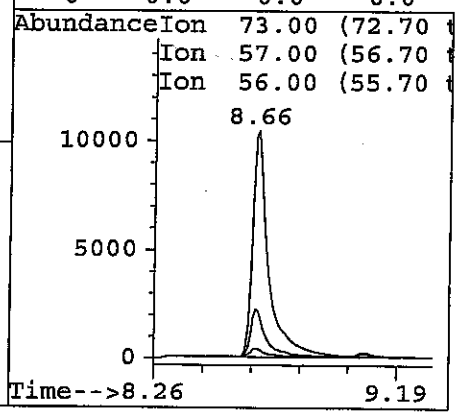


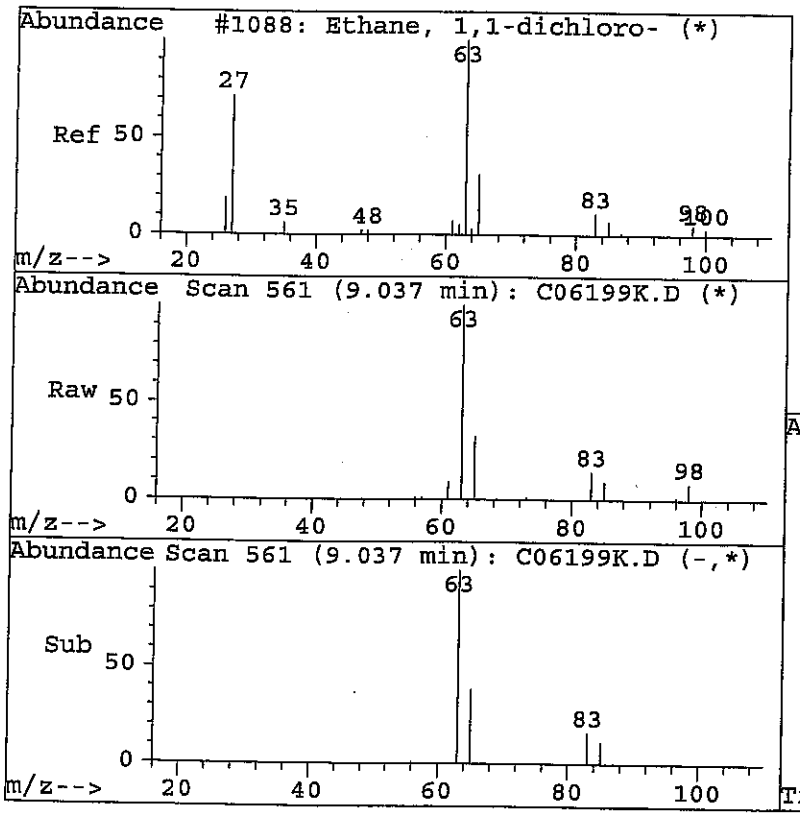


#13
Methyl tert butyl ether
Concen: 0.06 ppbV
RT: 8.66 min Scan# 522
Delta R.T. 0.06 min
Lab File: C06199K.D
Acq: 19 Jun 109 9:02 pm

Tgt Ion:73 Resp: 44883

Ion	Ratio	Lower	Upper
73	100		
57	19.0	19.0	28.4
56	2.5	6.2	9.2#
0	0.0	0.0	0.0

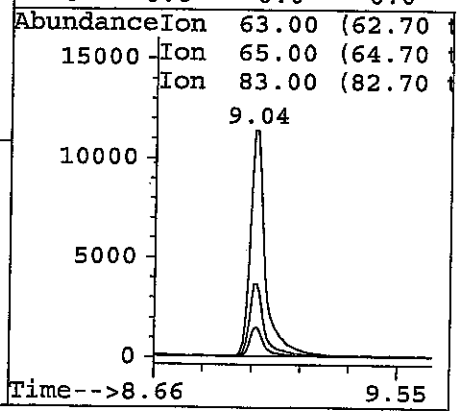


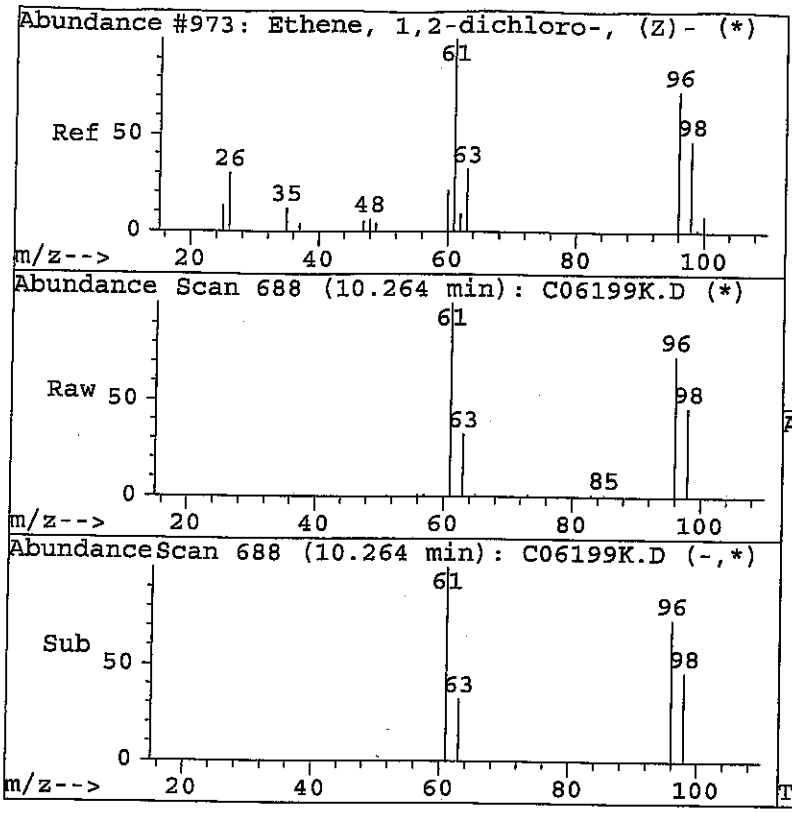


#14
1,1-Dichloroethane
Concen: 0.10 ppbV
RT: 9.04 min Scan# 561
Delta R.T. 0.04 min
Lab File: C06199K.D
Acq: 19 Jun 109 9:02 pm

Tgt Ion:63 Resp: 43151

Ion	Ratio	Lower	Upper
63	100		
65	31.4	24.4	36.6
83	13.0	9.0	13.4
0	0.0	0.0	0.0

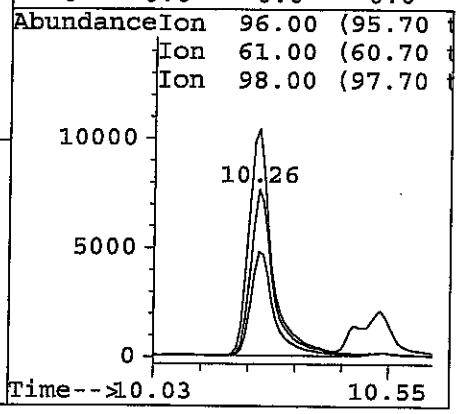


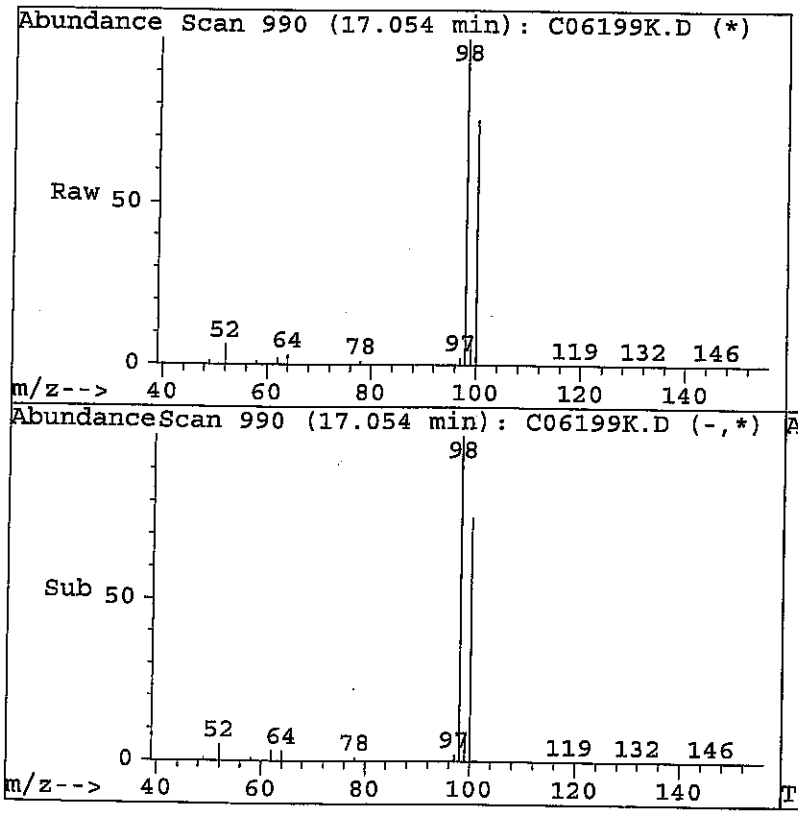


#15
cis-1,2-Dichloroethene
Concen: 0.10 ppbV
RT: 10.26 min Scan# 688
Delta R.T. 0.02 min
Lab File: C06199K.D
Acq: 19 Jun 109 9:02 pm

Tgt Ion:96 Resp: 27004

Ion	Ratio	Lower	Upper
96	100		
61	128.7	95.8	143.6
98	62.8	50.9	76.3
0	0.0	0.0	0.0

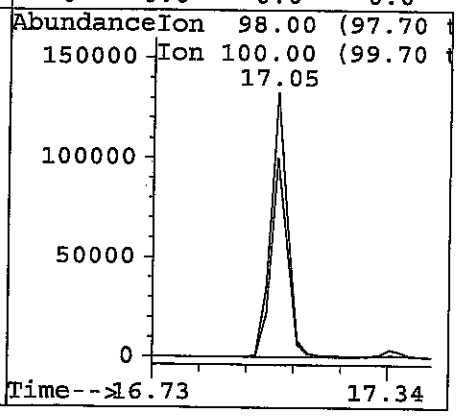


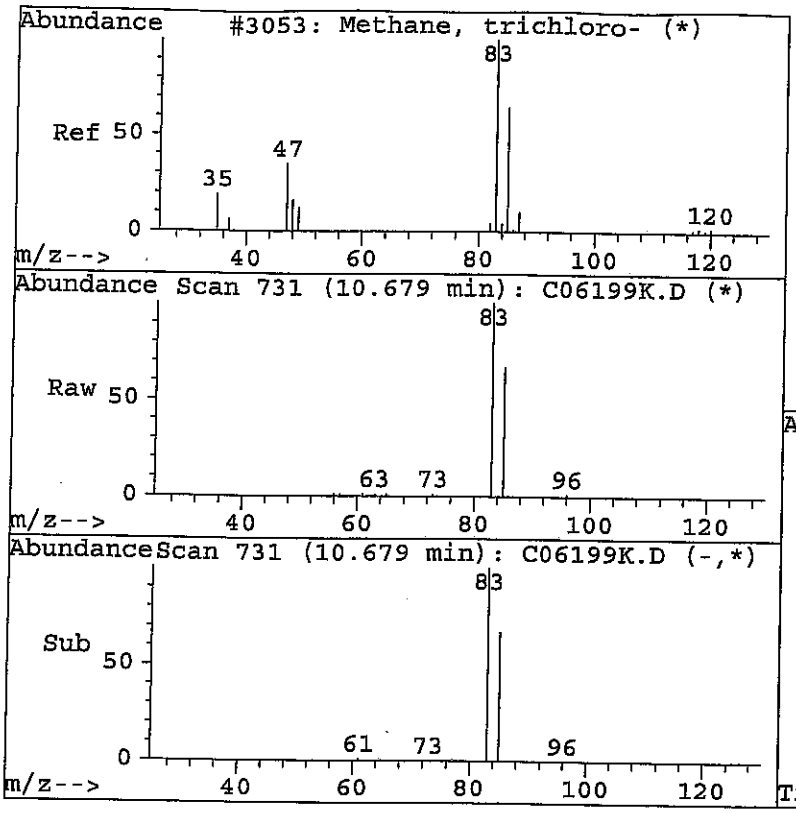


#16
Toluene-d8
Concen: 0.20 ppbV
RT: 17.05 min Scan# 990
Delta R.T. 0.00 min
Lab File: C06199K.D
Acq: 19 Jun 109 9:02 pm

Tgt Ion:98 Resp: 395034

Ion	Ratio	Lower	Upper
98	100		
100	75.3	59.1	88.7
0	0.0	0.0	0.0
0	0.0	0.0	0.0

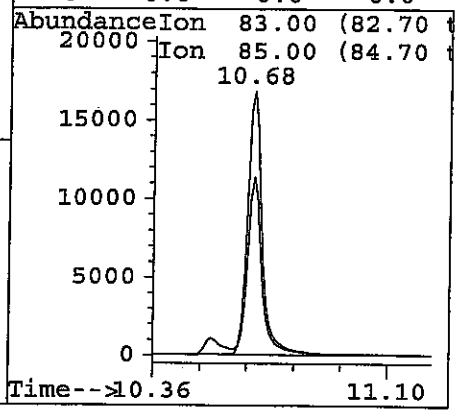


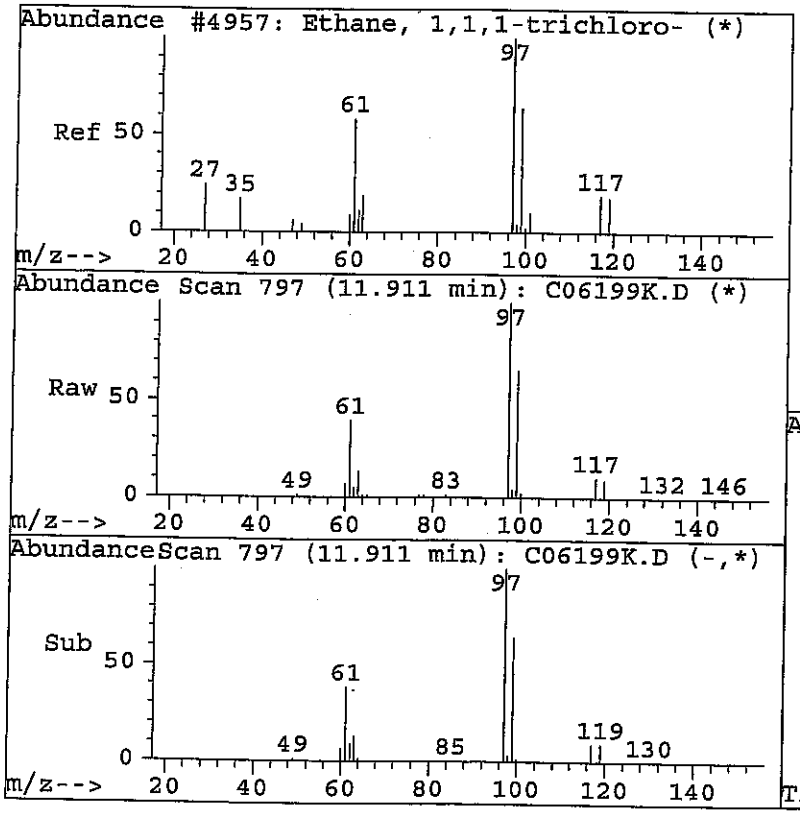


#17
Chloroform
Concen: 0.10 ppbV
RT: 10.68 min Scan# 731
Delta R.T. 0.02 min
Lab File: C06199K.D
Acq: 19 Jun 109 9:02 pm

Tgt Ion:83 Resp: 57851

Ion	Ratio	Lower	Upper
83	100		
85	65.6	54.2	81.4
0	0.0	0.0	0.0
0	0.0	0.0	0.0

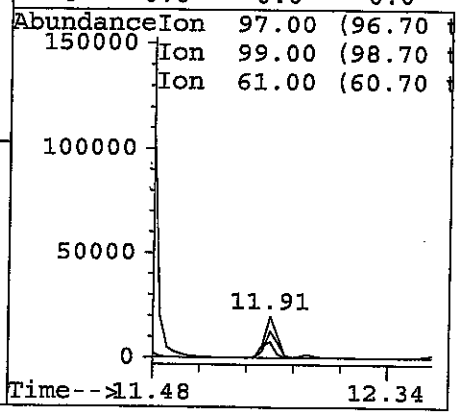


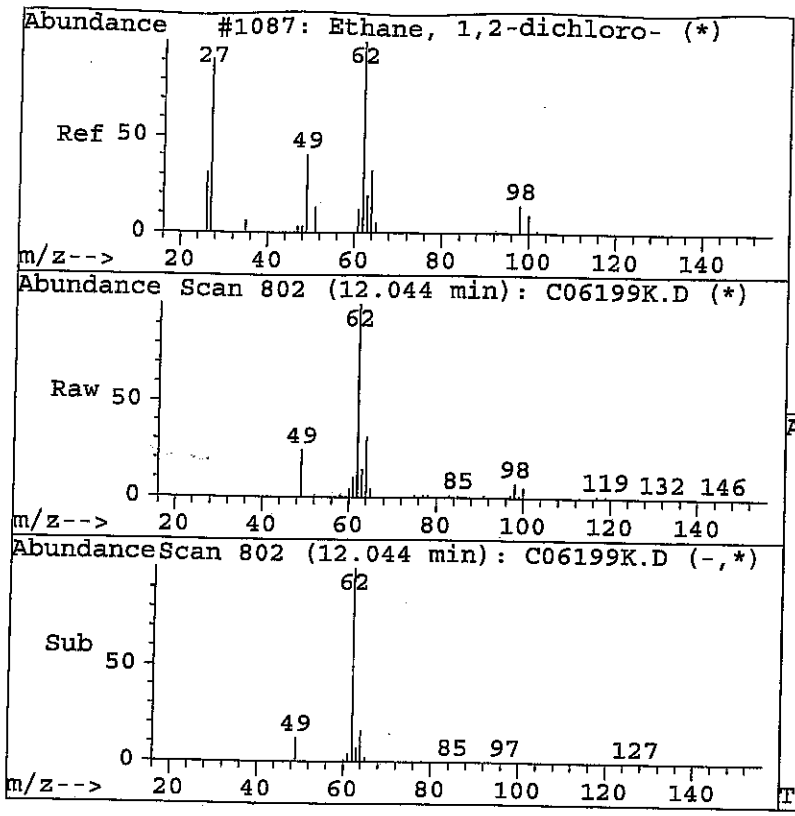


#18
1,1,1-Trichloroethane
Concen: 0.10 ppbV
RT: 11.91 min Scan# 797
Delta R.T. 0.00 min
Lab File: C06199K.D
Acq: 19 Jun 109 9:02 pm

Tgt Ion:97 Resp: 61727

Ion	Ratio	Lower	Upper
97	100		
99	64.2	50.7	76.1
61	38.5	24.5	36.7#
0	0.0	0.0	0.0

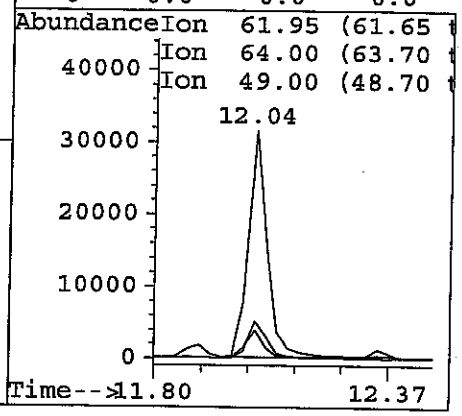


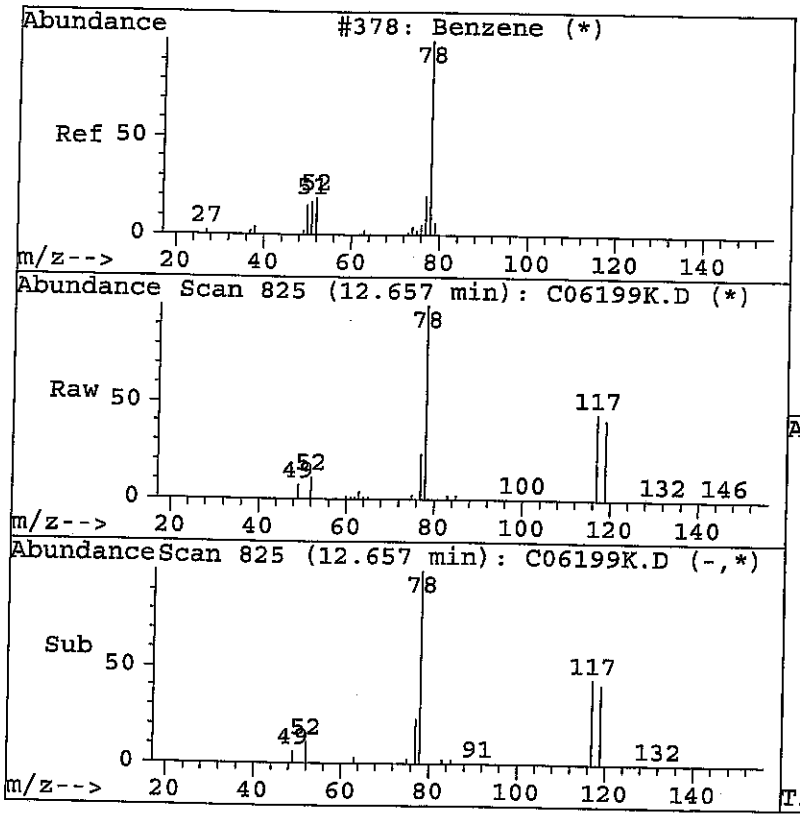


#19
1,2-Dichloroethane
Concen: 0.09 ppbV
RT: 12.04 min Scan# 802
Delta R.T. 0.02 min
Lab File: C06199K.D
Acq: 19 Jun 109 9:02 pm

Tgt Ion:61.95 Resp: 97954

Ion	Ratio	Lower	Upper
62	100		
64	16.1	11.9	17.9
49	11.7	10.6	16.0
0	0.0	0.0	0.0

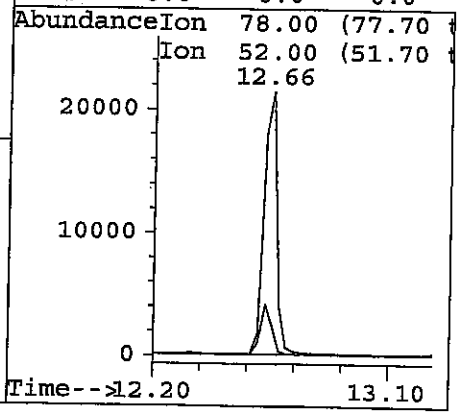


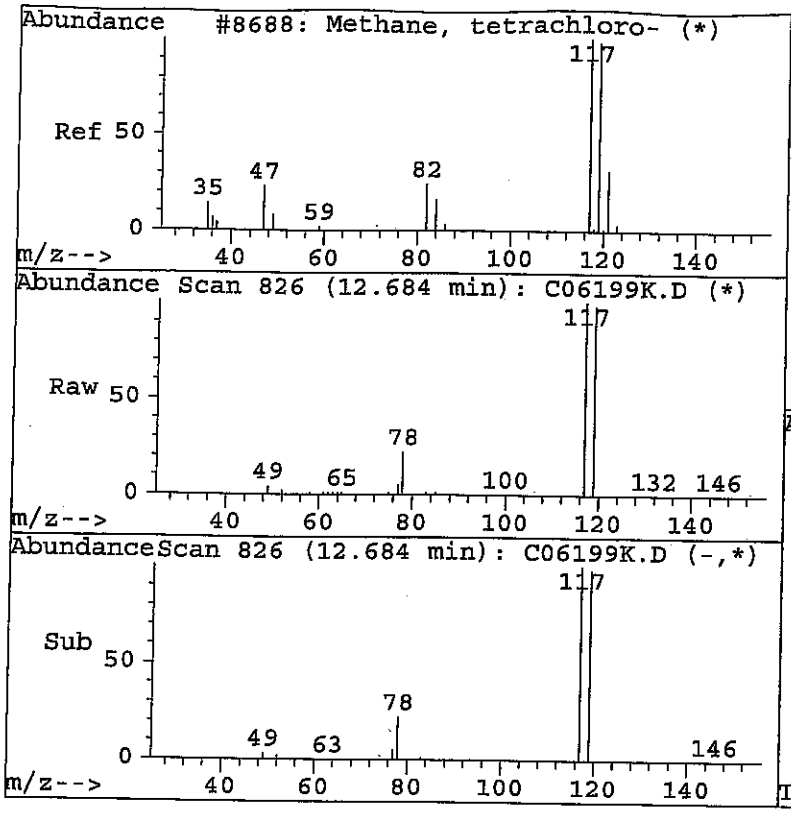


#20
Benzene
Concen: 0.09 ppbV
RT: 12.66 min Scan# 825
Delta R.T. 0.03 min
Lab File: C06199K.D
Acq: 19 Jun 109 9:02 pm

Tgt Ion:78 Resp: 73510

Ion	Ratio	Lower	Upper
78	100		
52	11.0	9.4	14.2
0	0.0	0.0	0.0
0	0.0	0.0	0.0

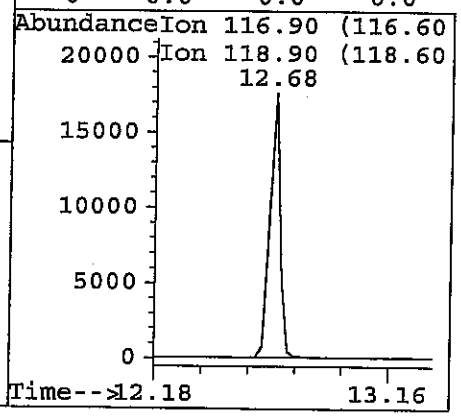


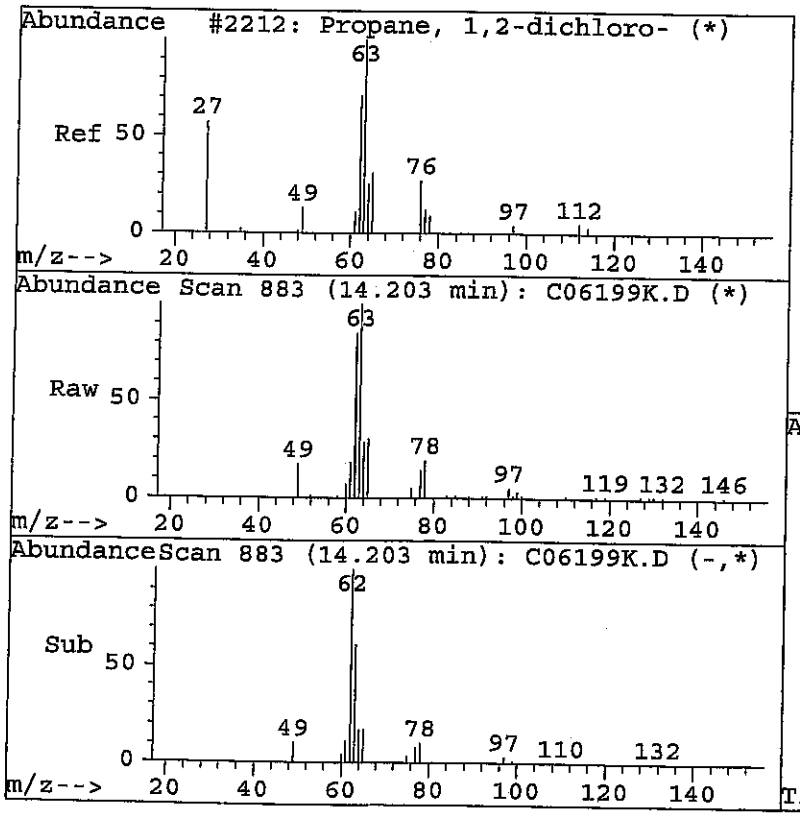


#21
Carbon tetrachloride
Concen: 0.10 ppbV
RT: 12.68 min Scan# 826
Delta R.T. 0.02 min
Lab File: C06199K.D
Acq: 19 Jun 109 9:02 pm

Tgt Ion:116.9 Resp: 53667

Ion	Ratio	Lower	Upper
117	100		
119	97.8	76.6	115.0
0	0.0	0.0	0.0
0	0.0	0.0	0.0

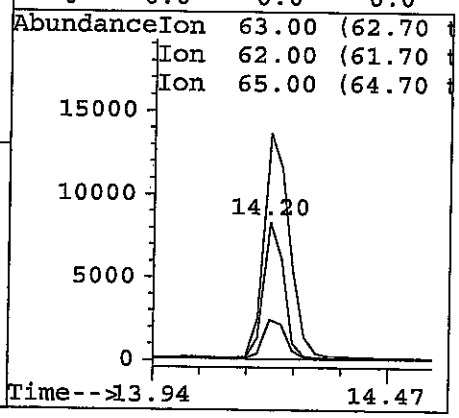


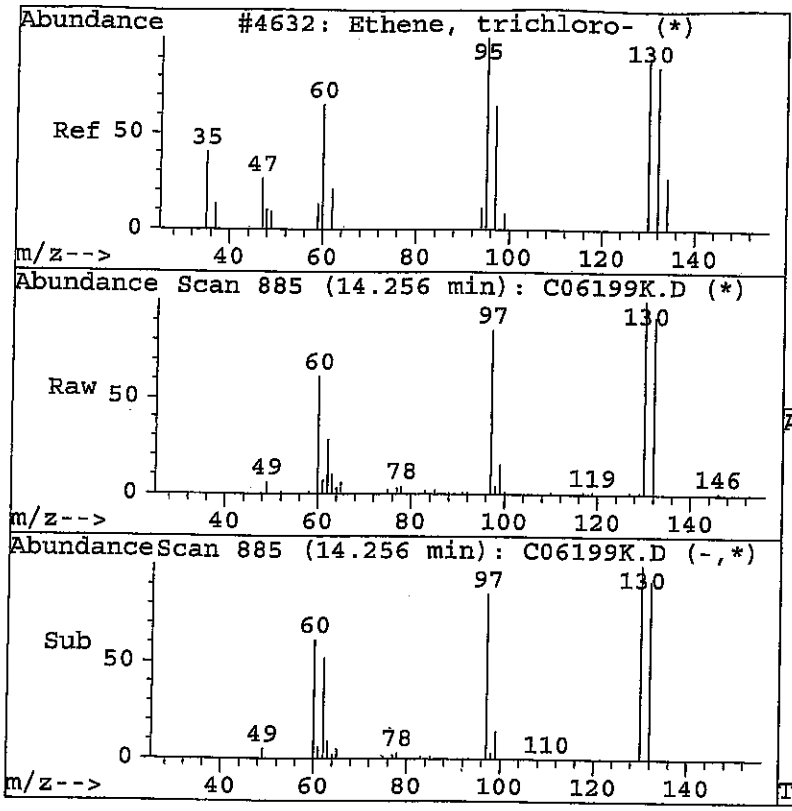


#22
1,2-Dichloropropane
Concen: 0.09 ppbV
RT: 14.20 min Scan# 883
Delta R.T. 0.00 min
Lab File: C06199K.D
Acq: 19 Jun 109 9:02 pm

Tgt Ion:63 Resp: 27080

Ion	Ratio	Lower	Upper
63	100		
62	163.7	122.8	184.2
65	28.6	24.3	36.5
0	0.0	0.0	0.0

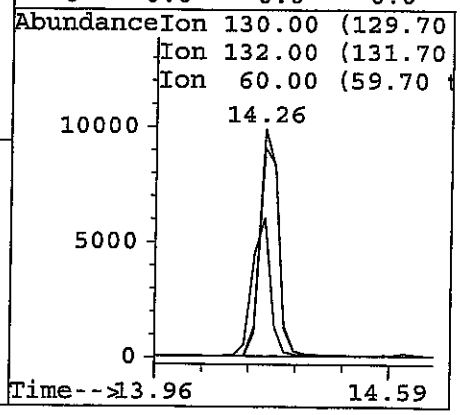


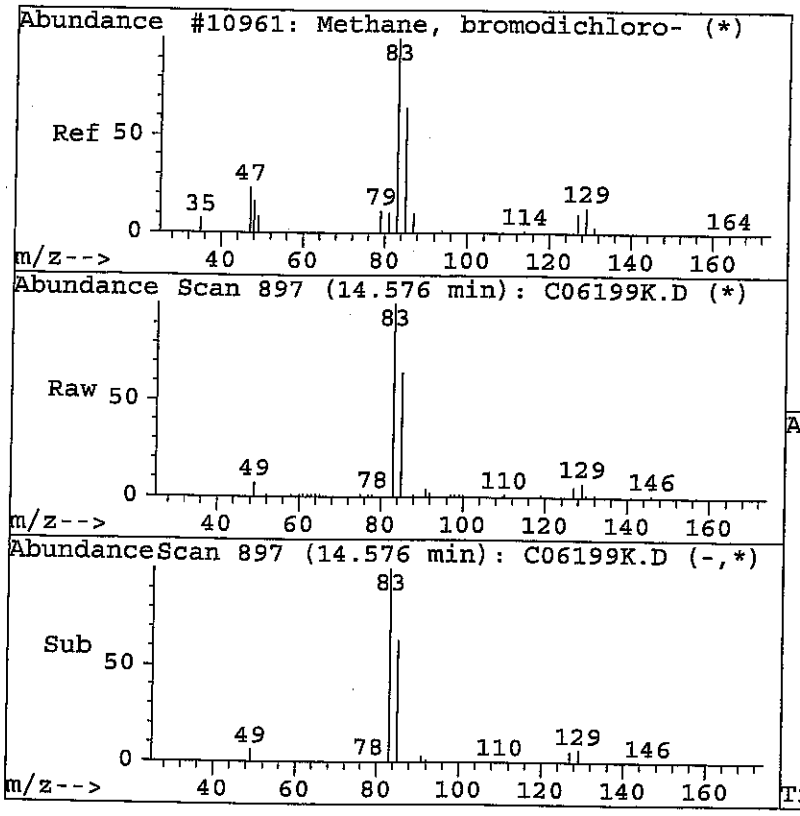


#23
Trichloroethene
Concen: 0.09 ppbV
RT: 14.26 min Scan# 885
Delta R.T. -0.00 min
Lab File: C06199K.D
Acq: 19 Jun 109 9:02 pm

Tgt Ion:130 Resp: 33459

Ion	Ratio	Lower	Upper
130	100		
132	91.7	78.6	118.0
60	60.7	16.2	24.2#
0	0.0	0.0	0.0

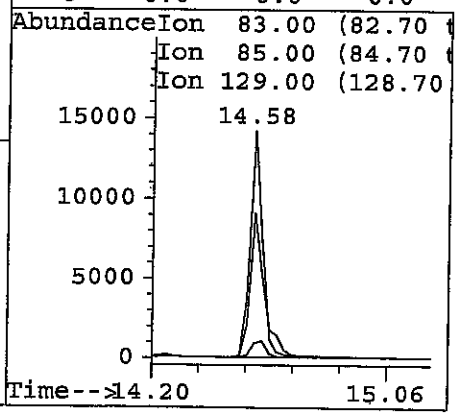


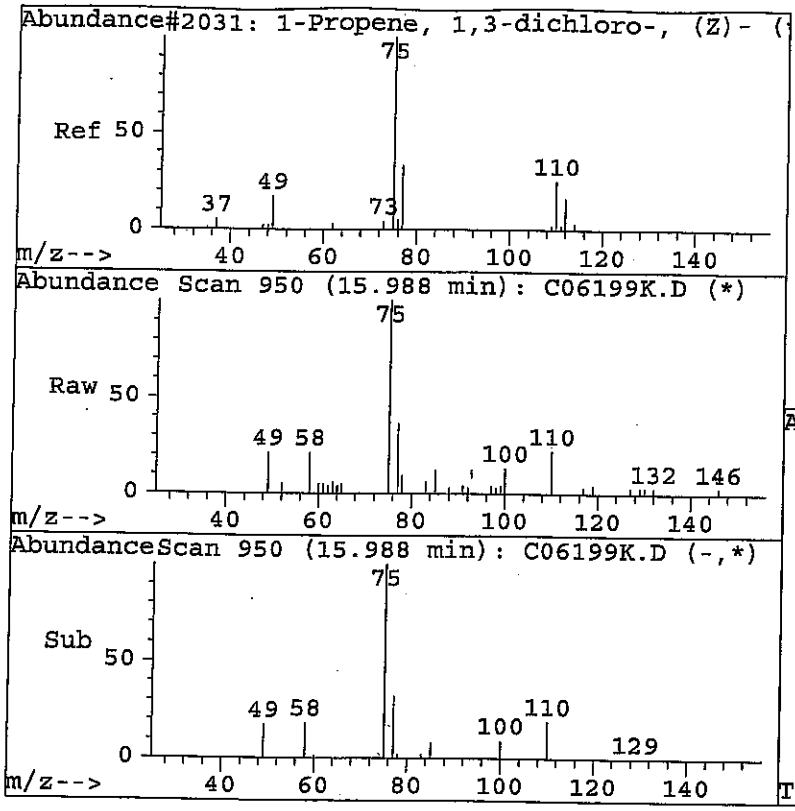


#24
Bromodichloromethane
Concen: 0.07 ppbV
RT: 14.58 min Scan# 897
Delta R.T. 0.01 min
Lab File: C06199K.D
Acq: 19 Jun 109 9:02 pm

Tgt Ion:83 Resp: 43188

Ion	Ratio	Lower	Upper
83	100		
85	63.6	51.1	76.7
129	6.2	5.0	7.4
0	0.0	0.0	0.0

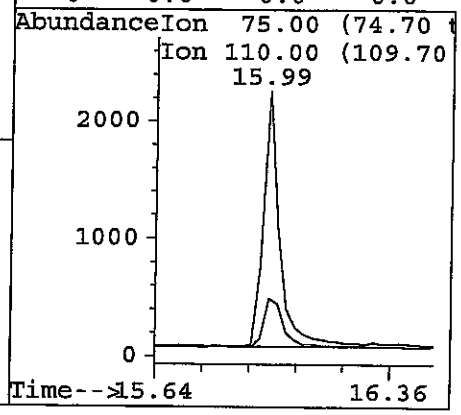


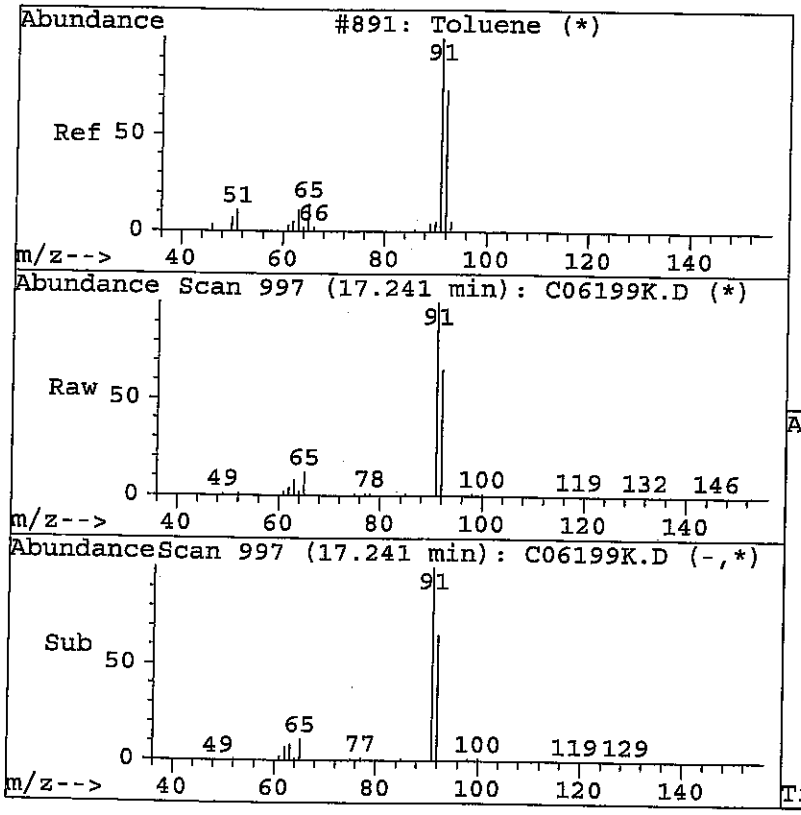


#25
cis-1,3-Dichloropropene
Concen: 0.03 ppbV
RT: 15.99 min Scan# 950
Delta R.T. 0.03 min
Lab File: C06199K.D
Acq: 19 Jun 109 9:02 pm

Tgt Ion:75 Resp: 7561

Ion	Ratio	Lower	Upper
75	100		
110	18.8	17.1	25.7
0	0.0	0.0	0.0
0	0.0	0.0	0.0

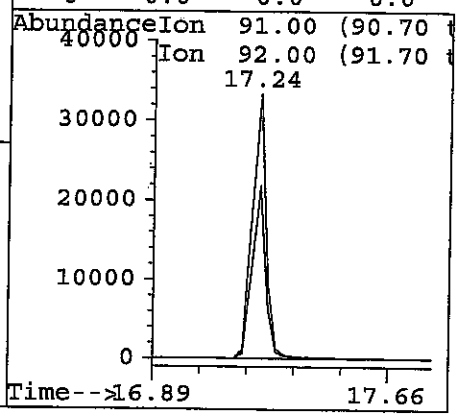


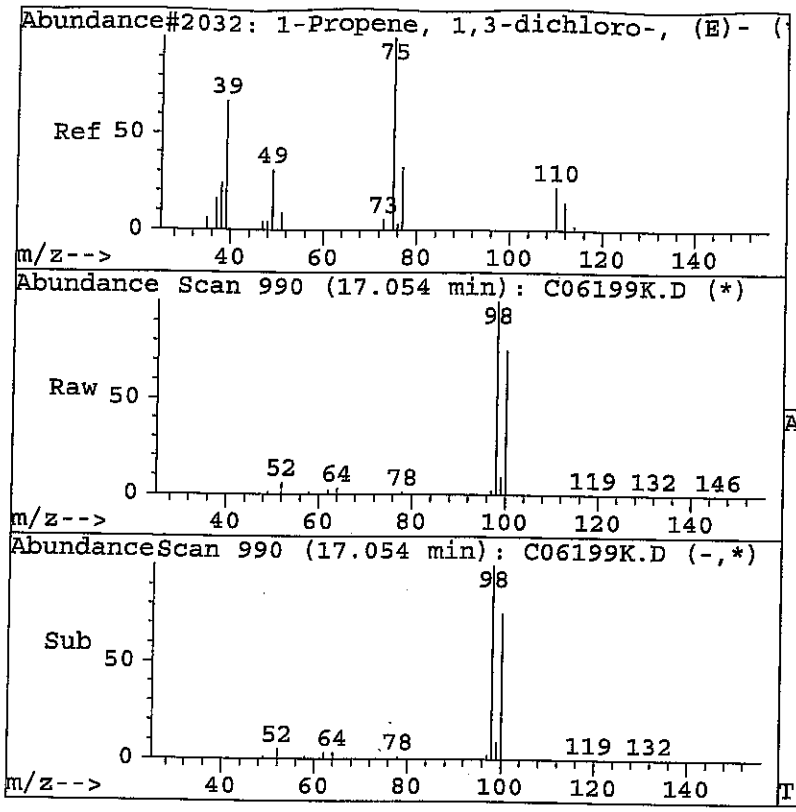


#26
Toluene
Concen: 0.08 ppbV
RT: 17.24 min Scan# 997
Delta R.T. 0.03 min
Lab File: C06199K.D
Acq: 19 Jun 109 9:02 pm

Tgt Ion:91 Resp: 102952

Ion	Ratio	Lower	Upper
91	100		
92	65.3	50.1	75.1
0	0.0	0.0	0.0
0	0.0	0.0	0.0

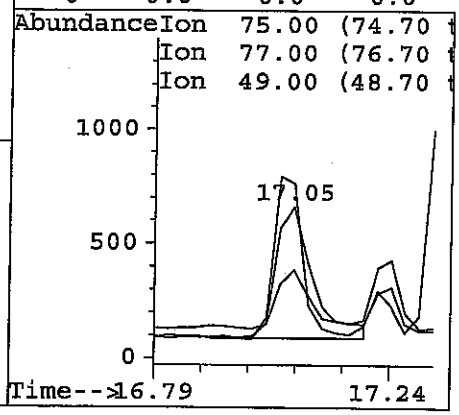


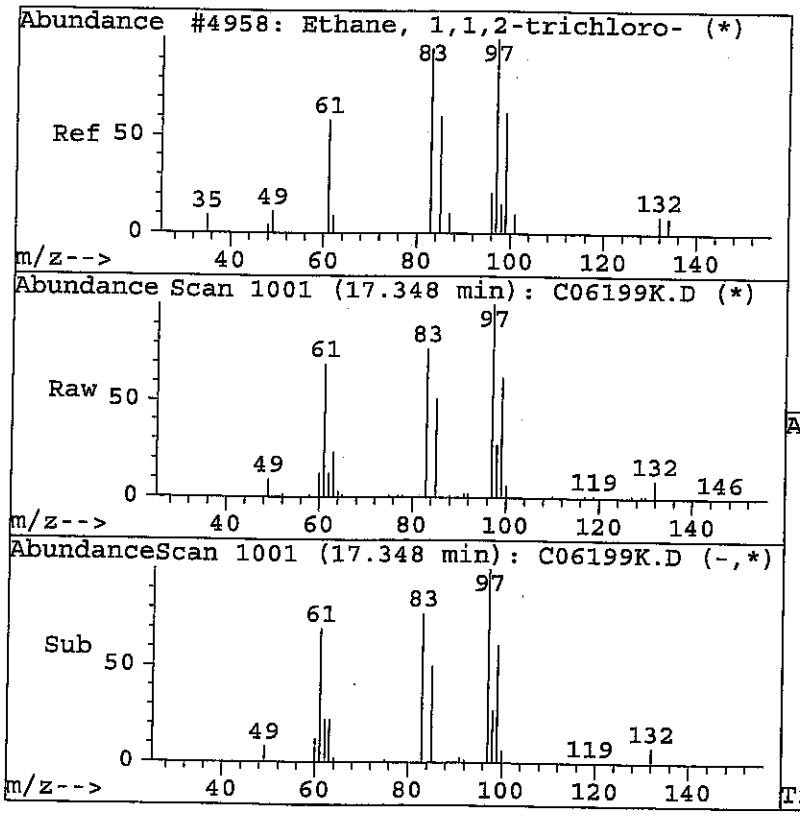


#27
trans-1,3-Dichloropropene
Concen: 0.01 ppbV
RT: 17.05 min Scan# 990
Delta R.T. 0.05 min
Lab File: C06199K.D
Acq: 19 Jun 109 9:02 pm

Tgt Ion:75 Resp: 2820

Ion	Ratio	Lower	Upper
75	100		
77	42.8	30.2	45.4
49	119.1	56.9	85.3#
0	0.0	0.0	0.0

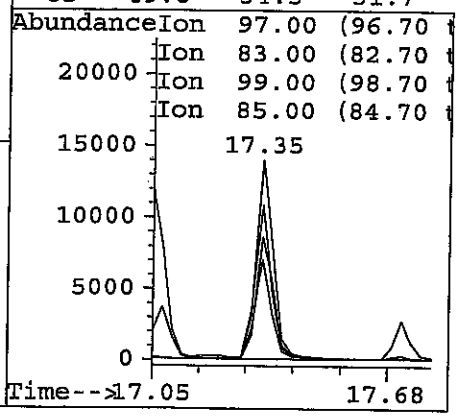


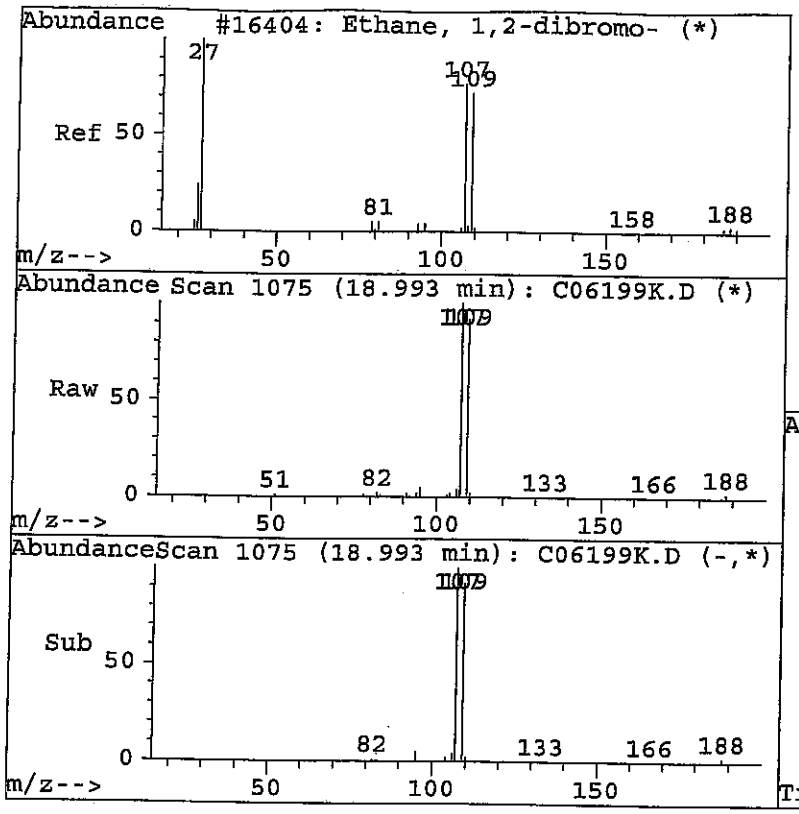


#28
1,1,2-Trichloroethane
Concen: 0.08 ppbV
RT: 17.35 min Scan# 1001
Delta R.T. -0.00 min
Lab File: C06199K.D
Acq: 19 Jun 109 9:02 pm

Tgt Ion:97 Resp: 43484

Ion	Ratio	Lower	Upper
97	100		
83	77.1	54.9	82.3
99	61.3	52.9	79.3
85	49.6	34.5	51.7

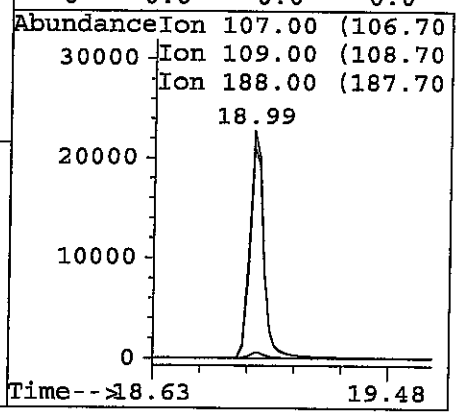


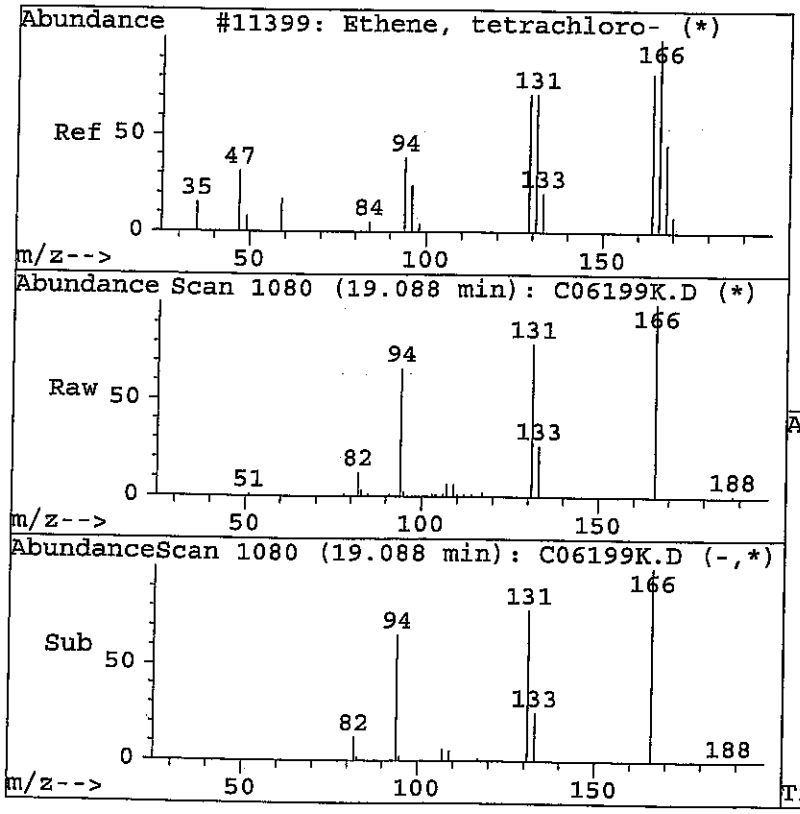


#29
1,2-Dibromoethane
Concen: 0.08 ppbV
RT: 18.99 min Scan# 1075
Delta R.T. 0.00 min
Lab File: C06199K.D
Acq: 19 Jun 109 9:02 pm

Tgt Ion:107 Resp: 79525

Ion	Ratio	Lower	Upper
107	100		
109	92.4	75.4	113.2
188	2.1	1.9	2.9
0	0.0	0.0	0.0

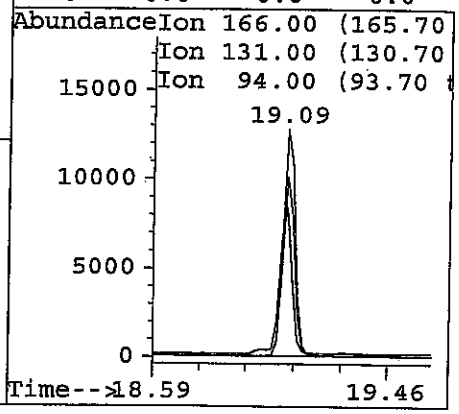


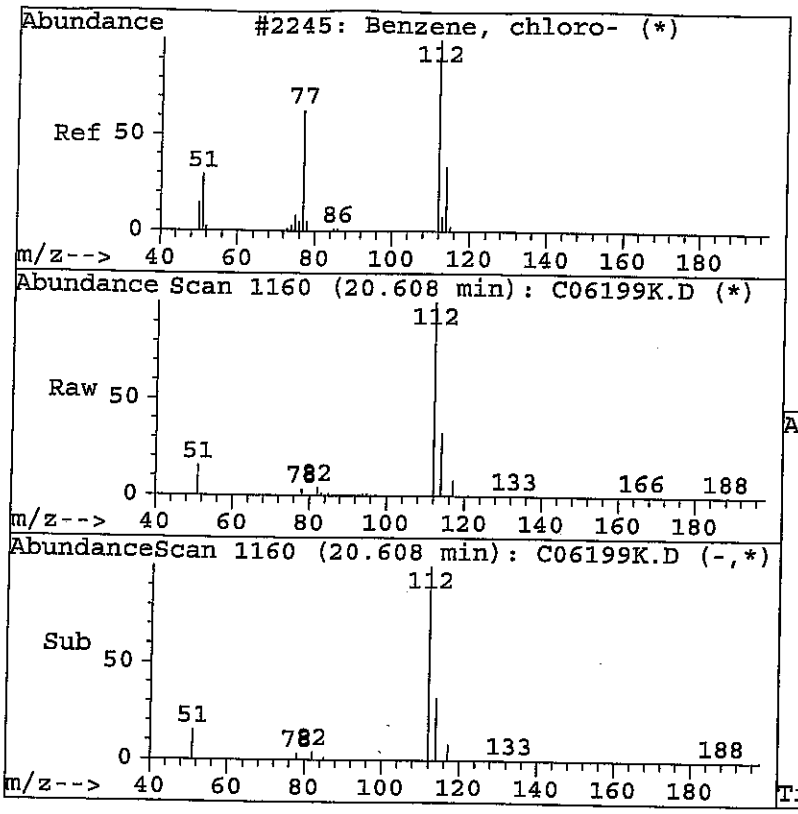


#30
Tetrachloroethene
Concen: 0.09 ppbV
RT: 19.09 min Scan# 1080
Delta R.T. -0.00 min
Lab File: C06199K.D
Acq: 19 Jun 109 9:02 pm

Tgt Ion:166 Resp: 38753

Ion	Ratio	Lower	Upper
166	100		
131	78.5	63.3	94.9
94	64.7	55.8	83.8
0	0.0	0.0	0.0

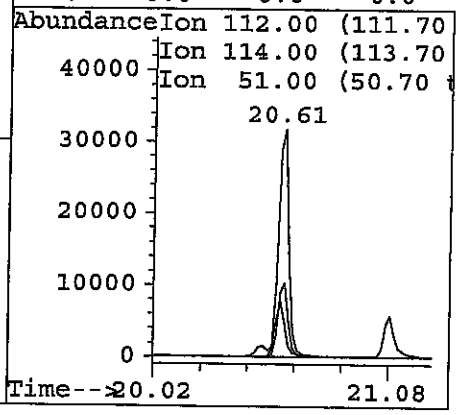


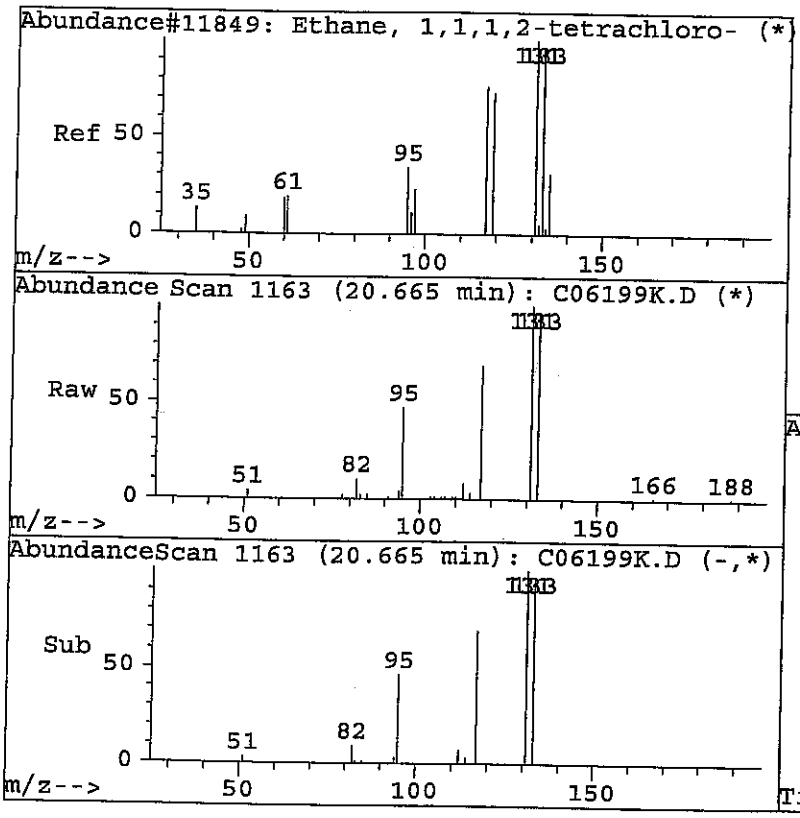


#31
Chlorobenzene
Concen: 0.08 ppbV
RT: 20.61 min Scan# 1160
Delta R.T. 0.02 min
Lab File: C06199K.D
Acq: 19 Jun 109 9:02 pm

Tgt Ion:112 Resp: 105228

Ion	Ratio	Lower	Upper
112	100		
114	32.2	25.6	38.4
51	14.6	13.0	19.4
0	0.0	0.0	0.0

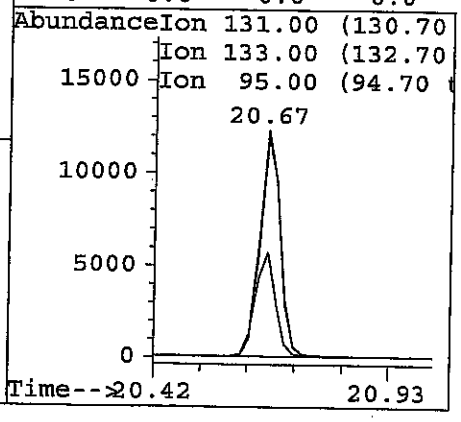


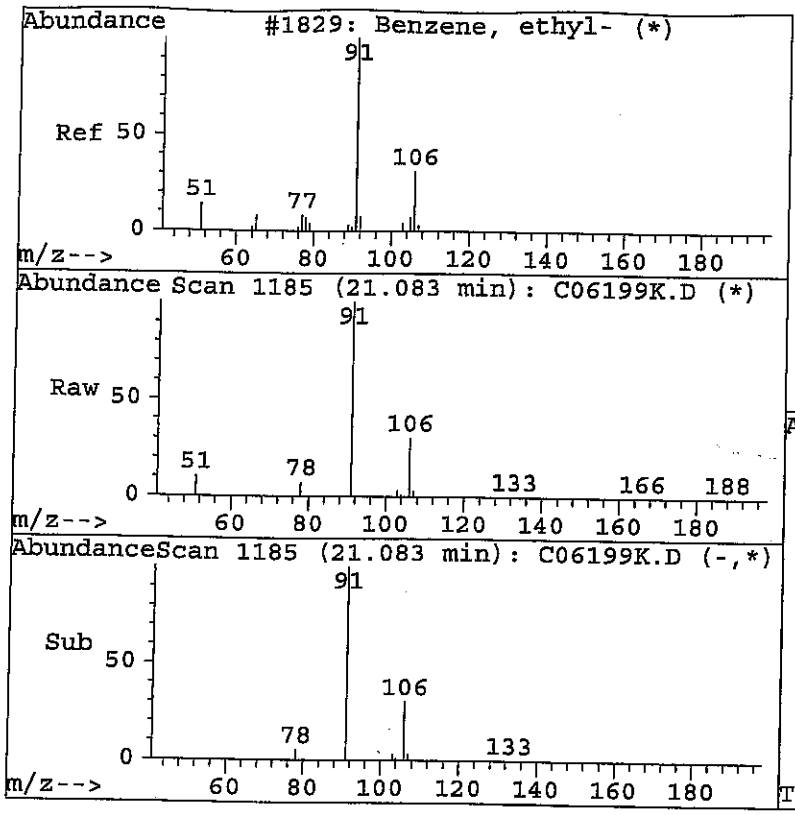


#32
1,1,1,2-Tetrachloroethane
Concen: 0.07 ppbV
RT: 20.67 min Scan# 1163
Delta R.T. -0.00 min
Lab File: C06199K.D
Acq: 19 Jun 109 9:02 pm

Tgt Ion:131 Resp: 37246

Ion	Ratio	Lower	Upper
131	100		
133	96.3	72.7	109.1
95	46.2	39.0	58.6
0	0.0	0.0	0.0

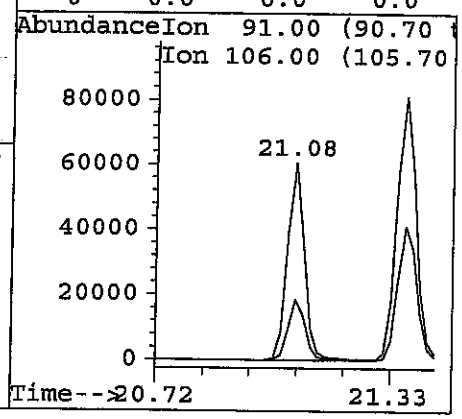


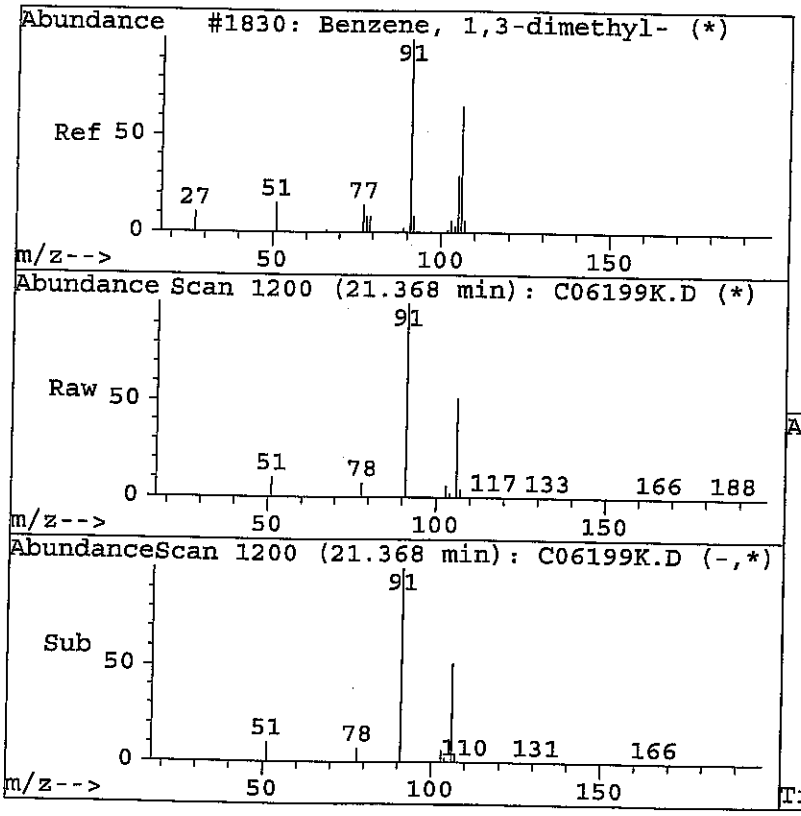


#33
Ethylbenzene
Concen: 0.08 ppbV
RT: 21.08 min Scan# 1185
Delta R.T. 0.00 min
Lab File: C06199K.D
Acq: 19 Jun 109 9:02 pm

Tgt Ion:91 Resp: 181776

Ion	Ratio	Lower	Upper
91	100		
106	30.3	22.2	33.4
0	0.0	0.0	0.0
0	0.0	0.0	0.0

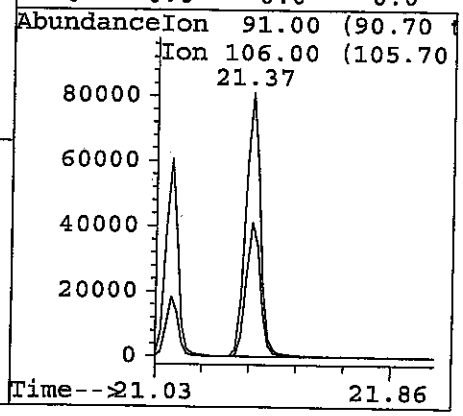


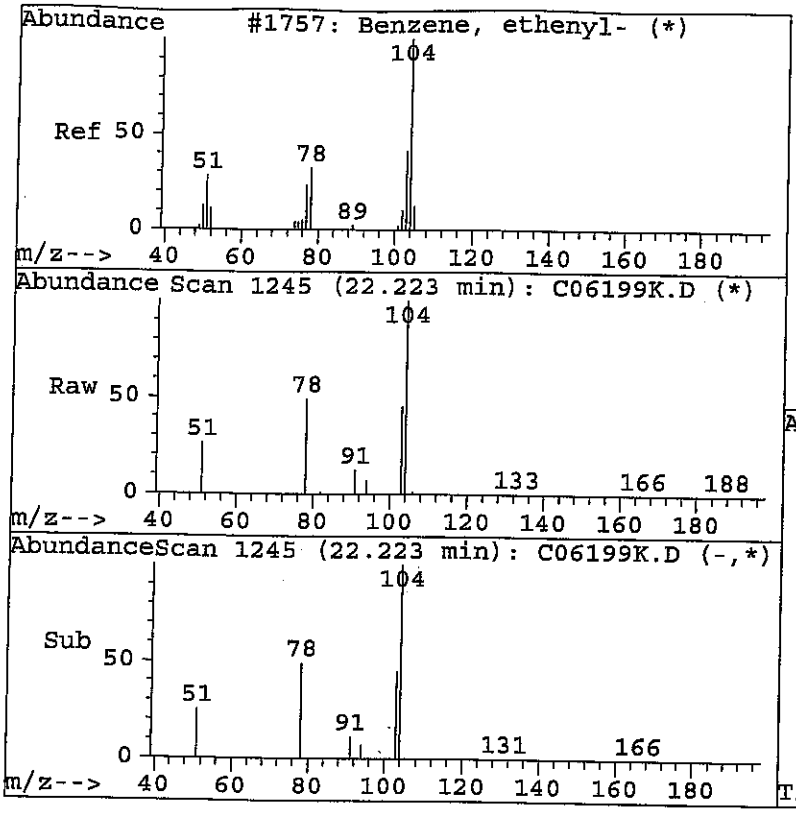


#34
m & p-Xylene
Concen: 0.16 ppbV
RT: 21.37 min Scan# 1200
Delta R.T. -0.00 min
Lab File: C06199K.D
Acq: 19 Jun 109 9:02 pm

Tgt Ion:91 Resp: 284680

Ion	Ratio	Lower	Upper
91	100		
106	50.7	37.4	56.2
0	0.0	0.0	0.0
0	0.0	0.0	0.0

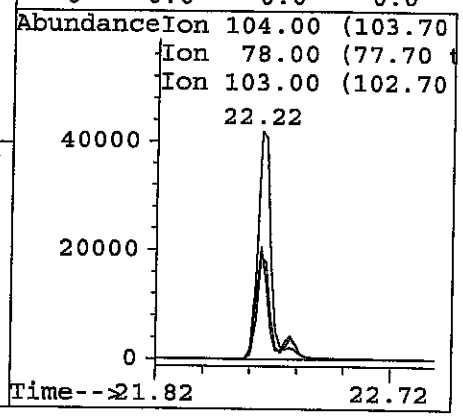


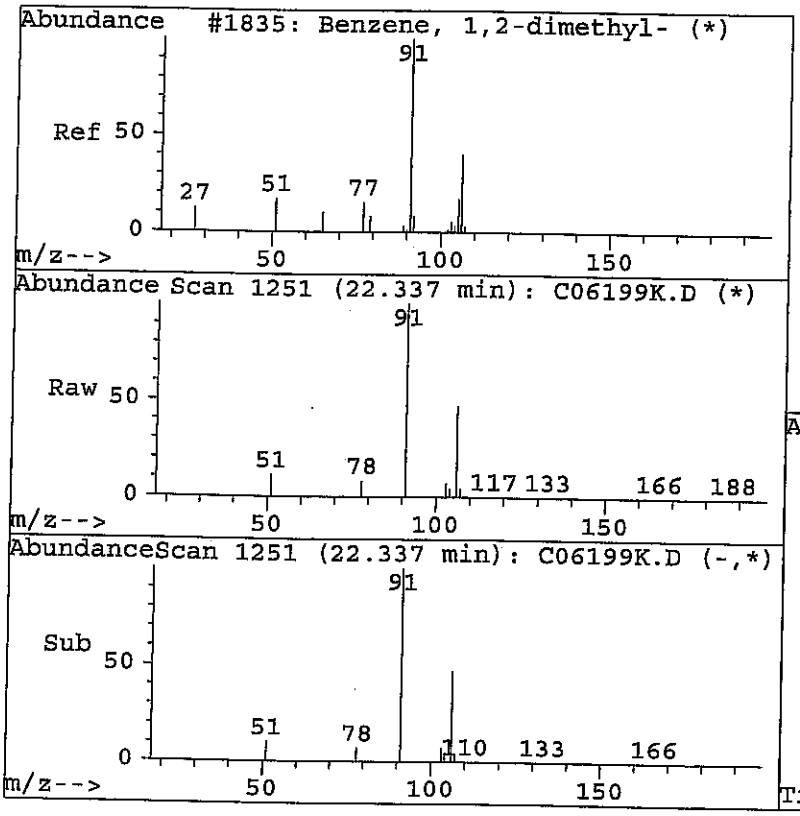


#35
Styrene
Concen: 0.07 ppbV
RT: 22.22 min Scan# 1245
Delta R.T. 0.00 min
Lab File: C06199K.D
Acq: 19 Jun 109 9:02 pm

Tgt Ion:104 Resp: 150847

Ion	Ratio	Lower	Upper
104	100		
78	49.0	32.6	48.8#
103	44.7	35.0	52.6
0	0.0	0.0	0.0

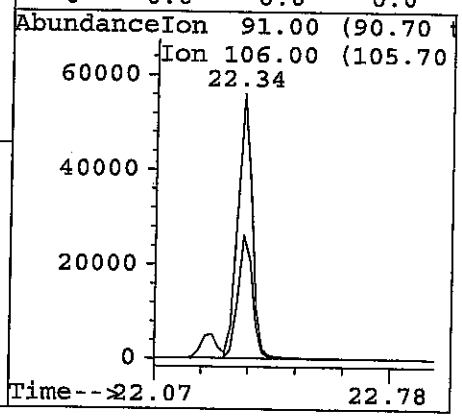


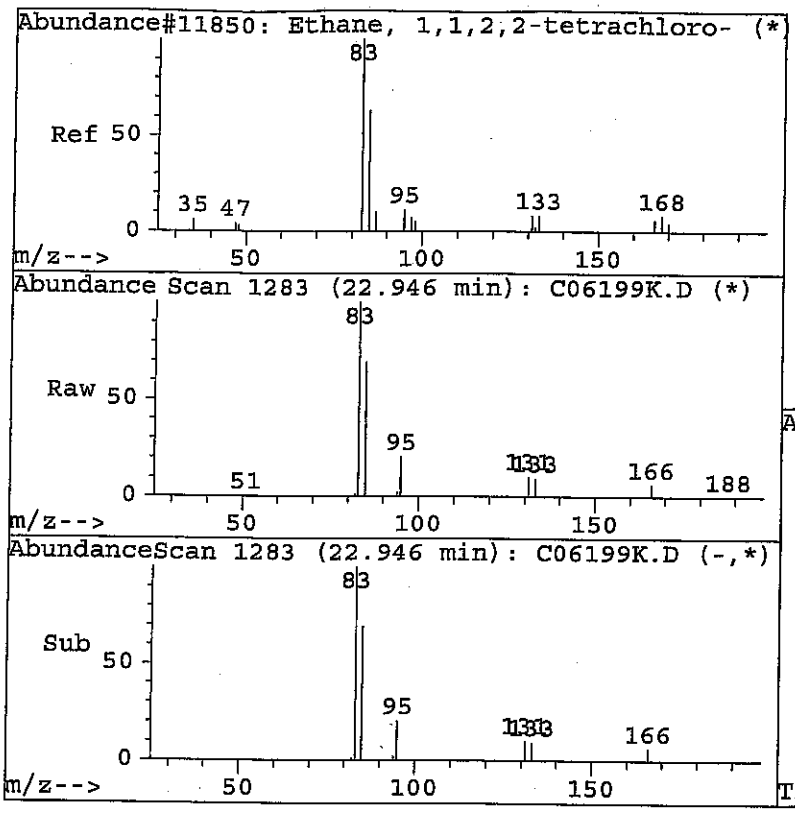


#36
o-Xylene
Concen: 0.07 ppbV
RT: 22.34 min Scan# 1251
Delta R.T. -0.00 min
Lab File: C06199K.D
Acq: 19 Jun 109 9:02 pm

Tgt Ion:91 Resp: 166711

Ion	Ratio	Lower	Upper
91	100		
106	47.1	34.5	51.7
0	0.0	0.0	0.0
0	0.0	0.0	0.0

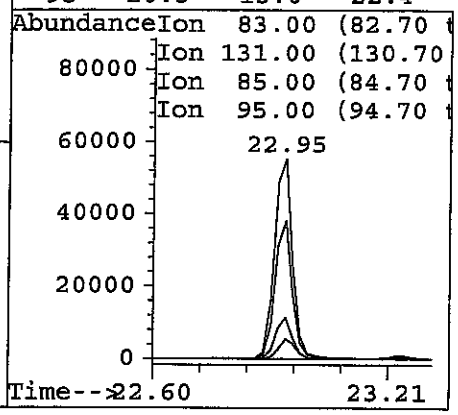


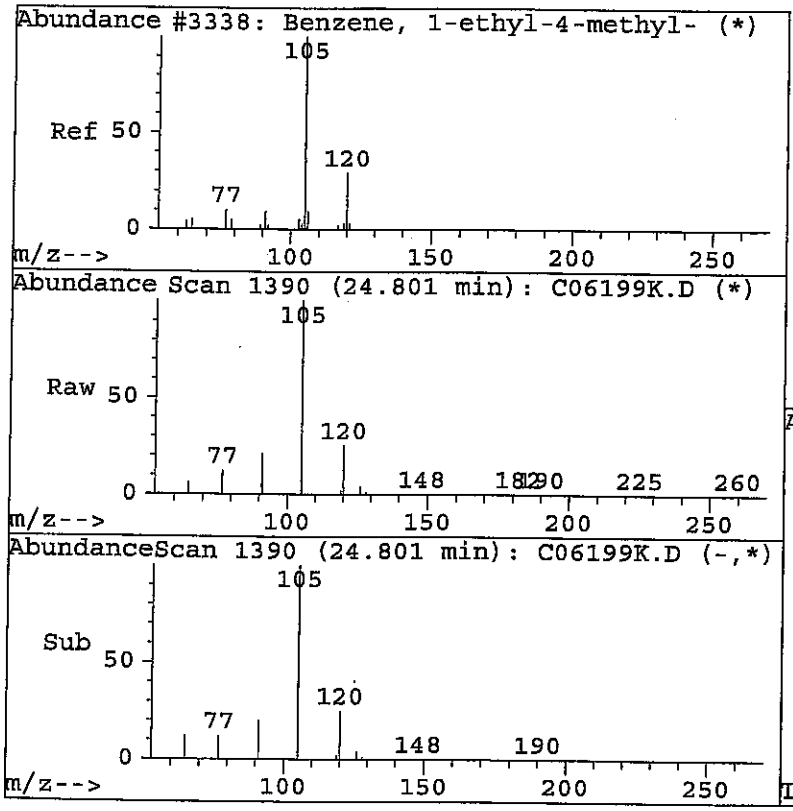


#37
1,1,2,2-Tetrachloroethane
Concen: 0.07 ppbV
RT: 22.95 min Scan# 1283
Delta R.T. 0.02 min
Lab File: C06199K.D
Acq: 19 Jun 109 9:02 pm

Tgt Ion:83 Resp: 180334

Ion	Ratio	Lower	Upper
83	100		
131	9.6	6.5	9.7
85	68.9	52.4	78.6
95	20.3	15.0	22.4

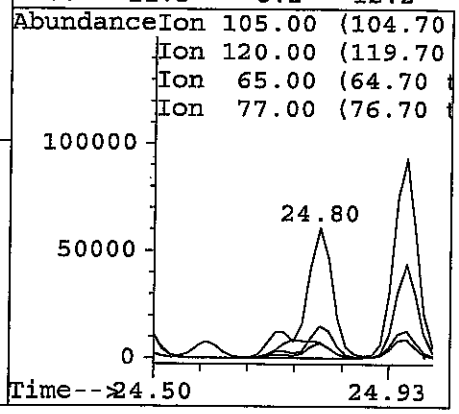


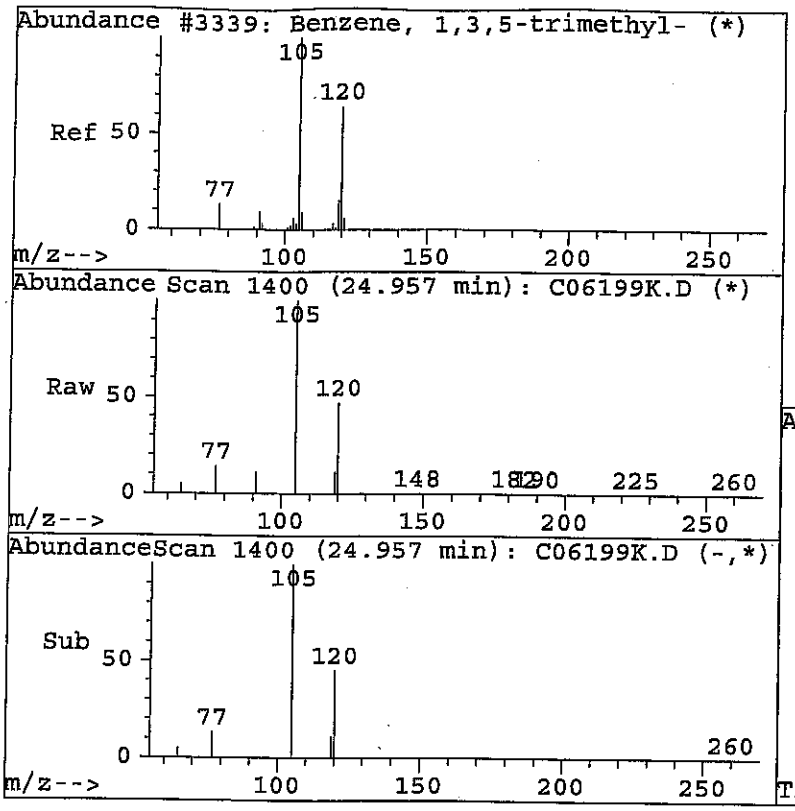


#38
4-Ethyltoluene
Concen: 0.05 ppbV
RT: 24.80 min Scan# 1390
Delta R.T. 0.00 min
Lab File: C06199K.D
Acq: 19 Jun 109 9:02 pm

Tgt Ion:105 Resp: 217540

Ion	Ratio	Lower	Upper
105	100		
120	24.7	20.1	30.1
65	9.6	7.5	11.3
77	11.5	8.2	12.2

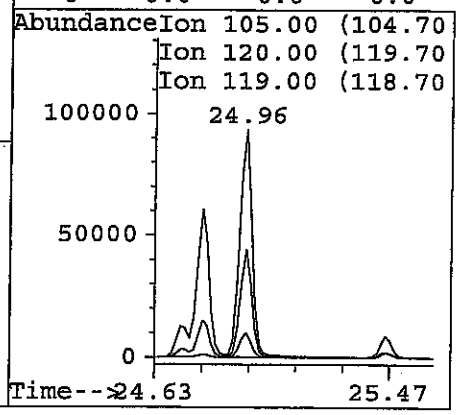


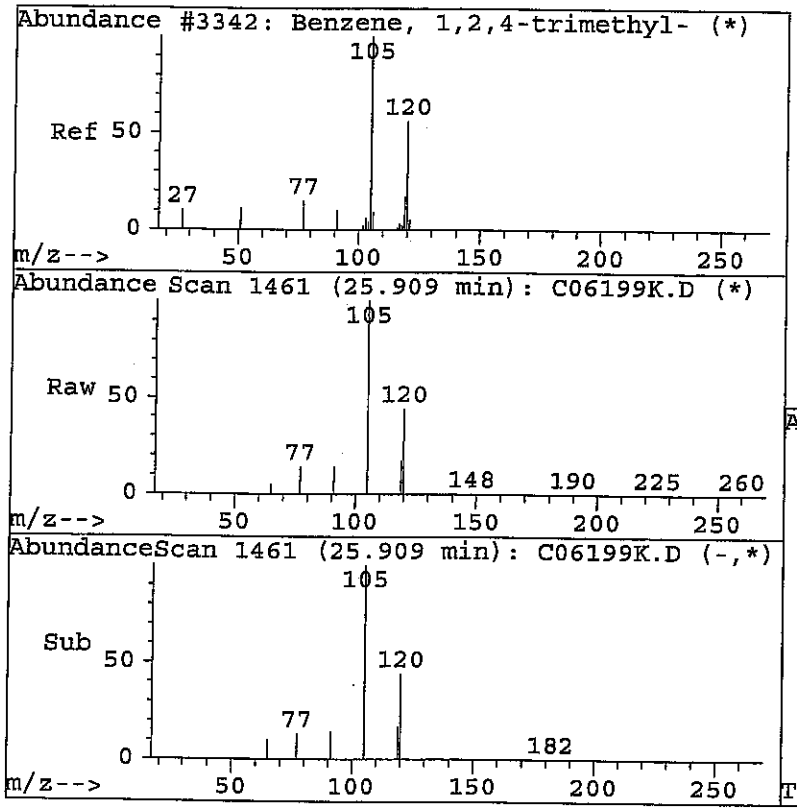


#39
1,3,5-Trimethylbenzene
Concen: 0.07 ppbV
RT: 24.96 min Scan# 1400
Delta R.T. -0.00 min
Lab File: C06199K.D
Acq: 19 Jun 109 9:02 pm

Tgt Ion:105 Resp: 280478

Ion	Ratio	Lower	Upper
105	100		
120	47.3	35.3	52.9
119	10.6	8.2	12.2
0	0.0	0.0	0.0

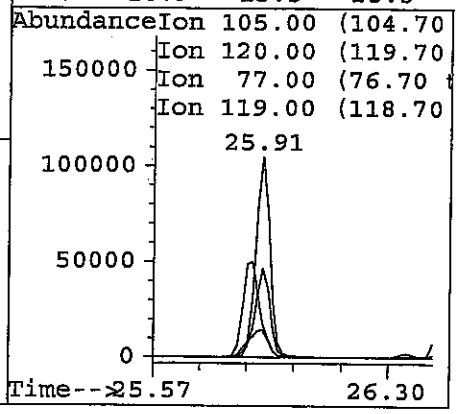


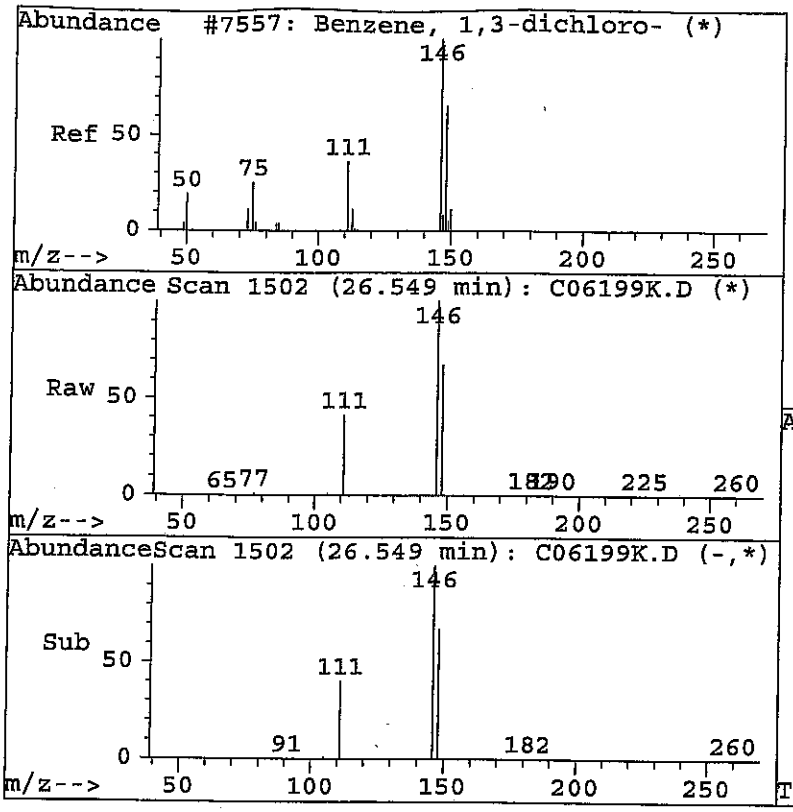


#40
1,2,4-Trimethylbenzene
Concen: 0.06 ppbV
RT: 25.91 min Scan# 1461
Delta R.T. -0.00 min
Lab File: C06199K.D
Acq: 19 Jun 109 9:02 pm

Tgt Ion:105 Resp: 315230

Ion	Ratio	Lower	Upper
105	100		
120	44.3	33.4	50.2
77	13.6	11.4	17.2
119	16.9	15.5	23.3

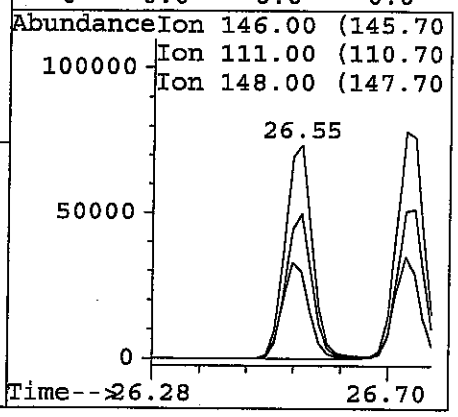


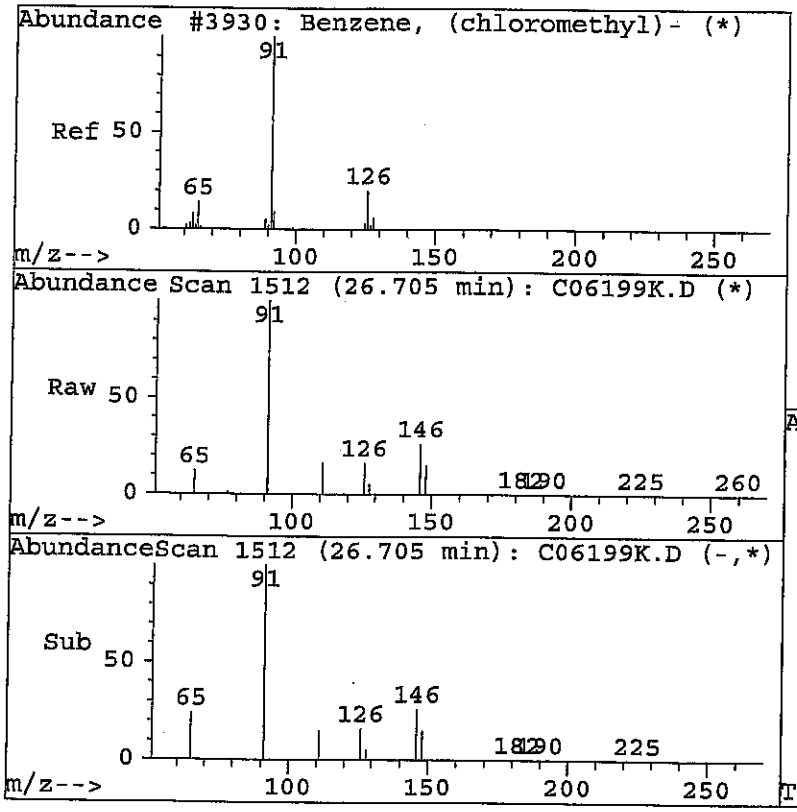


#41
1,3-Dichlorobenzene
Concen: 0.07 ppbV
RT: 26.55 min Scan# 1502
Delta R.T. -0.00 min
Lab File: C06199K.D
Acq: 19 Jun 109 9:02 pm

Tgt Ion:146 Resp: 243933

Ion	Ratio	Lower	Upper
146	100		
111	40.5	33.9	50.9
148	67.4	51.7	77.5
0	0.0	0.0	0.0

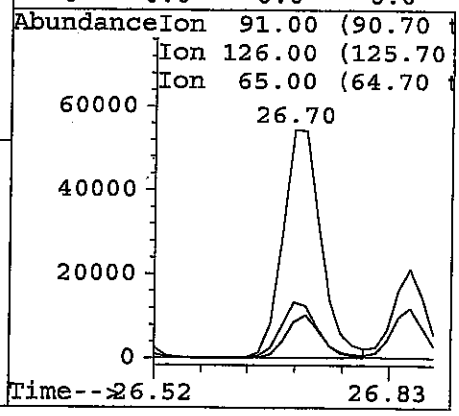


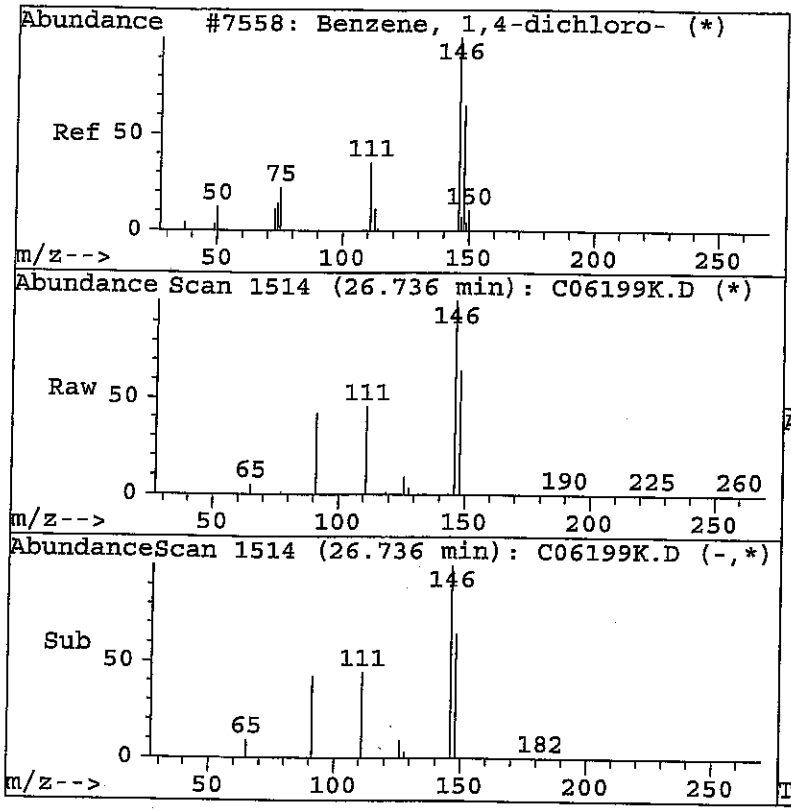


#42
Benzyl chloride
Concen: 0.05 ppbV
RT: 26.70 min Scan# 1512
Delta R.T. 0.00 min
Lab File: C06199K.D
Acq: 19 Jun 109 9:02 pm

Tgt Ion:91 Resp: 191598

Ion	Ratio	Lower	Upper
91	100		
126	15.8	13.4	20.2
65	24.2	18.2	27.4
0	0.0	0.0	0.0

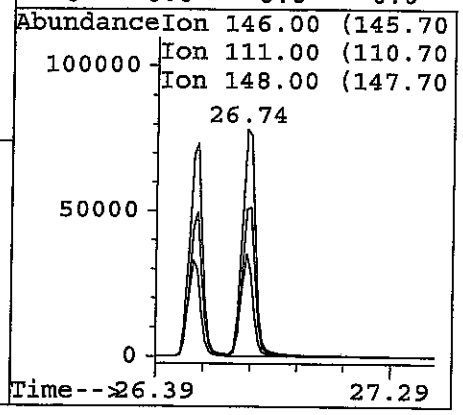


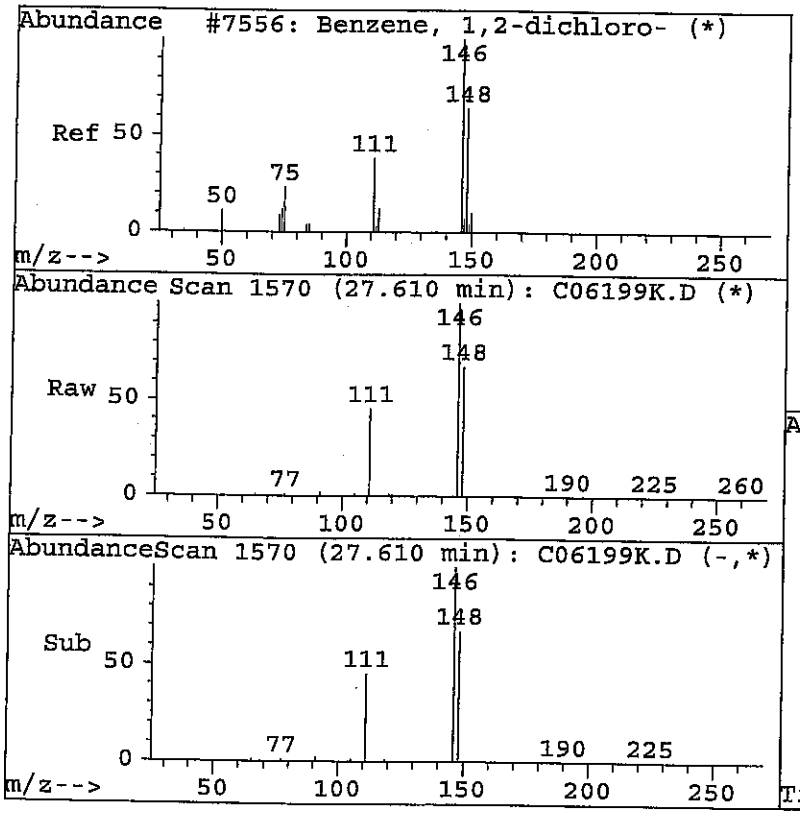


#43
1,4-Dichlorobenzene
Concen: 0.07 ppbV
RT: 26.74 min Scan# 1514
Delta R.T. -0.01 min
Lab File: C06199K.D
Acq: 19 Jun 109 9:02 pm

Tgt Ion:146 Resp: 271163

Ion	Ratio	Lower	Upper
146	100		
111	44.7	31.8	47.8
148	64.4	52.0	78.0
0	0.0	0.0	0.0

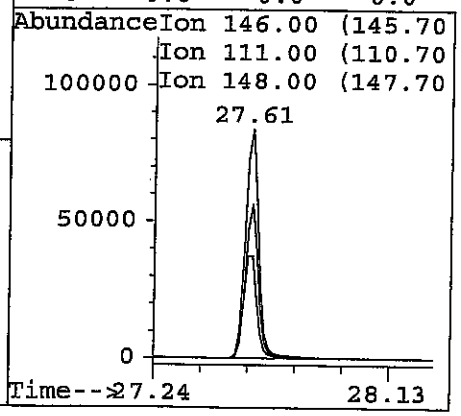


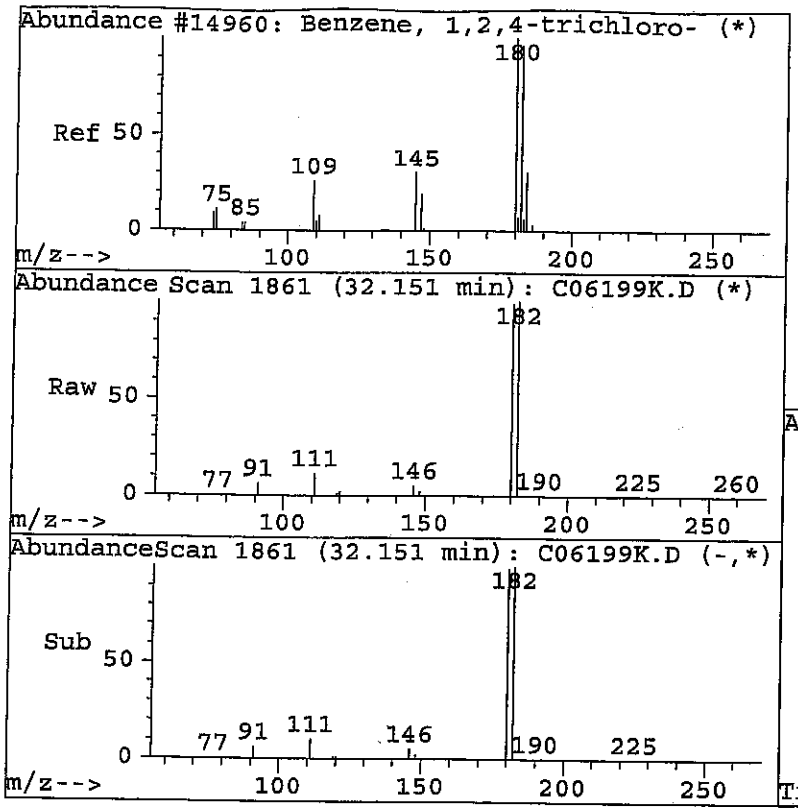


#44
1,2-Dichlorobenzene
Concen: 0.06 ppbV
RT: 27.61 min Scan# 1570
Delta R.T. -0.00 min
Lab File: C06199K.D
Acq: 19 Jun 109 9:02 pm

Tgt Ion:146 Resp: 288406

Ion	Ratio	Lower	Upper
146	100		
111	44.6	37.2	55.8
148	67.2	51.3	76.9
0	0.0	0.0	0.0

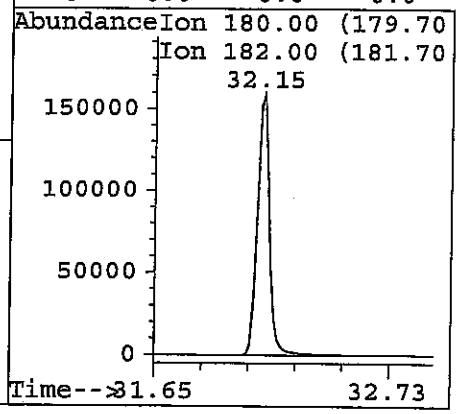


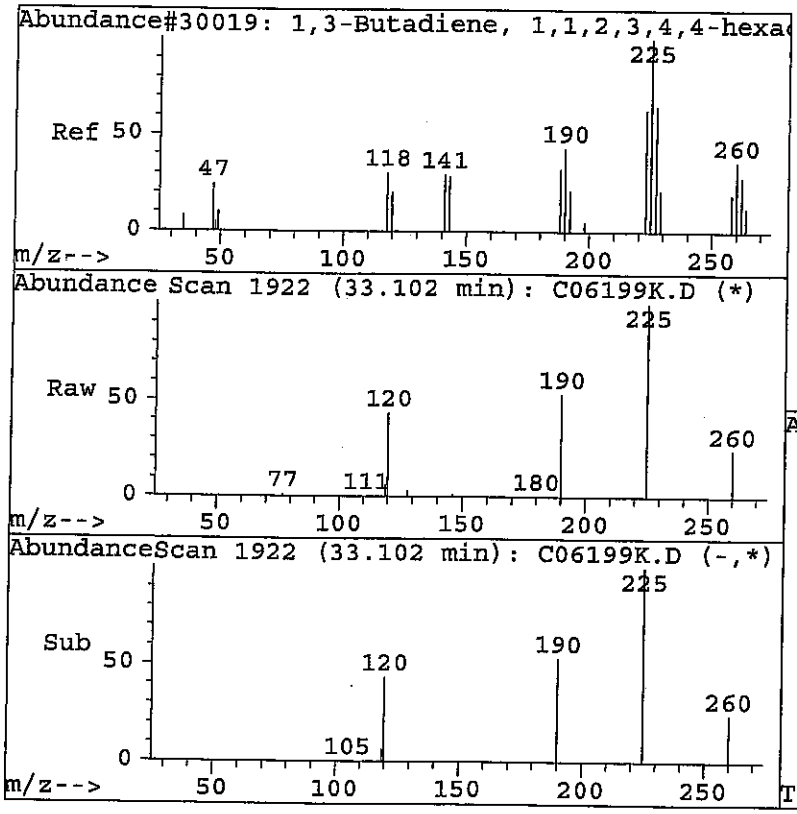


#45
1,2,4-Trichlorobenzene
Concen: 0.06 ppbV
RT: 32.15 min Scan# 1861
Delta R.T. -0.02 min
Lab File: C06199K.D
Acq: 19 Jun 109 9:02 pm

Tgt Ion:180 Resp: 617532

Ion	Ratio	Lower	Upper
180	100		
182	101.1	80.5	120.7
0	0.0	0.0	0.0
0	0.0	0.0	0.0

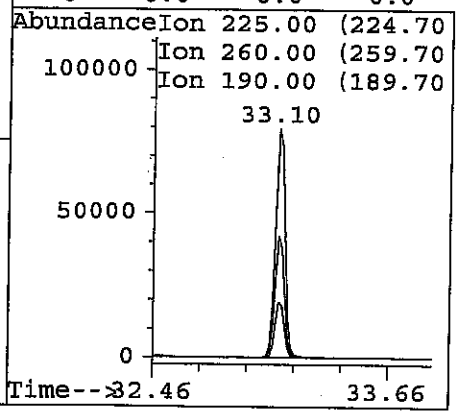


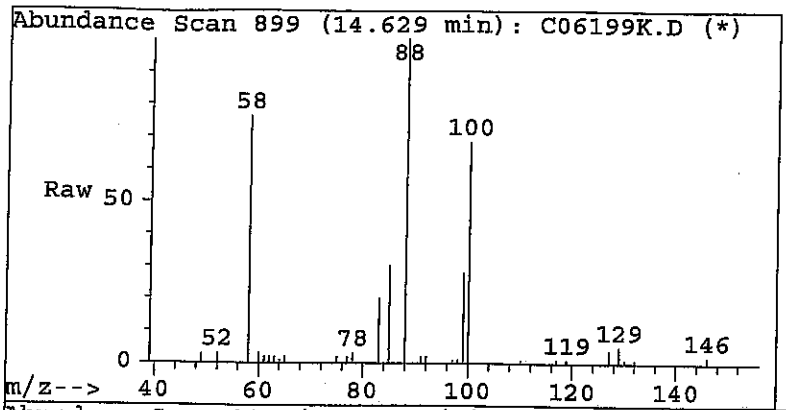


#46
Hexachlorobutadiene
Concen: 0.05 ppbV
RT: 33.10 min Scan# 1922
Delta R.T. -0.03 min
Lab File: C06199K.D
Acq: 19 Jun 109 9:02 pm

Tgt Ion:225 Resp: 269777

Ion	Ratio	Lower	Upper
225	100		
260	24.1	19.5	29.3
190	53.1	41.4	62.0
0	0.0	0.0	0.0

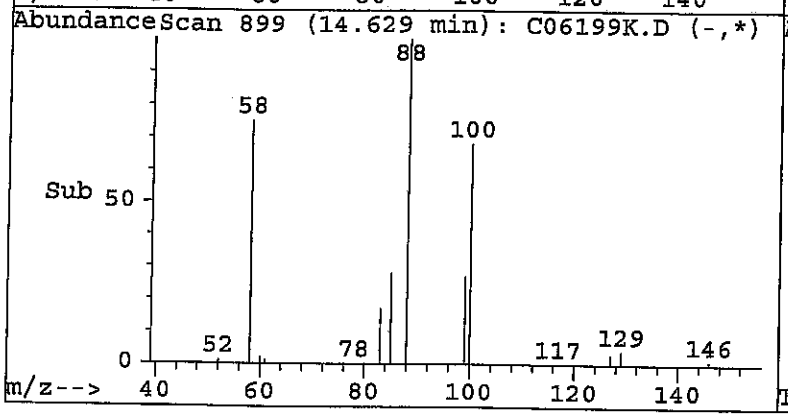


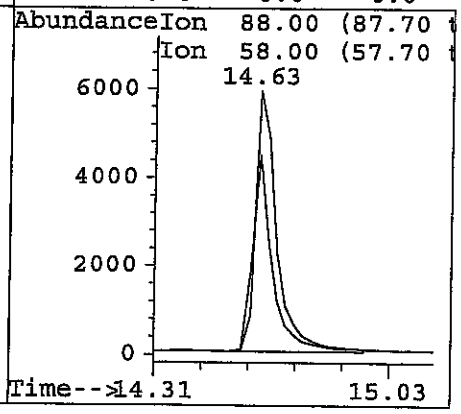


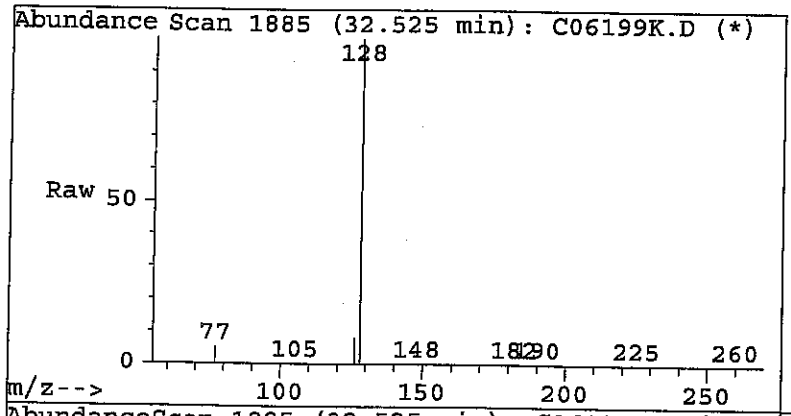
#47
1,4 Dioxane
Concen: 0.09 ppbV
RT: 14.63 min Scan# 899
Delta R.T. 0.06 min
Lab File: C06199K.D
Acq: 19 Jun 109 9:02 pm

Tgt Ion:88 Resp: 26330

Ion	Ratio	Lower	Upper
88	100		
58	70.4	52.1	78.1
0	0.0	0.0	0.0
0	0.0	0.0	0.0



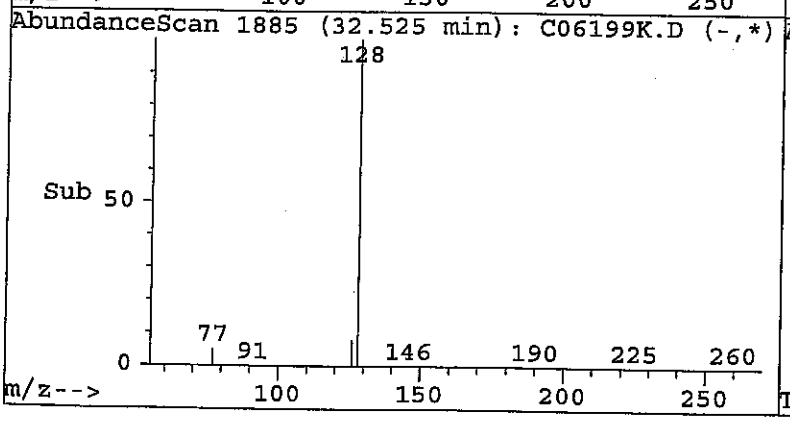


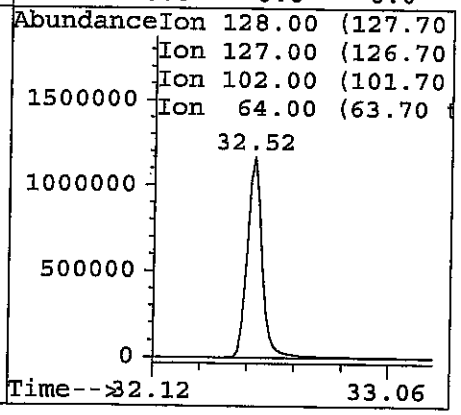


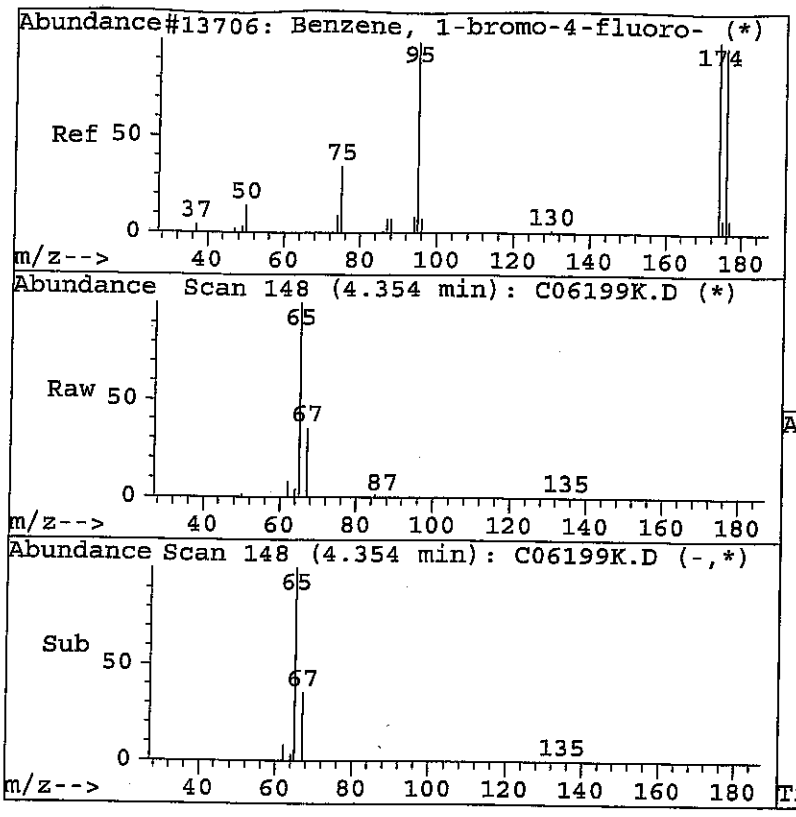
#48
Naphthalene
Concen: 0.10 ppbV m
RT: 32.52 min Scan# 1885
Delta R.T. -0.26 min
Lab File: C06199K.D
Acq: 19 Jun 109 9:02 pm

Tgt Ion:128 Resp: 4780301

Ion	Ratio	Lower	Upper
128	100		
127	0.0	0.0	0.0
102	0.0	0.0	0.0
64	0.0	0.0	0.0



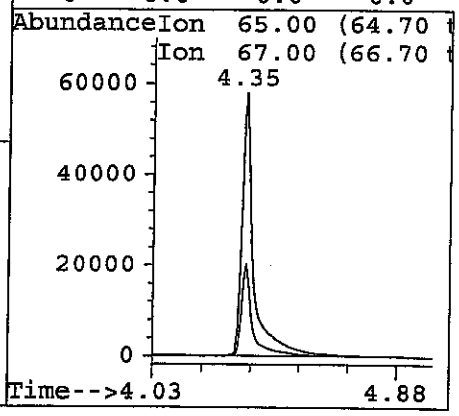




#49
Vinyl Chloride-d3
Concen: 0.20 ppbV
RT: 4.35 min Scan# 148
Delta R.T. 0.00 min
Lab File: C06199K.D
Acq: 19 Jun 109 9:02 pm

Tgt Ion:65 Resp: 161846

Ion	Ratio	Lower	Upper
65	100		
67	35.0	28.2	42.4
0	0.0	0.0	0.0
0	0.0	0.0	0.0



Initial Calibration Title: 2SIM_SEA.M

Quantitation Report

Data File : C:\MSCHEM\2\DATA\07089MS2\C07089D.D
Acq Time : 8 Jul 109 11:51 am
Sample : ST60421 + ST60250
Misc : 10.0 ML
Quant Time: Jul 9 8:10 19109

Operator: JF
Inst : MS2
Multiplr: 1.00

Method : C:\MSCHEM\2\METHODS\2SIM_SEA.M
Title : EPA T0-15
Last Update : Thu Jul 09 08:26:17 2009
Response via : Multiple Level Calibration

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Chlorobenzene-d5	20.54	117	1210851	0.20 ppbV	0.03
System Monitoring Compounds					%Recovery
4) Toluene-d8	17.08	98	555865	0.22 ppbV	
8) Vinyl Chloride-d3	4.39	65	200968	0.19 ppbV	
Target Compounds					Qvalue
2) Vinyl chloride	4.40	62	233907	0.99 ppbV	97
3) 1,1-Dichloroethene	7.00	61	475136	0.97 ppbV	93
5) 1,2-Dibromoethane	19.01	107	910214	0.74 ppbV #	98
6) 1,1,2,2-Tetrachloroethane	22.96	83	2066403	0.63 ppbV	97
7) Naphthalene	32.55	128	33275757	0.82 ppbV m	0

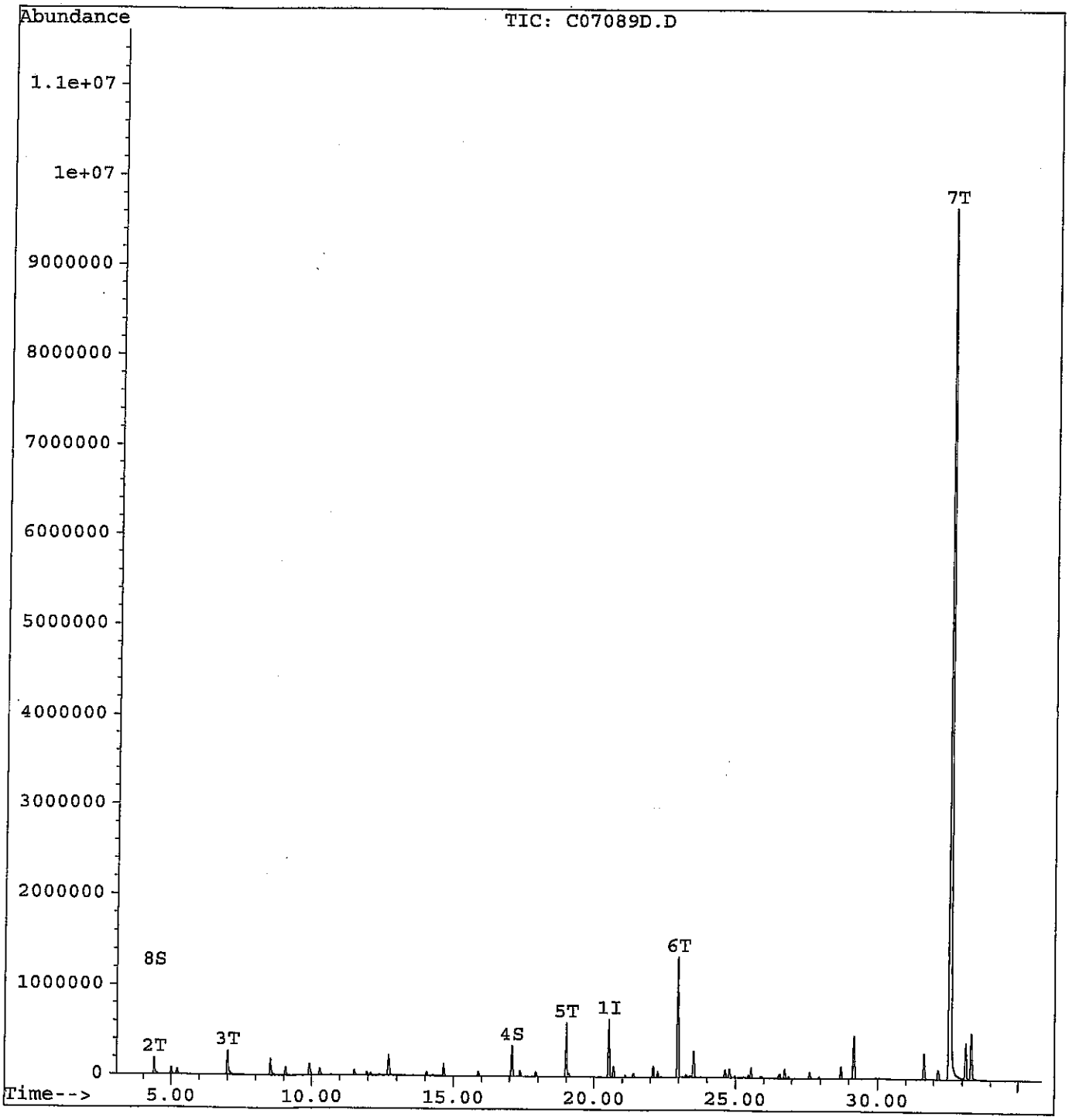
(#) = qualifier out of range (m) = manual integration

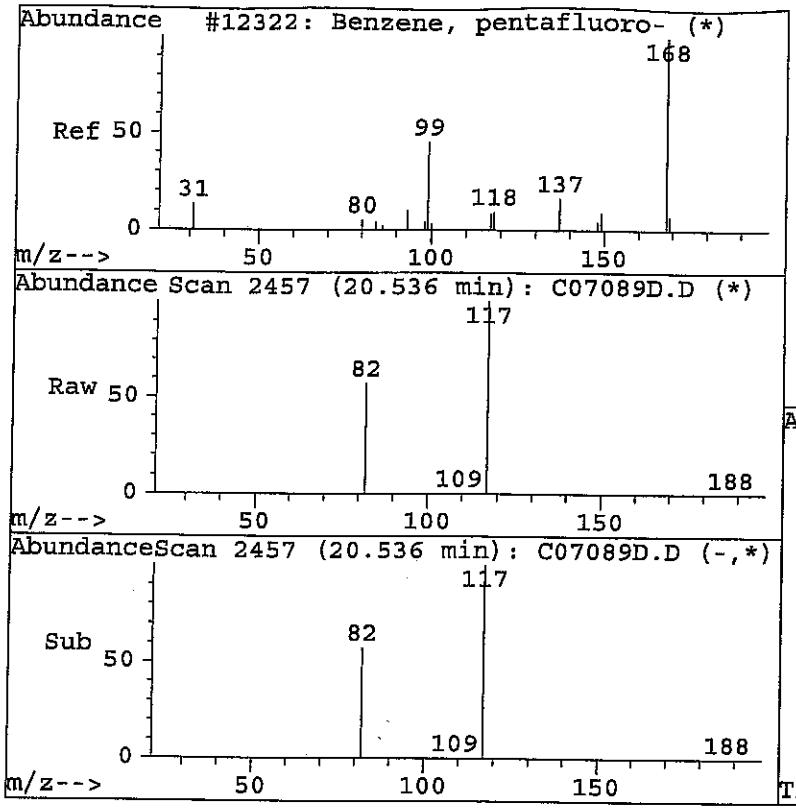
Quantitation Report

Data File : C:\MSCHEM\2\DATA\07089MS2\C07089D.D
Acq Time : 8 Jul 109 11:51 am
Sample : ST60421 + ST60250
Misc : 10.0 ML
Quant Time: Jul 9 8:10 19109

Operator: JF
Inst : MS2
Multiplr: 1.00

Method : C:\MSCHEM\2\METHODS\2SIM_SEA.M
Title : EPA T0-15
Last Update : Thu Jul 09 08:26:17 2009
Response via : Multiple Level Calibration

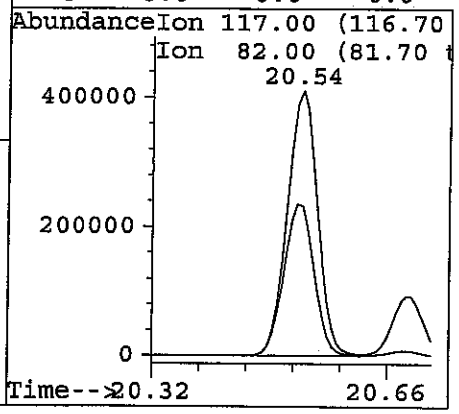


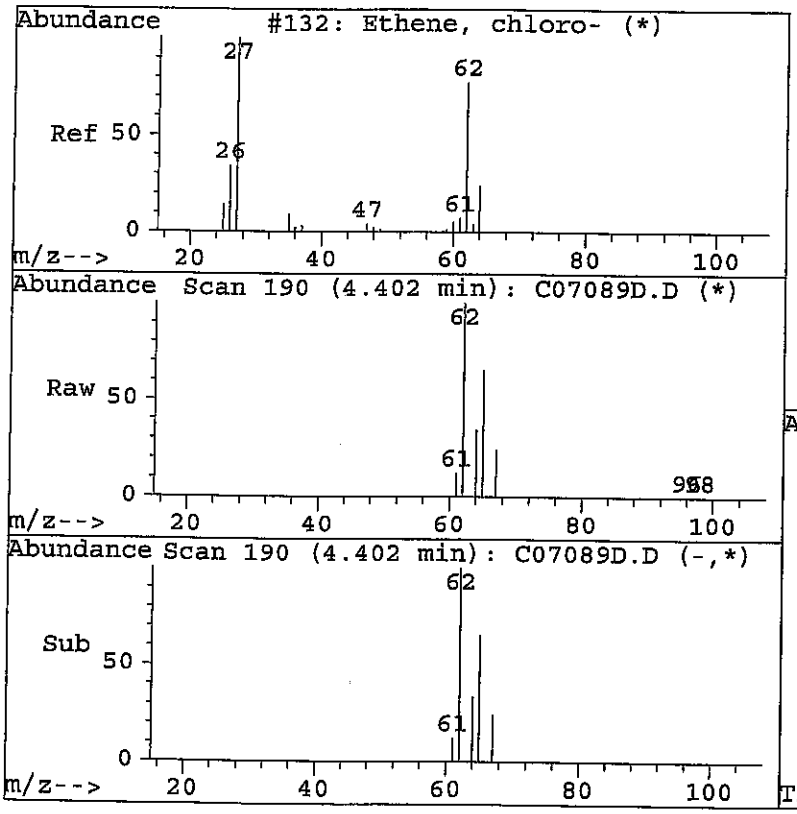


#1
Chlorobenzene-d5
Concen: 0.20 ppbV
RT: 20.54 min Scan# 2457
Delta R.T. 0.03 min
Lab File: C07089D.D
Acq: 8 Jul 109 11:51 am

Tgt Ion:117 Resp: 1210851

Ion	Ratio	Lower	Upper
117	100		
82	56.7	43.5	65.3
0	0.0	0.0	0.0
0	0.0	0.0	0.0

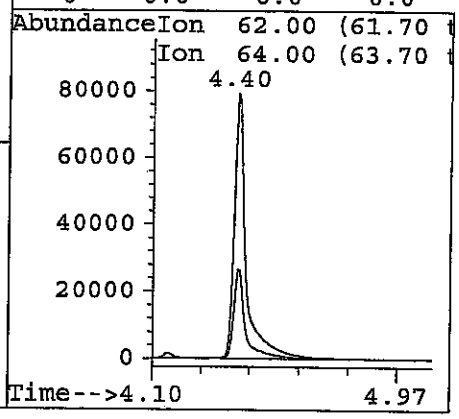


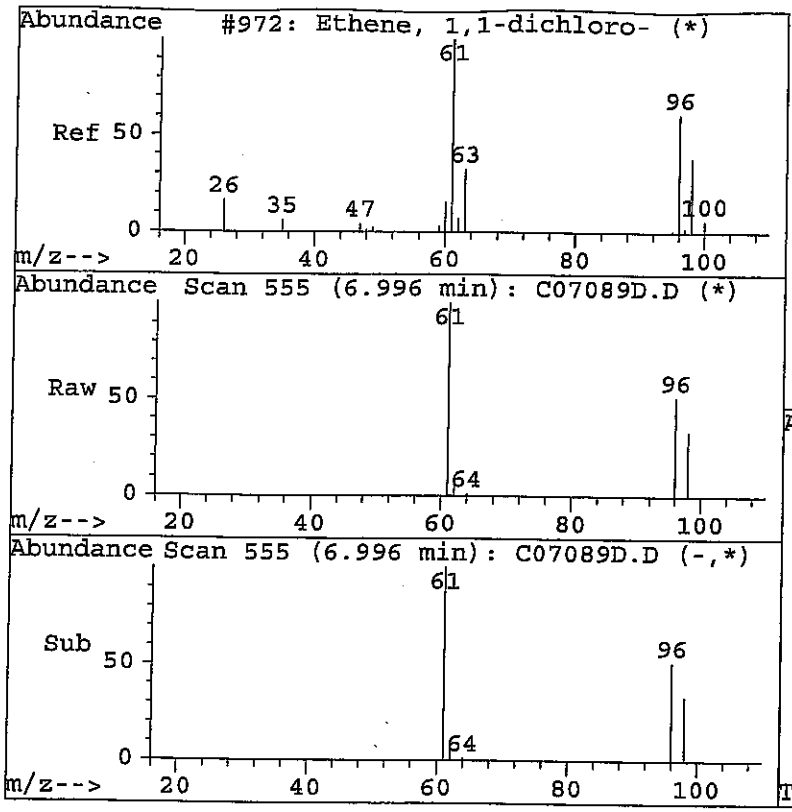


#2
Vinyl chloride
Concen: 0.99 ppbV
RT: 4.40 min Scan# 190
Delta R.T. 0.03 min
Lab File: C07089D.D
Acq: 8 Jul 109 11:51 am

Tgt Ion:62 Resp: 233907

Ion	Ratio	Lower	Upper
62	100		
64	33.4	28.2	42.2
0	0.0	0.0	0.0
0	0.0	0.0	0.0

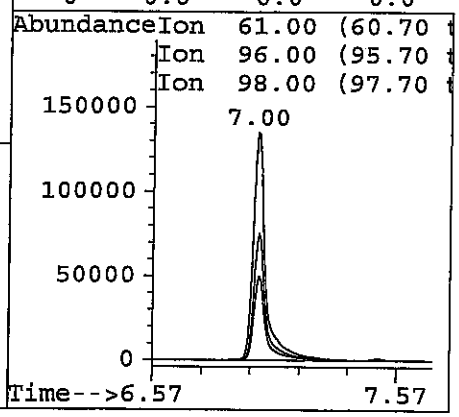


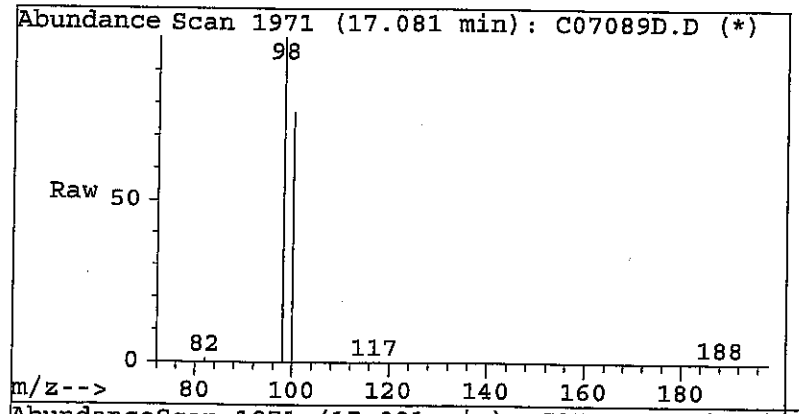


#3
1,1-Dichloroethene
Concen: 0.97 ppbV
RT: 7.00 min Scan# 555
Delta R.T. 0.05 min
Lab File: C07089D.D
Acq: 8 Jul 109 11:51 am

Tgt Ion:61 Resp: 475136

Ion	Ratio	Lower	Upper
61	100		
96	51.4	37.4	56.0
98	33.0	23.1	34.7
0	0.0	0.0	0.0

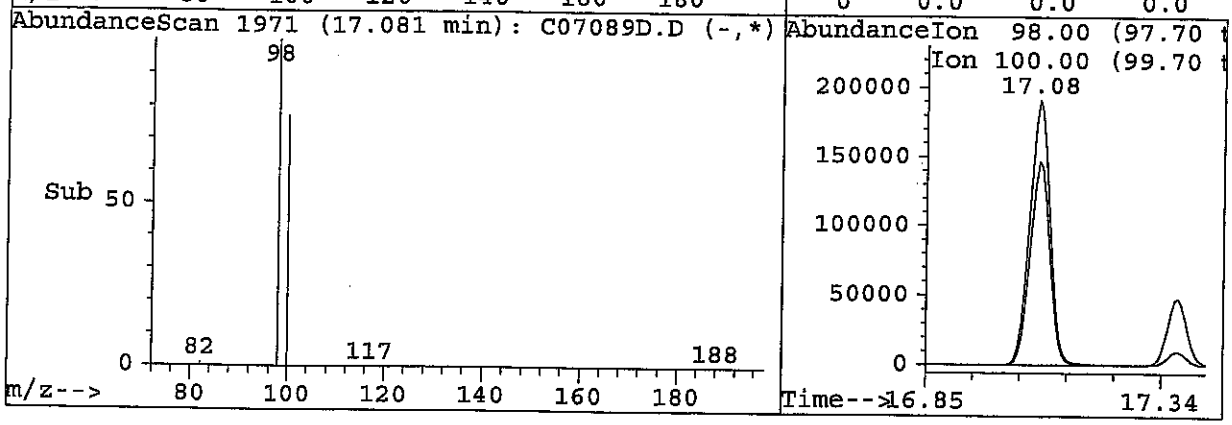


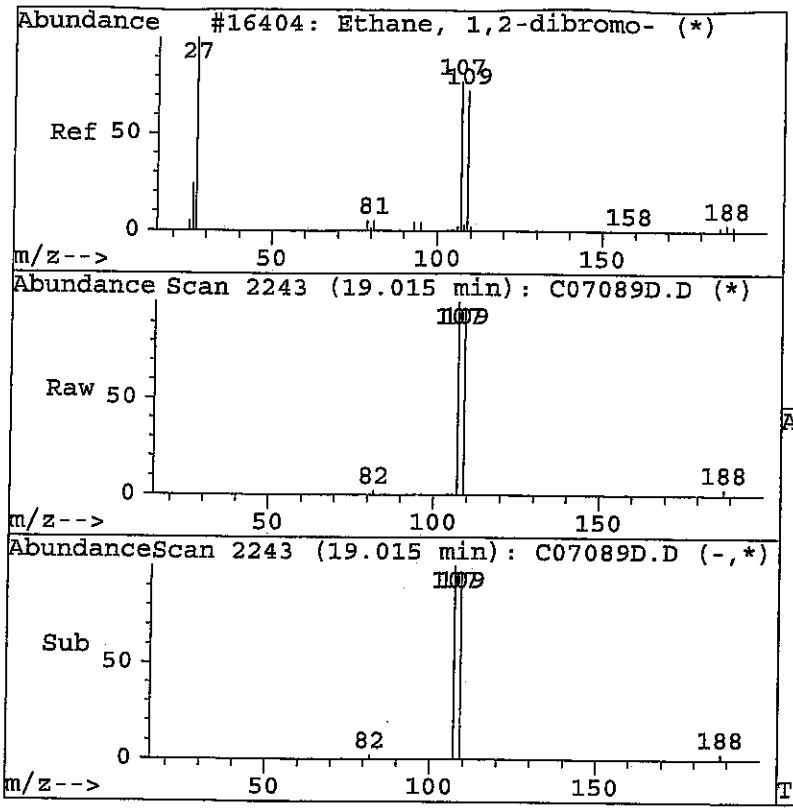


#4
Toluene-d8
Concen: 0.22 ppbV
RT: 17.08 min Scan# 1971
Delta R.T. 0.03 min
Lab File: C07089D.D
Acq: 8 Jul 109 11:51 am

Tgt Ion:98 Resp: 555865

Ion	Ratio	Lower	Upper
98	100		
100	75.7	59.5	89.3
0	0.0	0.0	0.0
0	0.0	0.0	0.0

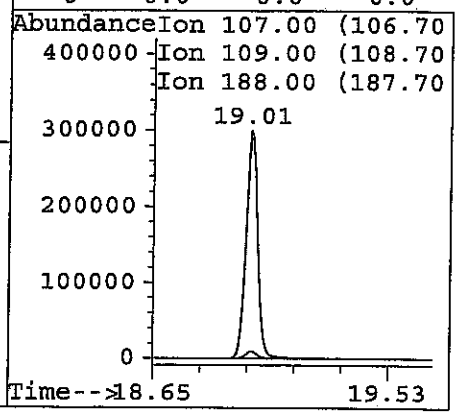


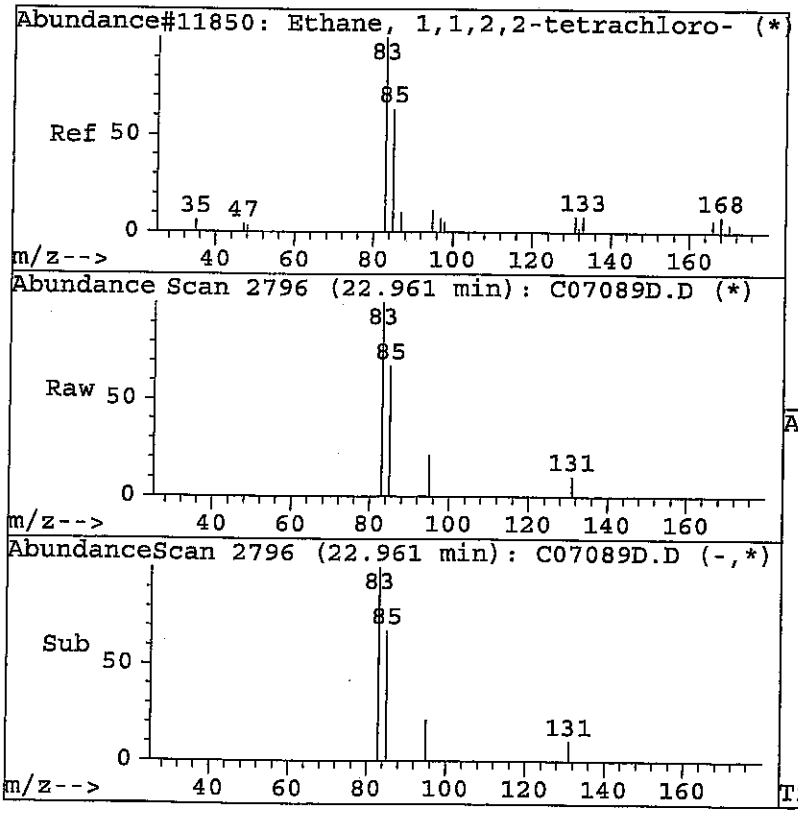


#5
1,2-Dibromoethane
Concen: 0.74 ppbV
RT: 19.01 min Scan# 2243
Delta R.T. 0.02 min
Lab File: C07089D.D
Acq: 8 Jul 109 11:51 am

Tgt Ion:107 Resp: 910214

Ion	Ratio	Lower	Upper
107	100		
109	97.0	75.9	113.9
188	3.1	1.7	2.5#
0	0.0	0.0	0.0

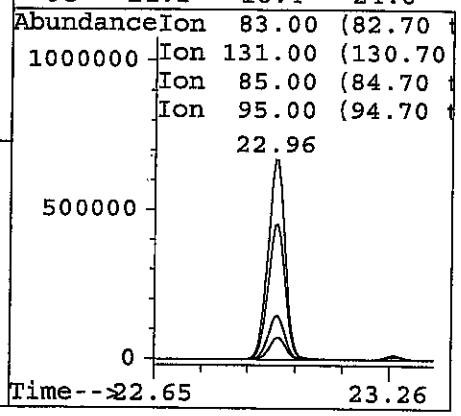


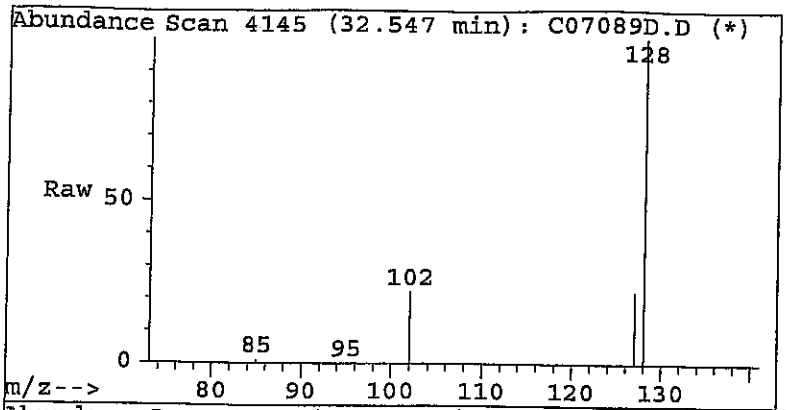


#6
1,1,2,2-Tetrachloroethane
Concen: 0.63 ppbV
RT: 22.96 min Scan# 2796
Delta R.T. 0.03 min
Lab File: C07089D.D
Acq: 8 Jul 109 11:51 am

Tgt Ion:83 Resp: 2066403

Ion	Ratio	Lower	Upper
83	100		
131	10.0	7.8	11.6
85	66.6	55.5	83.3
95	21.2	16.4	24.6

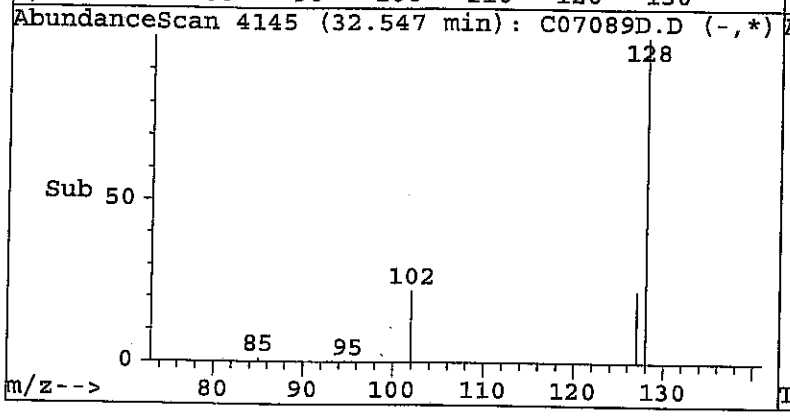


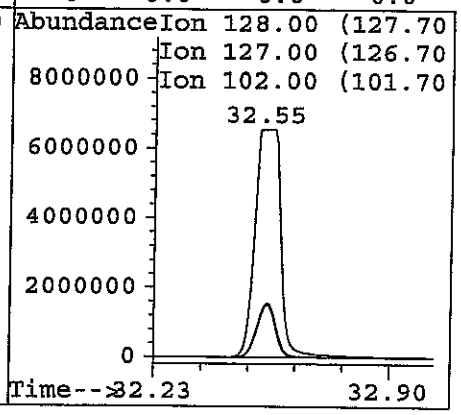


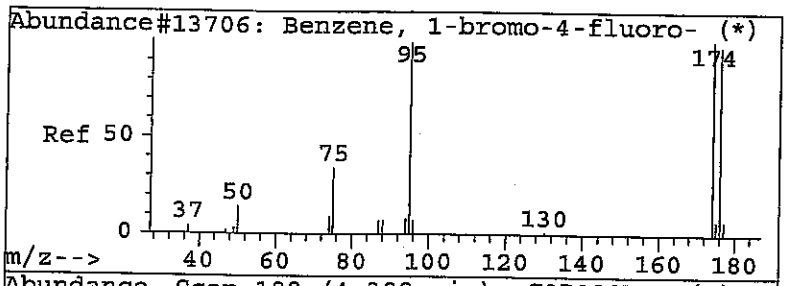
#7
Naphthalene
Concen: 0.82 ppbV m
RT: 32.55 min Scan# 4145
Delta R.T. -0.23 min
Lab File: C07089D.D
Acq: 8 Jul 109 11:51 am

Tgt Ion:128 Resp:33275757

Ion	Ratio	Lower	Upper
128	100		
127	22.0	0.0	0.0#
102	21.6	0.0	0.0#
0	0.0	0.0	0.0



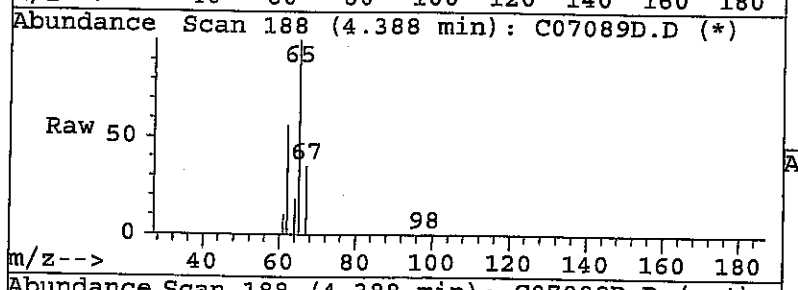


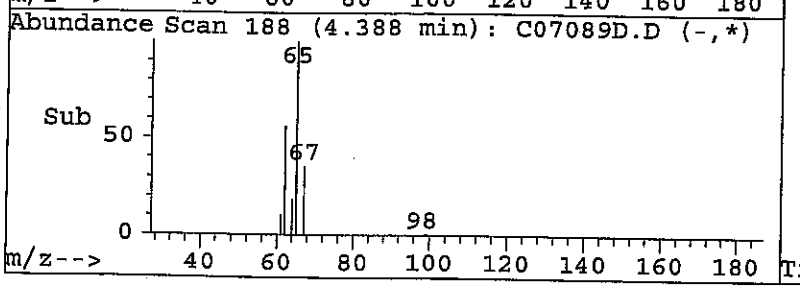


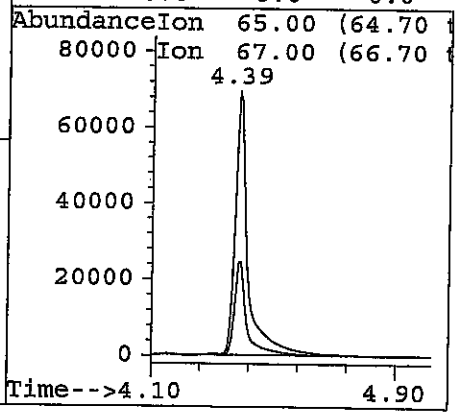
#8
Vinyl Chloride-d3
Concen: 0.19 ppbV
RT: 4.39 min Scan# 188
Delta R.T. 0.04 min
Lab File: C07089D.D
Acq: 8 Jul 109 11:51 am

Tgt Ion:65 Resp: 200968

Ion	Ratio	Lower	Upper
65	100		
67	35.1	26.6	40.0
0	0.0	0.0	0.0
0	0.0	0.0	0.0







Quantitation Report

Data File : C:\MSCHEM\2\DATA\07089MS2\C07089H.D
Acq Time : 8 Jul 109 2:57 pm
Sample : ST60421 + ST60250
Misc : 0.5 ML
Quant Time: Jul 9 8:12 19109

Operator: CM
Inst : MS2
Multiplr: 1.00

Method : C:\MSCHEM\2\METHODS\2SIM_SEA.M
Title : EPA T0-15
Last Update : Thu Jul 09 08:26:17 2009
Response via : Multiple Level Calibration

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Chlorobenzene-d5	20.54	117	185512	0.20 ppbV	0.03
System Monitoring Compounds					%Recovery
4) Toluene-d8	17.08	98	82583	0.21 ppbV	
8) Vinyl Chloride-d3	4.33	65	35913	0.23 ppbV	
Target Compounds					Qvalue
2) Vinyl chloride	4.35	62	2185	0.06 ppbV #	81
3) 1,1-Dichloroethene	6.95	61	3956	0.05 ppbV #	87
5) 1,2-Dibromoethane	19.04	107	8843	0.05 ppbV #	94
6) 1,1,2,2-Tetrachloroethane	22.98	83	19486	0.04 ppbV	95
7) Naphthalene	32.56	128	1174309	0.19 ppbV m	0

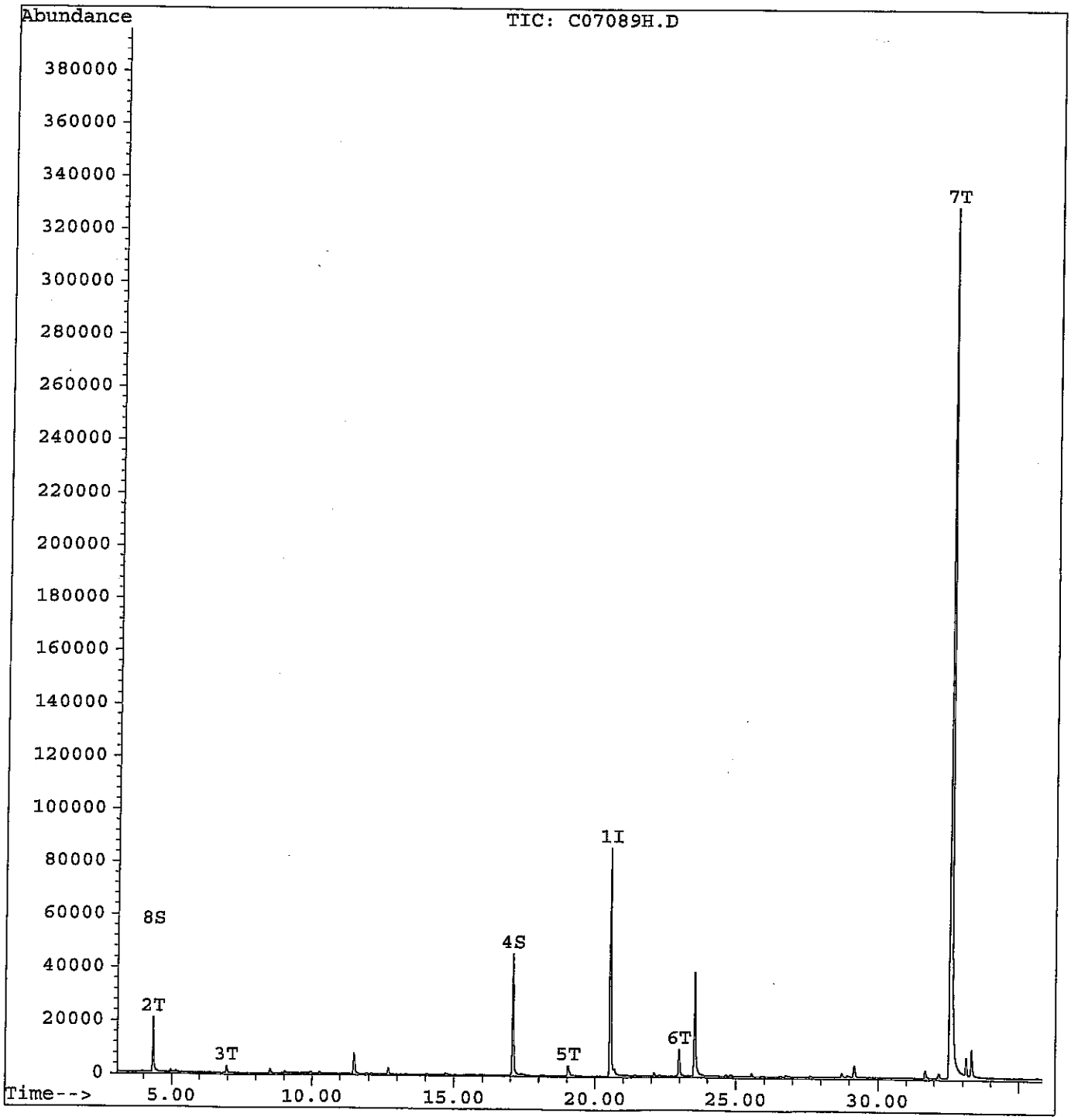
(#) = qualifier out of range (m) = manual integration

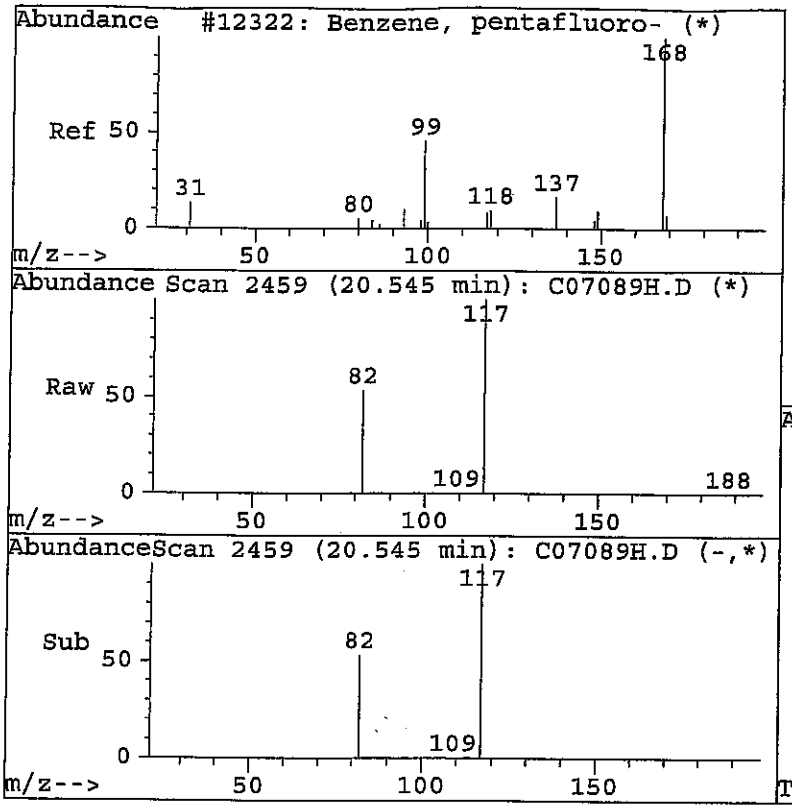
Quantitation Report

Data File : C:\MSCHEM\2\DATA\07089MS2\C07089H.D
Acq Time : 8 Jul 109 2:57 pm
Sample : ST60421 + ST60250
Misc : 0.5 ML
Quant Time: Jul 9 8:12 19109

Operator: CM
Inst : MS2
Multiplr: 1.00

Method : C:\MSCHEM\2\METHODS\2SIM_SEA.M
Title : EPA T0-15
Last Update : Thu Jul 09 08:26:17 2009
Response via : Multiple Level Calibration

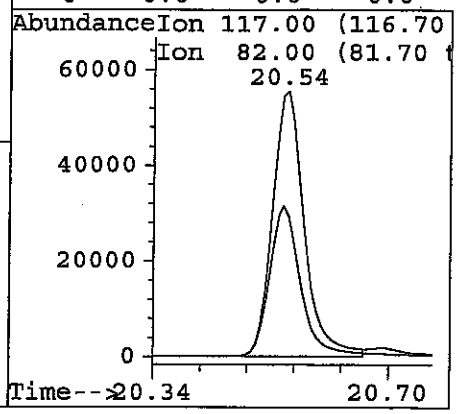


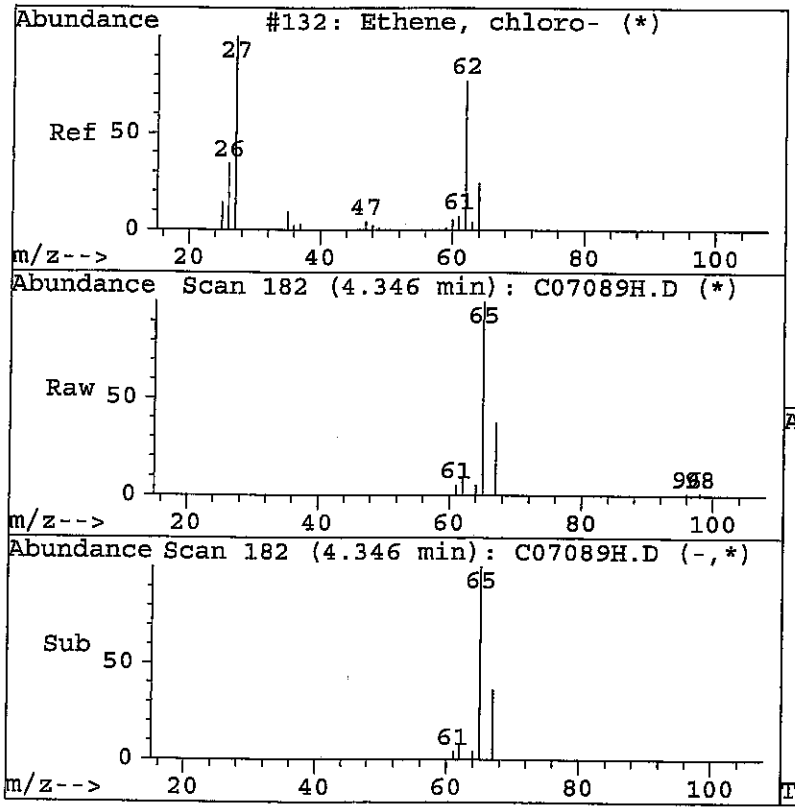


#1
Chlorobenzene-d5
Concen: 0.20 ppbV
RT: 20.54 min Scan# 2459
Delta R.T. 0.03 min
Lab File: C07089H.D
Acq: 8 Jul 109 2:57 pm

Tgt Ion:117 Resp: 185512

Ion	Ratio	Lower	Upper
117	100		
82	53.1	43.5	65.3
0	0.0	0.0	0.0
0	0.0	0.0	0.0

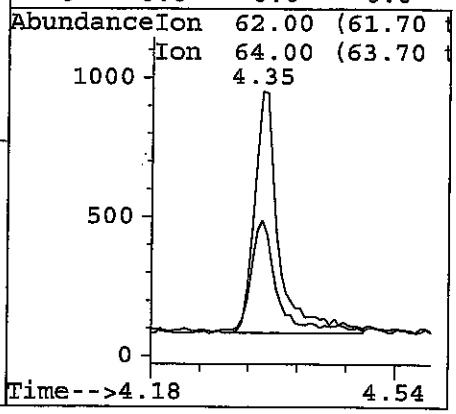


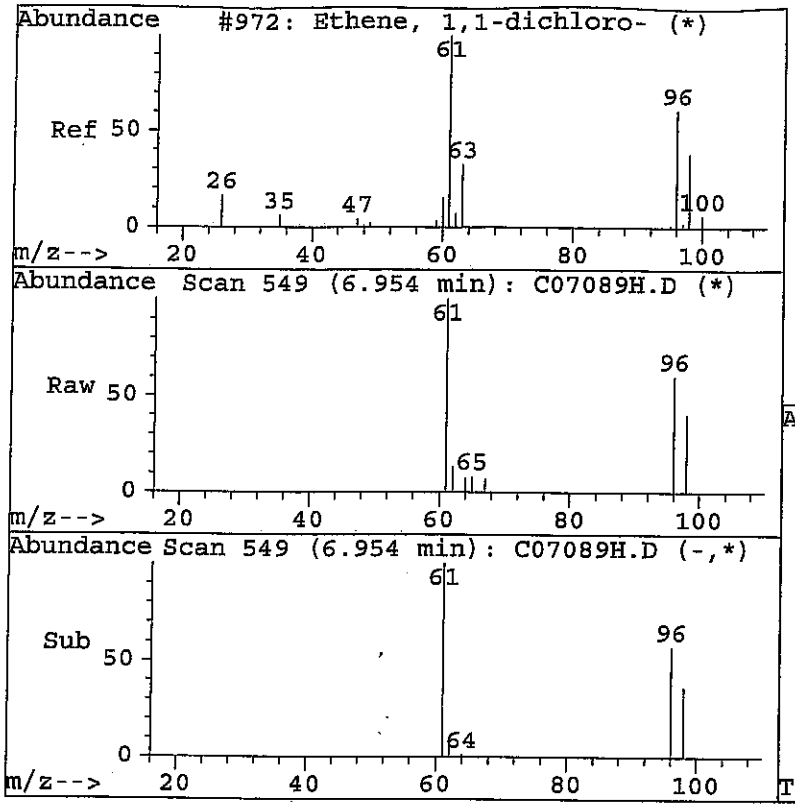


#2
Vinyl chloride
Concen: 0.06 ppbV
RT: 4.35 min Scan# 182
Delta R.T. -0.02 min
Lab File: C07089H.D
Acq: 8 Jul 109 2:57 pm

Tgt Ion:62 Resp: 2185

Ion	Ratio	Lower	Upper
62	100		
64	46.0	28.2	42.2#
0	0.0	0.0	0.0
0	0.0	0.0	0.0

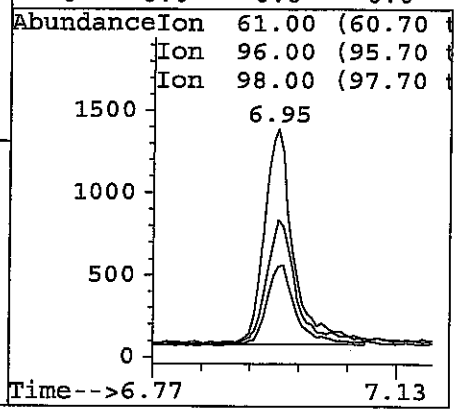


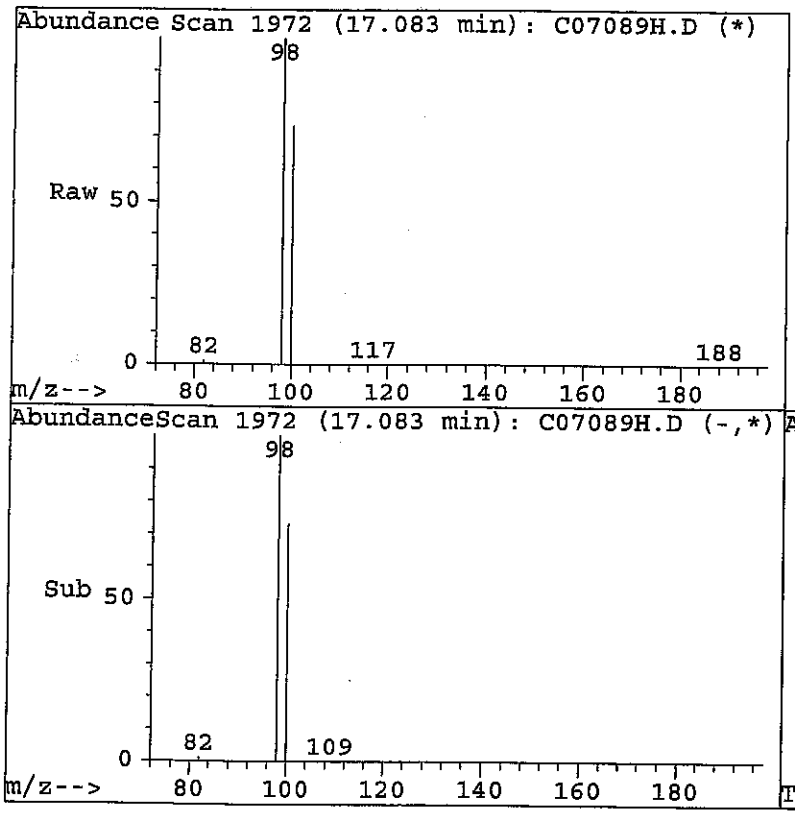


#3
1,1-Dichloroethene
Concen: 0.05 ppbV
RT: 6.95 min Scan# 549
Delta R.T. 0.00 min
Lab File: C07089H.D
Acq: 8 Jul 109 2:57 pm

Tgt Ion:61 Resp: 3956

Ion	Ratio	Lower	Upper
61	100		
96	55.9	37.4	56.0
98	35.7	23.1	34.7#
0	0.0	0.0	0.0

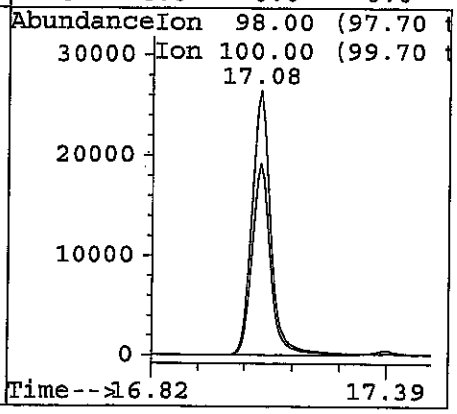


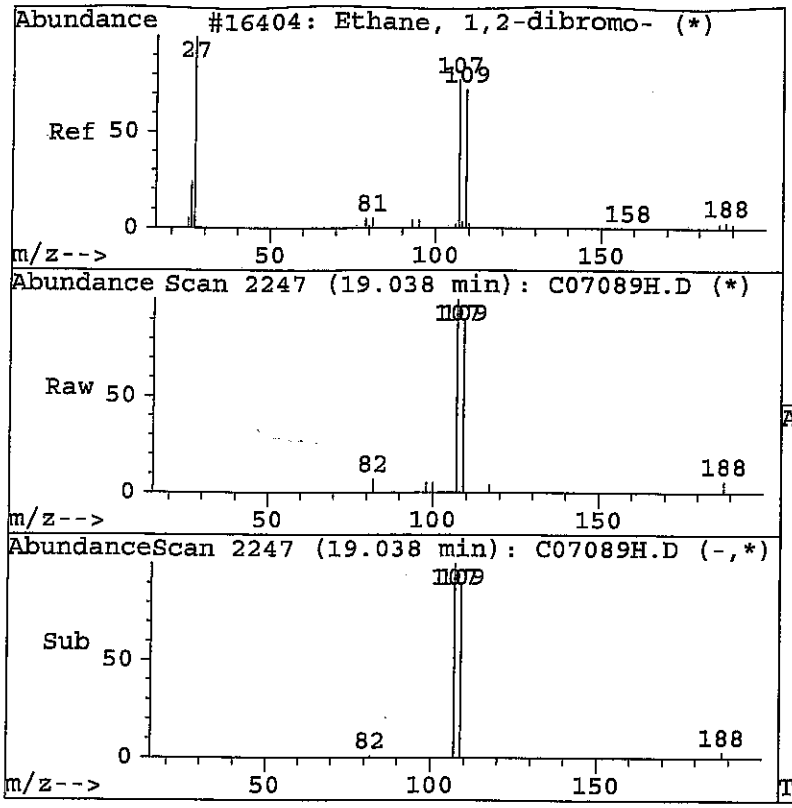


#4
Toluene-d8
Concen: 0.21 ppbV
RT: 17.08 min Scan# 1972
Delta R.T. 0.03 min
Lab File: C07089H.D
Acq: 8 Jul 109 2:57 pm

Tgt Ion:98 Resp: 82583

Ion	Ratio	Lower	Upper
98	100		
100	71.6	59.5	89.3
0	0.0	0.0	0.0
0	0.0	0.0	0.0

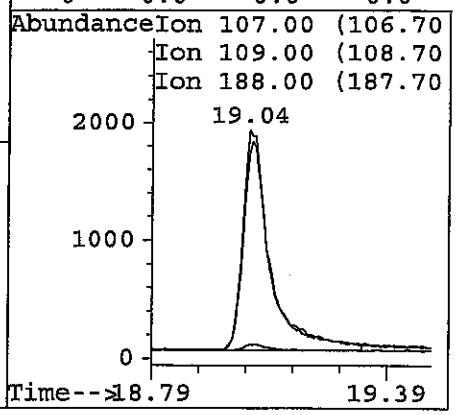


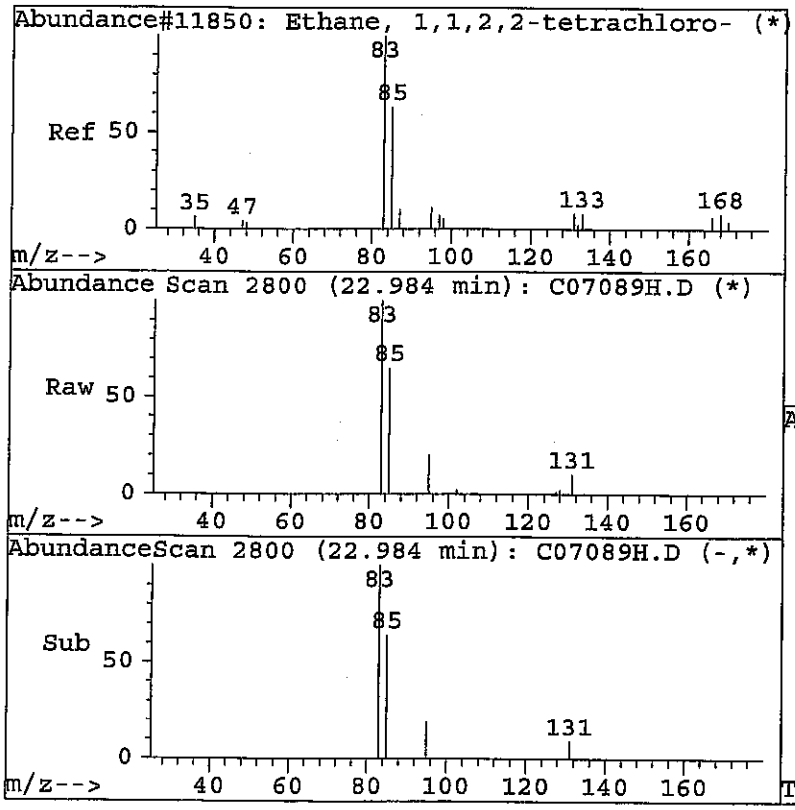


#5
1,2-Dibromoethane
Concen: 0.05 ppbV
RT: 19.04 min Scan# 2247
Delta R.T. 0.05 min
Lab File: C07089H.D
Acq: 8 Jul 109 2:57 pm

Tgt Ion:107 Resp: 8843

Ion	Ratio	Lower	Upper
107	100		
109	89.0	75.9	113.9
188	2.6	1.7	2.5#
0	0.0	0.0	0.0

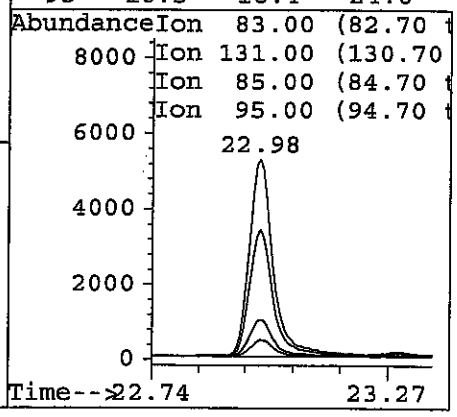


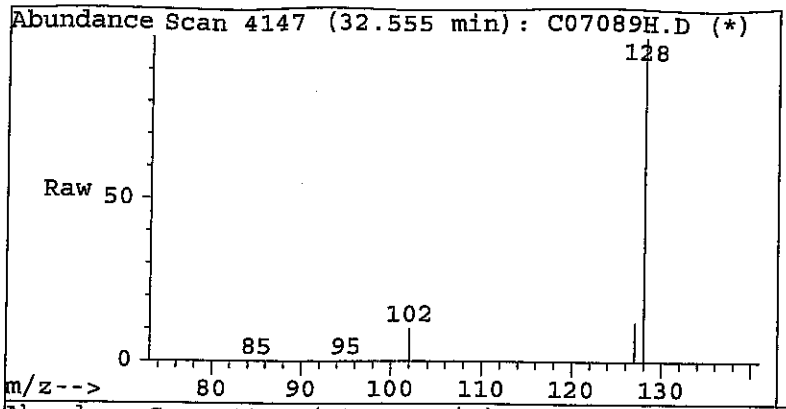


#6
1,1,2,2-Tetrachloroethane
Concen: 0.04 ppbV
RT: 22.98 min Scan# 2800
Delta R.T. 0.05 min
Lab File: C07089H.D
Acq: 8 Jul 109 2:57 pm

Tgt Ion:83 Resp: 19486

Ion	Ratio	Lower	Upper
83	100		
131	8.2	7.8	11.6
85	64.5	55.5	83.3
95	18.5	16.4	24.6

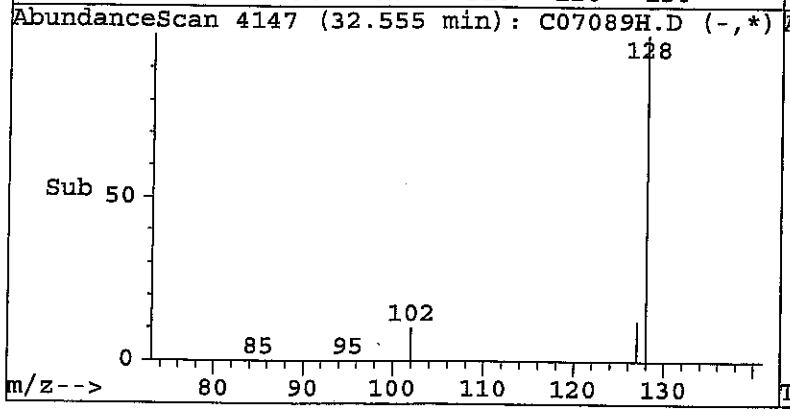


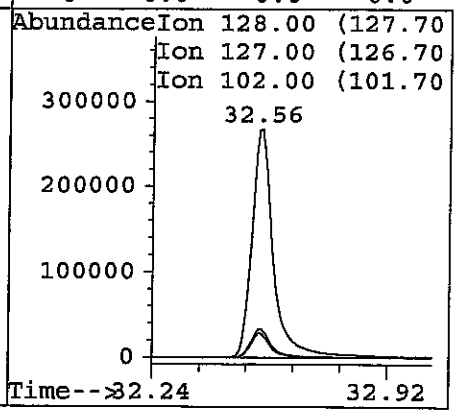


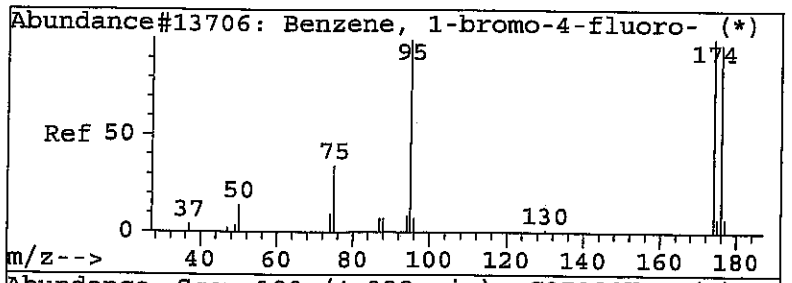
#7
Naphthalene
Concen: 0.19 ppbV m
RT: 32.56 min Scan# 4147
Delta R.T. -0.22 min
Lab File: C07089H.D
Acq: 8 Jul 109 2:57 pm

Tgt Ion:128 Resp: 1174309

Ion	Ratio	Lower	Upper
128	100		
127	12.4	0.0	0.0#
102	10.3	0.0	0.0#
0	0.0	0.0	0.0



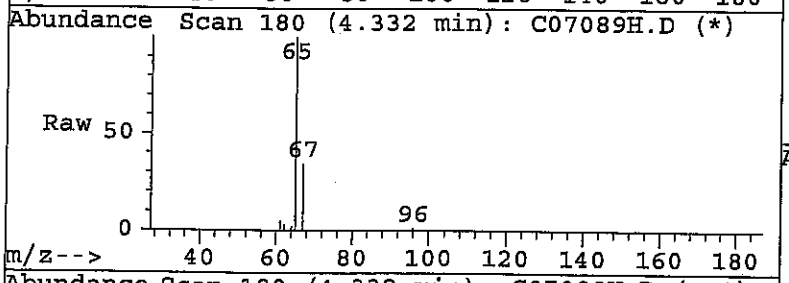


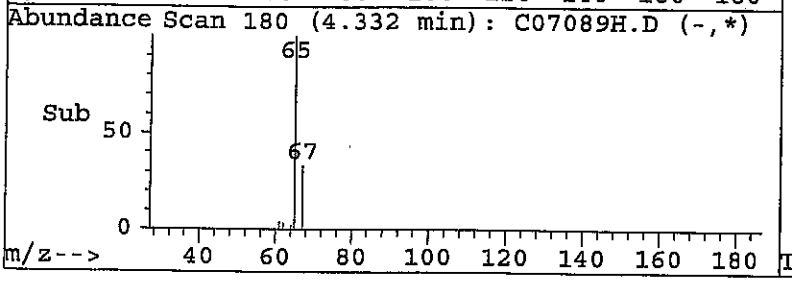


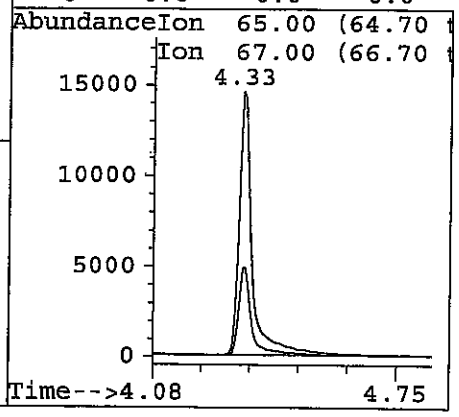
#8
Vinyl Chloride-d3
Concen: 0.23 ppbV
RT: 4.33 min Scan# 180
Delta R.T. -0.02 min
Lab File: C07089H.D
Acq: 8 Jul 109 2:57 pm

Tgt Ion:65 Resp: 35913

Ion	Ratio	Lower	Upper
65	100		
67	33.2	26.6	40.0
0	0.0	0.0	0.0
0	0.0	0.0	0.0







Quantitation Report

Data File : C:\MSCHEM\2\DATA\07089MS2\C07089I.D
Acq Time : 8 Jul 109 3:41 pm
Sample : ST60421 + ST60250
Misc : 0.25 ML
Quant Time: Jul 9 8:25 19109

Operator: CM
Inst : MS2
Multiplr: 1.00

Method : C:\MSCHEM\2\METHODS\2SIM_SEA.M
Title : EPA T0-15
Last Update : Thu Jul 09 08:26:17 2009
Response via : Multiple Level Calibration

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Chlorobenzene-d5	20.55	117	107112	0.20 ppbV	0.04
System Monitoring Compounds					%Recovery
4) Toluene-d8	17.09	98	42311	0.18 ppbV	
8) Vinyl Chloride-d3	4.35	65	18976	0.19 ppbV	
Target Compounds					Qvalue
2) Vinyl chloride	4.36	62	668	0.03 ppbV m	98
3) 1,1-Dichloroethene	6.96	61	1191	0.03 ppbV	96
5) 1,2-Dibromoethane	19.07	107	3034	0.03 ppbV m	90
6) 1,1,2,2-Tetrachloroethane	23.00	83	10290	0.04 ppbV	99
7) Naphthalene	32.56	128	813490	0.11 ppbV m	0

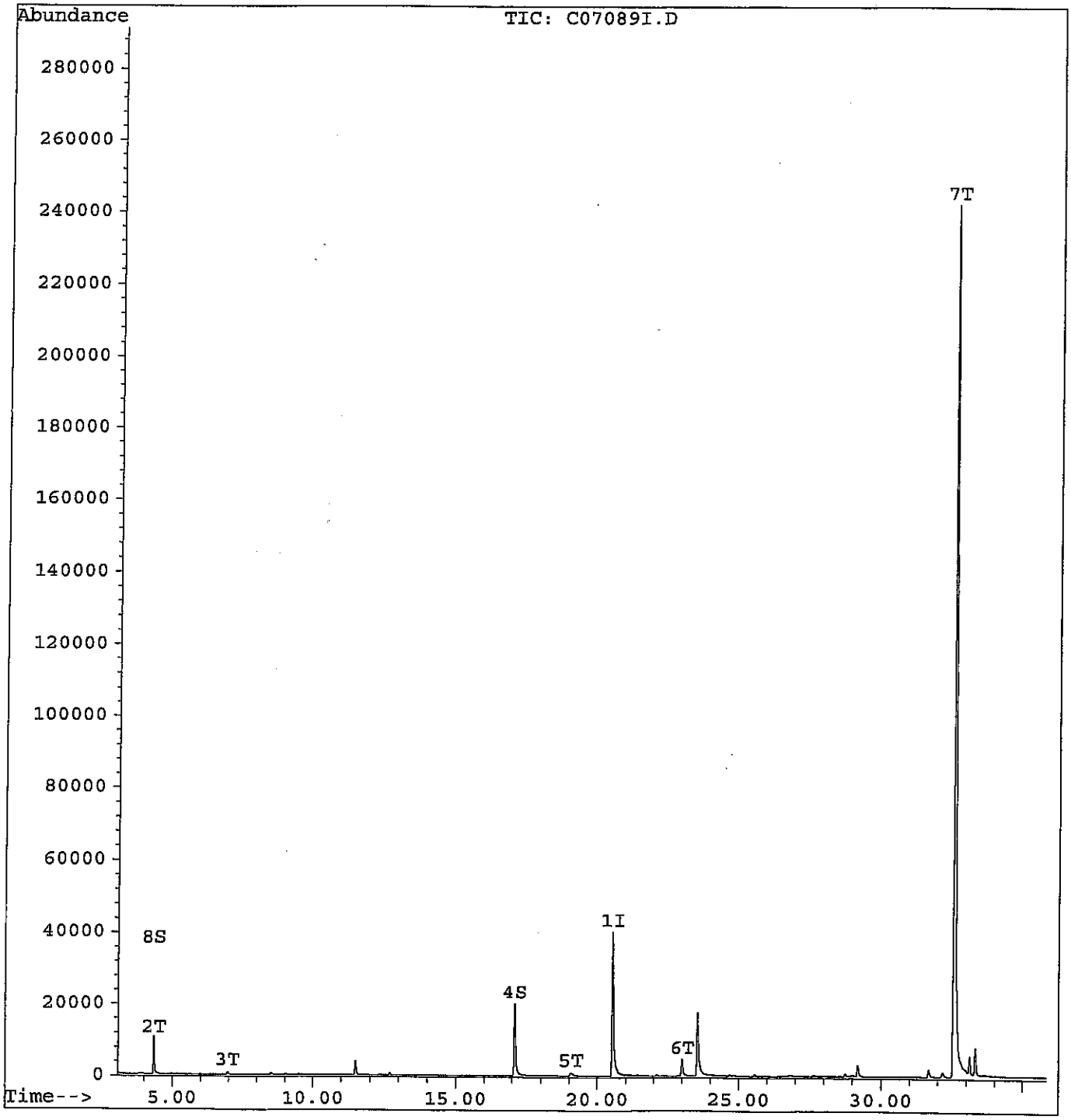
(#) = qualifier out of range (m) = manual integration

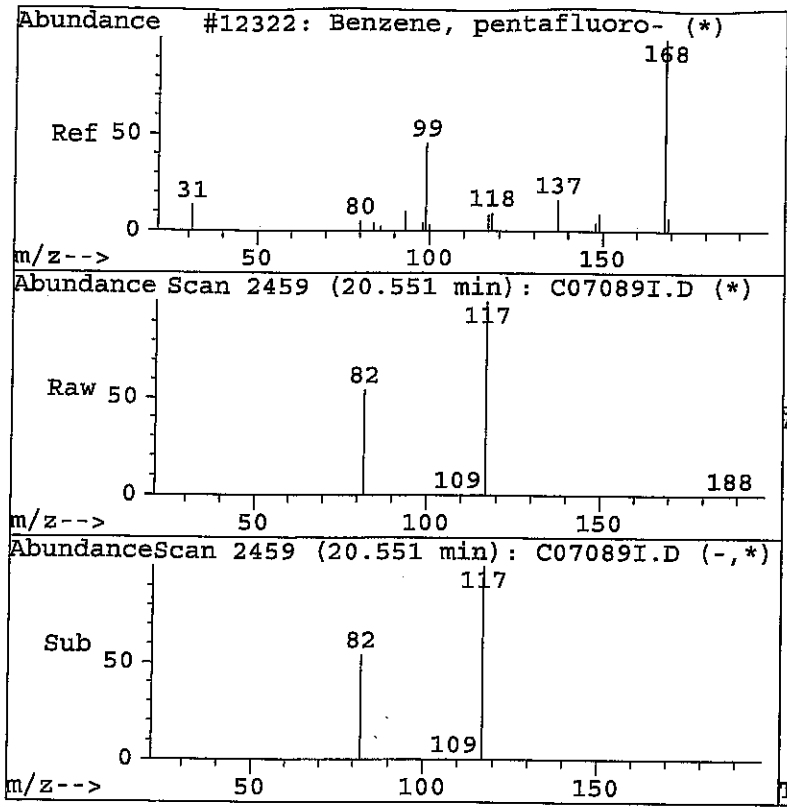
Quantitation Report

Data File : C:\MSCHEM\2\DATA\07089MS2\C07089I.D
Acq Time : 8 Jul 109 3:41 pm
Sample : ST60421 + ST60250
Misc : 0.25 ML
Quant Time: Jul 9 8:25 19109

Operator: CM
Inst : MS2
Multiplr: 1.00

Method : C:\MSCHEM\2\METHODS\2SIM_SEA.M
Title : EPA T0-15
Last Update : Thu Jul 09 08:26:17 2009
Response via : Multiple Level Calibration

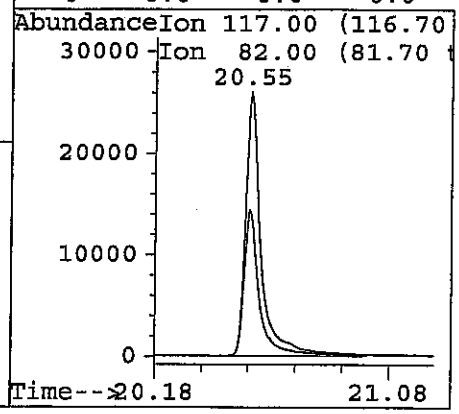


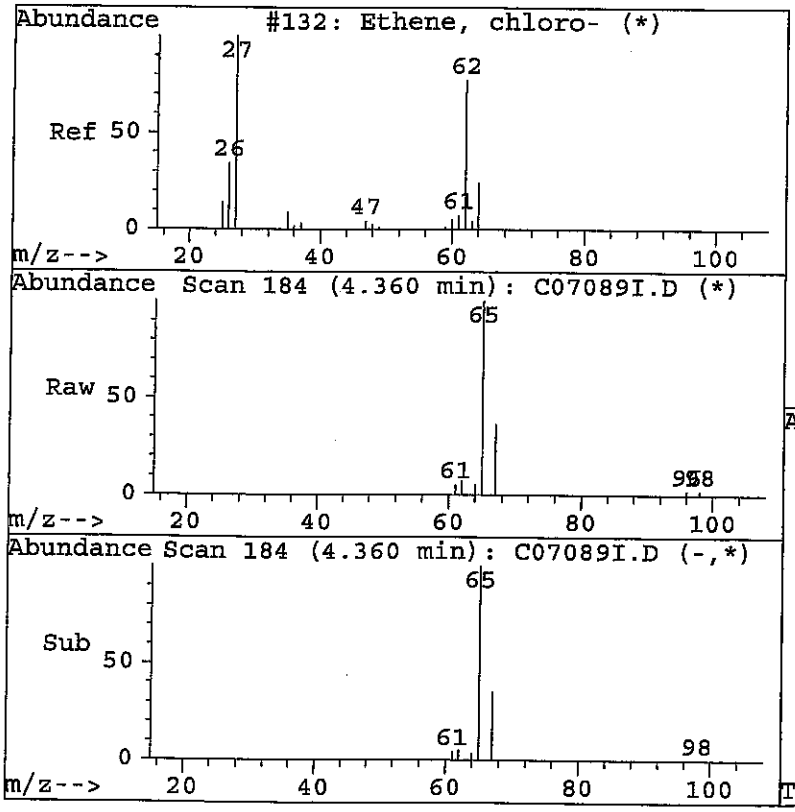


#1
Chlorobenzene-d5
Concen: 0.20 ppbV
RT: 20.55 min Scan# 2459
Delta R.T. 0.04 min
Lab File: C07089I.D
Acq: 8 Jul 109 3:41 pm

Tgt Ion:117 Resp: 107112

Ion	Ratio	Lower	Upper
117	100		
82	53.6	43.8	65.8
0	0.0	0.0	0.0
0	0.0	0.0	0.0

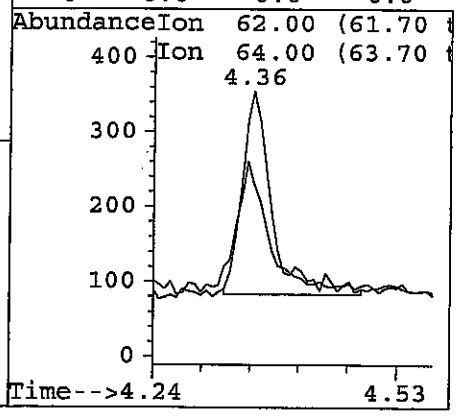


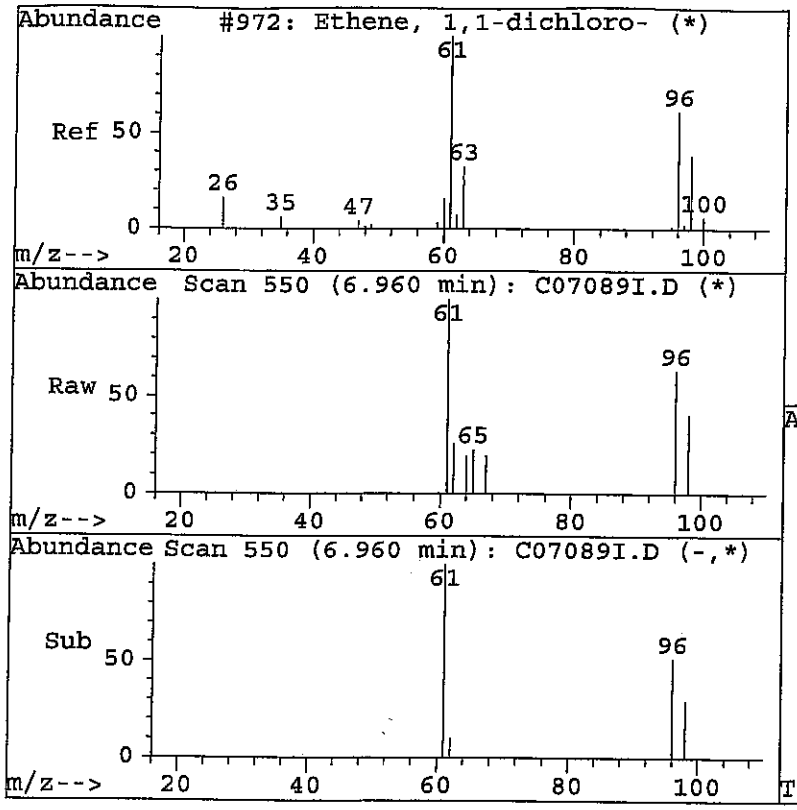


#2
Vinyl chloride
Concen: 0.03 ppbV m
RT: 4.36 min Scan# 184
Delta R.T. -0.01 min
Lab File: C07089I.D
Acq: 8 Jul 109 3:41 pm

Tgt Ion:62 Resp: 668

Ion	Ratio	Lower	Upper
62	100		
64	65.3	26.9	40.3#
0	0.0	0.0	0.0
0	0.0	0.0	0.0

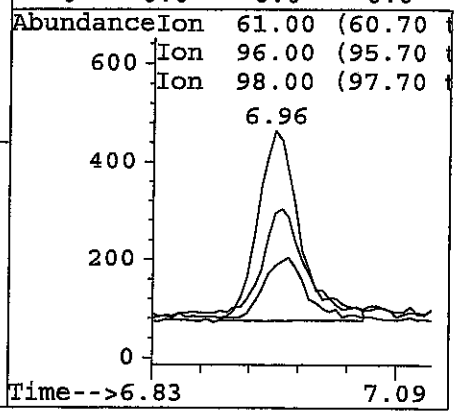


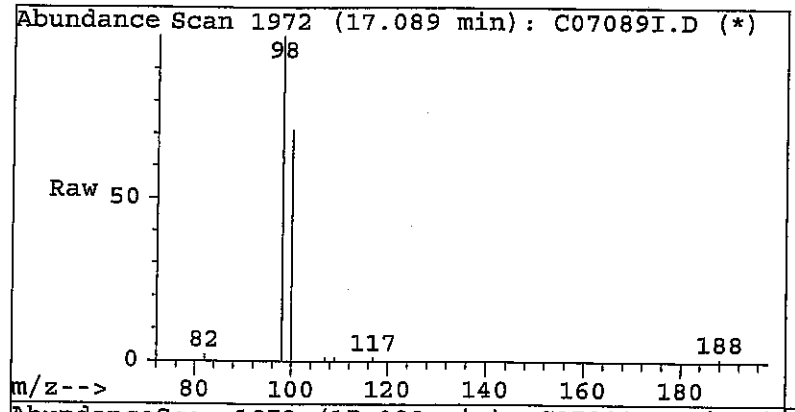


#3
1,1-Dichloroethene
Concen: 0.03 ppbV
RT: 6.96 min Scan# 550
Delta R.T. 0.01 min
Lab File: C07089I.D
Acq: 8 Jul 109 3:41 pm

Tgt Ion:61 Resp: 1191

Ion	Ratio	Lower	Upper
61	100		
96	52.5	41.2	61.8
98	28.4	26.6	39.8
0	0.0	0.0	0.0

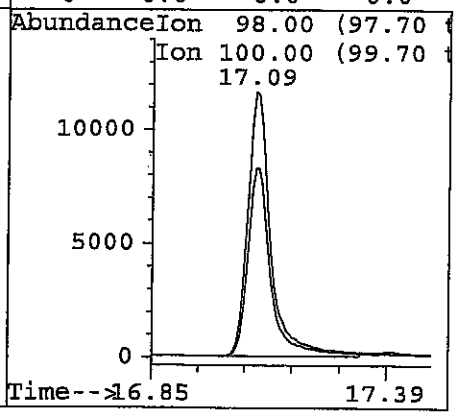


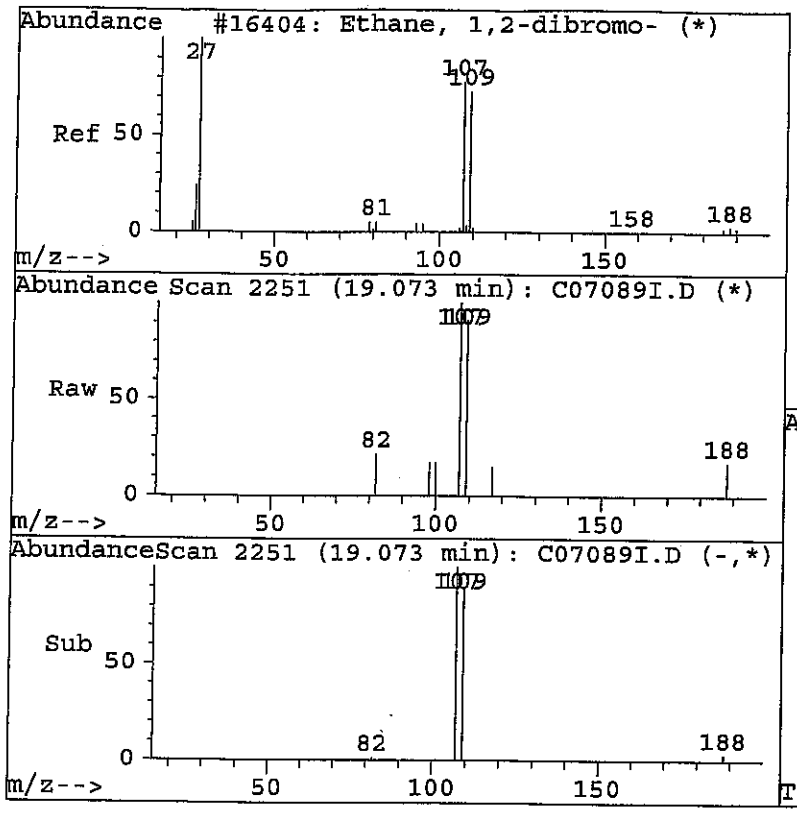


#4
Toluene-d8
Concen: 0.18 ppbV
RT: 17.09 min Scan# 1972
Delta R.T. 0.04 min
Lab File: C07089I.D
Acq: 8 Jul 109 3:41 pm

Tgt Ion:98 Resp: 42311

Ion	Ratio	Lower	Upper
98	100		
100	71.3	60.1	90.1
0	0.0	0.0	0.0
0	0.0	0.0	0.0

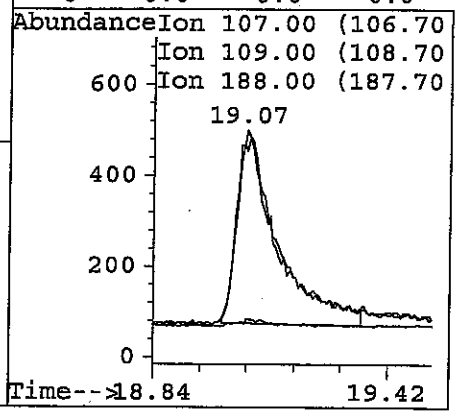


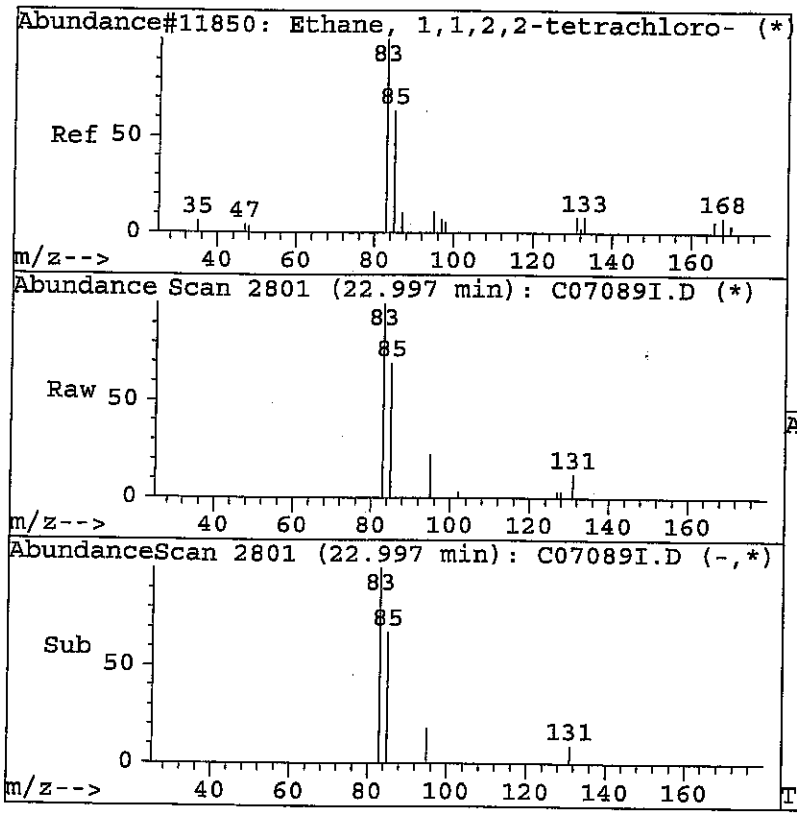


#5
1,2-Dibromoethane
Concen: 0.03 ppbV m
RT: 19.07 min Scan# 2251
Delta R.T. 0.08 min
Lab File: C07089I.D
Acq: 8 Jul 109 3:41 pm

Tgt Ion:107 Resp: 3034

Ion	Ratio	Lower	Upper
107	100		
109	91.0	78.4	117.6
188	16.8	2.4	3.6#
0	0.0	0.0	0.0

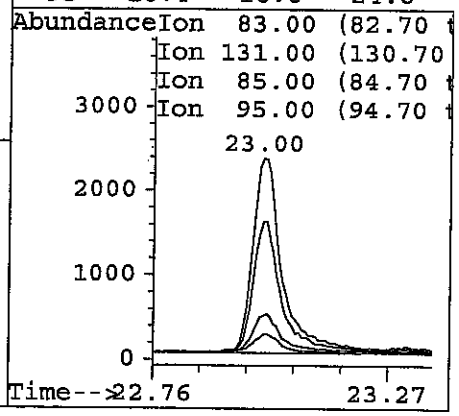


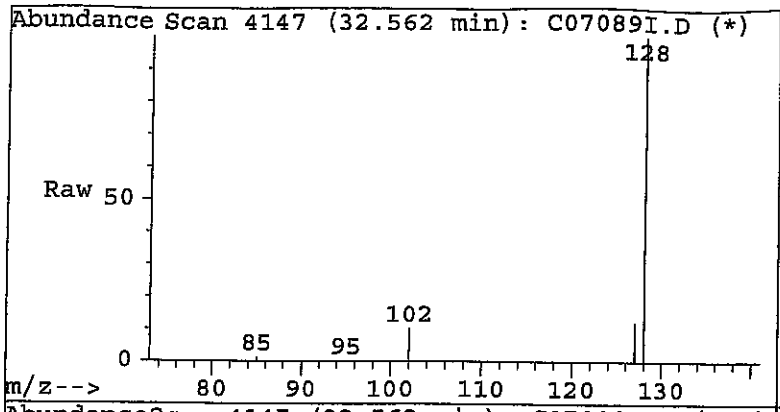


#6
1,1,2,2-Tetrachloroethane
Concen: 0.04 ppbV
RT: 23.00 min Scan# 2801
Delta R.T. 0.07 min
Lab File: C07089I.D
Acq: 8 Jul 109 3:41 pm

Tgt Ion:83 Resp: 10290

Ion	Ratio	Lower	Upper
83	100		
131	8.9	7.7	11.5
85	67.4	53.9	80.9
95	18.4	16.6	24.8

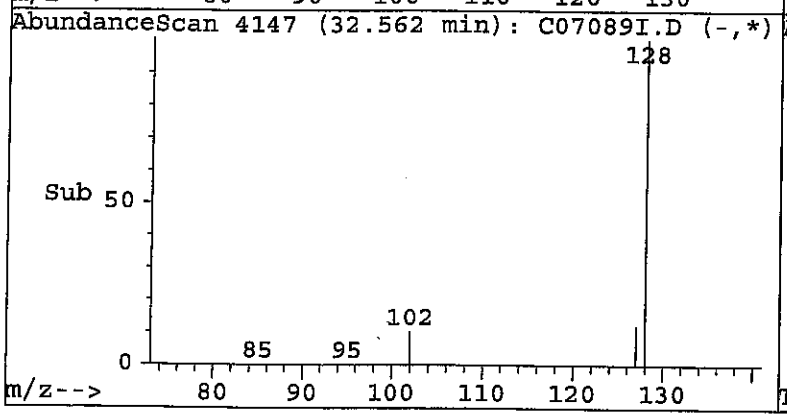


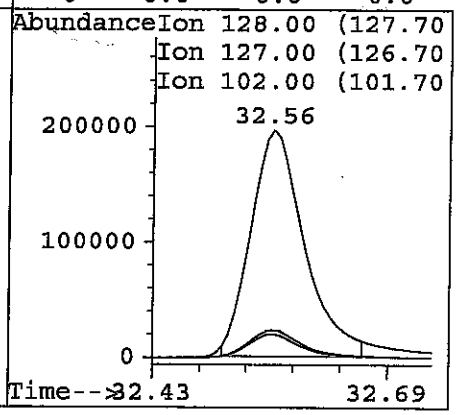


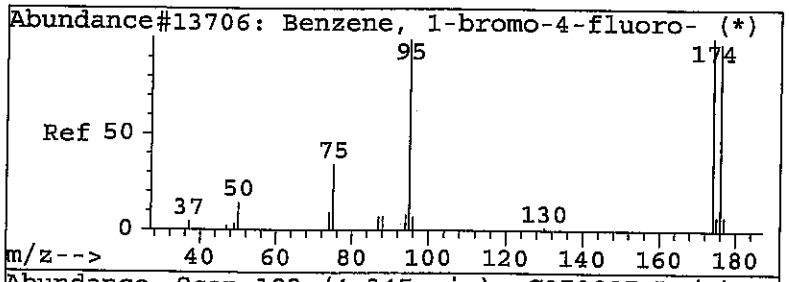
#7
Naphthalene
Concen: 0.11 ppbV m
RT: 32.56 min Scan# 4147
Delta R.T. -0.22 min
Lab File: C07089I.D
Acq: 8 Jul 109 3:41 pm

Tgt Ion:128 Resp: 813490

Ion	Ratio	Lower	Upper
128	100		
127	12.0	14.6	21.8#
102	10.3	13.9	20.9#
0	0.0	0.0	0.0



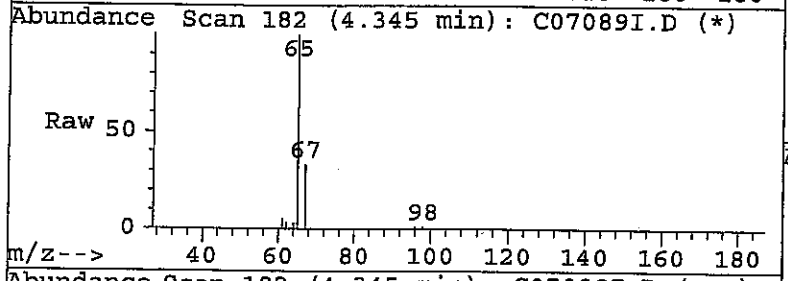


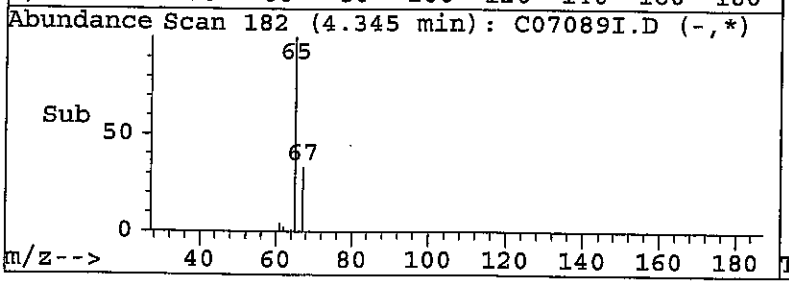


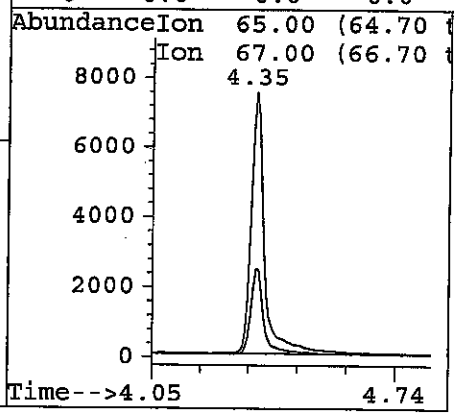
#8
Vinyl Chloride-d3
Concen: 0.19 ppbV
RT: 4.35 min Scan# 182
Delta R.T. -0.00 min
Lab File: C07089I.D
Acq: 8 Jul 109 3:41 pm

Tgt Ion:65 Resp: 18976

Ion	Ratio	Lower	Upper
65	100		
67	32.6	28.8	43.2
0	0.0	0.0	0.0
0	0.0	0.0	0.0







Quantitation Report

Data File : C:\MSCHEM\2\DATA\07089MS2\C07089F.D
Acq Time : 8 Jul 109 1:21 pm
Sample : ST60421 + ST60250
Misc : 2.0 ML
Quant Time: Jul 9 8:13 19109

Operator: JF
Inst : MS2
Multiplr: 1.00

Method : C:\MSCHEM\2\METHODS\2SIM_SEA.M
Title : EPA T0-15
Last Update : Thu Jul 09 08:26:17 2009
Response via : Multiple Level Calibration

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Chlorobenzene-d5	20.54	117	436325	0.20 ppbV	0.03
System Monitoring Compounds					%Recovery
4) Toluene-d8	17.08	98	183795	0.20 ppbV	
8) Vinyl Chloride-d3	4.38	65	88109	0.24 ppbV	
Target Compounds					Qvalue
2) Vinyl chloride	4.39	62	20463	0.24 ppbV	99
3) 1,1-Dichloroethene	7.00	61	39546	0.23 ppbV	97
5) 1,2-Dibromoethane	19.02	107	89643	0.23 ppbV #	99
6) 1,1,2,2-Tetrachloroethane	22.97	83	216109	0.22 ppbV	97
7) Naphthalene	32.55	128	11669920	0.77 ppbV m	0

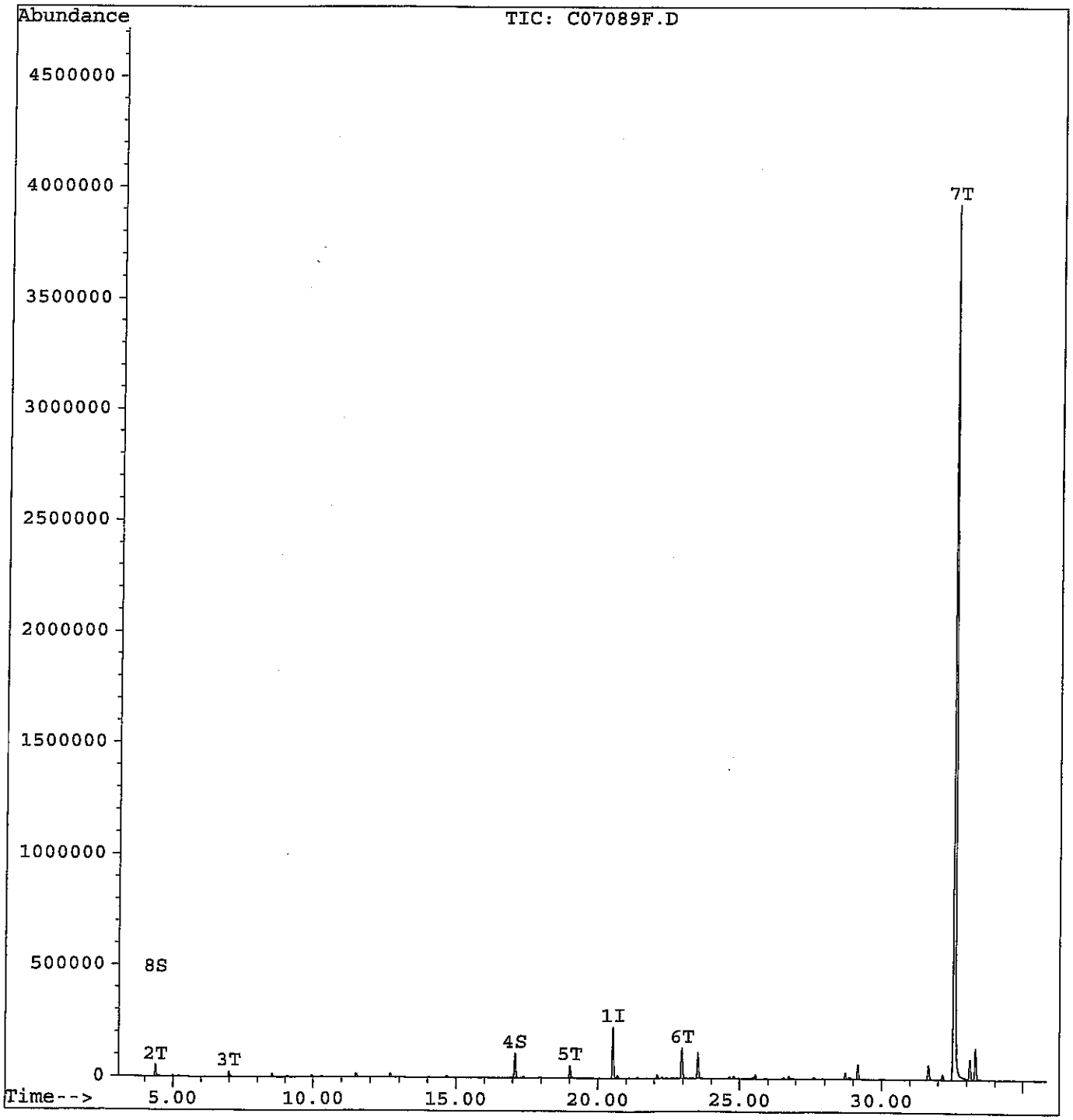
(#) = qualifier out of range (m) = manual integration

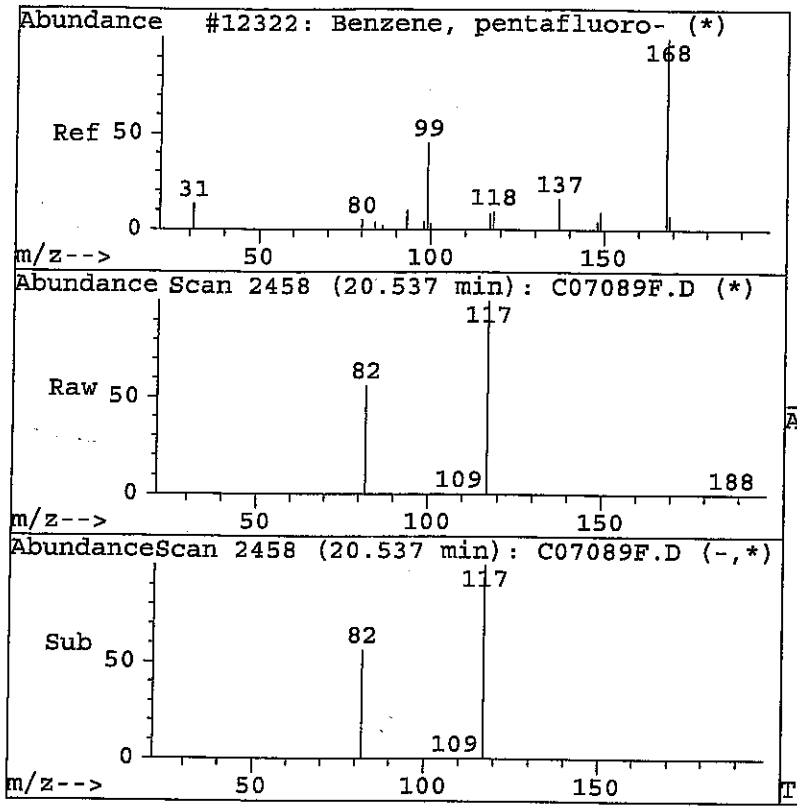
Quantitation Report

Data File : C:\MSCHEM\2\DATA\07089MS2\C07089F.D
Acq Time : 8 Jul 109 1:21 pm
Sample : ST60421 + ST60250
Misc : 2.0 ML
Quant Time: Jul 9 8:13 19109

Operator: JF
Inst : MS2
Multiplr: 1.00

Method : C:\MSCHEM\2\METHODS\2SIM_SEA.M
Title : EPA T0-15
Last Update : Thu Jul 09 08:26:17 2009
Response via : Multiple Level Calibration

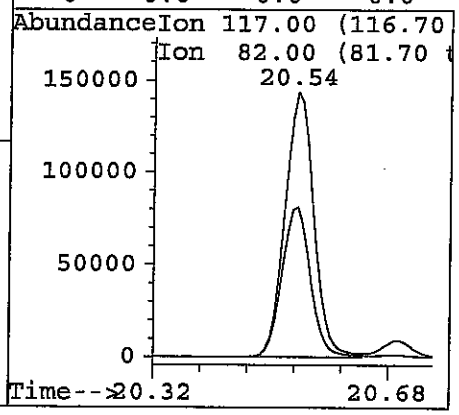


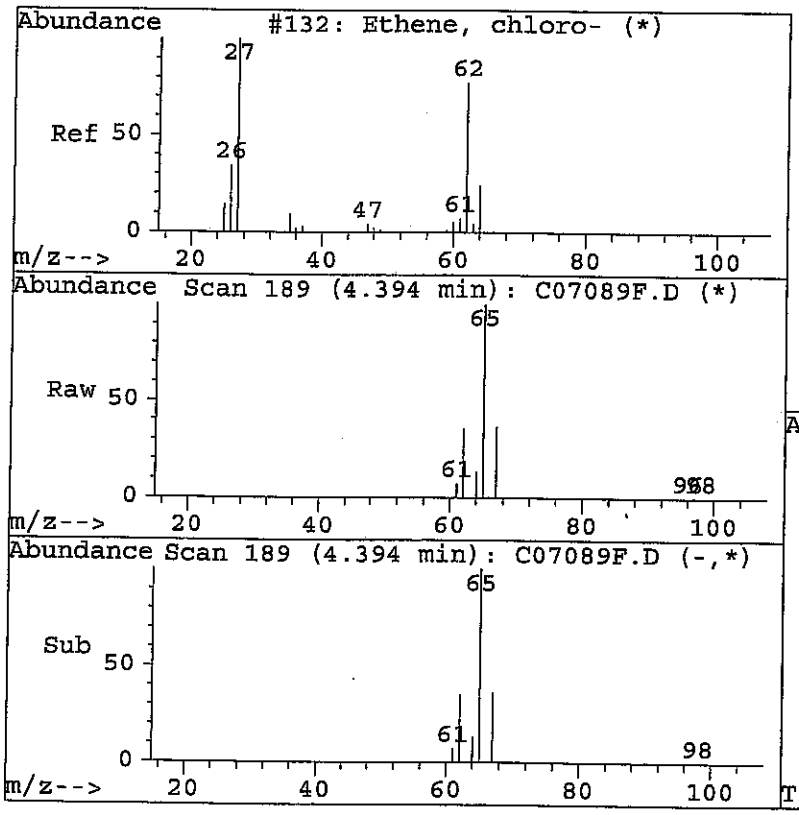


#1
Chlorobenzene-d5
Concen: 0.20 ppbV
RT: 20.54 min Scan# 2458
Delta R.T. 0.03 min
Lab File: C07089F.D
Acq: 8 Jul 109 1:21 pm

Tgt Ion:117 Resp: 436325

Ion	Ratio	Lower	Upper
117	100		
82	56.5	46.2	69.2
0	0.0	0.0	0.0
0	0.0	0.0	0.0

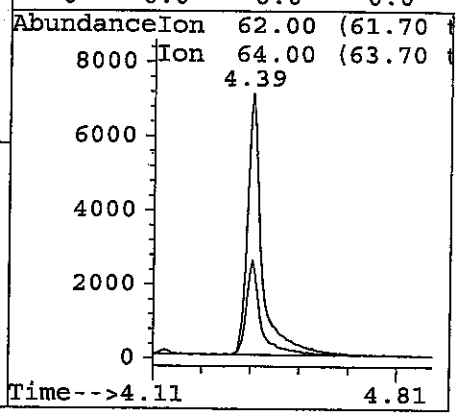


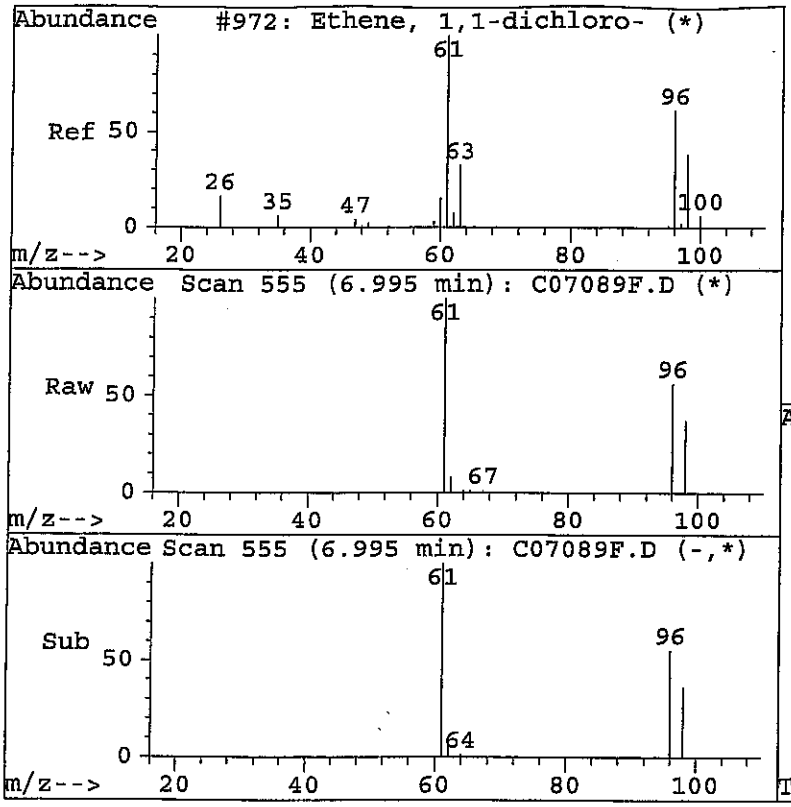


#2
Vinyl chloride
Concen: 0.24 ppbV
RT: 4.39 min Scan# 189
Delta R.T. 0.02 min
Lab File: C07089F.D
Acq: 8 Jul 109 1:21 pm

Tgt Ion:62 Resp: 20463

Ion	Ratio	Lower	Upper
62	100		
64	36.1	28.4	42.6
0	0.0	0.0	0.0
0	0.0	0.0	0.0

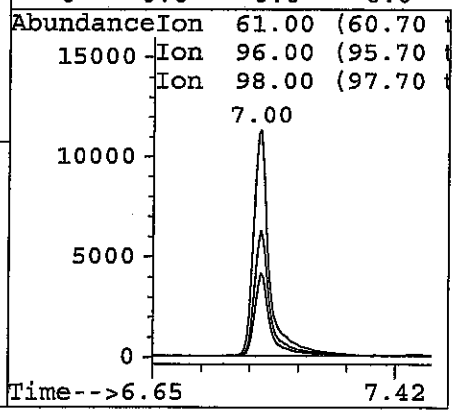


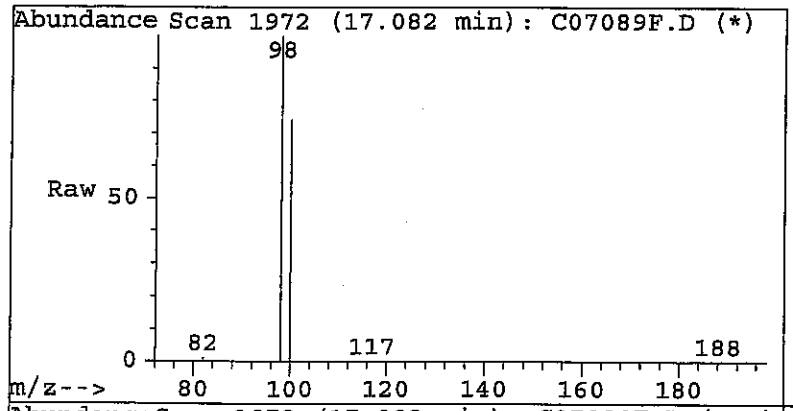


#3
1,1-Dichloroethene
Concen: 0.23 ppbV
RT: 7.00 min Scan# 555
Delta R.T. 0.05 min
Lab File: C07089F.D
Acq: 8 Jul 109 1:21 pm

Tgt Ion:61 Resp: 39546

Ion	Ratio	Lower	Upper
61	100		
96	55.1	42.2	63.2
98	36.2	27.8	41.8
0	0.0	0.0	0.0

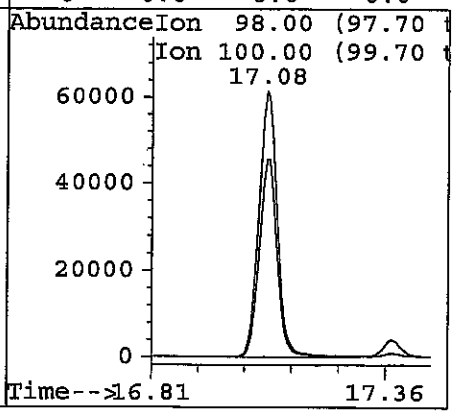


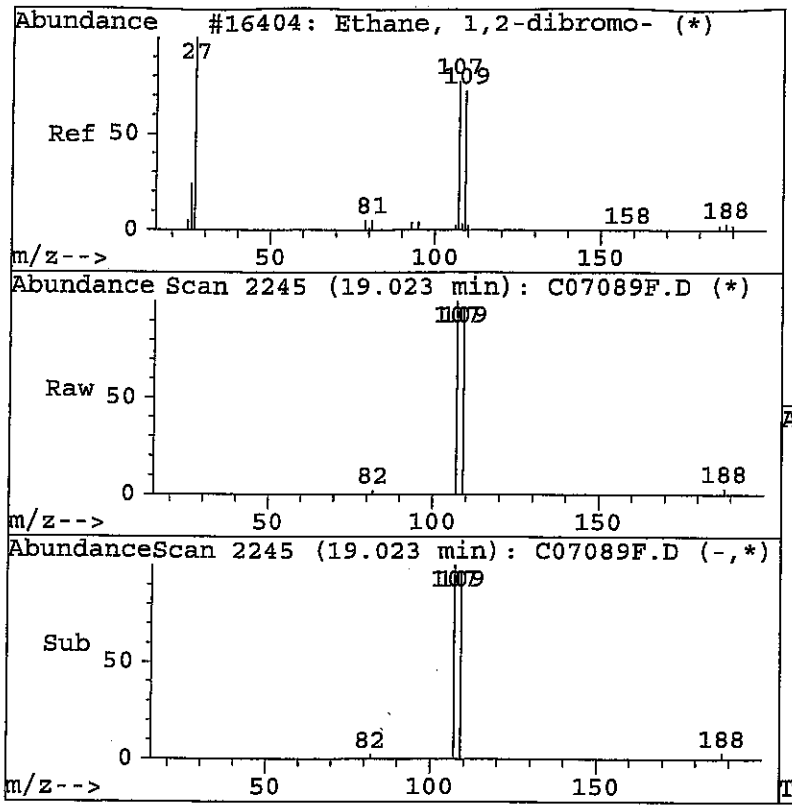


#4
Toluene-d8
Concen: 0.20 ppbV
RT: 17.08 min Scan# 1972
Delta R.T. 0.03 min
Lab File: C07089F.D
Acq: 8 Jul 109 1:21 pm

Tgt Ion:98 Resp: 183795

Ion	Ratio	Lower	Upper
98	100		
100	73.1	61.3	91.9
0	0.0	0.0	0.0
0	0.0	0.0	0.0

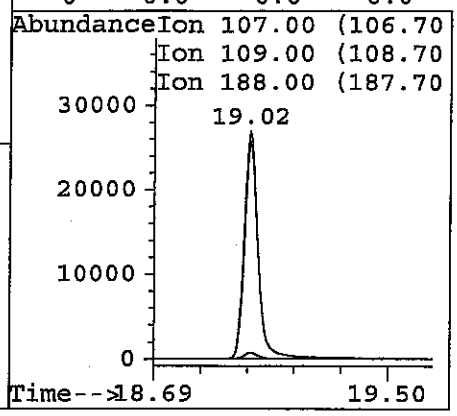


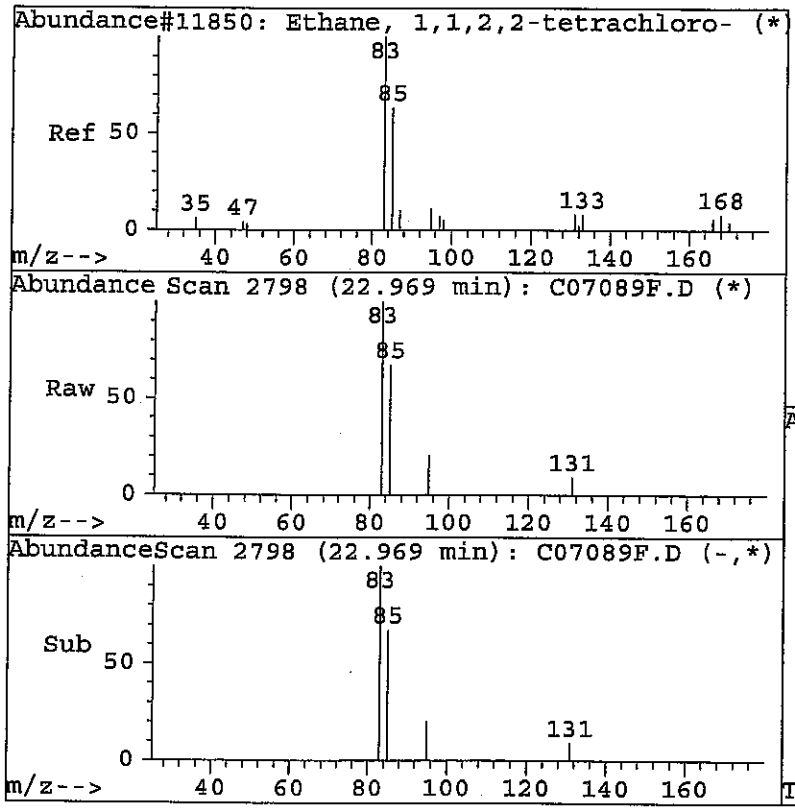


#5
1,2-Dibromoethane
Concen: 0.23 ppbV
RT: 19.02 min Scan# 2245
Delta R.T. 0.03 min
Lab File: C07089F.D
Acq: 8 Jul 109 1:21 pm

Tgt Ion:107 Resp: 89643

Ion	Ratio	Lower	Upper
107	100		
109	95.5	75.5	113.3
188	2.6	2.8	4.2#
0	0.0	0.0	0.0

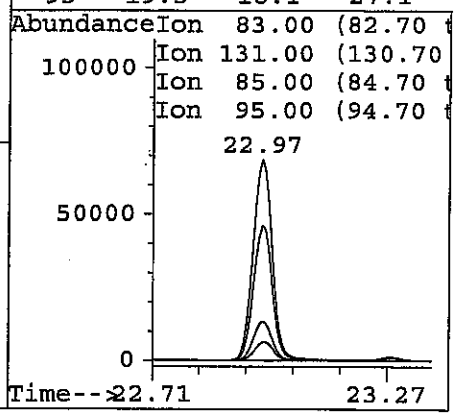


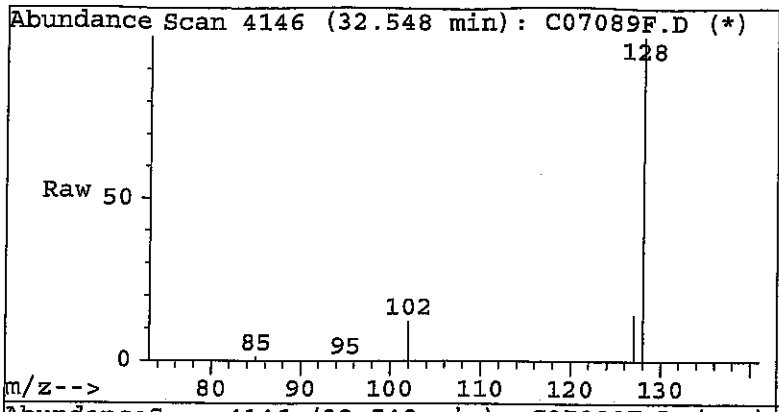


#6
1,1,2,2-Tetrachloroethane
Concen: 0.22 ppbV
RT: 22.97 min Scan# 2798
Delta R.T. 0.04 min
Lab File: C07089F.D
Acq: 8 Jul 109 1:21 pm

Tgt Ion:83 Resp: 216109

Ion	Ratio	Lower	Upper
83	100		
131	9.1	8.6	12.8
85	67.4	53.0	79.6
95	19.5	18.1	27.1

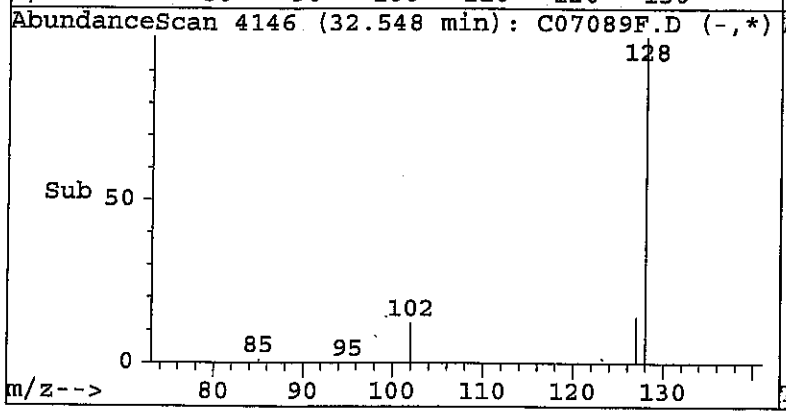


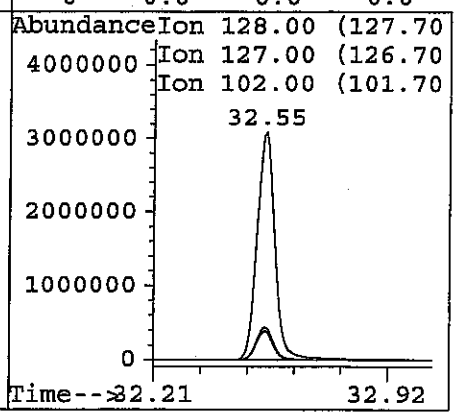


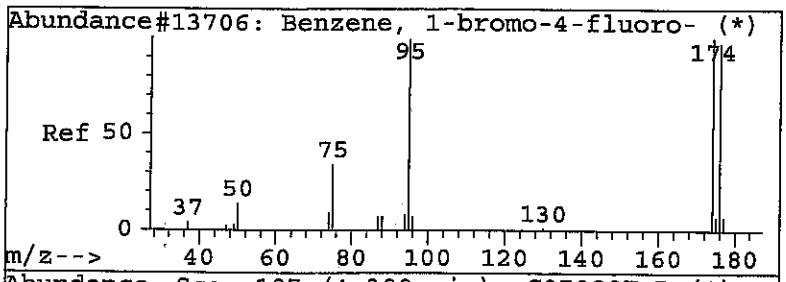
#7
Naphthalene
Concen: 0.77 ppbV m
RT: 32.55 min Scan# 4146
Delta R.T. -0.23 min
Lab File: C07089F.D
Acq: 8 Jul 109 1:21 pm

Tgt Ion:128 Resp:11669920

Ion	Ratio	Lower	Upper
128	100		
127	14.1	19.6	29.4#
102	12.4	19.7	29.5#
0	0.0	0.0	0.0



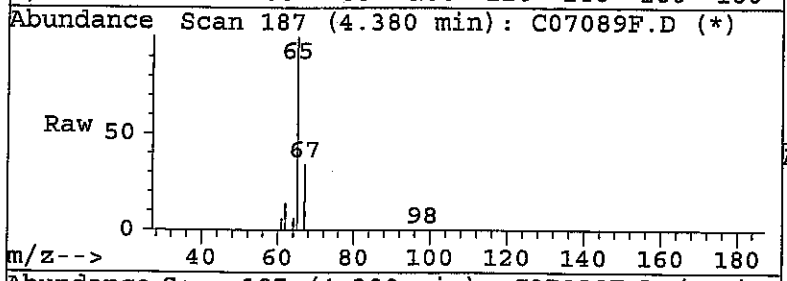


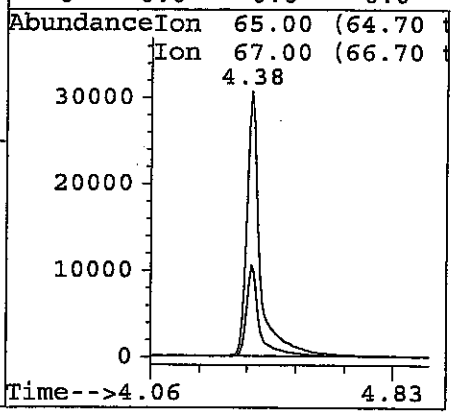


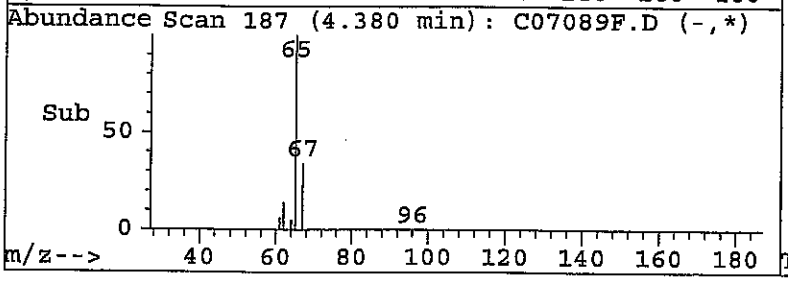
#8
Vinyl Chloride-d3
Concen: 0.24 ppbV
RT: 4.38 min Scan# 187
Delta R.T. 0.03 min
Lab File: C07089F.D
Acq: 8 Jul 109 1:21 pm

Tgt Ion:65 Resp: 88109

Ion	Ratio	Lower	Upper
65	100		
67	34.2	30.7	46.1
0	0.0	0.0	0.0
0	0.0	0.0	0.0







Quantitation Report

Data File : C:\MSCHEM\2\DATA\07089MS2\C07089E.D
Acq Time : 8 Jul 109 12:37 pm
Sample : ST60421 + ST60250
Misc : 4.0 ML
Quant Time: Jul 9 8:24 19109

Operator: JF
Inst : MS2
Multiplr: 1.00

Method : C:\MSCHEM\2\METHODS\2SIM_SEA.M
Title : EPA T0-15
Last Update : Thu Jul 09 08:26:17 2009
Response via : Multiple Level Calibration

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Chlorobenzene-d5	20.54	117	1007442	0.20 ppbV	0.03
System Monitoring Compounds					%Recovery
4) Toluene-d8	17.08	98	436164	0.20 ppbV	
8) Vinyl Chloride-d3	4.37	65	195008	0.20 ppbV	
Target Compounds					Qvalue
2) Vinyl chloride	4.38	62	93939	0.42 ppbV	97
3) 1,1-Dichloroethene	6.97	61	191059	0.44 ppbV	98
5) 1,2-Dibromoethane	19.02	107	417465	0.44 ppbV	96
6) 1,1,2,2-Tetrachloroethane	22.96	83	952470	0.41 ppbV	98
7) Naphthalene	32.55	128	29903019	0.43 ppbV m	0

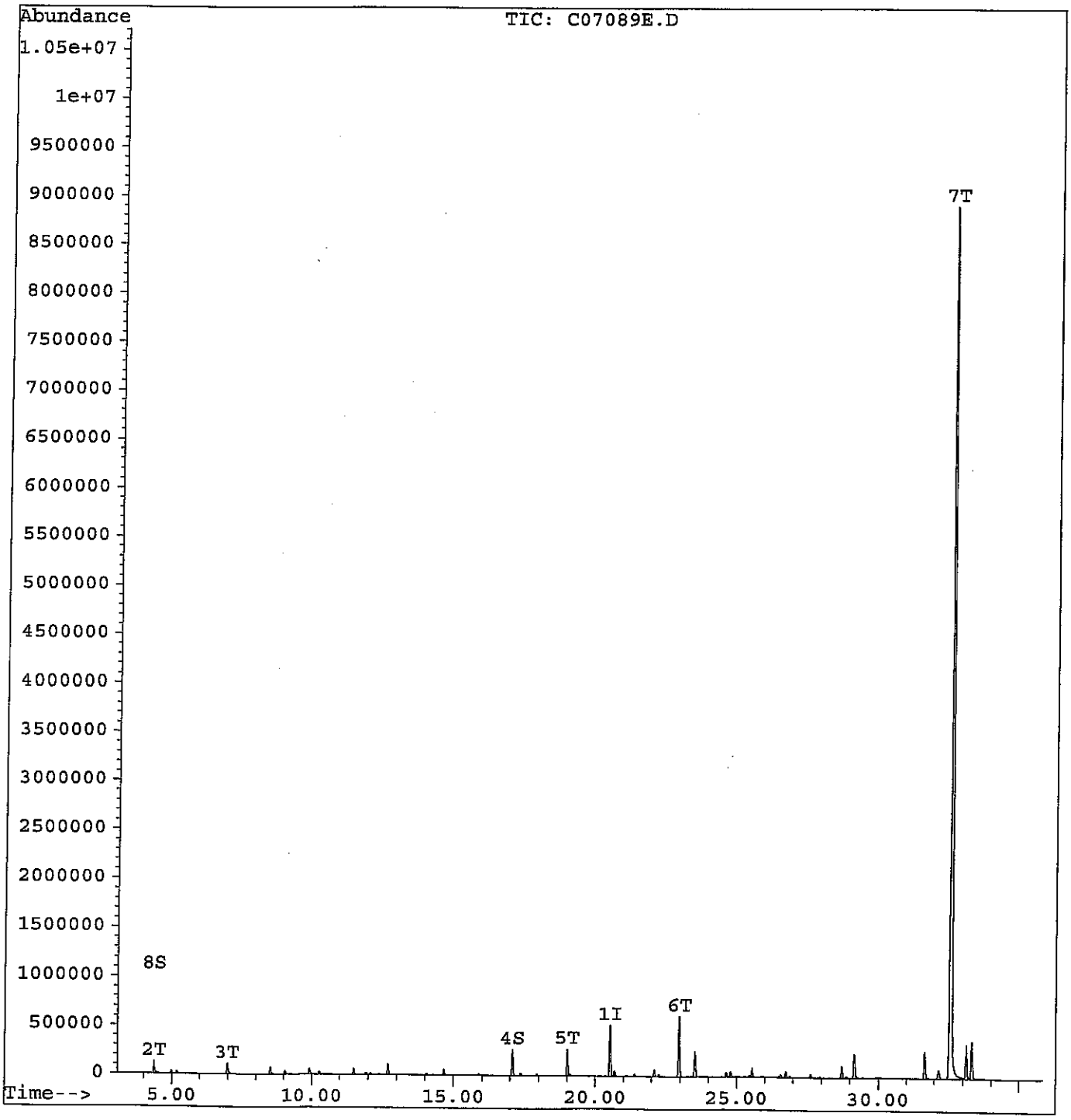
(#) = qualifier out of range (m) = manual integration

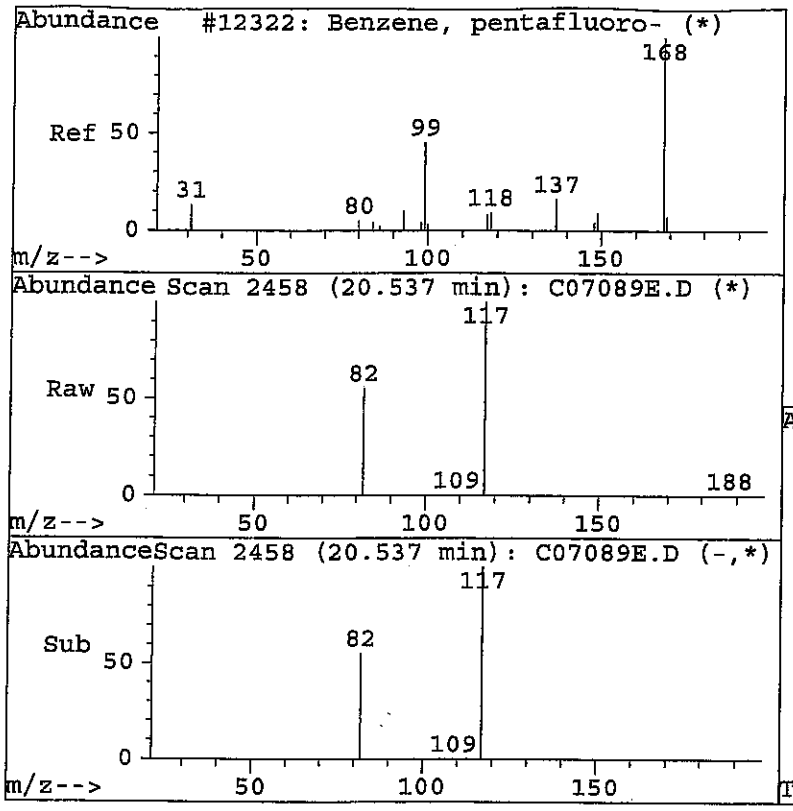
Quantitation Report

Data File : C:\MSCHEM\2\DATA\07089MS2\C07089E.D
Acq Time : 8 Jul 109 12:37 pm
Sample : ST60421 + ST60250
Misc : 4.0 ML
Quant Time: Jul 9 8:24 19109

Operator: JF
Inst : MS2
Multiplr: 1.00

Method : C:\MSCHEM\2\METHODS\2SIM_SEA.M
Title : EPA T0-15
Last Update : Thu Jul 09 08:26:17 2009
Response via : Multiple Level Calibration

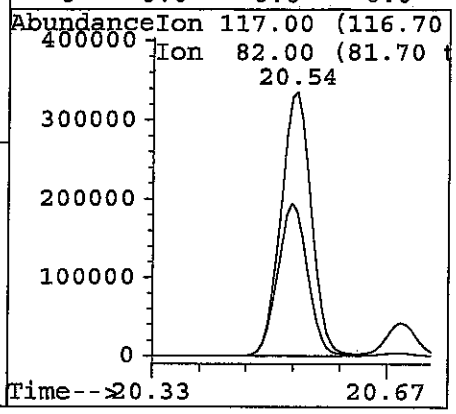


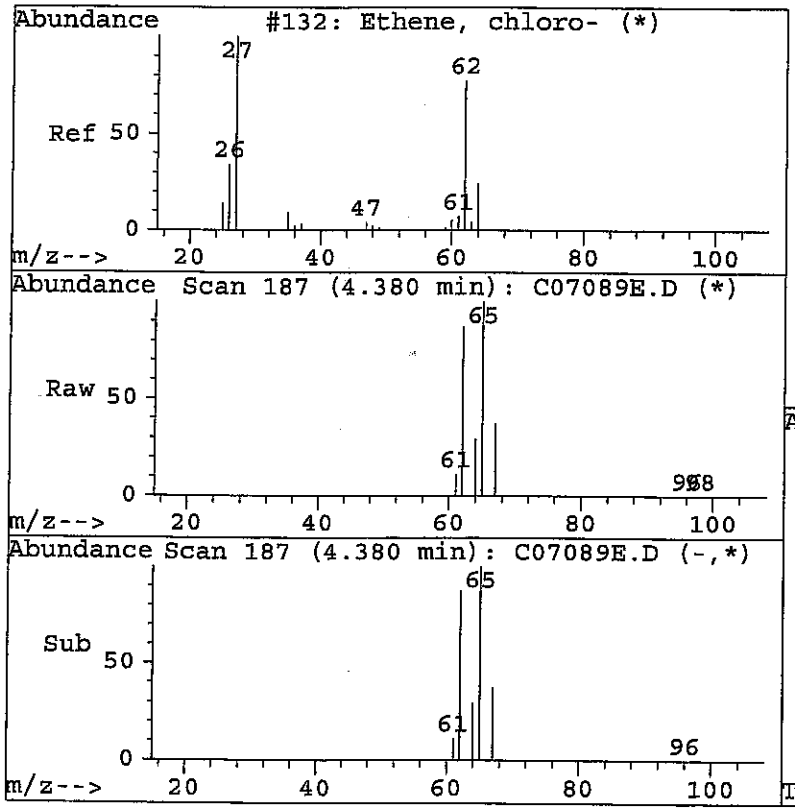


#1
Chlorobenzene-d5
Concen: 0.20 ppbV
RT: 20.54 min Scan# 2458
Delta R.T. 0.03 min
Lab File: C07089E.D
Acq: 8 Jul 109 12:37 pm

Tgt Ion:117 Resp: 1007442

Ion	Ratio	Lower	Upper
117	100		
82	54.8	46.2	69.2
0	0.0	0.0	0.0
0	0.0	0.0	0.0

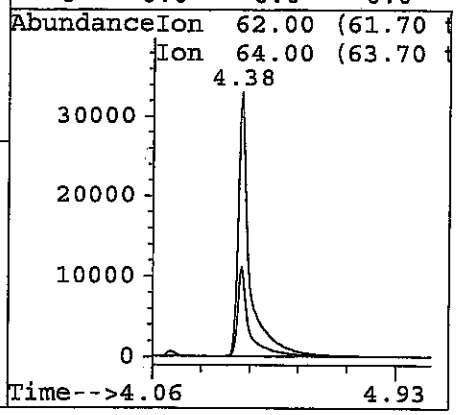


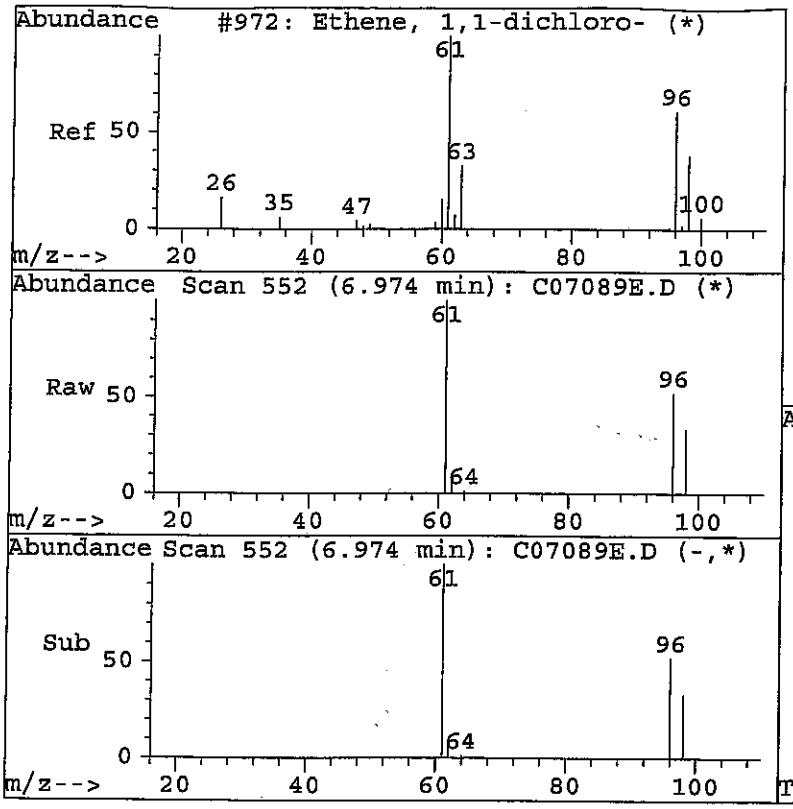


#2
Vinyl chloride
Concen: 0.42 ppbV
RT: 4.38 min Scan# 187
Delta R.T. 0.01 min
Lab File: C07089E.D
Acq: 8 Jul 109 12:37 pm

Tgt Ion:62 Resp: 93939

Ion	Ratio	Lower	Upper
62	100		
64	33.6	28.4	42.6
0	0.0	0.0	0.0
0	0.0	0.0	0.0

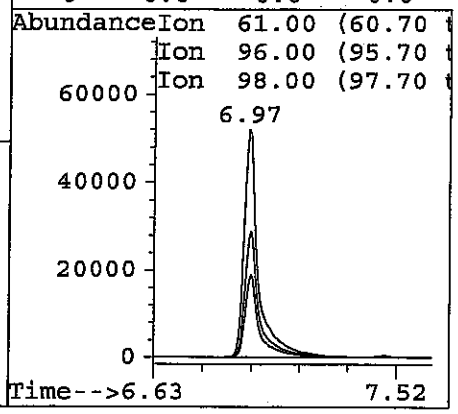


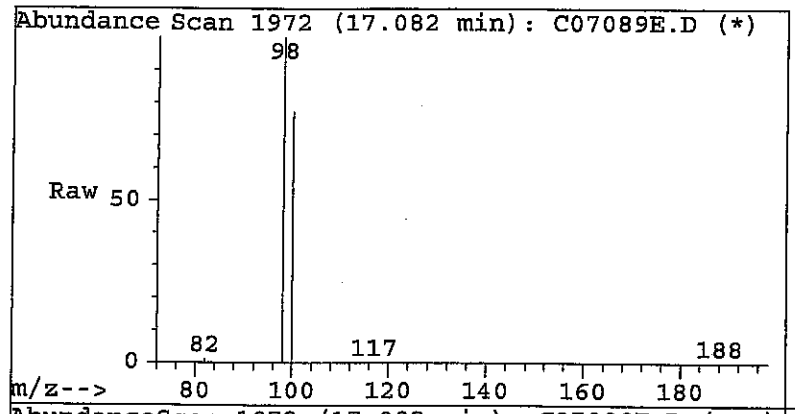


#3
1,1-Dichloroethene
Concen: 0.44 ppbV
RT: 6.97 min Scan# 552
Delta R.T. 0.02 min
Lab File: C07089E.D
Acq: 8 Jul 109 12:37 pm

Tgt Ion:61 Resp: 191059

Ion	Ratio	Lower	Upper
61	100		
96	51.5	42.2	63.2
98	33.2	27.8	41.8
0	0.0	0.0	0.0

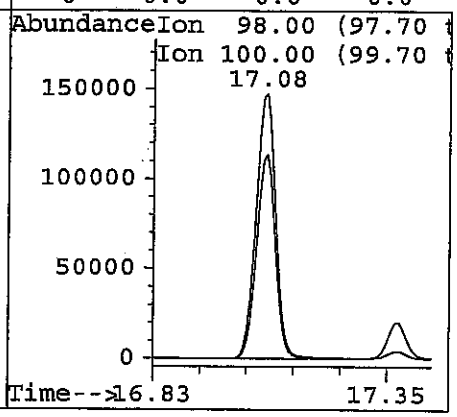


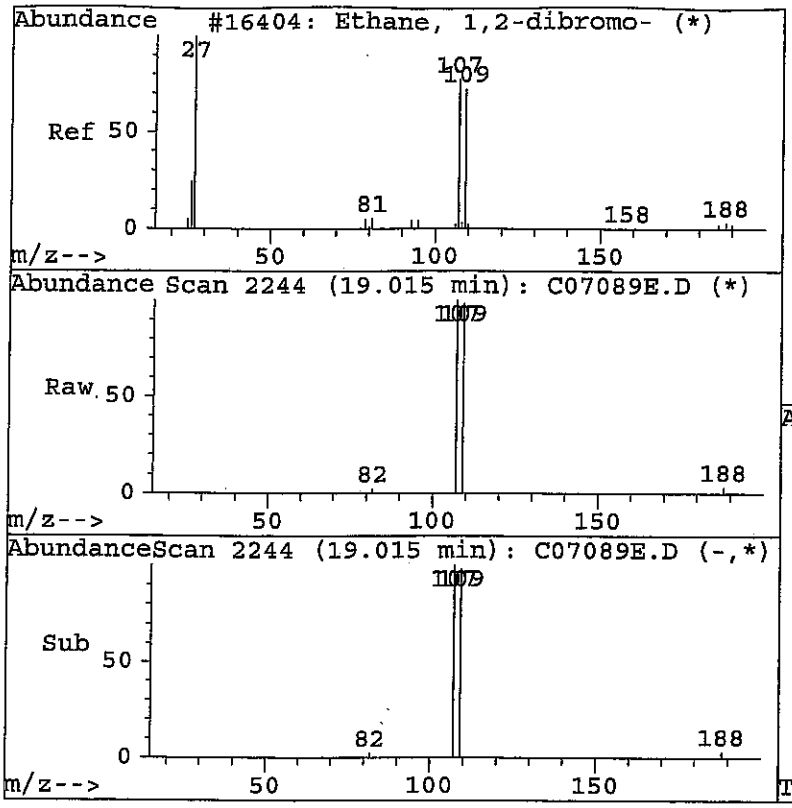


#4
Toluene-d8
Concen: 0.20 ppbV
RT: 17.08 min Scan# 1972
Delta R.T. 0.03 min
Lab File: C07089E.D
Acq: 8 Jul 109 12:37 pm

Tgt Ion:98 Resp: 436164

Ion	Ratio	Lower	Upper
98	100		
100	75.1	61.3	91.9
0	0.0	0.0	0.0
0	0.0	0.0	0.0

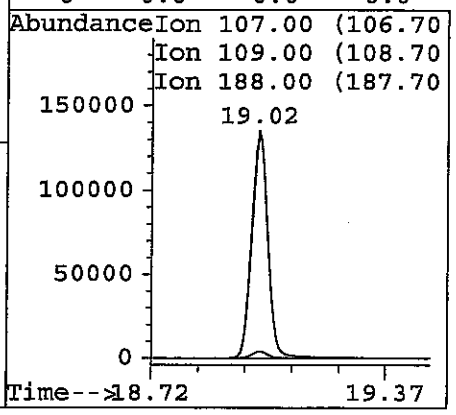


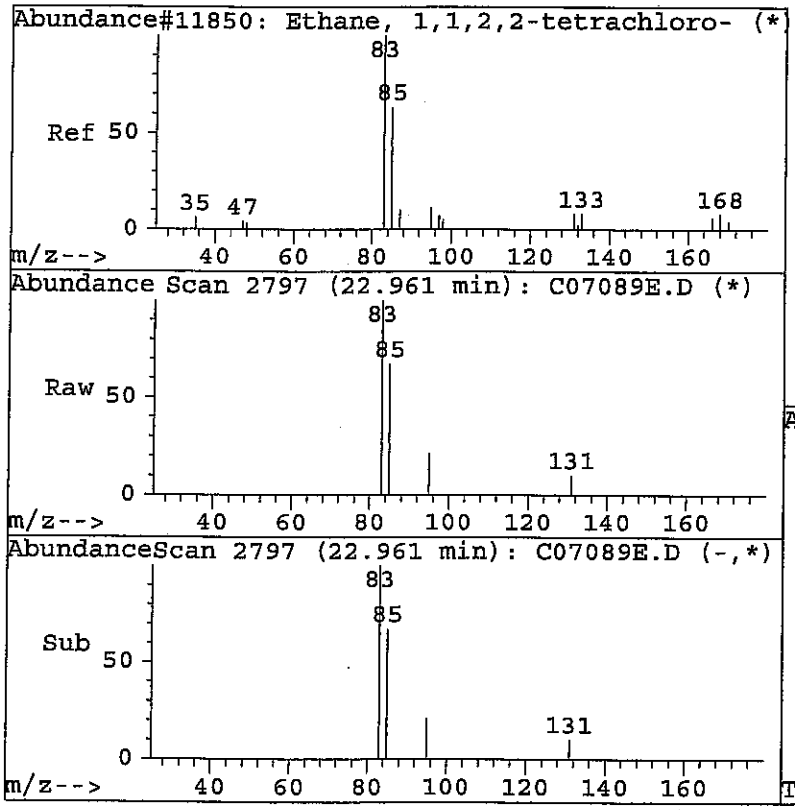


#5
1,2-Dibromoethane
Concen: 0.44 ppbV
RT: 19.02 min Scan# 2244
Delta R.T. 0.03 min
Lab File: C07089E.D
Acq: 8 Jul 109 12:37 pm

Tgt Ion:107 Resp: 417465

Ion	Ratio	Lower	Upper
107	100		
109	98.0	75.5	113.3
188	3.0	2.8	4.2
0	0.0	0.0	0.0

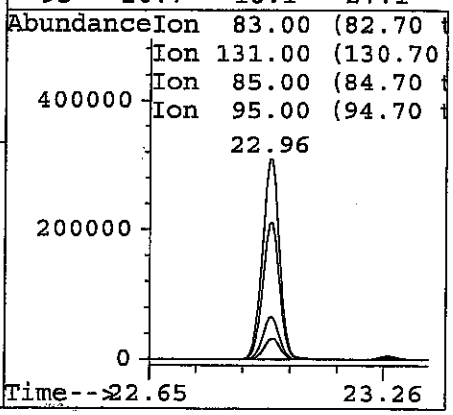


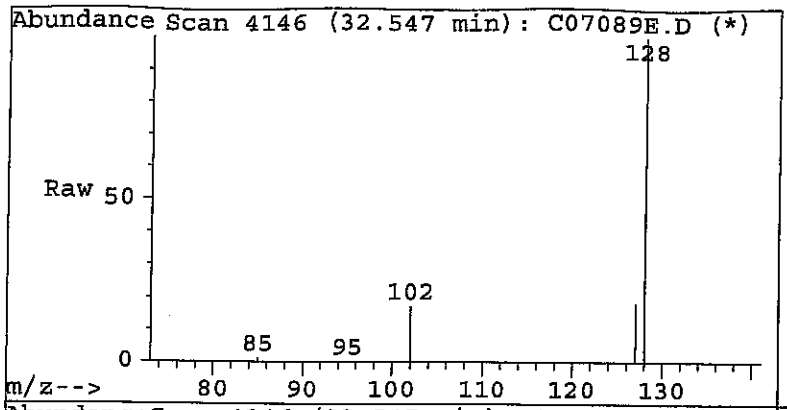


#6
1,1,2,2-Tetrachloroethane
Concen: 0.41 ppbV
RT: 22.96 min Scan# 2797
Delta R.T. 0.03 min
Lab File: C07089E.D
Acq: 8 Jul 109 12:37 pm

Tgt Ion:83 Resp: 952470

Ion	Ratio	Lower	Upper
83	100		
131	9.6	8.6	12.8
85	67.4	53.0	79.6
95	20.7	18.1	27.1

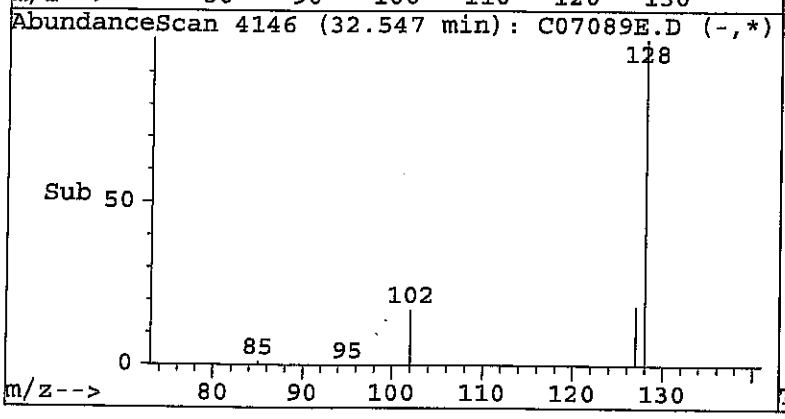


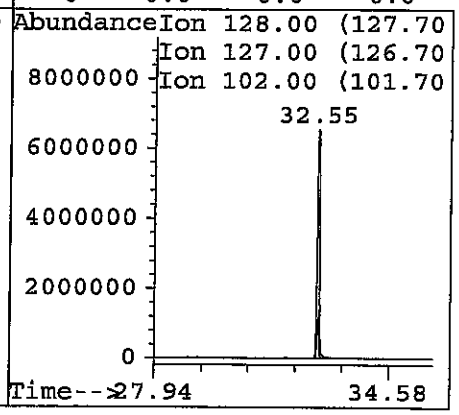


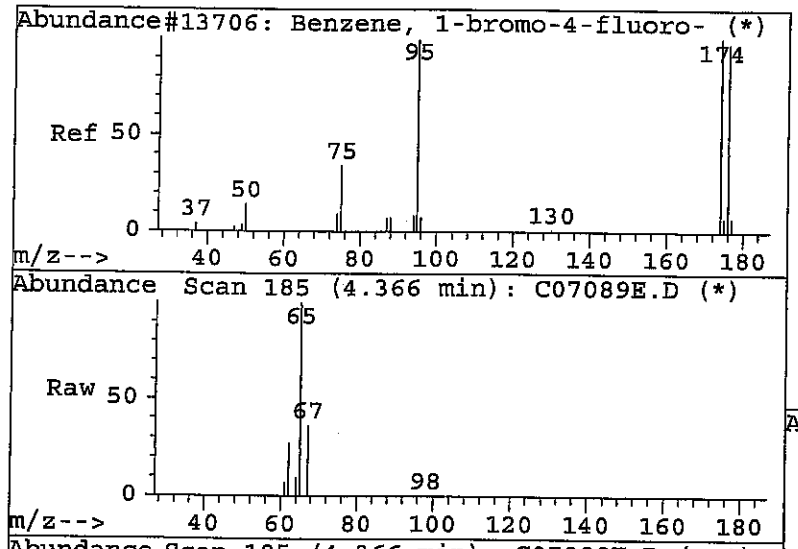
#7
Naphthalene
Concen: 0.43 ppbV m
RT: 32.55 min Scan# 4146
Delta R.T. -0.23 min
Lab File: C07089E.D
Acq: 8 Jul 109 12:37 pm

Tgt Ion:128 Resp:29903019

Ion	Ratio	Lower	Upper
128	100		
127	18.2	19.6	29.4#
102	17.4	19.7	29.5#
0	0.0	0.0	0.0



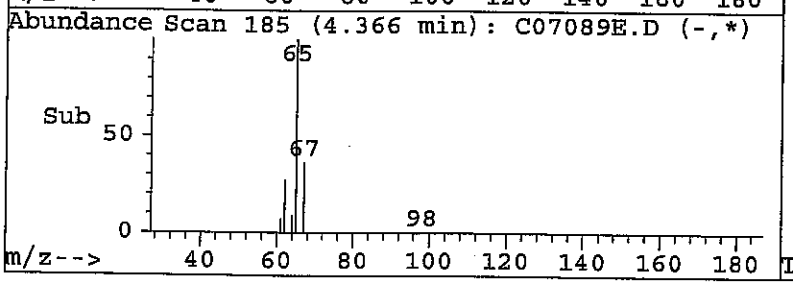


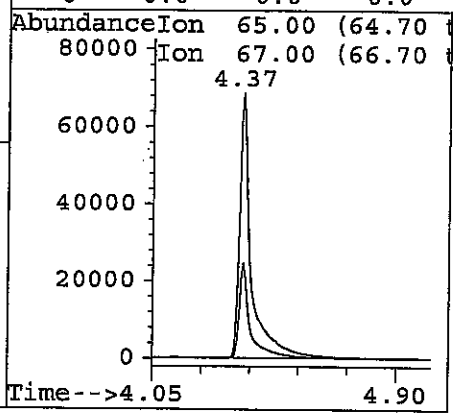


#8
Vinyl Chloride-d3
Concen: 0.20 ppbV
RT: 4.37 min Scan# 185
Delta R.T. 0.02 min
Lab File: C07089E.D
Acq: 8 Jul 109 12:37 pm

Tgt Ion:65 Resp: 195008

Ion	Ratio	Lower	Upper
65	100		
67	36.0	30.7	46.1
0	0.0	0.0	0.0
0	0.0	0.0	0.0





Quantitation Report

Data File : C:\MSCHEM\2\DATA\07089MS2\C07089G.D
Acq Time : 8 Jul 109 2:08 pm
Sample : ST60421 + ST60250
Misc : 1.0 ML
Quant Time: Jul 9 8:15 19109

Operator: JF
Inst : MS2
Multiplr: 1.00

Method : C:\MSCHEM\2\METHODS\2SIM_SEA.M
Title : EPA T0-15
Last Update : Thu Jul 09 08:26:17 2009
Response via : Multiple Level Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Chlorobenzene-d5	20.54	117	508059	0.20	ppbV	0.03
System Monitoring Compounds						%Recovery
4) Toluene-d8	17.08	98	214227	0.20	ppbV	m
8) Vinyl Chloride-d3	4.39	65	107396	0.24	ppbV	m
Target Compounds						Qvalue
2) Vinyl chloride	4.40	62	14023	0.14	ppbV	m 93
3) 1,1-Dichloroethene	7.00	61	26523	0.13	ppbV	m 96
5) 1,2-Dibromoethane	19.02	107	56275	0.13	ppbV	m 95
6) 1,1,2,2-Tetrachloroethane	22.97	83	103998	0.10	ppbV	m 97
7) Naphthalene	32.55	128	3979332	0.20	ppbV	m 0

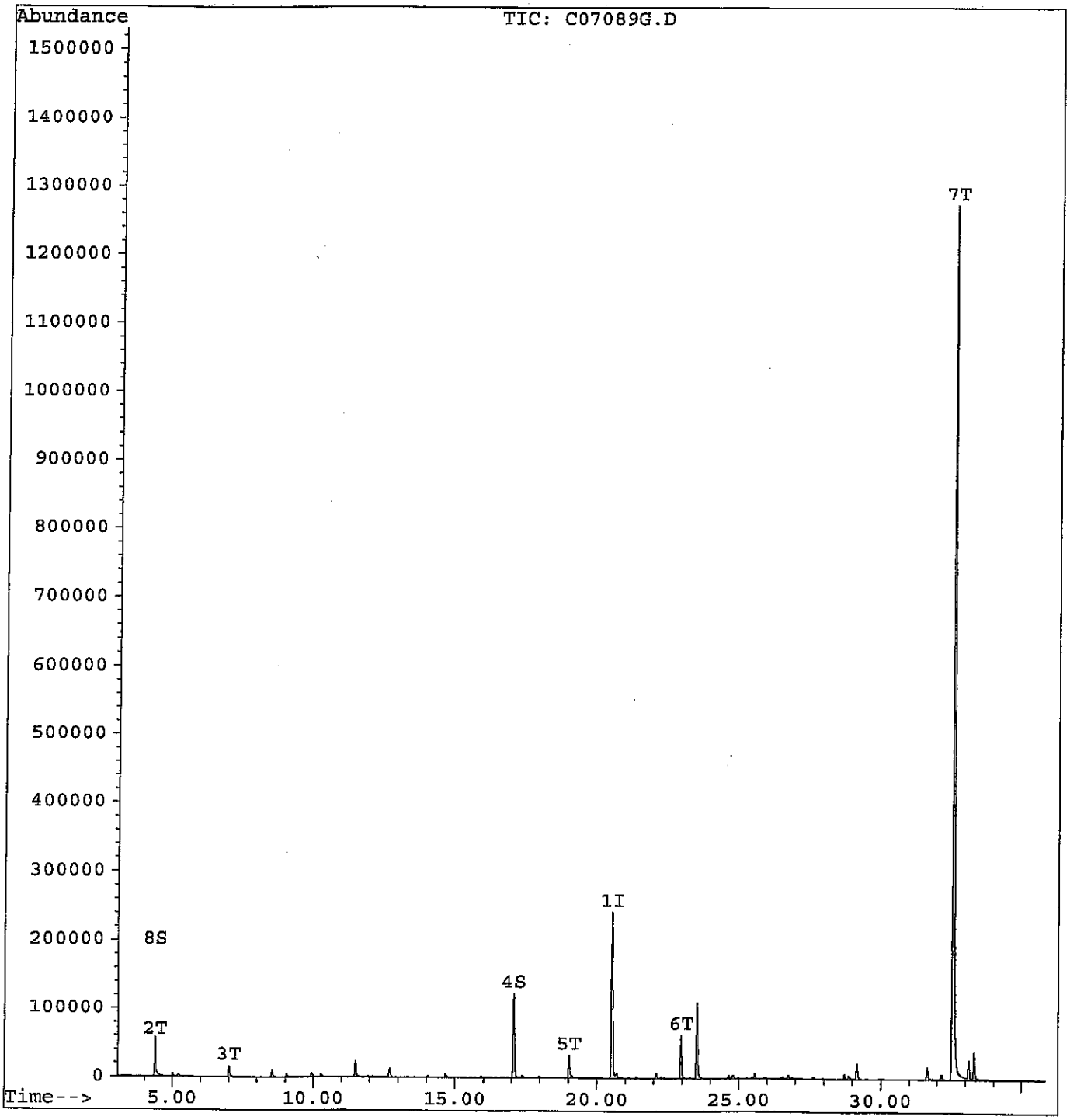
(#) = qualifier out of range (m) = manual integration

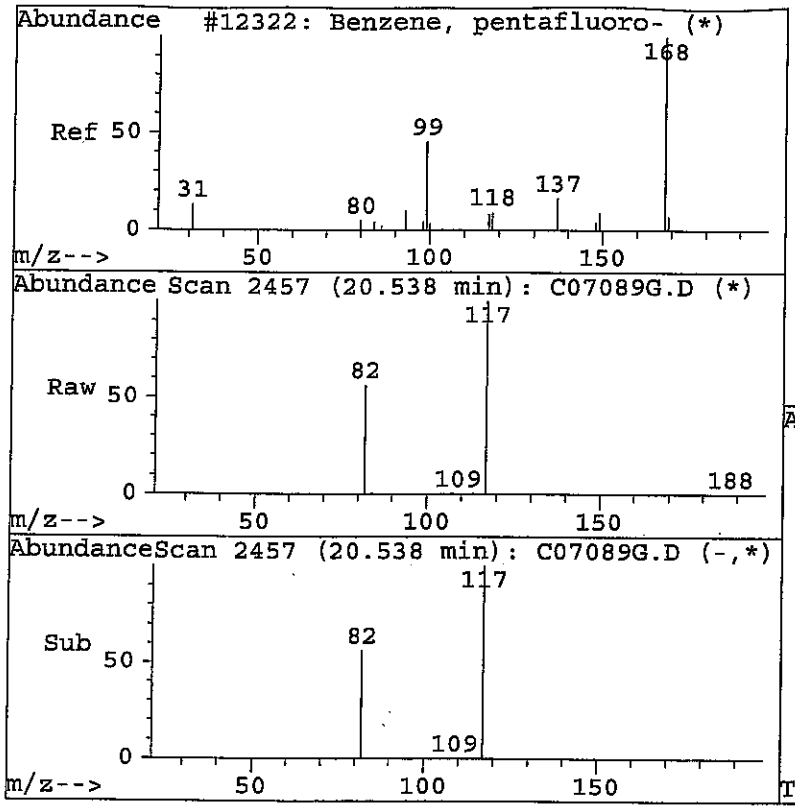
Quantitation Report

Data File : C:\MSCHEM\2\DATA\07089MS2\C07089G.D
Acq Time : 8 Jul 109 2:08 pm
Sample : ST60421 + ST60250
Misc : 1.0 ML
Quant Time: Jul 9 8:15 19109

Operator: JF
Inst : MS2
Multiplr: 1.00

Method : C:\MSCHEM\2\METHODS\2SIM_SEA.M
Title : EPA TO-15
Last Update : Thu Jul 09 08:26:17 2009
Response via : Multiple Level Calibration

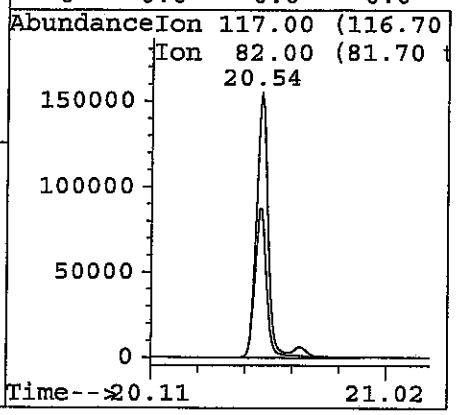


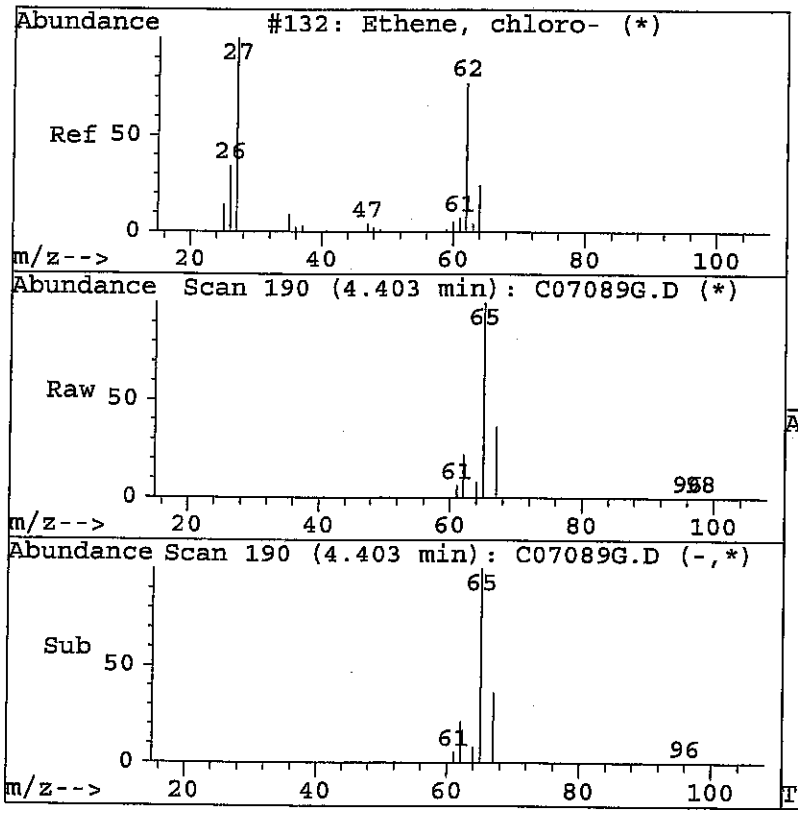


#1
Chlorobenzene-d5
Concen: 0.20 ppbV m
RT: 20.54 min Scan# 2457
Delta R.T. 0.03 min
Lab File: C07089G.D
Acq: 8 Jul 109 2:08 pm

Tgt Ion:117 Resp: 508059

Ion	Ratio	Lower	Upper
117	100		
82	56.0	43.8	65.8
0	0.0	0.0	0.0
0	0.0	0.0	0.0

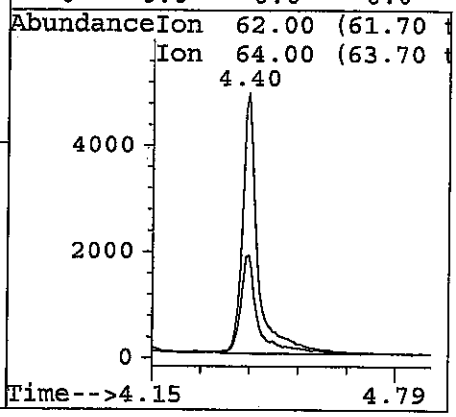


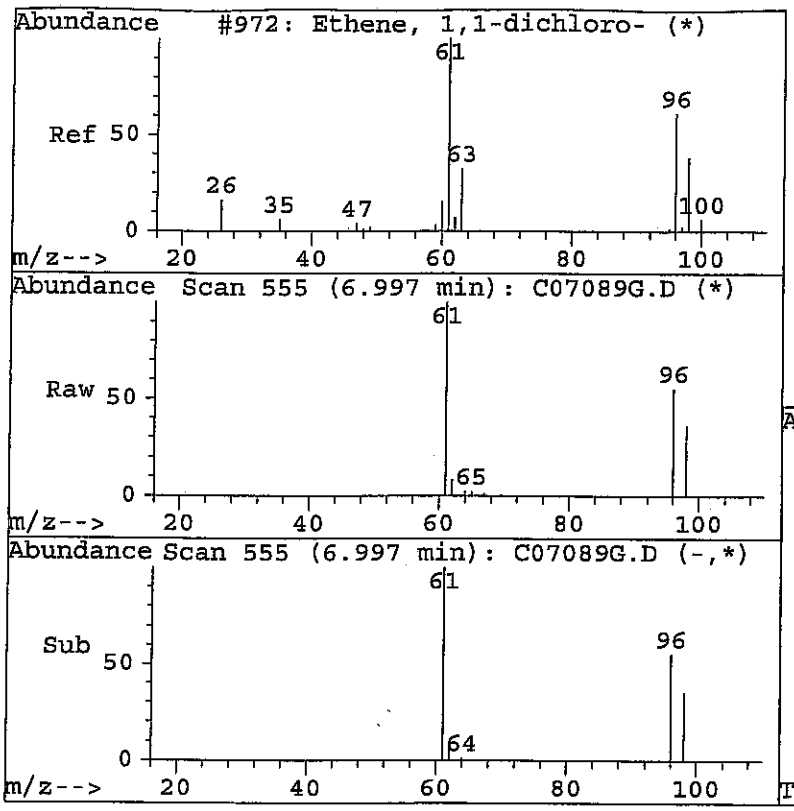


#2
Vinyl chloride
Concen: 0.14 ppbV m
RT: 4.40 min Scan# 190
Delta R.T. 0.03 min
Lab File: C07089G.D
Acq: 8 Jul 109 2:08 pm

Tgt Ion:62 Resp: 14023

Ion	Ratio	Lower	Upper
62	100		
64	37.3	26.9	40.3
0	0.0	0.0	0.0
0	0.0	0.0	0.0

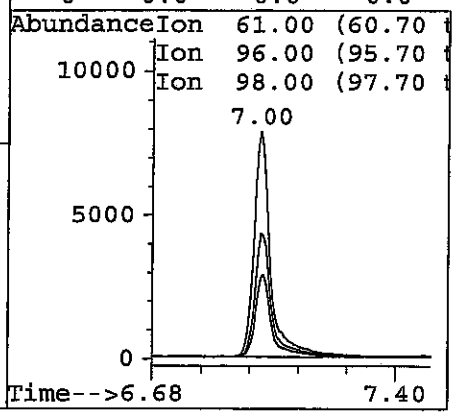


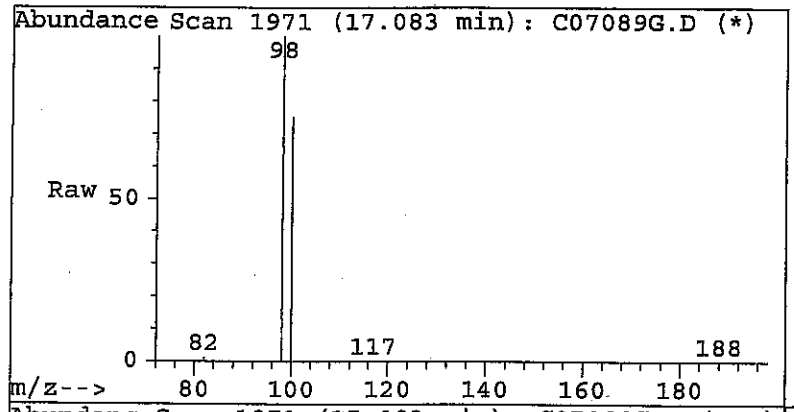


#3
1,1-Dichloroethene
Concen: 0.13 ppbV m
RT: 7.00 min Scan# 555
Delta R.T. 0.05 min
Lab File: C07089G.D
Acq: 8 Jul 109 2:08 pm

Tgt Ion:61 Resp: 26523

Ion	Ratio	Lower	Upper
61	100		
96	54.5	41.2	61.8
98	34.9	26.6	39.8
0	0.0	0.0	0.0

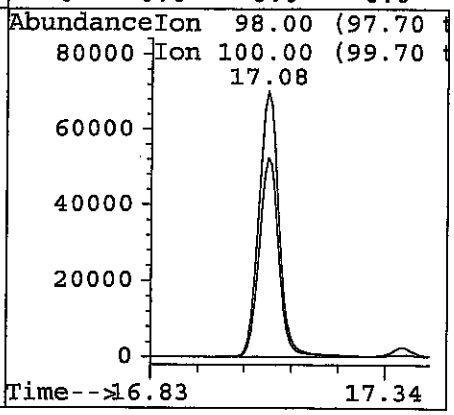


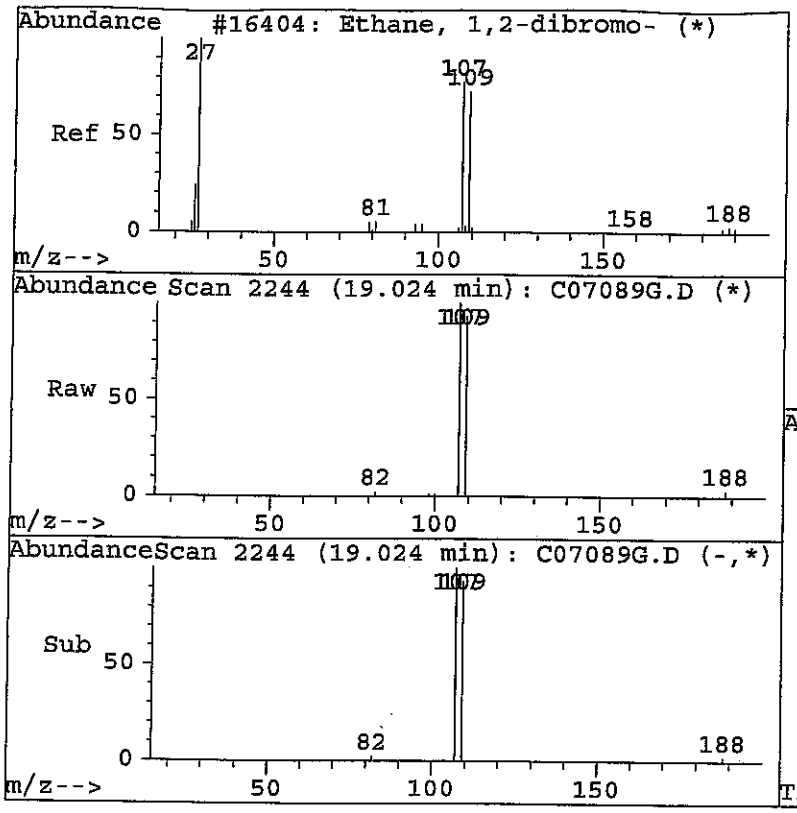


#4
Toluene-d8
Concen: 0.20 ppbV m
RT: 17.08 min Scan# 1971
Delta R.T. 0.03 min
Lab File: C07089G.D
Acq: 8 Jul 109 2:08 pm

Tgt Ion:98 Resp: 214227

Ion	Ratio	Lower	Upper
98	100		
100	73.9	60.1	90.1
0	0.0	0.0	0.0
0	0.0	0.0	0.0

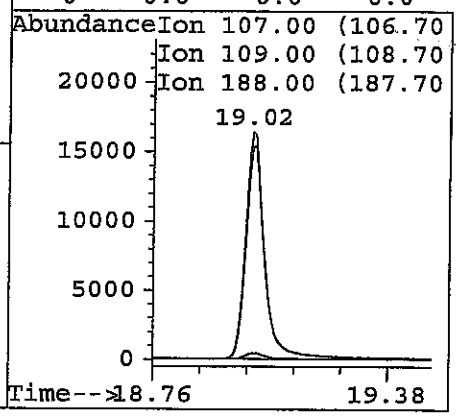


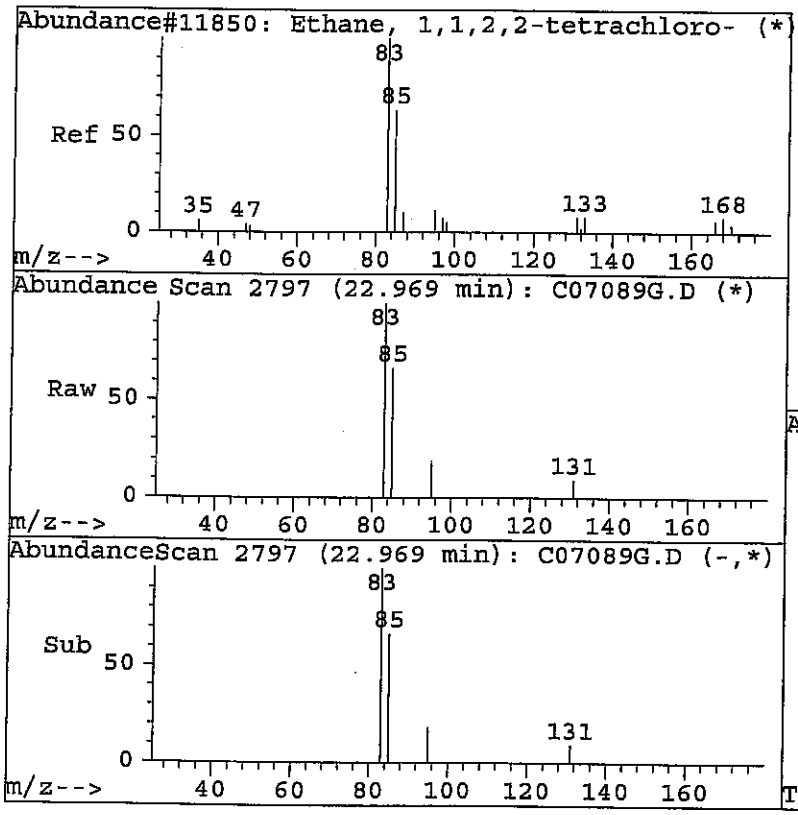


#5
1,2-Dibromoethane
Concen: 0.13 ppbV m
RT: 19.02 min Scan# 2244
Delta R.T. 0.03 min
Lab File: C07089G.D
Acq: 8 Jul 109 2:08 pm

Tgt Ion:107 Resp: 56275

Ion	Ratio	Lower	Upper
107	100		
109	93.1	78.4	117.6
188	2.4	2.4	3.6
0	0.0	0.0	0.0

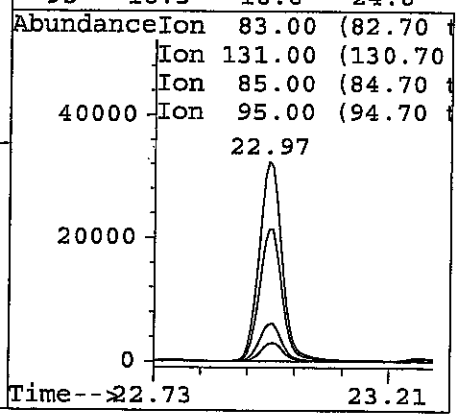


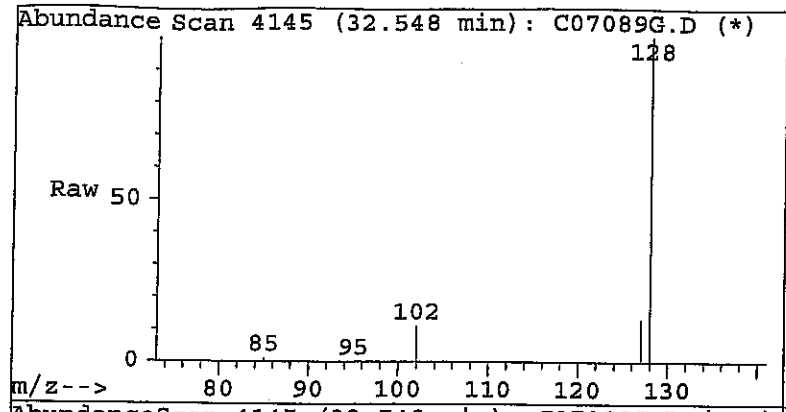


#6
1,1,2,2-Tetrachloroethane
Concen: 0.10 ppbV m
RT: 22.97 min Scan# 2797
Delta R.T. 0.04 min
Lab File: C07089G.D
Acq: 8 Jul 109 2:08 pm

Tgt Ion:83 Resp: 103998

Ion	Ratio	Lower	Upper
83	100		
131	8.7	7.7	11.5
85	65.9	53.9	80.9
95	18.3	16.6	24.8

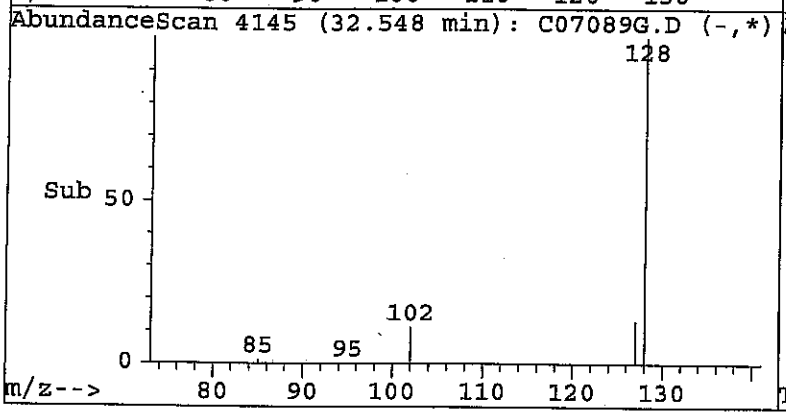


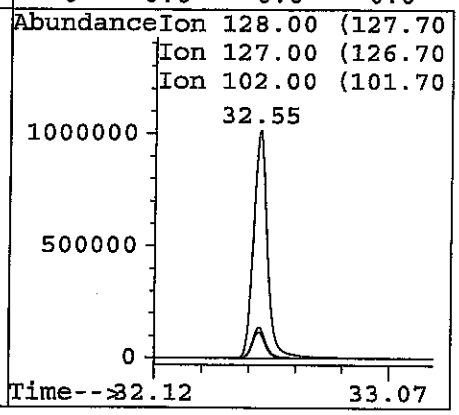


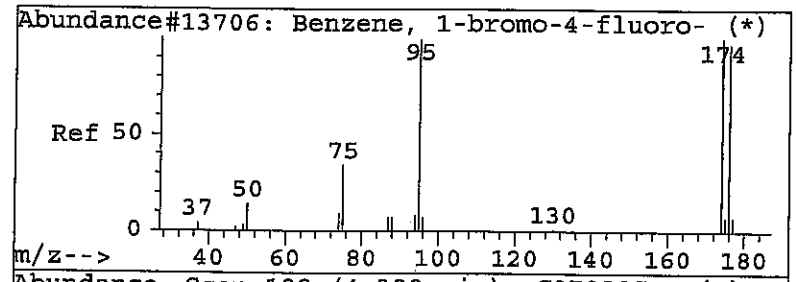
#7
Naphthalene
Concen: 0.20 ppbV m
RT: 32.55 min Scan# 4145
Delta R.T. -0.23 min
Lab File: C07089G.D
Acq: 8 Jul 109 2:08 pm

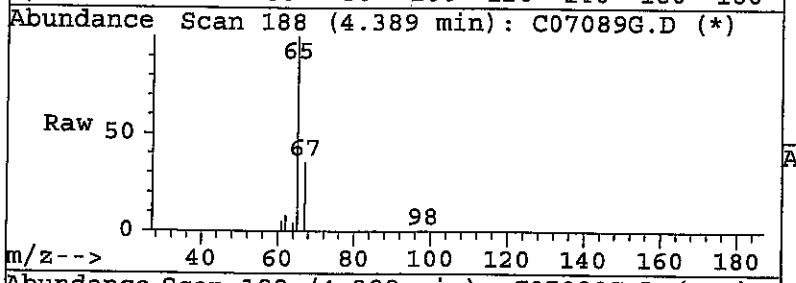
Tgt Ion:128 Resp: 3979332

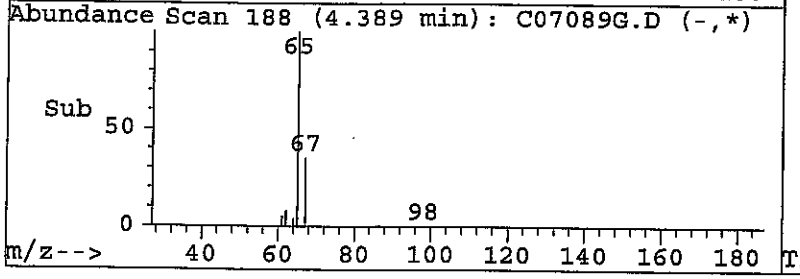
Ion	Ratio	Lower	Upper
128	100		
127	13.4	14.6	21.8#
102	11.5	13.9	20.9#
0	0.0	0.0	0.0







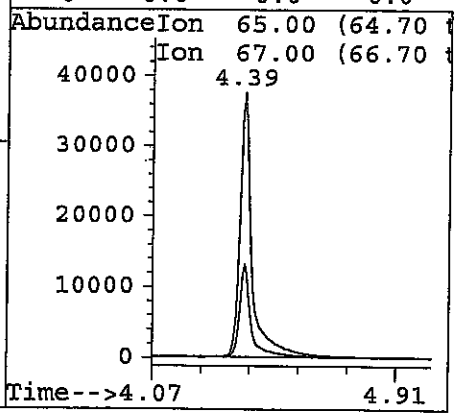




#8
Vinyl Chloride-d3
Concen: 0.24 ppbV m
RT: 4.39 min Scan# 188
Delta R.T. 0.04 min
Lab File: C07089G.D
Acq: 8 Jul 109 2:08 pm

Tgt Ion:65 Resp: 107396

Ion	Ratio	Lower	Upper
65	100		
67	34.9	28.8	43.2
0	0.0	0.0	0.0
0	0.0	0.0	0.0



SECTION 8
Internal Standard and RT Summaries

This section contains information equivalent to that found in EPA FORM VII – Volatile Organics Analysis Internal Standard Area and Retention Time Study.

8.1: Internal Standard and RT Summary Table

SDG	Sampno	Fieldsampid	Parameter	Qcbatchno	RT	AREA	LL	UL	FLAG
LABQC	QC06229	ST0623091	Chlorobenzene-d5	062209-MS2	20.55	584289	678665	2714658	*
LABQC	QC06229	ST0623091	Chlorobenzene-d5	062209-MS2	20.55	584486	678665	2714658	*
LABQC	C06229	ST60032 + ST60250	Chlorobenzene-d5	062209-MS2	20.55	1357329	678665	2714658	
LABQC	B06229	METHOD BLANK	Chlorobenzene-d5	062209-MS2	20.55	453663	678665	2714658	*
209270	14	44-006B	Chlorobenzene-d5	062209-MS2	20.40	639000	678665	2714658	*
209270	04	44-009	Chlorobenzene-d5	062209-MS2	20.38	771601	678665	2714658	
209270	02	44-007	Chlorobenzene-d5	062209-MS2	20.46	775666	678665	2714658	
LABQC	QC06239	ST0623091	Chlorobenzene-d5	062309-MS2	20.55	1313676	686756	2747024	
LABQC	QC06239	ST0623091	Chlorobenzene-d5	062309-MS2	20.55	851611	686756	2747024	
LABQC	C06239	ST60032 + ST60250	Chlorobenzene-d5	062309-MS2	20.55	1373512	686756	2747024	
LABQC	B06239	METHOD BLANK	Chlorobenzene-d5	062309-MS2	20.55	1135862	686756	2747024	
209270	12	44-017	Chlorobenzene-d5	062309-MS2	20.55	1064664	686756	2747024	
209270	11	44-016	Chlorobenzene-d5	062309-MS2	20.44	294772	686756	2747024	*
209270	10	44-015	Chlorobenzene-d5	062309-MS2	20.55	310499	686756	2747024	*
209270	09	44-014	Chlorobenzene-d5	062309-MS2	20.55	866703	686756	2747024	
209270	08	44-013	Chlorobenzene-d5	062309-MS2	20.46	910660	686756	2747024	
209270	06	44-011	Chlorobenzene-d5	062309-MS2	20.55	683336	686756	2747024	
209270	05	44-010	Chlorobenzene-d5	062309-MS2	20.55	1278502	686756	2747024	
LABQC	QC06249	ST60032	1,4-Difluorobenzene	062409-MS1	13.21	4632525	2755485	6429465	
LABQC	QC06249	ST60032	1,4-Difluorobenzene	062409-MS1	13.18	4462580	2755485	6429465	
LABQC	C06249	ST60022 + ST60350	1,4-Difluorobenzene	062409-MS1	13.18	4592475	2755485	6429465	
LABQC	B06249	METHOD BLANK	1,4-Difluorobenzene	062409-MS1	13.19	4961048	2755485	6429465	
209270	14	44-006B	1,4-Difluorobenzene	062409-MS1	13.11	5638180	2755485	6429465	
209270	06	44-011	1,4-Difluorobenzene	062409-MS1	13.02	1465145	2755485	6429465	*
209270	05	44-010	1,4-Difluorobenzene	062409-MS1	13.15	5556373	2755485	6429465	
209270	03	44-008	1,4-Difluorobenzene	062409-MS1	13.09	5692743	2755485	6429465	
209270	02	44-007	1,4-Difluorobenzene	062409-MS1	13.17	5367990	2755485	6429465	
209270	01	44-006A	1,4-Difluorobenzene	062409-MS1	13.10	5596227	2755485	6429465	
LABQC	QC06249	ST60032	Pentafluorobenzene	062409-MS1	11.43	5363808	3181520	7423548	
LABQC	QC06249	ST60032	Pentafluorobenzene	062409-MS1	11.41	5126050	3181520	7423548	
LABQC	C06249	ST60022 + ST60350	Pentafluorobenzene	062409-MS1	11.39	5302534	3181520	7423548	
LABQC	B06249	METHOD BLANK	Pentafluorobenzene	062409-MS1	11.40	5716190	3181520	7423548	
209270	14	44-006B	Pentafluorobenzene	062409-MS1	11.30	6618254	3181520	7423548	
209270	06	44-011	Pentafluorobenzene	062409-MS1	11.21	1703338	3181520	7423548	*
209270	05	44-010	Pentafluorobenzene	062409-MS1	11.37	6539371	3181520	7423548	
209270	03	44-008	Pentafluorobenzene	062409-MS1	11.29	6734188	3181520	7423548	
209270	02	44-007	Pentafluorobenzene	062409-MS1	11.38	6273891	3181520	7423548	
209270	01	44-006A	Pentafluorobenzene	062409-MS1	11.30	6817564	3181520	7423548	
LABQC	QC06249	ST0623091	Chlorobenzene-d5	062409-MS2	20.53	550834	582781	2331124	
LABQC	QC06249	ST0623091	Chlorobenzene-d5	062409-MS2	20.53	399425	582781	2331124	
LABQC	C06249	ST60032 + ST60250	Chlorobenzene-d5	062409-MS2	20.53	1165562	582781	2331124	
LABQC	B06249	METHOD BLANK	Chlorobenzene-d5	062409-MS2	20.53	1125527	582781	2331124	
209270	13	44-018	Chlorobenzene-d5	062409-MS2	20.49	968959	582781	2331124	
209270	03	44-008	Chlorobenzene-d5	062409-MS2	20.42	672066	582781	2331124	
209270	01	44-006A	Chlorobenzene-d5	062409-MS2	20.53	348362	582781	2331124	
LABQC	QC06259	ST60421	1,4-Difluorobenzene	062509-MS1	13.18	5036170	2755989	6430641	
LABQC	QC06259	ST60421	1,4-Difluorobenzene	062509-MS1	13.18	4701010	2755989	6430641	
LABQC	C06259	ST60022 + ST60350	1,4-Difluorobenzene	062509-MS1	13.18	4593315	2755989	6430641	
LABQC	B06259	METHOD BLANK	1,4-Difluorobenzene	062509-MS1	13.17	5246984	2755989	6430641	
LABQC	B06259	METHOD BLANK	1,4-Difluorobenzene	062509-MS1	13.17	5246984	2755989	6430641	
209270	13	44-018	1,4-Difluorobenzene	062509-MS1	12.55	3224300	2755989	6430641	
209270	13	44-018	1,4-Difluorobenzene	062509-MS1	12.55	3224300	2755989	6430641	

209270	12	44-017	1,4-Difluorobenzene	062509-MS1	13.17	4696715	2755989	6430641	
209270	12	44-017	1,4-Difluorobenzene	062509-MS1	13.17	4696715	2755989	6430641	
209270	11	44-016	1,4-Difluorobenzene	062509-MS1	13.19	3646886	2755989	6430641	
209270	11	44-016	1,4-Difluorobenzene	062509-MS1	13.19	3646886	2755989	6430641	
209270	10	44-015	1,4-Difluorobenzene	062509-MS1	13.08	5311136	2755989	6430641	
209270	09	44-014	1,4-Difluorobenzene	062509-MS1	13.15	4977819	2755989	6430641	
209270	08	44-013	1,4-Difluorobenzene	062509-MS1	13.19	3711105	2755989	6430641	
209270	07	44-012	1,4-Difluorobenzene	062509-MS1	13.18	5530766	2755989	6430641	
209270	04	44-009	1,4-Difluorobenzene	062509-MS1	13.18	5041467	2755989	6430641	
LABQC	QC06259	ST60421	Pentafluorobenzene	062509-MS1	11.40	5939187	3304030	7709404	
LABQC	QC06259	ST60421	Pentafluorobenzene	062509-MS1	11.39	5358338	3304030	7709404	
LABQC	C06259	ST60022 + ST60350	Pentafluorobenzene	062509-MS1	11.40	5506717	3304030	7709404	
LABQC	B06259	METHOD BLANK	Pentafluorobenzene	062509-MS1	11.38	5855494	3304030	7709404	
LABQC	B06259	METHOD BLANK	Pentafluorobenzene	062509-MS1	11.38	5855494	3304030	7709404	
209270	13	44-018	Pentafluorobenzene	062509-MS1	10.56	3736122	3304030	7709404	
209270	13	44-018	Pentafluorobenzene	062509-MS1	10.56	3736122	3304030	7709404	
209270	12	44-017	Pentafluorobenzene	062509-MS1	11.39	5516768	3304030	7709404	
209270	12	44-017	Pentafluorobenzene	062509-MS1	11.39	5516768	3304030	7709404	
209270	11	44-016	Pentafluorobenzene	062509-MS1	11.39	4260909	3304030	7709404	
209270	11	44-016	Pentafluorobenzene	062509-MS1	11.39	4260909	3304030	7709404	
209270	10	44-015	Pentafluorobenzene	062509-MS1	11.27	6300048	3304030	7709404	
209270	09	44-014	Pentafluorobenzene	062509-MS1	11.36	5603603	3304030	7709404	
209270	08	44-013	Pentafluorobenzene	062509-MS1	11.40	4380241	3304030	7709404	
209270	07	44-012	Pentafluorobenzene	062509-MS1	11.41	6418588	3304030	7709404	
209270	04	44-009	Pentafluorobenzene	062509-MS1	11.40	6141233	3304030	7709404	
LABQC	QC06259	ST0623091	Chlorobenzene-d5	062509-MS2	20.53	740290	728087	2912348	
LABQC	QC06259	ST0623091	Chlorobenzene-d5	062509-MS2	20.51	913449	728087	2912348	
LABQC	C06259	ST60421 + ST60250	Chlorobenzene-d5	062509-MS2	20.53	1456174	728087	2912348	
LABQC	B06259	METHOD BLANK	Chlorobenzene-d5	062509-MS2	20.53	897982	728087	2912348	
209270	07	44-012	Chlorobenzene-d5	062509-MS2	20.53	434929	728087	2912348	*
LABQC	QC07099	ST0709091	Chlorobenzene-d5	070909-MS2	20.53	796790	728087	2912348	
LABQC	QC07099	ST0709091	Chlorobenzene-d5	070909-MS2	20.53	1358979	728087	2912348	
LABQC	B07099	ST60421 + ST60250	Chlorobenzene-d5	070909-MS2	20.54	762378	728087	2912348	
LABQC	B07099	METHOD BLANK	Chlorobenzene-d5	070909-MS2	20.52	550070	728087	2912348	*
209270	06	44-011	Chlorobenzene-d5	070909-MS2	20.37	717421	728087	2912348	*
209270	03	44-008	Chlorobenzene-d5	070909-MS2	20.54	752290	728087	2912348	
209270	02	44-007	Chlorobenzene-d5	070909-MS2	20.52	459331	728087	2912348	*
209270	01	44-006A	Chlorobenzene-d5	070909-MS2	20.41	620716	728087	2912348	*
LABQC	QC07109	ST0709091	Chlorobenzene-d5	071009-MS2	20.53	1387158	387054	1548214	
LABQC	QC07109	ST0709091	Chlorobenzene-d5	071009-MS2	20.52	1366486	387054	1548214	
LABQC	C07109	ST60421 + ST60250	Chlorobenzene-d5	071009-MS2	20.53	774107	387054	1548214	
LABQC	B07109	METHOD BLANK	Chlorobenzene-d5	071009-MS2	20.52	1122878	387054	1548214	
209270	14	44-006B	Chlorobenzene-d5	071009-MS2	20.49	548129	387054	1548214	
209270	13	44-018	Chlorobenzene-d5	071009-MS2	20.54	709595	387054	1548214	
209270	12	44-017	Chlorobenzene-d5	071009-MS2	20.55	872506	387054	1548214	
209270	11	44-016	Chlorobenzene-d5	071009-MS2	20.41	410216	387054	1548214	
209270	09	44-014	Chlorobenzene-d5	071009-MS2	20.36	887191	387054	1548214	
209270	08	44-013	Chlorobenzene-d5	071009-MS2	20.35	857099	387054	1548214	

N00236_003662
ALAMEDA POINT
SSIC NO. 5090.3.A

FOLDER 3 OF 3

ORIGINAL

EAS ID 209277

TETRA TECH
1230 Columbia Street, Suite 750
San Diego, CA 92101 (619) 234-8696

CHAIN-OF-CUSTODY RECORD

NUMBER 30810

PROJECT NAME: Bldg #163	PURCHASE ORDER NO.
PROJECT LOCATION: Alameda	PROJECT NO.: 12990.044.003
SAMPLER NAME: Jacob Joab	AIRBILL NUMBER: 86943463-1890 1904 1915 (3)
PROJECT CONTACT: Lynn Jefferson	PROJECT CONTACT PHONE NUMBER: 619-889-7902

LABORATORY NAME: EAS

LABORATORY ID (FOR LABORATORY):

Project Information Section Do not submit to Laboratory

ANALYSES REQUIRED: TO15 ~~Stat~~

SAMPLE ID	DATE COLLECTED	TIME COLLECTED	NO. OF CONTAINER	LEVEL 3	LEVEL 4	TYPE	TAT	TO15	COMMENTS	LOCATION	DEPTH START	DEPTH END	QC
44-001	6-19-09	1243	1	X		W	10 day	X	full scan	SG-001			Reg
44-002	↓	1228	1	X		↓	↓	X	full Scan	SG-002			Reg
44-003	↓	1205	1	X		↓	↓	X	full Scan	SG-003			Reg
44-004	↓	1322	1		X	↓	↓	X	full Scan	SG-003			FD
44-005	↓	1200	1	X		↓	↓	X	full scan	Trip Blank			TB

DGM

DGM

RELINQUISHED BY (Signature)	DATE	RECEIVED BY (Signature)
DGM	6-19-09	FEDEX
COMPANY: GES-TECH	TIME	COMPANY
RELINQUISHED BY (Signature)	DATE	RECEIVED BY (Signature)
COMPANY	TIME	COMPANY
RELINQUISHED BY (Signature)	DATE	RECEIVED BY (Signature)
COMPANY	TIME	COMPANY

LABORATORY INSTRUCTIONS/COMMENTS

COMPOSITE DESCRIPTION

SAMPLE CONDITION UPON RECEIPT (FOR LABORATORY)

TEMPERATURE: _____ SAMPLE CONDITION: ☐ INTACT ☐ BROKEN

COOLER SEAL: ☐ INTACT ☐ BROKEN

SAMPLING COMMENT: Bldg #163 sub-slab Soil gas

White - Laboratory; Pink - Laboratory; Canary - Project File; Manila - Data Management

ENVIRONMENTAL ANALYTICAL SERVICE, INC.
DATA DELIVERABLE PACKAGE

COVER PAGE

Lab Name:	Environmental Analytical Service	**Contract:**	
Lab Code:		**SDG No.:**	209277
Report Date:		**Level:**	4

This Data Deliverable Package was prepared by Environmental Analytical Service and covers the following samples:

Sample No.	Lab Sample ID
44-001	209277-1
44-002	209277-2
44-003	209277-3
44-004	209277-4
44-005	209277-5

Comments:

I certify that this data package is in compliance with the Terms and Conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on floppy diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature:		**Name:**	Steve Hoyt
Date:	7/16/09	**Title:**	Lab Director

ANALYTICAL REPORT, QUALITY ASSURANCE REPORT, AND DELIVERABLES

Project Name: Alameda

Sample Date: 6/19/09

Sample Delivery Groups: 209277

Prepared for:

Sealaska Environmental
Trabuco Canyon, CA

Prepared by:

Kristin Beckley

Steve Hoyt

ENVIRONMENTAL ANALYTICAL SERVICE, INC.
173 Cross St.
San Luis Obispo, CA 93401

(805) 781-3585, FAX (805) 541-4550

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SECTION 1
Project Summary

1.1 Analytical Batch and Log-in Batch Summary

The samples received by Environmental Analytical Service (EAS) for this project were logged in and assigned a Sample Delivery Group (SDG) Number. Each sample is also assigned an individual Laboratory ID number. The samples were then distributed to the analysts for the designated analysis. Each sample was analyzed in a daily analytical batch with associated QC. Each QC batch is assigned a QC analytical batch number. The Analytical Batch Reference Table is a summary of the SDG number, the client ID, the date collected, the EAS laboratory ID number, and the analytical batch number for each sample received. The QC Criteria for each analytical test is summarized in Section 1.4. For detailed information on Quality Control consult the EAS Quality Manual. Section 1.5 contains a Case Narrative for each QC analytical batch.

This section contains information equivalent to that found in EPA FORM DC-1 – Volatile Organics Sample Log-In Sheet.

1.2 Sample Receipt Log-in Form and Chain-of-Custody Forms

The following page shows the Sample Receipt Log-In Form that was filled out by Sample Control when the samples were received by EAS. Following the Sample Receipt Log-In Form are the Chain-of-Custody form(s) received with the samples.

SAMPLE LOG-IN SHEET

Lab Name: Environmental Analytical Service
Received By (Print): Karina Campbell
Received By (Signature):
Contract Number:

Page 1 of 1
Log-In Date: 6/23/2009

Case Number:
Sample Delivery Group # 209277
SAS Number:

CIRCLE THE APPROPRIATE RESPONSE

1. Custody Seal(s): Present/Absent* Intact/Broken N/A
2. Custody Seal Nos.:
3. Traffic Reports/ Chain-of-Custody Records or Packing Lists: Present/Absent* N/A
4. Airbill: Airbill/Sticker Present/Absent* N/A
5. Airbill No(s): 869434631904 869434631915
6. Sample Tags: Present/Absent* Sample Tag Numbers: Listed/Not Listed on Chain-of-Custody
7. Sample Condition: Intact/Broken*/Leaking
8. Cooler Temperature Indicator Bottle: Present/Absent*
9. Cooler Temperature: N/A
10. Does information on custody records, traffic reports and sample tag agree? Yes / No *
11. Date Received at Lab: 6/23/2009
12. Time Received: 10:30 AM

Sample Transfer
Area #:
By:
On:

Sample #	Corresponding Sample Tag #	Corresponding Canister #	Corresponding Assigned Lab #	REMARKS: Condition of Sample - Shipment etc.
44-001		656	209277-1	
44-002		779	209277-2	
44-003		737	209277-3	
44-004		696	209277-4	
44-005		312	209277-5	

* If Circled, contact SMO and attach record of resolution

Reviewed By: KC
Date: 6/23/2009

Logbook No.: 5
Logbook Page 180-181

Form AADC - 1

LBSERV_labtemp\samcon\samlogin.xls

TETRA TECH
1230 Columbia Street, Suite 750
San Diego, CA 92101 (619) 234-8696

CHAIN-OF-CUSTODY RECORD

NUMBER 30810

PROJECT NAME: Bldg. #163	PURCHASE ORDER NO.
PROJECT LOCATION: Alameda	PROJECT NO.: 12990.044.003
SAMPLER NAME: Jacob Joab	AIRBILL NUMBER: 86943463-1890 1904 1915 (3)
PROJECT CONTACT: Lynn Jefferson	PROJECT CONTACT PHONE NUMBER: 619-889-7902

ANALYSES REQUIRED

LABORATORY NAME: EAS

LABORATORY ID (FOR LABORATORY):

	SAMPLE ID	DATE COLLECTED	TIME COLLECTED	NO. OF CONTAINER	LEVEL 3	LEVEL 4	TYPE	TAT	TO15 SIM	Canisters	P1	P2			Shelf	COMMENTS
209277																
-1	44-001	6-19-09	1243	1	X		W	10 day	X	656	649	925			A	full scan
-2	44-002	↓	1228	1	X		↓	↓	X	779	646	887			B	full Scan
-3	44-003	↓	1205	1	X		↓	↓	X	737	605	960			B	full Scan
-4	44-004	↓	1322	1		X	↓	↓	X	696	635	916			B	full Scan
-5	44-005	↓	1200	1	X		↓	↓	X	312	1336	✓			B	full scan

DGN

RELINQUISHED BY (Signature): DGN	DATE: 6-19-09	RECEIVED BY (Signature): FEDEX	LABORATORY INSTRUCTIONS/COMMENTS: 3 missing Caps
COMPANY: SES-TECH	TIME:	COMPANY:	
RELINQUISHED BY (Signature):	DATE: 6/23/09	RECEIVED BY (Signature): [signature]	COMPOSITE DESCRIPTION
COMPANY:	TIME: 1030	COMPANY: EAS	
RELINQUISHED BY (Signature):	DATE:	RECEIVED BY (Signature):	SAMPLE CONDITION UPON RECEIPT (FOR LABORATORY) TEMPERATURE: _____ SAMPLE CONDITION: ☐ INTACT ☐ BROKEN COOLER SEAL: ☐ INTACT ☐ BROKEN
COMPANY:	TIME:	COMPANY:	

White - Laboratory; Pink - Laboratory; Canary - Project File; Manila - Data Management

1.3 Analytical Batch Reference Table(s)

EPA TO-15M Tracer, EPA TO-15M Full Scan

SDG Number	Lab ID Number	Date Collected	Client ID	Analysis Batch
209277	1	6/19/09	44-001	070609-MS1
209277	2	6/19/09	44-002	070209-MS1
209277	3	6/19/09	44-003	070209-MS1 070609-MS1
209277	4	6/19/09	44-004	070609-MS1 070809-MS1
209277	5	6/19/09	44-005	070609-MS1

1.4 QC Criteria

The QC criteria are listed in the following tables by analytical test. The EAS QC Criteria described in the EAS Quality Manual was used as The QC criteria unless Project Specific QC Criteria was specified and supplied.

The daily analytical batch data was checked against the QC criteria and any criteria that did not pass are listed in the QC Comments section of the case narrative under the daily analytical batch number.

This package contains all the information needed for data validation for the requested samples.

TO-15 Full Scan Modified

Parameter	EAS Modified TO-15	EPA TO-15
BFB Tune	Daily	Daily
Tuning Criteria	TO-15 Tune Criteria	TO-15 Criteria
Initial Calibration	5pt points minimum Relative Standard Deviation (RSD) < 30% for Standard TO-15 Compounds 4 compounds <40% < 40% for EAS additional compounds 4 additional compounds < 50% 1,2,4-Trichlorobenzene, naphthalene, and hexachlorobutadiene can be up to 80%	2 to 50 ppbv 1 to 25 ppbv <30% with 2 compounds out to 40% EAS has additional compounds to its TO15 list that are not standard TO-15 compounds analyzed by most labs.
Calibration Check Sample (CCS)	Every 12 months Same Percent RSD as Initial Calibration	Every 12 months Same Percent RSD as Initial Calibration
Continuing Calibration Verification (CCV)	Daily (24 hours) 5 ppbv Std Same Percent Criteria as Initial Calibration	TO-15 uses 10 ppbv std
Internal Standard (IS)	10 to 25 ppbv 2 IS Pentafluorobenzene 1,4-Difluorobenzne RT < 0.5 min daily std. Response 60% to 140%	10 ppbv with 3 IS Pentafluorobenzene is used instead of Bromochlorobenzene which is a target compound
Surrogate	Toluene-d8 70-130% recovery.	Matrix interferences can cause out of limits recoveries.
Method Blank	<LOQ	<LOC
Laboratory Control Spike	1 per Daily Batch 70-130% for LCS list which is a short list of Standard TO-15 One compound may marginally exceed limits on LCS, LCD, and/or RPD 60 to 140% for hydrocarbons, oxygenated hydrocarbons, and EAS additional compounds	70 to 130%

Matrix Spike	1 per Daily Batch if Requested 70-130% special list	
Duplicate (One of below) Lab Control Dup Matrix Spike Dup	1 duplicate with each 20 samples <25% for special LCS spike list or standard TO-15 compounds <30% for EAS additional compounds	<25%
Canister Holding Times	30 days from sampling date unless specified by client	30 days
Canister Certification	Certification <0.2 ppbv or less than LOQ of target compound by full scan GC/MS	0.2 ppbv

1.5 Project Case Narrative

The samples were received in good condition with canister pressure in an acceptable range for a valid sample event. All analyses were performed in holding time as specified by the QC criteria listed in Section 1.4. The QC criteria for each of the analytical methods used in this project has been met except as noted in the QC comments for the daily analytical batch.

Daily Analytical Batch #: 070209-MS1
All analysis met the QC requirements for the method except freon 114, 1,2,4-trichlorobenzene, and hexachlorobutadiene exceed QC limits for % D on the continuing calibration analysis.

Daily Analytical Batch #: 070609-MS1
All analysis met the QC requirements for the method.

Daily Analytical Batch #: 070809-MS1
All analysis met the QC requirements for the method except freon 114, 1,2,4-trichlorobenzene, and dichlorobenzenes marginally exceed QC limits for % D on the continuing calibration analysis.

SECTION 2
Operational Information

2.1 SAMPLE ANALYSIS

EPA TO-15 Modified Ambient Air by GC/MS

The GC/MS method (EPA Method TO-14/15) uses a cryotrapping system and a high resolution capillary column to analyze for volatile organic compounds for the TO-14 method a nafion dryer is used for water management, on TO-15 no dryer is used so oxygenated compounds can be analyzed.

Samples are analyzed on an HP 5890 gas chromatograph and HP 5970 MSD quadrapole mass spectrometer detector. A 100 to 1000 mL ambient air sample is introduced from the air-sampling container on to the freezeout loop constructed of 1/8" nickel tubing packed with glass beads. A gas phase internal standard mixture, as specified in the EPA SOW for ambient air samples, is injected with each sample. The freezeout loop is immersed in liquid oxygen and concentrates the air sample. After the sample is trapped, it is thermally desorbed using an electric heater at 225° C and is cryofocussed onto the beginning of a 0.25 mm ID deactivated fused silica capillary column. The cryofocussed loop is then warmed and the compounds are injected onto a 60 meter, DB-5, 0.25 mm ID fused silica capillary column in the GC. The GC is temperature programmed from 35 to 220° C. As the column is heated, the compounds elute off the column and enter the mass spectrometer (MS). The GC/MS is tuned and operated according to the specifications outlined in EPA SW 846 Test Methods. Compounds are calibrated by the internal standard procedure using NIST traceable air standards as described below. The relative percent difference (RPD) of a duplicate pair is about 30% at 10 ppbV and the average MDL is approximately 0.10 ppbV for most compounds at a 500 ml load volume. SIM is typically able to achieve detection limits 10-20 times lower depending on target list desired.

2.2 Calibration Procedures

The standards used for the routine analytical tests are commercial NIST traceable gas standards. Special in-house standards are prepared when commercial standards are not available or when commercial standards need to be diluted. Details of the traceability and calibration program at EAS can be found in the EAS Quality Manual.

Working standards are prepared by using a gas dilution system on the gas chromatograph or by making static dilutions to atmospheric levels. The gas dilution system is constructed from an eight port gas sampling valve with various

size sample loops. The loops are filled with the standard and flushed with "zero air". The gas dilution system is used for the daily instrument calibration.

The concentration of the individual target compounds is determined using the initial calibration response factors as shown below. The GC/MS methods uses an internal standard in the calibration while the GC methods do not. If no IS is used the terms involving IS are removed from the sample calculations below.

2.3 Sample Calculations

$$RF = \frac{\text{Area Cmpd.}}{\text{Area IS}} * \frac{\text{Conc. IS}}{\text{Std Conc of Cmpd (ppbV)}}$$

Std Conc Cmpd (ppbV) = (Std Conc cmpd (ppmV)*1000*(Std load Vol /1000 mls)

Avg. RF = $(RF_1 + RF_2 + \ldots + Rf_n)/ n$

The Concentration of Analyte in the sample is calculated:

$$\frac{\text{Area Cmpd.}}{\text{Area IS}} * \frac{\text{IS Conc.}}{\text{Avg. RF}} * \frac{\text{1000 ml}}{\text{Smple. Vol.}} * \text{DF}$$

Where IS = Internal Standard
RF = Response Factor
n = Number of calibration levels
DF = Final pressure/ Initial pressure of the SUMMA canister.
IS Conc. = 20 ppbV (for full scan)

2.4 GC/MS Specific Data Processing :

Qualifiers: Qualifiers are ions used to aid in the identification of a peak. These ions are usually the secondary ion peaks for the compound in question. A ratio between the area counts of the primary ion (used for quantitation) and the area counts of the secondary ion is established by analyzing a daily standard containing the ions of interest at a known concentration (generally a mid-level standard). The standard ratios are used to check the running method on a daily basis. The method sets an acceptable criteria window for the qualifier ion by using the ion ratios and the user specific qualifier criteria.

Example For Toluene:

Primary ion 91 : 341877 area counts Secondary ion 92 : 205126 area counts
The target ion 91 is automatically set at 100%.
The ratio of 92 ion to 91 ion is used to set a target qualifier amount for the 91 ion

205126 / 341877 * 100 = 60%.

The user then sets a +/- window based upon the experience and the industry standard criteria. EAS uses a window of +/-20 percent relative except for the early eluting compounds which use a window of +/-35 percent relative.

Qualifier Exceptions: An analyst must use his or her best judgment when positively identifying a compound using qualifiers, as several factors can affect the qualifier ratios. These factors include, but are not limited to, the amounts of carbon dioxide and water present in the sample, the ambient room temperature, coeluting peaks, baseline carry-over from compounds eluting prior to the peak in question, and the actual amount of the compound in the sample.

If a compound is in question, the analyst will first compare the total peak spectra of the sample with the total compound spectra of a standard. If the two spectra are a fair match, the analyst will report a positive result. If the identity is still in question, the analyst runs a library search for compound matches with the NBS54K library. For a positive identification using this library, the peak in question must have a Q value match of 50% or above. If a positive peak identification still is not made, the analyst looks at the area counts for the target ion. If the area is less than 5000 counts and/or the compound result is near the instrument detection limit, the analyst will look for the presence of the qualifier. If it is present, a positive result will be reported. In the case that the compound result is less than 5 times the reported MDL, the presence of the target ion is sufficient to report a positive result. If none of this criterion is met, the compound is reported non-detected (ND).

Retention Time: Each day a calibration standard is analyzed. This calibration standard is used to check the compound target retention times in the running

method prior to all other analyses. The normal retention time window is +/- 0.2 minutes of the target retention time, adjusted for any retention time shifts in the internal standard (IS), with all shifts being in the same direction.

Retention Time Exceptions: Air samples rarely fall within the retention time guidelines cited above. The retention times of the compounds are significantly affected by the amount of carbon dioxide and water present in the samples. As a general rule, compounds eluting prior to benzene will be shifted to the left (earlier RTs), while the later eluting compounds may be shifted to the right (later RTs). For retention times near benzene, the normal retention time criteria can be used with judgment. The earlier the peaks elute from benzene, the wider the acceptance window becomes with the earliest peaks having a possible shift of 2 to 3 minutes. The analyst should use the nearest positively identified peak's retention time window as a guide to what the window will be for compounds near that peak. Normally, the peak elution prior to benzene is in the same direction. However, if significant amounts of carbon dioxide or water are present, they can cause the earliest eluting peaks to shift to the right. Peaks eluting after benzene may shift slightly to the right with the window increasing slightly with increasing distance. This shift is normally no more than +/- 0.4 minute of the target RT adjusted for the IS shift and is in the same direction for all compounds. If the analyst has knowledge of certain peak patterns, he or she will also use this information in identifying peaks. Another important retention time criteria for air samples is that all compounds should elute in the same order as the daily calibration standard compounds.

2.5 QUALITY CONTROL PROGRAM

The quality assurance program at Environmental Analytical Service, Inc. is described in detail in the EAS Quality Manual.

2.6 Data Qualifiers and Definitions

Data Qualifiers

U Indicates compound was analyzed for but not detected.

B This compound was also detected in the blank.

DL The sample was analyzed at a lower volume.

E The amount reported is an estimated value. The result may exceed the calibration range or may be affected by possible carry-over from the previous sample.

N Indicates presumptive evidence of a compound. This flag is only used for tentatively identified compounds, where the identification is based on a mass spectral library search. It is applied to all TIC results.

J The amount reported is an estimated value. This flag is used when a compound is reported below the Lower Quantitation Limit (LQL) often called the Reporting Limit (RL).

NFS The ions do not fit the target spectra.

Definitions

ppbV = $\frac{\text{\# nanomoles cmpd}}{\text{\# moles air}}$

The compound (cmpd) is reported as ppb of compound by Volume. This unit is temperature independent.

ug/m3 = ppbV * $\frac{\text{MW cmpd}}{23.68}$

The compound is reported as ug of a compound in a m3 of air.
23.68 is the molar volume of a gas at 60 F and 1 atm pressure.
MW = molecular weight.
This unit is temperature dependent.

ppbC = ppbV * # carbons in compound.

SECTION 3
Summary of Results

This section contains information equivalent to that found in EPA FORM I – Volatile Organics Data sheet.

3.1 EPA TO-15M Volatile Organics

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified Full Scan GC/MS | **SDG:** 209277
Analytical Method: TO-15 | **Laboratory Number:** 01

File:	0927701A.D	**Date Sampled:**	06/19/09	**Time:**	12:43
Description:	44-001	**Date Received:**	06/23/09		
Can/Tube#:	656	**Date Extracted:**			
Sam_Type:	SA	**Date Analyzed:**	07/06/09	**Time:**	14:57
QC_Batch:	070609-MS1	**Can Dilution Factor:**	1.43		2
Air Volume:	200 ml	**Not Detected Flag:**	ND		

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
75-71-8	Dichlorodifluoromethane	0.75	3.75	ND	3.83	19.17	ND	ND
74-87-3	Chloromethane	0.73	3.65	ND	1.56	7.78	ND	ND
76-14-2	Freon 114	0.74	3.72	ND	5.37	26.83	ND	ND
75-01-4	Vinyl chloride	0.74	3.72	ND	1.96	9.81	ND	ND
74-83-9	Bromomethane	0.74	3.72	ND	2.98	14.90	ND	ND
75-00-3	Chloroethane	0.74	3.72	ND	2.03	10.13	ND	ND
75-69-4	Trichlorofluoromethane	0.74	3.72	ND	4.31	21.57	ND	ND
67-64-1	Acetone	0.64	3.22	5.67	1.58	7.89	13.90	
67-63-0	2-propanol	0.65	3.25	ND	1.65	8.26	ND	ND
75-35-4	1,1-Dichloroethene	0.72	3.61	ND	2.96	14.78	ND	ND
76-13-1	Freon 113	0.73	3.65	1.63	5.77	28.84	12.89	J
75-09-2	Dichloromethane	0.74	3.72	ND	2.67	13.33	ND	ND
75-15-0	Carbon disulfide	0.64	3.18	3.21	2.05	10.23	10.30	
156-60-5	trans-1,2-Dichloroethene	0.62	3.11	ND	2.55	12.73	ND	ND
1634-04-4	Methyl tert butyl ether	0.56	2.79	ND	2.07	10.37	ND	ND
75-34-3	1,1-Dichloroethane	0.72	3.61	ND	3.02	15.10	ND	ND
108-05-4	Vinyl acetate	0.61	3.07	ND	2.24	11.18	ND	ND
78-93-3	2-Butanone	0.61	3.07	1.24	1.87	9.36	3.76	J
156-59-2	cis-1,2-Dichloroethene	0.74	3.68	ND	3.01	15.07	ND	ND
67-66-3	Chloroform	0.73	3.65	1.59	3.68	18.39	8.01	J
71-55-6	1,1,1-Trichloroethane	0.73	3.65	11.90	4.11	20.54	67.03	
107-06-2	1,2-Dichloroethane	0.74	3.68	0.83	3.08	15.39	3.47	J
71-43-2	Benzene	0.74	3.68	1.52	2.43	12.14	5.03	J
56-23-5	Carbon tetrachloride	0.73	3.65	ND	4.74	23.68	ND	ND
78-87-5	1,2-Dichloropropane	0.74	3.68	ND	3.51	17.57	ND	ND
123-91-1	1,4 Dioxane	0.63	3.15	ND	2.34	11.70	ND	ND
79-01-6	Trichloroethene	0.74	3.68	14.21	4.09	20.43	78.86	
75-27-4	Bromodichloromethane	0.57	2.86	ND	3.96	19.78	ND	ND
108-10-1	Methyl Isobutyl Ketone	0.66	3.29	ND	2.78	13.92	ND	ND
10061-01-5	cis-1,3-Dichloropropene	0.76	3.79	ND	3.55	17.76	ND	ND
108-88-3	Toluene	0.74	3.68	2.18	2.86	14.32	8.46	J
10061-02-6	trans-1,3-Dichloropropene	0.74	3.72	ND	3.49	17.43	ND	ND
79-00-5	1,1,2-Trichloroethane	0.73	3.65	ND	4.11	20.54	ND	ND
591-78-6	2-Hexanone	0.63	3.15	ND	2.66	13.31	ND	ND
124-48-1	Dibromochloromethane	0.64	3.18	ND	5.60	27.99	ND	ND
106-93-4	1,2-Dibromoethane	0.74	3.72	ND	5.90	29.50	ND	ND
127-18-4	Tetrachloroethene	0.73	3.65	28.12	5.11	25.53	196.91	
108-90-7	Chlorobenzene	0.73	3.65	ND	3.47	17.34	ND	ND
100-41-4	Ethylbenzene	0.74	3.72	ND	3.33	16.67	ND	ND
108-38-3	m & p-Xylene	1.47	7.36	ND	6.61	33.03	ND	ND

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
100-42-5	Styrene	0.74	3.68	ND	3.24	16.20	ND	ND
75-25-2	Bromoform	0.66	3.32	ND	7.10	35.48	ND	ND
95-47-6	o-Xylene	0.73	3.65	ND	3.27	16.35	ND	ND
79-34-5	1,1,2,2-Tetrachloroethane	0.73	3.65	ND	5.17	25.84	ND	ND
622-96-8	4-Ethyltoluene	0.65	3.25	ND	3.30	16.51	ND	ND
108-67-8	1,3,5-Trimethylbenzene	0.76	3.79	ND	3.85	19.24	ND	ND
95-63-6	1,2,4-Trimethylbenzene	0.73	3.65	ND	3.70	18.51	ND	ND
541-73-1	1,3-Dichlorobenzene	0.73	3.65	ND	4.53	22.64	ND	ND
100-44-7	Benzyl chloride	0.64	3.22	ND	3.44	17.20	ND	ND
106-46-7	1,4-Dichlorobenzene	0.73	3.65	ND	4.53	22.64	ND	ND
95-50-1	1,2-Dichlorobenzene	0.72	3.58	ND	4.44	22.19	ND	ND
120-82-1	1,2,4-Trichlorobenzene	0.74	3.68	ND	5.64	28.21	ND	ND
91-20-3	Naphthalene	1.71	8.54	ND	9.25	46.26	ND	ND
87-68-3	Hexachlorobutadiene	0.74	3.68	ND	8.11	40.55	ND	ND

	Surrogate Recovery	Spike Amt. ppbV	Amount ppbV	% Rec.	QC Limits	Flag * = Out
2037-26-5	Toluene-d8	10.000	10.323	103	70-130	

Notes: 1) Reported results are to be interpreted to two significant figures.
2) ug/m3 = ppbV*FW/23.68 calculated assuming conditions at 60 F and 1 atm.
3) MDL and RL are adjusted for sample volume and can dilution.
4) U and ND are Flags used for Not Detected
5) J is a flag for a result between the MDL and the RL (or lower quantitation limit, LQL)

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified Full Scan GC/MS | **SDG:** 209277
Analytical Method: TO-15 | **Laboratory Number:** 02

File:	0927702A.D	**Date Sampled:**	06/19/09	**Time:**	12:28
Description:	44-002	**Date Received:**	06/23/09		
Can/Tube#:	779	**Date Extracted:**			
Sam_Type:	SA	**Date Analyzed:**	07/02/09	**Time:**	13:41
QC_Batch:	070209-MS1	**Can Dilution Factor:**	1.37		0
Air Volume:	20 ml	**Not Detected Flag:**	ND		

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
75-71-8	Dichlorodifluoromethane	7	36	ND	37	184	ND	ND
74-87-3	Chloromethane	7	35	ND	15	75	ND	ND
76-14-2	Freon 114	7	36	ND	51	257	ND	ND
75-01-4	Vinyl chloride	7	36	ND	19	94	ND	ND
74-83-9	Bromomethane	7	36	ND	29	143	ND	ND
75-00-3	Chloroethane	7	36	ND	19	97	ND	ND
75-69-4	Trichlorofluoromethane	7	36	ND	41	207	ND	ND
67-64-1	Acetone	6	31	20	15	76	50	J
67-63-0	2-propanol	6	31	ND	16	79	ND	ND
75-35-4	1,1-Dichloroethene	7	35	ND	28	142	ND	ND
76-13-1	Freon 113	7	35	ND	55	276	ND	ND
75-09-2	Dichloromethane	7	36	ND	26	128	ND	ND
75-15-0	Carbon disulfide	6	30	222	20	98	712	
156-60-5	trans-1,2-Dichloroethene	6	30	8	24	122	35	J
1634-04-4	Methyl tert butyl ether	5	27	ND	20	99	ND	ND
75-34-3	1,1-Dichloroethane	7	35	ND	29	145	ND	ND
108-05-4	Vinyl acetate	6	29	ND	21	107	ND	ND
78-93-3	2-Butanone	6	29	ND	18	90	ND	ND
156-59-2	cis-1,2-Dichloroethene	7	35	234	29	144	959	
67-66-3	Chloroform	7	35	ND	35	176	ND	ND
71-55-6	1,1,1-Trichloroethane	7	35	ND	39	197	ND	ND
107-06-2	1,2-Dichloroethane	7	35	ND	29	147	ND	ND
71-43-2	Benzene	7	35	ND	23	116	ND	ND
56-23-5	Carbon tetrachloride	7	35	ND	45	227	ND	ND
78-87-5	1,2-Dichloropropane	7	35	ND	34	168	ND	ND
123-91-1	1,4 Dioxane	6	30	ND	22	112	ND	ND
79-01-6	Trichloroethene	7	35	1,291	39	196	7,166	
75-27-4	Bromodichloromethane	5	27	ND	38	190	ND	ND
108-10-1	Methyl Isobutyl Ketone	6	32	ND	27	133	ND	ND
10061-01-5	cis-1,3-Dichloropropene	7	36	ND	34	170	ND	ND
108-88-3	Toluene	7	35	11	27	137	44	J
10061-02-6	trans-1,3-Dichloropropene	7	36	ND	33	167	ND	ND
79-00-5	1,1,2-Trichloroethane	7	35	ND	39	197	ND	ND
591-78-6	2-Hexanone	6	30	ND	26	128	ND	ND
124-48-1	Dibromochloromethane	6	30	ND	54	268	ND	ND
106-93-4	1,2-Dibromoethane	7	36	ND	57	283	ND	ND
127-18-4	Tetrachloroethene	7	35	ND	49	245	ND	ND
108-90-7	Chlorobenzene	7	35	ND	33	166	ND	ND
100-41-4	Ethylbenzene	7	36	ND	32	160	ND	ND
108-38-3	m & p-Xylene	14	71	ND	63	316	ND	ND

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
100-42-5	Styrene	7	35	ND	31	155	ND	ND
75-25-2	Bromoform	6	32	ND	68	340	ND	ND
95-47-6	o-Xylene	7	35	ND	31	157	ND	ND
79-34-5	1,1,2,2-Tetrachloroethane	7	35	ND	50	248	ND	ND
622-96-8	4-Ethyltoluene	6	31	ND	32	158	ND	ND
108-67-8	1,3,5-Trimethylbenzene	7	36	ND	37	184	ND	ND
95-63-6	1,2,4-Trimethylbenzene	7	35	ND	35	177	ND	ND
541-73-1	1,3-Dichlorobenzene	7	35	ND	43	217	ND	ND
100-44-7	Benzyl chloride	6	31	ND	33	165	ND	ND
106-46-7	1,4-Dichlorobenzene	7	35	ND	43	217	ND	ND
95-50-1	1,2-Dichlorobenzene	7	34	ND	43	213	ND	ND
120-82-1	1,2,4-Trichlorobenzene	7	35	ND	54	270	ND	ND
91-20-3	Naphthalene	16	82	ND	89	443	ND	ND
87-68-3	Hexachlorobutadiene	7	35	ND	78	389	ND	ND

	Surrogate Recovery	Spike Amt. ppbV	Amount ppbV	% Rec.	QC Limits	Flag * = Out
2037-26-5	Toluene-d8	10.000	10.551	106	70-130	

Notes: 1) Reported results are to be interpreted to two significant figures.
2) ug/m3 = ppbV*FW/23.68 calculated assuming conditions at 60 F and 1 atm.
3) MDL and RL are adjusted for sample volume and can dilution.
4) U and ND are Flags used for Not Detected
5) J is a flag for a result between the MDL and the RL (or lower quantitation limit, LQL)

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified Full Scan GC/MS | **SDG:** 209277
Analytical Method: TO-15 | **Laboratory Number:** 03

File:	0927703A.D	**Date Sampled:**	06/19/09	**Time:**	12:05
Description:	44-003	**Date Received:**	06/23/09		
Can/Tube#:	737	**Date Extracted:**			
Sam_Type:	SA	**Date Analyzed:**	07/06/09	**Time:**	15:42
QC_Batch:	070609-MS1	**Can Dilution Factor:**	1.59		0
Air Volume:	0.05 ml	**Not Detected Flag:**	ND		

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
79-01-6	Trichloroethene	3,275	16,377	744,730	18,175	90,876	4,132,497	

	Surrogate Recovery	Spike Amt. ppbV	Amount ppbV	% Rec.	QC Limits	Flag * = Out
2037-26-5	Toluene-d8	10.000	10.171	102	70-130	

Notes: 1) Reported results are to be interpreted to two significant figures.
2) ug/m3 = ppbV*FW/23.68 calculated assuming conditions at 60 F and 1 atm.
3) MDL and RL are adjusted for sample volume and can dilution.
4) U and ND are Flags used for Not Detected
5) J is a flag for a result between the MDL and the RL (or lower quantitation limit, LQL)

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified Full Scan GC/MS | **SDG:** 209277
Analytical Method: TO-15 | **Laboratory Number:** 03

File:	0927703A.D	**Date Sampled:**	06/19/09	**Time:**	12:05
Description:	44-003	**Date Received:**	06/23/09		
Can/Tube#:	737	**Date Extracted:**			
Sam_Type:	SA	**Date Analyzed:**	07/02/09	**Time:**	15:20
QC_Batch:	070209-MS1	**Can Dilution Factor:**	1.59		0
Air Volume:	2 ml	**Not Detected Flag:**	ND		

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
75-71-8	Dichlorodifluoromethane	83	417	ND	426	2,131	ND	ND
74-87-3	Chloromethane	81	405	ND	173	865	ND	ND
76-14-2	Freon 114	83	413	ND	597	2,984	ND	ND
75-01-4	Vinyl chloride	83	413	ND	218	1,091	ND	ND
74-83-9	Bromomethane	83	413	ND	331	1,657	ND	ND
75-00-3	Chloroethane	83	413	ND	225	1,126	ND	ND
75-69-4	Trichlorofluoromethane	83	413	ND	480	2,399	ND	ND
67-64-1	Acetone	72	358	ND	176	878	ND	ND
67-63-0	2-propanol	72	362	ND	184	918	ND	ND
75-35-4	1,1-Dichloroethene	80	401	ND	329	1,643	ND	ND
76-13-1	Freon 113	81	405	ND	641	3,207	ND	ND
75-09-2	Dichloromethane	83	413	ND	296	1,482	ND	ND
75-15-0	Carbon disulfide	71	354	ND	227	1,137	ND	ND
156-60-5	trans-1,2-Dichloroethene	69	346	188	283	1,415	771	J
1634-04-4	Methyl tert butyl ether	62	310	ND	231	1,154	ND	ND
75-34-3	1,1-Dichloroethane	80	401	92	336	1,678	386	J
108-05-4	Vinyl acetate	68	342	ND	249	1,243	ND	ND
78-93-3	2-Butanone	68	342	ND	208	1,041	ND	ND
156-59-2	cis-1,2-Dichloroethene	82	409	2,027	335	1,675	8,295	
67-66-3	Chloroform	81	405	ND	409	2,044	ND	ND
71-55-6	1,1,1-Trichloroethane	81	405	ND	457	2,284	ND	ND
107-06-2	1,2-Dichloroethane	82	409	ND	342	1,712	ND	ND
71-43-2	Benzene	82	409	ND	270	1,350	ND	ND
56-23-5	Carbon tetrachloride	81	405	ND	527	2,633	ND	ND
78-87-5	1,2-Dichloropropane	82	409	ND	391	1,954	ND	ND
123-91-1	1,4 Dioxane	70	350	ND	260	1,301	ND	ND
75-27-4	Bromodichloromethane	64	318	ND	440	2,200	ND	ND
108-10-1	Methyl Isobutyl Ketone	73	366	ND	309	1,547	ND	ND
10061-01-5	cis-1,3-Dichloropropene	84	421	ND	395	1,975	ND	ND
108-88-3	Toluene	82	409	126	318	1,592	489	J
10061-02-6	trans-1,3-Dichloropropene	83	413	ND	388	1,938	ND	ND
79-00-5	1,1,2-Trichloroethane	81	405	ND	457	2,284	ND	ND
591-78-6	2-Hexanone	70	350	ND	296	1,480	ND	ND
124-48-1	Dibromochloromethane	71	354	ND	622	3,112	ND	ND
106-93-4	1,2-Dibromoethane	83	413	ND	656	3,280	ND	ND
127-18-4	Tetrachloroethene	81	405	ND	568	2,839	ND	ND
108-90-7	Chlorobenzene	81	405	ND	386	1,928	ND	ND
100-41-4	Ethylbenzene	83	413	ND	371	1,854	ND	ND
108-38-3	m & p-Xylene	164	819	ND	734	3,672	ND	ND
100-42-5	Styrene	82	409	ND	360	1,802	ND	ND

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
75-25-2	Bromoform	74	370	ND	789	3,945	ND	ND
95-47-6	o-Xylene	81	405	ND	364	1,818	ND	ND
79-34-5	1,1,2,2-Tetrachloroethane	81	405	ND	575	2,873	ND	ND
622-96-8	4-Ethyltoluene	72	362	ND	367	1,836	ND	ND
108-67-8	1,3,5-Trimethylbenzene	84	421	ND	428	2,139	ND	ND
95-63-6	1,2,4-Trimethylbenzene	81	405	ND	412	2,058	ND	ND
541-73-1	1,3-Dichlorobenzene	81	405	ND	503	2,517	ND	ND
100-44-7	Benzyl chloride	72	358	ND	383	1,913	ND	ND
106-46-7	1,4-Dichlorobenzene	81	405	ND	503	2,517	ND	ND
95-50-1	1,2-Dichlorobenzene	80	398	ND	494	2,468	ND	ND
120-82-1	1,2,4-Trichlorobenzene	82	409	ND	627	3,136	ND	ND
91-20-3	Naphthalene	190	950	ND	1,029	5,143	ND	ND
87-68-3	Hexachlorobutadiene	82	409	ND	902	4,509	ND	ND

	Surrogate Recovery	Spike Amt. ppbV	Amount ppbV	% Rec.	QC Limits	Flag * = Out
2037-26-5	Toluene-d8	10.000	10.307	103	70-130	

Notes: 1) Reported results are to be interpreted to two significant figures.
2) ug/m3 = ppbV*FW/23.68 calculated assuming conditions at 60 F and 1 atm.
3) MDL and RL are adjusted for sample volume and can dilution.
4) U and ND are Flags used for Not Detected
5) J is a flag for a result between the MDL and the RL (or lower quantitation limit, LQL)

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified Full Scan GC/MS | **SDG:** 209277
Analytical Method: TO-15 | **Laboratory Number:** 04

File:	0927704A.D	**Date Sampled:**	06/19/09	**Time:**	13:22
Description:	44-004	**Date Received:**	06/23/09		
Can/Tube#:	696	**Date Extracted:**			
Sam_Type:	SA	**Date Analyzed:**	07/06/09	**Time:**	16:25
QC_Batch:	070609-MS1	**Can Dilution Factor:**	1.44		0
Air Volume:	0.05 ml	**Not Detected Flag:**	ND		

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
79-01-6	Trichloroethene	2,966	14,832	755,100	16,461	82,303	4,190,042	

	Surrogate Recovery	Spike Amt. ppbV	Amount ppbV	% Rec.	QC Limits	Flag * = Out
2037-26-5	Toluene-d8	10.000	10.302	103	70-130	

Notes: 1) Reported results are to be interpreted to two significant figures.
2) ug/m3 = ppbV*FW/23.68 calculated assuming conditions at 60 F and 1 atm.
3) MDL and RL are adjusted for sample volume and can dilution.
4) U and ND are Flags used for Not Detected
5) J is a flag for a result between the MDL and the RL (or lower quantitation limit, LQL)

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified Full Scan GC/MS | **SDG:** 209277
Analytical Method: TO-15 | **Laboratory Number:** 04

File:	0927704A.D	**Date Sampled:**	06/19/09	**Time:**	13:22
Description:	44-004	**Date Received:**	06/23/09		
Can/Tube#:	696	**Date Extracted:**			
Sam_Type:	SA	**Date Analyzed:**	07/08/09	**Time:**	15:37
QC_Batch:	070809-MS1	**Can Dilution Factor:**	1.44		0
Air Volume:	2 ml	**Not Detected Flag:**	ND		

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
75-71-8	Dichlorodifluoromethane	76	378	ND	386	1,930	ND	ND
74-87-3	Chloromethane	73	367	ND	157	783	ND	ND
76-14-2	Freon 114	75	374	ND	540	2,702	ND	ND
75-01-4	Vinyl chloride	75	374	ND	198	988	ND	ND
74-83-9	Bromomethane	75	374	ND	300	1,500	ND	ND
75-00-3	Chloroethane	75	374	ND	204	1,020	ND	ND
75-69-4	Trichlorofluoromethane	75	374	ND	434	2,172	ND	ND
67-64-1	Acetone	65	324	ND	159	795	ND	ND
67-63-0	2-propanol	66	328	ND	166	831	ND	ND
75-35-4	1,1-Dichloroethene	73	364	ND	298	1,488	ND	ND
76-13-1	Freon 113	73	367	ND	581	2,904	ND	ND
75-09-2	Dichloromethane	75	374	ND	268	1,342	ND	ND
75-15-0	Carbon disulfide	64	320	ND	206	1,030	ND	ND
156-60-5	trans-1,2-Dichloroethene	63	313	834	256	1,282	3,413	
1634-04-4	Methyl tert butyl ether	56	281	ND	209	1,045	ND	ND
75-34-3	1,1-Dichloroethane	73	364	388	304	1,520	1,623	
108-05-4	Vinyl acetate	62	310	ND	225	1,126	ND	ND
78-93-3	2-Butanone	62	310	ND	189	943	ND	ND
156-59-2	cis-1,2-Dichloroethene	74	371	7,924	303	1,517	32,426	
67-66-3	Chloroform	73	367	ND	370	1,852	ND	ND
71-55-6	1,1,1-Trichloroethane	73	367	ND	414	2,069	ND	ND
107-06-2	1,2-Dichloroethane	74	371	ND	310	1,550	ND	ND
71-43-2	Benzene	74	371	108	245	1,223	357	J
56-23-5	Carbon tetrachloride	73	367	ND	477	2,385	ND	ND
78-87-5	1,2-Dichloropropane	74	371	ND	354	1,769	ND	ND
123-91-1	1,4 Dioxane	63	317	ND	236	1,179	ND	ND
75-27-4	Bromodichloromethane	58	288	ND	398	1,992	ND	ND
108-10-1	Methyl Isobutyl Ketone	66	331	ND	280	1,401	ND	ND
10061-01-5	cis-1,3-Dichloropropene	76	382	ND	358	1,789	ND	ND
108-88-3	Toluene	74	371	172	288	1,442	671	J
10061-02-6	trans-1,3-Dichloropropene	75	374	ND	351	1,755	ND	ND
79-00-5	1,1,2-Trichloroethane	73	367	ND	414	2,069	ND	ND
591-78-6	2-Hexanone	63	317	ND	268	1,341	ND	ND
124-48-1	Dibromochloromethane	64	320	ND	564	2,818	ND	ND
106-93-4	1,2-Dibromoethane	75	374	ND	594	2,971	ND	ND
127-18-4	Tetrachloroethene	73	367	ND	514	2,571	ND	ND
108-90-7	Chlorobenzene	73	367	ND	349	1,746	ND	ND
100-41-4	Ethylbenzene	75	374	ND	336	1,679	ND	ND
108-38-3	m & p-Xylene	148	742	ND	665	3,326	ND	ND
100-42-5	Styrene	74	371	ND	326	1,632	ND	ND

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
75-25-2	Bromoform	67	335	ND	715	3,573	ND	ND
95-47-6	o-Xylene	73	367	ND	329	1,647	ND	ND
79-34-5	1,1,2,2-Tetrachloroethane	73	367	ND	520	2,602	ND	ND
622-96-8	4-Ethyltoluene	66	328	ND	333	1,663	ND	ND
108-67-8	1,3,5-Trimethylbenzene	76	382	ND	387	1,937	ND	ND
95-63-6	1,2,4-Trimethylbenzene	73	367	ND	373	1,864	ND	ND
541-73-1	1,3-Dichlorobenzene	73	367	ND	456	2,279	ND	ND
100-44-7	Benzyl chloride	65	324	ND	346	1,732	ND	ND
106-46-7	1,4-Dichlorobenzene	73	367	111	456	2,279	689	J
95-50-1	1,2-Dichlorobenzene	72	360	88	447	2,235	547	J
120-82-1	1,2,4-Trichlorobenzene	74	371	ND	568	2,841	ND	ND
91-20-3	Naphthalene	172	860	ND	932	4,658	ND	ND
87-68-3	Hexachlorobutadiene	74	371	ND	817	4,084	ND	ND

	Surrogate Recovery	Spike Amt. ppbV	Amount ppbV	% Rec.	QC Limits	Flag * = Out
2037-26-5	Toluene-d8	10.000	10.177	102	70-130	

Notes: 1) Reported results are to be interpreted to two significant figures.
2) ug/m3 = ppbV*FW/23.68 calculated assuming conditions at 60 F and 1 atm.
3) MDL and RL are adjusted for sample volume and can dilution.
4) U and ND are Flags used for Not Detected
5) J is a flag for a result between the MDL and the RL (or lower quantitation limit, LQL)

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified Full Scan GC/MS | **SDG:** 209277
Analytical Method: TO-15 | **Laboratory Number:** 05

File:	0927705A.D	**Date Sampled:**	06/19/09	**Time:**	12:00
Description:	44-005	**Date Received:**	06/23/09		
Can/Tube#:	312	**Date Extracted:**			
Sam_Type:	SA	**Date Analyzed:**	07/06/09	**Time:**	14:15
QC_Batch:	070609-MS1	**Can Dilution Factor:**	1.00		2
Air Volume:	200 ml	**Not Detected Flag:**	ND		

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
75-71-8	Dichlorodifluoromethane	0.53	2.63	ND	2.68	13.40	ND	ND
74-87-3	Chloromethane	0.51	2.55	ND	1.09	5.44	ND	ND
76-14-2	Freon 114	0.52	2.60	ND	3.75	18.76	ND	ND
75-01-4	Vinyl chloride	0.52	2.60	ND	1.37	6.86	ND	ND
74-83-9	Bromomethane	0.52	2.60	ND	2.08	10.42	ND	ND
75-00-3	Chloroethane	0.52	2.60	ND	1.42	7.08	ND	ND
75-69-4	Trichlorofluoromethane	0.52	2.60	ND	3.02	15.09	ND	ND
67-64-1	Acetone	0.45	2.25	2.76	1.10	5.52	6.76	
67-63-0	2-propanol	0.46	2.28	ND	1.15	5.77	ND	ND
75-35-4	1,1-Dichloroethene	0.51	2.53	ND	2.07	10.33	ND	ND
76-13-1	Freon 113	0.51	2.55	ND	4.03	20.17	ND	ND
75-09-2	Dichloromethane	0.52	2.60	ND	1.86	9.32	ND	ND
75-15-0	Carbon disulfide	0.45	2.23	ND	1.43	7.15	ND	ND
156-60-5	trans-1,2-Dichloroethene	0.44	2.18	ND	1.78	8.90	ND	ND
1634-04-4	Methyl tert butyl ether	0.39	1.95	ND	1.45	7.25	ND	ND
75-34-3	1,1-Dichloroethane	0.51	2.53	ND	2.11	10.56	ND	ND
108-05-4	Vinyl acetate	0.43	2.15	ND	1.56	7.82	ND	ND
78-93-3	2-Butanone	0.43	2.15	0.63	1.31	6.55	1.91	J
156-59-2	cis-1,2-Dichloroethene	0.52	2.58	ND	2.11	10.54	ND	ND
67-66-3	Chloroform	0.51	2.55	ND	2.57	12.86	ND	ND
71-55-6	1,1,1-Trichloroethane	0.51	2.55	ND	2.87	14.37	ND	ND
107-06-2	1,2-Dichloroethane	0.52	2.58	ND	2.15	10.77	ND	ND
71-43-2	Benzene	0.52	2.58	ND	1.70	8.49	ND	ND
56-23-5	Carbon tetrachloride	0.51	2.55	ND	3.31	16.56	ND	ND
78-87-5	1,2-Dichloropropane	0.52	2.58	ND	2.46	12.29	ND	ND
123-91-1	1,4 Dioxane	0.44	2.20	ND	1.64	8.18	ND	ND
79-01-6	Trichloroethene	0.52	2.58	ND	2.86	14.29	ND	ND
75-27-4	Bromodichloromethane	0.40	2.00	ND	2.77	13.83	ND	ND
108-10-1	Methyl Isobutyl Ketone	0.46	2.30	ND	1.95	9.73	ND	ND
10061-01-5	cis-1,3-Dichloropropene	0.53	2.65	ND	2.48	12.42	ND	ND
108-88-3	Toluene	0.52	2.58	1.00	2.00	10.02	3.89	J
10061-02-6	trans-1,3-Dichloropropene	0.52	2.60	ND	2.44	12.19	ND	ND
79-00-5	1,1,2-Trichloroethane	0.51	2.55	ND	2.87	14.37	ND	ND
591-78-6	2-Hexanone	0.44	2.20	ND	1.86	9.31	ND	ND
124-48-1	Dibromochloromethane	0.45	2.23	ND	3.91	19.57	ND	ND
106-93-4	1,2-Dibromoethane	0.52	2.60	ND	4.13	20.63	ND	ND
127-18-4	Tetrachloroethene	0.51	2.55	ND	3.57	17.85	ND	ND
108-90-7	Chlorobenzene	0.51	2.55	ND	2.43	12.13	ND	ND
100-41-4	Ethylbenzene	0.52	2.60	ND	2.33	11.66	ND	ND
108-38-3	m & p-Xylene	1.03	5.15	ND	4.62	23.10	ND	ND

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
100-42-5	Styrene	0.52	2.58	ND	2.27	11.33	ND	ND
75-25-2	Bromoform	0.47	2.33	ND	4.96	24.81	ND	ND
95-47-6	o-Xylene	0.51	2.55	ND	2.29	11.44	ND	ND
79-34-5	1,1,2,2-Tetrachloroethane	0.51	2.55	ND	3.61	18.07	ND	ND
622-96-8	4-Ethyltoluene	0.46	2.28	ND	2.31	11.55	ND	ND
108-67-8	1,3,5-Trimethylbenzene	0.53	2.65	ND	2.69	13.45	ND	ND
95-63-6	1,2,4-Trimethylbenzene	0.51	2.55	ND	2.59	12.94	ND	ND
541-73-1	1,3-Dichlorobenzene	0.51	2.55	ND	3.17	15.83	ND	ND
100-44-7	Benzyl chloride	0.45	2.25	ND	2.41	12.03	ND	ND
106-46-7	1,4-Dichlorobenzene	0.51	2.55	ND	3.17	15.83	ND	ND
95-50-1	1,2-Dichlorobenzene	0.50	2.50	ND	3.10	15.52	ND	ND
120-82-1	1,2,4-Trichlorobenzene	0.52	2.58	ND	3.95	19.73	ND	ND
91-20-3	Naphthalene	1.20	5.98	ND	6.47	32.35	ND	ND
87-68-3	Hexachlorobutadiene	0.52	2.58	ND	5.67	28.36	ND	ND

	Surrogate Recovery	Spike Amt. ppbV	Amount ppbV	% Rec.	QC Limits	Flag * = Out
2037-26-5	Toluene-d8	10.000	10.379	104	70-130	

Notes: 1) Reported results are to be interpreted to two significant figures.
2) ug/m3 = ppbV*FW/23.68 calculated assuming conditions at 60 F and 1 atm.
3) MDL and RL are adjusted for sample volume and can dilution.
4) U and ND are Flags used for Not Detected
5) J is a flag for a result between the MDL and the RL (or lower quantitation limit, LQL)

SECTION 4
Analytical Data, Level C

This section contains the Daily Analytical Batch (DAB) data for each analytical test requested. There will be a separate DAB for each day samples were analyzed and for each analysis requested. The DAB's are organized first be analytical test then in order of date. To find a particular sample refer to the Analytical Batch Reference Table in Section 1.3, which gives the DAB number for each sample.

Each Batch contains the following:

1) Tune Data (GC/MS only)
2) Continuing Calibration Sample
3) Method Blank
4) QC Samples (LCS, LCD, MS, Sample Dup)
5) Samples

Each sample data package contains all of the information used to quantitate the results for that sample. The Initial Calibration data is included, along with the response factors, calculation sheet, sample calculation, analytical report. Note: The continuing calibration is considered a separate QC check sample, since the continuing calibration data is not used to calculate the analytical results (results are calculated from the initial calibration curve data).

This section contains information equivalent to that found in EPA FORM I – Volatile Organics Data sheet.

This section contains information equivalent to that found in EPA FORM II – Volatile Organics LCS Recovery and Precision.

This section contains information equivalent to that found in EPA FORM III – Volatile Organics Method Blank Summary.

This section contains information equivalent to that found in EPA FORM IV – Volatile Organics Instrument Performance Check Bromofluorobenzene (BFB).

This section contains information equivalent to that found in EPA FORM V – Volatile Organics Initial Calibration Data.

This section contains information equivalent to that found in EPA FORM VI – Volatile Organics Continuing Calibration Data.

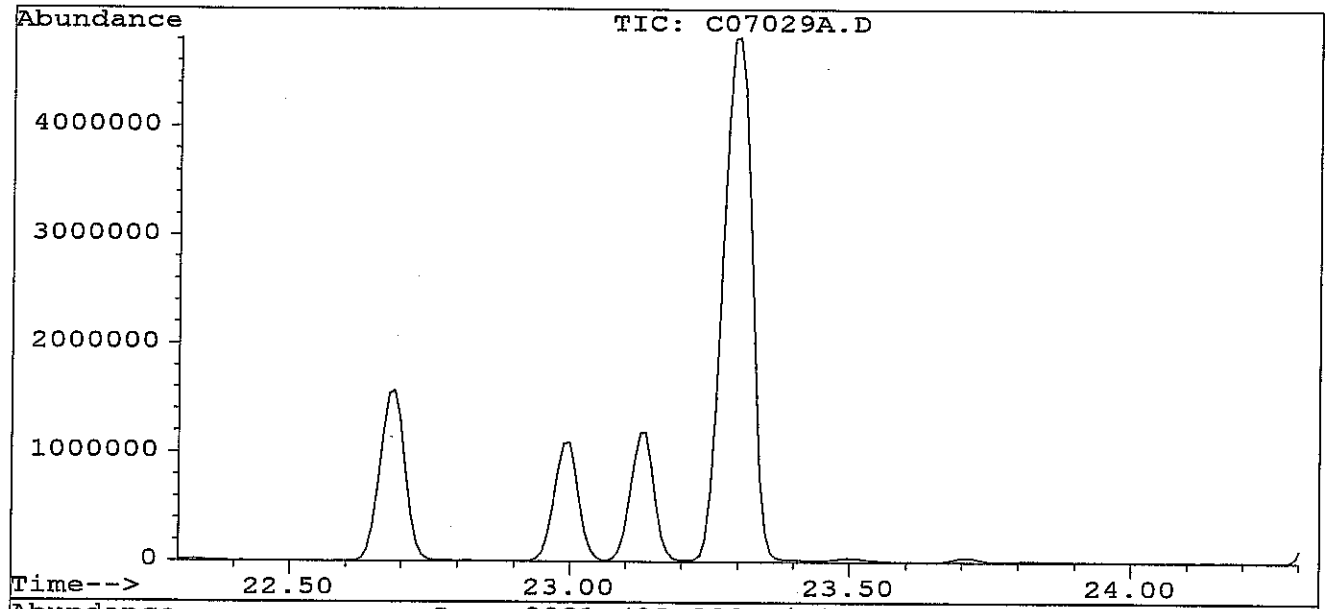
4.1 EPA TO-15M Volatile Organics
Daily Analytical Batch #: 070209-MS1

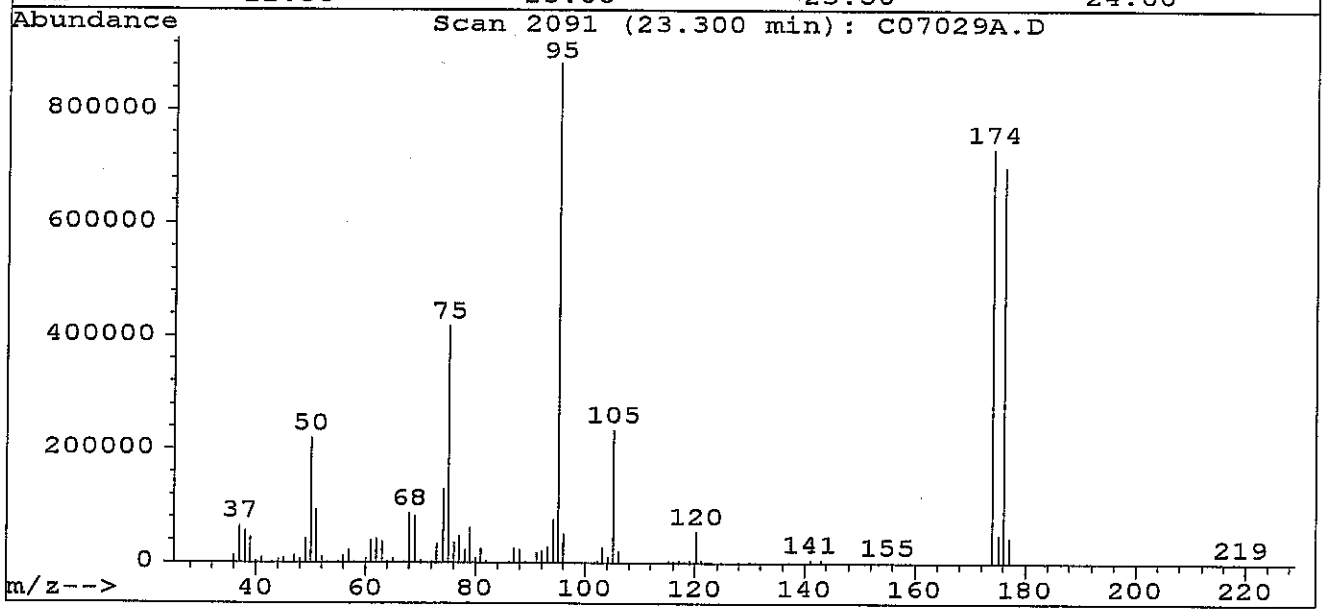
BFB

Data File : C:\MSCHEM\2\DATA\07029MS1\C07029A.D
Acq Time : 2 Jul 109 9:01 am
Sample : ST60022 + ST60350
Misc :

Operator: JF
Inst : 5970 - In
Multiplr: 1.00

Method : C:\MSCHEM\2\METHODS\1T15EXAY.M
Title : EPA TO-15





Peak Apex is scan: 2091

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	8	40	24.8	219392	PASS
75	95	30	66	47.3	418240	PASS
95	95	100	100	100.0	883392	PASS
96	95	5	9	5.9	52032	PASS
173	174	0	2	0.0	0	PASS
174	95	50	120	83.0	732800	PASS
175	174	4	9	6.7	49272	PASS
176	174	93	101	95.5	699840	PASS
177	176	5	9	6.4	44912	PASS

C07029A.D 1T15EXAY.M Tue Jul 07 15:45:42 2009

CONTINUING CALIBRATION REPORT

SDG:	**LABQC**	
QC_Batch:	**070209-MS1**	
Sample ID:	ST60022 + ST60350	
Sample Analysis Date:	2 Jul 109 9:01 am	
Run Method:	1T15EXAY.M	
Quant/Calibration Method:	1T15EXAY.M	
Cal Update:	Tue Mar 17 14:18:15 2009	
Template:	1TO15EXT.MS1	
Calibration Level	Level 4	5.0

Sample Calculation:

1) RFi = $\left| \frac{(Astdi)\ (Cistdi)}{(Cstdi)\ (Aistdi)} \right|_i$

Compound	Area Astdi	Cal Level Cstdi ppbv	CCRRF	AvgRFn	%Dev	%Dev Limit	%Dev Flag	
Dichlorodifluoromethane	592568	5.250	0.531	0.611	13.0	30	IN	
Chloromethane	310444	5.100	0.286	0.393	27.1	30	IN	
Freon 114	345143	5.200	0.312	0.650	51.9	30	OUT	CAF
Vinyl chloride	220268	5.200	0.199	0.213	6.6	30	IN	
Bromomethane	193412	5.200	0.175	0.212	17.2	30	IN	
Chloroethane	105472	5.200	0.095	0.112	14.4	30	IN	
Trichlorofluoromethane	592459	5.200	0.536	0.584	8.1	30	IN	
Acetone	635306	4.500	0.664	0.878	24.4	40	IN	
2-propanol	446860	4.550	0.462	0.668	30.8	40	IN	
1,1-Dichloroethene	484394	5.050	0.451	0.471	4.3	30	IN	
Freon 113	484007	5.100	0.447	0.370	-20.8	30	IN	
Dichloromethane	230157	5.200	0.208	0.209	0.2	30	IN	
Carbon disulfide	240900	4.450	0.255	0.261	2.5	40	IN	
trans-1,2-Dichloroethene	160495	4.350	0.174	0.192	9.7	40	IN	
Methyl tert butyl ether	593363	3.900	0.716	0.910	21.4	40	IN	
1,1-Dichloroethane	484896	5.050	0.452	0.606	25.5	30	IN	
Vinyl acetate	886299	4.300	0.970	1.295	25.1	40	IN	
2-Butanone	126026	4.300	0.138	0.170	19.0	40	IN	
cis-1,2-Dichloroethene	311725	5.150	0.285	0.313	9.0	30	IN	
Chloroform	669013	5.100	0.617	0.729	15.3	30	IN	
1,1,1-Trichloroethane	651245	5.100	0.685	0.726	5.6	30	IN	
1,2-Dichloroethane	682336	5.150	0.711	0.681	-4.4	30	IN	
Benzene	992979	5.150	1.035	1.183	12.6	30	IN	
Carbon tetrachloride	679418	5.100	0.715	0.737	3.0	30	IN	
1,2-Dichloropropane	430121	5.150	0.448	0.457	2.0	30	IN	
1,4 Dioxane	218703	4.400	0.267	0.350	23.9	40	IN	
Trichloroethene	591364	5.150	0.616	0.573	-7.5	30	IN	
Bromodichloromethane	582741	4.000	0.782	0.902	13.4	40	IN	
Methyl Isobutyl Ketone	1458963	4.600	1.702	2.014	15.5	40	IN	
cis-1,3-Dichloropropene	681354	5.300	0.690	0.713	3.3	30	IN	
Toluene	1450175	5.150	1.511	1.546	2.3	30	IN	
trans-1,3-Dichloropropene	758857	5.200	0.783	0.847	7.5	30	IN	
1,1,2-Trichloroethane	437650	5.100	0.460	0.455	-1.1	30	IN	
2-Hexanone	1586439	4.400	1.935	2.559	24.4	40	IN	
Dibromochloromethane	866025	4.450	1.044	1.207	13.5	40	IN	
1,2-Dibromoethane	1150342	5.200	1.187	1.119	-6.1	30	IN	
Tetrachloroethene	1074107	5.100	1.130	0.985	-14.7	30	IN	

Chlorobenzene	1442199	5.100	1.517	1.446	-4.9	30	IN	
Ethylbenzene	2356740	5.200	2.432	2.468	1.5	30	IN	
m & p-Xylene	3705302	10.300	1.930	2.080	7.2	30	IN	
Styrene	1290405	5.150	1.344	1.484	9.4	30	IN	
Bromoform	1385720	4.650	1.599	2.047	21.9	40	IN	
o-Xylene	2098683	5.100	2.208	2.300	4.0	30	IN	
1,1,2,2-Tetrachloroethane	1396250	5.100	1.469	2.109	30.4	30	OUT	1A
4-Ethyltoluene	1892680	4.550	2.232	3.651	38.9	40	IN	
1,3,5-Trimethylbenzene	2593737	5.300	2.626	3.337	21.3	30	IN	
1,2,4-Trimethylbenzene	2432898	5.100	2.560	3.082	16.9	30	IN	
1,3-Dichlorobenzene	1850430	5.100	1.947	2.476	21.4	30	IN	
Benzyl chloride	1535946	4.500	1.831	3.379	45.8	40	OUT	1B
1,4-Dichlorobenzene	1935727	5.100	2.036	2.556	20.3	30	IN	
1,2-Dichlorobenzene	1788484	5.000	1.919	2.845	32.5	30	OUT	2A
1,2,4-Trichlorobenzene	833212	5.150	0.868	5.265	83.5	80	OUT	CAF
Naphthalene	2592293	11.950	1.164	8.792	86.8	80	OUT	CAF
Hexachlorobutadiene	1685386	5.150	1.756	4.062	56.8	80	IN	
Pentafluorobenzene	4249888	20.000	1.000	1.000	0.0	30	IN	
1,4-Difluorobenzene	3727533	20.000	1.000	1.000	0.0	30	IN	
Toluene-d8	2113601	10.000	1.134	1.124	-0.9	30	IN	

QUANTITATION REPORT

EPA Method TO-15 Modified Full Scan GC/MS

			Review	EAS Sample ID: C07029A	
File Name:	C07029A.D				1 KB
Sample ID:	ST60022 + ST60350				2 AT
Date:	2 Jul 109 9:01 am			Cal Amounts	3 BB
Run Method:	1T15EXAY.M			IS Areas	4 SH
Quant Method:	1T15EXAY.M			Carryover	
Cal Update:	Tue Mar 17 14:18:15 2009				
Template:	1TO15EXT.MS1				
Can Factor:	1.00				
Volume:	20	ml		Analyst: KB 1	

CAS#	Compound	n	Raw Amount	RT	Target RT	Ion	Sample Area	Qualifier	Lower Qual	Upper Qual	Qual Flag	Cal Flag	Int Flag
75-71-8	Dichlorodifluoromethane	2	4.566	3.81	3.83	85.00	592568	32	25	37			
74-87-3	Chloromethane	3	3.720	4.06	4.09	50.00	310444	29	22	32			
76-14-2	Freon 114	4	2.500	4.08	4.11	85.00	345143	54	44	65			
75-01-4	Vinyl chloride	5	4.859	4.30	4.33	62.00	220268	32	24	36			
74-83-9	Bromomethane	6	4.303	4.89	4.92	94.00	193412	92	73	109			
75-00-3	Chloroethane	7	4.451	5.09	5.12	64.00	105472	40	26	40	Q		
75-69-4	Trichlorofluoromethane	10	4.778	5.91	5.94	101.00	592459	67	48	73			
67-64-1	Acetone	12	3.404	5.99	6.04	43.00	635306	22	16	24			
67-63-0	2-propanol	13	3.149	6.07	6.14	45.00	446860	38	18	27	Q		
75-35-4	1,1-Dichloroethene	15	4.835	6.84	6.89	61.00	484394	46	34	51			
76-13-1	Freon 113	17	6.159	7.12	7.16	151.00	484007	111	101	152			
75-09-2	Dichloromethane	19	5.190	7.27	7.31	84.00	230157	60	51	77			
75-15-0	Carbon disulfide	20	4.340	7.50	7.54	76.00	240900	19	16	24			
156-60-5	trans-1,2-Dichloroethene	21	3.927	8.33	8.38	96.00	160495	188	172	258			
1634-04-4	Methyl tert butyl ether	22	3.067	8.49	8.54	73.00	593363	21	18	27			
75-34-3	1,1-Dichloroethane	24	3.763	8.84	8.90	63.00	484896	32	24	36			
108-05-4	Vinyl acetate	25	3.221	10.23	10.32	43.00	886299	0	0	0			
78-93-3	2-Butanone	26	3.482	9.46	9.54	72.00	126026	35	30	45			
156-59-2	cis-1,2-Dichloroethene	32	4.684	10.05	10.11	96.00	311725	178	139	209			
67-66-3	Chloroform	34	4.318	10.46	10.53	83.00	669013	64	51	77			
71-55-6	1,1,1-Trichloroethane	36	4.812	11.73	11.80	97.00	651245	63	51	76			
107-06-2	1,2-Dichloroethane	37	5.376	11.80	11.87	61.95	682336	30	25	37			
71-43-2	Benzene	40	4.502	12.45	12.51	78.00	992979	22	19	29			
56-23-5	Carbon tetrachloride	41	4.945	12.51	12.56	116.90	679418	96	79	119			
78-87-5	1,2-Dichloropropane	43	5.045	13.98	14.07	63.00	430121	70	58	88			
123-91-1	1,4 Dioxane	44	3.349	14.30	14.40	88.00	218703	92	76	114			
79-01-6	Trichloroethene	46	5.538	14.06	14.13	130.00	591364	97	79	119			
75-27-4	Bromodichloromethane	47	3.465	14.32	14.40	83.00	582741	59	49	74			
108-10-1	Methyl Isobutyl Ketone	49	3.887	15.66	15.70	43.00	1458963	27	21	35			
10061-01-5	cis-1,3-Dichloropropene	50	5.125	15.74	15.82	75.00	681354	21	15	23			
108-88-3	Toluene	51	5.031	17.04	17.11	91.00	1450175	55	44	66			
10061-02-6	trans-1,3-Dichloropropene	52	4.808	16.77	16.85	75.00	758857	21	16	23			
79-00-5	1,1,2-Trichloroethane	53	5.158	17.08	17.16	61.00	437650	111	91	136			
591-78-6	2-Hexanone	54	3.327	17.69	17.80	43.00	1586439	39	28	47			
124-48-1	Dibromochloromethane	57	3.849	18.22	18.30	129.00	866025	75	60	91			
106-93-4	1,2-Dibromoethane	58	5.515	18.71	18.80	107.00	1150342	93	75	113			

CAS#	Compound	n	Raw Amount	RT	Target RT	Ion	Sample Area	Qualifier	Lower Qual	Upper Qual	Qual Flag	Cal Flag	Int Flag
127-18-4	Tetrachloroethene	59	5.850	18.90	18.97	166.00	1074107	60	52	78			
108-90-7	Chlorobenzene	60	5.351	20.37	20.45	112.00	1442199	31	25	38			
100-41-4	Ethylbenzene	62	5.123	20.91	17.80	91.00	2356740	28	21	32			
108-38-3	m & p-Xylene	63	9.557	21.20	21.28	91.00	3705302	38	32	48			
100-42-5	Styrene	64	4.664	22.03	22.14	104.00	1290405	61	53	79			
75-25-2	Bromoform	65	3.632	21.94	22.00	173.00	1385720	47	39	59			
95-47-6	o-Xylene	66	4.896	22.16	22.25	91.00	2098683	39	30	45			
79-34-5	1,1,2,2-Tetrachloroethane	67	3.552	22.69	22.75	83.00	1396250	11	8	13			
622-96-8	4-Ethyltoluene	72	2.782	24.66	24.74	105.00	1892680	26	20	31			
108-67-8	1,3,5-Trimethylbenzene	73	4.171	24.82	24.92	105.00	2593737	43	33	49			
95-63-6	1,2,4-Trimethylbenzene	76	4.236	25.77	25.89	105.00	2432898	40	32	48			
541-73-1	1,3-Dichlorobenzene	78	4.010	26.34	26.41	146.00	1850430	40	34	51			
100-44-7	Benzyl chloride	80	2.439	26.49	26.61	91.00	1535946	22	15	23			
106-46-7	1,4-Dichlorobenzene	81	4.064	26.53	26.68	146.00	1935727	37	34	51			
95-50-1	1,2-Dichlorobenzene	83	3.373	27.39	27.47	146.00	1788484	39	34	51			
120-82-1	1,2,4-Trichlorobenzene	86	0.849	31.94	32.18	180.00	833212	99	78	117			
91-20-3	Naphthalene	87	1.582	32.30	32.41	128.00	2592293	13	10	16			
87-68-3	Hexachlorobutadiene	88	2.226	32.98	33.08	225.00	1685386	29	22	33			
363-72-4	Pentafluorobenzene	1	20.000	11.31	11.38	168.00	**4249888**						
540-36-3	1,4-Difluorobenzene	35	20.000	13.11	13.17	114.00	**3727533**						
2037-26-5	Toluene-d8	94	**10.086**	16.87	16.94	98.00	2113601	60	51	77			

Integration Flags:

If no flag the Integration was done by the instrument computer

M1 Manual Integration because the computer did not integrated the peak or integrated the wrong peak

M2 Manual Integration because computer integration of baseline was different then Inital Calibration

INITIAL CALIBRATION REPORT

EPA Method TO-15 Modified Full Scan GC/MS

		SDG:	LABQC
		QC_Batch:	070209-MS1
File Name:	C07029A.D	Instrument Name:	5970 - In
Sample ID:	ST60022 + ST60350		
Sample Analysis Date:	2 Jul 109 9:01 am	Number Compounds:	96
Run Method:	1T15EXAY.M	IS1: ST60403	20
Quant and Calibration Method:	1T15EXAY.M	IS2: ST60403	20
Cal Update:	Tue Mar 17 14:18:15 2009	IS3:	
Template:	1TO15EXT.MS1	IS4:	

Calibration Title: EPA T0-15

		Calibration Amount CA, ppmv						Calibration Response, Area					
		Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
		Amt	Amt	Amt	Amt	Amt	Amt	C03179C.D	C03179E.D	C03179B.D	C03179A.D	C03169H.D	C03179D.D
n	Compound	0.25	4.0	1.0	5.0	10.0	2.0	0.25	4.0	1.0	5.0	10.0	2.0
2	Dichlorodifluoromethane	0.263	4.200	1.050	5.250	10.500	2.100	22559	398558	88898	436110	840988	185058
3	Chloromethane	0.255	4.080	1.020	5.100	10.200	2.040	15230	241294	55434	272653	505057	113562
4	Freon 114	0.260	4.160	1.040	5.200	10.400	2.080	25317	399238	94441	464176	861160	193013
5	Vinyl chloride	0.260	4.160	1.040	5.200	10.400	2.080	7909	132864	32643	150492	285530	62953
6	Bromomethane	0.260	4.160	1.040	5.200	10.400	2.080	8153	136639	28890	149016	274473	66325
7	Chloroethane	0.260	4.160	1.040	5.200	10.400	2.080	4307	71497	16630	78611	141439	32925
10	Trichlorofluoromethane	0.260	4.160	1.040	5.200	10.400	2.080	22371	364524	85037	431144	716396	179451
12	Acetone	0.225	3.600	0.900	4.500	9.000	1.800	42851	442389	113697	494726	770083	184591
13	2-propanol	0.228	3.640	0.910	4.550	9.100	1.820	19578	321532	75563	289890	1427833	154437
15	1,1-Dichloroethene	0.253	4.040	1.010	5.050	10.100	2.020	16793	248606	63935	305424	730028	150732
17	Freon 113	0.255	4.080	1.020	5.100	10.200	2.040	13083	220191	45725	205080	591375	132996
19	Dichloromethane	0.260	4.160	1.040	5.200	10.400	2.080	8354	124766	26131	120655	330491	71297
20	Carbon disulfide	0.223	3.560	0.890	4.450	8.900	1.780	8703	137347	33136	122015	313353	78232
21	trans-1,2-Dichloroethene	0.218	3.480	0.870	4.350	8.700	1.740	5940	117954	23397	80889	230621	52404
22	Methyl tert butyl ether	0.195	3.120	0.780	3.900	7.800	1.560	24271	482973	97431	369980	967308	233954
24	1,1-Dichloroethane	0.253	4.040	1.010	5.050	10.100	2.020	22823	387657	85531	331041	871129	183187
25	Vinyl acetate	0.215	3.440	0.860	4.300	8.600	1.720	40148	687529	149287	676740	1560060	338492
26	2-Butanone	0.215	3.440	0.860	4.300	8.600	1.720	5400	92652	22013	71425	205517	45058
32	cis-1,2-Dichloroethene	0.258	4.120	1.030	5.150	10.300	2.060	11695	190337	43510	224404	421914	95703
34	Chloroform	0.255	4.080	1.020	5.100	10.200	2.040	27147	449509	101707	516969	959204	213353
36	1,1,1-Trichloroethane	0.255	4.080	1.020	5.100	10.200	2.040	26931	432442	100881	509527	970639	210683
37	1,2-Dichloroethane	0.258	4.120	1.030	5.150	10.300	2.060	26512	398927	96975	495766	920839	187037

(36)

n	Compound	Amt 0.25	Amt 4.0	Amt 1.0	Amt 5.0	Amt 10.0	Amt 2.0	C03179C.D 0.25	C03179E.D 4.0	C03179B.D 1.0	C03179A.D 5.0	C03169H.D 10.0	C03179D.D 2.0
40	Benzene	-1.000	4.120	1.030	5.150	10.300	2.060	-1	712515	206967	782160	1387400	364766
41	Carbon tetrachloride	0.255	4.080	1.020	5.100	10.200	2.040	26276	451629	105798	518753	931992	220983
43	1,2-Dichloropropane	0.258	4.120	1.030	5.150	10.300	2.060	18588	266688	66789	305497	598806	132416
44	1,4 Dioxane	0.220	3.520	0.880	4.400	8.800	1.760	11252	171544	43700	161310	540834	80192
46	Trichloroethene	0.258	4.120	1.030	5.150	10.300	2.060	27013	323273	83100	364698	666308	165489
47	Bromodichloromethane	0.200	3.200	0.800	4.000	8.000	1.600	27507	476051	96325	417248	885573	218119
49	Methyl Isobutyl Ketone	0.230	3.680	0.920	4.600	9.200	1.840	67434	1179200	250239	1039898	2505790	566705
50	cis-1,3-Dichloropropene	0.265	4.240	1.060	5.300	10.600	2.120	28339	441906	107039	492454	1010236	206495
51	Toluene	-1.000	4.120	1.030	5.150	10.300	2.060	-1	944443	257501	1033029	1877014	478350
52	trans-1,3-Dichloropropene	0.260	4.160	1.040	5.200	10.400	2.080	33546	509168	127376	538174	1205186	242137
53	1,1,2-Trichloroethane	0.255	4.080	1.020	5.100	10.200	2.040	18573	263308	68163	281046	608914	127239
54	2-Hexanone	0.220	3.520	0.880	4.400	8.800	1.760	84018	1413472	311524	1112452	3278869	678898
57	Dibromochloromethane	0.223	3.560	0.890	4.450	8.900	1.780	43801	688881	150691	558917	1316838	322250
58	1,2-Dibromoethane	0.260	4.160	1.040	5.200	10.400	2.080	46912	660815	169213	701472	1505940	324567
59	Tetrachloroethene	0.255	4.080	1.020	5.100	10.200	2.040	40710	589393	145069	627137	1126037	300057
60	Chlorobenzene	0.255	4.080	1.020	5.100	10.200	2.040	64660	836027	208106	862738	1818049	410336
62	Ethylbenzene	0.260	4.160	1.040	5.200	10.400	2.080	107037	1527752	359496	1548148	3108186	722767
63	m & p-Xylene	0.515	8.240	2.060	10.300	20.600	4.120	192864	2440351	617919	2542524	4725274	1220126
64	Styrene	0.258	4.120	1.030	5.150	10.300	2.060	70964	837020	224026	840176	1812012	428714
65	Bromoform	0.233	3.720	0.930	4.650	9.300	1.860	90991	1151698	243927	958925	2416870	530300
66	o-Xylene	0.255	4.080	1.020	5.100	10.200	2.040	105567	1325719	329821	1384162	2817484	643280
67	1,1,2,2-Tetrachloroethane	0.255	4.080	1.020	5.100	10.200	2.040	102201	1142635	274703	1042229	3385910	560899
72	4-Ethyltoluene	0.228	3.640	0.910	4.550	9.100	1.820	177076	1912961	437379	1573293	3712735	943267
73	1,3,5-Trimethylbenzene	0.265	4.240	1.060	5.300	10.600	2.120	184274	1936506	488965	1778188	3957960	994445
76	1,2,4-Trimethylbenzene	-1.000	4.080	1.020	5.100	10.200	2.040	-1	1979227	501359	1766777	3635276	1033463
78	1,3-Dichlorobenzene	-1.000	4.080	1.020	5.100	10.200	2.040	-1	1499786	411700	1325016	3205866	837609
80	Benzyl chloride	-1.000	3.600	0.900	4.500	9.000	1.800	-1	1944712	459781	1580130	4463720	884546
81	1,4-Dichlorobenzene	-1.000	4.080	1.020	5.100	10.200	2.040	-1	1616283	417021	1362139	3091714	896732
83	1,2-Dichlorobenzene	-1.000	4.000	1.000	5.000	10.000	2.000	-1	1708595	429307	1374687	4272294	912351
86	1,2,4-Trichlorobenzene	-1.000	4.120	1.030	5.150	10.300	2.060	-1	3172331	905400	2236815	7156710	1987175
87	Naphthalene	-1.000	9.560	2.390	11.950	23.900	4.780	-1	11453402	4198495	10074168	24925580	6661715
88	Hexachlorobutadiene	-1.000	4.120	1.030	5.150	10.300	2.060	-1	2443776	758051	1914490	4177636	1622637
1	Pentafluorobenzene	20.000	20.000	20.000	20.000	20.000	20.000	2643183	2935915	2871816	2719013	2737194	3022845
35	1,4-Difluorobenzene	20.000	20.000	20.000	20.000	20.000	20.000	2659938	2870629	2814997	2720455	2706138	3020264
94	Toluene-d8	10.000	10.000	10.000	10.000	10.000	10.000	1479389	1629143	1590486	1469067	1546296	1730275

(37)

INITIAL CALIBRATION REPORT: Response Factors

SDG:	**LABQC**
QC_Batch:	**070209-MS1**
Sample ID:	ST60022 + ST60350
Sample Analysis Date:	2 Jul 109 9:01 am
Run Method:	1T15EXAY.M
Quant Method:	1T15EXAY.M
Cal Update:	Tue Mar 17 14:18:15 2009
Template:	1TO15EXT.MS1

Sample Calculation:

1) Avg RFn = Sum $\left| \frac{(Astdni)}{(Cstdni)} \frac{(Cistdi)}{(Aistdi)} \right|_i$

Response Factors

Compound		RF1	RF2	RF3	RF4	RF5	RF6	AvgRFn	%RSD
Dichlorodifluoromethane		0.649	0.646	0.590	0.611	0.585	0.583	0.611	4.97
Chloromethane		0.452	0.403	0.378	0.393	0.362	0.368	0.393	8.34
Freon 114		0.737	0.654	0.632	0.657	0.605	0.614	0.650	7.29
Vinyl chloride		0.230	0.218	0.219	0.213	0.201	0.200	0.213	5.40
Bromomethane		0.237	0.224	0.193	0.211	0.193	0.211	0.212	8.16
Chloroethane		0.125	0.117	0.111	0.111	0.099	0.105	0.112	8.18
Trichlorofluoromethane		0.651	0.597	0.569	0.610	0.503	0.571	0.584	8.47
Acetone		1.441	0.837	0.880	0.809	0.625	0.679	0.878	33.28
2-propanol		0.650	0.602	0.578	0.469	1.146	0.561	0.668	36.24
1,1-Dichloroethene		0.502	0.419	0.441	0.445	0.528	0.494	0.471	9.01
Freon 113		0.388	0.368	0.312	0.296	0.424	0.431	0.370	15.21
Dichloromethane		0.243	0.204	0.175	0.171	0.232	0.227	0.209	14.64
Carbon disulfide		0.295	0.263	0.259	0.202	0.257	0.291	0.261	12.82
trans-1,2-Dichloroethene		0.206	0.231	0.187	0.137	0.194	0.199	0.192	16.18
Methyl tert butyl ether		0.942	1.055	0.870	0.698	0.906	0.992	0.910	13.48
1,1-Dichloroethane		0.683	0.654	0.590	0.482	0.630	0.600	0.606	11.51
Vinyl acetate		1.413	1.362	1.209	1.158	1.325	1.302	1.295	7.38
2-Butanone		0.190	0.183	0.178	0.122	0.175	0.173	0.170	14.31
cis-1,2-Dichloroethene		0.343	0.315	0.294	0.321	0.299	0.307	0.313	5.59
Chloroform		0.806	0.751	0.694	0.746	0.687	0.692	0.729	6.41
1,1,1-Trichloroethane		0.794	0.738	0.703	0.734	0.703	0.684	0.726	5.40
1,2-Dichloroethane		0.773	0.675	0.669	0.708	0.661	0.601	0.681	8.33
Benzene	NA		1.205	1.428	1.117	0.996	1.173	1.183	13.36
Carbon tetrachloride		0.775	0.771	0.737	0.748	0.675	0.717	0.737	5.04
1,2-Dichloropropane		0.542	0.451	0.461	0.436	0.430	0.426	0.457	9.47
1,4 Dioxane		0.385	0.340	0.353	0.270	0.454	0.302	0.350	18.49
Trichloroethene		0.787	0.547	0.573	0.521	0.478	0.532	0.573	19.12
Bromodichloromethane		1.034	1.036	0.855	0.767	0.818	0.903	0.902	12.44
Methyl Isobutyl Ketone		2.204	2.233	1.932	1.662	2.013	2.040	2.014	10.30
cis-1,3-Dichloropropene		0.804	0.726	0.717	0.683	0.704	0.645	0.713	7.44
Toluene	NA		1.597	1.776	1.475	1.347	1.538	1.546	10.25
trans-1,3-Dichloropropene		0.970	0.853	0.870	0.761	0.856	0.771	0.847	9.00
1,1,2-Trichloroethane		0.548	0.450	0.475	0.405	0.441	0.413	0.455	11.39
2-Hexanone		2.871	2.798	2.515	1.859	2.754	2.554	2.559	14.47
Dibromochloromethane		1.477	1.348	1.203	0.923	1.094	1.199	1.207	15.98
1,2-Dibromoethane		1.357	1.107	1.156	0.992	1.070	1.033	1.119	11.58
Tetrachloroethene		1.200	1.006	1.010	0.904	0.816	0.974	0.985	13.06

Chlorobenzene		1.907	1.428	1.450	1.244	1.317	1.332	1.446	16.45
Ethylbenzene		3.095	2.559	2.456	2.189	2.209	2.301	2.468	13.74
m & p-Xylene		2.816	2.063	2.131	1.815	1.695	1.961	2.080	18.95
Styrene		2.068	1.415	1.545	1.199	1.300	1.378	1.484	20.78
Bromoform		2.936	2.157	1.863	1.516	1.921	1.888	2.047	23.53
o-Xylene		3.113	2.264	2.297	1.995	2.041	2.088	2.300	18.10
1,1,2,2-Tetrachloroethane		3.014	1.951	1.913	1.502	2.453	1.821	2.109	25.54
4-Ethyltoluene		5.840	3.661	3.415	2.542	3.015	3.432	3.651	31.30
1,3,5-Trimethylbenzene		5.228	3.182	3.277	2.467	2.760	3.106	3.337	29.21
1,2,4-Trimethylbenzene	NA		3.380	3.492	2.547	2.634	3.355	3.082	14.68
1,3-Dichlorobenzene	NA		2.561	2.868	1.910	2.323	2.719	2.476	15.16
Benzyl chloride	NA		3.764	3.630	2.581	3.666	3.254	3.379	14.38
1,4-Dichlorobenzene	NA		2.760	2.905	1.964	2.240	2.911	2.556	16.83
1,2-Dichlorobenzene	NA		2.976	3.050	2.021	3.157	3.021	2.845	16.36
1,2,4-Trichlorobenzene	NA		5.365	6.245	3.193	5.135	6.388	5.265	24.29
Naphthalene	NA		8.347	12.481	6.198	7.708	9.229	8.792	26.61
Hexachlorobutadiene	NA		4.133	5.229	2.733	2.998	5.216	4.062	29.13
Pentafluorobenzene		1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.00
1,4-Difluorobenzene		1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.00
Toluene-d8		1.112	1.135	1.130	1.080	1.143	1.146	1.124	2.20

CALCULATIONS

EPA Method TO-15 Modified Full Scan GC/MS

SDG: LABQC
Laboratory Number: B07029

Run Method: 1T15EXAY.M
Quant Method: 1T15EXAY.M
Can Dilution Factor: 1.00
Air Volume: 20 ml
MDL Factor 1
Gas Constant: 23.68
Decimal Places: 0

Compound	M.W.	Raw Amount	Result ppbv	Result ug/m3	(1) MDL ppbv	(2) RL ppbv	Calc MDL ppbv	Calc MDL ug/m3	Calc RL ppbv	Calc RL ug/m3	Flag	S062602-1 Spike ppmv
Dichlorodifluoromethane	120.9	4.566	228.302	1,166	0.105	0.525	5.25	27	26.25	134		0.103
Chloromethane	50.5	3.720	185.979	397	0.102	0.510	5.10	11	25.50	54		0.103
Freon 114	170.9	2.500	124.988	902	0.104	0.520	5.20	38	26.00	188		0.103
Vinyl chloride	62.5	4.859	242.937	641	0.104	0.520	5.20	14	26.00	69		0.103
Bromomethane	94.9	4.303	215.163	862	0.104	0.520	5.20	21	26.00	104		0.103
Chloroethane	64.5	4.451	222.551	606	0.104	0.520	5.20	14	26.00	71		0.103
Trichlorofluoromethane	137.4	4.778	238.884	1,386	0.104	0.520	5.20	30	26.00	151		0.103
Acetone	58.1	3.404	170.184	418	0.090	0.450	4.50	11	22.50	55		0.103
2-propanol	60.1	3.149	157.472	400	0.091	0.455	4.55	12	22.75	58		0.103
1,1-Dichloroethene	96.9	4.835	241.736	989	0.101	0.505	5.05	21	25.25	103		0.103
Freon 113	187.3	6.159	307.968	2,436	0.102	0.510	5.10	40	25.50	202		0.103
Dichloromethane	84.9	5.190	259.519	930	0.104	0.520	5.20	19	26.00	93		0.103
Carbon disulfide	76.1	4.340	217.021	697	0.089	0.445	4.45	14	22.25	72		0.103
trans-1,2-Dichloroethene	96.9	3.927	196.334	803	0.087	0.435	4.35	18	21.75	89		0.103
Methyl tert butyl ether	88.1	3.067	153.359	571	0.078	0.390	3.90	15	19.50	73		0.103
1,1-Dichloroethane	99.0	3.763	188.153	787	0.101	0.505	5.05	21	25.25	106		0.103
Vinyl acetate	86.1	3.221	161.070	586	0.086	0.430	4.30	16	21.50	78		0.103
2-Butanone	72.1	3.482	174.111	530	0.086	0.430	4.30	13	21.50	65		0.103
cis-1,2-Dichloroethene	96.9	4.684	234.207	958	0.103	0.515	5.15	21	25.75	105		0.103
Chloroform	119.4	4.318	215.880	1,089	0.102	0.510	5.10	26	25.50	129		0.103
1,1,1-Trichloroethane	133.4	4.812	240.601	1,355	0.102	0.510	5.10	29	25.50	144		0.103
1,2-Dichloroethane	99.0	5.376	268.810	1,124	0.103	0.515	5.15	22	25.75	108		0.103
Benzene	78.1	4.502	225.101	742	0.103	0.515	5.15	17	25.75	85		0.103
Carbon tetrachloride	153.8	4.945	247.239	1,606	0.102	0.510	5.10	33	25.50	166		0.103
1,2-Dichloropropane	113.0	5.045	252.236	1,204	0.103	0.515	5.15	25	25.75	123		0.103
1,4 Dioxane	88.1	3.349	167.446	623	0.088	0.440	4.40	16	22.00	82		0.103
Trichloroethene	131.4	5.538	276.887	1,536	0.103	0.515	5.15	29	25.75	143		0.103
Bromodichloromethane	163.8	3.465	173.263	1,198	0.080	0.400	4.00	28	20.00	138		0.103
Methyl Isobutyl Ketone	100.2	3.887	194.342	822	0.092	0.460	4.60	19	23.00	97		0.103
cis-1,3-Dichloropropene	111.0	5.125	256.241	1,201	0.106	0.530	5.30	25	26.50	124		0.103
Toluene	92.1	5.031	251.565	978	0.103	0.515	5.15	20	25.75	100		0.103
trans-1,3-Dichloropropene	111.0	4.808	240.392	1,127	0.104	0.520	5.20	24	26.00	122		0.103
1,1,2-Trichloroethane	133.4	5.158	257.910	1,453	0.102	0.510	5.10	29	25.50	144		0.103
2-Hexanone	100.2	3.327	166.347	704	0.088	0.440	4.40	19	22.00	93		0.103
Dibromochloromethane	208.3	3.849	192.442	1,693	0.089	0.445	4.45	39	22.25	196		0.103
1,2-Dibromoethane	187.9	5.515	275.765	2,188	0.104	0.520	5.20	41	26.00	206		0.103

Tetrachloroethene	165.8	5.850	292.482	2,048	0.102	0.510	5.10	36	25.50	179	0.103
Chlorobenzene	112.6	5.351	267.548	1,272	0.102	0.510	5.10	24	25.50	121	0.103
Ethylbenzene	106.2	5.123	256.170	1,149	0.104	0.520	5.20	23	26.00	117	0.103
m & p-Xylene	106.2	9.557	477.847	2,143	0.206	1.030	10.30	46	51.50	231	0.206
Styrene	104.2	4.664	233.210	1,026	0.103	0.515	5.15	23	25.75	113	0.103
Bromoform	252.7	3.632	181.616	1,938	0.093	0.465	4.65	50	23.25	248	0.103
o-Xylene	106.2	4.896	244.813	1,098	0.102	0.510	5.10	23	25.50	114	0.103
1,1,2,2-Tetrachloroethane	167.8	3.552	177.601	1,259	0.102	0.510	5.10	36	25.50	181	0.103
4-Ethyltoluene	120.2	2.782	139.078	706	0.091	0.455	4.55	23	22.75	115	0.103
1,3,5-Trimethylbenzene	120.2	4.171	208.538	1,059	0.106	0.530	5.30	27	26.50	135	0.103
1,2,4-Trimethylbenzene	120.2	4.236	211.807	1,075	0.102	0.510	5.10	26	25.50	129	0.103
1,3-Dichlorobenzene	147.0	4.010	200.484	1,245	0.102	0.510	5.10	32	25.50	158	0.103
Benzyl chloride	126.6	2.439	121.950	652	0.090	0.450	4.50	24	22.50	120	0.103
1,4-Dichlorobenzene	147.0	4.064	203.182	1,261	0.102	0.510	5.10	32	25.50	158	0.103
1,2-Dichlorobenzene	147.0	3.373	168.640	1,047	0.100	0.500	5.00	31	25.00	155	0.103
1,2,4-Trichlorobenzene	181.4	0.849	42.454	325	0.103	0.515	5.15	39	25.75	197	0.103
Naphthalene	128.2	1.582	79.096	428	0.239	1.195	11.95	65	59.75	323	0.103
Hexachlorobutadiene	260.8	2.226	111.322	1,226	0.103	0.515	5.15	57	25.75	284	0.103

SAMPLE CALCULATION

EPA Method TO-15 Modified Full Scan GC/MS

SDG:		**LABQC**
Laboratory Number:		**B07029**
Standard Volume	STV	5.0
Sample Volume	SV	20
Can Dilution Factor	CDF	1.00
Gas Constant		23.68
Decimal Places:		0

Sample Calculation:

1) Avg RFn = Sum $\left| \frac{(Astdni)}{(Cstdni)} \frac{(Cistdi)}{(Aistdi)} \right|_i$ Note: 1

2) Raw Amt = $\frac{(Ansamp)}{(Avg\ RFn)} \frac{(Cistdi)}{(Aistdi)}$ = Cn

3) Amount ppbv = $\frac{(Raw\ Amt)\ 1000}{(SV)}$ (CDF)

4) Amount ug/m3 = $\frac{(amt(ppbv)}{23.68}$ MW

n	Compound	IS n	Chem type	MW	AvgRFn	Area Ansamp	Cistdi ppmv	Aistdi Ais	Cn ppmV Raw Amt	Amount ppbv	Amount ug/m3
2	Dichlorodifluoromethane	1	TRG	120.9	0.611	592568	20.000	4249888	4.566	228	1,164
3	Chloromethane	1	TRG	50.5	0.393	310444	20.000	4249888	3.720	186	397
4	Freon 114	1	TRG	170.9	0.650	345143	20.000	4249888	2.500	125	902
5	Vinyl chloride	1	TRG	62.5	0.213	220268	20.000	4249888	4.859	243	641
6	Bromomethane	1	TRG	94.9	0.212	193412	20.000	4249888	4.303	215	862
7	Chloroethane	1	TRG	64.5	0.112	105472	20.000	4249888	4.451	223	607
10	Trichlorofluoromethane	1	TRG	137.4	0.584	592459	20.000	4249888	4.778	239	1,387
12	Acetone	1	TRG	58.1	0.878	635306	20.000	4249888	3.404	170	417
13	2-propanol	1	TRG	60.1	0.668	446860	20.000	4249888	3.149	157	398
15	1,1-Dichloroethene	1	TRG	96.9	0.471	484394	20.000	4249888	4.835	242	990
17	Freon 113	1	TRG	187.3	0.370	484007	20.000	4249888	6.159	308	2,436
19	Dichloromethane	1	TRG	84.9	0.209	230157	20.000	4249888	5.190	260	932
20	Carbon disulfide	1	TRG	76.1	0.261	240900	20.000	4249888	4.340	217	697
21	trans-1,2-Dichloroethene	1	TRG	96.9	0.192	160495	20.000	4249888	3.927	196	802
22	Methyl tert butyl ether	1	TRG	88.1	0.910	593363	20.000	4249888	3.067	153	569
24	1,1-Dichloroethane	1	TRG	99.0	0.606	484896	20.000	4249888	3.763	188	786
25	Vinyl acetate	1	TRG	86.1	1.295	886299	20.000	4249888	3.221	161	585
26	2-Butanone	1	TRG	72.1	0.170	126026	20.000	4249888	3.482	174	530
32	cis-1,2-Dichloroethene	1	TRG	96.9	0.313	311725	20.000	4249888	4.684	234	958
34	Chloroform	1	TRG	119.4	0.729	669013	20.000	4249888	4.318	216	1,089
36	1,1,1-Trichloroethane	35	TRG	133.4	0.726	651245	20.000	3727533	4.812	241	1,358
37	1,2-Dichloroethane	35	TRG	99.0	0.681	682336	20.000	3727533	5.376	269	1,125
40	Benzene	35	TRG	78.1	1.183	992979	20.000	3727533	4.502	225	742
41	Carbon tetrachloride	35	TRG	153.8	0.737	679418	20.000	3727533	4.945	247	1,604
43	1,2-Dichloropropane	35	TRG	113.0	0.457	430121	20.000	3727533	5.045	252	1,203
44	1,4 Dioxane	35	TRG	88.1	0.350	218703	20.000	3727533	3.349	167	621
46	Trichloroethene	35	TRG	131.4	0.573	591364	20.000	3727533	5.538	277	1,537
47	Bromodichloromethane	35	TRG	163.8	0.902	582741	20.000	3727533	3.465	173	1,197
49	Methyl Isobutyl Ketone	35	TRG	100.2	2.014	1458963	20.000	3727533	3.887	194	821
50	cis-1,3-Dichloropropene	35	TRG	111.0	0.713	681354	20.000	3727533	5.125	256	1,200
51	Toluene	35	TRG	92.1	1.546	1450175	20.000	3727533	5.031	252	980
52	trans-1,3-Dichloropropene	35	TRG	111.0	0.847	758857	20.000	3727533	4.808	240	1,125
53	1,1,2-Trichloroethane	35	TRG	133.4	0.455	437650	20.000	3727533	5.158	258	1,453
54	2-Hexanone	35	TRG	100.2	2.559	1586439	20.000	3727533	3.327	166	702
57	Dibromochloromethane	35	TRG	208.3	1.207	866025	20.000	3727533	3.849	192	1,689
58	1,2-Dibromoethane	35	TRG	187.9	1.119	1150342	20.000	3727533	5.515	276	2,190
59	Tetrachloroethene	35	TRG	165.8	0.985	1074107	20.000	3727533	5.850	292	2,044
60	Chlorobenzene	35	TRG	112.6	1.446	1442199	20.000	3727533	5.351	268	1,274
62	Ethylbenzene	35	TRG	106.2	2.468	2356740	20.000	3727533	5.123	256	1,148

63	m & p-Xylene	35	TRG	106.2	2.080	3705302	20.000	3727533	9.557	478	2,144
64	Styrene	35	TRG	104.2	1.484	1290405	20.000	3727533	4.664	233	1,025
65	Bromoform	35	TRG	252.7	2.047	1385720	20.000	3727533	3.632	182	1,942
66	o-Xylene	35	TRG	106.2	2.300	2098683	20.000	3727533	4.896	245	1,099
67	1,1,2,2-Tetrachloroethane	35	TRG	167.8	2.109	1396250	20.000	3727533	3.552	178	1,261
72	4-Ethyltoluene	35	TRG	120.2	3.651	1892680	20.000	3727533	2.782	139	706
73	1,3,5-Trimethylbenzene	35	TRG	120.2	3.337	2593737	20.000	3727533	4.171	209	1,061
76	1,2,4-Trimethylbenzene	35	TRG	120.2	3.082	2432898	20.000	3727533	4.236	212	1,076
78	1,3-Dichlorobenzene	35	TRG	147.0	2.476	1850430	20.000	3727533	4.010	200	1,242
80	Benzyl chloride	35	TRG	126.6	3.379	1535946	20.000	3727533	2.439	122	652
81	1,4-Dichlorobenzene	35	TRG	147.0	2.556	1935727	20.000	3727533	4.064	203	1,260
83	1,2-Dichlorobenzene	35	TRG	147.0	2.845	1788484	20.000	3727533	3.373	169	1,049
86	1,2,4-Trichlorobenzene	35	TRG	181.4	5.265	833212	20.000	3727533	0.849	42	322
87	Naphthalene	35	TRG	128.2	8.792	2592293	20.000	3727533	1.582	79	428
88	Hexachlorobutadiene	35	TRG	260.8	4.062	1685386	20.000	3727533	2.226	111	1,223
1	Pentafluorobenzene	1	IS		1.000	4249888	20.000	4249888			
35	1,4-Difluorobenzene	35	IS		1.000	3727533	20.000	3727533			
94	Toluene-d8	35	SURR		1.124	2113601	20.000	3727533			

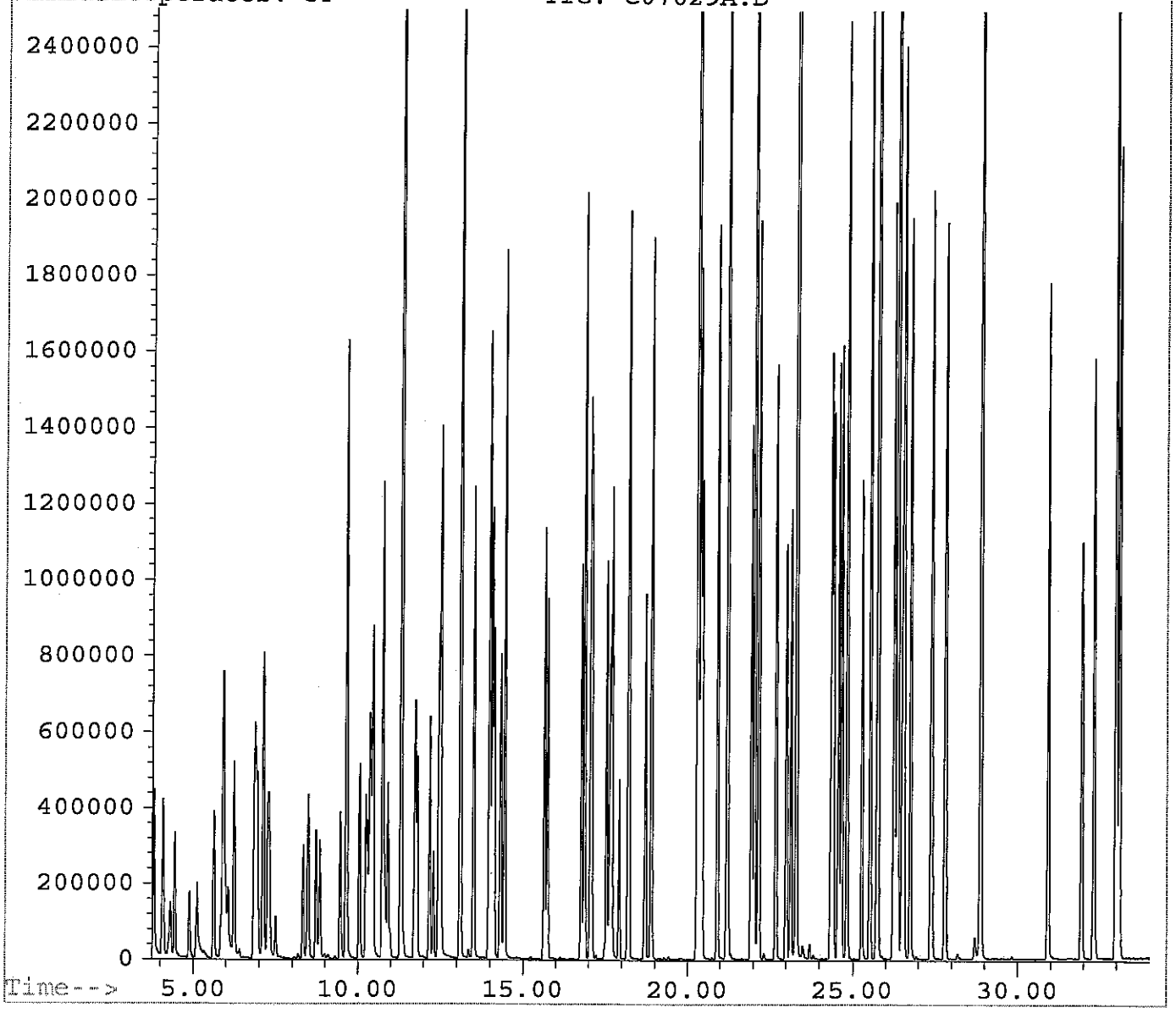
Calculation Definitions:

n	compound n
i	i th calibration level
Astdni	Standard Area for compound n at ith calibration level
Cstdni	Standard Concentration for compound n at ith calibration level in ppmv
Cistdi	Internal Standard Conc used for compound n at ith calibration level in ppmv
Aistdi	Internal Standard Area used for compound n at ith calibration level
Ansamp	Sample Area for compound n
Avg RFn	Average response factor for all ith calibration levels for compound n
Raw Amount	Sample Concentration in ppmv before applying factors
Cistd	Concentration internal standard used for compound n in sample in ppmv
Aistd	Area of internal standard used for compound n in sample
Cn	Concentration of compound n in sample in ppmv
23.68	Gas constant at 60 F as per EPA source test protocol
MW	Molecular weight of compound
Note (1) : Avg RFn	The values for the Average Response Factor AvgRFn can be optained from the response Factor Report for the Initial Calibration, or from the Calibration Report

Name of file: C:\MSCHEM\1\DATA\07029MS1\C07029A.D

Name of operator: JF

TIC: C07029A.D



METHOD BLANK REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified Full Scan GC/MS
Analytical Method: TO-15

SDG: LABQC
Laboratory Number: B07029

File: B07029A.D
Description: METHOD BLANK
Can/Tube#:
Sam_Type: MB
QC_Batch: 070209-MS1
Air Volume: 20 ml

Date Sampled: **Time:**
Date Received:
Date Extracted:
Date Analyzed: 07/02/09 **Time:** 11:50
Can Dilution Factor: 1.00 0
Not Detected Flag: ND

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
75-71-8	Dichlorodifluoromethane	5	26	ND	27	134	ND	ND
74-87-3	Chloromethane	5	26	ND	11	54	ND	ND
76-14-2	Freon 114	5	26	ND	38	188	ND	ND
75-01-4	Vinyl chloride	5	26	ND	14	69	ND	ND
74-83-9	Bromomethane	5	26	ND	21	104	ND	ND
75-00-3	Chloroethane	5	26	ND	14	71	ND	ND
75-69-4	Trichlorofluoromethane	5	26	ND	30	151	ND	ND
67-64-1	Acetone	5	23	ND	11	55	ND	ND
67-63-0	2-propanol	5	23	ND	12	58	ND	ND
75-35-4	1,1-Dichloroethene	5	25	ND	21	103	ND	ND
76-13-1	Freon 113	5	26	ND	40	202	ND	ND
75-09-2	Dichloromethane	5	26	ND	19	93	ND	ND
75-15-0	Carbon disulfide	4	22	ND	14	72	ND	ND
156-60-5	trans-1,2-Dichloroethene	4	22	ND	18	89	ND	ND
1634-04-4	Methyl tert butyl ether	4	20	ND	15	73	ND	ND
75-34-3	1,1-Dichloroethane	5	25	ND	21	106	ND	ND
108-05-4	Vinyl acetate	4	22	ND	16	78	ND	ND
78-93-3	2-Butanone	4	22	ND	13	65	ND	ND
156-59-2	cis-1,2-Dichloroethene	5	26	ND	21	105	ND	ND
67-66-3	Chloroform	5	26	ND	26	129	ND	ND
71-55-6	1,1,1-Trichloroethane	5	26	ND	29	144	ND	ND
107-06-2	1,2-Dichloroethane	5	26	ND	22	108	ND	ND
71-43-2	Benzene	5	26	ND	17	85	ND	ND
56-23-5	Carbon tetrachloride	5	26	ND	33	166	ND	ND
78-87-5	1,2-Dichloropropane	5	26	ND	25	123	ND	ND
123-91-1	1,4 Dioxane	4	22	ND	16	82	ND	ND
79-01-6	Trichloroethene	5	26	ND	29	143	ND	ND
75-27-4	Bromodichloromethane	4	20	ND	28	138	ND	ND
108-10-1	Methyl Isobutyl Ketone	5	23	ND	19	97	ND	ND
10061-01-5	cis-1,3-Dichloropropene	5	27	ND	25	124	ND	ND
108-88-3	Toluene	5	26	7	20	100	27	J
10061-02-6	trans-1,3-Dichloropropene	5	26	ND	24	122	ND	ND
79-00-5	1,1,2-Trichloroethane	5	26	ND	29	144	ND	ND
591-78-6	2-Hexanone	4	22	ND	19	93	ND	ND
124-48-1	Dibromochloromethane	4	22	ND	39	196	ND	ND
106-93-4	1,2-Dibromoethane	5	26	ND	41	206	ND	ND
127-18-4	Tetrachloroethene	5	26	ND	36	179	ND	ND
108-90-7	Chlorobenzene	5	26	ND	24	121	ND	ND
100-41-4	Ethylbenzene	5	26	ND	23	117	ND	ND
108-38-3	m & p-Xylene	10	52	ND	46	231	ND	ND

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
100-42-5	Styrene	5	26	ND	23	113	ND	ND
75-25-2	Bromoform	5	23	ND	50	248	ND	ND
95-47-6	o-Xylene	5	26	ND	23	114	ND	ND
79-34-5	1,1,2,2-Tetrachloroethane	5	26	ND	36	181	ND	ND
622-96-8	4-Ethyltoluene	5	23	ND	23	115	ND	ND
108-67-8	1,3,5-Trimethylbenzene	5	27	ND	27	135	ND	ND
95-63-6	1,2,4-Trimethylbenzene	5	26	ND	26	129	ND	ND
541-73-1	1,3-Dichlorobenzene	5	26	ND	32	158	ND	ND
100-44-7	Benzyl chloride	5	23	ND	24	120	ND	ND
106-46-7	1,4-Dichlorobenzene	5	26	ND	32	158	ND	ND
95-50-1	1,2-Dichlorobenzene	5	25	ND	31	155	ND	ND
120-82-1	1,2,4-Trichlorobenzene	5	26	ND	39	197	ND	ND
91-20-3	Naphthalene	12	60	ND	65	323	ND	ND
87-68-3	Hexachlorobutadiene	5	26	ND	57	284	ND	ND

	Surrogate Recovery	Spike Amt. ppbV	Amount ppbV	% Rec.	QC Limits	Flag * = Out
2037-26-5	Toluene-d8	10.000	10.677	107	70-130	

Notes: 1) Reported results are to be interpreted to two significant figures.
2) ug/m3 = ppbV*FW/23.68 calculated assuming conditions at 60 F and 1 atm.
3) MDL and RL are adjusted for sample volume and can dilution.
4) U and ND are Flags used for Not Detected
5) J is a flag for a result between the MDL and the RL (or lower quantitation limit, LQL)

QUANTITATION REPORT

EPA Method TO-15 Modified Full Scan GC/MS

			Review	EAS Sample ID: B07029A	
File Name:	B07029A.D				1 KB
Sample ID:	METHOD BLANK				2 AT
Date:	2 Jul 109 11:50 am			Cal Amounts	3 BB
Run Method:	1T15EXAY.M			IS Areas	4 SH
Quant Method:	1T15EXAY.M			Carryover	
Cal Update:	Tue Mar 17 14:18:15 2009				
Template:	1TO15EXT.MS1				
Can Factor:	1.00				
Volume:	20	ml		Analyst: KB 1	

CAS#	Compound	n	Raw Amount	RT	Target RT	Ion	Sample Area	Qualifier	Lower Qual	Upper Qual	Qual Flag	Cal Flag	Int Flag
75-71-8	Dichlorodifluoromethane	2	0.006	3.81	3.83	85.00	711	0	25	37			
74-87-3	Chloromethane	3	0.004	4.07	4.09	50.00	343	0	22	32			
76-14-2	Freon 114	4	0.017	4.08	4.11	85.00	2246	0	44	65	Q		
75-01-4	Vinyl chloride	5	0.000	0.00	4.33	62.00	0	0	24	36			
74-83-9	Bromomethane	6	0.000	0.00	4.92	94.00	0	0	73	109			
75-00-3	Chloroethane	7	0.000	0.00	5.12	64.00	0	0	26	40			
75-69-4	Trichlorofluoromethane	10	0.000	0.00	5.94	101.00	0	0	48	73			
67-64-1	Acetone	12	0.025	6.03	6.04	43.00	4526	0	16	24	Q		
67-63-0	2-propanol	13	0.000	0.00	6.14	45.00	0	0	18	27			
75-35-4	1,1-Dichloroethene	15	0.000	0.00	6.89	61.00	0	0	34	51			
76-13-1	Freon 113	17	0.000	0.00	7.16	151.00	0	0	101	152			
75-09-2	Dichloromethane	19	0.000	0.00	7.31	84.00	0	0	51	77			
75-15-0	Carbon disulfide	20	0.000	0.00	7.54	76.00	0	0	16	24			
156-60-5	trans-1,2-Dichloroethene	21	0.000	0.00	8.38	96.00	0	0	172	258			
1634-04-4	Methyl tert butyl ether	22	0.000	0.00	8.54	73.00	0	0	18	27			
75-34-3	1,1-Dichloroethane	24	0.000	0.00	8.90	63.00	0	0	24	36			
108-05-4	Vinyl acetate	25	0.000	0.00	10.32	43.00	0	0	0	0			
78-93-3	2-Butanone	26	0.000	0.00	9.54	72.00	0	0	30	45			
156-59-2	cis-1,2-Dichloroethene	32	0.000	0.00	10.11	96.00	0	0	139	209			
67-66-3	Chloroform	34	0.000	0.00	10.53	83.00	0	0	51	77			
71-55-6	1,1,1-Trichloroethane	36	0.000	0.00	11.80	97.00	0	0	51	76			
107-06-2	1,2-Dichloroethane	37	0.000	0.00	11.87	61.95	0	0	25	37			
71-43-2	Benzene	40	0.033	12.46	12.51	78.00	7370	23	19	29			
56-23-5	Carbon tetrachloride	41	0.000	0.00	12.56	116.90	0	0	79	119			
78-87-5	1,2-Dichloropropane	43	0.004	13.79	14.07	63.00	340	0	58	88			
123-91-1	1,4 Dioxane	44	0.000	0.00	14.40	88.00	0	0	76	114			
79-01-6	Trichloroethene	46	0.023	14.06	14.13	130.00	2478	62	79	119	Q		
75-27-4	Bromodichloromethane	47	0.000	0.00	14.40	83.00	0	0	49	74			
108-10-1	Methyl Isobutyl Ketone	49	0.000	0.00	15.70	43.00	0	0	21	35			
10061-01-5	cis-1,3-Dichloropropene	50	0.000	0.00	15.82	75.00	0	0	15	23			
108-88-3	Toluene	51	0.138	17.04	17.11	91.00	39953	53	44	66			
10061-02-6	trans-1,3-Dichloropropene	52	0.000	0.00	16.85	75.00	0	0	16	23			
79-00-5	1,1,2-Trichloroethane	53	0.000	0.00	17.16	61.00	0	0	91	136			
591-78-6	2-Hexanone	54	0.001	17.75	17.80	43.00	617	0	28	47			
124-48-1	Dibromochloromethane	57	0.000	0.00	18.30	129.00	0	0	60	91			
106-93-4	1,2-Dibromoethane	58	0.002	18.71	18.80	107.00	323	0	75	113			

CAS#	Compound	n	Raw Amount	RT	Target RT	Ion	Sample Area	Qualifier	Lower Qual	Upper Qual	Qual Flag	Cal Flag	Int Flag
127-18-4	Tetrachloroethene	59	0.000	0.00	18.97	166.00	0	0	52	78			
108-90-7	Chlorobenzene	60	0.006	20.37	20.45	112.00	1496	0	25	38	Q		
100-41-4	Ethylbenzene	62	0.005	20.92	17.80	91.00	2286	0	21	32	Q		
108-38-3	m & p-Xylene	63	0.022	21.20	21.28	91.00	8674	51	32	48	Q		
100-42-5	Styrene	64	0.010	22.03	22.14	104.00	2639	55	53	79			
75-25-2	Bromoform	65	0.003	21.96	22.00	173.00	1133	0	39	59	Q		
95-47-6	o-Xylene	66	0.007	22.18	22.25	91.00	3113	0	30	45	Q		
79-34-5	1,1,2,2-Tetrachloroethane	67	0.013	22.69	22.75	83.00	5168	19	8	13	Q		
622-96-8	4-Ethyltoluene	72	0.001	24.60	24.74	105.00	356	0	20	31			
108-67-8	1,3,5-Trimethylbenzene	73	0.010	24.83	24.92	105.00	6261	25	33	49	Q		
95-63-6	1,2,4-Trimethylbenzene	76	0.021	25.77	25.89	105.00	12354	38	32	48			
541-73-1	1,3-Dichlorobenzene	78	0.025	26.34	26.41	146.00	11730	40	34	51			
100-44-7	Benzyl chloride	80	0.001	26.52	26.61	91.00	699	0	15	23			
106-46-7	1,4-Dichlorobenzene	81	0.026	26.54	26.68	146.00	12242	33	34	51	Q		
95-50-1	1,2-Dichlorobenzene	83	0.025	27.40	27.47	146.00	13458	41	34	51			
120-82-1	1,2,4-Trichlorobenzene	86	0.041	31.94	32.18	180.00	40709	96	78	117			
91-20-3	Naphthalene	87	0.033	32.30	32.41	128.00	54017	12	10	16			
87-68-3	Hexachlorobutadiene	88	0.027	32.98	33.08	225.00	20244	32	22	33			
363-72-4	Pentafluorobenzene	1	20.000	11.32	11.38	168.00	**4064626**						
540-36-3	1,4-Difluorobenzene	35	20.000	13.11	13.17	114.00	**3731853**						
2037-26-5	Toluene-d8	94	**10.677**	16.86	16.94	98.00	2240046	61	51	77			

Integration Flags:

If no flag the Integration was done by the instrument computer

M1 Manual Integration because the computer did not integrated the peak or integrated the wrong peak

M2 Manual Integration because computer integration of baseline was different then Inital Calibration

INITIAL CALIBRATION REPORT

EPA Method TO-15 Modified Full Scan GC/MS

		SDG:	LABQC
		QC_Batch:	070209-MS1
File Name:	B07029A.D	Instrument Name:	5970 - In
Sample ID:	METHOD BLANK		
Sample Analysis Date:	2 Jul 109 11:50 am	Number Compounds:	96
Run Method:	1T15EXAY.M	IS1: ST60403	20
Quant and Calibration Method:	1T15EXAY.M	IS2: ST60403	20
Cal Update:	Tue Mar 17 14:18:15 2009	IS3:	
Template:	1TO15EXT.MS1	IS4:	

Calibration Title: EPA T0-15

		Calibration Amount CA, ppmv						Calibration Response, Area					
		Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
		Amt	Amt	Amt	Amt	Amt	Amt	C03179C.D	C03179E.D	C03179B.D	C03179A.D	C03169H.D	C03179D.D
n	Compound	0.25	4.0	1.0	5.0	10.0	2.0	0.25	4.0	1.0	5.0	10.0	2.0
2	Dichlorodifluoromethane	0.263	4.200	1.050	5.250	10.500	2.100	22559	398558	88898	436110	840988	185058
3	Chloromethane	0.255	4.080	1.020	5.100	10.200	2.040	15230	241294	55434	272653	505057	113562
4	Freon 114	0.260	4.160	1.040	5.200	10.400	2.080	25317	399238	94441	464176	861160	193013
5	Vinyl chloride	0.260	4.160	1.040	5.200	10.400	2.080	7909	132864	32643	150492	285530	62953
6	Bromomethane	0.260	4.160	1.040	5.200	10.400	2.080	8153	136639	28890	149016	274473	66325
7	Chloroethane	0.260	4.160	1.040	5.200	10.400	2.080	4307	71497	16630	78611	141439	32925
10	Trichlorofluoromethane	0.260	4.160	1.040	5.200	10.400	2.080	22371	364524	85037	431144	716396	179451
12	Acetone	0.225	3.600	0.900	4.500	9.000	1.800	42851	442389	113697	494726	770083	184591
13	2-propanol	0.228	3.640	0.910	4.550	9.100	1.820	19578	321532	75563	289890	1427833	154437
15	1,1-Dichloroethene	0.253	4.040	1.010	5.050	10.100	2.020	16793	248606	63935	305424	730028	150732
17	Freon 113	0.255	4.080	1.020	5.100	10.200	2.040	13083	220191	45725	205080	591375	132996
19	Dichloromethane	0.260	4.160	1.040	5.200	10.400	2.080	8354	124766	26131	120655	330491	71297
20	Carbon disulfide	0.223	3.560	0.890	4.450	8.900	1.780	8703	137347	33136	122015	313353	78232
21	trans-1,2-Dichloroethene	0.218	3.480	0.870	4.350	8.700	1.740	5940	117954	23397	80889	230621	52404
22	Methyl tert butyl ether	0.195	3.120	0.780	3.900	7.800	1.560	24271	482973	97431	369980	967308	233954
24	1,1-Dichloroethane	0.253	4.040	1.010	5.050	10.100	2.020	22823	387657	85531	331041	871129	183187
25	Vinyl acetate	0.215	3.440	0.860	4.300	8.600	1.720	40148	687529	149287	676740	1560060	338492
26	2-Butanone	0.215	3.440	0.860	4.300	8.600	1.720	5400	92652	22013	71425	205517	45058
32	cis-1,2-Dichloroethene	0.258	4.120	1.030	5.150	10.300	2.060	11695	190337	43510	224404	421914	95703
34	Chloroform	0.255	4.080	1.020	5.100	10.200	2.040	27147	449509	101707	516969	959204	213353
36	1,1,1-Trichloroethane	0.255	4.080	1.020	5.100	10.200	2.040	26931	432442	100881	509527	970639	210683
37	1,2-Dichloroethane	0.258	4.120	1.030	5.150	10.300	2.060	26512	398927	96975	495766	920839	187037

(49)

n	Compound	Amt 0.25	Amt 4.0	Amt 1.0	Amt 5.0	Amt 10.0	Amt 2.0	C03179C.D 0.25	C03179E.D 4.0	C03179B.D 1.0	C03179A.D 5.0	C03169H.D 10.0	C03179D.D 2.0
40	Benzene	-1.000	4.120	1.030	5.150	10.300	2.060	-1	712515	206967	782160	1387400	364766
41	Carbon tetrachloride	0.255	4.080	1.020	5.100	10.200	2.040	26276	451629	105798	518753	931992	220983
43	1,2-Dichloropropane	0.258	4.120	1.030	5.150	10.300	2.060	18588	266688	66789	305497	598806	132416
44	1,4 Dioxane	0.220	3.520	0.880	4.400	8.800	1.760	11252	171544	43700	161310	540834	80192
46	Trichloroethene	0.258	4.120	1.030	5.150	10.300	2.060	27013	323273	83100	364698	666308	165489
47	Bromodichloromethane	0.200	3.200	0.800	4.000	8.000	1.600	27507	476051	96325	417248	885573	218119
49	Methyl Isobutyl Ketone	0.230	3.680	0.920	4.600	9.200	1.840	67434	1179200	250239	1039898	2505790	566705
50	cis-1,3-Dichloropropene	0.265	4.240	1.060	5.300	10.600	2.120	28339	441906	107039	492454	1010236	206495
51	Toluene	-1.000	4.120	1.030	5.150	10.300	2.060	-1	944443	257501	1033029	1877014	478350
52	trans-1,3-Dichloropropene	0.260	4.160	1.040	5.200	10.400	2.080	33546	509168	127376	538174	1205186	242137
53	1,1,2-Trichloroethane	0.255	4.080	1.020	5.100	10.200	2.040	18573	263308	68163	281046	608914	127239
54	2-Hexanone	0.220	3.520	0.880	4.400	8.800	1.760	84018	1413472	311524	1112452	3278869	678898
57	Dibromochloromethane	0.223	3.560	0.890	4.450	8.900	1.780	43801	688881	150691	558917	1316838	322250
58	1,2-Dibromoethane	0.260	4.160	1.040	5.200	10.400	2.080	46912	660815	169213	701472	1505940	324567
59	Tetrachloroethene	0.255	4.080	1.020	5.100	10.200	2.040	40710	589393	145069	627137	1126037	300057
60	Chlorobenzene	0.255	4.080	1.020	5.100	10.200	2.040	64660	836027	208106	862738	1818049	410336
62	Ethylbenzene	0.260	4.160	1.040	5.200	10.400	2.080	107037	1527752	359496	1548148	3108186	722767
63	m & p-Xylene	0.515	8.240	2.060	10.300	20.600	4.120	192864	2440351	617919	2542524	4725274	1220126
64	Styrene	0.258	4.120	1.030	5.150	10.300	2.060	70964	837020	224026	840176	1812012	428714
65	Bromoform	0.233	3.720	0.930	4.650	9.300	1.860	90991	1151698	243927	958925	2416870	530300
66	o-Xylene	0.255	4.080	1.020	5.100	10.200	2.040	105567	1325719	329821	1384162	2817484	643280
67	1,1,2,2-Tetrachloroethane	0.255	4.080	1.020	5.100	10.200	2.040	102201	1142635	274703	1042229	3385910	560899
72	4-Ethyltoluene	0.228	3.640	0.910	4.550	9.100	1.820	177076	1912961	437379	1573293	3712735	943267
73	1,3,5-Trimethylbenzene	0.265	4.240	1.060	5.300	10.600	2.120	184274	1936506	488965	1778188	3957960	994445
76	1,2,4-Trimethylbenzene	-1.000	4.080	1.020	5.100	10.200	2.040	-1	1979227	501359	1766777	3635276	1033463
78	1,3-Dichlorobenzene	-1.000	4.080	1.020	5.100	10.200	2.040	-1	1499786	411700	1325016	3205866	837609
80	Benzyl chloride	-1.000	3.600	0.900	4.500	9.000	1.800	-1	1944712	459781	1580130	4463720	884546
81	1,4-Dichlorobenzene	-1.000	4.080	1.020	5.100	10.200	2.040	-1	1616283	417021	1362139	3091714	896732
83	1,2-Dichlorobenzene	-1.000	4.000	1.000	5.000	10.000	2.000	-1	1708595	429307	1374687	4272294	912351
86	1,2,4-Trichlorobenzene	-1.000	4.120	1.030	5.150	10.300	2.060	-1	3172331	905400	2236815	7156710	1987175
87	Naphthalene	-1.000	9.560	2.390	11.950	23.900	4.780	-1	11453402	4198495	10074168	24925580	6661715
88	Hexachlorobutadiene	-1.000	4.120	1.030	5.150	10.300	2.060	-1	2443776	758051	1914490	4177636	1622637
1	Pentafluorobenzene	20.000	20.000	20.000	20.000	20.000	20.000	2643183	2935915	2871816	2719013	2737194	3022845
35	1,4-Difluorobenzene	20.000	20.000	20.000	20.000	20.000	20.000	2659938	2870629	2814997	2720455	2706138	3020264
94	Toluene-d8	10.000	10.000	10.000	10.000	10.000	10.000	1479389	1629143	1590486	1469067	1546296	1730275

(50)

INITIAL CALIBRATION REPORT: Response Factors

SDG:	**LABQC**
QC_Batch:	**070209-MS1**
Sample ID:	METHOD BLANK
Sample Analysis Date:	2 Jul 109 11:50 am
Run Method:	1T15EXAY.M
Quant Method:	1T15EXAY.M
Cal Update:	Tue Mar 17 14:18:15 2009
Template:	1TO15EXT.MS1

Sample Calculation:

1) Avg RFn = Sum $\left| \frac{(Astdni)}{(Cstdni)} \frac{(Cistdi)}{(Aistdi)} \right|_i$

Response Factors

Compound		RF1	RF2	RF3	RF4	RF5	RF6	AvgRFn	%RSD
Dichlorodifluoromethane		0.649	0.646	0.590	0.611	0.585	0.583	0.611	4.97
Chloromethane		0.452	0.403	0.378	0.393	0.362	0.368	0.393	8.34
Freon 114		0.737	0.654	0.632	0.657	0.605	0.614	0.650	7.29
Vinyl chloride		0.230	0.218	0.219	0.213	0.201	0.200	0.213	5.40
Bromomethane		0.237	0.224	0.193	0.211	0.193	0.211	0.212	8.16
Chloroethane		0.125	0.117	0.111	0.111	0.099	0.105	0.112	8.18
Trichlorofluoromethane		0.651	0.597	0.569	0.610	0.503	0.571	0.584	8.47
Acetone		1.441	0.837	0.880	0.809	0.625	0.679	0.878	33.28
2-propanol		0.650	0.602	0.578	0.469	1.146	0.561	0.668	36.24
1,1-Dichloroethene		0.502	0.419	0.441	0.445	0.528	0.494	0.471	9.01
Freon 113		0.388	0.368	0.312	0.296	0.424	0.431	0.370	15.21
Dichloromethane		0.243	0.204	0.175	0.171	0.232	0.227	0.209	14.64
Carbon disulfide		0.295	0.263	0.259	0.202	0.257	0.291	0.261	12.82
trans-1,2-Dichloroethene		0.206	0.231	0.187	0.137	0.194	0.199	0.192	16.18
Methyl tert butyl ether		0.942	1.055	0.870	0.698	0.906	0.992	0.910	13.48
1,1-Dichloroethane		0.683	0.654	0.590	0.482	0.630	0.600	0.606	11.51
Vinyl acetate		1.413	1.362	1.209	1.158	1.325	1.302	1.295	7.38
2-Butanone		0.190	0.183	0.178	0.122	0.175	0.173	0.170	14.31
cis-1,2-Dichloroethene		0.343	0.315	0.294	0.321	0.299	0.307	0.313	5.59
Chloroform		0.806	0.751	0.694	0.746	0.687	0.692	0.729	6.41
1,1,1-Trichloroethane		0.794	0.738	0.703	0.734	0.703	0.684	0.726	5.40
1,2-Dichloroethane		0.773	0.675	0.669	0.708	0.661	0.601	0.681	8.33
Benzene	NA		1.205	1.428	1.117	0.996	1.173	1.183	13.36
Carbon tetrachloride		0.775	0.771	0.737	0.748	0.675	0.717	0.737	5.04
1,2-Dichloropropane		0.542	0.451	0.461	0.436	0.430	0.426	0.457	9.47
1,4 Dioxane		0.385	0.340	0.353	0.270	0.454	0.302	0.350	18.49
Trichloroethene		0.787	0.547	0.573	0.521	0.478	0.532	0.573	19.12
Bromodichloromethane		1.034	1.036	0.855	0.767	0.818	0.903	0.902	12.44
Methyl Isobutyl Ketone		2.204	2.233	1.932	1.662	2.013	2.040	2.014	10.30
cis-1,3-Dichloropropene		0.804	0.726	0.717	0.683	0.704	0.645	0.713	7.44
Toluene	NA		1.597	1.776	1.475	1.347	1.538	1.546	10.25
trans-1,3-Dichloropropene		0.970	0.853	0.870	0.761	0.856	0.771	0.847	9.00
1,1,2-Trichloroethane		0.548	0.450	0.475	0.405	0.441	0.413	0.455	11.39
2-Hexanone		2.871	2.798	2.515	1.859	2.754	2.554	2.559	14.47
Dibromochloromethane		1.477	1.348	1.203	0.923	1.094	1.199	1.207	15.98
1,2-Dibromoethane		1.357	1.107	1.156	0.992	1.070	1.033	1.119	11.58
Tetrachloroethene		1.200	1.006	1.010	0.904	0.816	0.974	0.985	13.06

Chlorobenzene		1.907	1.428	1.450	1.244	1.317	1.332	1.446	16.45
Ethylbenzene		3.095	2.559	2.456	2.189	2.209	2.301	2.468	13.74
m & p-Xylene		2.816	2.063	2.131	1.815	1.695	1.961	2.080	18.95
Styrene		2.068	1.415	1.545	1.199	1.300	1.378	1.484	20.78
Bromoform		2.936	2.157	1.863	1.516	1.921	1.888	2.047	23.53
o-Xylene		3.113	2.264	2.297	1.995	2.041	2.088	2.300	18.10
1,1,2,2-Tetrachloroethane		3.014	1.951	1.913	1.502	2.453	1.821	2.109	25.54
4-Ethyltoluene		5.840	3.661	3.415	2.542	3.015	3.432	3.651	31.30
1,3,5-Trimethylbenzene		5.228	3.182	3.277	2.467	2.760	3.106	3.337	29.21
1,2,4-Trimethylbenzene	NA		3.380	3.492	2.547	2.634	3.355	3.082	14.68
1,3-Dichlorobenzene	NA		2.561	2.868	1.910	2.323	2.719	2.476	15.16
Benzyl chloride	NA		3.764	3.630	2.581	3.666	3.254	3.379	14.38
1,4-Dichlorobenzene	NA		2.760	2.905	1.964	2.240	2.911	2.556	16.83
1,2-Dichlorobenzene	NA		2.976	3.050	2.021	3.157	3.021	2.845	16.36
1,2,4-Trichlorobenzene	NA		5.365	6.245	3.193	5.135	6.388	5.265	24.29
Naphthalene	NA		8.347	12.481	6.198	7.708	9.229	8.792	26.61
Hexachlorobutadiene	NA		4.133	5.229	2.733	2.998	5.216	4.062	29.13
Pentafluorobenzene		1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.00
1,4-Difluorobenzene		1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.00
Toluene-d8		1.112	1.135	1.130	1.080	1.143	1.146	1.124	2.20

CALCULATIONS

EPA Method TO-15 Modified Full Scan GC/MS

SDG: LABQC
Laboratory Number: B07029

Run Method: 1T15EXAY.M
Quant Method: 1T15EXAY.M
Can Dilution Factor: 1.00
Air Volume: 20 ml MDL Factor 1
Gas Constant: 23.68
Decimal Places: 0

Compound	M.W.	Raw Amount	Result ppbv	Result ug/m3	(1) MDL ppbv	(2) RL ppbv	Calc MDL ppbv	Calc MDL ug/m3	Calc RL ppbv	Calc RL ug/m3	Flag	S062602-1 Spike ppmv
Dichlorodifluoromethane	120.9	0.006	0.286	1	0.105	0.525	5.25	27	26.25	134	U	0.103
Chloromethane	50.5	0.004	0.215	0	0.102	0.510	5.10	11	25.50	54	U	0.103
Freon 114	170.9	0.017	0.850	6	0.104	0.520	5.20	38	26.00	188	U	0.103
Vinyl chloride	62.5	0.000	0.000	0	0.104	0.520	5.20	14	26.00	69	U	0.103
Bromomethane	94.9	0.000	0.000	0	0.104	0.520	5.20	21	26.00	104	U	0.103
Chloroethane	64.5	0.000	0.000	0	0.104	0.520	5.20	14	26.00	71	U	0.103
Trichlorofluoromethane	137.4	0.000	0.000	0	0.104	0.520	5.20	30	26.00	151	U	0.103
Acetone	58.1	0.025	1.268	3	0.090	0.450	4.50	11	22.50	55	U	0.103
2-propanol	60.1	0.000	0.000	0	0.091	0.455	4.55	12	22.75	58	U	0.103
1,1-Dichloroethene	96.9	0.000	0.000	0	0.101	0.505	5.05	21	25.25	103	U	0.103
Freon 113	187.3	0.000	0.000	0	0.102	0.510	5.10	40	25.50	202	U	0.103
Dichloromethane	84.9	0.000	0.000	0	0.104	0.520	5.20	19	26.00	93	U	0.103
Carbon disulfide	76.1	0.000	0.000	0	0.089	0.445	4.45	14	22.25	72	U	0.103
trans-1,2-Dichloroethene	96.9	0.000	0.000	0	0.087	0.435	4.35	18	21.75	89	U	0.103
Methyl tert butyl ether	88.1	0.000	0.000	0	0.078	0.390	3.90	15	19.50	73	U	0.103
1,1-Dichloroethane	99.0	0.000	0.000	0	0.101	0.505	5.05	21	25.25	106	U	0.103
Vinyl acetate	86.1	0.000	0.000	0	0.086	0.430	4.30	16	21.50	78	U	0.103
2-Butanone	72.1	0.000	0.000	0	0.086	0.430	4.30	13	21.50	65	U	0.103
cis-1,2-Dichloroethene	96.9	0.000	0.000	0	0.103	0.515	5.15	21	25.75	105	U	0.103
Chloroform	119.4	0.000	0.000	0	0.102	0.510	5.10	26	25.50	129	U	0.103
1,1,1-Trichloroethane	133.4	0.000	0.000	0	0.102	0.510	5.10	29	25.50	144	U	0.103
1,2-Dichloroethane	99.0	0.000	0.000	0	0.103	0.515	5.15	22	25.75	108	U	0.103
Benzene	78.1	0.033	1.669	6	0.103	0.515	5.15	17	25.75	85	U	0.103
Carbon tetrachloride	153.8	0.000	0.000	0	0.102	0.510	5.10	33	25.50	166	U	0.103
1,2-Dichloropropane	113.0	0.004	0.199	1	0.103	0.515	5.15	25	25.75	123	U	0.103
1,4 Dioxane	88.1	0.000	0.000	0	0.088	0.440	4.40	16	22.00	82	U	0.103
Trichloroethene	131.4	0.023	1.159	6	0.103	0.515	5.15	29	25.75	143	U	0.103
Bromodichloromethane	163.8	0.000	0.000	0	0.080	0.400	4.00	28	20.00	138	U	0.103
Methyl Isobutyl Ketone	100.2	0.000	0.000	0	0.092	0.460	4.60	19	23.00	97	U	0.103
cis-1,3-Dichloropropene	111.0	0.000	0.000	0	0.106	0.530	5.30	25	26.50	124	U	0.103
Toluene	92.1	0.138	6.923	27	0.103	0.515	5.15	20	25.75	100	J	0.103
trans-1,3-Dichloropropene	111.0	0.000	0.000	0	0.104	0.520	5.20	24	26.00	122	U	0.103
1,1,2-Trichloroethane	133.4	0.000	0.000	0	0.102	0.510	5.10	29	25.50	144	U	0.103
2-Hexanone	100.2	0.001	0.065	0	0.088	0.440	4.40	19	22.00	93	U	0.103
Dibromochloromethane	208.3	0.000	0.000	0	0.089	0.445	4.45	39	22.25	196	U	0.103
1,2-Dibromoethane	187.9	0.002	0.077	1	0.104	0.520	5.20	41	26.00	206	U	0.103

Tetrachloroethene	165.8	0.000	0.000	0	0.102	0.510	5.10	36	25.50	179	U	0.103
Chlorobenzene	112.6	0.006	0.277	1	0.102	0.510	5.10	24	25.50	121	U	0.103
Ethylbenzene	106.2	0.005	0.248	1	0.104	0.520	5.20	23	26.00	117	U	0.103
m & p-Xylene	106.2	0.022	1.117	5	0.206	1.030	10.30	46	51.50	231	U	0.206
Styrene	104.2	0.010	0.476	2	0.103	0.515	5.15	23	25.75	113	U	0.103
Bromoform	252.7	0.003	0.148	2	0.093	0.465	4.65	50	23.25	248	U	0.103
o-Xylene	106.2	0.007	0.363	2	0.102	0.510	5.10	23	25.50	114	U	0.103
1,1,2,2-Tetrachloroethane	167.8	0.013	0.657	5	0.102	0.510	5.10	36	25.50	181	U	0.103
4-Ethyltoluene	120.2	0.001	0.026	0	0.091	0.455	4.55	23	22.75	115	U	0.103
1,3,5-Trimethylbenzene	120.2	0.010	0.503	3	0.106	0.530	5.30	27	26.50	135	U	0.103
1,2,4-Trimethylbenzene	120.2	0.021	1.074	5	0.102	0.510	5.10	26	25.50	129	U	0.103
1,3-Dichlorobenzene	147.0	0.025	1.269	8	0.102	0.510	5.10	32	25.50	158	U	0.103
Benzyl chloride	126.6	0.001	0.055	0	0.090	0.450	4.50	24	22.50	120	U	0.103
1,4-Dichlorobenzene	147.0	0.026	1.283	8	0.102	0.510	5.10	32	25.50	158	U	0.103
1,2-Dichlorobenzene	147.0	0.025	1.268	8	0.100	0.500	5.00	31	25.00	155	U	0.103
1,2,4-Trichlorobenzene	181.4	0.041	2.072	16	0.103	0.515	5.15	39	25.75	197	U	0.103
Naphthalene	128.2	0.033	1.646	9	0.239	1.195	11.95	65	59.75	323	U	0.103
Hexachlorobutadiene	260.8	0.027	1.336	15	0.103	0.515	5.15	57	25.75	284	U	0.103

SAMPLE CALCULATION

EPA Method TO-15 Modified Full Scan GC/MS

SDG:		**LABQC**
Laboratory Number:		**B07029**
Standard Volume	STV	5.0
Sample Volume	SV	20
Can Dilution Factor	CDF	1.00
Gas Constant		23.68
Decimal Places:		0

Sample Calculation:

1) Avg RFn = Sum $\left| \frac{(Astdni)\ (Cistdi)}{(Cstdni)\ (Aistdi)} \right|_i$ Note: 1

2) Raw Amt = $\frac{(Ansamp)\ (Cistdi)}{(Avg\ RFn)\ (Aistdi)}$ = Cn

3) Amount ppbv = $\frac{(Raw\ Amt)\ 1000\ (CDF)}{(SV)}$

4) Amount ug/m3 = $\frac{(amt(ppbv)\ MW}{23.68}$

n	Compound	IS n	Chem type	MW	AvgRFn	Area Ansamp	Cistdi ppmv	Aistdi Ais	Cn ppmV Raw Amt	Amount ppbv	Amount ug/m3
2	Dichlorodifluoromethane	1	TRG	120.9	0.611	711	20.000	4064626	0.006	0	0
3	Chloromethane	1	TRG	50.5	0.393	343	20.000	4064626	0.004	0	0
4	Freon 114	1	TRG	170.9	0.650	2246	20.000	4064626	0.017	1	7
5	Vinyl chloride	1	TRG	62.5	0.213	0	20.000	4064626	0.000	0	0
6	Bromomethane	1	TRG	94.9	0.212	0	20.000	4064626	0.000	0	0
7	Chloroethane	1	TRG	64.5	0.112	0	20.000	4064626	0.000	0	0
10	Trichlorofluoromethane	1	TRG	137.4	0.584	0	20.000	4064626	0.000	0	0
12	Acetone	1	TRG	58.1	0.878	4526	20.000	4064626	0.025	1	2
13	2-propanol	1	TRG	60.1	0.668	0	20.000	4064626	0.000	0	0
15	1,1-Dichloroethene	1	TRG	96.9	0.471	0	20.000	4064626	0.000	0	0
17	Freon 113	1	TRG	187.3	0.370	0	20.000	4064626	0.000	0	0
19	Dichloromethane	1	TRG	84.9	0.209	0	20.000	4064626	0.000	0	0
20	Carbon disulfide	1	TRG	76.1	0.261	0	20.000	4064626	0.000	0	0
21	trans-1,2-Dichloroethene	1	TRG	96.9	0.192	0	20.000	4064626	0.000	0	0
22	Methyl tert butyl ether	1	TRG	88.1	0.910	0	20.000	4064626	0.000	0	0
24	1,1-Dichloroethane	1	TRG	99.0	0.606	0	20.000	4064626	0.000	0	0
25	Vinyl acetate	1	TRG	86.1	1.295	0	20.000	4064626	0.000	0	0
26	2-Butanone	1	TRG	72.1	0.170	0	20.000	4064626	0.000	0	0
32	cis-1,2-Dichloroethene	1	TRG	96.9	0.313	0	20.000	4064626	0.000	0	0
34	Chloroform	1	TRG	119.4	0.729	0	20.000	4064626	0.000	0	0
36	1,1,1-Trichloroethane	35	TRG	133.4	0.726	0	20.000	3731853	0.000	0	0
37	1,2-Dichloroethane	35	TRG	99.0	0.681	0	20.000	3731853	0.000	0	0
40	Benzene	35	TRG	78.1	1.183	7370	20.000	3731853	0.033	2	7
41	Carbon tetrachloride	35	TRG	153.8	0.737	0	20.000	3731853	0.000	0	0
43	1,2-Dichloropropane	35	TRG	113.0	0.457	340	20.000	3731853	0.004	0	0
44	1,4 Dioxane	35	TRG	88.1	0.350	0	20.000	3731853	0.000	0	0
46	Trichloroethene	35	TRG	131.4	0.573	2478	20.000	3731853	0.023	1	6
47	Bromodichloromethane	35	TRG	163.8	0.902	0	20.000	3731853	0.000	0	0
49	Methyl Isobutyl Ketone	35	TRG	100.2	2.014	0	20.000	3731853	0.000	0	0
50	cis-1,3-Dichloropropene	35	TRG	111.0	0.713	0	20.000	3731853	0.000	0	0
51	Toluene	35	TRG	92.1	1.546	39953	20.000	3731853	0.138	7	27
52	trans-1,3-Dichloropropene	35	TRG	111.0	0.847	0	20.000	3731853	0.000	0	0
53	1,1,2-Trichloroethane	35	TRG	133.4	0.455	0	20.000	3731853	0.000	0	0
54	2-Hexanone	35	TRG	100.2	2.559	617	20.000	3731853	0.001	0	0
57	Dibromochloromethane	35	TRG	208.3	1.207	0	20.000	3731853	0.000	0	0
58	1,2-Dibromoethane	35	TRG	187.9	1.119	323	20.000	3731853	0.002	0	0
59	Tetrachloroethene	35	TRG	165.8	0.985	0	20.000	3731853	0.000	0	0
60	Chlorobenzene	35	TRG	112.6	1.446	1496	20.000	3731853	0.006	0	0
62	Ethylbenzene	35	TRG	106.2	2.468	2286	20.000	3731853	0.005	0	0

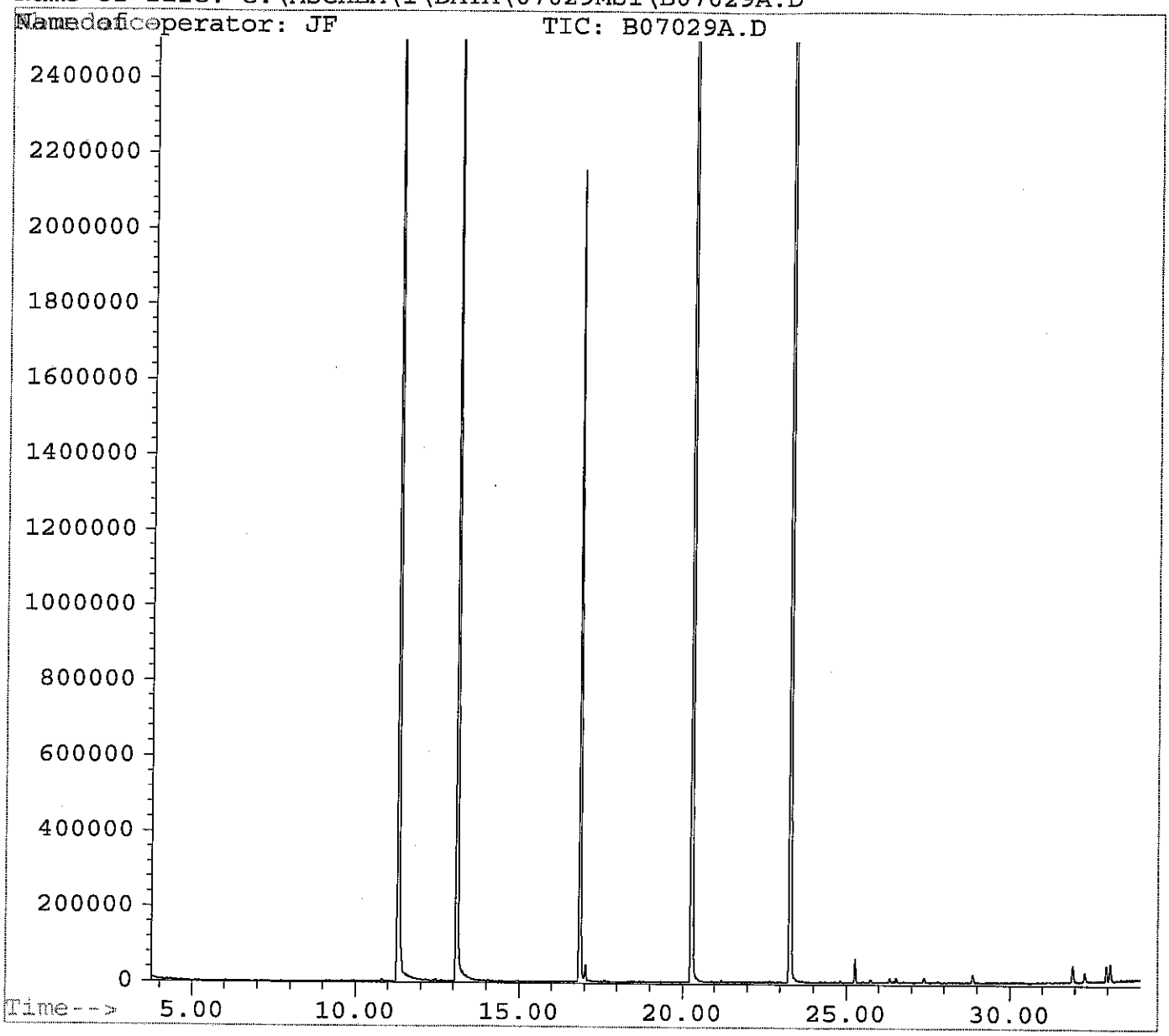
63	m & p-Xylene	35	TRG	106.2	2.080	8674	20.000	3731853	0.022	1	4
64	Styrene	35	TRG	104.2	1.484	2639	20.000	3731853	0.010	0	0
65	Bromoform	35	TRG	252.7	2.047	1133	20.000	3731853	0.003	0	0
66	o-Xylene	35	TRG	106.2	2.300	3113	20.000	3731853	0.007	0	0
67	1,1,2,2-Tetrachloroethane	35	TRG	167.8	2.109	5168	20.000	3731853	0.013	1	7
72	4-Ethyltoluene	35	TRG	120.2	3.651	356	20.000	3731853	0.001	0	0
73	1,3,5-Trimethylbenzene	35	TRG	120.2	3.337	6261	20.000	3731853	0.010	1	5
76	1,2,4-Trimethylbenzene	35	TRG	120.2	3.082	12354	20.000	3731853	0.021	1	5
78	1,3-Dichlorobenzene	35	TRG	147.0	2.476	11730	20.000	3731853	0.025	1	6
80	Benzyl chloride	35	TRG	126.6	3.379	699	20.000	3731853	0.001	0	0
81	1,4-Dichlorobenzene	35	TRG	147.0	2.556	12242	20.000	3731853	0.026	1	6
83	1,2-Dichlorobenzene	35	TRG	147.0	2.845	13458	20.000	3731853	0.025	1	6
86	1,2,4-Trichlorobenzene	35	TRG	181.4	5.265	40709	20.000	3731853	0.041	2	15
87	Naphthalene	35	TRG	128.2	8.792	54017	20.000	3731853	0.033	2	11
88	Hexachlorobutadiene	35	TRG	260.8	4.062	20244	20.000	3731853	0.027	1	11
1	Pentafluorobenzene	1	IS		1.000	4064626	20.000	4064626			
35	1,4-Difluorobenzene	35	IS		1.000	3731853	20.000	3731853			
94	Toluene-d8	35	SURR		1.124	2240046	20.000	3731853			

Calculation Definitions:

n	compound n
i	i th calibration level
Astdni	Standard Area for compound n at ith calibration level
Cstdni	Standard Concentration for compound n at ith calibration level in ppmv
Cistdi	Internal Standard Conc used for compound n at ith calibration level in ppmv
Aistdi	Internal Standard Area used for compound n at ith calibration level
Ansamp	Sample Area for compound n
Avg RFn	Average response factor for all ith calibration levels for compound n
Raw Amount	Sample Concentration in ppmv before applying factors
Cistd	Concentration internal standard used for compound n in sample in ppmv
Aistd	Area of internal standard used for compound n in sample
Cn	Concentration of compound n in sample in ppmv
23.68	Gas constant at 60 F as per EPA source test protocol
MW	Molecular weight of compound
Note (1) : Avg RFn	The values for the Average Response Factor AvgRFn can be optained from the response Factor Report for the Initial Calibration, or from the Calibration Report

Name of file: C:\MSCHEM\1\DATA\07029MS1\B07029A.D

Name of operator: JF



FORM II

QUALITY CONTROL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

LABORATORY CONTROL SPIKE

EPA Method TO-15 Modified Full Scan GC/MS
Analytical Method: TO-15

SDG: LABQC

File: QC07029A.D
Description: ST60421
Can/Tube#:
Sam_Type: LCS
QC_Batch: 070209-MS1
Air Volume: 1000 ml

Date Sampled: NA
Date Received: NA
Date Extracted: NA
Date Analyzed: 07/02/09 **Time:** 10:04
Can Dilution Factor: 1.00 2
QC Duplicate: No

CAS#	Compound	MDL ppbv	Spike Conc ppbv	Amount ppbv	Matrix Amt ppbv	Spk Amt ppbv	Percent Recovery	LCL %	UCL %	Flag
75-01-4	Vinyl chloride	0.10	1.04	0.96	0.000	0.96	92	70	130	
75-35-4	1,1-Dichloroethene	0.10	1.04	1.07	0.000	1.07	103	70	130	
75-09-2	Dichloromethane	0.10	1.04	1.06	0.000	1.06	102	70	130	
75-34-3	1,1-Dichloroethane	0.10	1.01	0.96	0.000	0.96	95	70	130	
67-66-3	Chloroform	0.10	1.02	0.94	0.000	0.94	92	70	130	
71-55-6	1,1,1-Trichloroethane	0.10	1.02	1.00	0.000	1.00	98	70	130	
107-06-2	1,2-Dichloroethane	0.10	1.03	1.11	0.000	1.11	108	70	130	
71-43-2	Benzene	0.10	1.03	0.97	0.000	0.97	94	70	130	
56-23-5	Carbon tetrachloride	0.10	1.02	1.06	0.000	1.06	104	70	130	
79-01-6	Trichloroethene	0.10	1.03	1.24	0.000	1.24	120	70	130	
108-88-3	Toluene	0.10	1.03	1.23	0.000	1.23	119	70	130	
106-93-4	1,2-Dibromoethane	0.10	1.04	1.22	0.000	1.22	117	70	130	
127-18-4	Tetrachloroethene	0.10	1.02	1.27	0.000	1.27	125	70	130	
108-90-7	Chlorobenzene	0.10	1.02	1.22	0.000	1.22	120	70	130	
100-41-4	Ethylbenzene	0.10	1.04	1.17	0.000	1.17	113	70	130	
108-38-3	m & p-Xylene	0.21	2.06	2.38	0.000	2.38	116	70	130	
95-47-6	o-Xylene	0.10	1.02	1.13	0.000	1.13	111	70	130	

	Surrogate Recovery	Spike Amt. ppbV	Amount ppbV	% Rec.	QC Limits	Flag * = Out
2037-26-5	Toluene-d8	10.000	10.524	105	70-130	

Notes: Reported results are to be interpreted to two significant figures.
ug/m3 calculated assuming conditions at 60 F and 1 atm.

QUANTITATION REPORT

EPA Method TO-15 Modified Full Scan GC/MS

			Review	EAS Sample ID: QC07029	
File Name:	QC07029A.D				1 KB
Sample ID:	ST60421				2 AT
Date:	2 Jul 109 10:04 am			Cal Amounts	3 BB
Run Method:	1T15EXAY.M			IS Areas	4 SH
Quant Method:	1T15EXAY.M			Carryover	
Cal Update:	Tue Mar 17 14:18:15 2009				
Template:	1TO15SP.MS1				
Can Factor:	1.00				
Volume:	1000	ml		Analyst: KB 1	

CAS#	Compound	n	Raw Amount	RT	Target RT	Ion	Sample Area	Qualifier	Lower Qual	Upper Qual	Qual Flag	Cal Flag	Int Flag
75-01-4	Vinyl chloride	5	0.965	4.32	4.33	62.00	40977	32	24	36			
75-35-4	1,1-Dichloroethene	15	1.067	6.86	6.89	61.00	100116	35	34	51			
75-09-2	Dichloromethane	19	1.059	7.27	7.31	84.00	43990	57	51	77			
75-34-3	1,1-Dichloroethane	24	0.955	8.85	8.90	63.00	115327	29	24	36			
67-66-3	Chloroform	34	0.937	10.46	10.53	83.00	135976	67	51	77			
71-55-6	1,1,1-Trichloroethane	36	1.003	11.73	11.80	97.00	131895	63	51	76			
107-06-2	1,2-Dichloroethane	37	1.111	11.80	11.87	61.95	137024	31	25	37			
71-43-2	Benzene	40	0.974	12.45	12.51	78.00	208846	23	19	29			
56-23-5	Carbon tetrachloride	41	1.060	12.51	12.56	116.90	141572	92	79	119			
79-01-6	Trichloroethene	46	1.243	14.06	14.13	130.00	129062	95	79	119			
108-88-3	Toluene	51	1.234	17.04	17.11	91.00	345676	56	44	66			
106-93-4	1,2-Dibromoethane	58	1.220	18.70	18.80	107.00	247359	98	75	113			
127-18-4	Tetrachloroethene	59	1.274	18.89	18.97	166.00	227315	59	52	78			
108-90-7	Chlorobenzene	60	1.216	20.37	20.45	112.00	318636	31	25	38			
100-41-4	Ethylbenzene	62	1.169	20.90	17.80	91.00	522845	26	21	32			
108-38-3	m & p-Xylene	63	2.384	21.19	21.28	91.00	898458	40	32	48			
95-47-6	o-Xylene	66	1.130	22.15	22.25	91.00	470956	39	30	45			
363-72-4	Pentafluorobenzene	1	20.000	11.32	11.38	168.00	**3980889**						
540-36-3	1,4-Difluorobenzene	35	20.000	13.10	13.17	114.00	**3623010**						
2037-26-5	Toluene-d8	94	**10.524**	16.86	16.94	98.00	2143517	62	51	77			
3114-55-4	Chlorobenzene-d5	95	**21.751**	20.28	20.36	117.00	4064422	67	56	84		HIGH	
460-00-4	1,4-Bromofluorobenzene	96	**11.037**	23.28	23.38	95.00	3225080	82	56	83			

Integration Flags:

If no flag the Integration was done by the instrument computer

M1 Manual Integration because the computer did not integrated the peak or integrated the wrong peak

M2 Manual Integration because computer integration of baseline was different then Inital Calibration

INITIAL CALIBRATION REPORT

EPA Method TO-15 Modified Full Scan GC/MS

		SDG:	LABQC
		QC_Batch:	070209-MS1
File Name:	QC07029A.D	Instrument Name:	5970 - In
Sample ID:	ST60421		
Sample Analysis Date:	2 Jul 109 10:04 am	Number Compounds:	96
Run Method:	1T15EXAY.M	IS1: ST60403	20
Quant and Calibration Method:	1T15EXAY.M	IS2: ST60403	20
Cal Update:	Tue Mar 17 14:18:15 2009	IS3:	
Template:	1TO15SP.MS1	IS4:	

Calibration Title: EPA T0-15

		Calibration Amount CA, ppmv						Calibration Response, Area					
		Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
		Amt	Amt	Amt	Amt	Amt	Amt	C03179C.D	C03179E.D	C03179B.D	C03179A.D	C03169H.D	C03179D.D
n	Compound	0.25	4.0	1.0	5.0	10.0	2.0	0.25	4.0	1.0	5.0	10.0	2.0
5	Vinyl chloride	0.260	4.160	1.040	5.200	10.400	2.080	7909	132864	32643	150492	285530	62953
15	1,1-Dichloroethene	0.253	4.040	1.010	5.050	10.100	2.020	16793	248606	63935	305424	730028	150732
19	Dichloromethane	0.260	4.160	1.040	5.200	10.400	2.080	8354	124766	26131	120655	330491	71297
24	1,1-Dichloroethane	0.253	4.040	1.010	5.050	10.100	2.020	22823	387657	85531	331041	871129	183187
34	Chloroform	0.255	4.080	1.020	5.100	10.200	2.040	27147	449509	101707	516969	959204	213353
36	1,1,1-Trichloroethane	0.255	4.080	1.020	5.100	10.200	2.040	26931	432442	100881	509527	970639	210683
37	1,2-Dichloroethane	0.258	4.120	1.030	5.150	10.300	2.060	26512	398927	96975	495766	920839	187037
40	Benzene	-1.000	4.120	1.030	5.150	10.300	2.060	-1	712515	206967	782160	1387400	364766
41	Carbon tetrachloride	0.255	4.080	1.020	5.100	10.200	2.040	26276	451629	105798	518753	931992	220983
46	Trichloroethene	0.258	4.120	1.030	5.150	10.300	2.060	27013	323273	83100	364698	666308	165489
51	Toluene	-1.000	4.120	1.030	5.150	10.300	2.060	-1	944443	257501	1033029	1877014	478350
58	1,2-Dibromoethane	0.260	4.160	1.040	5.200	10.400	2.080	46912	660815	169213	701472	1505940	324567
59	Tetrachloroethene	0.255	4.080	1.020	5.100	10.200	2.040	40710	589393	145069	627137	1126037	300057
60	Chlorobenzene	0.255	4.080	1.020	5.100	10.200	2.040	64660	836027	208106	862738	1818049	410336
62	Ethylbenzene	0.260	4.160	1.040	5.200	10.400	2.080	107037	1527752	359496	1548148	3108186	722767
63	m & p-Xylene	0.515	8.240	2.060	10.300	20.600	4.120	192864	2440351	617919	2542524	4725274	1220126
66	o-Xylene	0.255	4.080	1.020	5.100	10.200	2.040	105567	1325719	329821	1384162	2817484	643280
1	Pentafluorobenzene	20.000	20.000	20.000	20.000	20.000	20.000	2643183	2935915	2871816	2719013	2737194	3022845
35	1,4-Difluorobenzene	20.000	20.000	20.000	20.000	20.000	20.000	2659938	2870629	2814997	2720455	2706138	3020264
94	Toluene-d8	10.000	10.000	10.000	10.000	10.000	10.000	1479389	1629143	1590486	1469067	1546296	1730275
95	Chlorobenzene-d5	20.000	20.000	20.000	20.000	20.000	20.000	2736627	3026382	2937451	2602948	2900630	3122484
96	1,4-Bromofluorobenzene	10.000	10.000	10.000	10.000	10.000	10.000	2176179	2385587	2352342	2001651	2163994	2472723

(60)

INITIAL CALIBRATION REPORT: Response Factors

SDG:	**LABQC**	**Sample Calculation:**	
QC_Batch:	**070209-MS1**	1) Avg RFn =	Sum $\left\lvert \frac{(Astdni)}{(Cstdni)} \frac{(Cistdi)}{(Aistdi)} \right\rvert_i$
Sample ID:	ST60421		
Sample Analysis Date:	2 Jul 109 10:04 am		
Run Method:	1T15EXAY.M		
Quant Method:	1T15EXAY.M		
Cal Update:	Tue Mar 17 14:18:15 2009		
Template:	1TO15SP.MS1		

Response Factors

Compound	RF1	RF2	RF3	RF4	RF5	RF6	AvgRFn	%RSD
Vinyl chloride	0.230	0.218	0.219	0.213	0.201	0.200	0.213	5.40
1,1-Dichloroethene	0.502	0.419	0.441	0.445	0.528	0.494	0.471	9.01
Dichloromethane	0.243	0.204	0.175	0.171	0.232	0.227	0.209	14.64
1,1-Dichloroethane	0.683	0.654	0.590	0.482	0.630	0.600	0.606	11.51
Chloroform	0.806	0.751	0.694	0.746	0.687	0.692	0.729	6.41
1,1,1-Trichloroethane	0.794	0.738	0.703	0.734	0.703	0.684	0.726	5.40
1,2-Dichloroethane	0.773	0.675	0.669	0.708	0.661	0.601	0.681	8.33
Benzene	NA	1.205	1.428	1.117	0.996	1.173	1.183	13.36
Carbon tetrachloride	0.775	0.771	0.737	0.748	0.675	0.717	0.737	5.04
Trichloroethene	0.787	0.547	0.573	0.521	0.478	0.532	0.573	19.12
Toluene	NA	1.597	1.776	1.475	1.347	1.538	1.546	10.25
1,2-Dibromoethane	1.357	1.107	1.156	0.992	1.070	1.033	1.119	11.58
Tetrachloroethene	1.200	1.006	1.010	0.904	0.816	0.974	0.985	13.06
Chlorobenzene	1.907	1.428	1.450	1.244	1.317	1.332	1.446	16.45
Ethylbenzene	3.095	2.559	2.456	2.189	2.209	2.301	2.468	13.74
m & p-Xylene	2.816	2.063	2.131	1.815	1.695	1.961	2.080	18.95
o-Xylene	3.113	2.264	2.297	1.995	2.041	2.088	2.300	18.10
Pentafluorobenzene	1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.00
1,4-Difluorobenzene	1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.00
Toluene-d8	1.112	1.135	1.130	1.080	1.143	1.146	1.124	2.20
Chlorobenzene-d5	1.029	1.054	1.044	0.957	1.072	1.034	1.032	3.85
1,4-Bromofluorobenzene	1.636	1.662	1.671	1.472	1.599	1.637	1.613	4.57

CALCULATIONS

EPA Method TO-15 Modified Full Scan GC/MS

SDG: LABQC
Laboratory Number: QC07029

RL:	1T15EXAY.M
Run Method:	1T15EXAY.M
Quant Method:	1T15EXAY.M
Can Dilution Factor:	1.00
Air Volume:	1000 ml
Gas Constant:	23.68
Decimal Places:	2

MDL Factor 1

Compound	M.W.	Raw Amount	Result ppbv	Result ug/m3	(1) MDL ppbv	(2) RL ppbv	Calc MDL ppbv	Calc MDL ug/m3	Calc RL ppbv	Calc RL ug/m3	Flag	Spike ppmv
Vinyl chloride	62.5	0.965	0.965	2.55	0.104	0.520	0.10	0.27	0.52	1.37		1.040
1,1-Dichloroethene	96.9	1.067	1.067	4.37	0.101	0.505	0.10	0.41	0.51	2.07		1.040
Dichloromethane	84.9	1.059	1.059	3.80	0.104	0.520	0.10	0.37	0.52	1.86		1.040
1,1-Dichloroethane	99.0	0.955	0.955	3.99	0.101	0.505	0.10	0.42	0.51	2.11		1.010
Chloroform	119.4	0.937	0.937	4.72	0.102	0.510	0.10	0.51	0.51	2.57		1.020
1,1,1-Trichloroethane	133.4	1.003	1.003	5.65	0.102	0.510	0.10	0.57	0.51	2.87		1.020
1,2-Dichloroethane	99.0	1.111	1.111	4.64	0.103	0.515	0.10	0.43	0.52	2.15		1.030
Benzene	78.1	0.974	0.974	3.21	0.103	0.515	0.10	0.34	0.52	1.70		1.030
Carbon tetrachloride	153.8	1.060	1.060	6.89	0.102	0.510	0.10	0.66	0.51	3.31		1.020
Trichloroethene	131.4	1.243	1.243	6.90	0.103	0.515	0.10	0.57	0.52	2.86		1.030
Toluene	92.1	1.234	1.234	4.80	0.103	0.515	0.10	0.40	0.52	2.00		1.030
1,2-Dibromoethane	187.9	1.220	1.220	9.68	0.104	0.520	0.10	0.83	0.52	4.13		1.040
Tetrachloroethene	165.8	1.274	1.274	8.92	0.102	0.510	0.10	0.71	0.51	3.57		1.020
Chlorobenzene	112.6	1.216	1.216	5.78	0.102	0.510	0.10	0.49	0.51	2.43		1.020
Ethylbenzene	106.2	1.169	1.169	5.24	0.104	0.520	0.10	0.47	0.52	2.33		1.040
m & p-Xylene	106.2	2.384	2.384	10.69	0.206	1.030	0.21	0.92	1.03	4.62		2.060
o-Xylene	106.2	1.130	1.130	5.07	0.102	0.510	0.10	0.46	0.51	2.29		1.020

SAMPLE CALCULATION

EPA Method TO-15 Modified Full Scan GC/MS

SDG:		**LABQC**
Laboratory Number:		**QC07029**
Standard Volume	STV	5.0
Sample Volume	SV	1000
Can Dilution Factor	CDF	1.00
Gas Constant		23.68
Decimal Places:		2

Sample Calculation:

1) Avg RFn = Sum $\left| \frac{(Astdni)}{(Cstdni)} \frac{(Cistdi)}{(Aistdi)} \right|_i$ Note: 1

2) Raw Amt = $\frac{(Ansamp)}{(Avg\ RFn)} \frac{(Cistdi)}{(Aistdi)}$ = Cn

3) Amount ppbv = $\frac{(Raw\ Amt)\ 1000}{(SV)}$ (CDF)

4) Amount ug/m3 = $\frac{(amt(ppbv)\ MW}{23.68}$

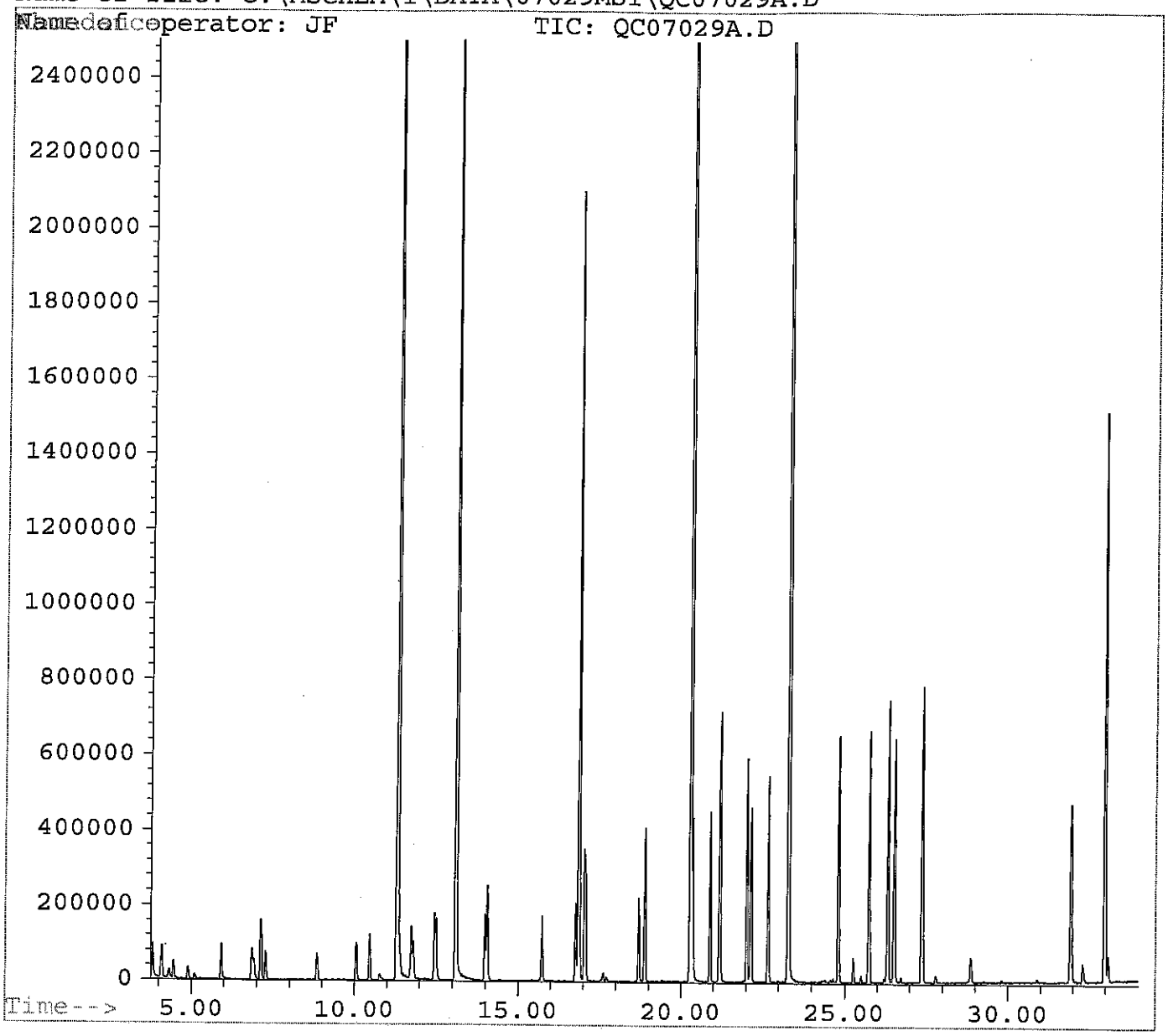
n	Compound	IS n	Chem type	MW	AvgRFn	Area Ansamp	Cistdi ppmv	Aistdi Ais	Cn ppmV Raw Amt	Amount ppbv	Amount ug/m3
5	Vinyl chloride	1	TRG	62.5	0.213	40977	20.000	3980889	0.965	0.96	2.53
15	1,1-Dichloroethene	1	TRG	96.9	0.471	100116	20.000	3980889	1.067	1.07	4.38
19	Dichloromethane	1	TRG	84.9	0.209	43990	20.000	3980889	1.059	1.06	3.80
24	1,1-Dichloroethane	1	TRG	99.0	0.606	115327	20.000	3980889	0.955	0.96	4.01
34	Chloroform	1	TRG	119.4	0.729	135976	20.000	3980889	0.937	0.94	4.74
36	1,1,1-Trichloroethane	35	TRG	133.4	0.726	131895	20.000	3623010	1.003	1.00	5.63
37	1,2-Dichloroethane	35	TRG	99.0	0.681	137024	20.000	3623010	1.111	1.11	4.64
40	Benzene	35	TRG	78.1	1.183	208846	20.000	3623010	0.974	0.97	3.20
41	Carbon tetrachloride	35	TRG	153.8	0.737	141572	20.000	3623010	1.060	1.06	6.88
46	Trichloroethene	35	TRG	131.4	0.573	129062	20.000	3623010	1.243	1.24	6.88
51	Toluene	35	TRG	92.1	1.546	345676	20.000	3623010	1.234	1.23	4.78
58	1,2-Dibromoethane	35	TRG	187.9	1.119	247359	20.000	3623010	1.220	1.22	9.68
59	Tetrachloroethene	35	TRG	165.8	0.985	227315	20.000	3623010	1.274	1.27	8.89
60	Chlorobenzene	35	TRG	112.6	1.446	318636	20.000	3623010	1.216	1.22	5.80
62	Ethylbenzene	35	TRG	106.2	2.468	522845	20.000	3623010	1.169	1.17	5.25
63	m & p-Xylene	35	TRG	106.2	2.080	898458	20.000	3623010	2.384	2.38	10.67
66	o-Xylene	35	TRG	106.2	2.300	470956	20.000	3623010	1.130	1.13	5.07
1	Pentafluorobenzene	1	IS		1.000	3980889	20.000	3980889			
35	1,4-Difluorobenzene	35	IS		1.000	3623010	20.000	3623010			
94	Toluene-d8	35	SURR		1.124	2143517	20.000	3623010			

Calculation Definitions:

n	compound n
i	i th calibration level
Astdni	Standard Area for compound n at ith calibration level
Cstdni	Standard Concentration for compound n at ith calibration level in ppmv
Cistdi	Internal Standard Conc used for compound n at ith calibration level in ppmv
Aistdi	Internal Standard Area used for compound n at ith calibration level
Ansamp	Sample Area for compound n
Avg RFn	Average response factor for all ith calibration levels for compound n
Raw Amount	Sample Concentration in ppmv before applying factors
Cistd	Concentration internal standard used for compound n in sample in ppmv
Aistd	Area of internal standard used for compound n in sample
Cn	Concentration of compound n in sample in ppmv
23.68	Gas constant at 60 F as per EPA source test protocol
MW	Molecular weight of compound
Note (1) : Avg RFn	The values for the Average Response Factor AvgRFn can be optained from the response Factor Report for the Initial Calibration, or from the Calibration Report

Name of file: C:\MSCHEM\1\DATA\07029MS1\QC07029A.D

Name of operator: JF



QUALITY CONTROL DUPLICATE

ENVIRONMENTAL
Analytical Service, Inc.

Duplicate of QC Sample

EPA Method TO-15 Modified Full Scan GC/MS **SDG: LABQC**
Analytical Method: **TO-15**

Dup File: QC07029B.D
Description: ST60421
Can/Tube#:
QC_Batch: 070209-MS1

CAS#	Compound	LCD ppbv	LCS ppbv	RPD %D	Limit %	Flag * = Out
75-01-4	Vinyl chloride	1.00	0.96	4	25	
75-35-4	1,1-Dichloroethene	1.05	1.07	2	25	
75-09-2	Dichloromethane	1.02	1.06	4	25	
75-34-3	1,1-Dichloroethane	0.96	0.96	0	25	
67-66-3	Chloroform	0.93	0.94	1	25	
71-55-6	1,1,1-Trichloroethane	1.01	1.00	1	25	
107-06-2	1,2-Dichloroethane	1.12	1.11	1	25	
71-43-2	Benzene	1.04	0.97	7	25	
56-23-5	Carbon tetrachloride	1.11	1.06	5	25	
79-01-6	Trichloroethene	1.24	1.24	0	25	
108-88-3	Toluene	1.17	1.23	6	25	
106-93-4	1,2-Dibromoethane	1.18	1.22	4	25	
127-18-4	Tetrachloroethene	1.25	1.27	2	25	
108-90-7	Chlorobenzene	1.12	1.22	10	25	
100-41-4	Ethylbenzene	1.21	1.17	4	25	
108-38-3	m & p-Xylene	2.18	2.38	10	25	
95-47-6	o-Xylene	1.10	1.13	3	25	

FORM II

QUALITY CONTROL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

LABORATORY CONTROL DUPLICATE

EPA Method TO-15 Modified Full Scan GC/MS **SDG: LABQC**
Analytical Method: TO-15

File: QC07029B.D
Description: ST60421
Can/Tube#:
Sam_Type: LCD
QC_Batch: 070209-MS1
Air Volume: 1000 ml

Date Sampled: NA
Date Received: NA
Date Extracted: NA
Date Analyzed: 07/02/09 **Time:** 10:51
Can Dilution Factor: 1.00 2
QC Duplicate: Yes

CAS#	Compound	MDL ppbv	Spike Conc ppbv	Amount ppbv	Matrix Amt ppbv	Spk Amt ppbv	Percent Recovery	LCL %	UCL %	Flag
75-01-4	Vinyl chloride	0.10	1.04	1.00	0.000	1.00	96	70	130	
75-35-4	1,1-Dichloroethene	0.10	1.04	1.05	0.000	1.05	101	70	130	
75-09-2	Dichloromethane	0.10	1.04	1.02	0.000	1.02	98	70	130	
75-34-3	1,1-Dichloroethane	0.10	1.01	0.96	0.000	0.96	95	70	130	
67-66-3	Chloroform	0.10	1.02	0.93	0.000	0.93	91	70	130	
71-55-6	1,1,1-Trichloroethane	0.10	1.02	1.01	0.000	1.01	99	70	130	
107-06-2	1,2-Dichloroethane	0.10	1.03	1.12	0.000	1.12	109	70	130	
71-43-2	Benzene	0.10	1.03	1.04	0.000	1.04	101	70	130	
56-23-5	Carbon tetrachloride	0.10	1.02	1.11	0.000	1.11	109	70	130	
79-01-6	Trichloroethene	0.10	1.03	1.24	0.000	1.24	120	70	130	
108-88-3	Toluene	0.10	1.03	1.17	0.000	1.17	114	70	130	
106-93-4	1,2-Dibromoethane	0.10	1.04	1.18	0.000	1.18	113	70	130	
127-18-4	Tetrachloroethene	0.10	1.02	1.25	0.000	1.25	123	70	130	
108-90-7	Chlorobenzene	0.10	1.02	1.12	0.000	1.12	110	70	130	
100-41-4	Ethylbenzene	0.10	1.04	1.21	0.000	1.21	116	70	130	
108-38-3	m & p-Xylene	0.21	2.06	2.18	0.000	2.18	106	70	130	
95-47-6	o-Xylene	0.10	1.02	1.10	0.000	1.10	108	70	130	

	Surrogate Recovery	Spike Amt. ppbV	Amount ppbV	% Rec.	QC Limits	Flag * = Out
2037-26-5	Toluene-d8	10.000	10.882	109	70-130	

Notes: Reported results are to be interpreted to two significant figures.
ug/m3 calculated assuming conditions at 60 F and 1 atm.

QUANTITATION REPORT

EPA Method TO-15 Modified Full Scan GC/MS

			Review	EAS Sample ID: QC07029	
File Name:	QC07029B.D				1 KB
Sample ID:	ST60421				2 AT
Date:	2 Jul 109 10:51 am			Cal Amounts	3 BB
Run Method:	1T15EXAY.M			IS Areas	4 SH
Quant Method:	1T15EXAY.M			Carryover	
Cal Update:	Tue Mar 17 14:18:15 2009				
Template:	1TO15SP.MS1				
Can Factor:	1.00				
Volume:	1000	ml		Analyst: KB 1	

CAS#	Compound	n	Raw Amount	RT	Target RT	Ion	Sample Area	Qualifier	Lower Qual	Upper Qual	Qual Flag	Cal Flag	Int Flag
75-01-4	Vinyl chloride	5	0.997	4.31	4.33	62.00	45053	23	24	36	Q		
75-35-4	1,1-Dichloroethene	15	1.051	6.86	6.89	61.00	104935	42	34	51			
75-09-2	Dichloromethane	19	1.019	7.28	7.31	84.00	45055	59	51	77			
75-34-3	1,1-Dichloroethane	24	0.961	8.87	8.90	63.00	123457	31	24	36			
67-66-3	Chloroform	34	0.925	10.48	10.53	83.00	142878	63	51	77			
71-55-6	1,1,1-Trichloroethane	36	1.011	11.75	11.80	97.00	139218	65	51	76			
107-06-2	1,2-Dichloroethane	37	1.117	11.83	11.87	61.95	144184	29	25	37			
71-43-2	Benzene	40	1.038	12.47	12.51	78.00	232919	23	19	29			
56-23-5	Carbon tetrachloride	41	1.106	12.52	12.56	116.90	154529	95	79	119			
79-01-6	Trichloroethene	46	1.241	14.08	14.13	130.00	134760	97	79	119			
108-88-3	Toluene	51	1.165	17.05	17.11	91.00	341568	57	44	66			
106-93-4	1,2-Dibromoethane	58	1.183	18.72	18.80	107.00	250926	89	75	113			
127-18-4	Tetrachloroethene	59	1.253	18.91	18.97	166.00	234064	62	52	78			
108-90-7	Chlorobenzene	60	1.122	20.38	20.45	112.00	307570	32	25	38			
100-41-4	Ethylbenzene	62	1.207	20.91	17.80	91.00	564763	27	21	32			
108-38-3	m & p-Xylene	63	2.182	21.20	21.28	91.00	860314	38	32	48			
95-47-6	o-Xylene	66	1.102	22.16	22.25	91.00	480366	38	30	45			
363-72-4	Pentafluorobenzene	1	20.000	11.34	11.38	168.00	**4236154**						
540-36-3	1,4-Difluorobenzene	35	20.000	13.12	13.17	114.00	**3791500**						
2037-26-5	Toluene-d8	94	**10.882**	16.88	16.94	98.00	2319533	63	51	77			
3114-55-4	Chlorobenzene-d5	95	**22.174**	20.30	20.36	117.00	4336053	70	56	84		HIGH	
460-00-4	1,4-Bromofluorobenzene	96	**11.841**	23.30	23.38	95.00	3620726	79	56	83			

Integration Flags:

If no flag the Integration was done by the instrument computer

M1 Manual Integration because the computer did not integrated the peak or integrated the wrong peak

M2 Manual Integration because computer integration of baseline was different then Inital Calibration

INITIAL CALIBRATION REPORT

EPA Method TO-15 Modified Full Scan GC/MS

SDG: LABQC
QC_Batch: 070209-MS1
Instrument Name: 5970 - In

File Name: QC07029B.D
Sample ID: ST60421
Sample Analysis Date: 2 Jul 109 10:51 am
Run Method: 1T15EXAY.M
Quant and Calibration Method: 1T15EXAY.M
Cal Update: Tue Mar 17 14:18:15 2009
Template: 1TO15SP.MS1

Calibration Title: EPA T0-15

Number Compounds: 96
IS1: ST60403 20
IS2: ST60403 20
IS3:
IS4:

		Calibration Amount CA, ppmv						Calibration Response, Area					
		Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
		Amt	Amt	Amt	Amt	Amt	Amt	C03179C.D	C03179E.D	C03179B.D	C03179A.D	C03169H.D	C03179D.D
n	Compound	0.25	4.0	1.0	5.0	10.0	2.0	0.25	4.0	1.0	5.0	10.0	2.0
5	Vinyl chloride	0.260	4.160	1.040	5.200	10.400	2.080	7909	132864	32643	150492	285530	62953
15	1,1-Dichloroethene	0.253	4.040	1.010	5.050	10.100	2.020	16793	248606	63935	305424	730028	150732
19	Dichloromethane	0.260	4.160	1.040	5.200	10.400	2.080	8354	124766	26131	120655	330491	71297
24	1,1-Dichloroethane	0.253	4.040	1.010	5.050	10.100	2.020	22823	387657	85531	331041	871129	183187
34	Chloroform	0.255	4.080	1.020	5.100	10.200	2.040	27147	449509	101707	516969	959204	213353
36	1,1,1-Trichloroethane	0.255	4.080	1.020	5.100	10.200	2.040	26931	432442	100881	509527	970639	210683
37	1,2-Dichloroethane	0.258	4.120	1.030	5.150	10.300	2.060	26512	398927	96975	495766	920839	187037
40	Benzene	-1.000	4.120	1.030	5.150	10.300	2.060	-1	712515	206967	782160	1387400	364766
41	Carbon tetrachloride	0.255	4.080	1.020	5.100	10.200	2.040	26276	451629	105798	518753	931992	220983
46	Trichloroethene	0.258	4.120	1.030	5.150	10.300	2.060	27013	323273	83100	364698	666308	165489
51	Toluene	-1.000	4.120	1.030	5.150	10.300	2.060	-1	944443	257501	1033029	1877014	478350
58	1,2-Dibromoethane	0.260	4.160	1.040	5.200	10.400	2.080	46912	660815	169213	701472	1505940	324567
59	Tetrachloroethene	0.255	4.080	1.020	5.100	10.200	2.040	40710	589393	145069	627137	1126037	300057
60	Chlorobenzene	0.255	4.080	1.020	5.100	10.200	2.040	64660	836027	208106	862738	1818049	410336
62	Ethylbenzene	0.260	4.160	1.040	5.200	10.400	2.080	107037	1527752	359496	1548148	3108186	722767
63	m & p-Xylene	0.515	8.240	2.060	10.300	20.600	4.120	192864	2440351	617919	2542524	4725274	1220126
66	o-Xylene	0.255	4.080	1.020	5.100	10.200	2.040	105567	1325719	329821	1384162	2817484	643280
1	Pentafluorobenzene	20.000	20.000	20.000	20.000	20.000	20.000	2643183	2935915	2871816	2719013	2737194	3022845
35	1,4-Difluorobenzene	20.000	20.000	20.000	20.000	20.000	20.000	2659938	2870629	2814997	2720455	2706138	3020264
94	Toluene-d8	10.000	10.000	10.000	10.000	10.000	10.000	1479389	1629143	1590486	1469067	1546296	1730275
95	Chlorobenzene-d5	20.000	20.000	20.000	20.000	20.000	20.000	2736627	3026382	2937451	2602948	2900630	3122484
96	1,4-Bromofluorobenzene	10.000	10.000	10.000	10.000	10.000	10.000	2176179	2385587	2352342	2001651	2163994	2472723

INITIAL CALIBRATION REPORT: Response Factors

SDG:	**LABQC**	**Sample Calculation:**	
QC_Batch:	**070209-MS1**	1) Avg RFn = Sum	$\left\lvert \frac{(Astdni)}{(Cstdni)} \frac{(Cistdi)}{(Aistdi)} \right\rvert_i$
Sample ID:	ST60421		
Sample Analysis Date:	2 Jul 109 10:51 am		
Run Method:	1T15EXAY.M		
Quant Method:	1T15EXAY.M		
Cal Update:	Tue Mar 17 14:18:15 2009		
Template:	1TO15SP.MS1		

Response Factors

Compound	RF1	RF2	RF3	RF4	RF5	RF6	AvgRFn	%RSD
Vinyl chloride	0.230	0.218	0.219	0.213	0.201	0.200	0.213	5.40
1,1-Dichloroethene	0.502	0.419	0.441	0.445	0.528	0.494	0.471	9.01
Dichloromethane	0.243	0.204	0.175	0.171	0.232	0.227	0.209	14.64
1,1-Dichloroethane	0.683	0.654	0.590	0.482	0.630	0.600	0.606	11.51
Chloroform	0.806	0.751	0.694	0.746	0.687	0.692	0.729	6.41
1,1,1-Trichloroethane	0.794	0.738	0.703	0.734	0.703	0.684	0.726	5.40
1,2-Dichloroethane	0.773	0.675	0.669	0.708	0.661	0.601	0.681	8.33
Benzene	NA	1.205	1.428	1.117	0.996	1.173	1.183	13.36
Carbon tetrachloride	0.775	0.771	0.737	0.748	0.675	0.717	0.737	5.04
Trichloroethene	0.787	0.547	0.573	0.521	0.478	0.532	0.573	19.12
Toluene	NA	1.597	1.776	1.475	1.347	1.538	1.546	10.25
1,2-Dibromoethane	1.357	1.107	1.156	0.992	1.070	1.033	1.119	11.58
Tetrachloroethene	1.200	1.006	1.010	0.904	0.816	0.974	0.985	13.06
Chlorobenzene	1.907	1.428	1.450	1.244	1.317	1.332	1.446	16.45
Ethylbenzene	3.095	2.559	2.456	2.189	2.209	2.301	2.468	13.74
m & p-Xylene	2.816	2.063	2.131	1.815	1.695	1.961	2.080	18.95
o-Xylene	3.113	2.264	2.297	1.995	2.041	2.088	2.300	18.10
Pentafluorobenzene	1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.00
1,4-Difluorobenzene	1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.00
Toluene-d8	1.112	1.135	1.130	1.080	1.143	1.146	1.124	2.20
Chlorobenzene-d5	1.029	1.054	1.044	0.957	1.072	1.034	1.032	3.85
1,4-Bromofluorobenzene	1.636	1.662	1.671	1.472	1.599	1.637	1.613	4.57

CALCULATIONS

EPA Method TO-15 Modified Full Scan GC/MS

SDG: LABQC
Laboratory Number: QC07029

RL:	1T15EXAY.M
Run Method:	1T15EXAY.M
Quant Method:	1T15EXAY.M
Can Dilution Factor:	1.00
Air Volume:	1000 ml
Gas Constant:	23.68
Decimal Places:	2

MDL Factor 1

Compound	M.W.	Raw Amount	Result ppbv	Result ug/m3	(1) MDL ppbv	(2) RL ppbv	Calc MDL ppbv	Calc MDL ug/m3	Calc RL ppbv	Calc RL ug/m3	Flag	Spike ppmv
Vinyl chloride	62.5	0.997	0.997	2.63	0.104	0.520	0.10	0.27	0.52	1.37		1.040
1,1-Dichloroethene	96.9	1.051	1.051	4.30	0.101	0.505	0.10	0.41	0.51	2.07		1.040
Dichloromethane	84.9	1.019	1.019	3.65	0.104	0.520	0.10	0.37	0.52	1.86		1.040
1,1-Dichloroethane	99.0	0.961	0.961	4.02	0.101	0.505	0.10	0.42	0.51	2.11		1.010
Chloroform	119.4	0.925	0.925	4.66	0.102	0.510	0.10	0.51	0.51	2.57		1.020
1,1,1-Trichloroethane	133.4	1.011	1.011	5.70	0.102	0.510	0.10	0.57	0.51	2.87		1.020
1,2-Dichloroethane	99.0	1.117	1.117	4.67	0.103	0.515	0.10	0.43	0.52	2.15		1.030
Benzene	78.1	1.038	1.038	3.42	0.103	0.515	0.10	0.34	0.52	1.70		1.030
Carbon tetrachloride	153.8	1.106	1.106	7.18	0.102	0.510	0.10	0.66	0.51	3.31		1.020
Trichloroethene	131.4	1.241	1.241	6.88	0.103	0.515	0.10	0.57	0.52	2.86		1.030
Toluene	92.1	1.165	1.165	4.53	0.103	0.515	0.10	0.40	0.52	2.00		1.030
1,2-Dibromoethane	187.9	1.183	1.183	9.39	0.104	0.520	0.10	0.83	0.52	4.13		1.040
Tetrachloroethene	165.8	1.253	1.253	8.77	0.102	0.510	0.10	0.71	0.51	3.57		1.020
Chlorobenzene	112.6	1.122	1.122	5.33	0.102	0.510	0.10	0.49	0.51	2.43		1.020
Ethylbenzene	106.2	1.207	1.207	5.41	0.104	0.520	0.10	0.47	0.52	2.33		1.040
m & p-Xylene	106.2	2.182	2.182	9.78	0.206	1.030	0.21	0.92	1.03	4.62		2.060
o-Xylene	106.2	1.102	1.102	4.94	0.102	0.510	0.10	0.46	0.51	2.29		1.020

SAMPLE CALCULATION

EPA Method TO-15 Modified Full Scan GC/MS

SDG:		**LABQC**
Laboratory Number:		**QC07029**
Standard Volume	STV	5.0
Sample Volume	SV	1000
Can Dilution Factor	CDF	1.00
Gas Constant		23.68
Decimal Places:		2

Sample Calculation:

1) Avg RFn = Sum $\left| \frac{(Astdni)}{(Cstdni)} \frac{(Cistdi)}{(Aistdi)} \right|_i$ Note: 1

2) Raw Amt = $\frac{(Ansamp)}{(Avg\ RFn)} \frac{(Cistdi)}{(Aistdi)}$ = **Cn**

3) Amount ppbv = $\frac{(Raw\ Amt)\ 1000\ (CDF)}{(SV)}$

4) Amount ug/m3 = $\frac{(amt(ppbv)\ MW}{23.68}$

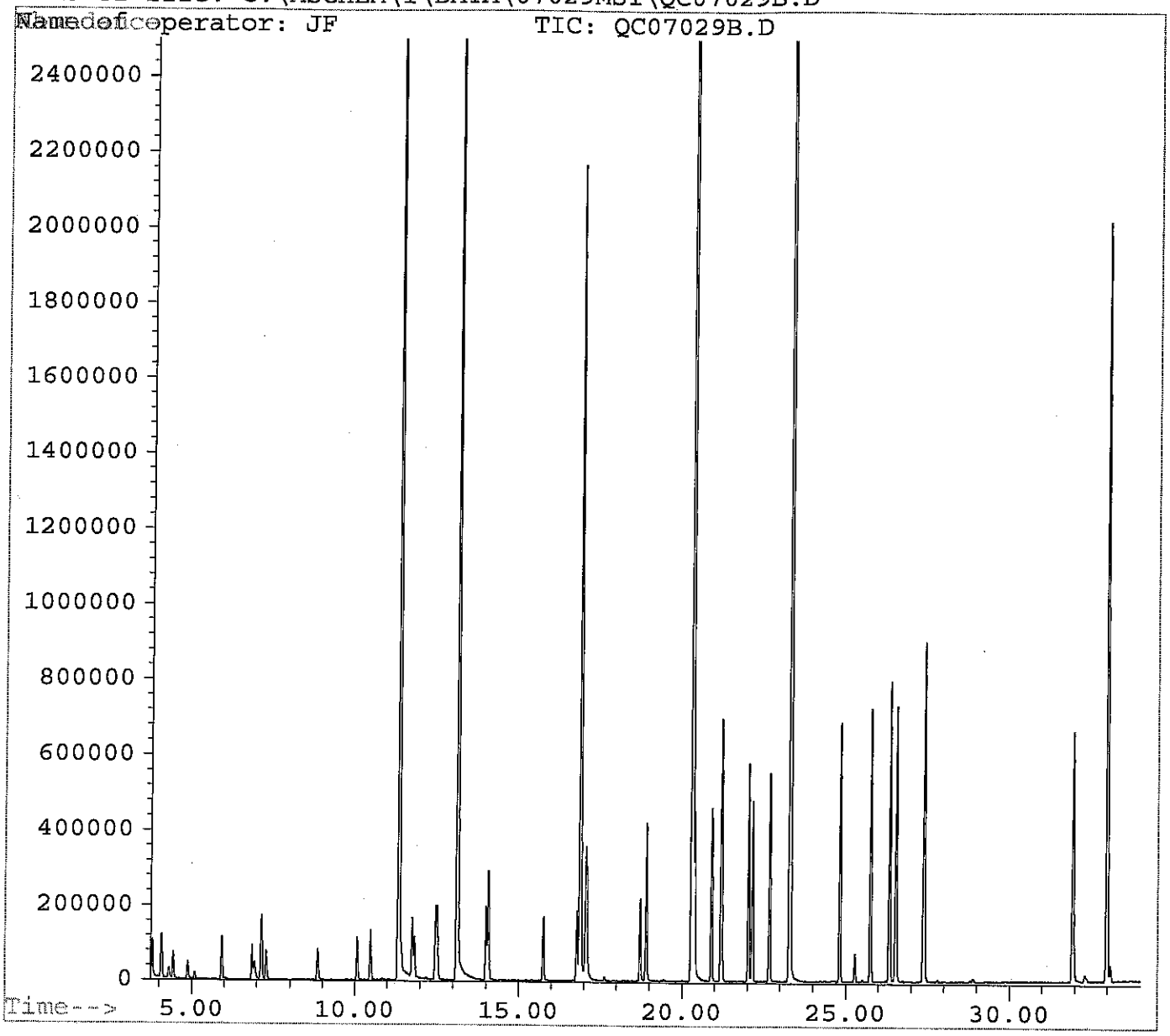
n	Compound	IS n	Chem type	MW	AvgRFn	Area Ansamp	Cistdi ppmv	Aistdi Ais	Cn ppmV Raw Amt	Amount ppbv	Amount ug/m3
5	Vinyl chloride	1	TRG	62.5	0.213	45053	20.000	4236154	0.997	1.00	2.64
15	1,1-Dichloroethene	1	TRG	96.9	0.471	104935	20.000	4236154	1.051	1.05	4.30
19	Dichloromethane	1	TRG	84.9	0.209	45055	20.000	4236154	1.019	1.02	3.66
24	1,1-Dichloroethane	1	TRG	99.0	0.606	123457	20.000	4236154	0.961	0.96	4.01
34	Chloroform	1	TRG	119.4	0.729	142878	20.000	4236154	0.925	0.93	4.69
36	1,1,1-Trichloroethane	35	TRG	133.4	0.726	139218	20.000	3791500	1.011	1.01	5.69
37	1,2-Dichloroethane	35	TRG	99.0	0.681	144184	20.000	3791500	1.117	1.12	4.68
40	Benzene	35	TRG	78.1	1.183	232919	20.000	3791500	1.038	1.04	3.43
41	Carbon tetrachloride	35	TRG	153.8	0.737	154529	20.000	3791500	1.106	1.11	7.21
46	Trichloroethene	35	TRG	131.4	0.573	134760	20.000	3791500	1.241	1.24	6.88
51	Toluene	35	TRG	92.1	1.546	341568	20.000	3791500	1.165	1.17	4.55
58	1,2-Dibromoethane	35	TRG	187.9	1.119	250926	20.000	3791500	1.183	1.18	9.36
59	Tetrachloroethene	35	TRG	165.8	0.985	234064	20.000	3791500	1.253	1.25	8.75
60	Chlorobenzene	35	TRG	112.6	1.446	307570	20.000	3791500	1.122	1.12	5.33
62	Ethylbenzene	35	TRG	106.2	2.468	564763	20.000	3791500	1.207	1.21	5.43
63	m & p-Xylene	35	TRG	106.2	2.080	860314	20.000	3791500	2.182	2.18	9.78
66	o-Xylene	35	TRG	106.2	2.300	480366	20.000	3791500	1.102	1.10	4.93
1	Pentafluorobenzene	1	IS		1.000	4236154	20.000	4236154			
35	1,4-Difluorobenzene	35	IS		1.000	3791500	20.000	3791500			
94	Toluene-d8	35	SURR		1.124	2319533	20.000	3791500			

Calculation Definitions:

n	compound n
i	i th calibration level
Astdni	Standard Area for compound n at ith calibration level
Cstdni	Standard Concentration for compound n at ith calibration level in ppmv
Cistdi	Internal Standard Conc used for compound n at ith calibration level in ppmv
Aistdi	Internal Standard Area used for compound n at ith calibration level
Ansamp	Sample Area for compound n
Avg RFn	Average response factor for all ith calibration levels for compound n
Raw Amount	Sample Concentration in ppmv before applying factors
Cistd	Concentration internal standard used for compound n in sample in ppmv
Aistd	Area of internal standard used for compound n in sample
Cn	Concentration of compound n in sample in ppmv
23.68	Gas constant at 60 F as per EPA source test protocol
MW	Molecular weight of compound
Note (1) : Avg RFn	The values for the Average Response Factor AvgRFn can be optained from the response Factor Report for the Initial Calibration, or from the Calibration Report

Name of file: C:\MSCHEM\1\DATA\07029MS1\QC07029B.D

Name of operator: JF



ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified Full Scan GC/MS
Analytical Method: TO-15

SDG: 209277
Laboratory Number: 02

File: 0927702A.D
Description: 44-002
Can/Tube#: 779
Sam_Type: SA
QC_Batch: 070209-MS1
Air Volume: 20 ml

Date Sampled: 06/19/09 **Time:** 12:28
Date Received: 06/23/09
Date Extracted:
Date Analyzed: 07/02/09 **Time:** 13:41
Can Dilution Factor: 1.37 0
Not Detected Flag: ND

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
75-71-8	Dichlorodifluoromethane	7	36	ND	37	184	ND	ND
74-87-3	Chloromethane	7	35	ND	15	75	ND	ND
76-14-2	Freon 114	7	36	ND	51	257	ND	ND
75-01-4	Vinyl chloride	7	36	ND	19	94	ND	ND
74-83-9	Bromomethane	7	36	ND	29	143	ND	ND
75-00-3	Chloroethane	7	36	ND	19	97	ND	ND
75-69-4	Trichlorofluoromethane	7	36	ND	41	207	ND	ND
67-64-1	Acetone	6	31	20	15	76	50	J
67-63-0	2-propanol	6	31	ND	16	79	ND	ND
75-35-4	1,1-Dichloroethene	7	35	ND	28	142	ND	ND
76-13-1	Freon 113	7	35	ND	55	276	ND	ND
75-09-2	Dichloromethane	7	36	ND	26	128	ND	ND
75-15-0	Carbon disulfide	6	30	222	20	98	712	
156-60-5	trans-1,2-Dichloroethene	6	30	8	24	122	35	J
1634-04-4	Methyl tert butyl ether	5	27	ND	20	99	ND	ND
75-34-3	1,1-Dichloroethane	7	35	ND	29	145	ND	ND
108-05-4	Vinyl acetate	6	29	ND	21	107	ND	ND
78-93-3	2-Butanone	6	29	ND	18	90	ND	ND
156-59-2	cis-1,2-Dichloroethene	7	35	234	29	144	959	
67-66-3	Chloroform	7	35	ND	35	176	ND	ND
71-55-6	1,1,1-Trichloroethane	7	35	ND	39	197	ND	ND
107-06-2	1,2-Dichloroethane	7	35	ND	29	147	ND	ND
71-43-2	Benzene	7	35	ND	23	116	ND	ND
56-23-5	Carbon tetrachloride	7	35	ND	45	227	ND	ND
78-87-5	1,2-Dichloropropane	7	35	ND	34	168	ND	ND
123-91-1	1,4 Dioxane	6	30	ND	22	112	ND	ND
79-01-6	Trichloroethene	7	35	1,291	39	196	7,166	
75-27-4	Bromodichloromethane	5	27	ND	38	190	ND	ND
108-10-1	Methyl Isobutyl Ketone	6	32	ND	27	133	ND	ND
10061-01-5	cis-1,3-Dichloropropene	7	36	ND	34	170	ND	ND
108-88-3	Toluene	7	35	11	27	137	44	J
10061-02-6	trans-1,3-Dichloropropene	7	36	ND	33	167	ND	ND
79-00-5	1,1,2-Trichloroethane	7	35	ND	39	197	ND	ND
591-78-6	2-Hexanone	6	30	ND	26	128	ND	ND
124-48-1	Dibromochloromethane	6	30	ND	54	268	ND	ND
106-93-4	1,2-Dibromoethane	7	36	ND	57	283	ND	ND
127-18-4	Tetrachloroethene	7	35	ND	49	245	ND	ND
108-90-7	Chlorobenzene	7	35	ND	33	166	ND	ND
100-41-4	Ethylbenzene	7	36	ND	32	160	ND	ND
108-38-3	m & p-Xylene	14	71	ND	63	316	ND	ND

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
100-42-5	Styrene	7	35	ND	31	155	ND	ND
75-25-2	Bromoform	6	32	ND	68	340	ND	ND
95-47-6	o-Xylene	7	35	ND	31	157	ND	ND
79-34-5	1,1,2,2-Tetrachloroethane	7	35	ND	50	248	ND	ND
622-96-8	4-Ethyltoluene	6	31	ND	32	158	ND	ND
108-67-8	1,3,5-Trimethylbenzene	7	36	ND	37	184	ND	ND
95-63-6	1,2,4-Trimethylbenzene	7	35	ND	35	177	ND	ND
541-73-1	1,3-Dichlorobenzene	7	35	ND	43	217	ND	ND
100-44-7	Benzyl chloride	6	31	ND	33	165	ND	ND
106-46-7	1,4-Dichlorobenzene	7	35	ND	43	217	ND	ND
95-50-1	1,2-Dichlorobenzene	7	34	ND	43	213	ND	ND
120-82-1	1,2,4-Trichlorobenzene	7	35	ND	54	270	ND	ND
91-20-3	Naphthalene	16	82	ND	89	443	ND	ND
87-68-3	Hexachlorobutadiene	7	35	ND	78	389	ND	ND

	Surrogate Recovery	Spike Amt. ppbV	Amount ppbV	% Rec.	QC Limits	Flag * = Out
2037-26-5	Toluene-d8	10.000	10.551	106	70-130	

Notes: 1) Reported results are to be interpreted to two significant figures.
2) ug/m3 = ppbV*FW/23.68 calculated assuming conditions at 60 F and 1 atm.
3) MDL and RL are adjusted for sample volume and can dilution.
4) U and ND are Flags used for Not Detected
5) J is a flag for a result between the MDL and the RL (or lower quantitation limit, LQL)

QUANTITATION REPORT

EPA Method TO-15 Modified Full Scan GC/MS

			Review	EAS Sample ID: 0927702	
File Name:	0927702A.D				1 KB
Sample ID:	44-002				2 AT
Date:	2 Jul 109 1:41 pm			Cal Amounts	3 BB
Run Method:	1T15EXAY.M			IS Areas	4 SH
Quant Method:	1T15EXAY.M			Carryover	
Cal Update:	Tue Mar 17 14:18:15 2009				
Template:	1TO15EXT.MS1				
Can Factor:	1.37				
Volume:	20	ml		Analyst: KB 1	

CAS#	Compound	n	Raw Amount	RT	Target RT	Ion	Sample Area	Qualifier	Lower Qual	Upper Qual	Qual Flag	Cal Flag	Int Flag
75-71-8	Dichlorodifluoromethane	2	0.000	0.00	3.83	85.00	0	0	25	37			
74-87-3	Chloromethane	3	0.000	0.00	4.09	50.00	0	0	22	32			
76-14-2	Freon 114	4	0.000	0.00	4.11	85.00	0	0	44	65			
75-01-4	Vinyl chloride	5	0.000	0.00	4.33	62.00	0	0	24	36			
74-83-9	Bromomethane	6	0.000	0.00	4.92	94.00	0	0	73	109			
75-00-3	Chloroethane	7	0.000	0.00	5.12	64.00	0	0	26	40			
75-69-4	Trichlorofluoromethane	10	0.000	0.00	5.94	101.00	0	0	48	73			
67-64-1	Acetone	12	0.295	6.05	6.04	43.00	56186	18	16	24			
67-63-0	2-propanol	13	0.017	6.12	6.14	45.00	2503	0	18	27	Q		
75-35-4	1,1-Dichloroethene	15	0.044	6.87	6.89	61.00	4509	48	34	51			
76-13-1	Freon 113	17	0.013	7.15	7.16	151.00	1062	73	101	152	Q		
75-09-2	Dichloromethane	19	0.000	0.00	7.31	84.00	0	0	51	77			
75-15-0	Carbon disulfide	20	3.235	7.52	7.54	76.00	183314	19	16	24			
156-60-5	trans-1,2-Dichloroethene	21	0.123	8.36	8.38	96.00	5138	157	172	258	Q		
1634-04-4	Methyl tert butyl ether	22	0.000	0.00	8.54	73.00	0	0	18	27			
75-34-3	1,1-Dichloroethane	24	0.051	8.88	8.90	63.00	6707	27	24	36			
108-05-4	Vinyl acetate	25	0.000	0.00	10.32	43.00	0	0	0	0			
78-93-3	2-Butanone	26	0.000	9.42	9.54	72.00	0	0	30	45			
156-59-2	cis-1,2-Dichloroethene	32	3.421	10.09	10.11	96.00	232443	174	139	209			
67-66-3	Chloroform	34	0.032	10.48	10.53	83.00	5088	54	51	77			
71-55-6	1,1,1-Trichloroethane	36	0.002	11.76	11.80	97.00	307	0	51	76			
107-06-2	1,2-Dichloroethane	37	0.000	0.00	11.87	61.95	0	0	25	37			
71-43-2	Benzene	40	0.058	12.48	12.51	78.00	12761	12	19	29	Q		
56-23-5	Carbon tetrachloride	41	0.000	0.00	12.56	116.90	0	0	79	119			
78-87-5	1,2-Dichloropropane	43	0.000	14.00	14.07	63.00	0	0	58	88			
123-91-1	1,4 Dioxane	44	0.000	0.00	14.40	88.00	0	0	76	114			
79-01-6	Trichloroethene	46	18.854	14.09	14.13	130.00	2024533	96	79	119			
75-27-4	Bromodichloromethane	47	0.000	14.29	14.40	83.00	0	0	49	74			
108-10-1	Methyl Isobutyl Ketone	49	0.030	15.70	15.70	43.00	11420	25	21	35			
10061-01-5	cis-1,3-Dichloropropene	50	0.000	0.00	15.82	75.00	0	0	15	23			
108-88-3	Toluene	51	0.166	17.07	17.11	91.00	48204	58	44	66			
10061-02-6	trans-1,3-Dichloropropene	52	0.000	0.00	16.85	75.00	0	0	16	23			
79-00-5	1,1,2-Trichloroethane	53	0.000	0.00	17.16	61.00	0	0	91	136			
591-78-6	2-Hexanone	54	0.012	17.75	17.80	43.00	5535	32	28	47			
124-48-1	Dibromochloromethane	57	0.000	0.00	18.30	129.00	0	0	60	91			
106-93-4	1,2-Dibromoethane	58	0.000	0.00	18.80	107.00	0	0	75	113			

CAS#	Compound	n	Raw Amount	RT	Target RT	Ion	Sample Area	Qualifier	Lower Qual	Upper Qual	Qual Flag	Cal Flag	Int Flag
127-18-4	Tetrachloroethene	59	0.013	18.92	18.97	166.00	2418	33	52	78	Q		
108-90-7	Chlorobenzene	60	0.001	20.39	20.45	112.00	305	0	25	38			
100-41-4	Ethylbenzene	62	0.006	20.92	17.80	91.00	2726	0	21	32	Q		
108-38-3	m & p-Xylene	63	0.038	21.22	21.28	91.00	14711	34	32	48			
100-42-5	Styrene	64	0.002	22.05	22.14	104.00	669	98	53	79			
75-25-2	Bromoform	65	0.000	0.00	22.00	173.00	0	0	39	59			
95-47-6	o-Xylene	66	0.011	22.20	22.25	91.00	4787	40	30	45			
79-34-5	1,1,2,2-Tetrachloroethane	67	0.000	0.00	22.75	83.00	0	0	8	13			
622-96-8	4-Ethyltoluene	72	0.011	24.68	24.74	105.00	7817	25	20	31			
108-67-8	1,3,5-Trimethylbenzene	73	0.007	24.85	24.92	105.00	4315	48	33	49			
95-63-6	1,2,4-Trimethylbenzene	76	0.022	25.77	25.89	105.00	12779	31	32	48	Q		
541-73-1	1,3-Dichlorobenzene	78	0.010	26.54	26.41	146.00	4581	47	34	51			
100-44-7	Benzyl chloride	80	0.001	26.51	26.61	91.00	455	0	15	23			
106-46-7	1,4-Dichlorobenzene	81	0.010	26.54	26.68	146.00	4581	47	34	51			
95-50-1	1,2-Dichlorobenzene	83	0.007	27.40	27.47	146.00	3830	67	34	51	Q		
120-82-1	1,2,4-Trichlorobenzene	86	0.015	31.96	32.18	180.00	14631	79	78	117			
91-20-3	Naphthalene	87	0.024	32.32	32.41	128.00	38946	13	10	16			
87-68-3	Hexachlorobutadiene	88	0.006	32.99	33.08	225.00	4327	0	22	33	Q		
363-72-4	Pentafluorobenzene	1	20.000	11.35	11.38	168.00	**4338723**						
540-36-3	1,4-Difluorobenzene	35	20.000	13.14	13.17	114.00	**3748245**						
2037-26-5	Toluene-d8	94	**10.551**	16.90	16.94	98.00	2223345	59	51	77			

Integration Flags:

If no flag the Integration was done by the Instrument computer

M1 Manual Integration because the computer did not integrated the peak or integrated the wrong peak

M2 Manual Integration because computer integration of baseline was different then Inital Calibration

INITIAL CALIBRATION REPORT

EPA Method TO-15 Modified Full Scan GC/MS

SDG: 209277
QC_Batch: 070209-MS1
Instrument Name: 5970 - In

File Name: 0927702A.D
Sample ID: 44-002
Sample Analysis Date: 2 Jul 109 1:41 pm
Run Method: 1T15EXAY.M
Quant and Calibration Method: 1T15EXAY.M
Cal Update: Tue Mar 17 14:18:15 2009
Template: 1TO15EXT.MS1

Calibration Title: EPA T0-15

Number Compounds: 96
IS1: ST60403 20
IS2: ST60403 20
IS3:
IS4:

		Calibration Amount CA, ppmv						Calibration Response, Area					
		Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
		Amt	Amt	Amt	Amt	Amt	Amt	C03179C.D	C03179E.D	C03179B.D	C03179A.D	C03169H.D	C03179D.D
n	Compound	0.25	4.0	1.0	5.0	10.0	2.0	0.25	4.0	1.0	5.0	10.0	2.0
2	Dichlorodifluoromethane	0.263	4.200	1.050	5.250	10.500	2.100	22559	398558	88898	436110	840988	185058
3	Chloromethane	0.255	4.080	1.020	5.100	10.200	2.040	15230	241294	55434	272653	505057	113562
4	Freon 114	0.260	4.160	1.040	5.200	10.400	2.080	25317	399238	94441	464176	861160	193013
5	Vinyl chloride	0.260	4.160	1.040	5.200	10.400	2.080	7909	132864	32643	150492	285530	62953
6	Bromomethane	0.260	4.160	1.040	5.200	10.400	2.080	8153	136639	28890	149016	274473	66325
7	Chloroethane	0.260	4.160	1.040	5.200	10.400	2.080	4307	71497	16630	78611	141439	32925
10	Trichlorofluoromethane	0.260	4.160	1.040	5.200	10.400	2.080	22371	364524	85037	431144	716396	179451
12	Acetone	0.225	3.600	0.900	4.500	9.000	1.800	42851	442389	113697	494726	770083	184591
13	2-propanol	0.228	3.640	0.910	4.550	9.100	1.820	19578	321532	75563	289890	1427833	154437
15	1,1-Dichloroethene	0.253	4.040	1.010	5.050	10.100	2.020	16793	248606	63935	305424	730028	150732
17	Freon 113	0.255	4.080	1.020	5.100	10.200	2.040	13083	220191	45725	205080	591375	132996
19	Dichloromethane	0.260	4.160	1.040	5.200	10.400	2.080	8354	124766	26131	120655	330491	71297
20	Carbon disulfide	0.223	3.560	0.890	4.450	8.900	1.780	8703	137347	33136	122015	313353	78232
21	trans-1,2-Dichloroethene	0.218	3.480	0.870	4.350	8.700	1.740	5940	117954	23397	80889	230621	52404
22	Methyl tert butyl ether	0.195	3.120	0.780	3.900	7.800	1.560	24271	482973	97431	369980	967308	233954
24	1,1-Dichloroethane	0.253	4.040	1.010	5.050	10.100	2.020	22823	387657	85531	331041	871129	183187
25	Vinyl acetate	0.215	3.440	0.860	4.300	8.600	1.720	40148	687529	149287	676740	1560060	338492
26	2-Butanone	0.215	3.440	0.860	4.300	8.600	1.720	5400	92652	22013	71425	205517	45058
32	cis-1,2-Dichloroethene	0.258	4.120	1.030	5.150	10.300	2.060	11695	190337	43510	224404	421914	95703
34	Chloroform	0.255	4.080	1.020	5.100	10.200	2.040	27147	449509	101707	516969	959204	213353
36	1,1,1-Trichloroethane	0.255	4.080	1.020	5.100	10.200	2.040	26931	432442	100881	509527	970639	210683
37	1,2-Dichloroethane	0.258	4.120	1.030	5.150	10.300	2.060	26512	398927	96975	495766	920839	187037

(77)

n	Compound	Amt 0.25	Amt 4.0	Amt 1.0	Amt 5.0	Amt 10.0	Amt 2.0	C03179C.D 0.25	C03179E.D 4.0	C03179B.D 1.0	C03179A.D 5.0	C03169H.D 10.0	C03179D.D 2.0
40	Benzene	-1.000	4.120	1.030	5.150	10.300	2.060	-1	712515	206967	782160	1387400	364766
41	Carbon tetrachloride	0.255	4.080	1.020	5.100	10.200	2.040	26276	451629	105798	518753	931992	220983
43	1,2-Dichloropropane	0.258	4.120	1.030	5.150	10.300	2.060	18588	266688	66789	305497	598806	132416
44	1,4 Dioxane	0.220	3.520	0.880	4.400	8.800	1.760	11252	171544	43700	161310	540834	80192
46	Trichloroethene	0.258	4.120	1.030	5.150	10.300	2.060	27013	323273	83100	364698	666308	165489
47	Bromodichloromethane	0.200	3.200	0.800	4.000	8.000	1.600	27507	476051	96325	417248	885573	218119
49	Methyl Isobutyl Ketone	0.230	3.680	0.920	4.600	9.200	1.840	67434	1179200	250239	1039898	2505790	566705
50	cis-1,3-Dichloropropene	0.265	4.240	1.060	5.300	10.600	2.120	28339	441906	107039	492454	1010236	206495
51	Toluene	-1.000	4.120	1.030	5.150	10.300	2.060	-1	944443	257501	1033029	1877014	478350
52	trans-1,3-Dichloropropene	0.260	4.160	1.040	5.200	10.400	2.080	33546	509168	127376	538174	1205186	242137
53	1,1,2-Trichloroethane	0.255	4.080	1.020	5.100	10.200	2.040	18573	263308	68163	281046	608914	127239
54	2-Hexanone	0.220	3.520	0.880	4.400	8.800	1.760	84018	1413472	311524	1112452	3278869	678898
57	Dibromochloromethane	0.223	3.560	0.890	4.450	8.900	1.780	43801	688881	150691	558917	1316838	322250
58	1,2-Dibromoethane	0.260	4.160	1.040	5.200	10.400	2.080	46912	660815	169213	701472	1505940	324567
59	Tetrachloroethene	0.255	4.080	1.020	5.100	10.200	2.040	40710	589393	145069	627137	1126037	300057
60	Chlorobenzene	0.255	4.080	1.020	5.100	10.200	2.040	64660	836027	208106	862738	1818049	410336
62	Ethylbenzene	0.260	4.160	1.040	5.200	10.400	2.080	107037	1527752	359496	1548148	3108186	722767
63	m & p-Xylene	0.515	8.240	2.060	10.300	20.600	4.120	192864	2440351	617919	2542524	4725274	1220126
64	Styrene	0.258	4.120	1.030	5.150	10.300	2.060	70964	837020	224026	840176	1812012	428714
65	Bromoform	0.233	3.720	0.930	4.650	9.300	1.860	90991	1151698	243927	958925	2416870	530300
66	o-Xylene	0.255	4.080	1.020	5.100	10.200	2.040	105567	1325719	329821	1384162	2817484	643280
67	1,1,2,2-Tetrachloroethane	0.255	4.080	1.020	5.100	10.200	2.040	102201	1142635	274703	1042229	3385910	560899
72	4-Ethyltoluene	0.228	3.640	0.910	4.550	9.100	1.820	177076	1912961	437379	1573293	3712735	943267
73	1,3,5-Trimethylbenzene	0.265	4.240	1.060	5.300	10.600	2.120	184274	1936506	488965	1778188	3957960	994445
76	1,2,4-Trimethylbenzene	-1.000	4.080	1.020	5.100	10.200	2.040	-1	1979227	501359	1766777	3635276	1033463
78	1,3-Dichlorobenzene	-1.000	4.080	1.020	5.100	10.200	2.040	-1	1499786	411700	1325016	3205866	837609
80	Benzyl chloride	-1.000	3.600	0.900	4.500	9.000	1.800	-1	1944712	459781	1580130	4463720	884546
81	1,4-Dichlorobenzene	-1.000	4.080	1.020	5.100	10.200	2.040	-1	1616283	417021	1362139	3091714	896732
83	1,2-Dichlorobenzene	-1.000	4.000	1.000	5.000	10.000	2.000	-1	1708595	429307	1374687	4272294	912351
86	1,2,4-Trichlorobenzene	-1.000	4.120	1.030	5.150	10.300	2.060	-1	3172331	905400	2236815	7156710	1987175
87	Naphthalene	-1.000	9.560	2.390	11.950	23.900	4.780	-1	11453402	4198495	10074168	24925580	6661715
88	Hexachlorobutadiene	-1.000	4.120	1.030	5.150	10.300	2.060	-1	2443776	758051	1914490	4177636	1622637
1	Pentafluorobenzene	20.000	20.000	20.000	20.000	20.000	20.000	2643183	2935915	2871816	2719013	2737194	3022845
35	1,4-Difluorobenzene	20.000	20.000	20.000	20.000	20.000	20.000	2659938	2870629	2814997	2720455	2706138	3020264
94	Toluene-d8	10.000	10.000	10.000	10.000	10.000	10.000	1479389	1629143	1590486	1469067	1546296	1730275

INITIAL CALIBRATION REPORT: Response Factors

SDG:	**209277**
QC_Batch:	**070209-MS1**
Sample ID:	44-002
Sample Analysis Date:	2 Jul 109 1:41 pm
Run Method:	1T15EXAY.M
Quant Method:	1T15EXAY.M
Cal Update:	Tue Mar 17 14:18:15 2009
Template:	1TO15EXT.MS1

Sample Calculation:

1) Avg RFn = Sum $\left| \frac{(Astdni)\ (Cistdi)}{(Cstdni)\ (Aistdi)} \right|_i$

Response Factors

Compound		RF1	RF2	RF3	RF4	RF5	RF6	AvgRFn	%RSD
Dichlorodifluoromethane		0.649	0.646	0.590	0.611	0.585	0.583	0.611	4.97
Chloromethane		0.452	0.403	0.378	0.393	0.362	0.368	0.393	8.34
Freon 114		0.737	0.654	0.632	0.657	0.605	0.614	0.650	7.29
Vinyl chloride		0.230	0.218	0.219	0.213	0.201	0.200	0.213	5.40
Bromomethane		0.237	0.224	0.193	0.211	0.193	0.211	0.212	8.16
Chloroethane		0.125	0.117	0.111	0.111	0.099	0.105	0.112	8.18
Trichlorofluoromethane		0.651	0.597	0.569	0.610	0.503	0.571	0.584	8.47
Acetone		1.441	0.837	0.880	0.809	0.625	0.679	0.878	33.28
2-propanol		0.650	0.602	0.578	0.469	1.146	0.561	0.668	36.24
1,1-Dichloroethene		0.502	0.419	0.441	0.445	0.528	0.494	0.471	9.01
Freon 113		0.388	0.368	0.312	0.296	0.424	0.431	0.370	15.21
Dichloromethane		0.243	0.204	0.175	0.171	0.232	0.227	0.209	14.64
Carbon disulfide		0.295	0.263	0.259	0.202	0.257	0.291	0.261	12.82
trans-1,2-Dichloroethene		0.206	0.231	0.187	0.137	0.194	0.199	0.192	16.18
Methyl tert butyl ether		0.942	1.055	0.870	0.698	0.906	0.992	0.910	13.48
1,1-Dichloroethane		0.683	0.654	0.590	0.482	0.630	0.600	0.606	11.51
Vinyl acetate		1.413	1.362	1.209	1.158	1.325	1.302	1.295	7.38
2-Butanone		0.190	0.183	0.178	0.122	0.175	0.173	0.170	14.31
cis-1,2-Dichloroethene		0.343	0.315	0.294	0.321	0.299	0.307	0.313	5.59
Chloroform		0.806	0.751	0.694	0.746	0.687	0.692	0.729	6.41
1,1,1-Trichloroethane		0.794	0.738	0.703	0.734	0.703	0.684	0.726	5.40
1,2-Dichloroethane		0.773	0.675	0.669	0.708	0.661	0.601	0.681	8.33
Benzene	NA		1.205	1.428	1.117	0.996	1.173	1.183	13.36
Carbon tetrachloride		0.775	0.771	0.737	0.748	0.675	0.717	0.737	5.04
1,2-Dichloropropane		0.542	0.451	0.461	0.436	0.430	0.426	0.457	9.47
1,4 Dioxane		0.385	0.340	0.353	0.270	0.454	0.302	0.350	18.49
Trichloroethene		0.787	0.547	0.573	0.521	0.478	0.532	0.573	19.12
Bromodichloromethane		1.034	1.036	0.855	0.767	0.818	0.903	0.902	12.44
Methyl Isobutyl Ketone		2.204	2.233	1.932	1.662	2.013	2.040	2.014	10.30
cis-1,3-Dichloropropene		0.804	0.726	0.717	0.683	0.704	0.645	0.713	7.44
Toluene	NA		1.597	1.776	1.475	1.347	1.538	1.546	10.25
trans-1,3-Dichloropropene		0.970	0.853	0.870	0.761	0.856	0.771	0.847	9.00
1,1,2-Trichloroethane		0.548	0.450	0.475	0.405	0.441	0.413	0.455	11.39
2-Hexanone		2.871	2.798	2.515	1.859	2.754	2.554	2.559	14.47
Dibromochloromethane		1.477	1.348	1.203	0.923	1.094	1.199	1.207	15.98
1,2-Dibromoethane		1.357	1.107	1.156	0.992	1.070	1.033	1.119	11.58
Tetrachloroethene		1.200	1.006	1.010	0.904	0.816	0.974	0.985	13.06

Chlorobenzene		1.907	1.428	1.450	1.244	1.317	1.332	1.446	16.45
Ethylbenzene		3.095	2.559	2.456	2.189	2.209	2.301	2.468	13.74
m & p-Xylene		2.816	2.063	2.131	1.815	1.695	1.961	2.080	18.95
Styrene		2.068	1.415	1.545	1.199	1.300	1.378	1.484	20.78
Bromoform		2.936	2.157	1.863	1.516	1.921	1.888	2.047	23.53
o-Xylene		3.113	2.264	2.297	1.995	2.041	2.088	2.300	18.10
1,1,2,2-Tetrachloroethane		3.014	1.951	1.913	1.502	2.453	1.821	2.109	25.54
4-Ethyltoluene		5.840	3.661	3.415	2.542	3.015	3.432	3.651	31.30
1,3,5-Trimethylbenzene		5.228	3.182	3.277	2.467	2.760	3.106	3.337	29.21
1,2,4-Trimethylbenzene	NA		3.380	3.492	2.547	2.634	3.355	3.082	14.68
1,3-Dichlorobenzene	NA		2.561	2.868	1.910	2.323	2.719	2.476	15.16
Benzyl chloride	NA		3.764	3.630	2.581	3.666	3.254	3.379	14.38
1,4-Dichlorobenzene	NA		2.760	2.905	1.964	2.240	2.911	2.556	16.83
1,2-Dichlorobenzene	NA		2.976	3.050	2.021	3.157	3.021	2.845	16.36
1,2,4-Trichlorobenzene	NA		5.365	6.245	3.193	5.135	6.388	5.265	24.29
Naphthalene	NA		8.347	12.481	6.198	7.708	9.229	8.792	26.61
Hexachlorobutadiene	NA		4.133	5.229	2.733	2.998	5.216	4.062	29.13
Pentafluorobenzene		1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.00
1,4-Difluorobenzene		1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.00
Toluene-d8		1.112	1.135	1.130	1.080	1.143	1.146	1.124	2.20

CALCULATIONS

EPA Method TO-15 Modified Full Scan GC/MS

SDG: 209277
Laboratory Number: 02

Run Method: 1T15EXAY.M
Quant Method: 1T15EXAY.M
Can Dilution Factor: 1.37
Air Volume: 20 ml
MDL Factor 1
Gas Constant: 23.68
Decimal Places: 0

Compound	M.W.	Raw Amount	Result ppbv	Result ug/m3	(1) MDL ppbv	(2) RL ppbv	Calc MDL ppbv	Calc MDL ug/m3	Calc RL ppbv	Calc RL ug/m3	Flag	S062602-1 Spike ppmv
Dichlorodifluoromethane	120.9	0.000	0.000	0	0.105	0.525	7.19	37	35.96	184	U	0.103
Chloromethane	50.5	0.000	0.000	0	0.102	0.510	6.99	15	34.94	75	U	0.103
Freon 114	170.9	0.000	0.000	0	0.104	0.520	7.12	51	35.62	257	U	0.103
Vinyl chloride	62.5	0.000	0.000	0	0.104	0.520	7.12	19	35.62	94	U	0.103
Bromomethane	94.9	0.000	0.000	0	0.104	0.520	7.12	29	35.62	143	U	0.103
Chloroethane	64.5	0.000	0.000	0	0.104	0.520	7.12	19	35.62	97	U	0.103
Trichlorofluoromethane	137.4	0.000	0.000	0	0.104	0.520	7.12	41	35.62	207	U	0.103
Acetone	58.1	0.295	20.198	50	0.090	0.450	6.17	15	30.83	76	J	0.103
2-propanol	60.1	0.017	1.184	3	0.091	0.455	6.23	16	31.17	79	U	0.103
1,1-Dichloroethene	96.9	0.044	3.020	12	0.101	0.505	6.92	28	34.59	142	U	0.103
Freon 113	187.3	0.013	0.907	7	0.102	0.510	6.99	55	34.94	276	U	0.103
Dichloromethane	84.9	0.000	0.000	0	0.104	0.520	7.12	26	35.62	128	U	0.103
Carbon disulfide	76.1	3.235	221.614	712	0.089	0.445	6.10	20	30.48	98		0.103
trans-1,2-Dichloroethene	96.9	0.123	8.435	35	0.087	0.435	5.96	24	29.80	122	J	0.103
Methyl tert butyl ether	88.1	0.000	0.000	0	0.078	0.390	5.34	20	26.72	99	U	0.103
1,1-Dichloroethane	99.0	0.051	3.492	15	0.101	0.505	6.92	29	34.59	145	U	0.103
Vinyl acetate	86.1	0.000	0.000	0	0.086	0.430	5.89	21	29.46	107	U	0.103
2-Butanone	72.1	0.000	0.000	0	0.086	0.430	5.89	18	29.46	90	U	0.103
cis-1,2-Dichloroethene	96.9	3.421	234.358	959	0.103	0.515	7.06	29	35.28	144		0.103
Chloroform	119.4	0.032	2.203	11	0.102	0.510	6.99	35	34.94	176	U	0.103
1,1,1-Trichloroethane	133.4	0.002	0.155	1	0.102	0.510	6.99	39	34.94	197	U	0.103
1,2-Dichloroethane	99.0	0.000	0.000	0	0.103	0.515	7.06	29	35.28	147	U	0.103
Benzene	78.1	0.058	3.941	13	0.103	0.515	7.06	23	35.28	116	U	0.103
Carbon tetrachloride	153.8	0.000	0.000	0	0.102	0.510	6.99	45	34.94	227	U	0.103
1,2-Dichloropropane	113.0	0.000	0.000	0	0.103	0.515	7.06	34	35.28	168	U	0.103
1,4 Dioxane	88.1	0.000	0.000	0	0.088	0.440	6.03	22	30.14	112	U	0.103
Trichloroethene	131.4	18.854	1291.477	7,166	0.103	0.515	7.06	39	35.28	196		0.103
Bromodichloromethane	163.8	0.000	0.000	0	0.080	0.400	5.48	38	27.40	190	U	0.103
Methyl Isobutyl Ketone	100.2	0.030	2.073	9	0.092	0.460	6.30	27	31.51	133	U	0.103
cis-1,3-Dichloropropene	111.0	0.000	0.000	0	0.106	0.530	7.26	34	36.31	170	U	0.103
Toluene	92.1	0.166	11.393	44	0.103	0.515	7.06	27	35.28	137	J	0.103
trans-1,3-Dichloropropene	111.0	0.000	0.000	0	0.104	0.520	7.12	33	35.62	167	U	0.103
1,1,2-Trichloroethane	133.4	0.000	0.000	0	0.102	0.510	6.99	39	34.94	197	U	0.103
2-Hexanone	100.2	0.012	0.791	3	0.088	0.440	6.03	26	30.14	128	U	0.103
Dibromochloromethane	208.3	0.000	0.000	0	0.089	0.445	6.10	54	30.48	268	U	0.103
1,2-Dibromoethane	187.9	0.000	0.000	0	0.104	0.520	7.12	57	35.62	283	U	0.103

Tetrachloroethene	165.8	0.013	0.897	6	0.102	0.510	6.99	49	34.94	245	U	0.103
Chlorobenzene	112.6	0.001	0.077	0	0.102	0.510	6.99	33	34.94	166	U	0.103
Ethylbenzene	106.2	0.006	0.404	2	0.104	0.520	7.12	32	35.62	160	U	0.103
m & p-Xylene	106.2	0.038	2.585	12	0.206	1.030	14.11	63	70.56	316	U	0.206
Styrene	104.2	0.002	0.165	1	0.103	0.515	7.06	31	35.28	155	U	0.103
Bromoform	252.7	0.000	0.000	0	0.093	0.465	6.37	68	31.85	340	U	0.103
o-Xylene	106.2	0.011	0.761	3	0.102	0.510	6.99	31	34.94	157	U	0.103
1,1,2,2-Tetrachloroethane	167.8	0.000	0.000	0	0.102	0.510	6.99	50	34.94	248	U	0.103
4-Ethyltoluene	120.2	0.011	0.783	4	0.091	0.455	6.23	32	31.17	158	U	0.103
1,3,5-Trimethylbenzene	120.2	0.007	0.473	2	0.106	0.530	7.26	37	36.31	184	U	0.103
1,2,4-Trimethylbenzene	120.2	0.022	1.516	8	0.102	0.510	6.99	35	34.94	177	U	0.103
1,3-Dichlorobenzene	147.0	0.010	0.676	4	0.102	0.510	6.99	43	34.94	217	U	0.103
Benzyl chloride	126.6	0.001	0.049	0	0.090	0.450	6.17	33	30.83	165	U	0.103
1,4-Dichlorobenzene	147.0	0.010	0.655	4	0.102	0.510	6.99	43	34.94	217	U	0.103
1,2-Dichlorobenzene	147.0	0.007	0.492	3	0.100	0.500	6.85	43	34.25	213	U	0.103
1,2,4-Trichlorobenzene	181.4	0.015	1.016	8	0.103	0.515	7.06	54	35.28	270	U	0.103
Naphthalene	128.2	0.024	1.619	9	0.239	1.195	16.37	89	81.86	443	U	0.103
Hexachlorobutadiene	260.8	0.006	0.389	4	0.103	0.515	7.06	78	35.28	389	U	0.103

SAMPLE CALCULATION

EPA Method TO-15 Modified Full Scan GC/MS

SDG:		**209277**
Laboratory Number:		**02**
Standard Volume	STV	5.0
Sample Volume	SV	20
Can Dilution Factor	CDF	1.37
Gas Constant		23.68
Decimal Places:		0

Sample Calculation:

1) Avg RFn = Sum $\left| \frac{(Astdni)}{(Cstdni)} \frac{(Cistdi)}{(Aistdi)} \right|_i$ Note: 1

2) Raw Amt = $\frac{(Ansamp)}{(Avg\ RFn)} \frac{(Cistdi)}{(Aistdi)}$ = Cn

3) Amount ppbv = $\frac{(Raw\ Amt)\ 1000}{(SV)}$ (CDF)

4) Amount ug/m3 = $\frac{(amt(ppbv)\ MW}{23.68}$

n	Compound	IS n	Chem type	MW	AvgRFn	Area Ansamp	Cistdi ppmv	Aistdi Ais	Cn ppmV Raw Amt	Amount ppbv	Amount ug/m3
2	Dichlorodifluoromethane	1	TRG	120.9	0.611	0	20.000	4338723	0.000	0	0
3	Chloromethane	1	TRG	50.5	0.393	0	20.000	4338723	0.000	0	0
4	Freon 114	1	TRG	170.9	0.650	0	20.000	4338723	0.000	0	0
5	Vinyl chloride	1	TRG	62.5	0.213	0	20.000	4338723	0.000	0	0
6	Bromomethane	1	TRG	94.9	0.212	0	20.000	4338723	0.000	0	0
7	Chloroethane	1	TRG	64.5	0.112	0	20.000	4338723	0.000	0	0
10	Trichlorofluoromethane	1	TRG	137.4	0.584	0	20.000	4338723	0.000	0	0
12	Acetone	1	TRG	58.1	0.878	56186	20.000	4338723	0.295	20	49
13	2-propanol	1	TRG	60.1	0.668	2503	20.000	4338723	0.017	1	3
15	1,1-Dichloroethene	1	TRG	96.9	0.471	4509	20.000	4338723	0.044	3	12
17	Freon 113	1	TRG	187.3	0.370	1062	20.000	4338723	0.013	1	8
19	Dichloromethane	1	TRG	84.9	0.209	0	20.000	4338723	0.000	0	0
20	Carbon disulfide	1	TRG	76.1	0.261	183314	20.000	4338723	3.235	222	713
21	trans-1,2-Dichloroethene	1	TRG	96.9	0.192	5138	20.000	4338723	0.123	8	33
22	Methyl tert butyl ether	1	TRG	88.1	0.910	0	20.000	4338723	0.000	0	0
24	1,1-Dichloroethane	1	TRG	99.0	0.606	6707	20.000	4338723	0.051	3	13
25	Vinyl acetate	1	TRG	86.1	1.295	0	20.000	4338723	0.000	0	0
26	2-Butanone	1	TRG	72.1	0.170	0	20.000	4338723	0.000	0	0
32	cis-1,2-Dichloroethene	1	TRG	96.9	0.313	232443	20.000	4338723	3.421	234	958
34	Chloroform	1	TRG	119.4	0.729	5088	20.000	4338723	0.032	2	10
36	1,1,1-Trichloroethane	35	TRG	133.4	0.726	307	20.000	3748245	0.002	0	0
37	1,2-Dichloroethane	35	TRG	99.0	0.681	0	20.000	3748245	0.000	0	0
40	Benzene	35	TRG	78.1	1.183	12761	20.000	3748245	0.058	4	13
41	Carbon tetrachloride	35	TRG	153.8	0.737	0	20.000	3748245	0.000	0	0
43	1,2-Dichloropropane	35	TRG	113.0	0.457	0	20.000	3748245	0.000	0	0
44	1,4 Dioxane	35	TRG	88.1	0.350	0	20.000	3748245	0.000	0	0
46	Trichloroethene	35	TRG	131.4	0.573	2024533	20.000	3748245	18.854	1,291	7,164
47	Bromodichloromethane	35	TRG	163.8	0.902	0	20.000	3748245	0.000	0	0
49	Methyl Isobutyl Ketone	35	TRG	100.2	2.014	11420	20.000	3748245	0.030	2	8
50	cis-1,3-Dichloropropene	35	TRG	111.0	0.713	0	20.000	3748245	0.000	0	0
51	Toluene	35	TRG	92.1	1.546	48204	20.000	3748245	0.166	11	43
52	trans-1,3-Dichloropropene	35	TRG	111.0	0.847	0	20.000	3748245	0.000	0	0
53	1,1,2-Trichloroethane	35	TRG	133.4	0.455	0	20.000	3748245	0.000	0	0
54	2-Hexanone	35	TRG	100.2	2.559	5535	20.000	3748245	0.012	1	4
57	Dibromochloromethane	35	TRG	208.3	1.207	0	20.000	3748245	0.000	0	0
58	1,2-Dibromoethane	35	TRG	187.9	1.119	0	20.000	3748245	0.000	0	0
59	Tetrachloroethene	35	TRG	165.8	0.985	2418	20.000	3748245	0.013	1	7
60	Chlorobenzene	35	TRG	112.6	1.446	305	20.000	3748245	0.001	0	0
62	Ethylbenzene	35	TRG	106.2	2.468	2726	20.000	3748245	0.006	0	0

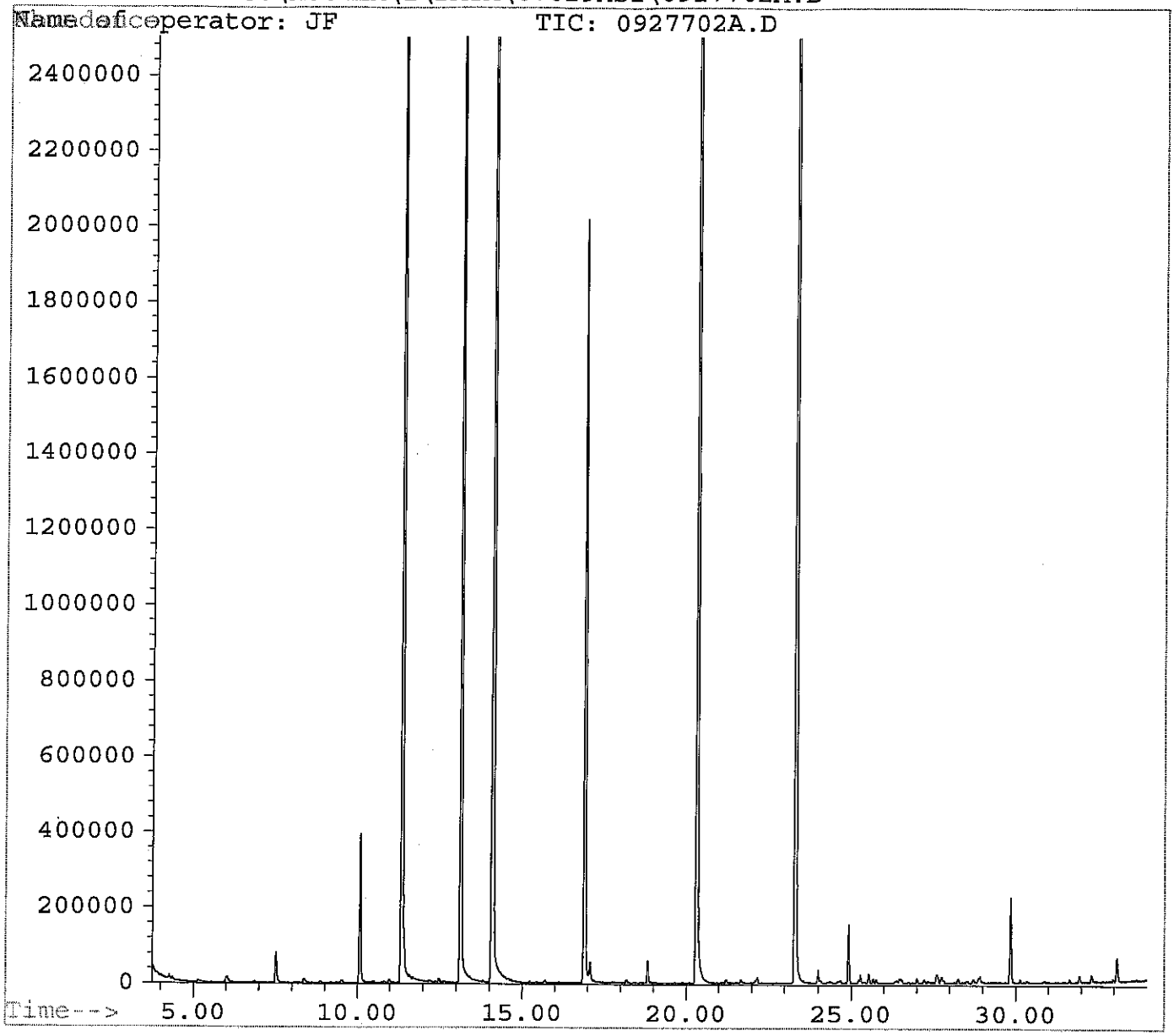
63	m & p-Xylene	35	TRG	106.2	2.080	14711	20.000	3748245	0.038	3	13
64	Styrene	35	TRG	104.2	1.484	669	20.000	3748245	0.002	0	0
65	Bromoform	35	TRG	252.7	2.047	0	20.000	3748245	0.000	0	0
66	o-Xylene	35	TRG	106.2	2.300	4787	20.000	3748245	0.011	1	4
67	1,1,2,2-Tetrachloroethane	35	TRG	167.8	2.109	0	20.000	3748245	0.000	0	0
72	4-Ethyltoluene	35	TRG	120.2	3.651	7817	20.000	3748245	0.011	1	5
73	1,3,5-Trimethylbenzene	35	TRG	120.2	3.337	4315	20.000	3748245	0.007	0	0
76	1,2,4-Trimethylbenzene	35	TRG	120.2	3.082	12779	20.000	3748245	0.022	2	10
78	1,3-Dichlorobenzene	35	TRG	147.0	2.476	4581	20.000	3748245	0.010	1	6
80	Benzyl chloride	35	TRG	126.6	3.379	455	20.000	3748245	0.001	0	0
81	1,4-Dichlorobenzene	35	TRG	147.0	2.556	4581	20.000	3748245	0.010	1	6
83	1,2-Dichlorobenzene	35	TRG	147.0	2.845	3830	20.000	3748245	0.007	0	0
86	1,2,4-Trichlorobenzene	35	TRG	181.4	5.265	14631	20.000	3748245	0.015	1	8
87	Naphthalene	35	TRG	128.2	8.792	38946	20.000	3748245	0.024	2	11
88	Hexachlorobutadiene	35	TRG	260.8	4.062	4327	20.000	3748245	0.006	0	0
1	Pentafluorobenzene	1	IS		1.000	4338723	20.000	4338723			
35	1,4-Difluorobenzene	35	IS		1.000	3748245	20.000	3748245			
94	Toluene-d8	35	SURR		1.124	2223345	20.000	3748245			

Calculation Definitions:

n	compound n
i	i th calibration level
Astdni	Standard Area for compound n at ith calibration level
Cstdni	Standard Concentration for compound n at ith calibration level in ppmv
Cistdi	Internal Standard Conc used for compound n at ith calibration level in ppmv
Aistdi	Internal Standard Area used for compound n at ith calibration level
Ansamp	Sample Area for compound n
Avg RFn	Average response factor for all ith calibration levels for compound n
Raw Amount	Sample Concentration in ppmv before applying factors
Cistd	Concentration internal standard used for compound n in sample in ppmv
Aistd	Area of internal standard used for compound n in sample
Cn	Concentration of compound n in sample in ppmv
23.68	Gas constant at 60 F as per EPA source test protocol
MW	Molecular weight of compound
Note (1) : Avg RFn	The values for the Average Response Factor AvgRFn can be optained from the response Factor Report for the Initial Calibration, or from the Calibration Report

Name of file: C:\MSCHEM\1\DATA\07029MS1\0927702A.D

Name of operator: JF



ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified Full Scan GC/MS | **SDG:** 209277
Analytical Method: TO-15 | **Laboratory Number:** 03

File:	0927703A.D	**Date Sampled:**	06/19/09	**Time:**	12:05
Description:	44-003	**Date Received:**	06/23/09		
Can/Tube#:	737	**Date Extracted:**			
Sam_Type:	SA	**Date Analyzed:**	07/02/09	**Time:**	15:20
QC_Batch:	070209-MS1	**Can Dilution Factor:**	1.59		0
Air Volume:	2 ml	**Not Detected Flag:**	ND		

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
75-71-8	Dichlorodifluoromethane	83	417	ND	426	2,131	ND	ND
74-87-3	Chloromethane	81	405	ND	173	865	ND	ND
76-14-2	Freon 114	83	413	ND	597	2,984	ND	ND
75-01-4	Vinyl chloride	83	413	ND	218	1,091	ND	ND
74-83-9	Bromomethane	83	413	ND	331	1,657	ND	ND
75-00-3	Chloroethane	83	413	ND	225	1,126	ND	ND
75-69-4	Trichlorofluoromethane	83	413	ND	480	2,399	ND	ND
67-64-1	Acetone	72	358	ND	176	878	ND	ND
67-63-0	2-propanol	72	362	ND	184	918	ND	ND
75-35-4	1,1-Dichloroethene	80	401	ND	329	1,643	ND	ND
76-13-1	Freon 113	81	405	ND	641	3,207	ND	ND
75-09-2	Dichloromethane	83	413	ND	296	1,482	ND	ND
75-15-0	Carbon disulfide	71	354	ND	227	1,137	ND	ND
156-60-5	trans-1,2-Dichloroethene	69	346	188	283	1,415	771	J
1634-04-4	Methyl tert butyl ether	62	310	ND	231	1,154	ND	ND
75-34-3	1,1-Dichloroethane	80	401	92	336	1,678	386	J
108-05-4	Vinyl acetate	68	342	ND	249	1,243	ND	ND
78-93-3	2-Butanone	68	342	ND	208	1,041	ND	ND
156-59-2	cis-1,2-Dichloroethene	82	409	2,027	335	1,675	8,295	
67-66-3	Chloroform	81	405	ND	409	2,044	ND	ND
71-55-6	1,1,1-Trichloroethane	81	405	ND	457	2,284	ND	ND
107-06-2	1,2-Dichloroethane	82	409	ND	342	1,712	ND	ND
71-43-2	Benzene	82	409	ND	270	1,350	ND	ND
56-23-5	Carbon tetrachloride	81	405	ND	527	2,633	ND	ND
78-87-5	1,2-Dichloropropane	82	409	ND	391	1,954	ND	ND
123-91-1	1,4 Dioxane	70	350	ND	260	1,301	ND	ND
75-27-4	Bromodichloromethane	64	318	ND	440	2,200	ND	ND
108-10-1	Methyl Isobutyl Ketone	73	366	ND	309	1,547	ND	ND
10061-01-5	cis-1,3-Dichloropropene	84	421	ND	395	1,975	ND	ND
108-88-3	Toluene	82	409	126	318	1,592	489	J
10061-02-6	trans-1,3-Dichloropropene	83	413	ND	388	1,938	ND	ND
79-00-5	1,1,2-Trichloroethane	81	405	ND	457	2,284	ND	ND
591-78-6	2-Hexanone	70	350	ND	296	1,480	ND	ND
124-48-1	Dibromochloromethane	71	354	ND	622	3,112	ND	ND
106-93-4	1,2-Dibromoethane	83	413	ND	656	3,280	ND	ND
127-18-4	Tetrachloroethene	81	405	ND	568	2,839	ND	ND
108-90-7	Chlorobenzene	81	405	ND	386	1,928	ND	ND
100-41-4	Ethylbenzene	83	413	ND	371	1,854	ND	ND
108-38-3	m & p-Xylene	164	819	ND	734	3,672	ND	ND
100-42-5	Styrene	82	409	ND	360	1,802	ND	ND

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
75-25-2	Bromoform	74	370	ND	789	3,945	ND	ND
95-47-6	o-Xylene	81	405	ND	364	1,818	ND	ND
79-34-5	1,1,2,2-Tetrachloroethane	81	405	ND	575	2,873	ND	ND
622-96-8	4-Ethyltoluene	72	362	ND	367	1,836	ND	ND
108-67-8	1,3,5-Trimethylbenzene	84	421	ND	428	2,139	ND	ND
95-63-6	1,2,4-Trimethylbenzene	81	405	ND	412	2,058	ND	ND
541-73-1	1,3-Dichlorobenzene	81	405	ND	503	2,517	ND	ND
100-44-7	Benzyl chloride	72	358	ND	383	1,913	ND	ND
106-46-7	1,4-Dichlorobenzene	81	405	ND	503	2,517	ND	ND
95-50-1	1,2-Dichlorobenzene	80	398	ND	494	2,468	ND	ND
120-82-1	1,2,4-Trichlorobenzene	82	409	ND	627	3,136	ND	ND
91-20-3	Naphthalene	190	950	ND	1,029	5,143	ND	ND
87-68-3	Hexachlorobutadiene	82	409	ND	902	4,509	ND	ND

	Surrogate Recovery	Spike Amt. ppbV	Amount ppbV	% Rec.	QC Limits	Flag * = Out
2037-26-5	Toluene-d8	10.000	10.307	103	70-130	

Notes: 1) Reported results are to be interpreted to two significant figures.
2) ug/m3 = ppbV*FW/23.68 calculated assuming conditions at 60 F and 1 atm.
3) MDL and RL are adjusted for sample volume and can dilution.
4) U and ND are Flags used for Not Detected
5) J is a flag for a result between the MDL and the RL (or lower quantitation limit, LQL)

QUANTITATION REPORT

EPA Method TO-15 Modified Full Scan GC/MS

			Review	EAS Sample ID: 0927703	
File Name:	0927703A.D		_____		1 KB
Sample ID:	44-003		_____		2 AT
Date:	2 Jul 109 3:20 pm		_____	Cal Amounts_____	3 BB
Run Method:	1T15EXAY.M		_____	IS Areas_____	4 SH
Quant Method:	1T15EXAY.M		_____	Carryover_____	
Cal Update:	Tue Mar 17 14:18:15 2009		_____		
Template:	1TO15EXT.MS1		_____		
Can Factor:	1.59		_____		
Volume:	2	ml		Analyst: KB 1	

CAS#	Compound	n	Raw Amount	RT	Target RT	Ion	Sample Area	Qualifier	Lower Qual	Upper Qual	Qual Flag	Cal Flag	Int Flag
75-71-8	Dichlorodifluoromethane	2	0.000	0.00	3.83	85.00	0	0	25	37			
74-87-3	Chloromethane	3	0.000	0.00	4.09	50.00	0	0	22	32			
76-14-2	Freon 114	4	0.000	0.00	4.11	85.00	0	0	44	65			
75-01-4	Vinyl chloride	5	0.000	0.00	4.33	62.00	0	0	24	36			
74-83-9	Bromomethane	6	0.000	0.00	4.92	94.00	0	0	73	109			
75-00-3	Chloroethane	7	0.000	0.00	5.12	64.00	0	0	26	40			
75-69-4	Trichlorofluoromethane	10	0.000	0.00	5.94	101.00	0	0	48	73			
67-64-1	Acetone	12	0.024	6.00	6.04	43.00	4494	0	16	24	Q		
67-63-0	2-propanol	13	0.000	0.00	6.14	45.00	0	0	18	27			
75-35-4	1,1-Dichloroethene	15	0.000	0.00	6.89	61.00	0	0	34	51			
76-13-1	Freon 113	17	0.000	0.00	7.16	151.00	0	0	101	152			
75-09-2	Dichloromethane	19	0.000	0.00	7.31	84.00	0	0	51	77			
75-15-0	Carbon disulfide	20	0.000	0.00	7.54	76.00	0	0	16	24			
156-60-5	trans-1,2-Dichloroethene	21	0.237	8.33	8.38	96.00	9883	207	172	258			
1634-04-4	Methyl tert butyl ether	22	0.000	0.00	8.54	73.00	0	0	18	27			
75-34-3	1,1-Dichloroethane	24	0.116	8.84	8.90	63.00	15271	21	24	36	Q		
108-05-4	Vinyl acetate	25	0.000	0.00	10.32	43.00	0	0	0	0			
78-93-3	2-Butanone	26	0.000	0.00	9.54	72.00	0	0	30	45			
156-59-2	cis-1,2-Dichloroethene	32	2.550	10.06	10.11	96.00	173224	164	139	209			
67-66-3	Chloroform	34	0.007	10.45	10.53	83.00	1112	73	51	77			
71-55-6	1,1,1-Trichloroethane	36	0.000	0.00	11.80	97.00	0	0	51	76			
107-06-2	1,2-Dichloroethane	37	0.007	11.81	11.87	61.95	921	0	25	37			
71-43-2	Benzene	40	0.058	12.46	12.51	78.00	13329	17	19	29	Q		
56-23-5	Carbon tetrachloride	41	0.000	0.00	12.56	116.90	0	0	79	119			
78-87-5	1,2-Dichloropropane	43	0.000	13.96	14.07	63.00	0	0	58	88			
123-91-1	1,4 Dioxane	44	0.000	0.00	14.40	88.00	0	0	76	114			
75-27-4	Bromodichloromethane	47	0.000	14.33	14.40	83.00	0	0	49	74			
108-10-1	Methyl Isobutyl Ketone	49	0.000	0.00	15.70	43.00	0	0	21	35			
10061-01-5	cis-1,3-Dichloropropene	50	0.000	0.00	15.82	75.00	0	0	15	23			
108-88-3	Toluene	51	0.158	17.06	17.11	91.00	47341	54	44	66			
10061-02-6	trans-1,3-Dichloropropene	52	0.000	0.00	16.85	75.00	0	0	16	23			
79-00-5	1,1,2-Trichloroethane	53	0.000	0.00	17.16	61.00	0	0	91	136			
591-78-6	2-Hexanone	54	0.000	0.00	17.80	43.00	0	0	28	47			
124-48-1	Dibromochloromethane	57	0.000	0.00	18.30	129.00	0	0	60	91			
106-93-4	1,2-Dibromoethane	58	0.000	0.00	18.80	107.00	0	0	75	113			
127-18-4	Tetrachloroethene	59	0.004	18.93	18.97	166.00	696	30	52	78			

CAS#	Compound	n	Raw Amount	RT	Target RT	Ion	Sample Area	Qualifier	Lower Qual	Upper Qual	Qual Flag	Cal Flag	Int Flag
108-90-7	Chlorobenzene	60	0.024	20.40	20.45	112.00	6706	27	25	38			
100-41-4	Ethylbenzene	62	0.003	21.23	17.80	91.00	1301	0	21	32	Q		
108-38-3	m & p-Xylene	63	0.003	21.23	21.28	91.00	1301	0	32	48	Q		
100-42-5	Styrene	64	0.000	0.00	22.14	104.00	0	0	53	79			
75-25-2	Bromoform	65	0.000	0.00	22.00	173.00	0	0	39	59			
95-47-6	o-Xylene	66	0.000	0.00	22.25	91.00	0	0	30	45			
79-34-5	1,1,2,2-Tetrachloroethane	67	0.000	0.00	22.75	83.00	0	0	8	13			
622-96-8	4-Ethyltoluene	72	0.002	24.65	24.74	105.00	1180	0	20	31	Q		
108-67-8	1,3,5-Trimethylbenzene	73	0.002	24.67	24.92	105.00	1533	0	33	49	Q		
95-63-6	1,2,4-Trimethylbenzene	76	0.001	25.77	25.89	105.00	848	0	32	48			
541-73-1	1,3-Dichlorobenzene	78	0.008	26.35	26.41	146.00	3970	0	34	51	Q		
100-44-7	Benzyl chloride	80	0.000	0.00	26.61	91.00	0	0	15	23			
106-46-7	1,4-Dichlorobenzene	81	0.049	26.54	26.68	146.00	23985	36	34	51			
95-50-1	1,2-Dichlorobenzene	83	0.043	27.39	27.47	146.00	23603	35	34	51			
120-82-1	1,2,4-Trichlorobenzene	86	0.015	31.96	32.18	180.00	15769	130	78	117	Q		
91-20-3	Naphthalene	87	0.064	32.32	32.41	128.00	108336	12	10	16			
87-68-3	Hexachlorobutadiene	88	0.002	32.99	33.08	225.00	1441	0	22	33	Q		
363-72-4	Pentafluorobenzene	1	20.000	11.32	11.38	168.00	**4338364**						
540-36-3	1,4-Difluorobenzene	35	20.000	13.12	13.17	114.00	**3868867**						
2037-26-5	Toluene-d8	94	**10.307**	16.89	16.94	98.00	2241767	60	51	77			

Integration Flags:

If no flag the Integration was done by the instrument computer

M1 Manual Integration because the computer did not integrated the peak or integrated the wrong peak

M2 Manual Integration because computer integration of baseline was different then Inital Calibration

INITIAL CALIBRATION REPORT

EPA Method TO-15 Modified Full Scan GC/MS

		SDG:	209277
		QC_Batch:	070209-MS1
File Name:	0927703A.D	Instrument Name:	5970 - In
Sample ID:	44-003		
Sample Analysis Date:	2 Jul 109 3:20 pm		
Run Method:	1T15EXAY.M		
Quant and Calibration Method:	1T15EXAY.M	Calibration Title:	EPA T0-15
Cal Update:	Tue Mar 17 14:18:15 2009		
Template:	1TO15EXT.MS1		

Number Compounds:		96
IS1:	ST60403	20
IS2:	ST60403	20
IS3:		
IS4:		

		Calibration Amount CA, ppmv						Calibration Response, Area					
		Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
		Amt	Amt	Amt	Amt	Amt	Amt	C03179C.D	C03179E.D	C03179B.D	C03179A.D	C03169H.D	C03179D.D
n	Compound	0.25	4.0	1.0	5.0	10.0	2.0	0.25	4.0	1.0	5.0	10.0	2.0
2	Dichlorodifluoromethane	0.263	4.200	1.050	5.250	10.500	2.100	22559	398558	88898	436110	840988	185058
3	Chloromethane	0.255	4.080	1.020	5.100	10.200	2.040	15230	241294	55434	272653	505057	113562
4	Freon 114	0.260	4.160	1.040	5.200	10.400	2.080	25317	399238	94441	464176	861160	193013
5	Vinyl chloride	0.260	4.160	1.040	5.200	10.400	2.080	7909	132864	32643	150492	285530	62953
6	Bromomethane	0.260	4.160	1.040	5.200	10.400	2.080	8153	136639	28890	149016	274473	66325
7	Chloroethane	0.260	4.160	1.040	5.200	10.400	2.080	4307	71497	16630	78611	141439	32925
10	Trichlorofluoromethane	0.260	4.160	1.040	5.200	10.400	2.080	22371	364524	85037	431144	716396	179451
12	Acetone	0.225	3.600	0.900	4.500	9.000	1.800	42851	442389	113697	494726	770083	184591
13	2-propanol	0.228	3.640	0.910	4.550	9.100	1.820	19578	321532	75563	289890	1427833	154437
15	1,1-Dichloroethene	0.253	4.040	1.010	5.050	10.100	2.020	16793	248606	63935	305424	730028	150732
17	Freon 113	0.255	4.080	1.020	5.100	10.200	2.040	13083	220191	45725	205080	591375	132996
19	Dichloromethane	0.260	4.160	1.040	5.200	10.400	2.080	8354	124766	26131	120655	330491	71297
20	Carbon disulfide	0.223	3.560	0.890	4.450	8.900	1.780	8703	137347	33136	122015	313353	78232
21	trans-1,2-Dichloroethene	0.218	3.480	0.870	4.350	8.700	1.740	5940	117954	23397	80889	230621	52404
22	Methyl tert butyl ether	0.195	3.120	0.780	3.900	7.800	1.560	24271	482973	97431	369980	967308	233954
24	1,1-Dichloroethane	0.253	4.040	1.010	5.050	10.100	2.020	22823	387657	85531	331041	871129	183187
25	Vinyl acetate	0.215	3.440	0.860	4.300	8.600	1.720	40148	687529	149287	676740	1560060	338492
26	2-Butanone	0.215	3.440	0.860	4.300	8.600	1.720	5400	92652	22013	71425	205517	45058
32	cis-1,2-Dichloroethene	0.258	4.120	1.030	5.150	10.300	2.060	11695	190337	43510	224404	421914	95703
34	Chloroform	0.255	4.080	1.020	5.100	10.200	2.040	27147	449509	101707	516969	959204	213353
36	1,1,1-Trichloroethane	0.255	4.080	1.020	5.100	10.200	2.040	26931	432442	100881	509527	970639	210683
37	1,2-Dichloroethane	0.258	4.120	1.030	5.150	10.300	2.060	26512	398927	96975	495766	920839	187037

(90)

n	Compound	Amt 0.25	Amt 4.0	Amt 1.0	Amt 5.0	Amt 10.0	Amt 2.0	C03179C.D 0.25	C03179E.D 4.0	C03179B.D 1.0	C03179A.D 5.0	C03169H.D 10.0	C03179D.D 2.0
40	Benzene	-1.000	4.120	1.030	5.150	10.300	2.060	-1	712515	206967	782160	1387400	364766
41	Carbon tetrachloride	0.255	4.080	1.020	5.100	10.200	2.040	26276	451629	105798	518753	931992	220983
43	1,2-Dichloropropane	0.258	4.120	1.030	5.150	10.300	2.060	18588	266688	66789	305497	598806	132416
44	1,4 Dioxane	0.220	3.520	0.880	4.400	8.800	1.760	11252	171544	43700	161310	540834	80192
47	Bromodichloromethane	0.200	3.200	0.800	4.000	8.000	1.600	27507	476051	96325	417248	885573	218119
49	Methyl Isobutyl Ketone	0.230	3.680	0.920	4.600	9.200	1.840	67434	1179200	250239	1039898	2505790	566705
50	cis-1,3-Dichloropropene	0.265	4.240	1.060	5.300	10.600	2.120	28339	441906	107039	492454	1010236	206495
51	Toluene	-1.000	4.120	1.030	5.150	10.300	2.060	-1	944443	257501	1033029	1877014	478350
52	trans-1,3-Dichloropropene	0.260	4.160	1.040	5.200	10.400	2.080	33546	509168	127376	538174	1205186	242137
53	1,1,2-Trichloroethane	0.255	4.080	1.020	5.100	10.200	2.040	18573	263308	68163	281046	608914	127239
54	2-Hexanone	0.220	3.520	0.880	4.400	8.800	1.760	84018	1413472	311524	1112452	3278869	678898
57	Dibromochloromethane	0.223	3.560	0.890	4.450	8.900	1.780	43801	688881	150691	558917	1316838	322250
58	1,2-Dibromoethane	0.260	4.160	1.040	5.200	10.400	2.080	46912	660815	169213	701472	1505940	324567
59	Tetrachloroethene	0.255	4.080	1.020	5.100	10.200	2.040	40710	589393	145069	627137	1126037	300057
60	Chlorobenzene	0.255	4.080	1.020	5.100	10.200	2.040	64660	836027	208106	862738	1818049	410336
62	Ethylbenzene	0.260	4.160	1.040	5.200	10.400	2.080	107037	1527752	359496	1548148	3108186	722767
63	m & p-Xylene	0.515	8.240	2.060	10.300	20.600	4.120	192864	2440351	617919	2542524	4725274	1220126
64	Styrene	0.258	4.120	1.030	5.150	10.300	2.060	70964	837020	224026	840176	1812012	428714
65	Bromoform	0.233	3.720	0.930	4.650	9.300	1.860	90991	1151698	243927	958925	2416870	530300
66	o-Xylene	0.255	4.080	1.020	5.100	10.200	2.040	105567	1325719	329821	1384162	2817484	643280
67	1,1,2,2-Tetrachloroethane	0.255	4.080	1.020	5.100	10.200	2.040	102201	1142635	274703	1042229	3385910	560899
72	4-Ethyltoluene	0.228	3.640	0.910	4.550	9.100	1.820	177076	1912961	437379	1573293	3712735	943267
73	1,3,5-Trimethylbenzene	0.265	4.240	1.060	5.300	10.600	2.120	184274	1936506	488965	1778188	3957960	994445
76	1,2,4-Trimethylbenzene	-1.000	4.080	1.020	5.100	10.200	2.040	-1	1979227	501359	1766777	3635276	1033463
78	1,3-Dichlorobenzene	-1.000	4.080	1.020	5.100	10.200	2.040	-1	1499786	411700	1325016	3205866	837609
80	Benzyl chloride	-1.000	3.600	0.900	4.500	9.000	1.800	-1	1944712	459781	1580130	4463720	884546
81	1,4-Dichlorobenzene	-1.000	4.080	1.020	5.100	10.200	2.040	-1	1616283	417021	1362139	3091714	896732
83	1,2-Dichlorobenzene	-1.000	4.000	1.000	5.000	10.000	2.000	-1	1708595	429307	1374687	4272294	912351
86	1,2,4-Trichlorobenzene	-1.000	4.120	1.030	5.150	10.300	2.060	-1	3172331	905400	2236815	7156710	1987175
87	Naphthalene	-1.000	9.560	2.390	11.950	23.900	4.780	-1	11453402	4198495	10074168	24925580	6661715
88	Hexachlorobutadiene	-1.000	4.120	1.030	5.150	10.300	2.060	-1	2443776	758051	1914490	4177636	1622637
1	Pentafluorobenzene	20.000	20.000	20.000	20.000	20.000	20.000	2643183	2935915	2871816	2719013	2737194	3022845
35	1,4-Difluorobenzene	20.000	20.000	20.000	20.000	20.000	20.000	2659938	2870629	2814997	2720455	2706138	3020264
94	Toluene-d8	10.000	10.000	10.000	10.000	10.000	10.000	1479389	1629143	1590486	1469067	1546296	1730275

INITIAL CALIBRATION REPORT: Response Factors

SDG:	**209277**
QC_Batch:	**070209-MS1**
Sample ID:	44-003
Sample Analysis Date:	2 Jul 109 3:20 pm
Run Method:	1T15EXAY.M
Quant Method:	1T15EXAY.M
Cal Update:	Tue Mar 17 14:18:15 2009
Template:	1TO15EXT.MS1

Sample Calculation:

1) Avg RFn = Sum $\left| \frac{(Astdni)}{(Cstdni)} \frac{(Cistdi)}{(Aistdi)} \right|_i$

Response Factors

Compound		RF1	RF2	RF3	RF4	RF5	RF6	AvgRFn	%RSD
Dichlorodifluoromethane		0.649	0.646	0.590	0.611	0.585	0.583	0.611	4.97
Chloromethane		0.452	0.403	0.378	0.393	0.362	0.368	0.393	8.34
Freon 114		0.737	0.654	0.632	0.657	0.605	0.614	0.650	7.29
Vinyl chloride		0.230	0.218	0.219	0.213	0.201	0.200	0.213	5.40
Bromomethane		0.237	0.224	0.193	0.211	0.193	0.211	0.212	8.16
Chloroethane		0.125	0.117	0.111	0.111	0.099	0.105	0.112	8.18
Trichlorofluoromethane		0.651	0.597	0.569	0.610	0.503	0.571	0.584	8.47
Acetone		1.441	0.837	0.880	0.809	0.625	0.679	0.878	33.28
2-propanol		0.650	0.602	0.578	0.469	1.146	0.561	0.668	36.24
1,1-Dichloroethene		0.502	0.419	0.441	0.445	0.528	0.494	0.471	9.01
Freon 113		0.388	0.368	0.312	0.296	0.424	0.431	0.370	15.21
Dichloromethane		0.243	0.204	0.175	0.171	0.232	0.227	0.209	14.64
Carbon disulfide		0.295	0.263	0.259	0.202	0.257	0.291	0.261	12.82
trans-1,2-Dichloroethene		0.206	0.231	0.187	0.137	0.194	0.199	0.192	16.18
Methyl tert butyl ether		0.942	1.055	0.870	0.698	0.906	0.992	0.910	13.48
1,1-Dichloroethane		0.683	0.654	0.590	0.482	0.630	0.600	0.606	11.51
Vinyl acetate		1.413	1.362	1.209	1.158	1.325	1.302	1.295	7.38
2-Butanone		0.190	0.183	0.178	0.122	0.175	0.173	0.170	14.31
cis-1,2-Dichloroethene		0.343	0.315	0.294	0.321	0.299	0.307	0.313	5.59
Chloroform		0.806	0.751	0.694	0.746	0.687	0.692	0.729	6.41
1,1,1-Trichloroethane		0.794	0.738	0.703	0.734	0.703	0.684	0.726	5.40
1,2-Dichloroethane		0.773	0.675	0.669	0.708	0.661	0.601	0.681	8.33
Benzene	NA		1.205	1.428	1.117	0.996	1.173	1.183	13.36
Carbon tetrachloride		0.775	0.771	0.737	0.748	0.675	0.717	0.737	5.04
1,2-Dichloropropane		0.542	0.451	0.461	0.436	0.430	0.426	0.457	9.47
1,4 Dioxane		0.385	0.340	0.353	0.270	0.454	0.302	0.350	18.49
Bromodichloromethane		1.034	1.036	0.855	0.767	0.818	0.903	0.902	12.44
Methyl Isobutyl Ketone		2.204	2.233	1.932	1.662	2.013	2.040	2.014	10.30
cis-1,3-Dichloropropene		0.804	0.726	0.717	0.683	0.704	0.645	0.713	7.44
Toluene	NA		1.597	1.776	1.475	1.347	1.538	1.546	10.25
trans-1,3-Dichloropropene		0.970	0.853	0.870	0.761	0.856	0.771	0.847	9.00
1,1,2-Trichloroethane		0.548	0.450	0.475	0.405	0.441	0.413	0.455	11.39
2-Hexanone		2.871	2.798	2.515	1.859	2.754	2.554	2.559	14.47
Dibromochloromethane		1.477	1.348	1.203	0.923	1.094	1.199	1.207	15.98
1,2-Dibromoethane		1.357	1.107	1.156	0.992	1.070	1.033	1.119	11.58
Tetrachloroethene		1.200	1.006	1.010	0.904	0.816	0.974	0.985	13.06
Chlorobenzene		1.907	1.428	1.450	1.244	1.317	1.332	1.446	16.45

Ethylbenzene		3.095	2.559	2.456	2.189	2.209	2.301	2.468	13.74
m & p-Xylene		2.816	2.063	2.131	1.815	1.695	1.961	2.080	18.95
Styrene		2.068	1.415	1.545	1.199	1.300	1.378	1.484	20.78
Bromoform		2.936	2.157	1.863	1.516	1.921	1.888	2.047	23.53
o-Xylene		3.113	2.264	2.297	1.995	2.041	2.088	2.300	18.10
1,1,2,2-Tetrachloroethane		3.014	1.951	1.913	1.502	2.453	1.821	2.109	25.54
4-Ethyltoluene		5.840	3.661	3.415	2.542	3.015	3.432	3.651	31.30
1,3,5-Trimethylbenzene		5.228	3.182	3.277	2.467	2.760	3.106	3.337	29.21
1,2,4-Trimethylbenzene	NA		3.380	3.492	2.547	2.634	3.355	3.082	14.68
1,3-Dichlorobenzene	NA		2.561	2.868	1.910	2.323	2.719	2.476	15.16
Benzyl chloride	NA		3.764	3.630	2.581	3.666	3.254	3.379	14.38
1,4-Dichlorobenzene	NA		2.760	2.905	1.964	2.240	2.911	2.556	16.83
1,2-Dichlorobenzene	NA		2.976	3.050	2.021	3.157	3.021	2.845	16.36
1,2,4-Trichlorobenzene	NA		5.365	6.245	3.193	5.135	6.388	5.265	24.29
Naphthalene	NA		8.347	12.481	6.198	7.708	9.229	8.792	26.61
Hexachlorobutadiene	NA		4.133	5.229	2.733	2.998	5.216	4.062	29.13
Pentafluorobenzene		1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.00
1,4-Difluorobenzene		1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.00
Toluene-d8		1.112	1.135	1.130	1.080	1.143	1.146	1.124	2.20

CALCULATIONS

EPA Method TO-15 Modified Full Scan GC/MS

SDG: 209277
Laboratory Number: 03

Run Method: 1T15EXAY.M
Quant Method: 1T15EXAY.M
Can Dilution Factor: 1.59
Air Volume: 2 ml MDL Factor 1
Gas Constant: 23.68
Decimal Places: 0

Compound	M.W.	Raw Amount	Result ppbv	Result ug/m3	(1) MDL ppbv	(2) RL ppbv	Calc MDL ppbv	Calc MDL ug/m3	Calc RL ppbv	Calc RL ug/m3	Flag	S062602-1 Spike ppmv
Dichlorodifluoromethane	120.9	0.000	0.000	0	0.105	0.525	83.48	426	417.38	2,131	U	0.103
Chloromethane	50.5	0.000	0.000	0	0.102	0.510	81.09	173	405.45	865	U	0.103
Freon 114	170.9	0.000	0.000	0	0.104	0.520	82.68	597	413.40	2,984	U	0.103
Vinyl chloride	62.5	0.000	0.000	0	0.104	0.520	82.68	218	413.40	1,091	U	0.103
Bromomethane	94.9	0.000	0.000	0	0.104	0.520	82.68	331	413.40	1,657	U	0.103
Chloroethane	64.5	0.000	0.000	0	0.104	0.520	82.68	225	413.40	1,126	U	0.103
Trichlorofluoromethane	137.4	0.000	0.000	0	0.104	0.520	82.68	480	413.40	2,399	U	0.103
Acetone	58.1	0.024	18.751	46	0.090	0.450	71.55	176	357.75	878	U	0.103
2-propanol	60.1	0.000	0.000	0	0.091	0.455	72.35	184	361.73	918	U	0.103
1,1-Dichloroethene	96.9	0.000	0.000	0	0.101	0.505	80.30	329	401.48	1,643	U	0.103
Freon 113	187.3	0.000	0.000	0	0.102	0.510	81.09	641	405.45	3,207	U	0.103
Dichloromethane	84.9	0.000	0.000	0	0.104	0.520	82.68	296	413.40	1,482	U	0.103
Carbon disulfide	76.1	0.000	0.000	0	0.089	0.445	70.76	227	353.78	1,137	U	0.103
trans-1,2-Dichloroethene	96.9	0.237	188.309	771	0.087	0.435	69.17	283	345.83	1,415	J	0.103
Methyl tert butyl ether	88.1	0.000	0.000	0	0.078	0.390	62.01	231	310.05	1,154	U	0.103
1,1-Dichloroethane	99.0	0.116	92.295	386	0.101	0.505	80.30	336	401.48	1,678	J	0.103
Vinyl acetate	86.1	0.000	0.000	0	0.086	0.430	68.37	249	341.85	1,243	U	0.103
2-Butanone	72.1	0.000	0.000	0	0.086	0.430	68.37	208	341.85	1,041	U	0.103
cis-1,2-Dichloroethene	96.9	2.550	2027.144	8,295	0.103	0.515	81.89	335	409.43	1,675		0.103
Chloroform	119.4	0.007	5.589	28	0.102	0.510	81.09	409	405.45	2,044	U	0.103
1,1,1-Trichloroethane	133.4	0.000	0.000	0	0.102	0.510	81.09	457	405.45	2,284	U	0.103
1,2-Dichloroethane	99.0	0.007	5.558	23	0.103	0.515	81.89	342	409.43	1,712	U	0.103
Benzene	78.1	0.058	46.288	153	0.103	0.515	81.89	270	409.43	1,350	U	0.103
Carbon tetrachloride	153.8	0.000	0.000	0	0.102	0.510	81.09	527	405.45	2,633	U	0.103
1,2-Dichloropropane	113.0	0.000	0.000	0	0.103	0.515	81.89	391	409.43	1,954	U	0.103
1,4 Dioxane	88.1	0.000	0.000	0	0.088	0.440	69.96	260	349.80	1,301	U	0.103
Bromodichloromethane	163.8	0.000	0.000	0	0.080	0.400	63.60	440	318.00	2,200	U	0.103
Methyl Isobutyl Ketone	100.2	0.000	0.000	0	0.092	0.460	73.14	309	365.70	1,547	U	0.103
cis-1,3-Dichloropropene	111.0	0.000	0.000	0	0.106	0.530	84.27	395	421.35	1,975	U	0.103
Toluene	92.1	0.158	125.806	489	0.103	0.515	81.89	318	409.43	1,592	J	0.103
trans-1,3-Dichloropropene	111.0	0.000	0.000	0	0.104	0.520	82.68	388	413.40	1,938	U	0.103
1,1,2-Trichloroethane	133.4	0.000	0.000	0	0.102	0.510	81.09	457	405.45	2,284	U	0.103
2-Hexanone	100.2	0.000	0.000	0	0.088	0.440	69.96	296	349.80	1,480	U	0.103
Dibromochloromethane	208.3	0.000	0.000	0	0.089	0.445	70.76	622	353.78	3,112	U	0.103
1,2-Dibromoethane	187.9	0.000	0.000	0	0.104	0.520	82.68	656	413.40	3,280	U	0.103
Tetrachloroethene	165.8	0.004	2.903	20	0.102	0.510	81.09	568	405.45	2,839	U	0.103

Chlorobenzene	112.6	0.024	19.058	91	0.102	0.510	81.09	386	405.45	1,928	U	0.103
Ethylbenzene	106.2	0.003	2.166	10	0.104	0.520	82.68	371	413.40	1,854	U	0.103
m & p-Xylene	106.2	0.003	2.570	12	0.206	1.030	163.77	734	818.85	3,672	U	0.206
Styrene	104.2	0.000	0.000	0	0.103	0.515	81.89	360	409.43	1,802	U	0.103
Bromoform	252.7	0.000	0.000	0	0.093	0.465	73.94	789	369.68	3,945	U	0.103
o-Xylene	106.2	0.000	0.000	0	0.102	0.510	81.09	364	405.45	1,818	U	0.103
1,1,2,2-Tetrachloroethane	167.8	0.000	0.000	0	0.102	0.510	81.09	575	405.45	2,873	U	0.103
4-Ethyltoluene	120.2	0.002	1.328	7	0.091	0.455	72.35	367	361.73	1,836	U	0.103
1,3,5-Trimethylbenzene	120.2	0.002	1.888	10	0.106	0.530	84.27	428	421.35	2,139	U	0.103
1,2,4-Trimethylbenzene	120.2	0.001	1.131	6	0.102	0.510	81.09	412	405.45	2,058	U	0.103
1,3-Dichlorobenzene	147.0	0.008	6.589	41	0.102	0.510	81.09	503	405.45	2,517	U	0.103
Benzyl chloride	126.6	0.000	0.000	0	0.090	0.450	71.55	383	357.75	1,913	U	0.103
1,4-Dichlorobenzene	147.0	0.049	38.567	239	0.102	0.510	81.09	503	405.45	2,517	U	0.103
1,2-Dichlorobenzene	147.0	0.043	34.094	212	0.100	0.500	79.50	494	397.50	2,468	U	0.103
1,2,4-Trichlorobenzene	181.4	0.015	12.308	94	0.103	0.515	81.89	627	409.43	3,136	U	0.103
Naphthalene	128.2	0.064	50.638	274	0.239	1.195	190.01	1,029	950.03	5,143	U	0.103
Hexachlorobutadiene	260.8	0.002	1.458	16	0.103	0.515	81.89	902	409.43	4,509	U	0.103

SAMPLE CALCULATION

EPA Method TO-15 Modified Full Scan GC/MS

SDG:		**209277**
Laboratory Number:		**03**
Standard Volume	STV	5.0
Sample Volume	SV	2
Can Dilution Factor	CDF	1.59
Gas Constant		23.68
Decimal Places:		0

Sample Calculation:

1) Avg RFn = Sum $\left| \frac{(Astdni)}{(Cstdni)} \frac{(Cistdi)}{(Aistdi)} \right|_i$ Note: 1

2) Raw Amt = $\frac{(Ansamp)}{(Avg\ RFn)} \frac{(Cistdi)}{(Aistdi)}$ = Cn

3) Amount ppbv = $\frac{(Raw\ Amt)\ 1000}{(SV)}$ (CDF)

4) Amount ug/m3 = $\frac{(amt(ppbv)\ MW}{23.68}$

n	Compound	IS n	Chem type	MW	AvgRFn	Area Ansamp	Cistdi ppmv	Aistdi Ais	Cn ppmV Raw Amt	Amount ppbv	Amount ug/m3
2	Dichlorodifluoromethane	1	TRG	120.9	0.611	0	20.000	4338364	0.000	0	0
3	Chloromethane	1	TRG	50.5	0.393	0	20.000	4338364	0.000	0	0
4	Freon 114	1	TRG	170.9	0.650	0	20.000	4338364	0.000	0	0
5	Vinyl chloride	1	TRG	62.5	0.213	0	20.000	4338364	0.000	0	0
6	Bromomethane	1	TRG	94.9	0.212	0	20.000	4338364	0.000	0	0
7	Chloroethane	1	TRG	64.5	0.112	0	20.000	4338364	0.000	0	0
10	Trichlorofluoromethane	1	TRG	137.4	0.584	0	20.000	4338364	0.000	0	0
12	Acetone	1	TRG	58.1	0.878	4494	20.000	4338364	0.024	19	47
13	2-propanol	1	TRG	60.1	0.668	0	20.000	4338364	0.000	0	0
15	1,1-Dichloroethene	1	TRG	96.9	0.471	0	20.000	4338364	0.000	0	0
17	Freon 113	1	TRG	187.3	0.370	0	20.000	4338364	0.000	0	0
19	Dichloromethane	1	TRG	84.9	0.209	0	20.000	4338364	0.000	0	0
20	Carbon disulfide	1	TRG	76.1	0.261	0	20.000	4338364	0.000	0	0
21	trans-1,2-Dichloroethene	1	TRG	96.9	0.192	9883	20.000	4338364	0.237	188	769
22	Methyl tert butyl ether	1	TRG	88.1	0.910	0	20.000	4338364	0.000	0	0
24	1,1-Dichloroethane	1	TRG	99.0	0.606	15271	20.000	4338364	0.116	92	385
25	Vinyl acetate	1	TRG	86.1	1.295	0	20.000	4338364	0.000	0	0
26	2-Butanone	1	TRG	72.1	0.170	0	20.000	4338364	0.000	0	0
32	cis-1,2-Dichloroethene	1	TRG	96.9	0.313	173224	20.000	4338364	2.550	2,027	8,295
34	Chloroform	1	TRG	119.4	0.729	1112	20.000	4338364	0.007	6	30
36	1,1,1-Trichloroethane	35	TRG	133.4	0.726	0	20.000	3868867	0.000	0	0
37	1,2-Dichloroethane	35	TRG	99.0	0.681	921	20.000	3868867	0.007	6	25
40	Benzene	35	TRG	78.1	1.183	13329	20.000	3868867	0.058	46	152
41	Carbon tetrachloride	35	TRG	153.8	0.737	0	20.000	3868867	0.000	0	0
43	1,2-Dichloropropane	35	TRG	113.0	0.457	0	20.000	3868867	0.000	0	0
44	1,4 Dioxane	35	TRG	88.1	0.350	0	20.000	3868867	0.000	0	0
47	Bromodichloromethane	35	TRG	163.8	0.902	0	20.000	3868867	0.000	0	0
49	Methyl Isobutyl Ketone	35	TRG	100.2	2.014	0	20.000	3868867	0.000	0	0
50	cis-1,3-Dichloropropene	35	TRG	111.0	0.713	0	20.000	3868867	0.000	0	0
51	Toluene	35	TRG	92.1	1.546	47341	20.000	3868867	0.158	126	490
52	trans-1,3-Dichloropropene	35	TRG	111.0	0.847	0	20.000	3868867	0.000	0	0
53	1,1,2-Trichloroethane	35	TRG	133.4	0.455	0	20.000	3868867	0.000	0	0
54	2-Hexanone	35	TRG	100.2	2.559	0	20.000	3868867	0.000	0	0
57	Dibromochloromethane	35	TRG	208.3	1.207	0	20.000	3868867	0.000	0	0
58	1,2-Dibromoethane	35	TRG	187.9	1.119	0	20.000	3868867	0.000	0	0
59	Tetrachloroethene	35	TRG	165.8	0.985	696	20.000	3868867	0.004	3	21
60	Chlorobenzene	35	TRG	112.6	1.446	6706	20.000	3868867	0.024	19	90
62	Ethylbenzene	35	TRG	106.2	2.468	1301	20.000	3868867	0.003	2	9
63	m & p-Xylene	35	TRG	106.2	2.080	1301	20.000	3868867	0.003	3	13

64	Styrene	35	TRG	104.2	1.484	0	20.000	3868867	0.000	0	0
65	Bromoform	35	TRG	252.7	2.047	0	20.000	3868867	0.000	0	0
66	o-Xylene	35	TRG	106.2	2.300	0	20.000	3868867	0.000	0	0
67	1,1,2,2-Tetrachloroethane	35	TRG	167.8	2.109	0	20.000	3868867	0.000	0	0
72	4-Ethyltoluene	35	TRG	120.2	3.651	1180	20.000	3868867	0.002	1	5
73	1,3,5-Trimethylbenzene	35	TRG	120.2	3.337	1533	20.000	3868867	0.002	2	10
76	1,2,4-Trimethylbenzene	35	TRG	120.2	3.082	848	20.000	3868867	0.001	1	5
78	1,3-Dichlorobenzene	35	TRG	147.0	2.476	3970	20.000	3868867	0.008	7	43
80	Benzyl chloride	35	TRG	126.6	3.379	0	20.000	3868867	0.000	0	0
81	1,4-Dichlorobenzene	35	TRG	147.0	2.556	23985	20.000	3868867	0.049	39	242
83	1,2-Dichlorobenzene	35	TRG	147.0	2.845	23603	20.000	3868867	0.043	34	211
86	1,2,4-Trichlorobenzene	35	TRG	181.4	5.265	15769	20.000	3868867	0.015	12	92
87	Naphthalene	35	TRG	128.2	8.792	108336	20.000	3868867	0.064	51	276
88	Hexachlorobutadiene	35	TRG	260.8	4.062	1441	20.000	3868867	0.002	1	11
1	Pentafluorobenzene	1	IS		1.000	4338364	20.000	4338364			
35	1,4-Difluorobenzene	35	IS		1.000	3868867	20.000	3868867			
94	Toluene-d8	35	SURR		1.124	2241767	20.000	3868867			

Calculation Definitions:

n	compound n
i	i th calibration level
Astdni	Standard Area for compound n at ith calibration level
Cstdni	Standard Concentration for compound n at ith calibration level in ppmv
Cistdi	Internal Standard Conc used for compound n at ith calibration level in ppmv
Aistdi	Internal Standard Area used for compound n at ith calibration level
Ansamp	Sample Area for compound n
Avg RFn	Average response factor for all ith calibration levels for compound n
Raw Amount	Sample Concentration in ppmv before applying factors
Cistd	Concentration internal standard used for compound n in sample in ppmv
Aistd	Area of internal standard used for compound n in sample
Cn	Concentration of compound n in sample in ppmv
23.68	Gas constant at 60 F as per EPA source test protocol
MW	Molecular weight of compound
Note (1) : Avg RFn	The values for the Average Response Factor AvgRFn can be optained from the response Factor Report for the Initial Calibration, or from the Calibration Report

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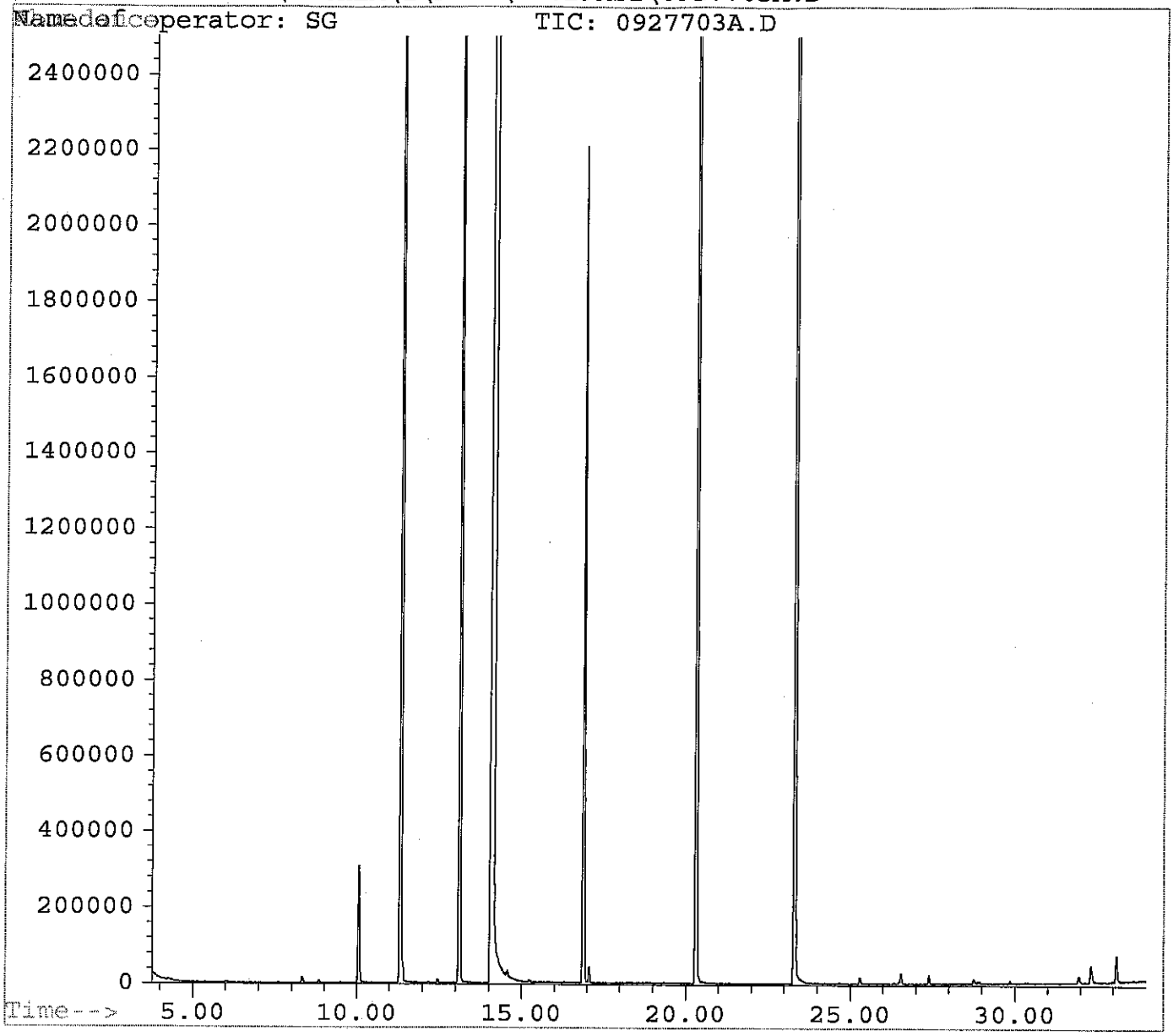
Name of operator: SG



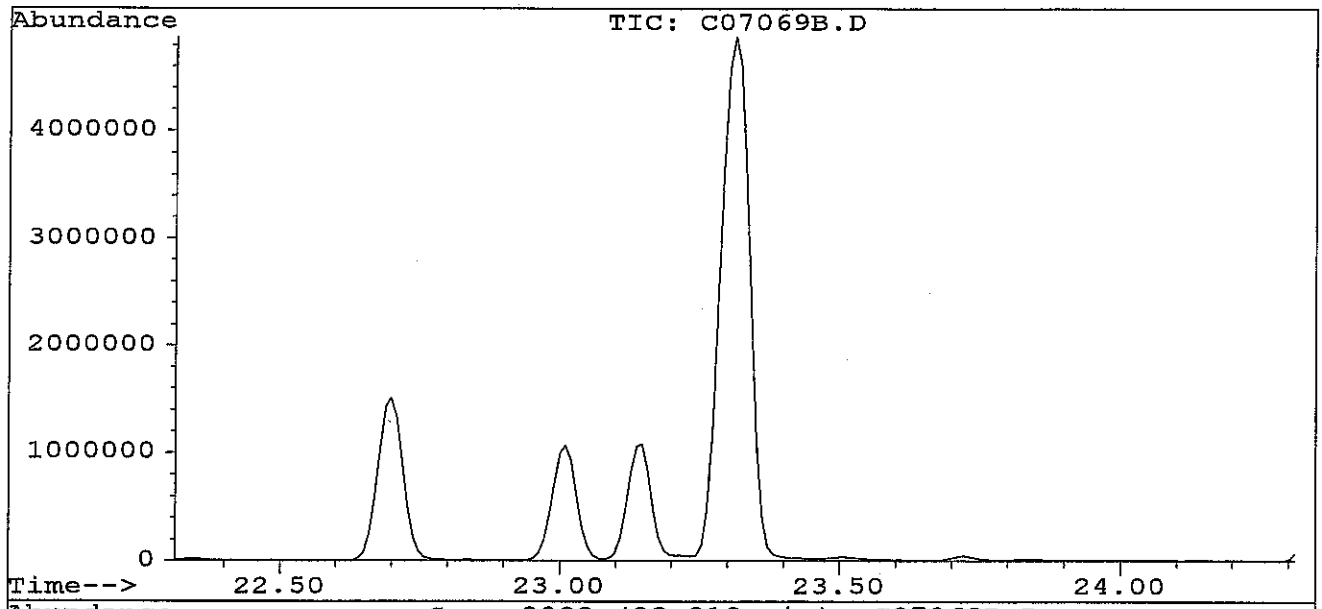
Daily Analytical Batch #: 070609-MS1

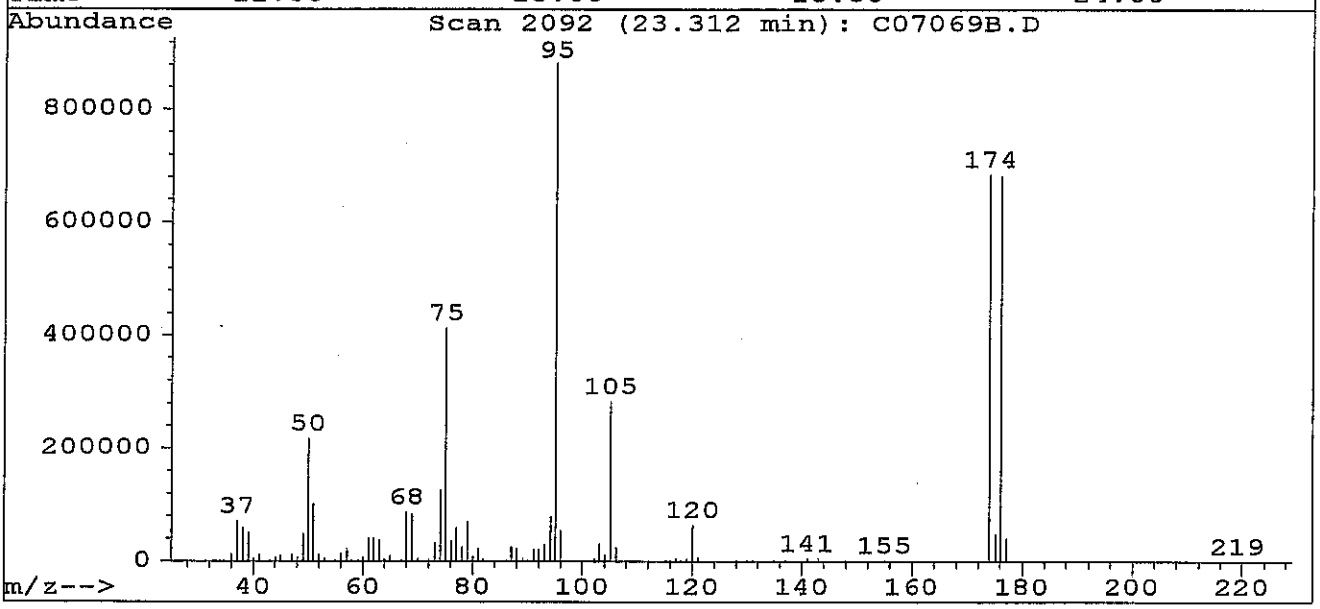
BFB

Data File : C:\MSCHEM\2\DATA\07069MS1\C07069B.D
Acq Time : 6 Jul 109 9:52 am
Sample : ST60022 + ST60350
Misc :

Operator: JF
Inst : 5970 - In
Multiplr: 1.00

Method : C:\MSCHEM\2\METHODS\1T15EXAY.M
Title : EPA TO-15





Peak Apex is scan: 2092

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	8	40	24.6	217664	PASS
75	95	30	66	46.8	413760	PASS
95	95	100	100	100.0	883392	PASS
96	95	5	9	6.1	53904	PASS
173	174	0	2	0.0	0	PASS
174	95	50	120	77.5	684800	PASS
175	174	4	9	7.0	48080	PASS
176	174	93	101	99.5	681152	PASS
177	176	5	9	6.1	41504	PASS

C07069B.D 1T15EXAY.M Tue Jul 07 15:52:05 2009

CONTINUING CALIBRATION REPORT

SDG:	**LABQC**	
QC_Batch:	**070609-MS1**	
Sample ID:	ST60022 + ST60350	
Sample Analysis Date:	6 Jul 109 8:45 am	
Run Method:	1T15EXAY.M	
Quant/Calibration Method:	1T15EXAY.M	
Cal Update:	Tue Mar 17 14:18:15 2009	
Template:	1TO15EXT.MS1	
Calibration Level	Level 4	5.0

Sample Calculation:

1) RFi = $\frac{(Astdi)\ (Cistdi)}{(Cstdi)\ (Aistdi)}$ i

Compound	Area Astdi	Cal Level Cstdi ppbv	CCRRF	AvgRFn	%Dev	%Dev Limit	%Dev Flag	
Dichlorodifluoromethane	665330	5.250	0.495	0.611	19.0	30	IN	
Chloromethane	372646	5.100	0.285	0.393	27.4	30	IN	
Freon 114	471649	5.200	0.354	0.650	45.5	30	OUT	1A
Vinyl chloride	223938	5.200	0.168	0.213	21.2	30	IN	
Bromomethane	197523	5.200	0.148	0.212	29.9	30	IN	
Chloroethane	115954	5.200	0.087	0.112	22.0	30	IN	
Trichlorofluoromethane	602732	5.200	0.452	0.584	22.5	30	IN	
Acetone	650299	4.500	0.564	0.878	35.8	40	IN	
2-propanol	474568	4.550	0.407	0.668	39.0	40	IN	
1,1-Dichloroethene	558075	5.050	0.431	0.471	8.5	30	IN	
Freon 113	550534	5.100	0.421	0.370	-13.9	30	IN	
Dichloromethane	277827	5.200	0.209	0.209	0.1	30	IN	
Carbon disulfide	369378	4.450	0.324	0.261	-24.0	40	IN	
trans-1,2-Dichloroethene	184093	4.350	0.165	0.192	14.1	40	IN	
Methyl tert butyl ether	676920	3.900	0.677	0.910	25.6	40	IN	
1,1-Dichloroethane	689568	5.050	0.533	0.606	12.1	30	IN	
Vinyl acetate	1005763	4.300	0.913	1.295	29.5	40	IN	
2-Butanone	142831	4.300	0.130	0.170	23.9	40	IN	
cis-1,2-Dichloroethene	410820	5.150	0.311	0.313	0.6	30	IN	
Chloroform	876803	5.100	0.671	0.729	8.0	30	IN	
1,1,1-Trichloroethane	793456	5.100	0.677	0.726	6.7	30	IN	
1,2-Dichloroethane	911050	5.150	0.770	0.681	-13.1	30	IN	
Benzene	1311262	5.150	1.108	1.183	6.4	30	IN	
Carbon tetrachloride	762752	5.100	0.651	0.737	11.7	30	IN	
1,2-Dichloropropane	543508	5.150	0.459	0.457	-0.4	30	IN	
1,4 Dioxane	240245	4.400	0.238	0.350	32.2	40	IN	
Trichloroethene	750403	5.150	0.634	0.573	-10.7	30	IN	
Bromodichloromethane	635461	4.000	0.691	0.902	23.4	40	IN	
Methyl Isobutyl Ketone	1601625	4.600	1.515	2.014	24.8	40	IN	
cis-1,3-Dichloropropene	870496	5.300	0.715	0.713	-0.2	30	IN	
Toluene	1891943	5.150	1.599	1.546	-3.4	30	IN	
trans-1,3-Dichloropropene	996017	5.200	0.834	0.847	1.6	30	IN	
1,1,2-Trichloroethane	593932	5.100	0.507	0.455	-11.3	30	IN	
2-Hexanone	1643302	4.400	1.626	2.559	36.5	40	IN	
Dibromochloromethane	939213	4.450	0.919	1.207	23.9	40	IN	
1,2-Dibromoethane	1509447	5.200	1.263	1.119	-12.9	30	IN	
Tetrachloroethene	1360973	5.100	1.161	0.985	-17.9	30	IN	

Chlorobenzene	1827047	5.100	1.559	1.446	-7.8	30	IN	
Ethylbenzene	2995013	5.200	2.507	2.468	-1.6	30	IN	
m & p-Xylene	4668447	10.300	1.973	2.080	5.2	30	IN	
Styrene	1630149	5.150	1.378	1.484	7.2	30	IN	
Bromoform	1404047	4.650	1.314	2.047	35.8	40	IN	
o-Xylene	2583208	5.100	2.205	2.300	4.1	30	IN	
1,1,2,2-Tetrachloroethane	1623019	5.100	1.385	2.109	34.3	30	OUT	2A
4-Ethyltoluene	1978551	4.550	1.893	3.651	48.2	40	OUT	1B
1,3,5-Trimethylbenzene	2915861	5.300	2.395	3.337	28.2	30	IN	
1,2,4-Trimethylbenzene	2675156	5.100	2.283	3.082	25.9	30	IN	
1,3-Dichlorobenzene	1985574	5.100	1.695	2.476	31.6	30	OUT	3A
Benzyl chloride	1479674	4.500	1.431	3.379	57.6	40	OUT	2B
1,4-Dichlorobenzene	2094060	5.100	1.787	2.556	30.1	30	OUT	4A
1,2-Dichlorobenzene	1812154	5.000	1.577	2.845	44.6	30	OUT	4A
1,2,4-Trichlorobenzene	7487413	5.150	6.328	5.265	-20.2	80	IN	
Naphthalene	8789955	11.950	3.201	8.792	63.6	80	IN	
Hexachlorobutadiene	2164451	5.150	1.829	4.062	55.0	80	IN	
Pentafluorobenzene	5124689	20.000	1.000	1.000	0.0	30	IN	
1,4-Difluorobenzene	4595142	20.000	1.000	1.000	0.0	30	IN	
Toluene-d8	2622417	10.000	1.141	1.124	-1.5	30	IN	

QUANTITATION REPORT

EPA Method TO-15 Modified Full Scan GC/MS

			Review	EAS Sample ID: C07069A	
File Name:	C07069A.D		_____		1 KB
Sample ID:	ST60022 + ST60350		_____		2 AT
Date:	6 Jul 109 8:45 am		_____	Cal Amounts _____	3 BB
Run Method:	1T15EXAY.M		_____	IS Areas _____	4 SH
Quant Method:	1T15EXAY.M		_____	Carryover _____	
Cal Update:	Tue Mar 17 14:18:15 2009		_____		
Template:	1TO15EXT.MS1		_____		
Can Factor:	1.00		_____		
Volume:	200	ml		Analyst: KB 1	

CAS#	Compound	n	Raw Amount	RT	Target RT	Ion	Sample Area	Qualifier	Lower Qual	Upper Qual	Qual Flag	Cal Flag	Int Flag
75-71-8	Dichlorodifluoromethane	2	4.252	3.82	3.83	85.00	665330	32	25	37			
74-87-3	Chloromethane	3	3.703	4.08	4.09	50.00	372646	25	22	32			
76-14-2	Freon 114	4	2.833	4.10	4.11	85.00	471649	57	44	65			
75-01-4	Vinyl chloride	5	4.096	4.32	4.33	62.00	223938	30	24	36			
74-83-9	Bromomethane	6	3.645	4.89	4.92	94.00	197523	93	73	109			
75-00-3	Chloroethane	7	4.058	5.10	5.12	64.00	115954	30	26	40			
75-69-4	Trichlorofluoromethane	10	4.031	5.92	5.94	101.00	602732	62	48	73			
67-64-1	Acetone	12	2.889	5.97	6.04	43.00	650299	19	16	24			
67-63-0	2-propanol	13	2.774	6.07	6.14	45.00	474568	23	18	27			
75-35-4	1,1-Dichloroethene	15	4.619	6.86	6.89	61.00	558075	45	34	51			
76-13-1	Freon 113	17	5.810	7.13	7.16	151.00	550534	110	101	152			
75-09-2	Dichloromethane	19	5.196	7.27	7.31	84.00	277827	65	51	77			
75-15-0	Carbon disulfide	20	5.519	7.51	7.54	76.00	369378	20	16	24			
156-60-5	trans-1,2-Dichloroethene	21	3.735	8.34	8.38	96.00	184093	184	172	258			
1634-04-4	Methyl tert butyl ether	22	2.902	8.49	8.54	73.00	676920	24	18	27			
75-34-3	1,1-Dichloroethane	24	4.438	8.85	8.90	63.00	689568	33	24	36			
108-05-4	Vinyl acetate	25	3.032	10.24	10.32	43.00	1005763	0	0	0			
78-93-3	2-Butanone	26	3.273	9.47	9.54	72.00	142831	37	30	45			
156-59-2	cis-1,2-Dichloroethene	32	5.119	10.05	10.11	96.00	410820	168	139	209			
67-66-3	Chloroform	34	4.693	10.47	10.53	83.00	876803	59	51	77			
71-55-6	1,1,1-Trichloroethane	36	4.756	11.74	11.80	97.00	793456	64	51	76			
107-06-2	1,2-Dichloroethane	37	5.823	11.81	11.87	61.95	911050	31	25	37			
71-43-2	Benzene	40	4.823	12.46	12.51	78.00	1311262	23	19	29			
56-23-5	Carbon tetrachloride	41	4.503	12.51	12.56	116.90	762752	96	79	119			
78-87-5	1,2-Dichloropropane	43	5.171	14.00	14.07	63.00	543508	75	58	88			
123-91-1	1,4 Dioxane	44	2.984	14.32	14.40	88.00	240245	95	76	114			
79-01-6	Trichloroethene	46	5.700	14.07	14.13	130.00	750403	97	79	119			
75-27-4	Bromodichloromethane	47	3.065	14.33	14.40	83.00	635461	64	49	74			
108-10-1	Methyl Isobutyl Ketone	49	3.461	15.67	15.70	43.00	1601625	29	21	35			
10061-01-5	cis-1,3-Dichloropropene	50	5.311	15.76	15.82	75.00	870496	22	15	23			
108-88-3	Toluene	51	5.325	17.06	17.11	91.00	1891943	56	44	66			
10061-02-6	trans-1,3-Dichloropropene	52	5.119	16.79	16.85	75.00	996017	22	16	23			
79-00-5	1,1,2-Trichloroethane	53	5.678	17.10	17.16	61.00	593932	115	91	136			
591-78-6	2-Hexanone	54	2.796	17.72	17.80	43.00	1643302	39	28	47			
124-48-1	Dibromochloromethane	57	3.386	18.23	18.30	129.00	939213	73	60	91			
106-93-4	1,2-Dibromoethane	58	5.871	18.73	18.80	107.00	1509447	95	75	113			

CAS#	Compound	n	Raw Amount	RT	Target RT	Ion	Sample Area	Qualifier	Lower Qual	Upper Qual	Qual Flag	Cal Flag	Int Flag
127-18-4	Tetrachloroethene	59	6.012	18.91	18.97	166.00	1360973	61	52	78			
108-90-7	Chlorobenzene	60	5.499	20.40	20.45	112.00	1827047	32	25	38			
100-41-4	Ethylbenzene	62	5.282	20.93	17.80	91.00	2995013	28	21	32			
108-38-3	m & p-Xylene	63	9.768	21.23	21.28	91.00	4668447	39	32	48			
100-42-5	Styrene	64	4.780	22.05	22.14	104.00	1630149	62	53	79			
75-25-2	Bromoform	65	2.985	21.95	22.00	173.00	1404047	46	39	59			
95-47-6	o-Xylene	66	4.889	22.18	22.25	91.00	2583208	39	30	45			
79-34-5	1,1,2,2-Tetrachloroethane	67	3.349	22.70	22.75	83.00	1623019	12	8	13			
622-96-8	4-Ethyltoluene	72	2.359	24.68	24.74	105.00	1978551	28	20	31			
108-67-8	1,3,5-Trimethylbenzene	73	3.803	24.84	24.92	105.00	2915861	42	33	49			
95-63-6	1,2,4-Trimethylbenzene	76	3.778	25.78	25.89	105.00	2675156	41	32	48			
541-73-1	1,3-Dichlorobenzene	78	3.490	26.36	26.41	146.00	1985574	38	34	51			
100-44-7	Benzyl chloride	80	1.906	26.51	26.61	91.00	1479674	22	15	23			
106-46-7	1,4-Dichlorobenzene	81	3.566	26.56	26.68	146.00	2094060	37	34	51			
95-50-1	1,2-Dichlorobenzene	83	2.772	27.41	27.47	146.00	1812154	39	34	51			
120-82-1	1,2,4-Trichlorobenzene	86	6.189	33.12	32.18	180.00	7487413	98	78	117			
91-20-3	Naphthalene	87	4.351	32.33	32.41	128.00	8789955	13	10	16			
87-68-3	Hexachlorobutadiene	88	2.319	33.01	33.08	225.00	2164451	29	22	33			
363-72-4	Pentafluorobenzene	1	20.000	11.33	11.38	168.00	**5124689**						
540-36-3	1,4-Difluorobenzene	35	20.000	13.11	13.17	114.00	**4595142**						
2037-26-5	Toluene-d8	94	**10.152**	16.87	16.94	98.00	2622417	61	51	77			

Integration Flags:

If no flag the Integration was done by the Instrument computer

M1 Manual Integration because the computer did not integrated the peak or integrated the wrong peak

M2 Manual Integration because computer integration of baseline was different then Inital Calibration

INITIAL CALIBRATION REPORT

EPA Method TO-15 Modified Full Scan GC/MS

		SDG:	LABQC
		QC_Batch:	070609-MS1
File Name:	C07069A.D	Instrument Name:	5970 - In
Sample ID:	ST60022 + ST60350		
Sample Analysis Date:	6 Jul 109 8:45 am	Number Compounds:	96
Run Method:	1T15EXAY.M	IS1:	ST60403 20
Quant and Calibration Method:	1T15EXAY.M	IS2:	ST60403 20
Cal Update:	Tue Mar 17 14:18:15 2009	IS3:	
Template:	1TO15EXT.MS1	IS4:	

Calibration Title: EPA T0-15

		Calibration Amount CA, ppmv						Calibration Response, Area					
		Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
		Amt	Amt	Amt	Amt	Amt	Amt	C03179C.D	C03179E.D	C03179B.D	C03179A.D	C03169H.D	C03179D.D
n	Compound	0.25	4.0	1.0	5.0	10.0	2.0	0.25	4.0	1.0	5.0	10.0	2.0
2	Dichlorodifluoromethane	0.263	4.200	1.050	5.250	10.500	2.100	22559	398558	88898	436110	840988	185058
3	Chloromethane	0.255	4.080	1.020	5.100	10.200	2.040	15230	241294	55434	272653	505057	113562
4	Freon 114	0.260	4.160	1.040	5.200	10.400	2.080	25317	399238	94441	464176	861160	193013
5	Vinyl chloride	0.260	4.160	1.040	5.200	10.400	2.080	7909	132864	32643	150492	285530	62953
6	Bromomethane	0.260	4.160	1.040	5.200	10.400	2.080	8153	136639	28890	149016	274473	66325
7	Chloroethane	0.260	4.160	1.040	5.200	10.400	2.080	4307	71497	16630	78611	141439	32925
10	Trichlorofluoromethane	0.260	4.160	1.040	5.200	10.400	2.080	22371	364524	85037	431144	716396	179451
12	Acetone	0.225	3.600	0.900	4.500	9.000	1.800	42851	442389	113697	494726	770083	184591
13	2-propanol	0.228	3.640	0.910	4.550	9.100	1.820	19578	321532	75563	289890	1427833	154437
15	1,1-Dichloroethene	0.253	4.040	1.010	5.050	10.100	2.020	16793	248606	63935	305424	730028	150732
17	Freon 113	0.255	4.080	1.020	5.100	10.200	2.040	13083	220191	45725	205080	591375	132996
19	Dichloromethane	0.260	4.160	1.040	5.200	10.400	2.080	8354	124766	26131	120655	330491	71297
20	Carbon disulfide	0.223	3.560	0.890	4.450	8.900	1.780	8703	137347	33136	122015	313353	78232
21	trans-1,2-Dichloroethene	0.218	3.480	0.870	4.350	8.700	1.740	5940	117954	23397	80889	230621	52404
22	Methyl tert butyl ether	0.195	3.120	0.780	3.900	7.800	1.560	24271	482973	97431	369980	967308	233954
24	1,1-Dichloroethane	0.253	4.040	1.010	5.050	10.100	2.020	22823	387657	85531	331041	871129	183187
25	Vinyl acetate	0.215	3.440	0.860	4.300	8.600	1.720	40148	687529	149287	676740	1560060	338492
26	2-Butanone	0.215	3.440	0.860	4.300	8.600	1.720	5400	92652	22013	71425	205517	45058
32	cis-1,2-Dichloroethene	0.258	4.120	1.030	5.150	10.300	2.060	11695	190337	43510	224404	421914	95703
34	Chloroform	0.255	4.080	1.020	5.100	10.200	2.040	27147	449509	101707	516969	959204	213353
36	1,1,1-Trichloroethane	0.255	4.080	1.020	5.100	10.200	2.040	26931	432442	100881	509527	970639	210683
37	1,2-Dichloroethane	0.258	4.120	1.030	5.150	10.300	2.060	26512	398927	96975	495766	920839	187037

(105)

n	Compound	Amt 0.25	Amt 4.0	Amt 1.0	Amt 5.0	Amt 10.0	Amt 2.0	C03179C.D 0.25	C03179E.D 4.0	C03179B.D 1.0	C03179A.D 5.0	C03169H.D 10.0	C03179D.D 2.0
40	Benzene	-1.000	4.120	1.030	5.150	10.300	2.060	-1	712515	206967	782160	1387400	364766
41	Carbon tetrachloride	0.255	4.080	1.020	5.100	10.200	2.040	26276	451629	105798	518753	931992	220983
43	1,2-Dichloropropane	0.258	4.120	1.030	5.150	10.300	2.060	18588	266688	66789	305497	598806	132416
44	1,4 Dioxane	0.220	3.520	0.880	4.400	8.800	1.760	11252	171544	43700	161310	540834	80192
46	Trichloroethene	0.258	4.120	1.030	5.150	10.300	2.060	27013	323273	83100	364698	666308	165489
47	Bromodichloromethane	0.200	3.200	0.800	4.000	8.000	1.600	27507	476051	96325	417248	885573	218119
49	Methyl Isobutyl Ketone	0.230	3.680	0.920	4.600	9.200	1.840	67434	1179200	250239	1039898	2505790	566705
50	cis-1,3-Dichloropropene	0.265	4.240	1.060	5.300	10.600	2.120	28339	441906	107039	492454	1010236	206495
51	Toluene	-1.000	4.120	1.030	5.150	10.300	2.060	-1	944443	257501	1033029	1877014	478350
52	trans-1,3-Dichloropropene	0.260	4.160	1.040	5.200	10.400	2.080	33546	509168	127376	538174	1205186	242137
53	1,1,2-Trichloroethane	0.255	4.080	1.020	5.100	10.200	2.040	18573	263308	68163	281046	608914	127239
54	2-Hexanone	0.220	3.520	0.880	4.400	8.800	1.760	84018	1413472	311524	1112452	3278869	678898
57	Dibromochloromethane	0.223	3.560	0.890	4.450	8.900	1.780	43801	688881	150691	558917	1316838	322250
58	1,2-Dibromoethane	0.260	4.160	1.040	5.200	10.400	2.080	46912	660815	169213	701472	1505940	324567
59	Tetrachloroethene	0.255	4.080	1.020	5.100	10.200	2.040	40710	589393	145069	627137	1126037	300057
60	Chlorobenzene	0.255	4.080	1.020	5.100	10.200	2.040	64660	836027	208106	862738	1818049	410336
62	Ethylbenzene	0.260	4.160	1.040	5.200	10.400	2.080	107037	1527752	359496	1548148	3108186	722767
63	m & p-Xylene	0.515	8.240	2.060	10.300	20.600	4.120	192864	2440351	617919	2542524	4725274	1220126
64	Styrene	0.258	4.120	1.030	5.150	10.300	2.060	70964	837020	224026	840176	1812012	428714
65	Bromoform	0.233	3.720	0.930	4.650	9.300	1.860	90991	1151698	243927	958925	2416870	530300
66	o-Xylene	0.255	4.080	1.020	5.100	10.200	2.040	105567	1325719	329821	1384162	2817484	643280
67	1,1,2,2-Tetrachloroethane	0.255	4.080	1.020	5.100	10.200	2.040	102201	1142635	274703	1042229	3385910	560899
72	4-Ethyltoluene	0.228	3.640	0.910	4.550	9.100	1.820	177076	1912961	437379	1573293	3712735	943267
73	1,3,5-Trimethylbenzene	0.265	4.240	1.060	5.300	10.600	2.120	184274	1936506	488965	1778188	3957960	994445
76	1,2,4-Trimethylbenzene	-1.000	4.080	1.020	5.100	10.200	2.040	-1	1979227	501359	1766777	3635276	1033463
78	1,3-Dichlorobenzene	-1.000	4.080	1.020	5.100	10.200	2.040	-1	1499786	411700	1325016	3205866	837609
80	Benzyl chloride	-1.000	3.600	0.900	4.500	9.000	1.800	-1	1944712	459781	1580130	4463720	884546
81	1,4-Dichlorobenzene	-1.000	4.080	1.020	5.100	10.200	2.040	-1	1616283	417021	1362139	3091714	896732
83	1,2-Dichlorobenzene	-1.000	4.000	1.000	5.000	10.000	2.000	-1	1708595	429307	1374687	4272294	912351
86	1,2,4-Trichlorobenzene	-1.000	4.120	1.030	5.150	10.300	2.060	-1	3172331	905400	2236815	7156710	1987175
87	Naphthalene	-1.000	9.560	2.390	11.950	23.900	4.780	-1	11453402	4198495	10074168	24925580	6661715
88	Hexachlorobutadiene	-1.000	4.120	1.030	5.150	10.300	2.060	-1	2443776	758051	1914490	4177636	1622637
1	Pentafluorobenzene	20.000	20.000	20.000	20.000	20.000	20.000	2643183	2935915	2871816	2719013	2737194	3022845
35	1,4-Difluorobenzene	20.000	20.000	20.000	20.000	20.000	20.000	2659938	2870629	2814997	2720455	2706138	3020264
94	Toluene-d8	10.000	10.000	10.000	10.000	10.000	10.000	1479389	1629143	1590486	1469067	1546296	1730275

INITIAL CALIBRATION REPORT: Response Factors

SDG:	**LABQC**	**Sample Calculation:**	
QC_Batch:	**070609-MS1**	1) Avg RFn = Sum	$\left\| \frac{(Astdni)}{(Cstdni)} \frac{(Cistdi)}{(Aistdi)} \right\|_i$
Sample ID:	ST60022 + ST60350		
Sample Analysis Date:	6 Jul 109 8:45 am		
Run Method:	1T15EXAY.M		
Quant Method:	1T15EXAY.M		
Cal Update:	Tue Mar 17 14:18:15 2009		
Template:	1TO15EXT.MS1		

Response Factors

Compound	RF1	RF2	RF3	RF4	RF5	RF6	AvgRFn	%RSD
Dichlorodifluoromethane	0.649	0.646	0.590	0.611	0.585	0.583	0.611	4.97
Chloromethane	0.452	0.403	0.378	0.393	0.362	0.368	0.393	8.34
Freon 114	0.737	0.654	0.632	0.657	0.605	0.614	0.650	7.29
Vinyl chloride	0.230	0.218	0.219	0.213	0.201	0.200	0.213	5.40
Bromomethane	0.237	0.224	0.193	0.211	0.193	0.211	0.212	8.16
Chloroethane	0.125	0.117	0.111	0.111	0.099	0.105	0.112	8.18
Trichlorofluoromethane	0.651	0.597	0.569	0.610	0.503	0.571	0.584	8.47
Acetone	1.441	0.837	0.880	0.809	0.625	0.679	0.878	33.28
2-propanol	0.650	0.602	0.578	0.469	1.146	0.561	0.668	36.24
1,1-Dichloroethene	0.502	0.419	0.441	0.445	0.528	0.494	0.471	9.01
Freon 113	0.388	0.368	0.312	0.296	0.424	0.431	0.370	15.21
Dichloromethane	0.243	0.204	0.175	0.171	0.232	0.227	0.209	14.64
Carbon disulfide	0.295	0.263	0.259	0.202	0.257	0.291	0.261	12.82
trans-1,2-Dichloroethene	0.206	0.231	0.187	0.137	0.194	0.199	0.192	16.18
Methyl tert butyl ether	0.942	1.055	0.870	0.698	0.906	0.992	0.910	13.48
1,1-Dichloroethane	0.683	0.654	0.590	0.482	0.630	0.600	0.606	11.51
Vinyl acetate	1.413	1.362	1.209	1.158	1.325	1.302	1.295	7.38
2-Butanone	0.190	0.183	0.178	0.122	0.175	0.173	0.170	14.31
cis-1,2-Dichloroethene	0.343	0.315	0.294	0.321	0.299	0.307	0.313	5.59
Chloroform	0.806	0.751	0.694	0.746	0.687	0.692	0.729	6.41
1,1,1-Trichloroethane	0.794	0.738	0.703	0.734	0.703	0.684	0.726	5.40
1,2-Dichloroethane	0.773	0.675	0.669	0.708	0.661	0.601	0.681	8.33
Benzene	NA	1.205	1.428	1.117	0.996	1.173	1.183	13.36
Carbon tetrachloride	0.775	0.771	0.737	0.748	0.675	0.717	0.737	5.04
1,2-Dichloropropane	0.542	0.451	0.461	0.436	0.430	0.426	0.457	9.47
1,4 Dioxane	0.385	0.340	0.353	0.270	0.454	0.302	0.350	18.49
Trichloroethene	0.787	0.547	0.573	0.521	0.478	0.532	0.573	19.12
Bromodichloromethane	1.034	1.036	0.855	0.767	0.818	0.903	0.902	12.44
Methyl Isobutyl Ketone	2.204	2.233	1.932	1.662	2.013	2.040	2.014	10.30
cis-1,3-Dichloropropene	0.804	0.726	0.717	0.683	0.704	0.645	0.713	7.44
Toluene	NA	1.597	1.776	1.475	1.347	1.538	1.546	10.25
trans-1,3-Dichloropropene	0.970	0.853	0.870	0.761	0.856	0.771	0.847	9.00
1,1,2-Trichloroethane	0.548	0.450	0.475	0.405	0.441	0.413	0.455	11.39
2-Hexanone	2.871	2.798	2.515	1.859	2.754	2.554	2.559	14.47
Dibromochloromethane	1.477	1.348	1.203	0.923	1.094	1.199	1.207	15.98
1,2-Dibromoethane	1.357	1.107	1.156	0.992	1.070	1.033	1.119	11.58
Tetrachloroethene	1.200	1.006	1.010	0.904	0.816	0.974	0.985	13.06

Chlorobenzene		1.907	1.428	1.450	1.244	1.317	1.332	1.446	16.45
Ethylbenzene		3.095	2.559	2.456	2.189	2.209	2.301	2.468	13.74
m & p-Xylene		2.816	2.063	2.131	1.815	1.695	1.961	2.080	18.95
Styrene		2.068	1.415	1.545	1.199	1.300	1.378	1.484	20.78
Bromoform		2.936	2.157	1.863	1.516	1.921	1.888	2.047	23.53
o-Xylene		3.113	2.264	2.297	1.995	2.041	2.088	2.300	18.10
1,1,2,2-Tetrachloroethane		3.014	1.951	1.913	1.502	2.453	1.821	2.109	25.54
4-Ethyltoluene		5.840	3.661	3.415	2.542	3.015	3.432	3.651	31.30
1,3,5-Trimethylbenzene		5.228	3.182	3.277	2.467	2.760	3.106	3.337	29.21
1,2,4-Trimethylbenzene	NA		3.380	3.492	2.547	2.634	3.355	3.082	14.68
1,3-Dichlorobenzene	NA		2.561	2.868	1.910	2.323	2.719	2.476	15.16
Benzyl chloride	NA		3.764	3.630	2.581	3.666	3.254	3.379	14.38
1,4-Dichlorobenzene	NA		2.760	2.905	1.964	2.240	2.911	2.556	16.83
1,2-Dichlorobenzene	NA		2.976	3.050	2.021	3.157	3.021	2.845	16.36
1,2,4-Trichlorobenzene	NA		5.365	6.245	3.193	5.135	6.388	5.265	24.29
Naphthalene	NA		8.347	12.481	6.198	7.708	9.229	8.792	26.61
Hexachlorobutadiene	NA		4.133	5.229	2.733	2.998	5.216	4.062	29.13
Pentafluorobenzene		1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.00
1,4-Difluorobenzene		1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.00
Toluene-d8		1.112	1.135	1.130	1.080	1.143	1.146	1.124	2.20

CALCULATIONS

EPA Method TO-15 Modified Full Scan GC/MS

SDG: LABQC
Laboratory Number: C07069

Run Method: 1T15EXAY.M
Quant Method: 1T15EXAY.M
Can Dilution Factor: 1.00
Air Volume: 200 ml MDL Factor 1
Gas Constant: 23.68
Decimal Places: 2

Compound	M.W.	Raw Amount	Result ppbv	Result ug/m3	(1) MDL ppbv	(2) RL ppbv	Calc MDL ppbv	Calc MDL ug/m3	Calc RL ppbv	Calc RL ug/m3	Flag	S062602-1 Spike ppmv
Dichlorodifluoromethane	120.9	4.252	21.258	108.53	0.105	0.525	0.53	2.68	2.63	13.40		0.103
Chloromethane	50.5	3.703	18.513	39.48	0.102	0.510	0.51	1.09	2.55	5.44		0.103
Freon 114	170.9	2.833	14.164	102.23	0.104	0.520	0.52	3.75	2.60	18.76		0.103
Vinyl chloride	62.5	4.096	20.482	54.06	0.104	0.520	0.52	1.37	2.60	6.86		0.103
Bromomethane	94.9	3.645	18.223	73.03	0.104	0.520	0.52	2.08	2.60	10.42		0.103
Chloroethane	64.5	4.058	20.290	55.27	0.104	0.520	0.52	1.42	2.60	7.08		0.103
Trichlorofluoromethane	137.4	4.031	20.154	116.94	0.104	0.520	0.52	3.02	2.60	15.09		0.103
Acetone	58.1	2.889	14.446	35.44	0.090	0.450	0.45	1.10	2.25	5.52		0.103
2-propanol	60.1	2.774	13.869	35.20	0.091	0.455	0.46	1.15	2.28	5.77		0.103
1,1-Dichloroethene	96.9	4.619	23.096	94.51	0.101	0.505	0.51	2.07	2.53	10.33		0.103
Freon 113	187.3	5.810	29.050	229.78	0.102	0.510	0.51	4.03	2.55	20.17		0.103
Dichloromethane	84.9	5.196	25.979	93.14	0.104	0.520	0.52	1.86	2.60	9.32		0.103
Carbon disulfide	76.1	5.519	27.596	88.68	0.089	0.445	0.45	1.43	2.23	7.15		0.103
trans-1,2-Dichloroethene	96.9	3.735	18.676	76.42	0.087	0.435	0.44	1.78	2.18	8.90		0.103
Methyl tert butyl ether	88.1	2.902	14.509	53.98	0.078	0.390	0.39	1.45	1.95	7.25		0.103
1,1-Dichloroethane	99.0	4.438	22.190	92.77	0.101	0.505	0.51	2.11	2.53	10.56		0.103
Vinyl acetate	86.1	3.032	15.158	55.11	0.086	0.430	0.43	1.56	2.15	7.82		0.103
2-Butanone	72.1	3.273	16.364	49.83	0.086	0.430	0.43	1.31	2.15	6.55		0.103
cis-1,2-Dichloroethene	96.9	5.119	25.597	104.74	0.103	0.515	0.52	2.11	2.58	10.54		0.103
Chloroform	119.4	4.693	23.463	118.31	0.102	0.510	0.51	2.57	2.55	12.86		0.103
1,1,1-Trichloroethane	133.4	4.756	23.779	133.96	0.102	0.510	0.51	2.87	2.55	14.37		0.103
1,2-Dichloroethane	99.0	5.823	29.115	121.72	0.103	0.515	0.52	2.15	2.58	10.77		0.103
Benzene	78.1	4.823	24.113	79.53	0.103	0.515	0.52	1.70	2.58	8.49		0.103
Carbon tetrachloride	153.8	4.503	22.516	146.24	0.102	0.510	0.51	3.31	2.55	16.56		0.103
1,2-Dichloropropane	113.0	5.171	25.855	123.38	0.103	0.515	0.52	2.46	2.58	12.29		0.103
1,4 Dioxane	88.1	2.984	14.921	55.51	0.088	0.440	0.44	1.64	2.20	8.18		0.103
Trichloroethene	131.4	5.700	28.501	158.15	0.103	0.515	0.52	2.86	2.58	14.29		0.103
Bromodichloromethane	163.8	3.065	15.326	106.02	0.080	0.400	0.40	2.77	2.00	13.83		0.103
Methyl Isobutyl Ketone	100.2	3.461	17.306	73.23	0.092	0.460	0.46	1.95	2.30	9.73		0.103
cis-1,3-Dichloropropene	111.0	5.311	26.556	124.48	0.106	0.530	0.53	2.48	2.65	12.42		0.103
Toluene	92.1	5.325	26.623	103.55	0.103	0.515	0.52	2.00	2.58	10.02		0.103
trans-1,3-Dichloropropene	111.0	5.119	25.595	119.98	0.104	0.520	0.52	2.44	2.60	12.19		0.103
1,1,2-Trichloroethane	133.4	5.678	28.392	159.95	0.102	0.510	0.51	2.87	2.55	14.37		0.103
2-Hexanone	100.2	2.796	13.978	59.14	0.088	0.440	0.44	1.86	2.20	9.31		0.103
Dibromochloromethane	208.3	3.386	16.930	148.92	0.089	0.445	0.45	3.91	2.23	19.57		0.103
1,2-Dibromoethane	187.9	5.871	29.353	232.91	0.104	0.520	0.52	4.13	2.60	20.63		0.103

Tetrachloroethene	165.8	6.012	30.062	210.49	0.102	0.510	0.51	3.57	2.55	17.85	0.103
Chlorobenzene	112.6	5.499	27.495	130.74	0.102	0.510	0.51	2.43	2.55	12.13	0.103
Ethylbenzene	106.2	5.282	26.408	118.44	0.104	0.520	0.52	2.33	2.60	11.66	0.103
m & p-Xylene	106.2	9.768	48.838	219.03	0.206	1.030	1.03	4.62	5.15	23.10	0.206
Styrene	104.2	4.780	23.899	105.16	0.103	0.515	0.52	2.27	2.58	11.33	0.103
Bromoform	252.7	2.985	14.927	159.30	0.093	0.465	0.47	4.96	2.33	24.81	0.103
o-Xylene	106.2	4.889	24.444	109.63	0.102	0.510	0.51	2.29	2.55	11.44	0.103
1,1,2,2-Tetrachloroethane	167.8	3.349	16.747	118.67	0.102	0.510	0.51	3.61	2.55	18.07	0.103
4-Ethyltoluene	120.2	2.359	11.794	59.87	0.091	0.455	0.46	2.31	2.28	11.55	0.103
1,3,5-Trimethylbenzene	120.2	3.803	19.017	96.53	0.106	0.530	0.53	2.69	2.65	13.45	0.103
1,2,4-Trimethylbenzene	120.2	3.778	18.892	95.90	0.102	0.510	0.51	2.59	2.55	12.94	0.103
1,3-Dichlorobenzene	147.0	3.490	17.451	108.33	0.102	0.510	0.51	3.17	2.55	15.83	0.103
Benzyl chloride	126.6	1.906	9.530	50.95	0.090	0.450	0.45	2.41	2.25	12.03	0.103
1,4-Dichlorobenzene	147.0	3.566	17.830	110.69	0.102	0.510	0.51	3.17	2.55	15.83	0.103
1,2-Dichlorobenzene	147.0	2.772	13.861	86.05	0.100	0.500	0.50	3.10	2.50	15.52	0.103
1,2,4-Trichlorobenzene	181.4	6.189	30.947	237.07	0.103	0.515	0.52	3.95	2.58	19.73	0.103
Naphthalene	128.2	4.351	21.756	117.78	0.239	1.195	1.20	6.47	5.98	32.35	0.103
Hexachlorobutadiene	260.8	2.319	11.597	127.73	0.103	0.515	0.52	5.67	2.58	28.36	0.103

SAMPLE CALCULATION

EPA Method TO-15 Modified Full Scan GC/MS

SDG:		**LABQC**
Laboratory Number:		**C07069**
Standard Volume	STV	5.0
Sample Volume	SV	200
Can Dilution Factor	CDF	1.00
Gas Constant		23.68
Decimal Places:		2

Sample Calculation:

1) Avg RFn = Sum $\left| \frac{(Astdni)}{(Cstdni)} \frac{(Cistdi)}{(Aistdi)} \right|$ Note: 1

2) Raw Amt = $\frac{(Ansamp)}{(Avg\ RFn)} \frac{(Cistdi)}{(Aistdi)}$ = Cn

3) Amount ppbv = $\frac{(Raw\ Amt)\ 1000}{(SV)}$ (CDF)

4) Amount ug/m3 = $\frac{(amt(ppbv)\ MW}{23.68}$

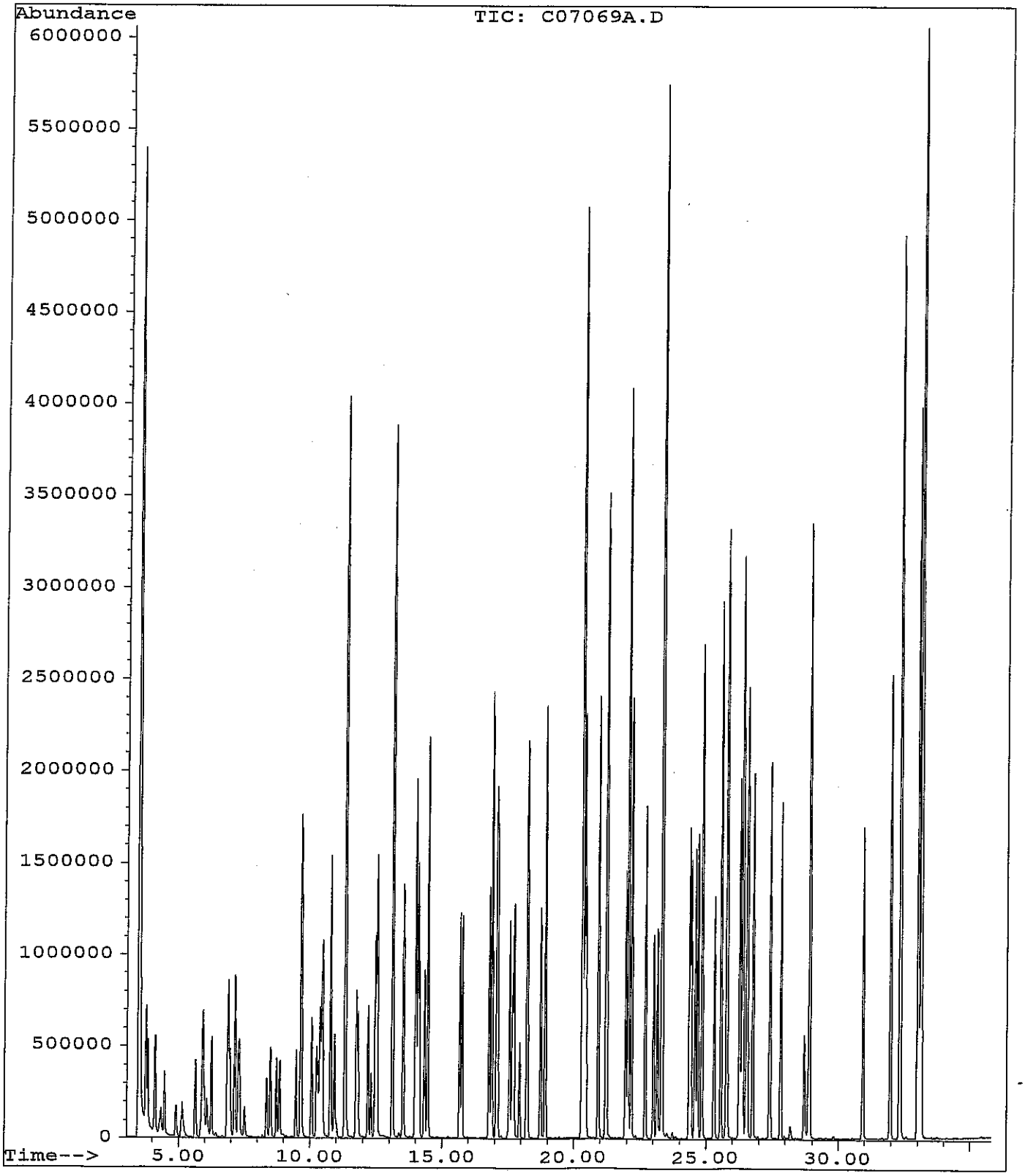
n	Compound	IS n	Chem type	MW	AvgRFn	Area Ansamp	Cistdi ppmv	Aistdi Ais	Cn ppmV Raw Amt	Amount ppbv	Amount ug/m3
2	Dichlorodifluoromethane	1	TRG	120.9	0.611	665330	20.000	5124689	4.252	21.26	108.54
3	Chloromethane	1	TRG	50.5	0.393	372646	20.000	5124689	3.703	18.51	39.47
4	Freon 114	1	TRG	170.9	0.650	471649	20.000	5124689	2.833	14.16	102.19
5	Vinyl chloride	1	TRG	62.5	0.213	223938	20.000	5124689	4.096	20.48	54.05
6	Bromomethane	1	TRG	94.9	0.212	197523	20.000	5124689	3.645	18.22	73.02
7	Chloroethane	1	TRG	64.5	0.112	115954	20.000	5124689	4.058	20.29	55.27
10	Trichlorofluoromethane	1	TRG	137.4	0.584	602732	20.000	5124689	4.031	20.15	116.92
12	Acetone	1	TRG	58.1	0.878	650299	20.000	5124689	2.889	14.45	35.45
13	2-propanol	1	TRG	60.1	0.668	474568	20.000	5124689	2.774	13.87	35.20
15	1,1-Dichloroethene	1	TRG	96.9	0.471	558075	20.000	5124689	4.619	23.10	94.53
17	Freon 113	1	TRG	187.3	0.370	550534	20.000	5124689	5.810	29.05	229.77
19	Dichloromethane	1	TRG	84.9	0.209	277827	20.000	5124689	5.196	25.98	93.15
20	Carbon disulfide	1	TRG	76.1	0.261	369378	20.000	5124689	5.519	27.60	88.70
21	trans-1,2-Dichloroethene	1	TRG	96.9	0.192	184093	20.000	5124689	3.735	18.68	76.44
22	Methyl tert butyl ether	1	TRG	88.1	0.910	676920	20.000	5124689	2.902	14.51	53.98
24	1,1-Dichloroethane	1	TRG	99.0	0.606	689568	20.000	5124689	4.438	22.19	92.77
25	Vinyl acetate	1	TRG	86.1	1.295	1005763	20.000	5124689	3.032	15.16	55.12
26	2-Butanone	1	TRG	72.1	0.170	142831	20.000	5124689	3.273	16.36	49.81
32	cis-1,2-Dichloroethene	1	TRG	96.9	0.313	410820	20.000	5124689	5.119	25.60	104.76
34	Chloroform	1	TRG	119.4	0.729	876803	20.000	5124689	4.693	23.46	118.29
36	1,1,1-Trichloroethane	35	TRG	133.4	0.726	793456	20.000	4595142	4.756	23.78	133.96
37	1,2-Dichloroethane	35	TRG	99.0	0.681	911050	20.000	4595142	5.823	29.11	121.70
40	Benzene	35	TRG	78.1	1.183	1311262	20.000	4595142	4.823	24.11	79.52
41	Carbon tetrachloride	35	TRG	153.8	0.737	762752	20.000	4595142	4.503	22.52	146.27
43	1,2-Dichloropropane	35	TRG	113.0	0.457	543508	20.000	4595142	5.171	25.85	123.36
44	1,4 Dioxane	35	TRG	88.1	0.350	240245	20.000	4595142	2.984	14.92	55.51
46	Trichloroethene	35	TRG	131.4	0.573	750403	20.000	4595142	5.700	28.50	158.15
47	Bromodichloromethane	35	TRG	163.8	0.902	635461	20.000	4595142	3.065	15.33	106.04
49	Methyl Isobutyl Ketone	35	TRG	100.2	2.014	1601625	20.000	4595142	3.461	17.31	73.25
50	cis-1,3-Dichloropropene	35	TRG	111.0	0.713	870496	20.000	4595142	5.311	26.56	124.50
51	Toluene	35	TRG	92.1	1.546	1891943	20.000	4595142	5.325	26.62	103.53
52	trans-1,3-Dichloropropene	35	TRG	111.0	0.847	996017	20.000	4595142	5.119	25.59	119.95
53	1,1,2-Trichloroethane	35	TRG	133.4	0.455	593932	20.000	4595142	5.678	28.39	159.93
54	2-Hexanone	35	TRG	100.2	2.559	1643302	20.000	4595142	2.796	13.98	59.16
57	Dibromochloromethane	35	TRG	208.3	1.207	939213	20.000	4595142	3.386	16.93	148.92
58	1,2-Dibromoethane	35	TRG	187.9	1.119	1509447	20.000	4595142	5.871	29.35	232.89
59	Tetrachloroethene	35	TRG	165.8	0.985	1360973	20.000	4595142	6.012	30.06	210.47
60	Chlorobenzene	35	TRG	112.6	1.446	1827047	20.000	4595142	5.499	27.49	130.72
62	Ethylbenzene	35	TRG	106.2	2.468	2995013	20.000	4595142	5.282	26.41	118.44

63	m & p-Xylene	35	TRG	106.2	2.080	4668447	20.000	4595142	9.768	48.84	219.04
64	Styrene	35	TRG	104.2	1.484	1630149	20.000	4595142	4.780	23.90	105.17
65	Bromoform	35	TRG	252.7	2.047	1404047	20.000	4595142	2.985	14.93	159.32
66	o-Xylene	35	TRG	106.2	2.300	2583208	20.000	4595142	4.889	24.44	109.61
67	1,1,2,2-Tetrachloroethane	35	TRG	167.8	2.109	1623019	20.000	4595142	3.349	16.75	118.69
72	4-Ethyltoluene	35	TRG	120.2	3.651	1978551	20.000	4595142	2.359	11.79	59.85
73	1,3,5-Trimethylbenzene	35	TRG	120.2	3.337	2915861	20.000	4595142	3.803	19.02	96.55
76	1,2,4-Trimethylbenzene	35	TRG	120.2	3.082	2675156	20.000	4595142	3.778	18.89	95.89
78	1,3-Dichlorobenzene	35	TRG	147.0	2.476	1985574	20.000	4595142	3.490	17.45	108.33
80	Benzyl chloride	35	TRG	126.6	3.379	1479674	20.000	4595142	1.906	9.53	50.95
81	1,4-Dichlorobenzene	35	TRG	147.0	2.556	2094060	20.000	4595142	3.566	17.83	110.68
83	1,2-Dichlorobenzene	35	TRG	147.0	2.845	1812154	20.000	4595142	2.772	13.86	86.04
86	1,2,4-Trichlorobenzene	35	TRG	181.4	5.265	7487413	20.000	4595142	6.189	30.95	237.09
87	Naphthalene	35	TRG	128.2	8.792	8789955	20.000	4595142	4.351	21.76	117.81
88	Hexachlorobutadiene	35	TRG	260.8	4.062	2164451	20.000	4595142	2.319	11.60	127.76
1	Pentafluorobenzene	1	IS		1.000	5124689	20.000	5124689			
35	1,4-Difluorobenzene	35	IS		1.000	4595142	20.000	4595142			
94	Toluene-d8	35	SURR		1.124	2622417	20.000	4595142			

Calculation Definitions:

n	compound n
i	i th calibration level
Astdni	Standard Area for compound n at ith calibration level
Cstdni	Standard Concentration for compound n at ith calibration level in ppmv
Cistdi	Internal Standard Conc used for compound n at ith calibration level in ppmv
Aistdi	Internal Standard Area used for compound n at ith calibration level
Ansamp	Sample Area for compound n
Avg RFn	Average response factor for all ith calibration levels for compound n
Raw Amount	Sample Concentration in ppmv before applying factors
Cistd	Concentration internal standard used for compound n in sample in ppmv
Aistd	Area of internal standard used for compound n in sample
Cn	Concentration of compound n in sample in ppmv
23.68	Gas constant at 60 F as per EPA source test protocol
MW	Molecular weight of compound
Note (1): Avg RFn	The values for the Average Response Factor AvgRFn can be optained from the response Factor Report for the Initial Calibration, or from the Calibration Report

File : C:\MSCHEM\2\DATA\07069MS1\C07069A.D
Operator : JF
Acquired : 6 Jul 109 8:45 am using AcqMethod 1T15EXAY.M
Instrument : 5970 - In
Sample Name: ST60022 + ST60350
Misc Info :
Vial Number: 1



METHOD BLANK REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified Full Scan GC/MS | **SDG:** LABQC
Analytical Method: TO-15 | **Laboratory Number:** B07069

File:	CC991A.D	**Date Sampled:**		**Time:**	
Description:	METHOD BLANK	**Date Received:**			
Can/Tube#:		**Date Extracted:**			
Sam_Type:	MB	**Date Analyzed:**	07/06/09	**Time:**	13:31
QC_Batch:	070609-MS1	**Can Dilution Factor:**	1.00		2
Air Volume:	200 ml	**Not Detected Flag:**	ND		

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
75-71-8	Dichlorodifluoromethane	0.53	2.63	ND	2.68	13.40	ND	ND
74-87-3	Chloromethane	0.51	2.55	ND	1.09	5.44	ND	ND
76-14-2	Freon 114	0.52	2.60	ND	3.75	18.76	ND	ND
75-01-4	Vinyl chloride	0.52	2.60	ND	1.37	6.86	ND	ND
74-83-9	Bromomethane	0.52	2.60	ND	2.08	10.42	ND	ND
75-00-3	Chloroethane	0.52	2.60	ND	1.42	7.08	ND	ND
75-69-4	Trichlorofluoromethane	0.52	2.60	ND	3.02	15.09	ND	ND
67-64-1	Acetone	0.45	2.25	0.68	1.10	5.52	1.68	J
67-63-0	2-propanol	0.46	2.28	ND	1.15	5.77	ND	ND
75-35-4	1,1-Dichloroethene	0.51	2.53	ND	2.07	10.33	ND	ND
76-13-1	Freon 113	0.51	2.55	ND	4.03	20.17	ND	ND
75-09-2	Dichloromethane	0.52	2.60	ND	1.86	9.32	ND	ND
75-15-0	Carbon disulfide	0.45	2.23	ND	1.43	7.15	ND	ND
156-60-5	trans-1,2-Dichloroethene	0.44	2.18	ND	1.78	8.90	ND	ND
1634-04-4	Methyl tert butyl ether	0.39	1.95	ND	1.45	7.25	ND	ND
75-34-3	1,1-Dichloroethane	0.51	2.53	ND	2.11	10.56	ND	ND
108-05-4	Vinyl acetate	0.43	2.15	ND	1.56	7.82	ND	ND
78-93-3	2-Butanone	0.43	2.15	ND	1.31	6.55	ND	ND
156-59-2	cis-1,2-Dichloroethene	0.52	2.58	ND	2.11	10.54	ND	ND
67-66-3	Chloroform	0.51	2.55	ND	2.57	12.86	ND	ND
71-55-6	1,1,1-Trichloroethane	0.51	2.55	ND	2.87	14.37	ND	ND
107-06-2	1,2-Dichloroethane	0.52	2.58	ND	2.15	10.77	ND	ND
71-43-2	Benzene	0.52	2.58	ND	1.70	8.49	ND	ND
56-23-5	Carbon tetrachloride	0.51	2.55	ND	3.31	16.56	ND	ND
78-87-5	1,2-Dichloropropane	0.52	2.58	ND	2.46	12.29	ND	ND
123-91-1	1,4 Dioxane	0.44	2.20	ND	1.64	8.18	ND	ND
79-01-6	Trichloroethene	0.52	2.58	ND	2.86	14.29	ND	ND
75-27-4	Bromodichloromethane	0.40	2.00	ND	2.77	13.83	ND	ND
108-10-1	Methyl Isobutyl Ketone	0.46	2.30	ND	1.95	9.73	ND	ND
10061-01-5	cis-1,3-Dichloropropene	0.53	2.65	ND	2.48	12.42	ND	ND
108-88-3	Toluene	0.52	2.58	0.75	2.00	10.02	2.94	J
10061-02-6	trans-1,3-Dichloropropene	0.52	2.60	ND	2.44	12.19	ND	ND
79-00-5	1,1,2-Trichloroethane	0.51	2.55	ND	2.87	14.37	ND	ND
591-78-6	2-Hexanone	0.44	2.20	ND	1.86	9.31	ND	ND
124-48-1	Dibromochloromethane	0.45	2.23	ND	3.91	19.57	ND	ND
106-93-4	1,2-Dibromoethane	0.52	2.60	ND	4.13	20.63	ND	ND
127-18-4	Tetrachloroethene	0.51	2.55	ND	3.57	17.85	ND	ND
108-90-7	Chlorobenzene	0.51	2.55	ND	2.43	12.13	ND	ND
100-41-4	Ethylbenzene	0.52	2.60	ND	2.33	11.66	ND	ND
108-38-3	m & p-Xylene	1.03	5.15	ND	4.62	23.10	ND	ND

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
100-42-5	Styrene	0.52	2.58	ND	2.27	11.33	ND	ND
75-25-2	Bromoform	0.47	2.33	ND	4.96	24.81	ND	ND
95-47-6	o-Xylene	0.51	2.55	ND	2.29	11.44	ND	ND
79-34-5	1,1,2,2-Tetrachloroethane	0.51	2.55	ND	3.61	18.07	ND	ND
622-96-8	4-Ethyltoluene	0.46	2.28	ND	2.31	11.55	ND	ND
108-67-8	1,3,5-Trimethylbenzene	0.53	2.65	ND	2.69	13.45	ND	ND
95-63-6	1,2,4-Trimethylbenzene	0.51	2.55	ND	2.59	12.94	ND	ND
541-73-1	1,3-Dichlorobenzene	0.51	2.55	ND	3.17	15.83	ND	ND
100-44-7	Benzyl chloride	0.45	2.25	ND	2.41	12.03	ND	ND
106-46-7	1,4-Dichlorobenzene	0.51	2.55	ND	3.17	15.83	ND	ND
95-50-1	1,2-Dichlorobenzene	0.50	2.50	ND	3.10	15.52	ND	ND
120-82-1	1,2,4-Trichlorobenzene	0.52	2.58	ND	3.95	19.73	ND	ND
91-20-3	Naphthalene	1.20	5.98	ND	6.47	32.35	ND	ND
87-68-3	Hexachlorobutadiene	0.52	2.58	ND	5.67	28.36	ND	ND

	Surrogate Recovery	Spike Amt. ppbV	Amount ppbV	% Rec.	QC Limits	Flag * = Out
2037-26-5	Toluene-d8	10.000	10.506	105	70-130	

Notes: 1) Reported results are to be interpreted to two significant figures.
2) ug/m3 = ppbV*FW/23.68 calculated assuming conditions at 60 F and 1 atm.
3) MDL and RL are adjusted for sample volume and can dilution.
4) U and ND are Flags used for Not Detected
5) J is a flag for a result between the MDL and the RL (or lower quantitation limit, LQL)

QUANTITATION REPORT

EPA Method TO-15 Modified Full Scan GC/MS

			Review	EAS Sample ID: CC991A.	
File Name:	CC991A.D				1 KB
Sample ID:	METHOD BLANK				2 AT
Date:	6 Jul 109 1:31 pm			Cal Amounts	3 BB
Run Method:	1T15EXAY.M			IS Areas	4 SH
Quant Method:	1T15EXAY.M			Carryover	
Cal Update:	Tue Mar 17 14:18:15 2009				
Template:	1TO15EXT.MS1				
Can Factor:	1.00				
Volume:	200	ml		Analyst: KB 1	

CAS#	Compound	n	Raw Amount	RT	Target RT	Ion	Sample Area	Qualifier	Lower Qual	Upper Qual	Qual Flag	Cal Flag	Int Flag
75-71-8	Dichlorodifluoromethane	2	0.000	0.00	3.83	85.00	0	0	25	37			
74-87-3	Chloromethane	3	0.000	0.00	4.09	50.00	0	0	22	32			
76-14-2	Freon 114	4	0.000	0.00	4.11	85.00	0	0	44	65			
75-01-4	Vinyl chloride	5	0.000	0.00	4.33	62.00	0	0	24	36			
74-83-9	Bromomethane	6	0.000	0.00	4.92	94.00	0	0	73	109			
75-00-3	Chloroethane	7	0.000	0.00	5.12	64.00	0	0	26	40			
75-69-4	Trichlorofluoromethane	10	0.000	0.00	5.94	101.00	0	0	48	73			
67-64-1	Acetone	12	0.137	5.98	6.04	43.00	27037	18	16	24			
67-63-0	2-propanol	13	0.016	6.12	6.14	45.00	2395	0	18	27	Q		
75-35-4	1,1-Dichloroethene	15	0.000	0.00	6.89	61.00	0	0	34	51			
76-13-1	Freon 113	17	0.000	0.00	7.16	151.00	0	0	101	152			
75-09-2	Dichloromethane	19	0.000	0.00	7.31	84.00	0	0	51	77			
75-15-0	Carbon disulfide	20	0.049	7.47	7.54	76.00	2867	32	16	24	Q		
156-60-5	trans-1,2-Dichloroethene	21	0.000	0.00	8.38	96.00	0	0	172	258			
1634-04-4	Methyl tert butyl ether	22	0.000	0.00	8.54	73.00	0	0	18	27			
75-34-3	1,1-Dichloroethane	24	0.000	0.00	8.90	63.00	0	0	24	36			
108-05-4	Vinyl acetate	25	0.004	10.26	10.32	43.00	1189	0	0	0			
78-93-3	2-Butanone	26	0.008	9.32	9.54	72.00	296	0	30	45			
156-59-2	cis-1,2-Dichloroethene	32	0.000	0.00	10.11	96.00	0	0	139	209			
67-66-3	Chloroform	34	0.000	0.00	10.53	83.00	0	0	51	77			
71-55-6	1,1,1-Trichloroethane	36	0.000	0.00	11.80	97.00	0	0	51	76			
107-06-2	1,2-Dichloroethane	37	0.000	0.00	11.87	61.95	0	0	25	37			
71-43-2	Benzene	40	0.072	12.45	12.51	78.00	17199	27	19	29			
56-23-5	Carbon tetrachloride	41	0.000	0.00	12.56	116.90	0	0	79	119			
78-87-5	1,2-Dichloropropane	43	0.000	0.00	14.07	63.00	0	0	58	88			
123-91-1	1,4 Dioxane	44	0.000	0.00	14.40	88.00	0	0	76	114			
79-01-6	Trichloroethene	46	0.090	14.06	14.13	130.00	10455	77	79	119	Q		
75-27-4	Bromodichloromethane	47	0.000	0.00	14.40	83.00	0	0	49	74			
108-10-1	Methyl Isobutyl Ketone	49	0.002	15.64	15.70	43.00	741	0	21	35			
10061-01-5	cis-1,3-Dichloropropene	50	0.000	0.00	15.82	75.00	0	0	15	23			
108-88-3	Toluene	51	0.151	17.03	17.11	91.00	47291	64	44	66			
10061-02-6	trans-1,3-Dichloropropene	52	0.000	0.00	16.85	75.00	0	0	16	23			
79-00-5	1,1,2-Trichloroethane	53	0.003	17.03	17.16	61.00	312	0	91	136			
591-78-6	2-Hexanone	54	0.010	17.72	17.80	43.00	5181	51	28	47	Q		
124-48-1	Dibromochloromethane	57	0.000	0.00	18.30	129.00	0	0	60	91			
106-93-4	1,2-Dibromoethane	58	0.000	0.00	18.80	107.00	0	0	75	113			

CAS#	Compound	n	Raw Amount	RT	Target RT	Ion	Sample Area	Qualifier	Lower Qual	Upper Qual	Qual Flag	Cal Flag	Int Flag
127-18-4	Tetrachloroethene	59	0.000	0.00	18.97	166.00	0	0	52	78			
108-90-7	Chlorobenzene	60	0.001	20.36	20.45	112.00	294	0	25	38			
100-41-4	Ethylbenzene	62	0.002	20.90	17.80	91.00	1157	0	21	32	Q		
108-38-3	m & p-Xylene	63	0.014	21.19	21.28	91.00	5832	48	32	48			
100-42-5	Styrene	64	0.006	22.03	22.14	104.00	1815	70	53	79			
75-25-2	Bromoform	65	0.004	21.94	22.00	173.00	1842	0	39	59	Q		
95-47-6	o-Xylene	66	0.002	22.17	22.25	91.00	1163	0	30	45	Q		
79-34-5	1,1,2,2-Tetrachloroethane	67	0.009	22.68	22.75	83.00	3976	0	8	13	Q		
622-96-8	4-Ethyltoluene	72	0.017	24.64	24.74	105.00	12246	0	20	31	Q		
108-67-8	1,3,5-Trimethylbenzene	73	0.007	24.80	24.92	105.00	4550	0	33	49	Q		
95-63-6	1,2,4-Trimethylbenzene	76	0.016	25.76	25.89	105.00	9684	39	32	48			
541-73-1	1,3-Dichlorobenzene	78	0.021	26.53	26.41	146.00	10631	44	34	51			
100-44-7	Benzyl chloride	80	0.008	26.49	26.61	91.00	5641	0	15	23	Q		
106-46-7	1,4-Dichlorobenzene	81	0.021	26.53	26.68	146.00	10631	44	34	51			
95-50-1	1,2-Dichlorobenzene	83	0.022	27.39	27.47	146.00	12969	36	34	51			
120-82-1	1,2,4-Trichlorobenzene	86	0.075	31.93	32.18	180.00	79743	99	78	117			
91-20-3	Naphthalene	87	0.163	32.30	32.41	128.00	291011	12	10	16			
87-68-3	Hexachlorobutadiene	88	0.027	32.98	33.08	225.00	22021	30	22	33			
363-72-4	Pentafluorobenzene	1	20.000	11.31	11.38	168.00	**4498948**						
540-36-3	1,4-Difluorobenzene	35	20.000	13.10	13.17	114.00	**4052016**						
2037-26-5	Toluene-d8	94	**10.506**	16.86	16.94	98.00	2393245	63	51	77			

Integration Flags:

If no flag the Integration was done by the instrument computer

M1 Manual Integration because the computer did not integrated the peak or integrated the wrong peak

M2 Manual Integration because computer integration of baseline was different then Inital Calibration

INITIAL CALIBRATION REPORT

EPA Method TO-15 Modified Full Scan GC/MS

		SDG:	LABQC
		QC_Batch:	070609-MS1
File Name:	CC991A.D	Instrument Name:	5970 - In
Sample ID:	METHOD BLANK		
Sample Analysis Date:	6 Jul 109 1:31 pm	Number Compounds:	96
Run Method:	1T15EXAY.M	IS1: ST60403	20
Quant and Calibration Method:	1T15EXAY.M	IS2: ST60403	20
Cal Update:	Tue Mar 17 14:18:15 2009	IS3:	
Template:	1TO15EXT.MS1	IS4:	

Calibration Title: EPA T0-15

		Calibration Amount CA, ppmv						Calibration Response, Area					
		Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
		Amt	Amt	Amt	Amt	Amt	Amt	C03179C.D	C03179E.D	C03179B.D	C03179A.D	C03169H.D	C03179D.D
n	Compound	0.25	4.0	1.0	5.0	10.0	2.0	0.25	4.0	1.0	5.0	10.0	2.0
2	Dichlorodifluoromethane	0.263	4.200	1.050	5.250	10.500	2.100	22559	398558	88898	436110	840988	185058
3	Chloromethane	0.255	4.080	1.020	5.100	10.200	2.040	15230	241294	55434	272653	505057	113562
4	Freon 114	0.260	4.160	1.040	5.200	10.400	2.080	25317	399238	94441	464176	861160	193013
5	Vinyl chloride	0.260	4.160	1.040	5.200	10.400	2.080	7909	132864	32643	150492	285530	62953
6	Bromomethane	0.260	4.160	1.040	5.200	10.400	2.080	8153	136639	28890	149016	274473	66325
7	Chloroethane	0.260	4.160	1.040	5.200	10.400	2.080	4307	71497	16630	78611	141439	32925
10	Trichlorofluoromethane	0.260	4.160	1.040	5.200	10.400	2.080	22371	364524	85037	431144	716396	179451
12	Acetone	0.225	3.600	0.900	4.500	9.000	1.800	42851	442389	113697	494726	770083	184591
13	2-propanol	0.228	3.640	0.910	4.550	9.100	1.820	19578	321532	75563	289890	1427833	154437
15	1,1-Dichloroethene	0.253	4.040	1.010	5.050	10.100	2.020	16793	248606	63935	305424	730028	150732
17	Freon 113	0.255	4.080	1.020	5.100	10.200	2.040	13083	220191	45725	205080	591375	132996
19	Dichloromethane	0.260	4.160	1.040	5.200	10.400	2.080	8354	124766	26131	120655	330491	71297
20	Carbon disulfide	0.223	3.560	0.890	4.450	8.900	1.780	8703	137347	33136	122015	313353	78232
21	trans-1,2-Dichloroethene	0.218	3.480	0.870	4.350	8.700	1.740	5940	117954	23397	80889	230621	52404
22	Methyl tert butyl ether	0.195	3.120	0.780	3.900	7.800	1.560	24271	482973	97431	369980	967308	233954
24	1,1-Dichloroethane	0.253	4.040	1.010	5.050	10.100	2.020	22823	387657	85531	331041	871129	183187
25	Vinyl acetate	0.215	3.440	0.860	4.300	8.600	1.720	40148	687529	149287	676740	1560060	338492
26	2-Butanone	0.215	3.440	0.860	4.300	8.600	1.720	5400	92652	22013	71425	205517	45058
32	cis-1,2-Dichloroethene	0.258	4.120	1.030	5.150	10.300	2.060	11695	190337	43510	224404	421914	95703
34	Chloroform	0.255	4.080	1.020	5.100	10.200	2.040	27147	449509	101707	516969	959204	213353
36	1,1,1-Trichloroethane	0.255	4.080	1.020	5.100	10.200	2.040	26931	432442	100881	509527	970639	210683
37	1,2-Dichloroethane	0.258	4.120	1.030	5.150	10.300	2.060	26512	398927	96975	495766	920839	187037

(118)

n	Compound	Amt 0.25	Amt 4.0	Amt 1.0	Amt 5.0	Amt 10.0	Amt 2.0	C03179C.D 0.25	C03179E.D 4.0	C03179B.D 1.0	C03179A.D 5.0	C03169H.D 10.0	C03179D.D 2.0
40	Benzene	-1.000	4.120	1.030	5.150	10.300	2.060	-1	712515	206967	782160	1387400	364766
41	Carbon tetrachloride	0.255	4.080	1.020	5.100	10.200	2.040	26276	451629	105798	518753	931992	220983
43	1,2-Dichloropropane	0.258	4.120	1.030	5.150	10.300	2.060	18588	266688	66789	305497	598806	132416
44	1,4 Dioxane	0.220	3.520	0.880	4.400	8.800	1.760	11252	171544	43700	161310	540834	80192
46	Trichloroethene	0.258	4.120	1.030	5.150	10.300	2.060	27013	323273	83100	364698	666308	165489
47	Bromodichloromethane	0.200	3.200	0.800	4.000	8.000	1.600	27507	476051	96325	417248	885573	218119
49	Methyl Isobutyl Ketone	0.230	3.680	0.920	4.600	9.200	1.840	67434	1179200	250239	1039898	2505790	566705
50	cis-1,3-Dichloropropene	0.265	4.240	1.060	5.300	10.600	2.120	28339	441906	107039	492454	1010236	206495
51	Toluene	-1.000	4.120	1.030	5.150	10.300	2.060	-1	944443	257501	1033029	1877014	478350
52	trans-1,3-Dichloropropene	0.260	4.160	1.040	5.200	10.400	2.080	33546	509168	127376	538174	1205186	242137
53	1,1,2-Trichloroethane	0.255	4.080	1.020	5.100	10.200	2.040	18573	263308	68163	281046	608914	127239
54	2-Hexanone	0.220	3.520	0.880	4.400	8.800	1.760	84018	1413472	311524	1112452	3278869	678898
57	Dibromochloromethane	0.223	3.560	0.890	4.450	8.900	1.780	43801	688881	150691	558917	1316838	322250
58	1,2-Dibromoethane	0.260	4.160	1.040	5.200	10.400	2.080	46912	660815	169213	701472	1505940	324567
59	Tetrachloroethene	0.255	4.080	1.020	5.100	10.200	2.040	40710	589393	145069	627137	1126037	300057
60	Chlorobenzene	0.255	4.080	1.020	5.100	10.200	2.040	64660	836027	208106	862738	1818049	410336
62	Ethylbenzene	0.260	4.160	1.040	5.200	10.400	2.080	107037	1527752	359496	1548148	3108186	722767
63	m & p-Xylene	0.515	8.240	2.060	10.300	20.600	4.120	192864	2440351	617919	2542524	4725274	1220126
64	Styrene	0.258	4.120	1.030	5.150	10.300	2.060	70964	837020	224026	840176	1812012	428714
65	Bromoform	0.233	3.720	0.930	4.650	9.300	1.860	90991	1151698	243927	958925	2416870	530300
66	o-Xylene	0.255	4.080	1.020	5.100	10.200	2.040	105567	1325719	329821	1384162	2817484	643280
67	1,1,2,2-Tetrachloroethane	0.255	4.080	1.020	5.100	10.200	2.040	102201	1142635	274703	1042229	3385910	560899
72	4-Ethyltoluene	0.228	3.640	0.910	4.550	9.100	1.820	177076	1912961	437379	1573293	3712735	943267
73	1,3,5-Trimethylbenzene	0.265	4.240	1.060	5.300	10.600	2.120	184274	1936506	488965	1778188	3957960	994445
76	1,2,4-Trimethylbenzene	-1.000	4.080	1.020	5.100	10.200	2.040	-1	1979227	501359	1766777	3635276	1033463
78	1,3-Dichlorobenzene	-1.000	4.080	1.020	5.100	10.200	2.040	-1	1499786	411700	1325016	3205866	837609
80	Benzyl chloride	-1.000	3.600	0.900	4.500	9.000	1.800	-1	1944712	459781	1580130	4463720	884546
81	1,4-Dichlorobenzene	-1.000	4.080	1.020	5.100	10.200	2.040	-1	1616283	417021	1362139	3091714	896732
83	1,2-Dichlorobenzene	-1.000	4.000	1.000	5.000	10.000	2.000	-1	1708595	429307	1374687	4272294	912351
86	1,2,4-Trichlorobenzene	-1.000	4.120	1.030	5.150	10.300	2.060	-1	3172331	905400	2236815	7156710	1987175
87	Naphthalene	-1.000	9.560	2.390	11.950	23.900	4.780	-1	11453402	4198495	10074168	24925580	6661715
88	Hexachlorobutadiene	-1.000	4.120	1.030	5.150	10.300	2.060	-1	2443776	758051	1914490	4177636	1622637
1	Pentafluorobenzene	20.000	20.000	20.000	20.000	20.000	20.000	2643183	2935915	2871816	2719013	2737194	3022845
35	1,4-Difluorobenzene	20.000	20.000	20.000	20.000	20.000	20.000	2659938	2870629	2814997	2720455	2706138	3020264
94	Toluene-d8	10.000	10.000	10.000	10.000	10.000	10.000	1479389	1629143	1590486	1469067	1546296	1730275

INITIAL CALIBRATION REPORT: Response Factors

SDG:	**LABQC**	**Sample Calculation:**	
QC_Batch:	**070609-MS1**	1) Avg RFn = Sum	$\left[\frac{(Astdni)}{(Cstdni)} \frac{(Cistdi)}{(Aistdi)}\right]_i$
Sample ID:	METHOD BLANK		
Sample Analysis Date:	6 Jul 109 1:31 pm		
Run Method:	1T15EXAY.M		
Quant Method:	1T15EXAY.M		
Cal Update:	Tue Mar 17 14:18:15 2009		
Template:	1TO15EXT.MS1		

Response Factors

Compound	RF1	RF2	RF3	RF4	RF5	RF6	AvgRFn	%RSD
Dichlorodifluoromethane	0.649	0.646	0.590	0.611	0.585	0.583	0.611	4.97
Chloromethane	0.452	0.403	0.378	0.393	0.362	0.368	0.393	8.34
Freon 114	0.737	0.654	0.632	0.657	0.605	0.614	0.650	7.29
Vinyl chloride	0.230	0.218	0.219	0.213	0.201	0.200	0.213	5.40
Bromomethane	0.237	0.224	0.193	0.211	0.193	0.211	0.212	8.16
Chloroethane	0.125	0.117	0.111	0.111	0.099	0.105	0.112	8.18
Trichlorofluoromethane	0.651	0.597	0.569	0.610	0.503	0.571	0.584	8.47
Acetone	1.441	0.837	0.880	0.809	0.625	0.679	0.878	33.28
2-propanol	0.650	0.602	0.578	0.469	1.146	0.561	0.668	36.24
1,1-Dichloroethene	0.502	0.419	0.441	0.445	0.528	0.494	0.471	9.01
Freon 113	0.388	0.368	0.312	0.296	0.424	0.431	0.370	15.21
Dichloromethane	0.243	0.204	0.175	0.171	0.232	0.227	0.209	14.64
Carbon disulfide	0.295	0.263	0.259	0.202	0.257	0.291	0.261	12.82
trans-1,2-Dichloroethene	0.206	0.231	0.187	0.137	0.194	0.199	0.192	16.18
Methyl tert butyl ether	0.942	1.055	0.870	0.698	0.906	0.992	0.910	13.48
1,1-Dichloroethane	0.683	0.654	0.590	0.482	0.630	0.600	0.606	11.51
Vinyl acetate	1.413	1.362	1.209	1.158	1.325	1.302	1.295	7.38
2-Butanone	0.190	0.183	0.178	0.122	0.175	0.173	0.170	14.31
cis-1,2-Dichloroethene	0.343	0.315	0.294	0.321	0.299	0.307	0.313	5.59
Chloroform	0.806	0.751	0.694	0.746	0.687	0.692	0.729	6.41
1,1,1-Trichloroethane	0.794	0.738	0.703	0.734	0.703	0.684	0.726	5.40
1,2-Dichloroethane	0.773	0.675	0.669	0.708	0.661	0.601	0.681	8.33
Benzene	NA	1.205	1.428	1.117	0.996	1.173	1.183	13.36
Carbon tetrachloride	0.775	0.771	0.737	0.748	0.675	0.717	0.737	5.04
1,2-Dichloropropane	0.542	0.451	0.461	0.436	0.430	0.426	0.457	9.47
1,4 Dioxane	0.385	0.340	0.353	0.270	0.454	0.302	0.350	18.49
Trichloroethene	0.787	0.547	0.573	0.521	0.478	0.532	0.573	19.12
Bromodichloromethane	1.034	1.036	0.855	0.767	0.818	0.903	0.902	12.44
Methyl Isobutyl Ketone	2.204	2.233	1.932	1.662	2.013	2.040	2.014	10.30
cis-1,3-Dichloropropene	0.804	0.726	0.717	0.683	0.704	0.645	0.713	7.44
Toluene	NA	1.597	1.776	1.475	1.347	1.538	1.546	10.25
trans-1,3-Dichloropropene	0.970	0.853	0.870	0.761	0.856	0.771	0.847	9.00
1,1,2-Trichloroethane	0.548	0.450	0.475	0.405	0.441	0.413	0.455	11.39
2-Hexanone	2.871	2.798	2.515	1.859	2.754	2.554	2.559	14.47
Dibromochloromethane	1.477	1.348	1.203	0.923	1.094	1.199	1.207	15.98
1,2-Dibromoethane	1.357	1.107	1.156	0.992	1.070	1.033	1.119	11.58
Tetrachloroethene	1.200	1.006	1.010	0.904	0.816	0.974	0.985	13.06

Chlorobenzene		1.907	1.428	1.450	1.244	1.317	1.332	1.446	16.45
Ethylbenzene		3.095	2.559	2.456	2.189	2.209	2.301	2.468	13.74
m & p-Xylene		2.816	2.063	2.131	1.815	1.695	1.961	2.080	18.95
Styrene		2.068	1.415	1.545	1.199	1.300	1.378	1.484	20.78
Bromoform		2.936	2.157	1.863	1.516	1.921	1.888	2.047	23.53
o-Xylene		3.113	2.264	2.297	1.995	2.041	2.088	2.300	18.10
1,1,2,2-Tetrachloroethane		3.014	1.951	1.913	1.502	2.453	1.821	2.109	25.54
4-Ethyltoluene		5.840	3.661	3.415	2.542	3.015	3.432	3.651	31.30
1,3,5-Trimethylbenzene		5.228	3.182	3.277	2.467	2.760	3.106	3.337	29.21
1,2,4-Trimethylbenzene	NA		3.380	3.492	2.547	2.634	3.355	3.082	14.68
1,3-Dichlorobenzene	NA		2.561	2.868	1.910	2.323	2.719	2.476	15.16
Benzyl chloride	NA		3.764	3.630	2.581	3.666	3.254	3.379	14.38
1,4-Dichlorobenzene	NA		2.760	2.905	1.964	2.240	2.911	2.556	16.83
1,2-Dichlorobenzene	NA		2.976	3.050	2.021	3.157	3.021	2.845	16.36
1,2,4-Trichlorobenzene	NA		5.365	6.245	3.193	5.135	6.388	5.265	24.29
Naphthalene	NA		8.347	12.481	6.198	7.708	9.229	8.792	26.61
Hexachlorobutadiene	NA		4.133	5.229	2.733	2.998	5.216	4.062	29.13
Pentafluorobenzene		1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.00
1,4-Difluorobenzene		1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.00
Toluene-d8		1.112	1.135	1.130	1.080	1.143	1.146	1.124	2.20

CALCULATIONS

EPA Method TO-15 Modified Full Scan GC/MS

SDG: LABQC
Laboratory Number: B07069

Run Method: 1T15EXAY.M
Quant Method: 1T15EXAY.M
Can Dilution Factor: 1.00
Air Volume: 200 ml MDL Factor 1
Gas Constant: 23.68
Decimal Places: 2

Compound	M.W.	Raw Amount	Result ppbv	Result ug/m3	(1) MDL ppbv	(2) RL ppbv	Calc MDL ppbv	Calc MDL ug/m3	Calc RL ppbv	Calc RL ug/m3	Flag	S062602-1 Spike ppmv
Dichlorodifluoromethane	120.9	0.000	0.000	0.00	0.105	0.525	0.53	2.68	2.63	13.40	U	0.103
Chloromethane	50.5	0.000	0.000	0.00	0.102	0.510	0.51	1.09	2.55	5.44	U	0.103
Freon 114	170.9	0.000	0.000	0.00	0.104	0.520	0.52	3.75	2.60	18.76	U	0.103
Vinyl chloride	62.5	0.000	0.000	0.00	0.104	0.520	0.52	1.37	2.60	6.86	U	0.103
Bromomethane	94.9	0.000	0.000	0.00	0.104	0.520	0.52	2.08	2.60	10.42	U	0.103
Chloroethane	64.5	0.000	0.000	0.00	0.104	0.520	0.52	1.42	2.60	7.08	U	0.103
Trichlorofluoromethane	137.4	0.000	0.000	0.00	0.104	0.520	0.52	3.02	2.60	15.09	U	0.103
Acetone	58.1	0.137	0.684	1.68	0.090	0.450	0.45	1.10	2.25	5.52	J	0.103
2-propanol	60.1	0.016	0.080	0.20	0.091	0.455	0.46	1.15	2.28	5.77	U	0.103
1,1-Dichloroethene	96.9	0.000	0.000	0.00	0.101	0.505	0.51	2.07	2.53	10.33	U	0.103
Freon 113	187.3	0.000	0.000	0.00	0.102	0.510	0.51	4.03	2.55	20.17	U	0.103
Dichloromethane	84.9	0.000	0.000	0.00	0.104	0.520	0.52	1.86	2.60	9.32	U	0.103
Carbon disulfide	76.1	0.049	0.244	0.78	0.089	0.445	0.45	1.43	2.23	7.15	U	0.103
trans-1,2-Dichloroethene	96.9	0.000	0.000	0.00	0.087	0.435	0.44	1.78	2.18	8.90	U	0.103
Methyl tert butyl ether	88.1	0.000	0.000	0.00	0.078	0.390	0.39	1.45	1.95	7.25	U	0.103
1,1-Dichloroethane	99.0	0.000	0.000	0.00	0.101	0.505	0.51	2.11	2.53	10.56	U	0.103
Vinyl acetate	86.1	0.004	0.020	0.07	0.086	0.430	0.43	1.56	2.15	7.82	U	0.103
2-Butanone	72.1	0.008	0.039	0.12	0.086	0.430	0.43	1.31	2.15	6.55	U	0.103
cis-1,2-Dichloroethene	96.9	0.000	0.000	0.00	0.103	0.515	0.52	2.11	2.58	10.54	U	0.103
Chloroform	119.4	0.000	0.000	0.00	0.102	0.510	0.51	2.57	2.55	12.86	U	0.103
1,1,1-Trichloroethane	133.4	0.000	0.000	0.00	0.102	0.510	0.51	2.87	2.55	14.37	U	0.103
1,2-Dichloroethane	99.0	0.000	0.000	0.00	0.103	0.515	0.52	2.15	2.58	10.77	U	0.103
Benzene	78.1	0.072	0.359	1.18	0.103	0.515	0.52	1.70	2.58	8.49	U	0.103
Carbon tetrachloride	153.8	0.000	0.000	0.00	0.102	0.510	0.51	3.31	2.55	16.56	U	0.103
1,2-Dichloropropane	113.0	0.000	0.000	0.00	0.103	0.515	0.52	2.46	2.58	12.29	U	0.103
1,4 Dioxane	88.1	0.000	0.000	0.00	0.088	0.440	0.44	1.64	2.20	8.18	U	0.103
Trichloroethene	131.4	0.090	0.450	2.50	0.103	0.515	0.52	2.86	2.58	14.29	U	0.103
Bromodichloromethane	163.8	0.000	0.000	0.00	0.080	0.400	0.40	2.77	2.00	13.83	U	0.103
Methyl Isobutyl Ketone	100.2	0.002	0.009	0.04	0.092	0.460	0.46	1.95	2.30	9.73	U	0.103
cis-1,3-Dichloropropene	111.0	0.000	0.000	0.00	0.106	0.530	0.53	2.48	2.65	12.42	U	0.103
Toluene	92.1	0.151	0.755	2.94	0.103	0.515	0.52	2.00	2.58	10.02	J	0.103
trans-1,3-Dichloropropene	111.0	0.000	0.000	0.00	0.104	0.520	0.52	2.44	2.60	12.19	U	0.103
1,1,2-Trichloroethane	133.4	0.003	0.017	0.10	0.102	0.510	0.51	2.87	2.55	14.37	U	0.103
2-Hexanone	100.2	0.010	0.050	0.21	0.088	0.440	0.44	1.86	2.20	9.31	U	0.103
Dibromochloromethane	208.3	0.000	0.000	0.00	0.089	0.445	0.45	3.91	2.23	19.57	U	0.103
1,2-Dibromoethane	187.9	0.000	0.000	0.00	0.104	0.520	0.52	4.13	2.60	20.63	U	0.103

Tetrachloroethene	165.8	0.000	0.000	0.00	0.102	0.510	0.51	3.57	2.55	17.85	U	0.103
Chlorobenzene	112.6	0.001	0.005	0.02	0.102	0.510	0.51	2.43	2.55	12.13	U	0.103
Ethylbenzene	106.2	0.002	0.012	0.05	0.104	0.520	0.52	2.33	2.60	11.66	U	0.103
m & p-Xylene	106.2	0.014	0.069	0.31	0.206	1.030	1.03	4.62	5.15	23.10	U	0.206
Styrene	104.2	0.006	0.030	0.13	0.103	0.515	0.52	2.27	2.58	11.33	U	0.103
Bromoform	252.7	0.004	0.022	0.24	0.093	0.465	0.47	4.96	2.33	24.81	U	0.103
o-Xylene	106.2	0.002	0.012	0.06	0.102	0.510	0.51	2.29	2.55	11.44	U	0.103
1,1,2,2-Tetrachloroethane	167.8	0.009	0.047	0.33	0.102	0.510	0.51	3.61	2.55	18.07	U	0.103
4-Ethyltoluene	120.2	0.017	0.083	0.42	0.091	0.455	0.46	2.31	2.28	11.55	U	0.103
1,3,5-Trimethylbenzene	120.2	0.007	0.034	0.17	0.106	0.530	0.53	2.69	2.65	13.45	U	0.103
1,2,4-Trimethylbenzene	120.2	0.016	0.078	0.39	0.102	0.510	0.51	2.59	2.55	12.94	U	0.103
1,3-Dichlorobenzene	147.0	0.021	0.106	0.66	0.102	0.510	0.51	3.17	2.55	15.83	U	0.103
Benzyl chloride	126.6	0.008	0.041	0.22	0.090	0.450	0.45	2.41	2.25	12.03	U	0.103
1,4-Dichlorobenzene	147.0	0.021	0.103	0.64	0.102	0.510	0.51	3.17	2.55	15.83	U	0.103
1,2-Dichlorobenzene	147.0	0.022	0.112	0.70	0.100	0.500	0.50	3.10	2.50	15.52	U	0.103
1,2,4-Trichlorobenzene	181.4	0.075	0.374	2.86	0.103	0.515	0.52	3.95	2.58	19.73	U	0.103
Naphthalene	128.2	0.163	0.817	4.42	0.239	1.195	1.20	6.47	5.98	32.35	U	0.103
Hexachlorobutadiene	260.8	0.027	0.134	1.47	0.103	0.515	0.52	5.67	2.58	28.36	U	0.103

SAMPLE CALCULATION

EPA Method TO-15 Modified Full Scan GC/MS

SDG:		**LABQC**
Laboratory Number:		**B07069**
Standard Volume	STV	5.0
Sample Volume	SV	200
Can Dilution Factor	CDF	1.00
Gas Constant		23.68
Decimal Places:		2

Sample Calculation:

1) Avg RFn = Sum $\left| \frac{(Astdni)}{(Cstdni)} \frac{(Cistdi)}{(Aistdi)} \right|_i$ Note: 1

2) Raw Amt = $\frac{(Ansamp)}{(Avg\ RFn)} \frac{(Cistdi)}{(Aistdi)}$ = Cn

3) Amount ppbv = $\frac{(Raw\ Amt)\ 1000}{(SV)}$ (CDF)

4) Amount ug/m3 = $\frac{(amt(ppbv)\ MW}{23.68}$

n	Compound	IS n	Chem type	MW	AvgRFn	Area Ansamp	Cistdi ppmv	Aistdi Ais	Cn ppmV Raw Amt	Amount ppbv	Amount ug/m3
2	Dichlorodifluoromethane	1	TRG	120.9	0.611	0	20.000	4498948	0.000	0.00	0.00
3	Chloromethane	1	TRG	50.5	0.393	0	20.000	4498948	0.000	0.00	0.00
4	Freon 114	1	TRG	170.9	0.650	0	20.000	4498948	0.000	0.00	0.00
5	Vinyl chloride	1	TRG	62.5	0.213	0	20.000	4498948	0.000	0.00	0.00
6	Bromomethane	1	TRG	94.9	0.212	0	20.000	4498948	0.000	0.00	0.00
7	Chloroethane	1	TRG	64.5	0.112	0	20.000	4498948	0.000	0.00	0.00
10	Trichlorofluoromethane	1	TRG	137.4	0.584	0	20.000	4498948	0.000	0.00	0.00
12	Acetone	1	TRG	58.1	0.878	27037	20.000	4498948	0.137	0.68	1.67
13	2-propanol	1	TRG	60.1	0.668	2395	20.000	4498948	0.016	0.08	0.20
15	1,1-Dichloroethene	1	TRG	96.9	0.471	0	20.000	4498948	0.000	0.00	0.00
17	Freon 113	1	TRG	187.3	0.370	0	20.000	4498948	0.000	0.00	0.00
19	Dichloromethane	1	TRG	84.9	0.209	0	20.000	4498948	0.000	0.00	0.00
20	Carbon disulfide	1	TRG	76.1	0.261	2867	20.000	4498948	0.049	0.24	0.77
21	trans-1,2-Dichloroethene	1	TRG	96.9	0.192	0	20.000	4498948	0.000	0.00	0.00
22	Methyl tert butyl ether	1	TRG	88.1	0.910	0	20.000	4498948	0.000	0.00	0.00
24	1,1-Dichloroethane	1	TRG	99.0	0.606	0	20.000	4498948	0.000	0.00	0.00
25	Vinyl acetate	1	TRG	86.1	1.295	1189	20.000	4498948	0.004	0.02	0.07
26	2-Butanone	1	TRG	72.1	0.170	296	20.000	4498948	0.008	0.04	0.12
32	cis-1,2-Dichloroethene	1	TRG	96.9	0.313	0	20.000	4498948	0.000	0.00	0.00
34	Chloroform	1	TRG	119.4	0.729	0	20.000	4498948	0.000	0.00	0.00
36	1,1,1-Trichloroethane	35	TRG	133.4	0.726	0	20.000	4052016	0.000	0.00	0.00
37	1,2-Dichloroethane	35	TRG	99.0	0.681	0	20.000	4052016	0.000	0.00	0.00
40	Benzene	35	TRG	78.1	1.183	17199	20.000	4052016	0.072	0.36	1.19
41	Carbon tetrachloride	35	TRG	153.8	0.737	0	20.000	4052016	0.000	0.00	0.00
43	1,2-Dichloropropane	35	TRG	113.0	0.457	0	20.000	4052016	0.000	0.00	0.00
44	1,4 Dioxane	35	TRG	88.1	0.350	0	20.000	4052016	0.000	0.00	0.00
46	Trichloroethene	35	TRG	131.4	0.573	10455	20.000	4052016	0.090	0.45	2.50
47	Bromodichloromethane	35	TRG	163.8	0.902	0	20.000	4052016	0.000	0.00	0.00
49	Methyl Isobutyl Ketone	35	TRG	100.2	2.014	741	20.000	4052016	0.002	0.01	0.04
50	cis-1,3-Dichloropropene	35	TRG	111.0	0.713	0	20.000	4052016	0.000	0.00	0.00
51	Toluene	35	TRG	92.1	1.546	47291	20.000	4052016	0.151	0.75	2.92
52	trans-1,3-Dichloropropene	35	TRG	111.0	0.847	0	20.000	4052016	0.000	0.00	0.00
53	1,1,2-Trichloroethane	35	TRG	133.4	0.455	312	20.000	4052016	0.003	0.02	0.11
54	2-Hexanone	35	TRG	100.2	2.559	5181	20.000	4052016	0.010	0.05	0.21
57	Dibromochloromethane	35	TRG	208.3	1.207	0	20.000	4052016	0.000	0.00	0.00
58	1,2-Dibromoethane	35	TRG	187.9	1.119	0	20.000	4052016	0.000	0.00	0.00
59	Tetrachloroethene	35	TRG	165.8	0.985	0	20.000	4052016	0.000	0.00	0.00
60	Chlorobenzene	35	TRG	112.6	1.446	294	20.000	4052016	0.001	0.01	0.05
62	Ethylbenzene	35	TRG	106.2	2.468	1157	20.000	4052016	0.002	0.01	0.04

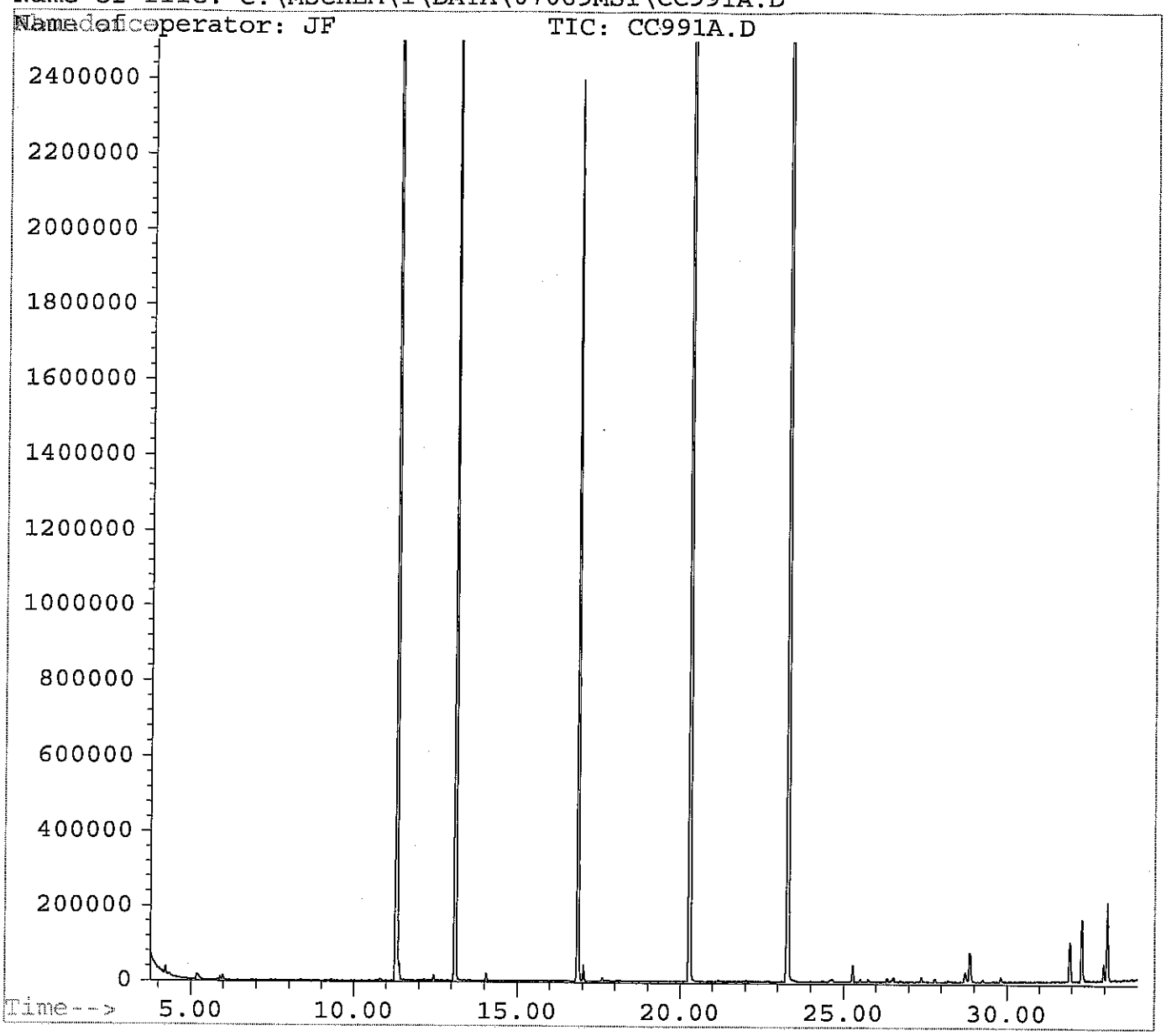
63	m & p-Xylene	35	TRG	106.2	2.080	5832	20.000	4052016	0.014	0.07	0.31
64	Styrene	35	TRG	104.2	1.484	1815	20.000	4052016	0.006	0.03	0.13
65	Bromoform	35	TRG	252.7	2.047	1842	20.000	4052016	0.004	0.02	0.21
66	o-Xylene	35	TRG	106.2	2.300	1163	20.000	4052016	0.002	0.01	0.04
67	1,1,2,2-Tetrachloroethane	35	TRG	167.8	2.109	3976	20.000	4052016	0.009	0.05	0.35
72	4-Ethyltoluene	35	TRG	120.2	3.651	12246	20.000	4052016	0.017	0.08	0.41
73	1,3,5-Trimethylbenzene	35	TRG	120.2	3.337	4550	20.000	4052016	0.007	0.03	0.15
76	1,2,4-Trimethylbenzene	35	TRG	120.2	3.082	9684	20.000	4052016	0.016	0.08	0.41
78	1,3-Dichlorobenzene	35	TRG	147.0	2.476	10631	20.000	4052016	0.021	0.11	0.68
80	Benzyl chloride	35	TRG	126.6	3.379	5641	20.000	4052016	0.008	0.04	0.21
81	1,4-Dichlorobenzene	35	TRG	147.0	2.556	10631	20.000	4052016	0.021	0.10	0.62
83	1,2-Dichlorobenzene	35	TRG	147.0	2.845	12969	20.000	4052016	0.022	0.11	0.68
86	1,2,4-Trichlorobenzene	35	TRG	181.4	5.265	79743	20.000	4052016	0.075	0.37	2.83
87	Naphthalene	35	TRG	128.2	8.792	291011	20.000	4052016	0.163	0.82	4.44
88	Hexachlorobutadiene	35	TRG	260.8	4.062	22021	20.000	4052016	0.027	0.13	1.43
1	Pentafluorobenzene	1	IS		1.000	4498948	20.000	4498948			
35	1,4-Difluorobenzene	35	IS		1.000	4052016	20.000	4052016			
94	Toluene-d8	35	SURR		1.124	2393245	20.000	4052016			

Calculation Definitions:

n	compound n
i	i th calibration level
Astdni	Standard Area for compound n at ith calibration level
Cstdni	Standard Concentration for compound n at ith calibration level in ppmv
Cistdi	Internal Standard Conc used for compound n at ith calibration level in ppmv
Aistdi	Internal Standard Area used for compound n at ith calibration level
Ansamp	Sample Area for compound n
Avg RFn	Average response factor for all ith calibration levels for compound n
Raw Amount	Sample Concentration in ppmv before applying factors
Cistd	Concentration internal standard used for compound n in sample in ppmv
Aistd	Area of internal standard used for compound n in sample
Cn	Concentration of compound n in sample in ppmv
23.68	Gas constant at 60 F as per EPA source test protocol
MW	Molecular weight of compound
Note (1): Avg RFn	The values for the Average Response Factor AvgRFn can be optained from the response Factor Report for the Initial Calibration, or from the Calibration Report

Name of file: C:\MSCHEM\1\DATA\07069MS1\CC991A.D

Name of operator: JF



FORM II

QUALITY CONTROL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

LABORATORY CONTROL SPIKE

EPA Method TO-15 Modified Full Scan GC/MS **SDG: LABQC**
Analytical Method: TO-15

File: QC07069A.D
Description: ST60421
Can/Tube#:
Sam_Type: LCS
QC_Batch: 070609-MS1
Air Volume: 1000 ml

Date Sampled: NA
Date Received: NA
Date Extracted: NA
Date Analyzed: 07/06/09 **Time:** 10:49
Can Dilution Factor: 1.00 2
QC Duplicate: No

CAS#	Compound	MDL ppbv	Spike Conc ppbv	Amount ppbv	Matrix Amt ppbv	Spk Amt ppbv	Percent Recovery	LCL %	UCL %	Flag
75-01-4	Vinyl chloride	0.10	1.04	0.92	0.000	0.92	88	70	130	
75-35-4	1,1-Dichloroethene	0.10	1.04	1.06	0.000	1.06	102	70	130	
75-09-2	Dichloromethane	0.10	1.04	1.06	0.000	1.06	102	70	130	
75-34-3	1,1-Dichloroethane	0.10	1.01	0.97	0.000	0.97	96	70	130	
67-66-3	Chloroform	0.10	1.02	0.94	0.000	0.94	92	70	130	
71-55-6	1,1,1-Trichloroethane	0.10	1.02	1.00	0.000	1.00	98	70	130	
107-06-2	1,2-Dichloroethane	0.10	1.03	1.11	0.000	1.11	108	70	130	
71-43-2	Benzene	0.10	1.03	0.97	0.000	0.97	94	70	130	
56-23-5	Carbon tetrachloride	0.10	1.02	1.04	0.000	1.04	102	70	130	
79-01-6	Trichloroethene	0.10	1.03	1.09	0.000	1.09	106	70	130	
108-88-3	Toluene	0.10	1.03	1.18	0.000	1.18	115	70	130	
106-93-4	1,2-Dibromoethane	0.10	1.04	1.18	0.000	1.18	113	70	130	
127-18-4	Tetrachloroethene	0.10	1.02	1.22	0.000	1.22	120	70	130	
108-90-7	Chlorobenzene	0.10	1.02	1.16	0.000	1.16	114	70	130	
100-41-4	Ethylbenzene	0.10	1.04	1.12	0.000	1.12	108	70	130	
108-38-3	m & p-Xylene	0.21	2.06	2.21	0.000	2.21	107	70	130	
95-47-6	o-Xylene	0.10	1.02	1.11	0.000	1.11	109	70	130	

	Surrogate Recovery	Spike Amt. ppbV	Amount ppbV	% Rec.	QC Limits	Flag * = Out
2037-26-5	Toluene-d8	10.000	10.206	102	70-130	

Notes: Reported results are to be interpreted to two significant figures.
ug/m3 calculated assuming conditions at 60 F and 1 atm.

QUANTITATION REPORT

EPA Method TO-15 Modified Full Scan GC/MS

			Review	EAS Sample ID: QC07069	
File Name:	QC07069A.D				1 KB
Sample ID:	ST60421				2 AT
Date:	6 Jul 109 10:49 am			Cal Amounts	3 BB
Run Method:	1T15EXAY.M			IS Areas	4 SH
Quant Method:	1T15EXAY.M			Carryover	
Cal Update:	Tue Mar 17 14:18:15 2009				
Template:	1TO15SP.MS1				
Can Factor:	1.00				
Volume:	1000	ml		Analyst: KB 1	

CAS#	Compound	n	Raw Amount	RT	Target RT	Ion	Sample Area	Qualifier	Lower Qual	Upper Qual	Qual Flag	Cal Flag	Int Flag
75-01-4	Vinyl chloride	5	0.917	4.32	4.33	62.00	40671	32	24	36			
75-35-4	1,1-Dichloroethene	15	1.064	6.87	6.89	61.00	104279	44	34	51			
75-09-2	Dichloromethane	19	1.059	7.29	7.31	84.00	45942	60	51	77			
75-34-3	1,1-Dichloroethane	24	0.973	8.86	8.90	63.00	122677	33	24	36			
67-66-3	Chloroform	34	0.938	10.48	10.53	83.00	142152	61	51	77			
71-55-6	1,1,1-Trichloroethane	36	0.999	11.75	11.80	97.00	137489	64	51	76			
107-06-2	1,2-Dichloroethane	37	1.111	11.82	11.87	61.95	143441	28	25	37			
71-43-2	Benzene	40	0.969	12.47	12.51	78.00	217505	23	19	29			
56-23-5	Carbon tetrachloride	41	1.041	12.52	12.56	116.90	145432	98	79	119			
79-01-6	Trichloroethene	46	1.093	14.07	14.13	130.00	118703	94	79	119			
108-88-3	Toluene	51	1.184	17.05	17.11	91.00	347201	57	44	66			
106-93-4	1,2-Dibromoethane	58	1.181	18.71	18.80	107.00	250545	99	75	113			
127-18-4	Tetrachloroethene	59	1.225	18.91	18.97	166.00	228790	62	52	78			
108-90-7	Chlorobenzene	60	1.157	20.37	20.45	112.00	317109	31	25	38			
100-41-4	Ethylbenzene	62	1.124	20.91	17.80	91.00	526146	29	21	32			
108-38-3	m & p-Xylene	63	2.207	21.20	21.28	91.00	870470	41	32	48			
95-47-6	o-Xylene	66	1.108	22.16	22.25	91.00	483228	40	30	45			
363-72-4	Pentafluorobenzene	1	20.000	11.33	11.38	168.00	**4157284**						
540-36-3	1,4-Difluorobenzene	35	20.000	13.12	13.17	114.00	**3791665**						
2037-26-5	Toluene-d8	94	**10.206**	16.87	16.94	98.00	2175507	61	51	77			
3114-55-4	Chlorobenzene-d5	95	**21.236**	20.30	20.36	117.00	4152929	72	56	84		HIGH	
460-00-4	1,4-Bromofluorobenzene	96	**11.547**	23.29	23.38	95.00	3531028	79	56	83			

Integration Flags:

If no flag the Integration was done by the instrument computer

M1 Manual Integration because the computer did not integrated the peak or integrated the wrong peak

M2 Manual Integration because computer integration of baseline was different then Inital Calibration

INITIAL CALIBRATION REPORT

EPA Method TO-15 Modified Full Scan GC/MS

		SDG:	LABQC
		QC_Batch:	070609-MS1
File Name:	QC07069A.D	Instrument Name:	5970 - In
Sample ID:	ST60421		
Sample Analysis Date:	6 Jul 109 10:49 am	Number Compounds:	96
Run Method:	1T15EXAY.M	IS1: ST60403	20
Quant and Calibration Method:	1T15EXAY.M	IS2: ST60403	20
Cal Update:	Tue Mar 17 14:18:15 2009	IS3:	
Template:	1TO15SP.MS1	IS4:	

Calibration Title: EPA T0-15

		Calibration Amount CA, ppmv						Calibration Response, Area					
		Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
		Amt	Amt	Amt	Amt	Amt	Amt	C03179C.D	C03179E.D	C03179B.D	C03179A.D	C03169H.D	C03179D.D
n	Compound	0.25	4.0	1.0	5.0	10.0	2.0	0.25	4.0	1.0	5.0	10.0	2.0
5	Vinyl chloride	0.260	4.160	1.040	5.200	10.400	2.080	7909	132864	32643	150492	285530	62953
15	1,1-Dichloroethene	0.253	4.040	1.010	5.050	10.100	2.020	16793	248606	63935	305424	730028	150732
19	Dichloromethane	0.260	4.160	1.040	5.200	10.400	2.080	8354	124766	26131	120655	330491	71297
24	1,1-Dichloroethane	0.253	4.040	1.010	5.050	10.100	2.020	22823	387657	85531	331041	871129	183187
34	Chloroform	0.255	4.080	1.020	5.100	10.200	2.040	27147	449509	101707	516969	959204	213353
36	1,1,1-Trichloroethane	0.255	4.080	1.020	5.100	10.200	2.040	26931	432442	100881	509527	970639	210683
37	1,2-Dichloroethane	0.258	4.120	1.030	5.150	10.300	2.060	26512	398927	96975	495766	920839	187037
40	Benzene	-1.000	4.120	1.030	5.150	10.300	2.060	-1	712515	206967	782160	1387400	364766
41	Carbon tetrachloride	0.255	4.080	1.020	5.100	10.200	2.040	26276	451629	105798	518753	931992	220983
46	Trichloroethene	0.258	4.120	1.030	5.150	10.300	2.060	27013	323273	83100	364698	666308	165489
51	Toluene	-1.000	4.120	1.030	5.150	10.300	2.060	-1	944443	257501	1033029	1877014	478350
58	1,2-Dibromoethane	0.260	4.160	1.040	5.200	10.400	2.080	46912	660815	169213	701472	1505940	324567
59	Tetrachloroethene	0.255	4.080	1.020	5.100	10.200	2.040	40710	589393	145069	627137	1126037	300057
60	Chlorobenzene	0.255	4.080	1.020	5.100	10.200	2.040	64660	836027	208106	862738	1818049	410336
62	Ethylbenzene	0.260	4.160	1.040	5.200	10.400	2.080	107037	1527752	359496	1548148	3108186	722767
63	m & p-Xylene	0.515	8.240	2.060	10.300	20.600	4.120	192864	2440351	617919	2542524	4725274	1220126
66	o-Xylene	0.255	4.080	1.020	5.100	10.200	2.040	105567	1325719	329821	1384162	2817484	643280
1	Pentafluorobenzene	20.000	20.000	20.000	20.000	20.000	20.000	2643183	2935915	2871816	2719013	2737194	3022845
35	1,4-Difluorobenzene	20.000	20.000	20.000	20.000	20.000	20.000	2659938	2870629	2814997	2720455	2706138	3020264
94	Toluene-d8	10.000	10.000	10.000	10.000	10.000	10.000	1479389	1629143	1590486	1469067	1546296	1730275
95	Chlorobenzene-d5	20.000	20.000	20.000	20.000	20.000	20.000	2736627	3026382	2937451	2602948	2900630	3122484
96	1,4-Bromofluorobenzene	10.000	10.000	10.000	10.000	10.000	10.000	2176179	2385587	2352342	2001651	2163994	2472723

INITIAL CALIBRATION REPORT: Response Factors

SDG:	**LABQC**	**Sample Calculation:**	
QC_Batch:	**070609-MS1**	1) Avg RFn =	Sum $\left\| \frac{(Astdni)}{(Cstdni)} \frac{(Cistdi)}{(Aistdi)} \right\|_i$
Sample ID:	ST60421		
Sample Analysis Date:	6 Jul 109 10:49 am		
Run Method:	1T15EXAY.M		
Quant Method:	1T15EXAY.M		
Cal Update:	Tue Mar 17 14:18:15 2009		
Template:	1TO15SP.MS1		

Response Factors

Compound	RF1	RF2	RF3	RF4	RF5	RF6	AvgRFn	%RSD
Vinyl chloride	0.230	0.218	0.219	0.213	0.201	0.200	0.213	5.40
1,1-Dichloroethene	0.502	0.419	0.441	0.445	0.528	0.494	0.471	9.01
Dichloromethane	0.243	0.204	0.175	0.171	0.232	0.227	0.209	14.64
1,1-Dichloroethane	0.683	0.654	0.590	0.482	0.630	0.600	0.606	11.51
Chloroform	0.806	0.751	0.694	0.746	0.687	0.692	0.729	6.41
1,1,1-Trichloroethane	0.794	0.738	0.703	0.734	0.703	0.684	0.726	5.40
1,2-Dichloroethane	0.773	0.675	0.669	0.708	0.661	0.601	0.681	8.33
Benzene	NA	1.205	1.428	1.117	0.996	1.173	1.183	13.36
Carbon tetrachloride	0.775	0.771	0.737	0.748	0.675	0.717	0.737	5.04
Trichloroethene	0.787	0.547	0.573	0.521	0.478	0.532	0.573	19.12
Toluene	NA	1.597	1.776	1.475	1.347	1.538	1.546	10.25
1,2-Dibromoethane	1.357	1.107	1.156	0.992	1.070	1.033	1.119	11.58
Tetrachloroethene	1.200	1.006	1.010	0.904	0.816	0.974	0.985	13.06
Chlorobenzene	1.907	1.428	1.450	1.244	1.317	1.332	1.446	16.45
Ethylbenzene	3.095	2.559	2.456	2.189	2.209	2.301	2.468	13.74
m & p-Xylene	2.816	2.063	2.131	1.815	1.695	1.961	2.080	18.95
o-Xylene	3.113	2.264	2.297	1.995	2.041	2.088	2.300	18.10
Pentafluorobenzene	1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.00
1,4-Difluorobenzene	1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.00
Toluene-d8	1.112	1.135	1.130	1.080	1.143	1.146	1.124	2.20
Chlorobenzene-d5	1.029	1.054	1.044	0.957	1.072	1.034	1.032	3.85
1,4-Bromofluorobenzene	1.636	1.662	1.671	1.472	1.599	1.637	1.613	4.57

CALCULATIONS

EPA Method TO-15 Modified Full Scan GC/MS

SDG: LABQC
Laboratory Number: QC07069

RL:	1T15EXAY.M
Run Method:	1T15EXAY.M
Quant Method:	1T15EXAY.M
Can Dilution Factor:	1.00
Air Volume:	1000 ml
Gas Constant:	23.68
Decimal Places:	2

MDL Factor 1

Compound	M.W.	Raw Amount	Result ppbv	Result ug/m3	(1) MDL ppbv	(2) RL ppbv	Calc MDL ppbv	Calc MDL ug/m3	Calc RL ppbv	Calc RL ug/m3	Flag	Spike ppmv
Vinyl chloride	62.5	0.917	0.917	2.42	0.104	0.520	0.10	0.27	0.52	1.37		1.040
1,1-Dichloroethene	96.9	1.064	1.064	4.35	0.101	0.505	0.10	0.41	0.51	2.07		1.040
Dichloromethane	84.9	1.059	1.059	3.80	0.104	0.520	0.10	0.37	0.52	1.86		1.040
1,1-Dichloroethane	99.0	0.973	0.973	4.07	0.101	0.505	0.10	0.42	0.51	2.11		1.010
Chloroform	119.4	0.938	0.938	4.73	0.102	0.510	0.10	0.51	0.51	2.57		1.020
1,1,1-Trichloroethane	133.4	0.999	0.999	5.63	0.102	0.510	0.10	0.57	0.51	2.87		1.020
1,2-Dichloroethane	99.0	1.111	1.111	4.65	0.103	0.515	0.10	0.43	0.52	2.15		1.030
Benzene	78.1	0.969	0.969	3.20	0.103	0.515	0.10	0.34	0.52	1.70		1.030
Carbon tetrachloride	153.8	1.041	1.041	6.76	0.102	0.510	0.10	0.66	0.51	3.31		1.020
Trichloroethene	131.4	1.093	1.093	6.06	0.103	0.515	0.10	0.57	0.52	2.86		1.030
Toluene	92.1	1.184	1.184	4.61	0.103	0.515	0.10	0.40	0.52	2.00		1.030
1,2-Dibromoethane	187.9	1.181	1.181	9.37	0.104	0.520	0.10	0.83	0.52	4.13		1.040
Tetrachloroethene	165.8	1.225	1.225	8.58	0.102	0.510	0.10	0.71	0.51	3.57		1.020
Chlorobenzene	112.6	1.157	1.157	5.50	0.102	0.510	0.10	0.49	0.51	2.43		1.020
Ethylbenzene	106.2	1.124	1.124	5.04	0.104	0.520	0.10	0.47	0.52	2.33		1.040
m & p-Xylene	106.2	2.207	2.207	9.90	0.206	1.030	0.21	0.92	1.03	4.62		2.060
o-Xylene	106.2	1.108	1.108	4.97	0.102	0.510	0.10	0.46	0.51	2.29		1.020

SAMPLE CALCULATION

EPA Method TO-15 Modified Full Scan GC/MS

SDG:		**LABQC**
Laboratory Number:		**QC07069**
Standard Volume	STV	5.0
Sample Volume	SV	1000
Can Dilution Factor	CDF	1.00
Gas Constant		23.68
Decimal Places:		2

Sample Calculation:

1) Avg RFn = Sum $\left| \frac{(Astdni)}{(Cstdni)} \frac{(Cistdi)}{(Aistdi)} \right|_i$ Note: 1

2) Raw Amt = $\frac{(Ansamp)}{(Avg\ RFn)} \frac{(Cistdi)}{(Aistdi)}$ = **Cn**

3) Amount ppbv = $\frac{(Raw\ Amt)}{(SV)} \frac{1000}{} \frac{(CDF)}{}$

4) Amount ug/m3 = $\frac{(amt(ppbv)}{23.68} \frac{MW}{}$

n	Compound	IS n	Chem type	MW	AvgRFn	Area Ansamp	Cistdi ppmv	Aistdi Ais	Cn ppmV Raw Amt	Amount ppbv	Amount ug/m3
5	Vinyl chloride	1	TRG	62.5	0.213	40671	20.000	4157284	0.917	0.92	2.43
15	1,1-Dichloroethene	1	TRG	96.9	0.471	104279	20.000	4157284	1.064	1.06	4.34
19	Dichloromethane	1	TRG	84.9	0.209	45942	20.000	4157284	1.059	1.06	3.80
24	1,1-Dichloroethane	1	TRG	99.0	0.606	122677	20.000	4157284	0.973	0.97	4.06
34	Chloroform	1	TRG	119.4	0.729	142152	20.000	4157284	0.938	0.94	4.74
36	1,1,1-Trichloroethane	35	TRG	133.4	0.726	137489	20.000	3791665	0.999	1.00	5.63
37	1,2-Dichloroethane	35	TRG	99.0	0.681	143441	20.000	3791665	1.111	1.11	4.64
40	Benzene	35	TRG	78.1	1.183	217505	20.000	3791665	0.969	0.97	3.20
41	Carbon tetrachloride	35	TRG	153.8	0.737	145432	20.000	3791665	1.041	1.04	6.75
46	Trichloroethene	35	TRG	131.4	0.573	118703	20.000	3791665	1.093	1.09	6.05
51	Toluene	35	TRG	92.1	1.546	347201	20.000	3791665	1.184	1.18	4.59
58	1,2-Dibromoethane	35	TRG	187.9	1.119	250545	20.000	3791665	1.181	1.18	9.36
59	Tetrachloroethene	35	TRG	165.8	0.985	228790	20.000	3791665	1.225	1.22	8.54
60	Chlorobenzene	35	TRG	112.6	1.446	317109	20.000	3791665	1.157	1.16	5.52
62	Ethylbenzene	35	TRG	106.2	2.468	526146	20.000	3791665	1.124	1.12	5.02
63	m & p-Xylene	35	TRG	106.2	2.080	870470	20.000	3791665	2.207	2.21	9.91
66	o-Xylene	35	TRG	106.2	2.300	483228	20.000	3791665	1.108	1.11	4.98
1	Pentafluorobenzene	1	IS		1.000	4157284	20.000	4157284			
35	1,4-Difluorobenzene	35	IS		1.000	3791665	20.000	3791665			
94	Toluene-d8	35	SURR		1.124	2175507	20.000	3791665			

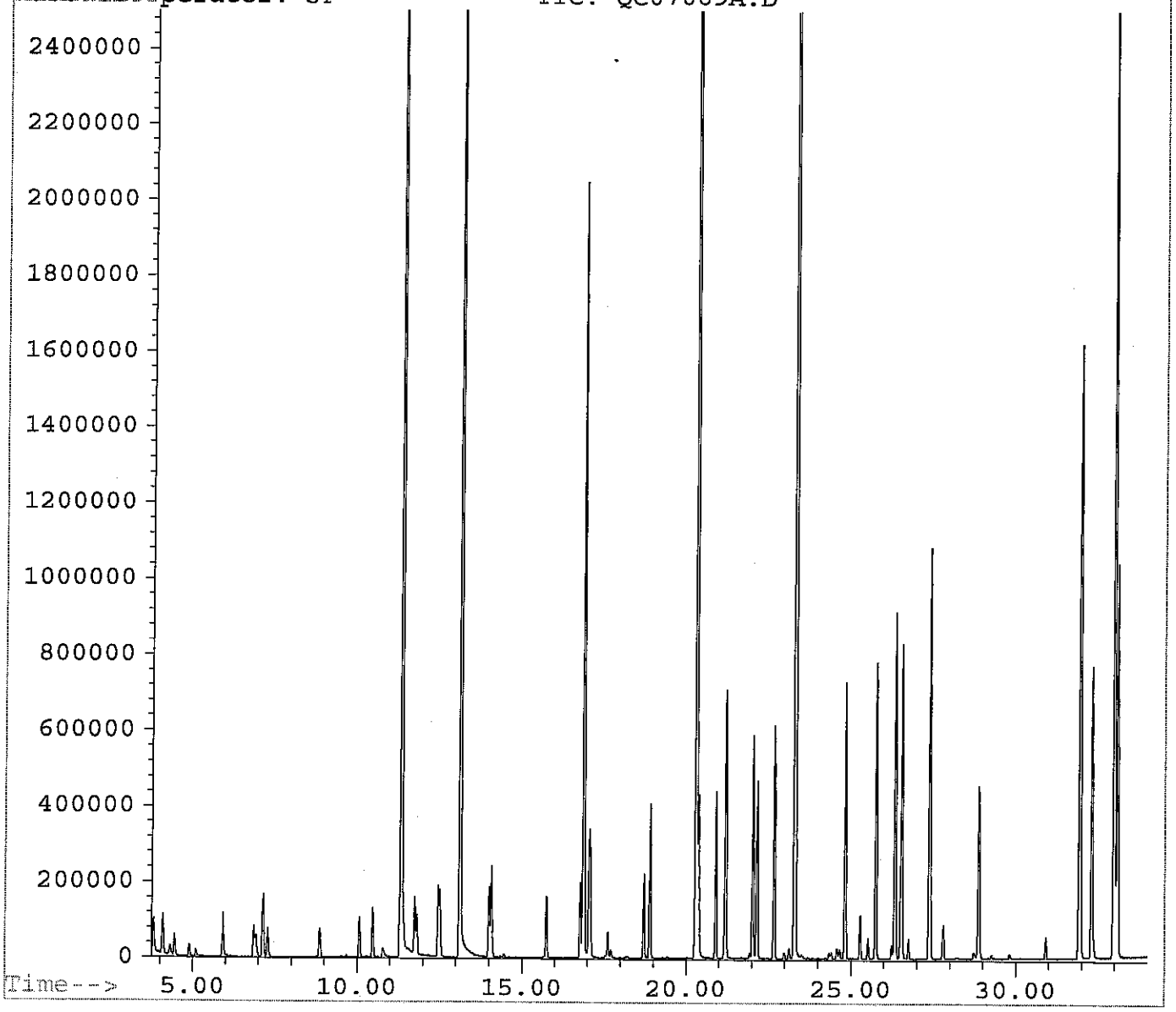
Calculation Definitions:

n	compound n
i	i th calibration level
Astdni	Standard Area for compound n at ith calibration level
Cstdni	Standard Concentration for compound n at ith calibration level in ppmv
Cistdi	Internal Standard Conc used for compound n at ith calibration level in ppmv
Aistdi	Internal Standard Area used for compound n at ith calibration level
Ansamp	Sample Area for compound n
Avg RFn	Average response factor for all ith calibration levels for compound n
Raw Amount	Sample Concentration in ppmv before applying factors
Cistd	Concentration internal standard used for compound n in sample in ppmv
Aistd	Area of internal standard used for compound n in sample
Cn	Concentration of compound n in sample in ppmv
23.68	Gas constant at 60 F as per EPA source test protocol
MW	Molecular weight of compound
Note (1) : Avg RFn	The values for the Average Response Factor AvgRFn can be optained from the response Factor Report for the Initial Calibration, or from the Calibration Report

Name of file: C:\MSCHEM\1\DATA\07069MS1\QC07069A.D

Name of operator: JF

TIC: QC07069A.D



QUALITY CONTROL DUPLICATE

ENVIRONMENTAL
Analytical Service, Inc.

Duplicate of QC Sample

EPA Method TO-15 Modified Full Scan GC/MS **SDG: LABQC**
Analytical Method: **TO-15**

Dup File: QC07069B.D
Description: ST60421
Can/Tube#:
QC_Batch: 070609-MS1

CAS#	Compound	LCD ppbv	LCS ppbv	RPD %D	Limit %	Flag * = Out
75-01-4	Vinyl chloride	0.93	0.92	1	25	
75-35-4	1,1-Dichloroethene	1.05	1.06	1	25	
75-09-2	Dichloromethane	1.04	1.06	2	25	
75-34-3	1,1-Dichloroethane	0.95	0.97	2	25	
67-66-3	Chloroform	0.88	0.94	6	25	
71-55-6	1,1,1-Trichloroethane	0.96	1.00	4	25	
107-06-2	1,2-Dichloroethane	1.00	1.11	11	25	
71-43-2	Benzene	0.98	0.97	1	25	
56-23-5	Carbon tetrachloride	1.06	1.04	2	25	
79-01-6	Trichloroethene	1.12	1.09	3	25	
108-88-3	Toluene	1.20	1.18	2	25	
106-93-4	1,2-Dibromoethane	1.19	1.18	1	25	
127-18-4	Tetrachloroethene	1.26	1.22	4	25	
108-90-7	Chlorobenzene	1.17	1.16	1	25	
100-41-4	Ethylbenzene	1.13	1.12	1	25	
108-38-3	m & p-Xylene	2.24	2.21	1	25	
95-47-6	o-Xylene	1.13	1.11	2	25	

FORM II

QUALITY CONTROL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

LABORATORY CONTROL DUPLICATE

EPA Method TO-15 Modified Full Scan GC/MS **SDG: LABQC**
Analytical Method: TO-15

File: QC07069B.D
Description: ST60421
Can/Tube#:
Sam_Type: LCD
QC_Batch: 070609-MS1
Air Volume: 1000 ml

Date Sampled: NA
Date Received: NA
Date Extracted: NA
Date Analyzed: 07/06/09 **Time:** 11:35
Can Dilution Factor: 1.00 2
QC Duplicate: Yes

CAS#	Compound	MDL ppbv	Spike Conc ppbv	Amount ppbv	Matrix Amt ppbv	Spk Amt ppbv	Percent Recovery	LCL %	UCL %	Flag
75-01-4	Vinyl chloride	0.10	1.04	0.93	0.000	0.93	89	70	130	
75-35-4	1,1-Dichloroethene	0.10	1.04	1.05	0.000	1.05	101	70	130	
75-09-2	Dichloromethane	0.10	1.04	1.04	0.000	1.04	100	70	130	
75-34-3	1,1-Dichloroethane	0.10	1.01	0.95	0.000	0.95	94	70	130	
67-66-3	Chloroform	0.10	1.02	0.88	0.000	0.88	86	70	130	
71-55-6	1,1,1-Trichloroethane	0.10	1.02	0.96	0.000	0.96	94	70	130	
107-06-2	1,2-Dichloroethane	0.10	1.03	1.00	0.000	1.00	97	70	130	
71-43-2	Benzene	0.10	1.03	0.98	0.000	0.98	95	70	130	
56-23-5	Carbon tetrachloride	0.10	1.02	1.06	0.000	1.06	104	70	130	
79-01-6	Trichloroethene	0.10	1.03	1.12	0.000	1.12	109	70	130	
108-88-3	Toluene	0.10	1.03	1.20	0.000	1.20	117	70	130	
106-93-4	1,2-Dibromoethane	0.10	1.04	1.19	0.000	1.19	114	70	130	
127-18-4	Tetrachloroethene	0.10	1.02	1.26	0.000	1.26	124	70	130	
108-90-7	Chlorobenzene	0.10	1.02	1.17	0.000	1.17	115	70	130	
100-41-4	Ethylbenzene	0.10	1.04	1.13	0.000	1.13	109	70	130	
108-38-3	m & p-Xylene	0.21	2.06	2.24	0.000	2.24	109	70	130	
95-47-6	o-Xylene	0.10	1.02	1.13	0.000	1.13	111	70	130	

	Surrogate Recovery	Spike Amt. ppbV	Amount ppbV	% Rec.	QC Limits	Flag * = Out
2037-26-5	Toluene-d8	10.000	10.430	104	70-130	

Notes: Reported results are to be interpreted to two significant figures.
ug/m3 calculated assuming conditions at 60 F and 1 atm.

QUANTITATION REPORT

EPA Method TO-15 Modified Full Scan GC/MS

			Review	EAS Sample ID: QC07069	
File Name:	QC07069B.D				1 KB
Sample ID:	ST60421				2 AT
Date:	6 Jul 109 11:35 am			Cal Amounts	3 BB
Run Method:	1T15EXAY.M			IS Areas	4 SH
Quant Method:	1T15EXAY.M			Carryover	
Cal Update:	Tue Mar 17 14:18:15 2009				
Template:	1TO15SP.MS1				
Can Factor:	1.00				
Volume:	1000	ml		Analyst: KB 1	

CAS#	Compound	n	Raw Amount	RT	Target RT	Ion	Sample Area	Qualifier	Lower Qual	Upper Qual	Qual Flag	Cal Flag	Int Flag
75-01-4	Vinyl chloride	5	0.932	4.31	4.33	62.00	42174	30	24	36			
75-35-4	1,1-Dichloroethene	15	1.054	6.86	6.89	61.00	105469	41	34	51			
75-09-2	Dichloromethane	19	1.035	7.28	7.31	84.00	45850	63	51	77			
75-34-3	1,1-Dichloroethane	24	0.953	8.87	8.90	63.00	122696	29	24	36			
67-66-3	Chloroform	34	0.881	10.48	10.53	83.00	136369	61	51	77			
71-55-6	1,1,1-Trichloroethane	36	0.958	11.75	11.80	97.00	135711	64	51	76			
107-06-2	1,2-Dichloroethane	37	1.000	11.82	11.87	61.95	132793	34	25	37			
71-43-2	Benzene	40	0.976	12.47	12.51	78.00	225199	23	19	29			
56-23-5	Carbon tetrachloride	41	1.063	12.53	12.56	116.90	152824	94	79	119			
79-01-6	Trichloroethene	46	1.117	14.07	14.13	130.00	124879	100	79	119			
108-88-3	Toluene	51	1.201	17.05	17.11	91.00	362315	54	44	66			
106-93-4	1,2-Dibromoethane	58	1.189	18.72	18.80	107.00	259535	98	75	113			
127-18-4	Tetrachloroethene	59	1.256	18.91	18.97	166.00	241344	60	52	78			
108-90-7	Chlorobenzene	60	1.173	20.39	20.45	112.00	330795	32	25	38			
100-41-4	Ethylbenzene	62	1.133	20.92	17.80	91.00	545369	29	21	32			
108-38-3	m & p-Xylene	63	2.245	21.21	21.28	91.00	910896	41	32	48			
95-47-6	o-Xylene	66	1.128	22.16	22.25	91.00	505855	37	30	45			
363-72-4	Pentafluorobenzene	1	20.000	11.33	11.38	168.00	**4244113**						
540-36-3	1,4-Difluorobenzene	35	20.000	13.12	13.17	114.00	**3901304**						
2037-26-5	Toluene-d8	94	**10.430**	16.87	16.94	98.00	2287490	62	51	77			
3114-55-4	Chlorobenzene-d5	95	**21.906**	20.31	20.36	117.00	4407742	70	56	84		HIGH	
460-00-4	1,4-Bromofluorobenzene	96	**11.680**	23.30	23.38	95.00	3675106	76	56	83			

Integration Flags:

If no flag the Integration was done by the instrument computer

M1 Manual Integration because the computer did not integrated the peak or integrated the wrong peak

M2 Manual Integration because computer integration of baseline was different then Inital Calibration

INITIAL CALIBRATION REPORT

EPA Method TO-15 Modified Full Scan GC/MS

		SDG:	LABQC
		QC_Batch:	070609-MS1
File Name:	QC07069B.D	Instrument Name:	5970 - In
Sample ID:	ST60421		
Sample Analysis Date:	6 Jul 109 11:35 am	Number Compounds:	96
Run Method:	1T15EXAY.M	IS1: ST60403	20
Quant and Calibration Method:	1T15EXAY.M	IS2: ST60403	20
Cal Update:	Tue Mar 17 14:18:15 2009	IS3:	
Template:	1TO15SP.MS1	IS4:	

Calibration Title: EPA T0-15

		Calibration Amount CA, ppmv						Calibration Response, Area					
		Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
		Amt	Amt	Amt	Amt	Amt	Amt	C03179C.D	C03179E.D	C03179B.D	C03179A.D	C03169H.D	C03179D.D
n	Compound	0.25	4.0	1.0	5.0	10.0	2.0	0.25	4.0	1.0	5.0	10.0	2.0
5	Vinyl chloride	0.260	4.160	1.040	5.200	10.400	2.080	7909	132864	32643	150492	285530	62953
15	1,1-Dichloroethene	0.253	4.040	1.010	5.050	10.100	2.020	16793	248606	63935	305424	730028	150732
19	Dichloromethane	0.260	4.160	1.040	5.200	10.400	2.080	8354	124766	26131	120655	330491	71297
24	1,1-Dichloroethane	0.253	4.040	1.010	5.050	10.100	2.020	22823	387657	85531	331041	871129	183187
34	Chloroform	0.255	4.080	1.020	5.100	10.200	2.040	27147	449509	101707	516969	959204	213353
36	1,1,1-Trichloroethane	0.255	4.080	1.020	5.100	10.200	2.040	26931	432442	100881	509527	970639	210683
37	1,2-Dichloroethane	0.258	4.120	1.030	5.150	10.300	2.060	26512	398927	96975	495766	920839	187037
40	Benzene	-1.000	4.120	1.030	5.150	10.300	2.060	-1	712515	206967	782160	1387400	364766
41	Carbon tetrachloride	0.255	4.080	1.020	5.100	10.200	2.040	26276	451629	105798	518753	931992	220983
46	Trichloroethene	0.258	4.120	1.030	5.150	10.300	2.060	27013	323273	83100	364698	666308	165489
51	Toluene	-1.000	4.120	1.030	5.150	10.300	2.060	-1	944443	257501	1033029	1877014	478350
58	1,2-Dibromoethane	0.260	4.160	1.040	5.200	10.400	2.080	46912	660815	169213	701472	1505940	324567
59	Tetrachloroethene	0.255	4.080	1.020	5.100	10.200	2.040	40710	589393	145069	627137	1126037	300057
60	Chlorobenzene	0.255	4.080	1.020	5.100	10.200	2.040	64660	836027	208106	862738	1818049	410336
62	Ethylbenzene	0.260	4.160	1.040	5.200	10.400	2.080	107037	1527752	359496	1548148	3108186	722767
63	m & p-Xylene	0.515	8.240	2.060	10.300	20.600	4.120	192864	2440351	617919	2542524	4725274	1220126
66	o-Xylene	0.255	4.080	1.020	5.100	10.200	2.040	105567	1325719	329821	1384162	2817484	643280
1	Pentafluorobenzene	20.000	20.000	20.000	20.000	20.000	20.000	2643183	2935915	2871816	2719013	2737194	3022845
35	1,4-Difluorobenzene	20.000	20.000	20.000	20.000	20.000	20.000	2659938	2870629	2814997	2720455	2706138	3020264
94	Toluene-d8	10.000	10.000	10.000	10.000	10.000	10.000	1479389	1629143	1590486	1469067	1546296	1730275
95	Chlorobenzene-d5	20.000	20.000	20.000	20.000	20.000	20.000	2736627	3026382	2937451	2602948	2900630	3122484
96	1,4-Bromofluorobenzene	10.000	10.000	10.000	10.000	10.000	10.000	2176179	2385587	2352342	2001651	2163994	2472723

(137)

INITIAL CALIBRATION REPORT: Response Factors

SDG:	**LABQC**
QC_Batch:	**070609-MS1**
Sample ID:	ST60421
Sample Analysis Date:	6 Jul 109 11:35 am
Run Method:	1T15EXAY.M
Quant Method:	1T15EXAY.M
Cal Update:	Tue Mar 17 14:18:15 2009
Template:	1TO15SP.MS1

Sample Calculation:

1) Avg RFn = Sum $\left| \frac{(Astdni)\ (Cistdi)}{(Cstdni)\ (Aistdi)} \right|_i$

Response Factors

Compound	RF1	RF2	RF3	RF4	RF5	RF6	AvgRFn	%RSD
Vinyl chloride	0.230	0.218	0.219	0.213	0.201	0.200	0.213	5.40
1,1-Dichloroethene	0.502	0.419	0.441	0.445	0.528	0.494	0.471	9.01
Dichloromethane	0.243	0.204	0.175	0.171	0.232	0.227	0.209	14.64
1,1-Dichloroethane	0.683	0.654	0.590	0.482	0.630	0.600	0.606	11.51
Chloroform	0.806	0.751	0.694	0.746	0.687	0.692	0.729	6.41
1,1,1-Trichloroethane	0.794	0.738	0.703	0.734	0.703	0.684	0.726	5.40
1,2-Dichloroethane	0.773	0.675	0.669	0.708	0.661	0.601	0.681	8.33
Benzene	NA	1.205	1.428	1.117	0.996	1.173	1.183	13.36
Carbon tetrachloride	0.775	0.771	0.737	0.748	0.675	0.717	0.737	5.04
Trichloroethene	0.787	0.547	0.573	0.521	0.478	0.532	0.573	19.12
Toluene	NA	1.597	1.776	1.475	1.347	1.538	1.546	10.25
1,2-Dibromoethane	1.357	1.107	1.156	0.992	1.070	1.033	1.119	11.58
Tetrachloroethene	1.200	1.006	1.010	0.904	0.816	0.974	0.985	13.06
Chlorobenzene	1.907	1.428	1.450	1.244	1.317	1.332	1.446	16.45
Ethylbenzene	3.095	2.559	2.456	2.189	2.209	2.301	2.468	13.74
m & p-Xylene	2.816	2.063	2.131	1.815	1.695	1.961	2.080	18.95
o-Xylene	3.113	2.264	2.297	1.995	2.041	2.088	2.300	18.10
Pentafluorobenzene	1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.00
1,4-Difluorobenzene	1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.00
Toluene-d8	1.112	1.135	1.130	1.080	1.143	1.146	1.124	2.20
Chlorobenzene-d5	1.029	1.054	1.044	0.957	1.072	1.034	1.032	3.85
1,4-Bromofluorobenzene	1.636	1.662	1.671	1.472	1.599	1.637	1.613	4.57

CALCULATIONS

EPA Method TO-15 Modified Full Scan GC/MS

SDG: LABQC
Laboratory Number: QC07069

RL:	1T15EXAY.M
Run Method:	1T15EXAY.M
Quant Method:	1T15EXAY.M
Can Dilution Factor:	1.00
Air Volume:	1000 ml
Gas Constant:	23.68
Decimal Places:	2

MDL Factor 1

Compound	M.W.	Raw Amount	Result ppbv	Result ug/m3	(1) MDL ppbv	(2) RL ppbv	Calc MDL ppbv	Calc MDL ug/m3	Calc RL ppbv	Calc RL ug/m3	Flag	Spike ppmv
Vinyl chloride	62.5	0.932	0.932	2.46	0.104	0.520	0.10	0.27	0.52	1.37		1.040
1,1-Dichloroethene	96.9	1.054	1.054	4.31	0.101	0.505	0.10	0.41	0.51	2.07		1.040
Dichloromethane	84.9	1.035	1.035	3.71	0.104	0.520	0.10	0.37	0.52	1.86		1.040
1,1-Dichloroethane	99.0	0.953	0.953	3.99	0.101	0.505	0.10	0.42	0.51	2.11		1.010
Chloroform	119.4	0.881	0.881	4.44	0.102	0.510	0.10	0.51	0.51	2.57		1.020
1,1,1-Trichloroethane	133.4	0.958	0.958	5.40	0.102	0.510	0.10	0.57	0.51	2.87		1.020
1,2-Dichloroethane	99.0	1.000	1.000	4.18	0.103	0.515	0.10	0.43	0.52	2.15		1.030
Benzene	78.1	0.976	0.976	3.22	0.103	0.515	0.10	0.34	0.52	1.70		1.030
Carbon tetrachloride	153.8	1.063	1.063	6.90	0.102	0.510	0.10	0.66	0.51	3.31		1.020
Trichloroethene	131.4	1.117	1.117	6.20	0.103	0.515	0.10	0.57	0.52	2.86		1.030
Toluene	92.1	1.201	1.201	4.67	0.103	0.515	0.10	0.40	0.52	2.00		1.030
1,2-Dibromoethane	187.9	1.189	1.189	9.43	0.104	0.520	0.10	0.83	0.52	4.13		1.040
Tetrachloroethene	165.8	1.256	1.256	8.79	0.102	0.510	0.10	0.71	0.51	3.57		1.020
Chlorobenzene	112.6	1.173	1.173	5.58	0.102	0.510	0.10	0.49	0.51	2.43		1.020
Ethylbenzene	106.2	1.133	1.133	5.08	0.104	0.520	0.10	0.47	0.52	2.33		1.040
m & p-Xylene	106.2	2.245	2.245	10.07	0.206	1.030	0.21	0.92	1.03	4.62		2.060
o-Xylene	106.2	1.128	1.128	5.06	0.102	0.510	0.10	0.46	0.51	2.29		1.020

SAMPLE CALCULATION

EPA Method TO-15 Modified Full Scan GC/MS

SDG:		**LABQC**
Laboratory Number:		**QC07069**
Standard Volume	STV	5.0
Sample Volume	SV	1000
Can Dilution Factor	CDF	1.00
Gas Constant		23.68
Decimal Places:		2

Sample Calculation:

1) Avg RFn = Sum $\left| \frac{(Astdni)}{(Cstdni)} \frac{(Cistdi)}{(Aistdi)} \right|_i$ Note: 1

2) Raw Amt = $\frac{(Ansamp)}{(Avg\ RFn)} \frac{(Cistdi)}{(Aistdi)}$ = **Cn**

3) Amount ppbv = $\frac{(Raw\ Amt)\ 1000}{(SV)}$ (CDF)

4) Amount ug/m3 = $\frac{(amt(ppbv)\ MW}{23.68}$

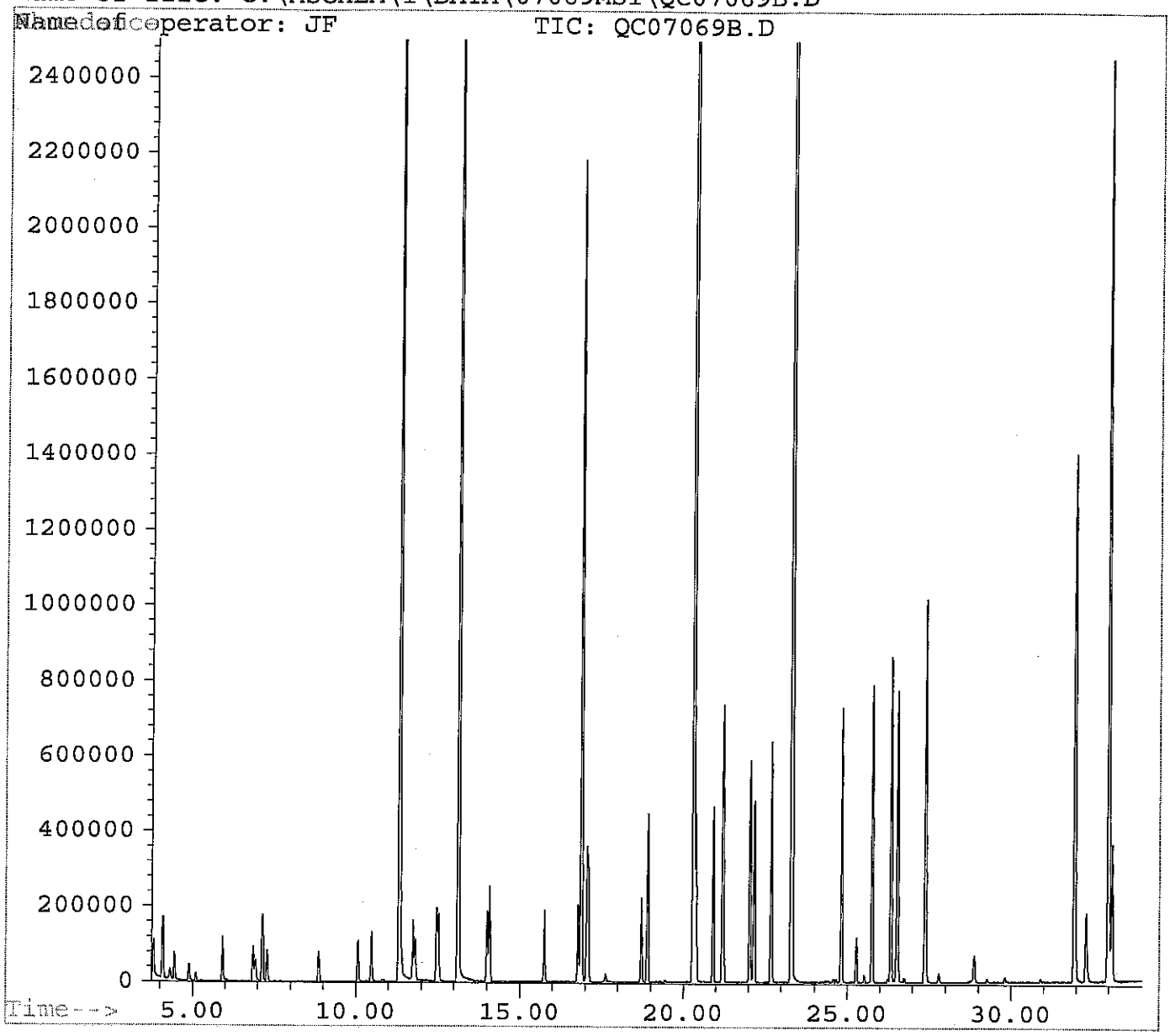
n	Compound	IS n	Chem type	MW	AvgRFn	Area Ansamp	Cistdi ppmv	Aistdi Ais	Cn ppmV Raw Amt	Amount ppbv	Amount ug/m3
5	Vinyl chloride	1	TRG	62.5	0.213	42174	20.000	4244113	0.932	0.93	2.45
15	1,1-Dichloroethene	1	TRG	96.9	0.471	105469	20.000	4244113	1.054	1.05	4.30
19	Dichloromethane	1	TRG	84.9	0.209	45850	20.000	4244113	1.035	1.04	3.73
24	1,1-Dichloroethane	1	TRG	99.0	0.606	122696	20.000	4244113	0.953	0.95	3.97
34	Chloroform	1	TRG	119.4	0.729	136369	20.000	4244113	0.881	0.88	4.44
36	1,1,1-Trichloroethane	35	TRG	133.4	0.726	135711	20.000	3901304	0.958	0.96	5.41
37	1,2-Dichloroethane	35	TRG	99.0	0.681	132793	20.000	3901304	1.000	1.00	4.18
40	Benzene	35	TRG	78.1	1.183	225199	20.000	3901304	0.976	0.98	3.23
41	Carbon tetrachloride	35	TRG	153.8	0.737	152824	20.000	3901304	1.063	1.06	6.88
46	Trichloroethene	35	TRG	131.4	0.573	124879	20.000	3901304	1.117	1.12	6.21
51	Toluene	35	TRG	92.1	1.546	362315	20.000	3901304	1.201	1.20	4.67
58	1,2-Dibromoethane	35	TRG	187.9	1.119	259535	20.000	3901304	1.189	1.19	9.44
59	Tetrachloroethene	35	TRG	165.8	0.985	241344	20.000	3901304	1.256	1.26	8.82
60	Chlorobenzene	35	TRG	112.6	1.446	330795	20.000	3901304	1.173	1.17	5.56
62	Ethylbenzene	35	TRG	106.2	2.468	545369	20.000	3901304	1.133	1.13	5.07
63	m & p-Xylene	35	TRG	106.2	2.080	910896	20.000	3901304	2.245	2.24	10.05
66	o-Xylene	35	TRG	106.2	2.300	505855	20.000	3901304	1.128	1.13	5.07
1	Pentafluorobenzene	1	IS		1.000	4244113	20.000	4244113			
35	1,4-Difluorobenzene	35	IS		1.000	3901304	20.000	3901304			
94	Toluene-d8	35	SURR		1.124	2287490	20.000	3901304			

Calculation Definitions:

n	compound n
i	i th calibration level
Astdni	Standard Area for compound n at ith calibration level
Cstdni	Standard Concentration for compound n at ith calibration level in ppmv
Cistdi	Internal Standard Conc used for compound n at ith calibration level in ppmv
Aistdi	Internal Standard Area used for compound n at ith calibration level
Ansamp	Sample Area for compound n
Avg RFn	Average response factor for all ith calibration levels for compound n
Raw Amount	Sample Concentration in ppmv before applying factors
Cistd	Concentration internal standard used for compound n in sample in ppmv
Aistd	Area of internal standard used for compound n in sample
Cn	Concentration of compound n in sample in ppmv
23.68	Gas constant at 60 F as per EPA source test protocol
MW	Molecular weight of compound
Note (1) : Avg RFn	The values for the Average Response Factor AvgRFn can be optained from the response Factor Report for the Initial Calibration, or from the Calibration Report

Name of file: C:\MSCHEM\1\DATA\07069MS1\QC07069B.D

Name of operator: JF



ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified Full Scan GC/MS | **SDG:** 209277
Analytical Method: TO-15 | **Laboratory Number:** 01

File:	0927701A.D	**Date Sampled:**	06/19/09	**Time:**	12:43
Description:	44-001	**Date Received:**	06/23/09		
Can/Tube#:	656	**Date Extracted:**			
Sam_Type:	SA	**Date Analyzed:**	07/06/09	**Time:**	14:57
QC_Batch:	070609-MS1	**Can Dilution Factor:**	1.43		2
Air Volume:	200 ml	**Not Detected Flag:**	ND		

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
75-71-8	Dichlorodifluoromethane	0.75	3.75	ND	3.83	19.17	ND	ND
74-87-3	Chloromethane	0.73	3.65	ND	1.56	7.78	ND	ND
76-14-2	Freon 114	0.74	3.72	ND	5.37	26.83	ND	ND
75-01-4	Vinyl chloride	0.74	3.72	ND	1.96	9.81	ND	ND
74-83-9	Bromomethane	0.74	3.72	ND	2.98	14.90	ND	ND
75-00-3	Chloroethane	0.74	3.72	ND	2.03	10.13	ND	ND
75-69-4	Trichlorofluoromethane	0.74	3.72	ND	4.31	21.57	ND	ND
67-64-1	Acetone	0.64	3.22	5.67	1.58	7.89	13.90	
67-63-0	2-propanol	0.65	3.25	ND	1.65	8.26	ND	ND
75-35-4	1,1-Dichloroethene	0.72	3.61	ND	2.96	14.78	ND	ND
76-13-1	Freon 113	0.73	3.65	1.63	5.77	28.84	12.89	J
75-09-2	Dichloromethane	0.74	3.72	ND	2.67	13.33	ND	ND
75-15-0	Carbon disulfide	0.64	3.18	3.21	2.05	10.23	10.30	
156-60-5	trans-1,2-Dichloroethene	0.62	3.11	ND	2.55	12.73	ND	ND
1634-04-4	Methyl tert butyl ether	0.56	2.79	ND	2.07	10.37	ND	ND
75-34-3	1,1-Dichloroethane	0.72	3.61	ND	3.02	15.10	ND	ND
108-05-4	Vinyl acetate	0.61	3.07	ND	2.24	11.18	ND	ND
78-93-3	2-Butanone	0.61	3.07	1.24	1.87	9.36	3.76	J
156-59-2	cis-1,2-Dichloroethene	0.74	3.68	ND	3.01	15.07	ND	ND
67-66-3	Chloroform	0.73	3.65	1.59	3.68	18.39	8.01	J
71-55-6	1,1,1-Trichloroethane	0.73	3.65	11.90	4.11	20.54	67.03	
107-06-2	1,2-Dichloroethane	0.74	3.68	0.83	3.08	15.39	3.47	J
71-43-2	Benzene	0.74	3.68	1.52	2.43	12.14	5.03	J
56-23-5	Carbon tetrachloride	0.73	3.65	ND	4.74	23.68	ND	ND
78-87-5	1,2-Dichloropropane	0.74	3.68	ND	3.51	17.57	ND	ND
123-91-1	1,4 Dioxane	0.63	3.15	ND	2.34	11.70	ND	ND
79-01-6	Trichloroethene	0.74	3.68	14.21	4.09	20.43	78.86	
75-27-4	Bromodichloromethane	0.57	2.86	ND	3.96	19.78	ND	ND
108-10-1	Methyl Isobutyl Ketone	0.66	3.29	ND	2.78	13.92	ND	ND
10061-01-5	cis-1,3-Dichloropropene	0.76	3.79	ND	3.55	17.76	ND	ND
108-88-3	Toluene	0.74	3.68	2.18	2.86	14.32	8.46	J
10061-02-6	trans-1,3-Dichloropropene	0.74	3.72	ND	3.49	17.43	ND	ND
79-00-5	1,1,2-Trichloroethane	0.73	3.65	ND	4.11	20.54	ND	ND
591-78-6	2-Hexanone	0.63	3.15	ND	2.66	13.31	ND	ND
124-48-1	Dibromochloromethane	0.64	3.18	ND	5.60	27.99	ND	ND
106-93-4	1,2-Dibromoethane	0.74	3.72	ND	5.90	29.50	ND	ND
127-18-4	Tetrachloroethene	0.73	3.65	28.12	5.11	25.53	196.91	
108-90-7	Chlorobenzene	0.73	3.65	ND	3.47	17.34	ND	ND
100-41-4	Ethylbenzene	0.74	3.72	ND	3.33	16.67	ND	ND
108-38-3	m & p-Xylene	1.47	7.36	ND	6.61	33.03	ND	ND

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
100-42-5	Styrene	0.74	3.68	ND	3.24	16.20	ND	ND
75-25-2	Bromoform	0.66	3.32	ND	7.10	35.48	ND	ND
95-47-6	o-Xylene	0.73	3.65	ND	3.27	16.35	ND	ND
79-34-5	1,1,2,2-Tetrachloroethane	0.73	3.65	ND	5.17	25.84	ND	ND
622-96-8	4-Ethyltoluene	0.65	3.25	ND	3.30	16.51	ND	ND
108-67-8	1,3,5-Trimethylbenzene	0.76	3.79	ND	3.85	19.24	ND	ND
95-63-6	1,2,4-Trimethylbenzene	0.73	3.65	ND	3.70	18.51	ND	ND
541-73-1	1,3-Dichlorobenzene	0.73	3.65	ND	4.53	22.64	ND	ND
100-44-7	Benzyl chloride	0.64	3.22	ND	3.44	17.20	ND	ND
106-46-7	1,4-Dichlorobenzene	0.73	3.65	ND	4.53	22.64	ND	ND
95-50-1	1,2-Dichlorobenzene	0.72	3.58	ND	4.44	22.19	ND	ND
120-82-1	1,2,4-Trichlorobenzene	0.74	3.68	ND	5.64	28.21	ND	ND
91-20-3	Naphthalene	1.71	8.54	ND	9.25	46.26	ND	ND
87-68-3	Hexachlorobutadiene	0.74	3.68	ND	8.11	40.55	ND	ND

	Surrogate Recovery	Spike Amt. ppbV	Amount ppbV	% Rec.	QC Limits	Flag * = Out
2037-26-5	Toluene-d8	10.000	10.323	103	70-130	

Notes: 1) Reported results are to be interpreted to two significant figures.
2) ug/m3 = ppbV*FW/23.68 calculated assuming conditions at 60 F and 1 atm.
3) MDL and RL are adjusted for sample volume and can dilution.
4) U and ND are Flags used for Not Detected
5) J is a flag for a result between the MDL and the RL (or lower quantitation limit, LQL)

QUANTITATION REPORT

EPA Method TO-15 Modified Full Scan GC/MS

Review **EAS Sample ID: 0927701**

File Name:	0927701A.D		1 KB
Sample ID:	44-001		2 AT
Date:	6 Jul 109 2:57 pm	Cal Amounts	3 BB
Run Method:	1T15EXAY.M	IS Areas	4 SH
Quant Method:	1T15EXAY.M	Carryover	
Cal Update:	Tue Mar 17 14:18:15 2009		
Template:	1TO15EXT.MS1		
Can Factor:	1.43		
Volume:	200 ml	Analyst: KB 1	

CAS#	Compound	n	Raw Amount	RT	Target RT	Ion	Sample Area	Qualifier	Lower Qual	Upper Qual	Qual Flag	Cal Flag	Int Flag
75-71-8	Dichlorodifluoromethane	2	0.044	3.84	3.83	85.00	6893	33	25	37			
74-87-3	Chloromethane	3	0.003	4.07	4.09	50.00	299	0	22	32			
76-14-2	Freon 114	4	0.000	3.99	4.11	85.00	0	0	44	65			
75-01-4	Vinyl chloride	5	0.000	0.00	4.33	62.00	0	0	24	36			
74-83-9	Bromomethane	6	0.000	0.00	4.92	94.00	0	0	73	109			
75-00-3	Chloroethane	7	0.000	0.00	5.12	64.00	0	0	26	40			
75-69-4	Trichlorofluoromethane	10	0.032	5.89	5.94	101.00	4741	56	48	73			
67-64-1	Acetone	12	0.793	6.00	6.04	43.00	177322	26	16	24	Q		
67-63-0	2-propanol	13	0.007	6.09	6.14	45.00	1237	0	18	27	Q		
75-35-4	1,1-Dichloroethene	15	0.000	0.00	6.89	61.00	0	0	34	51			
76-13-1	Freon 113	17	0.228	7.08	7.16	151.00	21461	99	101	152	Q		
75-09-2	Dichloromethane	19	0.067	7.22	7.31	84.00	3550	47	51	77	Q		
75-15-0	Carbon disulfide	20	0.448	7.47	7.54	76.00	29824	22	16	24			
156-60-5	trans-1,2-Dichloroethene	21	0.000	0.00	8.38	96.00	0	0	172	258			
1634-04-4	Methyl tert butyl ether	22	0.000	0.00	8.54	73.00	0	0	18	27			
75-34-3	1,1-Dichloroethane	24	0.014	8.79	8.90	63.00	2115	0	24	36	Q		
108-05-4	Vinyl acetate	25	0.010	10.22	10.32	43.00	3291	0	0	0			
78-93-3	2-Butanone	26	0.173	9.44	9.54	72.00	7498	34	30	45			
156-59-2	cis-1,2-Dichloroethene	32	0.000	0.00	10.11	96.00	0	0	139	209			
67-66-3	Chloroform	34	0.222	10.42	10.53	83.00	41259	66	51	77			
71-55-6	1,1,1-Trichloroethane	36	1.664	11.70	11.80	97.00	265666	62	51	76			
107-06-2	1,2-Dichloroethane	37	0.116	11.70	11.87	61.95	17366	18	25	37	Q		
71-43-2	Benzene	40	0.213	12.42	12.51	78.00	55472	25	19	29			
56-23-5	Carbon tetrachloride	41	0.000	0.00	12.56	116.90	0	0	79	119			
78-87-5	1,2-Dichloropropane	43	0.003	14.08	14.07	63.00	314	0	58	88			
123-91-1	1,4 Dioxane	44	0.000	0.00	14.40	88.00	0	0	76	114			
79-01-6	Trichloroethene	46	1.988	14.03	14.13	130.00	250385	99	79	119			
75-27-4	Bromodichloromethane	47	0.011	14.02	14.40	83.00	2241	77	49	74	Q		
108-10-1	Methyl Isobutyl Ketone	49	0.053	15.63	15.70	43.00	23468	34	21	35			
10061-01-5	cis-1,3-Dichloropropene	50	0.000	0.00	15.82	75.00	0	0	15	23			
108-88-3	Toluene	51	0.304	17.02	17.11	91.00	103465	53	44	66			
10061-02-6	trans-1,3-Dichloropropene	52	0.000	0.00	16.85	75.00	0	0	16	23			
79-00-5	1,1,2-Trichloroethane	53	0.012	17.01	17.16	61.00	1248	0	91	136	Q		
591-78-6	2-Hexanone	54	0.013	17.70	17.80	43.00	7069	39	28	47			
124-48-1	Dibromochloromethane	57	0.000	0.00	18.30	129.00	0	0	60	91			
106-93-4	1,2-Dibromoethane	58	0.002	18.79	18.80	107.00	372	0	75	113			

CAS#	Compound	n	Raw Amount	RT	Target RT	Ion	Sample Area	Qualifier	Lower Qual	Upper Qual	Qual Flag	Cal Flag	Int Flag
127-18-4	Tetrachloroethene	59	3.933	18.88	18.97	166.00	851939	61	52	78			
108-90-7	Chlorobenzene	60	0.002	20.37	20.45	112.00	610	0	25	38			
100-41-4	Ethylbenzene	62	0.027	20.90	17.80	91.00	14576	20	21	32	Q		
108-38-3	m & p-Xylene	63	0.120	21.19	21.28	91.00	54805	40	32	48			
100-42-5	Styrene	64	0.013	22.03	22.14	104.00	4098	55	53	79			
75-25-2	Bromoform	65	0.002	21.93	22.00	173.00	1012	0	39	59	Q		
95-47-6	o-Xylene	66	0.043	22.14	22.25	91.00	21806	38	30	45			
79-34-5	1,1,2,2-Tetrachloroethane	67	0.000	0.00	22.75	83.00	0	0	8	13			
622-96-8	4-Ethyltoluene	72	0.025	24.57	24.74	105.00	19750	39	20	31	Q		
108-67-8	1,3,5-Trimethylbenzene	73	0.017	24.81	24.92	105.00	12209	37	33	49			
95-63-6	1,2,4-Trimethylbenzene	76	0.058	25.76	25.89	105.00	39057	42	32	48			
541-73-1	1,3-Dichlorobenzene	78	0.009	26.33	26.41	146.00	5058	30	34	51	Q		
100-44-7	Benzyl chloride	80	0.003	26.37	26.61	91.00	2430	0	15	23	Q		
106-46-7	1,4-Dichlorobenzene	81	0.008	26.51	26.68	146.00	4617	32	34	51	Q		
95-50-1	1,2-Dichlorobenzene	83	0.004	27.38	27.47	146.00	2592	0	34	51	Q		
120-82-1	1,2,4-Trichlorobenzene	86	0.010	31.94	32.18	180.00	11393	78	78	117			
91-20-3	Naphthalene	87	0.047	32.30	32.41	128.00	90872	13	10	16			
87-68-3	Hexachlorobutadiene	88	0.005	32.96	33.08	225.00	4461	0	22	33	Q		
363-72-4	Pentafluorobenzene	1	20.000	11.28	11.38	168.00	**5094117**						
540-36-3	1,4-Difluorobenzene	35	20.000	13.07	13.17	114.00	**4396947**						
2037-26-5	Toluene-d8	94	**10.323**	16.83	16.94	98.00	2551570	62	51	77			

Integration Flags:

If no flag the Integration was done by the instrument computer

M1 Manual Integration because the computer did not integrated the peak or integrated the wrong peak

M2 Manual Integration because computer integration of baseline was different then Inital Calibration

INITIAL CALIBRATION REPORT

EPA Method TO-15 Modified Full Scan GC/MS

		SDG:	209277
		QC_Batch:	070609-MS1
File Name:	0927701A.D	Instrument Name:	5970 - In
Sample ID:	44-001		
Sample Analysis Date:	6 Jul 109 2:57 pm	Number Compounds:	96
Run Method:	1T15EXAY.M	IS1: ST60403	20
Quant and Calibration Method:	1T15EXAY.M	IS2: ST60403	20
Cal Update:	Tue Mar 17 14:18:15 2009	IS3:	
Template:	1TO15EXT.MS1	IS4:	

Calibration Title: EPA T0-15

		Calibration Amount CA, ppmv						Calibration Response, Area					
		Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
		Amt	Amt	Amt	Amt	Amt	Amt	C03179C.D	C03179E.D	C03179B.D	C03179A.D	C03169H.D	C03179D.D
n	Compound	0.25	4.0	1.0	5.0	10.0	2.0	0.25	4.0	1.0	5.0	10.0	2.0
2	Dichlorodifluoromethane	0.263	4.200	1.050	5.250	10.500	2.100	22559	398558	88898	436110	840988	185058
3	Chloromethane	0.255	4.080	1.020	5.100	10.200	2.040	15230	241294	55434	272653	505057	113562
4	Freon 114	0.260	4.160	1.040	5.200	10.400	2.080	25317	399238	94441	464176	861160	193013
5	Vinyl chloride	0.260	4.160	1.040	5.200	10.400	2.080	7909	132864	32643	150492	285530	62953
6	Bromomethane	0.260	4.160	1.040	5.200	10.400	2.080	8153	136639	28890	149016	274473	66325
7	Chloroethane	0.260	4.160	1.040	5.200	10.400	2.080	4307	71497	16630	78611	141439	32925
10	Trichlorofluoromethane	0.260	4.160	1.040	5.200	10.400	2.080	22371	364524	85037	431144	716396	179451
12	Acetone	0.225	3.600	0.900	4.500	9.000	1.800	42851	442389	113697	494726	770083	184591
13	2-propanol	0.228	3.640	0.910	4.550	9.100	1.820	19578	321532	75563	289890	1427833	154437
15	1,1-Dichloroethene	0.253	4.040	1.010	5.050	10.100	2.020	16793	248606	63935	305424	730028	150732
17	Freon 113	0.255	4.080	1.020	5.100	10.200	2.040	13083	220191	45725	205080	591375	132996
19	Dichloromethane	0.260	4.160	1.040	5.200	10.400	2.080	8354	124766	26131	120655	330491	71297
20	Carbon disulfide	0.223	3.560	0.890	4.450	8.900	1.780	8703	137347	33136	122015	313353	78232
21	trans-1,2-Dichloroethene	0.218	3.480	0.870	4.350	8.700	1.740	5940	117954	23397	80889	230621	52404
22	Methyl tert butyl ether	0.195	3.120	0.780	3.900	7.800	1.560	24271	482973	97431	369980	967308	233954
24	1,1-Dichloroethane	0.253	4.040	1.010	5.050	10.100	2.020	22823	387657	85531	331041	871129	183187
25	Vinyl acetate	0.215	3.440	0.860	4.300	8.600	1.720	40148	687529	149287	676740	1560060	338492
26	2-Butanone	0.215	3.440	0.860	4.300	8.600	1.720	5400	92652	22013	71425	205517	45058
32	cis-1,2-Dichloroethene	0.258	4.120	1.030	5.150	10.300	2.060	11695	190337	43510	224404	421914	95703
34	Chloroform	0.255	4.080	1.020	5.100	10.200	2.040	27147	449509	101707	516969	959204	213353
36	1,1,1-Trichloroethane	0.255	4.080	1.020	5.100	10.200	2.040	26931	432442	100881	509527	970639	210683
37	1,2-Dichloroethane	0.258	4.120	1.030	5.150	10.300	2.060	26512	398927	96975	495766	920839	187037

(146)

n	Compound	Amt 0.25	Amt 4.0	Amt 1.0	Amt 5.0	Amt 10.0	Amt 2.0	C03179C.D 0.25	C03179E.D 4.0	C03179B.D 1.0	C03179A.D 5.0	C03169H.D 10.0	C03179D.D 2.0
40	Benzene	-1.000	4.120	1.030	5.150	10.300	2.060	-1	712515	206967	782160	1387400	364766
41	Carbon tetrachloride	0.255	4.080	1.020	5.100	10.200	2.040	26276	451629	105798	518753	931992	220983
43	1,2-Dichloropropane	0.258	4.120	1.030	5.150	10.300	2.060	18588	266688	66789	305497	598806	132416
44	1,4 Dioxane	0.220	3.520	0.880	4.400	8.800	1.760	11252	171544	43700	161310	540834	80192
46	Trichloroethene	0.258	4.120	1.030	5.150	10.300	2.060	27013	323273	83100	364698	666308	165489
47	Bromodichloromethane	0.200	3.200	0.800	4.000	8.000	1.600	27507	476051	96325	417248	885573	218119
49	Methyl Isobutyl Ketone	0.230	3.680	0.920	4.600	9.200	1.840	67434	1179200	250239	1039898	2505790	566705
50	cis-1,3-Dichloropropene	0.265	4.240	1.060	5.300	10.600	2.120	28339	441906	107039	492454	1010236	206495
51	Toluene	-1.000	4.120	1.030	5.150	10.300	2.060	-1	944443	257501	1033029	1877014	478350
52	trans-1,3-Dichloropropene	0.260	4.160	1.040	5.200	10.400	2.080	33546	509168	127376	538174	1205186	242137
53	1,1,2-Trichloroethane	0.255	4.080	1.020	5.100	10.200	2.040	18573	263308	68163	281046	608914	127239
54	2-Hexanone	0.220	3.520	0.880	4.400	8.800	1.760	84018	1413472	311524	1112452	3278869	678898
57	Dibromochloromethane	0.223	3.560	0.890	4.450	8.900	1.780	43801	688881	150691	558917	1316838	322250
58	1,2-Dibromoethane	0.260	4.160	1.040	5.200	10.400	2.080	46912	660815	169213	701472	1505940	324567
59	Tetrachloroethene	0.255	4.080	1.020	5.100	10.200	2.040	40710	589393	145069	627137	1126037	300057
60	Chlorobenzene	0.255	4.080	1.020	5.100	10.200	2.040	64660	836027	208106	862738	1818049	410336
62	Ethylbenzene	0.260	4.160	1.040	5.200	10.400	2.080	107037	1527752	359496	1548148	3108186	722767
63	m & p-Xylene	0.515	8.240	2.060	10.300	20.600	4.120	192864	2440351	617919	2542524	4725274	1220126
64	Styrene	0.258	4.120	1.030	5.150	10.300	2.060	70964	837020	224026	840176	1812012	428714
65	Bromoform	0.233	3.720	0.930	4.650	9.300	1.860	90991	1151698	243927	958925	2416870	530300
66	o-Xylene	0.255	4.080	1.020	5.100	10.200	2.040	105567	1325719	329821	1384162	2817484	643280
67	1,1,2,2-Tetrachloroethane	0.255	4.080	1.020	5.100	10.200	2.040	102201	1142635	274703	1042229	3385910	560899
72	4-Ethyltoluene	0.228	3.640	0.910	4.550	9.100	1.820	177076	1912961	437379	1573293	3712735	943267
73	1,3,5-Trimethylbenzene	0.265	4.240	1.060	5.300	10.600	2.120	184274	1936506	488965	1778188	3957960	994445
76	1,2,4-Trimethylbenzene	-1.000	4.080	1.020	5.100	10.200	2.040	-1	1979227	501359	1766777	3635276	1033463
78	1,3-Dichlorobenzene	-1.000	4.080	1.020	5.100	10.200	2.040	-1	1499786	411700	1325016	3205866	837609
80	Benzyl chloride	-1.000	3.600	0.900	4.500	9.000	1.800	-1	1944712	459781	1580130	4463720	884546
81	1,4-Dichlorobenzene	-1.000	4.080	1.020	5.100	10.200	2.040	-1	1616283	417021	1362139	3091714	896732
83	1,2-Dichlorobenzene	-1.000	4.000	1.000	5.000	10.000	2.000	-1	1708595	429307	1374687	4272294	912351
86	1,2,4-Trichlorobenzene	-1.000	4.120	1.030	5.150	10.300	2.060	-1	3172331	905400	2236815	7156710	1987175
87	Naphthalene	-1.000	9.560	2.390	11.950	23.900	4.780	-1	11453402	4198495	10074168	24925580	6661715
88	Hexachlorobutadiene	-1.000	4.120	1.030	5.150	10.300	2.060	-1	2443776	758051	1914490	4177636	1622637
1	Pentafluorobenzene	20.000	20.000	20.000	20.000	20.000	20.000	2643183	2935915	2871816	2719013	2737194	3022845
35	1,4-Difluorobenzene	20.000	20.000	20.000	20.000	20.000	20.000	2659938	2870629	2814997	2720455	2706138	3020264
94	Toluene-d8	10.000	10.000	10.000	10.000	10.000	10.000	1479389	1629143	1590486	1469067	1546296	1730275

INITIAL CALIBRATION REPORT: Response Factors

SDG:	**209277**
QC_Batch:	**070609-MS1**
Sample ID:	44-001
Sample Analysis Date:	6 Jul 109 2:57 pm
Run Method:	1T15EXAY.M
Quant Method:	1T15EXAY.M
Cal Update:	Tue Mar 17 14:18:15 2009
Template:	1TO15EXT.MS1

Sample Calculation:

1) Avg RFn = Sum $\left| \frac{(Astdni)}{(Cstdni)} \frac{(Cistdi)}{(Aistdi)} \right|_i$

Response Factors

Compound		RF1	RF2	RF3	RF4	RF5	RF6	AvgRFn	%RSD
Dichlorodifluoromethane		0.649	0.646	0.590	0.611	0.585	0.583	0.611	4.97
Chloromethane		0.452	0.403	0.378	0.393	0.362	0.368	0.393	8.34
Freon 114		0.737	0.654	0.632	0.657	0.605	0.614	0.650	7.29
Vinyl chloride		0.230	0.218	0.219	0.213	0.201	0.200	0.213	5.40
Bromomethane		0.237	0.224	0.193	0.211	0.193	0.211	0.212	8.16
Chloroethane		0.125	0.117	0.111	0.111	0.099	0.105	0.112	8.18
Trichlorofluoromethane		0.651	0.597	0.569	0.610	0.503	0.571	0.584	8.47
Acetone		1.441	0.837	0.880	0.809	0.625	0.679	0.878	33.28
2-propanol		0.650	0.602	0.578	0.469	1.146	0.561	0.668	36.24
1,1-Dichloroethene		0.502	0.419	0.441	0.445	0.528	0.494	0.471	9.01
Freon 113		0.388	0.368	0.312	0.296	0.424	0.431	0.370	15.21
Dichloromethane		0.243	0.204	0.175	0.171	0.232	0.227	0.209	14.64
Carbon disulfide		0.295	0.263	0.259	0.202	0.257	0.291	0.261	12.82
trans-1,2-Dichloroethene		0.206	0.231	0.187	0.137	0.194	0.199	0.192	16.18
Methyl tert butyl ether		0.942	1.055	0.870	0.698	0.906	0.992	0.910	13.48
1,1-Dichloroethane		0.683	0.654	0.590	0.482	0.630	0.600	0.606	11.51
Vinyl acetate		1.413	1.362	1.209	1.158	1.325	1.302	1.295	7.38
2-Butanone		0.190	0.183	0.178	0.122	0.175	0.173	0.170	14.31
cis-1,2-Dichloroethene		0.343	0.315	0.294	0.321	0.299	0.307	0.313	5.59
Chloroform		0.806	0.751	0.694	0.746	0.687	0.692	0.729	6.41
1,1,1-Trichloroethane		0.794	0.738	0.703	0.734	0.703	0.684	0.726	5.40
1,2-Dichloroethane		0.773	0.675	0.669	0.708	0.661	0.601	0.681	8.33
Benzene	NA		1.205	1.428	1.117	0.996	1.173	1.183	13.36
Carbon tetrachloride		0.775	0.771	0.737	0.748	0.675	0.717	0.737	5.04
1,2-Dichloropropane		0.542	0.451	0.461	0.436	0.430	0.426	0.457	9.47
1,4 Dioxane		0.385	0.340	0.353	0.270	0.454	0.302	0.350	18.49
Trichloroethene		0.787	0.547	0.573	0.521	0.478	0.532	0.573	19.12
Bromodichloromethane		1.034	1.036	0.855	0.767	0.818	0.903	0.902	12.44
Methyl Isobutyl Ketone		2.204	2.233	1.932	1.662	2.013	2.040	2.014	10.30
cis-1,3-Dichloropropene		0.804	0.726	0.717	0.683	0.704	0.645	0.713	7.44
Toluene	NA		1.597	1.776	1.475	1.347	1.538	1.546	10.25
trans-1,3-Dichloropropene		0.970	0.853	0.870	0.761	0.856	0.771	0.847	9.00
1,1,2-Trichloroethane		0.548	0.450	0.475	0.405	0.441	0.413	0.455	11.39
2-Hexanone		2.871	2.798	2.515	1.859	2.754	2.554	2.559	14.47
Dibromochloromethane		1.477	1.348	1.203	0.923	1.094	1.199	1.207	15.98
1,2-Dibromoethane		1.357	1.107	1.156	0.992	1.070	1.033	1.119	11.58
Tetrachloroethene		1.200	1.006	1.010	0.904	0.816	0.974	0.985	13.06

Chlorobenzene		1.907	1.428	1.450	1.244	1.317	1.332	1.446	16.45
Ethylbenzene		3.095	2.559	2.456	2.189	2.209	2.301	2.468	13.74
m & p-Xylene		2.816	2.063	2.131	1.815	1.695	1.961	2.080	18.95
Styrene		2.068	1.415	1.545	1.199	1.300	1.378	1.484	20.78
Bromoform		2.936	2.157	1.863	1.516	1.921	1.888	2.047	23.53
o-Xylene		3.113	2.264	2.297	1.995	2.041	2.088	2.300	18.10
1,1,2,2-Tetrachloroethane		3.014	1.951	1.913	1.502	2.453	1.821	2.109	25.54
4-Ethyltoluene		5.840	3.661	3.415	2.542	3.015	3.432	3.651	31.30
1,3,5-Trimethylbenzene		5.228	3.182	3.277	2.467	2.760	3.106	3.337	29.21
1,2,4-Trimethylbenzene	NA		3.380	3.492	2.547	2.634	3.355	3.082	14.68
1,3-Dichlorobenzene	NA		2.561	2.868	1.910	2.323	2.719	2.476	15.16
Benzyl chloride	NA		3.764	3.630	2.581	3.666	3.254	3.379	14.38
1,4-Dichlorobenzene	NA		2.760	2.905	1.964	2.240	2.911	2.556	16.83
1,2-Dichlorobenzene	NA		2.976	3.050	2.021	3.157	3.021	2.845	16.36
1,2,4-Trichlorobenzene	NA		5.365	6.245	3.193	5.135	6.388	5.265	24.29
Naphthalene	NA		8.347	12.481	6.198	7.708	9.229	8.792	26.61
Hexachlorobutadiene	NA		4.133	5.229	2.733	2.998	5.216	4.062	29.13
Pentafluorobenzene		1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.00
1,4-Difluorobenzene		1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.00
Toluene-d8		1.112	1.135	1.130	1.080	1.143	1.146	1.124	2.20

CALCULATIONS

EPA Method TO-15 Modified Full Scan GC/MS

SDG: 209277
Laboratory Number: 01

Run Method: 1T15EXAY.M
Quant Method: 1T15EXAY.M
Can Dilution Factor: 1.43
Air Volume: 200 ml MDL Factor 1
Gas Constant: 23.68
Decimal Places: 2

Compound	M.W.	Raw Amount	Result ppbv	Result ug/m3	(1) MDL ppbv	(2) RL ppbv	Calc MDL ppbv	Calc MDL ug/m3	Calc RL ppbv	Calc RL ug/m3	Flag	S062602-1 Spike ppmv
Dichlorodifluoromethane	120.9	0.044	0.317	1.62	0.105	0.525	0.75	3.83	3.75	19.17	U	0.103
Chloromethane	50.5	0.003	0.021	0.05	0.102	0.510	0.73	1.56	3.65	7.78	U	0.103
Freon 114	170.9	0.000	0.000	0.00	0.104	0.520	0.74	5.37	3.72	26.83	U	0.103
Vinyl chloride	62.5	0.000	0.000	0.00	0.104	0.520	0.74	1.96	3.72	9.81	U	0.103
Bromomethane	94.9	0.000	0.000	0.00	0.104	0.520	0.74	2.98	3.72	14.90	U	0.103
Chloroethane	64.5	0.000	0.000	0.00	0.104	0.520	0.74	2.03	3.72	10.13	U	0.103
Trichlorofluoromethane	137.4	0.032	0.228	1.32	0.104	0.520	0.74	4.31	3.72	21.57	U	0.103
Acetone	58.1	0.793	5.667	13.90	0.090	0.450	0.64	1.58	3.22	7.89		0.103
2-propanol	60.1	0.007	0.052	0.13	0.091	0.455	0.65	1.65	3.25	8.26	U	0.103
1,1-Dichloroethene	96.9	0.000	0.000	0.00	0.101	0.505	0.72	2.96	3.61	14.78	U	0.103
Freon 113	187.3	0.228	1.629	12.89	0.102	0.510	0.73	5.77	3.65	28.84	J	0.103
Dichloromethane	84.9	0.067	0.478	1.71	0.104	0.520	0.74	2.67	3.72	13.33	U	0.103
Carbon disulfide	76.1	0.448	3.205	10.30	0.089	0.445	0.64	2.05	3.18	10.23		0.103
trans-1,2-Dichloroethene	96.9	0.000	0.000	0.00	0.087	0.435	0.62	2.55	3.11	12.73	U	0.103
Methyl tert butyl ether	88.1	0.000	0.000	0.00	0.078	0.390	0.56	2.07	2.79	10.37	U	0.103
1,1-Dichloroethane	99.0	0.014	0.098	0.41	0.101	0.505	0.72	3.02	3.61	15.10	U	0.103
Vinyl acetate	86.1	0.010	0.071	0.26	0.086	0.430	0.61	2.24	3.07	11.18	U	0.103
2-Butanone	72.1	0.173	1.236	3.76	0.086	0.430	0.61	1.87	3.07	9.36	J	0.103
cis-1,2-Dichloroethene	96.9	0.000	0.000	0.00	0.103	0.515	0.74	3.01	3.68	15.07	U	0.103
Chloroform	119.4	0.222	1.588	8.01	0.102	0.510	0.73	3.68	3.65	18.39	J	0.103
1,1,1-Trichloroethane	133.4	1.664	11.899	67.03	0.102	0.510	0.73	4.11	3.65	20.54		0.103
1,2-Dichloroethane	99.0	0.116	0.829	3.47	0.103	0.515	0.74	3.08	3.68	15.39	J	0.103
Benzene	78.1	0.213	1.524	5.03	0.103	0.515	0.74	2.43	3.68	12.14	J	0.103
Carbon tetrachloride	153.8	0.000	0.000	0.00	0.102	0.510	0.73	4.74	3.65	23.68	U	0.103
1,2-Dichloropropane	113.0	0.003	0.022	0.11	0.103	0.515	0.74	3.51	3.68	17.57	U	0.103
1,4 Dioxane	88.1	0.000	0.000	0.00	0.088	0.440	0.63	2.34	3.15	11.70	U	0.103
Trichloroethene	131.4	1.988	14.212	78.86	0.103	0.515	0.74	4.09	3.68	20.43		0.103
Bromodichloromethane	163.8	0.011	0.081	0.56	0.080	0.400	0.57	3.96	2.86	19.78	U	0.103
Methyl Isobutyl Ketone	100.2	0.053	0.379	1.60	0.092	0.460	0.66	2.78	3.29	13.92	U	0.103
cis-1,3-Dichloropropene	111.0	0.000	0.000	0.00	0.106	0.530	0.76	3.55	3.79	17.76	U	0.103
Toluene	92.1	0.304	2.176	8.46	0.103	0.515	0.74	2.86	3.68	14.32	J	0.103
trans-1,3-Dichloropropene	111.0	0.000	0.000	0.00	0.104	0.520	0.74	3.49	3.72	17.43	U	0.103
1,1,2-Trichloroethane	133.4	0.012	0.089	0.50	0.102	0.510	0.73	4.11	3.65	20.54	U	0.103
2-Hexanone	100.2	0.013	0.090	0.38	0.088	0.440	0.63	2.66	3.15	13.31	U	0.103
Dibromochloromethane	208.3	0.000	0.000	0.00	0.089	0.445	0.64	5.60	3.18	27.99	U	0.103
1,2-Dibromoethane	187.9	0.002	0.011	0.09	0.104	0.520	0.74	5.90	3.72	29.50	U	0.103

Tetrachloroethene	165.8	3.933	28.123	196.91	0.102	0.510	0.73	5.11	3.65	25.53		0.103
Chlorobenzene	112.6	0.002	0.014	0.07	0.102	0.510	0.73	3.47	3.65	17.34	U	0.103
Ethylbenzene	106.2	0.027	0.192	0.86	0.104	0.520	0.74	3.33	3.72	16.67	U	0.103
m & p-Xylene	106.2	0.120	0.857	3.84	0.206	1.030	1.47	6.61	7.36	33.03	U	0.206
Styrene	104.2	0.013	0.090	0.40	0.103	0.515	0.74	3.24	3.68	16.20	U	0.103
Bromoform	252.7	0.002	0.016	0.17	0.093	0.465	0.66	7.10	3.32	35.48	U	0.103
o-Xylene	106.2	0.043	0.308	1.38	0.102	0.510	0.73	3.27	3.65	16.35	U	0.103
1,1,2,2-Tetrachloroethane	167.8	0.000	0.000	0.00	0.102	0.510	0.73	5.17	3.65	25.84	U	0.103
4-Ethyltoluene	120.2	0.025	0.176	0.89	0.091	0.455	0.65	3.30	3.25	16.51	U	0.103
1,3,5-Trimethylbenzene	120.2	0.017	0.119	0.60	0.106	0.530	0.76	3.85	3.79	19.24	U	0.103
1,2,4-Trimethylbenzene	120.2	0.058	0.412	2.09	0.102	0.510	0.73	3.70	3.65	18.51	U	0.103
1,3-Dichlorobenzene	147.0	0.009	0.066	0.41	0.102	0.510	0.73	4.53	3.65	22.64	U	0.103
Benzyl chloride	126.6	0.003	0.023	0.13	0.090	0.450	0.64	3.44	3.22	17.20	U	0.103
1,4-Dichlorobenzene	147.0	0.008	0.059	0.36	0.102	0.510	0.73	4.53	3.65	22.64	U	0.103
1,2-Dichlorobenzene	147.0	0.004	0.030	0.18	0.100	0.500	0.72	4.44	3.58	22.19	U	0.103
1,2,4-Trichlorobenzene	181.4	0.010	0.070	0.54	0.103	0.515	0.74	5.64	3.68	28.21	U	0.103
Naphthalene	128.2	0.047	0.336	1.82	0.239	1.195	1.71	9.25	8.54	46.26	U	0.103
Hexachlorobutadiene	260.8	0.005	0.036	0.39	0.103	0.515	0.74	8.11	3.68	40.55	U	0.103

SAMPLE CALCULATION

EPA Method TO-15 Modified Full Scan GC/MS

SDG:		**209277**
Laboratory Number:		**01**
Standard Volume	STV	5.0
Sample Volume	SV	200
Can Dilution Factor	CDF	1.43
Gas Constant		23.68
Decimal Places:		2

Sample Calculation:

1) Avg RFn = Sum $\left| \frac{(Astdni)}{(Cstdni)} \frac{(Cistdi)}{(Aistdi)} \right|_i$ Note: 1

2) Raw Amt = $\frac{(Ansamp)}{(Avg\ RFn)} \frac{(Cistdi)}{(Aistdi)}$ = Cn

3) Amount ppbv = $\frac{(Raw\ Amt)}{} \frac{1000}{(SV)} (CDF)$

4) Amount ug/m3 = $\frac{(amt(ppbv)}{} \frac{MW}{23.68}$

n	Compound	IS n	Chem type	MW	AvgRFn	Area Ansamp	Cistdi ppmv	Aistdi Ais	Cn ppmV Raw Amt	Amount ppbv	Amount ug/m3
2	Dichlorodifluoromethane	1	TRG	120.9	0.611	6893	20.000	5094117	0.044	0.32	1.63
3	Chloromethane	1	TRG	50.5	0.393	299	20.000	5094117	0.003	0.02	0.04
4	Freon 114	1	TRG	170.9	0.650	0	20.000	5094117	0.000	0.00	0.00
5	Vinyl chloride	1	TRG	62.5	0.213	0	20.000	5094117	0.000	0.00	0.00
6	Bromomethane	1	TRG	94.9	0.212	0	20.000	5094117	0.000	0.00	0.00
7	Chloroethane	1	TRG	64.5	0.112	0	20.000	5094117	0.000	0.00	0.00
10	Trichlorofluoromethane	1	TRG	137.4	0.584	4741	20.000	5094117	0.032	0.23	1.33
12	Acetone	1	TRG	58.1	0.878	177322	20.000	5094117	0.793	5.67	13.91
13	2-propanol	1	TRG	60.1	0.668	1237	20.000	5094117	0.007	0.05	0.13
15	1,1-Dichloroethene	1	TRG	96.9	0.471	0	20.000	5094117	0.000	0.00	0.00
17	Freon 113	1	TRG	187.3	0.370	21461	20.000	5094117	0.228	1.63	12.89
19	Dichloromethane	1	TRG	84.9	0.209	3550	20.000	5094117	0.067	0.48	1.72
20	Carbon disulfide	1	TRG	76.1	0.261	29824	20.000	5094117	0.448	3.21	10.32
21	trans-1,2-Dichloroethene	1	TRG	96.9	0.192	0	20.000	5094117	0.000	0.00	0.00
22	Methyl tert butyl ether	1	TRG	88.1	0.910	0	20.000	5094117	0.000	0.00	0.00
24	1,1-Dichloroethane	1	TRG	99.0	0.606	2115	20.000	5094117	0.014	0.10	0.42
25	Vinyl acetate	1	TRG	86.1	1.295	3291	20.000	5094117	0.010	0.07	0.25
26	2-Butanone	1	TRG	72.1	0.170	7498	20.000	5094117	0.173	1.24	3.78
32	cis-1,2-Dichloroethene	1	TRG	96.9	0.313	0	20.000	5094117	0.000	0.00	0.00
34	Chloroform	1	TRG	119.4	0.729	41259	20.000	5094117	0.222	1.59	8.02
36	1,1,1-Trichloroethane	35	TRG	133.4	0.726	265666	20.000	4396947	1.664	11.90	67.04
37	1,2-Dichloroethane	35	TRG	99.0	0.681	17366	20.000	4396947	0.116	0.83	3.47
40	Benzene	35	TRG	78.1	1.183	55472	20.000	4396947	0.213	1.52	5.01
41	Carbon tetrachloride	35	TRG	153.8	0.737	0	20.000	4396947	0.000	0.00	0.00
43	1,2-Dichloropropane	35	TRG	113.0	0.457	314	20.000	4396947	0.003	0.02	0.10
44	1,4 Dioxane	35	TRG	88.1	0.350	0	20.000	4396947	0.000	0.00	0.00
46	Trichloroethene	35	TRG	131.4	0.573	250385	20.000	4396947	1.988	14.21	78.85
47	Bromodichloromethane	35	TRG	163.8	0.902	2241	20.000	4396947	0.011	0.08	0.55
49	Methyl Isobutyl Ketone	35	TRG	100.2	2.014	23468	20.000	4396947	0.053	0.38	1.61
50	cis-1,3-Dichloropropene	35	TRG	111.0	0.713	0	20.000	4396947	0.000	0.00	0.00
51	Toluene	35	TRG	92.1	1.546	103465	20.000	4396947	0.304	2.18	8.48
52	trans-1,3-Dichloropropene	35	TRG	111.0	0.847	0	20.000	4396947	0.000	0.00	0.00
53	1,1,2-Trichloroethane	35	TRG	133.4	0.455	1248	20.000	4396947	0.012	0.09	0.51
54	2-Hexanone	35	TRG	100.2	2.559	7069	20.000	4396947	0.013	0.09	0.38
57	Dibromochloromethane	35	TRG	208.3	1.207	0	20.000	4396947	0.000	0.00	0.00
58	1,2-Dibromoethane	35	TRG	187.9	1.119	372	20.000	4396947	0.002	0.01	0.08
59	Tetrachloroethene	35	TRG	165.8	0.985	851939	20.000	4396947	3.933	28.12	196.89
60	Chlorobenzene	35	TRG	112.6	1.446	610	20.000	4396947	0.002	0.01	0.05
62	Ethylbenzene	35	TRG	106.2	2.468	14576	20.000	4396947	0.027	0.19	0.85

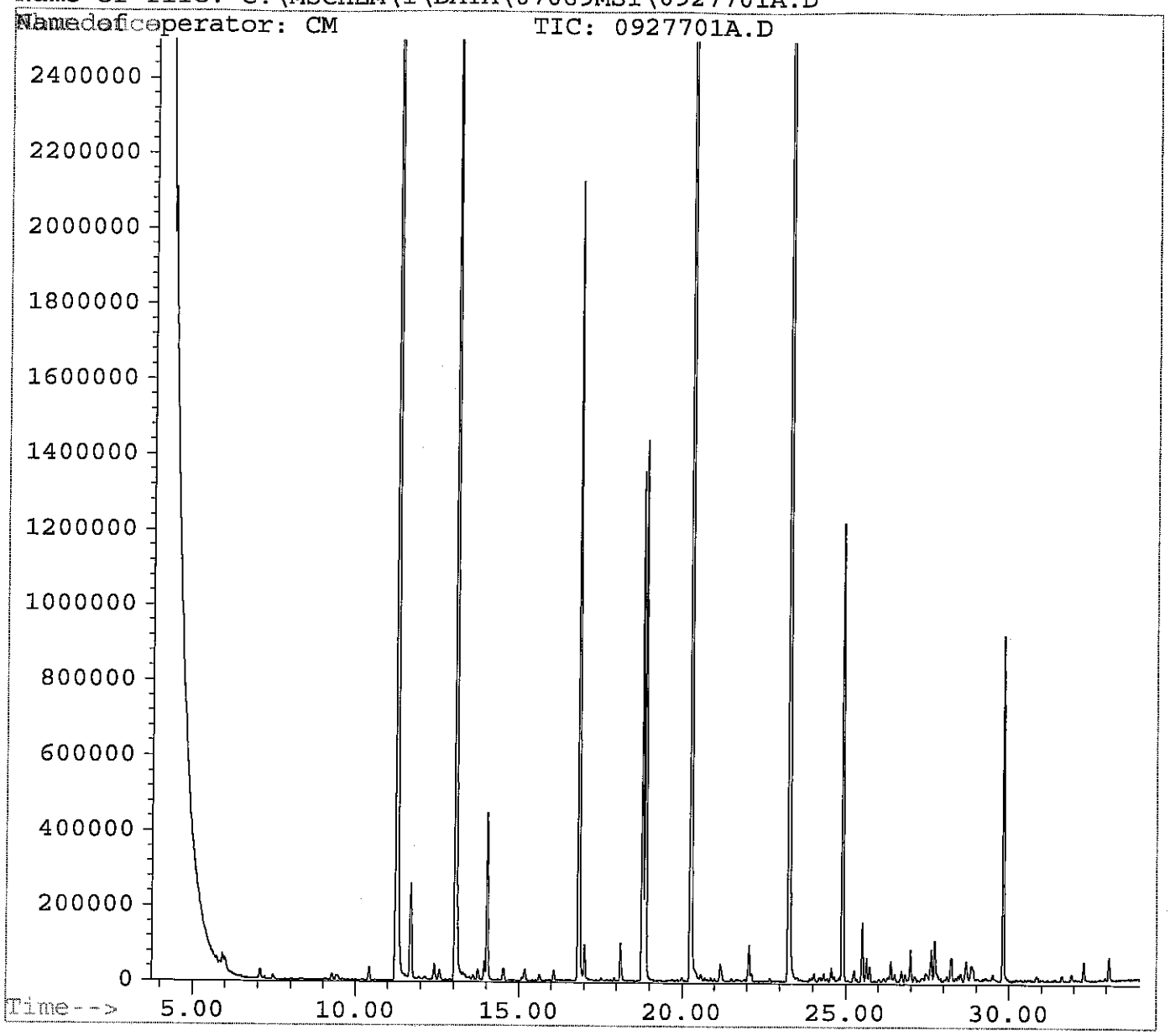
63	m & p-Xylene	35	TRG	106.2	2.080	54805	20.000	4396947	0.120	0.86	3.86
64	Styrene	35	TRG	104.2	1.484	4098	20.000	4396947	0.013	0.09	0.40
65	Bromoform	35	TRG	252.7	2.047	1012	20.000	4396947	0.002	0.02	0.21
66	o-Xylene	35	TRG	106.2	2.300	21806	20.000	4396947	0.043	0.31	1.39
67	1,1,2,2-Tetrachloroethane	35	TRG	167.8	2.109	0	20.000	4396947	0.000	0.00	0.00
72	4-Ethyltoluene	35	TRG	120.2	3.651	19750	20.000	4396947	0.025	0.18	0.91
73	1,3,5-Trimethylbenzene	35	TRG	120.2	3.337	12209	20.000	4396947	0.017	0.12	0.61
76	1,2,4-Trimethylbenzene	35	TRG	120.2	3.082	39057	20.000	4396947	0.058	0.41	2.08
78	1,3-Dichlorobenzene	35	TRG	147.0	2.476	5058	20.000	4396947	0.009	0.07	0.43
80	Benzyl chloride	35	TRG	126.6	3.379	2430	20.000	4396947	0.003	0.02	0.11
81	1,4-Dichlorobenzene	35	TRG	147.0	2.556	4617	20.000	4396947	0.008	0.06	0.37
83	1,2-Dichlorobenzene	35	TRG	147.0	2.845	2592	20.000	4396947	0.004	0.03	0.19
86	1,2,4-Trichlorobenzene	35	TRG	181.4	5.265	11393	20.000	4396947	0.010	0.07	0.54
87	Naphthalene	35	TRG	128.2	8.792	90872	20.000	4396947	0.047	0.34	1.84
88	Hexachlorobutadiene	35	TRG	260.8	4.062	4461	20.000	4396947	0.005	0.04	0.44
1	Pentafluorobenzene	1	IS		1.000	5094117	20.000	5094117			
35	1,4-Difluorobenzene	35	IS		1.000	4396947	20.000	4396947			
94	Toluene-d8	35	SURR		1.124	2551570	20.000	4396947			

Calculation Definitions:

n	compound n
i	i th calibration level
Astdni	Standard Area for compound n at ith calibration level
Cstdni	Standard Concentration for compound n at ith calibration level in ppmv
Cistdi	Internal Standard Conc used for compound n at ith calibration level in ppmv
Aistdi	Internal Standard Area used for compound n at ith calibration level
Ansamp	Sample Area for compound n
Avg RFn	Average response factor for all ith calibration levels for compound n
Raw Amount	Sample Concentration in ppmv before applying factors
Cistd	Concentration internal standard used for compound n in sample in ppmv
Aistd	Area of internal standard used for compound n in sample
Cn	Concentration of compound n in sample in ppmv
23.68	Gas constant at 60 F as per EPA source test protocol
MW	Molecular weight of compound
Note (1) : Avg RFn	The values for the Average Response Factor AvgRFn can be optained from the response Factor Report for the Initial Calibration, or from the Calibration Report

Name of file: C:\MSCHEM\1\DATA\07069MS1\0927701A.D

Name of operator: CM



ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified Full Scan GC/MS | **SDG:** 209277
Analytical Method: TO-15 | **Laboratory Number:** 03

File:	0927703A.D	**Date Sampled:**	06/19/09	**Time:**	12:05
Description:	44-003	**Date Received:**	06/23/09		
Can/Tube#:	737	**Date Extracted:**			
Sam_Type:	SA	**Date Analyzed:**	07/06/09	**Time:**	15:42
QC_Batch:	070609-MS1	**Can Dilution Factor:**	1.59		0
Air Volume:	0.05 ml	**Not Detected Flag:**	ND		

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
79-01-6	Trichloroethene	3,275	16,377	744,730	18,175	90,876	4,132,497	

	Surrogate Recovery	Spike Amt. ppbV	Amount ppbV	% Rec.	QC Limits	Flag * = Out
2037-26-5	Toluene-d8	10.000	10.171	102	70-130	

Notes: 1) Reported results are to be interpreted to two significant figures.
2) ug/m3 = ppbV*FW/23.68 calculated assuming conditions at 60 F and 1 atm.
3) MDL and RL are adjusted for sample volume and can dilution.
4) U and ND are Flags used for Not Detected
5) J is a flag for a result between the MDL and the RL (or lower quantitation limit, LQL)

QUANTITATION REPORT

EPA Method TO-15 Modified Full Scan GC/MS

			Review	EAS Sample ID: 0927703	
File Name:	0927703A.D				1 KB
Sample ID:	44-003				2 AT
Date:	6 Jul 109 3:42 pm			Cal Amounts	3 BB
Run Method:	1T15EXAY.M			IS Areas	4 SH
Quant Method:	1T15EXAY.M			Carryover	
Cal Update:	Tue Mar 17 14:18:15 2009				
Template:	1TO15EXT.MS1				
Can Factor:	1.59				
Volume:	0	ml		Analyst: KB 1	

CAS#	Compound	n	Raw Amount	RT	Target RT	Ion	Sample Area	Qualifier	Lower Qual	Upper Qual	Qual Flag	Cal Flag	Int Flag
79-01-6	Trichloroethene	46	23.419	14.06	14.13	130.00	2850139	95	79	119		HIGH	
363-72-4	Pentafluorobenzene	1	20.000	11.30	11.38	168.00	**4687399**						
540-36-3	1,4-Difluorobenzene	35	20.000	13.09	13.17	114.00	**4248087**						
2037-26-5	Toluene-d8	94	**10.171**	16.86	16.94	98.00	2428941	61	51	77			

Integration Flags:

If no flag the Integration was done by the instrument computer

M1 Manual Integration because the computer did not integrated the peak or integrated the wrong peak

M2 Manual Integration because computer integration of baseline was different then Inital Calibration

INITIAL CALIBRATION REPORT

EPA Method TO-15 Modified Full Scan GC/MS

SDG: 209277
QC_Batch: 070609-MS1
Instrument Name: 5970 - In

File Name: 0927703A.D
Sample ID: 44-003
Sample Analysis Date: 6 Jul 109 3:42 pm
Run Method: 1T15EXAY.M
Quant and Calibration Method: 1T15EXAY.M
Cal Update: Tue Mar 17 14:18:15 2009
Template: 1TO15EXT.MS1

Calibration Title: EPA T0-15

Number Compounds: 96
IS1: ST60403 20
IS2: ST60403 20
IS3:
IS4:

		Calibration Amount CA, ppmv						Calibration Response, Area					
		Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
		Amt	Amt	Amt	Amt	Amt	Amt	C03179C.D	C03179E.D	C03179B.D	C03179A.D	C03169H.D	C03179D.D
n	Compound	0.25	4.0	1.0	5.0	10.0	2.0	0.25	4.0	1.0	5.0	10.0	2.0
46	Trichloroethene	0.258	4.120	1.030	5.150	10.300	2.060	27013	323273	83100	364698	666308	165489
1	Pentafluorobenzene	20.000	20.000	20.000	20.000	20.000	20.000	2643183	2935915	2871816	2719013	2737194	3022845
35	1,4-Difluorobenzene	20.000	20.000	20.000	20.000	20.000	20.000	2659938	2870629	2814997	2720455	2706138	3020264
94	Toluene-d8	10.000	10.000	10.000	10.000	10.000	10.000	1479389	1629143	1590486	1469067	1546296	1730275

(157)

INITIAL CALIBRATION REPORT: Response Factors

SDG:	**209277**
QC_Batch:	**070609-MS1**
Sample ID:	44-003
Sample Analysis Date:	6 Jul 109 3:42 pm
Run Method:	1T15EXAY.M
Quant Method:	1T15EXAY.M
Cal Update:	Tue Mar 17 14:18:15 2009
Template:	1TO15EXT.MS1

Sample Calculation:

1) Avg RFn = Sum $\left| \frac{(Astdni)\ (Cistdi)}{(Cstdni)\ (Aistdi)} \right|_i$

Response Factors

Compound	RF1	RF2	RF3	RF4	RF5	RF6	AvgRFn	%RSD
Trichloroethene	0.787	0.547	0.573	0.521	0.478	0.532	0.573	19.12
Pentafluorobenzene	1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.00
1,4-Difluorobenzene	1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.00
Toluene-d8	1.112	1.135	1.130	1.080	1.143	1.146	1.124	2.20

CALCULATIONS

EPA Method TO-15 Modified Full Scan GC/MS

SDG: 209277
Laboratory Number: 03

Run Method:	1T15EXAY.M											
Quant Method:	1T15EXAY.M											
Can Dilution Factor:	1.59											
Air Volume:	0 ml					MDL Factor	1					
Gas Constant:	23.68											
Decimal Places:	0				(1)	(2)	Calc	Calc	Calc	Calc		S062602-1
Compound	M.W.	Raw Amount	Result ppbv	Result ug/m3	MDL ppbv	RL ppbv	MDL ppbv	MDL ug/m3	RL ppbv	RL ug/m3	Flag	Spike ppmv
Trichloroethene	131.4	23.419	#######	4,132,497	0.103	0.515	3275.40	18,175	######	90,876		0.103

SAMPLE CALCULATION

EPA Method TO-15 Modified Full Scan GC/MS

SDG:		**209277**
Laboratory Number:		**03**
Standard Volume	STV	5.0
Sample Volume	SV	0
Can Dilution Factor	CDF	1.59
Gas Constant		23.68
Decimal Places:		0

Sample Calculation:

1) Avg RFn = Sum $\left| \frac{(Astdni)}{(Cstdni)} \frac{(Cistdi)}{(Aistdi)} \right|_i$ Note: 1

2) Raw Amt = $\frac{(Ansamp)}{(Avg\ RFn)} \frac{(Cistdi)}{(Aistdi)}$ = **Cn**

3) Amount ppbv = $\frac{(Raw\ Amt)\ 1000}{(SV)}$ (CDF)

4) Amount ug/m3 = $\frac{(amt(ppbv)\ MW}{23.68}$

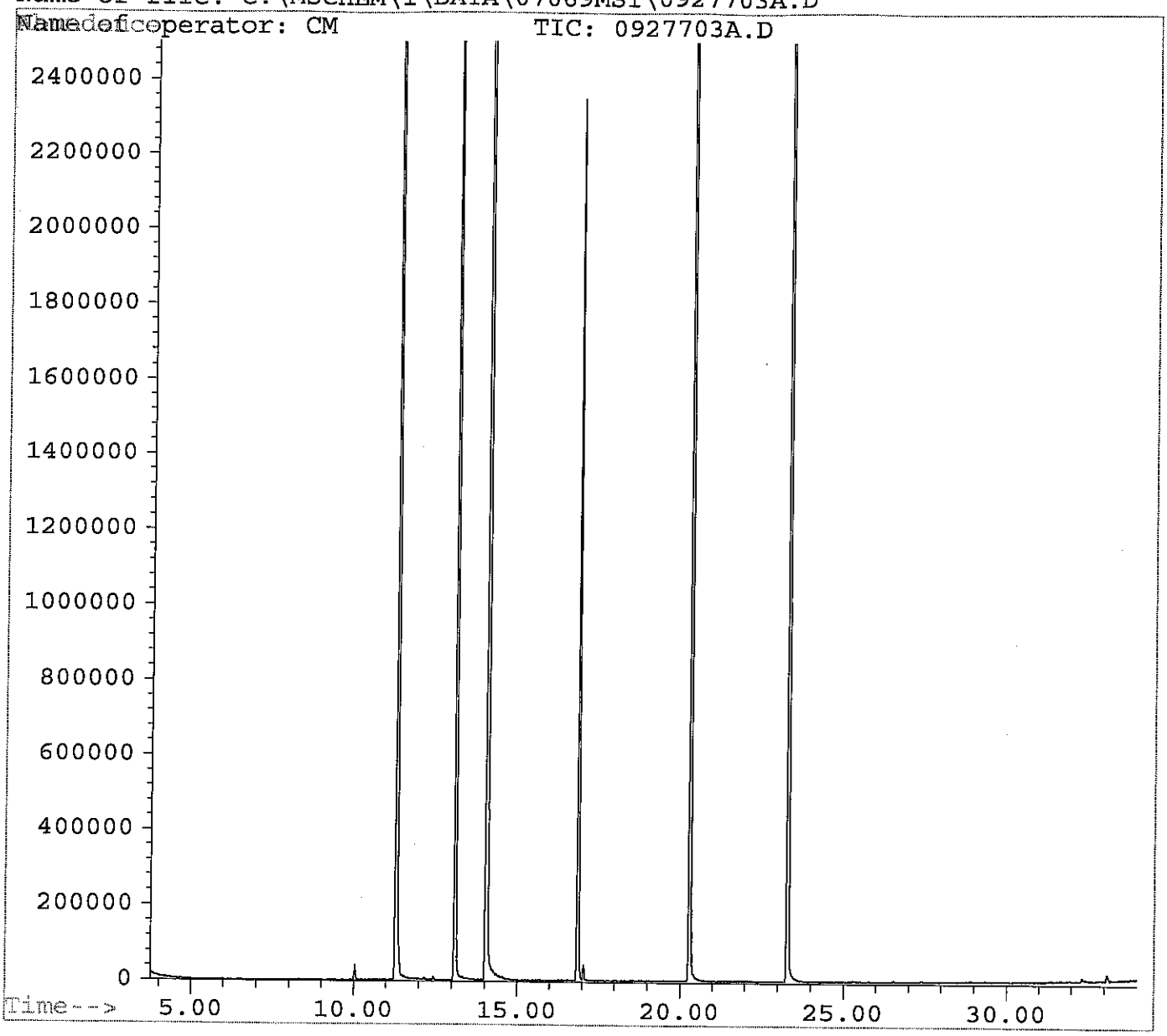
n	Compound	IS n	Chem type	MW	AvgRFn	Area Ansamp	Cistdi ppmv	Aistdi Ais	Cn ppmV Raw Amt	Amount ppbv	Amount ug/m3
46	Trichloroethene	35	TRG	131.4	0.573	2850139	20.000	4248087	23.419	744,730	4,132,497
1	Pentafluorobenzene	1	IS		1.000	4687399	20.000	4687399			
35	1,4-Difluorobenzene	35	IS		1.000	4248087	20.000	4248087			
94	Toluene-d8	35	SURR		1.124	2428941	20.000	4248087			

Calculation Definitions:

n	compound n
i	i th calibration level
Astdni	Standard Area for compound n at ith calibration level
Cstdni	Standard Concentration for compound n at ith calibration level in ppmv
Cistdi	Internal Standard Conc used for compound n at ith calibration level in ppmv
Aistdi	Internal Standard Area used for compound n at ith calibration level
Ansamp	Sample Area for compound n
Avg RFn	Average response factor for all ith calibration levels for compound n
Raw Amount	Sample Concentration in ppmv before applying factors
Cistd	Concentration internal standard used for compound n in sample in ppmv
Aistd	Area of internal standard used for compound n in sample
Cn	Concentration of compound n in sample in ppmv
23.68	Gas constant at 60 F as per EPA source test protocol
MW	Molecular weight of compound
Note (1) : Avg RFn	The values for the Average Response Factor AvgRFn can be optained from the response Factor Report for the Initial Calibration, or from the Calibration Report

Name of file: C:\MSCHEM\1\DATA\07069MS1\0927703A.D

Name of operator: CM



ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified Full Scan GC/MS | **SDG:** 209277
Analytical Method: TO-15 | **Laboratory Number:** 04

File:	0927704A.D	**Date Sampled:**	06/19/09	**Time:**	13:22
Description:	44-004	**Date Received:**	06/23/09		
Can/Tube#:	696	**Date Extracted:**			
Sam_Type:	SA	**Date Analyzed:**	07/06/09	**Time:**	16:25
QC_Batch:	070609-MS1	**Can Dilution Factor:**	1.44		0
Air Volume:	0.05 ml	**Not Detected Flag:**	ND		

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
79-01-6	Trichloroethene	2,966	14,832	755,100	16,461	82,303	4,190,042	

	Surrogate Recovery	Spike Amt. ppbV	Amount ppbV	% Rec.	QC Limits	Flag * = Out
2037-26-5	Toluene-d8	10.000	10.302	103	70-130	

Notes: 1) Reported results are to be interpreted to two significant figures.
2) ug/m3 = ppbV*FW/23.68 calculated assuming conditions at 60 F and 1 atm.
3) MDL and RL are adjusted for sample volume and can dilution.
4) U and ND are Flags used for Not Detected
5) J is a flag for a result between the MDL and the RL (or lower quantitation limit, LQL)

QUANTITATION REPORT

EPA Method TO-15 Modified Full Scan GC/MS

			Review	EAS Sample ID: 0927704	
File Name:	0927704A.D				1 KB
Sample ID:	44-004				2 AT
Date:	6 Jul 109 4:25 pm			Cal Amounts	3 BB
Run Method:	1T15EXAY.M			IS Areas	4 SH
Quant Method:	1T15EXAY.M			Carryover	
Cal Update:	Tue Mar 17 14:18:15 2009				
Template:	1TO15EXT.MS1				
Can Factor:	1.44				
Volume:	0	ml		Analyst: KB 1	

CAS#	Compound	n	Raw Amount	RT	Target RT	Ion	Sample Area	Qualifier	Lower Qual	Upper Qual	Qual Flag	Cal Flag	Int Flag
79-01-6	Trichloroethene	46	26.219	14.04	14.13	130.00	3344634	97	79	119		HIGH	
363-72-4	Pentafluorobenzene	1	20.000	11.27	11.38	168.00	**4903714**						
540-36-3	1,4-Difluorobenzene	35	20.000	13.07	13.17	114.00	**4452824**						
2037-26-5	Toluene-d8	94	**10.302**	16.85	16.94	98.00	2578871	64	51	77			

Integration Flags:

If no flag the Integration was done by the instrument computer

M1 Manual Integration because the computer did not integrated the peak or integrated the wrong peak

M2 Manual Integration because computer integration of baseline was different then Inital Calibration

INITIAL CALIBRATION REPORT

EPA Method TO-15 Modified Full Scan GC/MS

		SDG:	**209277**
		QC_Batch:	**070609-MS1**
File Name:	0927704A.D	**Instrument Name:**	5970 - In
Sample ID:	44-004		
Sample Analysis Date:	6 Jul 109 4:25 pm	Number Compounds:	96
Run Method:	1T15EXAY.M	IS1: ST60403	20
Quant and Calibration Method:	1T15EXAY.M	IS2: ST60403	20
Cal Update:	Tue Mar 17 14:18:15 2009	IS3:	
Template:	1TO15EXT.MS1	IS4:	

Calibration Title: EPA T0-15

		Calibration Amount CA, ppmv						Calibration Response, Area					
		Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
		Amt	Amt	Amt	Amt	Amt	Amt	C03179C.D	C03179E.D	C03179B.D	C03179A.D	C03169H.D	C03179D.D
n	Compound	0.25	4.0	1.0	5.0	10.0	2.0	0.25	4.0	1.0	5.0	10.0	2.0
46	Trichloroethene	0.258	4.120	1.030	5.150	10.300	2.060	27013	323273	83100	364698	666308	165489
1	Pentafluorobenzene	20.000	20.000	20.000	20.000	20.000	20.000	2643183	2935915	2871816	2719013	2737194	3022845
35	1,4-Difluorobenzene	20.000	20.000	20.000	20.000	20.000	20.000	2659938	2870629	2814997	2720455	2706138	3020264
94	Toluene-d8	10.000	10.000	10.000	10.000	10.000	10.000	1479389	1629143	1590486	1469067	1546296	1730275

(164)

INITIAL CALIBRATION REPORT: Response Factors

SDG:	**209277**
QC_Batch:	**070609-MS1**
Sample ID:	44-004
Sample Analysis Date:	6 Jul 109 4:25 pm
Run Method:	1T15EXAY.M
Quant Method:	1T15EXAY.M
Cal Update:	Tue Mar 17 14:18:15 2009
Template:	1TO15EXT.MS1

Sample Calculation:

1) Avg RFn = Sum $\left| \frac{(Astdni)}{(Cstdni)} \frac{(Cistdi)}{(Aistdi)} \right|_i$

Response Factors

Compound	RF1	RF2	RF3	RF4	RF5	RF6	AvgRFn	%RSD
Trichloroethene	0.787	0.547	0.573	0.521	0.478	0.532	0.573	19.12
Pentafluorobenzene	1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.00
1,4-Difluorobenzene	1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.00
Toluene-d8	1.112	1.135	1.130	1.080	1.143	1.146	1.124	2.20

CALCULATIONS

EPA Method TO-15 Modified Full Scan GC/MS

SDG: 209277
Laboratory Number: 04

Run Method:		1T15EXAY.M										
Quant Method:		1T15EXAY.M										
Can Dilution Factor:		1.44										
Air Volume:		0 ml				MDL Factor	1					
Gas Constant:		23.68										
Decimal Places:		0			(1)	(2)	Calc	Calc	Calc	Calc		S062602-1
Compound	M.W.	Raw Amount	Result ppbv	Result ug/m3	MDL ppbv	RL ppbv	MDL ppbv	MDL ug/m3	RL ppbv	RL ug/m3	Flag	Spike ppmv
Trichloroethene	131.4	26.219	#######	4,190,042	0.103	0.515	2966.40	16,461	######	82,303		0.103

SAMPLE CALCULATION

EPA Method TO-15 Modified Full Scan GC/MS

SDG:		**209277**
Laboratory Number:		**04**
Standard Volume	STV	5.0
Sample Volume	SV	0
Can Dilution Factor	CDF	1.44
Gas Constant		23.68
Decimal Places:		0

Sample Calculation:

1) Avg RFn = Sum $\left| \frac{(Astdni)}{(Cstdni)} \frac{(Cistdi)}{(Aistdi)} \right|_i$ Note: 1

2) Raw Amt = $\frac{(Ansamp)}{(Avg\ RFn)} \frac{(Cistdi)}{(Aistdi)}$ = **Cn**

3) Amount ppbv = $\frac{(Raw\ Amt)\ 1000}{(SV)}$ (CDF)

4) Amount ug/m3 = $\frac{(amt(ppbv)\ MW}{23.68}$

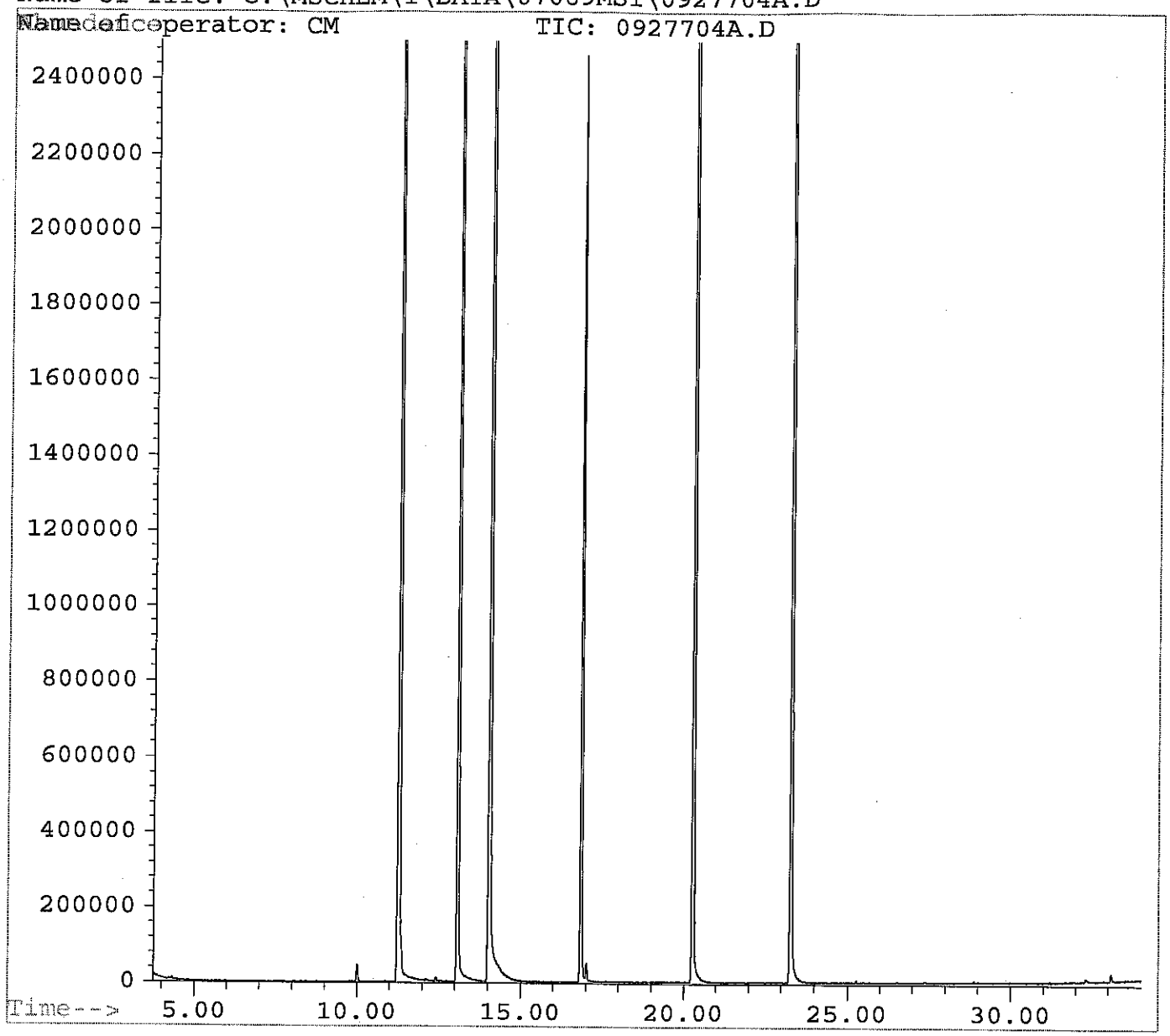
n	Compound	IS n	Chem type	MW	AvgRFn	Area Ansamp	Cistdi ppmv	Aistdi Ais	Cn ppmV Raw Amt	Amount ppbv	Amount ug/m3
46	Trichloroethene	35	TRG	131.4	0.573	3344634	20.000	4452824	26.219	755,100	4,190,040
1	Pentafluorobenzene	1	IS		1.000	4903714	20.000	4903714			
35	1,4-Difluorobenzene	35	IS		1.000	4452824	20.000	4452824			
94	Toluene-d8	35	SURR		1.124	2578871	20.000	4452824			

Calculation Definitions:

n	compound n
i	i th calibration level
Astdni	Standard Area for compound n at ith calibration level
Cstdni	Standard Concentration for compound n at ith calibration level in ppmv
Cistdi	Internal Standard Conc used for compound n at ith calibration level in ppmv
Aistdi	Internal Standard Area used for compound n at ith calibration level
Ansamp	Sample Area for compound n
Avg RFn	Average response factor for all ith calibration levels for compound n
Raw Amount	Sample Concentration in ppmv before applying factors
Cistd	Concentration internal standard used for compound n in sample in ppmv
Aistd	Area of internal standard used for compound n in sample
Cn	Concentration of compound n in sample in ppmv
23.68	Gas constant at 60 F as per EPA source test protocol
MW	Molecular weight of compound
Note (1): Avg RFn	The values for the Average Response Factor AvgRFn can be optained from the response Factor Report for the Initial Calibration, or from the Calibration Report

Name of file: C:\MSCHEM\1\DATA\07069MS1\0927704A.D

Name of operator: CM



ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified Full Scan GC/MS | **SDG:** 209277
Analytical Method: TO-15 | **Laboratory Number:** 05

File:	0927705A.D	**Date Sampled:**	06/19/09	**Time:**	12:00
Description:	44-005	**Date Received:**	06/23/09		
Can/Tube#:	312	**Date Extracted:**			
Sam_Type:	SA	**Date Analyzed:**	07/06/09	**Time:**	14:15
QC_Batch:	070609-MS1	**Can Dilution Factor:**	1.00		2
Air Volume:	200 ml	**Not Detected Flag:**	ND		

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
75-71-8	Dichlorodifluoromethane	0.53	2.63	ND	2.68	13.40	ND	ND
74-87-3	Chloromethane	0.51	2.55	ND	1.09	5.44	ND	ND
76-14-2	Freon 114	0.52	2.60	ND	3.75	18.76	ND	ND
75-01-4	Vinyl chloride	0.52	2.60	ND	1.37	6.86	ND	ND
74-83-9	Bromomethane	0.52	2.60	ND	2.08	10.42	ND	ND
75-00-3	Chloroethane	0.52	2.60	ND	1.42	7.08	ND	ND
75-69-4	Trichlorofluoromethane	0.52	2.60	ND	3.02	15.09	ND	ND
67-64-1	Acetone	0.45	2.25	2.76	1.10	5.52	6.76	
67-63-0	2-propanol	0.46	2.28	ND	1.15	5.77	ND	ND
75-35-4	1,1-Dichloroethene	0.51	2.53	ND	2.07	10.33	ND	ND
76-13-1	Freon 113	0.51	2.55	ND	4.03	20.17	ND	ND
75-09-2	Dichloromethane	0.52	2.60	ND	1.86	9.32	ND	ND
75-15-0	Carbon disulfide	0.45	2.23	ND	1.43	7.15	ND	ND
156-60-5	trans-1,2-Dichloroethene	0.44	2.18	ND	1.78	8.90	ND	ND
1634-04-4	Methyl tert butyl ether	0.39	1.95	ND	1.45	7.25	ND	ND
75-34-3	1,1-Dichloroethane	0.51	2.53	ND	2.11	10.56	ND	ND
108-05-4	Vinyl acetate	0.43	2.15	ND	1.56	7.82	ND	ND
78-93-3	2-Butanone	0.43	2.15	0.63	1.31	6.55	1.91	J
156-59-2	cis-1,2-Dichloroethene	0.52	2.58	ND	2.11	10.54	ND	ND
67-66-3	Chloroform	0.51	2.55	ND	2.57	12.86	ND	ND
71-55-6	1,1,1-Trichloroethane	0.51	2.55	ND	2.87	14.37	ND	ND
107-06-2	1,2-Dichloroethane	0.52	2.58	ND	2.15	10.77	ND	ND
71-43-2	Benzene	0.52	2.58	ND	1.70	8.49	ND	ND
56-23-5	Carbon tetrachloride	0.51	2.55	ND	3.31	16.56	ND	ND
78-87-5	1,2-Dichloropropane	0.52	2.58	ND	2.46	12.29	ND	ND
123-91-1	1,4 Dioxane	0.44	2.20	ND	1.64	8.18	ND	ND
79-01-6	Trichloroethene	0.52	2.58	ND	2.86	14.29	ND	ND
75-27-4	Bromodichloromethane	0.40	2.00	ND	2.77	13.83	ND	ND
108-10-1	Methyl Isobutyl Ketone	0.46	2.30	ND	1.95	9.73	ND	ND
10061-01-5	cis-1,3-Dichloropropene	0.53	2.65	ND	2.48	12.42	ND	ND
108-88-3	Toluene	0.52	2.58	1.00	2.00	10.02	3.89	J
10061-02-6	trans-1,3-Dichloropropene	0.52	2.60	ND	2.44	12.19	ND	ND
79-00-5	1,1,2-Trichloroethane	0.51	2.55	ND	2.87	14.37	ND	ND
591-78-6	2-Hexanone	0.44	2.20	ND	1.86	9.31	ND	ND
124-48-1	Dibromochloromethane	0.45	2.23	ND	3.91	19.57	ND	ND
106-93-4	1,2-Dibromoethane	0.52	2.60	ND	4.13	20.63	ND	ND
127-18-4	Tetrachloroethene	0.51	2.55	ND	3.57	17.85	ND	ND
108-90-7	Chlorobenzene	0.51	2.55	ND	2.43	12.13	ND	ND
100-41-4	Ethylbenzene	0.52	2.60	ND	2.33	11.66	ND	ND
108-38-3	m & p-Xylene	1.03	5.15	ND	4.62	23.10	ND	ND

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
100-42-5	Styrene	0.52	2.58	ND	2.27	11.33	ND	ND
75-25-2	Bromoform	0.47	2.33	ND	4.96	24.81	ND	ND
95-47-6	o-Xylene	0.51	2.55	ND	2.29	11.44	ND	ND
79-34-5	1,1,2,2-Tetrachloroethane	0.51	2.55	ND	3.61	18.07	ND	ND
622-96-8	4-Ethyltoluene	0.46	2.28	ND	2.31	11.55	ND	ND
108-67-8	1,3,5-Trimethylbenzene	0.53	2.65	ND	2.69	13.45	ND	ND
95-63-6	1,2,4-Trimethylbenzene	0.51	2.55	ND	2.59	12.94	ND	ND
541-73-1	1,3-Dichlorobenzene	0.51	2.55	ND	3.17	15.83	ND	ND
100-44-7	Benzyl chloride	0.45	2.25	ND	2.41	12.03	ND	ND
106-46-7	1,4-Dichlorobenzene	0.51	2.55	ND	3.17	15.83	ND	ND
95-50-1	1,2-Dichlorobenzene	0.50	2.50	ND	3.10	15.52	ND	ND
120-82-1	1,2,4-Trichlorobenzene	0.52	2.58	ND	3.95	19.73	ND	ND
91-20-3	Naphthalene	1.20	5.98	ND	6.47	32.35	ND	ND
87-68-3	Hexachlorobutadiene	0.52	2.58	ND	5.67	28.36	ND	ND

	Surrogate Recovery	Spike Amt. ppbV	Amount ppbV	% Rec.	QC Limits	Flag * = Out
2037-26-5	Toluene-d8	10.000	10.379	104	70-130	

Notes: 1) Reported results are to be interpreted to two significant figures.
2) ug/m3 = ppbV*FW/23.68 calculated assuming conditions at 60 F and 1 atm.
3) MDL and RL are adjusted for sample volume and can dilution.
4) U and ND are Flags used for Not Detected
5) J is a flag for a result between the MDL and the RL (or lower quantitation limit, LQL)

QUANTITATION REPORT

EPA Method TO-15 Modified Full Scan GC/MS

Review **EAS Sample ID: 0927705**

File Name:	0927705A.D			1 KB
Sample ID:	44-005			2 AT
Date:	6 Jul 109 2:15 pm	Cal Amounts		3 BB
Run Method:	1T15EXAY.M	IS Areas		4 SH
Quant Method:	1T15EXAY.M	Carryover		
Cal Update:	Tue Mar 17 14:18:15 2009			
Template:	1TO15EXT.MS1			
Can Factor:	1.00			
Volume:	200 ml	Analyst:	KB 1	

CAS#	Compound	n	Raw Amount	RT	Target RT	Ion	Sample Area	Qualifier	Lower Qual	Upper Qual	Qual Flag	Cal Flag	Int Flag
75-71-8	Dichlorodifluoromethane	2	0.000	0.00	3.83	85.00	0	0	25	37			
74-87-3	Chloromethane	3	0.000	0.00	4.09	50.00	0	0	22	32			
76-14-2	Freon 114	4	0.000	0.00	4.11	85.00	0	0	44	65			
75-01-4	Vinyl chloride	5	0.000	0.00	4.33	62.00	0	0	24	36			
74-83-9	Bromomethane	6	0.000	0.00	4.92	94.00	0	0	73	109			
75-00-3	Chloroethane	7	0.000	0.00	5.12	64.00	0	0	26	40			
75-69-4	Trichlorofluoromethane	10	0.000	0.00	5.94	101.00	0	0	48	73			
67-64-1	Acetone	12	0.551	5.97	6.04	43.00	114628	21	16	24			
67-63-0	2-propanol	13	0.005	6.12	6.14	45.00	755	0	18	27			
75-35-4	1,1-Dichloroethene	15	0.000	0.00	6.89	61.00	0	0	34	51			
76-13-1	Freon 113	17	0.000	0.00	7.16	151.00	0	0	101	152			
75-09-2	Dichloromethane	19	0.000	0.00	7.31	84.00	0	0	51	77			
75-15-0	Carbon disulfide	20	0.000	0.00	7.54	76.00	0	0	16	24			
156-60-5	trans-1,2-Dichloroethene	21	0.000	0.00	8.38	96.00	0	0	172	258			
1634-04-4	Methyl tert butyl ether	22	0.000	0.00	8.54	73.00	0	0	18	27			
75-34-3	1,1-Dichloroethane	24	0.000	0.00	8.90	63.00	0	0	24	36			
108-05-4	Vinyl acetate	25	0.010	10.26	10.32	43.00	2925	0	0	0			
78-93-3	2-Butanone	26	0.125	9.47	9.54	72.00	5049	42	30	45			
156-59-2	cis-1,2-Dichloroethene	32	0.000	0.00	10.11	96.00	0	0	139	209			
67-66-3	Chloroform	34	0.000	0.00	10.53	83.00	0	0	51	77			
71-55-6	1,1,1-Trichloroethane	36	0.000	0.00	11.80	97.00	0	0	51	76			
107-06-2	1,2-Dichloroethane	37	0.000	0.00	11.87	61.95	0	0	25	37			
71-43-2	Benzene	40	0.058	12.45	12.51	78.00	14725	18	19	29	Q		
56-23-5	Carbon tetrachloride	41	0.000	0.00	12.56	116.90	0	0	79	119			
78-87-5	1,2-Dichloropropane	43	0.003	13.89	14.07	63.00	311	0	58	88			
123-91-1	1,4 Dioxane	44	0.005	14.34	14.40	88.00	376	0	76	114			
79-01-6	Trichloroethene	46	0.049	14.06	14.13	130.00	6030	61	79	119	Q		
75-27-4	Bromodichloromethane	47	0.000	0.00	14.40	83.00	0	0	49	74			
108-10-1	Methyl Isobutyl Ketone	49	0.007	15.68	15.70	43.00	2920	0	21	35	Q		
10061-01-5	cis-1,3-Dichloropropene	50	0.000	0.00	15.82	75.00	0	0	15	23			
108-88-3	Toluene	51	0.200	17.04	17.11	91.00	66412	56	44	66			
10061-02-6	trans-1,3-Dichloropropene	52	0.000	0.00	16.85	75.00	0	0	16	23			
79-00-5	1,1,2-Trichloroethane	53	0.004	17.04	17.16	61.00	343	0	91	136			
591-78-6	2-Hexanone	54	0.017	17.72	17.80	43.00	9347	33	28	47			
124-48-1	Dibromochloromethane	57	0.000	0.00	18.30	129.00	0	0	60	91			
106-93-4	1,2-Dibromoethane	58	0.000	0.00	18.80	107.00	0	0	75	113			

CAS#	Compound	n	Raw Amount	RT	Target RT	Ion	Sample Area	Qualifier	Lower Qual	Upper Qual	Qual Flag	Cal Flag	Int Flag
127-18-4	Tetrachloroethene	59	0.000	0.00	18.97	166.00	0	0	52	78			
108-90-7	Chlorobenzene	60	0.000	0.00	20.45	112.00	0	0	25	38			
100-41-4	Ethylbenzene	62	0.010	20.90	17.80	91.00	5444	0	21	32	Q		
108-38-3	m & p-Xylene	63	0.057	21.20	21.28	91.00	25370	48	32	48	Q		
100-42-5	Styrene	64	0.004	22.04	22.14	104.00	1148	0	53	79	Q		
75-25-2	Bromoform	65	0.004	21.95	22.00	173.00	1855	0	39	59	Q		
95-47-6	o-Xylene	66	0.013	22.17	22.25	91.00	6202	25	30	45	Q		
79-34-5	1,1,2,2-Tetrachloroethane	67	0.000	0.00	22.75	83.00	0	0	8	13			
622-96-8	4-Ethyltoluene	72	0.011	24.59	24.74	105.00	8602	27	20	31			
108-67-8	1,3,5-Trimethylbenzene	73	0.010	24.83	24.92	105.00	7268	37	33	49			
95-63-6	1,2,4-Trimethylbenzene	76	0.038	25.77	25.89	105.00	24814	42	32	48			
541-73-1	1,3-Dichlorobenzene	78	0.015	26.33	26.41	146.00	7720	39	34	51			
100-44-7	Benzyl chloride	80	0.014	26.50	26.61	91.00	10506	0	15	23	Q		
106-46-7	1,4-Dichlorobenzene	81	0.016	26.53	26.68	146.00	8957	40	34	51			
95-50-1	1,2-Dichlorobenzene	83	0.011	27.40	27.47	146.00	6952	37	34	51			
120-82-1	1,2,4-Trichlorobenzene	86	0.013	31.93	32.18	180.00	14951	91	78	117			
91-20-3	Naphthalene	87	0.076	32.30	32.41	128.00	142406	12	10	16			
87-68-3	Hexachlorobutadiene	88	0.007	32.97	33.08	225.00	5957	0	22	33	Q		
363-72-4	Pentafluorobenzene	1	20.000	11.31	11.38	168.00	**4734856**						
540-36-3	1,4-Difluorobenzene	35	20.000	13.10	13.17	114.00	**4289621**						
2037-26-5	Toluene-d8	94	**10.379**	16.87	16.94	98.00	2502985	61	51	77			

Integration Flags:

If no flag the Integration was done by the instrument computer

M1 Manual Integration because the computer did not integrated the peak or integrated the wrong peak

M2 Manual Integration because computer integration of baseline was different then Inital Calibration

INITIAL CALIBRATION REPORT

EPA Method TO-15 Modified Full Scan GC/MS

SDG: 209277
QC_Batch: 070609-MS1
Instrument Name: 5970 - In

File Name: 0927705A.D
Sample ID: 44-005
Sample Analysis Date: 6 Jul 109 2:15 pm
Run Method: 1T15EXAY.M
Quant and Calibration Method: 1T15EXAY.M
Cal Update: Tue Mar 17 14:18:15 2009
Template: 1TO15EXT.MS1

Calibration Title: EPA T0-15

Number Compounds:		96
IS1:	ST60403	20
IS2:	ST60403	20
IS3:		
IS4:		

		Calibration Amount CA, ppmv						Calibration Response, Area					
		Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
		Amt	Amt	Amt	Amt	Amt	Amt	C03179C.D	C03179E.D	C03179B.D	C03179A.D	C03169H.D	C03179D.D
n	Compound	0.25	4.0	1.0	5.0	10.0	2.0	0.25	4.0	1.0	5.0	10.0	2.0
2	Dichlorodifluoromethane	0.263	4.200	1.050	5.250	10.500	2.100	22559	398558	88898	436110	840988	185058
3	Chloromethane	0.255	4.080	1.020	5.100	10.200	2.040	15230	241294	55434	272653	505057	113562
4	Freon 114	0.260	4.160	1.040	5.200	10.400	2.080	25317	399238	94441	464176	861160	193013
5	Vinyl chloride	0.260	4.160	1.040	5.200	10.400	2.080	7909	132864	32643	150492	285530	62953
6	Bromomethane	0.260	4.160	1.040	5.200	10.400	2.080	8153	136639	28890	149016	274473	66325
7	Chloroethane	0.260	4.160	1.040	5.200	10.400	2.080	4307	71497	16630	78611	141439	32925
10	Trichlorofluoromethane	0.260	4.160	1.040	5.200	10.400	2.080	22371	364524	85037	431144	716396	179451
12	Acetone	0.225	3.600	0.900	4.500	9.000	1.800	42851	442389	113697	494726	770083	184591
13	2-propanol	0.228	3.640	0.910	4.550	9.100	1.820	19578	321532	75563	289890	1427833	154437
15	1,1-Dichloroethene	0.253	4.040	1.010	5.050	10.100	2.020	16793	248606	63935	305424	730028	150732
17	Freon 113	0.255	4.080	1.020	5.100	10.200	2.040	13083	220191	45725	205080	591375	132996
19	Dichloromethane	0.260	4.160	1.040	5.200	10.400	2.080	8354	124766	26131	120655	330491	71297
20	Carbon disulfide	0.223	3.560	0.890	4.450	8.900	1.780	8703	137347	33136	122015	313353	78232
21	trans-1,2-Dichloroethene	0.218	3.480	0.870	4.350	8.700	1.740	5940	117954	23397	80889	230621	52404
22	Methyl tert butyl ether	0.195	3.120	0.780	3.900	7.800	1.560	24271	482973	97431	369980	967308	233954
24	1,1-Dichloroethane	0.253	4.040	1.010	5.050	10.100	2.020	22823	387657	85531	331041	871129	183187
25	Vinyl acetate	0.215	3.440	0.860	4.300	8.600	1.720	40148	687529	149287	676740	1560060	338492
26	2-Butanone	0.215	3.440	0.860	4.300	8.600	1.720	5400	92652	22013	71425	205517	45058
32	cis-1,2-Dichloroethene	0.258	4.120	1.030	5.150	10.300	2.060	11695	190337	43510	224404	421914	95703
34	Chloroform	0.255	4.080	1.020	5.100	10.200	2.040	27147	449509	101707	516969	959204	213353
36	1,1,1-Trichloroethane	0.255	4.080	1.020	5.100	10.200	2.040	26931	432442	100881	509527	970639	210683
37	1,2-Dichloroethane	0.258	4.120	1.030	5.150	10.300	2.060	26512	398927	96975	495766	920839	187037

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n	Compound	Amt 0.25	Amt 4.0	Amt 1.0	Amt 5.0	Amt 10.0	Amt 2.0	C03179C.D 0.25	C03179E.D 4.0	C03179B.D 1.0	C03179A.D 5.0	C03169H.D 10.0	C03179D.D 2.0
40	Benzene	-1.000	4.120	1.030	5.150	10.300	2.060	-1	712515	206967	782160	1387400	364766
41	Carbon tetrachloride	0.255	4.080	1.020	5.100	10.200	2.040	26276	451629	105798	518753	931992	220983
43	1,2-Dichloropropane	0.258	4.120	1.030	5.150	10.300	2.060	18588	266688	66789	305497	598806	132416
44	1,4 Dioxane	0.220	3.520	0.880	4.400	8.800	1.760	11252	171544	43700	161310	540834	80192
46	Trichloroethene	0.258	4.120	1.030	5.150	10.300	2.060	27013	323273	83100	364698	666308	165489
47	Bromodichloromethane	0.200	3.200	0.800	4.000	8.000	1.600	27507	476051	96325	417248	885573	218119
49	Methyl Isobutyl Ketone	0.230	3.680	0.920	4.600	9.200	1.840	67434	1179200	250239	1039898	2505790	566705
50	cis-1,3-Dichloropropene	0.265	4.240	1.060	5.300	10.600	2.120	28339	441906	107039	492454	1010236	206495
51	Toluene	-1.000	4.120	1.030	5.150	10.300	2.060	-1	944443	257501	1033029	1877014	478350
52	trans-1,3-Dichloropropene	0.260	4.160	1.040	5.200	10.400	2.080	33546	509168	127376	538174	1205186	242137
53	1,1,2-Trichloroethane	0.255	4.080	1.020	5.100	10.200	2.040	18573	263308	68163	281046	608914	127239
54	2-Hexanone	0.220	3.520	0.880	4.400	8.800	1.760	84018	1413472	311524	1112452	3278869	678898
57	Dibromochloromethane	0.223	3.560	0.890	4.450	8.900	1.780	43801	688881	150691	558917	1316838	322250
58	1,2-Dibromoethane	0.260	4.160	1.040	5.200	10.400	2.080	46912	660815	169213	701472	1505940	324567
59	Tetrachloroethene	0.255	4.080	1.020	5.100	10.200	2.040	40710	589393	145069	627137	1126037	300057
60	Chlorobenzene	0.255	4.080	1.020	5.100	10.200	2.040	64660	836027	208106	862738	1818049	410336
62	Ethylbenzene	0.260	4.160	1.040	5.200	10.400	2.080	107037	1527752	359496	1548148	3108186	722767
63	m & p-Xylene	0.515	8.240	2.060	10.300	20.600	4.120	192864	2440351	617919	2542524	4725274	1220126
64	Styrene	0.258	4.120	1.030	5.150	10.300	2.060	70964	837020	224026	840176	1812012	428714
65	Bromoform	0.233	3.720	0.930	4.650	9.300	1.860	90991	1151698	243927	958925	2416870	530300
66	o-Xylene	0.255	4.080	1.020	5.100	10.200	2.040	105567	1325719	329821	1384162	2817484	643280
67	1,1,2,2-Tetrachloroethane	0.255	4.080	1.020	5.100	10.200	2.040	102201	1142635	274703	1042229	3385910	560899
72	4-Ethyltoluene	0.228	3.640	0.910	4.550	9.100	1.820	177076	1912961	437379	1573293	3712735	943267
73	1,3,5-Trimethylbenzene	0.265	4.240	1.060	5.300	10.600	2.120	184274	1936506	488965	1778188	3957960	994445
76	1,2,4-Trimethylbenzene	-1.000	4.080	1.020	5.100	10.200	2.040	-1	1979227	501359	1766777	3635276	1033463
78	1,3-Dichlorobenzene	-1.000	4.080	1.020	5.100	10.200	2.040	-1	1499786	411700	1325016	3205866	837609
80	Benzyl chloride	-1.000	3.600	0.900	4.500	9.000	1.800	-1	1944712	459781	1580130	4463720	884546
81	1,4-Dichlorobenzene	-1.000	4.080	1.020	5.100	10.200	2.040	-1	1616283	417021	1362139	3091714	896732
83	1,2-Dichlorobenzene	-1.000	4.000	1.000	5.000	10.000	2.000	-1	1708595	429307	1374687	4272294	912351
86	1,2,4-Trichlorobenzene	-1.000	4.120	1.030	5.150	10.300	2.060	-1	3172331	905400	2236815	7156710	1987175
87	Naphthalene	-1.000	9.560	2.390	11.950	23.900	4.780	-1	11453402	4198495	10074168	24925580	6661715
88	Hexachlorobutadiene	-1.000	4.120	1.030	5.150	10.300	2.060	-1	2443776	758051	1914490	4177636	1622637
1	Pentafluorobenzene	20.000	20.000	20.000	20.000	20.000	20.000	2643183	2935915	2871816	2719013	2737194	3022845
35	1,4-Difluorobenzene	20.000	20.000	20.000	20.000	20.000	20.000	2659938	2870629	2814997	2720455	2706138	3020264
94	Toluene-d8	10.000	10.000	10.000	10.000	10.000	10.000	1479389	1629143	1590486	1469067	1546296	1730275

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INITIAL CALIBRATION REPORT: Response Factors

SDG:	**209277**
QC_Batch:	**070609-MS1**
Sample ID:	44-005
Sample Analysis Date:	6 Jul 109 2:15 pm
Run Method:	1T15EXAY.M
Quant Method:	1T15EXAY.M
Cal Update:	Tue Mar 17 14:18:15 2009
Template:	1TO15EXT.MS1

Sample Calculation:

1) Avg RFn = Sum $\left| \frac{(Astdni)}{(Cstdni)} \frac{(Cistdi)}{(Aistdi)} \right|_i$

Response Factors

Compound		RF1	RF2	RF3	RF4	RF5	RF6	AvgRFn	%RSD
Dichlorodifluoromethane		0.649	0.646	0.590	0.611	0.585	0.583	0.611	4.97
Chloromethane		0.452	0.403	0.378	0.393	0.362	0.368	0.393	8.34
Freon 114		0.737	0.654	0.632	0.657	0.605	0.614	0.650	7.29
Vinyl chloride		0.230	0.218	0.219	0.213	0.201	0.200	0.213	5.40
Bromomethane		0.237	0.224	0.193	0.211	0.193	0.211	0.212	8.16
Chloroethane		0.125	0.117	0.111	0.111	0.099	0.105	0.112	8.18
Trichlorofluoromethane		0.651	0.597	0.569	0.610	0.503	0.571	0.584	8.47
Acetone		1.441	0.837	0.880	0.809	0.625	0.679	0.878	33.28
2-propanol		0.650	0.602	0.578	0.469	1.146	0.561	0.668	36.24
1,1-Dichloroethene		0.502	0.419	0.441	0.445	0.528	0.494	0.471	9.01
Freon 113		0.388	0.368	0.312	0.296	0.424	0.431	0.370	15.21
Dichloromethane		0.243	0.204	0.175	0.171	0.232	0.227	0.209	14.64
Carbon disulfide		0.295	0.263	0.259	0.202	0.257	0.291	0.261	12.82
trans-1,2-Dichloroethene		0.206	0.231	0.187	0.137	0.194	0.199	0.192	16.18
Methyl tert butyl ether		0.942	1.055	0.870	0.698	0.906	0.992	0.910	13.48
1,1-Dichloroethane		0.683	0.654	0.590	0.482	0.630	0.600	0.606	11.51
Vinyl acetate		1.413	1.362	1.209	1.158	1.325	1.302	1.295	7.38
2-Butanone		0.190	0.183	0.178	0.122	0.175	0.173	0.170	14.31
cis-1,2-Dichloroethene		0.343	0.315	0.294	0.321	0.299	0.307	0.313	5.59
Chloroform		0.806	0.751	0.694	0.746	0.687	0.692	0.729	6.41
1,1,1-Trichloroethane		0.794	0.738	0.703	0.734	0.703	0.684	0.726	5.40
1,2-Dichloroethane		0.773	0.675	0.669	0.708	0.661	0.601	0.681	8.33
Benzene	NA		1.205	1.428	1.117	0.996	1.173	1.183	13.36
Carbon tetrachloride		0.775	0.771	0.737	0.748	0.675	0.717	0.737	5.04
1,2-Dichloropropane		0.542	0.451	0.461	0.436	0.430	0.426	0.457	9.47
1,4 Dioxane		0.385	0.340	0.353	0.270	0.454	0.302	0.350	18.49
Trichloroethene		0.787	0.547	0.573	0.521	0.478	0.532	0.573	19.12
Bromodichloromethane		1.034	1.036	0.855	0.767	0.818	0.903	0.902	12.44
Methyl Isobutyl Ketone		2.204	2.233	1.932	1.662	2.013	2.040	2.014	10.30
cis-1,3-Dichloropropene		0.804	0.726	0.717	0.683	0.704	0.645	0.713	7.44
Toluene	NA		1.597	1.776	1.475	1.347	1.538	1.546	10.25
trans-1,3-Dichloropropene		0.970	0.853	0.870	0.761	0.856	0.771	0.847	9.00
1,1,2-Trichloroethane		0.548	0.450	0.475	0.405	0.441	0.413	0.455	11.39
2-Hexanone		2.871	2.798	2.515	1.859	2.754	2.554	2.559	14.47
Dibromochloromethane		1.477	1.348	1.203	0.923	1.094	1.199	1.207	15.98
1,2-Dibromoethane		1.357	1.107	1.156	0.992	1.070	1.033	1.119	11.58
Tetrachloroethene		1.200	1.006	1.010	0.904	0.816	0.974	0.985	13.06

Chlorobenzene		1.907	1.428	1.450	1.244	1.317	1.332	1.446	16.45
Ethylbenzene		3.095	2.559	2.456	2.189	2.209	2.301	2.468	13.74
m & p-Xylene		2.816	2.063	2.131	1.815	1.695	1.961	2.080	18.95
Styrene		2.068	1.415	1.545	1.199	1.300	1.378	1.484	20.78
Bromoform		2.936	2.157	1.863	1.516	1.921	1.888	2.047	23.53
o-Xylene		3.113	2.264	2.297	1.995	2.041	2.088	2.300	18.10
1,1,2,2-Tetrachloroethane		3.014	1.951	1.913	1.502	2.453	1.821	2.109	25.54
4-Ethyltoluene		5.840	3.661	3.415	2.542	3.015	3.432	3.651	31.30
1,3,5-Trimethylbenzene		5.228	3.182	3.277	2.467	2.760	3.106	3.337	29.21
1,2,4-Trimethylbenzene	NA		3.380	3.492	2.547	2.634	3.355	3.082	14.68
1,3-Dichlorobenzene	NA		2.561	2.868	1.910	2.323	2.719	2.476	15.16
Benzyl chloride	NA		3.764	3.630	2.581	3.666	3.254	3.379	14.38
1,4-Dichlorobenzene	NA		2.760	2.905	1.964	2.240	2.911	2.556	16.83
1,2-Dichlorobenzene	NA		2.976	3.050	2.021	3.157	3.021	2.845	16.36
1,2,4-Trichlorobenzene	NA		5.365	6.245	3.193	5.135	6.388	5.265	24.29
Naphthalene	NA		8.347	12.481	6.198	7.708	9.229	8.792	26.61
Hexachlorobutadiene	NA		4.133	5.229	2.733	2.998	5.216	4.062	29.13
Pentafluorobenzene		1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.00
1,4-Difluorobenzene		1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.00
Toluene-d8		1.112	1.135	1.130	1.080	1.143	1.146	1.124	2.20

CALCULATIONS

EPA Method TO-15 Modified Full Scan GC/MS

SDG: 209277
Laboratory Number: 05

Run Method: 1T15EXAY.M
Quant Method: 1T15EXAY.M
Can Dilution Factor: 1.00
Air Volume: 200 ml MDL Factor 1
Gas Constant: 23.68
Decimal Places: 2

Compound	M.W.	Raw Amount	Result ppbv	Result ug/m3	(1) MDL ppbv	(2) RL ppbv	Calc MDL ppbv	Calc MDL ug/m3	Calc RL ppbv	Calc RL ug/m3	Flag	S062602-1 Spike ppmv
Dichlorodifluoromethane	120.9	0.000	0.000	0.00	0.105	0.525	0.53	2.68	2.63	13.40	U	0.103
Chloromethane	50.5	0.000	0.000	0.00	0.102	0.510	0.51	1.09	2.55	5.44	U	0.103
Freon 114	170.9	0.000	0.000	0.00	0.104	0.520	0.52	3.75	2.60	18.76	U	0.103
Vinyl chloride	62.5	0.000	0.000	0.00	0.104	0.520	0.52	1.37	2.60	6.86	U	0.103
Bromomethane	94.9	0.000	0.000	0.00	0.104	0.520	0.52	2.08	2.60	10.42	U	0.103
Chloroethane	64.5	0.000	0.000	0.00	0.104	0.520	0.52	1.42	2.60	7.08	U	0.103
Trichlorofluoromethane	137.4	0.000	0.000	0.00	0.104	0.520	0.52	3.02	2.60	15.09	U	0.103
Acetone	58.1	0.551	2.756	6.76	0.090	0.450	0.45	1.10	2.25	5.52		0.103
2-propanol	60.1	0.005	0.024	0.06	0.091	0.455	0.46	1.15	2.28	5.77	U	0.103
1,1-Dichloroethene	96.9	0.000	0.000	0.00	0.101	0.505	0.51	2.07	2.53	10.33	U	0.103
Freon 113	187.3	0.000	0.000	0.00	0.102	0.510	0.51	4.03	2.55	20.17	U	0.103
Dichloromethane	84.9	0.000	0.000	0.00	0.104	0.520	0.52	1.86	2.60	9.32	U	0.103
Carbon disulfide	76.1	0.000	0.000	0.00	0.089	0.445	0.45	1.43	2.23	7.15	U	0.103
trans-1,2-Dichloroethene	96.9	0.000	0.000	0.00	0.087	0.435	0.44	1.78	2.18	8.90	U	0.103
Methyl tert butyl ether	88.1	0.000	0.000	0.00	0.078	0.390	0.39	1.45	1.95	7.25	U	0.103
1,1-Dichloroethane	99.0	0.000	0.000	0.00	0.101	0.505	0.51	2.11	2.53	10.56	U	0.103
Vinyl acetate	86.1	0.010	0.048	0.17	0.086	0.430	0.43	1.56	2.15	7.82	U	0.103
2-Butanone	72.1	0.125	0.626	1.91	0.086	0.430	0.43	1.31	2.15	6.55	J	0.103
cis-1,2-Dichloroethene	96.9	0.000	0.000	0.00	0.103	0.515	0.52	2.11	2.58	10.54	U	0.103
Chloroform	119.4	0.000	0.000	0.00	0.102	0.510	0.51	2.57	2.55	12.86	U	0.103
1,1,1-Trichloroethane	133.4	0.000	0.000	0.00	0.102	0.510	0.51	2.87	2.55	14.37	U	0.103
1,2-Dichloroethane	99.0	0.000	0.000	0.00	0.103	0.515	0.52	2.15	2.58	10.77	U	0.103
Benzene	78.1	0.058	0.290	0.96	0.103	0.515	0.52	1.70	2.58	8.49	U	0.103
Carbon tetrachloride	153.8	0.000	0.000	0.00	0.102	0.510	0.51	3.31	2.55	16.56	U	0.103
1,2-Dichloropropane	113.0	0.003	0.016	0.08	0.103	0.515	0.52	2.46	2.58	12.29	U	0.103
1,4 Dioxane	88.1	0.005	0.025	0.09	0.088	0.440	0.44	1.64	2.20	8.18	U	0.103
Trichloroethene	131.4	0.049	0.245	1.36	0.103	0.515	0.52	2.86	2.58	14.29	U	0.103
Bromodichloromethane	163.8	0.000	0.000	0.00	0.080	0.400	0.40	2.77	2.00	13.83	U	0.103
Methyl Isobutyl Ketone	100.2	0.007	0.034	0.14	0.092	0.460	0.46	1.95	2.30	9.73	U	0.103
cis-1,3-Dichloropropene	111.0	0.000	0.000	0.00	0.106	0.530	0.53	2.48	2.65	12.42	U	0.103
Toluene	92.1	0.200	1.001	3.89	0.103	0.515	0.52	2.00	2.58	10.02	J	0.103
trans-1,3-Dichloropropene	111.0	0.000	0.000	0.00	0.104	0.520	0.52	2.44	2.60	12.19	U	0.103
1,1,2-Trichloroethane	133.4	0.004	0.018	0.10	0.102	0.510	0.51	2.87	2.55	14.37	U	0.103
2-Hexanone	100.2	0.017	0.085	0.36	0.088	0.440	0.44	1.86	2.20	9.31	U	0.103
Dibromochloromethane	208.3	0.000	0.000	0.00	0.089	0.445	0.45	3.91	2.23	19.57	U	0.103
1,2-Dibromoethane	187.9	0.000	0.000	0.00	0.104	0.520	0.52	4.13	2.60	20.63	U	0.103

Tetrachloroethene	165.8	0.000	0.000	0.00	0.102	0.510	0.51	3.57	2.55	17.85	U	0.103
Chlorobenzene	112.6	0.000	0.000	0.00	0.102	0.510	0.51	2.43	2.55	12.13	U	0.103
Ethylbenzene	106.2	0.010	0.051	0.23	0.104	0.520	0.52	2.33	2.60	11.66	U	0.103
m & p-Xylene	106.2	0.057	0.284	1.28	0.206	1.030	1.03	4.62	5.15	23.10	U	0.206
Styrene	104.2	0.004	0.018	0.08	0.103	0.515	0.52	2.27	2.58	11.33	U	0.103
Bromoform	252.7	0.004	0.021	0.23	0.093	0.465	0.47	4.96	2.33	24.81	U	0.103
o-Xylene	106.2	0.013	0.063	0.28	0.102	0.510	0.51	2.29	2.55	11.44	U	0.103
1,1,2,2-Tetrachloroethane	167.8	0.000	0.000	0.00	0.102	0.510	0.51	3.61	2.55	18.07	U	0.103
4-Ethyltoluene	120.2	0.011	0.055	0.28	0.091	0.455	0.46	2.31	2.28	11.55	U	0.103
1,3,5-Trimethylbenzene	120.2	0.010	0.051	0.26	0.106	0.530	0.53	2.69	2.65	13.45	U	0.103
1,2,4-Trimethylbenzene	120.2	0.038	0.188	0.95	0.102	0.510	0.51	2.59	2.55	12.94	U	0.103
1,3-Dichlorobenzene	147.0	0.015	0.073	0.45	0.102	0.510	0.51	3.17	2.55	15.83	U	0.103
Benzyl chloride	126.6	0.014	0.072	0.39	0.090	0.450	0.45	2.41	2.25	12.03	U	0.103
1,4-Dichlorobenzene	147.0	0.016	0.082	0.51	0.102	0.510	0.51	3.17	2.55	15.83	U	0.103
1,2-Dichlorobenzene	147.0	0.011	0.057	0.35	0.100	0.500	0.50	3.10	2.50	15.52	U	0.103
1,2,4-Trichlorobenzene	181.4	0.013	0.066	0.51	0.103	0.515	0.52	3.95	2.58	19.73	U	0.103
Naphthalene	128.2	0.076	0.378	2.04	0.239	1.195	1.20	6.47	5.98	32.35	U	0.103
Hexachlorobutadiene	260.8	0.007	0.034	0.38	0.103	0.515	0.52	5.67	2.58	28.36	U	0.103

SAMPLE CALCULATION

EPA Method TO-15 Modified Full Scan GC/MS

SDG:		**209277**
Laboratory Number:		**05**
Standard Volume	STV	5.0
Sample Volume	SV	200
Can Dilution Factor	CDF	1.00
Gas Constant		23.68
Decimal Places:		2

Sample Calculation:

1) Avg RFn = Sum $\left| \frac{(Astdni)}{(Cstdni)} \frac{(Cistdi)}{(Aistdi)} \right|_i$ Note: 1

2) Raw Amt = $\frac{(Ansamp)}{(Avg\ RFn)} \frac{(Cistdi)}{(Aistdi)}$ = Cn

3) Amount ppbv = $\frac{(Raw\ Amt)}{} \frac{1000}{(SV)} (CDF)$

4) Amount ug/m3 = $\frac{(amt(ppbv)}{} \frac{MW}{23.68}$

n	Compound	IS n	Chem type	MW	AvgRFn	Area Ansamp	Cistdi ppmv	Aistdi Ais	Cn ppmV Raw Amt	Amount ppbv	Amount ug/m3
2	Dichlorodifluoromethane	1	TRG	120.9	0.611	0	20.000	4734856	0.000	0.00	0.00
3	Chloromethane	1	TRG	50.5	0.393	0	20.000	4734856	0.000	0.00	0.00
4	Freon 114	1	TRG	170.9	0.650	0	20.000	4734856	0.000	0.00	0.00
5	Vinyl chloride	1	TRG	62.5	0.213	0	20.000	4734856	0.000	0.00	0.00
6	Bromomethane	1	TRG	94.9	0.212	0	20.000	4734856	0.000	0.00	0.00
7	Chloroethane	1	TRG	64.5	0.112	0	20.000	4734856	0.000	0.00	0.00
10	Trichlorofluoromethane	1	TRG	137.4	0.584	0	20.000	4734856	0.000	0.00	0.00
12	Acetone	1	TRG	58.1	0.878	114628	20.000	4734856	0.551	2.76	6.77
13	2-propanol	1	TRG	60.1	0.668	755	20.000	4734856	0.005	0.02	0.05
15	1,1-Dichloroethene	1	TRG	96.9	0.471	0	20.000	4734856	0.000	0.00	0.00
17	Freon 113	1	TRG	187.3	0.370	0	20.000	4734856	0.000	0.00	0.00
19	Dichloromethane	1	TRG	84.9	0.209	0	20.000	4734856	0.000	0.00	0.00
20	Carbon disulfide	1	TRG	76.1	0.261	0	20.000	4734856	0.000	0.00	0.00
21	trans-1,2-Dichloroethene	1	TRG	96.9	0.192	0	20.000	4734856	0.000	0.00	0.00
22	Methyl tert butyl ether	1	TRG	88.1	0.910	0	20.000	4734856	0.000	0.00	0.00
24	1,1-Dichloroethane	1	TRG	99.0	0.606	0	20.000	4734856	0.000	0.00	0.00
25	Vinyl acetate	1	TRG	86.1	1.295	2925	20.000	4734856	0.010	0.05	0.18
26	2-Butanone	1	TRG	72.1	0.170	5049	20.000	4734856	0.125	0.63	1.92
32	cis-1,2-Dichloroethene	1	TRG	96.9	0.313	0	20.000	4734856	0.000	0.00	0.00
34	Chloroform	1	TRG	119.4	0.729	0	20.000	4734856	0.000	0.00	0.00
36	1,1,1-Trichloroethane	35	TRG	133.4	0.726	0	20.000	4289621	0.000	0.00	0.00
37	1,2-Dichloroethane	35	TRG	99.0	0.681	0	20.000	4289621	0.000	0.00	0.00
40	Benzene	35	TRG	78.1	1.183	14725	20.000	4289621	0.058	0.29	0.96
41	Carbon tetrachloride	35	TRG	153.8	0.737	0	20.000	4289621	0.000	0.00	0.00
43	1,2-Dichloropropane	35	TRG	113.0	0.457	311	20.000	4289621	0.003	0.02	0.10
44	1,4 Dioxane	35	TRG	88.1	0.350	376	20.000	4289621	0.005	0.03	0.11
46	Trichloroethene	35	TRG	131.4	0.573	6030	20.000	4289621	0.049	0.25	1.39
47	Bromodichloromethane	35	TRG	163.8	0.902	0	20.000	4289621	0.000	0.00	0.00
49	Methyl Isobutyl Ketone	35	TRG	100.2	2.014	2920	20.000	4289621	0.007	0.03	0.13
50	cis-1,3-Dichloropropene	35	TRG	111.0	0.713	0	20.000	4289621	0.000	0.00	0.00
51	Toluene	35	TRG	92.1	1.546	66412	20.000	4289621	0.200	1.00	3.89
52	trans-1,3-Dichloropropene	35	TRG	111.0	0.847	0	20.000	4289621	0.000	0.00	0.00
53	1,1,2-Trichloroethane	35	TRG	133.4	0.455	343	20.000	4289621	0.004	0.02	0.11
54	2-Hexanone	35	TRG	100.2	2.559	9347	20.000	4289621	0.017	0.09	0.38
57	Dibromochloromethane	35	TRG	208.3	1.207	0	20.000	4289621	0.000	0.00	0.00
58	1,2-Dibromoethane	35	TRG	187.9	1.119	0	20.000	4289621	0.000	0.00	0.00
59	Tetrachloroethene	35	TRG	165.8	0.985	0	20.000	4289621	0.000	0.00	0.00
60	Chlorobenzene	35	TRG	112.6	1.446	0	20.000	4289621	0.000	0.00	0.00
62	Ethylbenzene	35	TRG	106.2	2.468	5444	20.000	4289621	0.010	0.05	0.22

63	m & p-Xylene	35	TRG	106.2	2.080	25370	20.000	4289621	0.057	0.28	1.26
64	Styrene	35	TRG	104.2	1.484	1148	20.000	4289621	0.004	0.02	0.09
65	Bromoform	35	TRG	252.7	2.047	1855	20.000	4289621	0.004	0.02	0.21
66	o-Xylene	35	TRG	106.2	2.300	6202	20.000	4289621	0.013	0.06	0.27
67	1,1,2,2-Tetrachloroethane	35	TRG	167.8	2.109	0	20.000	4289621	0.000	0.00	0.00
72	4-Ethyltoluene	35	TRG	120.2	3.651	8602	20.000	4289621	0.011	0.05	0.25
73	1,3,5-Trimethylbenzene	35	TRG	120.2	3.337	7268	20.000	4289621	0.010	0.05	0.25
76	1,2,4-Trimethylbenzene	35	TRG	120.2	3.082	24814	20.000	4289621	0.038	0.19	0.96
78	1,3-Dichlorobenzene	35	TRG	147.0	2.476	7720	20.000	4289621	0.015	0.07	0.43
80	Benzyl chloride	35	TRG	126.6	3.379	10506	20.000	4289621	0.014	0.07	0.37
81	1,4-Dichlorobenzene	35	TRG	147.0	2.556	8957	20.000	4289621	0.016	0.08	0.50
83	1,2-Dichlorobenzene	35	TRG	147.0	2.845	6952	20.000	4289621	0.011	0.06	0.37
86	1,2,4-Trichlorobenzene	35	TRG	181.4	5.265	14951	20.000	4289621	0.013	0.07	0.54
87	Naphthalene	35	TRG	128.2	8.792	142406	20.000	4289621	0.076	0.38	2.06
88	Hexachlorobutadiene	35	TRG	260.8	4.062	5957	20.000	4289621	0.007	0.03	0.33
1	Pentafluorobenzene	1	IS		1.000	4734856	20.000	4734856			
35	1,4-Difluorobenzene	35	IS		1.000	4289621	20.000	4289621			
94	Toluene-d8	35	SURR		1.124	2502985	20.000	4289621			

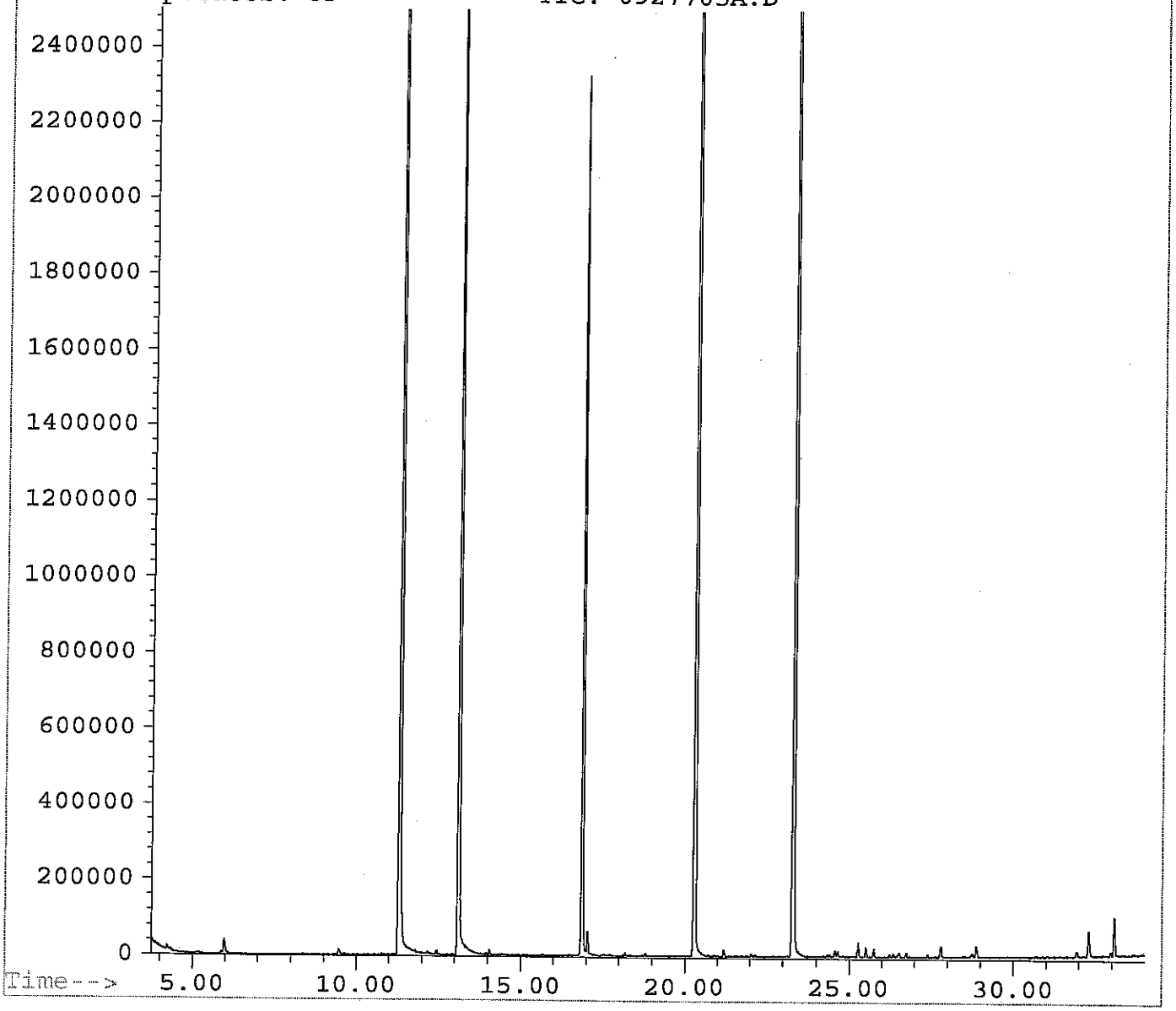
Calculation Definitions:

n	compound n
i	i th calibration level
Astdni	Standard Area for compound n at ith calibration level
Cstdni	Standard Concentration for compound n at ith calibration level in ppmv
Cistdi	Internal Standard Conc used for compound n at ith calibration level in ppmv
Aistdi	Internal Standard Area used for compound n at ith calibration level
Ansamp	Sample Area for compound n
Avg RFn	Average response factor for all ith calibration levels for compound n
Raw Amount	Sample Concentration in ppmv before applying factors
Cistd	Concentration internal standard used for compound n in sample in ppmv
Aistd	Area of internal standard used for compound n in sample
Cn	Concentration of compound n in sample in ppmv
23.68	Gas constant at 60 F as per EPA source test protocol
MW	Molecular weight of compound
Note (1): Avg RFn	The values for the Average Response Factor AvgRFn can be optained from the response Factor Report for the Initial Calibration, or from the Calibration Report

Name of file: C:\MSCHEM\1\DATA\07069MS1\0927705A.D

Name of operator: JF

TIC: 0927705A.D



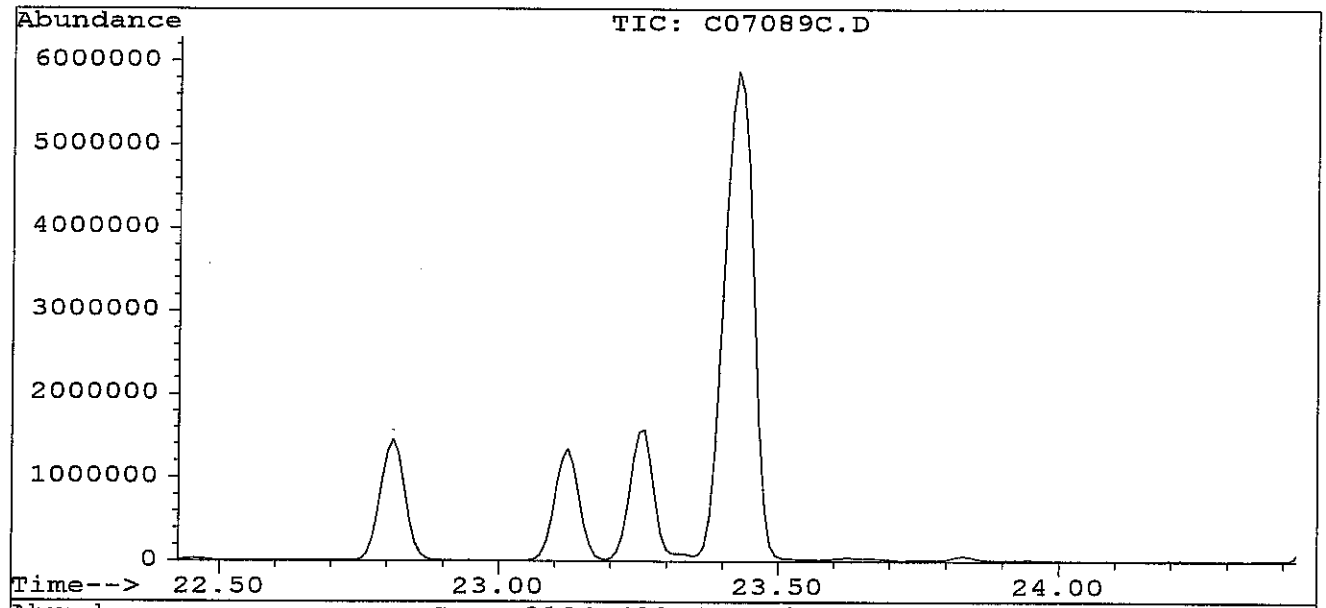
Daily Analytical Batch #: 070809-MS1

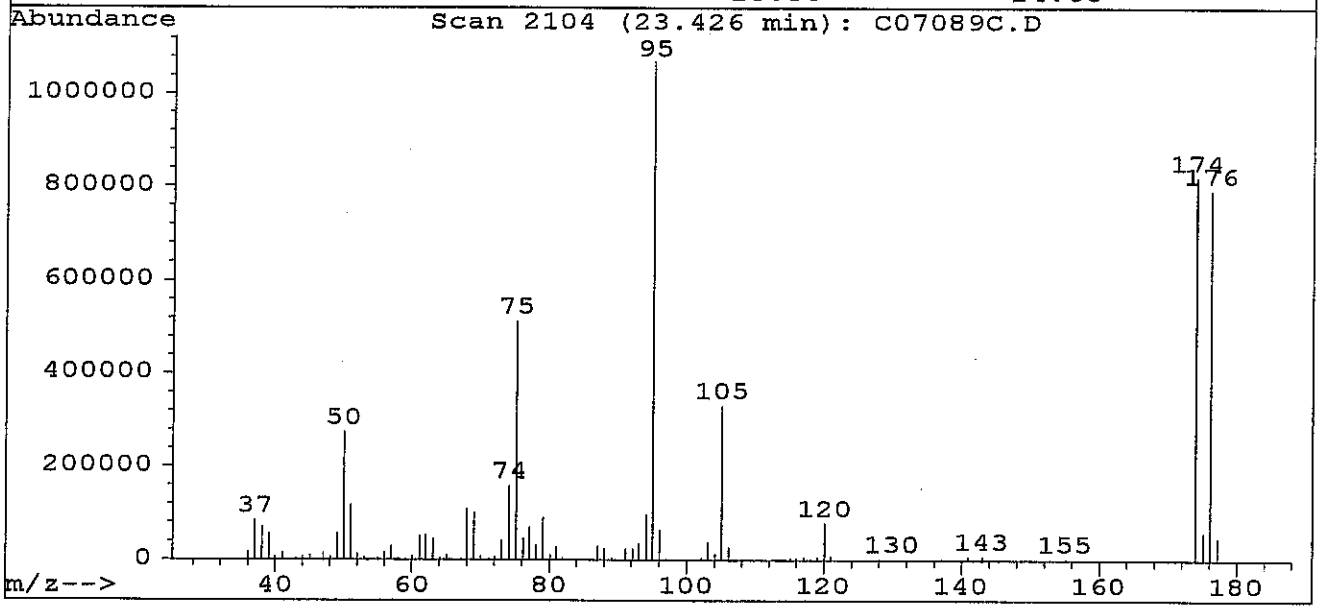
BFB

Data File : C:\MSCHEM\2\DATA\07089MS1\C07089C.D
Acq Time : 8 Jul 109 11:12 am
Sample : ST60022 + ST60350
Misc :

Operator: JF
Inst : 5970 - In
Multiplr: 1.00

Method : C:\MSCHEM\2\METHODS\1T15EXAY.M
Title : EPA TO-15





Peak Apex is scan: 2104

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	8	40	25.6	274048	PASS
75	95	30	66	47.7	511104	PASS
95	95	100	100	100.0	1070592	PASS
96	95	5	9	5.9	63640	PASS
173	174	0	2	0.0	0	PASS
174	95	50	120	76.7	821120	PASS
175	174	4	9	7.1	58336	PASS
176	174	93	101	96.5	792704	PASS
177	176	5	9	6.0	47304	PASS

C07089C.D 1T15EXAY.M Thu Jul 09 09:19:13 2009

CONTINUING CALIBRATION REPORT

SDG:	**LABQC**	
QC_Batch:	**070809-MS1**	
Sample ID:	ST60022 + ST60350	
Sample Analysis Date:	8 Jul 109 11:12 am	
Run Method:	1T15EXAY.M	
Quant/Calibration Method:	1T15EXAY.M	
Cal Update:	Tue Mar 17 14:18:15 2009	
Template:	1TO15EXT.MS1	
Calibration Level	Level 4	5.0

Sample Calculation:

1) $RFi = \frac{(Astdi)\ (Cistdi)}{(Cstdi)\ (Aistdi)}\ i$

Compound	Area Astdi	Cal Level Cstdi ppbv	CCRRF	AvgRFn	%Dev	%Dev Limit	%Dev Flag	
Dichlorodifluoromethane	628681	5.250	0.521	0.611	14.6	30	IN	
Chloromethane	356307	5.100	0.304	0.393	22.5	30	IN	
Freon 114	437671	5.200	0.367	0.650	43.6	30	OUT	CAF
Vinyl chloride	213830	5.200	0.179	0.213	16.1	30	IN	
Bromomethane	162791	5.200	0.136	0.212	35.5	30	OUT	1A
Chloroethane	98924	5.200	0.083	0.112	25.7	30	IN	
Trichlorofluoromethane	732398	5.200	0.613	0.584	-5.1	30	IN	
Acetone	685443	4.500	0.663	0.878	24.5	40	IN	
2-propanol	547648	4.550	0.524	0.668	21.5	40	IN	
1,1-Dichloroethene	549025	5.050	0.473	0.471	-0.4	30	IN	
Freon 113	489922	5.100	0.418	0.370	-13.1	30	IN	
Dichloromethane	221150	5.200	0.185	0.209	11.3	30	IN	
Carbon disulfide	245000	4.450	0.240	0.261	8.2	40	IN	
trans-1,2-Dichloroethene	176946	4.350	0.177	0.192	7.9	40	IN	
Methyl tert butyl ether	731980	3.900	0.817	0.910	10.2	40	IN	
1,1-Dichloroethane	612912	5.050	0.529	0.606	12.8	30	IN	
Vinyl acetate	1055827	4.300	1.069	1.295	17.4	40	IN	
2-Butanone	142559	4.300	0.144	0.170	15.2	40	IN	
cis-1,2-Dichloroethene	299325	5.150	0.253	0.313	19.2	30	IN	
Chloroform	694543	5.100	0.593	0.729	18.7	30	IN	
1,1,1-Trichloroethane	715958	5.100	0.647	0.726	10.9	30	IN	
1,2-Dichloroethane	677682	5.150	0.607	0.681	10.9	30	IN	
Benzene	1047795	5.150	0.938	1.183	20.7	30	IN	
Carbon tetrachloride	761632	5.100	0.688	0.737	6.6	30	IN	
1,2-Dichloropropane	438795	5.150	0.393	0.457	14.1	30	IN	
1,4 Dioxane	264761	4.400	0.277	0.350	20.8	40	IN	
Trichloroethene	555190	5.150	0.497	0.573	13.3	30	IN	
Bromodichloromethane	701973	4.000	0.809	0.902	10.3	40	IN	
Methyl Isobutyl Ketone	1718281	4.600	1.722	2.014	14.5	40	IN	
cis-1,3-Dichloropropene	669464	5.300	0.582	0.713	18.4	30	IN	
Toluene	1578173	5.150	1.413	1.546	8.6	30	IN	
trans-1,3-Dichloropropene	726985	5.200	0.645	0.847	23.9	30	IN	
1,1,2-Trichloroethane	406435	5.100	0.367	0.455	19.3	30	IN	
2-Hexanone	1834668	4.400	1.922	2.559	24.9	40	IN	
Dibromochloromethane	1027121	4.450	1.064	1.207	11.9	40	IN	
1,2-Dibromoethane	1003875	5.200	0.890	1.119	20.5	30	IN	
Tetrachloroethene	993276	5.100	0.898	0.985	8.9	30	IN	

Chlorobenzene	1275607	5.100	1.153	1.446	20.3	30	IN	
Ethylbenzene	2262841	5.200	2.006	2.468	18.7	30	IN	
m & p-Xylene	3516006	10.300	1.574	2.080	24.3	30	IN	
Styrene	1097925	5.150	0.983	1.484	33.8	30	OUT	2A
Bromoform	1494313	4.650	1.482	2.047	27.6	40	IN	
o-Xylene	2025664	5.100	1.831	2.300	20.4	30	IN	
1,1,2,2-Tetrachloroethane	1319078	5.100	1.192	2.109	43.5	30	OUT	CAF
4-Ethyltoluene	2465439	4.550	2.498	3.651	31.6	40	IN	
1,3,5-Trimethylbenzene	2488685	5.300	2.165	3.337	35.1	30	OUT	3A
1,2,4-Trimethylbenzene	2351736	5.100	2.126	3.082	31.0	30	OUT	4A
1,3-Dichlorobenzene	1644354	5.100	1.486	2.476	40.0	30	OUT	CAF
Benzyl chloride	1620691	4.500	1.660	3.379	50.9	40	OUT	1B
1,4-Dichlorobenzene	1808354	5.100	1.635	2.556	36.0	30	OUT	CAF
1,2-Dichlorobenzene	1758820	5.000	1.622	2.845	43.0	30	OUT	CAF
1,2,4-Trichlorobenzene	4452182	5.150	3.986	5.265	24.3	80	IN	
Naphthalene	5166964	11.950	1.993	8.792	77.3	80	IN	
Hexachlorobutadiene	1955976	5.150	1.751	4.062	56.9	80	IN	
Pentafluorobenzene	4592723	20.000	1.000	1.000	0.0	30	IN	
1,4-Difluorobenzene	4338144	20.000	1.000	1.000	0.0	30	IN	
Toluene-d8	2529725	10.000	1.166	1.124	-3.7	30	IN	

QUANTITATION REPORT

EPA Method TO-15 Modified Full Scan GC/MS

			Review	EAS Sample ID: C07089C	
File Name:	C07089C.D				1 KB
Sample ID:	ST60022 + ST60350				2 AT
Date:	8 Jul 109 11:12 am			Cal Amounts	3 BB
Run Method:	1T15EXAY.M			IS Areas	4 SH
Quant Method:	1T15EXAY.M			Carryover	
Cal Update:	Tue Mar 17 14:18:15 2009				
Template:	1TO15EXT.MS1				
Can Factor:	1.00				
Volume:	200	ml		Analyst: KB 1	

CAS#	Compound	n	Raw Amount	RT	Target RT	Ion	Sample Area	Qualifier	Lower Qual	Upper Qual	Qual Flag	Cal Flag	Int Flag
75-71-8	Dichlorodifluoromethane	2	4.483	3.87	3.83	85.00	628681	29	25	37			
74-87-3	Chloromethane	3	3.950	4.13	4.09	50.00	356307	29	22	32			
76-14-2	Freon 114	4	2.933	4.15	4.11	85.00	437671	53	44	65			
75-01-4	Vinyl chloride	5	4.365	4.38	4.33	62.00	213830	30	24	36			
74-83-9	Bromomethane	6	3.352	4.96	4.92	94.00	162791	88	73	109			
75-00-3	Chloroethane	7	3.863	5.18	5.12	64.00	98924	31	26	40			
75-69-4	Trichlorofluoromethane	10	5.465	6.00	5.94	101.00	732398	61	48	73			
67-64-1	Acetone	12	3.398	6.08	6.04	43.00	685443	19	16	24			
67-63-0	2-propanol	13	3.572	6.19	6.14	45.00	547648	23	18	27			
75-35-4	1,1-Dichloroethene	15	5.071	6.94	6.89	61.00	549025	41	34	51			
76-13-1	Freon 113	17	5.769	7.22	7.16	151.00	489922	112	101	152			
75-09-2	Dichloromethane	19	4.615	7.37	7.31	84.00	221150	64	51	77			
75-15-0	Carbon disulfide	20	4.085	7.60	7.54	76.00	245000	22	16	24			
156-60-5	trans-1,2-Dichloroethene	21	4.006	8.44	8.38	96.00	176946	197	172	258			
1634-04-4	Methyl tert butyl ether	22	3.501	8.60	8.54	73.00	731980	23	18	27			
75-34-3	1,1-Dichloroethane	24	4.401	8.95	8.90	63.00	612912	31	24	36			
108-05-4	Vinyl acetate	25	3.551	10.36	10.32	43.00	1055827	0	0	0			
78-93-3	2-Butanone	26	3.645	9.58	9.54	72.00	142559	42	30	45			
156-59-2	cis-1,2-Dichloroethene	32	4.162	10.16	10.11	96.00	299325	183	139	209			
67-66-3	Chloroform	34	4.148	10.58	10.53	83.00	694543	62	51	77			
71-55-6	1,1,1-Trichloroethane	36	4.546	11.86	11.80	97.00	715958	66	51	76			
107-06-2	1,2-Dichloroethane	37	4.588	11.92	11.87	61.95	677682	32	25	37			
71-43-2	Benzene	40	4.082	12.57	12.51	78.00	1047795	22	19	29			
56-23-5	Carbon tetrachloride	41	4.763	12.62	12.56	116.90	761632	95	79	119			
78-87-5	1,2-Dichloropropane	43	4.422	14.11	14.07	63.00	438795	74	58	88			
123-91-1	1,4 Dioxane	44	3.484	14.44	14.40	88.00	264761	95	76	114			
79-01-6	Trichloroethene	46	4.467	14.18	14.13	130.00	555190	95	79	119			
75-27-4	Bromodichloromethane	47	3.587	14.45	14.40	83.00	701973	61	49	74			
108-10-1	Methyl Isobutyl Ketone	49	3.933	15.78	15.70	43.00	1718281	27	21	35			
10061-01-5	cis-1,3-Dichloropropene	50	4.327	15.87	15.82	75.00	669464	19	15	23			
108-88-3	Toluene	51	4.705	17.17	17.11	91.00	1578173	57	44	66			
10061-02-6	trans-1,3-Dichloropropene	52	3.958	16.89	16.85	75.00	726985	20	16	23			
79-00-5	1,1,2-Trichloroethane	53	4.116	17.21	17.16	61.00	406435	113	91	136			
591-78-6	2-Hexanone	54	3.306	17.81	17.80	43.00	1834668	39	28	47			
124-48-1	Dibromochloromethane	57	3.922	18.35	18.30	129.00	1027121	78	60	91			
106-93-4	1,2-Dibromoethane	58	4.136	18.83	18.80	107.00	1003875	89	75	113			

CAS#	Compound	n	Raw Amount	RT	Target RT	Ion	Sample Area	Qualifier	Lower Qual	Upper Qual	Qual Flag	Cal Flag	Int Flag
127-18-4	Tetrachloroethene	59	4.648	19.03	18.97	166.00	993276	60	52	78			
108-90-7	Chlorobenzene	60	4.067	20.51	20.45	112.00	1275607	32	25	38			
100-41-4	Ethylbenzene	62	4.227	21.03	17.80	91.00	2262841	27	21	32			
108-38-3	m & p-Xylene	63	7.792	21.33	21.28	91.00	3516006	40	32	48			
100-42-5	Styrene	64	3.410	22.16	22.14	104.00	1097925	64	53	79			
75-25-2	Bromoform	65	3.366	22.06	22.00	173.00	1494313	49	39	59			
95-47-6	o-Xylene	66	4.061	22.29	22.25	91.00	2025664	38	30	45			
79-34-5	1,1,2,2-Tetrachloroethane	67	2.883	22.81	22.75	83.00	1319078	10	8	13			
622-96-8	4-Ethyltoluene	72	3.113	24.79	24.74	105.00	2465439	28	20	31			
108-67-8	1,3,5-Trimethylbenzene	73	3.439	24.95	24.92	105.00	2488685	41	33	49			
95-63-6	1,2,4-Trimethylbenzene	76	3.518	25.90	25.89	105.00	2351736	40	32	48			
541-73-1	1,3-Dichlorobenzene	78	3.062	26.47	26.41	146.00	1644354	40	34	51			
100-44-7	Benzyl chloride	80	2.211	26.63	26.61	91.00	1620691	21	15	23			
106-46-7	1,4-Dichlorobenzene	81	3.262	26.68	26.68	146.00	1808354	39	34	51			
95-50-1	1,2-Dichlorobenzene	83	2.850	27.53	27.47	146.00	1758820	41	34	51			
120-82-1	1,2,4-Trichlorobenzene	86	3.898	33.24	32.18	180.00	4452182	108	78	117			
91-20-3	Naphthalene	87	2.709	32.45	32.41	128.00	5166964	12	10	16			
87-68-3	Hexachlorobutadiene	88	2.220	33.13	33.08	225.00	1955976	29	22	33			
363-72-4	Pentafluorobenzene	1	20.000	11.43	11.38	168.00	**4592723**						
540-36-3	1,4-Difluorobenzene	35	20.000	13.23	13.17	114.00	**4338144**						
2037-26-5	Toluene-d8	94	**10.373**	16.99	16.94	98.00	2529725	61	51	77			

Integration Flags:

If no flag the Integration was done by the instrument computer

M1 Manual Integration because the computer did not integrated the peak or integrated the wrong peak

M2 Manual Integration because computer integration of baseline was different then Inital Calibration

INITIAL CALIBRATION REPORT

EPA Method TO-15 Modified Full Scan GC/MS

		SDG:	LABQC
		QC_Batch:	070809-MS1
File Name:	C07089C.D	Instrument Name:	5970 - In
Sample ID:	ST60022 + ST60350		
Sample Analysis Date:	8 Jul 109 11:12 am	Number Compounds:	96
Run Method:	1T15EXAY.M	IS1: ST60403	20
Quant and Calibration Method:	1T15EXAY.M	IS2: ST60403	20
Cal Update:	Tue Mar 17 14:18:15 2009	IS3:	
Template:	1TO15EXT.MS1	IS4:	

Calibration Title: EPA T0-15

		Calibration Amount CA, ppmv						Calibration Response, Area					
		Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
		Amt	Amt	Amt	Amt	Amt	Amt	C03179C.D	C03179E.D	C03179B.D	C03179A.D	C03169H.D	C03179D.D
n	Compound	0.25	4.0	1.0	5.0	10.0	2.0	0.25	4.0	1.0	5.0	10.0	2.0
2	Dichlorodifluoromethane	0.263	4.200	1.050	5.250	10.500	2.100	22559	398558	88898	436110	840988	185058
3	Chloromethane	0.255	4.080	1.020	5.100	10.200	2.040	15230	241294	55434	272653	505057	113562
4	Freon 114	0.260	4.160	1.040	5.200	10.400	2.080	25317	399238	94441	464176	861160	193013
5	Vinyl chloride	0.260	4.160	1.040	5.200	10.400	2.080	7909	132864	32643	150492	285530	62953
6	Bromomethane	0.260	4.160	1.040	5.200	10.400	2.080	8153	136639	28890	149016	274473	66325
7	Chloroethane	0.260	4.160	1.040	5.200	10.400	2.080	4307	71497	16630	78611	141439	32925
10	Trichlorofluoromethane	0.260	4.160	1.040	5.200	10.400	2.080	22371	364524	85037	431144	716396	179451
12	Acetone	0.225	3.600	0.900	4.500	9.000	1.800	42851	442389	113697	494726	770083	184591
13	2-propanol	0.228	3.640	0.910	4.550	9.100	1.820	19578	321532	75563	289890	1427833	154437
15	1,1-Dichloroethene	0.253	4.040	1.010	5.050	10.100	2.020	16793	248606	63935	305424	730028	150732
17	Freon 113	0.255	4.080	1.020	5.100	10.200	2.040	13083	220191	45725	205080	591375	132996
19	Dichloromethane	0.260	4.160	1.040	5.200	10.400	2.080	8354	124766	26131	120655	330491	71297
20	Carbon disulfide	0.223	3.560	0.890	4.450	8.900	1.780	8703	137347	33136	122015	313353	78232
21	trans-1,2-Dichloroethene	0.218	3.480	0.870	4.350	8.700	1.740	5940	117954	23397	80889	230621	52404
22	Methyl tert butyl ether	0.195	3.120	0.780	3.900	7.800	1.560	24271	482973	97431	369980	967308	233954
24	1,1-Dichloroethane	0.253	4.040	1.010	5.050	10.100	2.020	22823	387657	85531	331041	871129	183187
25	Vinyl acetate	0.215	3.440	0.860	4.300	8.600	1.720	40148	687529	149287	676740	1560060	338492
26	2-Butanone	0.215	3.440	0.860	4.300	8.600	1.720	5400	92652	22013	71425	205517	45058
32	cis-1,2-Dichloroethene	0.258	4.120	1.030	5.150	10.300	2.060	11695	190337	43510	224404	421914	95703
34	Chloroform	0.255	4.080	1.020	5.100	10.200	2.040	27147	449509	101707	516969	959204	213353
36	1,1,1-Trichloroethane	0.255	4.080	1.020	5.100	10.200	2.040	26931	432442	100881	509527	970639	210683
37	1,2-Dichloroethane	0.258	4.120	1.030	5.150	10.300	2.060	26512	398927	96975	495766	920839	187037

n	Compound	Amt 0.25	Amt 4.0	Amt 1.0	Amt 5.0	Amt 10.0	Amt 2.0	C03179C.D 0.25	C03179E.D 4.0	C03179B.D 1.0	C03179A.D 5.0	C03169H.D 10.0	C03179D.D 2.0
40	Benzene	-1.000	4.120	1.030	5.150	10.300	2.060	-1	712515	206967	782160	1387400	364766
41	Carbon tetrachloride	0.255	4.080	1.020	5.100	10.200	2.040	26276	451629	105798	518753	931992	220983
43	1,2-Dichloropropane	0.258	4.120	1.030	5.150	10.300	2.060	18588	266688	66789	305497	598806	132416
44	1,4 Dioxane	0.220	3.520	0.880	4.400	8.800	1.760	11252	171544	43700	161310	540834	80192
46	Trichloroethene	0.258	4.120	1.030	5.150	10.300	2.060	27013	323273	83100	364698	666308	165489
47	Bromodichloromethane	0.200	3.200	0.800	4.000	8.000	1.600	27507	476051	96325	417248	885573	218119
49	Methyl Isobutyl Ketone	0.230	3.680	0.920	4.600	9.200	1.840	67434	1179200	250239	1039898	2505790	566705
50	cis-1,3-Dichloropropene	0.265	4.240	1.060	5.300	10.600	2.120	28339	441906	107039	492454	1010236	206495
51	Toluene	-1.000	4.120	1.030	5.150	10.300	2.060	-1	944443	257501	1033029	1877014	478350
52	trans-1,3-Dichloropropene	0.260	4.160	1.040	5.200	10.400	2.080	33546	509168	127376	538174	1205186	242137
53	1,1,2-Trichloroethane	0.255	4.080	1.020	5.100	10.200	2.040	18573	263308	68163	281046	608914	127239
54	2-Hexanone	0.220	3.520	0.880	4.400	8.800	1.760	84018	1413472	311524	1112452	3278869	678898
57	Dibromochloromethane	0.223	3.560	0.890	4.450	8.900	1.780	43801	688881	150691	558917	1316838	322250
58	1,2-Dibromoethane	0.260	4.160	1.040	5.200	10.400	2.080	46912	660815	169213	701472	1505940	324567
59	Tetrachloroethene	0.255	4.080	1.020	5.100	10.200	2.040	40710	589393	145069	627137	1126037	300057
60	Chlorobenzene	0.255	4.080	1.020	5.100	10.200	2.040	64660	836027	208106	862738	1818049	410336
62	Ethylbenzene	0.260	4.160	1.040	5.200	10.400	2.080	107037	1527752	359496	1548148	3108186	722767
63	m & p-Xylene	0.515	8.240	2.060	10.300	20.600	4.120	192864	2440351	617919	2542524	4725274	1220126
64	Styrene	0.258	4.120	1.030	5.150	10.300	2.060	70964	837020	224026	840176	1812012	428714
65	Bromoform	0.233	3.720	0.930	4.650	9.300	1.860	90991	1151698	243927	958925	2416870	530300
66	o-Xylene	0.255	4.080	1.020	5.100	10.200	2.040	105567	1325719	329821	1384162	2817484	643280
67	1,1,2,2-Tetrachloroethane	0.255	4.080	1.020	5.100	10.200	2.040	102201	1142635	274703	1042229	3385910	560899
72	4-Ethyltoluene	0.228	3.640	0.910	4.550	9.100	1.820	177076	1912961	437379	1573293	3712735	943267
73	1,3,5-Trimethylbenzene	0.265	4.240	1.060	5.300	10.600	2.120	184274	1936506	488965	1778188	3957960	994445
76	1,2,4-Trimethylbenzene	-1.000	4.080	1.020	5.100	10.200	2.040	-1	1979227	501359	1766777	3635276	1033463
78	1,3-Dichlorobenzene	-1.000	4.080	1.020	5.100	10.200	2.040	-1	1499786	411700	1325016	3205866	837609
80	Benzyl chloride	-1.000	3.600	0.900	4.500	9.000	1.800	-1	1944712	459781	1580130	4463720	884546
81	1,4-Dichlorobenzene	-1.000	4.080	1.020	5.100	10.200	2.040	-1	1616283	417021	1362139	3091714	896732
83	1,2-Dichlorobenzene	-1.000	4.000	1.000	5.000	10.000	2.000	-1	1708595	429307	1374687	4272294	912351
86	1,2,4-Trichlorobenzene	-1.000	4.120	1.030	5.150	10.300	2.060	-1	3172331	905400	2236815	7156710	1987175
87	Naphthalene	-1.000	9.560	2.390	11.950	23.900	4.780	-1	11453402	4198495	10074168	24925580	6661715
88	Hexachlorobutadiene	-1.000	4.120	1.030	5.150	10.300	2.060	-1	2443776	758051	1914490	4177636	1622637
1	Pentafluorobenzene	20.000	20.000	20.000	20.000	20.000	20.000	2643183	2935915	2871816	2719013	2737194	3022845
35	1,4-Difluorobenzene	20.000	20.000	20.000	20.000	20.000	20.000	2659938	2870629	2814997	2720455	2706138	3020264
94	Toluene-d8	10.000	10.000	10.000	10.000	10.000	10.000	1479389	1629143	1590486	1469067	1546296	1730275

INITIAL CALIBRATION REPORT: Response Factors

SDG:	**LABQC**	**Sample Calculation:**	
QC_Batch:	**070809-MS1**	1) Avg RFn = Sum	$\frac{(Astdni)}{(Cstdni)} \frac{(Cistdi)}{(Aistdi)}$
Sample ID:	ST60022 + ST60350		
Sample Analysis Date:	8 Jul 109 11:12 am		
Run Method:	1T15EXAY.M		
Quant Method:	1T15EXAY.M		
Cal Update:	Tue Mar 17 14:18:15 2009		
Template:	1TO15EXT.MS1		

Response Factors

Compound		RF1	RF2	RF3	RF4	RF5	RF6	AvgRFn	%RSD
Dichlorodifluoromethane		0.649	0.646	0.590	0.611	0.585	0.583	0.611	4.97
Chloromethane		0.452	0.403	0.378	0.393	0.362	0.368	0.393	8.34
Freon 114		0.737	0.654	0.632	0.657	0.605	0.614	0.650	7.29
Vinyl chloride		0.230	0.218	0.219	0.213	0.201	0.200	0.213	5.40
Bromomethane		0.237	0.224	0.193	0.211	0.193	0.211	0.212	8.16
Chloroethane		0.125	0.117	0.111	0.111	0.099	0.105	0.112	8.18
Trichlorofluoromethane		0.651	0.597	0.569	0.610	0.503	0.571	0.584	8.47
Acetone		1.441	0.837	0.880	0.809	0.625	0.679	0.878	33.28
2-propanol		0.650	0.602	0.578	0.469	1.146	0.561	0.668	36.24
1,1-Dichloroethene		0.502	0.419	0.441	0.445	0.528	0.494	0.471	9.01
Freon 113		0.388	0.368	0.312	0.296	0.424	0.431	0.370	15.21
Dichloromethane		0.243	0.204	0.175	0.171	0.232	0.227	0.209	14.64
Carbon disulfide		0.295	0.263	0.259	0.202	0.257	0.291	0.261	12.82
trans-1,2-Dichloroethene		0.206	0.231	0.187	0.137	0.194	0.199	0.192	16.18
Methyl tert butyl ether		0.942	1.055	0.870	0.698	0.906	0.992	0.910	13.48
1,1-Dichloroethane		0.683	0.654	0.590	0.482	0.630	0.600	0.606	11.51
Vinyl acetate		1.413	1.362	1.209	1.158	1.325	1.302	1.295	7.38
2-Butanone		0.190	0.183	0.178	0.122	0.175	0.173	0.170	14.31
cis-1,2-Dichloroethene		0.343	0.315	0.294	0.321	0.299	0.307	0.313	5.59
Chloroform		0.806	0.751	0.694	0.746	0.687	0.692	0.729	6.41
1,1,1-Trichloroethane		0.794	0.738	0.703	0.734	0.703	0.684	0.726	5.40
1,2-Dichloroethane		0.773	0.675	0.669	0.708	0.661	0.601	0.681	8.33
Benzene	NA		1.205	1.428	1.117	0.996	1.173	1.183	13.36
Carbon tetrachloride		0.775	0.771	0.737	0.748	0.675	0.717	0.737	5.04
1,2-Dichloropropane		0.542	0.451	0.461	0.436	0.430	0.426	0.457	9.47
1,4 Dioxane		0.385	0.340	0.353	0.270	0.454	0.302	0.350	18.49
Trichloroethene		0.787	0.547	0.573	0.521	0.478	0.532	0.573	19.12
Bromodichloromethane		1.034	1.036	0.855	0.767	0.818	0.903	0.902	12.44
Methyl Isobutyl Ketone		2.204	2.233	1.932	1.662	2.013	2.040	2.014	10.30
cis-1,3-Dichloropropene		0.804	0.726	0.717	0.683	0.704	0.645	0.713	7.44
Toluene	NA		1.597	1.776	1.475	1.347	1.538	1.546	10.25
trans-1,3-Dichloropropene		0.970	0.853	0.870	0.761	0.856	0.771	0.847	9.00
1,1,2-Trichloroethane		0.548	0.450	0.475	0.405	0.441	0.413	0.455	11.39
2-Hexanone		2.871	2.798	2.515	1.859	2.754	2.554	2.559	14.47
Dibromochloromethane		1.477	1.348	1.203	0.923	1.094	1.199	1.207	15.98
1,2-Dibromoethane		1.357	1.107	1.156	0.992	1.070	1.033	1.119	11.58
Tetrachloroethene		1.200	1.006	1.010	0.904	0.816	0.974	0.985	13.06

Chlorobenzene		1.907	1.428	1.450	1.244	1.317	1.332	1.446	16.45
Ethylbenzene		3.095	2.559	2.456	2.189	2.209	2.301	2.468	13.74
m & p-Xylene		2.816	2.063	2.131	1.815	1.695	1.961	2.080	18.95
Styrene		2.068	1.415	1.545	1.199	1.300	1.378	1.484	20.78
Bromoform		2.936	2.157	1.863	1.516	1.921	1.888	2.047	23.53
o-Xylene		3.113	2.264	2.297	1.995	2.041	2.088	2.300	18.10
1,1,2,2-Tetrachloroethane		3.014	1.951	1.913	1.502	2.453	1.821	2.109	25.54
4-Ethyltoluene		5.840	3.661	3.415	2.542	3.015	3.432	3.651	31.30
1,3,5-Trimethylbenzene		5.228	3.182	3.277	2.467	2.760	3.106	3.337	29.21
1,2,4-Trimethylbenzene	NA		3.380	3.492	2.547	2.634	3.355	3.082	14.68
1,3-Dichlorobenzene	NA		2.561	2.868	1.910	2.323	2.719	2.476	15.16
Benzyl chloride	NA		3.764	3.630	2.581	3.666	3.254	3.379	14.38
1,4-Dichlorobenzene	NA		2.760	2.905	1.964	2.240	2.911	2.556	16.83
1,2-Dichlorobenzene	NA		2.976	3.050	2.021	3.157	3.021	2.845	16.36
1,2,4-Trichlorobenzene	NA		5.365	6.245	3.193	5.135	6.388	5.265	24.29
Naphthalene	NA		8.347	12.481	6.198	7.708	9.229	8.792	26.61
Hexachlorobutadiene	NA		4.133	5.229	2.733	2.998	5.216	4.062	29.13
Pentafluorobenzene		1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.00
1,4-Difluorobenzene		1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.00
Toluene-d8		1.112	1.135	1.130	1.080	1.143	1.146	1.124	2.20

CALCULATIONS

EPA Method TO-15 Modified Full Scan GC/MS

SDG: LABQC
Laboratory Number: C07089

Run Method: 1T15EXAY.M
Quant Method: 1T15EXAY.M
Can Dilution Factor: 1.00
Air Volume: 200 ml MDL Factor 1
Gas Constant: 23.68
Decimal Places: 2

Compound	M.W.	Raw Amount	Result ppbv	Result ug/m3	(1) MDL ppbv	(2) RL ppbv	Calc MDL ppbv	Calc MDL ug/m3	Calc RL ppbv	Calc RL ug/m3	Flag	S062602-1 Spike ppmv
Dichlorodifluoromethane	120.9	4.483	22.413	114.43	0.105	0.525	0.53	2.68	2.63	13.40		0.103
Chloromethane	50.5	3.950	19.752	42.12	0.102	0.510	0.51	1.09	2.55	5.44		0.103
Freon 114	170.9	2.933	14.666	105.85	0.104	0.520	0.52	3.75	2.60	18.76		0.103
Vinyl chloride	62.5	4.365	21.823	57.60	0.104	0.520	0.52	1.37	2.60	6.86		0.103
Bromomethane	94.9	3.352	16.758	67.16	0.104	0.520	0.52	2.08	2.60	10.42		0.103
Chloroethane	64.5	3.863	19.315	52.61	0.104	0.520	0.52	1.42	2.60	7.08		0.103
Trichlorofluoromethane	137.4	5.465	27.326	158.56	0.104	0.520	0.52	3.02	2.60	15.09		0.103
Acetone	58.1	3.398	16.991	41.69	0.090	0.450	0.45	1.10	2.25	5.52		0.103
2-propanol	60.1	3.572	17.858	45.32	0.091	0.455	0.46	1.15	2.28	5.77		0.103
1,1-Dichloroethene	96.9	5.071	25.354	103.75	0.101	0.505	0.51	2.07	2.53	10.33		0.103
Freon 113	187.3	5.769	28.846	228.16	0.102	0.510	0.51	4.03	2.55	20.17		0.103
Dichloromethane	84.9	4.615	23.075	82.73	0.104	0.520	0.52	1.86	2.60	9.32		0.103
Carbon disulfide	76.1	4.085	20.424	65.64	0.089	0.445	0.45	1.43	2.23	7.15		0.103
trans-1,2-Dichloroethene	96.9	4.006	20.030	81.96	0.087	0.435	0.44	1.78	2.18	8.90		0.103
Methyl tert butyl ether	88.1	3.501	17.506	65.13	0.078	0.390	0.39	1.45	1.95	7.25		0.103
1,1-Dichloroethane	99.0	4.401	22.007	92.01	0.101	0.505	0.51	2.11	2.53	10.56		0.103
Vinyl acetate	86.1	3.551	17.756	64.56	0.086	0.430	0.43	1.56	2.15	7.82		0.103
2-Butanone	72.1	3.645	18.225	55.49	0.086	0.430	0.43	1.31	2.15	6.55		0.103
cis-1,2-Dichloroethene	96.9	4.162	20.810	85.16	0.103	0.515	0.52	2.11	2.58	10.54		0.103
Chloroform	119.4	4.148	20.739	104.57	0.102	0.510	0.51	2.57	2.55	12.86		0.103
1,1,1-Trichloroethane	133.4	4.546	22.728	128.04	0.102	0.510	0.51	2.87	2.55	14.37		0.103
1,2-Dichloroethane	99.0	4.588	22.940	95.91	0.103	0.515	0.52	2.15	2.58	10.77		0.103
Benzene	78.1	4.082	20.409	67.31	0.103	0.515	0.52	1.70	2.58	8.49		0.103
Carbon tetrachloride	153.8	4.763	23.815	154.67	0.102	0.510	0.51	3.31	2.55	16.56		0.103
1,2-Dichloropropane	113.0	4.422	22.110	105.51	0.103	0.515	0.52	2.46	2.58	12.29		0.103
1,4 Dioxane	88.1	3.484	17.418	64.80	0.088	0.440	0.44	1.64	2.20	8.18		0.103
Trichloroethene	131.4	4.467	22.336	123.94	0.103	0.515	0.52	2.86	2.58	14.29		0.103
Bromodichloromethane	163.8	3.587	17.934	124.05	0.080	0.400	0.40	2.77	2.00	13.83		0.103
Methyl Isobutyl Ketone	100.2	3.933	19.667	83.22	0.092	0.460	0.46	1.95	2.30	9.73		0.103
cis-1,3-Dichloropropene	111.0	4.327	21.633	101.41	0.106	0.530	0.53	2.48	2.65	12.42		0.103
Toluene	92.1	4.705	23.524	91.49	0.103	0.515	0.52	2.00	2.58	10.02		0.103
trans-1,3-Dichloropropene	111.0	3.958	19.788	92.76	0.104	0.520	0.52	2.44	2.60	12.19		0.103
1,1,2-Trichloroethane	133.4	4.116	20.580	115.94	0.102	0.510	0.51	2.87	2.55	14.37		0.103
2-Hexanone	100.2	3.306	16.530	69.94	0.088	0.440	0.44	1.86	2.20	9.31		0.103
Dibromochloromethane	208.3	3.922	19.611	172.51	0.089	0.445	0.45	3.91	2.23	19.57		0.103
1,2-Dibromoethane	187.9	4.136	20.678	164.08	0.104	0.520	0.52	4.13	2.60	20.63		0.103

Tetrachloroethene	165.8	4.648	23.240	162.72	0.102	0.510	0.51	3.57	2.55	17.85	0.103
Chlorobenzene	112.6	4.067	20.333	96.69	0.102	0.510	0.51	2.43	2.55	12.13	0.103
Ethylbenzene	106.2	4.227	21.134	94.78	0.104	0.520	0.52	2.33	2.60	11.66	0.103
m & p-Xylene	106.2	7.792	38.961	174.73	0.206	1.030	1.03	4.62	5.15	23.10	0.206
Styrene	104.2	3.410	17.049	75.02	0.103	0.515	0.52	2.27	2.58	11.33	0.103
Bromoform	252.7	3.366	16.828	179.58	0.093	0.465	0.47	4.96	2.33	24.81	0.103
o-Xylene	106.2	4.061	20.304	91.06	0.102	0.510	0.51	2.29	2.55	11.44	0.103
1,1,2,2-Tetrachloroethane	167.8	2.883	14.417	102.16	0.102	0.510	0.51	3.61	2.55	18.07	0.103
4-Ethyltoluene	120.2	3.113	15.567	79.02	0.091	0.455	0.46	2.31	2.28	11.55	0.103
1,3,5-Trimethylbenzene	120.2	3.439	17.193	87.27	0.106	0.530	0.53	2.69	2.65	13.45	0.103
1,2,4-Trimethylbenzene	120.2	3.518	17.592	89.30	0.102	0.510	0.51	2.59	2.55	12.94	0.103
1,3-Dichlorobenzene	147.0	3.062	15.308	95.03	0.102	0.510	0.51	3.17	2.55	15.83	0.103
Benzyl chloride	126.6	2.211	11.057	59.11	0.090	0.450	0.45	2.41	2.25	12.03	0.103
1,4-Dichlorobenzene	147.0	3.262	16.310	101.25	0.102	0.510	0.51	3.17	2.55	15.83	0.103
1,2-Dichlorobenzene	147.0	2.850	14.250	88.46	0.100	0.500	0.50	3.10	2.50	15.52	0.103
1,2,4-Trichlorobenzene	181.4	3.898	19.492	149.32	0.103	0.515	0.52	3.95	2.58	19.73	0.103
Naphthalene	128.2	2.709	13.546	73.34	0.239	1.195	1.20	6.47	5.98	32.35	0.103
Hexachlorobutadiene	260.8	2.220	11.101	122.26	0.103	0.515	0.52	5.67	2.58	28.36	0.103

SAMPLE CALCULATION

EPA Method TO-15 Modified Full Scan GC/MS

SDG:		**LABQC**
Laboratory Number:		**C07089**
Standard Volume	STV	5.0
Sample Volume	SV	200
Can Dilution Factor	CDF	1.00
Gas Constant		23.68
Decimal Places:		2

Sample Calculation:

1) Avg RFn = Sum $\left| \frac{(Astdni)}{(Cstdni)} \frac{(Cistdi)}{(Aistdi)} \right|_i$ Note: 1

2) Raw Amt = $\frac{(Ansamp)}{(Avg\ RFn)} \frac{(Cistdi)}{(Aistdi)}$ = Cn

3) Amount ppbv = $\frac{(Raw\ Amt)}{} \frac{1000}{(SV)} (CDF)$

4) Amount ug/m3 = $\frac{(amt(ppbv)}{} \frac{MW}{23.68}$

n	Compound	IS n	Chem type	MW	AvgRFn	Area Ansamp	Cistdi ppmv	Aistdi Ais	Cn ppmV Raw Amt	Amount ppbv	Amount ug/m3
2	Dichlorodifluoromethane	1	TRG	120.9	0.611	628681	20.000	4592723	4.483	22.41	114.42
3	Chloromethane	1	TRG	50.5	0.393	356307	20.000	4592723	3.950	19.75	42.12
4	Freon 114	1	TRG	170.9	0.650	437671	20.000	4592723	2.933	14.67	105.87
5	Vinyl chloride	1	TRG	62.5	0.213	213830	20.000	4592723	4.365	21.82	57.59
6	Bromomethane	1	TRG	94.9	0.212	162791	20.000	4592723	3.352	16.76	67.17
7	Chloroethane	1	TRG	64.5	0.112	98924	20.000	4592723	3.863	19.32	52.62
10	Trichlorofluoromethane	1	TRG	137.4	0.584	732398	20.000	4592723	5.465	27.33	158.58
12	Acetone	1	TRG	58.1	0.878	685443	20.000	4592723	3.398	16.99	41.69
13	2-propanol	1	TRG	60.1	0.668	547648	20.000	4592723	3.572	17.86	45.33
15	1,1-Dichloroethene	1	TRG	96.9	0.471	549025	20.000	4592723	5.071	25.35	103.73
17	Freon 113	1	TRG	187.3	0.370	489922	20.000	4592723	5.769	28.85	228.19
19	Dichloromethane	1	TRG	84.9	0.209	221150	20.000	4592723	4.615	23.07	82.71
20	Carbon disulfide	1	TRG	76.1	0.261	245000	20.000	4592723	4.085	20.42	65.62
21	trans-1,2-Dichloroethene	1	TRG	96.9	0.192	176946	20.000	4592723	4.006	20.03	81.96
22	Methyl tert butyl ether	1	TRG	88.1	0.910	731980	20.000	4592723	3.501	17.51	65.14
24	1,1-Dichloroethane	1	TRG	99.0	0.606	612912	20.000	4592723	4.401	22.01	92.02
25	Vinyl acetate	1	TRG	86.1	1.295	1055827	20.000	4592723	3.551	17.76	64.58
26	2-Butanone	1	TRG	72.1	0.170	142559	20.000	4592723	3.645	18.23	55.51
32	cis-1,2-Dichloroethene	1	TRG	96.9	0.313	299325	20.000	4592723	4.162	20.81	85.16
34	Chloroform	1	TRG	119.4	0.729	694543	20.000	4592723	4.148	20.74	104.58
36	1,1,1-Trichloroethane	35	TRG	133.4	0.726	715958	20.000	4338144	4.546	22.73	128.05
37	1,2-Dichloroethane	35	TRG	99.0	0.681	677682	20.000	4338144	4.588	22.94	95.91
40	Benzene	35	TRG	78.1	1.183	1047795	20.000	4338144	4.082	20.41	67.32
41	Carbon tetrachloride	35	TRG	153.8	0.737	761632	20.000	4338144	4.763	23.81	154.64
43	1,2-Dichloropropane	35	TRG	113.0	0.457	438795	20.000	4338144	4.422	22.11	105.51
44	1,4 Dioxane	35	TRG	88.1	0.350	264761	20.000	4338144	3.484	17.42	64.81
46	Trichloroethene	35	TRG	131.4	0.573	555190	20.000	4338144	4.467	22.34	123.96
47	Bromodichloromethane	35	TRG	163.8	0.902	701973	20.000	4338144	3.587	17.93	124.03
49	Methyl Isobutyl Ketone	35	TRG	100.2	2.014	1718281	20.000	4338144	3.933	19.67	83.23
50	cis-1,3-Dichloropropene	35	TRG	111.0	0.713	669464	20.000	4338144	4.327	21.63	101.39
51	Toluene	35	TRG	92.1	1.546	1578173	20.000	4338144	4.705	23.52	91.48
52	trans-1,3-Dichloropropene	35	TRG	111.0	0.847	726985	20.000	4338144	3.958	19.79	92.77
53	1,1,2-Trichloroethane	35	TRG	133.4	0.455	406435	20.000	4338144	4.116	20.58	115.94
54	2-Hexanone	35	TRG	100.2	2.559	1834668	20.000	4338144	3.306	16.53	69.95
57	Dibromochloromethane	35	TRG	208.3	1.207	1027121	20.000	4338144	3.922	19.61	172.50
58	1,2-Dibromoethane	35	TRG	187.9	1.119	1003875	20.000	4338144	4.136	20.68	164.10
59	Tetrachloroethene	35	TRG	165.8	0.985	993276	20.000	4338144	4.648	23.24	162.72
60	Chlorobenzene	35	TRG	112.6	1.446	1275607	20.000	4338144	4.067	20.33	96.67
62	Ethylbenzene	35	TRG	106.2	2.468	2262841	20.000	4338144	4.227	21.13	94.76

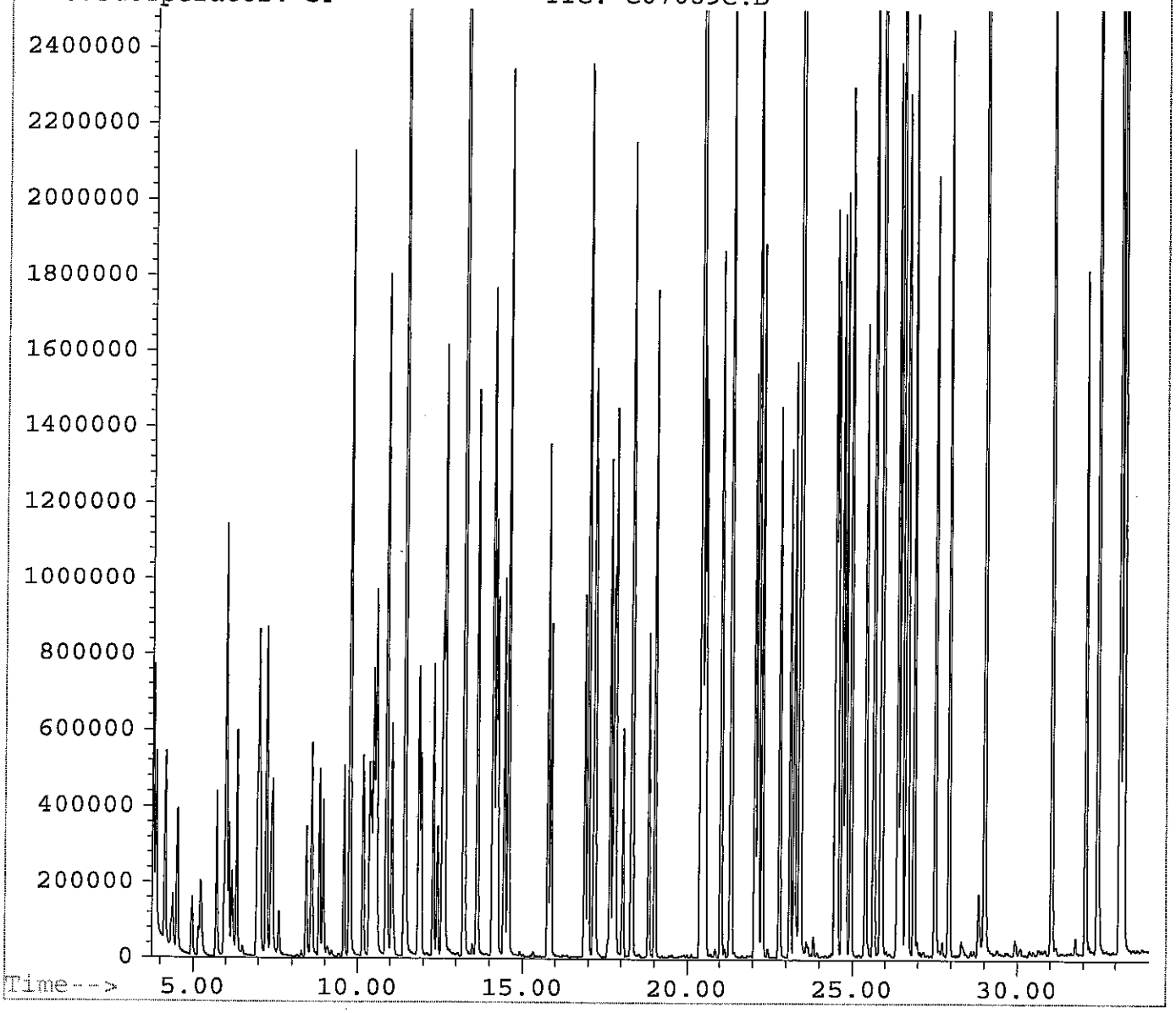
63	m & p-Xylene	35	TRG	106.2	2.080	3516006	20.000	4338144	7.792	38.96	174.73
64	Styrene	35	TRG	104.2	1.484	1097925	20.000	4338144	3.410	17.05	75.03
65	Bromoform	35	TRG	252.7	2.047	1494313	20.000	4338144	3.366	16.83	179.60
66	o-Xylene	35	TRG	106.2	2.300	2025664	20.000	4338144	4.061	20.30	91.04
67	1,1,2,2-Tetrachloroethane	35	TRG	167.8	2.109	1319078	20.000	4338144	2.883	14.42	102.18
72	4-Ethyltoluene	35	TRG	120.2	3.651	2465439	20.000	4338144	3.113	15.57	79.03
73	1,3,5-Trimethylbenzene	35	TRG	120.2	3.337	2488685	20.000	4338144	3.439	17.19	87.26
76	1,2,4-Trimethylbenzene	35	TRG	120.2	3.082	2351736	20.000	4338144	3.518	17.59	89.29
78	1,3-Dichlorobenzene	35	TRG	147.0	2.476	1644354	20.000	4338144	3.062	15.31	95.04
80	Benzyl chloride	35	TRG	126.6	3.379	1620691	20.000	4338144	2.211	11.06	59.13
81	1,4-Dichlorobenzene	35	TRG	147.0	2.556	1808354	20.000	4338144	3.262	16.31	101.25
83	1,2-Dichlorobenzene	35	TRG	147.0	2.845	1758820	20.000	4338144	2.850	14.25	88.46
86	1,2,4-Trichlorobenzene	35	TRG	181.4	5.265	4452182	20.000	4338144	3.898	19.49	149.30
87	Naphthalene	35	TRG	128.2	8.792	5166964	20.000	4338144	2.709	13.55	73.36
88	Hexachlorobutadiene	35	TRG	260.8	4.062	1955976	20.000	4338144	2.220	11.10	122.25
1	Pentafluorobenzene	1	IS		1.000	4592723	20.000	4592723			
35	1,4-Difluorobenzene	35	IS		1.000	4338144	20.000	4338144			
94	Toluene-d8	35	SURR		1.124	2529725	20.000	4338144			

Calculation Definitions:

n	compound n
i	i th calibration level
Astdni	Standard Area for compound n at ith calibration level
Cstdni	Standard Concentration for compound n at ith calibration level in ppmv
Cistdi	Internal Standard Conc used for compound n at ith calibration level in ppmv
Aistdi	Internal Standard Area used for compound n at ith calibration level
Ansamp	Sample Area for compound n
Avg RFn	Average response factor for all ith calibration levels for compound n
Raw Amount	Sample Concentration in ppmv before applying factors
Cistd	Concentration internal standard used for compound n in sample in ppmv
Aistd	Area of internal standard used for compound n in sample
Cn	Concentration of compound n in sample in ppmv
23.68	Gas constant at 60 F as per EPA source test protocol
MW	Molecular weight of compound
Note (1) : Avg RFn	The values for the Average Response Factor AvgRFn can be optained from the response Factor Report for the Initial Calibration, or from the Calibration Report

Name of file: C:\MSCHEM\1\DATA\07089MS1\C07089C.D

Name of operator: JF TIC: C07089C.D



METHOD BLANK REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified Full Scan GC/MS | **SDG:** LABQC
Analytical Method: TO-15 | **Laboratory Number:** B07089

File:	CC662A.D	**Date Sampled:**		**Time:**	
Description:	METHOD BLANK	**Date Received:**			
Can/Tube#:		**Date Extracted:**			
Sam_Type:	MB	**Date Analyzed:**	07/08/09	**Time:**	14:05
QC_Batch:	070809-MS1	**Can Dilution Factor:**	1.00		0
Air Volume:	2 ml	**Not Detected Flag:**	ND		

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
75-71-8	Dichlorodifluoromethane	53	263	ND	268	1,340	ND	ND
74-87-3	Chloromethane	51	255	ND	109	544	ND	ND
76-14-2	Freon 114	52	260	ND	375	1,876	ND	ND
75-01-4	Vinyl chloride	52	260	ND	137	686	ND	ND
74-83-9	Bromomethane	52	260	ND	208	1,042	ND	ND
75-00-3	Chloroethane	52	260	ND	142	708	ND	ND
75-69-4	Trichlorofluoromethane	52	260	ND	302	1,509	ND	ND
67-64-1	Acetone	45	225	113	110	552	278	J
67-63-0	2-propanol	46	228	112	115	577	284	J
75-35-4	1,1-Dichloroethene	51	253	ND	207	1,033	ND	ND
76-13-1	Freon 113	51	255	ND	403	2,017	ND	ND
75-09-2	Dichloromethane	52	260	ND	186	932	ND	ND
75-15-0	Carbon disulfide	45	223	ND	143	715	ND	ND
156-60-5	trans-1,2-Dichloroethene	44	218	ND	178	890	ND	ND
1634-04-4	Methyl tert butyl ether	39	195	ND	145	725	ND	ND
75-34-3	1,1-Dichloroethane	51	253	ND	211	1,056	ND	ND
108-05-4	Vinyl acetate	43	215	ND	156	782	ND	ND
78-93-3	2-Butanone	43	215	ND	131	655	ND	ND
156-59-2	cis-1,2-Dichloroethene	52	258	ND	211	1,054	ND	ND
67-66-3	Chloroform	51	255	ND	257	1,286	ND	ND
71-55-6	1,1,1-Trichloroethane	51	255	ND	287	1,437	ND	ND
107-06-2	1,2-Dichloroethane	52	258	ND	215	1,077	ND	ND
71-43-2	Benzene	52	258	ND	170	849	ND	ND
56-23-5	Carbon tetrachloride	51	255	ND	331	1,656	ND	ND
78-87-5	1,2-Dichloropropane	52	258	ND	246	1,229	ND	ND
123-91-1	1,4 Dioxane	44	220	ND	164	818	ND	ND
79-01-6	Trichloroethene	52	258	ND	286	1,429	ND	ND
75-27-4	Bromodichloromethane	40	200	ND	277	1,383	ND	ND
108-10-1	Methyl Isobutyl Ketone	46	230	ND	195	973	ND	ND
10061-01-5	cis-1,3-Dichloropropene	53	265	ND	248	1,242	ND	ND
108-88-3	Toluene	52	258	89	200	1,002	345	J
10061-02-6	trans-1,3-Dichloropropene	52	260	ND	244	1,219	ND	ND
79-00-5	1,1,2-Trichloroethane	51	255	ND	287	1,437	ND	ND
591-78-6	2-Hexanone	44	220	ND	186	931	ND	ND
124-48-1	Dibromochloromethane	45	223	ND	391	1,957	ND	ND
106-93-4	1,2-Dibromoethane	52	260	ND	413	2,063	ND	ND
127-18-4	Tetrachloroethene	51	255	ND	357	1,785	ND	ND
108-90-7	Chlorobenzene	51	255	ND	243	1,213	ND	ND
100-41-4	Ethylbenzene	52	260	ND	233	1,166	ND	ND
108-38-3	m & p-Xylene	103	515	ND	462	2,310	ND	ND

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
100-42-5	Styrene	52	258	ND	227	1,133	ND	ND
75-25-2	Bromoform	47	233	ND	496	2,481	ND	ND
95-47-6	o-Xylene	51	255	ND	229	1,144	ND	ND
79-34-5	1,1,2,2-Tetrachloroethane	51	255	ND	361	1,807	ND	ND
622-96-8	4-Ethyltoluene	46	228	ND	231	1,155	ND	ND
108-67-8	1,3,5-Trimethylbenzene	53	265	ND	269	1,345	ND	ND
95-63-6	1,2,4-Trimethylbenzene	51	255	ND	259	1,294	ND	ND
541-73-1	1,3-Dichlorobenzene	51	255	ND	317	1,583	ND	ND
100-44-7	Benzyl chloride	45	225	ND	241	1,203	ND	ND
106-46-7	1,4-Dichlorobenzene	51	255	ND	317	1,583	ND	ND
95-50-1	1,2-Dichlorobenzene	50	250	ND	310	1,552	ND	ND
120-82-1	1,2,4-Trichlorobenzene	52	258	ND	395	1,973	ND	ND
91-20-3	Naphthalene	120	598	ND	647	3,235	ND	ND
87-68-3	Hexachlorobutadiene	52	258	ND	567	2,836	ND	ND

	Surrogate Recovery	Spike Amt. ppbV	Amount ppbV	% Rec.	QC Limits	Flag * = Out
2037-26-5	Toluene-d8	10.000	10.492	105	70-130	

Notes: 1) Reported results are to be interpreted to two significant figures.
2) ug/m3 = ppbV*FW/23.68 calculated assuming conditions at 60 F and 1 atm.
3) MDL and RL are adjusted for sample volume and can dilution.
4) U and ND are Flags used for Not Detected
5) J is a flag for a result between the MDL and the RL (or lower quantitation limit, LQL)

QUANTITATION REPORT

EPA Method TO-15 Modified Full Scan GC/MS

Review **EAS Sample ID: CC662A.**

File Name:	CC662A.D			1 KB
Sample ID:	METHOD BLANK			2 AT
Date:	8 Jul 109 2:05 pm	Cal Amounts		3 BB
Run Method:	1T15EXAY.M	IS Areas		4 SH
Quant Method:	1T15EXAY.M	Carryover		
Cal Update:	Tue Mar 17 14:18:15 2009			
Template:	1TO15EXT.MS1			
Can Factor:	1.00			
Volume:	2 ml	Analyst:	KB 1	

CAS#	Compound	n	Raw Amount	RT	Target RT	Ion	Sample Area	Qualifier	Lower Qual	Upper Qual	Qual Flag	Cal Flag	Int Flag
75-71-8	Dichlorodifluoromethane	2	0.004	4.16	3.83	85.00	616	0	25	37			
74-87-3	Chloromethane	3	0.000	0.00	4.09	50.00	0	0	22	32			
76-14-2	Freon 114	4	0.004	4.16	4.11	85.00	616	0	44	65			
75-01-4	Vinyl chloride	5	0.000	0.00	4.33	62.00	0	0	24	36			
74-83-9	Bromomethane	6	0.000	0.00	4.92	94.00	0	0	73	109			
75-00-3	Chloroethane	7	0.000	0.00	5.12	64.00	0	0	26	40			
75-69-4	Trichlorofluoromethane	10	0.000	0.00	5.94	101.00	0	0	48	73			
67-64-1	Acetone	12	0.227	6.09	6.04	43.00	47716	20	16	24			
67-63-0	2-propanol	13	0.224	6.23	6.14	45.00	35810	15	18	27	Q		
75-35-4	1,1-Dichloroethene	15	0.000	0.00	6.89	61.00	0	0	34	51			
76-13-1	Freon 113	17	0.000	0.00	7.16	151.00	0	0	101	152			
75-09-2	Dichloromethane	19	0.000	0.00	7.31	84.00	0	0	51	77			
75-15-0	Carbon disulfide	20	0.000	0.00	7.54	76.00	0	0	16	24			
156-60-5	trans-1,2-Dichloroethene	21	0.000	0.00	8.38	96.00	0	0	172	258			
1634-04-4	Methyl tert butyl ether	22	0.000	0.00	8.54	73.00	0	0	18	27			
75-34-3	1,1-Dichloroethane	24	0.000	0.00	8.90	63.00	0	0	24	36			
108-05-4	Vinyl acetate	25	0.007	10.35	10.32	43.00	2164	0	0	0			
78-93-3	2-Butanone	26	0.031	9.58	9.54	72.00	1248	0	30	45	Q		
156-59-2	cis-1,2-Dichloroethene	32	0.000	0.00	10.11	96.00	0	0	139	209			
67-66-3	Chloroform	34	0.000	0.00	10.53	83.00	0	0	51	77			
71-55-6	1,1,1-Trichloroethane	36	0.000	0.00	11.80	97.00	0	0	51	76			
107-06-2	1,2-Dichloroethane	37	0.000	0.00	11.87	61.95	0	0	25	37			
71-43-2	Benzene	40	0.045	12.56	12.51	78.00	11859	23	19	29			
56-23-5	Carbon tetrachloride	41	0.000	0.00	12.56	116.90	0	0	79	119			
78-87-5	1,2-Dichloropropane	43	0.007	13.96	14.07	63.00	705	0	58	88			
123-91-1	1,4 Dioxane	44	0.018	14.47	14.40	88.00	1436	47	76	114	Q		
79-01-6	Trichloroethene	46	0.035	14.17	14.13	130.00	4490	79	79	119	Q		
75-27-4	Bromodichloromethane	47	0.000	0.00	14.40	83.00	0	0	49	74			
108-10-1	Methyl Isobutyl Ketone	49	0.008	15.79	15.70	43.00	3667	0	21	35	Q		
10061-01-5	cis-1,3-Dichloropropene	50	0.000	0.00	15.82	75.00	0	0	15	23			
108-88-3	Toluene	51	0.177	17.14	17.11	91.00	61611	59	44	66			
10061-02-6	trans-1,3-Dichloropropene	52	0.004	16.88	16.85	75.00	683	0	16	23			
79-00-5	1,1,2-Trichloroethane	53	0.007	17.14	17.16	61.00	712	0	91	136			
591-78-6	2-Hexanone	54	0.026	17.83	17.80	43.00	14687	48	28	47	Q		
124-48-1	Dibromochloromethane	57	0.000	0.00	18.30	129.00	0	0	60	91			
106-93-4	1,2-Dibromoethane	58	0.009	18.82	18.80	107.00	2266	89	75	113			

CAS#	Compound	n	Raw Amount	RT	Target RT	Ion	Sample Area	Qualifier	Lower Qual	Upper Qual	Qual Flag	Cal Flag	Int Flag
127-18-4	Tetrachloroethene	59	0.000	0.00	18.97	166.00	0	0	52	78			
108-90-7	Chlorobenzene	60	0.010	20.48	20.45	112.00	3149	0	25	38	Q		
100-41-4	Ethylbenzene	62	0.015	21.03	17.80	91.00	8507	33	21	32	Q		
108-38-3	m & p-Xylene	63	0.075	21.31	21.28	91.00	35077	44	32	48			
100-42-5	Styrene	64	0.021	22.14	22.14	104.00	6831	61	53	79			
75-25-2	Bromoform	65	0.008	22.06	22.00	173.00	3716	0	39	59	Q		
95-47-6	o-Xylene	66	0.024	22.27	22.25	91.00	12320	40	30	45			
79-34-5	1,1,2,2-Tetrachloroethane	67	0.023	22.80	22.75	83.00	10719	19	8	13	Q		
622-96-8	4-Ethyltoluene	72	0.025	24.77	24.74	105.00	20739	20	20	31	Q		
108-67-8	1,3,5-Trimethylbenzene	73	0.022	24.94	24.92	105.00	16716	36	33	49			
95-63-6	1,2,4-Trimethylbenzene	76	0.049	25.88	25.89	105.00	33635	42	32	48			
541-73-1	1,3-Dichlorobenzene	78	0.036	26.45	26.41	146.00	20184	42	34	51			
100-44-7	Benzyl chloride	80	0.010	26.62	26.61	91.00	7742	0	15	23	Q		
106-46-7	1,4-Dichlorobenzene	81	0.040	26.66	26.68	146.00	22759	40	34	51			
95-50-1	1,2-Dichlorobenzene	83	0.036	27.52	27.47	146.00	22677	35	34	51			
120-82-1	1,2,4-Trichlorobenzene	86	0.043	32.07	32.18	180.00	50934	108	78	117			
91-20-3	Naphthalene	87	0.069	32.44	32.41	128.00	137108	13	10	16			
87-68-3	Hexachlorobutadiene	88	0.027	33.11	33.08	225.00	25014	32	22	33			
363-72-4	Pentafluorobenzene	1	20.000	11.40	11.38	168.00	**4790129**						
540-36-3	1,4-Difluorobenzene	35	20.000	13.20	13.17	114.00	**4489502**						
2037-26-5	Toluene-d8	94	**10.492**	16.97	16.94	98.00	2648030	62	51	77			

Integration Flags:

If no flag the Integration was done by the instrument computer

M1 Manual Integration because the computer did not integrated the peak or integrated the wrong peak

M2 Manual Integration because computer integration of baseline was different then Inital Calibration

INITIAL CALIBRATION REPORT

EPA Method TO-15 Modified Full Scan GC/MS

		SDG:	LABQC
		QC_Batch:	070809-MS1
File Name:	CC662A.D	Instrument Name:	5970 - In
Sample ID:	METHOD BLANK		
Sample Analysis Date:	8 Jul 109 2:05 pm	Number Compounds:	96
Run Method:	1T15EXAY.M	IS1: ST60403	20
Quant and Calibration Method:	1T15EXAY.M	IS2: ST60403	20
Cal Update:	Tue Mar 17 14:18:15 2009	IS3:	
Template:	1TO15EXT.MS1	IS4:	

Calibration Title: EPA T0-15

		Calibration Amount CA, ppmv						Calibration Response, Area					
		Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
		Amt	Amt	Amt	Amt	Amt	Amt	C03179C.D	C03179E.D	C03179B.D	C03179A.D	C03169H.D	C03179D.D
n	Compound	0.25	4.0	1.0	5.0	10.0	2.0	0.25	4.0	1.0	5.0	10.0	2.0
2	Dichlorodifluoromethane	0.263	4.200	1.050	5.250	10.500	2.100	22559	398558	88898	436110	840988	185058
3	Chloromethane	0.255	4.080	1.020	5.100	10.200	2.040	15230	241294	55434	272653	505057	113562
4	Freon 114	0.260	4.160	1.040	5.200	10.400	2.080	25317	399238	94441	464176	861160	193013
5	Vinyl chloride	0.260	4.160	1.040	5.200	10.400	2.080	7909	132864	32643	150492	285530	62953
6	Bromomethane	0.260	4.160	1.040	5.200	10.400	2.080	8153	136639	28890	149016	274473	66325
7	Chloroethane	0.260	4.160	1.040	5.200	10.400	2.080	4307	71497	16630	78611	141439	32925
10	Trichlorofluoromethane	0.260	4.160	1.040	5.200	10.400	2.080	22371	364524	85037	431144	716396	179451
12	Acetone	0.225	3.600	0.900	4.500	9.000	1.800	42851	442389	113697	494726	770083	184591
13	2-propanol	0.228	3.640	0.910	4.550	9.100	1.820	19578	321532	75563	289890	1427833	154437
15	1,1-Dichloroethene	0.253	4.040	1.010	5.050	10.100	2.020	16793	248606	63935	305424	730028	150732
17	Freon 113	0.255	4.080	1.020	5.100	10.200	2.040	13083	220191	45725	205080	591375	132996
19	Dichloromethane	0.260	4.160	1.040	5.200	10.400	2.080	8354	124766	26131	120655	330491	71297
20	Carbon disulfide	0.223	3.560	0.890	4.450	8.900	1.780	8703	137347	33136	122015	313353	78232
21	trans-1,2-Dichloroethene	0.218	3.480	0.870	4.350	8.700	1.740	5940	117954	23397	80889	230621	52404
22	Methyl tert butyl ether	0.195	3.120	0.780	3.900	7.800	1.560	24271	482973	97431	369980	967308	233954
24	1,1-Dichloroethane	0.253	4.040	1.010	5.050	10.100	2.020	22823	387657	85531	331041	871129	183187
25	Vinyl acetate	0.215	3.440	0.860	4.300	8.600	1.720	40148	687529	149287	676740	1560060	338492
26	2-Butanone	0.215	3.440	0.860	4.300	8.600	1.720	5400	92652	22013	71425	205517	45058
32	cis-1,2-Dichloroethene	0.258	4.120	1.030	5.150	10.300	2.060	11695	190337	43510	224404	421914	95703
34	Chloroform	0.255	4.080	1.020	5.100	10.200	2.040	27147	449509	101707	516969	959204	213353
36	1,1,1-Trichloroethane	0.255	4.080	1.020	5.100	10.200	2.040	26931	432442	100881	509527	970639	210683
37	1,2-Dichloroethane	0.258	4.120	1.030	5.150	10.300	2.060	26512	398927	96975	495766	920839	187037

(201)

n	Compound	Amt 0.25	Amt 4.0	Amt 1.0	Amt 5.0	Amt 10.0	Amt 2.0	C03179C.D 0.25	C03179E.D 4.0	C03179B.D 1.0	C03179A.D 5.0	C03169H.D 10.0	C03179D.D 2.0
40	Benzene	-1.000	4.120	1.030	5.150	10.300	2.060	-1	712515	206967	782160	1387400	364766
41	Carbon tetrachloride	0.255	4.080	1.020	5.100	10.200	2.040	26276	451629	105798	518753	931992	220983
43	1,2-Dichloropropane	0.258	4.120	1.030	5.150	10.300	2.060	18588	266688	66789	305497	598806	132416
44	1,4 Dioxane	0.220	3.520	0.880	4.400	8.800	1.760	11252	171544	43700	161310	540834	80192
46	Trichloroethene	0.258	4.120	1.030	5.150	10.300	2.060	27013	323273	83100	364698	666308	165489
47	Bromodichloromethane	0.200	3.200	0.800	4.000	8.000	1.600	27507	476051	96325	417248	885573	218119
49	Methyl Isobutyl Ketone	0.230	3.680	0.920	4.600	9.200	1.840	67434	1179200	250239	1039898	2505790	566705
50	cis-1,3-Dichloropropene	0.265	4.240	1.060	5.300	10.600	2.120	28339	441906	107039	492454	1010236	206495
51	Toluene	-1.000	4.120	1.030	5.150	10.300	2.060	-1	944443	257501	1033029	1877014	478350
52	trans-1,3-Dichloropropene	0.260	4.160	1.040	5.200	10.400	2.080	33546	509168	127376	538174	1205186	242137
53	1,1,2-Trichloroethane	0.255	4.080	1.020	5.100	10.200	2.040	18573	263308	68163	281046	608914	127239
54	2-Hexanone	0.220	3.520	0.880	4.400	8.800	1.760	84018	1413472	311524	1112452	3278869	678898
57	Dibromochloromethane	0.223	3.560	0.890	4.450	8.900	1.780	43801	688881	150691	558917	1316838	322250
58	1,2-Dibromoethane	0.260	4.160	1.040	5.200	10.400	2.080	46912	660815	169213	701472	1505940	324567
59	Tetrachloroethene	0.255	4.080	1.020	5.100	10.200	2.040	40710	589393	145069	627137	1126037	300057
60	Chlorobenzene	0.255	4.080	1.020	5.100	10.200	2.040	64660	836027	208106	862738	1818049	410336
62	Ethylbenzene	0.260	4.160	1.040	5.200	10.400	2.080	107037	1527752	359496	1548148	3108186	722767
63	m & p-Xylene	0.515	8.240	2.060	10.300	20.600	4.120	192864	2440351	617919	2542524	4725274	1220126
64	Styrene	0.258	4.120	1.030	5.150	10.300	2.060	70964	837020	224026	840176	1812012	428714
65	Bromoform	0.233	3.720	0.930	4.650	9.300	1.860	90991	1151698	243927	958925	2416870	530300
66	o-Xylene	0.255	4.080	1.020	5.100	10.200	2.040	105567	1325719	329821	1384162	2817484	643280
67	1,1,2,2-Tetrachloroethane	0.255	4.080	1.020	5.100	10.200	2.040	102201	1142635	274703	1042229	3385910	560899
72	4-Ethyltoluene	0.228	3.640	0.910	4.550	9.100	1.820	177076	1912961	437379	1573293	3712735	943267
73	1,3,5-Trimethylbenzene	0.265	4.240	1.060	5.300	10.600	2.120	184274	1936506	488965	1778188	3957960	994445
76	1,2,4-Trimethylbenzene	-1.000	4.080	1.020	5.100	10.200	2.040	-1	1979227	501359	1766777	3635276	1033463
78	1,3-Dichlorobenzene	-1.000	4.080	1.020	5.100	10.200	2.040	-1	1499786	411700	1325016	3205866	837609
80	Benzyl chloride	-1.000	3.600	0.900	4.500	9.000	1.800	-1	1944712	459781	1580130	4463720	884546
81	1,4-Dichlorobenzene	-1.000	4.080	1.020	5.100	10.200	2.040	-1	1616283	417021	1362139	3091714	896732
83	1,2-Dichlorobenzene	-1.000	4.000	1.000	5.000	10.000	2.000	-1	1708595	429307	1374687	4272294	912351
86	1,2,4-Trichlorobenzene	-1.000	4.120	1.030	5.150	10.300	2.060	-1	3172331	905400	2236815	7156710	1987175
87	Naphthalene	-1.000	9.560	2.390	11.950	23.900	4.780	-1	11453402	4198495	10074168	24925580	6661715
88	Hexachlorobutadiene	-1.000	4.120	1.030	5.150	10.300	2.060	-1	2443776	758051	1914490	4177636	1622637
1	Pentafluorobenzene	20.000	20.000	20.000	20.000	20.000	20.000	2643183	2935915	2871816	2719013	2737194	3022845
35	1,4-Difluorobenzene	20.000	20.000	20.000	20.000	20.000	20.000	2659938	2870629	2814997	2720455	2706138	3020264
94	Toluene-d8	10.000	10.000	10.000	10.000	10.000	10.000	1479389	1629143	1590486	1469067	1546296	1730275

(202)

INITIAL CALIBRATION REPORT: Response Factors

SDG:	**LABQC**	**Sample Calculation:**	
QC_Batch:	**070809-MS1**	1) Avg RFn = Sum	$\left[\frac{(Astdni)}{(Cstdni)} \frac{(Cistdi)}{(Aistdi)}\right]_i$
Sample ID:	METHOD BLANK		
Sample Analysis Date:	8 Jul 109 2:05 pm		
Run Method:	1T15EXAY.M		
Quant Method:	1T15EXAY.M		
Cal Update:	Tue Mar 17 14:18:15 2009		
Template:	1TO15EXT.MS1		

Response Factors

Compound	RF1	RF2	RF3	RF4	RF5	RF6	AvgRFn	%RSD
Dichlorodifluoromethane	0.649	0.646	0.590	0.611	0.585	0.583	0.611	4.97
Chloromethane	0.452	0.403	0.378	0.393	0.362	0.368	0.393	8.34
Freon 114	0.737	0.654	0.632	0.657	0.605	0.614	0.650	7.29
Vinyl chloride	0.230	0.218	0.219	0.213	0.201	0.200	0.213	5.40
Bromomethane	0.237	0.224	0.193	0.211	0.193	0.211	0.212	8.16
Chloroethane	0.125	0.117	0.111	0.111	0.099	0.105	0.112	8.18
Trichlorofluoromethane	0.651	0.597	0.569	0.610	0.503	0.571	0.584	8.47
Acetone	1.441	0.837	0.880	0.809	0.625	0.679	0.878	33.28
2-propanol	0.650	0.602	0.578	0.469	1.146	0.561	0.668	36.24
1,1-Dichloroethene	0.502	0.419	0.441	0.445	0.528	0.494	0.471	9.01
Freon 113	0.388	0.368	0.312	0.296	0.424	0.431	0.370	15.21
Dichloromethane	0.243	0.204	0.175	0.171	0.232	0.227	0.209	14.64
Carbon disulfide	0.295	0.263	0.259	0.202	0.257	0.291	0.261	12.82
trans-1,2-Dichloroethene	0.206	0.231	0.187	0.137	0.194	0.199	0.192	16.18
Methyl tert butyl ether	0.942	1.055	0.870	0.698	0.906	0.992	0.910	13.48
1,1-Dichloroethane	0.683	0.654	0.590	0.482	0.630	0.600	0.606	11.51
Vinyl acetate	1.413	1.362	1.209	1.158	1.325	1.302	1.295	7.38
2-Butanone	0.190	0.183	0.178	0.122	0.175	0.173	0.170	14.31
cis-1,2-Dichloroethene	0.343	0.315	0.294	0.321	0.299	0.307	0.313	5.59
Chloroform	0.806	0.751	0.694	0.746	0.687	0.692	0.729	6.41
1,1,1-Trichloroethane	0.794	0.738	0.703	0.734	0.703	0.684	0.726	5.40
1,2-Dichloroethane	0.773	0.675	0.669	0.708	0.661	0.601	0.681	8.33
Benzene	NA	1.205	1.428	1.117	0.996	1.173	1.183	13.36
Carbon tetrachloride	0.775	0.771	0.737	0.748	0.675	0.717	0.737	5.04
1,2-Dichloropropane	0.542	0.451	0.461	0.436	0.430	0.426	0.457	9.47
1,4 Dioxane	0.385	0.340	0.353	0.270	0.454	0.302	0.350	18.49
Trichloroethene	0.787	0.547	0.573	0.521	0.478	0.532	0.573	19.12
Bromodichloromethane	1.034	1.036	0.855	0.767	0.818	0.903	0.902	12.44
Methyl Isobutyl Ketone	2.204	2.233	1.932	1.662	2.013	2.040	2.014	10.30
cis-1,3-Dichloropropene	0.804	0.726	0.717	0.683	0.704	0.645	0.713	7.44
Toluene	NA	1.597	1.776	1.475	1.347	1.538	1.546	10.25
trans-1,3-Dichloropropene	0.970	0.853	0.870	0.761	0.856	0.771	0.847	9.00
1,1,2-Trichloroethane	0.548	0.450	0.475	0.405	0.441	0.413	0.455	11.39
2-Hexanone	2.871	2.798	2.515	1.859	2.754	2.554	2.559	14.47
Dibromochloromethane	1.477	1.348	1.203	0.923	1.094	1.199	1.207	15.98
1,2-Dibromoethane	1.357	1.107	1.156	0.992	1.070	1.033	1.119	11.58
Tetrachloroethene	1.200	1.006	1.010	0.904	0.816	0.974	0.985	13.06

Chlorobenzene		1.907	1.428	1.450	1.244	1.317	1.332	1.446	16.45
Ethylbenzene		3.095	2.559	2.456	2.189	2.209	2.301	2.468	13.74
m & p-Xylene		2.816	2.063	2.131	1.815	1.695	1.961	2.080	18.95
Styrene		2.068	1.415	1.545	1.199	1.300	1.378	1.484	20.78
Bromoform		2.936	2.157	1.863	1.516	1.921	1.888	2.047	23.53
o-Xylene		3.113	2.264	2.297	1.995	2.041	2.088	2.300	18.10
1,1,2,2-Tetrachloroethane		3.014	1.951	1.913	1.502	2.453	1.821	2.109	25.54
4-Ethyltoluene		5.840	3.661	3.415	2.542	3.015	3.432	3.651	31.30
1,3,5-Trimethylbenzene		5.228	3.182	3.277	2.467	2.760	3.106	3.337	29.21
1,2,4-Trimethylbenzene	NA		3.380	3.492	2.547	2.634	3.355	3.082	14.68
1,3-Dichlorobenzene	NA		2.561	2.868	1.910	2.323	2.719	2.476	15.16
Benzyl chloride	NA		3.764	3.630	2.581	3.666	3.254	3.379	14.38
1,4-Dichlorobenzene	NA		2.760	2.905	1.964	2.240	2.911	2.556	16.83
1,2-Dichlorobenzene	NA		2.976	3.050	2.021	3.157	3.021	2.845	16.36
1,2,4-Trichlorobenzene	NA		5.365	6.245	3.193	5.135	6.388	5.265	24.29
Naphthalene	NA		8.347	12.481	6.198	7.708	9.229	8.792	26.61
Hexachlorobutadiene	NA		4.133	5.229	2.733	2.998	5.216	4.062	29.13
Pentafluorobenzene		1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.00
1,4-Difluorobenzene		1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.00
Toluene-d8		1.112	1.135	1.130	1.080	1.143	1.146	1.124	2.20

CALCULATIONS

EPA Method TO-15 Modified Full Scan GC/MS

SDG: LABQC
Laboratory Number: B07089

Run Method: 1T15EXAY.M
Quant Method: 1T15EXAY.M
Can Dilution Factor: 1.00
Air Volume: 2 ml MDL Factor 1
Gas Constant: 23.68
Decimal Places: 0

Compound	M.W.	Raw Amount	Result ppbv	Result ug/m3	(1) MDL ppbv	(2) RL ppbv	Calc MDL ppbv	Calc MDL ug/m3	Calc RL ppbv	Calc RL ug/m3	Flag	S062602-1 Spike ppmv
Dichlorodifluoromethane	120.9	0.004	2.106	11	0.105	0.525	52.50	268	262.50	1,340	U	0.103
Chloromethane	50.5	0.000	0.000	0	0.102	0.510	51.00	109	255.00	544	U	0.103
Freon 114	170.9	0.004	1.979	14	0.104	0.520	52.00	375	260.00	1,876	U	0.103
Vinyl chloride	62.5	0.000	0.000	0	0.104	0.520	52.00	137	260.00	686	U	0.103
Bromomethane	94.9	0.000	0.000	0	0.104	0.520	52.00	208	260.00	1,042	U	0.103
Chloroethane	64.5	0.000	0.000	0	0.104	0.520	52.00	142	260.00	708	U	0.103
Trichlorofluoromethane	137.4	0.000	0.000	0	0.104	0.520	52.00	302	260.00	1,509	U	0.103
Acetone	58.1	0.227	113.404	278	0.090	0.450	45.00	110	225.00	552	J	0.103
2-propanol	60.1	0.224	111.961	284	0.091	0.455	45.50	115	227.50	577	J	0.103
1,1-Dichloroethene	96.9	0.000	0.000	0	0.101	0.505	50.50	207	252.50	1,033	U	0.103
Freon 113	187.3	0.000	0.000	0	0.102	0.510	51.00	403	255.00	2,017	U	0.103
Dichloromethane	84.9	0.000	0.000	0	0.104	0.520	52.00	186	260.00	932	U	0.103
Carbon disulfide	76.1	0.000	0.000	0	0.089	0.445	44.50	143	222.50	715	U	0.103
trans-1,2-Dichloroethene	96.9	0.000	0.000	0	0.087	0.435	43.50	178	217.50	890	U	0.103
Methyl tert butyl ether	88.1	0.000	0.000	0	0.078	0.390	39.00	145	195.00	725	U	0.103
1,1-Dichloroethane	99.0	0.000	0.000	0	0.101	0.505	50.50	211	252.50	1,056	U	0.103
Vinyl acetate	86.1	0.007	3.489	13	0.086	0.430	43.00	156	215.00	782	U	0.103
2-Butanone	72.1	0.031	15.297	47	0.086	0.430	43.00	131	215.00	655	U	0.103
cis-1,2-Dichloroethene	96.9	0.000	0.000	0	0.103	0.515	51.50	211	257.50	1,054	U	0.103
Chloroform	119.4	0.000	0.000	0	0.102	0.510	51.00	257	255.00	1,286	U	0.103
1,1,1-Trichloroethane	133.4	0.000	0.000	0	0.102	0.510	51.00	287	255.00	1,437	U	0.103
1,2-Dichloroethane	99.0	0.000	0.000	0	0.103	0.515	51.50	215	257.50	1,077	U	0.103
Benzene	78.1	0.045	22.321	74	0.103	0.515	51.50	170	257.50	849	U	0.103
Carbon tetrachloride	153.8	0.000	0.000	0	0.102	0.510	51.00	331	255.00	1,656	U	0.103
1,2-Dichloropropane	113.0	0.007	3.433	16	0.103	0.515	51.50	246	257.50	1,229	U	0.103
1,4 Dioxane	88.1	0.018	9.128	34	0.088	0.440	44.00	164	220.00	818	U	0.103
Trichloroethene	131.4	0.035	17.455	97	0.103	0.515	51.50	286	257.50	1,429	U	0.103
Bromodichloromethane	163.8	0.000	0.000	0	0.080	0.400	40.00	277	200.00	1,383	U	0.103
Methyl Isobutyl Ketone	100.2	0.008	4.056	17	0.092	0.460	46.00	195	230.00	973	U	0.103
cis-1,3-Dichloropropene	111.0	0.000	0.000	0	0.106	0.530	53.00	248	265.00	1,242	U	0.103
Toluene	92.1	0.177	88.739	345	0.103	0.515	51.50	200	257.50	1,002	J	0.103
trans-1,3-Dichloropropene	111.0	0.004	1.796	8	0.104	0.520	52.00	244	260.00	1,219	U	0.103
1,1,2-Trichloroethane	133.4	0.007	3.484	20	0.102	0.510	51.00	287	255.00	1,437	U	0.103
2-Hexanone	100.2	0.026	12.786	54	0.088	0.440	44.00	186	220.00	931	U	0.103
Dibromochloromethane	208.3	0.000	0.000	0	0.089	0.445	44.50	391	222.50	1,957	U	0.103
1,2-Dibromoethane	187.9	0.009	4.510	36	0.104	0.520	52.00	413	260.00	2,063	U	0.103

Tetrachloroethene	165.8	0.000	0.000	0	0.102	0.510	51.00	357	255.00	1,785	U	0.103
Chlorobenzene	112.6	0.010	4.850	23	0.102	0.510	51.00	243	255.00	1,213	U	0.103
Ethylbenzene	106.2	0.015	7.677	34	0.104	0.520	52.00	233	260.00	1,166	U	0.103
m & p-Xylene	106.2	0.075	37.559	168	0.206	1.030	103.00	462	515.00	2,310	U	0.206
Styrene	104.2	0.021	10.250	45	0.103	0.515	51.50	227	257.50	1,133	U	0.103
Bromoform	252.7	0.008	4.044	43	0.093	0.465	46.50	496	232.50	2,481	U	0.103
o-Xylene	106.2	0.024	11.932	54	0.102	0.510	51.00	229	255.00	1,144	U	0.103
1,1,2,2-Tetrachloroethane	167.8	0.023	11.320	80	0.102	0.510	51.00	361	255.00	1,807	U	0.103
4-Ethyltoluene	120.2	0.025	12.653	64	0.091	0.455	45.50	231	227.50	1,155	U	0.103
1,3,5-Trimethylbenzene	120.2	0.022	11.159	57	0.106	0.530	53.00	269	265.00	1,345	U	0.103
1,2,4-Trimethylbenzene	120.2	0.049	24.313	123	0.102	0.510	51.00	259	255.00	1,294	U	0.103
1,3-Dichlorobenzene	147.0	0.036	18.157	113	0.102	0.510	51.00	317	255.00	1,583	U	0.103
Benzyl chloride	126.6	0.010	5.104	27	0.090	0.450	45.00	241	225.00	1,203	U	0.103
1,4-Dichlorobenzene	147.0	0.040	19.834	123	0.102	0.510	51.00	317	255.00	1,583	U	0.103
1,2-Dichlorobenzene	147.0	0.036	17.754	110	0.100	0.500	50.00	310	250.00	1,552	U	0.103
1,2,4-Trichlorobenzene	181.4	0.043	21.547	165	0.103	0.515	51.50	395	257.50	1,973	U	0.103
Naphthalene	128.2	0.069	34.734	188	0.239	1.195	119.50	647	597.50	3,235	U	0.103
Hexachlorobutadiene	260.8	0.027	13.718	151	0.103	0.515	51.50	567	257.50	2,836	U	0.103

SAMPLE CALCULATION

EPA Method TO-15 Modified Full Scan GC/MS

SDG:		**LABQC**
Laboratory Number:		**B07089**
Standard Volume	STV	5.0
Sample Volume	SV	2
Can Dilution Factor	CDF	1.00
Gas Constant		23.68
Decimal Places:		0

Sample Calculation:

1) Avg RFn = Sum $\left| \frac{(Astdni)}{(Cstdni)} \frac{(Cistdi)}{(Aistdi)} \right|_i$ Note: 1

2) Raw Amt = $\frac{(Ansamp)}{(Avg\ RFn)} \frac{(Cistdi)}{(Aistdi)}$ = Cn

3) Amount ppbv = $\frac{(Raw\ Amt)\ 1000}{(SV)}$ (CDF)

4) Amount ug/m3 = $\frac{(amt(ppbv)\ MW}{23.68}$

n	Compound	IS n	Chem type	MW	AvgRFn	Area Ansamp	Cistdi ppmv	Aistdi Ais	Cn ppmV Raw Amt	Amount ppbv	Amount ug/m3
2	Dichlorodifluoromethane	1	TRG	120.9	0.611	616	20.000	4790129	0.004	2	10
3	Chloromethane	1	TRG	50.5	0.393	0	20.000	4790129	0.000	0	0
4	Freon 114	1	TRG	170.9	0.650	616	20.000	4790129	0.004	2	14
5	Vinyl chloride	1	TRG	62.5	0.213	0	20.000	4790129	0.000	0	0
6	Bromomethane	1	TRG	94.9	0.212	0	20.000	4790129	0.000	0	0
7	Chloroethane	1	TRG	64.5	0.112	0	20.000	4790129	0.000	0	0
10	Trichlorofluoromethane	1	TRG	137.4	0.584	0	20.000	4790129	0.000	0	0
12	Acetone	1	TRG	58.1	0.878	47716	20.000	4790129	0.227	113	277
13	2-propanol	1	TRG	60.1	0.668	35810	20.000	4790129	0.224	112	284
15	1,1-Dichloroethene	1	TRG	96.9	0.471	0	20.000	4790129	0.000	0	0
17	Freon 113	1	TRG	187.3	0.370	0	20.000	4790129	0.000	0	0
19	Dichloromethane	1	TRG	84.9	0.209	0	20.000	4790129	0.000	0	0
20	Carbon disulfide	1	TRG	76.1	0.261	0	20.000	4790129	0.000	0	0
21	trans-1,2-Dichloroethene	1	TRG	96.9	0.192	0	20.000	4790129	0.000	0	0
22	Methyl tert butyl ether	1	TRG	88.1	0.910	0	20.000	4790129	0.000	0	0
24	1,1-Dichloroethane	1	TRG	99.0	0.606	0	20.000	4790129	0.000	0	0
25	Vinyl acetate	1	TRG	86.1	1.295	2164	20.000	4790129	0.007	3	11
26	2-Butanone	1	TRG	72.1	0.170	1248	20.000	4790129	0.031	15	46
32	cis-1,2-Dichloroethene	1	TRG	96.9	0.313	0	20.000	4790129	0.000	0	0
34	Chloroform	1	TRG	119.4	0.729	0	20.000	4790129	0.000	0	0
36	1,1,1-Trichloroethane	35	TRG	133.4	0.726	0	20.000	4489502	0.000	0	0
37	1,2-Dichloroethane	35	TRG	99.0	0.681	0	20.000	4489502	0.000	0	0
40	Benzene	35	TRG	78.1	1.183	11859	20.000	4489502	0.045	22	73
41	Carbon tetrachloride	35	TRG	153.8	0.737	0	20.000	4489502	0.000	0	0
43	1,2-Dichloropropane	35	TRG	113.0	0.457	705	20.000	4489502	0.007	3	14
44	1,4 Dioxane	35	TRG	88.1	0.350	1436	20.000	4489502	0.018	9	33
46	Trichloroethene	35	TRG	131.4	0.573	4490	20.000	4489502	0.035	17	94
47	Bromodichloromethane	35	TRG	163.8	0.902	0	20.000	4489502	0.000	0	0
49	Methyl Isobutyl Ketone	35	TRG	100.2	2.014	3667	20.000	4489502	0.008	4	17
50	cis-1,3-Dichloropropene	35	TRG	111.0	0.713	0	20.000	4489502	0.000	0	0
51	Toluene	35	TRG	92.1	1.546	61611	20.000	4489502	0.177	89	346
52	trans-1,3-Dichloropropene	35	TRG	111.0	0.847	683	20.000	4489502	0.004	2	9
53	1,1,2-Trichloroethane	35	TRG	133.4	0.455	712	20.000	4489502	0.007	3	17
54	2-Hexanone	35	TRG	100.2	2.559	14687	20.000	4489502	0.026	13	55
57	Dibromochloromethane	35	TRG	208.3	1.207	0	20.000	4489502	0.000	0	0
58	1,2-Dibromoethane	35	TRG	187.9	1.119	2266	20.000	4489502	0.009	5	40
59	Tetrachloroethene	35	TRG	165.8	0.985	0	20.000	4489502	0.000	0	0
60	Chlorobenzene	35	TRG	112.6	1.446	3149	20.000	4489502	0.010	5	24
62	Ethylbenzene	35	TRG	106.2	2.468	8507	20.000	4489502	0.015	8	36

63	m & p-Xylene	35	TRG	106.2	2.080	35077	20.000	4489502	0.075	38	170
64	Styrene	35	TRG	104.2	1.484	6831	20.000	4489502	0.021	10	44
65	Bromoform	35	TRG	252.7	2.047	3716	20.000	4489502	0.008	4	43
66	o-Xylene	35	TRG	106.2	2.300	12320	20.000	4489502	0.024	12	54
67	1,1,2,2-Tetrachloroethane	35	TRG	167.8	2.109	10719	20.000	4489502	0.023	11	78
72	4-Ethyltoluene	35	TRG	120.2	3.651	20739	20.000	4489502	0.025	13	66
73	1,3,5-Trimethylbenzene	35	TRG	120.2	3.337	16716	20.000	4489502	0.022	11	56
76	1,2,4-Trimethylbenzene	35	TRG	120.2	3.082	33635	20.000	4489502	0.049	24	122
78	1,3-Dichlorobenzene	35	TRG	147.0	2.476	20184	20.000	4489502	0.036	18	112
80	Benzyl chloride	35	TRG	126.6	3.379	7742	20.000	4489502	0.010	5	27
81	1,4-Dichlorobenzene	35	TRG	147.0	2.556	22759	20.000	4489502	0.040	20	124
83	1,2-Dichlorobenzene	35	TRG	147.0	2.845	22677	20.000	4489502	0.036	18	112
86	1,2,4-Trichlorobenzene	35	TRG	181.4	5.265	50934	20.000	4489502	0.043	22	169
87	Naphthalene	35	TRG	128.2	8.792	137108	20.000	4489502	0.069	35	189
88	Hexachlorobutadiene	35	TRG	260.8	4.062	25014	20.000	4489502	0.027	14	154
1	Pentafluorobenzene	1	IS		1.000	4790129	20.000	4790129			
35	1,4-Difluorobenzene	35	IS		1.000	4489502	20.000	4489502			
94	Toluene-d8	35	SURR		1.124	2648030	20.000	4489502			

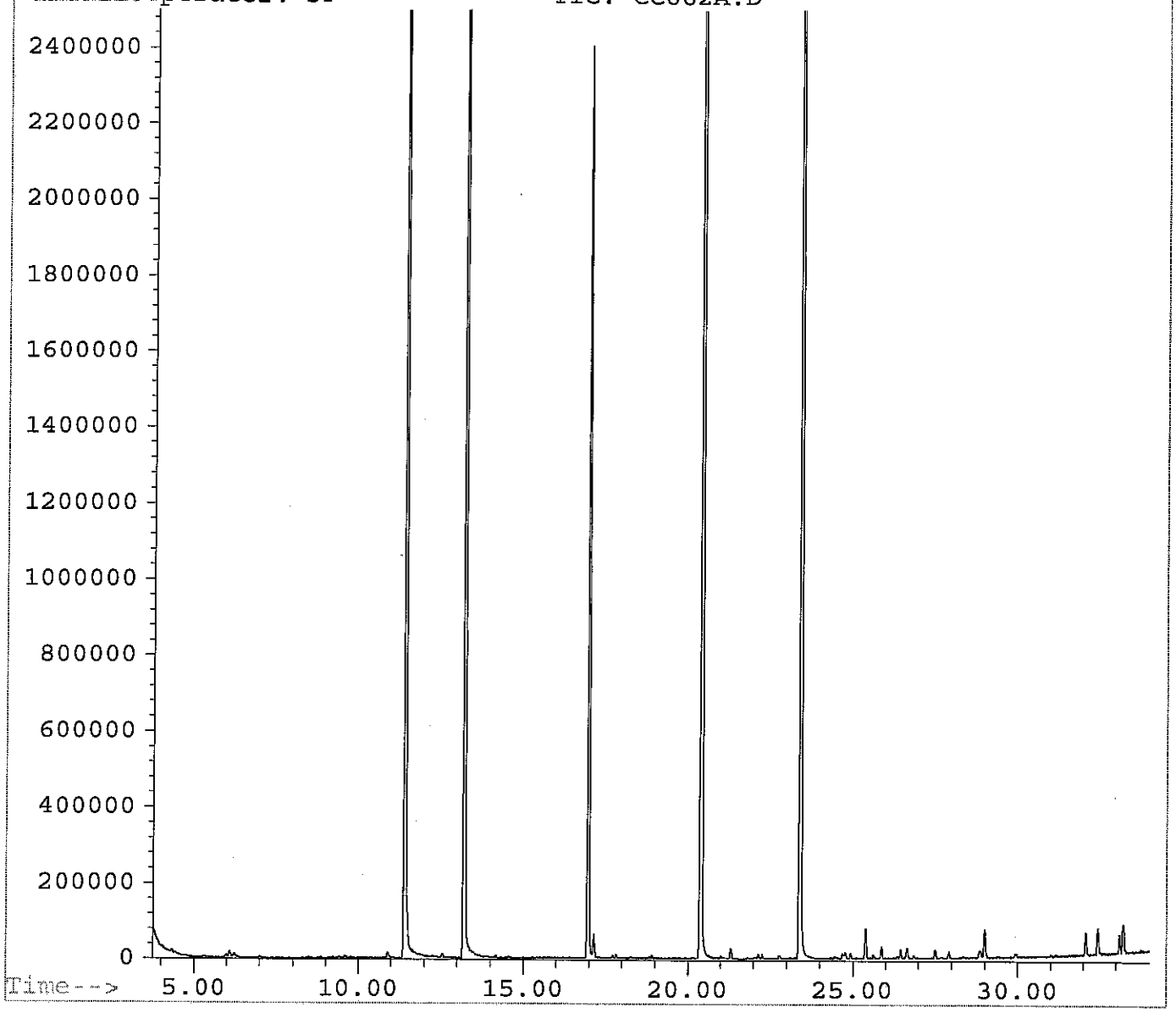
Calculation Definitions:

n	compound n
i	i th calibration level
Astdni	Standard Area for compound n at ith calibration level
Cstdni	Standard Concentration for compound n at ith calibration level in ppmv
Cistdi	Internal Standard Conc used for compound n at ith calibration level in ppmv
Aistdi	Internal Standard Area used for compound n at ith calibration level
Ansamp	Sample Area for compound n
Avg RFn	Average response factor for all ith calibration levels for compound n
Raw Amount	Sample Concentration in ppmv before applying factors
Cistd	Concentration internal standard used for compound n in sample in ppmv
Aistd	Area of internal standard used for compound n in sample
Cn	Concentration of compound n in sample in ppmv
23.68	Gas constant at 60 F as per EPA source test protocol
MW	Molecular weight of compound
Note (1): Avg RFn	The values for the Average Response Factor AvgRFn can be optained from the response Factor Report for the Initial Calibration, or from the Calibration Report

Name of file: C:\MSCHEM\1\DATA\07089MS1\CC662A.D

Name of operator: JF

TIC: CC662A.D



FORM II

QUALITY CONTROL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

LABORATORY CONTROL SPIKE

EPA Method TO-15 Modified Full Scan GC/MS **SDG: LABQC**
Analytical Method: TO-15

File: C07089D.D
Description: ST60421
Can/Tube#:
Sam_Type: LCS
QC_Batch: 070809-MS1
Air Volume: 1000 ml

Date Sampled: NA
Date Received: NA
Date Extracted: NA
Date Analyzed: 07/08/09 **Time:** 12:18
Can Dilution Factor: 1.00 2
QC Duplicate: No

CAS#	Compound	MDL ppbv	Spike Conc ppbv	Amount ppbv	Matrix Amt ppbv	Spk Amt ppbv	Percent Recovery	LCL %	UCL %	Flag
75-01-4	Vinyl chloride	0.10	1.04	1.17	0.000	1.17	113	70	130	
75-35-4	1,1-Dichloroethene	0.10	1.04	1.11	0.000	1.11	107	70	130	
75-09-2	Dichloromethane	0.10	1.04	1.06	0.000	1.06	102	70	130	
75-34-3	1,1-Dichloroethane	0.10	1.01	1.01	0.000	1.01	100	70	130	
67-66-3	Chloroform	0.10	1.02	0.95	0.000	0.95	93	70	130	
71-55-6	1,1,1-Trichloroethane	0.10	1.02	1.04	0.000	1.04	102	70	130	
107-06-2	1,2-Dichloroethane	0.10	1.03	1.05	0.000	1.05	102	70	130	
71-43-2	Benzene	0.10	1.03	0.97	0.000	0.97	94	70	130	
56-23-5	Carbon tetrachloride	0.10	1.02	1.09	0.000	1.09	107	70	130	
79-01-6	Trichloroethene	0.10	1.03	1.08	0.000	1.08	105	70	130	
108-88-3	Toluene	0.10	1.03	1.19	0.000	1.19	116	70	130	
106-93-4	1,2-Dibromoethane	0.10	1.04	1.03	0.000	1.03	99	70	130	
127-18-4	Tetrachloroethene	0.10	1.02	1.20	0.000	1.20	118	70	130	
108-90-7	Chlorobenzene	0.10	1.02	1.00	0.000	1.00	98	70	130	
100-41-4	Ethylbenzene	0.10	1.04	1.03	0.000	1.03	99	70	130	
108-38-3	m & p-Xylene	0.21	2.06	2.08	0.000	2.08	101	70	130	
95-47-6	o-Xylene	0.10	1.02	0.97	0.000	0.97	95	70	130	

	Surrogate Recovery	Spike Amt. ppbV	Amount ppbV	% Rec.	QC Limits	Flag * = Out
2037-26-5	Toluene-d8	10.000	10.816	108	70-130	

Notes: Reported results are to be interpreted to two significant figures.
ug/m3 calculated assuming conditions at 60 F and 1 atm.

QUANTITATION REPORT

EPA Method TO-15 Modified Full Scan GC/MS

Review **EAS Sample ID: C07089D**

File Name:	C07089D.D		1 KB
Sample ID:	ST60421		2 AT
Date:	8 Jul 109 12:18 pm	Cal Amounts	3 BB
Run Method:	1T15EXAY.M	IS Areas	4 SH
Quant Method:	1T15EXAY.M	Carryover	
Cal Update:	Tue Mar 17 14:18:15 2009		
Template:	1TO15SP.MS1		
Can Factor:	1.00		
Volume:	1000 ml	Analyst: KB 1	

CAS#	Compound	n	Raw Amount	RT	Target RT	Ion	Sample Area	Qualifier	Lower Qual	Upper Qual	Qual Flag	Cal Flag	Int Flag
75-01-4	Vinyl chloride	5	1.170	4.36	4.33	62.00	53005	29	24	36			
75-35-4	1,1-Dichloroethene	15	1.107	6.93	6.89	61.00	110860	44	34	51			
75-09-2	Dichloromethane	19	1.062	7.34	7.31	84.00	47048	64	51	77			
75-34-3	1,1-Dichloroethane	24	1.008	8.92	8.90	63.00	129790	29	24	36			
67-66-3	Chloroform	34	0.946	10.55	10.53	83.00	146449	65	51	77			
71-55-6	1,1,1-Trichloroethane	36	1.045	11.83	11.80	97.00	158360	63	51	76			
107-06-2	1,2-Dichloroethane	37	1.053	11.90	11.87	61.95	149641	30	25	37			
71-43-2	Benzene	40	0.972	12.55	12.51	78.00	240160	22	19	29			
56-23-5	Carbon tetrachloride	41	1.086	12.60	12.56	116.90	167185	102	79	119			
79-01-6	Trichloroethene	46	1.080	14.16	14.13	130.00	129141	97	79	119			
108-88-3	Toluene	51	1.190	17.15	17.11	91.00	384345	56	44	66			
106-93-4	1,2-Dibromoethane	58	1.033	18.82	18.80	107.00	241304	99	75	113			
127-18-4	Tetrachloroethene	59	1.202	19.00	18.97	166.00	247317	61	52	78			
108-90-7	Chlorobenzene	60	1.003	20.49	20.45	112.00	302924	31	25	38			
100-41-4	Ethylbenzene	62	1.032	21.02	17.80	91.00	531764	27	21	32			
108-38-3	m & p-Xylene	63	2.077	21.32	21.28	91.00	901901	40	32	48			
95-47-6	o-Xylene	66	0.967	22.28	22.25	91.00	464379	37	30	45			
363-72-4	Pentafluorobenzene	1	20.000	11.39	11.38	168.00	**4246658**						
540-36-3	1,4-Difluorobenzene	35	20.000	13.19	13.17	114.00	**4175396**						
2037-26-5	Toluene-d8	94	**10.816**	16.97	16.94	98.00	2538702	62	51	77			
3114-55-4	Chlorobenzene-d5	95	**22.001**	20.40	20.36	117.00	4737894	70	56	84		HIGH	
460-00-4	1,4-Bromofluorobenzene	96	**11.234**	23.41	23.38	95.00	3782848	77	56	83			

Integration Flags:

If no flag the Integration was done by the instrument computer

M1 Manual Integration because the computer did not integrated the peak or integrated the wrong peak

M2 Manual Integration because computer integration of baseline was different then Inital Calibration

INITIAL CALIBRATION REPORT

EPA Method TO-15 Modified Full Scan GC/MS

		SDG:	LABQC
		QC_Batch:	070809-MS1
File Name:	C07089D.D	Instrument Name:	5970 - In
Sample ID:	ST60421		
Sample Analysis Date:	8 Jul 109 12:18 pm	Number Compounds:	96
Run Method:	1T15EXAY.M	IS1: ST60403	20
Quant and Calibration Method:	1T15EXAY.M	IS2: ST60403	20
Cal Update:	Tue Mar 17 14:18:15 2009	IS3:	
Template:	1TO15SP.MS1	IS4:	

Calibration Title: EPA T0-15

		Calibration Amount CA, ppmv						Calibration Response, Area					
		Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
		Amt	Amt	Amt	Amt	Amt	Amt	C03179C.D	C03179E.D	C03179B.D	C03179A.D	C03169H.D	C03179D.D
n	Compound	0.25	4.0	1.0	5.0	10.0	2.0	0.25	4.0	1.0	5.0	10.0	2.0
5	Vinyl chloride	0.260	4.160	1.040	5.200	10.400	2.080	7909	132864	32643	150492	285530	62953
15	1,1-Dichloroethene	0.253	4.040	1.010	5.050	10.100	2.020	16793	248606	63935	305424	730028	150732
19	Dichloromethane	0.260	4.160	1.040	5.200	10.400	2.080	8354	124766	26131	120655	330491	71297
24	1,1-Dichloroethane	0.253	4.040	1.010	5.050	10.100	2.020	22823	387657	85531	331041	871129	183187
34	Chloroform	0.255	4.080	1.020	5.100	10.200	2.040	27147	449509	101707	516969	959204	213353
36	1,1,1-Trichloroethane	0.255	4.080	1.020	5.100	10.200	2.040	26931	432442	100881	509527	970639	210683
37	1,2-Dichloroethane	0.258	4.120	1.030	5.150	10.300	2.060	26512	398927	96975	495766	920839	187037
40	Benzene	-1.000	4.120	1.030	5.150	10.300	2.060	-1	712515	206967	782160	1387400	364766
41	Carbon tetrachloride	0.255	4.080	1.020	5.100	10.200	2.040	26276	451629	105798	518753	931992	220983
46	Trichloroethene	0.258	4.120	1.030	5.150	10.300	2.060	27013	323273	83100	364698	666308	165489
51	Toluene	-1.000	4.120	1.030	5.150	10.300	2.060	-1	944443	257501	1033029	1877014	478350
58	1,2-Dibromoethane	0.260	4.160	1.040	5.200	10.400	2.080	46912	660815	169213	701472	1505940	324567
59	Tetrachloroethene	0.255	4.080	1.020	5.100	10.200	2.040	40710	589393	145069	627137	1126037	300057
60	Chlorobenzene	0.255	4.080	1.020	5.100	10.200	2.040	64660	836027	208106	862738	1818049	410336
62	Ethylbenzene	0.260	4.160	1.040	5.200	10.400	2.080	107037	1527752	359496	1548148	3108186	722767
63	m & p-Xylene	0.515	8.240	2.060	10.300	20.600	4.120	192864	2440351	617919	2542524	4725274	1220126
66	o-Xylene	0.255	4.080	1.020	5.100	10.200	2.040	105567	1325719	329821	1384162	2817484	643280
1	Pentafluorobenzene	20.000	20.000	20.000	20.000	20.000	20.000	2643183	2935915	2871816	2719013	2737194	3022845
35	1,4-Difluorobenzene	20.000	20.000	20.000	20.000	20.000	20.000	2659938	2870629	2814997	2720455	2706138	3020264
94	Toluene-d8	10.000	10.000	10.000	10.000	10.000	10.000	1479389	1629143	1590486	1469067	1546296	1730275
95	Chlorobenzene-d5	20.000	20.000	20.000	20.000	20.000	20.000	2736627	3026382	2937451	2602948	2900630	3122484
96	1,4-Bromofluorobenzene	10.000	10.000	10.000	10.000	10.000	10.000	2176179	2385587	2352342	2001651	2163994	2472723

(212)

INITIAL CALIBRATION REPORT: Response Factors

SDG:	**LABQC**
QC_Batch:	**070809-MS1**
Sample ID:	ST60421
Sample Analysis Date:	8 Jul 109 12:18 pm
Run Method:	1T15EXAY.M
Quant Method:	1T15EXAY.M
Cal Update:	Tue Mar 17 14:18:15 2009
Template:	1TO15SP.MS1

Sample Calculation:

1) Avg RFn = Sum $\left| \frac{(Astdni) \quad (Cistdi)}{(Cstdni) \quad (Aistdi)} \right|_i$

Response Factors

Compound	RF1	RF2	RF3	RF4	RF5	RF6	AvgRFn	%RSD
Vinyl chloride	0.230	0.218	0.219	0.213	0.201	0.200	0.213	5.40
1,1-Dichloroethene	0.502	0.419	0.441	0.445	0.528	0.494	0.471	9.01
Dichloromethane	0.243	0.204	0.175	0.171	0.232	0.227	0.209	14.64
1,1-Dichloroethane	0.683	0.654	0.590	0.482	0.630	0.600	0.606	11.51
Chloroform	0.806	0.751	0.694	0.746	0.687	0.692	0.729	6.41
1,1,1-Trichloroethane	0.794	0.738	0.703	0.734	0.703	0.684	0.726	5.40
1,2-Dichloroethane	0.773	0.675	0.669	0.708	0.661	0.601	0.681	8.33
Benzene	NA	1.205	1.428	1.117	0.996	1.173	1.183	13.36
Carbon tetrachloride	0.775	0.771	0.737	0.748	0.675	0.717	0.737	5.04
Trichloroethene	0.787	0.547	0.573	0.521	0.478	0.532	0.573	19.12
Toluene	NA	1.597	1.776	1.475	1.347	1.538	1.546	10.25
1,2-Dibromoethane	1.357	1.107	1.156	0.992	1.070	1.033	1.119	11.58
Tetrachloroethene	1.200	1.006	1.010	0.904	0.816	0.974	0.985	13.06
Chlorobenzene	1.907	1.428	1.450	1.244	1.317	1.332	1.446	16.45
Ethylbenzene	3.095	2.559	2.456	2.189	2.209	2.301	2.468	13.74
m & p-Xylene	2.816	2.063	2.131	1.815	1.695	1.961	2.080	18.95
o-Xylene	3.113	2.264	2.297	1.995	2.041	2.088	2.300	18.10
Pentafluorobenzene	1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.00
1,4-Difluorobenzene	1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.00
Toluene-d8	1.112	1.135	1.130	1.080	1.143	1.146	1.124	2.20
Chlorobenzene-d5	1.029	1.054	1.044	0.957	1.072	1.034	1.032	3.85
1,4-Bromofluorobenzene	1.636	1.662	1.671	1.472	1.599	1.637	1.613	4.57

CALCULATIONS

EPA Method TO-15 Modified Full Scan GC/MS

SDG: LABQC
Laboratory Number: QC07089

RL:	1T15EXAY.M
Run Method:	1T15EXAY.M
Quant Method:	1T15EXAY.M
Can Dilution Factor:	1.00
Air Volume:	1000 ml
Gas Constant:	23.68
Decimal Places:	2

MDL Factor 1

Compound	M.W.	Raw Amount	Result ppbv	Result ug/m3	(1) MDL ppbv	(2) RL ppbv	Calc MDL ppbv	Calc MDL ug/m3	Calc RL ppbv	Calc RL ug/m3	Flag	Spike ppmv
Vinyl chloride	62.5	1.170	1.170	3.09	0.104	0.520	0.10	0.27	0.52	1.37		1.040
1,1-Dichloroethene	96.9	1.107	1.107	4.53	0.101	0.505	0.10	0.41	0.51	2.07		1.040
Dichloromethane	84.9	1.062	1.062	3.81	0.104	0.520	0.10	0.37	0.52	1.86		1.040
1,1-Dichloroethane	99.0	1.008	1.008	4.21	0.101	0.505	0.10	0.42	0.51	2.11		1.010
Chloroform	119.4	0.946	0.946	4.77	0.102	0.510	0.10	0.51	0.51	2.57		1.020
1,1,1-Trichloroethane	133.4	1.045	1.045	5.88	0.102	0.510	0.10	0.57	0.51	2.87		1.020
1,2-Dichloroethane	99.0	1.053	1.053	4.40	0.103	0.515	0.10	0.43	0.52	2.15		1.030
Benzene	78.1	0.972	0.972	3.21	0.103	0.515	0.10	0.34	0.52	1.70		1.030
Carbon tetrachloride	153.8	1.086	1.086	7.06	0.102	0.510	0.10	0.66	0.51	3.31		1.020
Trichloroethene	131.4	1.080	1.080	5.99	0.103	0.515	0.10	0.57	0.52	2.86		1.030
Toluene	92.1	1.190	1.190	4.63	0.103	0.515	0.10	0.40	0.52	2.00		1.030
1,2-Dibromoethane	187.9	1.033	1.033	8.20	0.104	0.520	0.10	0.83	0.52	4.13		1.040
Tetrachloroethene	165.8	1.202	1.202	8.42	0.102	0.510	0.10	0.71	0.51	3.57		1.020
Chlorobenzene	112.6	1.003	1.003	4.77	0.102	0.510	0.10	0.49	0.51	2.43		1.020
Ethylbenzene	106.2	1.032	1.032	4.63	0.104	0.520	0.10	0.47	0.52	2.33		1.040
m & p-Xylene	106.2	2.077	2.077	9.31	0.206	1.030	0.21	0.92	1.03	4.62		2.060
o-Xylene	106.2	0.967	0.967	4.34	0.102	0.510	0.10	0.46	0.51	2.29		1.020

SAMPLE CALCULATION

EPA Method TO-15 Modified Full Scan GC/MS

SDG:		**LABQC**
Laboratory Number:		**QC07089**
Standard Volume	STV	5.0
Sample Volume	SV	1000
Can Dilution Factor	CDF	1.00
Gas Constant		23.68
Decimal Places:		2

Sample Calculation:

1) Avg RFn = Sum $\left| \frac{(Astdni)}{(Cstdni)} \frac{(Cistdi)}{(Aistdi)} \right|_i$ Note: 1

2) Raw Amt = $\frac{(Ansamp)}{(Avg\ RFn)} \frac{(Cistdi)}{(Aistdi)}$ = **Cn**

3) Amount ppbv = $\frac{(Raw\ Amt)\ 1000}{(SV)}$ (CDF)

4) Amount ug/m3 = $\frac{(amt(ppbv)\ MW}{23.68}$

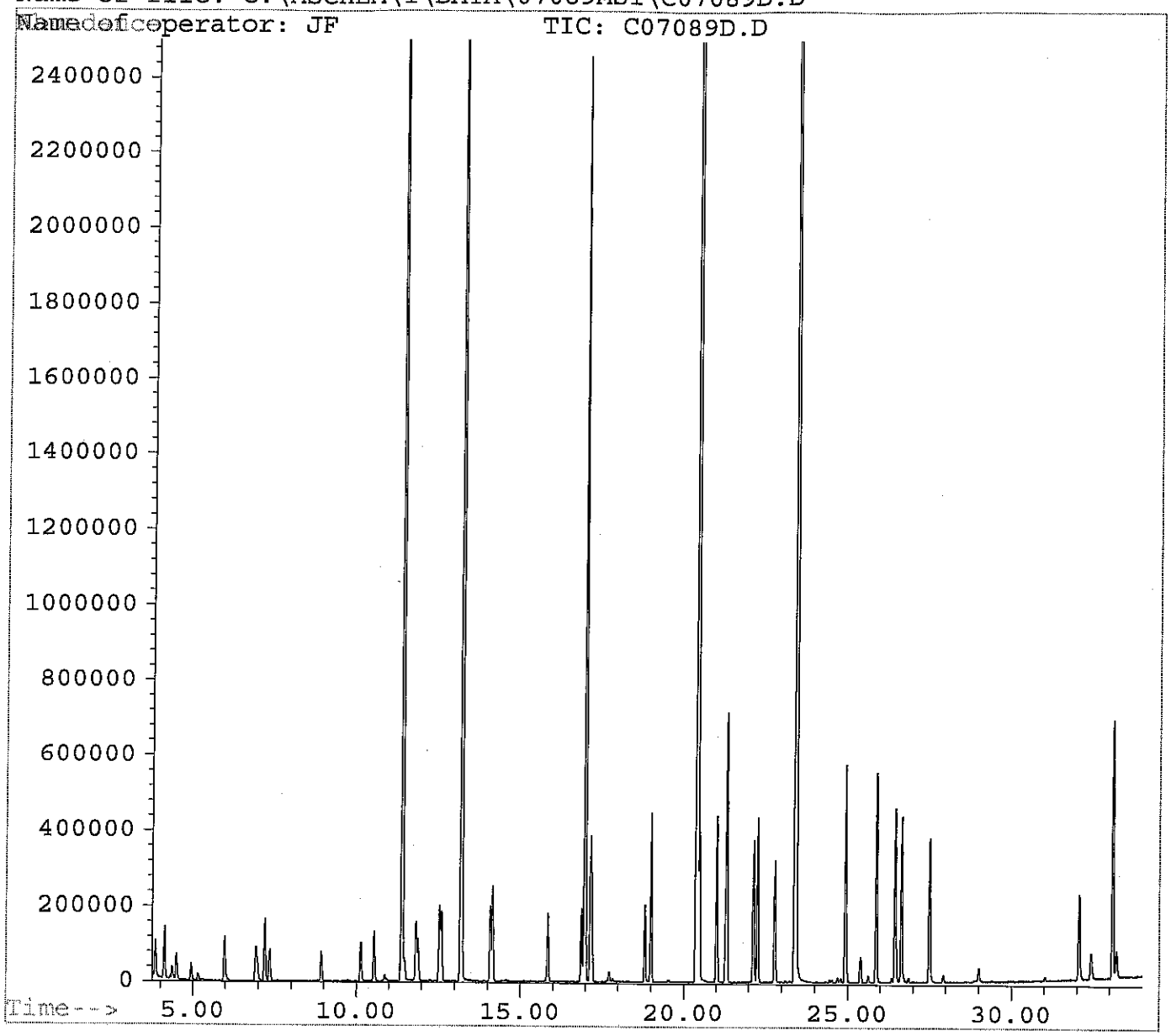
n	Compound	IS n	Chem type	MW	AvgRFn	Area Ansamp	Cistdi ppmv	Aistdi Ais	Cn ppmV Raw Amt	Amount ppbv	Amount ug/m3
5	Vinyl chloride	1	TRG	62.5	0.213	53005	20.000	4246658	1.170	1.17	3.09
15	1,1-Dichloroethene	1	TRG	96.9	0.471	110860	20.000	4246658	1.107	1.11	4.54
19	Dichloromethane	1	TRG	84.9	0.209	47048	20.000	4246658	1.062	1.06	3.80
24	1,1-Dichloroethane	1	TRG	99.0	0.606	129790	20.000	4246658	1.008	1.01	4.22
34	Chloroform	1	TRG	119.4	0.729	146449	20.000	4246658	0.946	0.95	4.79
36	1,1,1-Trichloroethane	35	TRG	133.4	0.726	158360	20.000	4175396	1.045	1.04	5.86
37	1,2-Dichloroethane	35	TRG	99.0	0.681	149641	20.000	4175396	1.053	1.05	4.39
40	Benzene	35	TRG	78.1	1.183	240160	20.000	4175396	0.972	0.97	3.20
41	Carbon tetrachloride	35	TRG	153.8	0.737	167185	20.000	4175396	1.086	1.09	7.08
46	Trichloroethene	35	TRG	131.4	0.573	129141	20.000	4175396	1.080	1.08	5.99
51	Toluene	35	TRG	92.1	1.546	384345	20.000	4175396	1.190	1.19	4.63
58	1,2-Dibromoethane	35	TRG	187.9	1.119	241304	20.000	4175396	1.033	1.03	8.17
59	Tetrachloroethene	35	TRG	165.8	0.985	247317	20.000	4175396	1.202	1.20	8.40
60	Chlorobenzene	35	TRG	112.6	1.446	302924	20.000	4175396	1.003	1.00	4.76
62	Ethylbenzene	35	TRG	106.2	2.468	531764	20.000	4175396	1.032	1.03	4.62
63	m & p-Xylene	35	TRG	106.2	2.080	901901	20.000	4175396	2.077	2.08	9.33
66	o-Xylene	35	TRG	106.2	2.300	464379	20.000	4175396	0.967	0.97	4.35
1	Pentafluorobenzene	1	IS		1.000	4246658	20.000	4246658			
35	1,4-Difluorobenzene	35	IS		1.000	4175396	20.000	4175396			
94	Toluene-d8	35	SURR		1.124	2538702	20.000	4175396			

Calculation Definitions:

n	compound n
i	i th calibration level
Astdni	Standard Area for compound n at ith calibration level
Cstdni	Standard Concentration for compound n at ith calibration level in ppmv
Cistdi	Internal Standard Conc used for compound n at ith calibration level in ppmv
Aistdi	Internal Standard Area used for compound n at ith calibration level
Ansamp	Sample Area for compound n
Avg RFn	Average response factor for all ith calibration levels for compound n
Raw Amount	Sample Concentration in ppmv before applying factors
Cistd	Concentration internal standard used for compound n in sample in ppmv
Aistd	Area of internal standard used for compound n in sample
Cn	Concentration of compound n in sample in ppmv
23.68	Gas constant at 60 F as per EPA source test protocol
MW	Molecular weight of compound
Note (1) : Avg RFn	The values for the Average Response Factor AvgRFn can be optained from the response Factor Report for the Initial Calibration, or from the Calibration Report

Name of file: C:\MSCHEM\1\DATA\07089MS1\C07089D.D

Name of operator: JF



QUALITY CONTROL DUPLICATE

ENVIRONMENTAL
Analytical Service, Inc.

Duplicate of QC Sample

EPA Method TO-15 Modified Full Scan GC/MS **SDG: LABQC**
Analytical Method: **TO-15**

Dup File: QC07089B.D
Description: ST60421
Can/Tube#:
QC_Batch: 070809-MS1

CAS#	Compound	LCD ppbv	LCS ppbv	RPD %D	Limit %	Flag * = Out
75-01-4	Vinyl chloride	0.93	1.17	23	25	
75-35-4	1,1-Dichloroethene	1.09	1.11	2	25	
75-09-2	Dichloromethane	1.05	1.06	1	25	
75-34-3	1,1-Dichloroethane	1.01	1.01	0	25	
67-66-3	Chloroform	0.91	0.95	4	25	
71-55-6	1,1,1-Trichloroethane	0.98	1.04	6	25	
107-06-2	1,2-Dichloroethane	0.93	1.05	12	25	
71-43-2	Benzene	0.89	0.97	8	25	
56-23-5	Carbon tetrachloride	1.01	1.09	8	25	
79-01-6	Trichloroethene	1.08	1.08	0	25	
108-88-3	Toluene	1.14	1.19	5	25	
106-93-4	1,2-Dibromoethane	1.03	1.03	0	25	
127-18-4	Tetrachloroethene	1.11	1.20	9	25	
108-90-7	Chlorobenzene	1.01	1.00	1	25	
100-41-4	Ethylbenzene	1.02	1.03	1	25	
108-38-3	m & p-Xylene	2.04	2.08	2	25	
95-47-6	o-Xylene	0.96	0.97	1	25	

FORM II

QUALITY CONTROL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

LABORATORY CONTROL DUPLICATE

EPA Method TO-15 Modified Full Scan GC/MS **SDG: LABQC**
Analytical Method: TO-15

File: QC07089B.D
Description: ST60421
Can/Tube#:
Sam_Type: LCD
QC_Batch: 070809-MS1
Air Volume: 1000 ml

Date Sampled: NA
Date Received: NA
Date Extracted: NA
Date Analyzed: 07/08/09 **Time:** 13:05
Can Dilution Factor: 1.00 2
QC Duplicate: Yes

CAS#	Compound	MDL ppbv	Spike Conc ppbv	Amount ppbv	Matrix Amt ppbv	Spk Amt ppbv	Percent Recovery	LCL %	UCL %	Flag
75-01-4	Vinyl chloride	0.10	1.04	0.93	0.000	0.93	89	70	130	
75-35-4	1,1-Dichloroethene	0.10	1.04	1.09	0.000	1.09	105	70	130	
75-09-2	Dichloromethane	0.10	1.04	1.05	0.000	1.05	101	70	130	
75-34-3	1,1-Dichloroethane	0.10	1.01	1.01	0.000	1.01	100	70	130	
67-66-3	Chloroform	0.10	1.02	0.91	0.000	0.91	89	70	130	
71-55-6	1,1,1-Trichloroethane	0.10	1.02	0.98	0.000	0.98	96	70	130	
107-06-2	1,2-Dichloroethane	0.10	1.03	0.93	0.000	0.93	90	70	130	
71-43-2	Benzene	0.10	1.03	0.89	0.000	0.89	86	70	130	
56-23-5	Carbon tetrachloride	0.10	1.02	1.01	0.000	1.01	99	70	130	
79-01-6	Trichloroethene	0.10	1.03	1.08	0.000	1.08	105	70	130	
108-88-3	Toluene	0.10	1.03	1.14	0.000	1.14	111	70	130	
106-93-4	1,2-Dibromoethane	0.10	1.04	1.03	0.000	1.03	99	70	130	
127-18-4	Tetrachloroethene	0.10	1.02	1.11	0.000	1.11	109	70	130	
108-90-7	Chlorobenzene	0.10	1.02	1.01	0.000	1.01	99	70	130	
100-41-4	Ethylbenzene	0.10	1.04	1.02	0.000	1.02	98	70	130	
108-38-3	m & p-Xylene	0.21	2.06	2.04	0.000	2.04	99	70	130	
95-47-6	o-Xylene	0.10	1.02	0.96	0.000	0.96	94	70	130	

	Surrogate Recovery	Spike Amt. ppbV	Amount ppbV	% Rec.	QC Limits	Flag * = Out
2037-26-5	Toluene-d8	10.000	10.181	102	70-130	

Notes: Reported results are to be interpreted to two significant figures.
ug/m3 calculated assuming conditions at 60 F and 1 atm.

QUANTITATION REPORT

EPA Method TO-15 Modified Full Scan GC/MS

			Review	EAS Sample ID: QC07089	
File Name:	QC07089B.D				1 KB
Sample ID:	ST60421				2 AT
Date:	8 Jul 109 1:05 pm			Cal Amounts	3 BB
Run Method:	1T15EXAY.M			IS Areas	4 SH
Quant Method:	1T15EXAY.M			Carryover	
Cal Update:	Tue Mar 17 14:18:15 2009				
Template:	1TO15SP.MS1				
Can Factor:	1.00				
Volume:	1000	ml		Analyst: KB 1	

CAS#	Compound	n	Raw Amount	RT	Target RT	Ion	Sample Area	Qualifier	Lower Qual	Upper Qual	Qual Flag	Cal Flag	Int Flag
75-01-4	Vinyl chloride	5	0.928	4.38	4.33	62.00	44730	27	24	36			
75-35-4	1,1-Dichloroethene	15	1.091	6.94	6.89	61.00	116173	42	34	51			
75-09-2	Dichloromethane	19	1.054	7.37	7.31	84.00	49654	60	51	77			
75-34-3	1,1-Dichloroethane	24	1.014	8.96	8.90	63.00	138927	31	24	36			
67-66-3	Chloroform	34	0.908	10.58	10.53	83.00	149505	68	51	77			
71-55-6	1,1,1-Trichloroethane	36	0.978	11.86	11.80	97.00	158902	63	51	76			
107-06-2	1,2-Dichloroethane	37	0.928	11.92	11.87	61.95	141379	30	25	37			
71-43-2	Benzene	40	0.888	12.57	12.51	78.00	235151	23	19	29			
56-23-5	Carbon tetrachloride	41	1.014	12.62	12.56	116.90	167176	102	79	119			
79-01-6	Trichloroethene	46	1.078	14.18	14.13	130.00	138111	97	79	119			
108-88-3	Toluene	51	1.144	17.14	17.11	91.00	395553	56	44	66			
106-93-4	1,2-Dibromoethane	58	1.030	18.81	18.80	107.00	257800	95	75	113			
127-18-4	Tetrachloroethene	59	1.114	19.01	18.97	166.00	245535	59	52	78			
108-90-7	Chlorobenzene	60	1.009	20.49	20.45	112.00	326213	31	25	38			
100-41-4	Ethylbenzene	62	1.021	21.01	17.80	91.00	563723	27	21	32			
108-38-3	m & p-Xylene	63	2.044	21.30	21.28	91.00	951129	41	32	48			
95-47-6	o-Xylene	66	0.963	22.26	22.25	91.00	495557	39	30	45			
363-72-4	Pentafluorobenzene	1	20.000	11.43	11.38	168.00	**4516986**						
540-36-3	1,4-Difluorobenzene	35	20.000	13.22	13.17	114.00	**4473387**						
2037-26-5	Toluene-d8	94	**10.181**	16.97	16.94	98.00	2560394	62	51	77			
3114-55-4	Chlorobenzene-d5	95	**21.575**	20.40	20.36	117.00	4977743	72	56	84		HIGH	
460-00-4	1,4-Bromofluorobenzene	96	**11.845**	23.40	23.38	95.00	4273337	75	56	83			

Integration Flags:

If no flag the Integration was done by the instrument computer

M1 Manual Integration because the computer did not integrated the peak or integrated the wrong peak

M2 Manual Integration because computer integration of baseline was different then Inital Calibration

INITIAL CALIBRATION REPORT

EPA Method TO-15 Modified Full Scan GC/MS

		SDG:	LABQC
		QC_Batch:	070809-MS1
File Name:	QC07089B.D	Instrument Name:	5970 - In
Sample ID:	ST60421		
Sample Analysis Date:	8 Jul 109 1:05 pm	Number Compounds:	96
Run Method:	1T15EXAY.M	IS1: ST60403	20
Quant and Calibration Method:	1T15EXAY.M	IS2: ST60403	20
Cal Update:	Tue Mar 17 14:18:15 2009	IS3:	
Template:	1TO15SP.MS1	IS4:	

Calibration Title: EPA T0-15

		Calibration Amount CA, ppmv						Calibration Response, Area					
		Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
		Amt	Amt	Amt	Amt	Amt	Amt	C03179C.D	C03179E.D	C03179B.D	C03179A.D	C03169H.D	C03179D.D
n	Compound	0.25	4.0	1.0	5.0	10.0	2.0	0.25	4.0	1.0	5.0	10.0	2.0
5	Vinyl chloride	0.260	4.160	1.040	5.200	10.400	2.080	7909	132864	32643	150492	285530	62953
15	1,1-Dichloroethene	0.253	4.040	1.010	5.050	10.100	2.020	16793	248606	63935	305424	730028	150732
19	Dichloromethane	0.260	4.160	1.040	5.200	10.400	2.080	8354	124766	26131	120655	330491	71297
24	1,1-Dichloroethane	0.253	4.040	1.010	5.050	10.100	2.020	22823	387657	85531	331041	871129	183187
34	Chloroform	0.255	4.080	1.020	5.100	10.200	2.040	27147	449509	101707	516969	959204	213353
36	1,1,1-Trichloroethane	0.255	4.080	1.020	5.100	10.200	2.040	26931	432442	100881	509527	970639	210683
37	1,2-Dichloroethane	0.258	4.120	1.030	5.150	10.300	2.060	26512	398927	96975	495766	920839	187037
40	Benzene	-1.000	4.120	1.030	5.150	10.300	2.060	-1	712515	206967	782160	1387400	364766
41	Carbon tetrachloride	0.255	4.080	1.020	5.100	10.200	2.040	26276	451629	105798	518753	931992	220983
46	Trichloroethene	0.258	4.120	1.030	5.150	10.300	2.060	27013	323273	83100	364698	666308	165489
51	Toluene	-1.000	4.120	1.030	5.150	10.300	2.060	-1	944443	257501	1033029	1877014	478350
58	1,2-Dibromoethane	0.260	4.160	1.040	5.200	10.400	2.080	46912	660815	169213	701472	1505940	324567
59	Tetrachloroethene	0.255	4.080	1.020	5.100	10.200	2.040	40710	589393	145069	627137	1126037	300057
60	Chlorobenzene	0.255	4.080	1.020	5.100	10.200	2.040	64660	836027	208106	862738	1818049	410336
62	Ethylbenzene	0.260	4.160	1.040	5.200	10.400	2.080	107037	1527752	359496	1548148	3108186	722767
63	m & p-Xylene	0.515	8.240	2.060	10.300	20.600	4.120	192864	2440351	617919	2542524	4725274	1220126
66	o-Xylene	0.255	4.080	1.020	5.100	10.200	2.040	105567	1325719	329821	1384162	2817484	643280
1	Pentafluorobenzene	20.000	20.000	20.000	20.000	20.000	20.000	2643183	2935915	2871816	2719013	2737194	3022845
35	1,4-Difluorobenzene	20.000	20.000	20.000	20.000	20.000	20.000	2659938	2870629	2814997	2720455	2706138	3020264
94	Toluene-d8	10.000	10.000	10.000	10.000	10.000	10.000	1479389	1629143	1590486	1469067	1546296	1730275
95	Chlorobenzene-d5	20.000	20.000	20.000	20.000	20.000	20.000	2736627	3026382	2937451	2602948	2900630	3122484
96	1,4-Bromofluorobenzene	10.000	10.000	10.000	10.000	10.000	10.000	2176179	2385587	2352342	2001651	2163994	2472723

(220)

INITIAL CALIBRATION REPORT: Response Factors

SDG:	**LABQC**
QC_Batch:	**070809-MS1**
Sample ID:	ST60421
Sample Analysis Date:	8 Jul 109 1:05 pm
Run Method:	1T15EXAY.M
Quant Method:	1T15EXAY.M
Cal Update:	Tue Mar 17 14:18:15 2009
Template:	1TO15SP.MS1

Sample Calculation:

1) Avg RFn = Sum $\left| \frac{(Astdni) \quad (Cistdi)}{(Cstdni) \quad (Aistdi)} \right|$

Response Factors

Compound	RF1	RF2	RF3	RF4	RF5	RF6	AvgRFn	%RSD
Vinyl chloride	0.230	0.218	0.219	0.213	0.201	0.200	0.213	5.40
1,1-Dichloroethene	0.502	0.419	0.441	0.445	0.528	0.494	0.471	9.01
Dichloromethane	0.243	0.204	0.175	0.171	0.232	0.227	0.209	14.64
1,1-Dichloroethane	0.683	0.654	0.590	0.482	0.630	0.600	0.606	11.51
Chloroform	0.806	0.751	0.694	0.746	0.687	0.692	0.729	6.41
1,1,1-Trichloroethane	0.794	0.738	0.703	0.734	0.703	0.684	0.726	5.40
1,2-Dichloroethane	0.773	0.675	0.669	0.708	0.661	0.601	0.681	8.33
Benzene	NA	1.205	1.428	1.117	0.996	1.173	1.183	13.36
Carbon tetrachloride	0.775	0.771	0.737	0.748	0.675	0.717	0.737	5.04
Trichloroethene	0.787	0.547	0.573	0.521	0.478	0.532	0.573	19.12
Toluene	NA	1.597	1.776	1.475	1.347	1.538	1.546	10.25
1,2-Dibromoethane	1.357	1.107	1.156	0.992	1.070	1.033	1.119	11.58
Tetrachloroethene	1.200	1.006	1.010	0.904	0.816	0.974	0.985	13.06
Chlorobenzene	1.907	1.428	1.450	1.244	1.317	1.332	1.446	16.45
Ethylbenzene	3.095	2.559	2.456	2.189	2.209	2.301	2.468	13.74
m & p-Xylene	2.816	2.063	2.131	1.815	1.695	1.961	2.080	18.95
o-Xylene	3.113	2.264	2.297	1.995	2.041	2.088	2.300	18.10
Pentafluorobenzene	1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.00
1,4-Difluorobenzene	1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.00
Toluene-d8	1.112	1.135	1.130	1.080	1.143	1.146	1.124	2.20
Chlorobenzene-d5	1.029	1.054	1.044	0.957	1.072	1.034	1.032	3.85
1,4-Bromofluorobenzene	1.636	1.662	1.671	1.472	1.599	1.637	1.613	4.57

CALCULATIONS

EPA Method TO-15 Modified Full Scan GC/MS

SDG: LABQC
Laboratory Number: QC07089

RL:	1T15EXAY.M
Run Method:	1T15EXAY.M
Quant Method:	1T15EXAY.M
Can Dilution Factor:	1.00
Air Volume:	1000 ml
Gas Constant:	23.68
Decimal Places:	2

MDL Factor 1

Compound	M.W.	Raw Amount	Result ppbv	Result ug/m3	(1) MDL ppbv	(2) RL ppbv	Calc MDL ppbv	Calc MDL ug/m3	Calc RL ppbv	Calc RL ug/m3	Flag	Spike ppmv
Vinyl chloride	62.5	0.928	0.928	2.45	0.104	0.520	0.10	0.27	0.52	1.37		1.040
1,1-Dichloroethene	96.9	1.091	1.091	4.46	0.101	0.505	0.10	0.41	0.51	2.07		1.040
Dichloromethane	84.9	1.054	1.054	3.78	0.104	0.520	0.10	0.37	0.52	1.86		1.040
1,1-Dichloroethane	99.0	1.014	1.014	4.24	0.101	0.505	0.10	0.42	0.51	2.11		1.010
Chloroform	119.4	0.908	0.908	4.58	0.102	0.510	0.10	0.51	0.51	2.57		1.020
1,1,1-Trichloroethane	133.4	0.978	0.978	5.51	0.102	0.510	0.10	0.57	0.51	2.87		1.020
1,2-Dichloroethane	99.0	0.928	0.928	3.88	0.103	0.515	0.10	0.43	0.52	2.15		1.030
Benzene	78.1	0.888	0.888	2.93	0.103	0.515	0.10	0.34	0.52	1.70		1.030
Carbon tetrachloride	153.8	1.014	1.014	6.58	0.102	0.510	0.10	0.66	0.51	3.31		1.020
Trichloroethene	131.4	1.078	1.078	5.98	0.103	0.515	0.10	0.57	0.52	2.86		1.030
Toluene	92.1	1.144	1.144	4.45	0.103	0.515	0.10	0.40	0.52	2.00		1.030
1,2-Dibromoethane	187.9	1.030	1.030	8.17	0.104	0.520	0.10	0.83	0.52	4.13		1.040
Tetrachloroethene	165.8	1.114	1.114	7.80	0.102	0.510	0.10	0.71	0.51	3.57		1.020
Chlorobenzene	112.6	1.009	1.009	4.80	0.102	0.510	0.10	0.49	0.51	2.43		1.020
Ethylbenzene	106.2	1.021	1.021	4.58	0.104	0.520	0.10	0.47	0.52	2.33		1.040
m & p-Xylene	106.2	2.044	2.044	9.17	0.206	1.030	0.21	0.92	1.03	4.62		2.060
o-Xylene	106.2	0.963	0.963	4.32	0.102	0.510	0.10	0.46	0.51	2.29		1.020

SAMPLE CALCULATION

EPA Method TO-15 Modified Full Scan GC/MS

SDG:		**LABQC**
Laboratory Number:		**QC07089**
Standard Volume	STV	5.0
Sample Volume	SV	1000
Can Dilution Factor	CDF	1.00
Gas Constant		23.68
Decimal Places:		2

Sample Calculation:

1) Avg RFn = Sum $\left| \frac{(Astdni)}{(Cstdni)} \frac{(Cistdi)}{(Aistdi)} \right|_i$ Note: 1

2) Raw Amt = $\frac{(Ansamp)}{(Avg\ RFn)} \frac{(Cistdi)}{(Aistdi)}$ = **Cn**

3) Amount ppbv = $\frac{(Raw\ Amt)\ 1000}{(SV)}$ (CDF)

4) Amount ug/m3 = $\frac{(amt(ppbv)\ MW}{23.68}$

n	Compound	IS n	Chem type	MW	AvgRFn	Area Ansamp	Cistdi ppmv	Aistdi Ais	Cn ppmV Raw Amt	Amount ppbv	Amount ug/m3
5	Vinyl chloride	1	TRG	62.5	0.213	44730	20.000	4516986	0.928	0.93	2.45
15	1,1-Dichloroethene	1	TRG	96.9	0.471	116173	20.000	4516986	1.091	1.09	4.46
19	Dichloromethane	1	TRG	84.9	0.209	49654	20.000	4516986	1.054	1.05	3.76
24	1,1-Dichloroethane	1	TRG	99.0	0.606	138927	20.000	4516986	1.014	1.01	4.22
34	Chloroform	1	TRG	119.4	0.729	149505	20.000	4516986	0.908	0.91	4.59
36	1,1,1-Trichloroethane	35	TRG	133.4	0.726	158902	20.000	4473387	0.978	0.98	5.52
37	1,2-Dichloroethane	35	TRG	99.0	0.681	141379	20.000	4473387	0.928	0.93	3.89
40	Benzene	35	TRG	78.1	1.183	235151	20.000	4473387	0.888	0.89	2.94
41	Carbon tetrachloride	35	TRG	153.8	0.737	167176	20.000	4473387	1.014	1.01	6.56
46	Trichloroethene	35	TRG	131.4	0.573	138111	20.000	4473387	1.078	1.08	5.99
51	Toluene	35	TRG	92.1	1.546	395553	20.000	4473387	1.144	1.14	4.43
58	1,2-Dibromoethane	35	TRG	187.9	1.119	257800	20.000	4473387	1.030	1.03	8.17
59	Tetrachloroethene	35	TRG	165.8	0.985	245535	20.000	4473387	1.114	1.11	7.77
60	Chlorobenzene	35	TRG	112.6	1.446	326213	20.000	4473387	1.009	1.01	4.80
62	Ethylbenzene	35	TRG	106.2	2.468	563723	20.000	4473387	1.021	1.02	4.57
63	m & p-Xylene	35	TRG	106.2	2.080	951129	20.000	4473387	2.044	2.04	9.15
66	o-Xylene	35	TRG	106.2	2.300	495557	20.000	4473387	0.963	0.96	4.31
1	Pentafluorobenzene	1	IS		1.000	4516986	20.000	4516986			
35	1,4-Difluorobenzene	35	IS		1.000	4473387	20.000	4473387			
94	Toluene-d8	35	SURR		1.124	2560394	20.000	4473387			

Calculation Definitions:

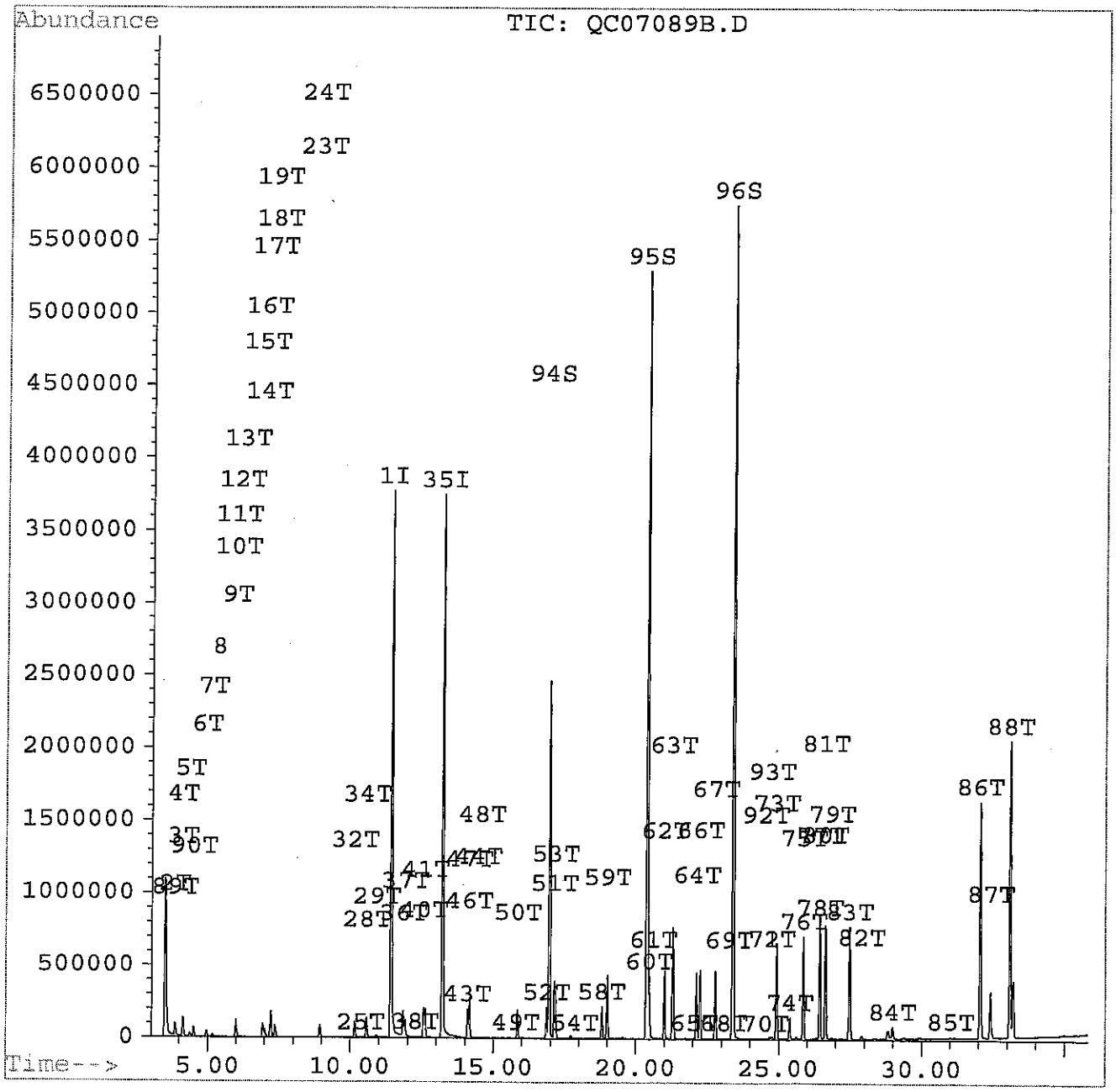
n	compound n
i	i th calibration level
Astdni	Standard Area for compound n at ith calibration level
Cstdni	Standard Concentration for compound n at ith calibration level in ppmv
Cistdi	Internal Standard Conc used for compound n at ith calibration level in ppmv
Aistdi	Internal Standard Area used for compound n at ith calibration level
Ansamp	Sample Area for compound n
Avg RFn	Average response factor for all ith calibration levels for compound n
Raw Amount	Sample Concentration in ppmv before applying factors
Cistd	Concentration internal standard used for compound n in sample in ppmv
Aistd	Area of internal standard used for compound n in sample
Cn	Concentration of compound n in sample in ppmv
23.68	Gas constant at 60 F as per EPA source test protocol
MW	Molecular weight of compound
Note (1) : Avg RFn	The values for the Average Response Factor AvgRFn can be optained from the response Factor Report for the Initial Calibration, or from the Calibration Report

Quantitation Report

Data File : C:\MSCHEM\1\DATA\07089MS1\QC07089B.D
Acq Time : 8 Jul 109 1:05 pm
Sample : ST60421
Misc :
Quant Time: Jul 8 13:41 19109

Operator: JF
Inst : 5970 - In
Multiplr: 1.00

Method : C:\MSCHEM\1\METHODS\1T15EXAY.M
Title : EPA T0-15
Last Update : Tue Mar 17 14:18:15 2009
Response via : Multiple Level Calibration



ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified Full Scan GC/MS | **SDG:** 209277
Analytical Method: TO-15 | **Laboratory Number:** 04

File:	0927704A.D	**Date Sampled:**	06/19/09	**Time:**	13:22
Description:	44-004	**Date Received:**	06/23/09		
Can/Tube#:	696	**Date Extracted:**			
Sam_Type:	SA	**Date Analyzed:**	07/08/09	**Time:**	15:37
QC_Batch:	070809-MS1	**Can Dilution Factor:**	1.44		0
Air Volume:	2 ml	**Not Detected Flag:**	ND		

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
75-71-8	Dichlorodifluoromethane	76	378	ND	386	1,930	ND	ND
74-87-3	Chloromethane	73	367	ND	157	783	ND	ND
76-14-2	Freon 114	75	374	ND	540	2,702	ND	ND
75-01-4	Vinyl chloride	75	374	ND	198	988	ND	ND
74-83-9	Bromomethane	75	374	ND	300	1,500	ND	ND
75-00-3	Chloroethane	75	374	ND	204	1,020	ND	ND
75-69-4	Trichlorofluoromethane	75	374	ND	434	2,172	ND	ND
67-64-1	Acetone	65	324	ND	159	795	ND	ND
67-63-0	2-propanol	66	328	ND	166	831	ND	ND
75-35-4	1,1-Dichloroethene	73	364	ND	298	1,488	ND	ND
76-13-1	Freon 113	73	367	ND	581	2,904	ND	ND
75-09-2	Dichloromethane	75	374	ND	268	1,342	ND	ND
75-15-0	Carbon disulfide	64	320	ND	206	1,030	ND	ND
156-60-5	trans-1,2-Dichloroethene	63	313	834	256	1,282	3,413	
1634-04-4	Methyl tert butyl ether	56	281	ND	209	1,045	ND	ND
75-34-3	1,1-Dichloroethane	73	364	388	304	1,520	1,623	
108-05-4	Vinyl acetate	62	310	ND	225	1,126	ND	ND
78-93-3	2-Butanone	62	310	ND	189	943	ND	ND
156-59-2	cis-1,2-Dichloroethene	74	371	7,924	303	1,517	32,426	
67-66-3	Chloroform	73	367	ND	370	1,852	ND	ND
71-55-6	1,1,1-Trichloroethane	73	367	ND	414	2,069	ND	ND
107-06-2	1,2-Dichloroethane	74	371	ND	310	1,550	ND	ND
71-43-2	Benzene	74	371	108	245	1,223	357	J
56-23-5	Carbon tetrachloride	73	367	ND	477	2,385	ND	ND
78-87-5	1,2-Dichloropropane	74	371	ND	354	1,769	ND	ND
123-91-1	1,4 Dioxane	63	317	ND	236	1,179	ND	ND
75-27-4	Bromodichloromethane	58	288	ND	398	1,992	ND	ND
108-10-1	Methyl Isobutyl Ketone	66	331	ND	280	1,401	ND	ND
10061-01-5	cis-1,3-Dichloropropene	76	382	ND	358	1,789	ND	ND
108-88-3	Toluene	74	371	172	288	1,442	671	J
10061-02-6	trans-1,3-Dichloropropene	75	374	ND	351	1,755	ND	ND
79-00-5	1,1,2-Trichloroethane	73	367	ND	414	2,069	ND	ND
591-78-6	2-Hexanone	63	317	ND	268	1,341	ND	ND
124-48-1	Dibromochloromethane	64	320	ND	564	2,818	ND	ND
106-93-4	1,2-Dibromoethane	75	374	ND	594	2,971	ND	ND
127-18-4	Tetrachloroethene	73	367	ND	514	2,571	ND	ND
108-90-7	Chlorobenzene	73	367	ND	349	1,746	ND	ND
100-41-4	Ethylbenzene	75	374	ND	336	1,679	ND	ND
108-38-3	m & p-Xylene	148	742	ND	665	3,326	ND	ND
100-42-5	Styrene	74	371	ND	326	1,632	ND	ND

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
75-25-2	Bromoform	67	335	ND	715	3,573	ND	ND
95-47-6	o-Xylene	73	367	ND	329	1,647	ND	ND
79-34-5	1,1,2,2-Tetrachloroethane	73	367	ND	520	2,602	ND	ND
622-96-8	4-Ethyltoluene	66	328	ND	333	1,663	ND	ND
108-67-8	1,3,5-Trimethylbenzene	76	382	ND	387	1,937	ND	ND
95-63-6	1,2,4-Trimethylbenzene	73	367	ND	373	1,864	ND	ND
541-73-1	1,3-Dichlorobenzene	73	367	ND	456	2,279	ND	ND
100-44-7	Benzyl chloride	65	324	ND	346	1,732	ND	ND
106-46-7	1,4-Dichlorobenzene	73	367	111	456	2,279	689	J
95-50-1	1,2-Dichlorobenzene	72	360	88	447	2,235	547	J
120-82-1	1,2,4-Trichlorobenzene	74	371	ND	568	2,841	ND	ND
91-20-3	Naphthalene	172	860	ND	932	4,658	ND	ND
87-68-3	Hexachlorobutadiene	74	371	ND	817	4,084	ND	ND

	Surrogate Recovery	Spike Amt. ppbV	Amount ppbV	% Rec.	QC Limits	Flag * = Out
2037-26-5	Toluene-d8	10.000	10.177	102	70-130	

Notes: 1) Reported results are to be interpreted to two significant figures.
2) ug/m3 = ppbV*FW/23.68 calculated assuming conditions at 60 F and 1 atm.
3) MDL and RL are adjusted for sample volume and can dilution.
4) U and ND are Flags used for Not Detected
5) J is a flag for a result between the MDL and the RL (or lower quantitation limit, LQL)

QUANTITATION REPORT

EPA Method TO-15 Modified Full Scan GC/MS

Review **EAS Sample ID: 0927704**

File Name:	0927704A.D		1 KB
Sample ID:	44-004		2 AT
Date:	8 Jul 109 3:37 pm	Cal Amounts	3 BB
Run Method:	1T15EXAY.M	IS Areas	4 SH
Quant Method:	1T15EXAY.M	Carryover	
Cal Update:	Tue Mar 17 14:18:15 2009		
Template:	1TO15EXT.MS1		
Can Factor:	1.44		
Volume:	2 ml	Analyst: KB 1	

CAS#	Compound	n	Raw Amount	RT	Target RT	Ion	Sample Area	Qualifier	Lower Qual	Upper Qual	Qual Flag	Cal Flag	Int Flag
75-71-8	Dichlorodifluoromethane	2	0.000	0.00	3.83	85.00	0	0	25	37			
74-87-3	Chloromethane	3	0.000	0.00	4.09	50.00	0	0	22	32			
76-14-2	Freon 114	4	0.000	0.00	4.11	85.00	0	0	44	65			
75-01-4	Vinyl chloride	5	0.000	0.00	4.33	62.00	0	0	24	36			
74-83-9	Bromomethane	6	0.000	0.00	4.92	94.00	0	0	73	109			
75-00-3	Chloroethane	7	0.000	0.00	5.12	64.00	0	0	26	40			
75-69-4	Trichlorofluoromethane	10	0.000	0.00	5.94	101.00	0	0	48	73			
67-64-1	Acetone	12	0.071	6.02	6.04	43.00	15922	21	16	24			
67-63-0	2-propanol	13	0.012	6.16	6.14	45.00	2043	0	18	27	Q		
75-35-4	1,1-Dichloroethene	15	0.010	6.90	6.89	61.00	1163	0	34	51	Q		
76-13-1	Freon 113	17	0.000	0.00	7.16	151.00	0	0	101	152			
75-09-2	Dichloromethane	19	0.000	0.00	7.31	84.00	0	0	51	77			
75-15-0	Carbon disulfide	20	0.000	0.00	7.54	76.00	0	0	16	24			
156-60-5	trans-1,2-Dichloroethene	21	1.158	8.40	8.38	96.00	56986	180	172	258			
1634-04-4	Methyl tert butyl ether	22	0.000	0.00	8.54	73.00	0	0	18	27			
75-34-3	1,1-Dichloroethane	24	0.539	8.91	8.90	63.00	83629	32	24	36			
108-05-4	Vinyl acetate	25	0.001	10.34	10.32	43.00	291	0	0	0			
78-93-3	2-Butanone	26	0.000	0.00	9.54	72.00	0	0	30	45			
156-59-2	cis-1,2-Dichloroethene	32	11.006	10.11	10.11	96.00	881580	179	139	209			
67-66-3	Chloroform	34	0.047	10.53	10.53	83.00	8678	53	51	77			
71-55-6	1,1,1-Trichloroethane	36	0.000	0.00	11.80	97.00	0	0	51	76			
107-06-2	1,2-Dichloroethane	37	0.034	11.86	11.87	61.95	5241	0	25	37	Q		
71-43-2	Benzene	40	0.150	12.53	12.51	78.00	40724	16	19	29	Q		
56-23-5	Carbon tetrachloride	41	0.000	0.00	12.56	116.90	0	0	79	119			
78-87-5	1,2-Dichloropropane	43	0.000	14.03	14.07	63.00	0	0	58	88			
123-91-1	1,4 Dioxane	44	0.004	14.45	14.40	88.00	309	245	76	114			
75-27-4	Bromodichloromethane	47	0.000	14.52	14.40	83.00	0	0	49	74			
108-10-1	Methyl Isobutyl Ketone	49	0.000	15.85	15.70	43.00	0	0	21	35			
10061-01-5	cis-1,3-Dichloropropene	50	0.000	0.00	15.82	75.00	0	0	15	23			
108-88-3	Toluene	51	0.240	17.13	17.11	91.00	84720	56	44	66			
10061-02-6	trans-1,3-Dichloropropene	52	0.000	0.00	16.85	75.00	0	0	16	23			
79-00-5	1,1,2-Trichloroethane	53	0.015	17.13	17.16	61.00	1518	0	91	136	Q		
591-78-6	2-Hexanone	54	0.000	17.99	17.80	43.00	0	0	28	47			
124-48-1	Dibromochloromethane	57	0.000	0.00	18.30	129.00	0	0	60	91			
106-93-4	1,2-Dibromoethane	58	0.000	0.00	18.80	107.00	0	0	75	113			
127-18-4	Tetrachloroethene	59	0.038	19.00	18.97	166.00	8632	48	52	78	Q		

CAS#	Compound	n	Raw Amount	RT	Target RT	Ion	Sample Area	Qualifier	Lower Qual	Upper Qual	Qual Flag	Cal Flag	Int Flag
108-90-7	Chlorobenzene	60	0.096	20.47	20.45	112.00	31692	34	25	38			
100-41-4	Ethylbenzene	62	0.013	21.01	17.80	91.00	7433	23	21	32			
108-38-3	m & p-Xylene	63	0.048	21.29	21.28	91.00	22643	40	32	48			
100-42-5	Styrene	64	0.005	22.16	22.14	104.00	1699	67	53	79			
75-25-2	Bromoform	65	0.001	22.03	22.00	173.00	363	0	39	59			
95-47-6	o-Xylene	66	0.020	22.26	22.25	91.00	10606	41	30	45			
79-34-5	1,1,2,2-Tetrachloroethane	67	0.000	0.00	22.75	83.00	0	0	8	13			
622-96-8	4-Ethyltoluene	72	0.015	24.77	24.74	105.00	12129	22	20	31			
108-67-8	1,3,5-Trimethylbenzene	73	0.009	24.92	24.92	105.00	7030	37	33	49			
95-63-6	1,2,4-Trimethylbenzene	76	0.027	25.88	25.89	105.00	18917	38	32	48			
541-73-1	1,3-Dichlorobenzene	78	0.027	26.44	26.41	146.00	15309	39	34	51			
100-44-7	Benzyl chloride	80	0.002	26.62	26.61	91.00	1337	0	15	23	Q		
106-46-7	1,4-Dichlorobenzene	81	0.154	26.64	26.68	146.00	90073	38	34	51			
95-50-1	1,2-Dichlorobenzene	83	0.122	27.49	27.47	146.00	79656	37	34	51			
120-82-1	1,2,4-Trichlorobenzene	86	0.011	32.06	32.18	180.00	13414	78	78	117			
91-20-3	Naphthalene	87	0.026	32.43	32.41	128.00	52061	12	10	16			
87-68-3	Hexachlorobutadiene	88	0.005	33.09	33.08	225.00	4192	0	22	33	Q		
363-72-4	Pentafluorobenzene	1	20.000	11.37	11.38	168.00	**5115411**						
540-36-3	1,4-Difluorobenzene	35	20.000	13.17	13.17	114.00	**4573707**						
2037-26-5	Toluene-d8	94	**10.177**	16.96	16.94	98.00	2616752	61	51	77			

Integration Flags:

If no flag the Integration was done by the instrument computer

M1 Manual Integration because the computer did not integrated the peak or integrated the wrong peak

M2 Manual Integration because computer integration of baseline was different then Inital Calibration

INITIAL CALIBRATION REPORT

EPA Method TO-15 Modified Full Scan GC/MS

SDG: 209277
QC_Batch: 070809-MS1
Instrument Name: 5970 - In

File Name: 0927704A.D
Sample ID: 44-004
Sample Analysis Date: 8 Jul 109 3:37 pm
Run Method: 1T15EXAY.M
Quant and Calibration Method: 1T15EXAY.M
Cal Update: Tue Mar 17 14:18:15 2009
Template: 1TO15EXT.MS1

Calibration Title: EPA T0-15

Number Compounds:		96
IS1:	ST60403	20
IS2:	ST60403	20
IS3:		
IS4:		

		Calibration Amount CA, ppmv						Calibration Response, Area					
		Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
		Amt	Amt	Amt	Amt	Amt	Amt	C03179C.D	C03179E.D	C03179B.D	C03179A.D	C03169H.D	C03179D.D
n	Compound	0.25	4.0	1.0	5.0	10.0	2.0	0.25	4.0	1.0	5.0	10.0	2.0
2	Dichlorodifluoromethane	0.263	4.200	1.050	5.250	10.500	2.100	22559	398558	88898	436110	840988	185058
3	Chloromethane	0.255	4.080	1.020	5.100	10.200	2.040	15230	241294	55434	272653	505057	113562
4	Freon 114	0.260	4.160	1.040	5.200	10.400	2.080	25317	399238	94441	464176	861160	193013
5	Vinyl chloride	0.260	4.160	1.040	5.200	10.400	2.080	7909	132864	32643	150492	285530	62953
6	Bromomethane	0.260	4.160	1.040	5.200	10.400	2.080	8153	136639	28890	149016	274473	66325
7	Chloroethane	0.260	4.160	1.040	5.200	10.400	2.080	4307	71497	16630	78611	141439	32925
10	Trichlorofluoromethane	0.260	4.160	1.040	5.200	10.400	2.080	22371	364524	85037	431144	716396	179451
12	Acetone	0.225	3.600	0.900	4.500	9.000	1.800	42851	442389	113697	494726	770083	184591
13	2-propanol	0.228	3.640	0.910	4.550	9.100	1.820	19578	321532	75563	289890	1427833	154437
15	1,1-Dichloroethene	0.253	4.040	1.010	5.050	10.100	2.020	16793	248606	63935	305424	730028	150732
17	Freon 113	0.255	4.080	1.020	5.100	10.200	2.040	13083	220191	45725	205080	591375	132996
19	Dichloromethane	0.260	4.160	1.040	5.200	10.400	2.080	8354	124766	26131	120655	330491	71297
20	Carbon disulfide	0.223	3.560	0.890	4.450	8.900	1.780	8703	137347	33136	122015	313353	78232
21	trans-1,2-Dichloroethene	0.218	3.480	0.870	4.350	8.700	1.740	5940	117954	23397	80889	230621	52404
22	Methyl tert butyl ether	0.195	3.120	0.780	3.900	7.800	1.560	24271	482973	97431	369980	967308	233954
24	1,1-Dichloroethane	0.253	4.040	1.010	5.050	10.100	2.020	22823	387657	85531	331041	871129	183187
25	Vinyl acetate	0.215	3.440	0.860	4.300	8.600	1.720	40148	687529	149287	676740	1560060	338492
26	2-Butanone	0.215	3.440	0.860	4.300	8.600	1.720	5400	92652	22013	71425	205517	45058
32	cis-1,2-Dichloroethene	0.258	4.120	1.030	5.150	10.300	2.060	11695	190337	43510	224404	421914	95703
34	Chloroform	0.255	4.080	1.020	5.100	10.200	2.040	27147	449509	101707	516969	959204	213353
36	1,1,1-Trichloroethane	0.255	4.080	1.020	5.100	10.200	2.040	26931	432442	100881	509527	970639	210683
37	1,2-Dichloroethane	0.258	4.120	1.030	5.150	10.300	2.060	26512	398927	96975	495766	920839	187037

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n	Compound	Amt 0.25	Amt 4.0	Amt 1.0	Amt 5.0	Amt 10.0	Amt 2.0	C03179C.D 0.25	C03179E.D 4.0	C03179B.D 1.0	C03179A.D 5.0	C03169H.D 10.0	C03179D.D 2.0
40	Benzene	-1.000	4.120	1.030	5.150	10.300	2.060	-1	712515	206967	782160	1387400	364766
41	Carbon tetrachloride	0.255	4.080	1.020	5.100	10.200	2.040	26276	451629	105798	518753	931992	220983
43	1,2-Dichloropropane	0.258	4.120	1.030	5.150	10.300	2.060	18588	266688	66789	305497	598806	132416
44	1,4 Dioxane	0.220	3.520	0.880	4.400	8.800	1.760	11252	171544	43700	161310	540834	80192
47	Bromodichloromethane	0.200	3.200	0.800	4.000	8.000	1.600	27507	476051	96325	417248	885573	218119
49	Methyl Isobutyl Ketone	0.230	3.680	0.920	4.600	9.200	1.840	67434	1179200	250239	1039898	2505790	566705
50	cis-1,3-Dichloropropene	0.265	4.240	1.060	5.300	10.600	2.120	28339	441906	107039	492454	1010236	206495
51	Toluene	-1.000	4.120	1.030	5.150	10.300	2.060	-1	944443	257501	1033029	1877014	478350
52	trans-1,3-Dichloropropene	0.260	4.160	1.040	5.200	10.400	2.080	33546	509168	127376	538174	1205186	242137
53	1,1,2-Trichloroethane	0.255	4.080	1.020	5.100	10.200	2.040	18573	263308	68163	281046	608914	127239
54	2-Hexanone	0.220	3.520	0.880	4.400	8.800	1.760	84018	1413472	311524	1112452	3278869	678898
57	Dibromochloromethane	0.223	3.560	0.890	4.450	8.900	1.780	43801	688881	150691	558917	1316838	322250
58	1,2-Dibromoethane	0.260	4.160	1.040	5.200	10.400	2.080	46912	660815	169213	701472	1505940	324567
59	Tetrachloroethene	0.255	4.080	1.020	5.100	10.200	2.040	40710	589393	145069	627137	1126037	300057
60	Chlorobenzene	0.255	4.080	1.020	5.100	10.200	2.040	64660	836027	208106	862738	1818049	410336
62	Ethylbenzene	0.260	4.160	1.040	5.200	10.400	2.080	107037	1527752	359496	1548148	3108186	722767
63	m & p-Xylene	0.515	8.240	2.060	10.300	20.600	4.120	192864	2440351	617919	2542524	4725274	1220126
64	Styrene	0.258	4.120	1.030	5.150	10.300	2.060	70964	837020	224026	840176	1812012	428714
65	Bromoform	0.233	3.720	0.930	4.650	9.300	1.860	90991	1151698	243927	958925	2416870	530300
66	o-Xylene	0.255	4.080	1.020	5.100	10.200	2.040	105567	1325719	329821	1384162	2817484	643280
67	1,1,2,2-Tetrachloroethane	0.255	4.080	1.020	5.100	10.200	2.040	102201	1142635	274703	1042229	3385910	560899
72	4-Ethyltoluene	0.228	3.640	0.910	4.550	9.100	1.820	177076	1912961	437379	1573293	3712735	943267
73	1,3,5-Trimethylbenzene	0.265	4.240	1.060	5.300	10.600	2.120	184274	1936506	488965	1778188	3957960	994445
76	1,2,4-Trimethylbenzene	-1.000	4.080	1.020	5.100	10.200	2.040	-1	1979227	501359	1766777	3635276	1033463
78	1,3-Dichlorobenzene	-1.000	4.080	1.020	5.100	10.200	2.040	-1	1499786	411700	1325016	3205866	837609
80	Benzyl chloride	-1.000	3.600	0.900	4.500	9.000	1.800	-1	1944712	459781	1580130	4463720	884546
81	1,4-Dichlorobenzene	-1.000	4.080	1.020	5.100	10.200	2.040	-1	1616283	417021	1362139	3091714	896732
83	1,2-Dichlorobenzene	-1.000	4.000	1.000	5.000	10.000	2.000	-1	1708595	429307	1374687	4272294	912351
86	1,2,4-Trichlorobenzene	-1.000	4.120	1.030	5.150	10.300	2.060	-1	3172331	905400	2236815	7156710	1987175
87	Naphthalene	-1.000	9.560	2.390	11.950	23.900	4.780	-1	11453402	4198495	10074168	24925580	6661715
88	Hexachlorobutadiene	-1.000	4.120	1.030	5.150	10.300	2.060	-1	2443776	758051	1914490	4177636	1622637
1	Pentafluorobenzene	20.000	20.000	20.000	20.000	20.000	20.000	2643183	2935915	2871816	2719013	2737194	3022845
35	1,4-Difluorobenzene	20.000	20.000	20.000	20.000	20.000	20.000	2659938	2870629	2814997	2720455	2706138	3020264
94	Toluene-d8	10.000	10.000	10.000	10.000	10.000	10.000	1479389	1629143	1590486	1469067	1546296	1730275

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INITIAL CALIBRATION REPORT: Response Factors

SDG:	**209277**
QC_Batch:	**070809-MS1**
Sample ID:	44-004
Sample Analysis Date:	8 Jul 109 3:37 pm
Run Method:	1T15EXAY.M
Quant Method:	1T15EXAY.M
Cal Update:	Tue Mar 17 14:18:15 2009
Template:	1TO15EXT.MS1

Sample Calculation:

1) Avg RFn = Sum $\left| \frac{(Astdni)}{(Cstdni)} \frac{(Cistdi)}{(Aistdi)} \right|_i$

Response Factors

Compound		RF1	RF2	RF3	RF4	RF5	RF6	AvgRFn	%RSD
Dichlorodifluoromethane		0.649	0.646	0.590	0.611	0.585	0.583	0.611	4.97
Chloromethane		0.452	0.403	0.378	0.393	0.362	0.368	0.393	8.34
Freon 114		0.737	0.654	0.632	0.657	0.605	0.614	0.650	7.29
Vinyl chloride		0.230	0.218	0.219	0.213	0.201	0.200	0.213	5.40
Bromomethane		0.237	0.224	0.193	0.211	0.193	0.211	0.212	8.16
Chloroethane		0.125	0.117	0.111	0.111	0.099	0.105	0.112	8.18
Trichlorofluoromethane		0.651	0.597	0.569	0.610	0.503	0.571	0.584	8.47
Acetone		1.441	0.837	0.880	0.809	0.625	0.679	0.878	33.28
2-propanol		0.650	0.602	0.578	0.469	1.146	0.561	0.668	36.24
1,1-Dichloroethene		0.502	0.419	0.441	0.445	0.528	0.494	0.471	9.01
Freon 113		0.388	0.368	0.312	0.296	0.424	0.431	0.370	15.21
Dichloromethane		0.243	0.204	0.175	0.171	0.232	0.227	0.209	14.64
Carbon disulfide		0.295	0.263	0.259	0.202	0.257	0.291	0.261	12.82
trans-1,2-Dichloroethene		0.206	0.231	0.187	0.137	0.194	0.199	0.192	16.18
Methyl tert butyl ether		0.942	1.055	0.870	0.698	0.906	0.992	0.910	13.48
1,1-Dichloroethane		0.683	0.654	0.590	0.482	0.630	0.600	0.606	11.51
Vinyl acetate		1.413	1.362	1.209	1.158	1.325	1.302	1.295	7.38
2-Butanone		0.190	0.183	0.178	0.122	0.175	0.173	0.170	14.31
cis-1,2-Dichloroethene		0.343	0.315	0.294	0.321	0.299	0.307	0.313	5.59
Chloroform		0.806	0.751	0.694	0.746	0.687	0.692	0.729	6.41
1,1,1-Trichloroethane		0.794	0.738	0.703	0.734	0.703	0.684	0.726	5.40
1,2-Dichloroethane		0.773	0.675	0.669	0.708	0.661	0.601	0.681	8.33
Benzene	NA		1.205	1.428	1.117	0.996	1.173	1.183	13.36
Carbon tetrachloride		0.775	0.771	0.737	0.748	0.675	0.717	0.737	5.04
1,2-Dichloropropane		0.542	0.451	0.461	0.436	0.430	0.426	0.457	9.47
1,4 Dioxane		0.385	0.340	0.353	0.270	0.454	0.302	0.350	18.49
Bromodichloromethane		1.034	1.036	0.855	0.767	0.818	0.903	0.902	12.44
Methyl Isobutyl Ketone		2.204	2.233	1.932	1.662	2.013	2.040	2.014	10.30
cis-1,3-Dichloropropene		0.804	0.726	0.717	0.683	0.704	0.645	0.713	7.44
Toluene	NA		1.597	1.776	1.475	1.347	1.538	1.546	10.25
trans-1,3-Dichloropropene		0.970	0.853	0.870	0.761	0.856	0.771	0.847	9.00
1,1,2-Trichloroethane		0.548	0.450	0.475	0.405	0.441	0.413	0.455	11.39
2-Hexanone		2.871	2.798	2.515	1.859	2.754	2.554	2.559	14.47
Dibromochloromethane		1.477	1.348	1.203	0.923	1.094	1.199	1.207	15.98
1,2-Dibromoethane		1.357	1.107	1.156	0.992	1.070	1.033	1.119	11.58
Tetrachloroethene		1.200	1.006	1.010	0.904	0.816	0.974	0.985	13.06
Chlorobenzene		1.907	1.428	1.450	1.244	1.317	1.332	1.446	16.45

Ethylbenzene		3.095	2.559	2.456	2.189	2.209	2.301	2.468	13.74
m & p-Xylene		2.816	2.063	2.131	1.815	1.695	1.961	2.080	18.95
Styrene		2.068	1.415	1.545	1.199	1.300	1.378	1.484	20.78
Bromoform		2.936	2.157	1.863	1.516	1.921	1.888	2.047	23.53
o-Xylene		3.113	2.264	2.297	1.995	2.041	2.088	2.300	18.10
1,1,2,2-Tetrachloroethane		3.014	1.951	1.913	1.502	2.453	1.821	2.109	25.54
4-Ethyltoluene		5.840	3.661	3.415	2.542	3.015	3.432	3.651	31.30
1,3,5-Trimethylbenzene		5.228	3.182	3.277	2.467	2.760	3.106	3.337	29.21
1,2,4-Trimethylbenzene	NA		3.380	3.492	2.547	2.634	3.355	3.082	14.68
1,3-Dichlorobenzene	NA		2.561	2.868	1.910	2.323	2.719	2.476	15.16
Benzyl chloride	NA		3.764	3.630	2.581	3.666	3.254	3.379	14.38
1,4-Dichlorobenzene	NA		2.760	2.905	1.964	2.240	2.911	2.556	16.83
1,2-Dichlorobenzene	NA		2.976	3.050	2.021	3.157	3.021	2.845	16.36
1,2,4-Trichlorobenzene	NA		5.365	6.245	3.193	5.135	6.388	5.265	24.29
Naphthalene	NA		8.347	12.481	6.198	7.708	9.229	8.792	26.61
Hexachlorobutadiene	NA		4.133	5.229	2.733	2.998	5.216	4.062	29.13
Pentafluorobenzene		1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.00
1,4-Difluorobenzene		1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.00
Toluene-d8		1.112	1.135	1.130	1.080	1.143	1.146	1.124	2.20

CALCULATIONS

EPA Method TO-15 Modified Full Scan GC/MS

SDG: 209277
Laboratory Number: 04

Run Method: 1T15EXAY.M
Quant Method: 1T15EXAY.M
Can Dilution Factor: 1.44
Air Volume: 2 ml MDL Factor 1
Gas Constant: 23.68
Decimal Places: 0

Compound	M.W.	Raw Amount	Result ppbv	Result ug/m3	(1) MDL ppbv	(2) RL ppbv	Calc MDL ppbv	Calc MDL ug/m3	Calc RL ppbv	Calc RL ug/m3	Flag	S062602-1 Spike ppmv
Dichlorodifluoromethane	120.9	0.000	0.000	0	0.105	0.525	75.60	386	378.00	1,930	U	0.103
Chloromethane	50.5	0.000	0.000	0	0.102	0.510	73.44	157	367.20	783	U	0.103
Freon 114	170.9	0.000	0.000	0	0.104	0.520	74.88	540	374.40	2,702	U	0.103
Vinyl chloride	62.5	0.000	0.000	0	0.104	0.520	74.88	198	374.40	988	U	0.103
Bromomethane	94.9	0.000	0.000	0	0.104	0.520	74.88	300	374.40	1,500	U	0.103
Chloroethane	64.5	0.000	0.000	0	0.104	0.520	74.88	204	374.40	1,020	U	0.103
Trichlorofluoromethane	137.4	0.000	0.000	0	0.104	0.520	74.88	434	374.40	2,172	U	0.103
Acetone	58.1	0.071	51.026	125	0.090	0.450	64.80	159	324.00	795	U	0.103
2-propanol	60.1	0.012	8.613	22	0.091	0.455	65.52	166	327.60	831	U	0.103
1,1-Dichloroethene	96.9	0.010	6.944	28	0.101	0.505	72.72	298	363.60	1,488	U	0.103
Freon 113	187.3	0.000	0.000	0	0.102	0.510	73.44	581	367.20	2,904	U	0.103
Dichloromethane	84.9	0.000	0.000	0	0.104	0.520	74.88	268	374.40	1,342	U	0.103
Carbon disulfide	76.1	0.000	0.000	0	0.089	0.445	64.08	206	320.40	1,030	U	0.103
trans-1,2-Dichloroethene	96.9	1.158	833.990	3,413	0.087	0.435	62.64	256	313.20	1,282		0.103
Methyl tert butyl ether	88.1	0.000	0.000	0	0.078	0.390	56.16	209	280.80	1,045	U	0.103
1,1-Dichloroethane	99.0	0.539	388.221	1,623	0.101	0.505	72.72	304	363.60	1,520		0.103
Vinyl acetate	86.1	0.001	0.633	2	0.086	0.430	61.92	225	309.60	1,126	U	0.103
2-Butanone	72.1	0.000	0.000	0	0.086	0.430	61.92	189	309.60	943	U	0.103
cis-1,2-Dichloroethene	96.9	11.006	7924.085	32,426	0.103	0.515	74.16	303	370.80	1,517		0.103
Chloroform	119.4	0.047	33.501	169	0.102	0.510	73.44	370	367.20	1,852	U	0.103
1,1,1-Trichloroethane	133.4	0.000	0.000	0	0.102	0.510	73.44	414	367.20	2,069	U	0.103
1,2-Dichloroethane	99.0	0.034	24.231	101	0.103	0.515	74.16	310	370.80	1,550	U	0.103
Benzene	78.1	0.150	108.344	357	0.103	0.515	74.16	245	370.80	1,223	J	0.103
Carbon tetrachloride	153.8	0.000	0.000	0	0.102	0.510	73.44	477	367.20	2,385	U	0.103
1,2-Dichloropropane	113.0	0.000	0.000	0	0.103	0.515	74.16	354	370.80	1,769	U	0.103
1,4 Dioxane	88.1	0.004	2.776	10	0.088	0.440	63.36	236	316.80	1,179	U	0.103
Bromodichloromethane	163.8	0.000	0.000	0	0.080	0.400	57.60	398	288.00	1,992	U	0.103
Methyl Isobutyl Ketone	100.2	0.000	0.000	0	0.092	0.460	66.24	280	331.20	1,401	U	0.103
cis-1,3-Dichloropropene	111.0	0.000	0.000	0	0.106	0.530	76.32	358	381.60	1,789	U	0.103
Toluene	92.1	0.240	172.477	671	0.103	0.515	74.16	288	370.80	1,442	J	0.103
trans-1,3-Dichloropropene	111.0	0.000	0.000	0	0.104	0.520	74.88	351	374.40	1,755	U	0.103
1,1,2-Trichloroethane	133.4	0.015	10.499	59	0.102	0.510	73.44	414	367.20	2,069	U	0.103
2-Hexanone	100.2	0.000	0.000	0	0.088	0.440	63.36	268	316.80	1,341	U	0.103
Dibromochloromethane	208.3	0.000	0.000	0	0.089	0.445	64.08	564	320.40	2,818	U	0.103
1,2-Dibromoethane	187.9	0.000	0.000	0	0.104	0.520	74.88	594	374.40	2,971	U	0.103
Tetrachloroethene	165.8	0.038	27.585	193	0.102	0.510	73.44	514	367.20	2,571	U	0.103

Chlorobenzene	112.6	0.096	68.999	328	0.102	0.510	73.44	349	367.20	1,746	U	0.103
Ethylbenzene	106.2	0.013	9.482	43	0.104	0.520	74.88	336	374.40	1,679	U	0.103
m & p-Xylene	106.2	0.048	34.270	154	0.206	1.030	148.32	665	741.60	3,326	U	0.206
Styrene	104.2	0.005	3.604	16	0.103	0.515	74.16	326	370.80	1,632	U	0.103
Bromoform	252.7	0.001	0.558	6	0.093	0.465	66.96	715	334.80	3,573	U	0.103
o-Xylene	106.2	0.020	14.520	65	0.102	0.510	73.44	329	367.20	1,647	U	0.103
1,1,2,2-Tetrachloroethane	167.8	0.000	0.000	0	0.102	0.510	73.44	520	367.20	2,602	U	0.103
4-Ethyltoluene	120.2	0.015	10.460	53	0.091	0.455	65.52	333	327.60	1,663	U	0.103
1,3,5-Trimethylbenzene	120.2	0.009	6.633	34	0.106	0.530	76.32	387	381.60	1,937	U	0.103
1,2,4-Trimethylbenzene	120.2	0.027	19.328	98	0.102	0.510	73.44	373	367.20	1,864	U	0.103
1,3-Dichlorobenzene	147.0	0.027	19.466	121	0.102	0.510	73.44	456	367.20	2,279	U	0.103
Benzyl chloride	126.6	0.002	1.246	7	0.090	0.450	64.80	346	324.00	1,732	U	0.103
1,4-Dichlorobenzene	147.0	0.154	110.956	689	0.102	0.510	73.44	456	367.20	2,279	J	0.103
1,2-Dichlorobenzene	147.0	0.122	88.148	547	0.100	0.500	72.00	447	360.00	2,235	J	0.103
1,2,4-Trichlorobenzene	181.4	0.011	8.021	61	0.103	0.515	74.16	568	370.80	2,841	U	0.103
Naphthalene	128.2	0.026	18.642	101	0.239	1.195	172.08	932	860.40	4,658	U	0.103
Hexachlorobutadiene	260.8	0.005	3.250	36	0.103	0.515	74.16	817	370.80	4,084	U	0.103

SAMPLE CALCULATION

EPA Method TO-15 Modified Full Scan GC/MS

SDG:		**209277**
Laboratory Number:		**04**
Standard Volume	STV	5.0
Sample Volume	SV	2
Can Dilution Factor	CDF	1.44
Gas Constant		23.68
Decimal Places:		0

Sample Calculation:

1) Avg RFn = Sum $\left| \frac{(Astdni)}{(Cstdni)} \frac{(Cistdi)}{(Aistdi)} \right|_i$ Note: 1

2) Raw Amt = $\frac{(Ansamp)}{(Avg\ RFn)} \frac{(Cistdi)}{(Aistdi)}$ = Cn

3) Amount ppbv = $\frac{(Raw\ Amt)\ 1000}{(SV)}$ (CDF)

4) Amount ug/m3 = $\frac{(amt(ppbv)\ MW}{23.68}$

n	Compound	IS n	Chem type	MW	AvgRFn	Area Ansamp	Cistdi ppmv	Aistdi Ais	Cn ppmV Raw Amt	Amount ppbv	Amount ug/m3
2	Dichlorodifluoromethane	1	TRG	120.9	0.611	0	20.000	5115411	0.000	0	0
3	Chloromethane	1	TRG	50.5	0.393	0	20.000	5115411	0.000	0	0
4	Freon 114	1	TRG	170.9	0.650	0	20.000	5115411	0.000	0	0
5	Vinyl chloride	1	TRG	62.5	0.213	0	20.000	5115411	0.000	0	0
6	Bromomethane	1	TRG	94.9	0.212	0	20.000	5115411	0.000	0	0
7	Chloroethane	1	TRG	64.5	0.112	0	20.000	5115411	0.000	0	0
10	Trichlorofluoromethane	1	TRG	137.4	0.584	0	20.000	5115411	0.000	0	0
12	Acetone	1	TRG	58.1	0.878	15922	20.000	5115411	0.071	51	125
13	2-propanol	1	TRG	60.1	0.668	2043	20.000	5115411	0.012	9	23
15	1,1-Dichloroethene	1	TRG	96.9	0.471	1163	20.000	5115411	0.010	7	29
17	Freon 113	1	TRG	187.3	0.370	0	20.000	5115411	0.000	0	0
19	Dichloromethane	1	TRG	84.9	0.209	0	20.000	5115411	0.000	0	0
20	Carbon disulfide	1	TRG	76.1	0.261	0	20.000	5115411	0.000	0	0
21	trans-1,2-Dichloroethene	1	TRG	96.9	0.192	56986	20.000	5115411	1.158	834	3,413
22	Methyl tert butyl ether	1	TRG	88.1	0.910	0	20.000	5115411	0.000	0	0
24	1,1-Dichloroethane	1	TRG	99.0	0.606	83629	20.000	5115411	0.539	388	1,622
25	Vinyl acetate	1	TRG	86.1	1.295	291	20.000	5115411	0.001	1	4
26	2-Butanone	1	TRG	72.1	0.170	0	20.000	5115411	0.000	0	0
32	cis-1,2-Dichloroethene	1	TRG	96.9	0.313	881580	20.000	5115411	11.006	7,924	32,425
34	Chloroform	1	TRG	119.4	0.729	8678	20.000	5115411	0.047	34	171
36	1,1,1-Trichloroethane	35	TRG	133.4	0.726	0	20.000	4573707	0.000	0	0
37	1,2-Dichloroethane	35	TRG	99.0	0.681	5241	20.000	4573707	0.034	24	100
40	Benzene	35	TRG	78.1	1.183	40724	20.000	4573707	0.150	108	356
41	Carbon tetrachloride	35	TRG	153.8	0.737	0	20.000	4573707	0.000	0	0
43	1,2-Dichloropropane	35	TRG	113.0	0.457	0	20.000	4573707	0.000	0	0
44	1,4 Dioxane	35	TRG	88.1	0.350	309	20.000	4573707	0.004	3	11
47	Bromodichloromethane	35	TRG	163.8	0.902	0	20.000	4573707	0.000	0	0
49	Methyl Isobutyl Ketone	35	TRG	100.2	2.014	0	20.000	4573707	0.000	0	0
50	cis-1,3-Dichloropropene	35	TRG	111.0	0.713	0	20.000	4573707	0.000	0	0
51	Toluene	35	TRG	92.1	1.546	84720	20.000	4573707	0.240	172	669
52	trans-1,3-Dichloropropene	35	TRG	111.0	0.847	0	20.000	4573707	0.000	0	0
53	1,1,2-Trichloroethane	35	TRG	133.4	0.455	1518	20.000	4573707	0.015	10	56
54	2-Hexanone	35	TRG	100.2	2.559	0	20.000	4573707	0.000	0	0
57	Dibromochloromethane	35	TRG	208.3	1.207	0	20.000	4573707	0.000	0	0
58	1,2-Dibromoethane	35	TRG	187.9	1.119	0	20.000	4573707	0.000	0	0
59	Tetrachloroethene	35	TRG	165.8	0.985	8632	20.000	4573707	0.038	28	196
60	Chlorobenzene	35	TRG	112.6	1.446	31692	20.000	4573707	0.096	69	328
62	Ethylbenzene	35	TRG	106.2	2.468	7433	20.000	4573707	0.013	9	40
63	m & p-Xylene	35	TRG	106.2	2.080	22643	20.000	4573707	0.048	34	152

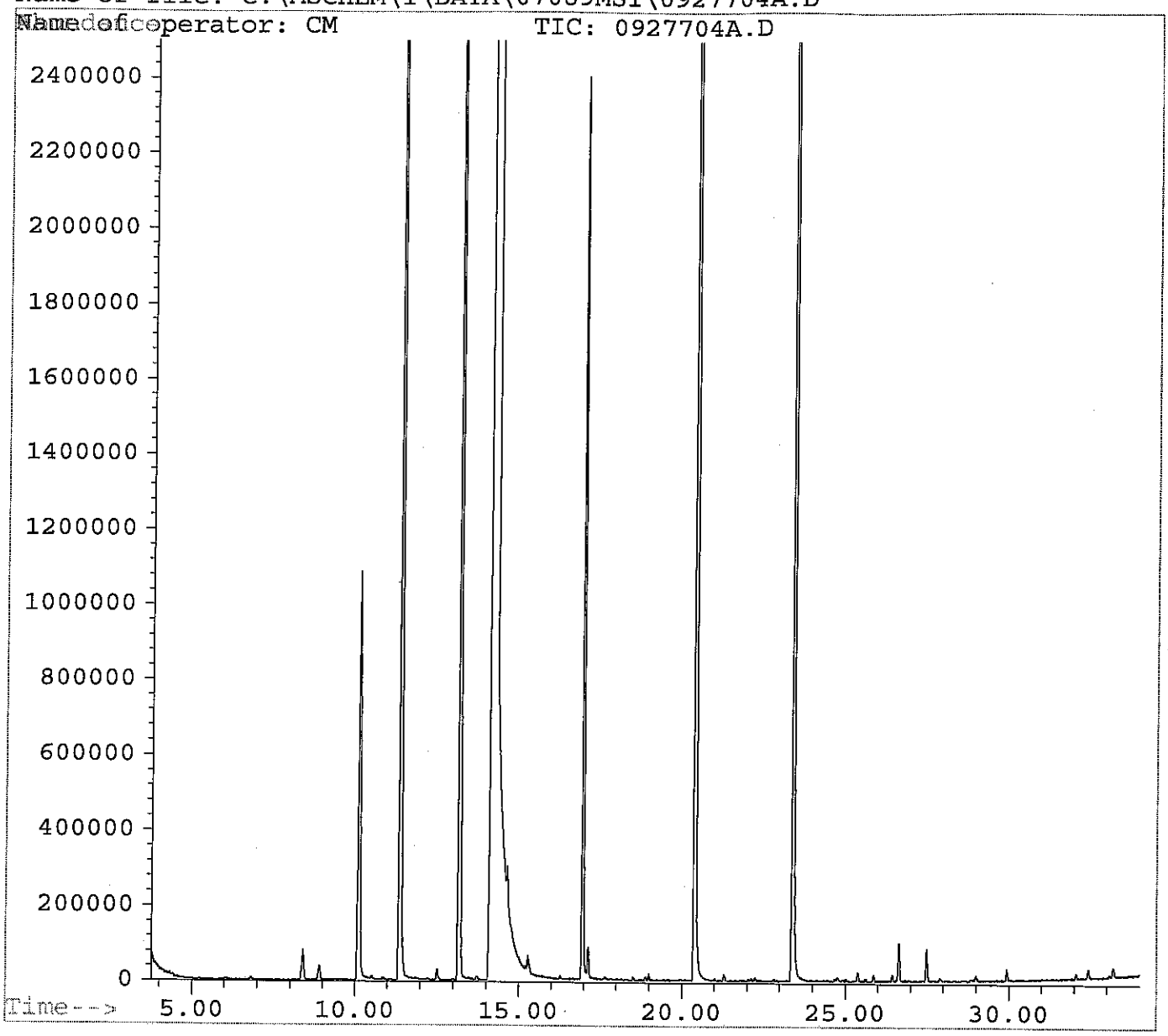
64	Styrene	35	TRG	104.2	1.484	1699	20.000	4573707	0.005	4	18
65	Bromoform	35	TRG	252.7	2.047	363	20.000	4573707	0.001	1	11
66	o-Xylene	35	TRG	106.2	2.300	10606	20.000	4573707	0.020	15	67
67	1,1,2,2-Tetrachloroethane	35	TRG	167.8	2.109	0	20.000	4573707	0.000	0	0
72	4-Ethyltoluene	35	TRG	120.2	3.651	12129	20.000	4573707	0.015	10	51
73	1,3,5-Trimethylbenzene	35	TRG	120.2	3.337	7030	20.000	4573707	0.009	7	36
76	1,2,4-Trimethylbenzene	35	TRG	120.2	3.082	18917	20.000	4573707	0.027	19	96
78	1,3-Dichlorobenzene	35	TRG	147.0	2.476	15309	20.000	4573707	0.027	19	118
80	Benzyl chloride	35	TRG	126.6	3.379	1337	20.000	4573707	0.002	1	5
81	1,4-Dichlorobenzene	35	TRG	147.0	2.556	90073	20.000	4573707	0.154	111	689
83	1,2-Dichlorobenzene	35	TRG	147.0	2.845	79656	20.000	4573707	0.122	88	546
86	1,2,4-Trichlorobenzene	35	TRG	181.4	5.265	13414	20.000	4573707	0.011	8	61
87	Naphthalene	35	TRG	128.2	8.792	52061	20.000	4573707	0.026	19	103
88	Hexachlorobutadiene	35	TRG	260.8	4.062	4192	20.000	4573707	0.005	3	33
1	Pentafluorobenzene	1	IS		1.000	5115411	20.000	5115411			
35	1,4-Difluorobenzene	35	IS		1.000	4573707	20.000	4573707			
94	Toluene-d8	35	SURR		1.124	2616752	20.000	4573707			

Calculation Definitions:

n	compound n
i	i th calibration level
Astdni	Standard Area for compound n at ith calibration level
Cstdni	Standard Concentration for compound n at ith calibration level in ppmv
Cistdi	Internal Standard Conc used for compound n at ith calibration level in ppmv
Aistdi	Internal Standard Area used for compound n at ith calibration level
Ansamp	Sample Area for compound n
Avg RFn	Average response factor for all ith calibration levels for compound n
Raw Amount	Sample Concentration in ppmv before applying factors
Cistd	Concentration internal standard used for compound n in sample in ppmv
Aistd	Area of internal standard used for compound n in sample
Cn	Concentration of compound n in sample in ppmv
23.68	Gas constant at 60 F as per EPA source test protocol
MW	Molecular weight of compound
Note (1): Avg RFn	The values for the Average Response Factor AvgRFn can be optained from the response Factor Report for the Initial Calibration, or from the Calibration Report

Name of file: C:\MSCHEM\1\DATA\07089MS1\0927704A.D

Name of operator: CM



SECTION 5
Sample Delivery Group Information

5.1: Instrument Daily Analytical Batch Run Logs and Initial Calibration Run Logs

Daily Analytical Batch

Method: 1T15EXAY **DAB:** 070209-MS1

RUN	TYPE	SDG or LABQC	ID	File ID	Can	Description	Client	Vol	DAB	Tech	Qual	Method	Comments
01	STD	LABQC		C07029A		ST60022	ST60350	5.0	070209-MS1	JF	OK	1T15EXAY	
02	SPK	LABQC		QC07029A		ST60421		10	070209-MS1	JF	OK	1T15EXAY	
03	SPK	LABQC		QC07029B		ST60421		10	070209-MS1	JF	OK	1T15EXAY	
04	BLK	LABQC		B07029A		METHOD BLANK		500	070209-MS1	JF	OK	1T15EXAY	
05	SA	209277	01	0927701A	656	44-001	SEALASKA	20	070209-MS1	JF	OK	1T15EXAY	
06	SA	209277	02	0927702A	646	44-002	SEALASKA	20	070209-MS1	JF	OK	1T15EXAY	
07	SA	209277	05	0927705A	312	44-005	SEALASKA	2.0	070209-MS1	JF	NG	1T15EXAY	LOW
08	SA	209277	03	0927703A	737	44-003	SEALASKA	2.0	070209-MS1	SG	~~OK~~ NG	1T15EXAY	~~LOW~~ HIGH
09	SA	209277	05	0927705B	312	44-005	SEALASKA	20	070209-MS1	SG	OK	1T15EXAY	
10	SA	209277	01	0927701B	656	44-001	SEALASKA	200	070209-MS1	SG	OK	1T15EXAY	
11	SA	209277	03	0927703B	737	44-003	SEALASKA	0.1	070209-MS1	SG	OK	1T15EXAY	
12	SA	209277	04	0927704A	696	44-004	SEALASKA	0.5	070209-MS1	SG	OK	1T15EXAY	
13		LABQC		CC532A	532	070209	~~SEALASKA~~ VB	100	070209-MS1	SG	~~OK~~	1T15EXAY	NG CO

Daily Analytical Batch

Method: 1T15EXAY **DAB:** 070609-MS1

RUN	TYPE	SDG or LABQC	ID	File ID	Can	Description	Client	Vol	DAB	Tech	Qual	Method	Comments
01	STD	LABQC		C07069A		ST60022	ST60350	5.0	070609-MS1	JF	NG	1T15EXAY	
02	STD	LABQC		C07069B		ST60022	ST60350	5.0	070609-MS1	JF	OK	1T15EXAY	
03	SPK	LABQC		QC07069A		ST60421		10	070609-MS1	JF	OK	1T15EXAY	
04	SPK	LABQC		QC07069B		ST60421		10	070609-MS1	JF	OK	1T15EXAY	
05	CC	LABQC		CC532A	532	532	070209	100	070609-MS1	JF	OK	1T15EXAY	
06	CC	LABQC		CC991A	991	991	070609	100	070609-MS1	KB	OK	1T15EXAY	
07	SA	209277	05	0927705A	312	44-005	SEALASKA ENVIRONME	200	070609-MS1	JF	OK	1T15EXAY	
08	SA	209277	01	0927701A	656	44-001	SEALASKA ENVIRONME	200	070609-MS1	CM	OK	1T15EXAY	
09	SA	209277	03	0927703A	737	44-003	SEALASKA ENVIRONME	.05	070609-MS1	CM	OK	1T15EXAY	
10	SA	209277	04	0927704A	696	44-004	SEALASKA ENVIRONME	.05	070609-MS1	CM	OK	1T15EXAY	
11	SA	209295	01	0929501A	1129	LANDFILL GAS	COUNTY OF SLO	2.0	070609-MS1	CM	NG	1T15EXAY	C.O.
12	SA	209281	01	0928101A	675	1 AG	CHBW	500	070609-MS1	CM	OK	1T15EXAY	
13	SA	209281	03	0928103A	715	2 G	CHBW	500	070609-MS1	CM	OK	1T15EXAY	
14	SA	209281	04	0928104A	529	2 GD	CHBW	500	070609-MS1	CM	OK	1T15EXAY	
15	SA	209281	05	0928105A	524	3 G	CHBW	500	070609-MS1	CM	OK	1T15EXAY	

Daily Analytical Batch

Method: 1T15EXAY **DAB:** 070809-MS1

RUN	TYPE	SDG or LABQC	ID	File ID	Can	Description	Client	Vol	DAB	Tech	Qual	Method	Comments
01	STD	LABQC		C07089A		ST60022	ST60350	5.0	070809-MS1	JF	NG	1T15EXAY	
02	STD	LABQC		C07089B		ST60022	ST60350	5.0	070809-MS1	JF	NG	1T15EXAY	
03	STD	LABQC		C07089C		ST60022	ST60350	5.0	070809-MS1	JF	OK	1T15EXAY	
04	SPK	LABQC		C07089D		ST60421		10	070809-MS1	JF		1T15EXAY	
05	SPK	LABQC		QC07089B		ST60421		10	070809-MS1	JF		1T15EXAY	
06	CC	LABQC		CC662A	662	662	070709	100	070809-MS1	JF		1T15EXAY	
07	CC	LABQC		CC610A	610	610		100	070809-MS1	CM		1T15EXAY	
08	SA	209277	04	0927704A	696	44-004	SEALASKA ENVIRONME	2.0	070809-MS1	CM		1T15EXAY	
09	SA	209286	01	0928601A	194	INFLUENT - JUNE - 09	MOORE TWINING ASS	20	070809-MS1	CM		1T15EXAY	
10	SA	209293	01	0929301A	383	INF-JUN-09	MOORE TWINING ASS	0.5	070809-MS1	CM		1T15EXAY	
11	SA	209291	01	0929101A	759	INF-JUN-09	MOORE TWINING ASS	0.5	070809-MS1	CM		1T15EXAY	
12	SA	209292	01	0929201A	401	INF-JUN-09	MOORE TWINING ASS	0.1	070809-MS1	CM		1T15EXAY	
13	CC	LABQC		CC878A	878	878	070809	100	070809-MS1	CM		1T15EXAY	
14	CC	LABQC		CC2962A	2962	2962	070809	100	070809-MS1	CM		1T15EXAY	
15	SA	209294	01	0929401A	773	1 B	CHBW	500	070809-MS1	CM		1T15EXAY	
16	SA	209294	04	0929404A	538	3 G	CHBW	500	070809-MS1	CM		1T15EXAY	

INSTRUMENT LOGBOOK

ENVIRONMENTAL
Analytical Service, Inc.

FILE NAME	CAN #	CLIENT NAME	CLIENT ID	VOLUME	COMMENTS
C03179A	STD	ST60022	ST60350	5.0 ML	OK
C03179B	STD	""	""	1.0 ML	OK
C03179C	STD	""	""	0.25 ML	OK
C03179D	STD	""	""	2.0 ML	OK
C03179E	STD	""	""	4.0 ML	OK
QC03179A	SPK	ST60032		10.0 ML	OK
QC03179B	SPK	""		10.0 ML	OK
B03179A	BLK	METHOD	BLANK	500 ML	NG
CC951A	951	031709	751	1000 ML	OK
0911201A	1771	URS CORP	EFF	20.0 ML	OK
0911202A	698	""	INF	0.5 ML	OK
0909701A	753	TWINING	KMVZBT.-01	10.0 ML	OK
0909401A	TBAG	EXPONENT	FINAL DRYWALL	500 ML	OK

Instrument Name: MSD1
Date: 03/17/09
Technician Initials: KB
Method(s): 1T15EXAY.M

5.2: Sample Preparation Logs

5.3: Shipping Receipts, Correspondence, Phone Logs

Environmental
ANALYTICAL SERVICE, INC.

PACKING SLIP

Project Manager:

Lynn Jefferson
Sealaska Environmental
28513 Salerno Drive
Trabuco Canyon CA 92679
619-889-7902

Ship To:

SES-Trech Trailer, North of Bldg 45
Cummins Ave
Moffit Field CA 94035
619 889-7902

PS NO: 8085

Quote: 15981 **Order Date:** 6/5/2009 **Due Date:** 6/10/2009 **Ship Date:** 6/5/2009

Carrier: UPS Ground **Bill Client:** **Account:**

Airbill Number: 86943463-1890, 86943463 **Order Status** Completed

Item	Quan	Description	ID	Equipment Clean Batch	Return	SDG	Date Returned
1	1	SUMMA Canister 3.2 L	357	060809C	Yes	209277	6/23/2009
2	1	SUMMA Canister 3.2 L	423	060809C	Yes	209277	6/23/2009
3	1	SUMMA Canister 3.2 L	359	060809C	Yes	209277	6/23/2009
4	1	SUMMA Canister 3.2 L	372	060809C	Yes	209277	6/23/2009
5	1	SUMMA Canister 3.2 L	863	060809C	Yes	209277	6/23/2009
	1				Yes		
	1	Trip Blank 6.0 L	703	021809B	Yes	209270	6/17/2009
	1	Trip Blank 3.2 L	312	060809C	Yes	209277	6/23/2009
	1				Yes		
1	1	Purge Can	521		Yes	209277	6/23/2009
2	1	Purge Can	753		Yes	209277	6/23/2009
	1				Yes		
1	1	SUMMA Canister 6.0 L	633	060409A	Yes	209270	6/17/2009
2	1	SUMMA Canister 6.0 L	526	060409A	Yes	209270	6/17/2009
3	1	SUMMA Canister 6.0 L	670	060409A	Yes	209270	6/17/2009
4	1	SUMMA Canister 6.0 L	664	060409A	Yes	209270	6/17/2009
5	1	SUMMA Canister 6.0 L	782	060409A	Yes	209270	6/17/2009
6	1	SUMMA Canister 6.0 L	188	060409A	Yes	209270	6/17/2009
7	1	SUMMA Canister 6.0 L	692	060309A	Yes	209270	6/17/2009
8	1	SUMMA Canister 6.0 L	640	060309A	Yes	209270	6/17/2009
9	1	SUMMA Canister 6.0 L	741	060309A	Yes	209270	6/17/2009
10	1	SUMMA Canister 6.0 L	180	060509A	Yes	209270	6/17/2009
11	1	SUMMA Canister 6.0 L	169	060309A	Yes	209270	6/17/2009
12	1	SUMMA Canister 6.0 L	681	060309A	Yes	209270	6/17/2009
13	1	SUMMA Canister 6.0 L	2968	060309A	Yes	209270	6/17/2009

	1				Yes		
1	1	Flow Orifice 8 Hour	2542		Yes	209270	6/17/2009
2	1	Flow Orifice 8 Hour	2612	2014	Yes	209270	6/17/2009
3	1	Flow Orifice 8 Hour	2605	2092	Yes	209270	6/17/2009
4	1	Flow Orifice 8 Hour	2538	2016	Yes	209270	6/17/2009
5	1	Flow Orifice 8 Hour	2616		Yes	209270	6/17/2009
6	1	Flow Orifice 8 Hour	2617	2087	Yes	209270	6/17/2009
7	1	Flow Orifice 8 Hour	2610		Yes	209270	6/17/2009
8	1	Flow Orifice 8 Hour	2618	2071	Yes	209270	6/17/2009
9	1	Flow Orifice 8 Hour	2590	2053	Yes	209270	6/17/2009
10	1	Flow Orifice 8 Hour	2539	2037	Yes	209270	6/17/2009
11	1	Flow Orifice 8 Hour	2595	2052	Yes	209270	6/17/2009
12	1	Flow Orifice 8 Hour	2567		Yes	209270	6/17/2009
13	1	Flow Orifice 8 Hour	2623		Yes	209270	6/17/2009
	1				Yes		
1	1	Soil Gas Sampler	2514		Yes	209277	6/23/2009
2	1	Soil Gas Sampler	2555		Yes	209277	6/23/2009
3	1	Soil Gas Sampler	2625		Yes	209277	6/23/2009
4	1	Soil Gas Sampler	2523		Yes	209277	6/23/2009
5	1	Soil Gas Sampler	2576		Yes	209277	6/23/2009

Note: If the Return Column is Marked "Yes" for an Items it Needs to be Returned to EAS

Environmental
ANALYTICAL SERVICE, INC.

PACKING SLIP

Project Manager:

Lynn Jefferson
Sealaska Environmental
28513 Salerno Drive
Trabuco Canyon CA 92679
619-889-7902

Ship To:

SES-Trech Trailer, North of Bldg 45
Cummins Ave
Moffit Field CA 94035
619 889-7902

PS NO: 8092

Quote: 15981 **Order Date:** 6/11/2009 **Due Date:** 6/12/2009 **Ship Date:** 6/11/2009

Carrier: UPS Ground **Bill Client:** **Account:**

Airbill Number: **Order Status** Completed

Item	Quan	Description	Equipment ID	Clean Batch	Return	SDG	Date Returned
	1	SUMMA Canister, 6.0L	737	061009A	Yes	209277	6/23/2009
	1	SUMMA Canister, 6.0L	779	061009A	Yes	209277	6/23/2009
	1	SUMMA Canister, 6.0L	656	061009A	Yes	209277	6/23/2009
	1	SUMMA Canister, 6.0L	696	061009A	Yes	209277	6/23/2009
	1	SUMMA Canister, 6.0L	610	061009A	Yes	209277	6/23/2009

Note: If the Return Column is Marked "Yes" for an Items it Needs to be Returned to EAS

Environmental
ANALYTICAL SERVICE, INC.

PACKING SLIP

Project Manager:

Lynn Jefferson
Sealaska Environmental
28513 Salerno Drive
Trabuco Canyon CA 92679
619-889-7902

Ship To:

SES-Trech Trailer, North of Bldg 45
Cummins Ave
Moffit Field CA 94035
619 889-7902

PS NO: 8094

Quote: 15981 **Order Date:** 6/15/2009 **Due Date:** 6/16/2009 **Ship Date:** 6/15/2009

Carrier: UPS Ground **Bill Client:** **Account:**

Airbill Number:

Order Status Completed

Item	Quan	Description	ID	Equipment Clean Batch	Return	SDG	Date Returned
	5	Nuts and Ferrels			Bill	209277	6/23/2009

Note: If the Return Column is Marked "Yes" for an Items it Needs to be Returned to EAS

FedEx. US Airbill Express

FedEx Tracking Number 8694 3463 1915

Form ID No. 0200 — Recipient's Copy

1 From

Date 6-19-09

Sender's Name Jacob Jada Phone 702 509-0072

Company Sadaka

Address 1230 Columbia St Suite 540 Dept/Floor/Suite/Room

City San Diego State CA ZIP 92101

2 Your Internal Billing Reference 12910.044.003

3 To

Recipient's Name Lesley Wise Phone 805 781-3585

Company LMS

Recipient's Address 173 Cross St.

We cannot deliver to P.O. boxes or P.O. ZIP codes. Dept/Floor/Suite/Room

Address

To request a package be held at a specific FedEx location, print FedEx address here.

City San Luis Obispo State CA ZIP 93401

8694 3463 1915

4a Express Package Service — *Packages up to 150 lbs.*

- [ ] FedEx Priority Overnight — Next business morning.* Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- [ ] FedEx Standard Overnight — Next business afternoon.* Saturday Delivery NOT available.
- [ ] FedEx First Overnight — Earliest next business morning delivery to select locations.* Saturday Delivery NOT available.
- [x] FedEx 2Day — Second business day.* Thursday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- [ ] FedEx Express Saver — Third business day.* Saturday Delivery NOT available.

FedEx Envelope rate not available. Minimum charge: One-pound rate. * To most locations.

4b Express Freight Service — *Packages over 150 lbs.*

- [ ] FedEx 1Day Freight* — Next business day.** Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- [ ] FedEx 2Day Freight — Second business day.** Thursday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- [ ] FedEx 3Day Freight — Third business day.** Saturday Delivery NOT available.

* Call for Confirmation: ** To most locations.

5 Packaging

- [ ] FedEx Envelope*
- [ ] FedEx Pak* — Includes FedEx Small Pak, FedEx Large Pak, and FedEx Sturdy Pak.
- [ ] FedEx Box
- [ ] FedEx Tube
- [ ] Other

* Declared value limit $500.

6 Special Handling — Include FedEx address in Section 3.

- [ ] SATURDAY Delivery — Not available for FedEx Standard Overnight, FedEx First Overnight, FedEx Express Saver, or FedEx 3Day Freight.
- [ ] HOLD Weekday at FedEx Location — Not available for FedEx First Overnight.
- [ ] HOLD Saturday at FedEx Location — Available ONLY for FedEx Priority Overnight and FedEx 2Day to select locations.

Does this shipment contain dangerous goods? One box must be checked.

- [x] No
- [ ] Yes — As per attached Shipper's Declaration.
- [ ] Yes — Shipper's Declaration not required.
- [ ] Dry Ice — Dry Ice, 9, UN 1845 ____ x ____ kg

Dangerous goods (including dry ice) cannot be shipped in FedEx packaging. [ ] Cargo Aircraft Only

7 Payment *Bill to:* Enter FedEx Acct. No. or Credit Card No. below.

- [x] Sender — Acct. No. in Section 1 will be billed.
- [ ] Recipient
- [ ] Third Party
- [ ] Credit Card
- [ ] Cash/Check

Obtain Recip. Acct. No. [ ]

Total Packages: 1 Total Weight: 917 Total Declared Value†: $ .00

†Our liability is limited to $100 unless you declare a higher value. See back for details. Credit Card Auth.

8 Residential Delivery Signature Options If you require a signature, check Direct or Indirect.

- [ ] No Signature Required — Package may be left without obtaining a signature for delivery.
- [ ] Direct Signature — Someone at recipient's address may sign for delivery. *Fee applies.*
- [ ] Indirect Signature — If no one is available at recipient's address, someone at a neighboring address may sign for delivery. *Fee applies.*

520

Rev. Date 10/06 • Part #158281 • ©1994–2006 FedEx • PRINTED IN U.S.A. SRY

FedEx. US Airbill Express

FedEx Tracking Number 8694 3463 1904

Form ID No. 0200 — Recipient's Copy

1 From

Date 6-19-09

Sender's Name Jacob Jada Phone 702 509-0072

Company Sadaka

Address 1230 Columbia St Suite 540 Dept/Floor/Suite/Room

City San Diego State CA ZIP 92101

2 Your Internal Billing Reference 12910.044.003

3 To

Recipient's Name Lesley Wise Phone 805 781-3585

Company LMS

Recipient's Address 173 Cross St.

We cannot deliver to P.O. boxes or P.O. ZIP codes. Dept/Floor/Suite/Room

Address

To request a package be held at a specific FedEx location, print FedEx address here.

City San Luis Obispo State CA ZIP 93401

8694 3463 1904

4a Express Package Service — *Packages up to 150 lbs.*

- [ ] FedEx Priority Overnight — Next business morning.* Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- [ ] FedEx Standard Overnight — Next business afternoon.* Saturday Delivery NOT available.
- [ ] FedEx First Overnight — Earliest next business morning delivery to select locations.* Saturday Delivery NOT available.
- [x] FedEx 2Day — Second business day.* Thursday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- [ ] FedEx Express Saver — Third business day.* Saturday Delivery NOT available.

FedEx Envelope rate not available. Minimum charge: One-pound rate. * To most locations.

4b Express Freight Service — *Packages over 150 lbs.*

- [ ] FedEx 1Day Freight* — Next business day.** Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- [ ] FedEx 2Day Freight — Second business day.** Thursday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- [ ] FedEx 3Day Freight — Third business day.** Saturday Delivery NOT available.

* Call for Confirmation: ** To most locations.

5 Packaging

- [ ] FedEx Envelope*
- [ ] FedEx Pak* — Includes FedEx Small Pak, FedEx Large Pak, and FedEx Sturdy Pak.
- [ ] FedEx Box
- [ ] FedEx Tube
- [ ] Other

* Declared value limit $500.

6 Special Handling — Include FedEx address in Section 3.

- [ ] SATURDAY Delivery — Not available for FedEx Standard Overnight, FedEx First Overnight, FedEx Express Saver, or FedEx 3Day Freight.
- [ ] HOLD Weekday at FedEx Location — Not available for FedEx First Overnight.
- [ ] HOLD Saturday at FedEx Location — Available ONLY for FedEx Priority Overnight and FedEx 2Day to select locations.

Does this shipment contain dangerous goods? One box must be checked.

- [x] No
- [ ] Yes — As per attached Shipper's Declaration.
- [ ] Yes — Shipper's Declaration not required.
- [ ] Dry Ice — Dry Ice, 9, UN 1845 ____ x ____ kg

Dangerous goods (including dry ice) cannot be shipped in FedEx packaging. [ ] Cargo Aircraft Only

7 Payment *Bill to:* Enter FedEx Acct. No. or Credit Card No. below.

- [x] Sender — Acct. No. in Section 1 will be billed.
- [ ] Recipient
- [ ] Third Party
- [ ] Credit Card
- [ ] Cash/Check

Obtain Recip. Acct. No. [ ]

Total Packages: 1 Total Weight: 40 Total Declared Value†: $ 700 .00

†Our liability is limited to $100 unless you declare a higher value. See back for details. Credit Card Auth.

8 Residential Delivery Signature Options If you require a signature, check Direct or Indirect.

- [ ] No Signature Required — Package may be left without obtaining a signature for delivery.
- [ ] Direct Signature — Someone at recipient's address may sign for delivery. *Fee applies.*
- [ ] Indirect Signature — If no one is available at recipient's address, someone at a neighboring address may sign for delivery. *Fee applies.*

520

Environmental
ANALYTICAL SERVICE, INC

LABORATORY WORK ORDER

INFORMATION

SDG Number: 209277

Project Manager: Lynn Jefferson

e-mail: lynn.jefferson@sealaska.com

Client: Sealaska Environmental

Quote Number: 15981

Date Received: 6/23/2009

The Turn-Around-Time from the Date Received and the preliminary report due date are shown on the right. If you have any question on these please contact Sample Control.

TAT: 10

Due Date: 7/7/2009

SAMPLE DESCRIPTION AND ANALYSIS REQUESTED

Client Sample No.	EAS Lab No.	Analysis Requested	Date Sampled	Pressure (torr) Initial Rec	Pressure (torr) Final	Factor
44-001	209277 1	EPA TO-15 Full Scan - Soil Gas	6/19/2009	649	925	1.43
44-002	209277 2	EPA TO-15 Full Scan - Soil Gas	6/19/2009	646	887	1.37
44-003	209277 3	EPA TO-15 Full Scan - Soil Gas	6/19/2009	605	960	1.59
44-004	209277 4	EPA TO-15 Full Scan - Soil Gas	6/19/2009	635	916	1.44
44-005	209277 5	EPA TO-15 Full Scan - Soil Gas	6/19/2009	1336	1336	1.00

Environmental
Analytical Service, Inc.
173 Cross Street, San Luis Obispo, CA 93401-759

Sample Receipt Notification

Project Manager:	Lynn Jefferson	**EAS SDG Number:**	209277
Company:	Sealaska Environmental	**Date Received:**	6/23/2009
Proj. Number:	12990.044.003	**EAS Project/Quote Number:**	15981
		EAS Project Manager:	Kristin Beckley

Thank you for submitting samples to Environmental Analytical Service. Attached to this sample receipt notification are copies or your Chain of Custody forms signed by Sample Control. If there were any problems with the sample shipment they will be recorded in the Sample Control Case Narrative. Each batch of samples received is assigned a Sample Delivery Group (SDG) number and a project manager. When contacting EAS please reference your SDG number.

In a couple of days your Project Manager will e-mail you an EAS Work Order that has the LIMS login information on your samples, including your field ID, the EAS sample ID, canister pressures, and the analytical tests requested for each sample. Please review this information to make sure it is correct.

Normal Turn Around Time for e-mailed reports is 10 working days from date of receipt unless an expedited TAT was requested. Depending on the sample load, your project manager may be able to e-mail preliminary results in about 5 to 7 working days, if requested. If you have any special scheduling needs please contact us and we will try to accomodate them if possible.

EAS uses the method specified holding times. EPA TO-15 specifies a holding time for SUMMA canisters of 30 days for most normal sampling situations. EAS pressurizes the canisters as soon as they are received so they will qualify for the 30 day holding time. If your project specifies a holding time that is shorter than the method holding time, please notify your project manager as soon as possible. If you have questions on canister pressurization, dilution factors, holding times, or any other technical questions, please contact Dr. Steve Hoyt for assistance.

Sample Control Case Narrative

For Technical Questions
Dr. Steve Hoyt
stevehoyt@easlab.com or (805 781-3585 x 2

For Questions on SDG
Kristin Beckley
kbeckley@easlab.com or (805) 781-3585 x 6

5.4: Standard Certificates

STANDARD CERTIFICATE
CALIBRATION GAS STANDARD

ENVIRONMENTAL
Analytical Service, Inc.

Standard Identification Number: ST60022

Date Originally Purchased/Prepared:	**07/25/06**	**Cylinder:**	**CC-230154**
Date Recertified:	**08/29/08**	**Cylinder Pres:**	**1100 psi**
Recertification Standard:	**ST60025**		
Expires:	**08/29/09**	**Analytical Accuracy: +/- 10%**	

CAS	Compound	Concentration (ppmV)
75-71-8	Freon 12	1.05
74-87-3	Chloromethane	1.02
76-14-2	Freon 114	1.04
75-01-4	Vinyl chloride	1.04
74-83-9	Bromomethane	1.04
75-00-3	Chloroethane	1.04
75-69-4	Trichlorofluoromethane	1.04
75-35-4	1,1-Dichloroethene	1.04
75-09-2	Dichloromethane	1.04
76-13-1	Freon 113	1.02
75-34-3	1,1-Dichloroethane	1.01
156-59-2	c-1,2-Dichloroethene	1.03
67-66-3	Chloroform	1.02
107-06-2	1,2-Dichloroethane	1.03
71-55-6	1,1,1-Trichloroethane	1.02
71-43-2	Benzene	1.03
56-23-5	Carbon Tetrachloride	1.02
78-87-5	1,2-Dichloropropane	1.03
79-01-6	Trichloroethene	1.03
10061-01-5	c-1,3-Dichloropropene	1.06
10061-02-6	t-1,3-Dichloropropene	1.04
79-00-5	1,1,2-Trichloroethane	1.02
108-88-3	Toluene	1.03
106-93-4	1,2-Dibromoethane	1.04
127-18-4	Tetrachloroethene	1.02
108-90-7	Chlorobenzene	1.02
100-41-4	Ethylbenzene	1.04
106-42-3	p-Xylenes	1.03
108-38-3	m-Xylenes	1.03
100-42-5	Styrene	1.03
95-47-6	o-Xylene	1.02
79-34-5	1,1,2,2-Tetrachloroethane	1.02
108-67-8	1,3,5-Trimethylbenzene	1.06
95-63-6	1,2,4-Trimethylbenzene	1.02
541-73-1	1,3-Dichlorobenzene	1.02
106-46-7	1,4-Dichlorobenzene	1.02
95-50-1	1,2-Dichlorobenzene	1.00
120-82-1	1,2,4-Trichlorobenzene	1.03
87-68-3	Hexachlorobutadiene	1.03
106-99-0	1,3-Butadiene	1.07
107-13-1	Acrylonitrile	1.08

•This Analysis is NIST Traceable by either measurement or weight.

Analyst: Approved:

The stability of gas standards cannot be guaranteed and EAS will only be liable for replacement or reanalysis if the standard changes in six months from analysis date.

Standard Certificate1

STANDARD CERTIFICATE
CALIBRATION GAS STANDARD

ENVIRONMENTAL
Analytical Service, Inc.

Standard Identification Number: ST60350

Date Originally Purchased/Prepared:	**10/20/08**	**Cylinder:**	**AL150**
Date Recertified:		**Cylinder Pres:**	**1000 psi**
Recertification Standard:			
Expires:	**10/20/09**	**Analytical Accuracy: +/- 10%**	

CAS	Compound	Recertified Values (ppmV)
11-65-9	Octane	0.823
74-95-3	Dibromomethane	0.885
104-51-8	n-Butylbenzene	0.923
135-98-8	sec-Butylbenzene	0.915
98-06-6	tert-butylbenzene	0.902
104-51-8	i-Butylbenzene	0.903
99-87-6	p-Isopropyltoluene(cymene)	0.907
74-97-5	Bromochloromethane	0.864
98-82-8	Isopropylbenzene (Cumene)	0.950
98-83-9	Methylstyrene	0.899
103-65-1	n-Propylbenzene	0.839
630-20-6	1,1,1,2-Tetrachloroethane	0.888
563-58-6	1,1-Dichloropropene	0.839
96-18-4	1,2,3 Trichloropropane	0.863
142-28-9	1,3-Dichloropropane	0.826
594-20-7	2,2-Dichloropropane	0.906
111-84-2	Nonane	0.889
124-18-5	Decane	0.905
95-49-8	2-Chlorotoluene	0.893
106-43-4	4-Chlorotoluene	0.904
97-63-3	Ethyl methacrylate	0.886
96-33-3	Methyl acrylate	0.868
109-66-0	Pentane	0.899
78-78-4	2-Methylbutane	0.899
110-57-6	t-1,4-Dichloro-2-butene	2.554
96-12-8	1,2-Dibromo-3-chloropropane	2.402
67-56-1	Methanol	2.134
64-17-5	Ethanol	2.445
78-00-2	Tetra ethyl lead	2.156
75-05-8	Acetonitrile	2.436
4227-95-6	Methyl iodide	2.043
107-02--8	Acrolein	2.654
107-13-1	Acrylonitrile	2.326
78-83-1	Isobutyl alcohol	2.458
80-62-6	Methyl methacrylate	2.294
126-98-7	Methacrylonitrile	3.032
107-12-0	Propionitrile	2.265
87-61-6	1,2,3-Trichlorobenzene	2.372
91-20-3	Naphthalene	2.386
78-93-3	2-Butanone	0.863
67-64-1	Acetone	0.901
75-15-0	Carbon Disulfide	0.889
75-25-2	Bromoform	0.930
108-10-1	4-Methyl-2-pentanone	0.915
591-78-6	2-Hexanone	0.884
75-27-4	Bromodichloromethane	0.802

CAS	Compound	Recertified Values (ppmV)
124-48-1	Dibromochloromethane	0.887
108-05-4	Vinyl acetate	0.861
156-60-5	t-1,2-Dichloroethene(total)	0.873
100-44-7	Benzylchloride	0.905
622-96-8	4-Ethyltoluene	0.915
1634-04-4	Methyl t-butyl ether	0.784
110-82-7	Cyclohexane	0.892
123-91-1	1,4-Dioxane	0.883
110-54-3	Hexane	0.752
67-63-0	2-Propanol (Isopropanol)	0.912
109-99-9	Tetrahydrofuran	0.922
540-84-1	2,2,4-Trimethylpentane (isooctane)	0.901
107-05-1	Allyl Chloride	0.927
141-78-6	Ethyl acetate	0.838
142-82-5	Heptane	0.836
115-07-1	Propene	1.996

•This Analysis is NIST Traceable by either measurement or weight•

Analyst: Approved:

The stability of gas standards cannot be guaranteed and EAS will only be liable for replacement or reanalysis if the standard changes in six months from analysis date.

Standard Certificate2

5.5: Laboratory Control Spike Certificates & Internal Standard Certificates

STANDARD CERTIFICATE
CALIBRATION GAS STANDARD

ENVIRONMENTAL
Analytical Service, Inc.

Standard Identification Number: ST60421

Date Originally Purchased/Prepared:	**06/23/09**	**Cylinder:**	**AL032401**
Date Recertified:		**Cylinder Pres:**	**1000 psi**
Prep Standard:	**ST60022**		
Expires:	**06/23/10**	**Analytical Accuracy: +/- 10%**	

CAS	Compound	Concentration (ppmV)
75-71-8	Freon 12	0.105
74-87-3	Chloromethane	0.102
76-14-2	Freon 114	0.104
75-01-4	Vinyl chloride	0.104
74-83-9	Bromomethane	0.104
75-00-3	Chloroethane	0.104
75-69-4	Trichlorofluoromethane	0.104
75-35-4	1,1-Dichloroethene	0.104
75-09-2	Dichloromethane	0.104
76-13-1	Freon 113	0.102
75-34-3	1,1-Dichloroethane	0.101
156-59-2	c-1,2-Dichloroethene	0.103
67-66-3	Chloroform	0.102
107-06-2	1,2-Dichloroethane	0.103
71-55-6	1,1,1-Trichloroethane	0.102
71-43-2	Benzene	0.103
56-23-5	Carbon Tetrachloride	0.102
78-87-5	1,2-Dichloropropane	0.103
79-01-6	Trichloroethene	0.103
10061-01-5	c-1,3-Dichloropropene	0.040
10061-02-6	t-1,3-Dichloropropene	0.022
79-00-5	1,1,2-Trichloroethane	0.102
108-88-3	Toluene	0.103
106-93-4	1,2-Dibromoethane	0.104
127-18-4	Tetrachloroethene	0.102
108-90-7	Chlorobenzene	0.102
100-41-4	Ethylbenzene	0.104
106-42-3	p-Xylenes	0.103
108-38-3	m-Xylenes	0.103
100-42-5	Styrene	0.103
95-47-6	o-Xylene	0.102
79-34-5	1,1,2,2-Tetrachloroethane	0.102
108-67-8	1,3,5-Trimethylbenzene	0.106
95-63-6	1,2,4-Trimethylbenzene	0.102
541-73-1	1,3-Dichlorobenzene	0.102
106-46-7	1,4-Dichlorobenzene	0.102
95-50-1	1,2-Dichlorobenzene	0.100
120-82-1	1,2,4-Trichlorobenzene	0.103
87-68-3	Hexachlorobutadiene	0.103
106-99-0	1,3-Butadiene	0.107
107-13-1	Acrylonitrile	0.108

•This Analysis is NIST Traceable by either measurement or weight•

Analyst: Approved:

The stability of gas standards cannot be guaranteed and EAS will only be liable for replacement or reanalysis if the standard changes in six months from analysis date.

Standard Certificate1

STANDARD CERTIFICATE
CALIBRATION GAS STANDARD

ENVIRONMENTAL
Analytical Service, Inc.

Standard Identification Number: ST60403

Date Originally Purchased/Prepared:	**03/13/09**	**Cylinder:**	**AL150**
Date Recertified:		**Cylinder Pres:**	**998 psi**
Recertification Standard:			
Expires:	**03/13/10**	**Analytical Accuracy: +/- 10%**	

CAS	Compound	Concentration (ppmV)
386-72-4	Pentafluorobenzene	9.685
540-36-3	1,4-Difluorobenzene	9.974
3114-55-4	Chlorobenzene-d5	9.576
460-00-4	1,4-Bromofluorobenzene	4.975
2037-26-5	Toluene-d8	5.450

•This Analysis is NIST Traceable by either measurement or weight•

Analyst: _____ Approved: _____

The stability of gas standards cannot be guaranteed and EAS will only be liable for replacement or reanalysis if the standard changes in six months from analysis date.

Standard Certificate1

SECTION 6
Canister Certification Data

This section contains information equivalent to that found in EPA FORM I – Volatile Organics Summa Canister Certification Sheet.

6.1 Canister Certification Information

Canister certification for this project was done by batch certification method.

SECTION 7
Ion Spectra for GC/MS, Level D

This Section contains the Ion Spectra for samples analyzed for GC/MS for Level D Data Deliverable Packages. The Ion Spectra is grouped by Daily Analytical Batch and is included for the DAB and the Initial Calibration. Initial Calibration Tune Data is also included.

7.1: Ion Spectra for Daily Analytical Batch

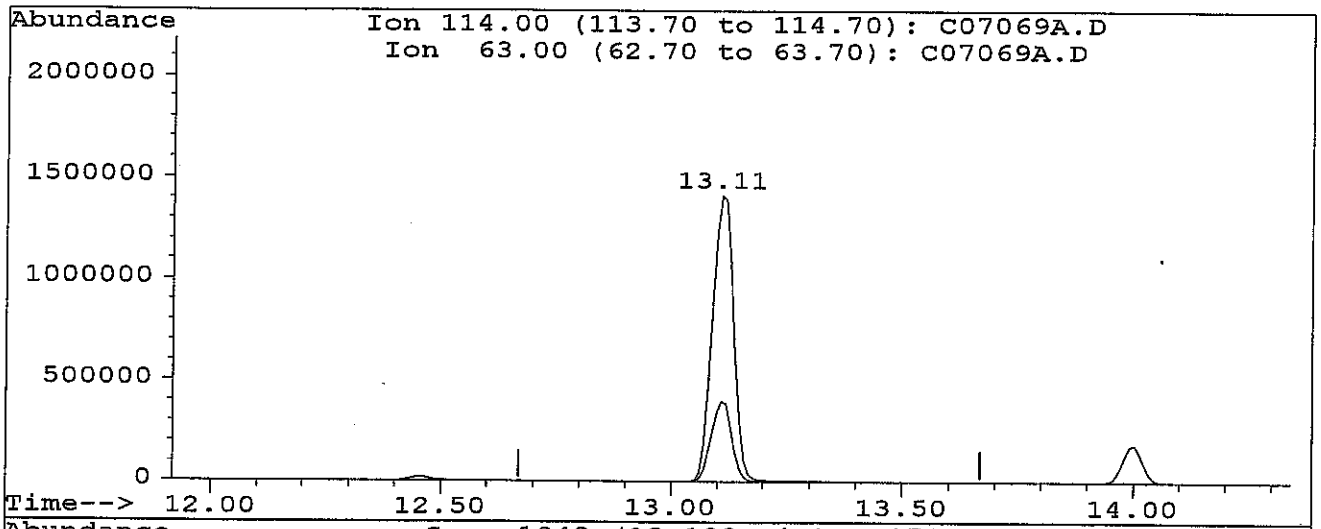
Daily Analytical Batch #: 070609-MS1

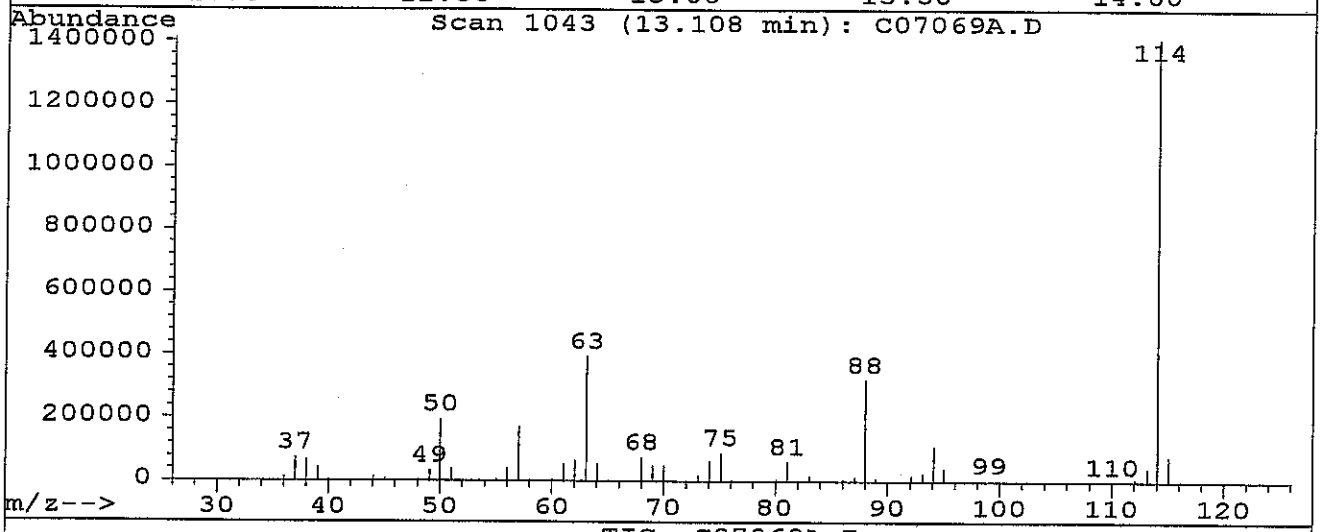
Quantitation Report

Data File : C:\MSCHEM\2\DATA\07069MS1\C07069A.D
Acq Time : 6 Jul 109 8:45 am
Sample : ST60022 + ST60350
Misc :
Quant Time: Jul 7 16:03 19109

Operator: JF
Inst : 5970 - In
Multiplr: 1.00

Method : C:\MSCHEM\2\METHODS\1T15EXAY.M
Title : EPA TO-15
Last Update : Tue Mar 17 14:18:15 2009
Response via : Multiple Level Calibration





TIC: C07069A.D

(35) 1,4-Difluorobenzene (I)

13.11min 20.00ppbV

response 4595142

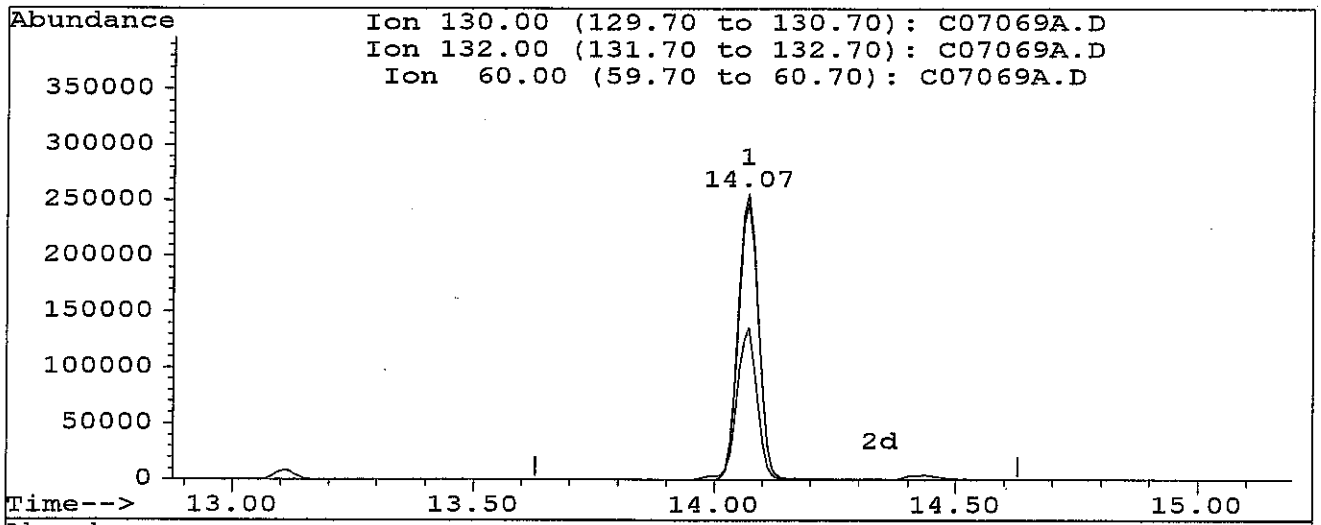
Ion	Exp%	Act%
114.00	100	100
63.00	29.30	28.08
0.00	0.00	0.00
0.00	0.00	0.00

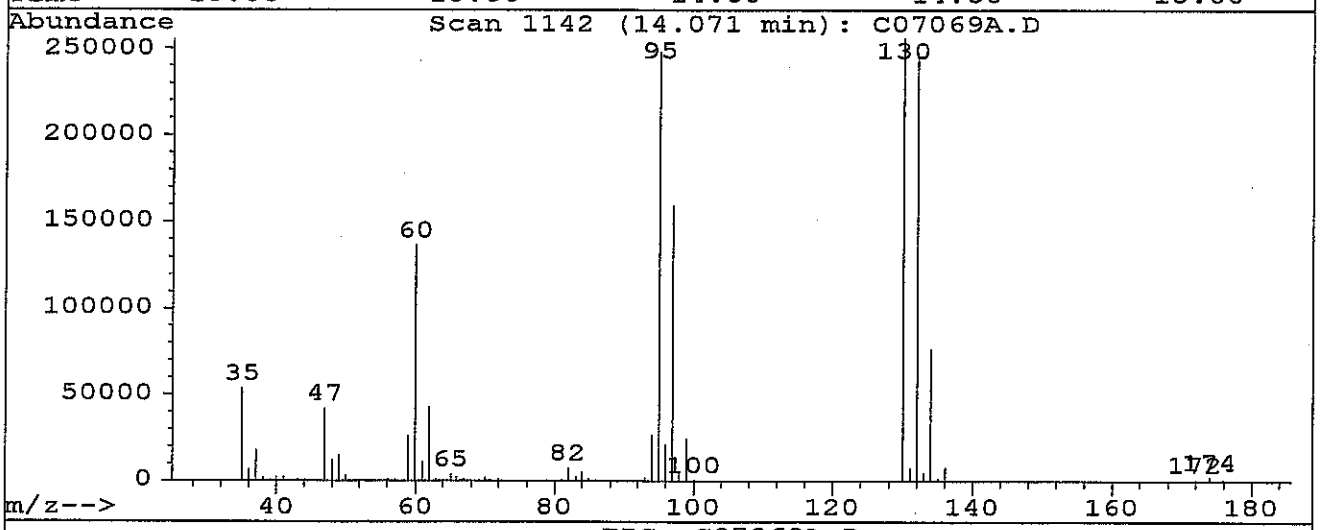
Quantitation Report

Data File : C:\MSCHEM\2\DATA\07069MS1\C07069A.D
Acq Time : 6 Jul 109 8:45 am
Sample : ST60022 + ST60350
Misc :
Quant Time: Jul 7 16:03 19109

Operator: JF
Inst : 5970 - In
Multiplr: 1.00

Method : C:\MSCHEM\2\METHODS\1T15EXAY.M
Title : EPA TO-15
Last Update : Tue Mar 17 14:18:15 2009
Response via : Multiple Level Calibration





TIC: C07069A.D

(46) Trichloroethene (T)

14.07min 5.70ppbV

response 750403

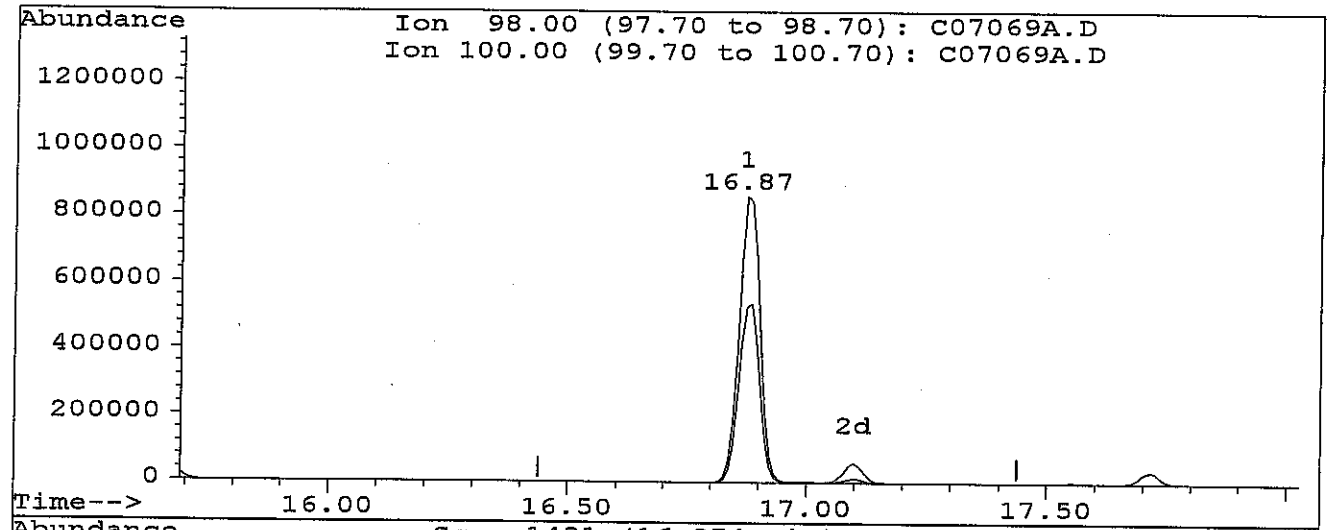
Ion	Exp%	Act%
130.00	100	100
132.00	98.90	96.80
60.00	57.90	52.53
0.00	0.00	0.00

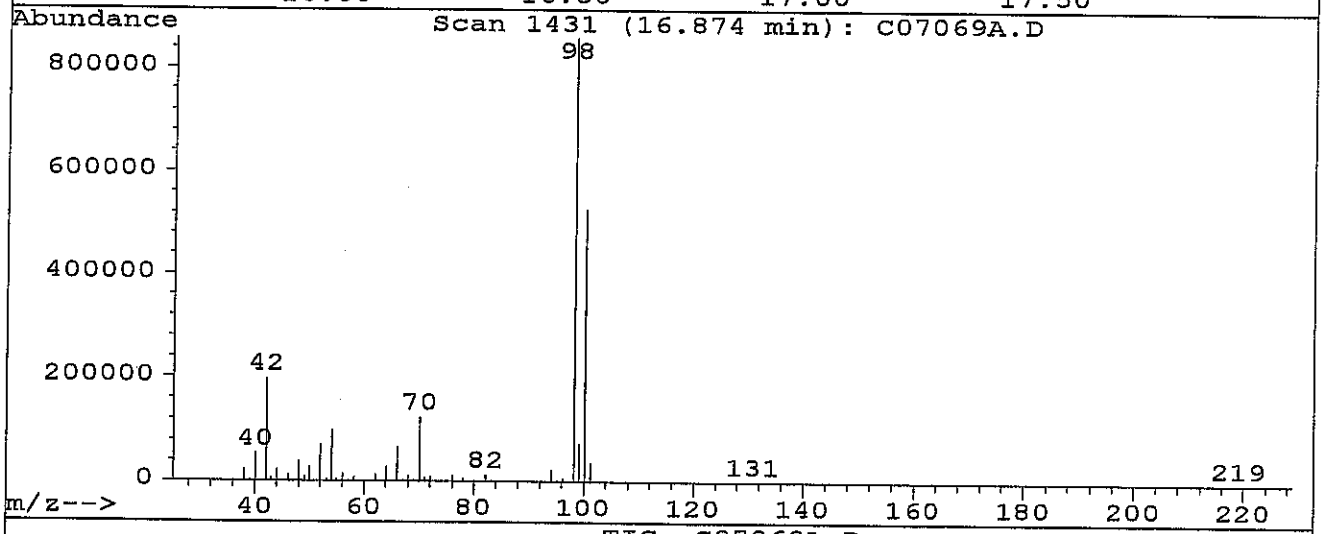
Quantitation Report

Data File : C:\MSCHEM\2\DATA\07069MS1\C07069A.D
Acq Time : 6 Jul 109 8:45 am
Sample : ST60022 + ST60350
Misc :
Quant Time: Jul 7 16:03 19109

Operator: JF
Inst : 5970 - In
Multiplr: 1.00

Method : C:\MSCHEM\2\METHODS\1T15EXAY.M
Title : EPA TO-15
Last Update : Tue Mar 17 14:18:15 2009
Response via : Multiple Level Calibration





TIC: C07069A.D

(94) Toluene-d8 (S)

16.87min 10.15ppbV

response 2622417

Ion	Exp%	Act%
98.00	100	100
100.00	64.30	61.40
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report

Data File : C:\MSCHEM\2\DATA\07069MS1\C07069A.D
Acq Time : 6 Jul 109 8:45 am
Sample : ST60022 + ST60350
Misc :
Quant Time: Jul 7 16:03 19109

Operator: JF
Inst : 5970 - In
Multiplr: 1.00

Method : C:\MSCHEM\2\METHODS\1T15EXAY.M
Title : EPA TO-15
Last Update : Tue Mar 17 14:18:15 2009
Response via : Multiple Level Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene	11.33	168	5124689	20.00	ppbV	-0.05
35) 1,4-Difluorobenzene	13.11	114	4595142	20.00	ppbV	-0.06
System Monitoring Compounds						%Recovery
94) Toluene-d8	16.87	98	2622417	10.15	ppbV	203.03%
95) Chlorobenzene-d5	20.31	117	4989146	21.05	ppbV	210.51%
96) 1,4-Bromofluorobenzene	23.32	95	3800752	10.26	ppbV	205.12%
Target Compounds						Qvalue
2) Dichlorodifluoromethane	3.82	85	665330	4.25	ppbV	99
3) Chloromethane	4.08	50	372646	3.70	ppbV	95
4) Freon 114	4.10	85	471649	2.83	ppbV m	96
5) Vinyl chloride	4.32	62	223938	4.10	ppbV	100
6) Bromomethane	4.89	94	197523	3.64	ppbV	98
7) Chloroethane	5.10	64	115954	4.06	ppbV	95
8) Ethanol	5.13	45	435679	5.26	ppbV	99
9) Acrolein	5.86	56	172177	6.57	ppbV	97
10) Trichlorofluoromethane	5.92	101	602732	4.03	ppbV	98
11) Acetonitrile	5.89	41	706231	6.45	ppbV	95
12) Acetone	5.97	43	650299	2.89	ppbV m	99
13) 2-propanol	6.07	45	474568	2.77	ppbV #	99
14) Methyl iodide	6.95	142	727777	10.33	ppbV	91
15) 1,1-Dichloroethene	6.86	61	558075	4.62	ppbV	96
16) Acrylonitrile	6.88	53	888964	13.04	ppbV	97
17) Freon 113	7.13	151	550534	5.81	ppbV	89
18) Allyl chloride	7.31	41	543751	4.06	ppbV	95
19) Dichloromethane	7.27	84	277827	5.20	ppbV	96
20) Carbon disulfide	7.51	76	369378	5.52	ppbV #	98
21) trans-1,2-Dichloroethene	8.34	96	184093	3.74	ppbV	84
22) Methyl tert butyl ether	8.49	73	676920	2.90	ppbV	97
23) Propionitrile	8.73	54	621356	7.45	ppbV	96
24) 1,1-Dichloroethane	8.85	63	689568	4.44	ppbV	95
25) Vinyl acetate	10.24	43	1005763	3.03	ppbV	100
26) 2-Butanone	9.47	72	142831	3.27	ppbV	97
27) Hexane	9.67	57	339637	2.65	ppbV	99
28) Bromochloromethane	10.43	49	575324	3.27	ppbV	98
29) Tetrahydrofuran	10.77	42	1550768	2.28	ppbV m	39
30) Isobutyl alcohol	10.77	74	105297	5.70	ppbV	96
31) Methacrylonitrile	9.64	67	542045	11.35	ppbV	95
32) cis-1,2-Dichloroethene	10.05	96	410820	5.12	ppbV	95
33) 2,2-Dichloropropane	10.37	77	526910	3.39	ppbV	93
34) Chloroform	10.47	83	876803	4.69	ppbV	94
36) 1,1,1-Trichloroethane	11.74	97	793456	4.76	ppbV	98
37) 1,2-Dichloroethane	11.81	62	911050	5.82	ppbV	99
38) 1,1-Dichloropropene	12.19	75	464585	3.42	ppbV	96
39) Cyclohexane	12.53	56	548776	3.59	ppbV	97
40) Benzene	12.46	78	1311262	4.82	ppbV	98
41) Carbon tetrachloride	12.51	117	762752	4.50	ppbV	97
42) n-Heptane	13.98	43	880535	3.22	ppbV	98
43) 1,2-Dichloropropane	14.00	63	543508	5.17	ppbV	97
44) 1,4 Dioxane	14.32	88	240245	2.98	ppbV #	100
45) Dibromomethane	14.13	174	696747	4.14	ppbV	96
46) Trichloroethene	14.07	130	750403	5.70	ppbV	96
47) Bromodichloromethane	14.33	83	635461	3.07	ppbV #	96
48) Methyl methacrylate	14.45	69	941596	8.35	ppbV	98
49) Methyl Isobutyl Ketone	15.67	43	1601625	3.46	ppbV	98

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

Quantitation Report

Data File : C:\MSCHEM\2\DATA\07069MS1\C07069A.D
Acq Time : 6 Jul 109 8:45 am
Sample : ST60022 + ST60350
Misc :
Quant Time: Jul 7 16:03 19109

Operator: JF
Inst : 5970 - In
Multiplr: 1.00

Method : C:\MSCHEM\2\METHODS\1T15EXAY.M
Title : EPA TO-15
Last Update : Tue Mar 17 14:18:15 2009
Response via : Multiple Level Calibration

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
50)	cis-1,3-Dichloropropene	15.76	75	870496	5.31	ppbV		94
51)	Toluene	17.06	91	1891943	5.32	ppbV		99
52)	trans-1,3-Dichloropropene	16.79	75	996017	5.12	ppbV		93
53)	1,1,2-Trichloroethane	17.10	61	593932	5.68	ppbV		97
54)	2-Hexanone	17.72	43	1643302	2.80	ppbV		98
55)	1,3-Dichloropropane	17.66	76	604494	2.93	ppbV		99
56)	Octane	18.20	57	407783	3.05	ppbV		95
57)	Dibromochloromethane	18.23	129	939213	3.39	ppbV		97
58)	1,2-Dibromoethane	18.73	107	1509447	5.87	ppbV	#	99
59)	Tetrachloroethene	18.91	166	1360973	6.01	ppbV		92
60)	Chlorobenzene	20.40	112	1827047	5.50	ppbV		97
61)	1,1,1,2-Tetrachloroethane	20.45	131	707751	3.54	ppbV		98
62)	Ethylbenzene	20.93	91	2995013	5.28	ppbV		97
63)	m & p-Xylene	21.23	91	4668447	9.77	ppbV		99
64)	Styrene	22.05	104	1630149	4.78	ppbV		97
65)	Bromoform	21.95	173	1404047	2.99	ppbV	#	93
66)	o-Xylene	22.18	91	2583208	4.89	ppbV		97
67)	1,1,2,2-Tetrachloroethane	22.70	83	1623019	3.35	ppbV		99
68)	1,2,3-Trichloropropane	23.01	110	291600	2.20	ppbV		95
69)	t-1,4-Dichloro-2-butene	23.14	53	488873	4.12	ppbV		99
70)	n-Propylbenzene	24.37	91	2458367	2.22	ppbV		95
71)	Isopropylbenzene	24.68	105	1978551	2.46	ppbV		96
72)	4-Ethyltoluene	24.68	105	1978551	2.36	ppbV		96
73)	1,3,5-Trimethylbenzene	24.84	105	2915861	3.80	ppbV		99
74)	Methylstyrene	25.30	118	669514	1.89	ppbV		97
75)	tert-butyl benzene	25.76	119	1762561	2.77	ppbV		94
76)	1,2,4-Trimethylbenzene	25.78	105	2675156	3.78	ppbV		98
77)	sec-butylbenzene	26.39	105	2240183	2.42	ppbV		97
78)	1,3-Dichlorobenzene	26.36	146	1985574	3.49	ppbV	m	96
79)	Isopropyltoluene	26.76	119	2156367	2.43	ppbV		96
80)	Benzyl chloride	26.51	91	1479674	1.91	ppbV	m	96
81)	1,4-Dichlorobenzene	26.56	146	2094060	3.57	ppbV	m	96
82)	n-Butylbenzene	27.81	91	1911128	1.83	ppbV		97
83)	1,2-Dichlorobenzene	27.41	146	1812154	2.77	ppbV		98
84)	1,2-Dibromo-3-chloropropan	28.89	75	1562721	3.42	ppbV	#	57
85)	Tetraethyl lead	30.93	237	1241719	2.89	ppbV	#	96
86)	1,2,4-Trichlorobenzene	33.12	180	7487413	6.19	ppbV	m	96
87)	Naphthalene	32.33	128	8789955	4.35	ppbV		98
88)	Hexachlorobutadiene	33.01	225	2164451	2.32	ppbV		96
89)	Propylene	3.75	40	174272	9.06	ppbV		92
90)	1,3-Butadiene	4.46	54	219699	4.18	ppbV		96
92)	2-Chlorotoluene	24.42	91	1478539	2.60	ppbV		99
93)	4-Chlorotoluene	24.58	91	1727722	2.39	ppbV		98

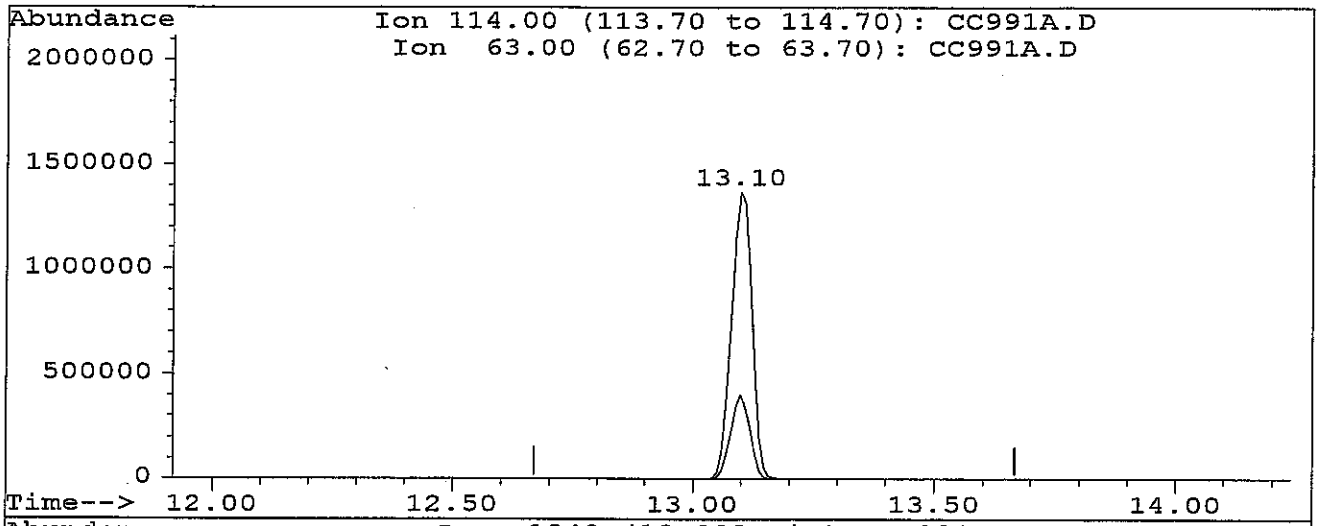
(#) = qualifier out of range (m) = manual integration

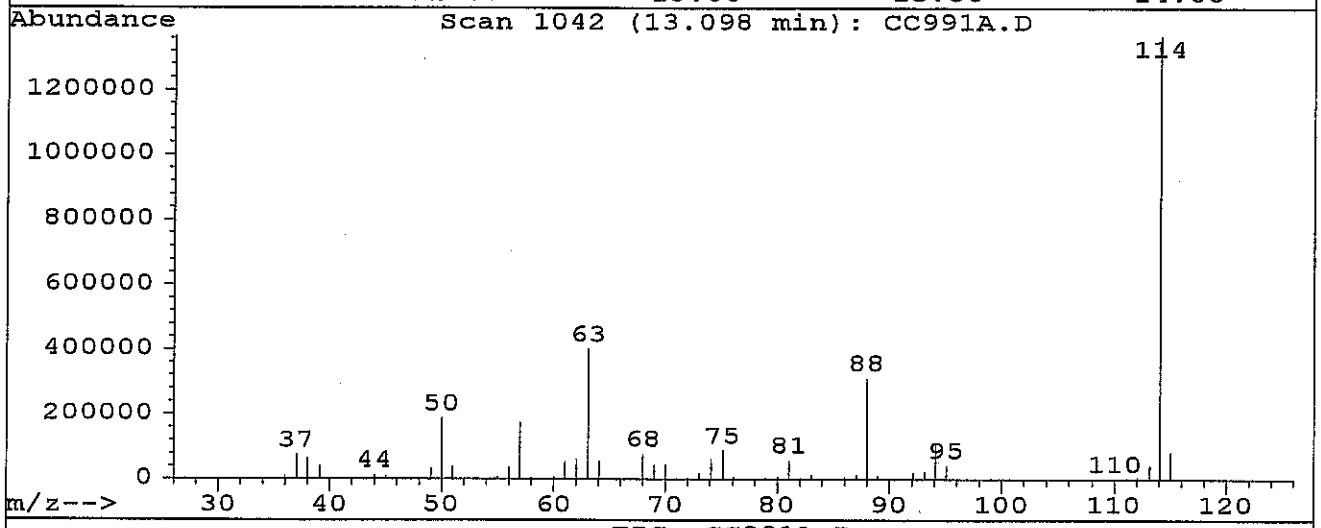
Quantitation Report

Data File : C:\MSCHEM\2\DATA\07069MS1\CC991A.D
Acq Time : 6 Jul 109 1:31 pm
Sample : 991
Misc : 070609
Quant Time: Jul 6 14:07 19109

Operator: JF
Inst : 5970 - In
Multiplr: 1.00

Method : C:\MSCHEM\2\METHODS\1T15EXAY.M
Title : EPA TO-15
Last Update : Tue Mar 17 14:18:15 2009
Response via : Multiple Level Calibration





TIC: CC991A.D

(35) 1,4-Difluorobenzene (I)

13.10min 20.00ppbV

response 4052016

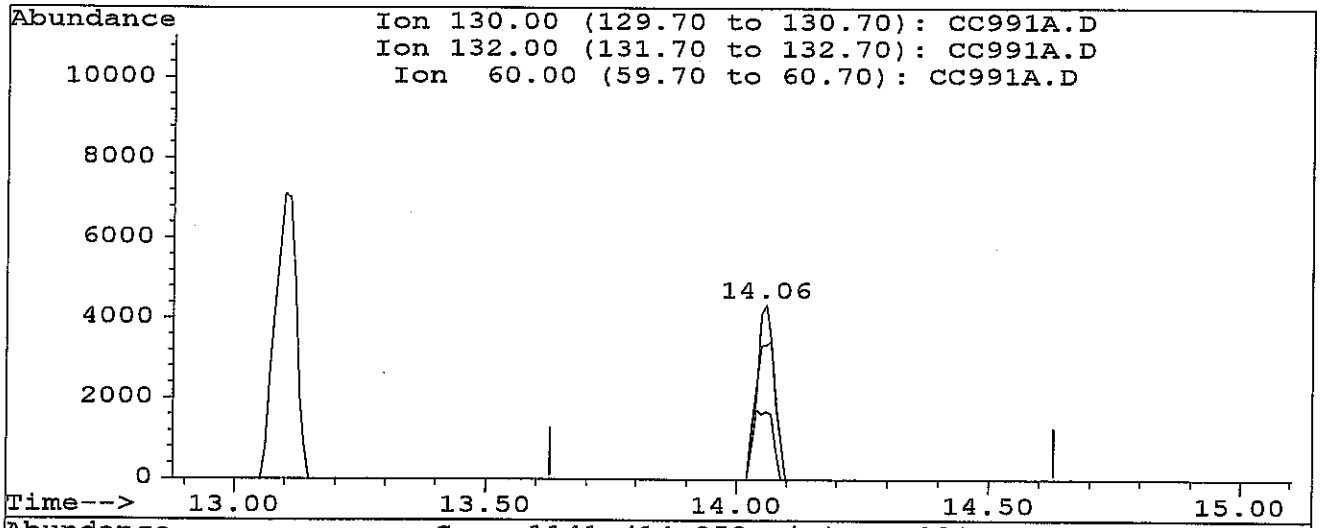
Ion	Exp%	Act%
114.00	100	100
63.00	29.30	29.33
0.00	0.00	0.00
0.00	0.00	0.00

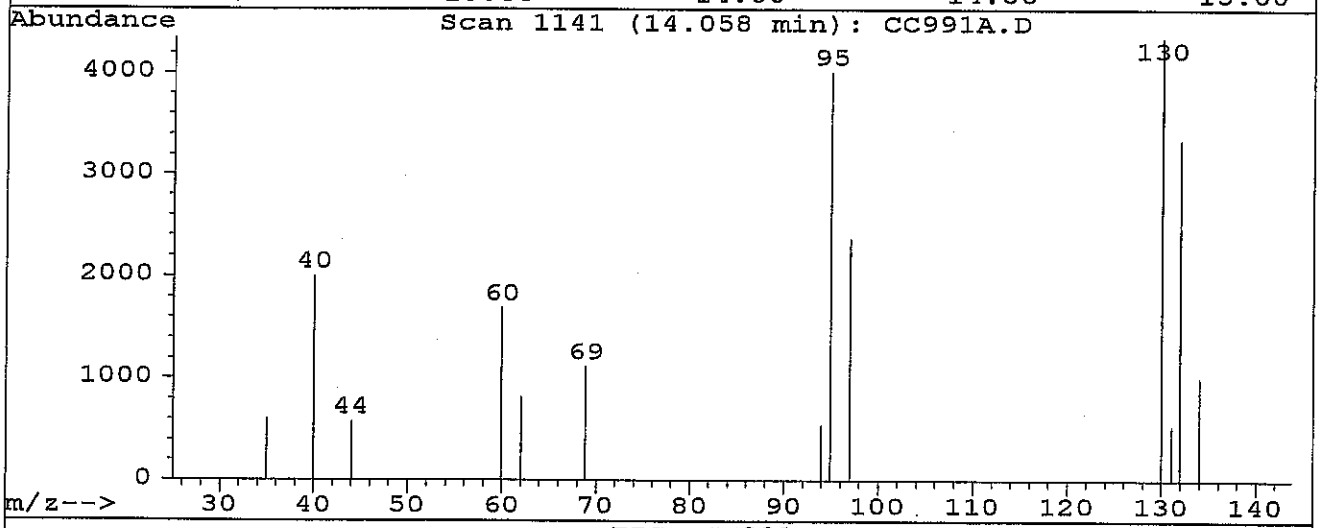
Quantitation Report

Data File : C:\MSCHEM\2\DATA\07069MS1\CC991A.D
Acq Time : 6 Jul 109 1:31 pm
Sample : 991
Misc : 070609
Quant Time: Jul 6 14:07 19109

Operator: JF
Inst : 5970 - In
Multiplr: 1.00

Method : C:\MSCHEM\2\METHODS\1T15EXAY.M
Title : EPA TO-15
Last Update : Tue Mar 17 14:18:15 2009
Response via : Multiple Level Calibration





TIC: CC991A.D

(46) Trichloroethene (T)

14.06min 0.09ppbV

response 10455

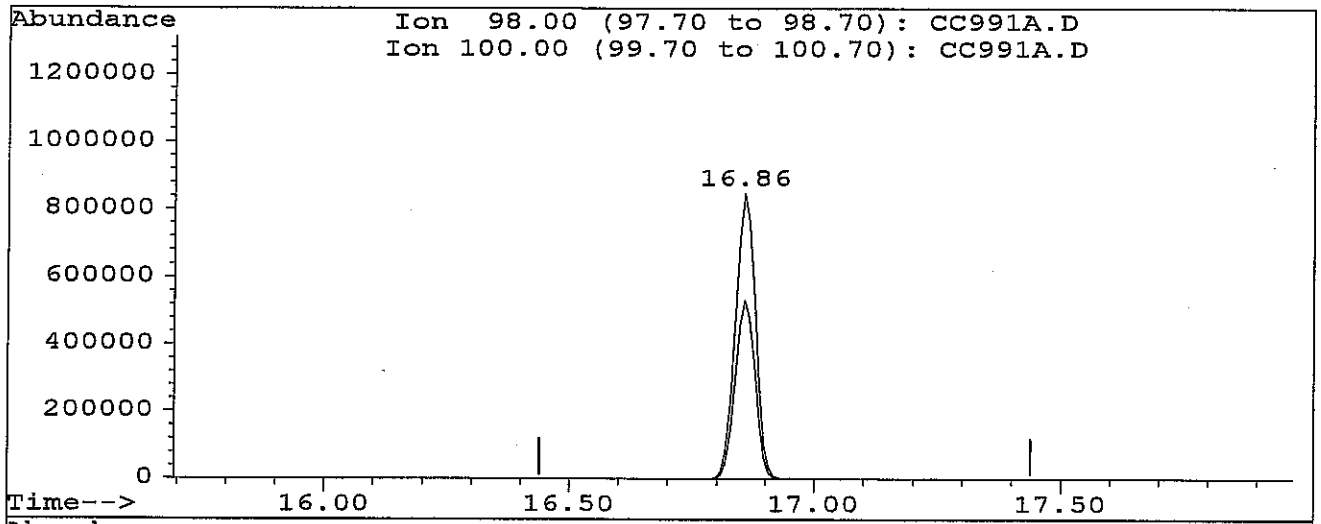
Ion	Exp%	Act%
130.00	100	100
132.00	98.90	76.95#
60.00	57.90	38.86#
0.00	0.00	0.00

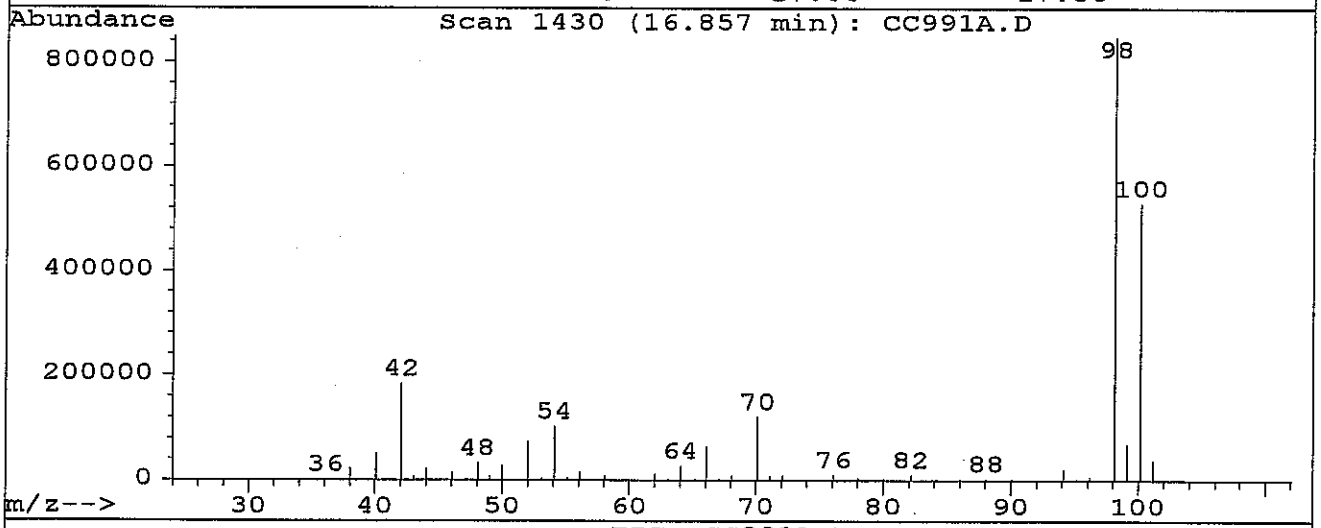
Quantitation Report

Data File : C:\MSCHEM\2\DATA\07069MS1\CC991A.D
Acq Time : 6 Jul 109 1:31 pm
Sample : 991
Misc : 070609
Quant Time: Jul 6 14:07 19109

Operator: JF
Inst : 5970 - In
Multiplr: 1.00

Method : C:\MSCHEM\2\METHODS\1T15EXAY.M
Title : EPA TO-15
Last Update : Tue Mar 17 14:18:15 2009
Response via : Multiple Level Calibration





TIC: CC991A.D

(94) Toluene-d8 (S)

16.86min 10.51ppbV

response 2393245

Ion	Exp%	Act%
98.00	100	100
100.00	64.30	62.58
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report

Data File : C:\MSCHEM\2\DATA\07069MS1\CC991A.D
Acq Time : 6 Jul 109 1:31 pm
Sample : 991
Misc : 070609
Quant Time: Jul 6 14:07 19109

Operator: JF
Inst : 5970 - In
Multiplr: 1.00

Method : C:\MSCHEM\2\METHODS\1T15EXAY.M
Title : EPA TO-15
Last Update : Tue Mar 17 14:18:15 2009
Response via : Multiple Level Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene	11.31	168	4498948	20.00	ppbV	-0.07
35) 1,4-Difluorobenzene	13.10	114	4052016	20.00	ppbV	-0.07
System Monitoring Compounds						%Recovery
94) Toluene-d8	16.86	98	2393245	10.51	ppbV	210.13%
95) Chlorobenzene-d5	20.29	117	4662765	22.31	ppbV	223.11%
96) 1,4-Bromofluorobenzene	23.30	95	3840327	11.75	ppbV	235.03%
Target Compounds						Qvalue
8) Ethanol	5.19	45	49441	0.68	ppbV	92
9) Acrolein	5.83	56	3684	0.16	ppbV #	81
11) Acetonitrile	5.90	41	13482	0.14	ppbV #	84
12) Acetone	5.98	43	27037	0.14	ppbV	95
13) 2-propanol	6.12	45	2395	0.02	ppbV #	58
16) Acrylonitrile	6.88	53	1232	0.02	ppbV #	86
20) Carbon disulfide	7.47	76	2867	0.05	ppbV #	75
23) Propionitrile	8.74	54	686	0.01	ppbV #	66
25) Vinyl acetate	10.26	43	1189	0.00	ppbV #	81
26) 2-Butanone	9.32	72	296	0.01	ppbV #	1
29) Tetrahydrofuran	10.80	42	3342	0.01	ppbV #	78
40) Benzene	12.45	78	17199	0.07	ppbV	94
46) Trichloroethene	14.06	130	10455	0.09	ppbV #	77
48) Methyl methacrylate	14.48	69	5736	0.06	ppbV #	1
49) Methyl Isobutyl Ketone	15.64	43	741	0.00	ppbV #	56
51) Toluene	17.03	91	47291	0.15	ppbV	87
53) 1,1,2-Trichloroethane	17.03	61	312	0.00	ppbV #	1
54) 2-Hexanone	17.72	43	5181	0.01	ppbV #	73
56) Octane	18.15	57	303	0.00	ppbV #	12
60) Chlorobenzene	20.36	112	294	0.00	ppbV #	44
61) 1,1,1,2-Tetrachloroethane	20.41	131	314	0.00	ppbV #	12
62) Ethylbenzene	20.90	91	1157	0.00	ppbV #	48
63) m & p-Xylene	21.19	91	5832	0.01	ppbV	87
64) Styrene	22.03	104	1815	0.01	ppbV #	68
65) Bromoform	21.94	173	1842	0.00	ppbV #	36
66) o-Xylene	22.17	91	1163	0.00	ppbV #	38
67) 1,1,2,2-Tetrachloroethane	22.68	83	3976	0.01	ppbV #	91
69) t-1,4-Dichloro-2-butene	23.13	53	409	0.00	ppbV #	35
70) n-Propylbenzene	24.34	91	5059	0.01	ppbV #	74
71) Isopropylbenzene	24.64	105	12246	0.02	ppbV #	33
72) 4-Ethyltoluene	24.64	105	12246	0.02	ppbV #	56
73) 1,3,5-Trimethylbenzene	24.80	105	4550	0.01	ppbV #	42
74) Methylstyrene	25.29	118	25352	0.08	ppbV	86
75) tert-butyl benzene	25.74	119	2459	0.00	ppbV #	79
76) 1,2,4-Trimethylbenzene	25.76	105	9684	0.02	ppbV	98
77) sec-butylbenzene	26.36	105	4426	0.01	ppbV #	67
78) 1,3-Dichlorobenzene	26.53	146	10631	0.02	ppbV	91
79) Isopropyltoluene	26.73	119	7923	0.01	ppbV #	77
80) Benzyl chloride	26.49	91	5641	0.01	ppbV #	59
81) 1,4-Dichlorobenzene	26.53	146	10631	0.02	ppbV	90
82) n-Butylbenzene	27.80	91	12133	0.01	ppbV #	96
83) 1,2-Dichlorobenzene	27.39	146	12969	0.02	ppbV	95
84) 1,2-Dibromo-3-chloropropan	28.86	75	34857	0.09	ppbV #	71
86) 1,2,4-Trichlorobenzene	31.93	180	79743	0.07	ppbV	98
87) Naphthalene	32.30	128	291011	0.16	ppbV #	95
88) Hexachlorobutadiene	32.98	225	22021	0.03	ppbV	93
89) Propylene	3.77	40	4920	0.29	ppbV #	1

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

Quantitation Report

Data File : C:\MSCHEM\2\DATA\07069MS1\CC991A.D
Acq Time : 6 Jul 109 1:31 pm
Sample : 991
Misc : 070609
Quant Time: Jul 6 14:07 19109

Operator: JF
Inst : 5970 - In
Multiplr: 1.00

Method : C:\MSCHEM\2\METHODS\1T15EXAY.M
Title : EPA TO-15
Last Update : Tue Mar 17 14:18:15 2009
Response via : Multiple Level Calibration

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
92) 2-Chlorotoluene	24.34	91	5059	0.01 ppbV #	79
93) 4-Chlorotoluene	24.58	91	6335	0.01 ppbV #	68

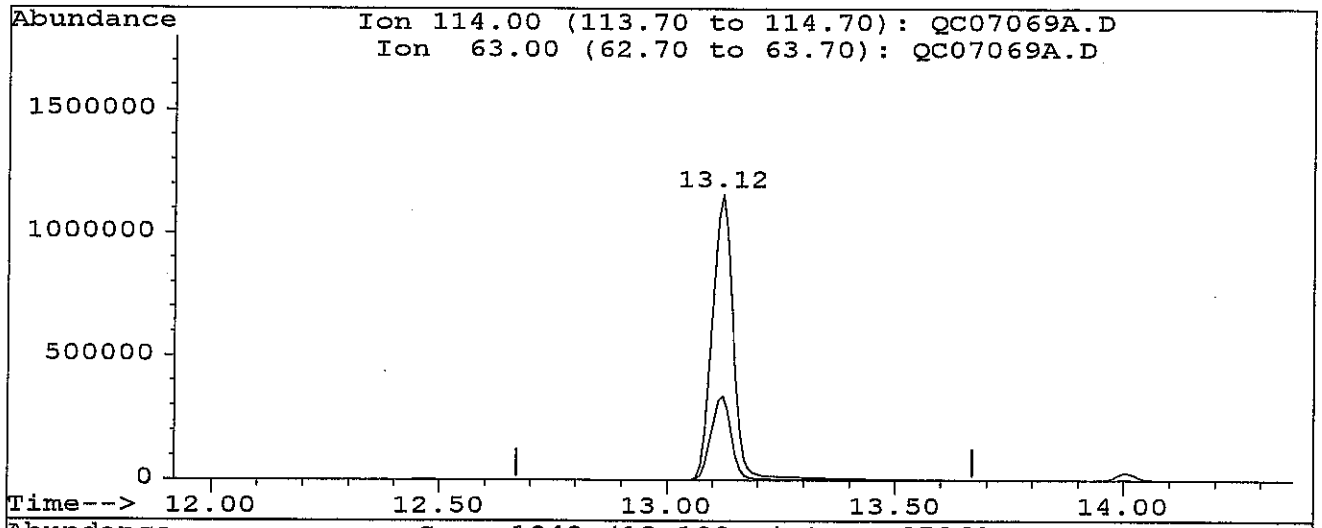
(#) = qualifier out of range (m) = manual integration

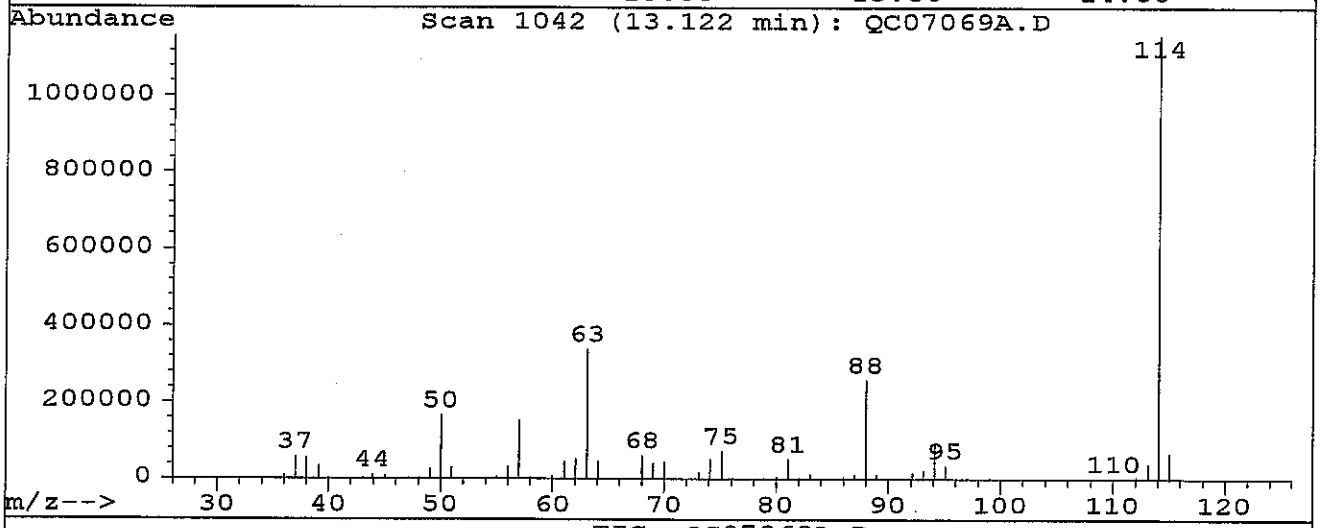
Quantitation Report

Data File : C:\MSCHEM\2\DATA\07069MS1\QC07069A.D
Acq Time : 6 Jul 109 10:49 am
Sample : ST60421
Misc :
Quant Time: Jul 6 11:25 19109

Operator: JF
Inst : 5970 - In
Multiplr: 1.00

Method : C:\MSCHEM\2\METHODS\1T15EXAY.M
Title : EPA TO-15
Last Update : Tue Mar 17 14:18:15 2009
Response via : Multiple Level Calibration





TIC: QC07069A.D

(35) 1,4-Difluorobenzene (I)

13.12min 20.00ppbV

response 3791665

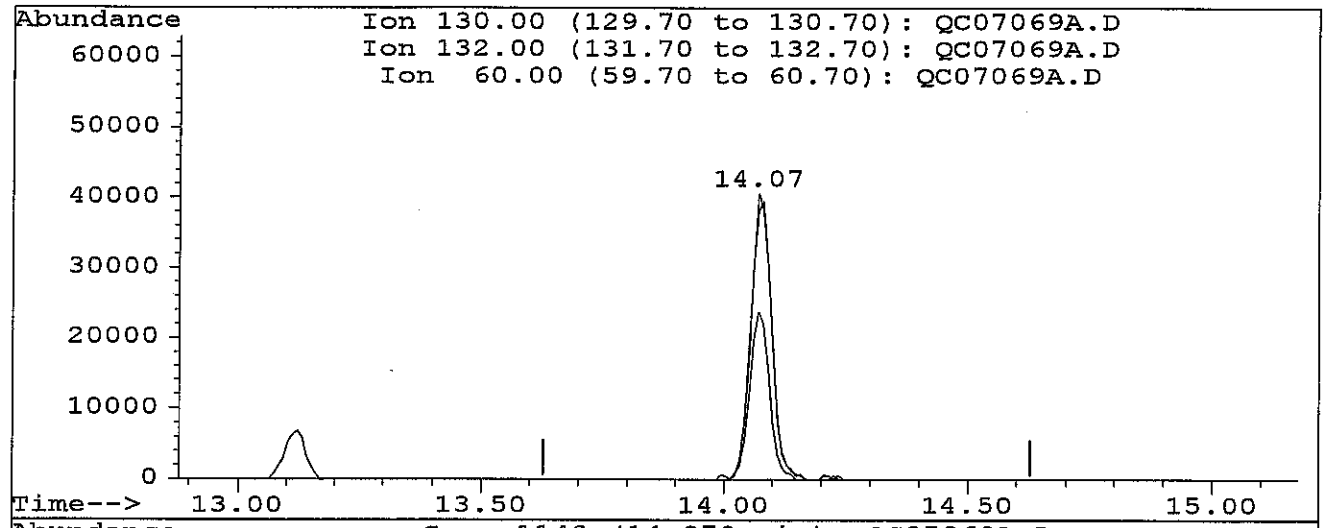
Ion	Exp%	Act%
114.00	100	100
63.00	29.30	29.15
0.00	0.00	0.00
0.00	0.00	0.00

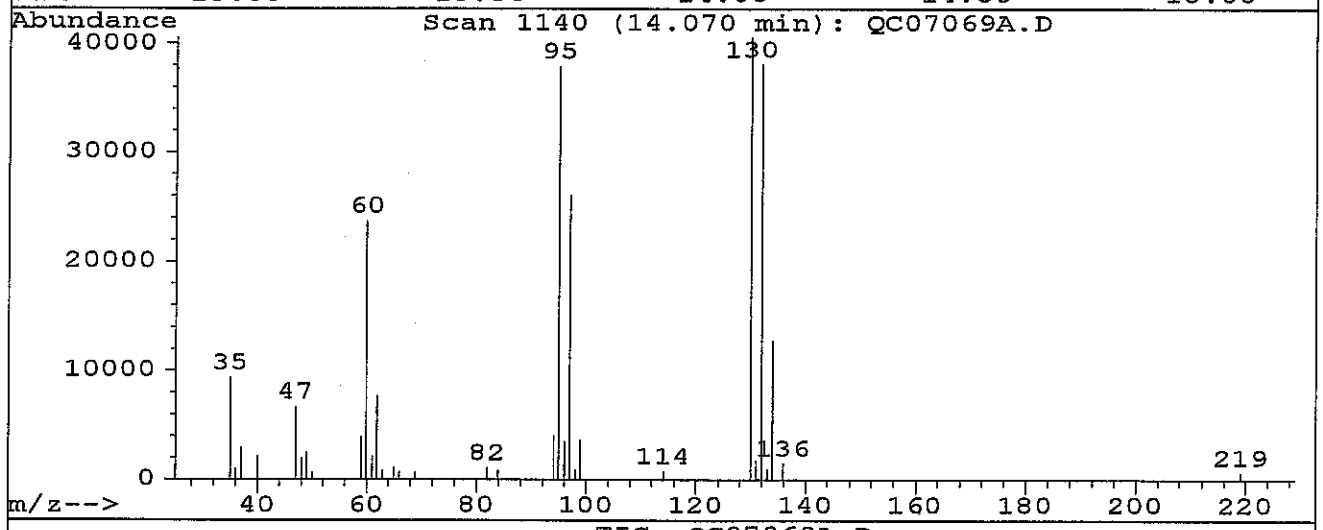
Quantitation Report

Data File : C:\MSCHEM\2\DATA\07069MS1\QC07069A.D
Acq Time : 6 Jul 109 10:49 am
Sample : ST60421
Misc :
Quant Time: Jul 6 11:25 19109

Operator: JF
Inst : 5970 - In
Multiplr: 1.00

Method : C:\MSCHEM\2\METHODS\1T15EXAY.M
Title : EPA TO-15
Last Update : Tue Mar 17 14:18:15 2009
Response via : Multiple Level Calibration





TIC: QC07069A.D

(46) Trichloroethene (T)

14.07min 1.09ppbV

response 118703

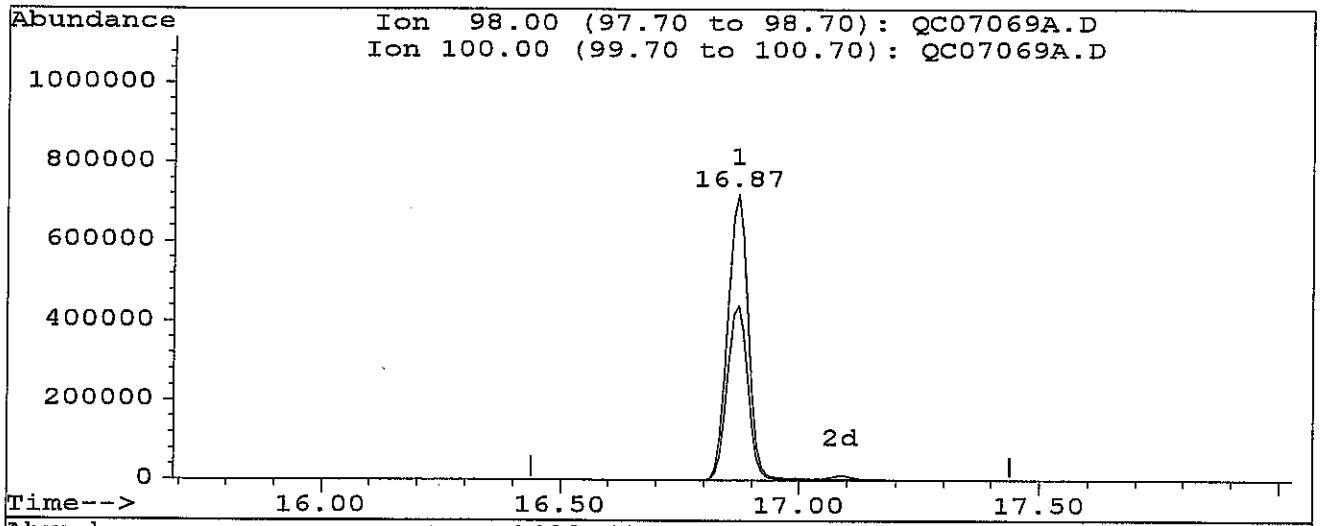
Ion	Exp%	Act%
130.00	100	100
132.00	98.90	93.91
60.00	57.90	57.90
0.00	0.00	0.00

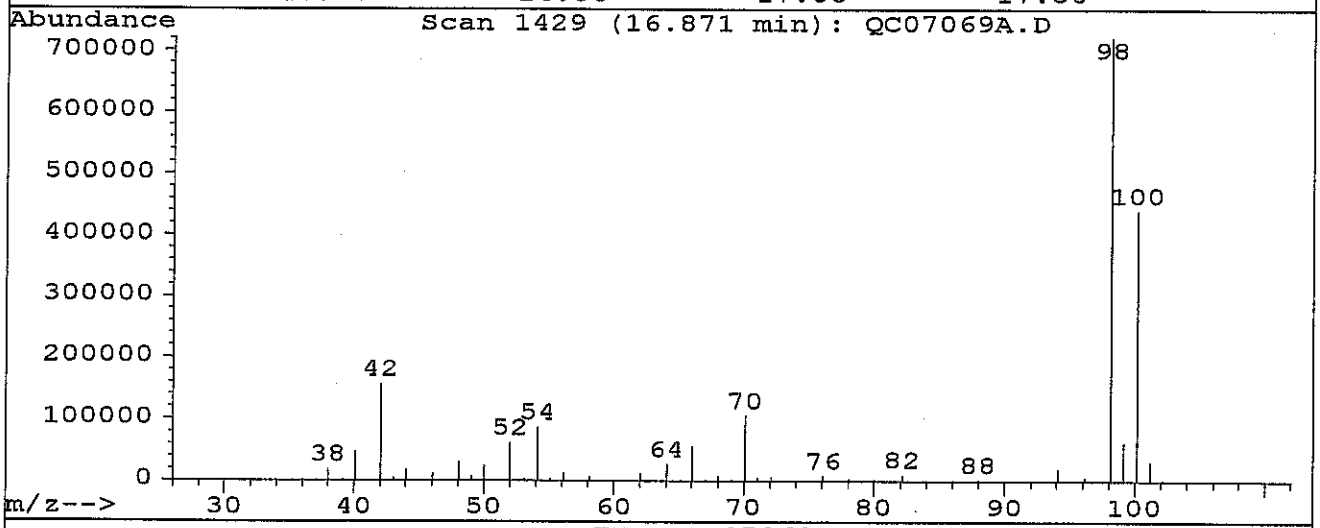
Quantitation Report

Data File : C:\MSCHEM\2\DATA\07069MS1\QC07069A.D
Acq Time : 6 Jul 109 10:49 am
Sample : ST60421
Misc :
Quant Time: Jul 6 11:25 19109

Operator: JF
Inst : 5970 - In
Multiplr: 1.00

Method : C:\MSCHEM\2\METHODS\1T15EXAY.M
Title : EPA TO-15
Last Update : Tue Mar 17 14:18:15 2009
Response via : Multiple Level Calibration





TIC: QC07069A.D

(94) Toluene-d8 (S)

16.87min 10.21ppbV

response 2175507

Ion	Exp%	Act%
98.00	100	100
100.00	64.30	61.07
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report

Data File : C:\MSCHEM\2\DATA\07069MS1\QC07069A.D
Acq Time : 6 Jul 109 10:49 am
Sample : ST60421
Misc :
Quant Time: Jul 6 11:25 19109

Operator: JF
Inst : 5970 - In
Multiplr: 1.00

Method : C:\MSCHEM\2\METHODS\1T15EXAY.M
Title : EPA TO-15
Last Update : Tue Mar 17 14:18:15 2009
Response via : Multiple Level Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Pentafluorobenzene	11.33	168	4157284	20.00	ppbV		-0.05
35) 1,4-Difluorobenzene	13.12	114	3791665	20.00	ppbV		-0.05
System Monitoring Compounds							%Recovery
94) Toluene-d8	16.87	98	2175507	10.21	ppbV		204.12%
95) Chlorobenzene-d5	20.30	117	4152929	21.24	ppbV		212.36%
96) 1,4-Bromofluorobenzene	23.29	95	3531028	11.55	ppbV		230.94%
Target Compounds							Qvalue
2) Dichlorodifluoromethane	3.82	85	124514	0.98	ppbV		97
3) Chloromethane	4.07	50	58100	0.71	ppbV		92
4) Freon 114	4.09	85	96279	0.71	ppbV		92
5) Vinyl chloride	4.32	62	40671	0.92	ppbV		96
6) Bromomethane	4.89	94	35835	0.82	ppbV		94
7) Chloroethane	5.10	64	24176	1.04	ppbV		89
8) Ethanol	5.17	45	4714	0.07	ppbV		98
9) Acrolein	5.88	56	5732	0.27	ppbV		85
10) Trichlorofluoromethane	5.92	101	145254	1.20	ppbV		94
11) Acetonitrile	5.92	41	5872	0.07	ppbV	#	61
12) Acetone	6.06	43	13918	0.08	ppbV		92
13) 2-propanol	6.15	45	2896	0.02	ppbV	#	78
14) Methyl iodide	6.96	142	1757	0.03	ppbV	#	30
15) 1,1-Dichloroethene	6.87	61	104279	1.06	ppbV		96
16) Acrylonitrile	6.93	53	78779	1.42	ppbV	#	90
17) Freon 113	7.14	151	100723	1.31	ppbV		84
18) Allyl chloride	7.30	41	6146	0.06	ppbV	#	20
19) Dichloromethane	7.29	84	45942	1.06	ppbV		94
20) Carbon disulfide	7.51	76	303	0.01	ppbV	#	70
23) Propionitrile	8.77	54	6680	0.10	ppbV	#	66
24) 1,1-Dichloroethane	8.86	63	122677	0.97	ppbV		94
25) Vinyl acetate	10.30	43	3091	0.01	ppbV	#	81
28) Bromochloromethane	10.47	49	17376	0.12	ppbV	#	35
29) Tetrahydrofuran	10.80	42	20009	0.04	ppbV	#	81
30) Isobutyl alcohol	10.81	74	589	0.04	ppbV	#	23
31) Methacrylonitrile	9.68	67	1462	0.04	ppbV	#	63
32) cis-1,2-Dichloroethene	10.07	96	59389	0.91	ppbV		99
34) Chloroform	10.48	83	142152	0.94	ppbV		96
36) 1,1,1-Trichloroethane	11.75	97	137489	1.00	ppbV		99
37) 1,2-Dichloroethane	11.82	62	143441	1.11	ppbV		98
38) 1,1-Dichloropropene	12.18	75	364	0.00	ppbV	#	44
40) Benzene	12.47	78	217505	0.97	ppbV		98
41) Carbon tetrachloride	12.52	117	145432	1.04	ppbV		98
42) n-Heptane	13.97	43	424	0.00	ppbV	#	44
43) 1,2-Dichloropropane	14.00	63	94162	1.09	ppbV		87
44) 1,4 Dioxane	14.37	88	3028	0.05	ppbV	#	88
45) Dibromomethane	14.14	174	2155	0.02	ppbV	#	59
46) Trichloroethene	14.07	130	118703	1.09	ppbV		97
47) Bromodichloromethane	14.34	83	294	0.00	ppbV	#	27
48) Methyl methacrylate	14.46	69	5843	0.06	ppbV		97
49) Methyl Isobutyl Ketone	15.68	43	9211	0.02	ppbV	#	92
50) cis-1,3-Dichloropropene	15.76	75	130056	0.96	ppbV		99
51) Toluene	17.05	91	347201	1.18	ppbV		98
52) trans-1,3-Dichloropropene	16.77	75	145187	0.90	ppbV		99
53) 1,1,2-Trichloroethane	17.09	61	95228	1.10	ppbV		95
54) 2-Hexanone	17.72	43	30674	0.06	ppbV	#	94
55) 1,3-Dichloropropane	17.65	76	2791	0.02	ppbV	#	49

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

Quantitation Report

Data File : C:\MSCHEM\2\DATA\07069MS1\QC07069A.D
Acq Time : 6 Jul 109 10:49 am
Sample : ST60421
Misc :
Quant Time: Jul 6 11:25 19109

Operator: JF
Inst : 5970 - In
Multiplr: 1.00

Method : C:\MSCHEM\2\METHODS\1T15EXAY.M
Title : EPA TO-15
Last Update : Tue Mar 17 14:18:15 2009
Response via : Multiple Level Calibration

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
57)	Dibromochloromethane	18.22	129	3051	0.01 ppbV #	74
58)	1,2-Dibromoethane	18.71	107	250545	1.18 ppbV #	95
59)	Tetrachloroethene	18.91	166	228790	1.22 ppbV #	93
60)	Chlorobenzene	20.37	112	317109	1.16 ppbV	96
61)	1,1,1,2-Tetrachloroethane	20.44	131	3535	0.02 ppbV #	63
62)	Ethylbenzene	20.91	91	526146	1.12 ppbV	95
63)	m & p-Xylene	21.20	91	870470	2.21 ppbV	98
64)	Styrene	22.02	104	444653	1.58 ppbV	95
65)	Bromoform	21.94	173	14694	0.04 ppbV #	84
66)	o-Xylene	22.16	91	483228	1.11 ppbV	95
67)	1,1,2,2-Tetrachloroethane	22.68	83	546660	1.37 ppbV	97
68)	1,2,3-Trichloropropane	22.99	110	4137	0.04 ppbV	92
69)	t-1,4-Dichloro-2-butene	23.13	53	10617	0.11 ppbV #	89
70)	n-Propylbenzene	24.35	91	24148	0.03 ppbV #	93
71)	Isopropylbenzene	24.66	105	35047	0.05 ppbV #	77
72)	4-Ethyltoluene	24.66	105	35047	0.05 ppbV	94
73)	1,3,5-Trimethylbenzene	24.81	105	742982	1.17 ppbV	97
74)	Methylstyrene	25.28	118	59306	0.20 ppbV	94
75)	tert-butyl benzene	25.76	119	107625	0.21 ppbV #	93
76)	1,2,4-Trimethylbenzene	25.76	105	790778	1.35 ppbV	97
77)	sec-butylbenzene	26.35	105	41590	0.05 ppbV	98
78)	1,3-Dichlorobenzene	26.33	146	745458	1.59 ppbV	97
79)	Isopropyltoluene	26.74	119	53163	0.07 ppbV	95
80)	Benzyl chloride	26.49	91	44802	0.07 ppbV	96
81)	1,4-Dichlorobenzene	26.53	146	691744	1.43 ppbV	97
82)	n-Butylbenzene	27.80	91	91584	0.11 ppbV	95
83)	1,2-Dichlorobenzene	27.38	146	906293	1.68 ppbV	97
84)	1,2-Dibromo-3-chloropropan	28.87	75	201106	0.53 ppbV #	59
85)	Tetraethyl lead	30.91	237	37883	0.11 ppbV #	98
86)	1,2,4-Trichlorobenzene	31.94	180	1228540	1.23 ppbV	99
87)	Naphthalene	32.30	128	1302388	0.78 ppbV #	96
88)	Hexachlorobutadiene	32.99	225	1358441	1.76 ppbV	97
89)	Propylene	3.75	40	3072	0.19 ppbV #	1
90)	1,3-Butadiene	4.45	54	32895	0.76 ppbV	92
92)	2-Chlorotoluene	24.35	91	24148	0.05 ppbV #	79
93)	4-Chlorotoluene	24.40	91	19984	0.03 ppbV	96

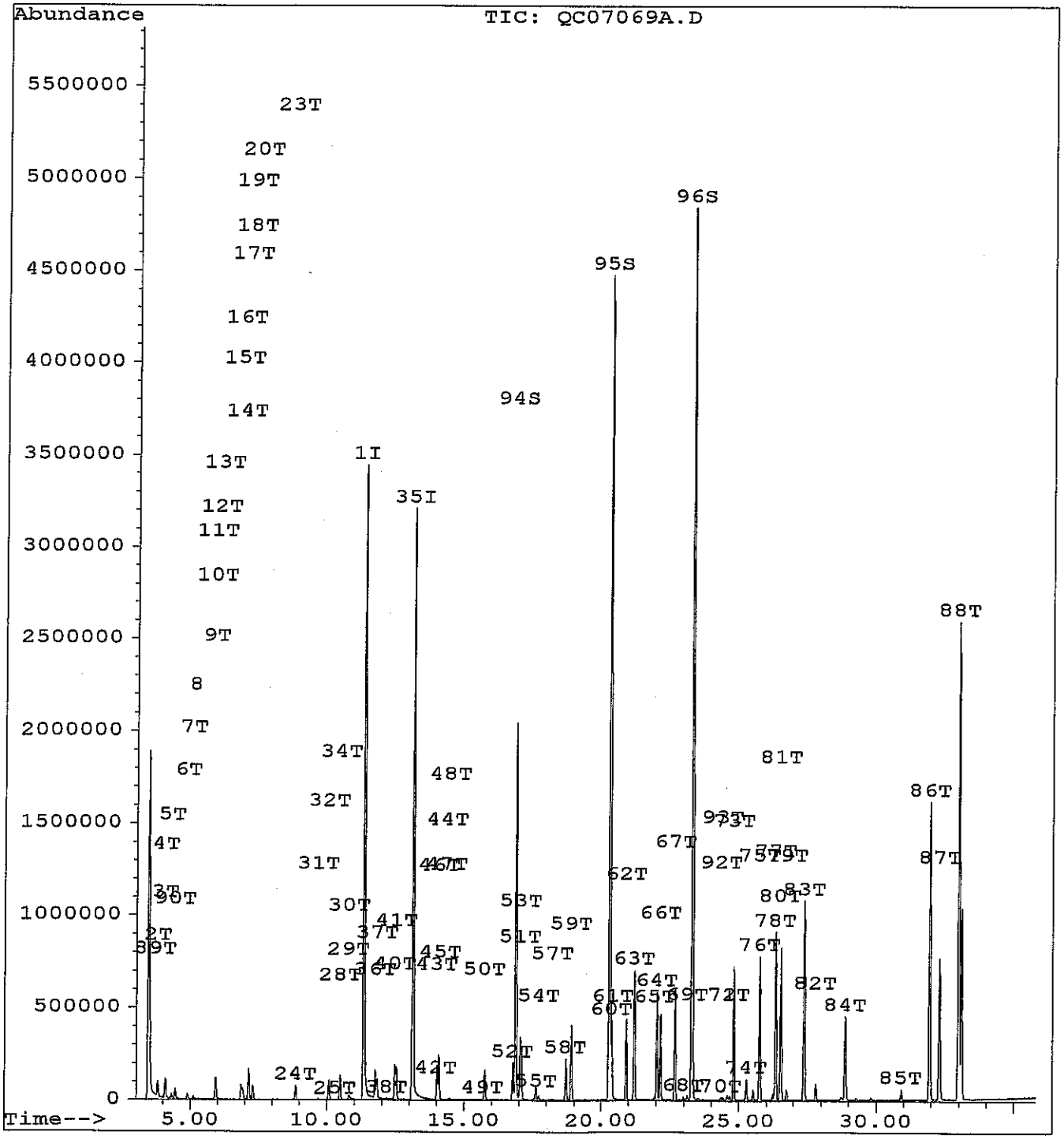
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\MSCHEM\2\DATA\07069MS1\QC07069A.D
Acq Time : 6 Jul 109 10:49 am
Sample : ST60421
Misc :
Quant Time: Jul 6 11:25 19109

Operator: JF
Inst : 5970 - In
Multiplr: 1.00

Method : C:\MSCHEM\2\METHODS\1T15EXAY.M
Title : EPA TO-15
Last Update : Tue Mar 17 14:18:15 2009
Response via : Multiple Level Calibration

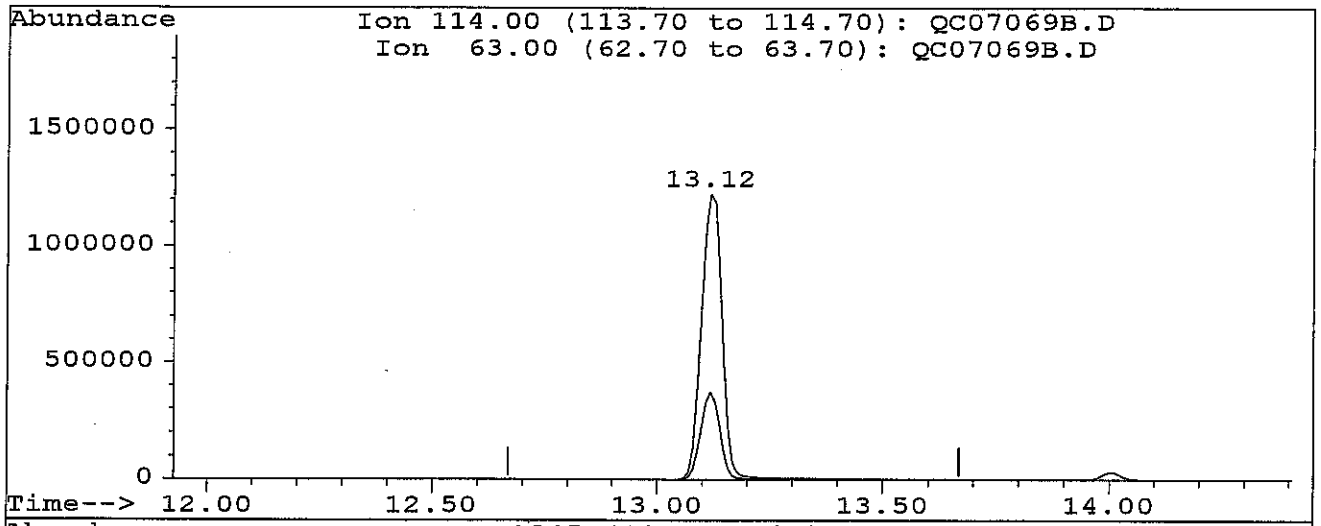


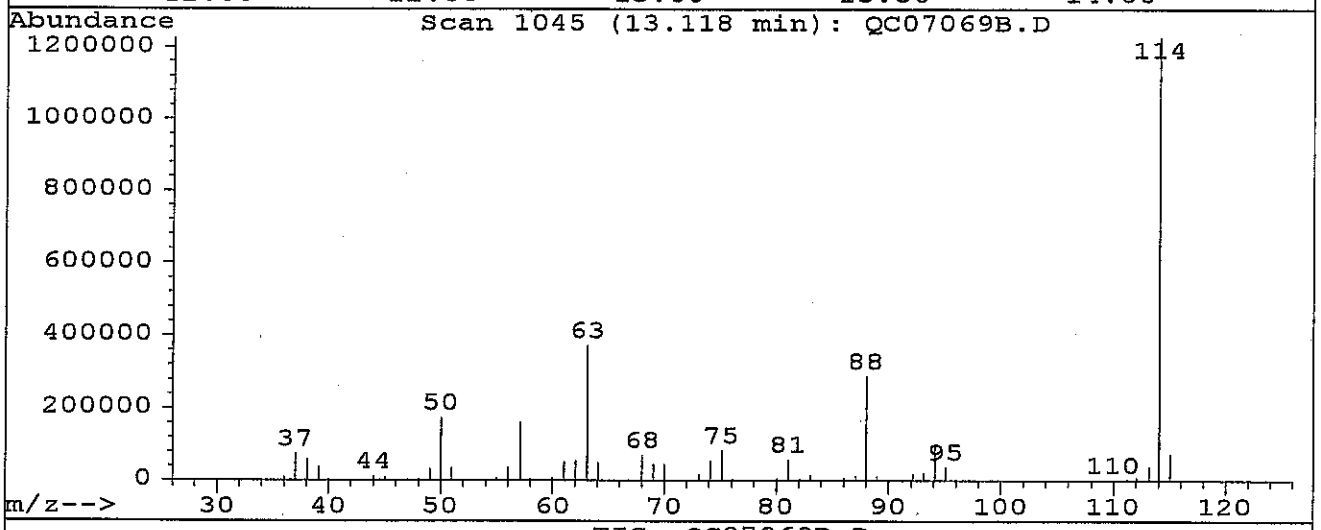
Quantitation Report

Data File : C:\MSCHEM\2\DATA\07069MS1\QC07069B.D
Acq Time : 6 Jul 109 11:35 am
Sample : ST60421
Misc :
Quant Time: Jul 6 12:11 19109

Operator: JF
Inst : 5970 - In
Multiplr: 1.00

Method : C:\MSCHEM\2\METHODS\1T15EXAY.M
Title : EPA TO-15
Last Update : Tue Mar 17 14:18:15 2009
Response via : Multiple Level Calibration





TIC: QC07069B.D

(35) 1,4-Difluorobenzene (I)

13.12min 20.00ppbV

response 3901304

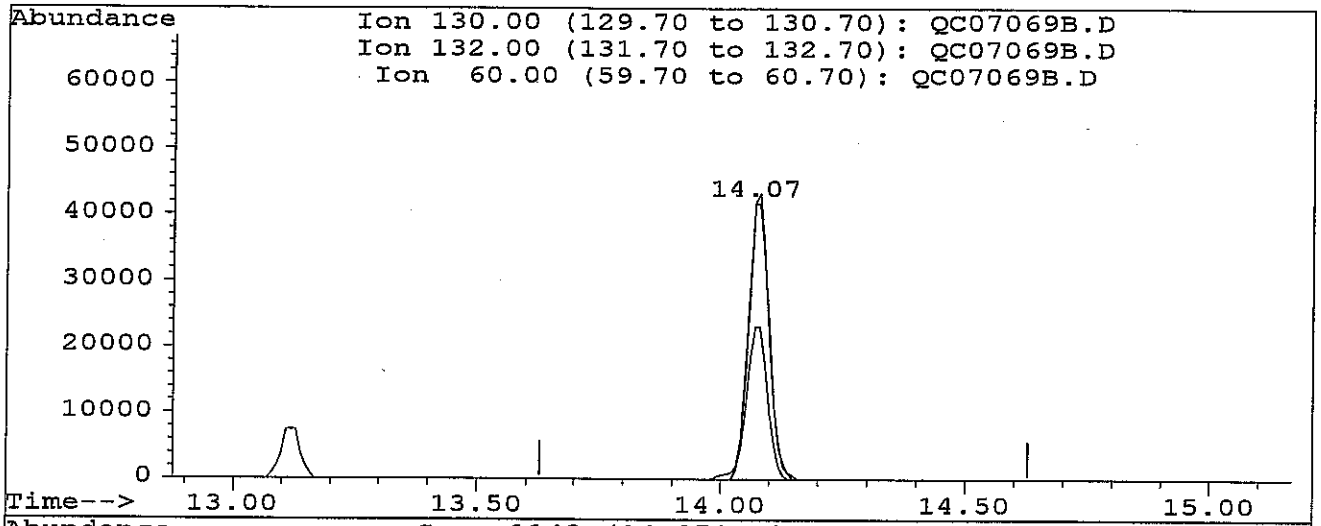
Ion	Exp%	Act%
114.00	100	100
63.00	29.30	30.37
0.00	0.00	0.00
0.00	0.00	0.00

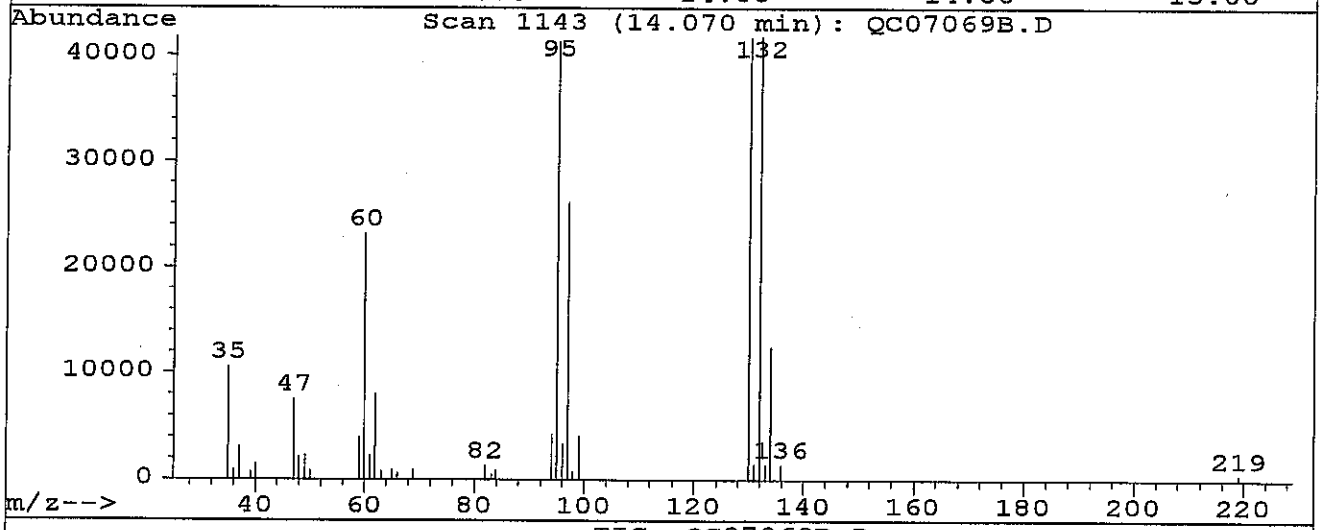
Quantitation Report

Data File : C:\MSCHEM\2\DATA\07069MS1\QC07069B.D
Acq Time : 6 Jul 109 11:35 am
Sample : ST60421
Misc :
Quant Time: Jul 6 12:11 19109

Operator: JF
Inst : 5970 - In
Multiplr: 1.00

Method : C:\MSCHEM\2\METHODS\1T15EXAY.M
Title : EPA TO-15
Last Update : Tue Mar 17 14:18:15 2009
Response via : Multiple Level Calibration





TIC: QC07069B.D

(46) Trichloroethene (T)

14.07min 1.12ppbV

response 124879

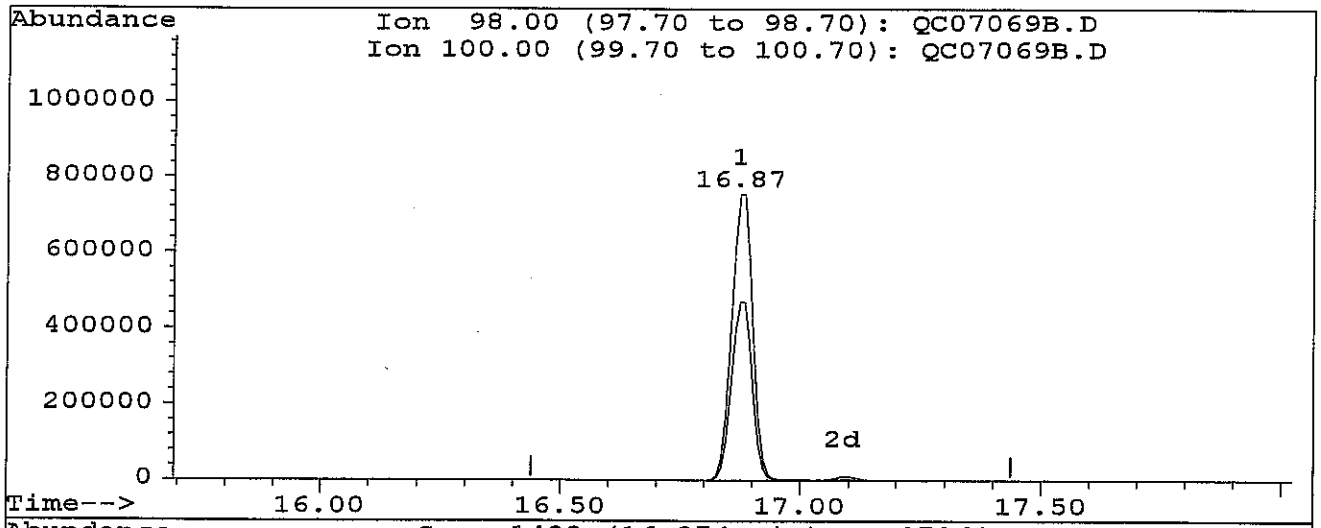
Ion	Exp%	Act%
130.00	100	100
132.00	98.90	100.27
60.00	57.90	54.53
0.00	0.00	0.00

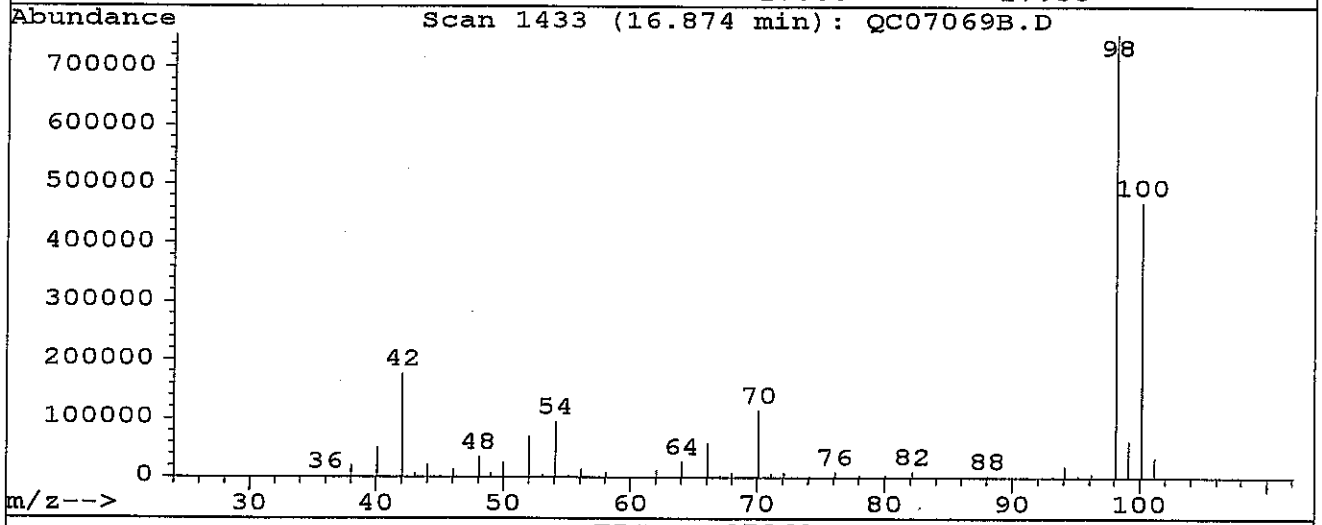
Quantitation Report

Data File : C:\MSCHEM\2\DATA\07069MS1\QC07069B.D
Acq Time : 6 Jul 109 11:35 am
Sample : ST60421
Misc :
Quant Time: Jul 6 12:11 19109

Operator: JF
Inst : 5970 - In
Multiplr: 1.00

Method : C:\MSCHEM\2\METHODS\1T15EXAY.M
Title : EPA TO-15
Last Update : Tue Mar 17 14:18:15 2009
Response via : Multiple Level Calibration





TIC: QC07069B.D

(94) Toluene-d8 (S)

16.87min 10.43ppbV

response 2287490

Ion	Exp%	Act%
98.00	100	100
100.00	64.30	62.23
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report

Data File : C:\MSCHEM\2\DATA\07069MS1\QC07069B.D
Acq Time : 6 Jul 109 11:35 am
Sample : ST60421
Misc :
Quant Time: Jul 6 12:11 19109

Operator: JF
Inst : 5970 - In
Multiplr: 1.00

Method : C:\MSCHEM\2\METHODS\1T15EXAY.M
Title : EPA TO-15
Last Update : Tue Mar 17 14:18:15 2009
Response via : Multiple Level Calibration

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Pentafluorobenzene	11.33	168	4244113	20.00 ppbV	-0.05
35) 1,4-Difluorobenzene	13.12	114	3901304	20.00 ppbV	-0.05
System Monitoring Compounds					%Recovery
94) Toluene-d8	16.87	98	2287490	10.43 ppbV	208.60%
95) Chlorobenzene-d5	20.31	117	4407742	21.91 ppbV	219.06%
96) 1,4-Bromofluorobenzene	23.30	95	3675106	11.68 ppbV	233.61%
Target Compounds					Qvalue
2) Dichlorodifluoromethane	3.81	85	132691	1.02 ppbV	98
3) Chloromethane	4.07	50	66377	0.80 ppbV	94
4) Freon 114	4.09	85	128302	0.93 ppbV	95
5) Vinyl chloride	4.31	62	42174	0.93 ppbV	99
6) Bromomethane	4.89	94	47942	1.07 ppbV	95
7) Chloroethane	5.11	64	27322	1.15 ppbV	90
8) Ethanol	5.29	45	4205	0.06 ppbV #	51
9) Acrolein	5.89	56	2503	0.12 ppbV #	78
10) Trichlorofluoromethane	5.92	101	143297	1.16 ppbV	96
11) Acetonitrile	5.97	41	4724	0.05 ppbV #	33
12) Acetone	6.05	43	10295	0.06 ppbV	93
13) 2-propanol	6.20	45	1835	0.01 ppbV #	88
14) Methyl iodide	6.94	142	314	0.01 ppbV #	30
15) 1,1-Dichloroethene	6.86	61	105469	1.05 ppbV	98
16) Acrylonitrile	6.92	53	68046	1.21 ppbV	99
17) Freon 113	7.14	151	101182	1.29 ppbV	93
18) Allyl chloride	7.29	41	3878	0.03 ppbV #	15
19) Dichloromethane	7.28	84	45850	1.04 ppbV	96
21) trans-1,2-Dichloroethene	8.36	96	326	0.01 ppbV #	1
24) 1,1-Dichloroethane	8.87	63	122696	0.95 ppbV #	96
25) Vinyl acetate	10.30	43	686	0.00 ppbV #	81
28) Bromochloromethane	10.49	49	15936	0.11 ppbV #	35
29) Tetrahydrofuran	10.83	42	3910	0.01 ppbV #	71
32) cis-1,2-Dichloroethene	10.07	96	59565	0.90 ppbV	92
34) Chloroform	10.48	83	136369	0.88 ppbV	95
36) 1,1,1-Trichloroethane	11.75	97	135711	0.96 ppbV	98
37) 1,2-Dichloroethane	11.82	62	132793	1.00 ppbV	96
38) 1,1-Dichloropropene	12.47	75	4442	0.04 ppbV #	1
40) Benzene	12.47	78	225199	0.98 ppbV	97
41) Carbon tetrachloride	12.53	117	152824	1.06 ppbV	94
43) 1,2-Dichloropropane	14.01	63	97187	1.09 ppbV	93
46) Trichloroethene	14.07	130	124879	1.12 ppbV	97
47) Bromodichloromethane	14.07	83	301	0.00 ppbV #	27
48) Methyl methacrylate	14.48	69	6553	0.07 ppbV #	27
49) Methyl Isobutyl Ketone	15.69	43	1893	0.00 ppbV #	56
50) cis-1,3-Dichloropropene	15.76	75	138993	1.00 ppbV	97
51) Toluene	17.05	91	362315	1.20 ppbV	99
52) trans-1,3-Dichloropropene	16.78	75	146935	0.89 ppbV	96
53) 1,1,2-Trichloroethane	17.09	61	102684	1.16 ppbV	97
54) 2-Hexanone	17.75	43	5427	0.01 ppbV #	49
57) Dibromochloromethane	18.24	129	296	0.00 ppbV #	12
58) 1,2-Dibromoethane	18.72	107	259535	1.19 ppbV #	96
59) Tetrachloroethene	18.91	166	241344	1.26 ppbV	93
60) Chlorobenzene	20.39	112	330795	1.17 ppbV	95
61) 1,1,1,2-Tetrachloroethane	20.45	131	3231	0.02 ppbV #	12
62) Ethylbenzene	20.92	91	545369	1.13 ppbV	96
63) m & p-Xylene	21.21	91	910896	2.24 ppbV	99

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

Quantitation Report

Data File : C:\MSCHEM\2\DATA\07069MS1\QC07069B.D
Acq Time : 6 Jul 109 11:35 am
Sample : ST60421
Misc :
Quant Time: Jul 6 12:11 19109

Operator: JF
Inst : 5970 - In
Multiplr: 1.00

Method : C:\MSCHEM\2\METHODS\1T15EXAY.M
Title : EPA TO-15
Last Update : Tue Mar 17 14:18:15 2009
Response via : Multiple Level Calibration

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
64) Styrene	22.04	104	443211	1.53 ppbV	93
65) Bromoform	21.96	173	3896	0.01 ppbV #	84
66) o-Xylene	22.16	91	505855	1.13 ppbV	99
67) 1,1,2,2-Tetrachloroethane	22.69	83	548391	1.33 ppbV	100
68) 1,2,3-Trichloropropane	23.00	110	353	0.00 ppbV #	51
69) t-1,4-Dichloro-2-butene	23.15	53	1757	0.02 ppbV #	35
70) n-Propylbenzene	24.36	91	11425	0.01 ppbV #	81
71) Isopropylbenzene	24.67	105	13079	0.02 ppbV #	84
72) 4-Ethyltoluene	24.67	105	13079	0.02 ppbV #	92
73) 1,3,5-Trimethylbenzene	24.82	105	732034	1.12 ppbV	96
74) Methylstyrene	25.29	118	58324	0.19 ppbV	97
75) tert-butyl benzene	25.77	119	88736	0.16 ppbV #	86
76) 1,2,4-Trimethylbenzene	25.77	105	787861	1.31 ppbV #	96
77) sec-butylbenzene	26.37	105	12911	0.02 ppbV #	93
78) 1,3-Dichlorobenzene	26.34	146	726989	1.51 ppbV	97
79) Isopropyltoluene	26.76	119	16889	0.02 ppbV #	94
80) Benzyl chloride	26.49	91	9377	0.01 ppbV #	66
81) 1,4-Dichlorobenzene	26.53	146	648369	1.30 ppbV	97
82) n-Butylbenzene	27.80	91	25679	0.03 ppbV	98
83) 1,2-Dichlorobenzene	27.38	146	902153	1.63 ppbV	97
84) 1,2-Dibromo-3-chloropropan	28.87	75	31490	0.08 ppbV #	67
85) Tetraethyl lead	30.91	237	5652	0.02 ppbV #	73
86) 1,2,4-Trichlorobenzene	31.94	180	1105978	1.08 ppbV	96
87) Naphthalene	32.30	128	334015	0.19 ppbV #	95
88) Hexachlorobutadiene	32.98	225	1213853	1.53 ppbV	98
89) Propylene	3.75	40	5592	0.34 ppbV #	1
90) 1,3-Butadiene	4.45	54	39219	0.88 ppbV	95
92) 2-Chlorotoluene	24.36	91	11425	0.02 ppbV #	79
93) 4-Chlorotoluene	24.58	91	12441	0.02 ppbV #	79

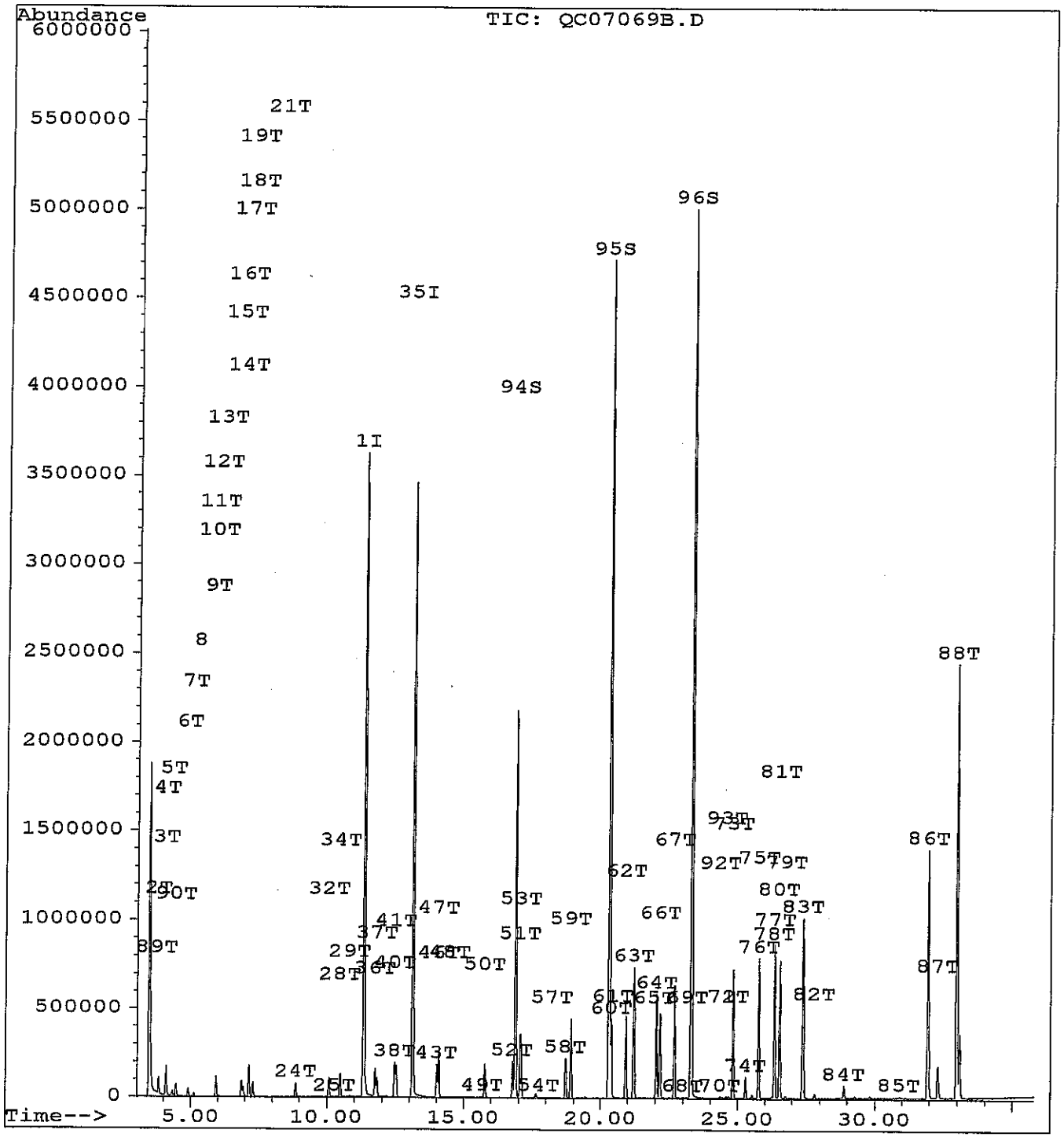
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\MSCHEM\2\DATA\07069MS1\QC07069B.D
Acq Time : 6 Jul 109 11:35 am
Sample : ST60421
Misc :
Quant Time: Jul 6 12:11 19109

Operator: JF
Inst : 5970 - In
Multiplr: 1.00

Method : C:\MSCHEM\2\METHODS\1T15EXAY.M
Title : EPA TO-15
Last Update : Tue Mar 17 14:18:15 2009
Response via : Multiple Level Calibration

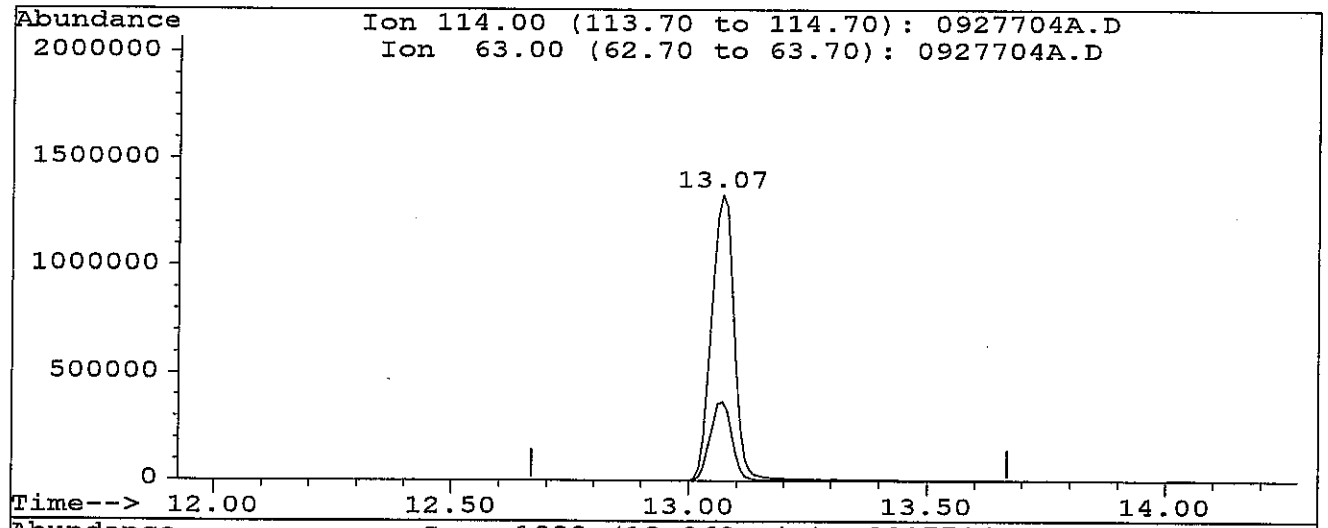


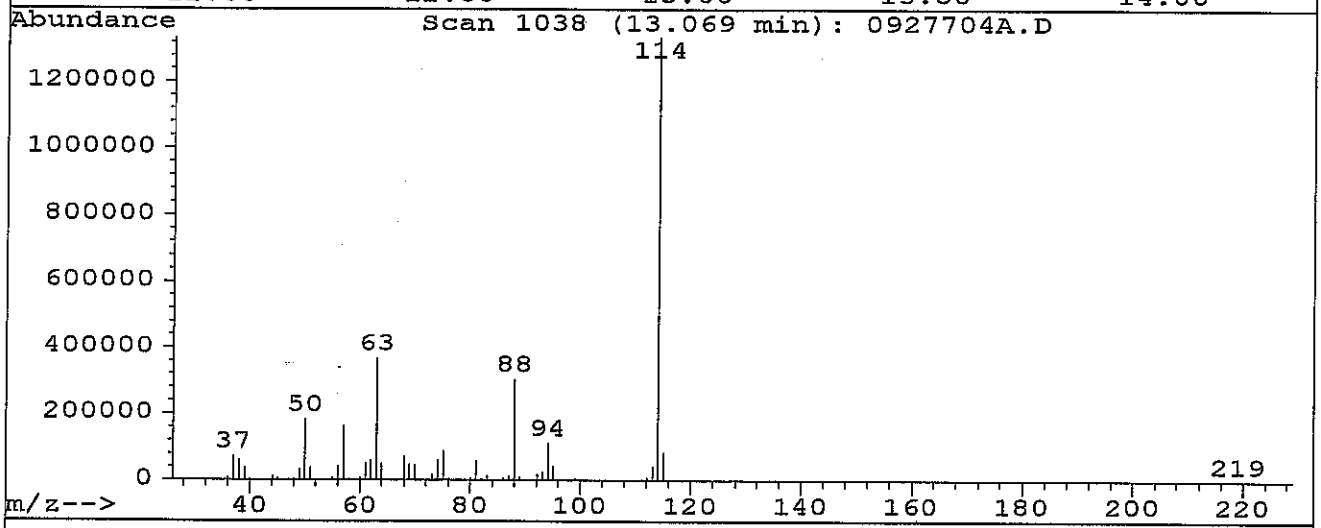
Quantitation Report

Data File : C:\MSCHEM\2\DATA\07069MS1\0927704A.D
Acq Time : 6 Jul 109 4:25 pm
Sample : 44-004
Misc : SEALASKA ENVIRONMENTAL
Quant Time: Jul 7 16:17 19109

Operator: CM
Inst : 5970 - In
Multiplr: 1.00

Method : C:\MSCHEM\2\METHODS\1T15EXAY.M
Title : EPA TO-15
Last Update : Tue Mar 17 14:18:15 2009
Response via : Multiple Level Calibration





TIC: 0927704A.D

(35) 1,4-Difluorobenzene (I)

13.07min 20.00ppbV

response 4452824

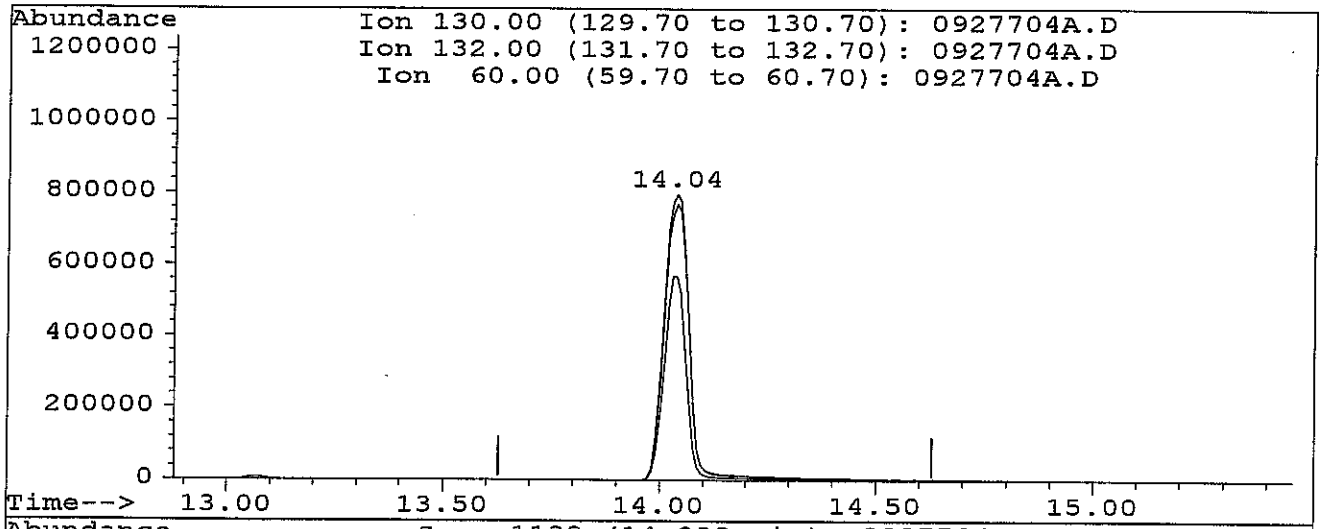
Ion	Exp%	Act%
114.00	100	100
63.00	29.30	27.63
0.00	0.00	0.00
0.00	0.00	0.00

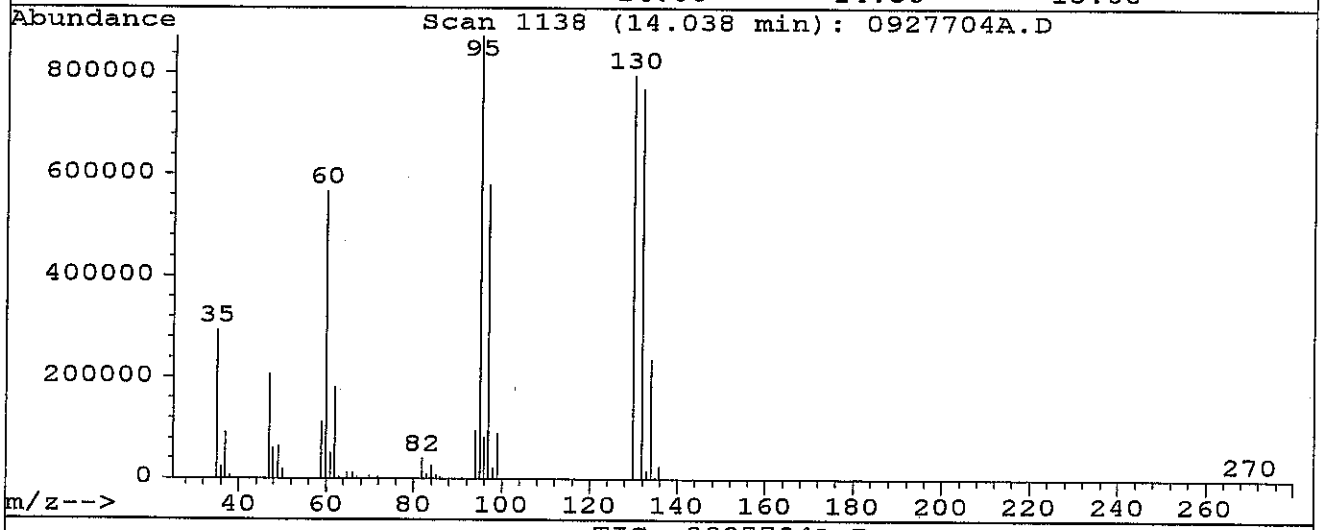
Quantitation Report

Data File : C:\MSCHEM\2\DATA\07069MS1\0927704A.D
Acq Time : 6 Jul 109 4:25 pm
Sample : 44-004
Misc : SEALASKA ENVIRONMENTAL
Quant Time: Jul 7 16:17 19109

Operator: CM
Inst : 5970 - In
Multiplr: 1.00

Method : C:\MSCHEM\2\METHODS\1T15EXAY.M
Title : EPA TO-15
Last Update : Tue Mar 17 14:18:15 2009
Response via : Multiple Level Calibration





TIC: 0927704A.D

(46) Trichloroethene (T)

14.04min 26.22ppbV

response 3344634

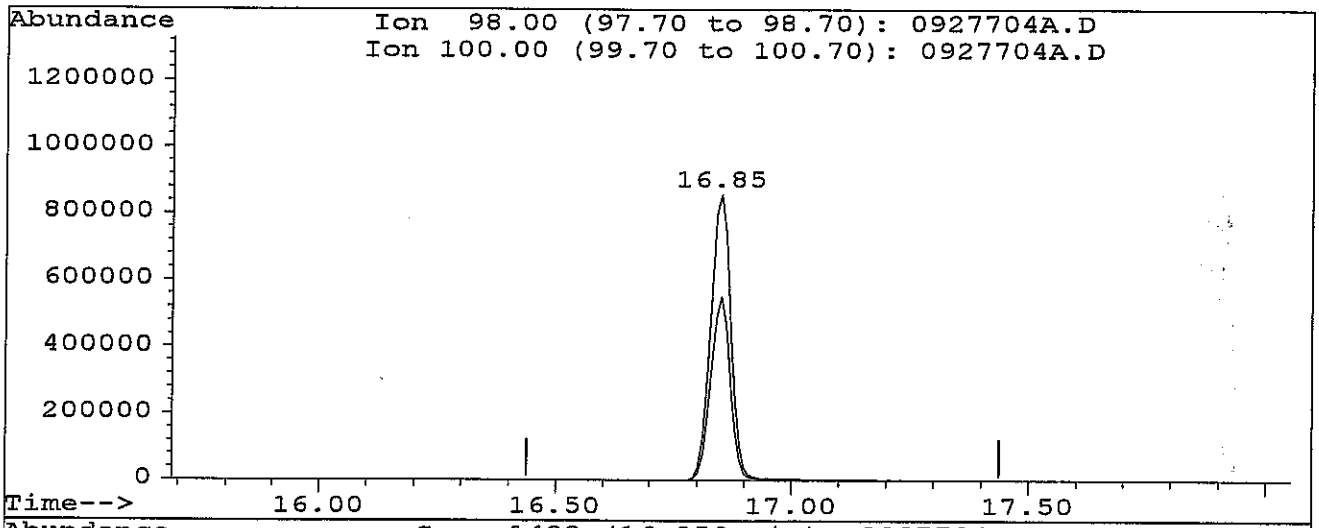
Ion	Exp%	Act%
130.00	100	100
132.00	98.90	96.52
60.00	57.90	71.13#
0.00	0.00	0.00

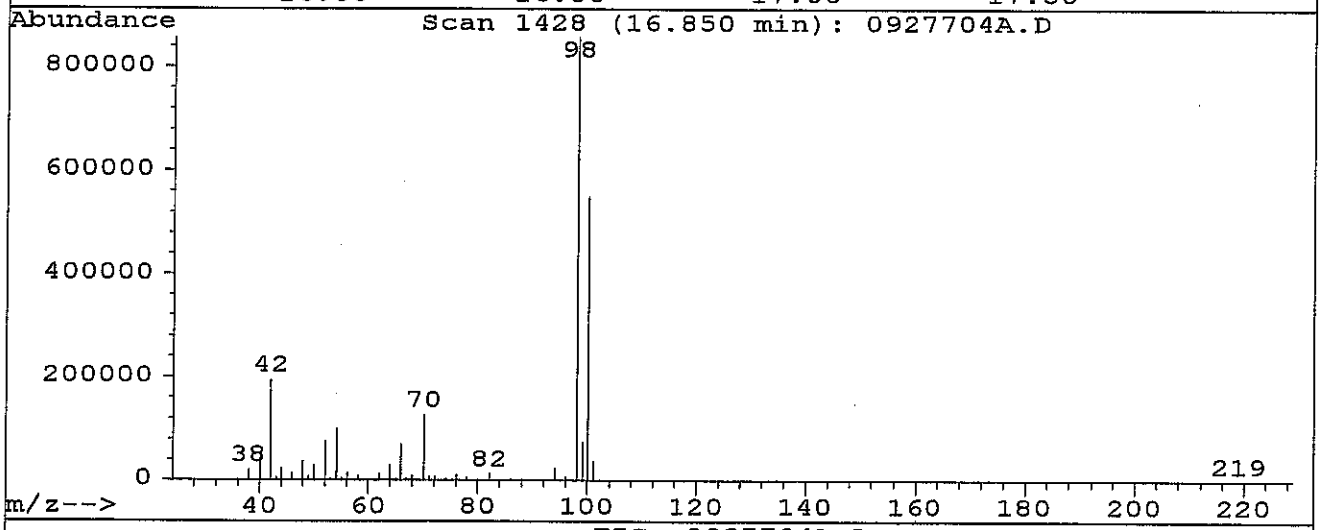
Quantitation Report

Data File : C:\MSCHEM\2\DATA\07069MS1\0927704A.D
Acq Time : 6 Jul 109 4:25 pm
Sample : 44-004
Misc : SEALASKA ENVIRONMENTAL
Quant Time: Jul 7 16:18 19109

Operator: CM
Inst : 5970 - In
Multiplr: 1.00

Method : C:\MSCHEM\2\METHODS\1T15EXAY.M
Title : EPA TO-15
Last Update : Tue Mar 17 14:18:15 2009
Response via : Multiple Level Calibration





TIC: 0927704A.D

(94) Toluene-d8 (S)

16.85min 10.30ppbV

response 2578871

Ion	Exp%	Act%
98.00	100	100
100.00	64.30	64.30
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report

Data File : C:\MSCHEM\2\DATA\07069MS1\0927704A.D
Acq Time : 6 Jul 109 4:25 pm
Sample : 44-004
Misc : SEALASKA ENVIRONMENTAL
Quant Time: Jul 7 16:18 19109

Operator: CM
Inst : 5970 - In
Multiplr: 1.00

Method : C:\MSCHEM\2\METHODS\1T15EXAY.M
Title : EPA TO-15
Last Update : Tue Mar 17 14:18:15 2009
Response via : Multiple Level Calibration

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Pentafluorobenzene	11.27	168	4903714	20.00 ppbV	-0.11
35) 1,4-Difluorobenzene	13.07	114	4452824	20.00 ppbV	-0.10
System Monitoring Compounds					%Recovery
94) Toluene-d8	16.85	98	2578871	10.30 ppbV	206.04%
95) Chlorobenzene-d5	20.29	117	4932947	21.48 ppbV	214.79%
96) 1,4-Bromofluorobenzene	23.28	95	3571401	9.94 ppbV	198.90%
Target Compounds					Qvalue
9) Acrolein	5.82	56	368	0.01 ppbV #	16
12) Acetone	5.97	43	7592	0.04 ppbV #	57
21) trans-1,2-Dichloroethene	8.28	96	990	0.02 ppbV #	55
24) 1,1-Dichloroethane	8.80	63	707	0.00 ppbV #	52
32) cis-1,2-Dichloroethene	10.01	96	27037	0.35 ppbV	95
40) Benzene	12.41	78	12758	0.05 ppbV	90
46) Trichloroethene	14.04	130	3344634	26.22 ppbV #	92
48) Methyl methacrylate	14.42	69	2040	0.02 ppbV #	1
51) Toluene	17.03	91	49475	0.14 ppbV	99
60) Chlorobenzene	20.36	112	1194	0.00 ppbV #	44
61) 1,1,1,2-Tetrachloroethane	20.33	131	980	0.01 ppbV #	12
62) Ethylbenzene	20.89	91	305	0.00 ppbV #	48
63) m & p-Xylene	21.20	91	4356	0.01 ppbV	97
70) n-Propylbenzene	24.34	91	700	0.00 ppbV #	65
71) Isopropylbenzene	24.65	105	1480	0.00 ppbV #	59
72) 4-Ethyltoluene	24.65	105	1480	0.00 ppbV #	56
73) 1,3,5-Trimethylbenzene	24.65	105	1480	0.00 ppbV #	42
74) Methylstyrene	25.27	118	3540	0.01 ppbV #	55
76) 1,2,4-Trimethylbenzene	25.75	105	1876	0.00 ppbV #	43
78) 1,3-Dichlorobenzene	26.53	146	5664	0.01 ppbV #	71
79) Isopropyltoluene	26.74	119	1189	0.00 ppbV #	51
80) Benzyl chloride	26.23	91	319	0.00 ppbV #	59
81) 1,4-Dichlorobenzene	26.53	146	5664	0.01 ppbV #	71
82) n-Butylbenzene	27.81	91	1835	0.00 ppbV #	49
83) 1,2-Dichlorobenzene	27.40	146	4153	0.01 ppbV	98
84) 1,2-Dibromo-3-chloropropan	28.87	75	832	0.00 ppbV #	73
86) 1,2,4-Trichlorobenzene	31.95	180	2004	0.00 ppbV #	70
87) Naphthalene	32.33	128	28123	0.01 ppbV #	83
89) Propylene	3.64	40	12085	0.65 ppbV #	1
92) 2-Chlorotoluene	24.34	91	700	0.00 ppbV #	79
93) 4-Chlorotoluene	24.40	91	707	0.00 ppbV #	68

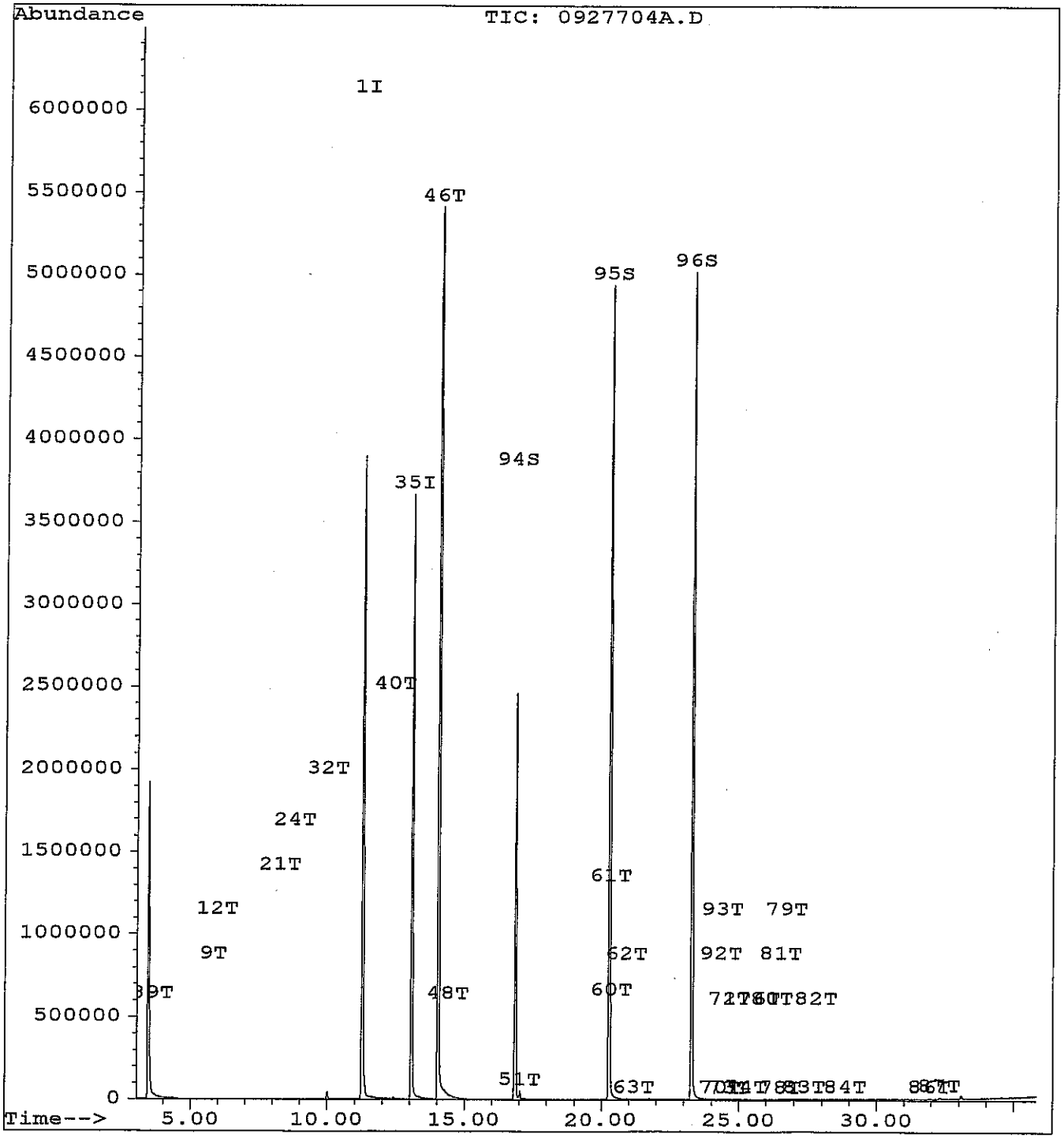
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\MSCHEM\2\DATA\07069MS1\0927704A.D
Acq Time : 6 Jul 109 4:25 pm
Sample : 44-004
Misc : SEALASKA ENVIRONMENTAL
Quant Time: Jul 7 16:18 19109

Operator: CM
Inst : 5970 - In
Multiplr: 1.00

Method : C:\MSCHEM\2\METHODS\1T15EXAY.M
Title : EPA TO-15
Last Update : Tue Mar 17 14:18:15 2009
Response via : Multiple Level Calibration



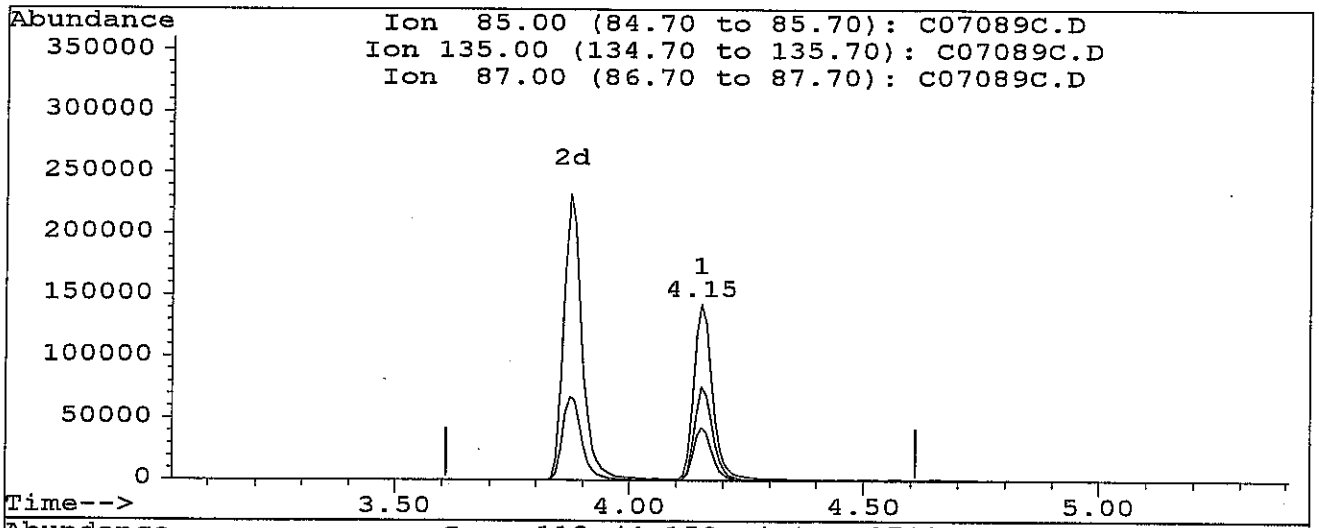
Daily Analytical Batch #: 070809-MS1

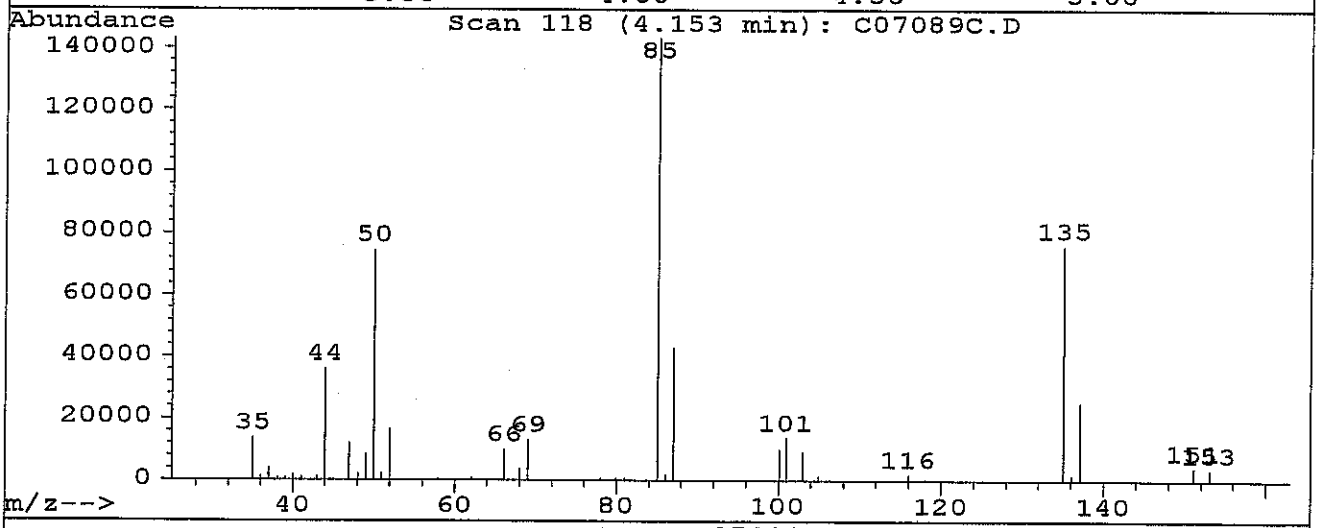
Quantitation Report

Data File : C:\MSCHEM\2\DATA\07089MS1\C07089C.D
Acq Time : 8 Jul 109 11:12 am
Sample : ST60022 + ST60350
Misc :
Quant Time: Jul 8 11:48 19109

Operator: JF
Inst : 5970 - In
Multiplr: 1.00

Method : C:\MSCHEM\2\METHODS\1T15EXAY.M
Title : EPA TO-15
Last Update : Tue Mar 17 14:18:15 2009
Response via : Multiple Level Calibration





TIC: C07089C.D

(4) Freon 114 (T)

4.15min 2.65ppbV

response 395951

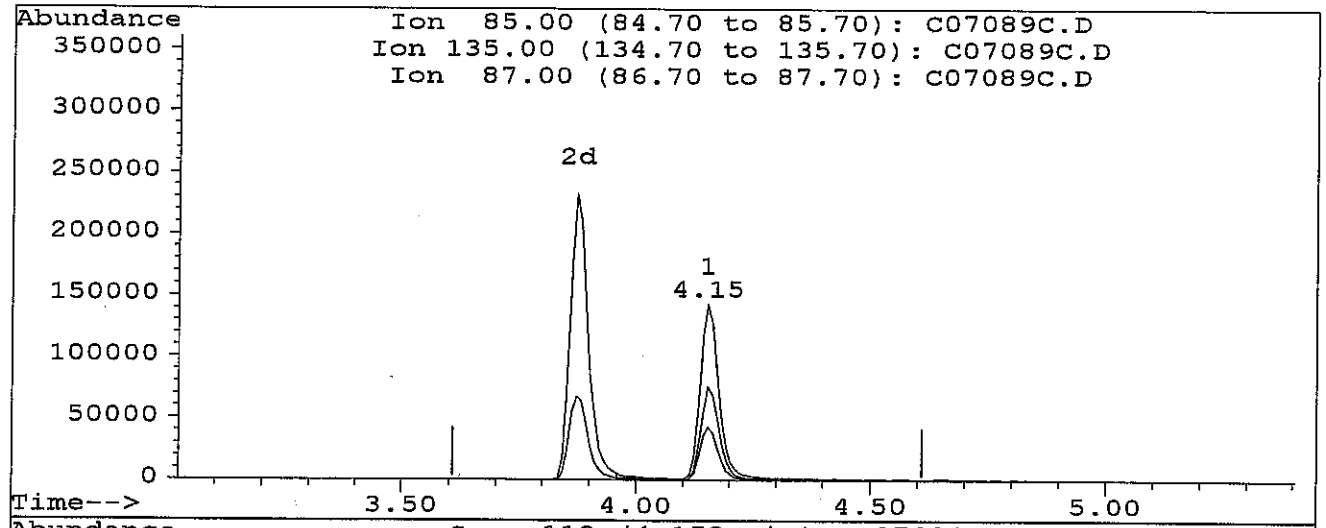
Ion	Exp%	Act%
85.00	100	100
135.00	54.40	53.45
87.00	32.60	30.26
0.00	0.00	0.00

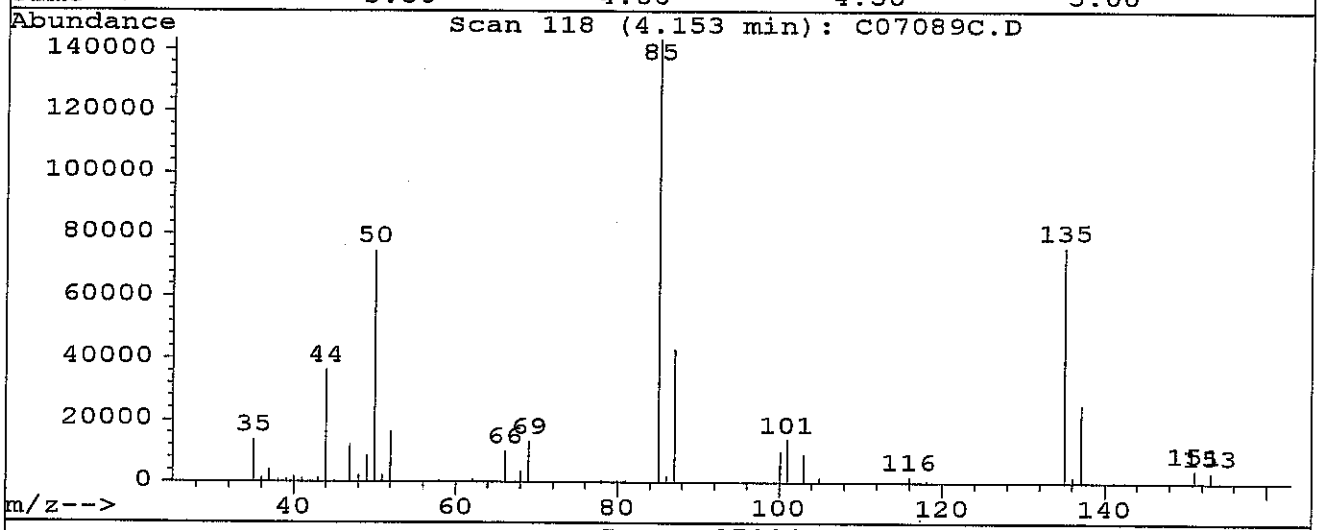
Quantitation Report

Data File : C:\MSCHEM\2\DATA\07089MS1\C07089C.D
Acq Time : 8 Jul 109 11:12 am
Sample : ST60022 + ST60350
Misc :
Quant Time: Jul 9 9:30 19109

Operator: JF
Inst : 5970 - In
Multiplr: 1.00

Method : C:\MSCHEM\2\METHODS\1T15EXAY.M
Title : EPA TO-15
Last Update : Tue Mar 17 14:18:15 2009
Response via : Multiple Level Calibration





TIC: C07089C.D

(4) Freon 114 (T)

4.15min 2.93ppbV m

response 437671

Ion	Exp%	Act%
85.00	100	100
135.00	54.40	53.14
87.00	32.60	30.09
0.00	0.00	0.00

Peak tailing
7/9/09

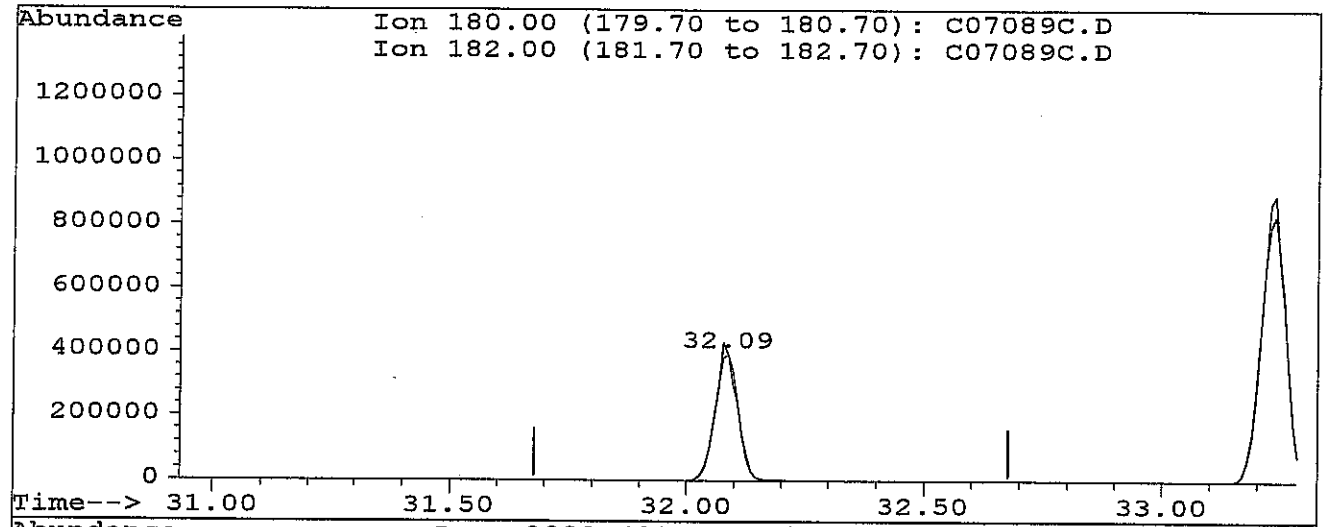
C07089C.D 1T15EXAY.M Thu Jul 09 09:30:31 2009

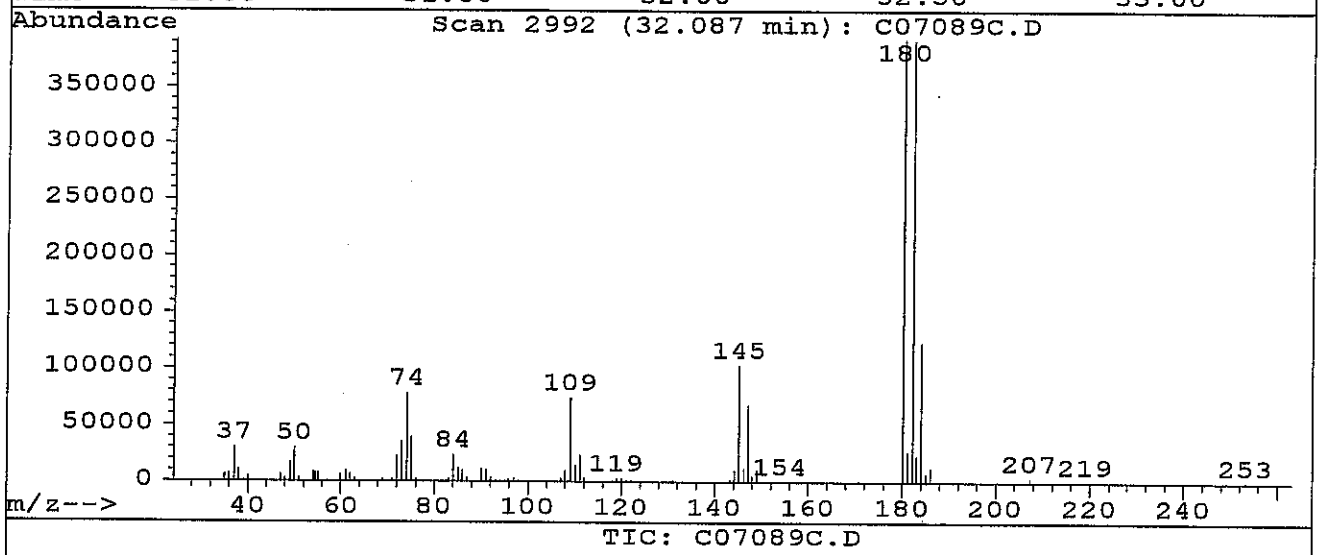
Quantitation Report

Data File : C:\MSCHEM\2\DATA\07089MS1\C07089C.D
Acq Time : 8 Jul 109 11:12 am
Sample : ST60022 + ST60350
Misc :
Quant Time: Jul 9 9:31 19109

Operator: JF
Inst : 5970 - In
Multiplr: 1.00

Method : C:\MSCHEM\2\METHODS\1T15EXAY.M
Title : EPA TO-15
Last Update : Tue Mar 17 14:18:15 2009
Response via : Multiple Level Calibration





(86) 1,2,4-Trichlorobenzene (T)

32.09min 1.19ppbV

response 1353807

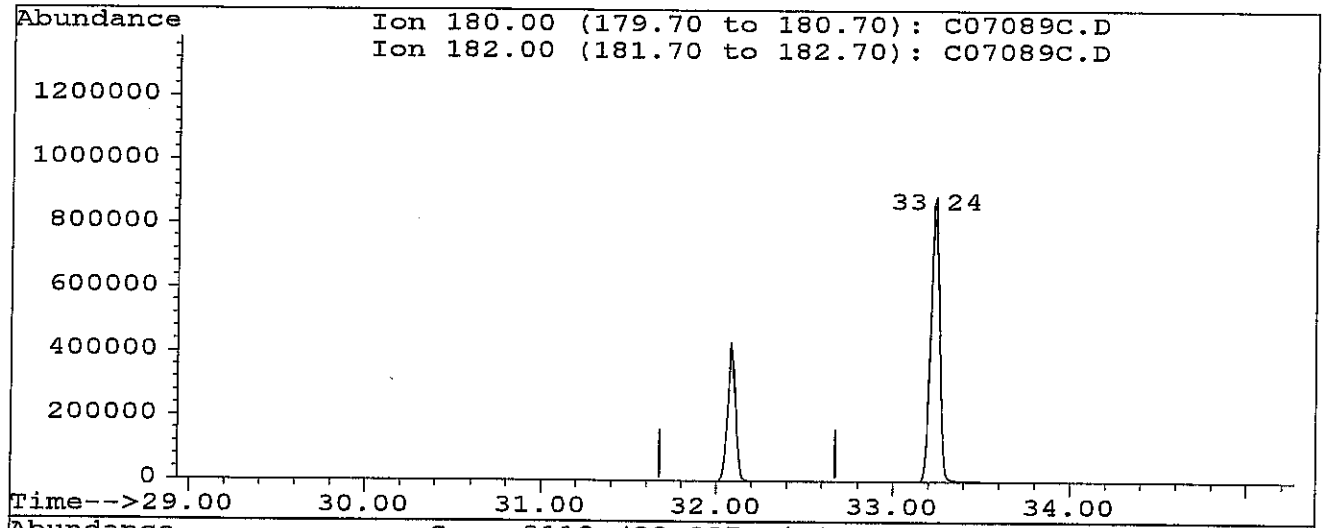
Ion	Exp%	Act%
180.00	100	100
182.00	97.30	99.66
0.00	0.00	0.00
0.00	0.00	0.00

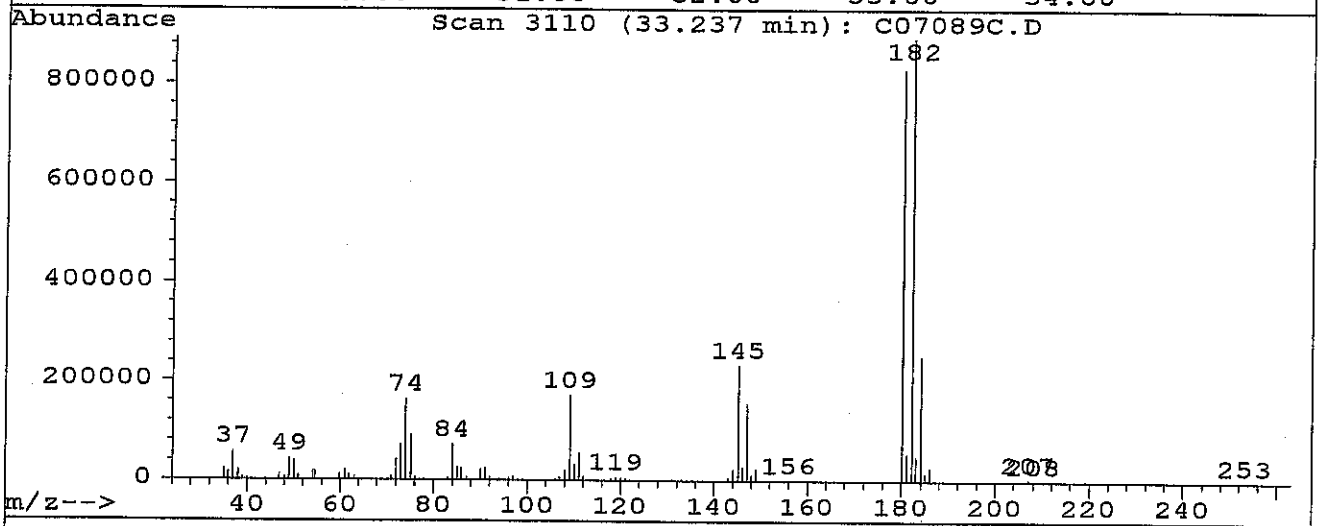
Quantitation Report

Data File : C:\MSCHEM\2\DATA\07089MS1\C07089C.D
Acq Time : 8 Jul 109 11:12 am
Sample : ST60022 + ST60350
Misc :
Quant Time: Jul 9 9:31 19109

Operator: JF
Inst : 5970 - In
Multiplr: 1.00

Method : C:\MSCHEM\2\METHODS\1T15EXAY.M
Title : EPA TO-15
Last Update : Tue Mar 17 14:18:15 2009
Response via : Multiple Level Calibration





TIC: C07089C.D

(86) 1,2,4-Trichlorobenzene (T)

33.24min 3.90ppbV m

response 4452182

Ion	Exp%	Act%
180.00	100	100
182.00	97.30	107.59
0.00	0.00	0.00
0.00	0.00	0.00

RT shift / peak split 7/9/09

C07089C.D 1T15EXAY.M Thu Jul 09 09:31:45 2009

Quantitation Report

Data File : C:\MSCHEM\2\DATA\07089MS1\C07089C.D
Acq Time : 8 Jul 109 11:12 am
Sample : ST60022 + ST60350
Misc :
Quant Time: Jul 9 9:31 19109

Operator: JF
Inst : 5970 - In
Multiplr: 1.00

Method : C:\MSCHEM\2\METHODS\1T15EXAY.M
Title : EPA T0-15
Last Update : Tue Mar 17 14:18:15 2009
Response via : Multiple Level Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene	11.43	168	4592723	20.00	ppbV	0.05
35) 1,4-Difluorobenzene	13.23	114	4338144	20.00	ppbV	0.06
System Monitoring Compounds						%Recovery
94) Toluene-d8	16.99	98	2529725	10.37	ppbV	207.46%
95) Chlorobenzene-d5	20.43	117	4901048	21.90	ppbV	219.05%
96) 1,4-Bromofluorobenzene	23.44	95	3892211	11.12	ppbV	222.50%
Target Compounds						Qvalue
2) Dichlorodifluoromethane	3.87	85	628681	4.48	ppbV	98
3) Chloromethane	4.13	50	356307	3.95	ppbV	95
4) Freon 114	4.15	85	437671	2.93	ppbV m	98
5) Vinyl chloride	4.38	62	213830	4.36	ppbV	99
6) Bromomethane	4.96	94	162791	3.35	ppbV	97
7) Chloroethane	5.18	64	98924	3.86	ppbV	96
8) Ethanol	5.22	45	510431	6.88	ppbV	100
9) Acrolein	5.94	56	217081	9.24	ppbV	99
10) Trichlorofluoromethane	6.00	101	732398	5.47	ppbV	100
11) Acetonitrile	5.99	41	1016795	10.36	ppbV	96
12) Acetone	6.08	43	685443	3.40	ppbV	99
13) 2-propanol	6.19	45	547648	3.57	ppbV	99
14) Methyl iodide	7.04	142	658406	10.43	ppbV	92
15) 1,1-Dichloroethene	6.94	61	549025	5.07	ppbV	98
16) Acrylonitrile	6.99	53	876107	14.34	ppbV	98
17) Freon 113	7.22	151	489922	5.77	ppbV	91
18) Allyl chloride	7.41	41	480790	4.01	ppbV	99
19) Dichloromethane	7.37	84	221150	4.61	ppbV	99
20) Carbon disulfide	7.60	76	245000	4.08	ppbV #	95
21) trans-1,2-Dichloroethene	8.44	96	176946	4.01	ppbV	91
22) Methyl tert butyl ether	8.60	73	731980	3.50	ppbV	99
23) Propionitrile	8.84	54	720428	9.64	ppbV	99
24) 1,1-Dichloroethane	8.95	63	612912	4.40	ppbV	97
25) Vinyl acetate	10.36	43	1055827	3.55	ppbV	99
26) 2-Butanone	9.58	72	142559	3.65	ppbV	85
27) Hexane	9.77	57	344275	3.00	ppbV	95
28) Bromochloromethane	10.55	49	583596	3.70	ppbV	97
29) Tetrahydrofuran	10.88	42	1787895	2.93	ppbV m	44
30) Isobutyl alcohol	10.89	74	122618	7.40	ppbV #	98
31) Methacrylonitrile	9.76	67	579361	13.54	ppbV	99
32) cis-1,2-Dichloroethene	10.16	96	299325	4.16	ppbV	94
33) 2,2-Dichloropropane	10.48	77	556899	3.99	ppbV #	91
34) Chloroform	10.58	83	694543	4.15	ppbV	97
36) 1,1,1-Trichloroethane	11.86	97	715958	4.55	ppbV	97
37) 1,2-Dichloroethane	11.92	62	677682	4.59	ppbV	99
38) 1,1-Dichloropropene	12.29	75	488097	3.81	ppbV	95
39) Cyclohexane	12.63	56	576098	3.99	ppbV	98
40) Benzene	12.57	78	1047795	4.08	ppbV	97
41) Carbon tetrachloride	12.62	117	761632	4.76	ppbV	96
42) n-Heptane	14.09	43	950014	3.68	ppbV	99
43) 1,2-Dichloropropane	14.11	63	438795	4.42	ppbV	98
44) 1,4 Dioxane	14.44	88	264761	3.48	ppbV #	100
45) Dibromomethane	14.24	174	675813	4.25	ppbV	98
46) Trichloroethene	14.18	130	555190	4.47	ppbV	95
47) Bromodichloromethane	14.45	83	701973	3.59	ppbV	99
48) Methyl methacrylate	14.56	69	1053028	9.89	ppbV	97
49) Methyl Isobutyl Ketone	15.78	43	1718281	3.93	ppbV	99

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

Quantitation Report

Data File : C:\MSCHEM\2\DATA\07089MS1\C07089C.D
Acq Time : 8 Jul 109 11:12 am
Sample : ST60022 + ST60350
Misc :
Quant Time: Jul 9 9:31 19109

Operator: JF
Inst : 5970 - In
Multiplr: 1.00

Method : C:\MSCHEM\2\METHODS\1T15EXAY.M
Title : EPA TO-15
Last Update : Tue Mar 17 14:18:15 2009
Response via : Multiple Level Calibration

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
50)	cis-1,3-Dichloropropene	15.87	75	669464	4.33	ppbV		100
51)	Toluene	17.17	91	1578173	4.70	ppbV		98
52)	trans-1,3-Dichloropropene	16.89	75	726985	3.96	ppbV		98
53)	1,1,2-Trichloroethane	17.21	61	406435	4.12	ppbV		95
54)	2-Hexanone	17.81	43	1834668	3.31	ppbV		98
55)	1,3-Dichloropropane	17.77	76	680913	3.49	ppbV		97
56)	Octane	18.31	57	444312	3.52	ppbV		94
57)	Dibromochloromethane	18.35	129	1027121	3.92	ppbV		98
58)	1,2-Dibromoethane	18.83	107	1003875	4.14	ppbV	#	95
59)	Tetrachloroethene	19.03	166	993276	4.65	ppbV		94
60)	Chlorobenzene	20.51	112	1275607	4.07	ppbV		99
61)	1,1,1,2-Tetrachloroethane	20.56	131	723958	3.83	ppbV		98
62)	Ethylbenzene	21.03	91	2262841	4.23	ppbV		99
63)	m & p-Xylene	21.33	91	3516006	7.79	ppbV		100
64)	Styrene	22.16	104	1097925	3.41	ppbV		98
65)	Bromoform	22.06	173	1494313	3.37	ppbV		98
66)	o-Xylene	22.29	91	2025664	4.06	ppbV		98
67)	1,1,2,2-Tetrachloroethane	22.81	83	1319078	2.88	ppbV		98
68)	1,2,3-Trichloropropane	23.12	110	338495	2.70	ppbV		99
69)	t-1,4-Dichloro-2-butene	23.26	53	667616	5.96	ppbV		99
70)	n-Propylbenzene	24.48	91	2913098	2.79	ppbV		96
71)	Isopropylbenzene	24.79	105	2465439	3.25	ppbV		98
72)	4-Ethyltoluene	24.79	105	2465439	3.11	ppbV		97
73)	1,3,5-Trimethylbenzene	24.95	105	2488685	3.44	ppbV	m	99
74)	Methylstyrene	25.41	118	858075	2.56	ppbV		98
75)	tert-butyl benzene	25.87	119	2019607	3.36	ppbV		95
76)	1,2,4-Trimethylbenzene	25.90	105	2351736	3.52	ppbV		99
77)	sec-butylbenzene	26.50	105	2752999	3.15	ppbV		99
78)	1,3-Dichlorobenzene	26.47	146	1644354	3.06	ppbV		97
79)	Isopropyltoluene	26.88	119	2631609	3.14	ppbV		98
80)	Benzyl chloride	26.63	91	1620691	2.21	ppbV		97
81)	1,4-Dichlorobenzene	26.68	146	1808354	3.26	ppbV		97
82)	n-Butylbenzene	27.94	91	2612159	2.64	ppbV		98
83)	1,2-Dichlorobenzene	27.53	146	1758820	2.85	ppbV		98
84)	1,2-Dibromo-3-chloropropan	29.02	75	1865563	4.32	ppbV	#	72
85)	Tetraethyl lead	31.06	237	2392872	5.91	ppbV	#	97
86)	1,2,4-Trichlorobenzene	33.24	180	4452182	3.90	ppbV	m	98
87)	Naphthalene	32.45	128	5166964	2.71	ppbV		96
88)	Hexachlorobutadiene	33.13	225	1955976	2.22	ppbV		98
89)	Propylene	3.79	40	163325	9.00	ppbV		91
90)	1,3-Butadiene	4.52	54	221114	4.46	ppbV		96
92)	2-Chlorotoluene	24.54	91	1856684	3.45	ppbV		98
93)	4-Chlorotoluene	24.70	91	2124257	3.12	ppbV		100

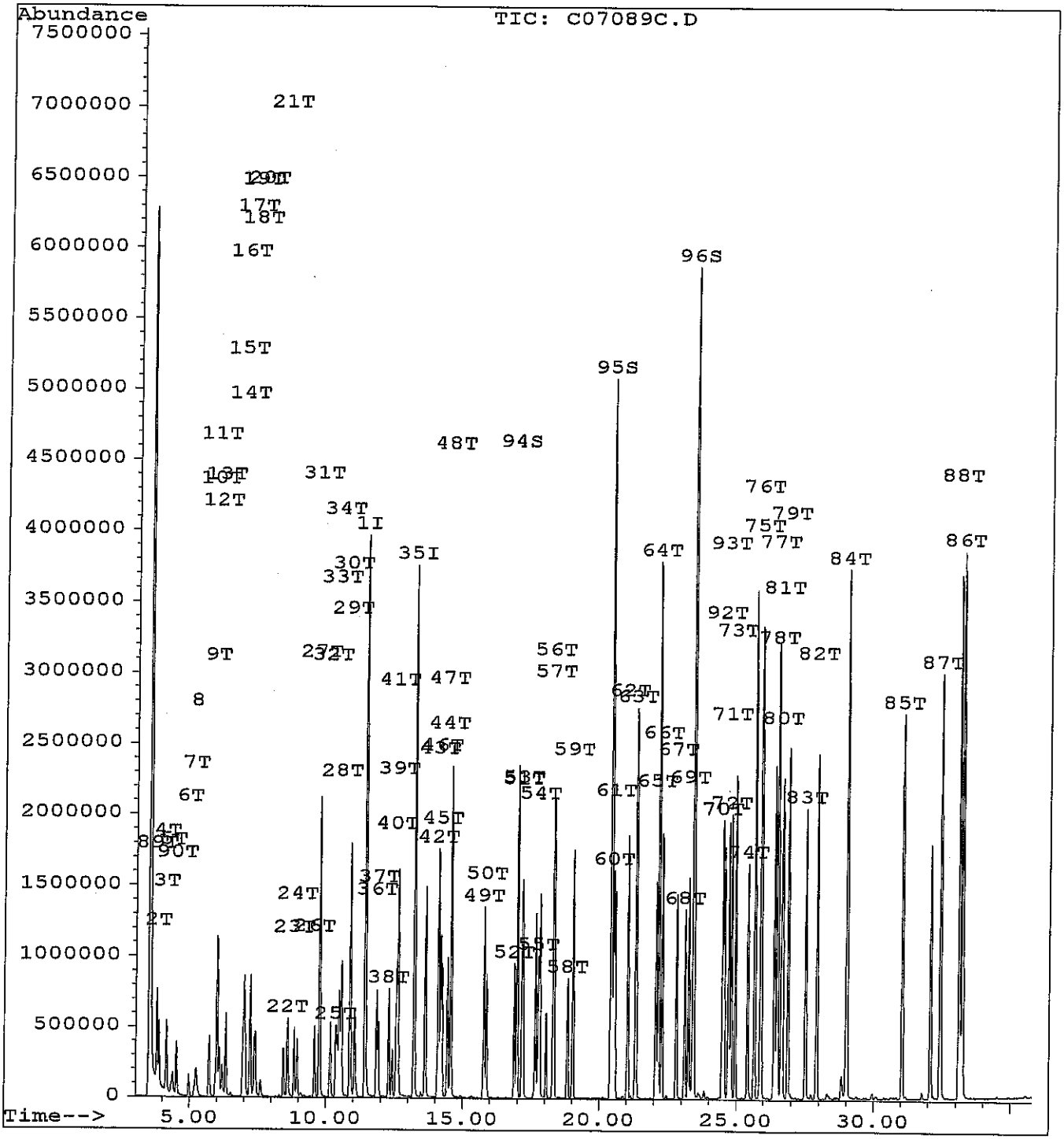
(#) = qualifier out of range (m) = manual integration

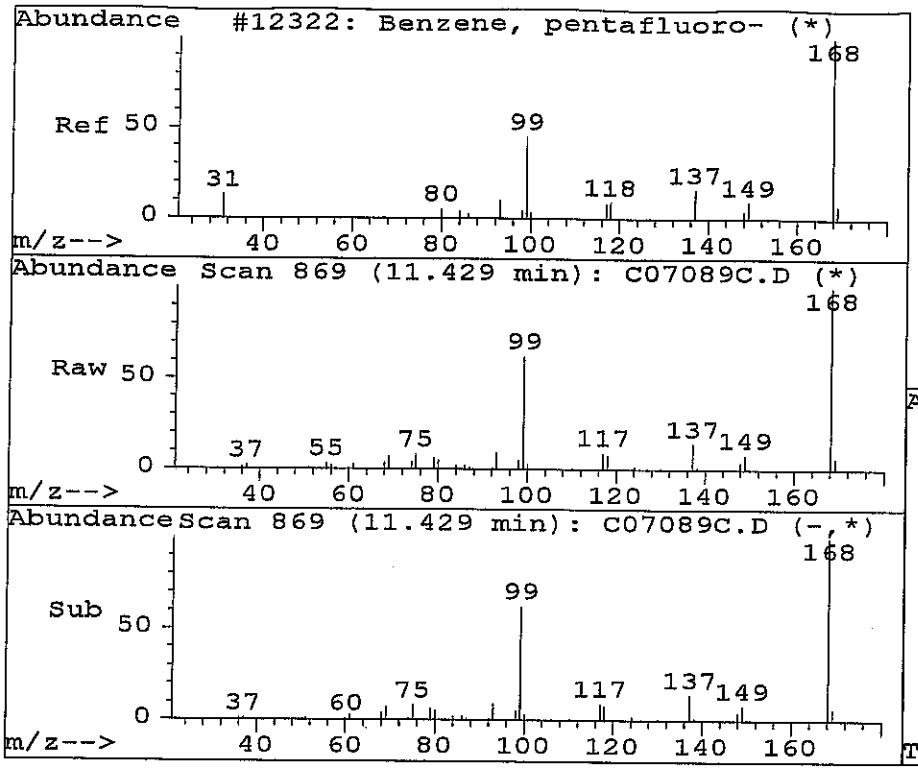
Quantitation Report

Data File : C:\MSCHEM\2\DATA\07089MS1\C07089C.D
Acq Time : 8 Jul 109 11:12 am
Sample : ST60022 + ST60350
Misc :
Quant Time: Jul 9 9:31 19109

Operator: JF
Inst : 5970 - In
Multiplr: 1.00

Method : C:\MSCHEM\2\METHODS\1T15EXAY.M
Title : EPA TO-15
Last Update : Tue Mar 17 14:18:15 2009
Response via : Multiple Level Calibration

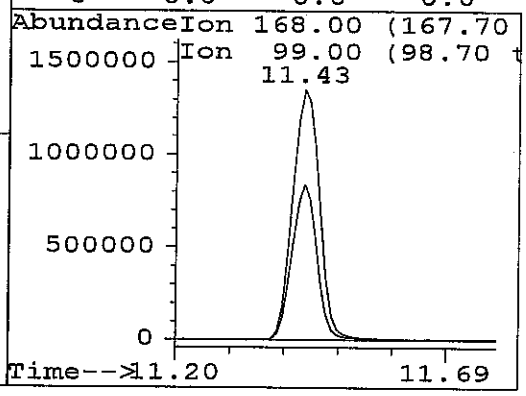


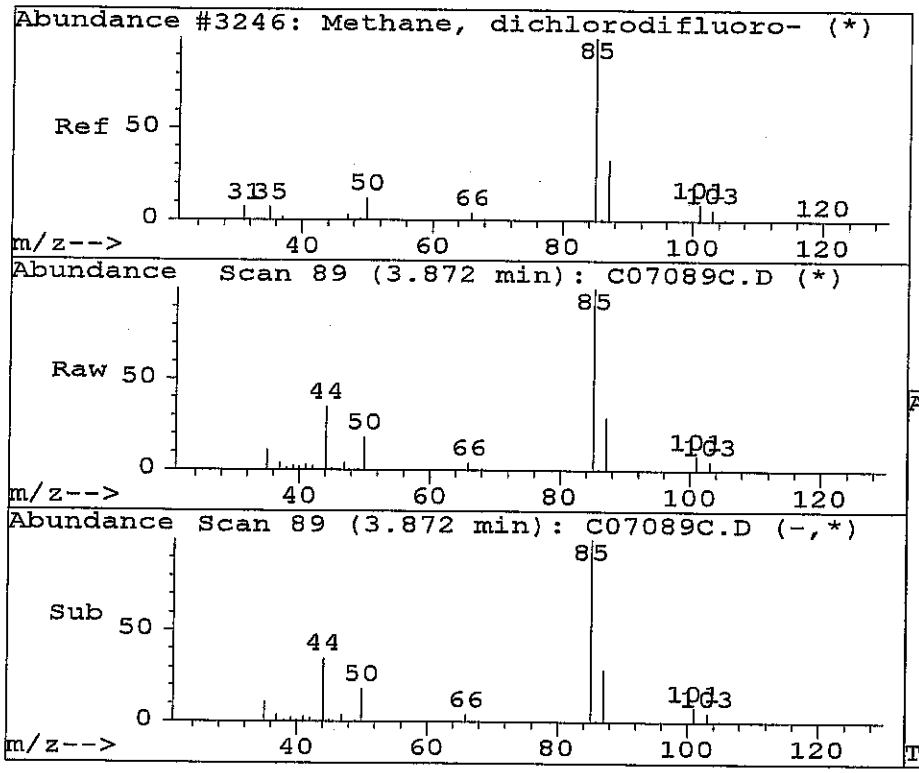


#1
Pentafluorobenzene
Concen: 20.00 ppbV
RT: 11.43 min Scan# 869
Delta R.T. 0.05 min
Lab File: C07089C.D
Acq: 8 Jul 109 11:12 am

Tgt Ion:168 Resp: 4592723

Ion	Ratio	Lower	Upper
168	100		
99	61.9	53.6	80.4
0	0.0	0.0	0.0
0	0.0	0.0	0.0

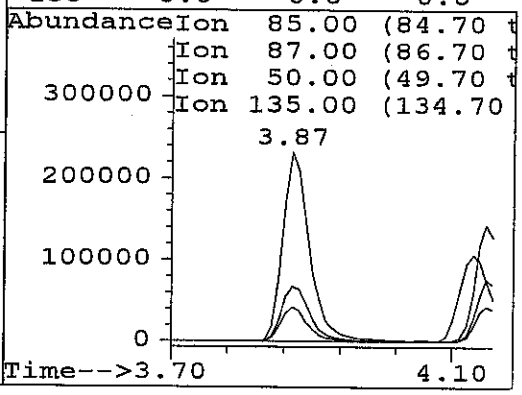


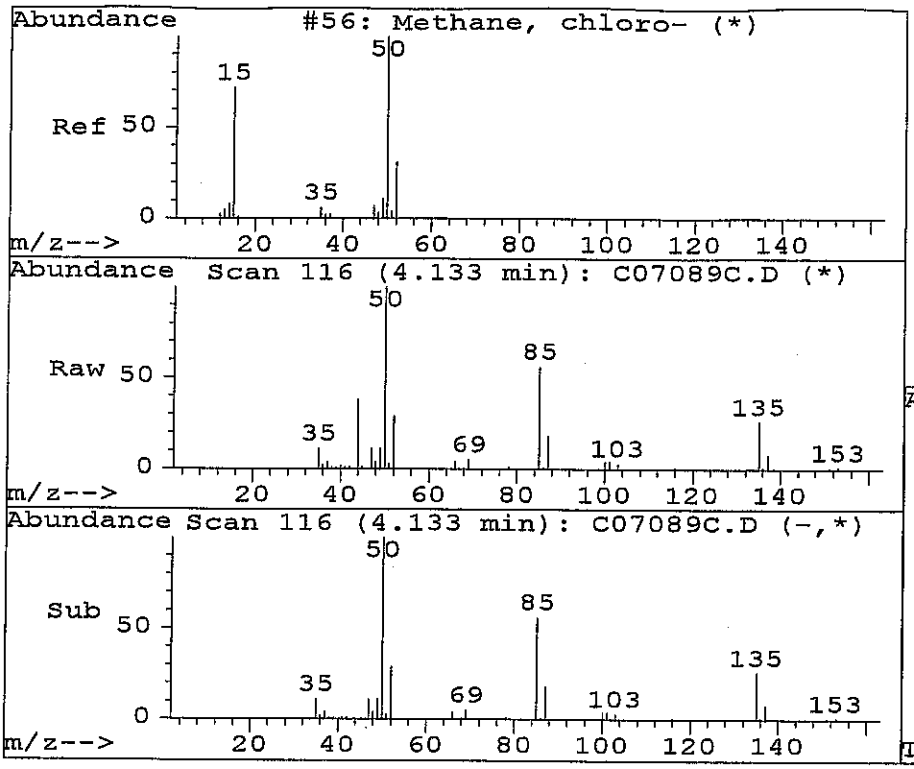


#2
Dichlorodifluoromethane
Concen: 4.48 ppbV
RT: 3.87 min Scan# 89
Delta R.T. 0.04 min
Lab File: C07089C.D
Acq: 8 Jul 109 11:12 am

Tgt Ion:85 Resp: 628681

Ion	Ratio	Lower	Upper
85	100		
87	29.1	24.9	37.3
50	18.4	14.9	22.3
135	0.0	0.0	0.0

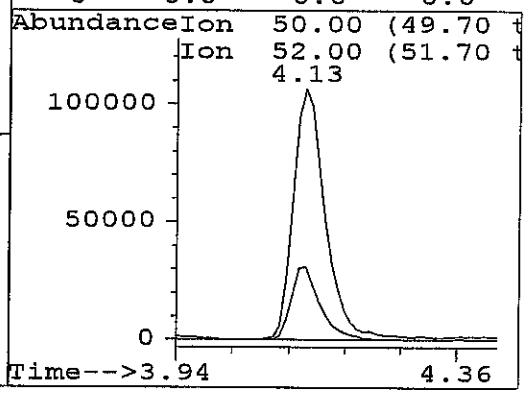


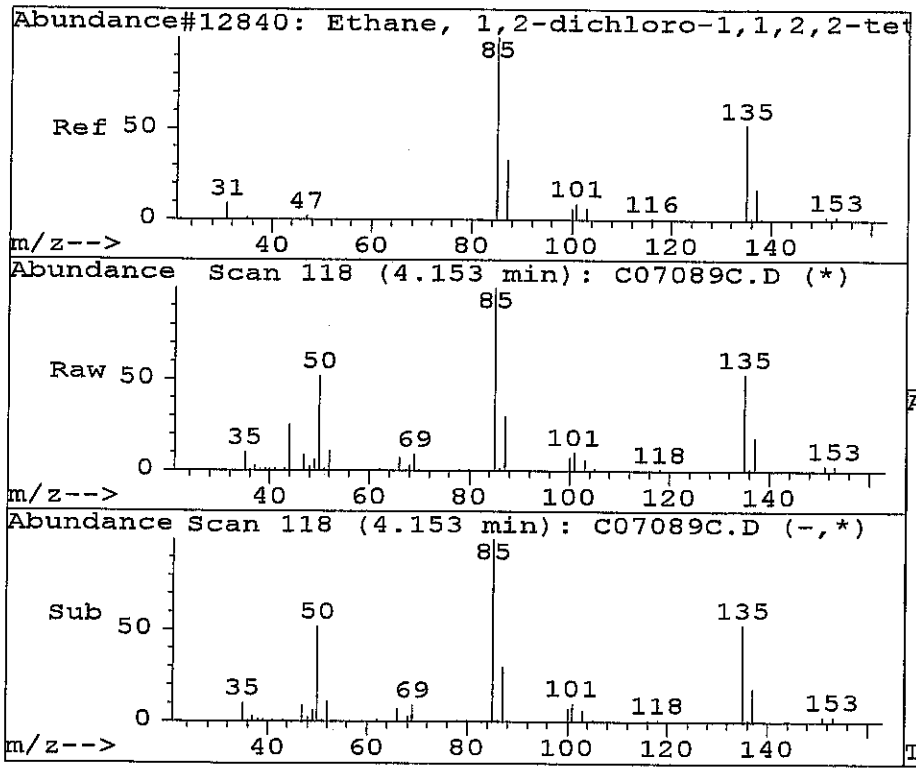


#3
Chloromethane
Concen: 3.95 ppbV
RT: 4.13 min Scan# 116
Delta R.T. 0.04 min
Lab File: C07089C.D
Acq: 8 Jul 109 11:12 am

Tgt Ion:50 Resp: 356307

Ion	Ratio	Lower	Upper
50	100		
52	29.2	21.5	32.3
0	0.0	0.0	0.0
0	0.0	0.0	0.0

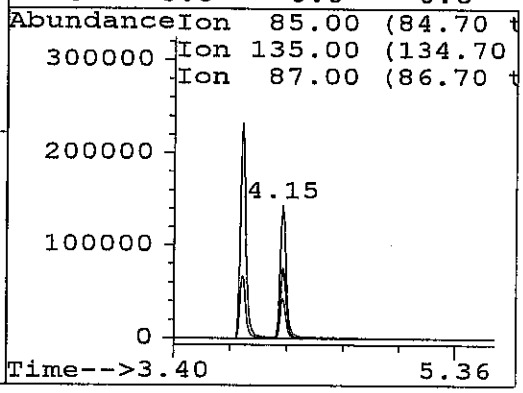


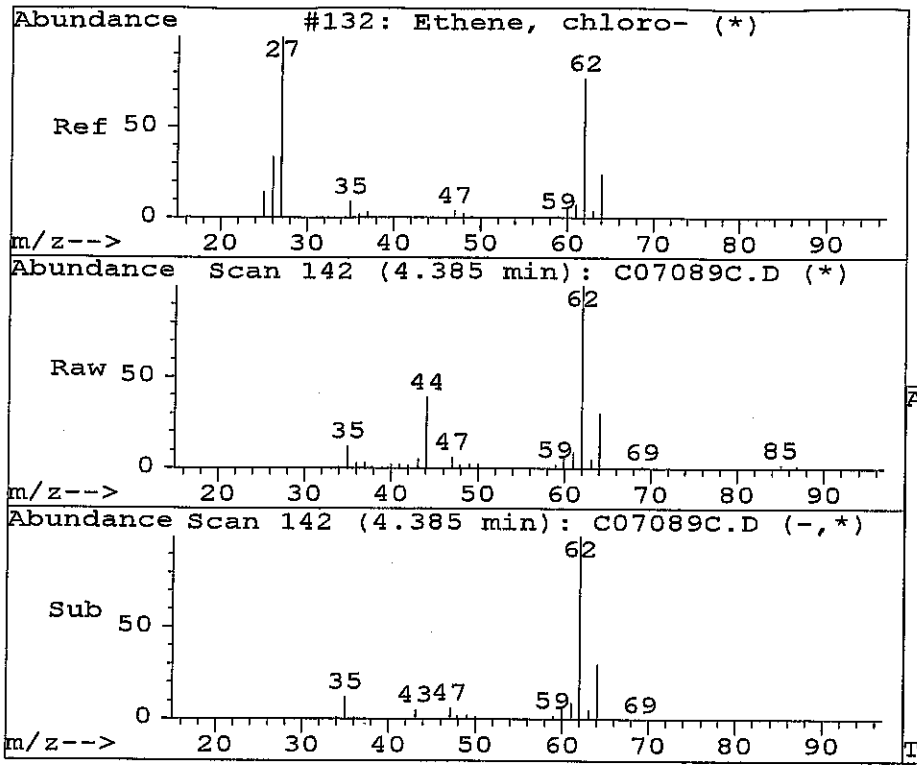


#4
Freon 114
Concen: 2.93 ppbV m
RT: 4.15 min Scan# 118
Delta R.T. 0.04 min
Lab File: C07089C.D
Acq: 8 Jul 109 11:12 am

Tgt Ion:85 Resp: 437671

Ion	Ratio	Lower	Upper
85	100		
135	53.1	43.5	65.3
87	30.1	26.1	39.1
0	0.0	0.0	0.0

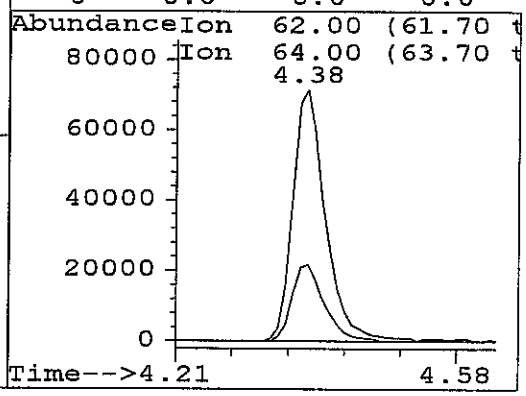


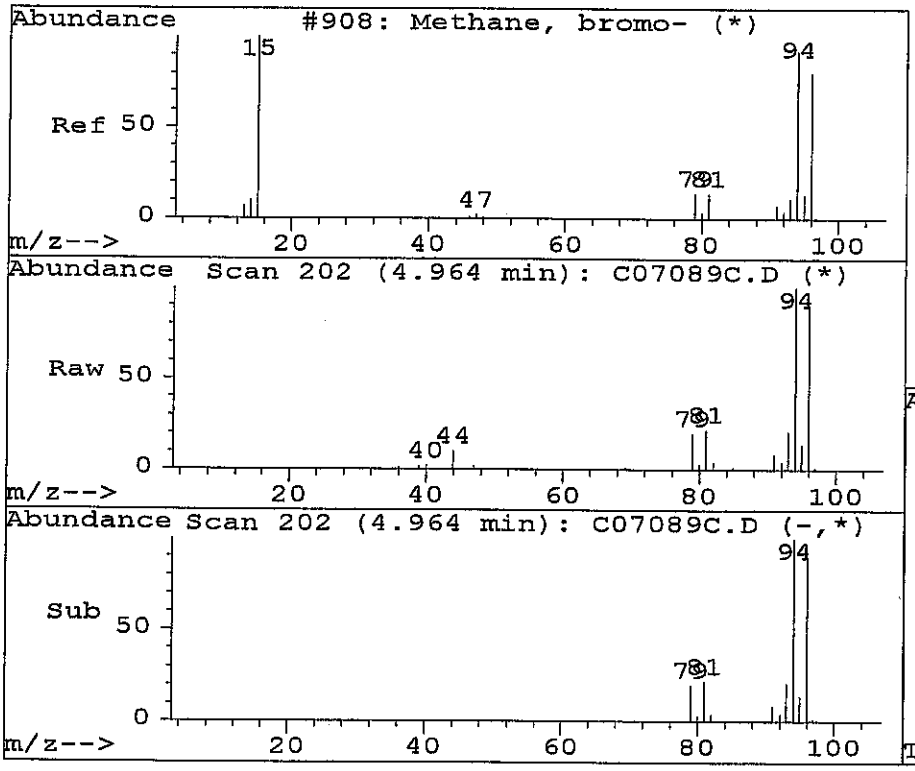


#5
Vinyl chloride
Concen: 4.36 ppbV
RT: 4.38 min Scan# 142
Delta R.T. 0.05 min
Lab File: C07089C.D
Acq: 8 Jul 109 11:12 am

Tgt Ion:62 Resp: 213830

Ion	Ratio	Lower	Upper
62	100		
64	30.4	23.8	35.8
0	0.0	0.0	0.0
0	0.0	0.0	0.0

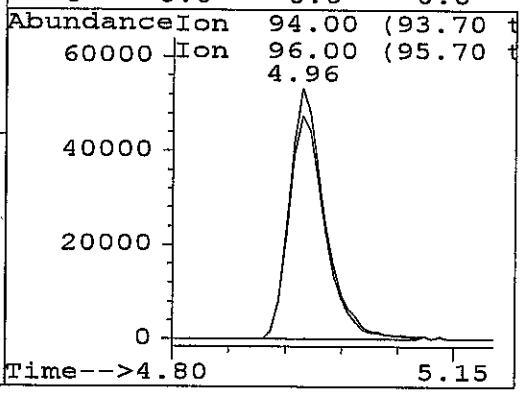


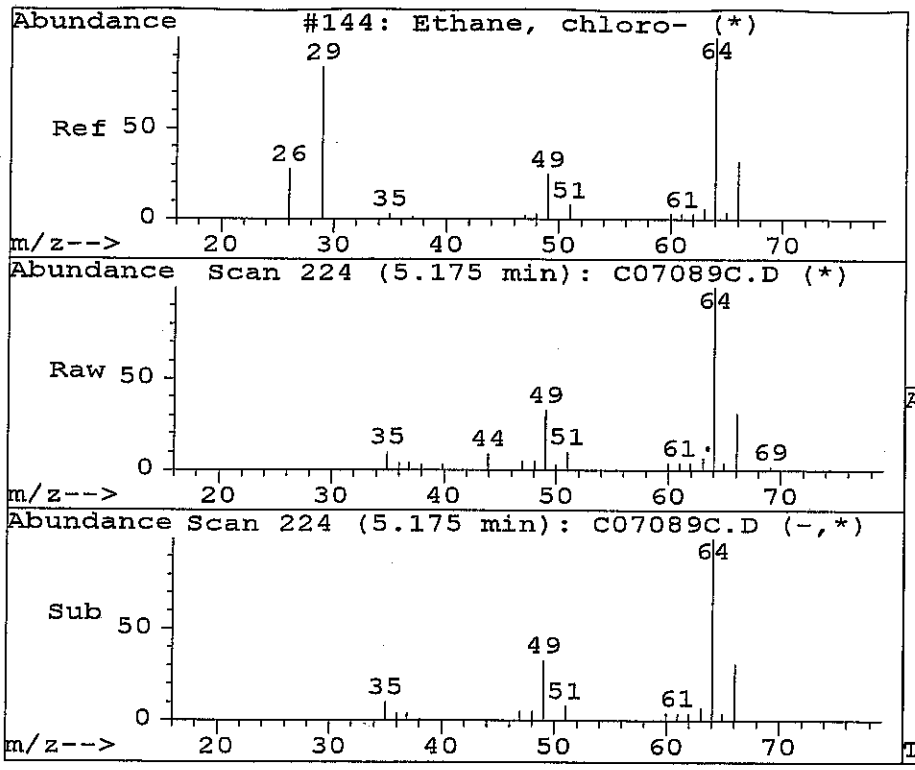


#6
Bromomethane
Concen: 3.35 ppbV
RT: 4.96 min Scan# 202
Delta R.T. 0.04 min
Lab File: C07089C.D
Acq: 8 Jul 109 11:12 am

Tgt Ion:94 Resp: 162791

Ion	Ratio	Lower	Upper
94	100		
96	88.5	73.0	109.4
0	0.0	0.0	0.0
0	0.0	0.0	0.0

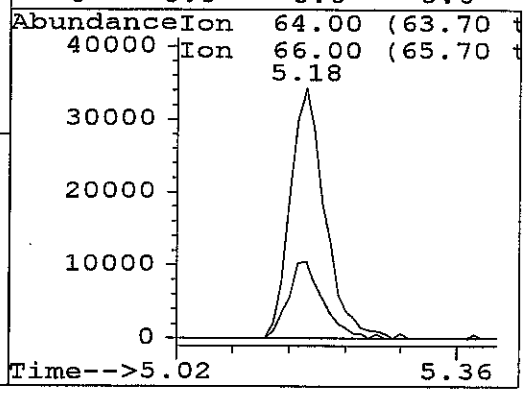


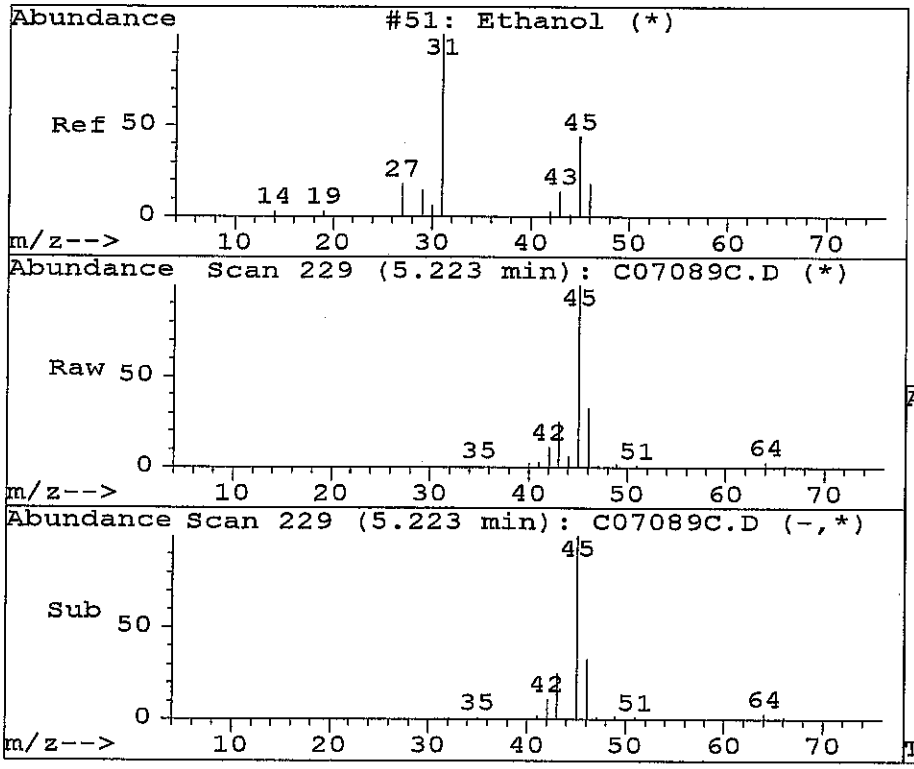


#7
Chloroethane
Concen: 3.86 ppbV
RT: 5.18 min Scan# 224
Delta R.T. 0.06 min
Lab File: C07089C.D
Acq: 8 Jul 109 11:12 am

Tgt Ion:64 Resp: 98924

Ion	Ratio	Lower	Upper
64	100		
66	30.6	26.4	39.6
0	0.0	0.0	0.0
0	0.0	0.0	0.0

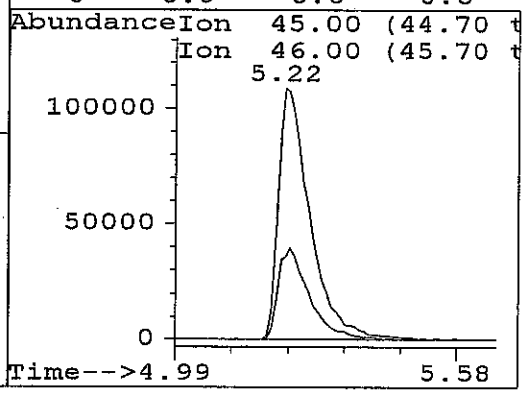


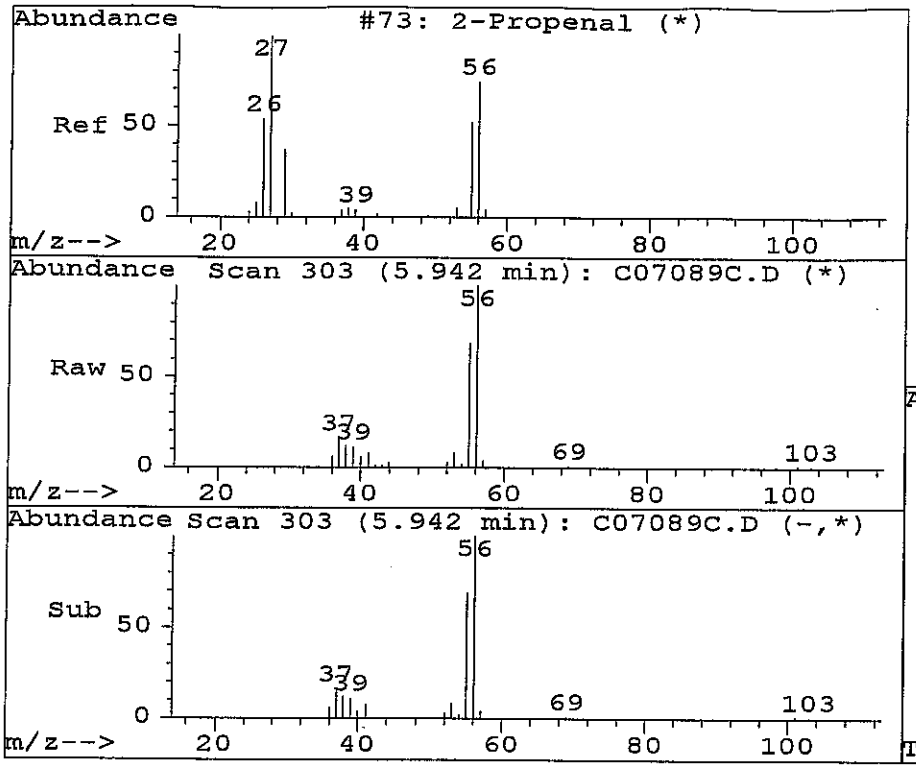


#8
Ethanol
Concen: 6.88 ppbV
RT: 5.22 min Scan# 229
Delta R.T. 0.02 min
Lab File: C07089C.D
Acq: 8 Jul 109 11:12 am

Tgt Ion:45 Resp: 510431

Ion	Ratio	Lower	Upper
45	100		
46	35.6	28.5	42.7
0	0.0	0.0	0.0
0	0.0	0.0	0.0

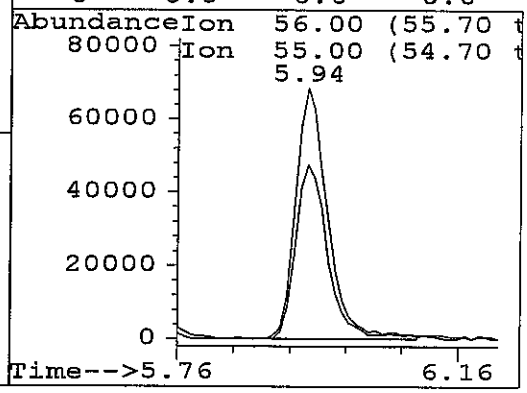


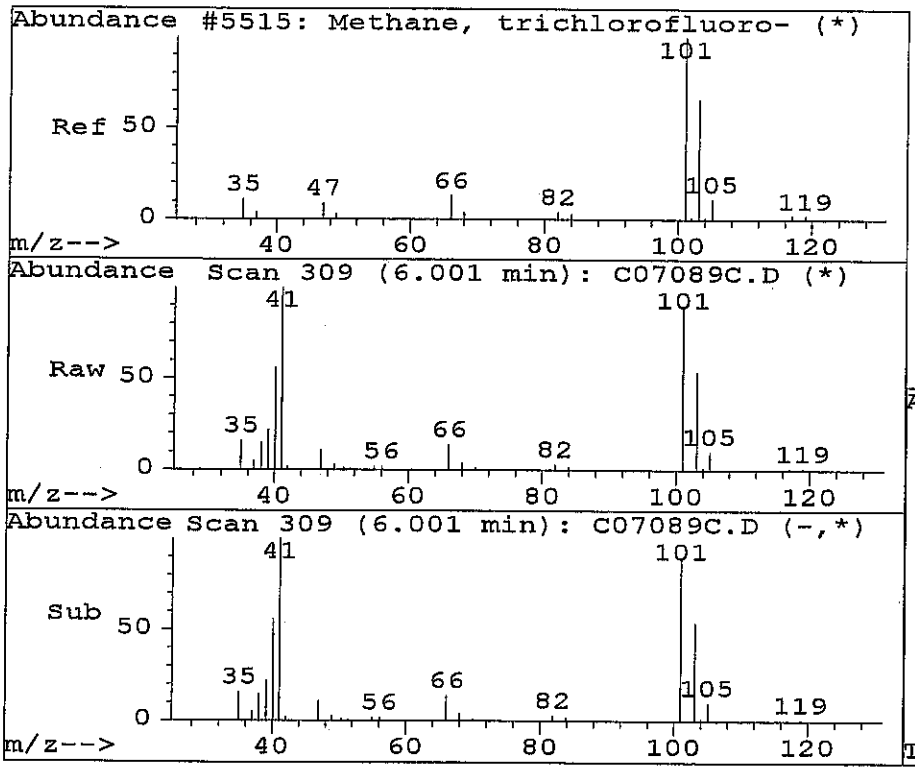


#9
Acrolein
Concen: 9.24 ppbV
RT: 5.94 min Scan# 303
Delta R.T. 0.05 min
Lab File: C07089C.D
Acq: 8 Jul 109 11:12 am

Tgt Ion:56 Resp: 217081

Ion	Ratio	Lower	Upper
56	100		
55	69.0	54.2	81.4
0	0.0	0.0	0.0
0	0.0	0.0	0.0

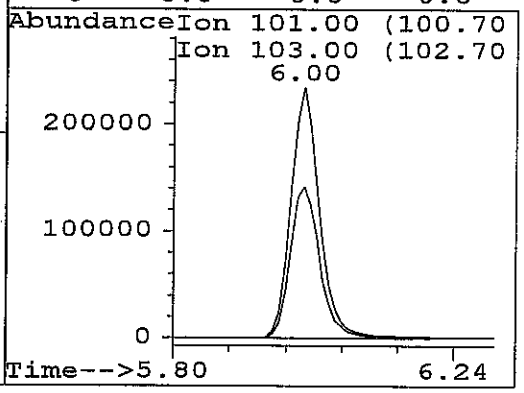


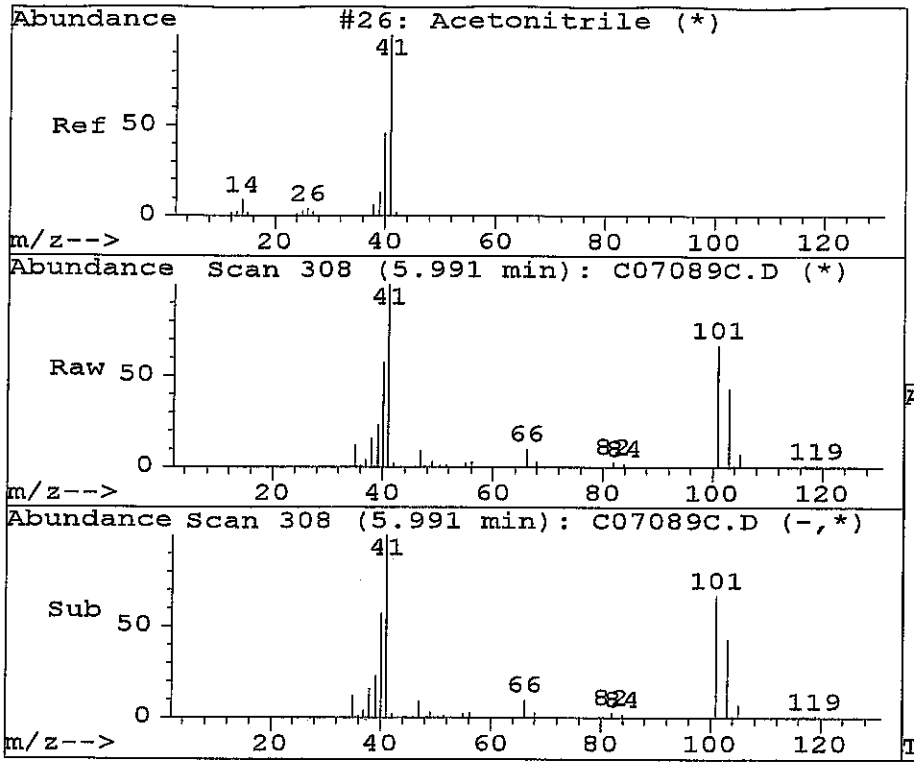


#10
Trichlorofluoromethane
Concen: 5.47 ppbV
RT: 6.00 min Scan# 309
Delta R.T. 0.06 min
Lab File: C07089C.D
Acq: 8 Jul 109 11:12 am

Tgt Ion:101 Resp: 732398

Ion	Ratio	Lower	Upper
101	100		
103	60.6	48.4	72.6
0	0.0	0.0	0.0
0	0.0	0.0	0.0

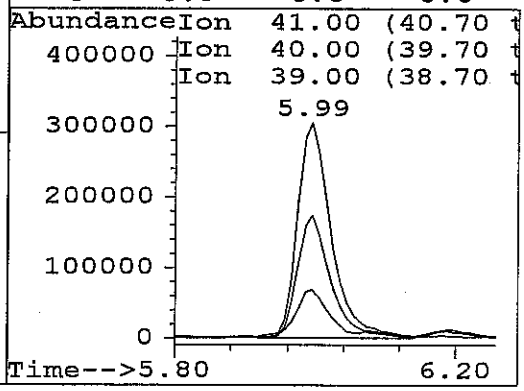


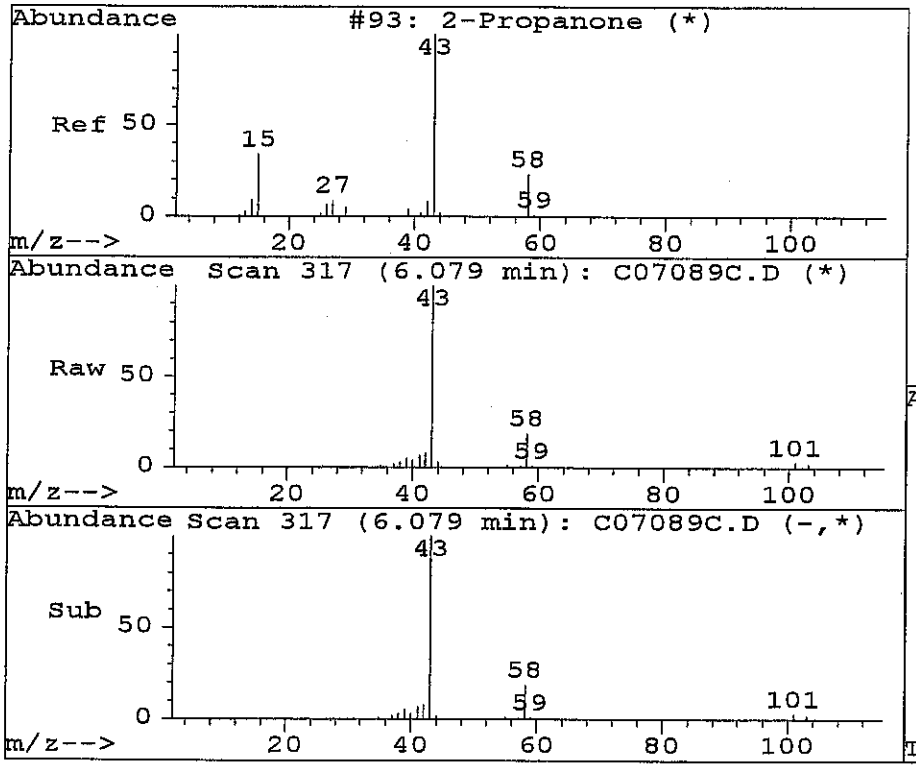


#11
Acetonitrile
Concen: 10.36 ppbV
RT: 5.99 min Scan# 308
Delta R.T. 0.03 min
Lab File: C07089C.D
Acq: 8 Jul 109 11:12 am

Tgt Ion:41 Resp: 1016795

Ion	Ratio	Lower	Upper
41	100		
40	56.7	42.9	64.3
39	22.0	16.4	24.6
0	0.0	0.0	0.0

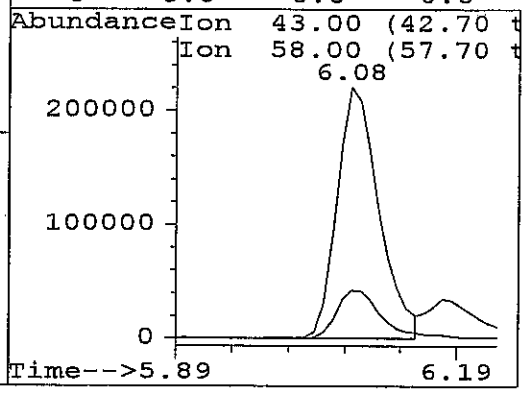


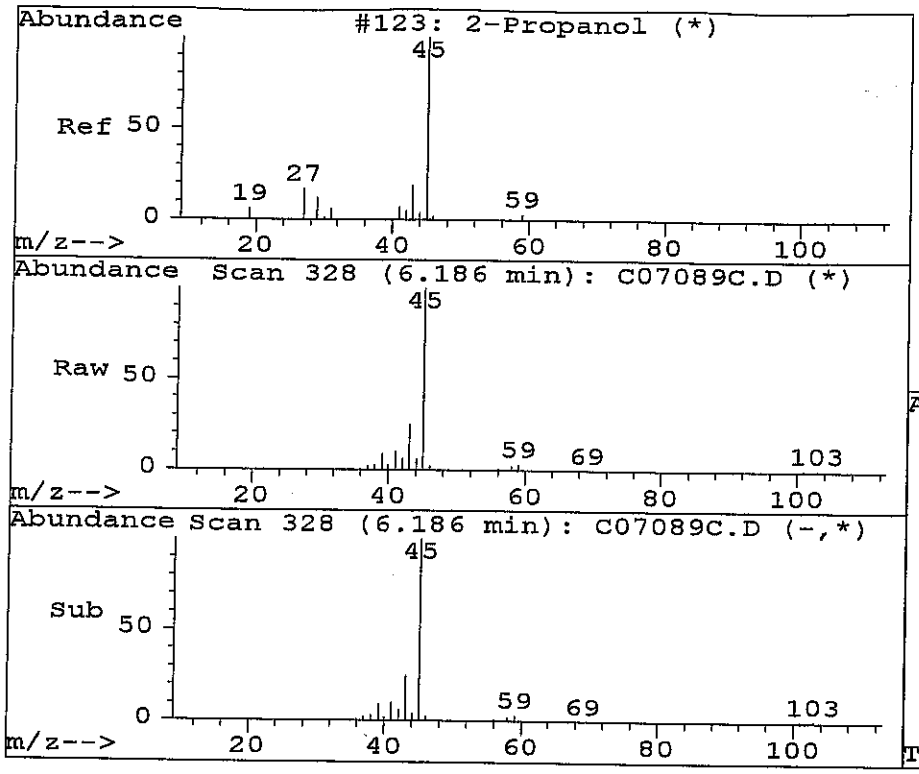


#12
Acetone
Concen: 3.40 ppbV
RT: 6.08 min Scan# 317
Delta R.T. 0.04 min
Lab File: C07089C.D
Acq: 8 Jul 109 11:12 am

Tgt Ion:43 Resp: 685443

Ion	Ratio	Lower	Upper
43	100		
58	18.9	15.7	23.5
0	0.0	0.0	0.0
0	0.0	0.0	0.0

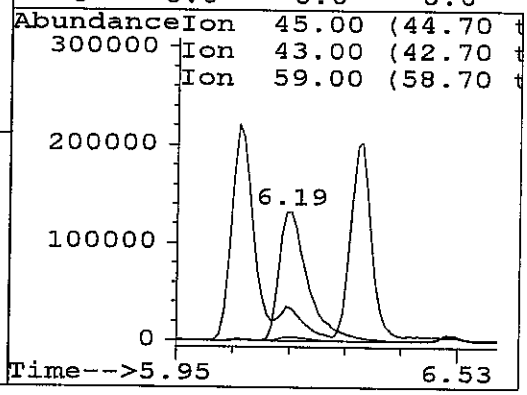


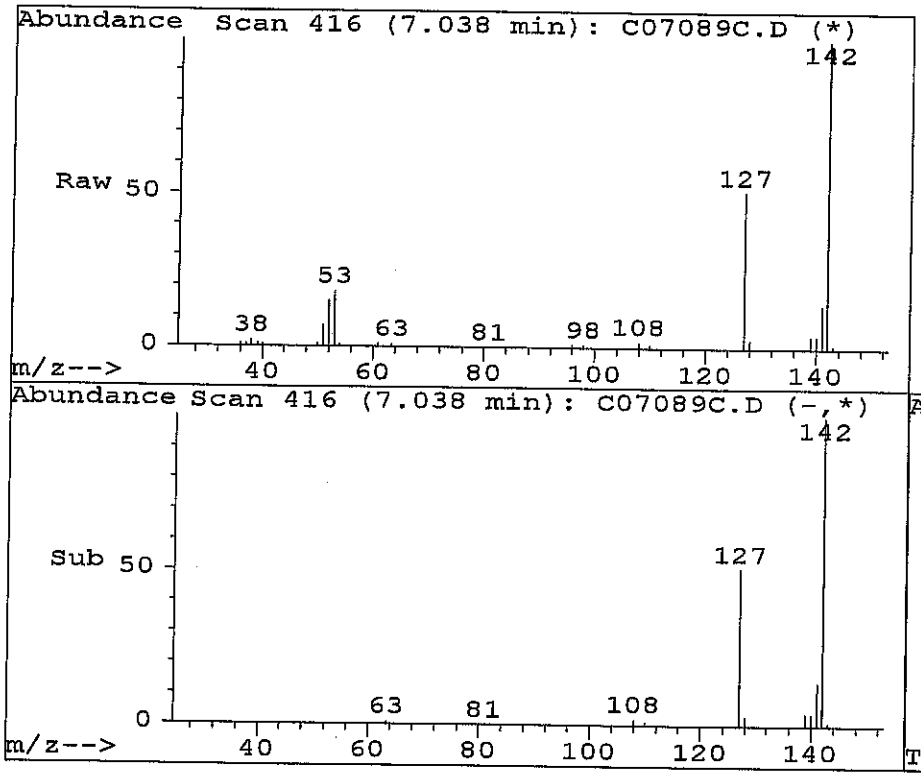


#13
2-propanol
Concen: 3.57 ppbV
RT: 6.19 min Scan# 328
Delta R.T. 0.05 min
Lab File: C07089C.D
Acq: 8 Jul 109 11:12 am

Tgt Ion:45 Resp: 547648

Ion	Ratio	Lower	Upper
45	100		
43	23.4	18.2	27.2
59	2.8	2.6	3.8
0	0.0	0.0	0.0

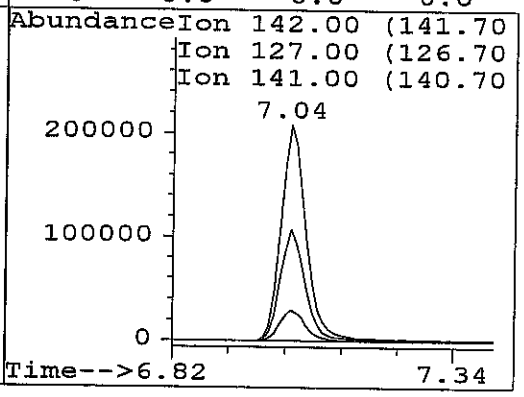


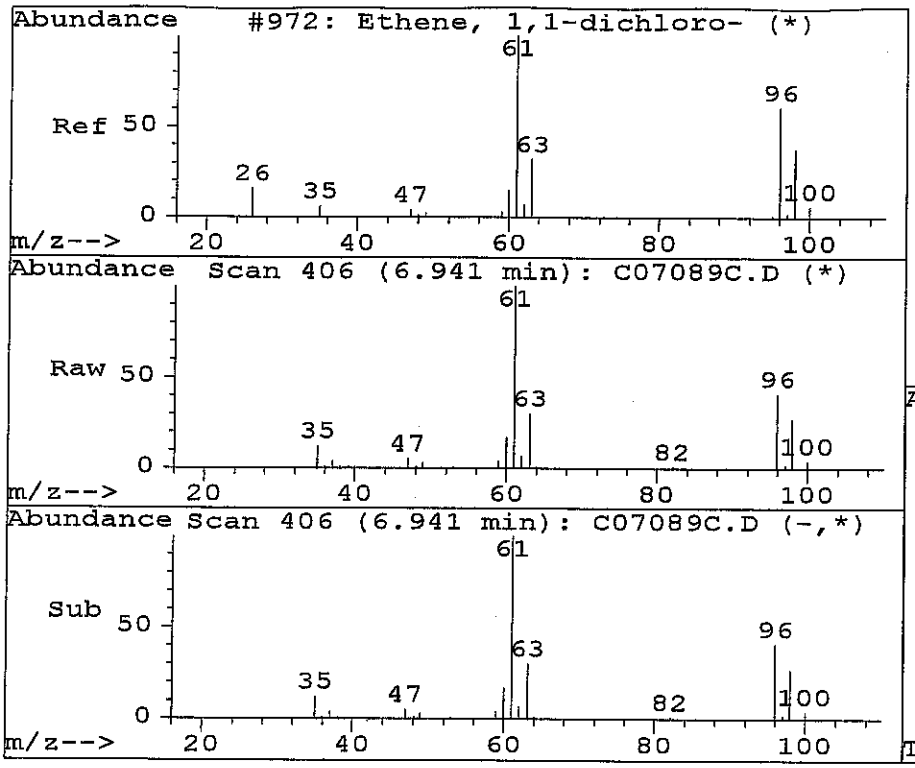


#14
Methyl iodide
Concen: 10.43 ppbV
RT: 7.04 min Scan# 416
Delta R.T. 0.05 min
Lab File: C07089C.D
Acq: 8 Jul 109 11:12 am

Tgt Ion:142 Resp: 658406

Ion	Ratio	Lower	Upper
142	100		
127	51.4	46.6	69.8
141	14.1	12.4	18.6
0	0.0	0.0	0.0

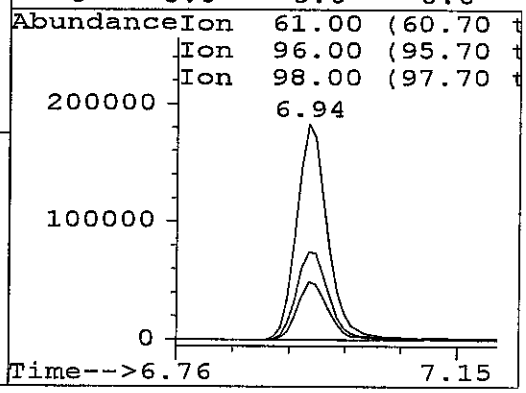


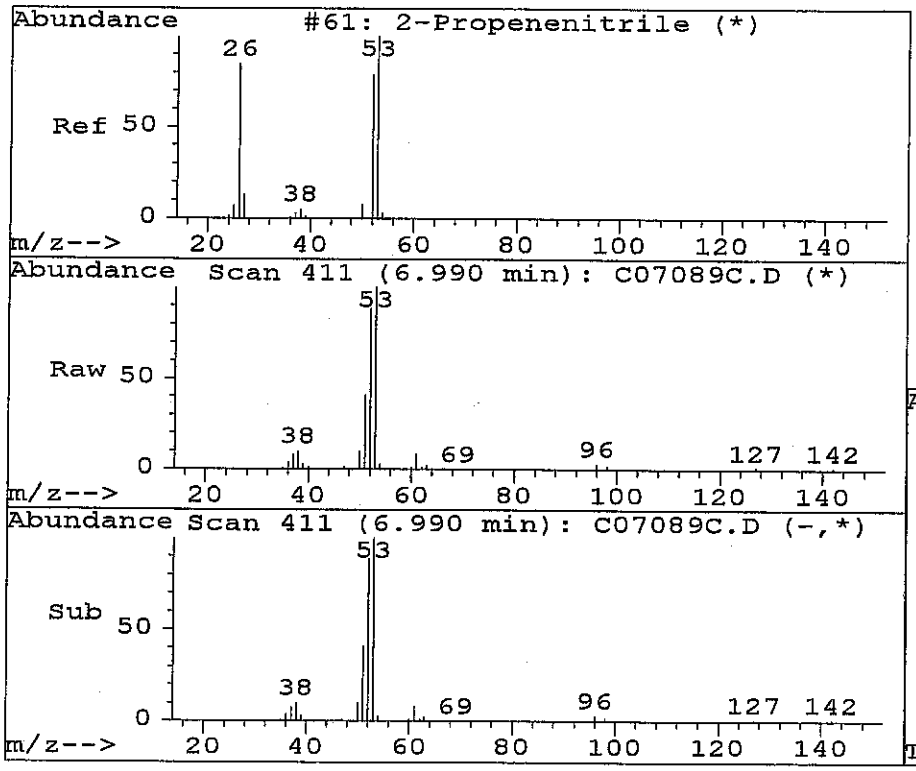


#15
1,1-Dichloroethene
Concen: 5.07 ppbV
RT: 6.94 min Scan# 406
Delta R.T. 0.05 min
Lab File: C07089C.D
Acq: 8 Jul 109 11:12 am

Tgt Ion:61 Resp: 549025

Ion	Ratio	Lower	Upper
61	100		
96	40.5	34.1	51.1
98	26.9	21.7	32.5
0	0.0	0.0	0.0

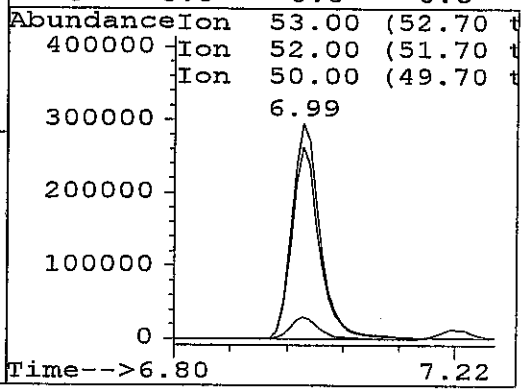


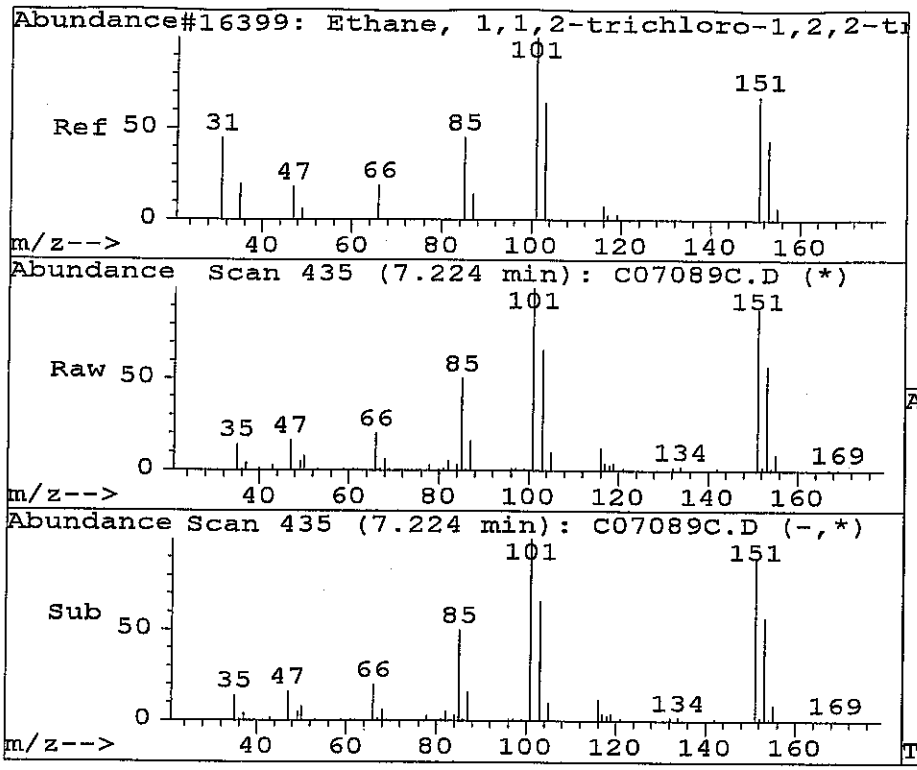


#16
Acrylonitrile
Concen: 14.34 ppbV
RT: 6.99 min Scan# 411
Delta R.T. 0.03 min
Lab File: C07089C.D
Acq: 8 Jul 109 11:12 am

Tgt Ion:53 Resp: 876107

Ion	Ratio	Lower	Upper
53	100		
52	88.9	73.0	109.4
50	10.2	8.3	12.5
0	0.0	0.0	0.0

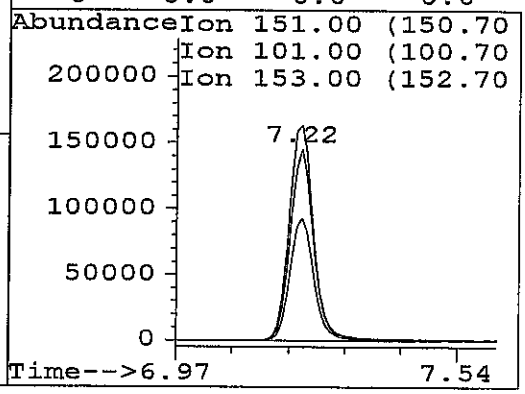


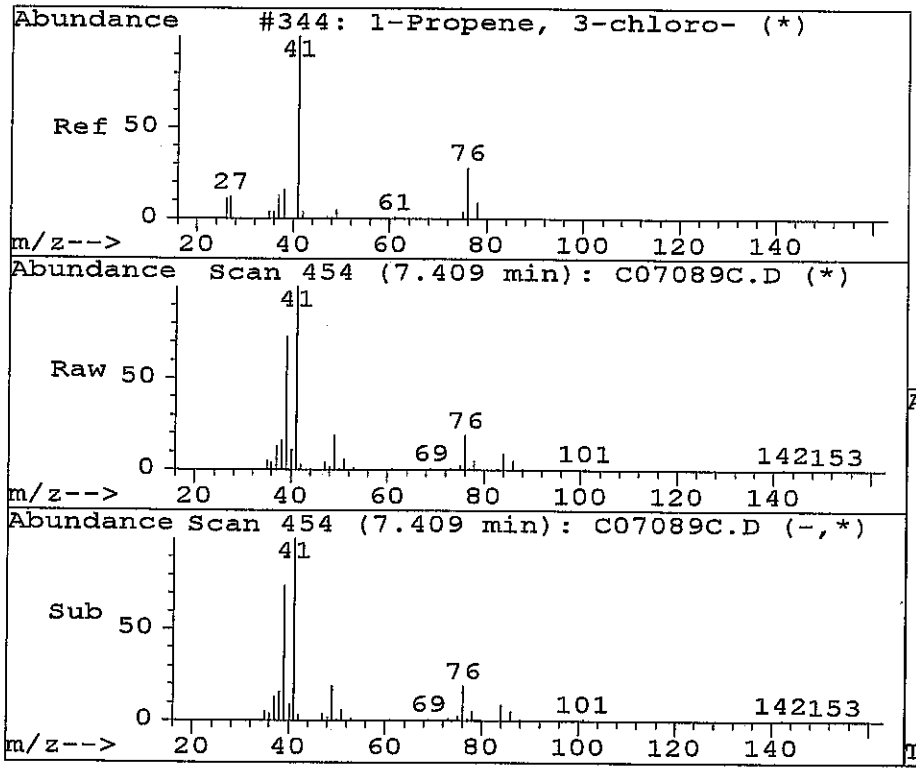


#17
Freon 113
Concen: 5.77 ppbV
RT: 7.22 min Scan# 435
Delta R.T. 0.06 min
Lab File: C07089C.D
Acq: 8 Jul 109 11:12 am

Tgt Ion:151 Resp: 489922

Ion	Ratio	Lower	Upper
151	100		
101	112.1	101.3	151.9
153	64.0	52.3	78.5
0	0.0	0.0	0.0

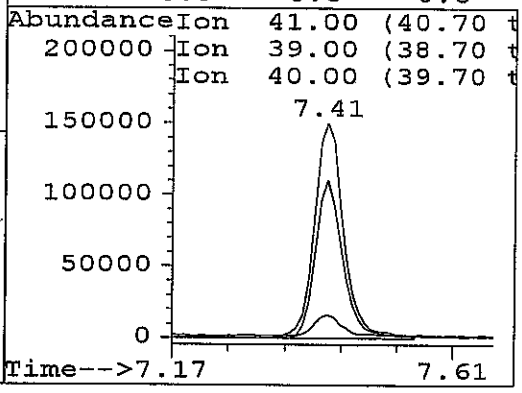


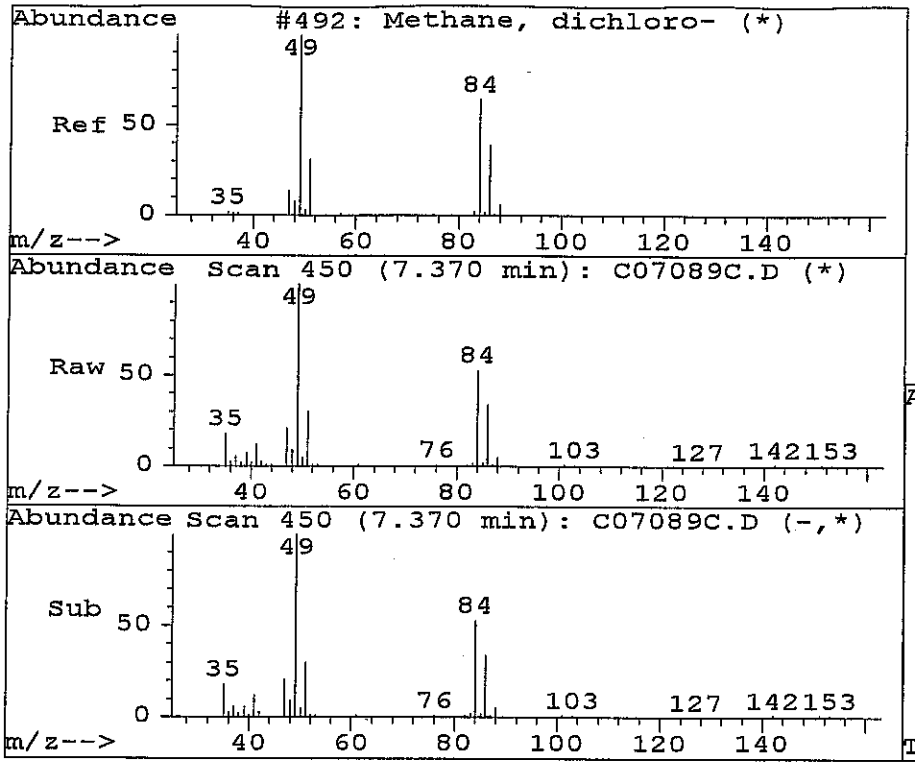


#18
Allyl chloride
Concen: 4.01 ppbV
RT: 7.41 min Scan# 454
Delta R.T. 0.06 min
Lab File: C07089C.D
Acq: 8 Jul 109 11:12 am

Tgt Ion:41 Resp: 480790

Ion	Ratio	Lower	Upper
41	100		
39	73.4	59.4	89.2
40	9.5	7.8	11.8
0	0.0	0.0	0.0

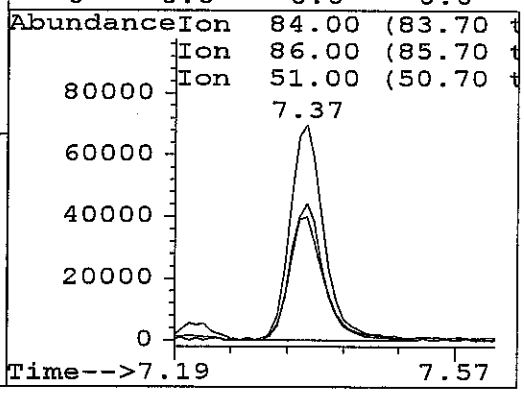


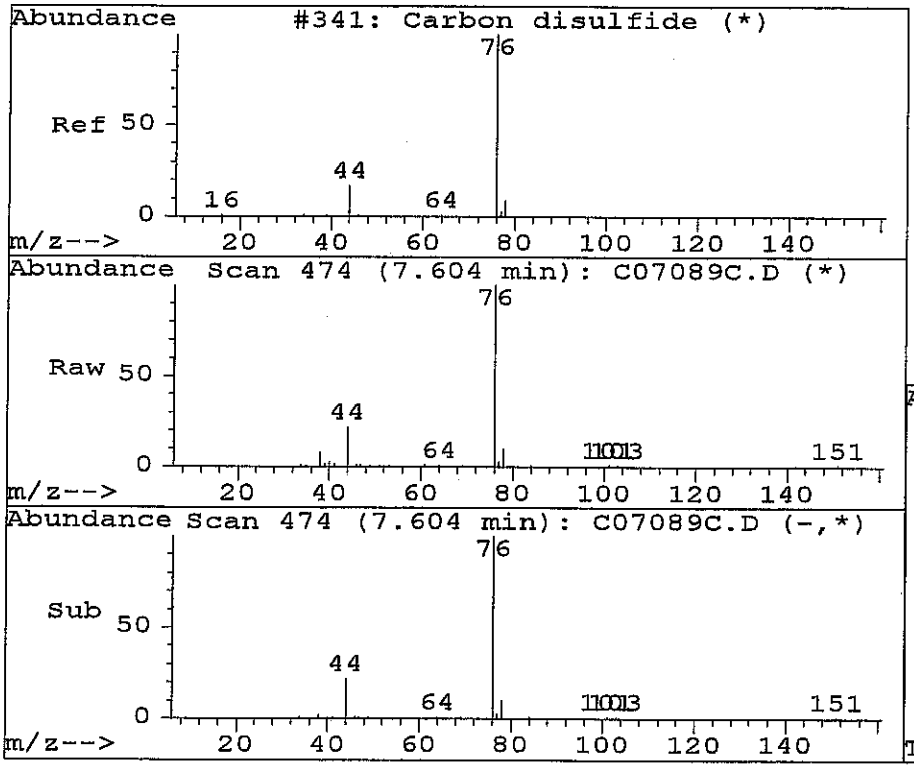


#19
Dichloromethane
Concen: 4.61 ppbV
RT: 7.37 min Scan# 450
Delta R.T. 0.06 min
Lab File: C07089C.D
Acq: 8 Jul 109 11:12 am

Tgt Ion:84 Resp: 221150

Ion	Ratio	Lower	Upper
84	100		
86	63.7	51.1	76.7
51	56.9	47.2	70.8
0	0.0	0.0	0.0

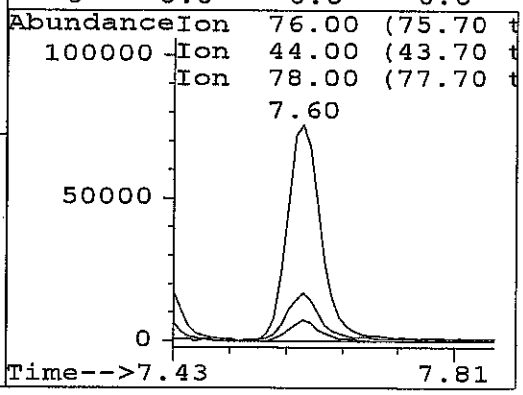


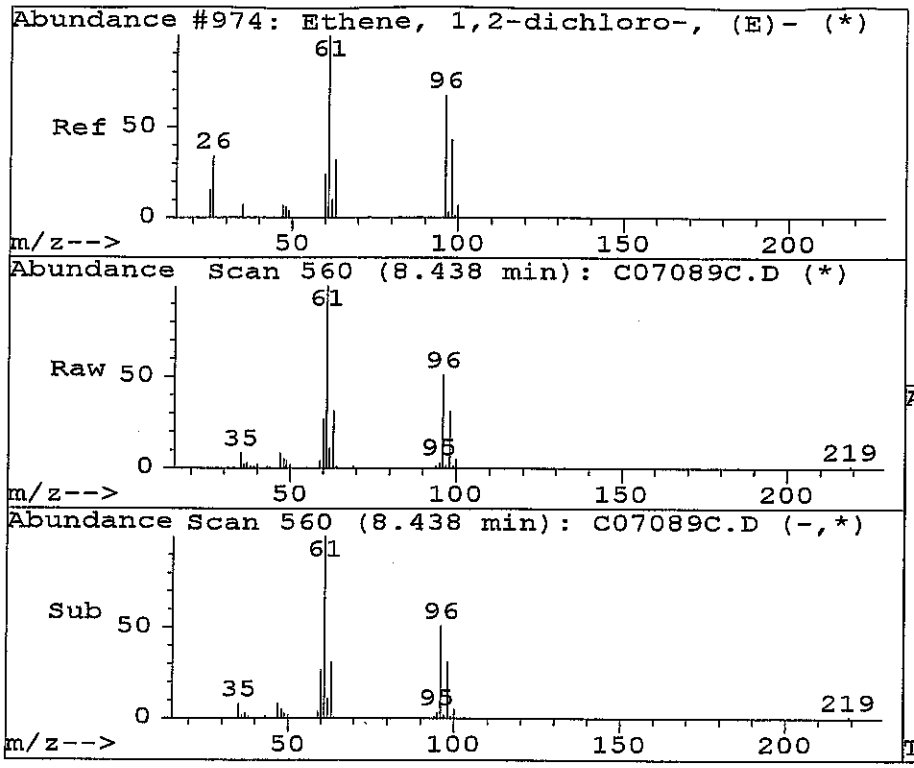


#20
Carbon disulfide
Concen: 4.08 ppbV
RT: 7.60 min Scan# 474
Delta R.T. 0.06 min
Lab File: C07089C.D
Acq: 8 Jul 109 11:12 am

Tgt Ion:76 Resp: 245000

Ion	Ratio	Lower	Upper
76	100		
44	21.6	15.8	23.6
78	9.8	5.3	8.9#
0	0.0	0.0	0.0

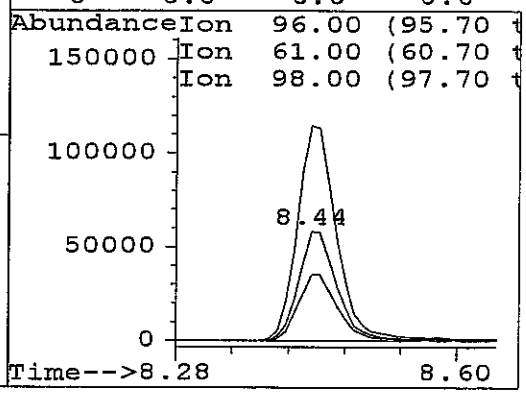


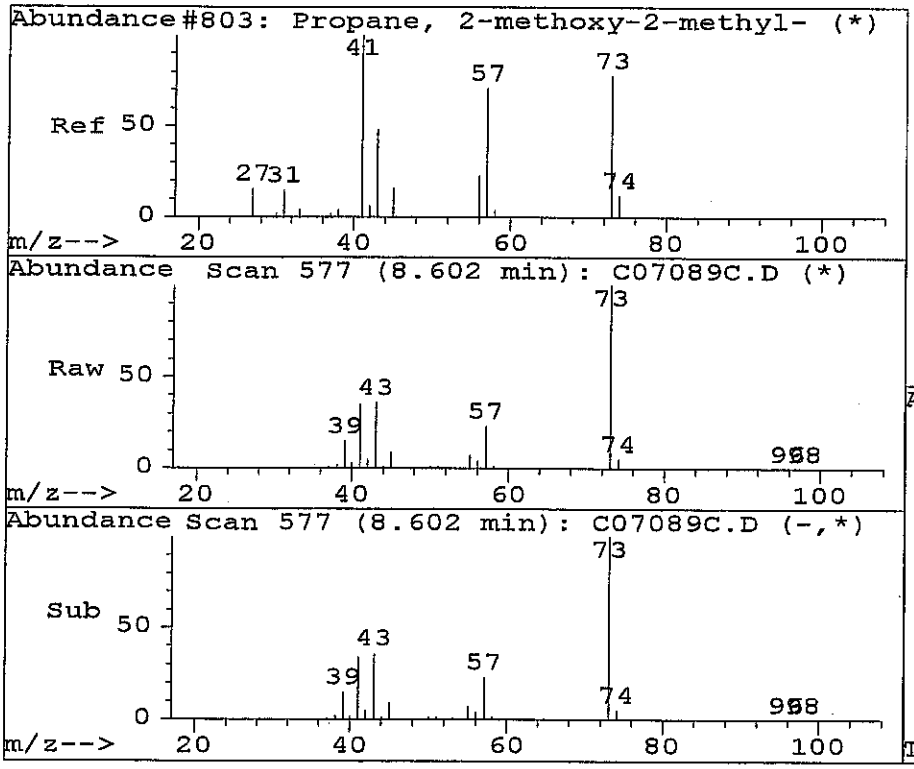


#21
trans-1,2-Dichloroethene
Concen: 4.01 ppbV
RT: 8.44 min Scan# 560
Delta R.T. 0.06 min
Lab File: C07089C.D
Acq: 8 Jul 109 11:12 am

Tgt Ion:96 Resp: 176946

Ion	Ratio	Lower	Upper
96	100		
61	197.4	172.2	258.4
98	60.2	49.6	74.4
0	0.0	0.0	0.0

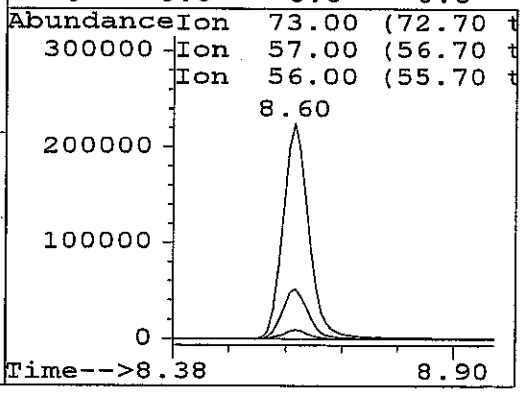


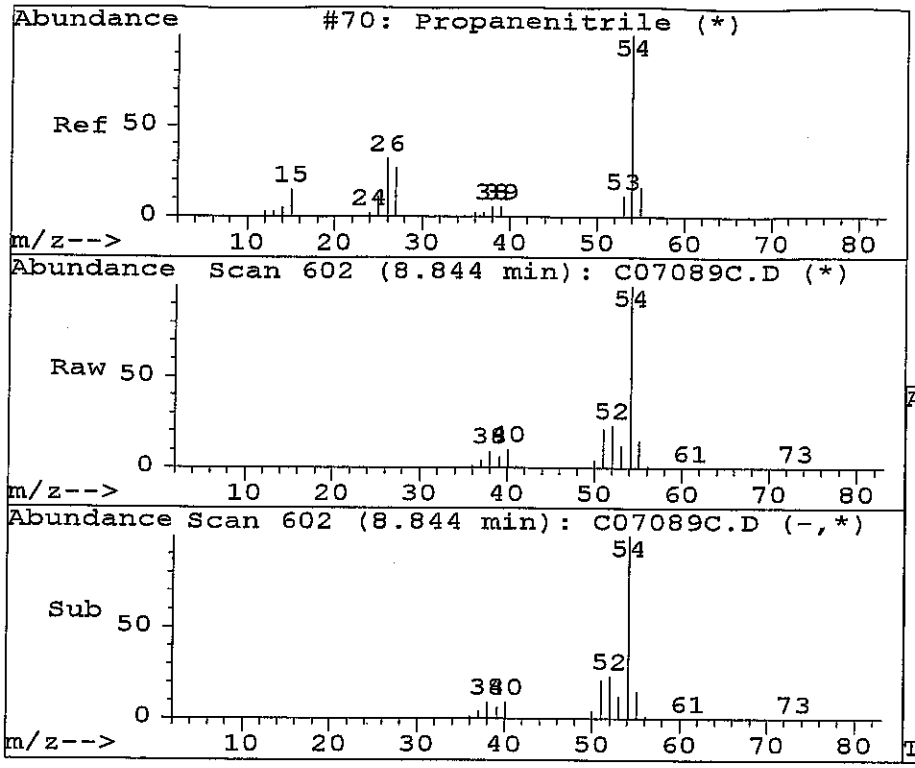


#22
Methyl tert butyl ether
Concen: 3.50 ppbV
RT: 8.60 min Scan# 577
Delta R.T. 0.06 min
Lab File: C07089C.D
Acq: 8 Jul 109 11:12 am

Tgt Ion:73 Resp: 731980

Ion	Ratio	Lower	Upper
73	100		
57	23.2	18.2	27.2
56	3.9	3.0	4.6
0	0.0	0.0	0.0

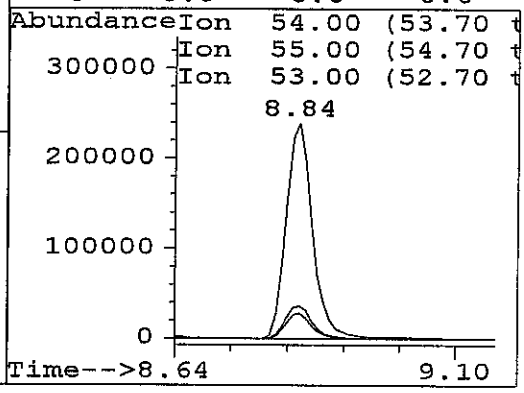


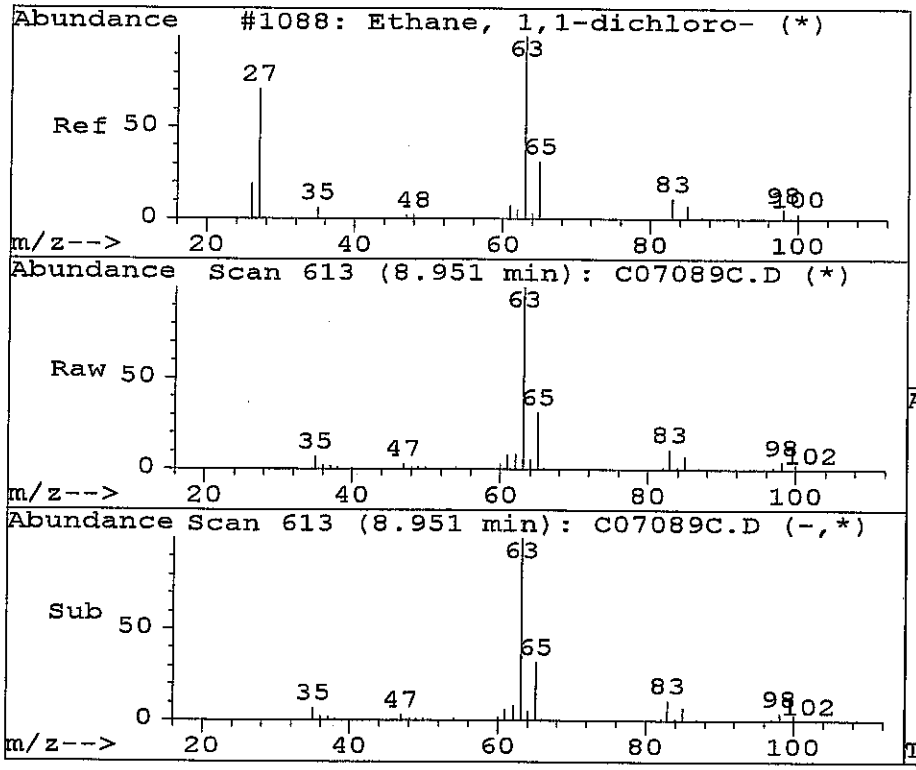


#23
Propionitrile
Concen: 9.64 ppbV
RT: 8.84 min Scan# 602
Delta R.T. 0.01 min
Lab File: C07089C.D
Acq: 8 Jul 109 11:12 am

Tgt Ion:54 Resp: 720428

Ion	Ratio	Lower	Upper
54	100		
55	15.2	12.1	18.1
53	11.9	9.8	14.8
0	0.0	0.0	0.0

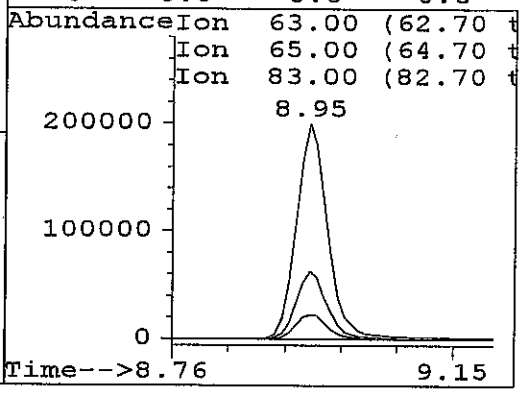


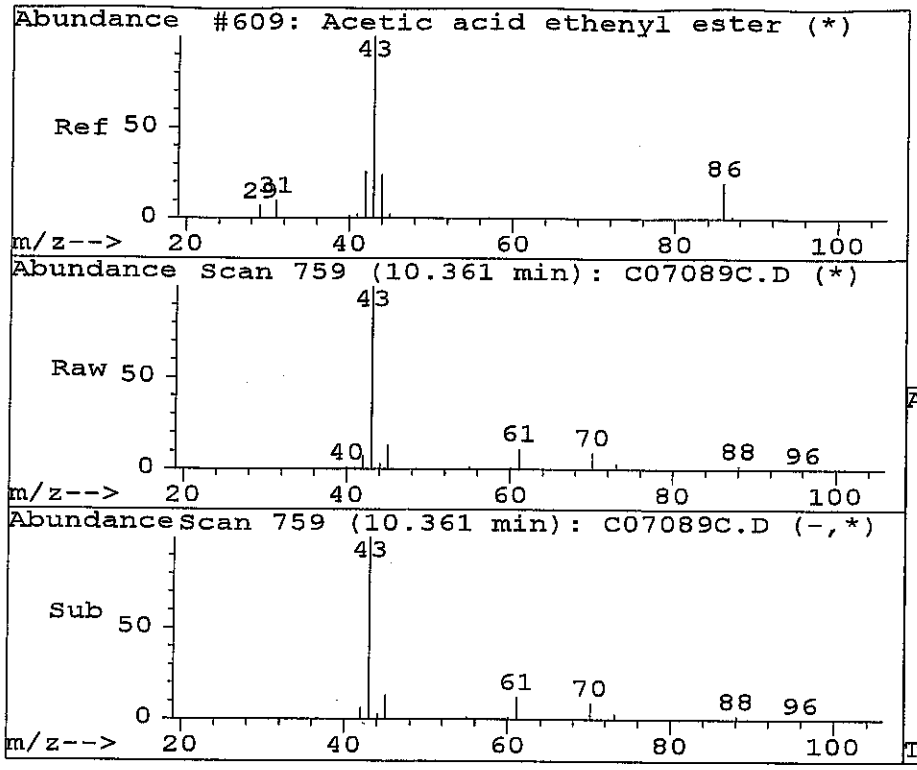


#24
1,1-Dichloroethane
Concen: 4.40 ppbV
RT: 8.95 min Scan# 613
Delta R.T. 0.05 min
Lab File: C07089C.D
Acq: 8 Jul 109 11:12 am

Tgt Ion:63 Resp: 612912

Ion	Ratio	Lower	Upper
63	100		
65	31.3	23.8	35.8
83	11.2	9.8	14.8
0	0.0	0.0	0.0

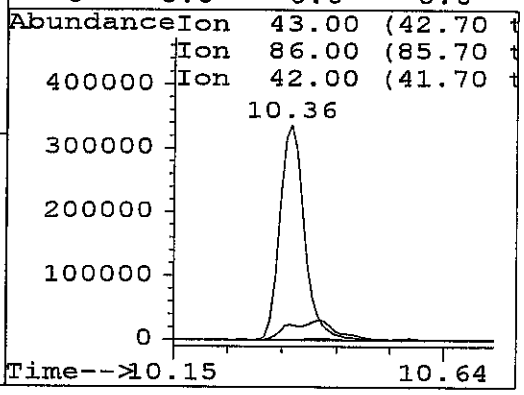


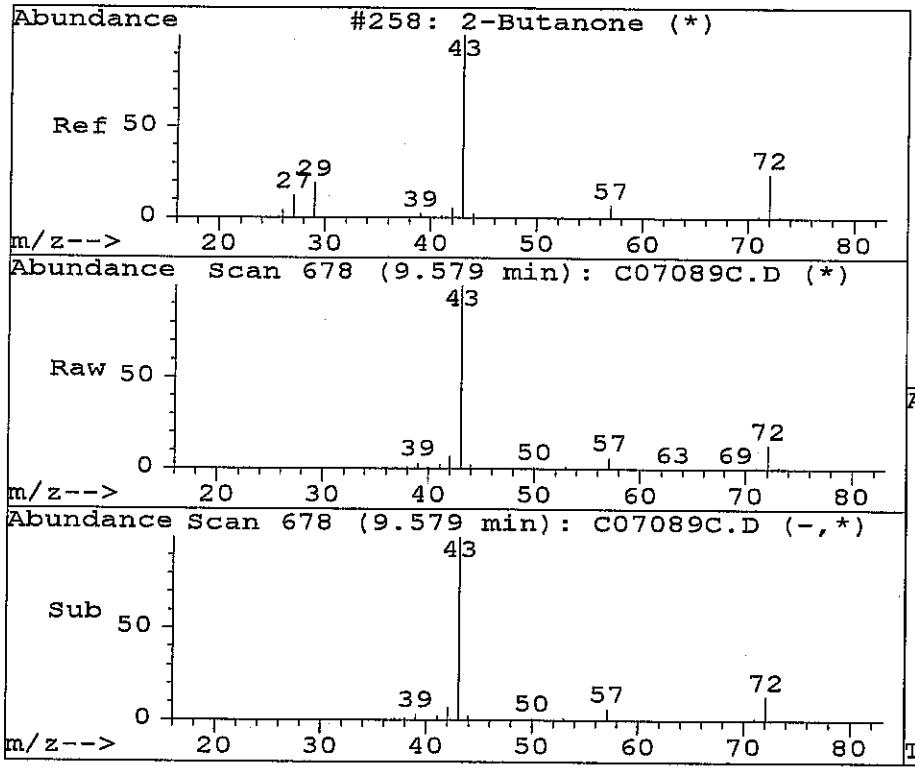


#25
Vinyl acetate
Concen: 3.55 ppbV
RT: 10.36 min Scan# 759
Delta R.T. 0.04 min
Lab File: C07089C.D
Acq: 8 Jul 109 11:12 am

Tgt Ion:43 Resp: 1055827

Ion	Ratio	Lower	Upper
43	100		
86	0.0	0.0	0.0
42	7.0	5.2	7.8
0	0.0	0.0	0.0

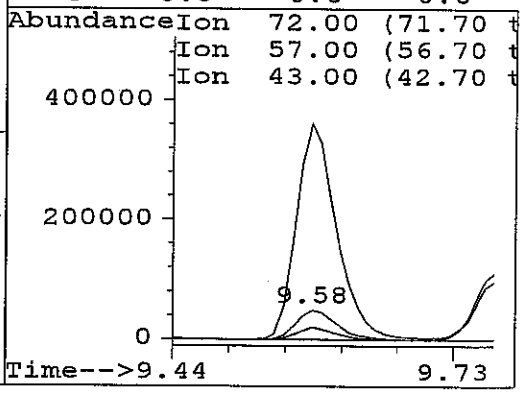


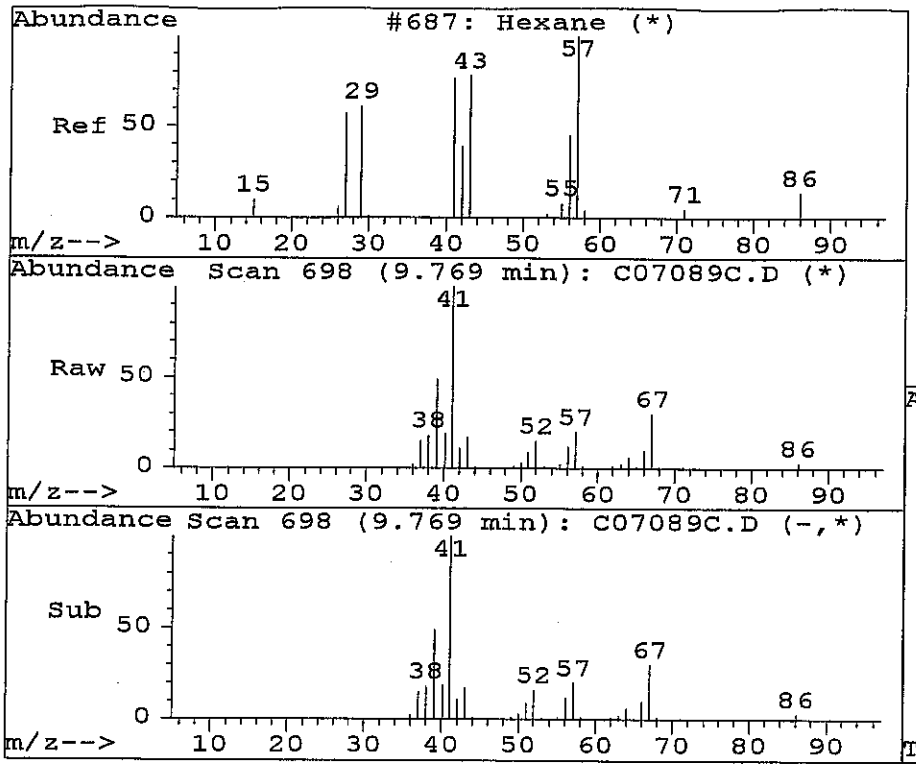


#26
2-Butanone
Concen: 3.65 ppbV
RT: 9.58 min Scan# 678
Delta R.T. 0.04 min
Lab File: C07089C.D
Acq: 8 Jul 109 11:12 am

Tgt Ion:72 Resp: 142559

Ion	Ratio	Lower	Upper
72	100		
57	42.4	29.8	44.6
43	741.3	551.4	827.0
0	0.0	0.0	0.0

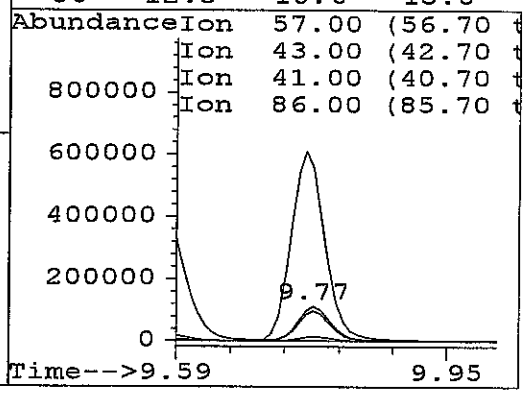


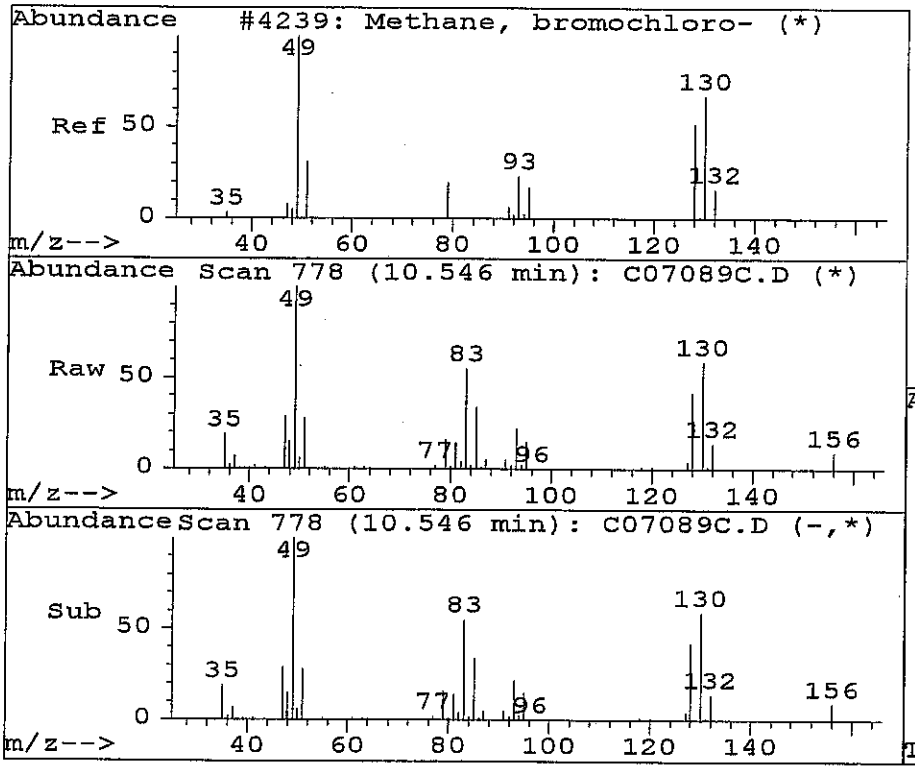


#27
Hexane
Concen: 3.00 ppbV
RT: 9.77 min Scan# 698
Delta R.T. 0.06 min
Lab File: C07089C.D
Acq: 8 Jul 109 11:12 am

Tgt Ion:57 Resp: 344275

Ion	Ratio	Lower	Upper
57	100		
43	87.8	71.2	106.8
41	569.6	442.3	663.5
86	12.3	10.6	15.8

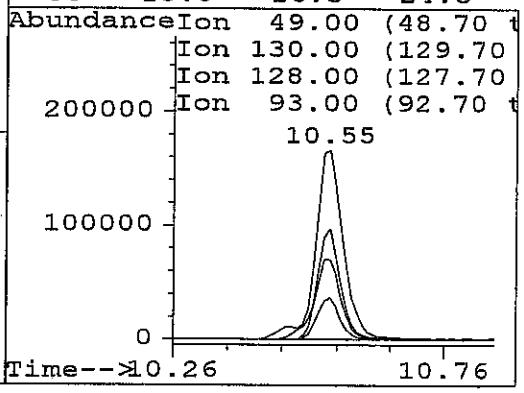


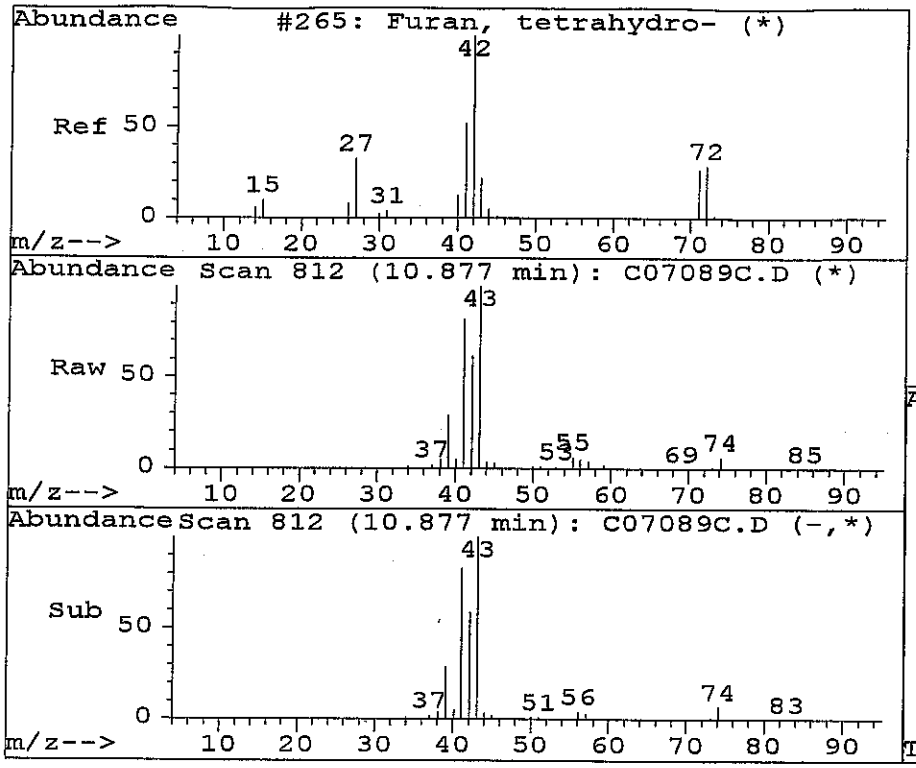


#28
Bromochloromethane
Concen: 3.70 ppbV
RT: 10.55 min Scan# 778
Delta R.T. 0.05 min
Lab File: C07089C.D
Acq: 8 Jul 109 11:12 am

Tgt Ion:49 Resp: 583596

Ion	Ratio	Lower	Upper
49	100		
130	47.9	40.0	60.0
128	40.7	34.2	51.2
93	18.0	16.3	24.5

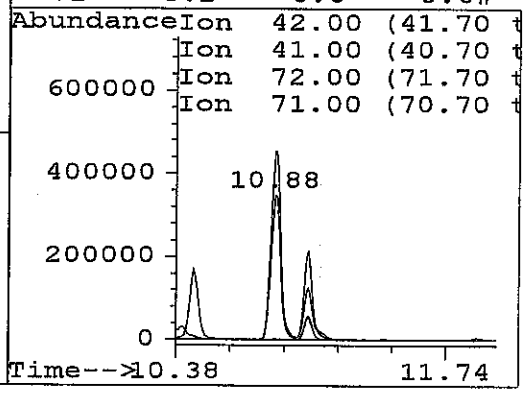


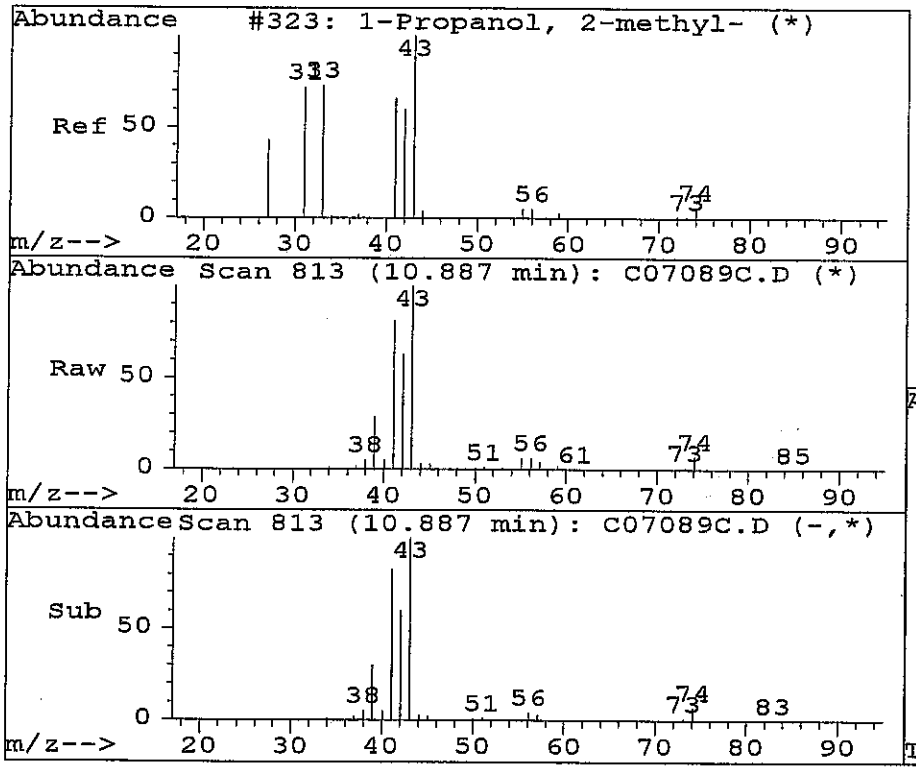


#29
Tetrahydrofuran
Concen: 2.93 ppbV m
RT: 10.88 min Scan# 812
Delta R.T. -0.04 min
Lab File: C07089C.D
Acq: 8 Jul 109 11:12 am

Tgt Ion:42 Resp: 1787895

Ion	Ratio	Lower	Upper
42	100		
41	130.8	103.5	155.3
72	0.7	0.3	0.5#
71	0.2	0.0	0.0#

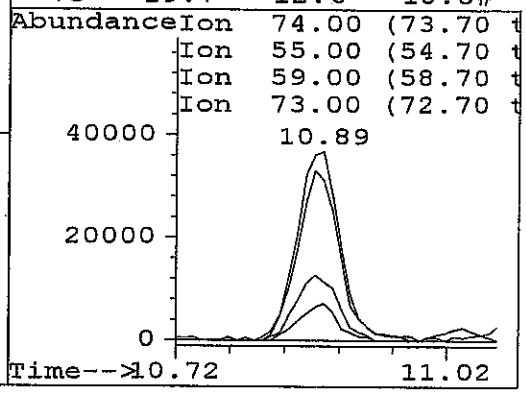


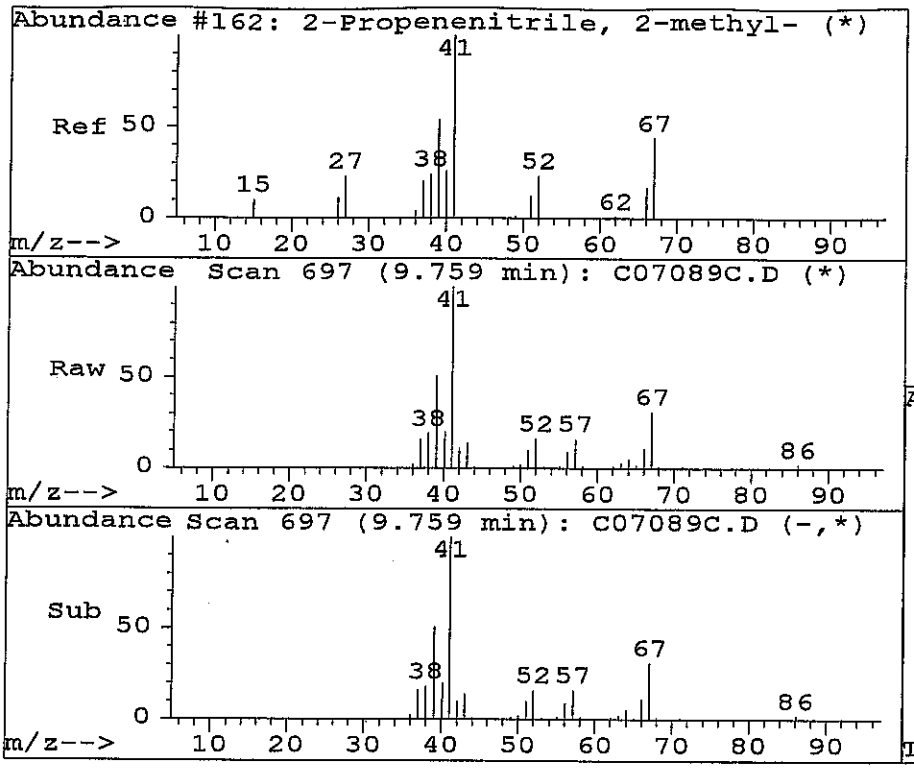


#30
Isobutyl alcohol
Concen: 7.40 ppbV
RT: 10.89 min Scan# 813
Delta R.T. -0.03 min
Lab File: C07089C.D
Acq: 8 Jul 109 11:12 am

Tgt Ion:74 Resp: 122618

Ion	Ratio	Lower	Upper
74	100		
55	84.7	66.8	100.2
59	31.1	23.9	35.9
73	19.7	12.6	18.8#

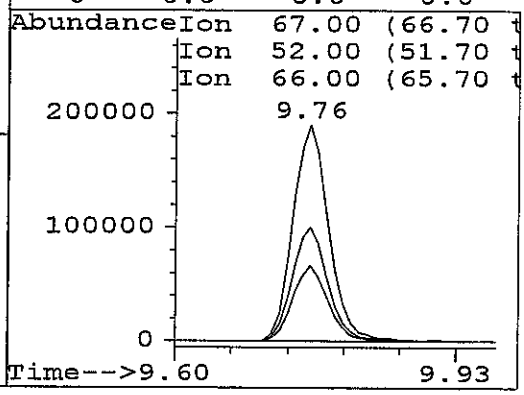


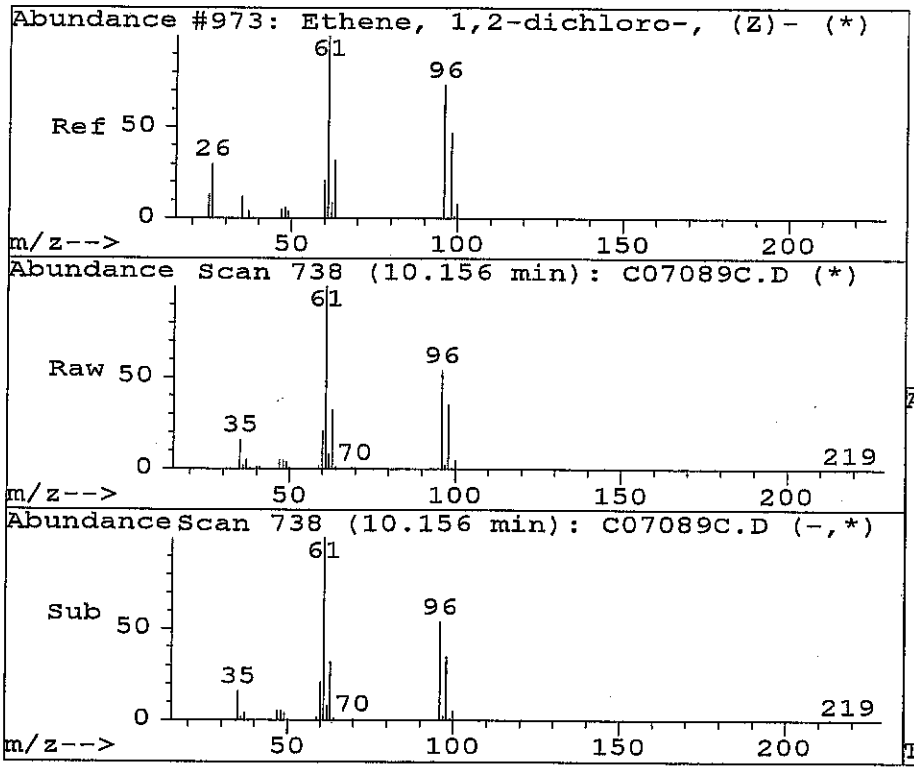


#31
Methacrylonitrile
Concen: 13.54 ppbV
RT: 9.76 min Scan# 697
Delta R.T. 0.02 min
Lab File: C07089C.D
Acq: 8 Jul 109 11:12 am

Tgt Ion:67 Resp: 579361

Ion	Ratio	Lower	Upper
67	100		
52	52.7	42.1	63.1
66	35.0	29.7	44.5
0	0.0	0.0	0.0

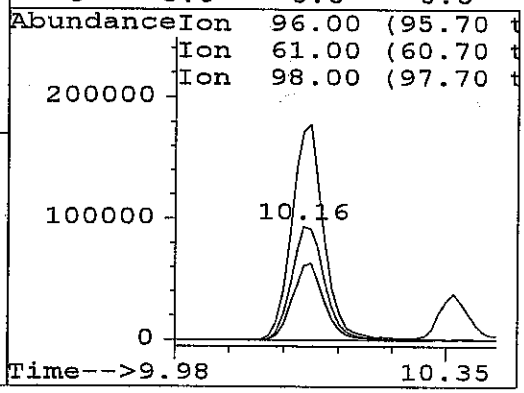


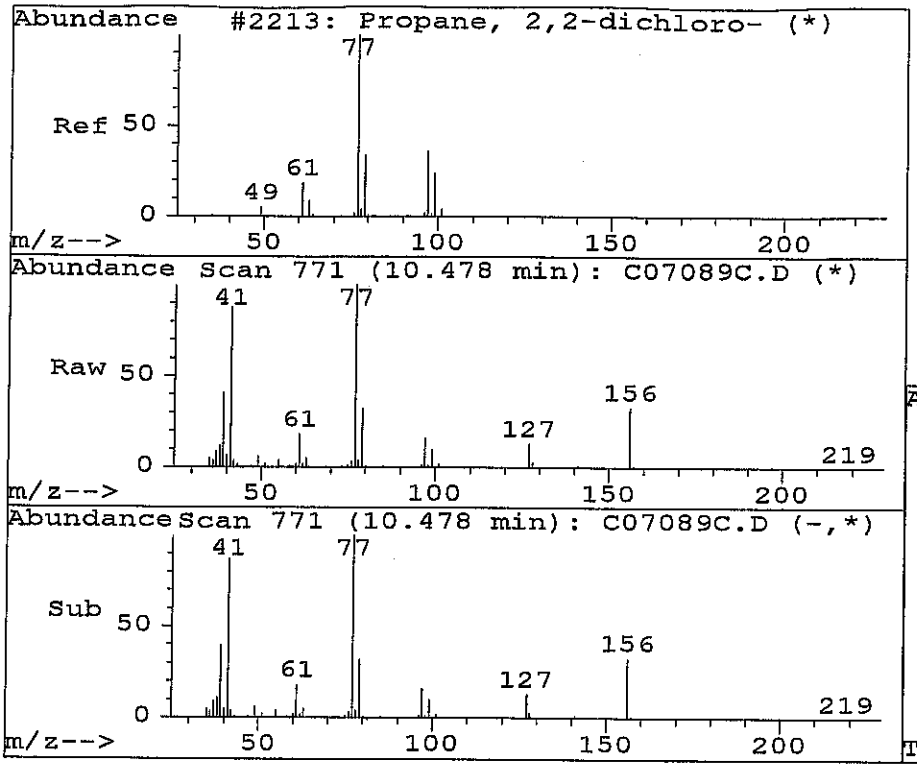


#32
cis-1,2-Dichloroethene
Concen: 4.16 ppbV
RT: 10.16 min Scan# 738
Delta R.T. 0.05 min
Lab File: C07089C.D
Acq: 8 Jul 109 11:12 am

Tgt Ion:96 Resp: 299325

Ion	Ratio	Lower	Upper
96	100		
61	183.2	139.1	208.7
98	65.3	49.5	74.3
0	0.0	0.0	0.0

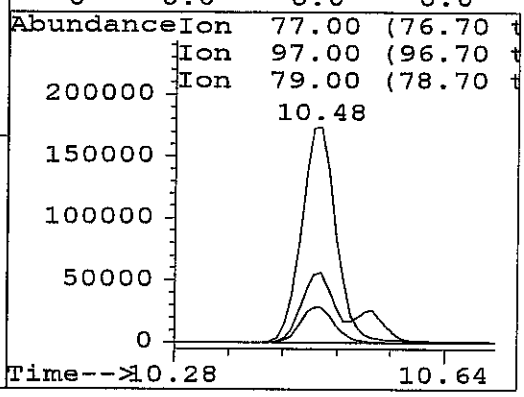


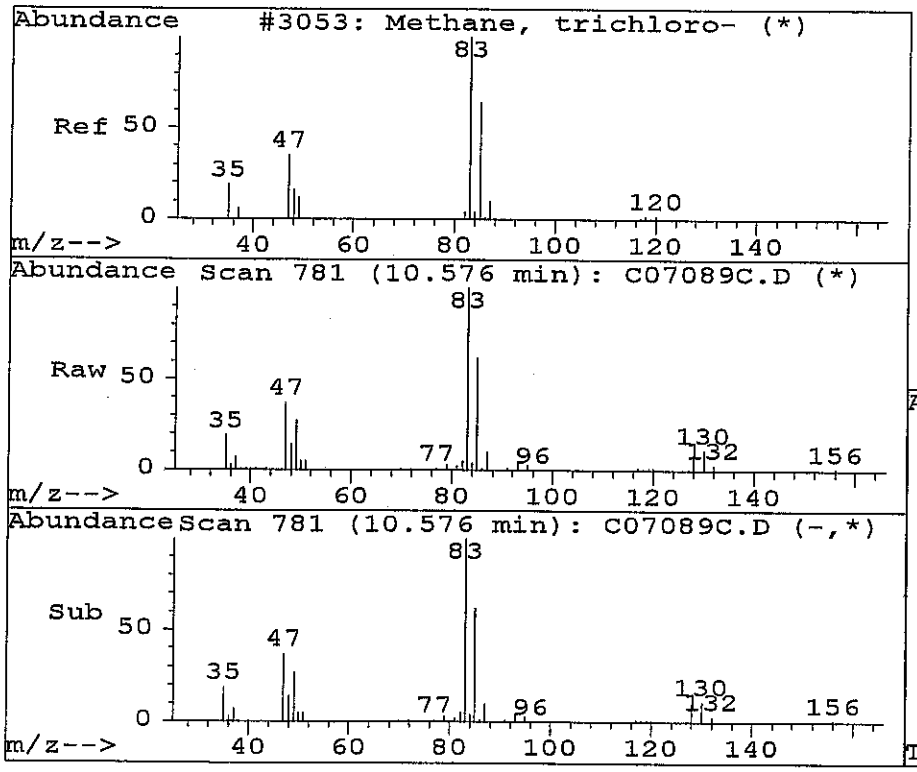


#33
2,2-Dichloropropane
Concen: 3.99 ppbV
RT: 10.48 min Scan# 771
Delta R.T. 0.06 min
Lab File: C07089C.D
Acq: 8 Jul 109 11:12 am

Tgt Ion:77 Resp: 556899

Ion	Ratio	Lower	Upper
77	100		
97	16.4	14.3	21.5
79	32.3	20.2	30.4#
0	0.0	0.0	0.0

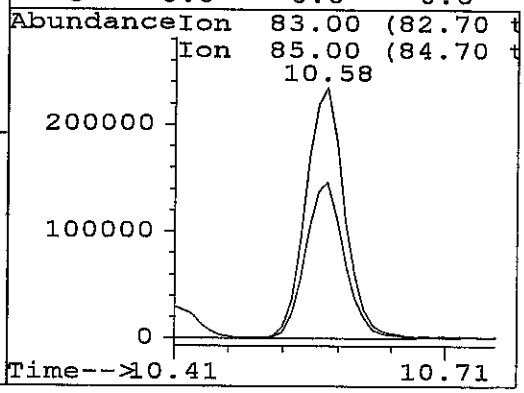


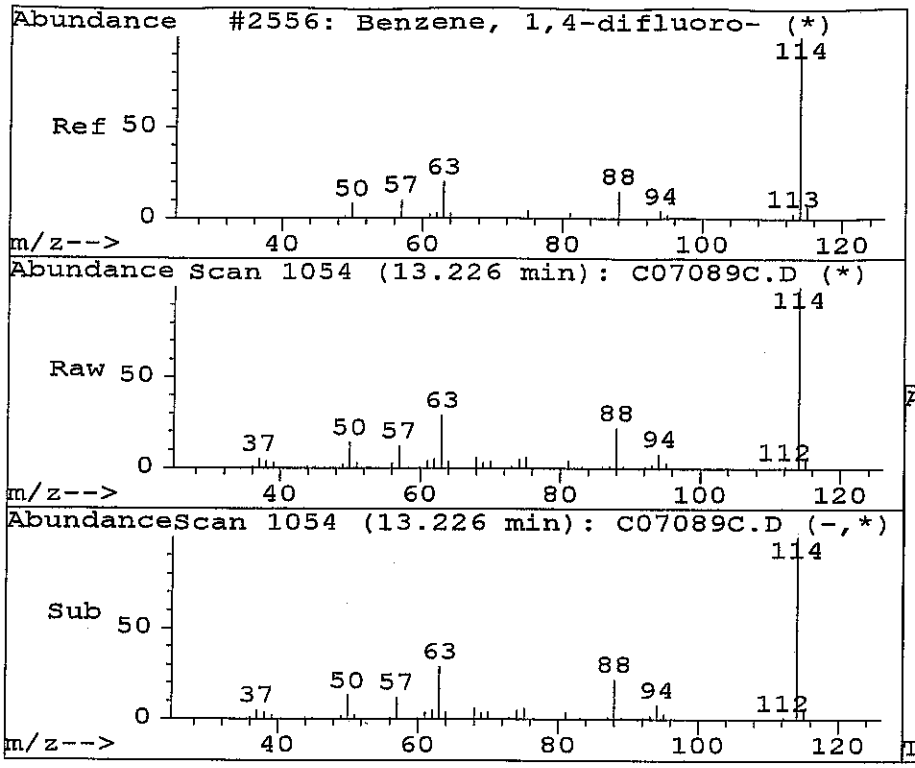


#34
Chloroform
Concen: 4.15 ppbV
RT: 10.58 min Scan# 781
Delta R.T. 0.05 min
Lab File: C07089C.D
Acq: 8 Jul 109 11:12 am

Tgt Ion:83 Resp: 694543

Ion	Ratio	Lower	Upper
83	100		
85	62.1	51.3	76.9
0	0.0	0.0	0.0
0	0.0	0.0	0.0

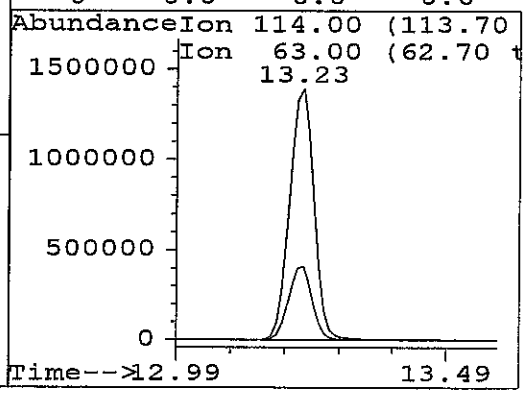


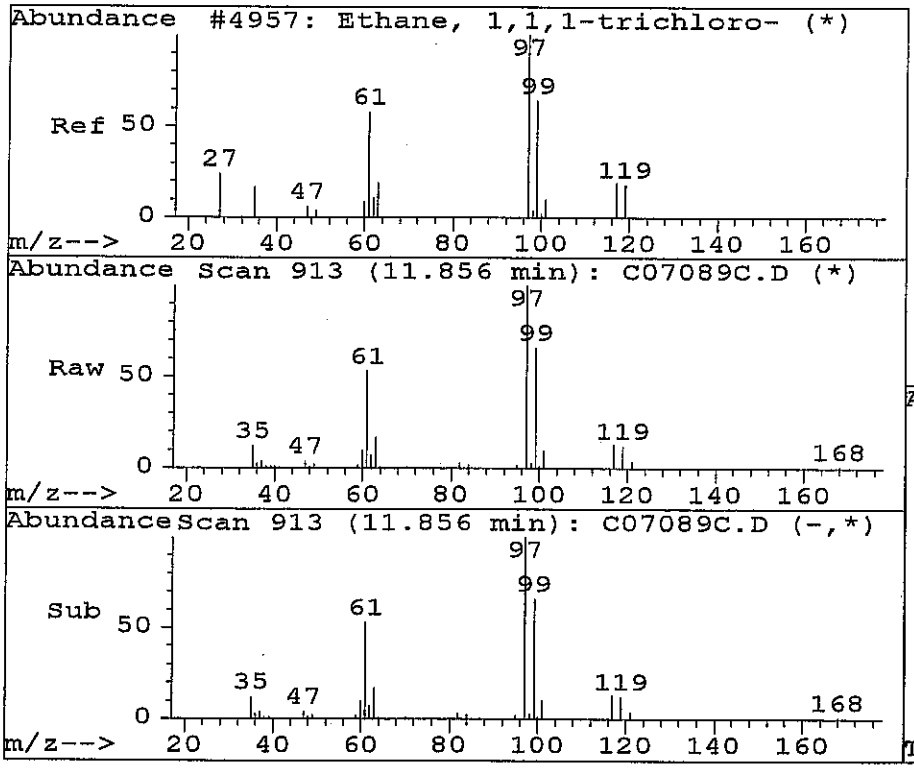


#35
1,4-Difluorobenzene
Concen: 20.00 ppbV
RT: 13.23 min Scan# 1054
Delta R.T. 0.06 min
Lab File: C07089C.D
Acq: 8 Jul 109 11:12 am

Tgt Ion:114 Resp: 4338144

Ion	Ratio	Lower	Upper
114	100		
63	29.4	22.0	36.6
0	0.0	0.0	0.0
0	0.0	0.0	0.0

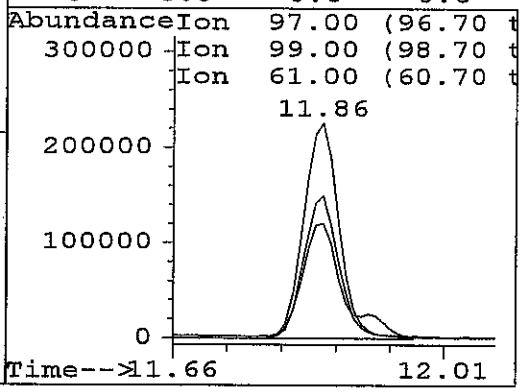


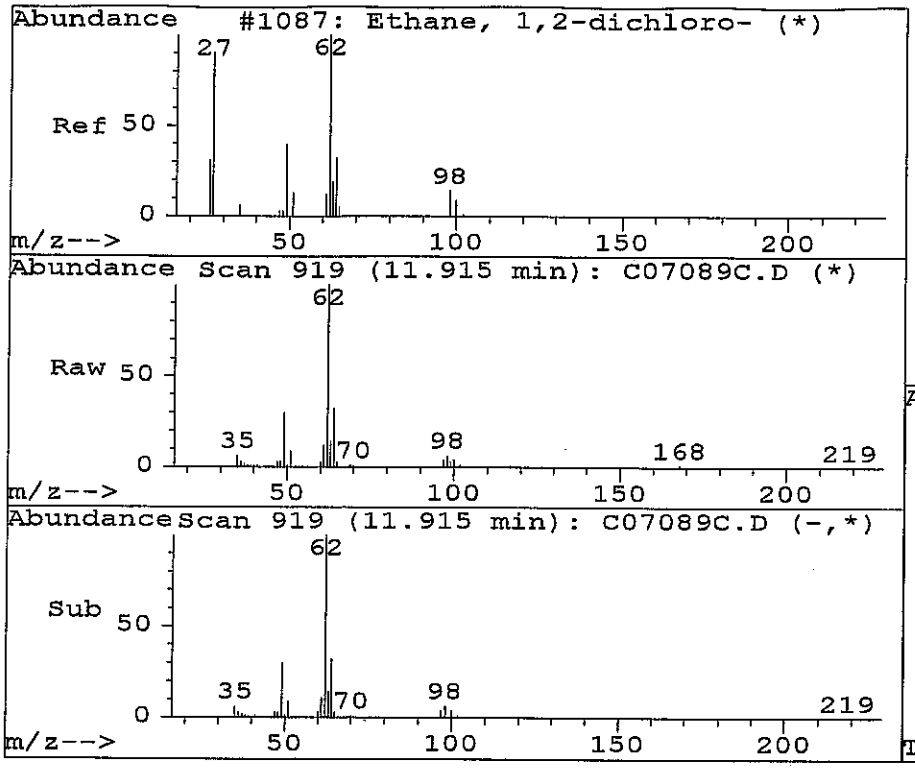


#36
1,1,1-Trichloroethane
Concen: 4.55 ppbV
RT: 11.86 min Scan# 913
Delta R.T. 0.06 min
Lab File: C07089C.D
Acq: 8 Jul 109 11:12 am

Tgt Ion:97 Resp: 715958

Ion	Ratio	Lower	Upper
97	100		
99	65.6	50.6	75.8
61	53.1	44.3	66.5
0	0.0	0.0	0.0

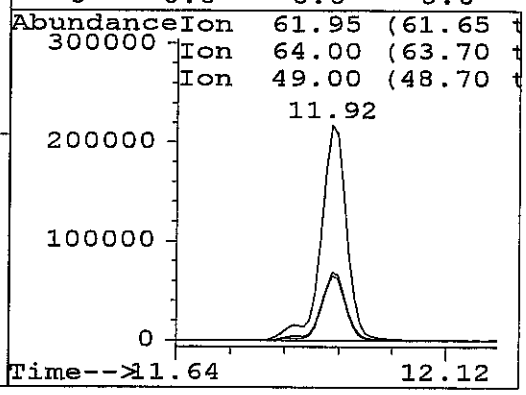


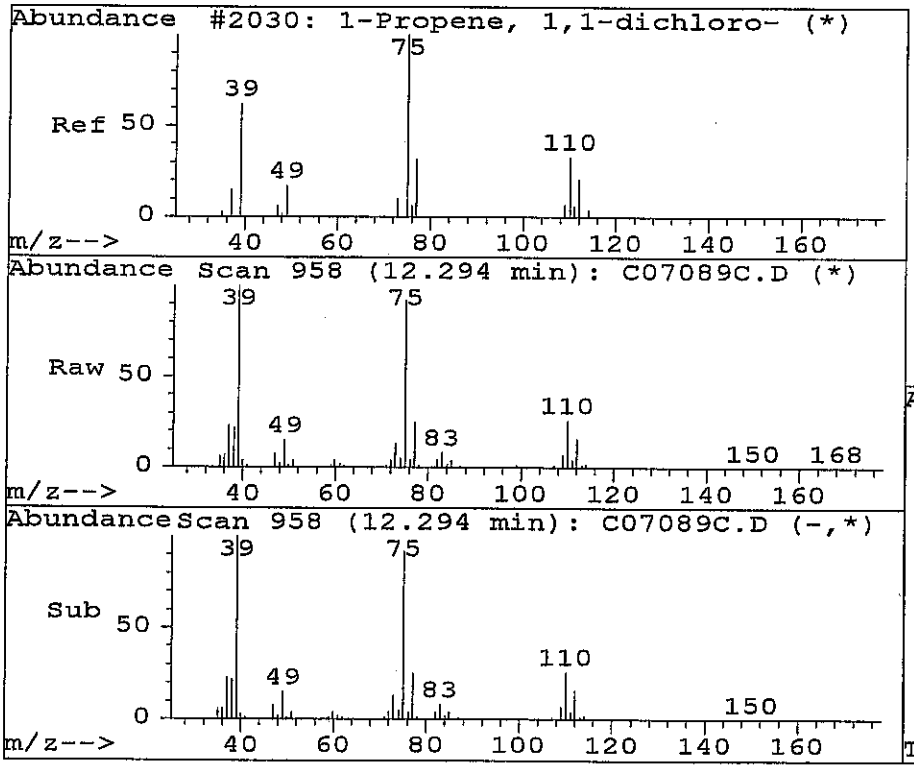


#37
1,2-Dichloroethane
Concen: 4.59 ppbV
RT: 11.92 min Scan# 919
Delta R.T. 0.05 min
Lab File: C07089C.D
Acq: 8 Jul 109 11:12 am

Tgt Ion:61.95 Resp: 677682

Ion	Ratio	Lower	Upper
62	100		
64	31.7	24.7	37.1
49	29.9	23.8	35.6
0	0.0	0.0	0.0

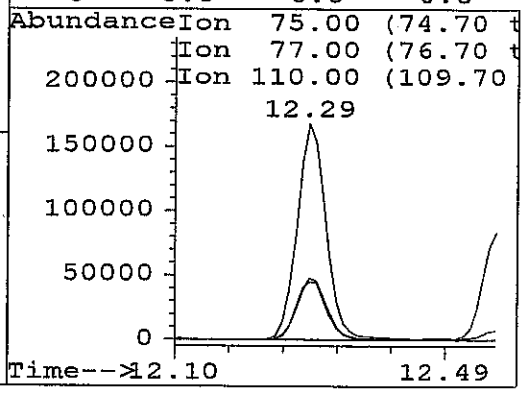


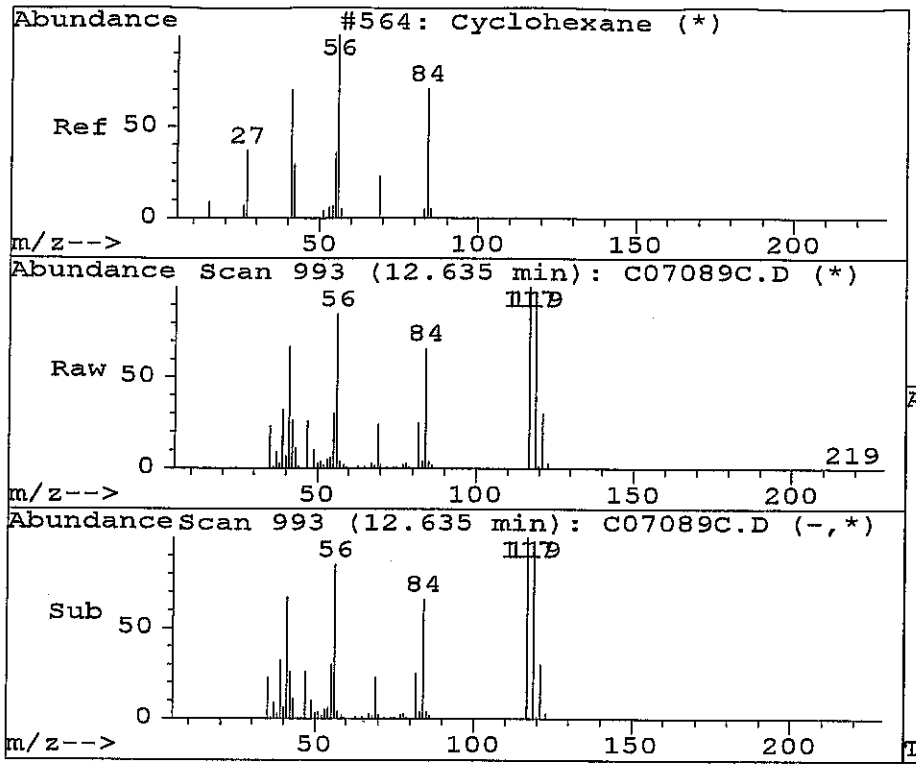


#38
1,1-Dichloropropene
Concen: 3.81 ppbV
RT: 12.29 min Scan# 958
Delta R.T. 0.05 min
Lab File: C07089C.D
Acq: 8 Jul 109 11:12 am

Tgt Ion:75 Resp: 488097

Ion	Ratio	Lower	Upper
75	100		
77	27.0	24.7	37.1
110	28.4	23.5	35.3
0	0.0	0.0	0.0

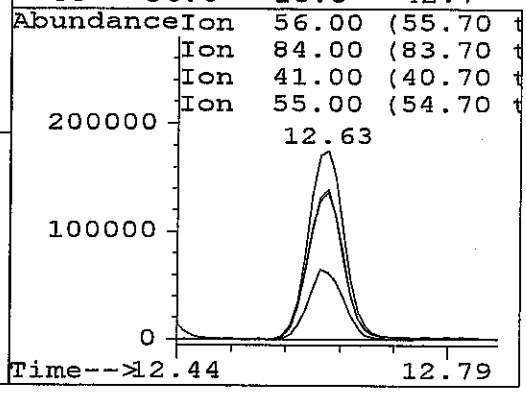


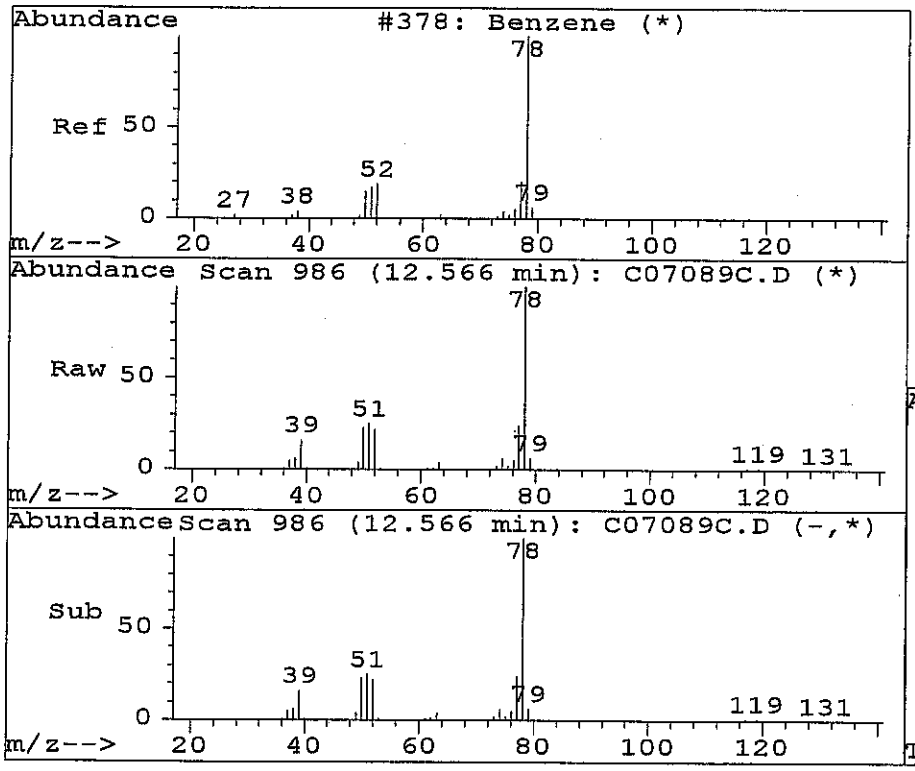


#39
Cyclohexane
Concen: 3.99 ppbV
RT: 12.63 min Scan# 993
Delta R.T. 0.08 min
Lab File: C07089C.D
Acq: 8 Jul 109 11:12 am

Tgt Ion:56 Resp: 576098

Ion	Ratio	Lower	Upper
56	100		
84	77.8	60.6	90.8
41	77.2	62.4	93.6
55	36.6	28.5	42.7

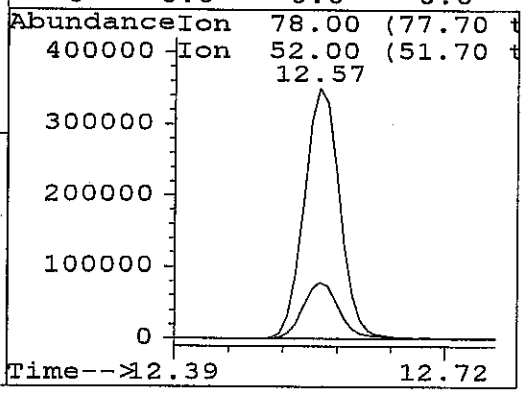


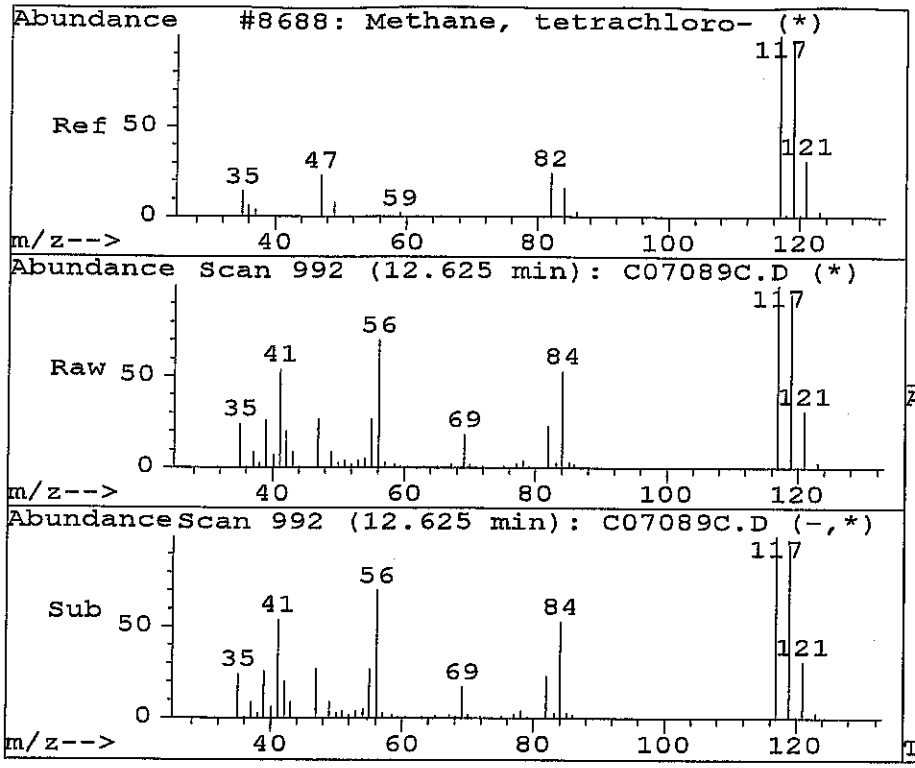


#40
Benzene
Concen: 4.08 ppbV
RT: 12.57 min Scan# 986
Delta R.T. 0.06 min
Lab File: C07089C.D
Acq: 8 Jul 109 11:12 am

Tgt Ion:78 Resp: 1047795

Ion	Ratio	Lower	Upper
78	100		
52	22.4	19.2	28.8
0	0.0	0.0	0.0
0	0.0	0.0	0.0

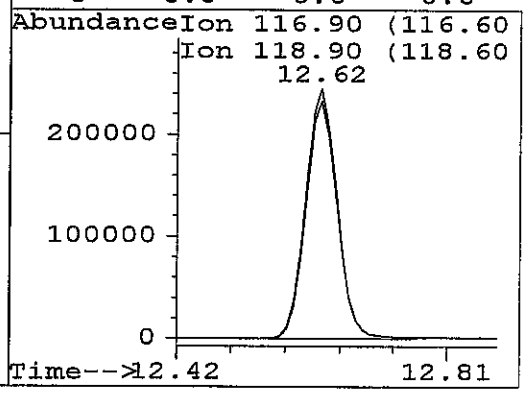


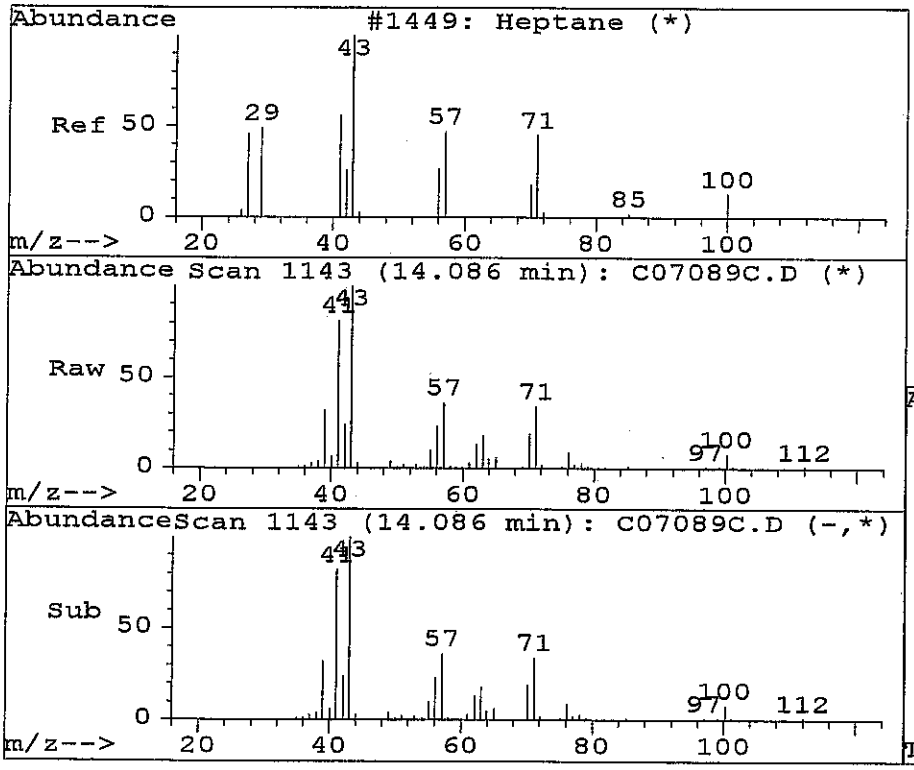


#41
Carbon tetrachloride
Concen: 4.76 ppbV
RT: 12.62 min Scan# 992
Delta R.T. 0.06 min
Lab File: C07089C.D
Acq: 8 Jul 109 11:12 am

Tgt Ion:116.9 Resp: 761632

Ion	Ratio	Lower	Upper
117	100		
119	94.8	79.4	119.0
0	0.0	0.0	0.0
0	0.0	0.0	0.0

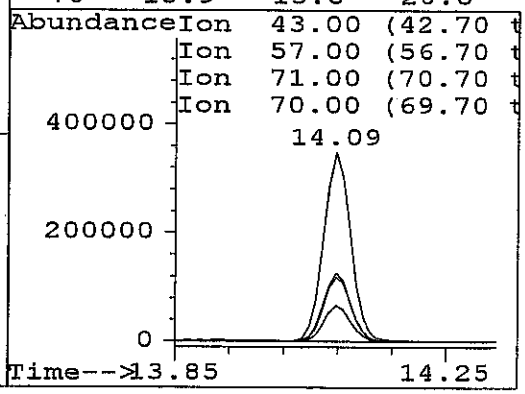


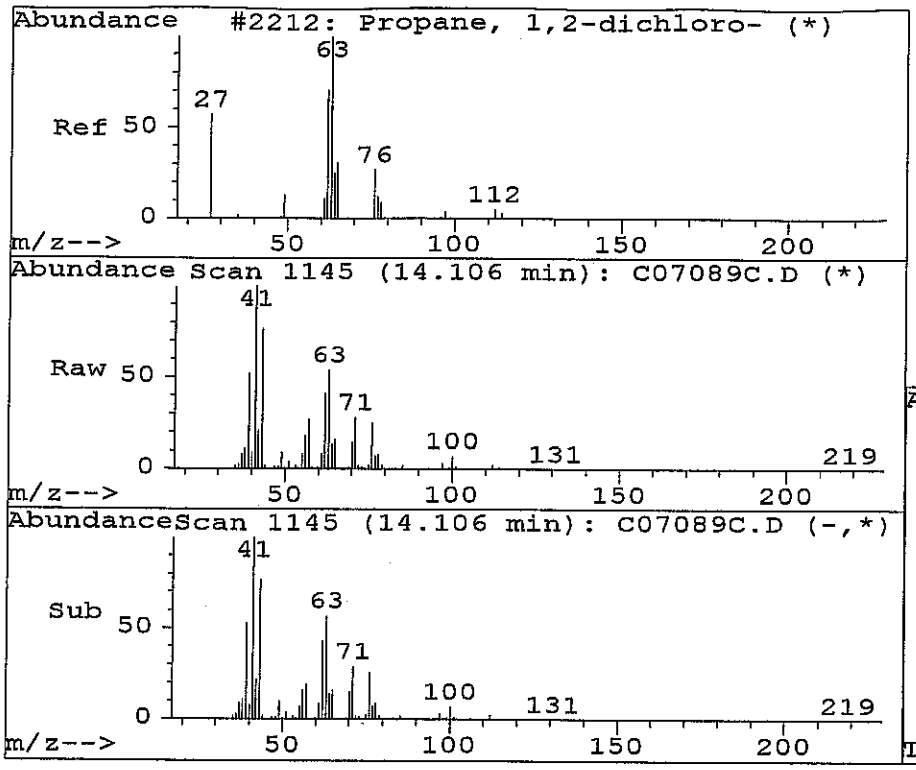


#42
n-Heptane
Concen: 3.68 ppbV
RT: 14.09 min Scan# 1143
Delta R.T. 0.05 min
Lab File: C07089C.D
Acq: 8 Jul 109 11:12 am

Tgt Ion:43 Resp: 950014

Ion	Ratio	Lower	Upper
43	100		
57	35.7	28.7	43.1
71	34.0	27.4	41.0
70	18.9	13.8	20.8

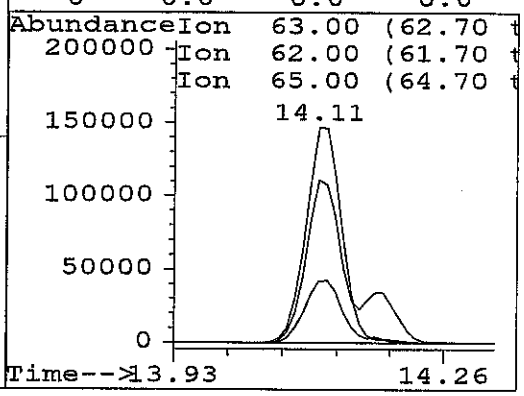


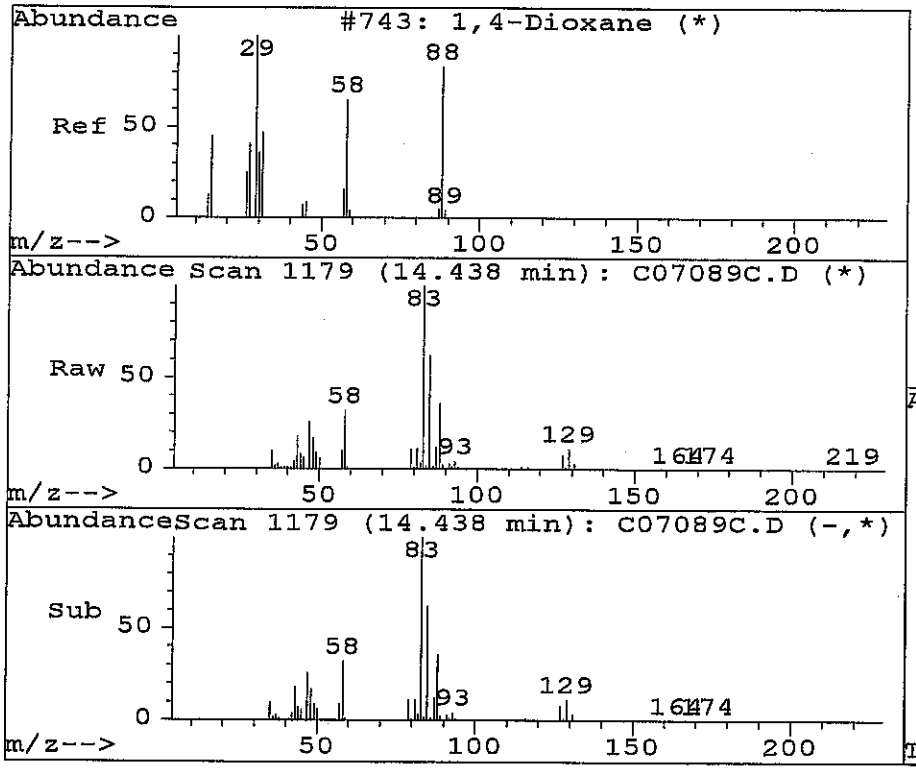


#43
1,2-Dichloropropane
Concen: 4.42 ppbV
RT: 14.11 min Scan# 1145
Delta R.T. 0.04 min
Lab File: C07089C.D
Acq: 8 Jul 109 11:12 am

Tgt Ion:63 Resp: 438795

Ion	Ratio	Lower	Upper
63	100		
62	74.3	58.3	87.5
65	28.5	23.8	35.8
0	0.0	0.0	0.0

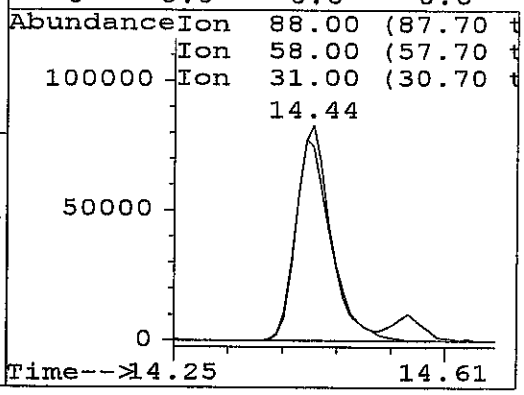


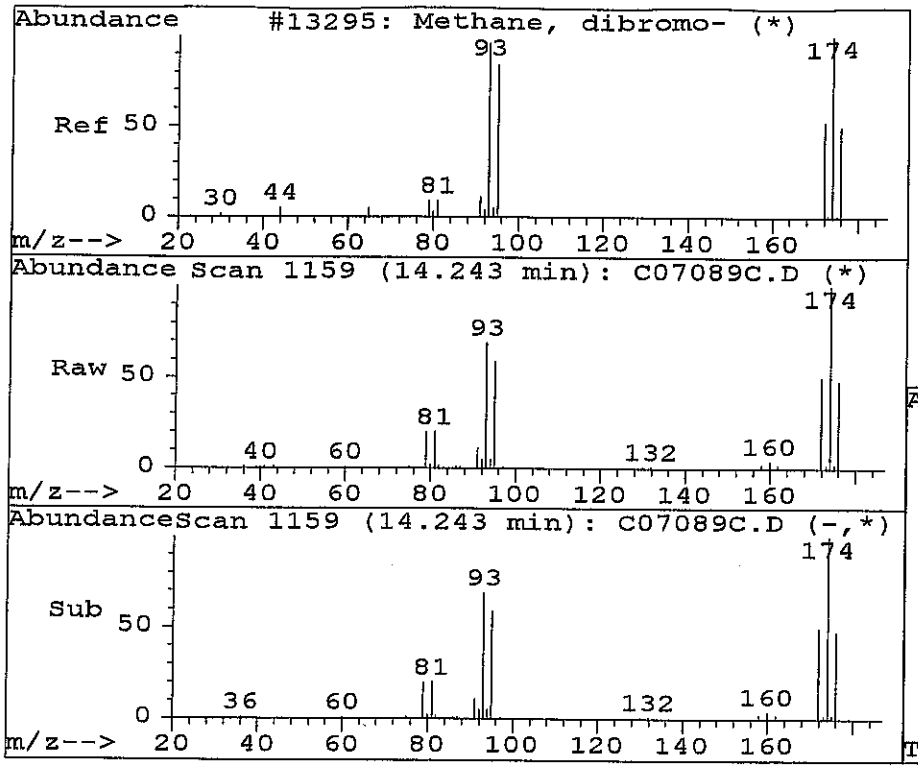


#44
1,4 Dioxane
Concen: 3.48 ppbV
RT: 14.44 min Scan# 1179
Delta R.T. 0.04 min
Lab File: C07089C.D
Acq: 8 Jul 109 11:12 am

Tgt Ion:88 Resp: 264761

Ion	Ratio	Lower	Upper
88	100		
58	95.2	75.8	113.6
31	0.0	0.0	0.0
0	0.0	0.0	0.0

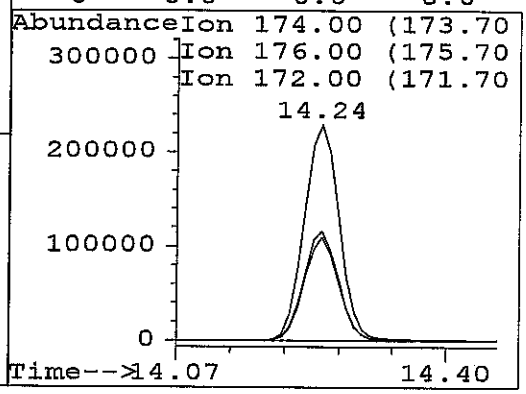


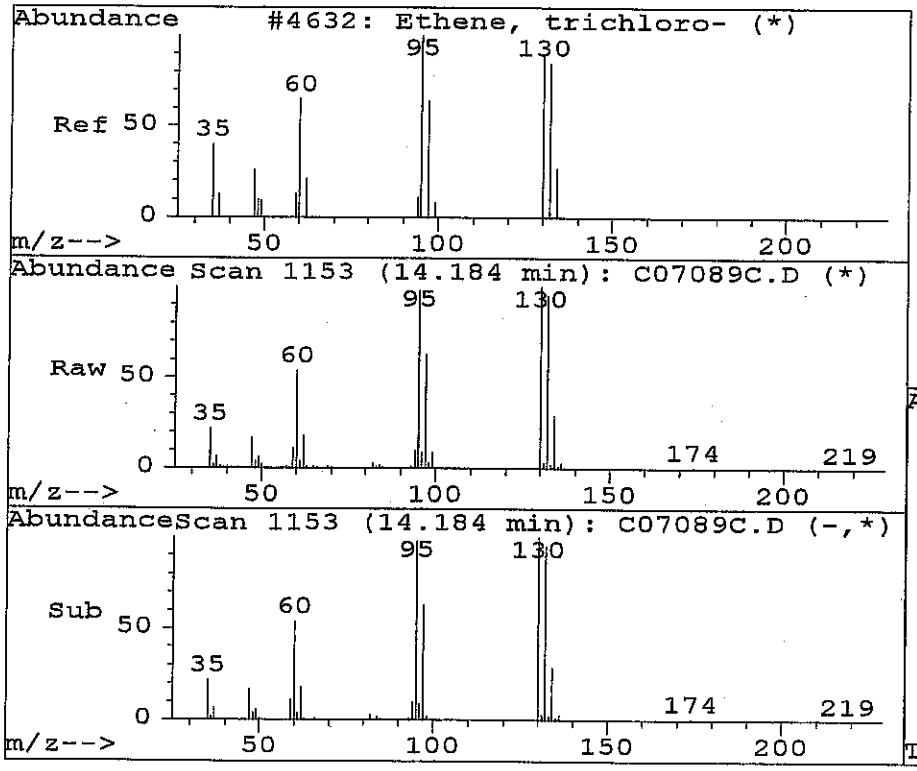


#45
Dibromomethane
Concen: 4.25 ppbV
RT: 14.24 min Scan# 1159
Delta R.T. 0.04 min
Lab File: C07089C.D
Acq: 8 Jul 109 11:12 am

Tgt Ion:174 Resp: 675813

Ion	Ratio	Lower	Upper
174	100		
176	47.8	36.6	54.8
172	50.5	40.9	61.3
0	0.0	0.0	0.0

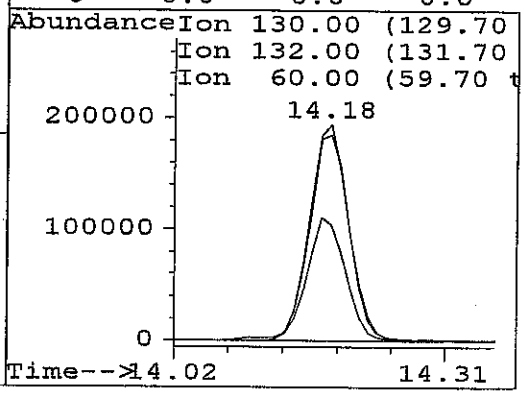


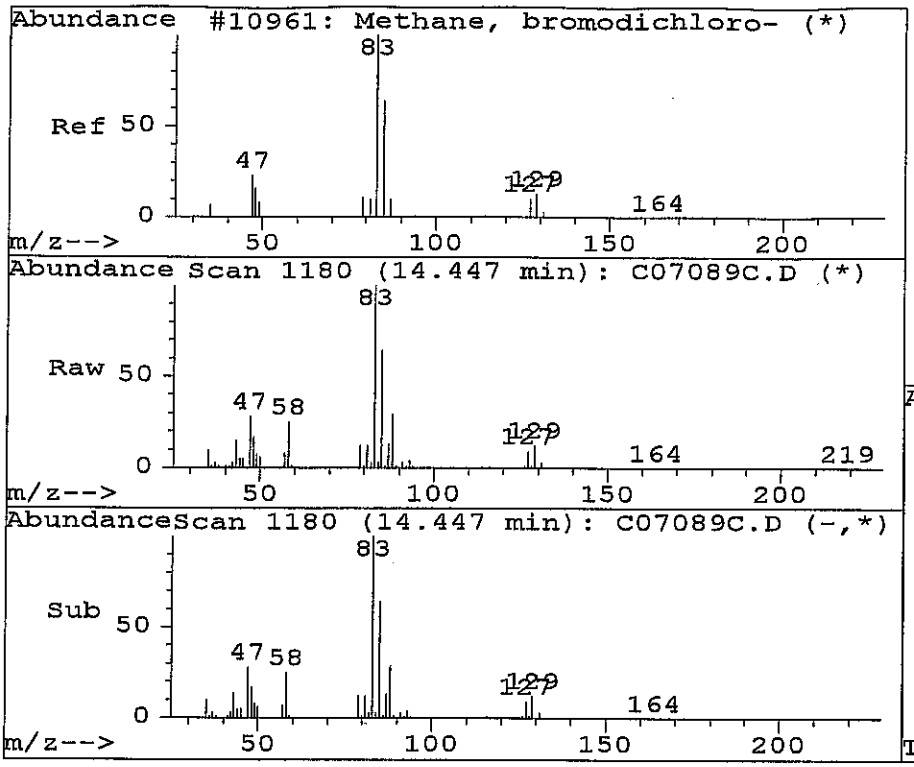


#46
Trichloroethene
Concen: 4.47 ppbV
RT: 14.18 min Scan# 1153
Delta R.T. 0.05 min
Lab File: C07089C.D
Acq: 8 Jul 109 11:12 am

Tgt Ion:130 Resp: 555190

Ion	Ratio	Lower	Upper
130	100		
132	95.2	79.1	118.7
60	53.0	46.3	69.5
0	0.0	0.0	0.0

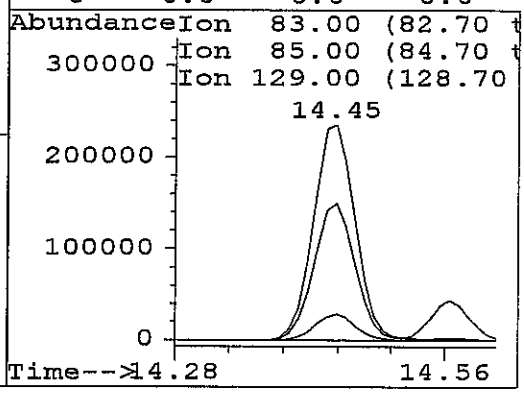


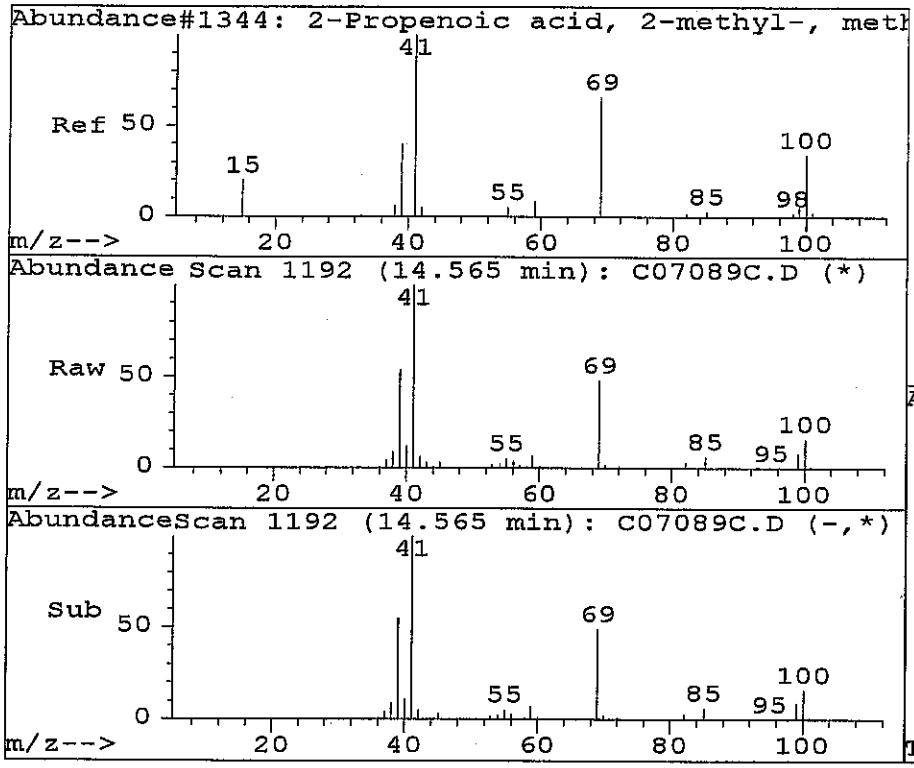


#47
Bromodichloromethane
Concen: 3.59 ppbV
RT: 14.45 min Scan# 1180
Delta R.T. 0.05 min
Lab File: C07089C.D
Acq: 8 Jul 109 11:12 am

Tgt Ion:83 Resp: 701973

Ion	Ratio	Lower	Upper
83	100		
85	61.1	49.3	73.9
129	12.2	8.6	13.0
0	0.0	0.0	0.0

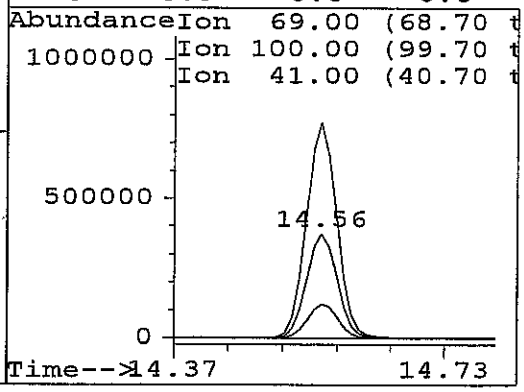


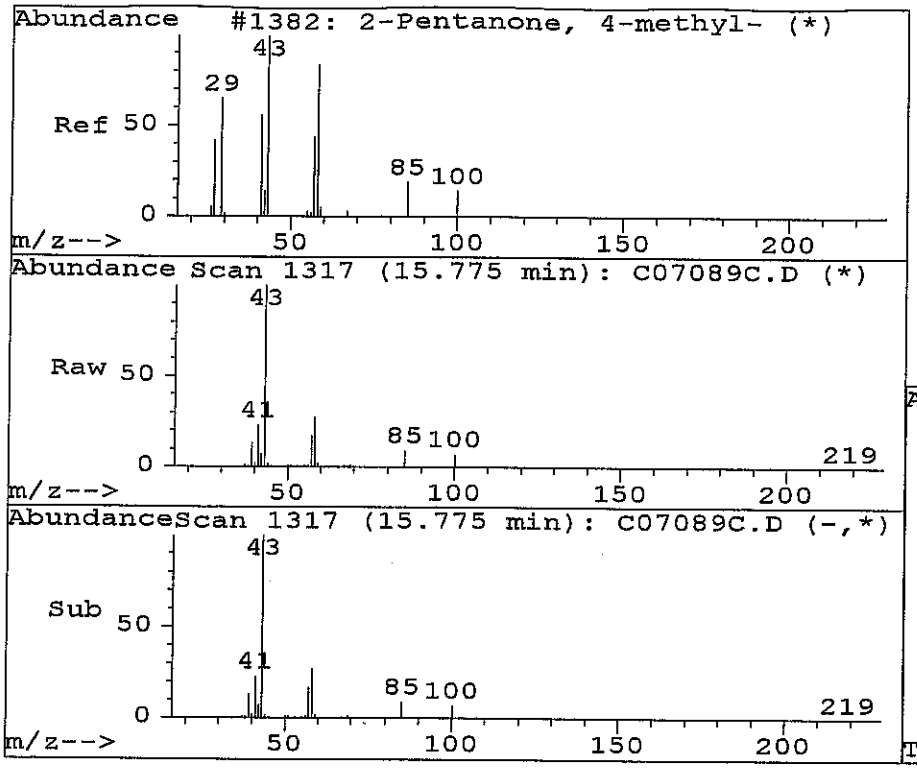


#48
Methyl methacrylate
Concen: 9.89 ppbV
RT: 14.56 min Scan# 1192
Delta R.T. 0.01 min
Lab File: C07089C.D
Acq: 8 Jul 109 11:12 am

Tgt Ion:69 Resp: 1053028

Ion	Ratio	Lower	Upper
69	100		
100	32.7	27.5	41.3
41	207.9	163.1	244.7
0	0.0	0.0	0.0

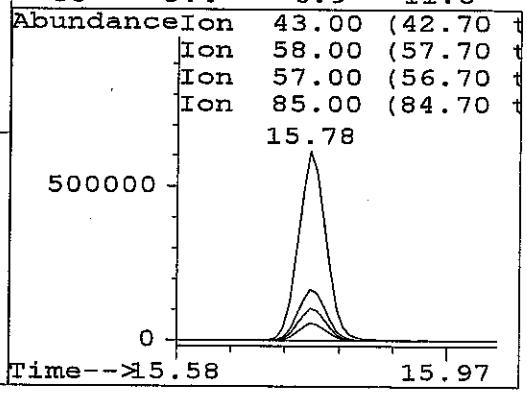


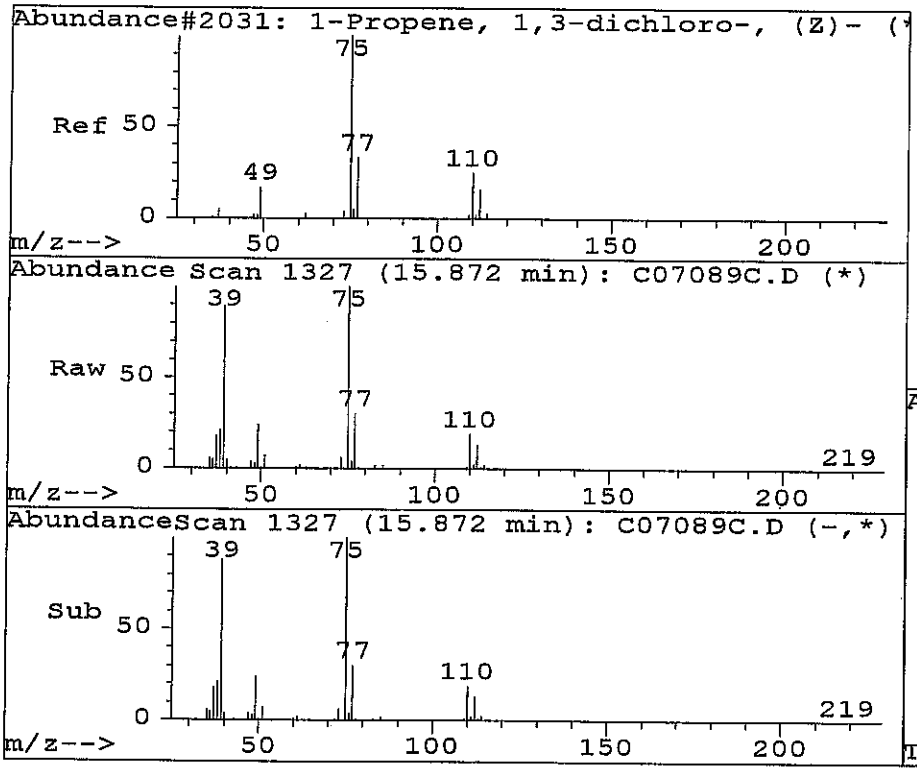


#49
Methyl Isobutyl Ketone
Concen: 3.93 ppbV
RT: 15.78 min Scan# 1317
Delta R.T. 0.08 min
Lab File: C07089C.D
Acq: 8 Jul 109 11:12 am

Tgt Ion:43 Resp: 1718281

Ion	Ratio	Lower	Upper
43	100		
58	27.1	20.7	34.5
57	17.1	12.8	21.4
85	9.4	6.9	11.5

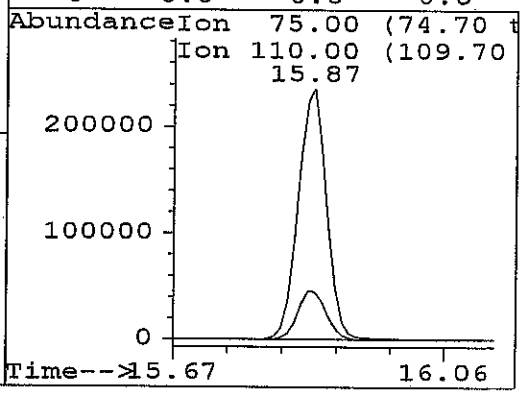


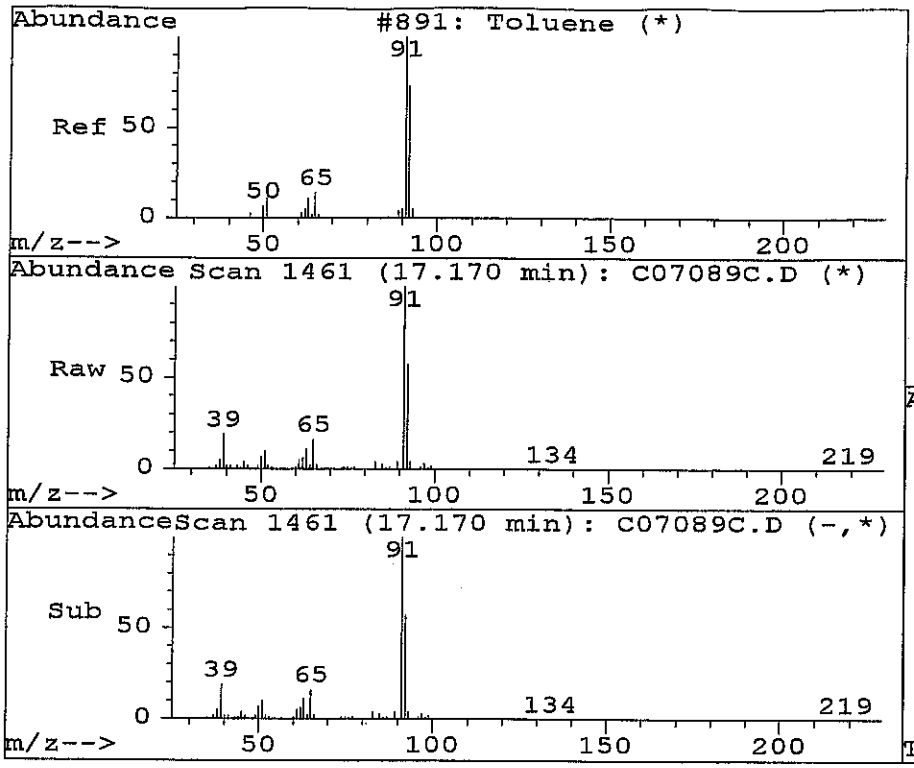


#50
cis-1,3-Dichloropropene
Concen: 4.33 ppbV
RT: 15.87 min Scan# 1327
Delta R.T. 0.05 min
Lab File: C07089C.D
Acq: 8 Jul 109 11:12 am

Tgt Ion:75 Resp: 669464

Ion	Ratio	Lower	Upper
75	100		
110	19.1	15.3	22.9
0	0.0	0.0	0.0
0	0.0	0.0	0.0

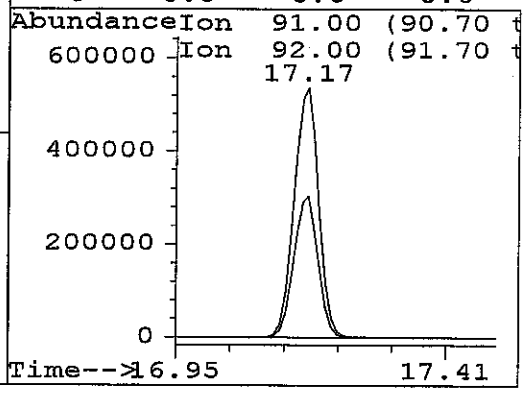


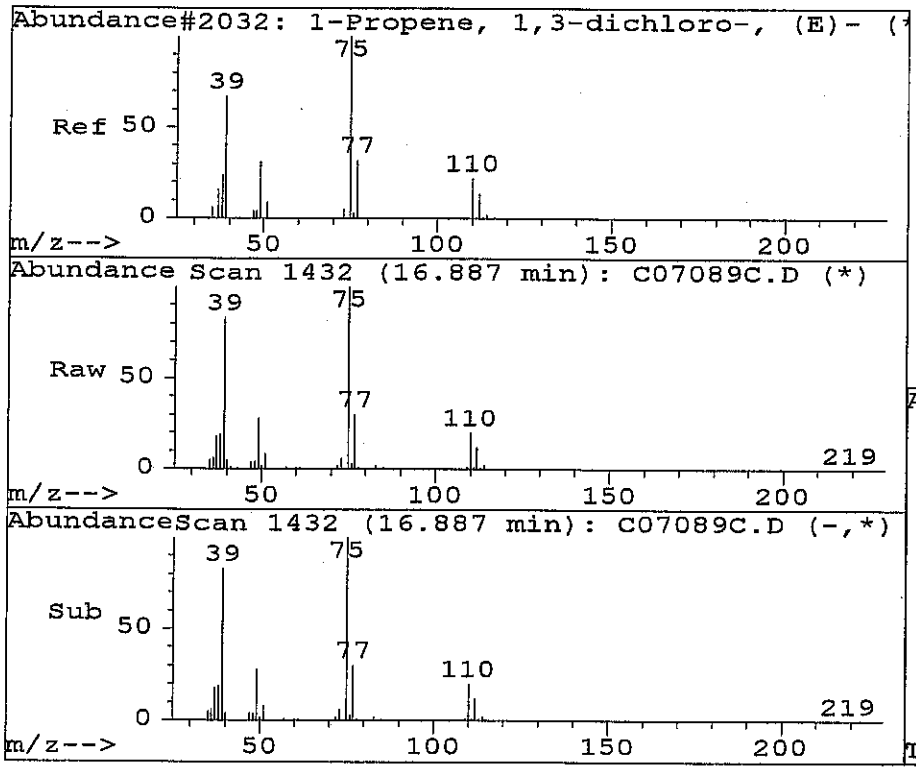


#51
Toluene
Concen: 4.70 ppbV
RT: 17.17 min Scan# 1461
Delta R.T. 0.06 min
Lab File: C07089C.D
Acq: 8 Jul 109 11:12 am

Tgt Ion:91 Resp: 1578173

Ion	Ratio	Lower	Upper
91	100		
92	56.6	43.9	65.9
0	0.0	0.0	0.0
0	0.0	0.0	0.0

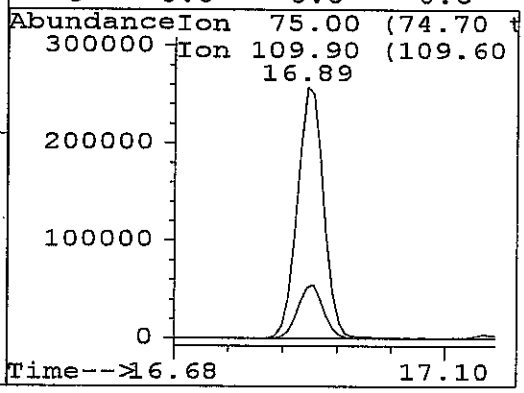


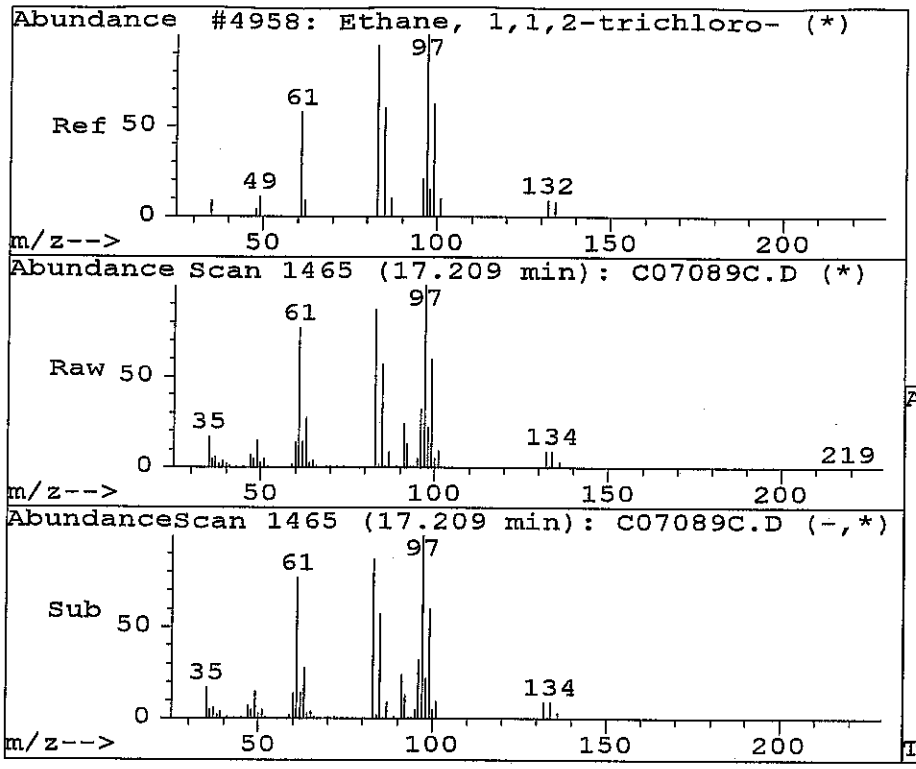


#52
trans-1,3-Dichloropropene
Concen: 3.96 ppbV
RT: 16.89 min Scan# 1432
Delta R.T. 0.04 min
Lab File: C07089C.D
Acq: 8 Jul 109 11:12 am

Tgt Ion:75 Resp: 726985

Ion	Ratio	Lower	Upper
75	100		
110	20.4	15.5	23.3
0	0.0	0.0	0.0
0	0.0	0.0	0.0

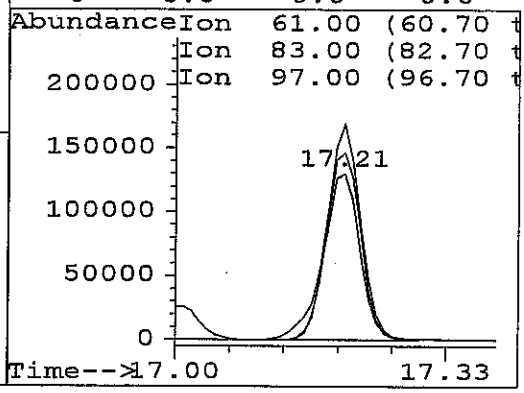


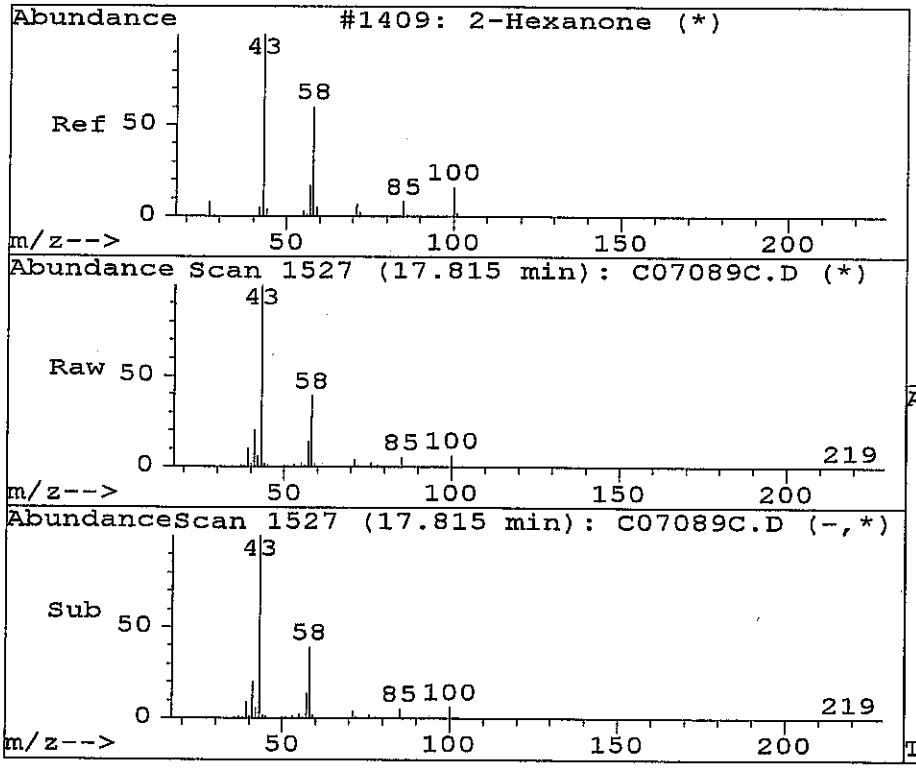


#53
1,1,2-Trichloroethane
Concen: 4.12 ppbV
RT: 17.21 min Scan# 1465
Delta R.T. 0.05 min
Lab File: C07089C.D
Acq: 8 Jul 109 11:12 am

Tgt Ion:61 Resp: 406435

Ion	Ratio	Lower	Upper
61	100		
83	112.6	90.9	136.3
97	130.4	96.7	145.1
0	0.0	0.0	0.0

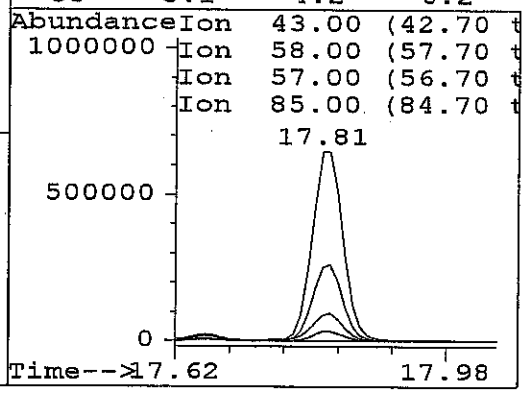


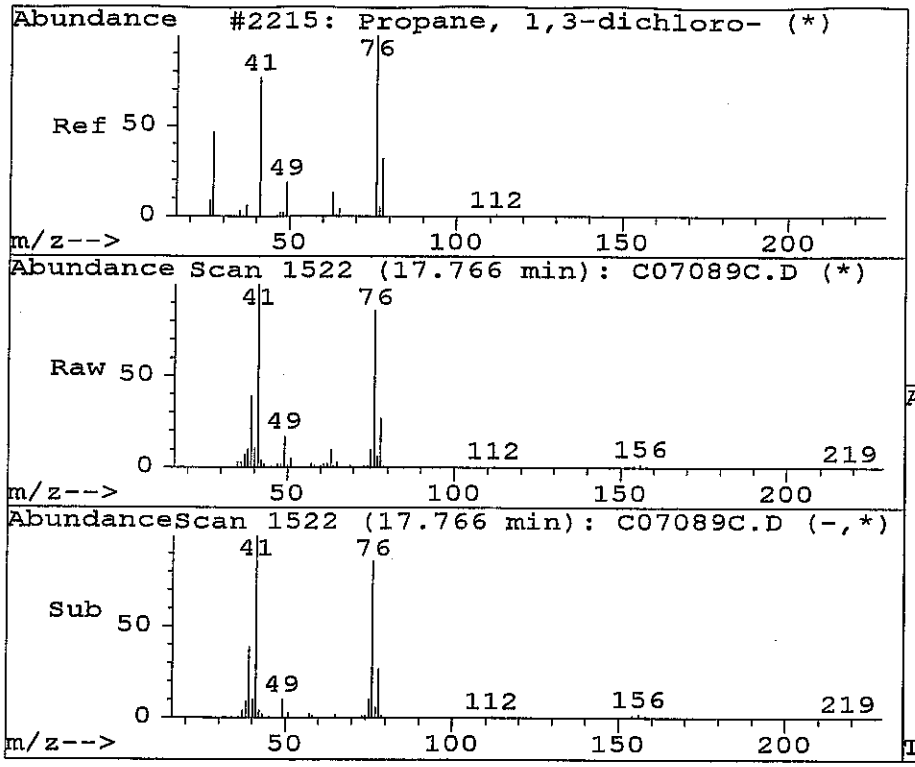


#54
2-Hexanone
Concen: 3.31 ppbV
RT: 17.81 min Scan# 1527
Delta R.T. 0.01 min
Lab File: C07089C.D
Acq: 8 Jul 109 11:12 am

Tgt Ion:43 Resp: 1834668

Ion	Ratio	Lower	Upper
43	100		
58	38.9	28.2	47.0
57	13.5	10.4	17.3
85	5.1	4.2	6.2

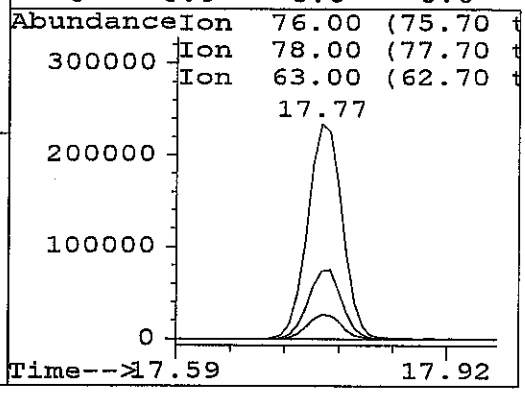


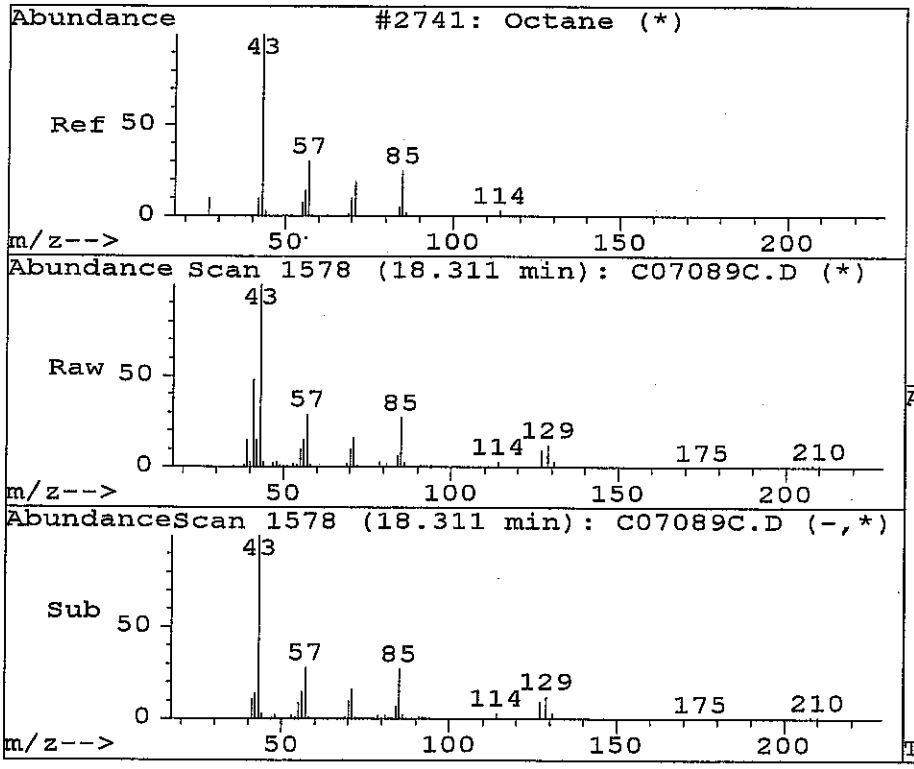


#55
1,3-Dichloropropane
Concen: 3.49 ppbV
RT: 17.77 min Scan# 1522
Delta R.T. 0.05 min
Lab File: C07089C.D
Acq: 8 Jul 109 11:12 am

Tgt Ion:76 Resp: 680913

Ion	Ratio	Lower	Upper
76	100		
78	31.5	26.6	40.0
63	11.3	8.5	12.7
0	0.0	0.0	0.0

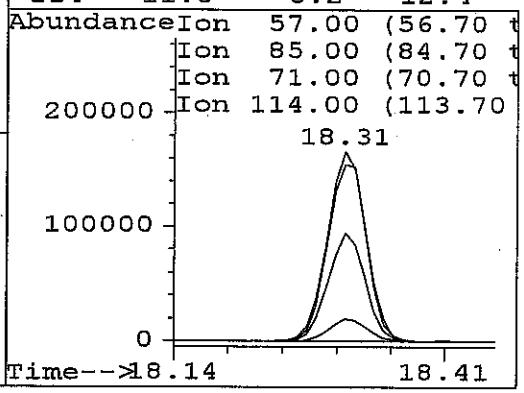


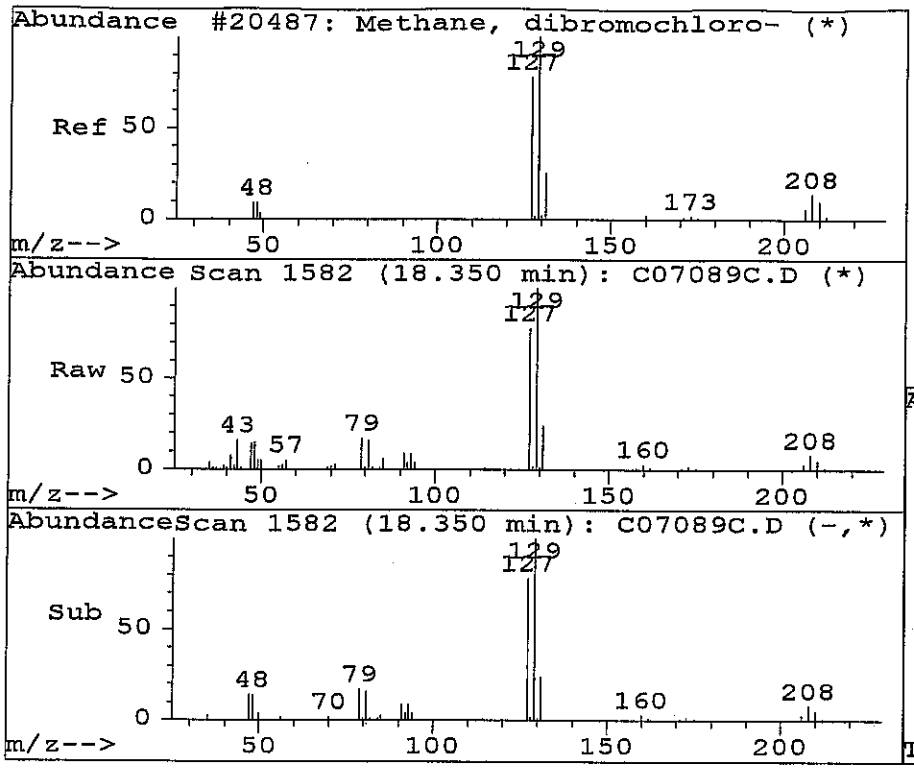


#56
Octane
Concen: 3.52 ppbV
RT: 18.31 min Scan# 1578
Delta R.T. 0.05 min
Lab File: C07089C.D
Acq: 8 Jul 109 11:12 am

Tgt Ion:57 Resp: 444312

Ion	Ratio	Lower	Upper
57	100		
85	93.2	81.3	121.9
71	56.9	45.0	67.4
114	11.8	8.2	12.4

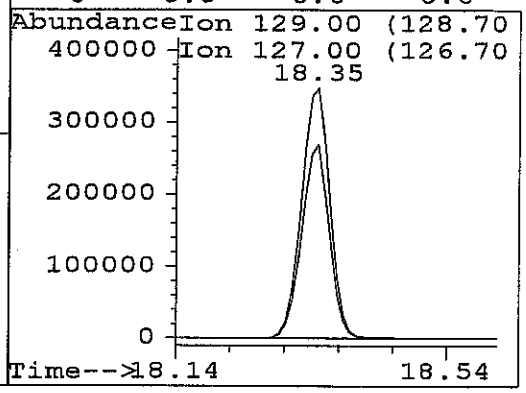


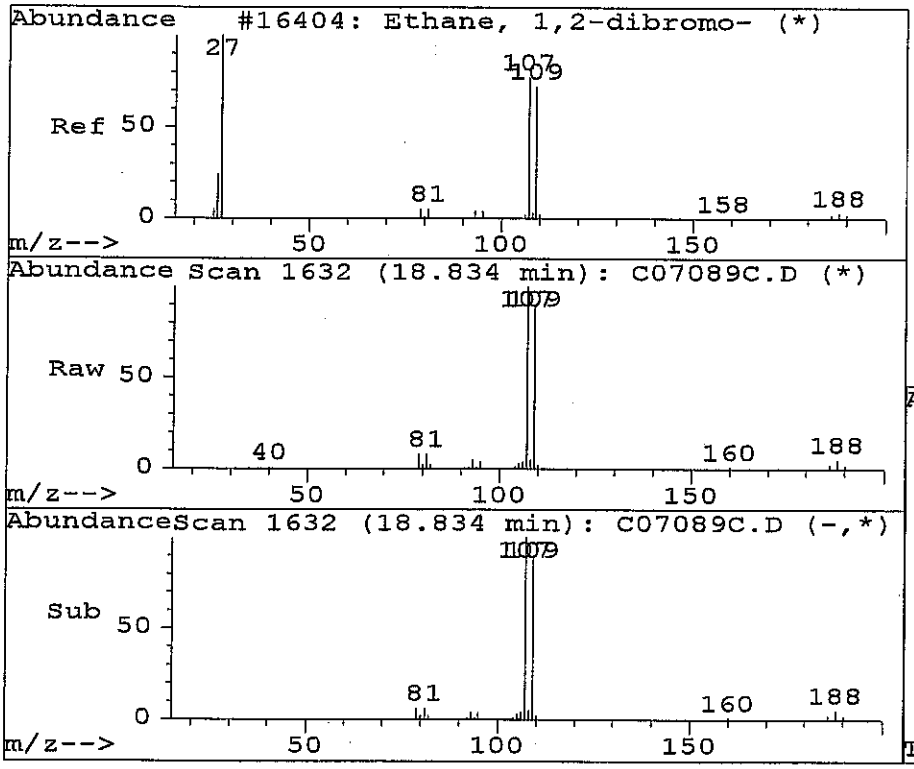


#57
Dibromochloromethane
Concen: 3.92 ppbV
RT: 18.35 min Scan# 1582
Delta R.T. 0.05 min
Lab File: C07089C.D
Acq: 8 Jul 109 11:12 am

Tgt Ion:129 Resp: 1027121

Ion	Ratio	Lower	Upper
129	100		
127	77.5	60.3	90.5
0	0.0	0.0	0.0
0	0.0	0.0	0.0

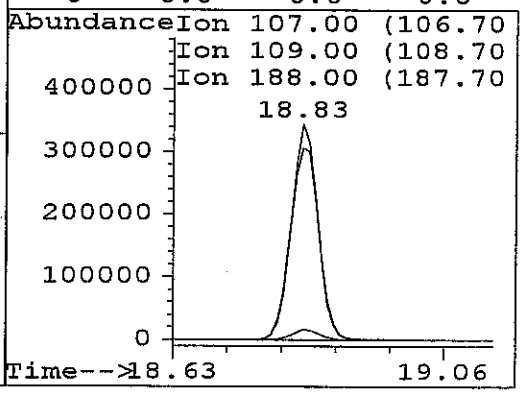


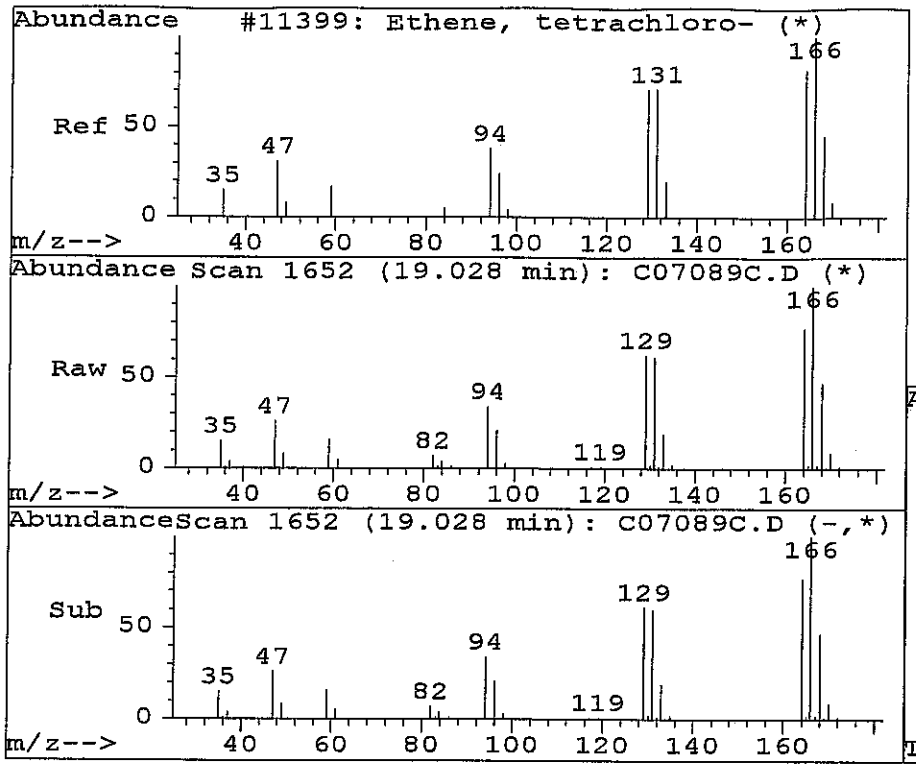


#58
1,2-Dibromoethane
Concen: 4.14 ppbV
RT: 18.83 min Scan# 1632
Delta R.T. 0.03 min
Lab File: C07089C.D
Acq: 8 Jul 109 11:12 am

Tgt Ion:107 Resp: 1003875

Ion	Ratio	Lower	Upper
107	100		
109	88.9	75.4	113.0
188	4.8	3.0	4.6#
0	0.0	0.0	0.0

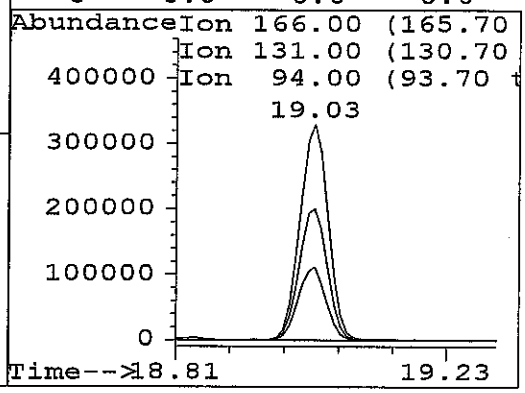


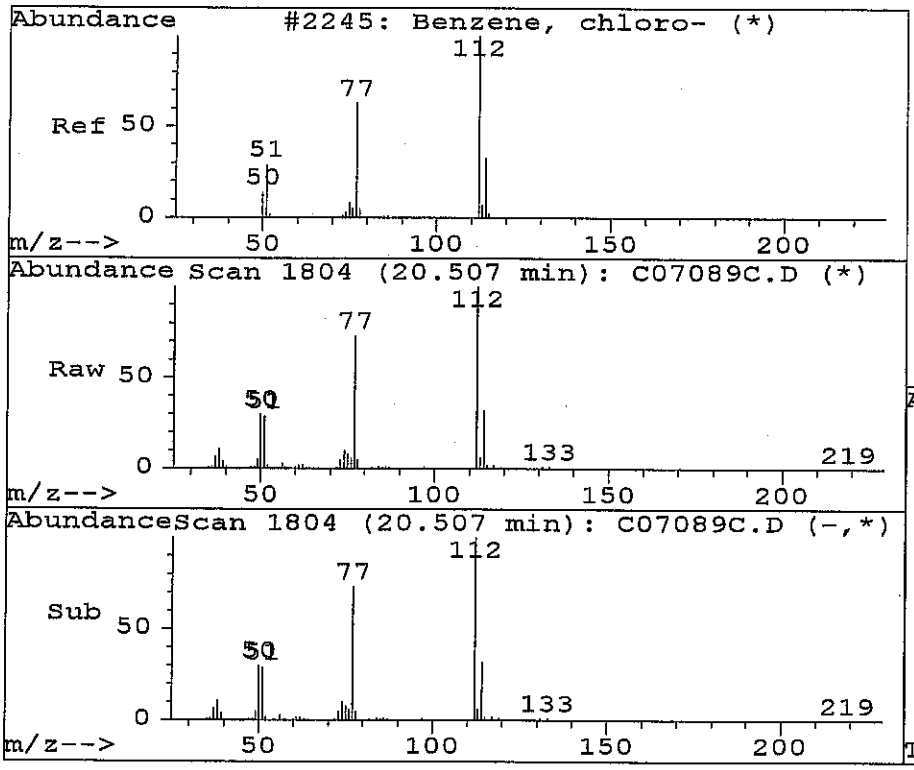


#59
Tetrachloroethene
Concen: 4.65 ppbV
RT: 19.03 min Scan# 1652
Delta R.T. 0.06 min
Lab File: C07089C.D
Acq: 8 Jul 109 11:12 am

Tgt Ion:166 Resp: 993276

Ion	Ratio	Lower	Upper
166	100		
131	60.3	52.1	78.1
94	33.8	29.9	44.9
0	0.0	0.0	0.0

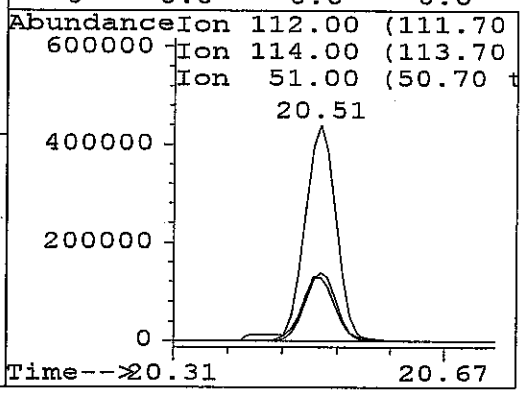


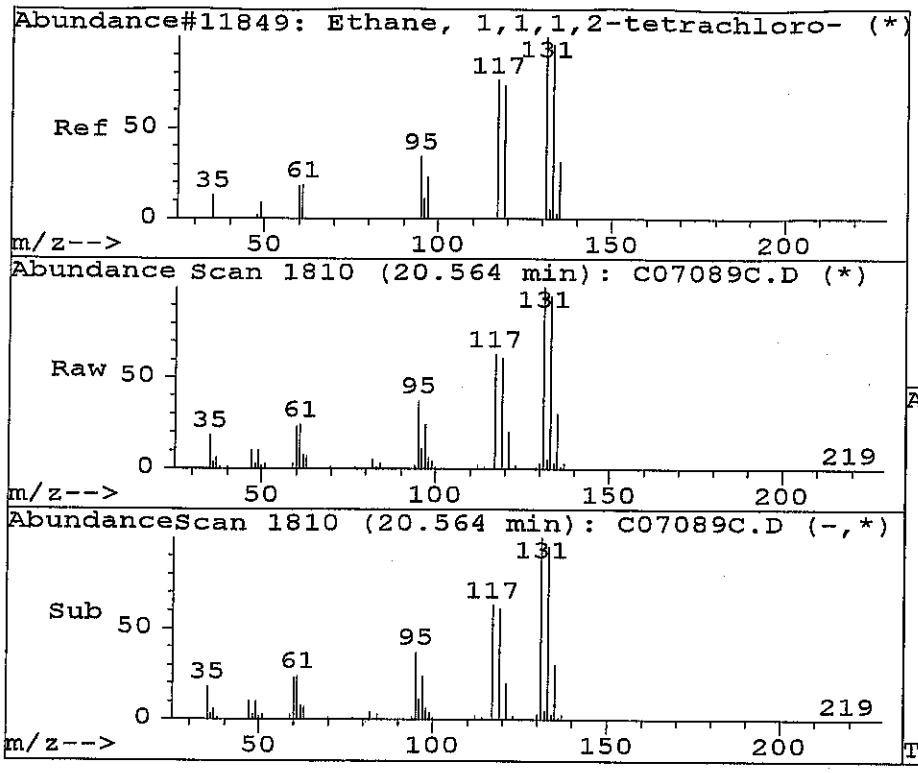


#60
Chlorobenzene
Concen: 4.07 ppbV
RT: 20.51 min Scan# 1804
Delta R.T. 0.06 min
Lab File: C07089C.D
Acq: 8 Jul 109 11:12 am

Tgt Ion:112 Resp: 1275607

Ion	Ratio	Lower	Upper
112	100		
114	31.6	25.3	37.9
51	28.0	23.0	34.6
0	0.0	0.0	0.0

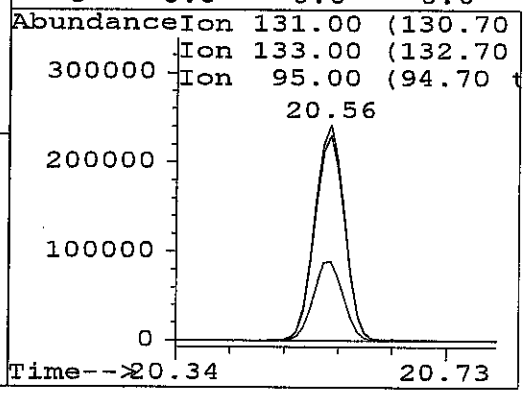


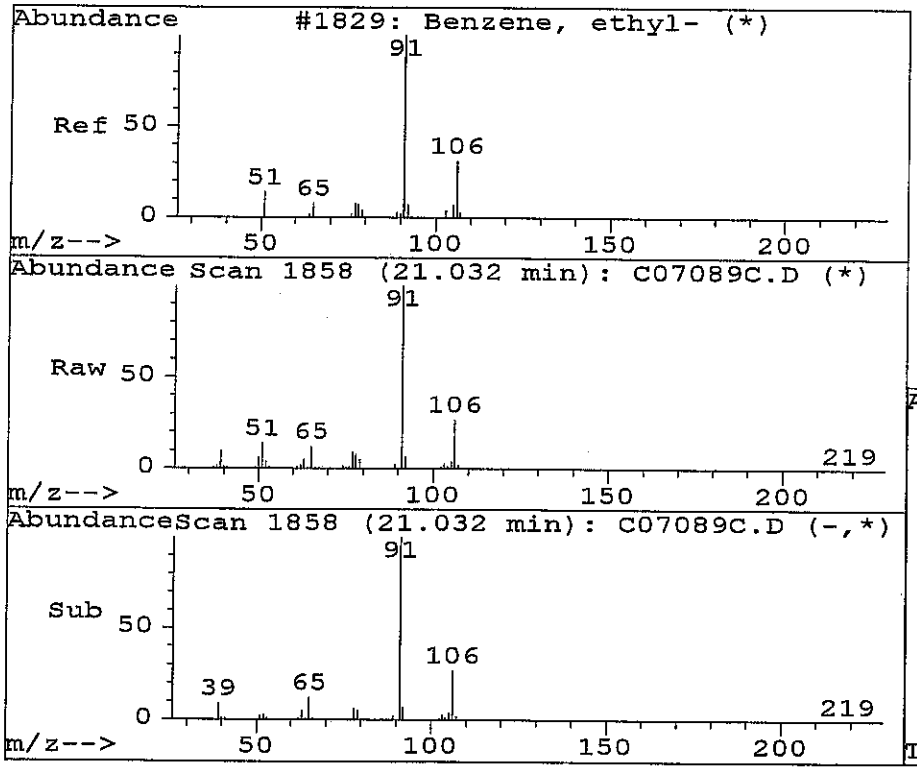


#61
1,1,1,2-Tetrachloroethane
Concen: 3.83 ppbV
RT: 20.56 min Scan# 1810
Delta R.T. 0.05 min
Lab File: C07089C.D
Acq: 8 Jul 109 11:12 am

Tgt Ion:131 Resp: 723958

Ion	Ratio	Lower	Upper
131	100		
133	95.4	76.0	114.0
95	36.9	31.8	47.6
0	0.0	0.0	0.0

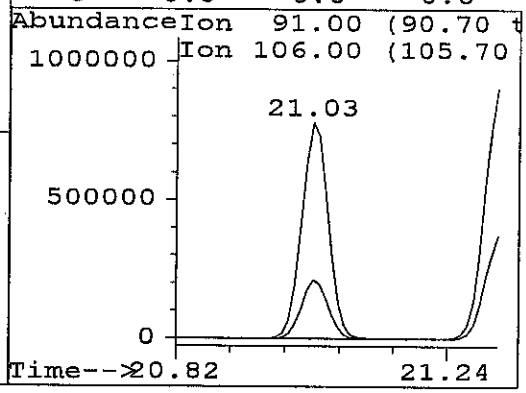


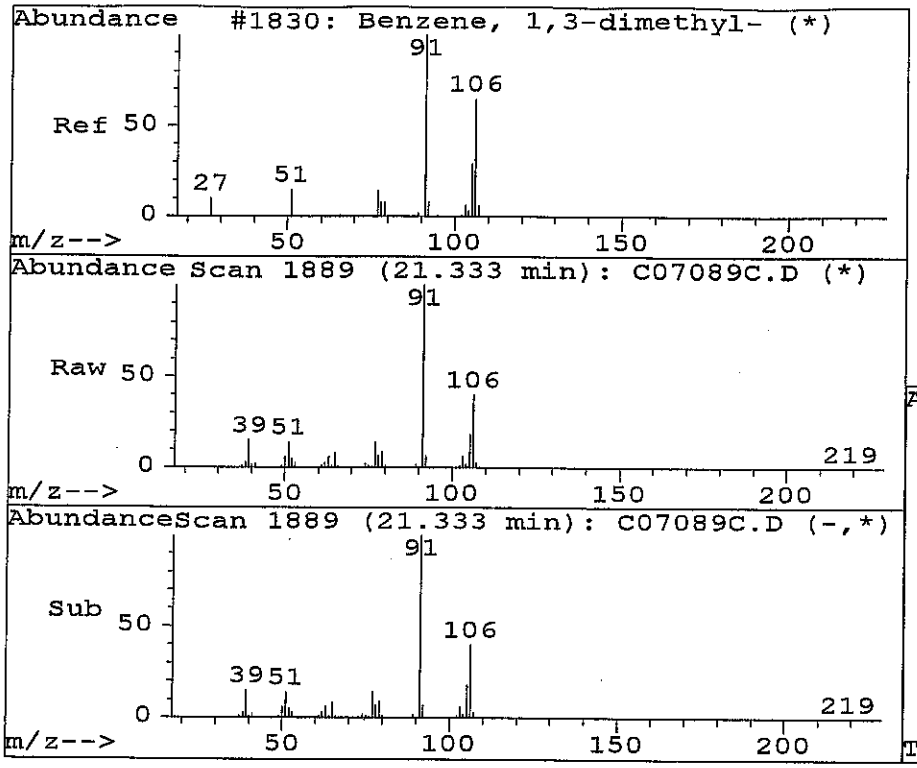


#62
Ethylbenzene
Concen: 4.23 ppbV
RT: 21.03 min Scan# 1858
Delta R.T. 0.04 min
Lab File: C07089C.D
Acq: 8 Jul 109 11:12 am

Tgt Ion:91 Resp: 2262841

Ion	Ratio	Lower	Upper
91	100		
106	27.1	21.4	32.0
0	0.0	0.0	0.0
0	0.0	0.0	0.0

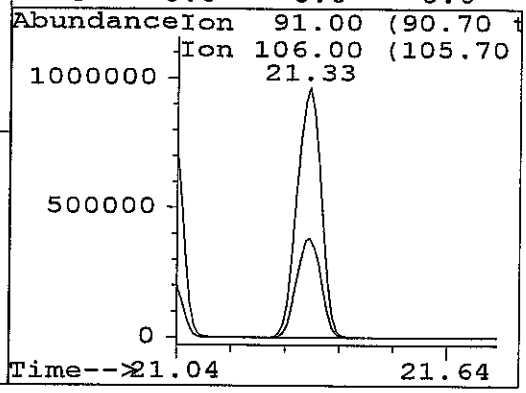


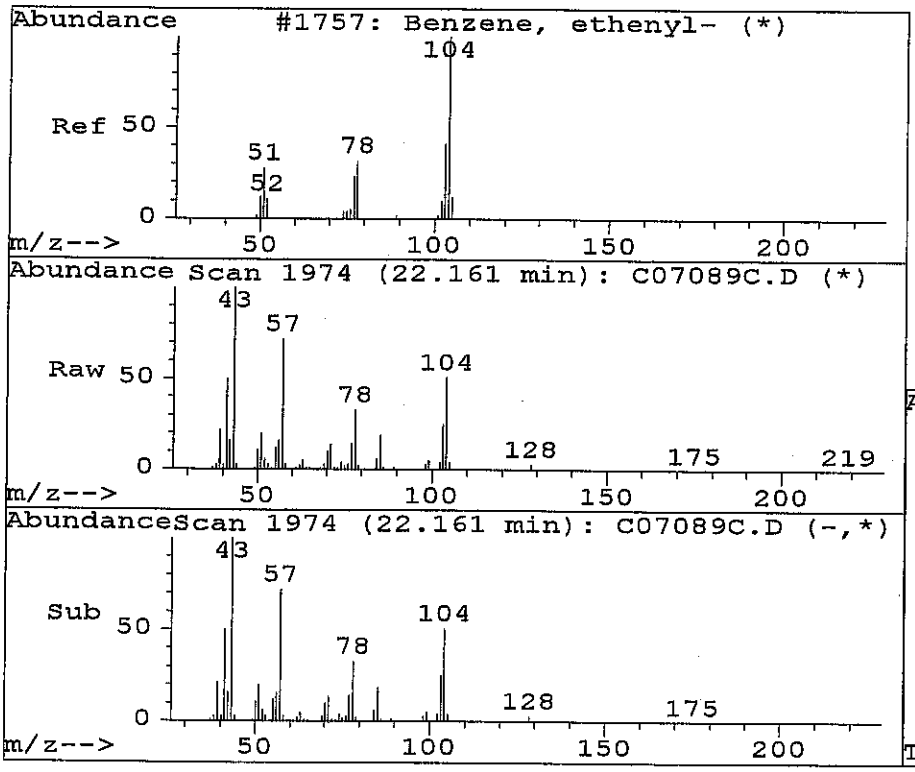


#63
m & p-Xylene
Concen: 7.79 ppbV
RT: 21.33 min Scan# 1889
Delta R.T. 0.05 min
Lab File: C07089C.D
Acq: 8 Jul 109 11:12 am

Tgt Ion:91 Resp: 3516006

Ion	Ratio	Lower	Upper
91	100		
106	39.7	31.9	47.9
0	0.0	0.0	0.0
0	0.0	0.0	0.0

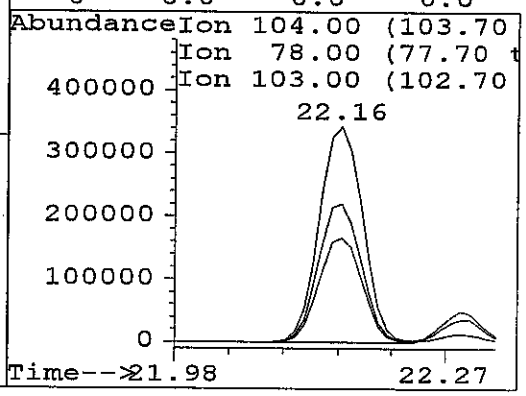


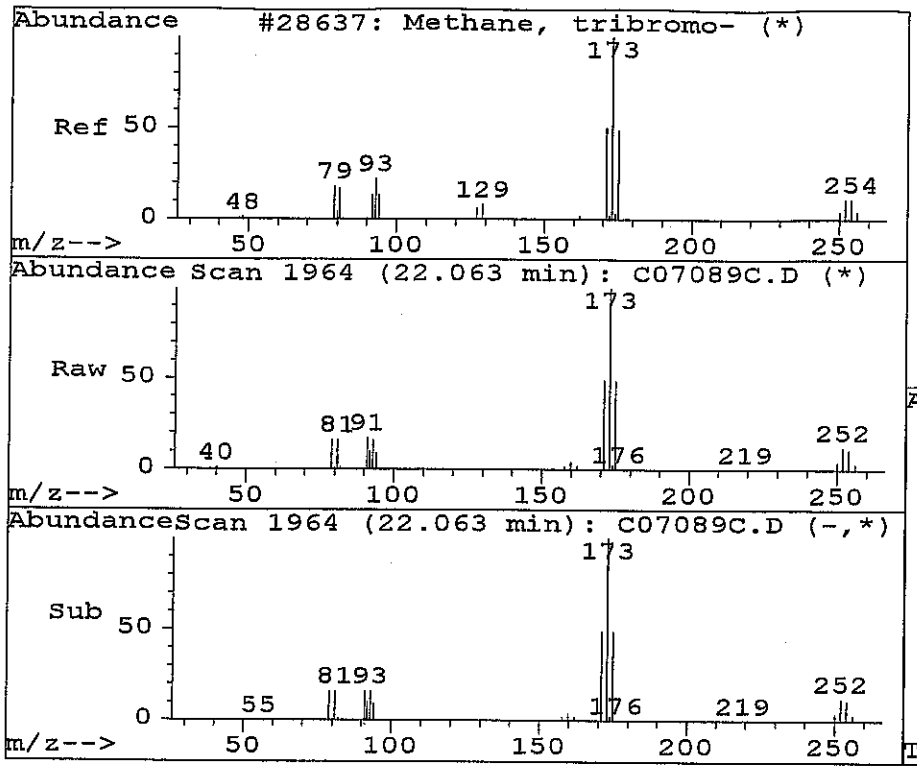


#64
Styrene
Concen: 3.41 ppbV
RT: 22.16 min Scan# 1974
Delta R.T. 0.02 min
Lab File: C07089C.D
Acq: 8 Jul 109 11:12 am

Tgt Ion:104 Resp: 1097925

Ion	Ratio	Lower	Upper
104	100		
78	63.9	52.8	79.2
103	48.2	37.9	56.9
0	0.0	0.0	0.0

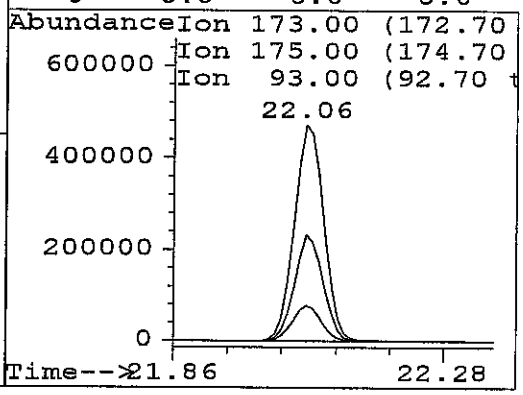


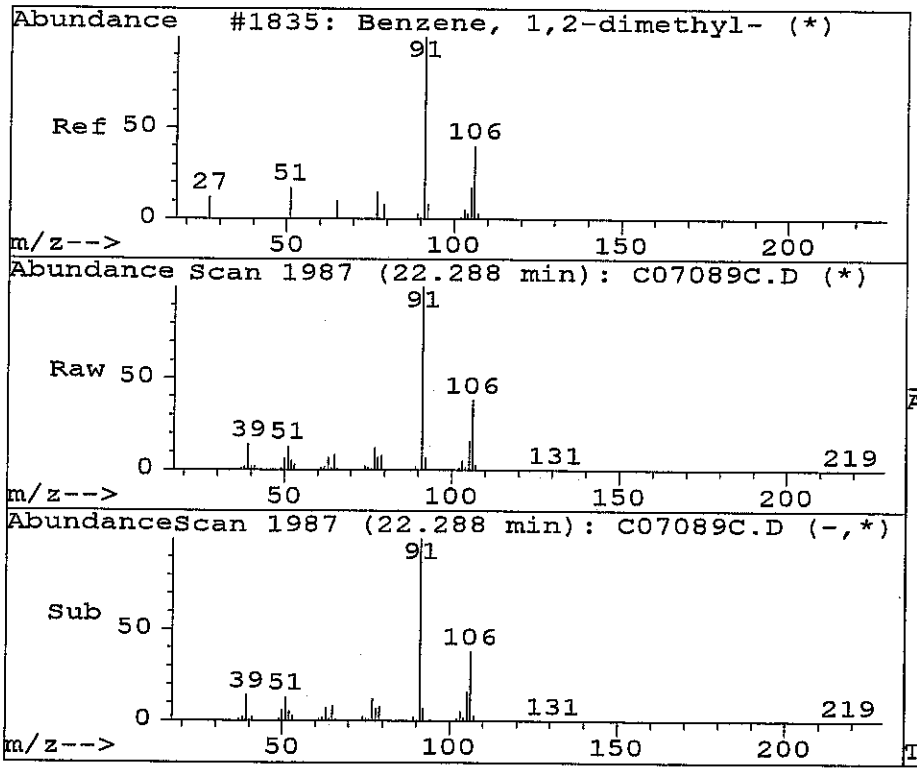


#65
Bromoform
Concen: 3.37 ppbV
RT: 22.06 min Scan# 1964
Delta R.T. 0.06 min
Lab File: C07089C.D
Acq: 8 Jul 109 11:12 am

Tgt Ion:173 Resp: 1494313

Ion	Ratio	Lower	Upper
173	100		
175	49.4	39.4	59.0
93	16.4	15.6	23.4
0	0.0	0.0	0.0

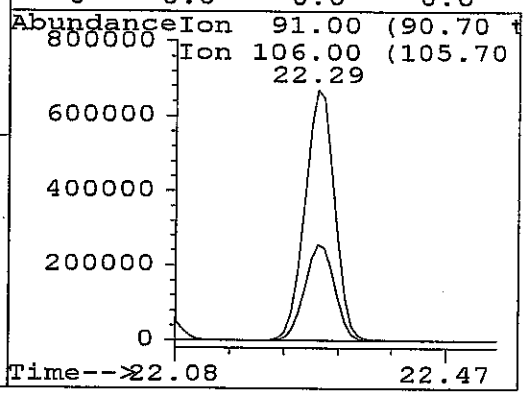


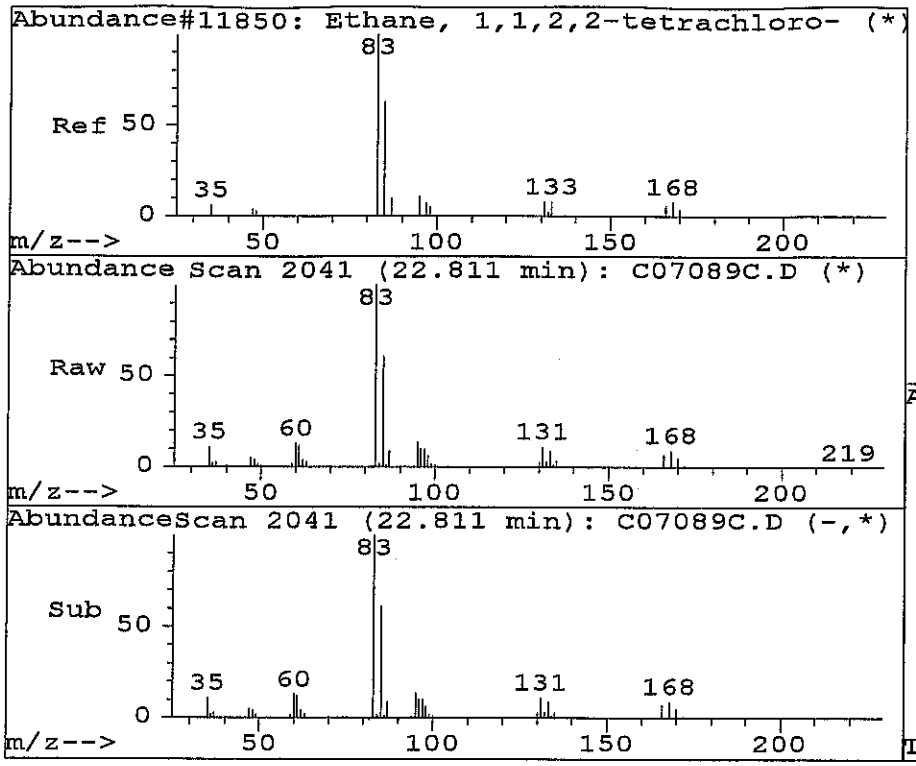


#66
o-Xylene
Concen: 4.06 ppbV
RT: 22.29 min Scan# 1987
Delta R.T. 0.04 min
Lab File: C07089C.D
Acq: 8 Jul 109 11:12 am

Tgt Ion:91 Resp: 2025664

Ion	Ratio	Lower	Upper
91	100		
106	38.2	29.8	44.8
0	0.0	0.0	0.0
0	0.0	0.0	0.0

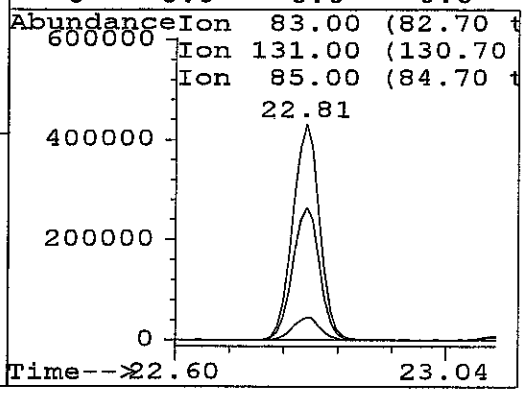


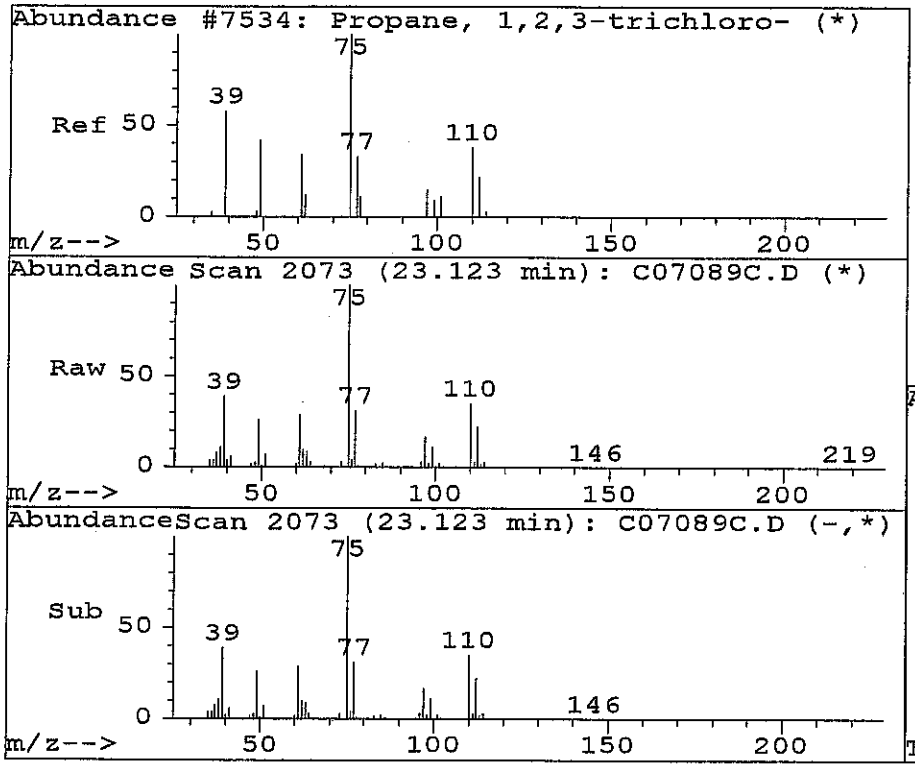


#67
1,1,2,2-Tetrachloroethane
Concen: 2.88 ppbV
RT: 22.81 min Scan# 2041
Delta R.T. 0.06 min
Lab File: C07089C.D
Acq: 8 Jul 109 11:12 am

Tgt Ion:83 Resp: 1319078

Ion	Ratio	Lower	Upper
83	100		
131	10.5	8.3	12.5
85	61.2	50.2	75.2
0	0.0	0.0	0.0

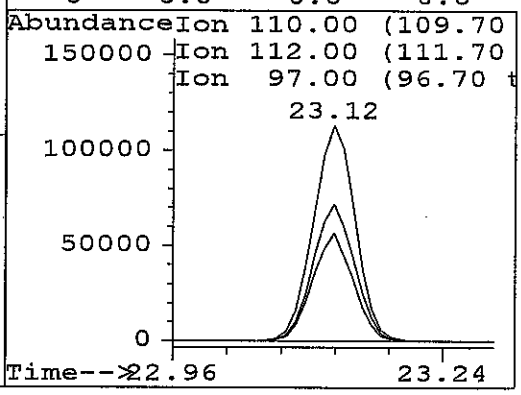


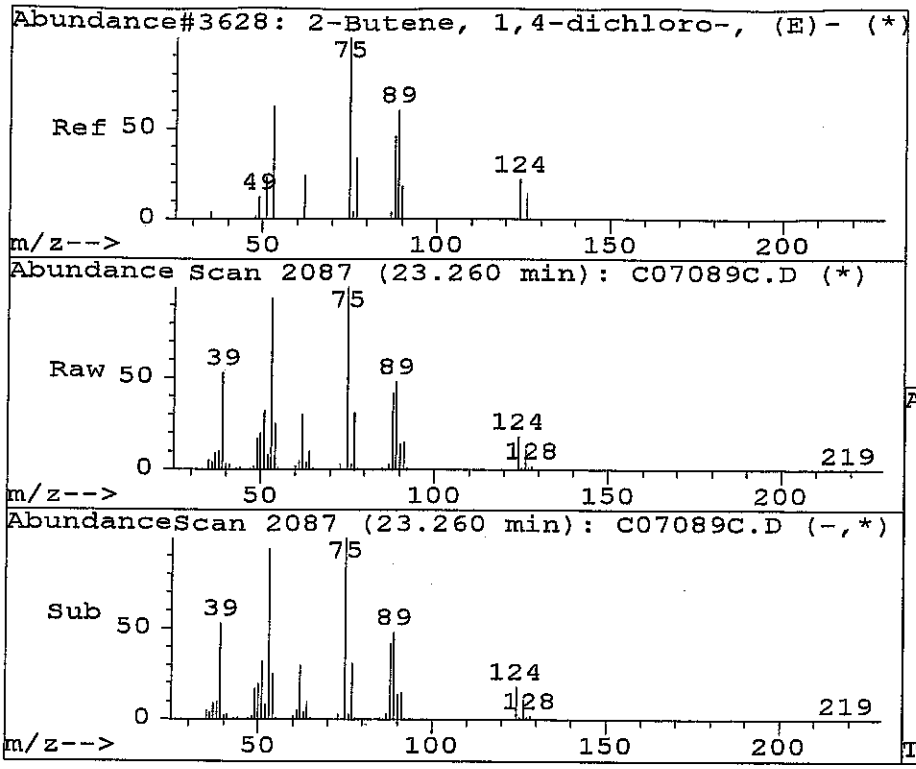


#68
1,2,3-Trichloropropane
Concen: 2.70 ppbV
RT: 23.12 min Scan# 2073
Delta R.T. 0.04 min
Lab File: C07089C.D
Acq: 8 Jul 109 11:12 am

Tgt Ion:110 Resp: 338495

Ion	Ratio	Lower	Upper
110	100		
112	63.5	51.9	77.9
97	50.0	39.8	59.6
0	0.0	0.0	0.0

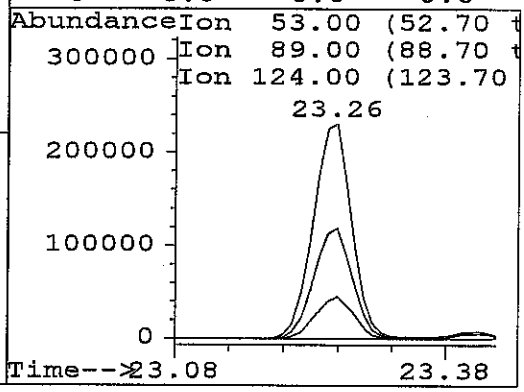


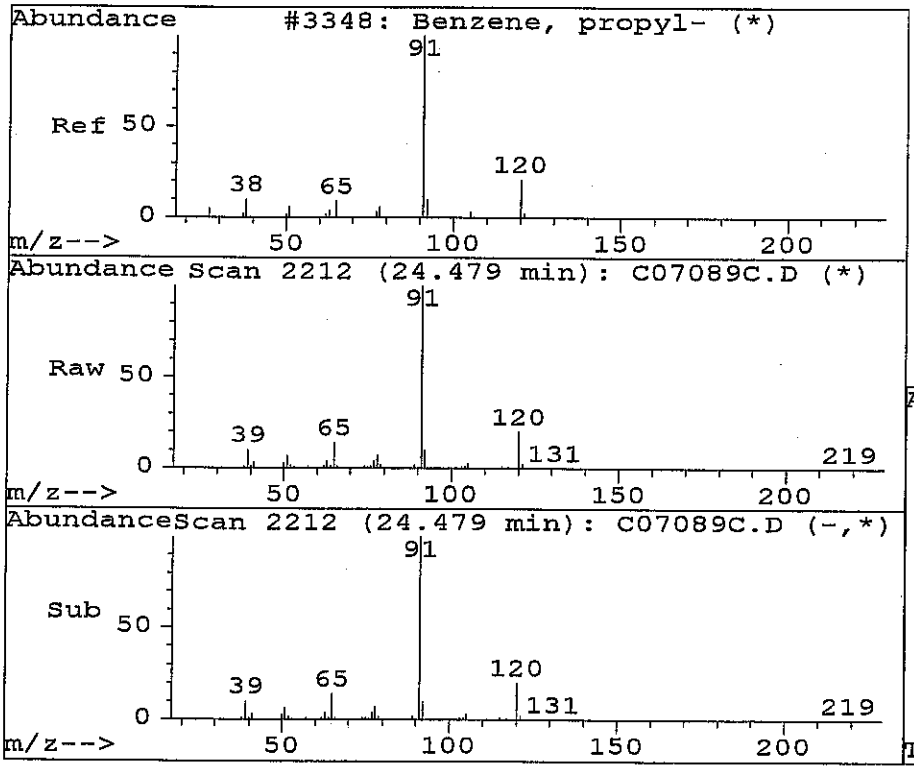


#69
t-1,4-Dichloro-2-butene
Concen: 5.96 ppbV
RT: 23.26 min Scan# 2087
Delta R.T. 0.03 min
Lab File: C07089C.D
Acq: 8 Jul 109 11:12 am

Tgt Ion:53 Resp: 667616

Ion	Ratio	Lower	Upper
53	100		
89	51.3	40.8	61.2
124	19.7	15.0	22.4
0	0.0	0.0	0.0

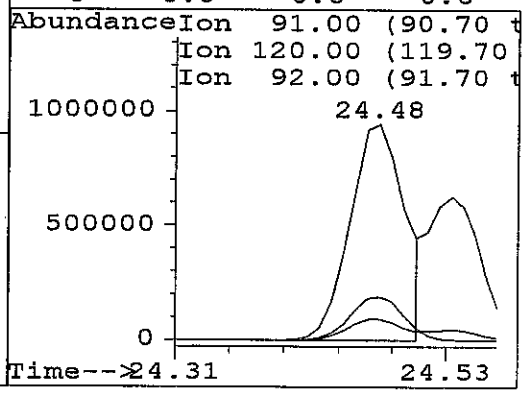


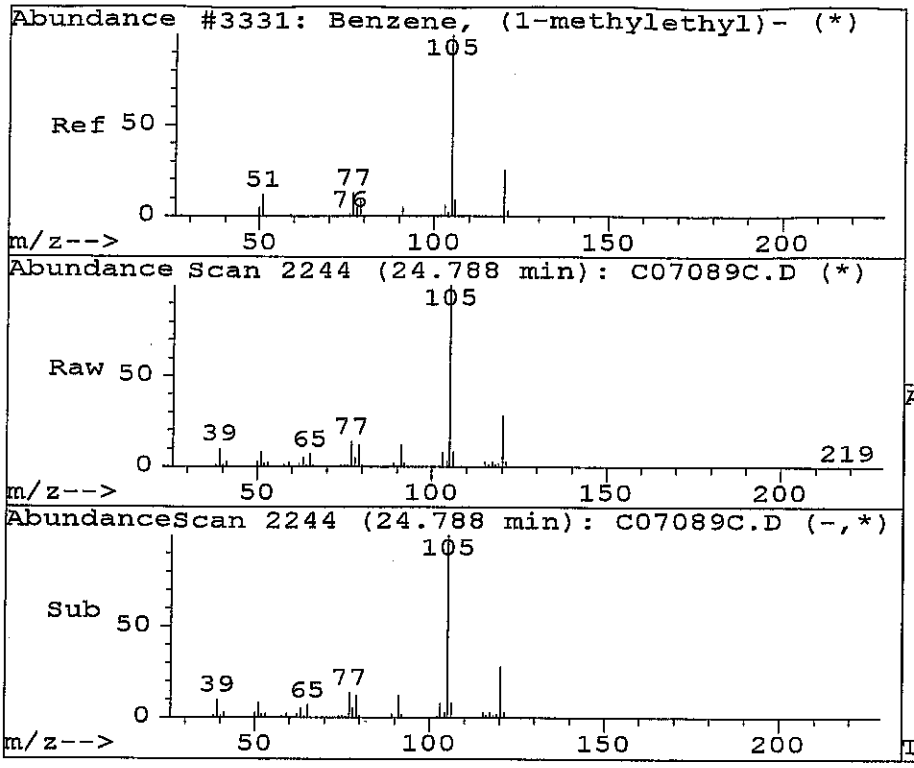


#70
n-Propylbenzene
Concen: 2.79 ppbV
RT: 24.48 min Scan# 2212
Delta R.T. 0.05 min
Lab File: C07089C.D
Acq: 8 Jul 109 11:12 am

Tgt Ion:91 Resp: 2913098

Ion	Ratio	Lower	Upper
91	100		
120	19.6	13.9	20.9
92	10.8	7.8	11.6
0	0.0	0.0	0.0

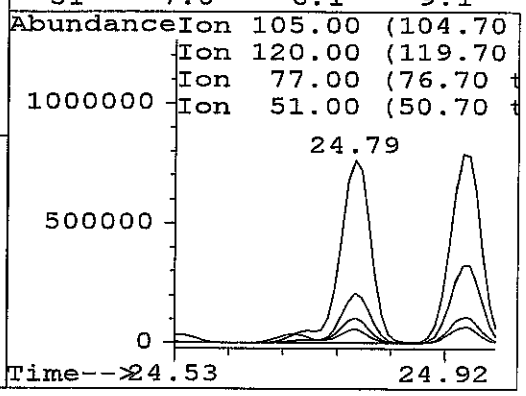


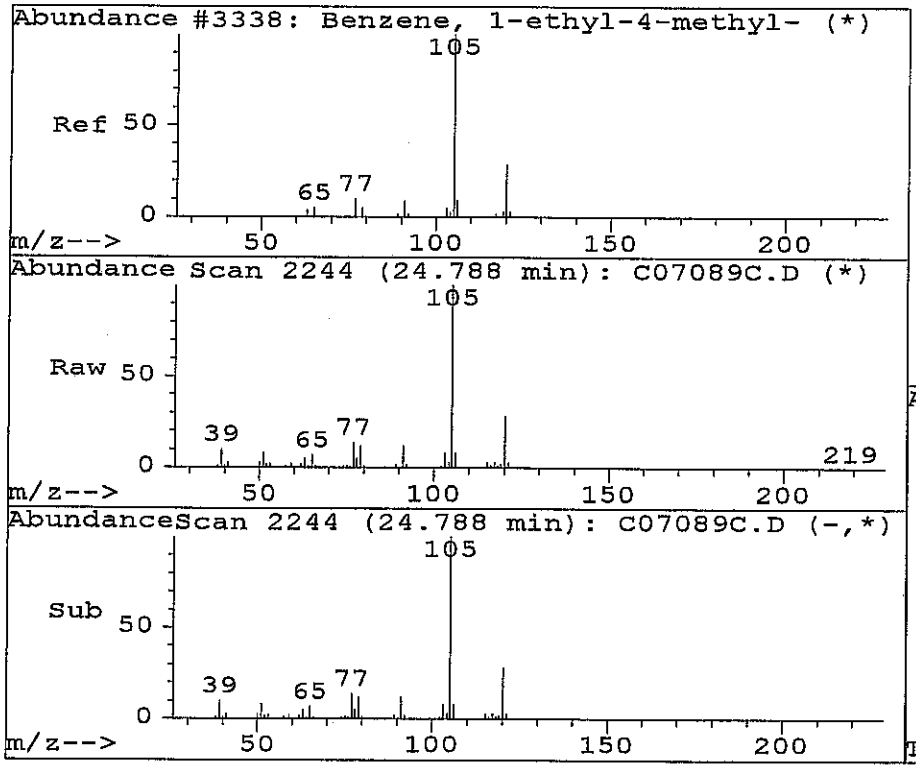


#71
Isopropylbenzene
Concen: 3.25 ppbV
RT: 24.79 min Scan# 2244
Delta R.T. 0.05 min
Lab File: C07089C.D
Acq: 8 Jul 109 11:12 am

Tgt Ion:105 Resp: 2465439

Ion	Ratio	Lower	Upper
105	100		
120	26.5	20.3	30.5
77	14.3	12.1	18.1
51	7.0	6.1	9.1

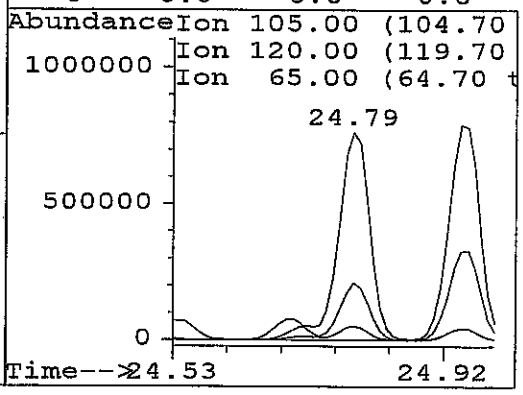


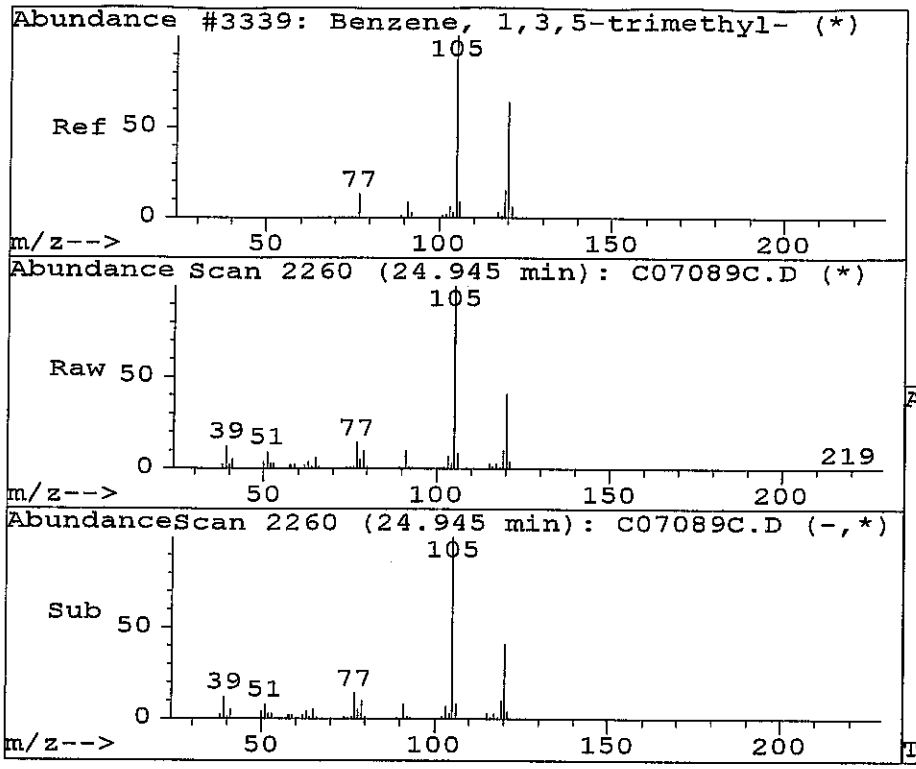


#72
4-Ethyltoluene
Concen: 3.11 ppbV
RT: 24.79 min Scan# 2244
Delta R.T. 0.05 min
Lab File: C07089C.D
Acq: 8 Jul 109 11:12 am

Tgt Ion:105 Resp: 2465439

Ion	Ratio	Lower	Upper
105	100		
120	27.5	20.4	30.6
65	6.5	5.1	7.7
0	0.0	0.0	0.0

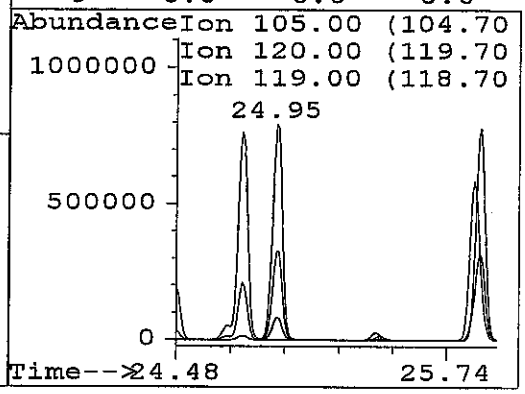


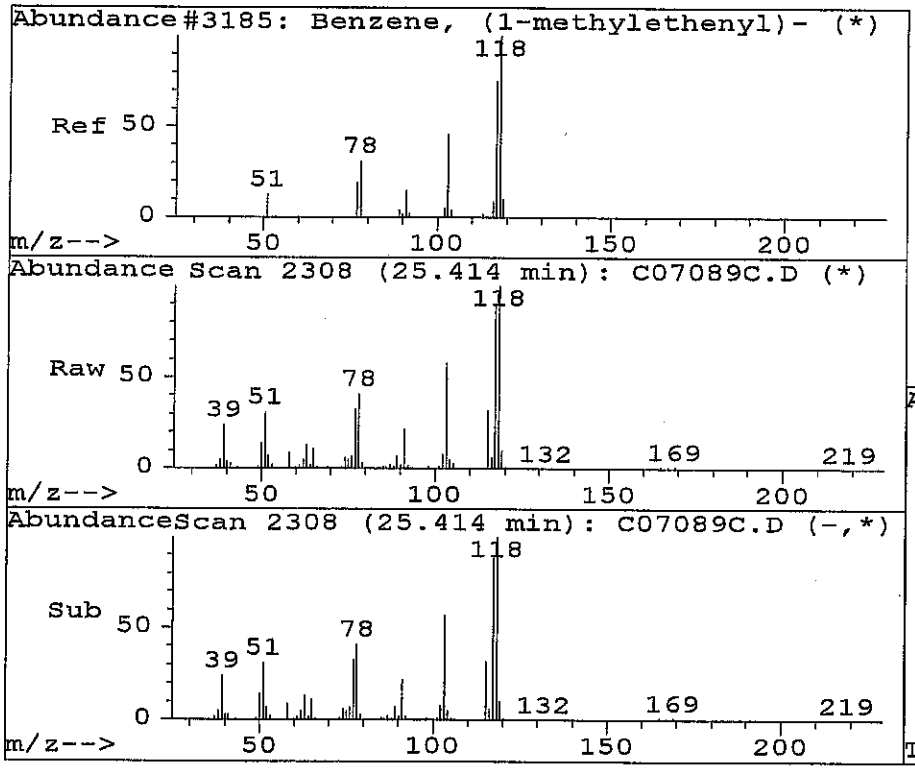


#73
1,3,5-Trimethylbenzene
Concen: 3.44 ppbV m
RT: 24.95 min Scan# 2260
Delta R.T. 0.03 min
Lab File: C07089C.D
Acq: 8 Jul 109 11:12 am

Tgt Ion:105 Resp: 2488685

Ion	Ratio	Lower	Upper
105	100		
120	41.1	32.8	49.2
119	10.2	8.7	13.1
0	0.0	0.0	0.0

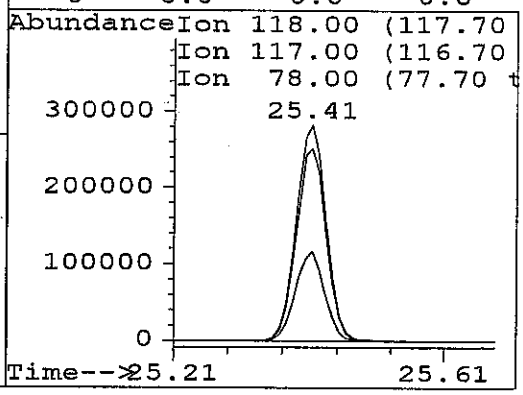


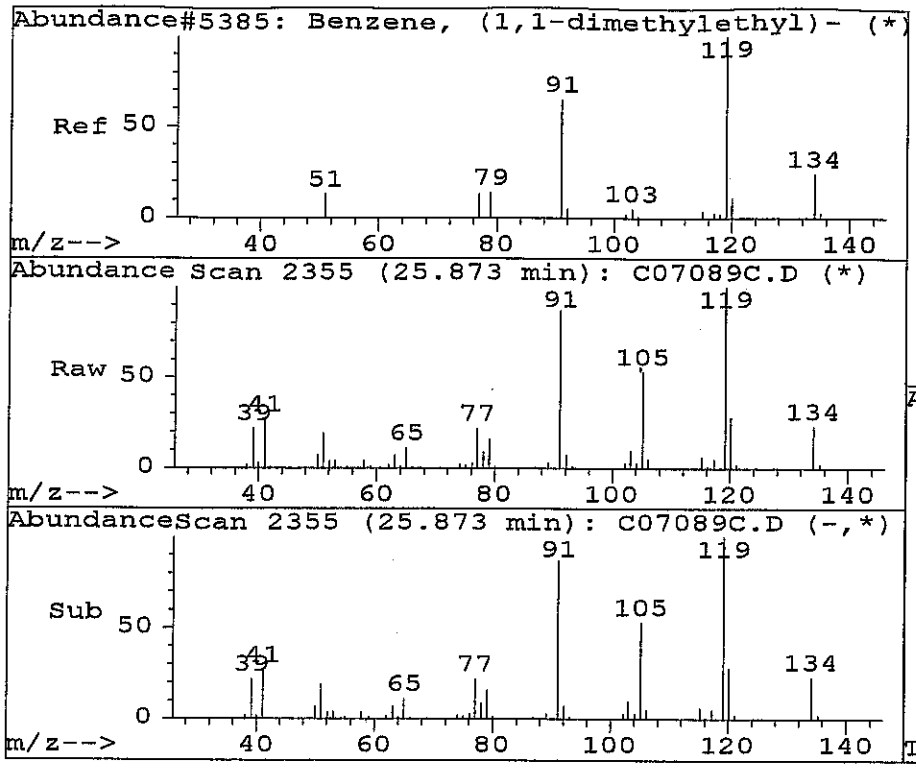


#74
Methylstyrene
Concen: 2.56 ppbV
RT: 25.41 min Scan# 2308
Delta R.T. 0.05 min
Lab File: C07089C.D
Acq: 8 Jul 109 11:12 am

Tgt Ion:118 Resp: 858075

Ion	Ratio	Lower	Upper
118	100		
117	89.0	70.3	105.5
78	41.2	34.2	51.2
0	0.0	0.0	0.0

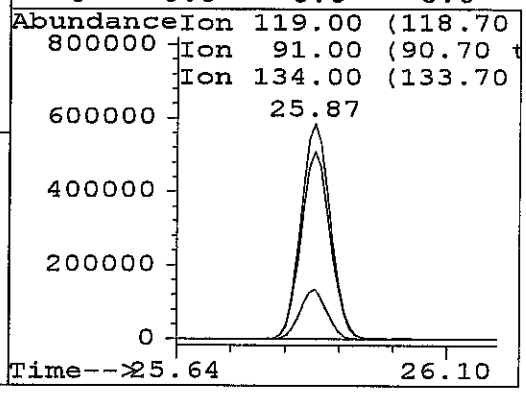


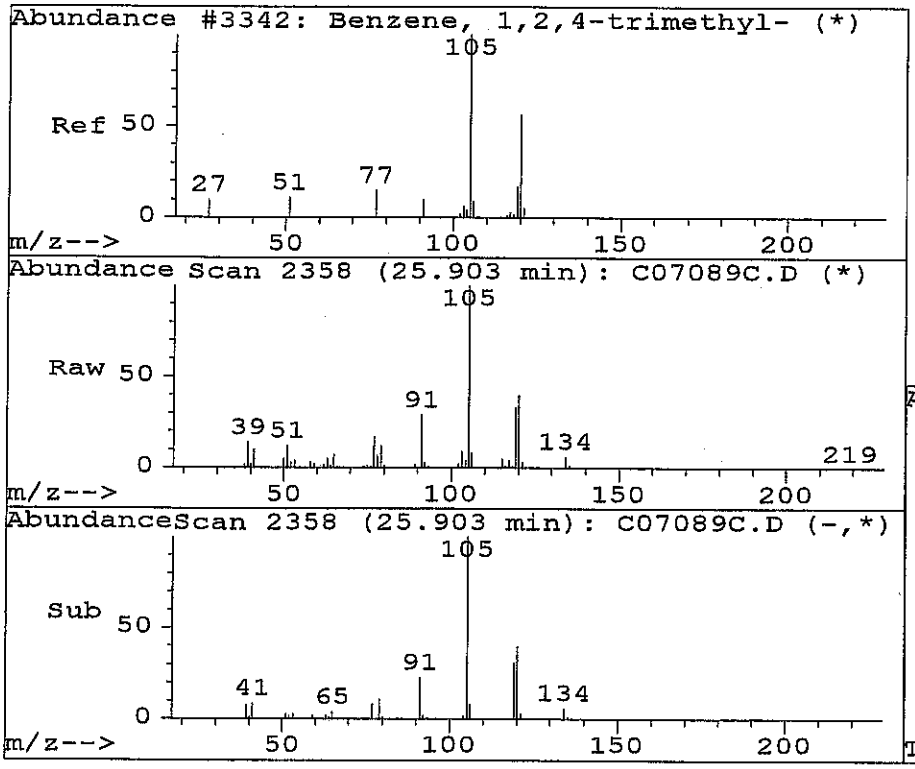


#75
tert-butyl benzene
Concen: 3.36 ppbV
RT: 25.87 min Scan# 2355
Delta R.T. 0.06 min
Lab File: C07089C.D
Acq: 8 Jul 109 11:12 am

Tgt Ion:119 Resp: 2019607

Ion	Ratio	Lower	Upper
119	100		
91	87.3	73.8	110.6
134	21.1	16.2	24.4
0	0.0	0.0	0.0

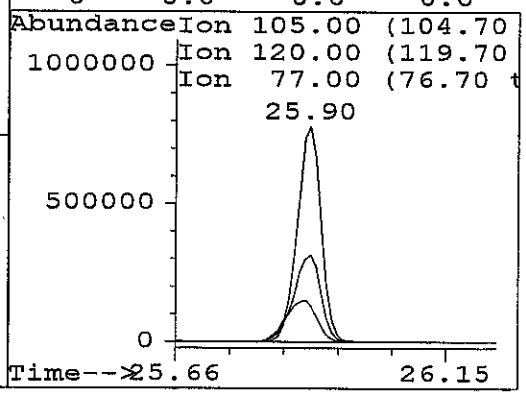


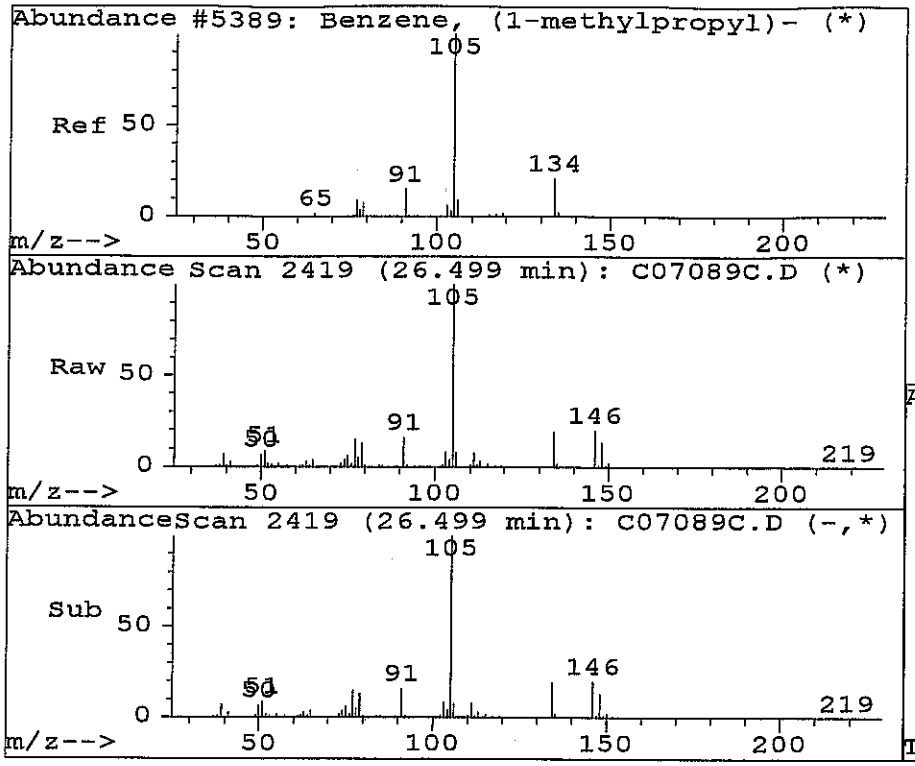


#76
1,2,4-Trimethylbenzene
Concen: 3.52 ppbV
RT: 25.90 min Scan# 2358
Delta R.T. 0.01 min
Lab File: C07089C.D
Acq: 8 Jul 109 11:12 am

Tgt Ion:105 Resp: 2351736

Ion	Ratio	Lower	Upper
105	100		
120	40.2	31.9	47.9
77	16.9	14.2	21.2
0	0.0	0.0	0.0

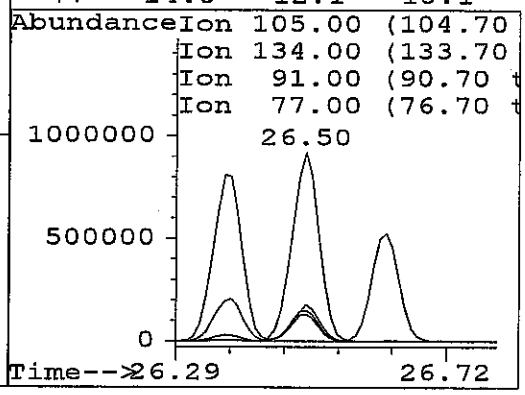


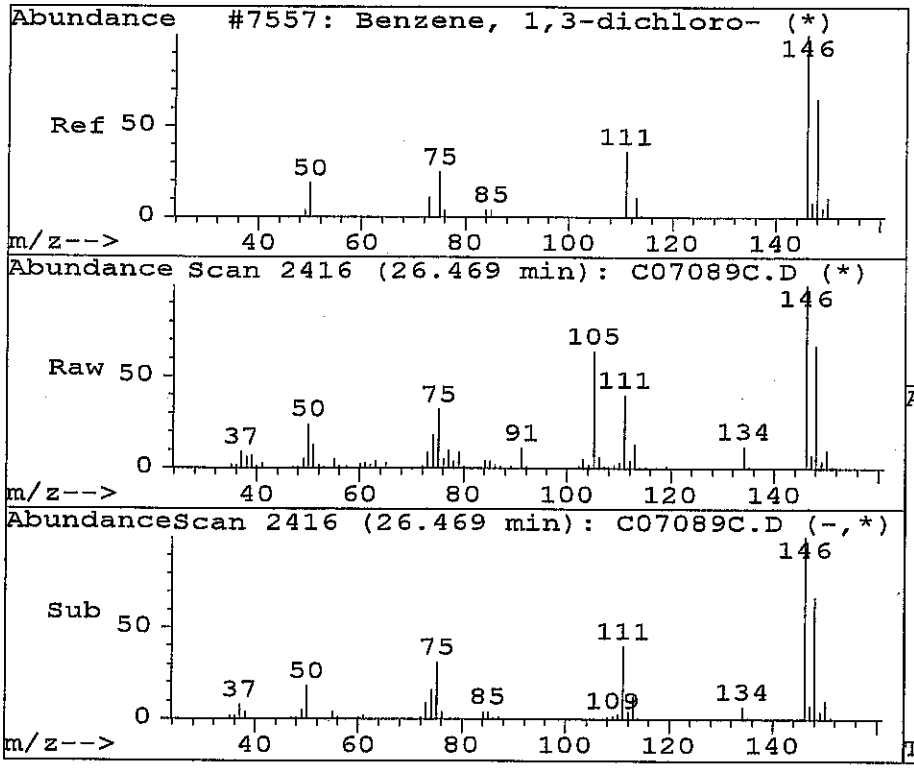


#77
sec-butylbenzene
Concen: 3.15 ppbV
RT: 26.50 min Scan# 2419
Delta R.T. -0.00 min
Lab File: C07089C.D
Acq: 8 Jul 109 11:12 am

Tgt Ion:105 Resp: 2752999

Ion	Ratio	Lower	Upper
105	100		
134	19.1	14.4	21.6
91	16.9	13.4	20.0
77	14.8	12.1	18.1

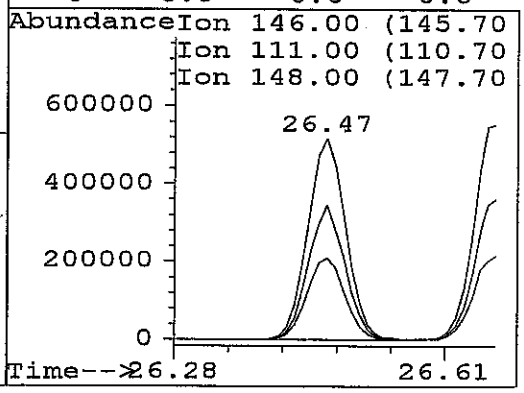


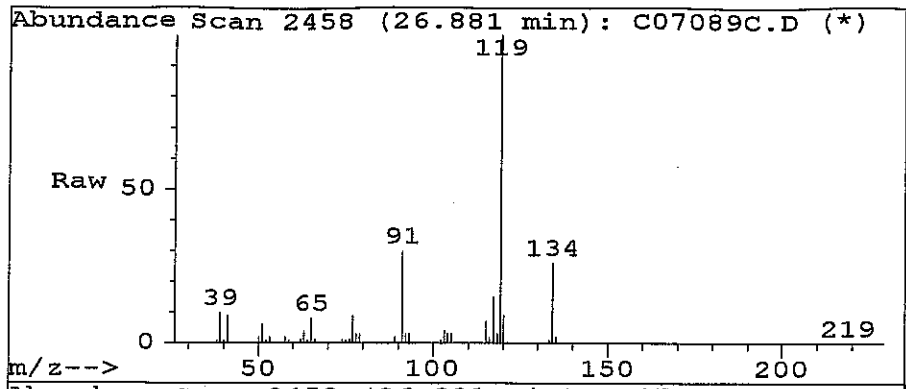


#78
1,3-Dichlorobenzene
Concen: 3.06 ppbV
RT: 26.47 min Scan# 2416
Delta R.T. 0.06 min
Lab File: C07089C.D
Acq: 8 Jul 109 11:12 am

Tgt Ion:146 Resp: 1644354

Ion	Ratio	Lower	Upper
146	100		
111	40.4	34.2	51.4
148	66.8	51.6	77.4
0	0.0	0.0	0.0

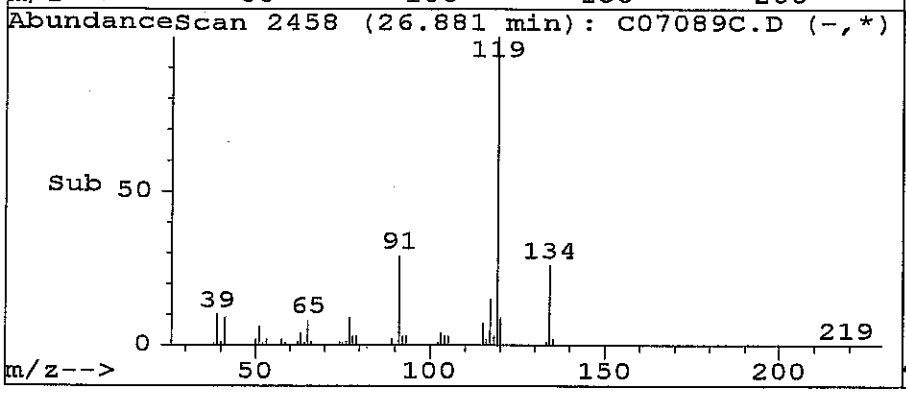


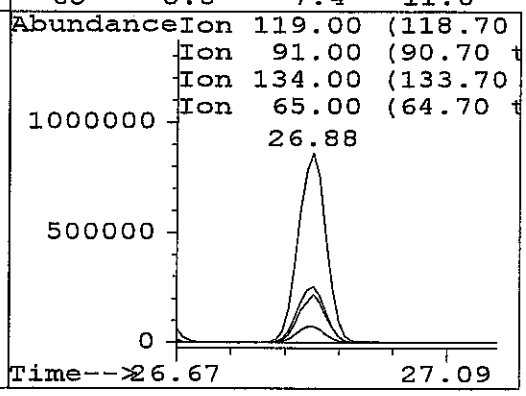


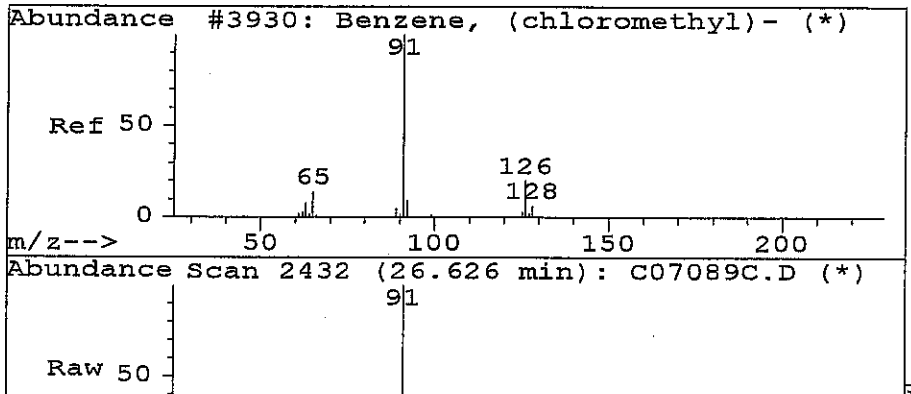
#79
Isopropyltoluene
Concen: 3.14 ppbV
RT: 26.88 min Scan# 2458
Delta R.T. 0.05 min
Lab File: C07089C.D
Acq: 8 Jul 109 11:12 am

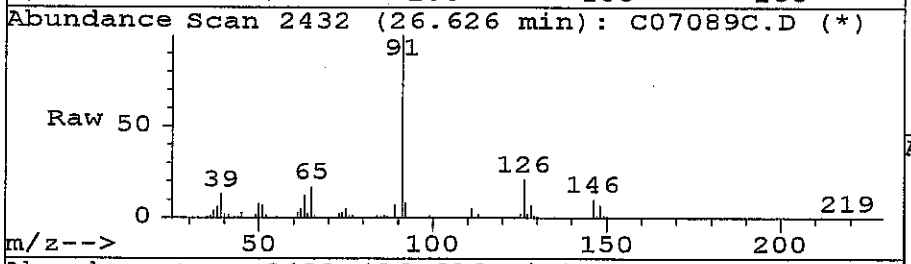
Tgt Ion:119 Resp: 2631609

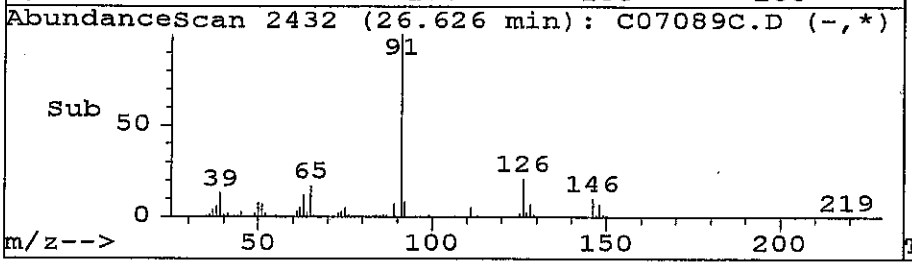
Ion	Ratio	Lower	Upper
119	100		
91	30.0	25.4	38.0
134	24.7	19.0	28.6
65	8.8	7.4	11.0







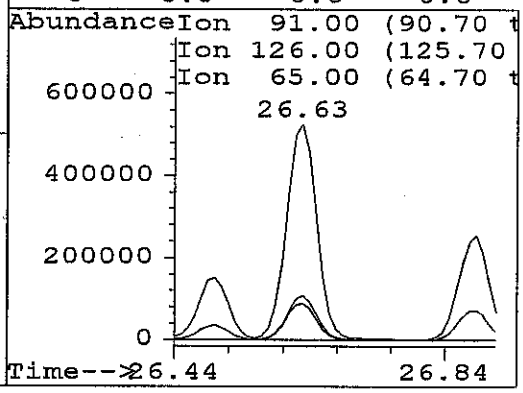


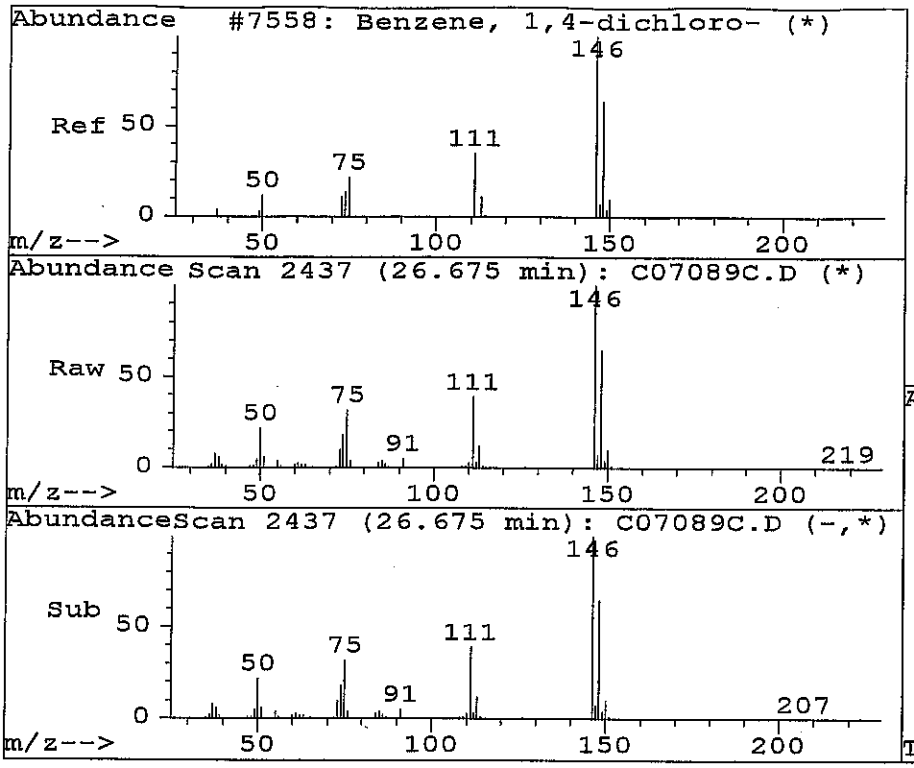


#80
Benzyl chloride
Concen: 2.21 ppbV
RT: 26.63 min Scan# 2432
Delta R.T. 0.02 min
Lab File: C07089C.D
Acq: 8 Jul 109 11:12 am

Tgt Ion:91 Resp: 1620691

Ion	Ratio	Lower	Upper
91	100		
126	20.7	15.4	23.0
65	16.8	14.2	21.4
0	0.0	0.0	0.0

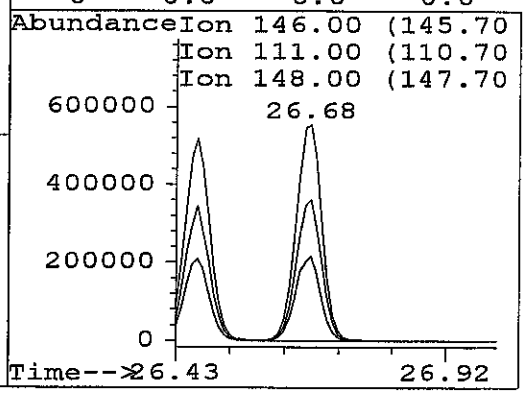


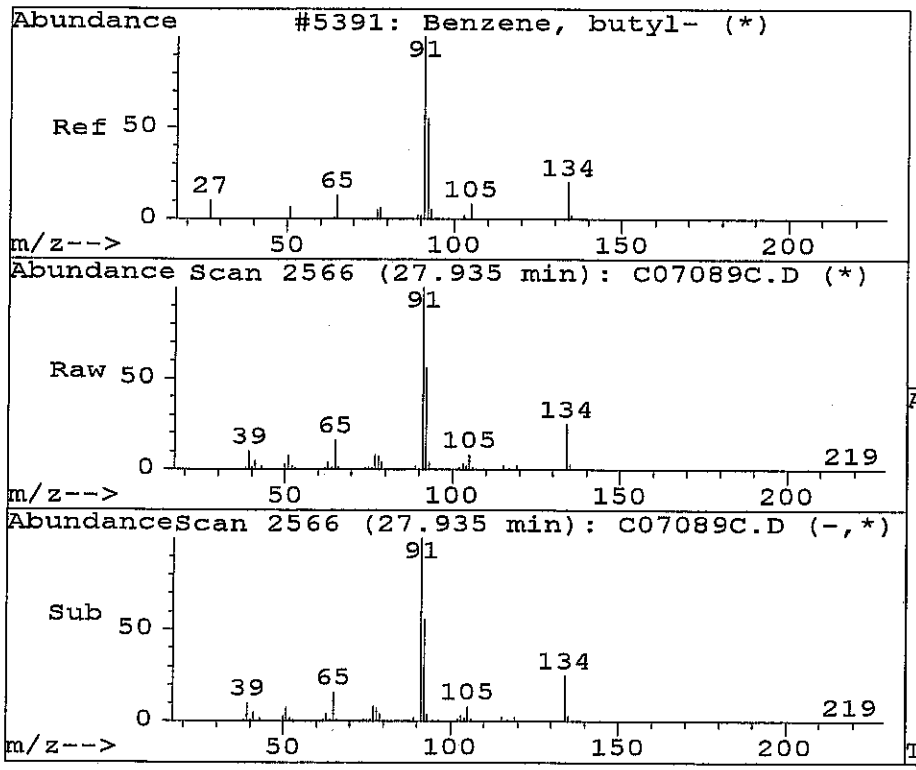


#81
1,4-Dichlorobenzene
Concen: 3.26 ppbV
RT: 26.68 min Scan# 2437
Delta R.T. -0.00 min
Lab File: C07089C.D
Acq: 8 Jul 109 11:12 am

Tgt Ion:146 Resp: 1808354

Ion	Ratio	Lower	Upper
146	100		
111	39.0	33.7	50.5
148	65.3	51.2	76.8
0	0.0	0.0	0.0

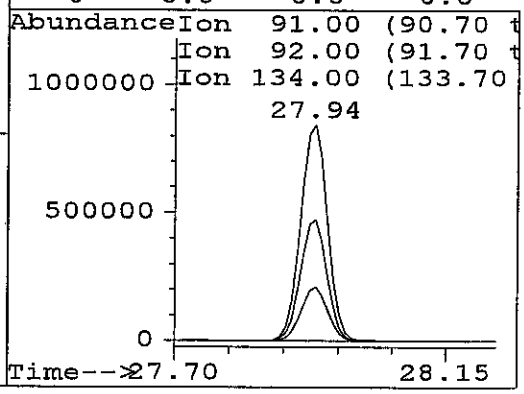


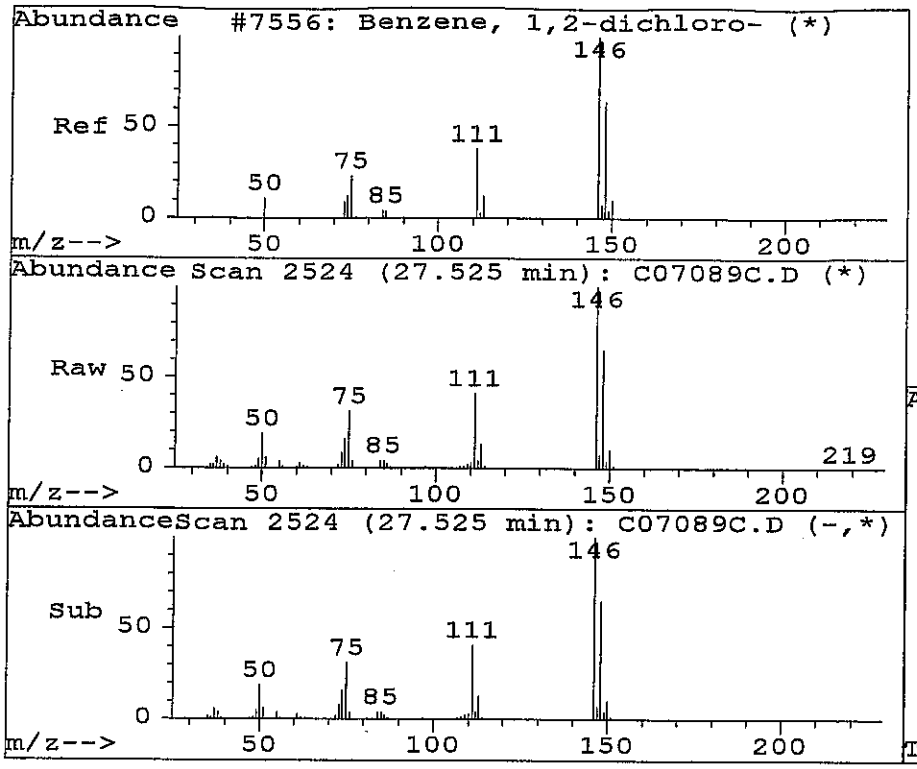


#82
n-Butylbenzene
Concen: 2.64 ppbV
RT: 27.94 min Scan# 2566
Delta R.T. 0.06 min
Lab File: C07089C.D
Acq: 8 Jul 109 11:12 am

Tgt Ion:91 Resp: 2612159

Ion	Ratio	Lower	Upper
91	100		
92	55.5	44.2	66.4
134	24.9	18.2	27.4
0	0.0	0.0	0.0

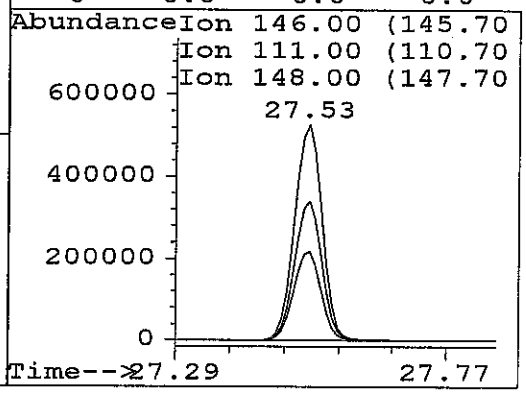


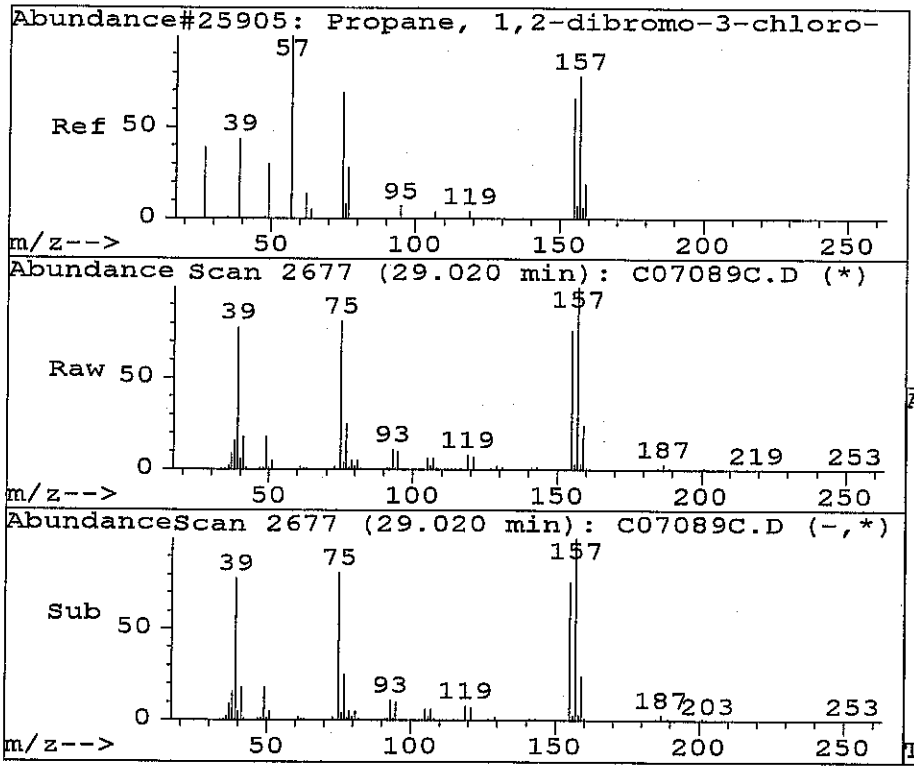


#83
1,2-Dichlorobenzene
Concen: 2.85 ppbV
RT: 27.53 min Scan# 2524
Delta R.T. 0.06 min
Lab File: C07089C.D
Acq: 8 Jul 109 11:12 am

Tgt Ion:146 Resp: 1758820

Ion	Ratio	Lower	Upper
146	100		
111	41.4	34.1	51.1
148	64.6	49.9	74.9
0	0.0	0.0	0.0

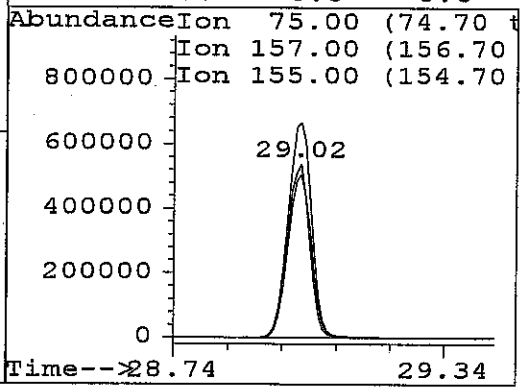


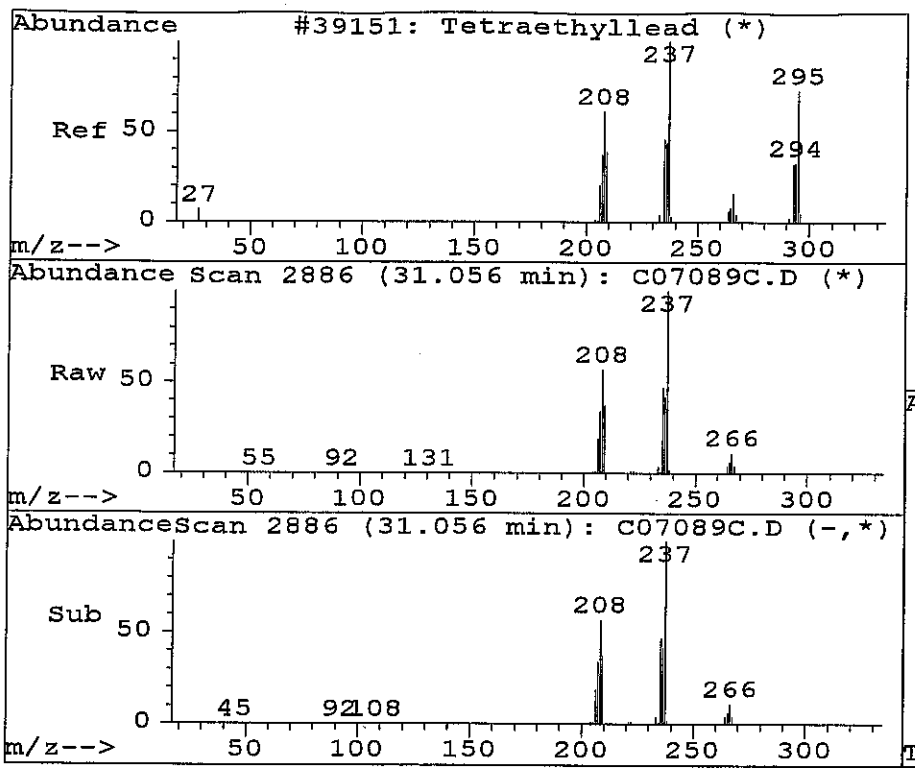


#84
1,2-Dibromo-3-chloropropane
Concen: 4.32 ppbV
RT: 29.02 min Scan# 2677
Delta R.T. 0.06 min
Lab File: C07089C.D
Acq: 8 Jul 109 11:12 am

Tgt Ion:75 Resp: 1865563

Ion	Ratio	Lower	Upper
75	100		
157	124.1	76.2	114.2#
155	94.2	58.6	87.8#
0	0.0	0.0	0.0

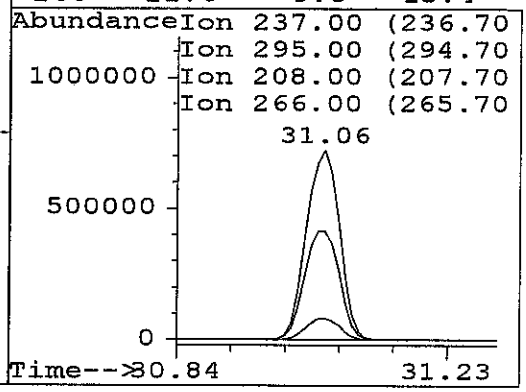


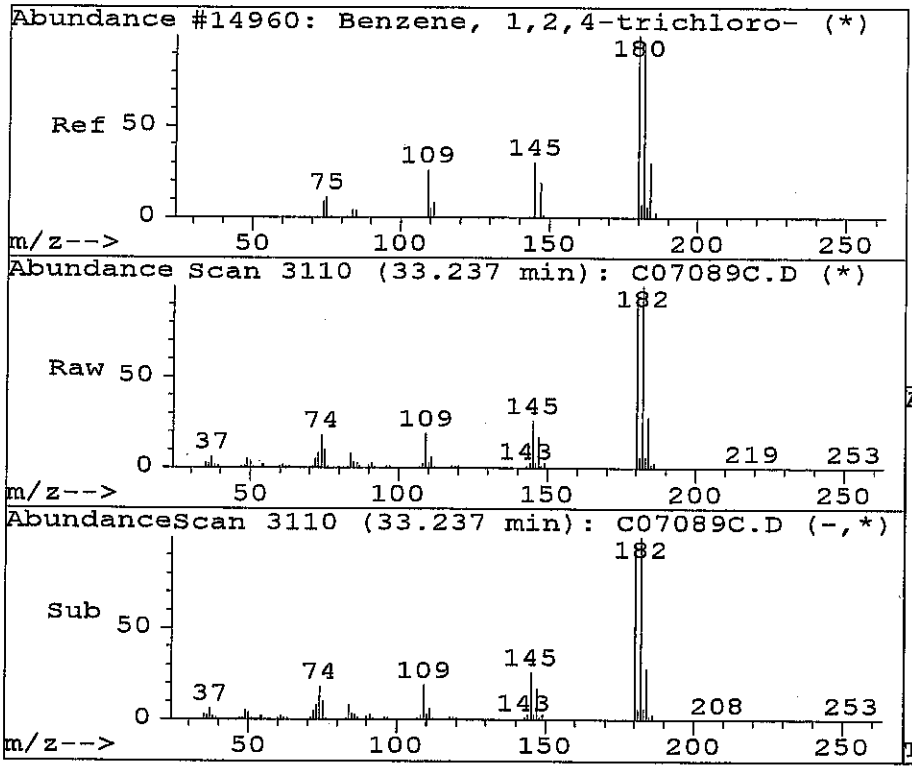


#85
Tetraethyl lead
Concen: 5.91 ppbV
RT: 31.06 min Scan# 2886
Delta R.T. 0.08 min
Lab File: C07089C.D
Acq: 8 Jul 109 11:12 am

Tgt Ion:237 Resp: 2392872

Ion	Ratio	Lower	Upper
237	100		
295	0.0	0.0	0.0
208	60.3	50.6	75.8
266	11.6	9.0	13.4

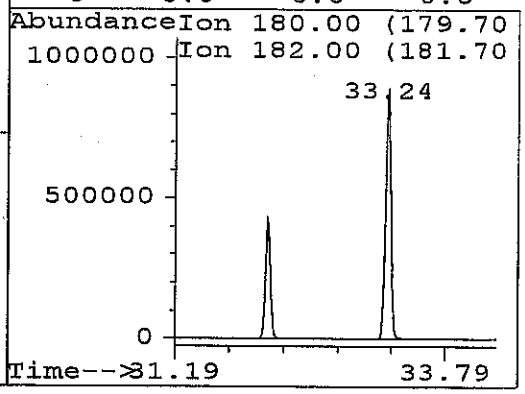


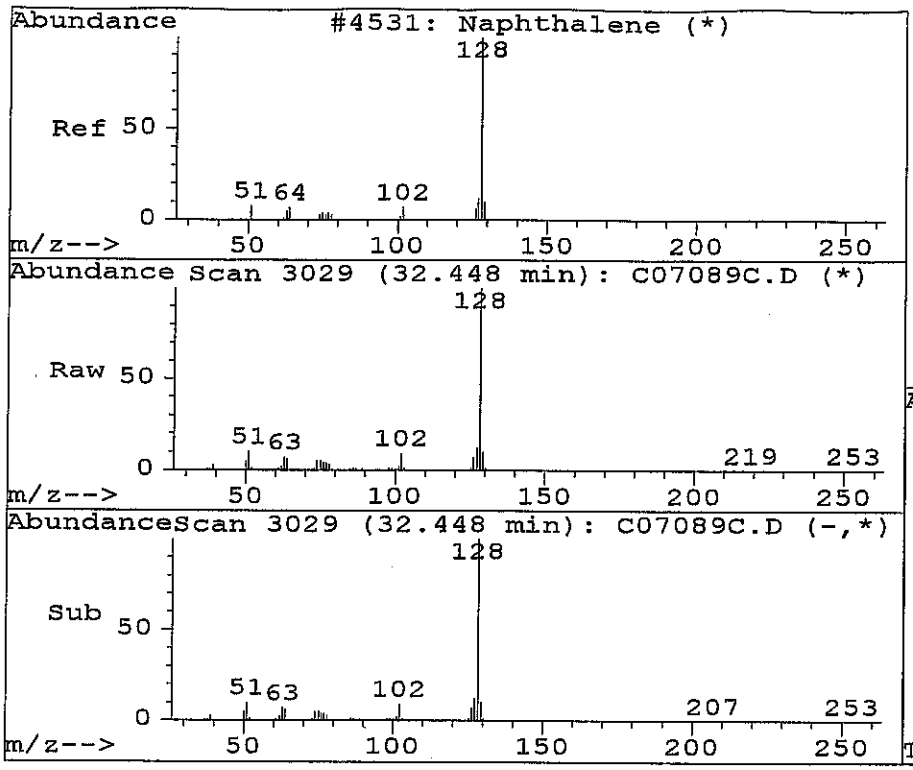


#86
1,2,4-Trichlorobenzene
Concen: 3.90 ppbV m
RT: 33.24 min Scan# 3110
Delta R.T. 1.06 min
Lab File: C07089C.D
Acq: 8 Jul 109 11:12 am

Tgt Ion:180 Resp: 4452182

Ion	Ratio	Lower	Upper
180	100		
182	107.6	77.8	116.8
0	0.0	0.0	0.0
0	0.0	0.0	0.0

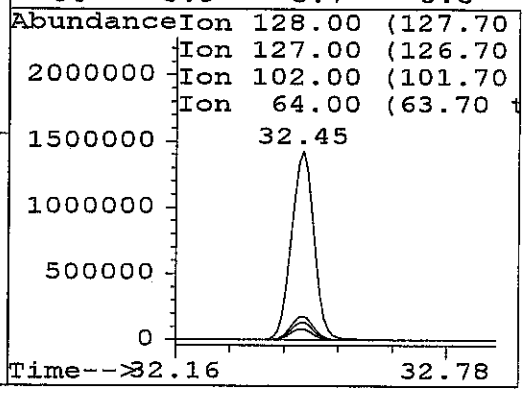


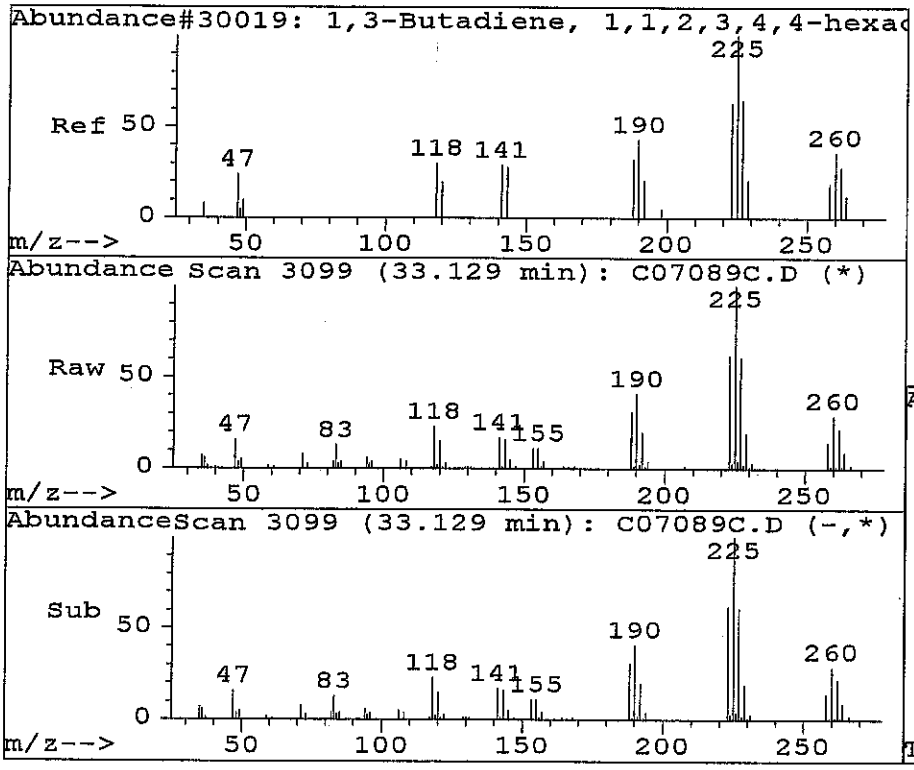


#87
Naphthalene
Concen: 2.71 ppbV
RT: 32.45 min Scan# 3029
Delta R.T. 0.04 min
Lab File: C07089C.D
Acq: 8 Jul 109 11:12 am

Tgt Ion:128 Resp: 5166964

Ion	Ratio	Lower	Upper
128	100		
127	12.4	10.4	15.6
102	9.3	9.2	13.8
64	5.9	5.7	8.5

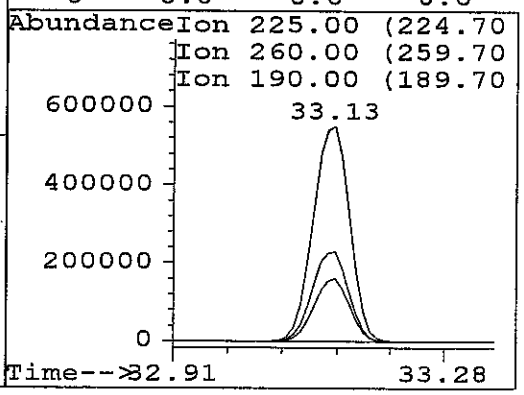


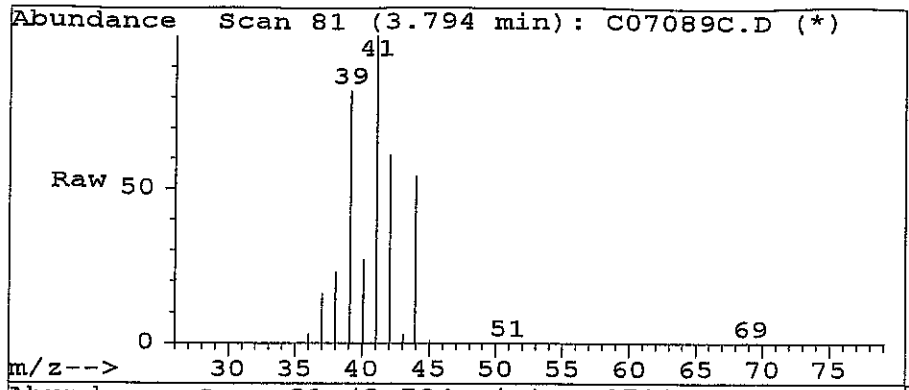


#88
Hexachlorobutadiene
Concen: 2.22 ppbV
RT: 33.13 min Scan# 3099
Delta R.T. 0.05 min
Lab File: C07089C.D
Acq: 8 Jul 109 11:12 am

Tgt Ion:225 Resp: 1955976

Ion	Ratio	Lower	Upper
225	100		
260	29.2	22.2	33.2
190	41.5	33.6	50.4
0	0.0	0.0	0.0

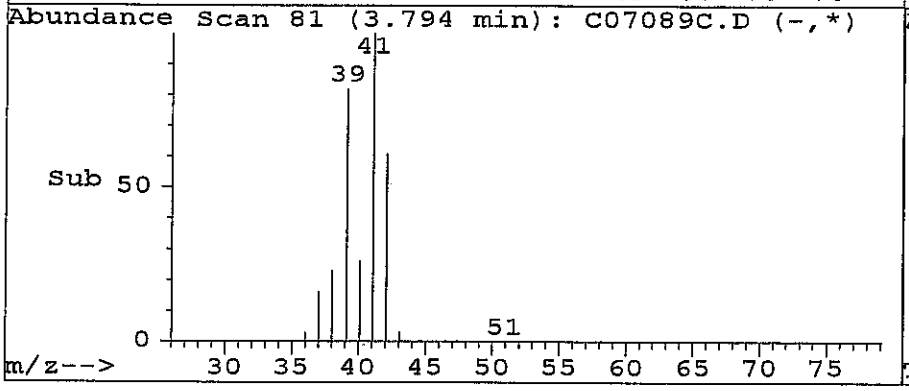


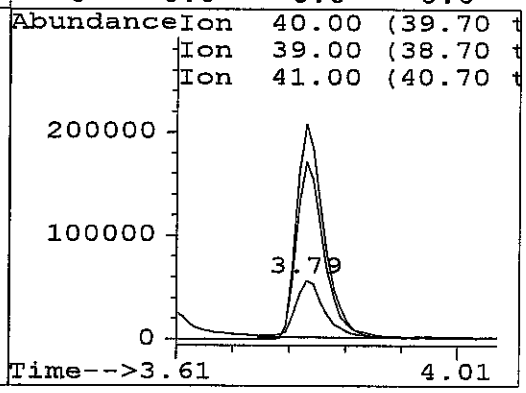


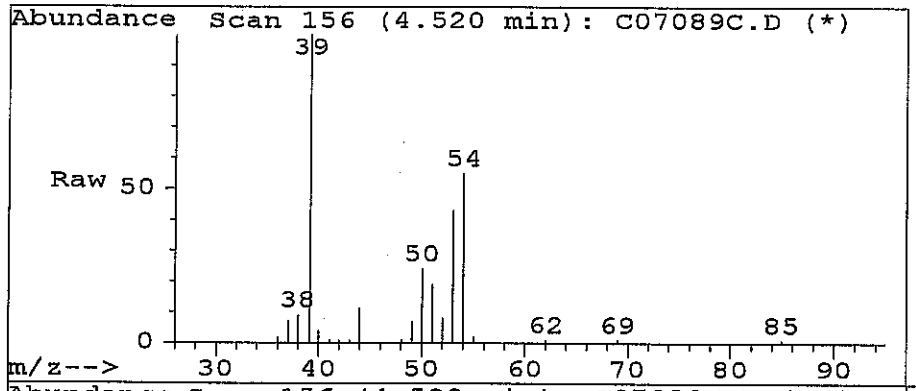
#89
Propylene
Concen: 9.00 ppbV
RT: 3.79 min Scan# 81
Delta R.T. 0.03 min
Lab File: C07089C.D
Acq: 8 Jul 109 11:12 am

Tgt Ion:40 Resp: 163325

Ion	Ratio	Lower	Upper
40	100		
39	293.6	238.9	358.3
41	356.5	310.2	465.4
0	0.0	0.0	0.0



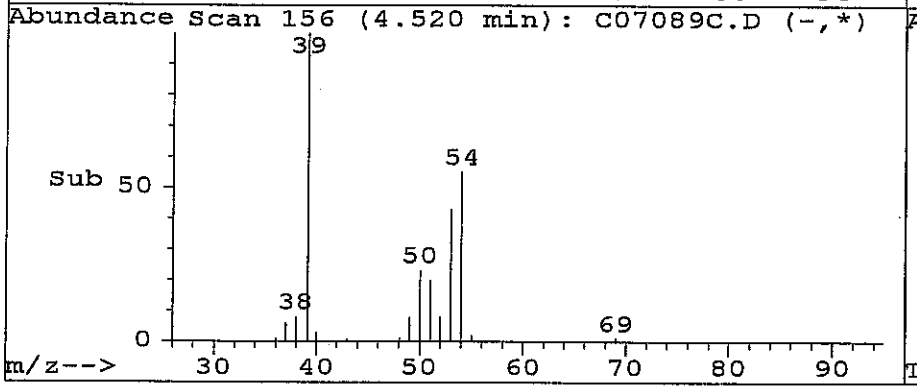


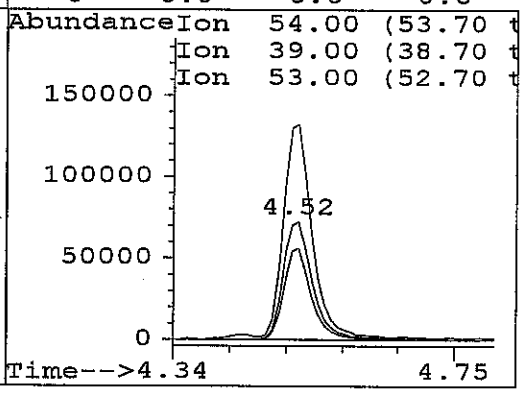


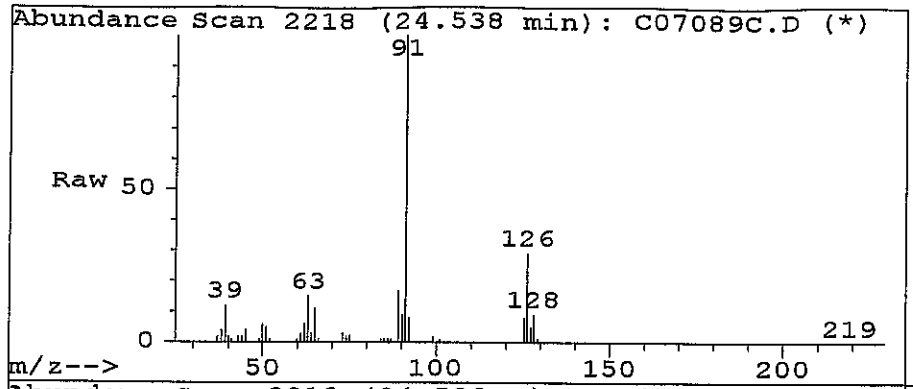
#90
1,3-Butadiene
Concen: 4.46 ppbV
RT: 4.52 min Scan# 156
Delta R.T. 0.05 min
Lab File: C07089C.D
Acq: 8 Jul 109 11:12 am

Tgt Ion:54 Resp: 221114

Ion	Ratio	Lower	Upper
54	100		
39	177.8	135.9	203.9
53	72.5	59.0	88.4
0	0.0	0.0	0.0



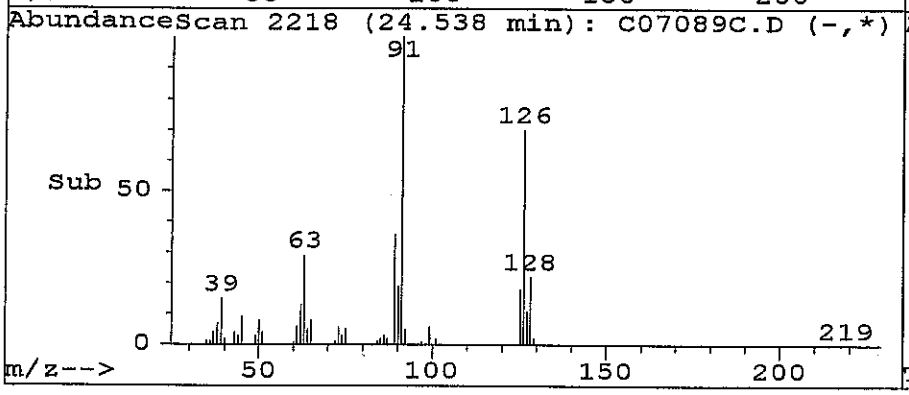


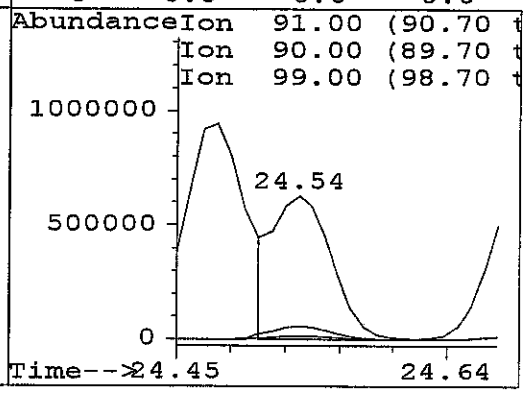


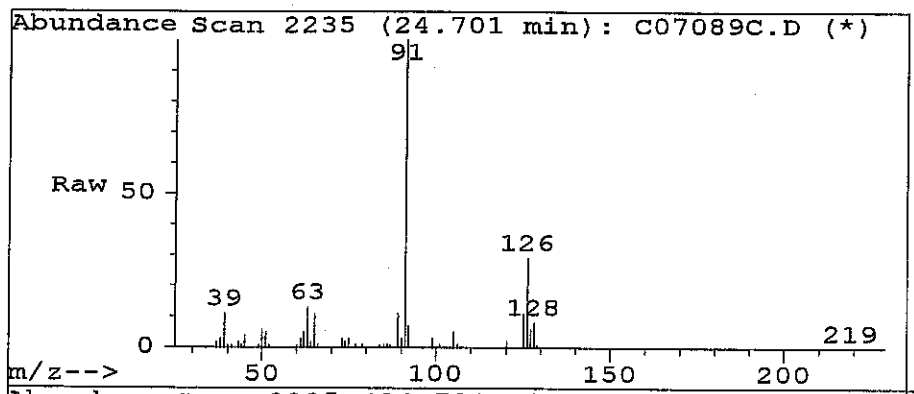
#92
2-Chlorotoluene
Concen: 3.45 ppbV
RT: 24.54 min Scan# 2218
Delta R.T. 0.08 min
Lab File: C07089C.D
Acq: 8 Jul 109 11:12 am

Tgt Ion:91 Resp: 1856684

Ion	Ratio	Lower	Upper
91	100		
90	9.5	7.0	10.4
99	2.6	1.8	2.8
0	0.0	0.0	0.0



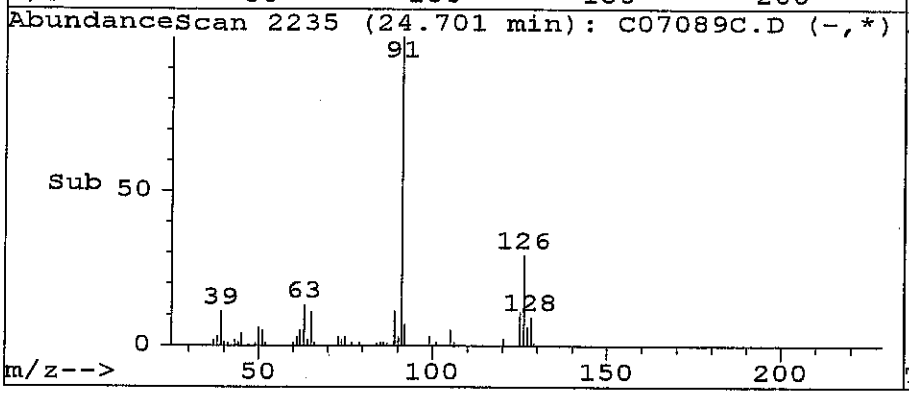


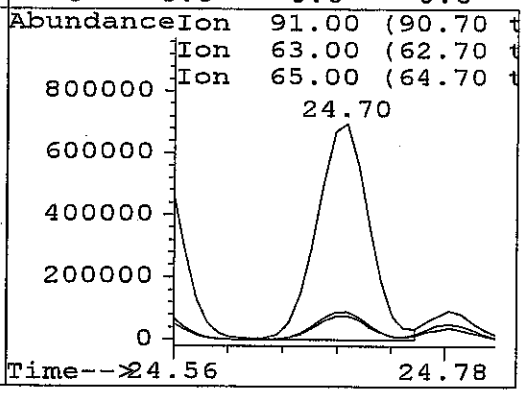


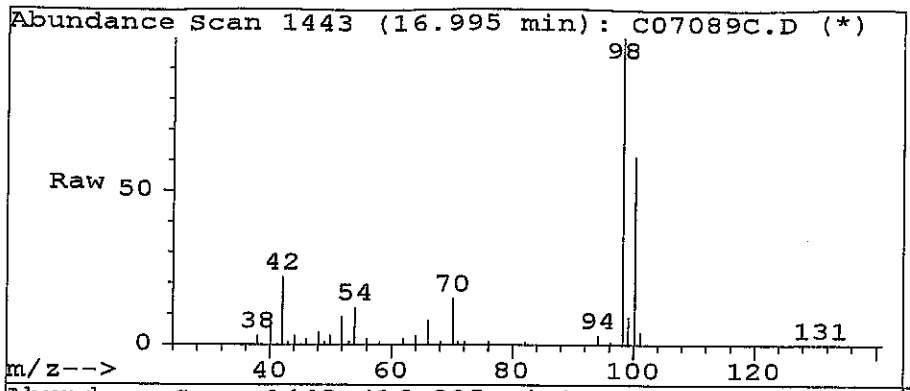
#93
4-Chlorotoluene
Concen: 3.12 ppbV
RT: 24.70 min Scan# 2235
Delta R.T. 0.05 min
Lab File: C07089C.D
Acq: 8 Jul 109 11:12 am

Tgt Ion:91 Resp: 2124257

Ion	Ratio	Lower	Upper
91	100		
63	13.2	10.6	16.0
65	11.7	9.5	14.3
0	0.0	0.0	0.0



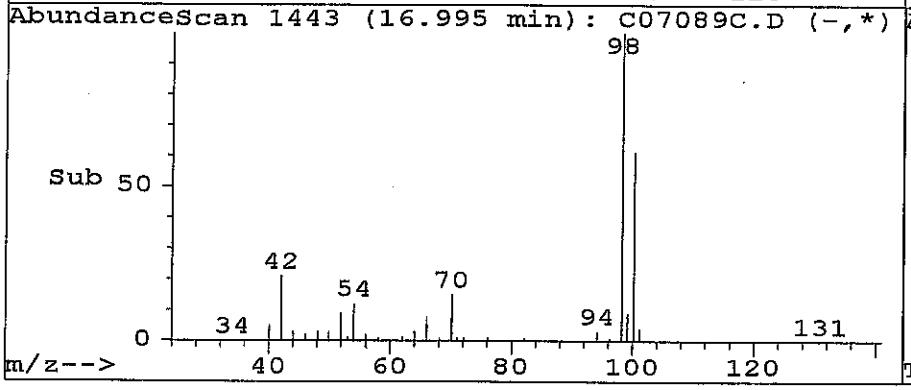


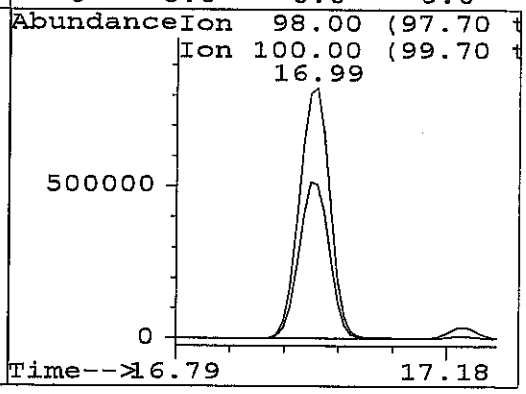


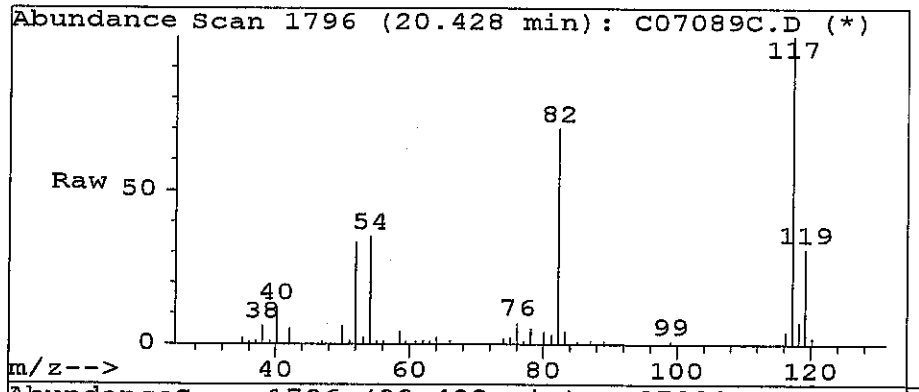
#94
Toluene-d8
Concen: 10.37 ppbV
RT: 16.99 min Scan# 1443
Delta R.T. 0.05 min
Lab File: C07089C.D
Acq: 8 Jul 109 11:12 am

Tgt Ion:98 Resp: 2529725

Ion	Ratio	Lower	Upper
98	100		
100	61.2	51.4	77.2
0	0.0	0.0	0.0
0	0.0	0.0	0.0



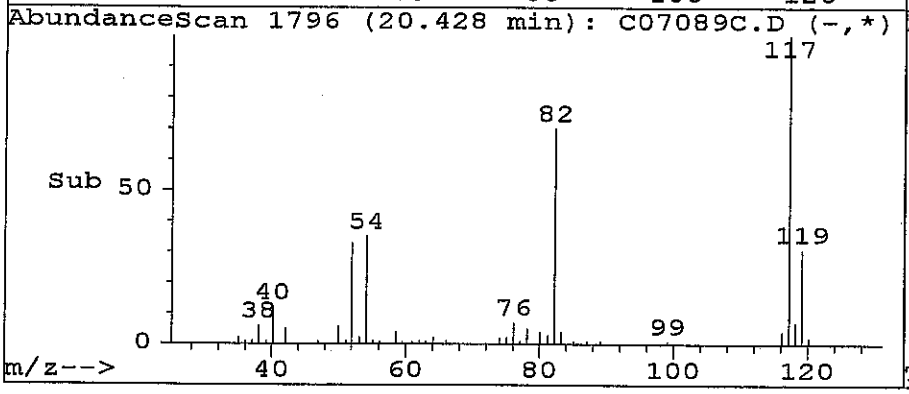


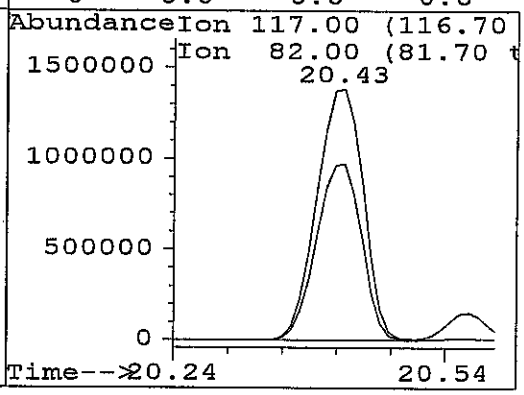


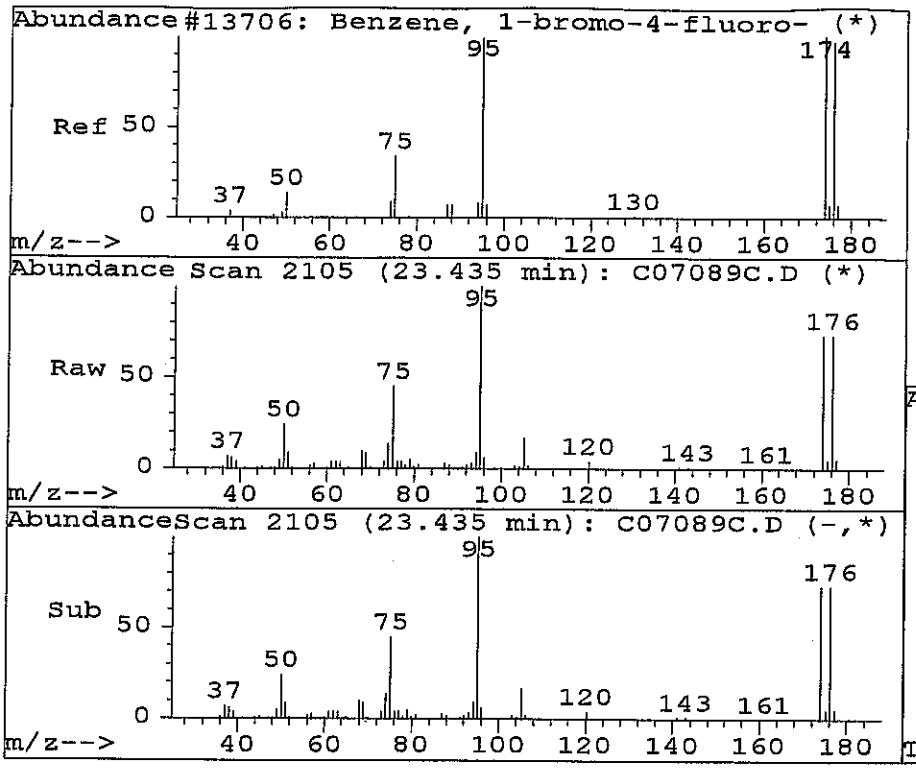
#95
Chlorobenzene-d5
Concen: 21.90 ppbV
RT: 20.43 min Scan# 1796
Delta R.T. 0.07 min
Lab File: C07089C.D
Acq: 8 Jul 109 11:12 am

Tgt Ion:117 Resp: 4901048

Ion	Ratio	Lower	Upper
117	100		
82	70.4	55.7	83.5
0	0.0	0.0	0.0
0	0.0	0.0	0.0



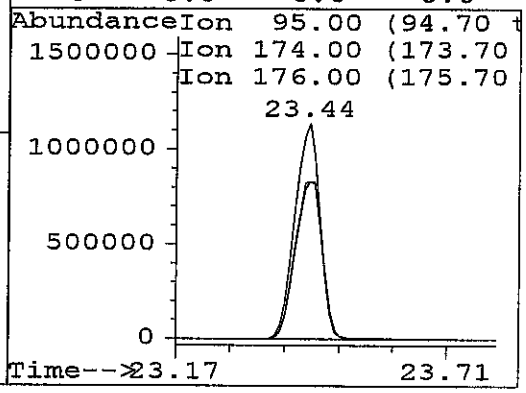




#96
1,4-Bromofluorobenzene
Concen: 11.12 ppbV
RT: 23.44 min Scan# 2105
Delta R.T. 0.06 min
Lab File: C07089C.D
Acq: 8 Jul 109 11:12 am

Tgt Ion:95 Resp: 3892211

Ion	Ratio	Lower	Upper
95	100		
174	73.0	55.5	83.3
176	73.1	55.7	83.5
0	0.0	0.0	0.0



Quantitation Report

Data File : C:\MSCHEM\2\DATA\07089MS1\CC662A.D
Acq Time : 8 Jul 109 2:05 pm
Sample : 662
Misc : 070709
Quant Time: Jul 9 9:34 19109

Operator: JF
Inst : 5970 - In
Multiplr: 1.00

Method : C:\MSCHEM\2\METHODS\1T15EXAY.M
Title : EPA TO-15
Last Update : Tue Mar 17 14:18:15 2009
Response via : Multiple Level Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene	11.40	168	4790129	20.00	ppbV	0.02
35) 1,4-Difluorobenzene	13.20	114	4489502	20.00	ppbV	0.03
System Monitoring Compounds						%Recovery
94) Toluene-d8	16.97	98	2648030	10.49	ppbV	209.84%
95) Chlorobenzene-d5	20.40	117	4988531	21.54	ppbV	215.44%
96) 1,4-Bromofluorobenzene	23.41	95	4039084	11.16	ppbV	223.11%
Target Compounds						Qvalue
2) Dichlorodifluoromethane	4.16	85	616	0.00	ppbV #	49
4) Freon 114	4.16	85	616	0.00	ppbV #	31
9) Acrolein	5.96	56	7619	0.31	ppbV #	58
11) Acetonitrile	6.01	41	15699	0.15	ppbV #	91
12) Acetone	6.09	43	47716	0.23	ppbV	100
13) 2-propanol	6.23	45	35810	0.22	ppbV #	85
16) Acrylonitrile	7.02	53	5933	0.09	ppbV #	87
25) Vinyl acetate	10.35	43	2164	0.01	ppbV #	81
26) 2-Butanone	9.58	72	1248	0.03	ppbV #	1
27) Hexane	9.44	57	301	0.00	ppbV #	1
29) Tetrahydrofuran	10.90	42	11875	0.02	ppbV #	76
31) Methacrylonitrile	9.77	67	302	0.01	ppbV #	31
38) 1,1-Dichloropropene	12.25	75	299	0.00	ppbV #	44
40) Benzene	12.56	78	11859	0.04	ppbV	99
42) n-Heptane	14.06	43	686	0.00	ppbV #	44
43) 1,2-Dichloropropane	13.96	63	705	0.01	ppbV #	22
44) 1,4 Dioxane	14.47	88	1436	0.02	ppbV #	51
46) Trichloroethene	14.17	130	4490	0.03	ppbV #	80
48) Methyl methacrylate	14.57	69	2582	0.02	ppbV #	22
49) Methyl Isobutyl Ketone	15.79	43	3667	0.01	ppbV #	56
51) Toluene	17.14	91	61611	0.18	ppbV	94
52) trans-1,3-Dichloropropene	16.88	75	683	0.00	ppbV #	57
53) 1,1,2-Trichloroethane	17.14	61	712	0.01	ppbV #	1
54) 2-Hexanone	17.83	43	14687	0.03	ppbV #	85
56) Octane	18.28	57	1050	0.01	ppbV #	12
58) 1,2-Dibromoethane	18.82	107	2266	0.01	ppbV #	95
60) Chlorobenzene	20.48	112	3149	0.01	ppbV #	44
61) 1,1,1,2-Tetrachloroethane	20.53	131	1464	0.01	ppbV #	12
62) Ethylbenzene	21.03	91	8507	0.02	ppbV #	87
63) m & p-Xylene	21.31	91	35077	0.08	ppbV	93
64) Styrene	22.14	104	6831	0.02	ppbV #	87
65) Bromoform	22.06	173	3716	0.01	ppbV #	36
66) o-Xylene	22.27	91	12320	0.02	ppbV	96
67) 1,1,2,2-Tetrachloroethane	22.80	83	10719	0.02	ppbV #	79
68) 1,2,3-Trichloropropane	23.12	110	310	0.00	ppbV #	22
69) t-1,4-Dichloro-2-butene	23.23	53	2760	0.02	ppbV #	35
70) n-Propylbenzene	24.47	91	10350	0.01	ppbV #	80
71) Isopropylbenzene	24.77	105	20739	0.03	ppbV #	48
72) 4-Ethyltoluene	24.77	105	20739	0.03	ppbV #	87
73) 1,3,5-Trimethylbenzene	24.94	105	16716	0.02	ppbV #	91
74) Methylstyrene	25.40	118	43621	0.13	ppbV	96
75) tert-butyl benzene	25.88	119	7946	0.01	ppbV #	75
76) 1,2,4-Trimethylbenzene	25.88	105	33635	0.05	ppbV	96
77) sec-butylbenzene	26.47	105	7130	0.01	ppbV #	66
78) 1,3-Dichlorobenzene	26.45	146	20184	0.04	ppbV	94
79) Isopropyltoluene	26.86	119	10990	0.01	ppbV #	79
80) Benzyl chloride	26.62	91	7742	0.01	ppbV #	59

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

Quantitation Report

Data File : C:\MSCHEM\2\DATA\07089MS1\CC662A.D
Acq Time : 8 Jul 109 2:05 pm
Sample : 662
Misc : 070709
Quant Time: Jul 9 9:34 19109

Operator: JF
Inst : 5970 - In
Multiplr: 1.00

Method : C:\MSCHEM\2\METHODS\1T15EXAY.M
Title : EPA TO-15
Last Update : Tue Mar 17 14:18:15 2009
Response via : Multiple Level Calibration

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
81)	1,4-Dichlorobenzene	26.66	146	22759	0.04 ppbV	95
82)	n-Butylbenzene	27.92	91	15356	0.02 ppbV #	96
83)	1,2-Dichlorobenzene	27.52	146	22677	0.04 ppbV	94
84)	1,2-Dibromo-3-chloropropan	29.00	75	34493	0.08 ppbV #	55
85)	Tetraethyl lead	31.03	237	1122	0.00 ppbV #	1
86)	1,2,4-Trichlorobenzene	32.07	180	50934	0.04 ppbV	89
87)	Naphthalene	32.44	128	137108	0.07 ppbV #	94
88)	Hexachlorobutadiene	33.11	225	25014	0.03 ppbV	95
89)	Propylene	3.74	40	4453	0.24 ppbV #	1
92)	2-Chlorotoluene	24.53	91	4595	0.01 ppbV #	79
93)	4-Chlorotoluene	24.69	91	10569	0.01 ppbV #	83

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

Quantitation Report

Data File : C:\MSCHEM\2\DATA\07089MS1\CC662A.D
Acq Time : 8 Jul 109 2:05 pm
Sample : 662
Misc : 070709
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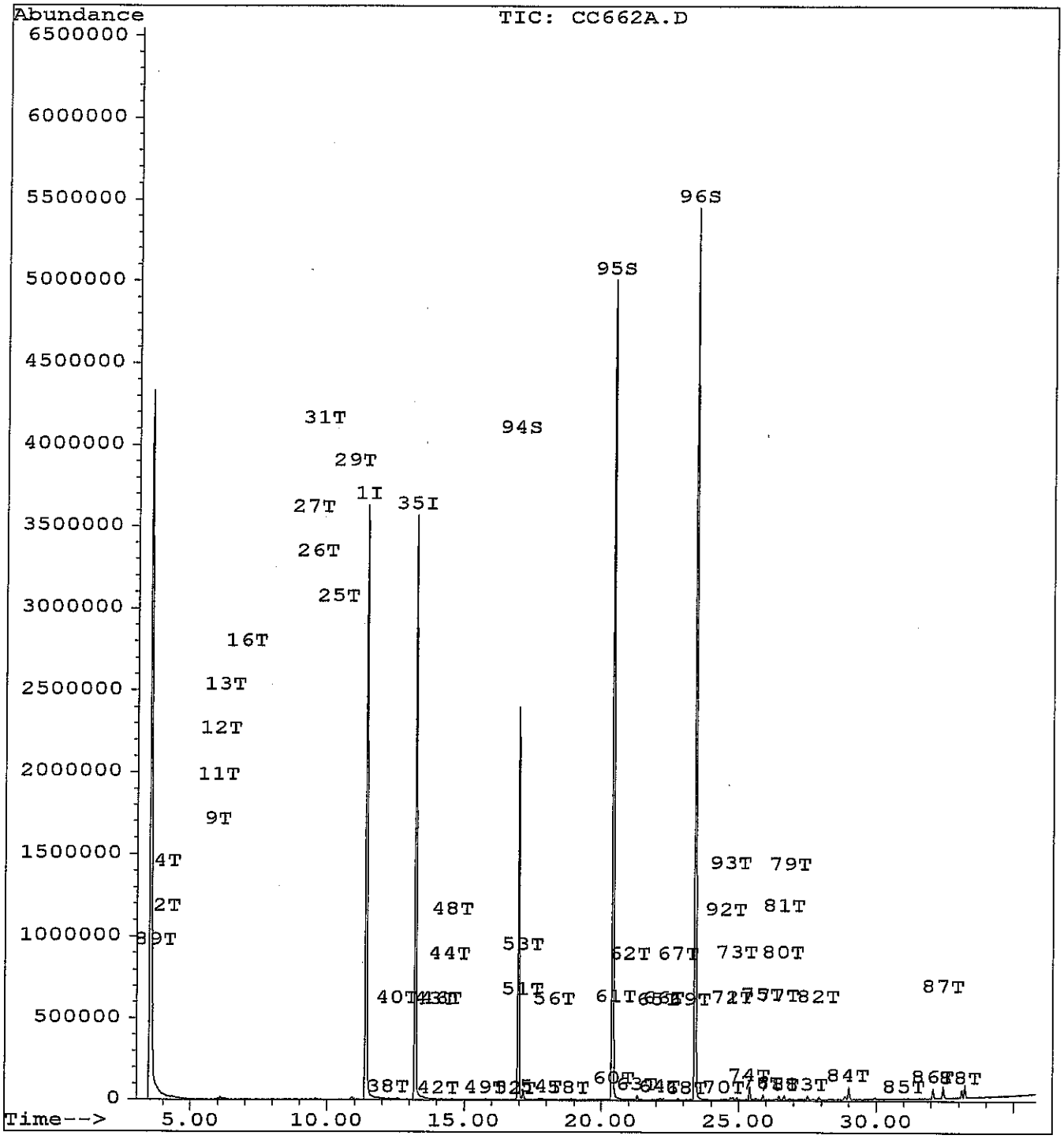
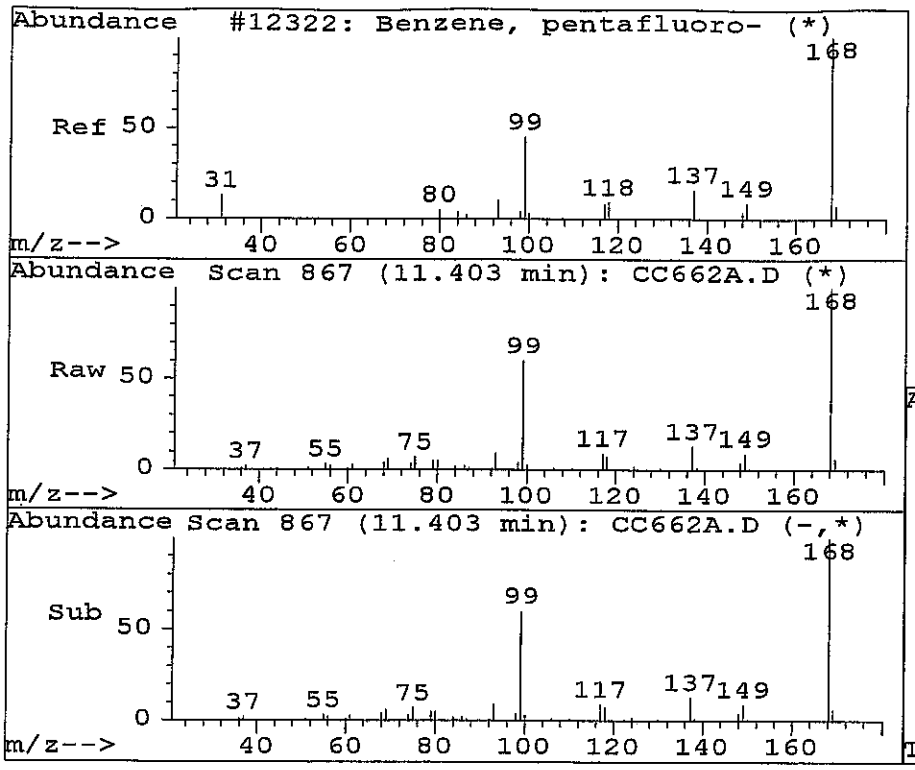
Operator: JF
Inst : 5970 - In
Multiplr: 1.00

Method : C:\MSCHEM\2\METHODS\1T15EXAY.M
Title : EPA TO-15
Last Update : Tue Mar 17 14:18:15 2009
Response via : Multiple Level Calibration

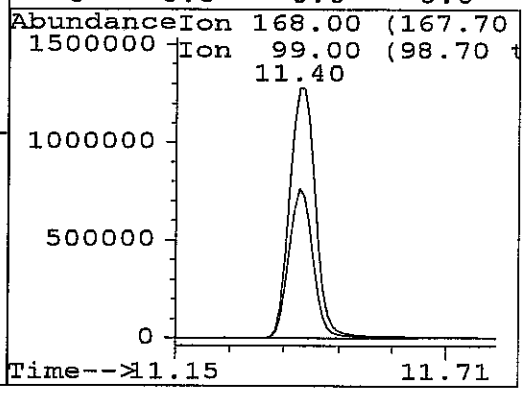


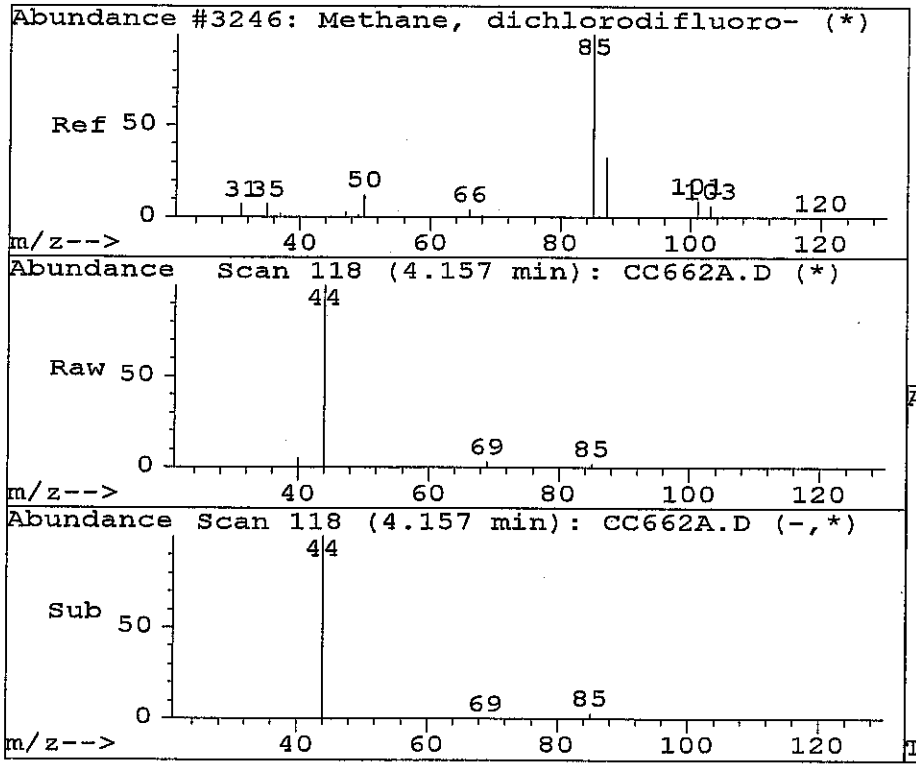


#1
Pentafluorobenzene
Concen: 20.00 ppbV
RT: 11.40 min Scan# 867
Delta R.T. 0.02 min
Lab File: CC662A.D
Acq: 8 Jul 109 2:05 pm

Tgt Ion:168 Resp: 4790129

Ion	Ratio	Lower	Upper
168	100		
99	59.8	53.6	80.4
0	0.0	0.0	0.0
0	0.0	0.0	0.0

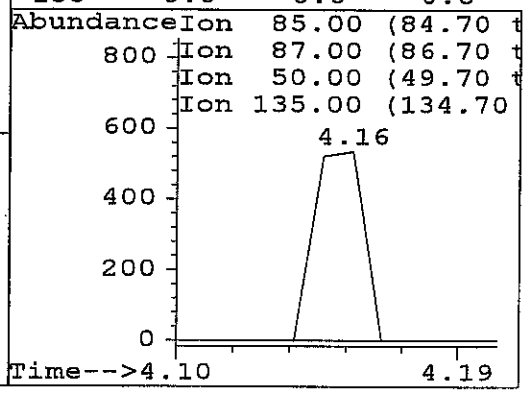


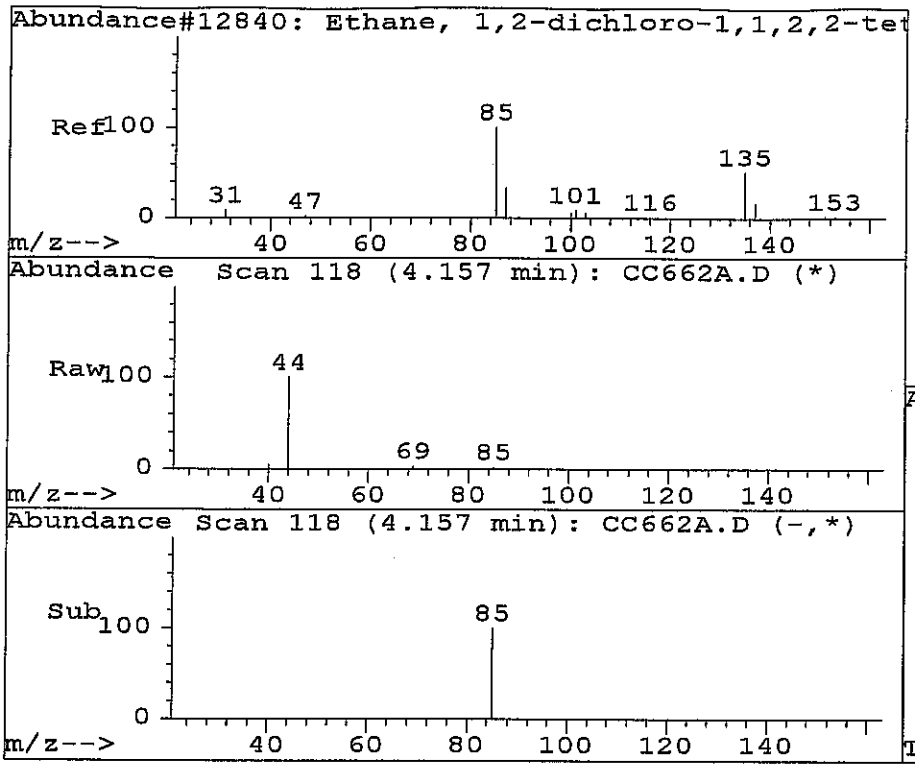


#2
Dichlorodifluoromethane
Concen: 0.00 ppbV
RT: 4.16 min Scan# 118
Delta R.T. 0.33 min
Lab File: CC662A.D
Acq: 8 Jul 109 2:05 pm

Tgt Ion:85 Resp: 616

Ion	Ratio	Lower	Upper
85	100		
87	0.0	24.9	37.3#
50	0.0	14.9	22.3#
135	0.0	0.0	0.0

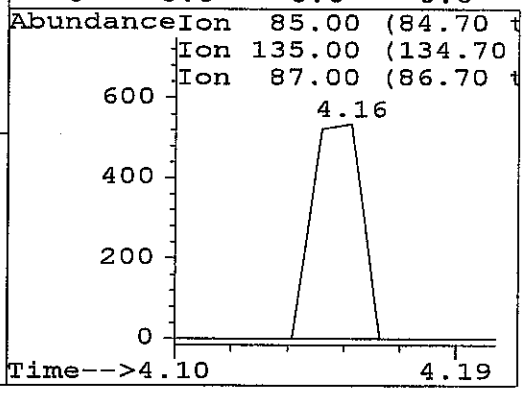


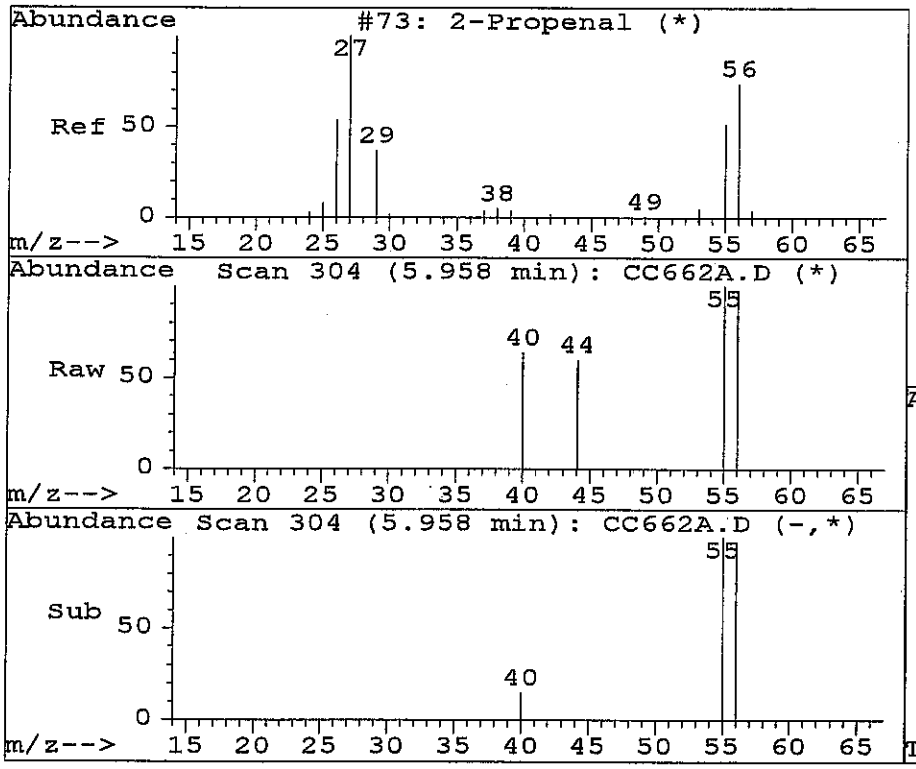


#4
Freon 114
Concen: 0.00 ppbV
RT: 4.16 min Scan# 118
Delta R.T. 0.05 min
Lab File: CC662A.D
Acq: 8 Jul 109 2:05 pm

Tgt Ion:85 Resp: 616

Ion	Ratio	Lower	Upper
85	100		
135	0.0	43.5	65.3#
87	0.0	26.1	39.1#
0	0.0	0.0	0.0

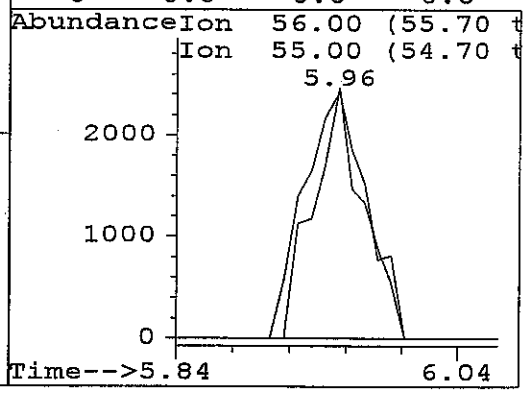


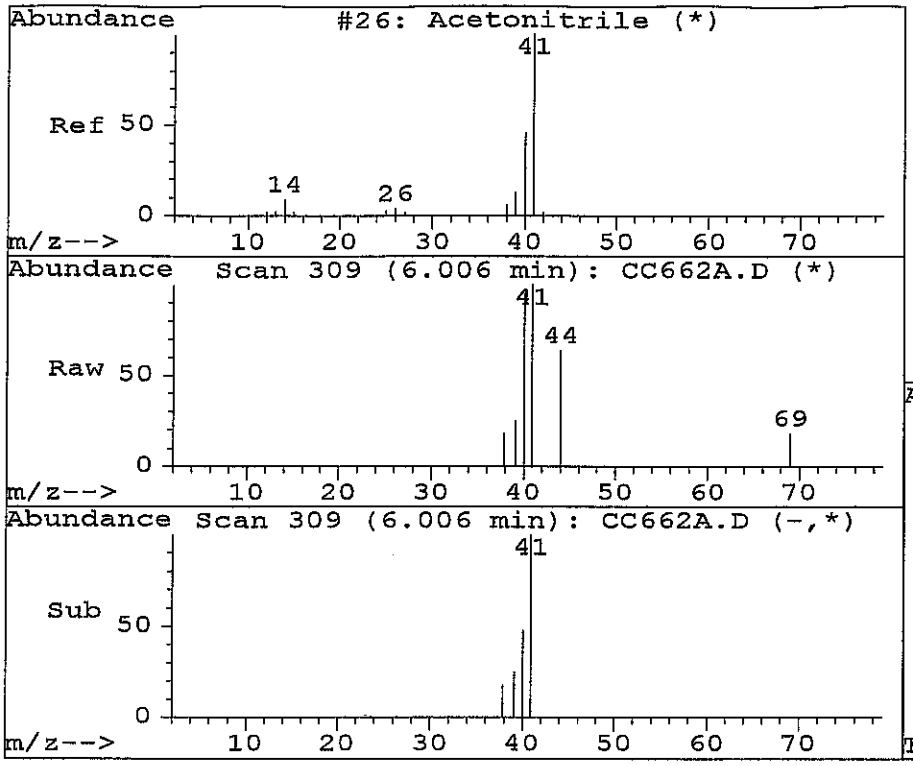


#9
Acrolein
Concen: 0.31 ppbV
RT: 5.96 min Scan# 304
Delta R.T. 0.07 min
Lab File: CC662A.D
Acq: 8 Jul 109 2:05 pm

Tgt Ion:56 Resp: 7619

Ion	Ratio	Lower	Upper
56	100		
55	101.9	54.2	81.4#
0	0.0	0.0	0.0
0	0.0	0.0	0.0

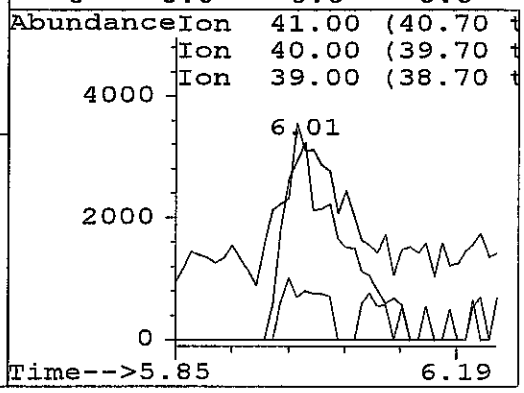


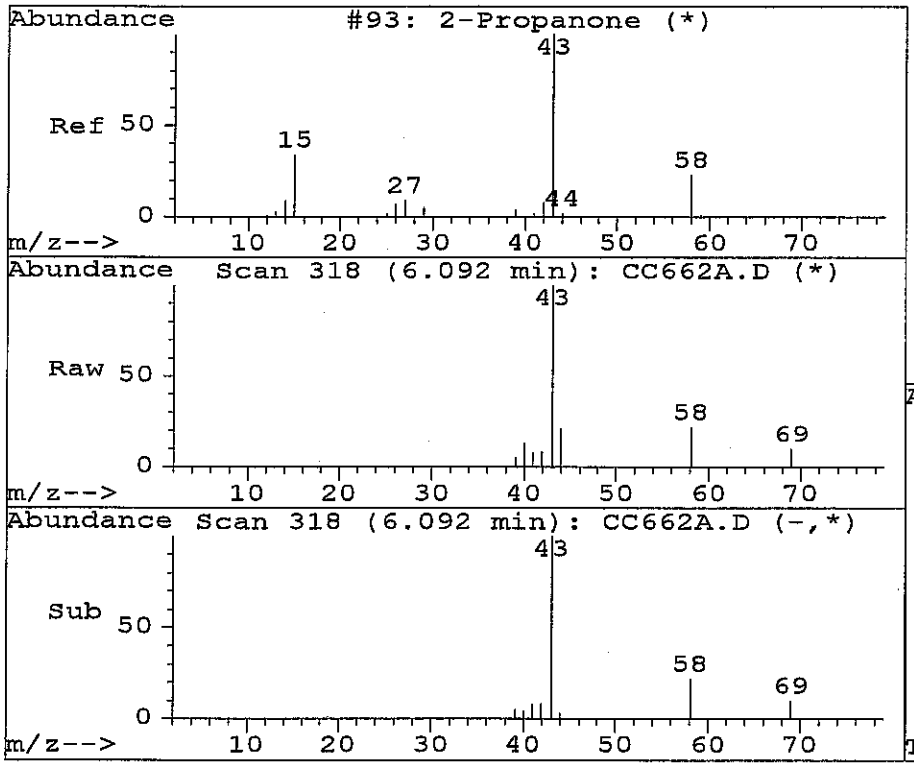


#11
Acetonitrile
Concen: 0.15 ppbV
RT: 6.01 min Scan# 309
Delta R.T. 0.05 min
Lab File: CC662A.D
Acq: 8 Jul 109 2:05 pm

Tgt Ion:41 Resp: 15699

Ion	Ratio	Lower	Upper
41	100		
40	59.6	42.9	64.3
39	24.8	16.4	24.6#
0	0.0	0.0	0.0

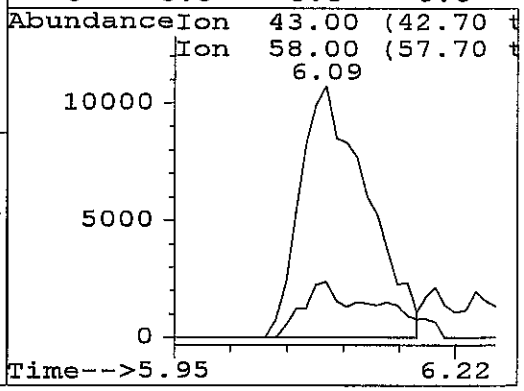


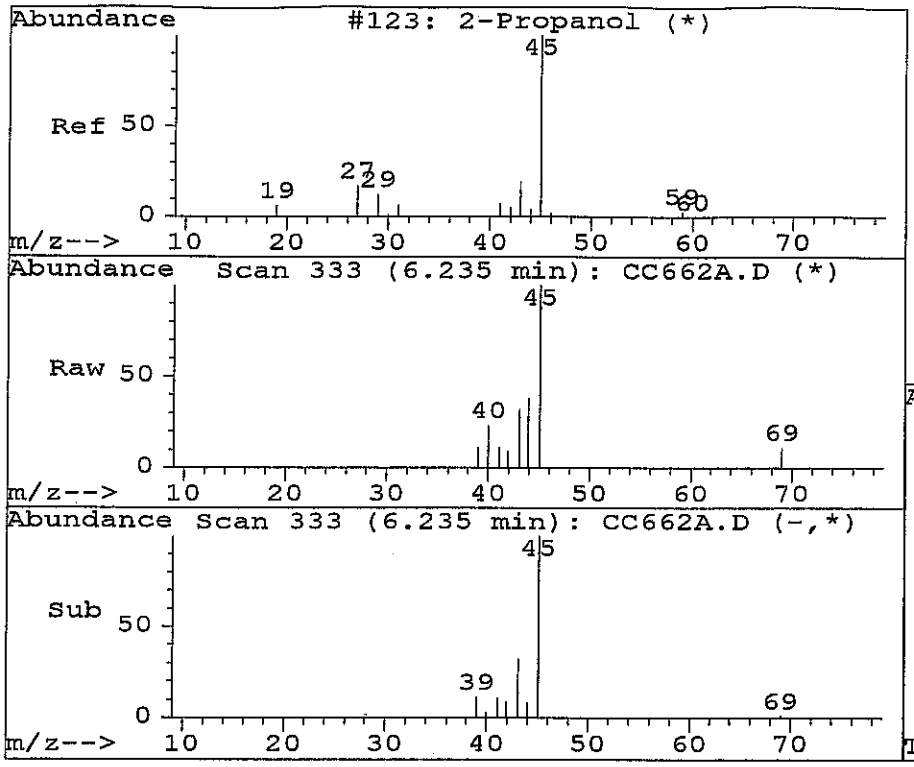


#12
Acetone
Concen: 0.23 ppbV
RT: 6.09 min Scan# 318
Delta R.T. 0.05 min
Lab File: CC662A.D
Acq: 8 Jul 109 2:05 pm

Tgt Ion:43 Resp: 47716

Ion	Ratio	Lower	Upper
43	100		
58	19.6	15.7	23.5
0	0.0	0.0	0.0
0	0.0	0.0	0.0

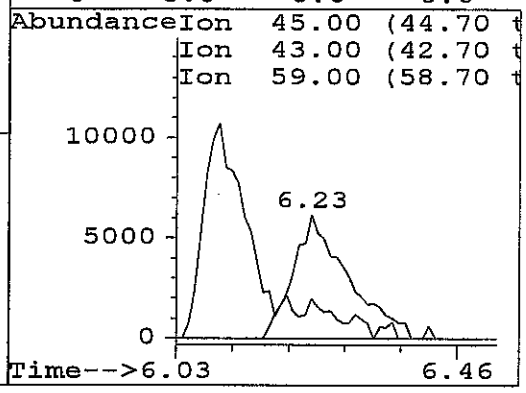


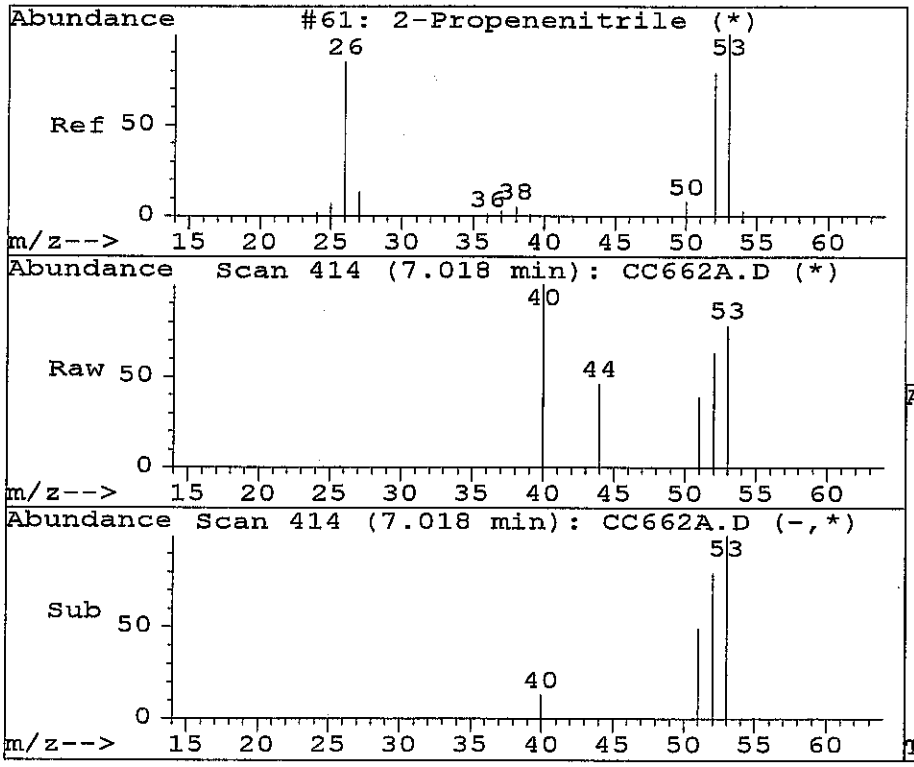


#13
2-propanol
Concen: 0.22 ppbV
RT: 6.23 min Scan# 333
Delta R.T. 0.09 min
Lab File: CC662A.D
Acq: 8 Jul 109 2:05 pm

Tgt Ion:45 Resp: 35810

Ion	Ratio	Lower	Upper
45	100		
43	14.9	18.2	27.2#
59	0.0	2.6	3.8#
0	0.0	0.0	0.0

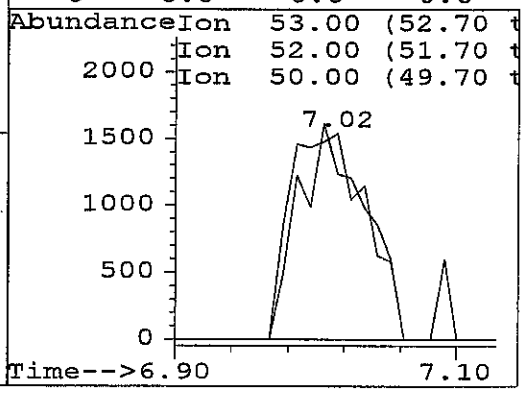


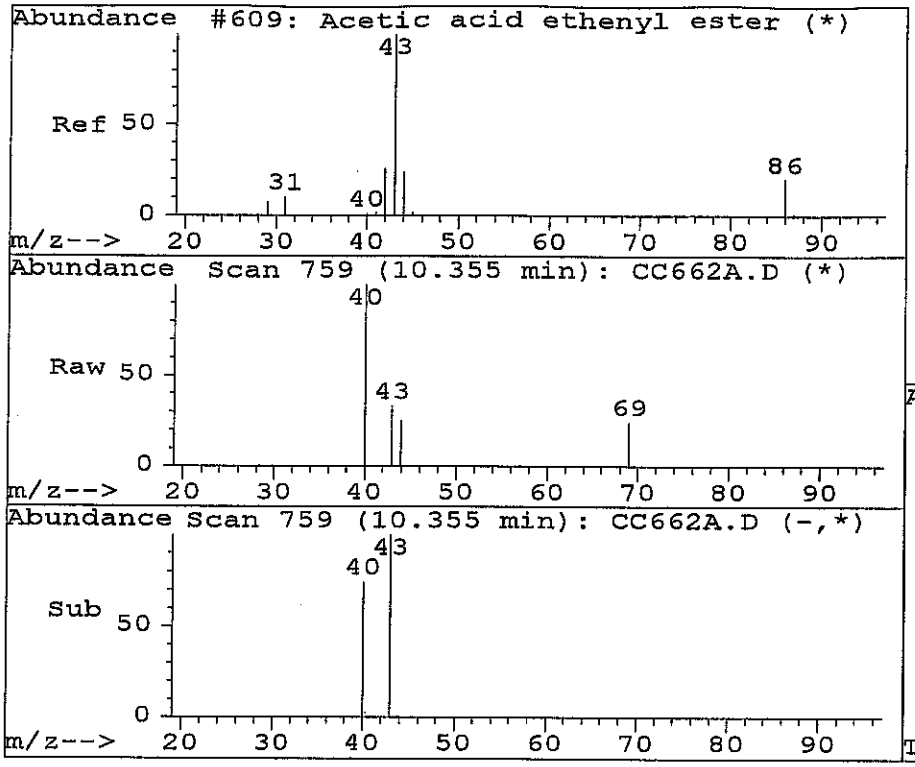


#16
Acrylonitrile
Concen: 0.09 ppbV
RT: 7.02 min Scan# 414
Delta R.T. 0.06 min
Lab File: CC662A.D
Acq: 8 Jul 109 2:05 pm

Tgt Ion:53 Resp: 5933

Ion	Ratio	Lower	Upper
53	100		
52	80.4	73.0	109.4
50	0.0	8.3	12.5#
0	0.0	0.0	0.0

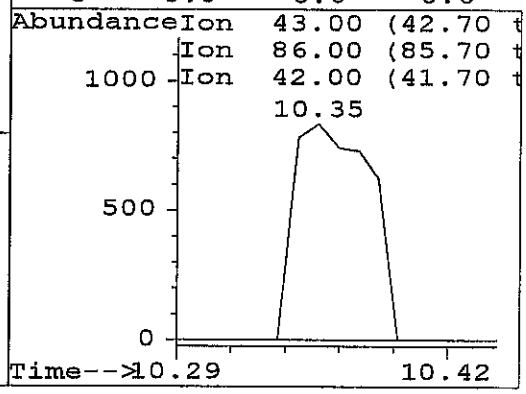


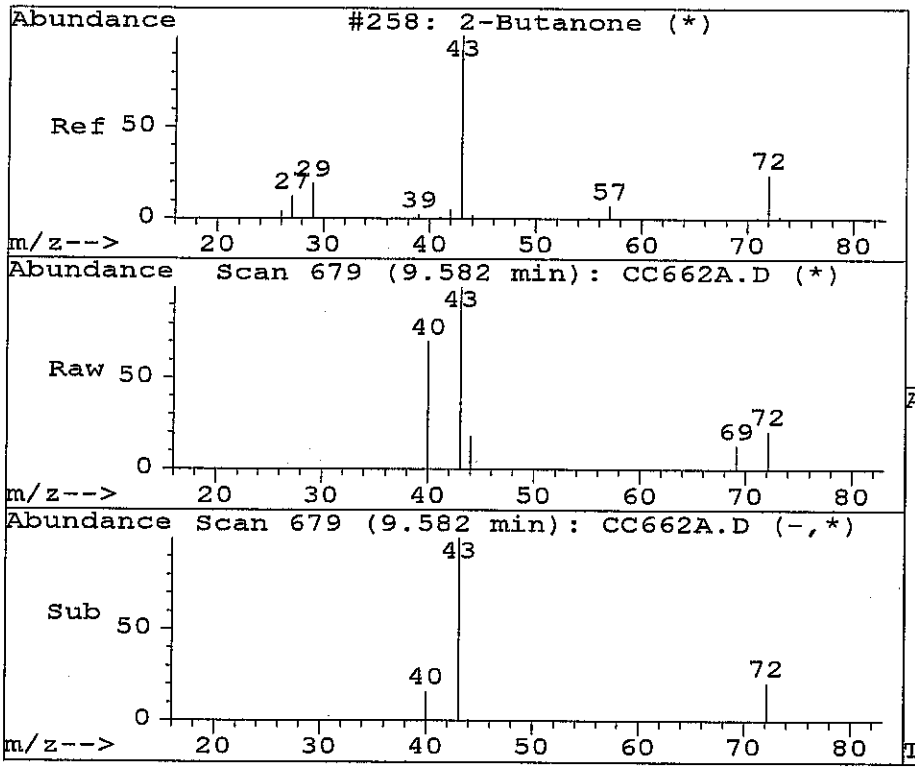


#25
Vinyl acetate
Concen: 0.01 ppbV
RT: 10.35 min Scan# 759
Delta R.T. 0.03 min
Lab File: CC662A.D
Acq: 8 Jul 109 2:05 pm

Tgt Ion:43 Resp: 2164

Ion	Ratio	Lower	Upper
43	100		
86	0.0	0.0	0.0
42	0.0	5.2	7.8#
0	0.0	0.0	0.0

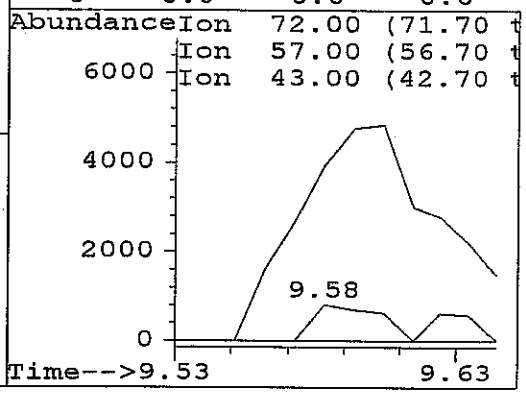


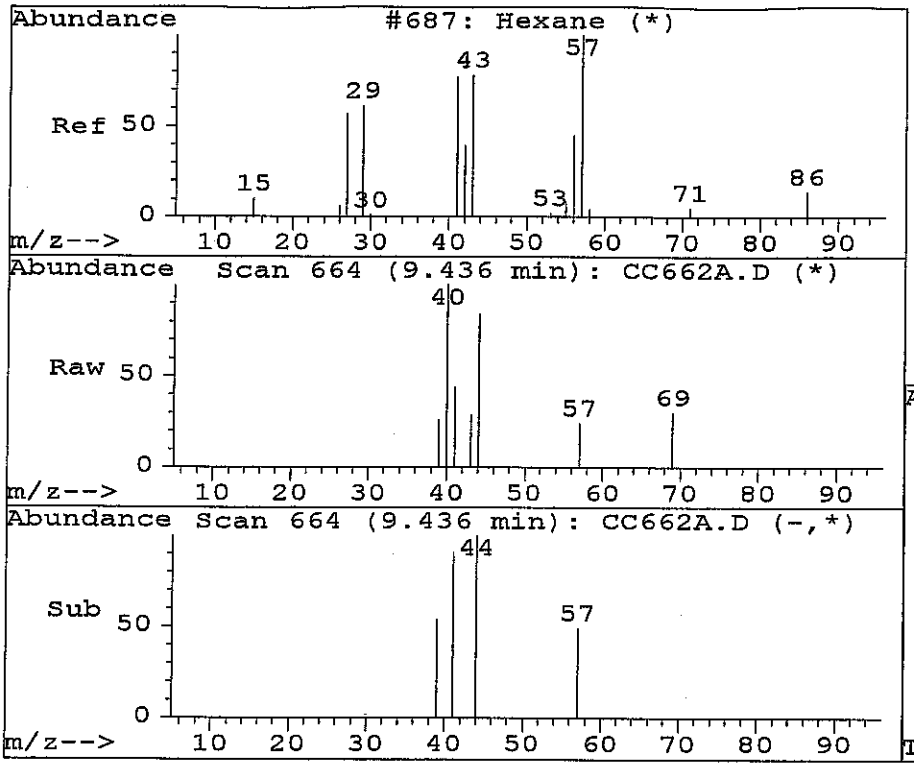


#26
2-Butanone
Concen: 0.03 ppbV
RT: 9.58 min Scan# 679
Delta R.T. 0.04 min
Lab File: CC662A.D
Acq: 8 Jul 109 2:05 pm

Tgt Ion:72 Resp: 1248

Ion	Ratio	Lower	Upper
72	100		
57	0.0	29.8	44.6#
43	202.5	551.4	827.0#
0	0.0	0.0	0.0

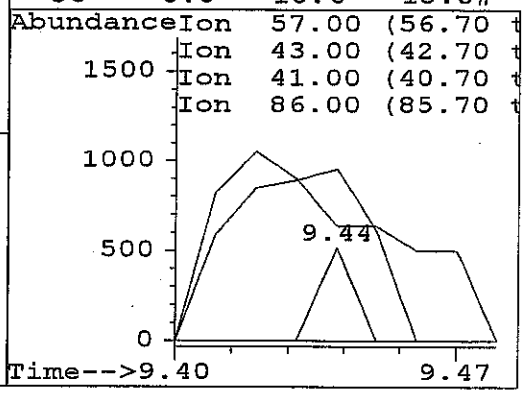


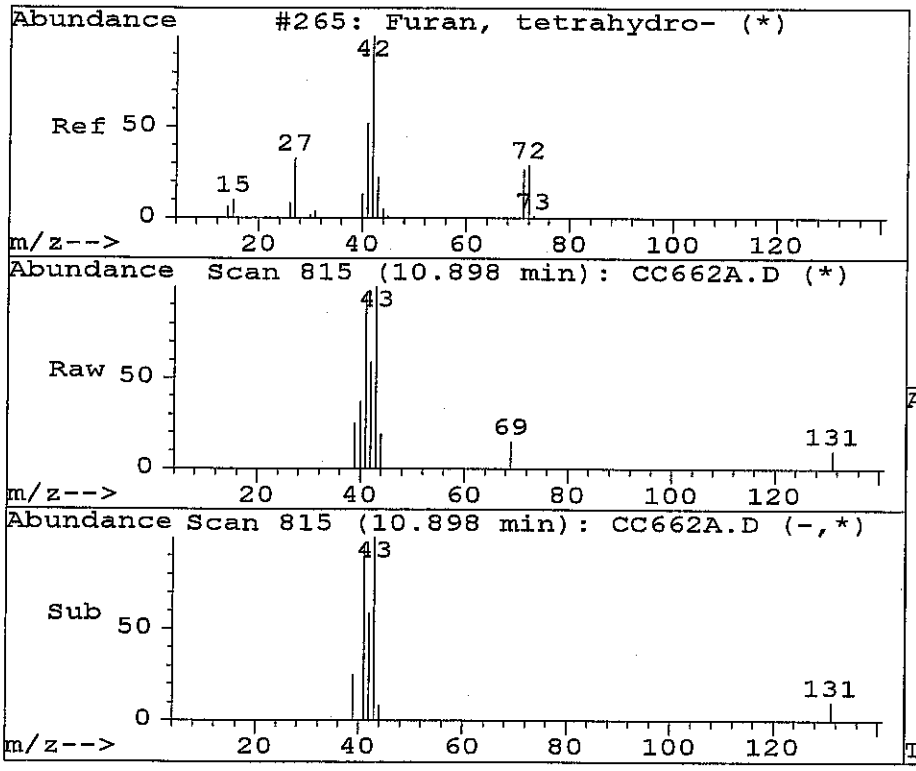


#27
Hexane
Concen: 0.00 ppbV
RT: 9.44 min Scan# 664
Delta R.T. -0.27 min
Lab File: CC662A.D
Acq: 8 Jul 109 2:05 pm

Tgt Ion:57 Resp: 301

Ion	Ratio	Lower	Upper
57	100		
43	978.4	71.2	106.8#
41	755.1	442.3	663.5#
86	0.0	10.6	15.8#

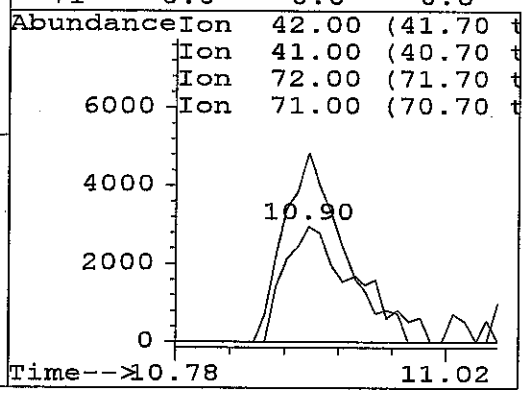


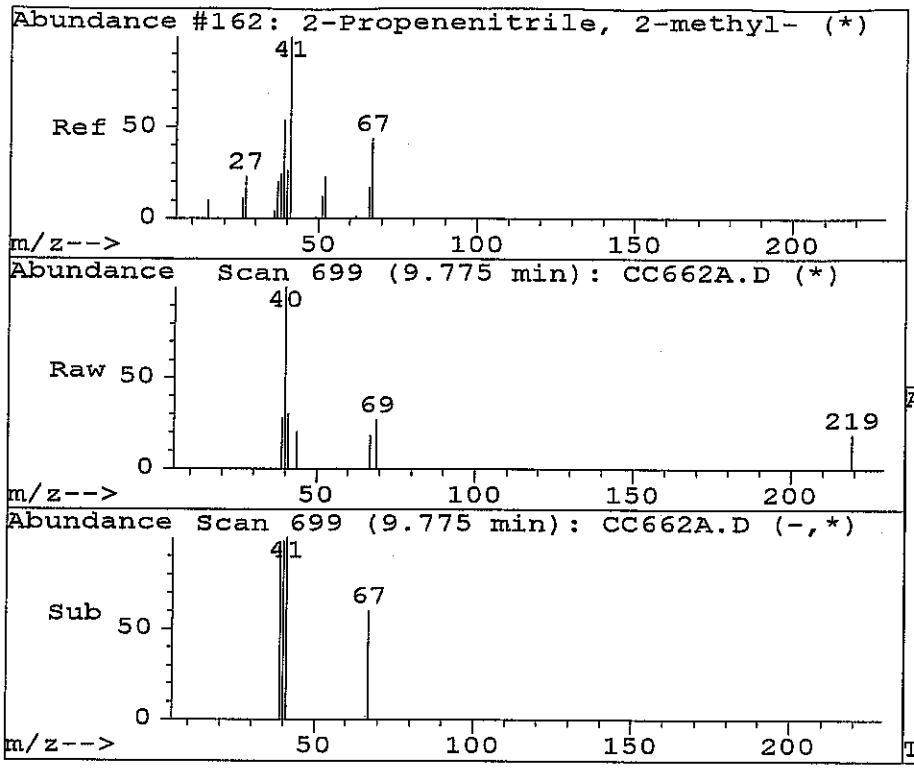


#29
Tetrahydrofuran
Concen: 0.02 ppbV
RT: 10.90 min Scan# 815
Delta R.T. -0.02 min
Lab File: CC662A.D
Acq: 8 Jul 109 2:05 pm

Tgt Ion:42 Resp: 11875

Ion	Ratio	Lower	Upper
42	100		
41	156.9	103.5	155.3#
72	0.0	0.3	0.5#
71	0.0	0.0	0.0

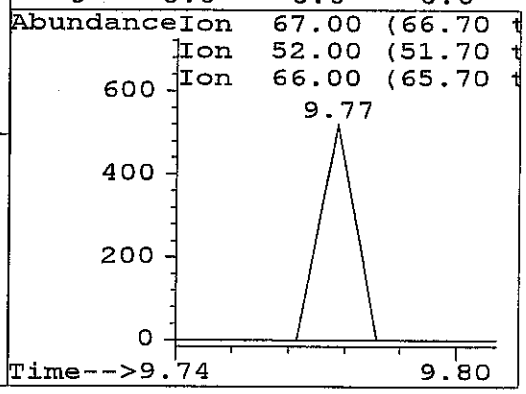


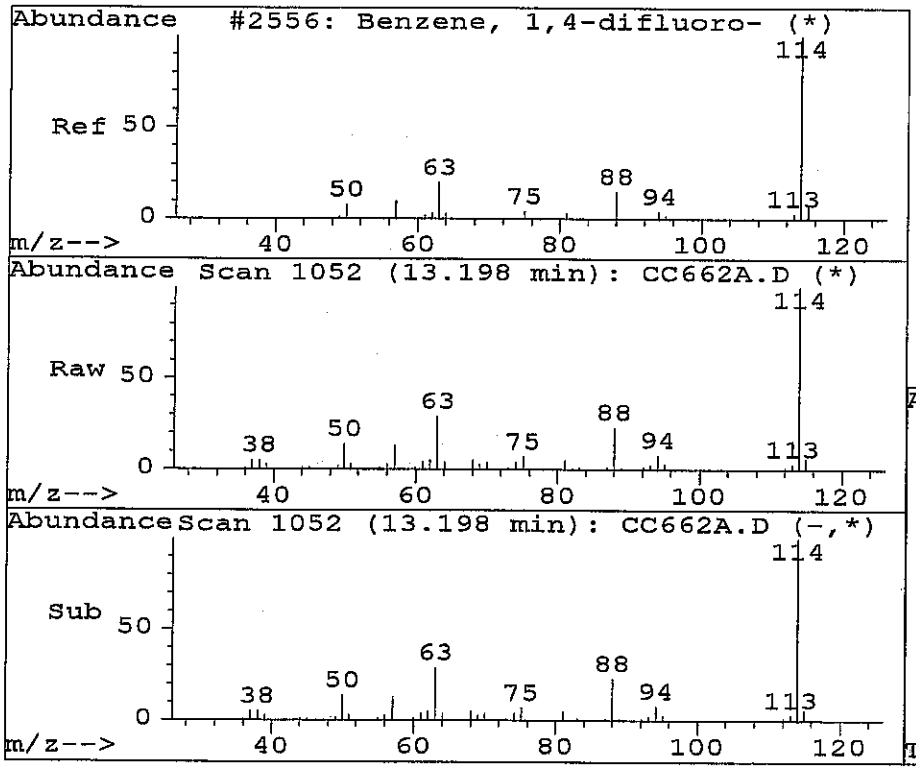


#31
Methacrylonitrile
Concen: 0.01 ppbV
RT: 9.77 min Scan# 699
Delta R.T. 0.03 min
Lab File: CC662A.D
Acq: 8 Jul 109 2:05 pm

Tgt Ion:67 Resp: 302

Ion	Ratio	Lower	Upper
67	100		
52	0.0	42.1	63.1#
66	0.0	29.7	44.5#
0	0.0	0.0	0.0

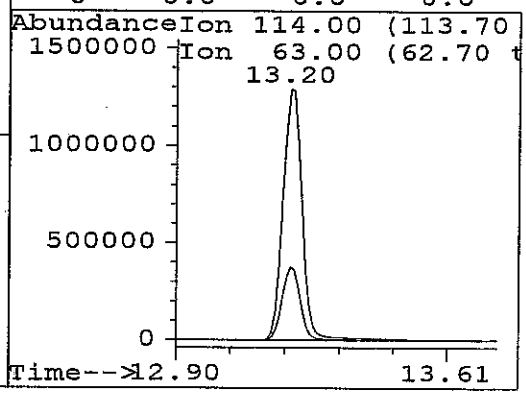


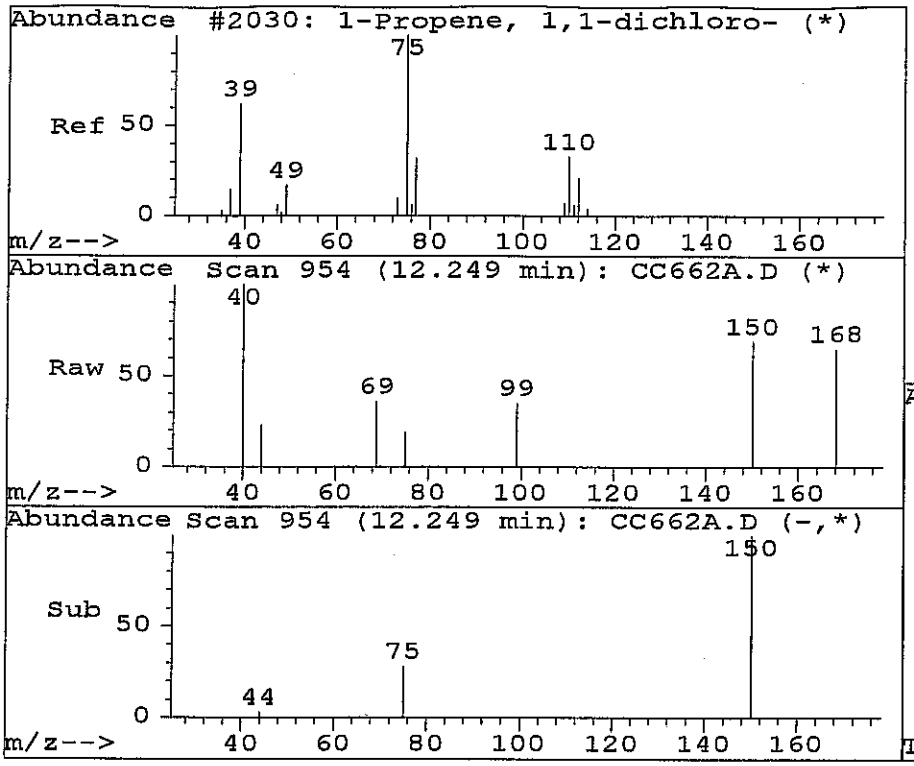


#35
1,4-Difluorobenzene
Concen: 20.00 ppbV
RT: 13.20 min Scan# 1052
Delta R.T. 0.03 min
Lab File: CC662A.D
Acq: 8 Jul 109 2:05 pm

Tgt Ion:114 Resp: 4489502

Ion	Ratio	Lower	Upper
114	100		
63	29.4	22.0	36.6
0	0.0	0.0	0.0
0	0.0	0.0	0.0

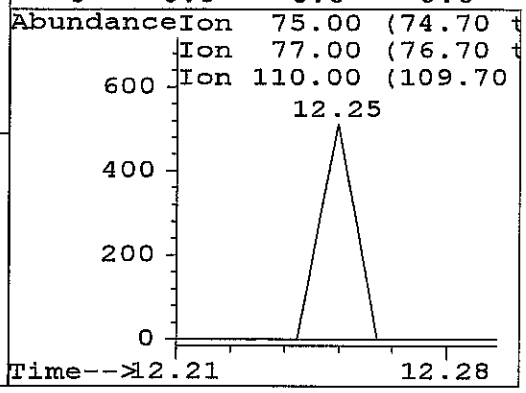


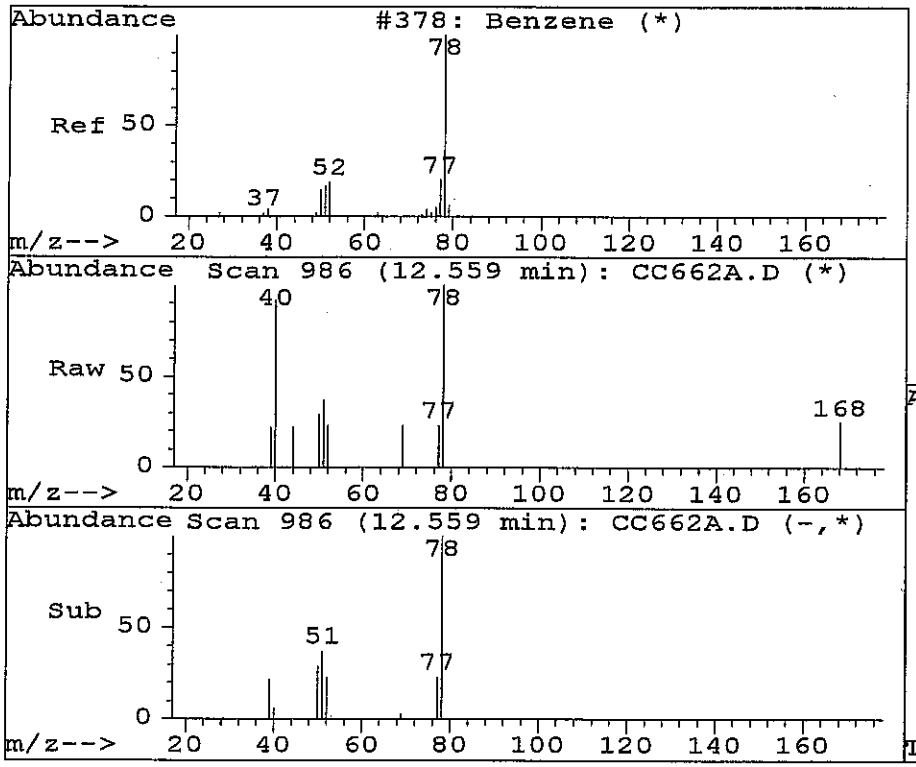


#38
1,1-Dichloropropene
Concen: 0.00 ppbV
RT: 12.25 min Scan# 954
Delta R.T. 0.01 min
Lab File: CC662A.D
Acq: 8 Jul 109 2:05 pm

Tgt Ion:75 Resp: 299

Ion	Ratio	Lower	Upper
75	100		
77	0.0	24.7	37.1#
110	0.0	23.5	35.3#
0	0.0	0.0	0.0

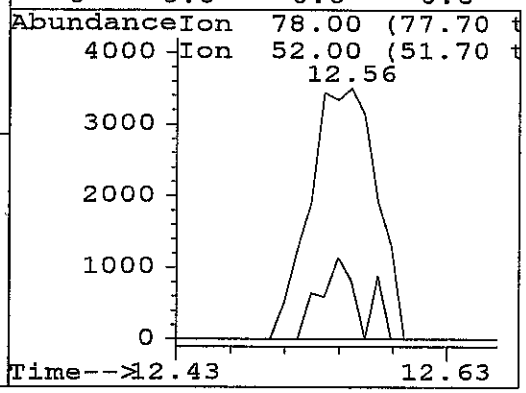


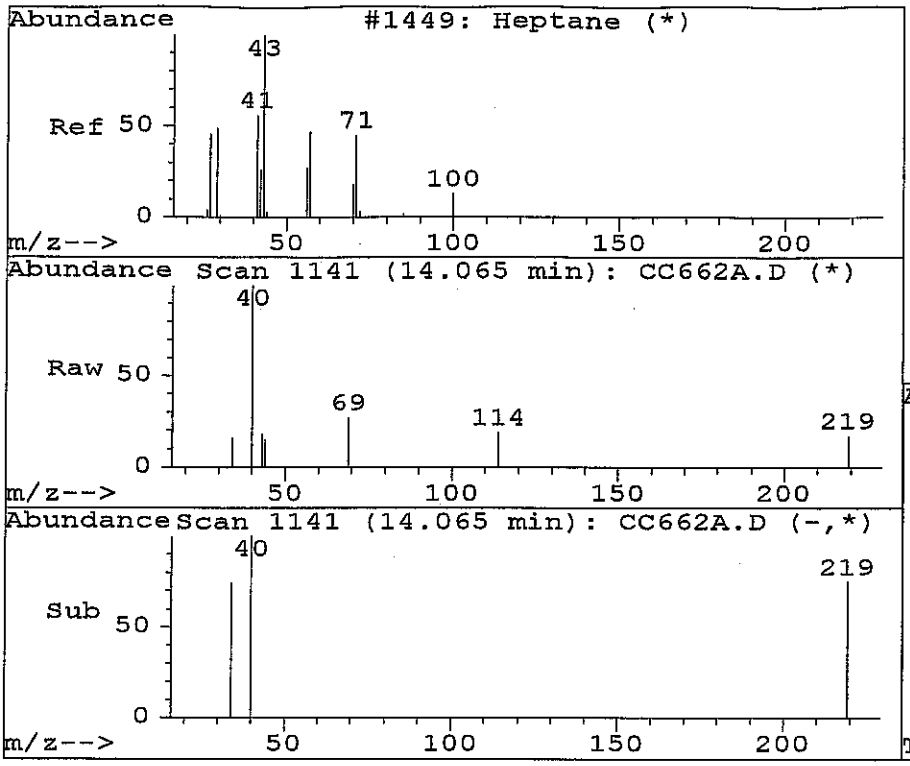


#40
Benzene
Concen: 0.04 ppbV
RT: 12.56 min Scan# 986
Delta R.T. 0.05 min
Lab File: CC662A.D
Acq: 8 Jul 109 2:05 pm

Tgt Ion:78 Resp: 11859

Ion	Ratio	Lower	Upper
78	100		
52	23.3	19.2	28.8
0	0.0	0.0	0.0
0	0.0	0.0	0.0

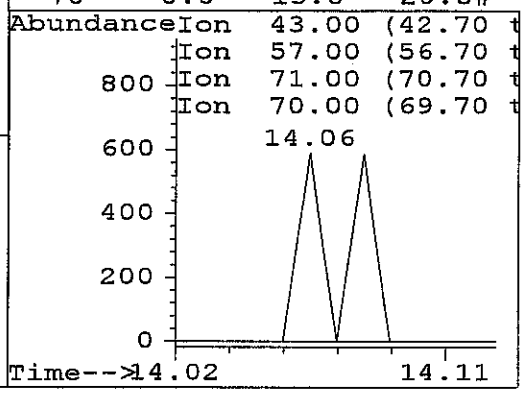


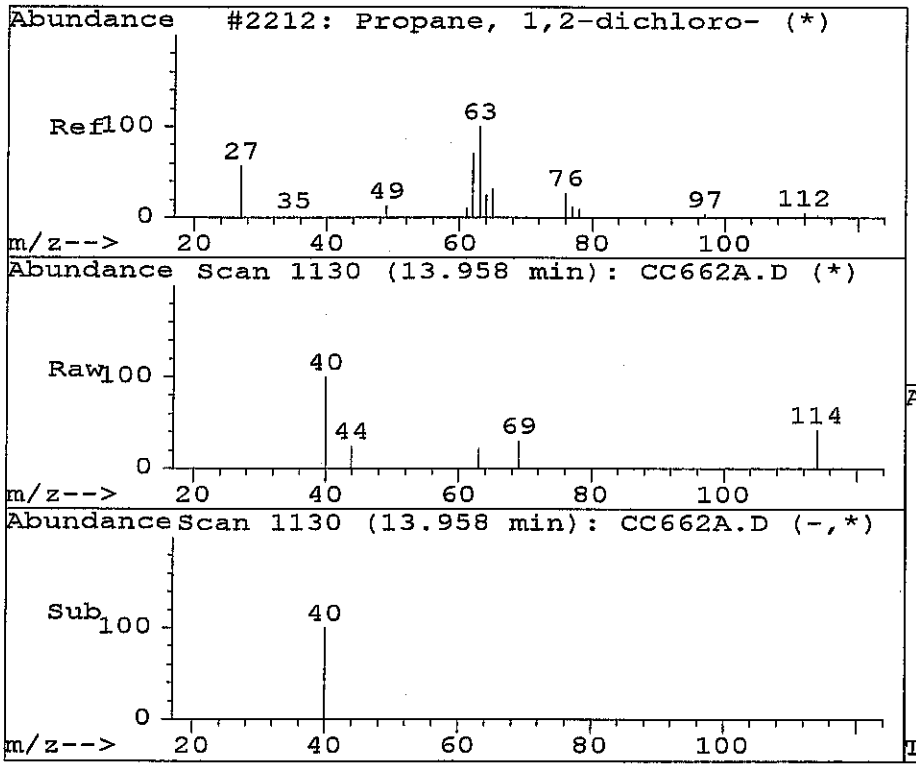


#42
n-Heptane
Concen: 0.00 ppbV
RT: 14.06 min Scan# 1141
Delta R.T. 0.02 min
Lab File: CC662A.D
Acq: 8 Jul 109 2:05 pm

Tgt Ion:43 Resp: 686

Ion	Ratio	Lower	Upper
43	100		
57	0.0	28.7	43.1#
71	0.0	27.4	41.0#
70	0.0	13.8	20.8#

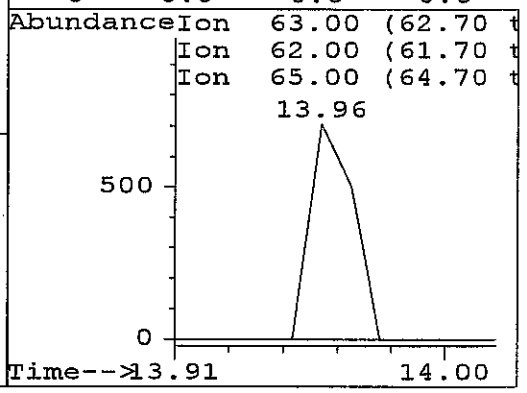


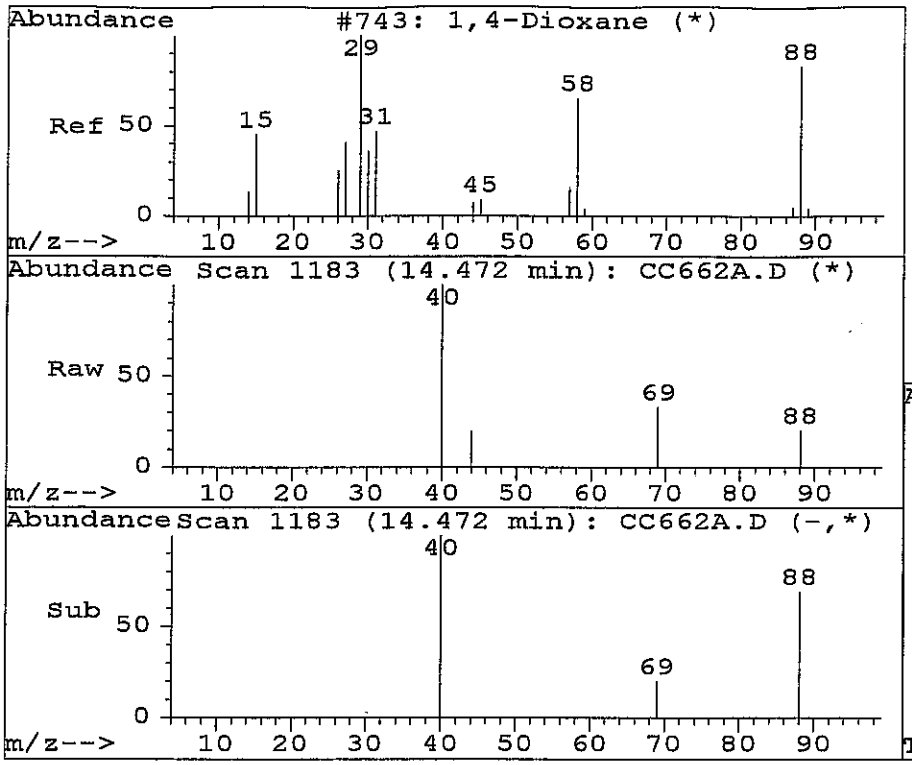


#43
1,2-Dichloropropane
Concen: 0.01 ppbV
RT: 13.96 min Scan# 1130
Delta R.T. -0.11 min
Lab File: CC662A.D
Acq: 8 Jul 109 2:05 pm

Tgt Ion:63 Resp: 705

Ion	Ratio	Lower	Upper
63	100		
62	0.0	58.3	87.5#
65	0.0	23.8	35.8#
0	0.0	0.0	0.0

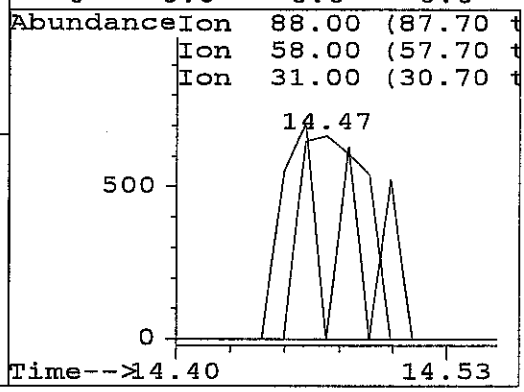


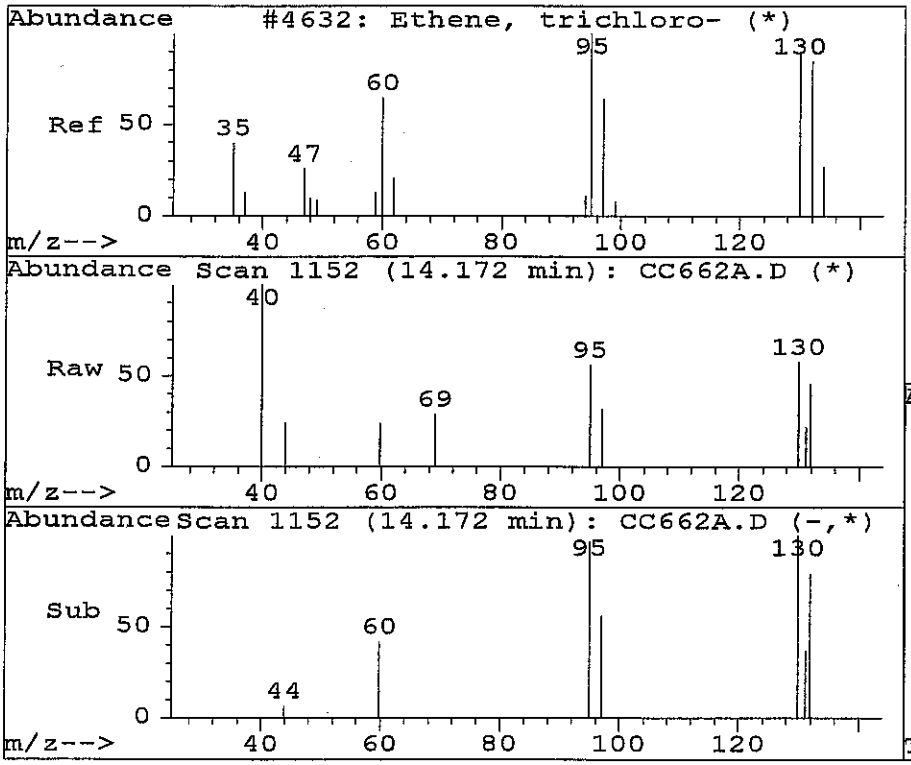


#44
1,4 Dioxane
Concen: 0.02 ppbV
RT: 14.47 min Scan# 1183
Delta R.T. 0.07 min
Lab File: CC662A.D
Acq: 8 Jul 109 2:05 pm

Tgt Ion:88 Resp: 1436

Ion	Ratio	Lower	Upper
88	100		
58	46.9	75.8	113.6#
31	0.0	0.0	0.0
0	0.0	0.0	0.0

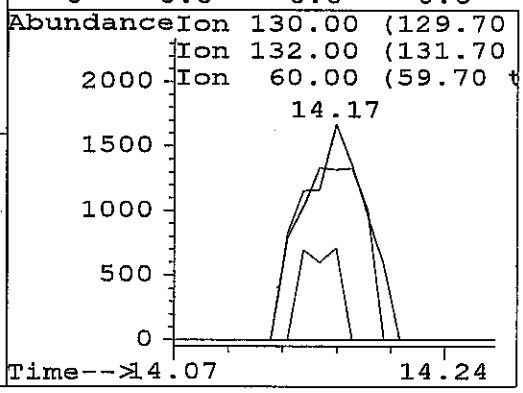


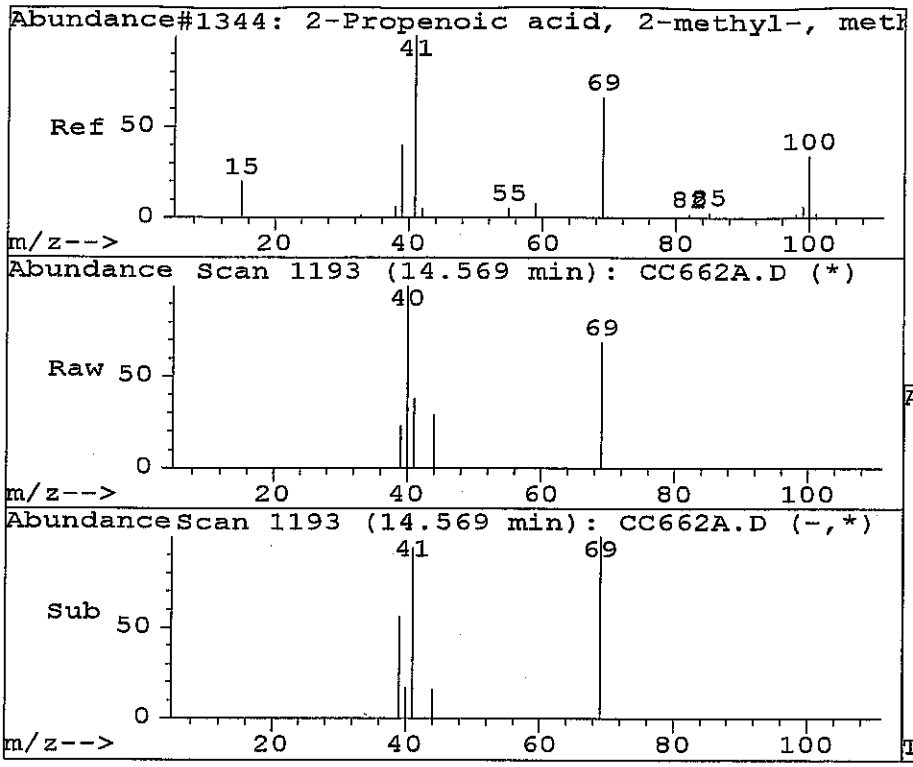


#46
Trichloroethene
Concen: 0.03 ppbV
RT: 14.17 min Scan# 1152
Delta R.T. 0.04 min
Lab File: CC662A.D
Acq: 8 Jul 109 2:05 pm

Tgt Ion:130 Resp: 4490

Ion	Ratio	Lower	Upper
130	100		
132	79.0	79.1	118.7#
60	42.4	46.3	69.5#
0	0.0	0.0	0.0

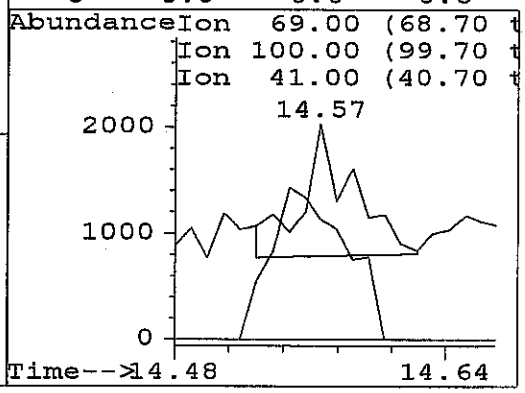


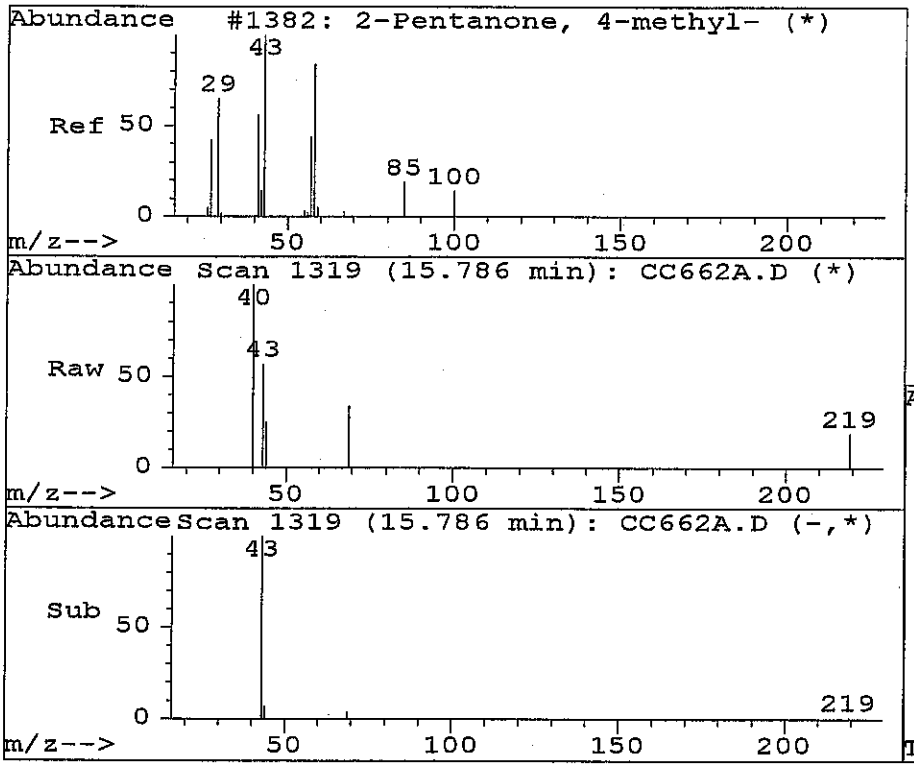


#48
Methyl methacrylate
Concen: 0.02 ppbV
RT: 14.57 min Scan# 1193
Delta R.T. 0.02 min
Lab File: CC662A.D
Acq: 8 Jul 109 2:05 pm

Tgt Ion:69 Resp: 2582

Ion	Ratio	Lower	Upper
69	100		
100	0.0	27.5	41.3#
41	79.7	163.1	244.7#
0	0.0	0.0	0.0

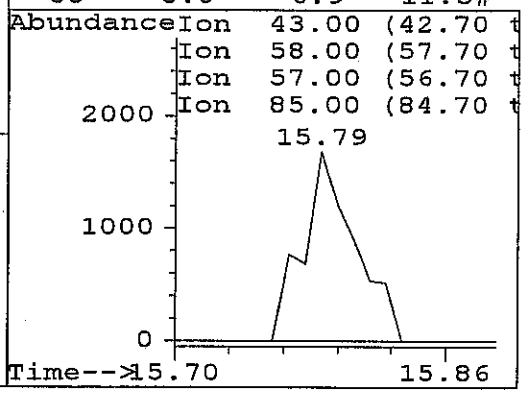


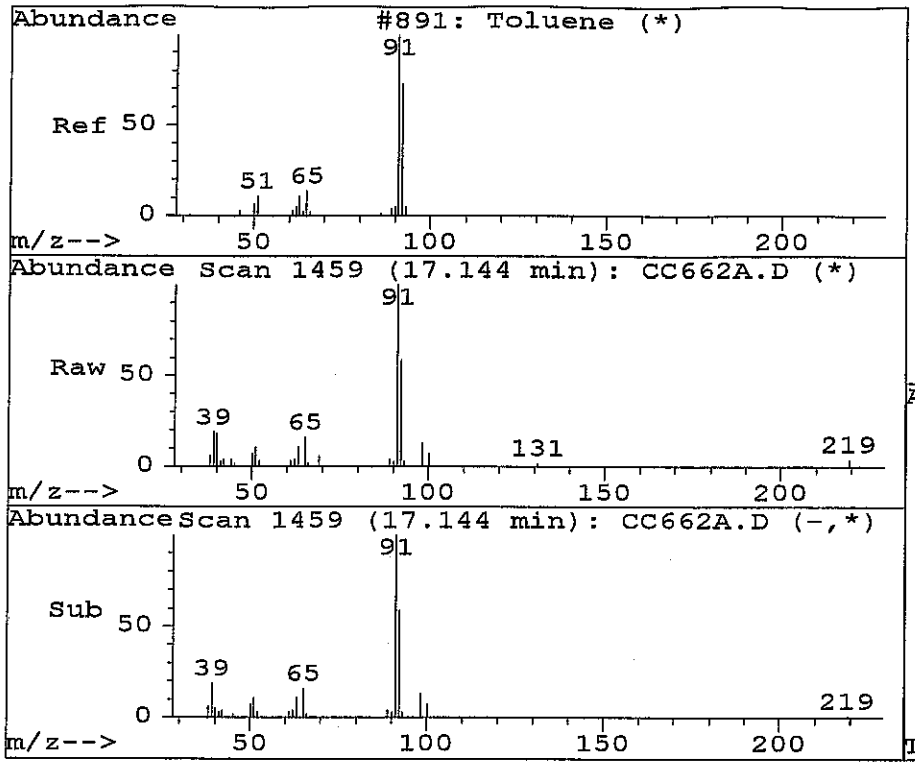


#49
Methyl Isobutyl Ketone
Concen: 0.01 ppbV
RT: 15.79 min Scan# 1319
Delta R.T. 0.09 min
Lab File: CC662A.D
Acq: 8 Jul 109 2:05 pm

Tgt Ion:43 Resp: 3667

Ion	Ratio	Lower	Upper
43	100		
58	0.0	20.7	34.5#
57	0.0	12.8	21.4#
85	0.0	6.9	11.5#

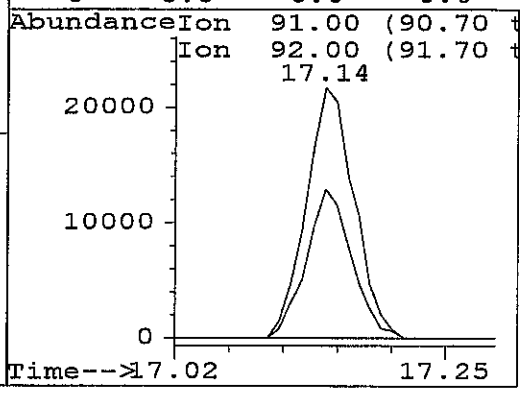


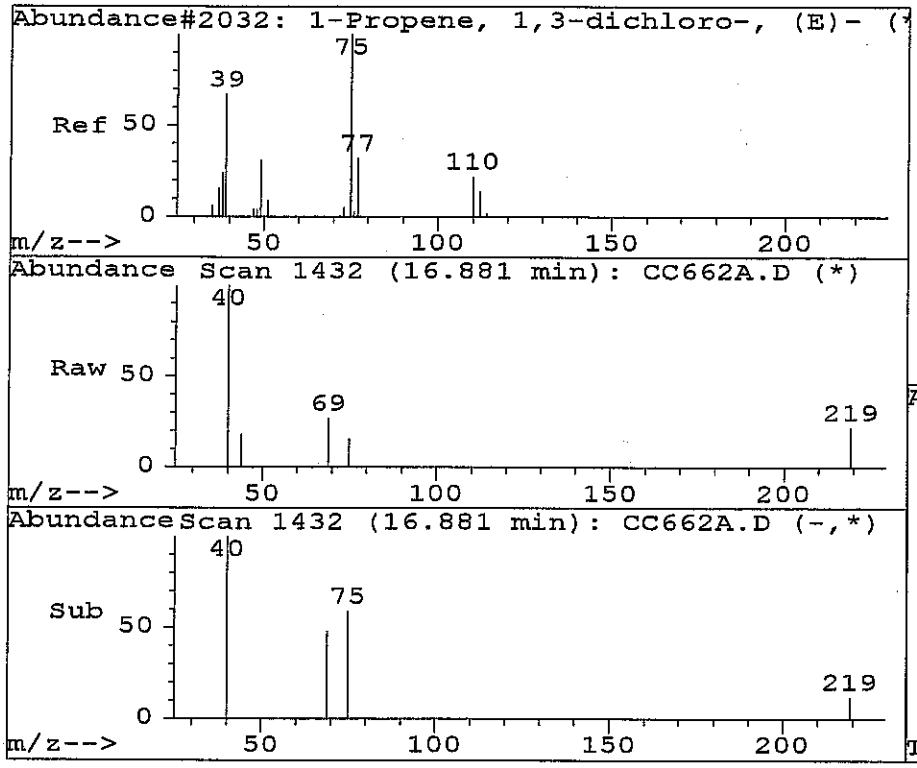


#51
Toluene
Concen: 0.18 ppbV
RT: 17.14 min Scan# 1459
Delta R.T. 0.03 min
Lab File: CC662A.D
Acq: 8 Jul 109 2:05 pm

Tgt Ion:91 Resp: 61611

Ion	Ratio	Lower	Upper
91	100		
92	59.4	43.9	65.9
0	0.0	0.0	0.0
0	0.0	0.0	0.0

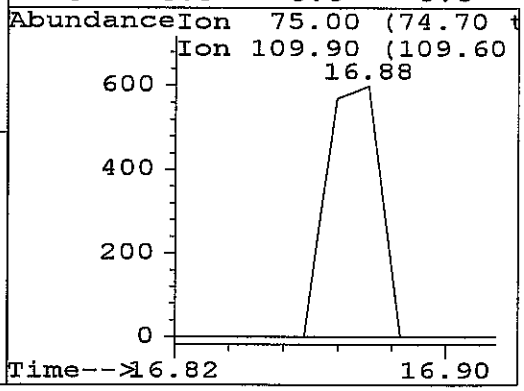


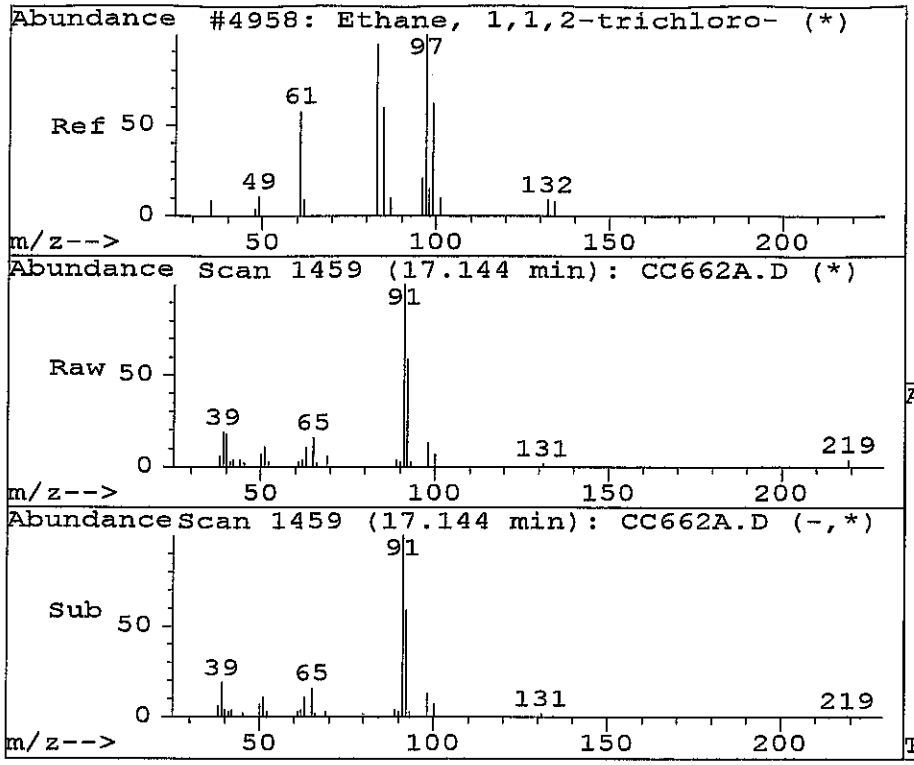


#52
trans-1,3-Dichloropropene
Concen: 0.00 ppbV
RT: 16.88 min Scan# 1432
Delta R.T. 0.03 min
Lab File: CC662A.D
Acq: 8 Jul 109 2:05 pm

Tgt Ion:75 Resp: 683

Ion	Ratio	Lower	Upper
75	100		
110	0.0	15.5	23.3#
0	0.0	0.0	0.0
0	0.0	0.0	0.0

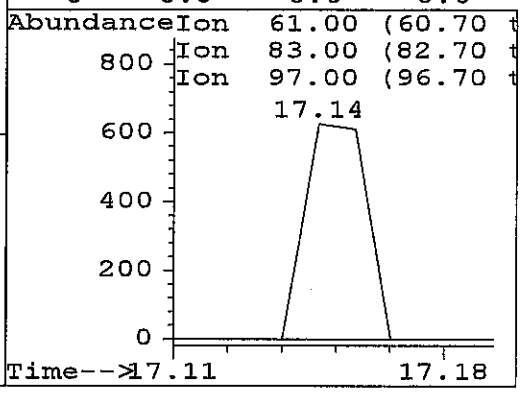


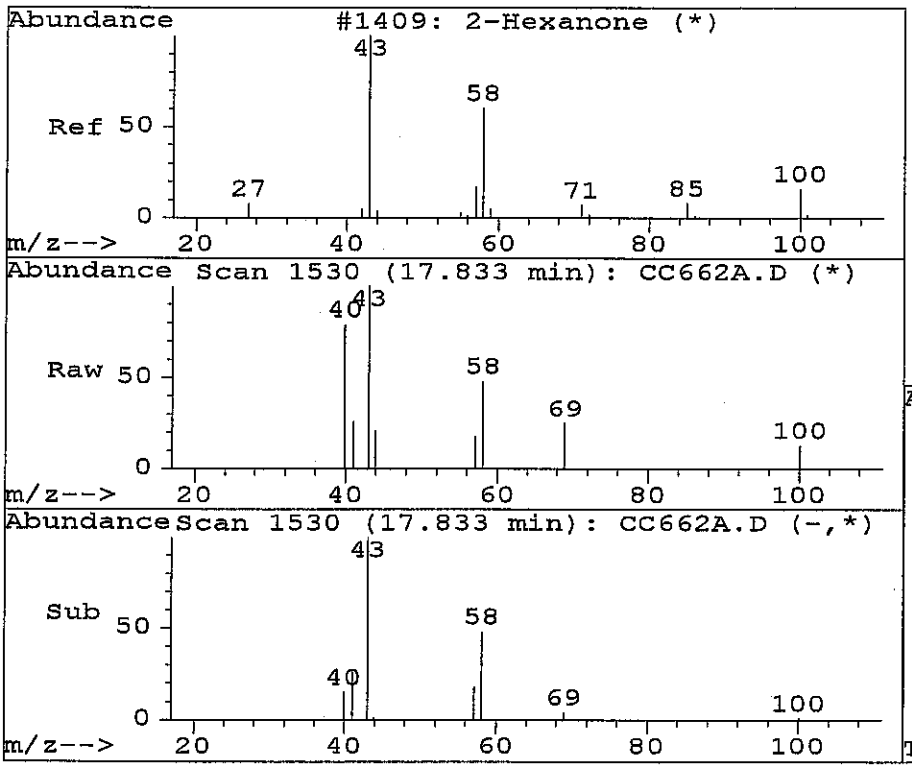


#53
1,1,2-Trichloroethane
Concen: 0.01 ppbV
RT: 17.14 min Scan# 1459
Delta R.T. -0.02 min
Lab File: CC662A.D
Acq: 8 Jul 109 2:05 pm

Tgt Ion:61 Resp: 712

Ion	Ratio	Lower	Upper
61	100		
83	0.0	90.9	136.3#
97	0.0	96.7	145.1#
0	0.0	0.0	0.0

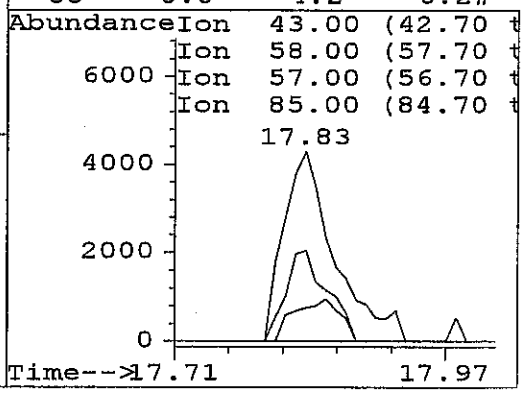


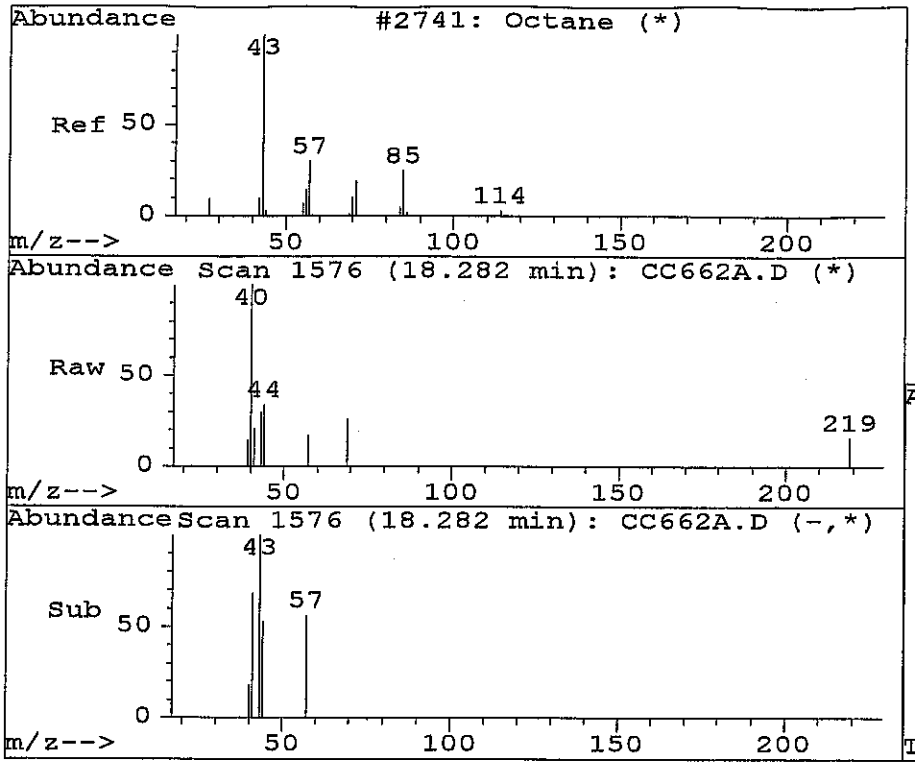


#54
2-Hexanone
Concen: 0.03 ppbV
RT: 17.83 min Scan# 1530
Delta R.T. 0.03 min
Lab File: CC662A.D
Acq: 8 Jul 109 2:05 pm

Tgt Ion:43 Resp: 14687

Ion	Ratio	Lower	Upper
43	100		
58	47.7	28.2	47.0#
57	17.7	10.4	17.3#
85	0.0	4.2	6.2#

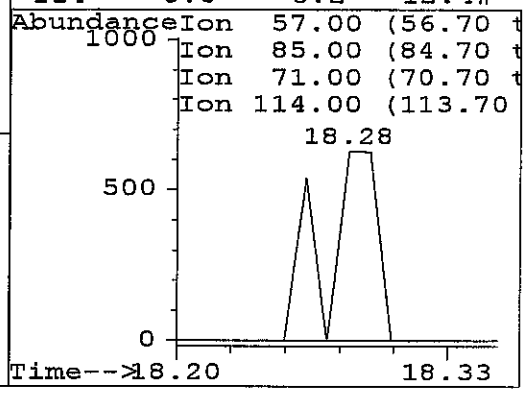


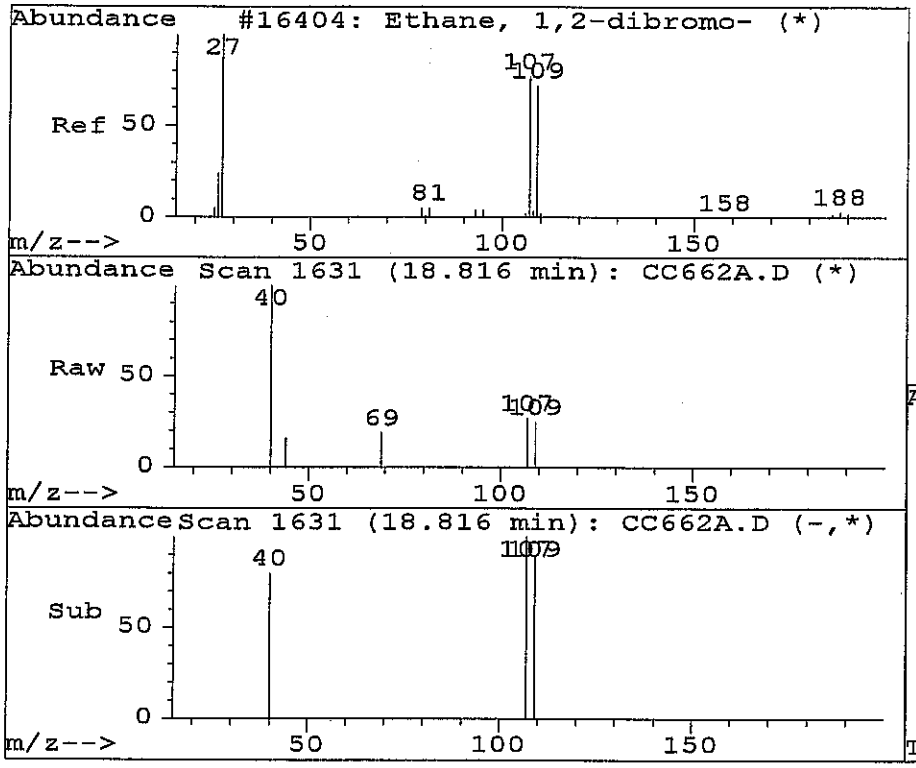


#56
Octane
Concen: 0.01 ppbV
RT: 18.28 min Scan# 1576
Delta R.T. 0.02 min
Lab File: CC662A.D
Acq: 8 Jul 109 2:05 pm

Tgt Ion:57 Resp: 1050

Ion	Ratio	Lower	Upper
57	100		
85	0.0	81.3	121.9#
71	0.0	45.0	67.4#
114	0.0	8.2	12.4#

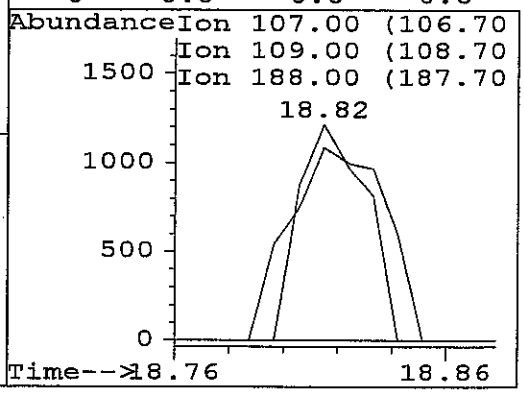


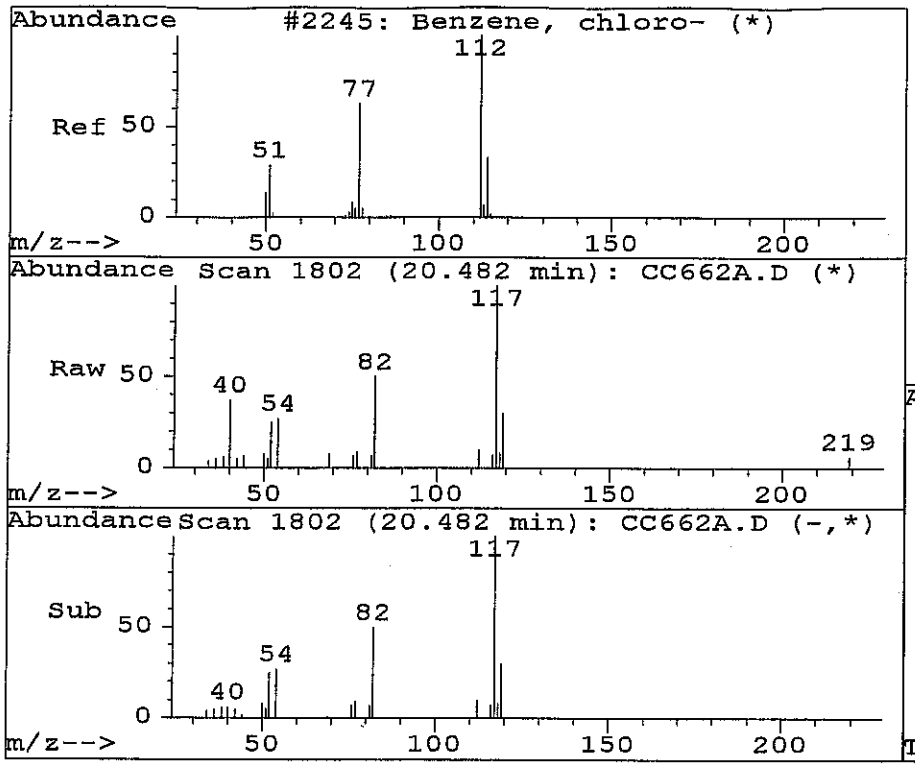


#58
1,2-Dibromoethane
Concen: 0.01 ppbV
RT: 18.82 min Scan# 1631
Delta R.T. 0.02 min
Lab File: CC662A.D
Acq: 8 Jul 109 2:05 pm

Tgt Ion:107 Resp: 2266

Ion	Ratio	Lower	Upper
107	100		
109	89.5	75.4	113.0
188	0.0	3.0	4.6#
0	0.0	0.0	0.0

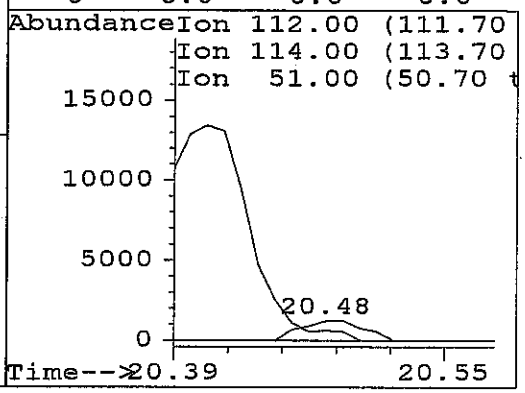


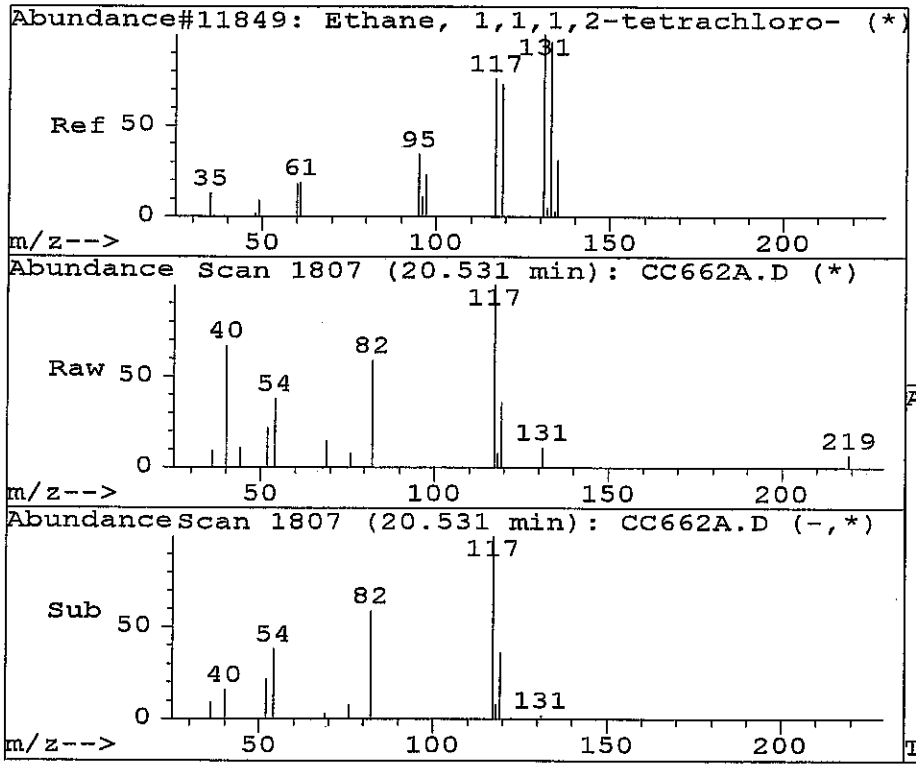


#60
Chlorobenzene
Concen: 0.01 ppbV
RT: 20.48 min Scan# 1802
Delta R.T. 0.03 min
Lab File: CC662A.D
Acq: 8 Jul 109 2:05 pm

Tgt Ion:112 Resp: 3149

Ion	Ratio	Lower	Upper
112	100		
114	0.0	25.3	37.9#
51	0.0	23.0	34.6#
0	0.0	0.0	0.0

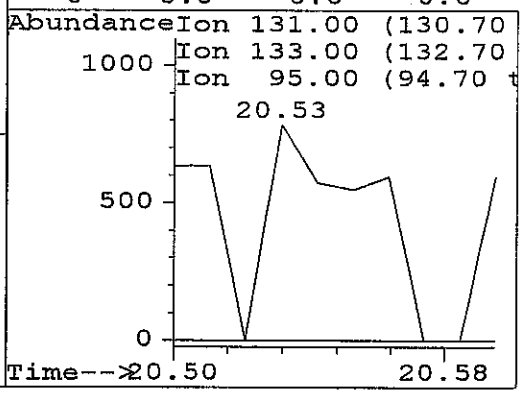


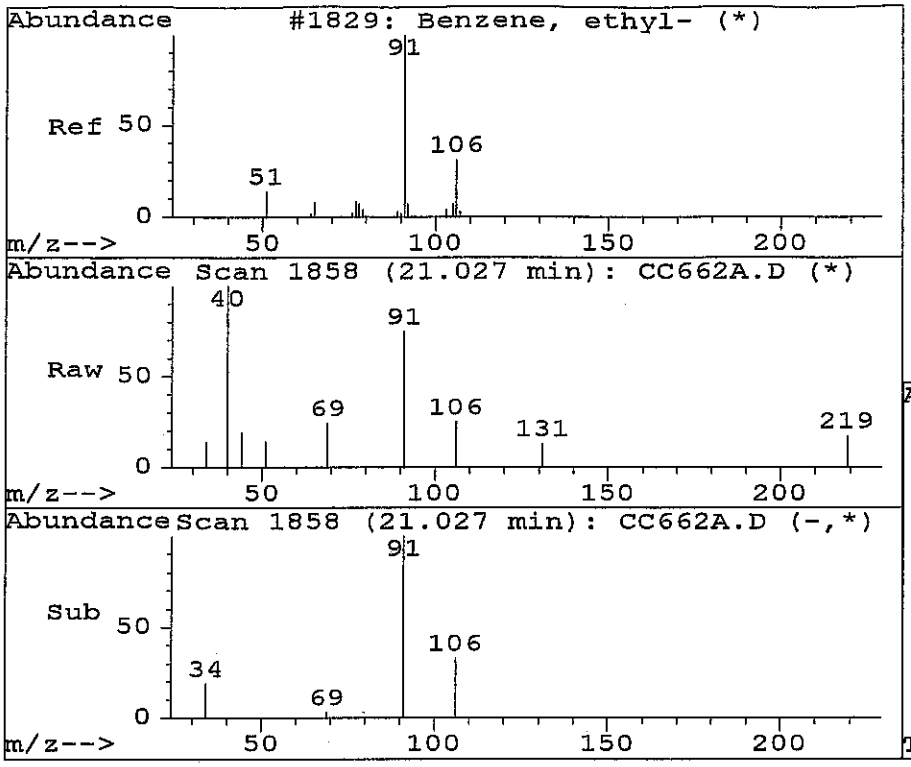


#61
1,1,1,2-Tetrachloroethane
Concen: 0.01 ppbV
RT: 20.53 min Scan# 1807
Delta R.T. 0.02 min
Lab File: CC662A.D
Acq: 8 Jul 109 2:05 pm

Tgt Ion:131 Resp: 1464

Ion	Ratio	Lower	Upper
131	100		
133	0.0	76.0	114.0#
95	0.0	31.8	47.6#
0	0.0	0.0	0.0

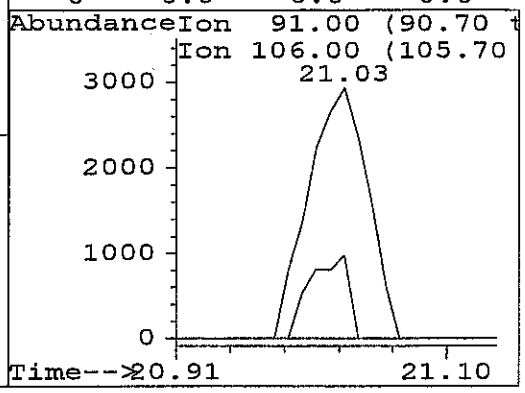


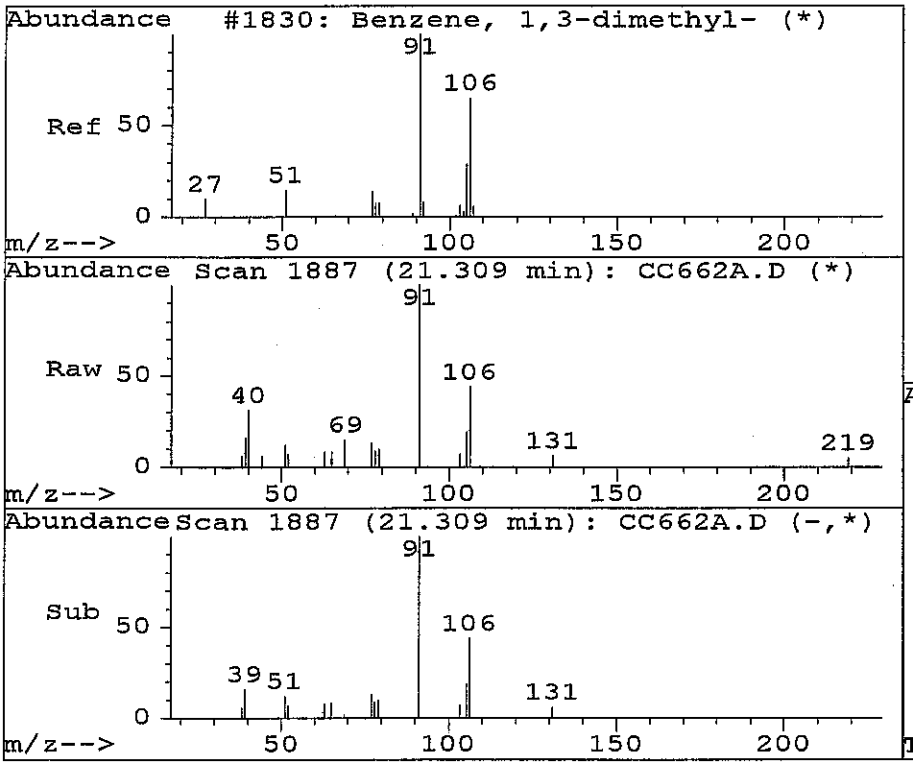


#62
Ethylbenzene
Concen: 0.02 ppbV
RT: 21.03 min Scan# 1858
Delta R.T. 0.04 min
Lab File: CC662A.D
Acq: 8 Jul 109 2:05 pm

Tgt Ion:91 Resp: 8507

Ion	Ratio	Lower	Upper
91	100		
106	33.4	21.4	32.0#
0	0.0	0.0	0.0
0	0.0	0.0	0.0

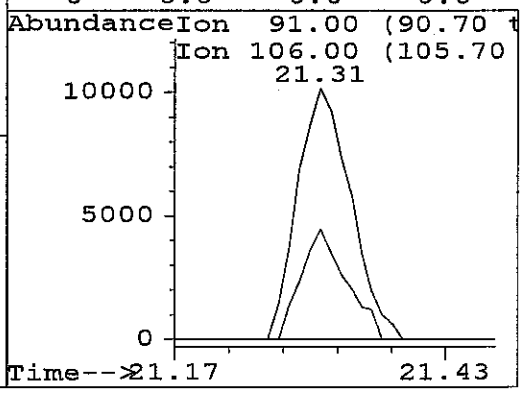


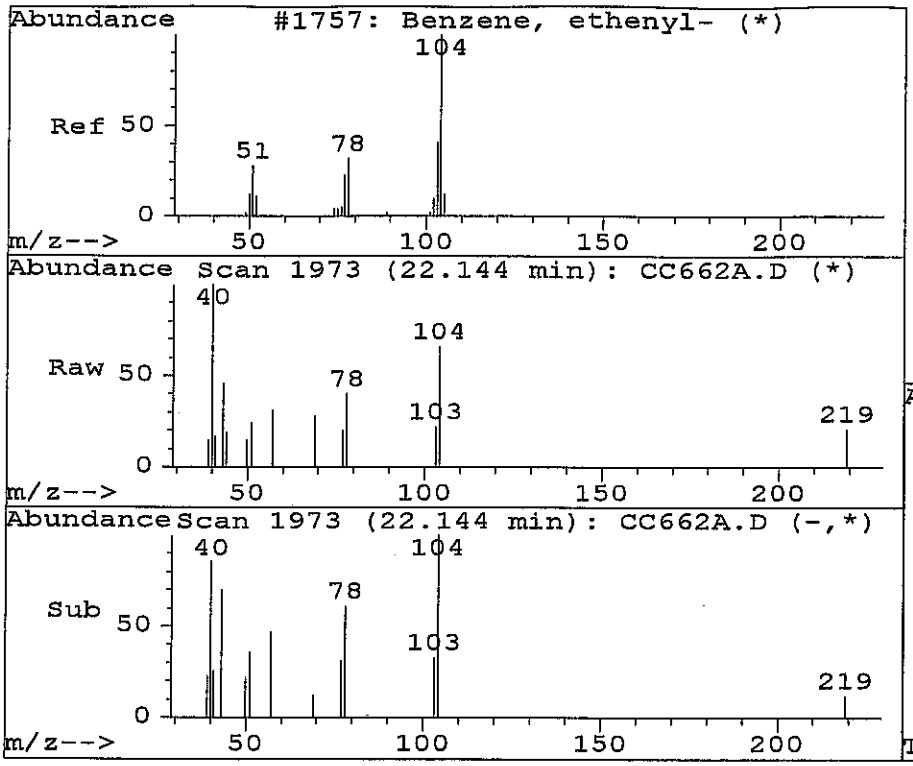


#63
m & p-Xylene
Concen: 0.08 ppbV
RT: 21.31 min Scan# 1887
Delta R.T. 0.03 min
Lab File: CC662A.D
Acq: 8 Jul 109 2:05 pm

Tgt Ion:91 Resp: 35077

Ion	Ratio	Lower	Upper
91	100		
106	44.0	31.9	47.9
0	0.0	0.0	0.0
0	0.0	0.0	0.0

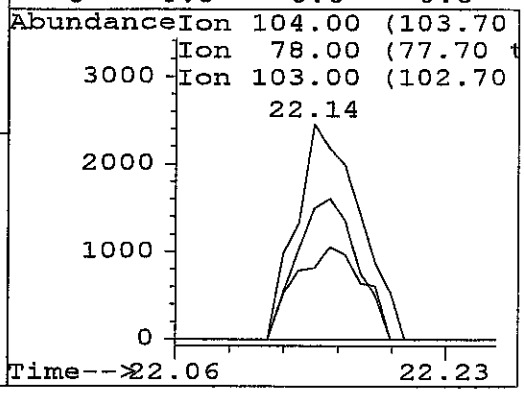


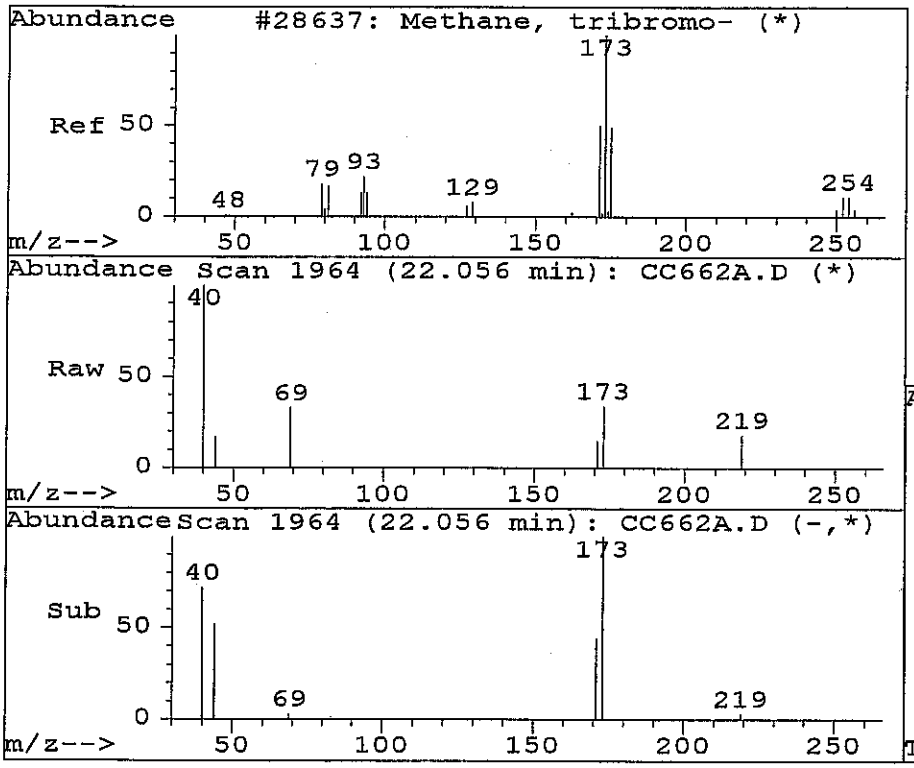


#64
Styrene
Concen: 0.02 ppbV
RT: 22.14 min Scan# 1973
Delta R.T. 0.00 min
Lab File: CC662A.D
Acq: 8 Jul 109 2:05 pm

Tgt Ion:104 Resp: 6831

Ion	Ratio	Lower	Upper
104	100		
78	60.8	52.8	79.2
103	33.1	37.9	56.9#
0	0.0	0.0	0.0

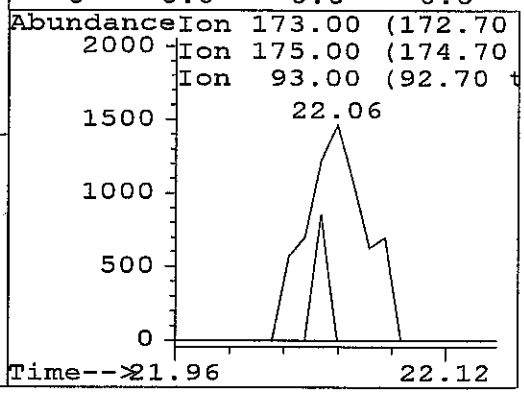


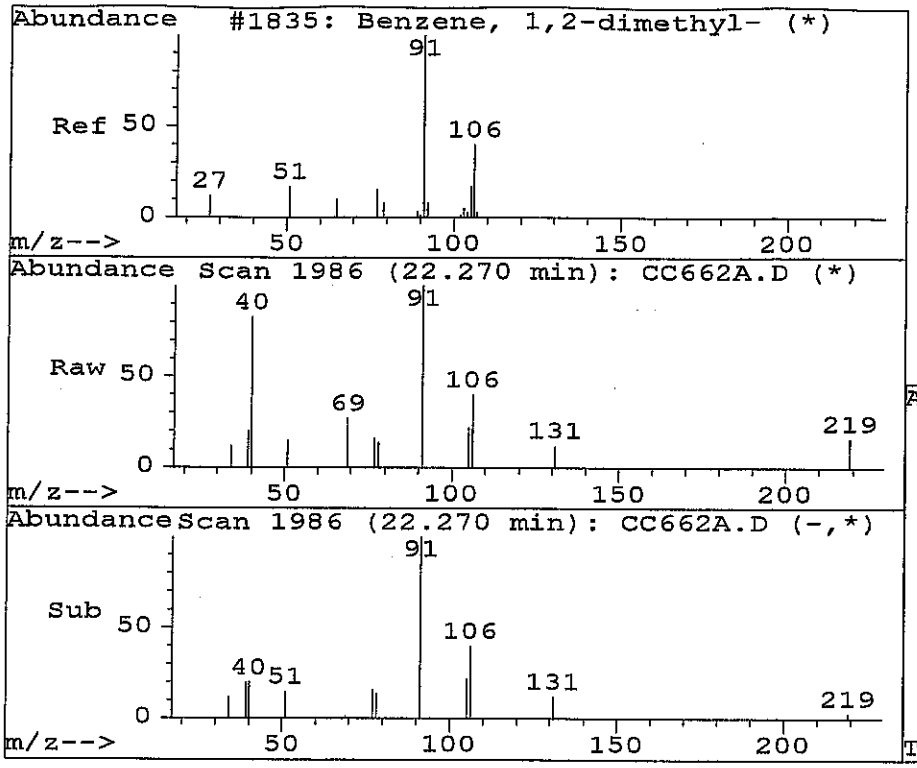


#65
Bromoform
Concen: 0.01 ppbV
RT: 22.06 min Scan# 1964
Delta R.T. 0.06 min
Lab File: CC662A.D
Acq: 8 Jul 109 2:05 pm

Tgt Ion:173 Resp: 3716

Ion	Ratio	Lower	Upper
173	100		
175	0.0	39.4	59.0#
93	0.0	15.6	23.4#
0	0.0	0.0	0.0

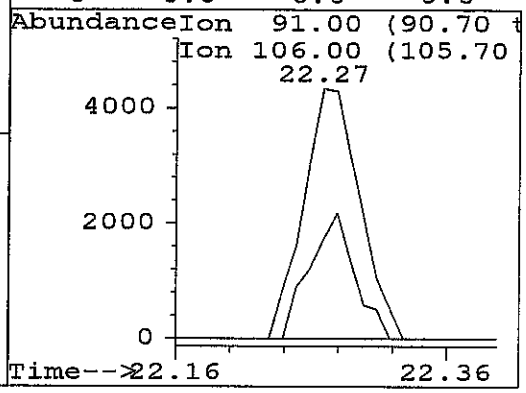


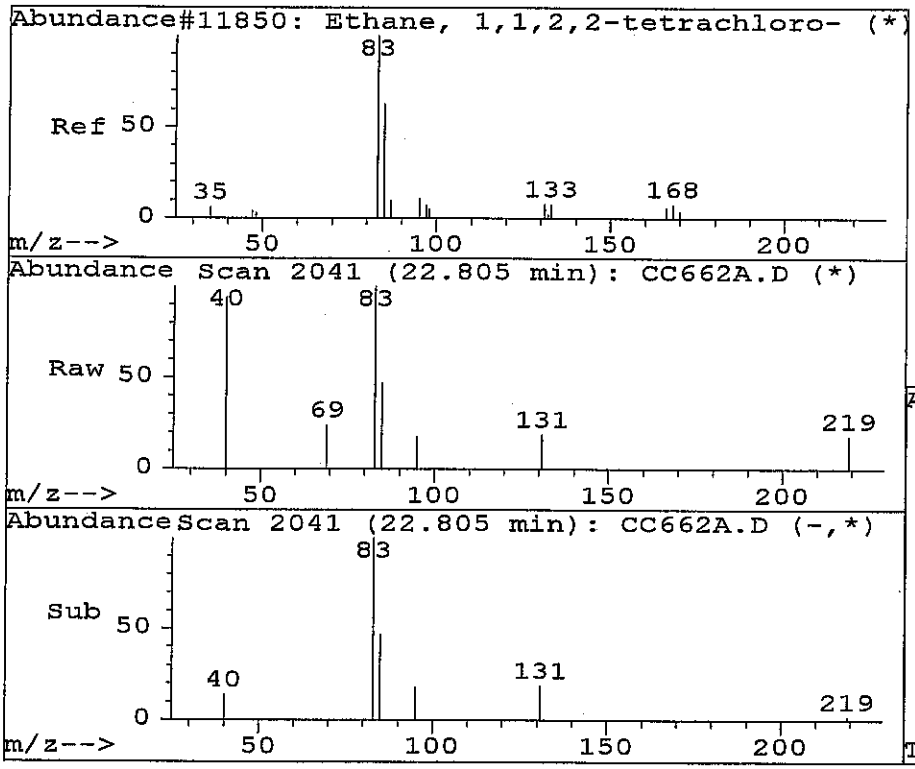


#66
o-Xylene
Concen: 0.02 ppbV
RT: 22.27 min Scan# 1986
Delta R.T. 0.02 min
Lab File: CC662A.D
Acq: 8 Jul 109 2:05 pm

Tgt Ion:91 Resp: 12320

Ion	Ratio	Lower	Upper
91	100		
106	39.7	29.8	44.8
0	0.0	0.0	0.0
0	0.0	0.0	0.0

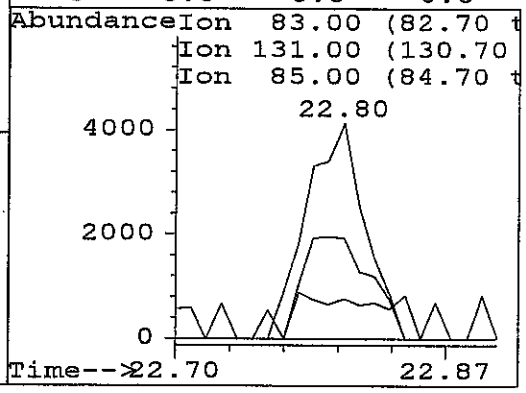


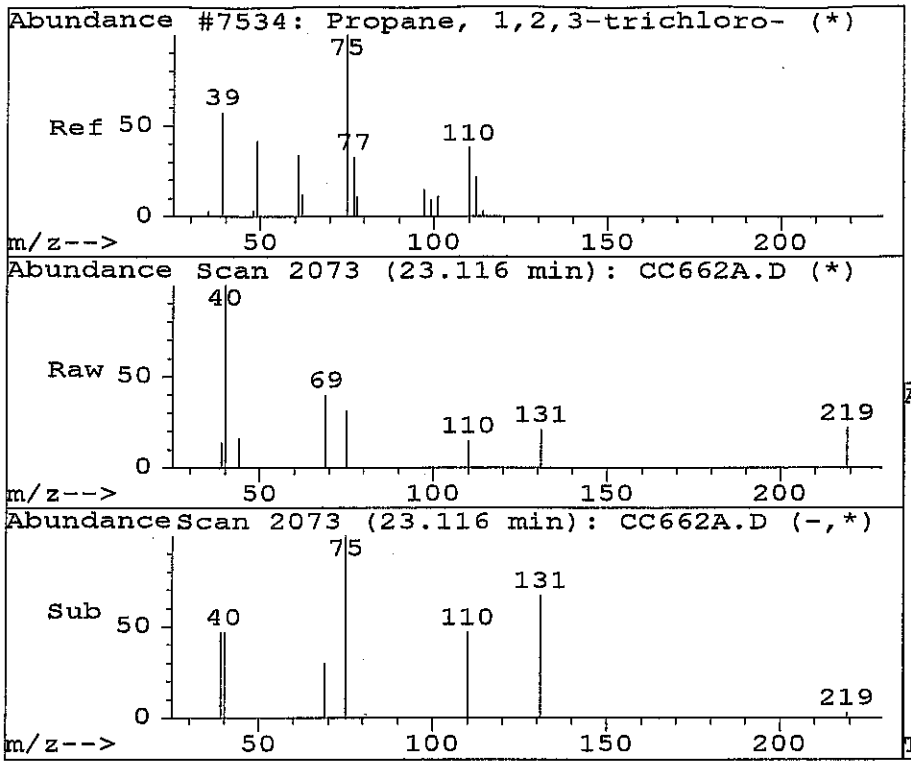


#67
1,1,2,2-Tetrachloroethane
Concen: 0.02 ppbV
RT: 22.80 min Scan# 2041
Delta R.T. 0.05 min
Lab File: CC662A.D
Acq: 8 Jul 109 2:05 pm

Tgt Ion:83 Resp: 10719

Ion	Ratio	Lower	Upper
83	100		
131	18.6	8.3	12.5#
85	46.7	50.2	75.2#
0	0.0	0.0	0.0

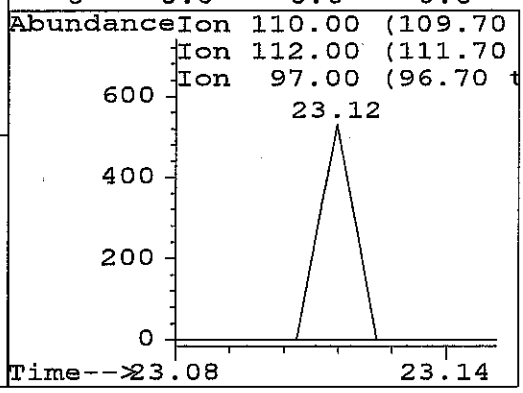


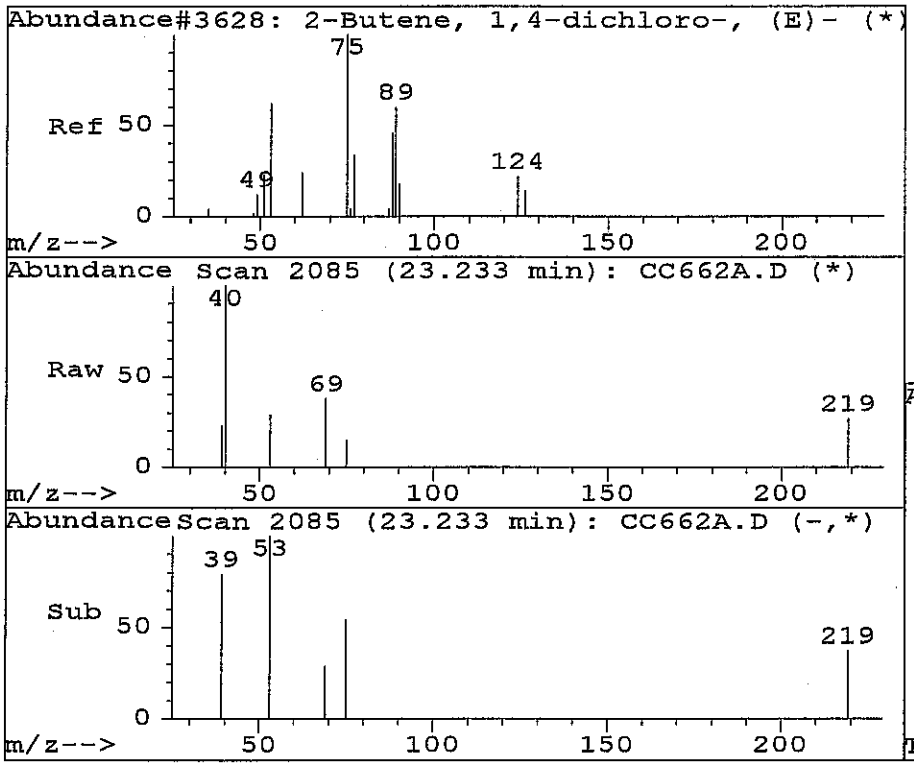


#68
1,2,3-Trichloropropane
Concen: 0.00 ppbV
RT: 23.12 min Scan# 2073
Delta R.T. 0.04 min
Lab File: CC662A.D
Acq: 8 Jul 109 2:05 pm

Tgt Ion:110 Resp: 310

Ion	Ratio	Lower	Upper
110	100		
112	0.0	51.9	77.9#
97	0.0	39.8	59.6#
0	0.0	0.0	0.0

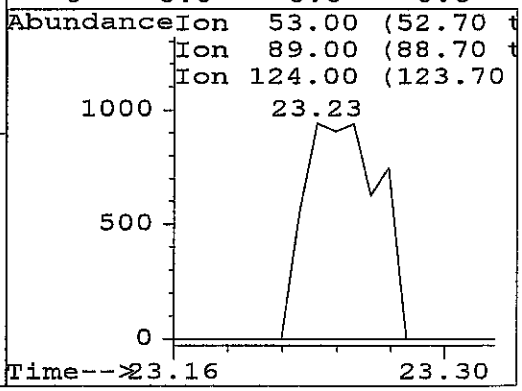


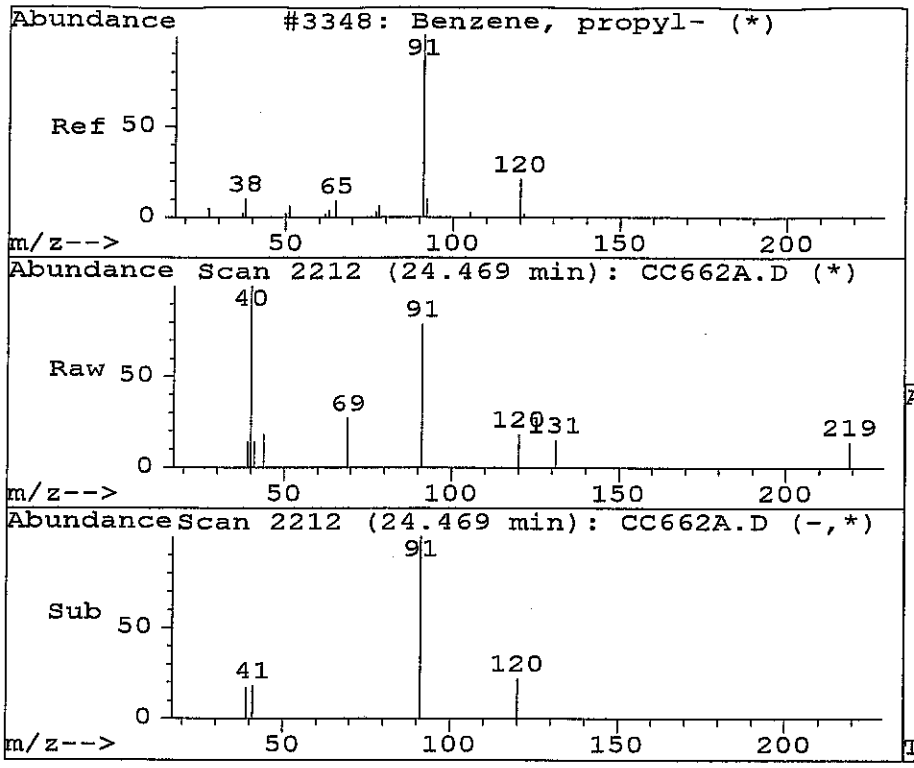


#69
t-1,4-Dichloro-2-butene
Concen: 0.02 ppbV
RT: 23.23 min Scan# 2085
Delta R.T. 0.00 min
Lab File: CC662A.D
Acq: 8 Jul 109 2:05 pm

Tgt Ion:53 Resp: 2760

Ion	Ratio	Lower	Upper
53	100		
89	0.0	40.8	61.2#
124	0.0	15.0	22.4#
0	0.0	0.0	0.0

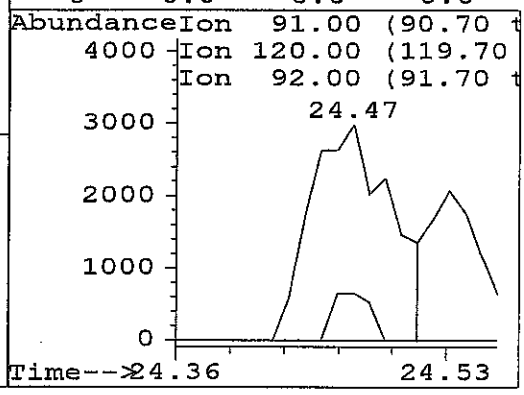


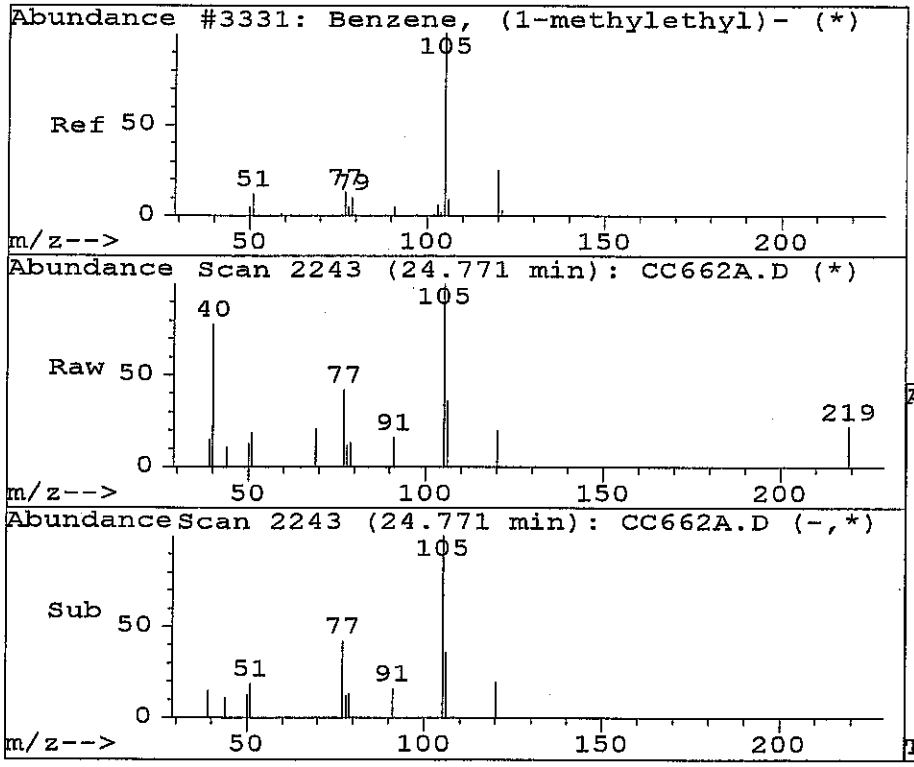


#70
n-Propylbenzene
Concen: 0.01 ppbV
RT: 24.47 min Scan# 2212
Delta R.T. 0.04 min
Lab File: CC662A.D
Acq: 8 Jul 109 2:05 pm

Tgt Ion:91 Resp: 10350

Ion	Ratio	Lower	Upper
91	100		
120	10.4	13.9	20.9#
92	0.0	7.8	11.6#
0	0.0	0.0	0.0

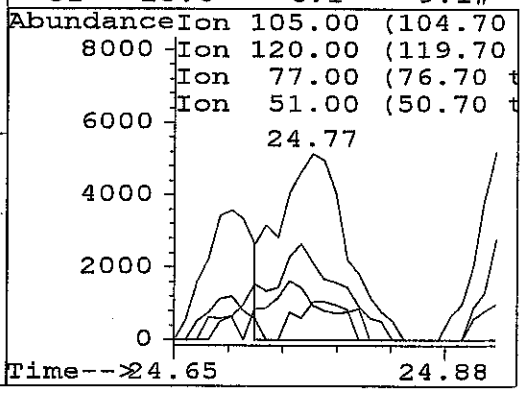


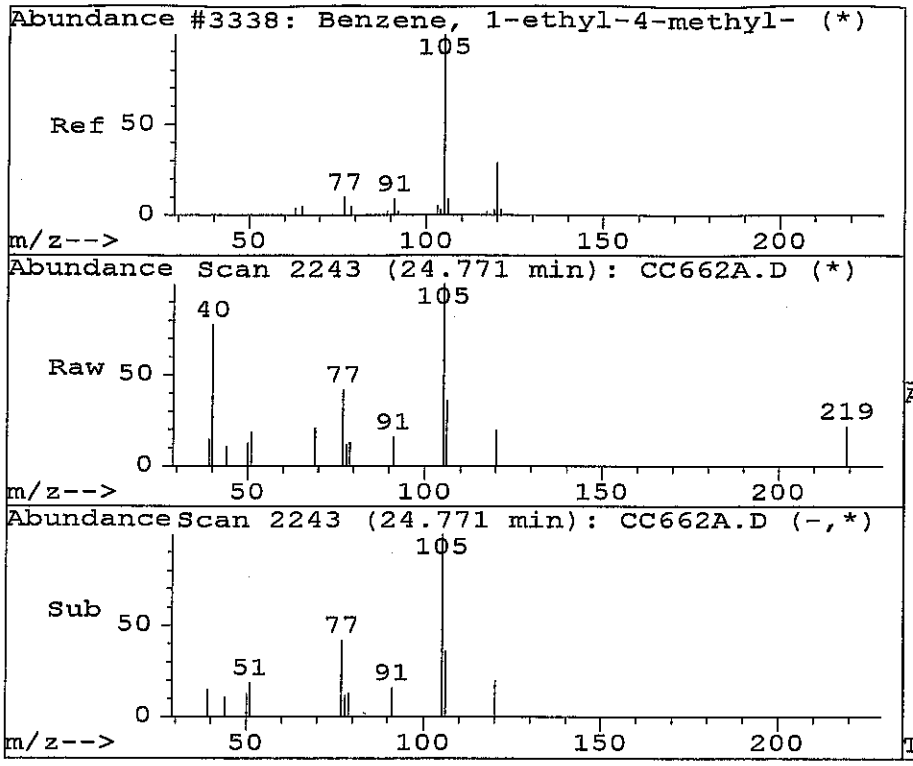


#71
Isopropylbenzene
Concen: 0.03 ppbV
RT: 24.77 min Scan# 2243
Delta R.T. 0.03 min
Lab File: CC662A.D
Acq: 8 Jul 109 2:05 pm

Tgt Ion:105 Resp: 20739

Ion	Ratio	Lower	Upper
105	100		
120	14.9	20.3	30.5#
77	57.4	12.1	18.1#
51	28.6	6.1	9.1#

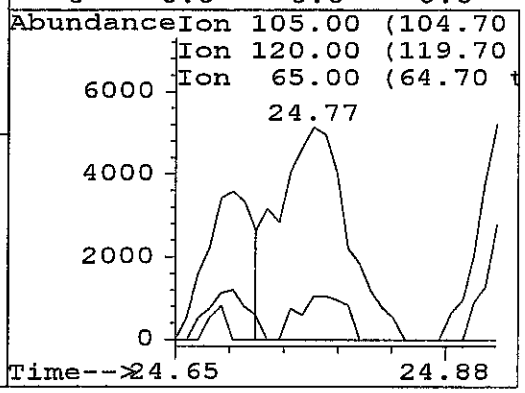


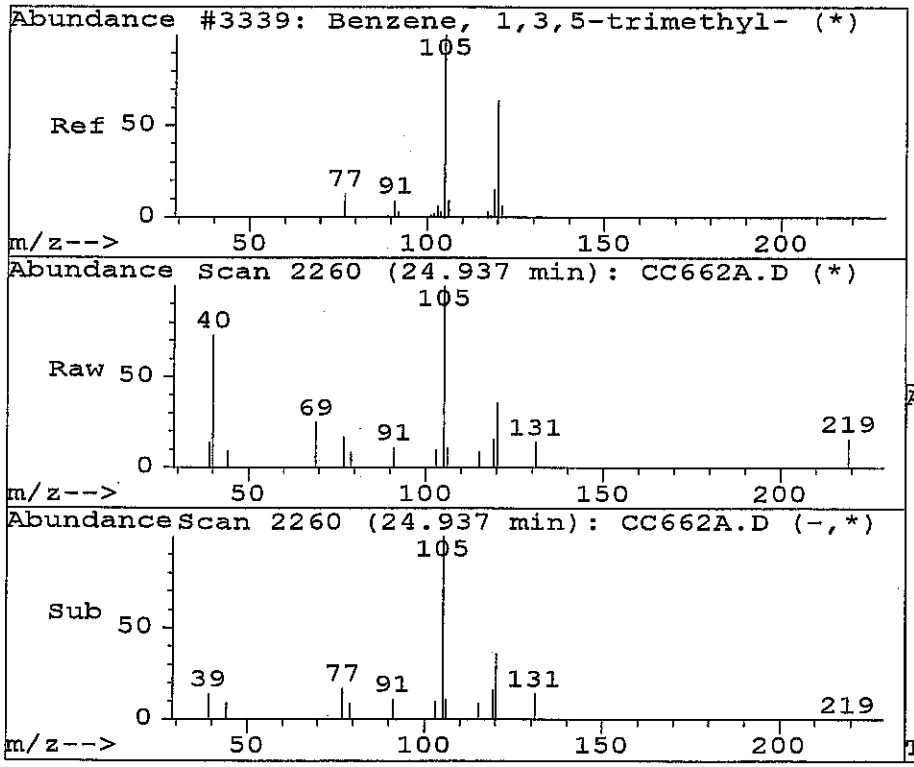


#72
4-Ethyltoluene
Concen: 0.03 ppbV
RT: 24.77 min Scan# 2243
Delta R.T. 0.03 min
Lab File: CC662A.D
Acq: 8 Jul 109 2:05 pm

Tgt Ion:105 Resp: 20739

Ion	Ratio	Lower	Upper
105	100		
120	19.6	20.4	30.6#
65	0.0	5.1	7.7#
0	0.0	0.0	0.0

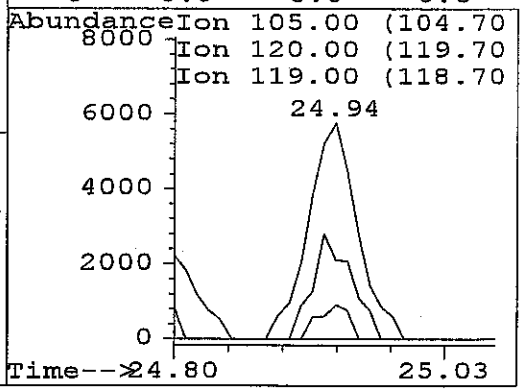


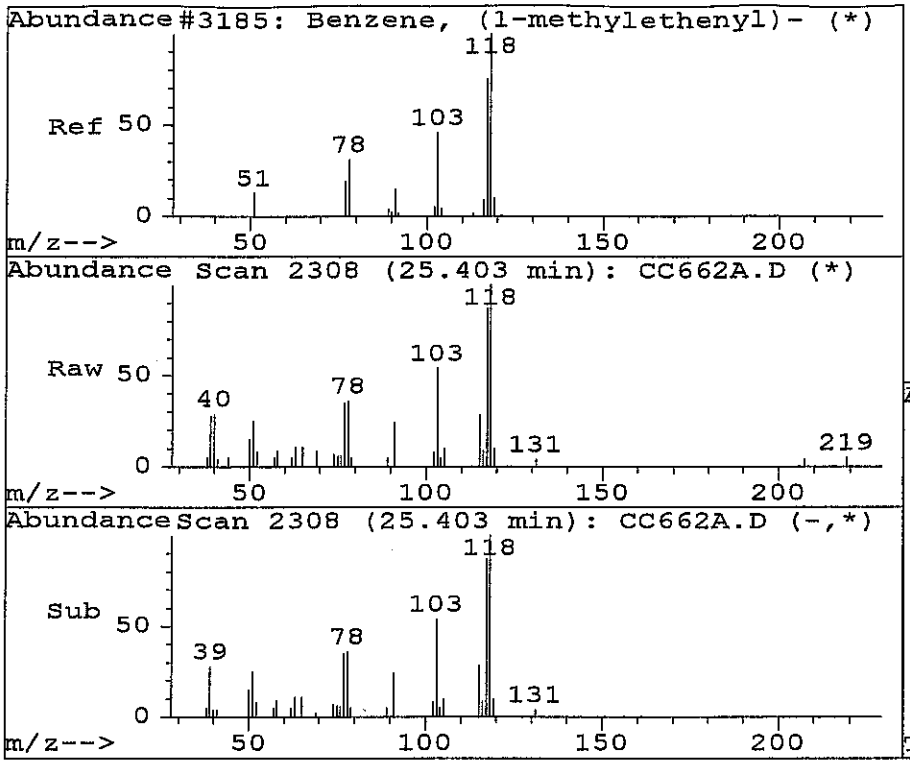


#73
1,3,5-Trimethylbenzene
Concen: 0.02 ppbV
RT: 24.94 min Scan# 2260
Delta R.T. 0.02 min
Lab File: CC662A.D
Acq: 8 Jul 109 2:05 pm

Tgt Ion:105 Resp: 16716

Ion	Ratio	Lower	Upper
105	100		
120	36.3	32.8	49.2
119	15.8	8.7	13.1#
0	0.0	0.0	0.0

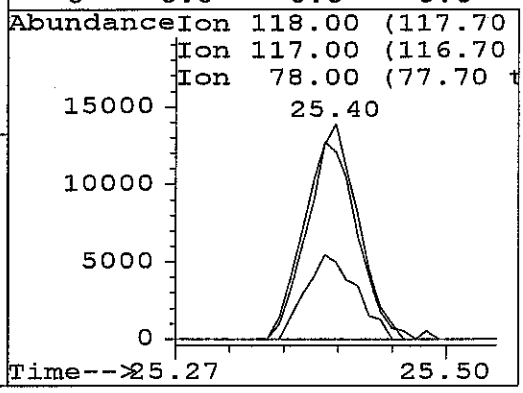


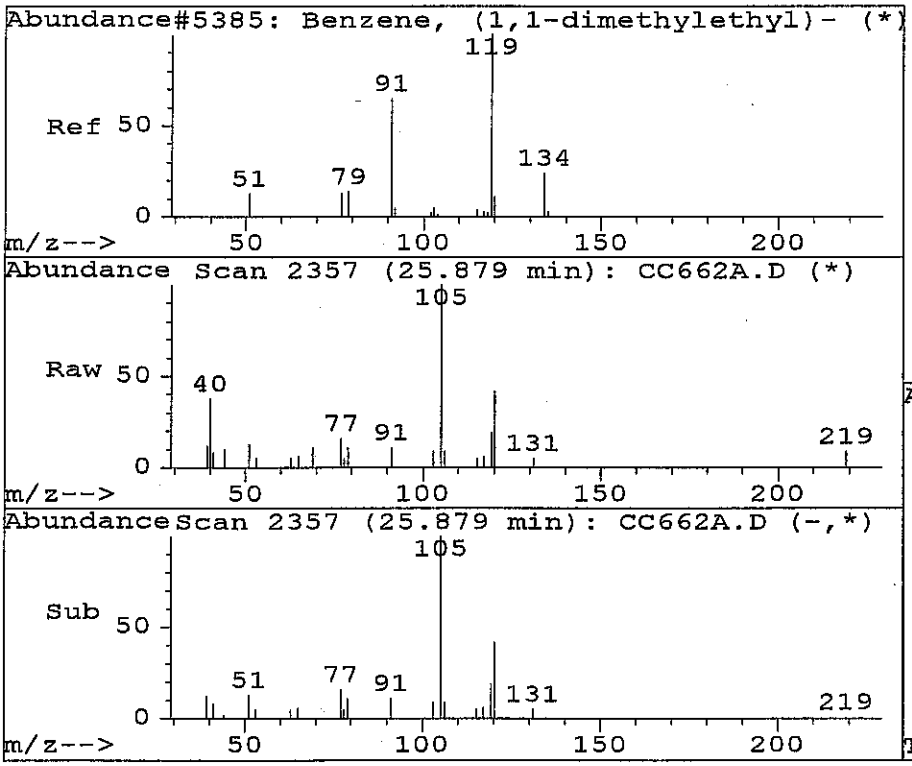


#74
Methylstyrene
Concen: 0.13 ppbV
RT: 25.40 min Scan# 2308
Delta R.T. 0.04 min
Lab File: CC662A.D
Acq: 8 Jul 109 2:05 pm

Tgt Ion:118 Resp: 43621

Ion	Ratio	Lower	Upper
118	100		
117	87.1	70.3	105.5
78	35.9	34.2	51.2
0	0.0	0.0	0.0

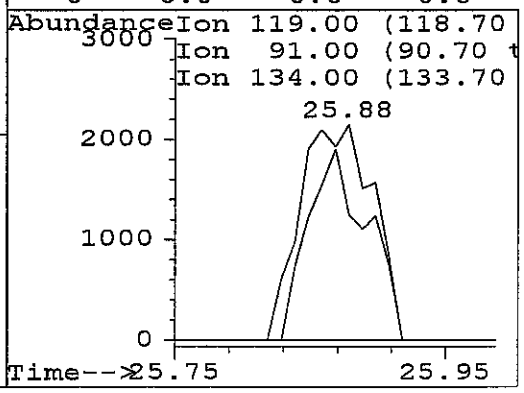


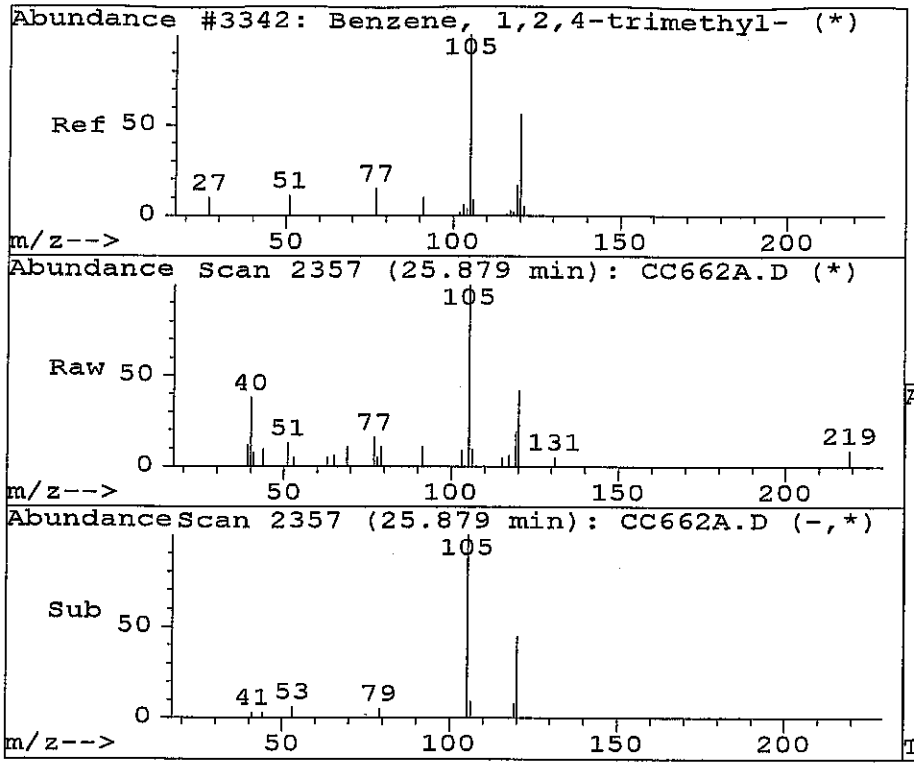


#75
tert-butyl benzene
Concen: 0.01 ppbV
RT: 25.88 min Scan# 2357
Delta R.T. 0.07 min
Lab File: CC662A.D
Acq: 8 Jul 109 2:05 pm

Tgt Ion:119 Resp: 7946

Ion	Ratio	Lower	Upper
119	100		
91	72.0	73.8	110.6#
134	0.0	16.2	24.4#
0	0.0	0.0	0.0

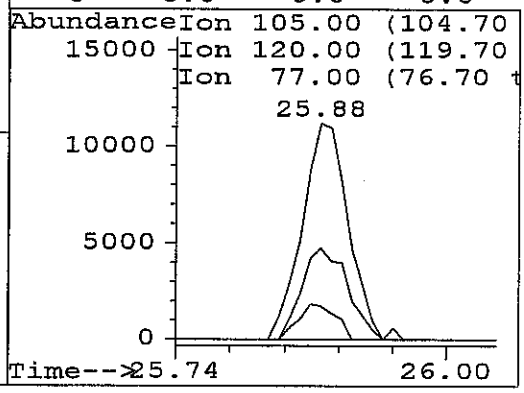


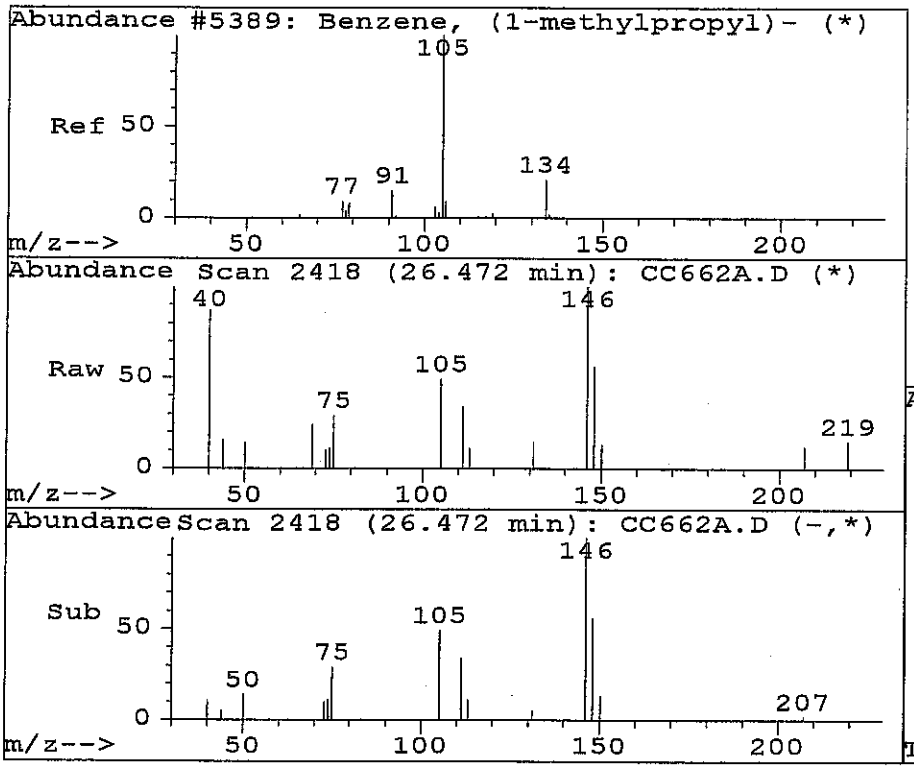


#76
1,2,4-Trimethylbenzene
Concen: 0.05 ppbV
RT: 25.88 min Scan# 2357
Delta R.T. -0.01 min
Lab File: CC662A.D
Acq: 8 Jul 109 2:05 pm

Tgt Ion:105 Resp: 33635

Ion	Ratio	Lower	Upper
105	100		
120	42.4	31.9	47.9
77	15.6	14.2	21.2
0	0.0	0.0	0.0

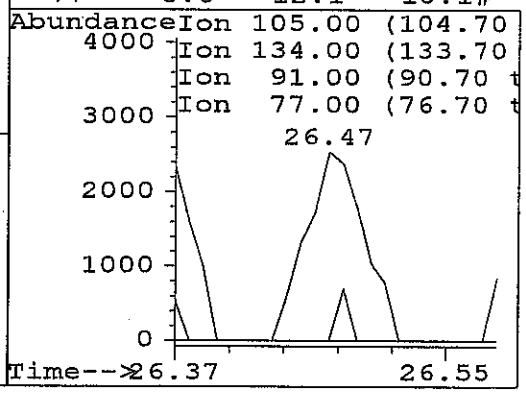


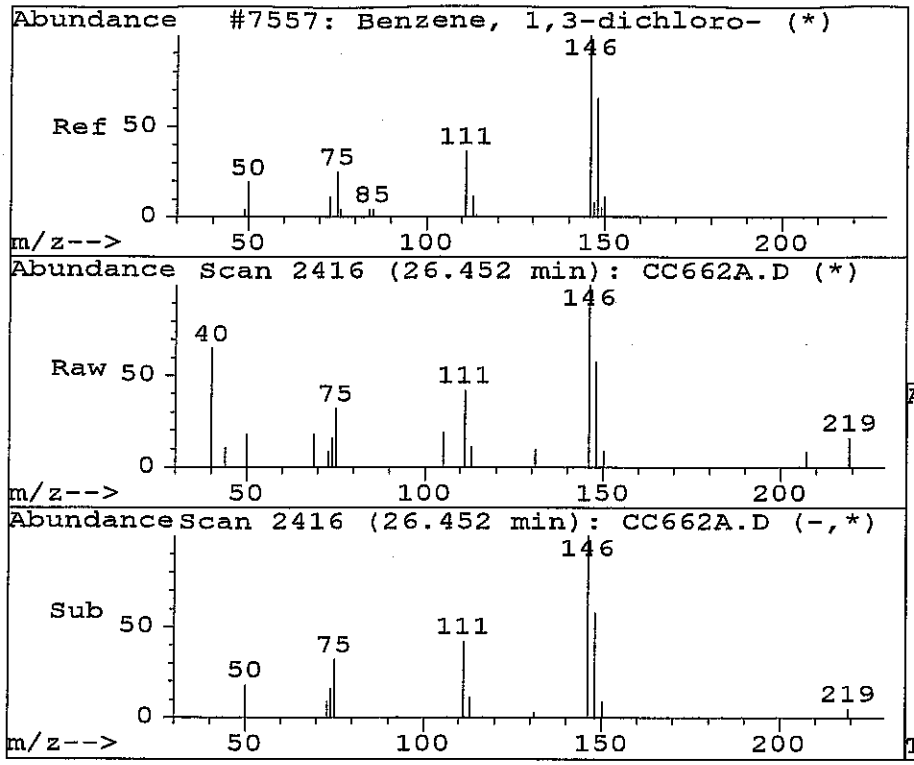


#77
sec-butylbenzene
Concen: 0.01 ppbV
RT: 26.47 min Scan# 2418
Delta R.T. -0.03 min
Lab File: CC662A.D
Acq: 8 Jul 109 2:05 pm

Tgt Ion:105 Resp: 7130

Ion	Ratio	Lower	Upper
105	100		
134	0.0	14.4	21.6#
91	5.8	13.4	20.0#
77	0.0	12.1	18.1#

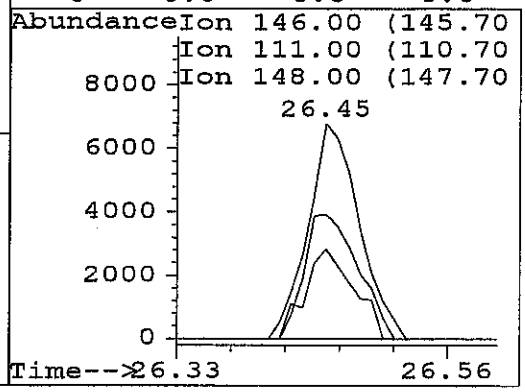


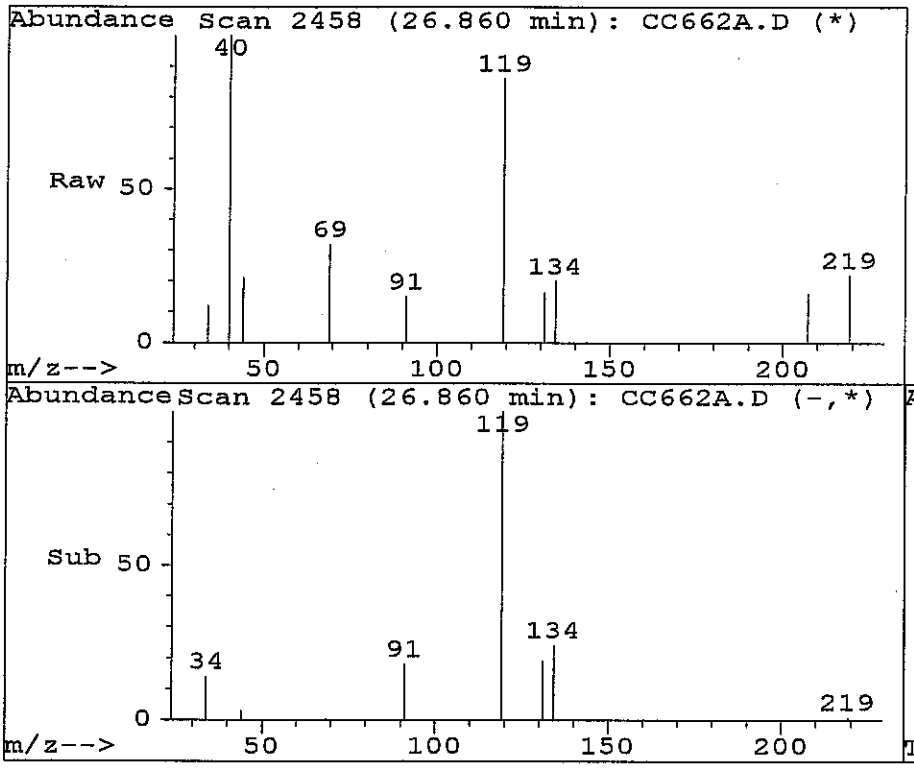


#78
1,3-Dichlorobenzene
Concen: 0.04 ppbV
RT: 26.45 min Scan# 2416
Delta R.T. 0.04 min
Lab File: CC662A.D
Acq: 8 Jul 109 2:05 pm

Tgt Ion:146 Resp: 20184

Ion	Ratio	Lower	Upper
146	100		
111	41.8	34.2	51.4
148	57.9	51.6	77.4
0	0.0	0.0	0.0

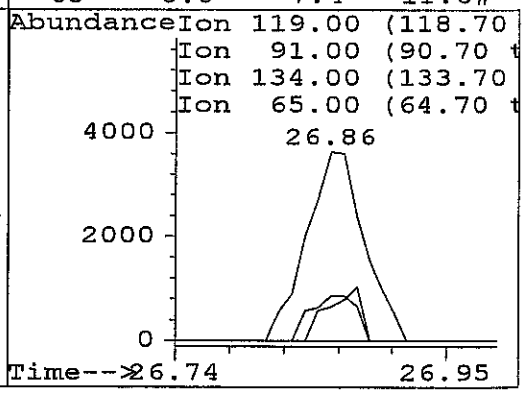


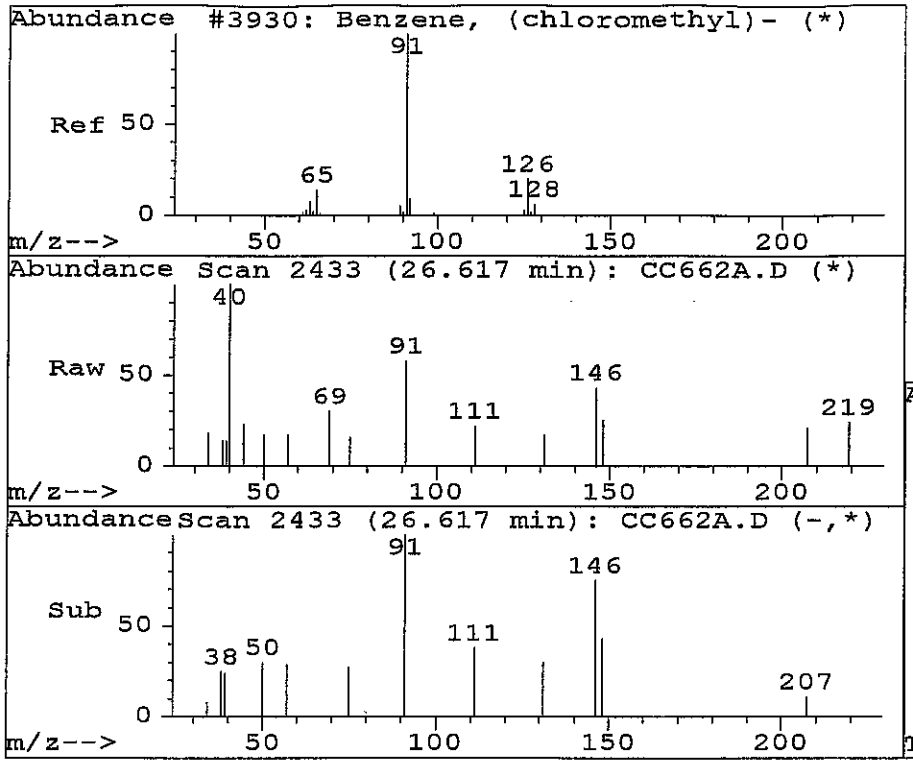


#79
Isopropyltoluene
Concen: 0.01 ppbV
RT: 26.86 min Scan# 2458
Delta R.T. 0.03 min
Lab File: CC662A.D
Acq: 8 Jul 109 2:05 pm

Tgt Ion:119 Resp: 10990

Ion	Ratio	Lower	Upper
119	100		
91	16.1	25.4	38.0#
134	19.0	19.0	28.6#
65	0.0	7.4	11.0#

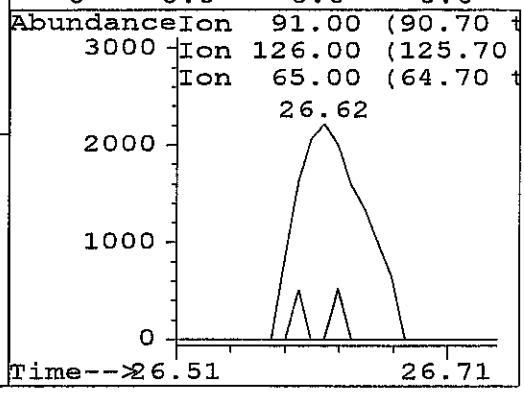


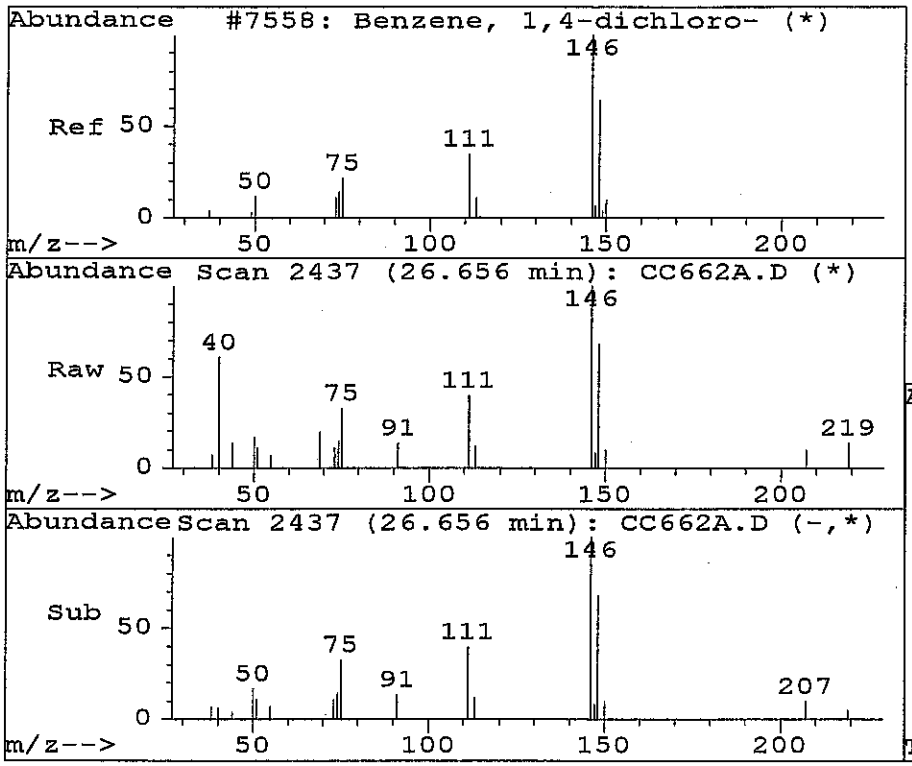


#80
Benzyl chloride
Concen: 0.01 ppbV
RT: 26.62 min Scan# 2433
Delta R.T. 0.01 min
Lab File: CC662A.D
Acq: 8 Jul 109 2:05 pm

Tgt Ion:91 Resp: 7742

Ion	Ratio	Lower	Upper
91	100		
126	0.0	15.4	23.0#
65	0.0	14.2	21.4#
0	0.0	0.0	0.0

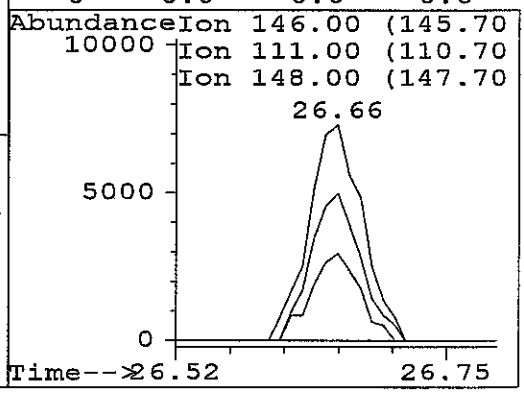


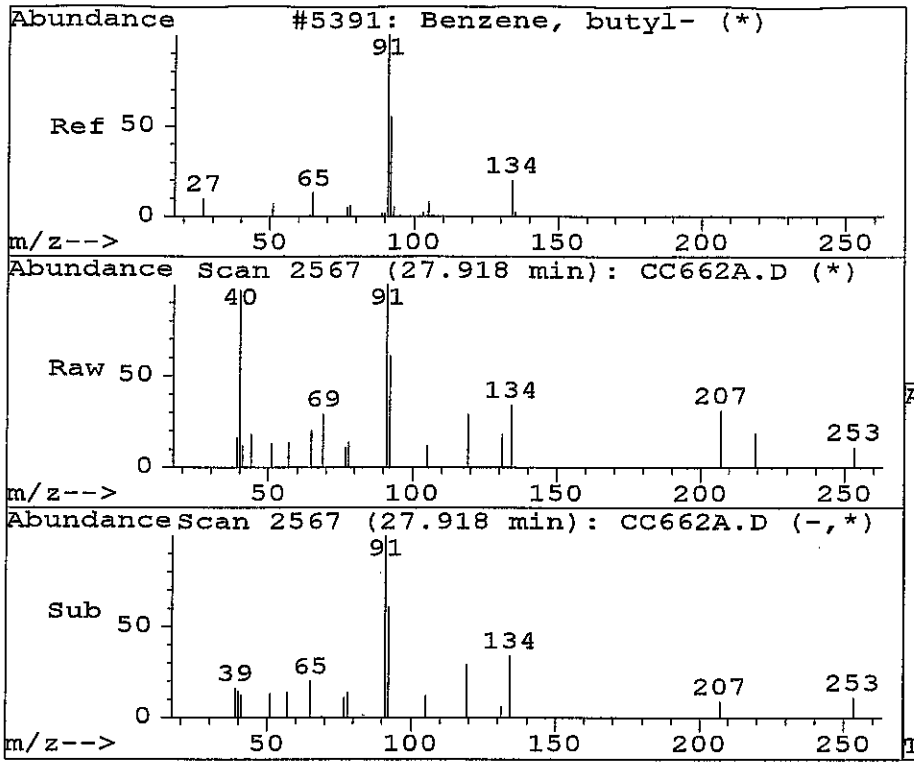


#81
1,4-Dichlorobenzene
Concen: 0.04 ppbV
RT: 26.66 min Scan# 2437
Delta R.T. -0.02 min
Lab File: CC662A.D
Acq: 8 Jul 109 2:05 pm

Tgt Ion:146 Resp: 22759

Ion	Ratio	Lower	Upper
146	100		
111	40.3	33.7	50.5
148	68.4	51.2	76.8
0	0.0	0.0	0.0

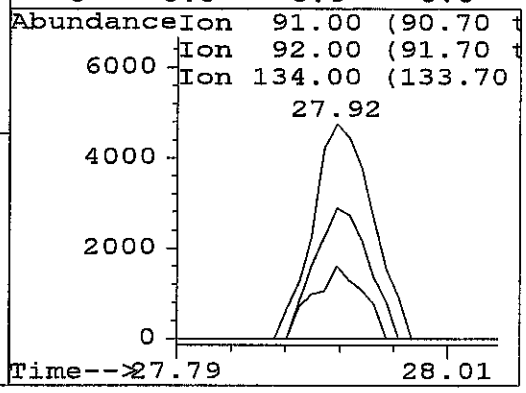


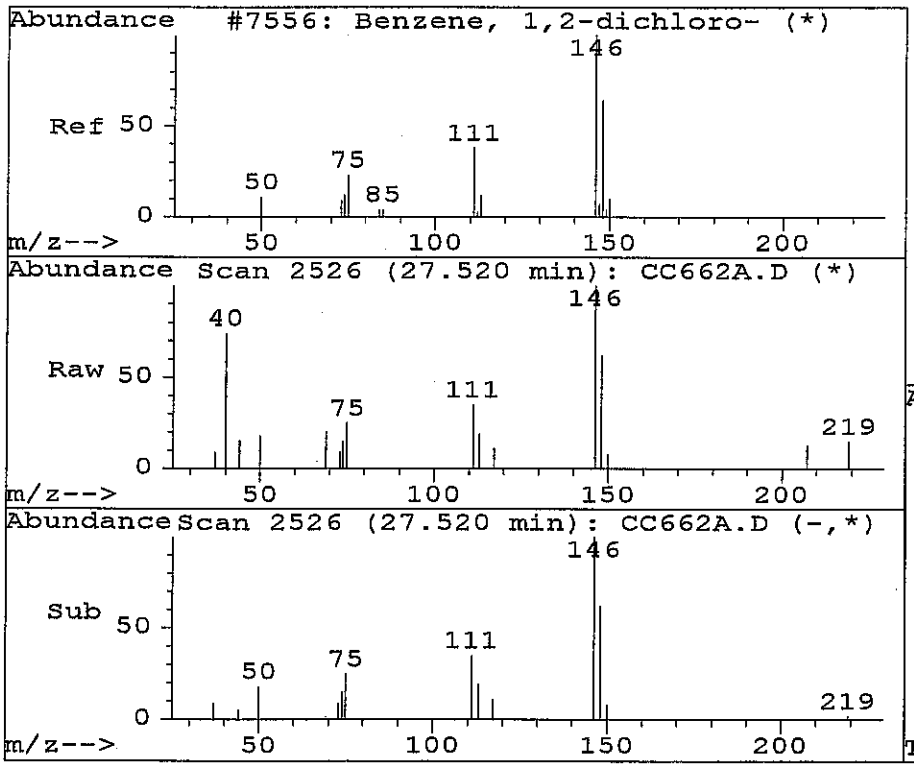


#82
n-Butylbenzene
Concen: 0.02 ppbV
RT: 27.92 min Scan# 2567
Delta R.T. 0.04 min
Lab File: CC662A.D
Acq: 8 Jul 109 2:05 pm

Tgt Ion:91 Resp: 15356

Ion	Ratio	Lower	Upper
91	100		
92	55.8	44.2	66.4
134	28.5	18.2	27.4#
0	0.0	0.0	0.0

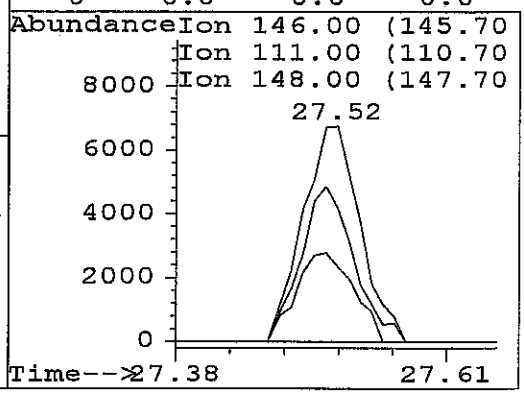


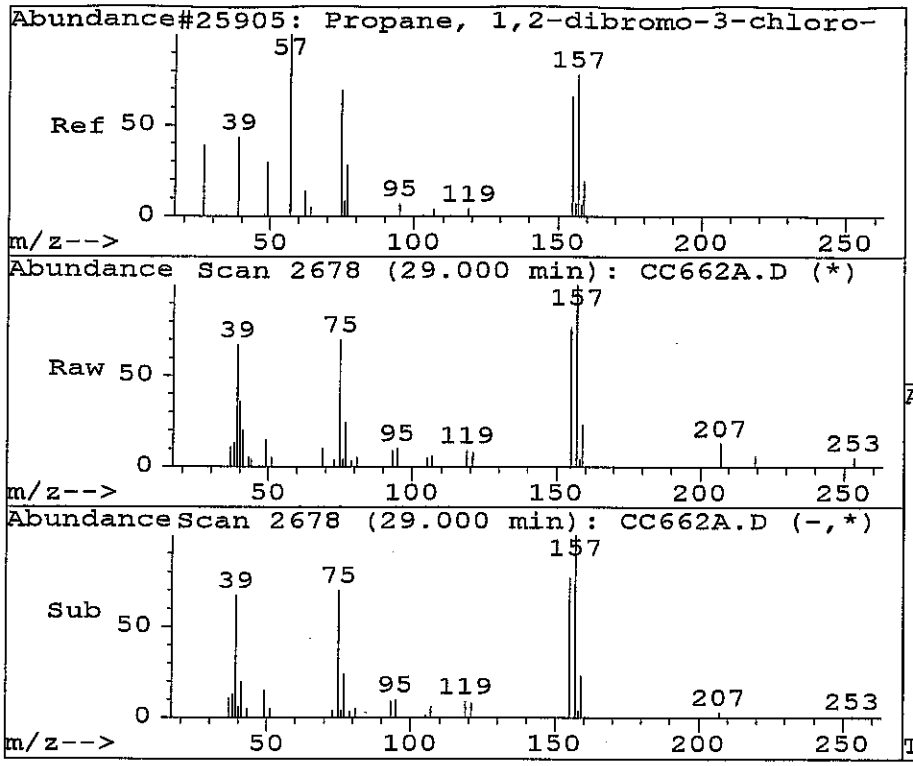


#83
1,2-Dichlorobenzene
Concen: 0.04 ppbV
RT: 27.52 min Scan# 2526
Delta R.T. 0.05 min
Lab File: CC662A.D
Acq: 8 Jul 109 2:05 pm

Tgt Ion:146 Resp: 22677

Ion	Ratio	Lower	Upper
146	100		
111	34.7	34.1	51.1
148	61.7	49.9	74.9
0	0.0	0.0	0.0

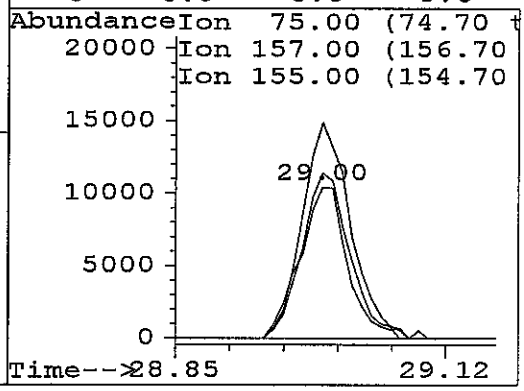


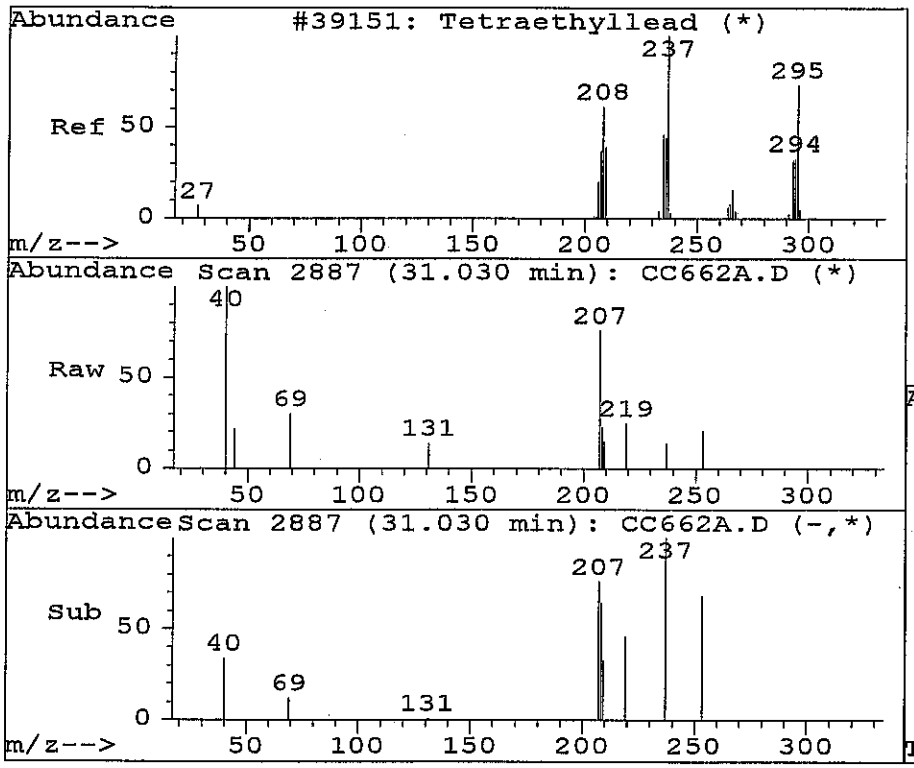


#84
1,2-Dibromo-3-chloropropane
Concen: 0.08 ppbV
RT: 29.00 min Scan# 2678
Delta R.T. 0.04 min
Lab File: CC662A.D
Acq: 8 Jul 109 2:05 pm

Tgt Ion:75 Resp: 34493

Ion	Ratio	Lower	Upper
75	100		
157	140.0	76.2	114.2#
155	109.3	58.6	87.8#
0	0.0	0.0	0.0

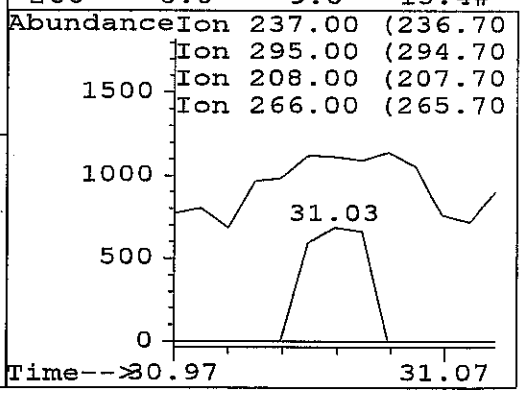


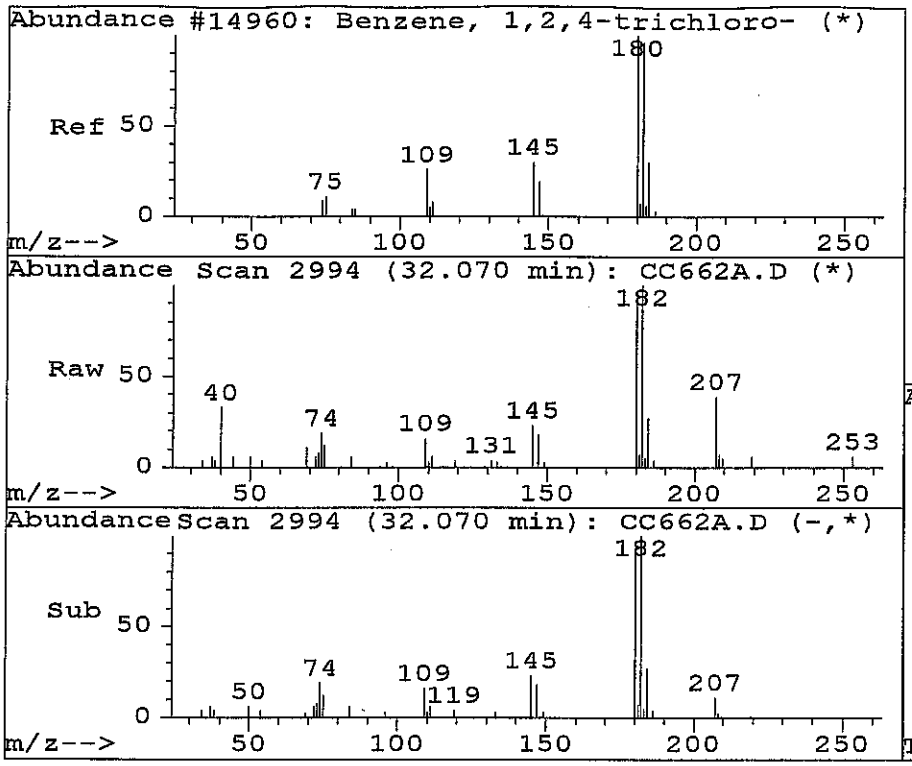


#85
Tetraethyl lead
Concen: 0.00 ppbV
RT: 31.03 min Scan# 2887
Delta R.T. 0.05 min
Lab File: CC662A.D
Acq: 8 Jul 109 2:05 pm

Tgt Ion:237 Resp: 1122

Ion	Ratio	Lower	Upper
237	100		
295	0.0	0.0	0.0
208	341.9	50.6	75.8#
266	0.0	9.0	13.4#

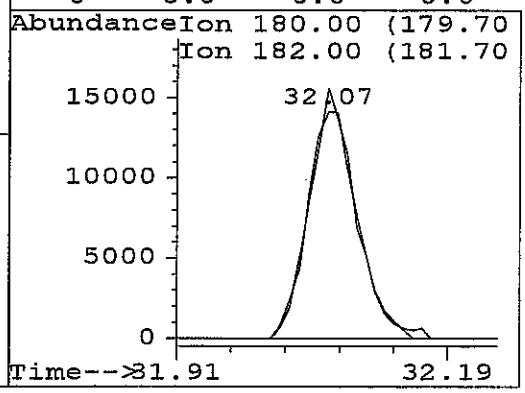


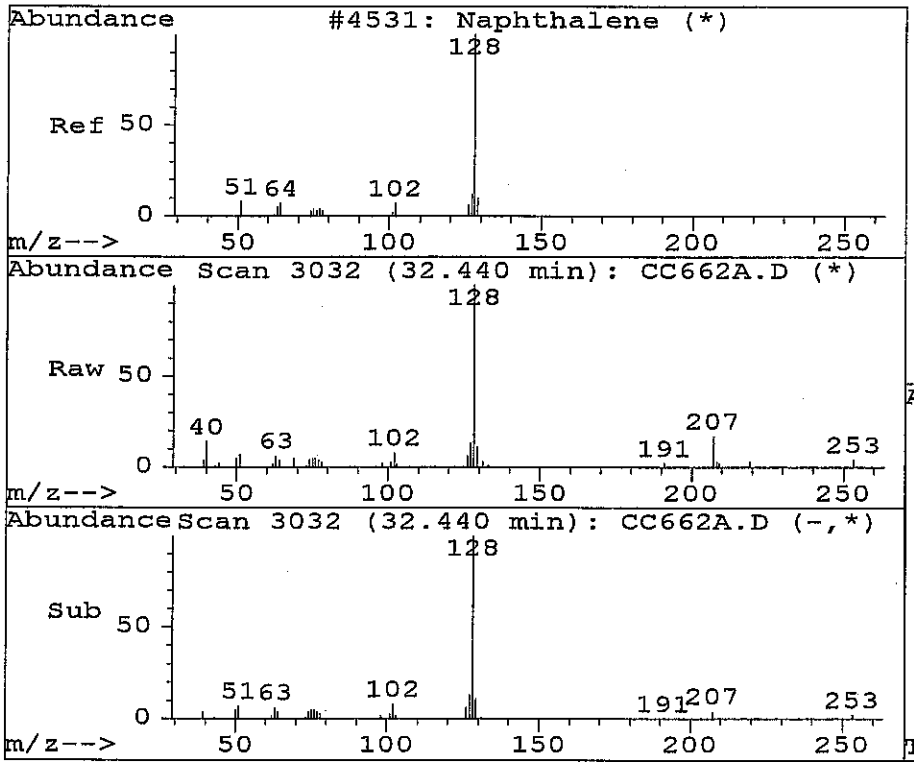


#86
1,2,4-Trichlorobenzene
Concen: 0.04 ppbV
RT: 32.07 min Scan# 2994
Delta R.T. -0.11 min
Lab File: CC662A.D
Acq: 8 Jul 109 2:05 pm

Tgt Ion:180 Resp: 50934

Ion	Ratio	Lower	Upper
180	100		
182	107.9	77.8	116.8
0	0.0	0.0	0.0
0	0.0	0.0	0.0

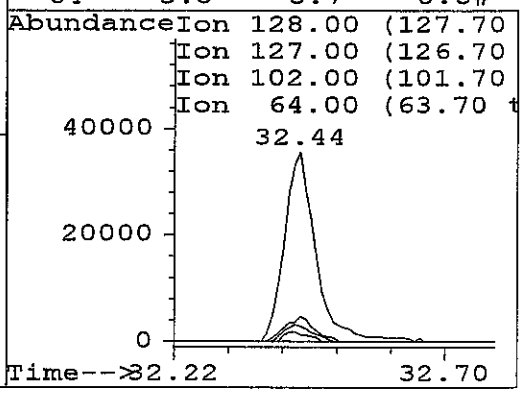


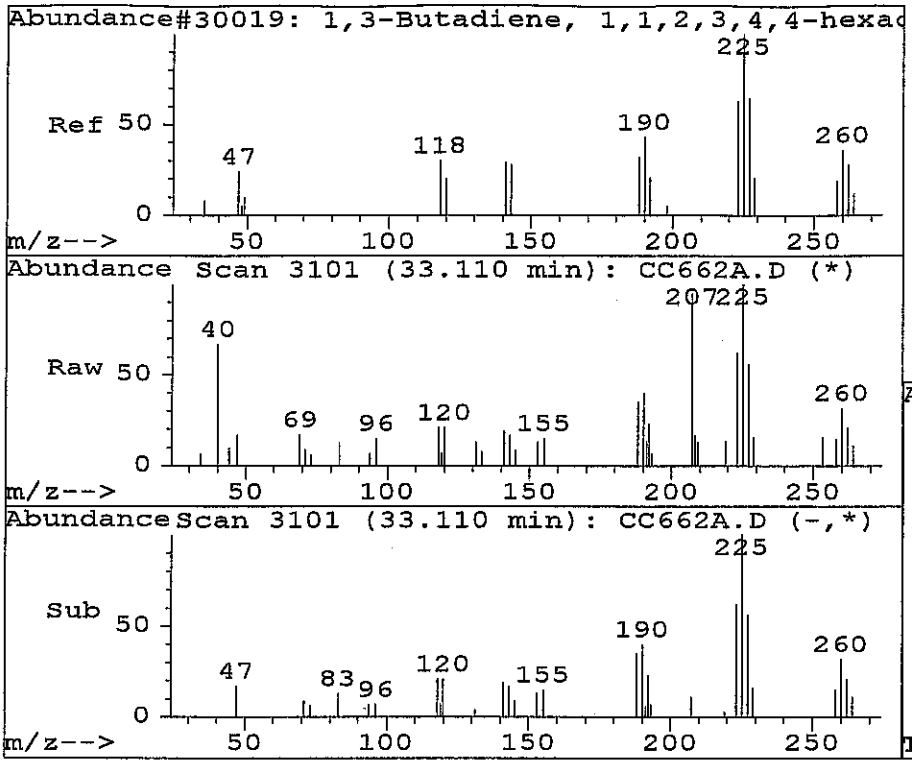


#87
Naphthalene
Concen: 0.07 ppbV
RT: 32.44 min Scan# 3032
Delta R.T. 0.03 min
Lab File: CC662A.D
Acq: 8 Jul 109 2:05 pm

Tgt Ion:128 Resp: 137108

Ion	Ratio	Lower	Upper
128	100		
127	13.1	10.4	15.6
102	8.1	9.2	13.8#
64	3.5	5.7	8.5#

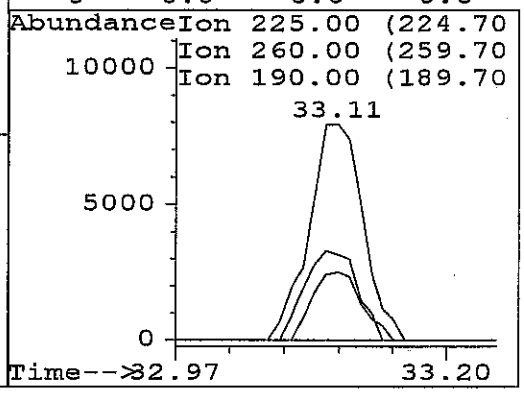


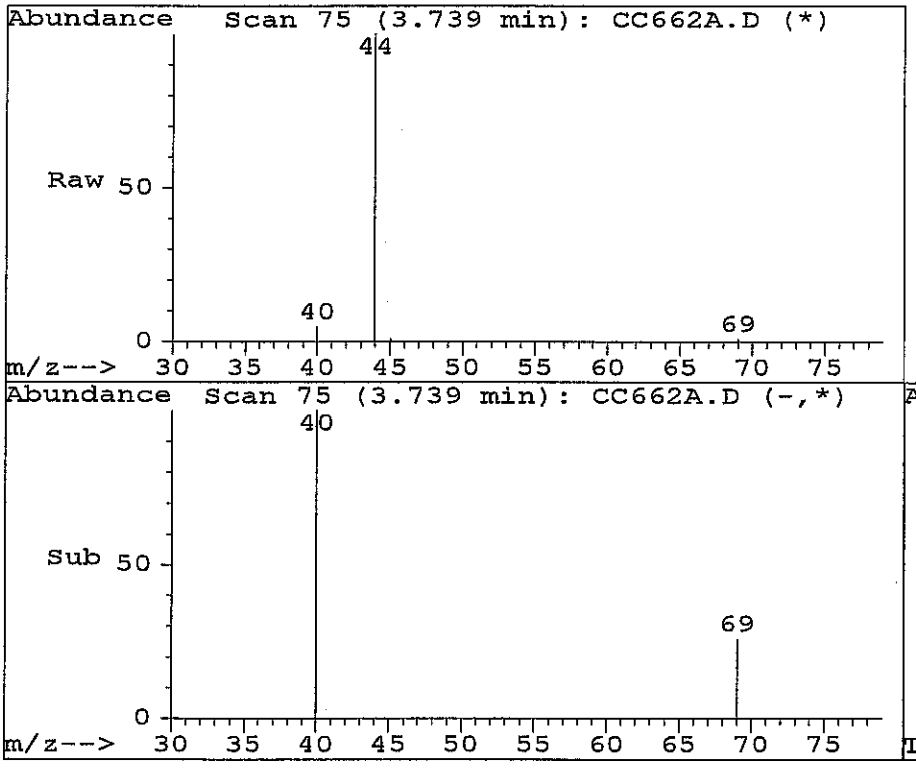


#88
Hexachlorobutadiene
Concen: 0.03 ppbV
RT: 33.11 min Scan# 3101
Delta R.T. 0.03 min
Lab File: CC662A.D
Acq: 8 Jul 109 2:05 pm

Tgt Ion:225 Resp: 25014

Ion	Ratio	Lower	Upper
225	100		
260	31.6	22.2	33.2
190	39.7	33.6	50.4
0	0.0	0.0	0.0

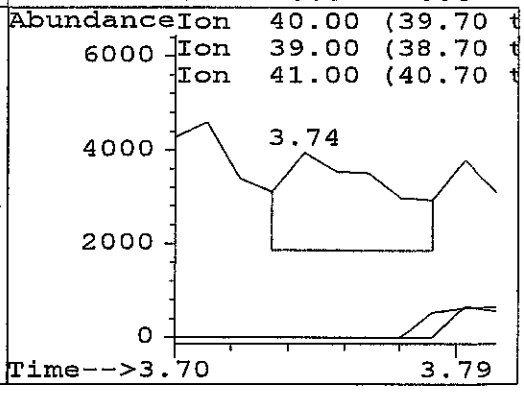


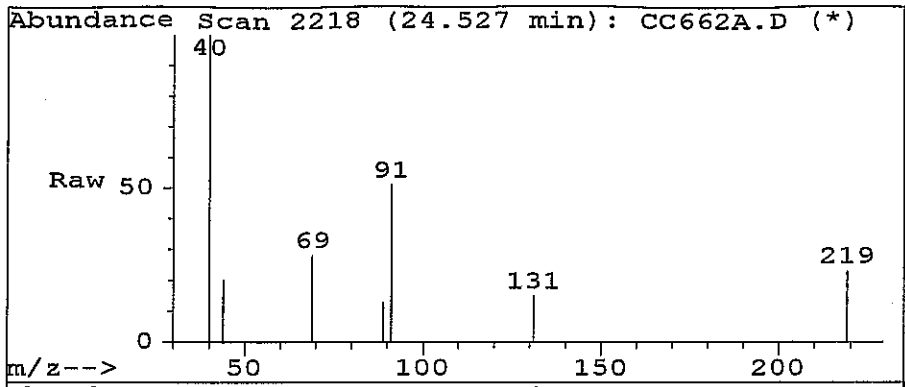


#89
Propylene
Concen: 0.24 ppbV
RT: 3.74 min Scan# 75
Delta R.T. -0.02 min
Lab File: CC662A.D
Acq: 8 Jul 109 2:05 pm

Tgt Ion:40 Resp: 4453

Ion	Ratio	Lower	Upper
40	100		
39	0.0	238.9	358.3#
41	0.0	310.2	465.4#
0	0.0	0.0	0.0

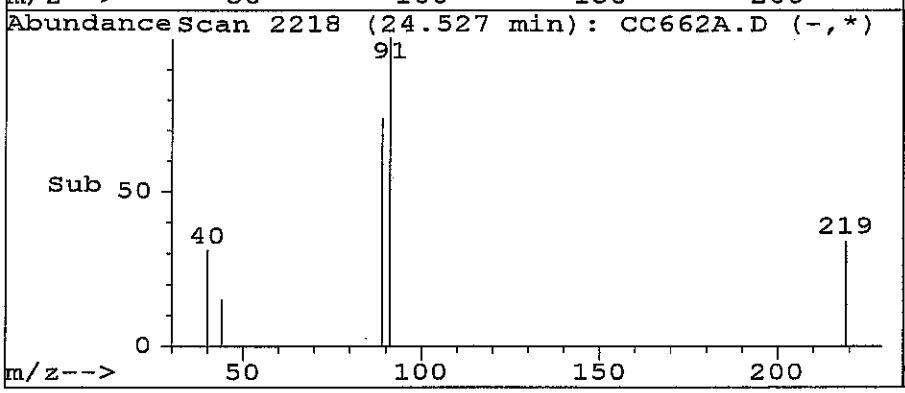


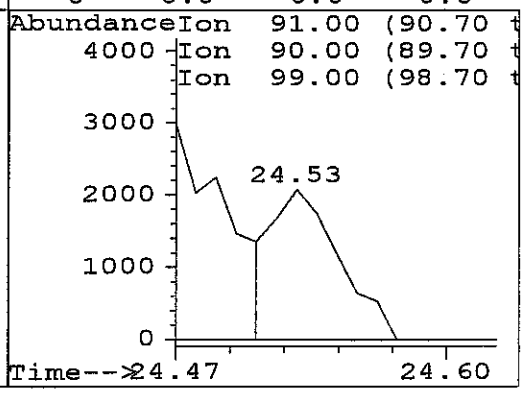


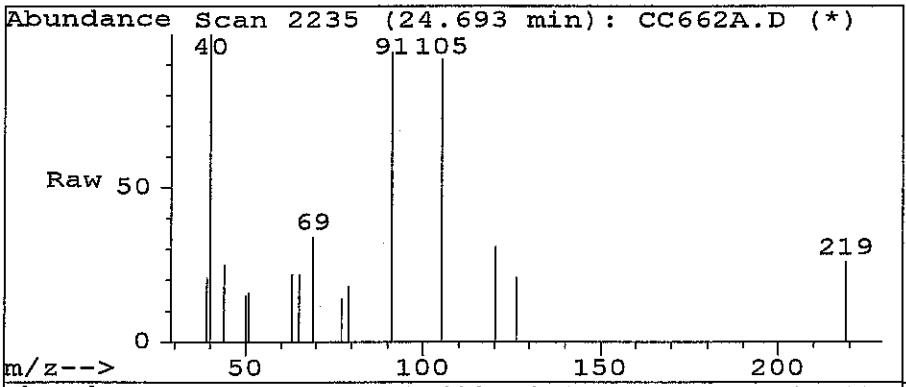
#92
2-Chlorotoluene
Concen: 0.01 ppbV
RT: 24.53 min Scan# 2218
Delta R.T. 0.07 min
Lab File: CC662A.D
Acq: 8 Jul 109 2:05 pm

Tgt Ion:91 Resp: 4595

Ion	Ratio	Lower	Upper
91	100		
90	0.0	7.0	10.4#
99	0.0	1.8	2.8#
0	0.0	0.0	0.0



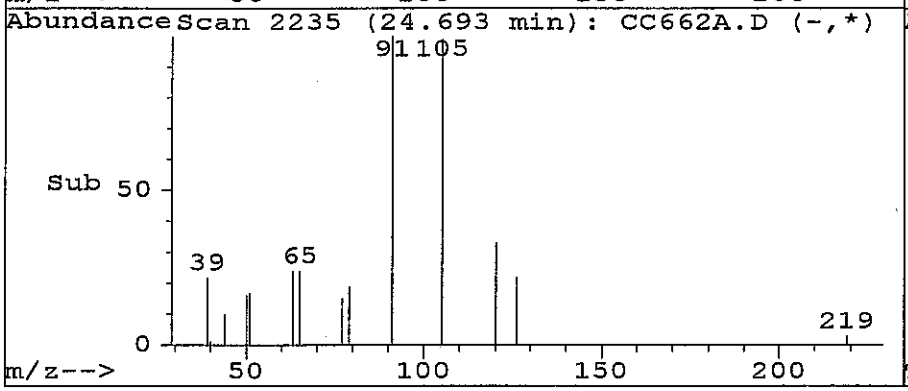


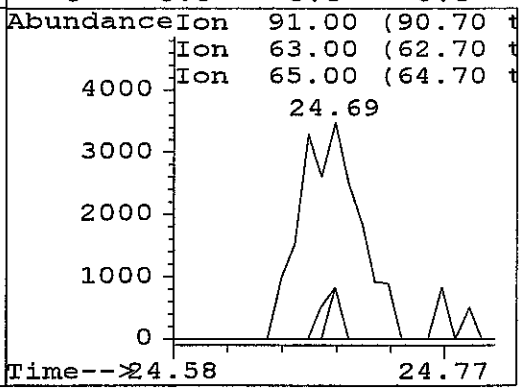


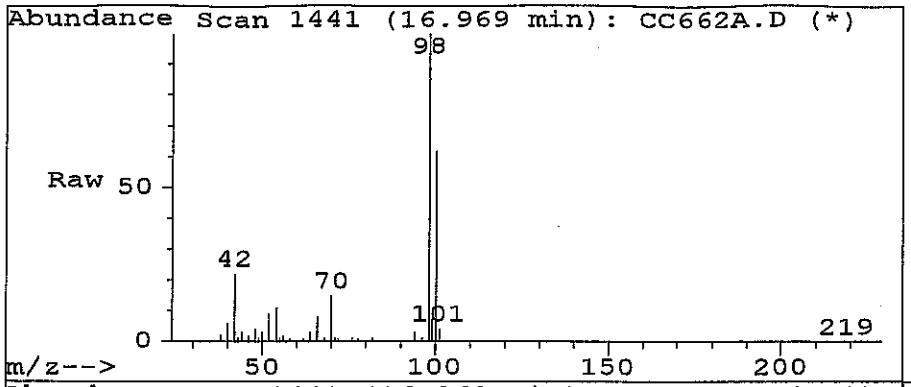
#93
4-Chlorotoluene
Concen: 0.01 ppbV
RT: 24.69 min Scan# 2235
Delta R.T. 0.04 min
Lab File: CC662A.D
Acq: 8 Jul 109 2:05 pm

Tgt Ion:91 Resp: 10569

Ion	Ratio	Lower	Upper
91	100		
63	4.6	10.6	16.0#
65	7.5	9.5	14.3#
0	0.0	0.0	0.0



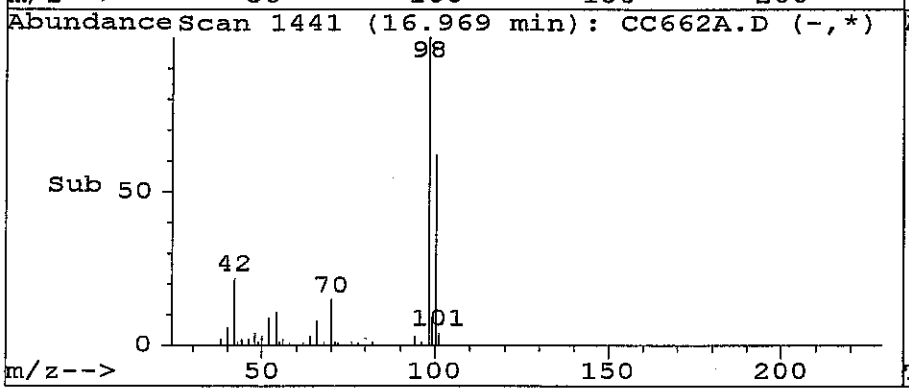


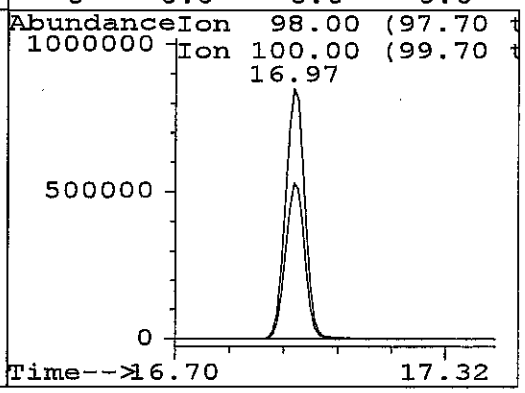


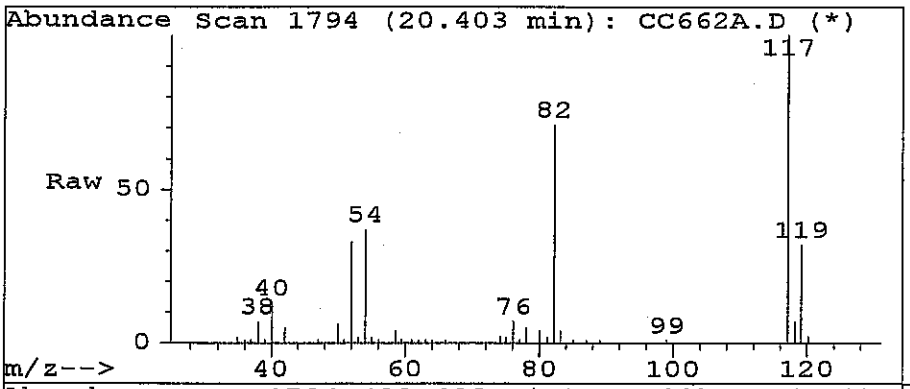
#94
Toluene-d8
Concen: 10.49 ppbV
RT: 16.97 min Scan# 1441
Delta R.T. 0.03 min
Lab File: CC662A.D
Acq: 8 Jul 109 2:05 pm

Tgt Ion:98 Resp: 2648030

Ion	Ratio	Lower	Upper
98	100		
100	62.4	51.4	77.2
0	0.0	0.0	0.0
0	0.0	0.0	0.0



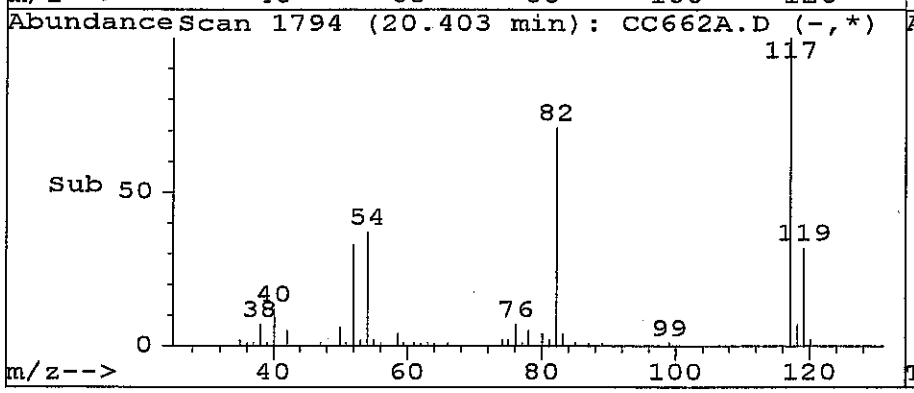


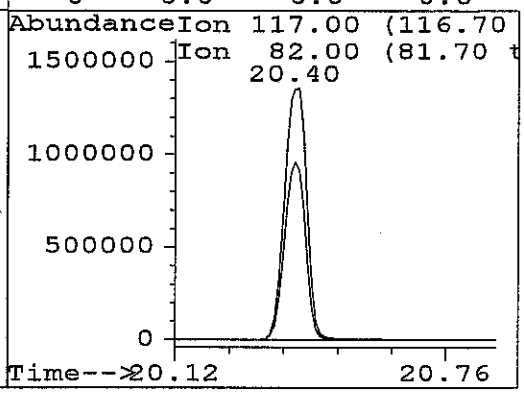


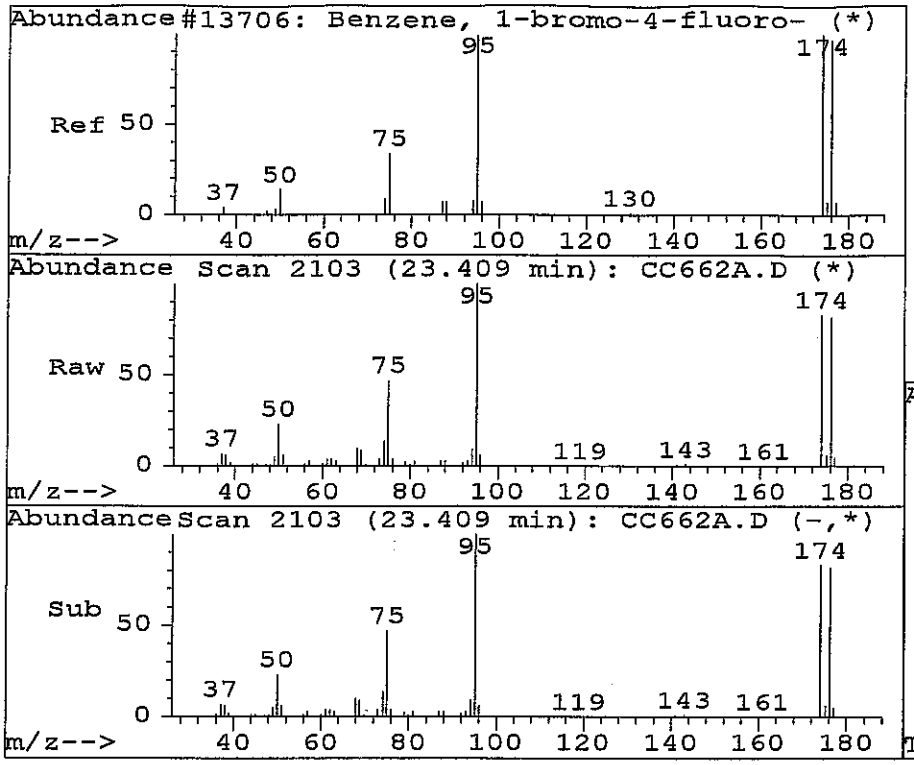
#95
Chlorobenzene-d5
Concen: 21.54 ppbV
RT: 20.40 min Scan# 1794
Delta R.T. 0.04 min
Lab File: CC662A.D
Acq: 8 Jul 109 2:05 pm

Tgt Ion:117 Resp: 4988531

Ion	Ratio	Lower	Upper
117	100		
82	71.1	55.7	83.5
0	0.0	0.0	0.0
0	0.0	0.0	0.0



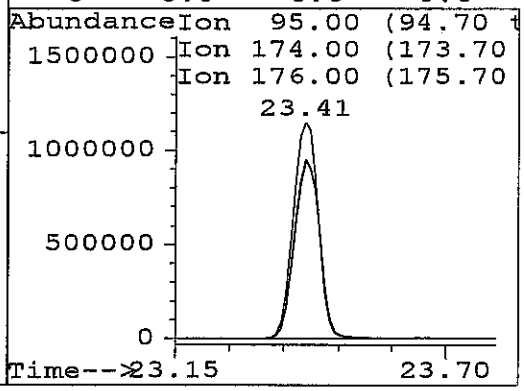




#96
1,4-Bromofluorobenzene
Concen: 11.16 ppbV
RT: 23.41 min Scan# 2103
Delta R.T. 0.03 min
Lab File: CC662A.D
Acq: 8 Jul 109 2:05 pm

Tgt Ion:95 Resp: 4039084

Ion	Ratio	Lower	Upper
95	100		
174	83.0	55.5	83.3
176	81.6	55.7	83.5
0	0.0	0.0	0.0



Quantitation Report

Data File : C:\MSCHEM\2\DATA\07089MS1\C07089D.D
Acq Time : 8 Jul 109 12:18 pm
Sample : ST60421
Misc :
Quant Time: Jul 8 12:54 19109

Operator: JF
Inst : 5970 - In
Multiplr: 1.00

Method : C:\MSCHEM\2\METHODS\1T15EXAY.M
Title : EPA TO-15
Last Update : Tue Mar 17 14:18:15 2009
Response via : Multiple Level Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Pentafluorobenzene	11.39	168	4246658	20.00	ppbV		0.01
35) 1,4-Difluorobenzene	13.19	114	4175396	20.00	ppbV		0.02
System Monitoring Compounds							%Recovery
94) Toluene-d8	16.97	98	2538702	10.82	ppbV		216.31%
95) Chlorobenzene-d5	20.40	117	4737894	22.00	ppbV		220.01%
96) 1,4-Bromofluorobenzene	23.41	95	3782848	11.23	ppbV		224.67%
Target Compounds							Qvalue
2) Dichlorodifluoromethane	3.85	85	132575	1.02	ppbV		97
3) Chloromethane	4.13	50	67605	0.81	ppbV	#	80
4) Freon 114	4.14	85	115290	0.84	ppbV		96
5) Vinyl chloride	4.36	62	53005	1.17	ppbV		98
6) Bromomethane	4.95	94	48757	1.09	ppbV		95
7) Chloroethane	5.15	64	27278	1.15	ppbV		94
8) Ethanol	5.28	45	8405	0.12	ppbV	#	72
9) Acrolein	5.94	56	4217	0.19	ppbV	#	60
10) Trichlorofluoromethane	5.98	101	154695	1.25	ppbV		99
11) Acetonitrile	5.98	41	7975	0.09	ppbV	#	80
12) Acetone	6.09	43	8619	0.05	ppbV	#	57
13) 2-propanol	6.23	45	2239	0.02	ppbV	#	90
14) Methyl iodide	7.02	142	742	0.01	ppbV	#	30
15) 1,1-Dichloroethene	6.93	61	110860	1.11	ppbV		98
16) Acrylonitrile	6.97	53	63695	1.13	ppbV		93
17) Freon 113	7.20	151	95318	1.21	ppbV		98
18) Allyl chloride	7.35	41	3776	0.03	ppbV	#	19
19) Dichloromethane	7.34	84	47048	1.06	ppbV		95
21) trans-1,2-Dichloroethene	8.44	96	358	0.01	ppbV	#	1
23) Propionitrile	8.83	54	3970	0.06	ppbV	#	66
24) 1,1-Dichloroethane	8.92	63	129790	1.01	ppbV		97
25) Vinyl acetate	10.35	43	1306	0.00	ppbV	#	81
28) Bromochloromethane	10.55	49	17098	0.12	ppbV	#	35
29) Tetrahydrofuran	10.87	42	12024	0.02	ppbV	#	97
30) Isobutyl alcohol	10.87	74	297	0.02	ppbV	#	23
31) Methacrylonitrile	9.74	67	696	0.02	ppbV	#	31
32) cis-1,2-Dichloroethene	10.14	96	62197	0.94	ppbV		94
34) Chloroform	10.55	83	146449	0.95	ppbV		98
36) 1,1,1-Trichloroethane	11.83	97	158360	1.04	ppbV		96
37) 1,2-Dichloroethane	11.90	62	149641	1.05	ppbV		97
38) 1,1-Dichloropropene	12.56	75	4216	0.03	ppbV	#	1
40) Benzene	12.55	78	240160	0.97	ppbV		96
41) Carbon tetrachloride	12.60	117	167185	1.09	ppbV		97
43) 1,2-Dichloropropane	14.09	63	101499	1.06	ppbV		90
44) 1,4 Dioxane	14.44	88	1185	0.02	ppbV	#	33
45) Dibromomethane	14.23	174	670	0.00	ppbV	#	29
46) Trichloroethene	14.16	130	129141	1.08	ppbV		98
47) Bromodichloromethane	14.15	83	311	0.00	ppbV	#	27
48) Methyl methacrylate	14.56	69	4828	0.05	ppbV	#	52
49) Methyl Isobutyl Ketone	15.79	43	5815	0.01	ppbV	#	56
50) cis-1,3-Dichloropropene	15.85	75	136984	0.92	ppbV		99
51) Toluene	17.15	91	384345	1.19	ppbV		99
52) trans-1,3-Dichloropropene	16.88	75	143939	0.81	ppbV		99
53) 1,1,2-Trichloroethane	17.19	61	99011	1.04	ppbV		96
54) 2-Hexanone	17.84	43	18489	0.03	ppbV	#	75
55) 1,3-Dichloropropane	17.76	76	902	0.00	ppbV	#	49
57) Dibromochloromethane	18.34	129	891	0.00	ppbV		93

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

Quantitation Report

Data File : C:\MSCHEM\2\DATA\07089MS1\C07089D.D
Acq Time : 8 Jul 109 12:18 pm
Sample : ST60421
Misc :
Quant Time: Jul 8 12:54 19109

Operator: JF
Inst : 5970 - In
Multiplr: 1.00

Method : C:\MSCHEM\2\METHODS\1T15EXAY.M
Title : EPA TO-15
Last Update : Tue Mar 17 14:18:15 2009
Response via : Multiple Level Calibration

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
58)	1,2-Dibromoethane	18.82	107	241304	1.03 ppbV #	95
59)	Tetrachloroethene	19.00	166	247317	1.20 ppbV	93
60)	Chlorobenzene	20.49	112	302924	1.00 ppbV #	93
61)	1,1,1,2-Tetrachloroethane	20.56	131	3019	0.02 ppbV #	12
62)	Ethylbenzene	21.02	91	531764	1.03 ppbV	99
63)	m & p-Xylene	21.32	91	901901	2.08 ppbV	100
64)	Styrene	22.14	104	283096	0.91 ppbV	94
65)	Bromoform	22.05	173	4943	0.01 ppbV #	68
66)	o-Xylene	22.28	91	464379	0.97 ppbV	100
67)	1,1,2,2-Tetrachloroethane	22.80	83	286920	0.65 ppbV	99
68)	1,2,3-Trichloropropane	23.12	110	660	0.01 ppbV #	46
69)	t-1,4-Dichloro-2-butene	23.26	53	2623	0.02 ppbV #	35
70)	n-Propylbenzene	24.47	91	12056	0.01 ppbV #	88
71)	Isopropylbenzene	24.78	105	15045	0.02 ppbV #	97
72)	4-Ethyltoluene	24.78	105	15045	0.02 ppbV #	89
73)	1,3,5-Trimethylbenzene	24.93	105	595273	0.85 ppbV	98
74)	Methylstyrene	25.40	118	32385	0.10 ppbV	91
75)	tert-butyl benzene	25.88	119	70998	0.12 ppbV #	88
76)	1,2,4-Trimethylbenzene	25.88	105	583818	0.91 ppbV #	96
77)	sec-butylbenzene	26.47	105	15990	0.02 ppbV #	95
78)	1,3-Dichlorobenzene	26.45	146	388983	0.75 ppbV	98
79)	Isopropyltoluene	26.86	119	15954	0.02 ppbV #	90
80)	Benzyl chloride	26.61	91	8936	0.01 ppbV	98
81)	1,4-Dichlorobenzene	26.65	146	384206	0.72 ppbV	97
82)	n-Butylbenzene	27.93	91	24071	0.03 ppbV	95
83)	1,2-Dichlorobenzene	27.51	146	343188	0.58 ppbV	96
84)	1,2-Dibromo-3-chloropropan	29.00	75	19506	0.05 ppbV #	55
85)	Tetraethyl lead	31.04	237	7783	0.02 ppbV #	27
86)	1,2,4-Trichlorobenzene	32.08	180	193678	0.18 ppbV	93
87)	Naphthalene	32.43	128	150242	0.08 ppbV #	97
88)	Hexachlorobutadiene	33.10	225	334843	0.39 ppbV	98
89)	Propylene	3.78	40	1845	0.11 ppbV #	1
90)	1,3-Butadiene	4.50	54	41942	0.88 ppbV	94
92)	2-Chlorotoluene	24.47	91	12056	0.02 ppbV #	79
93)	4-Chlorotoluene	24.70	91	13993	0.02 ppbV #	87

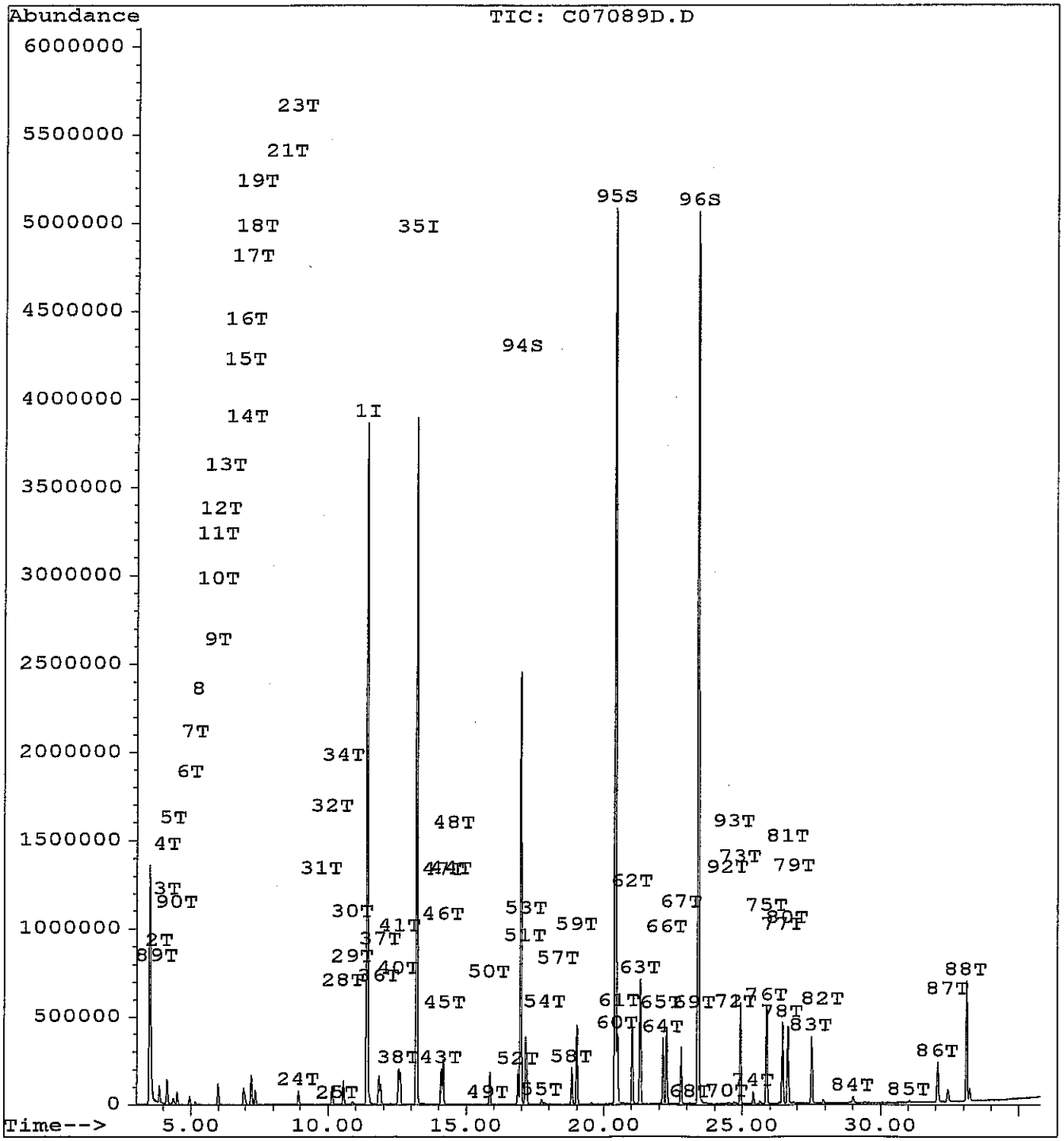
(#) = qualifier out of range (m) = manual integration

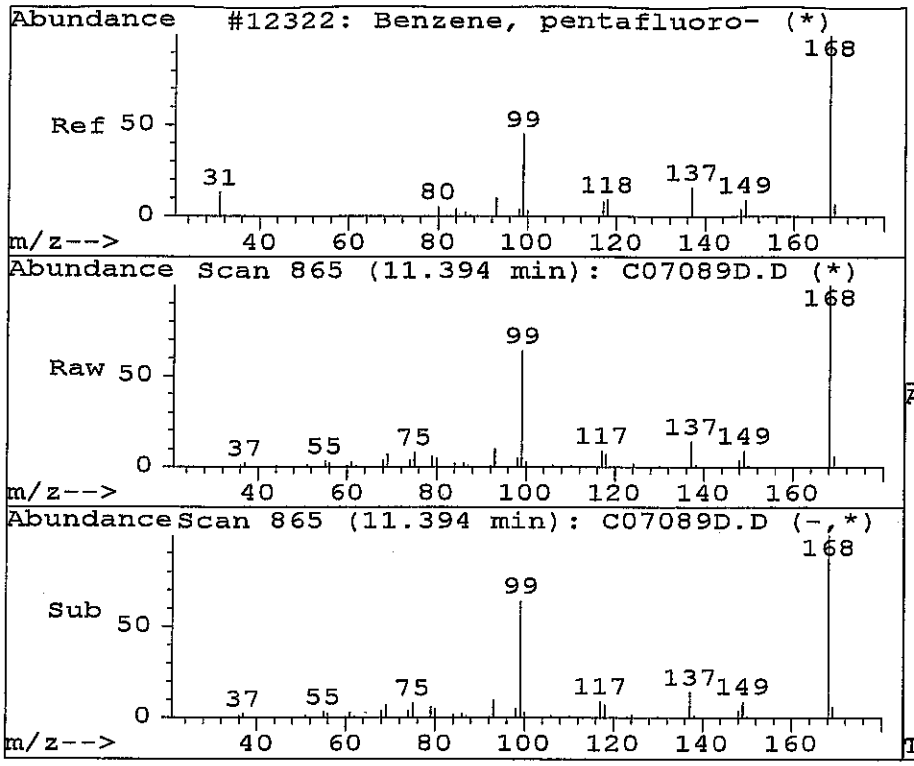
Quantitation Report

Data File : C:\MSCHEM\2\DATA\07089MS1\C07089D.D
Acq Time : 8 Jul 109 12:18 pm
Sample : ST60421
Misc :
Quant Time: Jul 8 12:54 19109

Operator: JF
Inst : 5970 - In
Multiplr: 1.00

Method : C:\MSCHEM\2\METHODS\1T15EXAY.M
Title : EPA TO-15
Last Update : Tue Mar 17 14:18:15 2009
Response via : Multiple Level Calibration

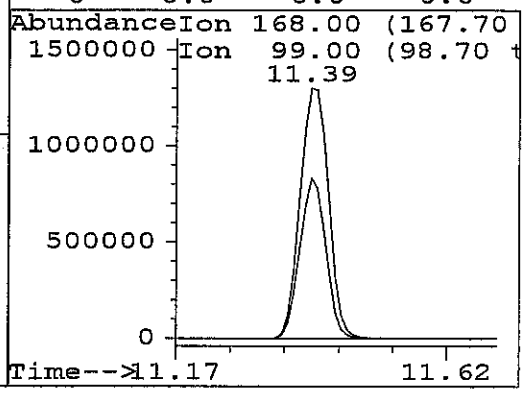


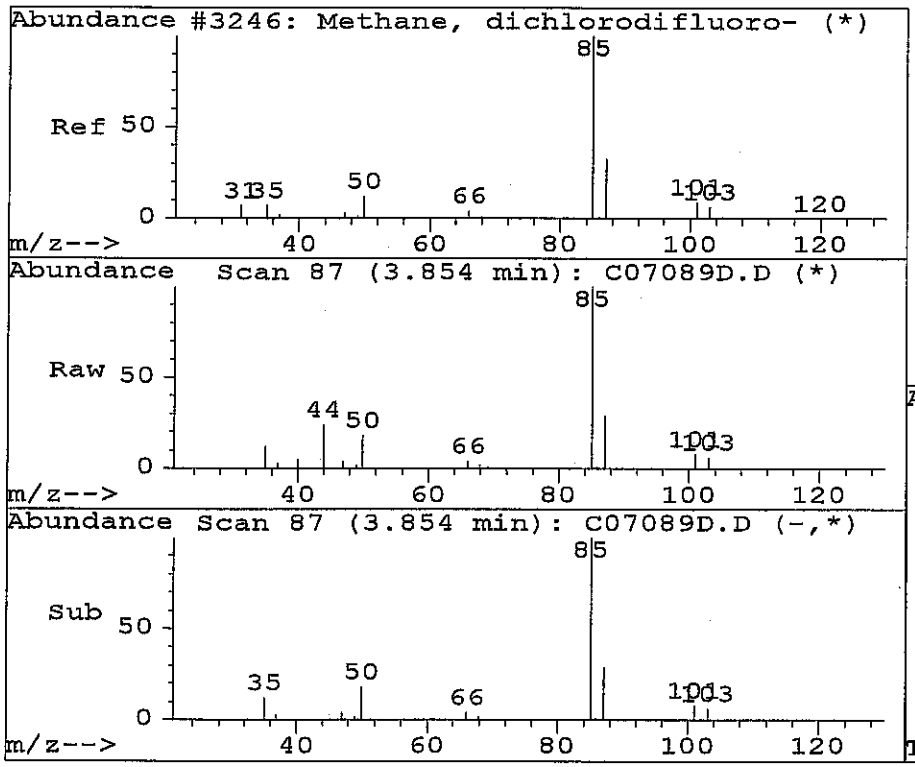


#1
Pentafluorobenzene
Concen: 20.00 ppbV
RT: 11.39 min Scan# 865
Delta R.T. 0.01 min
Lab File: C07089D.D
Acq: 8 Jul 109 12:18 pm

Tgt Ion:168 Resp: 4246658

Ion	Ratio	Lower	Upper
168	100		
99	64.0	53.6	80.4
0	0.0	0.0	0.0
0	0.0	0.0	0.0

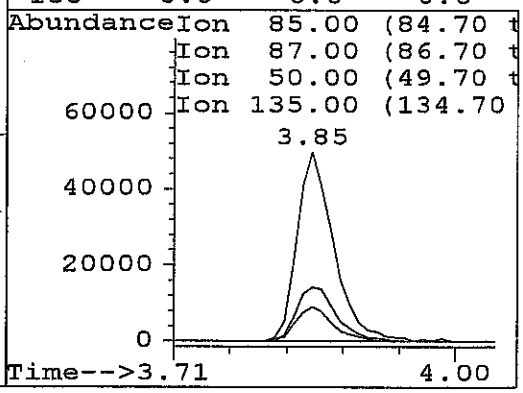


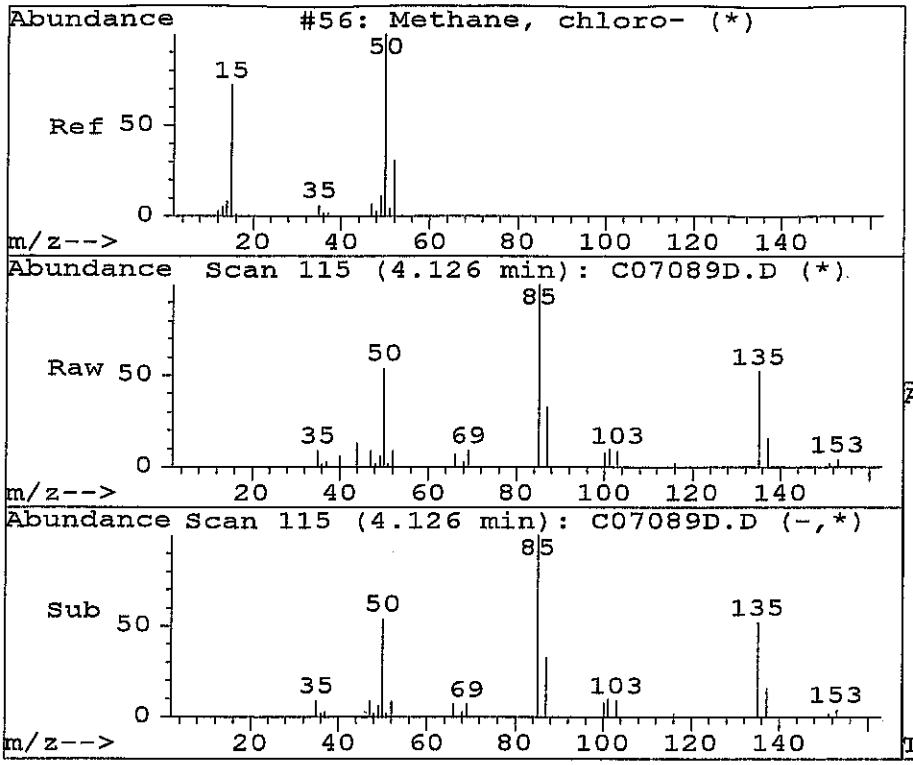


#2
Dichlorodifluoromethane
Concen: 1.02 ppbV
RT: 3.85 min Scan# 87
Delta R.T. 0.02 min
Lab File: C07089D.D
Acq: 8 Jul 109 12:18 pm

Tgt Ion:85 Resp: 132575

Ion	Ratio	Lower	Upper
85	100		
87	28.5	24.9	37.3
50	18.1	14.9	22.3
135	0.0	0.0	0.0

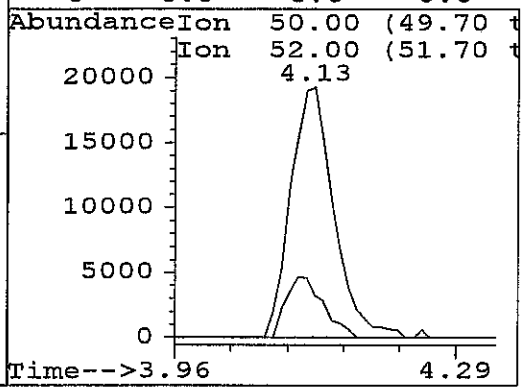


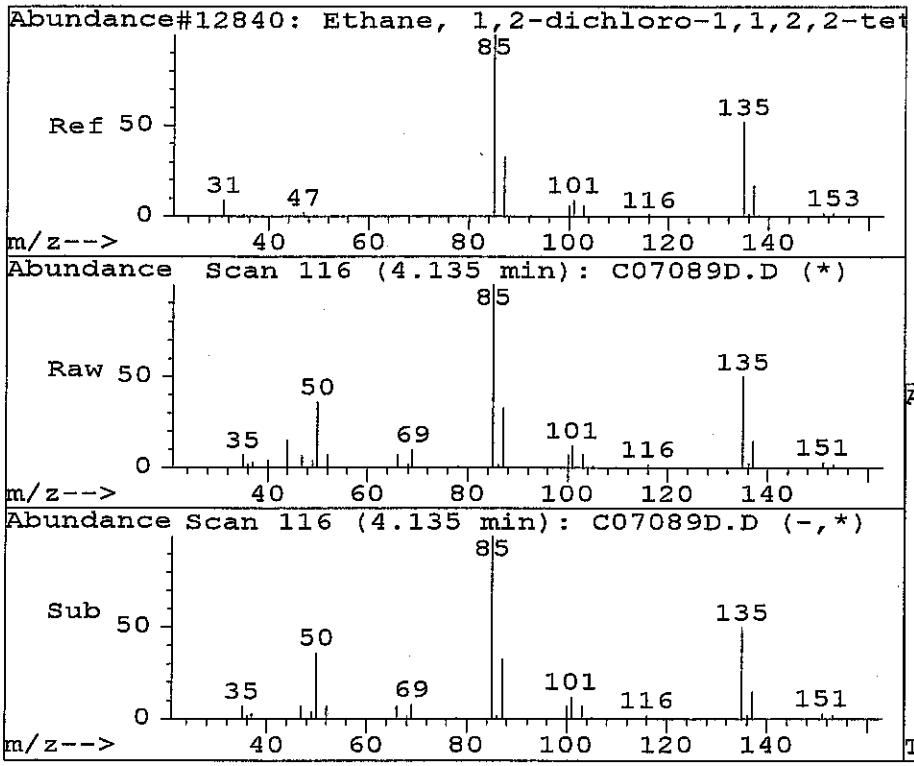


#3
Chloromethane
Concen: 0.81 ppbV
RT: 4.13 min Scan# 115
Delta R.T. 0.04 min
Lab File: C07089D.D
Acq: 8 Jul 109 12:18 pm

Tgt Ion:50 Resp: 67605

Ion	Ratio	Lower	Upper
50	100		
52	16.8	21.5	32.3#
0	0.0	0.0	0.0
0	0.0	0.0	0.0

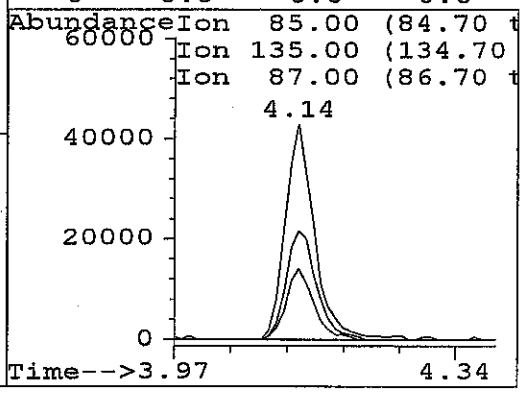


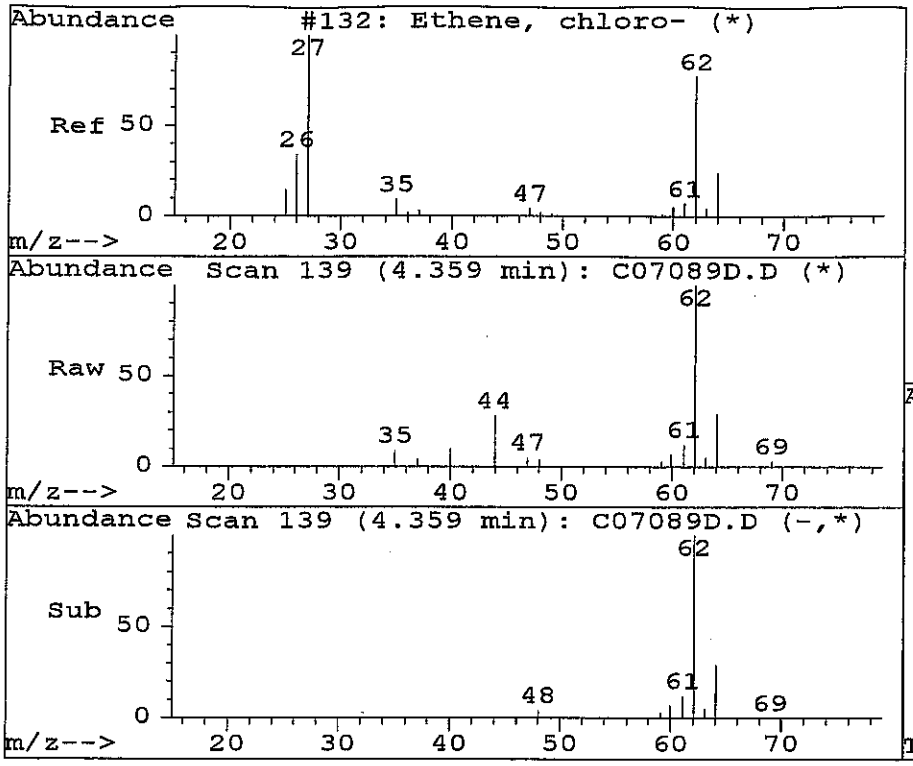


#4
Freon 114
Concen: 0.84 ppbV
RT: 4.14 min Scan# 116
Delta R.T. 0.03 min
Lab File: C07089D.D
Acq: 8 Jul 109 12:18 pm

Tgt Ion:85 Resp: 115290

Ion	Ratio	Lower	Upper
85	100		
135	50.2	43.5	65.3
87	32.9	26.1	39.1
0	0.0	0.0	0.0

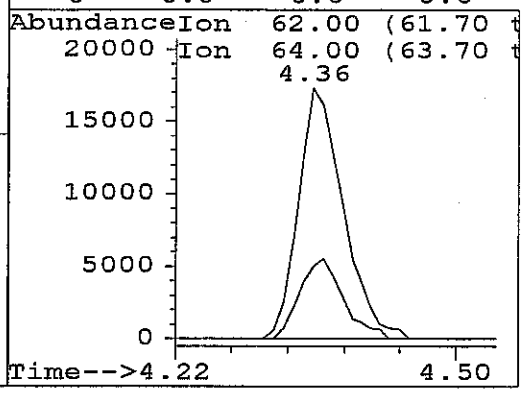


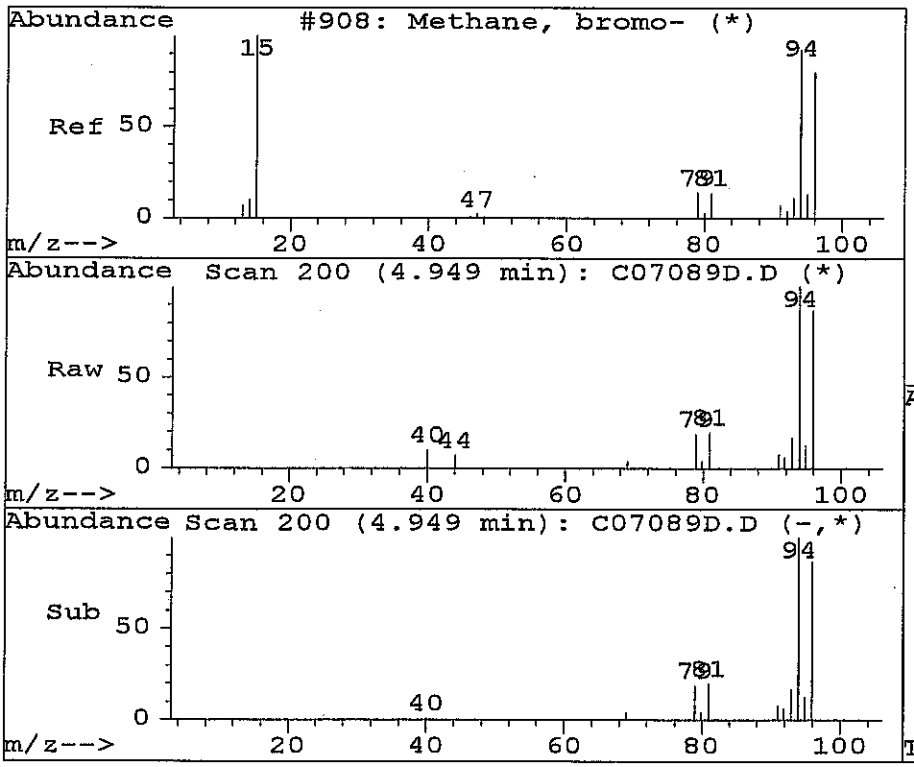


#5
Vinyl chloride
Concen: 1.17 ppbV
RT: 4.36 min Scan# 139
Delta R.T. 0.03 min
Lab File: C07089D.D
Acq: 8 Jul 109 12:18 pm

Tgt Ion:62 Resp: 53005

Ion	Ratio	Lower	Upper
62	100		
64	28.7	23.8	35.8
0	0.0	0.0	0.0
0	0.0	0.0	0.0

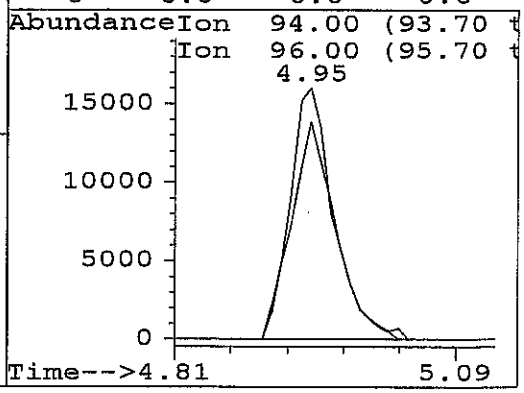


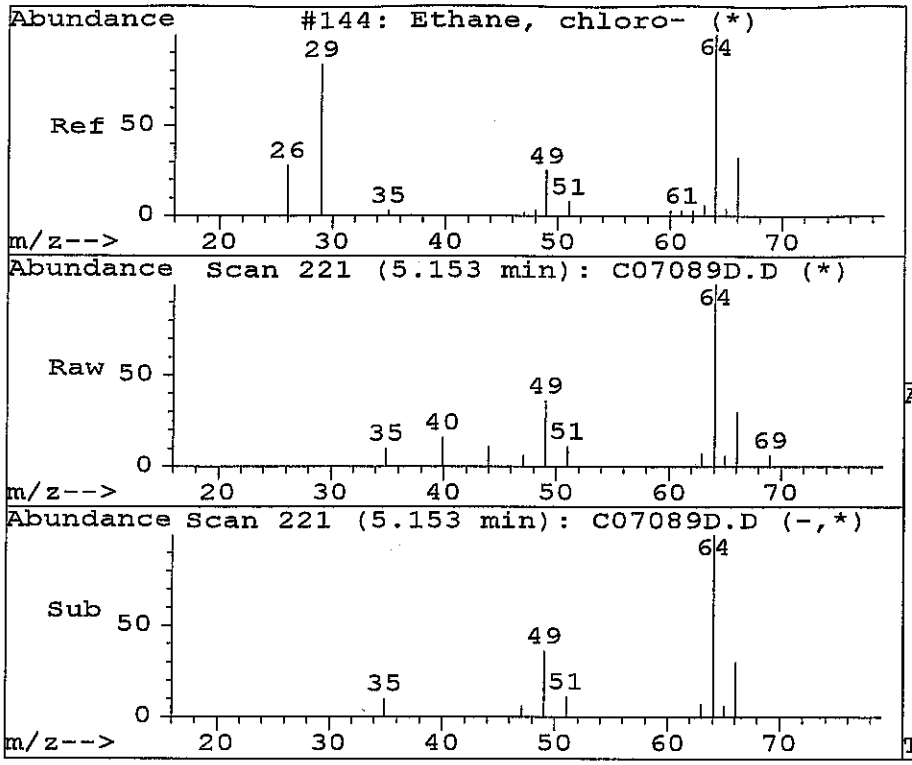


#6
Bromomethane
Concen: 1.09 ppbV
RT: 4.95 min Scan# 200
Delta R.T. 0.03 min
Lab File: C07089D.D
Acq: 8 Jul 109 12:18 pm

Tgt Ion:94 Resp: 48757

Ion	Ratio	Lower	Upper
94	100		
96	86.6	73.0	109.4
0	0.0	0.0	0.0
0	0.0	0.0	0.0

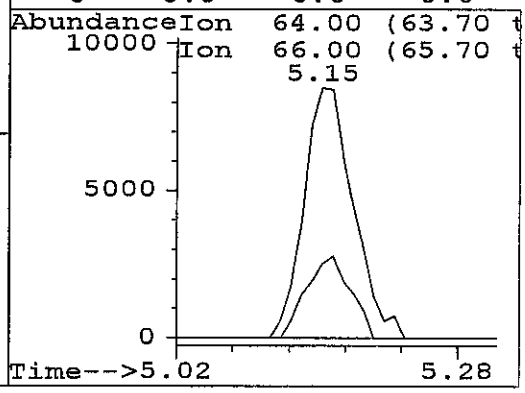


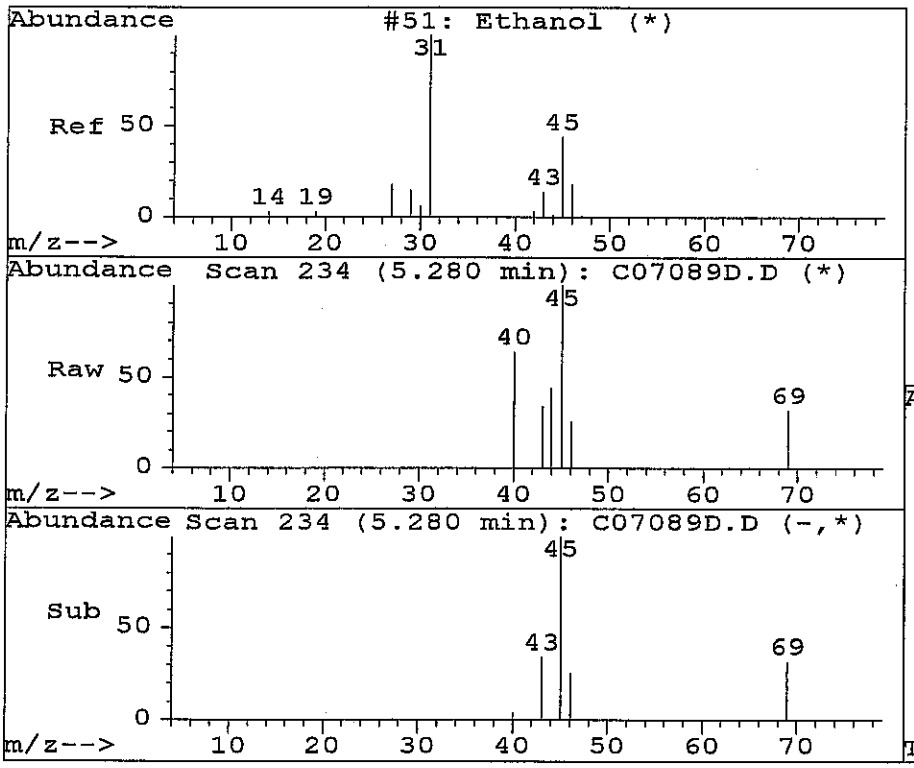


#7
Chloroethane
Concen: 1.15 ppbV
RT: 5.15 min Scan# 221
Delta R.T. 0.03 min
Lab File: C07089D.D
Acq: 8 Jul 109 12:18 pm

Tgt Ion:64 Resp: 27278

Ion	Ratio	Lower	Upper
64	100		
66	29.6	26.4	39.6
0	0.0	0.0	0.0
0	0.0	0.0	0.0

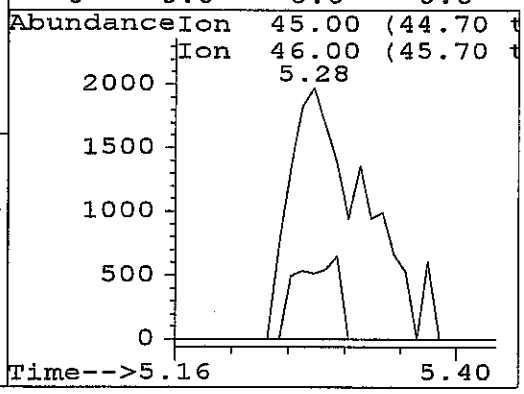


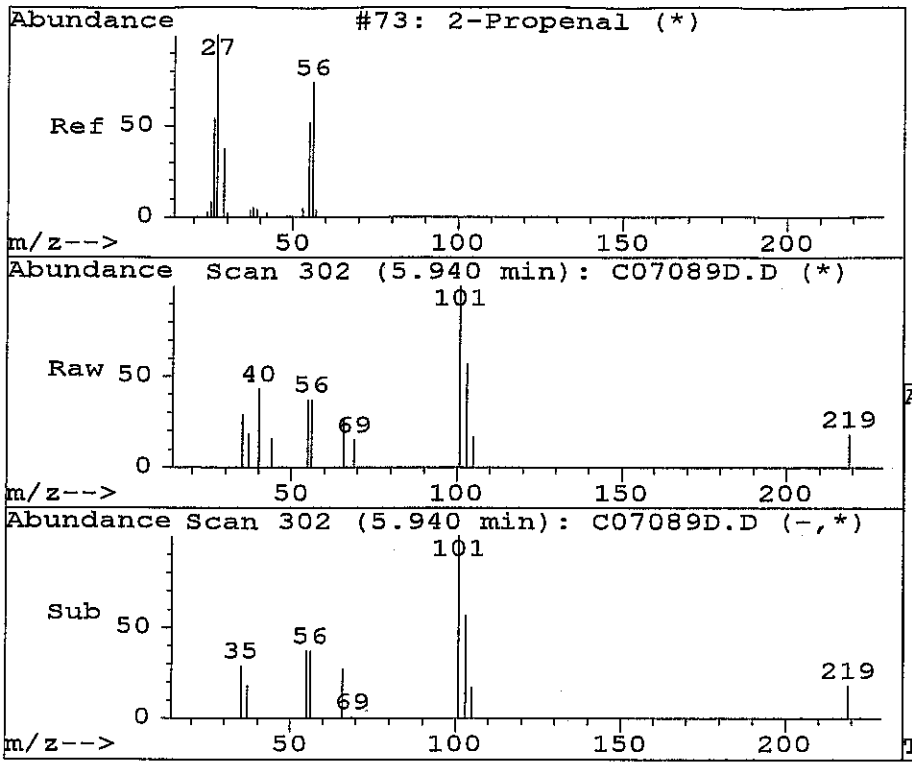


#8
Ethanol
Concen: 0.12 ppbV
RT: 5.28 min Scan# 234
Delta R.T. 0.08 min
Lab File: C07089D.D
Acq: 8 Jul 109 12:18 pm

Tgt Ion:45 Resp: 8405

Ion	Ratio	Lower	Upper
45	100		
46	19.1	28.5	42.7#
0	0.0	0.0	0.0
0	0.0	0.0	0.0

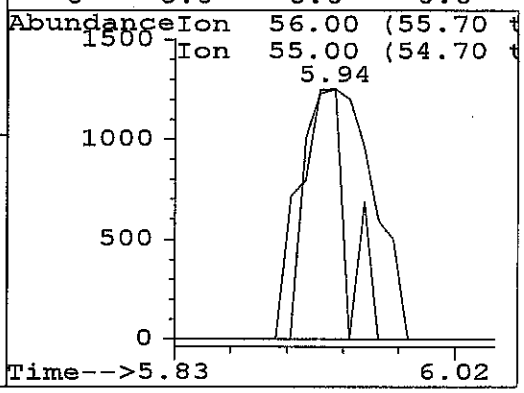


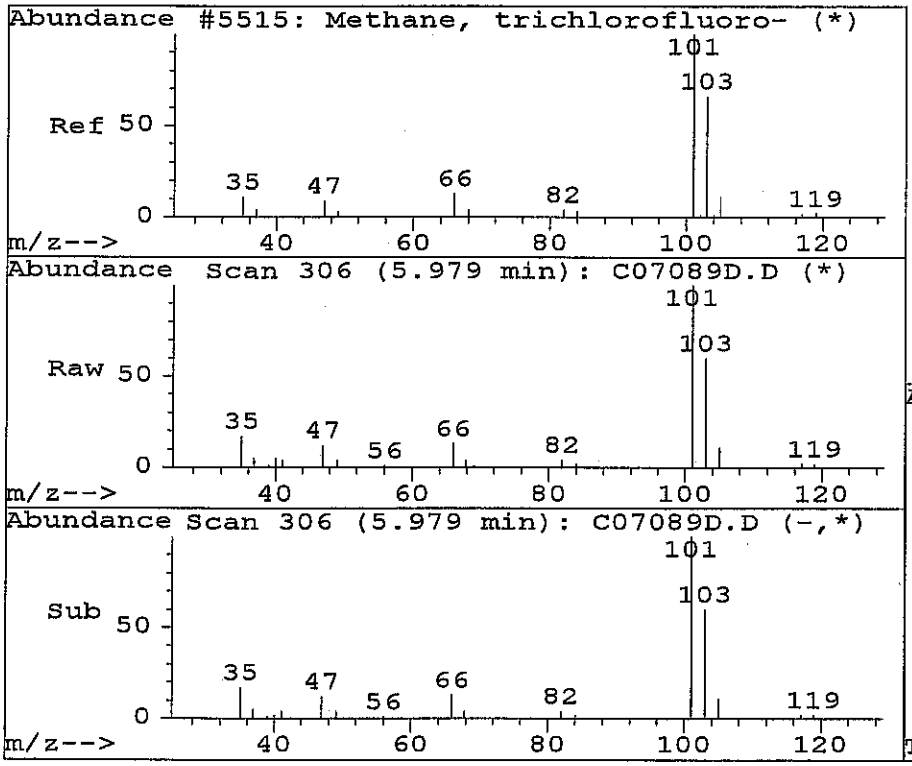


#9
Acrolein
Concen: 0.19 ppbV
RT: 5.94 min Scan# 302
Delta R.T. 0.05 min
Lab File: C07089D.D
Acq: 8 Jul 109 12:18 pm

Tgt Ion:56 Resp: 4217

Ion	Ratio	Lower	Upper
56	100		
55	100.0	54.2	81.4#
0	0.0	0.0	0.0
0	0.0	0.0	0.0

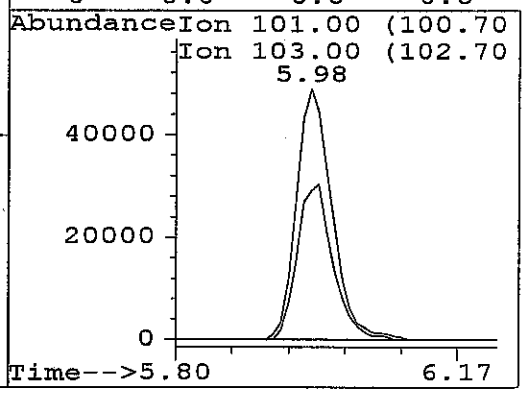


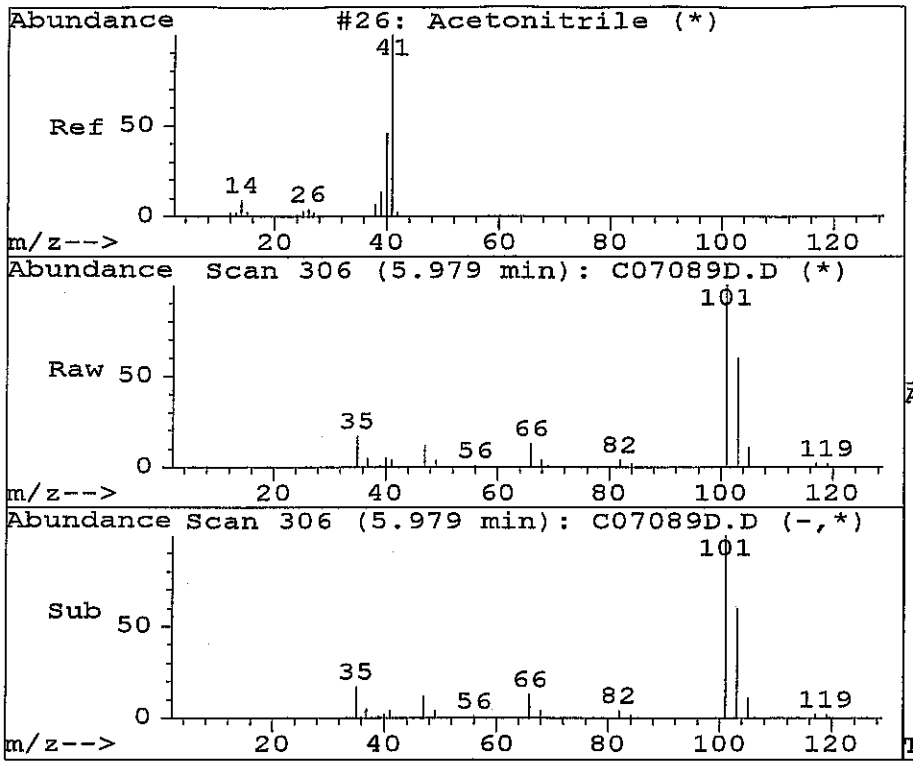


#10
Trichlorofluoromethane
Concen: 1.25 ppbV
RT: 5.98 min Scan# 306
Delta R.T. 0.04 min
Lab File: C07089D.D
Acq: 8 Jul 109 12:18 pm

Tgt Ion:101 Resp: 154695

Ion	Ratio	Lower	Upper
101	100		
103	59.6	48.4	72.6
0	0.0	0.0	0.0
0	0.0	0.0	0.0

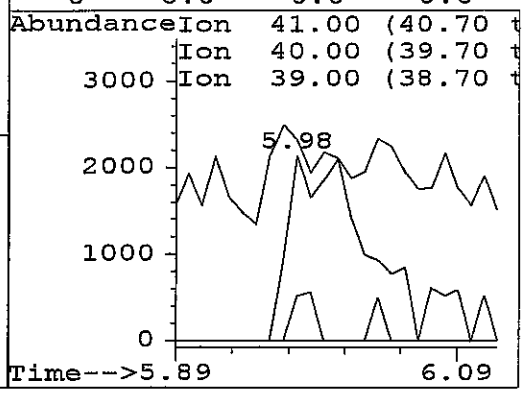


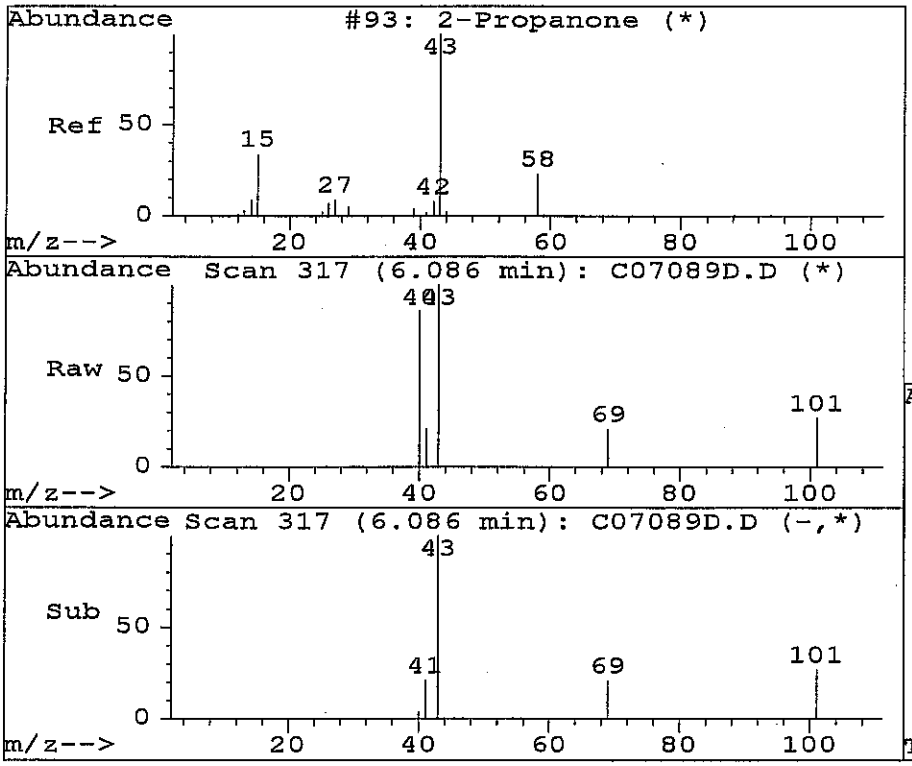


#11
Acetonitrile
Concen: 0.09 ppbV
RT: 5.98 min Scan# 306
Delta R.T. 0.02 min
Lab File: C07089D.D
Acq: 8 Jul 109 12:18 pm

Tgt Ion:41 Resp: 7975

Ion	Ratio	Lower	Upper
41	100		
40	36.1	42.9	64.3#
39	24.3	16.4	24.6
0	0.0	0.0	0.0

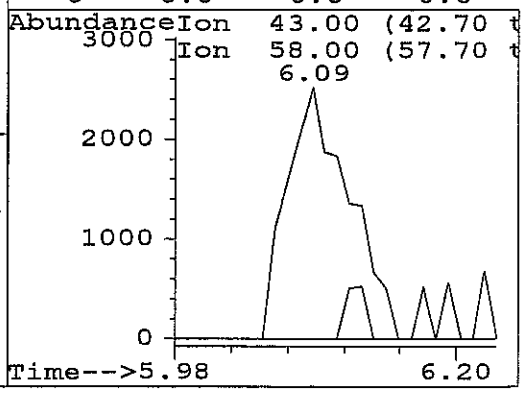


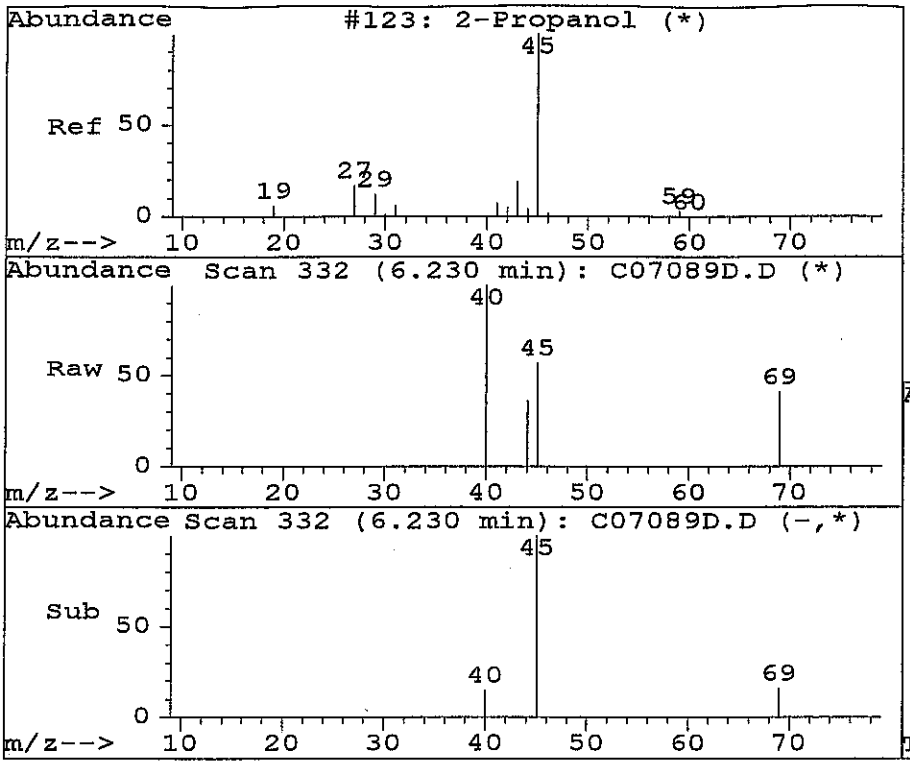


#12
Acetone
Concen: 0.05 ppbV
RT: 6.09 min Scan# 317
Delta R.T. 0.05 min
Lab File: C07089D.D
Acq: 8 Jul 109 12:18 pm

Tgt Ion:43 Resp: 8619

Ion	Ratio	Lower	Upper
43	100		
58	0.0	15.7	23.5#
0	0.0	0.0	0.0
0	0.0	0.0	0.0

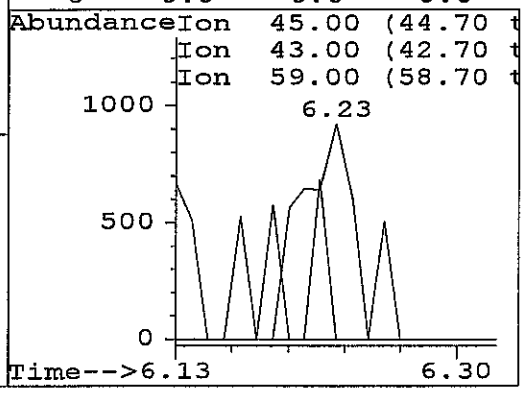


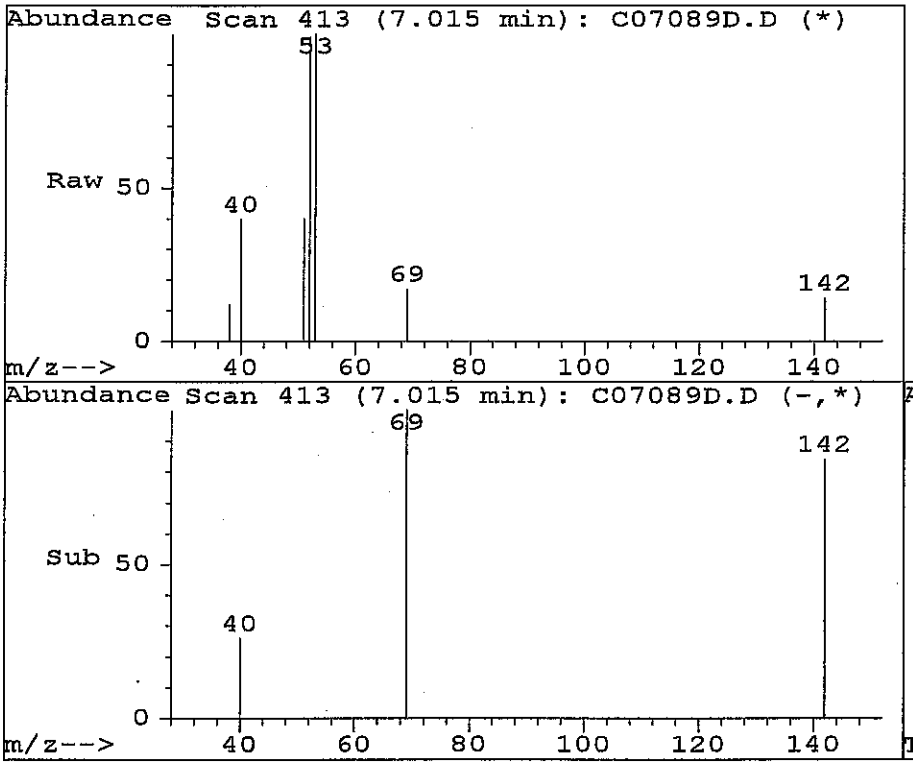


#13
2-propanol
Concen: 0.02 ppbV
RT: 6.23 min Scan# 332
Delta R.T. 0.09 min
Lab File: C07089D.D
Acq: 8 Jul 109 12:18 pm

Tgt Ion:45 Resp: 2239

Ion	Ratio	Lower	Upper
45	100		
43	17.6	18.2	27.2#
59	0.0	2.6	3.8#
0	0.0	0.0	0.0

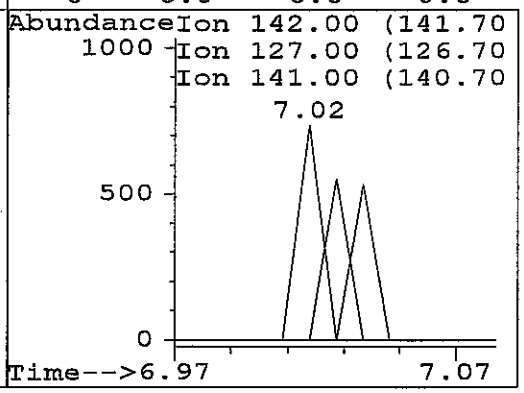


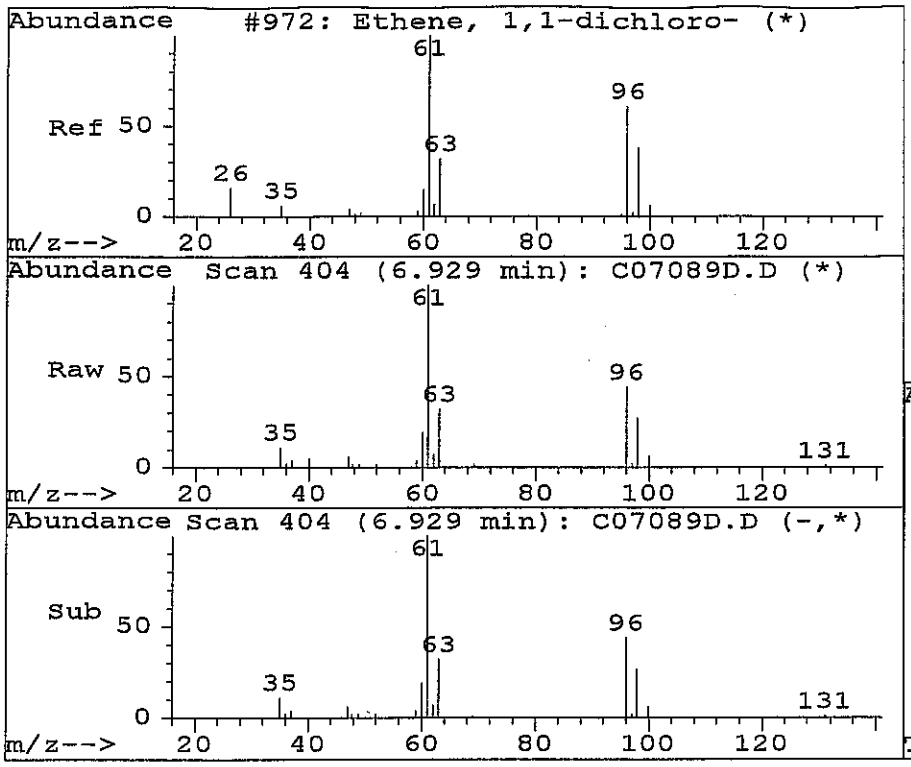


#14
Methyl iodide
Concen: 0.01 ppbV
RT: 7.02 min Scan# 413
Delta R.T. 0.03 min
Lab File: C07089D.D
Acq: 8 Jul 109 12:18 pm

Tgt Ion:142 Resp: 742

Ion	Ratio	Lower	Upper
142	100		
127	0.0	46.6	69.8#
141	0.0	12.4	18.6#
0	0.0	0.0	0.0

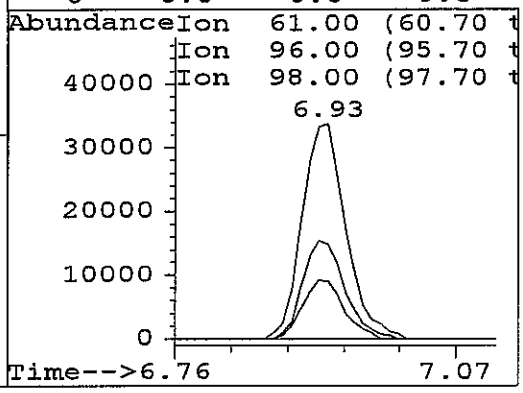


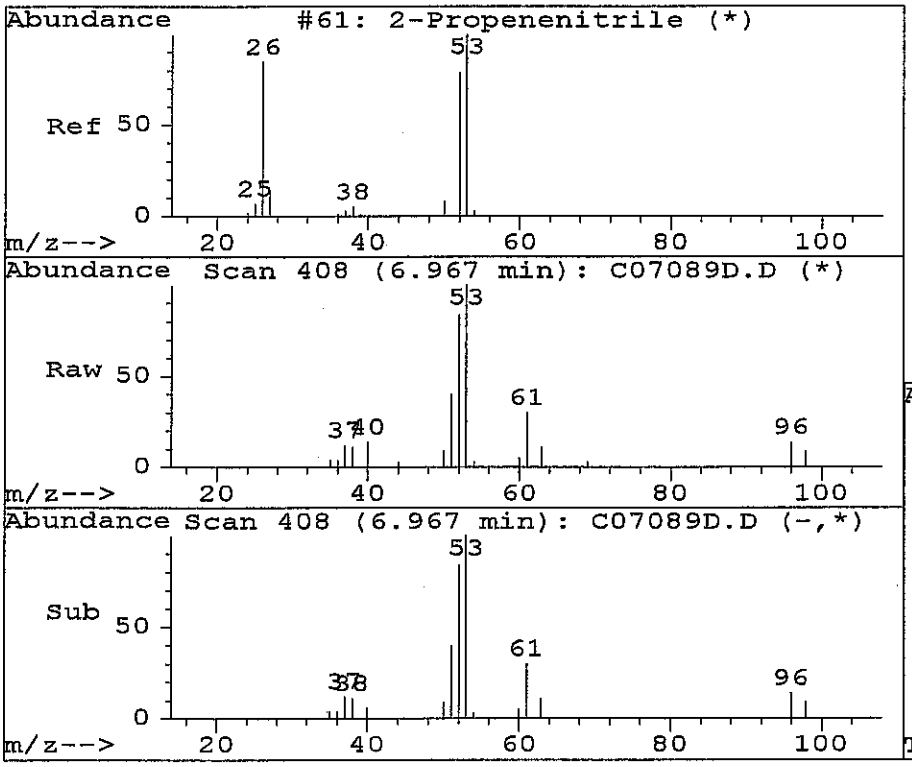


#15
1,1-Dichloroethene
Concen: 1.11 ppbV
RT: 6.93 min Scan# 404
Delta R.T. 0.04 min
Lab File: C07089D.D
Acq: 8 Jul 109 12:18 pm

Tgt Ion:61 Resp: 110860

Ion	Ratio	Lower	Upper
61	100		
96	44.0	34.1	51.1
98	26.9	21.7	32.5
0	0.0	0.0	0.0

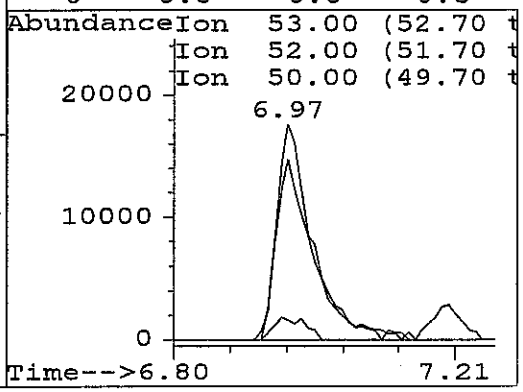


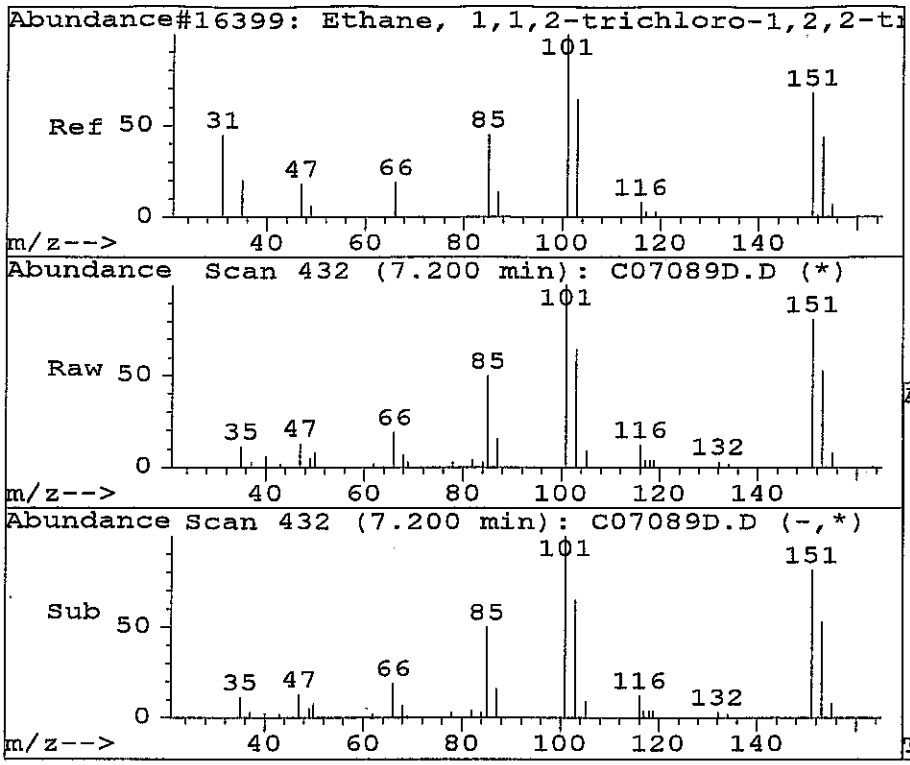


#16
Acrylonitrile
Concen: 1.13 ppbV
RT: 6.97 min Scan# 408
Delta R.T. 0.01 min
Lab File: C07089D.D
Acq: 8 Jul 109 12:18 pm

Tgt Ion:53 Resp: 63695

Ion	Ratio	Lower	Upper
53	100		
52	83.6	73.0	109.4
50	9.2	8.3	12.5
0	0.0	0.0	0.0

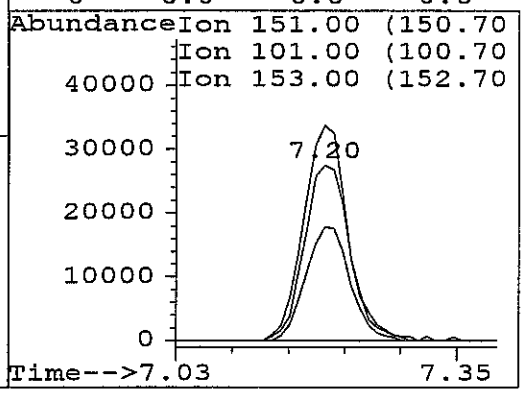


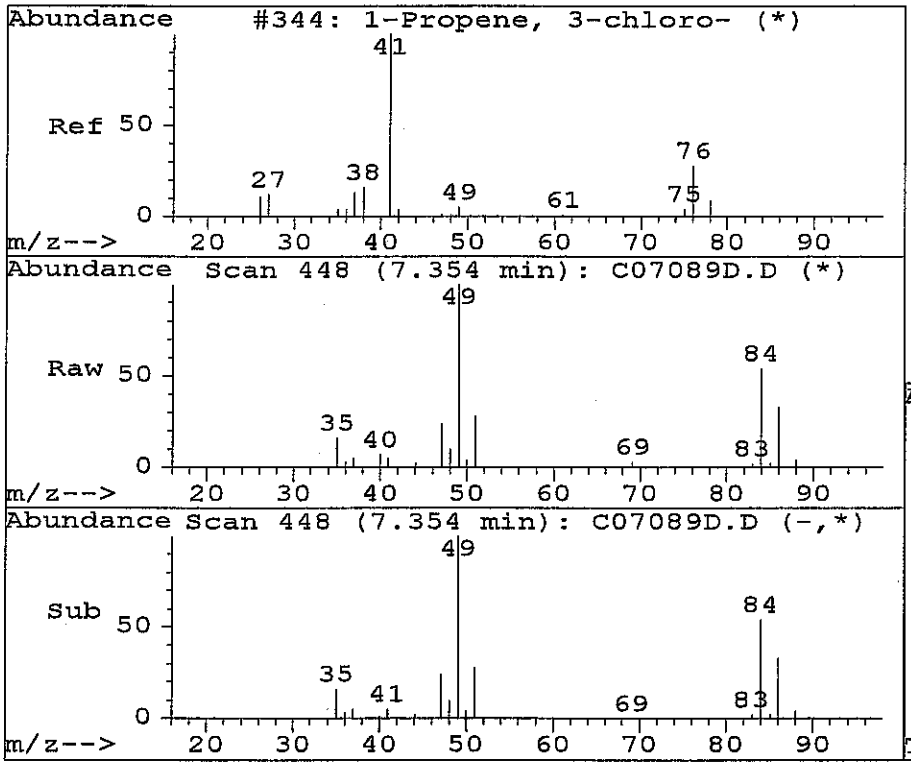


#17
Freon 113
Concen: 1.21 ppbV
RT: 7.20 min Scan# 432
Delta R.T. 0.04 min
Lab File: C07089D.D
Acq: 8 Jul 109 12:18 pm

Tgt Ion:151 Resp: 95318

Ion	Ratio	Lower	Upper
151	100		
101	122.7	101.3	151.9
153	65.0	52.3	78.5
0	0.0	0.0	0.0

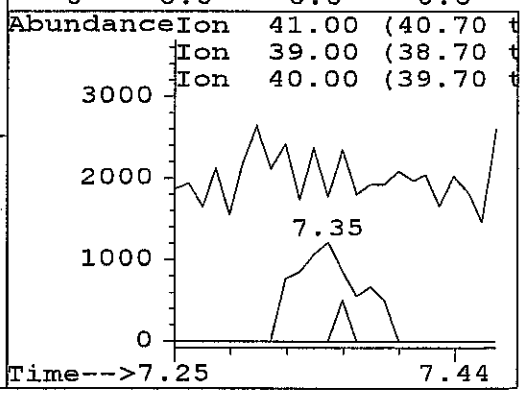


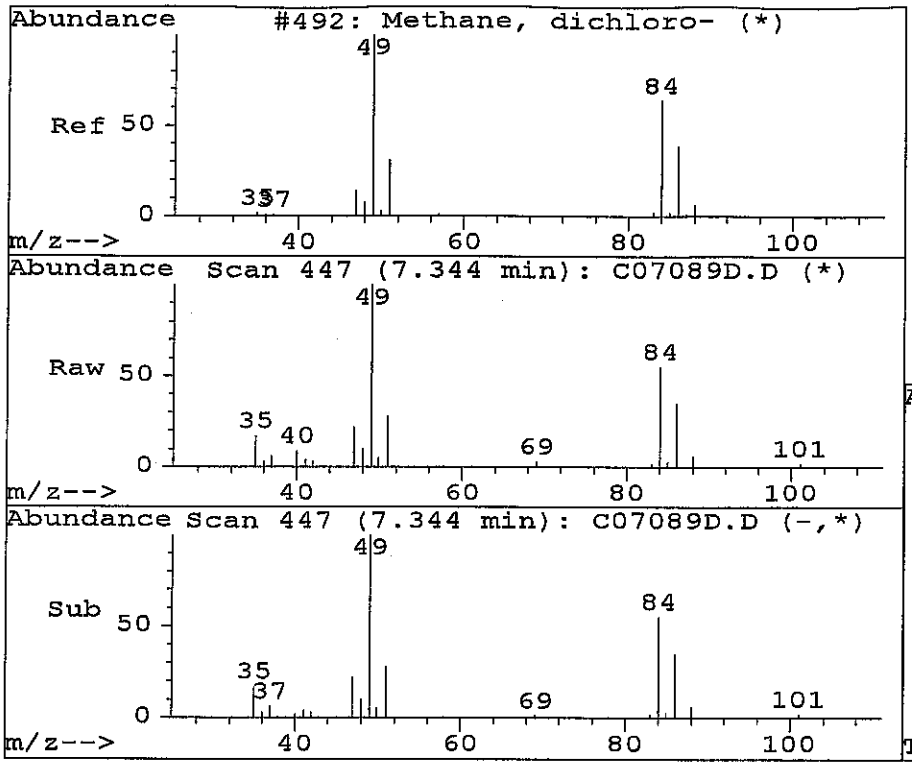


#18
Allyl chloride
Concen: 0.03 ppbV
RT: 7.35 min Scan# 448
Delta R.T. 0.00 min
Lab File: C07089D.D
Acq: 8 Jul 109 12:18 pm

Tgt Ion:41 Resp: 3776

Ion	Ratio	Lower	Upper
41	100		
39	0.0	59.4	89.2#
40	0.0	7.8	11.8#
0	0.0	0.0	0.0

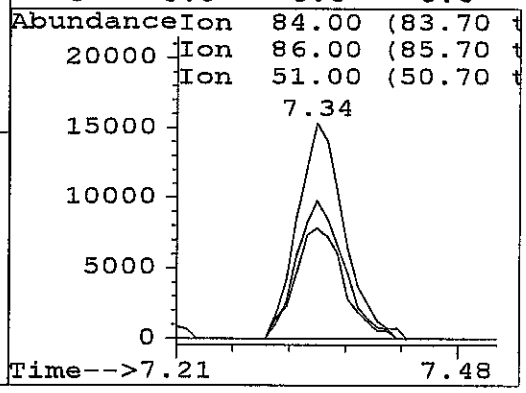


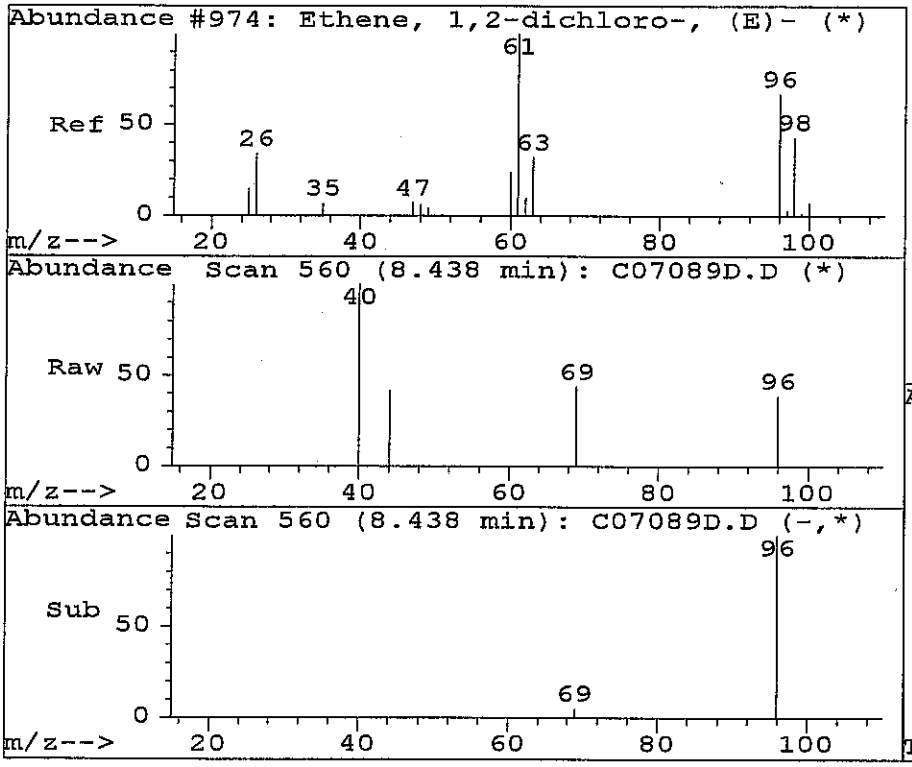


#19
Dichloromethane
Concen: 1.06 ppbV
RT: 7.34 min Scan# 447
Delta R.T. 0.03 min
Lab File: C07089D.D
Acq: 8 Jul 109 12:18 pm

Tgt Ion:84 Resp: 47048

Ion	Ratio	Lower	Upper
84	100		
86	63.7	51.1	76.7
51	51.0	47.2	70.8
0	0.0	0.0	0.0

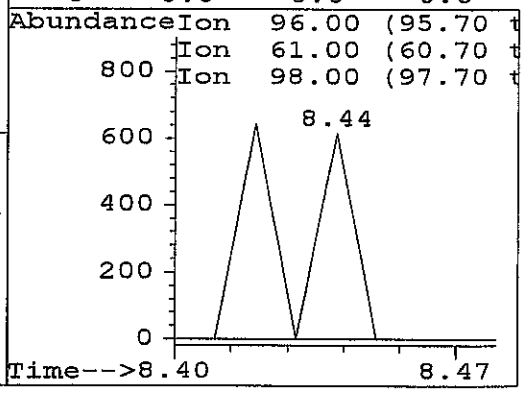


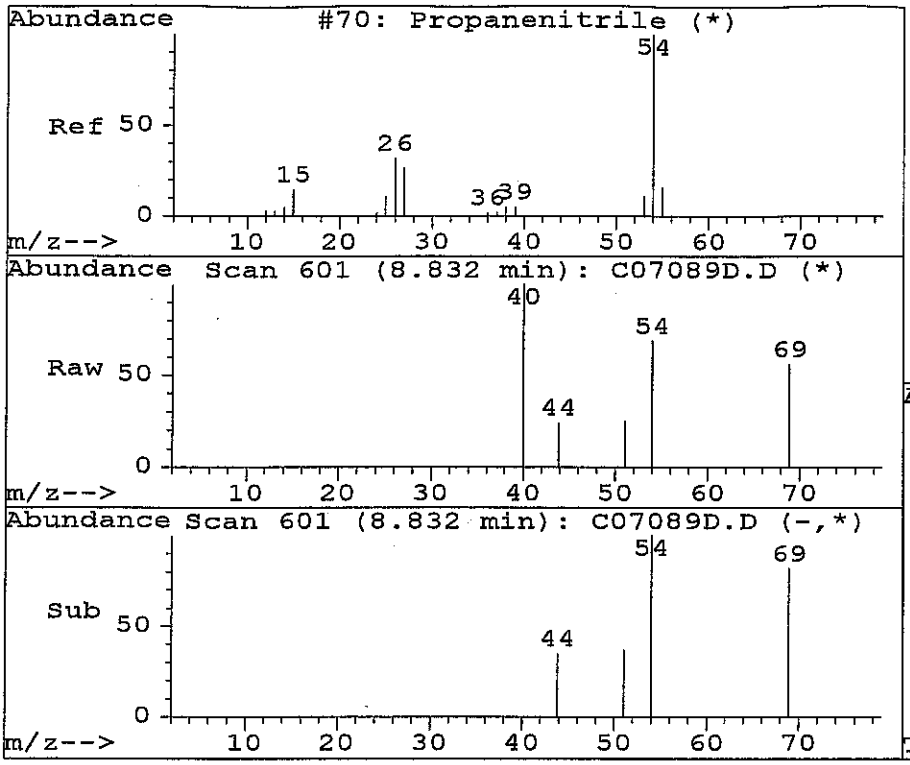


#21
trans-1,2-Dichloroethene
Concen: 0.01 ppbV
RT: 8.44 min Scan# 560
Delta R.T. 0.06 min
Lab File: C07089D.D
Acq: 8 Jul 109 12:18 pm

Tgt Ion:96 Resp: 358

Ion	Ratio	Lower	Upper
96	100		
61	0.0	172.2	258.4#
98	0.0	49.6	74.4#
0	0.0	0.0	0.0

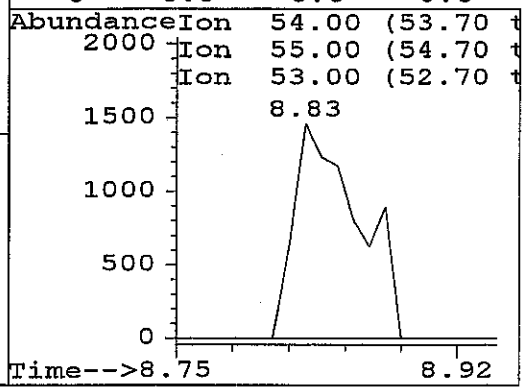


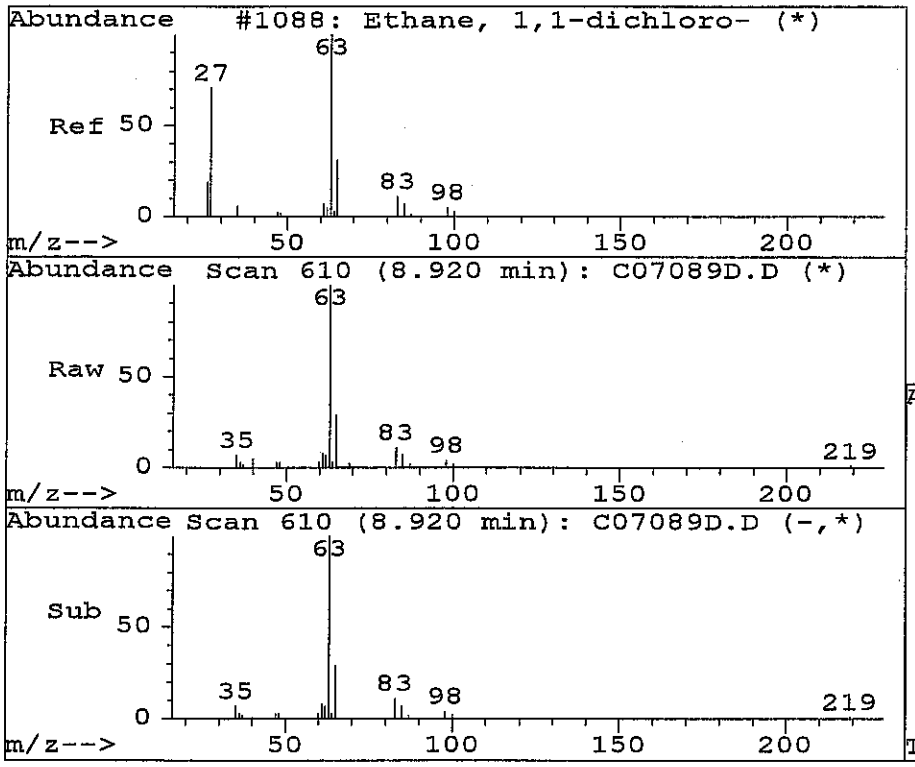


#23
Propionitrile
Concen: 0.06 ppbV
RT: 8.83 min Scan# 601
Delta R.T. 0.00 min
Lab File: C07089D.D
Acq: 8 Jul 109 12:18 pm

Tgt Ion:54 Resp: 3970

Ion	Ratio	Lower	Upper
54	100		
55	0.0	12.1	18.1#
53	0.0	9.8	14.8#
0	0.0	0.0	0.0

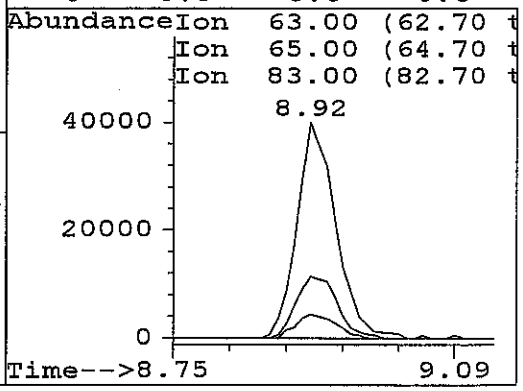


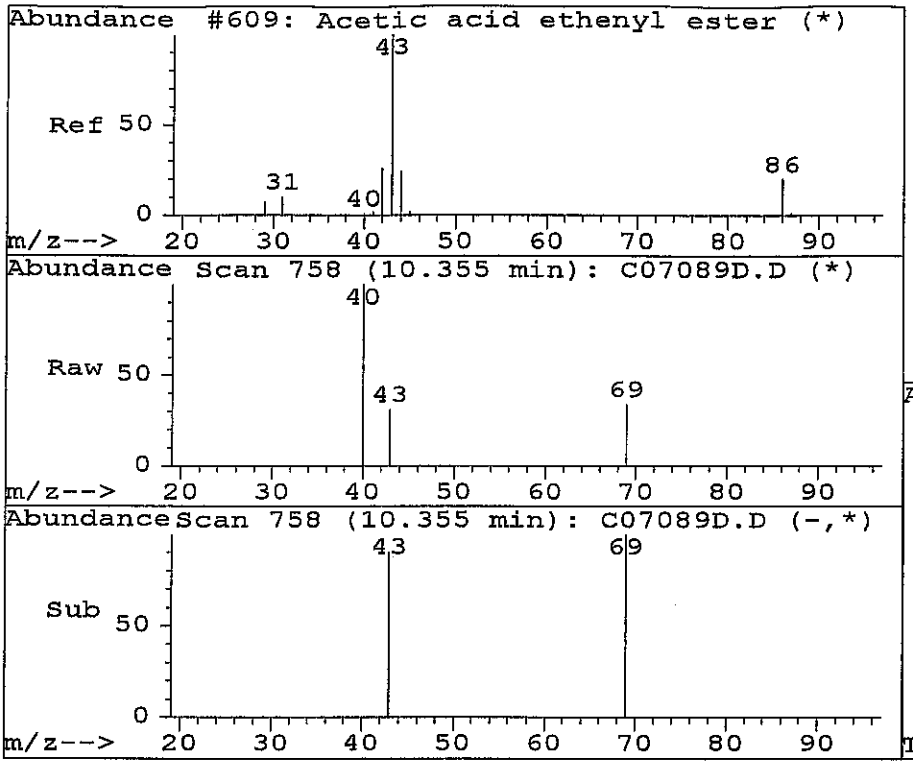


#24
1,1-Dichloroethane
Concen: 1.01 ppbV
RT: 8.92 min Scan# 610
Delta R.T. 0.02 min
Lab File: C07089D.D
Acq: 8 Jul 109 12:18 pm

Tgt Ion:63 Resp: 129790

Ion	Ratio	Lower	Upper
63	100		
65	28.6	23.8	35.8
83	11.1	9.8	14.8
0	0.0	0.0	0.0

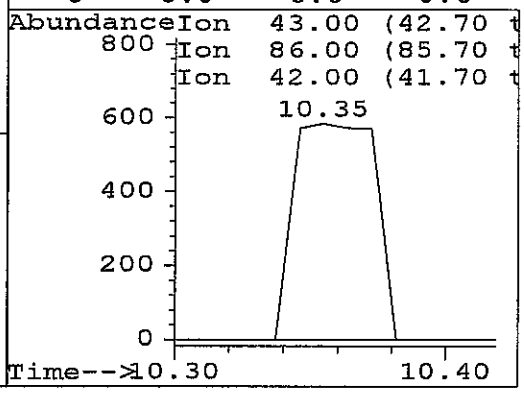


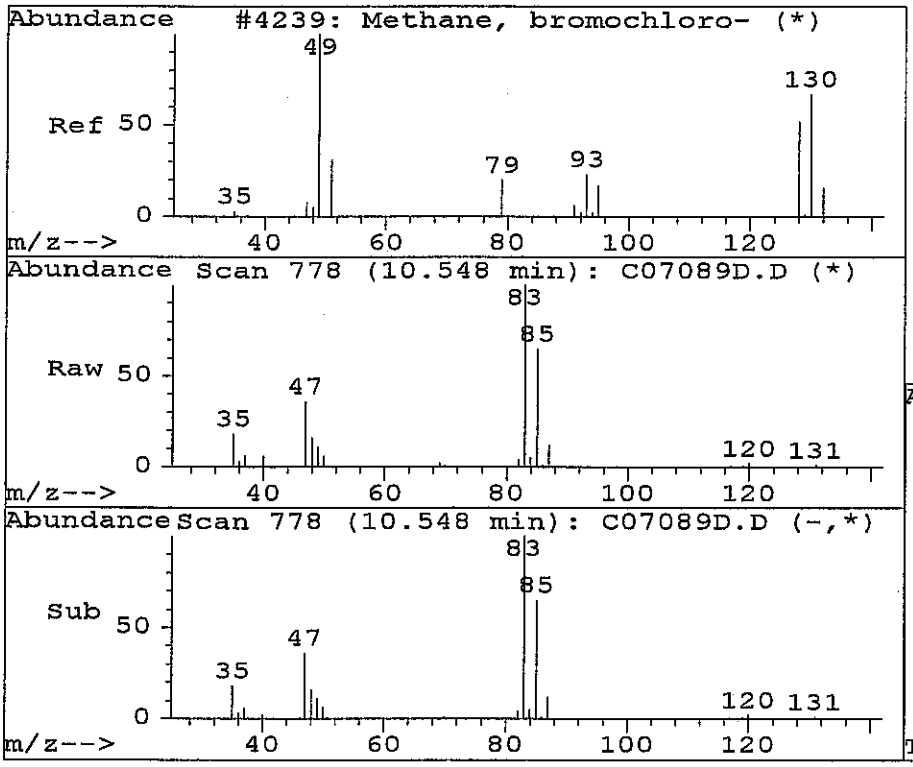


#25
Vinyl acetate
Concen: 0.00 ppbV
RT: 10.35 min Scan# 758
Delta R.T. 0.03 min
Lab File: C07089D.D
Acq: 8 Jul 109 12:18 pm

Tgt Ion:43 Resp: 1306

Ion	Ratio	Lower	Upper
43	100		
86	0.0	0.0	0.0
42	0.0	5.2	7.8#
0	0.0	0.0	0.0

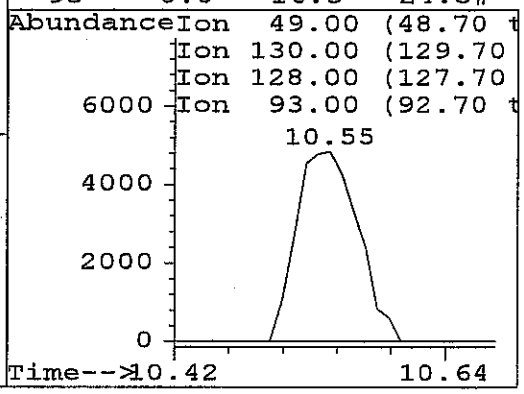


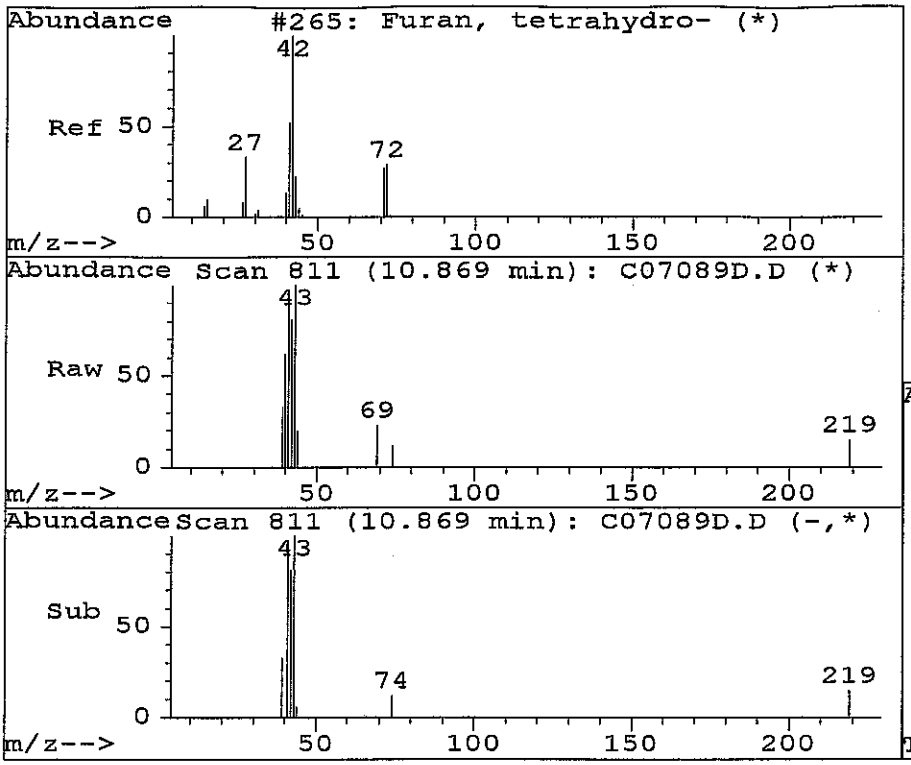


#28
Bromochloromethane
Concen: 0.12 ppbV
RT: 10.55 min Scan# 778
Delta R.T. 0.05 min
Lab File: C07089D.D
Acq: 8 Jul 109 12:18 pm

Tgt Ion:49 Resp: 17098

Ion	Ratio	Lower	Upper
49	100		
130	0.0	40.0	60.0#
128	0.0	34.2	51.2#
93	0.0	16.3	24.5#

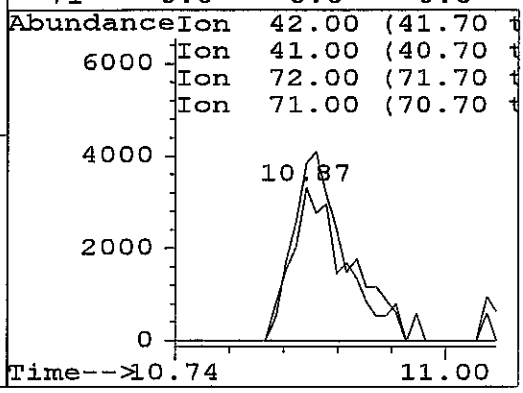


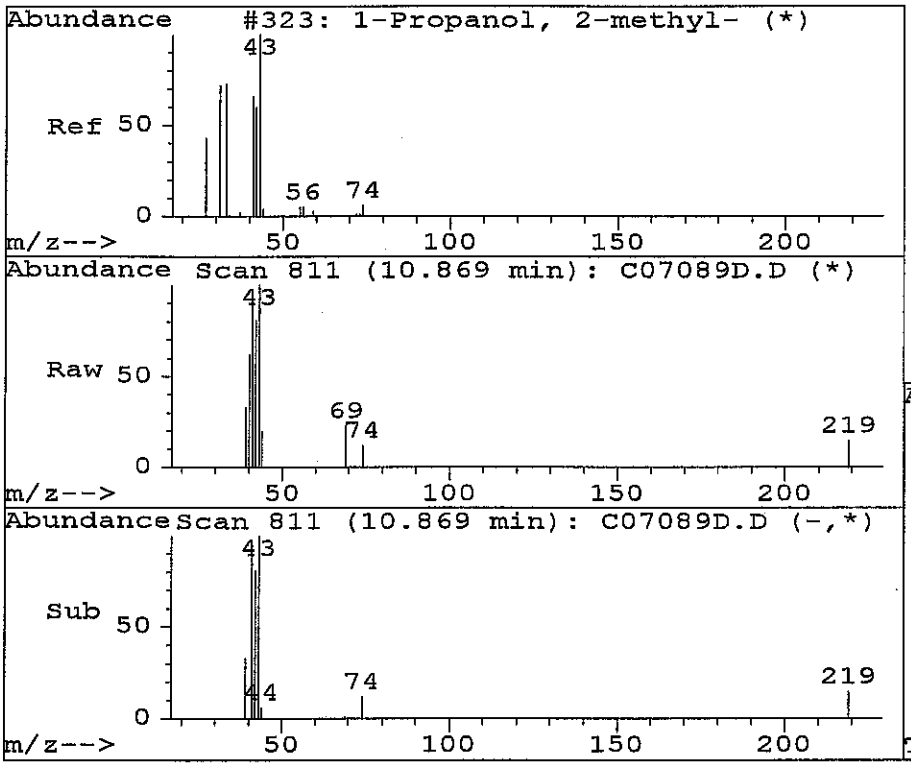


#29
Tetrahydrofuran
Concen: 0.02 ppbV
RT: 10.87 min Scan# 811
Delta R.T. -0.05 min
Lab File: C07089D.D
Acq: 8 Jul 109 12:18 pm

Tgt Ion:42 Resp: 12024

Ion	Ratio	Lower	Upper
42	100		
41	125.9	103.5	155.3
72	0.0	0.3	0.5#
71	0.0	0.0	0.0

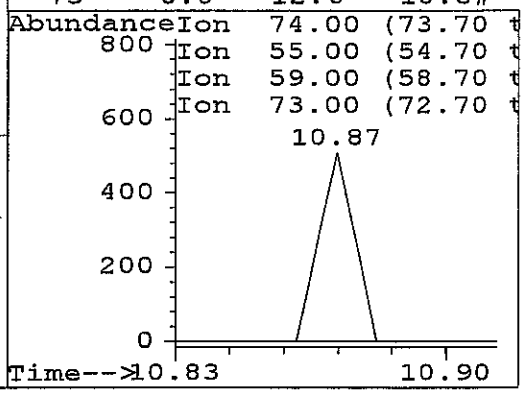


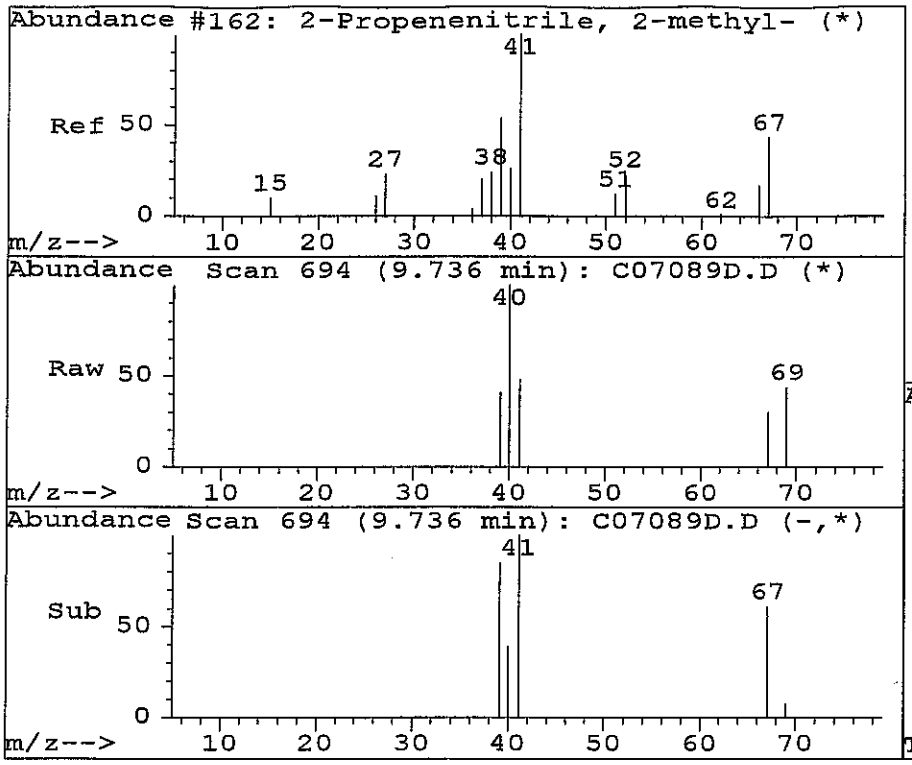


#30
Isobutyl alcohol
Concen: 0.02 ppbV
RT: 10.87 min Scan# 811
Delta R.T. -0.05 min
Lab File: C07089D.D
Acq: 8 Jul 109 12:18 pm

Tgt Ion:74 Resp: 297

Ion	Ratio	Lower	Upper
74	100		
55	0.0	66.8	100.2#
59	0.0	23.9	35.9#
73	0.0	12.6	18.8#

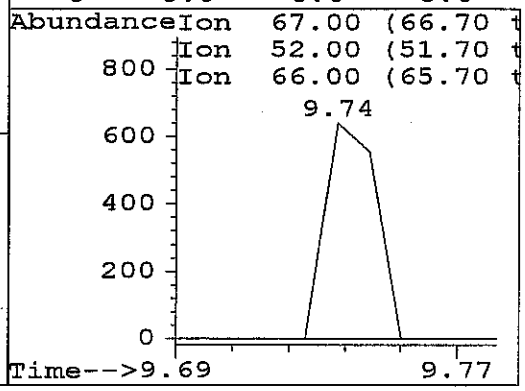


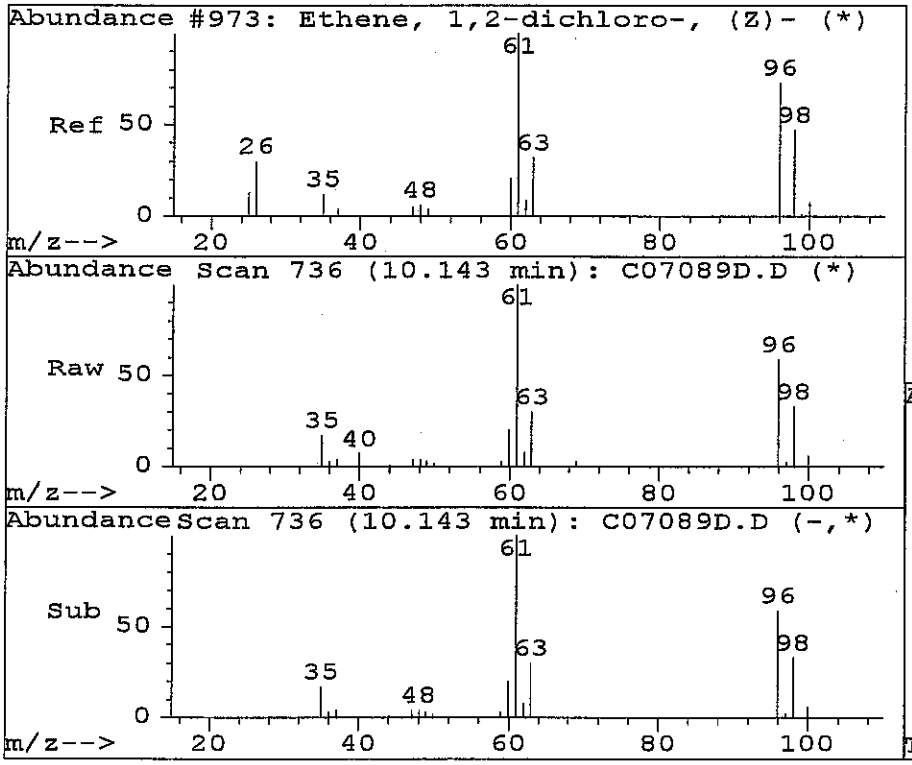


#31
Methacrylonitrile
Concen: 0.02 ppbV
RT: 9.74 min Scan# 694
Delta R.T. -0.00 min
Lab File: C07089D.D
Acq: 8 Jul 109 12:18 pm

Tgt Ion:67 Resp: 696

Ion	Ratio	Lower	Upper
67	100		
52	0.0	42.1	63.1#
66	0.0	29.7	44.5#
0	0.0	0.0	0.0

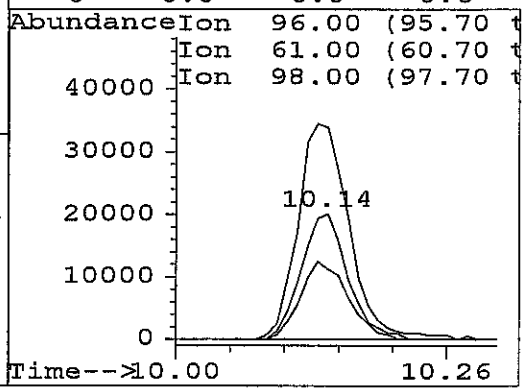


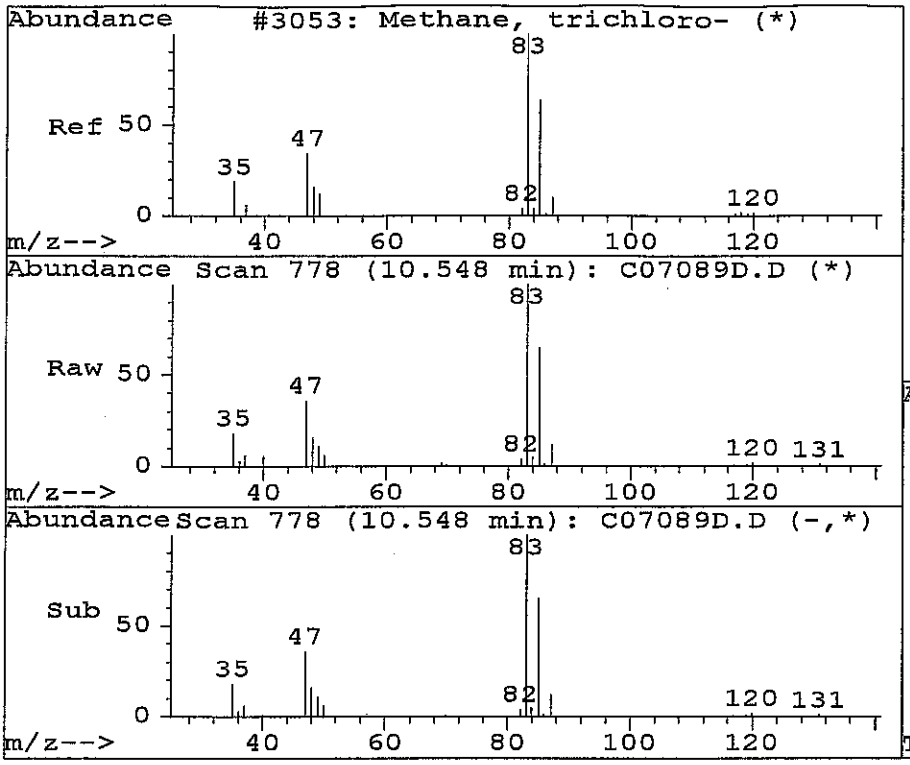


#32
cis-1,2-Dichloroethene
Concen: 0.94 ppbV
RT: 10.14 min Scan# 736
Delta R.T. 0.03 min
Lab File: C07089D.D
Acq: 8 Jul 109 12:18 pm

Tgt Ion:96 Resp: 62197

Ion	Ratio	Lower	Upper
96	100		
61	166.7	139.1	208.7
98	55.9	49.5	74.3
0	0.0	0.0	0.0

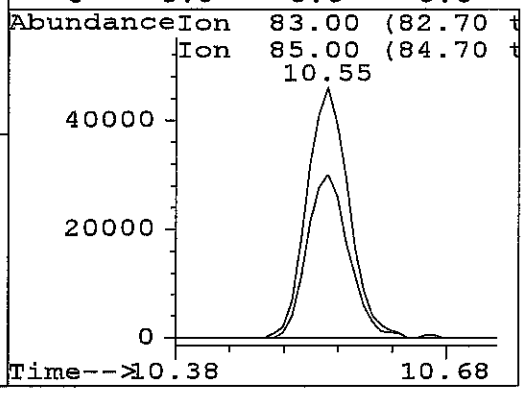


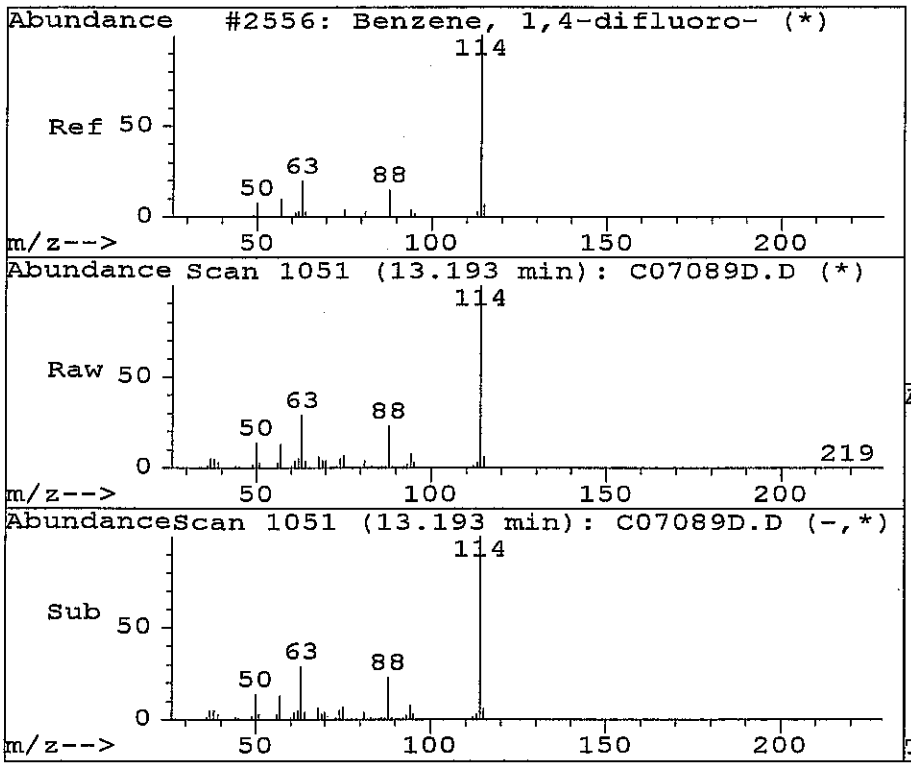


#34
Chloroform
Concen: 0.95 ppbV
RT: 10.55 min Scan# 778
Delta R.T. 0.02 min
Lab File: C07089D.D
Acq: 8 Jul 109 12:18 pm

Tgt Ion:83 Resp: 146449

Ion	Ratio	Lower	Upper
83	100		
85	65.3	51.3	76.9
0	0.0	0.0	0.0
0	0.0	0.0	0.0

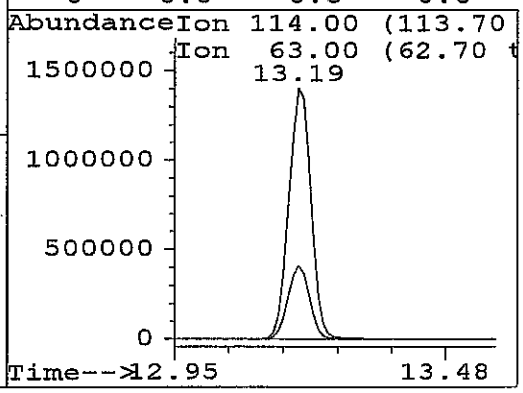


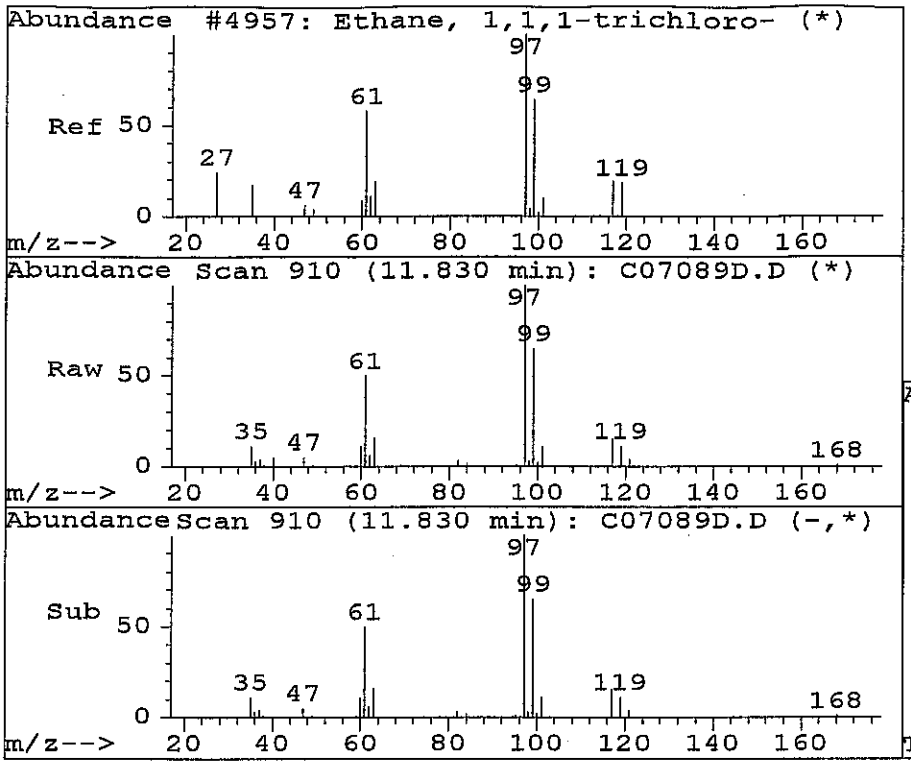


#35
1,4-Difluorobenzene
Concen: 20.00 ppbV
RT: 13.19 min Scan# 1051
Delta R.T. 0.02 min
Lab File: C07089D.D
Acq: 8 Jul 109 12:18 pm

Tgt Ion:114 Resp: 4175396

Ion	Ratio	Lower	Upper
114	100		
63	29.1	22.0	36.6
0	0.0	0.0	0.0
0	0.0	0.0	0.0

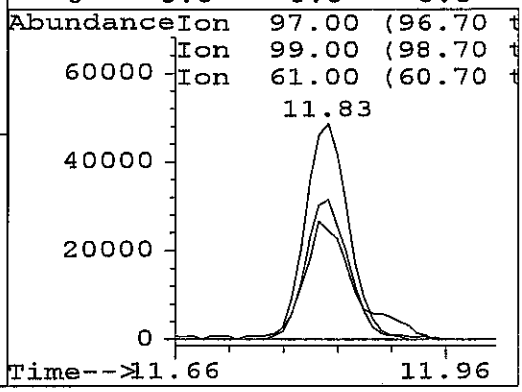


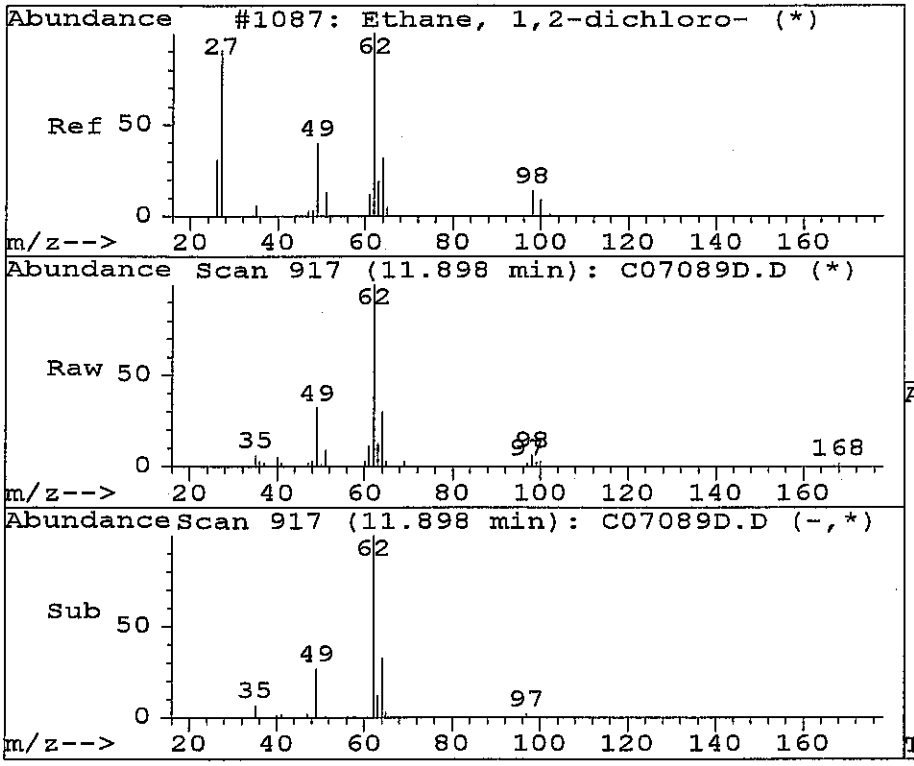


#36
1,1,1-Trichloroethane
Concen: 1.04 ppbV
RT: 11.83 min Scan# 910
Delta R.T. 0.03 min
Lab File: C07089D.D
Acq: 8 Jul 109 12:18 pm

Tgt Ion:97 Resp: 158360

Ion	Ratio	Lower	Upper
97	100		
99	63.4	50.6	75.8
61	49.0	44.3	66.5
0	0.0	0.0	0.0

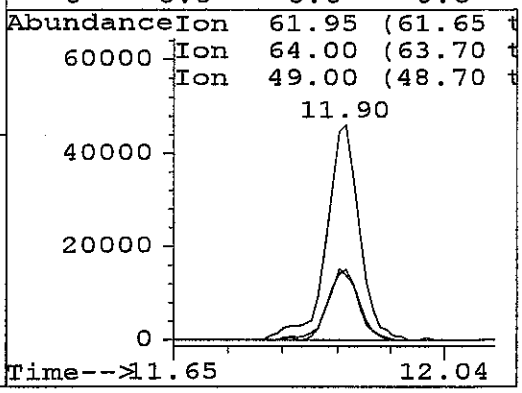


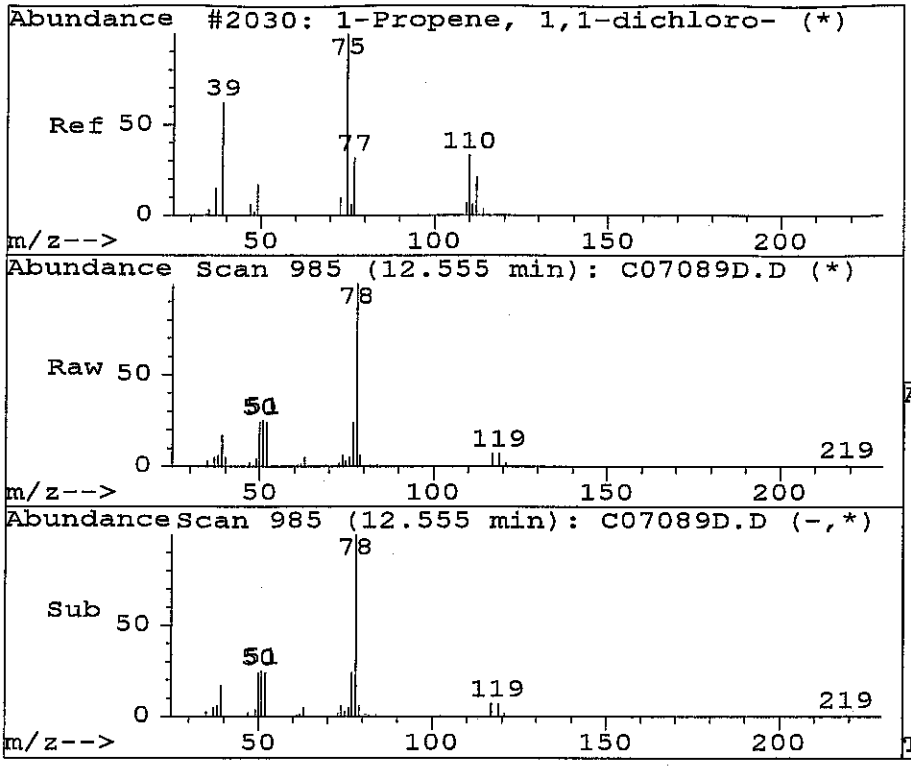


#37
1,2-Dichloroethane
Concen: 1.05 ppbV
RT: 11.90 min Scan# 917
Delta R.T. 0.03 min
Lab File: C07089D.D
Acq: 8 Jul 109 12:18 pm

Tgt Ion:61.95 Resp: 14964

Ion	Ratio	Lower	Upper
62	100		
64	30.1	24.7	37.1
49	32.4	23.8	35.6
0	0.0	0.0	0.0

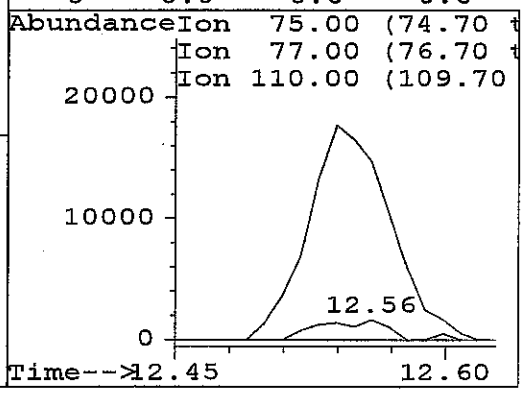


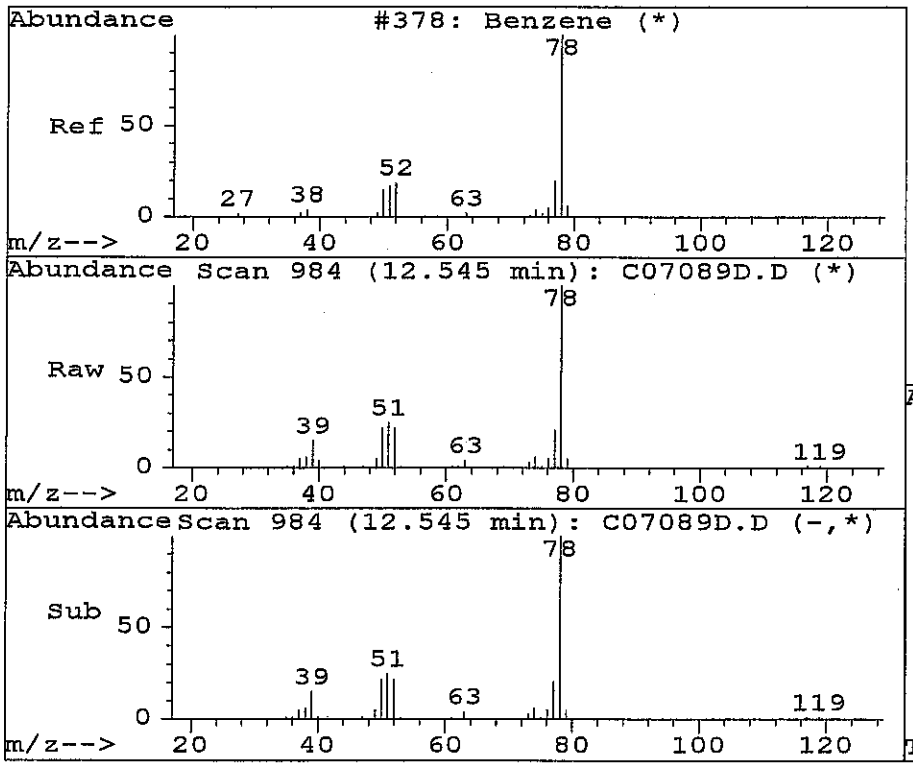


#38
1,1-Dichloropropene
Concen: 0.03 ppbV
RT: 12.56 min Scan# 985
Delta R.T. 0.32 min
Lab File: C07089D.D
Acq: 8 Jul 109 12:18 pm

Tgt Ion:75 Resp: 4216

Ion	Ratio	Lower	Upper
75	100		
77	773.0	24.7	37.1#
110	0.0	23.5	35.3#
0	0.0	0.0	0.0

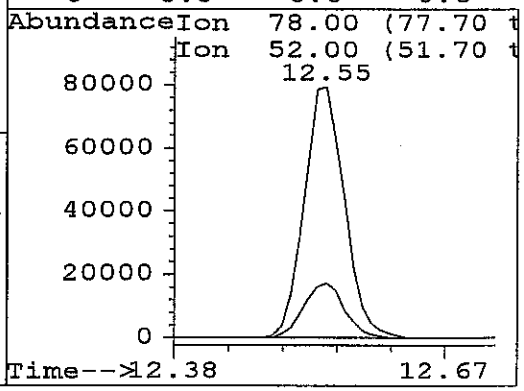


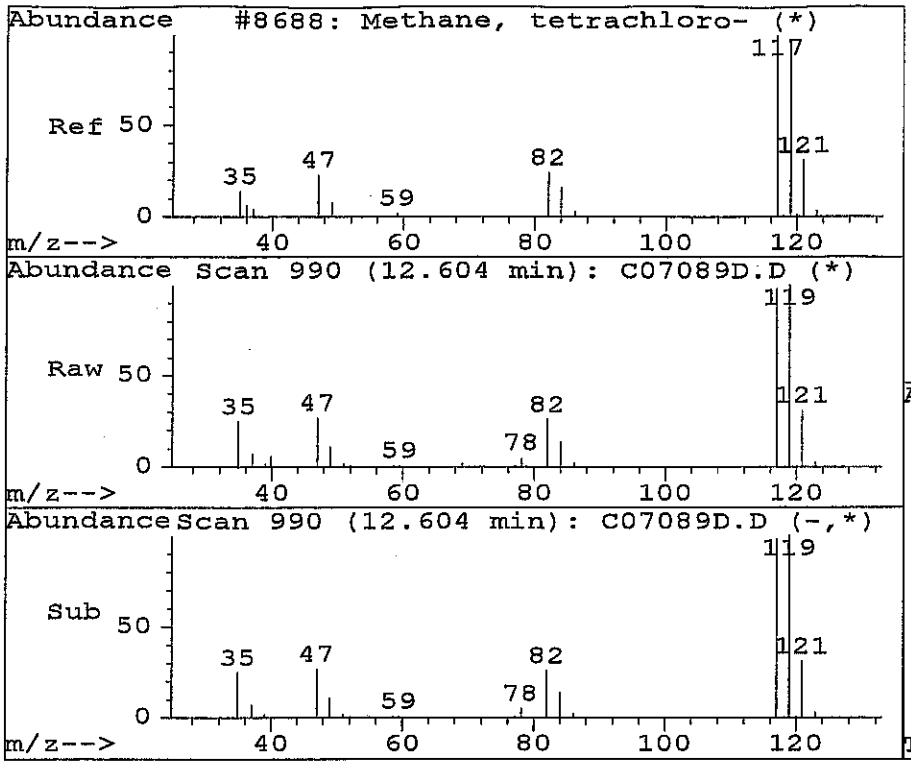


#40
Benzene
Concen: 0.97 ppbV
RT: 12.55 min Scan# 984
Delta R.T. 0.04 min
Lab File: C07089D.D
Acq: 8 Jul 109 12:18 pm

Tgt Ion:78 Resp: 240160

Ion	Ratio	Lower	Upper
78	100		
52	21.8	19.2	28.8
0	0.0	0.0	0.0
0	0.0	0.0	0.0

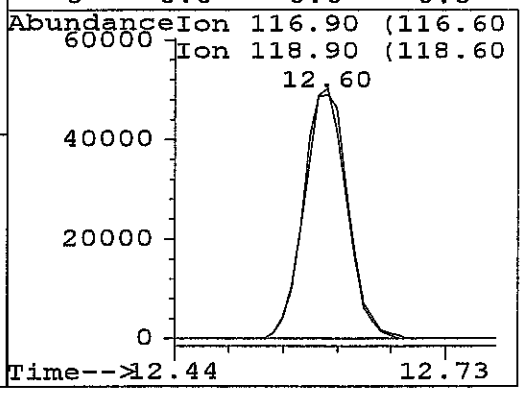


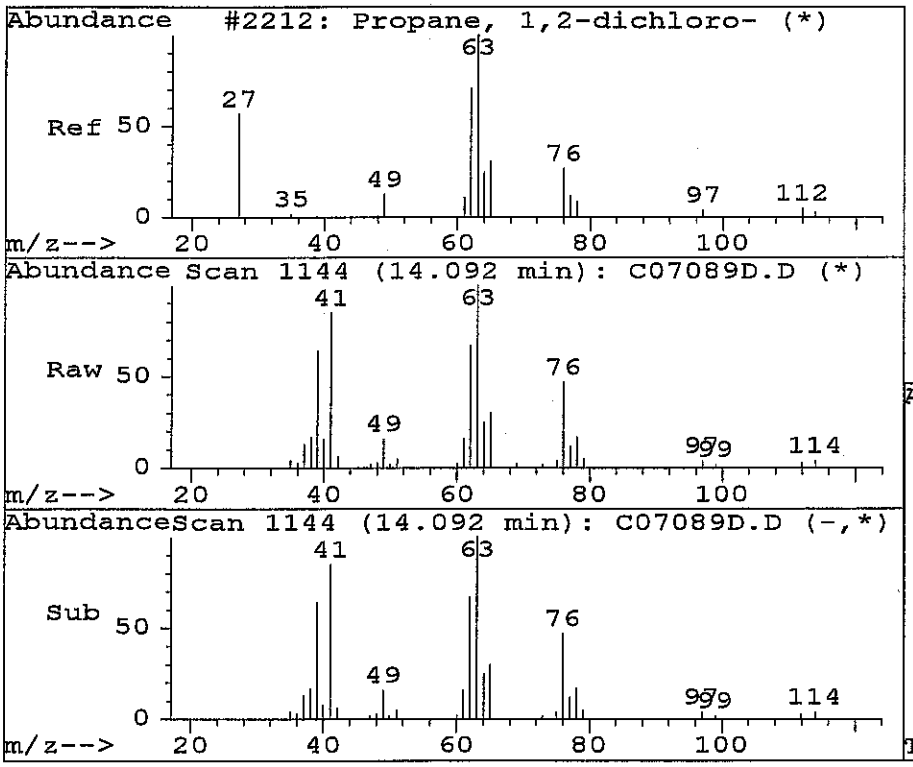


#41
Carbon tetrachloride
Concen: 1.09 ppbV
RT: 12.60 min Scan# 990
Delta R.T. 0.04 min
Lab File: C07089D.D
Acq: 8 Jul 109 12:18 pm

Tgt Ion:116.9 Resp: 167185

Ion	Ratio	Lower	Upper
117	100		
119	102.5	79.4	119.0
0	0.0	0.0	0.0
0	0.0	0.0	0.0

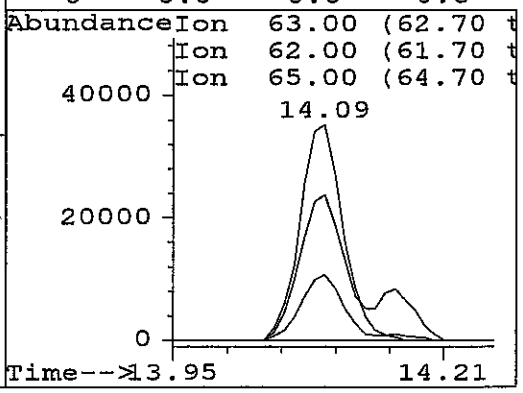


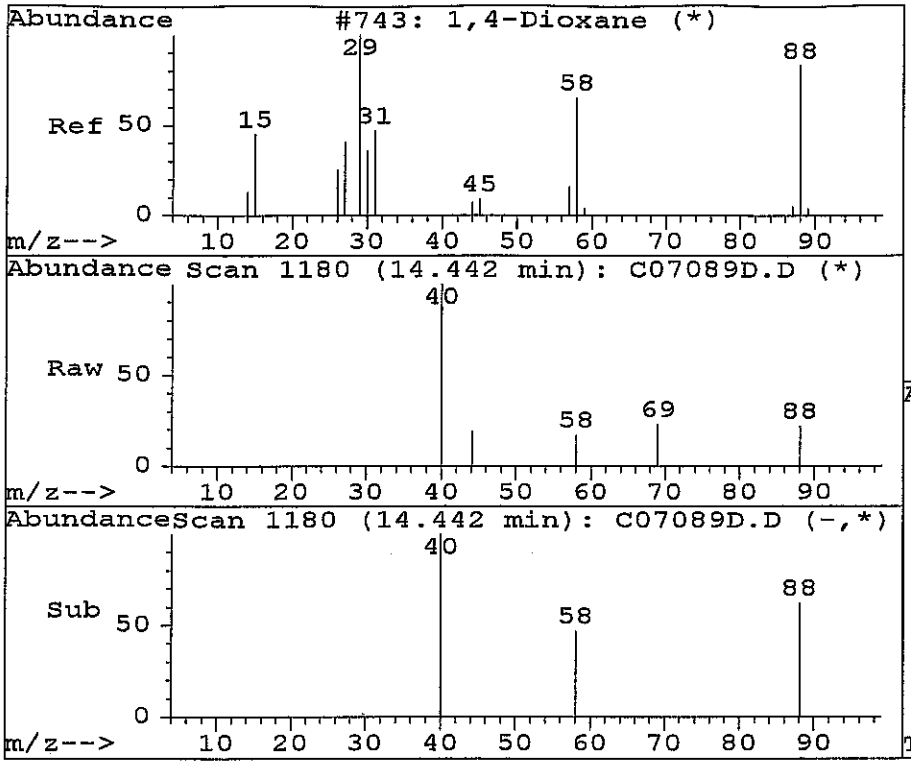


#43
1,2-Dichloropropane
Concen: 1.06 ppbV
RT: 14.09 min Scan# 1144
Delta R.T. 0.02 min
Lab File: C07089D.D
Acq: 8 Jul 109 12:18 pm

Tgt Ion:63 Resp: 101499

Ion	Ratio	Lower	Upper
63	100		
62	60.7	58.3	87.5
65	29.7	23.8	35.8
0	0.0	0.0	0.0

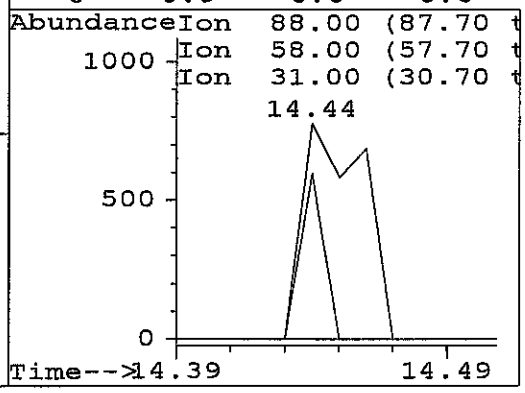


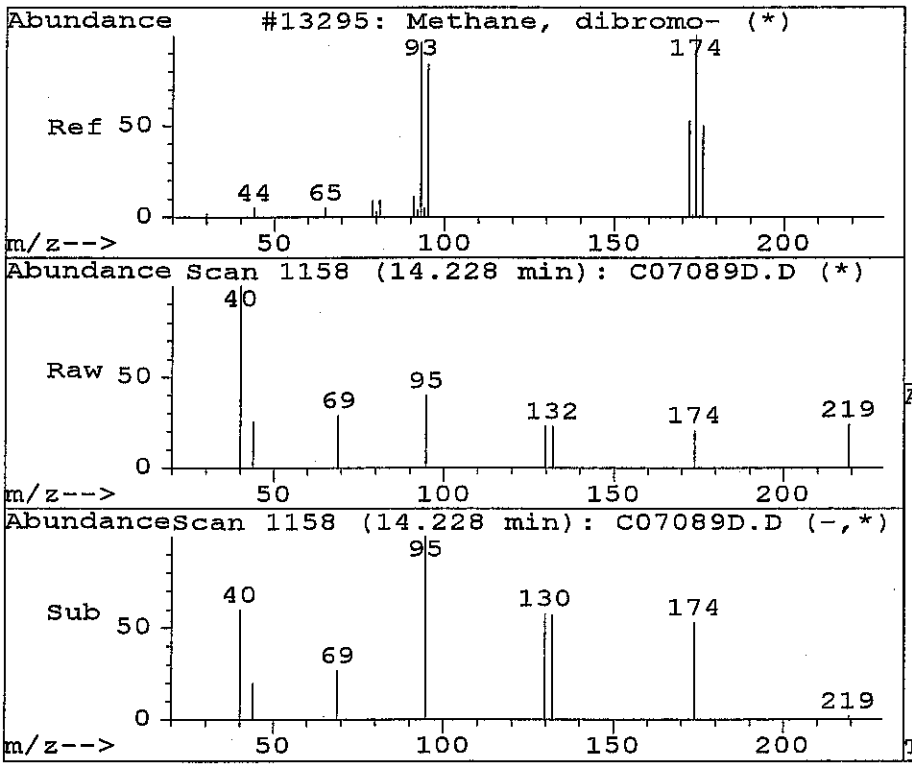


#44
1,4 Dioxane
Concen: 0.02 ppbV
RT: 14.44 min Scan# 1180
Delta R.T. 0.04 min
Lab File: C07089D.D
Acq: 8 Jul 109 12:18 pm

Tgt Ion:88 Resp: 1185

Ion	Ratio	Lower	Upper
88	100		
58	29.3	75.8	113.6#
31	0.0	0.0	0.0
0	0.0	0.0	0.0

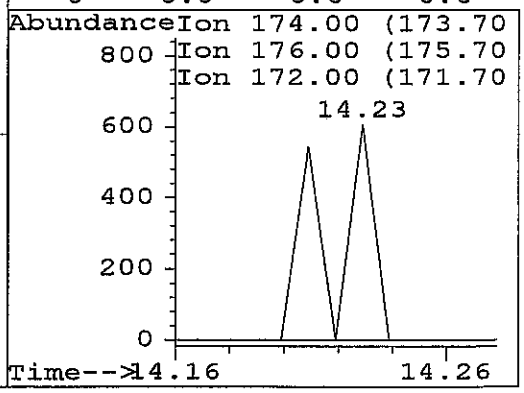


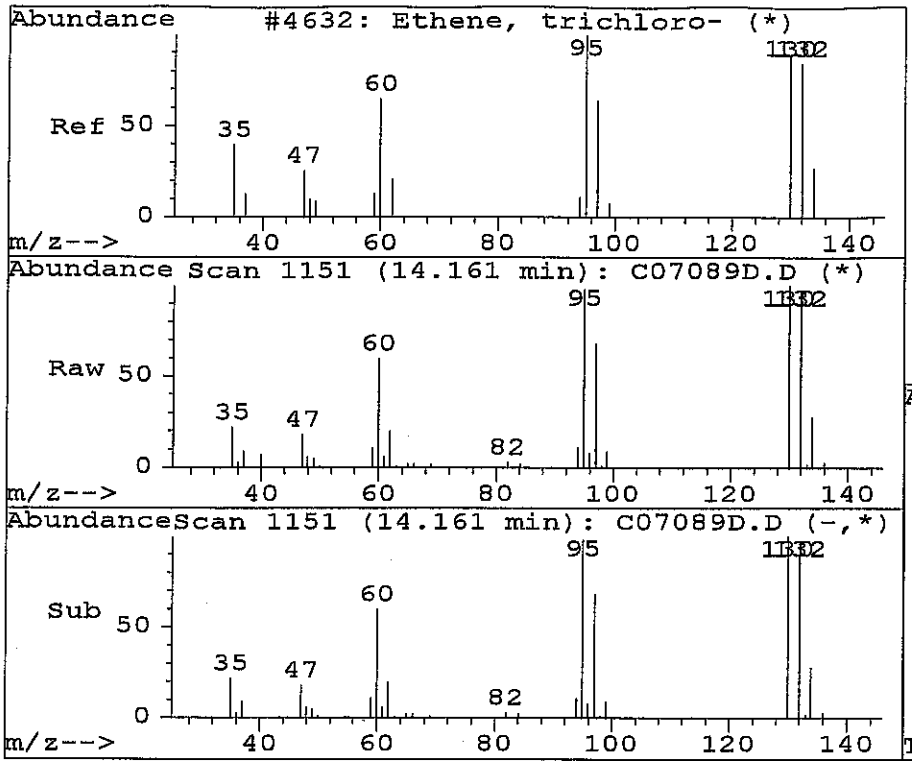


#45
Dibromomethane
Concen: 0.00 ppbV
RT: 14.23 min Scan# 1158
Delta R.T. 0.03 min
Lab File: C07089D.D
Acq: 8 Jul 109 12:18 pm

Tgt Ion:174 Resp: 670

Ion	Ratio	Lower	Upper
174	100		
176	0.0	36.6	54.8#
172	0.0	40.9	61.3#
0	0.0	0.0	0.0

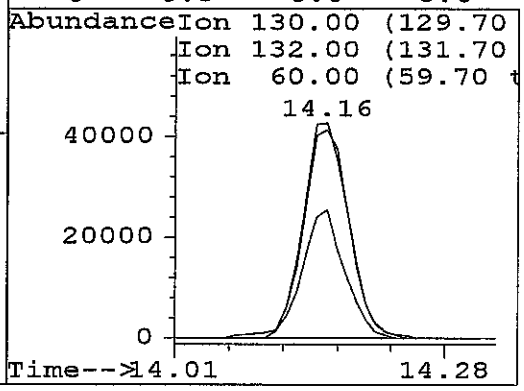


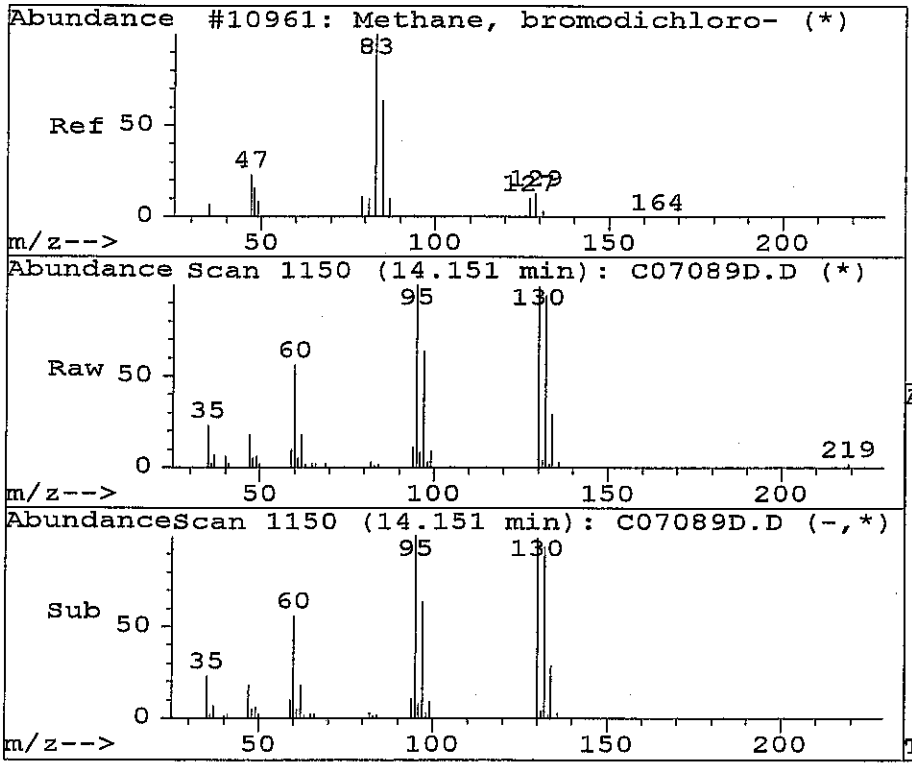


#46
Trichloroethene
Concen: 1.08 ppbV
RT: 14.16 min Scan# 1151
Delta R.T. 0.03 min
Lab File: C07089D.D
Acq: 8 Jul 109 12:18 pm

Tgt Ion:130 Resp: 129141

Ion	Ratio	Lower	Upper
130	100		
132	96.8	79.1	118.7
60	58.7	46.3	69.5
0	0.0	0.0	0.0

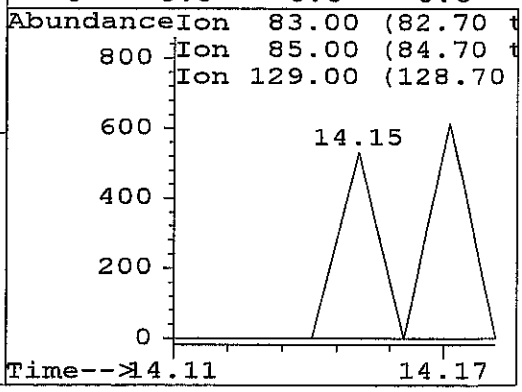


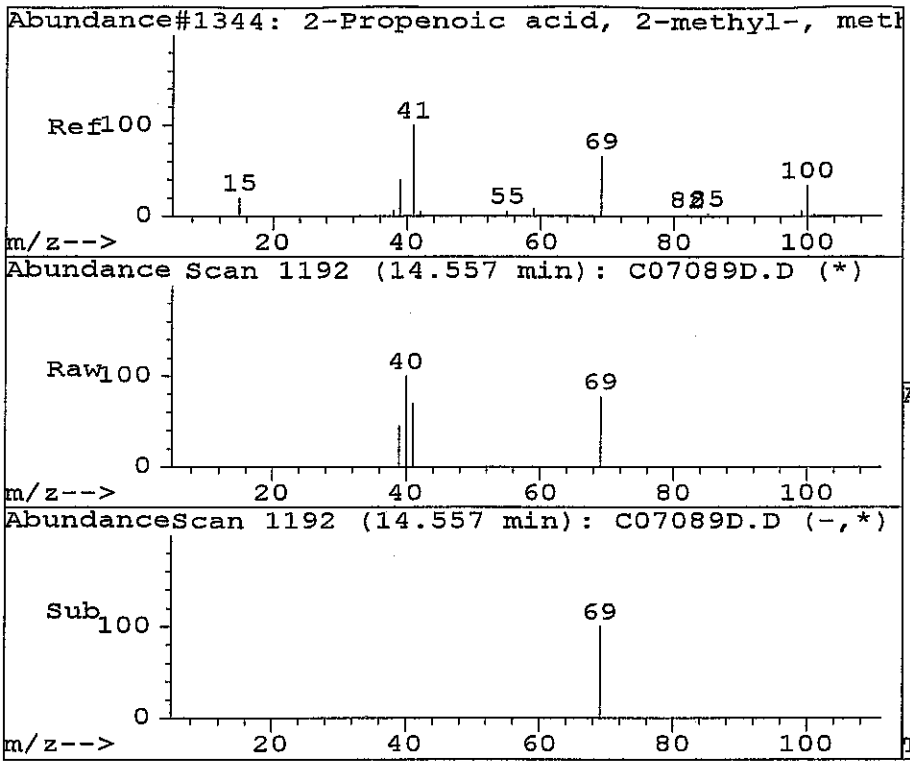


#47
Bromodichloromethane
Concen: 0.00 ppbV
RT: 14.15 min Scan# 1150
Delta R.T. -0.25 min
Lab File: C07089D.D
Acq: 8 Jul 109 12:18 pm

Tgt Ion:83 Resp: 311

Ion	Ratio	Lower	Upper
83	100		
85	0.0	49.3	73.9#
129	0.0	8.6	13.0#
0	0.0	0.0	0.0

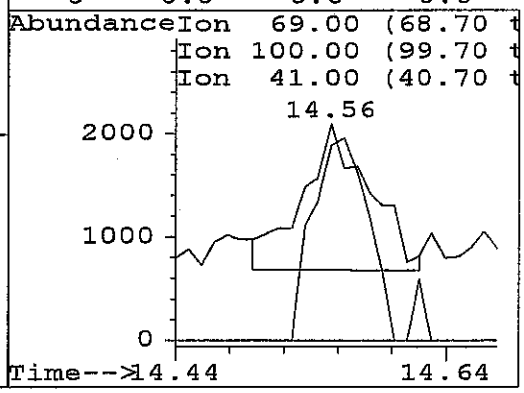


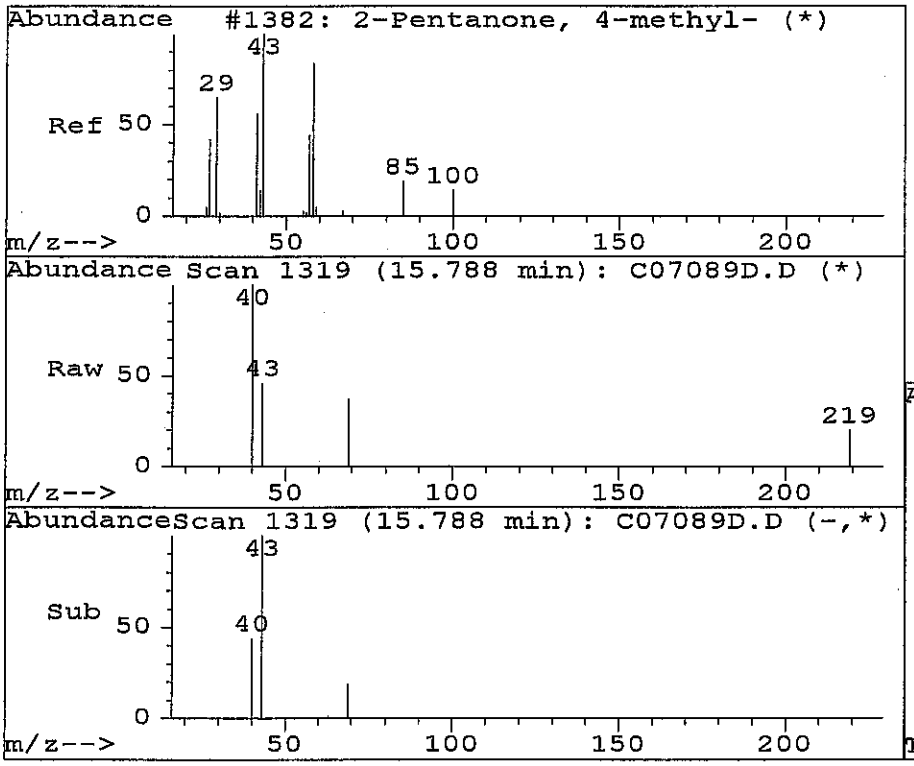


#48
Methyl methacrylate
Concen: 0.05 ppbV
RT: 14.56 min Scan# 1192
Delta R.T. 0.01 min
Lab File: C07089D.D
Acq: 8 Jul 109 12:18 pm

Tgt Ion:69 Resp: 4828

Ion	Ratio	Lower	Upper
69	100		
100	0.0	27.5	41.3#
41	133.0	163.1	244.7#
0	0.0	0.0	0.0

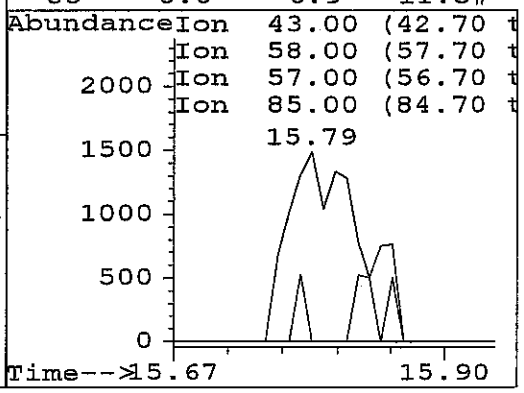


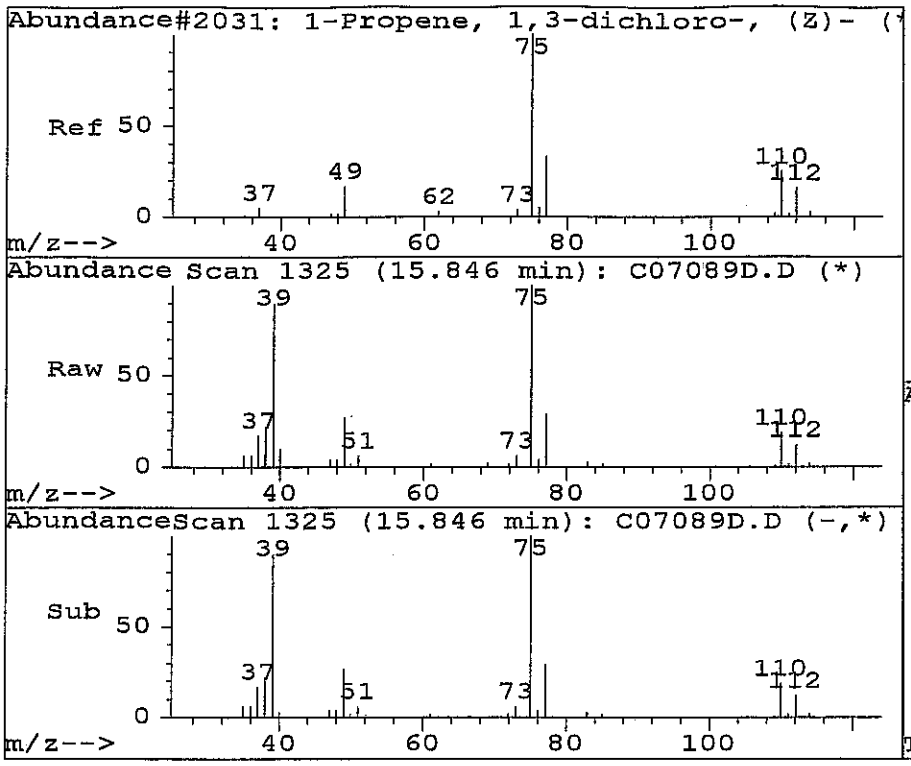


#49
Methyl Isobutyl Ketone
Concen: 0.01 ppbV
RT: 15.79 min Scan# 1319
Delta R.T. 0.09 min
Lab File: C07089D.D
Acq: 8 Jul 109 12:18 pm

Tgt Ion:43 Resp: 5815

Ion	Ratio	Lower	Upper
43	100		
58	0.0	20.7	34.5#
57	0.0	12.8	21.4#
85	0.0	6.9	11.5#

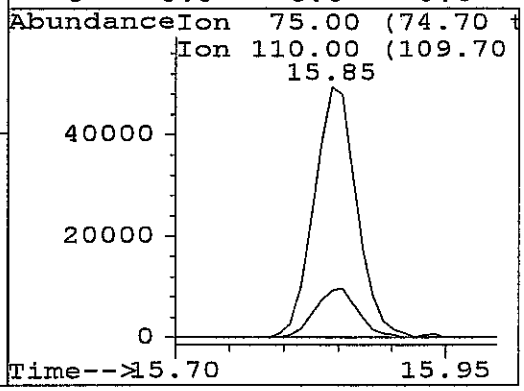


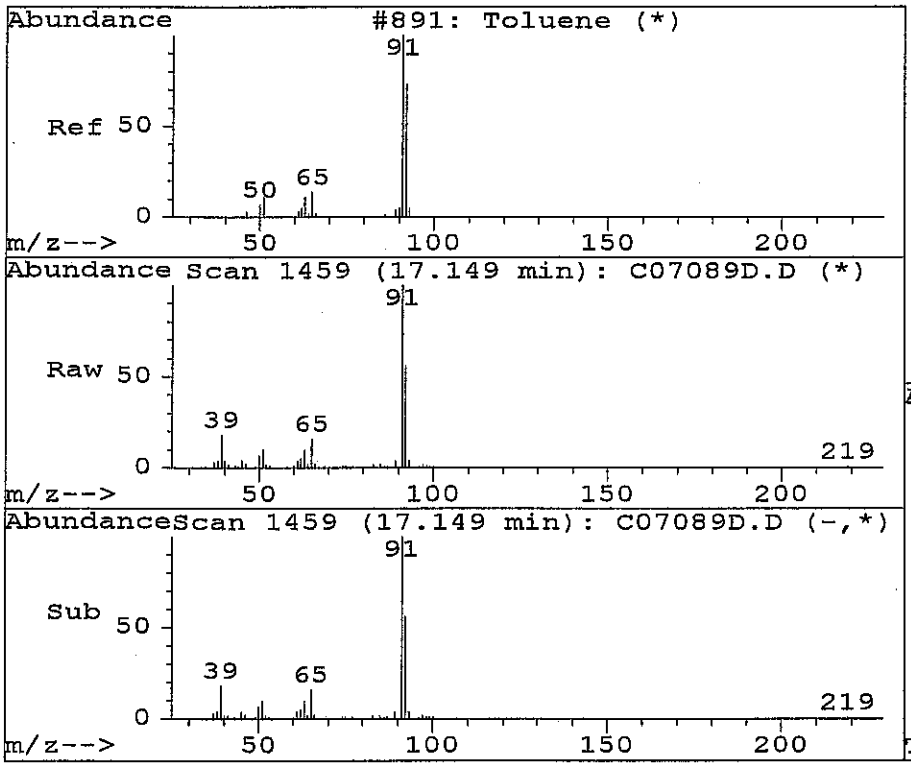


#50
cis-1,3-Dichloropropene
Concen: 0.92 ppbV
RT: 15.85 min Scan# 1325
Delta R.T. 0.03 min
Lab File: C07089D.D
Acq: 8 Jul 109 12:18 pm

Tgt Ion:75 Resp: 136984

Ion	Ratio	Lower	Upper
75	100		
110	18.8	15.3	22.9
0	0.0	0.0	0.0
0	0.0	0.0	0.0

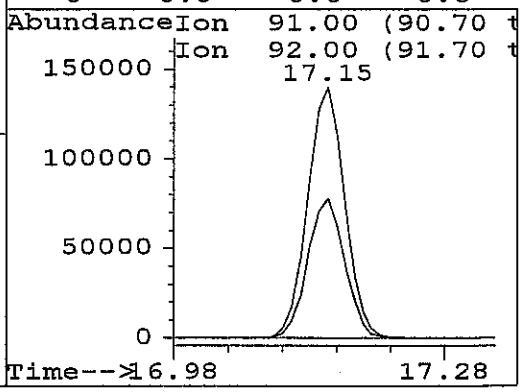


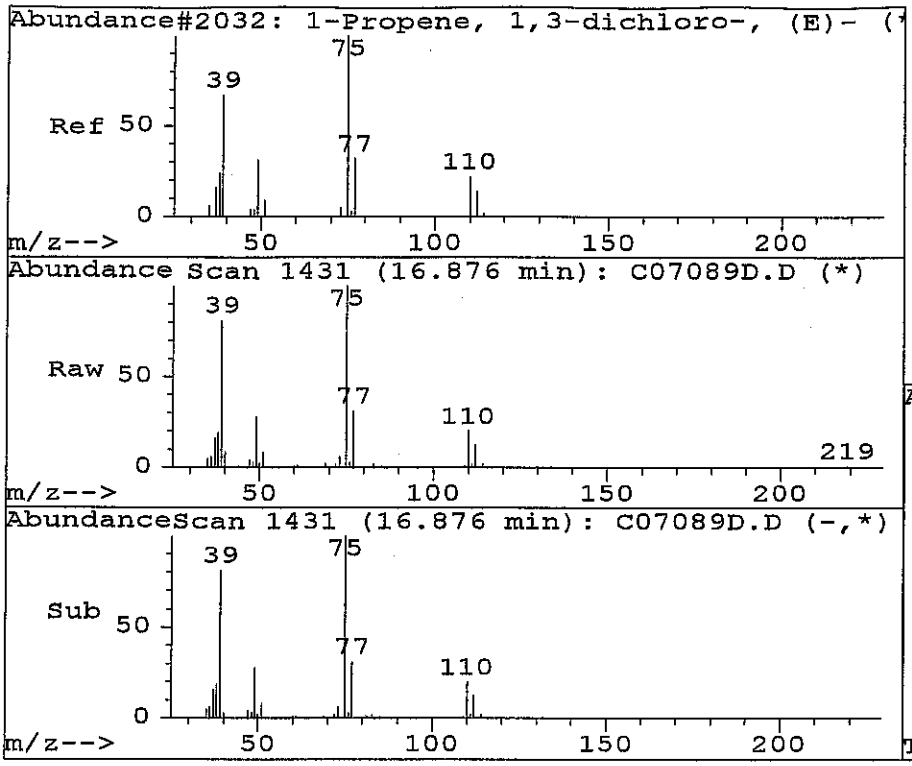


#51
Toluene
Concen: 1.19 ppbV
RT: 17.15 min Scan# 1459
Delta R.T. 0.04 min
Lab File: C07089D.D
Acq: 8 Jul 109 12:18 pm

Tgt Ion:91 Resp: 384345

Ion	Ratio	Lower	Upper
91	100		
92	55.7	43.9	65.9
0	0.0	0.0	0.0
0	0.0	0.0	0.0

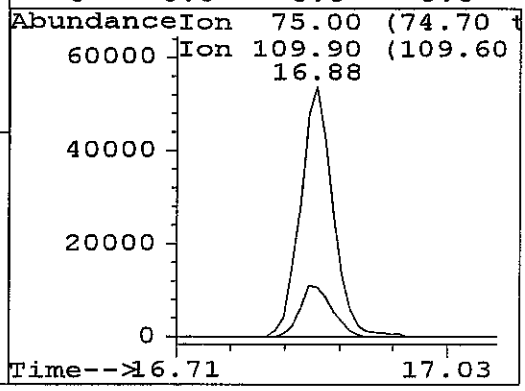


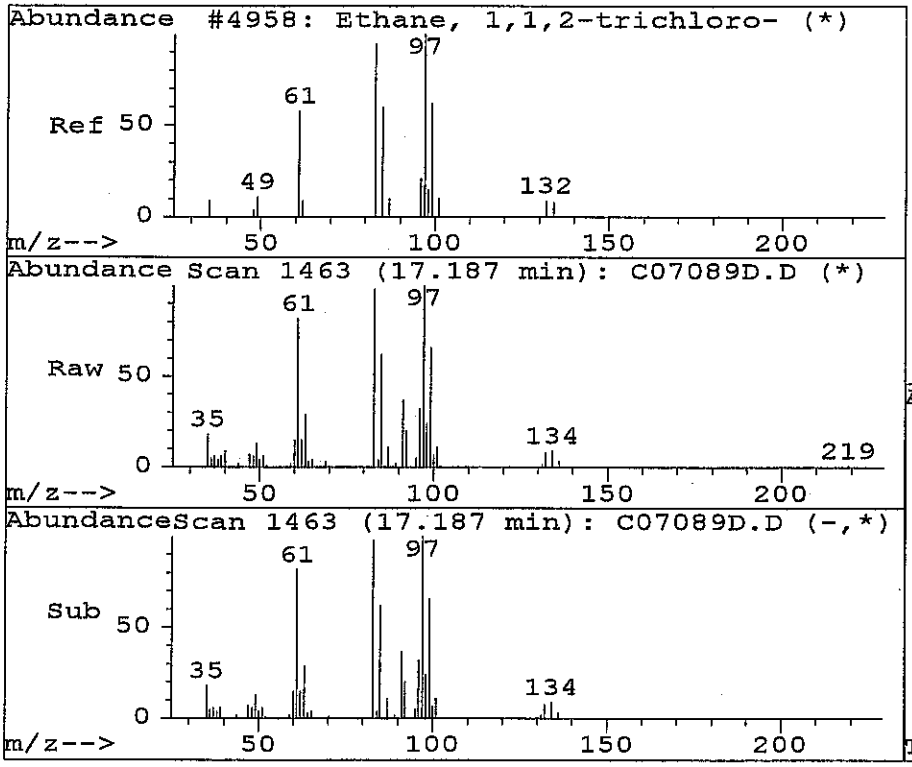


#52
trans-1,3-Dichloropropene
Concen: 0.81 ppbV
RT: 16.88 min Scan# 1431
Delta R.T. 0.03 min
Lab File: C07089D.D
Acq: 8 Jul 109 12:18 pm

Tgt Ion:75 Resp: 143939

Ion	Ratio	Lower	Upper
75	100		
110	20.0	15.5	23.3
0	0.0	0.0	0.0
0	0.0	0.0	0.0

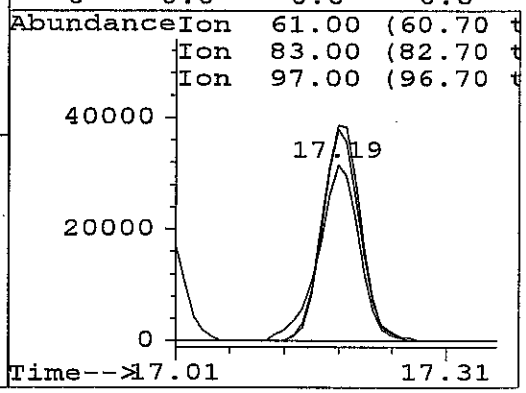


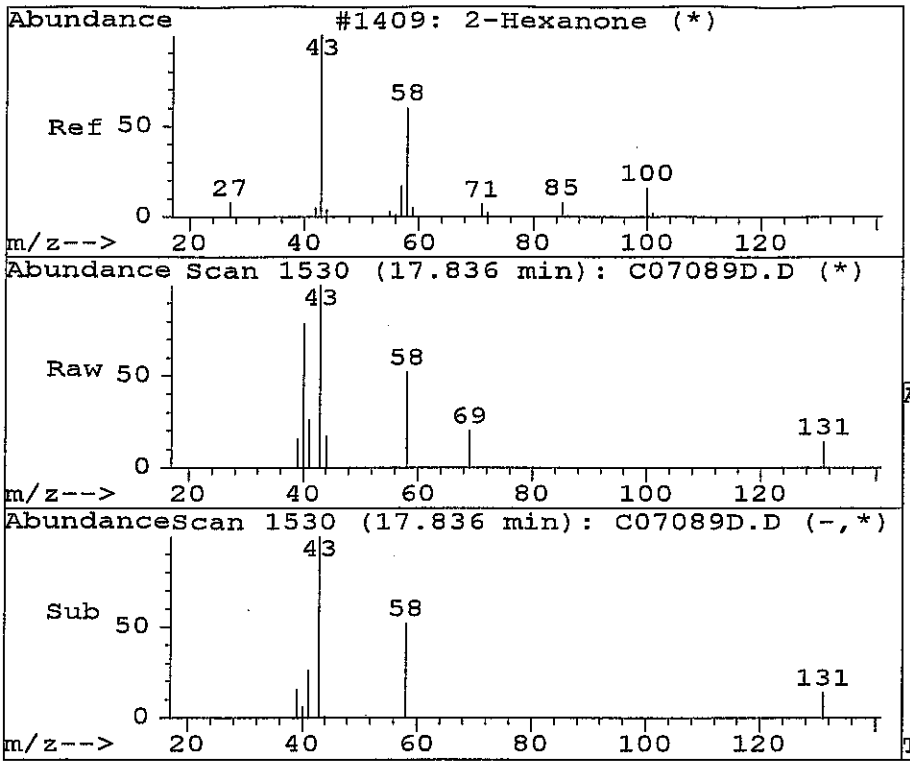


#53
1,1,2-Trichloroethane
Concen: 1.04 ppbV
RT: 17.19 min Scan# 1463
Delta R.T. 0.03 min
Lab File: C07089D.D
Acq: 8 Jul 109 12:18 pm

Tgt Ion:61 Resp: 99011

Ion	Ratio	Lower	Upper
61	100		
83	120.1	90.9	136.3
97	122.4	96.7	145.1
0	0.0	0.0	0.0

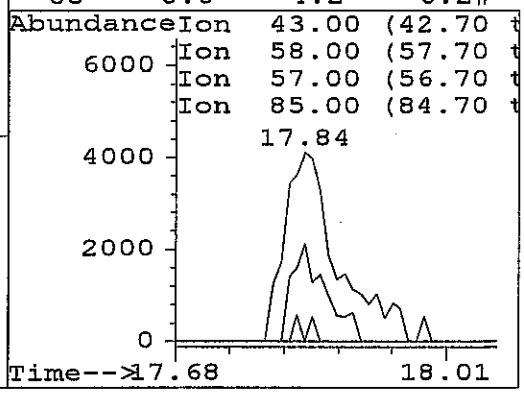


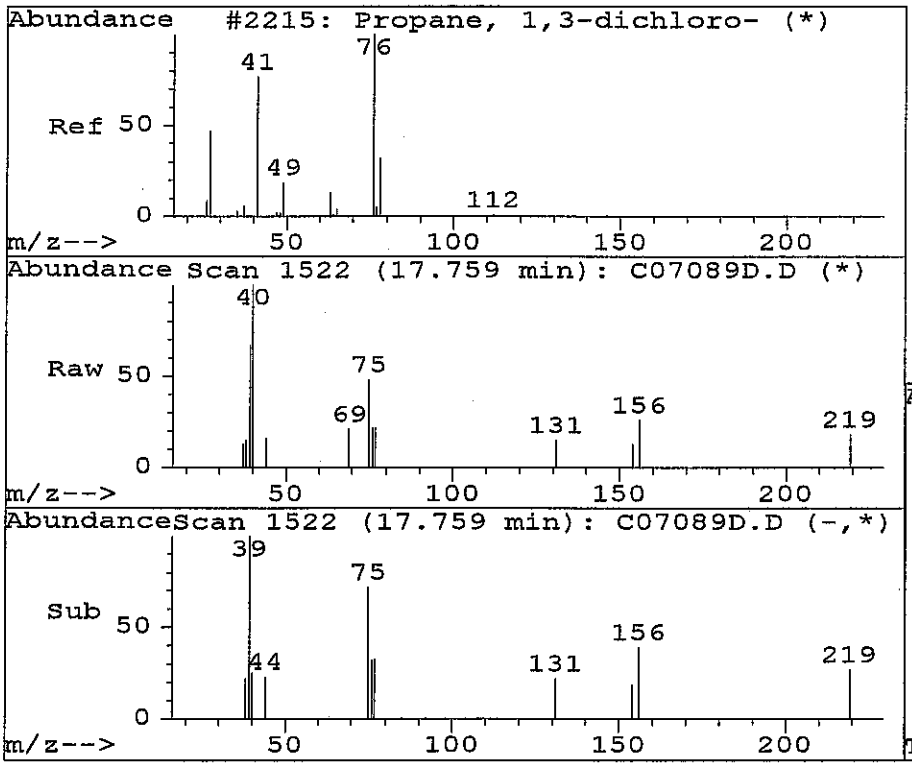


#54
2-Hexanone
Concen: 0.03 ppbV
RT: 17.84 min Scan# 1530
Delta R.T. 0.04 min
Lab File: C07089D.D
Acq: 8 Jul 109 12:18 pm

Tgt Ion:43 Resp: 18489

Ion	Ratio	Lower	Upper
43	100		
58	51.7	28.2	47.0#
57	0.0	10.4	17.3#
85	0.0	4.2	6.2#

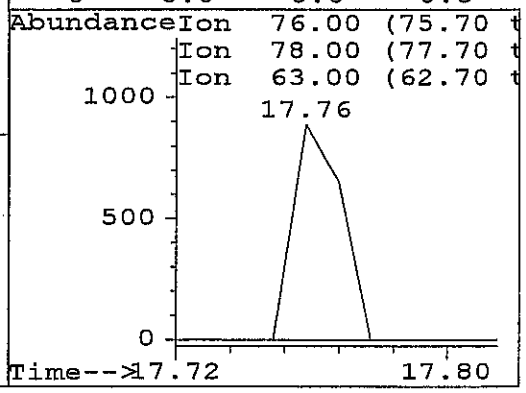


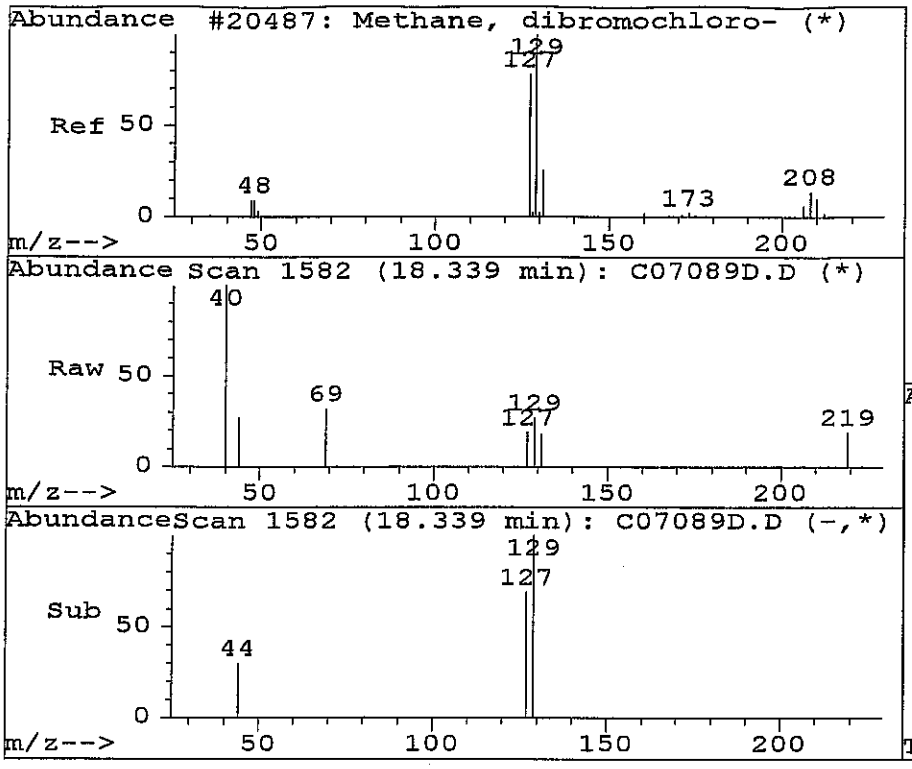


#55
1,3-Dichloropropane
Concen: 0.00 ppbV
RT: 17.76 min Scan# 1522
Delta R.T. 0.04 min
Lab File: C07089D.D
Acq: 8 Jul 109 12:18 pm

Tgt Ion:76 Resp: 902

Ion	Ratio	Lower	Upper
76	100		
78	0.0	26.6	40.0#
63	0.0	8.5	12.7#
0	0.0	0.0	0.0

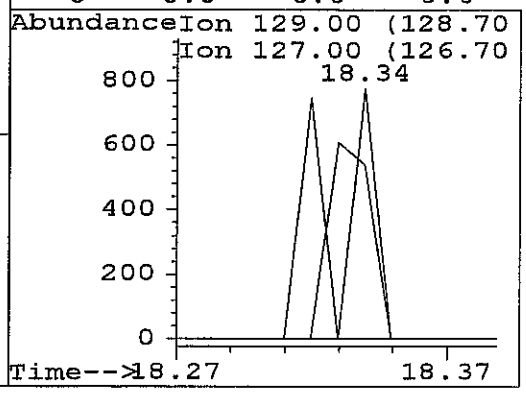


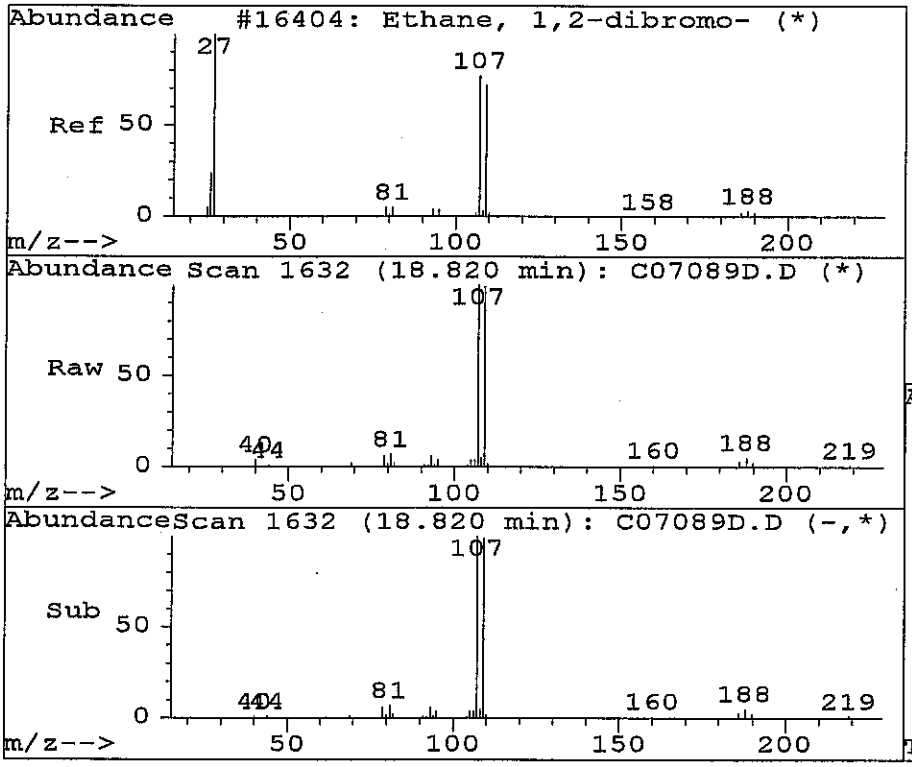


#57
Dibromochloromethane
Concen: 0.00 ppbV
RT: 18.34 min Scan# 1582
Delta R.T. 0.04 min
Lab File: C07089D.D
Acq: 8 Jul 109 12:18 pm

Tgt Ion:129 Resp: 891

Ion	Ratio	Lower	Upper
129	100		
127	69.2	60.3	90.5
0	0.0	0.0	0.0
0	0.0	0.0	0.0

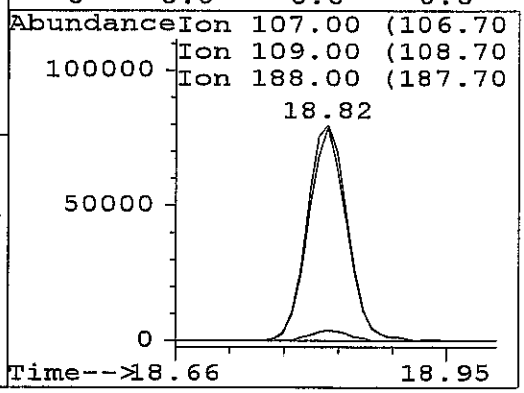


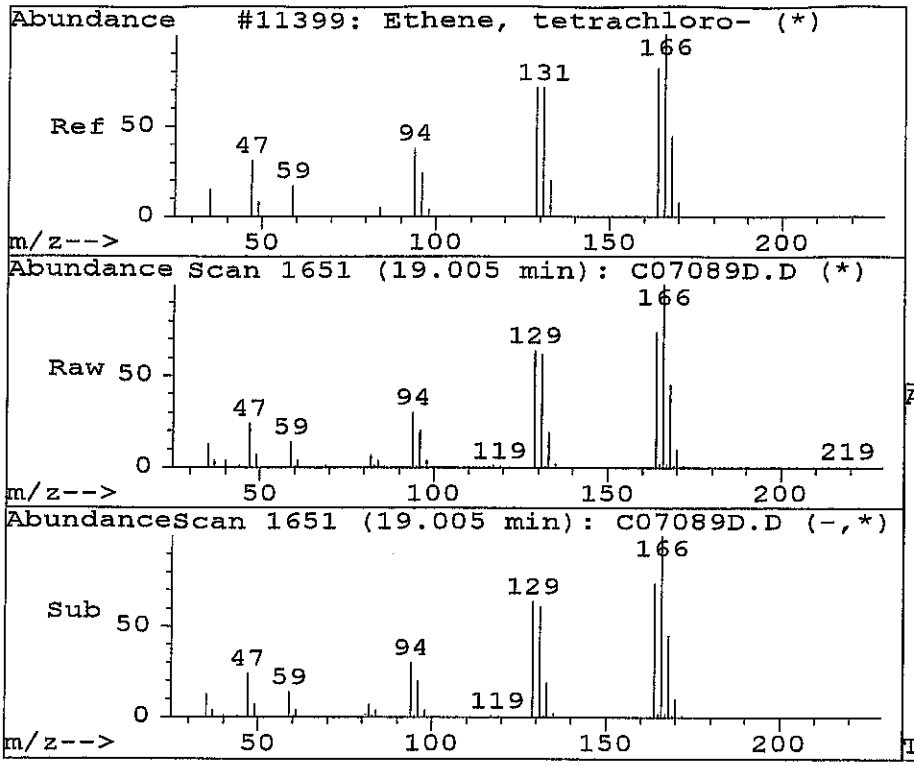


#58
1,2-Dibromoethane
Concen: 1.03 ppbV
RT: 18.82 min Scan# 1632
Delta R.T. 0.02 min
Lab File: C07089D.D
Acq: 8 Jul 109 12:18 pm

Tgt Ion:107 Resp: 241304

Ion	Ratio	Lower	Upper
107	100		
109	98.9	75.4	113.0
188	4.8	3.0	4.6#
0	0.0	0.0	0.0

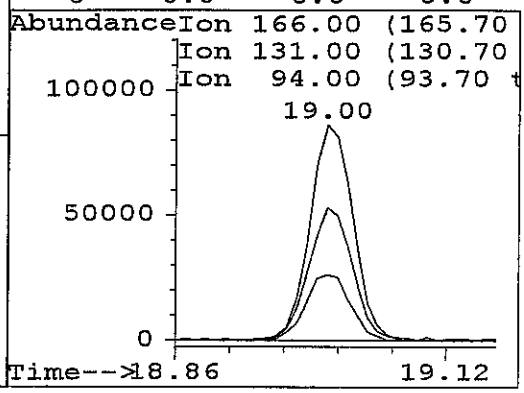


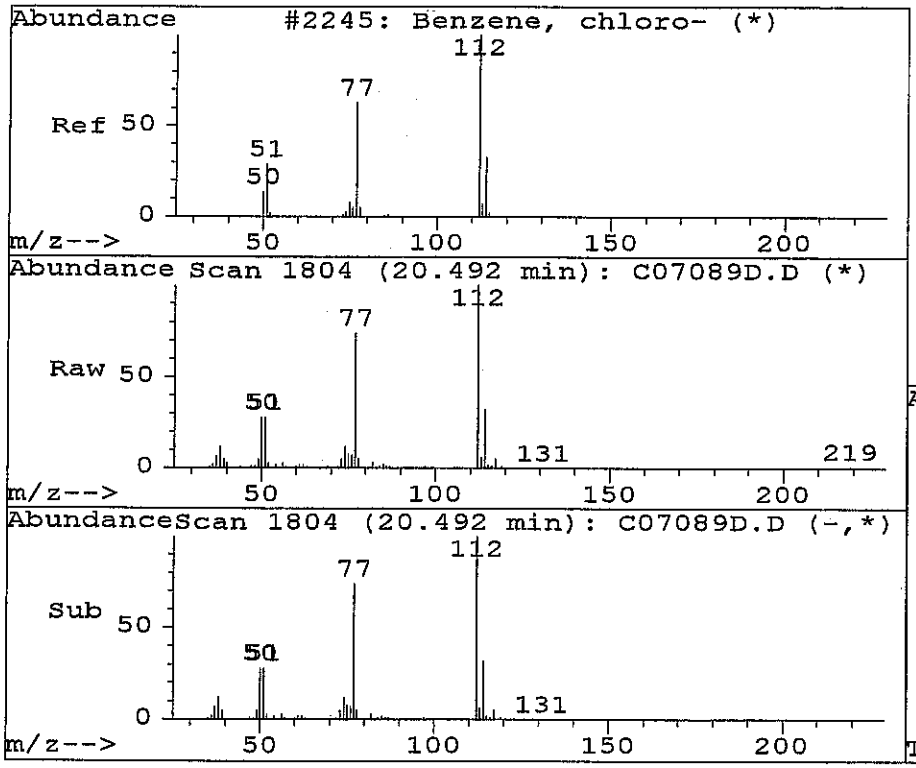


#59
Tetrachloroethene
Concen: 1.20 ppbV
RT: 19.00 min Scan# 1651
Delta R.T. 0.03 min
Lab File: C07089D.D
Acq: 8 Jul 109 12:18 pm

Tgt Ion:166 Resp: 247317

Ion	Ratio	Lower	Upper
166	100		
131	61.3	52.1	78.1
94	30.4	29.9	44.9
0	0.0	0.0	0.0

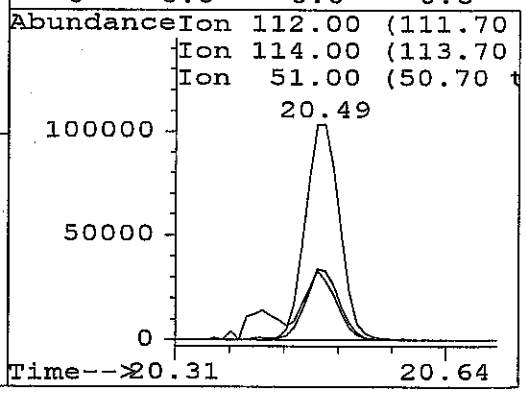


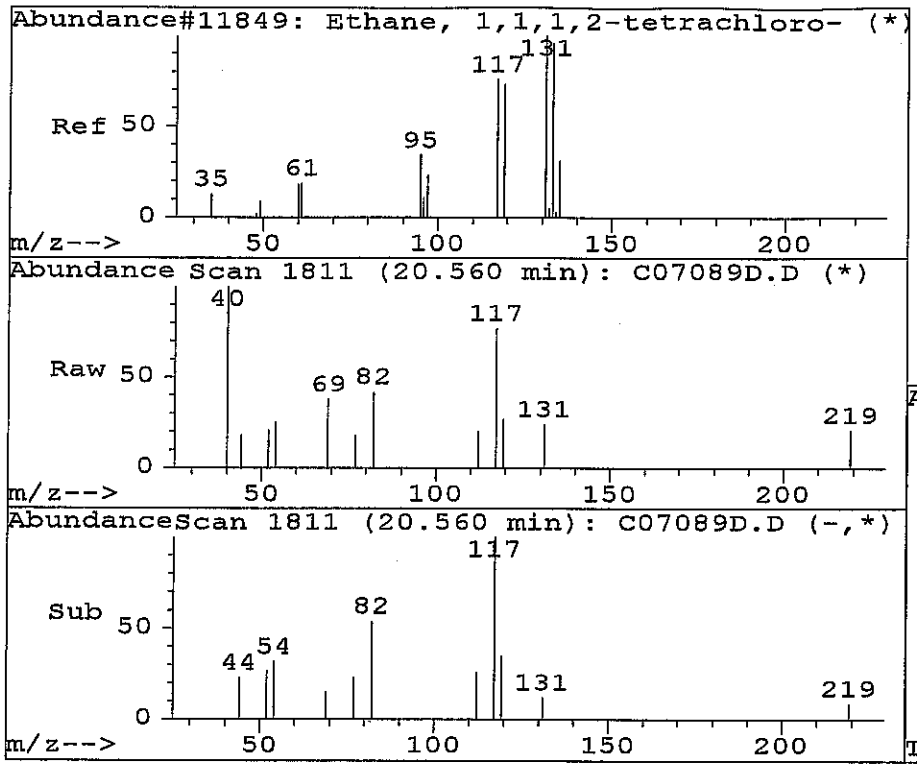


#60
Chlorobenzene
Concen: 1.00 ppbV
RT: 20.49 min Scan# 1804
Delta R.T. 0.04 min
Lab File: C07089D.D
Acq: 8 Jul 109 12:18 pm

Tgt Ion:112 Resp: 302924

Ion	Ratio	Lower	Upper
112	100		
114	31.5	25.3	37.9
51	21.6	23.0	34.6#
0	0.0	0.0	0.0

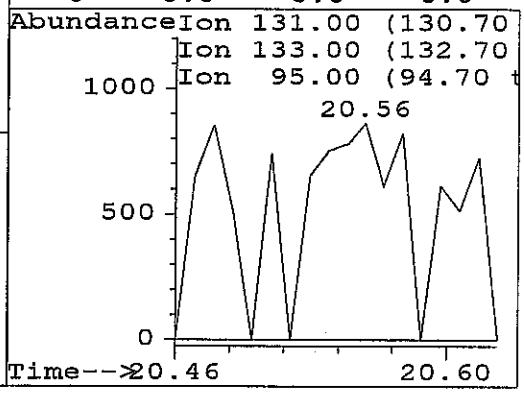


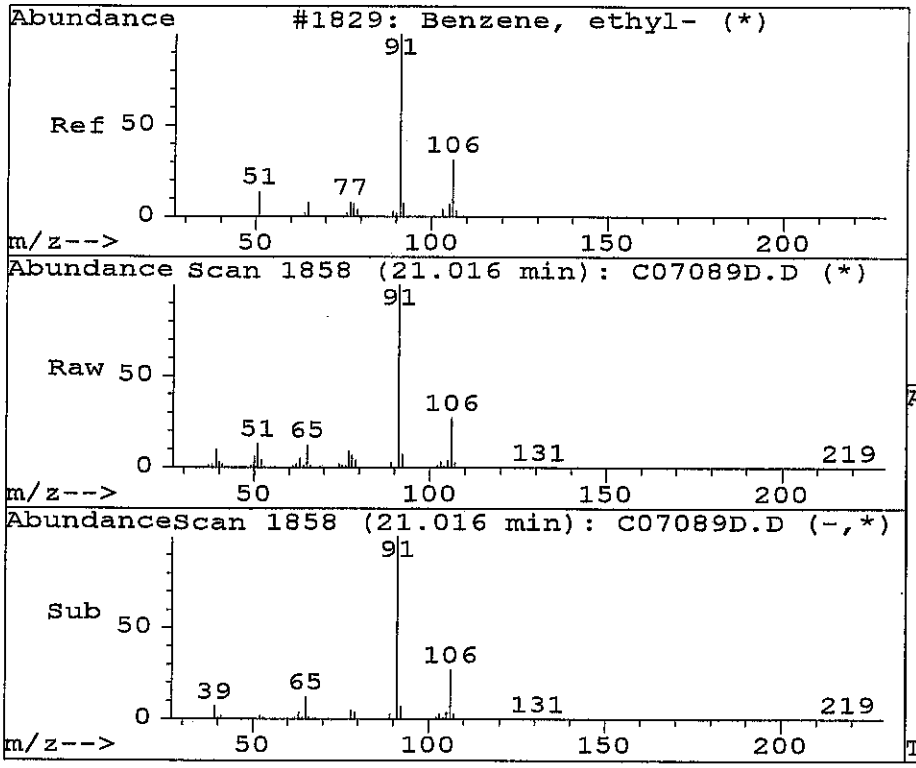


#61
1,1,1,2-Tetrachloroethane
Concen: 0.02 ppbV
RT: 20.56 min Scan# 1811
Delta R.T. 0.05 min
Lab File: C07089D.D
Acq: 8 Jul 109 12:18 pm

Tgt Ion:131 Resp: 3019

Ion	Ratio	Lower	Upper
131	100		
133	0.0	76.0	114.0#
95	0.0	31.8	47.6#
0	0.0	0.0	0.0

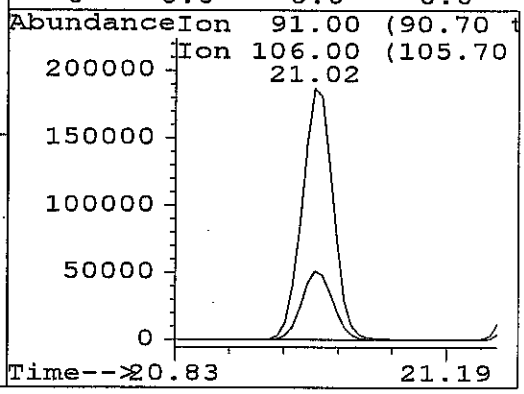


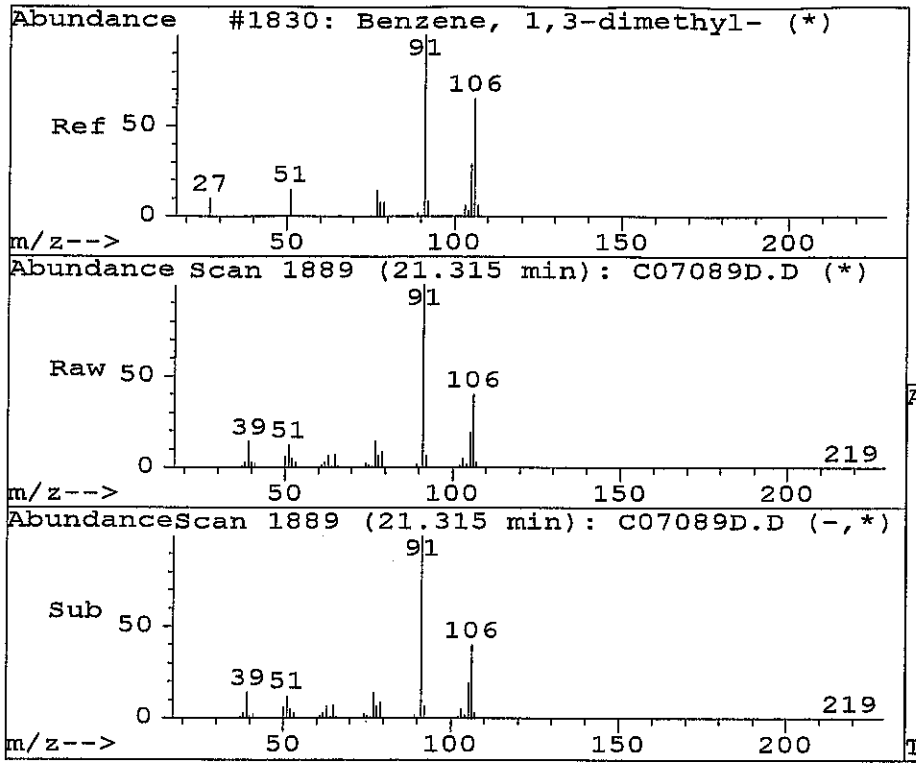


#62
Ethylbenzene
Concen: 1.03 ppbV
RT: 21.02 min Scan# 1858
Delta R.T. 0.03 min
Lab File: C07089D.D
Acq: 8 Jul 109 12:18 pm

Tgt Ion:91 Resp: 531764

Ion	Ratio	Lower	Upper
91	100		
106	27.4	21.4	32.0
0	0.0	0.0	0.0
0	0.0	0.0	0.0

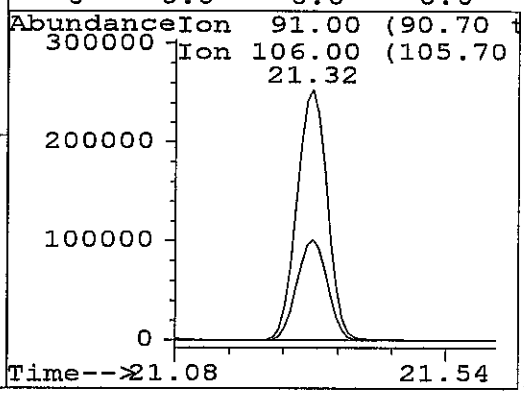


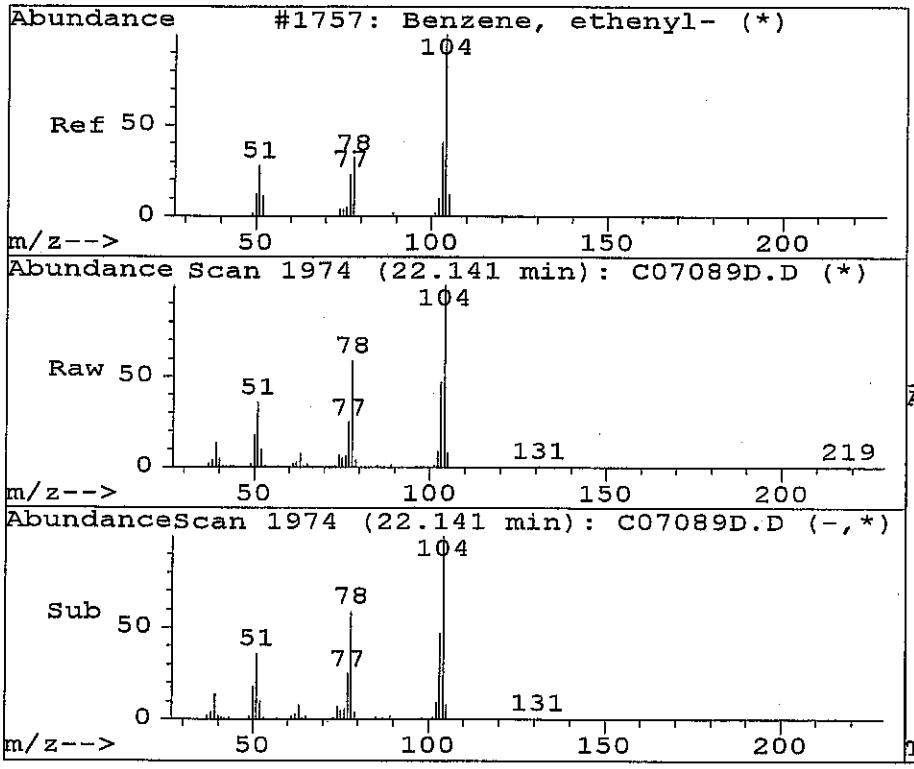


#63
m & p-Xylene
Concen: 2.08 ppbV
RT: 21.32 min Scan# 1889
Delta R.T. 0.04 min
Lab File: C07089D.D
Acq: 8 Jul 109 12:18 pm

Tgt Ion:91 Resp: 901901

Ion	Ratio	Lower	Upper
91	100		
106	40.0	31.9	47.9
0	0.0	0.0	0.0
0	0.0	0.0	0.0

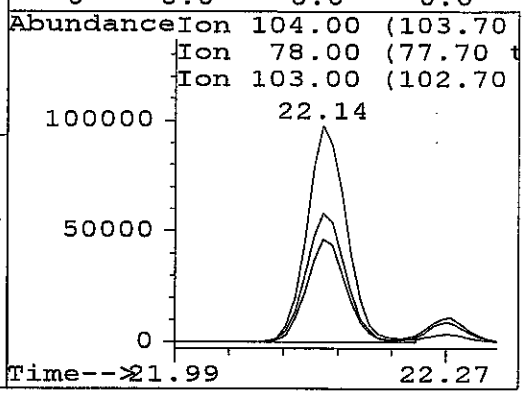


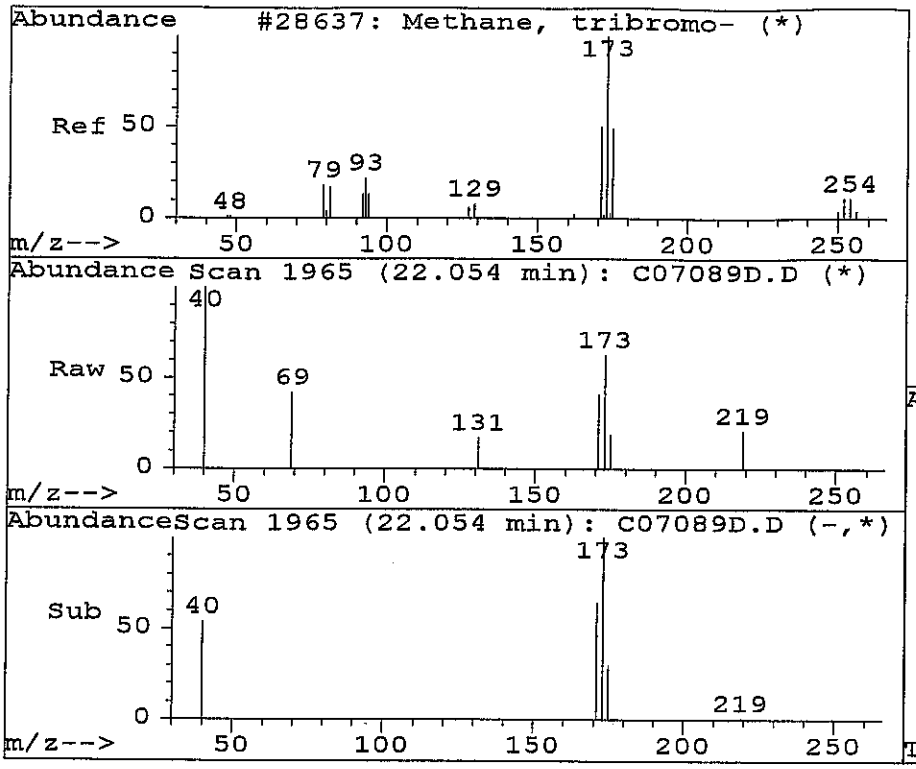


#64
Styrene
Concen: 0.91 ppbV
RT: 22.14 min Scan# 1974
Delta R.T. 0.00 min
Lab File: C07089D.D
Acq: 8 Jul 109 12:18 pm

Tgt Ion:104 Resp: 283096

Ion	Ratio	Lower	Upper
104	100		
78	58.3	52.8	79.2
103	46.7	37.9	56.9
0	0.0	0.0	0.0

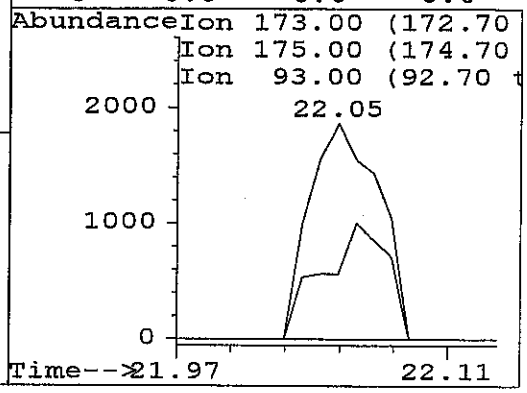


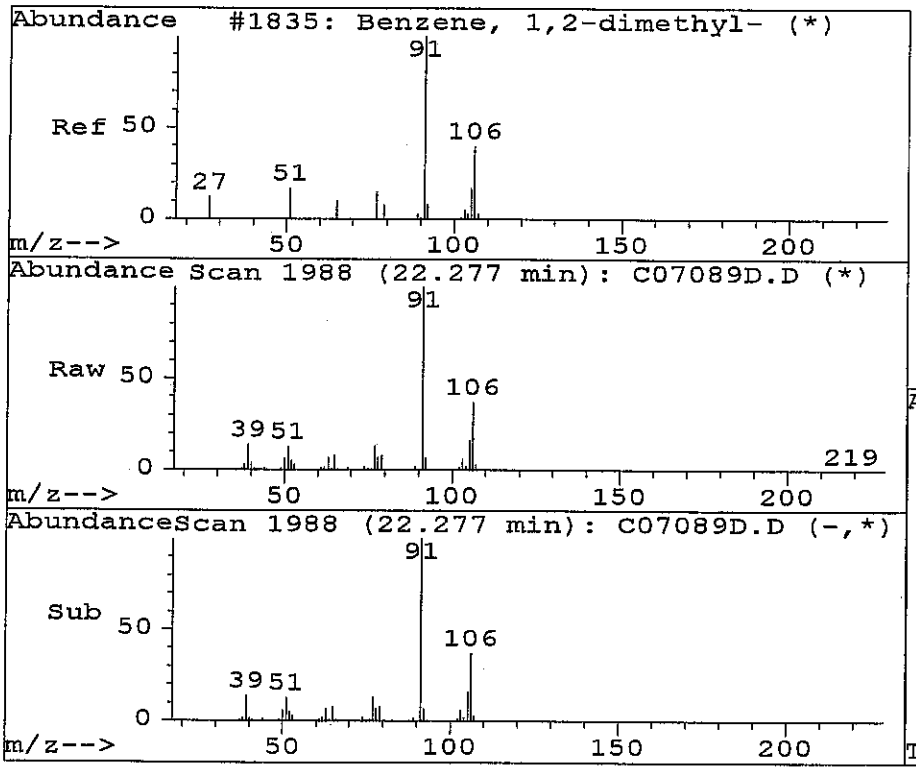


#65
Bromoform
Concen: 0.01 ppbV
RT: 22.05 min Scan# 1965
Delta R.T. 0.05 min
Lab File: C07089D.D
Acq: 8 Jul 109 12:18 pm

Tgt Ion:173 Resp: 4943

Ion	Ratio	Lower	Upper
173	100		
175	30.3	39.4	59.0#
93	0.0	15.6	23.4#
0	0.0	0.0	0.0

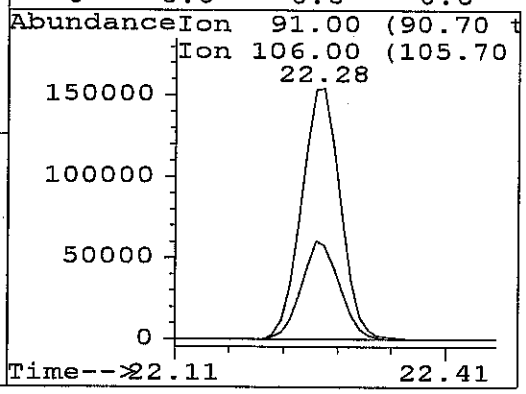


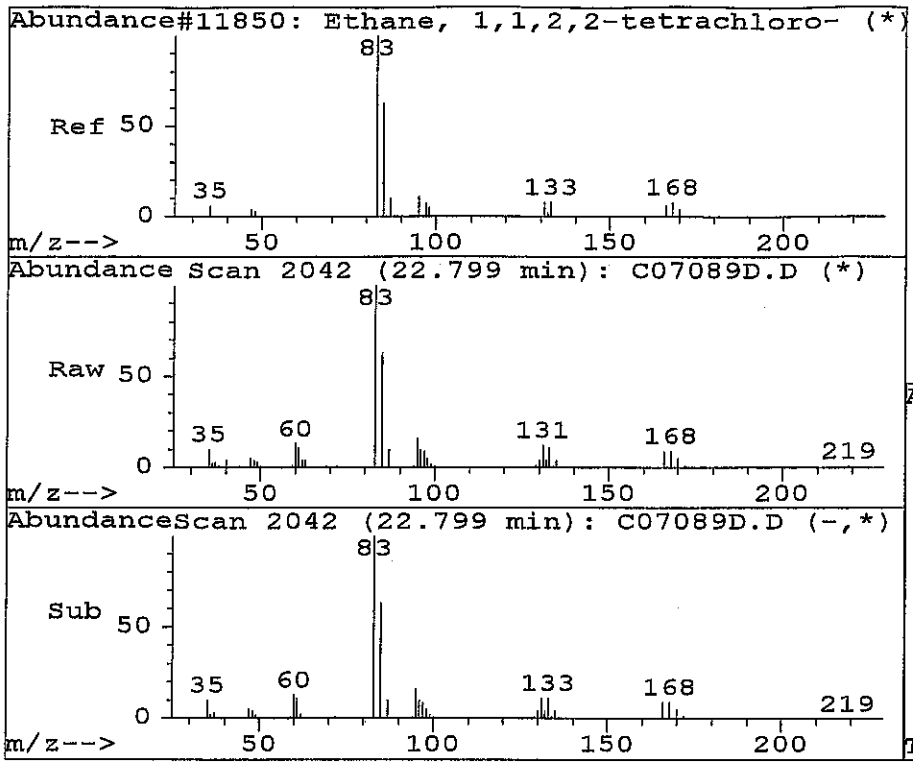


#66
o-Xylene
Concen: 0.97 ppbV
RT: 22.28 min Scan# 1988
Delta R.T. 0.03 min
Lab File: C07089D.D
Acq: 8 Jul 109 12:18 pm

Tgt Ion:91 Resp: 464379

Ion	Ratio	Lower	Upper
91	100		
106	37.4	29.8	44.8
0	0.0	0.0	0.0
0	0.0	0.0	0.0

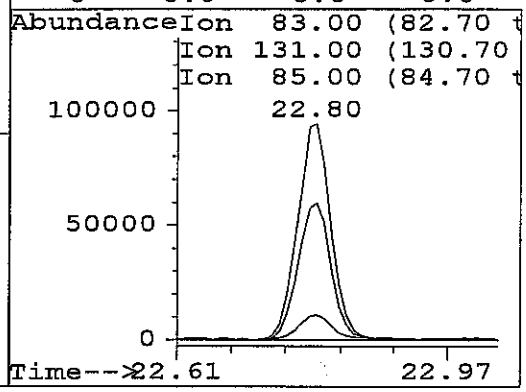


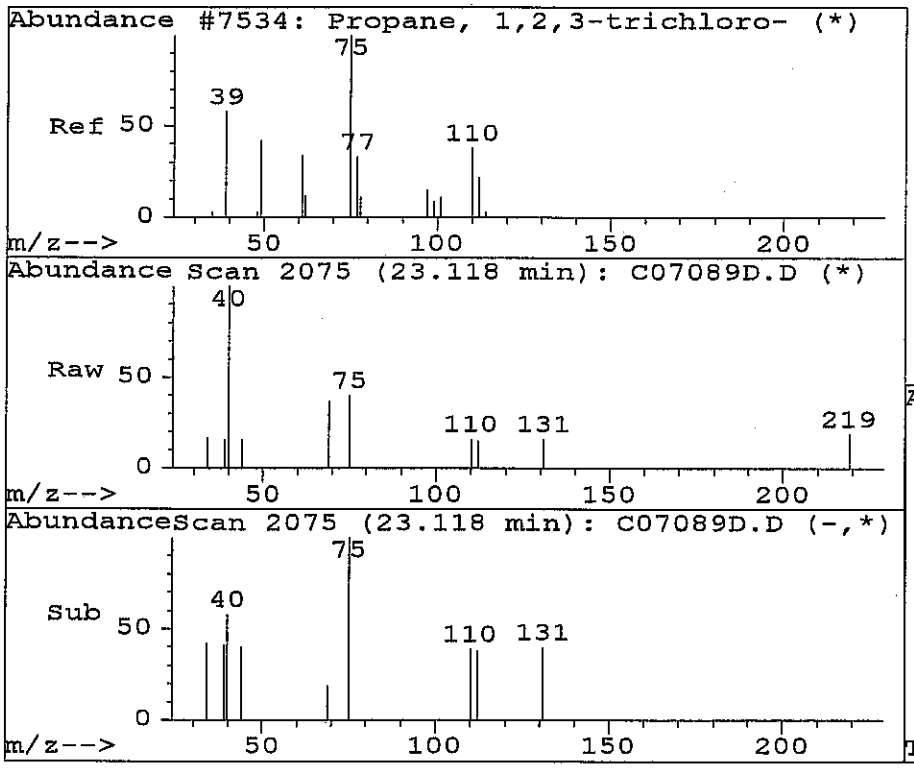


#67
1,1,2,2-Tetrachloroethane
Concen: 0.65 ppbV
RT: 22.80 min Scan# 2042
Delta R.T. 0.05 min
Lab File: C07089D.D
Acq: 8 Jul 109 12:18 pm

Tgt Ion:83 Resp: 286920

Ion	Ratio	Lower	Upper
83	100		
131	11.6	8.3	12.5
85	63.3	50.2	75.2
0	0.0	0.0	0.0

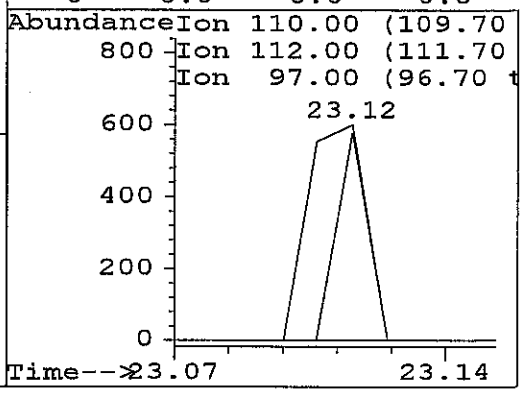


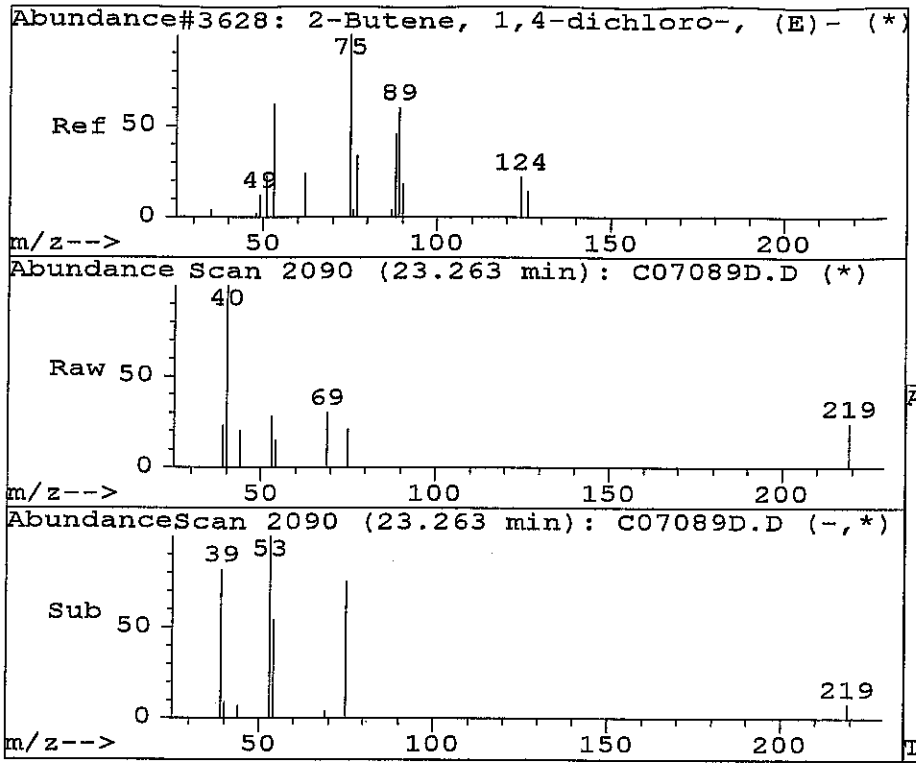


#68
1,2,3-Trichloropropane
Concen: 0.01 ppbV
RT: 23.12 min Scan# 2075
Delta R.T. 0.04 min
Lab File: C07089D.D
Acq: 8 Jul 109 12:18 pm

Tgt Ion:110 Resp: 660

Ion	Ratio	Lower	Upper
110	100		
112	96.3	51.9	77.9#
97	0.0	39.8	59.6#
0	0.0	0.0	0.0

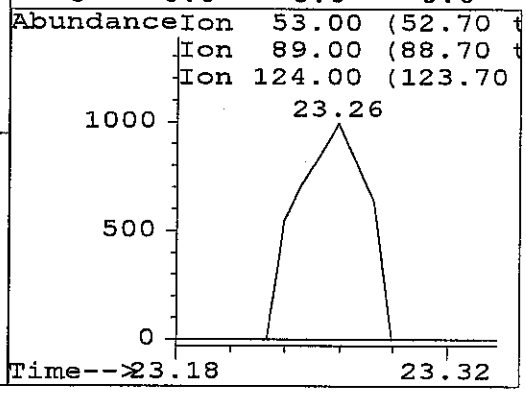


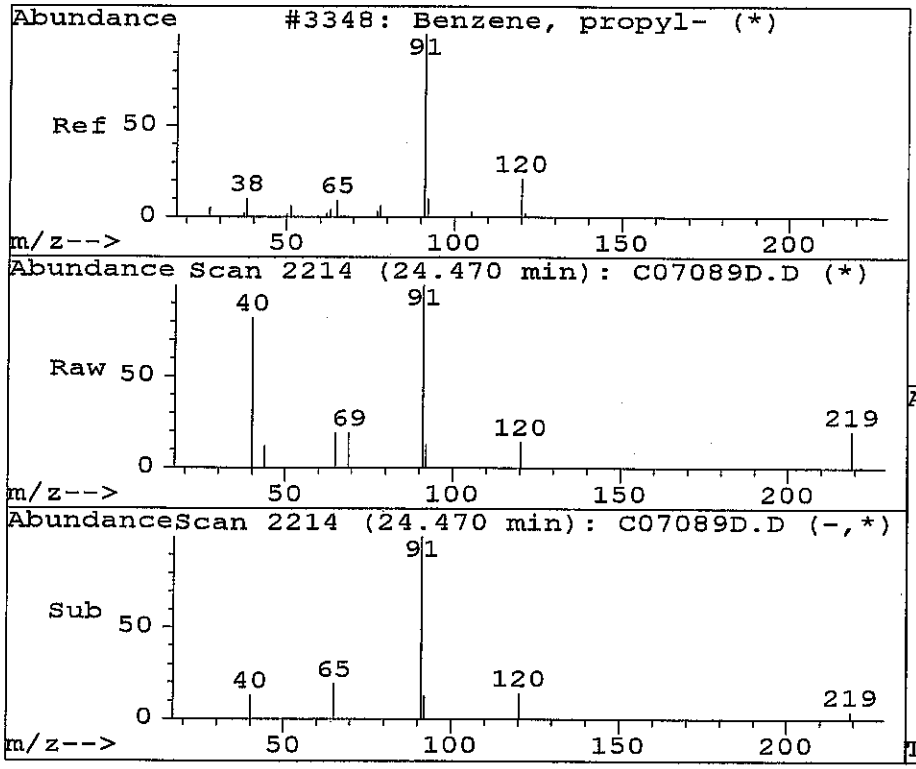


#69
t-1,4-Dichloro-2-butene
Concen: 0.02 ppbV
RT: 23.26 min Scan# 2090
Delta R.T. 0.03 min
Lab File: C07089D.D
Acq: 8 Jul 109 12:18 pm

Tgt Ion:53 Resp: 2623

Ion	Ratio	Lower	Upper
53	100		
89	0.0	40.8	61.2#
124	0.0	15.0	22.4#
0	0.0	0.0	0.0

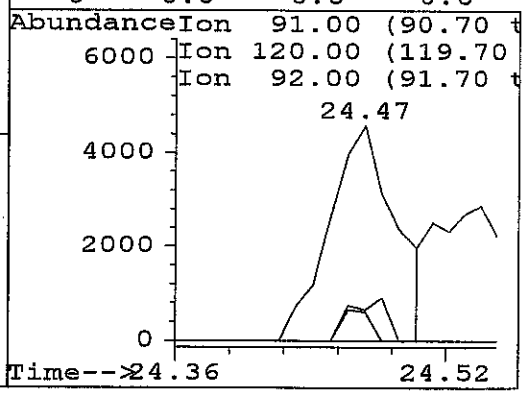


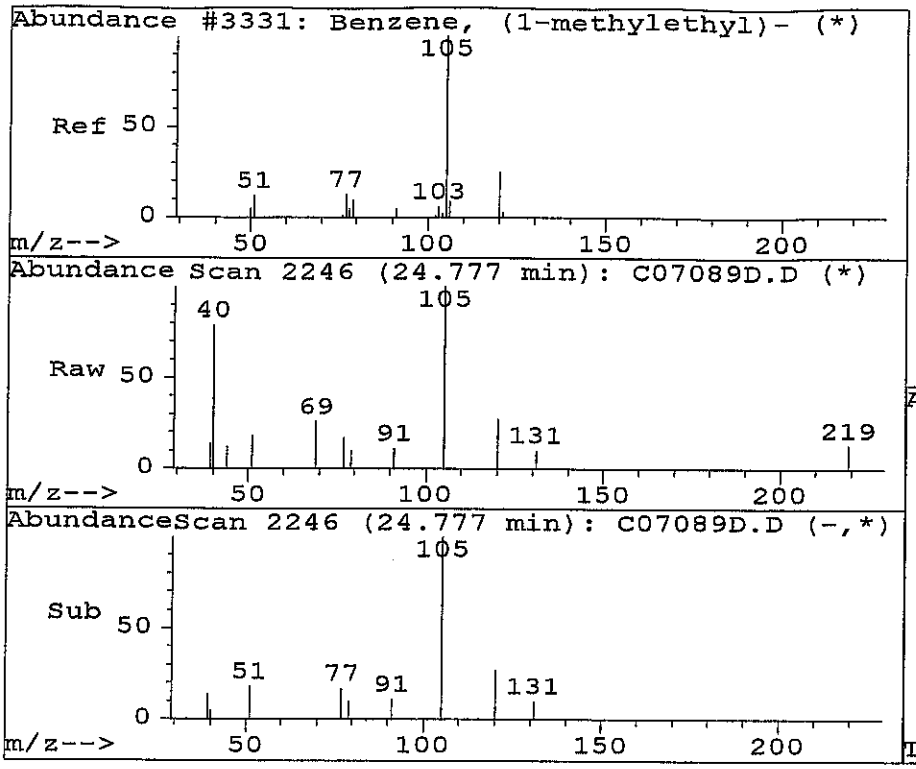


#70
n-Propylbenzene
Concen: 0.01 ppbV
RT: 24.47 min Scan# 2214
Delta R.T. 0.04 min
Lab File: C07089D.D
Acq: 8 Jul 109 12:18 pm

Tgt Ion:91 Resp: 12056

Ion	Ratio	Lower	Upper
91	100		
120	11.3	13.9	20.9#
92	6.2	7.8	11.6#
0	0.0	0.0	0.0

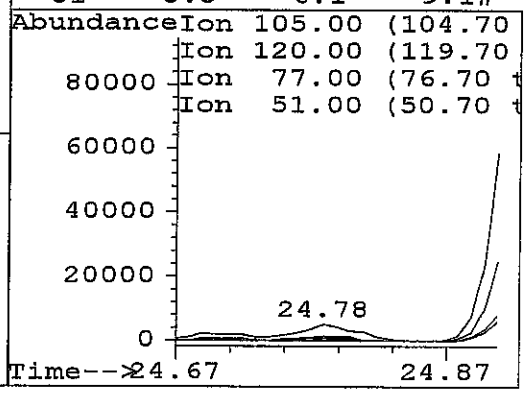


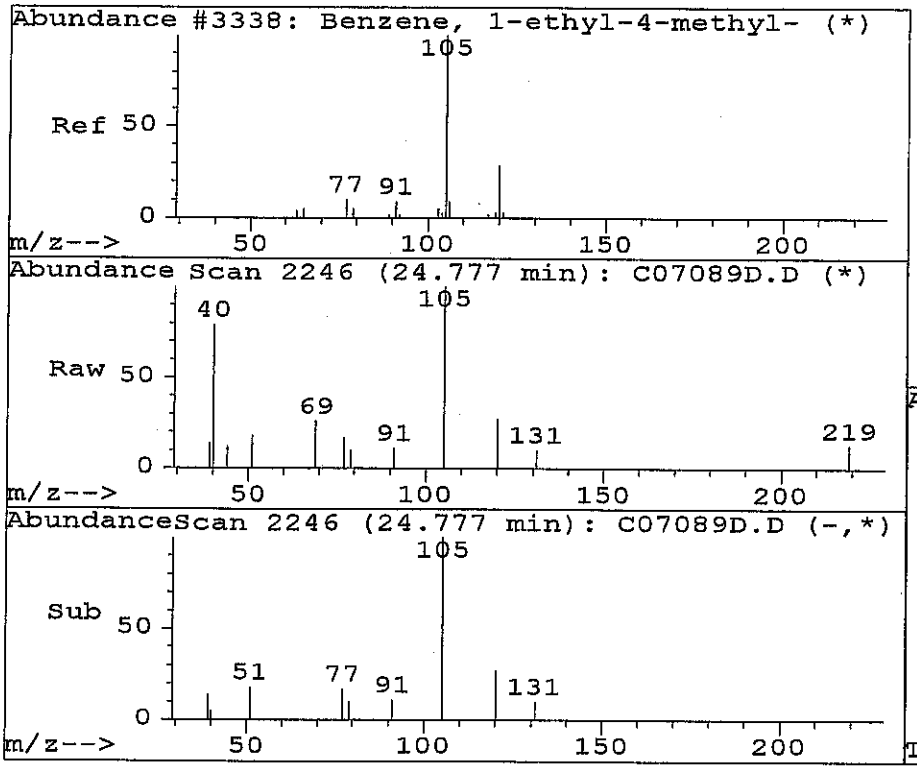


#71
Isopropylbenzene
Concen: 0.02 ppbV
RT: 24.78 min Scan# 2246
Delta R.T. 0.04 min
Lab File: C07089D.D
Acq: 8 Jul 109 12:18 pm

Tgt Ion:105 Resp: 15045

Ion	Ratio	Lower	Upper
105	100		
120	23.1	20.3	30.5
77	15.2	12.1	18.1
51	5.5	6.1	9.1#

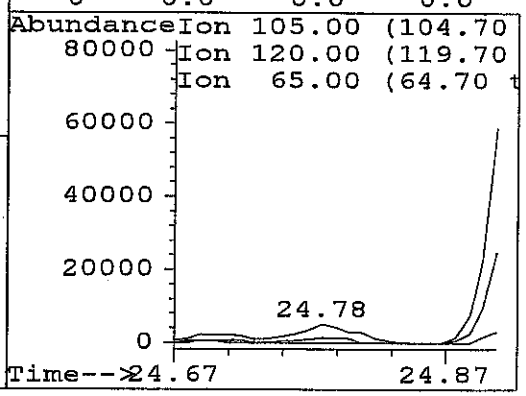


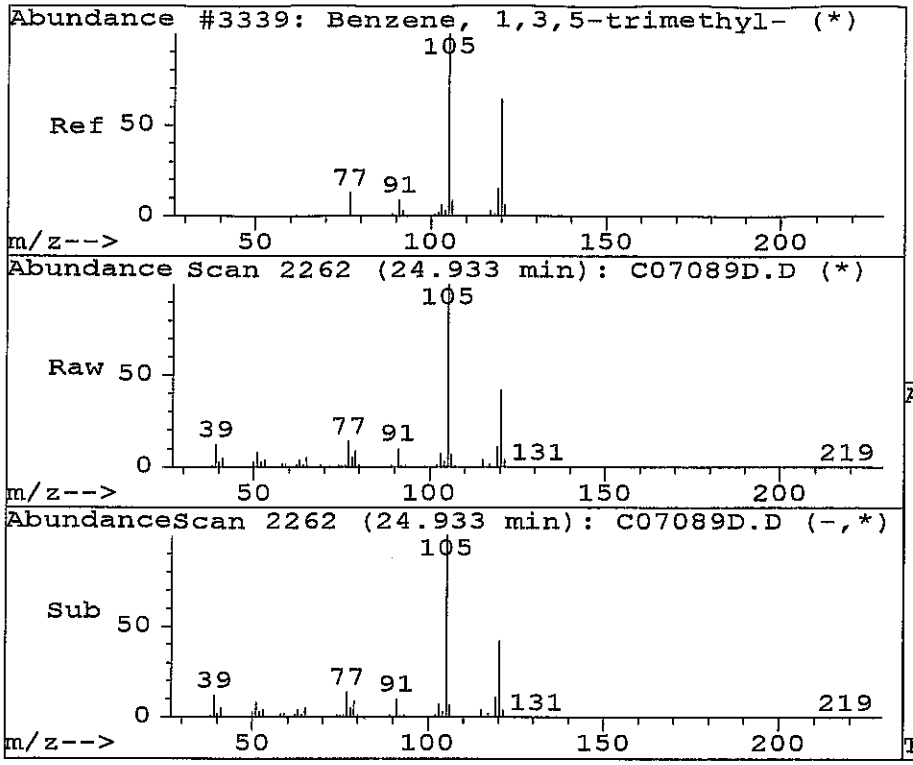


#72
4-Ethyltoluene
Concen: 0.02 ppbV
RT: 24.78 min Scan# 2246
Delta R.T. 0.04 min
Lab File: C07089D.D
Acq: 8 Jul 109 12:18 pm

Tgt Ion:105 Resp: 15045

Ion	Ratio	Lower	Upper
105	100		
120	30.2	20.4	30.6
65	0.0	5.1	7.7#
0	0.0	0.0	0.0

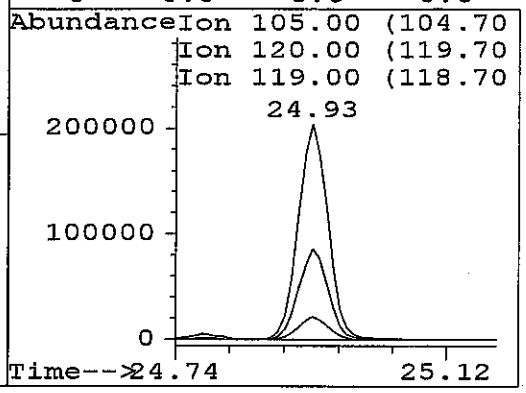


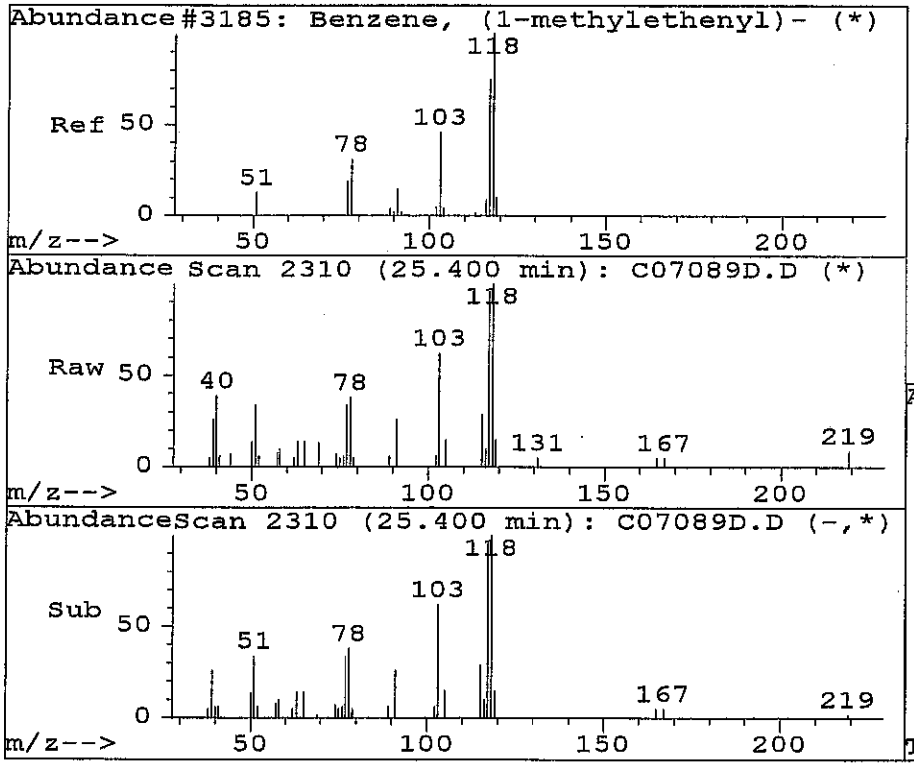


#73
1,3,5-Trimethylbenzene
Concen: 0.85 ppbV
RT: 24.93 min Scan# 2262
Delta R.T. 0.01 min
Lab File: C07089D.D
Acq: 8 Jul 109 12:18 pm

Tgt Ion:105 Resp: 595273

Ion	Ratio	Lower	Upper
105	100		
120	42.1	32.8	49.2
119	10.6	8.7	13.1
0	0.0	0.0	0.0

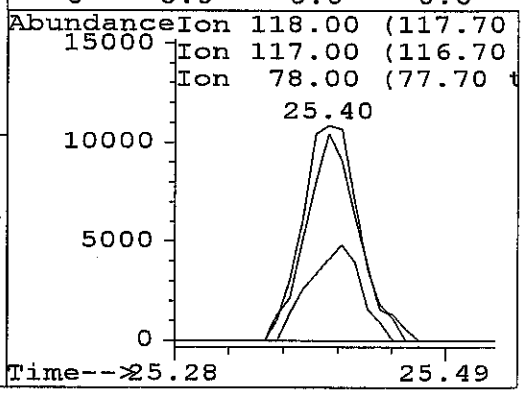


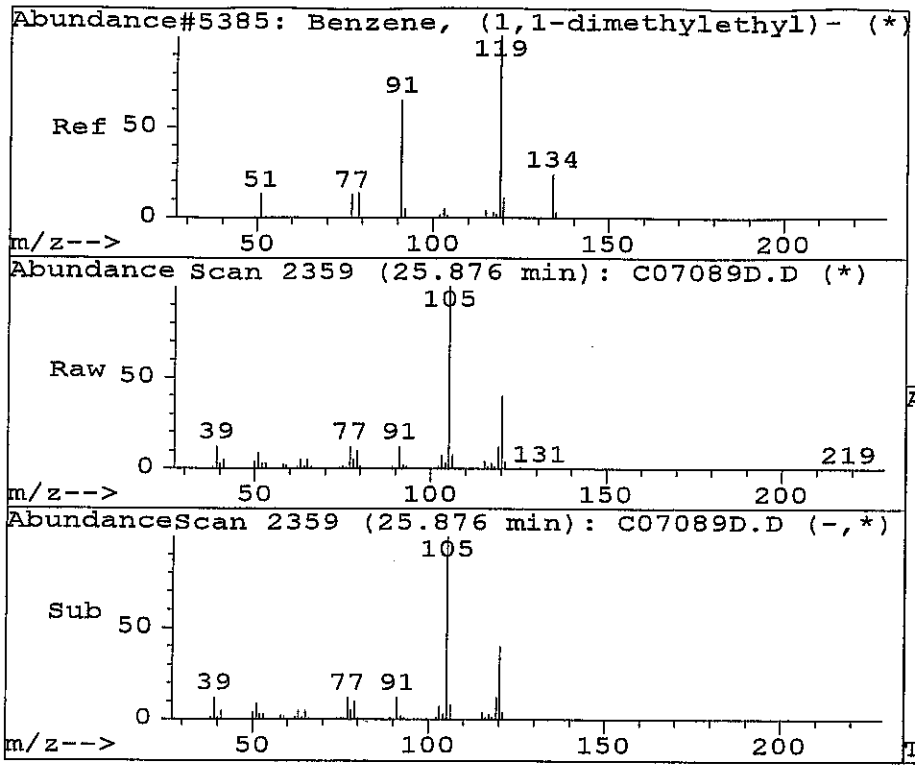


#74
Methylstyrene
Concen: 0.10 ppbV
RT: 25.40 min Scan# 2310
Delta R.T. 0.04 min
Lab File: C07089D.D
Acq: 8 Jul 109 12:18 pm

Tgt Ion:118 Resp: 32385

Ion	Ratio	Lower	Upper
118	100		
117	96.2	70.3	105.5
78	37.7	34.2	51.2
0	0.0	0.0	0.0

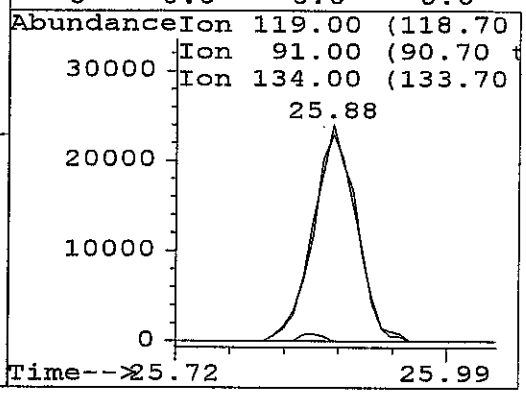


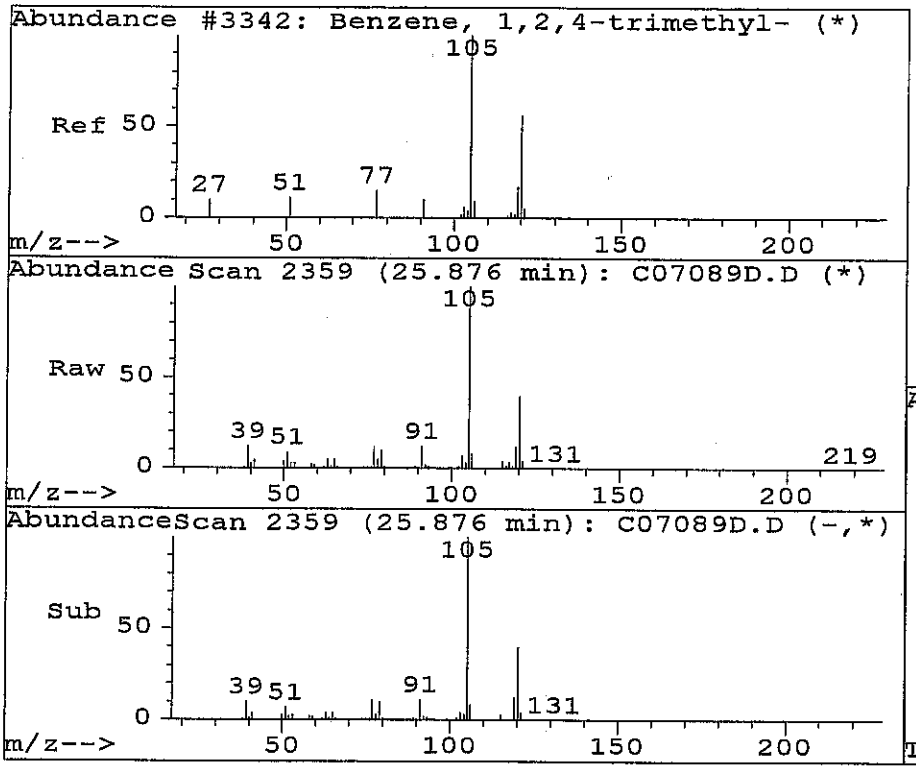


#75
tert-butyl benzene
Concen: 0.12 ppbV
RT: 25.88 min Scan# 2359
Delta R.T. 0.07 min
Lab File: C07089D.D
Acq: 8 Jul 109 12:18 pm

Tgt Ion:119 Resp: 70998

Ion	Ratio	Lower	Upper
119	100		
91	97.8	73.8	110.6
134	1.7	16.2	24.4#
0	0.0	0.0	0.0

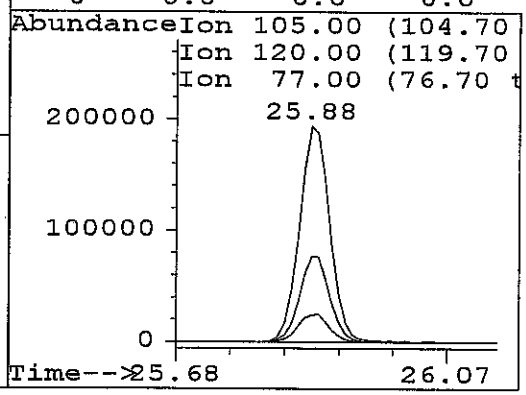


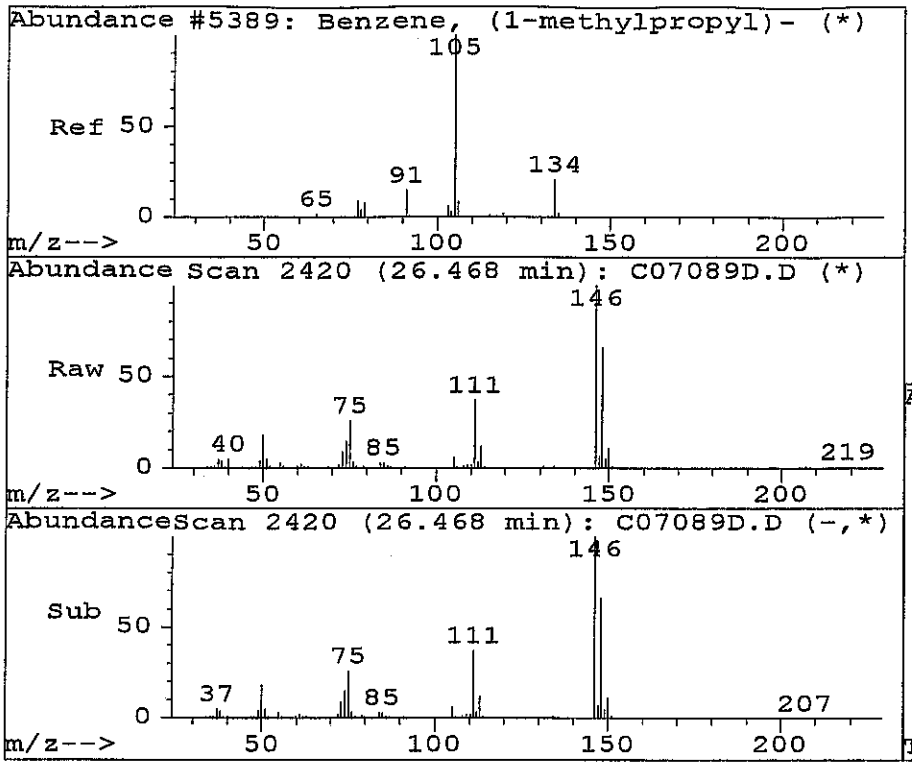


#76
1,2,4-Trimethylbenzene
Concen: 0.91 ppbV
RT: 25.88 min Scan# 2359
Delta R.T. -0.01 min
Lab File: C07089D.D
Acq: 8 Jul 109 12:18 pm

Tgt Ion:105 Resp: 583818

Ion	Ratio	Lower	Upper
105	100		
120	39.7	31.9	47.9
77	12.5	14.2	21.2#
0	0.0	0.0	0.0

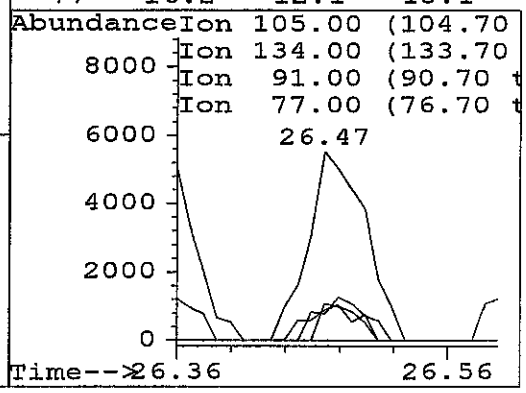


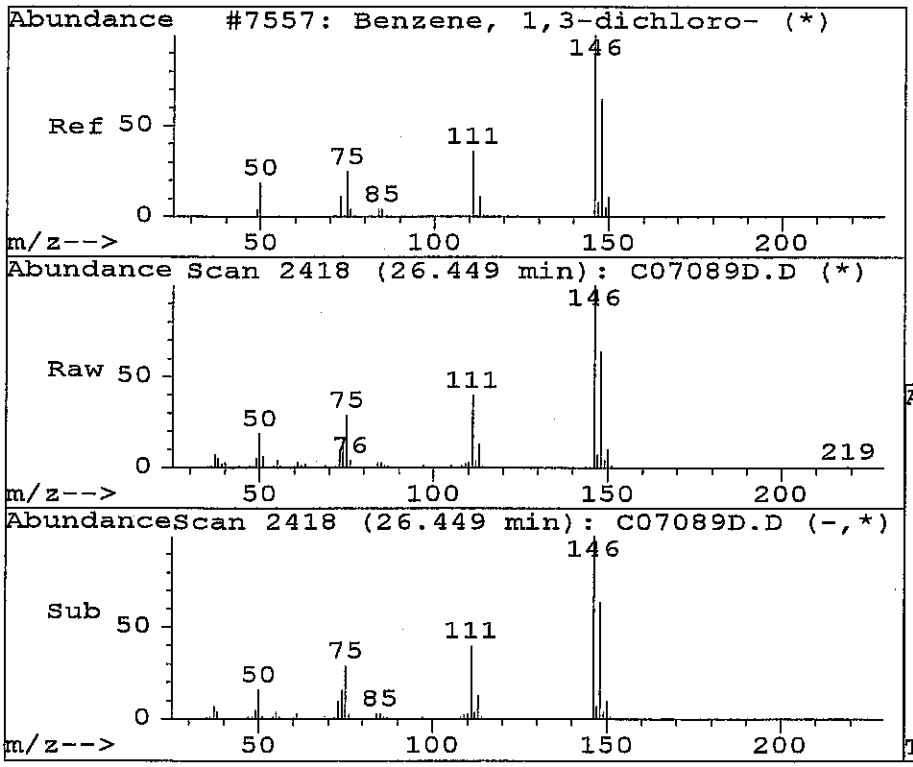


#77
sec-butylbenzene
Concen: 0.02 ppbV
RT: 26.47 min Scan# 2420
Delta R.T. -0.03 min
Lab File: C07089D.D
Acq: 8 Jul 109 12:18 pm

Tgt Ion:105 Resp: 15990

Ion	Ratio	Lower	Upper
105	100		
134	19.2	14.4	21.6
91	12.6	13.4	20.0#
77	16.2	12.1	18.1

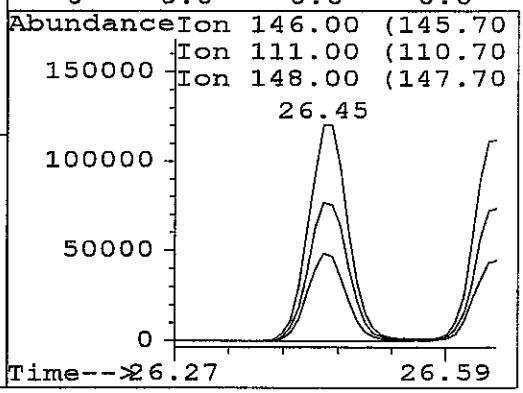


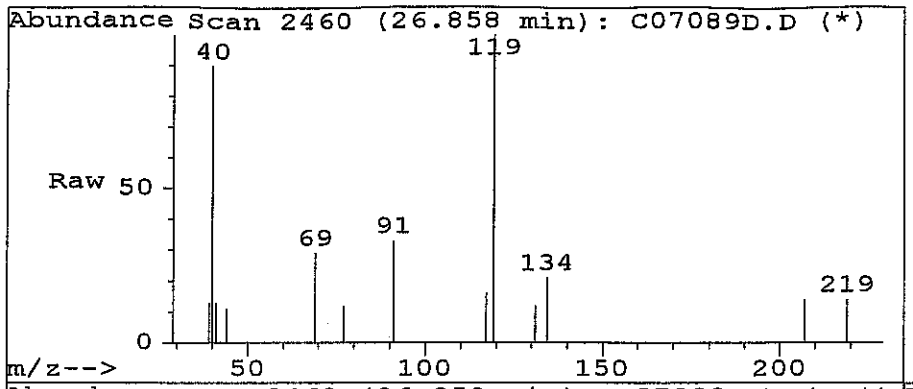


#78
1,3-Dichlorobenzene
Concen: 0.75 ppbV
RT: 26.45 min Scan# 2418
Delta R.T. 0.04 min
Lab File: C07089D.D
Acq: 8 Jul 109 12:18 pm

Tgt Ion:146 Resp: 388983

Ion	Ratio	Lower	Upper
146	100		
111	40.2	34.2	51.4
148	63.7	51.6	77.4
0	0.0	0.0	0.0

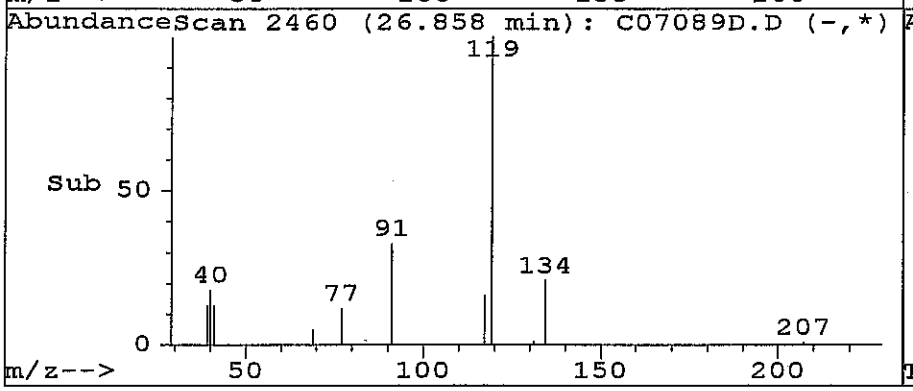


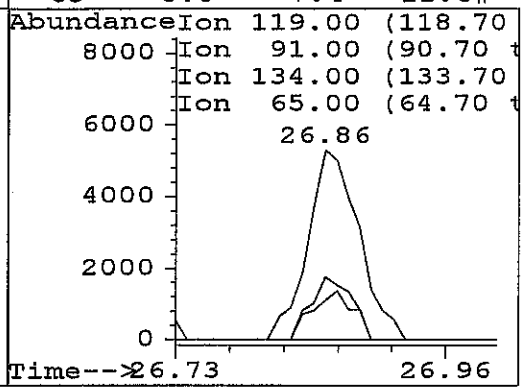


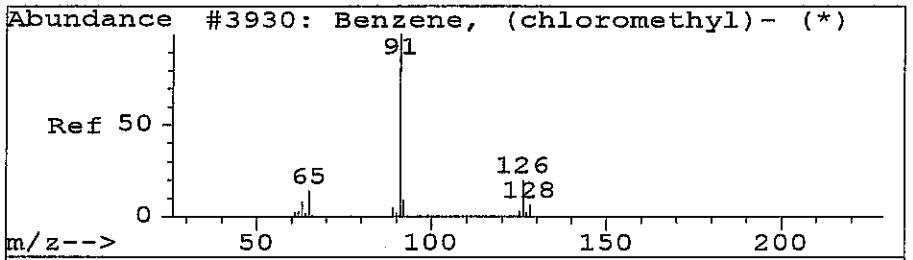
#79
Isopropyltoluene
Concen: 0.02 ppbV
RT: 26.86 min Scan# 2460
Delta R.T. 0.03 min
Lab File: C07089D.D
Acq: 8 Jul 109 12:18 pm

Tgt Ion:119 Resp: 15954

Ion	Ratio	Lower	Upper
119	100		
91	26.8	25.4	38.0
134	21.0	19.0	28.6
65	0.0	7.4	11.0#



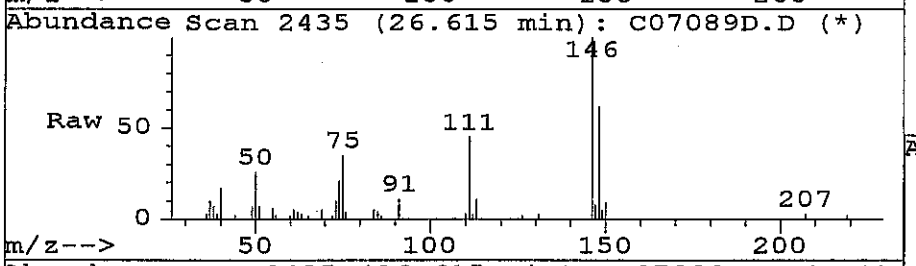


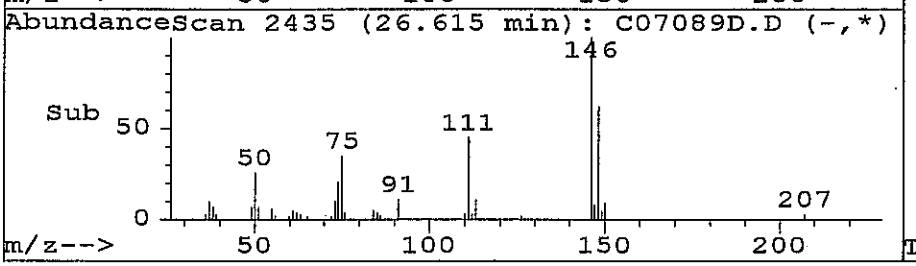


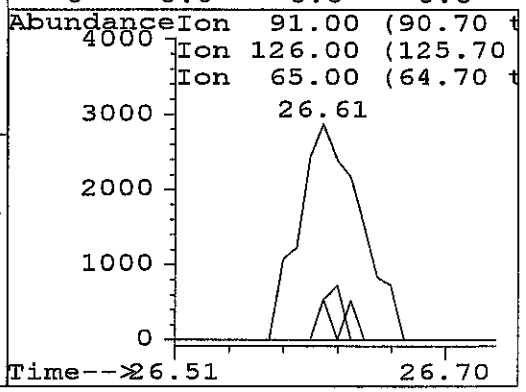
#80
Benzyl chloride
Concen: 0.01 ppbV
RT: 26.61 min Scan# 2435
Delta R.T. 0.00 min
Lab File: C07089D.D
Acq: 8 Jul 109 12:18 pm

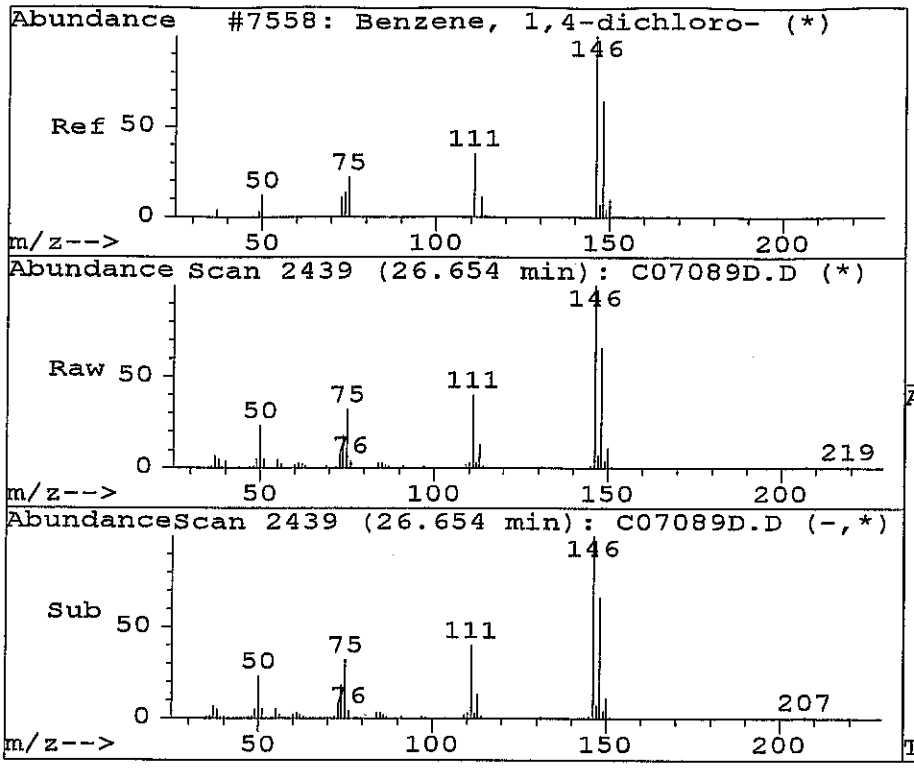
Tgt Ion:91 Resp: 8936

Ion	Ratio	Lower	Upper
91	100		
126	18.6	15.4	23.0
65	19.0	14.2	21.4
0	0.0	0.0	0.0





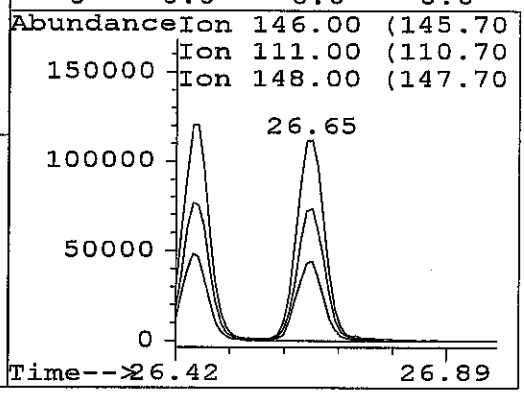


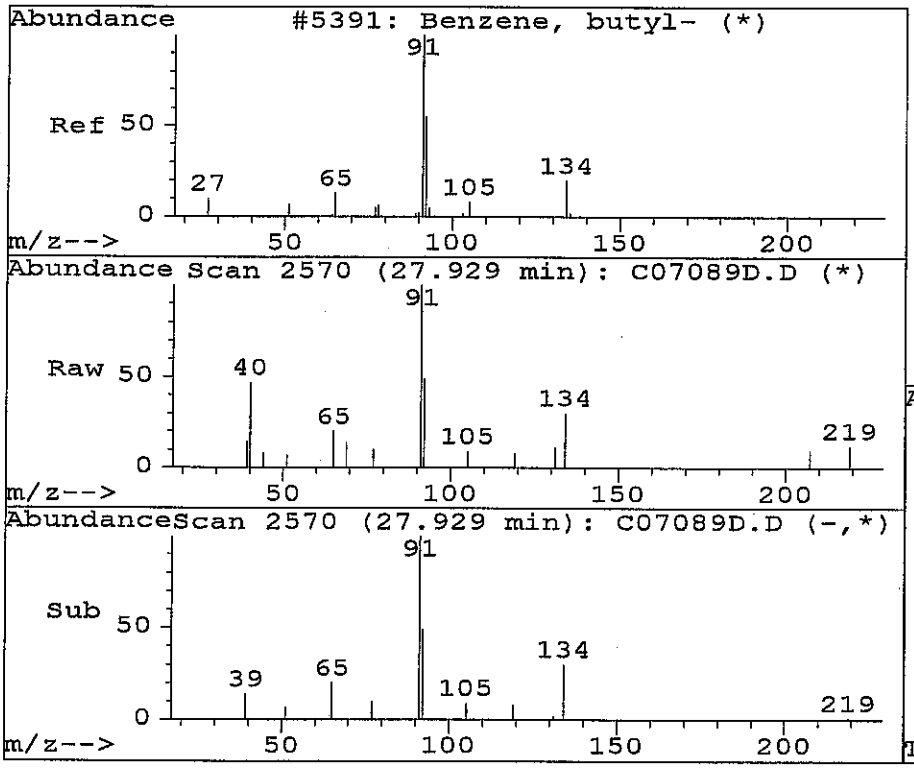


#81
1,4-Dichlorobenzene
Concen: 0.72 ppbV
RT: 26.65 min Scan# 2439
Delta R.T. -0.03 min
Lab File: C07089D.D
Acq: 8 Jul 109 12:18 pm

Tgt Ion:146 Resp: 384206

Ion	Ratio	Lower	Upper
146	100		
111	39.7	33.7	50.5
148	65.7	51.2	76.8
0	0.0	0.0	0.0

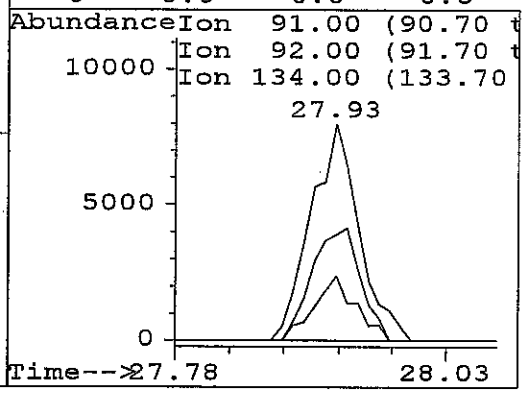


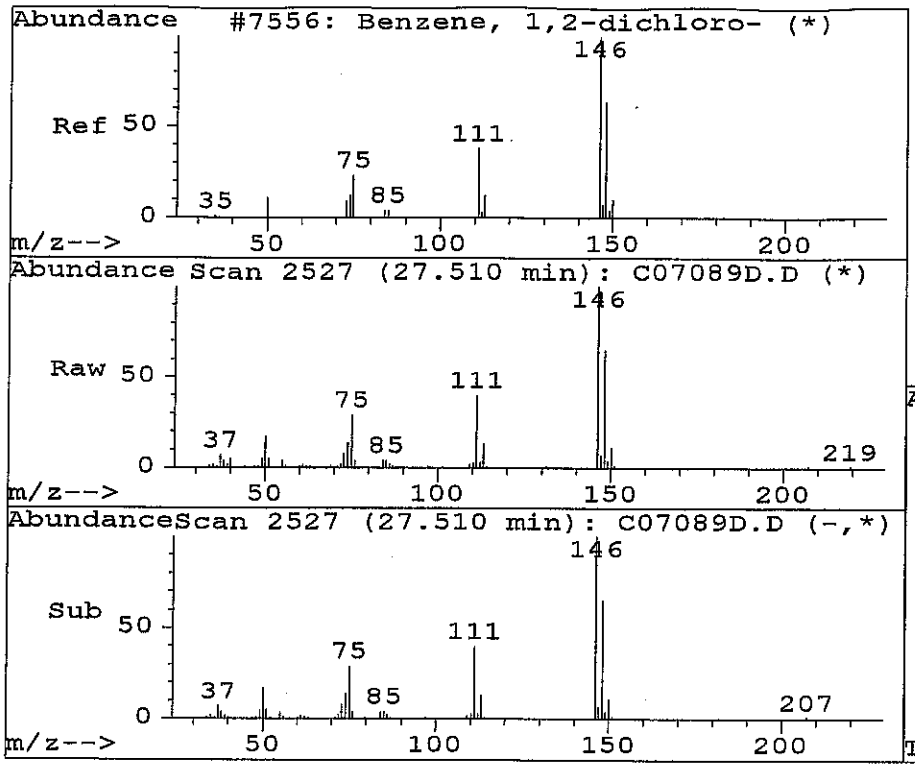


#82
n-Butylbenzene
Concen: 0.03 ppbV
RT: 27.93 min Scan# 2570
Delta R.T. 0.05 min
Lab File: C07089D.D
Acq: 8 Jul 109 12:18 pm

Tgt Ion:91 Resp: 24071

Ion	Ratio	Lower	Upper
91	100		
92	52.4	44.2	66.4
134	25.7	18.2	27.4
0	0.0	0.0	0.0

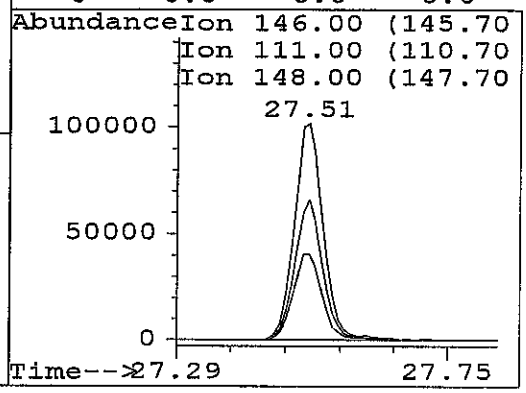


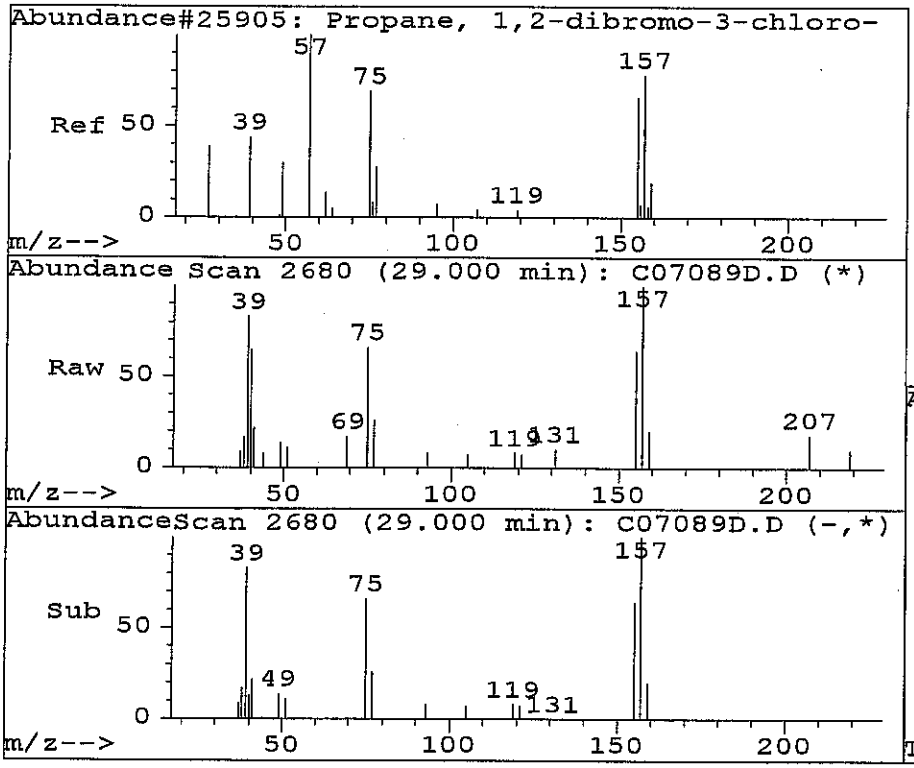


#83
1,2-Dichlorobenzene
Concen: 0.58 ppbV
RT: 27.51 min Scan# 2527
Delta R.T. 0.04 min
Lab File: C07089D.D
Acq: 8 Jul 109 12:18 pm

Tgt Ion:146 Resp: 343188

Ion	Ratio	Lower	Upper
146	100		
111	39.9	34.1	51.1
148	64.9	49.9	74.9
0	0.0	0.0	0.0

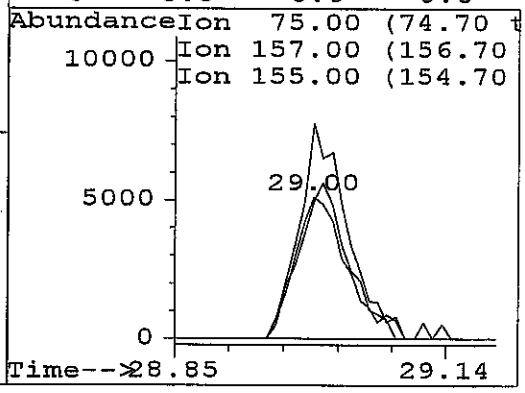


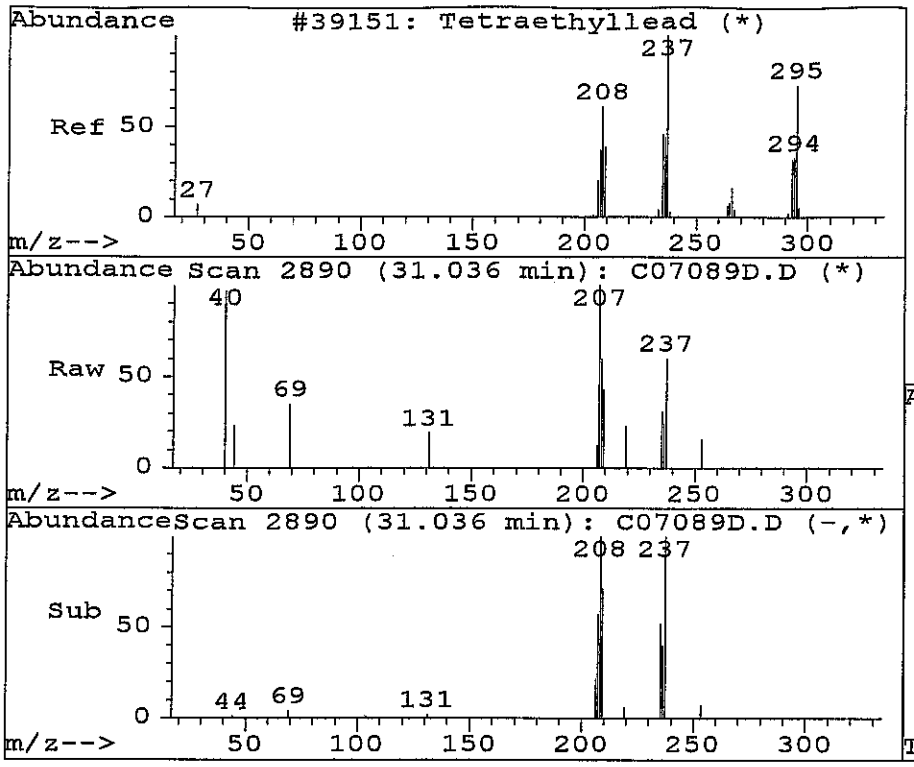


#84
1,2-Dibromo-3-chloropropane
Concen: 0.05 ppbV
RT: 29.00 min Scan# 2680
Delta R.T. 0.04 min
Lab File: C07089D.D
Acq: 8 Jul 109 12:18 pm

Tgt Ion:75 Resp: 19506

Ion	Ratio	Lower	Upper
75	100		
157	152.1	76.2	114.2#
155	96.9	58.6	87.8#
0	0.0	0.0	0.0

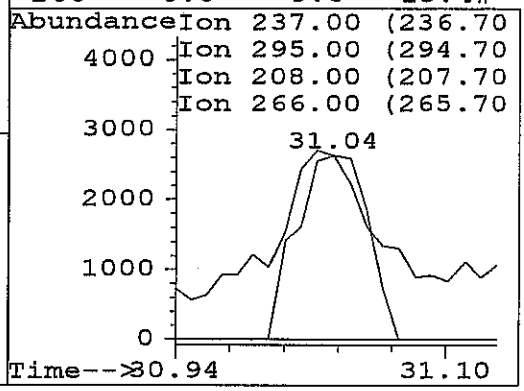


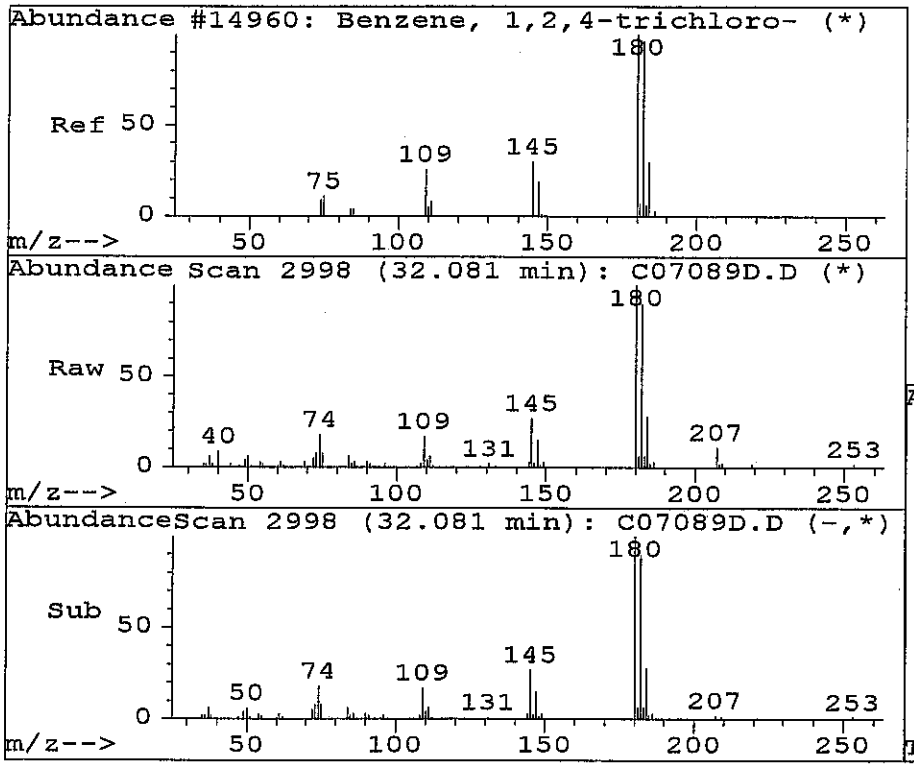


#85
Tetraethyl lead
Concen: 0.02 ppbV
RT: 31.04 min Scan# 2890
Delta R.T. 0.06 min
Lab File: C07089D.D
Acq: 8 Jul 109 12:18 pm

Tgt Ion:237 Resp: 7783

Ion	Ratio	Lower	Upper
237	100		
295	0.0	0.0	0.0
208	126.2	50.6	75.8#
266	0.0	9.0	13.4#

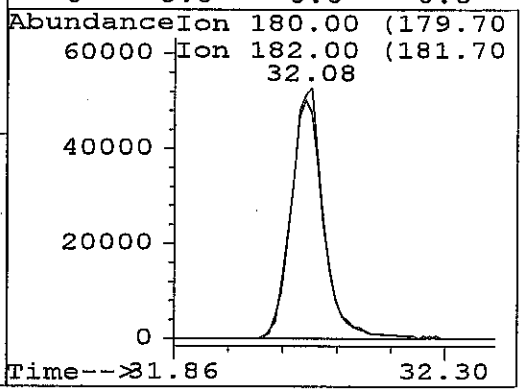


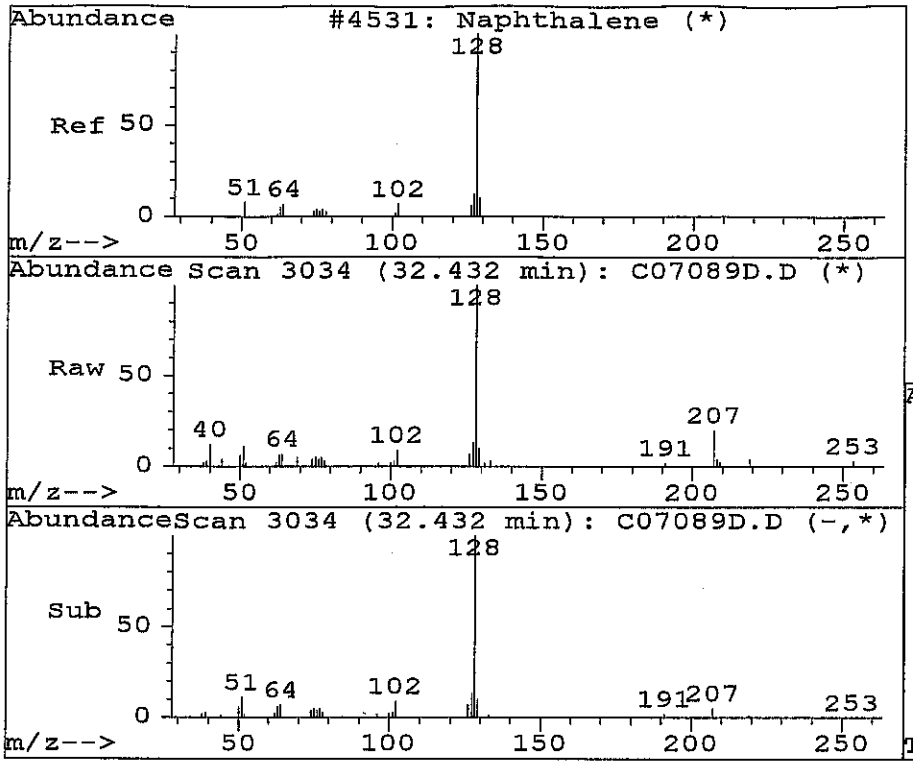


#86
1,2,4-Trichlorobenzene
Concen: 0.18 ppbV
RT: 32.08 min Scan# 2998
Delta R.T. -0.10 min
Lab File: C07089D.D
Acq: 8 Jul 109 12:18 pm

Tgt Ion:180 Resp: 193678

Ion	Ratio	Lower	Upper
180	100		
182	90.2	77.8	116.8
0	0.0	0.0	0.0
0	0.0	0.0	0.0

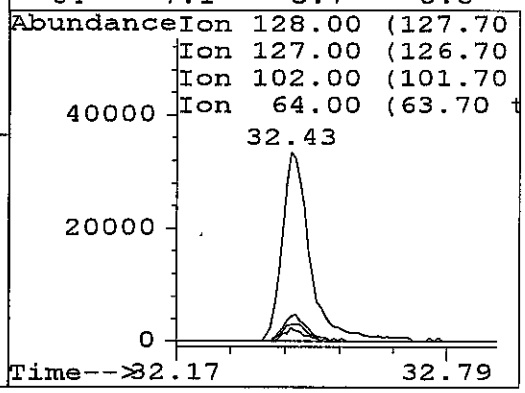


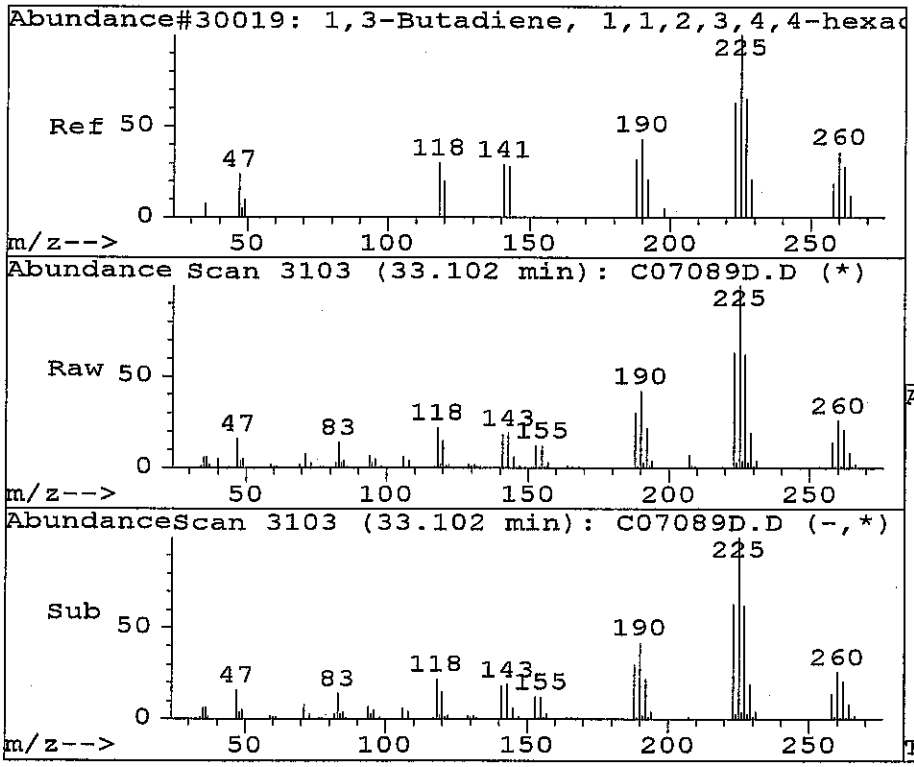


#87
Naphthalene
Concen: 0.08 ppbV
RT: 32.43 min Scan# 3034
Delta R.T. 0.02 min
Lab File: C07089D.D
Acq: 8 Jul 109 12:18 pm

Tgt Ion:128 Resp: 150242

Ion	Ratio	Lower	Upper
128	100		
127	13.3	10.4	15.6
102	8.7	9.2	13.8#
64	7.1	5.7	8.5

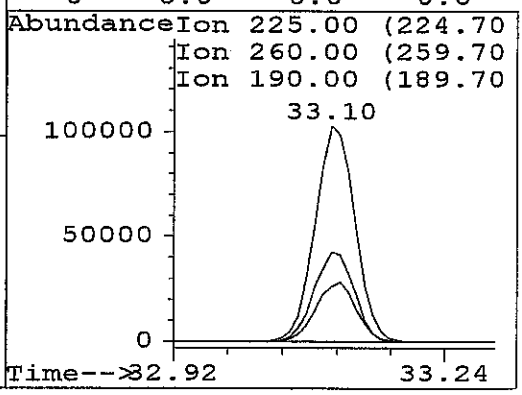


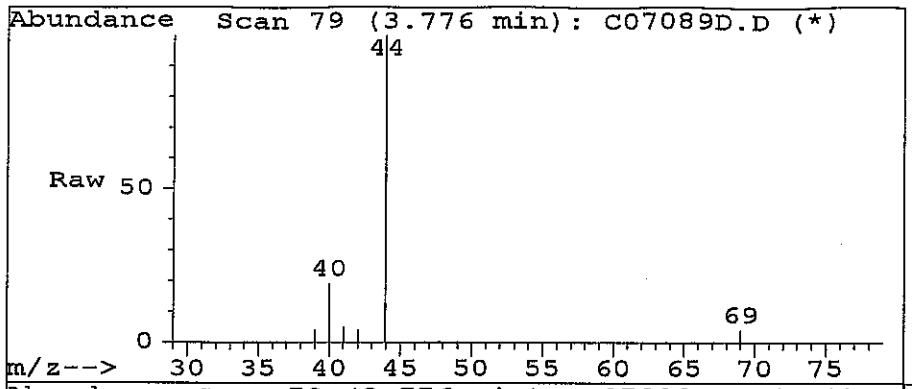


#88
Hexachlorobutadiene
Concen: 0.39 ppbV
RT: 33.10 min Scan# 3103
Delta R.T. 0.02 min
Lab File: C07089D.D
Acq: 8 Jul 109 12:18 pm

Tgt Ion:225 Resp: 334843

Ion	Ratio	Lower	Upper
225	100		
260	25.5	22.2	33.2
190	41.5	33.6	50.4
0	0.0	0.0	0.0

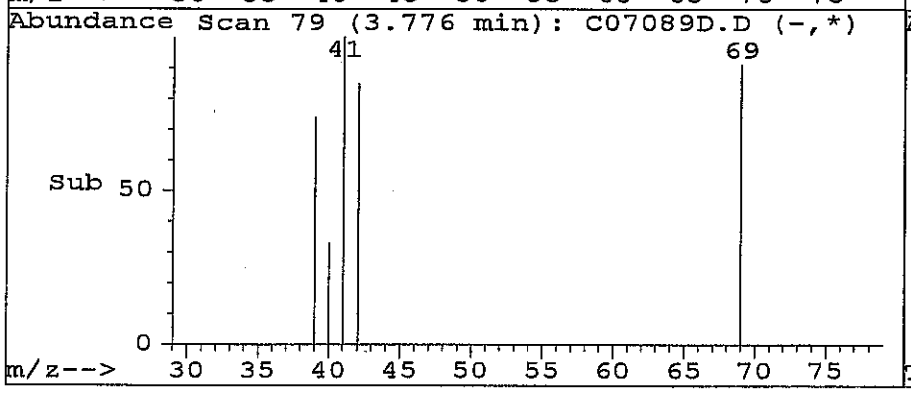


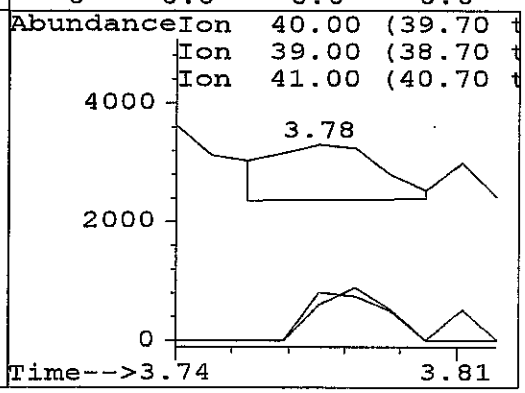


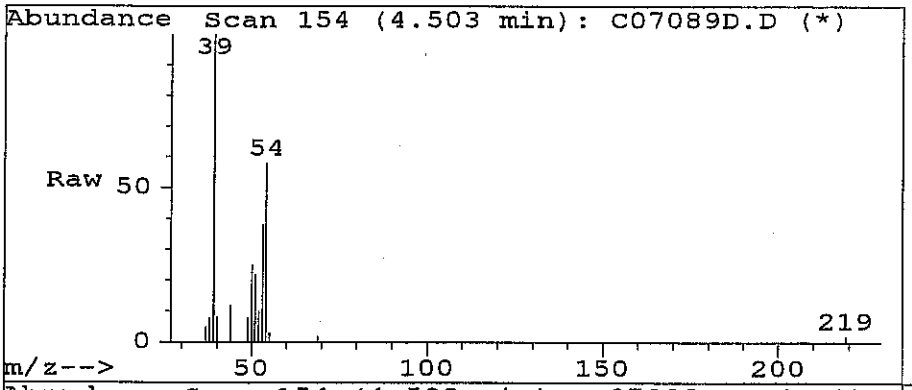
#89
Propylene
Concen: 0.11 ppbV
RT: 3.78 min Scan# 79
Delta R.T. 0.02 min
Lab File: C07089D.D
Acq: 8 Jul 109 12:18 pm

Tgt Ion:40 Resp: 1845

Ion	Ratio	Lower	Upper
40	100		
39	80.0	238.9	358.3#
41	64.9	310.2	465.4#
0	0.0	0.0	0.0



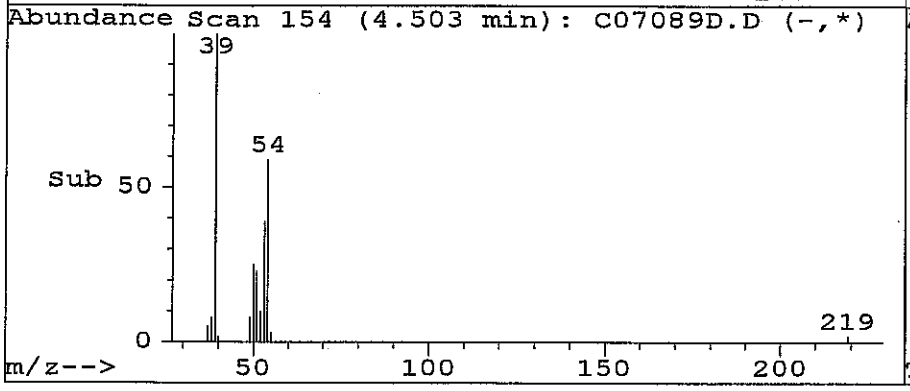


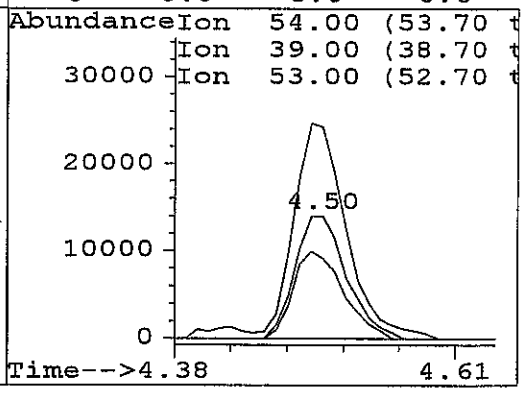


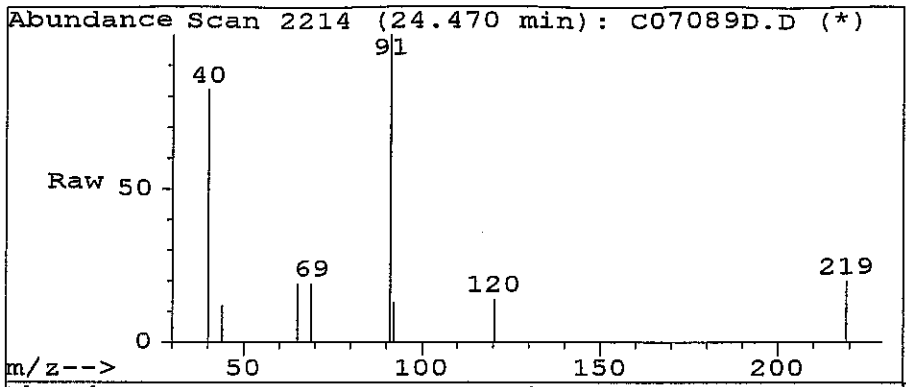
#90
1,3-Butadiene
Concen: 0.88 ppbV
RT: 4.50 min Scan# 154
Delta R.T. 0.03 min
Lab File: C07089D.D
Acq: 8 Jul 109 12:18 pm

Tgt Ion:54 Resp: 41942

Ion	Ratio	Lower	Upper
54	100		
39	179.2	135.9	203.9
53	69.8	59.0	88.4
0	0.0	0.0	0.0



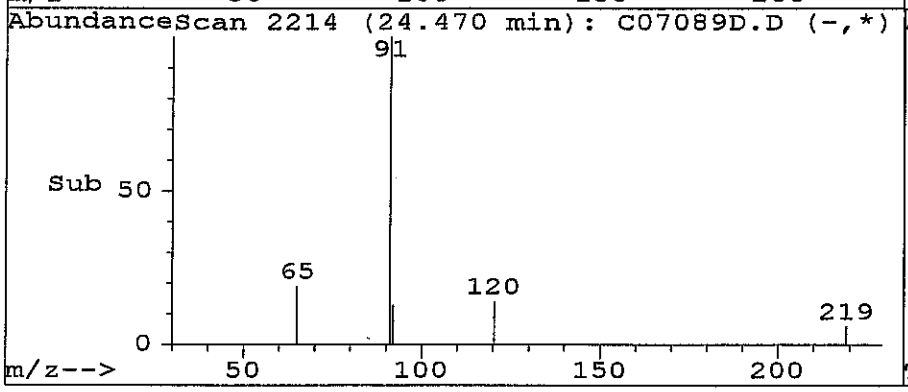


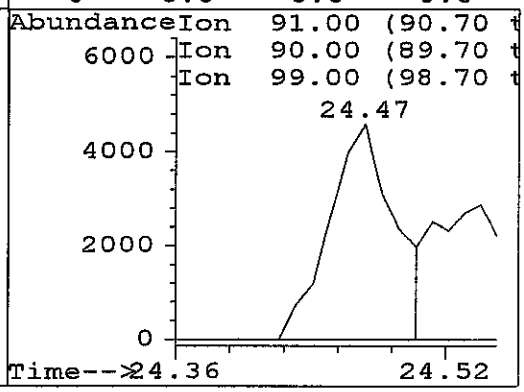


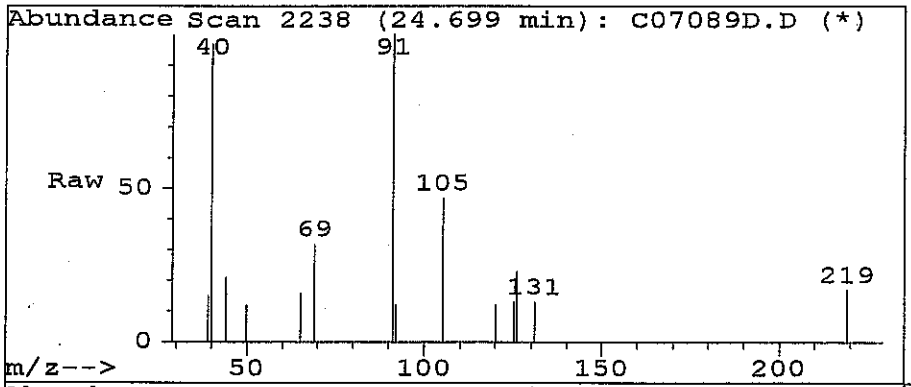
#92
2-Chlorotoluene
Concen: 0.02 ppbV
RT: 24.47 min Scan# 2214
Delta R.T. 0.01 min
Lab File: C07089D.D
Acq: 8 Jul 109 12:18 pm

Tgt Ion:91 Resp: 12056

Ion	Ratio	Lower	Upper
91	100		
90	0.0	7.0	10.4#
99	0.0	1.8	2.8#
0	0.0	0.0	0.0



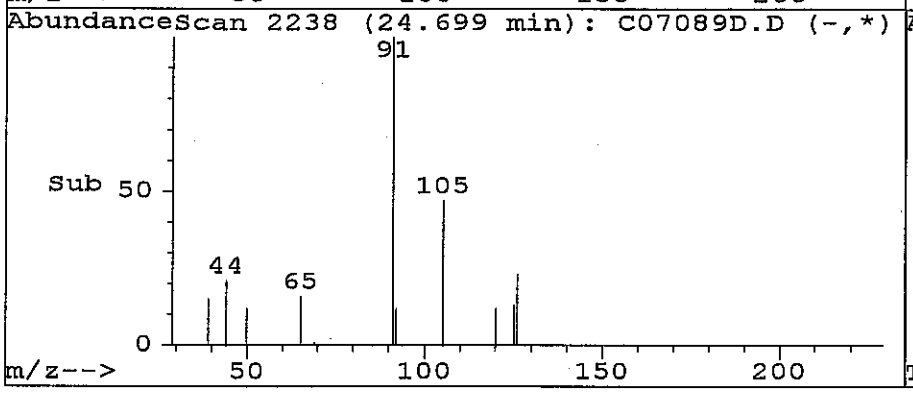


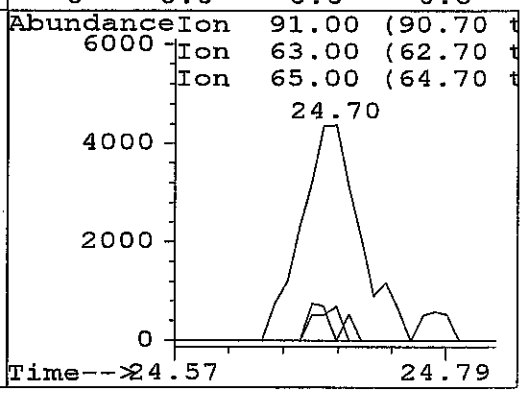


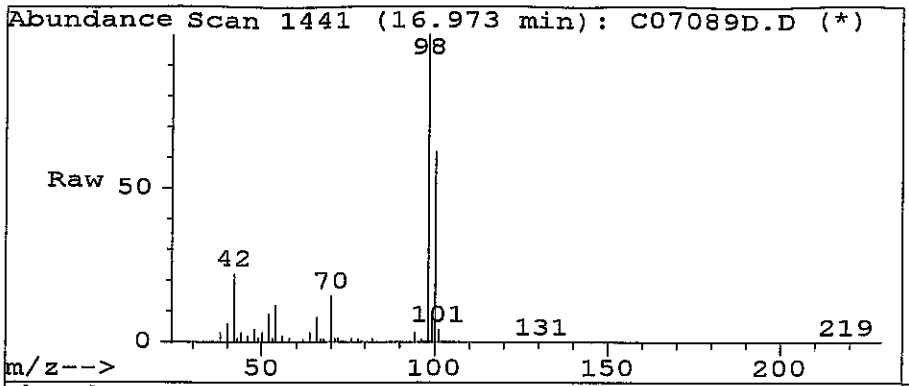
#93
4-Chlorotoluene
Concen: 0.02 ppbV
RT: 24.70 min Scan# 2238
Delta R.T. 0.05 min
Lab File: C07089D.D
Acq: 8 Jul 109 12:18 pm

Tgt Ion:91 Resp: 13993

Ion	Ratio	Lower	Upper
91	100		
63	8.1	10.6	16.0#
65	7.1	9.5	14.3#
0	0.0	0.0	0.0



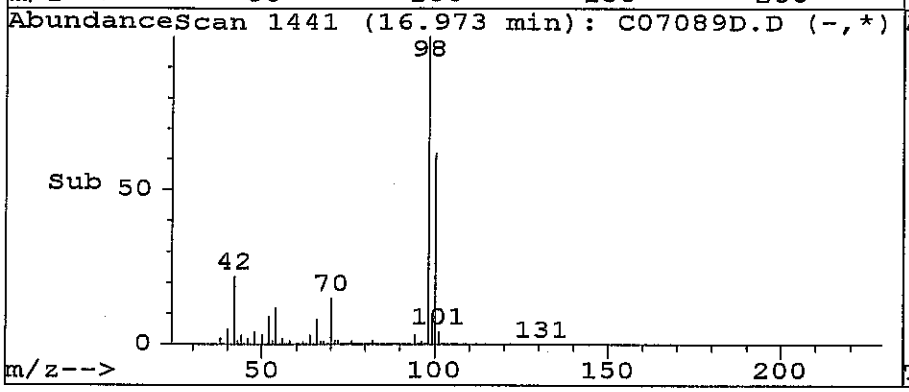


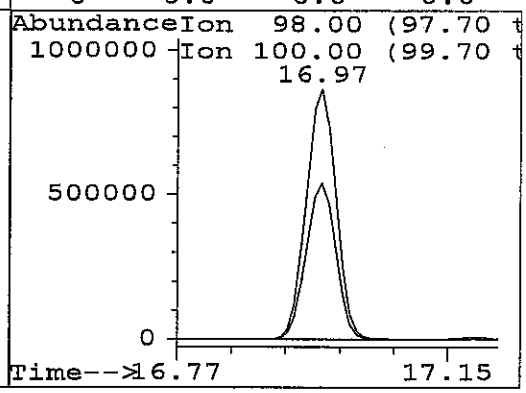


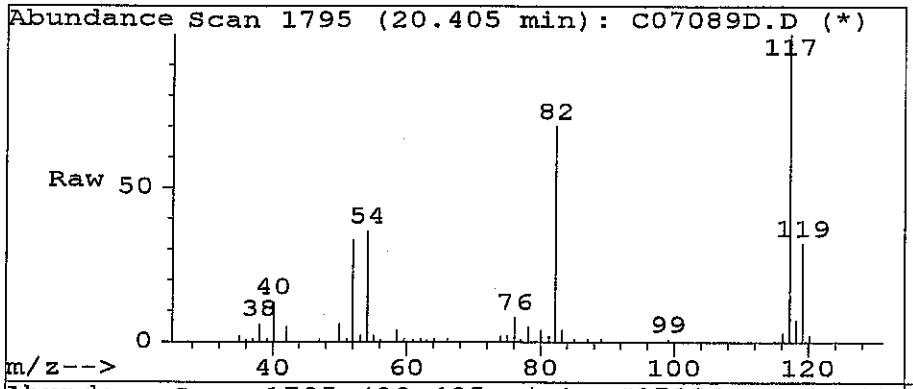
#94
Toluene-d8
Concen: 10.82 ppbV
RT: 16.97 min Scan# 1441
Delta R.T. 0.03 min
Lab File: C07089D.D
Acq: 8 Jul 109 12:18 pm

Tgt Ion:98 Resp: 2538702

Ion	Ratio	Lower	Upper
98	100		
100	62.2	51.4	77.2
0	0.0	0.0	0.0
0	0.0	0.0	0.0



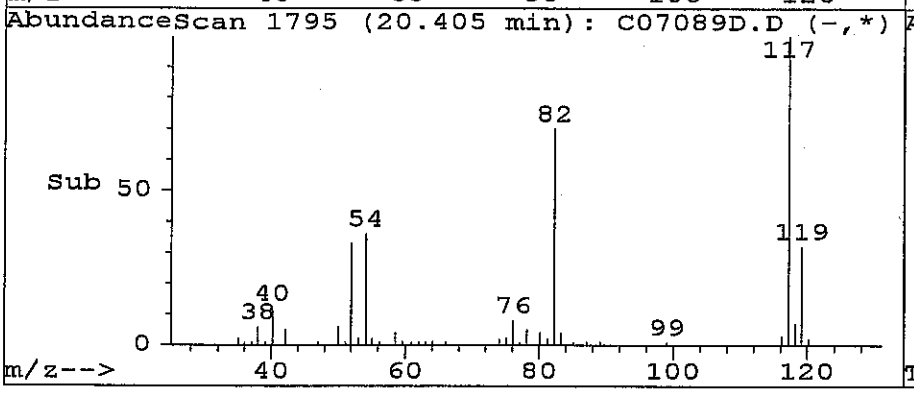


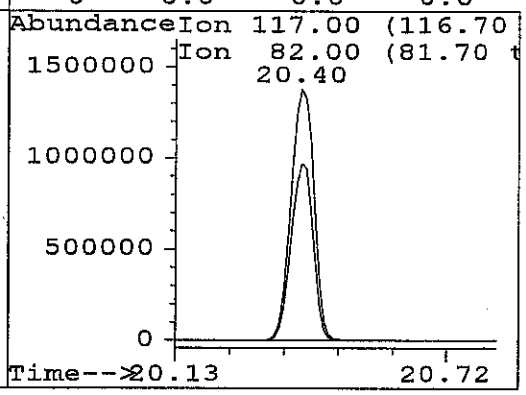


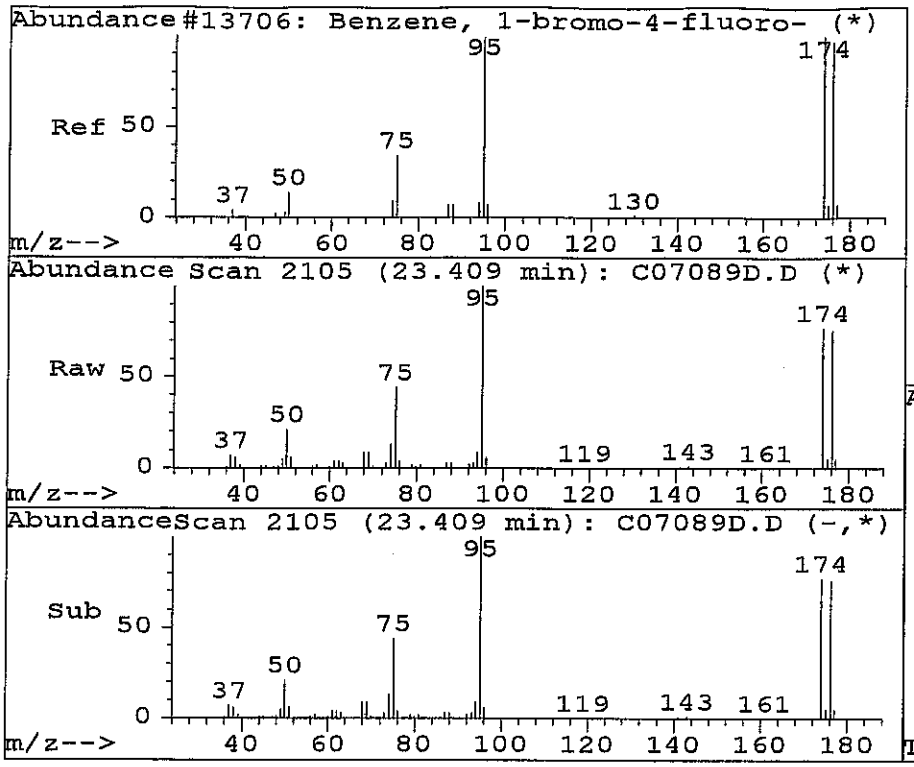
#95
Chlorobenzene-d5
Concen: 22.00 ppbV
RT: 20.40 min Scan# 1795
Delta R.T. 0.04 min
Lab File: C07089D.D
Acq: 8 Jul 109 12:18 pm

Tgt Ion:117 Resp: 4737894

Ion	Ratio	Lower	Upper
117	100		
82	70.3	55.7	83.5
0	0.0	0.0	0.0
0	0.0	0.0	0.0



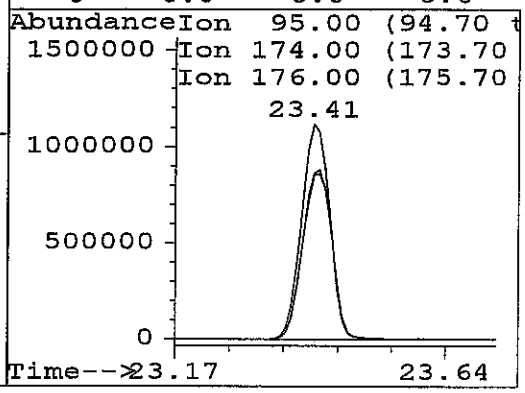




#96
1,4-Bromofluorobenzene
Concen: 11.23 ppbV
RT: 23.41 min Scan# 2105
Delta R.T. 0.03 min
Lab File: C07089D.D
Acq: 8 Jul 109 12:18 pm

Tgt Ion:95 Resp: 3782848

Ion	Ratio	Lower	Upper
95	100		
174	77.3	55.5	83.3
176	76.3	55.7	83.5
0	0.0	0.0	0.0



Quantitation Report

Data File : C:\MSCHEM\2\DATA\07089MS1\QC07089B.D
Acq Time : 8 Jul 109 1:05 pm
Sample : ST60421
Misc :
Quant Time: Jul 8 13:41 19109

Operator: JF
Inst : 5970 - In
Multiplr: 1.00

Method : C:\MSCHEM\2\METHODS\1T15EXAY.M
Title : EPA TO-15
Last Update : Tue Mar 17 14:18:15 2009
Response via : Multiple Level Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene	11.43	168	4516986	20.00	ppbV	0.05
35) 1,4-Difluorobenzene	13.22	114	4473387	20.00	ppbV	0.05
System Monitoring Compounds						%Recovery
94) Toluene-d8	16.97	98	2560394	10.18	ppbV	203.63%
95) Chlorobenzene-d5	20.40	117	4977743	21.57	ppbV	215.75%
96) 1,4-Bromofluorobenzene	23.40	95	4273337	11.84	ppbV	236.90%
Target Compounds						Qvalue
2) Dichlorodifluoromethane	3.86	85	133010	0.96	ppbV	98
3) Chloromethane	4.13	50	66980	0.76	ppbV	91
4) Freon 114	4.14	85	116210	0.79	ppbV	98
5) Vinyl chloride	4.38	62	44730	0.93	ppbV	95
6) Bromomethane	4.96	94	48423	1.01	ppbV	96
7) Chloroethane	5.16	64	27523	1.09	ppbV	89
8) Ethanol	5.37	45	5671	0.08	ppbV #	39
9) Acrolein	5.97	56	3795	0.16	ppbV #	66
10) Trichlorofluoromethane	6.00	101	161953	1.23	ppbV	100
11) Acetonitrile	6.03	41	4354	0.05	ppbV #	33
12) Acetone	6.13	43	6727	0.03	ppbV #	57
13) 2-propanol	6.29	45	1279	0.01	ppbV #	58
14) Methyl iodide	7.03	142	311	0.01	ppbV #	30
15) 1,1-Dichloroethene	6.94	61	116173	1.09	ppbV	98
16) Acrylonitrile	7.01	53	66113	1.10	ppbV #	94
17) Freon 113	7.21	151	106603	1.28	ppbV #	82
18) Allyl chloride	7.36	41	3492	0.03	ppbV #	19
19) Dichloromethane	7.37	84	49654	1.05	ppbV	97
23) Propionitrile	8.89	54	1292	0.02	ppbV #	66
24) 1,1-Dichloroethane	8.96	63	138927	1.01	ppbV	98
25) Vinyl acetate	10.38	43	295	0.00	ppbV #	81
28) Bromochloromethane	10.57	49	17178	0.11	ppbV #	35
29) Tetrahydrofuran	10.92	42	9826	0.02	ppbV #	97
32) cis-1,2-Dichloroethene	10.17	96	65410	0.92	ppbV	97
34) Chloroform	10.58	83	149505	0.91	ppbV	95
36) 1,1,1-Trichloroethane	11.86	97	158902	0.98	ppbV	97
37) 1,2-Dichloroethane	11.92	62	141379	0.93	ppbV	99
38) 1,1-Dichloropropene	12.28	75	287	0.00	ppbV #	44
40) Benzene	12.57	78	235151	0.89	ppbV	98
41) Carbon tetrachloride	12.62	117	167176	1.01	ppbV	97
43) 1,2-Dichloropropane	14.10	63	103260	1.01	ppbV	97
44) 1,4 Dioxane	14.48	88	1822	0.02	ppbV #	86
46) Trichloroethene	14.18	130	138111	1.08	ppbV	94
47) Bromodichloromethane	14.18	83	627	0.00	ppbV #	27
48) Methyl methacrylate	14.61	69	1226	0.01	ppbV #	1
49) Methyl Isobutyl Ketone	15.80	43	2097	0.00	ppbV #	56
50) cis-1,3-Dichloropropene	15.86	75	143140	0.90	ppbV	97
51) Toluene	17.14	91	395553	1.14	ppbV	99
52) trans-1,3-Dichloropropene	16.87	75	153496	0.81	ppbV	99
53) 1,1,2-Trichloroethane	17.19	61	102328	1.00	ppbV	97
54) 2-Hexanone	17.85	43	9342	0.02	ppbV #	83
58) 1,2-Dibromoethane	18.81	107	257800	1.03	ppbV #	99
59) Tetrachloroethene	19.01	166	245535	1.11	ppbV	92
60) Chlorobenzene	20.49	112	326213	1.01	ppbV	96
61) 1,1,1,2-Tetrachloroethane	20.61	131	1521	0.01	ppbV #	12
62) Ethylbenzene	21.01	91	563723	1.02	ppbV	99
63) m & p-Xylene	21.30	91	951129	2.04	ppbV	98

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

Quantitation Report

Data File : C:\MSCHEM\2\DATA\07089MS1\QC07089B.D
Acq Time : 8 Jul 109 1:05 pm
Sample : ST60421
Misc :
Quant Time: Jul 8 13:41 19109

Operator: JF
Inst : 5970 - In
Multiplr: 1.00

Method : C:\MSCHEM\2\METHODS\1T15EXAY.M
Title : EPA TO-15
Last Update : Tue Mar 17 14:18:15 2009
Response via : Multiple Level Calibration

	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
64)	Styrene	22.14	104	346179	1.04 ppbV		92
65)	Bromoform	22.06	173	4563	0.01 ppbV	#	81
66)	o-Xylene	22.26	91	495557	0.96 ppbV		97
67)	1,1,2,2-Tetrachloroethane	22.78	83	416790	0.88 ppbV		99
68)	1,2,3-Trichloropropane	23.11	110	326	0.00 ppbV	#	22
69)	t-1,4-Dichloro-2-butene	23.26	53	1688	0.01 ppbV	#	35
70)	n-Propylbenzene	24.53	91	5616	0.01 ppbV	#	65
71)	Isopropylbenzene	24.76	105	19760	0.03 ppbV	#	61
72)	4-Ethyltoluene	24.76	105	19760	0.02 ppbV	#	86
73)	1,3,5-Trimethylbenzene	24.92	105	683263	0.92 ppbV		99
74)	Methylstyrene	25.38	118	75655	0.22 ppbV		96
75)	tert-butyl benzene	25.87	119	81347	0.13 ppbV	#	88
76)	1,2,4-Trimethylbenzene	25.87	105	720685	1.05 ppbV	#	95
77)	sec-butylbenzene	26.46	105	10104	0.01 ppbV	#	90
78)	1,3-Dichlorobenzene	26.44	146	678519	1.23 ppbV		98
79)	Isopropyltoluene	26.85	119	14042	0.02 ppbV	#	86
80)	Benzyl chloride	26.60	91	11071	0.01 ppbV	#	80
81)	1,4-Dichlorobenzene	26.64	146	643008	1.12 ppbV		95
82)	n-Butylbenzene	27.91	91	23426	0.02 ppbV		98
83)	1,2-Dichlorobenzene	27.49	146	667316	1.05 ppbV		97
84)	1,2-Dibromo-3-chloropropan	29.00	75	38468	0.09 ppbV	#	38
85)	Tetraethyl lead	31.02	237	4754	0.01 ppbV	#	1
86)	1,2,4-Trichlorobenzene	32.05	180	1276646	1.08 ppbV		99
87)	Naphthalene	32.42	128	558702	0.28 ppbV		96
88)	Hexachlorobutadiene	33.10	225	1052570	1.16 ppbV		98
89)	Propylene	3.84	40	3748	0.20 ppbV	#	1
90)	1,3-Butadiene	4.50	54	40755	0.80 ppbV		91
92)	2-Chlorotoluene	24.53	91	5616	0.01 ppbV	#	79
93)	4-Chlorotoluene	24.74	91	1753	0.00 ppbV	#	68

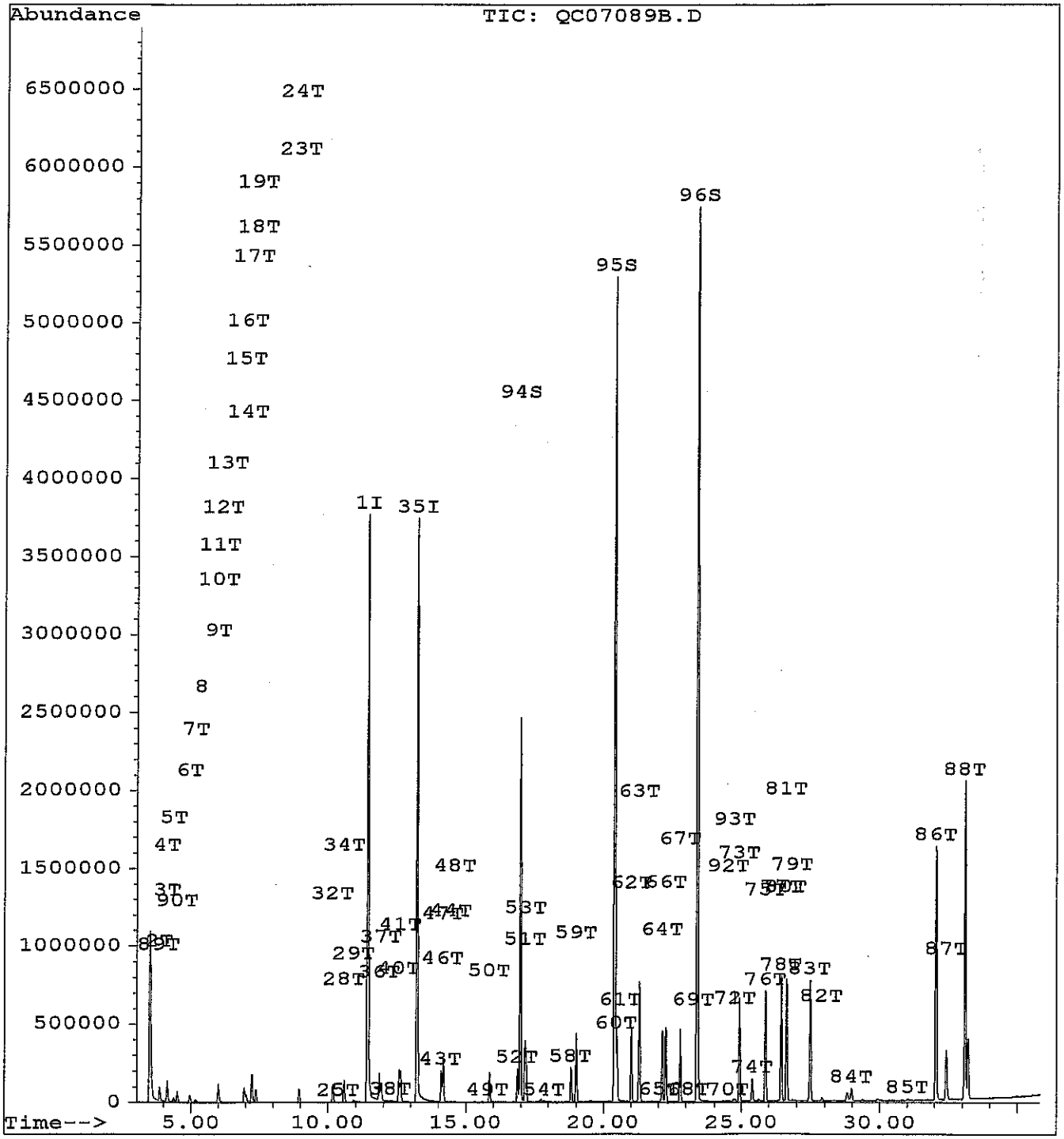
(#) = qualifier out of range (m) = manual integration

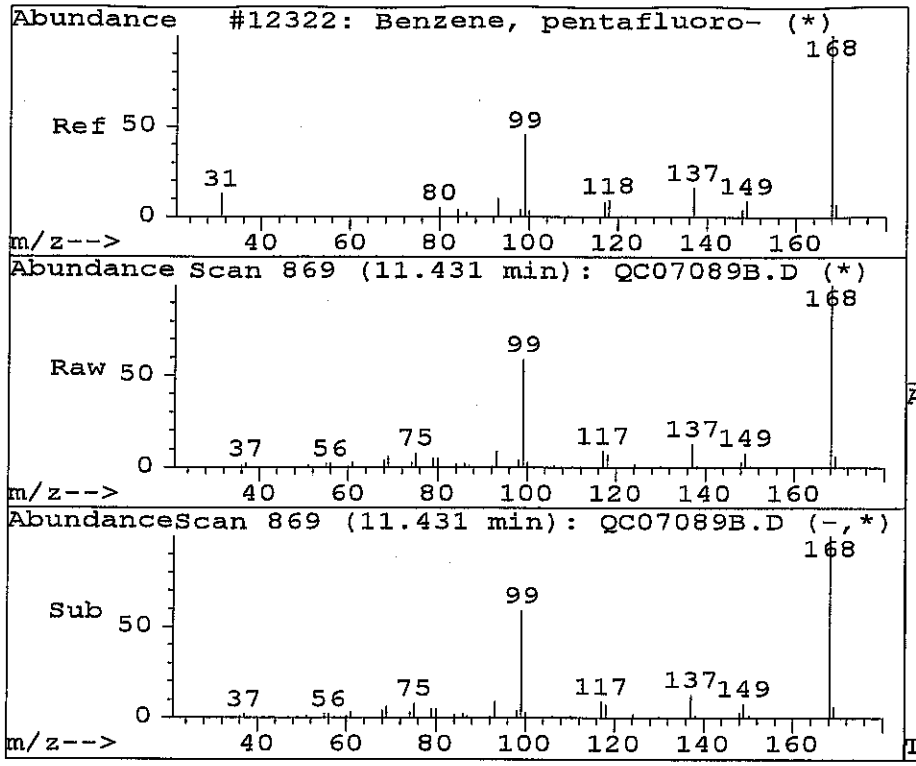
Quantitation Report

Data File : C:\MSCHEM\2\DATA\07089MS1\QC07089B.D
Acq Time : 8 Jul 109 1:05 pm
Sample : ST60421
Misc :
Quant Time: Jul 8 13:41 19109

Operator: JF
Inst : 5970 - In
Multiplr: 1.00

Method : C:\MSCHEM\2\METHODS\1T15EXAY.M
Title : EPA TO-15
Last Update : Tue Mar 17 14:18:15 2009
Response via : Multiple Level Calibration

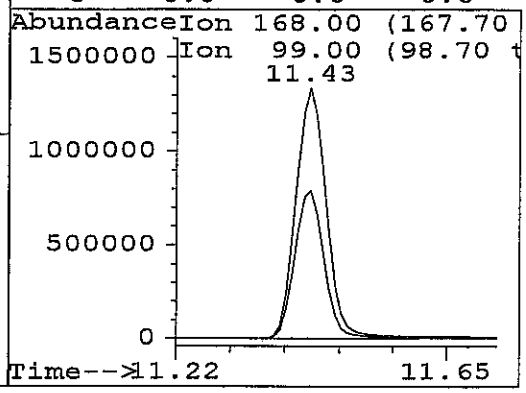


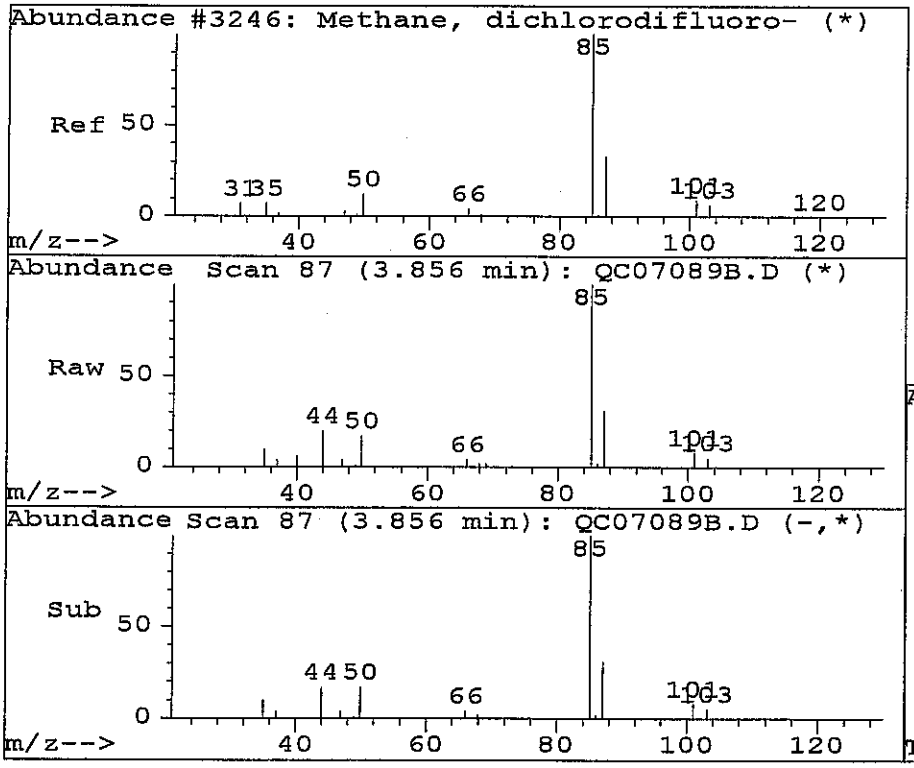


#1
Pentafluorobenzene
Concen: 20.00 ppbV
RT: 11.43 min Scan# 869
Delta R.T. 0.05 min
Lab File: QC07089B.D
Acq: 8 Jul 109 1:05 pm

Tgt Ion:168 Resp: 4516986

Ion	Ratio	Lower	Upper
168	100		
99	59.0	53.6	80.4
0	0.0	0.0	0.0
0	0.0	0.0	0.0

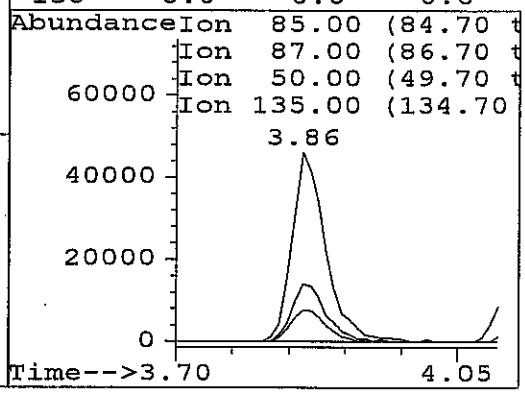


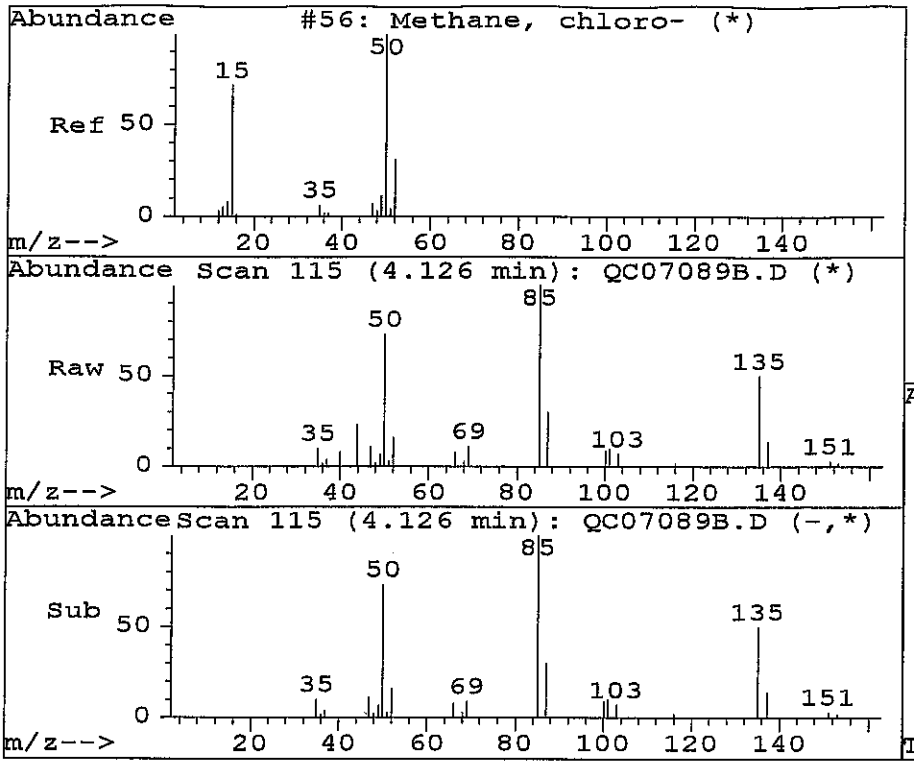


#2
Dichlorodifluoromethane
Concen: 0.96 ppbV
RT: 3.86 min Scan# 87
Delta R.T. 0.03 min
Lab File: QC07089B.D
Acq: 8 Jul 109 1:05 pm

Tgt Ion:85 Resp: 133010

Ion	Ratio	Lower	Upper
85	100		
87	30.5	24.9	37.3
50	16.5	14.9	22.3
135	0.0	0.0	0.0

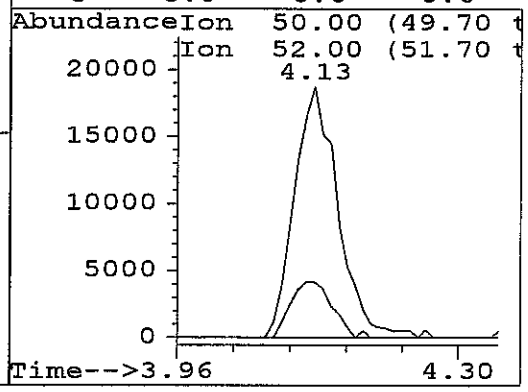


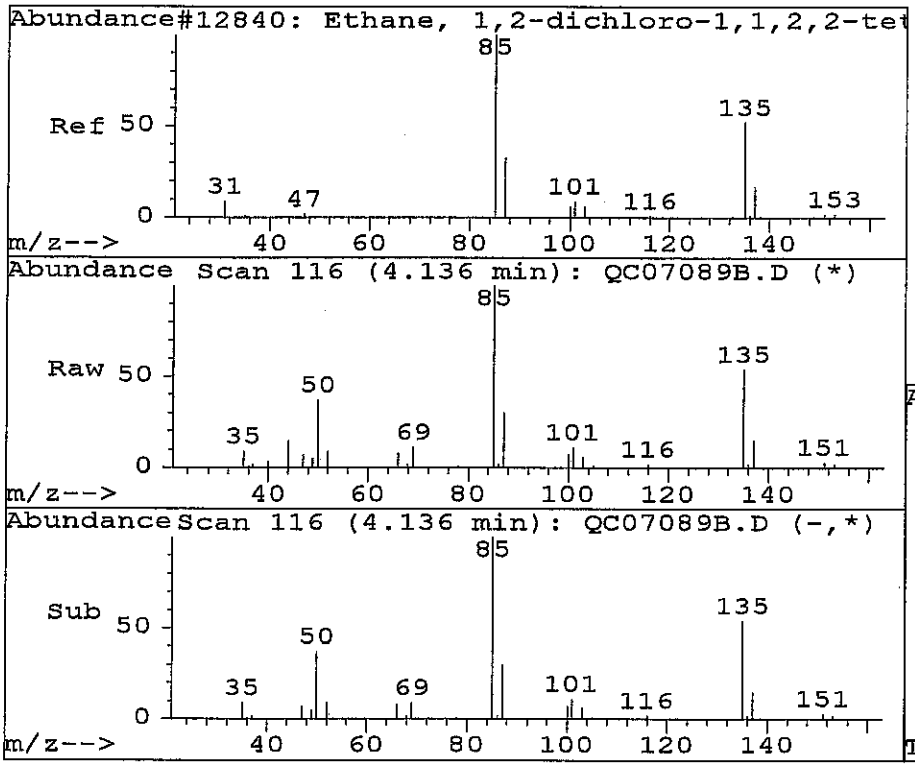


#3
Chloromethane
Concen: 0.76 ppbV
RT: 4.13 min Scan# 115
Delta R.T. 0.04 min
Lab File: QC07089B.D
Acq: 8 Jul 109 1:05 pm

Tgt Ion:50 Resp: 66980

Ion	Ratio	Lower	Upper
50	100		
52	22.3	21.5	32.3
0	0.0	0.0	0.0
0	0.0	0.0	0.0

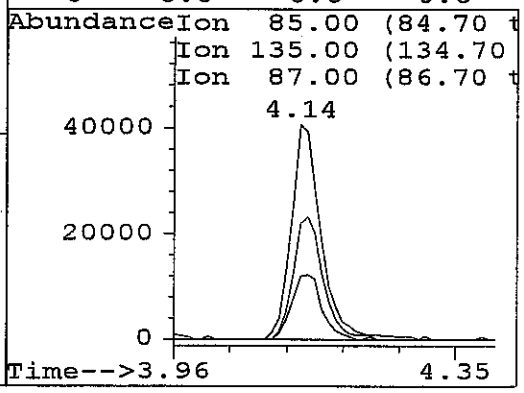


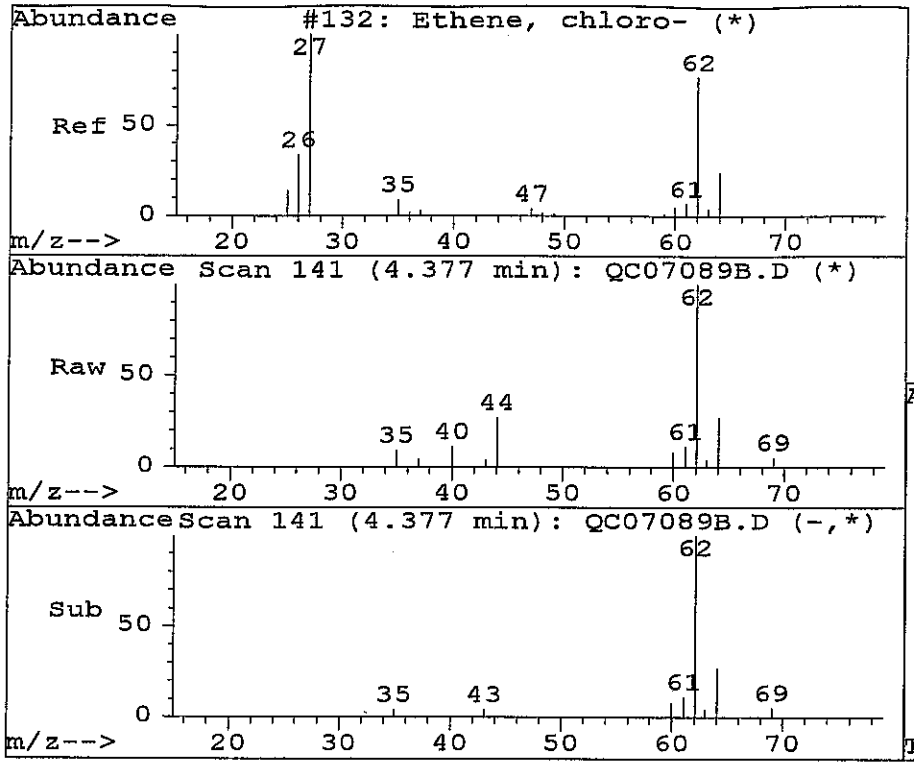


#4
Freon 114
Concen: 0.79 ppbV
RT: 4.14 min Scan# 116
Delta R.T. 0.03 min
Lab File: QC07089B.D
Acq: 8 Jul 109 1:05 pm

Tgt Ion:85 Resp: 116210

Ion	Ratio	Lower	Upper
85	100		
135	53.9	43.5	65.3
87	29.6	26.1	39.1
0	0.0	0.0	0.0

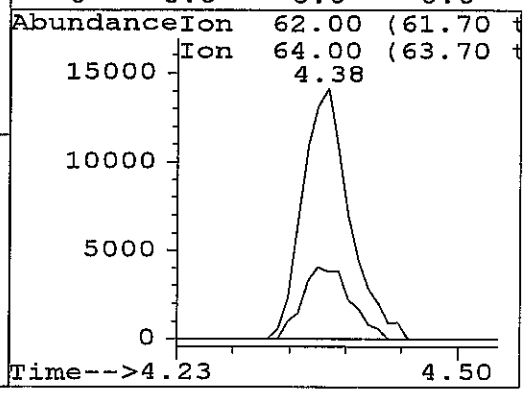


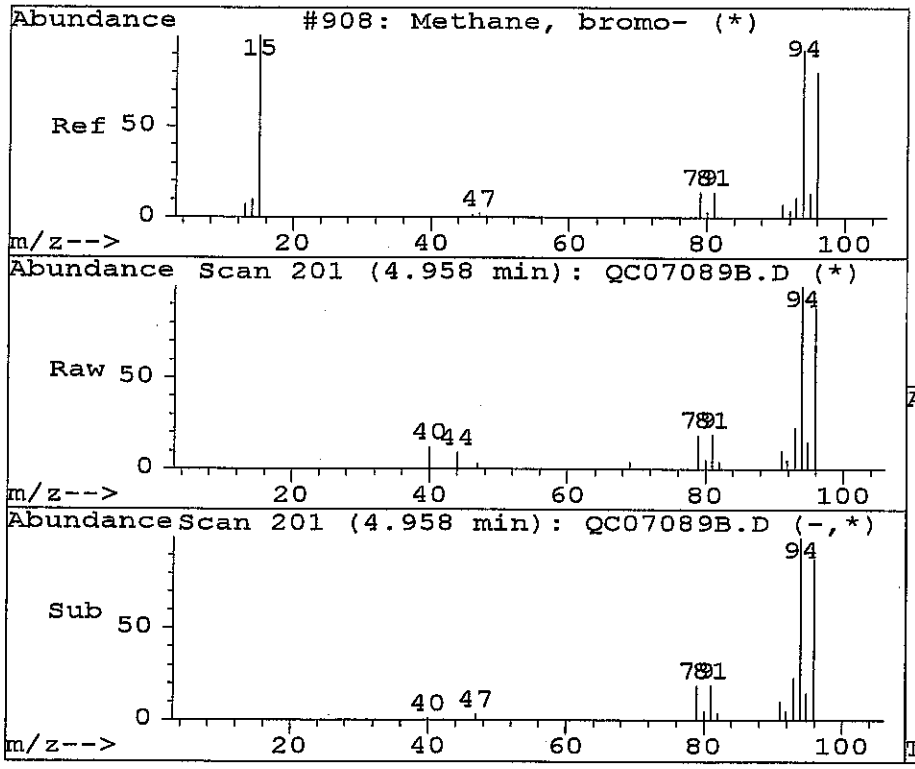


#5
Vinyl chloride
Concen: 0.93 ppbV
RT: 4.38 min Scan# 141
Delta R.T. 0.05 min
Lab File: QC07089B.D
Acq: 8 Jul 109 1:05 pm

Tgt Ion:62 Resp: 44730

Ion	Ratio	Lower	Upper
62	100		
64	27.1	23.8	35.8
0	0.0	0.0	0.0
0	0.0	0.0	0.0

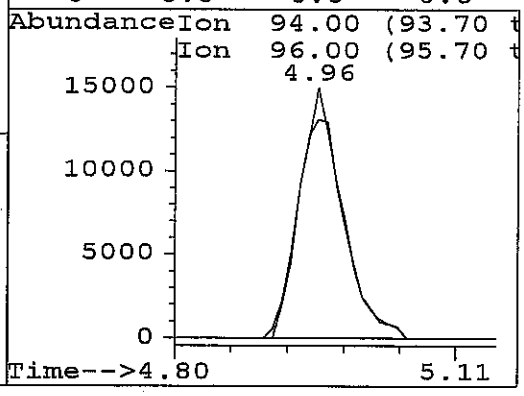


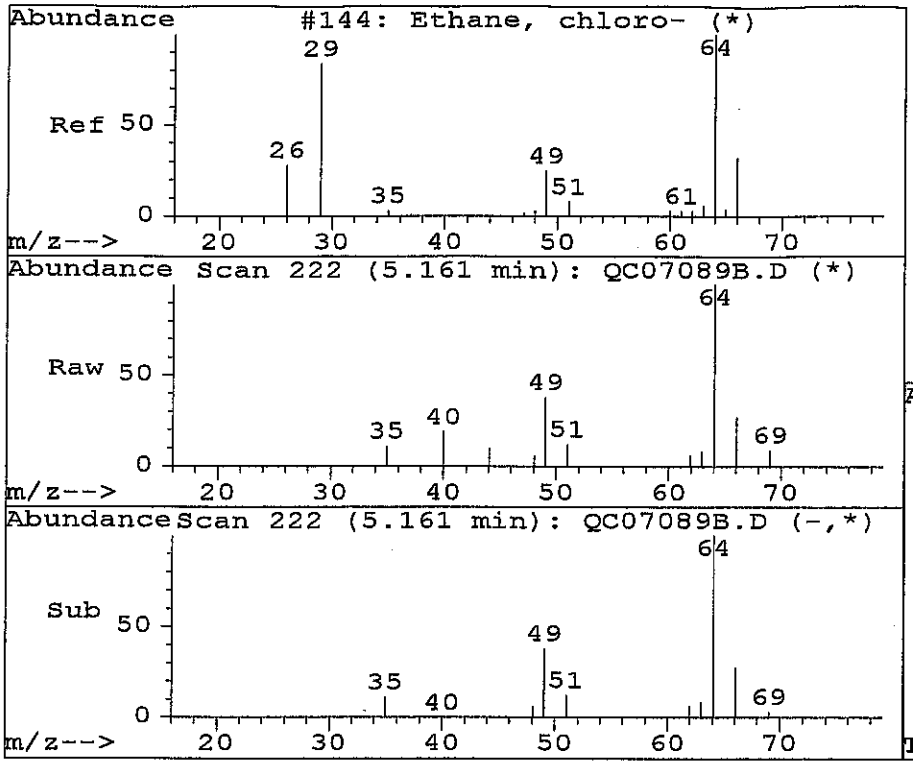


#6
Bromomethane
Concen: 1.01 ppbV
RT: 4.96 min Scan# 201
Delta R.T. 0.04 min
Lab File: QC07089B.D
Acq: 8 Jul 109 1:05 pm

Tgt Ion:94 Resp: 48423

Ion	Ratio	Lower	Upper
94	100		
96	87.6	73.0	109.4
0	0.0	0.0	0.0
0	0.0	0.0	0.0

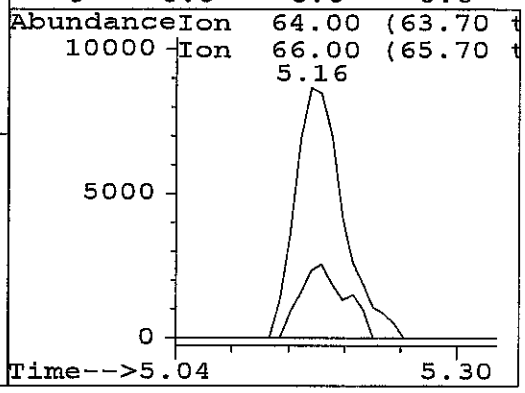


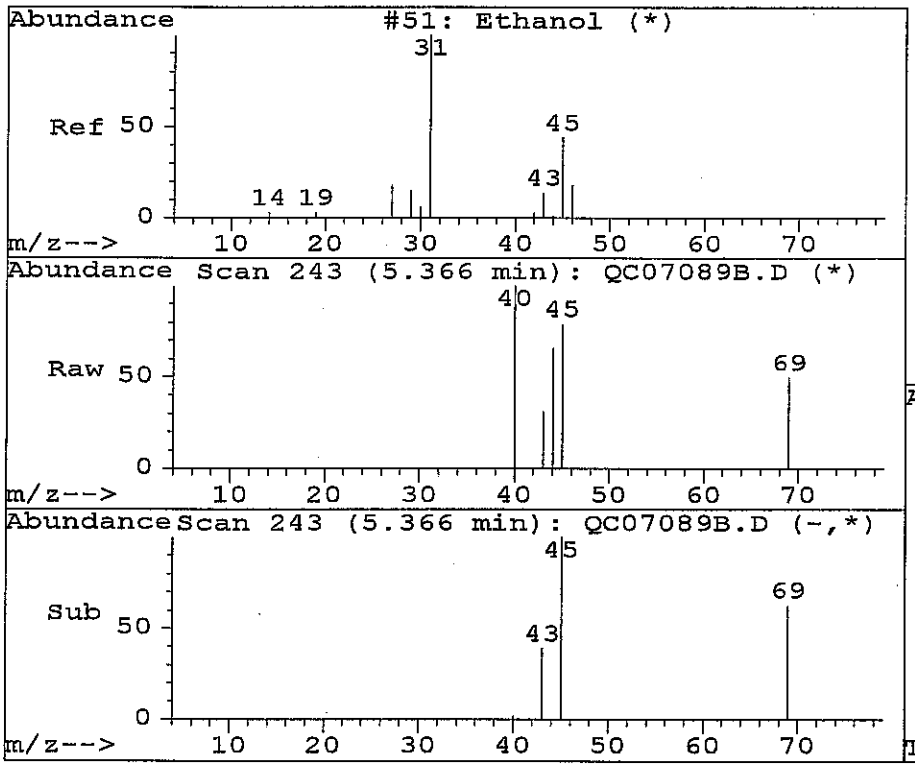


#7
Chloroethane
Concen: 1.09 ppbV
RT: 5.16 min Scan# 222
Delta R.T. 0.04 min
Lab File: QC07089B.D
Acq: 8 Jul 109 1:05 pm

Tgt Ion:64 Resp: 27523

Ion	Ratio	Lower	Upper
64	100		
66	27.0	26.4	39.6
0	0.0	0.0	0.0
0	0.0	0.0	0.0

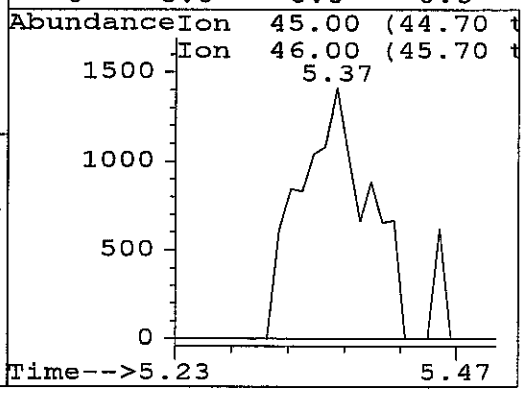


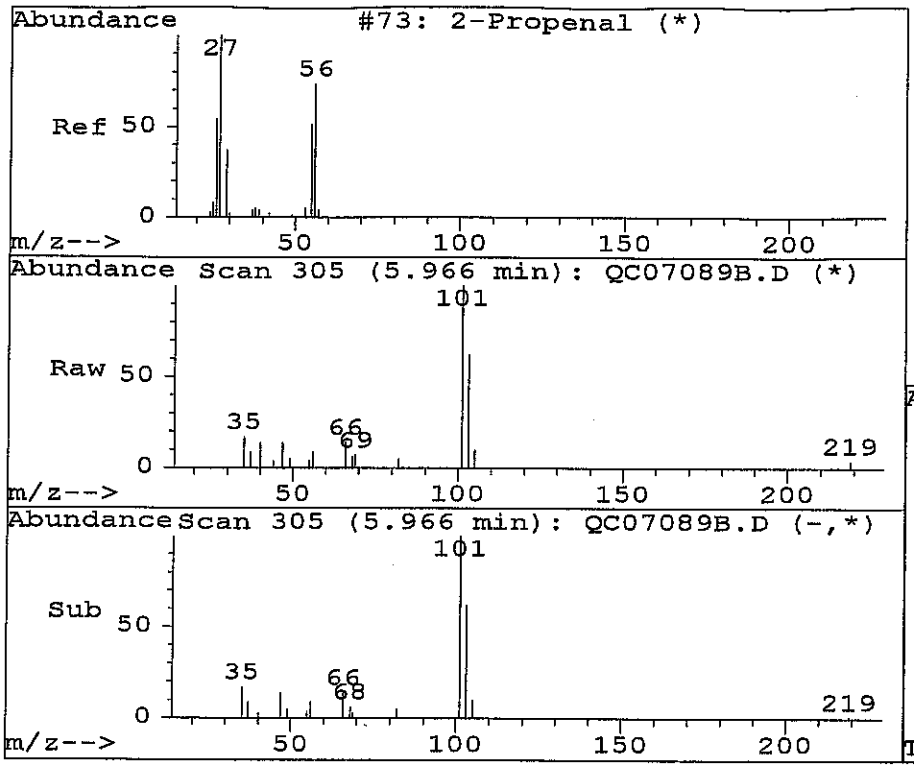


#8
Ethanol
Concen: 0.08 ppbV
RT: 5.37 min Scan# 243
Delta R.T. 0.17 min
Lab File: QC07089B.D
Acq: 8 Jul 109 1:05 pm

Tgt Ion:45 Resp: 5671

Ion	Ratio	Lower	Upper
45	100		
46	0.0	28.5	42.7#
0	0.0	0.0	0.0
0	0.0	0.0	0.0

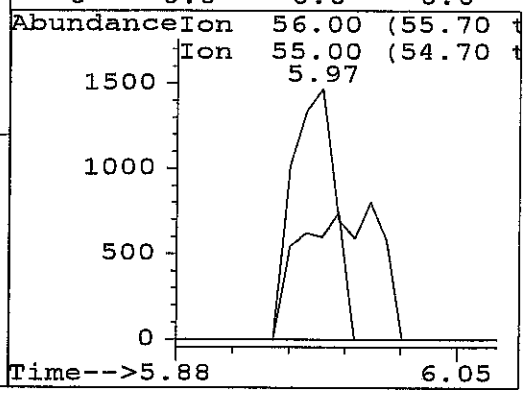


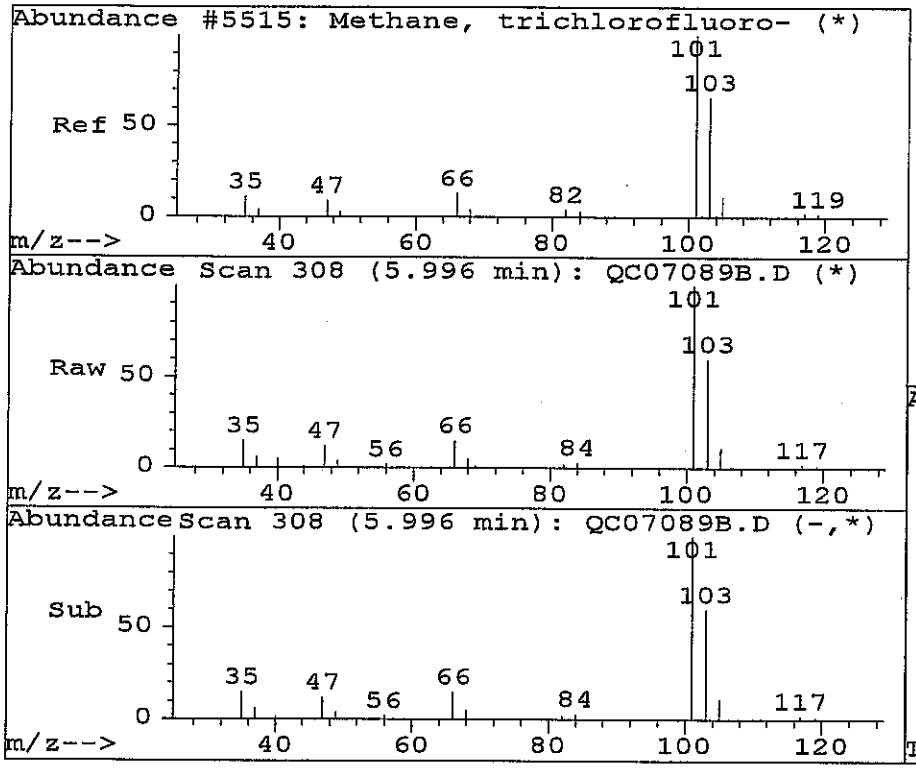


#9
Acrolein
Concen: 0.16 ppbV
RT: 5.97 min Scan# 305
Delta R.T. 0.08 min
Lab File: QC07089B.D
Acq: 8 Jul 109 1:05 pm

Tgt Ion:56 Resp: 3795

Ion	Ratio	Lower	Upper
56	100		
55	40.7	54.2	81.4#
0	0.0	0.0	0.0
0	0.0	0.0	0.0

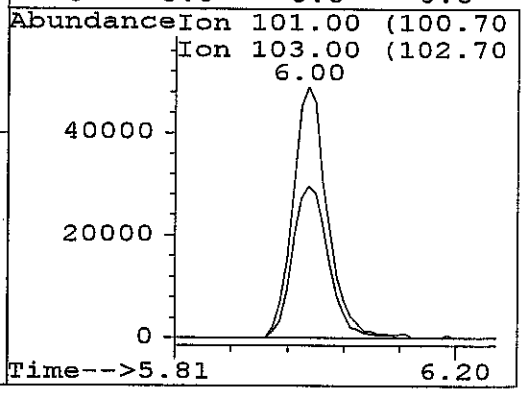


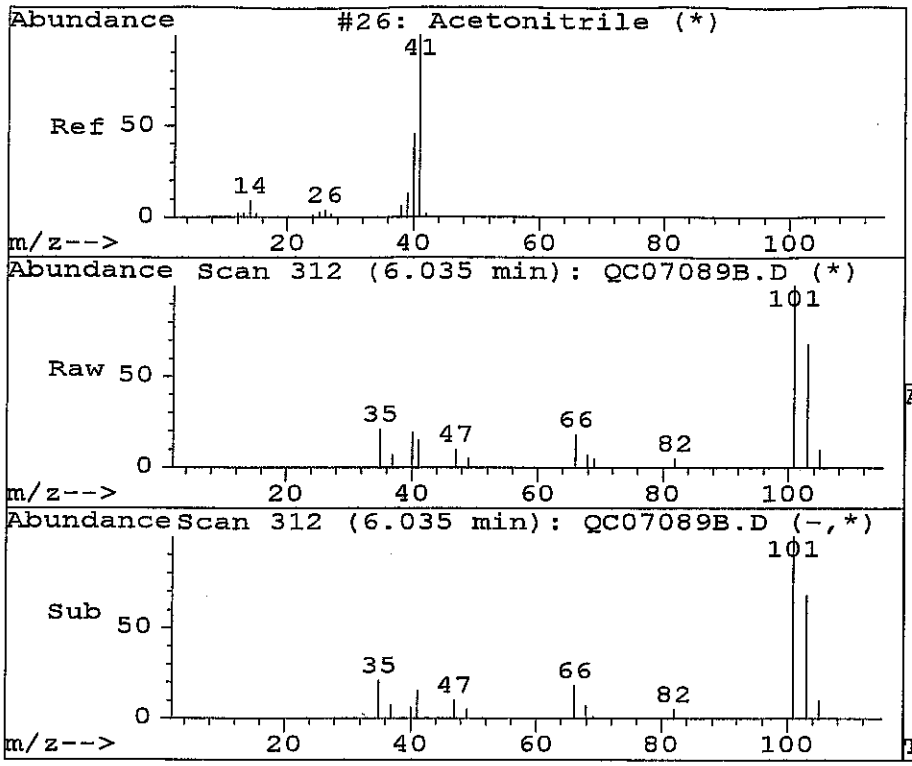


#10
Trichlorofluoromethane
Concen: 1.23 ppbV
RT: 6.00 min Scan# 308
Delta R.T. 0.06 min
Lab File: QC07089B.D
Acq: 8 Jul 109 1:05 pm

Tgt Ion:101 Resp: 161953

Ion	Ratio	Lower	Upper
101	100		
103	60.4	48.4	72.6
0	0.0	0.0	0.0
0	0.0	0.0	0.0

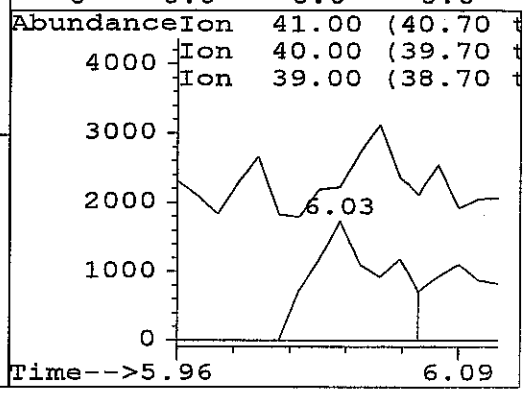


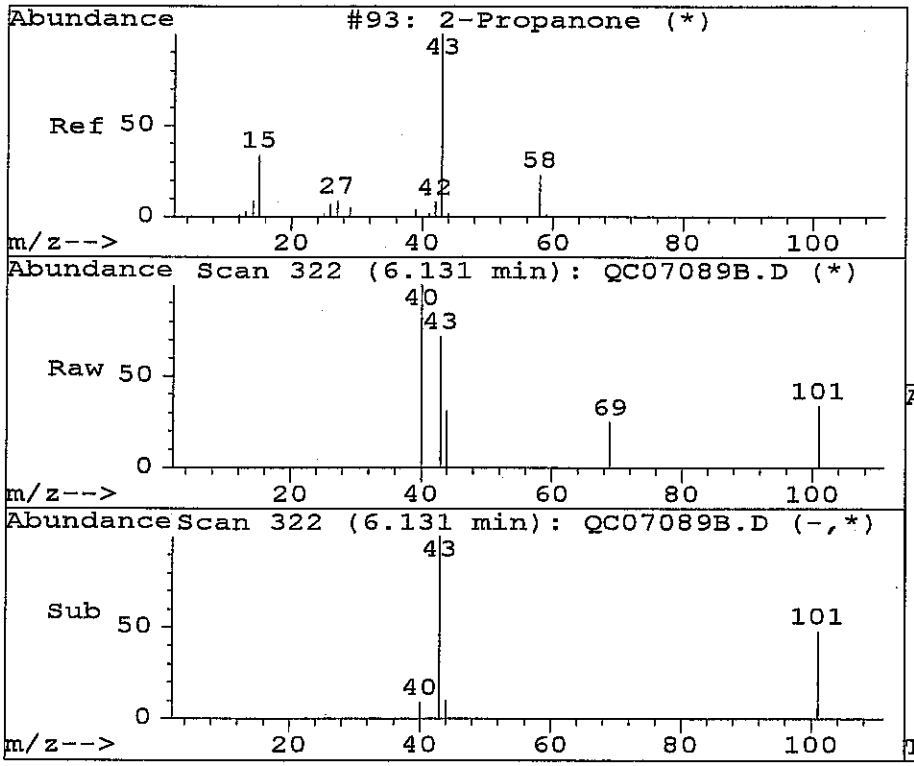


#11
Acetonitrile
Concen: 0.05 ppbV
RT: 6.03 min Scan# 312
Delta R.T. 0.07 min
Lab File: QC07089B.D
Acq: 8 Jul 109 1:05 pm

Tgt Ion:41 Resp: 4354

Ion	Ratio	Lower	Upper
41	100		
40	0.0	42.9	64.3#
39	0.0	16.4	24.6#
0	0.0	0.0	0.0

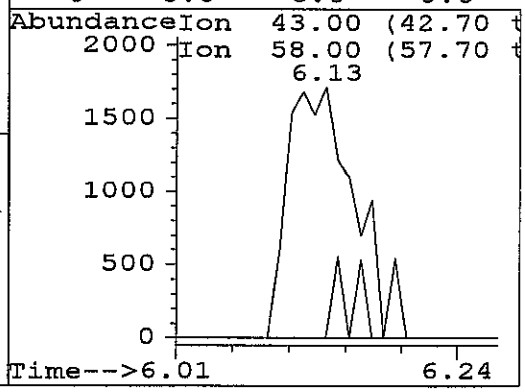


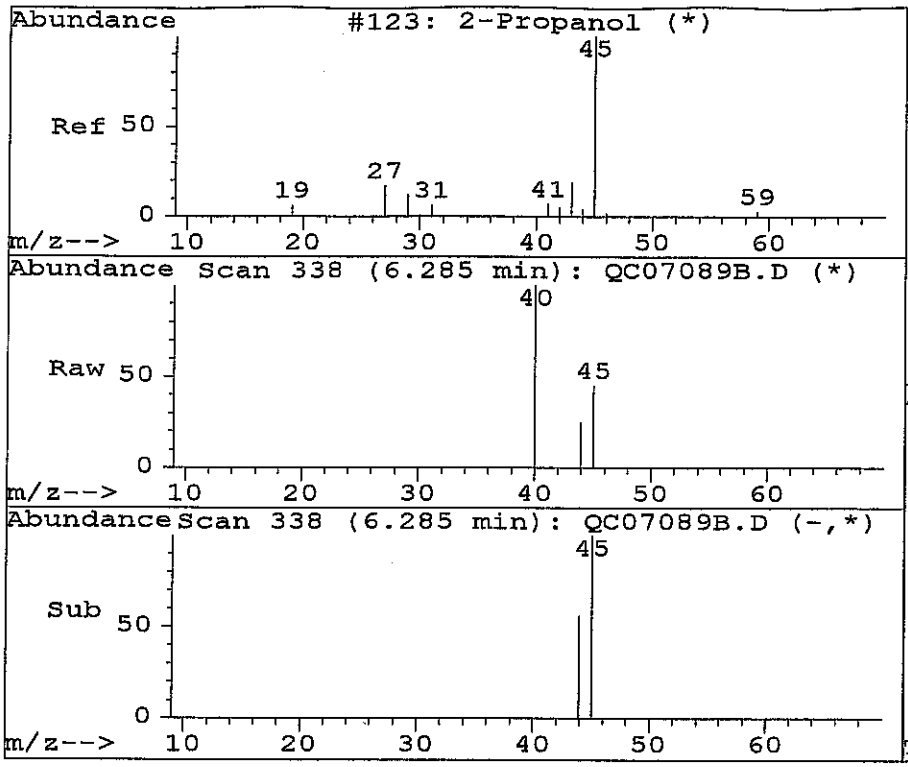


#12
Acetone
Concen: 0.03 ppbV
RT: 6.13 min Scan# 322
Delta R.T. 0.09 min
Lab File: QC07089B.D
Acq: 8 Jul 109 1:05 pm

Tgt Ion:43 Resp: 6727

Ion	Ratio	Lower	Upper
43	100		
58	0.0	15.7	23.5#
0	0.0	0.0	0.0
0	0.0	0.0	0.0

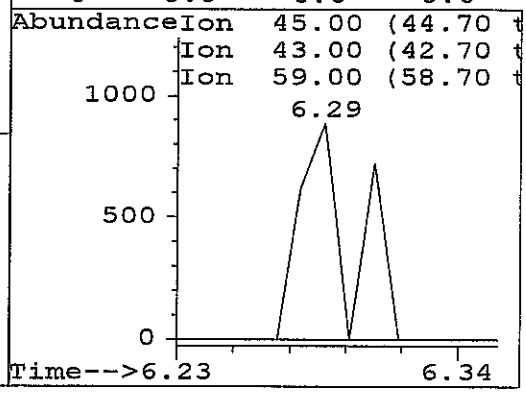


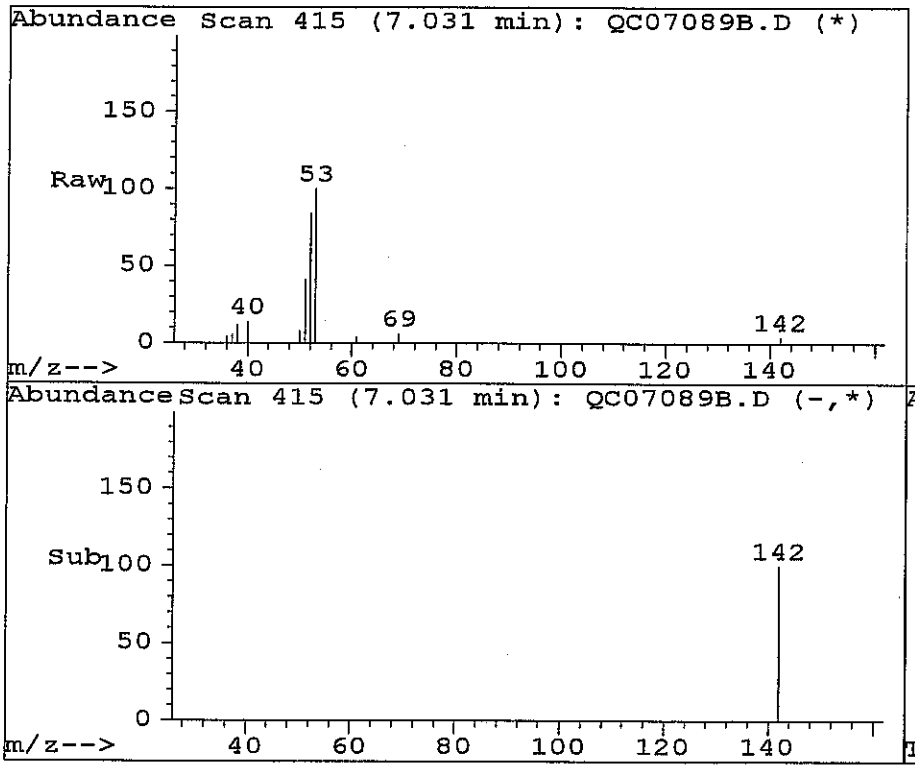


#13
2-propanol
Concen: 0.01 ppbV
RT: 6.29 min Scan# 338
Delta R.T. 0.15 min
Lab File: QC07089B.D
Acq: 8 Jul 109 1:05 pm

Tgt Ion:45 Resp: 1279

Ion	Ratio	Lower	Upper
45	100		
43	0.0	18.2	27.2#
59	0.0	2.6	3.8#
0	0.0	0.0	0.0

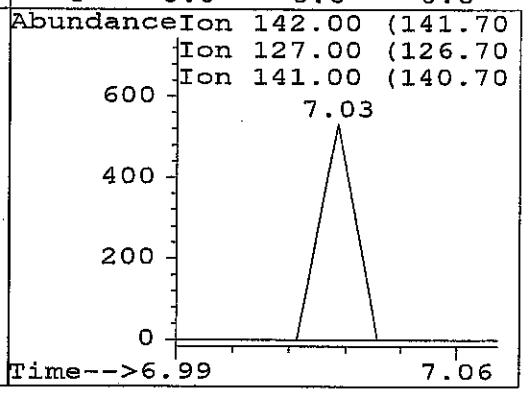


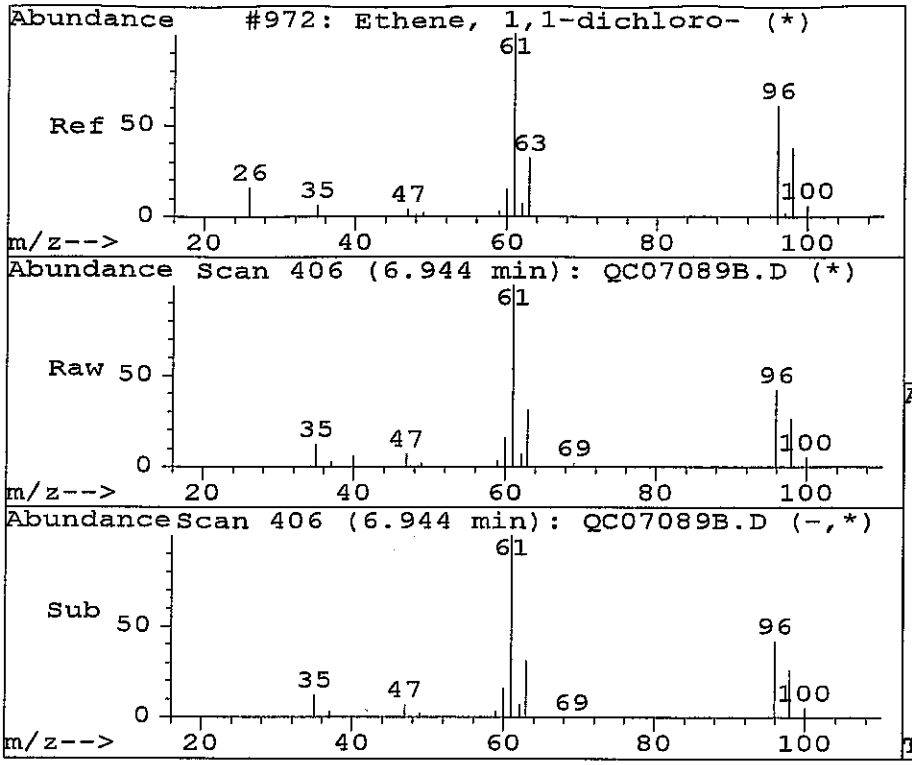


#14
Methyl iodide
Concen: 0.01 ppbV
RT: 7.03 min Scan# 415
Delta R.T. 0.04 min
Lab File: QC07089B.D
Acq: 8 Jul 109 1:05 pm

Tgt Ion:142 Resp: 311

Ion	Ratio	Lower	Upper
142	100		
127	0.0	46.6	69.8#
141	0.0	12.4	18.6#
0	0.0	0.0	0.0

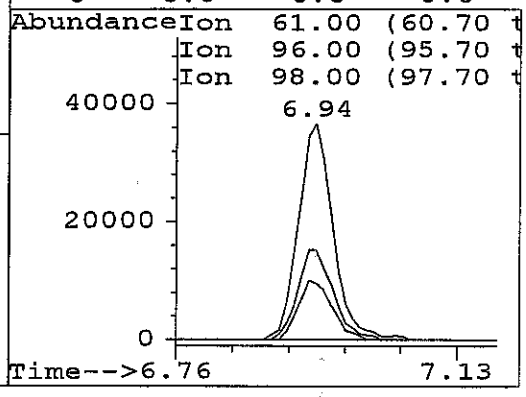


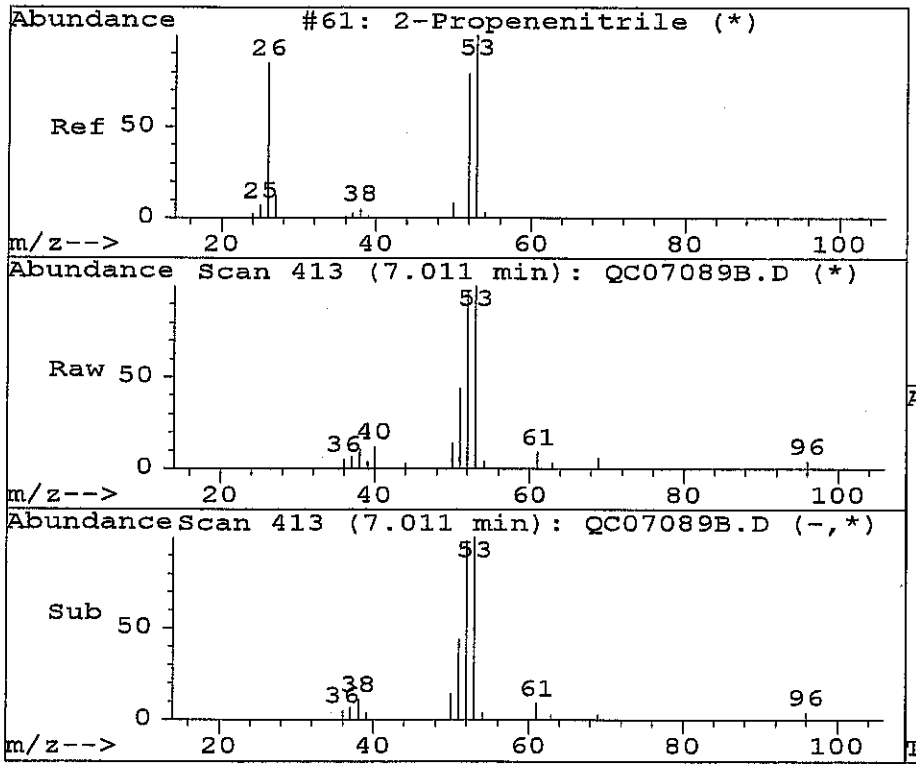


#15
1,1-Dichloroethene
Concen: 1.09 ppbV
RT: 6.94 min Scan# 406
Delta R.T. 0.05 min
Lab File: QC07089B.D
Acq: 8 Jul 109 1:05 pm

Tgt Ion:61 Resp: 116173

Ion	Ratio	Lower	Upper
61	100		
96	41.6	34.1	51.1
98	26.1	21.7	32.5
0	0.0	0.0	0.0

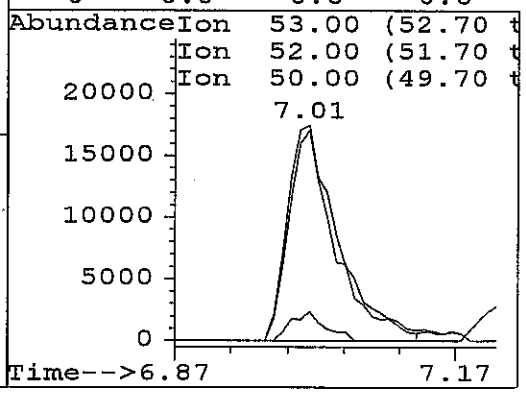


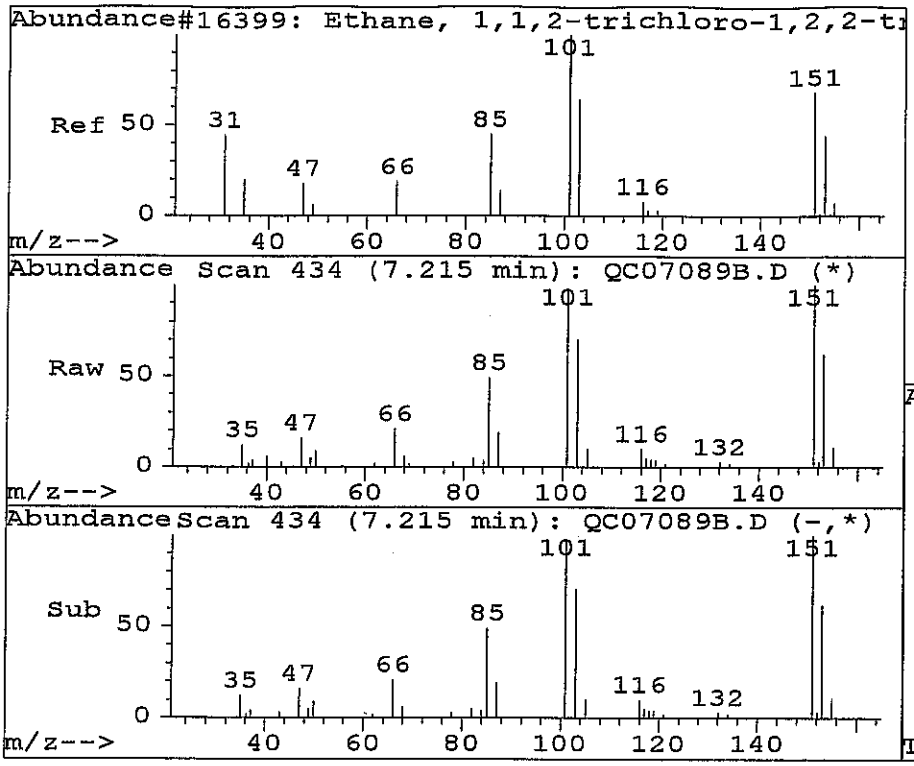


#16
Acrylonitrile
Concen: 1.10 ppbV
RT: 7.01 min Scan# 413
Delta R.T. 0.05 min
Lab File: QC07089B.D
Acq: 8 Jul 109 1:05 pm

Tgt Ion:53 Resp: 66113

Ion	Ratio	Lower	Upper
53	100		
52	96.7	73.0	109.4
50	13.8	8.3	12.5#
0	0.0	0.0	0.0

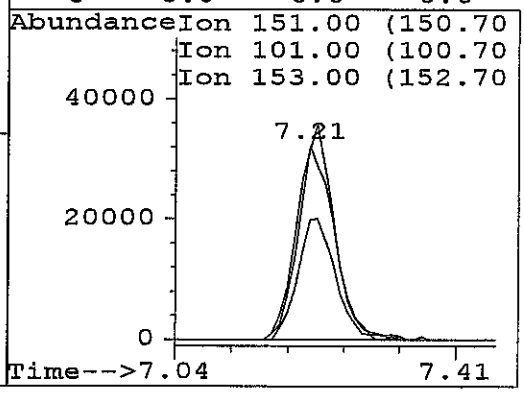


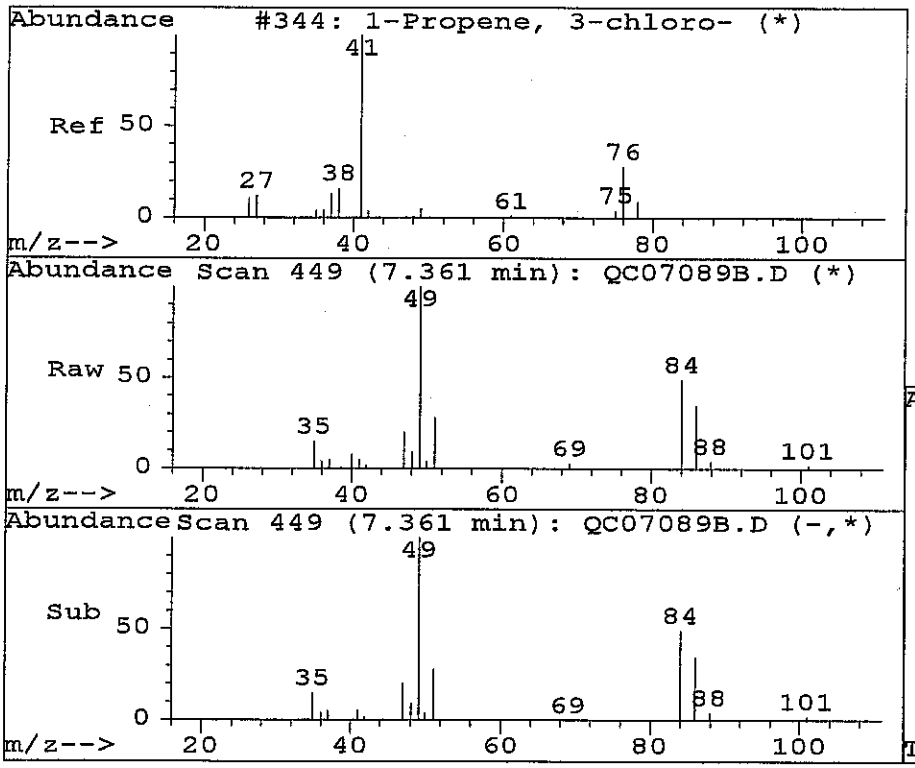


#17
Freon 113
Concen: 1.28 ppbV
RT: 7.21 min Scan# 434
Delta R.T. 0.05 min
Lab File: QC07089B.D
Acq: 8 Jul 109 1:05 pm

Tgt Ion:151 Resp: 106603

Ion	Ratio	Lower	Upper
151	100		
101	98.1	101.3	151.9#
153	61.9	52.3	78.5
0	0.0	0.0	0.0

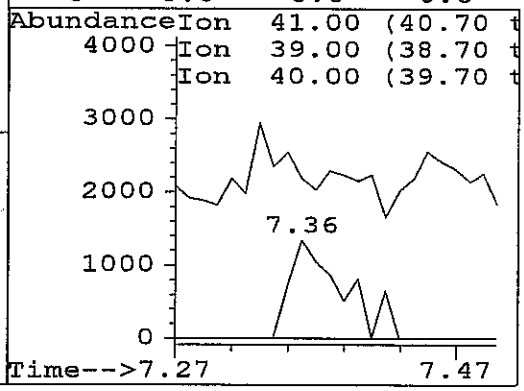


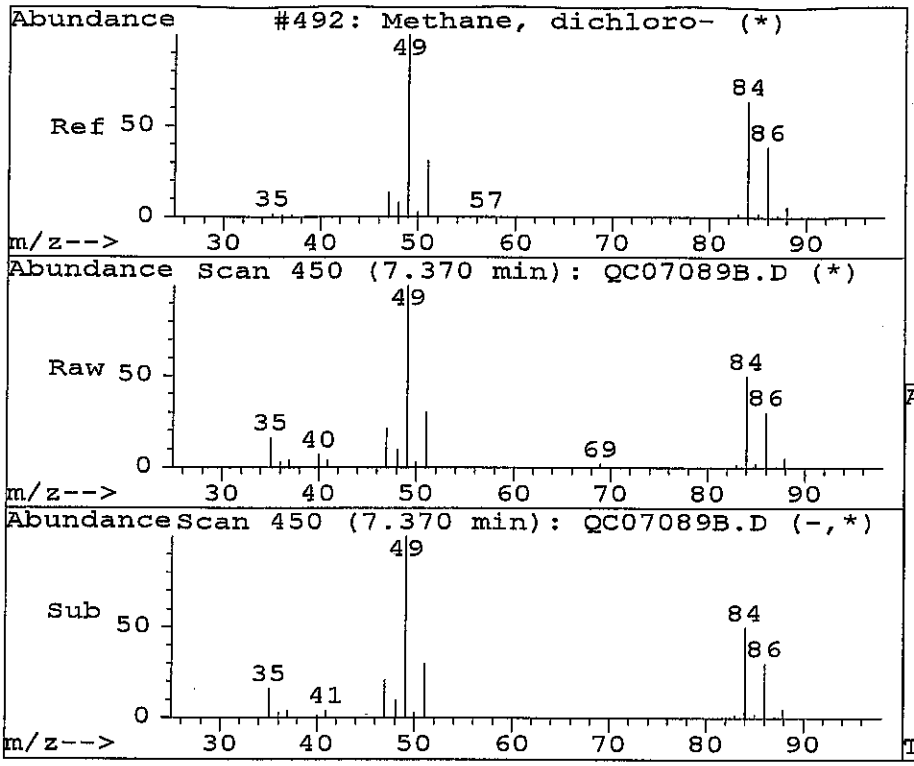


#18
Allyl chloride
Concen: 0.03 ppbV
RT: 7.36 min Scan# 449
Delta R.T. 0.01 min
Lab File: QC07089B.D
Acq: 8 Jul 109 1:05 pm

Tgt Ion:41 Resp: 3492

Ion	Ratio	Lower	Upper
41	100		
39	0.0	59.4	89.2#
40	0.0	7.8	11.8#
0	0.0	0.0	0.0

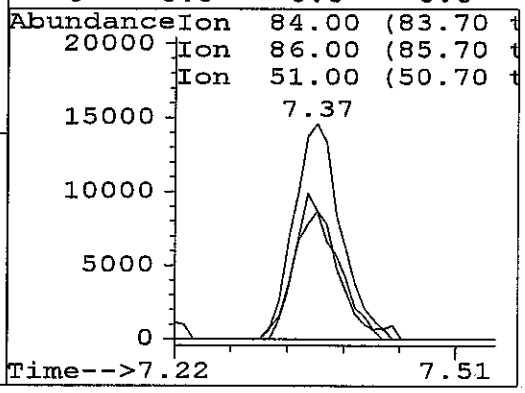


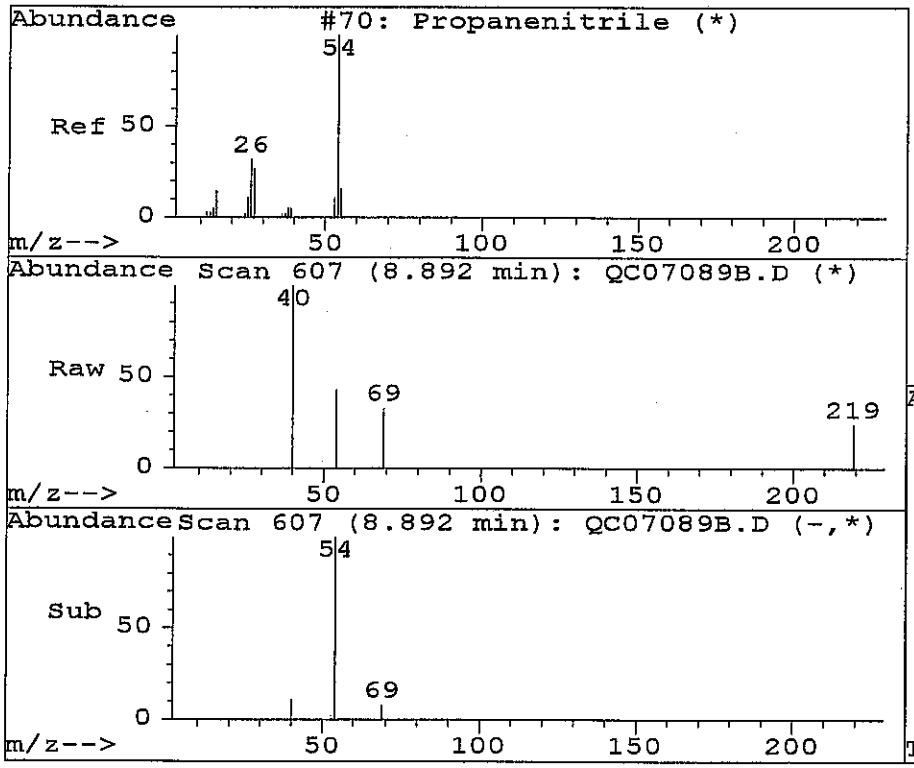


#19
Dichloromethane
Concen: 1.05 ppbV
RT: 7.37 min Scan# 450
Delta R.T. 0.06 min
Lab File: QC07089B.D
Acq: 8 Jul 109 1:05 pm

Tgt Ion:84 Resp: 49654

Ion	Ratio	Lower	Upper
84	100		
86	59.7	51.1	76.7
51	59.5	47.2	70.8
0	0.0	0.0	0.0

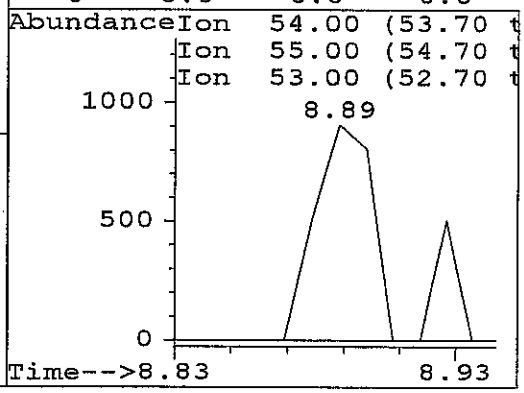


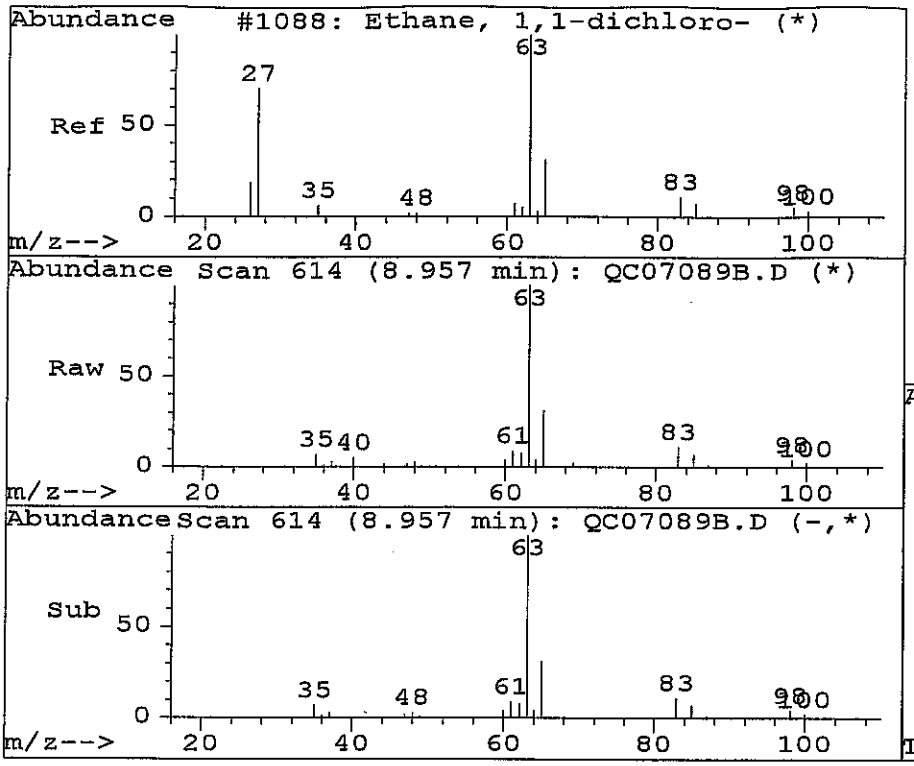


#23
Propionitrile
Concen: 0.02 ppbV
RT: 8.89 min Scan# 607
Delta R.T. 0.06 min
Lab File: QC07089B.D
Acq: 8 Jul 109 1:05 pm

Tgt Ion:54 Resp: 1292

Ion	Ratio	Lower	Upper
54	100		
55	0.0	12.1	18.1#
53	0.0	9.8	14.8#
0	0.0	0.0	0.0

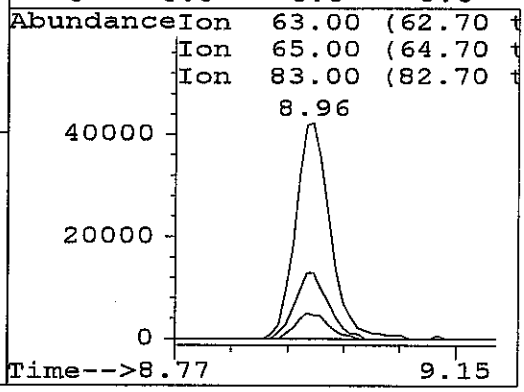


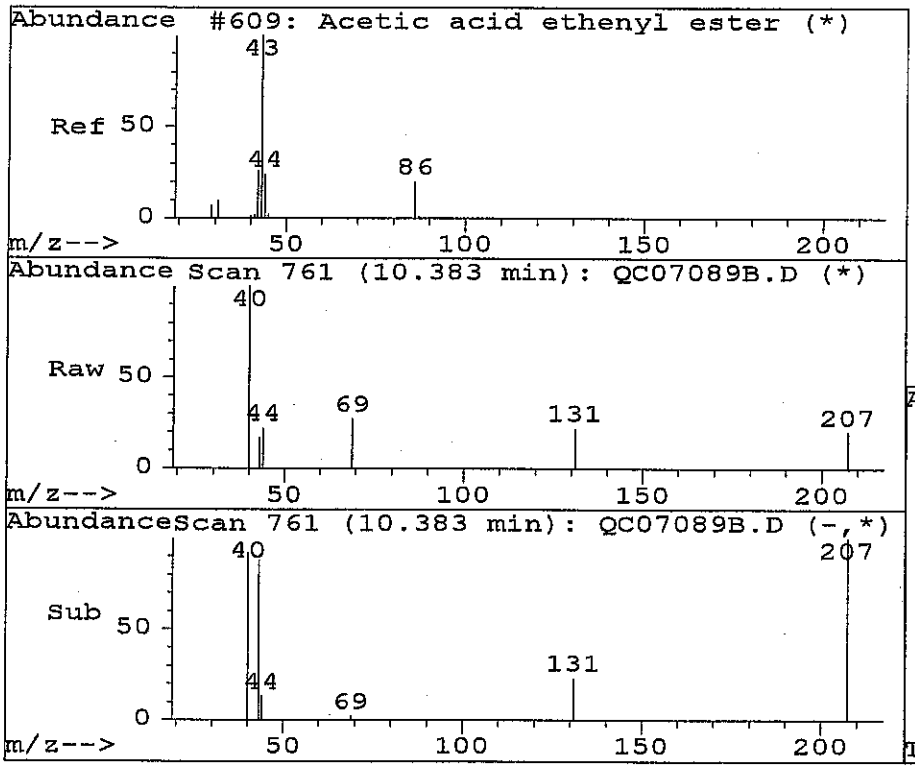


#24
1,1-Dichloroethane
Concen: 1.01 ppbV
RT: 8.96 min Scan# 614
Delta R.T. 0.06 min
Lab File: QC07089B.D
Acq: 8 Jul 109 1:05 pm

Tgt Ion:63 Resp: 138927

Ion	Ratio	Lower	Upper
63	100		
65	30.8	23.8	35.8
83	11.0	9.8	14.8
0	0.0	0.0	0.0

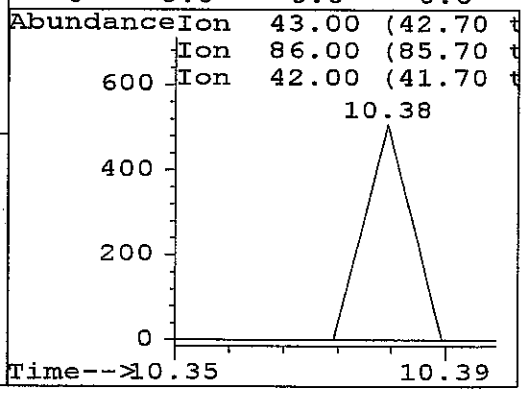


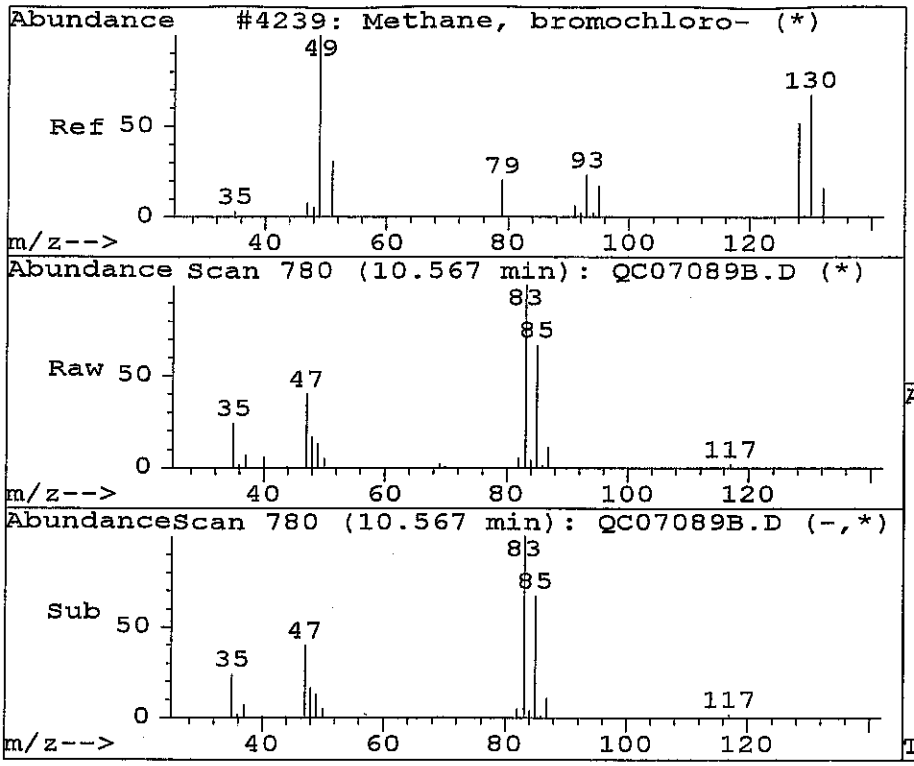


#25
Vinyl acetate
Concen: 0.00 ppbV
RT: 10.38 min Scan# 761
Delta R.T. 0.06 min
Lab File: QC07089B.D
Acq: 8 Jul 109 1:05 pm

Tgt Ion:43 Resp: 295

Ion	Ratio	Lower	Upper
43	100		
86	0.0	0.0	0.0
42	0.0	5.2	7.8#
0	0.0	0.0	0.0

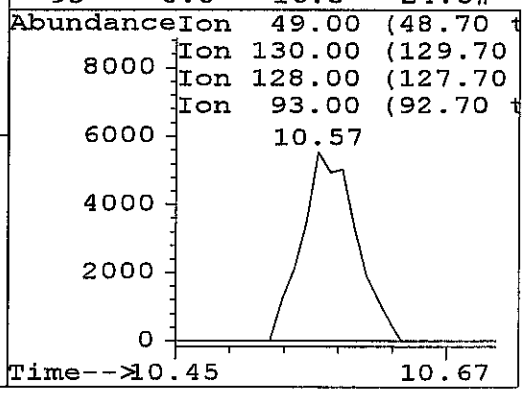


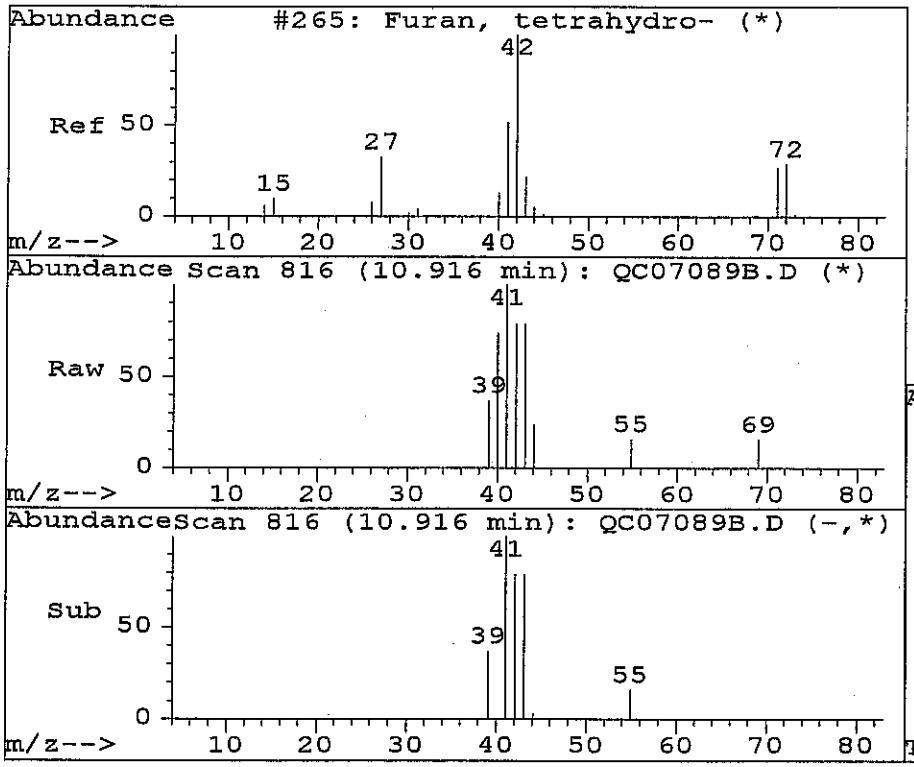


#28
Bromochloromethane
Concen: 0.11 ppbV
RT: 10.57 min Scan# 780
Delta R.T. 0.07 min
Lab File: QC07089B.D
Acq: 8 Jul 109 1:05 pm

Tgt Ion:49 Resp: 17178

Ion	Ratio	Lower	Upper
49	100		
130	0.0	40.0	60.0#
128	0.0	34.2	51.2#
93	0.0	16.3	24.5#

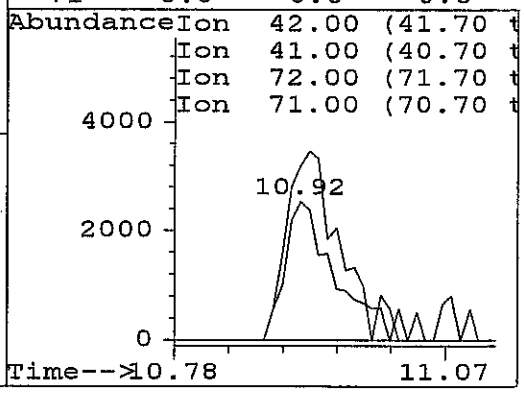


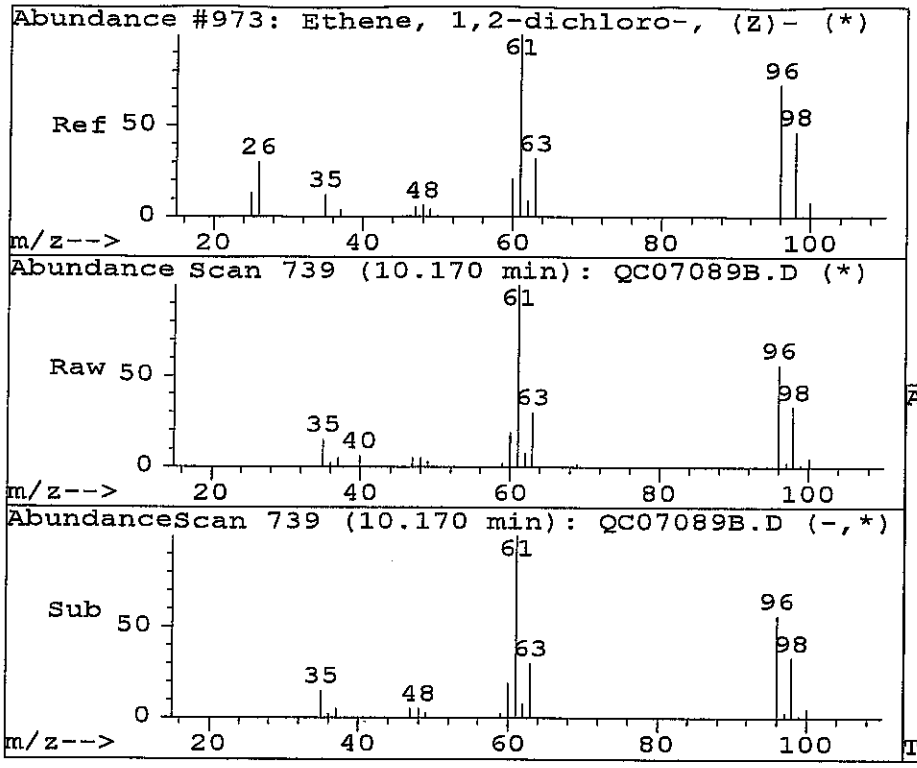


#29
Tetrahydrofuran
Concen: 0.02 ppbV
RT: 10.92 min Scan# 816
Delta R.T. -0.00 min
Lab File: QC07089B.D
Acq: 8 Jul 109 1:05 pm

Tgt Ion:42 Resp: 9826

Ion	Ratio	Lower	Upper
42	100		
41	133.4	103.5	155.3
72	0.0	0.3	0.5#
71	0.0	0.0	0.0

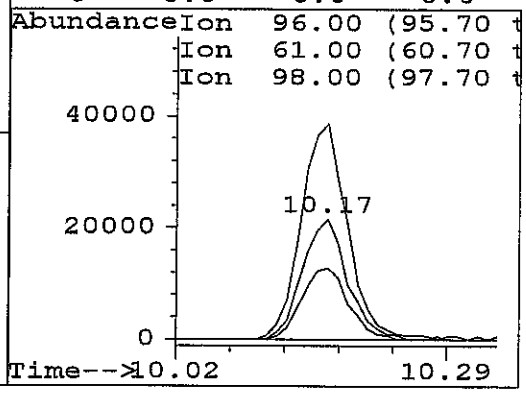


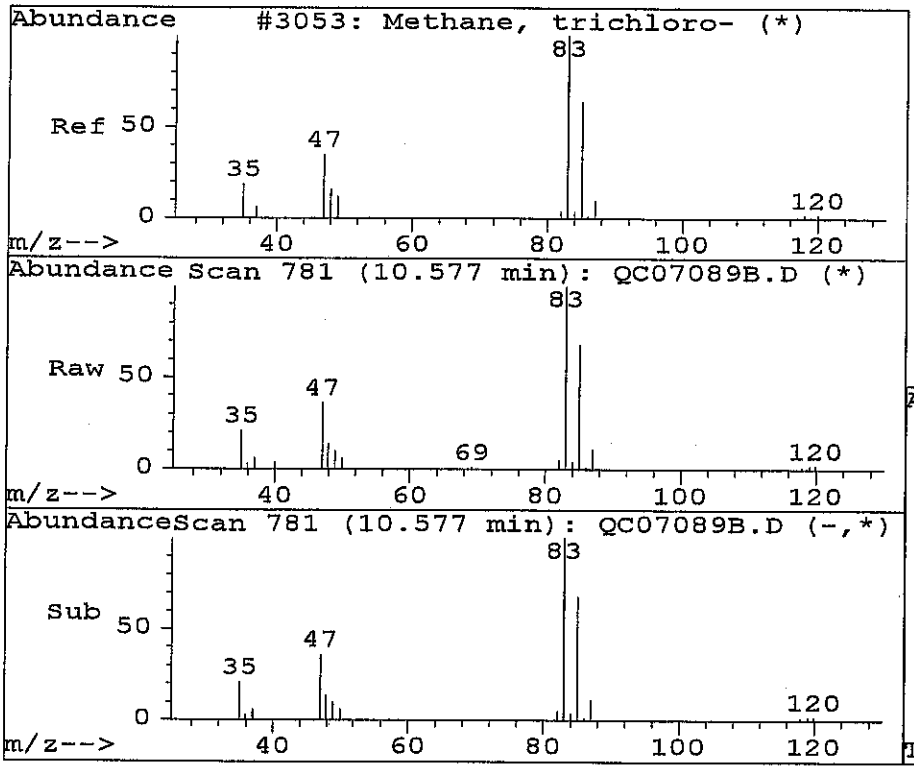


#32
cis-1,2-Dichloroethene
Concen: 0.92 ppbV
RT: 10.17 min Scan# 739
Delta R.T. 0.06 min
Lab File: QC07089B.D
Acq: 8 Jul 109 1:05 pm

Tgt Ion:96 Resp: 65410

Ion	Ratio	Lower	Upper
96	100		
61	178.2	139.1	208.7
98	59.6	49.5	74.3
0	0.0	0.0	0.0

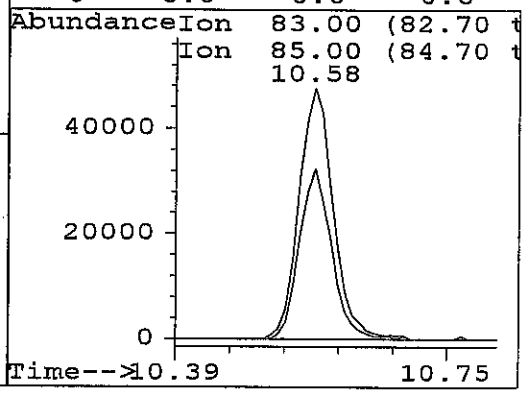


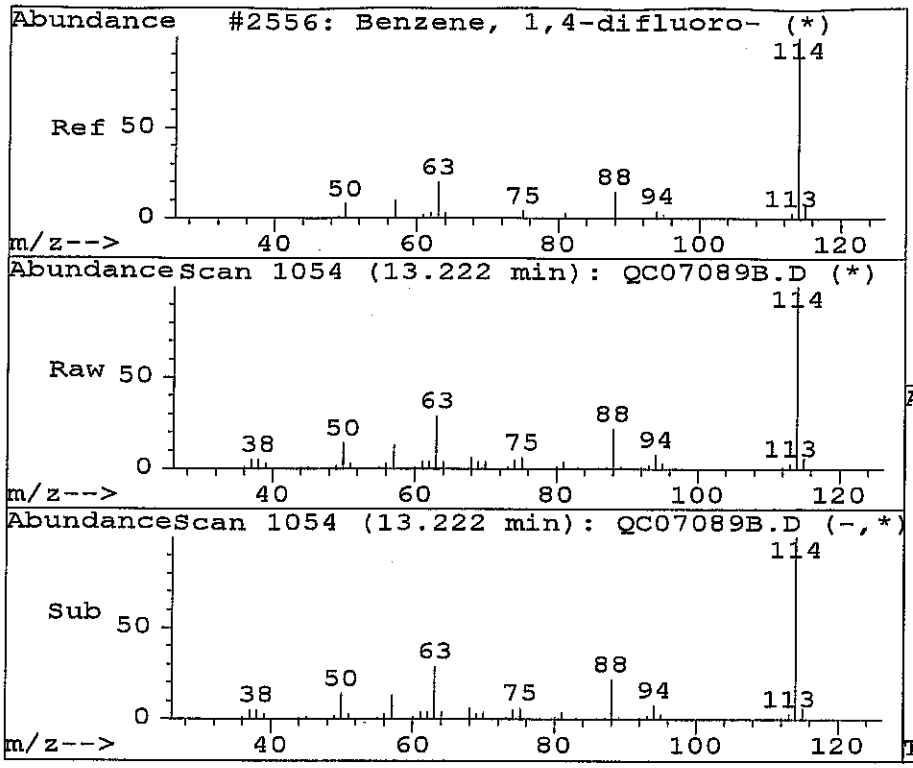


#34
Chloroform
Concen: 0.91 ppbV
RT: 10.58 min Scan# 781
Delta R.T. 0.05 min
Lab File: QC07089B.D
Acq: 8 Jul 109 1:05 pm

Tgt Ion:83 Resp: 149505

Ion	Ratio	Lower	Upper
83	100		
85	68.1	51.3	76.9
0	0.0	0.0	0.0
0	0.0	0.0	0.0

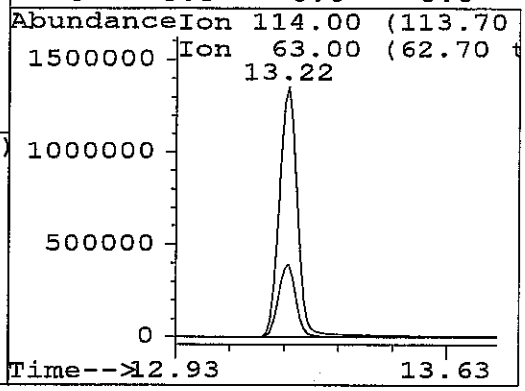


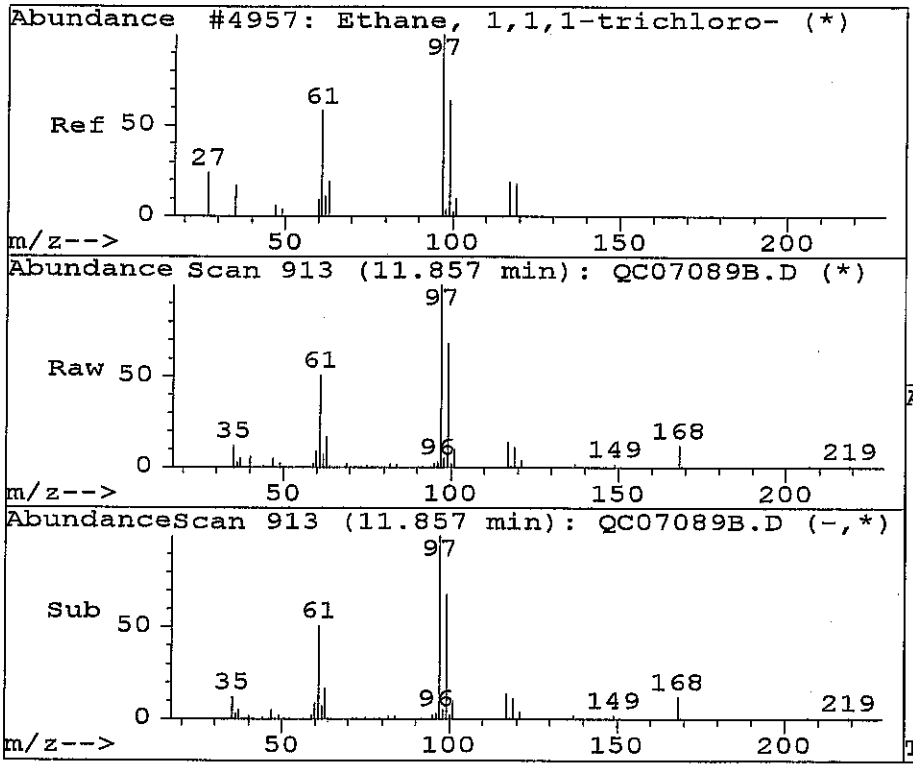


#35
1,4-Difluorobenzene
Concen: 20.00 ppbV
RT: 13.22 min Scan# 1054
Delta R.T. 0.05 min
Lab File: QC07089B.D
Acq: 8 Jul 109 1:05 pm

Tgt Ion:114 Resp: 4473387

Ion	Ratio	Lower	Upper
114	100		
63	29.2	22.0	36.6
0	0.0	0.0	0.0
0	0.0	0.0	0.0

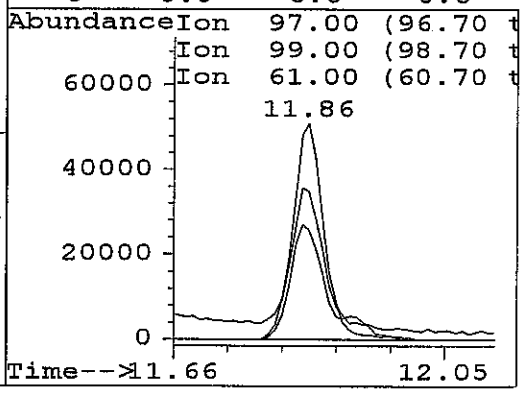


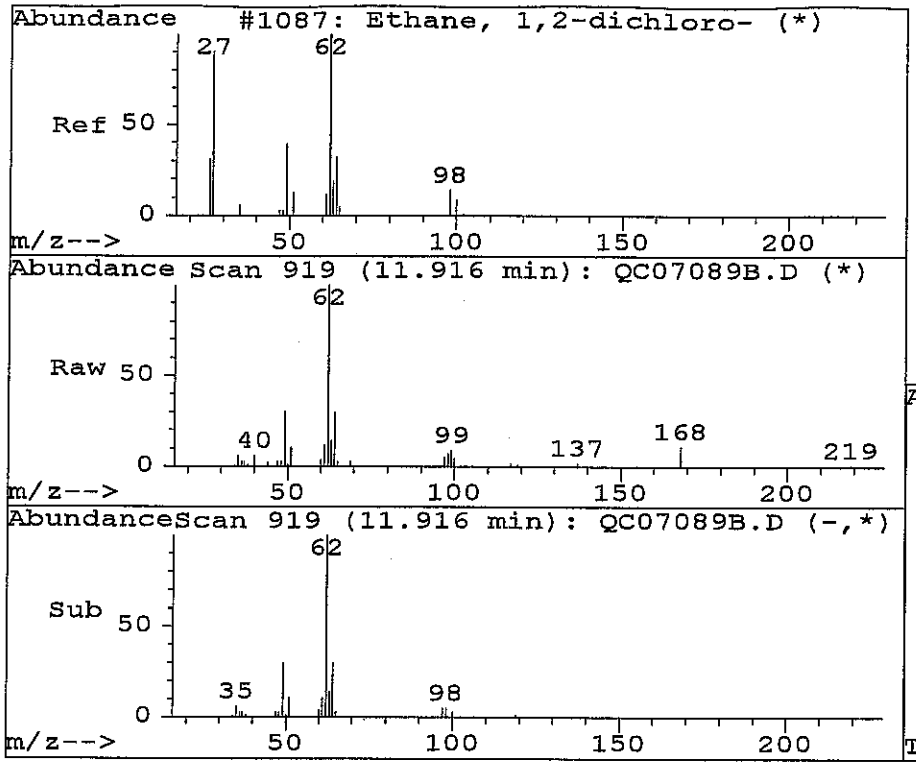


#36
1,1,1-Trichloroethane
Concen: 0.98 ppbV
RT: 11.86 min Scan# 913
Delta R.T. 0.06 min
Lab File: QC07089B.D
Acq: 8 Jul 109 1:05 pm

Tgt Ion:97 Resp: 158902

Ion	Ratio	Lower	Upper
97	100		
99	62.7	50.6	75.8
61	50.5	44.3	66.5
0	0.0	0.0	0.0

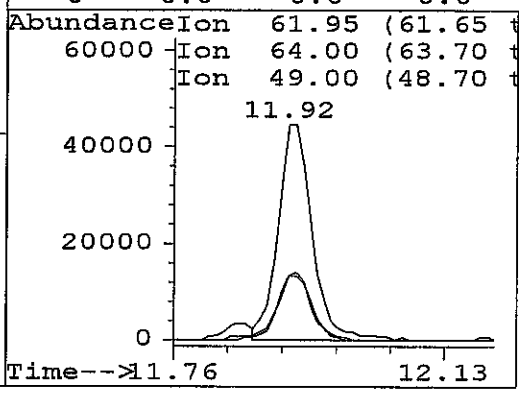


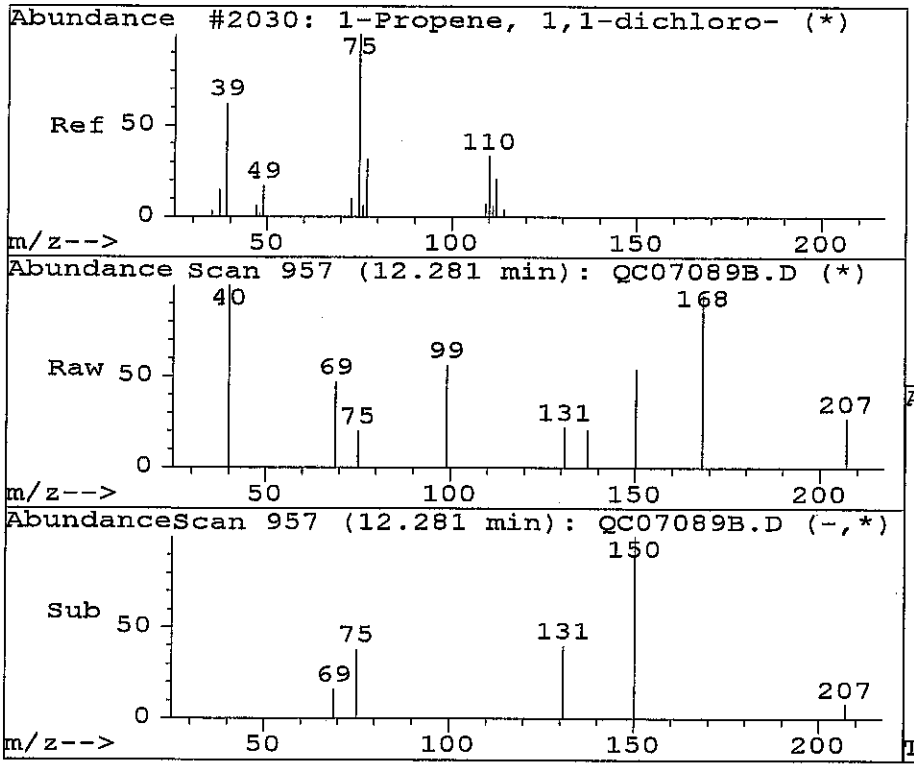


#37
1,2-Dichloroethane
Concen: 0.93 ppbV
RT: 11.92 min Scan# 919
Delta R.T. 0.05 min
Lab File: QC07089B.D
Acq: 8 Jul 109 1:05 pm

Tgt Ion:61.95 Resp: 14137

Ion	Ratio	Lower	Upper
62	100		
64	30.1	24.7	37.1
49	29.9	23.8	35.6
0	0.0	0.0	0.0

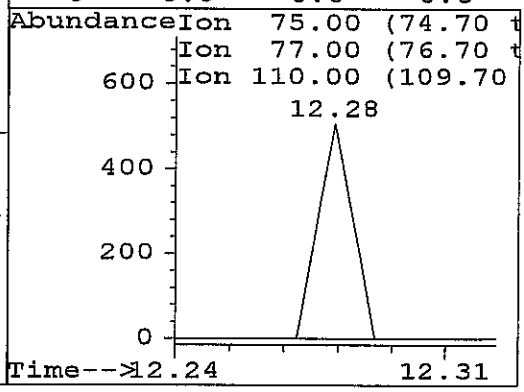


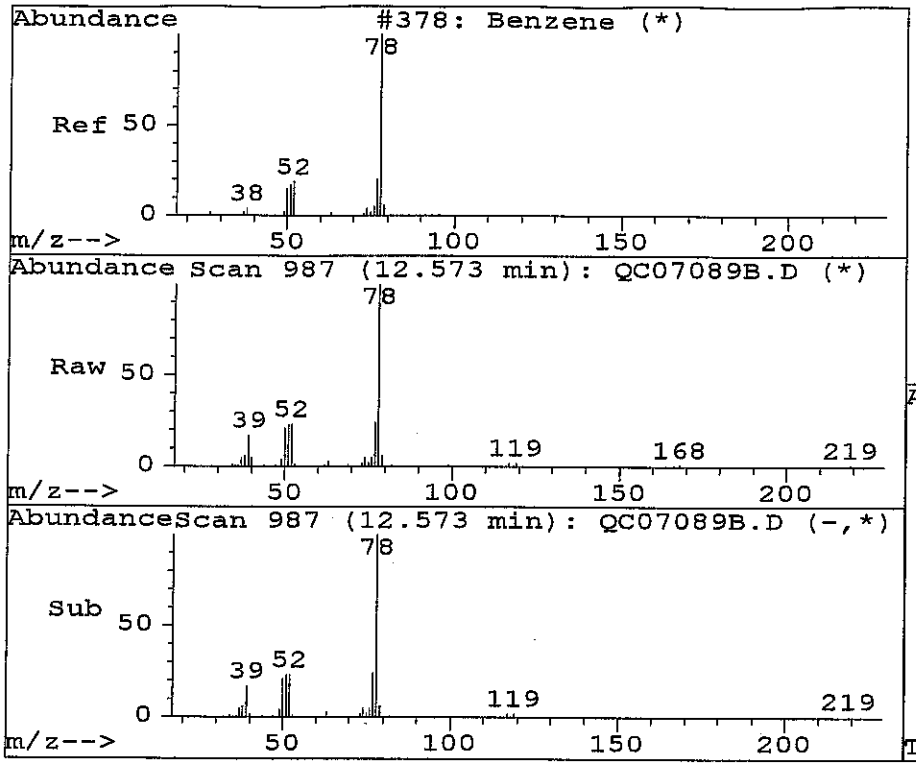


#38
1,1-Dichloropropene
Concen: 0.00 ppbV
RT: 12.28 min Scan# 957
Delta R.T. 0.04 min
Lab File: QC07089B.D
Acq: 8 Jul 109 1:05 pm

Tgt Ion:75 Resp: 287

Ion	Ratio	Lower	Upper
75	100		
77	0.0	24.7	37.1#
110	0.0	23.5	35.3#
0	0.0	0.0	0.0

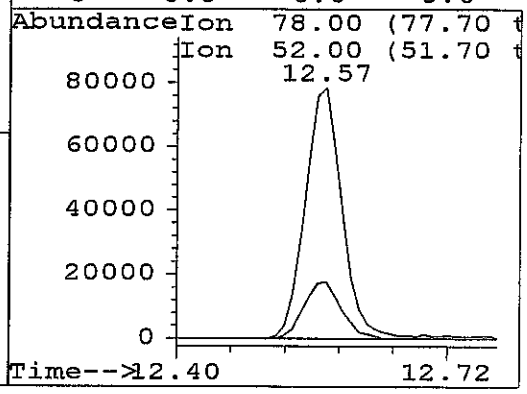


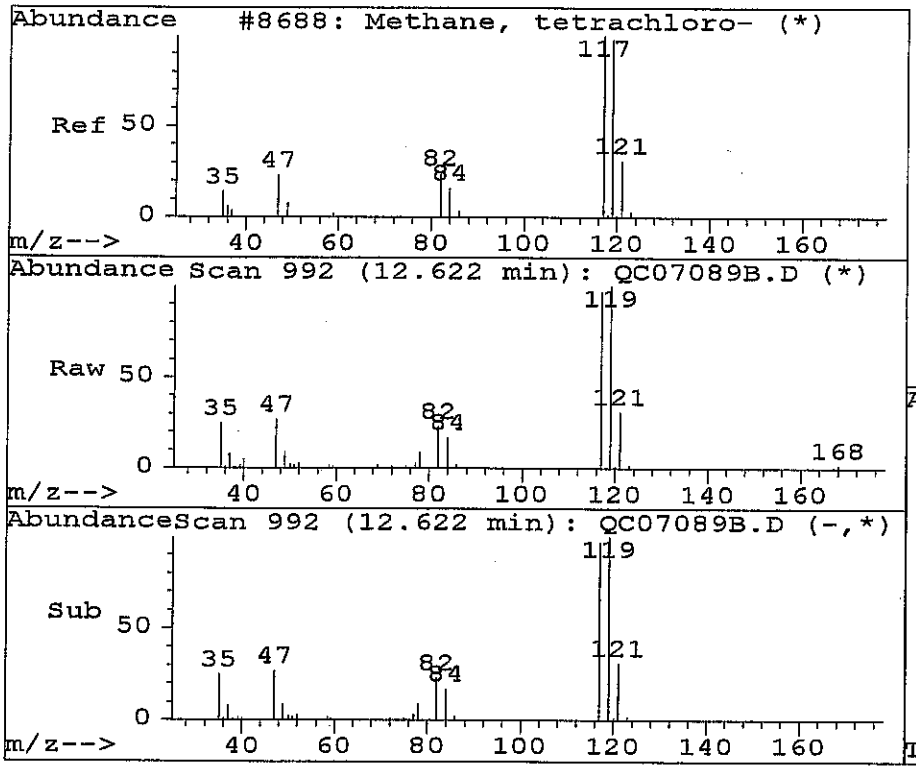


#40
Benzene
Concen: 0.89 ppbV
RT: 12.57 min Scan# 987
Delta R.T. 0.06 min
Lab File: QC07089B.D
Acq: 8 Jul 109 1:05 pm

Tgt Ion:78 Resp: 235151

Ion	Ratio	Lower	Upper
78	100		
52	22.8	19.2	28.8
0	0.0	0.0	0.0
0	0.0	0.0	0.0

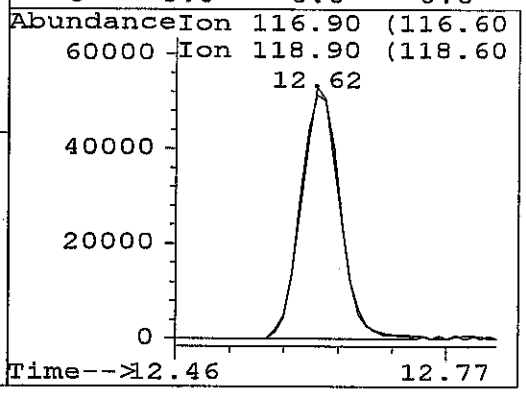


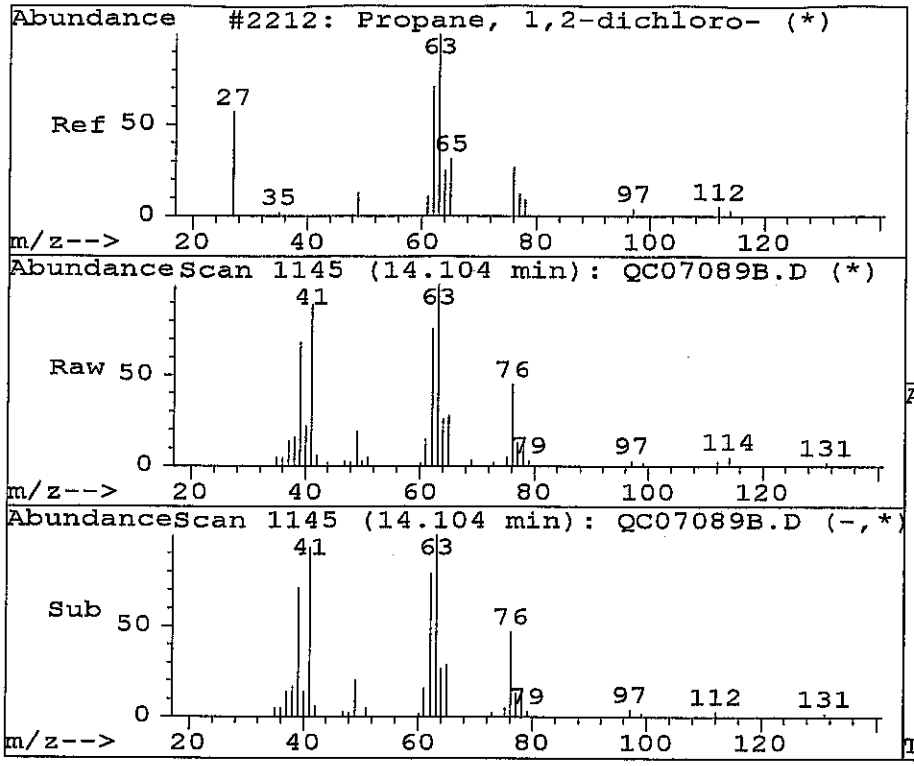


#41
Carbon tetrachloride
Concen: 1.01 ppbV
RT: 12.62 min Scan# 992
Delta R.T. 0.06 min
Lab File: QC07089B.D
Acq: 8 Jul 109 1:05 pm

Tgt Ion:116.9 Resp: 16717

Ion	Ratio	Lower	Upper
117	100		
119	102.5	79.4	119.0
0	0.0	0.0	0.0
0	0.0	0.0	0.0

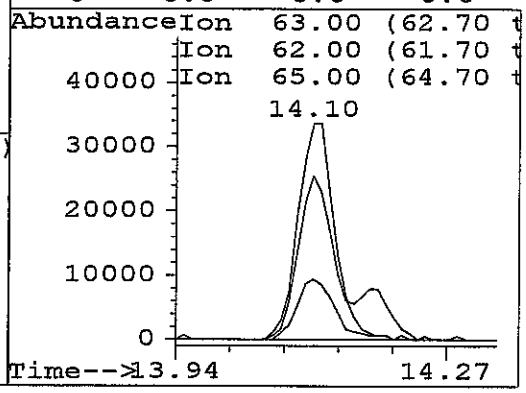


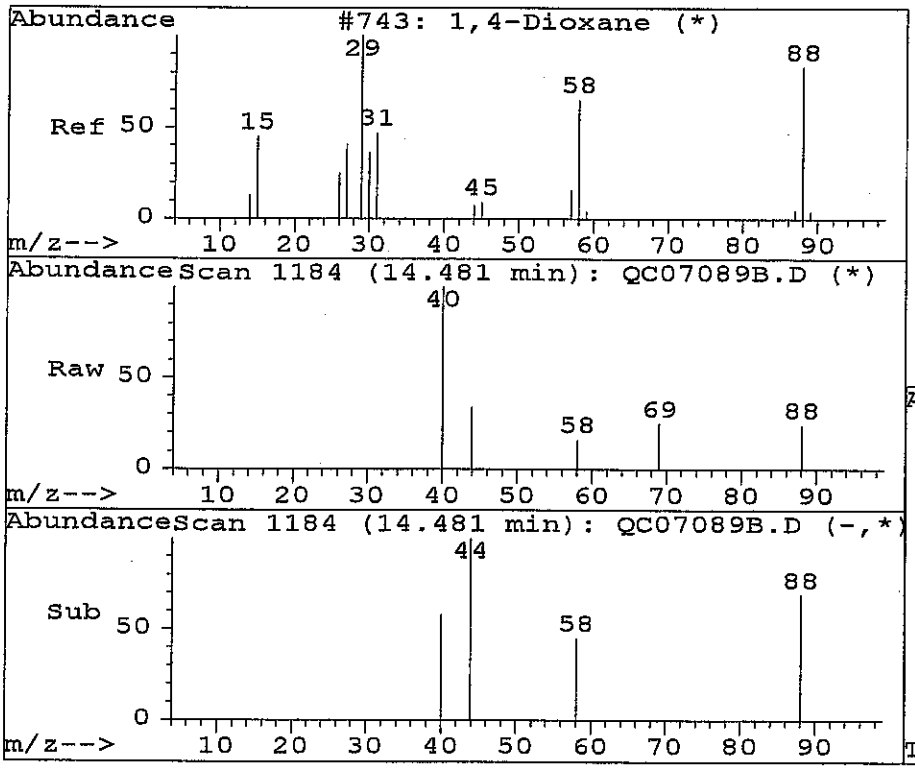


#43
1,2-Dichloropropane
Concen: 1.01 ppbV
RT: 14.10 min Scan# 1145
Delta R.T. 0.03 min
Lab File: QC07089B.D
Acq: 8 Jul 109 1:05 pm

Tgt Ion:63 Resp: 103260

Ion	Ratio	Lower	Upper
63	100		
62	75.7	58.3	87.5
65	28.2	23.8	35.8
0	0.0	0.0	0.0

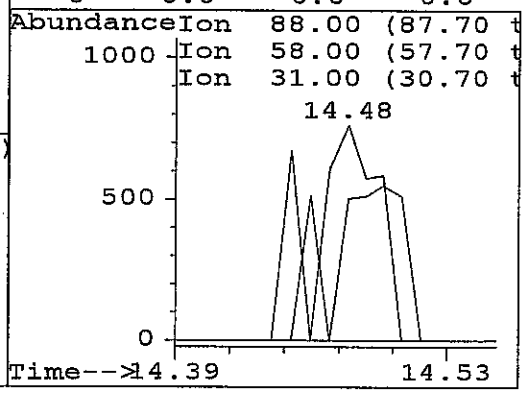


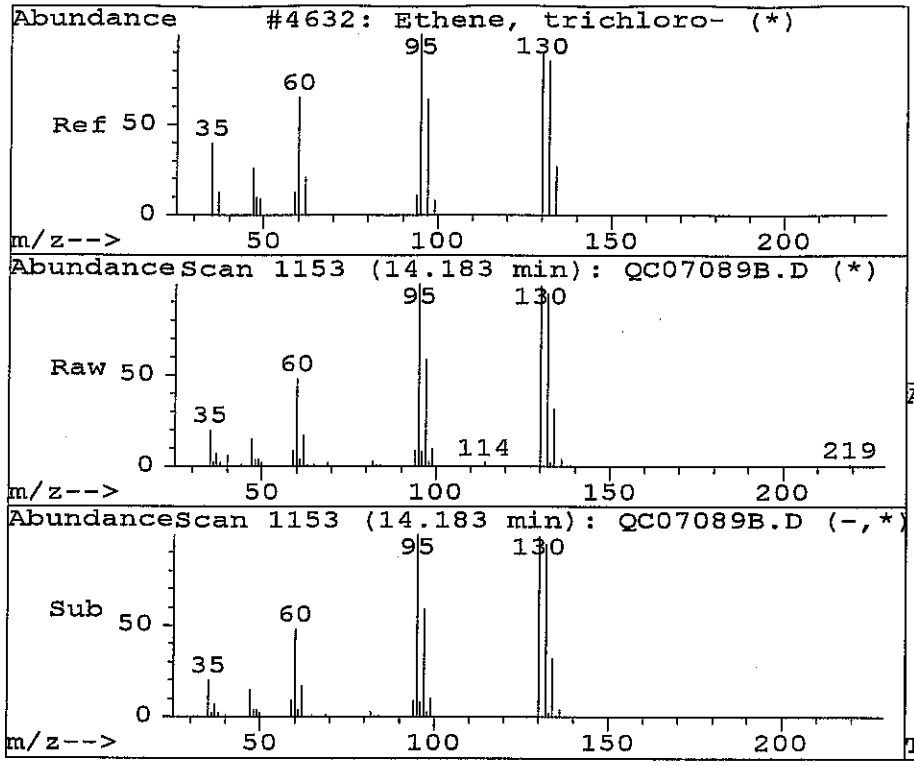


#44
1,4 Dioxane
Concen: 0.02 ppbV
RT: 14.48 min Scan# 1184
Delta R.T. 0.08 min
Lab File: QC07089B.D
Acq: 8 Jul 109 1:05 pm

Tgt Ion:88 Resp: 1822

Ion	Ratio	Lower	Upper
88	100		
58	80.8	75.8	113.6
31	0.0	0.0	0.0
0	0.0	0.0	0.0

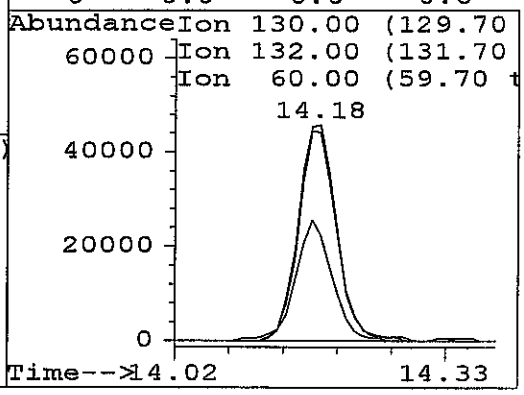


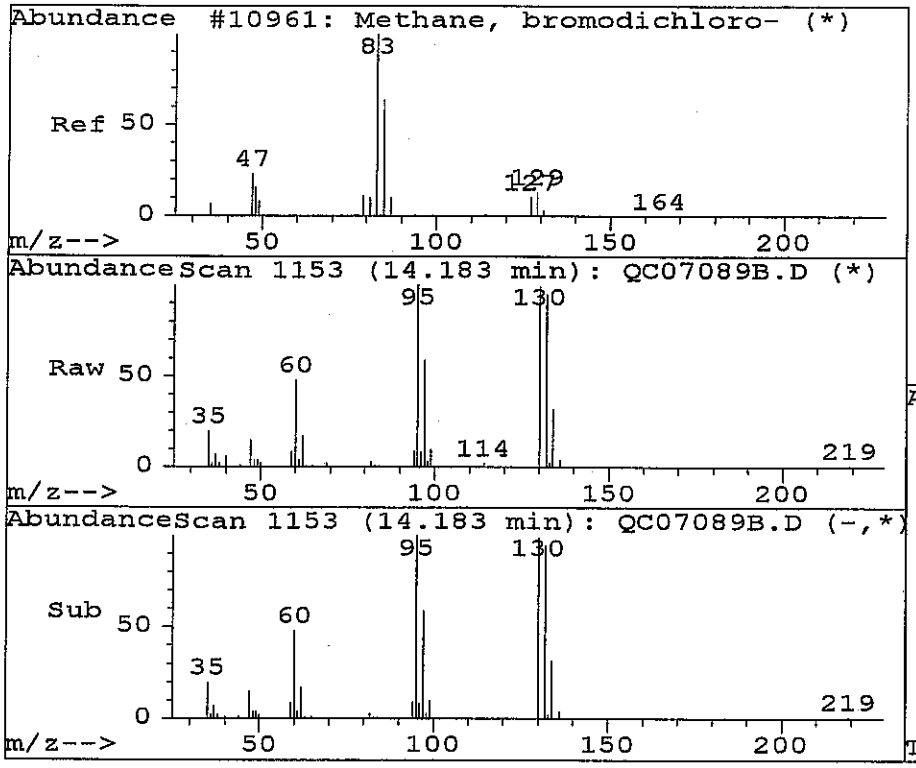


#46
Trichloroethene
Concen: 1.08 ppbV
RT: 14.18 min Scan# 1153
Delta R.T. 0.05 min
Lab File: QC07089B.D
Acq: 8 Jul 109 1:05 pm

Tgt Ion:130 Resp: 138111

Ion	Ratio	Lower	Upper
130	100		
132	96.5	79.1	118.7
60	48.4	46.3	69.5
0	0.0	0.0	0.0

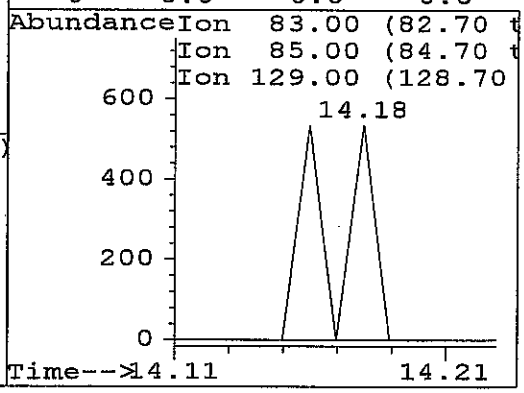


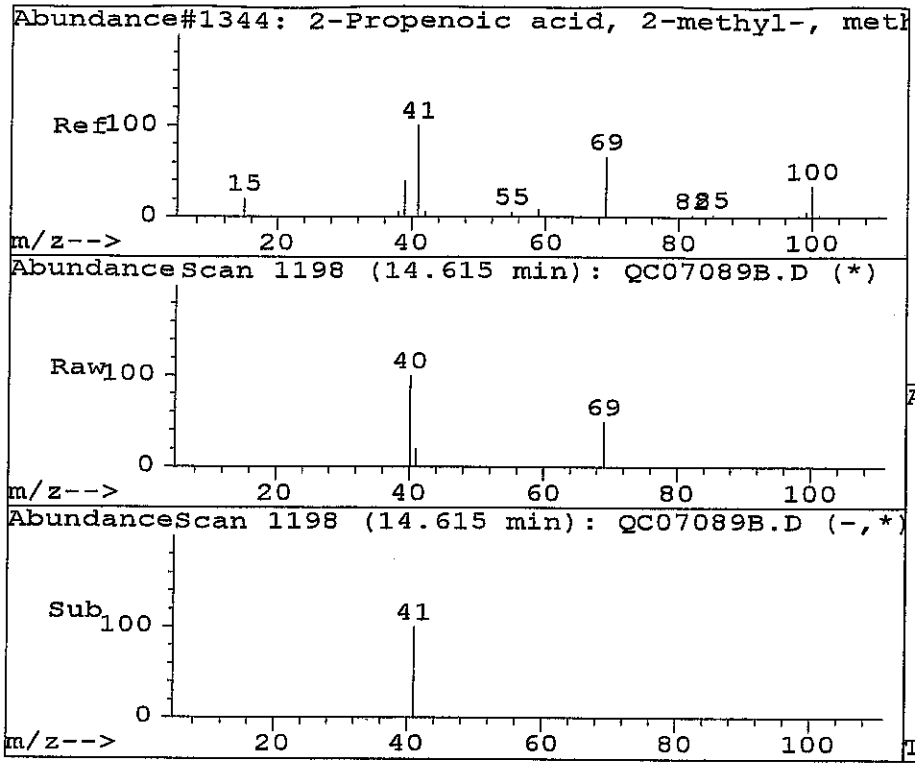


#47
Bromodichloromethane
Concen: 0.00 ppbV
RT: 14.18 min Scan# 1153
Delta R.T. -0.22 min
Lab File: QC07089B.D
Acq: 8 Jul 109 1:05 pm

Tgt Ion:83 Resp: 627

Ion	Ratio	Lower	Upper
83	100		
85	0.0	49.3	73.9#
129	0.0	8.6	13.0#
0	0.0	0.0	0.0

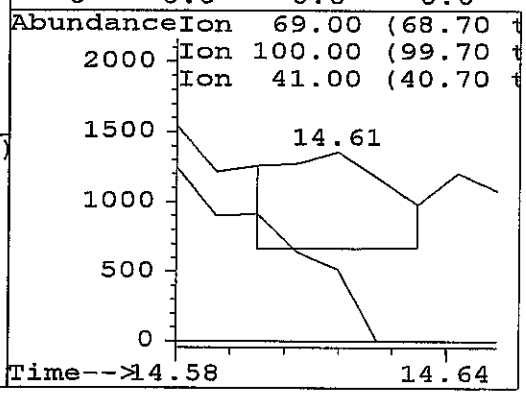


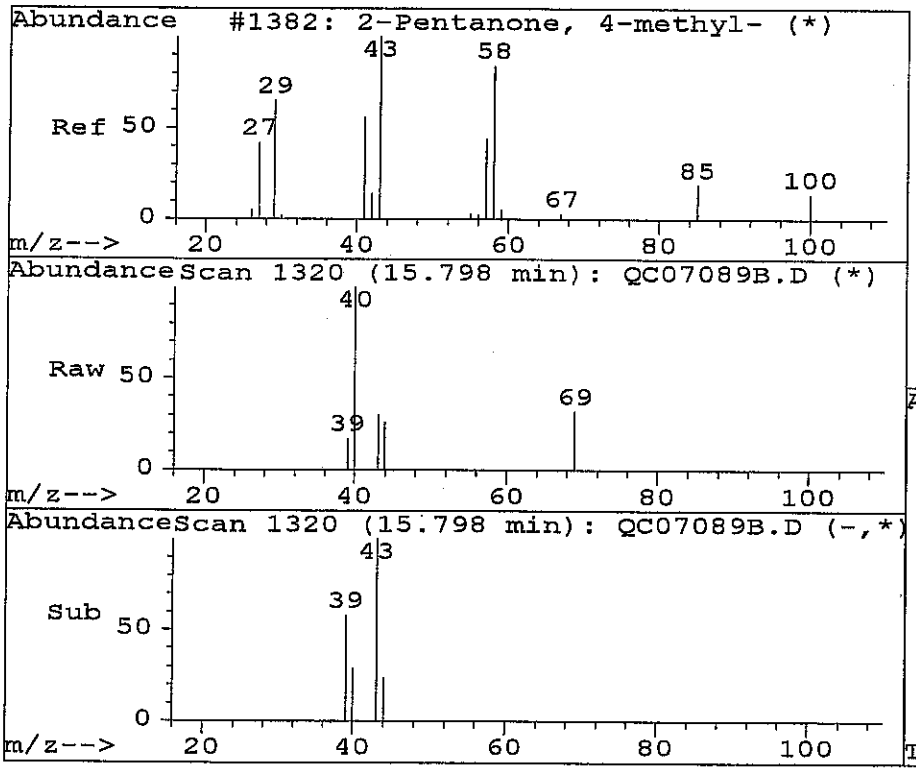


#48
Methyl methacrylate
Concen: 0.01 ppbV
RT: 14.61 min Scan# 1198
Delta R.T. 0.06 min
Lab File: QC07089B.D
Acq: 8 Jul 109 1:05 pm

Tgt Ion:69 Resp: 1226

Ion	Ratio	Lower	Upper
69	100		
100	0.0	27.5	41.3#
41	25.1	163.1	244.7#
0	0.0	0.0	0.0

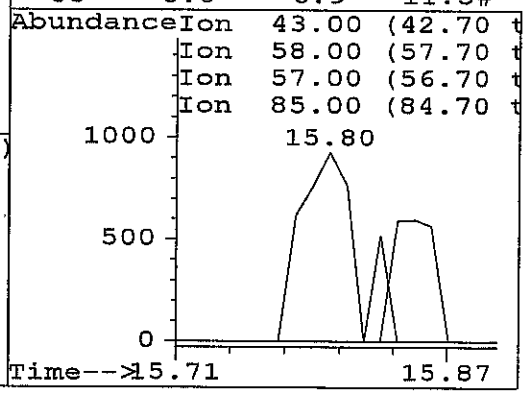


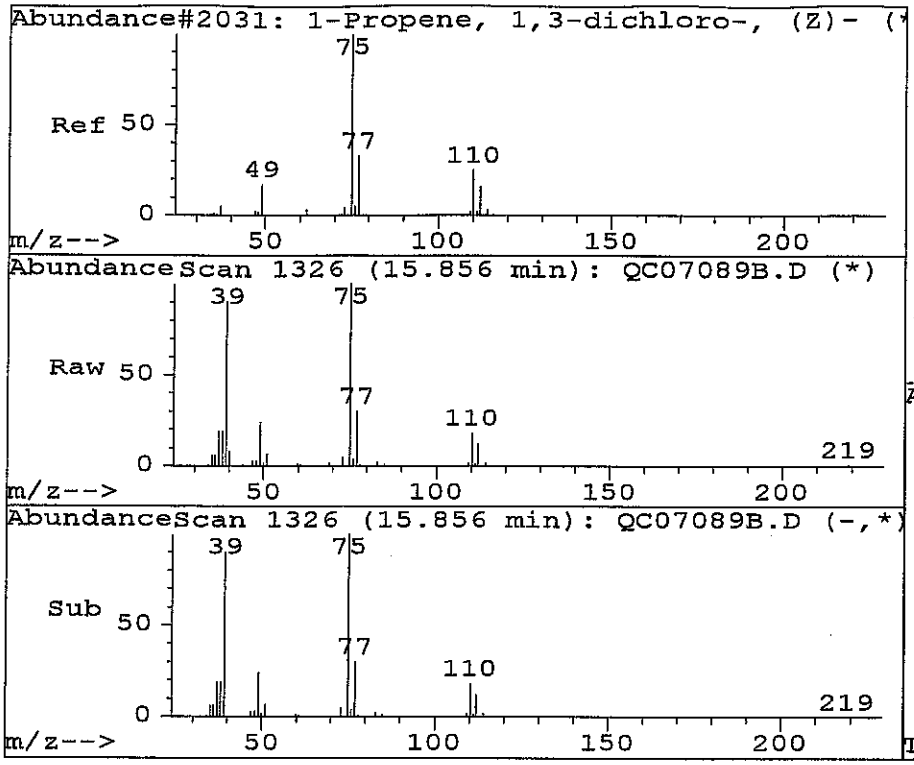


#49
Methyl Isobutyl Ketone
Concen: 0.00 ppbV
RT: 15.80 min Scan# 1320
Delta R.T. 0.10 min
Lab File: QC07089B.D
Acq: 8 Jul 109 1:05 pm

Tgt Ion:43 Resp: 2097

Ion	Ratio	Lower	Upper
43	100		
58	0.0	20.7	34.5#
57	0.0	12.8	21.4#
85	0.0	6.9	11.5#

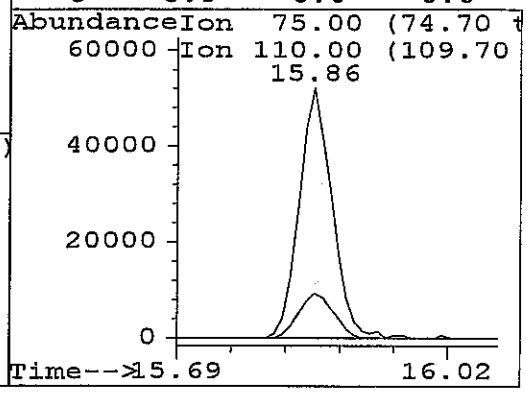


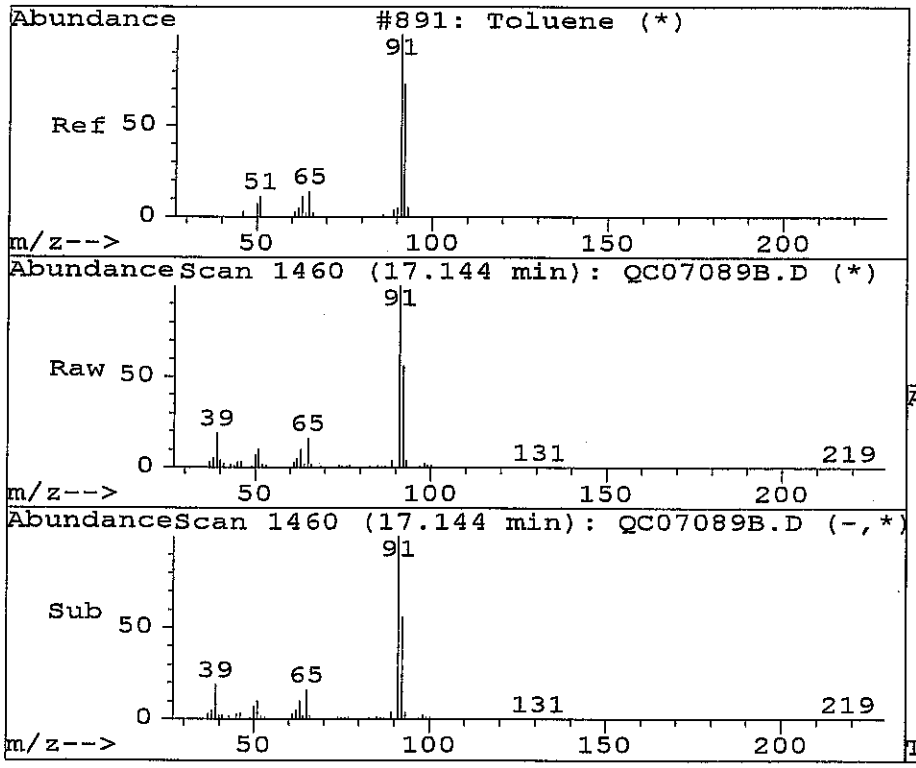


#50
cis-1,3-Dichloropropene
Concen: 0.90 ppbV
RT: 15.86 min Scan# 1326
Delta R.T. 0.04 min
Lab File: QC07089B.D
Acq: 8 Jul 109 1:05 pm

Tgt Ion:75 Resp: 143140

Ion	Ratio	Lower	Upper
75	100		
110	17.9	15.3	22.9
0	0.0	0.0	0.0
0	0.0	0.0	0.0

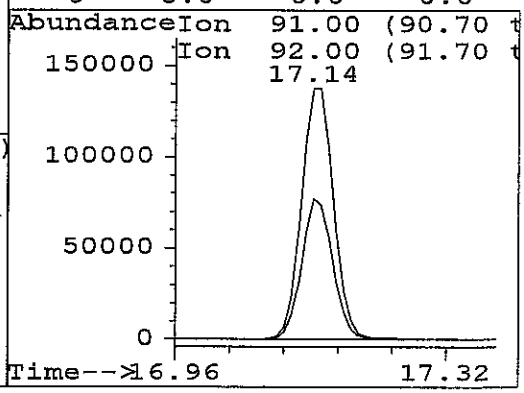


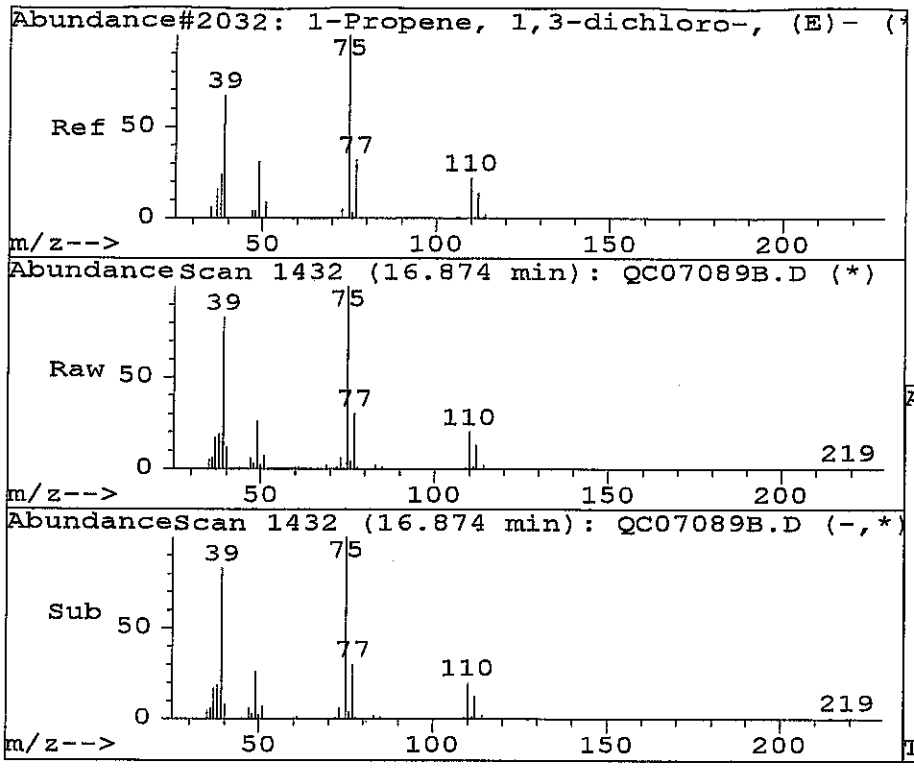


#51
Toluene
Concen: 1.14 ppbV
RT: 17.14 min Scan# 1460
Delta R.T. 0.03 min
Lab File: QC07089B.D
Acq: 8 Jul 109 1:05 pm

Tgt Ion:91 Resp: 395553

Ion	Ratio	Lower	Upper
91	100		
92	55.9	43.9	65.9
0	0.0	0.0	0.0
0	0.0	0.0	0.0

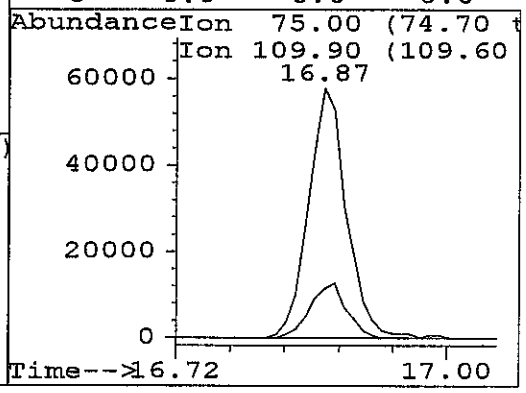


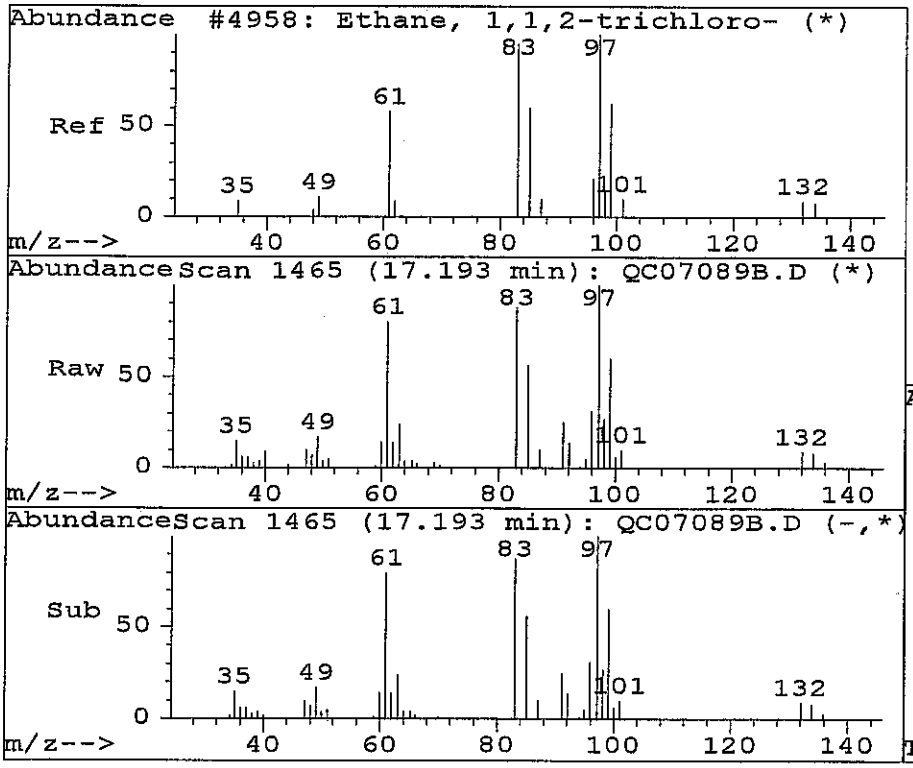


#52
trans-1,3-Dichloropropene
Concen: 0.81 ppbV
RT: 16.87 min Scan# 1432
Delta R.T. 0.02 min
Lab File: QC07089B.D
Acq: 8 Jul 109 1:05 pm

Tgt Ion:75 Resp: 153496

Ion	Ratio	Lower	Upper
75	100		
110	19.7	15.5	23.3
0	0.0	0.0	0.0
0	0.0	0.0	0.0

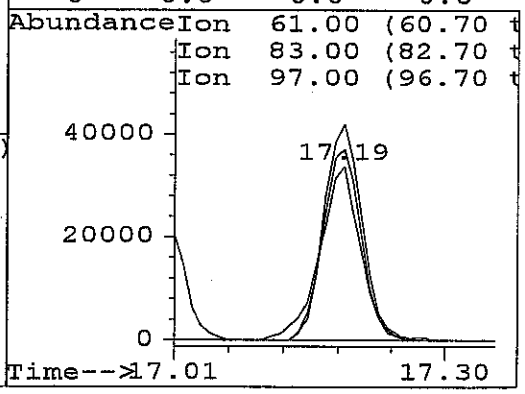


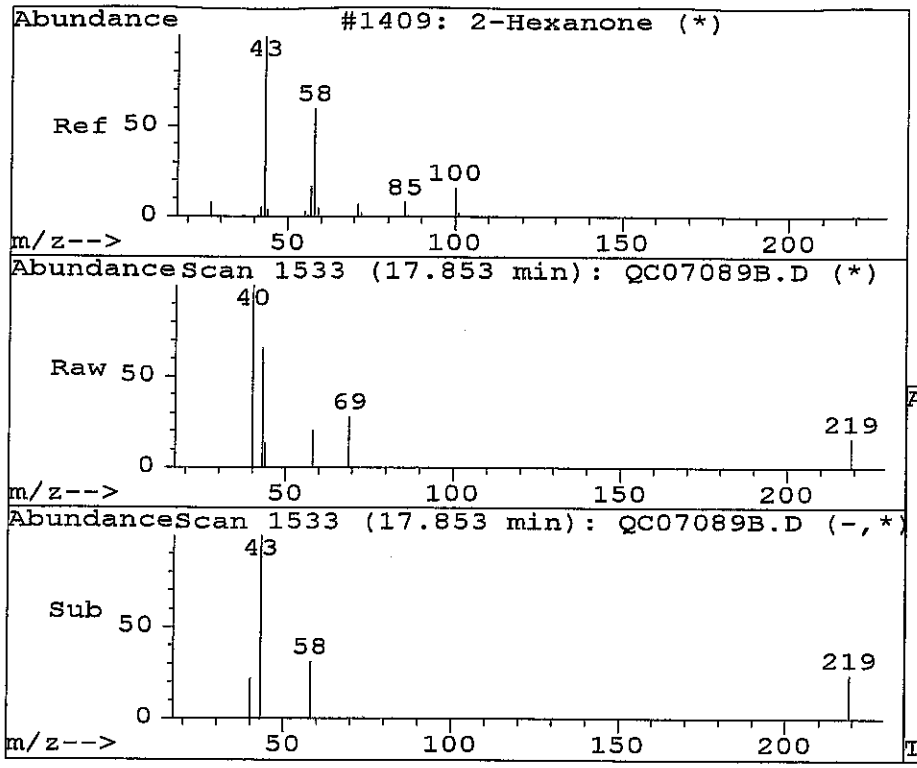


#53
1,1,2-Trichloroethane
Concen: 1.00 ppbV
RT: 17.19 min Scan# 1465
Delta R.T. 0.03 min
Lab File: QC07089B.D
Acq: 8 Jul 109 1:05 pm

Tgt Ion:61 Resp: 102328

Ion	Ratio	Lower	Upper
61	100		
83	110.0	90.9	136.3
97	123.6	96.7	145.1
0	0.0	0.0	0.0

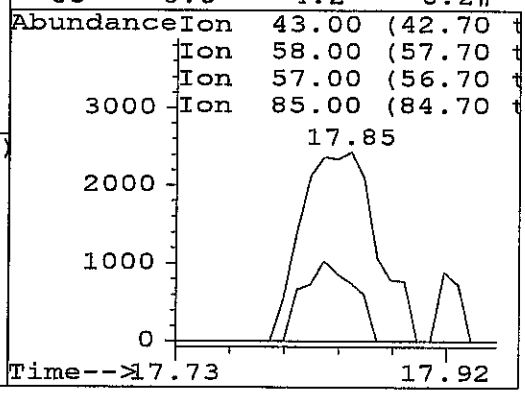


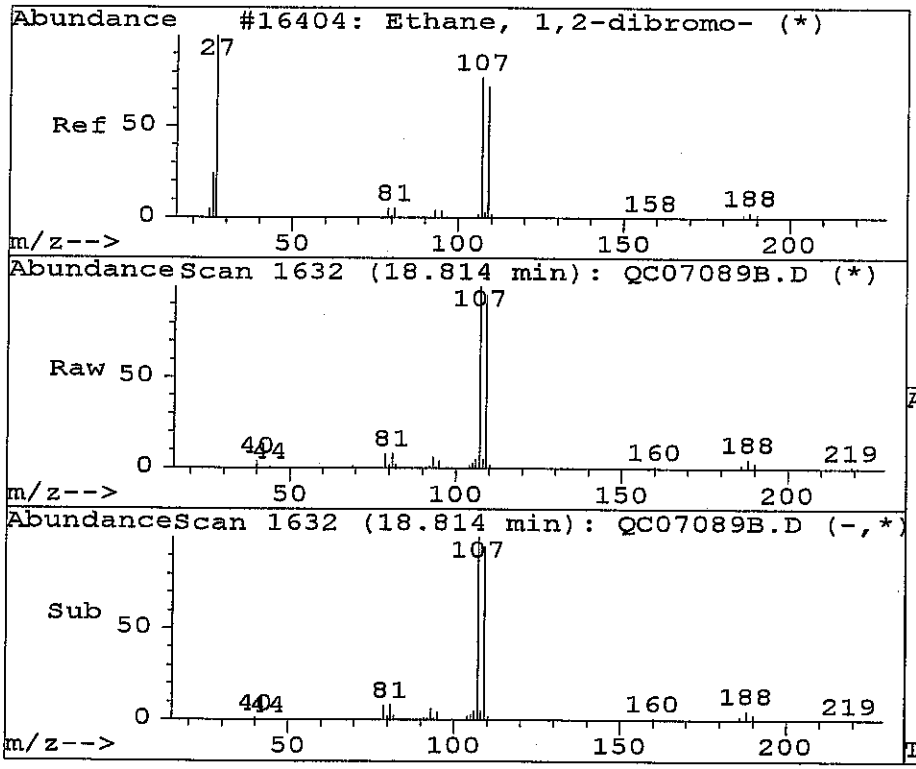


#54
2-Hexanone
Concen: 0.02 ppbV
RT: 17.85 min Scan# 1533
Delta R.T. 0.05 min
Lab File: QC07089B.D
Acq: 8 Jul 109 1:05 pm

Tgt Ion:43 Resp: 9342

Ion	Ratio	Lower	Upper
43	100		
58	30.8	28.2	47.0
57	0.0	10.4	17.3#
85	0.0	4.2	6.2#

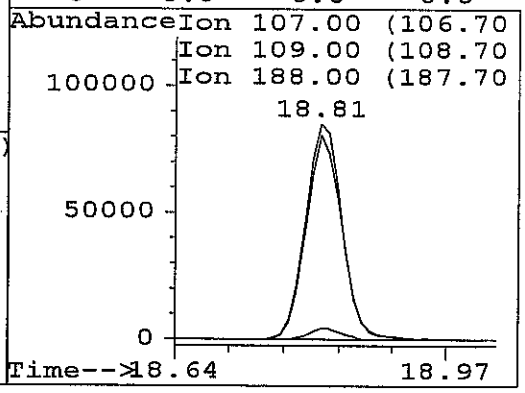


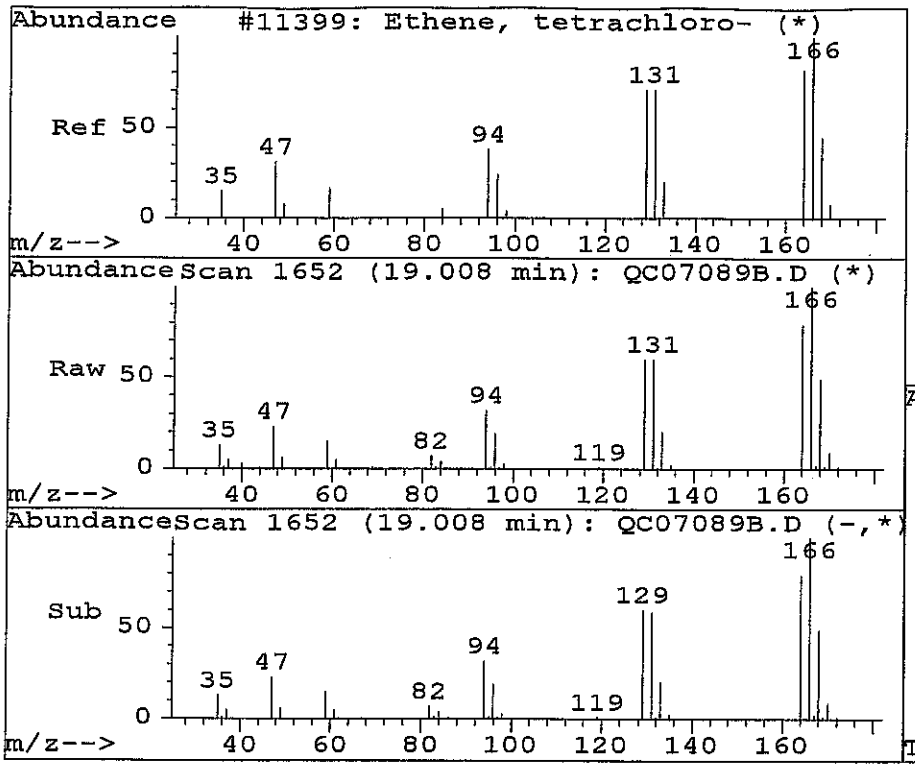


#58
1,2-Dibromoethane
Concen: 1.03 ppbV
RT: 18.81 min Scan# 1632
Delta R.T. 0.01 min
Lab File: QC07089B.D
Acq: 8 Jul 109 1:05 pm

Tgt Ion:107 Resp: 257800

Ion	Ratio	Lower	Upper
107	100		
109	94.7	75.4	113.0
188	5.0	3.0	4.6#
0	0.0	0.0	0.0

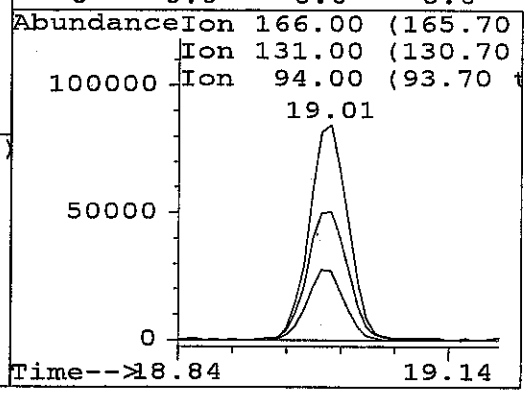


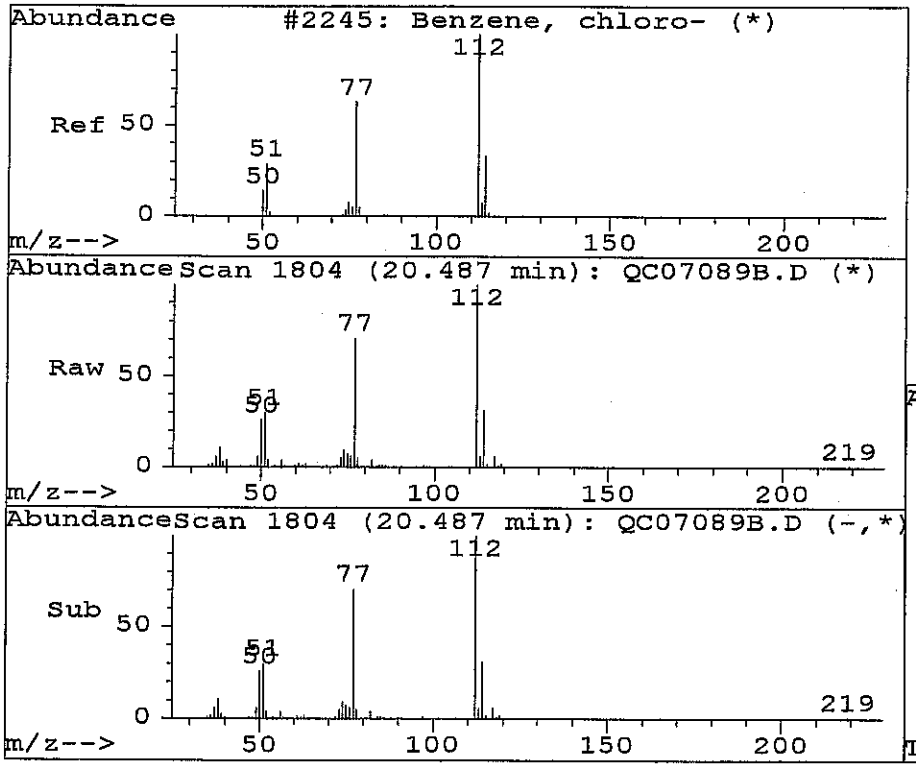


#59
Tetrachloroethene
Concen: 1.11 ppbV
RT: 19.01 min Scan# 1652
Delta R.T. 0.04 min
Lab File: QC07089B.D
Acq: 8 Jul 109 1:05 pm

Tgt Ion:166 Resp: 245535

Ion	Ratio	Lower	Upper
166	100		
131	58.8	52.1	78.1
94	32.1	29.9	44.9
0	0.0	0.0	0.0

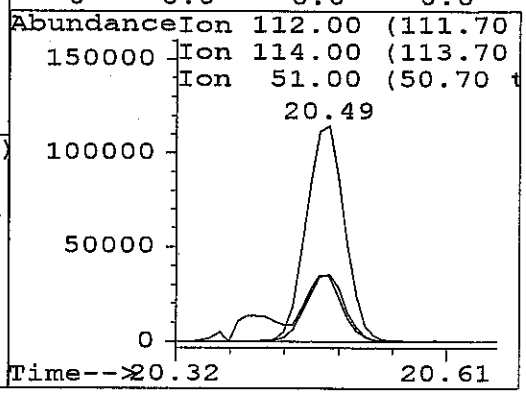


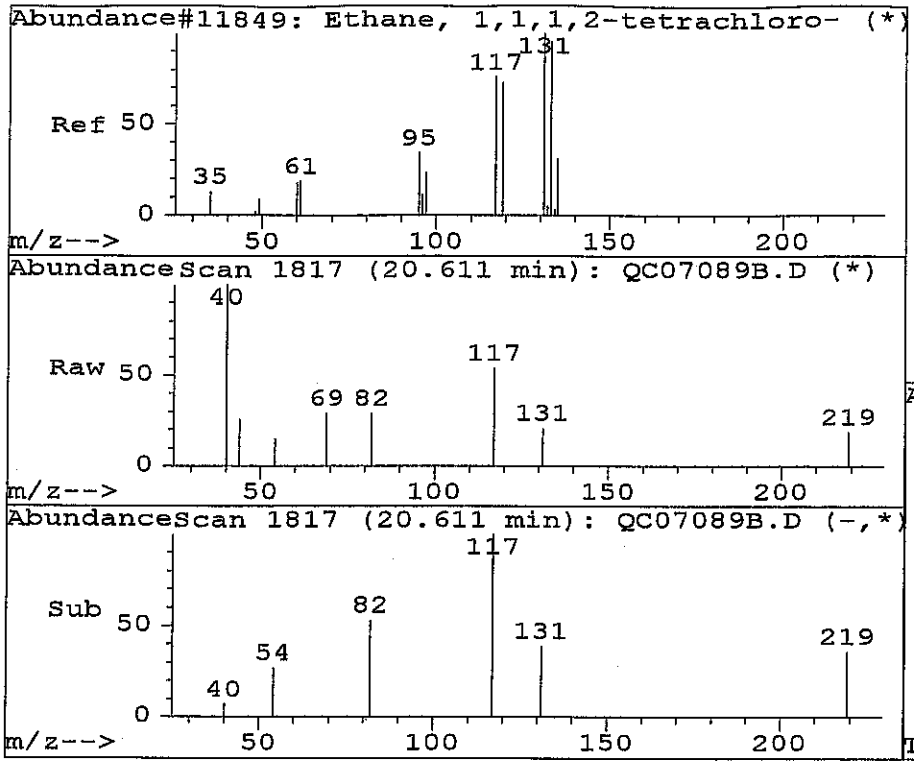


#60
Chlorobenzene
Concen: 1.01 ppbV
RT: 20.49 min Scan# 1804
Delta R.T. 0.04 min
Lab File: QC07089B.D
Acq: 8 Jul 109 1:05 pm

Tgt Ion:112 Resp: 326213

Ion	Ratio	Lower	Upper
112	100		
114	31.0	25.3	37.9
51	24.5	23.0	34.6
0	0.0	0.0	0.0

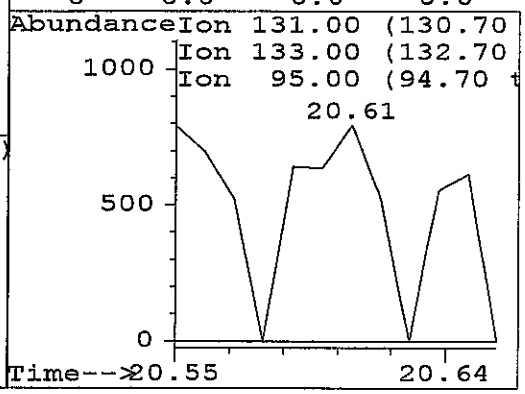


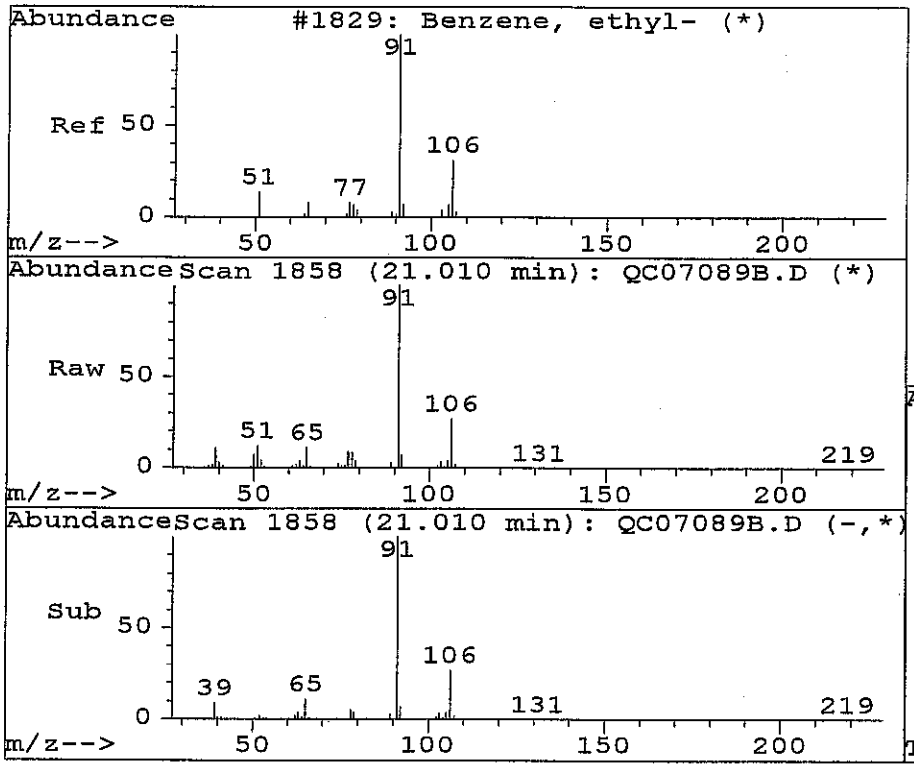


#61
1,1,1,2-Tetrachloroethane
Concen: 0.01 ppbV
RT: 20.61 min Scan# 1817
Delta R.T. 0.10 min
Lab File: QC07089B.D
Acq: 8 Jul 109 1:05 pm

Tgt Ion:131 Resp: 1521

Ion	Ratio	Lower	Upper
131	100		
133	0.0	76.0	114.0#
95	0.0	31.8	47.6#
0	0.0	0.0	0.0

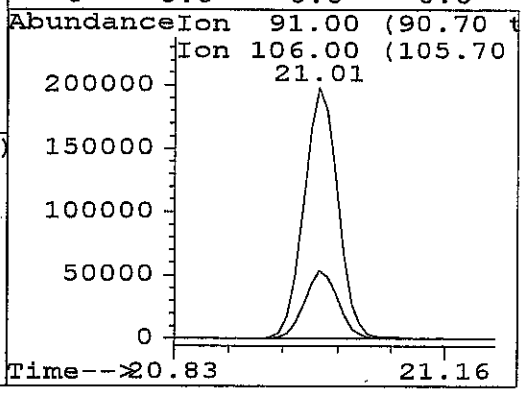


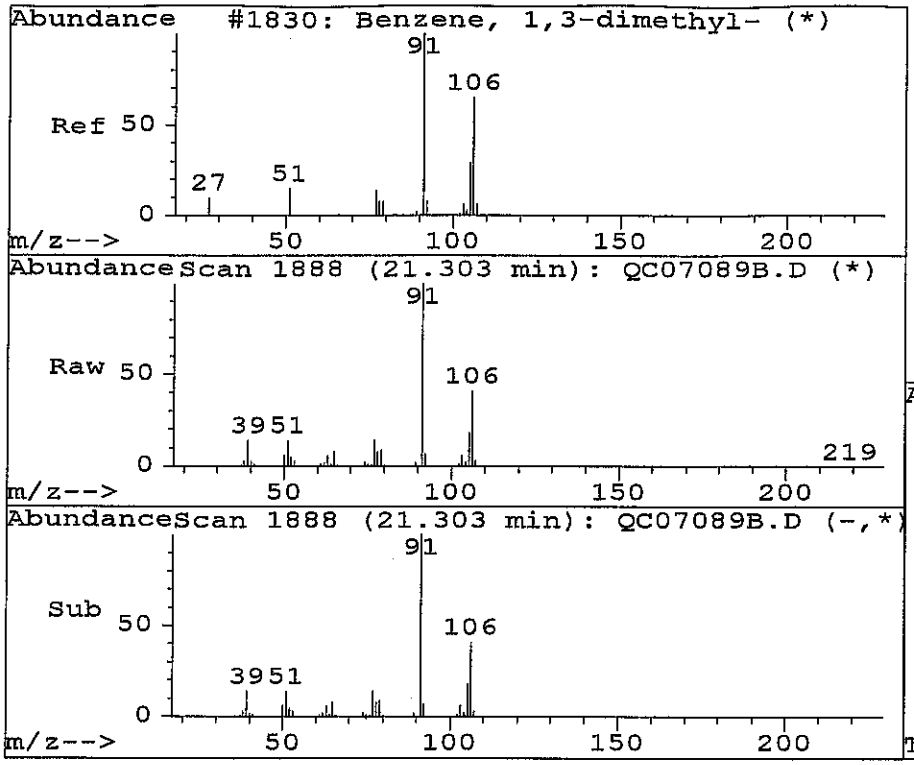


#62
Ethylbenzene
Concen: 1.02 ppbV
RT: 21.01 min Scan# 1858
Delta R.T. 0.02 min
Lab File: QC07089B.D
Acq: 8 Jul 109 1:05 pm

Tgt Ion:91 Resp: 563723

Ion	Ratio	Lower	Upper
91	100		
106	27.1	21.4	32.0
0	0.0	0.0	0.0
0	0.0	0.0	0.0

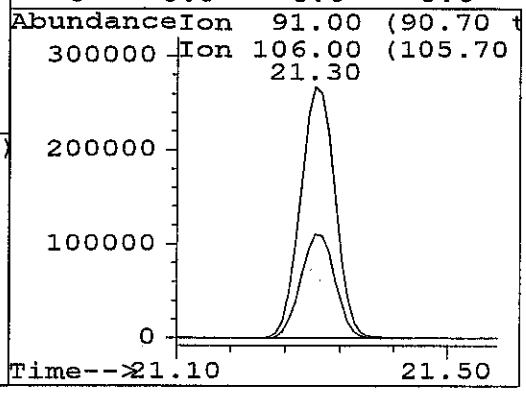


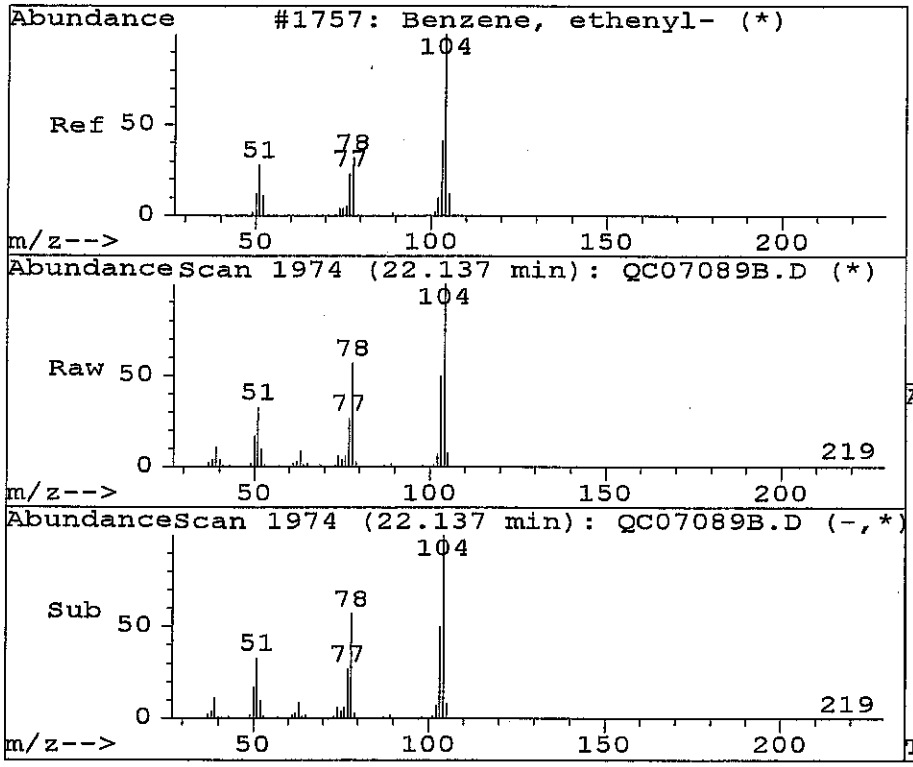


#63
m & p-Xylene
Concen: 2.04 ppbV
RT: 21.30 min Scan# 1888
Delta R.T. 0.02 min
Lab File: QC07089B.D
Acq: 8 Jul 109 1:05 pm

Tgt Ion:91 Resp: 951129

Ion	Ratio	Lower	Upper
91	100		
106	41.3	31.9	47.9
0	0.0	0.0	0.0
0	0.0	0.0	0.0

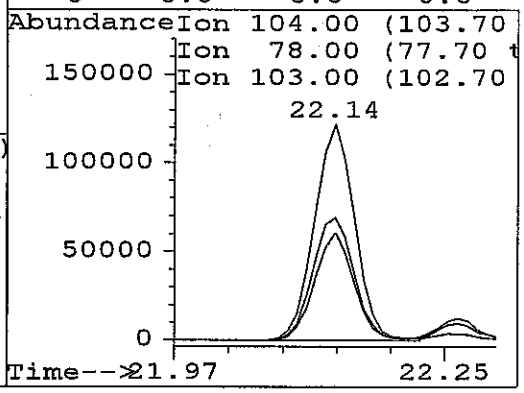


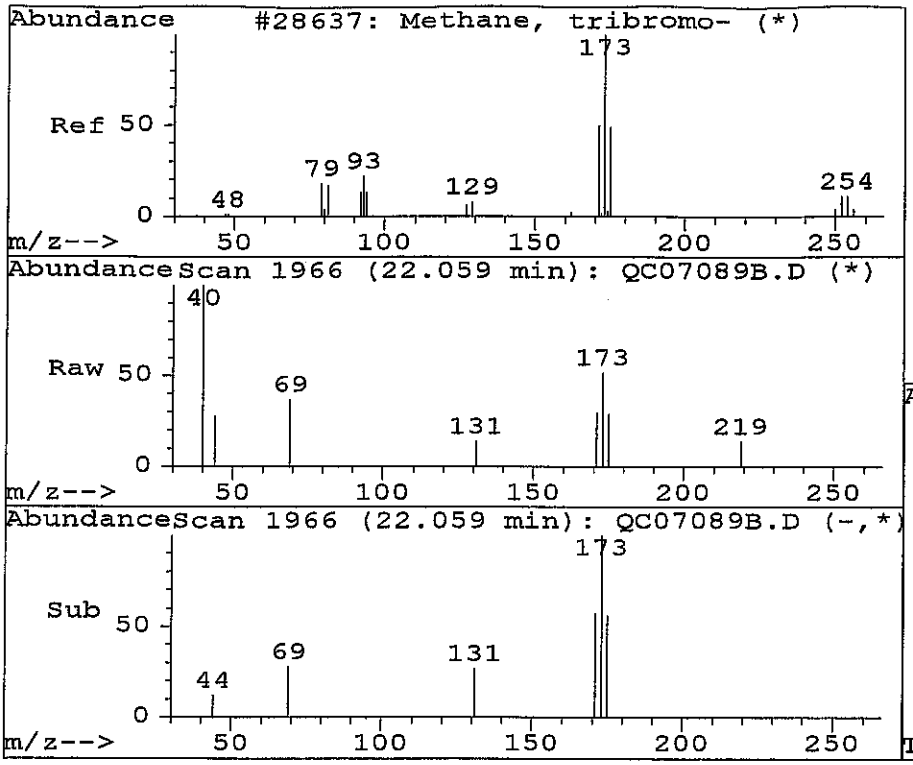


#64
Styrene
Concen: 1.04 ppbV
RT: 22.14 min Scan# 1974
Delta R.T. -0.00 min
Lab File: QC07089B.D
Acq: 8 Jul 109 1:05 pm

Tgt Ion:104 Resp: 346179

Ion	Ratio	Lower	Upper
104	100		
78	56.0	52.8	79.2
103	49.1	37.9	56.9
0	0.0	0.0	0.0

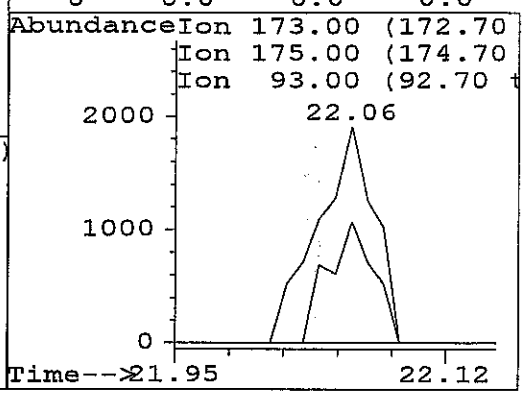


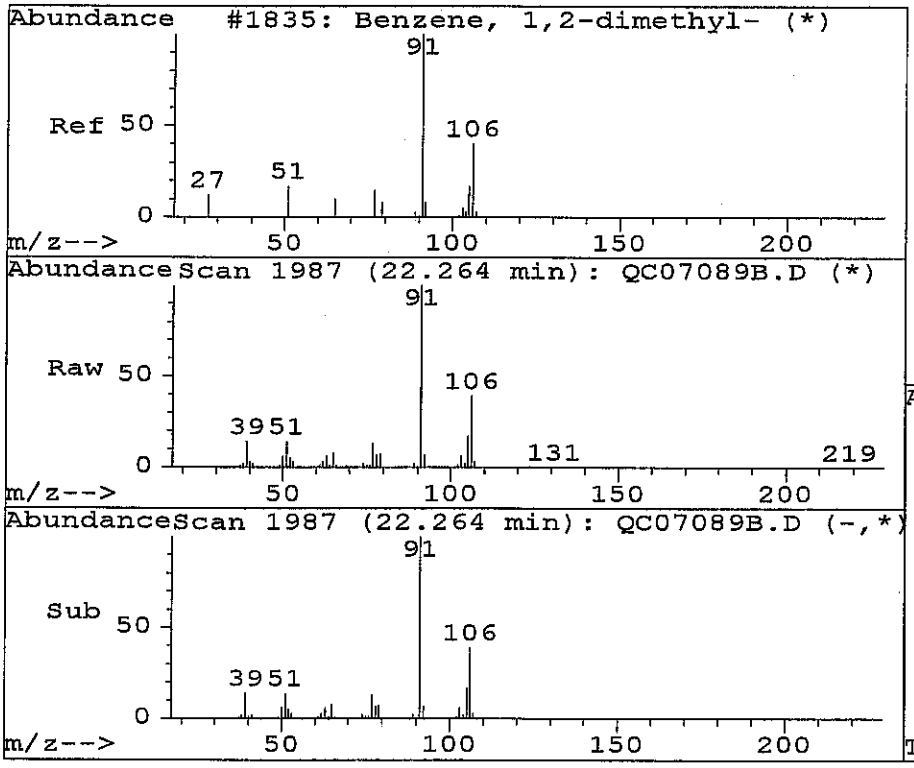


#65
Bromoform
Concen: 0.01 ppbV
RT: 22.06 min Scan# 1966
Delta R.T. 0.06 min
Lab File: QC07089B.D
Acq: 8 Jul 109 1:05 pm

Tgt Ion:173 Resp: 4563

Ion	Ratio	Lower	Upper
173	100		
175	55.8	39.4	59.0
93	0.0	15.6	23.4#
0	0.0	0.0	0.0

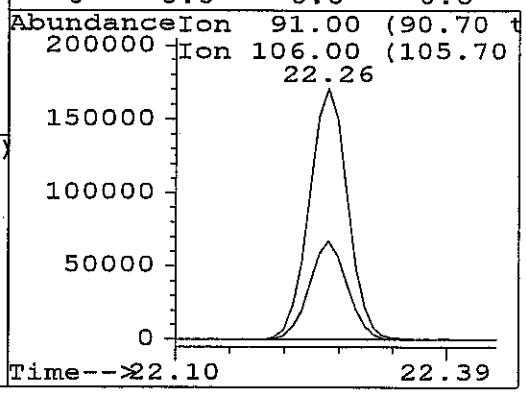


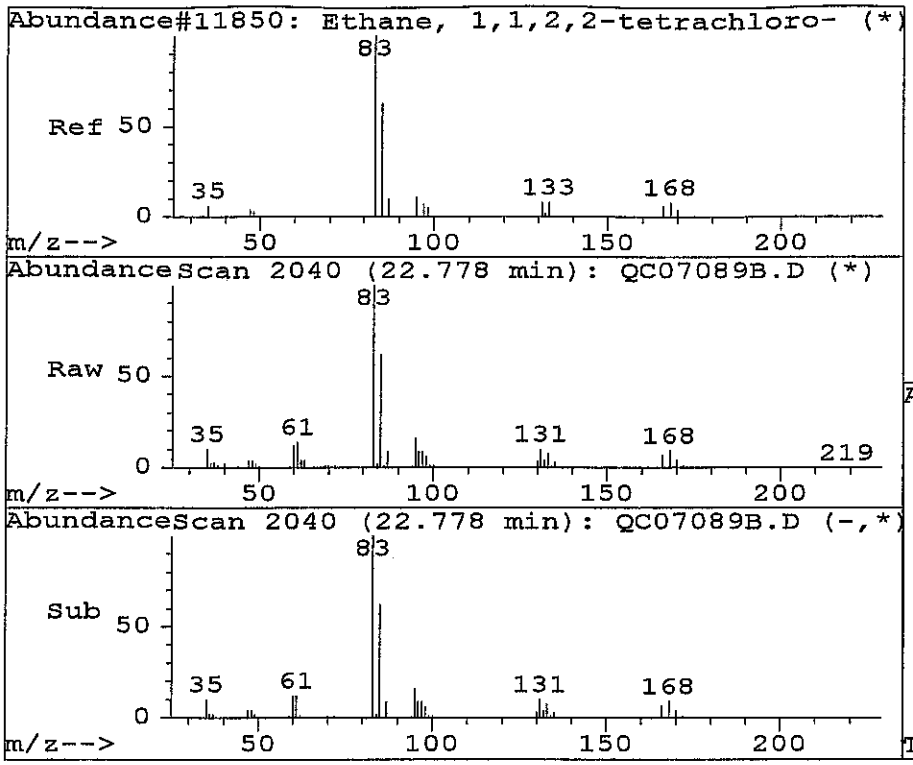


#66
o-Xylene
Concen: 0.96 ppbV
RT: 22.26 min Scan# 1987
Delta R.T. 0.01 min
Lab File: QC07089B.D
Acq: 8 Jul 109 1:05 pm

Tgt Ion:91 Resp: 495557

Ion	Ratio	Lower	Upper
91	100		
106	39.3	29.8	44.8
0	0.0	0.0	0.0
0	0.0	0.0	0.0

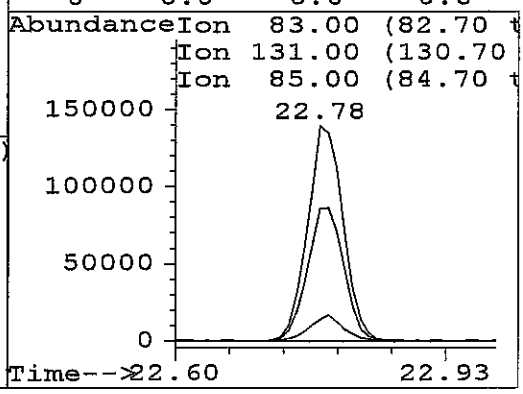


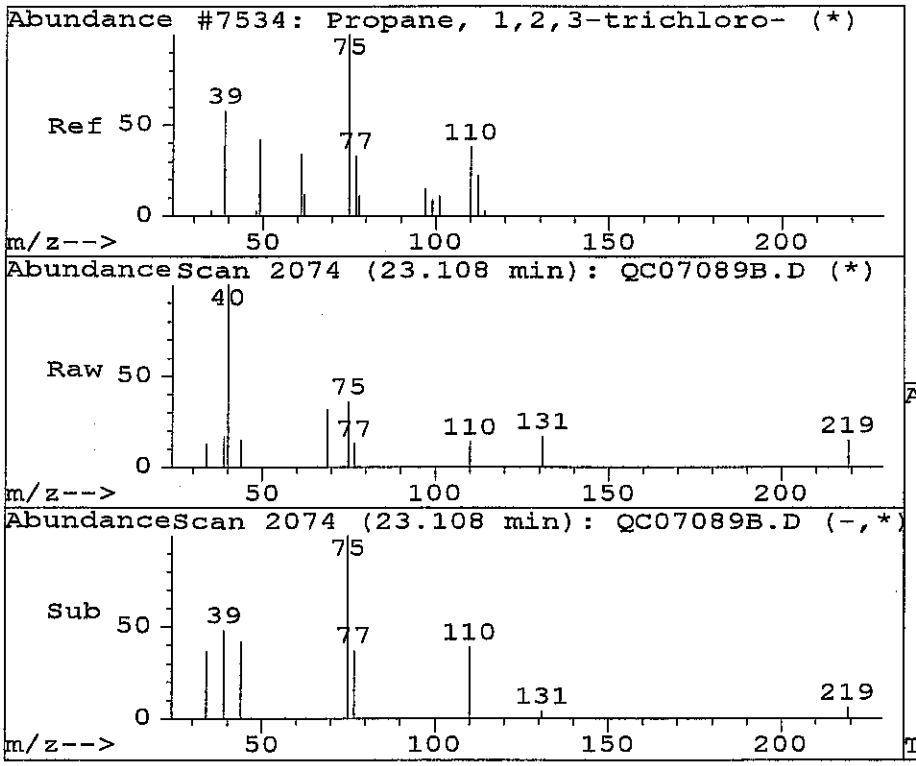


#67
1,1,2,2-Tetrachloroethane
Concen: 0.88 ppbV
RT: 22.78 min Scan# 2040
Delta R.T. 0.03 min
Lab File: QC07089B.D
Acq: 8 Jul 109 1:05 pm

Tgt Ion:83 Resp: 416790

Ion	Ratio	Lower	Upper
83	100		
131	9.7	8.3	12.5
85	61.7	50.2	75.2
0	0.0	0.0	0.0

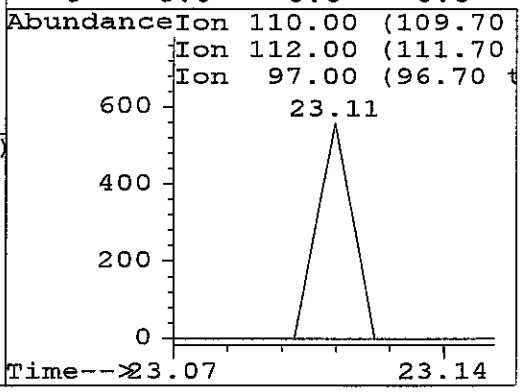


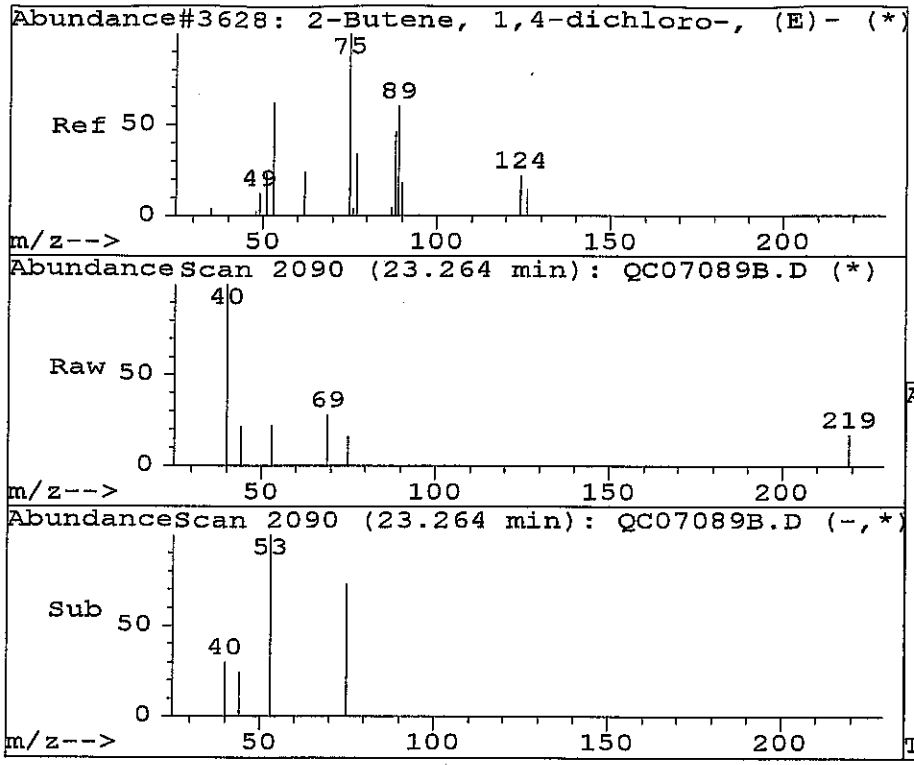


#68
1,2,3-Trichloropropane
Concen: 0.00 ppbV
RT: 23.11 min Scan# 2074
Delta R.T. 0.03 min
Lab File: QC07089B.D
Acq: 8 Jul 109 1:05 pm

Tgt Ion:110 Resp: 326

Ion	Ratio	Lower	Upper
110	100		
112	0.0	51.9	77.9#
97	0.0	39.8	59.6#
0	0.0	0.0	0.0

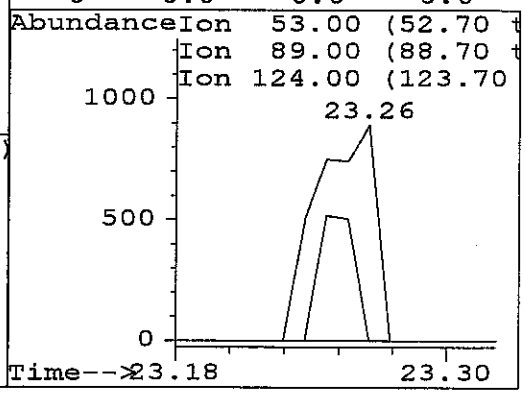


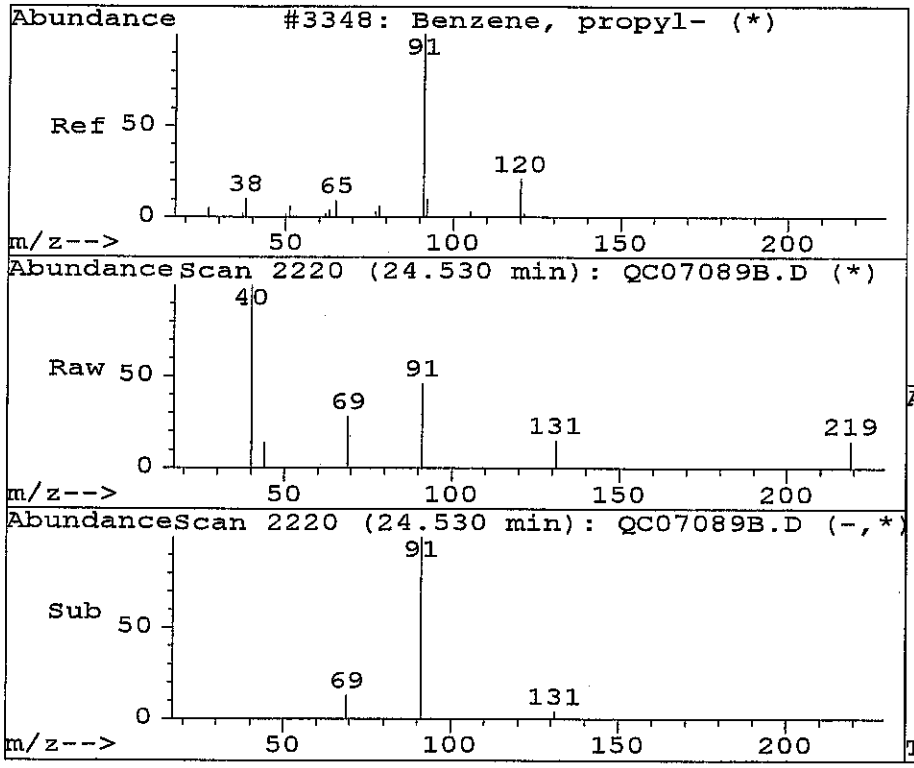


#69
t-1,4-Dichloro-2-butene
Concen: 0.01 ppbV
RT: 23.26 min Scan# 2090
Delta R.T. 0.03 min
Lab File: QC07089B.D
Acq: 8 Jul 109 1:05 pm

Tgt Ion:53 Resp: 1688

Ion	Ratio	Lower	Upper
53	100		
89	0.0	40.8	61.2#
124	0.0	15.0	22.4#
0	0.0	0.0	0.0

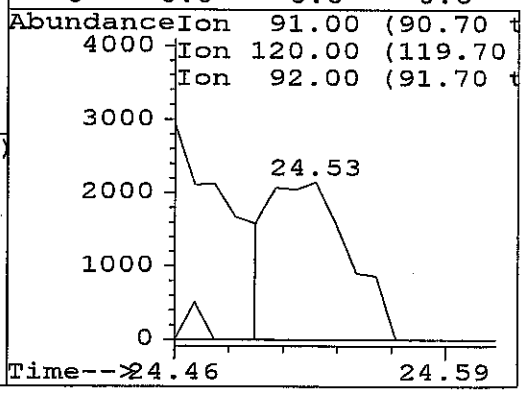


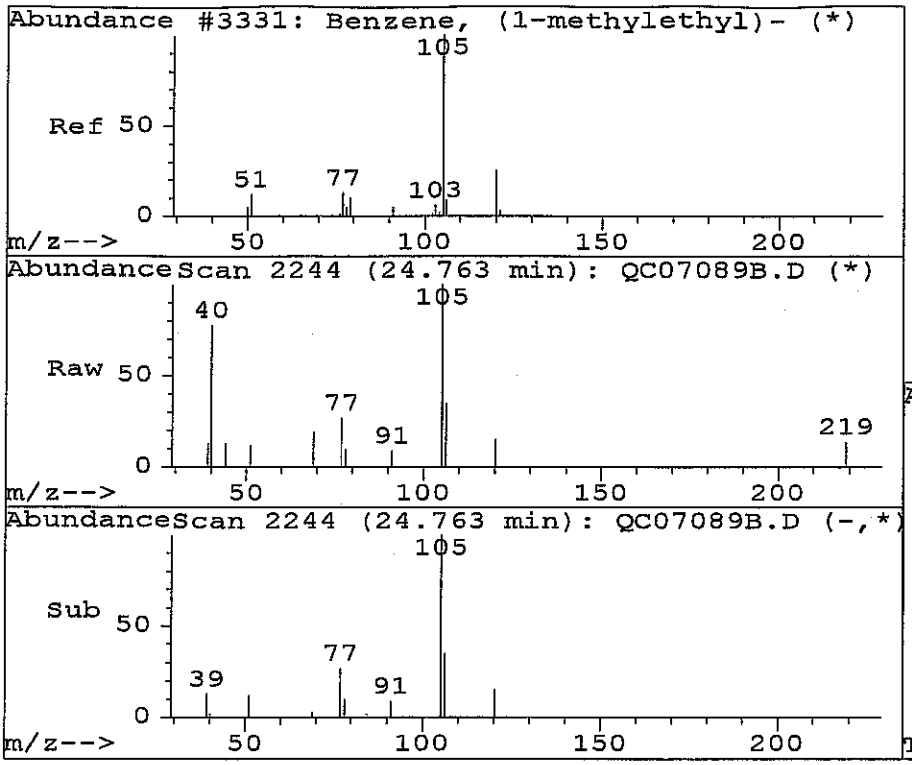


#70
n-Propylbenzene
Concen: 0.01 ppbV
RT: 24.53 min Scan# 2220
Delta R.T. 0.10 min
Lab File: QC07089B.D
Acq: 8 Jul 109 1:05 pm

Tgt Ion:91 Resp: 5616

Ion	Ratio	Lower	Upper
91	100		
120	0.0	13.9	20.9#
92	0.0	7.8	11.6#
0	0.0	0.0	0.0

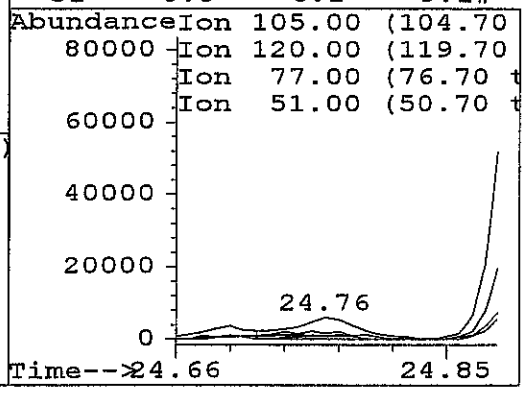


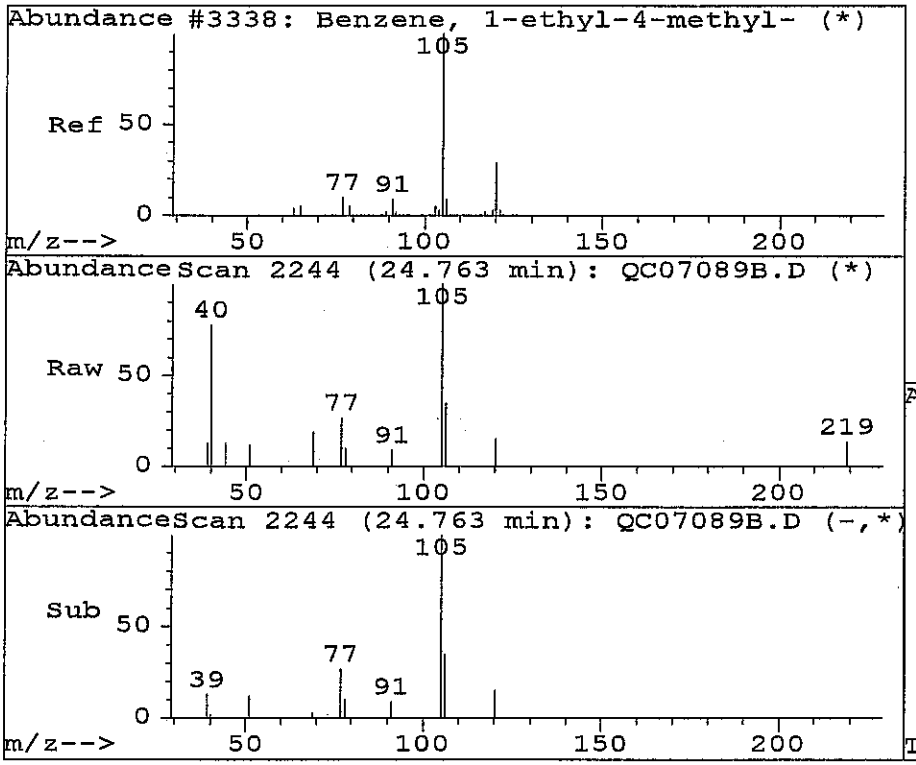


#71
Isopropylbenzene
Concen: 0.03 ppbV
RT: 24.76 min Scan# 2244
Delta R.T. 0.02 min
Lab File: QC07089B.D
Acq: 8 Jul 109 1:05 pm

Tgt Ion:105 Resp: 19760

Ion	Ratio	Lower	Upper
105	100		
120	15.6	20.3	30.5#
77	48.7	12.1	18.1#
51	0.0	6.1	9.1#

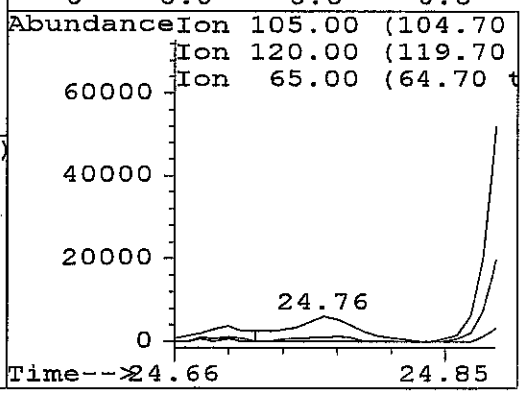


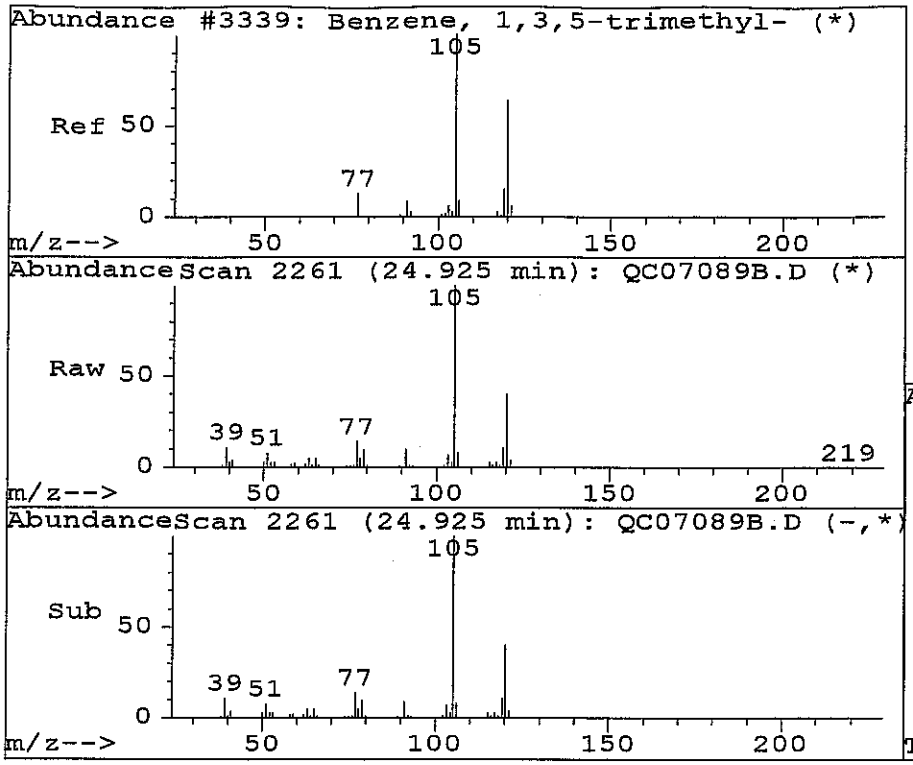


#72
4-Ethyltoluene
Concen: 0.02 ppbV
RT: 24.76 min Scan# 2244
Delta R.T. 0.02 min
Lab File: QC07089B.D
Acq: 8 Jul 109 1:05 pm

Tgt Ion:105 Resp: 19760

Ion	Ratio	Lower	Upper
105	100		
120	19.1	20.4	30.6#
65	0.0	5.1	7.7#
0	0.0	0.0	0.0

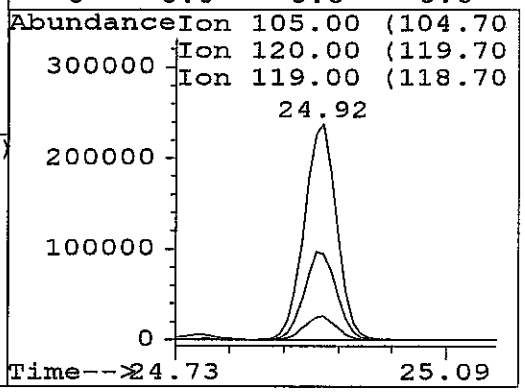


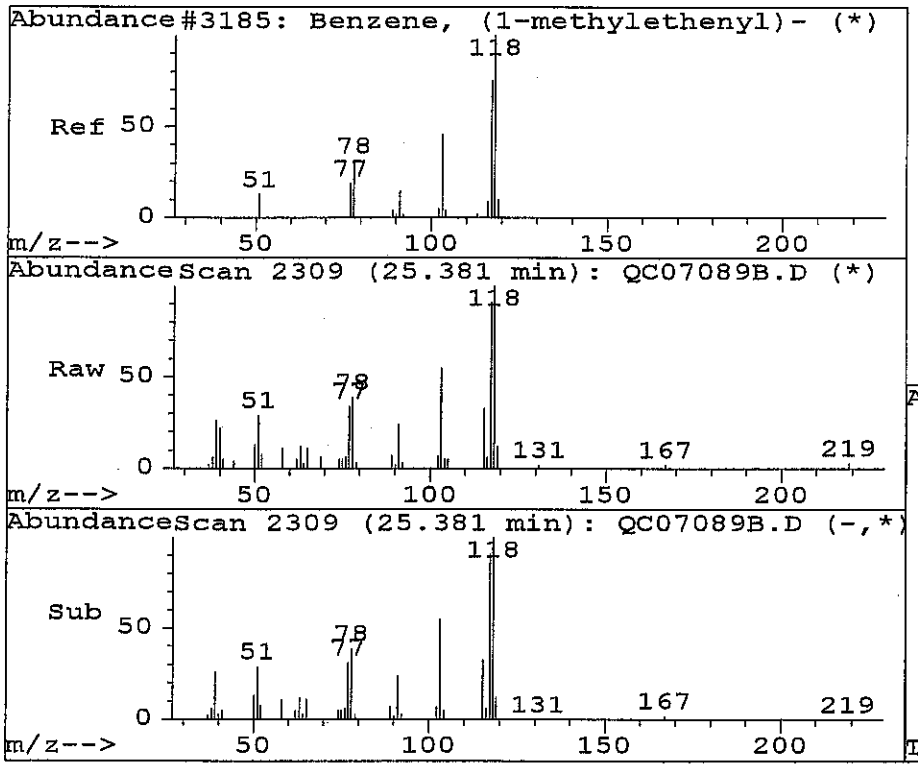


#73
1,3,5-Trimethylbenzene
Concen: 0.92 ppbV
RT: 24.92 min Scan# 2261
Delta R.T. 0.00 min
Lab File: QC07089B.D
Acq: 8 Jul 109 1:05 pm

Tgt Ion:105 Resp: 683263

Ion	Ratio	Lower	Upper
105	100		
120	39.9	32.8	49.2
119	10.9	8.7	13.1
0	0.0	0.0	0.0

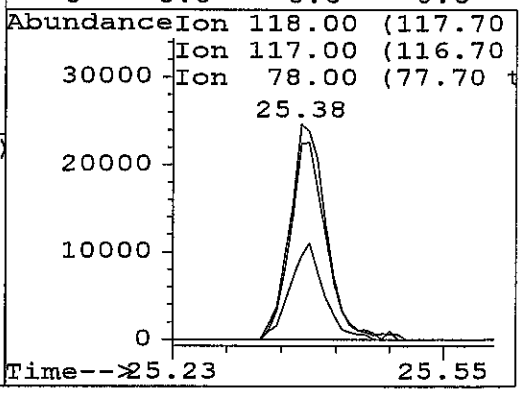


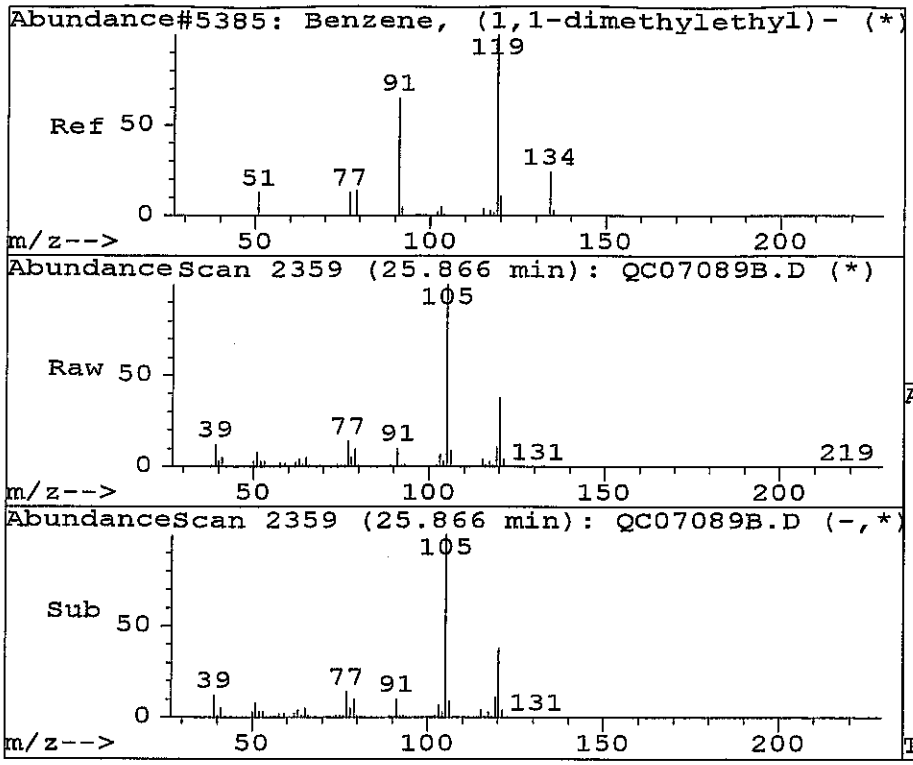


#74
Methylstyrene
Concen: 0.22 ppbV
RT: 25.38 min Scan# 2309
Delta R.T. 0.02 min
Lab File: QC07089B.D
Acq: 8 Jul 109 1:05 pm

Tgt Ion:118 Resp: 75655

Ion	Ratio	Lower	Upper
118	100		
117	91.1	70.3	105.5
78	38.6	34.2	51.2
0	0.0	0.0	0.0

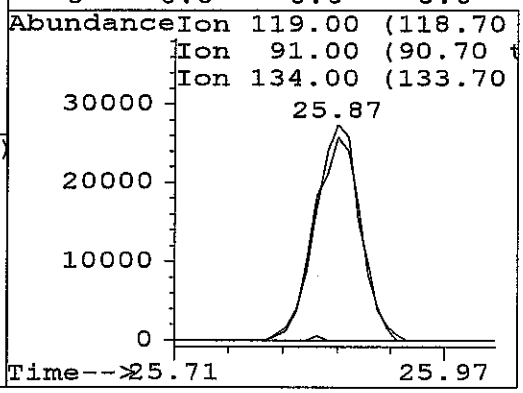


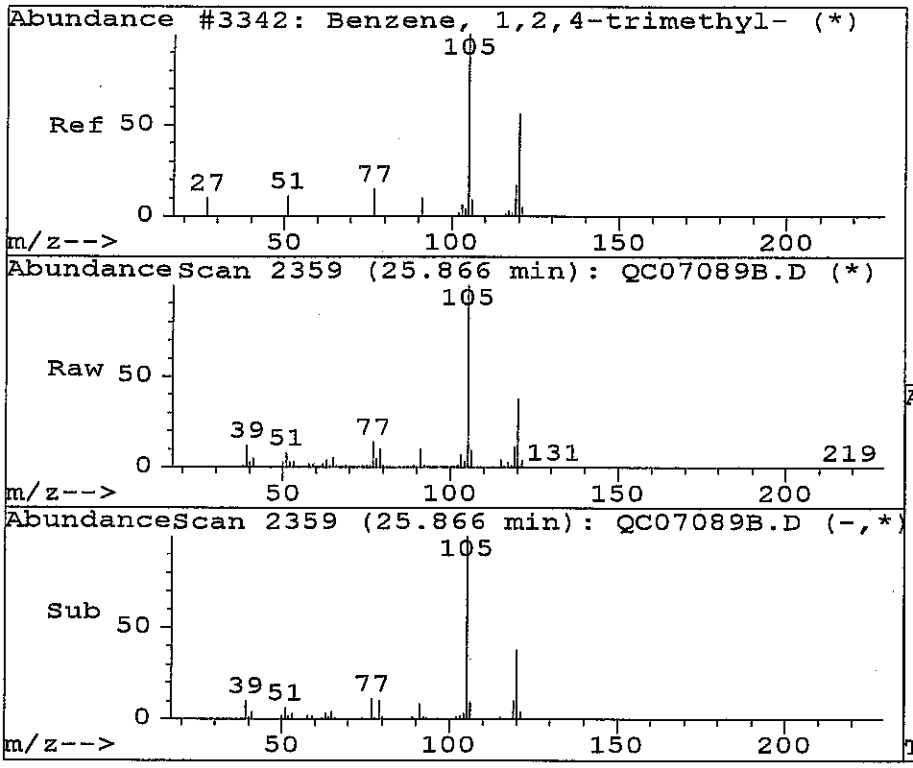


#75
tert-butyl benzene
Concen: 0.13 ppbV
RT: 25.87 min Scan# 2359
Delta R.T. 0.06 min
Lab File: QC07089B.D
Acq: 8 Jul 109 1:05 pm

Tgt Ion:119 Resp: 81347

Ion	Ratio	Lower	Upper
119	100		
91	96.7	73.8	110.6
134	0.4	16.2	24.4#
0	0.0	0.0	0.0

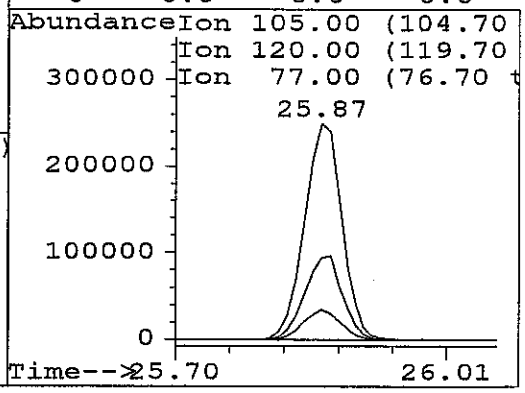


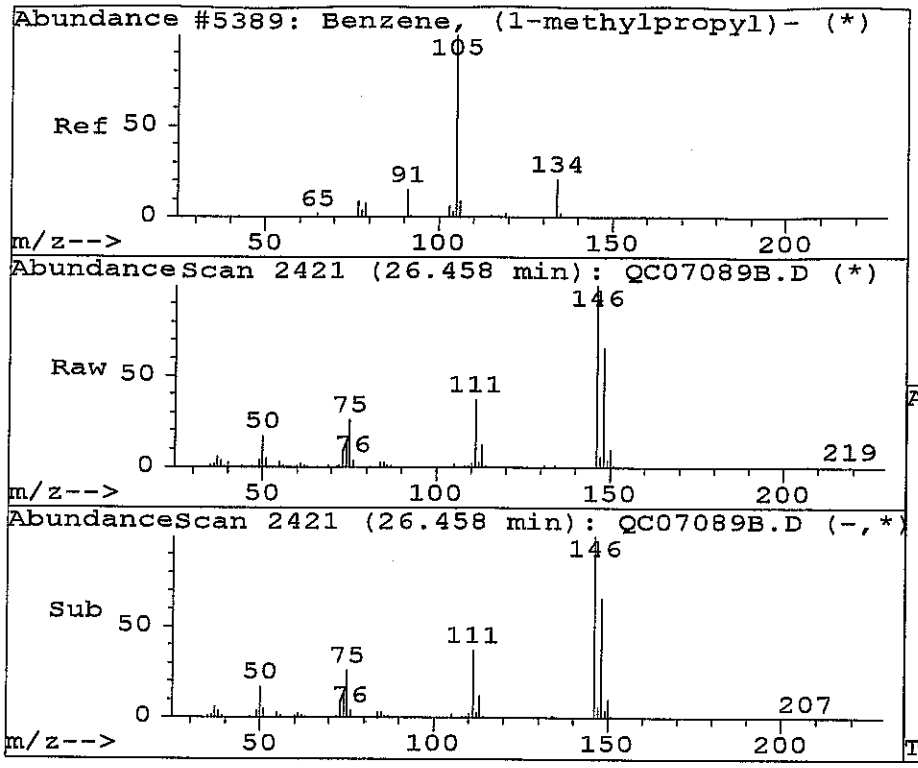


#76
1,2,4-Trimethylbenzene
Concen: 1.05 ppbV
RT: 25.87 min Scan# 2359
Delta R.T. -0.02 min
Lab File: QC07089B.D
Acq: 8 Jul 109 1:05 pm

Tgt Ion:105 Resp: 720685

Ion	Ratio	Lower	Upper
105	100		
120	37.9	31.9	47.9
77	14.0	14.2	21.2#
0	0.0	0.0	0.0

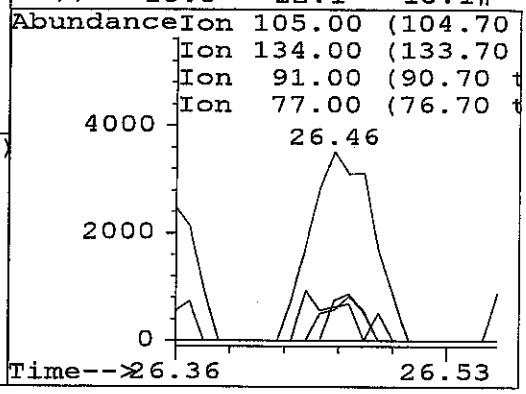


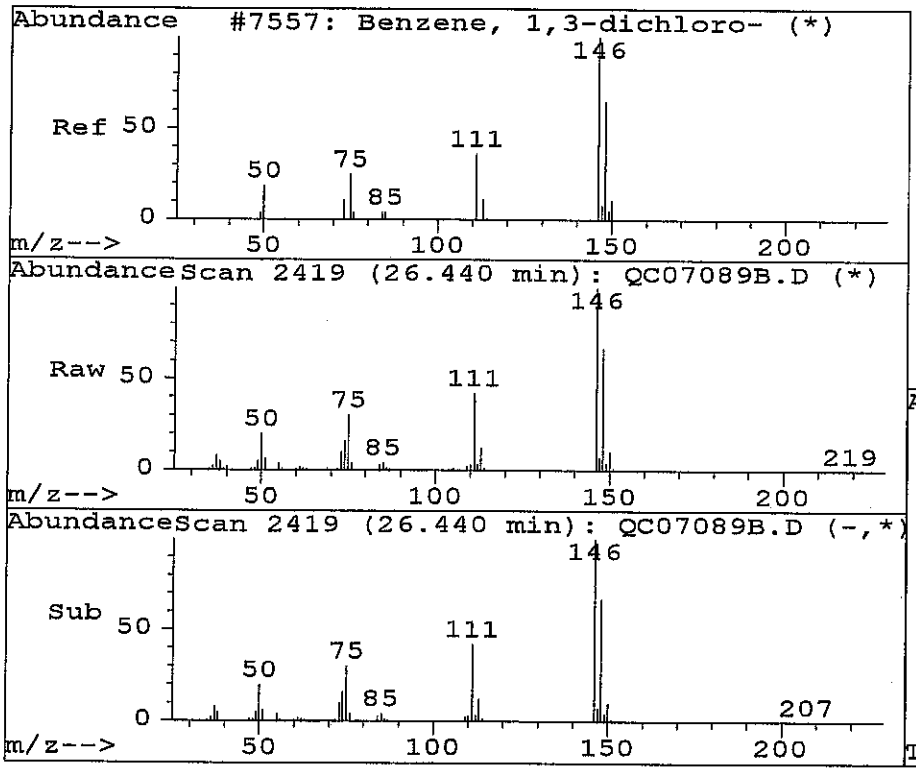


#77
sec-butylbenzene
Concen: 0.01 ppbV
RT: 26.46 min Scan# 2421
Delta R.T. -0.04 min
Lab File: QC07089B.D
Acq: 8 Jul 109 1:05 pm

Tgt Ion:105 Resp: 10104

Ion	Ratio	Lower	Upper
105	100		
134	12.2	14.4	21.6#
91	14.0	13.4	20.0
77	18.8	12.1	18.1#

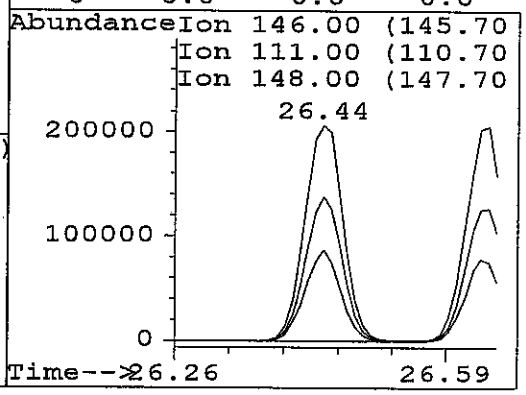


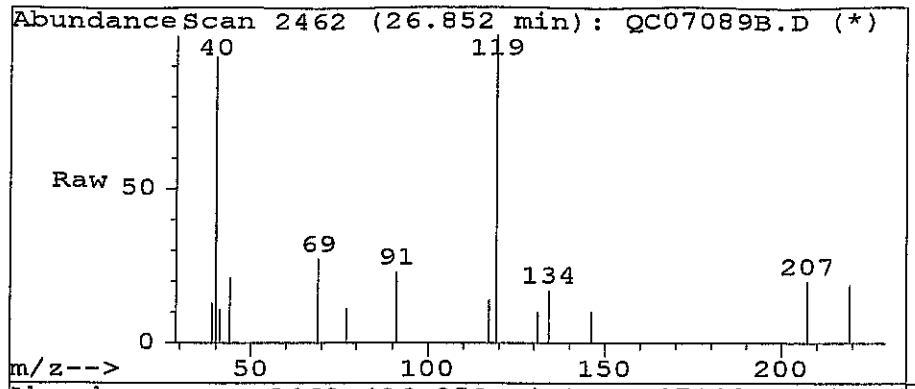


#78
1,3-Dichlorobenzene
Concen: 1.23 ppbV
RT: 26.44 min Scan# 2419
Delta R.T. 0.03 min
Lab File: QC07089B.D
Acq: 8 Jul 109 1:05 pm

Tgt Ion:146 Resp: 678519

Ion	Ratio	Lower	Upper
146	100		
111	42.1	34.2	51.4
148	66.9	51.6	77.4
0	0.0	0.0	0.0

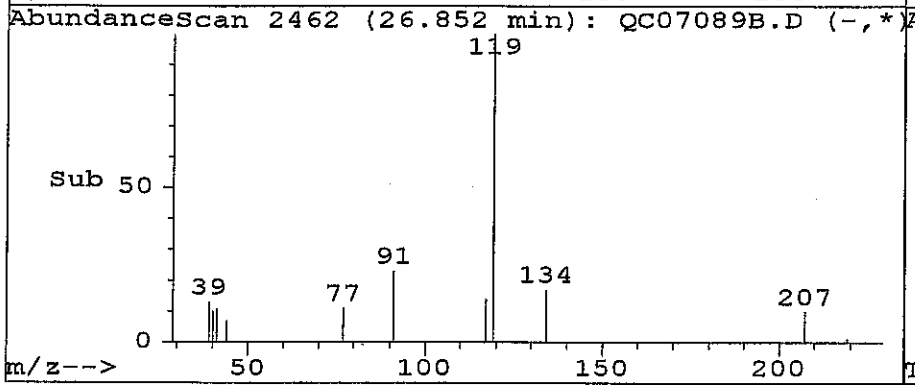


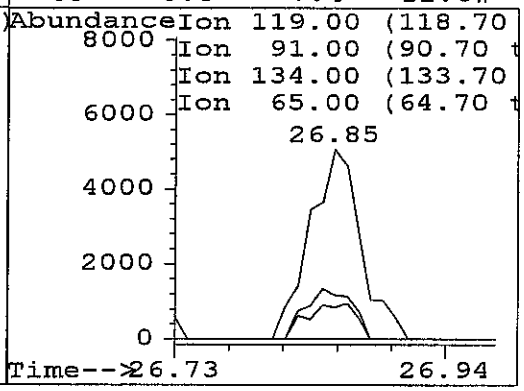


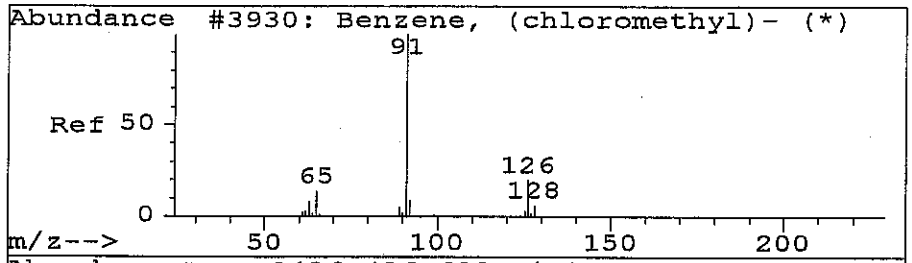
#79
Isopropyltoluene
Concen: 0.02 ppbV
RT: 26.85 min Scan# 2462
Delta R.T. 0.02 min
Lab File: QC07089B.D
Acq: 8 Jul 109 1:05 pm

Tgt Ion:119 Resp: 14042

Ion	Ratio	Lower	Upper
119	100		
91	24.5	25.4	38.0#
134	17.9	19.0	28.6#
65	0.0	7.4	11.0#



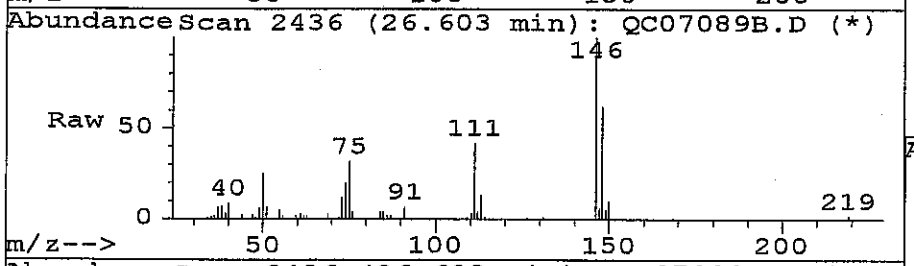


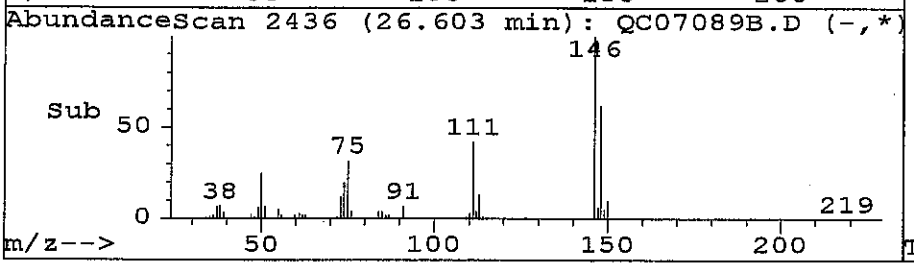


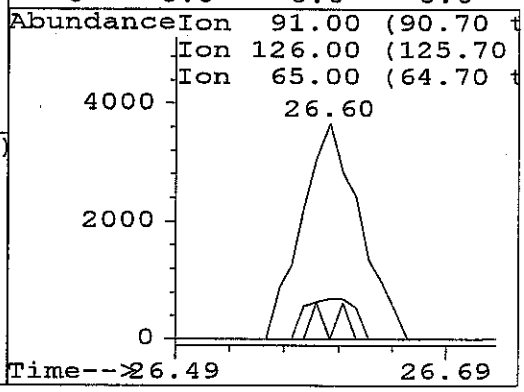
#80
Benzyl chloride
Concen: 0.01 ppbV
RT: 26.60 min Scan# 2436
Delta R.T. -0.01 min
Lab File: QC07089B.D
Acq: 8 Jul 109 1:05 pm

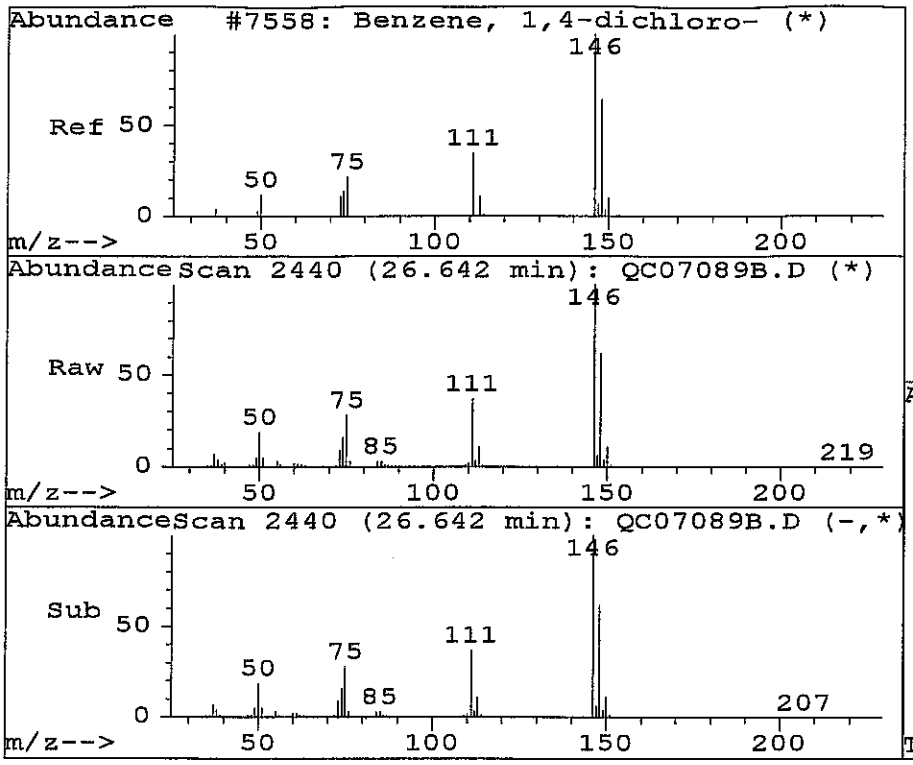
Tgt Ion:91 Resp: 11071

Ion	Ratio	Lower	Upper
91	100		
126	18.8	15.4	23.0
65	0.0	14.2	21.4#
0	0.0	0.0	0.0





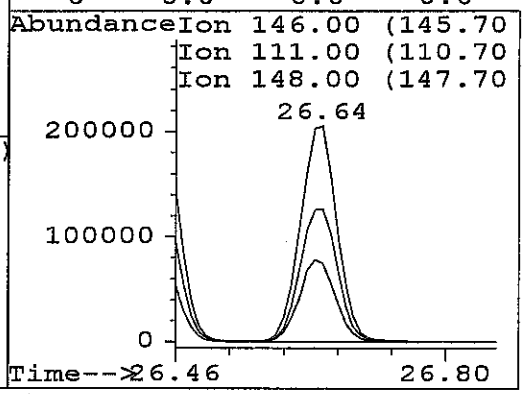


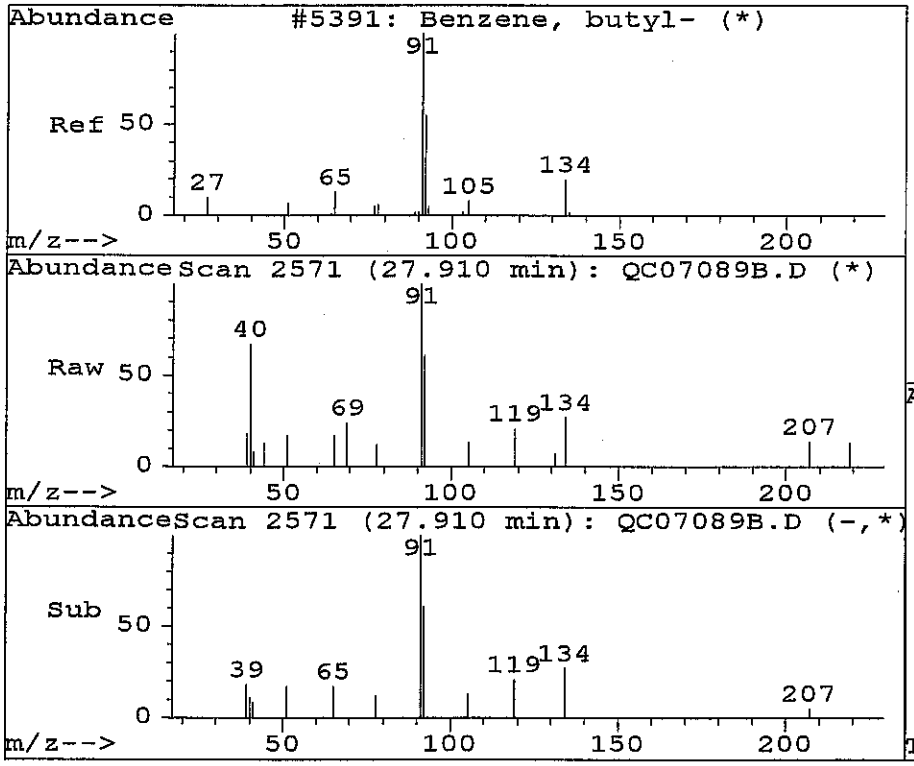


#81
1,4-Dichlorobenzene
Concen: 1.12 ppbV
RT: 26.64 min Scan# 2440
Delta R.T. -0.04 min
Lab File: QC07089B.D
Acq: 8 Jul 109 1:05 pm

Tgt Ion:146 Resp: 643008

Ion	Ratio	Lower	Upper
146	100		
111	36.6	33.7	50.5
148	61.7	51.2	76.8
0	0.0	0.0	0.0

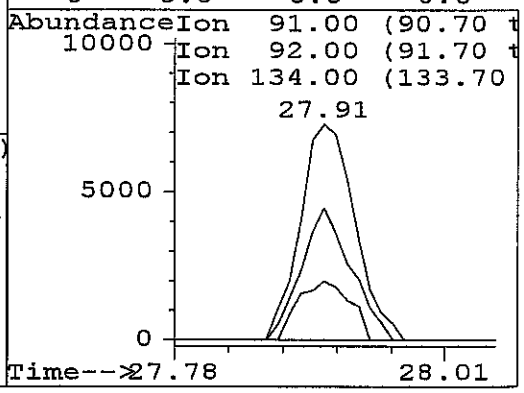


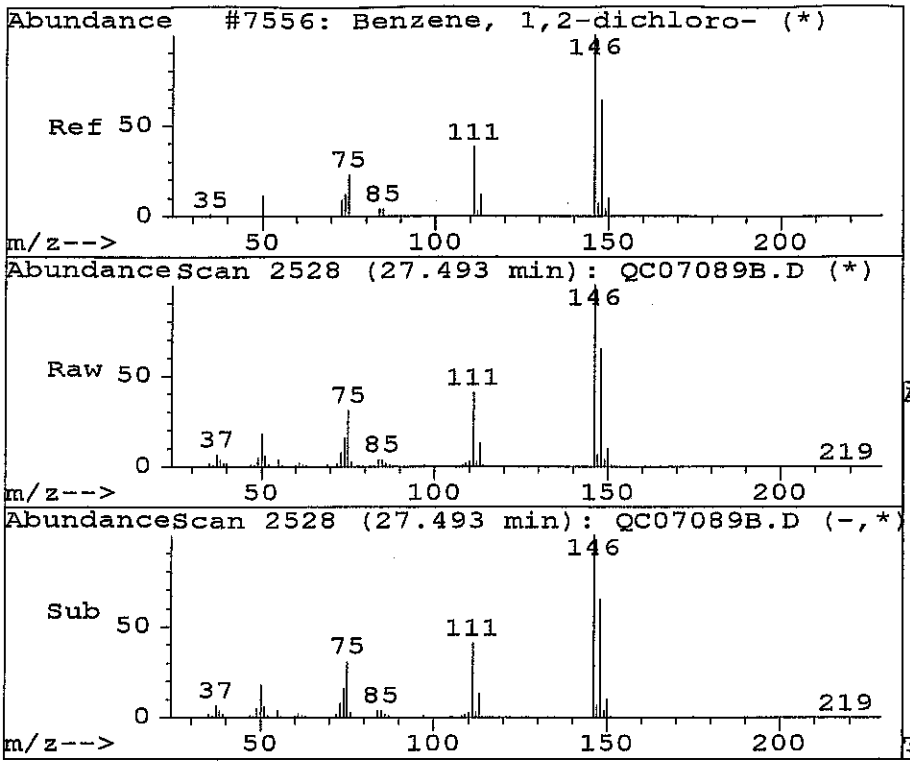


#82
n-Butylbenzene
Concen: 0.02 ppbV
RT: 27.91 min Scan# 2571
Delta R.T. 0.03 min
Lab File: QC07089B.D
Acq: 8 Jul 109 1:05 pm

Tgt Ion:91 Resp: 23426

Ion	Ratio	Lower	Upper
91	100		
92	55.6	44.2	66.4
134	25.9	18.2	27.4
0	0.0	0.0	0.0

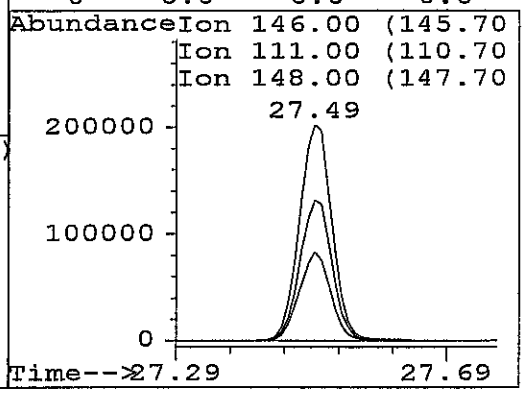


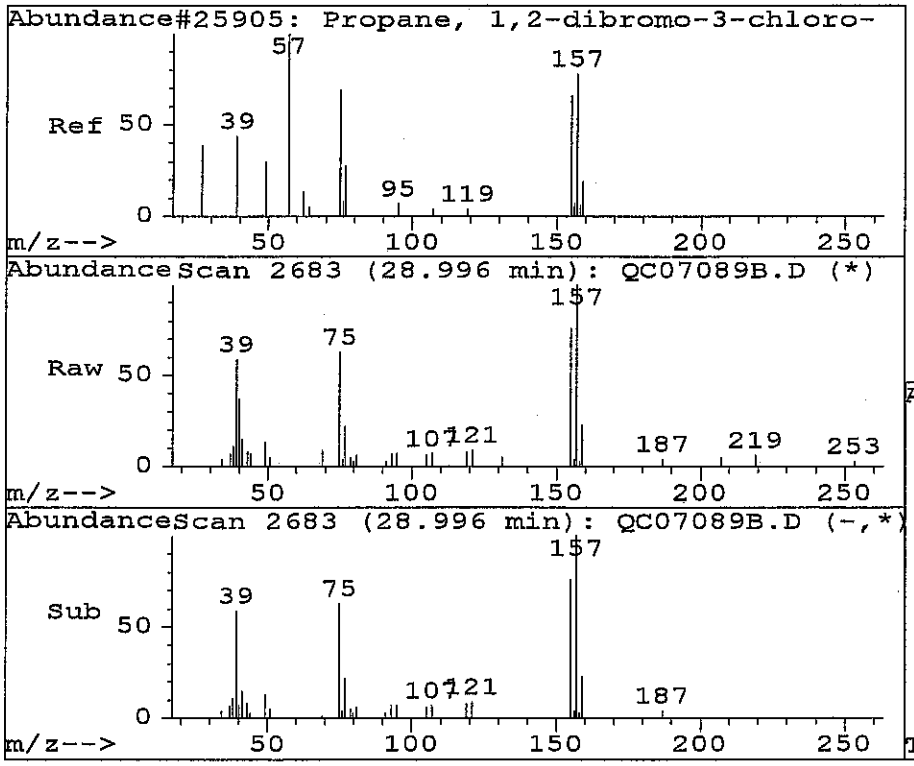


#83
1,2-Dichlorobenzene
Concen: 1.05 ppbV
RT: 27.49 min Scan# 2528
Delta R.T. 0.02 min
Lab File: QC07089B.D
Acq: 8 Jul 109 1:05 pm

Tgt Ion:146 Resp: 667316

Ion	Ratio	Lower	Upper
146	100		
111	41.1	34.1	51.1
148	64.9	49.9	74.9
0	0.0	0.0	0.0

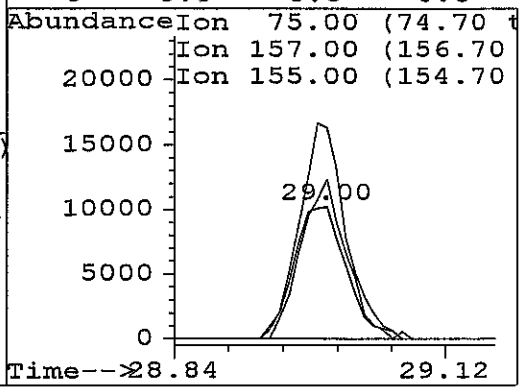


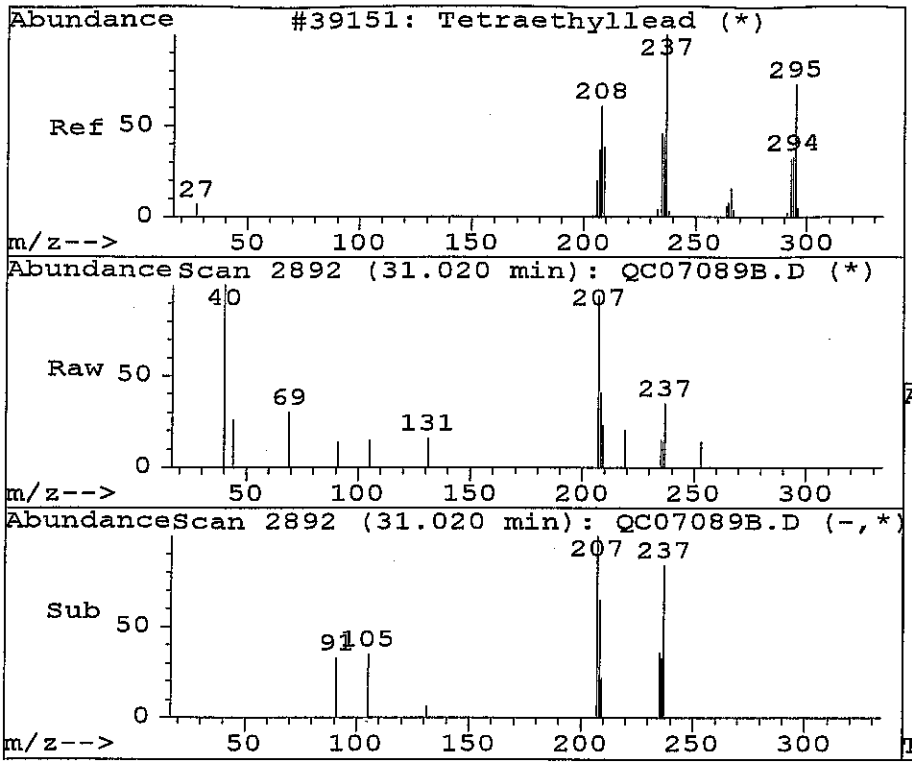


#84
1,2-Dibromo-3-chloropropane
Concen: 0.09 ppbV
RT: 29.00 min Scan# 2683
Delta R.T. 0.04 min
Lab File: QC07089B.D
Acq: 8 Jul 109 1:05 pm

Tgt Ion:75 Resp: 38468

Ion	Ratio	Lower	Upper
75	100		
157	159.7	76.2	114.2#
155	120.8	58.6	87.8#
0	0.0	0.0	0.0

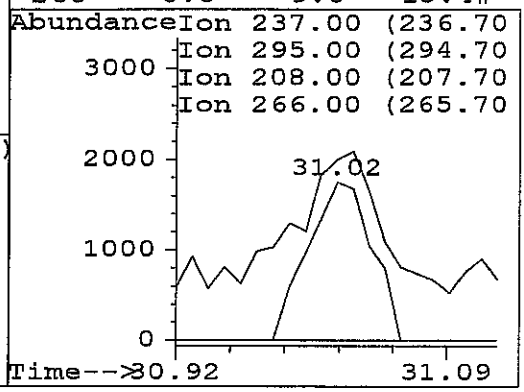


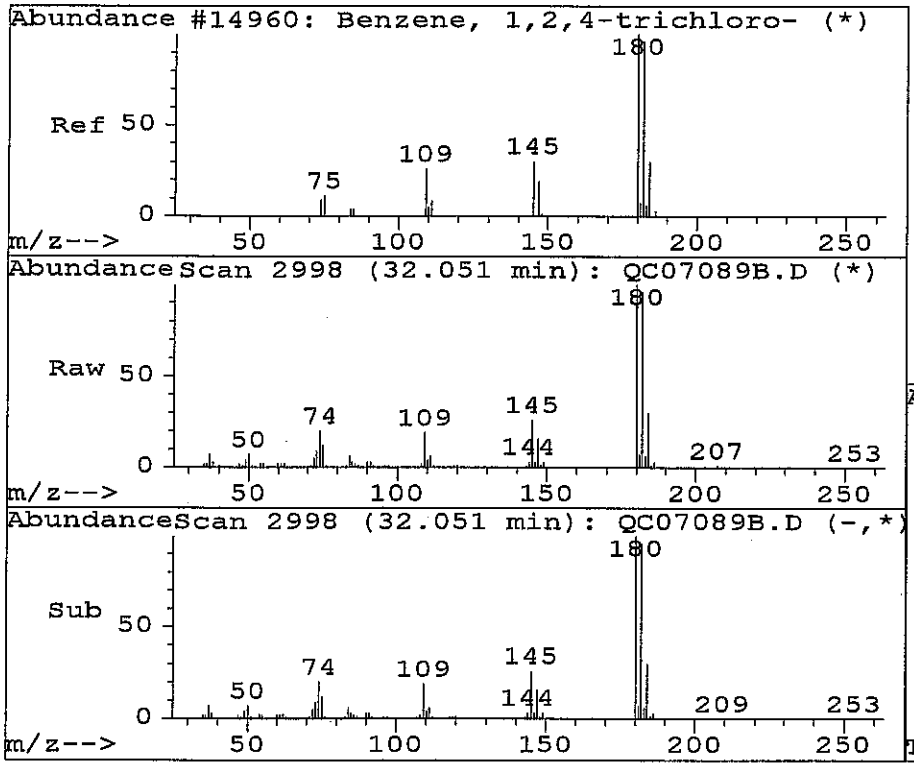


#85
Tetraethyl lead
Concen: 0.01 ppbV
RT: 31.02 min Scan# 2892
Delta R.T. 0.04 min
Lab File: QC07089B.D
Acq: 8 Jul 109 1:05 pm

Tgt Ion:237 Resp: 4754

Ion	Ratio	Lower	Upper
237	100		
295	0.0	0.0	0.0
208	156.8	50.6	75.8#
266	0.0	9.0	13.4#

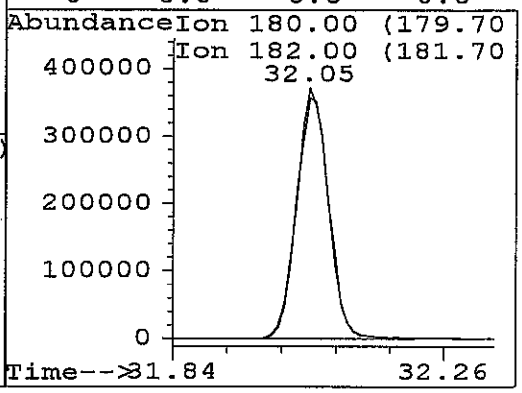


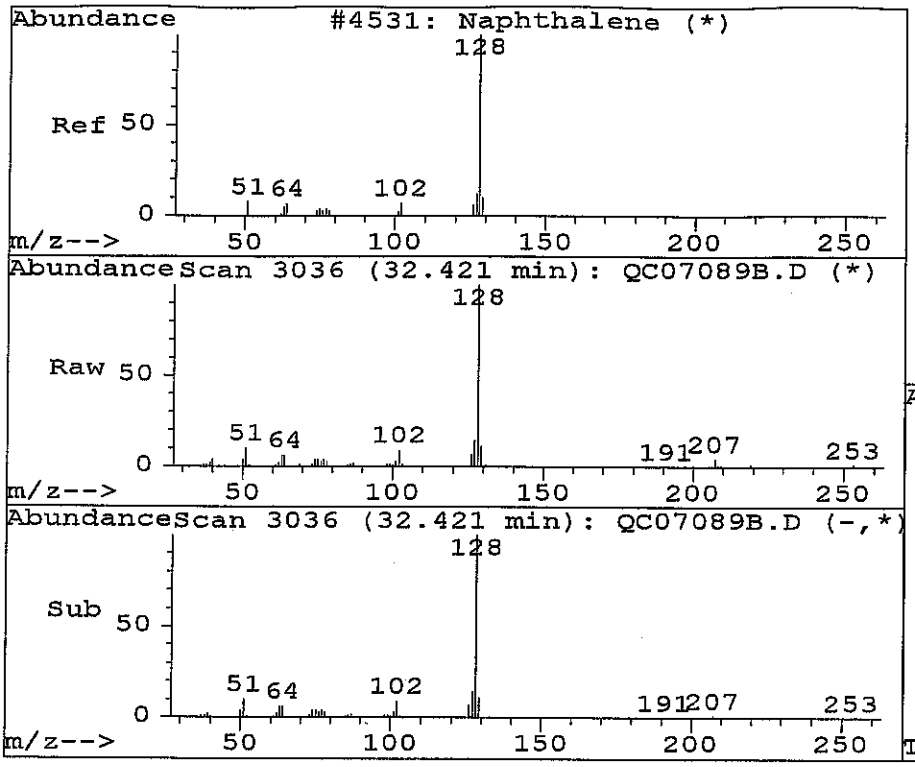


#86
1,2,4-Trichlorobenzene
Concen: 1.08 ppbV
RT: 32.05 min Scan# 2998
Delta R.T. -0.13 min
Lab File: QC07089B.D
Acq: 8 Jul 109 1:05 pm

Tgt Ion:180 Resp: 1276646

Ion	Ratio	Lower	Upper
180	100		
182	96.2	77.8	116.8
0	0.0	0.0	0.0
0	0.0	0.0	0.0

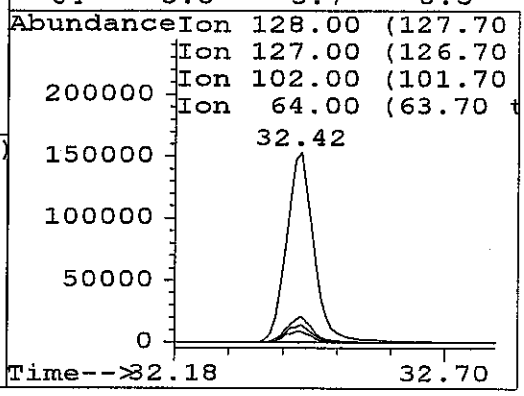


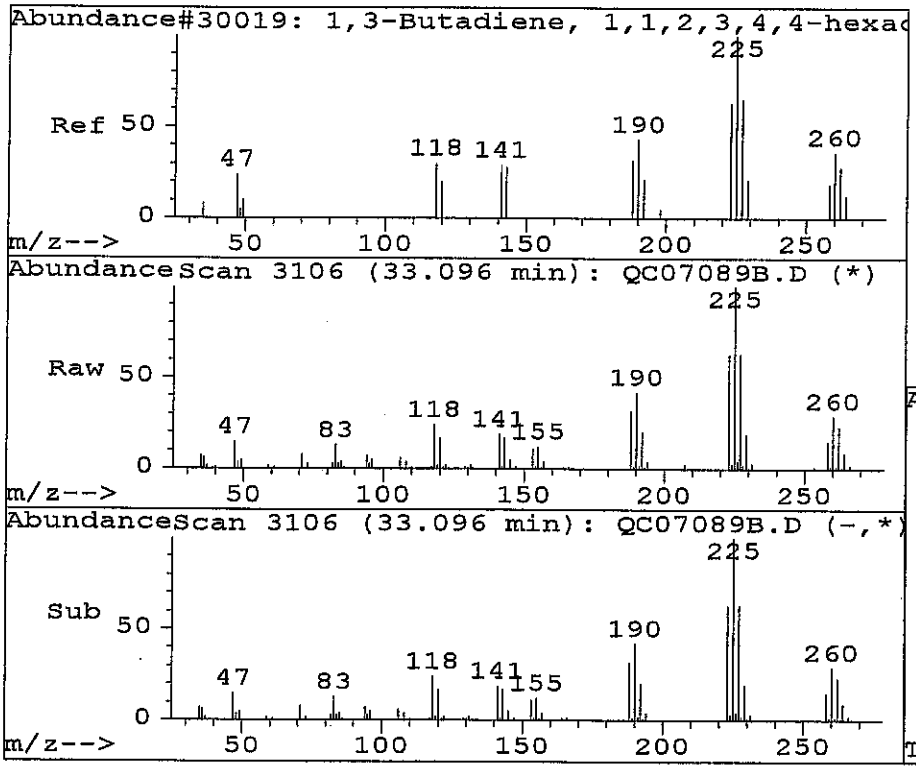


#87
Naphthalene
Concen: 0.28 ppbV
RT: 32.42 min Scan# 3036
Delta R.T. 0.01 min
Lab File: QC07089B.D
Acq: 8 Jul 109 1:05 pm

Tgt Ion:128 Resp: 558702

Ion	Ratio	Lower	Upper
128	100		
127	13.9	10.4	15.6
102	9.4	9.2	13.8
64	5.8	5.7	8.5

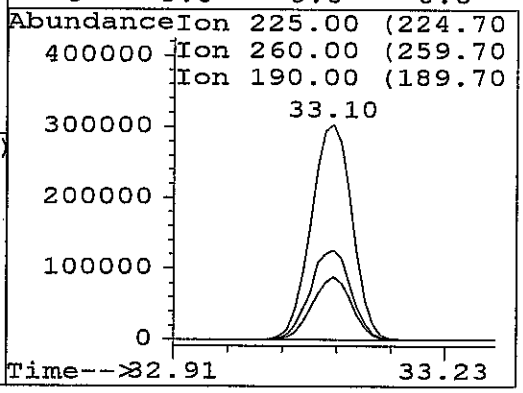


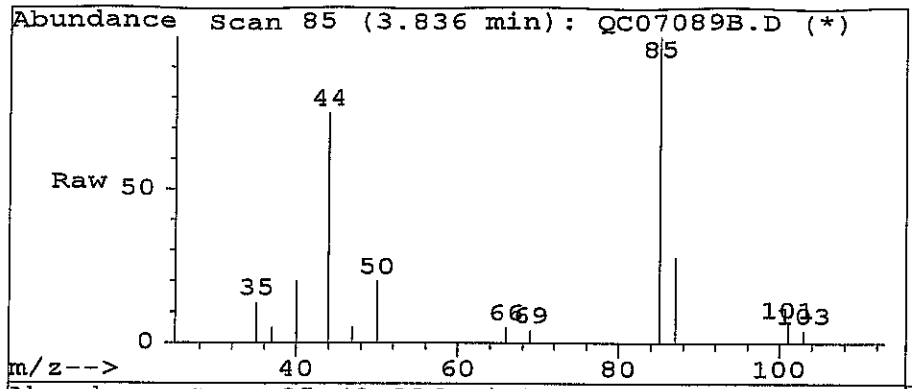


#88
Hexachlorobutadiene
Concen: 1.16 ppbV
RT: 33.10 min Scan# 3106
Delta R.T. 0.02 min
Lab File: QC07089B.D
Acq: 8 Jul 109 1:05 pm

Tgt Ion:225 Resp: 1052570

Ion	Ratio	Lower	Upper
225	100		
260	29.3	22.2	33.2
190	41.6	33.6	50.4
0	0.0	0.0	0.0

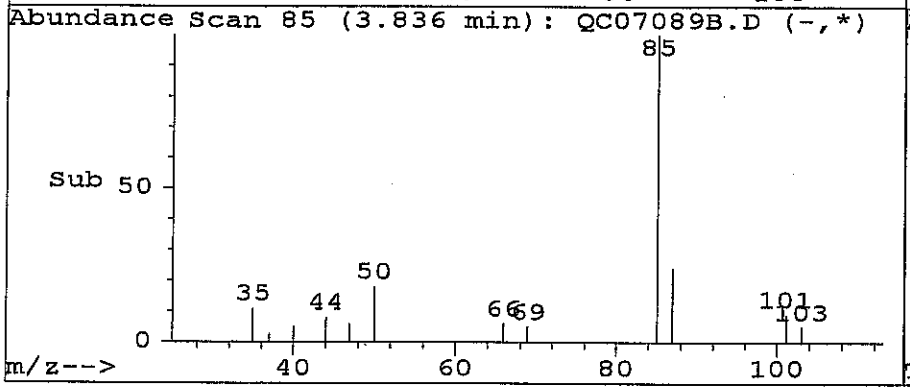


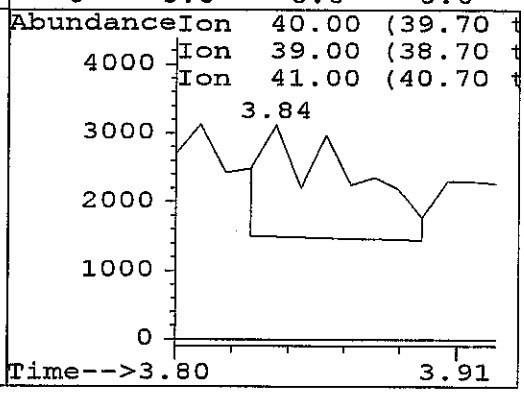


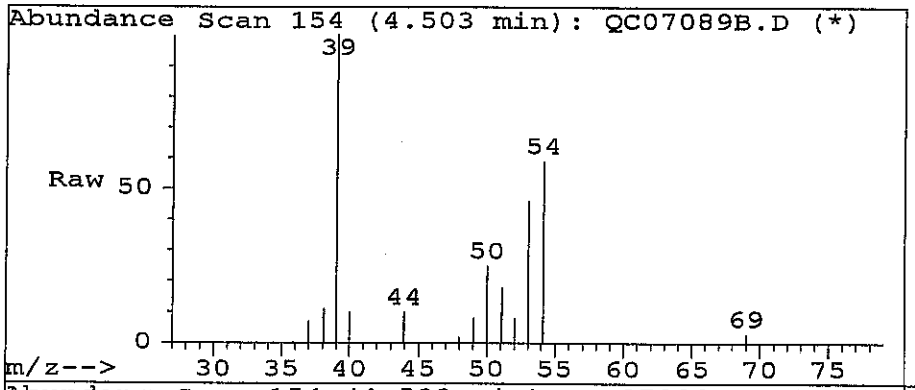
#89
Propylene
Concen: 0.20 ppbV
RT: 3.84 min Scan# 85
Delta R.T. 0.08 min
Lab File: QC07089B.D
Acq: 8 Jul 109 1:05 pm

Tgt Ion:40 Resp: 3748

Ion	Ratio	Lower	Upper
40	100		
39	0.0	238.9	358.3#
41	0.0	310.2	465.4#
0	0.0	0.0	0.0



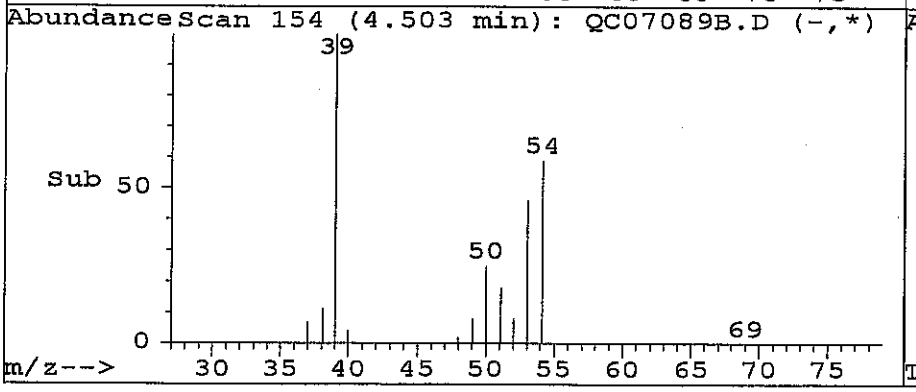


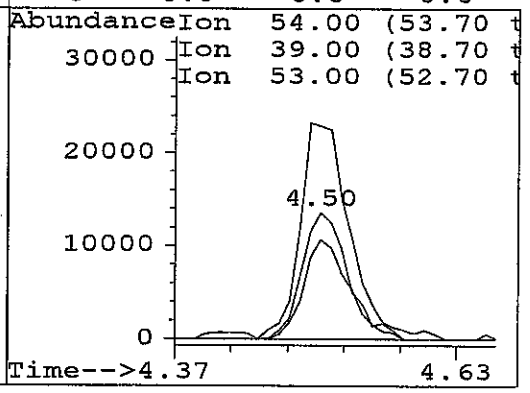


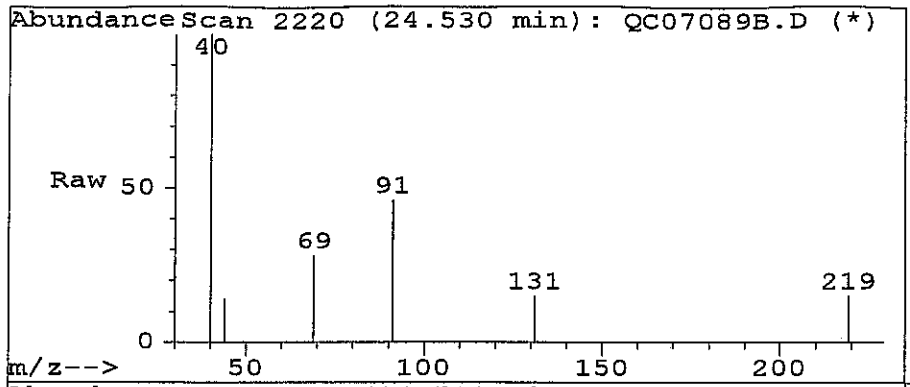
#90
1,3-Butadiene
Concen: 0.80 ppbV
RT: 4.50 min Scan# 154
Delta R.T. 0.03 min
Lab File: QC07089B.D
Acq: 8 Jul 109 1:05 pm

Tgt Ion:54 Resp: 40755

Ion	Ratio	Lower	Upper
54	100		
39	184.7	135.9	203.9
53	76.8	59.0	88.4
0	0.0	0.0	0.0



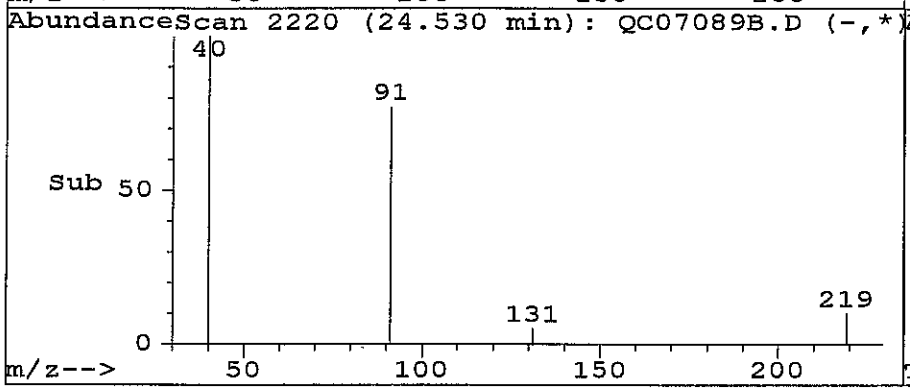


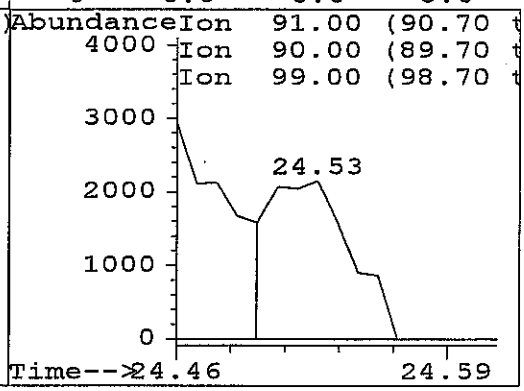


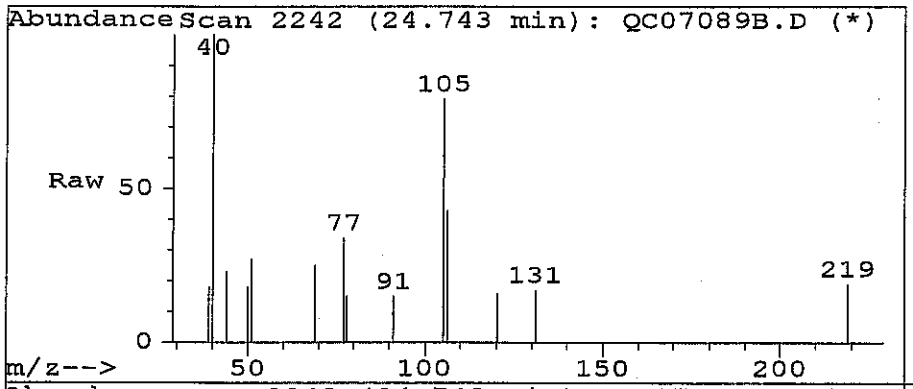
#92
2-Chlorotoluene
Concen: 0.01 ppbV
RT: 24.53 min Scan# 2220
Delta R.T. 0.07 min
Lab File: QC07089B.D
Acq: 8 Jul 109 1:05 pm

Tgt Ion:91 Resp: 5616

Ion	Ratio	Lower	Upper
91	100		
90	0.0	7.0	10.4#
99	0.0	1.8	2.8#
0	0.0	0.0	0.0



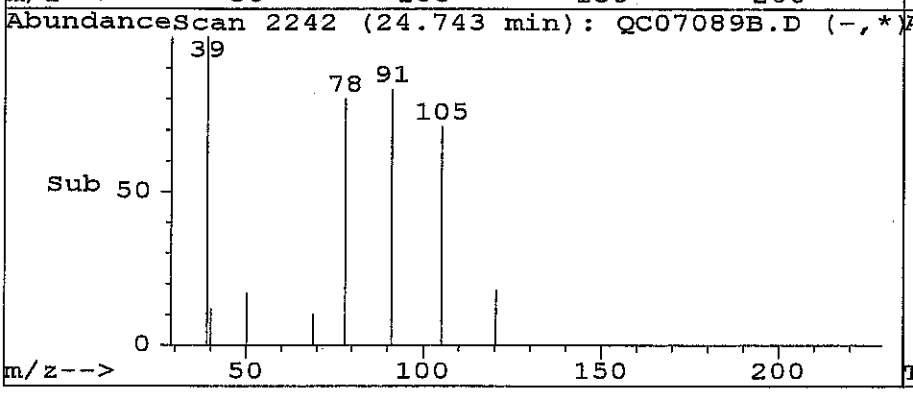


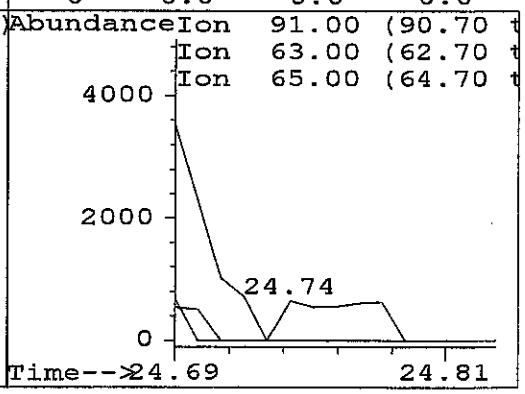


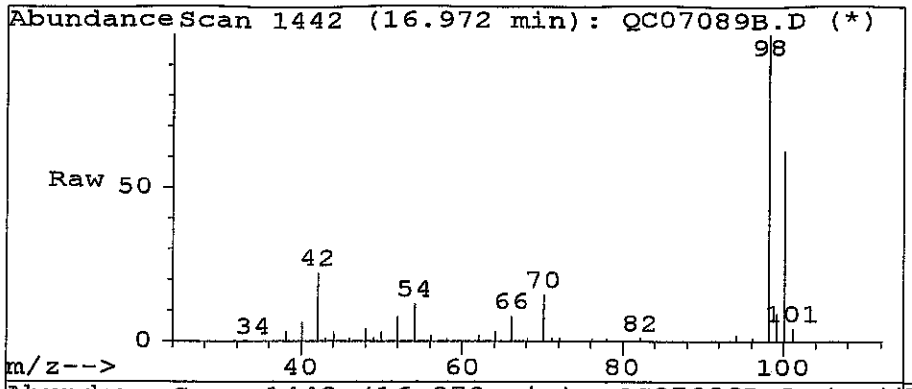
#93
4-Chlorotoluene
Concen: 0.00 ppbV
RT: 24.74 min Scan# 2242
Delta R.T. 0.09 min
Lab File: QC07089B.D
Acq: 8 Jul 109 1:05 pm

Tgt Ion:91 Resp: 1753

Ion	Ratio	Lower	Upper
91	100		
63	0.0	10.6	16.0#
65	0.0	9.5	14.3#
0	0.0	0.0	0.0



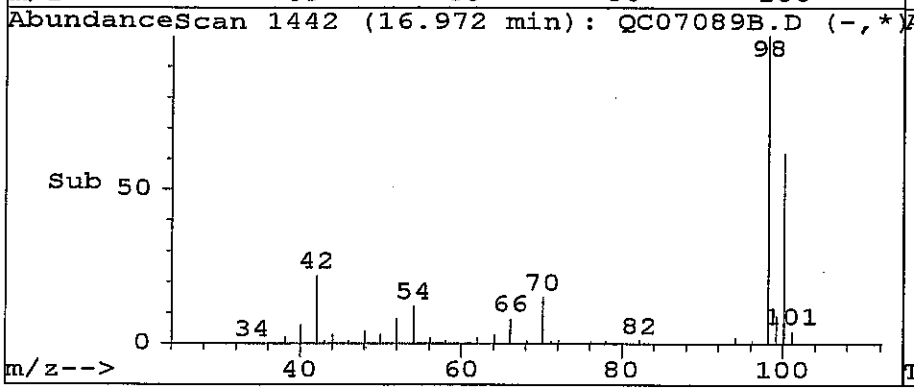


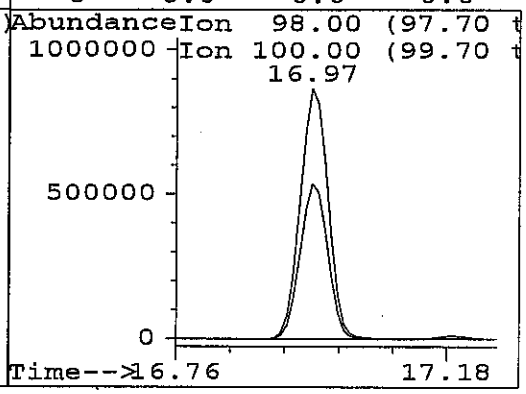


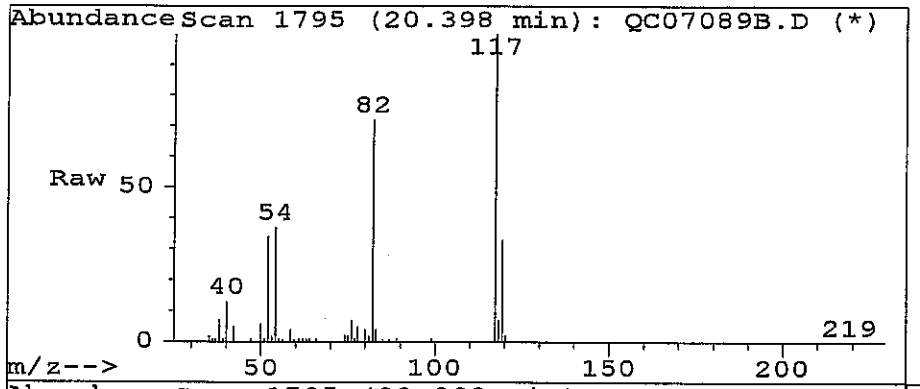
#94
Toluene-d8
Concen: 10.18 ppbV
RT: 16.97 min Scan# 1442
Delta R.T. 0.03 min
Lab File: QC07089B.D
Acq: 8 Jul 109 1:05 pm

Tgt Ion:98 Resp: 2560394

Ion	Ratio	Lower	Upper
98	100		
100	61.9	51.4	77.2
0	0.0	0.0	0.0
0	0.0	0.0	0.0



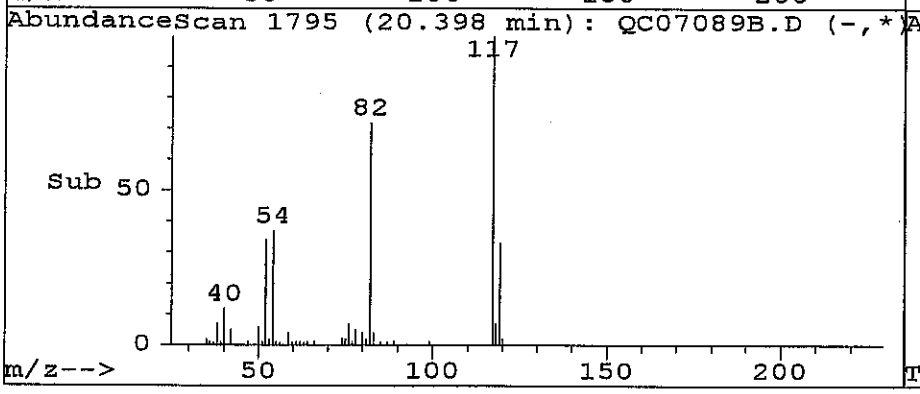


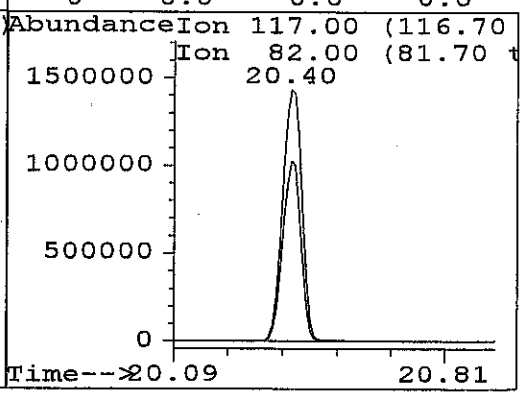


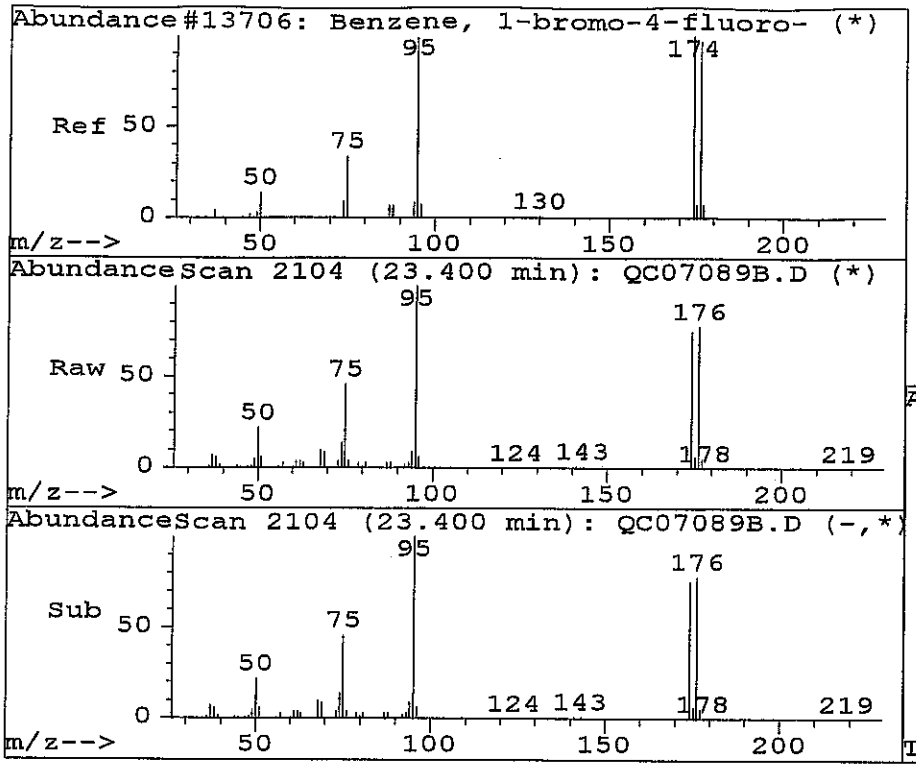
#95
Chlorobenzene-d5
Concen: 21.57 ppbV
RT: 20.40 min Scan# 1795
Delta R.T. 0.04 min
Lab File: QC07089B.D
Acq: 8 Jul 109 1:05 pm

Tgt Ion:117 Resp: 4977743

Ion	Ratio	Lower	Upper
117	100		
82	71.7	55.7	83.5
0	0.0	0.0	0.0
0	0.0	0.0	0.0



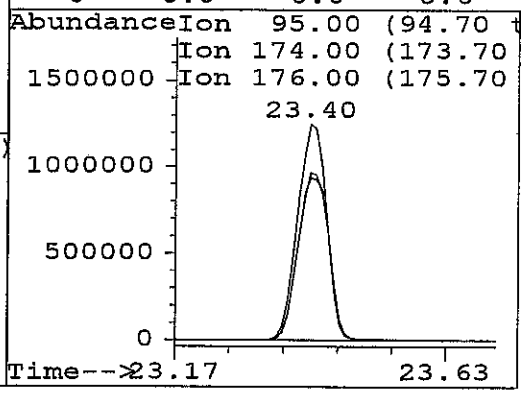




#96
1,4-Bromofluorobenzene
Concen: 11.84 ppbV
RT: 23.40 min Scan# 2104
Delta R.T. 0.02 min
Lab File: QC07089B.D
Acq: 8 Jul 109 1:05 pm

Tgt Ion:95 Resp: 4273337

Ion	Ratio	Lower	Upper
95	100		
174	75.0	55.5	83.3
176	77.5	55.7	83.5
0	0.0	0.0	0.0



Quantitation Report

Data File : C:\MSCHEM\2\DATA\07089MS1\0927704A.D
Acq Time : 8 Jul 109 3:37 pm
Sample : 44-004
Misc : SEALASKA ENVIRONMENTAL
Quant Time: Jul 9 9:45 19109

Operator: CM
Inst : 5970 - In
Multiplr: 1.00

Method : C:\MSCHEM\2\METHODS\1T15EXAY.M
Title : EPA TO-15
Last Update : Tue Mar 17 14:18:15 2009
Response via : Multiple Level Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Pentafluorobenzene	11.37	168	5115411	20.00	ppbV		0.00
35) 1,4-Difluorobenzene	13.17	114	4573707	20.00	ppbV		0.00
System Monitoring Compounds							%Recovery
94) Toluene-d8	16.96	98	2616752	10.18	ppbV		203.54%
95) Chlorobenzene-d5	20.39	117	5064441	21.47	ppbV		214.69%
96) 1,4-Bromofluorobenzene	23.40	95	4150035	11.25	ppbV		225.02%
Target Compounds							Qvalue
8) Ethanol	5.21	45	2368	0.03	ppbV	#	69
11) Acetonitrile	5.95	41	3239	0.03	ppbV	#	65
12) Acetone	6.02	43	15922	0.07	ppbV		96
13) 2-propanol	6.16	45	2043	0.01	ppbV	#	58
15) 1,1-Dichloroethene	6.90	61	1163	0.01	ppbV	#	39
16) Acrylonitrile	6.95	53	289	0.00	ppbV	#	11
21) trans-1,2-Dichloroethene	8.40	96	56986	1.16	ppbV		82
23) Propionitrile	8.83	54	296	0.00	ppbV	#	66
24) 1,1-Dichloroethane	8.91	63	83629	0.54	ppbV		97
25) Vinyl acetate	10.34	43	291	0.00	ppbV	#	81
28) Bromochloromethane	10.52	49	339	0.00	ppbV	#	35
32) cis-1,2-Dichloroethene	10.11	96	881580	11.01	ppbV		97
34) Chloroform	10.53	83	8678	0.05	ppbV		86
37) 1,2-Dichloroethane	11.86	62	5241	0.03	ppbV	#	67
39) Cyclohexane	12.59	56	2690	0.02	ppbV	#	55
40) Benzene	12.53	78	40724	0.15	ppbV	#	84
42) n-Heptane	14.11	43	304	0.00	ppbV	#	44
44) 1,4 Dioxane	14.45	88	309	0.00	ppbV	#	1
46) Trichloroethene	14.22	130	15010000	114.55	ppbV	m	77
51) Toluene	17.13	91	84720	0.24	ppbV		99
53) 1,1,2-Trichloroethane	17.13	61	1518	0.01	ppbV	#	1
59) Tetrachloroethene	19.00	166	8632	0.04	ppbV	#	78
60) Chlorobenzene	20.47	112	31692	0.10	ppbV	#	72
61) 1,1,1,2-Tetrachloroethane	20.51	131	1117	0.01	ppbV	#	12
62) Ethylbenzene	21.01	91	7433	0.01	ppbV		93
63) m & p-Xylene	21.29	91	22643	0.05	ppbV		99
64) Styrene	22.16	104	1699	0.01	ppbV	#	70
65) Bromoform	22.03	173	363	0.00	ppbV	#	36
66) o-Xylene	22.26	91	10606	0.02	ppbV		94
70) n-Propylbenzene	24.46	91	5389	0.00	ppbV	#	65
71) Isopropylbenzene	24.77	105	12129	0.02	ppbV	#	53
72) 4-Ethyltoluene	24.77	105	12129	0.01	ppbV	#	90
73) 1,3,5-Trimethylbenzene	24.92	105	7030	0.01	ppbV	#	89
74) Methylstyrene	25.39	118	13350	0.04	ppbV		92
75) tert-butyl benzene	25.87	119	3165	0.00	ppbV	#	45
76) 1,2,4-Trimethylbenzene	25.88	105	18917	0.03	ppbV	#	94
77) sec-butylbenzene	26.46	105	2739	0.00	ppbV	#	61
78) 1,3-Dichlorobenzene	26.44	146	15309	0.03	ppbV		90
79) Isopropyltoluene	26.85	119	3668	0.00	ppbV	#	59
80) Benzyl chloride	26.62	91	1337	0.00	ppbV	#	59
81) 1,4-Dichlorobenzene	26.64	146	90073	0.15	ppbV		96
82) n-Butylbenzene	27.92	91	7261	0.01	ppbV	#	88
83) 1,2-Dichlorobenzene	27.49	146	79656	0.12	ppbV		96
84) 1,2-Dibromo-3-chloropropan	28.98	75	5876	0.01	ppbV	#	80
86) 1,2,4-Trichlorobenzene	32.06	180	13414	0.01	ppbV		81
87) Naphthalene	32.43	128	52061	0.03	ppbV	#	95
88) Hexachlorobutadiene	33.09	225	4192	0.00	ppbV	#	39

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

Quantitation Report

Data File : C:\MSCHEM\2\DATA\07089MS1\0927704A.D
Acq Time : 8 Jul 109 3:37 pm
Sample : 44-004
Misc : SEALASKA ENVIRONMENTAL
Quant Time: Jul 9 9:45 19109

Operator: CM
Inst : 5970 - In
Multiplr: 1.00

Method : C:\MSCHEM\2\METHODS\1T15EXAY.M
Title : EPA TO-15
Last Update : Tue Mar 17 14:18:15 2009
Response via : Multiple Level Calibration

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue

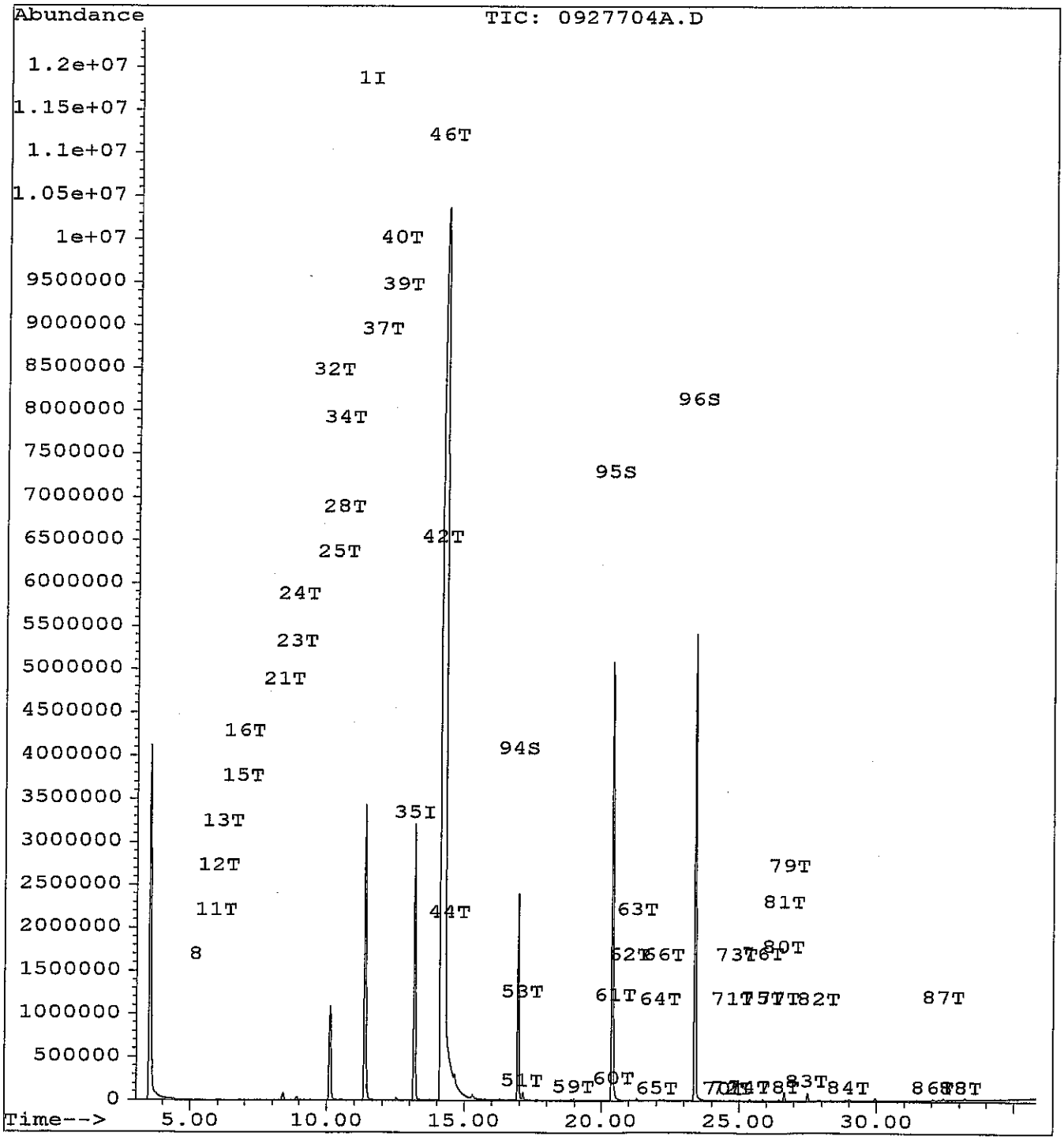
(#) = qualifier out of range (m) = manual integration

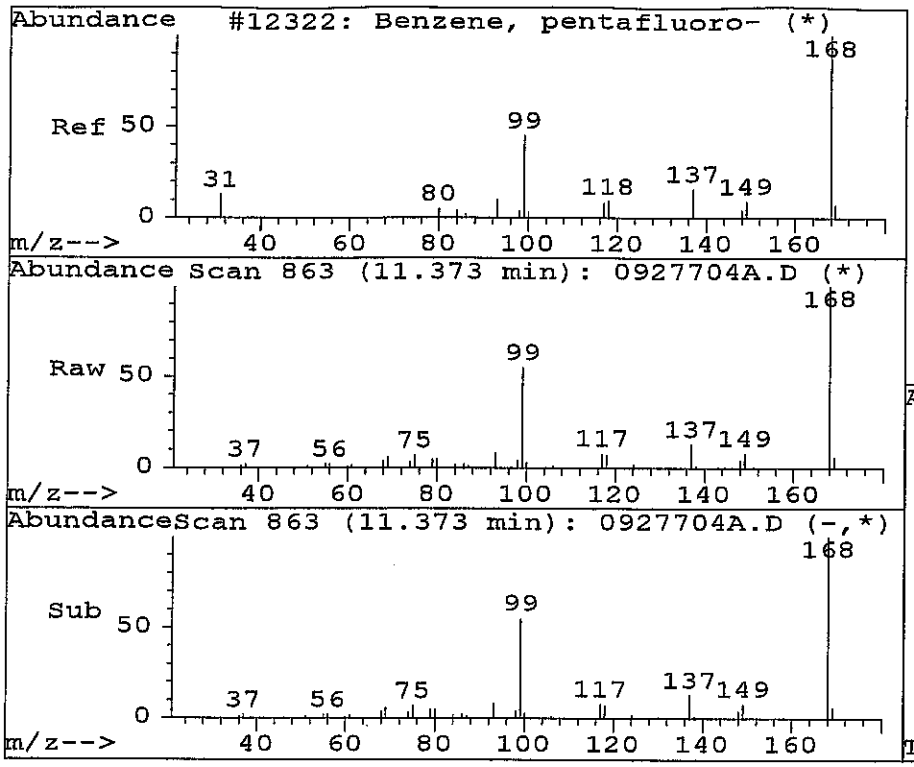
Quantitation Report

Data File : C:\MSCHEM\2\DATA\07089MS1\0927704A.D
Acq Time : 8 Jul 109 3:37 pm
Sample : 44-004
Misc : SEALASKA ENVIRONMENTAL
Quant Time: Jul 9 9:45 19109

Operator: CM
Inst : 5970 - In
Multiplr: 1.00

Method : C:\MSCHEM\2\METHODS\1T15EXAY.M
Title : EPA TO-15
Last Update : Tue Mar 17 14:18:15 2009
Response via : Multiple Level Calibration

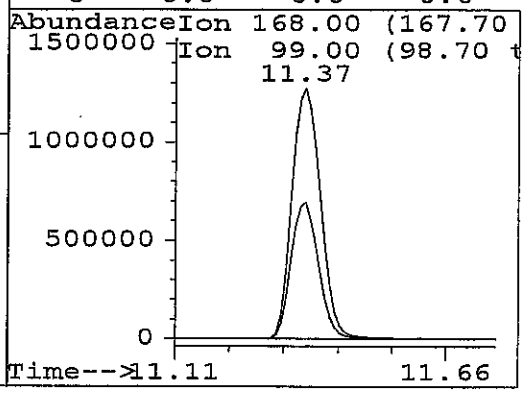


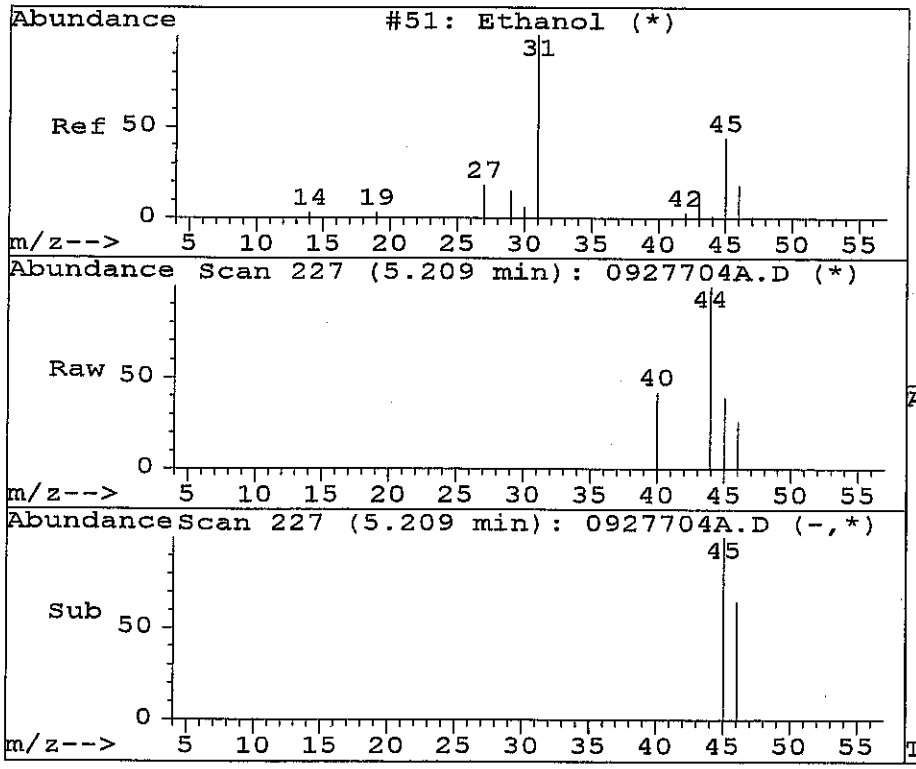


#1
Pentafluorobenzene
Concen: 20.00 ppbV
RT: 11.37 min Scan# 863
Delta R.T. -0.01 min
Lab File: 0927704A.D
Acq: 8 Jul 109 3:37 pm

Tgt Ion:168 Resp: 5115411

Ion	Ratio	Lower	Upper
168	100		
99	54.5	53.6	80.4
0	0.0	0.0	0.0
0	0.0	0.0	0.0

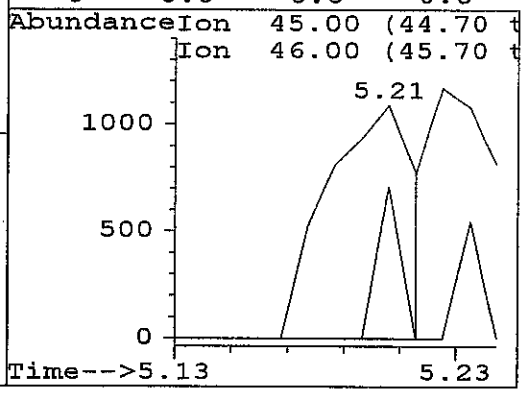


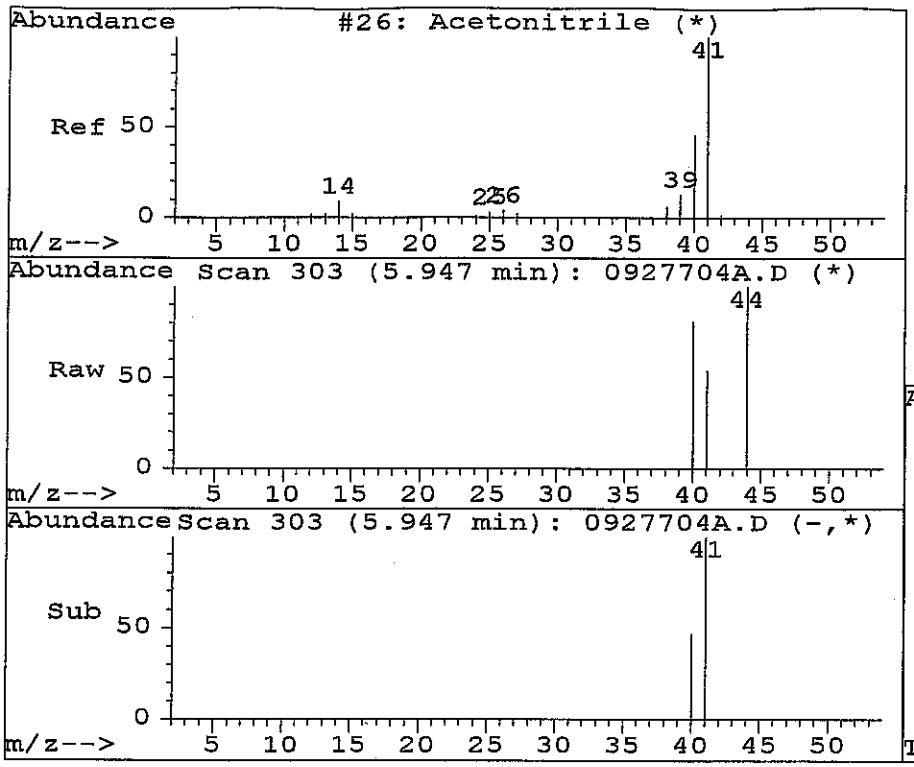


#8
Ethanol
Concen: 0.03 ppbV
RT: 5.21 min Scan# 227
Delta R.T. 0.01 min
Lab File: 0927704A.D
Acq: 8 Jul 109 3:37 pm

Tgt Ion:45 Resp: 2368

Ion	Ratio	Lower	Upper
45	100		
46	17.5	28.5	42.7#
0	0.0	0.0	0.0
0	0.0	0.0	0.0

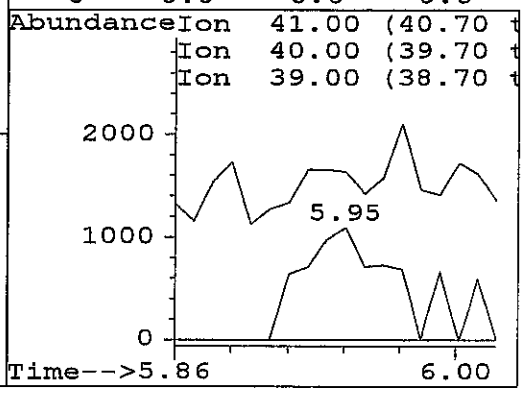


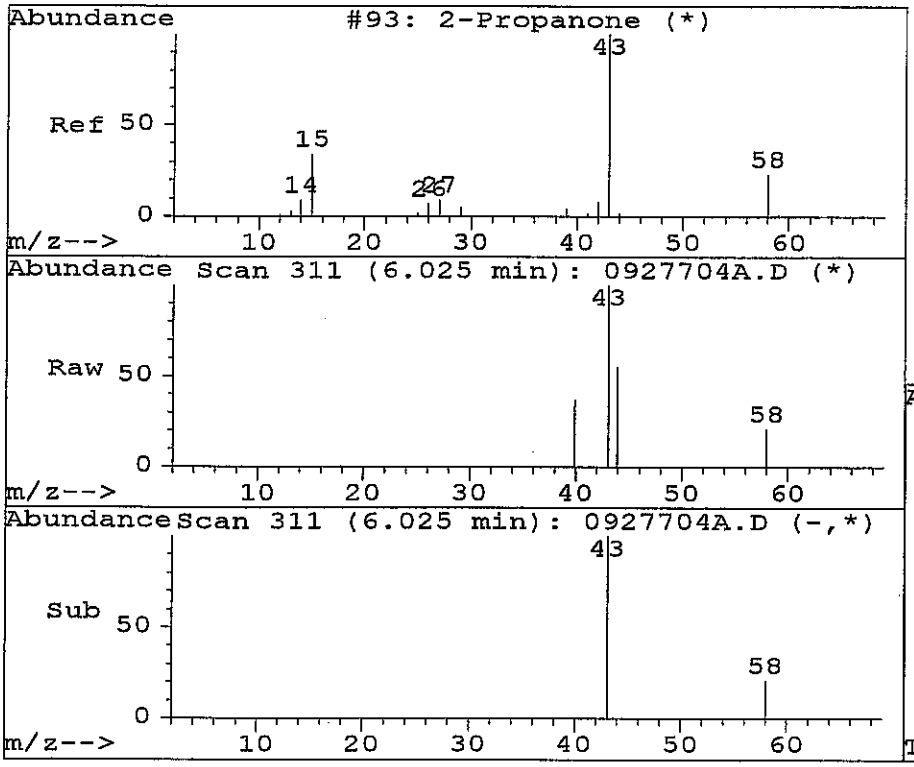


#11
Acetonitrile
Concen: 0.03 ppbV
RT: 5.95 min Scan# 303
Delta R.T. -0.01 min
Lab File: 0927704A.D
Acq: 8 Jul 109 3:37 pm

Tgt Ion:41 Resp: 3239

Ion	Ratio	Lower	Upper
41	100		
40	31.4	42.9	64.3#
39	0.0	16.4	24.6#
0	0.0	0.0	0.0

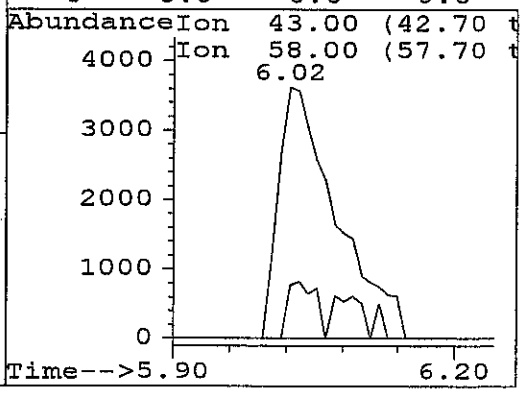


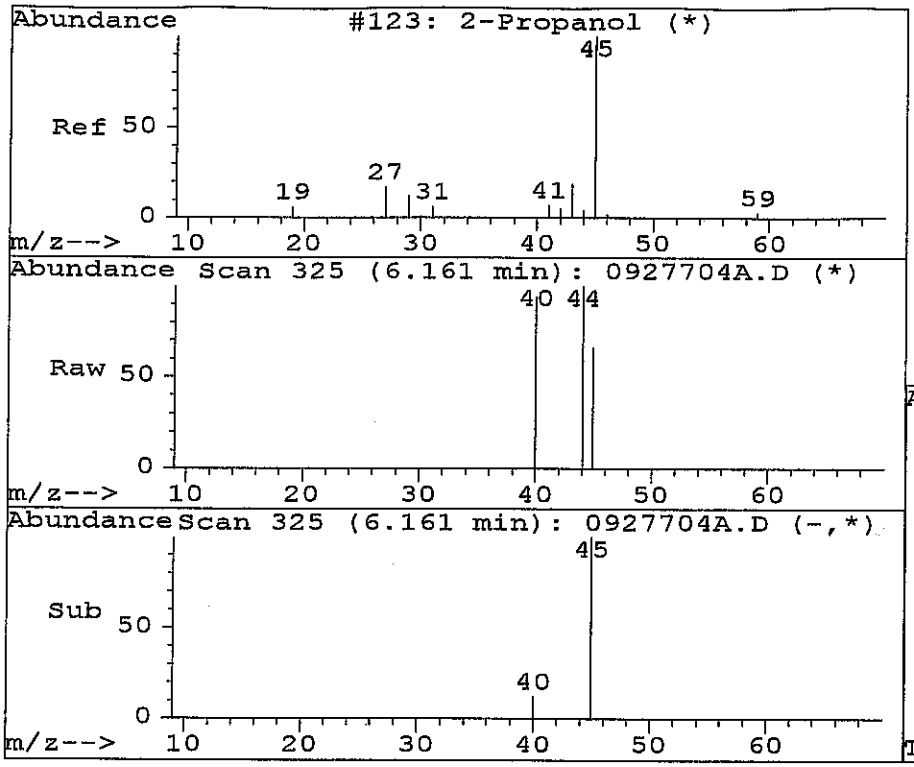


#12
Acetone
Concen: 0.07 ppbV
RT: 6.02 min Scan# 311
Delta R.T. -0.02 min
Lab File: 0927704A.D
Acq: 8 Jul 109 3:37 pm

Tgt Ion:43 Resp: 15922

Ion	Ratio	Lower	Upper
43	100		
58	21.3	15.7	23.5
0	0.0	0.0	0.0
0	0.0	0.0	0.0

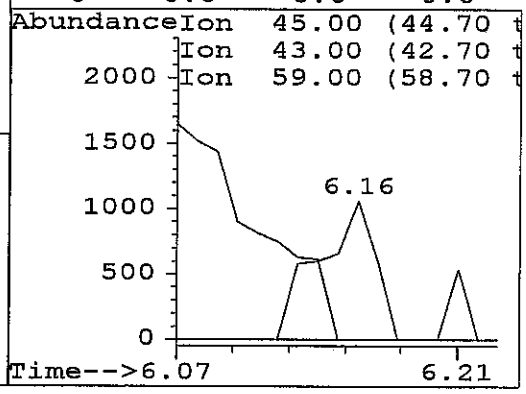


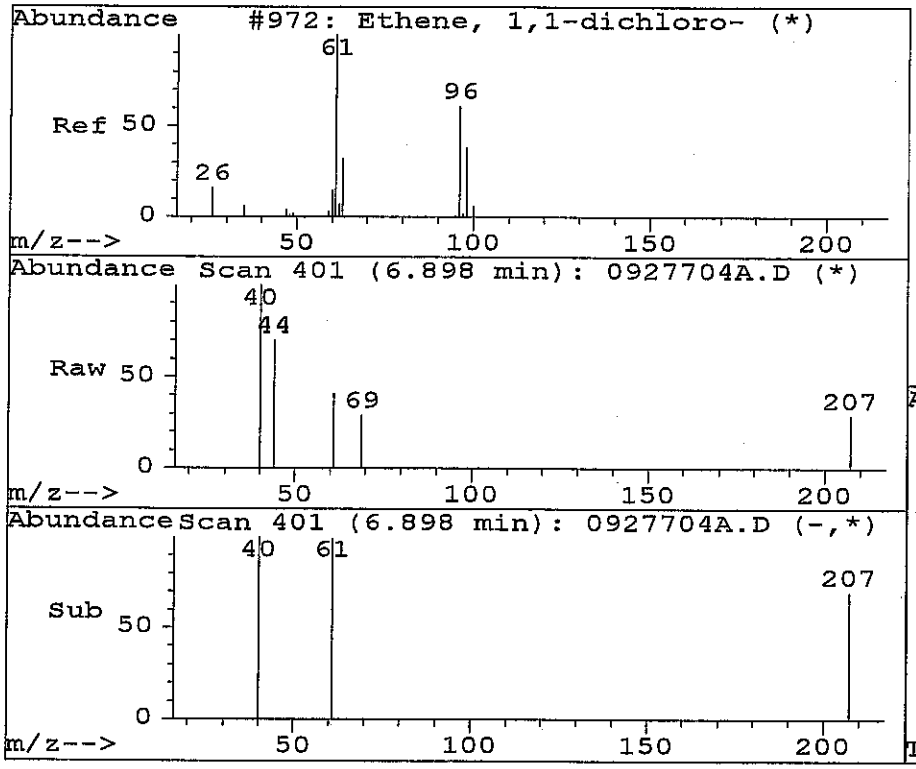


#13
2-propanol
Concen: 0.01 ppbV
RT: 6.16 min Scan# 325
Delta R.T. 0.02 min
Lab File: 0927704A.D
Acq: 8 Jul 109 3:37 pm

Tgt Ion:45 Resp: 2043

Ion	Ratio	Lower	Upper
45	100		
43	0.0	18.2	27.2#
59	0.0	2.6	3.8#
0	0.0	0.0	0.0

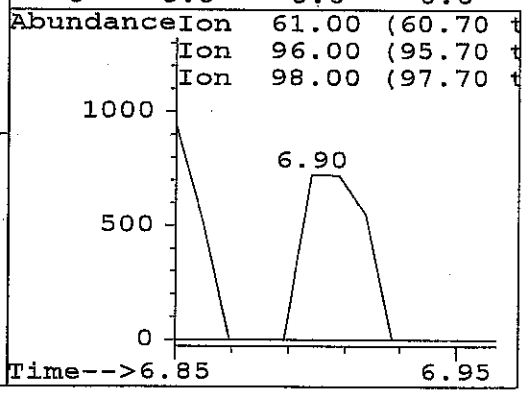


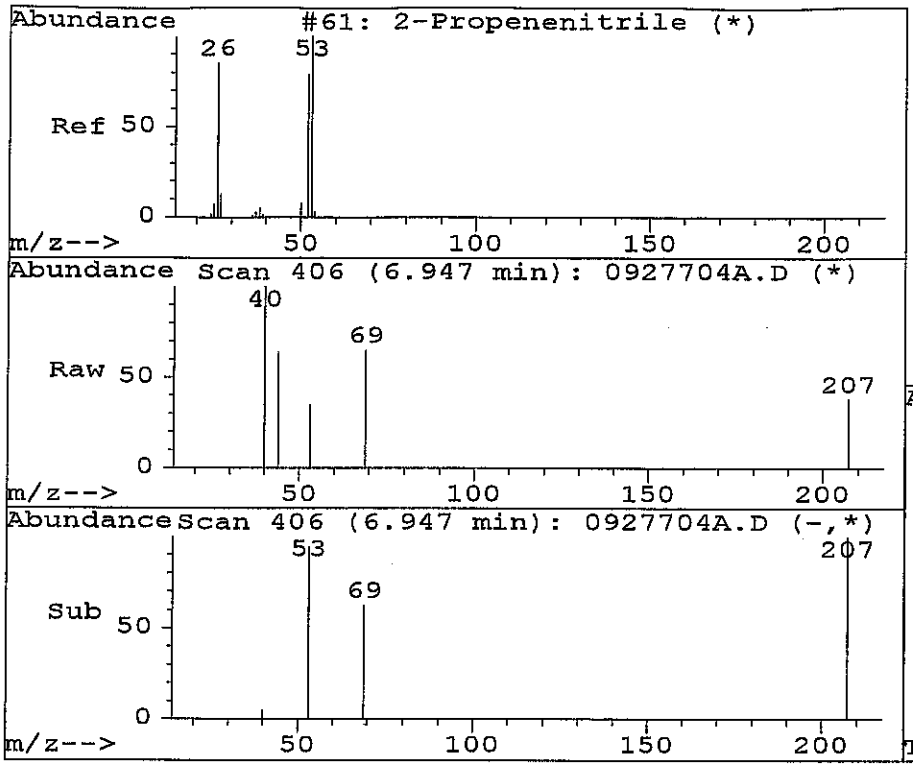


#15
1,1-Dichloroethene
Concen: 0.01 ppbV
RT: 6.90 min Scan# 401
Delta R.T. 0.01 min
Lab File: 0927704A.D
Acq: 8 Jul 109 3:37 pm

Tgt Ion:61 Resp: 1163

Ion	Ratio	Lower	Upper
61	100		
96	0.0	34.1	51.1#
98	0.0	21.7	32.5#
0	0.0	0.0	0.0

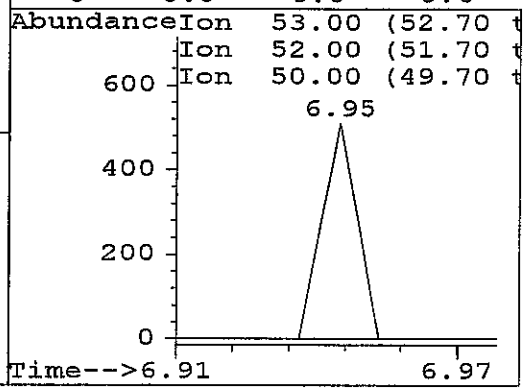


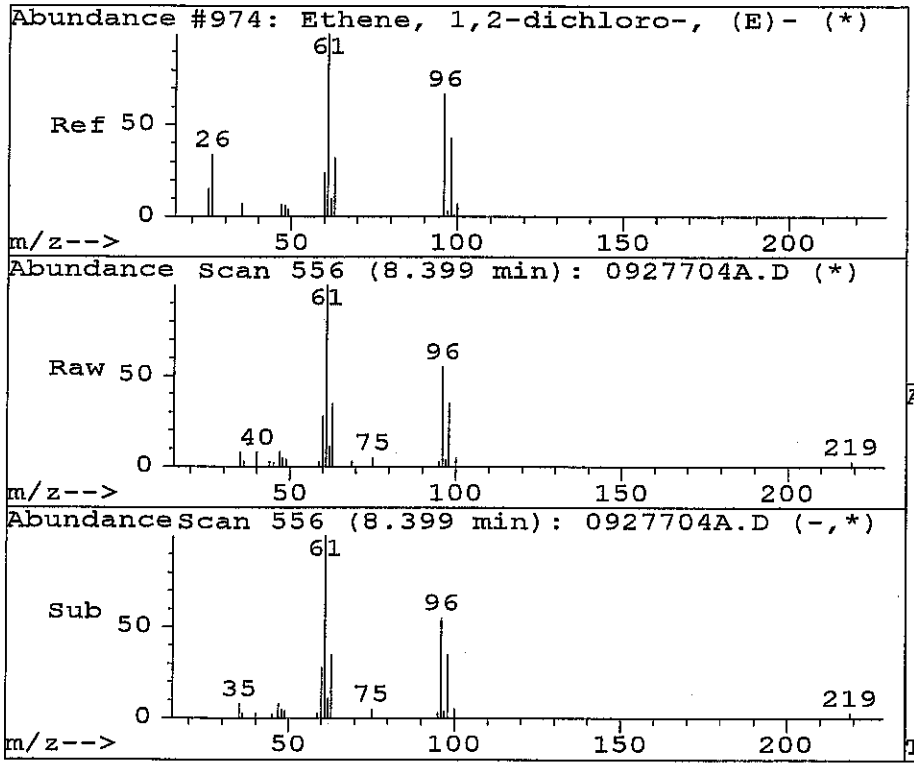


#16
Acrylonitrile
Concen: 0.00 ppbV
RT: 6.95 min Scan# 406
Delta R.T. -0.01 min
Lab File: 0927704A.D
Acq: 8 Jul 109 3:37 pm

Tgt Ion:53 Resp: 289

Ion	Ratio	Lower	Upper
53	100		
52	0.0	73.0	109.4#
50	0.0	8.3	12.5#
0	0.0	0.0	0.0

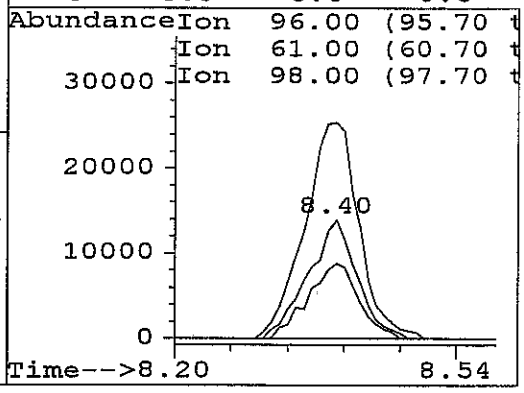


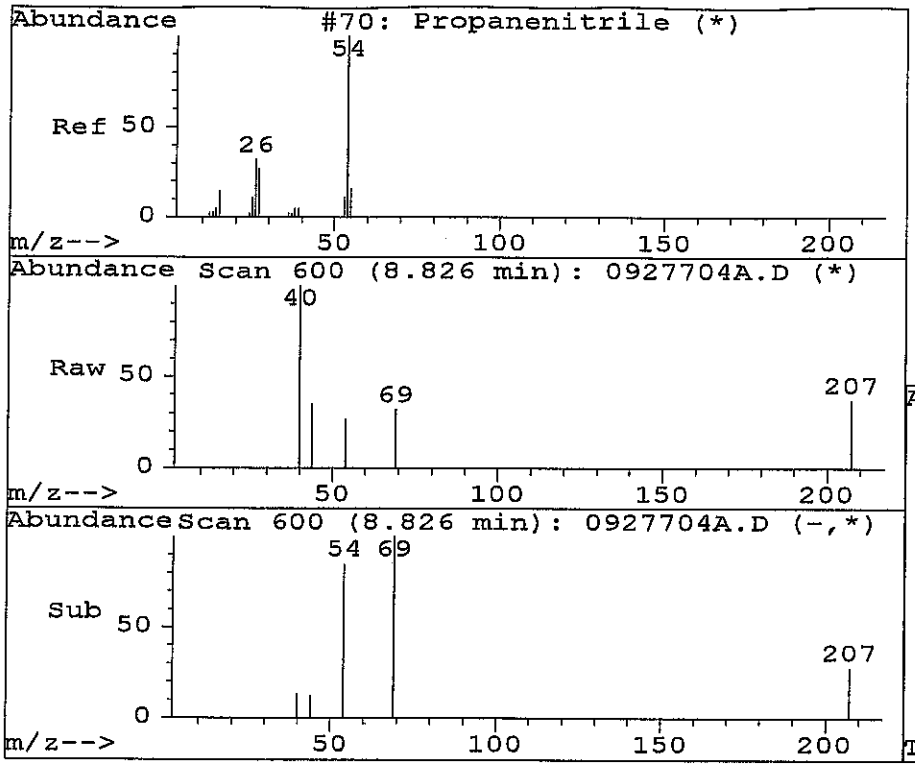


#21
trans-1,2-Dichloroethene
Concen: 1.16 ppbV
RT: 8.40 min Scan# 556
Delta R.T. 0.02 min
Lab File: 0927704A.D
Acq: 8 Jul 109 3:37 pm

Tgt Ion:96 Resp: 56986

Ion	Ratio	Lower	Upper
96	100		
61	180.0	172.2	258.4
98	63.2	49.6	74.4
0	0.0	0.0	0.0

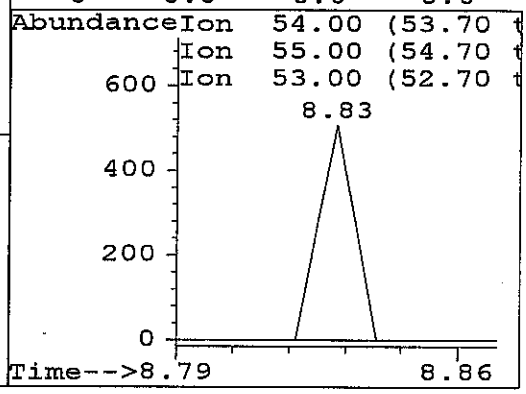


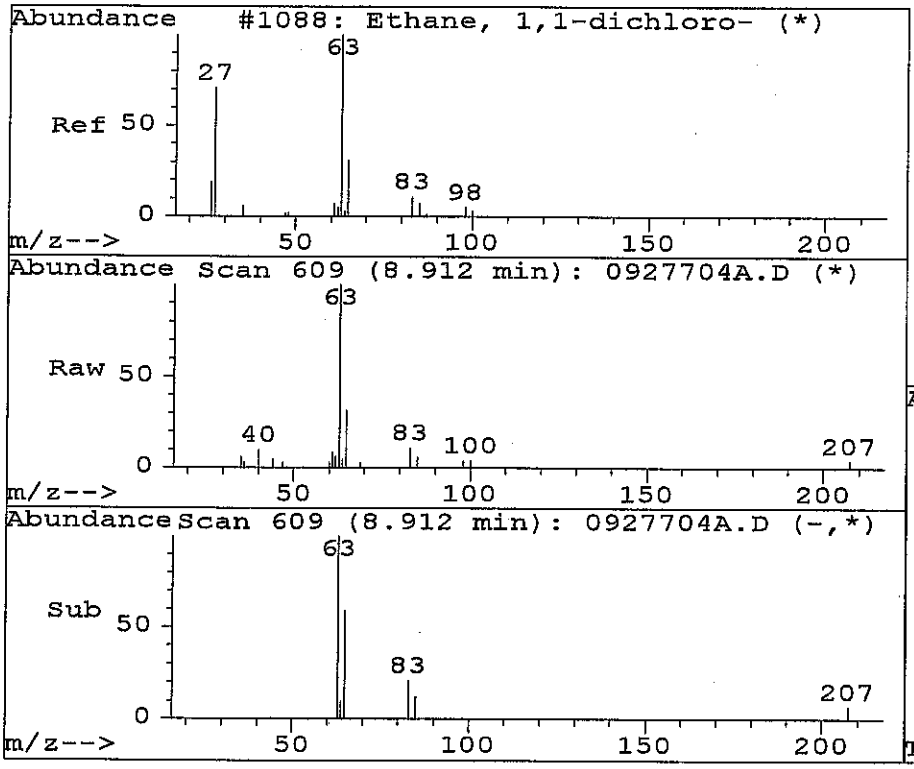


#23
Propionitrile
Concen: 0.00 ppbV
RT: 8.83 min Scan# 600
Delta R.T. -0.00 min
Lab File: 0927704A.D
Acq: 8 Jul 109 3:37 pm

Tgt Ion:54 Resp: 296

Ion	Ratio	Lower	Upper
54	100		
55	0.0	12.1	18.1#
53	0.0	9.8	14.8#
0	0.0	0.0	0.0

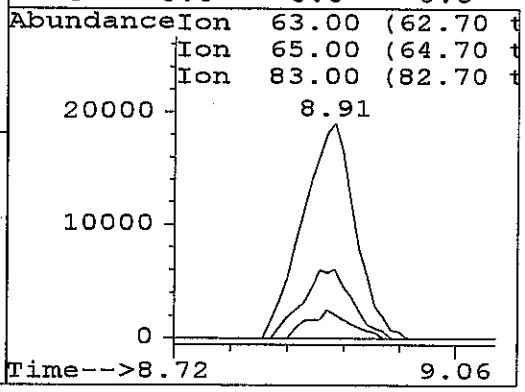


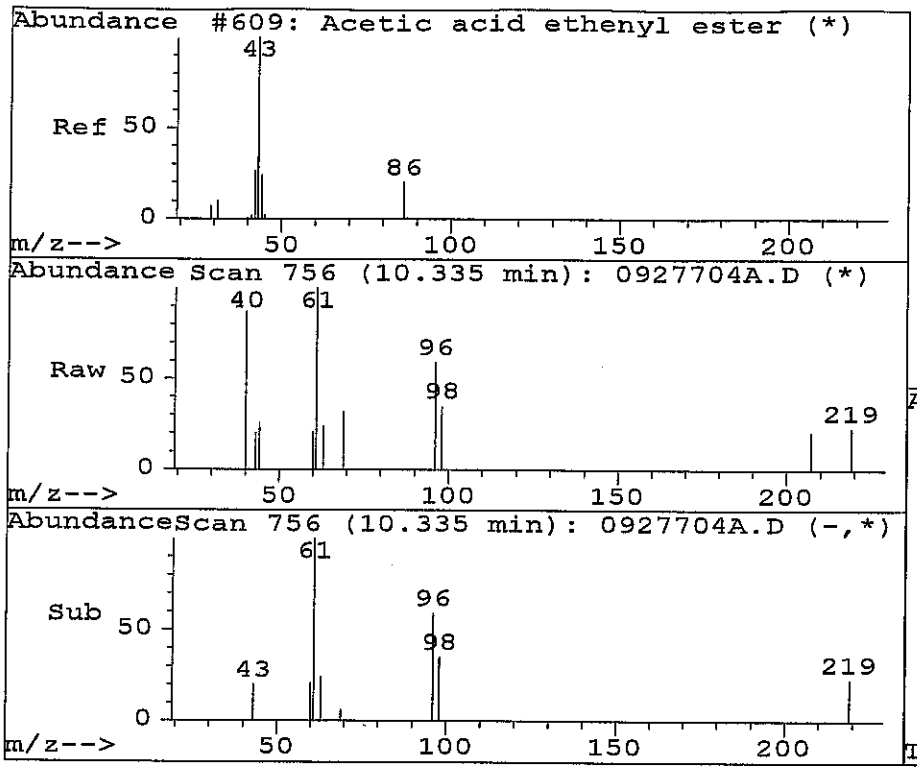


#24
1,1-Dichloroethane
Concen: 0.54 ppbV
RT: 8.91 min Scan# 609
Delta R.T. 0.01 min
Lab File: 0927704A.D
Acq: 8 Jul 109 3:37 pm

Tgt Ion:63 Resp: 83629

Ion	Ratio	Lower	Upper
63	100		
65	31.7	23.8	35.8
83	11.1	9.8	14.8
0	0.0	0.0	0.0

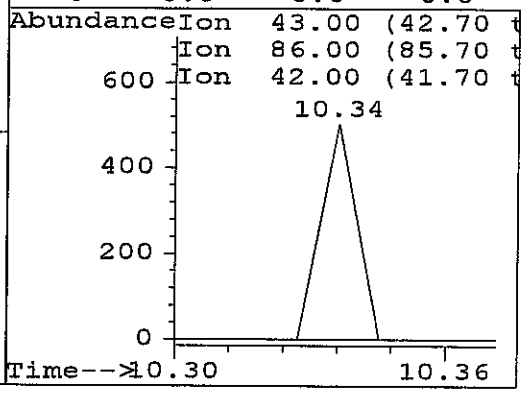


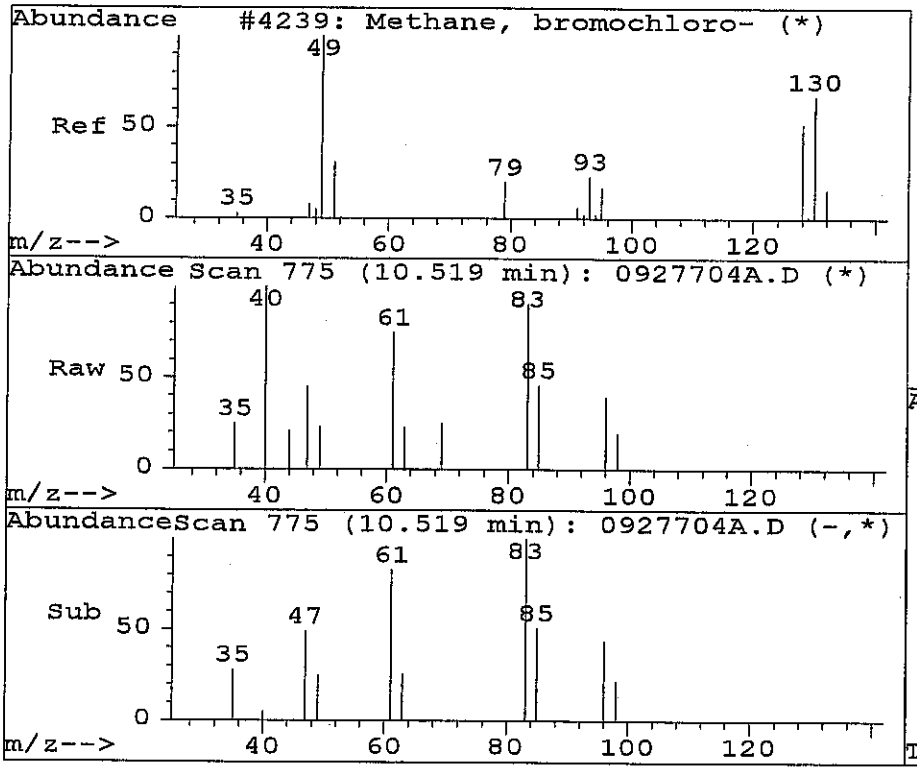


#25
Vinyl acetate
Concen: 0.00 ppbV
RT: 10.34 min Scan# 756
Delta R.T. 0.02 min
Lab File: 0927704A.D
Acq: 8 Jul 109 3:37 pm

Tgt Ion:43 Resp: 291

Ion	Ratio	Lower	Upper
43	100		
86	0.0	0.0	0.0
42	0.0	5.2	7.8#
0	0.0	0.0	0.0

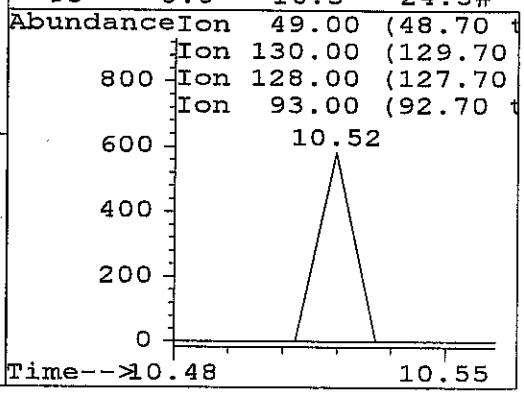


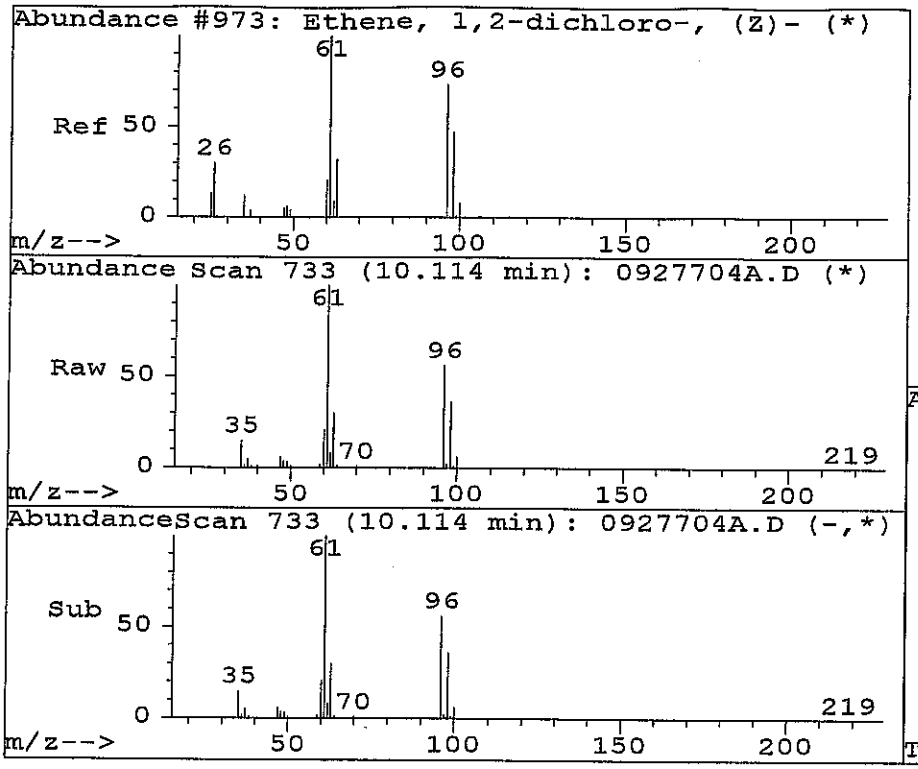


#28
Bromochloromethane
Concen: 0.00 ppbV
RT: 10.52 min Scan# 775
Delta R.T. 0.02 min
Lab File: 0927704A.D
Acq: 8 Jul 109 3:37 pm

Tgt Ion:49 Resp: 339

Ion	Ratio	Lower	Upper
49	100		
130	0.0	40.0	60.0#
128	0.0	34.2	51.2#
93	0.0	16.3	24.5#

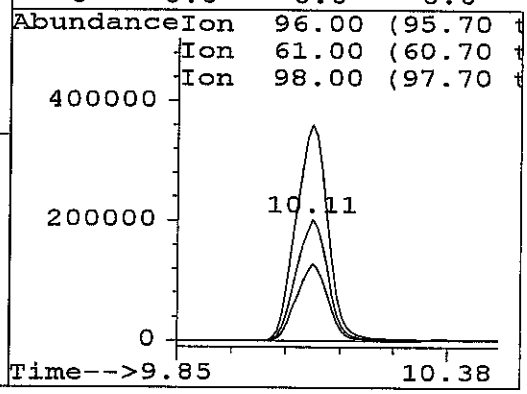


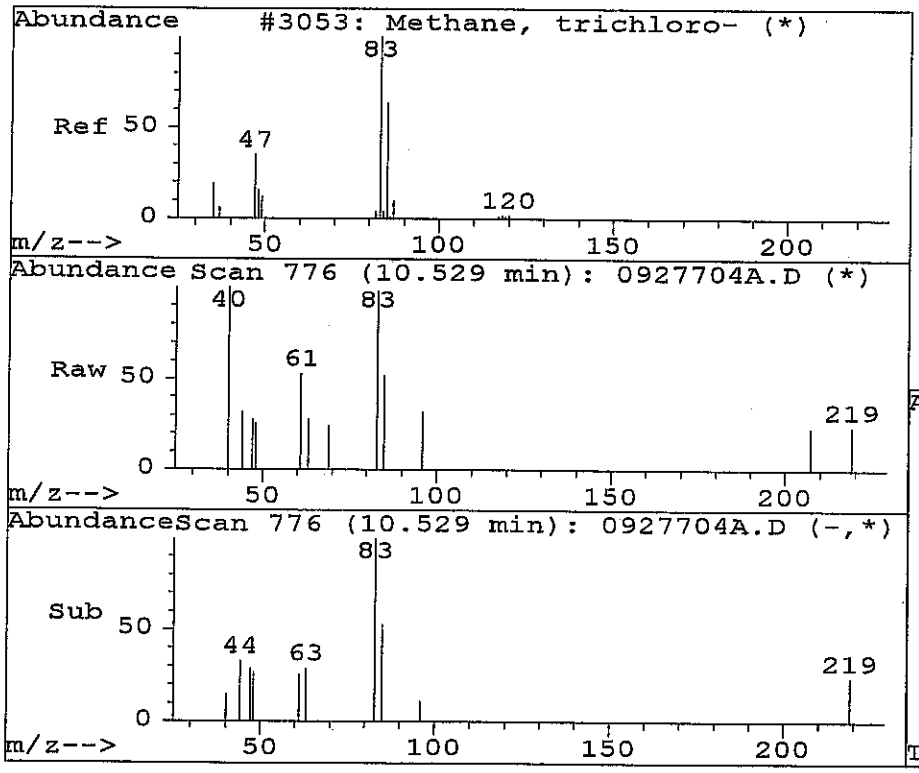


#32
cis-1,2-Dichloroethene
Concen: 11.01 ppbV
RT: 10.11 min Scan# 733
Delta R.T. 0.00 min
Lab File: 0927704A.D
Acq: 8 Jul 109 3:37 pm

Tgt Ion:96 Resp: 881580

Ion	Ratio	Lower	Upper
96	100		
61	178.7	139.1	208.7
98	63.4	49.5	74.3
0	0.0	0.0	0.0

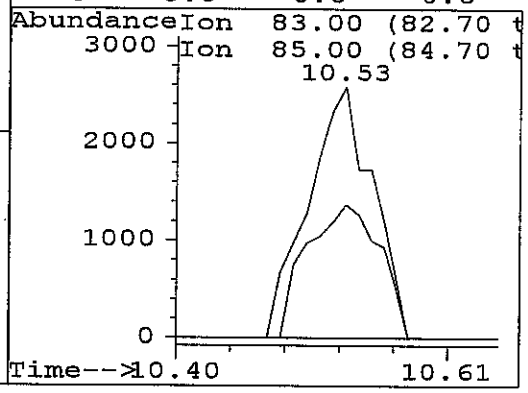


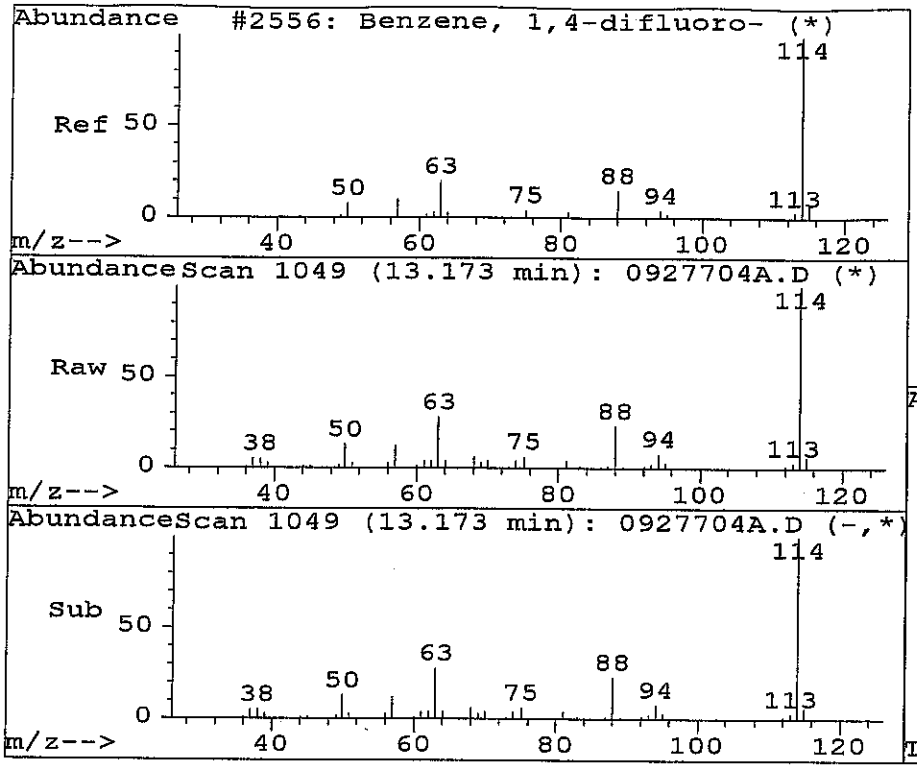


#34
Chloroform
Concen: 0.05 ppbV
RT: 10.53 min Scan# 776
Delta R.T. -0.00 min
Lab File: 0927704A.D
Acq: 8 Jul 109 3:37 pm

Tgt Ion:83 Resp: 8678

Ion	Ratio	Lower	Upper
83	100		
85	53.1	51.3	76.9
0	0.0	0.0	0.0
0	0.0	0.0	0.0

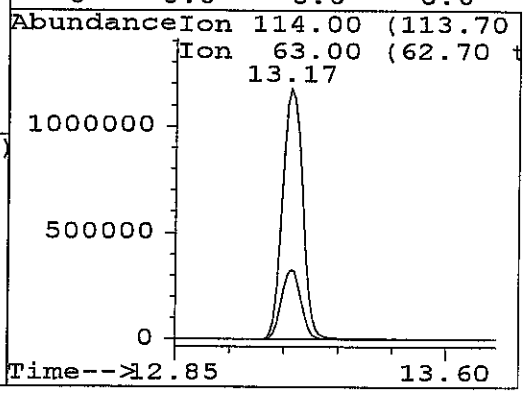


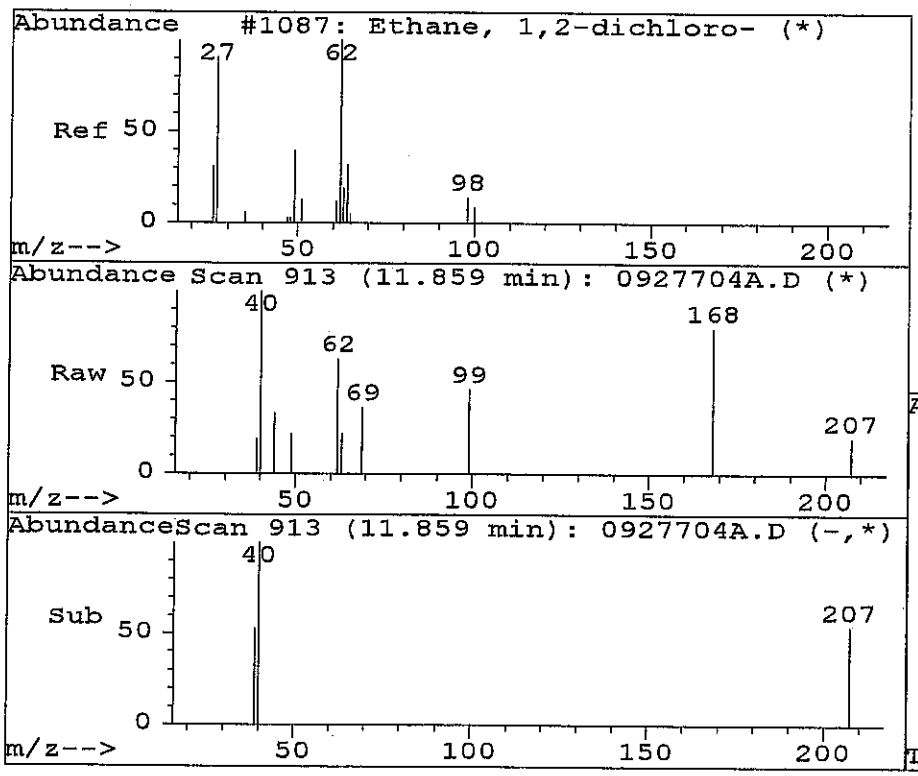


#35
1,4-Difluorobenzene
Concen: 20.00 ppbV
RT: 13.17 min Scan# 1049
Delta R.T. 0.00 min
Lab File: 0927704A.D
Acq: 8 Jul 109 3:37 pm

Tgt Ion:114 Resp: 4573707

Ion	Ratio	Lower	Upper
114	100		
63	27.8	22.0	36.6
0	0.0	0.0	0.0
0	0.0	0.0	0.0

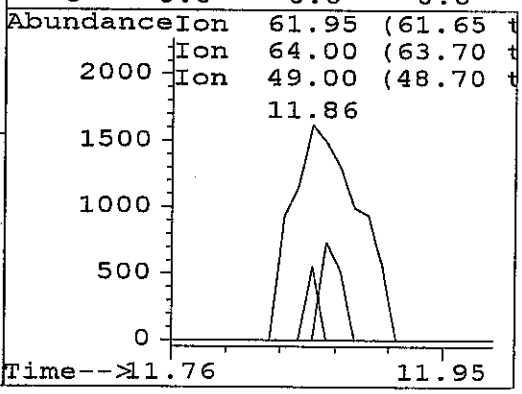


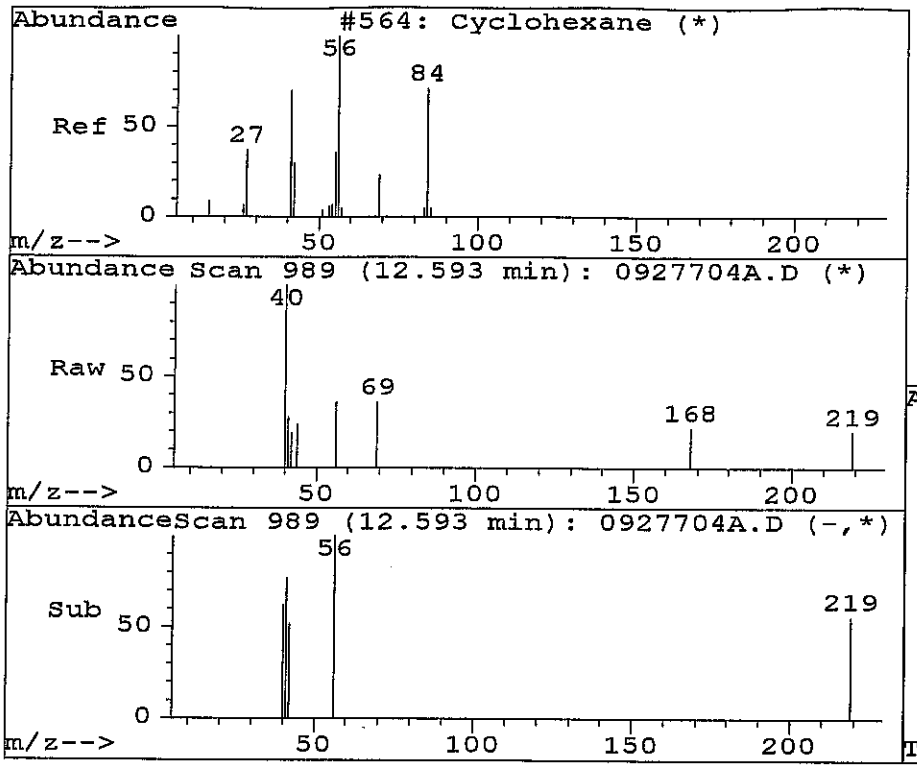


#37
1,2-Dichloroethane
Concen: 0.03 ppbV
RT: 11.86 min Scan# 913
Delta R.T. -0.01 min
Lab File: 0927704A.D
Acq: 8 Jul 109 3:37 pm

Tgt Ion:61.95 Resp: 524

Ion	Ratio	Lower	Upper
62	100		
64	0.0	24.7	37.1#
49	34.3	23.8	35.6
0	0.0	0.0	0.0

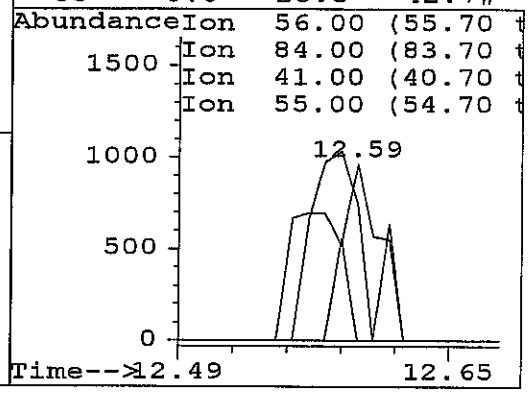


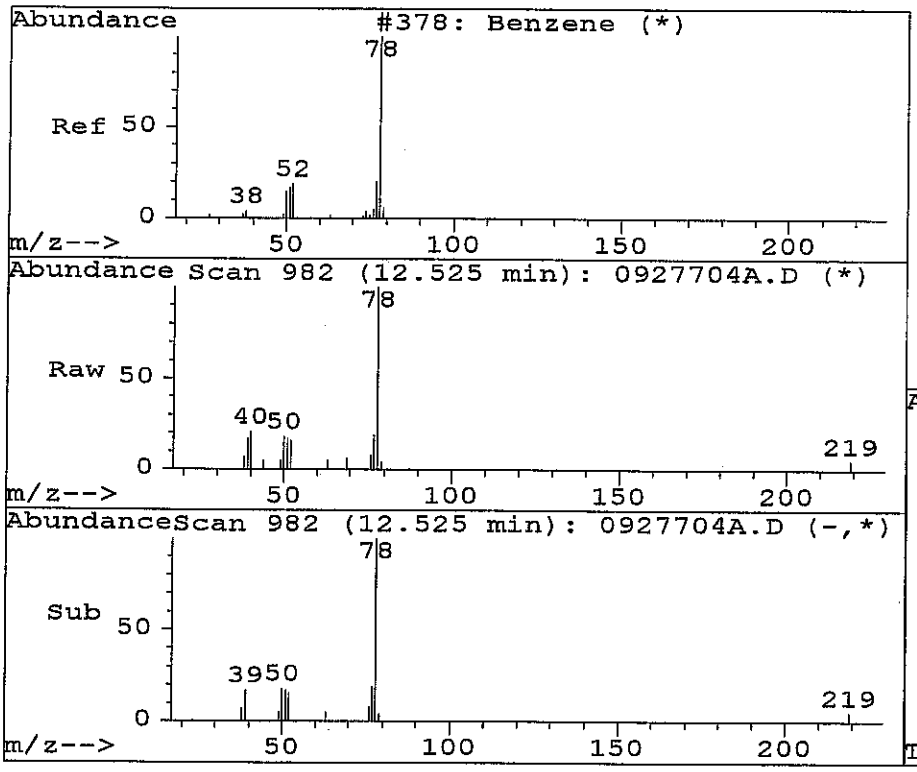


#39
Cyclohexane
Concen: 0.02 ppbV
RT: 12.59 min Scan# 989
Delta R.T. 0.04 min
Lab File: 0927704A.D
Acq: 8 Jul 109 3:37 pm

Tgt Ion:56 Resp: 2690

Ion	Ratio	Lower	Upper
56	100		
84	12.2	60.6	90.8#
41	86.8	62.4	93.6
55	0.0	28.5	42.7#

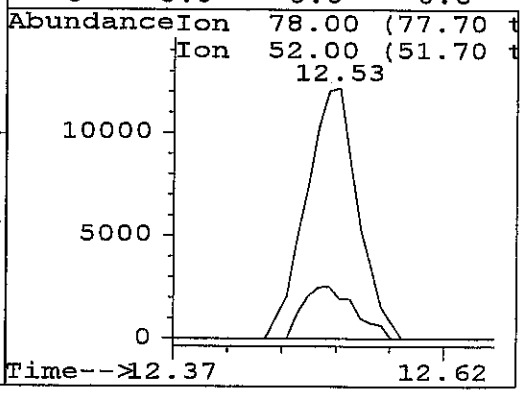


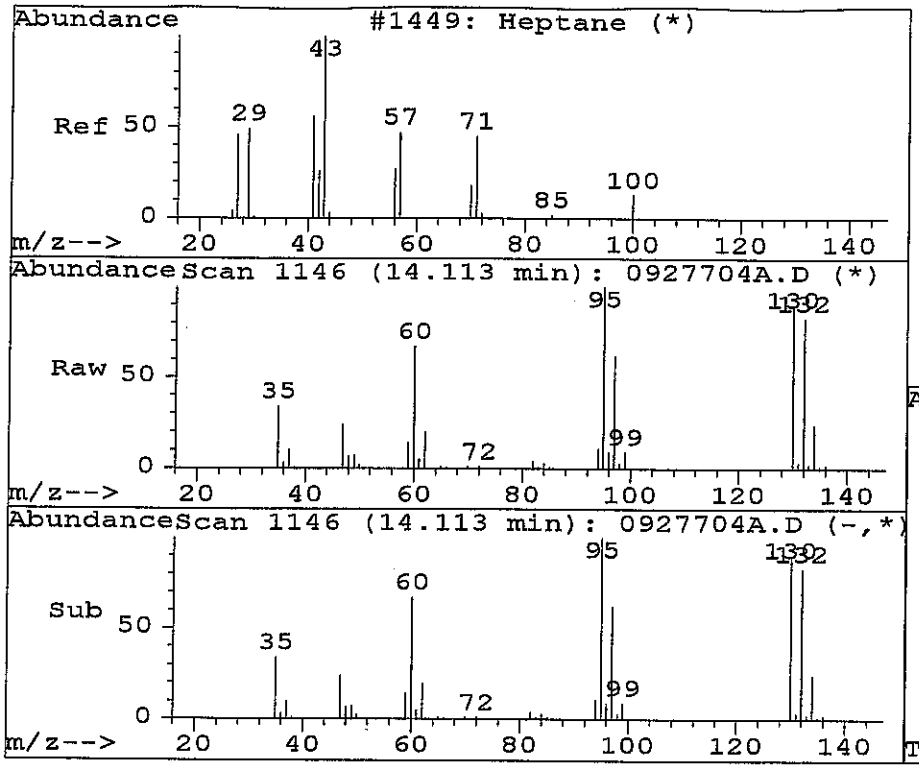


#40
Benzene
Concen: 0.15 ppbV
RT: 12.53 min Scan# 982
Delta R.T. 0.02 min
Lab File: 0927704A.D
Acq: 8 Jul 109 3:37 pm

Tgt Ion:78 Resp: 40724

Ion	Ratio	Lower	Upper
78	100		
52	16.0	19.2	28.8#
0	0.0	0.0	0.0
0	0.0	0.0	0.0

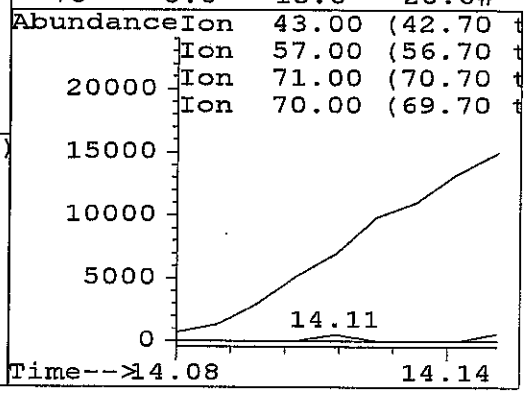


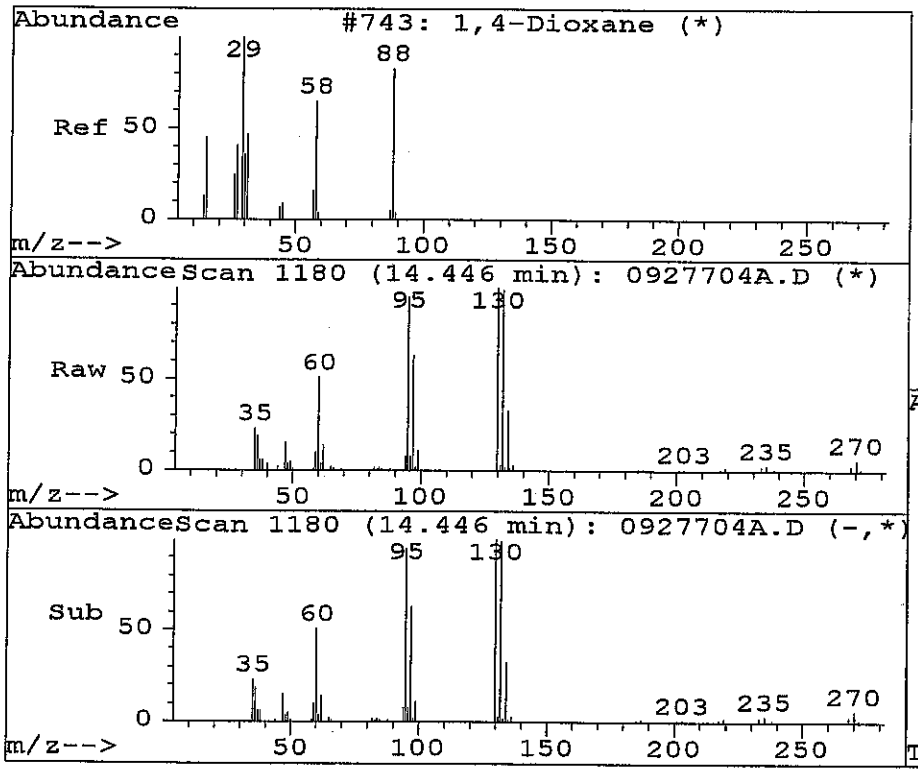


#42
n-Heptane
Concen: 0.00 ppbV
RT: 14.11 min Scan# 1146
Delta R.T. 0.07 min
Lab File: 0927704A.D
Acq: 8 Jul 109 3:37 pm

Tgt Ion:43 Resp: 304

Ion	Ratio	Lower	Upper
43	100		
57	0.0	28.7	43.1#
71	0.0	27.4	41.0#
70	0.0	13.8	20.8#

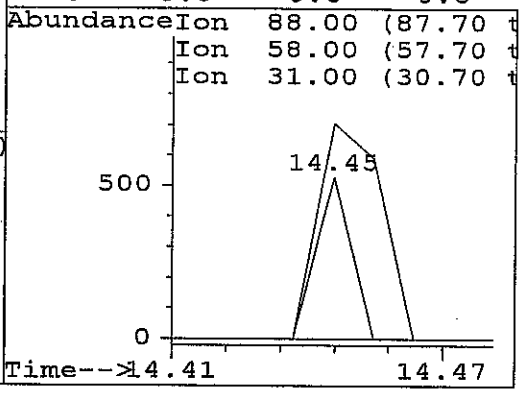


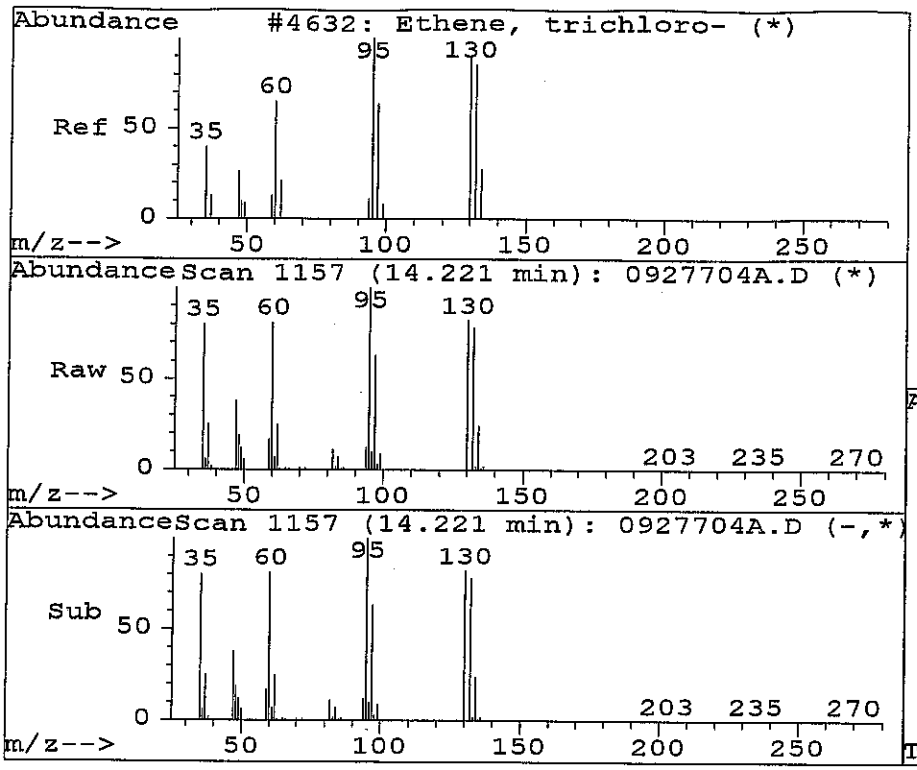


#44
1,4 Dioxane
Concen: 0.00 ppbV
RT: 14.45 min Scan# 1180
Delta R.T. 0.05 min
Lab File: 0927704A.D
Acq: 8 Jul 109 3:37 pm

Tgt Ion:88 Resp: 309

Ion	Ratio	Lower	Upper
88	100		
58	245.3	75.8	113.6#
31	0.0	0.0	0.0
0	0.0	0.0	0.0

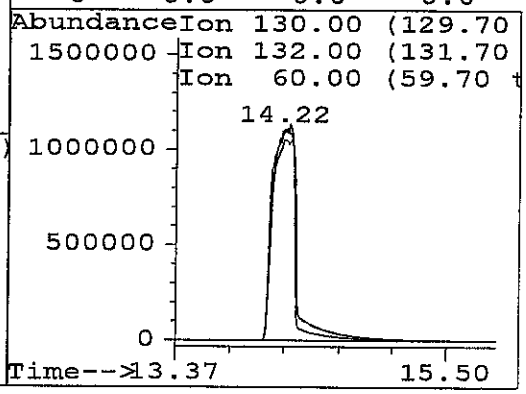


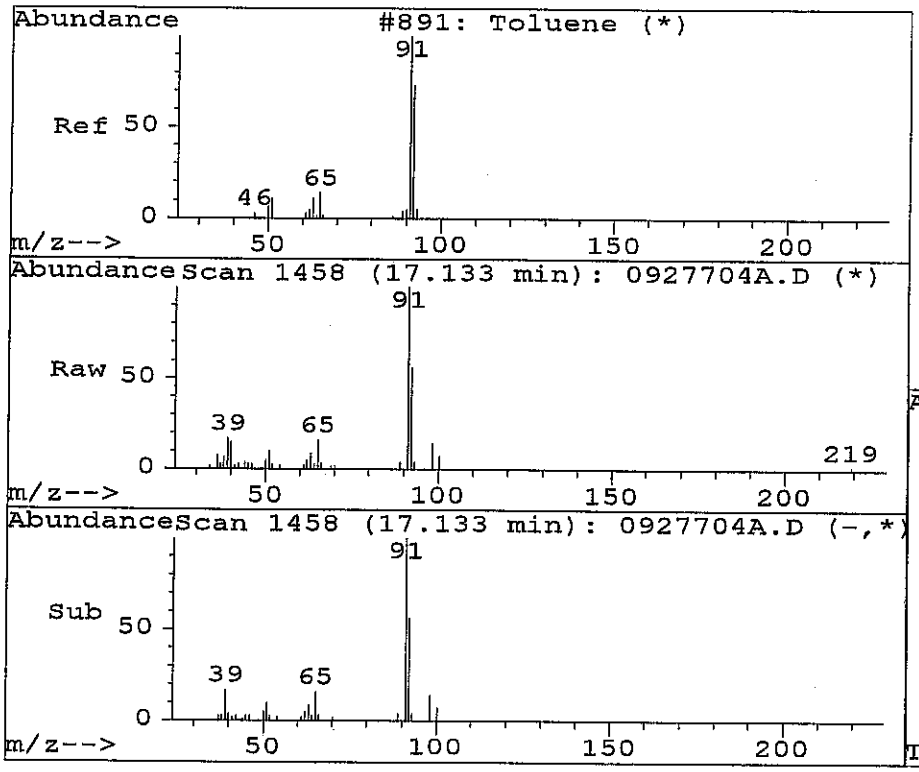


#46
Trichloroethene
Concen: 114.55 ppbV m
RT: 14.22 min Scan# 1157
Delta R.T. 0.09 min
Lab File: 0927704A.D
Acq: 8 Jul 109 3:37 pm

Tgt Ion:130 Resp:15010000

Ion	Ratio	Lower	Upper
130	100		
132	95.0	79.1	118.7
60	98.7	46.3	69.5#
0	0.0	0.0	0.0

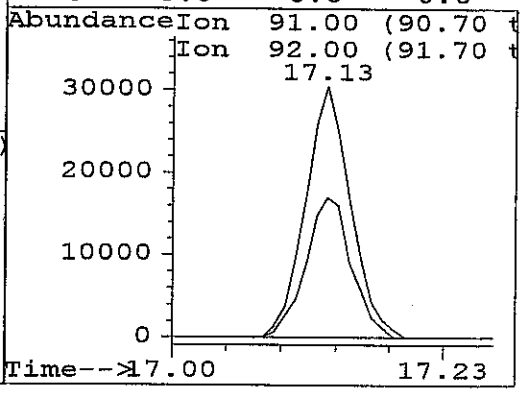


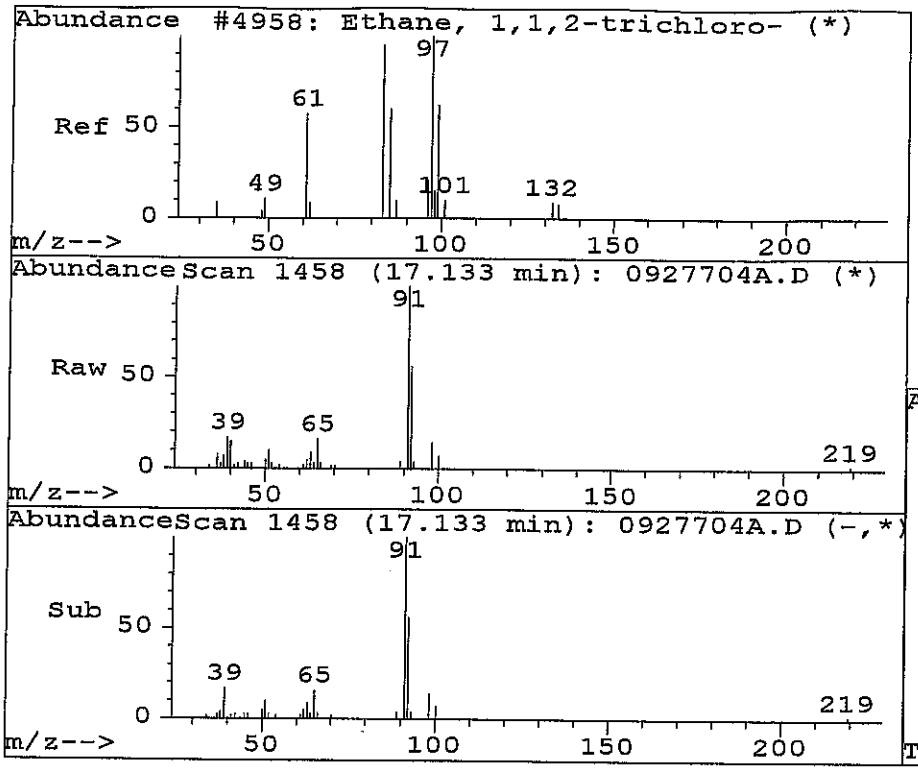


#51
Toluene
Concen: 0.24 ppbV
RT: 17.13 min Scan# 1458
Delta R.T. 0.02 min
Lab File: 0927704A.D
Acq: 8 Jul 109 3:37 pm

Tgt Ion:91 Resp: 84720

Ion	Ratio	Lower	Upper
91	100		
92	55.7	43.9	65.9
0	0.0	0.0	0.0
0	0.0	0.0	0.0

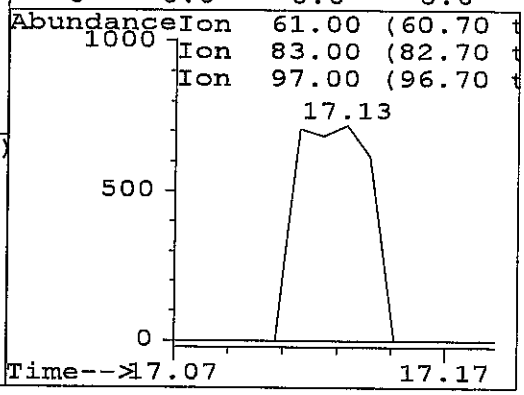


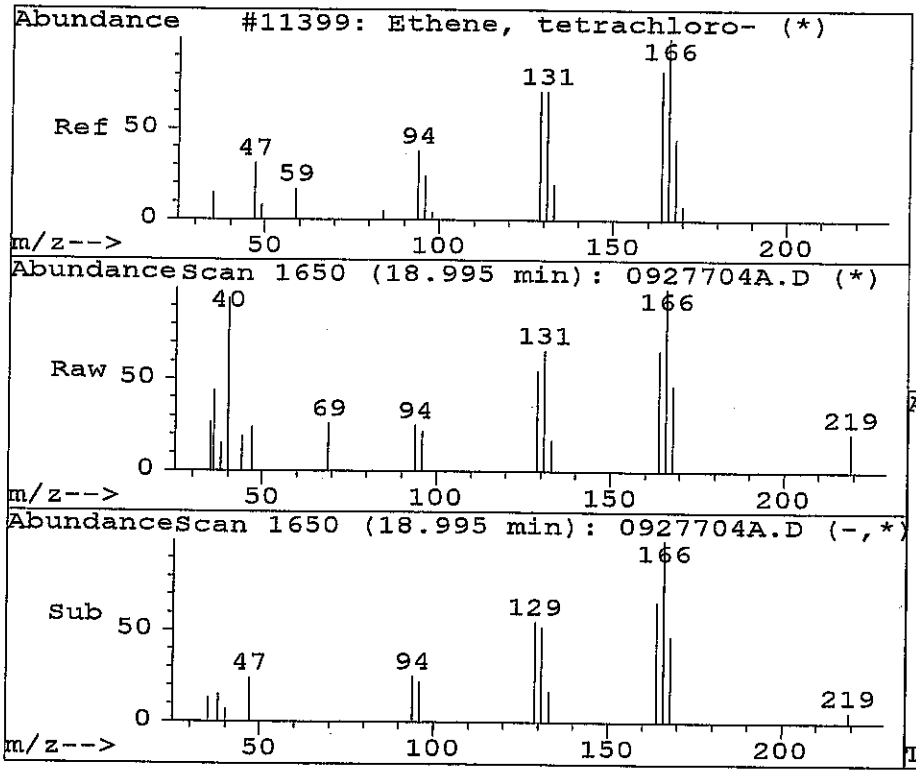


#53
1,1,2-Trichloroethane
Concen: 0.01 ppbV
RT: 17.13 min Scan# 1458
Delta R.T. -0.03 min
Lab File: 0927704A.D
Acq: 8 Jul 109 3:37 pm

Tgt Ion:61 Resp: 1518

Ion	Ratio	Lower	Upper
61	100		
83	0.0	90.9	136.3#
97	0.0	96.7	145.1#
0	0.0	0.0	0.0

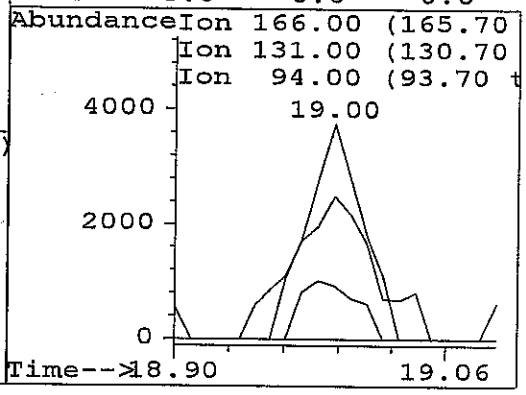


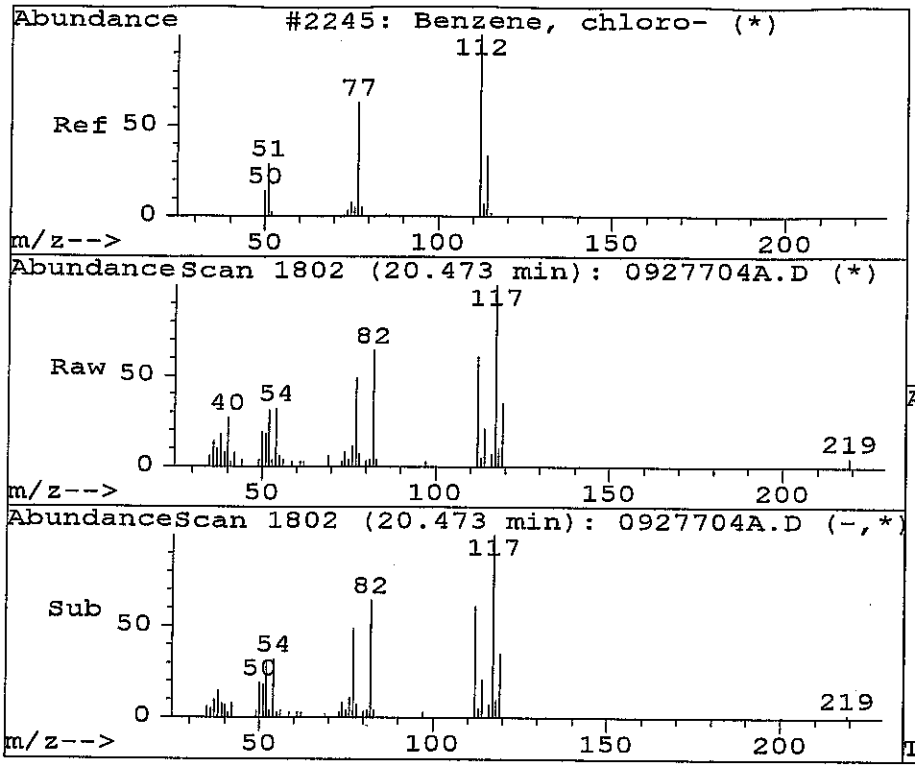


#59
Tetrachloroethene
Concen: 0.04 ppbV
RT: 19.00 min Scan# 1650
Delta R.T. 0.03 min
Lab File: 0927704A.D
Acq: 8 Jul 109 3:37 pm

Tgt Ion:166 Resp: 8632

Ion	Ratio	Lower	Upper
166	100		
131	47.9	52.1	78.1#
94	24.8	29.9	44.9#
0	0.0	0.0	0.0

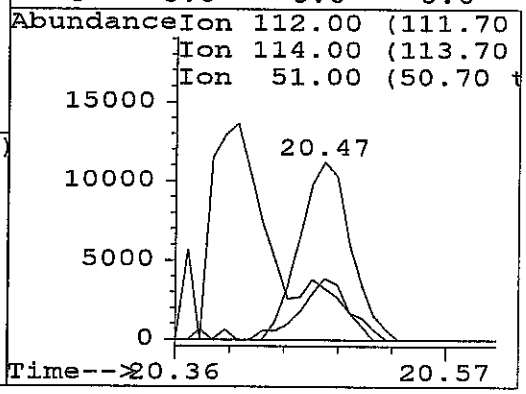


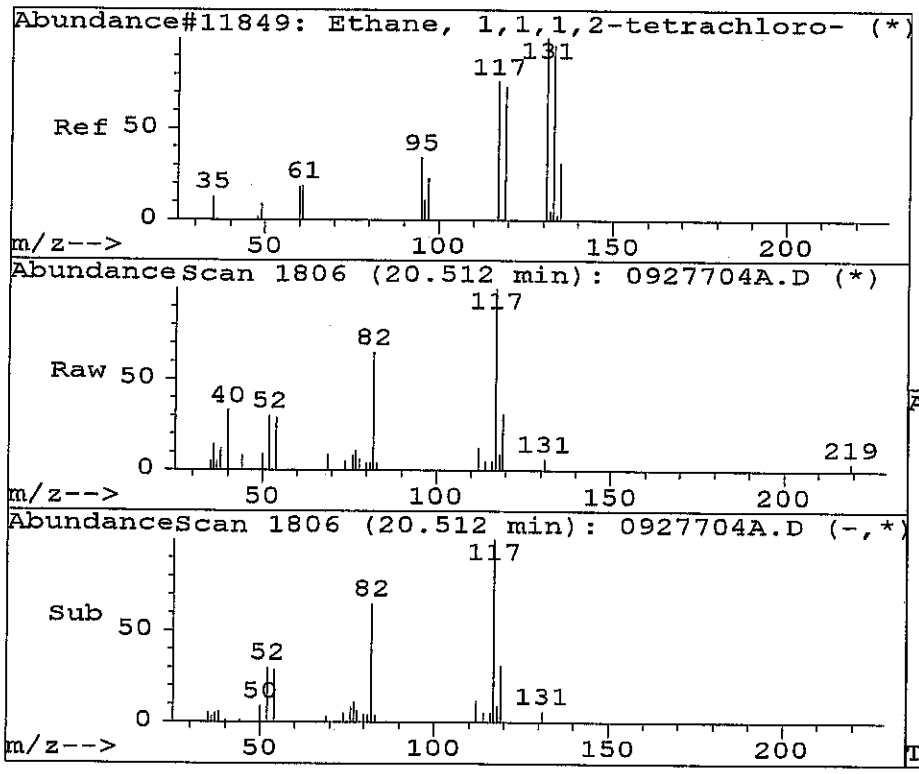


#60
Chlorobenzene
Concen: 0.10 ppbV
RT: 20.47 min Scan# 1802
Delta R.T. 0.02 min
Lab File: 0927704A.D
Acq: 8 Jul 109 3:37 pm

Tgt Ion:112 Resp: 31692

Ion	Ratio	Lower	Upper
112	100		
114	34.4	25.3	37.9
51	0.0	23.0	34.6#
0	0.0	0.0	0.0

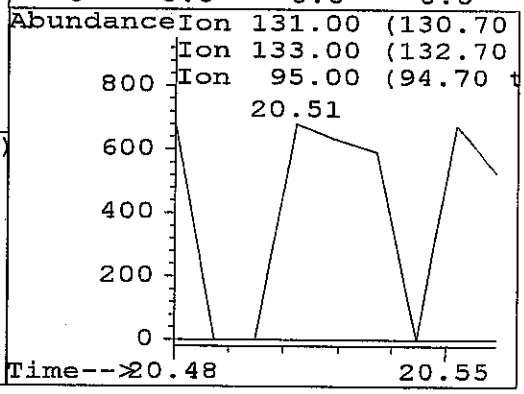


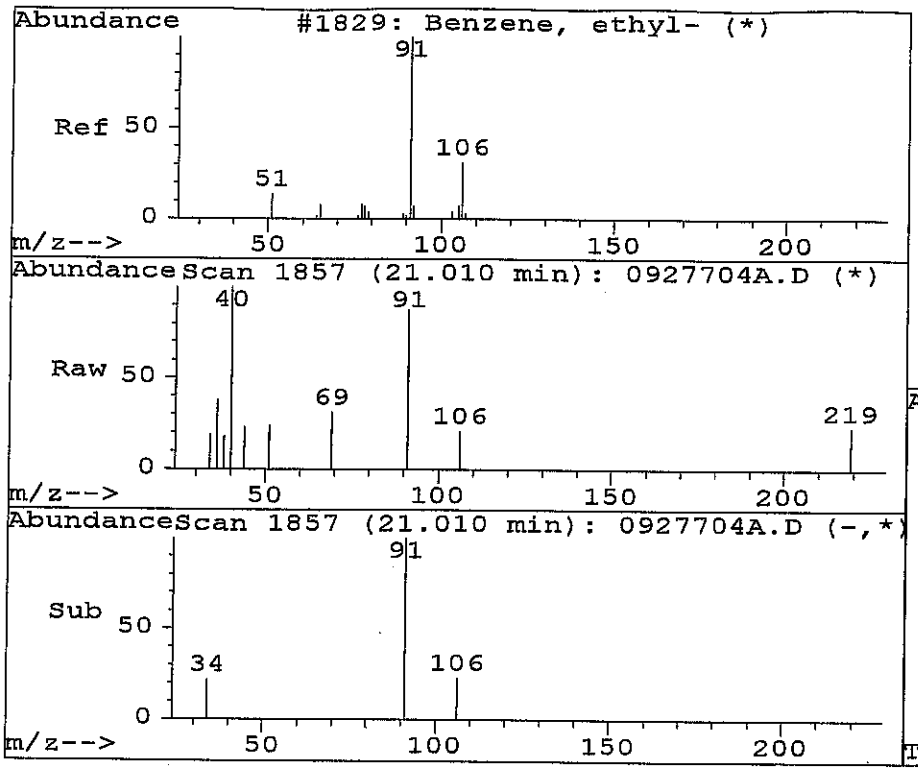


#61
1,1,1,2-Tetrachloroethane
Concen: 0.01 ppbV
RT: 20.51 min Scan# 1806
Delta R.T. 0.00 min
Lab File: 0927704A.D
Acq: 8 Jul 109 3:37 pm

Tgt Ion:131 Resp: 1117

Ion	Ratio	Lower	Upper
131	100		
133	0.0	76.0	114.0#
95	0.0	31.8	47.6#
0	0.0	0.0	0.0

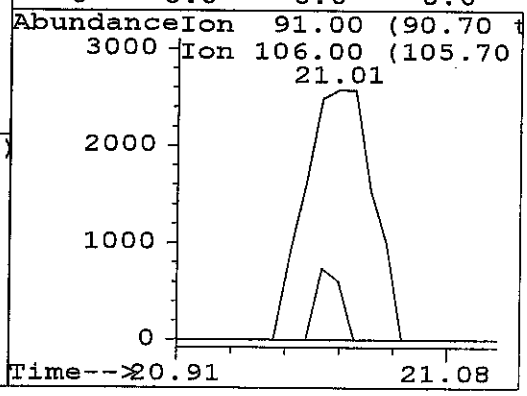


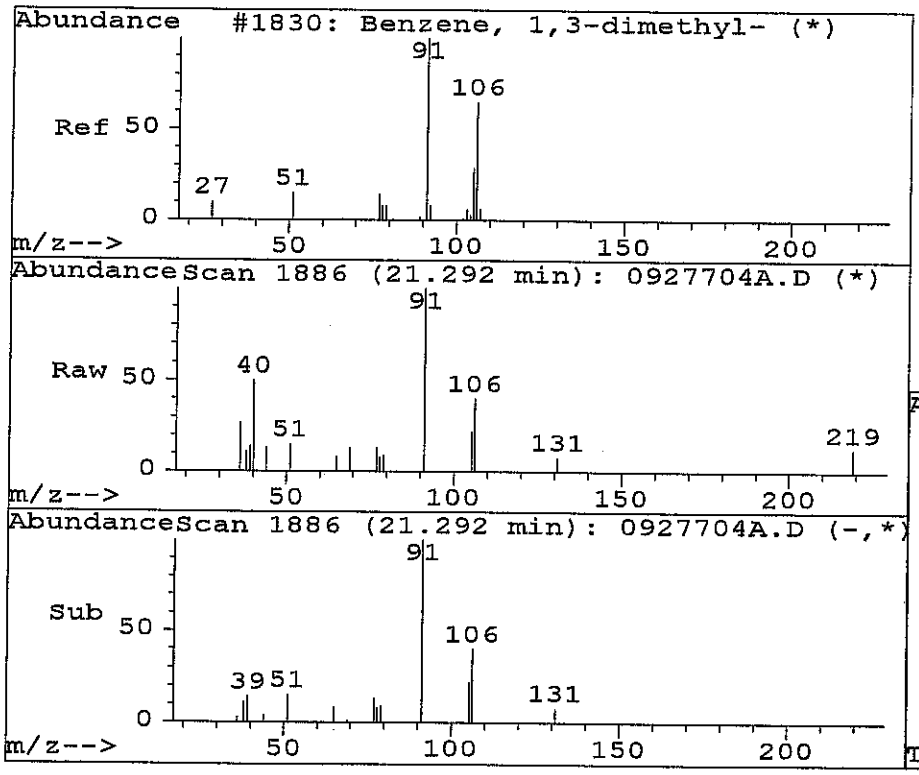


#62
Ethylbenzene
Concen: 0.01 ppbV
RT: 21.01 min Scan# 1857
Delta R.T. 0.02 min
Lab File: 0927704A.D
Acq: 8 Jul 109 3:37 pm

Tgt Ion:91 Resp: 7433

Ion	Ratio	Lower	Upper
91	100		
106	23.3	21.4	32.0
0	0.0	0.0	0.0
0	0.0	0.0	0.0

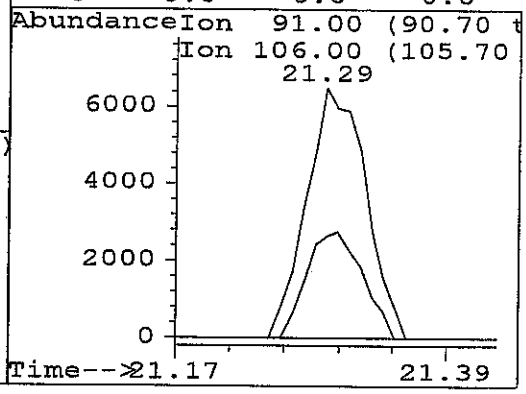


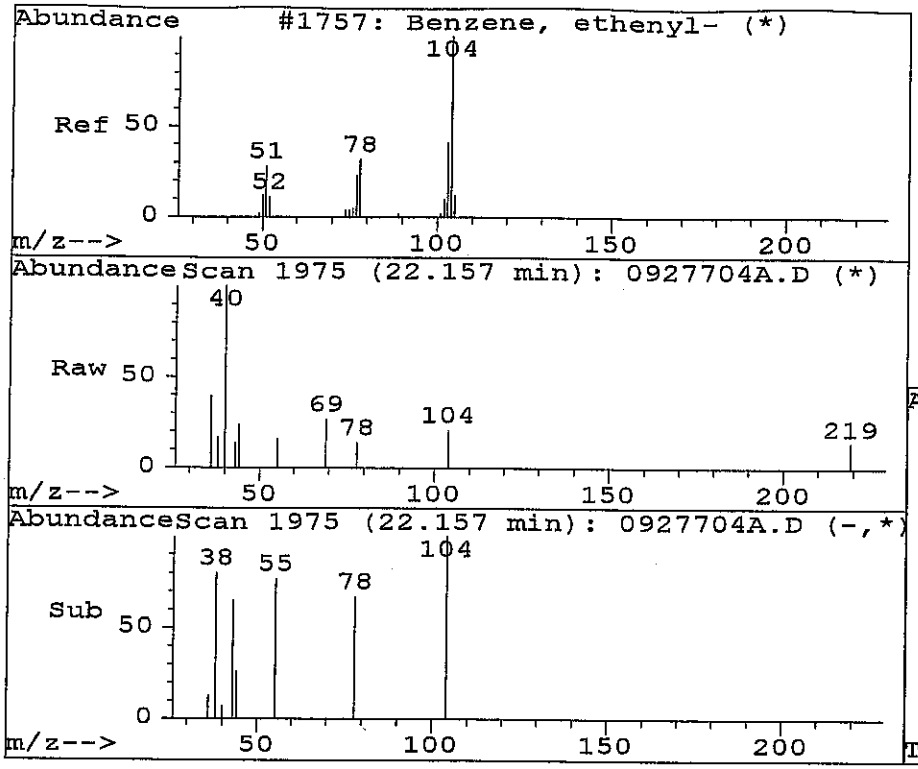


#63
m & p-Xylene
Concen: 0.05 ppbV
RT: 21.29 min Scan# 1886
Delta R.T. 0.01 min
Lab File: 0927704A.D
Acq: 8 Jul 109 3:37 pm

Tgt Ion:91 Resp: 22643

Ion	Ratio	Lower	Upper
91	100		
106	40.4	31.9	47.9
0	0.0	0.0	0.0
0	0.0	0.0	0.0

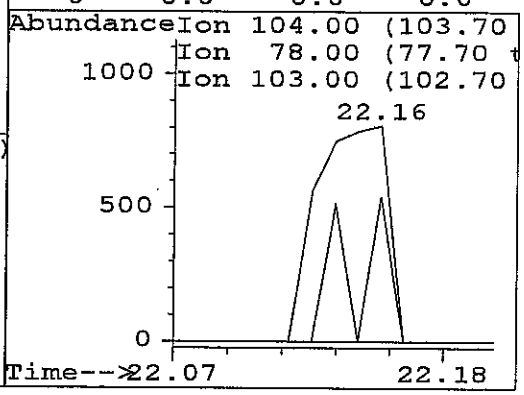


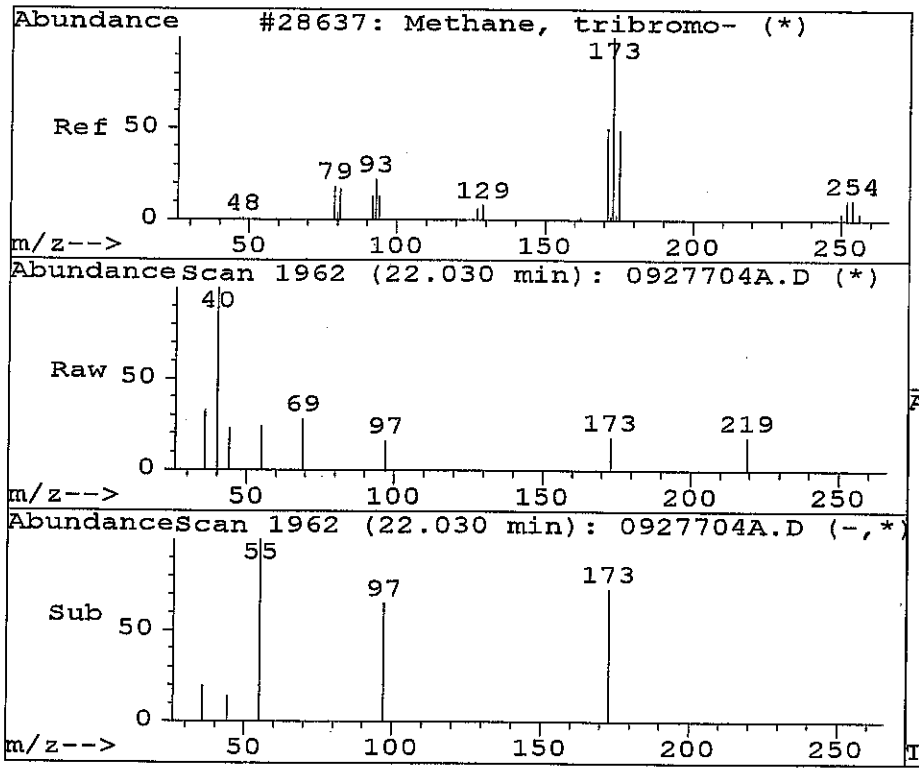


#64
Styrene
Concen: 0.01 ppbV
RT: 22.16 min Scan# 1975
Delta R.T. 0.02 min
Lab File: 0927704A.D
Acq: 8 Jul 109 3:37 pm

Tgt Ion:104 Resp: 1699

Ion	Ratio	Lower	Upper
104	100		
78	67.1	52.8	79.2
103	0.0	37.9	56.9#
0	0.0	0.0	0.0

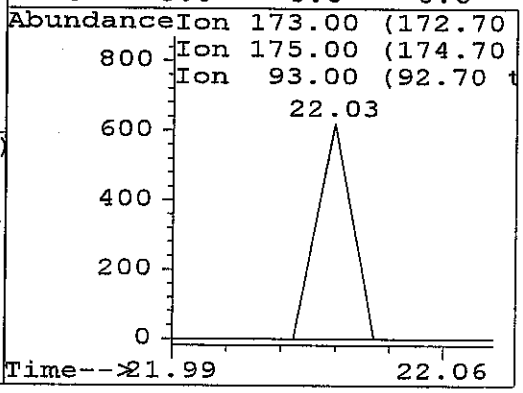


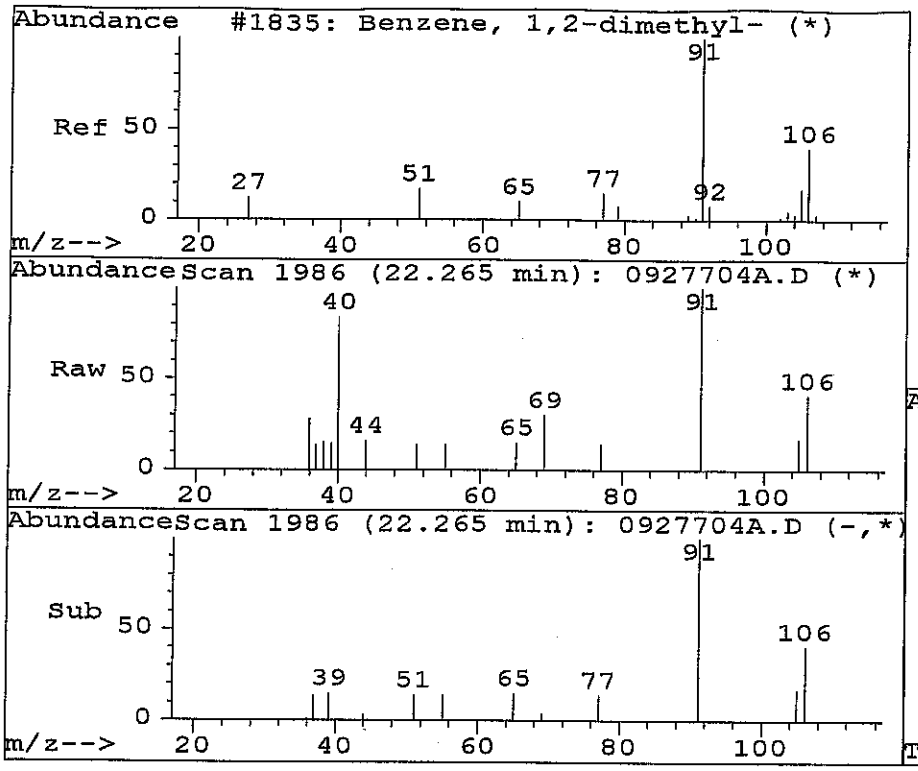


#65
Bromoform
Concen: 0.00 ppbV
RT: 22.03 min Scan# 1962
Delta R.T. 0.03 min
Lab File: 0927704A.D
Acq: 8 Jul 109 3:37 pm

Tgt Ion:173 Resp: 363

Ion	Ratio	Lower	Upper
173	100		
175	0.0	39.4	59.0#
93	0.0	15.6	23.4#
0	0.0	0.0	0.0

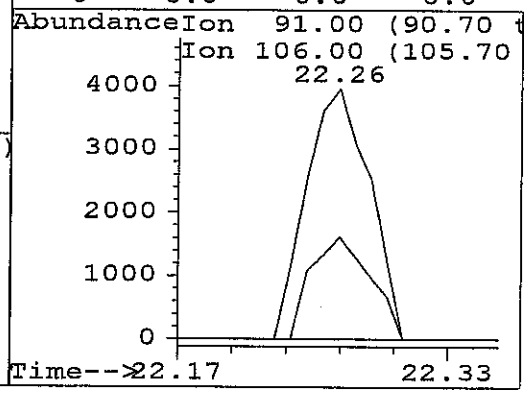


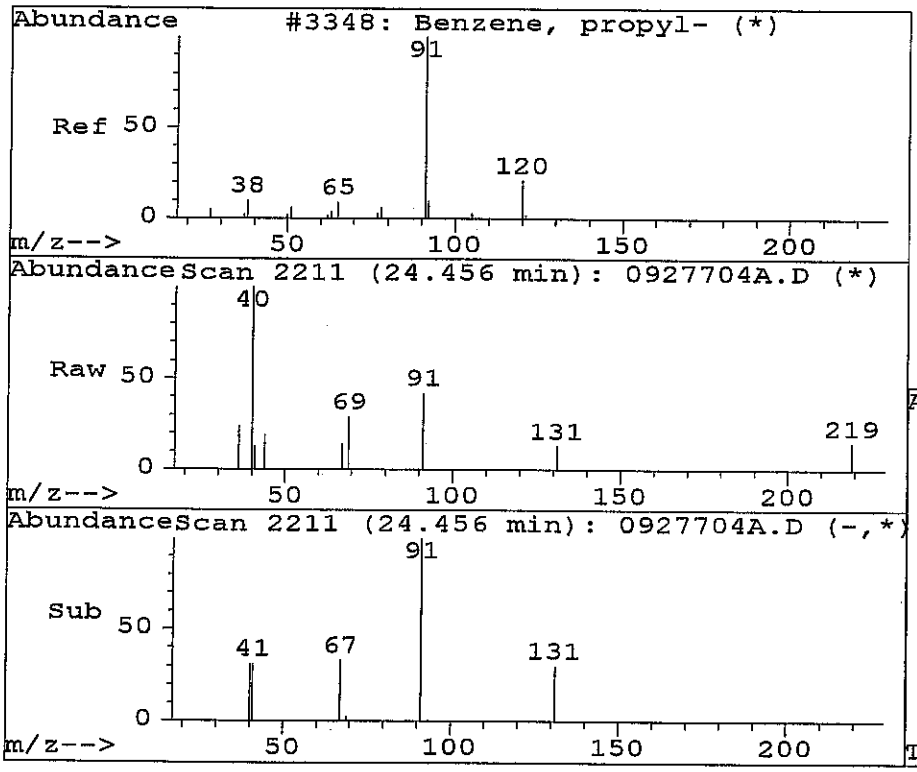


#66
o-Xylene
Concen: 0.02 ppbV
RT: 22.26 min Scan# 1986
Delta R.T. 0.01 min
Lab File: 0927704A.D
Acq: 8 Jul 109 3:37 pm

Tgt Ion:91 Resp: 10606

Ion	Ratio	Lower	Upper
91	100		
106	40.9	29.8	44.8
0	0.0	0.0	0.0
0	0.0	0.0	0.0

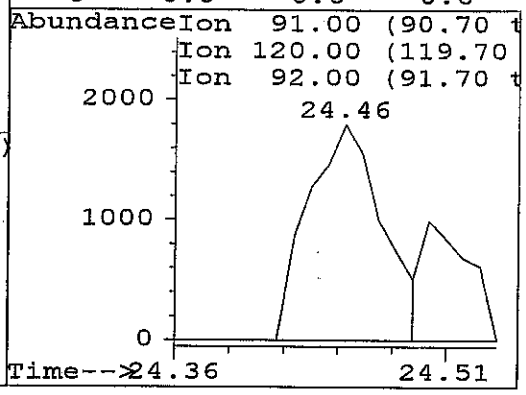


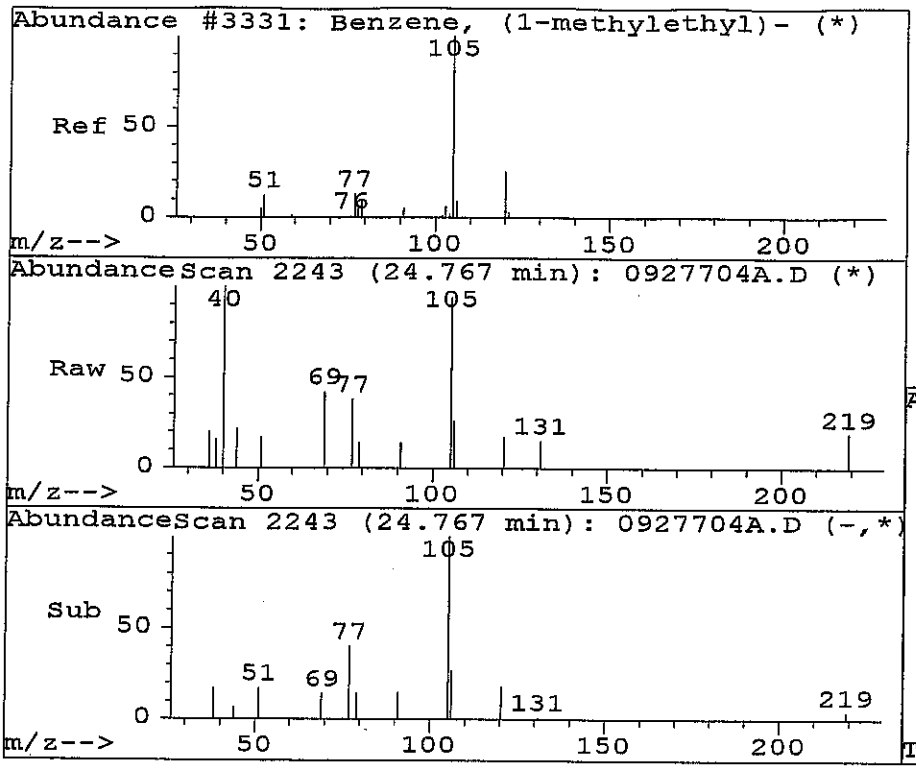


#70
n-Propylbenzene
Concen: 0.00 ppbV
RT: 24.46 min Scan# 2211
Delta R.T. 0.03 min
Lab File: 0927704A.D
Acq: 8 Jul 109 3:37 pm

Tgt Ion:91 Resp: 5389

Ion	Ratio	Lower	Upper
91	100		
120	0.0	13.9	20.9#
92	0.0	7.8	11.6#
0	0.0	0.0	0.0

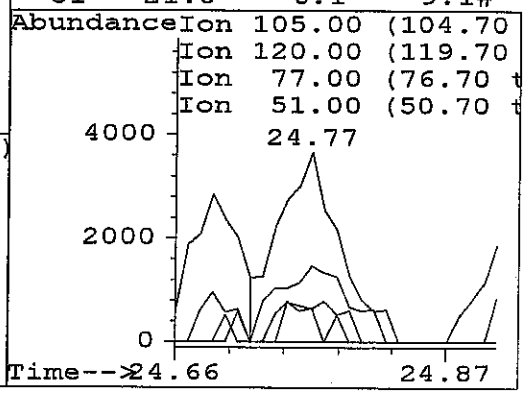


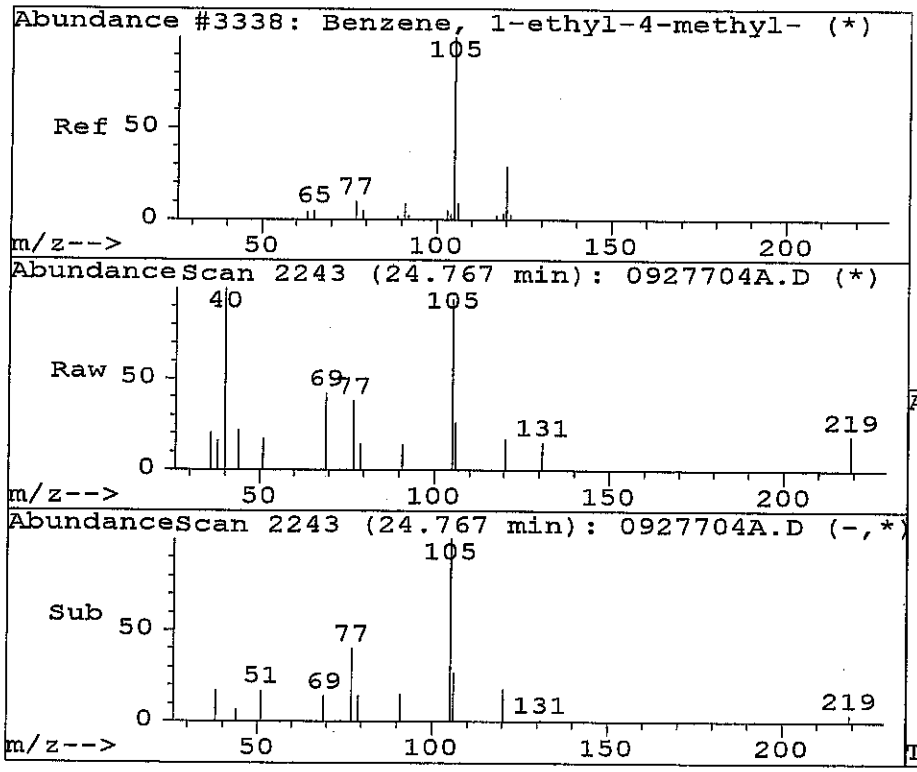


#71
Isopropylbenzene
Concen: 0.02 ppbV
RT: 24.77 min Scan# 2243
Delta R.T. 0.03 min
Lab File: 0927704A.D
Acq: 8 Jul 109 3:37 pm

Tgt Ion:105 Resp: 12129

Ion	Ratio	Lower	Upper
105	100		
120	12.2	20.3	30.5#
77	50.7	12.1	18.1#
51	21.8	6.1	9.1#

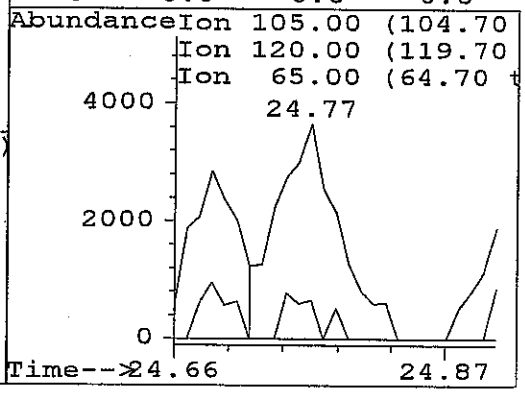


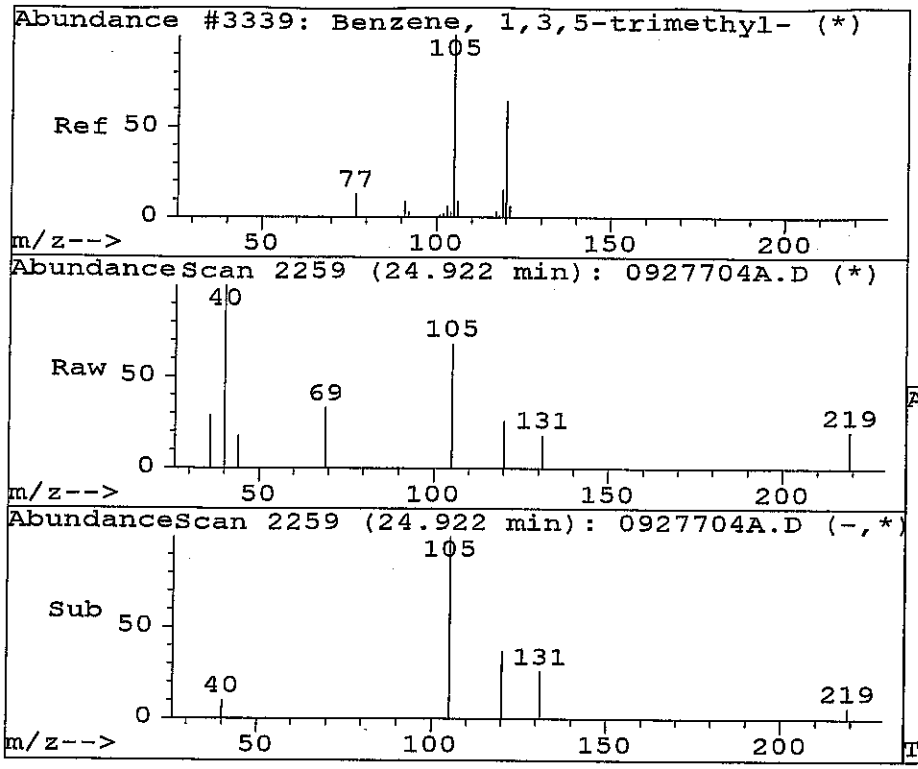


#72
4-Ethyltoluene
Concen: 0.01 ppbV
RT: 24.77 min Scan# 2243
Delta R.T. 0.03 min
Lab File: 0927704A.D
Acq: 8 Jul 109 3:37 pm

Tgt Ion:105 Resp: 12129

Ion	Ratio	Lower	Upper
105	100		
120	21.6	20.4	30.6
65	0.0	5.1	7.7#
0	0.0	0.0	0.0

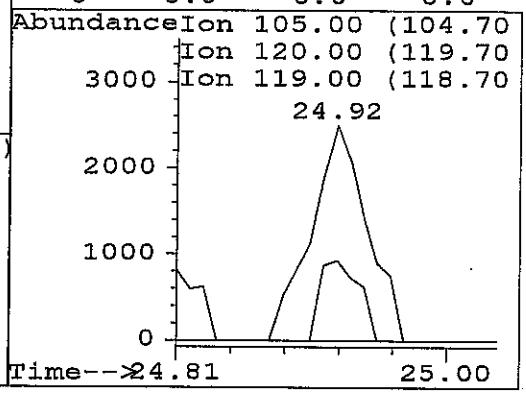


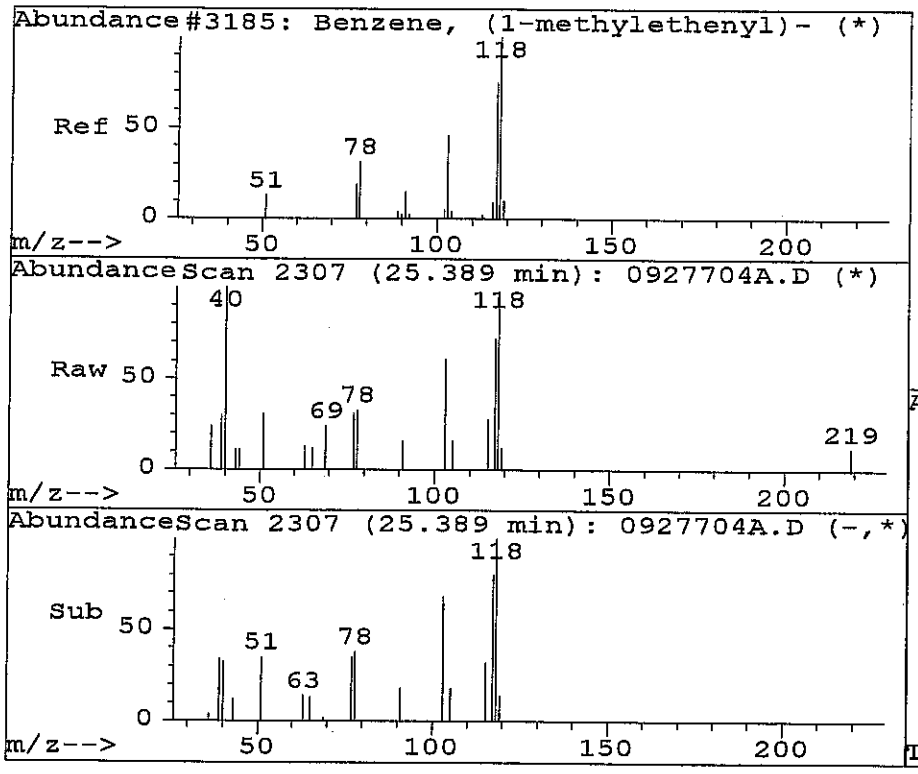


#73
1,3,5-Trimethylbenzene
Concen: 0.01 ppbV
RT: 24.92 min Scan# 2259
Delta R.T. 0.00 min
Lab File: 0927704A.D
Acq: 8 Jul 109 3:37 pm

Tgt Ion:105 Resp: 7030

Ion	Ratio	Lower	Upper
105	100		
120	37.3	32.8	49.2
119	0.0	8.7	13.1#
0	0.0	0.0	0.0

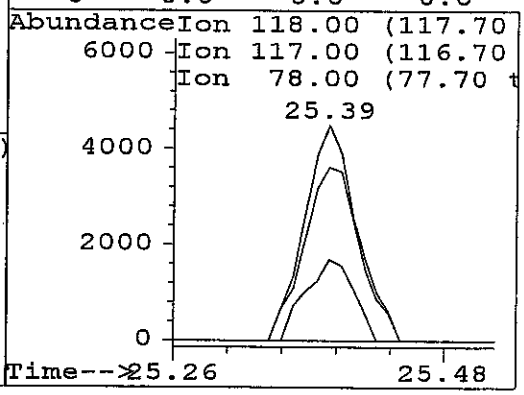


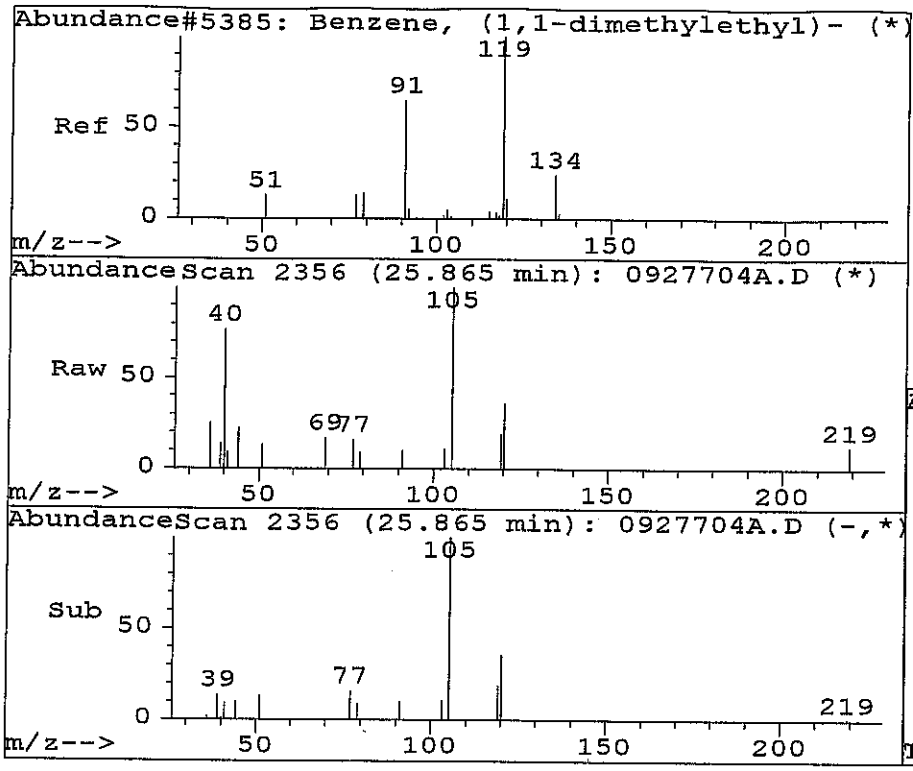


#74
Methylstyrene
Concen: 0.04 ppbV
RT: 25.39 min Scan# 2307
Delta R.T. 0.03 min
Lab File: 0927704A.D
Acq: 8 Jul 109 3:37 pm

Tgt Ion:118 Resp: 13350

Ion	Ratio	Lower	Upper
118	100		
117	80.5	70.3	105.5
78	37.6	34.2	51.2
0	0.0	0.0	0.0

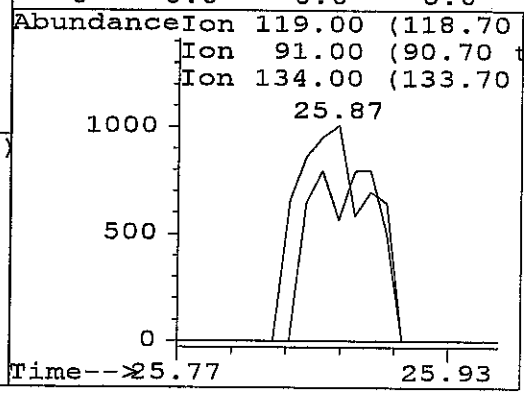


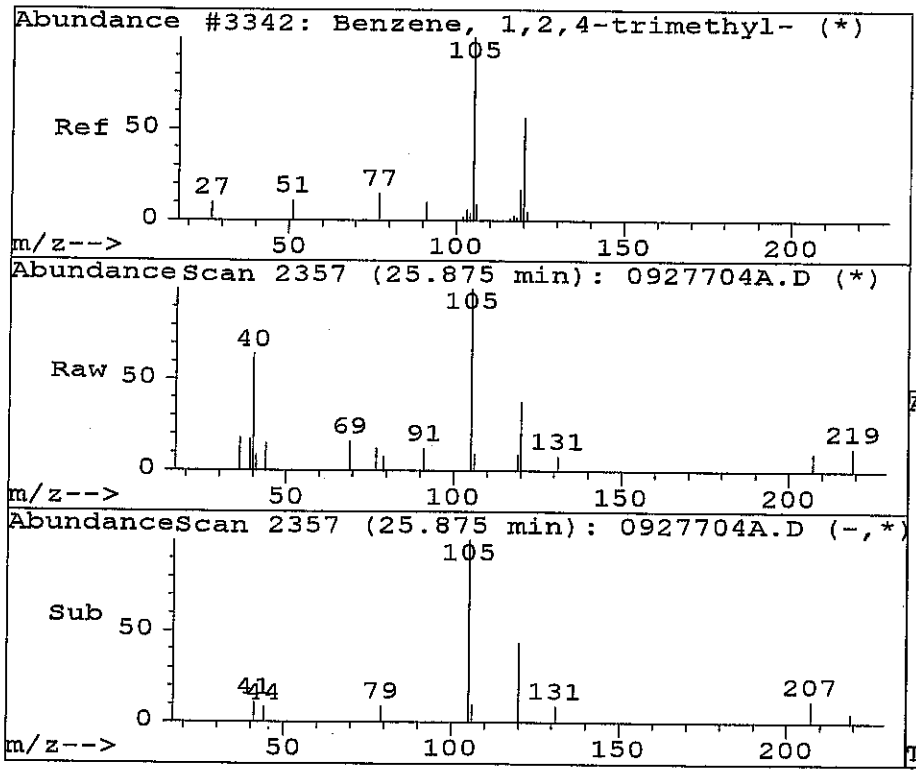


#75
tert-butyl benzene
Concen: 0.00 ppbV
RT: 25.87 min Scan# 2356
Delta R.T. 0.06 min
Lab File: 0927704A.D
Acq: 8 Jul 109 3:37 pm

Tgt Ion:119 Resp: 3165

Ion	Ratio	Lower	Upper
119	100		
91	37.1	73.8	110.6#
134	0.0	16.2	24.4#
0	0.0	0.0	0.0

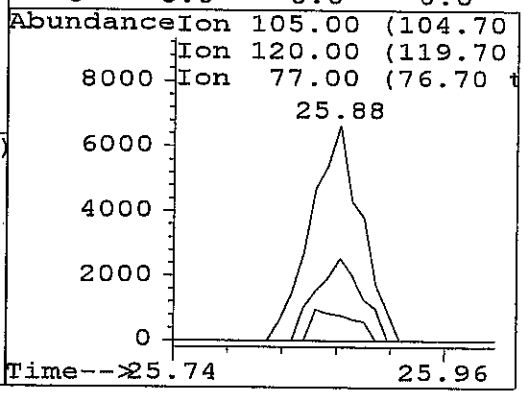


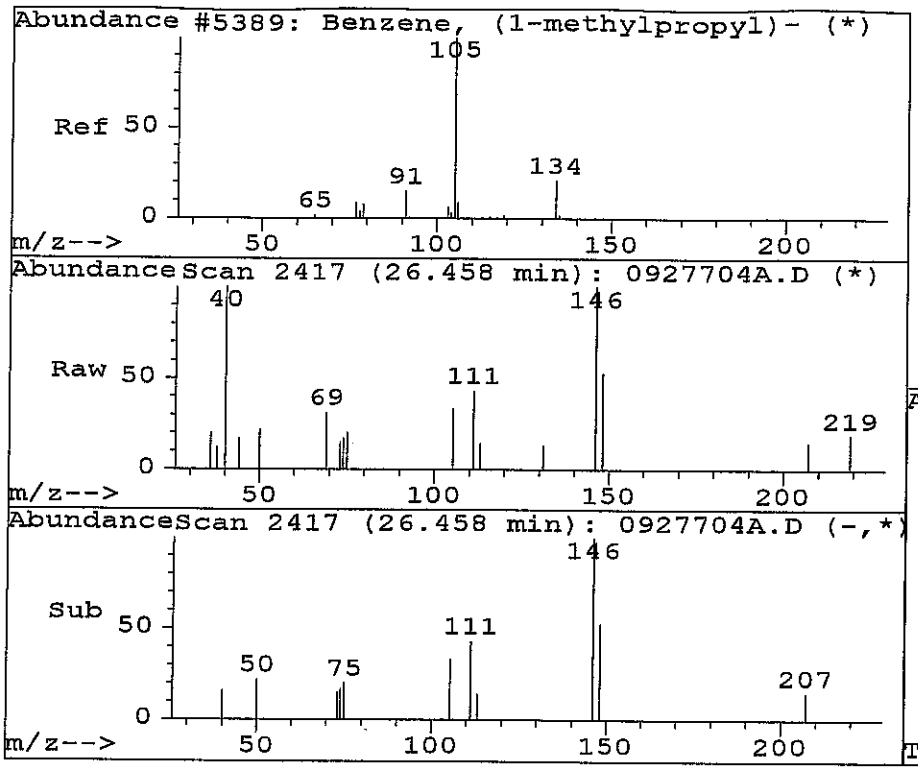


#76
1,2,4-Trimethylbenzene
Concen: 0.03 ppbV
RT: 25.88 min Scan# 2357
Delta R.T. -0.01 min
Lab File: 0927704A.D
Acq: 8 Jul 109 3:37 pm

Tgt Ion:105 Resp: 18917

Ion	Ratio	Lower	Upper
105	100		
120	38.3	31.9	47.9
77	11.9	14.2	21.2#
0	0.0	0.0	0.0

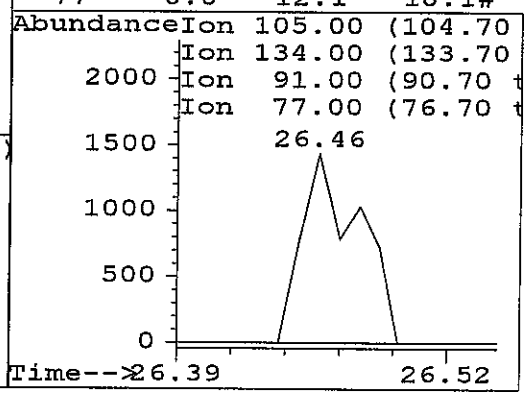


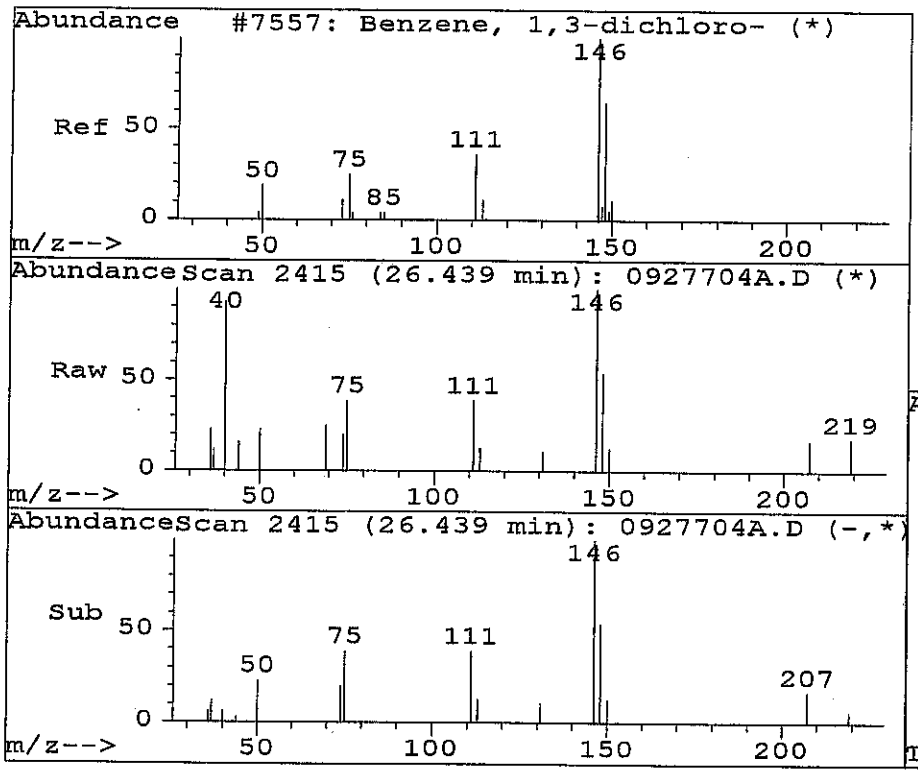


#77
sec-butylbenzene
Concen: 0.00 ppbV
RT: 26.46 min Scan# 2417
Delta R.T. -0.04 min
Lab File: 0927704A.D
Acq: 8 Jul 109 3:37 pm

Tgt Ion:105 Resp: 2739

Ion	Ratio	Lower	Upper
105	100		
134	0.0	14.4	21.6#
91	0.0	13.4	20.0#
77	0.0	12.1	18.1#

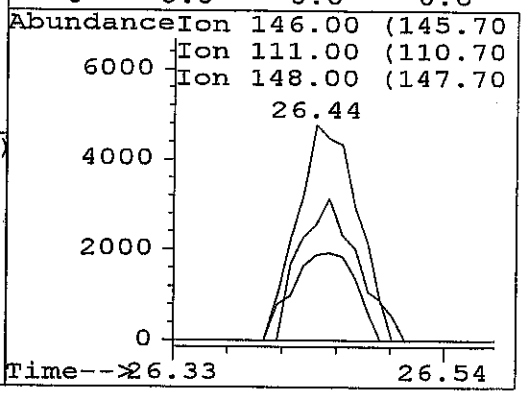


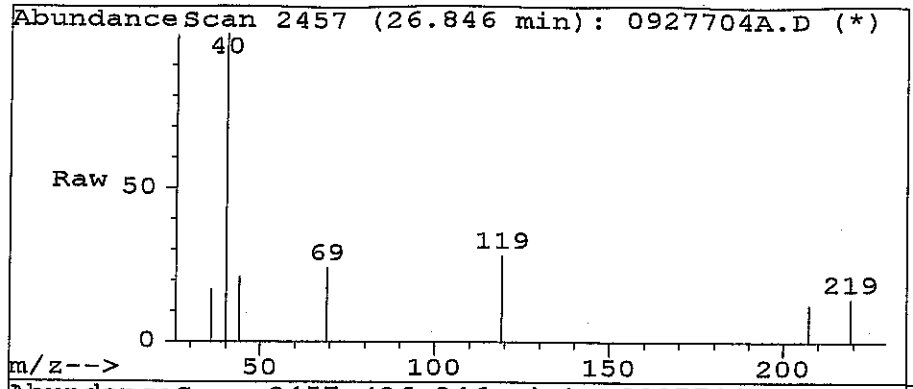


#78
1,3-Dichlorobenzene
Concen: 0.03 ppbV
RT: 26.44 min Scan# 2415
Delta R.T. 0.03 min
Lab File: 0927704A.D
Acq: 8 Jul 109 3:37 pm

Tgt Ion:146 Resp: 15309

Ion	Ratio	Lower	Upper
146	100		
111	39.5	34.2	51.4
148	53.6	51.6	77.4
0	0.0	0.0	0.0

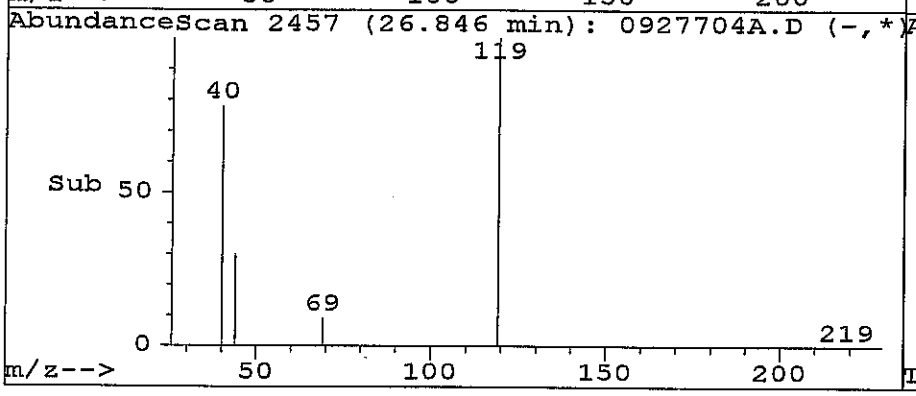


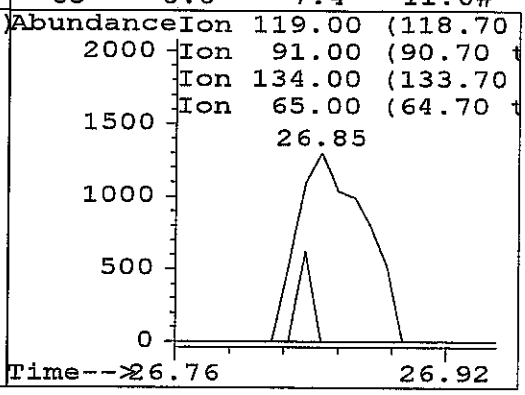


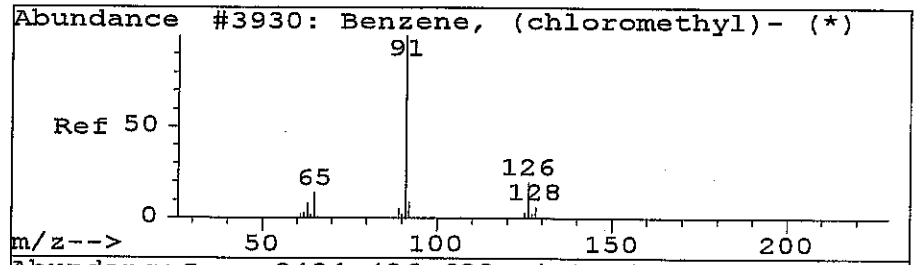
#79
Isopropyltoluene
Concen: 0.00 ppbV
RT: 26.85 min Scan# 2457
Delta R.T. 0.02 min
Lab File: 0927704A.D
Acq: 8 Jul 109 3:37 pm

Tgt Ion:119 Resp: 3668

Ion	Ratio	Lower	Upper
119	100		
91	9.9	25.4	38.0#
134	0.0	19.0	28.6#
65	0.0	7.4	11.0#



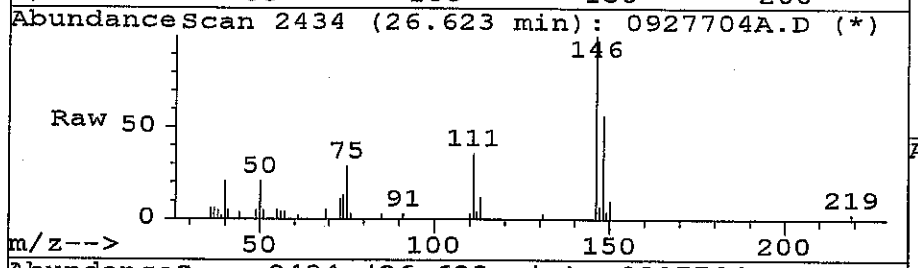


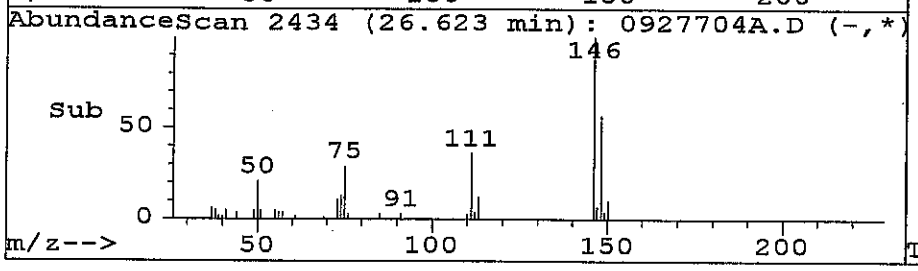


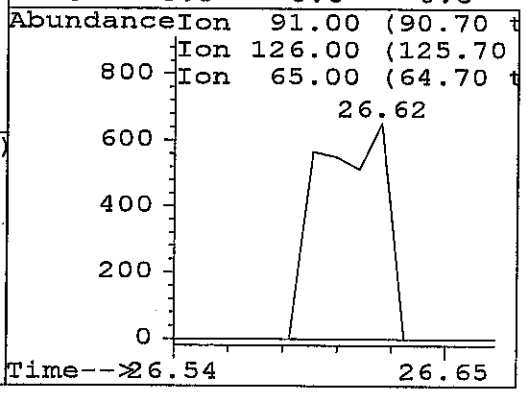
#80
Benzyl chloride
Concen: 0.00 ppbV
RT: 26.62 min Scan# 2434
Delta R.T. 0.01 min
Lab File: 0927704A.D
Acq: 8 Jul 109 3:37 pm

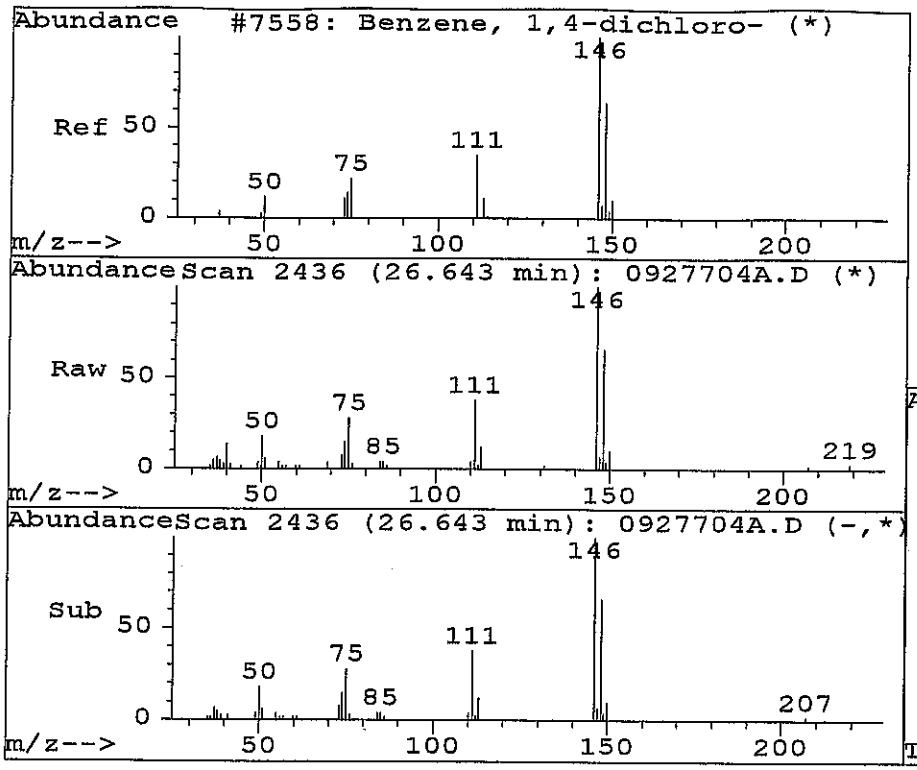
Tgt Ion:91 Resp: 1337

Ion	Ratio	Lower	Upper
91	100		
126	0.0	15.4	23.0#
65	0.0	14.2	21.4#
0	0.0	0.0	0.0





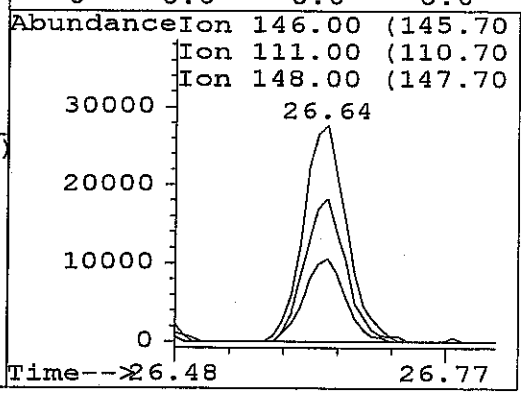


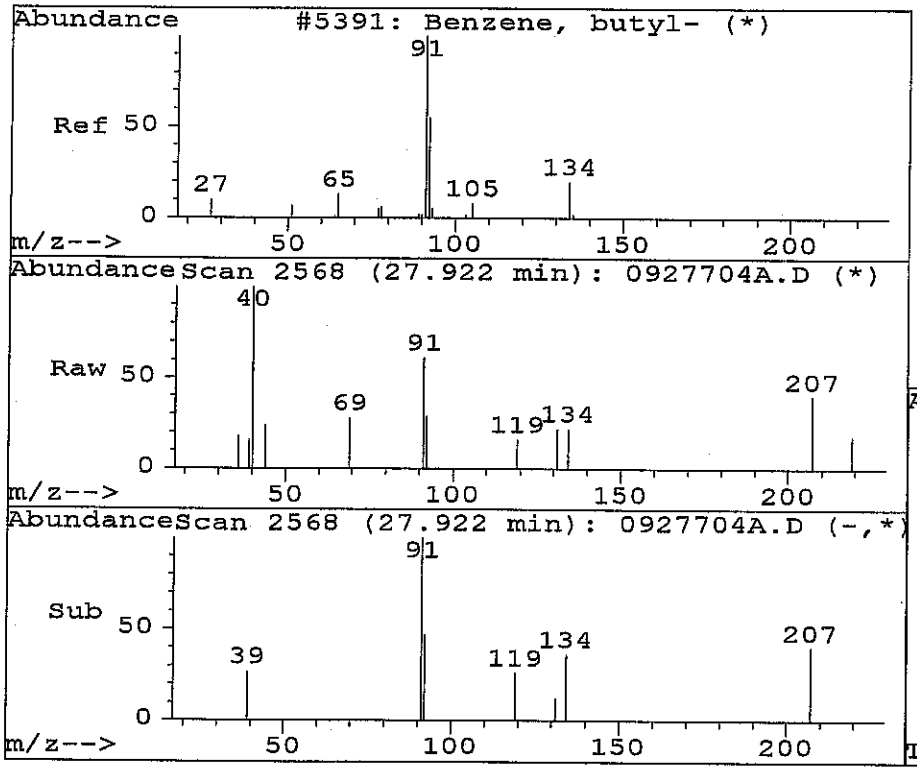


#81
1,4-Dichlorobenzene
Concen: 0.15 ppbV
RT: 26.64 min Scan# 2436
Delta R.T. -0.04 min
Lab File: 0927704A.D
Acq: 8 Jul 109 3:37 pm

Tgt Ion:146 Resp: 90073

Ion	Ratio	Lower	Upper
146	100		
111	38.1	33.7	50.5
148	65.7	51.2	76.8
0	0.0	0.0	0.0

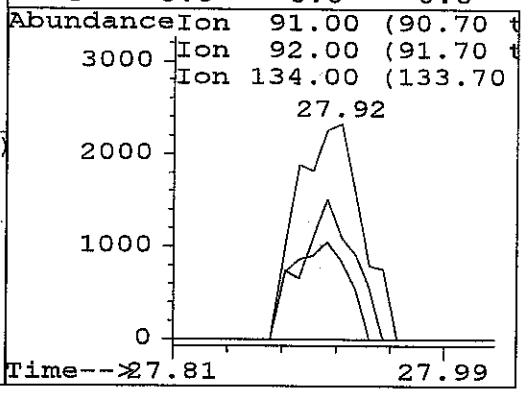


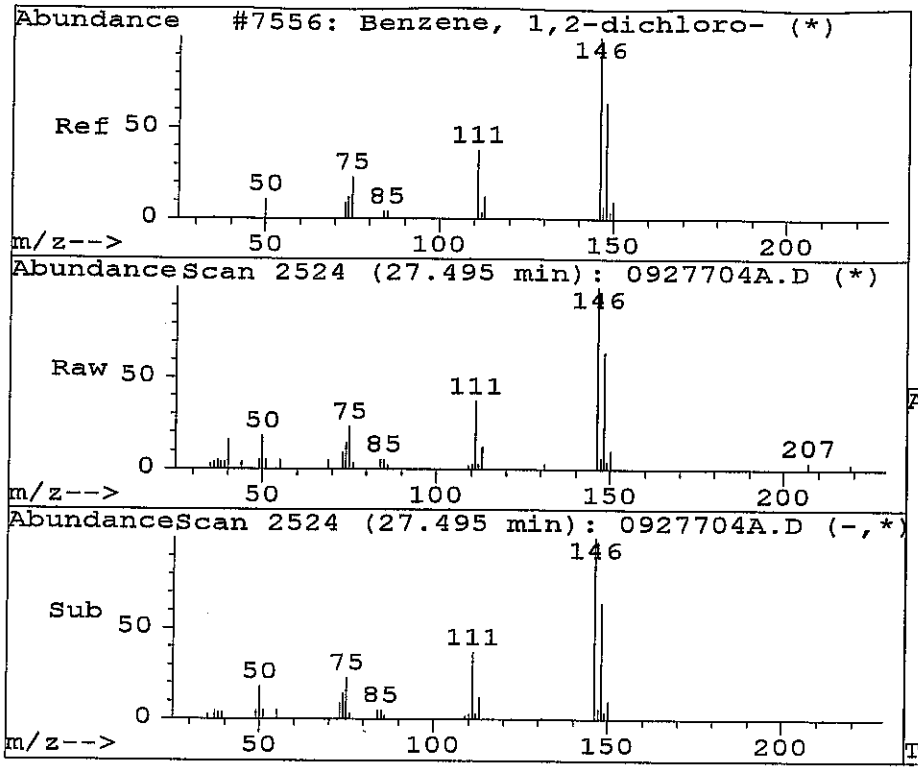


#82
n-Butylbenzene
Concen: 0.01 ppbV
RT: 27.92 min Scan# 2568
Delta R.T. 0.04 min
Lab File: 0927704A.D
Acq: 8 Jul 109 3:37 pm

Tgt Ion:91 Resp: 7261

Ion	Ratio	Lower	Upper
91	100		
92	53.1	44.2	66.4
134	39.7	18.2	27.4#
0	0.0	0.0	0.0

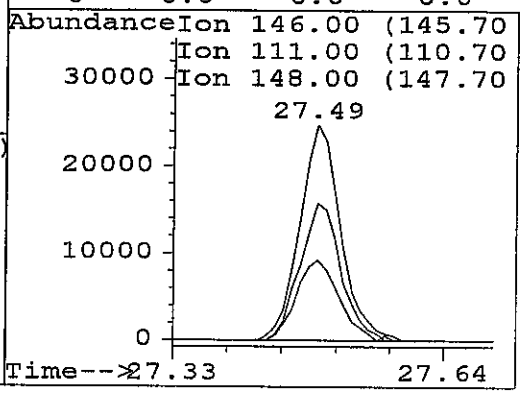


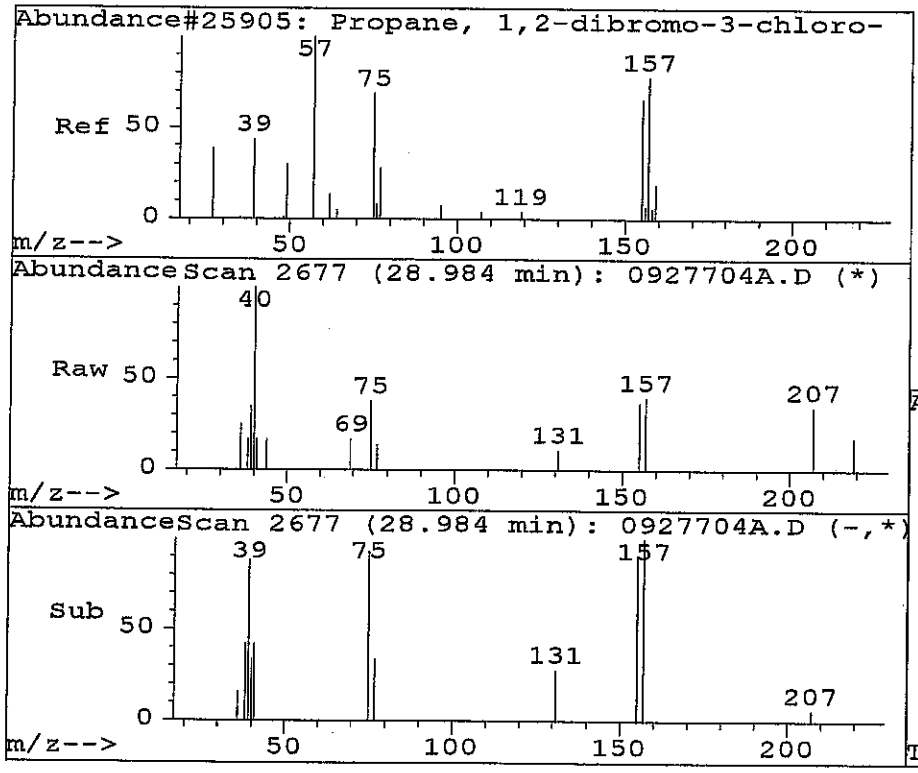


#83
1,2-Dichlorobenzene
Concen: 0.12 ppbV
RT: 27.49 min Scan# 2524
Delta R.T. 0.02 min
Lab File: 0927704A.D
Acq: 8 Jul 109 3:37 pm

Tgt Ion:146 Resp: 79656

Ion	Ratio	Lower	Upper
146	100		
111	37.3	34.1	51.1
148	63.6	49.9	74.9
0	0.0	0.0	0.0

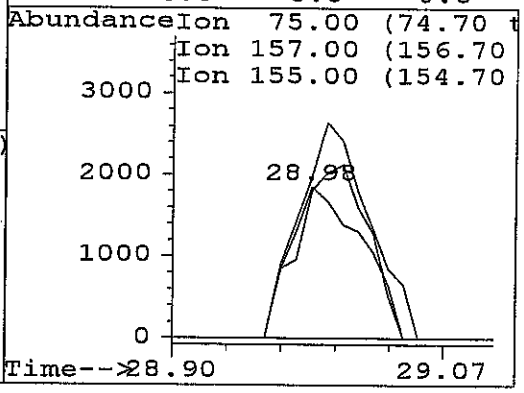


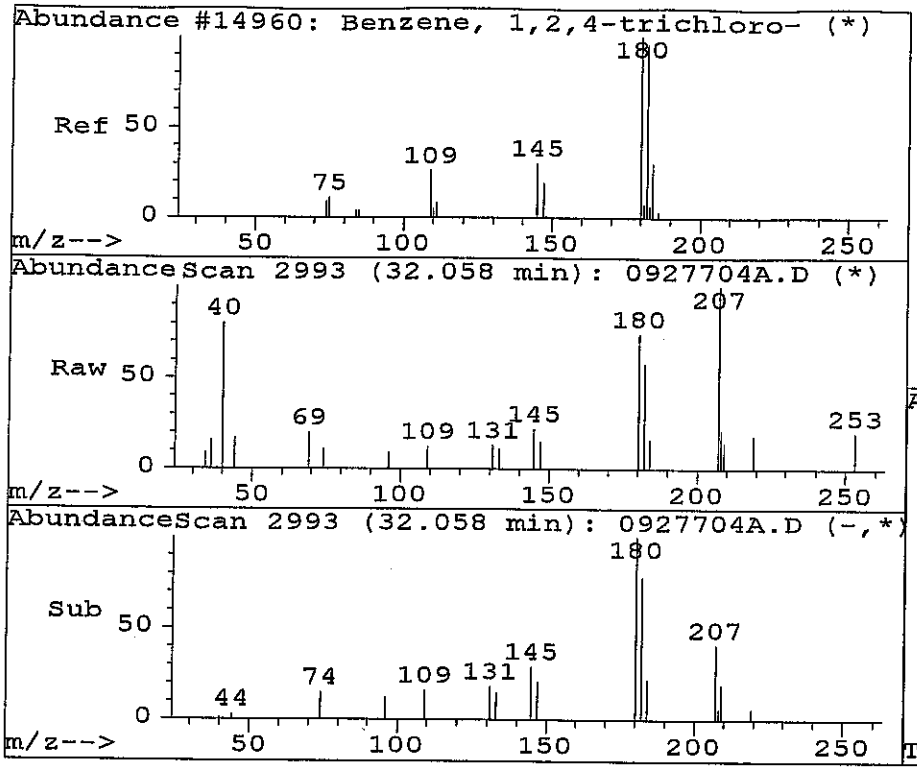


#84
1,2-Dibromo-3-chloropropane
Concen: 0.01 ppbV
RT: 28.98 min Scan# 2677
Delta R.T. 0.02 min
Lab File: 0927704A.D
Acq: 8 Jul 109 3:37 pm

Tgt Ion:75 Resp: 5876

Ion	Ratio	Lower	Upper
75	100		
157	107.1	76.2	114.2
155	97.8	58.6	87.8#
0	0.0	0.0	0.0

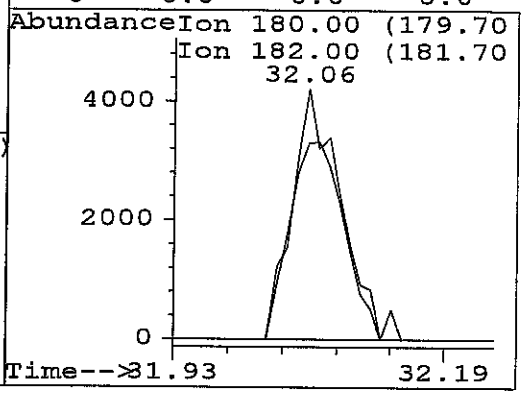


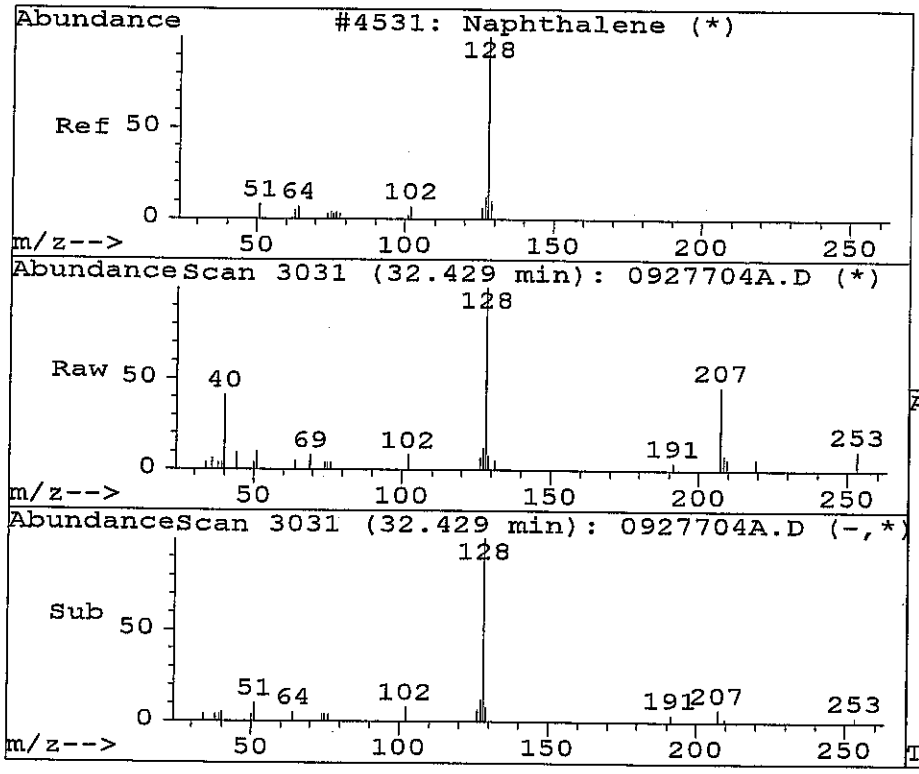


#86
1,2,4-Trichlorobenzene
Concen: 0.01 ppbV
RT: 32.06 min Scan# 2993
Delta R.T. -0.12 min
Lab File: 0927704A.D
Acq: 8 Jul 109 3:37 pm

Tgt Ion:180 Resp: 13414

Ion	Ratio	Lower	Upper
180	100		
182	78.3	77.8	116.8
0	0.0	0.0	0.0
0	0.0	0.0	0.0

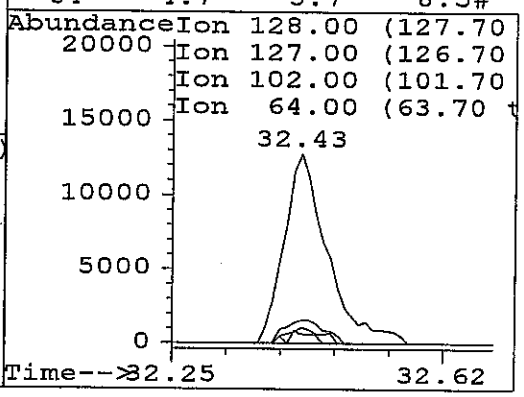


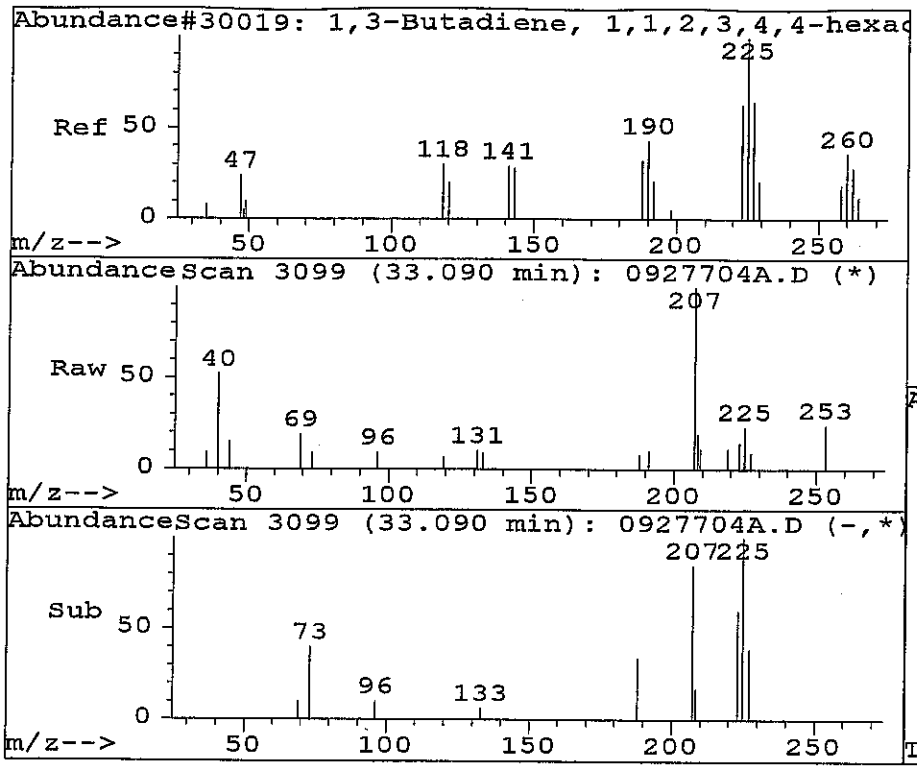


#87
Naphthalene
Concen: 0.03 ppbV
RT: 32.43 min Scan# 3031
Delta R.T. 0.02 min
Lab File: 0927704A.D
Acq: 8 Jul 109 3:37 pm

Tgt Ion:128 Resp: 52061

Ion	Ratio	Lower	Upper
128	100		
127	12.3	10.4	15.6
102	8.5	9.2	13.8#
64	4.7	5.7	8.5#

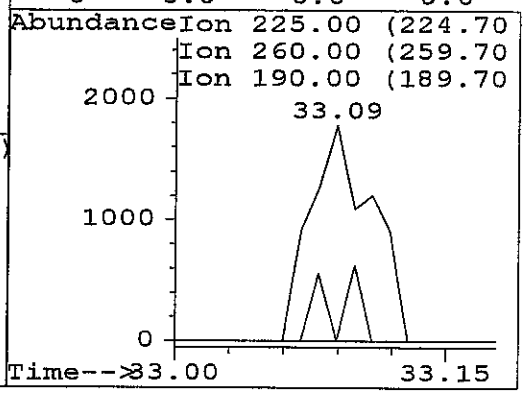


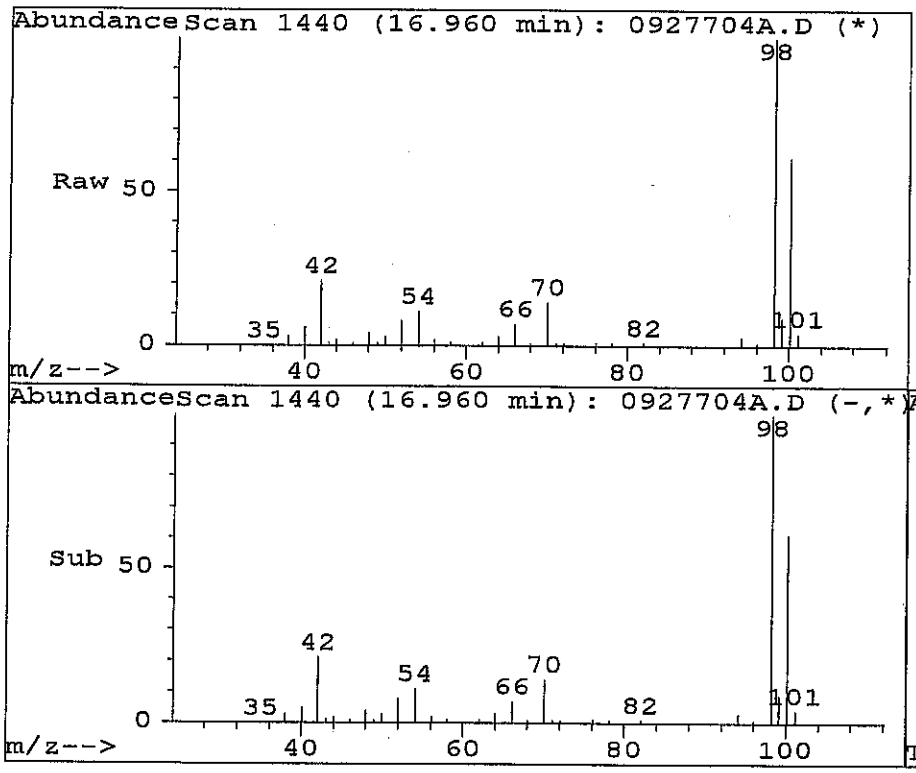


#88
Hexachlorobutadiene
Concen: 0.00 ppbV
RT: 33.09 min Scan# 3099
Delta R.T. 0.01 min
Lab File: 0927704A.D
Acq: 8 Jul 109 3:37 pm

Tgt Ion:225 Resp: 4192

Ion	Ratio	Lower	Upper
225	100		
260	0.0	22.2	33.2#
190	0.0	33.6	50.4#
0	0.0	0.0	0.0

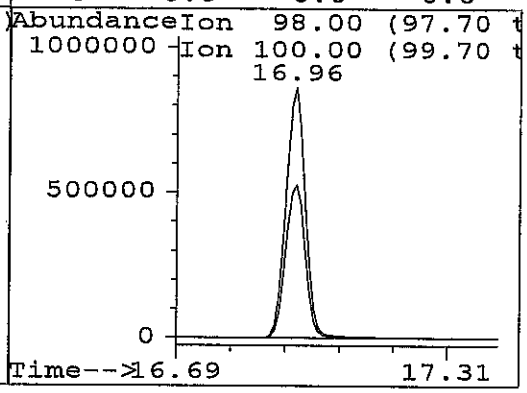


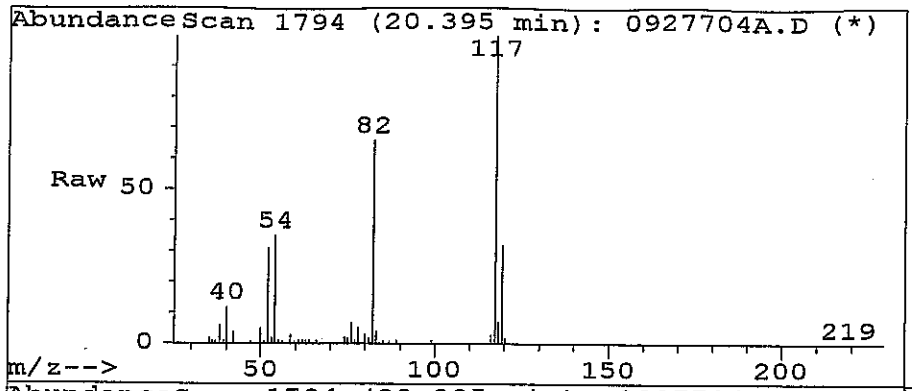


#94
Toluene-d8
Concen: 10.18 ppbV
RT: 16.96 min Scan# 1440
Delta R.T. 0.02 min
Lab File: 0927704A.D
Acq: 8 Jul 109 3:37 pm

Tgt Ion:98 Resp: 2616752

Ion	Ratio	Lower	Upper
98	100		
100	61.1	51.4	77.2
0	0.0	0.0	0.0
0	0.0	0.0	0.0

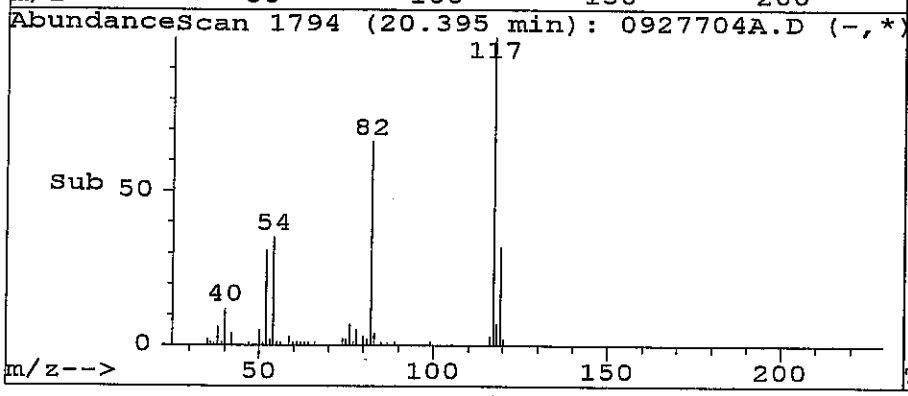


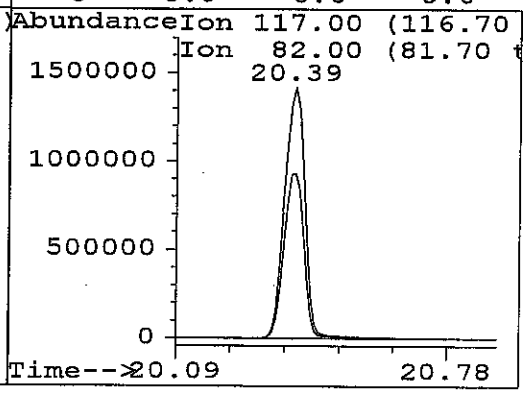


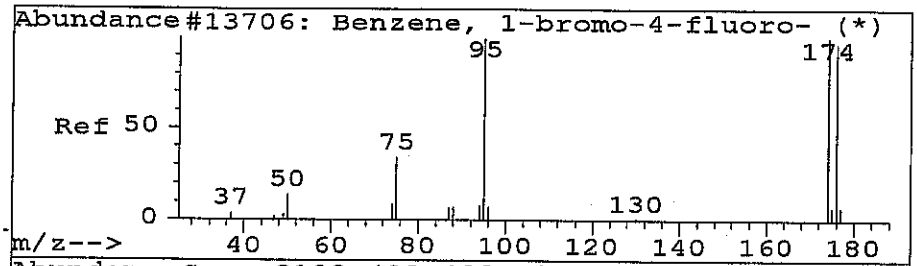
#95
Chlorobenzene-d5
Concen: 21.47 ppbV
RT: 20.39 min Scan# 1794
Delta R.T. 0.03 min
Lab File: 0927704A.D
Acq: 8 Jul 109 3:37 pm

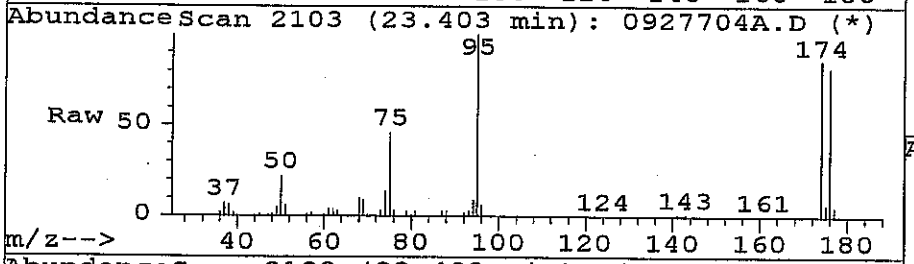
Tgt Ion:117 Resp: 5064441

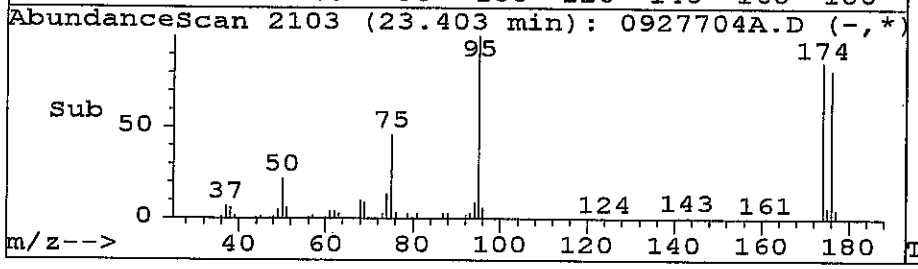
Ion	Ratio	Lower	Upper
117	100		
82	65.5	55.7	83.5
0	0.0	0.0	0.0
0	0.0	0.0	0.0







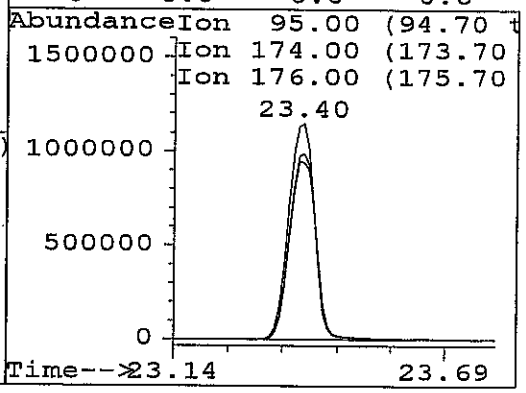




#96
1,4-Bromofluorobenzene
Concen: 11.25 ppbV
RT: 23.40 min Scan# 2103
Delta R.T. 0.02 min
Lab File: 0927704A.D
Acq: 8 Jul 109 3:37 pm

Tgt Ion:95 Resp: 4150035

Ion	Ratio	Lower	Upper
95	100		
174	86.2	55.5	83.3#
176	82.1	55.7	83.5
0	0.0	0.0	0.0



7.2: Ion Spectra for Initial Calibration

Initial Calibration Title: 1T15EXAY.M

Quantitation Report

Data File : C:\MSCHEM\2\DATA\03179M~1\C03169H.D
Acq Time : 16 Mar 109 7:21 pm
Sample : ST60022 + ST60350
Misc : 10.0 ML
Quant Time: Mar 17 10:13 19109

Operator: CM
Inst : 5970 - In
Multiplr: 1.00

Method : C:\MSCHEM\2\METHODS\1T15EXAY.M
Title : EPA TO-15
Last Update : Tue Mar 17 14:18:15 2009
Response via : Multiple Level Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene	11.20	168	2737194	20.00	ppbV	-0.18
35) 1,4-Difluorobenzene	12.99	114	2706138	20.00	ppbV	-0.18
System Monitoring Compounds						%Recovery
94) Toluene-d8	16.75	98	1546296	10.56	ppbV	211.21%
95) Chlorobenzene-d5	20.17	117	2900630	22.73	ppbV	227.26%
96) 1,4-Bromofluorobenzene	23.19	95	2163994	10.64	ppbV	212.81%
Target Compounds						Qvalue
2) Dichlorodifluoromethane	3.74	85	840988	13.04	ppbV	98
3) Chloromethane	3.99	50	505057	12.83	ppbV	96
4) Freon 114	4.01	85	861160	13.07	ppbV	89
5) Vinyl chloride	4.22	62	285530	12.21	ppbV	98
6) Bromomethane	4.80	94	274473	10.80	ppbV	93
7) Chloroethane	4.99	64	141439	12.27	ppbV	96
8) Ethanol	5.05	45	1626206	61.82	ppbV	99
9) Acrolein	5.74	56	363529	58.70	ppbV	92
10) Trichlorofluoromethane	5.80	101	716396	9.44	ppbV	97
11) Acetonitrile	5.79	41	1344233	38.36	ppbV	98
12) Acetone	5.87	43	770083	6.01	ppbV	97
13) 2-propanol	5.98	45	1427833	25.00	ppbV #	100
14) Methyl iodide	6.82	142	874608	26.12	ppbV	99
15) 1,1-Dichloroethene	6.74	61	730028	13.19	ppbV	100
16) Acrylonitrile	6.78	53	1312482	48.50	ppbV	98
17) Freon 113	7.02	151	591375	11.11	ppbV	96
18) Allyl chloride	7.19	41	716230	18.11	ppbV	91
19) Dichloromethane	7.15	84	330491	14.23	ppbV	93
20) Carbon disulfide	7.39	76	313353	15.63	ppbV	99
21) trans-1,2-Dichloroethene	8.21	96	230621	11.10	ppbV	95
22) Methyl tert butyl ether	8.37	73	967308	9.54	ppbV	94
23) Propionitrile	8.64	54	1209148	45.50	ppbV	98
24) 1,1-Dichloroethane	8.72	63	871129	13.77	ppbV	96
25) Vinyl acetate	10.13	43	1560060	14.49	ppbV	98
26) 2-Butanone	9.36	72	205517	11.28	ppbV #	39
27) Hexane	9.54	57	409529	8.44	ppbV	74
28) Bromochloromethane	10.31	49	729979	13.22	ppbV #	81
29) Tetrahydrofuran	10.74	42	5179960	24.89	ppbV m	91
30) Isobutyl alcohol	10.74	74	411535	57.39	ppbV	95
31) Methacrylonitrile	9.54	67	731423	40.99	ppbV	99
32) cis-1,2-Dichloroethene	9.92	96	421914	12.42	ppbV	90
33) 2,2-Dichloropropane	10.23	77	713261	10.34	ppbV #	93
34) Chloroform	10.34	83	959204	11.94	ppbV	100
36) 1,1,1-Trichloroethane	11.61	97	970639	9.90	ppbV	94
37) 1,2-Dichloroethane	11.68	62	920839	10.77	ppbV #	95
38) 1,1-Dichloropropene	12.06	75	616834	10.31	ppbV	97
39) Cyclohexane	12.39	56	691589	11.95	ppbV	91
40) Benzene	12.33	78	1387400	10.39	ppbV	95
41) Carbon tetrachloride	12.38	117	931992	8.90	ppbV	94
42) n-Heptane	13.86	43	1176503	12.21	ppbV #	87
43) 1,2-Dichloropropane	13.88	63	598806	13.14	ppbV	93
44) 1,4 Dioxane	14.20	88	540834	16.53	ppbV #	99
45) Dibromomethane	14.00	174	786579	9.29	ppbV	98
46) Trichloroethene	13.94	130	666308	8.13	ppbV	95
47) Bromodichloromethane	14.22	83	885573	9.40	ppbV	96
48) Methyl methacrylate	14.34	69	1334867	30.88	ppbV	81
49) Methyl Isobutyl Ketone	15.55	43	2505790	14.35	ppbV	92

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

Quantitation Report

Data File : C:\MSCHEM\2\DATA\03179M~1\C03169H.D
Acq Time : 16 Mar 109 7:21 pm
Sample : ST60022 + ST60350
Misc : 10.0 ML
Quant Time: Mar 17 10:13 19109

Operator: CM
Inst : 5970 - In
Multiplr: 1.00

Method : C:\MSCHEM\2\METHODS\1T15EXAY.M
Title : EPA TO-15
Last Update : Tue Mar 17 14:18:15 2009
Response via : Multiple Level Calibration

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
50) cis-1,3-Dichloropropene	15.63	75	1010236	13.06 ppbV	99
51) Toluene	16.93	91	1877014	10.85 ppbV	98
52) trans-1,3-Dichloropropene	16.66	75	1205186	12.30 ppbV	99
53) 1,1,2-Trichloroethane	16.97	61	608914	11.97 ppbV	96
54) 2-Hexanone	17.59	43	3278869	14.71 ppbV	98
55) 1,3-Dichloropropane	17.54	76	989685	12.63 ppbV	99
56) Octane	18.08	57	525459	8.28 ppbV	94
57) Dibromochloromethane	18.11	129	1316838	9.73 ppbV	100
58) 1,2-Dibromoethane	18.59	107	1505940	12.10 ppbV #	99
59) Tetrachloroethene	18.78	166	1126037	9.31 ppbV	92
60) Chlorobenzene	20.26	112	1818049	11.41 ppbV	98
61) 1,1,1,2-Tetrachloroethane	20.32	131	921637	10.15 ppbV	97
62) Ethylbenzene	20.79	91	3108186	12.07 ppbV	100
63) m & p-Xylene	21.09	91	4725274	20.91 ppbV	99
64) Styrene	21.92	104	1812012	11.40 ppbV	98
65) Bromoform	21.81	173	2416870	11.24 ppbV	97
66) o-Xylene	22.05	91	2817484	11.50 ppbV	98
67) 1,1,2,2-Tetrachloroethane	22.56	83	3385910	18.54 ppbV #	98
68) 1,2,3-Trichloropropane	22.88	110	714721	13.56 ppbV	96
69) t-1,4-Dichloro-2-butene	23.03	53	2007908	39.27 ppbV	97
70) n-Propylbenzene	24.23	91	5124406	12.35 ppbV	96
71) Isopropylbenzene	24.54	105	3712735	11.44 ppbV	100
72) 4-Ethyltoluene	24.54	105	3712735	11.34 ppbV	98
73) 1,3,5-Trimethylbenzene	24.71	105	3957960	11.91 ppbV	98
74) Methylstyrene	25.17	118	1746656	13.61 ppbV	97
75) tert-butyl benzene	25.62	119	2904495	9.67 ppbV	99
76) 1,2,4-Trimethylbenzene	25.66	105	3635276	9.88 ppbV	95
77) sec-butylbenzene	26.27	105	4221559	10.51 ppbV	99
78) 1,3-Dichlorobenzene	26.22	146	3205866	10.75 ppbV	97
79) Isopropyltoluene	26.64	119	4292399	10.83 ppbV	97
80) Benzyl chloride	26.38	91	4463720	13.58 ppbV	97
81) 1,4-Dichlorobenzene	26.43	146	3091714	9.84 ppbV m	96
82) n-Butylbenzene	27.69	91	5393478	12.90 ppbV	98
83) 1,2-Dichlorobenzene	27.28	146	4272294	12.28 ppbV	95
84) 1,2-Dibromo-3-chloropropan	28.81	75	7308444	36.97 ppbV m	1
85) Tetraethyl lead	30.77	237	3224507	11.51 ppbV m	96
86) 1,2,4-Trichlorobenzene	31.86	180	7156710	11.67 ppbV	92
87) Naphthalene	32.27	128	24925580	37.90 ppbV #	97
88) Hexachlorobutadiene	32.89	225	4177636	8.74 ppbV	98
89) Propylene	3.67	40	191557	17.14 ppbV	94
90) 1,3-Butadiene	4.36	54	318019	13.49 ppbV	97
92) 2-Chlorotoluene	24.29	91	3030861	9.98 ppbV m	100
93) 4-Chlorotoluene	24.44	91	3768334	11.79 ppbV	100

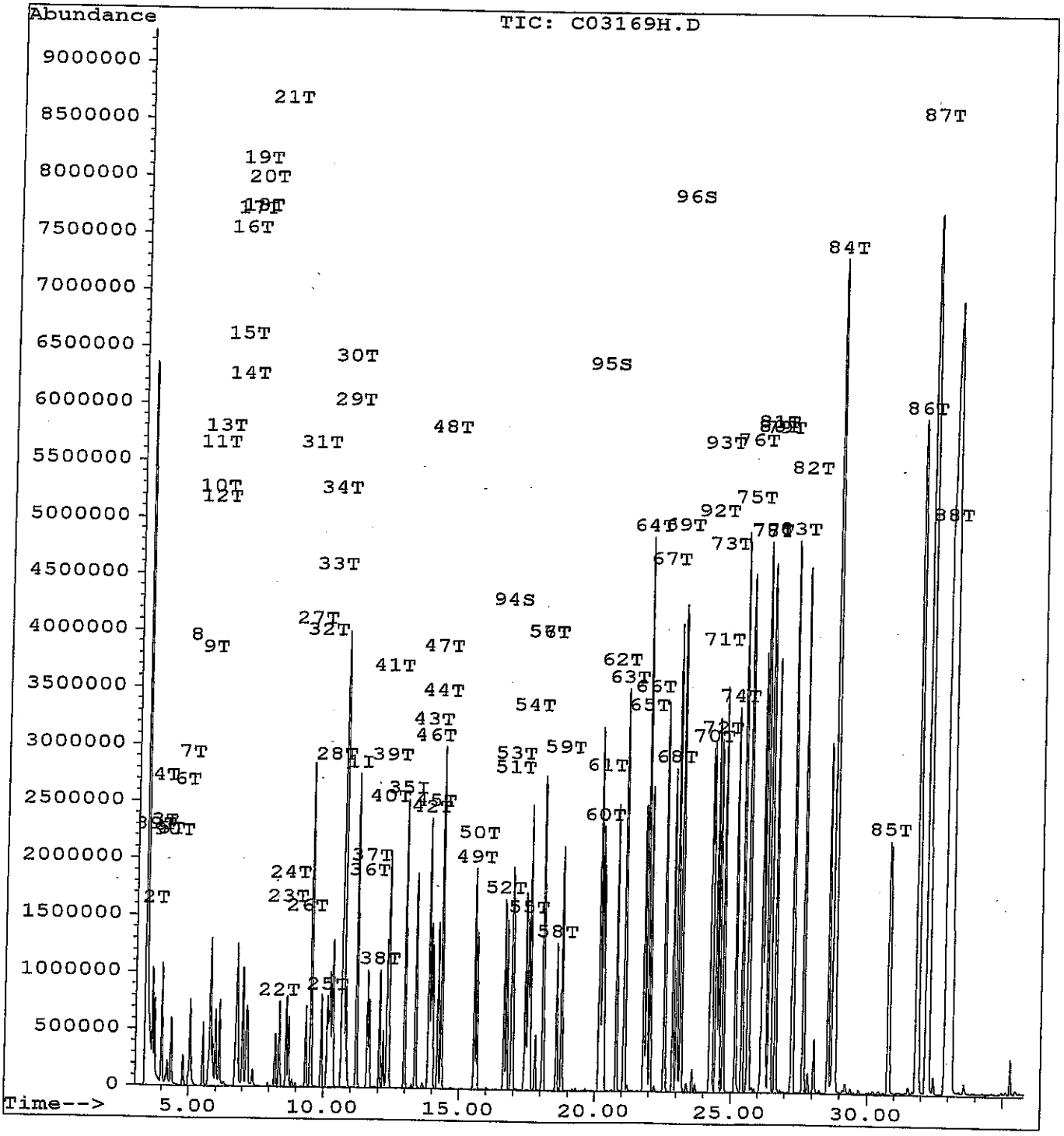
(#) = qualifier out of range (m) = manual integration

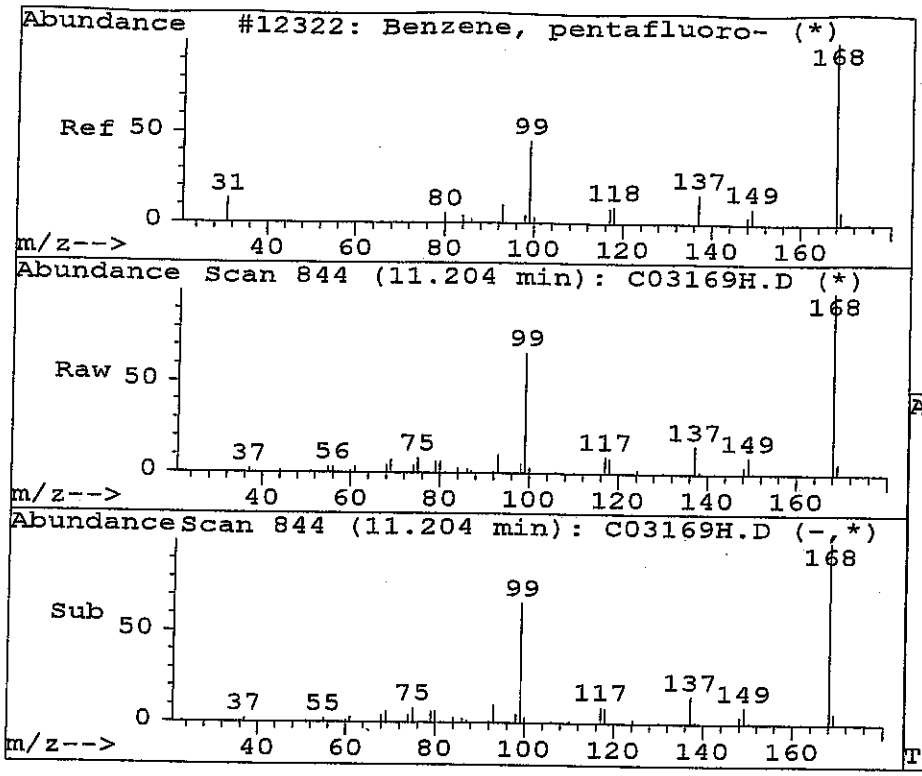
Quantitation Report

Data File : C:\MSCHEM\2\DATA\03179M~1\C03169H.D
Acq Time : 16 Mar 109 7:21 pm
Sample : ST60022 + ST60350
Misc : 10.0 ML
Quant Time: Mar 17 10:13 19109

Operator: CM
Inst : 5970 - In
Multiplr: 1.00

Method : C:\MSCHEM\2\METHODS\1T15EXAY.M
Title : EPA TO-15
Last Update : Tue Mar 17 14:18:15 2009
Response via : Multiple Level Calibration

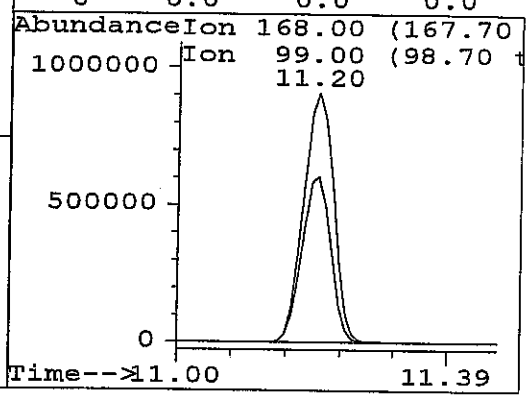


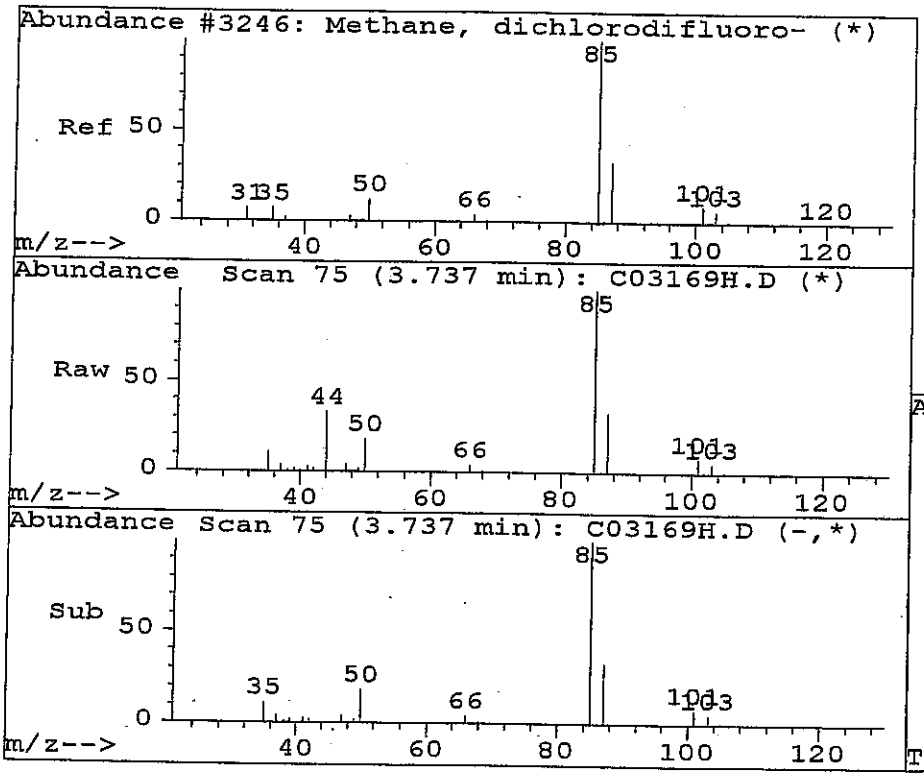


#1
Pentafluorobenzene
Concen: 20.00 ppbV
RT: 11.20 min Scan# 844
Delta R.T. -0.18 min
Lab File: C03169H.D
Acq: 16 Mar 109 7:21 pm

Tgt Ion:168 Resp: 2737194

Ion	Ratio	Lower	Upper
168	100		
99	66.4	46.6	70.0
0	0.0	0.0	0.0
0	0.0	0.0	0.0

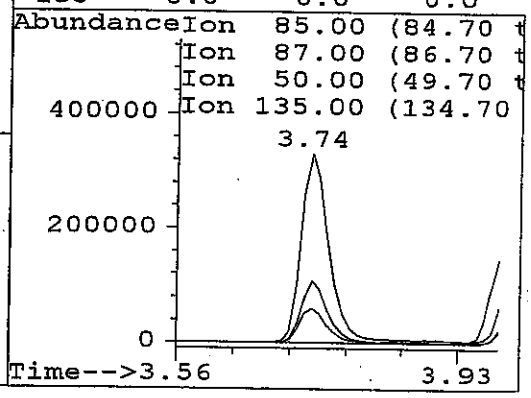


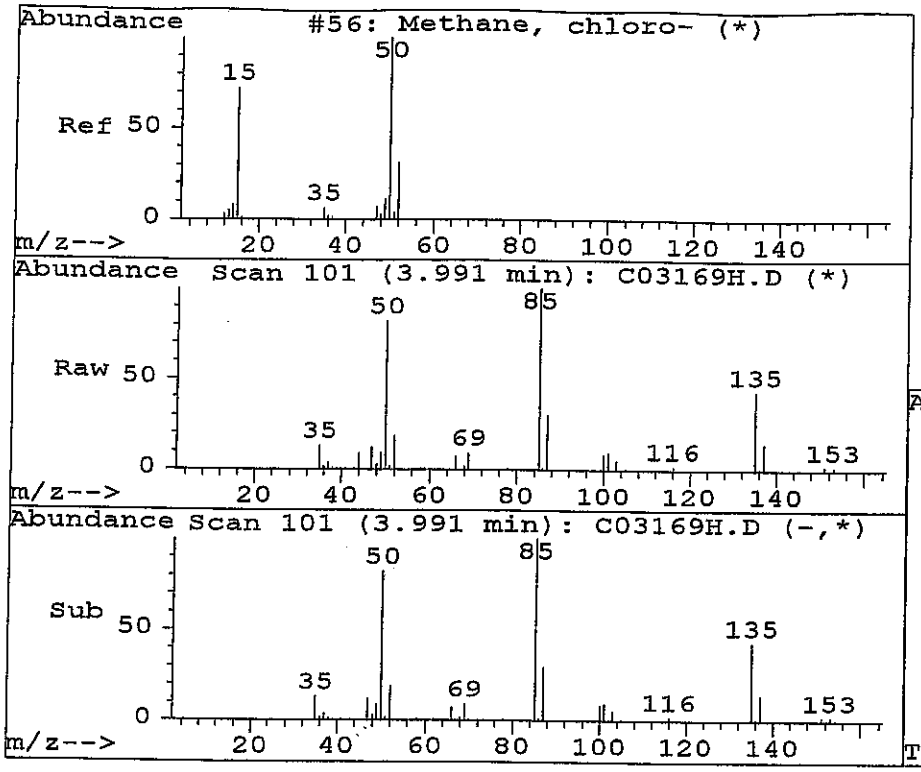


#2
Dichlorodifluoromethane
Concen: 13.04 ppbV
RT: 3.74 min Scan# 75
Delta R.T. -0.09 min
Lab File: C03169H.D
Acq: 16 Mar 109 7:21 pm

Tgt Ion:85 Resp: 840988

Ion	Ratio	Lower	Upper
85	100		
87	32.6	25.6	38.4
50	18.1	13.4	20.2
135	0.0	0.0	0.0

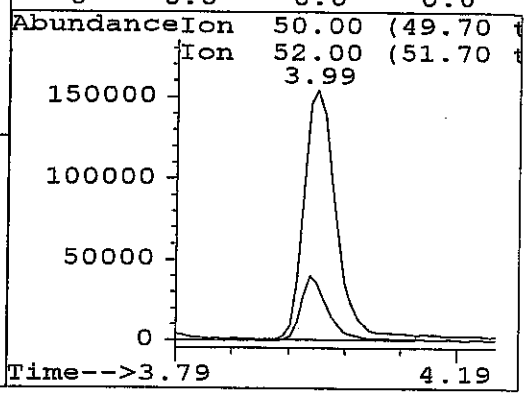


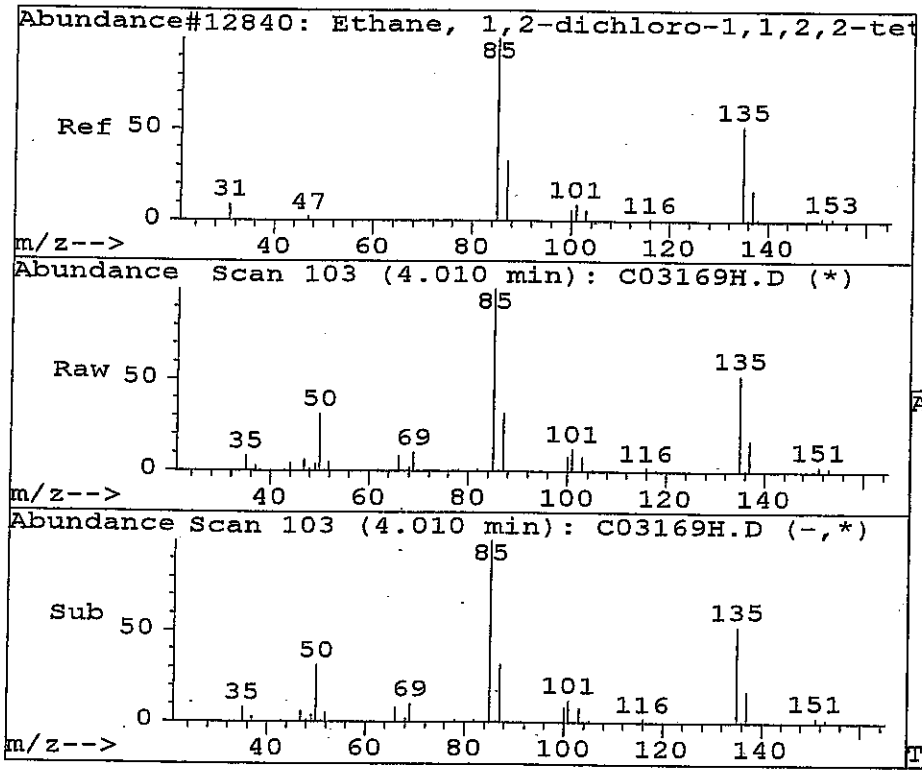


#3
Chloromethane
Concen: 12.83 ppbV
RT: 3.99 min Scan# 101
Delta R.T. -0.10 min
Lab File: C03169H.D
Acq: 16 Mar 109 7:21 pm

Tgt Ion:50 Resp: 505057

Ion	Ratio	Lower	Upper
50	100		
52	23.1	20.2	30.2
0	0.0	0.0	0.0
0	0.0	0.0	0.0

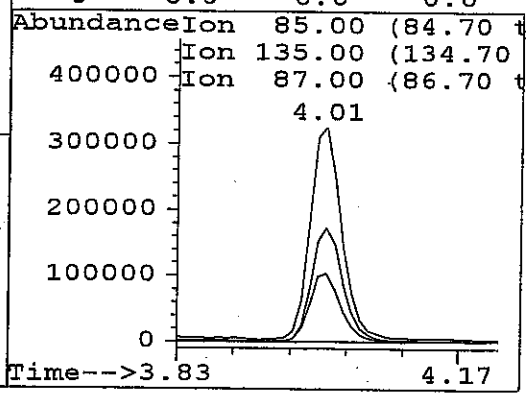


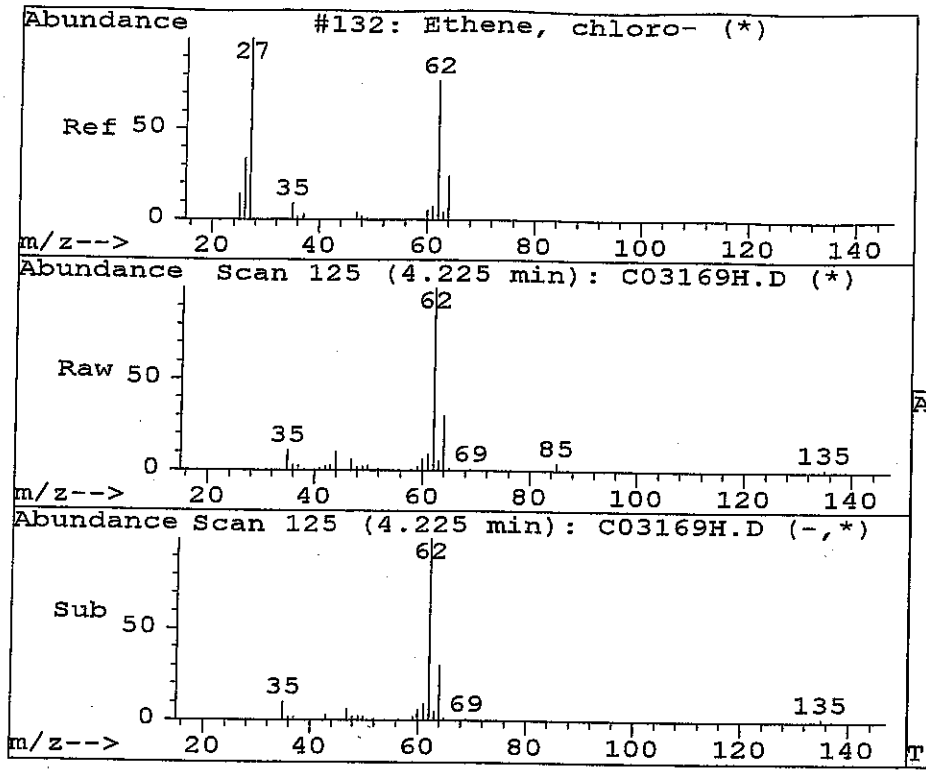


#4
Freon 114
Concen: 13.07 ppbV
RT: 4.01 min Scan# 103
Delta R.T. -0.10 min
Lab File: C03169H.D
Acq: 16 Mar 109 7:21 pm

Tgt Ion:85 Resp: 861160

Ion	Ratio	Lower	Upper
85	100		
135	53.4	53.3	79.9
87	31.7	25.2	37.8
0	0.0	0.0	0.0

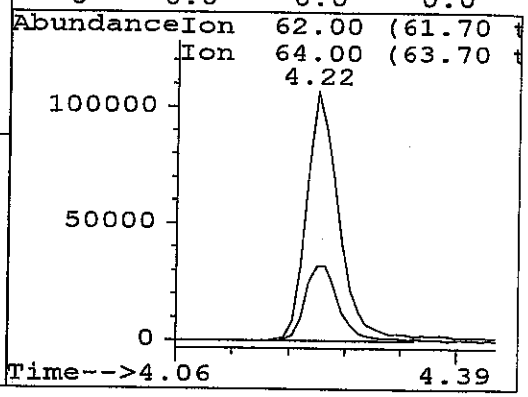


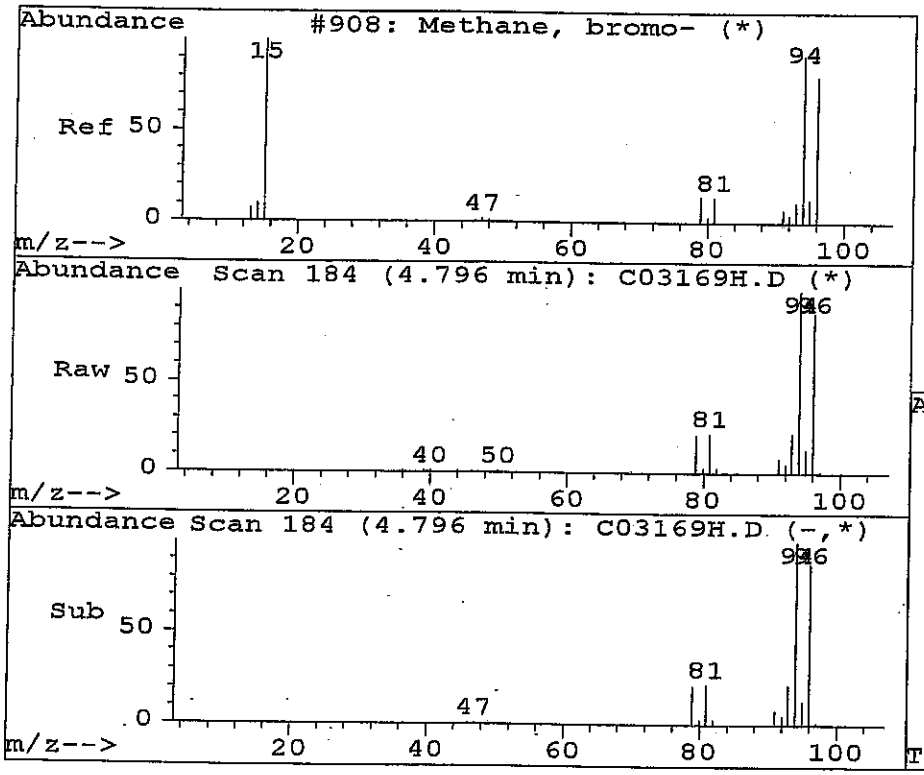


#5
Vinyl chloride
Concen: 12.21 ppbV
RT: 4.22 min Scan# 125
Delta R.T. -0.11 min
Lab File: C03169H.D
Acq: 16 Mar 109 7:21 pm

Tgt Ion:62 Resp: 285530

Ion	Ratio	Lower	Upper
62	100		
64	29.6	24.5	36.7
0	0.0	0.0	0.0
0	0.0	0.0	0.0

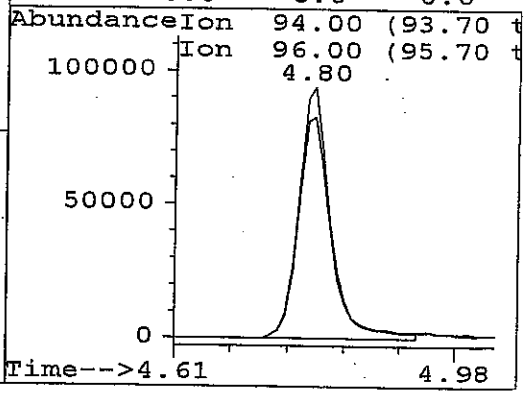


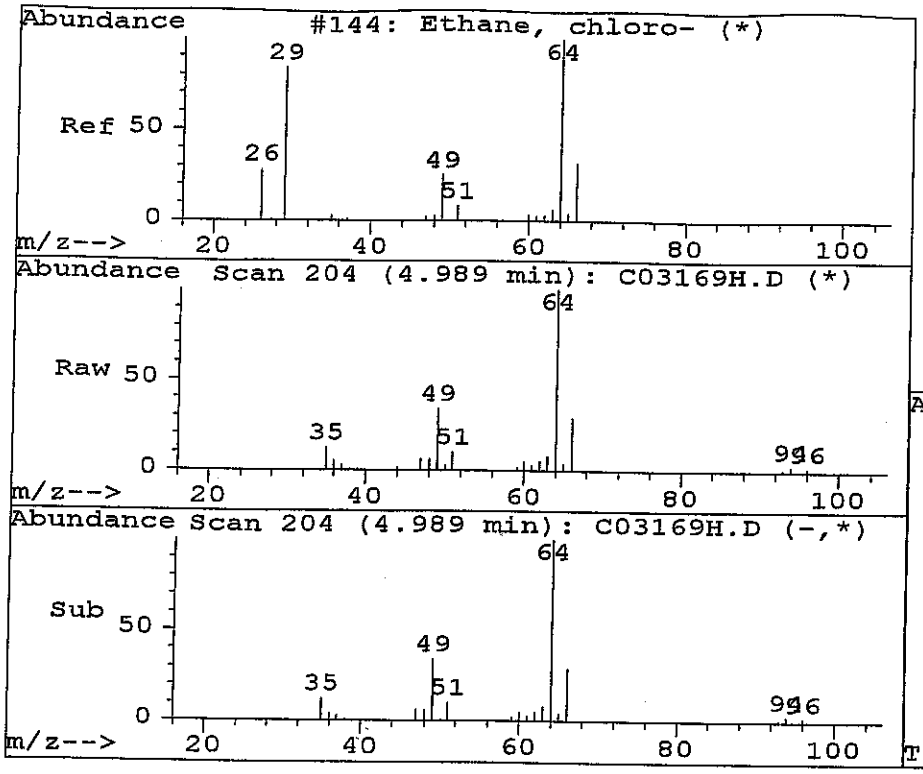


#6
Bromomethane
Concen: 10.80 ppbV
RT: 4.80 min Scan# 184
Delta R.T. -0.12 min
Lab File: C03169H.D
Acq: 16 Mar 109 7:21 pm

Tgt Ion:94 Resp: 274473

Ion	Ratio	Lower	Upper
94	100		
96	88.0	75.8	113.6
0	0.0	0.0	0.0
0	0.0	0.0	0.0

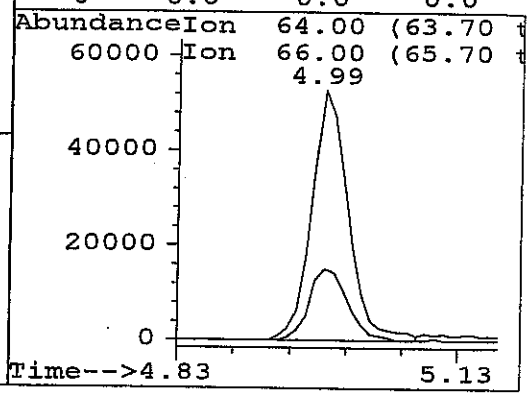


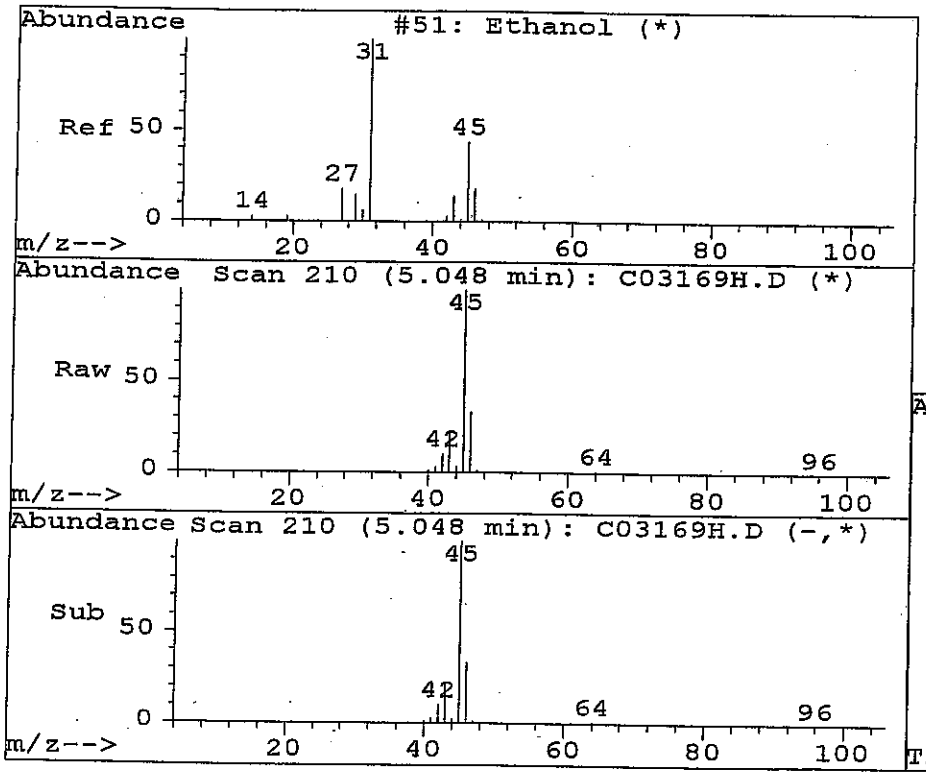


#7
Chloroethane
Concen: 12.27 ppbV
RT: 4.99 min Scan# 204
Delta R.T. -0.13 min
Lab File: C03169H.D
Acq: 16 Mar 109 7:21 pm

Tgt Ion:64 Resp: 141439

Ion	Ratio	Lower	Upper
64	100		
66	28.9	24.9	37.3
0	0.0	0.0	0.0
0	0.0	0.0	0.0

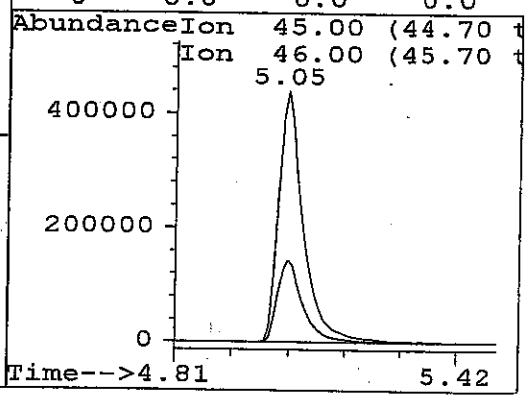


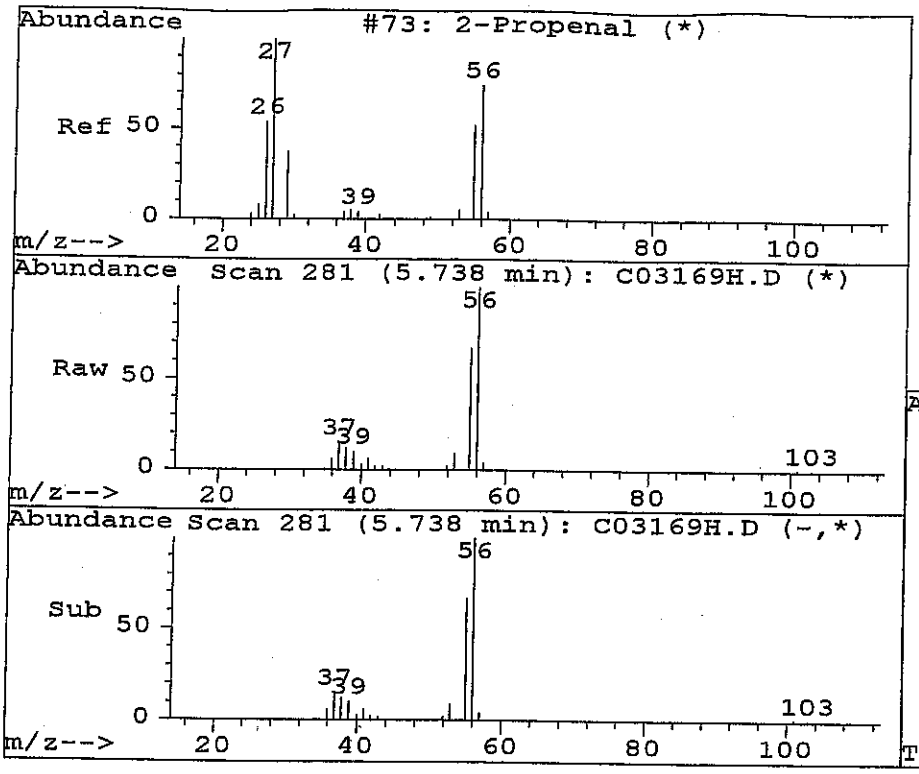


#8
Ethanol
Concen: 61.82 ppbV
RT: 5.05 min Scan# 210
Delta R.T. -0.15 min
Lab File: C03169H.D
Acq: 16 Mar 109 7:21 pm

Tgt Ion:45 Resp: 1626206

Ion	Ratio	Lower	Upper
45	100		
46	33.7	26.4	39.6
0	0.0	0.0	0.0
0	0.0	0.0	0.0

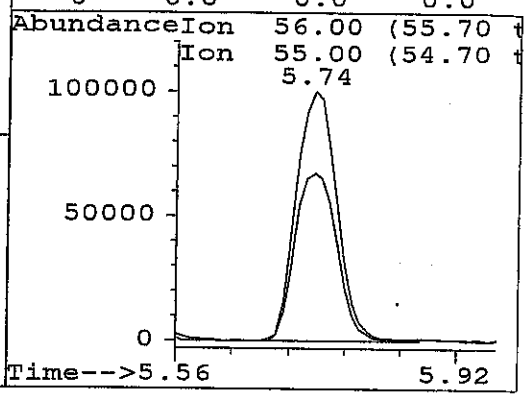


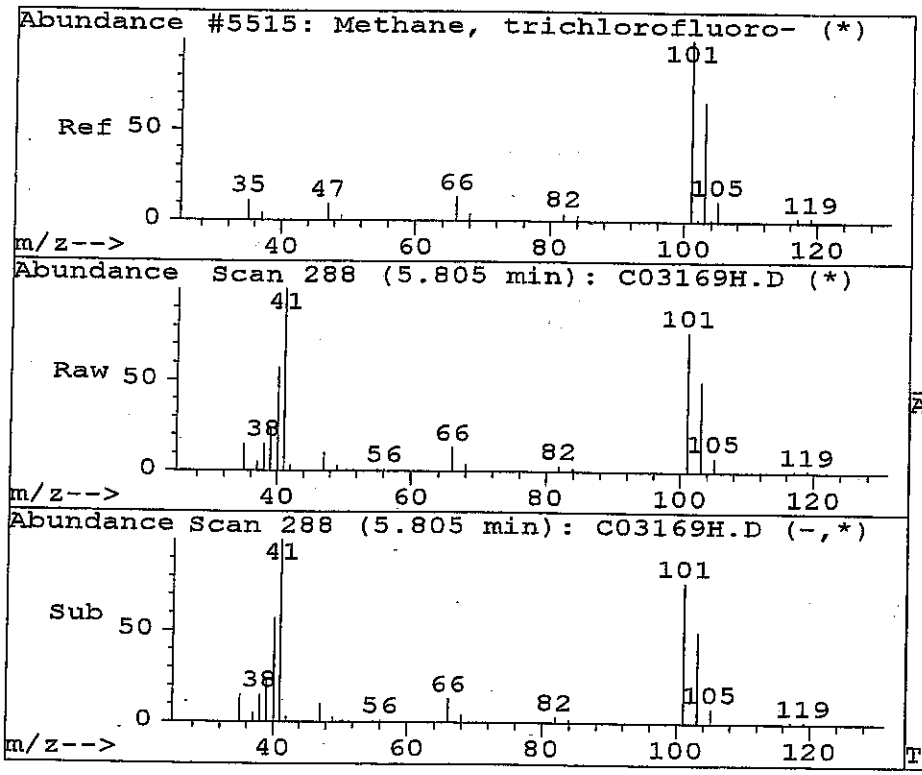


#9
Acrolein
Concen: 58.70 ppbV
RT: 5.74 min Scan# 281
Delta R.T. -0.15 min
Lab File: C03169H.D
Acq: 16 Mar 109 7:21 pm

Tgt Ion:56 Resp: 363529

Ion	Ratio	Lower	Upper
56	100		
55	66.8	48.6	72.8
0	0.0	0.0	0.0
0	0.0	0.0	0.0

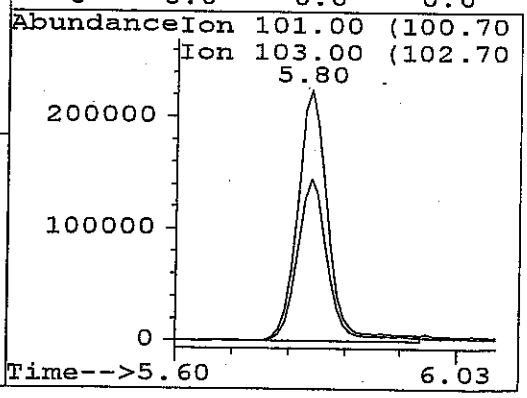


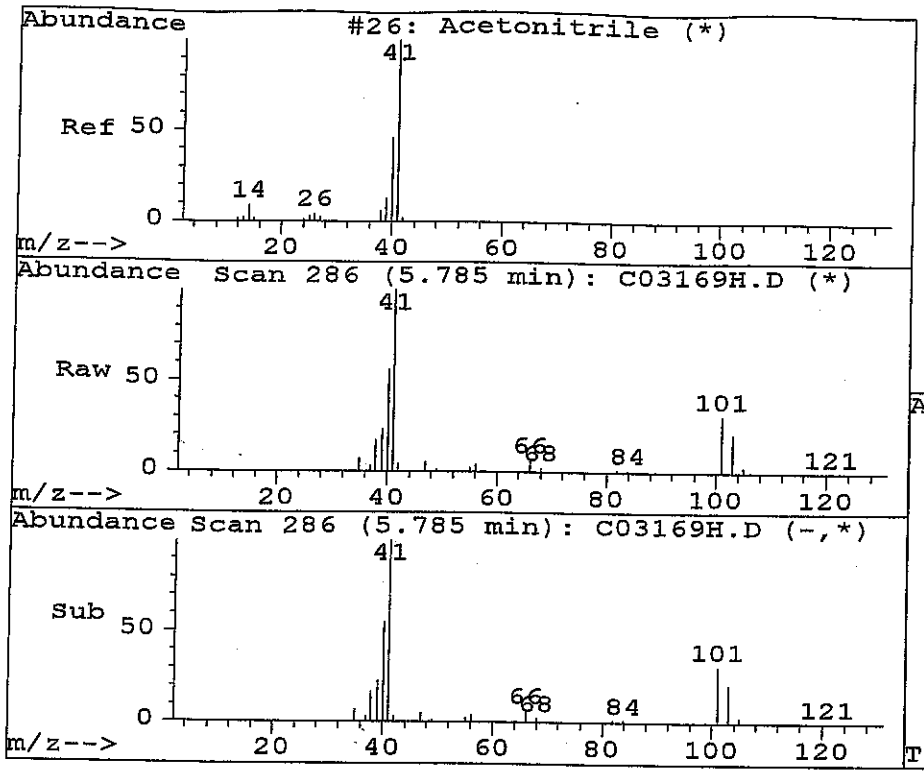


#10
Trichlorofluoromethane
Concen: 9.44 ppbV
RT: 5.80 min Scan# 288
Delta R.T. -0.14 min
Lab File: C03169H.D
Acq: 16 Mar 109 7:21 pm

Tgt Ion:101 Resp: 716396

Ion	Ratio	Lower	Upper
101	100		
103	64.8	49.8	74.6
0	0.0	0.0	0.0
0	0.0	0.0	0.0

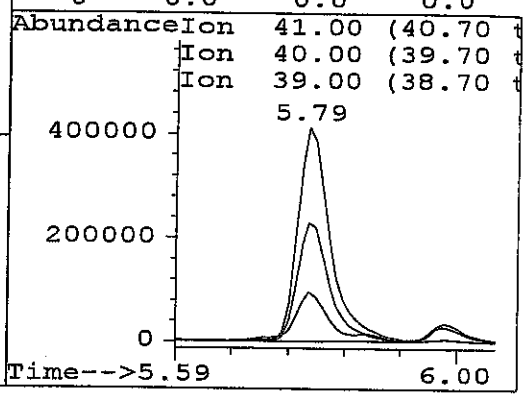


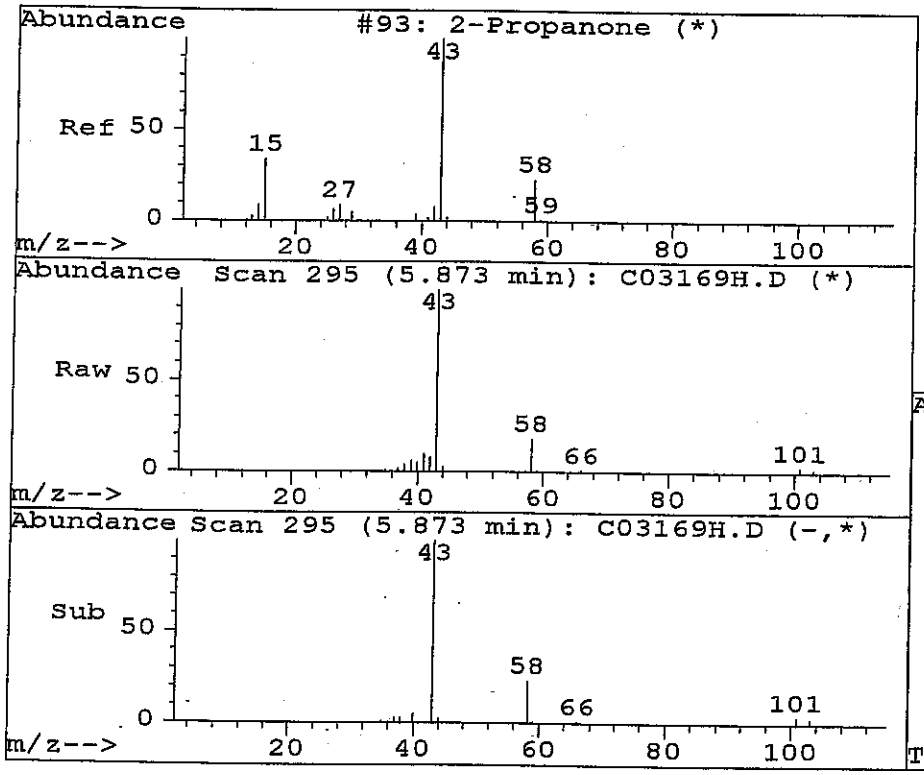


#11
Acetonitrile
Concen: 38.36 ppbV
RT: 5.79 min Scan# 286
Delta R.T. -0.17 min
Lab File: C03169H.D
Acq: 16 Mar 109 7:21 pm

Tgt Ion:41 Resp: 1344233

Ion	Ratio	Lower	Upper
41	100		
40	55.7	46.1	69.1
39	22.5	17.9	26.9
0	0.0	0.0	0.0

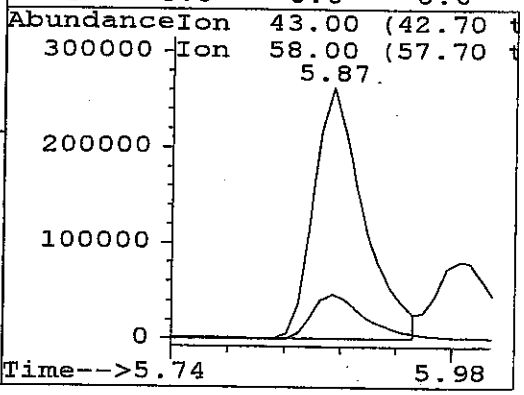


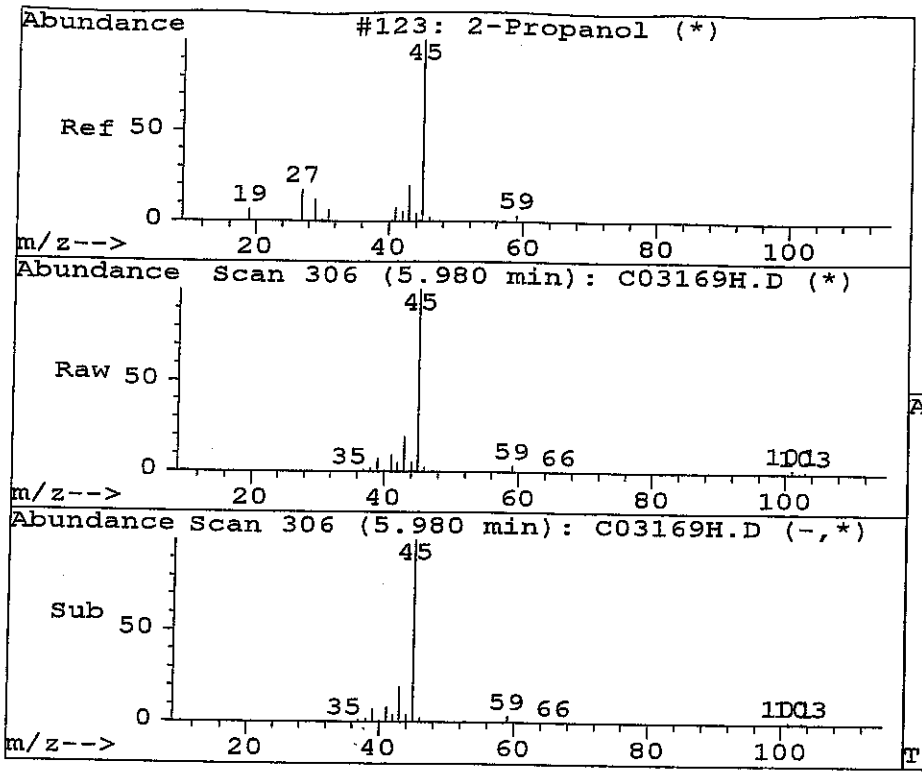


#12
Acetone
Concen: 6.01 ppbV
RT: 5.87 min Scan# 295
Delta R.T. -0.17 min
Lab File: C03169H.D
Acq: 16 Mar 109 7:21 pm

Tgt Ion:43 Resp: 770083

Ion	Ratio	Lower	Upper
43	100		
58	17.7	15.0	22.6
0	0.0	0.0	0.0
0	0.0	0.0	0.0

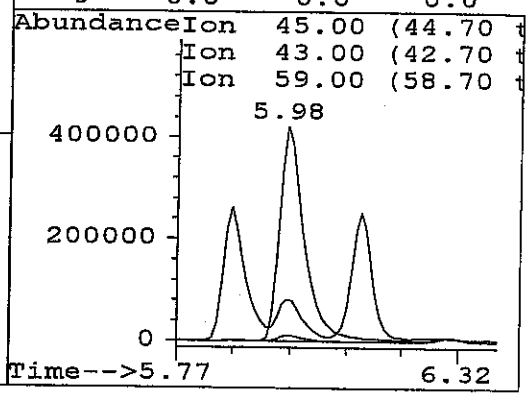


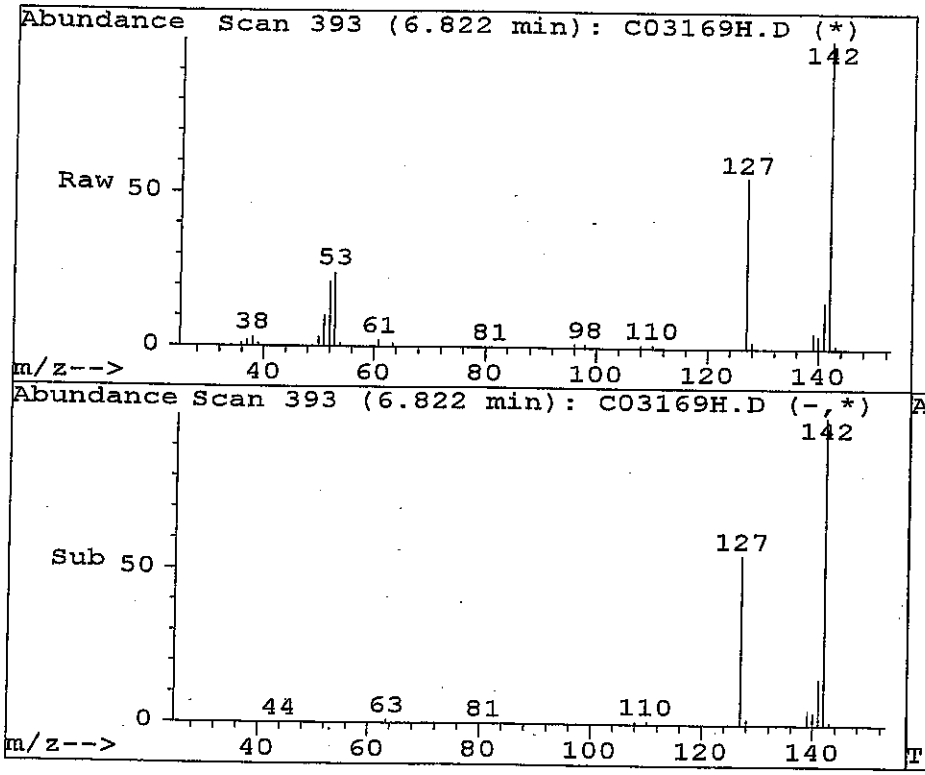


#13
2-propanol
Concen: 25.00 ppbV
RT: 5.98 min Scan# 306
Delta R.T. -0.16 min
Lab File: C03169H.D
Acq: 16 Mar 109 7:21 pm

Tgt Ion:45 Resp: 1427833

Ion	Ratio	Lower	Upper
45	100		
43	20.1	0.0	0.0#
59	2.6	0.0	0.0#
0	0.0	0.0	0.0

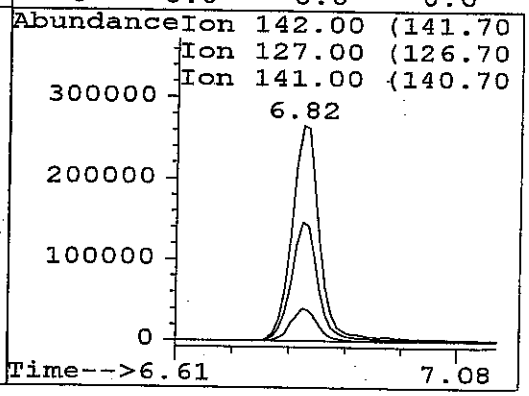


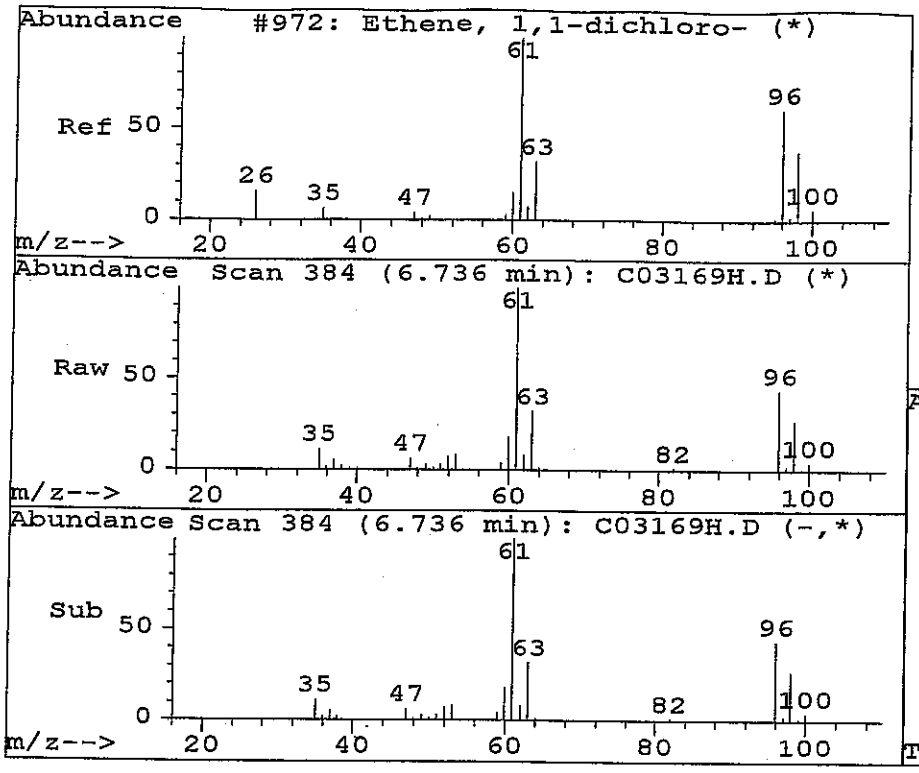


#14
Methyl iodide
Concen: 26.12 ppbV
RT: 6.82 min Scan# 393
Delta R.T. -0.17 min
Lab File: C03169H.D
Acq: 16 Mar 109 7:21 pm

Tgt Ion:142 Resp: 874608

Ion	Ratio	Lower	Upper
142	100		
127	55.2	44.2	66.4
141	15.1	11.1	16.7
0	0.0	0.0	0.0

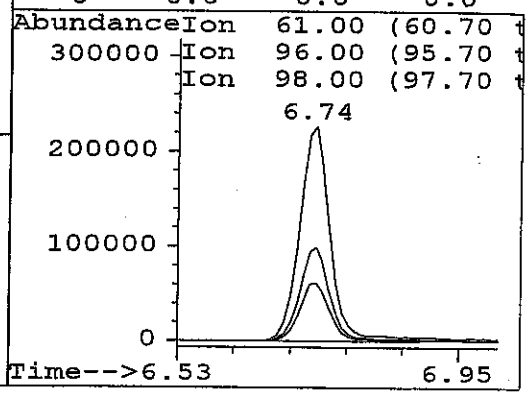


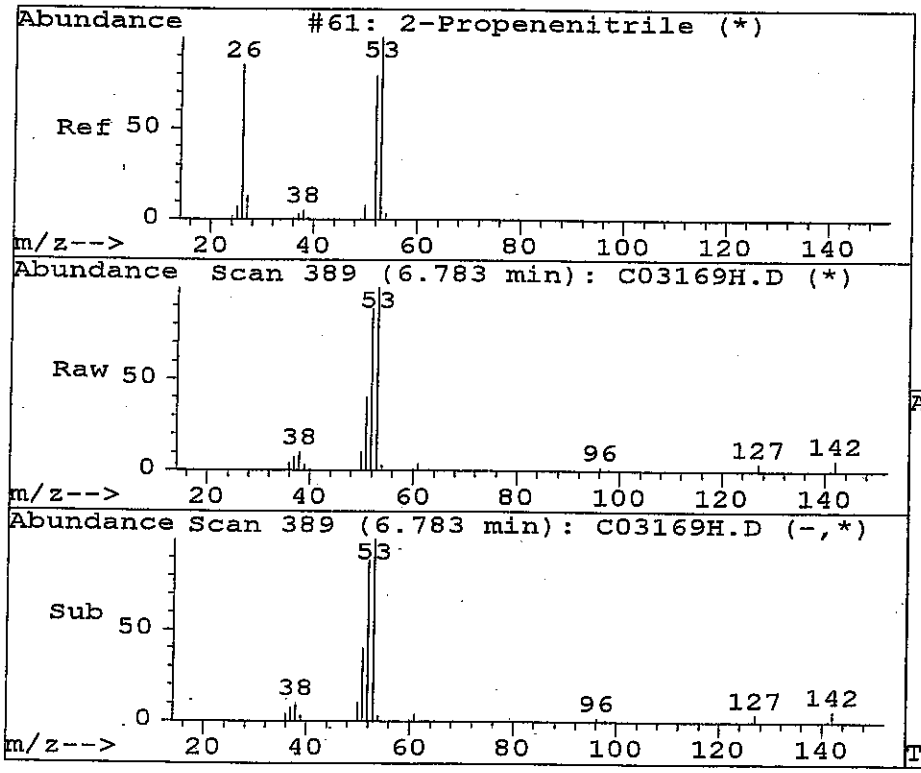


#15
1,1-Dichloroethene
Concen: 13.19 ppbV
RT: 6.74 min Scan# 384
Delta R.T. -0.15 min
Lab File: C03169H.D
Acq: 16 Mar 109 7:21 pm

Tgt Ion:61 Resp: 730028

Ion	Ratio	Lower	Upper
61	100		
96	44.0	35.0	52.6
98	27.0	21.7	32.5
0	0.0	0.0	0.0

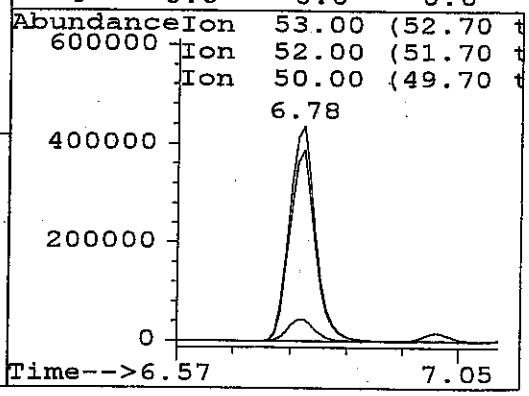


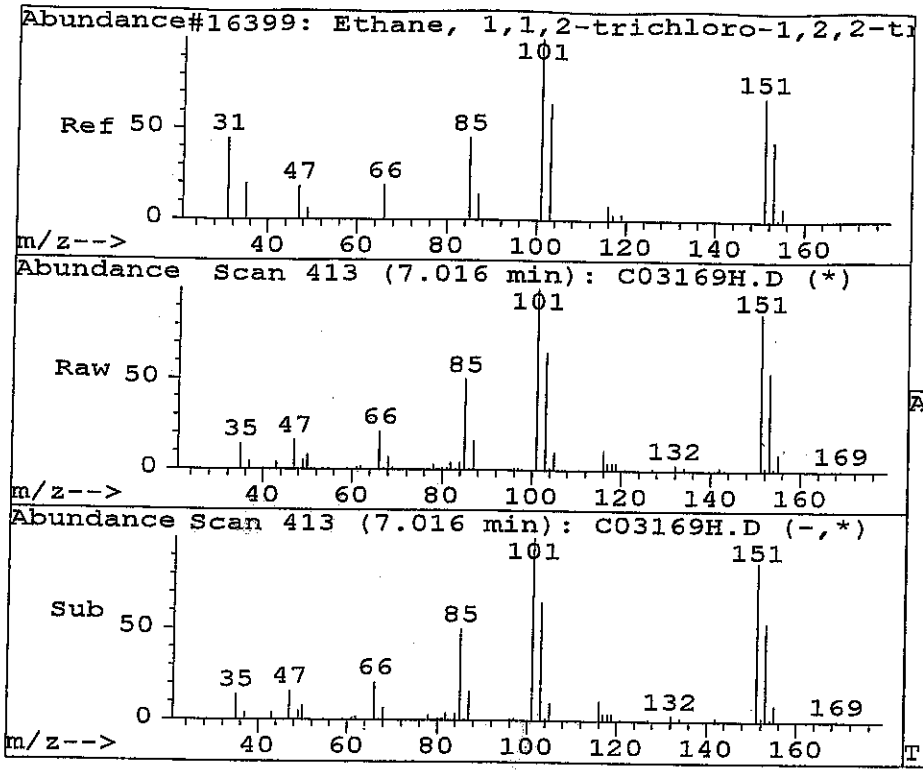


#16
Acrylonitrile
Concen: 48.50 ppbV
RT: 6.78 min Scan# 389
Delta R.T. -0.18 min
Lab File: C03169H.D
Acq: 16 Mar 109 7:21 pm

Tgt Ion:53 Resp: 1312482

Ion	Ratio	Lower	Upper
53	100		
52	88.7	69.3	103.9
50	9.5	7.7	11.5
0	0.0	0.0	0.0

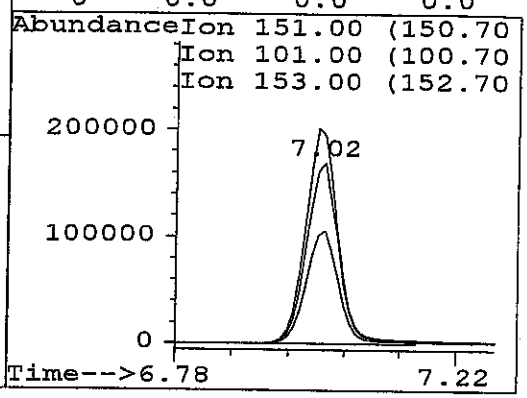


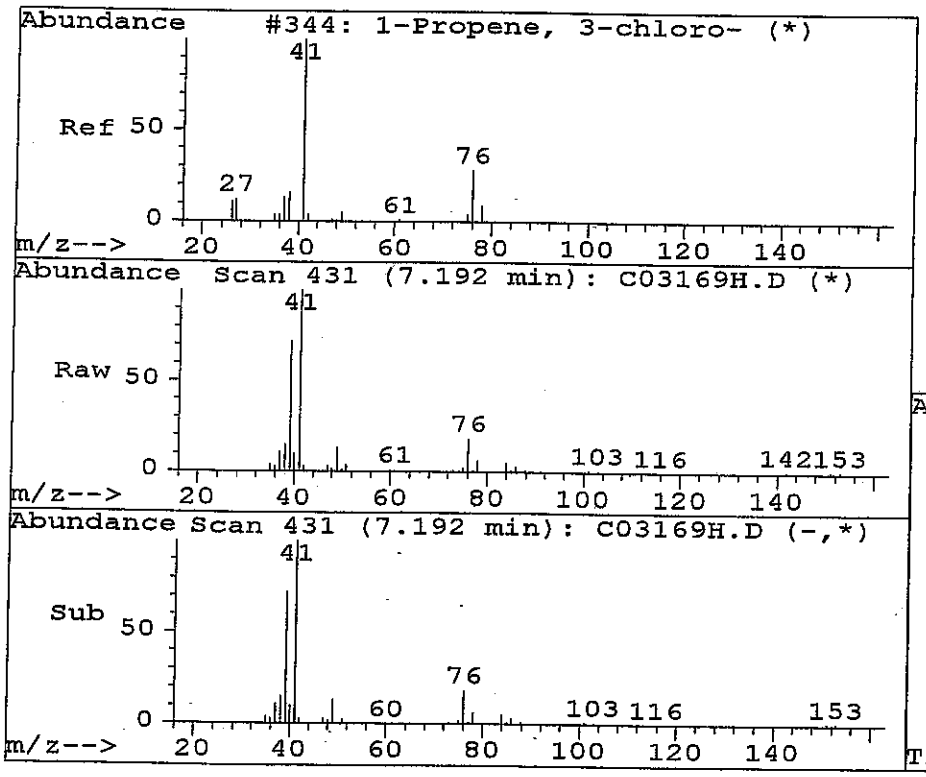


#17
Freon 113
Concen: 11.11 ppbV
RT: 7.02 min Scan# 413
Delta R.T. -0.14 min
Lab File: C03169H.D
Acq: 16 Mar 109 7:21 pm

Tgt Ion:151 Resp: 591375

Ion	Ratio	Lower	Upper
151	100		
101	114.9	96.2	144.4
153	62.5	52.2	78.2
0	0.0	0.0	0.0

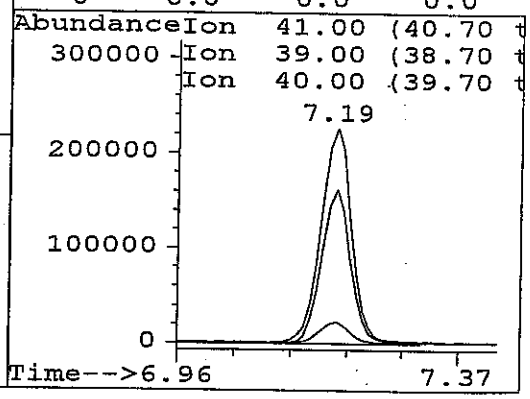


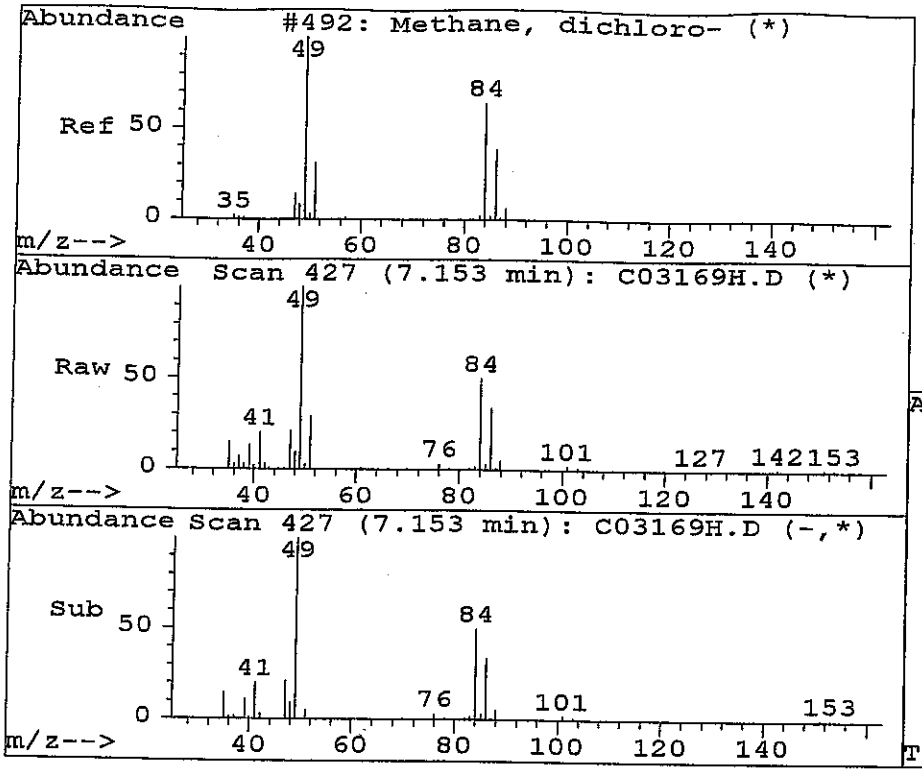


#18
Allyl chloride
Concen: 18.11 ppbV
RT: 7.19 min Scan# 431
Delta R.T. -0.16 min
Lab File: C03169H.D
Acq: 16 Mar 109 7:21 pm

Tgt Ion:41 Resp: 716230

Ion	Ratio	Lower	Upper
41	100		
39	71.6	63.9	95.9
40	9.7	8.5	12.7
0	0.0	0.0	0.0

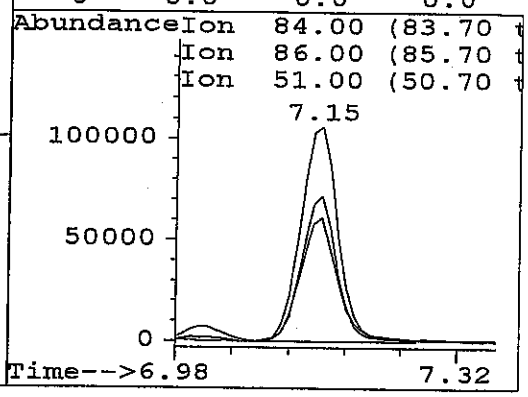


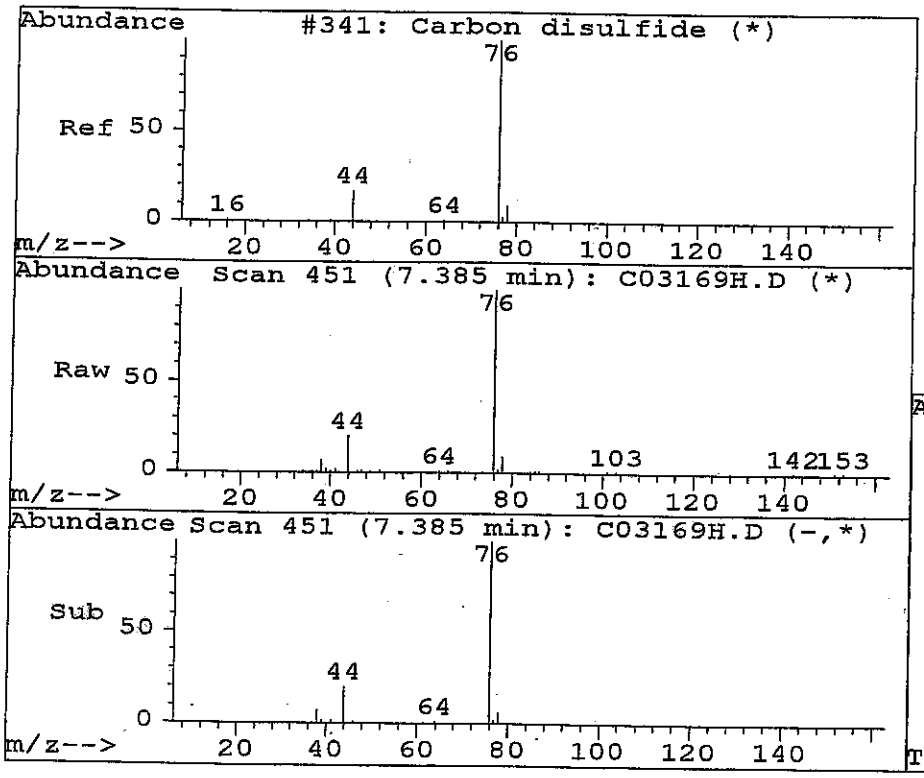


#19
Dichloromethane
Concen: 14.23 ppbV
RT: 7.15 min Scan# 427
Delta R.T. -0.16 min
Lab File: C03169H.D
Acq: 16 Mar 109 7:21 pm

Tgt Ion:84 Resp: 330491

Ion	Ratio	Lower	Upper
84	100		
86	67.7	49.6	74.4
51	57.3	42.2	63.4
0	0.0	0.0	0.0

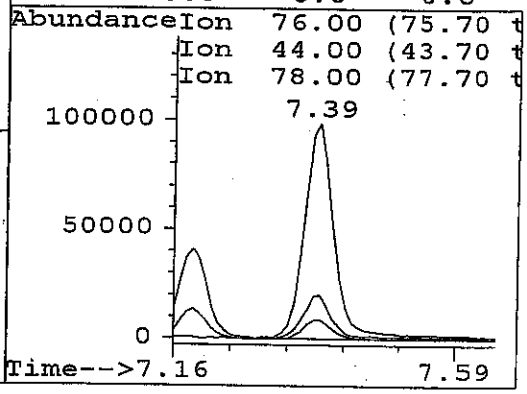


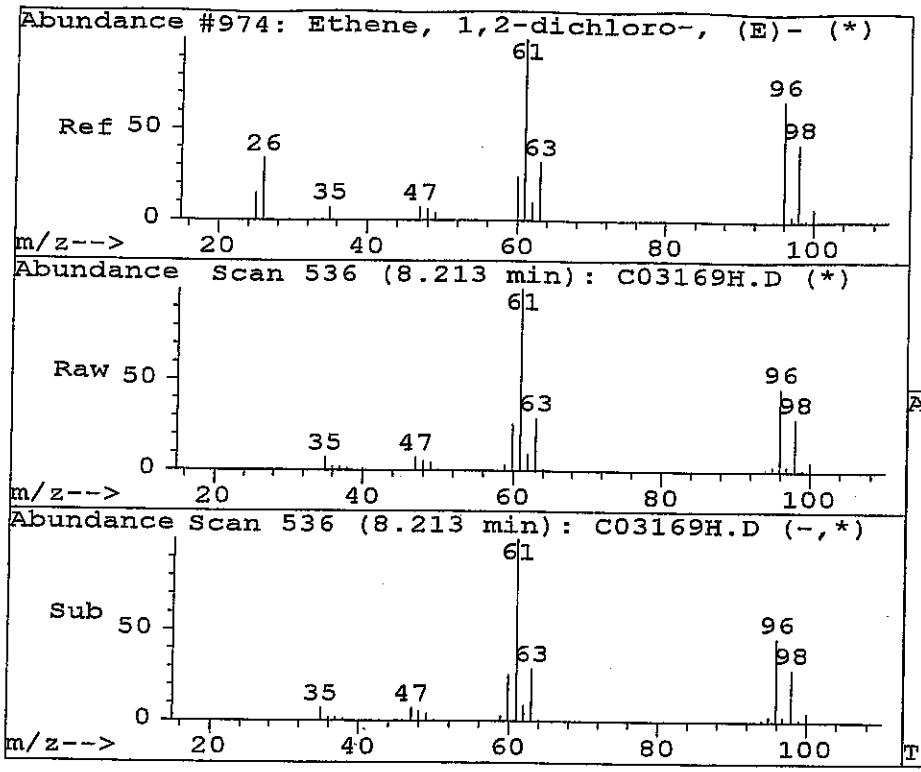


#20
Carbon disulfide
Concen: 15.63 ppbV
RT: 7.39 min Scan# 451
Delta R.T. -0.15 min
Lab File: C03169H.D
Acq: 16 Mar 109 7:21 pm

Tgt Ion:76 Resp: 313353

Ion	Ratio	Lower	Upper
76	100		
44	19.9	16.6	25.0
78	8.9	6.7	11.1
0	0.0	0.0	0.0

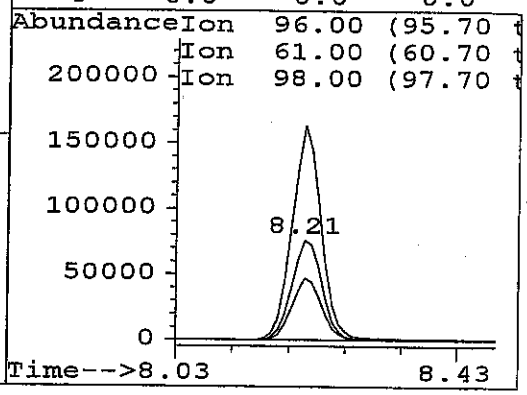


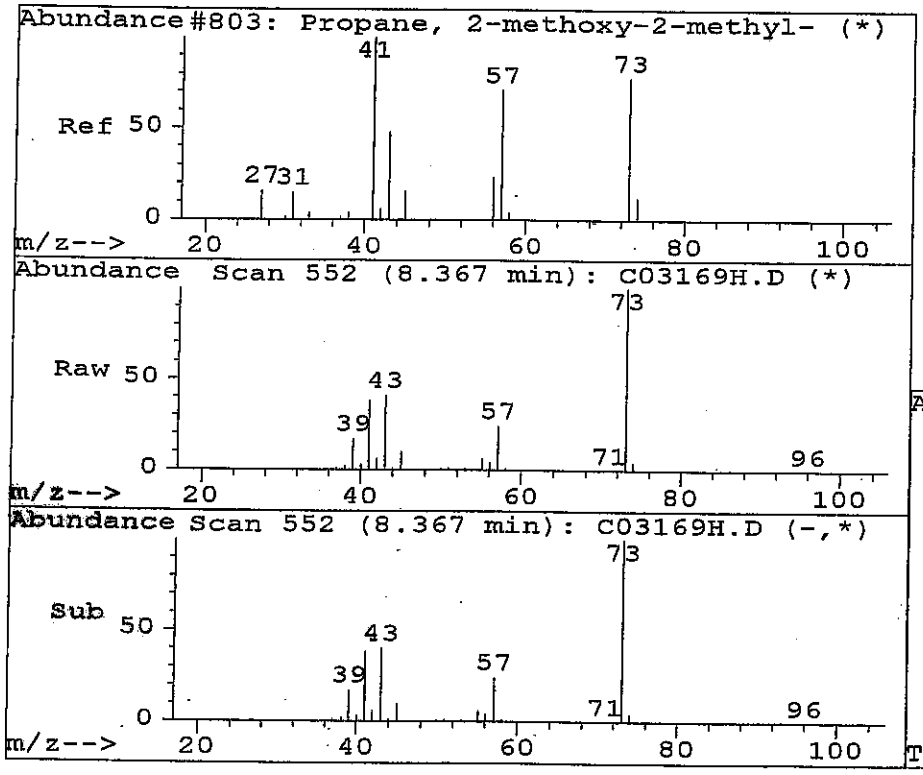


#21
trans-1,2-Dichloroethene
Concen: 11.10 ppbV
RT: 8.21 min Scan# 536
Delta R.T. -0.17 min
Lab File: C03169H.D
Acq: 16 Mar 109 7:21 pm

Tgt Ion:96 Resp: 230621

Ion	Ratio	Lower	Upper
96	100		
61	215.6	164.1	246.1
98	62.1	50.2	75.2
0	0.0	0.0	0.0

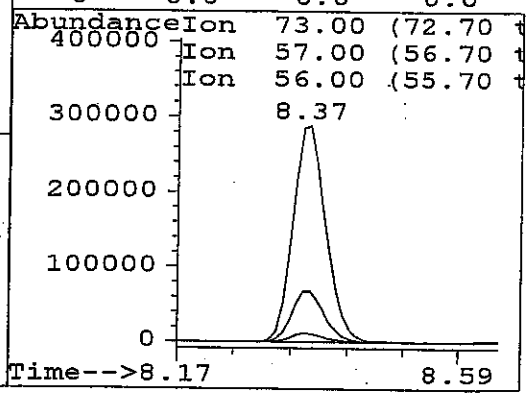


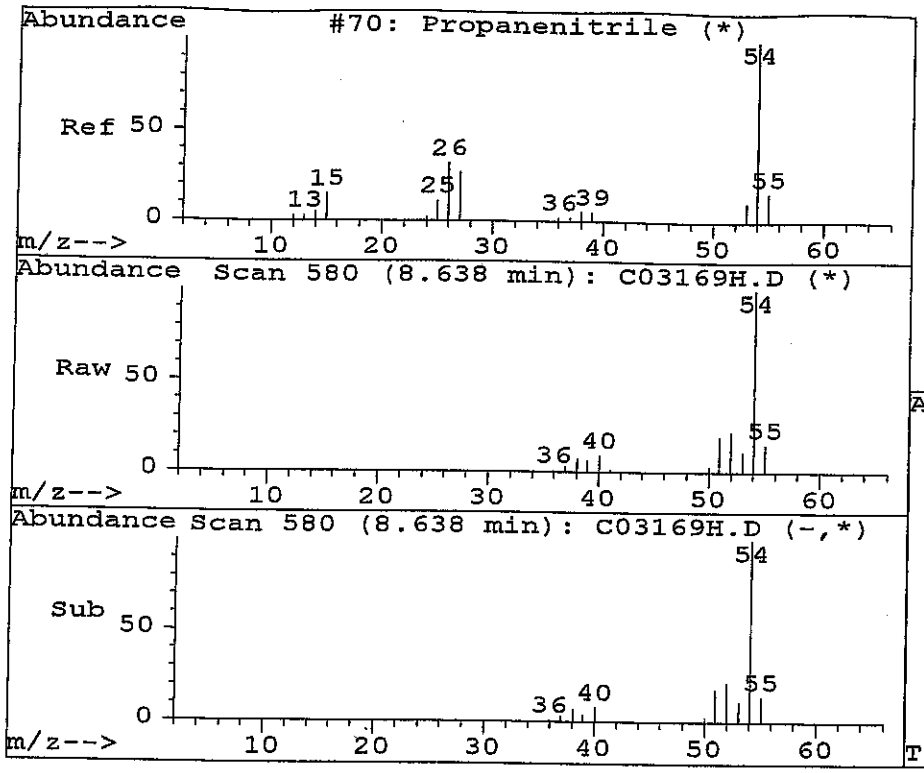


#22
Methyl tert butyl ether
Concen: 9.54 ppbV
RT: 8.37 min Scan# 552
Delta R.T. -0.17 min
Lab File: C03169H.D
Acq: 16 Mar 109 7:21 pm

Tgt Ion:73 Resp: 967308

Ion	Ratio	Lower	Upper
73	100		
57	23.5	16.3	24.5
56	3.9	3.0	4.4
0	0.0	0.0	0.0

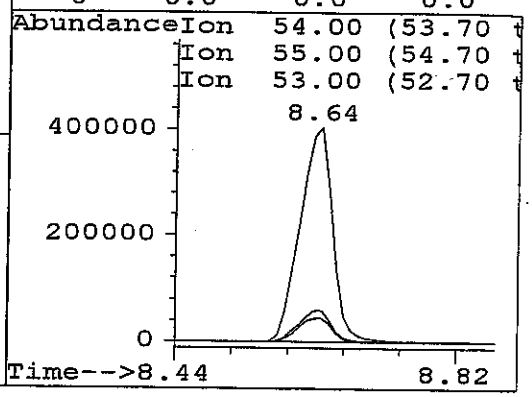


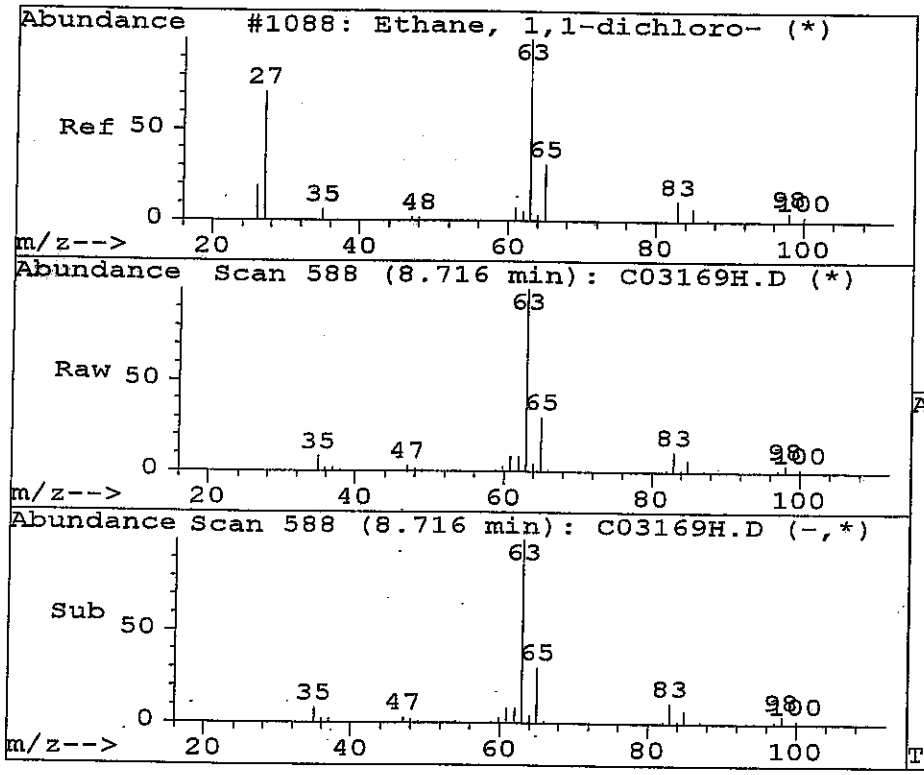


#23
Propionitrile
Concen: 45.50 ppbV
RT: 8.64 min Scan# 580
Delta R.T. -0.19 min
Lab File: C03169H.D
Acq: 16 Mar 109 7:21 pm

Tgt Ion:54 Resp: 1209148

Ion	Ratio	Lower	Upper
54	100		
55	14.7	11.9	17.9
53	11.2	10.0	15.0
0	0.0	0.0	0.0

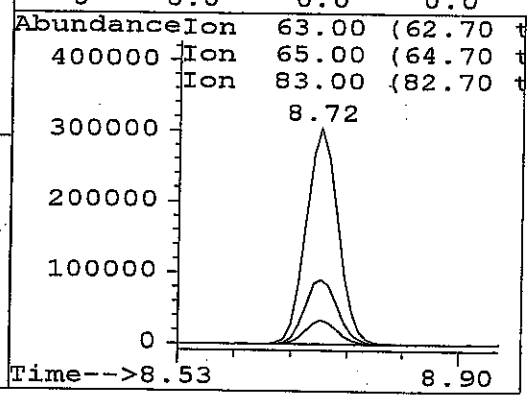


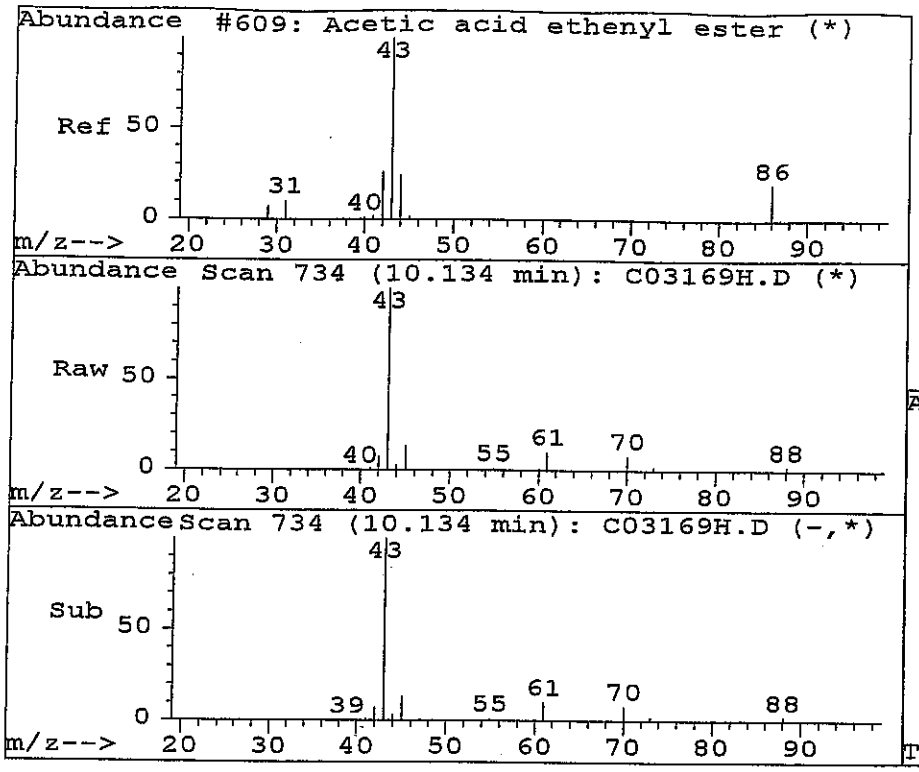


#24
1,1-Dichloroethane
Concen: 13.77 ppbV
RT: 8.72 min Scan# 588
Delta R.T. -0.18 min
Lab File: C03169H.D
Acq: 16 Mar 109 7:21 pm

Tgt Ion:63 Resp: 871129

Ion	Ratio	Lower	Upper
63	100		
65	29.6	25.4	38.2
83	11.1	10.6	15.8
0	0.0	0.0	0.0

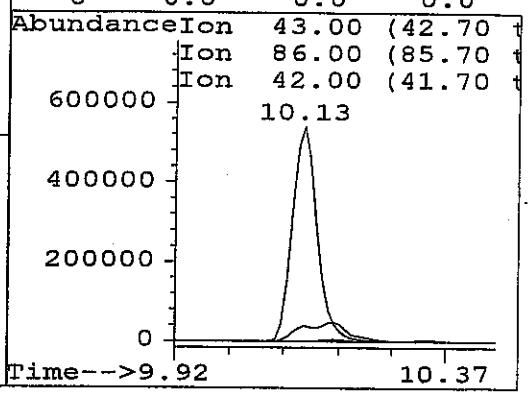


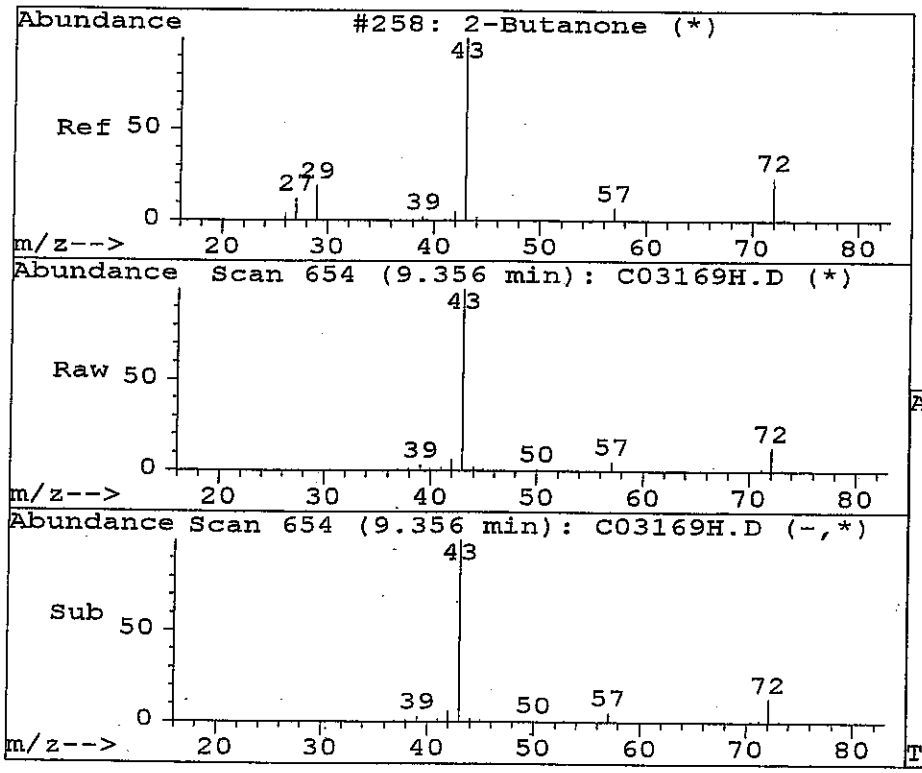


#25
Vinyl acetate
Concen: 14.49 ppbV
RT: 10.13 min Scan# 734
Delta R.T. -0.19 min
Lab File: C03169H.D
Acq: 16 Mar 109 7:21 pm

Tgt Ion:43 Resp: 1560060

Ion	Ratio	Lower	Upper
43	100		
86	0.0	0.0	0.0
42	7.1	6.2	9.2
0	0.0	0.0	0.0

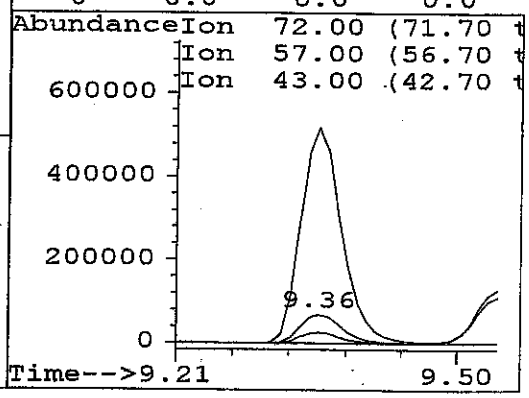


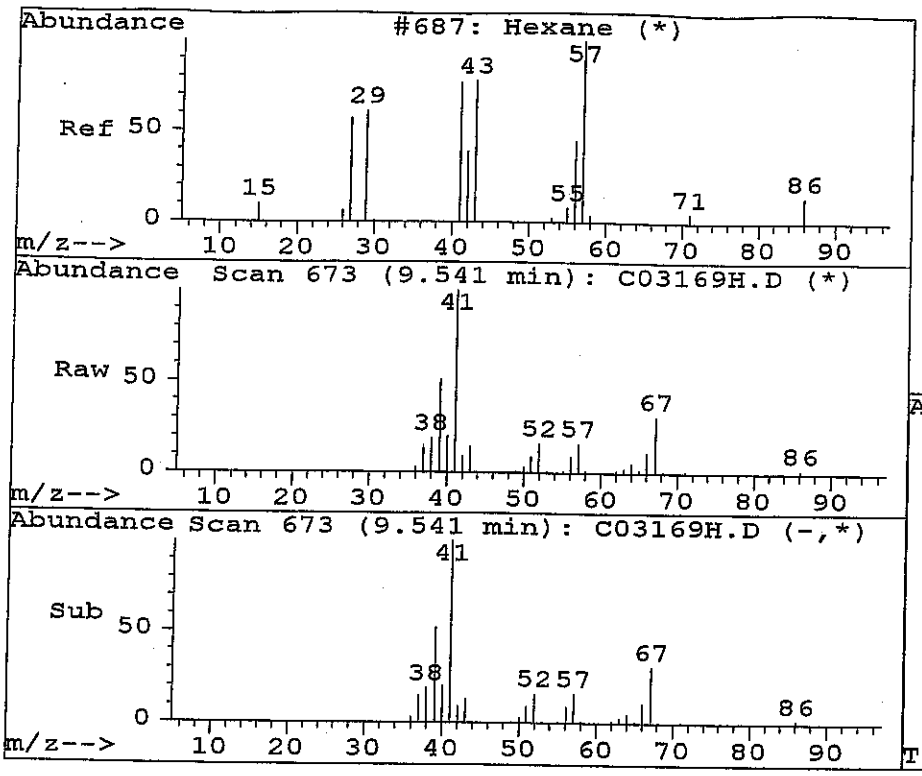


#26
2-Butanone
Concen: 11.28 ppbV
RT: 9.36 min Scan# 654
Delta R.T. -0.18 min
Lab File: C03169H.D
Acq: 16 Mar 109 7:21 pm

Tgt Ion:72 Resp: 205517

Ion	Ratio	Lower	Upper
72	100		
57	38.3	19.3	28.9#
43	751.9	452.8	679.2#
0	0.0	0.0	0.0

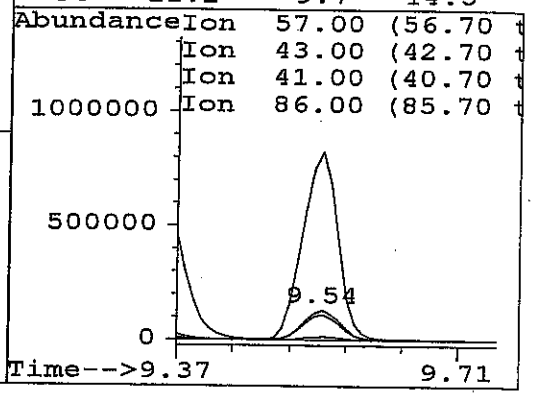


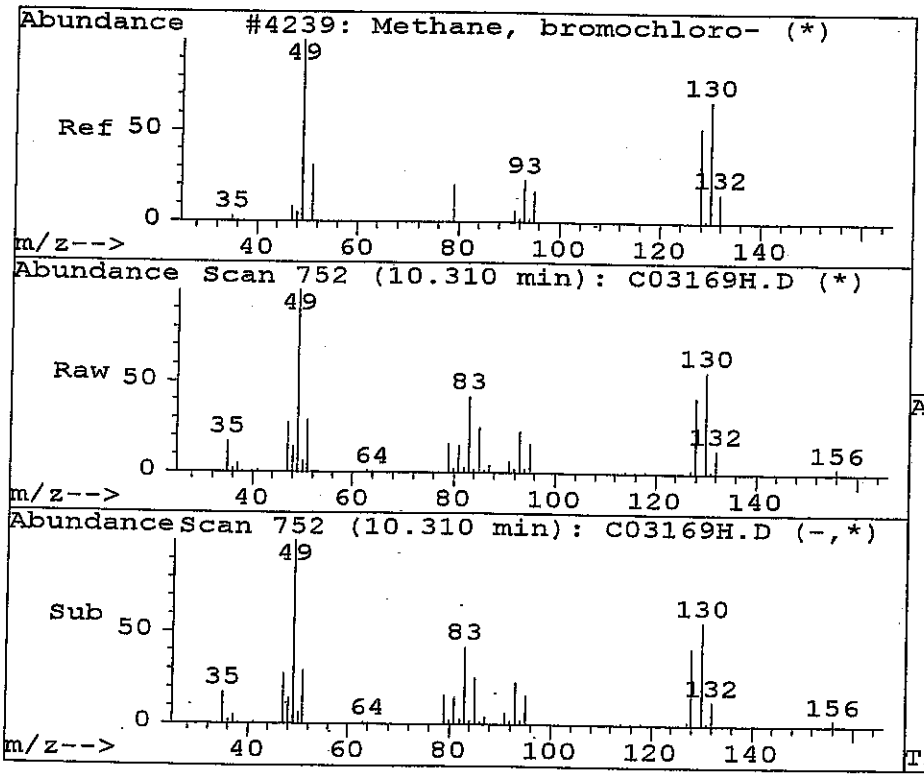


#27
Hexane
Concen: 8.44 ppbV
RT: 9.54 min Scan# 673
Delta R.T. -0.17 min
Lab File: C03169H.D
Acq: 16 Mar 109 7:21 pm

Tgt Ion:57 Resp: 409529

Ion	Ratio	Lower	Upper
57	100		
43	85.6	63.1	94.7
41	593.6	408.8	613.2
86	11.2	9.7	14.5

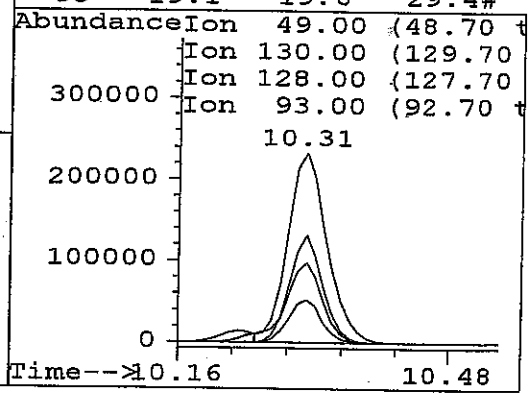


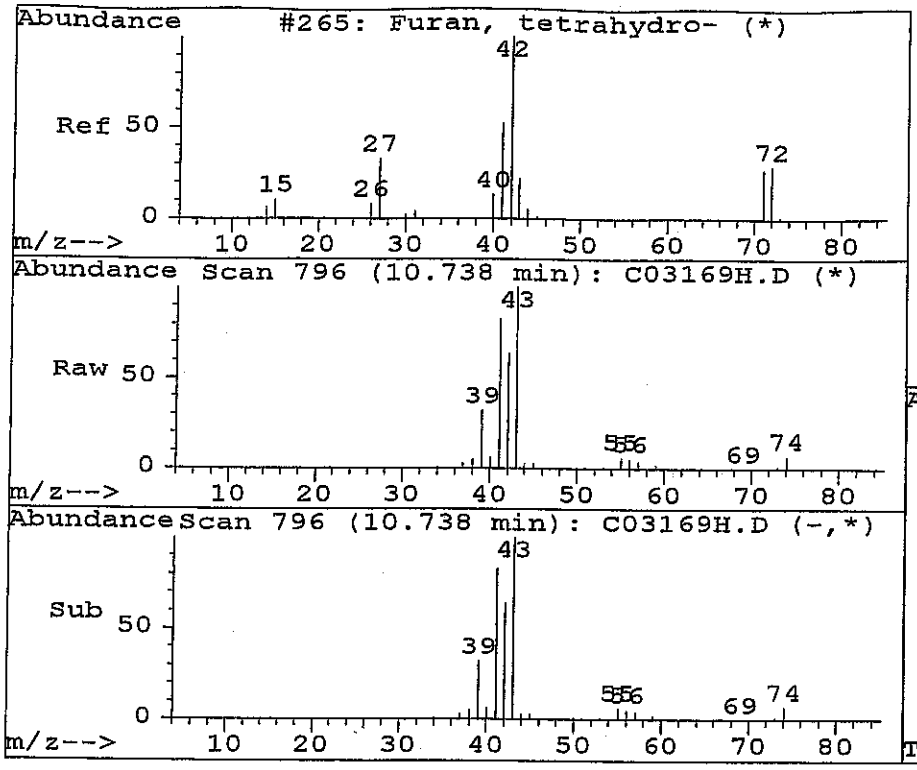


#28
Bromochloromethane
Concen: 13.22 ppbV
RT: 10.31 min Scan# 752
Delta R.T. -0.19 min
Lab File: C03169H.D
Acq: 16 Mar 109 7:21 pm

Tgt Ion:49 Resp: 729979

Ion	Ratio	Lower	Upper
49	100		
130	47.4	51.4	77.2#
128	40.7	44.3	66.5#
93	19.1	19.6	29.4#

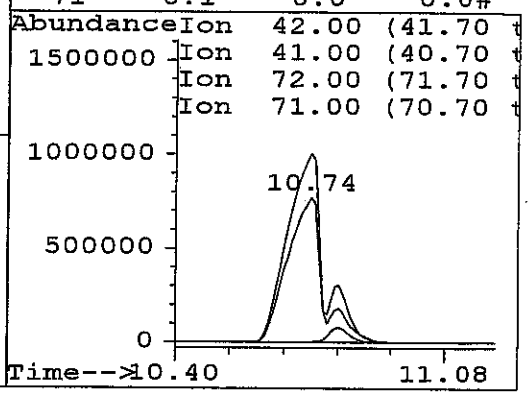


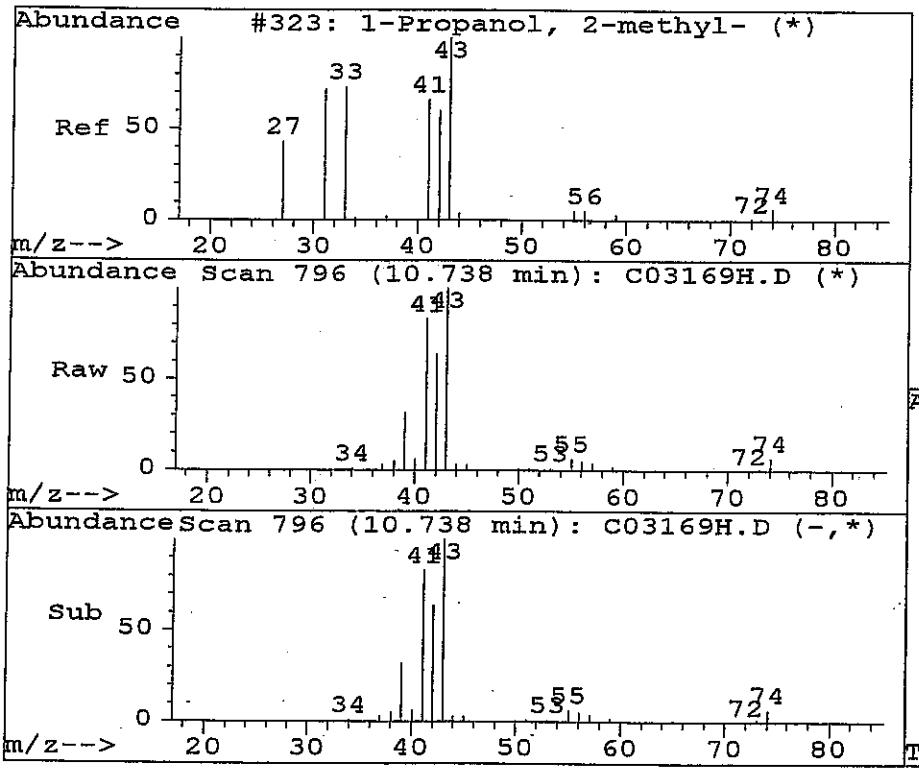


#29
Tetrahydrofuran
Concen: 24.89 ppbV m
RT: 10.74 min Scan# 796
Delta R.T. -0.18 min
Lab File: C03169H.D
Acq: 16 Mar 109 7:21 pm

Tgt Ion:42 Resp: 5179960

Ion	Ratio	Lower	Upper
42	100		
41	130.8	112.3	168.5
72	0.3	0.4	0.6#
71	0.1	0.0	0.0#

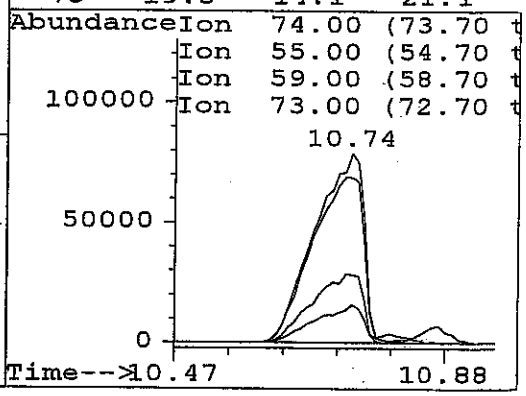


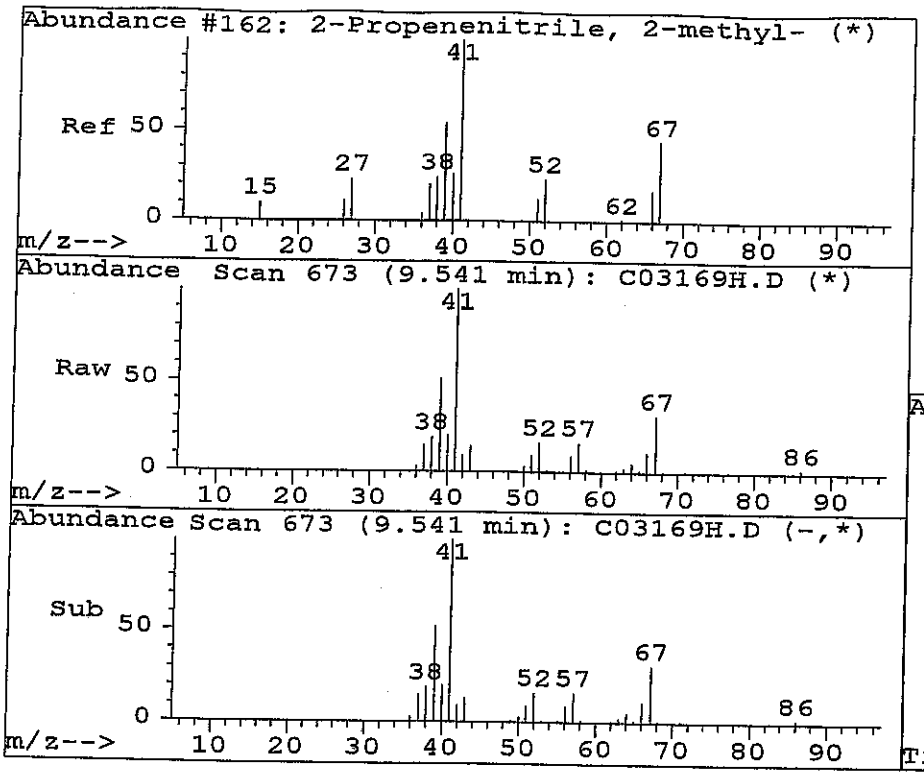


#30
Isobutyl alcohol
Concen: 57.39 ppbV
RT: 10.74 min Scan# 796
Delta R.T. -0.18 min
Lab File: C03169H.D
Acq: 16 Mar 109 7:21 pm

Tgt Ion:74 Resp: 411535

Ion	Ratio	Lower	Upper
74	100		
55	85.8	64.8	97.2
59	35.9	30.2	45.2
73	19.3	14.1	21.1

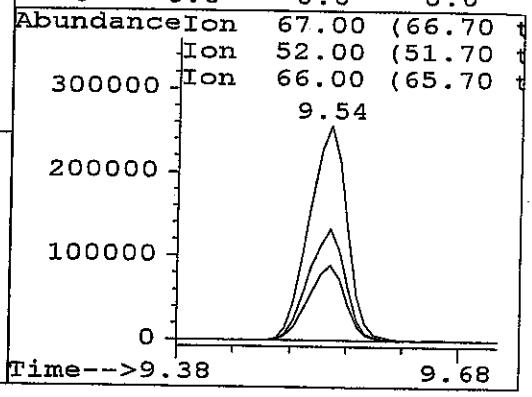


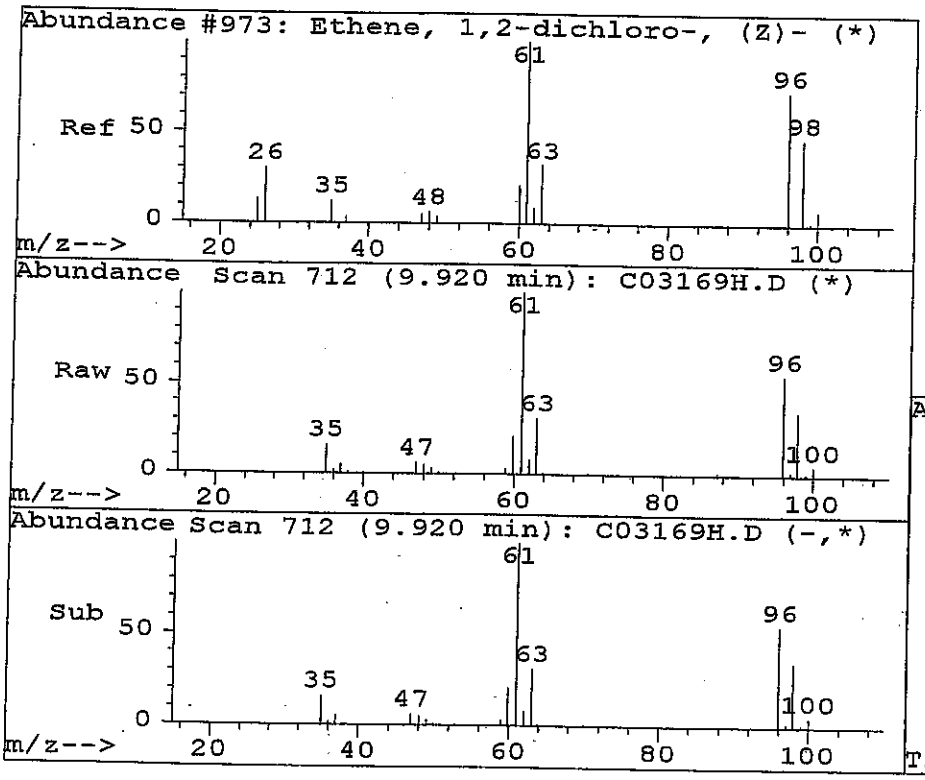


#31
Methacrylonitrile
Concen: 40.99 ppbV
RT: 9.54 min Scan# 673
Delta R.T. -0.20 min
Lab File: C03169H.D
Acq: 16 Mar 109 7:21 pm

Tgt Ion:67 Resp: 731423

Ion	Ratio	Lower	Upper
67	100		
52	51.7	41.0	61.6
66	34.8	26.8	40.2
0	0.0	0.0	0.0

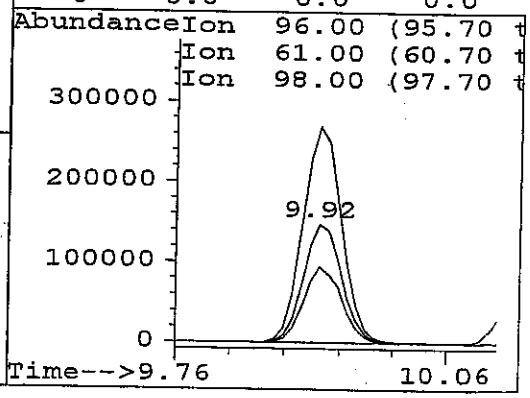


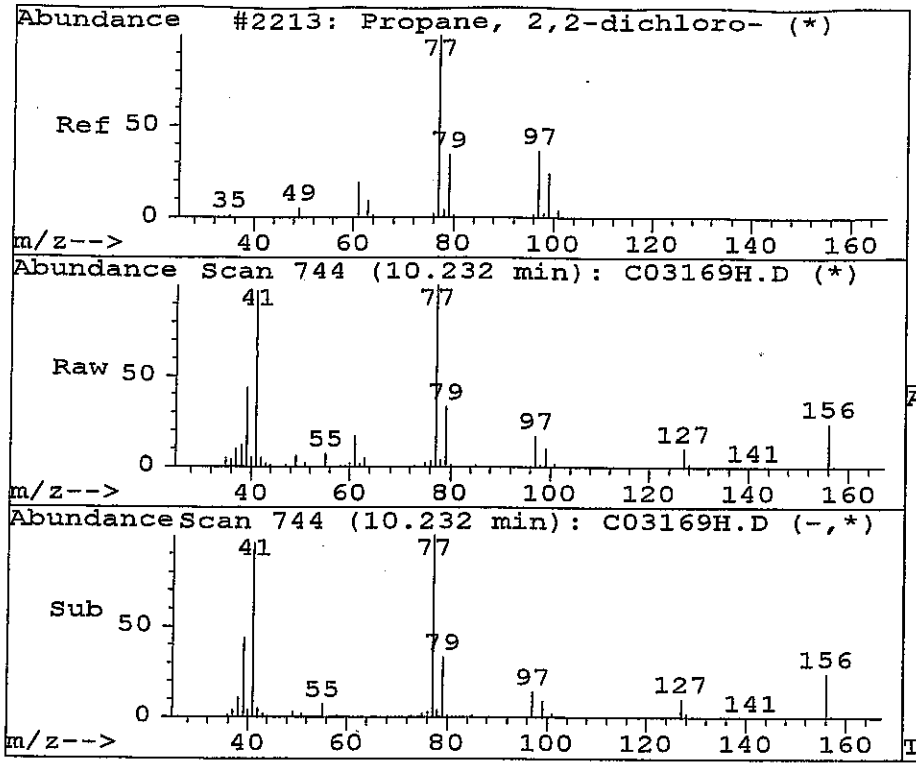


#32
cis-1,2-Dichloroethene
Concen: 12.42 ppbV
RT: 9.92 min Scan# 712
Delta R.T. -0.19 min
Lab File: C03169H.D
Acq: 16 Mar 109 7:21 pm

Tgt Ion:96 Resp: 421914

Ion	Ratio	Lower	Upper
96	100		
61	182.4	132.6	198.8
98	64.1	49.3	73.9
0	0.0	0.0	0.0

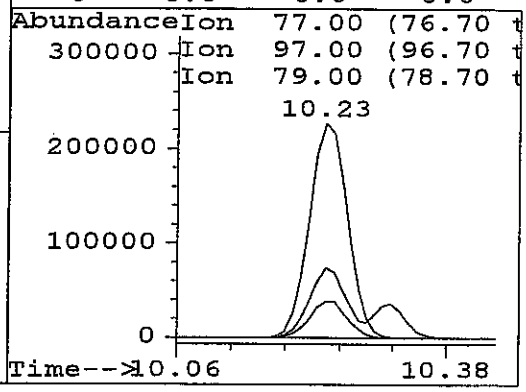


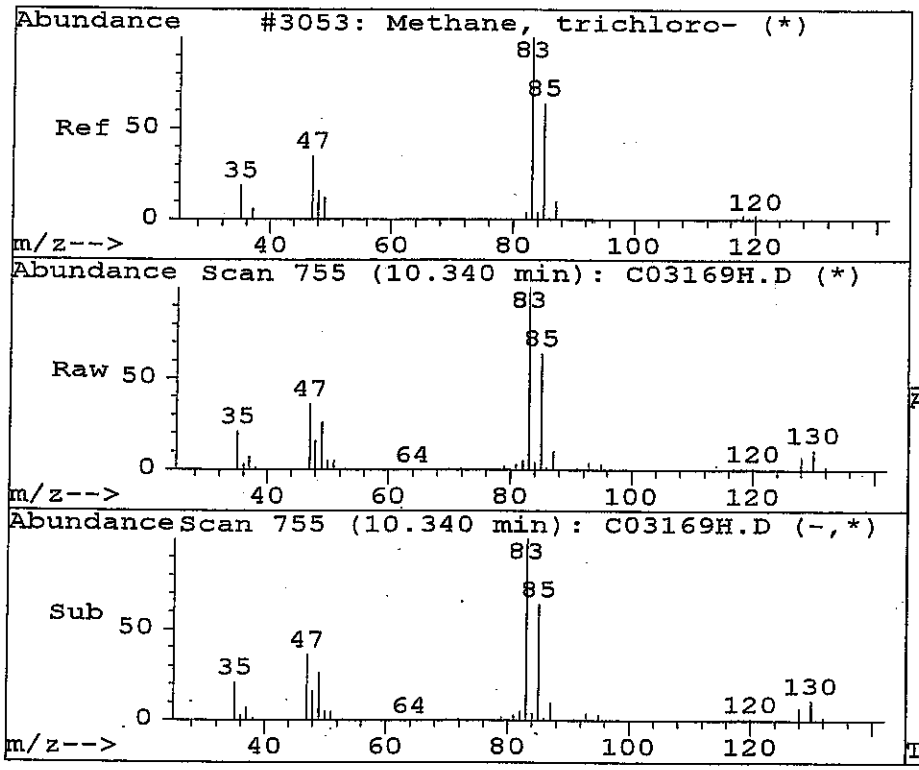


#33
2,2-Dichloropropane
Concen: 10.34 ppbV
RT: 10.23 min Scan# 744
Delta R.T. -0.19 min
Lab File: C03169H.D
Acq: 16 Mar 109 7:21 pm

Tgt Ion:77 Resp: 713261

Ion	Ratio	Lower	Upper
77	100		
97	16.9	13.0	19.6
79	31.0	20.5	30.7#
0	0.0	0.0	0.0

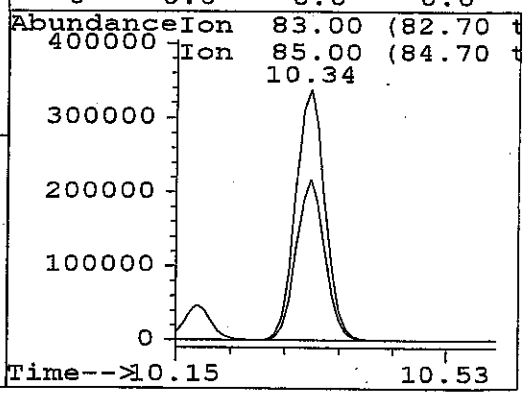


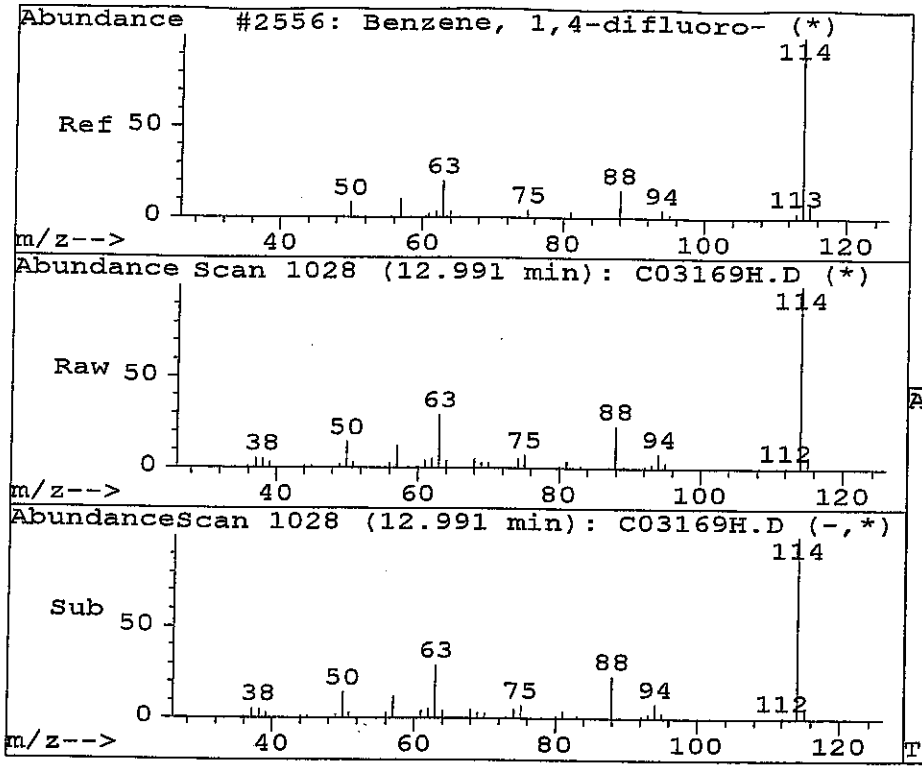


#34
Chloroform
Concen: 11.94 ppbV
RT: 10.34 min Scan# 755
Delta R.T. -0.19 min
Lab File: C03169H.D
Acq: 16 Mar 109 7:21 pm

Tgt Ion:83 Resp: 959204

Ion	Ratio	Lower	Upper
83	100		
85	64.4	51.3	76.9
0	0.0	0.0	0.0
0	0.0	0.0	0.0

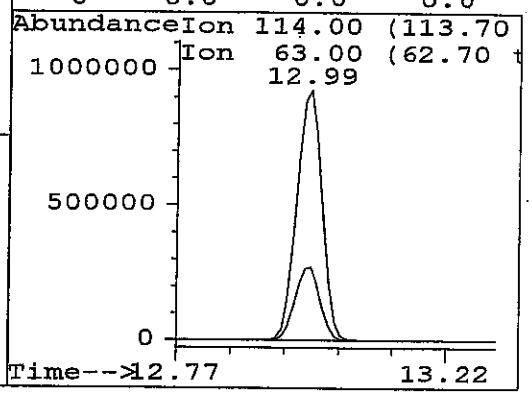


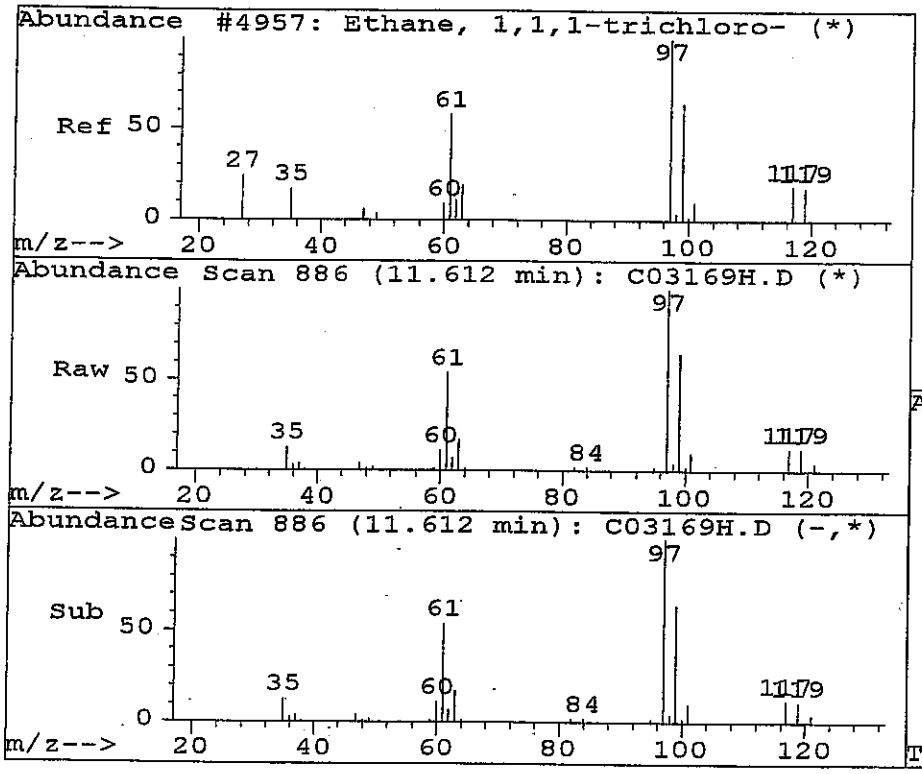


#35
1,4-Difluorobenzene
Concen: 20.00 ppbV
RT: 12.99 min Scan# 1028
Delta R.T. -0.18 min
Lab File: C03169H.D
Acq: 16 Mar 109 7:21 pm

Tgt Ion:114 Resp: 2706138

Ion	Ratio	Lower	Upper
114	100		
63	29.3	19.8	33.0
0	0.0	0.0	0.0
0	0.0	0.0	0.0

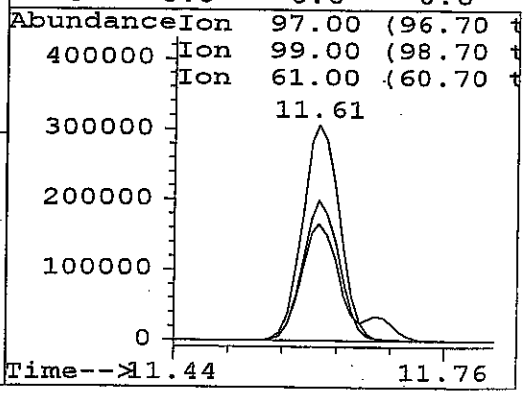


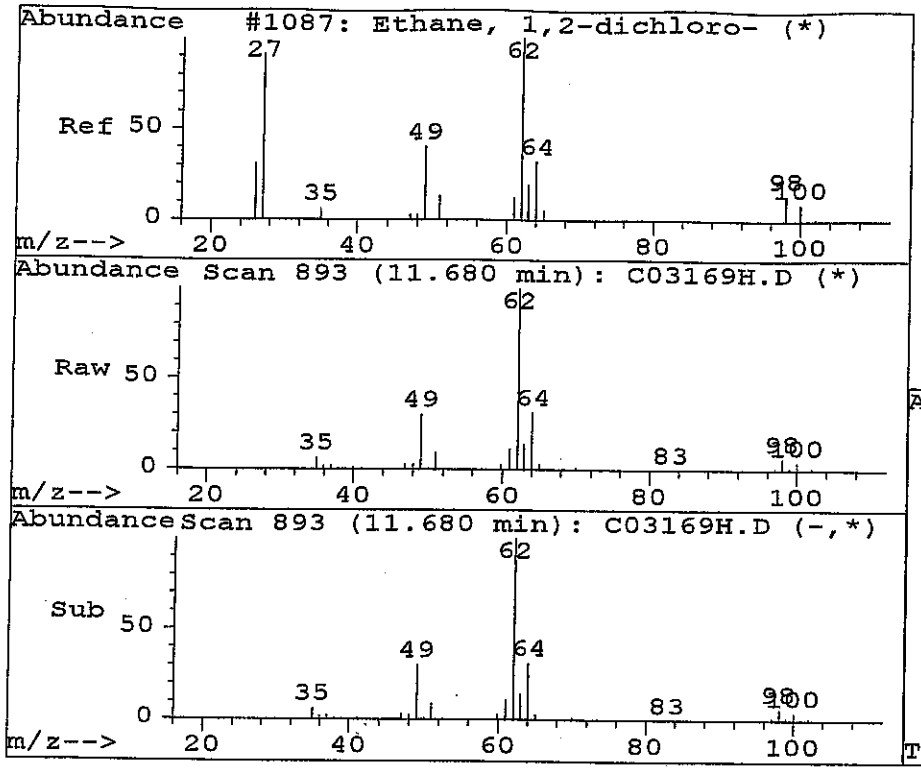


#36
1,1,1-Trichloroethane
Concen: 9.90 ppbV
RT: 11.61 min Scan# 886
Delta R.T. -0.19 min
Lab File: C03169H.D
Acq: 16 Mar 109 7:21 pm

Tgt Ion:97 Resp: 970639

Ion	Ratio	Lower	Upper
97	100		
99	65.0	49.2	73.8
61	53.8	38.8	58.2
0	0.0	0.0	0.0

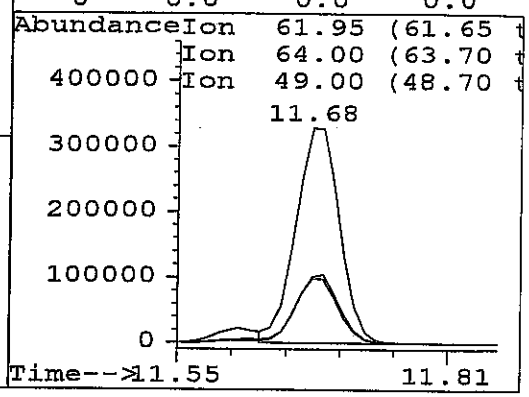


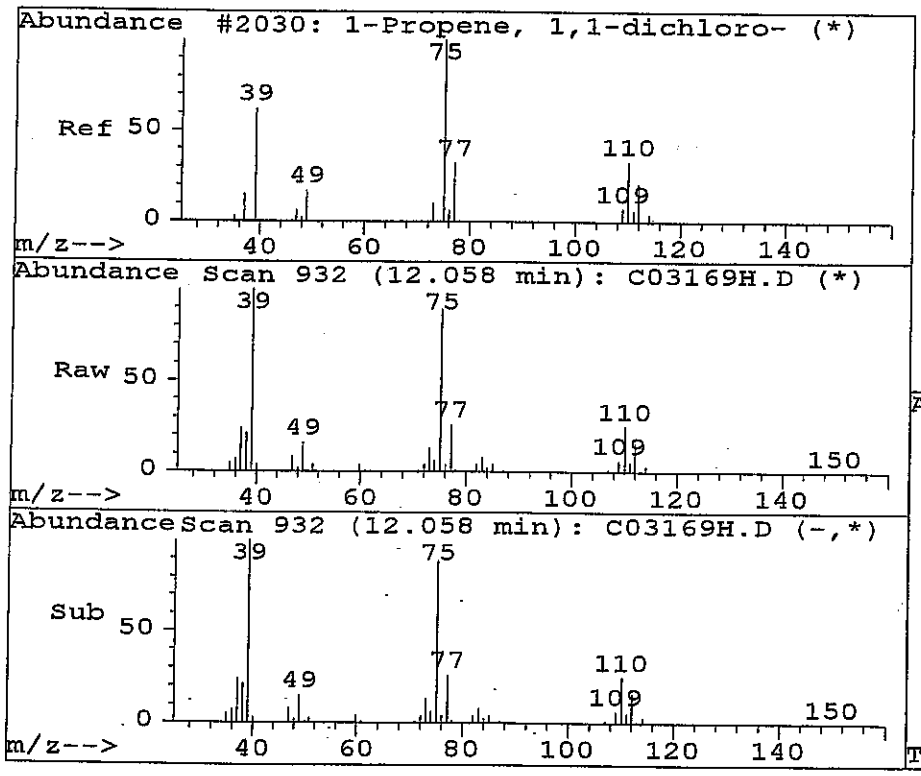


#37
1,2-Dichloroethane
Concen: 10.77 ppbV
RT: 11.68 min Scan# 893
Delta R.T. -0.19 min
Lab File: C03169H.D
Acq: 16 Mar 109 7:21 pm

Tgt Ion:61.95 Resp: 92083

Ion	Ratio	Lower	Upper
62	100		
64	31.0	25.0	37.4
49	29.9	19.9	29.9#
0	0.0	0.0	0.0

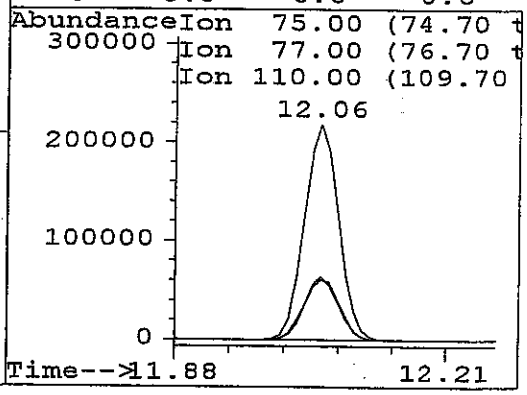


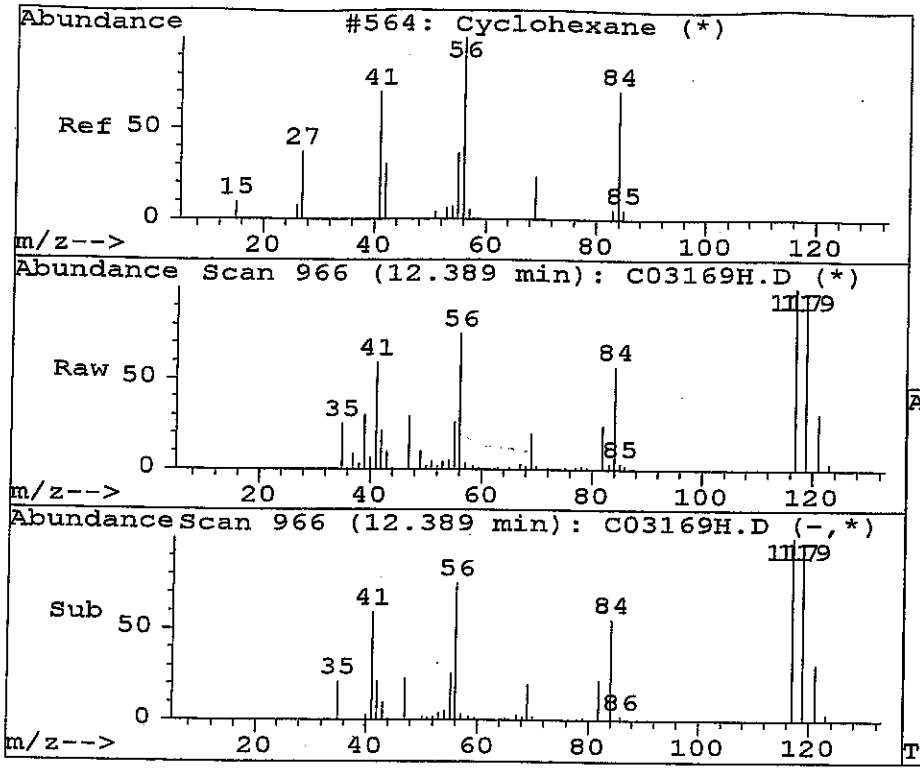


#38
1,1-Dichloropropene
Concen: 10.31 ppbV
RT: 12.06 min Scan# 932
Delta R.T. -0.18 min
Lab File: C03169H.D
Acq: 16 Mar 109 7:21 pm

Tgt Ion:75 Resp: 616834

Ion	Ratio	Lower	Upper
75	100		
77	29.0	23.0	34.4
110	27.8	24.9	37.3
0	0.0	0.0	0.0

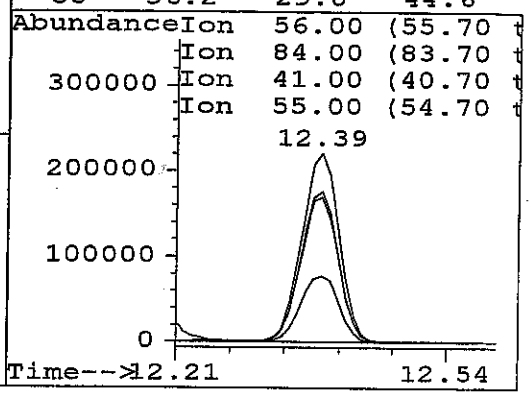


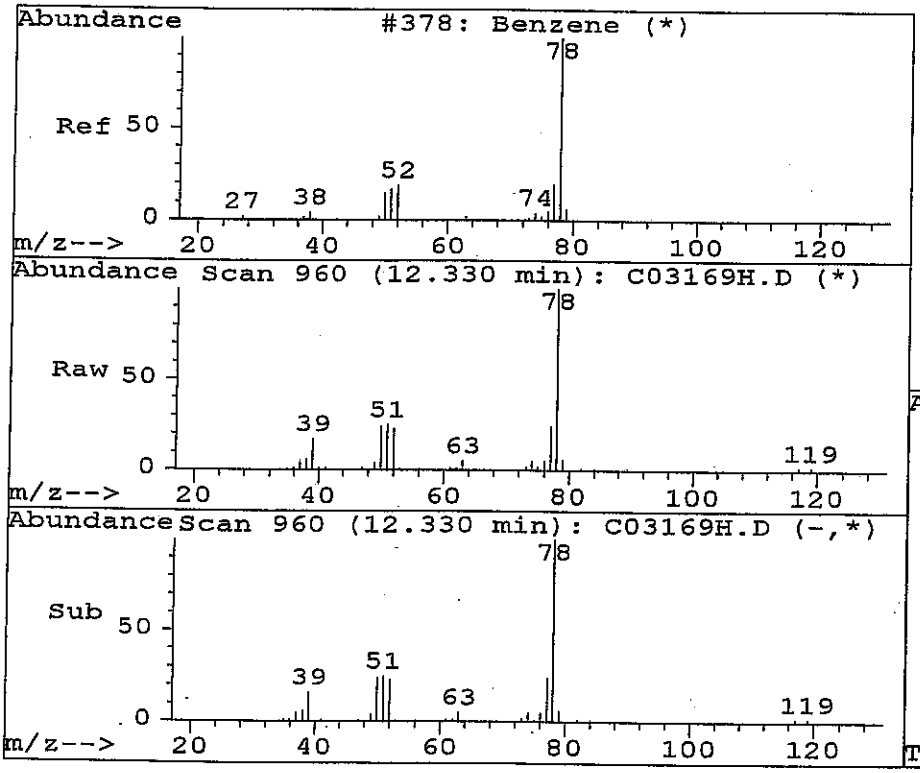


#39
Cyclohexane
Concen: 11.95 ppbV
RT: 12.39 min Scan# 966
Delta R.T. -0.16 min
Lab File: C03169H.D
Acq: 16 Mar 109 7:21 pm

Tgt Ion:56 Resp: 691589

Ion	Ratio	Lower	Upper
56	100		
84	77.7	74.2	111.4
41	80.2	60.4	90.6
55	36.2	29.8	44.6

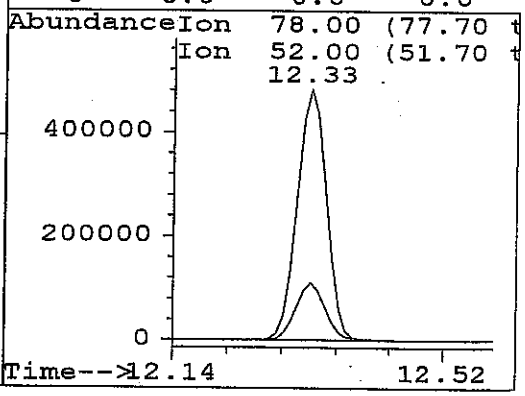


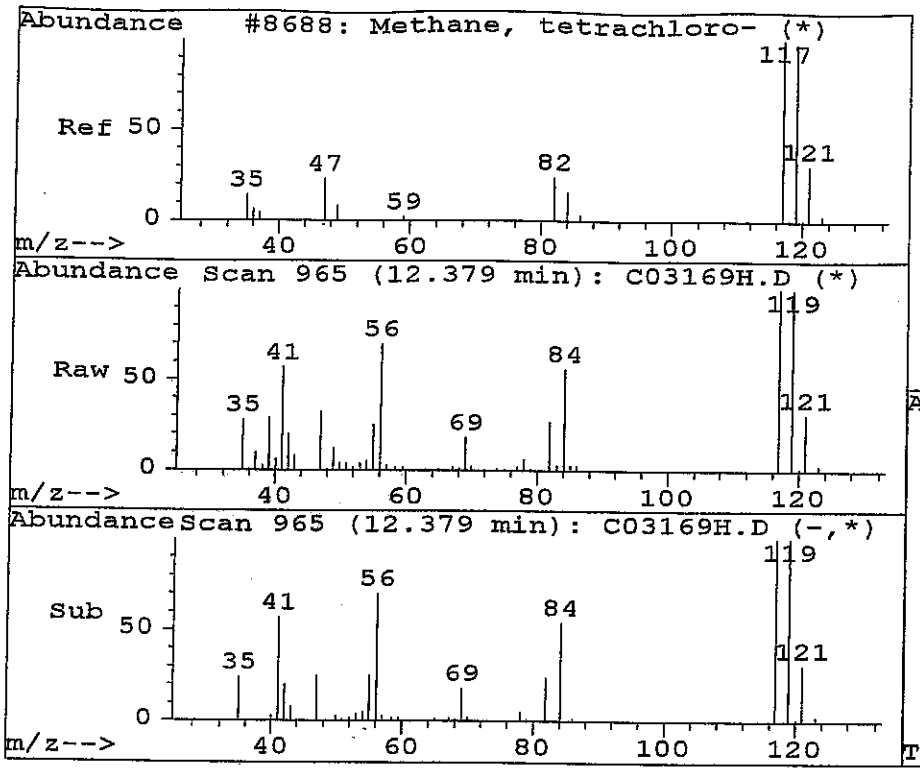


#40
Benzene
Concen: 10.39 ppbV
RT: 12.33 min Scan# 960
Delta R.T. -0.18 min
Lab File: C03169H.D
Acq: 16 Mar 109 7:21 pm

Tgt Ion:78 Resp: 1387400

Ion	Ratio	Lower	Upper
78	100		
52	22.9	16.4	24.6
0	0.0	0.0	0.0
0	0.0	0.0	0.0

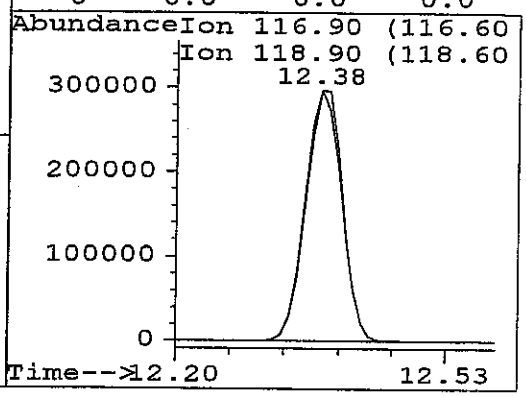


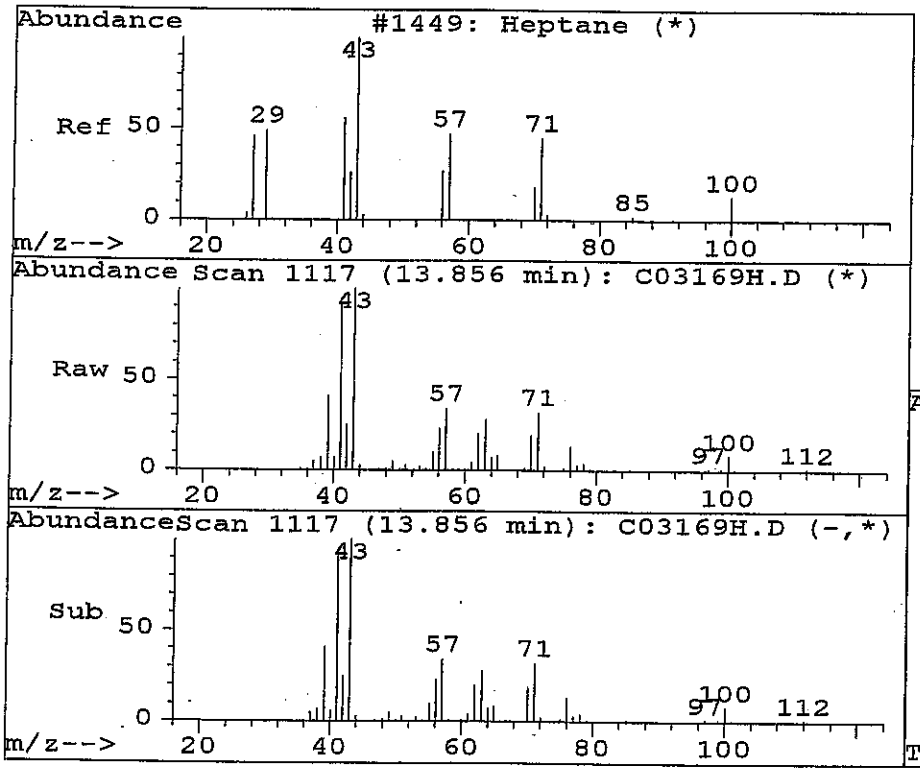


#41
Carbon tetrachloride
Concen: 8.90 ppbV
RT: 12.38 min Scan# 965
Delta R.T. -0.18 min
Lab File: C03169H.D
Acq: 16 Mar 109 7:21 pm

Tgt Ion:116.9 Resp: 93199

Ion	Ratio	Lower	Upper
117	100		
119	100.0	75.3	112.9
0	0.0	0.0	0.0
0	0.0	0.0	0.0

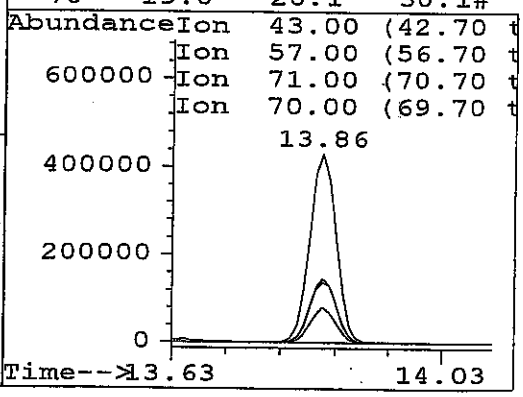


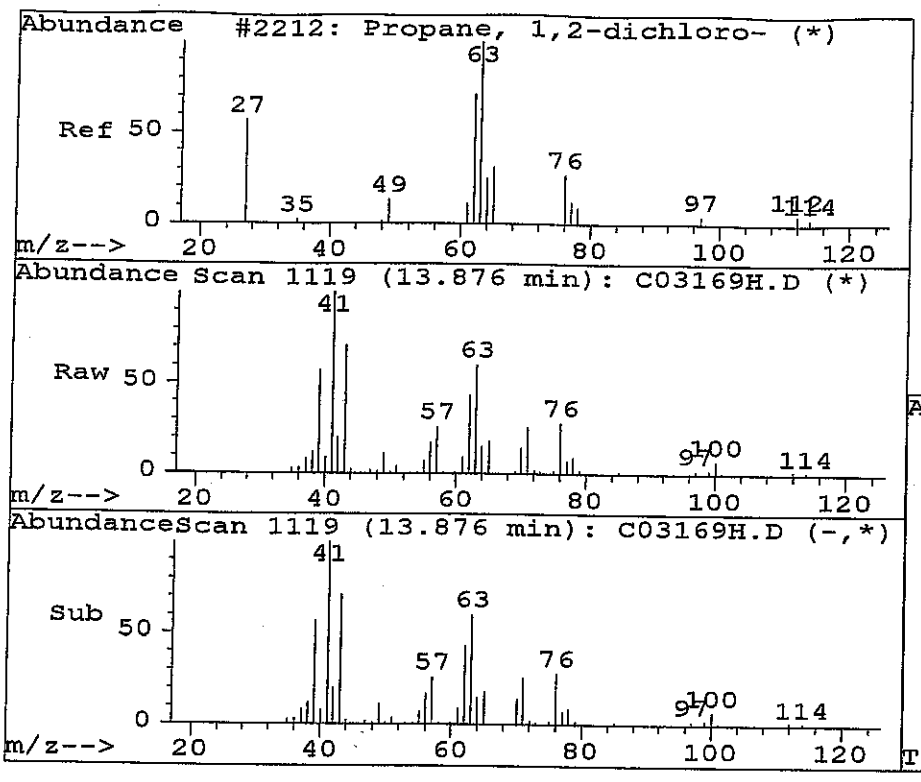


#42
n-Heptane
Concen: 12.21 ppbV
RT: 13.86 min Scan# 1117
Delta R.T. -0.18 min
Lab File: C03169H.D
Acq: 16 Mar 109 7:21 pm

Tgt Ion:43 Resp: 1176503

Ion	Ratio	Lower	Upper
43	100		
57	33.8	33.0	49.6
71	32.1	33.4	50.0#
70	19.0	20.1	30.1#

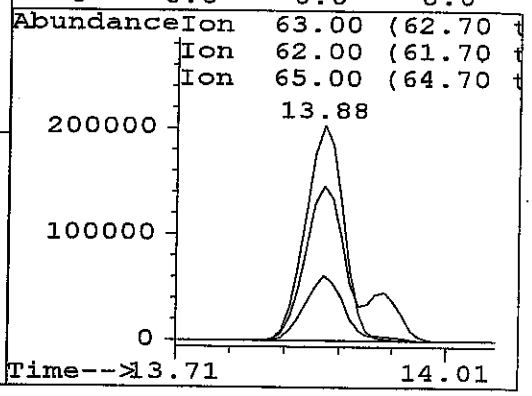


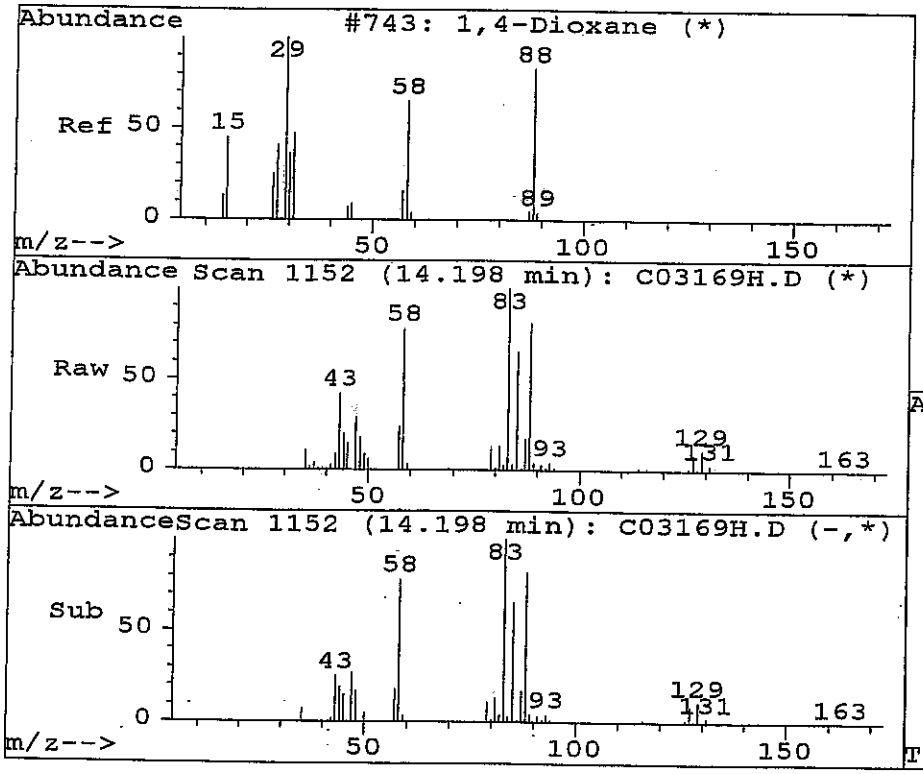


#43
1,2-Dichloropropane
Concen: 13.14 ppbV
RT: 13.88 min Scan# 1119
Delta R.T. -0.19 min
Lab File: C03169H.D
Acq: 16 Mar 109 7:21 pm

Tgt Ion:63 Resp: 598806

Ion	Ratio	Lower	Upper
63	100		
62	70.7	51.3	76.9
65	30.3	23.1	34.7
0	0.0	0.0	0.0

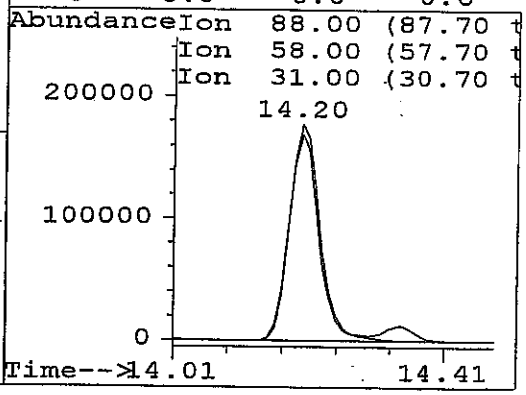


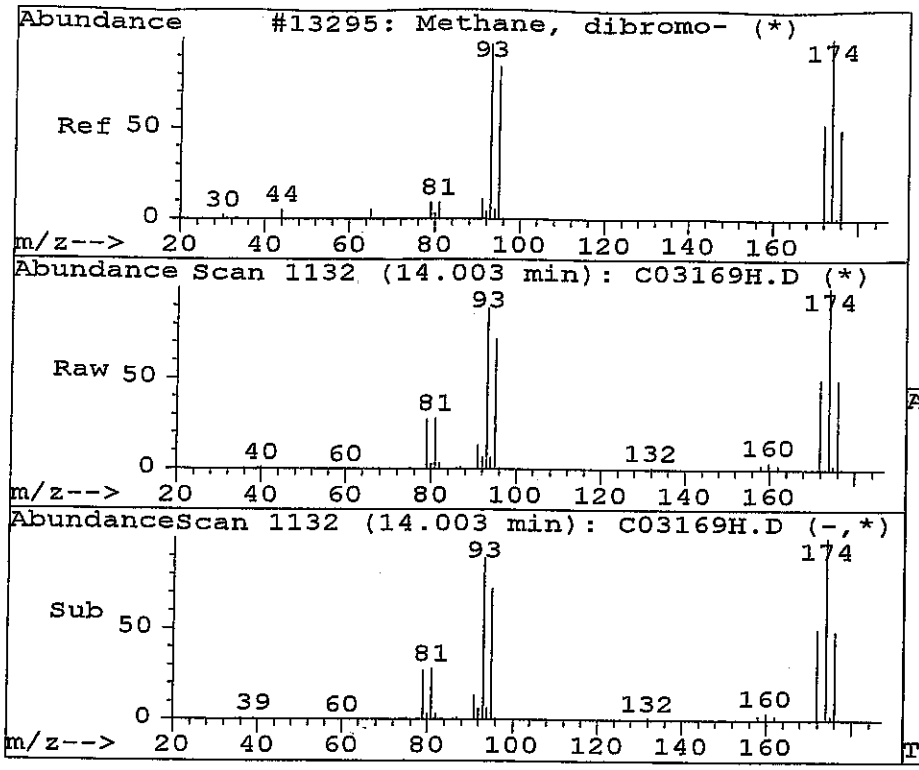


#44
1,4 Dioxane
Concen: 16.53 ppbV
RT: 14.20 min Scan# 1152
Delta R.T. -0.20 min
Lab File: C03169H.D
Acq: 16 Mar 109 7:21 pm

Tgt Ion:88 Resp: 540834

Ion	Ratio	Lower	Upper
88	100		
58	95.6	75.6	113.4
31	0.0	0.0	0.0
0	0.0	0.0	0.0

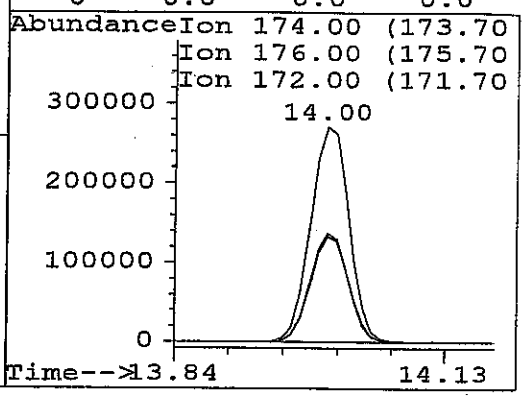


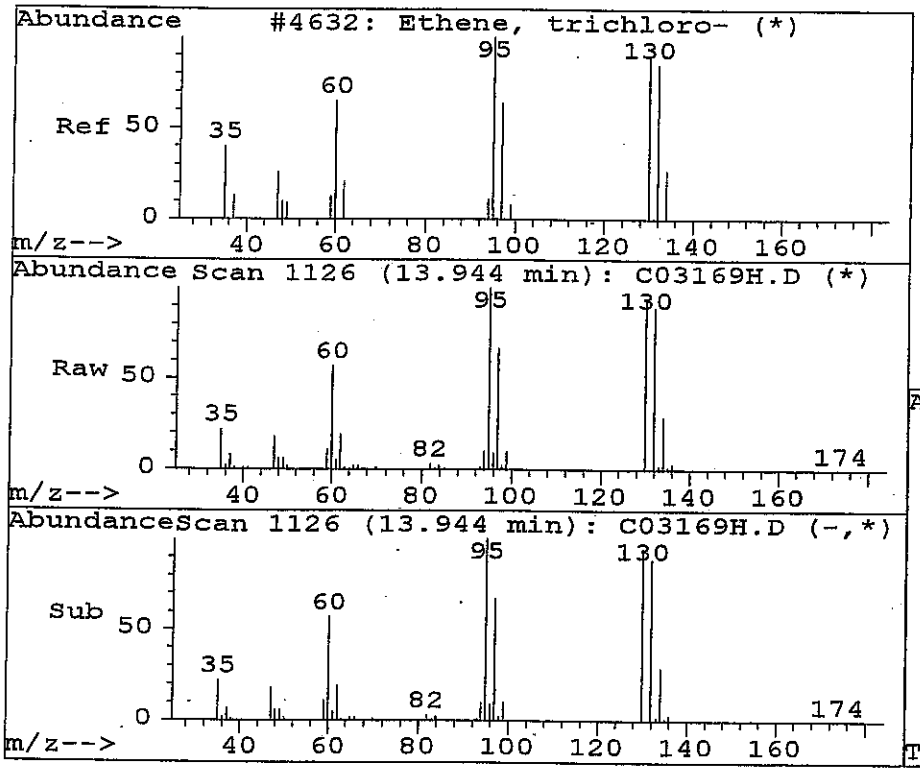


#45
Dibromomethane
Concen: 9.29 ppbV
RT: 14.00 min Scan# 1132
Delta R.T. -0.20 min
Lab File: C03169H.D
Acq: 16 Mar 109 7:21 pm

Tgt Ion:174 Resp: 786579

Ion	Ratio	Lower	Upper
174	100		
176	49.1	39.1	58.7
172	50.5	42.4	63.6
0	0.0	0.0	0.0

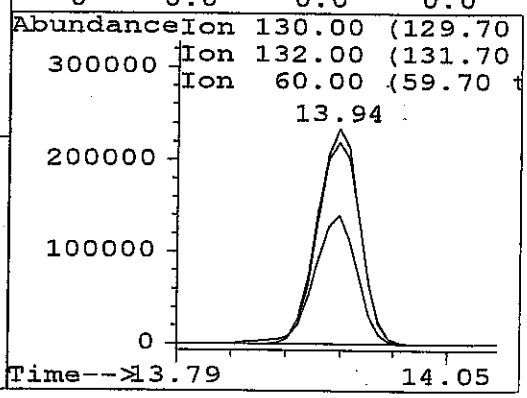


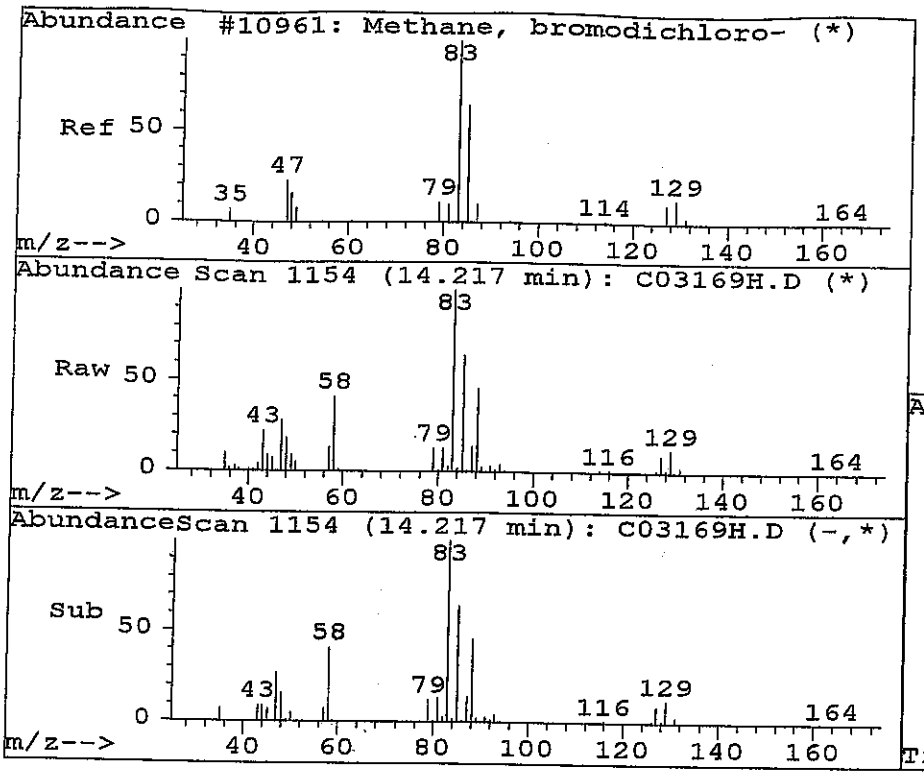


#46
Trichloroethene
Concen: 8.13 ppbV
RT: 13.94 min Scan# 1126
Delta R.T. -0.19 min
Lab File: C03169H.D
Acq: 16 Mar 109 7:21 pm

Tgt Ion:130 Resp: 666308

Ion	Ratio	Lower	Upper
130	100		
132	93.7	78.5	117.7
60	59.2	44.2	66.4
0	0.0	0.0	0.0

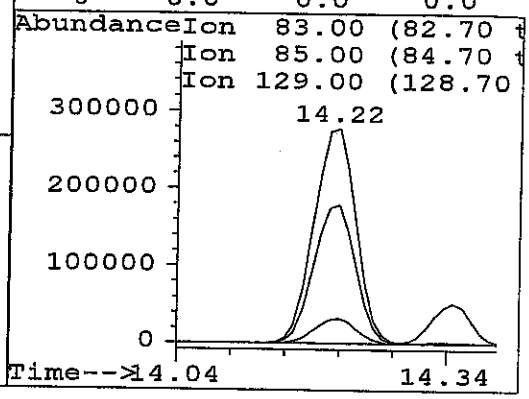


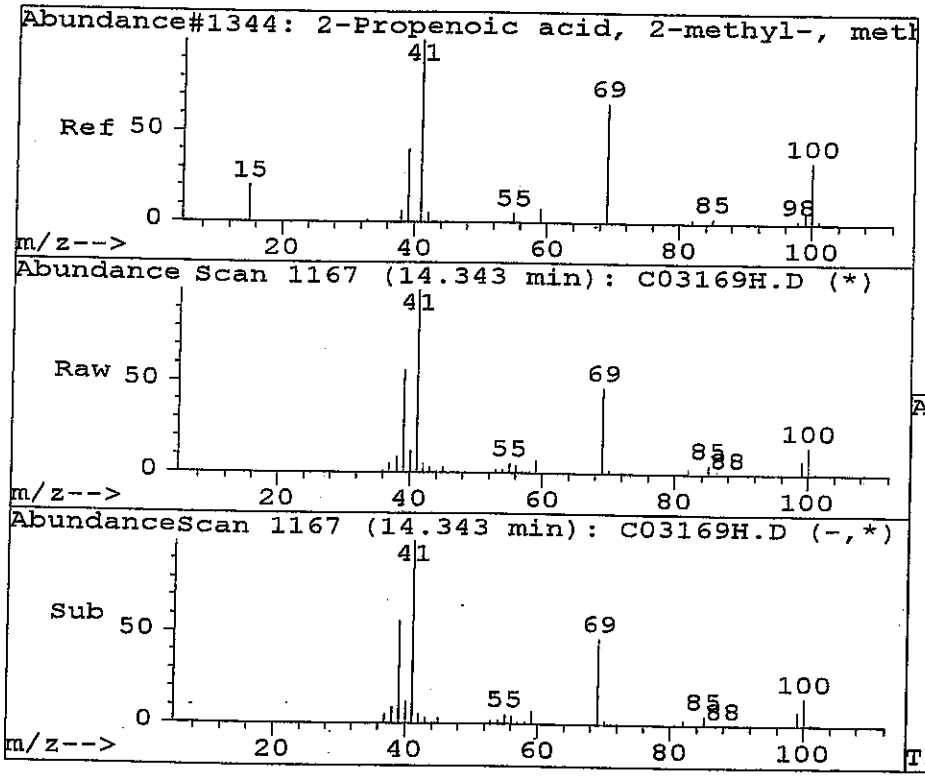


#47
Bromodichloromethane
Concen: 9.40 ppbV
RT: 14.22 min Scan# 1154
Delta R.T. -0.18 min
Lab File: C03169H.D
Acq: 16 Mar 109 7:21 pm

Tgt Ion:83 Resp: 885573

Ion	Ratio	Lower	Upper
83	100		
85	63.0	47.5	71.3
129	11.8	10.2	15.4
0	0.0	0.0	0.0

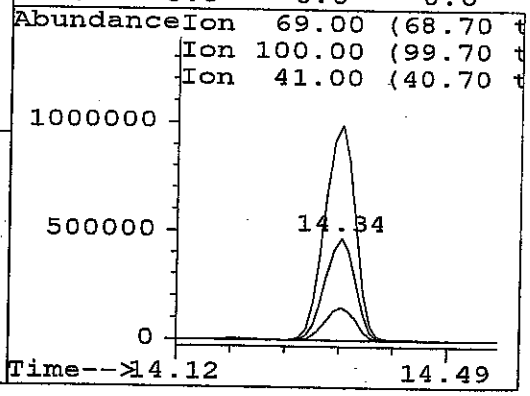


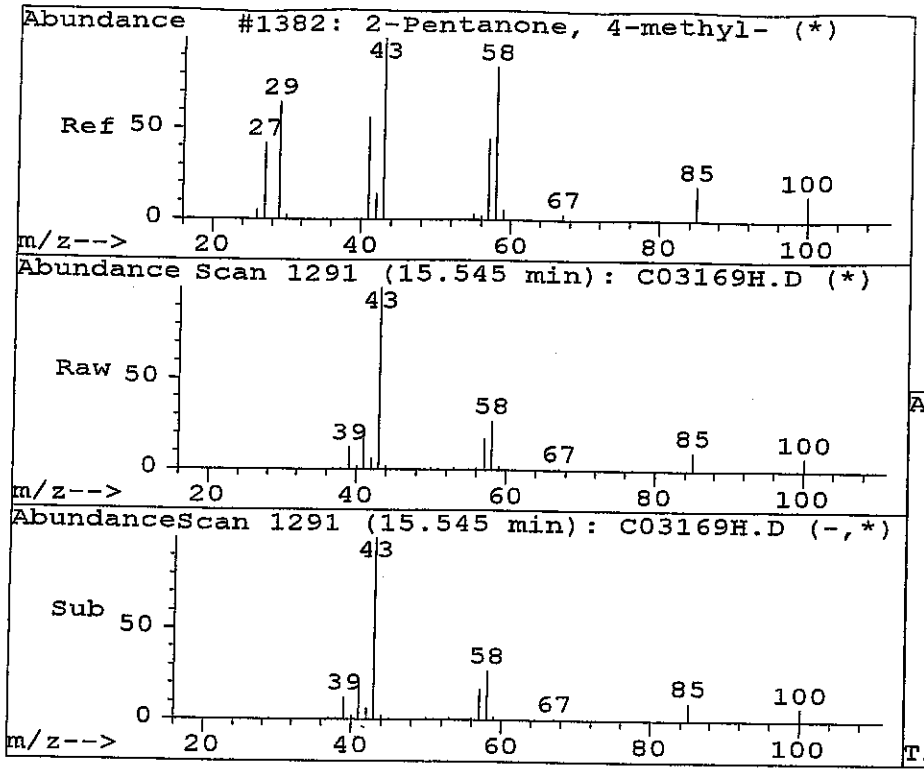


#48
Methyl methacrylate
Concen: 30.88 ppbV
RT: 14.34 min Scan# 1167
Delta R.T. -0.21 min
Lab File: C03169H.D
Acq: 16 Mar 109 7:21 pm

Tgt Ion:69 Resp: 1334867

Ion	Ratio	Lower	Upper
69	100		
100	32.1	29.5	44.3
41	211.5	144.6	217.0
0	0.0	0.0	0.0

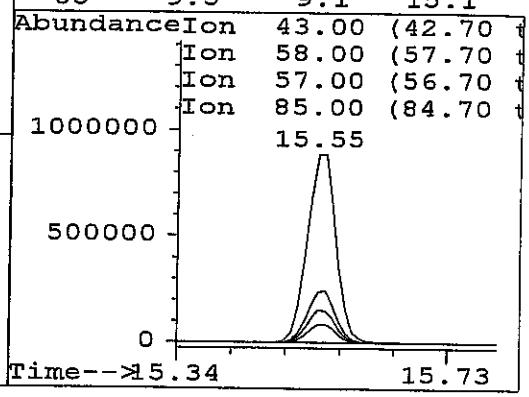


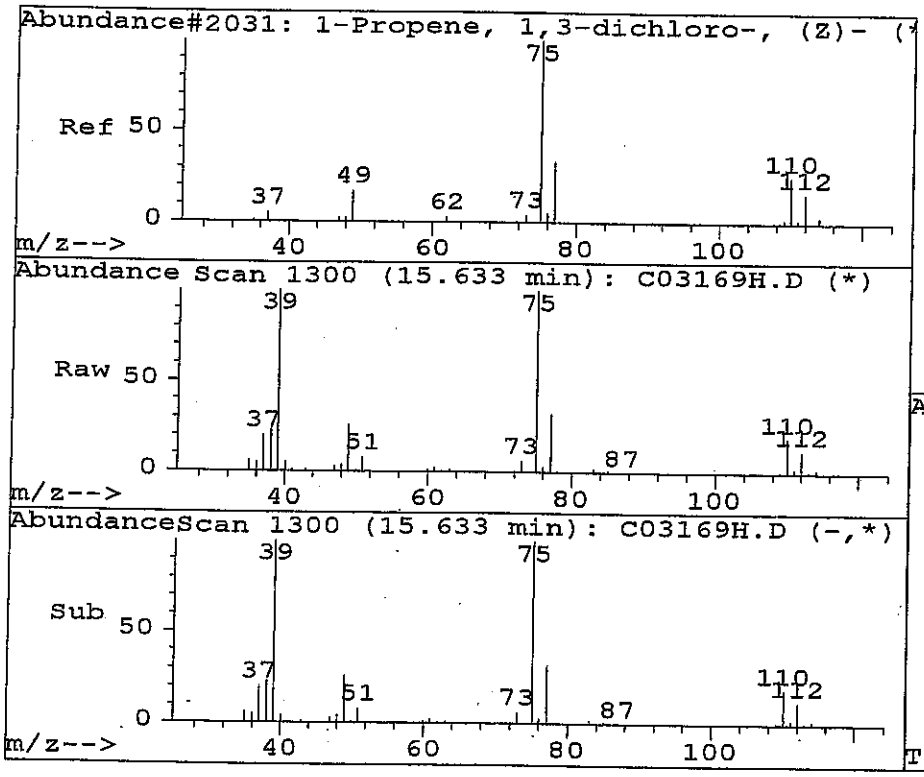


#49
Methyl Isobutyl Ketone
Concen: 14.35 ppbV
RT: 15.55 min Scan# 1291
Delta R.T. -0.15 min
Lab File: C03169H.D
Acq: 16 Mar 109 7:21 pm

Tgt Ion:43 Resp: 2505790

Ion	Ratio	Lower	Upper
43	100		
58	26.6	23.0	38.4
57	17.3	15.9	26.5
85	9.5	9.1	15.1

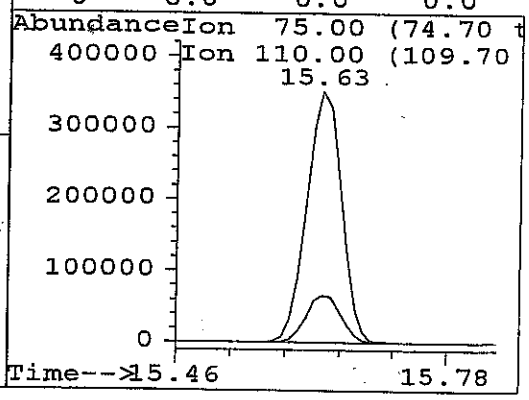


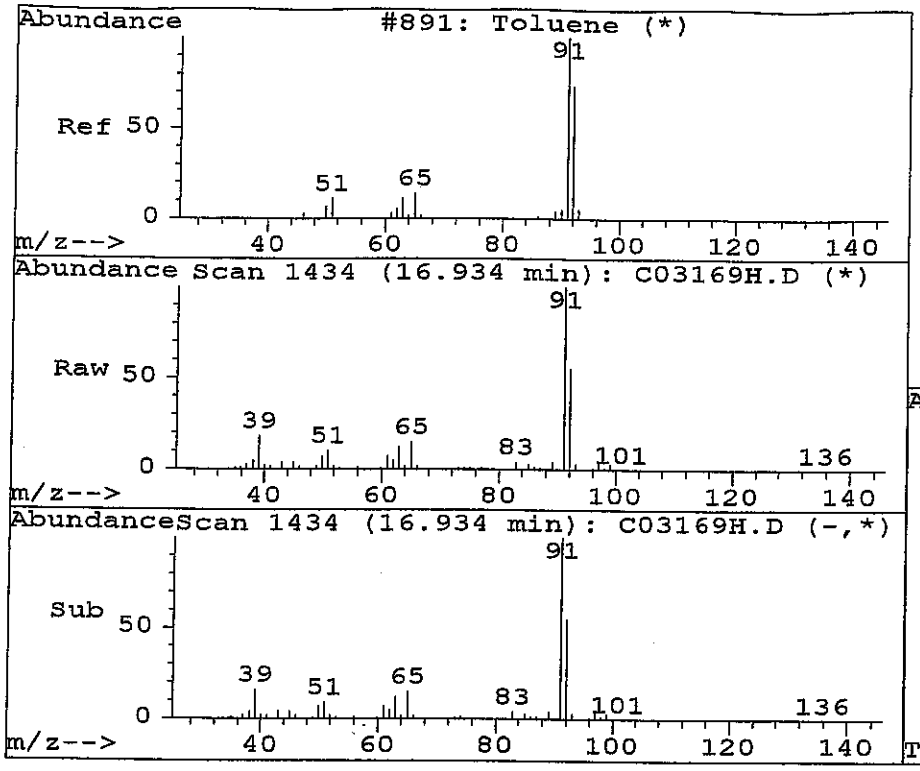


#50
cis-1,3-Dichloropropene
Concen: 13.06 ppbV
RT: 15.63 min Scan# 1300
Delta R.T. -0.19 min
Lab File: C03169H.D
Acq: 16 Mar 109 7:21 pm

Tgt Ion:75 Resp: 1010236

Ion	Ratio	Lower	Upper
75	100		
110	18.9	15.4	23.2
0	0.0	0.0	0.0
0	0.0	0.0	0.0

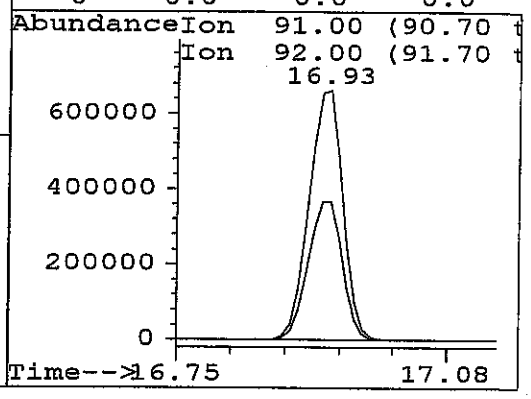


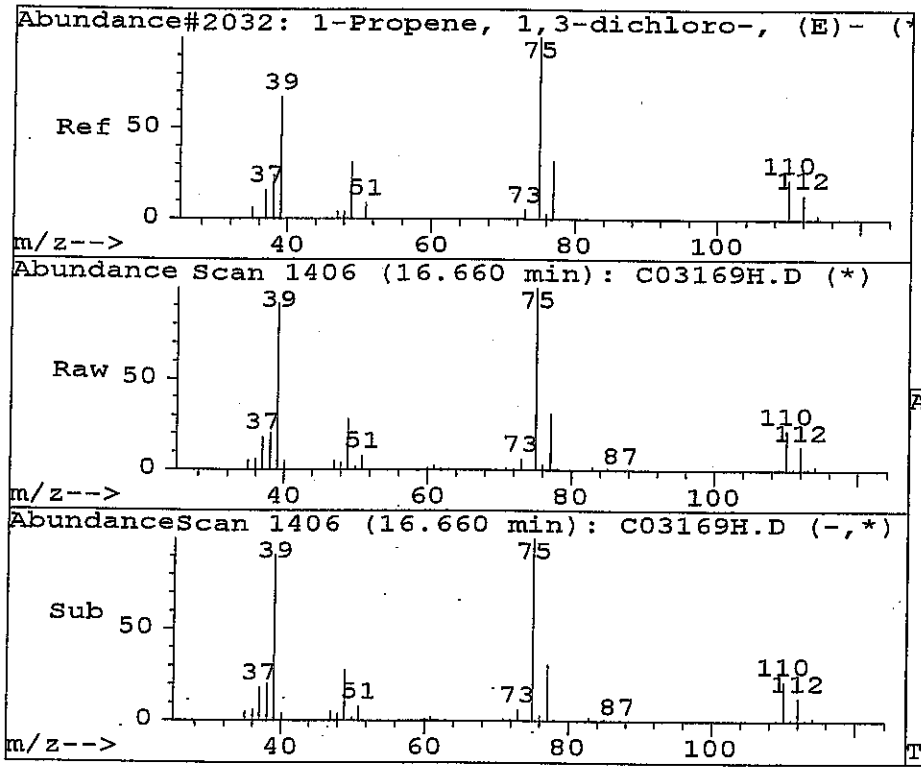


#51
Toluene
Concen: 10.85 ppbV
RT: 16.93 min Scan# 1434
Delta R.T. -0.18 min
Lab File: C03169H.D
Acq: 16 Mar 109 7:21 pm

Tgt Ion:91 Resp: 1877014

Ion	Ratio	Lower	Upper
91	100		
92	55.4	45.5	68.3
0	0.0	0.0	0.0
0	0.0	0.0	0.0

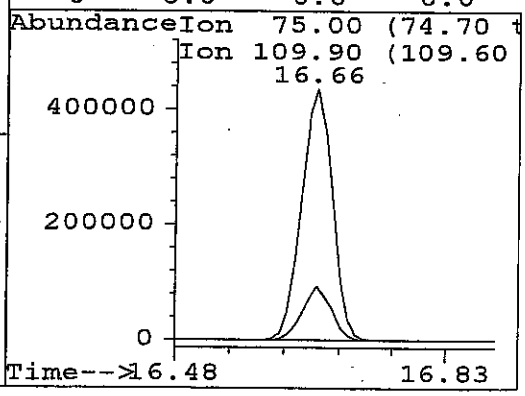


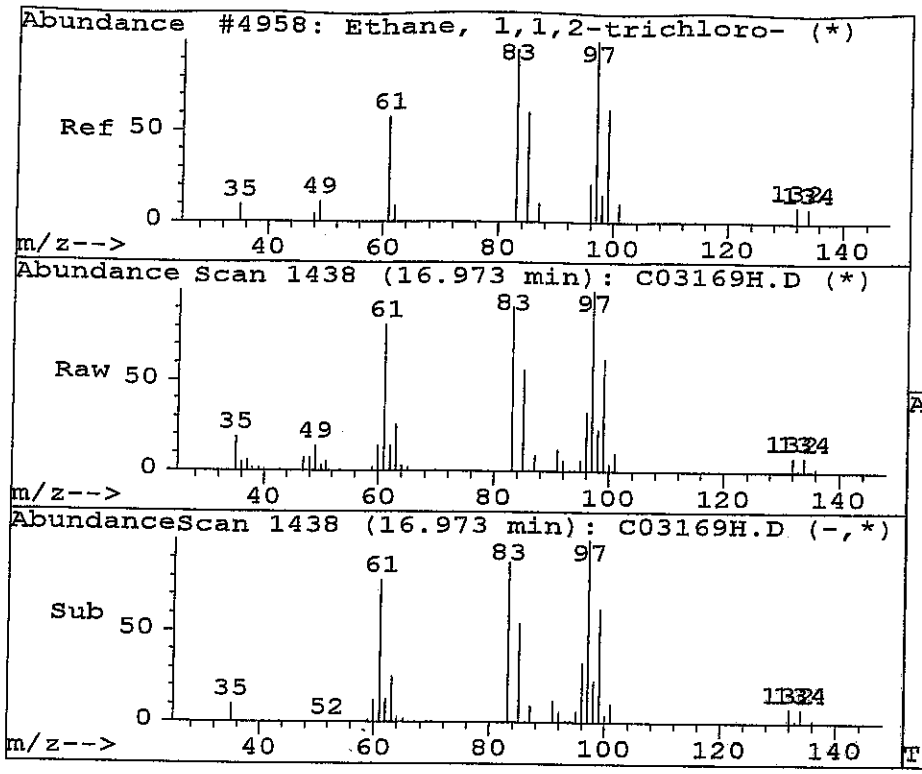


#52
trans-1,3-Dichloropropene
Concen: 12.30 ppbV
RT: 16.66 min Scan# 1406
Delta R.T. -0.19 min
Lab File: C03169H.D
Acq: 16 Mar 109 7:21 pm

Tgt Ion:75 Resp: 1205186

Ion	Ratio	Lower	Upper
75	100		
110	21.5	17.4	26.2
0	0.0	0.0	0.0
0	0.0	0.0	0.0

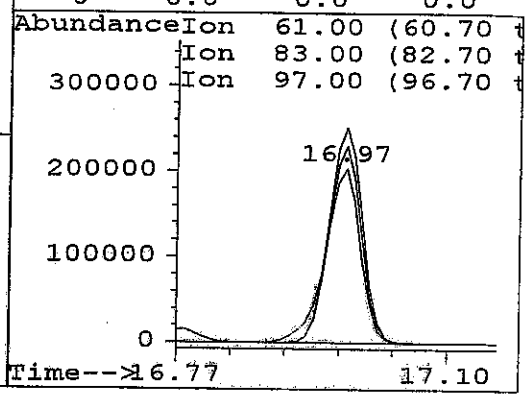


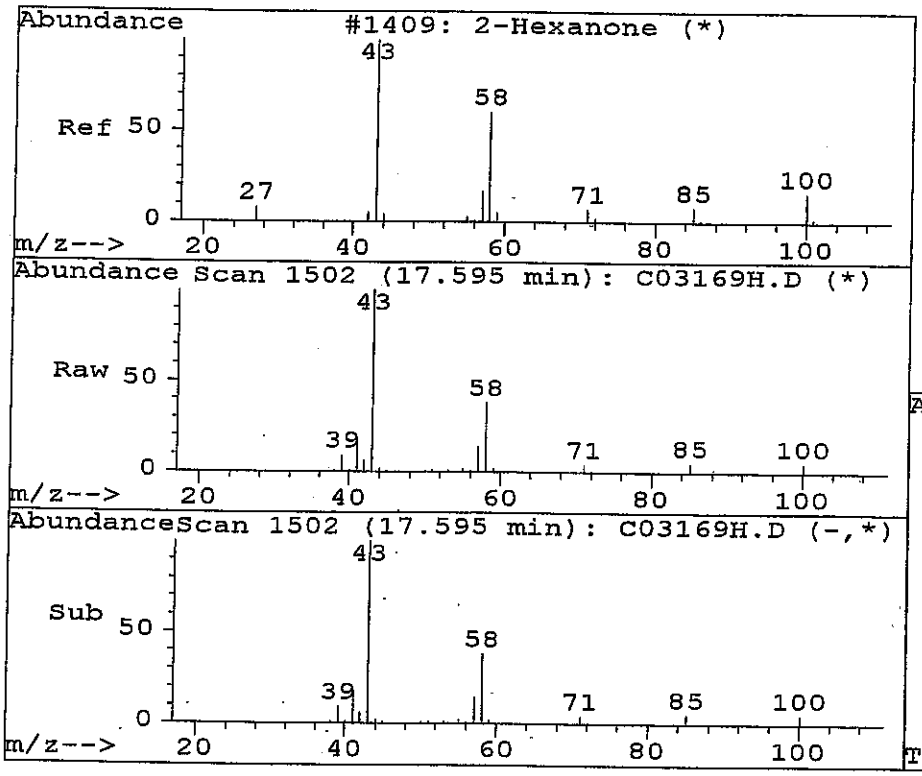


#53
1,1,2-Trichloroethane
Concen: 11.97 ppbV
RT: 16.97 min Scan# 1438
Delta R.T. -0.19 min
Lab File: C03169H.D
Acq: 16 Mar 109 7:21 pm

Tgt Ion:61 Resp: 608914

Ion	Ratio	Lower	Upper
61	100		
83	113.0	83.1	124.7
97	123.9	99.4	149.2
0	0.0	0.0	0.0

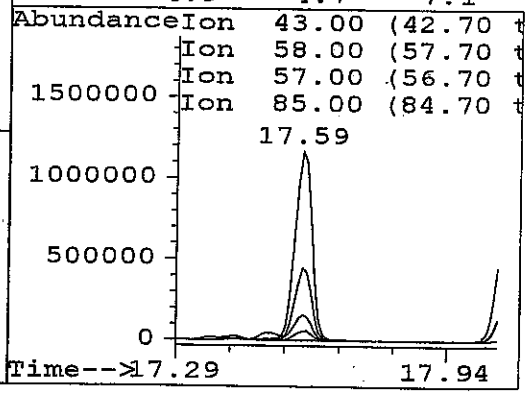


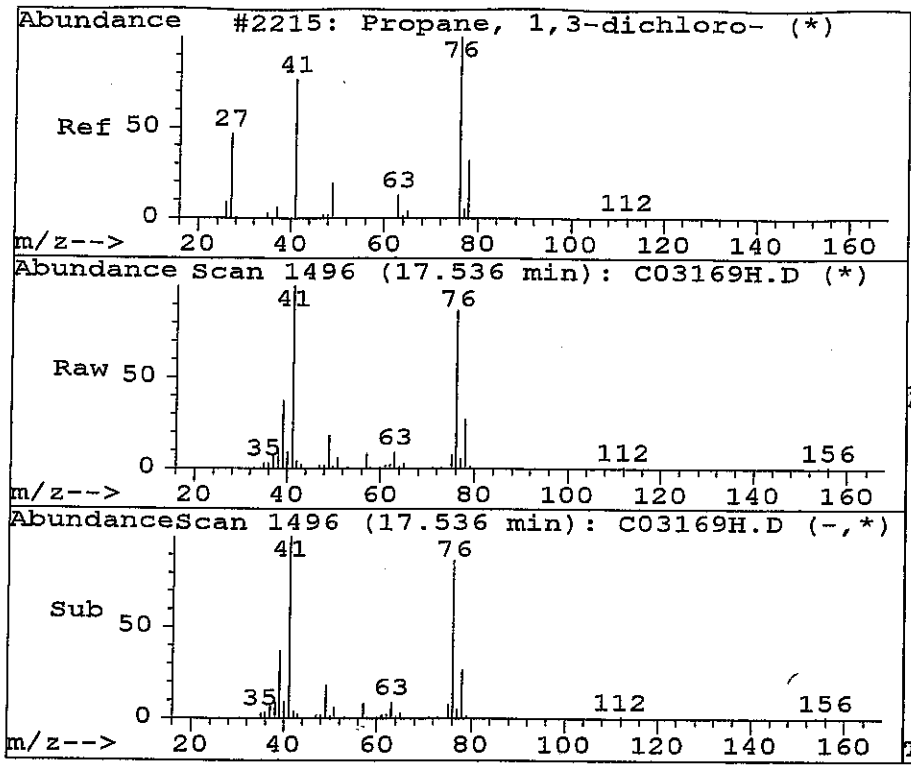


#54
2-Hexanone
Concen: 14.71 ppbV
RT: 17.59 min Scan# 1502
Delta R.T. -0.21 min
Lab File: C03169H.D
Acq: 16 Mar 109 7:21 pm

Tgt Ion:43 Resp: 3278869

Ion	Ratio	Lower	Upper
43	100		
58	38.2	28.1	46.9
57	12.9	10.4	17.4
85	4.9	4.7	7.1

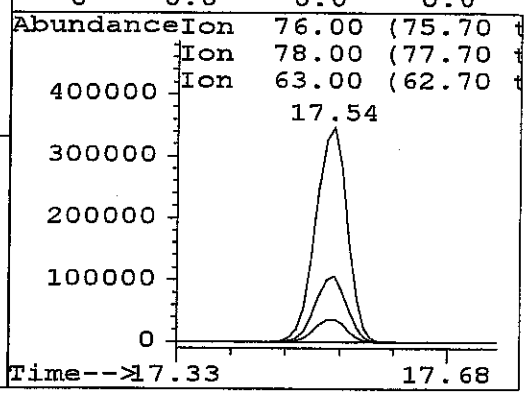


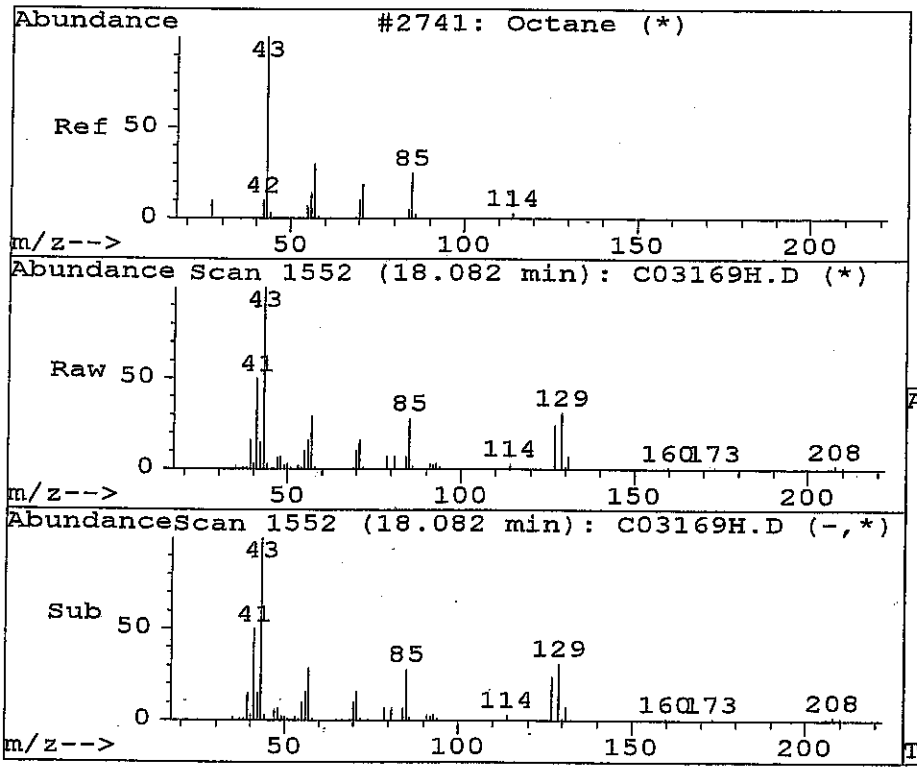


#55
1,3-Dichloropropane
Concen: 12.63 ppbV
RT: 17.54 min Scan# 1496
Delta R.T. -0.18 min
Lab File: C03169H.D
Acq: 16 Mar 109 7:21 pm

Tgt Ion:76 Resp: 989685

Ion	Ratio	Lower	Upper
76	100		
78	30.7	25.4	38.0
63	10.6	8.3	12.5
0	0.0	0.0	0.0

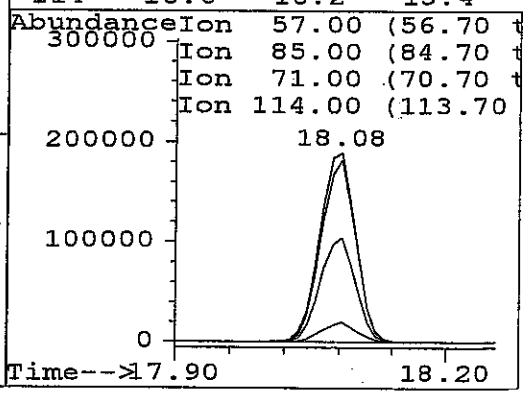


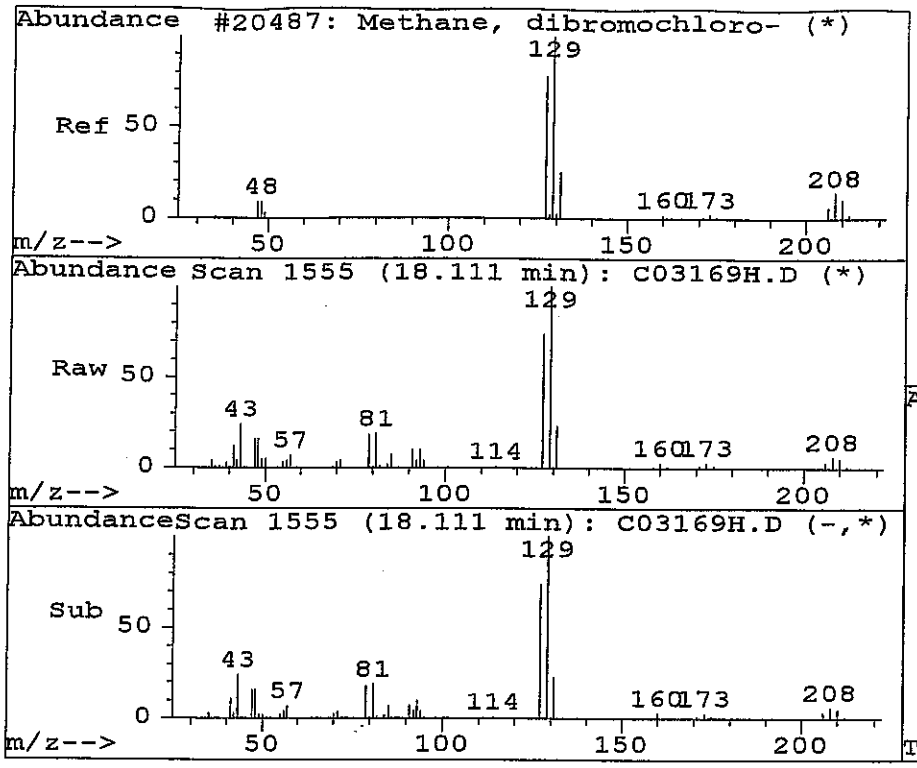


#56
Octane
Concen: 8.28 ppbV
RT: 18.08 min Scan# 1552
Delta R.T. -0.18 min
Lab File: C03169H.D
Acq: 16 Mar 109 7:21 pm

Tgt Ion:57 Resp: 525459

Ion	Ratio	Lower	Upper
57	100		
85	96.3	84.5	126.7
71	55.4	44.1	66.1
114	10.6	10.2	15.4

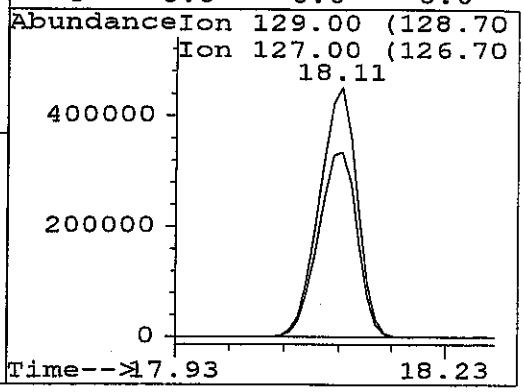


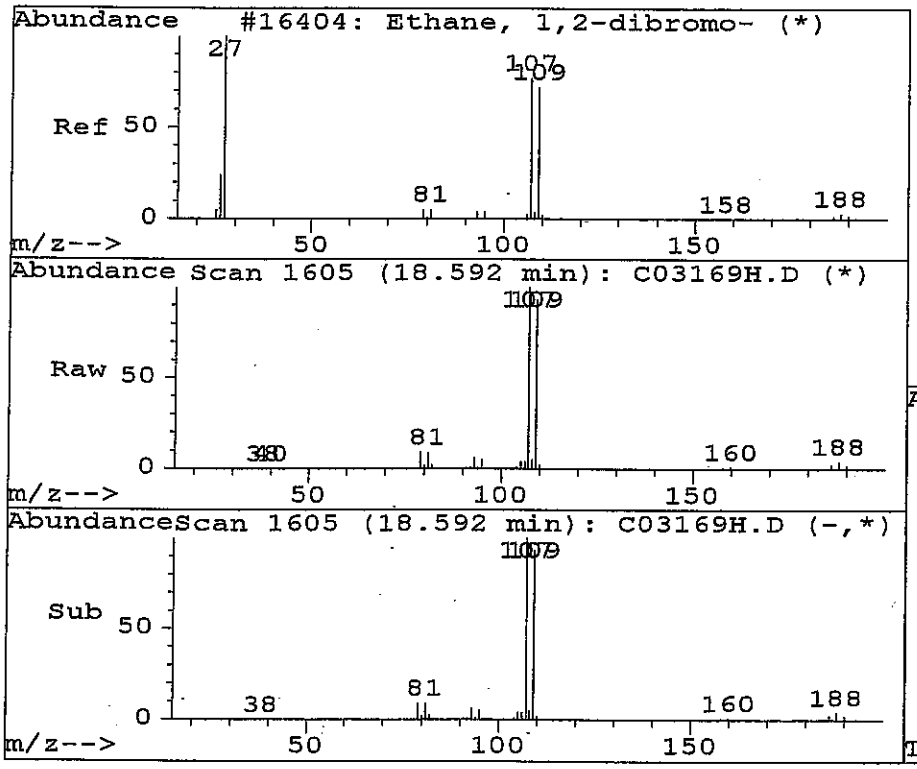


#57
Dibromochloromethane
Concen: 9.73 ppbV
RT: 18.11 min Scan# 1555
Delta R.T. -0.19 min
Lab File: C03169H.D
Acq: 16 Mar 109 7:21 pm

Tgt Ion:129 Resp: 1316838

Ion	Ratio	Lower	Upper
129	100		
127	74.2	59.7	89.5
0	0.0	0.0	0.0
0	0.0	0.0	0.0

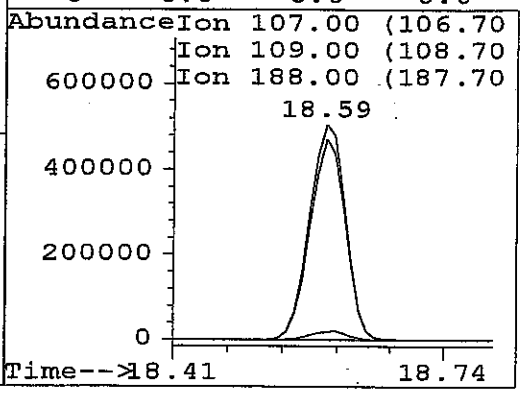


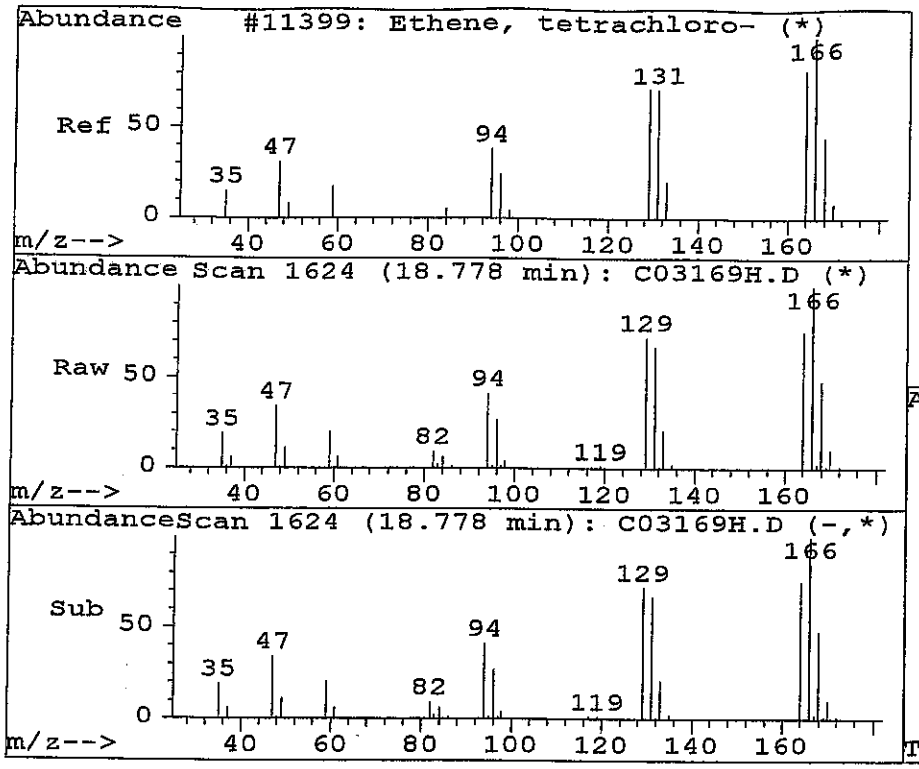


#58
1,2-Dibromoethane
Concen: 12.10 ppbV
RT: 18.59 min Scan# 1605
Delta R.T. -0.21 min
Lab File: C03169H.D
Acq: 16 Mar 109 7:21 pm

Tgt Ion:107 Resp: 1505940

Ion	Ratio	Lower	Upper
107	100		
109	93.2	75.4	113.0
188	3.6	3.8	5.6#
0	0.0	0.0	0.0

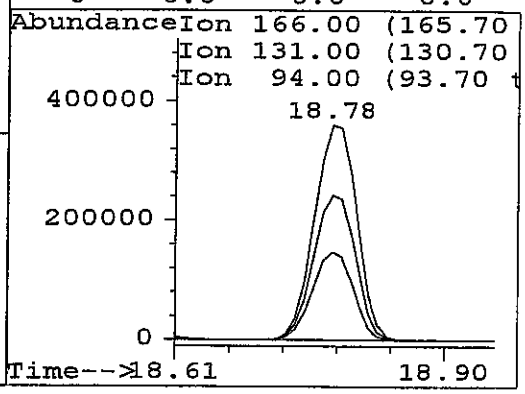


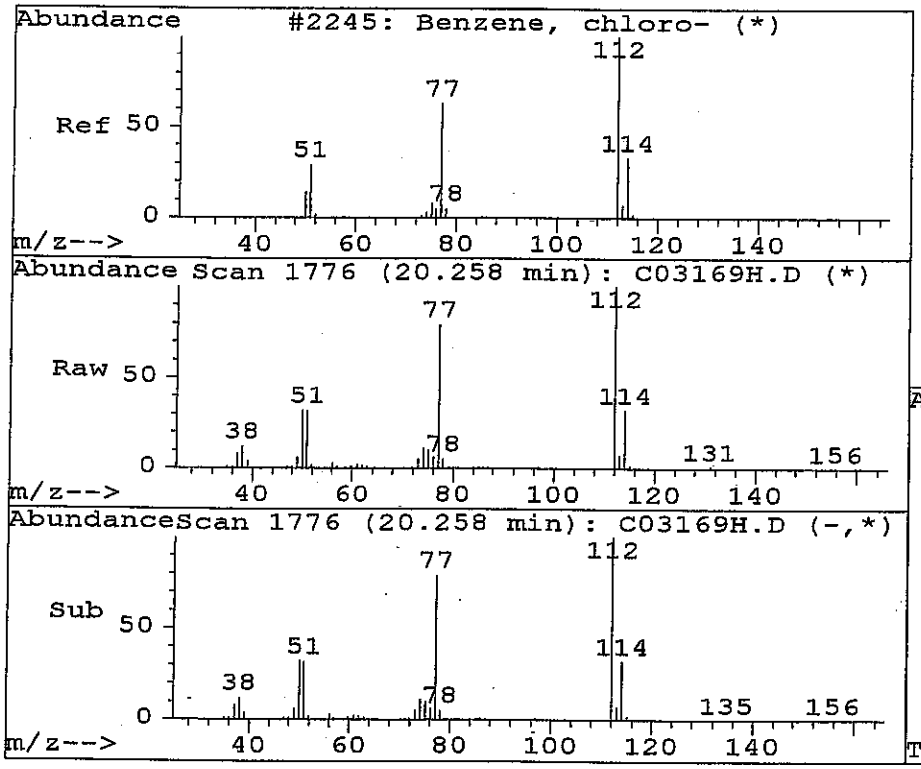


#59
Tetrachloroethene
Concen: 9.31 ppbV
RT: 18.78 min Scan# 1624
Delta R.T. -0.19 min
Lab File: C03169H.D
Acq: 16 Mar 109 7:21 pm

Tgt Ion:166 Resp: 1126037

Ion	Ratio	Lower	Upper
166	100		
131	67.2	49.8	74.8
94	41.0	28.2	42.4
0	0.0	0.0	0.0

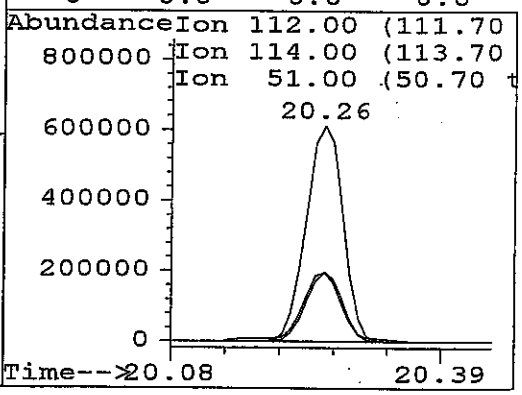


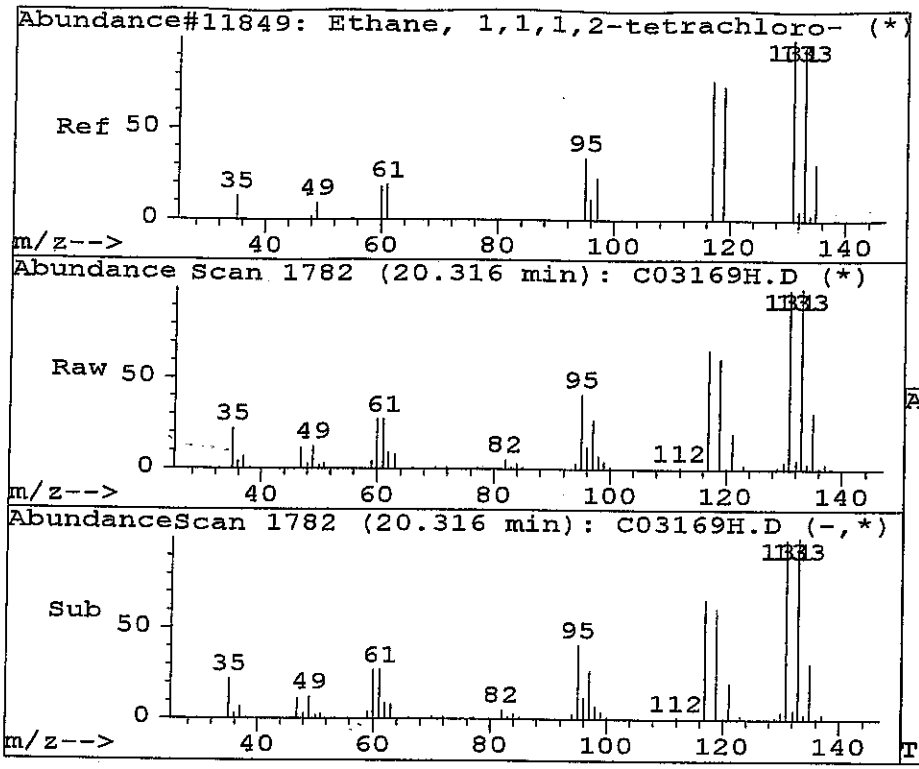


#60
Chlorobenzene
Concen: 11.41 ppbV
RT: 20.26 min Scan# 1776
Delta R.T. -0.19 min
Lab File: C03169H.D
Acq: 16 Mar 109 7:21 pm

Tgt Ion:112 Resp: 1818049

Ion	Ratio	Lower	Upper
112	100		
114	32.1	25.0	37.4
51	30.9	23.3	34.9
0	0.0	0.0	0.0

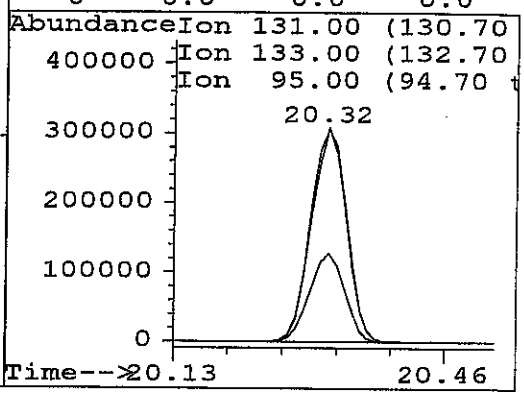


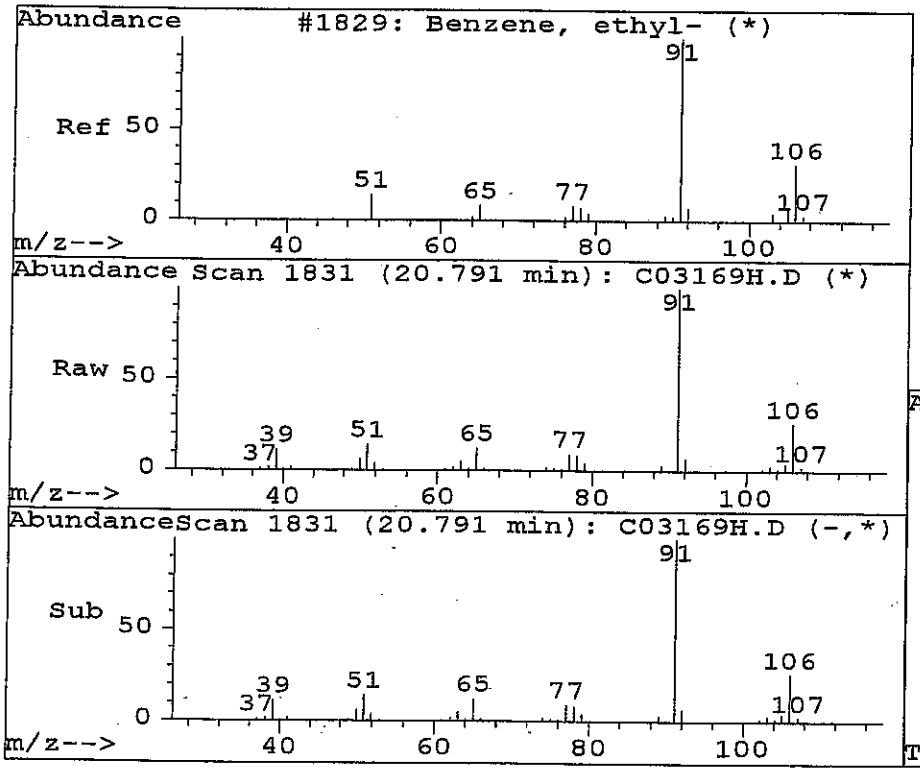


#61
1,1,1,2-Tetrachloroethane
Concen: 10.15 ppbV
RT: 20.32 min Scan# 1782
Delta R.T. -0.19 min
Lab File: C03169H.D
Acq: 16 Mar 109 7:21 pm

Tgt Ion:131 Resp: 921637

Ion	Ratio	Lower	Upper
131	100		
133	100.8	78.9	118.3
95	41.8	30.4	45.6
0	0.0	0.0	0.0

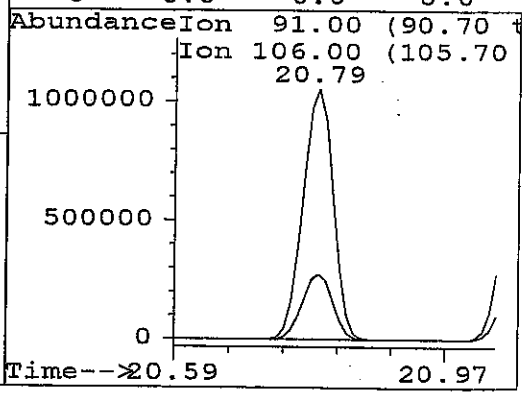


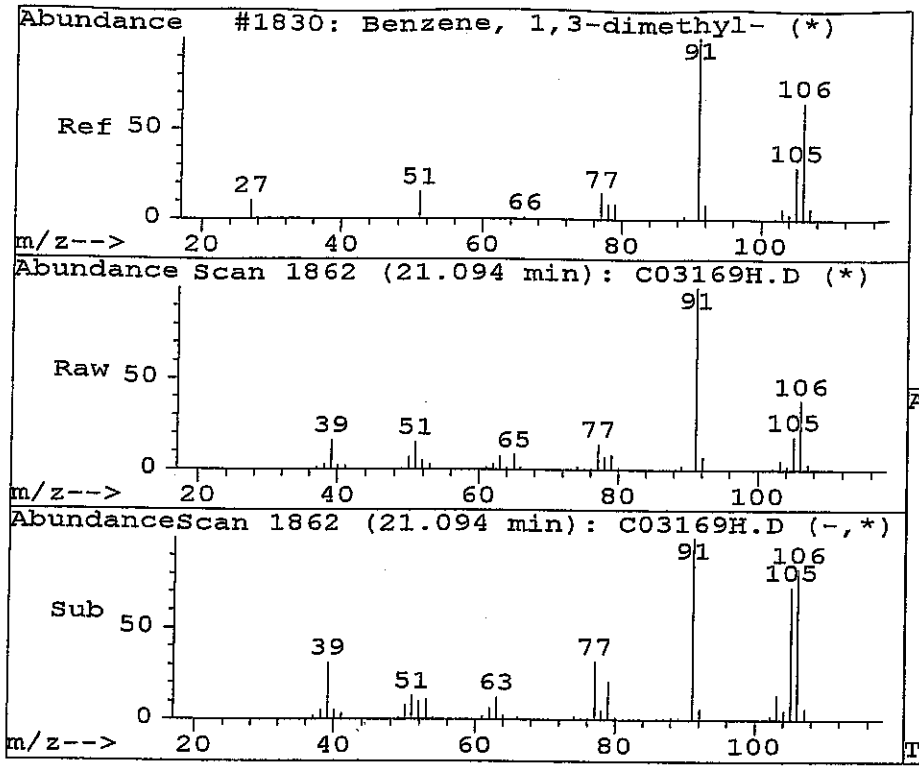


#62
Ethylbenzene
Concen: 12.07 ppbV
RT: 20.79 min Scan# 1831
Delta R.T. -0.20 min
Lab File: C03169H.D
Acq: 16 Mar 109 7:21 pm

Tgt Ion:91 Resp: 3108186

Ion	Ratio	Lower	Upper
91	100		
106	26.0	20.9	31.3
0	0.0	0.0	0.0
0	0.0	0.0	0.0

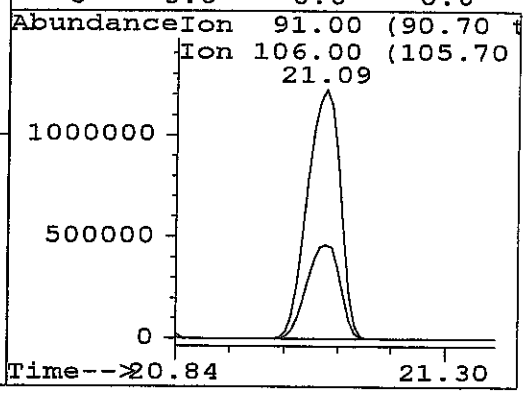


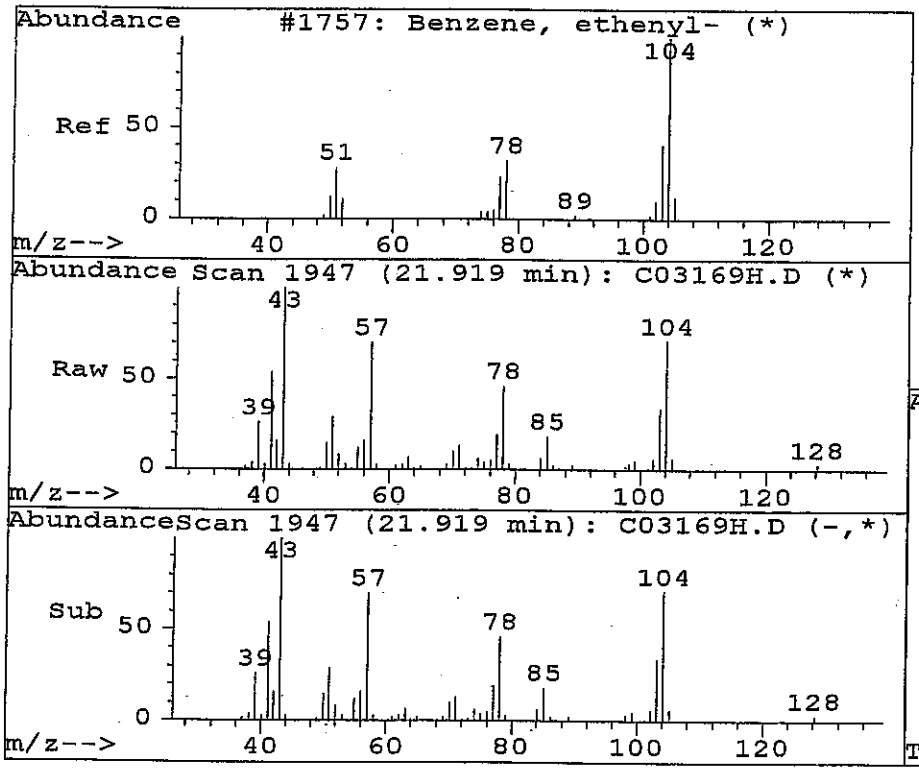


#63
m & p-Xylene
Concen: 20.91 ppbV
RT: 21.09 min Scan# 1862
Delta R.T. -0.19 min
Lab File: C03169H.D
Acq: 16 Mar 109 7:21 pm

Tgt Ion:91 Resp: 4725274

Ion	Ratio	Lower	Upper
91	100		
106	37.7	30.8	46.2
0	0.0	0.0	0.0
0	0.0	0.0	0.0

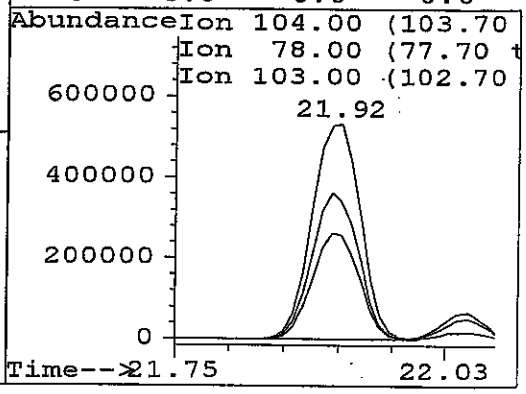


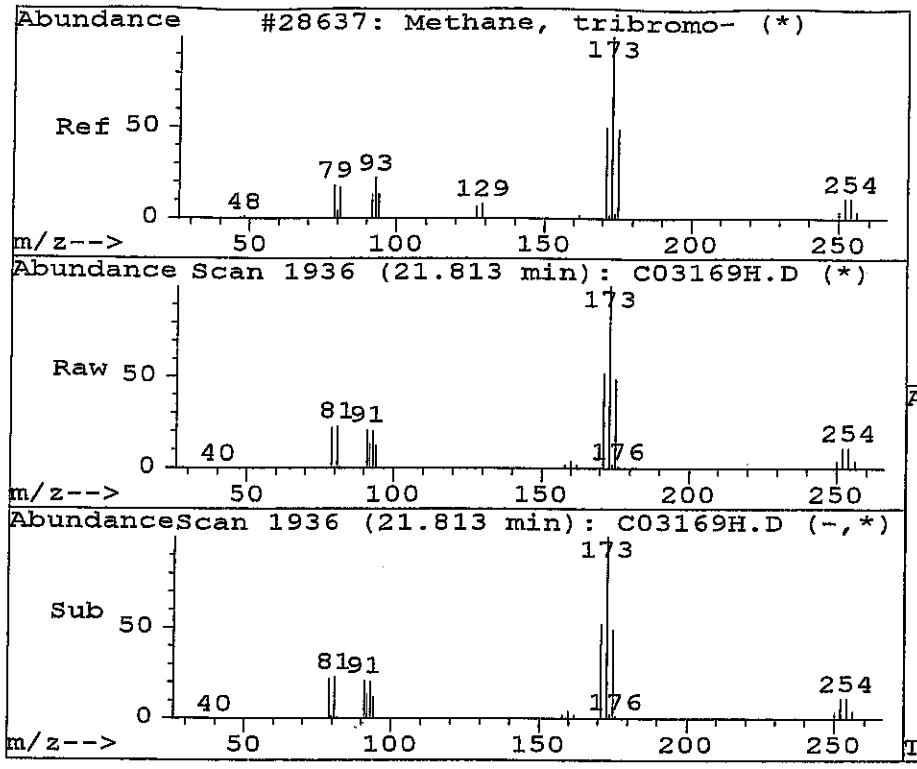


#64
Styrene
Concen: 11.40 ppbV
RT: 21.92 min Scan# 1947
Delta R.T. -0.22 min
Lab File: C03169H.D
Acq: 16 Mar 109 7:21 pm

Tgt Ion:104 Resp: 1812012

Ion	Ratio	Lower	Upper
104	100		
78	63.5	52.3	78.5
103	48.0	37.7	56.5
0	0.0	0.0	0.0

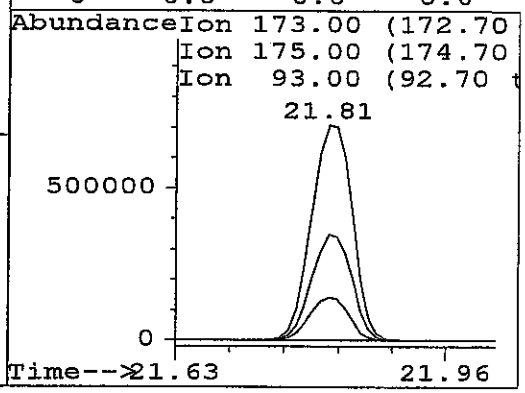


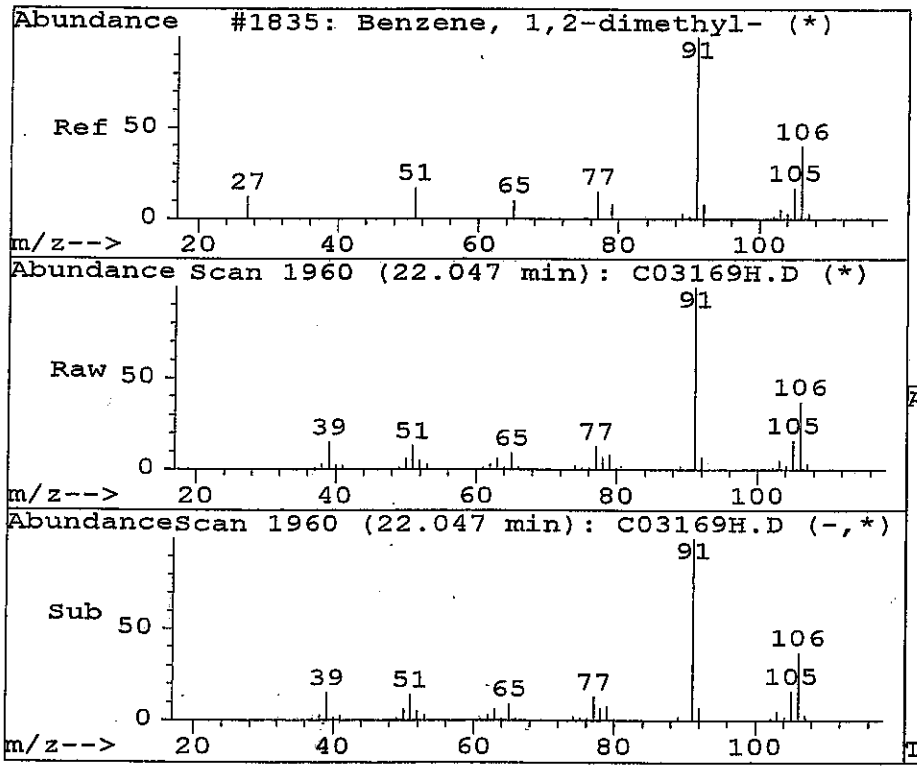


#65
Bromoform
Concen: 11.24 ppbV
RT: 21.81 min Scan# 1936
Delta R.T. -0.19 min
Lab File: C03169H.D
Acq: 16 Mar 109 7:21 pm

Tgt Ion:173 Resp: 2416870

Ion	Ratio	Lower	Upper
173	100		
175	49.2	38.6	57.8
93	20.0	14.0	21.0
0	0.0	0.0	0.0

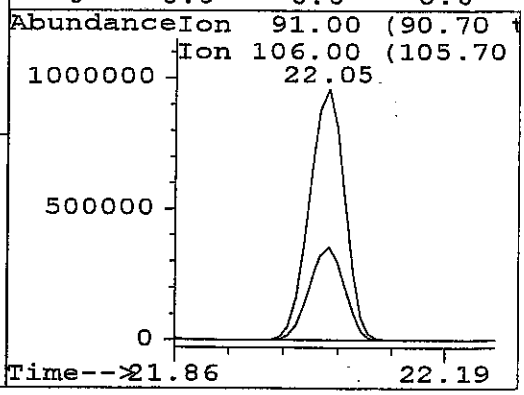


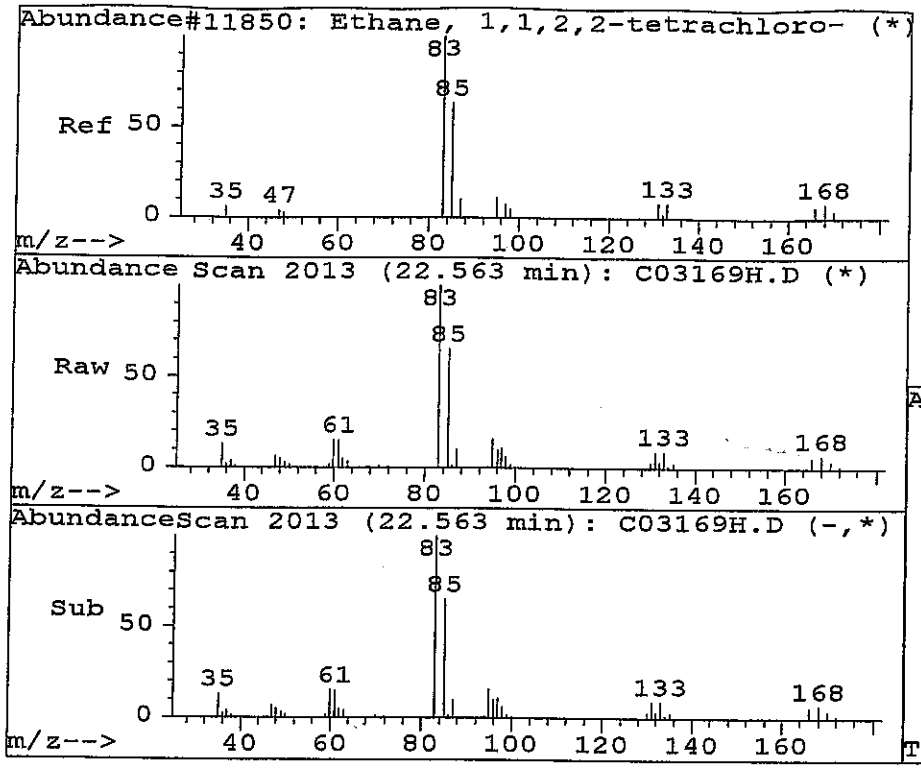


#66
o-Xylene
Concen: 11.50 ppbV
RT: 22.05 min Scan# 1960
Delta R.T. -0.20 min
Lab File: C03169H.D
Acq: 16 Mar 109 7:21 pm

Tgt Ion:91 Resp: 2817484

Ion	Ratio	Lower	Upper
91	100		
106	37.0	28.6	42.8
0	0.0	0.0	0.0
0	0.0	0.0	0.0

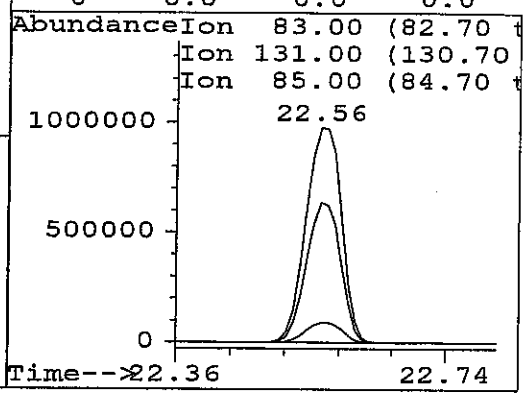


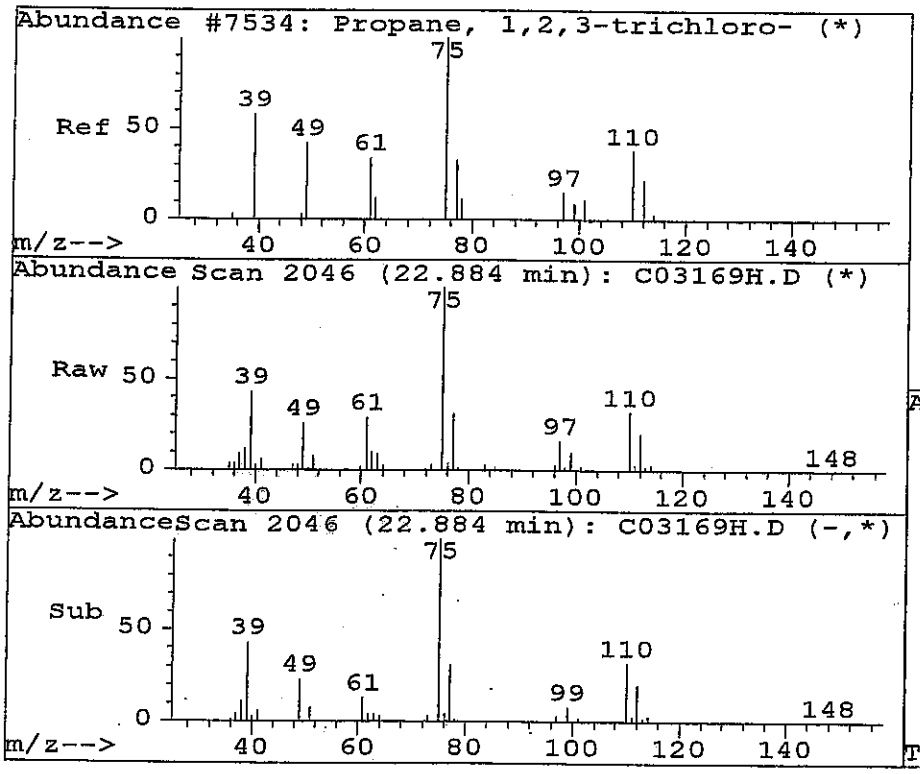


#67
1,1,2,2-Tetrachloroethane
Concen: 18.54 ppbV
RT: 22.56 min Scan# 2013
Delta R.T. -0.19 min
Lab File: C03169H.D
Acq: 16 Mar 109 7:21 pm

Tgt Ion:83 Resp: 3385910

Ion	Ratio	Lower	Upper
83	100		
131	9.1	10.1	15.1#
85	65.2	52.4	78.6
0	0.0	0.0	0.0

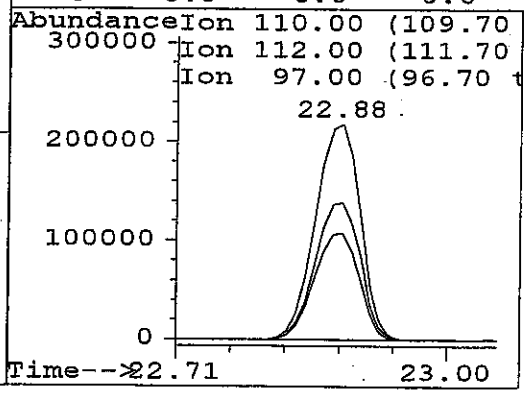


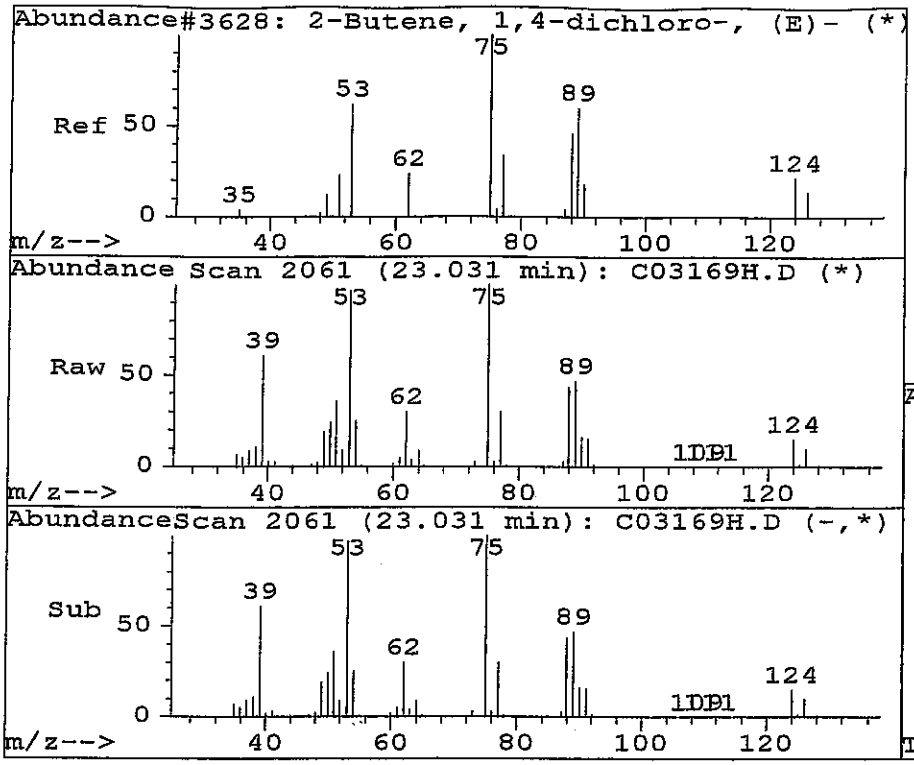


#68
1,2,3-Trichloropropane
Concen: 13.56 ppbV
RT: 22.88 min Scan# 2046
Delta R.T. -0.20 min
Lab File: C03169H.D
Acq: 16 Mar 109 7:21 pm

Tgt Ion:110 Resp: 714721

Ion	Ratio	Lower	Upper
110	100		
112	63.4	51.6	77.4
97	49.1	35.4	53.2
0	0.0	0.0	0.0

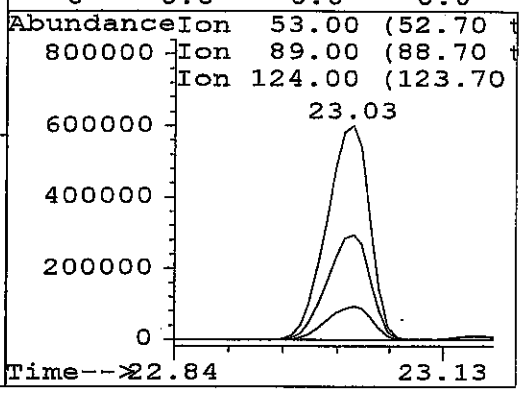


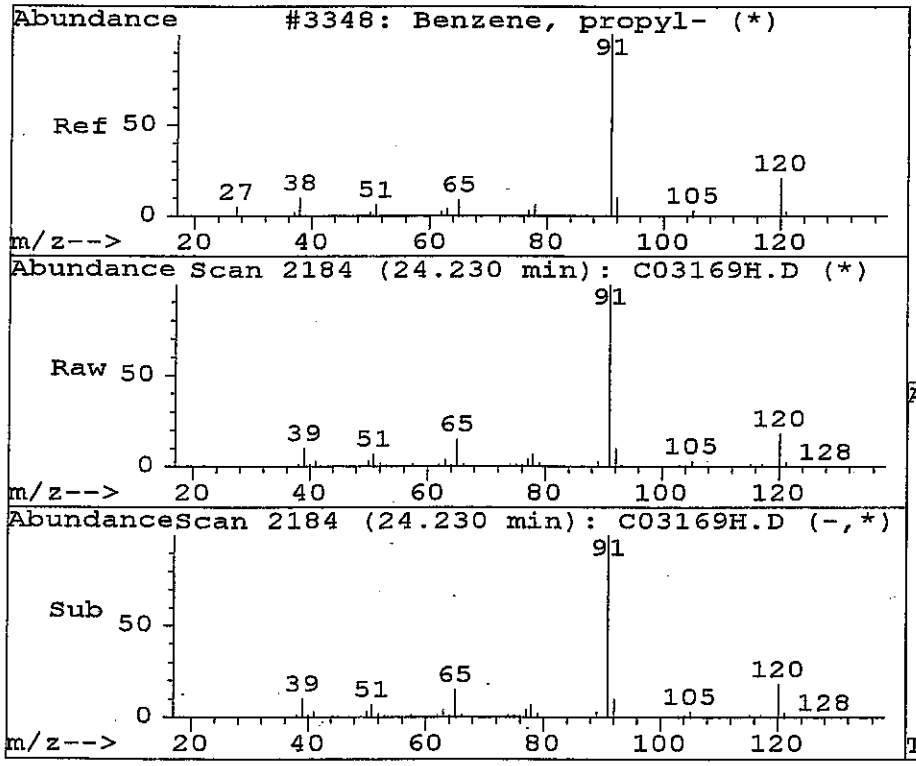


#69
t-1,4-Dichloro-2-butene
Concen: 39.27 ppbV
RT: 23.03 min Scan# 2061
Delta R.T. -0.20 min
Lab File: C03169H.D
Acq: 16 Mar 109 7:21 pm

Tgt Ion:53 Resp: 2007908

Ion	Ratio	Lower	Upper
53	100		
89	48.9	40.2	60.2
124	15.7	15.0	22.4
0	0.0	0.0	0.0

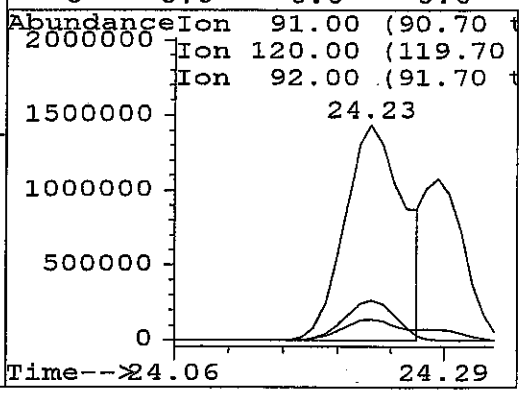


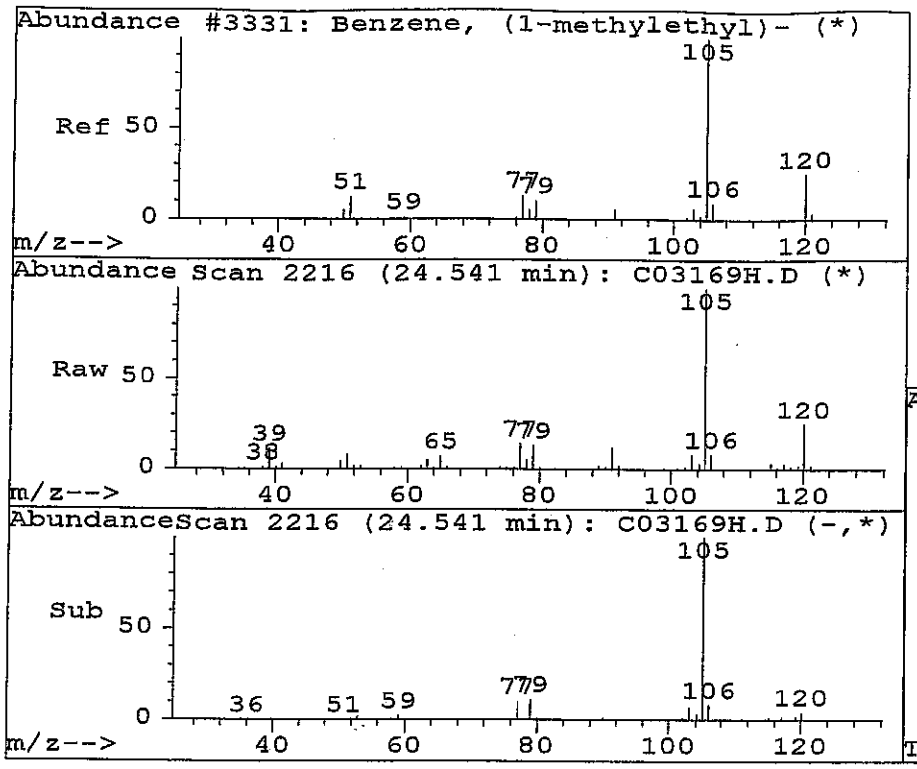


#70
n-Propylbenzene
Concen: 12.35 ppbV
RT: 24.23 min Scan# 2184
Delta R.T. -0.20 min
Lab File: C03169H.D
Acq: 16 Mar 109 7:21 pm

Tgt Ion:91 Resp: 5124406

Ion	Ratio	Lower	Upper
91	100		
120	15.6	14.3	21.5
92	9.6	7.9	11.9
0	0.0	0.0	0.0

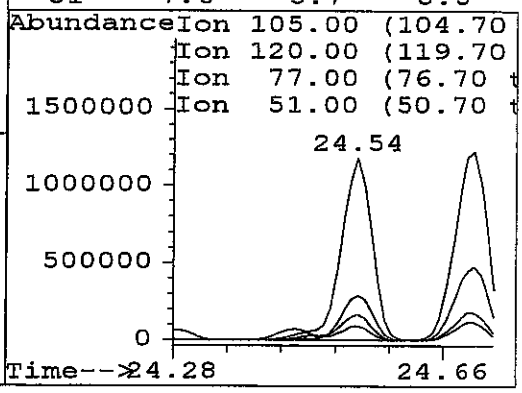


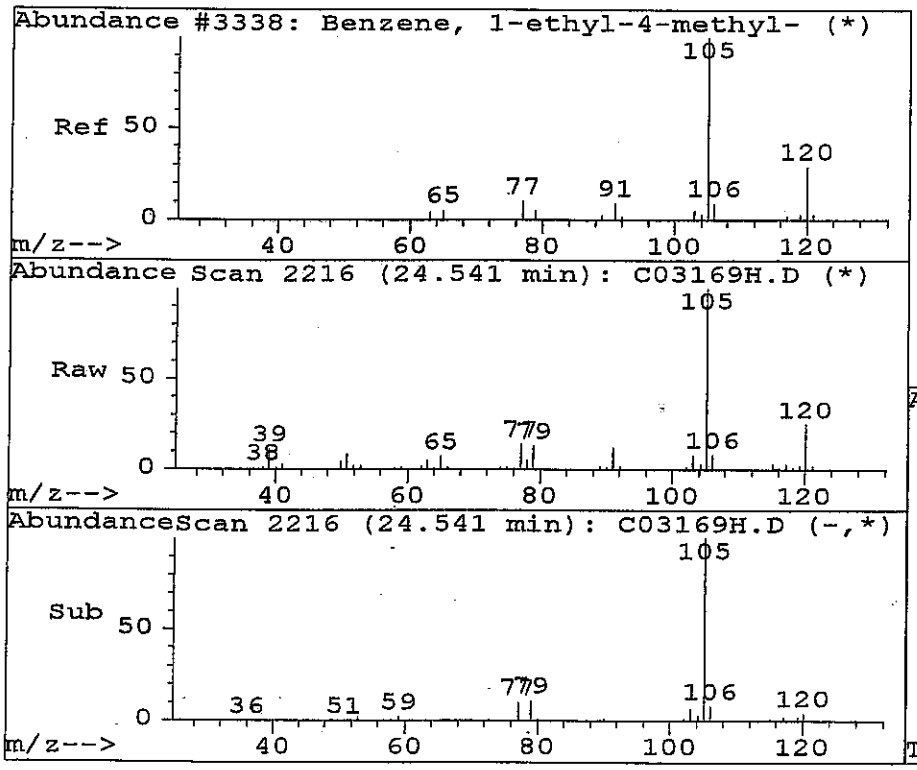


#71
Isopropylbenzene
Concen: 11.44 ppbV
RT: 24.54 min Scan# 2216
Delta R.T. -0.20 min
Lab File: C03169H.D
Acq: 16 Mar 109 7:21 pm

Tgt Ion:105 Resp: 3712735

Ion	Ratio	Lower	Upper
105	100		
120	25.3	20.2	30.4
77	15.9	12.5	18.7
51	7.6	5.7	8.5

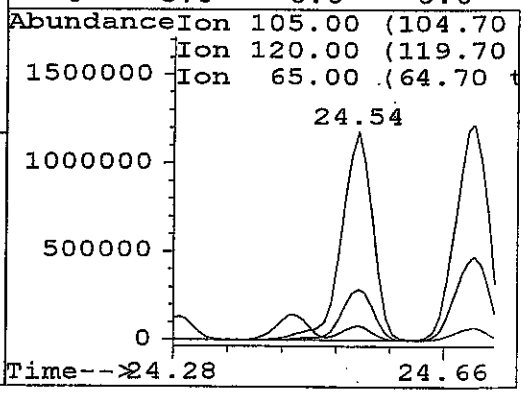


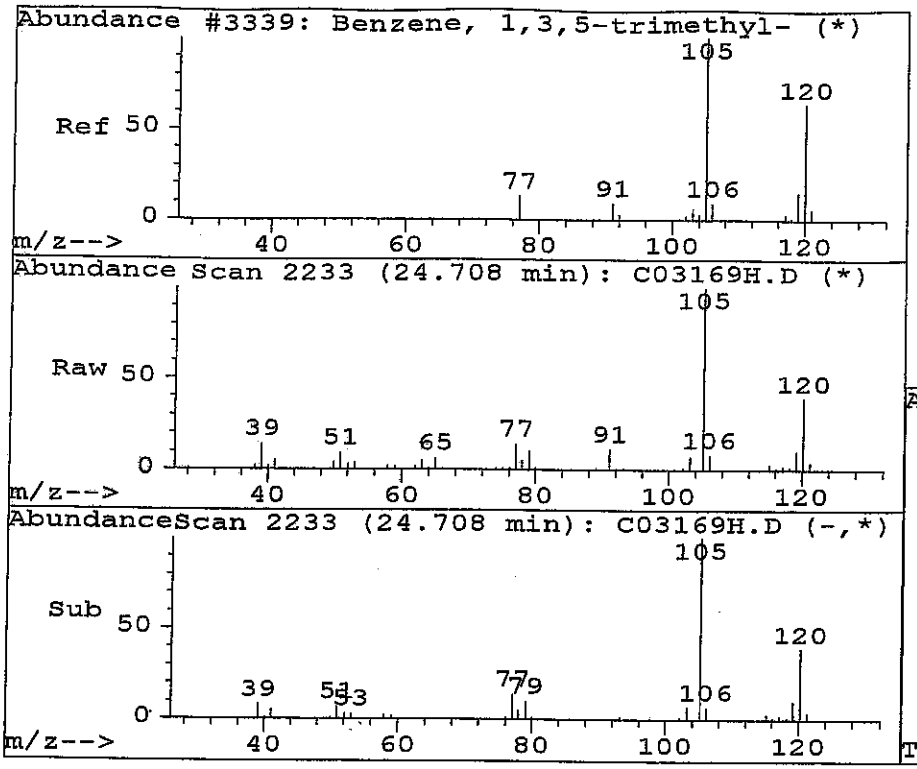


#72
4-Ethyltoluene
Concen: 11.34 ppbV
RT: 24.54 min Scan# 2216
Delta R.T. -0.20 min
Lab File: C03169H.D
Acq: 16 Mar 109 7:21 pm

Tgt Ion:105 Resp: 3712735

Ion	Ratio	Lower	Upper
105	100		
120	24.5	20.4	30.6
65	6.8	5.4	8.0
0	0.0	0.0	0.0

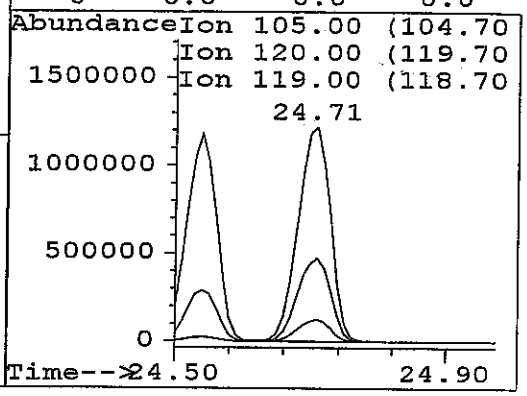


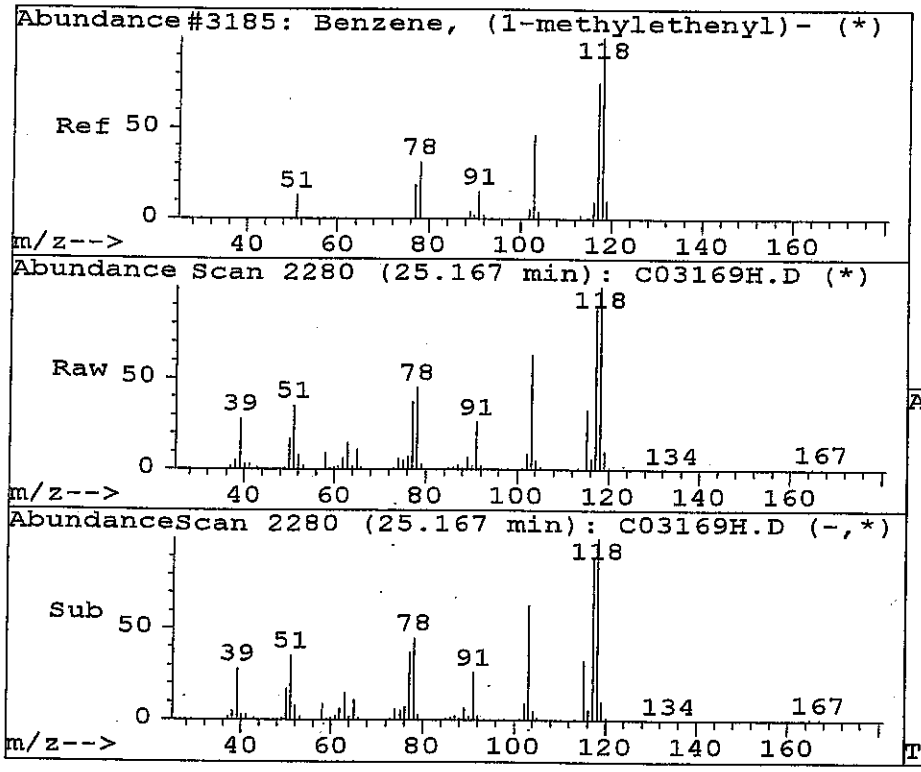


#73
1,3,5-Trimethylbenzene
Concen: 11.91 ppbV
RT: 24.71 min Scan# 2233
Delta R.T. -0.21 min
Lab File: C03169H.D
Acq: 16 Mar 109 7:21 pm

Tgt Ion:105 Resp: 3957960

Ion	Ratio	Lower	Upper
105	100		
120	38.9	32.1	48.1
119	10.3	8.2	12.4
0	0.0	0.0	0.0

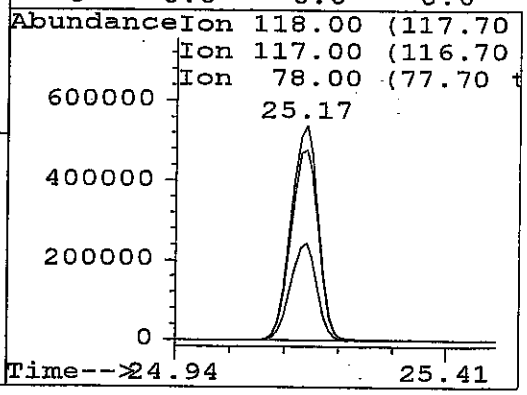


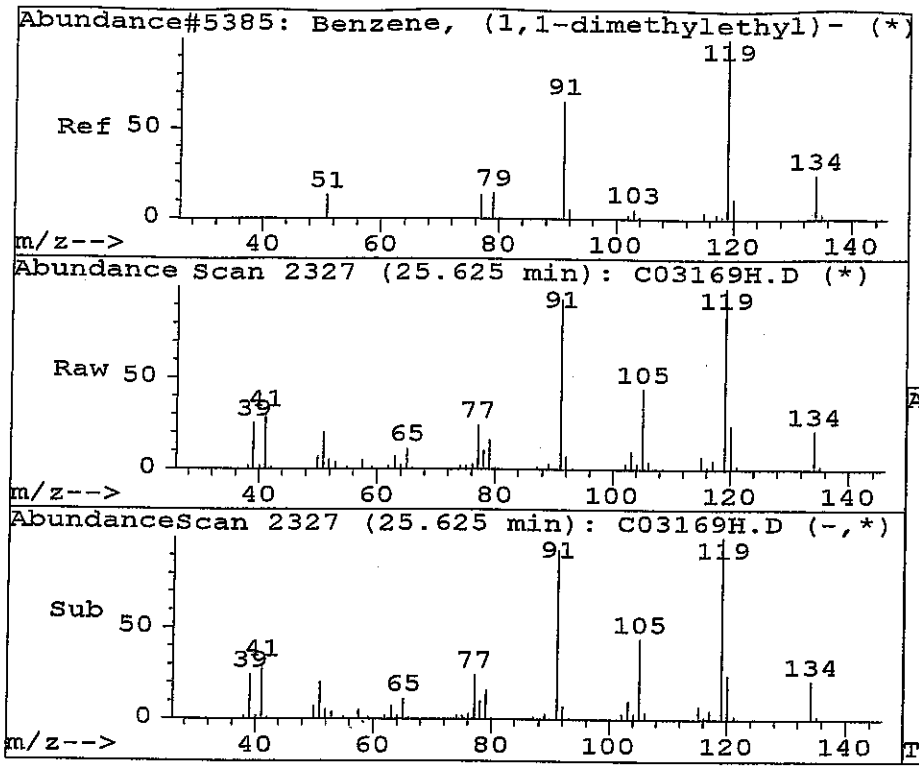


#74
Methylstyrene
Concen: 13.61 ppbV
RT: 25.17 min Scan# 2280
Delta R.T. -0.19 min
Lab File: C03169H.D
Acq: 16 Mar 109 7:21 pm

Tgt Ion:118 Resp: 1746656

Ion	Ratio	Lower	Upper
118	100		
117	88.5	71.4	107.0
78	45.2	32.2	48.2
0	0.0	0.0	0.0

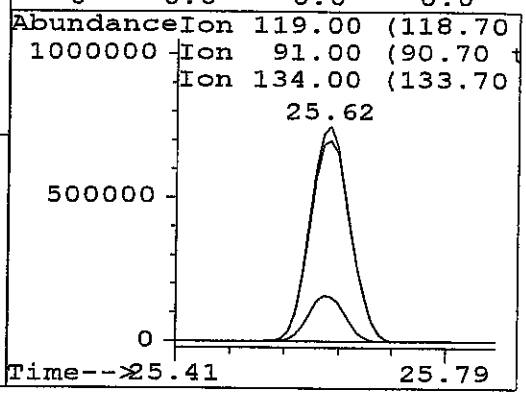


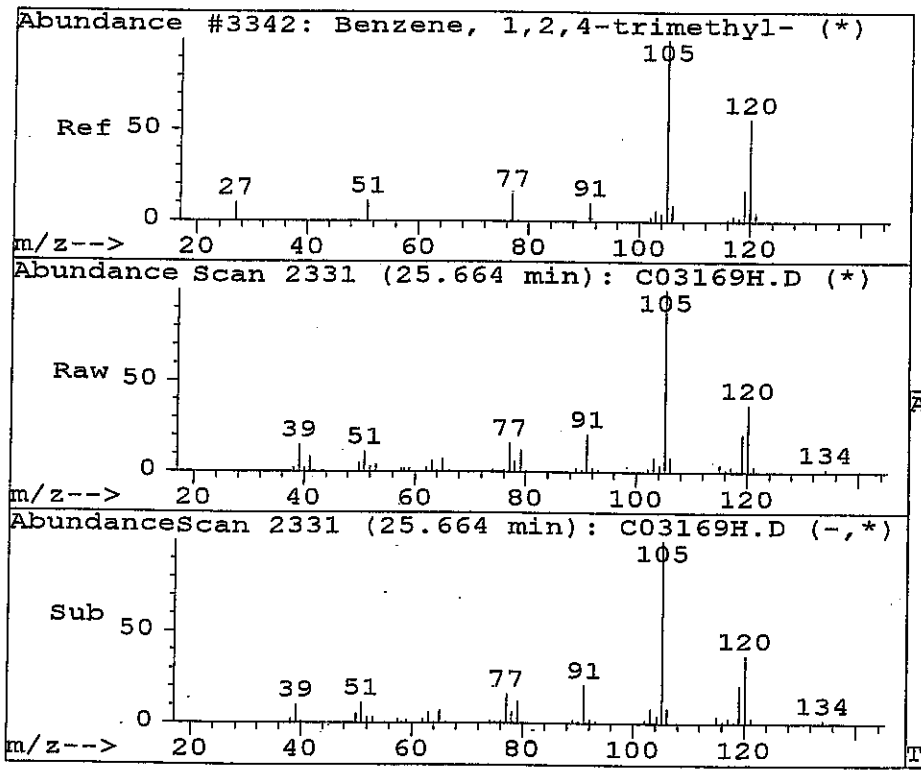


#75
tert-butyl benzene
Concen: 9.67 ppbV
RT: 25.62 min Scan# 2327
Delta R.T. -0.19 min
Lab File: C03169H.D
Acq: 16 Mar 109 7:21 pm

Tgt Ion:119 Resp: 2904495

Ion	Ratio	Lower	Upper
119	100		
91	96.1	75.7	113.5
134	19.6	15.6	23.4
0	0.0	0.0	0.0

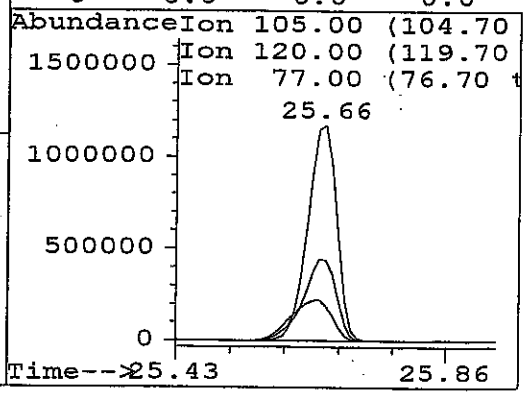


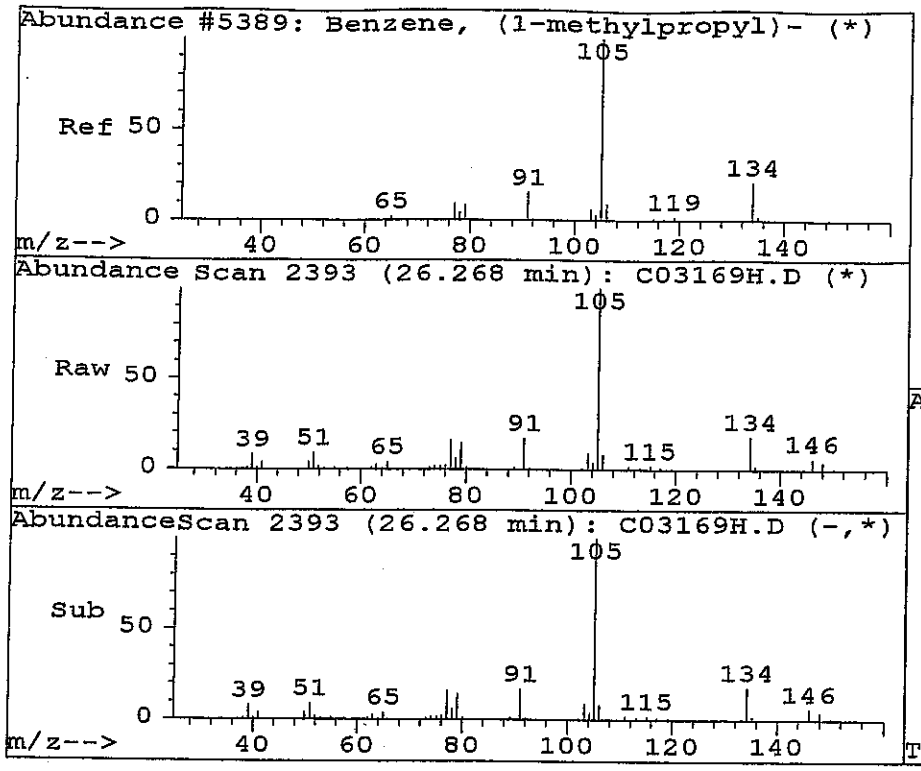


#76
1,2,4-Trimethylbenzene
Concen: 9.88 ppbV
RT: 25.66 min Scan# 2331
Delta R.T. -0.23 min
Lab File: C03169H.D
Acq: 16 Mar 109 7:21 pm

Tgt Ion:105 Resp: 3635276

Ion	Ratio	Lower	Upper
105	100		
120	37.3	32.2	48.4
77	16.2	15.0	22.4
0	0.0	0.0	0.0

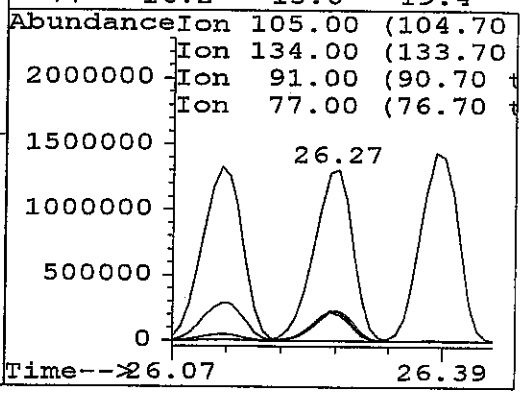


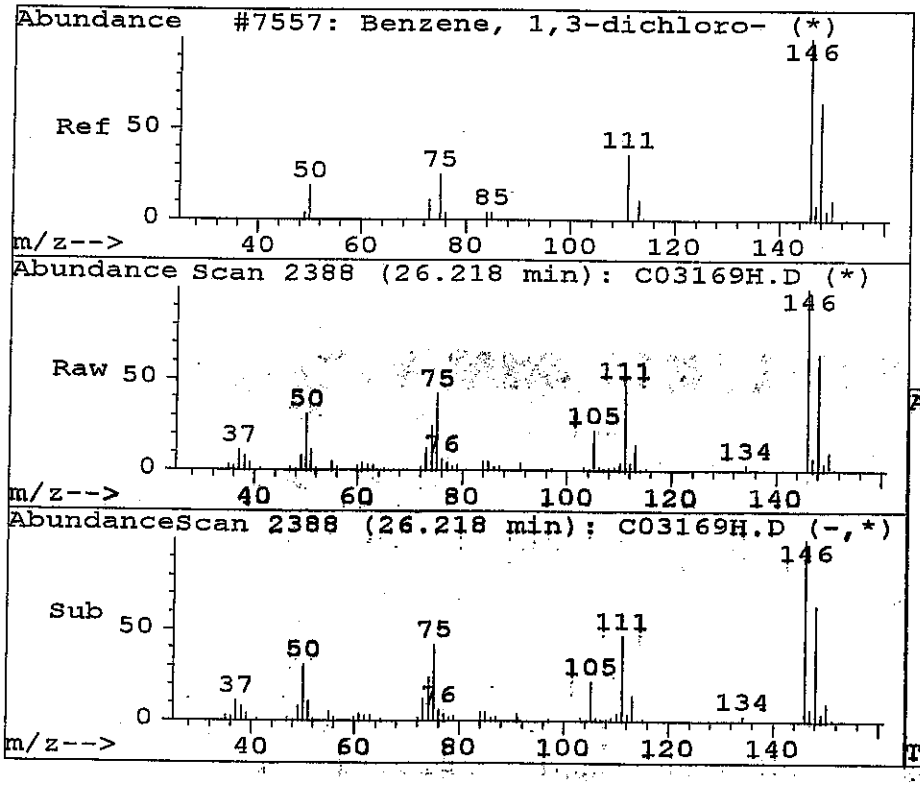


#77
sec-butylbenzene
Concen: 10.51 ppbV
RT: 26.27 min Scan# 2393
Delta R.T. -0.23 min
Lab File: C03169H.D
Acq: 16 Mar 109 7:21 pm

Tgt Ion:105 Resp: 4221559

Ion	Ratio	Lower	Upper
105	100		
134	17.4	15.2	22.8
91	17.4	13.8	20.8
77	16.2	13.0	19.4

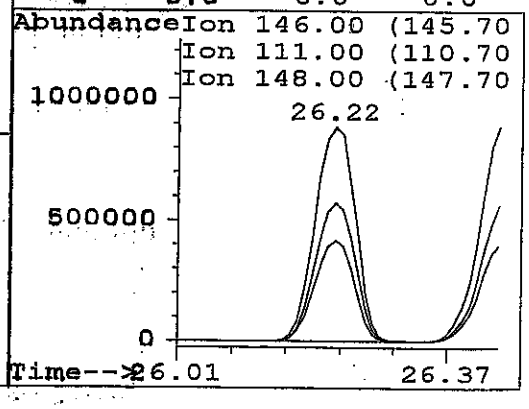


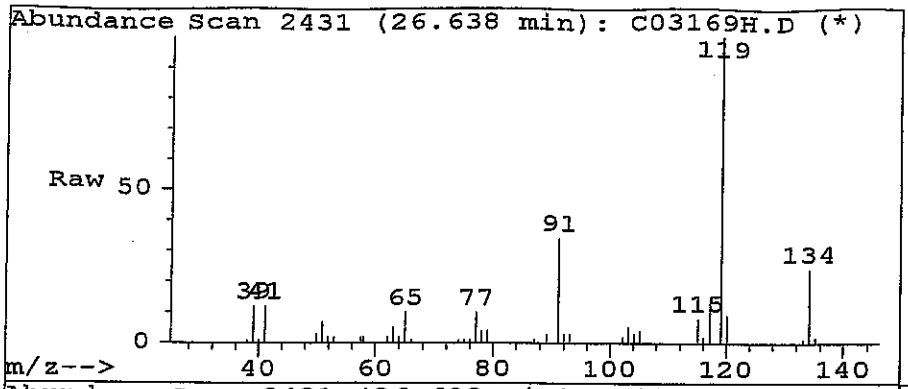


#78
1,3-Dichlorobenzene
Concen: 10.75 ppbV
RT: 26.22 min Scan# 2388
Delta R.T. -0.19 min
Lab File: C03169H.D
Acq: 16 Mar 109 7:21 pm

Tgt Ion:146 Resp: 3205866

Ion	Ratio	Lower	Upper
146	100		
111	47.1	34.6	52.0
148	64.5	52.2	78.2
0	0.0	0.0	0.0

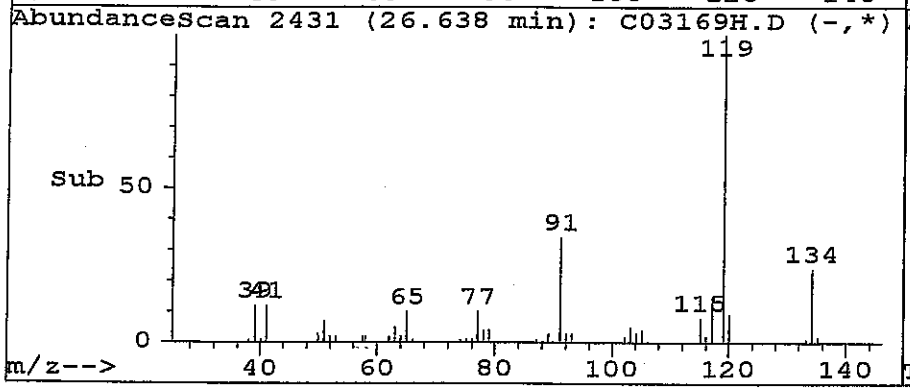


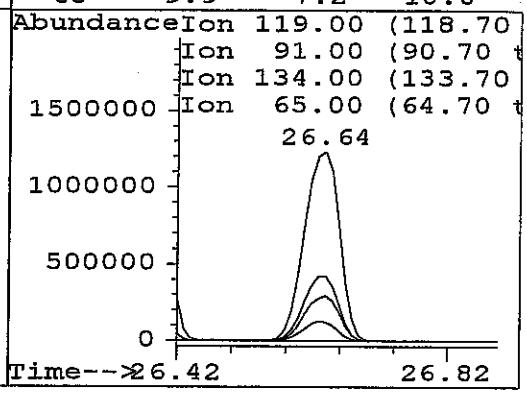


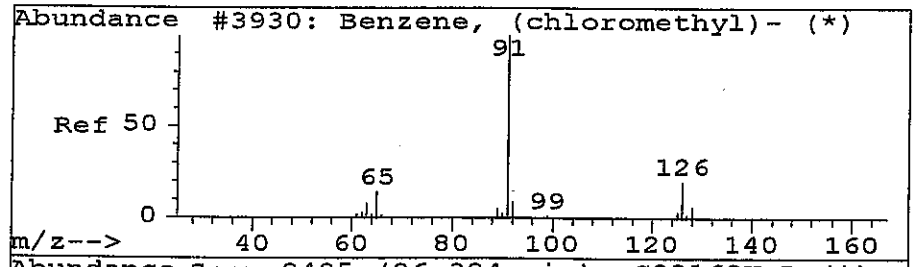
#79
Isopropyltoluene
Concen: 10.83 ppbV
RT: 26.64 min Scan# 2431
Delta R.T. -0.19 min
Lab File: C03169H.D
Acq: 16 Mar 109 7:21 pm

Tgt Ion:119 Resp: 4292399

Ion	Ratio	Lower	Upper
119	100		
91	33.5	25.7	38.5
134	23.6	20.0	30.0
65	9.9	7.2	10.8



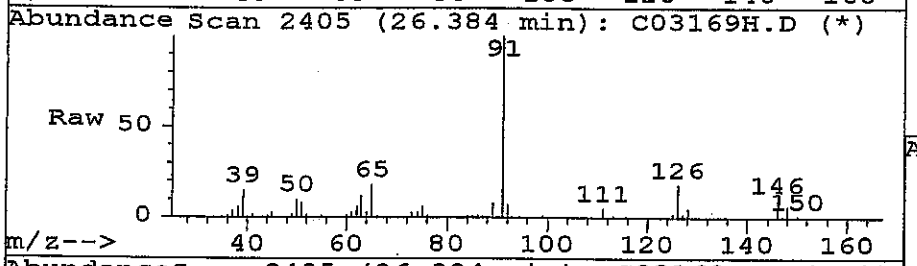


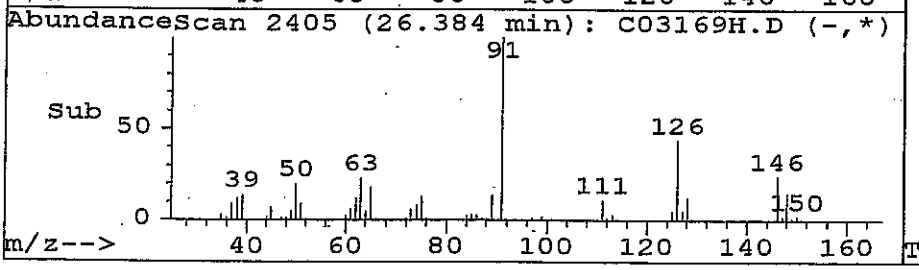


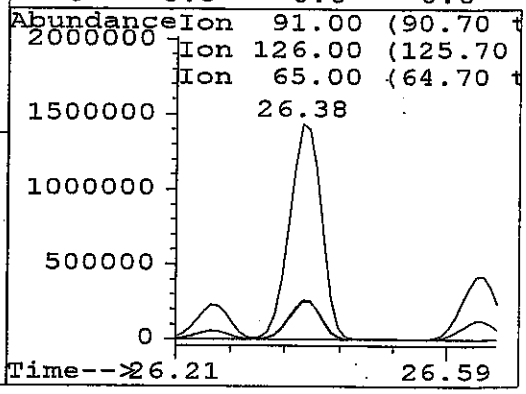
#80
Benzyl chloride
Concen: 13.58 ppbV
RT: 26.38 min Scan# 2405
Delta R.T. -0.23 min
Lab File: C03169H.D
Acq: 16 Mar 109 7:21 pm

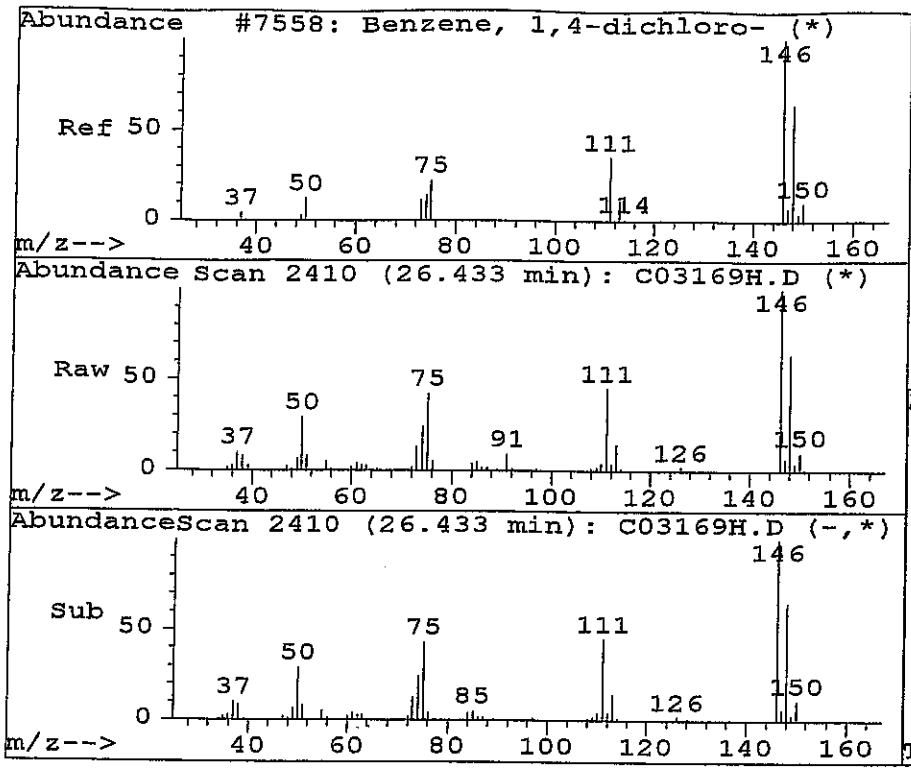
Tgt Ion:91 Resp: 4463720

Ion	Ratio	Lower	Upper
91	100		
126	17.6	16.0	24.0
65	18.0	14.4	21.6
0	0.0	0.0	0.0





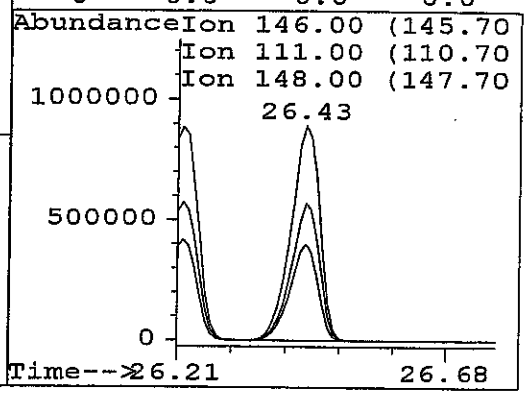


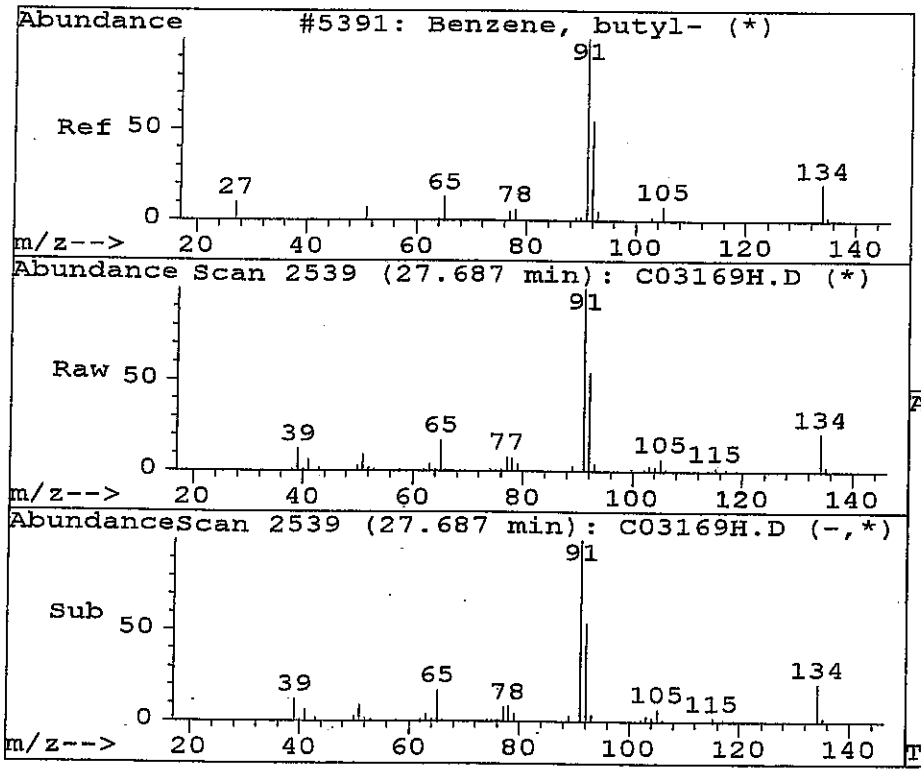


#81
1,4-Dichlorobenzene
Concen: 9.84 ppbV m
RT: 26.43 min Scan# 2410
Delta R.T. -0.25 min
Lab File: C03169H.D
Acq: 16 Mar 109 7:21 pm

Tgt Ion:146 Resp: 3091714

Ion	Ratio	Lower	Upper
146	100		
111	45.0	34.3	51.5
148	63.8	52.6	78.8
0	0.0	0.0	0.0

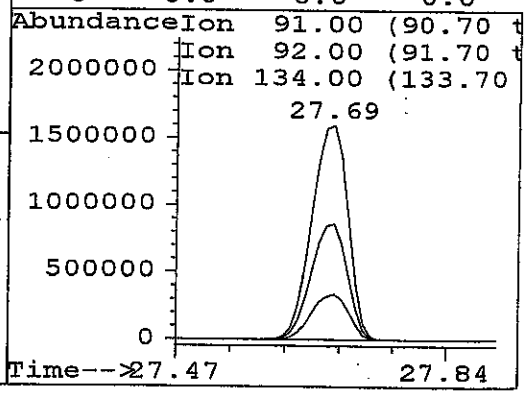


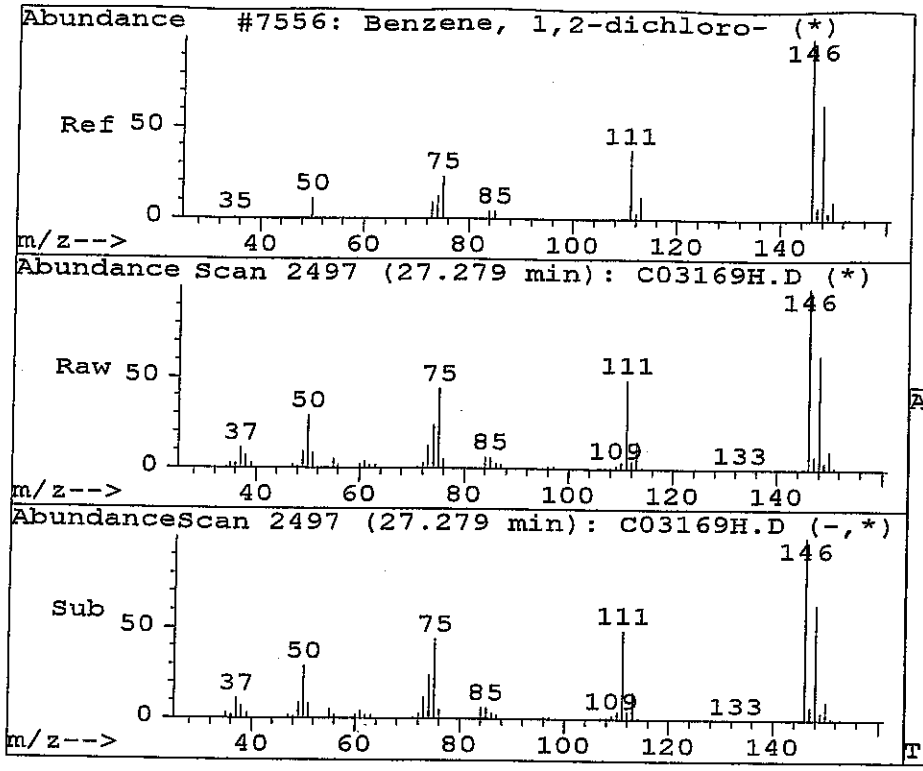


#82
n-Butylbenzene
Concen: 12.90 ppbV
RT: 27.69 min Scan# 2539
Delta R.T. -0.19 min
Lab File: C03169H.D
Acq: 16 Mar 109 7:21 pm

Tgt Ion:91 Resp: 5393478

Ion	Ratio	Lower	Upper
91	100		
92	53.9	43.4	65.2
134	21.7	19.8	29.6
0	0.0	0.0	0.0

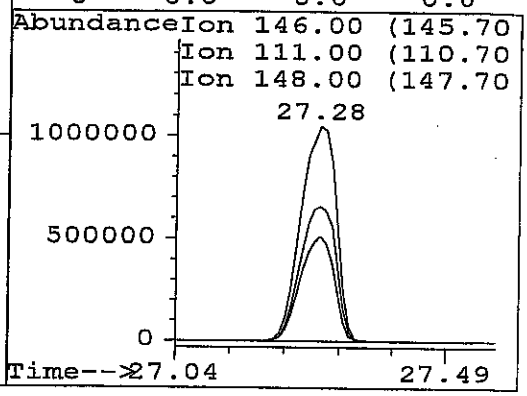


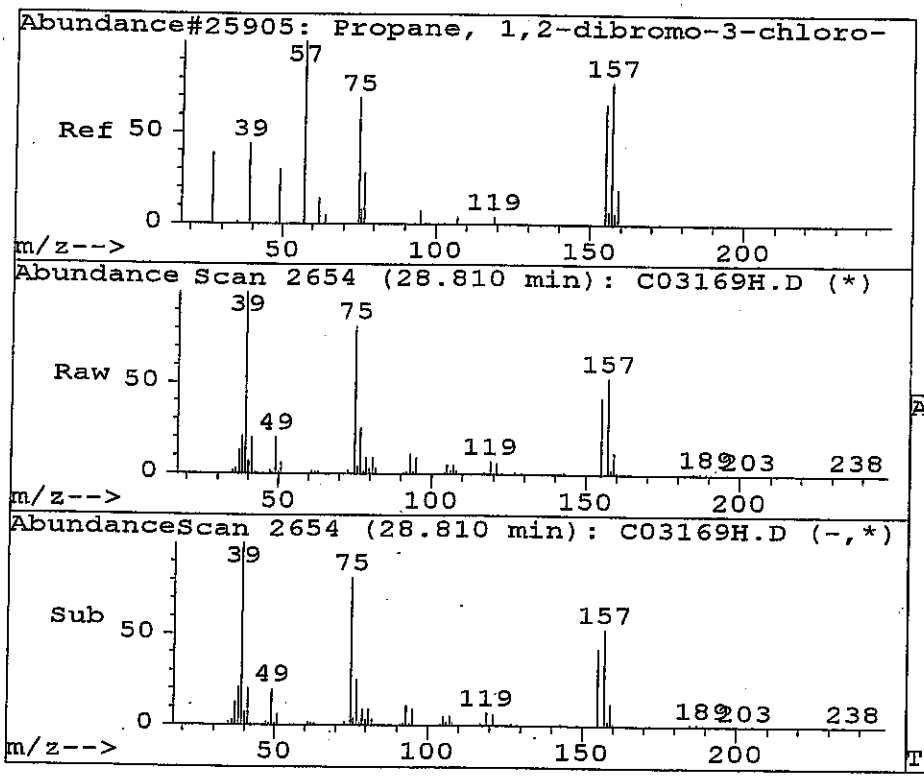


#83
1,2-Dichlorobenzene
Concen: 12.28 ppbV
RT: 27.28 min Scan# 2497
Delta R.T. -0.19 min
Lab File: C03169H.D
Acq: 16 Mar 109 7:21 pm

Tgt Ion:146 Resp: 4272294

Ion	Ratio	Lower	Upper
146	100		
111	48.7	35.0	52.6
148	62.6	48.5	72.7
0	0.0	0.0	0.0

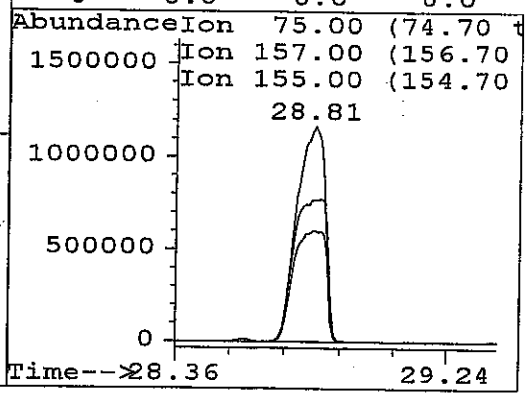


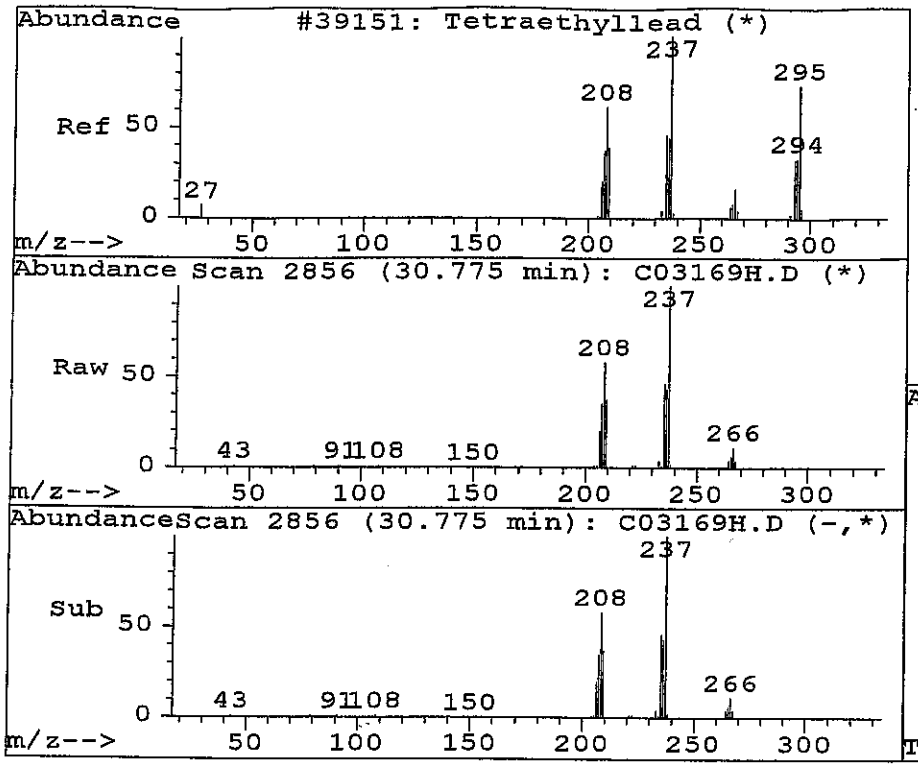


#84
1,2-Dibromo-3-chloropropane
Concen: 36.97 ppbV m
RT: 28.81 min Scan# 2654
Delta R.T. -0.15 min
Lab File: C03169H.D
Acq: 16 Mar 109 7:21 pm

Tgt Ion:75 Resp: 7308444

Ion	Ratio	Lower	Upper
75	100		
157	65.7	87.7	131.5#
155	51.6	65.6	98.4#
0	0.0	0.0	0.0

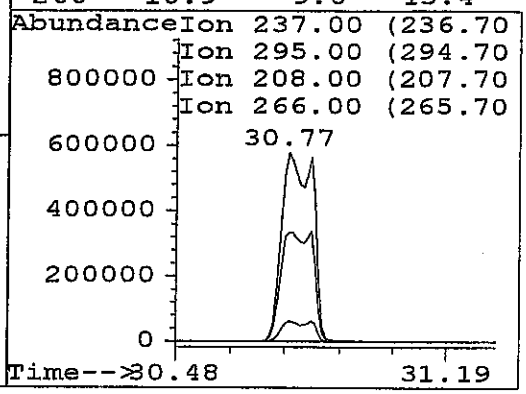


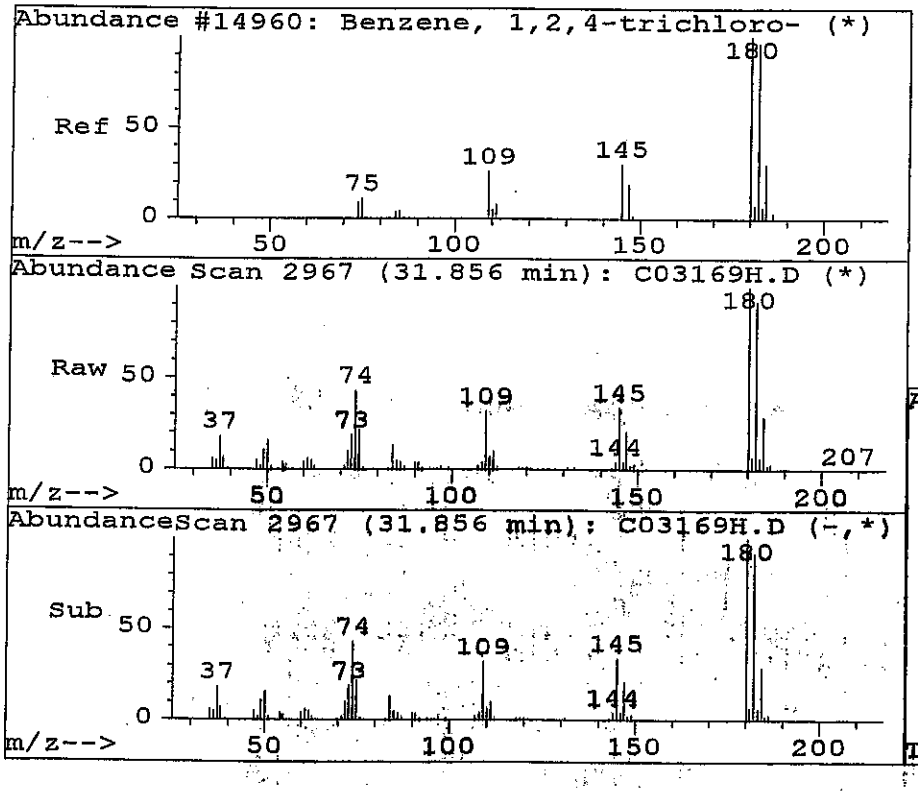


#85
Tetraethyl lead
Concen: 11.51 ppbV m
RT: 30.77 min Scan# 2856
Delta R.T. -0.21 min
Lab File: C03169H.D
Acq: 16 Mar 109 7:21 pm

Tgt Ion:237 Resp: 3224507

Ion	Ratio	Lower	Upper
237	100		
295	0.0	0.0	0.0
208	57.7	47.4	71.2
266	10.9	9.0	13.4

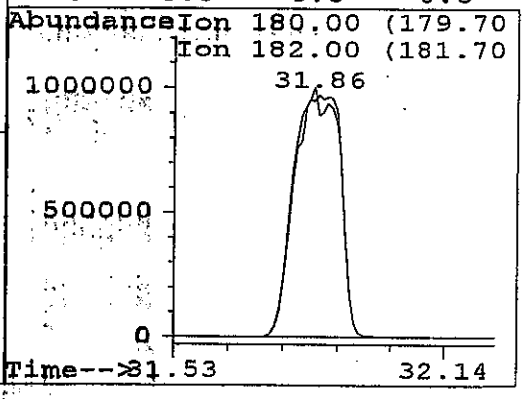


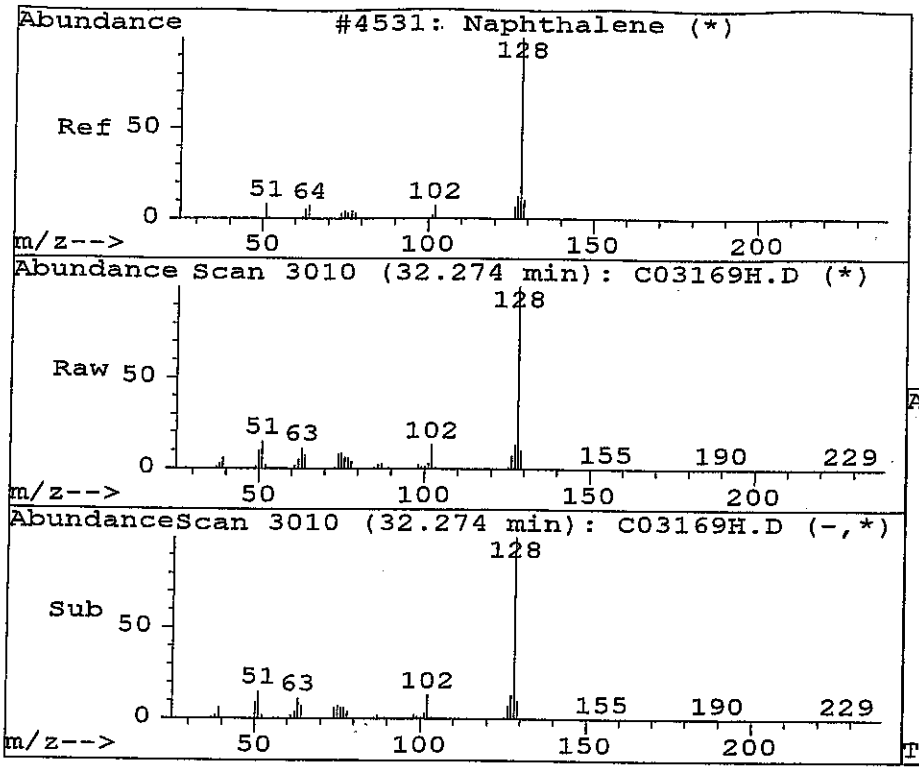


#86
1,2,4-Trichlorobenzene
Concen: 11.67 ppbV
RT: 31.86 min Scan# 2967
Delta R.T. -0.32 min
Lab File: C03169H.D
Acq: 16 Mar 109 7:21 pm

Tgt Ion:180 Resp: 7156710

Ion	Ratio	Lower	Upper
180	100		
182	91.9	67.8	101.6
0	0.0	0.0	0.0
0	0.0	0.0	0.0

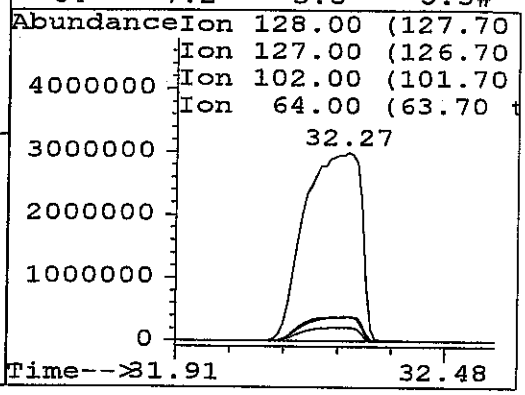


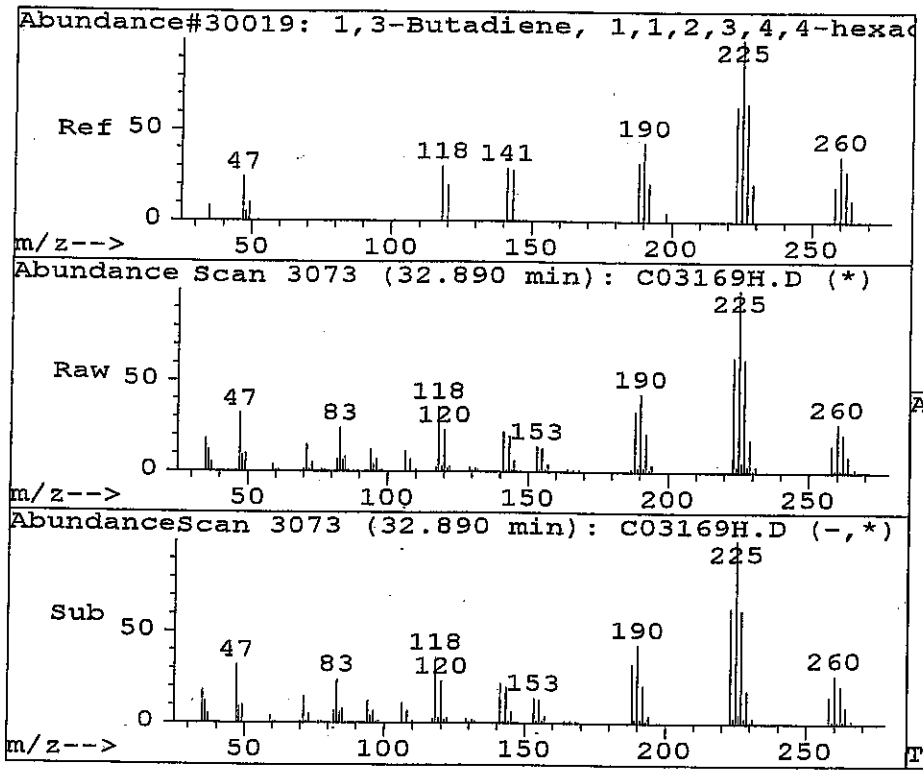


#87
Naphthalene
Concen: 37.90 ppbV
RT: 32.27 min Scan# 3010
Delta R.T. -0.14 min
Lab File: C03169H.D
Acq: 16 Mar 109 7:21 pm

Tgt Ion:128 Resp:24925580

Ion	Ratio	Lower	Upper
128	100		
127	13.0	10.6	16.0
102	12.9	9.3	13.9
64	7.2	3.5	5.3#

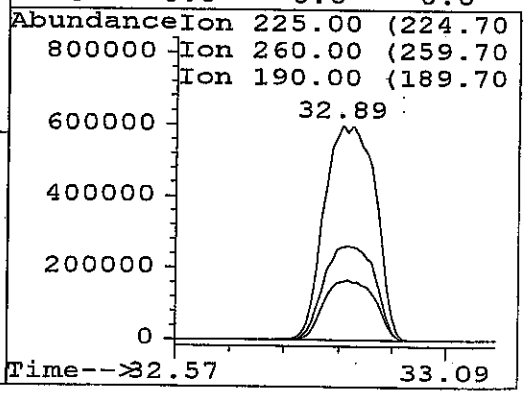


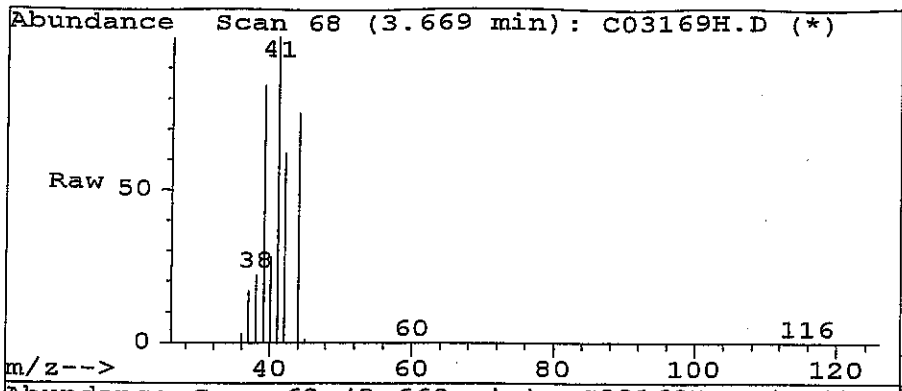


#88
Hexachlorobutadiene
Concen: 8.74 ppbV
RT: 32.89 min Scan# 3073
Delta R.T. -0.19 min
Lab File: C03169H.D
Acq: 16 Mar 109 7:21 pm

Tgt Ion:225 Resp: 4177636

Ion	Ratio	Lower	Upper
225	100		
260	27.2	21.0	31.6
190	43.2	36.0	54.0
0	0.0	0.0	0.0

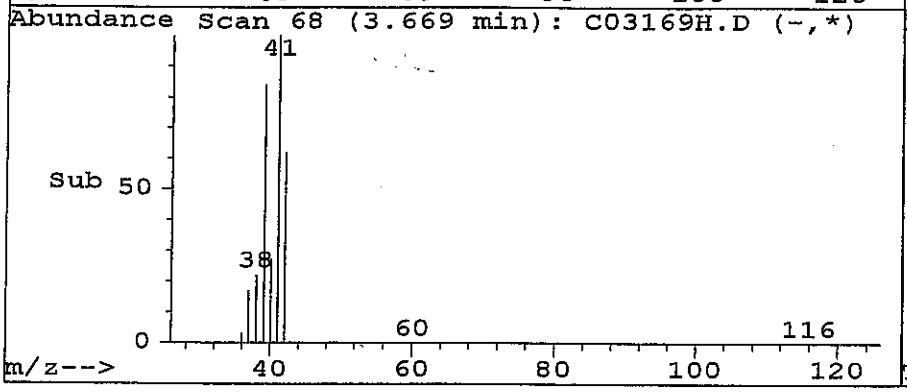


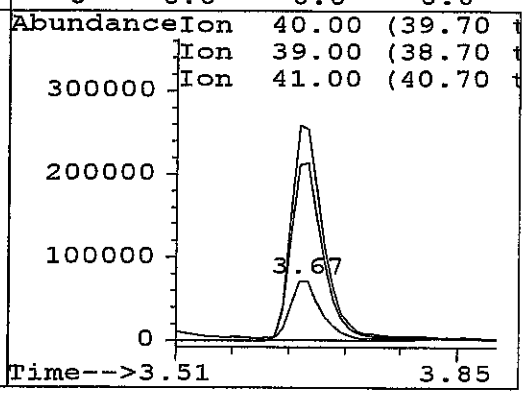


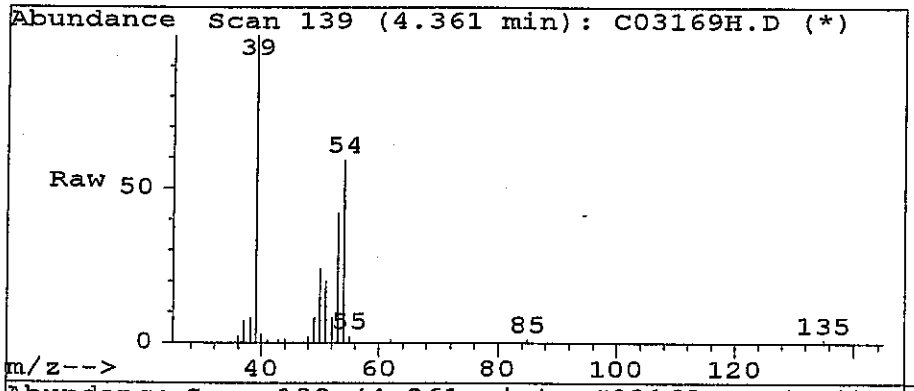
#89
Propylene
Concen: 17.14 ppbV
RT: 3.67 min Scan# 68
Delta R.T. -0.09 min
Lab File: C03169H.D
Acq: 16 Mar 109 7:21 pm

Tgt Ion:40 Resp: 191557

Ion	Ratio	Lower	Upper
40	100		
39	301.9	238.8	358.2
41	379.7	287.0	430.4
0	0.0	0.0	0.0



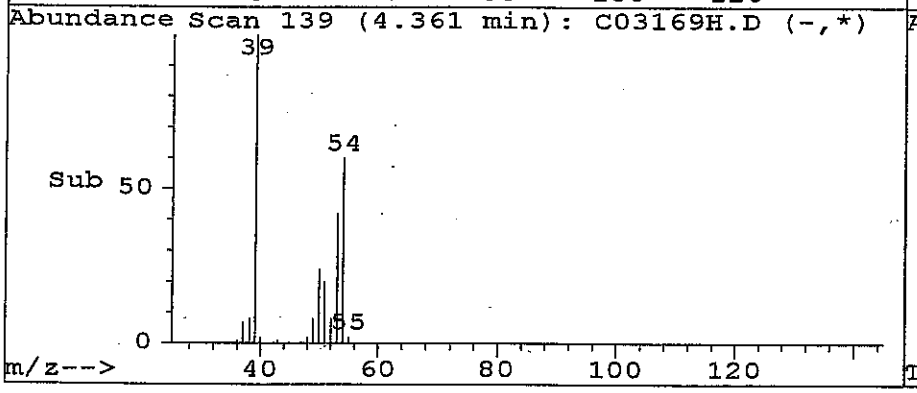


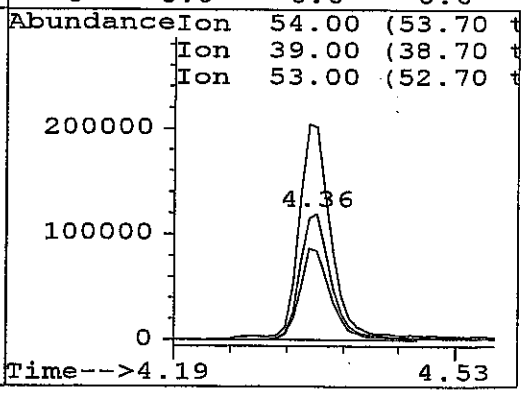


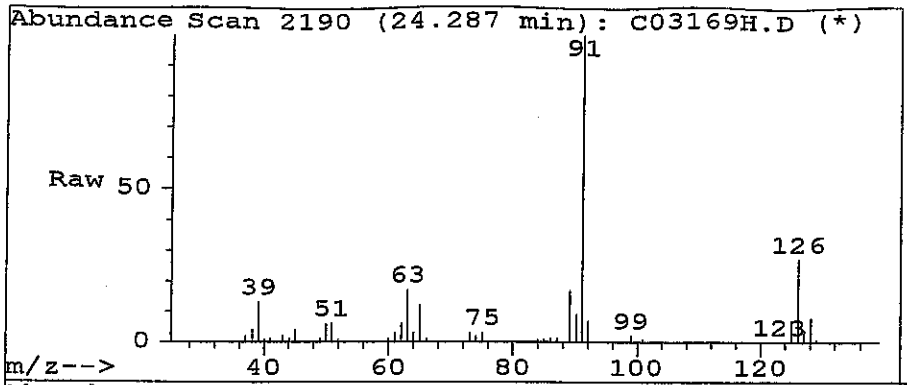
#90
1,3-Butadiene
Concen: 13.49 ppbV
RT: 4.36 min Scan# 139
Delta R.T. -0.11 min
Lab File: C03169H.D
Acq: 16 Mar 109 7:21 pm

Tgt Ion:54 Resp: 318019

Ion	Ratio	Lower	Upper
54	100		
39	169.4	140.9	211.3
53	72.4	58.1	87.1
0	0.0	0.0	0.0



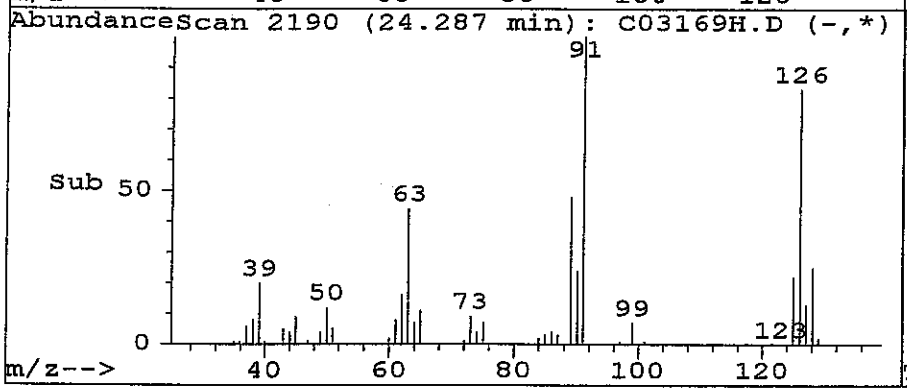


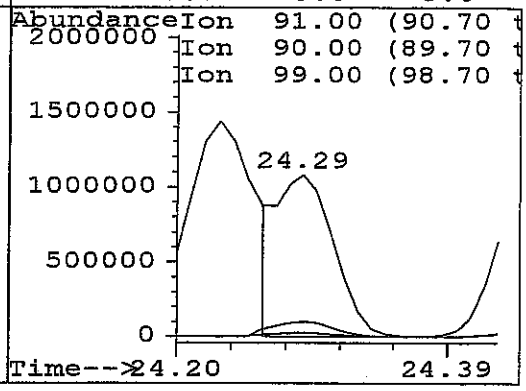


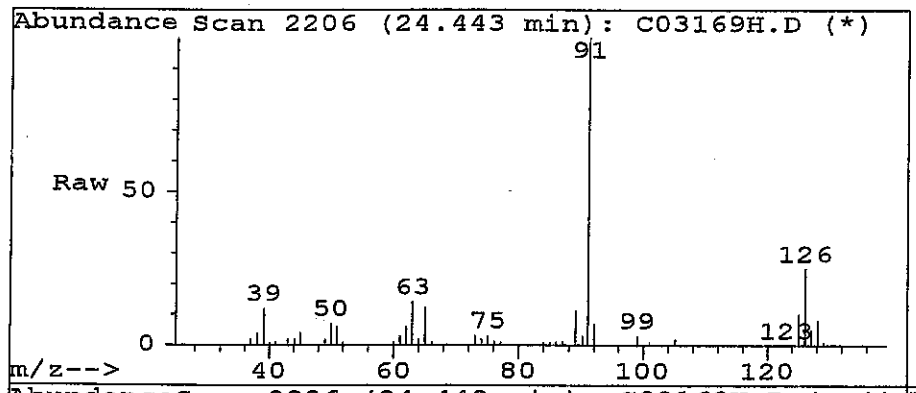
#92
2-Chlorotoluene
Concen: 9.98 ppbV m
RT: 24.29 min Scan# 2190
Delta R.T. -0.17 min
Lab File: C03169H.D
Acq: 16 Mar 109 7:21 pm

Tgt Ion:91 Resp: 3030861

Ion	Ratio	Lower	Upper
91	100		
90	9.1	0.0	0.0#
99	2.2	0.0	0.0#
0	0.0	0.0	0.0



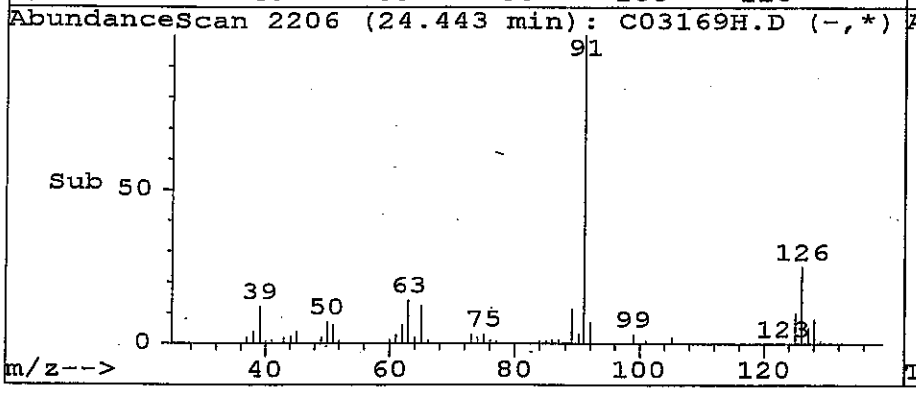


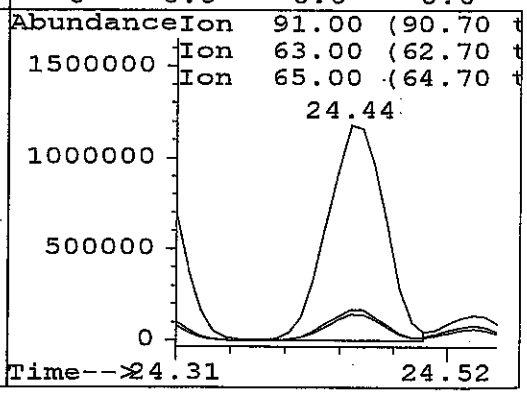


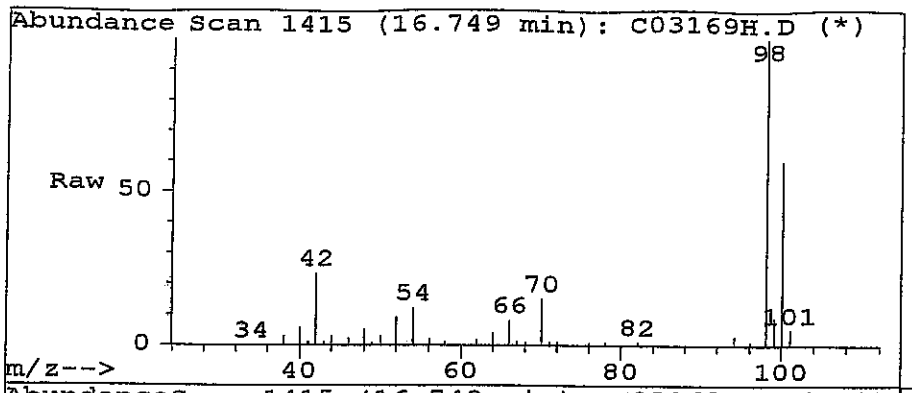
#93
4-Chlorotoluene
Concen: 11.79 ppbV
RT: 24.44 min Scan# 2206
Delta R.T. -0.21 min
Lab File: C03169H.D
Acq: 16 Mar 109 7:21 pm

Tgt Ion:91 Resp: 3768334

Ion	Ratio	Lower	Upper
91	100		
63	14.2	11.4	17.2
65	12.0	9.6	14.4
0	0.0	0.0	0.0



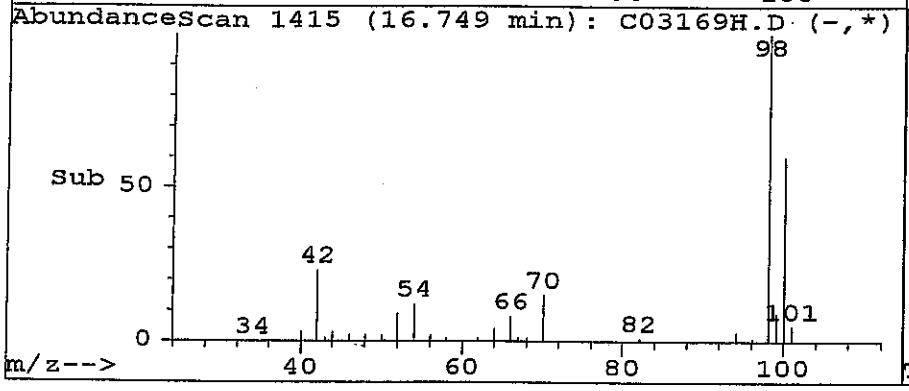


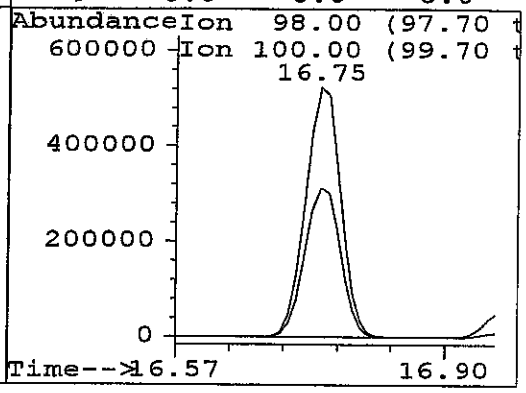


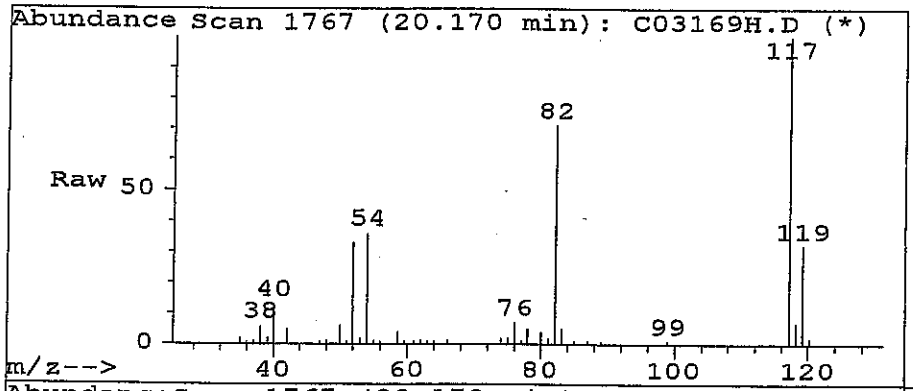
#94
Toluene-d8
Concen: 10.56 ppbV
RT: 16.75 min Scan# 1415
Delta R.T. -0.19 min
Lab File: C03169H.D
Acq: 16 Mar 109 7:21 pm

Tgt Ion:98 Resp: 1546296

Ion	Ratio	Lower	Upper
98	100		
100	59.8	50.2	75.2
0	0.0	0.0	0.0
0	0.0	0.0	0.0



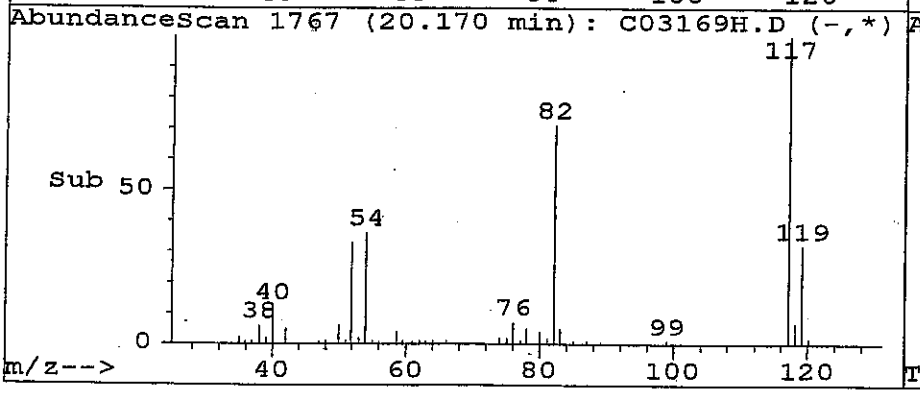


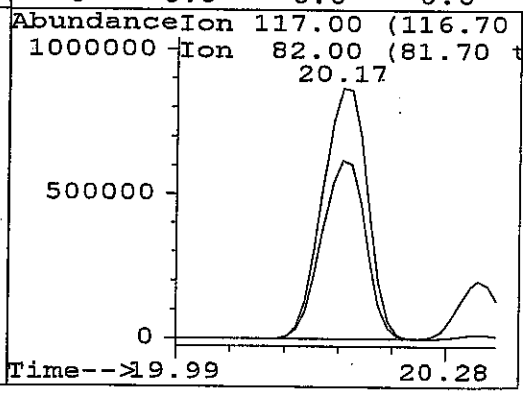


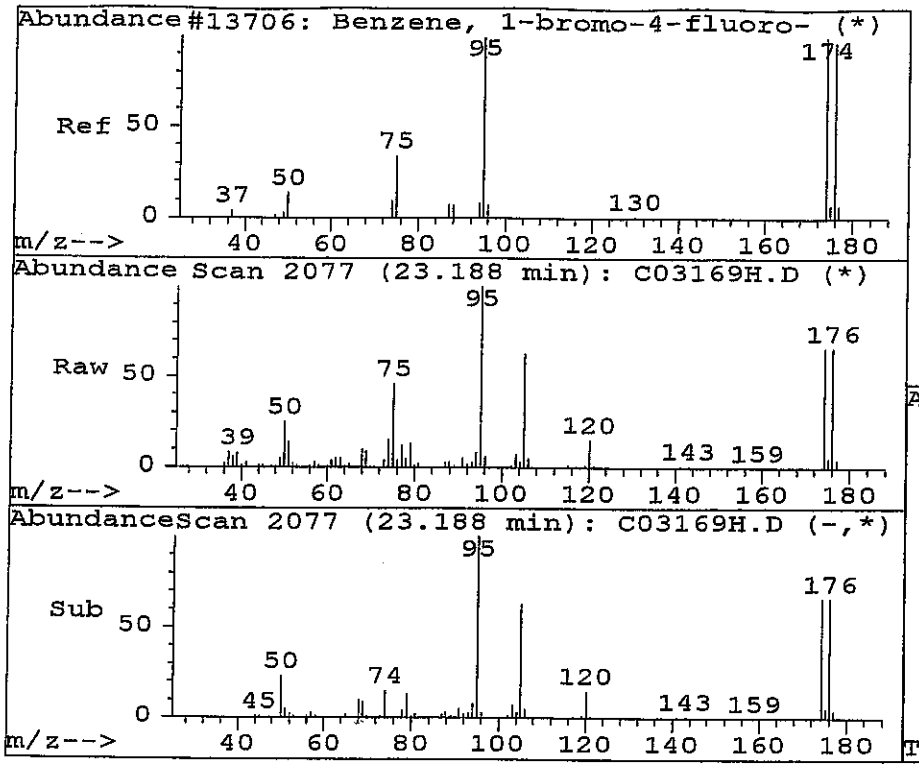
#95
Chlorobenzene-d5
Concen: 22.73 ppbV
RT: 20.17 min Scan# 1767
Delta R.T. -0.19 min
Lab File: C03169H.D
Acq: 16 Mar 109 7:21 pm

Tgt Ion:117 Resp: 2900630

Ion	Ratio	Lower	Upper
117	100		
82	71.5	54.6	82.0
0	0.0	0.0	0.0
0	0.0	0.0	0.0



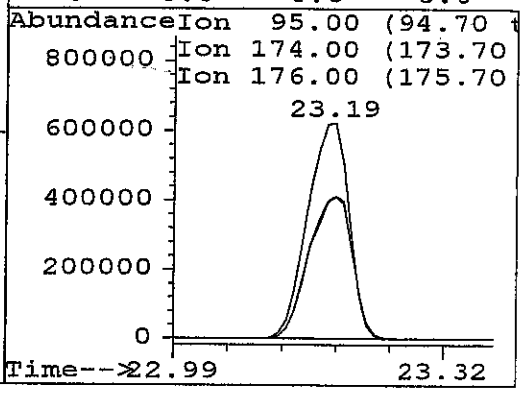




#96
1,4-Bromofluorobenzene
Concen: 10.64 ppbV
RT: 23.19 min Scan# 2077
Delta R.T. -0.19 min
Lab File: C03169H.D
Acq: 16 Mar 109 7:21 pm

Tgt Ion:95 Resp: 2163994

Ion	Ratio	Lower	Upper
95	100		
174	66.2	56.4	84.6
176	65.9	56.7	85.1
0	0.0	0.0	0.0



Quantitation Report

Data File : C:\MSCHEM\2\DATA\03179M~1\C03179A.D
Acq Time : 17 Mar 109 8:47 am
Sample : ST60022 + ST60350
Misc :
Quant Time: Mar 17 10:41 19109

Operator: KB
Inst : 5970 - In
Multiplr: 1.00

Method : C:\MSCHEM\2\METHODS\1T15EXAY.M
Title : EPA TO-15
Last Update : Tue Mar 17 14:18:15 2009
Response via : Multiple Level Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene	11.18	168	2719013	20.00	ppbV	-0.20
35) 1,4-Difluorobenzene	12.97	114	2720455	20.00	ppbV	-0.20
System Monitoring Compounds						%Recovery
94) Toluene-d8	16.73	98	1469067	3.30	ppbV	65.99%
95) Chlorobenzene-d5	20.15	117	2602948	3.97	ppbV	39.67%
96) 1,4-Bromofluorobenzene	23.15	95	2001651	6.29	ppbV	125.86%
Target Compounds						Qvalue
2) Dichlorodifluoromethane	3.72	85	436110	0.25	ppbV	99
3) Chloromethane	3.97	50	272653	0.29	ppbV	93
4) Freon 114	3.99	85	464176	5.80	ppbV	95
5) Vinyl chloride	4.21	62	150492	0.26	ppbV	99
6) Bromomethane	4.78	94	149016	0.26	ppbV	95
7) Chloroethane	4.98	64	78611	0.25	ppbV	99
8) Ethanol	5.02	45	336921	1.83	ppbV	95
9) Acrolein	5.73	56	106554	0.53	ppbV	97
10) Trichlorofluoromethane	5.78	101	431144	0.27	ppbV	97
11) Acetonitrile	5.77	41	509363	0.58	ppbV	98
12) Acetone	5.86	43	494726	0.31	ppbV m	93
13) 2-propanol	5.96	45	289890	1.11	ppbV #	90
14) Methyl iodide	6.81	142	339051	0.38	ppbV	98
15) 1,1-Dichloroethene	6.71	61	305424	0.21	ppbV	98
16) Acrylonitrile	6.76	53	482925	0.74	ppbV #	99
17) Freon 113	6.99	151	205080	0.17	ppbV #	84
18) Allyl chloride	7.18	41	248581	0.19	ppbV	96
19) Dichloromethane	7.13	84	120655	0.19	ppbV	93
20) Carbon disulfide	7.36	76	122015	0.18	ppbV	98
21) trans-1,2-Dichloroethene	8.20	96	80889	0.15	ppbV	97
22) Methyl tert butyl ether	8.36	73	369980	0.15	ppbV	99
23) Propionitrile	8.61	54	316585	0.43	ppbV	98
24) 1,1-Dichloroethane	8.71	63	331041	0.19	ppbV	98
25) Vinyl acetate	10.12	43	676740	0.21	ppbV	97
26) 2-Butanone	9.34	72	71425	0.19	ppbV	82
27) Hexane	9.51	57	162303	0.15	ppbV	93
28) Bromochloromethane	10.29	49	370225	0.23	ppbV	97
29) Tetrahydrofuran	10.64	42	1122494	0.56	ppbV m	44
30) Isobutyl alcohol	10.64	74	79891	0.60	ppbV	98
31) Methacrylonitrile	9.51	67	274466	0.58	ppbV	98
32) cis-1,2-Dichloroethene	9.91	96	224404	0.28	ppbV	97
33) 2,2-Dichloropropane	10.22	77	359345	0.23	ppbV	97
34) Chloroform	10.32	83	516969	0.28	ppbV	98
36) 1,1,1-Trichloroethane	11.59	97	509527	0.12	ppbV	98
37) 1,2-Dichloroethane	11.66	62	495766	0.13	ppbV	98
38) 1,1-Dichloropropene	12.04	75	310573	0.11	ppbV	96
39) Cyclohexane	12.37	56	373616	0.12	ppbV	98
40) Benzene	12.31	78	782160	0.13	ppbV	99
41) Carbon tetrachloride	12.36	117	518753	0.12	ppbV	96
42) n-Heptane	13.83	43	586493	0.11	ppbV	96
43) 1,2-Dichloropropane	13.85	63	305497	0.12	ppbV	92
44) 1,4 Dioxane	14.18	88	161310	0.11	ppbV #	96
45) Dibromomethane	13.98	174	358053	0.10	ppbV	98
46) Trichloroethene	13.92	130	364698	0.12	ppbV	99
47) Bromodichloromethane	14.19	83	417248	0.10	ppbV	95
48) Methyl methacrylate	14.31	69	637368	0.28	ppbV	95
49) Methyl Isobutyl Ketone	15.53	43	1039898	0.11	ppbV	99

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

Quantitation Report

Data File : C:\MSCHEM\2\DATA\03179M~1\C03179A.D
Acq Time : 17 Mar 109 8:47 am
Sample : ST60022 + ST60350
Misc :
Quant Time: Mar 17 10:41 19109

Operator: KB
Inst : 5970 - In
Multiplr: 1.00

Method : C:\MSCHEM\2\METHODS\1T15EXAY.M
Title : EPA TO-15
Last Update : Tue Mar 17 14:18:15 2009
Response via : Multiple Level Calibration

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
50)	cis-1,3-Dichloropropene	15.60	75	492454	0.12	ppbV		99
51)	Toluene	16.90	91	1033029	0.13	ppbV		98
52)	trans-1,3-Dichloropropene	16.63	75	538174	0.12	ppbV		97
53)	1,1,2-Trichloroethane	16.94	61	281046	0.12	ppbV		95
54)	2-Hexanone	17.56	43	1112452	0.10	ppbV		99
55)	1,3-Dichloropropane	17.51	76	402983	0.10	ppbV		98
56)	Octane	18.05	57	274693	0.09	ppbV		97
57)	Dibromochloromethane	18.08	129	558917	0.10	ppbV		100
58)	1,2-Dibromoethane	18.57	107	701472	0.12	ppbV		99
59)	Tetrachloroethene	18.76	166	627137	0.13	ppbV		98
60)	Chlorobenzene	20.23	112	862738	0.12	ppbV		99
61)	1,1,1,2-Tetrachloroethane	20.30	131	408032	0.10	ppbV		97
62)	Ethylbenzene	20.77	91	1548148	0.13	ppbV		100
63)	m & p-Xylene	21.07	91	2542524	0.26	ppbV		97
64)	Styrene	21.89	104	840176	0.13	ppbV		98
65)	Bromoform	21.79	173	958925	0.11	ppbV		97
66)	o-Xylene	22.02	91	1384162	0.12	ppbV		100
67)	1,1,2,2-Tetrachloroethane	22.54	83	1042229	0.10	ppbV		96
68)	1,2,3-Trichloropropane	22.85	110	231249	0.10	ppbV		98
69)	t-1,4-Dichloro-2-butene	22.98	53	614970	0.30	ppbV		99
70)	n-Propylbenzene	24.20	91	1871406	0.09	ppbV		95
71)	Isopropylbenzene	24.51	105	1573293	0.11	ppbV		100
72)	4-Ethyltoluene	24.51	105	1573293	0.11	ppbV		99
73)	1,3,5-Trimethylbenzene	24.68	105	1778188	0.11	ppbV		99
74)	Methylstyrene	25.14	118	700556	0.11	ppbV		99
75)	tert-butyl benzene	25.60	119	1302134	0.09	ppbV		96
76)	1,2,4-Trimethylbenzene	25.63	105	1766777	0.11	ppbV		97
77)	sec-butylbenzene	26.22	105	1874067	0.10	ppbV		99
78)	1,3-Dichlorobenzene	26.19	146	1325016	0.11	ppbV		97
79)	Isopropyltoluene	26.60	119	1772233	0.10	ppbV		98
80)	Benzyl chloride	26.35	91	1580130	0.10	ppbV		97
81)	1,4-Dichlorobenzene	26.39	146	1362139	0.11	ppbV	m	98
82)	n-Butylbenzene	27.66	91	2064802	0.10	ppbV		98
83)	1,2-Dichlorobenzene	27.24	146	1374687	0.10	ppbV		96
84)	1,2-Dibromo-3-chloropropan	28.74	75	2420308	0.32	ppbV	m	21
85)	Tetraethyl lead	30.77	237	1960424	0.23	ppbV	#	95
86)	1,2,4-Trichlorobenzene	31.80	180	2236815	0.12	ppbV		91
87)	Naphthalene	32.18	128	10074168	0.34	ppbV		98
88)	Hexachlorobutadiene	32.84	225	1914490	0.11	ppbV		99
89)	Propylene	3.65	40	103546	0.21	ppbV		93
90)	1,3-Butadiene	4.34	54	157819	0.12	ppbV		93
92)	2-Chlorotoluene	24.26	91	1196093	0.06	ppbV	m	79
93)	4-Chlorotoluene	24.42	91	1485093	0.09	ppbV		99

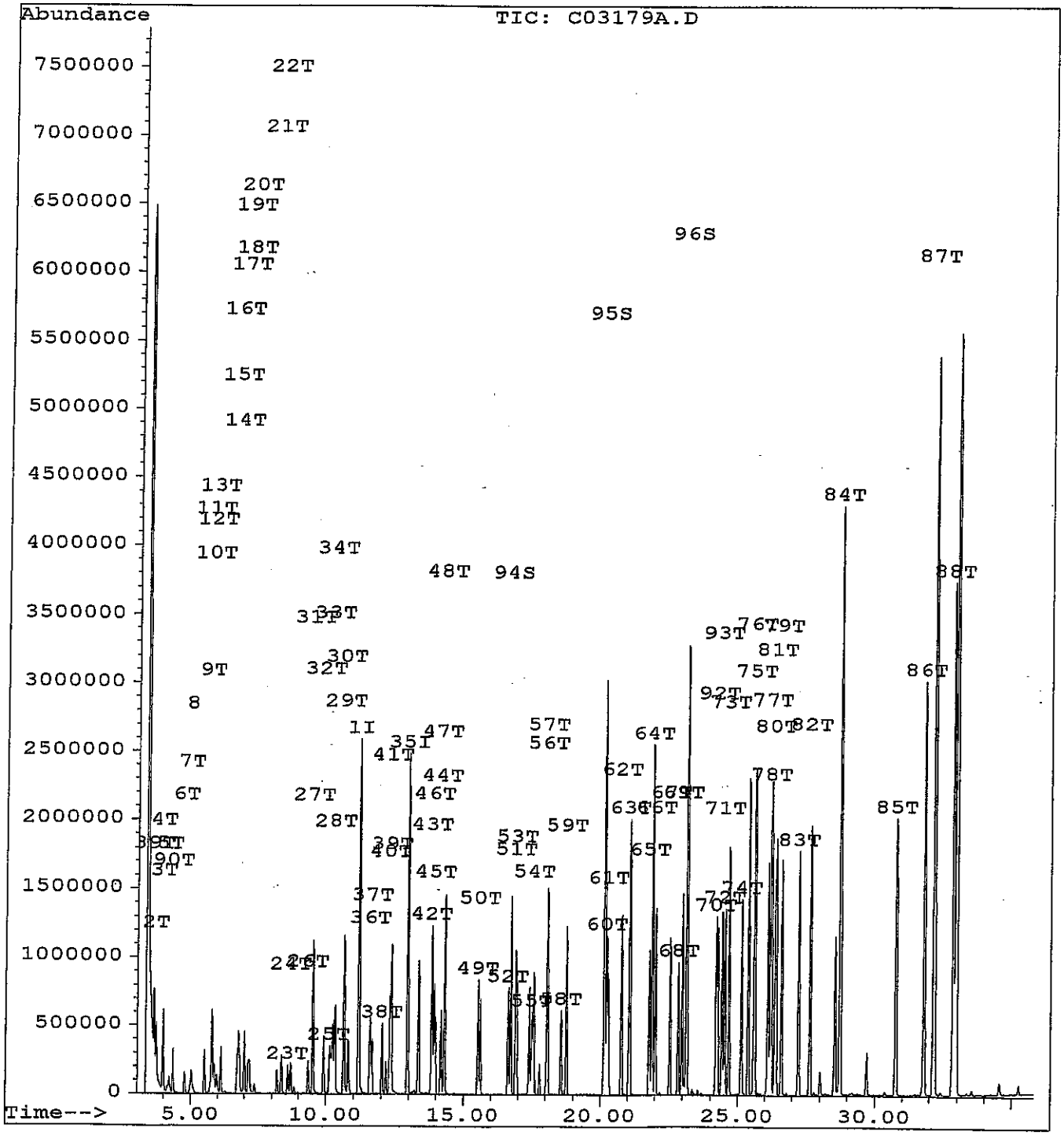
(#) = qualifier out of range (m) = manual integration

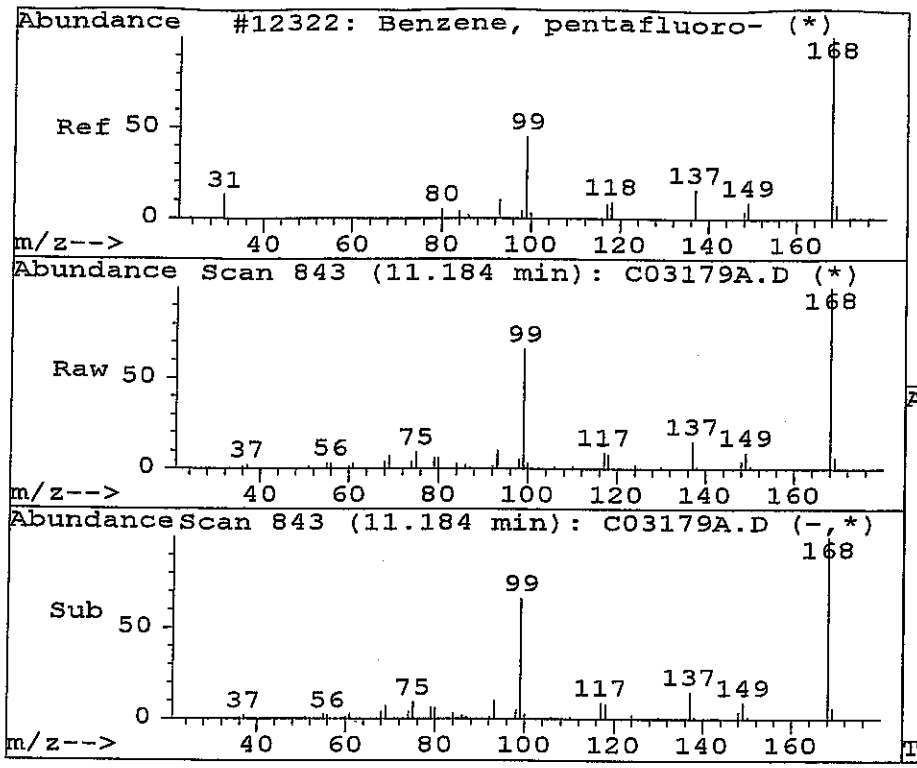
Quantitation Report

Data File : C:\MSCHEM\2\DATA\03179M~1\C03179A.D
Acq Time : 17 Mar 109 8:47 am
Sample : ST60022 + ST60350
Misc :
Quant Time: Mar 17 10:41 19109

Operator: KB
Inst : 5970 - In
Multiplr: 1.00

Method : C:\MSCHEM\2\METHODS\1T15EXAY.M
Title : EPA TO-15
Last Update : Tue Mar 17 14:18:15 2009
Response via : Multiple Level Calibration

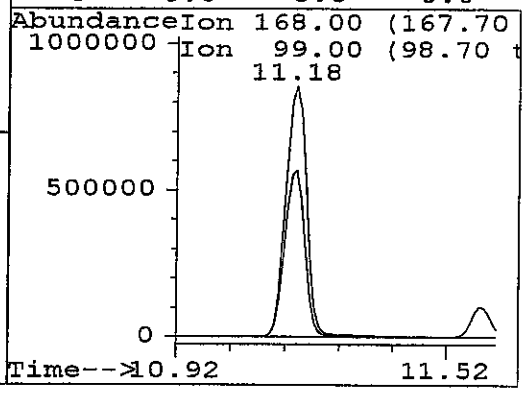


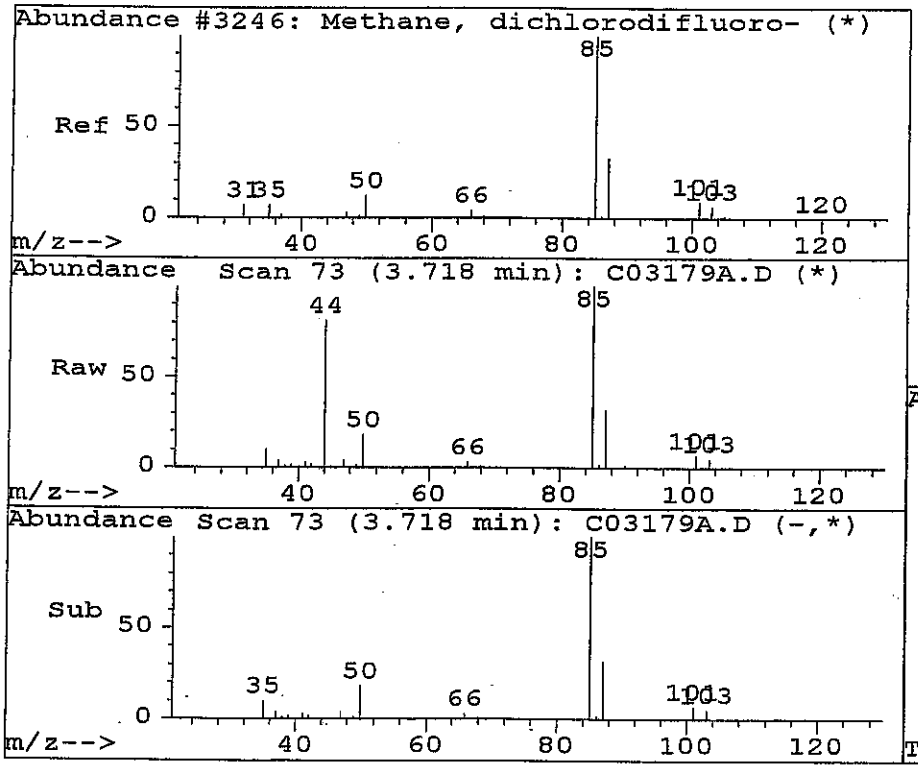


#1
Pentafluorobenzene
Concen: 20.00 ppbV
RT: 11.18 min Scan# 843
Delta R.T. -0.20 min
Lab File: C03179A.D
Acq: 17 Mar 109 8:47 am

Tgt Ion:168 Resp: 2719013

Ion	Ratio	Lower	Upper
168	100		
99	66.4	53.1	79.7
0	0.0	0.0	0.0
0	0.0	0.0	0.0

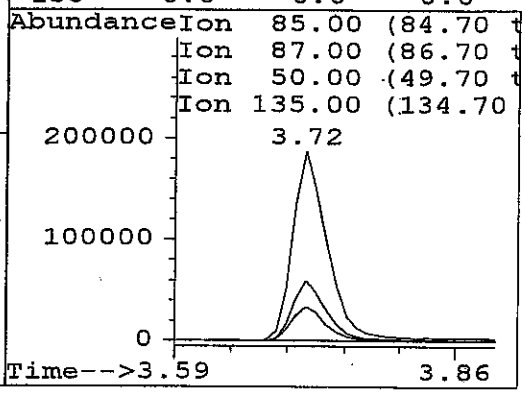


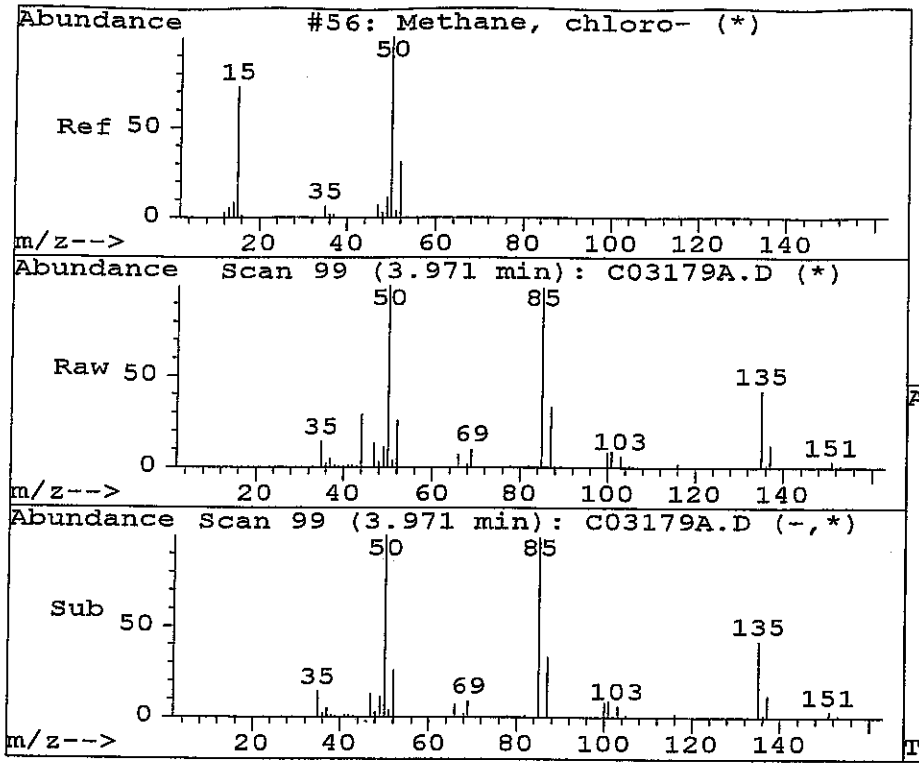


#2
Dichlorodifluoromethane
Concen: 0.25 ppbV
RT: 3.72 min Scan# 73
Delta R.T. -0.11 min
Lab File: C03179A.D
Acq: 17 Mar 109 8:47 am

Tgt Ion:85 Resp: 436110

Ion	Ratio	Lower	Upper
85	100		
87	31.8	26.1	39.1
50	17.9	14.5	21.7
135	0.0	0.0	0.0

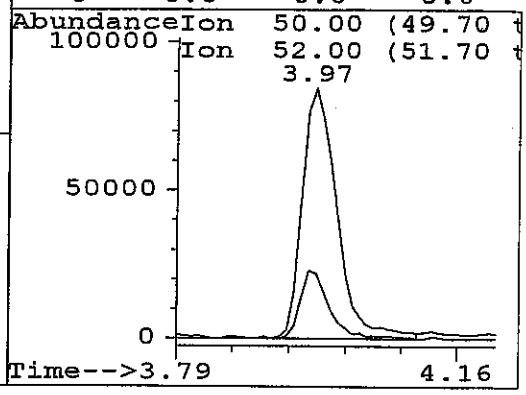


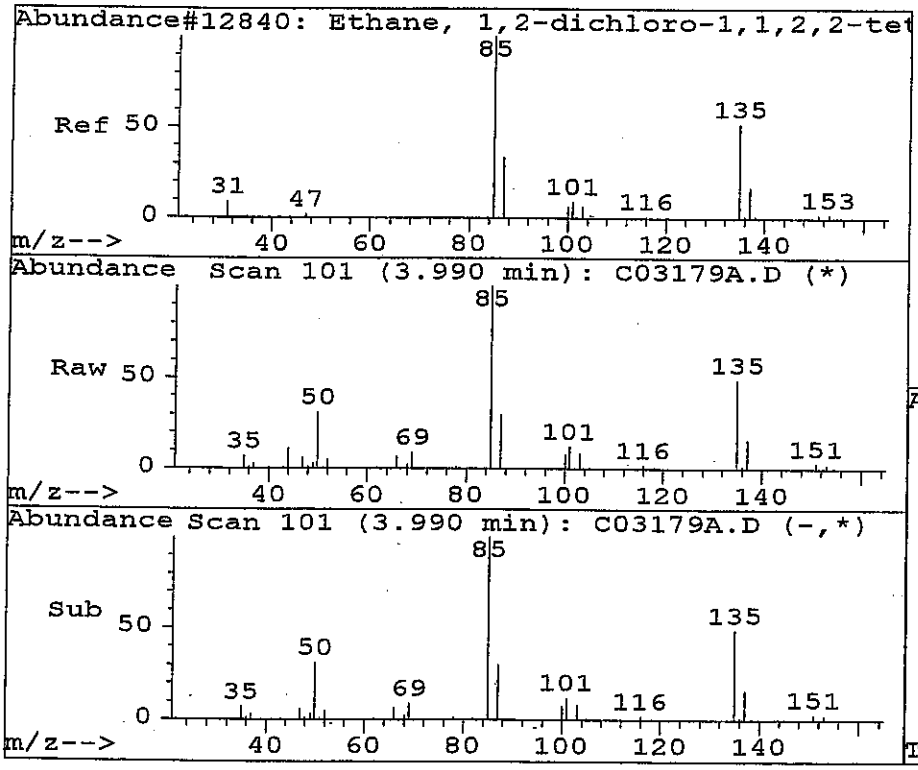


#3
Chloromethane
Concen: 0.29 ppbV
RT: 3.97 min Scan# 99
Delta R.T. -0.12 min
Lab File: C03179A.D
Acq: 17 Mar 109 8:47 am

Tgt Ion:50 Resp: 272653

Ion	Ratio	Lower	Upper
50	100		
52	26.4	18.5	27.7
0	0.0	0.0	0.0
0	0.0	0.0	0.0

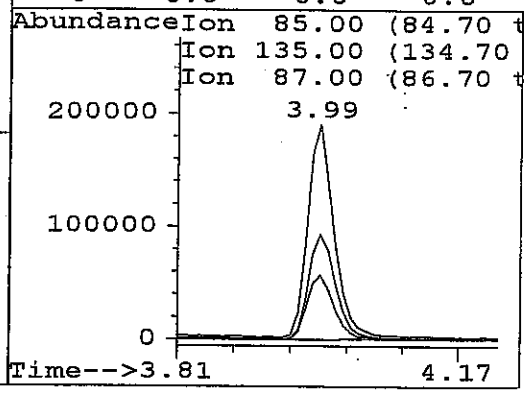


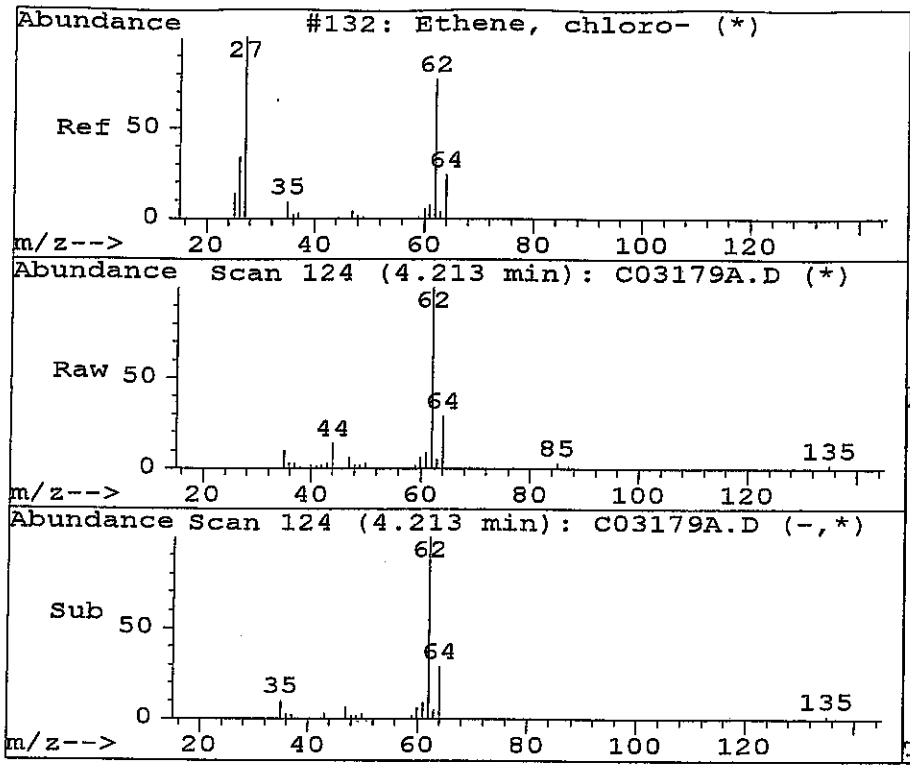


#4
Freon 114
Concen: 5.80 ppbV
RT: 3.99 min Scan# 101
Delta R.T. -0.12 min
Lab File: C03179A.D
Acq: 17 Mar 109 8:47 am

Tgt Ion:85 Resp: 464176

Ion	Ratio	Lower	Upper
85	100		
135	49.0	42.7	64.1
87	29.9	25.4	38.0
0	0.0	0.0	0.0

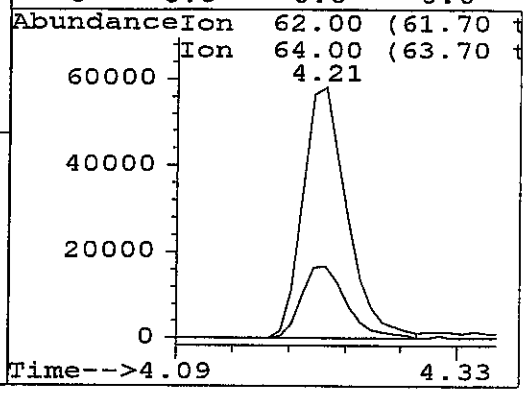


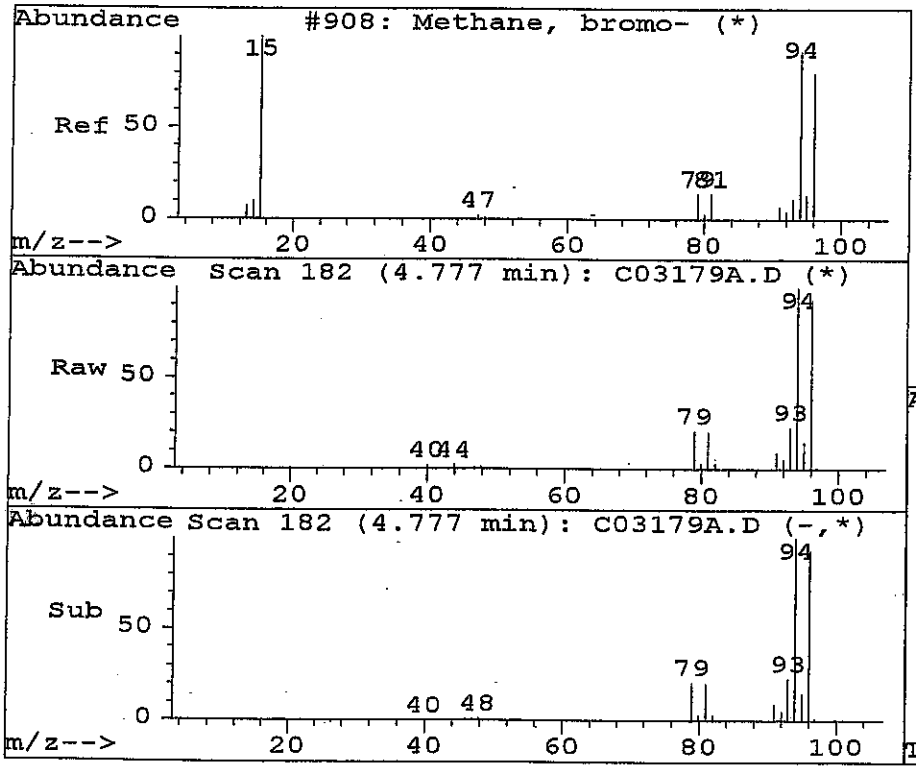


#5
Vinyl chloride
Concen: 0.26 ppbV
RT: 4.21 min Scan# 124
Delta R.T. -0.12 min
Lab File: C03179A.D
Acq: 17 Mar 109 8:47 am

Tgt Ion:62 Resp: 150492

Ion	Ratio	Lower	Upper
62	100		
64	29.0	23.7	35.5
0	0.0	0.0	0.0
0	0.0	0.0	0.0

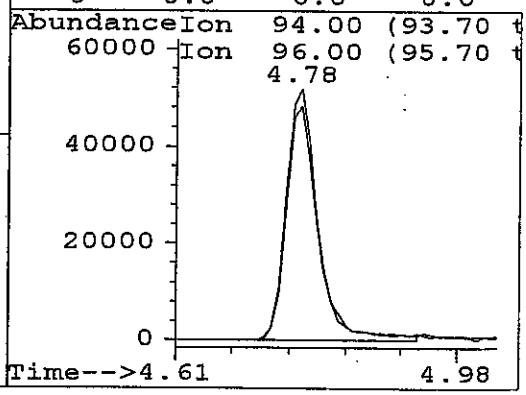


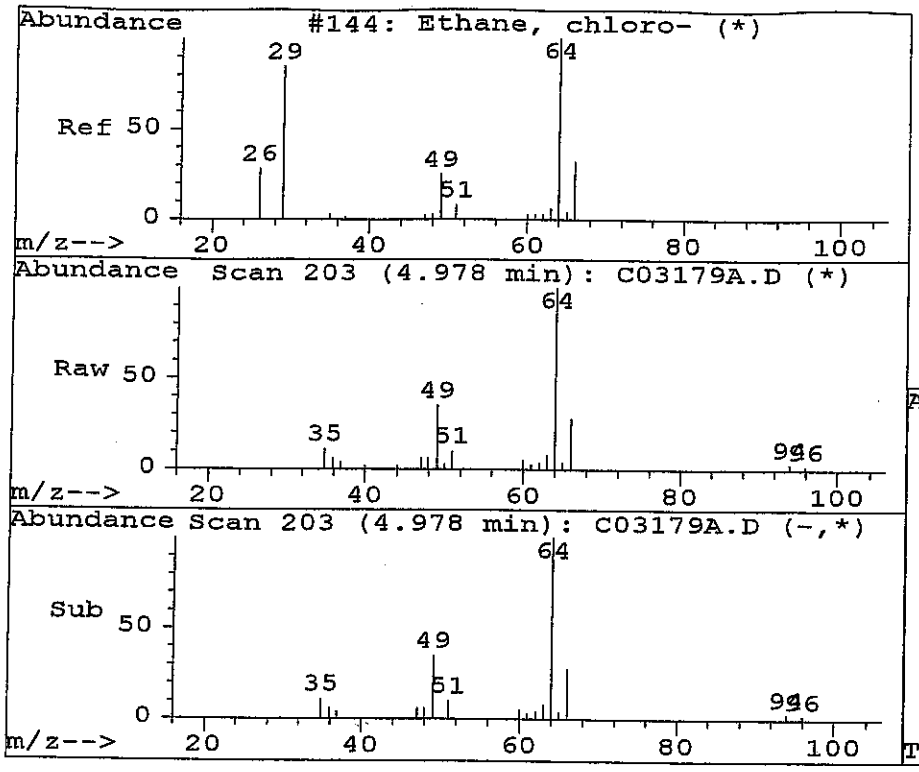


#6
Bromomethane
Concen: 0.26 ppbV
RT: 4.78 min Scan# 182
Delta R.T. -0.14 min
Lab File: C03179A.D
Acq: 17 Mar 109 8:47 am

Tgt Ion:94 Resp: 149016

Ion	Ratio	Lower	Upper
94	100		
96	92.8	70.4	105.6
0	0.0	0.0	0.0
0	0.0	0.0	0.0

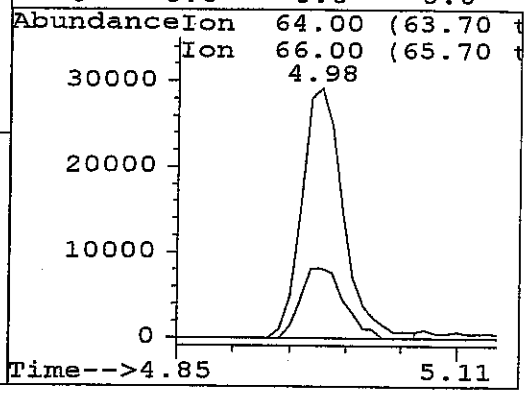


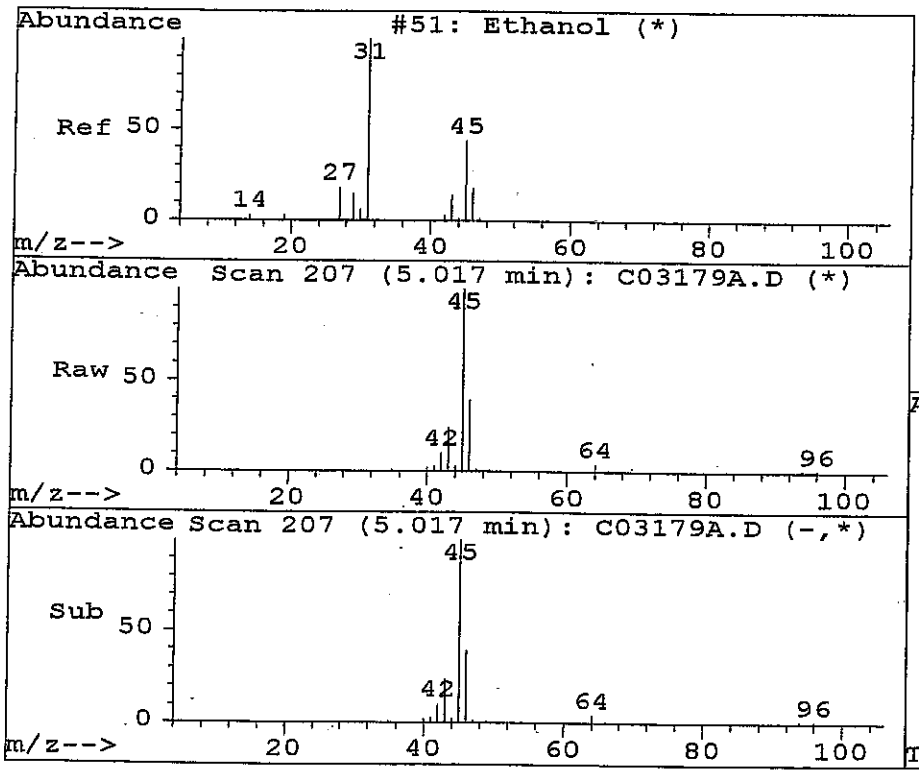


#7
Chloroethane
Concen: 0.25 ppbV
RT: 4.98 min Scan# 203
Delta R.T. -0.14 min
Lab File: C03179A.D
Acq: 17 Mar 109 8:47 am

Tgt Ion:64 Resp: 78611

Ion	Ratio	Lower	Upper
64	100		
66	28.4	23.1	34.7
0	0.0	0.0	0.0
0	0.0	0.0	0.0

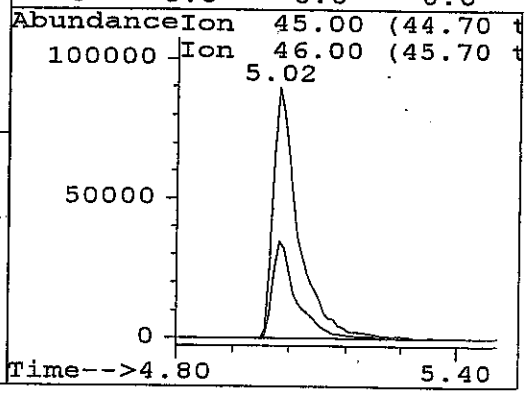


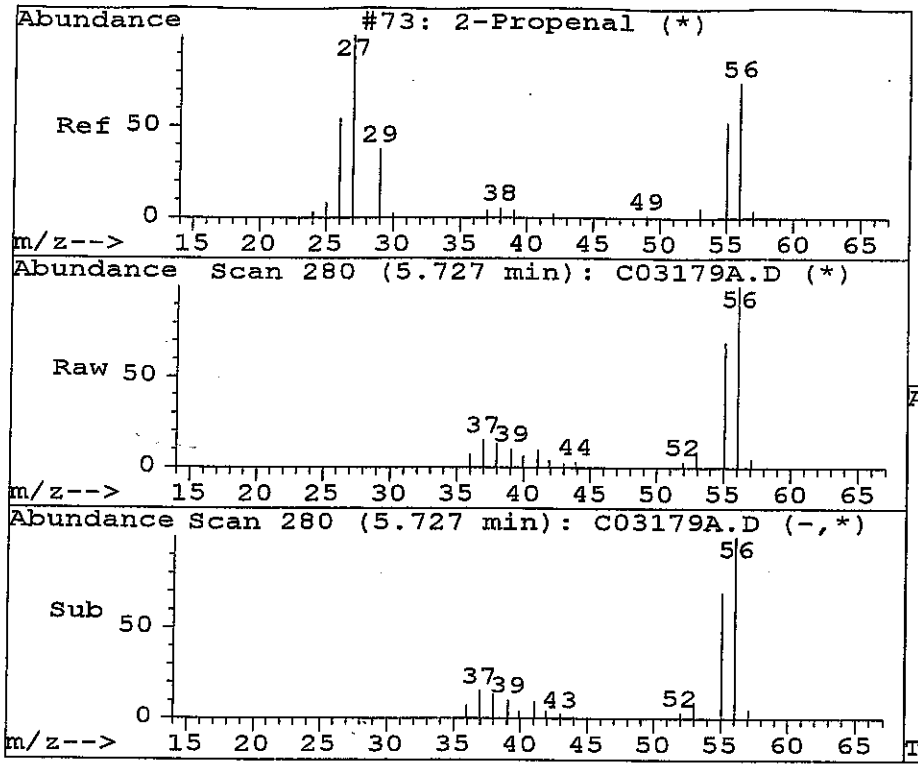


#8
Ethanol
Concen: 1.83 ppbV
RT: 5.02 min Scan# 207
Delta R.T. -0.18 min
Lab File: C03179A.D
Acq: 17 Mar 109 8:47 am

Tgt Ion:45 Resp: 336921

Ion	Ratio	Lower	Upper
45	100		
46	36.5	27.0	40.4
0	0.0	0.0	0.0
0	0.0	0.0	0.0

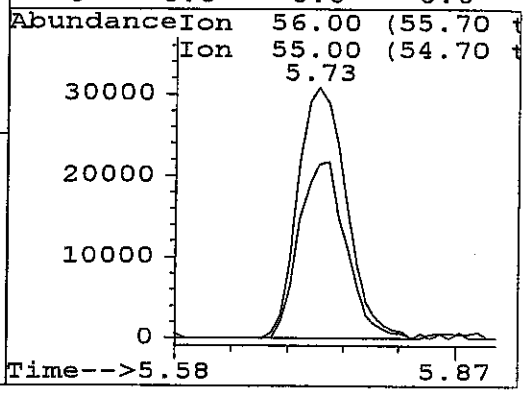


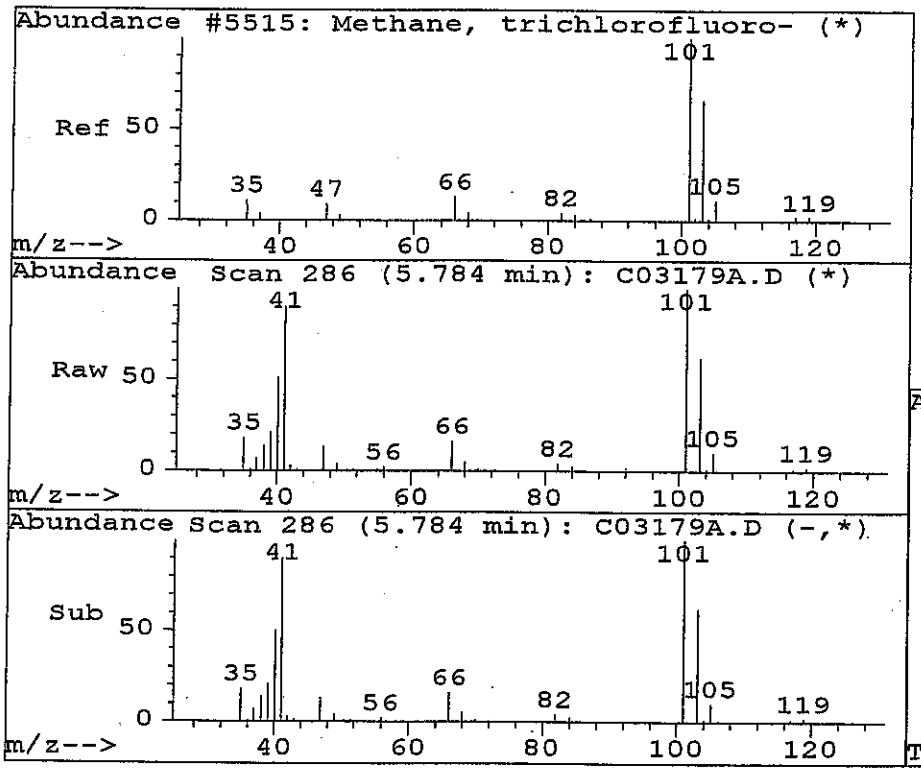


#9
Acrolein
Concen: 0.53 ppbV
RT: 5.73 min Scan# 280
Delta R.T. -0.16 min
Lab File: C03179A.D
Acq: 17 Mar 109 8:47 am

Tgt Ion:56 Resp: 106554

Ion	Ratio	Lower	Upper
56	100		
55	69.5	53.4	80.2
0	0.0	0.0	0.0
0	0.0	0.0	0.0

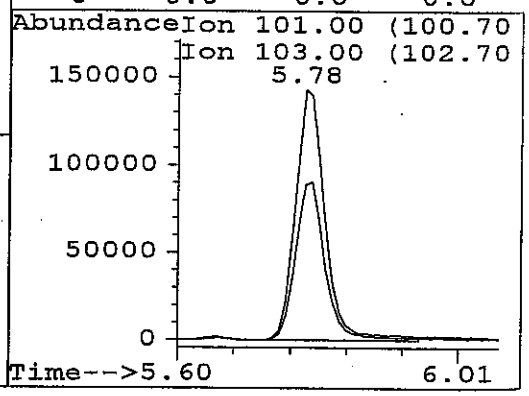


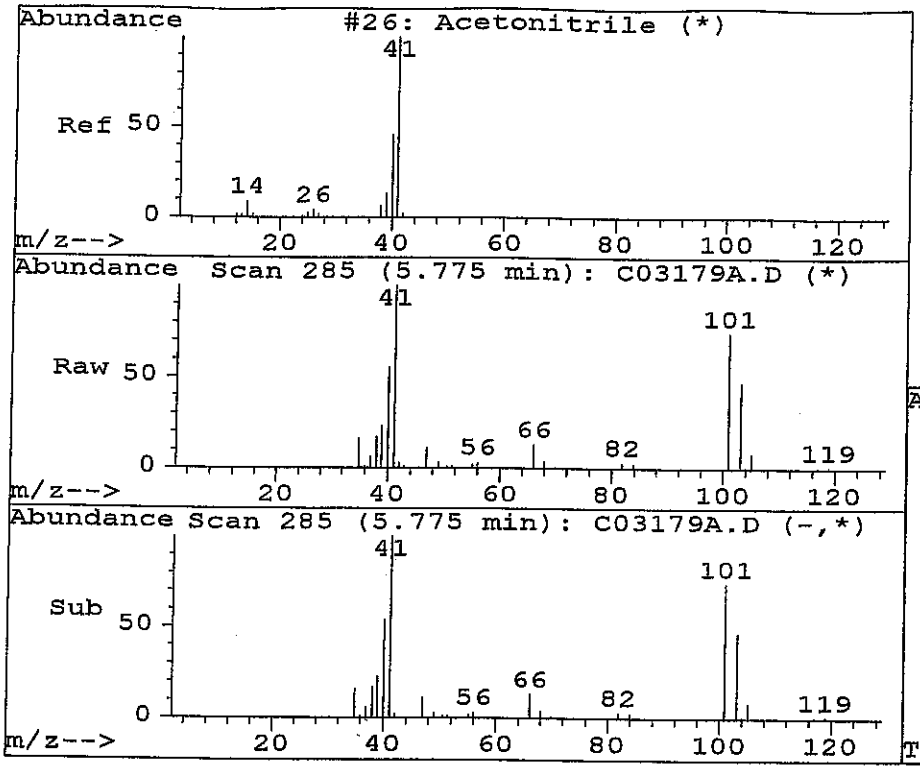


#10
Trichlorofluoromethane
Concen: 0.27 ppbV
RT: 5.78 min Scan# 286
Delta R.T. -0.16 min
Lab File: C03179A.D
Acq: 17 Mar 109 8:47 am

Tgt Ion:101 Resp: 431144

Ion	Ratio	Lower	Upper
101	100		
103	62.3	51.8	77.8
0	0.0	0.0	0.0
0	0.0	0.0	0.0

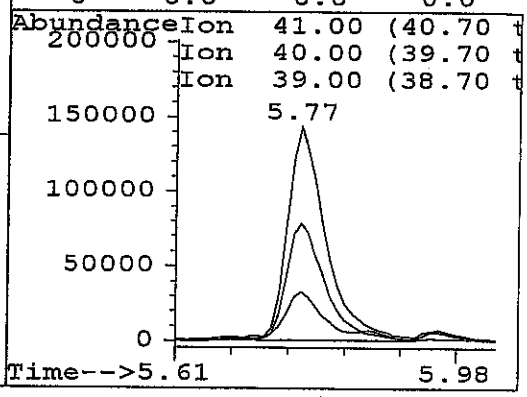


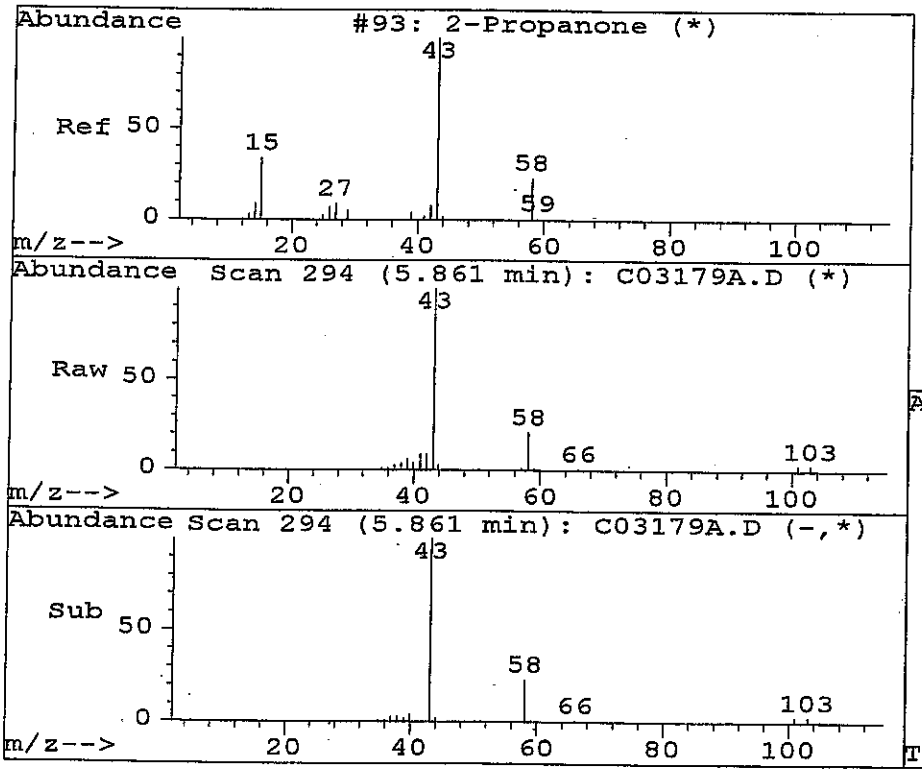


#11
Acetonitrile
Concen: 0.58 ppbV
RT: 5.77 min Scan# 285
Delta R.T. -0.19 min
Lab File: C03179A.D
Acq: 17 Mar 109 8:47 am

Tgt Ion:41 Resp: 509363

Ion	Ratio	Lower	Upper
41	100		
40	54.4	44.6	66.8
39	21.3	18.0	27.0
0	0.0	0.0	0.0

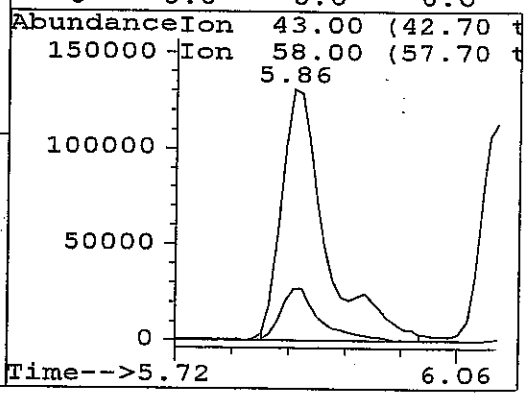


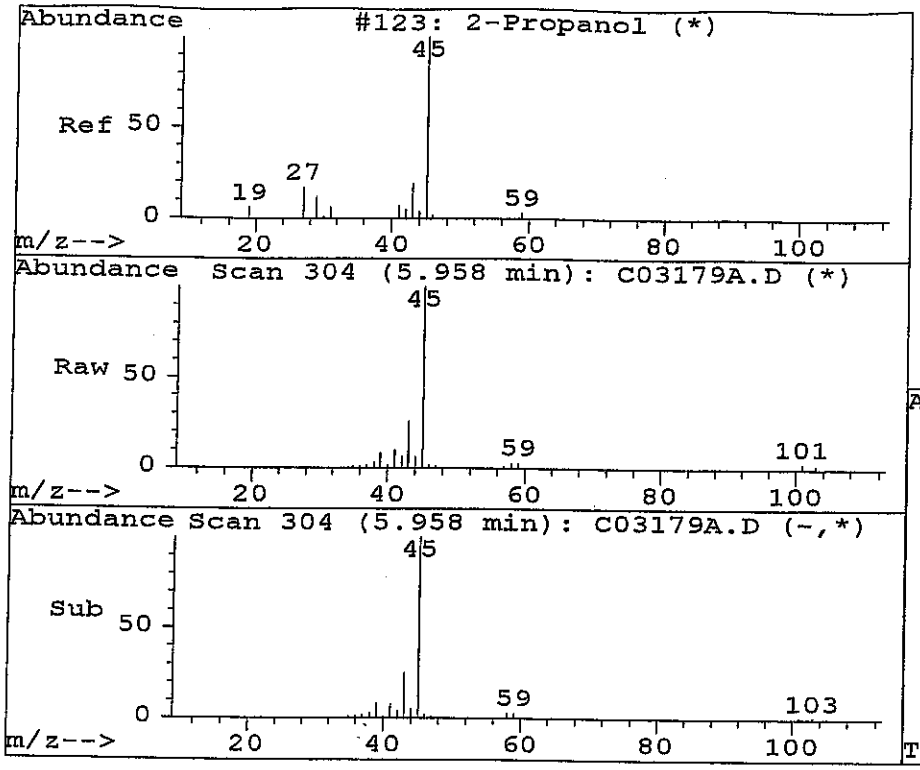


#12
Acetone
Concen: 0.31 ppbV m
RT: 5.86 min Scan# 294
Delta R.T. -0.18 min
Lab File: C03179A.D
Acq: 17 Mar 109 8:47 am

Tgt Ion:43 Resp: 494726

Ion	Ratio	Lower	Upper
43	100		
58	20.6	14.2	21.2
0	0.0	0.0	0.0
0	0.0	0.0	0.0

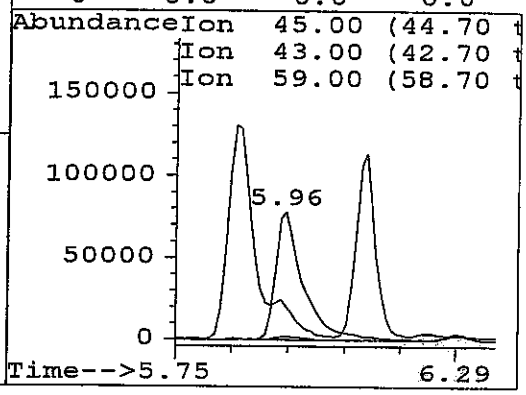


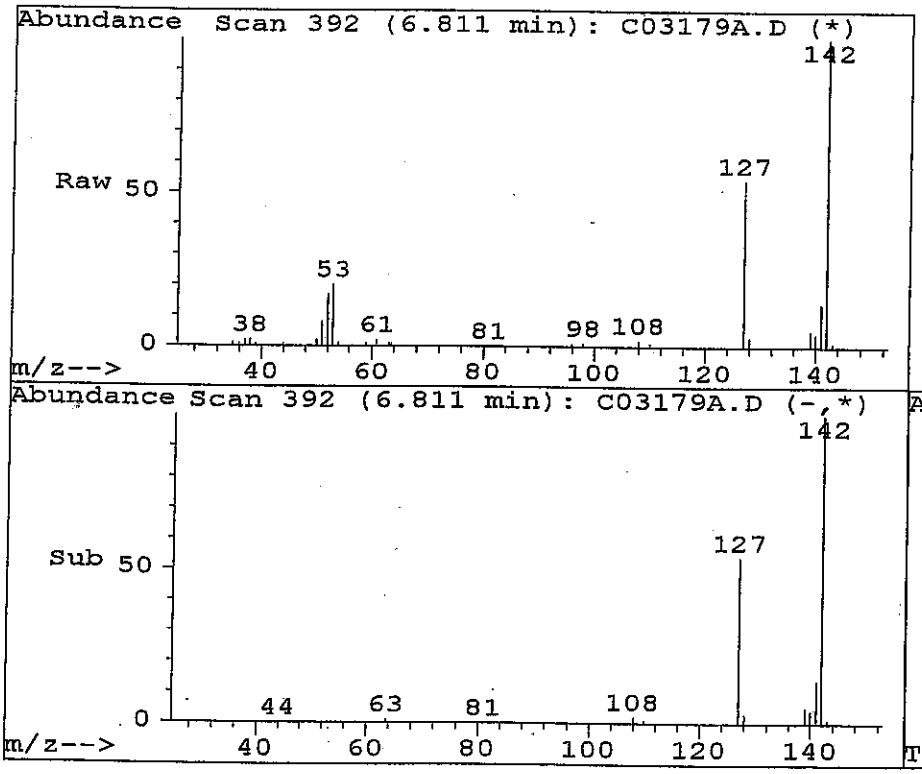


#13
2-propanol
Concen: 1.11 ppbV
RT: 5.96 min Scan# 304
Delta R.T. -0.18 min
Lab File: C03179A.D
Acq: 17 Mar 109 8:47 am

Tgt Ion:45 Resp: 289890

Ion	Ratio	Lower	Upper
45	100		
43	25.4	16.1	24.1#
59	2.4	2.1	3.1
0	0.0	0.0	0.0

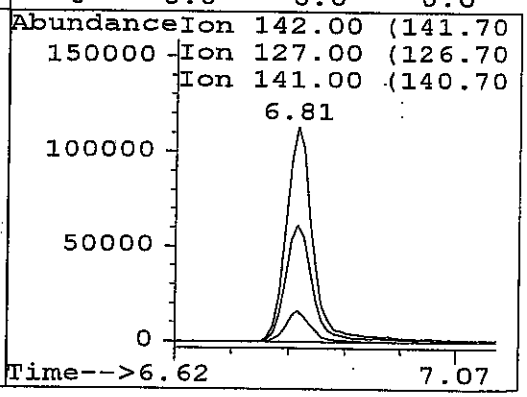


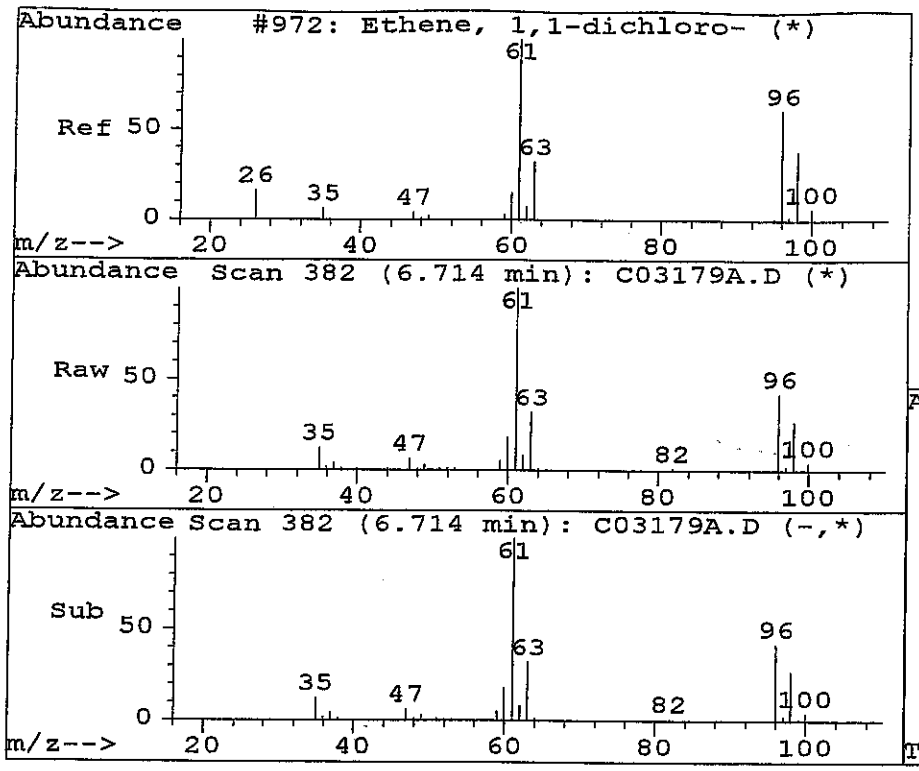


#14
Methyl iodide
Concen: 0.38 ppbV
RT: 6.81 min Scan# 392
Delta R.T. -0.18 min
Lab File: C03179A.D
Acq: 17 Mar 109 8:47 am

Tgt Ion:142 Resp: 339051

Ion	Ratio	Lower	Upper
142	100		
127	53.9	44.2	66.2
141	14.5	12.1	18.1
0	0.0	0.0	0.0

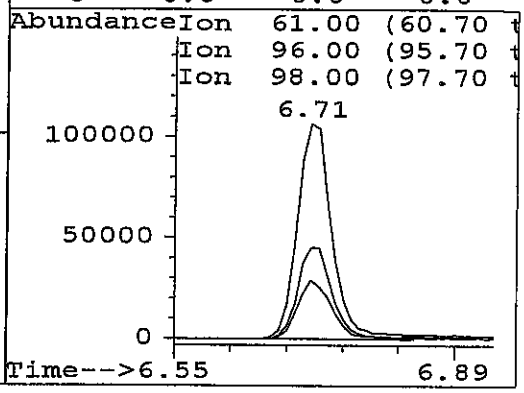


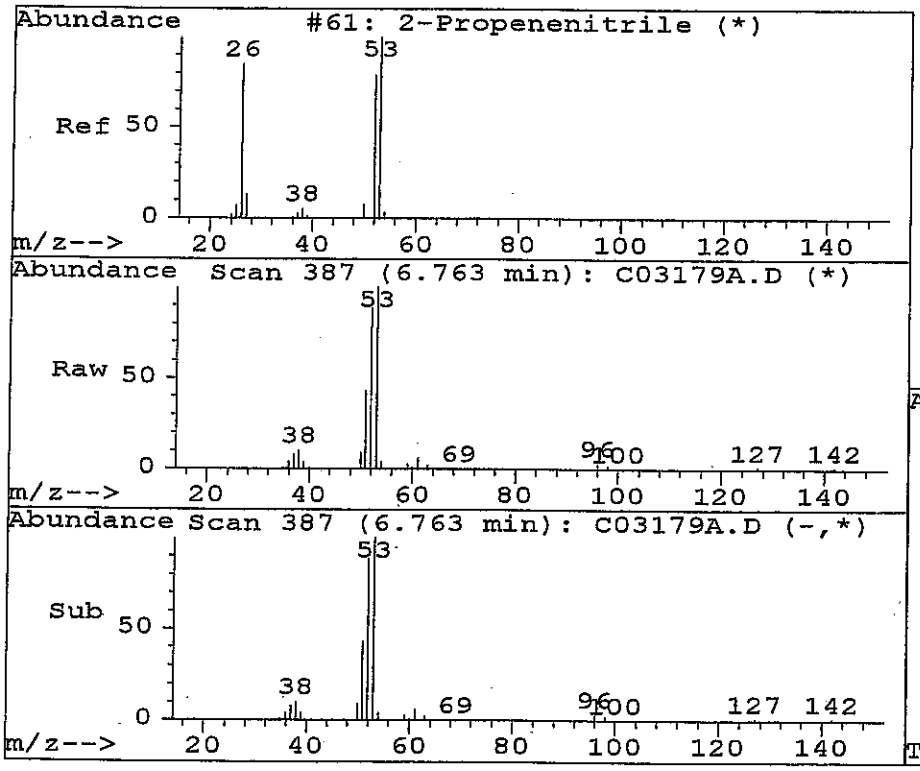


#15
1,1-Dichloroethene
Concen: 0.21 ppbV
RT: 6.71 min Scan# 382
Delta R.T. -0.18 min
Lab File: C03179A.D
Acq: 17 Mar 109 8:47 am

Tgt Ion:61 Resp: 305424

Ion	Ratio	Lower	Upper
61	100		
96	42.1	35.2	52.8
98	27.2	21.6	32.4
0	0.0	0.0	0.0

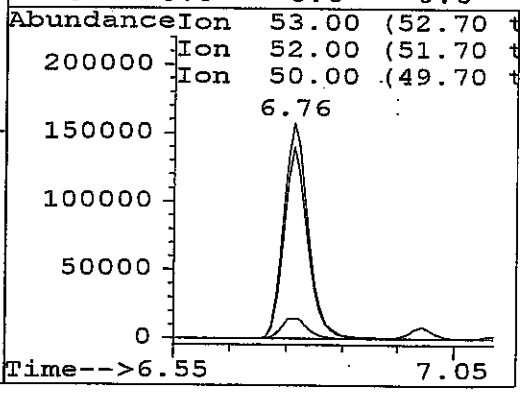


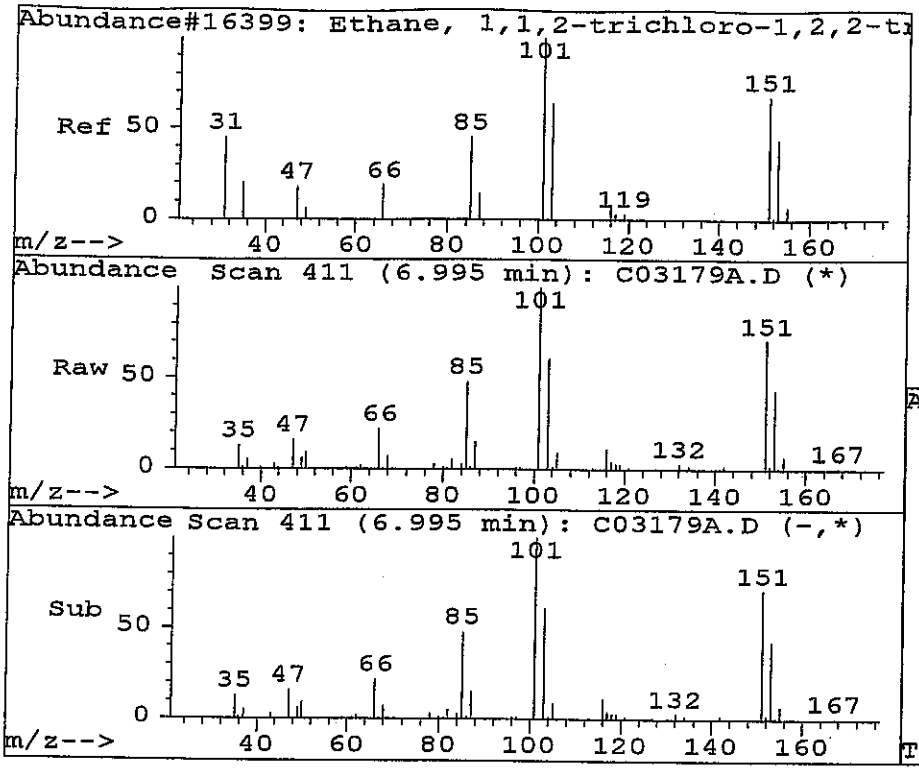


#16
Acrylonitrile
Concen: 0.74 ppbV
RT: 6.76 min Scan# 387
Delta R.T. -0.20 min
Lab File: C03179A.D
Acq: 17 Mar 109 8:47 am

Tgt Ion:53 Resp: 482925

Ion	Ratio	Lower	Upper
53	100		
52	89.0	71.0	106.4
50	7.4	7.6	11.4#
0	0.0	0.0	0.0

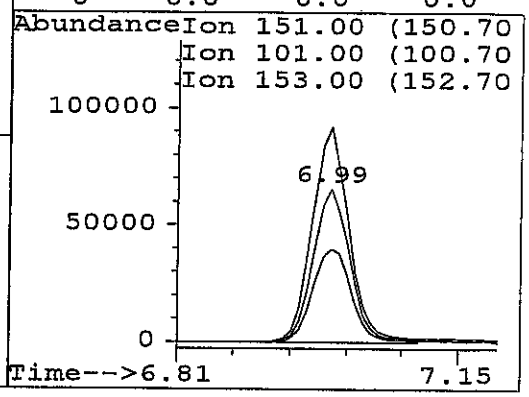


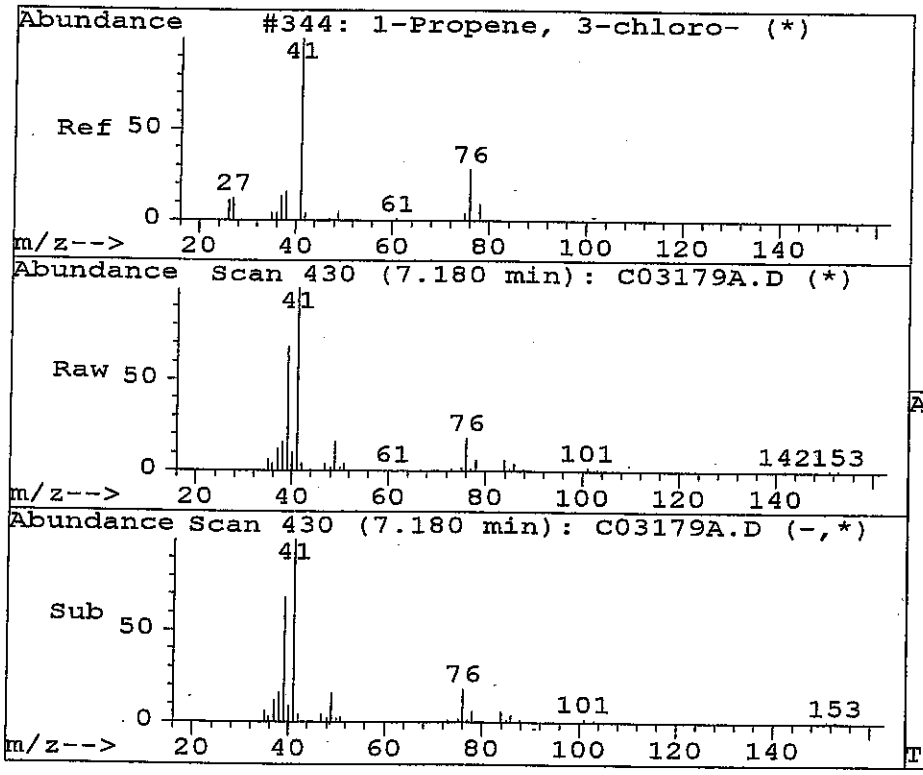


#17
Freon 113
Concen: 0.17 ppbV
RT: 6.99 min Scan# 411
Delta R.T. -0.17 min
Lab File: C03179A.D
Acq: 17 Mar 109 8:47 am

Tgt Ion:151 Resp: 205080

Ion	Ratio	Lower	Upper
151	100		
101	140.4	91.9	137.9#
153	60.8	50.0	75.0
0	0.0	0.0	0.0

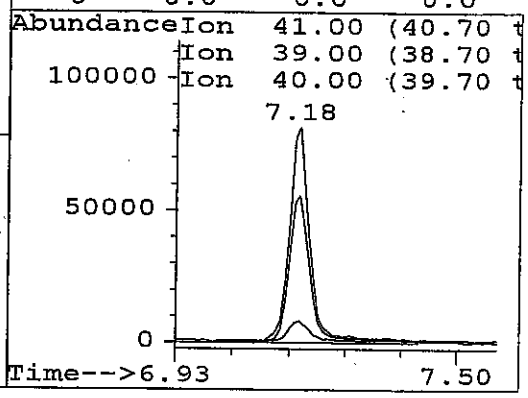


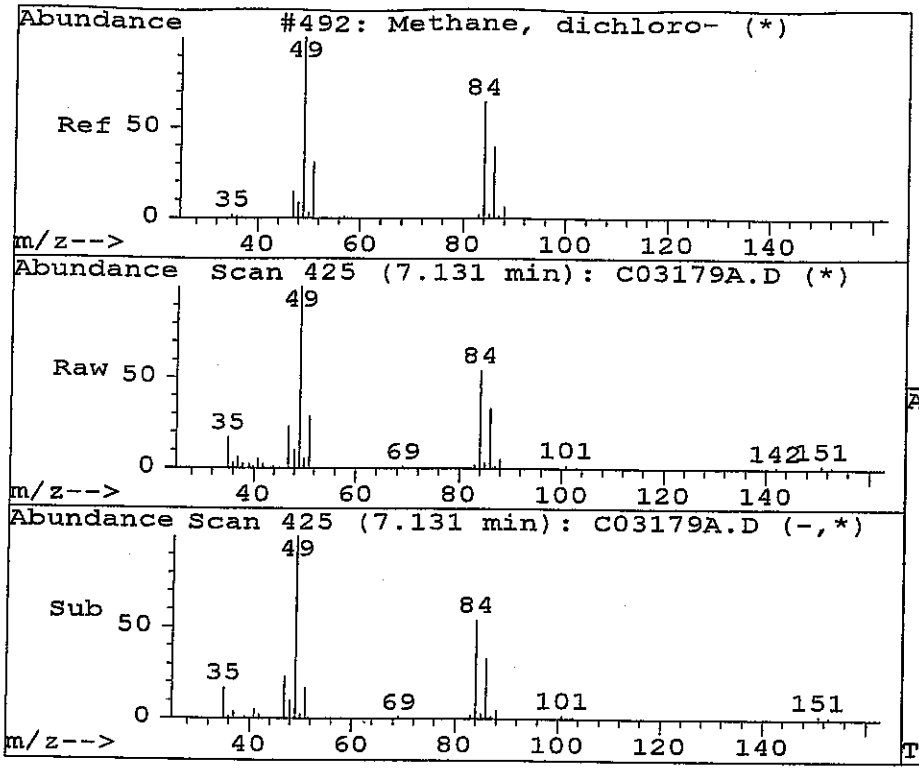


#18
Allyl chloride
Concen: 0.19 ppbV
RT: 7.18 min Scan# 430
Delta R.T. -0.17 min
Lab File: C03179A.D
Acq: 17 Mar 109 8:47 am

Tgt Ion:41 Resp: 248581

Ion	Ratio	Lower	Upper
41	100		
39	67.9	57.3	85.9
40	9.0	7.8	11.6
0	0.0	0.0	0.0

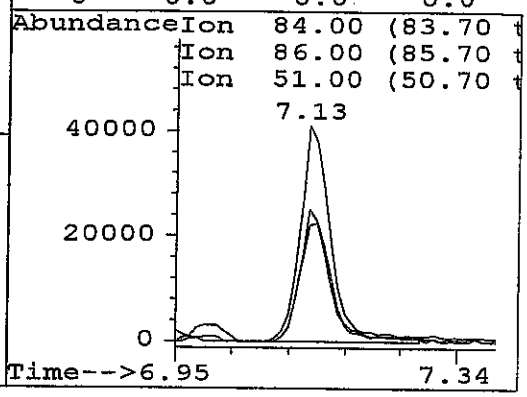


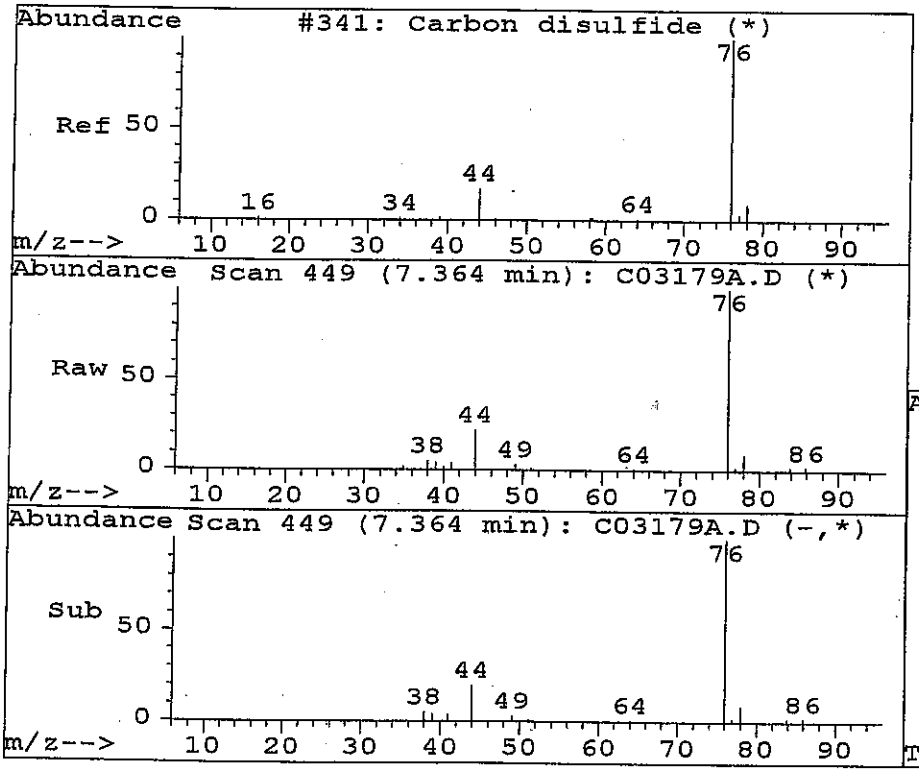


#19
Dichloromethane
Concen: 0.19 ppbV
RT: 7.13 min Scan# 425
Delta R.T. -0.18 min
Lab File: C03179A.D
Acq: 17 Mar 109 8:47 am

Tgt Ion:84 Resp: 120655

Ion	Ratio	Lower	Upper
84	100		
86	61.2	54.2	81.2
51	53.4	45.8	68.8
0	0.0	0.0	0.0

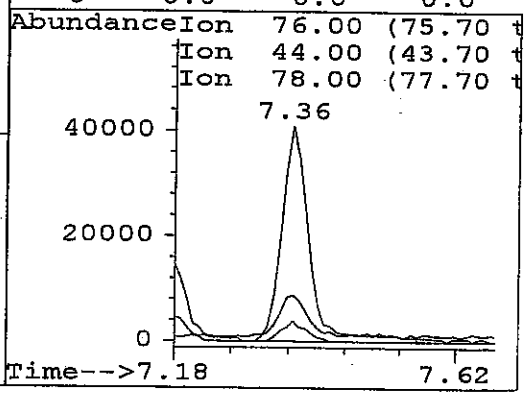


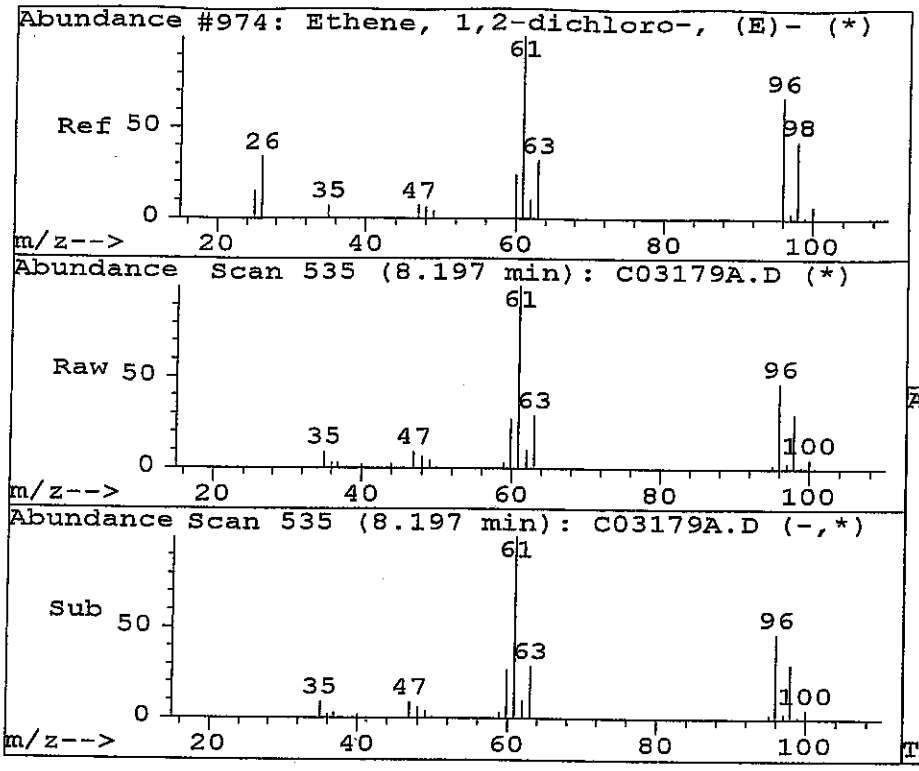


#20
Carbon disulfide
Concen: 0.18 ppbV
RT: 7.36 min Scan# 449
Delta R.T. -0.18 min
Lab File: C03179A.D
Acq: 17 Mar 109 8:47 am

Tgt Ion:76 Resp: 122015

Ion	Ratio	Lower	Upper
76	100		
44	19.0	15.9	23.9
78	9.5	6.7	11.1
0	0.0	0.0	0.0

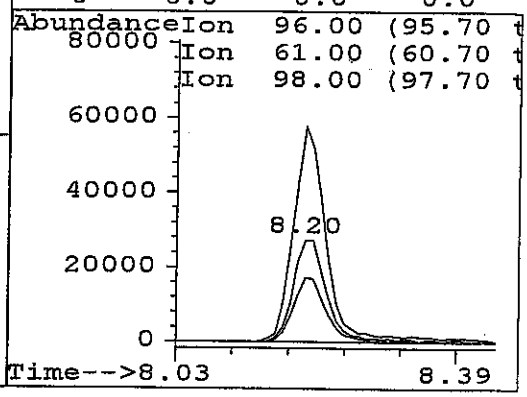


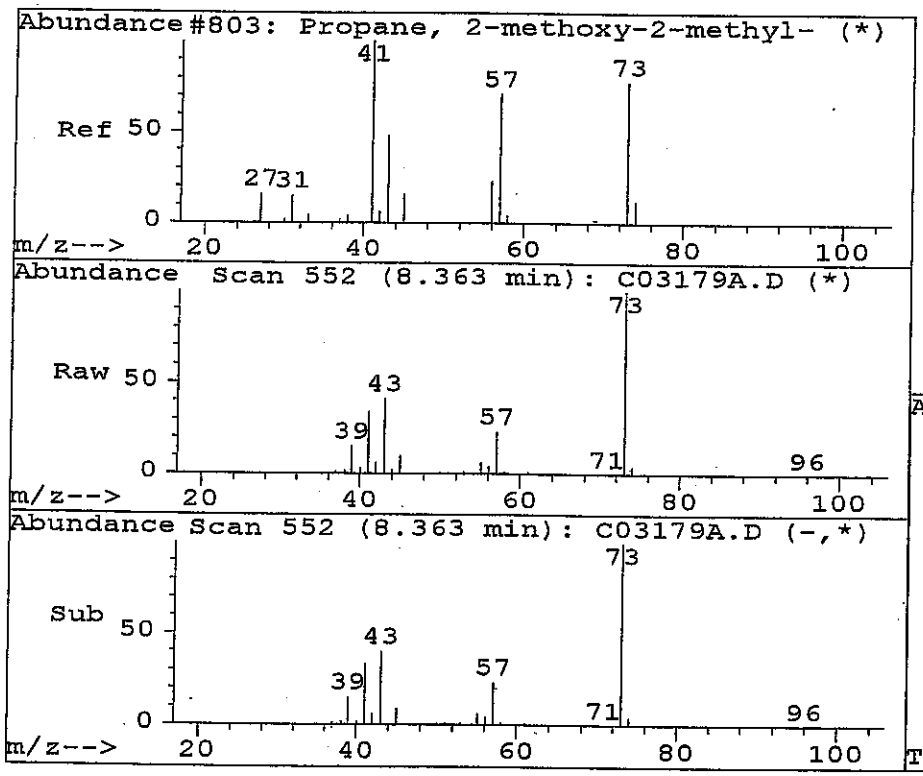


#21
trans-1,2-Dichloroethene
Concen: 0.15 ppbV
RT: 8.20 min Scan# 535
Delta R.T. -0.18 min
Lab File: C03179A.D
Acq: 17 Mar 109 8:47 am

Tgt Ion:96 Resp: 80889

Ion	Ratio	Lower	Upper
96	100		
61	209.2	172.5	258.7
98	63.3	49.7	74.5
0	0.0	0.0	0.0

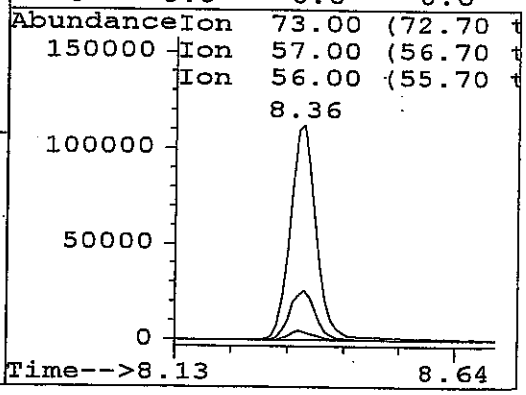


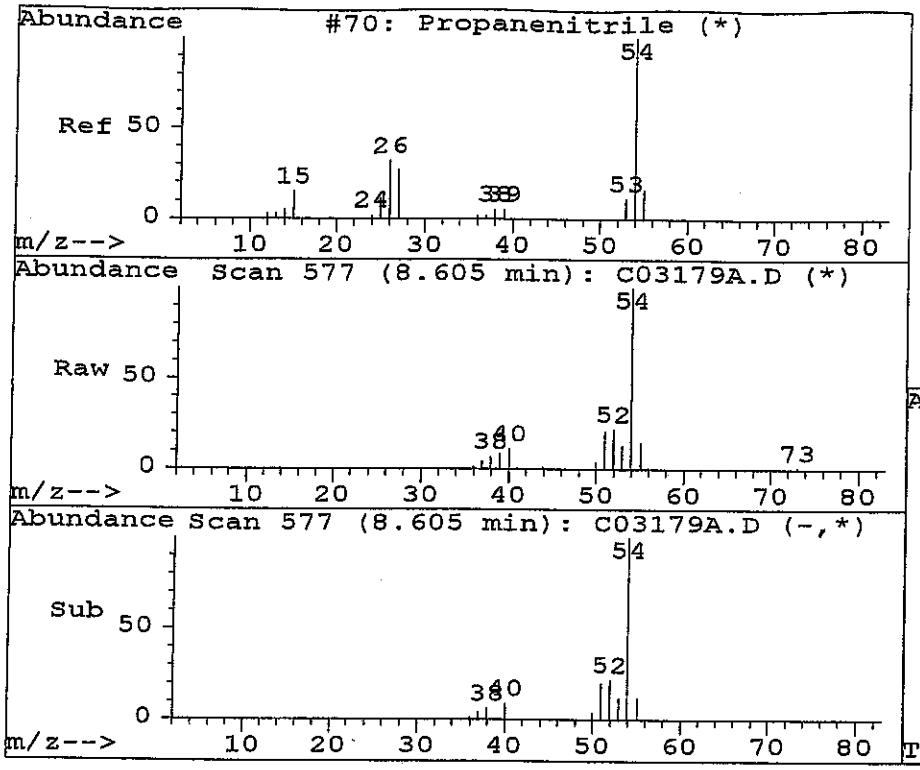


#22
Methyl tert butyl ether
Concen: 0.15 ppbV
RT: 8.36 min Scan# 552
Delta R.T. -0.18 min
Lab File: C03179A.D
Acq: 17 Mar 109 8:47 am

Tgt Ion:73 Resp: 369980

Ion	Ratio	Lower	Upper
73	100		
57	23.2	18.8	28.2
56	3.7	3.1	4.7
0	0.0	0.0	0.0

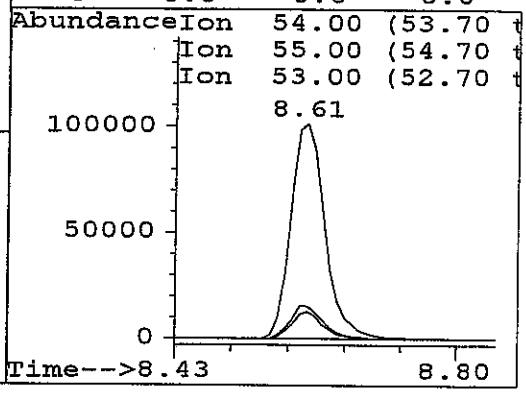


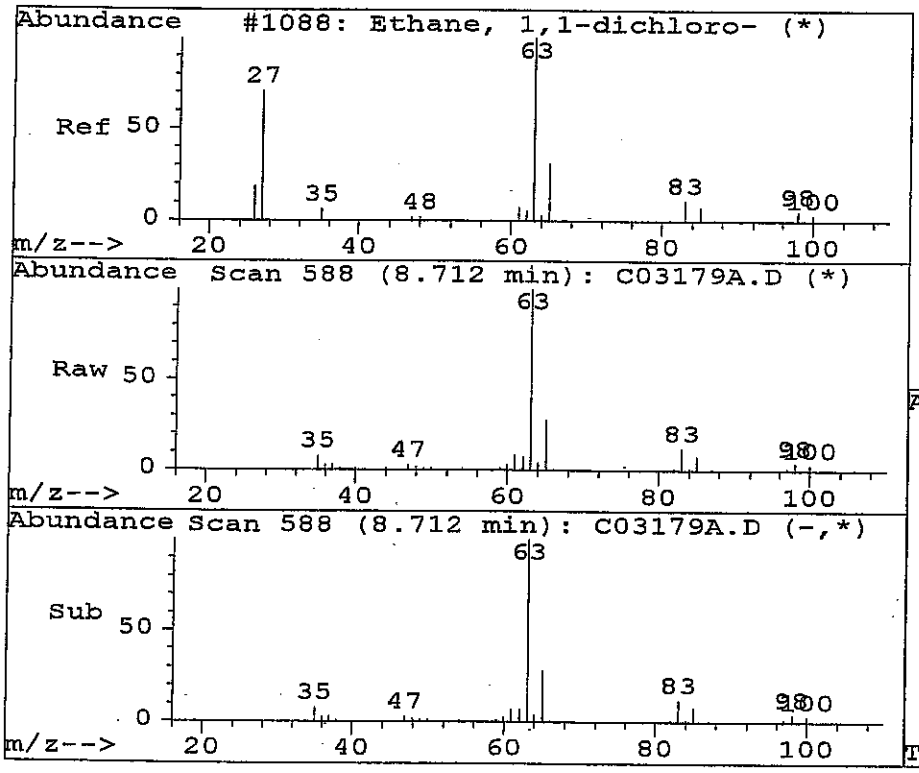


#23
Propionitrile
Concen: 0.43 ppbV
RT: 8.61 min Scan# 577
Delta R.T. -0.22 min
Lab File: C03179A.D
Acq: 17 Mar 109 8:47 am

Tgt Ion:54 Resp: 316585

Ion	Ratio	Lower	Upper
54	100		
55	15.3	11.8	17.6
53	12.5	9.0	13.4
0	0.0	0.0	0.0

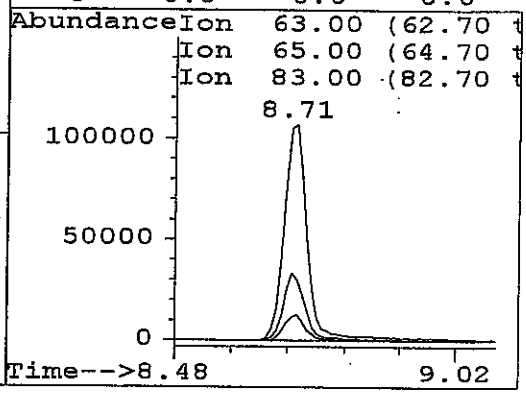


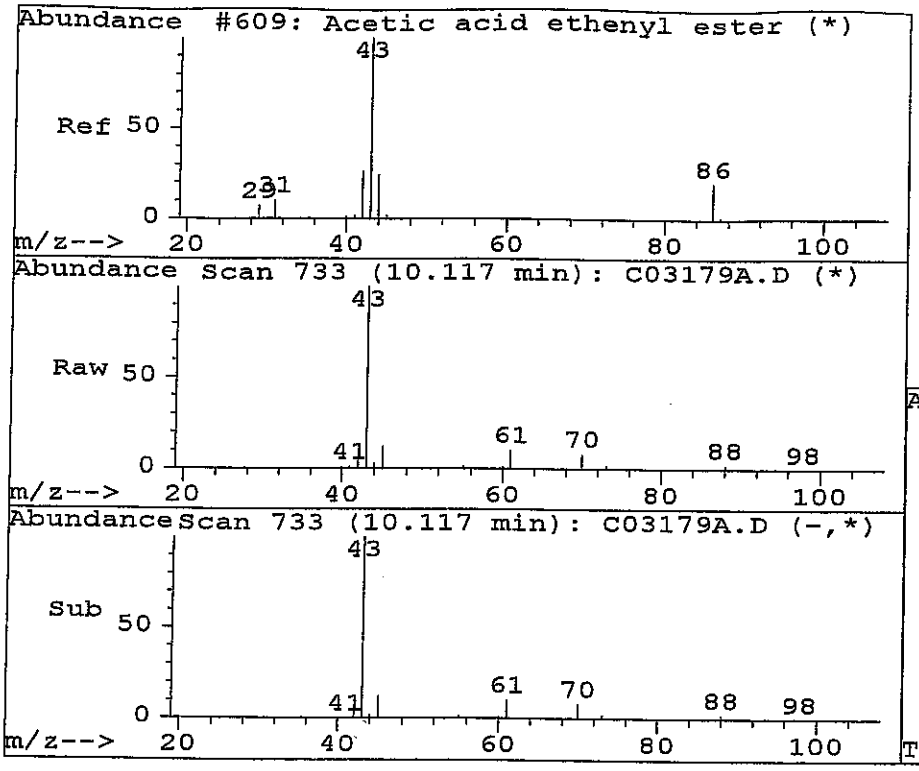


#24
1,1-Dichloroethane
Concen: 0.19 ppbV
RT: 8.71 min Scan# 588
Delta R.T. -0.19 min
Lab File: C03179A.D
Acq: 17 Mar 109 8:47 am

Tgt Ion:63 Resp: 33104-1

Ion	Ratio	Lower	Upper
63	100		
65	28.3	23.7	35.5
83	12.1	8.9	13.3
0	0.0	0.0	0.0

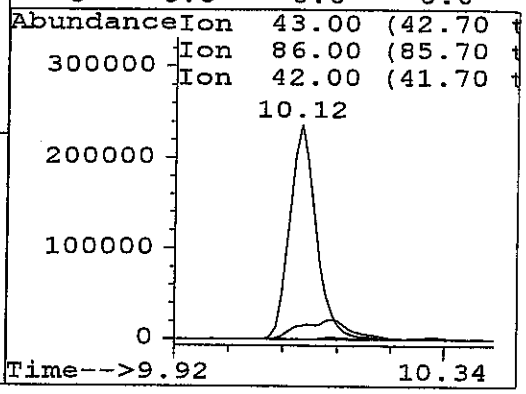


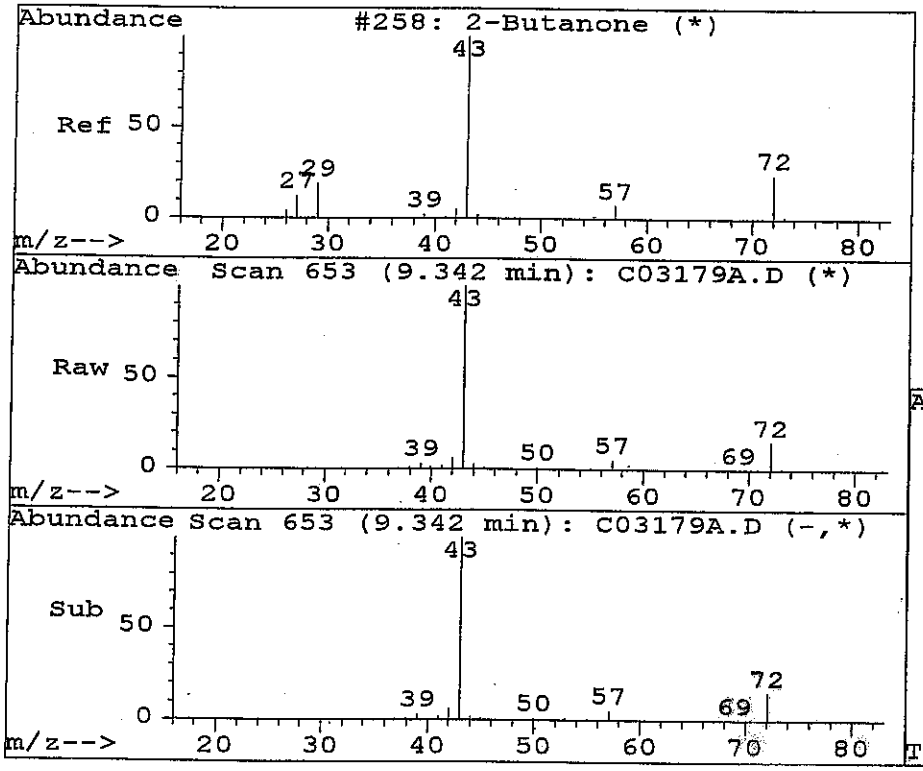


#25
Vinyl acetate
Concen: 0.21 ppbV
RT: 10.12 min Scan# 733
Delta R.T. -0.20 min
Lab File: C03179A.D
Acq: 17 Mar 109 8:47 am

Tgt Ion:43 Resp: 676740

Ion	Ratio	Lower	Upper
43	100		
86	0.0	0.0	0.0
42	6.2	5.7	8.5
0	0.0	0.0	0.0

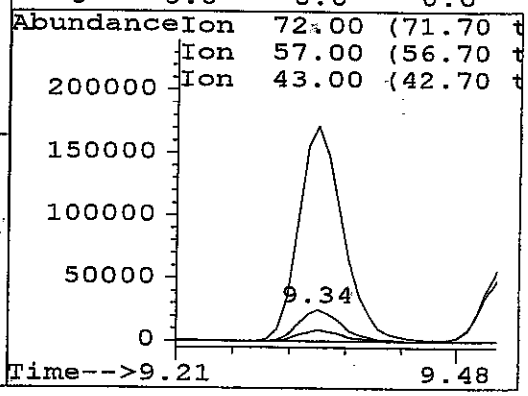


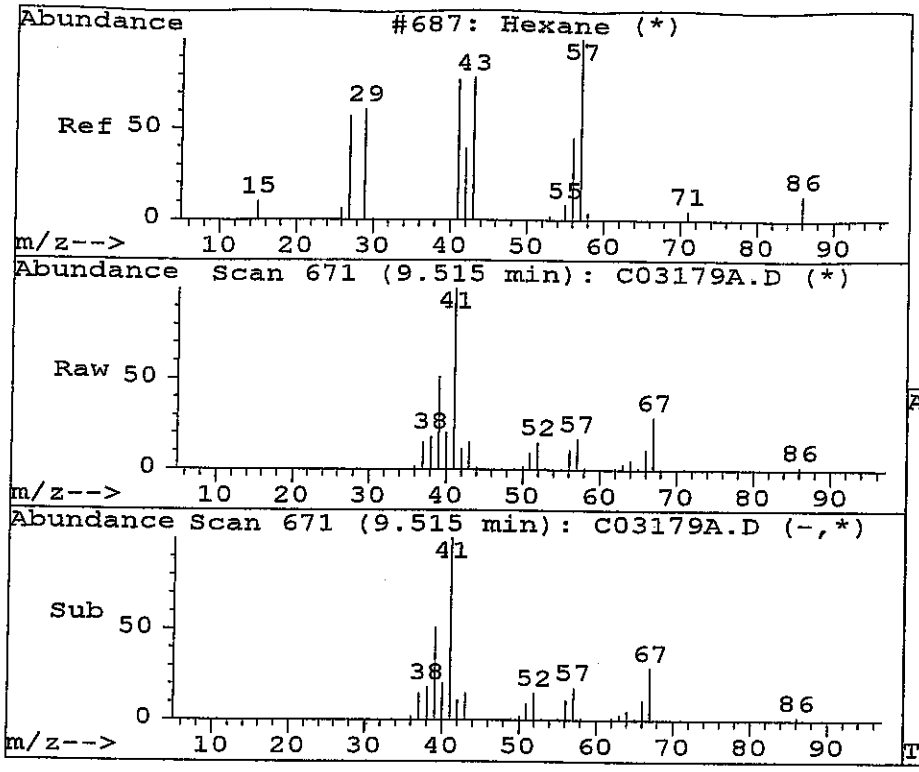


#26
2-Butanone
Concen: 0.19 ppbV
RT: 9.34 min Scan# 653
Delta R.T. -0.20 min
Lab File: C03179A.D
Acq: 17 Mar 109 8:47 am

Tgt Ion:72 Resp: 71425

Ion	Ratio	Lower	Upper
72	100		
57	36.2	30.6	46.0
43	685.3	601.5	902.3
0	0.0	0.0	0.0

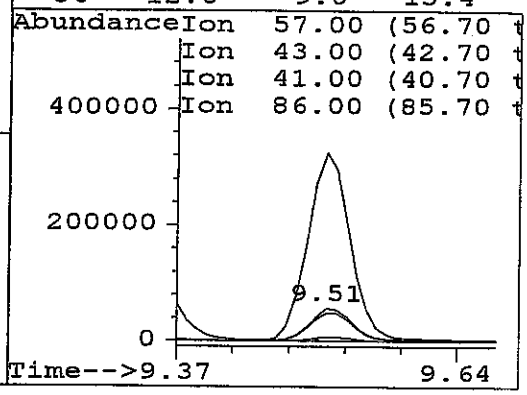


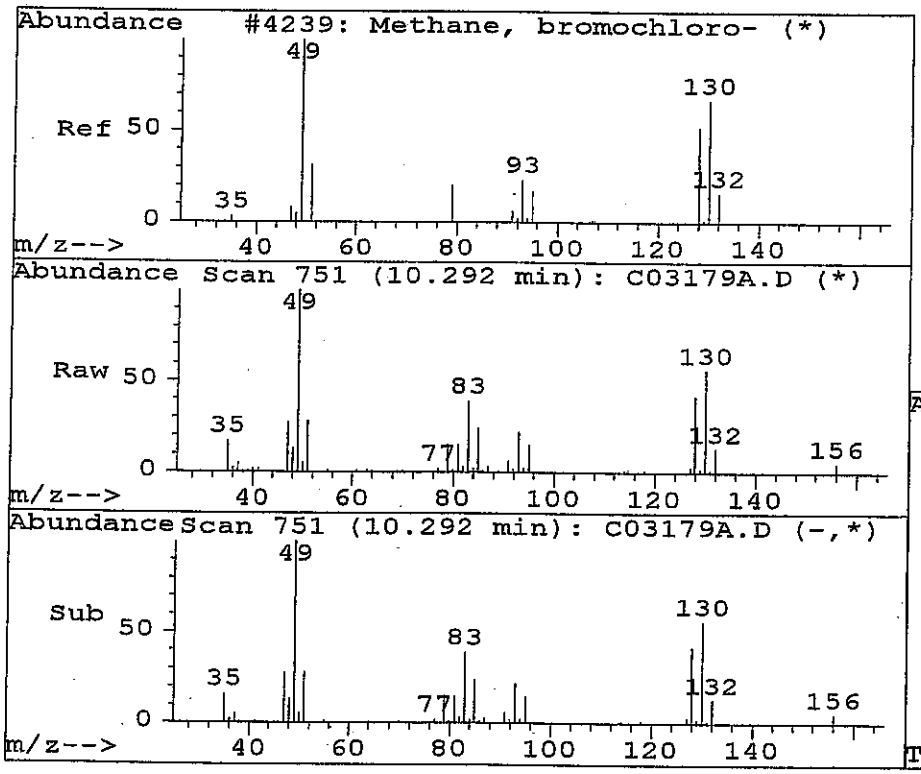


#27
Hexane
Concen: 0.15 ppbV
RT: 9.51 min Scan# 671
Delta R.T. -0.20 min
Lab File: C03179A.D
Acq: 17 Mar 109 8:47 am

Tgt Ion:57 Resp: 162303

Ion	Ratio	Lower	Upper
57	100		
43	94.2	68.5	102.7
41	571.6	474.9	712.3
86	12.0	9.0	13.4

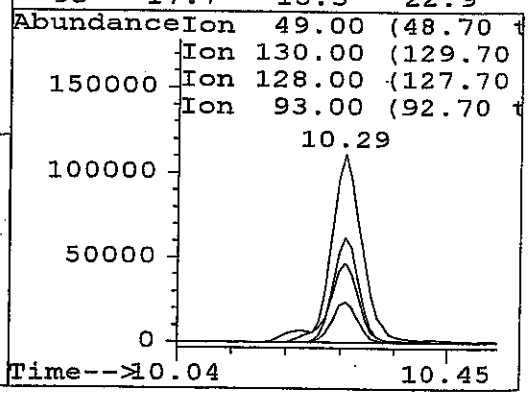


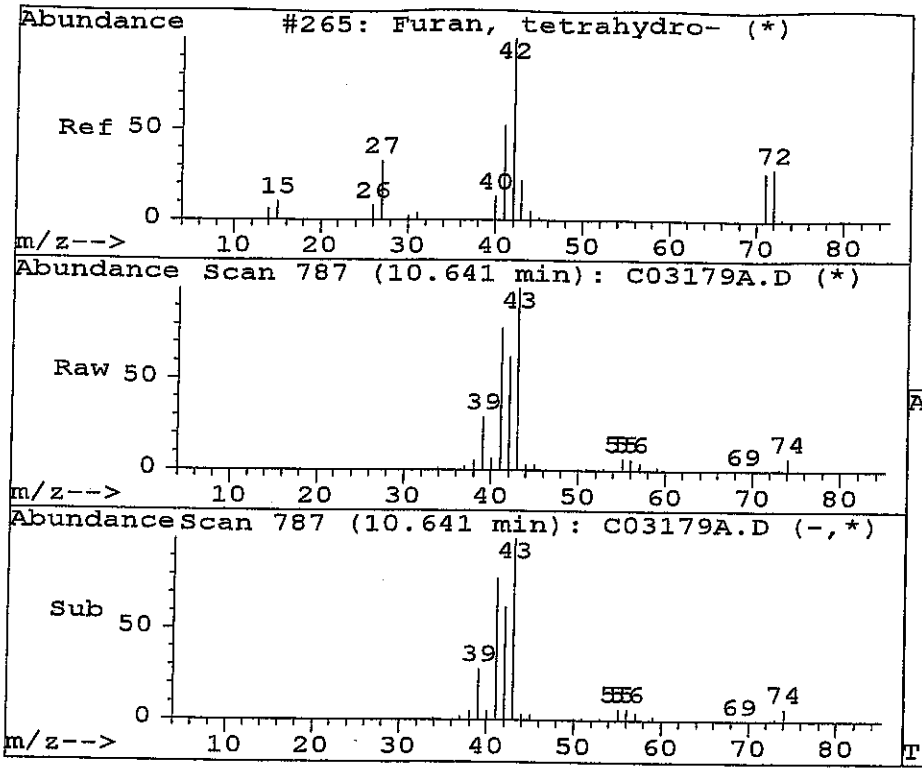


#28
Bromochloromethane
Concen: 0.23 ppbV
RT: 10.29 min Scan# 751
Delta R.T. -0.21 min
Lab File: C03179A.D
Acq: 17 Mar 109 8:47 am

Tgt Ion:49 Resp: 370225

Ion	Ratio	Lower	Upper
49	100		
130	45.6	37.9	56.9
128	39.4	32.6	48.8
93	17.7	15.3	22.9

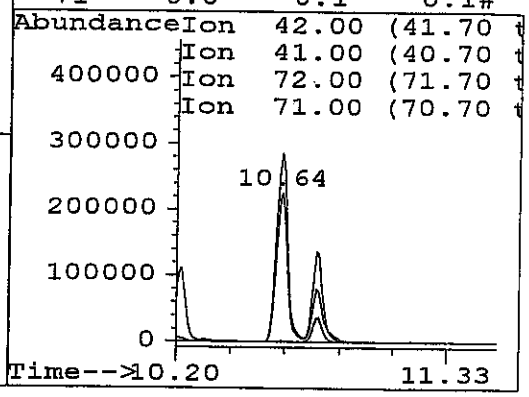


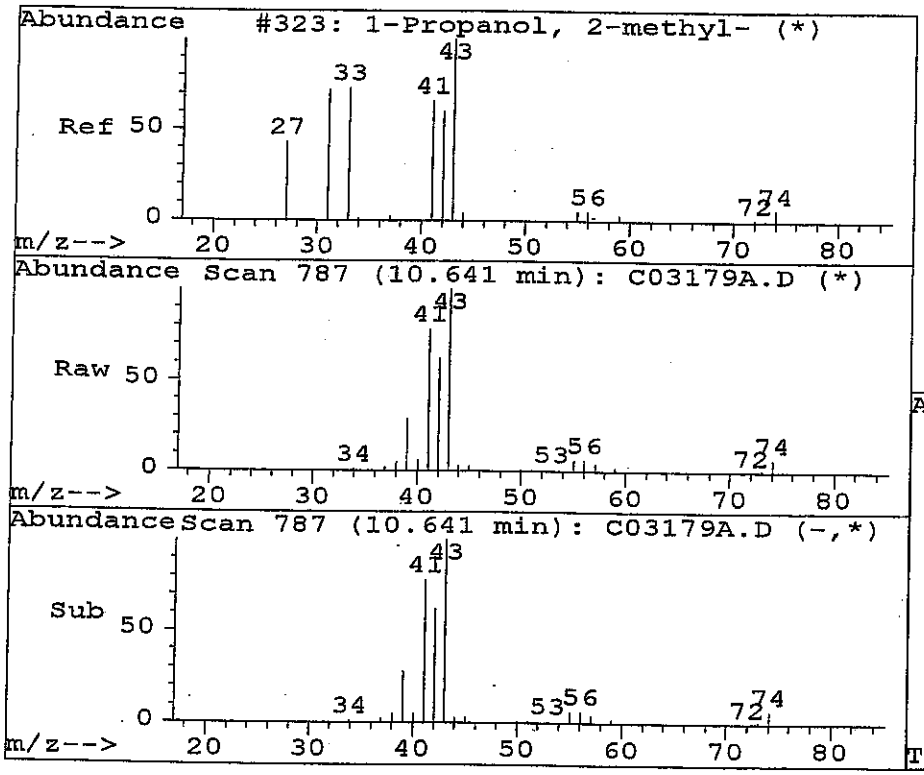


#29
Tetrahydrofuran
Concen: 0.56 ppbV m
RT: 10.64 min Scan# 787
Delta R.T. -0.28 min
Lab File: C03179A.D
Acq: 17 Mar 109 8:47 am

Tgt Ion:42 Resp: 1122494

Ion	Ratio	Lower	Upper
42	100		
41	126.6	104.6	157.0
72	0.5	0.2	0.4#
71	0.0	0.1	0.1#

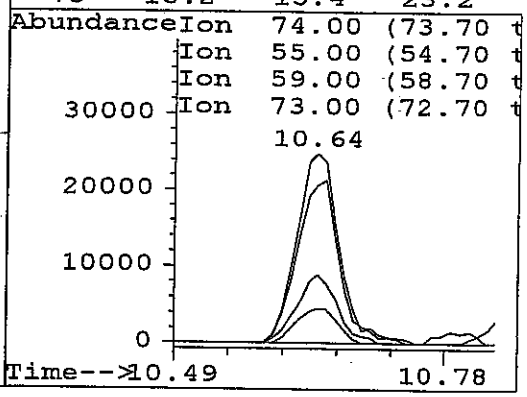


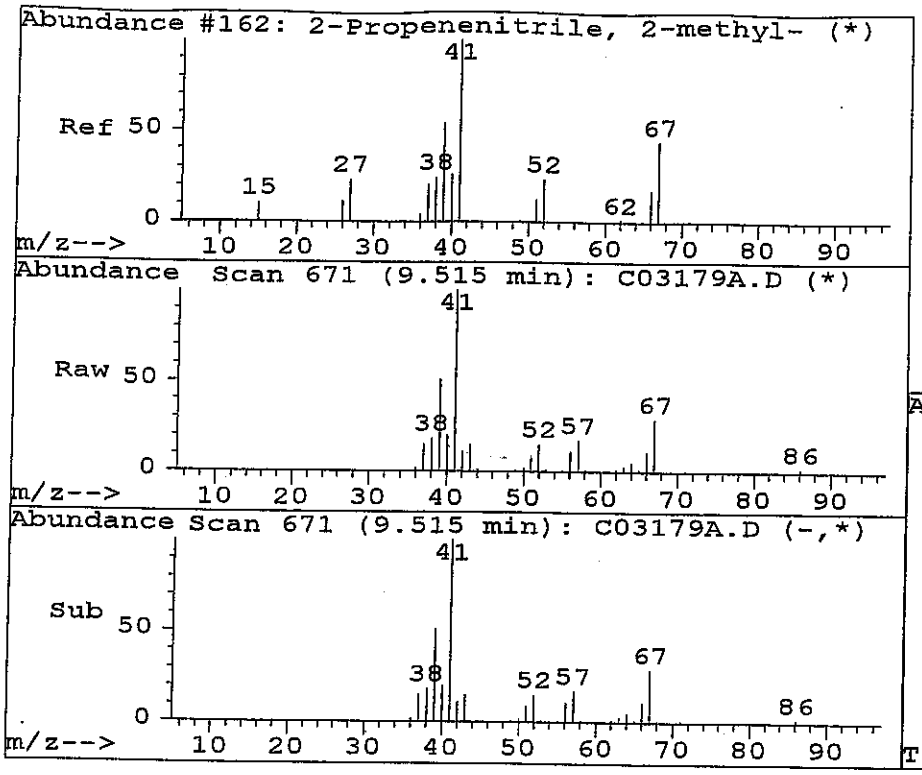


#30
Isobutyl alcohol
Concen: 0.60 ppbV
RT: 10.64 min Scan# 787
Delta R.T. -0.28 min
Lab File: C03179A.D
Acq: 17 Mar 109 8:47 am

Tgt Ion:74 Resp: 79891

Ion	Ratio	Lower	Upper
74	100		
55	83.2	68.6	103.0
59	35.8	28.7	43.1
73	18.2	15.4	23.2

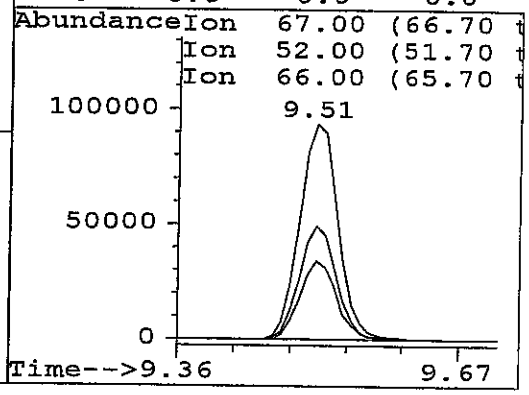


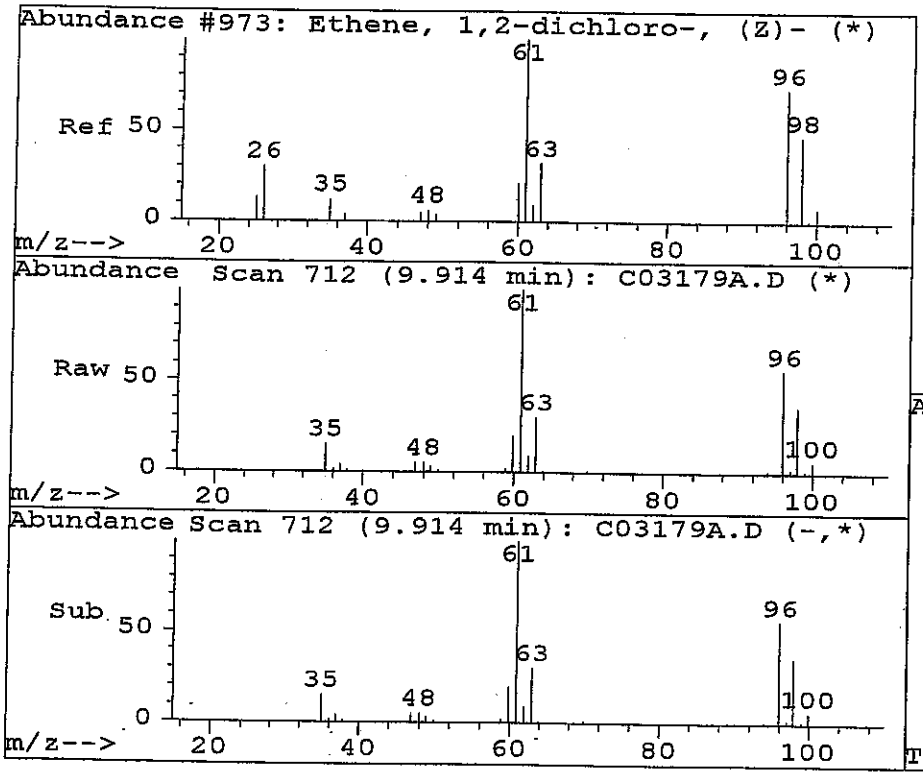


#31
Methacrylonitrile
Concen: 0.58 ppbV
RT: 9.51 min Scan# 671
Delta R.T. -0.23 min
Lab File: C03179A.D
Acq: 17 Mar 109 8:47 am

Tgt Ion:67 Resp: 274466

Ion	Ratio	Lower	Upper
67	100		
52	52.6	41.4	62.0
66	36.5	27.8	41.8
0	0.0	0.0	0.0

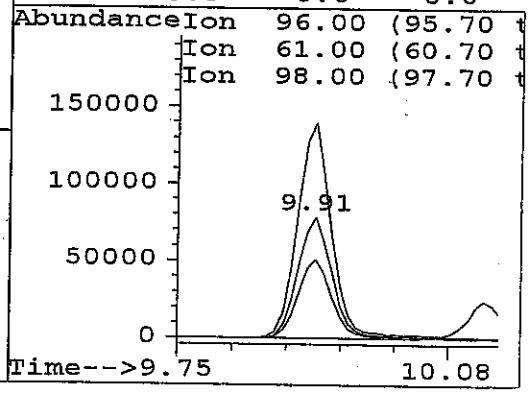


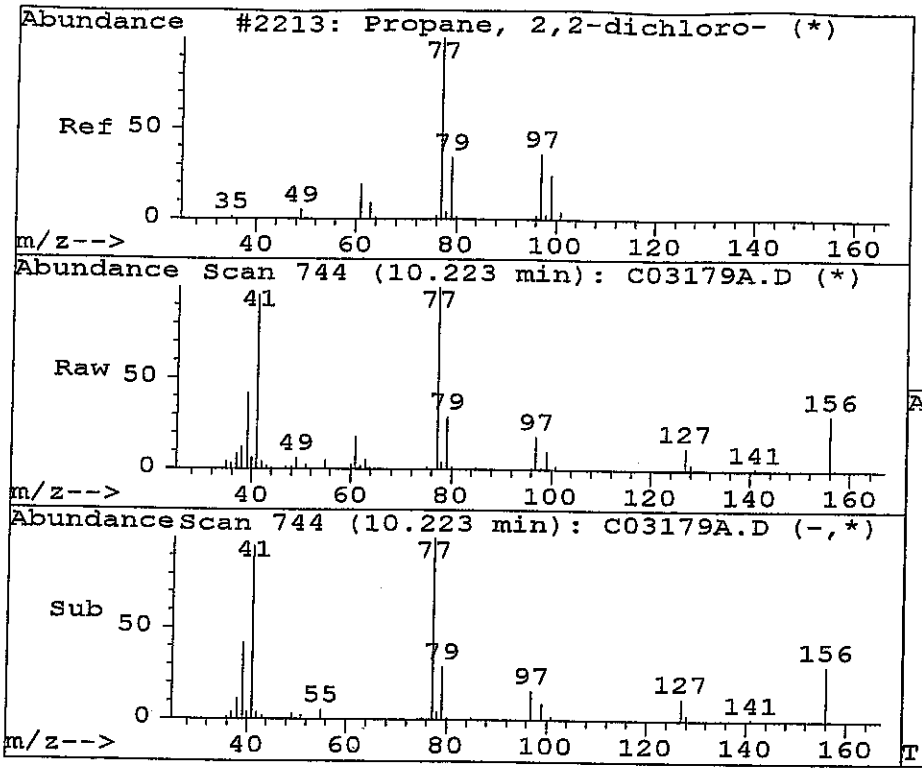


#32
cis-1,2-Dichloroethene
Concen: 0.28 ppbV
RT: 9.91 min Scan# 712
Delta R.T. -0.20 min
Lab File: C03179A.D
Acq: 17 Mar 109 8:47 am

Tgt Ion:96 Resp: 224404

Ion	Ratio	Lower	Upper
96	100		
61	177.6	145.9	218.9
98	64.7	51.3	76.9
0	0.0	0.0	0.0

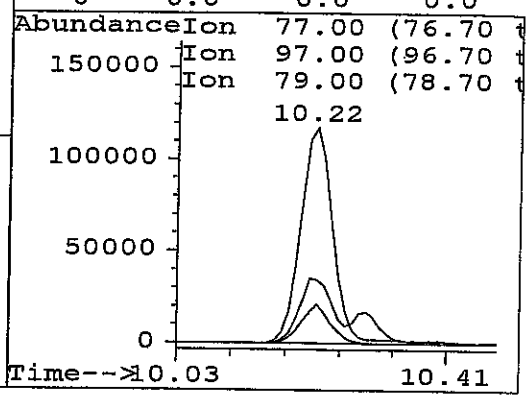


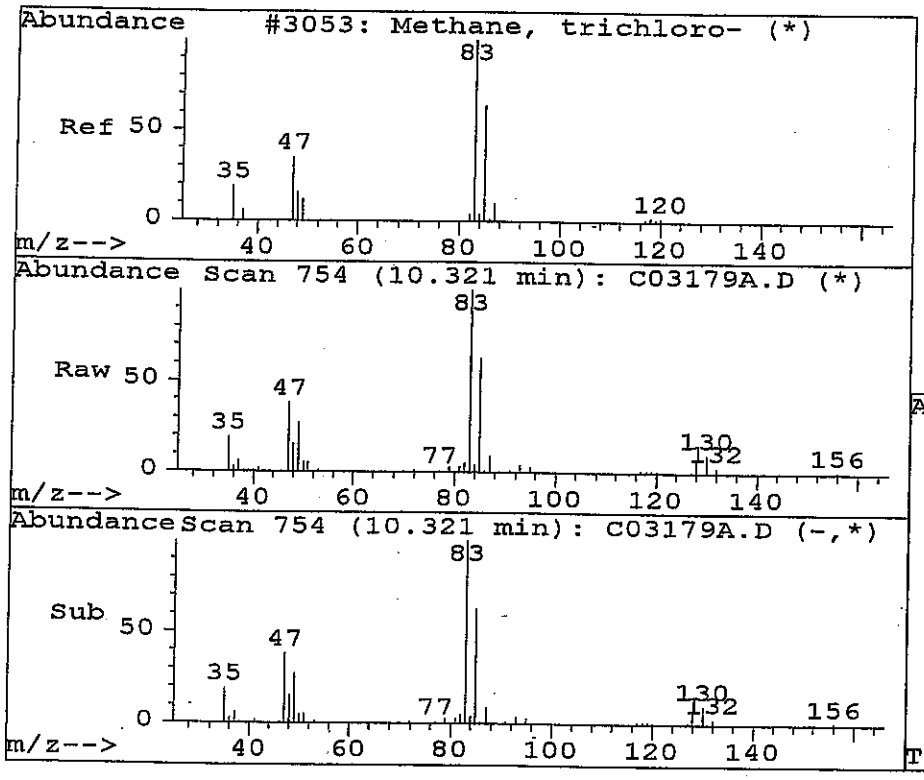


#33
2,2-Dichloropropane
Concen: 0.23 ppbV
RT: 10.22 min Scan# 744
Delta R.T. -0.20 min
Lab File: C03179A.D
Acq: 17 Mar 109 8:47 am

Tgt Ion:77 Resp: 359345

Ion	Ratio	Lower	Upper
77	100		
97	18.2	13.5	20.3
79	29.1	24.8	37.2
0	0.0	0.0	0.0

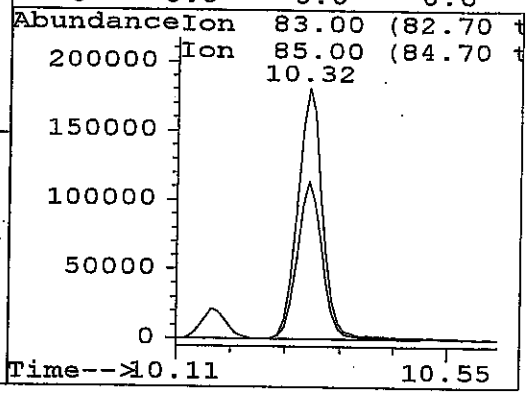


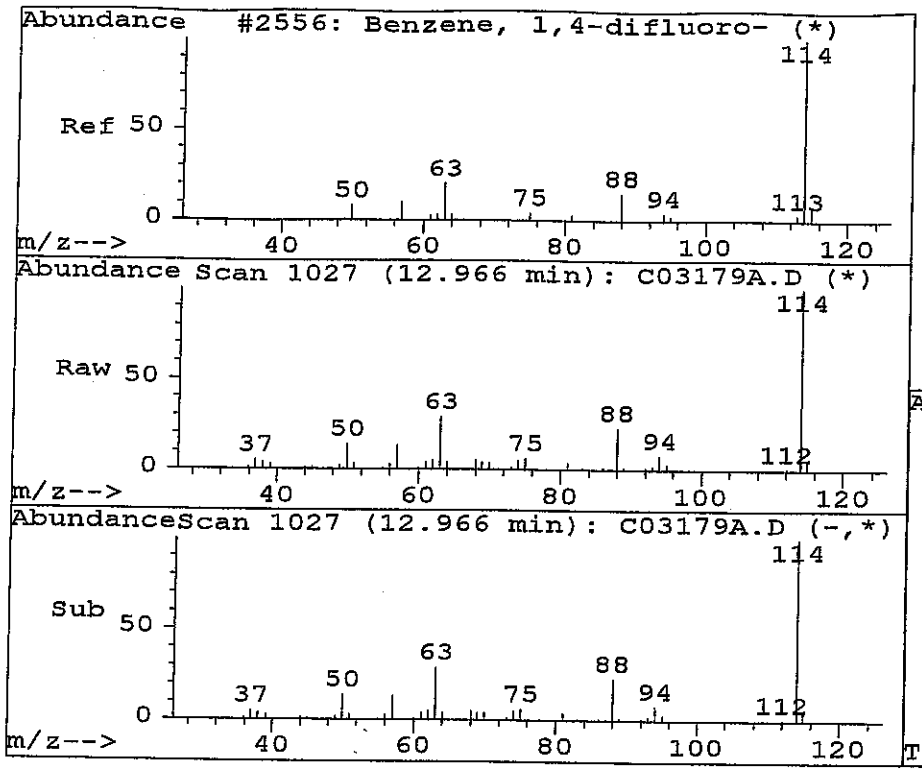


#34
Chloroform
Concen: 0.28 ppbV
RT: 10.32 min Scan# 754
Delta R.T. -0.21 min
Lab File: C03179A.D
Acq: 17 Mar 109 8:47 am

Tgt Ion:83 Resp: 516969

Ion	Ratio	Lower	Upper
83	100		
85	62.8	51.5	77.3
0	0.0	0.0	0.0
0	0.0	0.0	0.0

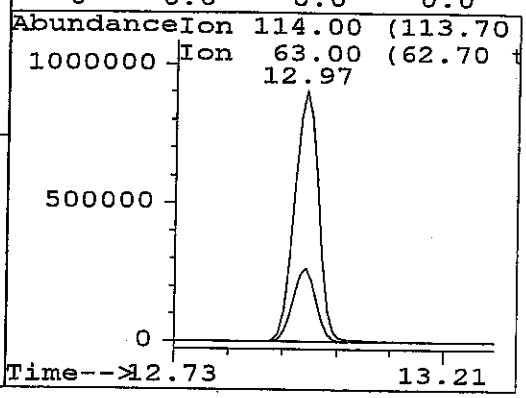


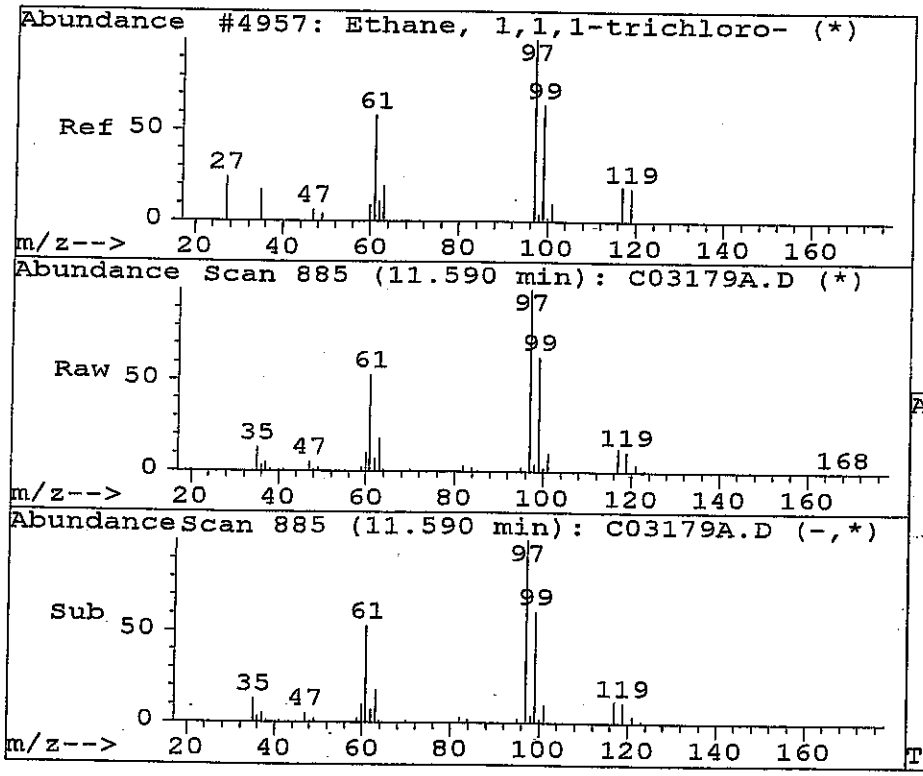


#35
1,4-Difluorobenzene
Concen: 20.00 ppbV
RT: 12.97 min Scan# 1027
Delta R.T. -0.20 min
Lab File: C03179A.D
Acq: 17 Mar 109 8:47 am

Tgt Ion:114 Resp: 2720455

Ion	Ratio	Lower	Upper
114	100		
63	29.4	22.0	36.6
0	0.0	0.0	0.0
0	0.0	0.0	0.0

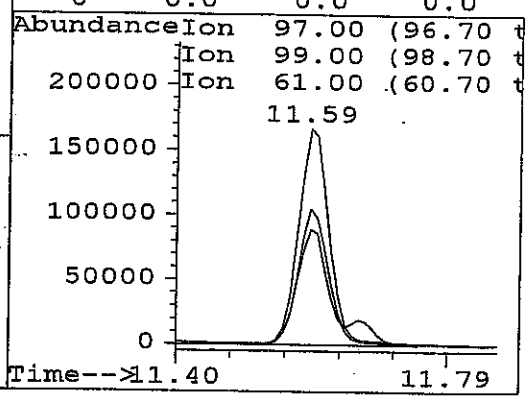


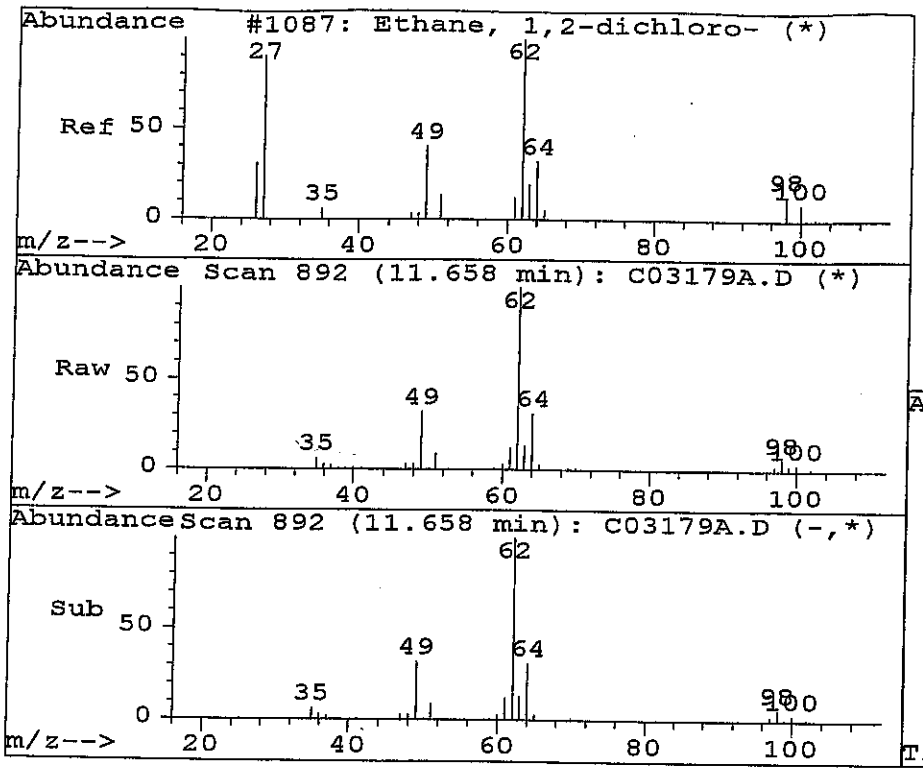


#36
1,1,1-Trichloroethane
Concen: 0.12 ppbV
RT: 11.59 min Scan# 885
Delta R.T. -0.21 min
Lab File: C03179A.D
Acq: 17 Mar 109 8:47 am

Tgt Ion:97 Resp: 509527

Ion	Ratio	Lower	Upper
97	100		
99	62.7	52.0	78.0
61	53.2	43.0	64.6
0	0.0	0.0	0.0

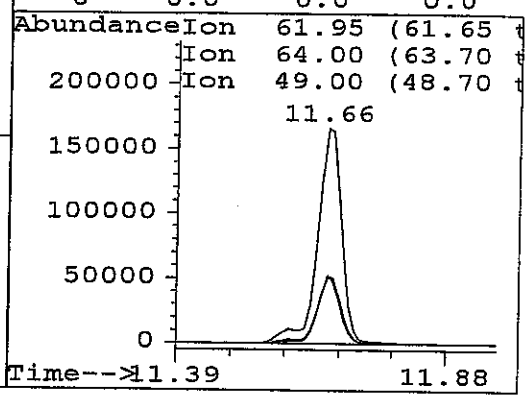


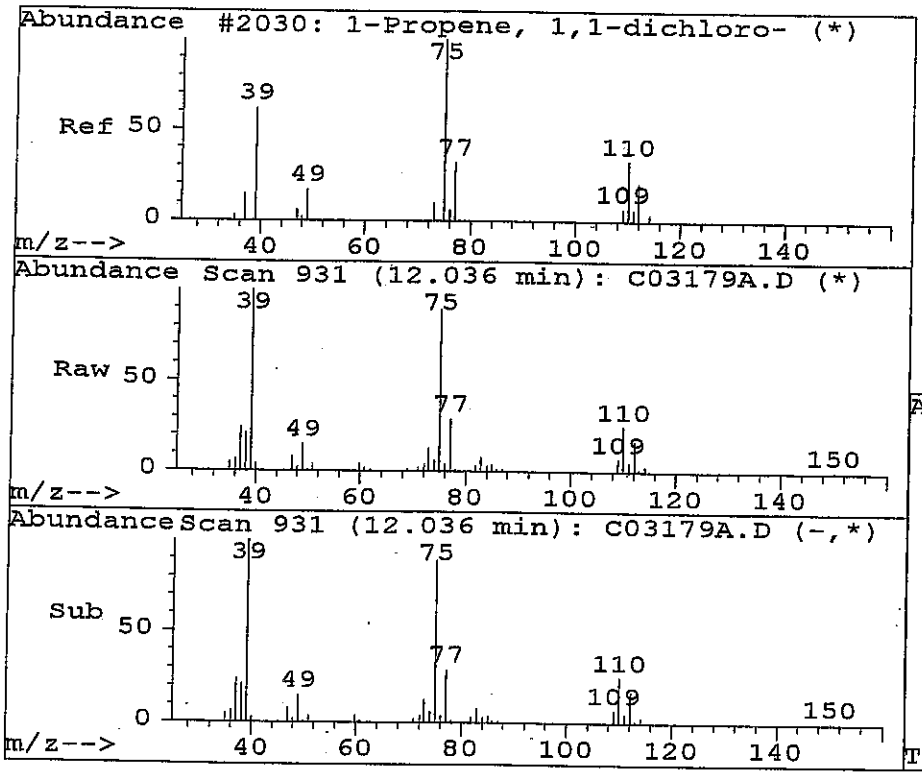


#37
1,2-Dichloroethane
Concen: 0.13 ppbV
RT: 11.66 min Scan# 892
Delta R.T. -0.21 min
Lab File: C03179A.D
Acq: 17 Mar 109 8:47 am

Tgt Ion:61.95 Resp: 49576

Ion	Ratio	Lower	Upper
62	100		
64	30.9	24.8	37.2
49	31.7	23.9	35.9
0	0.0	0.0	0.0

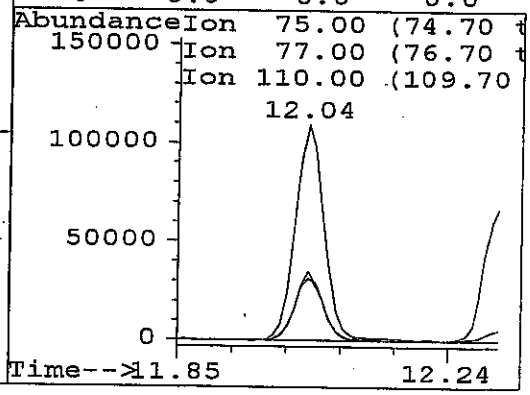


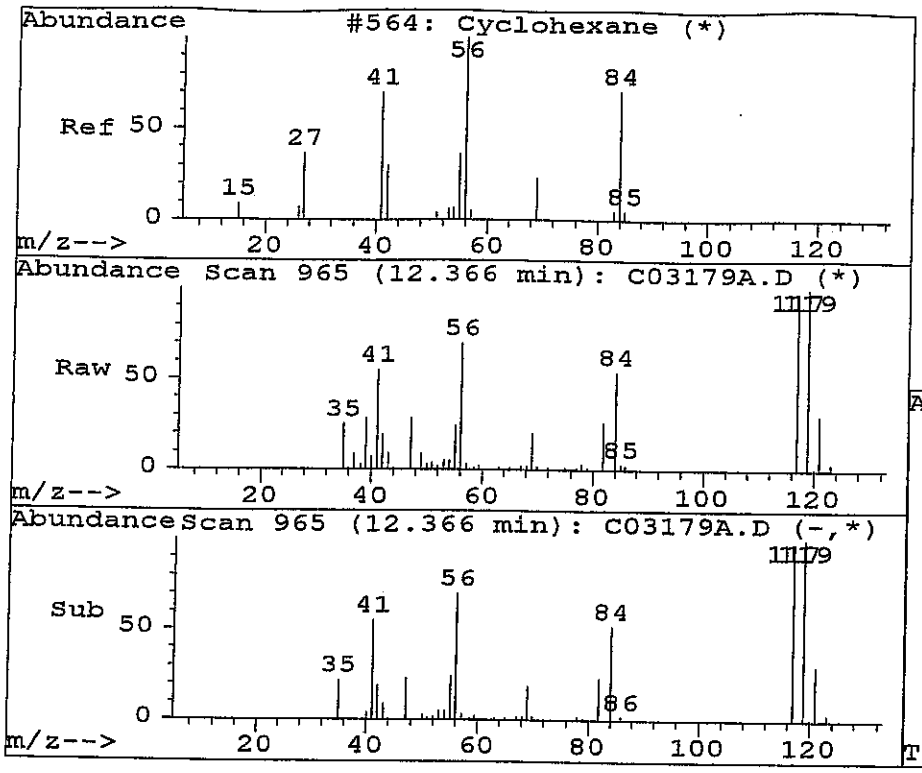


#38
1,1-Dichloropropene
Concen: 0.11 ppbV
RT: 12.04 min Scan# 931
Delta R.T. -0.20 min
Lab File: C03179A.D
Acq: 17 Mar 109 8:47 am

Tgt Ion:75 Resp: 310573

Ion	Ratio	Lower	Upper
75	100		
77	32.1	23.2	34.8
110	28.5	22.2	33.4
0	0.0	0.0	0.0

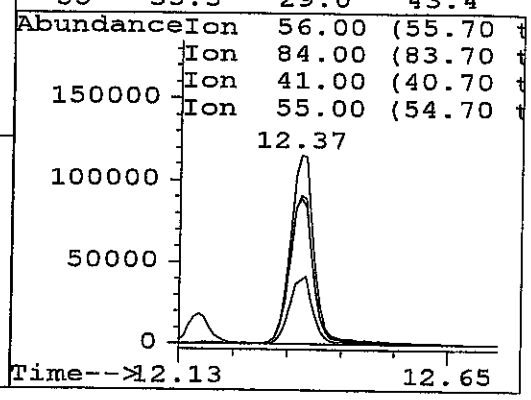


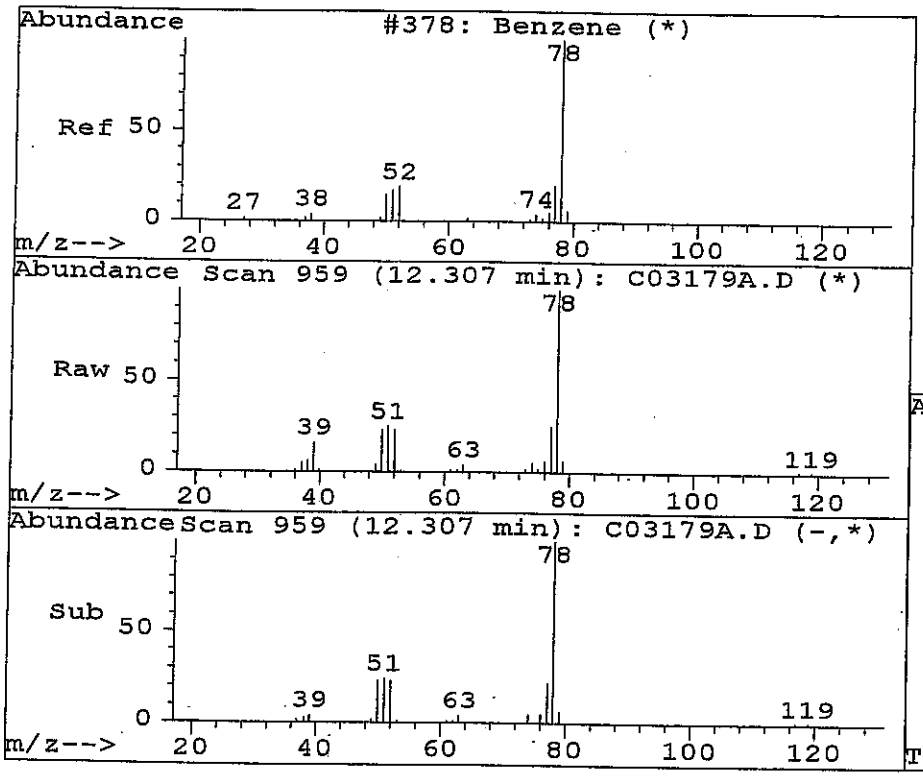


#39
Cyclohexane
Concen: 0.12 ppbV
RT: 12.37 min Scan# 965
Delta R.T. -0.18 min
Lab File: C03179A.D
Acq: 17 Mar 109 8:47 am

Tgt Ion:56 Resp: 373616

Ion	Ratio	Lower	Upper
56	100		
84	77.8	62.2	93.2
41	77.5	64.2	96.2
55	35.3	29.0	43.4

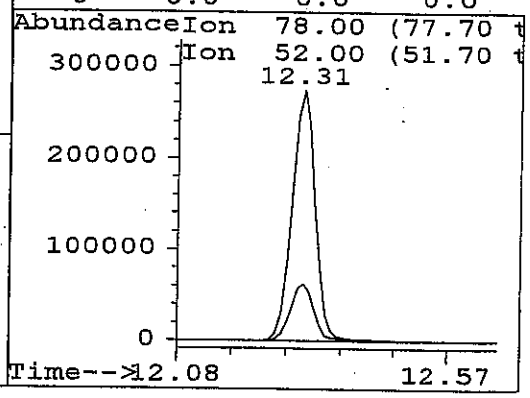


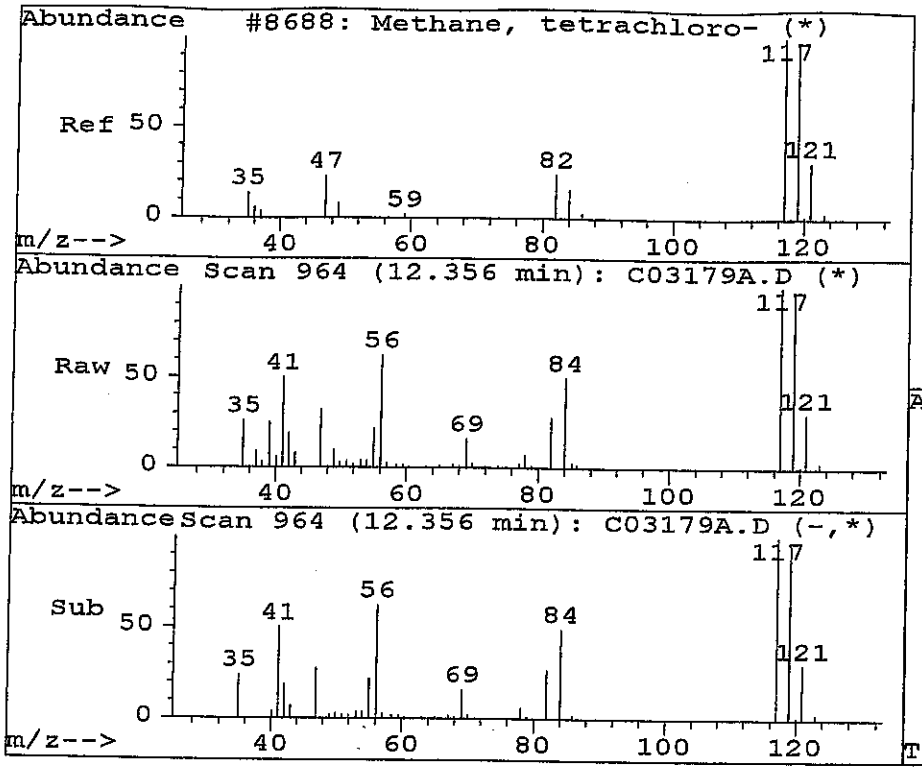


#40
Benzene
Concen: 0.13 ppbV
RT: 12.31 min Scan# 959
Delta R.T. -0.20 min
Lab File: C03179A.D
Acq: 17 Mar 109 8:47 am

Tgt Ion:78 Resp: 782160

Ion	Ratio	Lower	Upper
78	100		
52	22.6	18.3	27.5
0	0.0	0.0	0.0
0	0.0	0.0	0.0

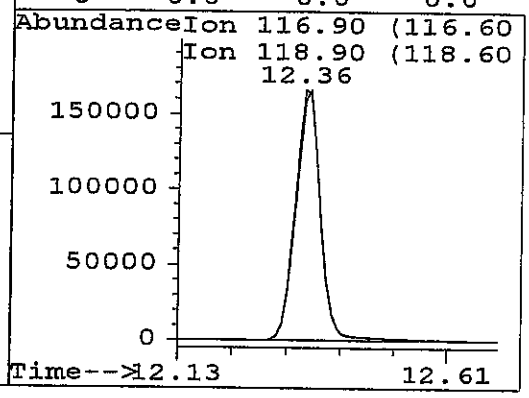


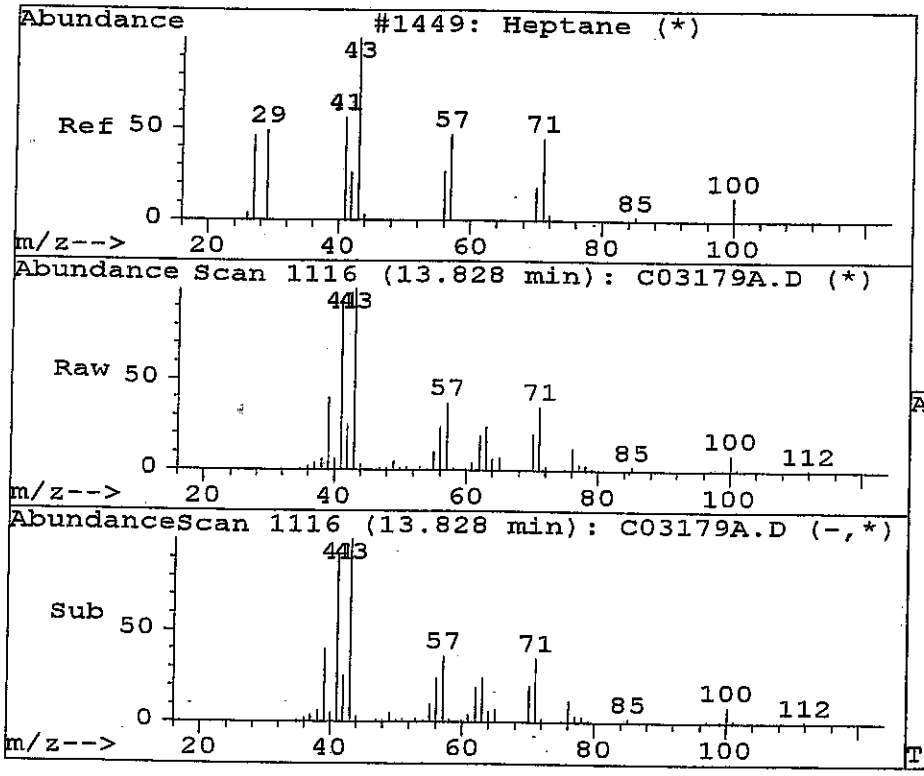


#41
Carbon tetrachloride
Concen: 0.12 ppbV
RT: 12.36 min Scan# 964
Delta R.T. -0.20 min
Lab File: C03179A.D
Acq: 17 Mar 109 8:47 am

Tgt Ion:116.9 Resp: 51875

Ion	Ratio	Lower	Upper
117	100		
119	95.7	80.0	120.0
0	0.0	0.0	0.0
0	0.0	0.0	0.0

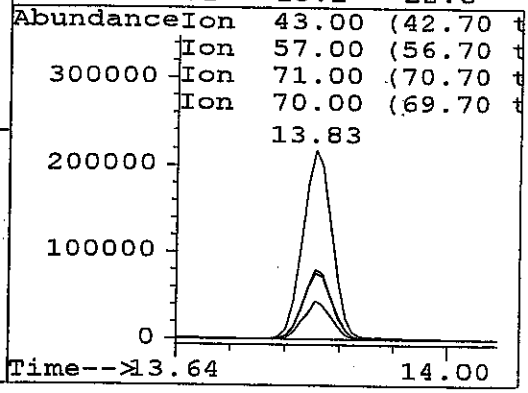


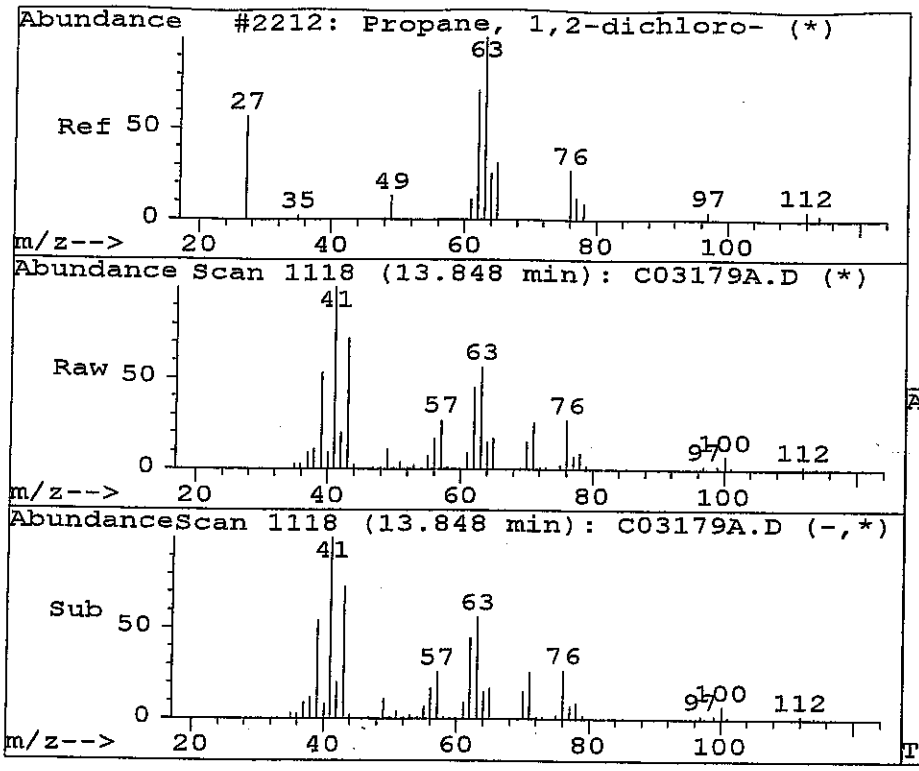


#42
n-Heptane
Concen: 0.11 ppbV
RT: 13.83 min Scan# 1116
Delta R.T. -0.21 min
Lab File: C03179A.D
Acq: 17 Mar 109 8:47 am

Tgt Ion:43 Resp: 586493

Ion	Ratio	Lower	Upper
43	100		
57	36.8	27.0	40.6
71	34.8	25.7	38.5
70	20.1	15.2	22.8

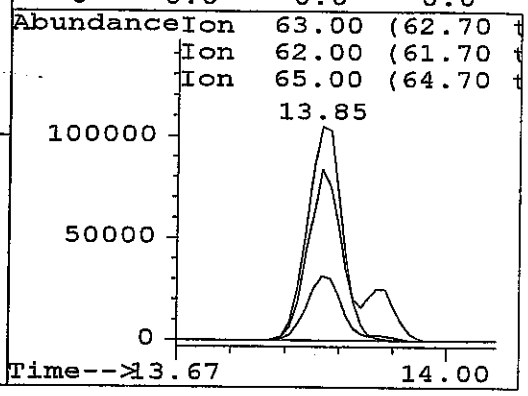


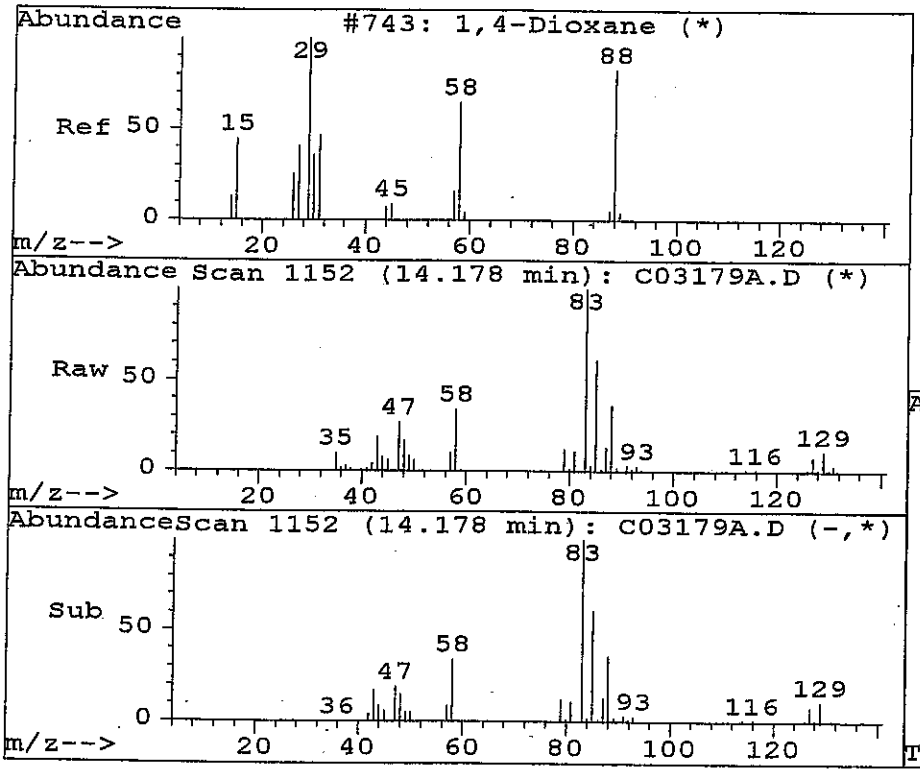


#43
1,2-Dichloropropane
Concen: 0.12 ppbV
RT: 13.85 min Scan# 1118
Delta R.T. -0.22 min
Lab File: C03179A.D
Acq: 17 Mar 109 8:47 am

Tgt Ion:63 Resp: 305497

Ion	Ratio	Lower	Upper
63	100		
62	79.4	56.6	84.8
65	30.1	24.2	36.4
0	0.0	0.0	0.0

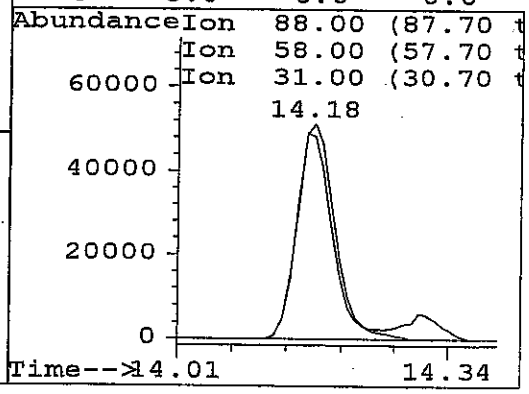


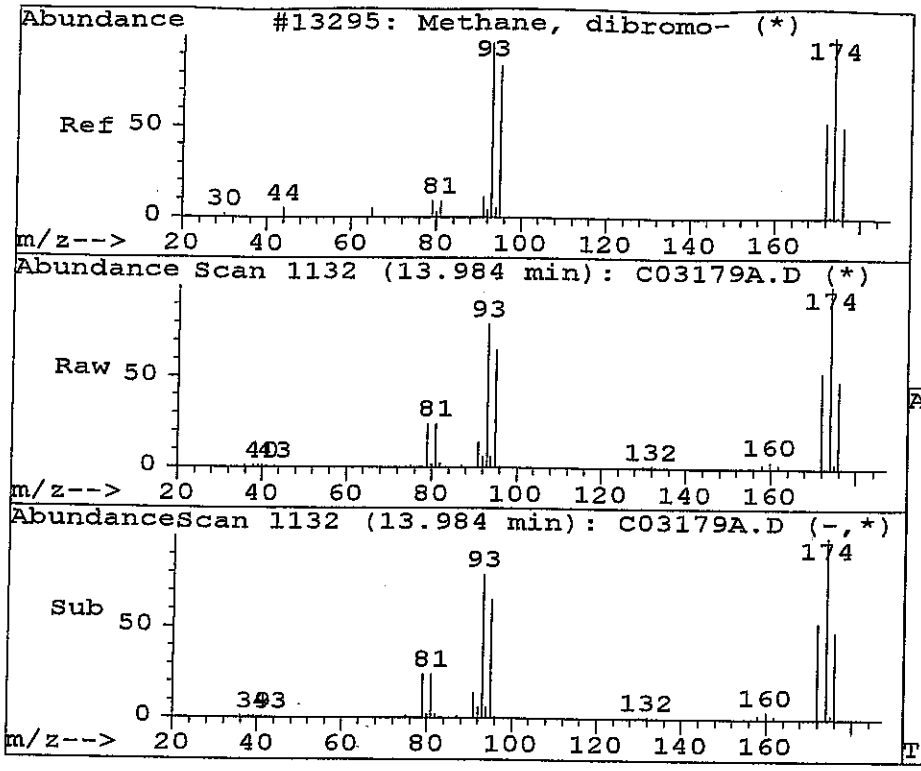


#44
1,4 Dioxane
Concen: 0.11 ppbV
RT: 14.18 min Scan# 1152
Delta R.T. -0.22 min
Lab File: C03179A.D
Acq: 17 Mar 109 8:47 am

Tgt Ion:88 Resp: 161310

Ion	Ratio	Lower	Upper
88	100		
58	91.4	76.5	114.7
31	0.0	0.0	0.0
0	0.0	0.0	0.0

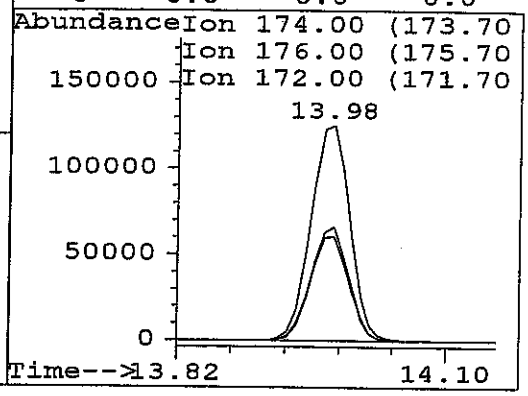


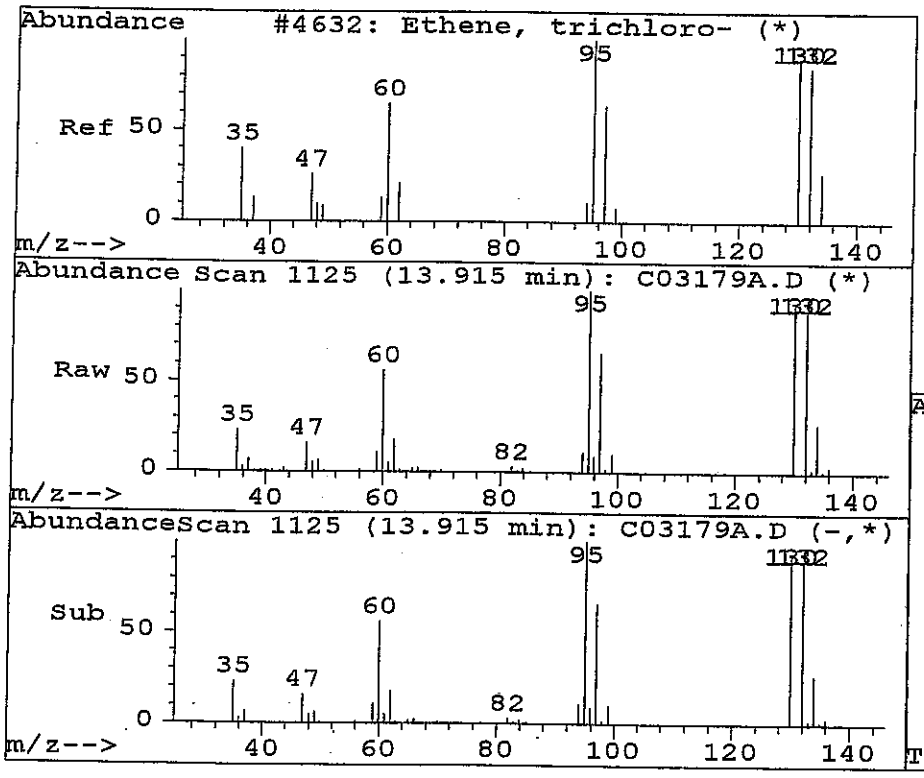


#45
Dibromomethane
Concen: 0.10 ppbV
RT: 13.98 min Scan# 1132
Delta R.T. -0.22 min
Lab File: C03179A.D
Acq: 17 Mar 109 8:47 am

Tgt Ion:174 Resp: 358053

Ion	Ratio	Lower	Upper
174	100		
176	48.3	39.3	58.9
172	52.8	40.4	60.6
0	0.0	0.0	0.0

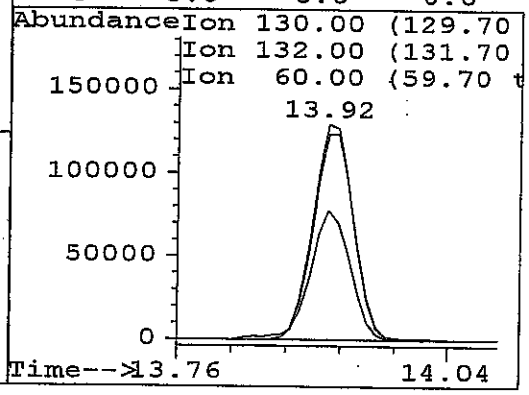


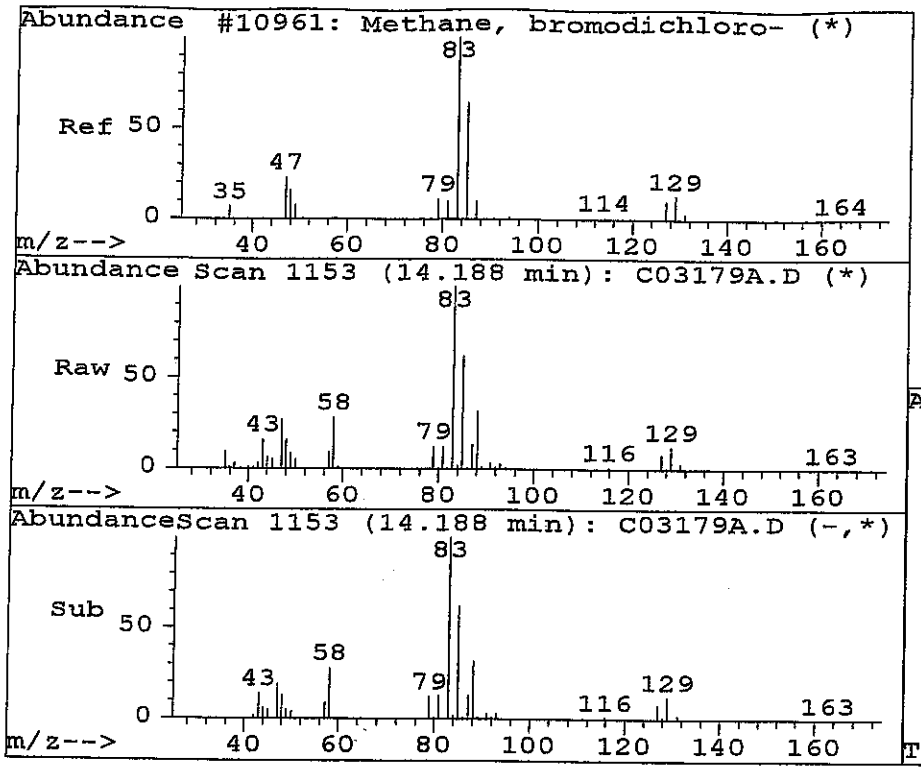


#46
Trichloroethene
Concen: 0.12 ppbV
RT: 13.92 min Scan# 1125
Delta R.T. -0.21 min
Lab File: C03179A.D
Acq: 17 Mar 109 8:47 am

Tgt Ion:130 Resp: 364698

Ion	Ratio	Lower	Upper
130	100		
132	95.2	75.0	112.4
60	59.4	47.4	71.0
0	0.0	0.0	0.0

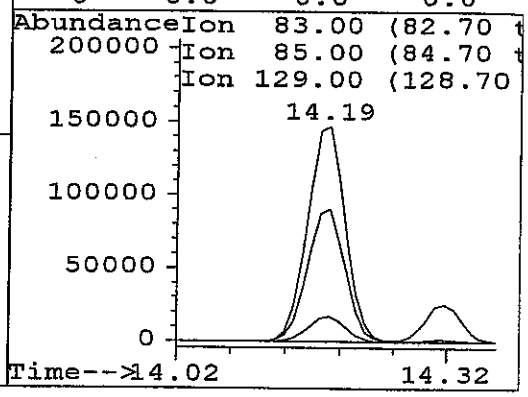


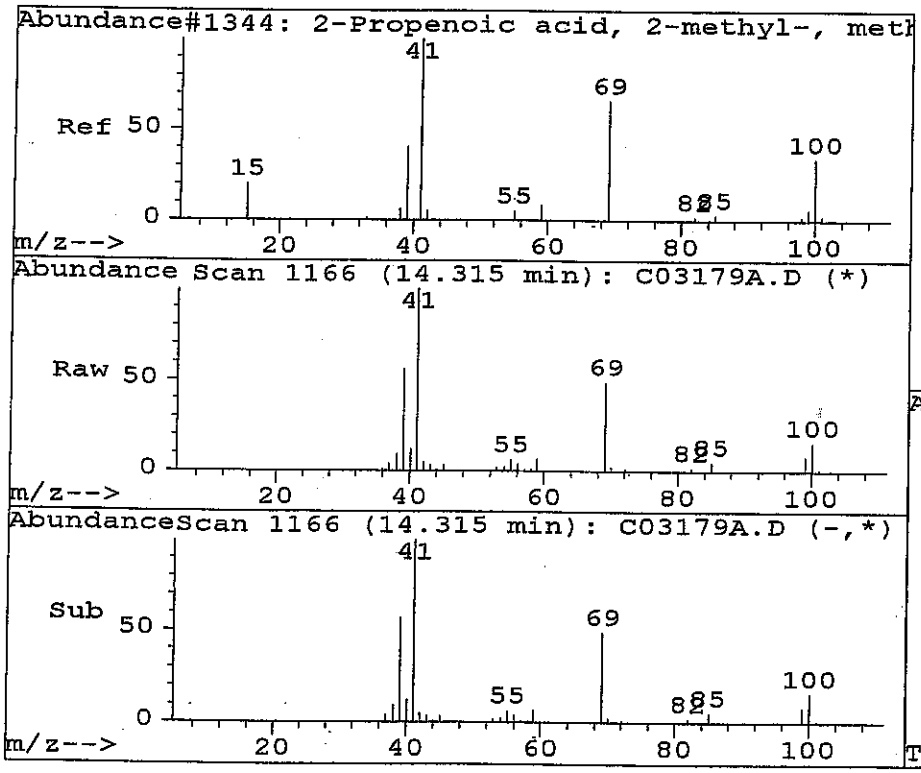


#47
Bromodichloromethane
Concen: 0.10 ppbV
RT: 14.19 min Scan# 1153
Delta R.T. -0.21 min
Lab File: C03179A.D
Acq: 17 Mar 109 8:47 am

Tgt Ion:83 Resp: 417248

Ion	Ratio	Lower	Upper
83	100		
85	58.9	50.4	75.6
129	11.6	9.4	14.2
0	0.0	0.0	0.0

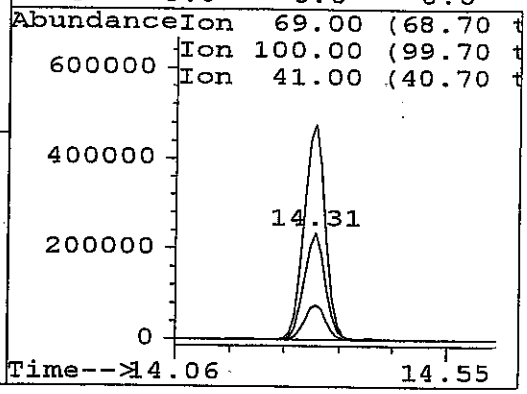


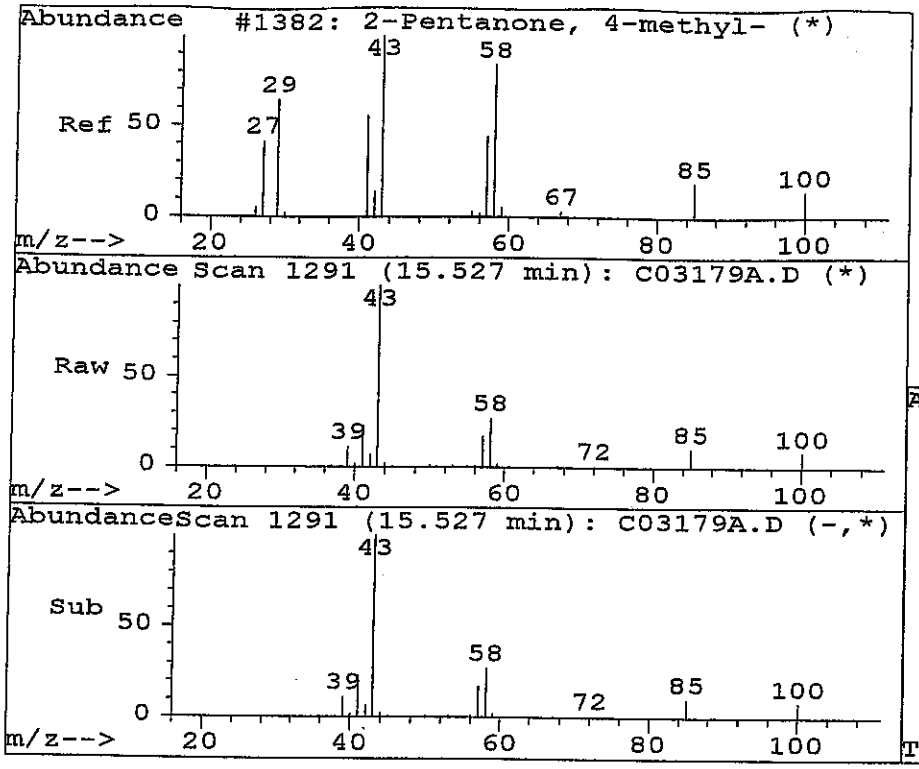


#48
Methyl methacrylate
Concen: 0.28 ppbV
RT: 14.31 min Scan# 1166
Delta R.T. -0.24 min
Lab File: C03179A.D
Acq: 17 Mar 109 8:47 am

Tgt Ion:69 Resp: 637368

Ion	Ratio	Lower	Upper
69	100		
100	32.6	25.7	38.5
41	202.9	169.2	253.8
0	0.0	0.0	0.0

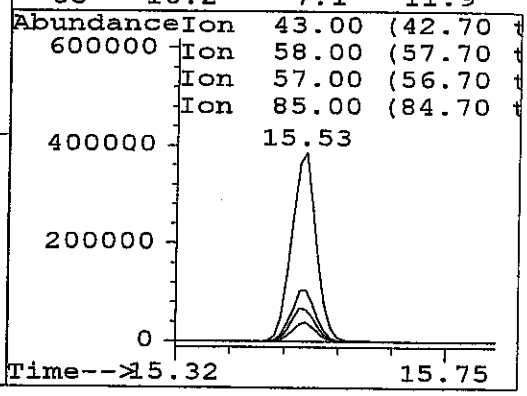


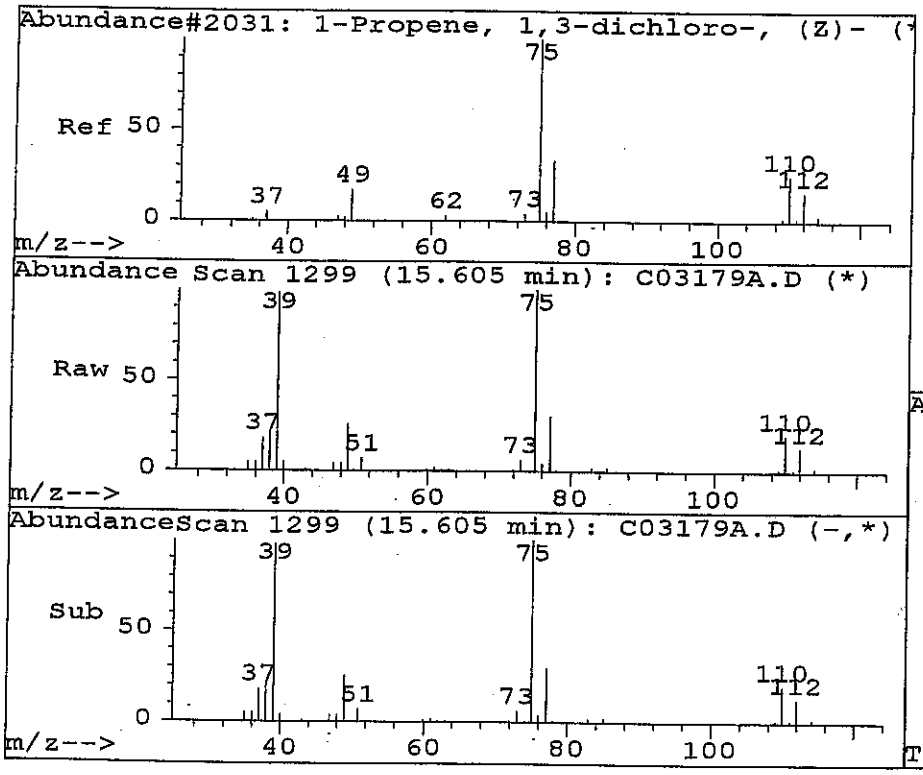


#49
Methyl Isobutyl Ketone
Concen: 0.11 ppbV
RT: 15.53 min Scan# 1291
Delta R.T. -0.17 min
Lab File: C03179A.D
Acq: 17 Mar 109 8:47 am

Tgt Ion:43 Resp: 1039898

Ion	Ratio	Lower	Upper
43	100		
58	27.4	20.0	33.3
57	16.9	13.0	21.6
85	10.2	7.1	11.9

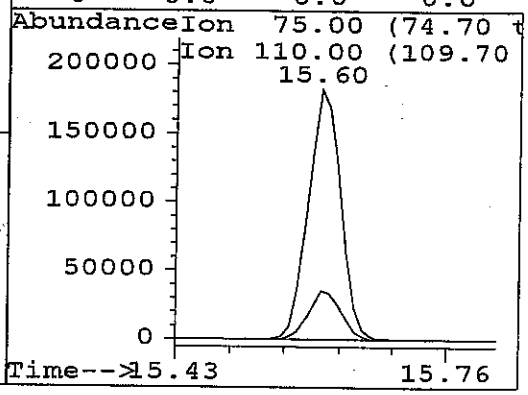


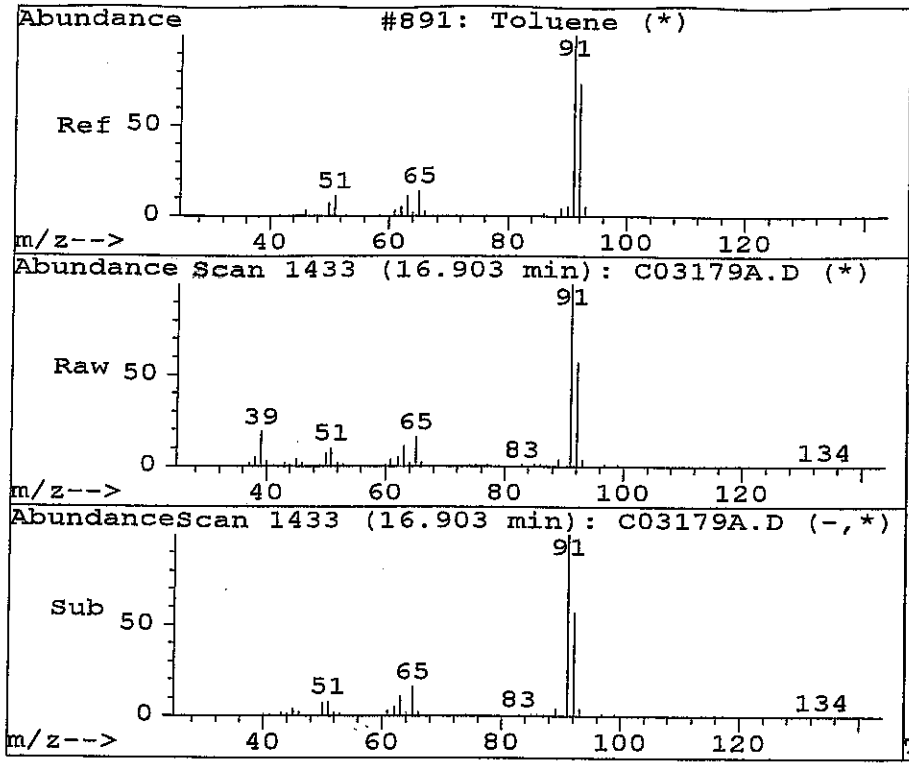


#50
cis-1,3-Dichloropropene
Concen: 0.12 ppbV
RT: 15.60 min Scan# 1299
Delta R.T. -0.22 min
Lab File: C03179A.D
Acq: 17 Mar 109 8:47 am

Tgt Ion:75 Resp: 492454

Ion	Ratio	Lower	Upper
75	100		
110	19.5	15.1	22.7
0	0.0	0.0	0.0
0	0.0	0.0	0.0

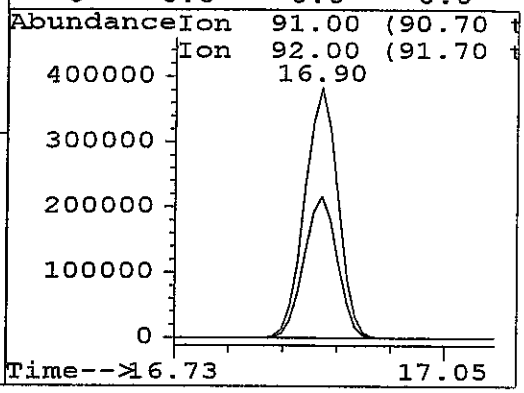


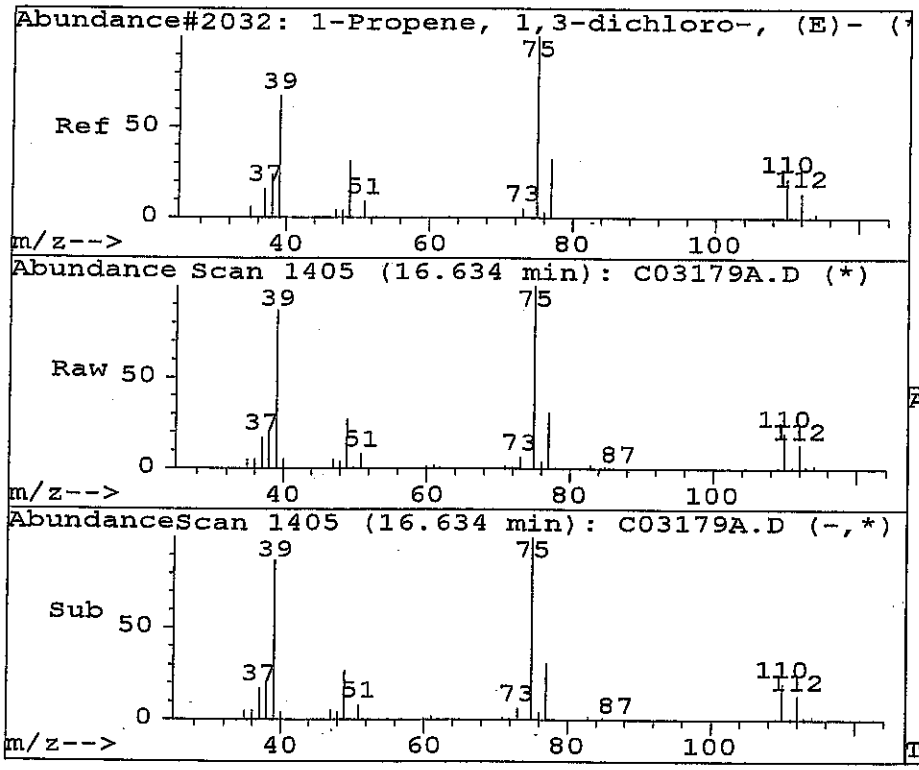


#51
Toluene
Concen: 0.13 ppbV
RT: 16.90 min Scan# 1433
Delta R.T. -0.21 min
Lab File: C03179A.D
Acq: 17 Mar 109 8:47 am

Tgt Ion:91 Resp: 1033029

Ion	Ratio	Lower	Upper
91	100		
92	56.6	44.3	66.5
0	0.0	0.0	0.0
0	0.0	0.0	0.0

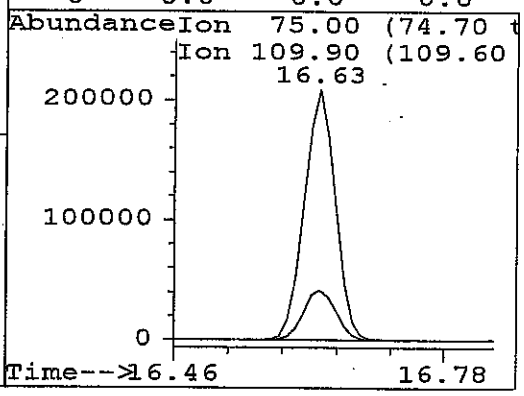


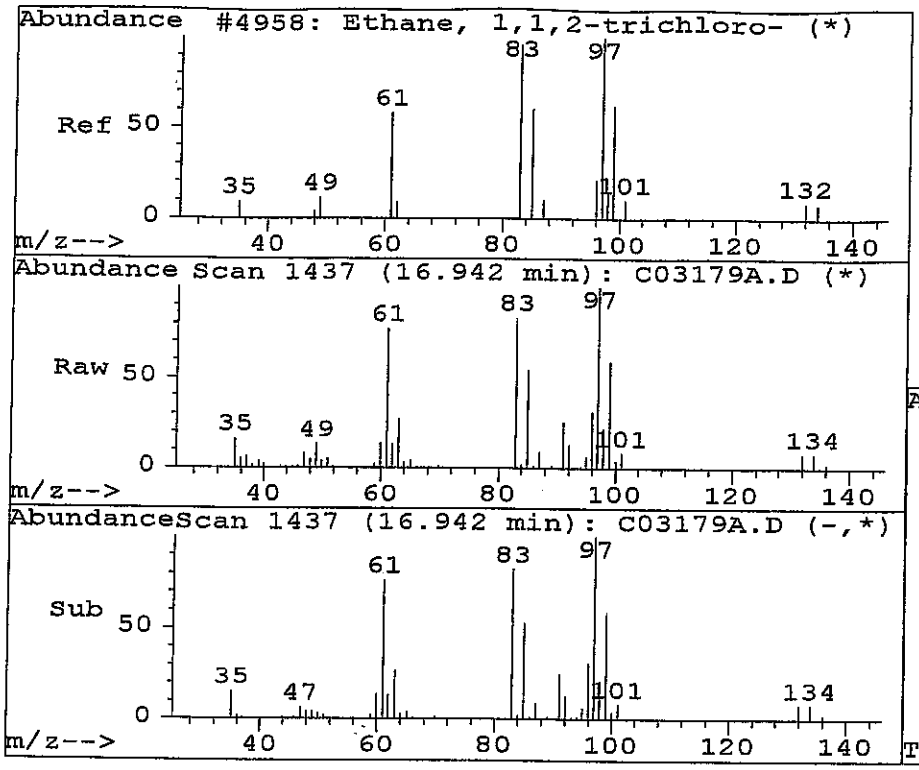


#52
trans-1,3-Dichloropropene
Concen: 0.12 ppbV
RT: 16.63 min Scan# 1405
Delta R.T. -0.22 min
Lab File: C03179A.D
Acq: 17 Mar 109 8:47 am

Tgt Ion:75 Resp: 538174

Ion	Ratio	Lower	Upper
75	100		
110	19.9	17.2	25.8
0	0.0	0.0	0.0
0	0.0	0.0	0.0

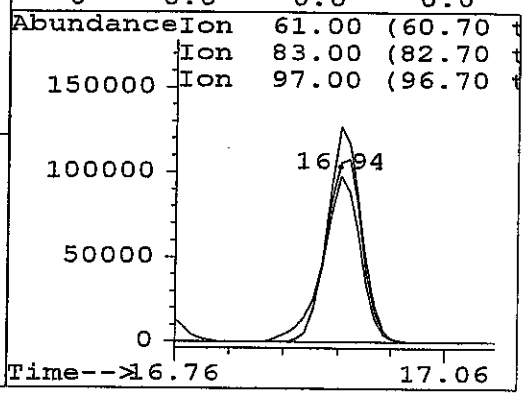


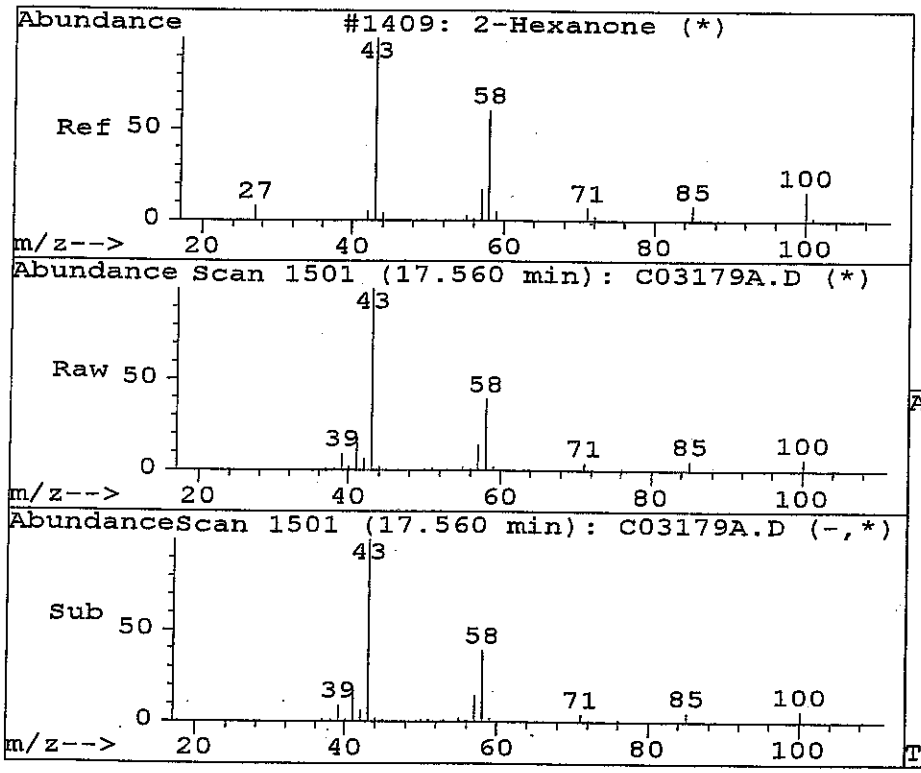


#53
1,1,2-Trichloroethane
Concen: 0.12 ppbV
RT: 16.94 min Scan# 1437
Delta R.T. -0.22 min
Lab File: C03179A.D
Acq: 17 Mar 109 8:47 am

Tgt Ion:61 Resp: 281046

Ion	Ratio	Lower	Upper
61	100		
83	107.9	90.4	135.6
97	129.8	99.1	148.7
0	0.0	0.0	0.0

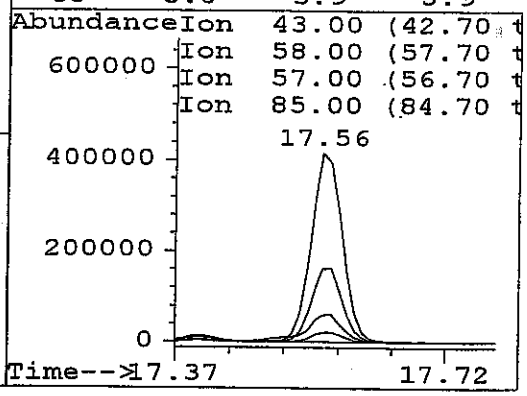


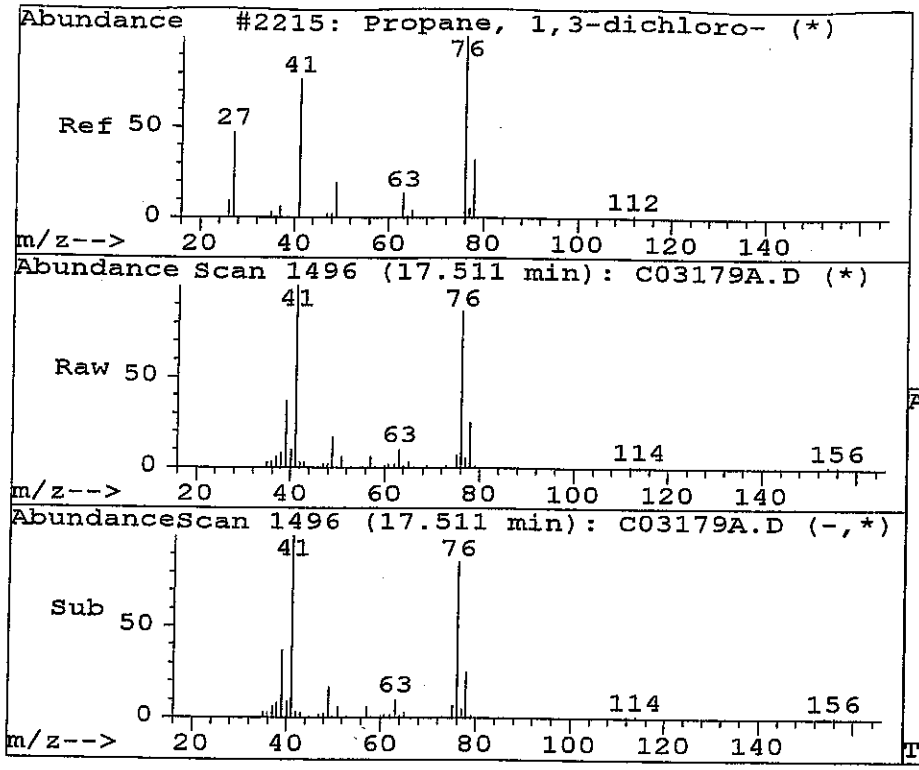


#54
2-Hexanone
Concen: 0.10 ppbV
RT: 17.56 min Scan# 1501
Delta R.T. -0.24 min
Lab File: C03179A.D
Acq: 17 Mar 109 8:47 am

Tgt Ion:43 Resp: 1112452

Ion	Ratio	Lower	Upper
43	100		
58	38.5	28.7	47.8
57	13.8	9.7	16.1
85	5.0	3.9	5.9

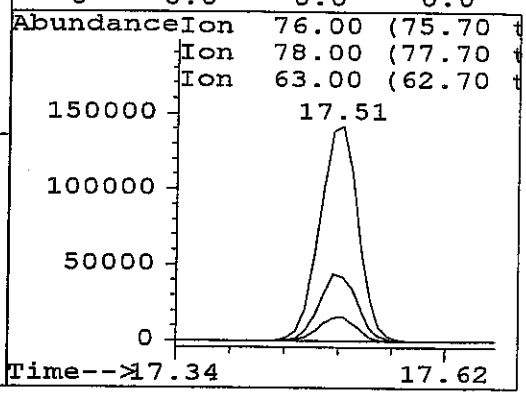


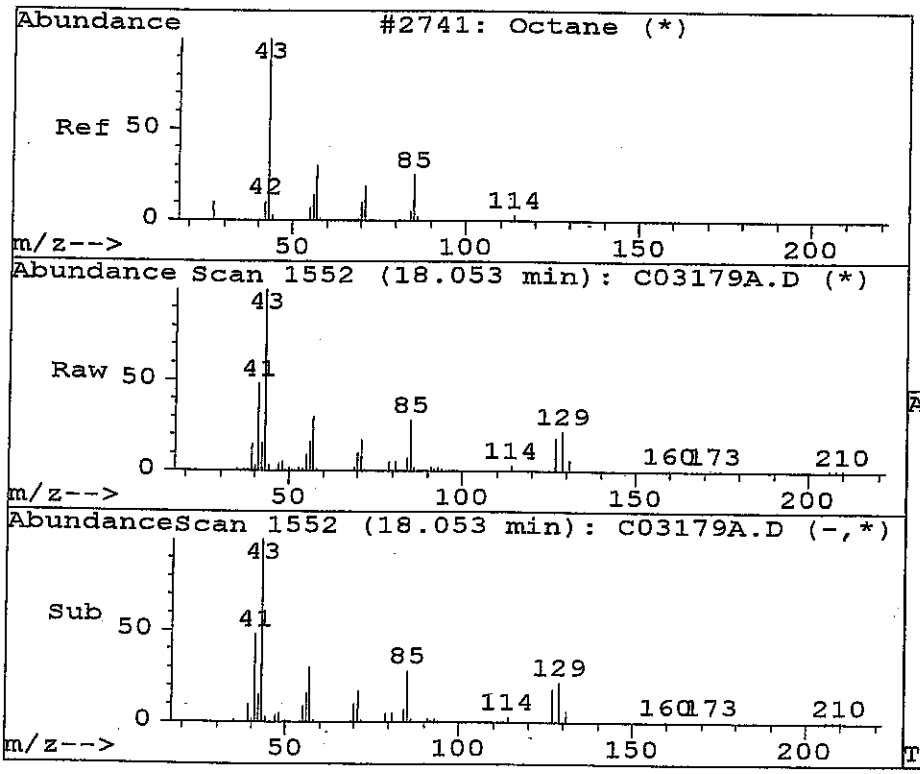


#55
1,3-Dichloropropane
Concen: 0.10 ppbV
RT: 17.51 min Scan# 1496
Delta R.T. -0.21 min
Lab File: C03179A.D
Acq: 17 Mar 109 8:47 am

Tgt Ion:76 Resp: 402983

Ion	Ratio	Lower	Upper
76	100		
78	29.8	24.6	36.8
63	11.5	8.5	12.7
0	0.0	0.0	0.0

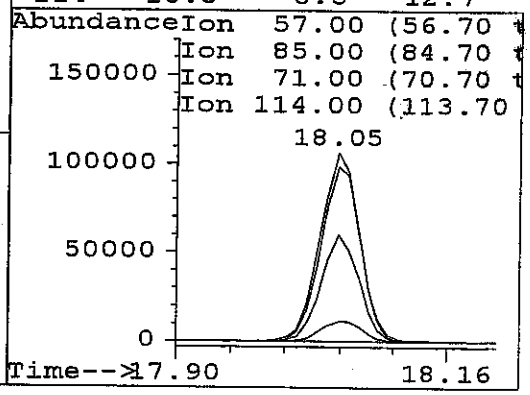


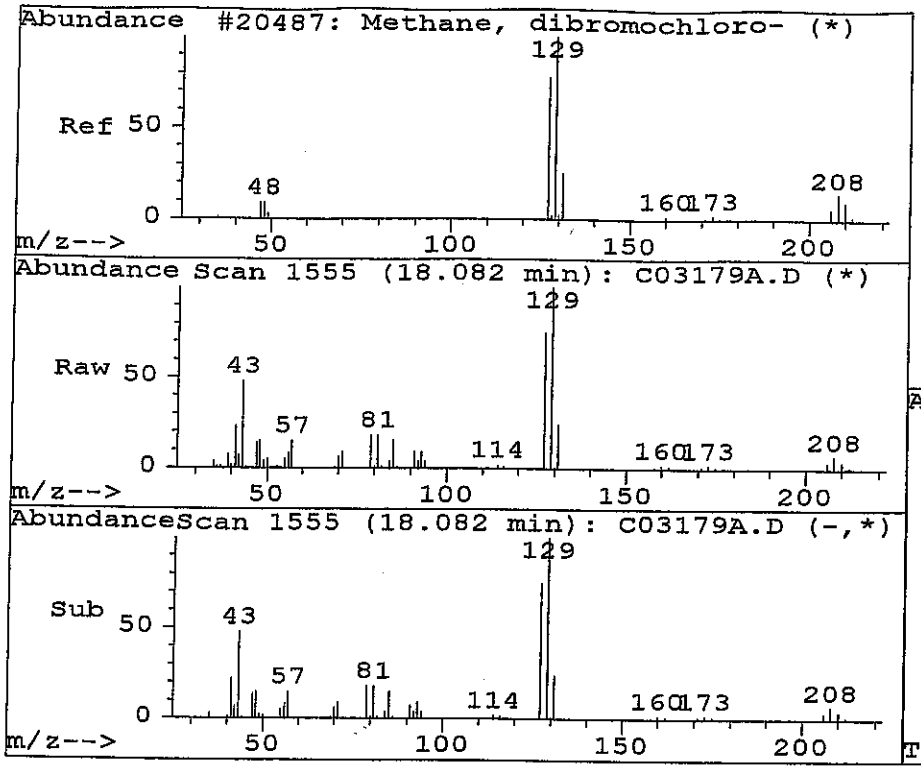


#56
Octane
Concen: 0.09 ppbV
RT: 18.05 min Scan# 1552
Delta R.T. -0.21 min
Lab File: C03179A.D
Acq: 17 Mar 109 8:47 am

Tgt Ion:57 Resp: 274693

Ion	Ratio	Lower	Upper
57	100		
85	92.1	77.0	115.6
71	56.5	44.3	66.5
114	10.5	8.5	12.7

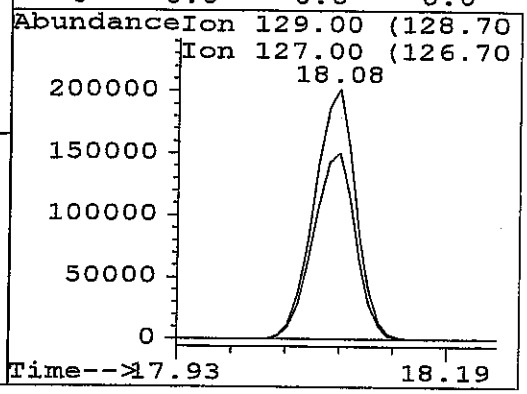


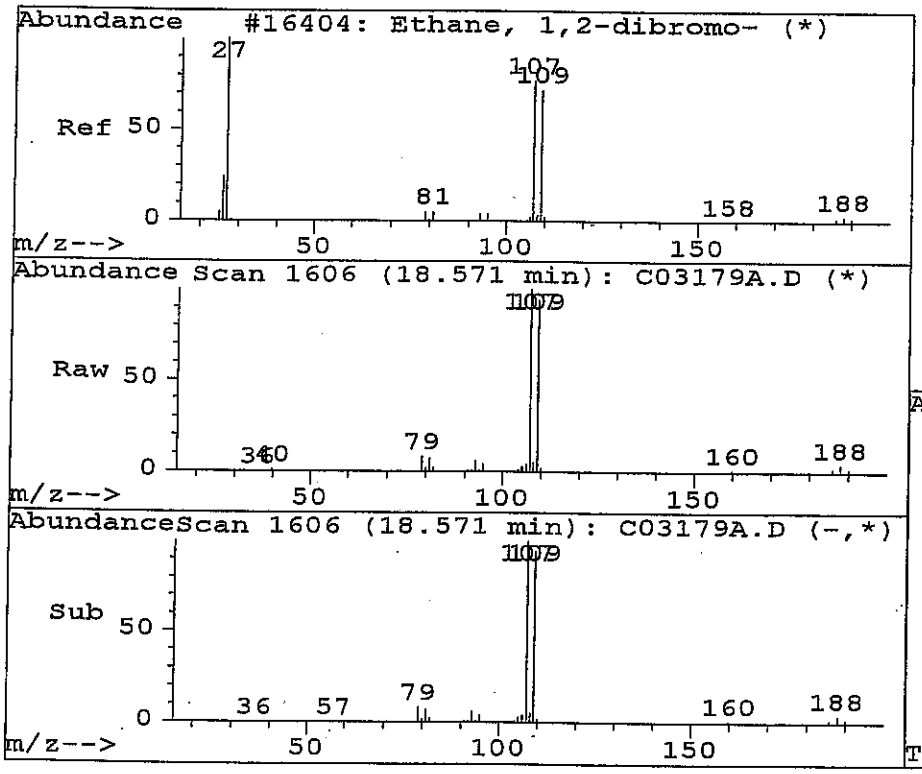


#57
Dibromochloromethane
Concen: 0.10 ppbV
RT: 18.08 min Scan# 1555
Delta R.T. -0.22 min
Lab File: C03179A.D
Acq: 17 Mar 109 8:47 am

Tgt Ion:129 Resp: 558917

Ion	Ratio	Lower	Upper
129	100		
127	74.6	59.4	89.0
0	0.0	0.0	0.0
0	0.0	0.0	0.0

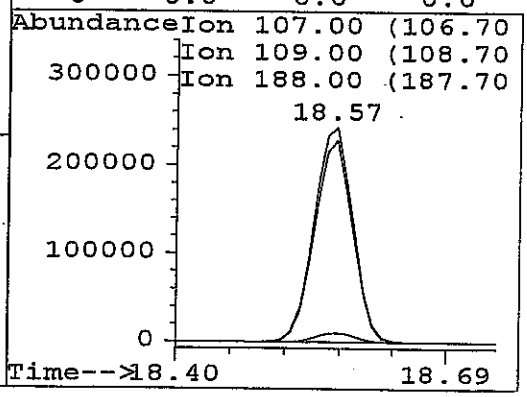


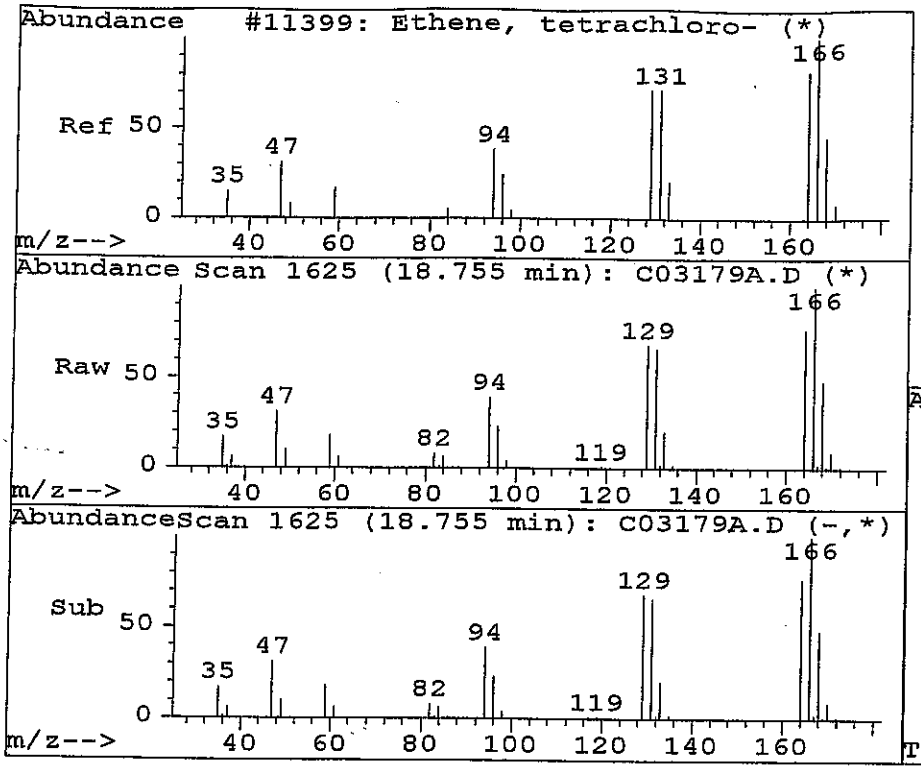


#58
1,2-Dibromoethane
Concen: 0.12 ppbV
RT: 18.57 min Scan# 1606
Delta R.T. -0.23 min
Lab File: C03179A.D
Acq: 17 Mar 109 8:47 am

Tgt Ion:107 Resp: 701472

Ion	Ratio	Lower	Upper
107	100		
109	93.9	74.6	111.8
188	4.1	2.9	4.3
0	0.0	0.0	0.0

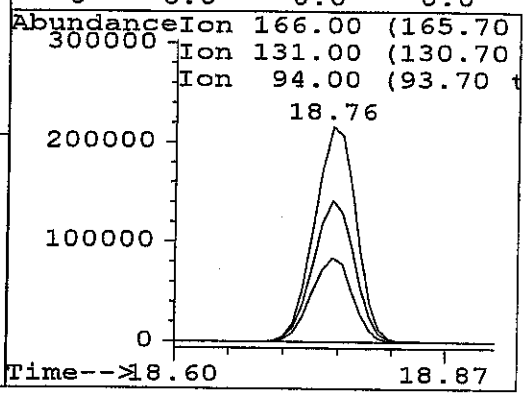


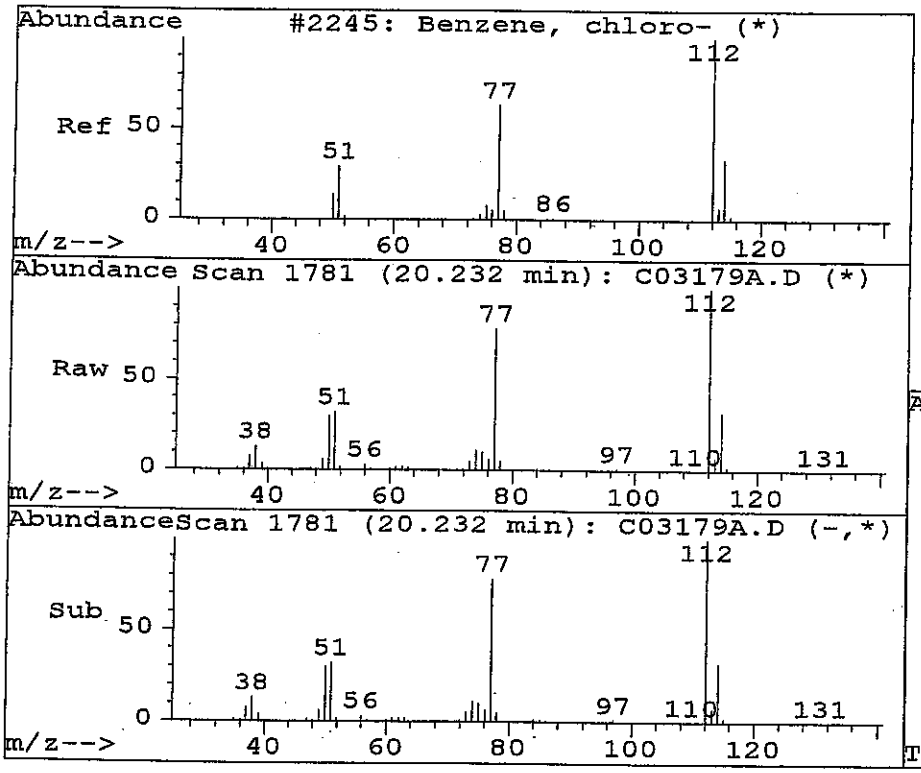


#59
Tetrachloroethene
Concen: 0.13 ppbV
RT: 18.76 min Scan# 1625
Delta R.T. -0.21 min
Lab File: C03179A.D
Acq: 17 Mar 109 8:47 am

Tgt Ion:166 Resp: 627137

Ion	Ratio	Lower	Upper
166	100		
131	65.6	53.8	80.6
94	39.2	32.8	49.2
0	0.0	0.0	0.0

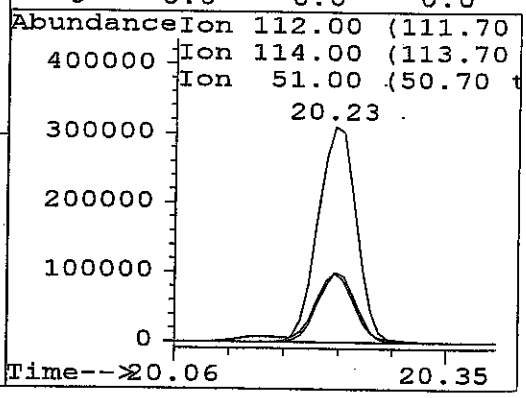


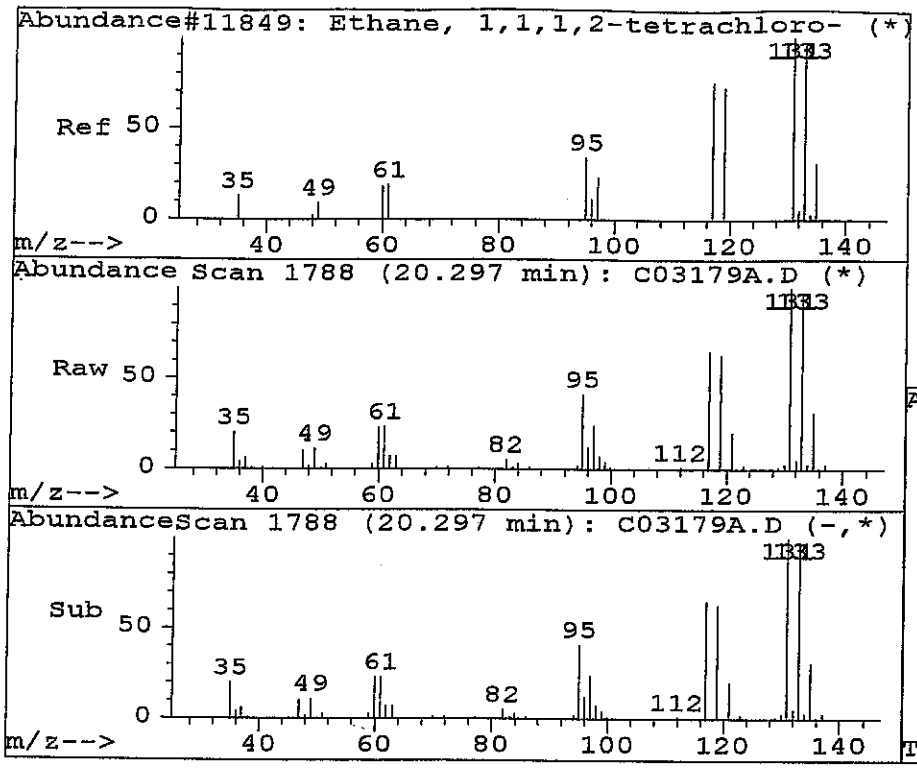


#60
Chlorobenzene
Concen: 0.12 ppbV
RT: 20.23 min Scan# 1781
Delta R.T. -0.22 min
Lab File: C03179A.D
Acq: 17 Mar 109 8:47 am

Tgt Ion:112 Resp: 862738

Ion	Ratio	Lower	Upper
112	100		
114	32.4	25.7	38.5
51	30.5	24.7	37.1
0	0.0	0.0	0.0

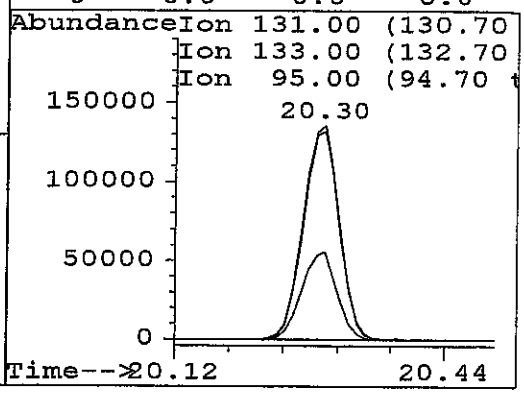


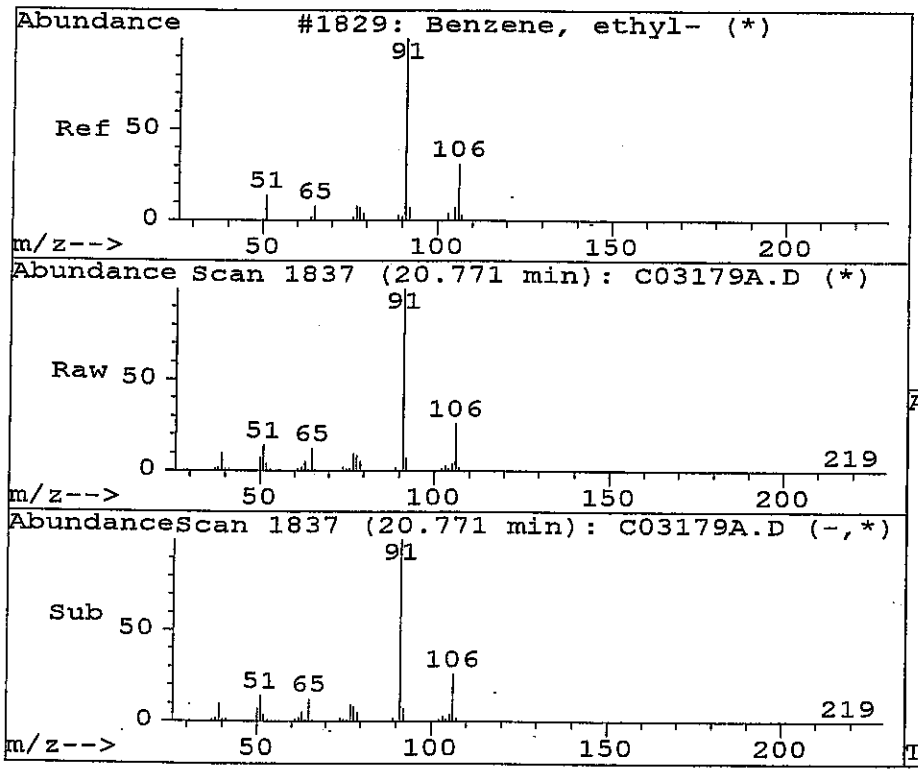


#61
1,1,1,2-Tetrachloroethane
Concen: 0.10 ppbV
RT: 20.30 min Scan# 1788
Delta R.T. -0.21 min
Lab File: C03179A.D
Acq: 17 Mar 109 8:47 am

Tgt Ion:131 Resp: 408032

Ion	Ratio	Lower	Upper
131	100		
133	97.1	80.6	121.0
95	41.1	33.4	50.2
0	0.0	0.0	0.0

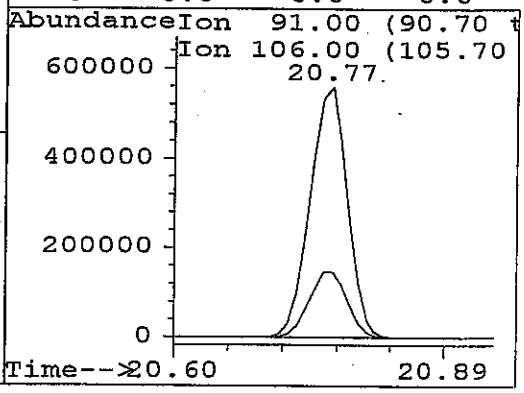


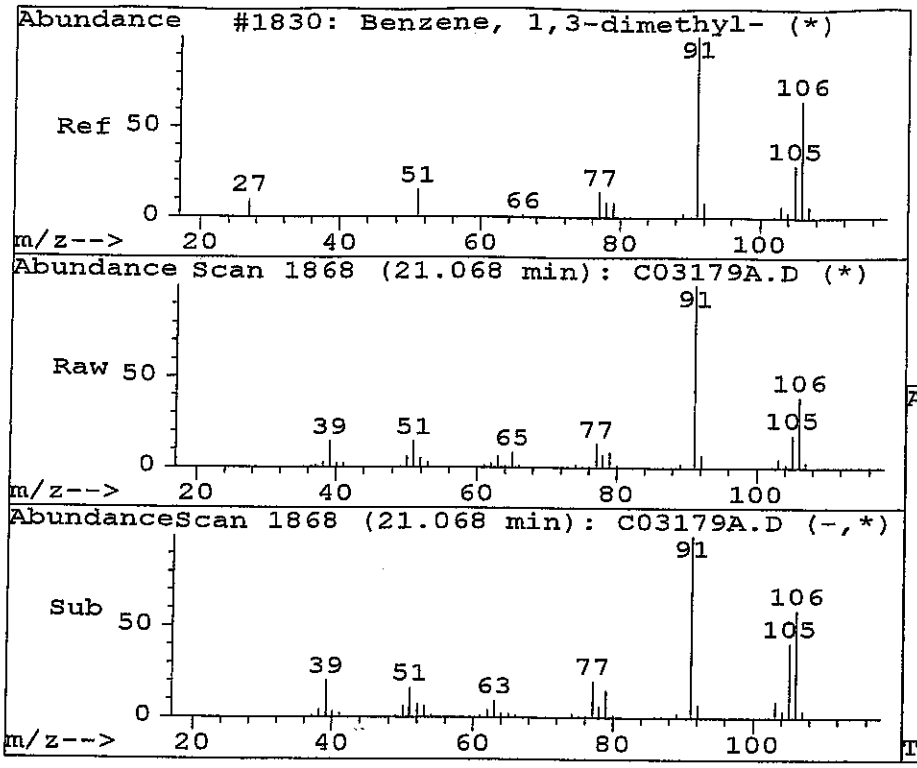


#62
Ethylbenzene
Concen: 0.13 ppbV
RT: 20.77 min Scan# 1837
Delta R.T. -0.22 min
Lab File: C03179A.D
Acq: 17 Mar 109 8:47 am

Tgt Ion:91 Resp: 1548148

Ion	Ratio	Lower	Upper
91	100		
106	26.1	20.8	31.2
0	0.0	0.0	0.0
0	0.0	0.0	0.0

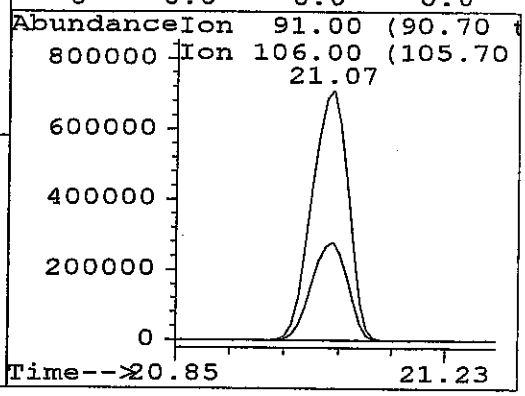


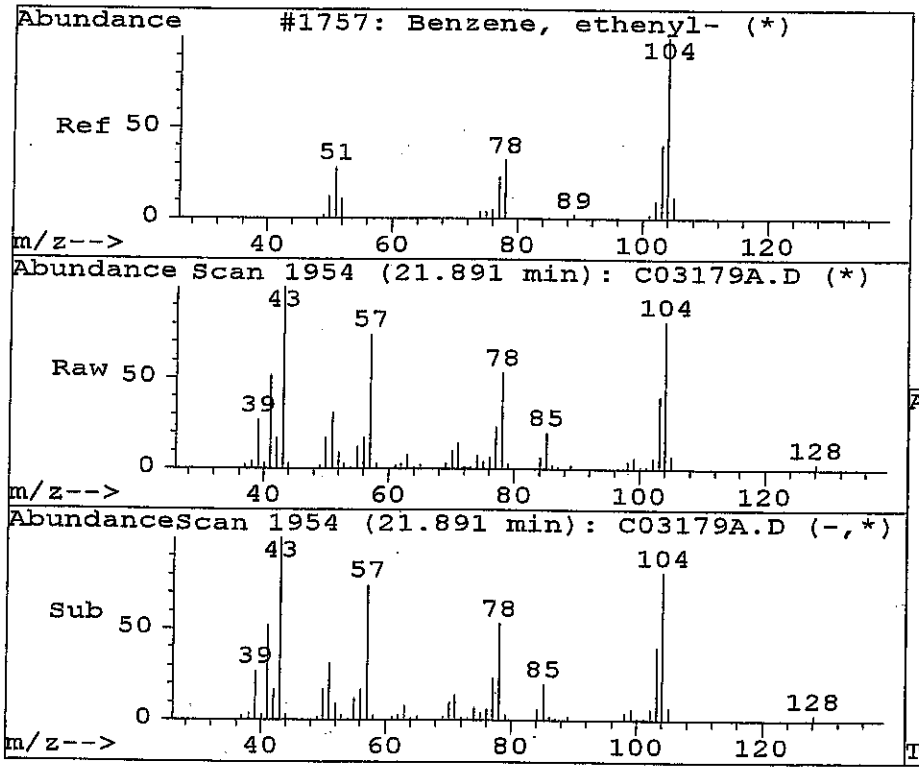


#63
m & p-Xylene
Concen: 0.26 ppbV
RT: 21.07 min Scan# 1868
Delta R.T. -0.21 min
Lab File: C03179A.D
Acq: 17 Mar 109 8:47 am

Tgt Ion:91 Resp: 2542524

Ion	Ratio	Lower	Upper
91	100		
106	39.3	30.2	45.2
0	0.0	0.0	0.0
0	0.0	0.0	0.0

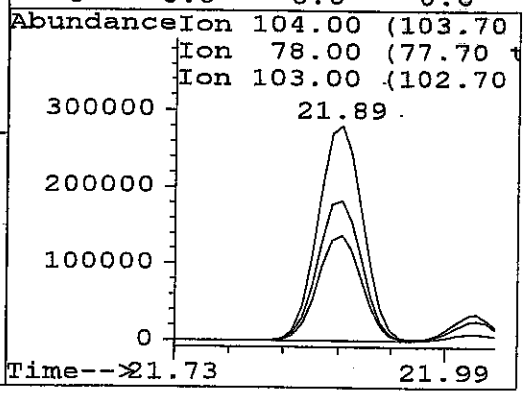


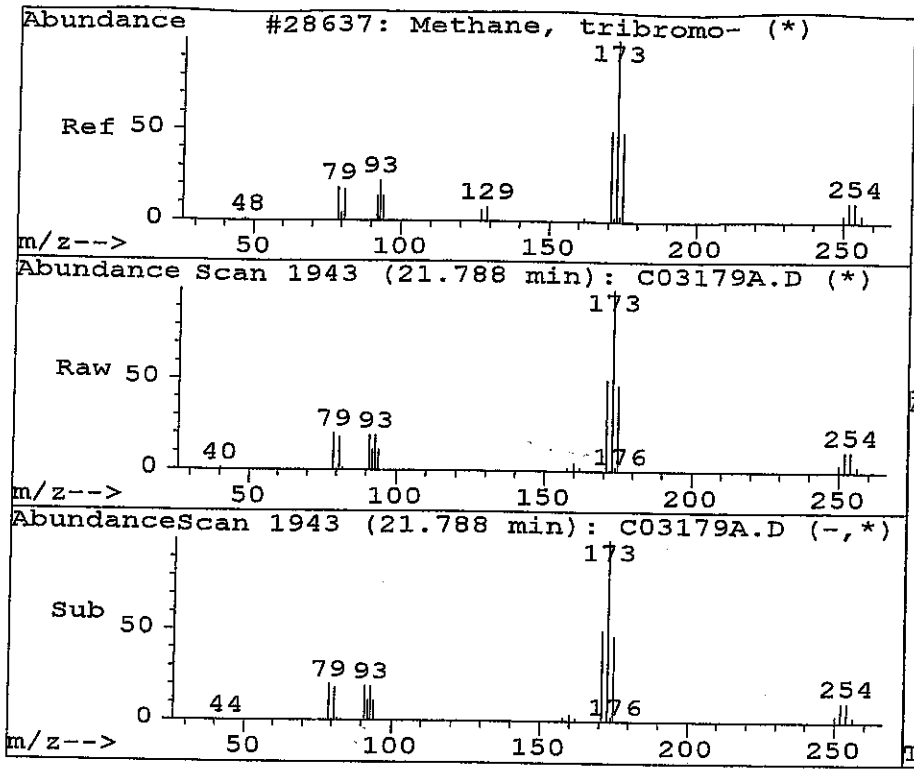


#64
Styrene
Concen: 0.13 ppbV
RT: 21.89 min Scan# 1954
Delta R.T. -0.25 min
Lab File: C03179A.D
Acq: 17 Mar 109 8:47 am

Tgt Ion:104 Resp: 840176

Ion	Ratio	Lower	Upper
104	100		
78	64.8	50.8	76.2
103	48.8	38.4	57.6
0	0.0	0.0	0.0

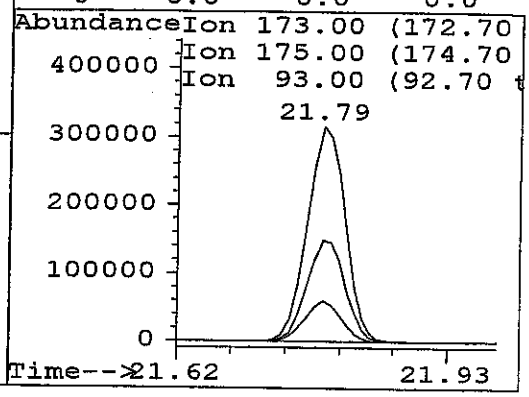


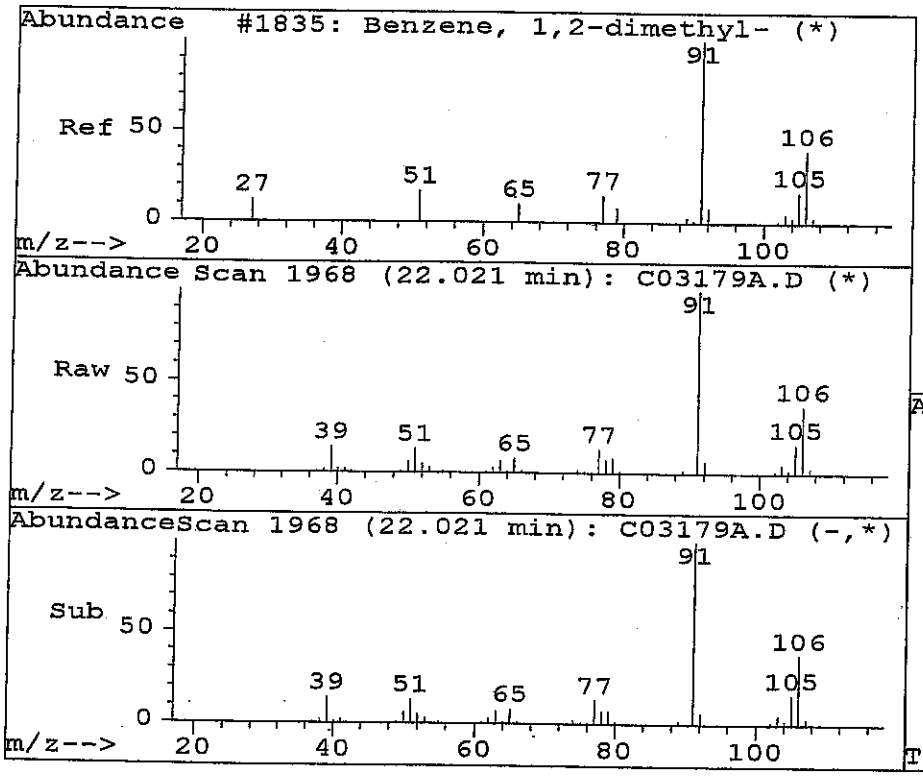


#65
Bromoform
Concen: 0.11 ppbV
RT: 21.79 min Scan# 1943
Delta R.T. -0.21 min
Lab File: C03179A.D
Acq: 17 Mar 109 8:47 am

Tgt Ion:173 Resp: 958925

Ion	Ratio	Lower	Upper
173	100		
175	47.1	39.4	59.0
93	18.9	16.0	24.0
0	0.0	0.0	0.0

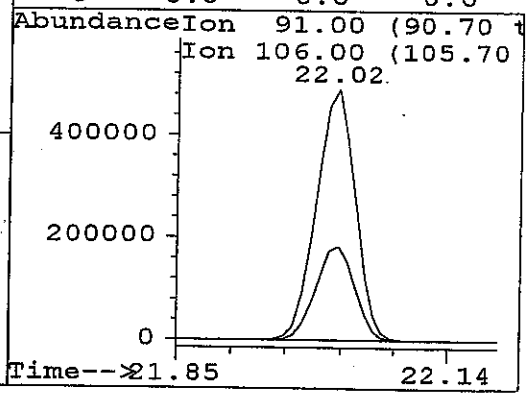


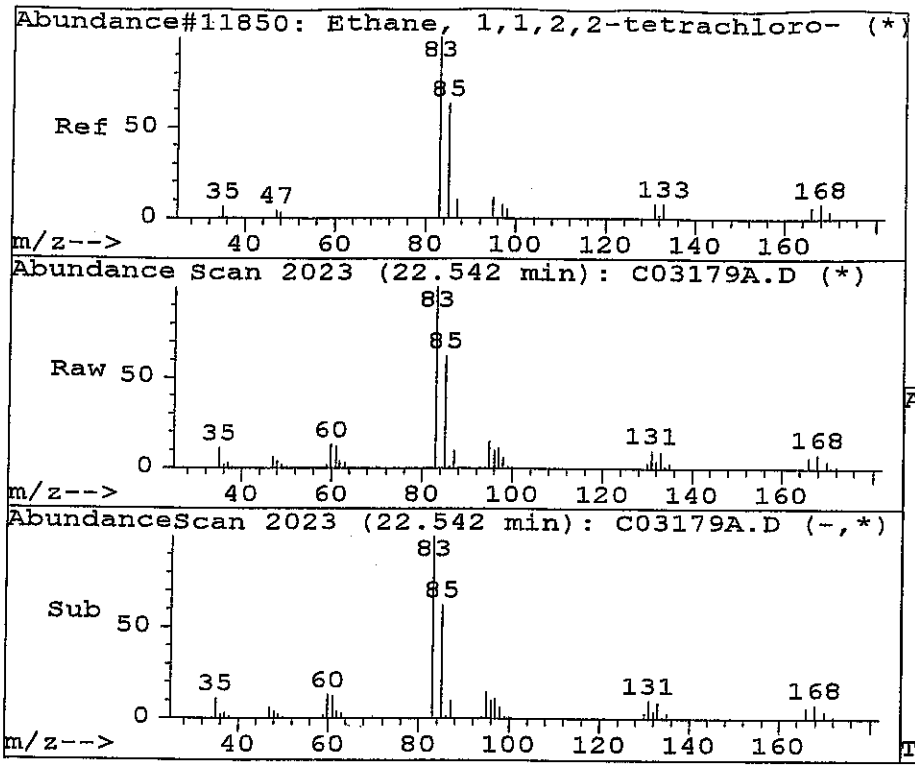


#66
o-Xylene
Concen: 0.12 ppbV
RT: 22.02 min Scan# 1968
Delta R.T. -0.23 min
Lab File: C03179A.D
Acq: 17 Mar 109 8:47 am

Tgt Ion:91 Resp: 1384162

Ion	Ratio	Lower	Upper
91	100		
106	37.3	29.6	44.4
0	0.0	0.0	0.0
0	0.0	0.0	0.0

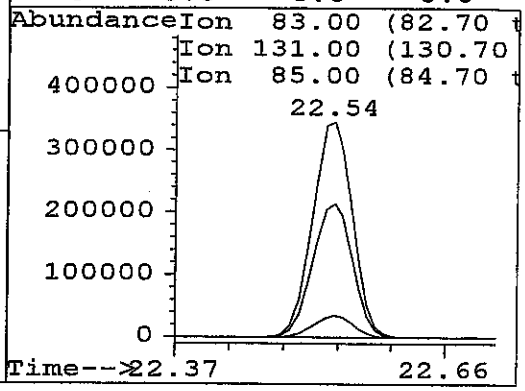


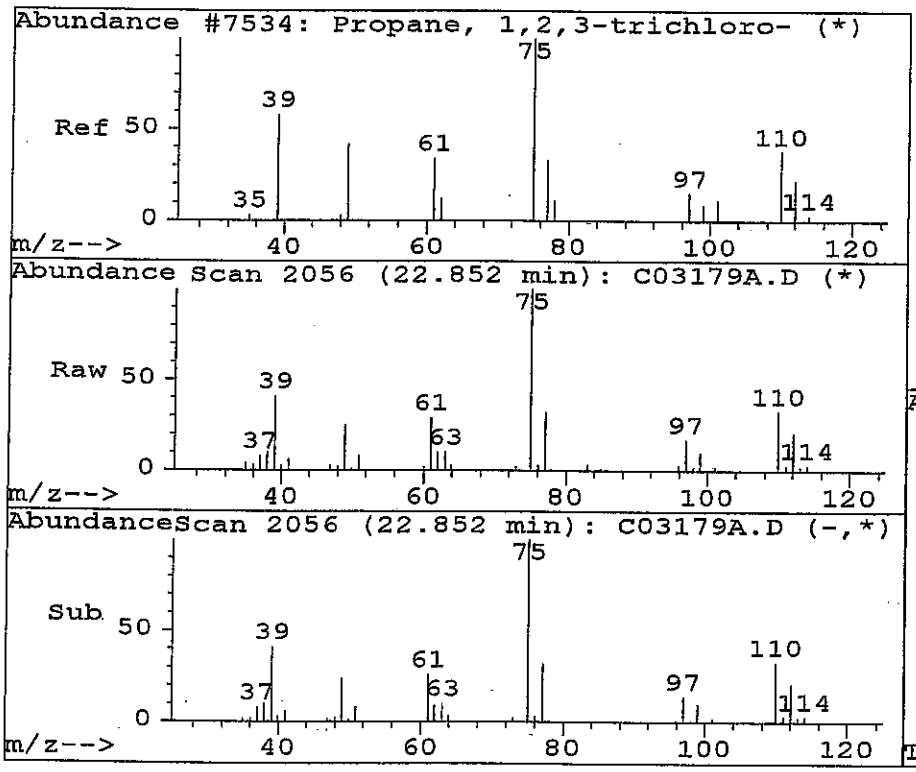


#67
1,1,2,2-Tetrachloroethane
Concen: 0.10 ppbV
RT: 22.54 min Scan# 2023
Delta R.T. -0.21 min
Lab File: C03179A.D
Acq: 17 Mar 109 8:47 am

Tgt Ion:83 Resp: 1042229

Ion	Ratio	Lower	Upper
83	100		
131	10.1	7.3	10.9
85	61.9	52.2	78.2
0	0.0	0.0	0.0

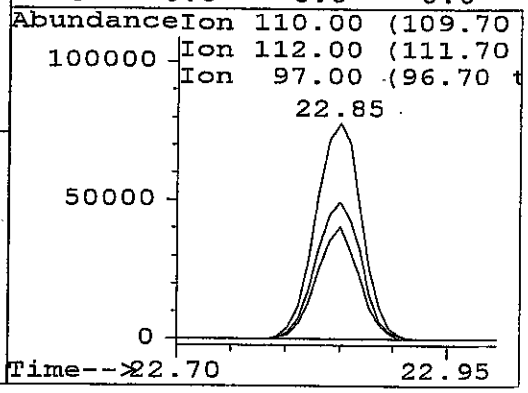


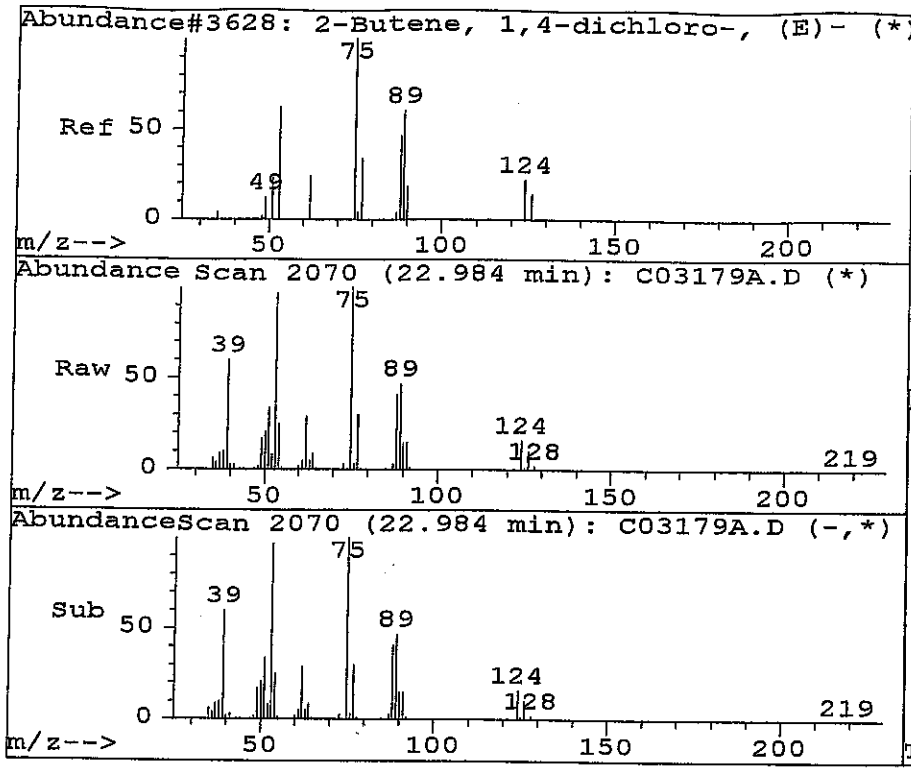


#68
1,2,3-Trichloropropane
Concen: 0.10 ppbV
RT: 22.85 min Scan# 2056
Delta R.T. -0.23 min
Lab File: C03179A.D
Acq: 17 Mar 109 8:47 am

Tgt Ion:110 Resp: 231249

Ion	Ratio	Lower	Upper
110	100		
112	63.5	50.7	76.1
97	52.2	39.3	58.9
0	0.0	0.0	0.0

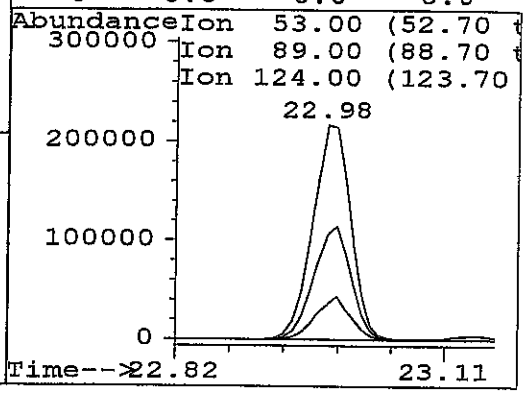


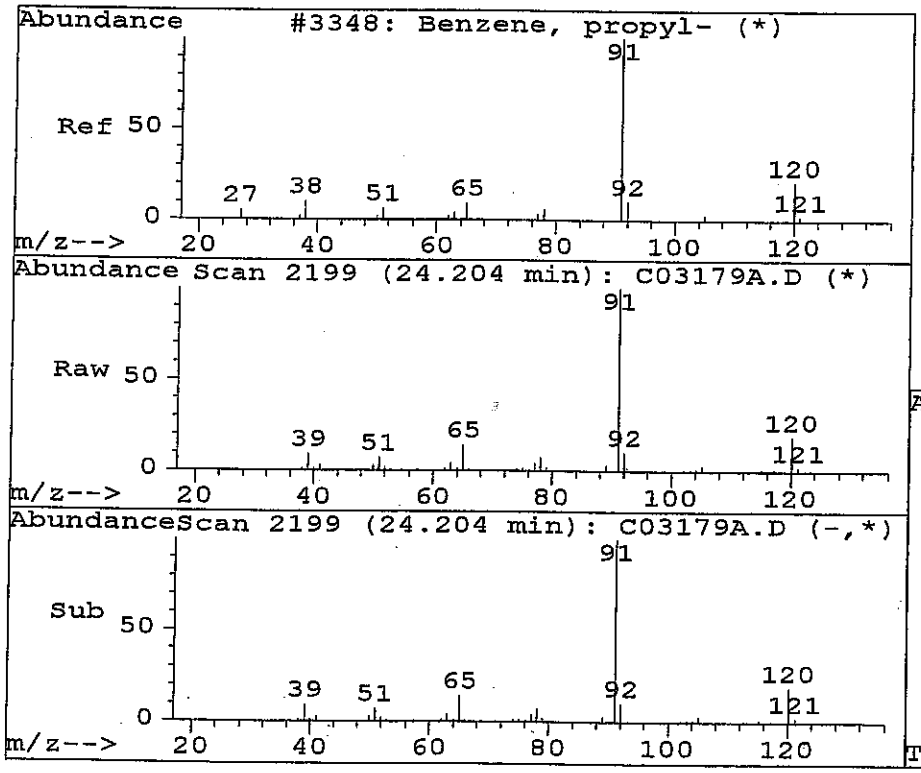


#69
t-1,4-Dichloro-2-butene
Concen: 0.30 ppbV
RT: 22.98 min Scan# 2070
Delta R.T. -0.25 min
Lab File: C03179A.D
Acq: 17 Mar 109 8:47 am

Tgt Ion:53 Resp: 614970

Ion	Ratio	Lower	Upper
53	100		
89	49.1	39.1	58.7
124	16.5	12.6	18.8
0	0.0	0.0	0.0

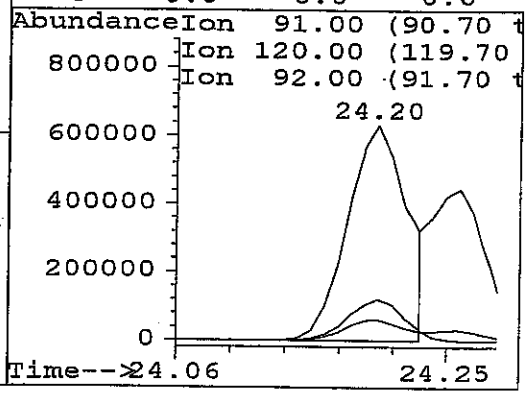


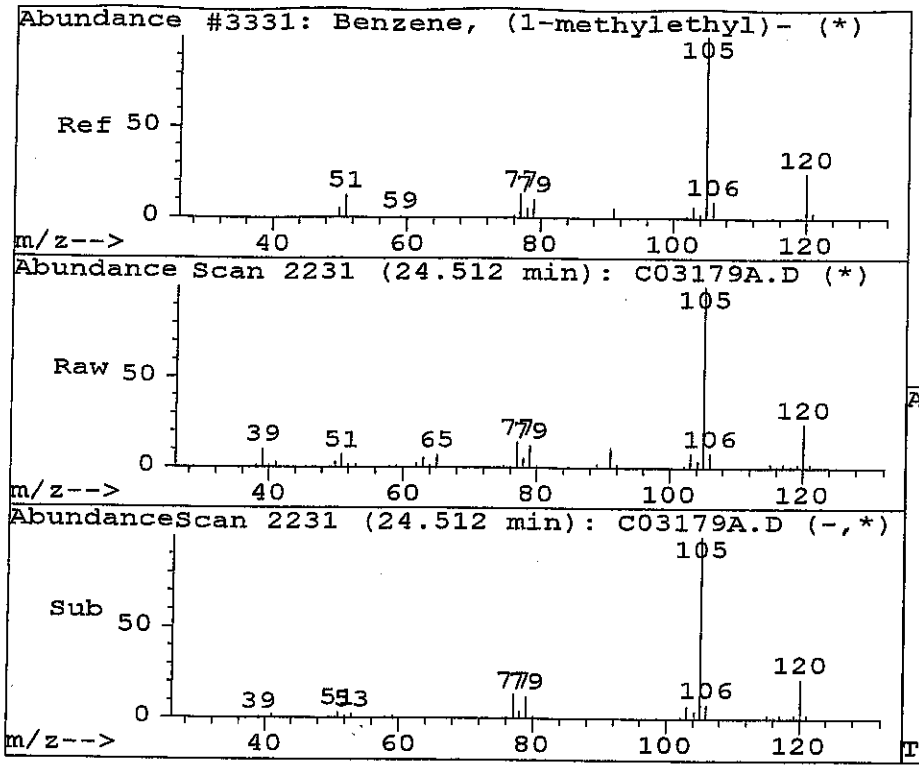


#70
n-Propylbenzene
Concen: 0.09 ppbV
RT: 24.20 min Scan# 2199
Delta R.T. -0.23 min
Lab File: C03179A.D
Acq: 17 Mar 109 8:47 am

Tgt Ion:91 Resp: 1871406

Ion	Ratio	Lower	Upper
91	100		
120	18.1	12.5	18.7
92	10.7	7.7	11.5
0	0.0	0.0	0.0

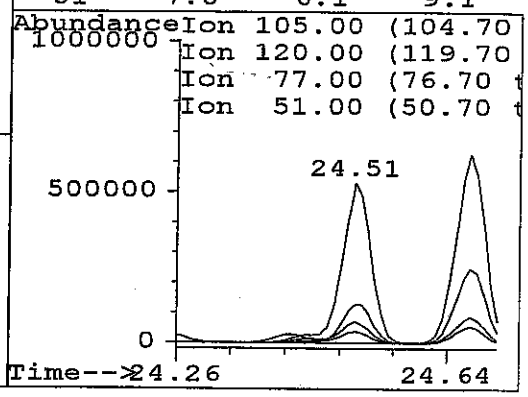


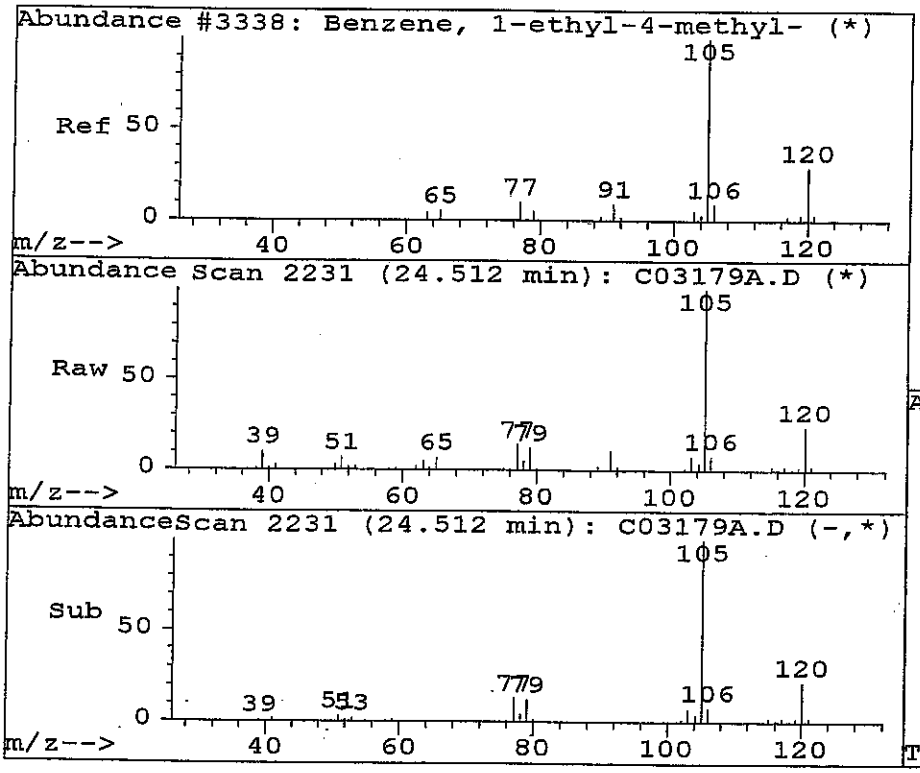


#71
Isopropylbenzene
Concen: 0.11 ppbV
RT: 24.51 min Scan# 2231
Delta R.T. -0.23 min
Lab File: C03179A.D
Acq: 17 Mar 109 8:47 am

Tgt Ion:105 Resp: 1573293

Ion	Ratio	Lower	Upper
105	100		
120	25.2	20.2	30.4
77	15.8	12.7	19.1
51	7.0	6.1	9.1

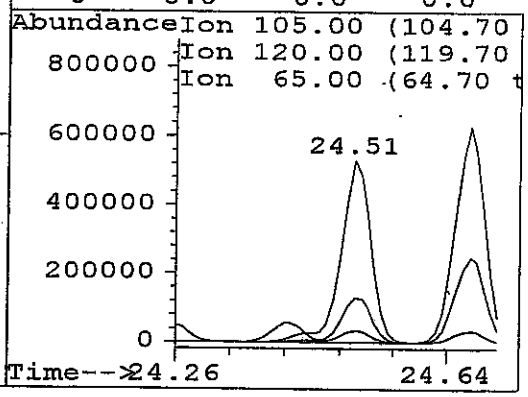


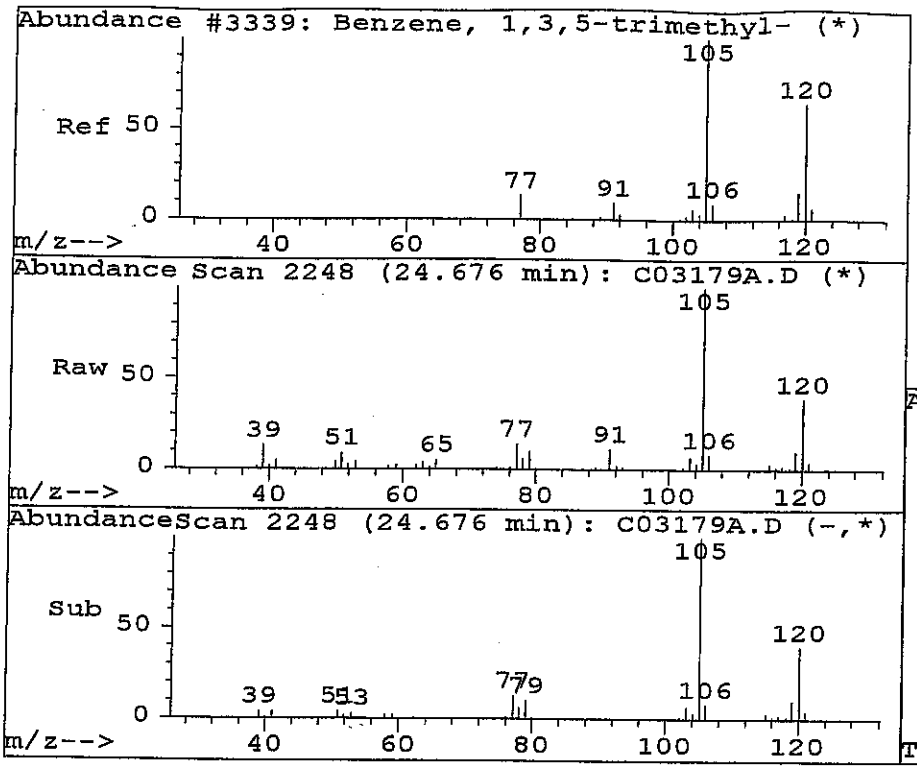


#72
4-Ethyltoluene
Concen: 0.11 ppbV
RT: 24.51 min Scan# 2231
Delta R.T. -0.23 min
Lab File: C03179A.D
Acq: 17 Mar 109 8:47 am

Tgt Ion:105 Resp: 1573293

Ion	Ratio	Lower	Upper
105	100		
120	24.4	19.6	29.4
65	6.0	5.4	8.2
0	0.0	0.0	0.0

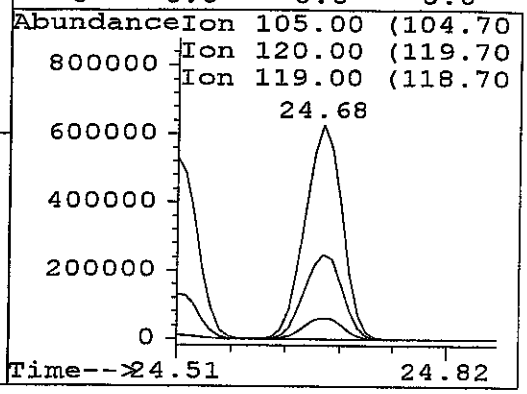


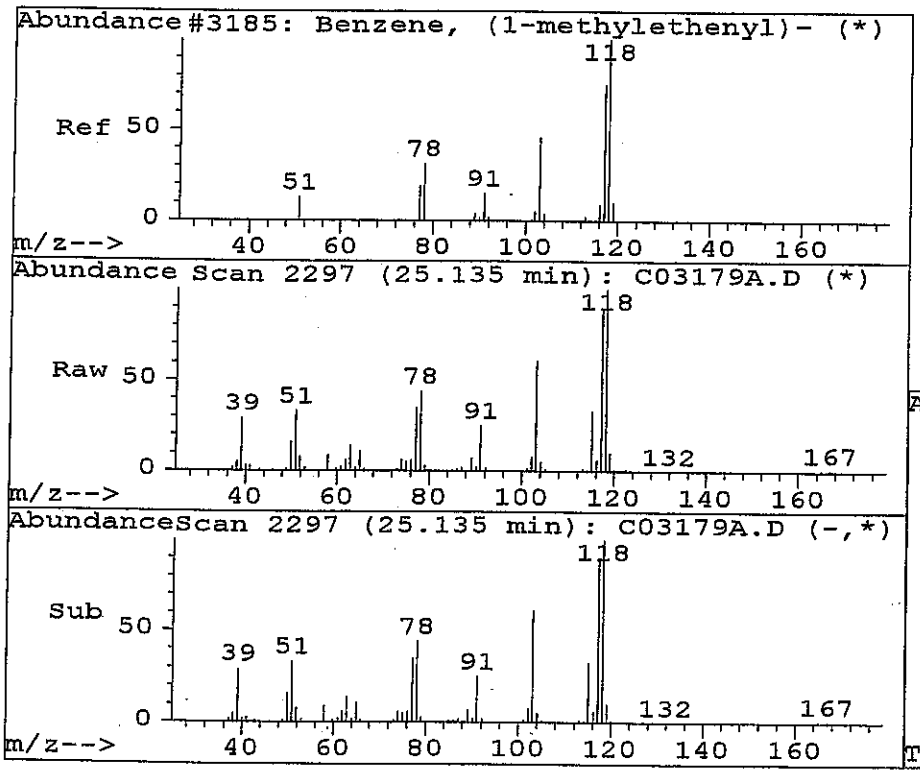


#73
1,3,5-Trimethylbenzene
Concen: 0.11 ppbV
RT: 24.68 min Scan# 2248
Delta R.T. -0.24 min
Lab File: C03179A.D
Acq: 17 Mar 109 8:47 am

Tgt Ion:105 Resp: 1778188

Ion	Ratio	Lower	Upper
105	100		
120	39.5	31.1	46.7
119	9.7	8.2	12.4
0	0.0	0.0	0.0

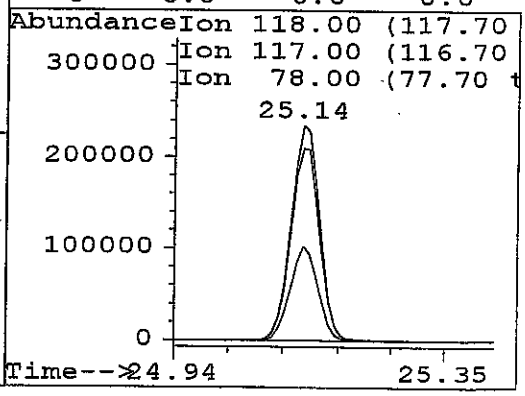


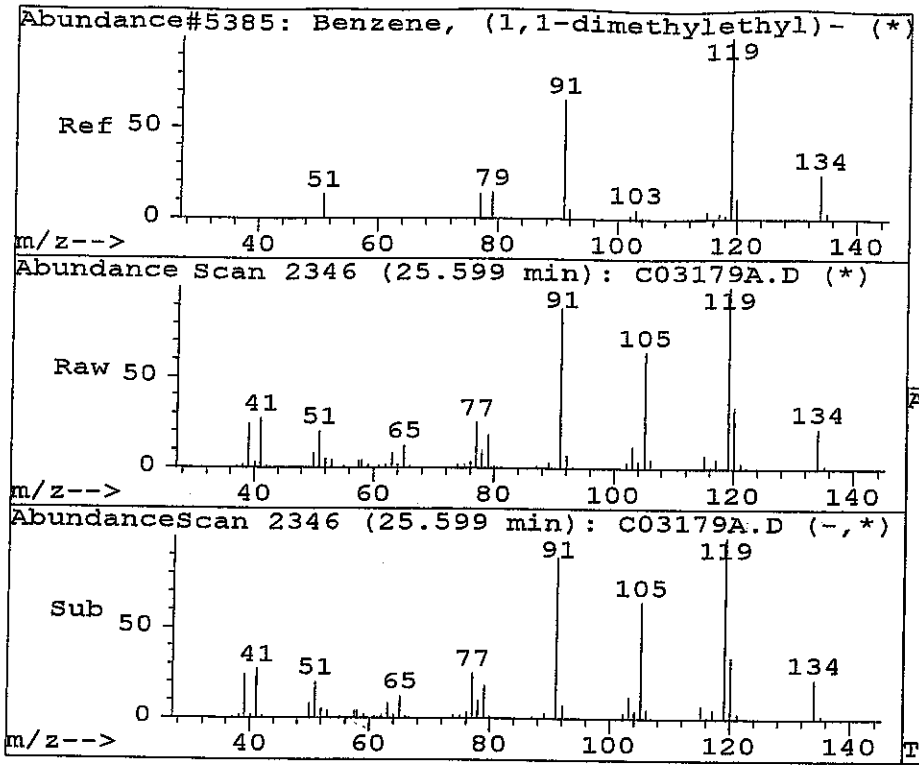


#74
Methylstyrene
Concen: 0.11 ppbV
RT: 25.14 min Scan# 2297
Delta R.T. -0.22 min
Lab File: C03179A.D
Acq: 17 Mar 109 8:47 am

Tgt Ion:118 Resp: 700556

Ion	Ratio	Lower	Upper
118	100		
117	89.0	70.8	106.2
78	43.6	36.2	54.2
0	0.0	0.0	0.0

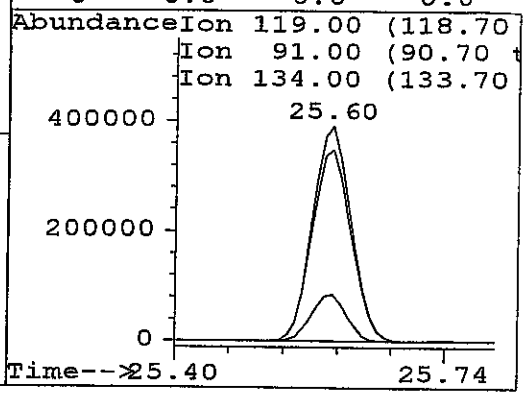


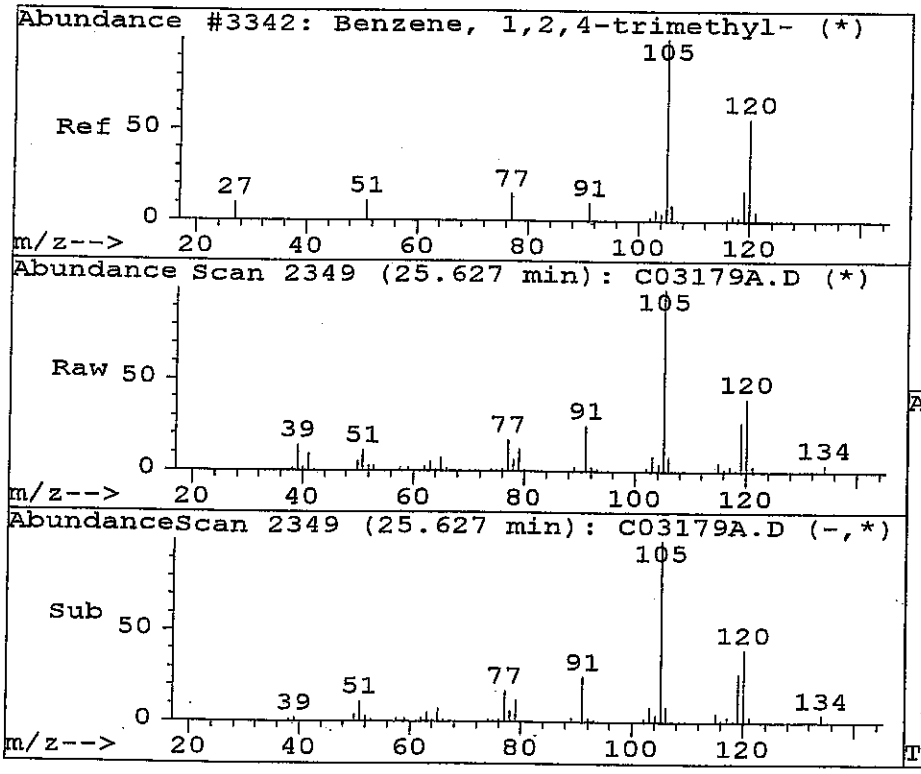


#75
tert-butyl benzene
Concen: 0.09 ppbV
RT: 25.60 min Scan# 2346
Delta R.T. -0.21 min
Lab File: C03179A.D
Acq: 17 Mar 109 8:47 am

Tgt Ion:119 Resp: 1302134

Ion	Ratio	Lower	Upper
119	100		
91	91.0	76.9	115.3
134	19.5	15.7	23.5
0	0.0	0.0	0.0

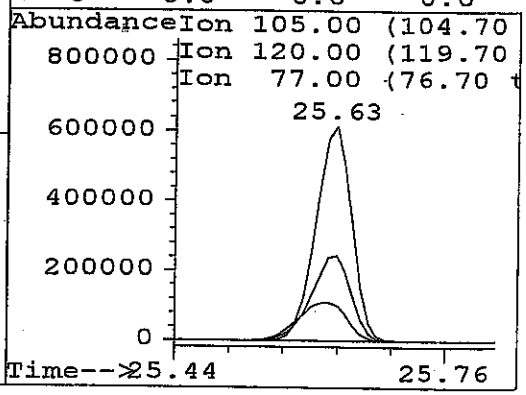


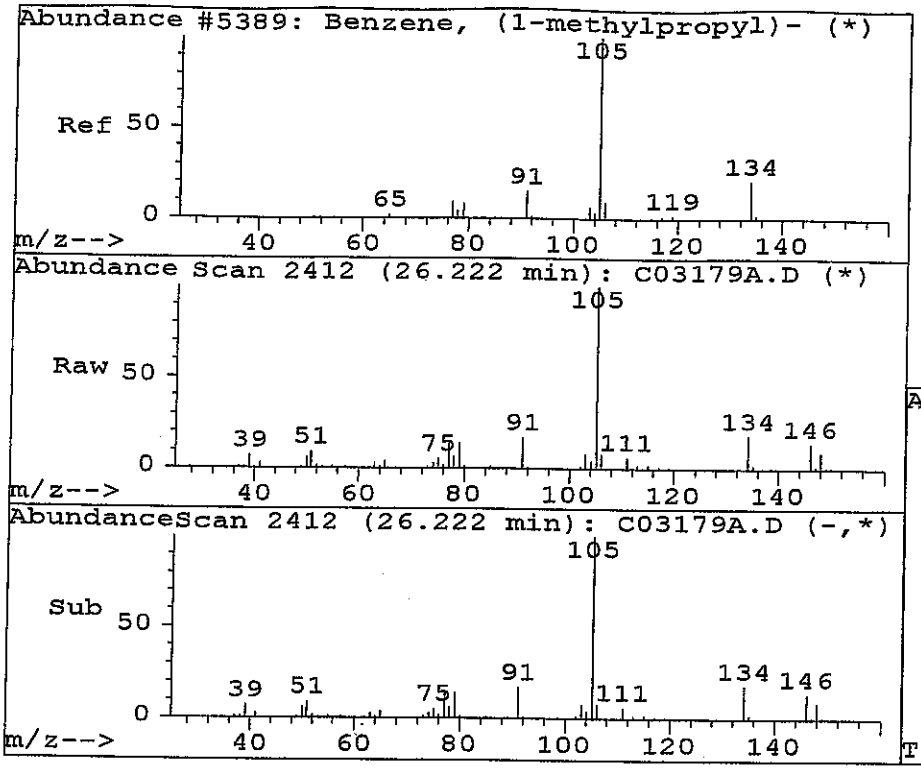


#76
1,2,4-Trimethylbenzene
Concen: 0.11 ppbV
RT: 25.63 min Scan# 2349
Delta R.T. -0.26 min
Lab File: C03179A.D
Acq: 17 Mar 109 8:47 am

Tgt Ion:105 Resp: 1766777

Ion	Ratio	Lower	Upper
105	100		
120	39.6	29.8	44.8
77	16.5	13.0	19.4
0	0.0	0.0	0.0

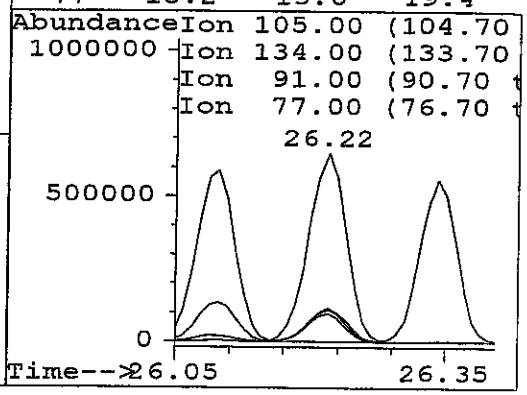


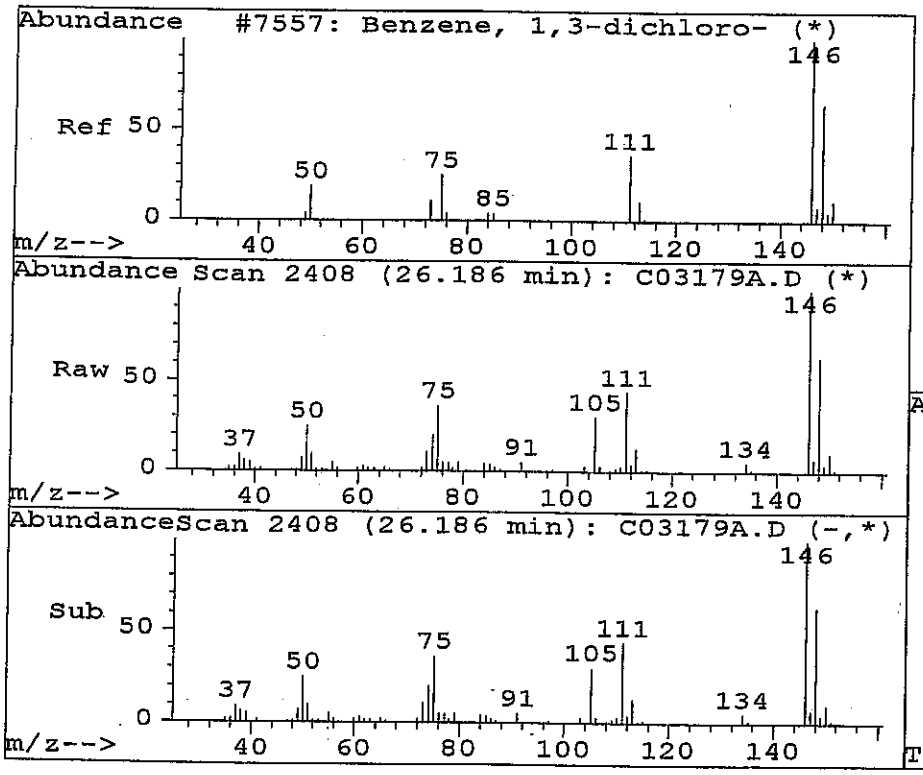


#77
sec-butylbenzene
Concen: 0.10 ppbV
RT: 26.22 min Scan# 2412
Delta R.T. -0.28 min
Lab File: C03179A.D
Acq: 17 Mar 109 8:47 am

Tgt Ion:105 Resp: 1874067

Ion	Ratio	Lower	Upper
105	100		
134	17.7	13.9	20.9
91	17.1	13.9	20.9
77	15.2	13.0	19.4

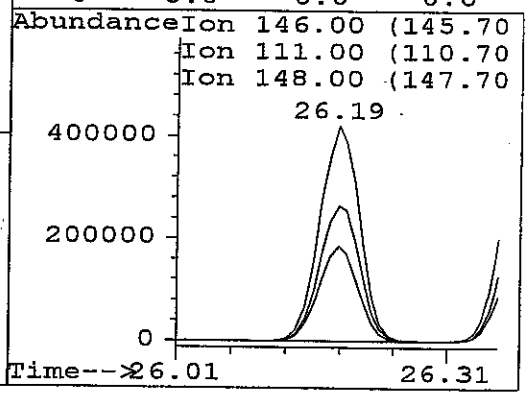


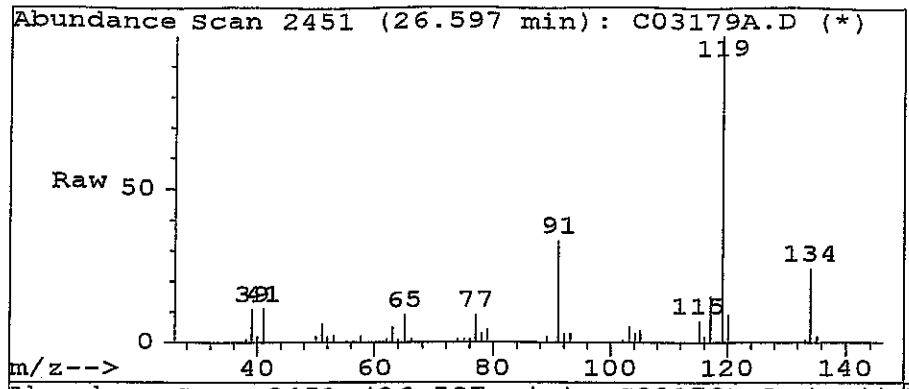


#78
1,3-Dichlorobenzene
Concen: 0.11 ppbV
RT: 26.19 min Scan# 2408
Delta R.T. -0.22 min
Lab File: C03179A.D
Acq: 17 Mar 109 8:47 am

Tgt Ion:146 Resp: 1325016

Ion	Ratio	Lower	Upper
146	100		
111	44.0	37.7	56.5
148	62.6	51.6	77.4
0	0.0	0.0	0.0

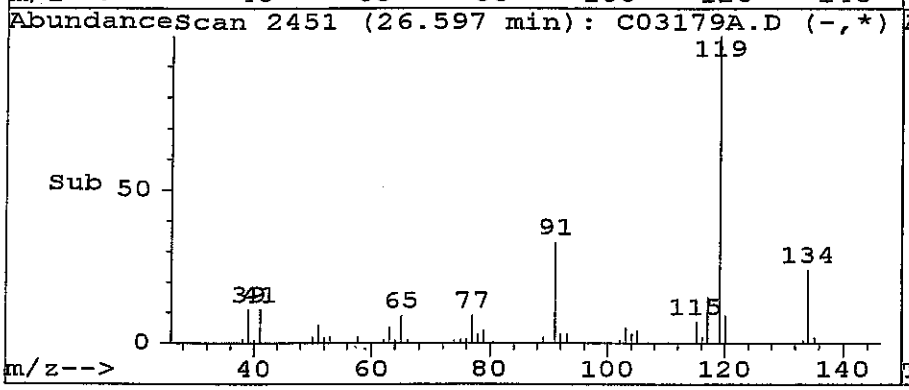


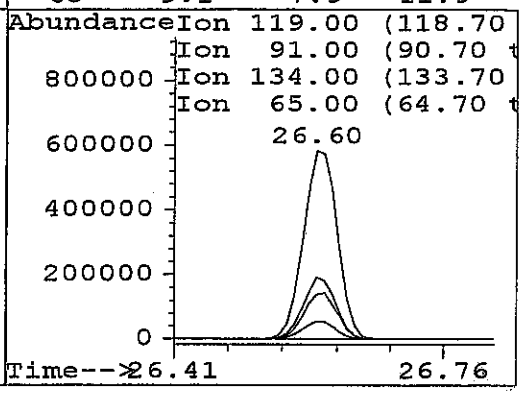


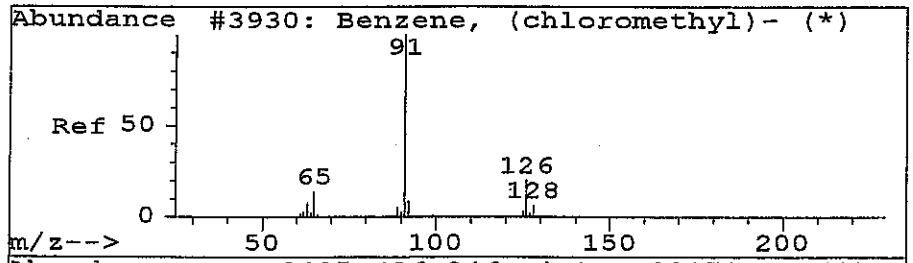
#79
Isopropyltoluene
Concen: 0.10 ppbV
RT: 26.60 min Scan# 2451
Delta R.T. -0.23 min
Lab File: C03179A.D
Acq: 17 Mar 109 8:47 am

Tgt Ion:119 Resp: 1772233

Ion	Ratio	Lower	Upper
119	100		
91	31.5	26.8	40.2
134	24.1	18.9	28.3
65	9.1	7.9	11.9



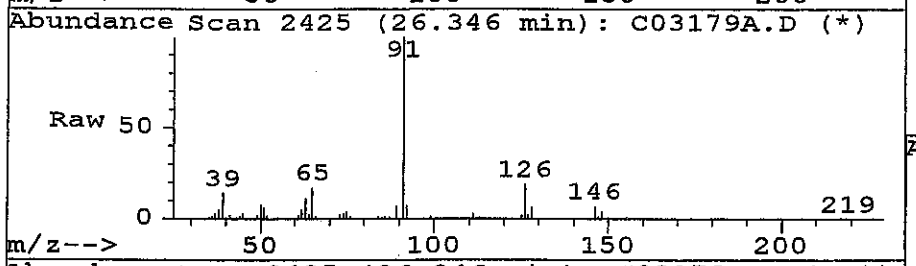


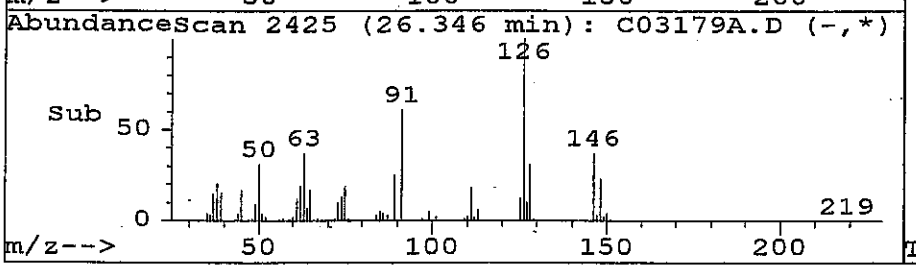


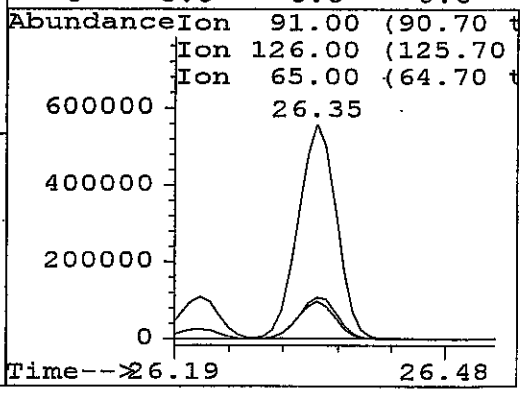
#80
Benzyl chloride
Concen: 0.10 ppbV
RT: 26.35 min Scan# 2425
Delta R.T. -0.26 min
Lab File: C03179A.D
Acq: 17 Mar 109 8:47 am

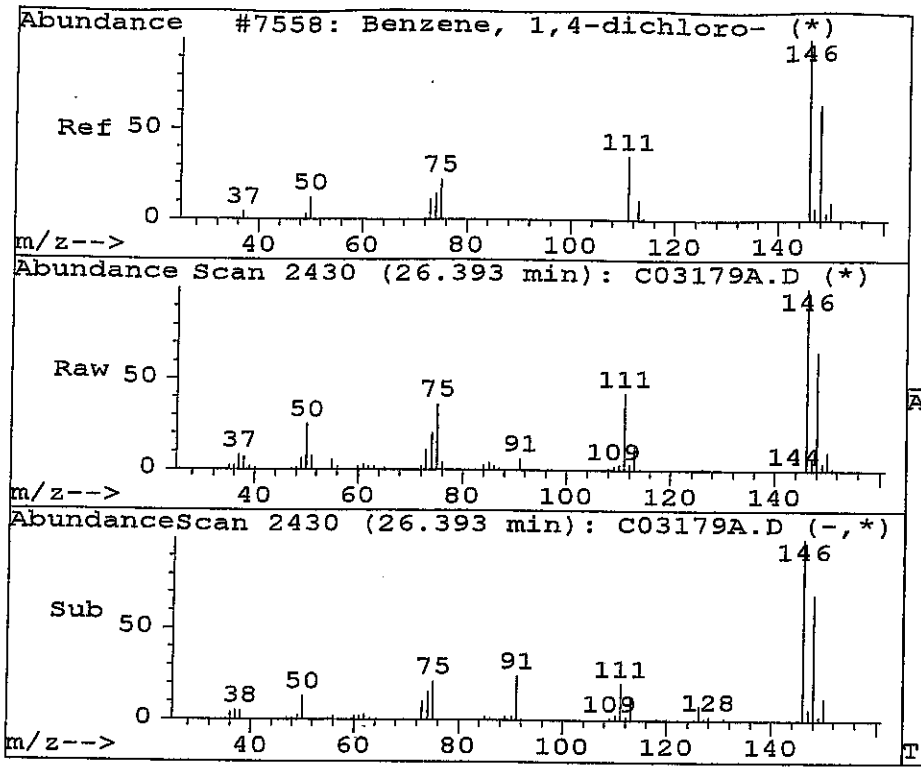
Tgt Ion:91 Resp: 1580130

Ion	Ratio	Lower	Upper
91	100		
126	19.4	14.1	21.1
65	17.5	14.4	21.6
0	0.0	0.0	0.0





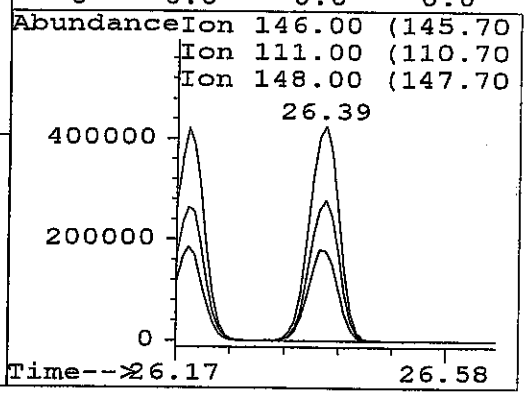


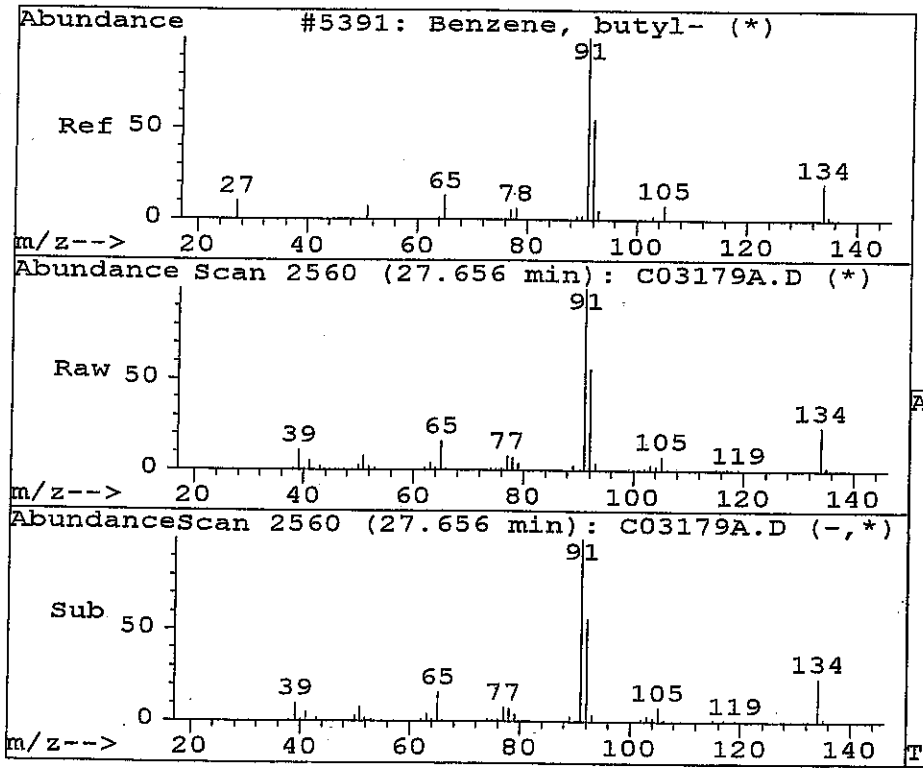


#81
1,4-Dichlorobenzene
Concen: 0.11 ppbV m
RT: 26.39 min Scan# 2430
Delta R.T. -0.29 min
Lab File: C03179A.D
Acq: 17 Mar 109 8:47 am

Tgt Ion:146 Resp: 1362139

Ion	Ratio	Lower	Upper
146	100		
111	41.9	36.0	54.0
148	65.3	51.0	76.6
0	0.0	0.0	0.0

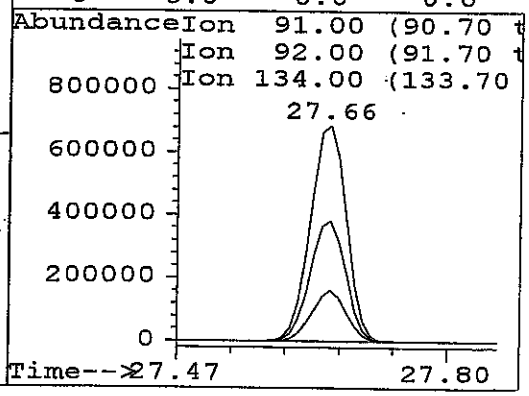


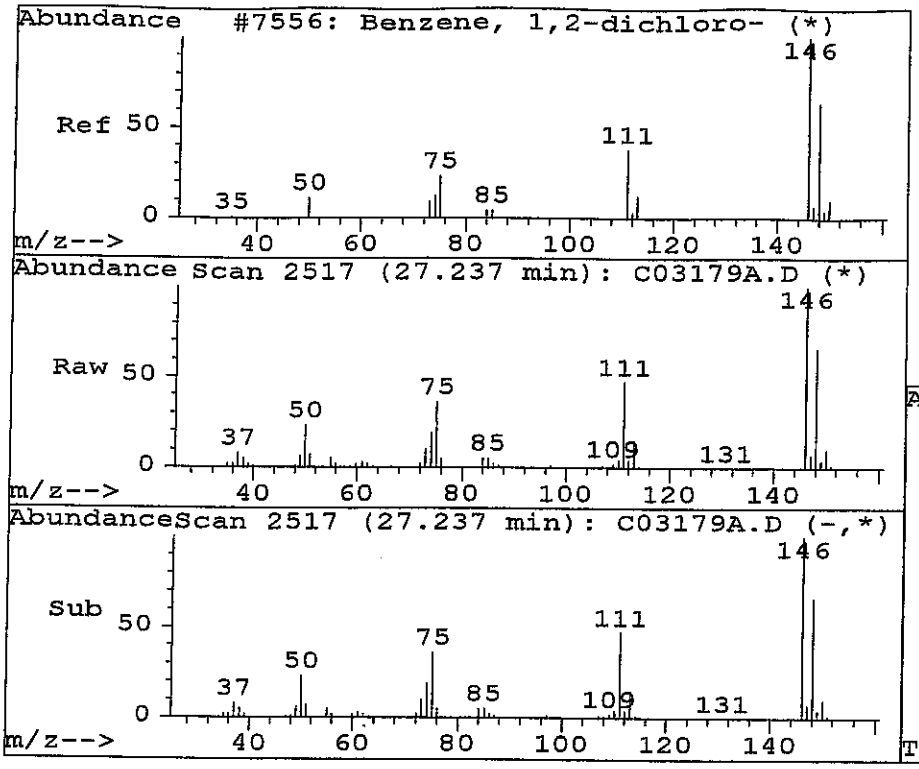


#82
n-Butylbenzene
Concen: 0.10 ppbV
RT: 27.66 min Scan# 2560
Delta R.T. -0.22 min
Lab File: C03179A.D
Acq: 17 Mar 109 8:47 am

Tgt Ion:91 Resp: 2064802

Ion	Ratio	Lower	Upper
91	100		
92	55.3	43.1	64.7
134	22.6	17.4	26.0
0	0.0	0.0	0.0

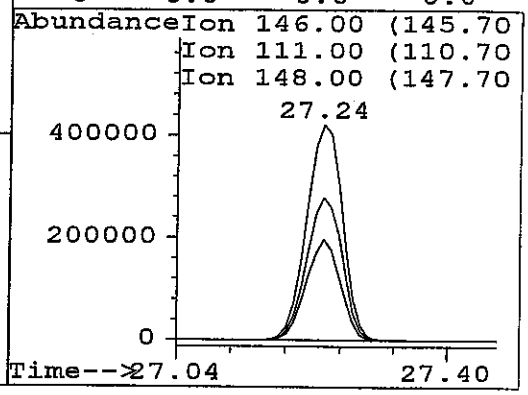


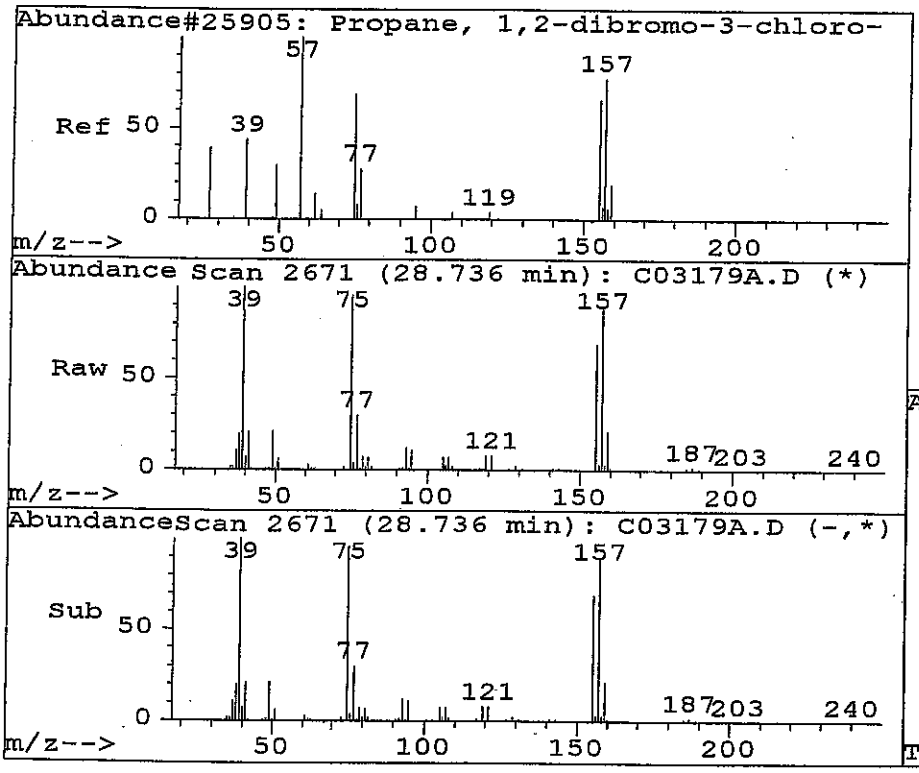


#83
1,2-Dichlorobenzene
Concen: 0.10 ppbV
RT: 27.24 min Scan# 2517
Delta R.T. -0.23 min
Lab File: C03179A.D
Acq: 17 Mar 109 8:47 am

Tgt Ion:146 Resp: 1374687

Ion	Ratio	Lower	Upper
146	100		
111	46.8	39.0	58.4
148	66.2	50.1	75.1
0	0.0	0.0	0.0

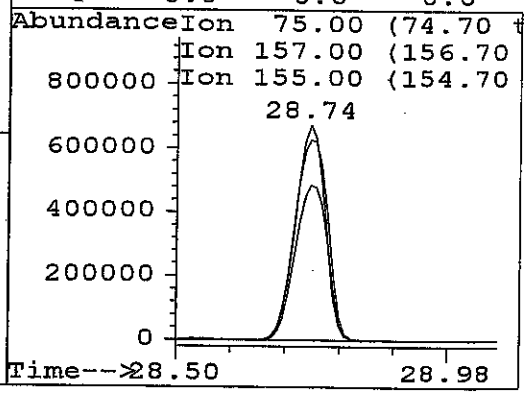


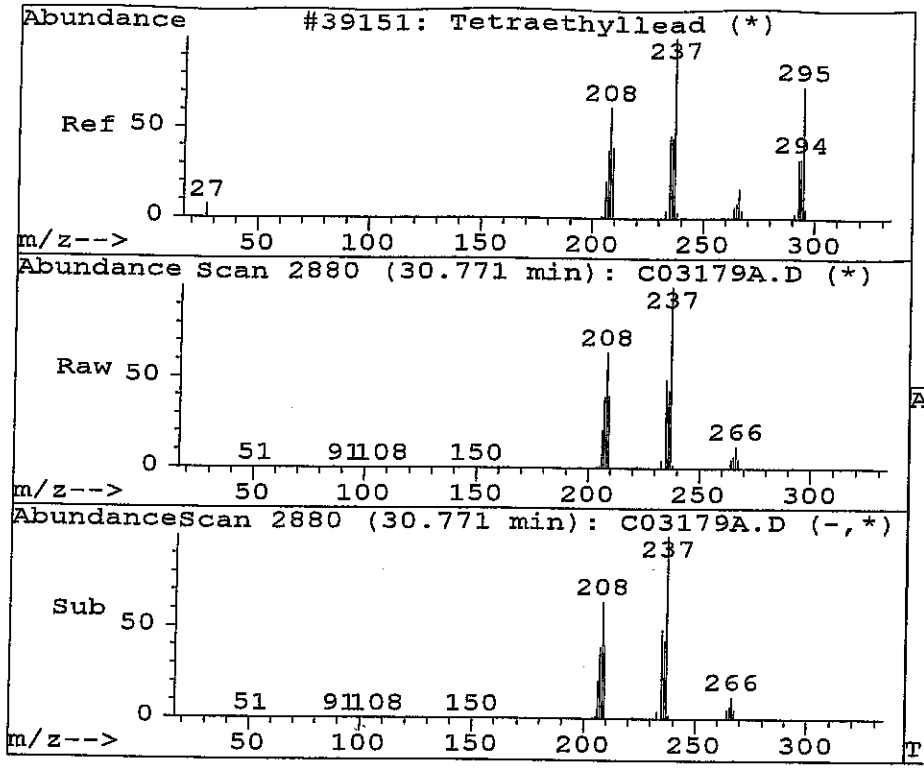


#84
1,2-Dibromo-3-chloropropane
Concen: 0.32 ppbV m
RT: 28.74 min Scan# 2671
Delta R.T. -0.22 min
Lab File: C03179A.D
Acq: 17 Mar 109 8:47 am

Tgt Ion:75 Resp: 2420308

Ion	Ratio	Lower	Upper
75	100		
157	92.9	52.6	78.8#
155	72.0	41.3	61.9#
0	0.0	0.0	0.0

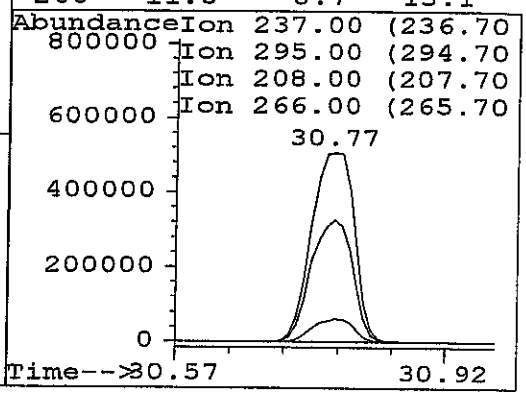


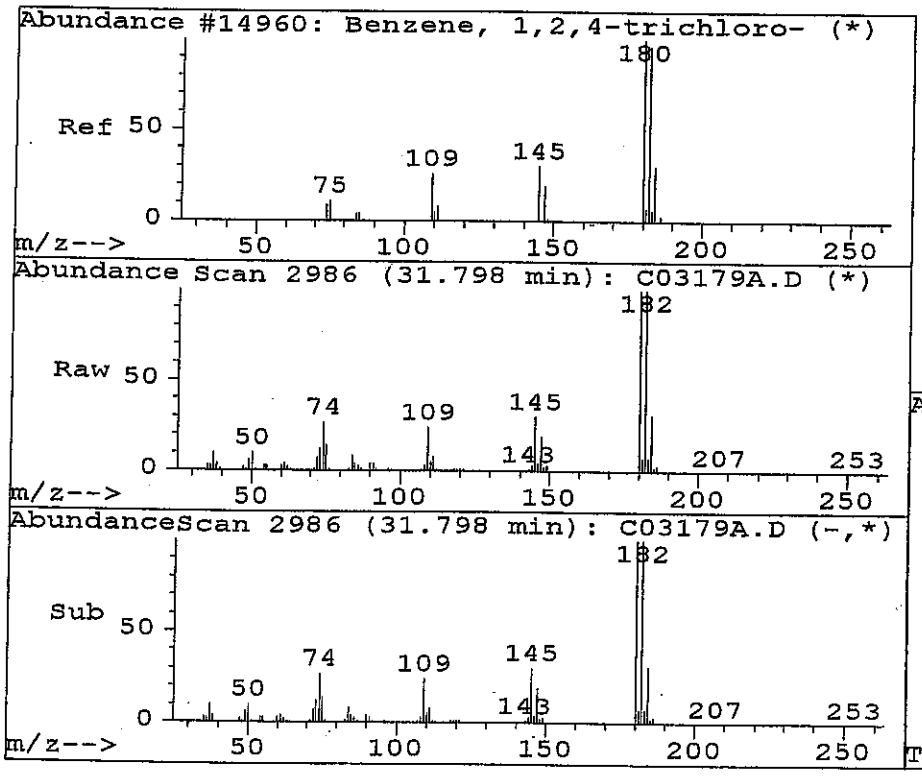


#85
Tetraethyl lead
Concen: 0.23 ppbV
RT: 30.77 min Scan# 2880
Delta R.T. -0.21 min
Lab File: C03179A.D
Acq: 17 Mar 109 8:47 am

Tgt Ion:237 Resp: 1960424

Ion	Ratio	Lower	Upper
237	100		
295	0.0	0.0	0.0
208	62.1	46.2	69.2
266	11.8	8.7	13.1

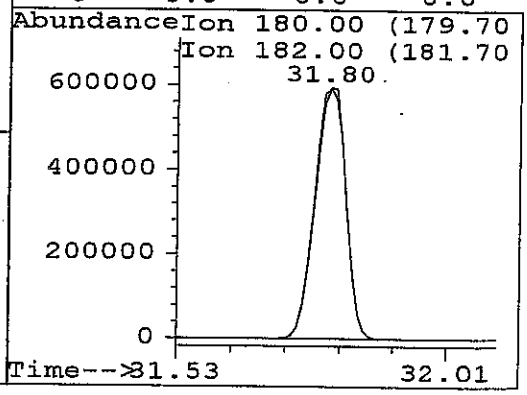


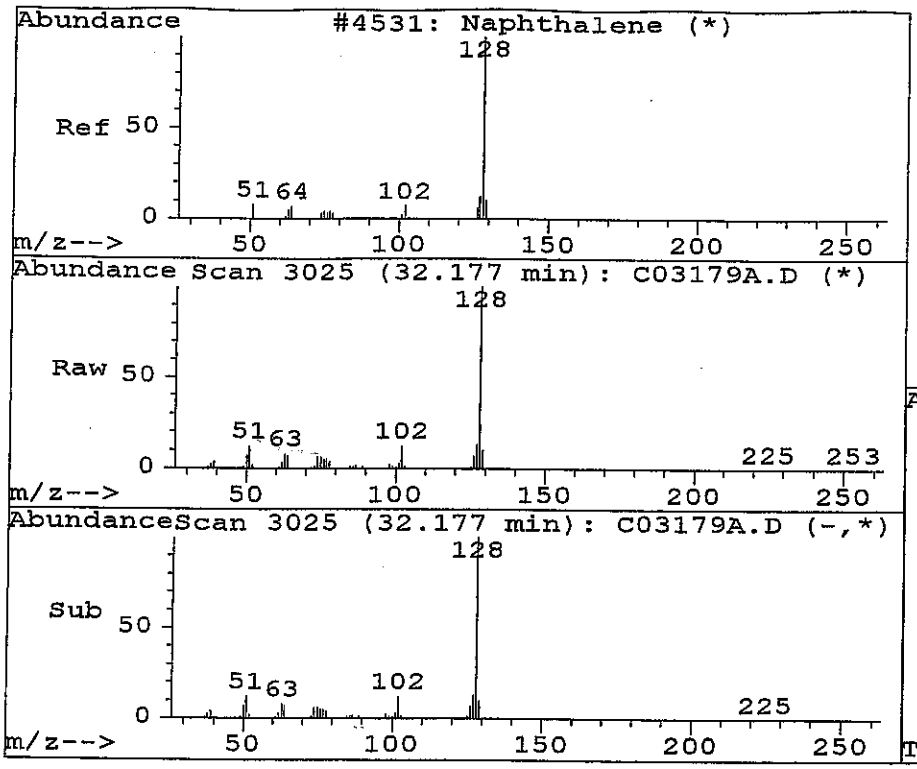


#86
1,2,4-Trichlorobenzene
Concen: 0.12 ppbV
RT: 31.80 min Scan# 2986
Delta R.T. -0.38 min
Lab File: C03179A.D
Acq: 17 Mar 109 8:47 am

Tgt Ion:180 Resp: 2236815

Ion	Ratio	Lower	Upper
180	100		
182	100.3	73.5	110.3
0	0.0	0.0	0.0
0	0.0	0.0	0.0

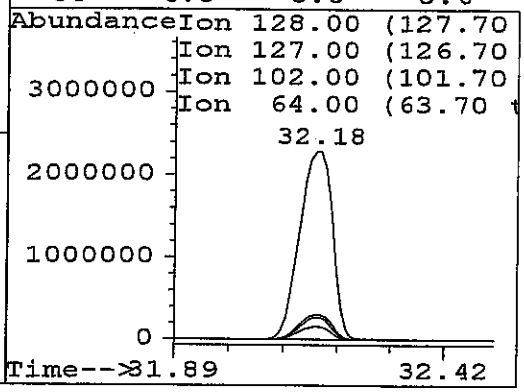


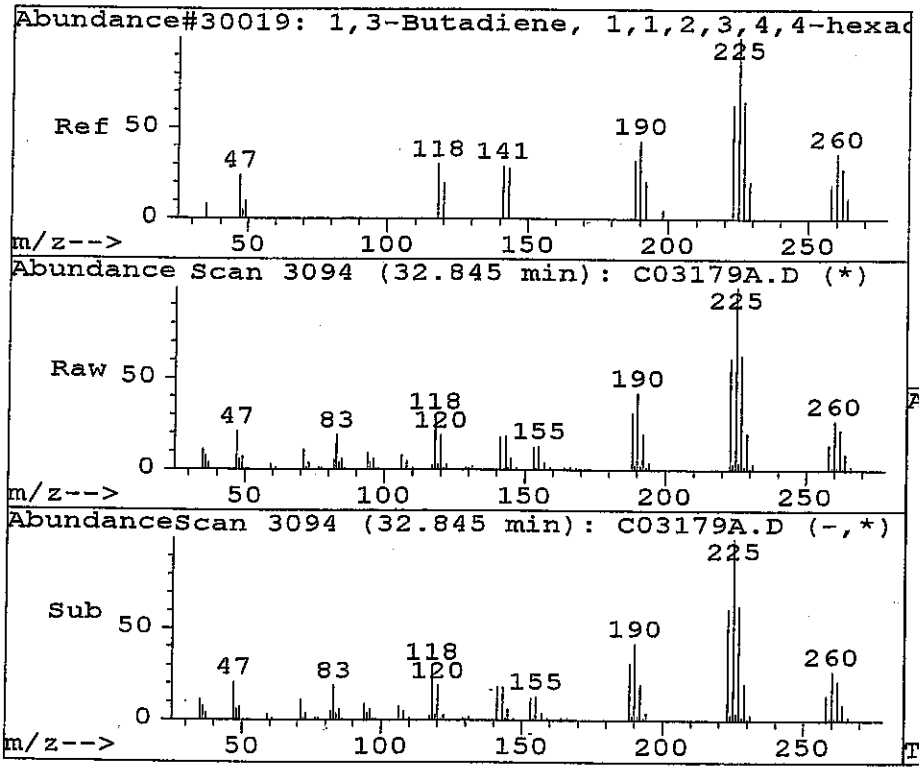


#87
Naphthalene
Concen: 0.34 ppbV
RT: 32.18 min Scan# 3025
Delta R.T. -0.23 min
Lab File: C03179A.D
Acq: 17 Mar 109 8:47 am

Tgt Ion:128 Resp:10074168

Ion	Ratio	Lower	Upper
128	100		
127	13.0	10.4	15.6
102	11.6	10.3	15.5
64	6.8	5.8	8.6

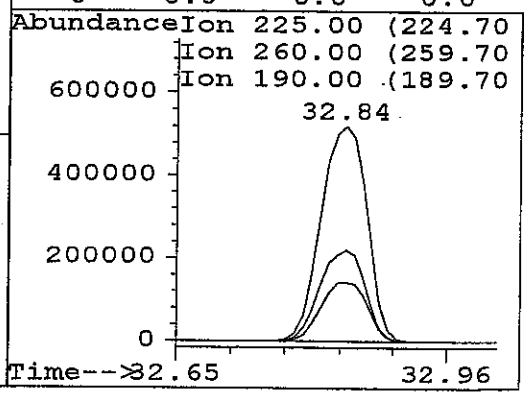


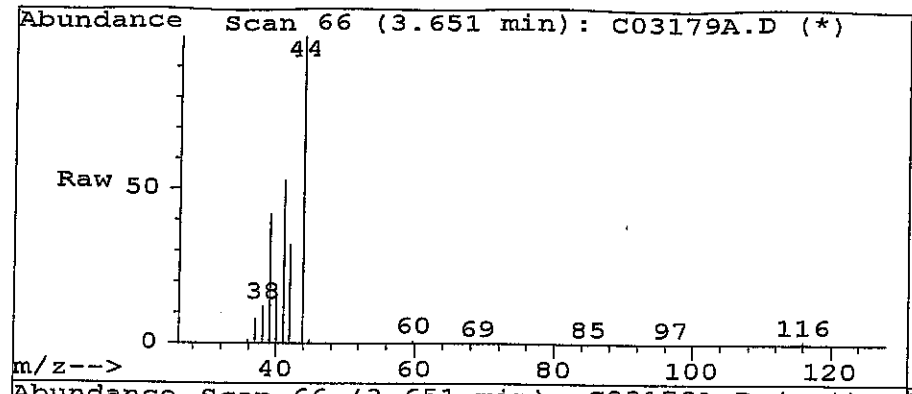


#88
Hexachlorobutadiene
Concen: 0.11 ppbV
RT: 32.84 min Scan# 3094
Delta R.T. -0.24 min
Lab File: C03179A.D
Acq: 17 Mar 109 8:47 am

Tgt Ion:225 Resp: 1914490

Ion	Ratio	Lower	Upper
225	100		
260	27.4	21.8	32.6
190	42.2	34.6	51.8
0	0.0	0.0	0.0

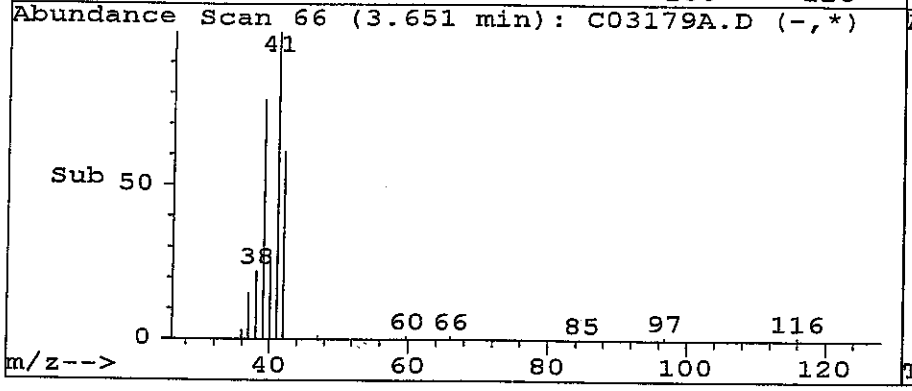


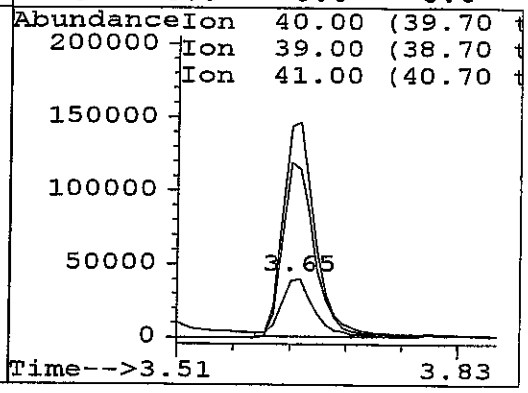


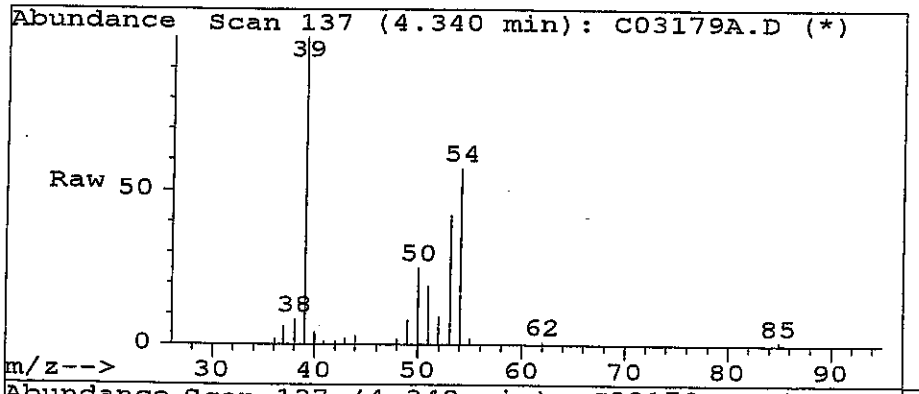
#89
Propylene
Concen: 0.21 ppbV
RT: 3.65 min Scan# 66
Delta R.T. -0.11 min
Lab File: C03179A.D
Acq: 17 Mar 109 8:47 am

Tgt Ion:40 Resp: 103546

Ion	Ratio	Lower	Upper
40	100		
39	292.6	241.5	362.3
41	359.5	303.8	455.6
0	0.0	0.0	0.0



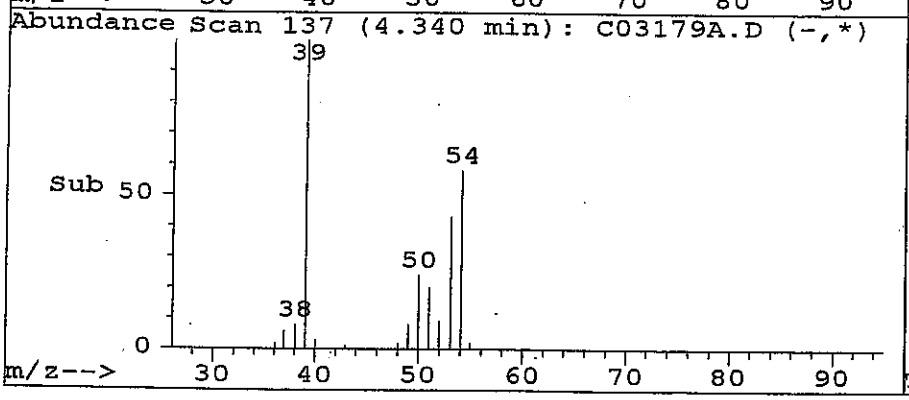


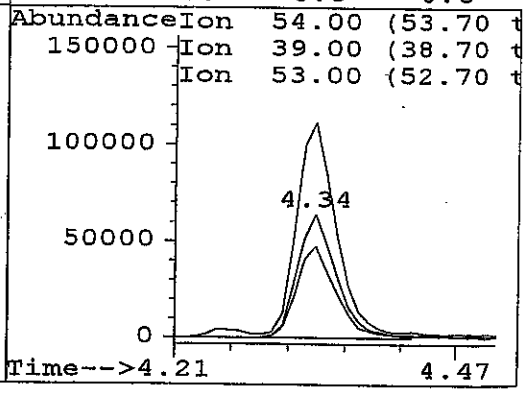


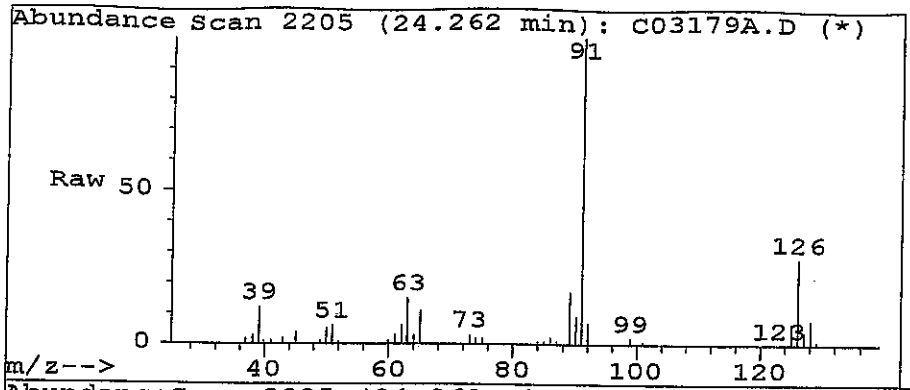
#90
1,3-Butadiene
Concen: 0.12 ppbV
RT: 4.34 min Scan# 137
Delta R.T. -0.13 min
Lab File: C03179A.D
Acq: 17 Mar 109 8:47 am

Tgt Ion:54 Resp: 157819

Ion	Ratio	Lower	Upper
54	100		
39	179.5	135.5	203.3
53	76.5	57.9	86.9
0	0.0	0.0	0.0



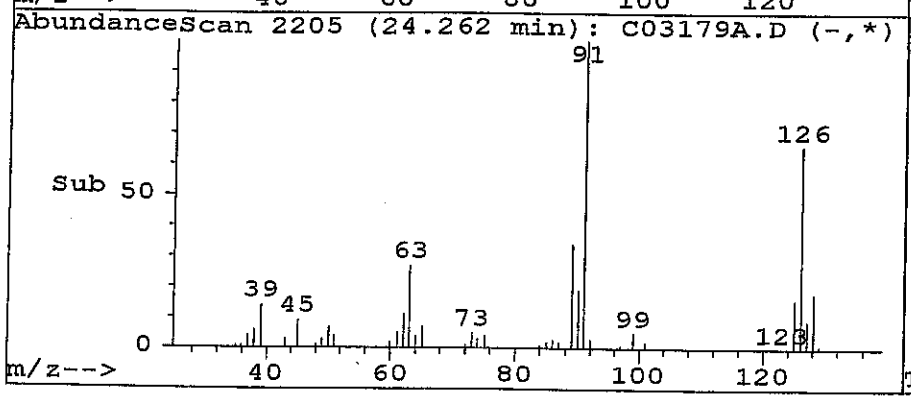


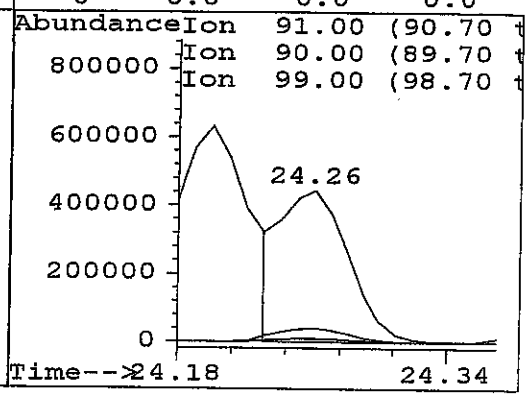


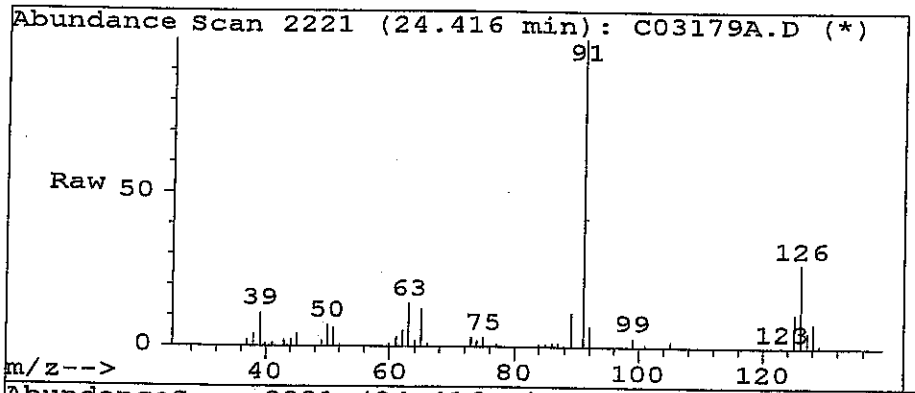
#92
2-Chlorotoluene
Concen: 0.06 ppbV m
RT: 24.26 min Scan# 2205
Delta R.T. -0.20 min
Lab File: C03179A.D
Acq: 17 Mar 109 8:47 am

Tgt Ion:91 Resp: 1196093

Ion	Ratio	Lower	Upper
91	100		
90	9.1	7.3	10.9
99	2.3	1.8	2.6
0	0.0	0.0	0.0



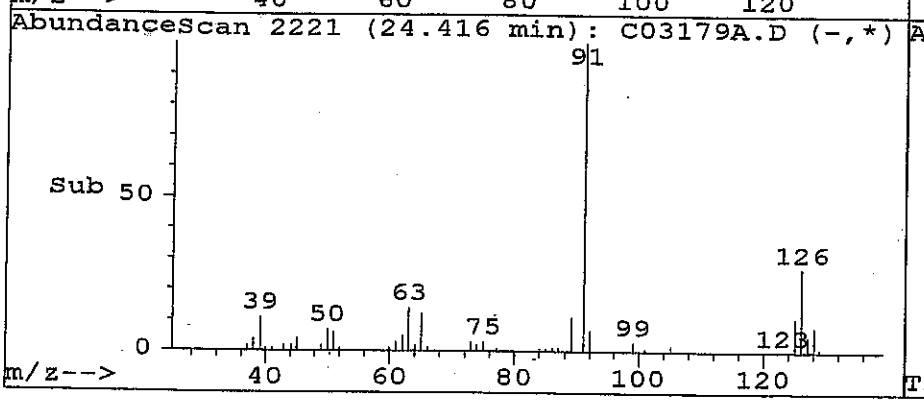


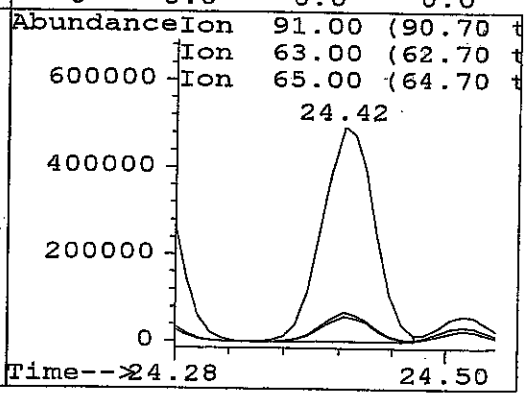


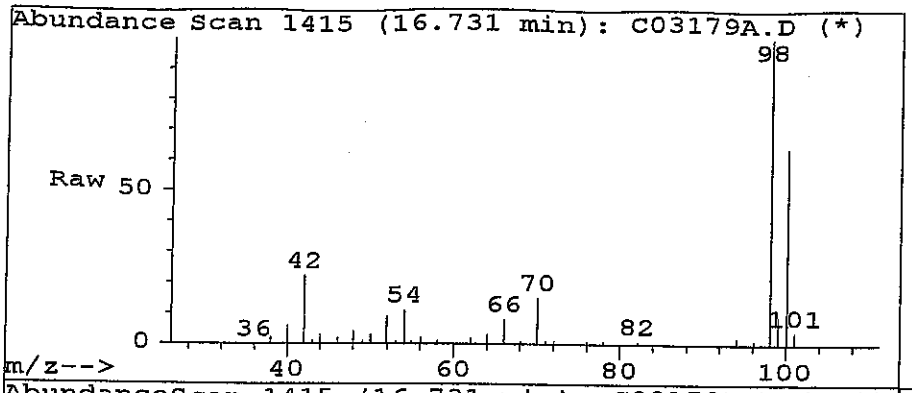
#93
4-Chlorotoluene
Concen: 0.09 ppbV
RT: 24.42 min Scan# 2221
Delta R.T. -0.23 min
Lab File: C03179A.D
Acq: 17 Mar 109 8:47 am

Tgt Ion:91 Resp: 1485093

Ion	Ratio	Lower	Upper
91	100		
63	13.5	11.4	17.0
65	11.9	9.6	14.4
0	0.0	0.0	0.0



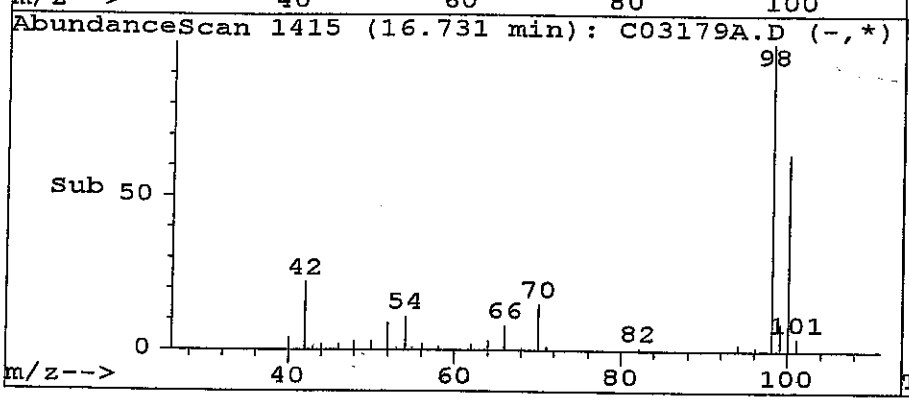


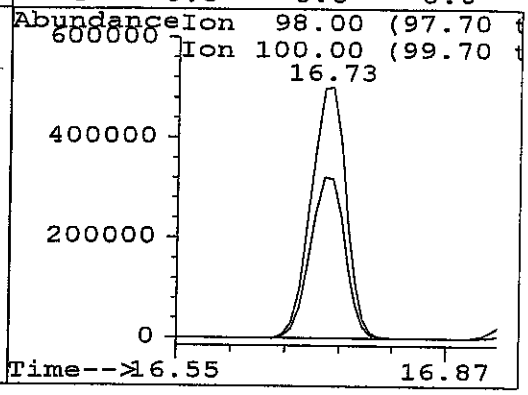


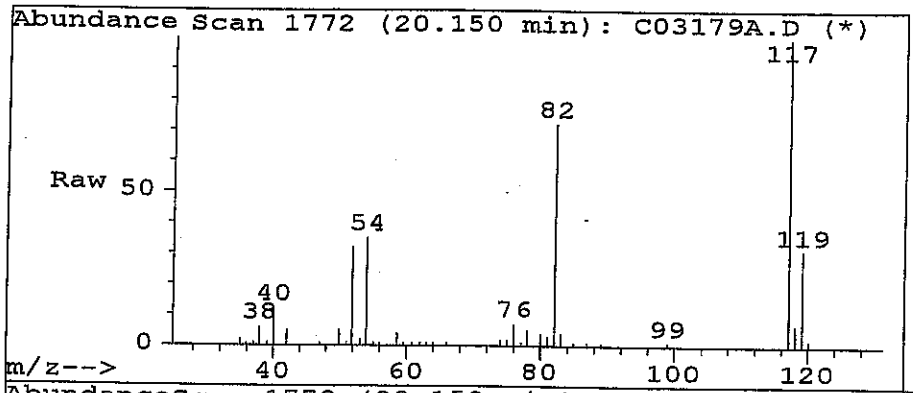
#94
Toluene-d8
Concen: 3.30 ppbV
RT: 16.73 min Scan# 1415
Delta R.T. -0.21 min
Lab File: C03179A.D
Acq: 17 Mar 109 8:47 am

Tgt Ion:98 Resp: 1469067

Ion	Ratio	Lower	Upper
98	100		
100	63.6	47.8	71.8
0	0.0	0.0	0.0
0	0.0	0.0	0.0



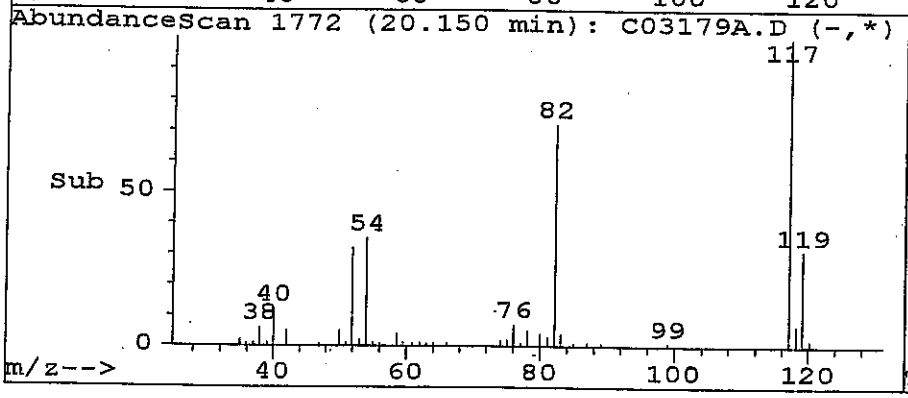


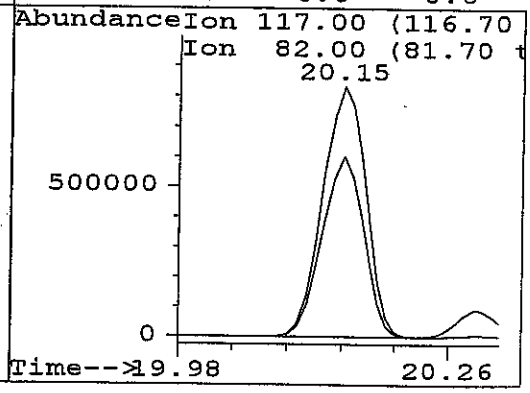


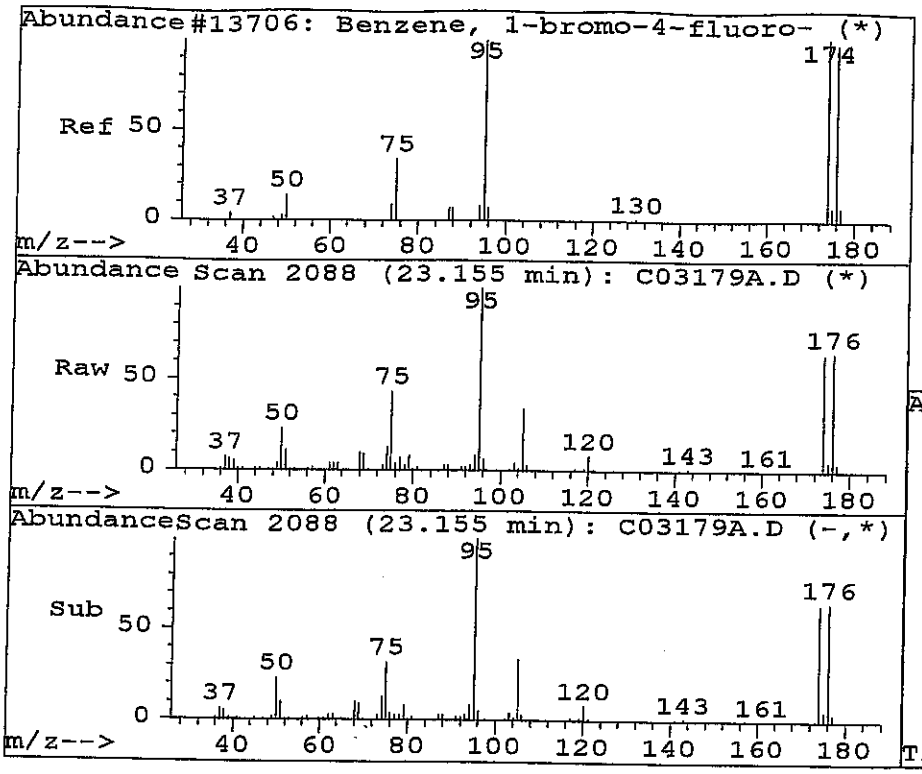
#95
Chlorobenzene-d5
Concen: 3.97 ppbV
RT: 20.15 min Scan# 1772
Delta R.T. -0.21 min
Lab File: C03179A.D
Acq: 17 Mar 109 8:47 am

Tgt Ion:117 Resp: 2602948

Ion	Ratio	Lower	Upper
117	100		
82	72.4	57.2	85.8
0	0.0	0.0	0.0
0	0.0	0.0	0.0



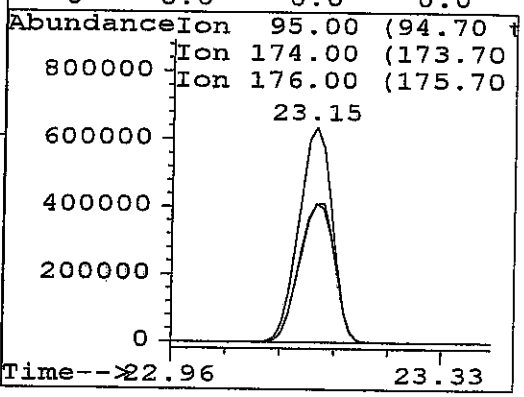




#96
1,4-Bromofluorobenzene
Concen: 6.29 ppbV
RT: 23.15 min Scan# 2088
Delta R.T. -0.23 min
Lab File: C03179A.D
Acq: 17 Mar 109 8:47 am

Tgt Ion:95 Resp: 2001651

Ion	Ratio	Lower	Upper
95	100		
174	64.0	53.0	79.4
176	64.6	52.7	79.1
0	0.0	0.0	0.0



Quantitation Report

Data File : C:\MSCHEM\2\DATA\03179M~1\C03179B.D
Acq Time : 17 Mar 109 9:42 am
Sample : ST60022 + ST60350
Misc : 1.0
Quant Time: Mar 17 11:22 19109

Operator: KB
Inst : 5970 - In
Multiplr: 1.00

Method : C:\MSCHEM\2\METHODS\1T15EXAY.M
Title : EPA TO-15
Last Update : Tue Mar 17 14:18:15 2009
Response via : Multiple Level Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene	11.20	168	2871816	20.00	ppbV	-0.18
35) 1,4-Difluorobenzene	12.98	114	2814997	20.00	ppbV	-0.19
System Monitoring Compounds						%Recovery
94) Toluene-d8	16.72	98	1590486	10.44	ppbV	208.85%
95) Chlorobenzene-d5	20.15	117	2937451	22.12	ppbV	221.24%
96) 1,4-Bromofluorobenzene	23.15	95	2352342	11.12	ppbV	222.39%
Target Compounds						Qvalue
2) Dichlorodifluoromethane	3.73	85	88898	1.31	ppbV	99
3) Chloromethane	3.98	50	55434	1.34	ppbV	99
4) Freon 114	4.00	85	94441	1.37	ppbV #	88
5) Vinyl chloride	4.22	62	32643	1.33	ppbV	96
6) Bromomethane	4.78	94	28890	1.08	ppbV	96
7) Chloroethane	4.98	64	16630	1.38	ppbV #	84
8) Ethanol	5.03	45	163073	5.91	ppbV	98
9) Acrolein	5.75	56	46235	7.12	ppbV #	78
10) Trichlorofluoromethane	5.80	101	85037	1.07	ppbV	98
11) Acetonitrile	5.80	41	174401	4.74	ppbV	97
12) Acetone	5.88	43	113697	0.85	ppbV	97
13) 2-propanol	5.97	45	75563	1.26	ppbV #	100
14) Methyl iodide	6.82	142	72721	2.07	ppbV	99
15) 1,1-Dichloroethene	6.72	61	63935	1.10	ppbV	98
16) Acrylonitrile	6.78	53	141541	4.98	ppbV	97
17) Freon 113	7.00	151	45725	0.82	ppbV	91
18) Allyl chloride	7.19	41	54211	1.31	ppbV	89
19) Dichloromethane	7.15	84	26131	1.07	ppbV	92
20) Carbon disulfide	7.38	76	33136	1.57	ppbV	94
21) trans-1,2-Dichloroethene	8.21	96	23397	1.07	ppbV	94
22) Methyl tert butyl ether	8.38	73	97431	0.92	ppbV #	95
23) Propionitrile	8.63	54	109954	3.94	ppbV	95
24) 1,1-Dichloroethane	8.73	63	85531	1.29	ppbV	98
25) Vinyl acetate	10.12	43	149287	1.32	ppbV	100
26) 2-Butanone	9.36	72	22013	1.15	ppbV #	83
27) Hexane	9.53	57	47026	0.92	ppbV	78
28) Bromochloromethane	10.31	49	80833	1.39	ppbV #	76
29) Tetrahydrofuran	10.64	42	383009	1.75	ppbV m	44
30) Isobutyl alcohol	10.64	74	30717	4.08	ppbV #	97
31) Methacrylonitrile	9.53	67	81589	4.36	ppbV #	90
32) cis-1,2-Dichloroethene	9.92	96	43510	1.22	ppbV	93
33) 2,2-Dichloropropane	10.23	77	72177	1.00	ppbV #	91
34) Chloroform	10.33	83	101707	1.21	ppbV	99
36) 1,1,1-Trichloroethane	11.61	97	100881	0.99	ppbV	92
37) 1,2-Dichloroethane	11.67	62	96975	1.09	ppbV	94
38) 1,1-Dichloropropene	12.05	75	62476	1.00	ppbV	98
39) Cyclohexane	12.38	56	83495	1.39	ppbV	90
40) Benzene	12.31	78	206967	1.49	ppbV	94
41) Carbon tetrachloride	12.37	117	105798	0.97	ppbV	95
42) n-Heptane	13.83	43	135509	1.35	ppbV #	90
43) 1,2-Dichloropropane	13.85	63	66789	1.41	ppbV	98
44) 1,4 Dioxane	14.18	88	43700	1.28	ppbV #	99
45) Dibromomethane	13.99	174	87600	0.99	ppbV	95
46) Trichloroethene	13.92	130	83100	0.97	ppbV	98
47) Bromodichloromethane	14.19	83	96325	0.98	ppbV	98
48) Methyl methacrylate	14.32	69	161809	3.60	ppbV	88
49) Methyl Isobutyl Ketone	15.52	43	250239	1.38	ppbV	95

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

Quantitation Report

Data File : C:\MSCHEM\2\DATA\03179M~1\C03179B.D
Acq Time : 17 Mar 109 9:42 am
Sample : ST60022 + ST60350
Misc : 1.0
Quant Time: Mar 17 11:22 19109

Operator: KB
Inst : 5970 - In
Multiplr: 1.00

Method : C:\MSCHEM\2\METHODS\1T15EXAY.M
Title : EPA TO-15
Last Update : Tue Mar 17 14:18:15 2009
Response via : Multiple Level Calibration

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
50)	cis-1,3-Dichloropropene	15.61	75	107039	1.33	ppbV		100
51)	Toluene	16.91	91	257501	1.43	ppbV		99
52)	trans-1,3-Dichloropropene	16.63	75	127376	1.25	ppbV		97
53)	1,1,2-Trichloroethane	16.94	61	68163	1.29	ppbV		92
54)	2-Hexanone	17.55	43	311524	1.34	ppbV	#	98
55)	1,3-Dichloropropane	17.51	76	102447	1.26	ppbV		98
56)	Octane	18.05	57	67553	1.02	ppbV		95
57)	Dibromochloromethane	18.07	129	150691	1.07	ppbV		97
58)	1,2-Dibromoethane	18.57	107	169213	1.31	ppbV		97
59)	Tetrachloroethene	18.76	166	145069	1.15	ppbV		92
60)	Chlorobenzene	20.23	112	208106	1.26	ppbV		95
61)	1,1,1,2-Tetrachloroethane	20.29	131	104954	1.11	ppbV		92
62)	Ethylbenzene	20.76	91	359496	1.34	ppbV		98
63)	m & p-Xylene	21.06	91	617919	2.63	ppbV		99
64)	Styrene	21.88	104	224026	1.35	ppbV		99
65)	Bromoform	21.79	173	243927	1.09	ppbV		97
66)	o-Xylene	22.01	91	329821	1.29	ppbV		93
67)	1,1,2,2-Tetrachloroethane	22.54	83	274703	1.45	ppbV		97
68)	1,2,3-Trichloropropane	22.84	110	64244	1.17	ppbV		98
69)	t-1,4-Dichloro-2-butene	22.98	53	171723	3.23	ppbV		96
70)	n-Propylbenzene	24.20	91	514907	1.19	ppbV		97
71)	Isopropylbenzene	24.51	105	437379	1.30	ppbV		98
72)	4-Ethyltoluene	24.51	105	437379	1.28	ppbV	#	97
73)	1,3,5-Trimethylbenzene	24.66	105	488965	1.41	ppbV		99
74)	Methylstyrene	25.14	118	252870	1.89	ppbV		100
75)	tert-butyl benzene	25.58	119	390637	1.25	ppbV		96
76)	1,2,4-Trimethylbenzene	25.61	105	501359	1.31	ppbV		97
77)	sec-butylbenzene	26.21	105	578680	1.39	ppbV		98
78)	1,3-Dichlorobenzene	26.18	146	411700	1.33	ppbV		97
79)	Isopropyltoluene	26.59	119	552096	1.34	ppbV		99
80)	Benzyl chloride	26.33	91	459781	1.34	ppbV		99
81)	1,4-Dichlorobenzene	26.37	146	417021	1.28	ppbV		95
82)	n-Butylbenzene	27.65	91	640508	1.47	ppbV		98
83)	1,2-Dichlorobenzene	27.23	146	429307	1.19	ppbV		96
84)	1,2-Dibromo-3-chloropropan	28.72	75	795765	3.87	ppbV		97
85)	Tetraethyl lead	30.76	237	750701	2.58	ppbV	#	95
86)	1,2,4-Trichlorobenzene	31.79	180	905400	1.42	ppbV		89
87)	Naphthalene	32.15	128	4198495	6.14	ppbV	#	98
88)	Hexachlorobutadiene	32.83	225	758051	1.52	ppbV		96
89)	Propylene	3.65	40	34907	3.00	ppbV	#	47
90)	1,3-Butadiene	4.34	54	32969	1.34	ppbV		95
92)	2-Chlorotoluene	24.25	91	342293	1.08	ppbV	m	100
93)	4-Chlorotoluene	24.41	91	427755	1.29	ppbV		99

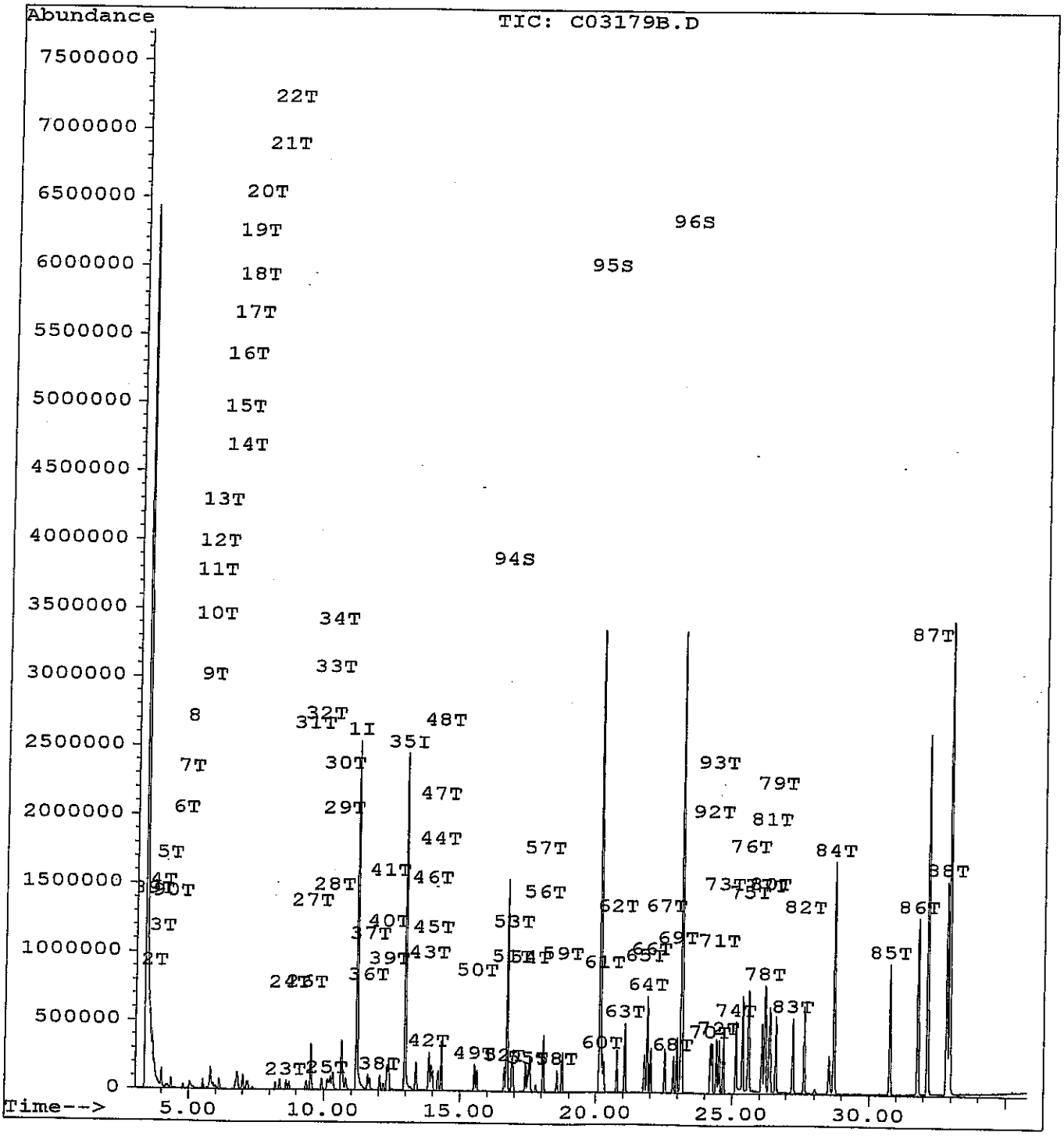
(#) = qualifier out of range (m) = manual integration

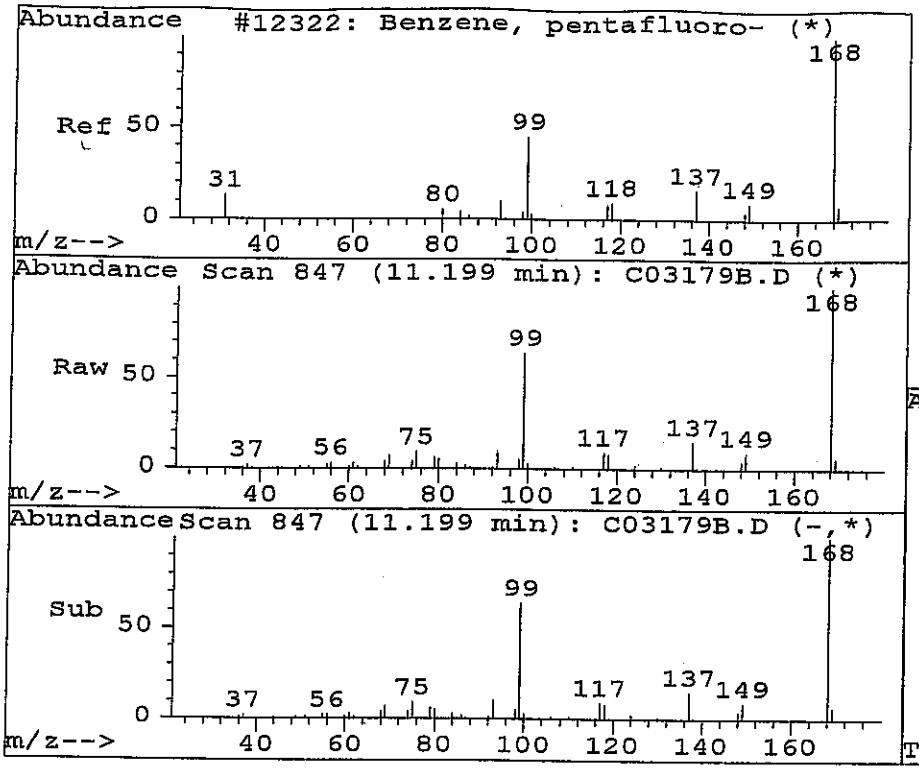
Quantitation Report

Data File : C:\MSCHEM\2\DATA\03179M~1\C03179B.D
Acq Time : 17 Mar 109 9:42 am
Sample : ST60022 + ST60350
Misc : 1.0
Quant Time: Mar 17 11:22 19109

Operator: KB
Inst : 5970 - In
Multiplr: 1.00

Method : C:\MSCHEM\2\METHODS\1T15EXAY.M
Title : EPA TO-15
Last Update : Tue Mar 17 14:18:15 2009
Response via : Multiple Level Calibration

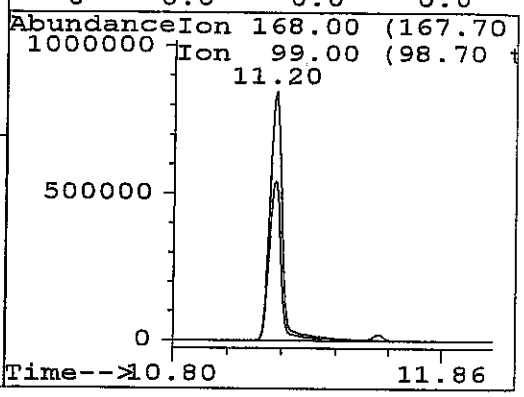


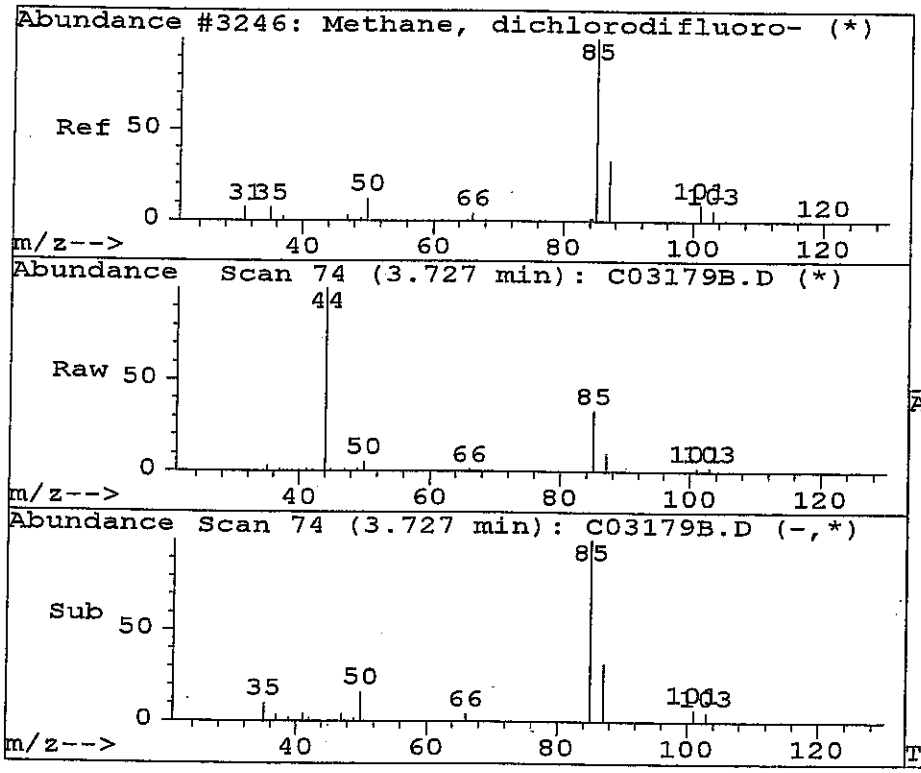


#1
Pentafluorobenzene
Concen: 20.00 ppbV
RT: 11.20 min Scan# 847
Delta R.T. -0.18 min
Lab File: C03179B.D
Acq: 17 Mar 109 9:42 am

Tgt Ion:168 Resp: 2871816

Ion	Ratio	Lower	Upper
168	100		
99	63.9	46.6	70.0
0	0.0	0.0	0.0
0	0.0	0.0	0.0

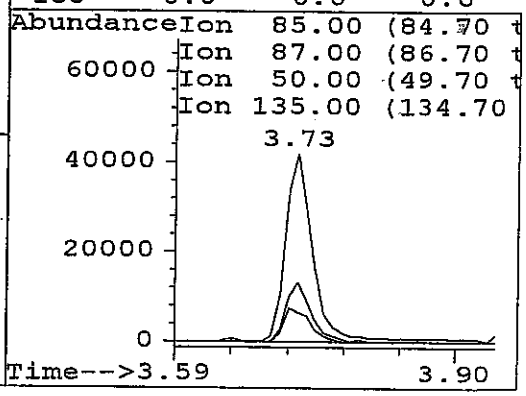


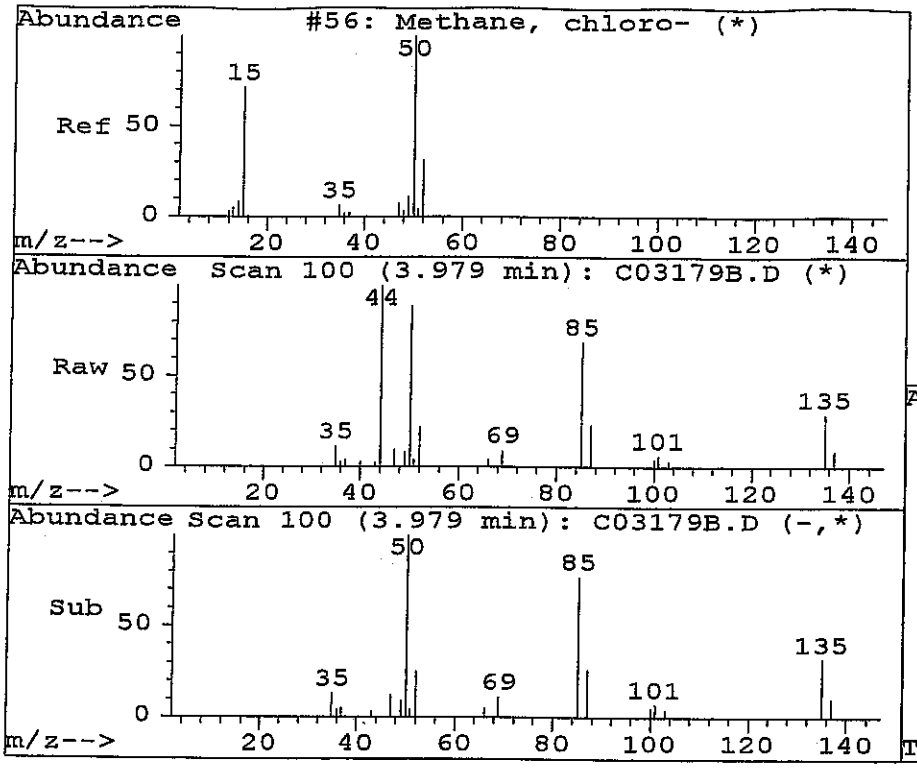


#2
Dichlorodifluoromethane
Concen: 1.31 ppbV
RT: 3.73 min Scan# 74
Delta R.T. -0.10 min
Lab File: C03179B.D
Acq: 17 Mar 109 9:42 am

Tgt Ion:85 Resp: 88898

Ion	Ratio	Lower	Upper
85	100		
87	31.8	25.6	38.4
50	15.8	13.4	20.2
135	0.0	0.0	0.0

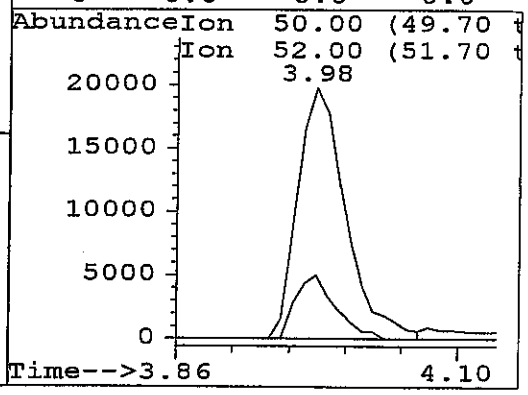


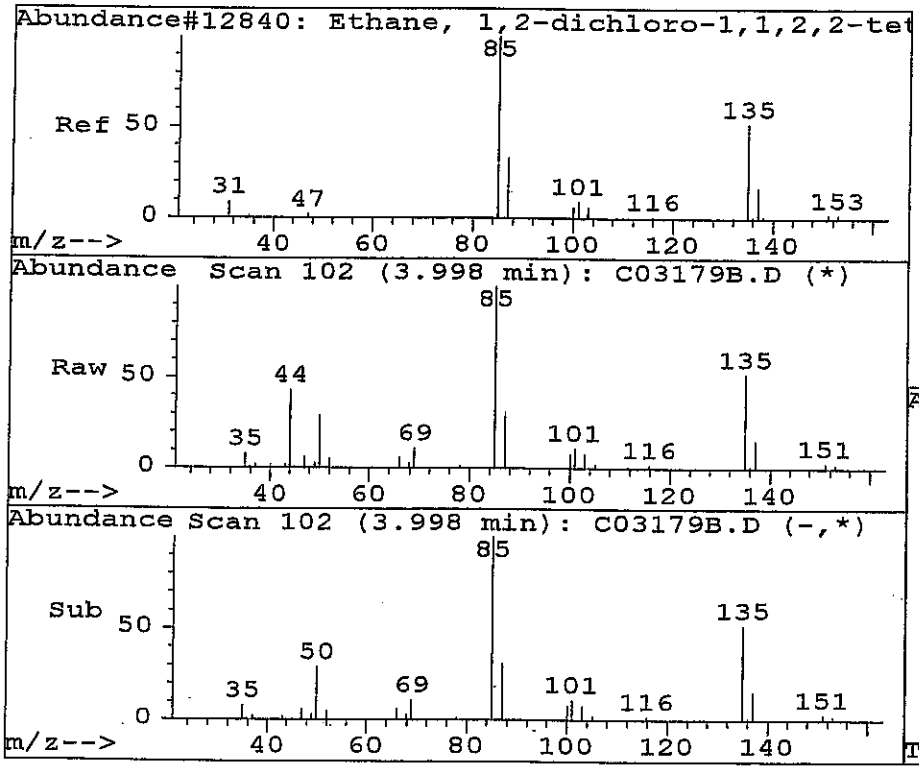


#3
Chloromethane
Concen: 1.34 ppbV
RT: 3.98 min Scan# 100
Delta R.T. -0.11 min
Lab File: C03179B.D
Acq: 17 Mar 109 9:42 am

Tgt Ion:50 Resp: 55434

Ion	Ratio	Lower	Upper
50	100		
52	25.6	20.2	30.2
0	0.0	0.0	0.0
0	0.0	0.0	0.0

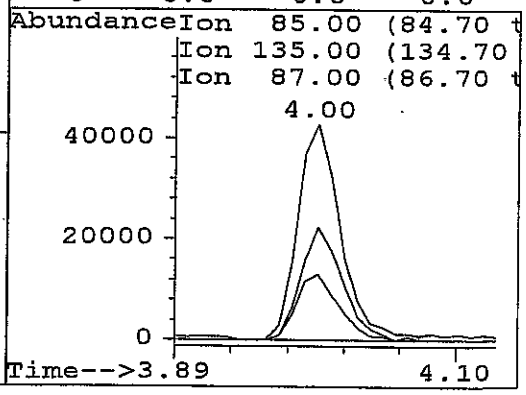


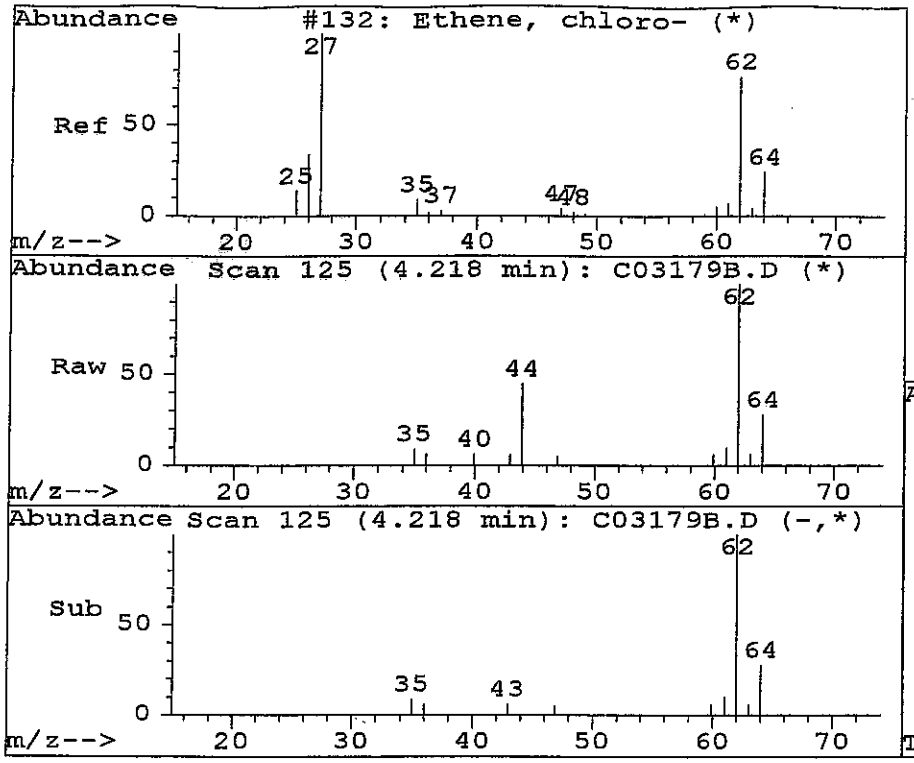


#4
Freon 114
Concen: 1.37 ppbV
RT: 4.00 min Scan# 102
Delta R.T. -0.11 min
Lab File: C03179B.D
Acq: 17 Mar 109 9:42 am

Tgt Ion:85 Resp: 94441

Ion	Ratio	Lower	Upper
85	100		
135	52.7	53.3	79.9#
87	30.8	25.2	37.8
0	0.0	0.0	0.0

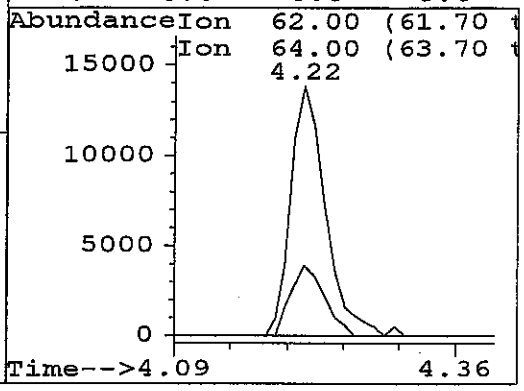


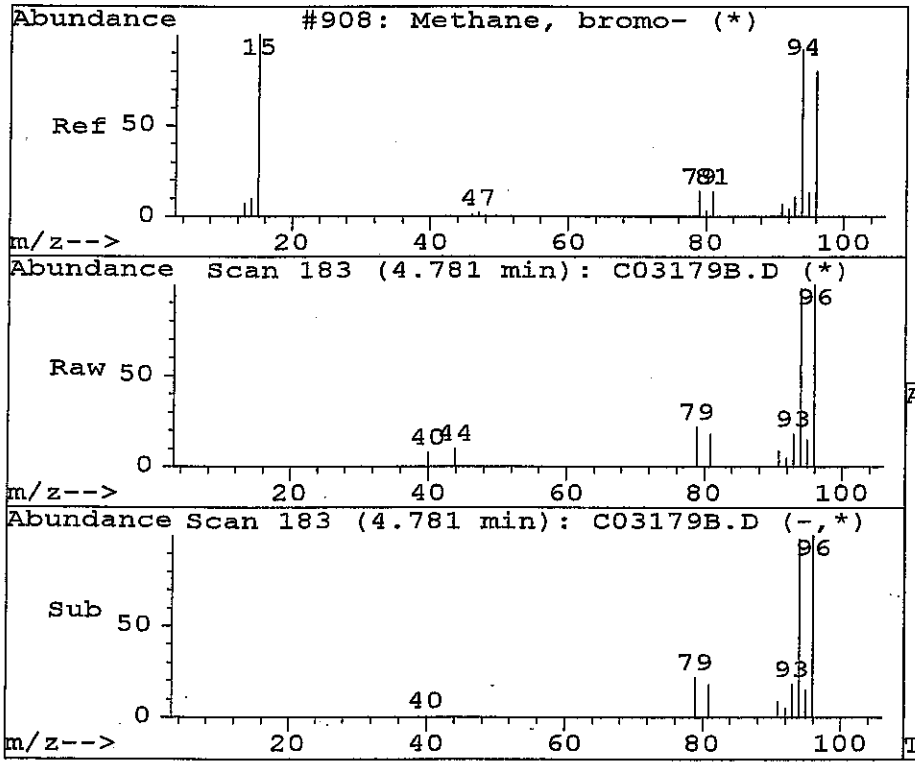


#5
Vinyl chloride
Concen: 1.33 ppbV
RT: 4.22 min Scan# 125
Delta R.T. -0.11 min
Lab File: C03179B.D
Acq: 17 Mar 109 9:42 am

Tgt Ion:62 Resp: 32643

Ion	Ratio	Lower	Upper
62	100		
64	28.2	24.5	36.7
0	0.0	0.0	0.0
0	0.0	0.0	0.0

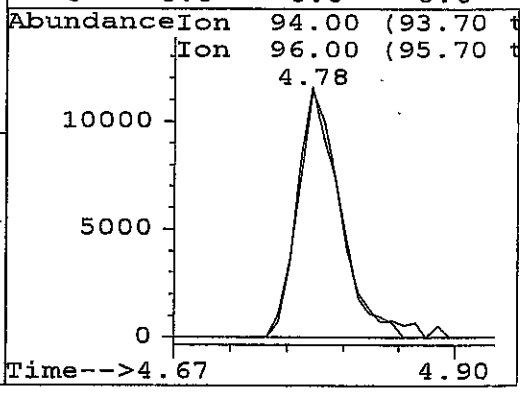


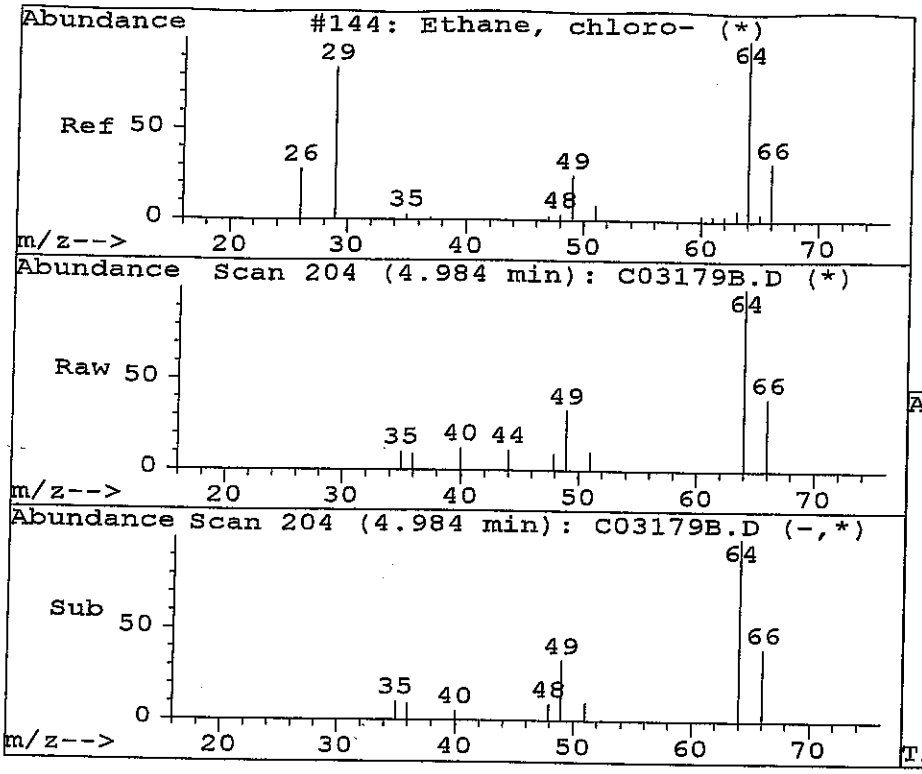


#6
Bromomethane
Concen: 1.08 ppbV
RT: 4.78 min Scan# 183
Delta R.T. -0.14 min
Lab File: C03179B.D
Acq: 17 Mar 109 9:42 am

Tgt Ion:94 Resp: 28890

Ion	Ratio	Lower	Upper
94	100		
96	98.9	75.8	113.6
0	0.0	0.0	0.0
0	0.0	0.0	0.0

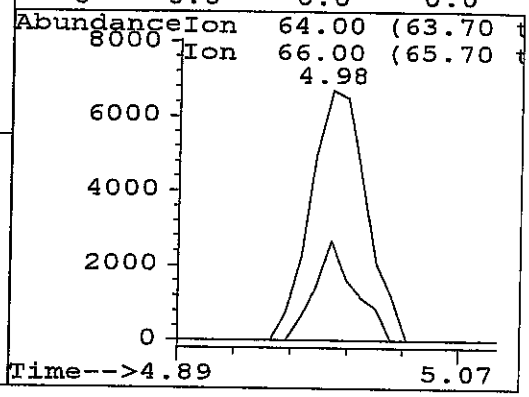


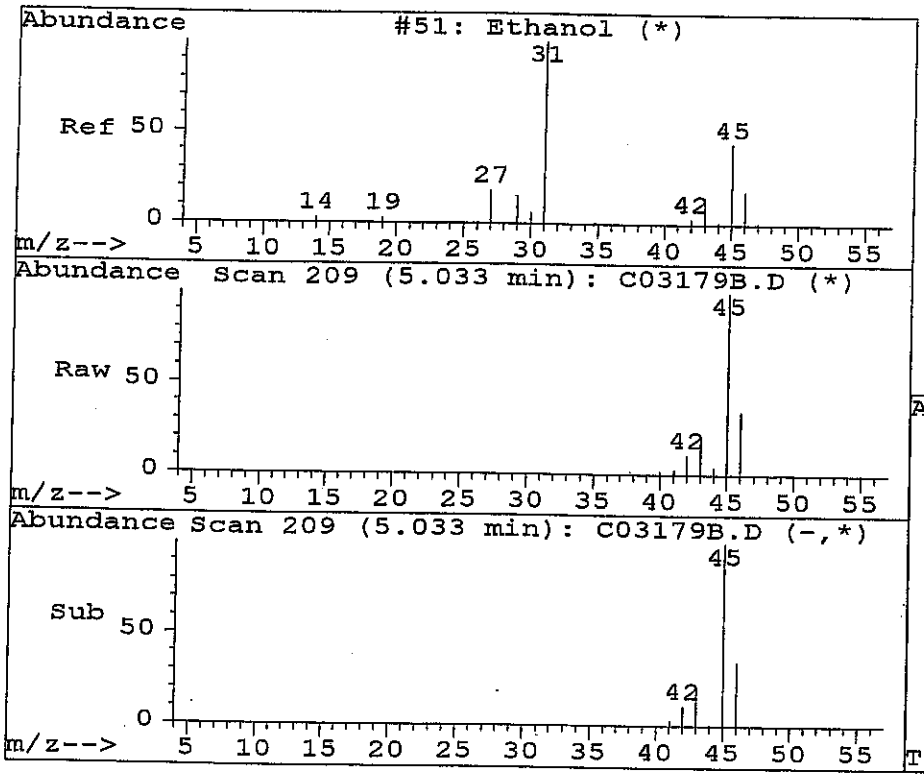


#7
Chloroethane
Concen: 1.38 ppbV
RT: 4.98 min Scan# 204
Delta R.T. -0.14 min
Lab File: C03179B.D
Acq: 17 Mar 109 9:42 am

Tgt Ion:64 Resp: 16630

Ion	Ratio	Lower	Upper
64	100		
66	39.8	24.9	37.3#
0	0.0	0.0	0.0
0	0.0	0.0	0.0

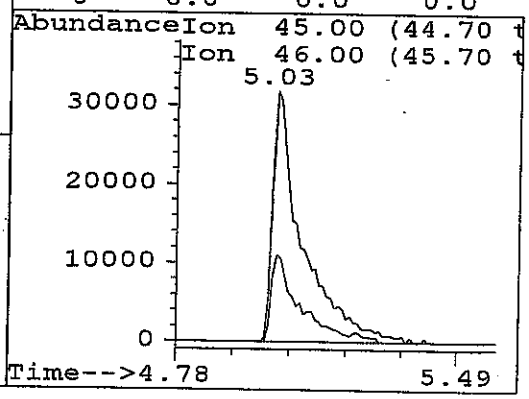


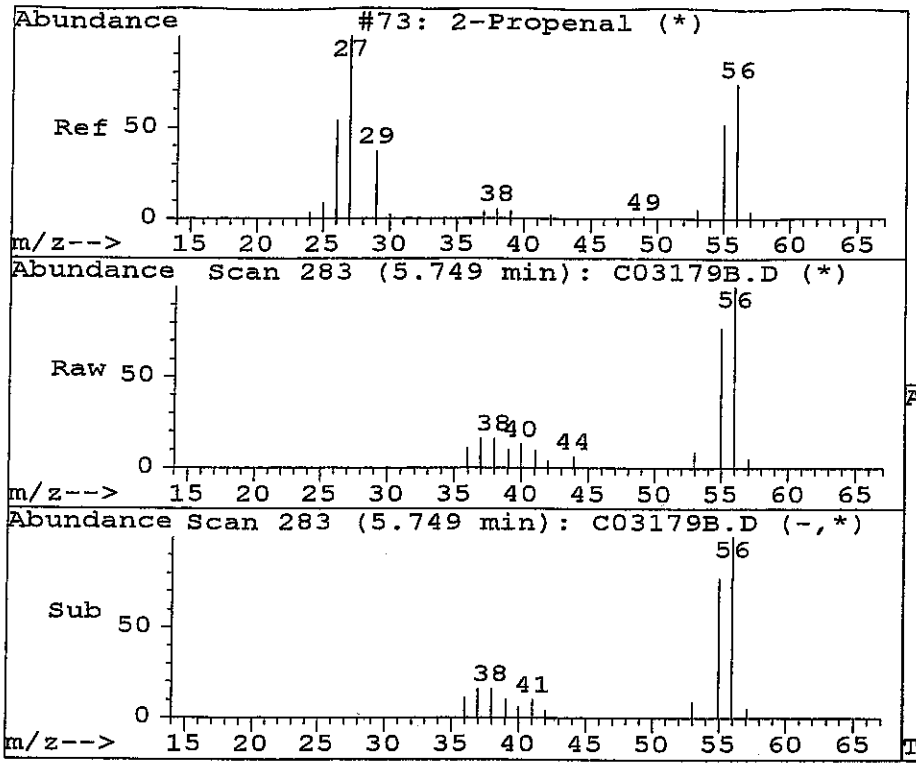


#8
Ethanol
Concen: 5.91 ppbV
RT: 5.03 min Scan# 209
Delta R.T. -0.17 min
Lab File: C03179B.D
Acq: 17 Mar 109 9:42 am

Tgt Ion:45 Resp: 163073

Ion	Ratio	Lower	Upper
45	100		
46	32.0	26.4	39.6
0	0.0	0.0	0.0
0	0.0	0.0	0.0

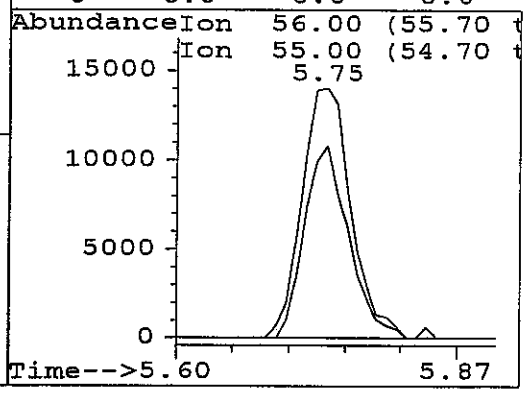


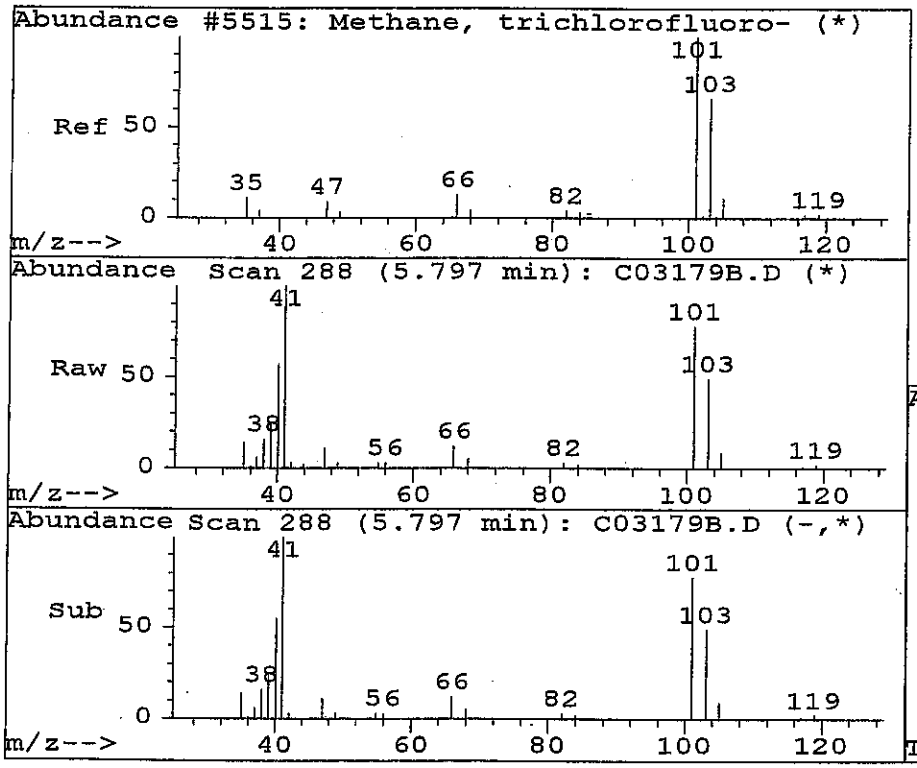


#9
Acrolein
Concen: 7.12 ppbV
RT: 5.75 min Scan# 283
Delta R.T. -0.14 min
Lab File: C03179B.D
Acq: 17 Mar 109 9:42 am

Tgt Ion:56 Resp: 46235

Ion	Ratio	Lower	Upper
56	100		
55	77.1	48.6	72.8#
0	0.0	0.0	0.0
0	0.0	0.0	0.0

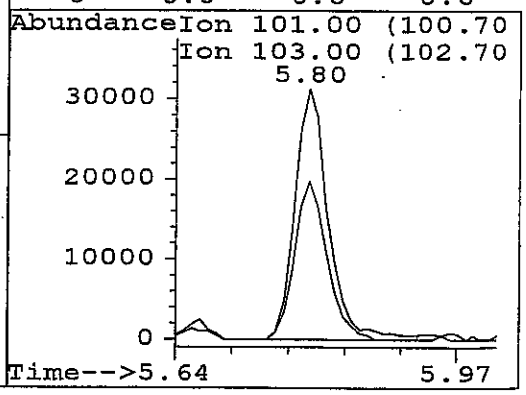


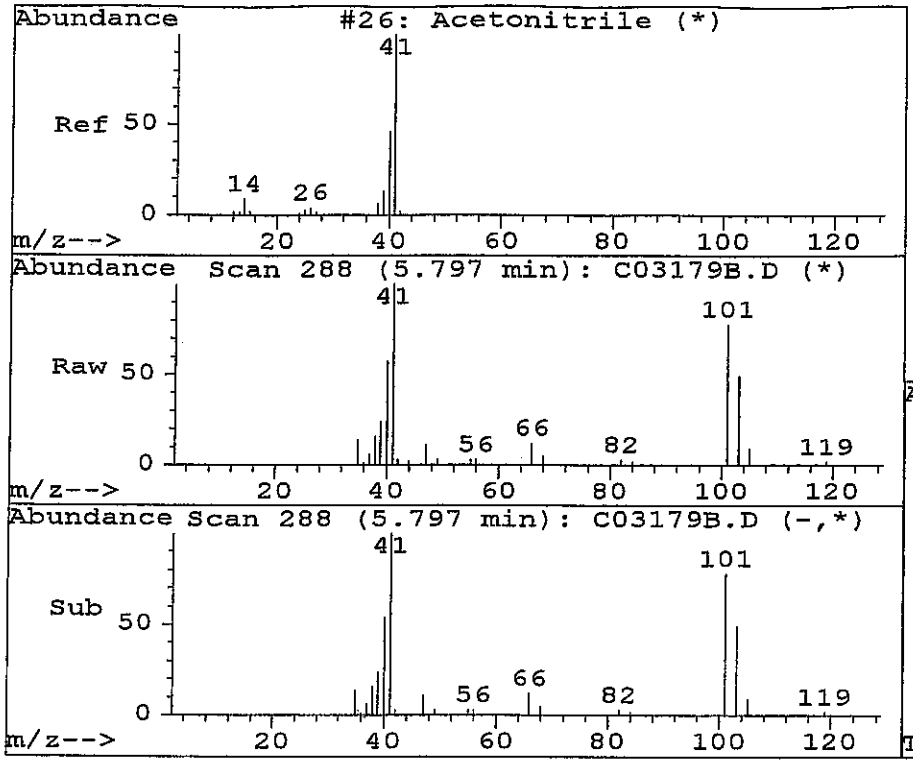


#10
Trichlorofluoromethane
Concen: 1.07 ppbV
RT: 5.80 min Scan# 288
Delta R.T. -0.14 min
Lab File: C03179B.D
Acq: 17 Mar 109 9:42 am

Tgt Ion:101 Resp: 85037

Ion	Ratio	Lower	Upper
101	100		
103	63.9	49.8	74.6
0	0.0	0.0	0.0
0	0.0	0.0	0.0

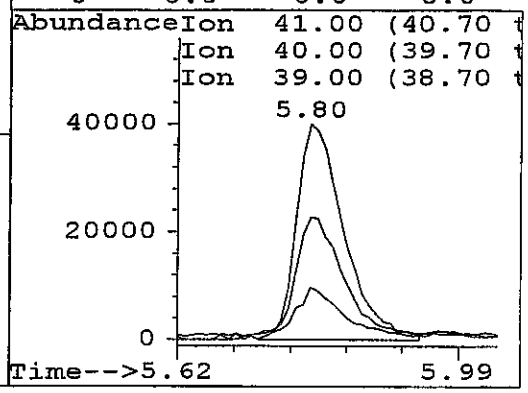


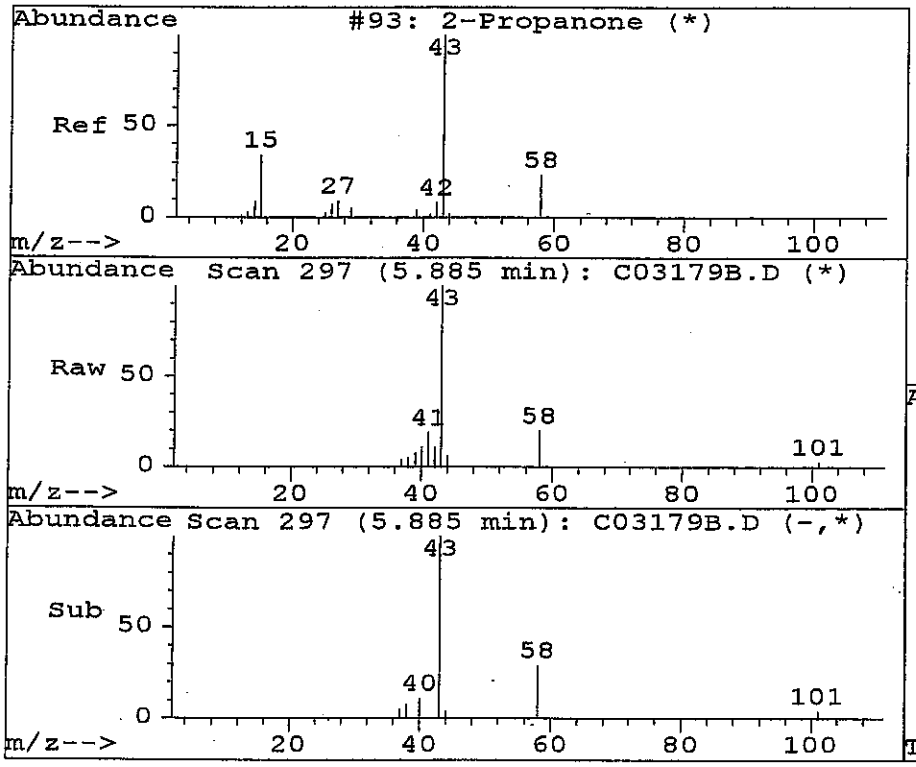


#11
Acetonitrile
Concen: 4.74 ppbV
RT: 5.80 min Scan# 288
Delta R.T. -0.16 min
Lab File: C03179B.D
Acq: 17 Mar 109 9:42 am

Tgt Ion:41 Resp: 174401

Ion	Ratio	Lower	Upper
41	100		
40	54.7	46.1	69.1
39	22.3	17.9	26.9
0	0.0	0.0	0.0

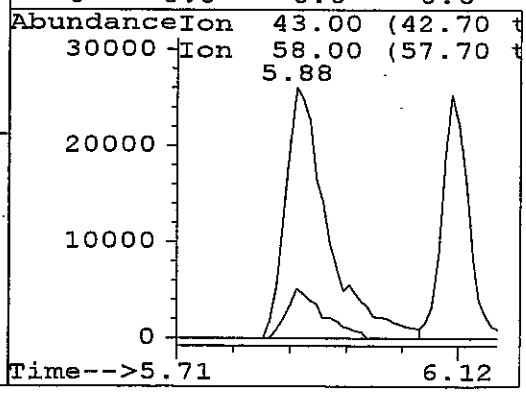


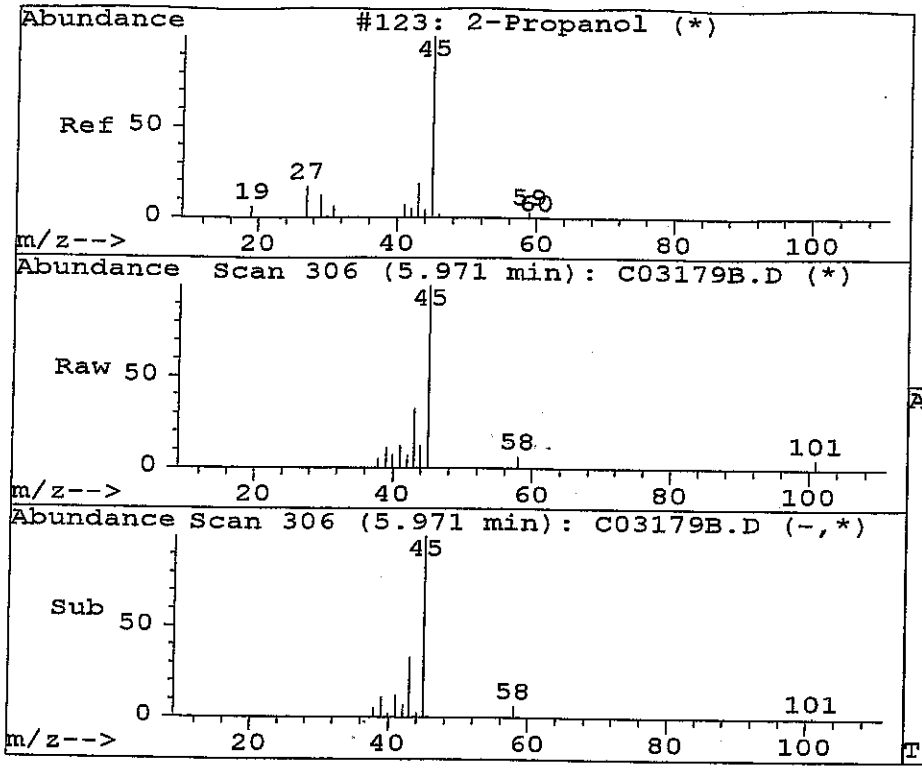


#12
Acetone
Concen: 0.85 ppbV
RT: 5.88 min Scan# 297
Delta R.T. -0.16 min
Lab File: C03179B.D
Acq: 17 Mar 109 9:42 am

Tgt Ion:43 Resp: 113697

Ion	Ratio	Lower	Upper
43	100		
58	20.3	15.0	22.6
0	0.0	0.0	0.0
0	0.0	0.0	0.0

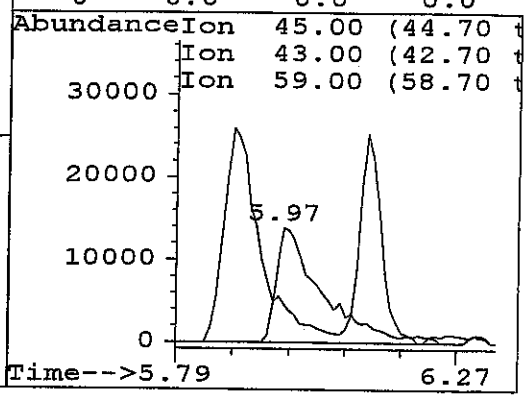


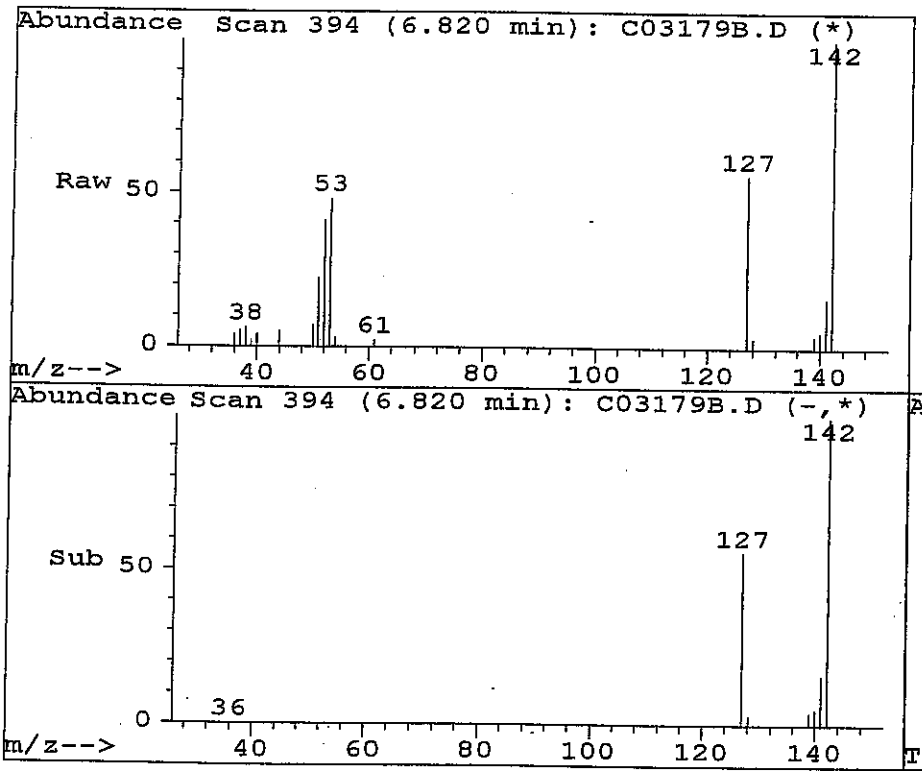


#13
2-propanol
Concen: 1.26 ppbV
RT: 5.97 min Scan# 306
Delta R.T. -0.17 min
Lab File: C03179B.D
Acq: 17 Mar 109 9:42 am

Tgt Ion:45 Resp: 75563

Ion	Ratio	Lower	Upper
45	100		
43	0.0	0.0	0.0
59	0.0	0.0	0.0
0	0.0	0.0	0.0

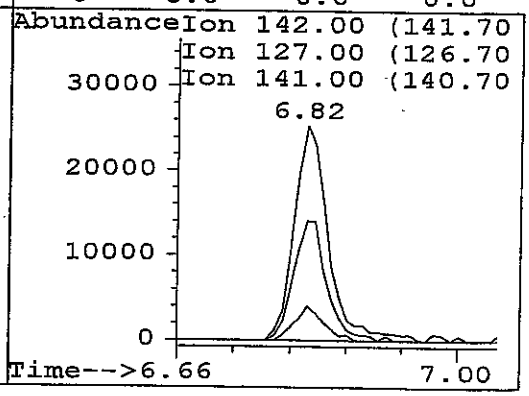


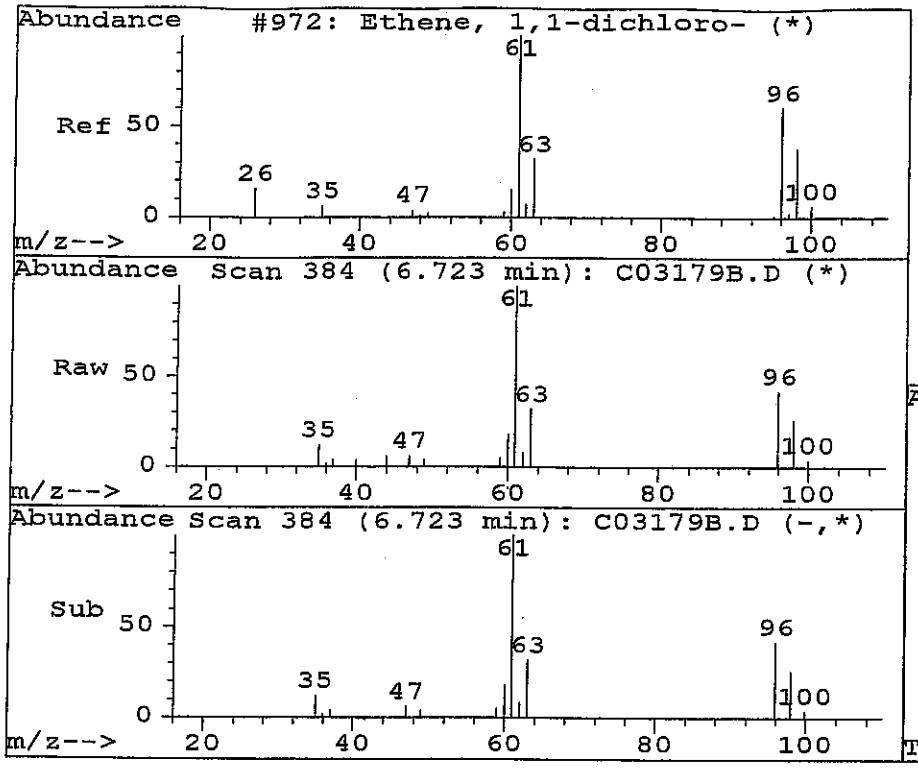


#14
Methyl iodide
Concen: 2.07 ppbV
RT: 6.82 min Scan# 394
Delta R.T. -0.17 min
Lab File: C03179B.D
Acq: 17 Mar 109 9:42 am

Tgt Ion:142 Resp: 72721

Ion	Ratio	Lower	Upper
142	100		
127	55.5	44.2	66.4
141	15.8	11.1	16.7
0	0.0	0.0	0.0

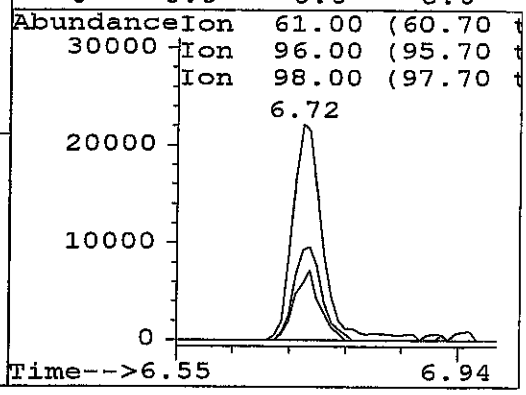


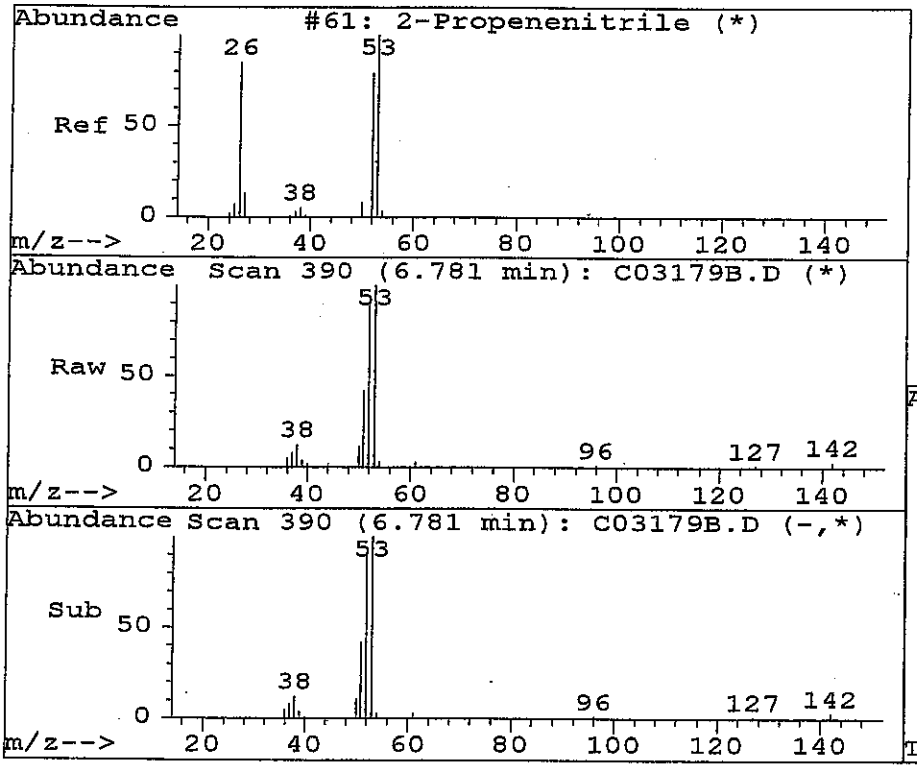


#15
1,1-Dichloroethene
Concen: 1.10 ppbV
RT: 6.72 min Scan# 384
Delta R.T. -0.17 min
Lab File: C03179B.D
Acq: 17 Mar 109 9:42 am

Tgt Ion:61 Resp: 63935

Ion	Ratio	Lower	Upper
61	100		
96	41.9	35.0	52.6
98	26.4	21.7	32.5
0	0.0	0.0	0.0

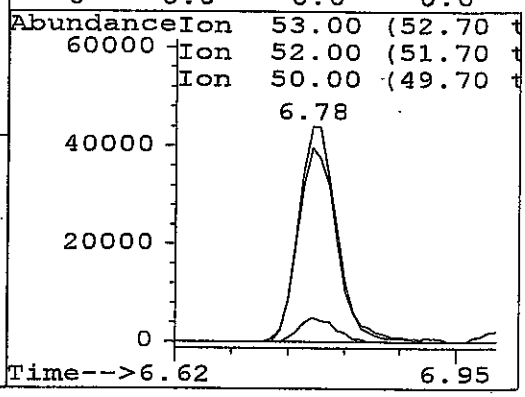


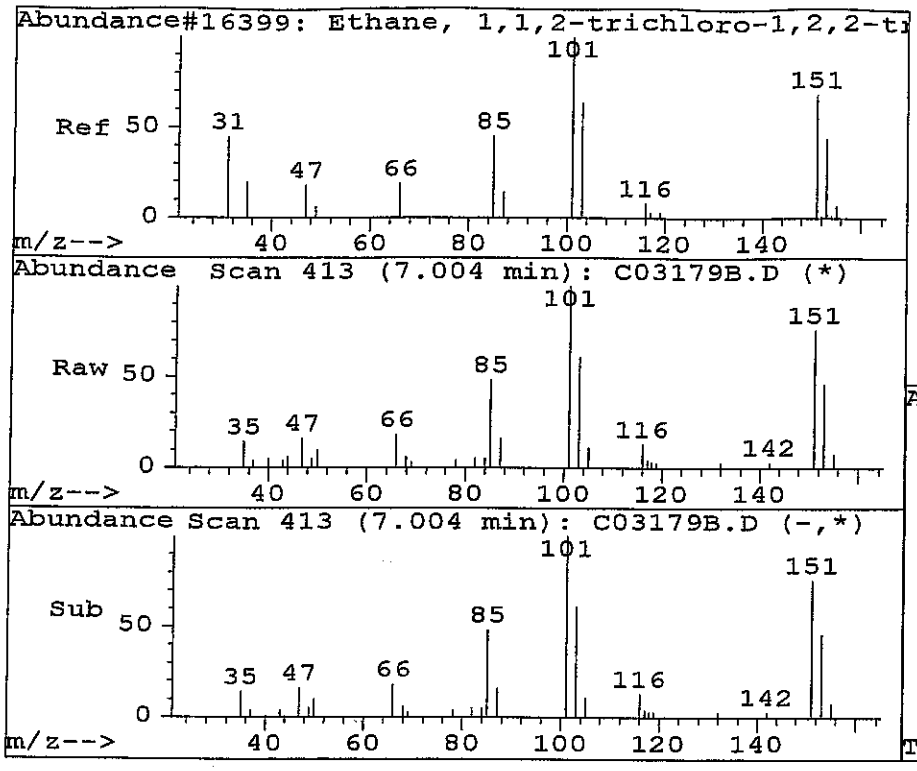


#16
Acrylonitrile
Concen: 4.98 ppbV
RT: 6.78 min Scan# 390
Delta R.T. -0.18 min
Lab File: C03179B.D
Acq: 17 Mar 109 9:42 am

Tgt Ion:53 Resp: 141541

Ion	Ratio	Lower	Upper
53	100		
52	89.4	69.3	103.9
50	11.4	7.7	11.5
0	0.0	0.0	0.0

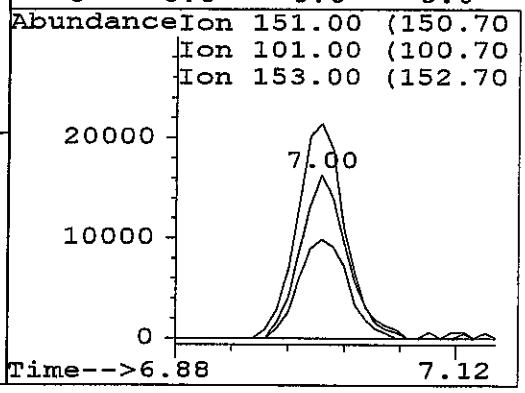


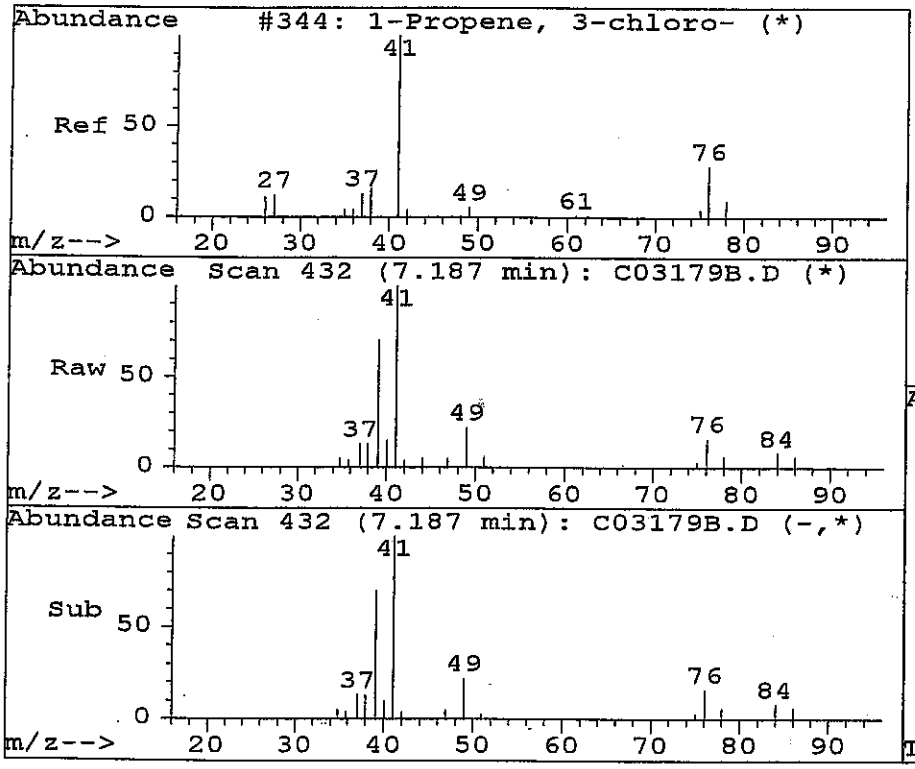


#17
Freon 113
Concen: 0.82 ppbV
RT: 7.00 min Scan# 413
Delta R.T. -0.16 min
Lab File: C03179B.D
Acq: 17 Mar 109 9:42 am

Tgt Ion:151 Resp: 45725

Ion	Ratio	Lower	Upper
151	100		
101	131.6	96.2	144.4
153	60.8	52.2	78.2
0	0.0	0.0	0.0

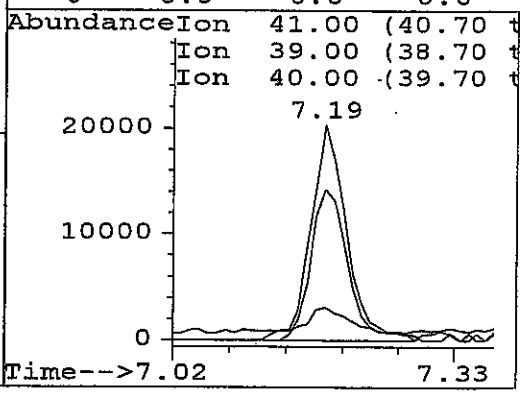


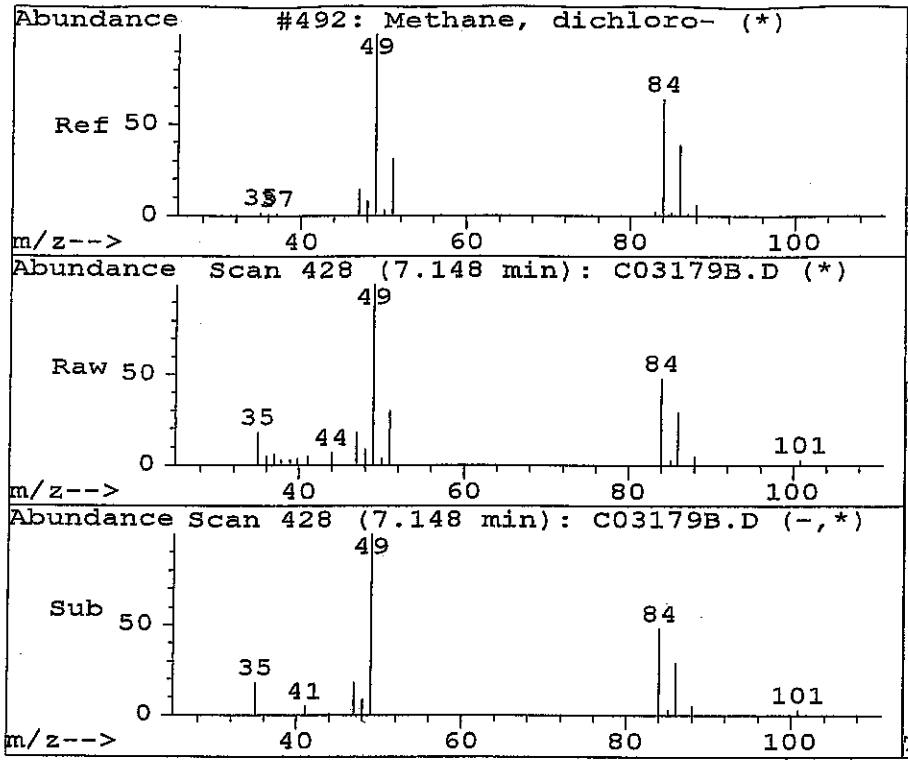


#18
Allyl chloride
Concen: 1.31 ppbV
RT: 7.19 min Scan# 432
Delta R.T. -0.16 min
Lab File: C03179B.D
Acq: 17 Mar 109 9:42 am

Tgt Ion:41 Resp: 54211

Ion	Ratio	Lower	Upper
41	100		
39	68.7	63.9	95.9
40	10.8	8.5	12.7
0	0.0	0.0	0.0

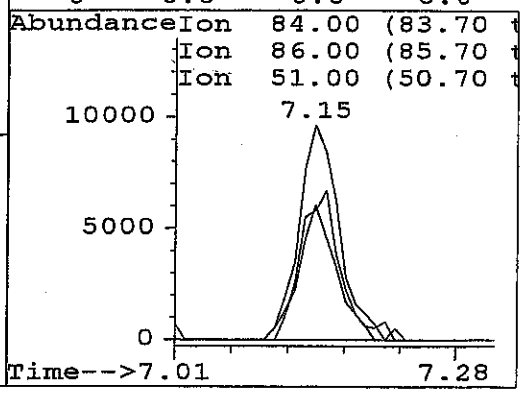


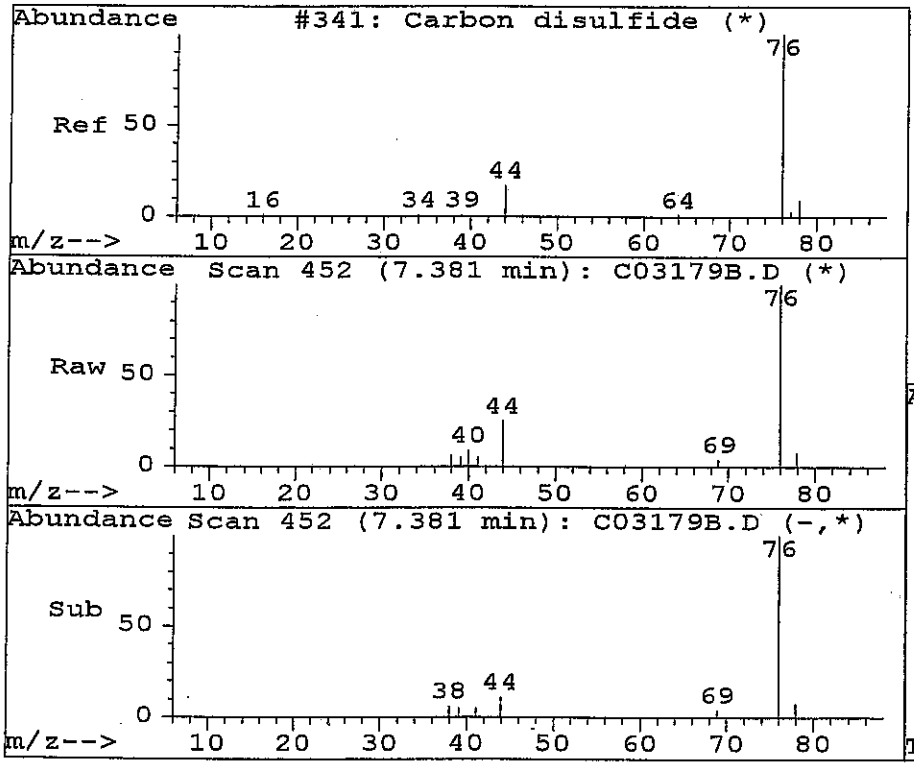


#19
Dichloromethane
Concen: 1.07 ppbV
RT: 7.15 min Scan# 428
Delta R.T. -0.16 min
Lab File: C03179B.D
Acq: 17 Mar 109 9:42 am

Tgt Ion:84 Resp: 26131

Ion	Ratio	Lower	Upper
84	100		
86	60.0	49.6	74.4
51	62.6	42.2	63.4
0	0.0	0.0	0.0

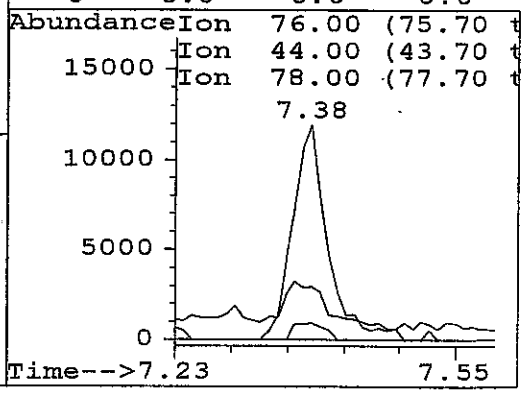


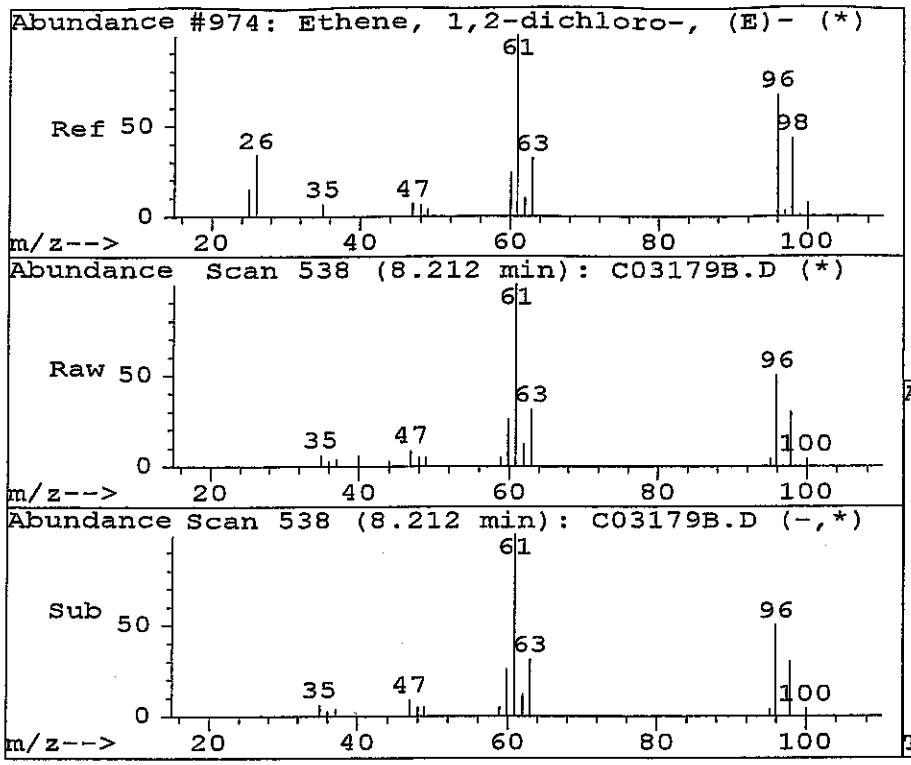


#20
Carbon disulfide
Concen: 1.57 ppbV
RT: 7.38 min Scan# 452
Delta R.T. -0.16 min
Lab File: C03179B.D
Acq: 17 Mar 109 9:42 am

Tgt Ion:76 Resp: 33136

Ion	Ratio	Lower	Upper
76	100		
44	17.7	16.6	25.0
78	7.8	6.7	11.1
0	0.0	0.0	0.0

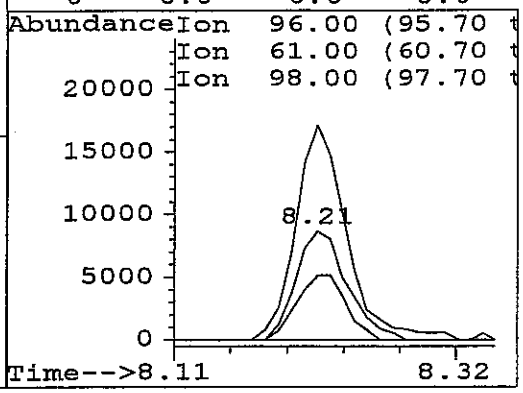


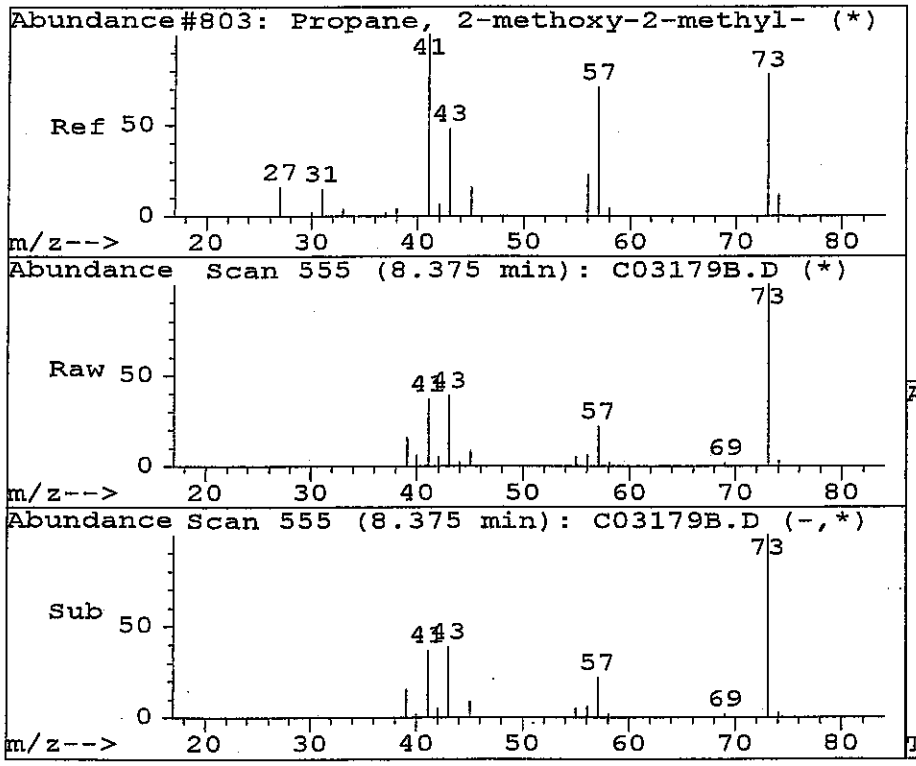


#21
trans-1,2-Dichloroethene
Concen: 1.07 ppbV
RT: 8.21 min Scan# 538
Delta R.T. -0.17 min
Lab File: C03179B.D
Acq: 17 Mar 109 9:42 am

Tgt Ion:96 Resp: 23397

Ion	Ratio	Lower	Upper
96	100		
61	194.6	164.1	246.1
98	59.3	50.2	75.2
0	0.0	0.0	0.0

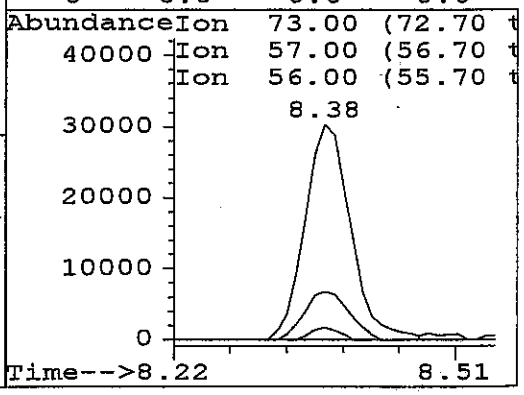


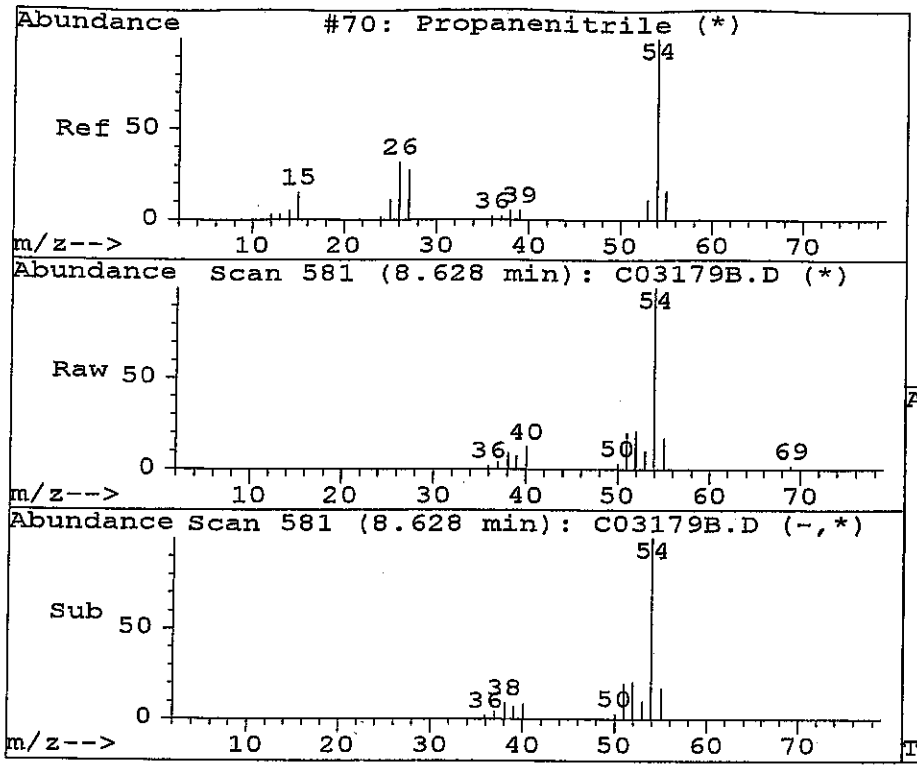


#22
Methyl tert butyl ether
Concen: 0.92 ppbV
RT: 8.38 min Scan# 555
Delta R.T. -0.16 min
Lab File: C03179B.D
Acq: 17 Mar 109 9:42 am

Tgt Ion:73 Resp: 97431

Ion	Ratio	Lower	Upper
73	100		
57	22.7	16.3	24.5
56	5.7	3.0	4.4#
0	0.0	0.0	0.0

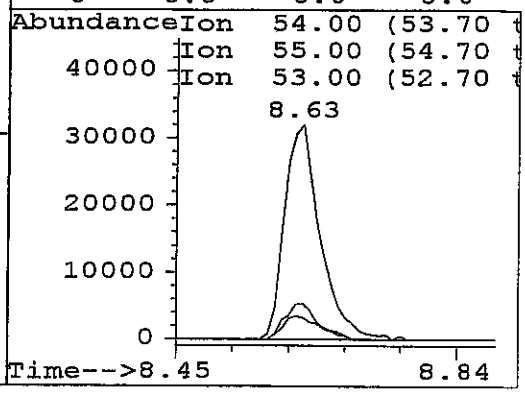


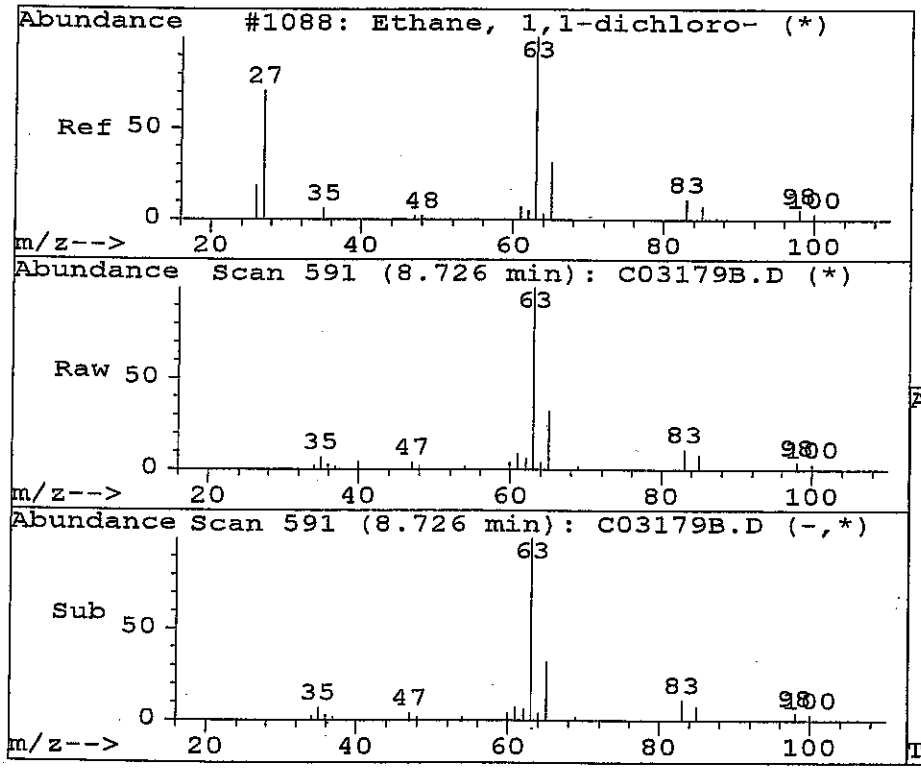


#23
Propionitrile
Concen: 3.94 ppbV
RT: 8.63 min Scan# 581
Delta R.T. -0.20 min
Lab File: C03179B.D
Acq: 17 Mar 109 9:42 am

Tgt Ion:54 Resp: 109954

Ion	Ratio	Lower	Upper
54	100		
55	16.6	11.9	17.9
53	10.0	10.0	15.0
0	0.0	0.0	0.0

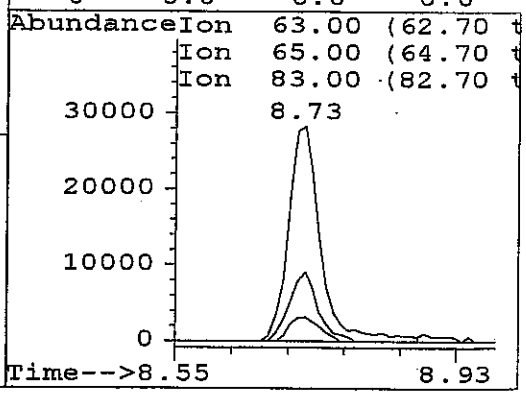


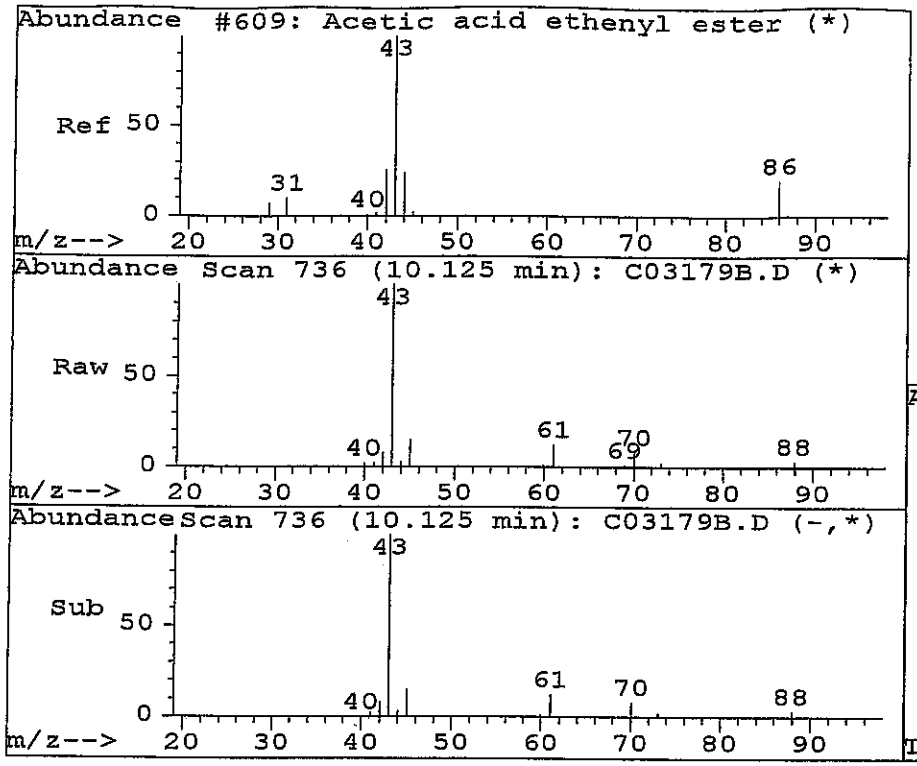


#24
1,1-Dichloroethane
Concen: 1.29 ppbV
RT: 8.73 min Scan# 591
Delta R.T. -0.17 min
Lab File: C03179B.D
Acq: 17 Mar 109 9:42 am

Tgt Ion:63 Resp: 8553-1

Ion	Ratio	Lower	Upper
63	100		
65	32.3	25.4	38.2
83	11.3	10.6	15.8
0	0.0	0.0	0.0

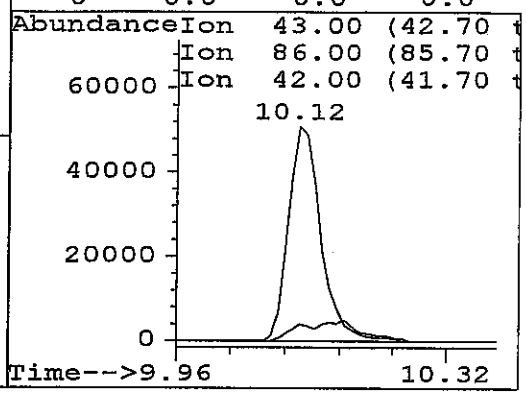


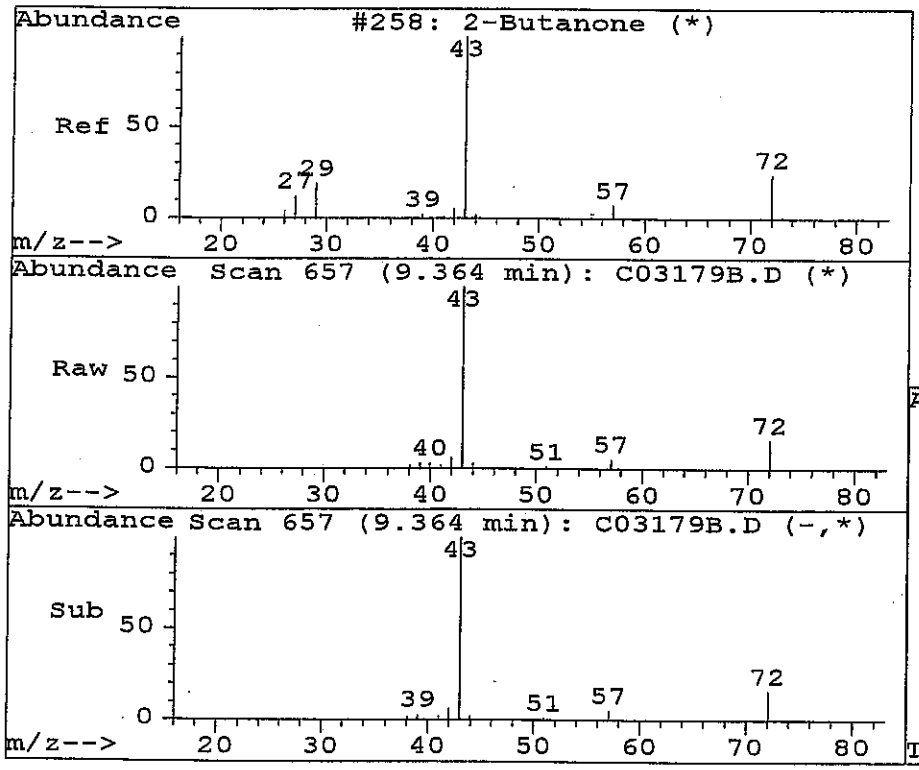


#25
Vinyl acetate
Concen: 1.32 ppbV
RT: 10.12 min Scan# 736
Delta R.T. -0.20 min
Lab File: C03179B.D
Acq: 17 Mar 109 9:42 am

Tgt Ion:43 Resp: 149287

Ion	Ratio	Lower	Upper
43	100		
86	0.0	0.0	0.0
42	7.7	6.2	9.2
0	0.0	0.0	0.0

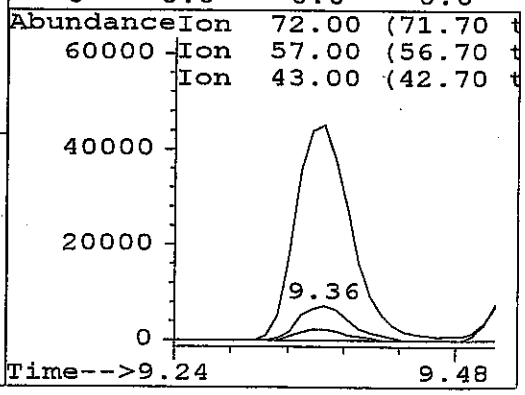


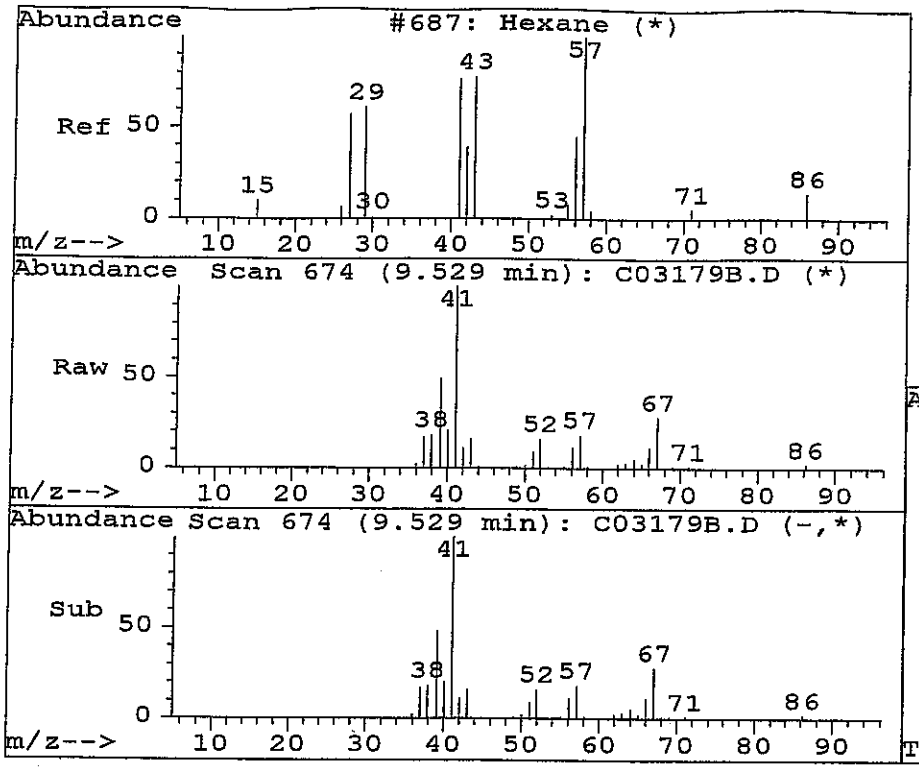


#26
2-Butanone
Concen: 1.15 ppbV
RT: 9.36 min Scan# 657
Delta R.T. -0.18 min
Lab File: C03179B.D
Acq: 17 Mar 109 9:42 am

Tgt Ion:72 Resp: 22013

Ion	Ratio	Lower	Upper
72	100		
57	32.2	19.3	28.9#
43	616.6	452.8	679.2
0	0.0	0.0	0.0

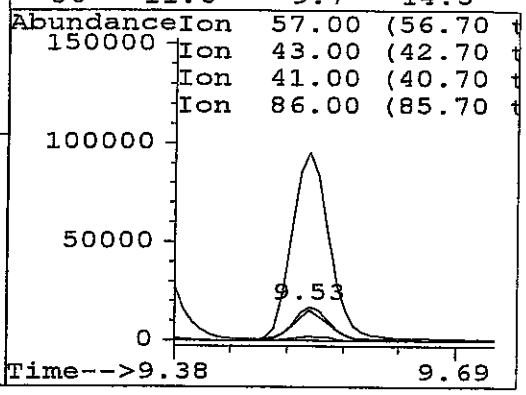


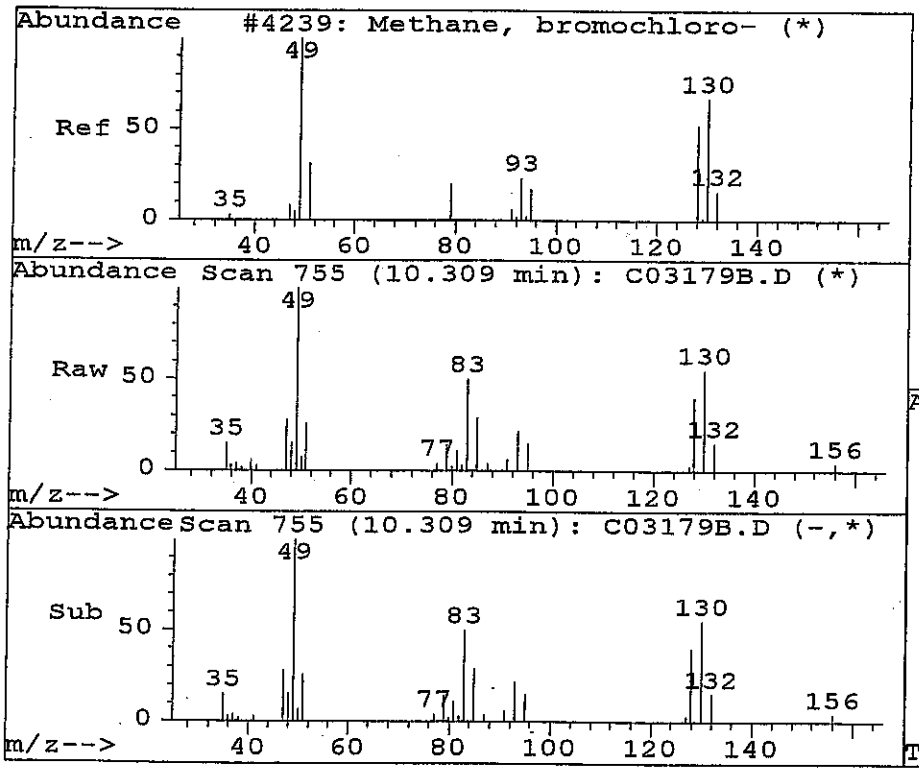


#27
Hexane
Concen: 0.92 ppbV
RT: 9.53 min Scan# 674
Delta R.T. -0.18 min
Lab File: C03179B.D
Acq: 17 Mar 109 9:42 am

Tgt Ion:57 Resp: 47026

Ion	Ratio	Lower	Upper
57	100		
43	93.7	63.1	94.7
41	576.4	408.8	613.2
86	11.6	9.7	14.5

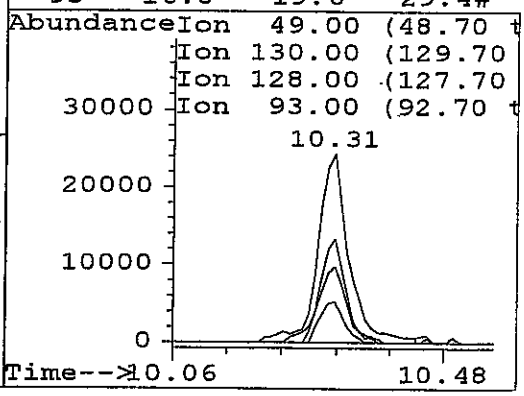


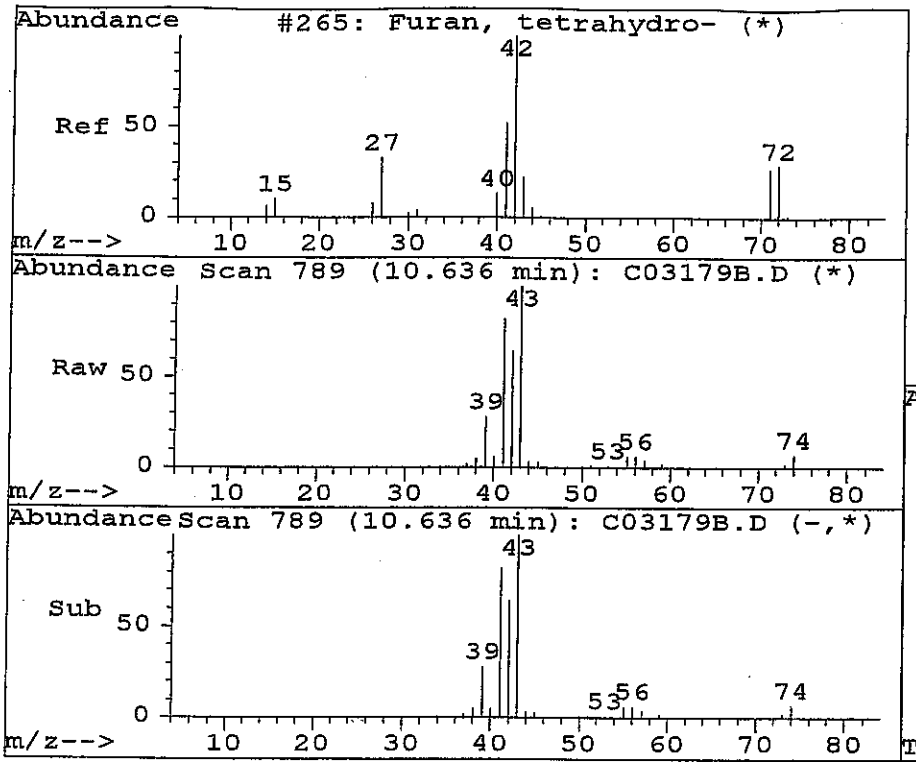


#28
Bromochloromethane
Concen: 1.39 ppbV
RT: 10.31 min Scan# 755
Delta R.T. -0.19 min
Lab File: C03179B.D
Acq: 17 Mar 109 9:42 am

Tgt Ion:49 Resp: 80833

Ion	Ratio	Lower	Upper
49	100		
130	44.1	51.4	77.2#
128	37.5	44.3	66.5#
93	16.8	19.6	29.4#

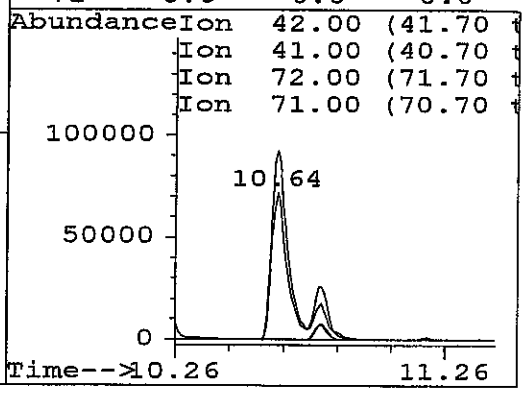


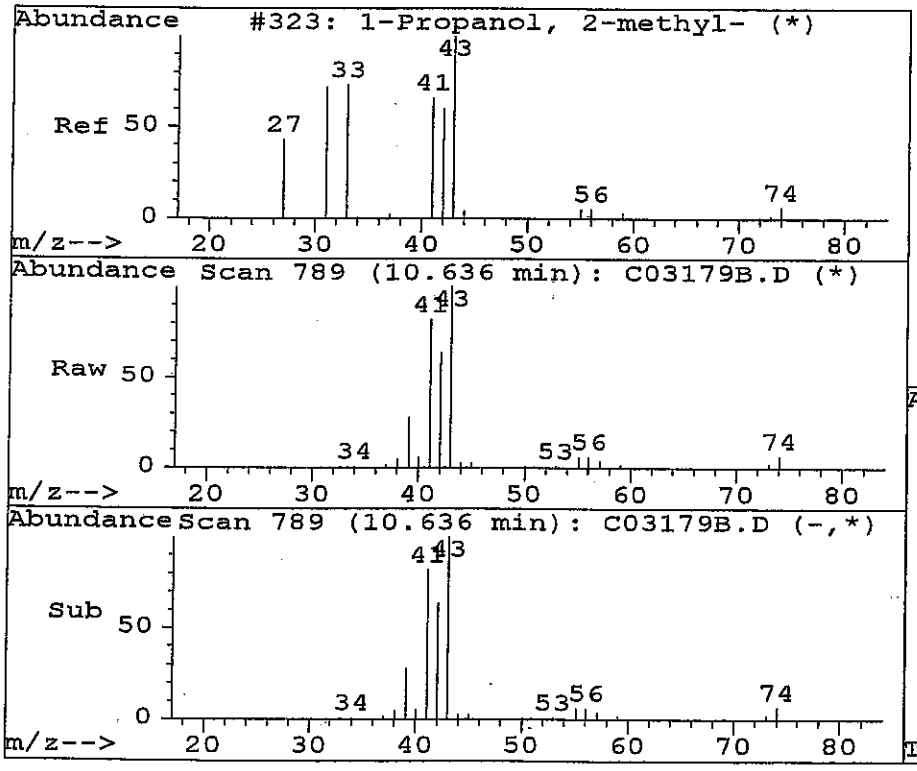


#29
Tetrahydrofuran
Concen: 1.75 ppbV m
RT: 10.64 min Scan# 789
Delta R.T. -0.28 min
Lab File: C03179B.D
Acq: 17 Mar 109 9:42 am

Tgt Ion:42 Resp: 383009

Ion	Ratio	Lower	Upper
42	100		
41	129.1	112.3	168.5
72	0.0	0.4	0.6#
71	0.0	0.0	0.0

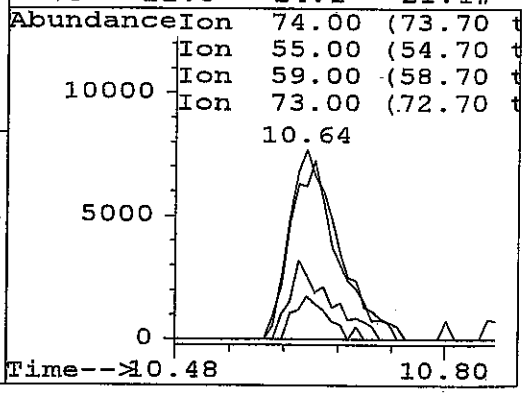


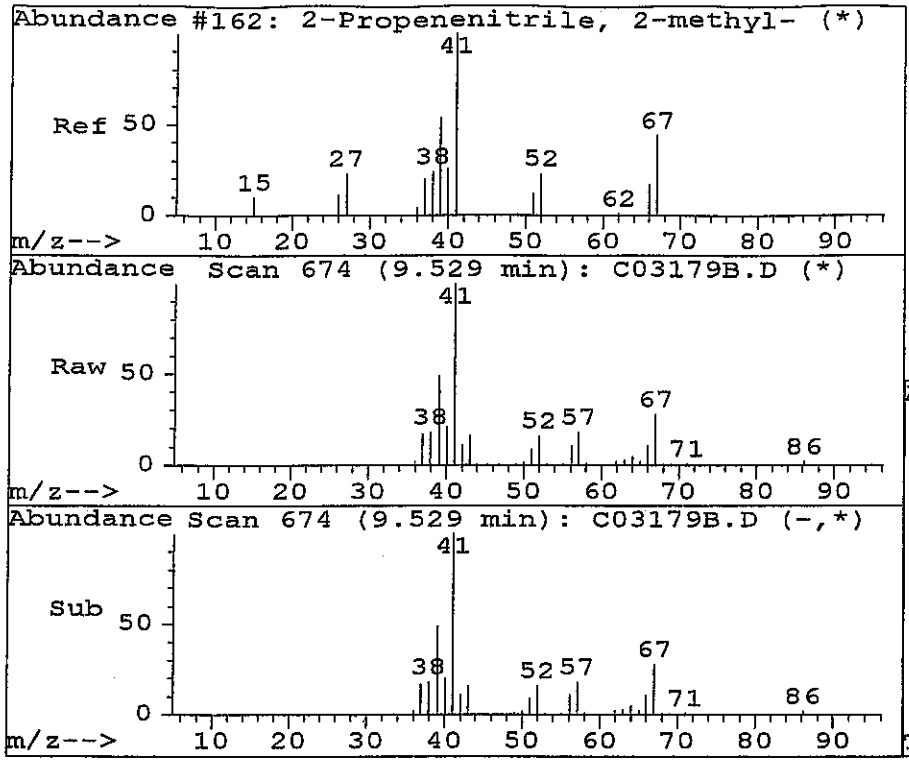


#30
Isobutyl alcohol
Concen: 4.08 ppbV
RT: 10.64 min Scan# 789
Delta R.T. -0.28 min
Lab File: C03179B.D
Acq: 17 Mar 109 9:42 am

Tgt Ion:74 Resp: 30717

Ion	Ratio	Lower	Upper
74	100		
55	81.0	64.8	97.2
59	33.9	30.2	45.2
73	22.8	14.1	21.1#

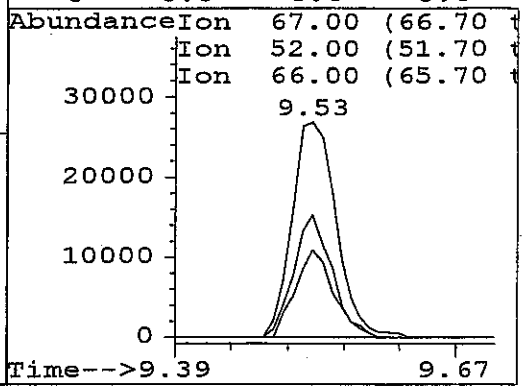


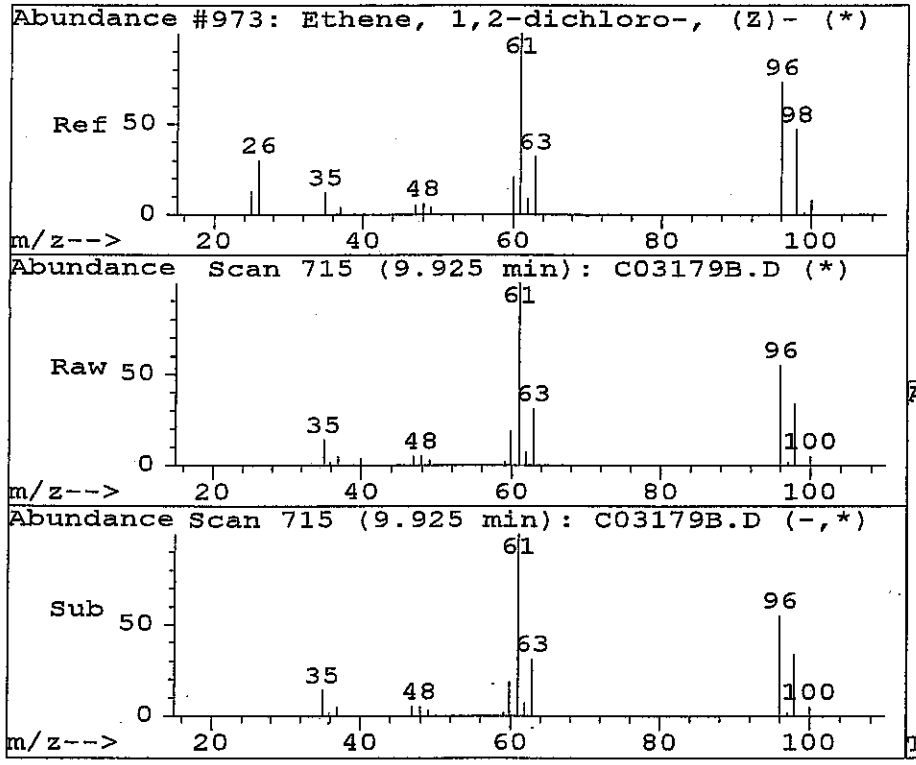


#31
Methacrylonitrile
Concen: 4.36 ppbV
RT: 9.53 min Scan# 674
Delta R.T. -0.21 min
Lab File: C03179B.D
Acq: 17 Mar 109 9:42 am

Tgt Ion:67 Resp: 81589

Ion	Ratio	Lower	Upper
67	100		
52	56.8	41.0	61.6
66	40.6	26.8	40.2#
0	0.0	0.0	0.0

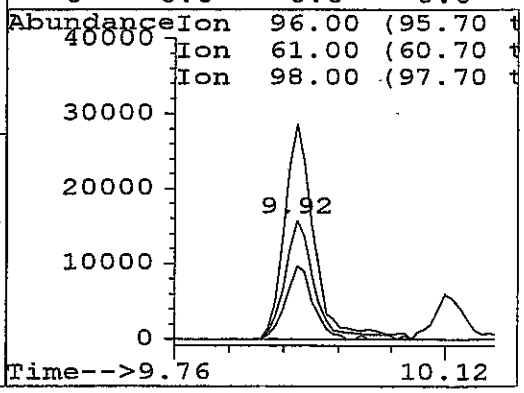


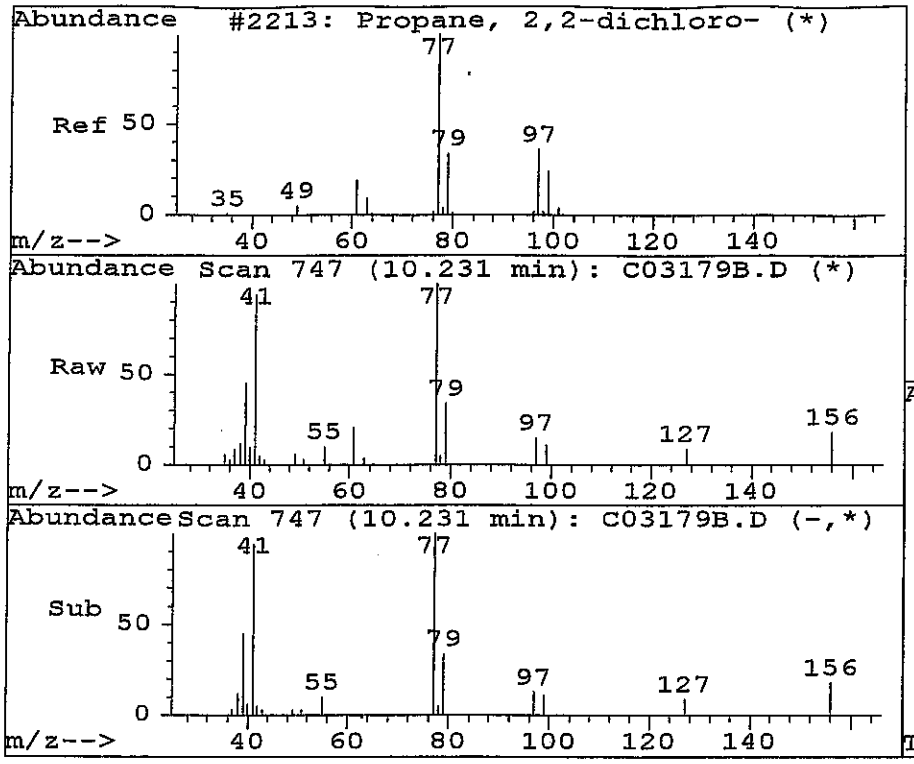


#32
cis-1,2-Dichloroethene
Concen: 1.22 ppbV
RT: 9.92 min Scan# 715
Delta R.T. -0.19 min
Lab File: C03179B.D
Acq: 17 Mar 109 9:42 am

Tgt Ion:96 Resp: 43510

Ion	Ratio	Lower	Upper
96	100		
61	178.9	132.6	198.8
98	61.4	49.3	73.9
0	0.0	0.0	0.0

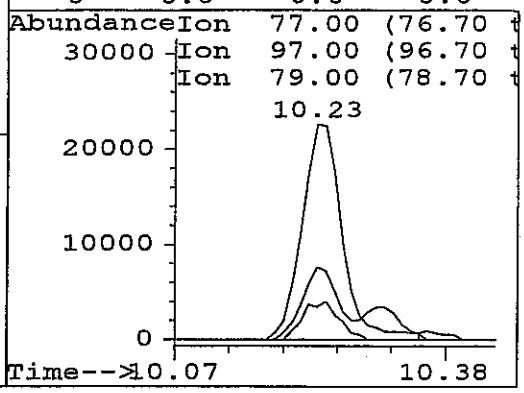


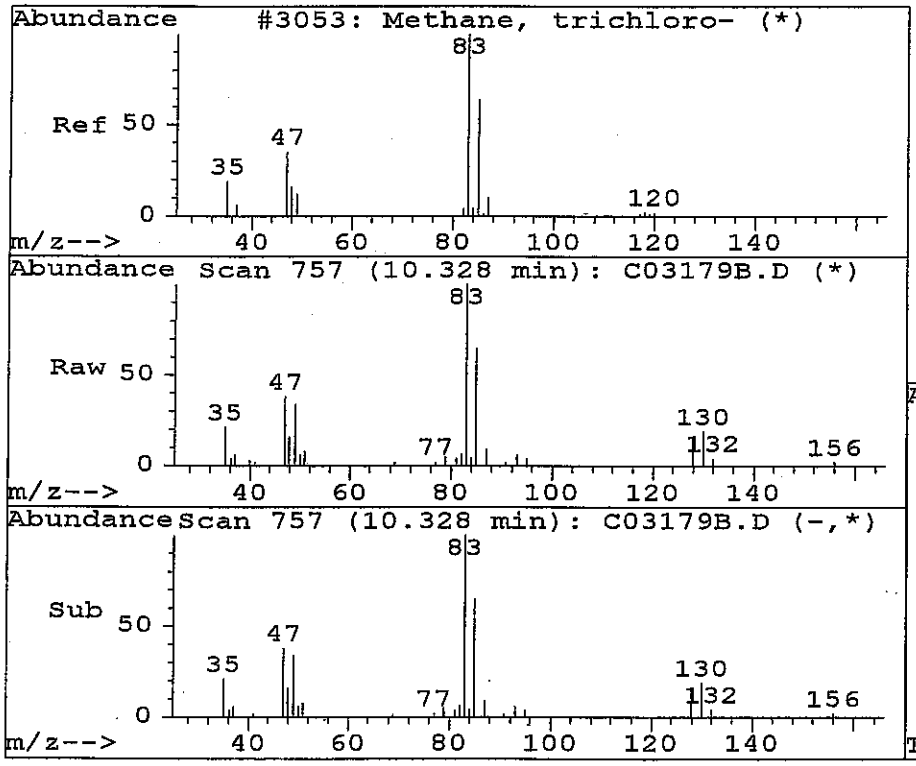


#33
2,2-Dichloropropane
Concen: 1.00 ppbV
RT: 10.23 min Scan# 747
Delta R.T. -0.19 min
Lab File: C03179B.D
Acq: 17 Mar 109 9:42 am

Tgt Ion:77 Resp: 72177

Ion	Ratio	Lower	Upper
77	100		
97	15.5	13.0	19.6
79	32.9	20.5	30.7#
0	0.0	0.0	0.0

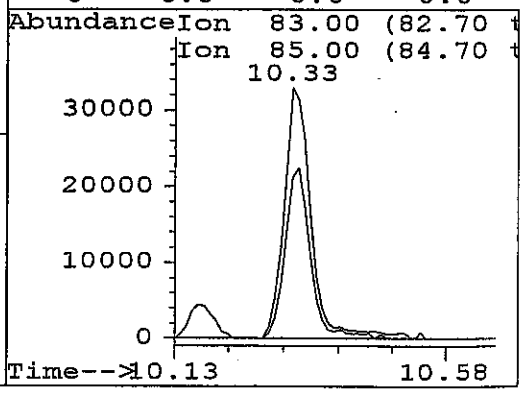


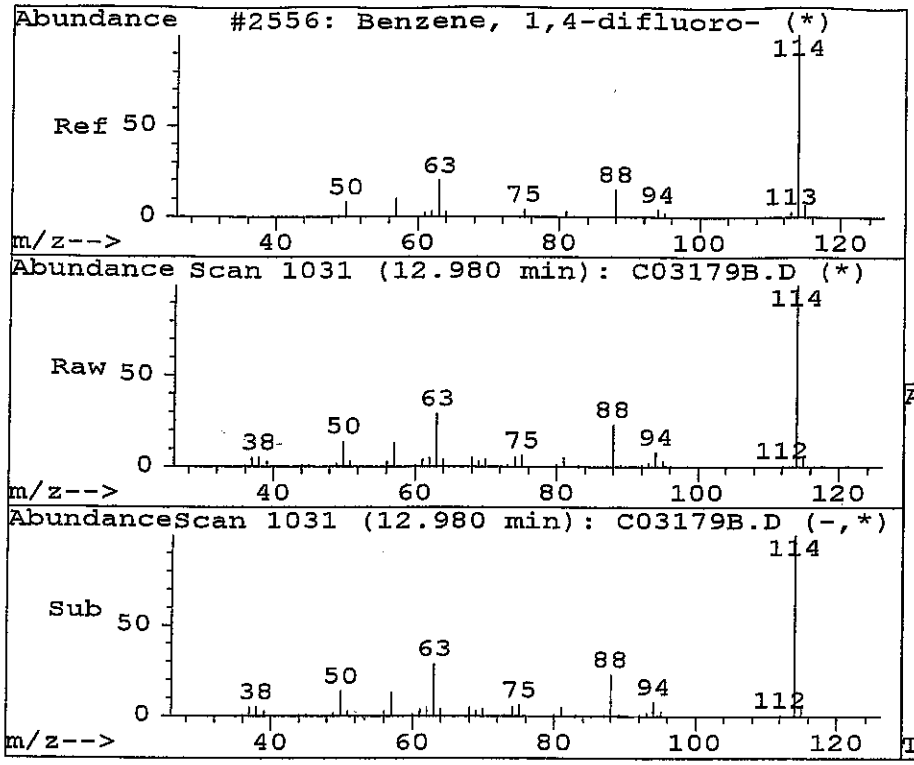


#34
Chloroform
Concen: 1.21 ppbV
RT: 10.33 min Scan# 757
Delta R.T. -0.20 min
Lab File: C03179B.D
Acq: 17 Mar 109 9:42 am

Tgt Ion:83 Resp: 101707

Ion	Ratio	Lower	Upper
83	100		
85	64.7	51.3	76.9
0	0.0	0.0	0.0
0	0.0	0.0	0.0

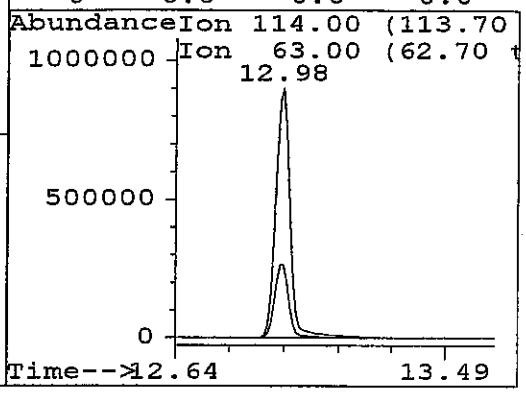


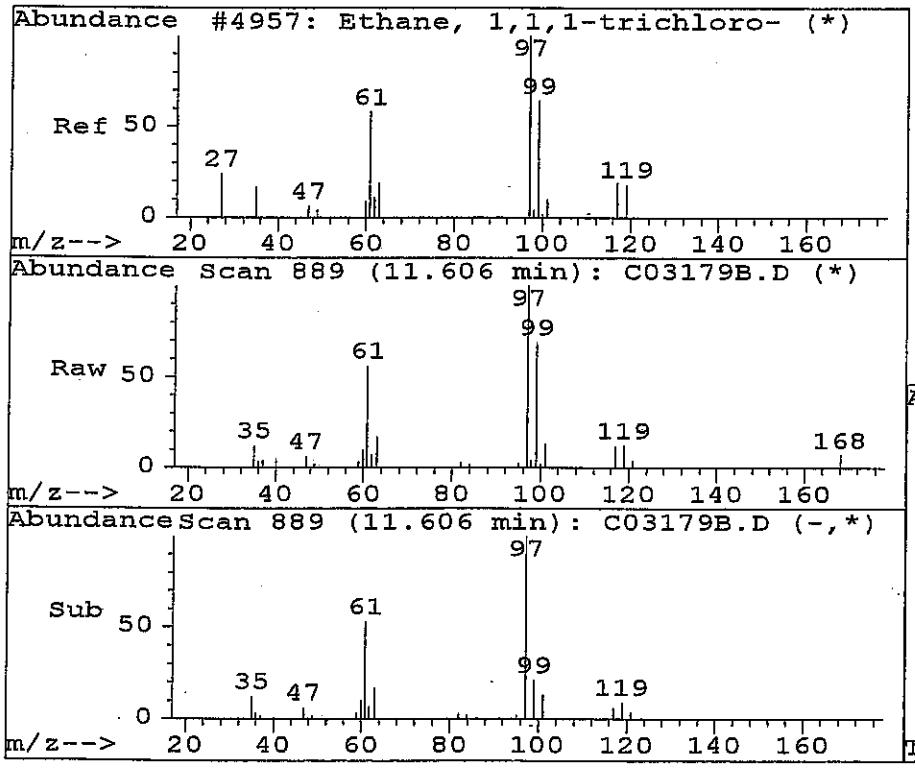


#35
1,4-Difluorobenzene
Concen: 20.00 ppbV
RT: 12.98 min Scan# 1031
Delta R.T. -0.19 min
Lab File: C03179B.D
Acq: 17 Mar 109 9:42 am

Tgt Ion:114 Resp: 2814997

Ion	Ratio	Lower	Upper
114	100		
63	29.1	19.8	33.0
0	0.0	0.0	0.0
0	0.0	0.0	0.0

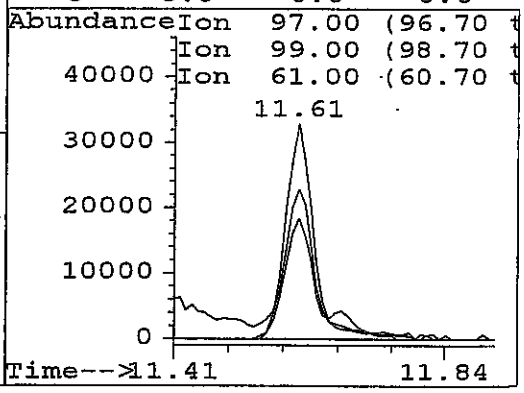


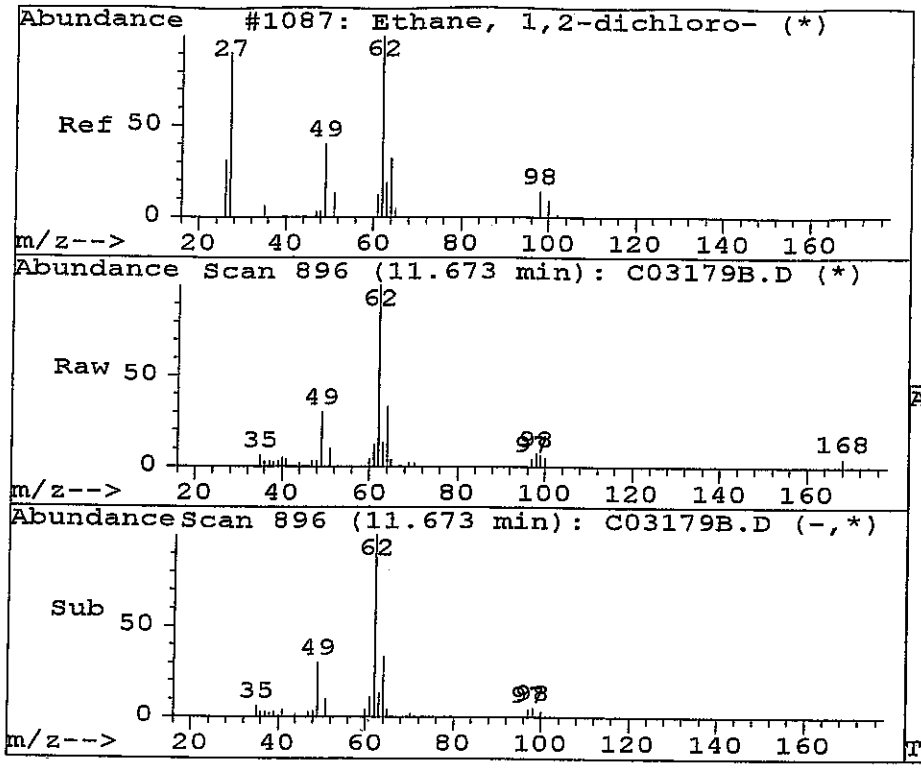


#36
1,1,1-Trichloroethane
Concen: 0.99 ppbV
RT: 11.61 min Scan# 889
Delta R.T. -0.19 min
Lab File: C03179B.D
Acq: 17 Mar 109 9:42 am

Tgt Ion:97 Resp: 100881

Ion	Ratio	Lower	Upper
97	100		
99	66.5	49.2	73.8
61	55.8	38.8	58.2
0	0.0	0.0	0.0

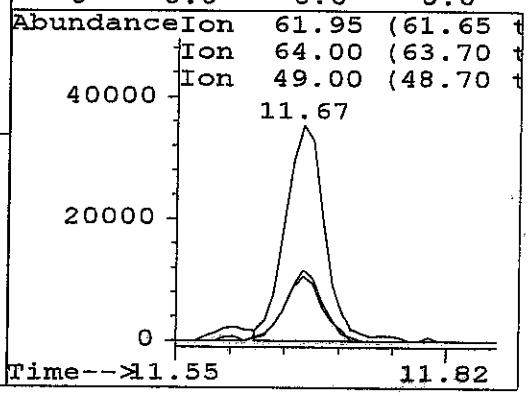


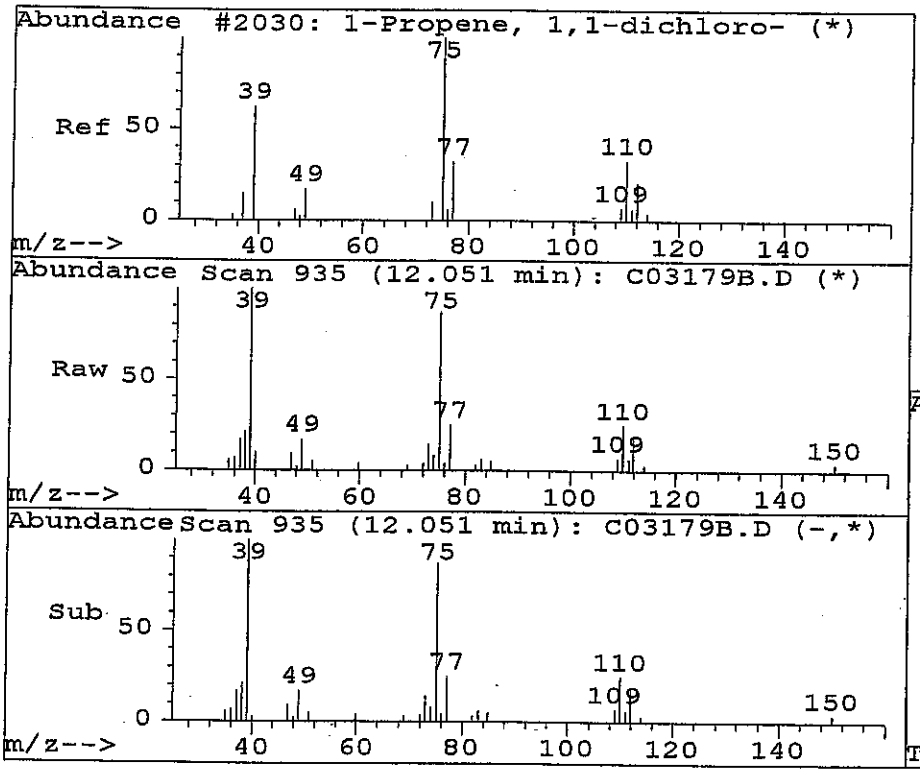


#37
1,2-Dichloroethane
Concen: 1.09 ppbV
RT: 11.67 min Scan# 896
Delta R.T. -0.20 min
Lab File: C03179B.D
Acq: 17 Mar 109 9:42 am

Tgt Ion:61.95 Resp: 96975

Ion	Ratio	Lower	Upper
62	100		
64	33.0	25.0	37.4
49	29.7	19.9	29.9
0	0.0	0.0	0.0

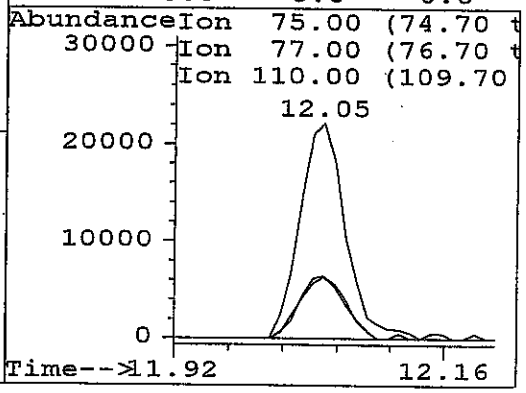


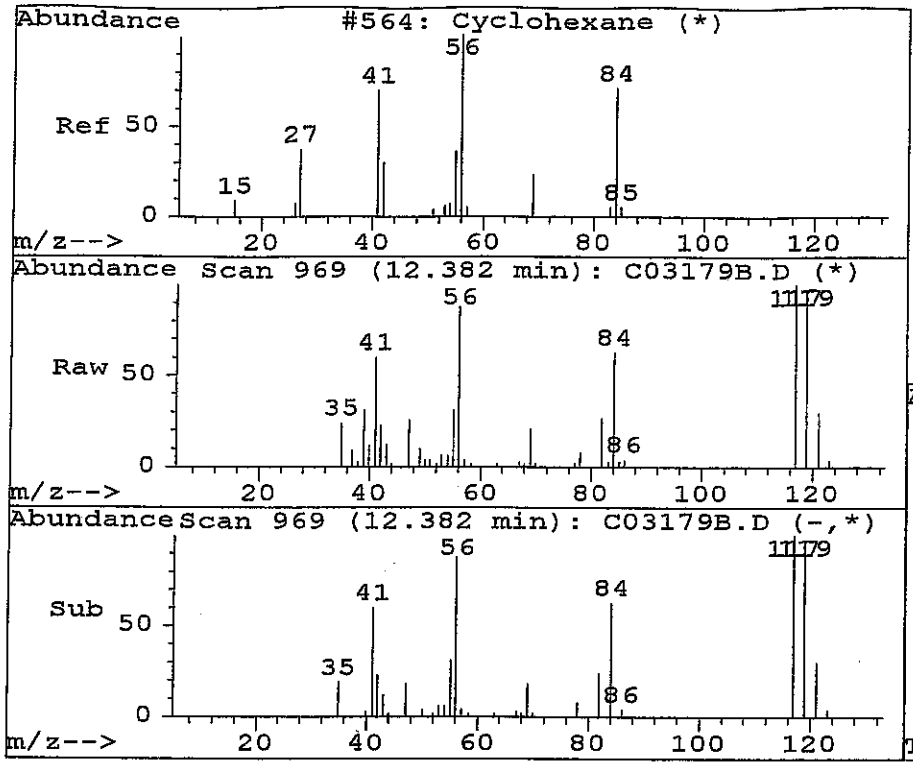


#38
1,1-Dichloropropene
Concen: 1.00 ppbV
RT: 12.05 min Scan# 935
Delta R.T. -0.19 min
Lab File: C03179B.D
Acq: 17 Mar 109 9:42 am

Tgt Ion:75 Resp: 62476

Ion	Ratio	Lower	Upper
75	100		
77	28.7	23.0	34.4
110	28.9	24.9	37.3
0	0.0	0.0	0.0

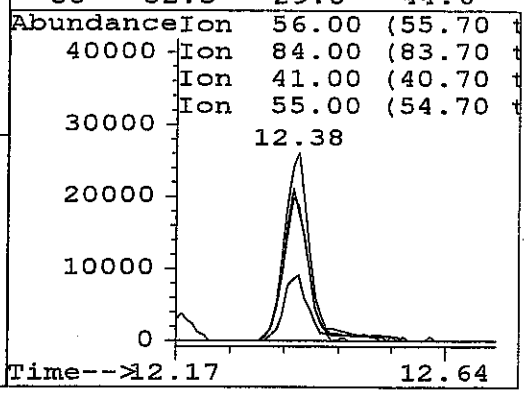


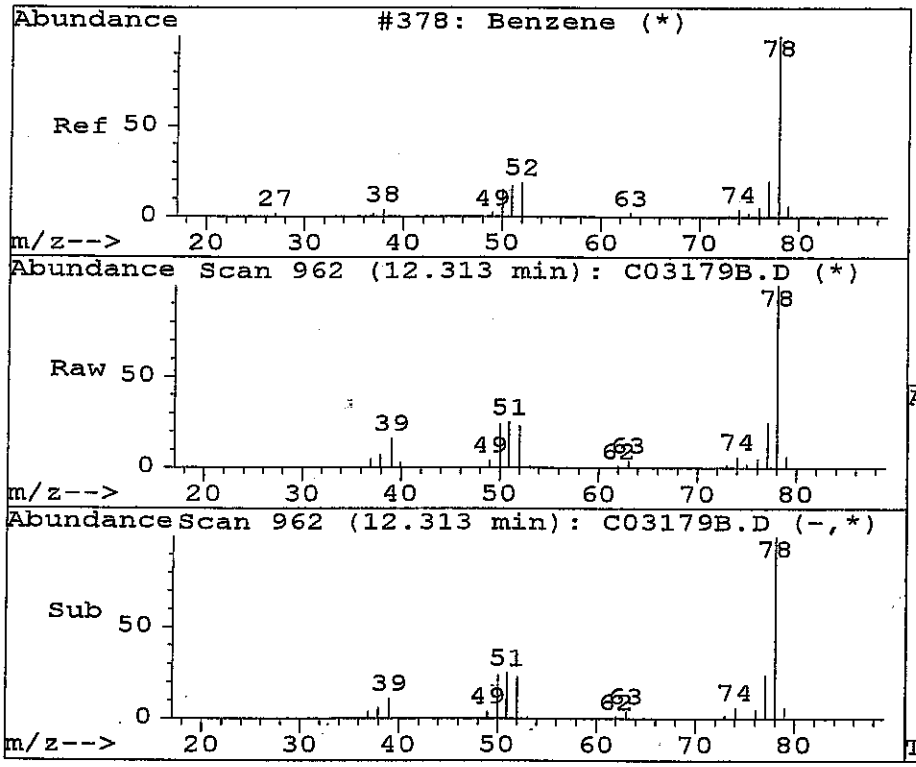


#39
Cyclohexane
Concen: 1.39 ppbV
RT: 12.38 min Scan# 969
Delta R.T. -0.17 min
Lab File: C03179B.D
Acq: 17 Mar 109 9:42 am

Tgt Ion:56 Resp: 83495

Ion	Ratio	Lower	Upper
56	100		
84	75.4	74.2	111.4
41	74.7	60.4	90.6
55	32.3	29.8	44.6

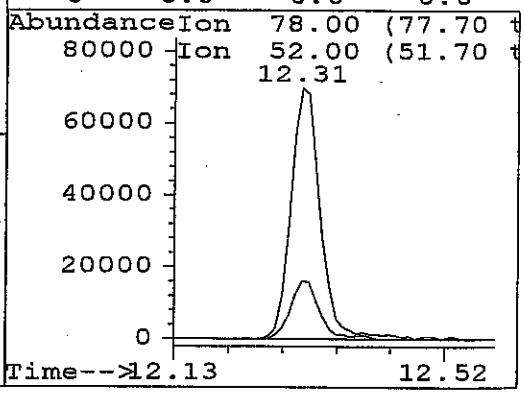


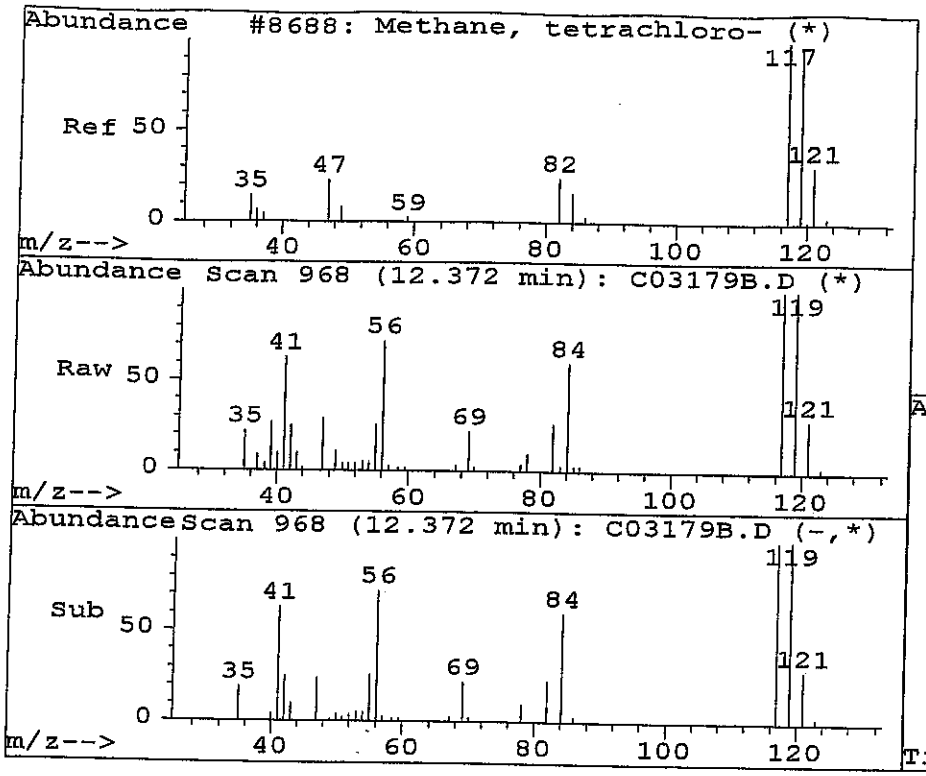


#40
Benzene
Concen: 1.49 ppbV
RT: 12.31 min Scan# 962
Delta R.T. -0.20 min
Lab File: C03179B.D
Acq: 17 Mar 109 9:42 am

Tgt Ion:78 Resp: 206967

Ion	Ratio	Lower	Upper
78	100		
52	23.2	16.4	24.6
0	0.0	0.0	0.0
0	0.0	0.0	0.0

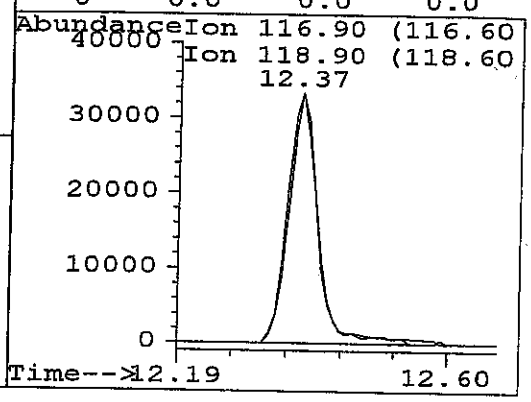


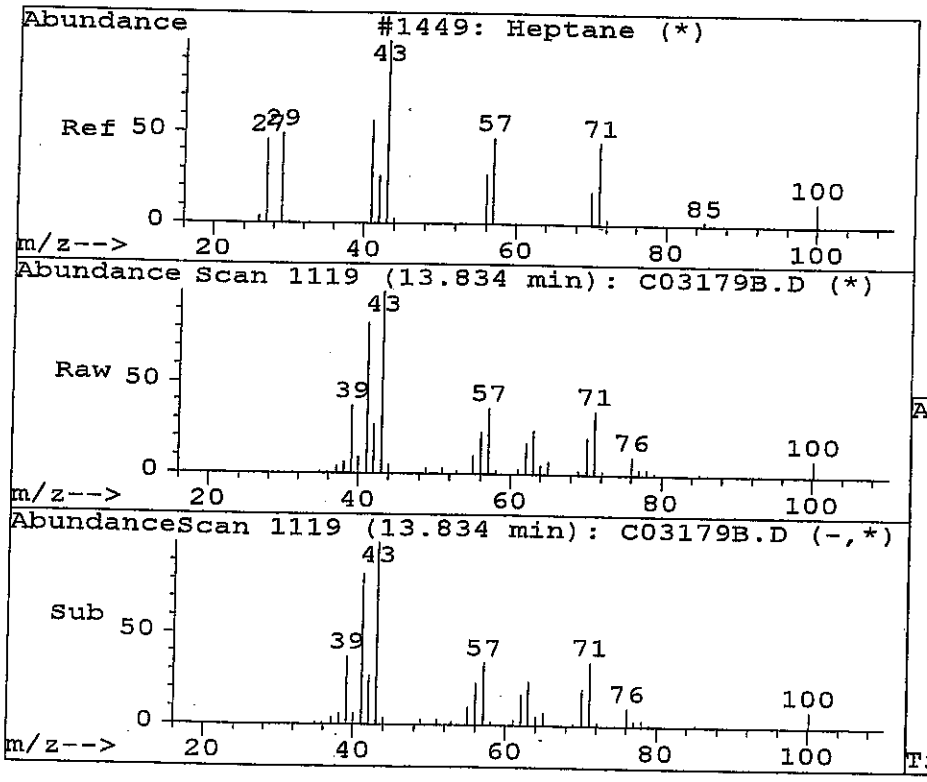


#41
Carbon tetrachloride
Concen: 0.97 ppbV
RT: 12.37 min Scan# 968
Delta R.T. -0.19 min
Lab File: C03179B.D
Acq: 17 Mar 109 9:42 am

Tgt Ion:116.9 Resp: 10579

Ion	Ratio	Lower	Upper
117	100		
119	99.4	75.3	112.9
0	0.0	0.0	0.0
0	0.0	0.0	0.0

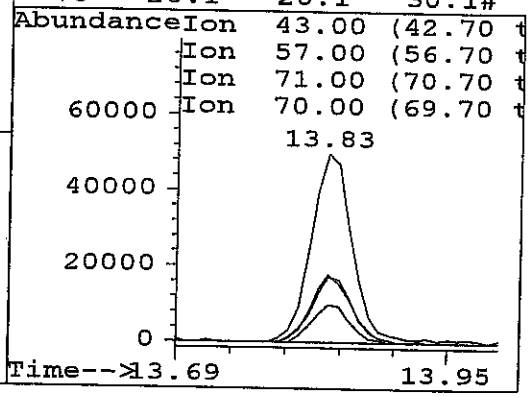


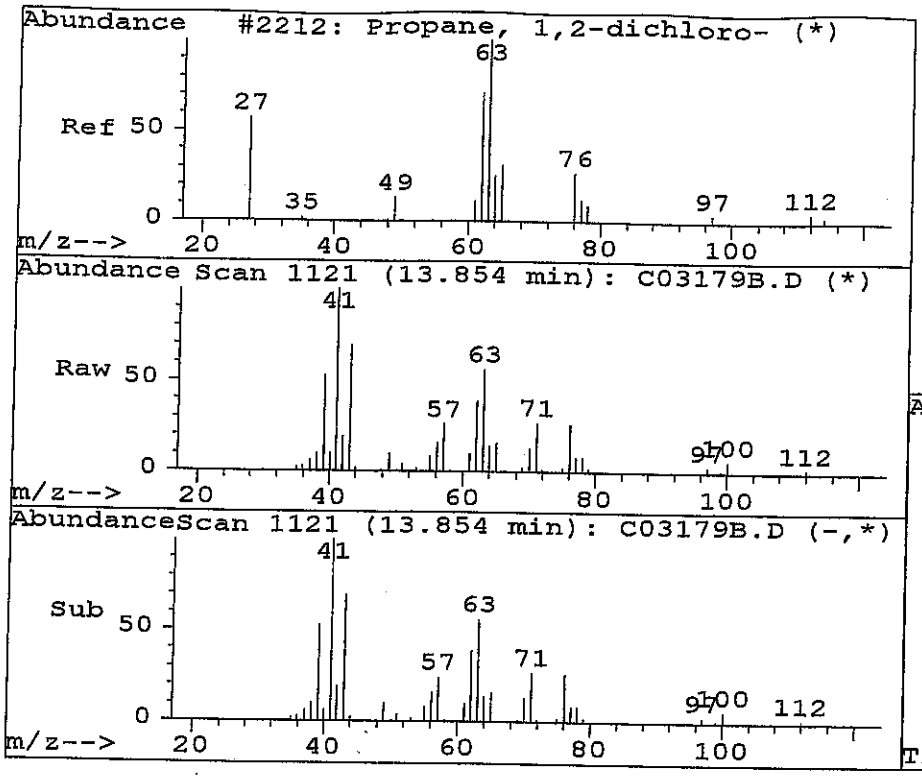


#42
n-Heptane
Concen: 1.35 ppbV
RT: 13.83 min Scan# 1119
Delta R.T. -0.21 min
Lab File: C03179B.D
Acq: 17 Mar 109 9:42 am

Tgt Ion:43 Resp: 135509

Ion	Ratio	Lower	Upper
43	100		
57	36.1	33.0	49.6
71	34.4	33.4	50.0
70	20.1	20.1	30.1#

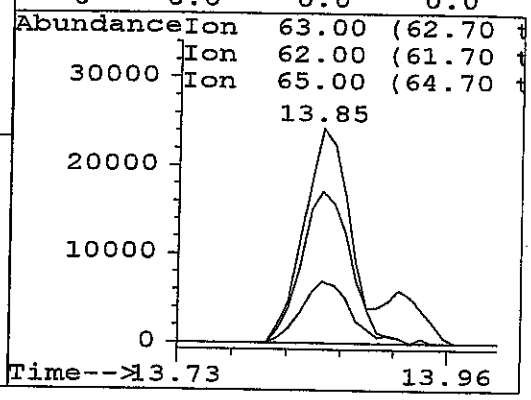


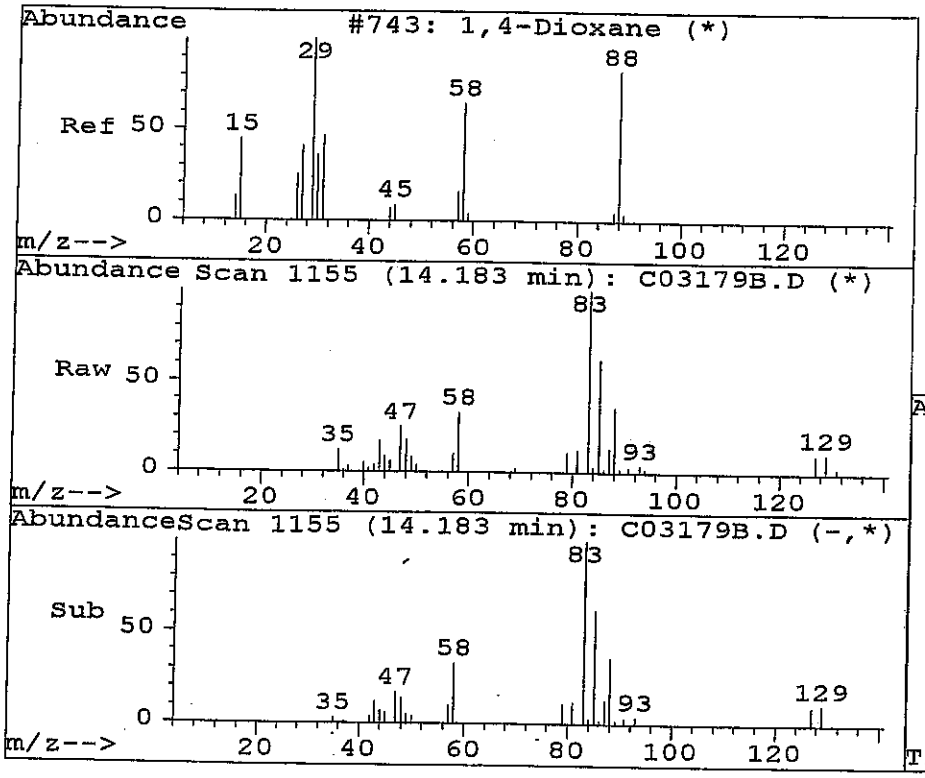


#43
1,2-Dichloropropane
Concen: 1.41 ppbV
RT: 13.85 min Scan# 1121
Delta R.T. -0.22 min
Lab File: C03179B.D
Acq: 17 Mar 109 9:42 am

Tgt Ion:63 Resp: 66789

Ion	Ratio	Lower	Upper
63	100		
62	62.9	51.3	76.9
65	27.5	23.1	34.7
0	0.0	0.0	0.0

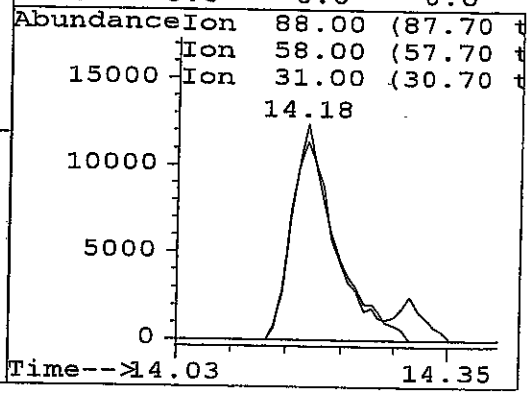


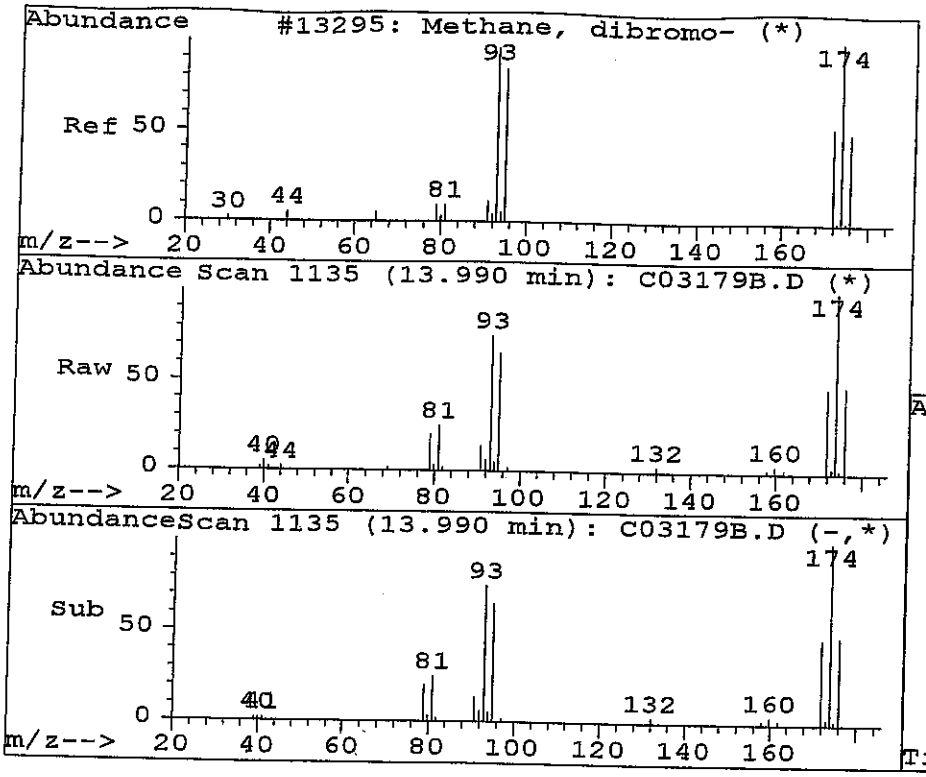


#44
1,4 Dioxane
Concen: 1.28 ppbV
RT: 14.18 min Scan# 1155
Delta R.T. -0.22 min
Lab File: C03179B.D
Acq: 17 Mar 109 9:42 am

Tgt Ion:88 Resp: 43700

Ion	Ratio	Lower	Upper
88	100		
58	95.8	75.6	113.4
31	0.0	0.0	0.0
0	0.0	0.0	0.0

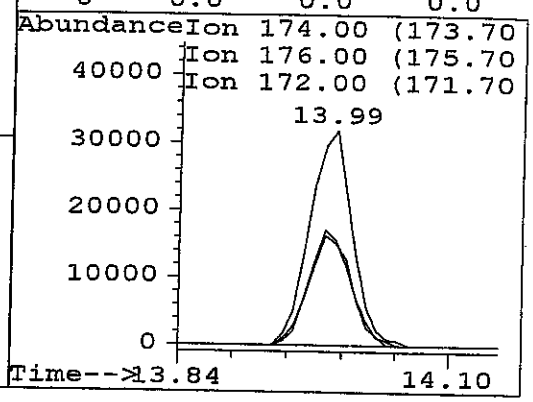


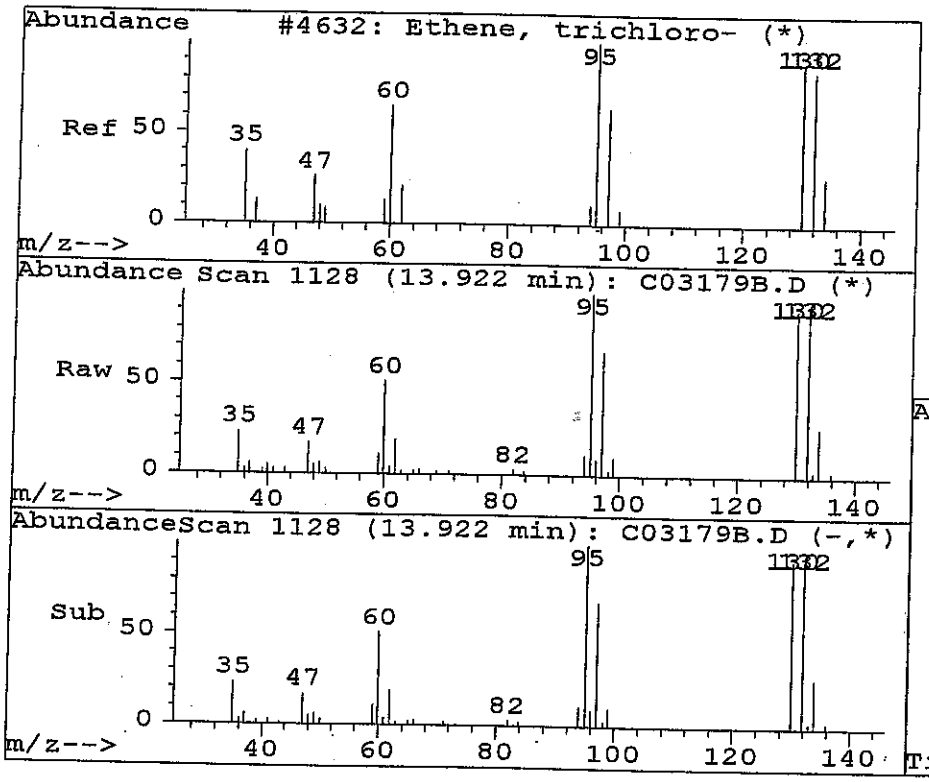


#45
Dibromomethane
Concen: 0.99 ppbV
RT: 13.99 min Scan# 1135
Delta R.T. -0.21 min
Lab File: C03179B.D
Acq: 17 Mar 109 9:42 am

Tgt Ion:174 Resp: 87600

Ion	Ratio	Lower	Upper
174	100		
176	48.4	39.1	58.7
172	47.2	42.4	63.6
0	0.0	0.0	0.0

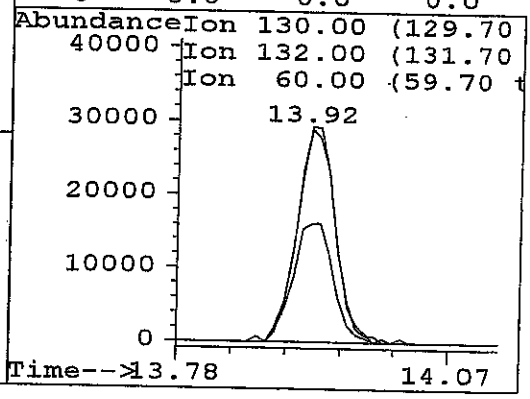


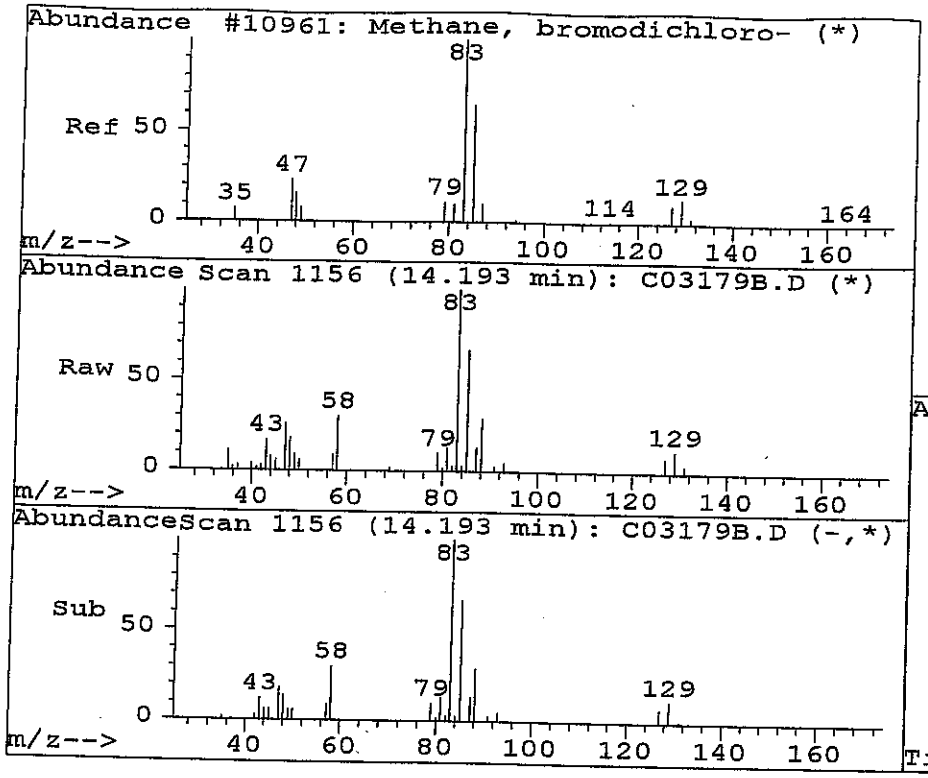


#46
Trichloroethene
Concen: 0.97 ppbV
RT: 13.92 min Scan# 1128
Delta R.T. -0.21 min
Lab File: C03179B.D
Acq: 17 Mar 109 9:42 am

Tgt Ion:130 Resp: 83100

Ion	Ratio	Lower	Upper
130	100		
132	101.1	78.5	117.7
60	54.2	44.2	66.4
0	0.0	0.0	0.0

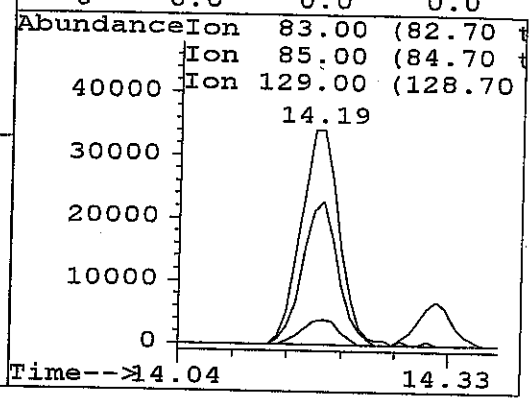


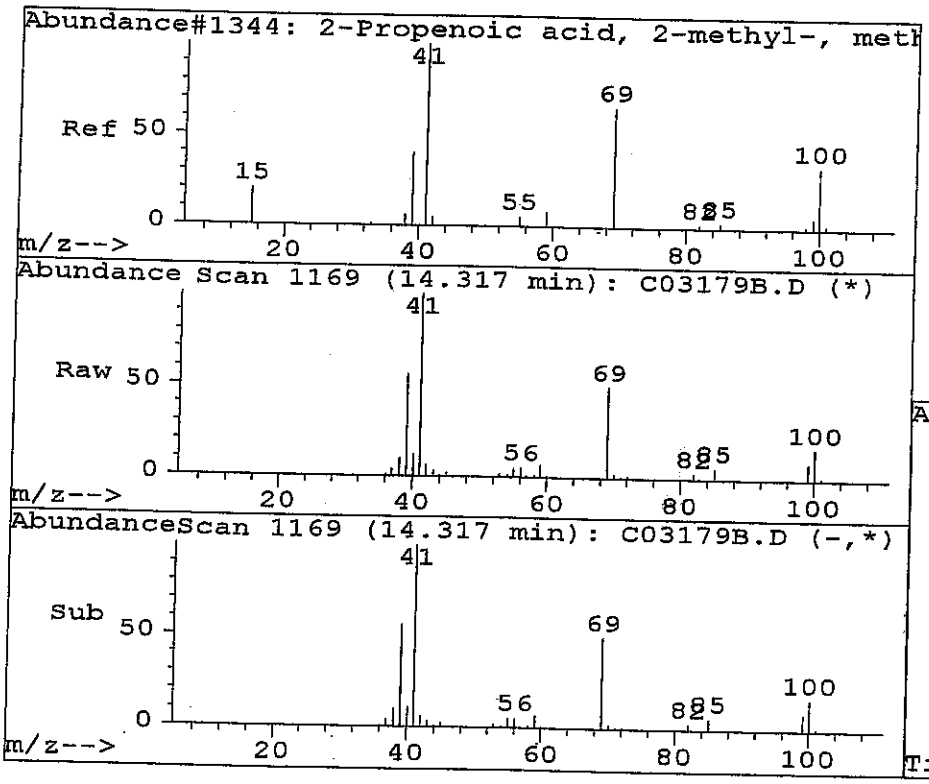


#47
Bromodichloromethane
Concen: 0.98 ppbV
RT: 14.19 min Scan# 1156
Delta R.T. -0.21 min
Lab File: C03179B.D
Acq: 17 Mar 109 9:42 am

Tgt Ion:83 Resp: 96325

Ion	Ratio	Lower	Upper
83	100		
85	61.0	47.5	71.3
129	11.6	10.2	15.4
0	0.0	0.0	0.0

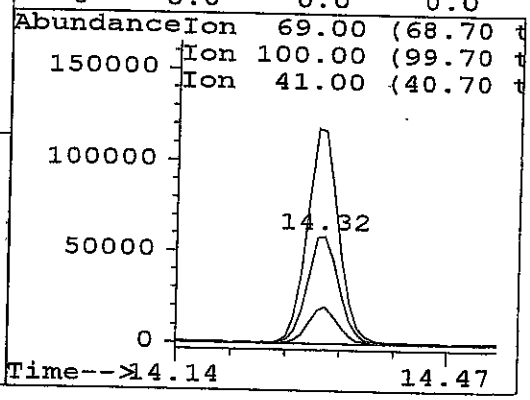


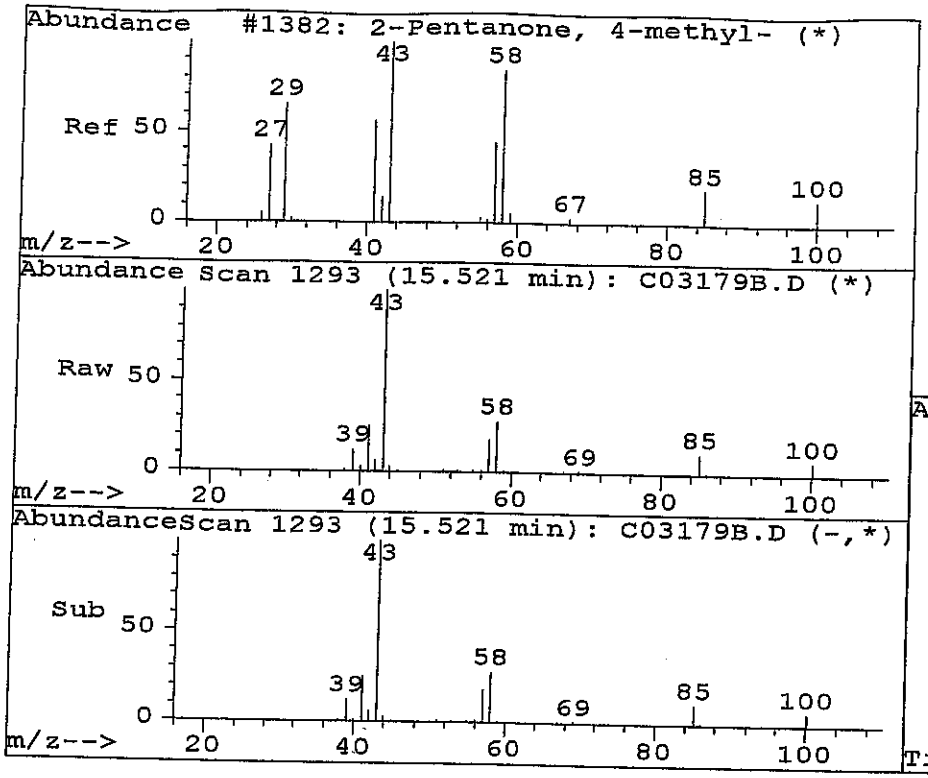


#48
Methyl methacrylate
Concen: 3.60 ppbV
RT: 14.32 min Scan# 1169
Delta R.T. -0.23 min
Lab File: C03179B.D
Acq: 17 Mar 109 9:42 am

Tgt Ion:69 Resp: 161809

Ion	Ratio	Lower	Upper
69	100		
100	34.6	29.5	44.3
41	200.3	144.6	217.0
0	0.0	0.0	0.0

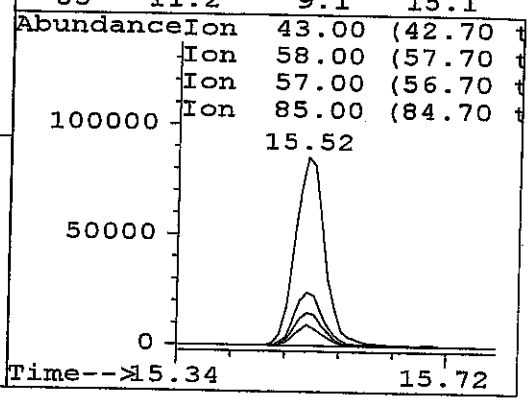


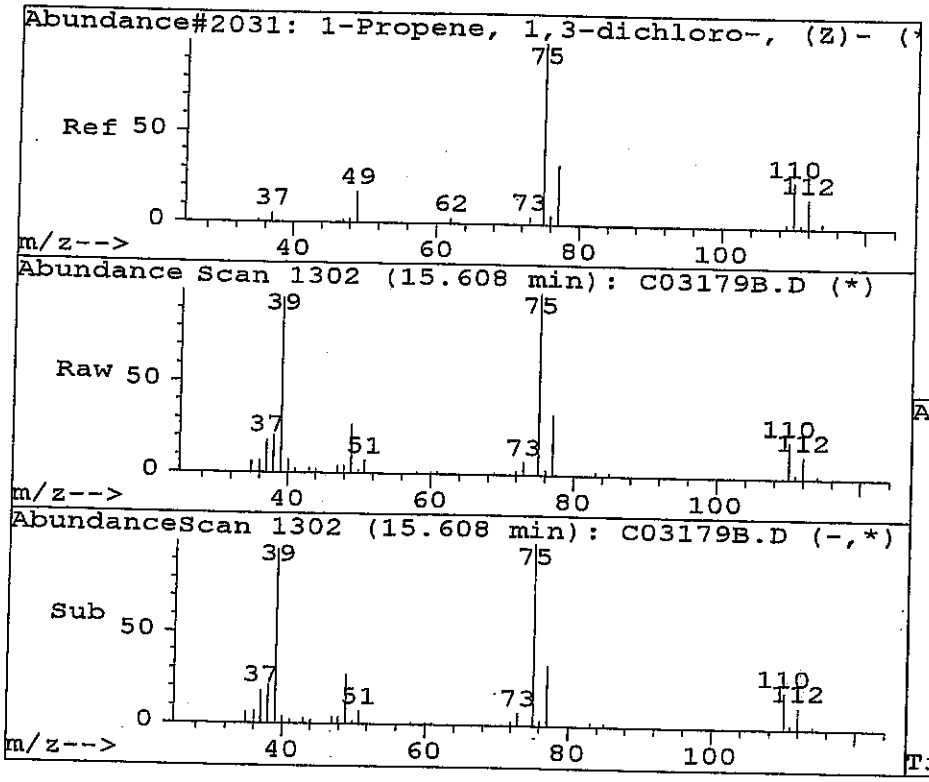


#49
Methyl Isobutyl Ketone
Concen: 1.38 ppbV
RT: 15.52 min Scan# 1293
Delta R.T. -0.18 min
Lab File: C03179B.D
Acq: 17 Mar 109 9:42 am

Tgt Ion:43 Resp: 250239

Ion	Ratio	Lower	Upper
43	100		
58	28.4	23.0	38.4
57	17.6	15.9	26.5
85	11.2	9.1	15.1

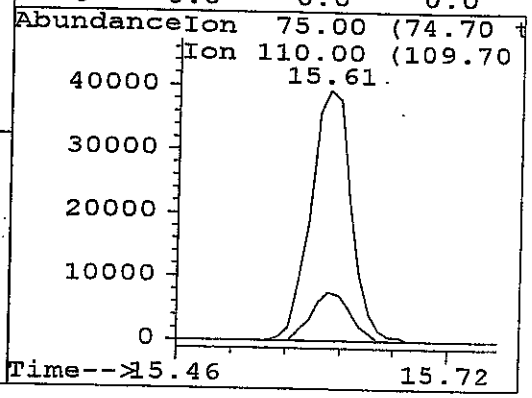


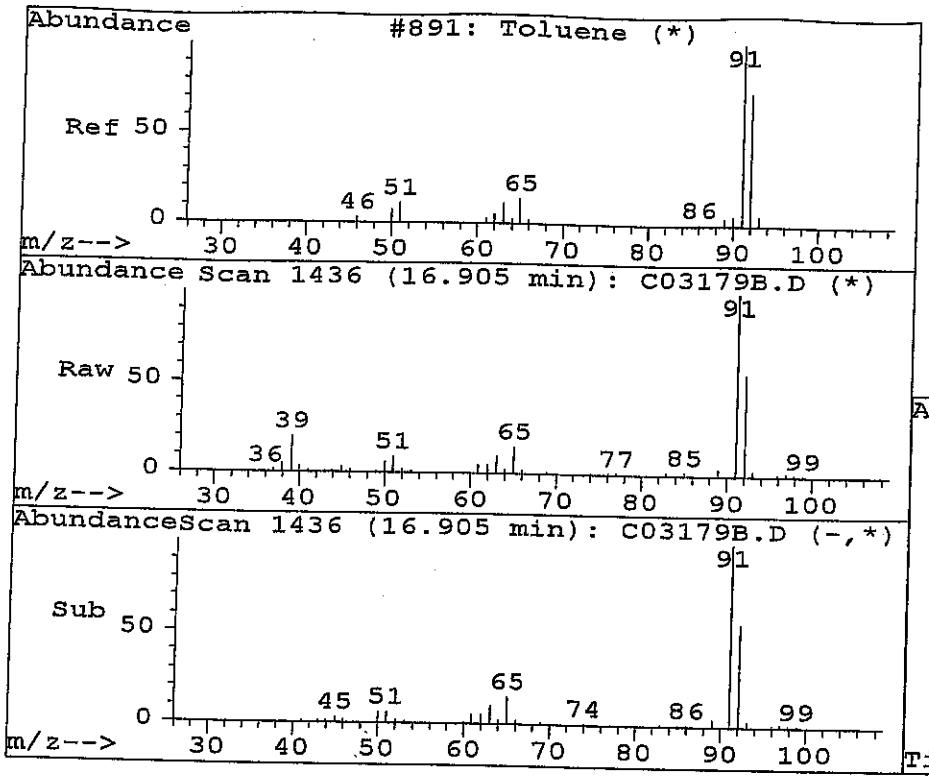


#50
cis-1,3-Dichloropropene
Concen: 1.33 ppbV
RT: 15.61 min Scan# 1302
Delta R.T. -0.21 min
Lab File: C03179B.D
Acq: 17 Mar 109 9:42 am

Tgt Ion:75 Resp: 107039

Ion	Ratio	Lower	Upper
75	100		
110	19.5	15.4	23.2
0	0.0	0.0	0.0
0	0.0	0.0	0.0

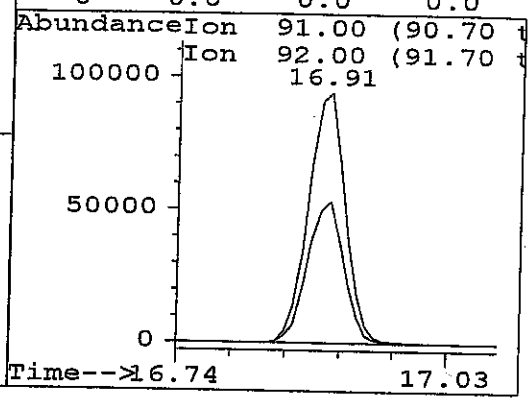


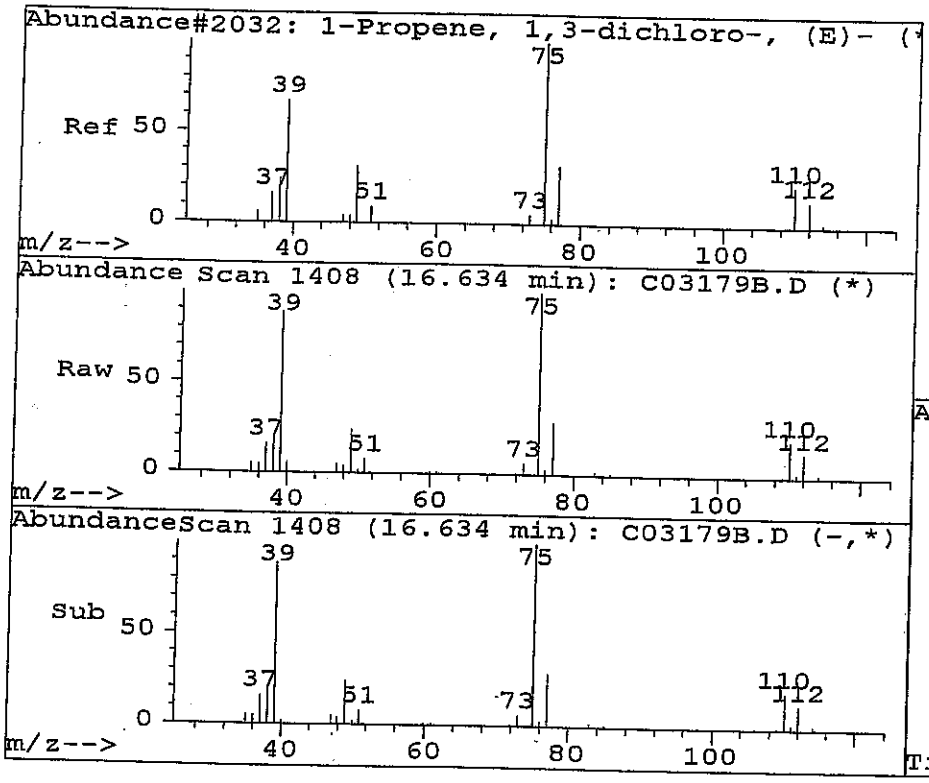


#51
Toluene
Concen: 1.43 ppbV
RT: 16.91 min Scan# 1436
Delta R.T. -0.20 min
Lab File: C03179B.D
Acq: 17 Mar 109 9:42 am

Tgt Ion:91 Resp: 257501

Ion	Ratio	Lower	Upper
91	100		
92	56.3	45.5	68.3
0	0.0	0.0	0.0
0	0.0	0.0	0.0

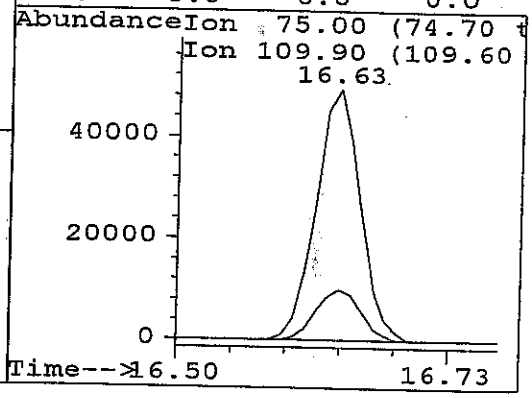


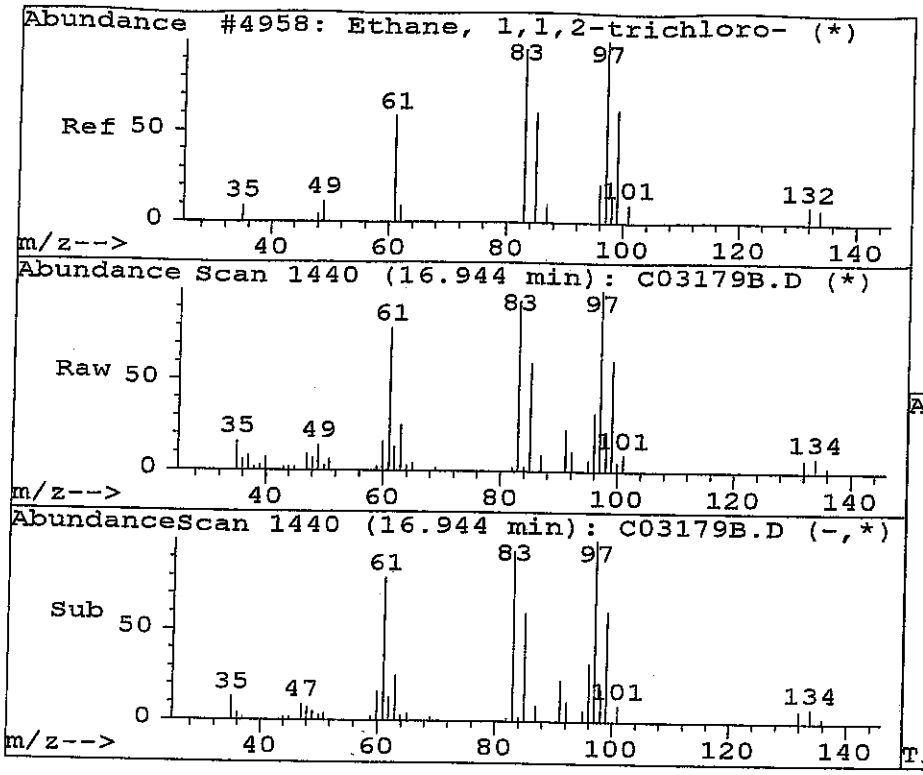


#52
trans-1,3-Dichloropropene
Concen: 1.25 ppbV
RT: 16.63 min Scan# 1408
Delta R.T. -0.22 min
Lab File: C03179B.D
Acq: 17 Mar 109 9:42 am

Tgt Ion:75 Resp: 127376

Ion	Ratio	Lower	Upper
75	100		
110	20.2	17.4	26.2
0	0.0	0.0	0.0
0	0.0	0.0	0.0

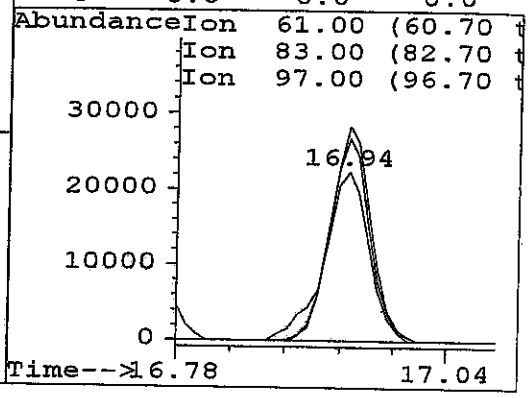


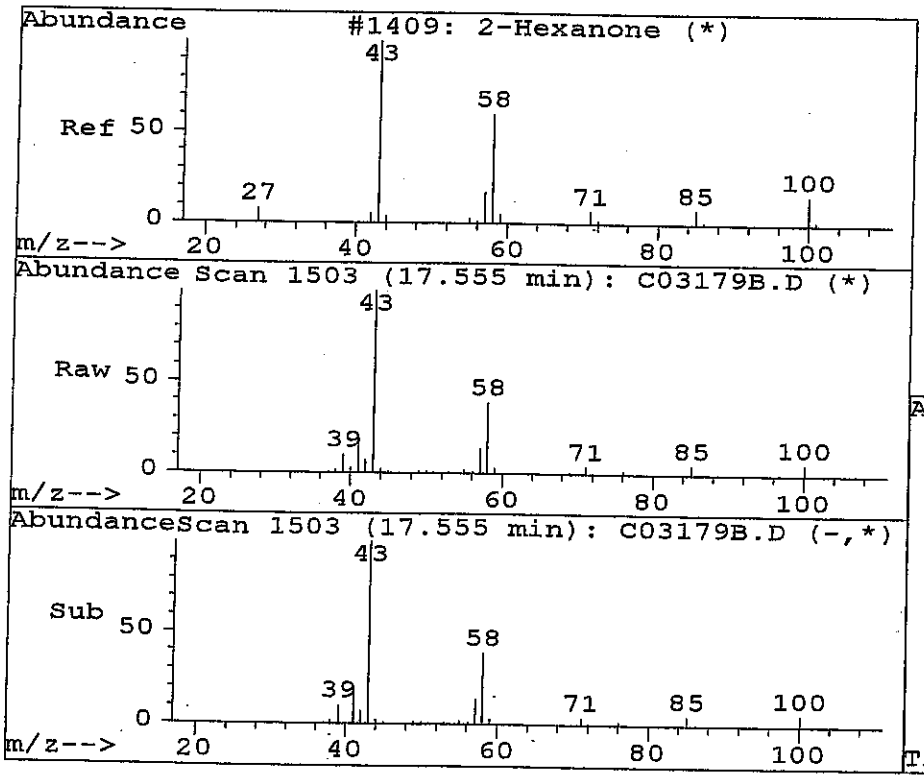


#53
1,1,2-Trichloroethane
Concen: 1.29 ppbV
RT: 16.94 min Scan# 1440
Delta R.T. -0.22 min
Lab File: C03179B.D
Acq: 17 Mar 109 9:42 am

Tgt Ion:61 Resp: 68163

Ion	Ratio	Lower	Upper
61	100		
83	119.8	83.1	124.7
97	127.2	99.4	149.2
0	0.0	0.0	0.0

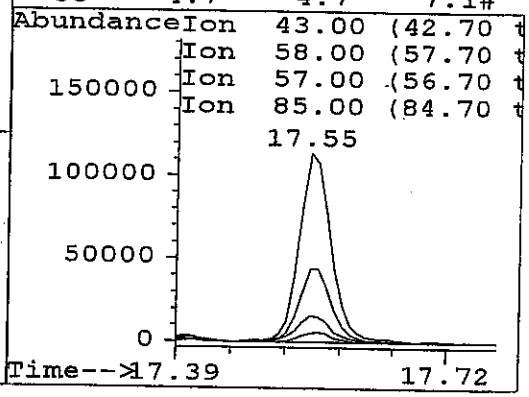


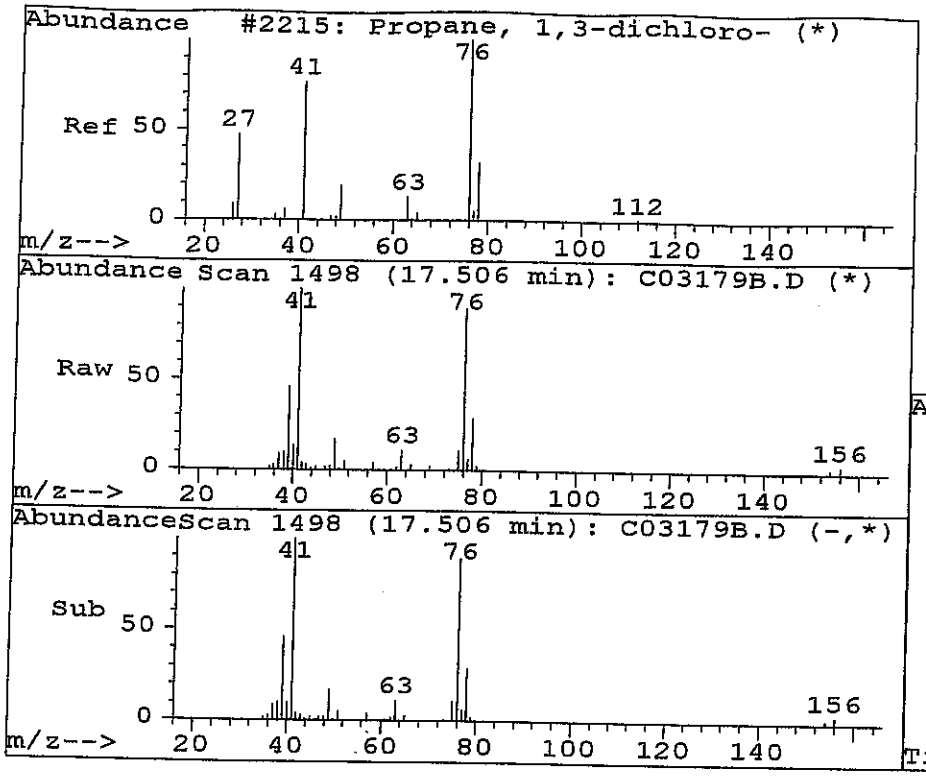


#54
2-Hexanone
Concen: 1.34 ppbV
RT: 17.55 min Scan# 1503
Delta R.T. -0.25 min
Lab File: C03179B.D
Acq: 17 Mar 109 9:42 am

Tgt Ion:43 Resp: 311524

Ion	Ratio	Lower	Upper
43	100		
58	39.0	28.1	46.9
57	13.7	10.4	17.4
85	4.7	4.7	7.1#

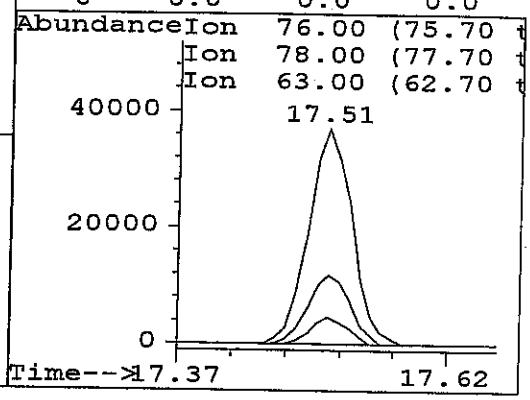


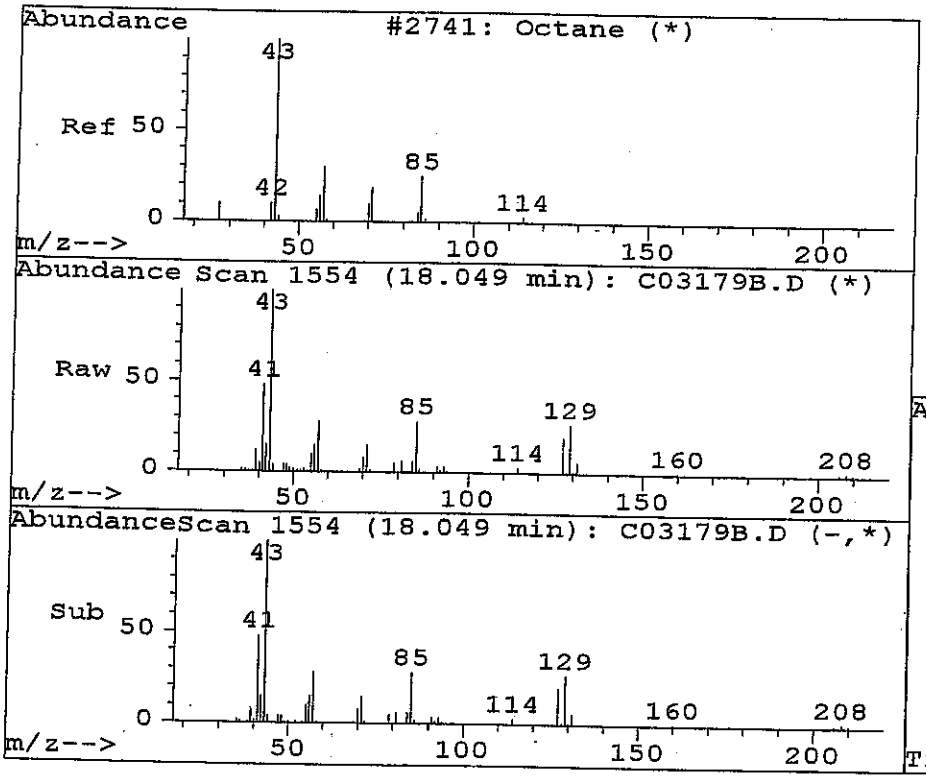


#55
1,3-Dichloropropane
Concen: 1.26 ppbV
RT: 17.51 min Scan# 1498
Delta R.T. -0.21 min
Lab File: C03179B.D
Acq: 17 Mar 109 9:42 am

Tgt Ion:76 Resp: 102447

Ion	Ratio	Lower	Upper
76	100		
78	32.0	25.4	38.0
63	12.5	8.3	12.5
0	0.0	0.0	0.0

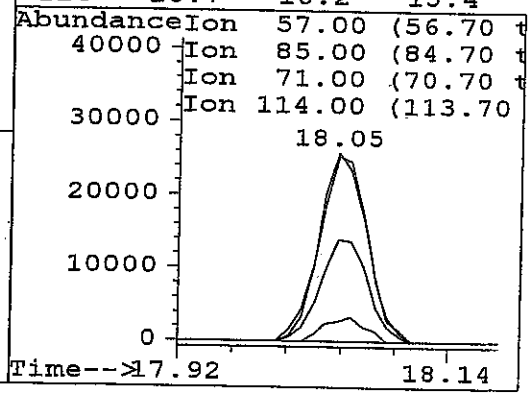


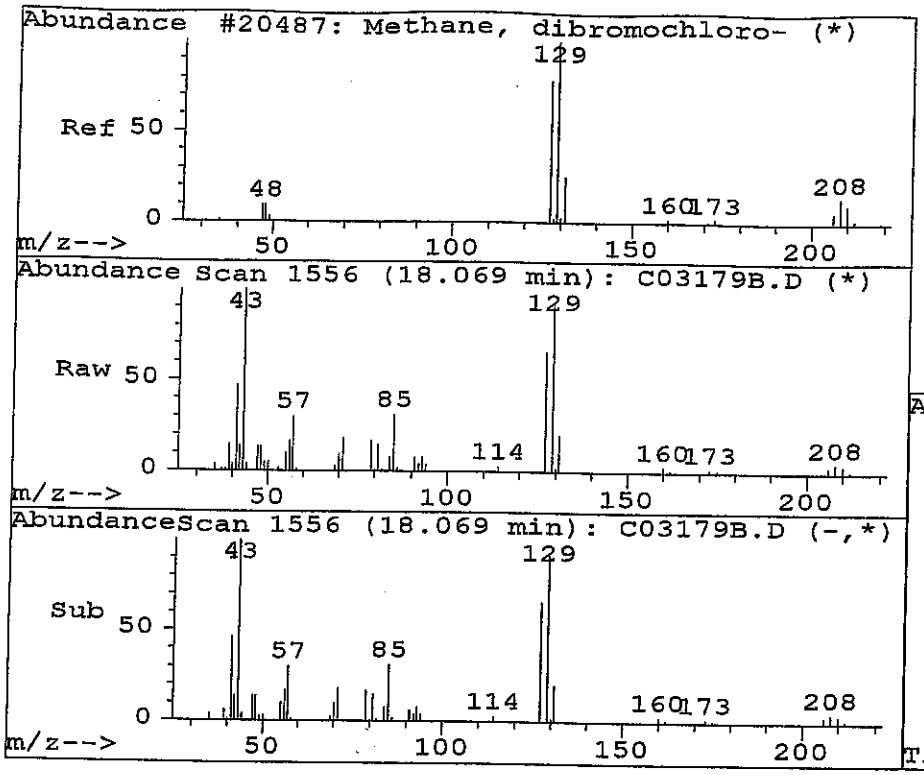


#56
Octane
Concen: 1.02 ppbV
RT: 18.05 min Scan# 1554
Delta R.T. -0.21 min
Lab File: C03179B.D
Acq: 17 Mar 109 9:42 am

Tgt Ion:57 Resp: 67553

Ion	Ratio	Lower	Upper
57	100		
85	98.4	84.5	126.7
71	54.0	44.1	66.1
114	10.7	10.2	15.4

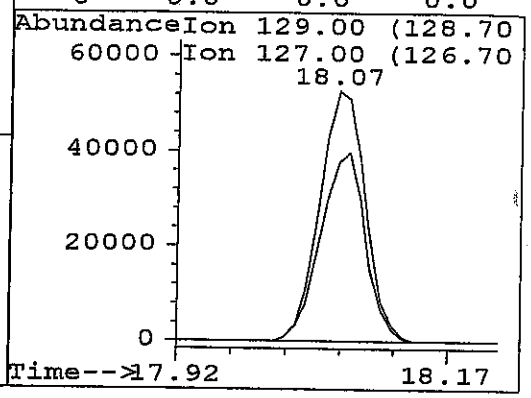


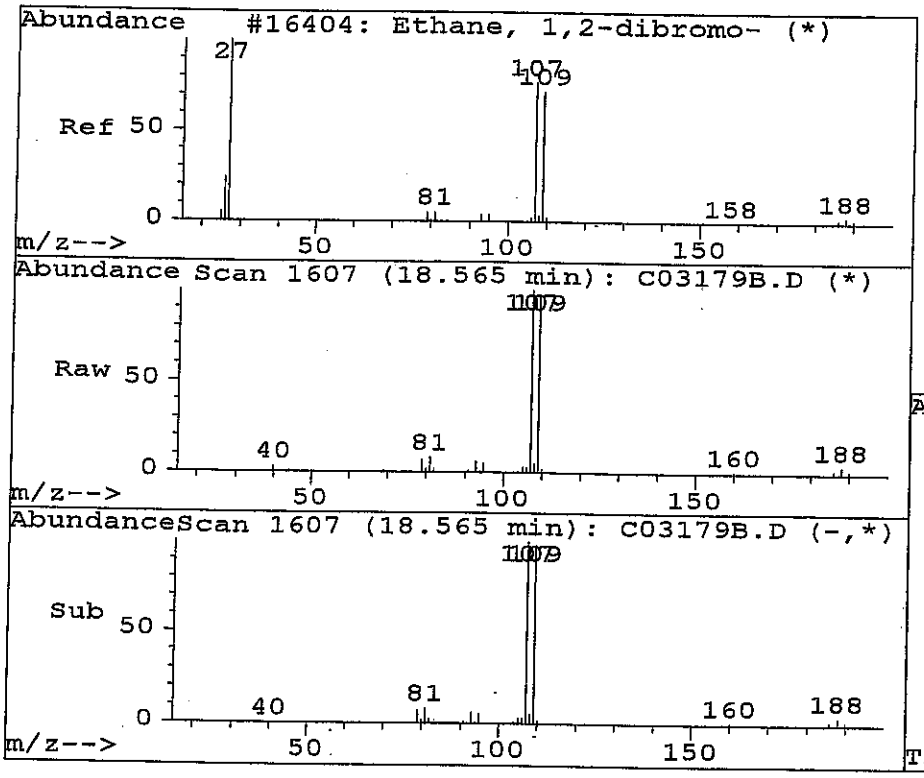


#57
Dibromochloromethane
Concen: 1.07 ppbV
RT: 18.07 min Scan# 1556
Delta R.T. -0.23 min
Lab File: C03179B.D
Acq: 17 Mar 109 9:42 am

Tgt Ion:129 Resp: 150691

Ion	Ratio	Lower	Upper
129	100		
127	71.7	59.7	89.5
0	0.0	0.0	0.0
0	0.0	0.0	0.0

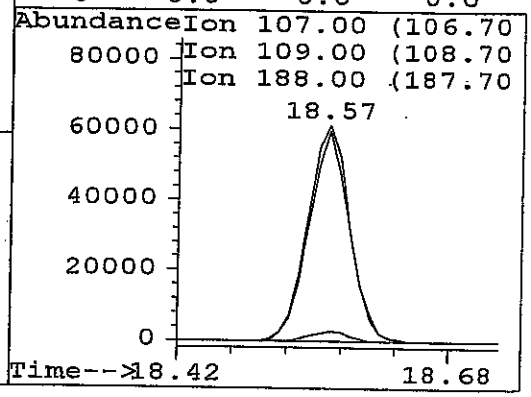


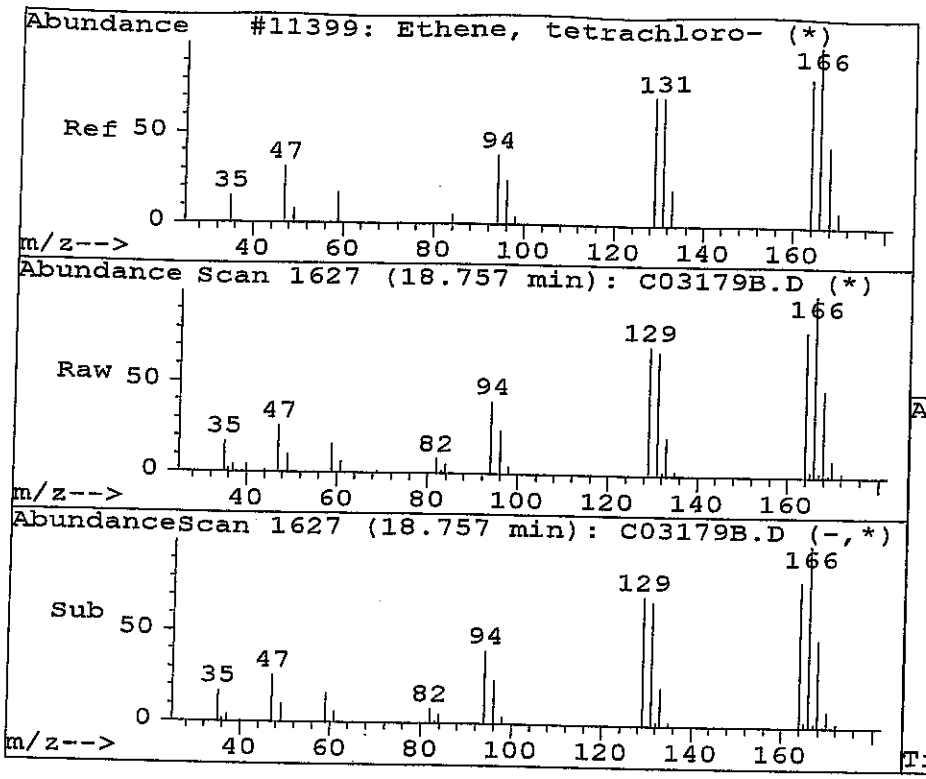


#58
1,2-Dibromoethane
Concen: 1.31 ppbV
RT: 18.57 min Scan# 1607
Delta R.T. -0.23 min
Lab File: C03179B.D
Acq: 17 Mar 109 9:42 am

Tgt Ion:107 Resp: 169213

Ion	Ratio	Lower	Upper
107	100		
109	97.6	75.4	113.0
188	4.5	3.8	5.6
0	0.0	0.0	0.0

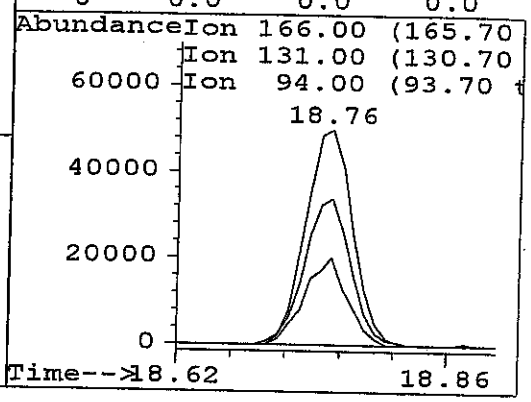


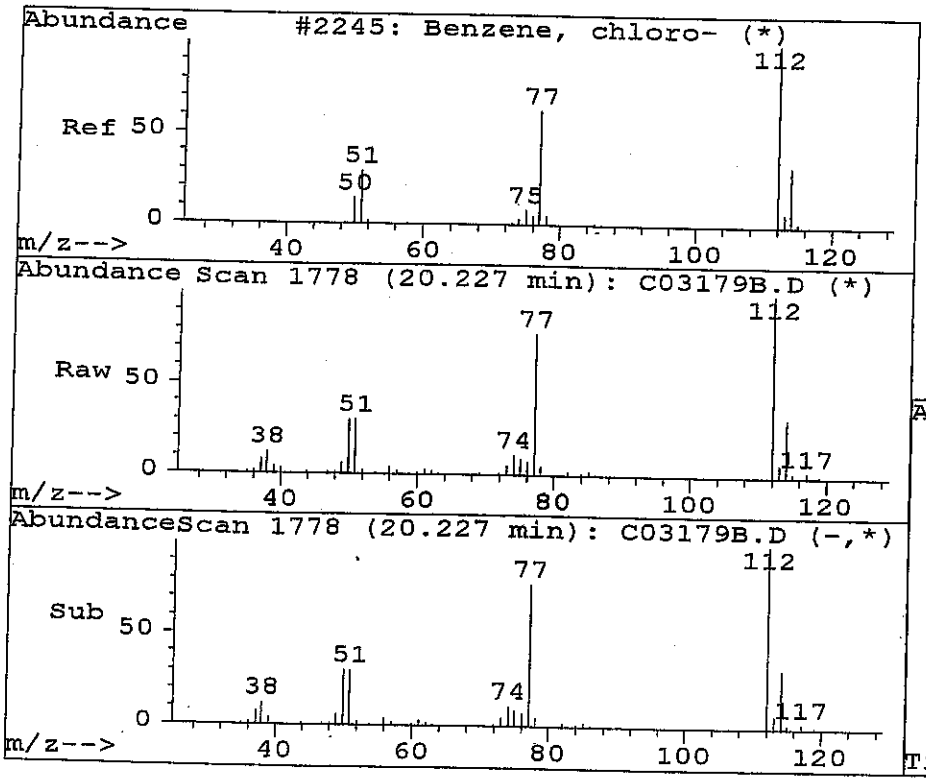


#59
Tetrachloroethene
Concen: 1.15 ppbV
RT: 18.76 min Scan# 1627
Delta R.T. -0.21 min
Lab File: C03179B.D
Acq: 17 Mar 109 9:42 am

Tgt Ion:166 Resp: 145069

Ion	Ratio	Lower	Upper
166	100		
131	67.9	49.8	74.8
94	40.4	28.2	42.4
0	0.0	0.0	0.0

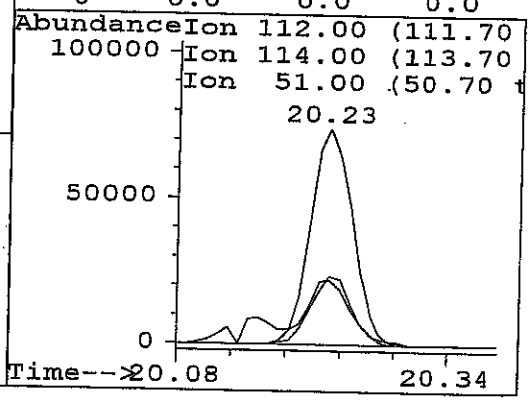


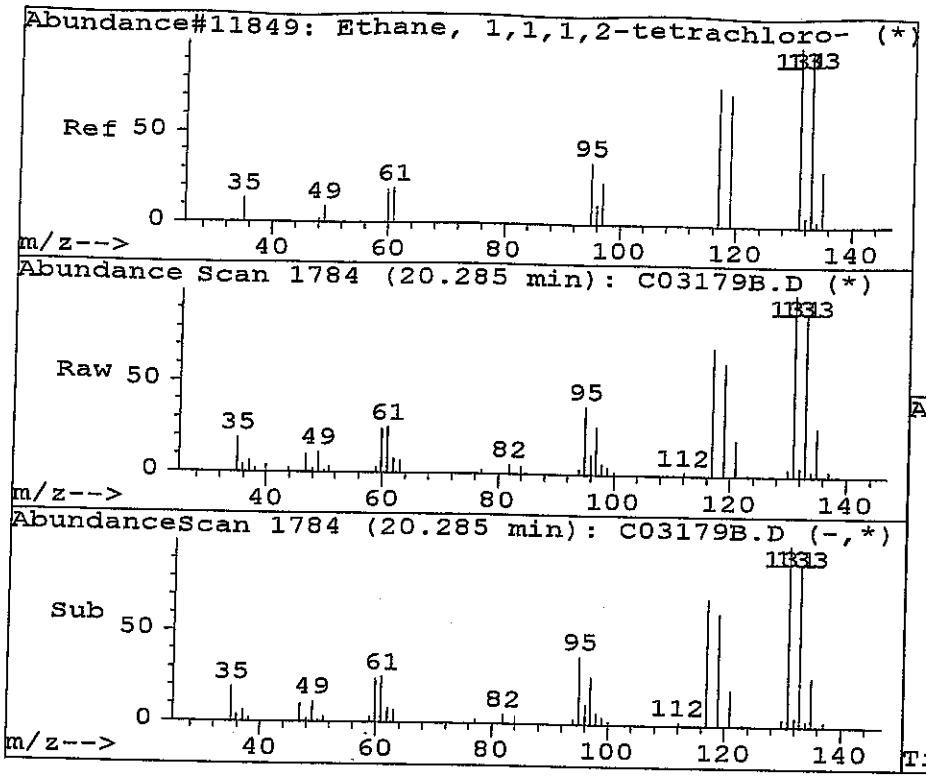


#60
Chlorobenzene
Concen: 1.26 ppbV
RT: 20.23 min Scan# 1778
Delta R.T. -0.22 min
Lab File: C03179B.D
Acq: 17 Mar 109 9:42 am

Tgt Ion:112 Resp: 208106

Ion	Ratio	Lower	Upper
112	100		
114	31.6	25.0	37.4
51	23.8	23.3	34.9
0	0.0	0.0	0.0

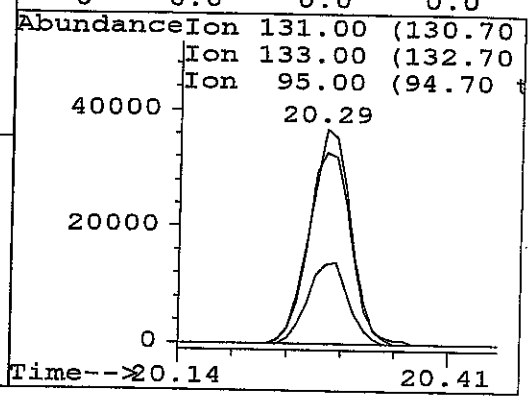


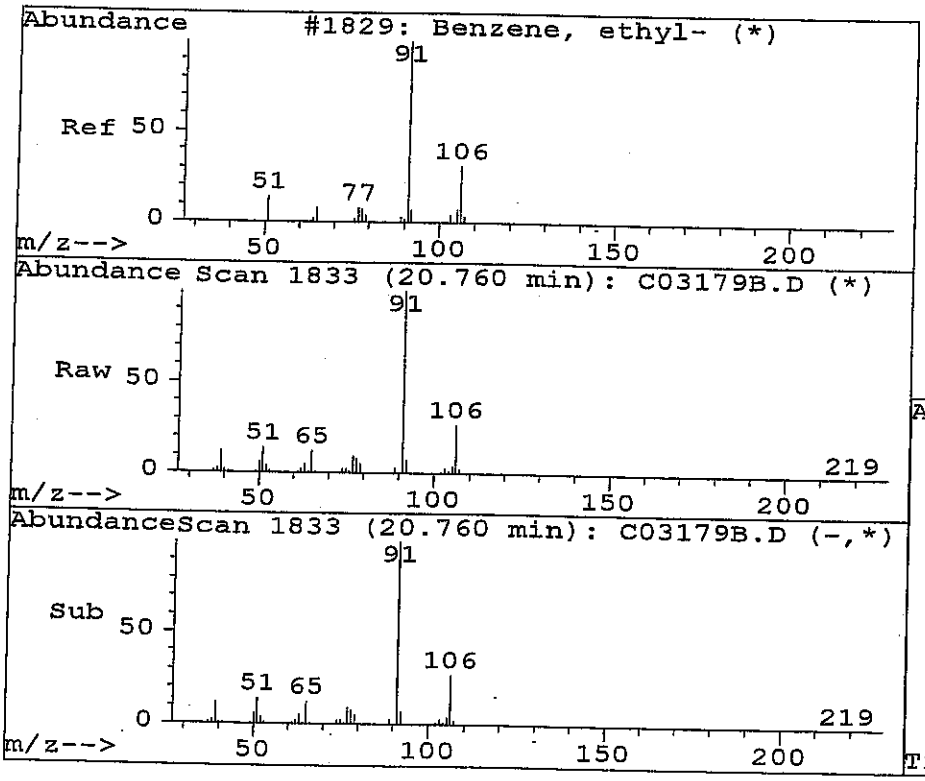


#61
1,1,1,2-Tetrachloroethane
Concen: 1.11 ppbV
RT: 20.29 min Scan# 1784
Delta R.T. -0.22 min
Lab File: C03179B.D
Acq: 17 Mar 109 9:42 am

Tgt Ion:131 Resp: 104954

Ion	Ratio	Lower	Upper
131	100		
133	88.9	78.9	118.3
95	36.9	30.4	45.6
0	0.0	0.0	0.0

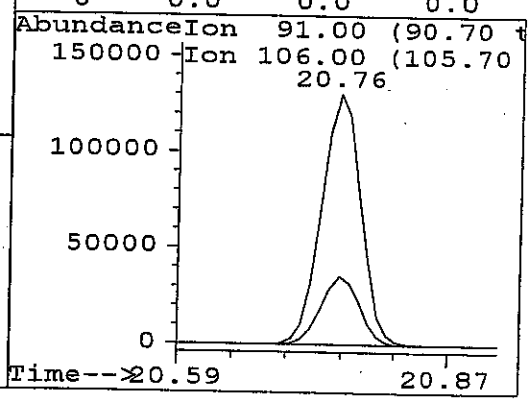


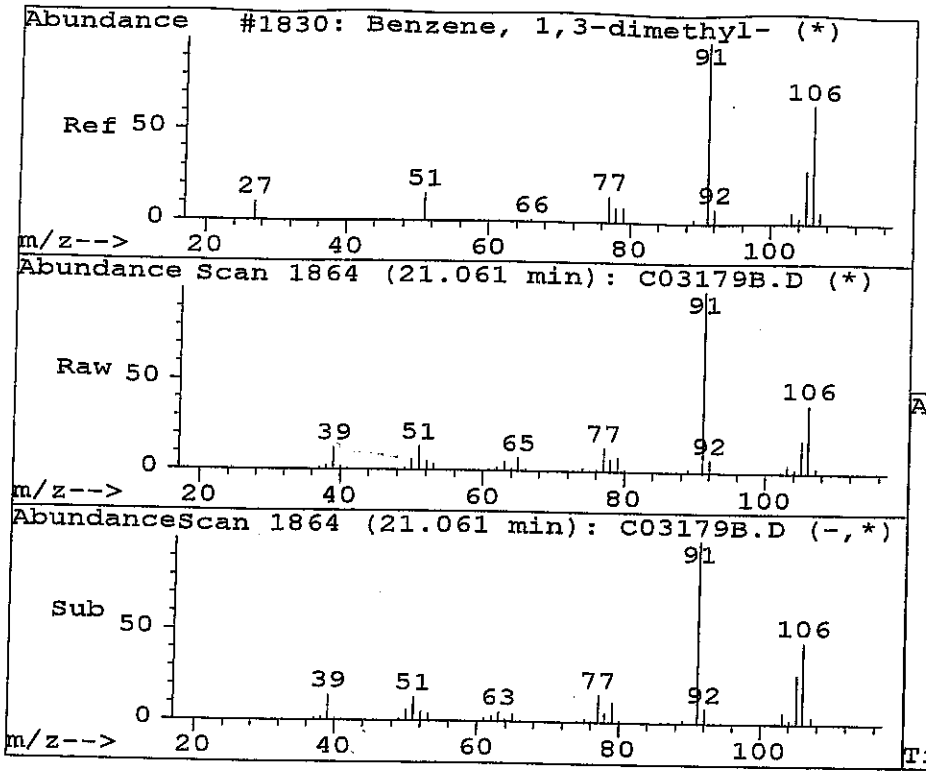


#62
Ethylbenzene
Concen: 1.34 ppbV
RT: 20.76 min Scan# 1833
Delta R.T. -0.23 min
Lab File: C03179B.D
Acq: 17 Mar 109 9:42 am

Tgt Ion:91 Resp: 359496

Ion	Ratio	Lower	Upper
91	100		
106	27.2	20.9	31.3
0	0.0	0.0	0.0
0	0.0	0.0	0.0

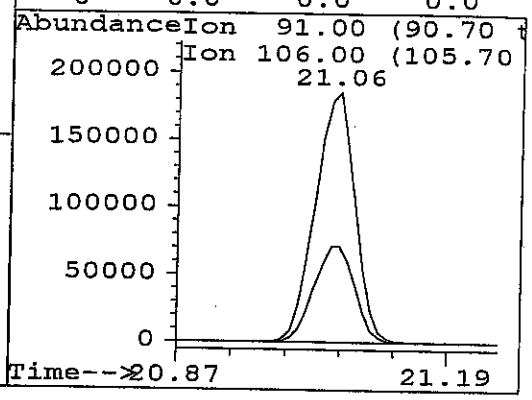


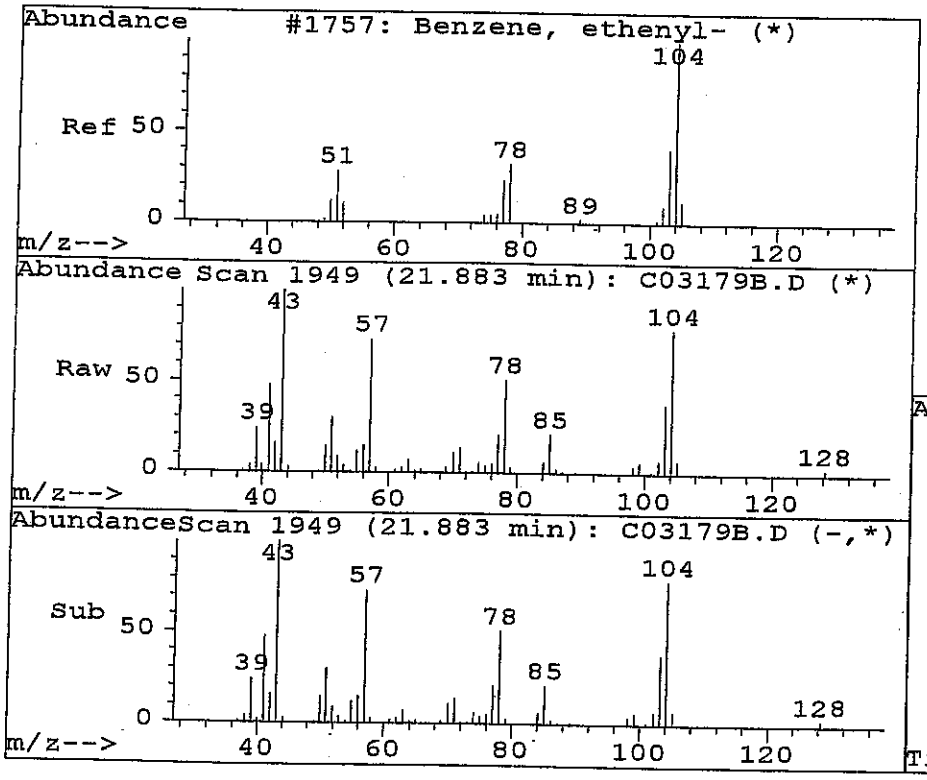


#63
m & p-Xylene
Concen: 2.63 ppbV
RT: 21.06 min Scan# 1864
Delta R.T. -0.22 min
Lab File: C03179B.D
Acq: 17 Mar 109 9:42 am

Tgt Ion:91 Resp: 617919

Ion	Ratio	Lower	Upper
91	100		
106	38.2	30.8	46.2
0	0.0	0.0	0.0
0	0.0	0.0	0.0

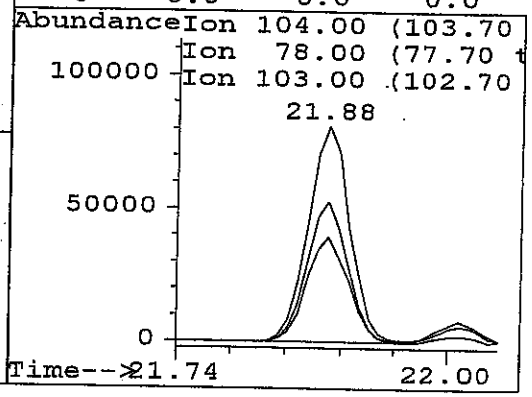


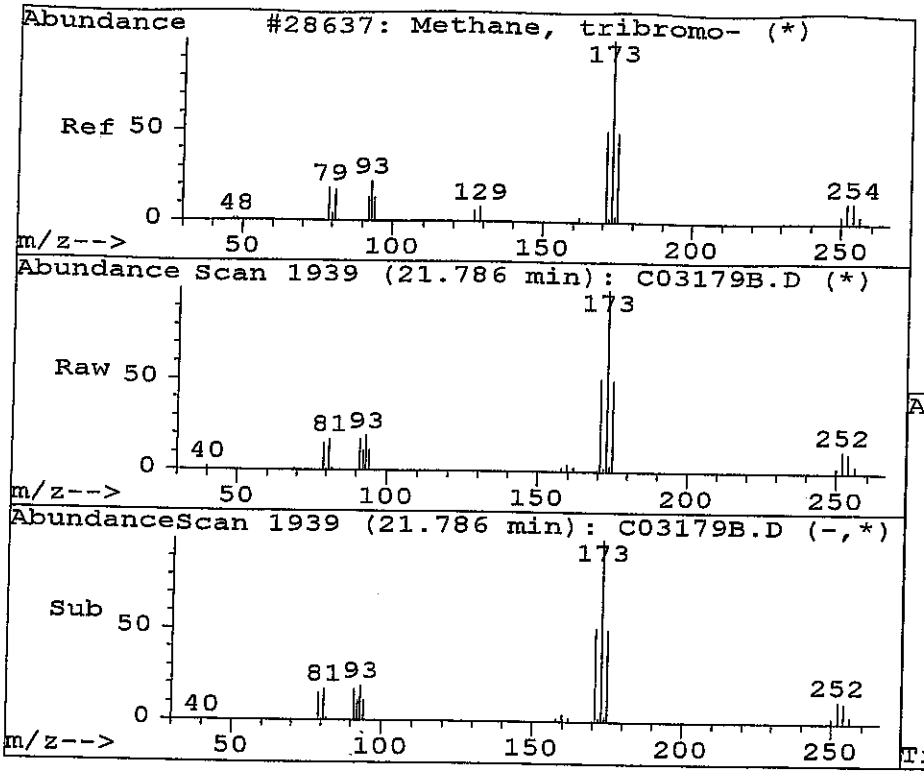


#64
Styrene
Concen: 1.35 ppbV
RT: 21.88 min Scan# 1949
Delta R.T. -0.26 min
Lab File: C03179B.D
Acq: 17 Mar 109 9:42 am

Tgt Ion:104 Resp: 224026

Ion	Ratio	Lower	Upper
104	100		
78	64.5	52.3	78.5
103	48.0	37.7	56.5
0	0.0	0.0	0.0

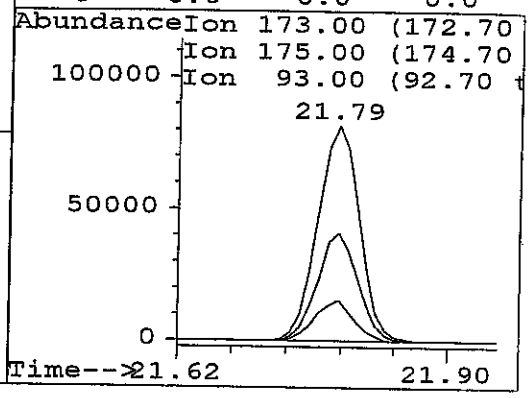


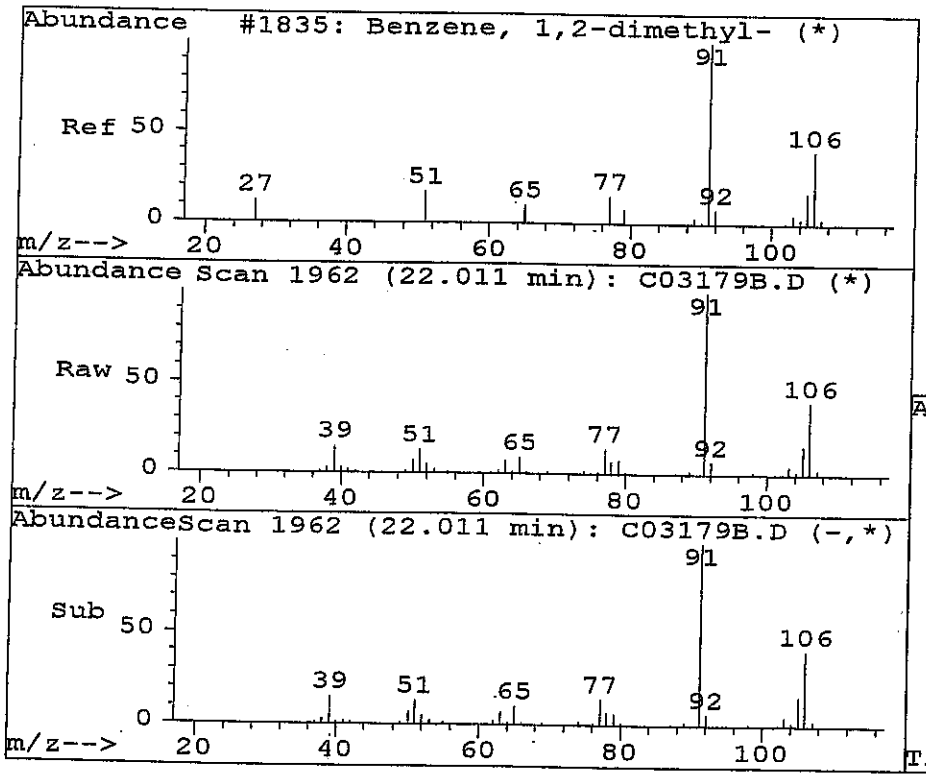


#65
Bromoform
Concen: 1.09 ppbV
RT: 21.79 min Scan# 1939
Delta R.T. -0.21 min
Lab File: C03179B.D
Acq: 17 Mar 109 9:42 am

Tgt Ion:173 Resp: 243927

Ion	Ratio	Lower	Upper
173	100		
175	50.0	38.6	57.8
93	18.9	14.0	21.0
0	0.0	0.0	0.0

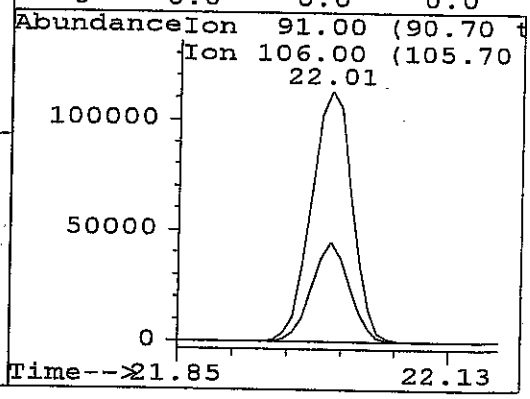


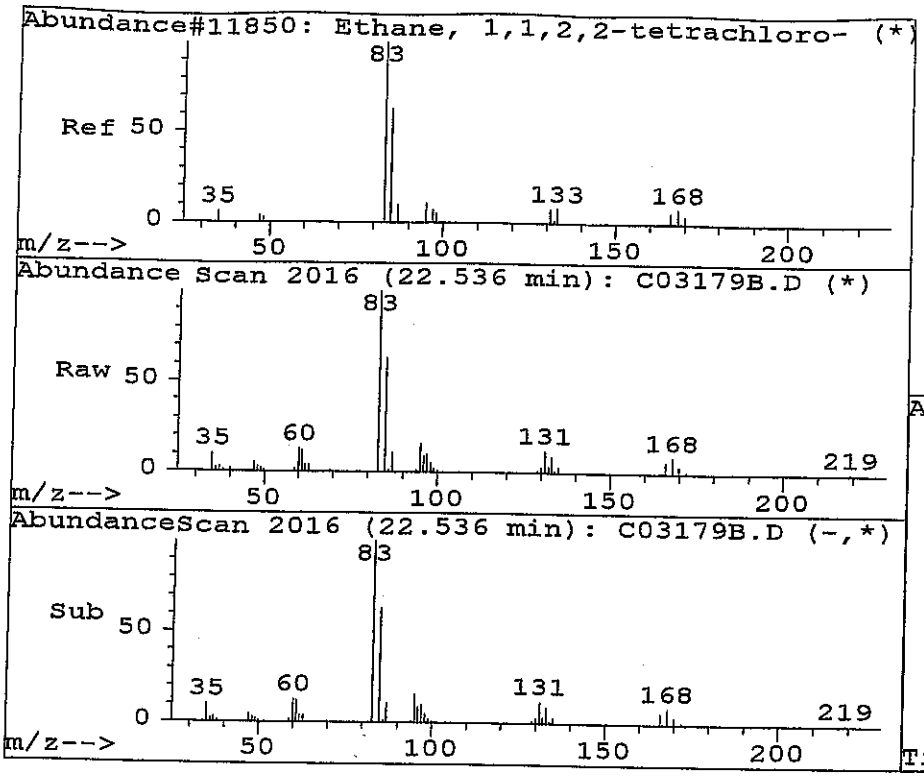


#66
o-Xylene
Concen: 1.29 ppbV
RT: 22.01 min Scan# 1962
Delta R.T. -0.24 min
Lab File: C03179B.D
Acq: 17 Mar 109 9:42 am

Tgt Ion:91 Resp: 329821

Ion	Ratio	Lower	Upper
91	100		
106	39.8	28.6	42.8
0	0.0	0.0	0.0
0	0.0	0.0	0.0

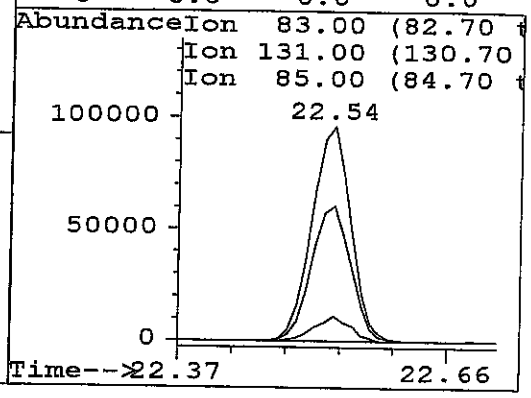


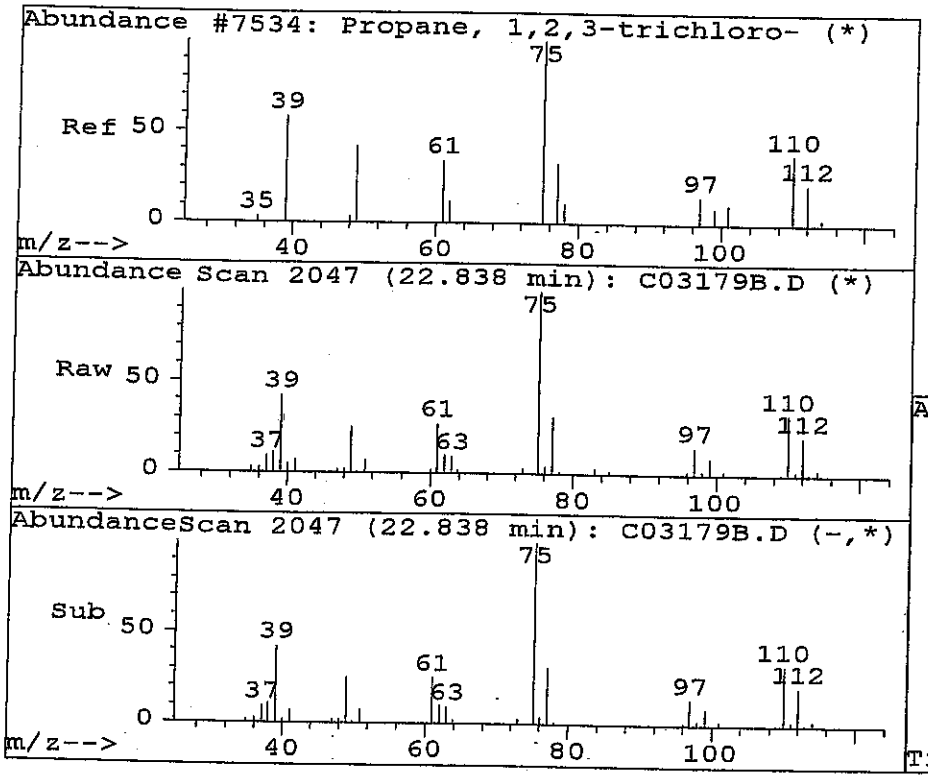


#67
1,1,2,2-Tetrachloroethane
Concen: 1.45 ppbV
RT: 22.54 min Scan# 2016
Delta R.T. -0.21 min
Lab File: C03179B.D
Acq: 17 Mar 109 9:42 am

Tgt Ion:83 Resp: 274703

Ion	Ratio	Lower	Upper
83	100		
131	11.7	10.1	15.1
85	62.8	52.4	78.6
0	0.0	0.0	0.0

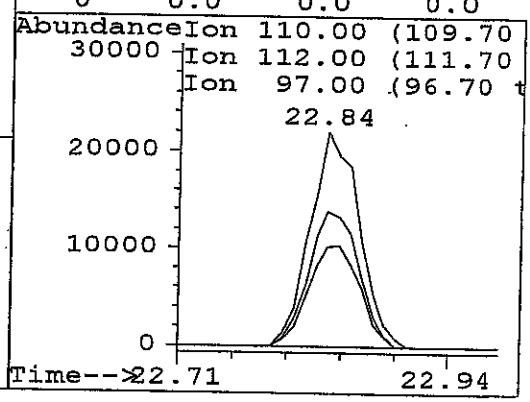


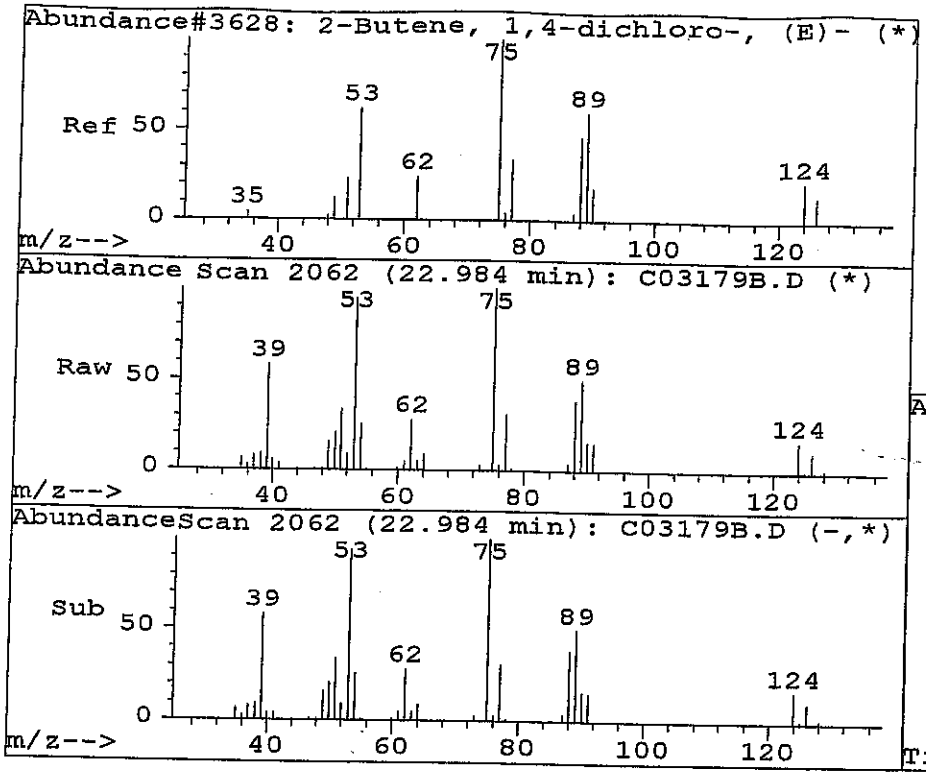


#68
1,2,3-Trichloropropane
Concen: 1.17 ppbV
RT: 22.84 min Scan# 2047
Delta R.T. -0.24 min
Lab File: C03179B.D
Acq: 17 Mar 109 9:42 am

Tgt Ion:110 Resp: 64244

Ion	Ratio	Lower	Upper
110	100		
112	63.0	51.6	77.4
97	46.3	35.4	53.2
0	0.0	0.0	0.0

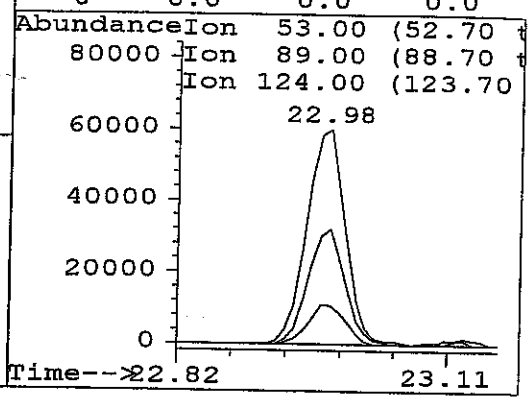


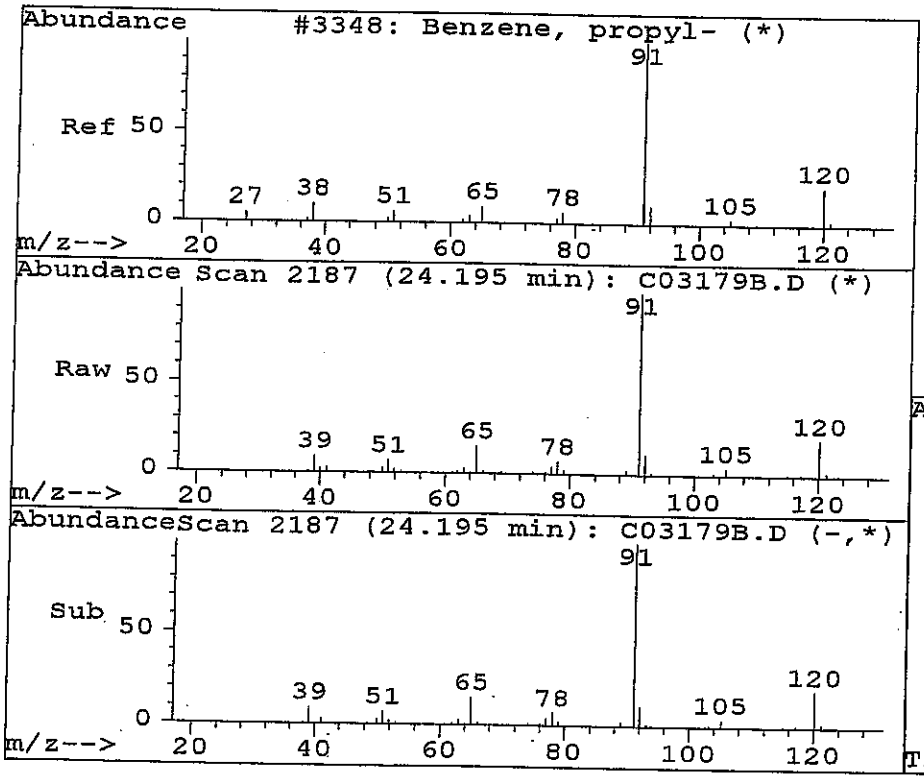


#69
t-1,4-Dichloro-2-butene
Concen: 3.23 ppbV
RT: 22.98 min Scan# 2062
Delta R.T. -0.25 min
Lab File: C03179B.D
Acq: 17 Mar 109 9:42 am

Tgt Ion:53 Resp: 171723

Ion	Ratio	Lower	Upper
53	100		
89	53.3	40.2	60.2
124	17.9	15.0	22.4
0	0.0	0.0	0.0

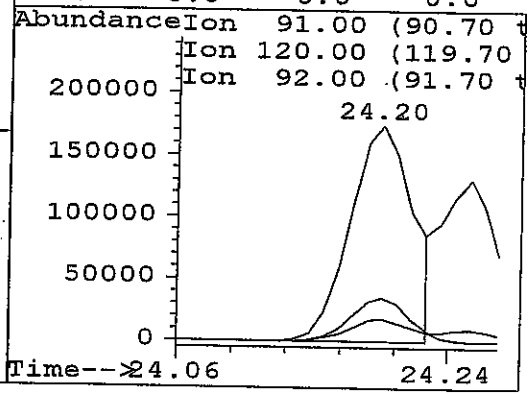


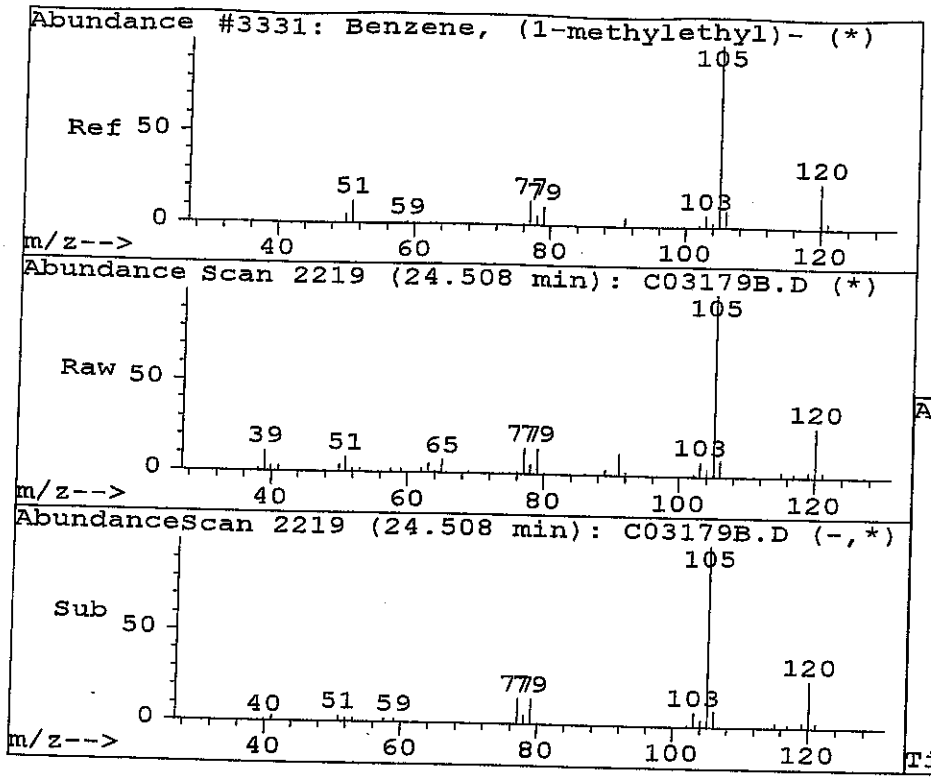


#70
n-Propylbenzene
Concen: 1.19 ppbV
RT: 24.20 min Scan# 2187
Delta R.T. -0.23 min
Lab File: C03179B.D
Acq: 17 Mar 109 9:42 am

Tgt Ion:91 Resp: 514907

Ion	Ratio	Lower	Upper
91	100		
120	18.9	14.3	21.5
92	11.1	7.9	11.9
0	0.0	0.0	0.0

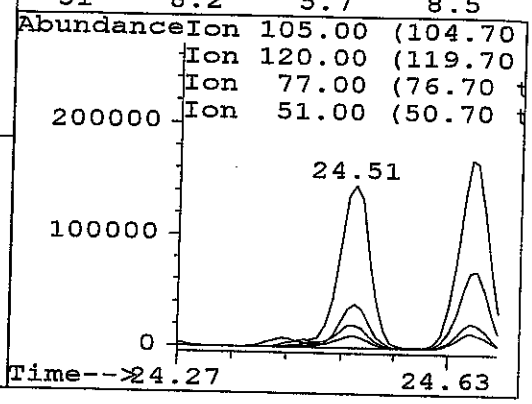


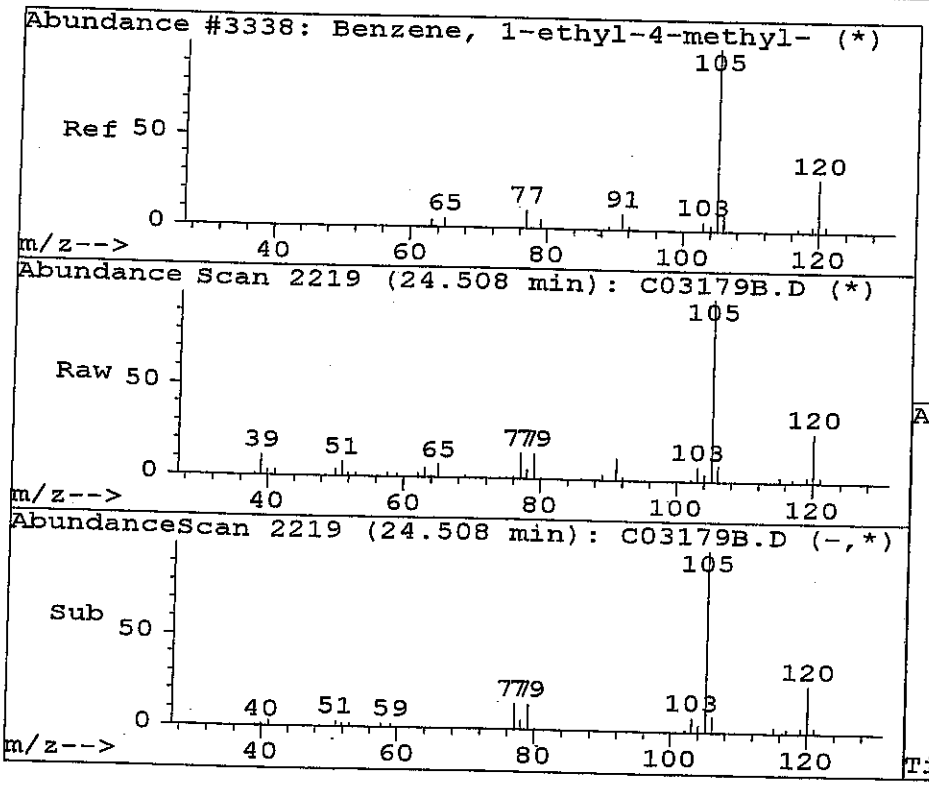


#71
Isopropylbenzene
Concen: 1.30 ppbV
RT: 24.51 min Scan# 2219
Delta R.T. -0.23 min
Lab File: C03179B.D
Acq: 17 Mar 109 9:42 am

Tgt Ion:105 Resp: 437379

Ion	Ratio	Lower	Upper
105	100		
120	25.5	20.2	30.4
77	16.7	12.5	18.7
51	8.2	5.7	8.5

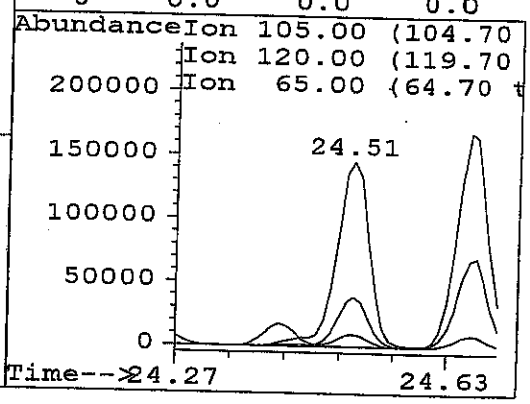


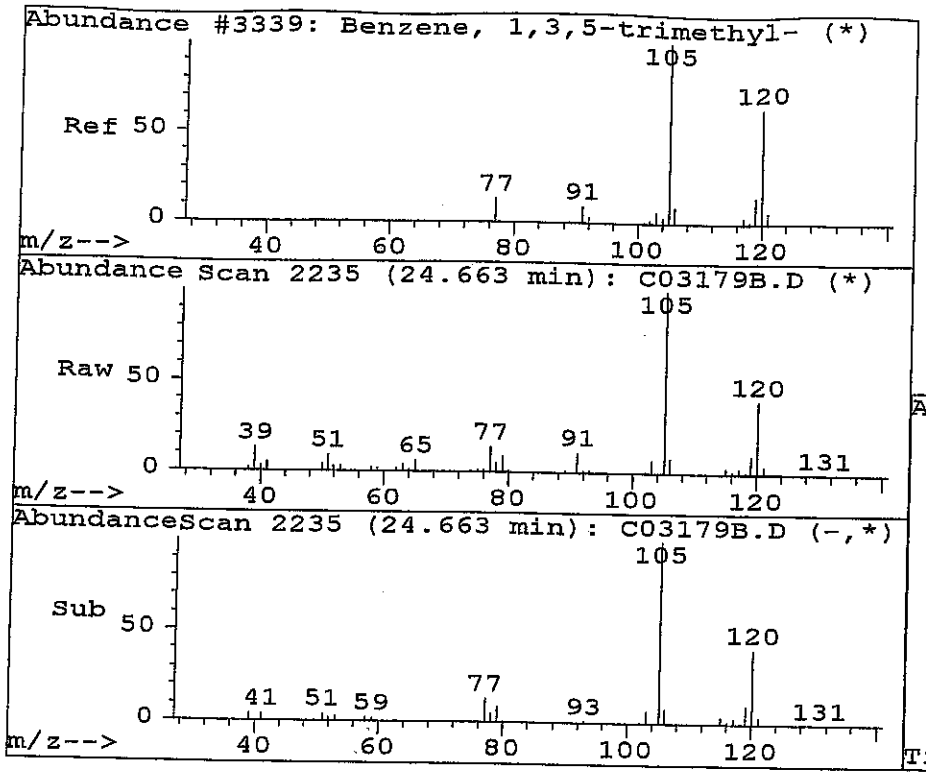


#72
4-Ethyltoluene
Concen: 1.28 ppbV
RT: 24.51 min Scan# 2219
Delta R.T. -0.23 min
Lab File: C03179B.D
Acq: 17 Mar 109 9:42 am

Tgt Ion:105 Resp: 437379

Ion	Ratio	Lower	Upper
105	100		
120	27.0	20.4	30.6
65	4.9	5.4	8.0#
0	0.0	0.0	0.0

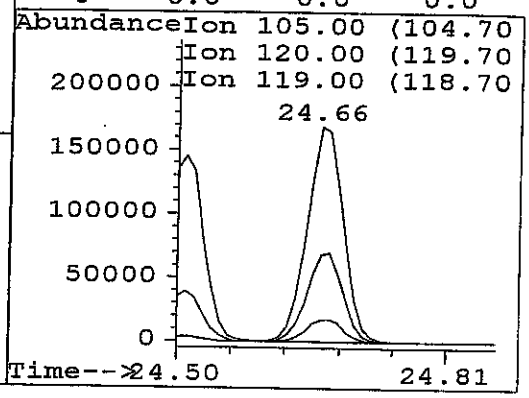


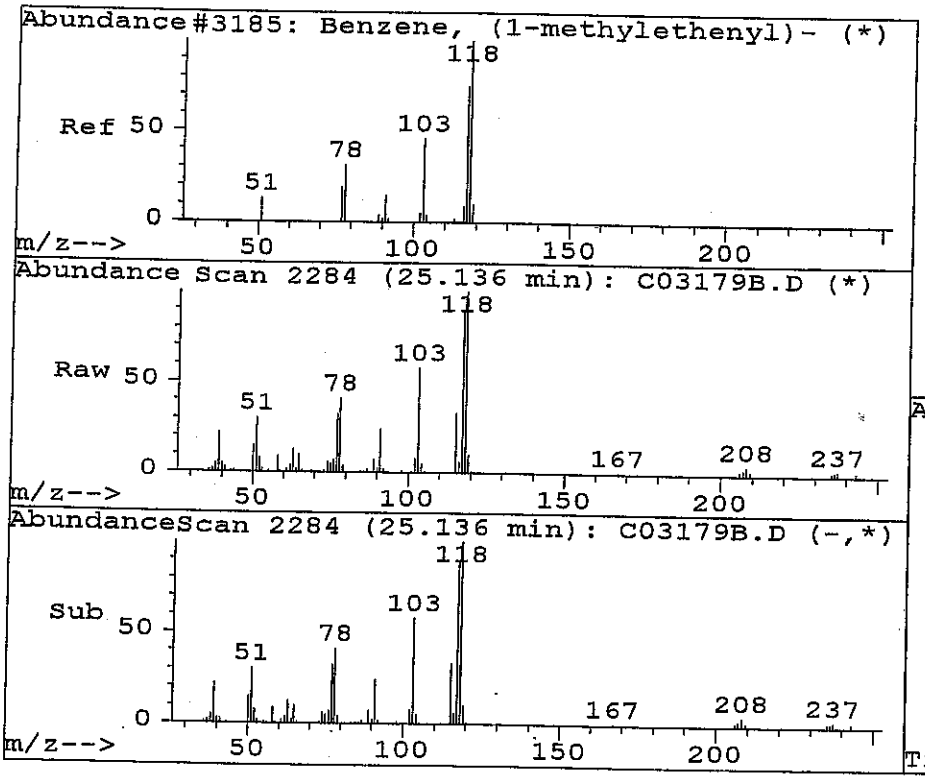


#73
1,3,5-Trimethylbenzene
Concen: 1.41 ppbV
RT: 24.66 min Scan# 2235
Delta R.T. -0.26 min
Lab File: C03179B.D
Acq: 17 Mar 109 9:42 am

Tgt Ion:105 Resp: 488965

Ion	Ratio	Lower	Upper
105	100		
120	40.5	32.1	48.1
119	10.1	8.2	12.4
0	0.0	0.0	0.0

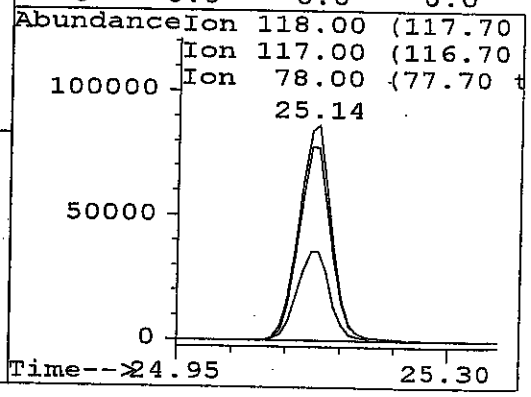


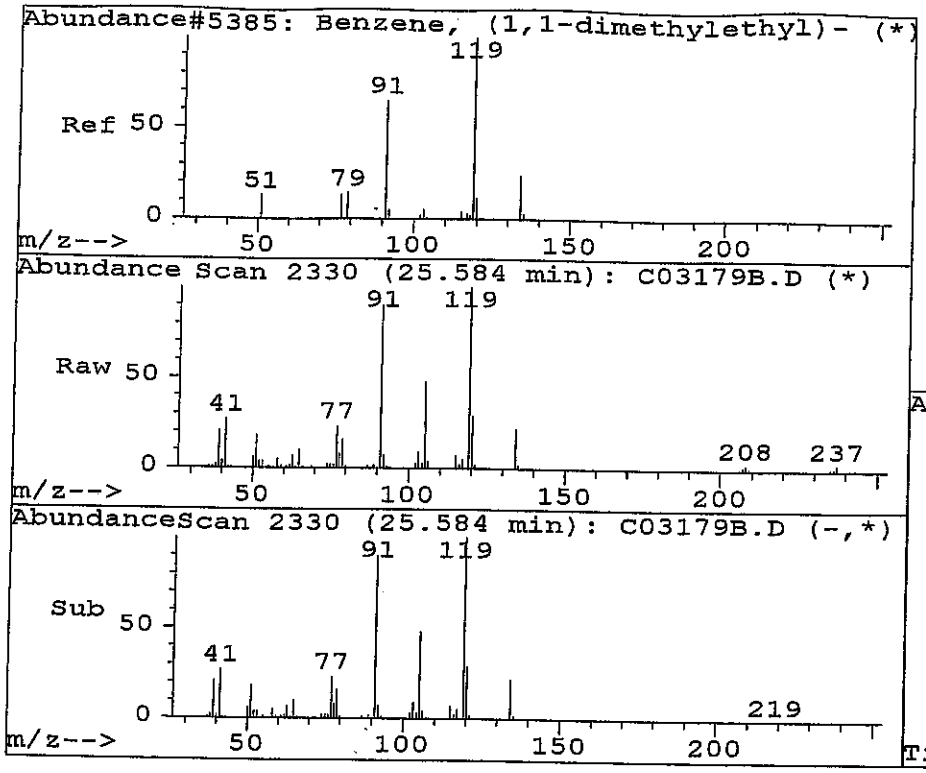


#74
Methylstyrene
Concen: 1.89 ppbV
RT: 25.14 min Scan# 2284
Delta R.T. -0.22 min
Lab File: C03179B.D
Acq: 17 Mar 109 9:42 am

Tgt Ion:118 Resp: 252870

Ion	Ratio	Lower	Upper
118	100		
117	89.1	71.4	107.0
78	40.9	32.2	48.2
0	0.0	0.0	0.0

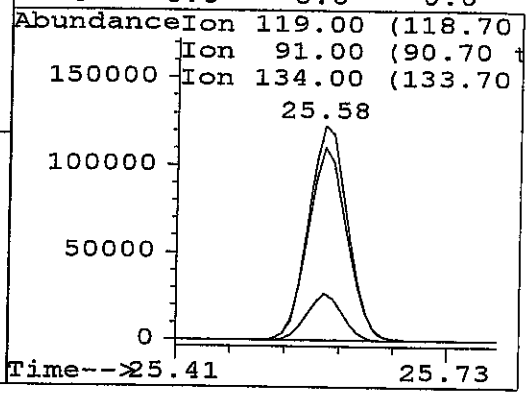


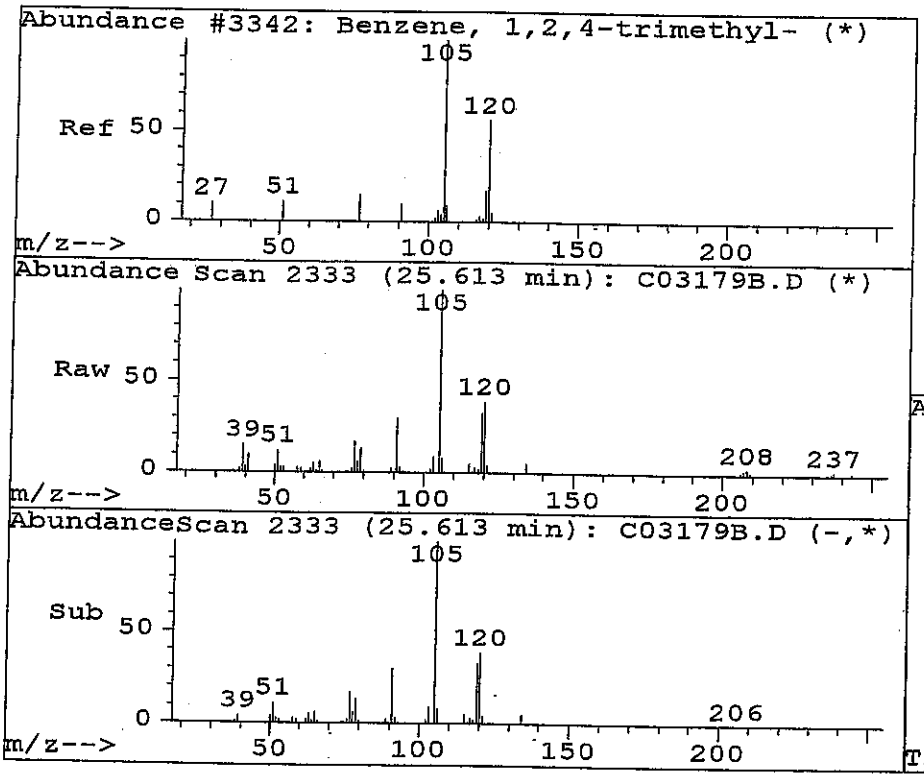


#75
tert-butyl benzene
Concen: 1.25 ppbV
RT: 25.58 min Scan# 2330
Delta R.T. -0.23 min
Lab File: C03179B.D
Acq: 17 Mar 109 9:42 am

Tgt Ion:119 Resp: 390637

Ion	Ratio	Lower	Upper
119	100		
91	90.3	75.7	113.5
134	19.6	15.6	23.4
0	0.0	0.0	0.0

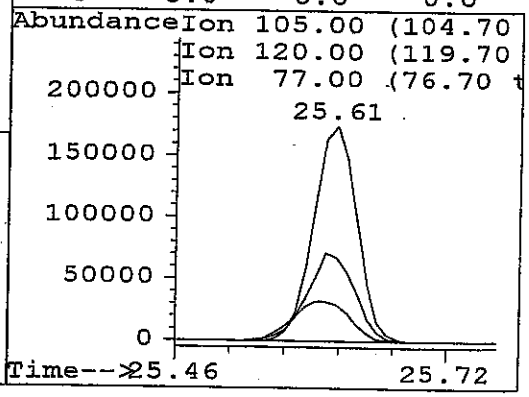


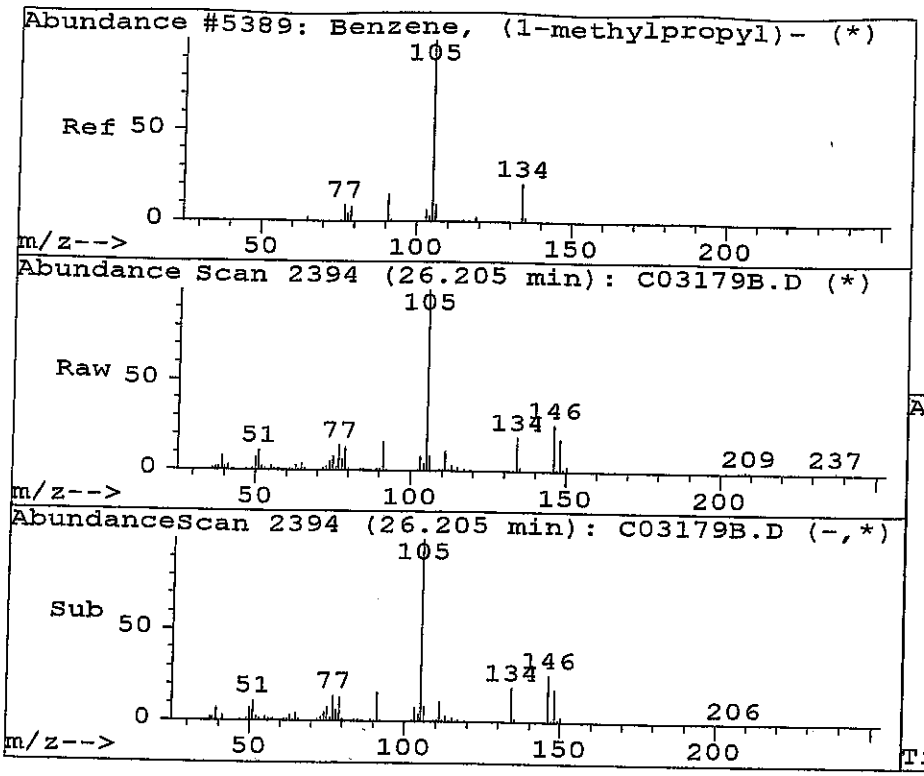


#76
1,2,4-Trimethylbenzene
Concen: 1.31 ppbV
RT: 25.61 min Scan# 2333
Delta R.T. -0.28 min
Lab File: C03179B.D
Acq: 17 Mar 109 9:42 am

Tgt Ion:105 Resp: 501359

Ion	Ratio	Lower	Upper
105	100		
120	38.7	32.2	48.4
77	16.6	15.0	22.4
0	0.0	0.0	0.0

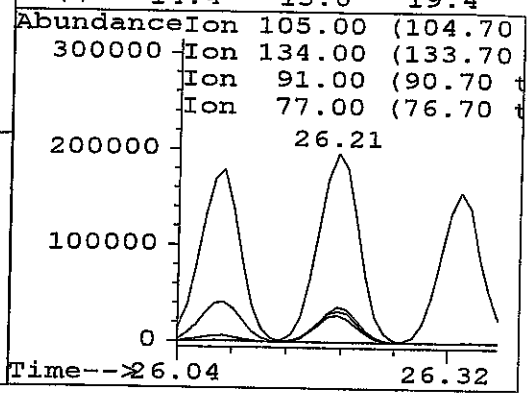


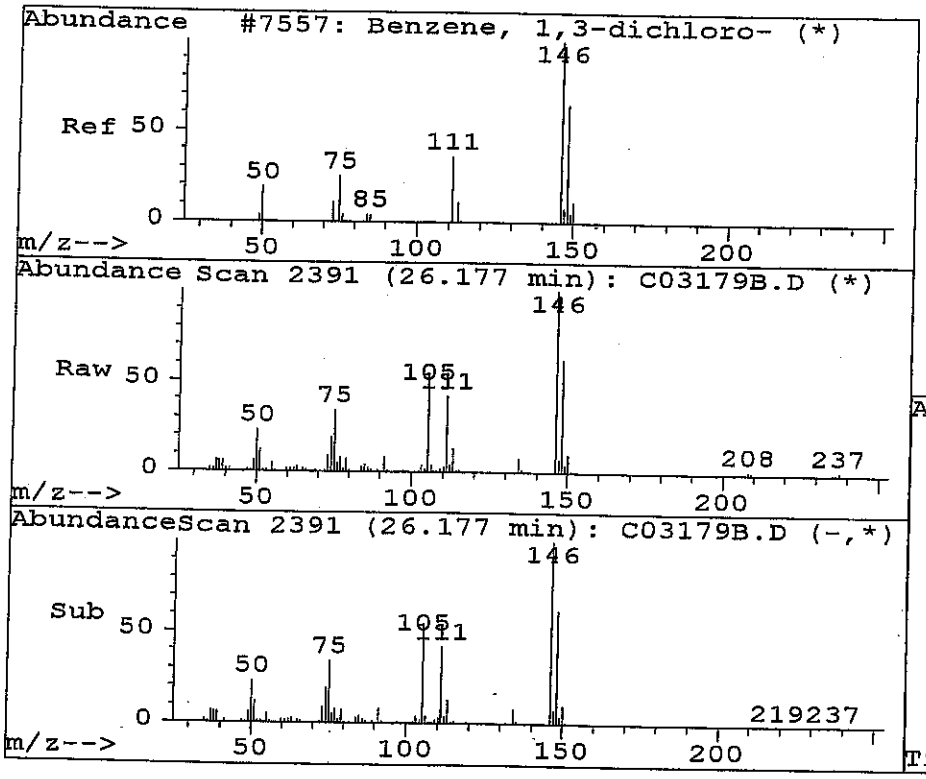


#77
sec-butylbenzene
Concen: 1.39 ppbV
RT: 26.21 min Scan# 2394
Delta R.T. -0.29 min
Lab File: C03179B.D
Acq: 17 Mar 109 9:42 am

Tgt Ion:105 Resp: 578680

Ion	Ratio	Lower	Upper
105	100		
134	18.1	15.2	22.8
91	16.8	13.8	20.8
77	14.4	13.0	19.4

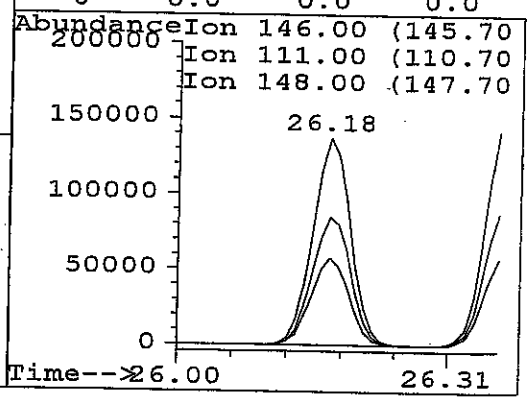


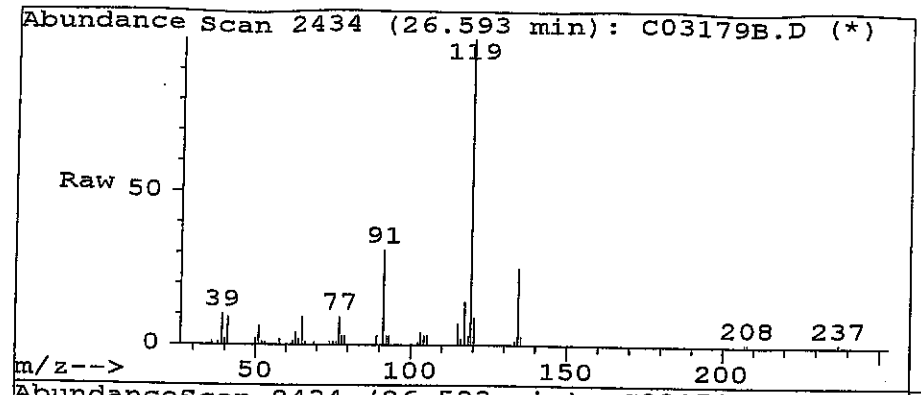


#78
1,3-Dichlorobenzene
Concen: 1.33 ppbV
RT: 26.18 min Scan# 2391
Delta R.T. -0.23 min
Lab File: C03179B.D
Acq: 17 Mar 109 9:42 am

Tgt Ion:146 Resp: 411700

Ion	Ratio	Lower	Upper
146	100		
111	42.1	34.6	52.0
148	61.7	52.2	78.2
0	0.0	0.0	0.0

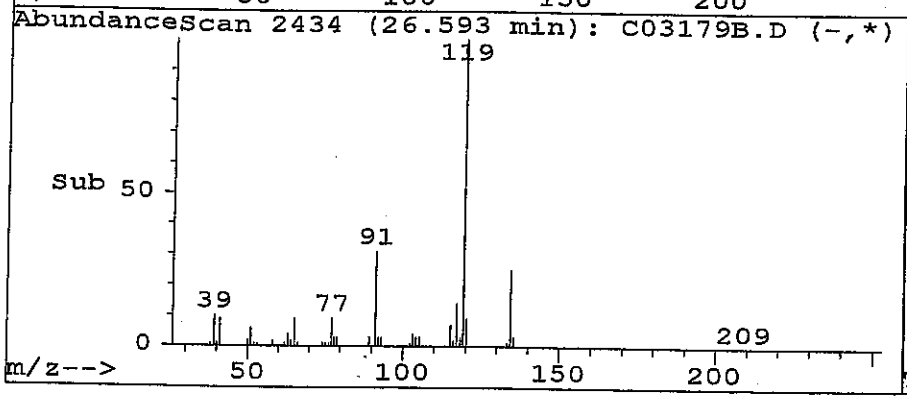


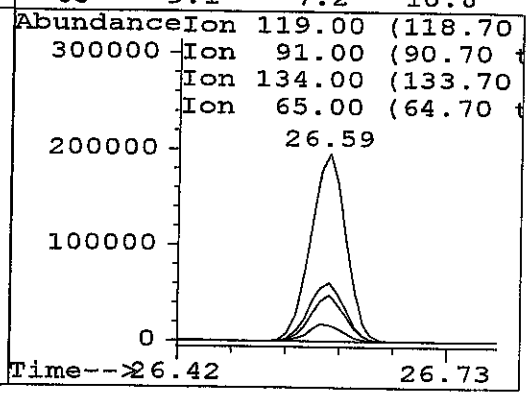


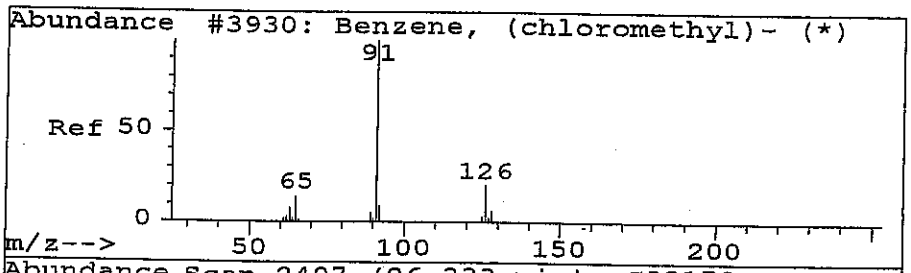
#79
Isopropyltoluene
Concen: 1.34 ppbV
RT: 26.59 min Scan# 2434
Delta R.T. -0.24 min
Lab File: C03179B.D
Acq: 17 Mar 109 9:42 am

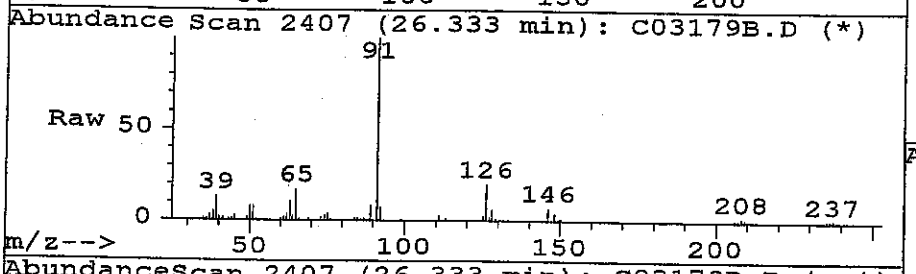
Tgt Ion:119 Resp: 552096

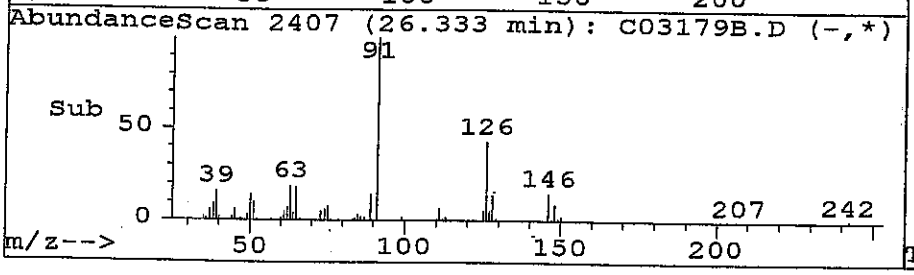
Ion	Ratio	Lower	Upper
119	100		
91	31.8	25.7	38.5
134	24.1	20.0	30.0
65	9.1	7.2	10.8







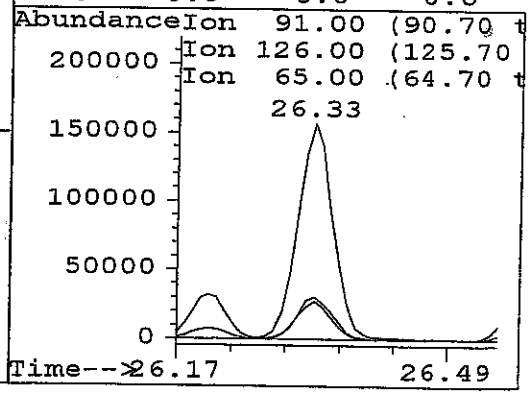


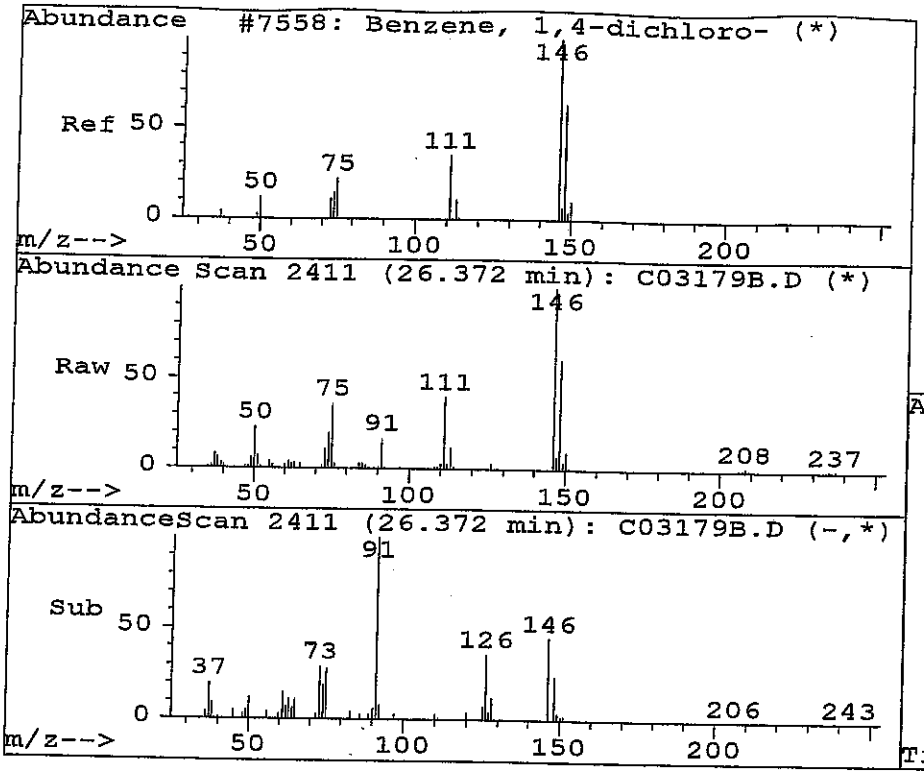


#80
Benzyl chloride
Concen: 1.34 ppbV
RT: 26.33 min Scan# 2407
Delta R.T. -0.28 min
Lab File: C03179B.D
Acq: 17 Mar 109 9:42 am

Tgt Ion:91 Resp: 459781

Ion	Ratio	Lower	Upper
91	100		
126	19.6	16.0	24.0
65	17.5	14.4	21.6
0	0.0	0.0	0.0

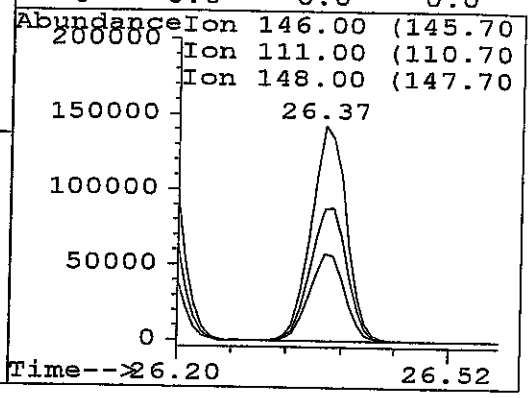


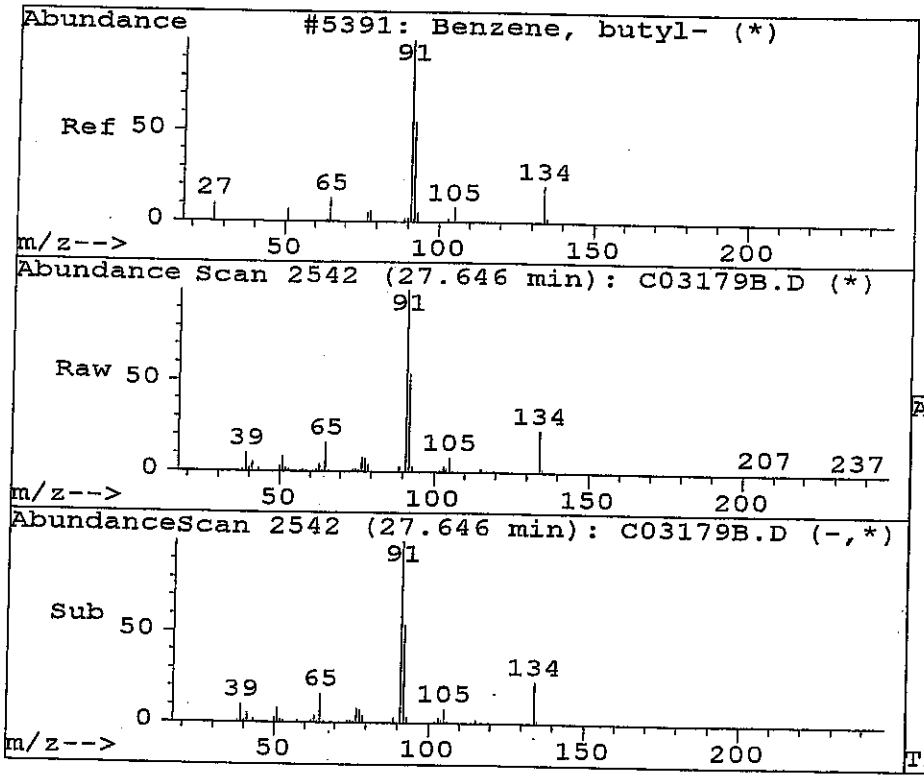


#81
1,4-Dichlorobenzene
Concen: 1.28 ppbV
RT: 26.37 min Scan# 2411
Delta R.T. -0.31 min
Lab File: C03179B.D
Acq: 17 Mar 109 9:42 am

Tgt Ion:146 Resp: 417021

Ion	Ratio	Lower	Upper
146	100		
111	40.5	34.3	51.5
148	61.4	52.6	78.8
0	0.0	0.0	0.0

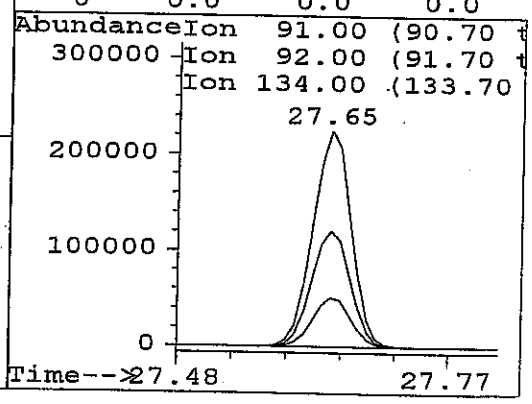


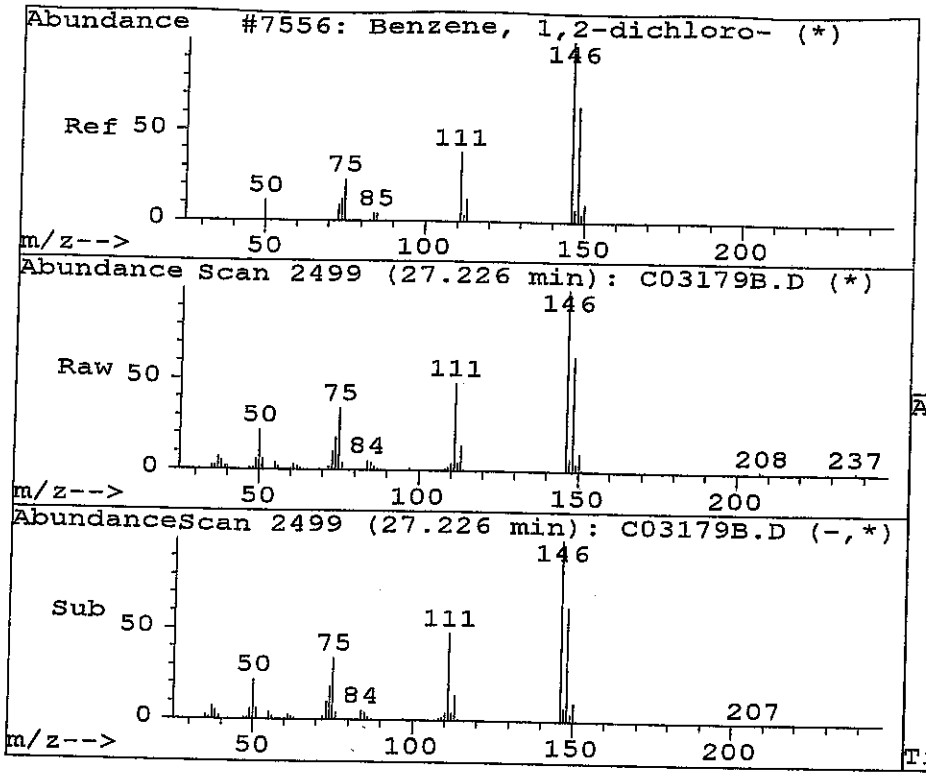


#82
n-Butylbenzene
Concen: 1.47 ppbV
RT: 27.65 min Scan# 2542
Delta R.T. -0.23 min
Lab File: C03179B.D
Acq: 17 Mar 109 9:42 am

Tgt Ion:91 Resp: 640508

Ion	Ratio	Lower	Upper
91	100		
92	54.9	43.4	65.2
134	23.0	19.8	29.6
0	0.0	0.0	0.0

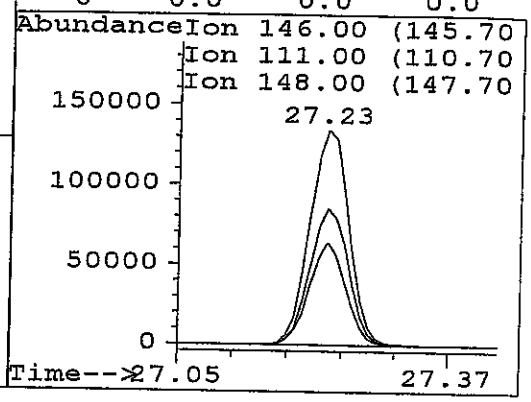


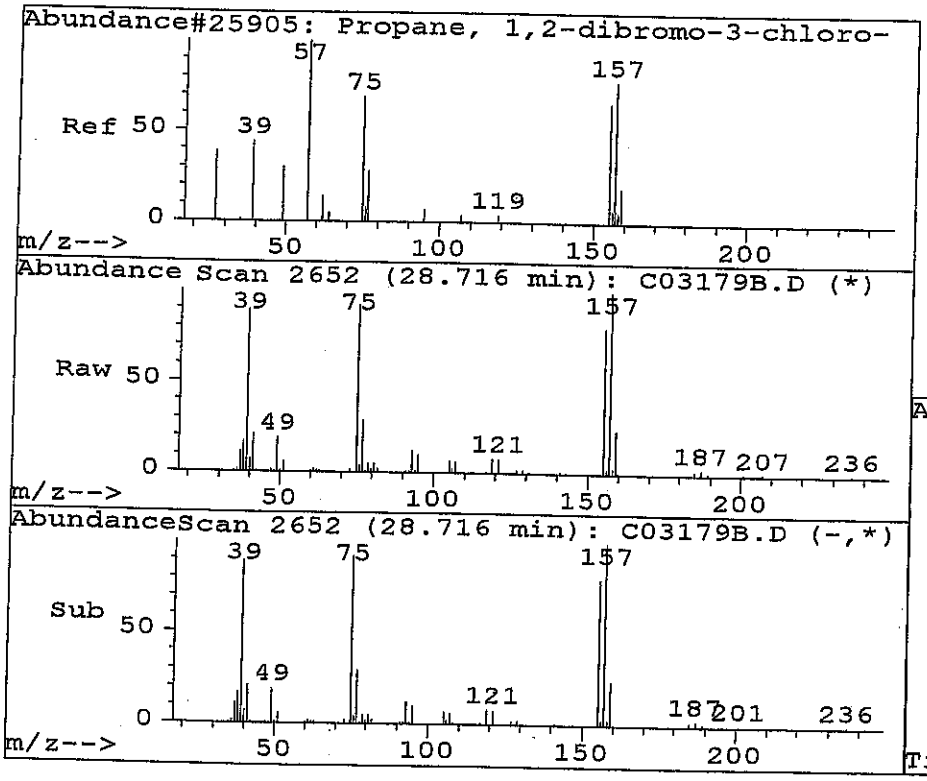


#83
1,2-Dichlorobenzene
Concen: 1.19 ppbV
RT: 27.23 min Scan# 2499
Delta R.T. -0.24 min
Lab File: C03179B.D
Acq: 17 Mar 109 9:42 am

Tgt Ion:146 Resp: 429307

Ion	Ratio	Lower	Upper
146	100		
111	47.5	35.0	52.6
148	63.2	48.5	72.7
0	0.0	0.0	0.0

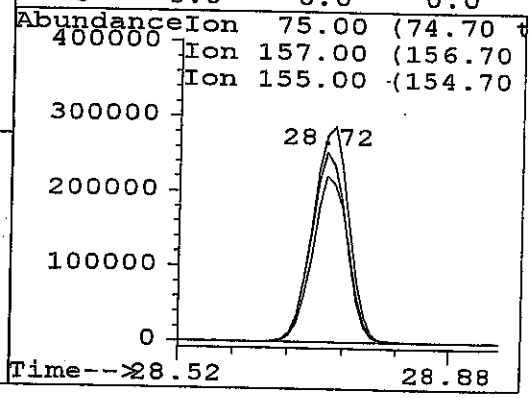


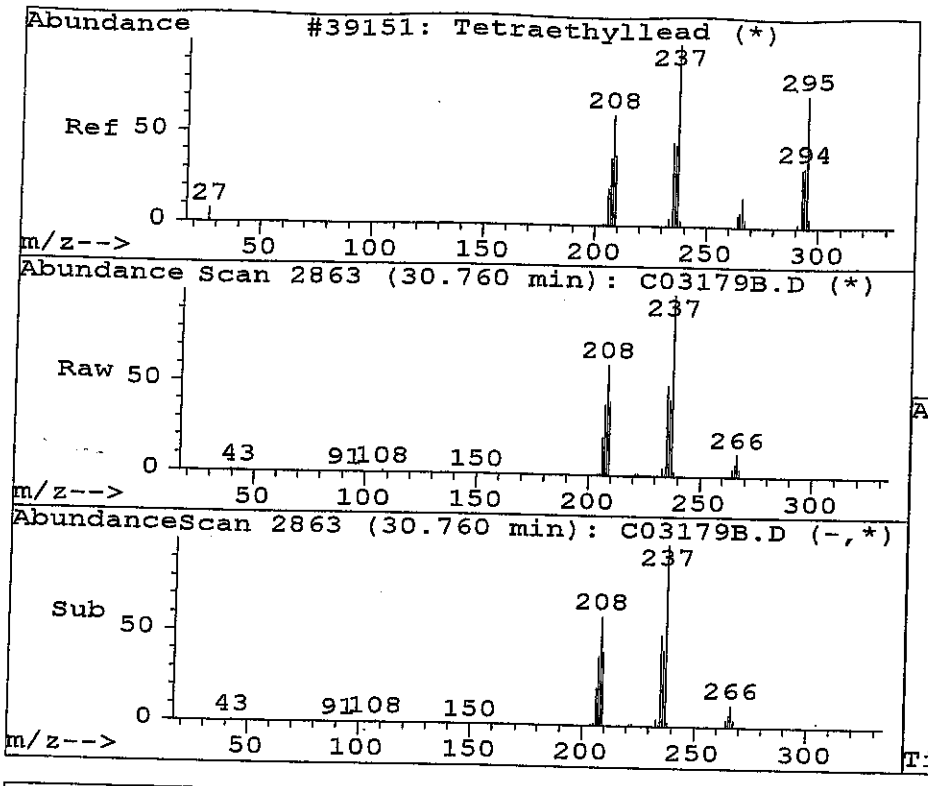


#84
1,2-Dibromo-3-chloropropane
Concen: 3.87 ppbV
RT: 28.72 min Scan# 2652
Delta R.T. -0.24 min
Lab File: C03179B.D
Acq: 17 Mar 109 9:42 am

Tgt Ion:75 Resp: 795765

Ion	Ratio	Lower	Upper
75	100		
157	108.8	87.7	131.5
155	87.3	65.6	98.4
0	0.0	0.0	0.0

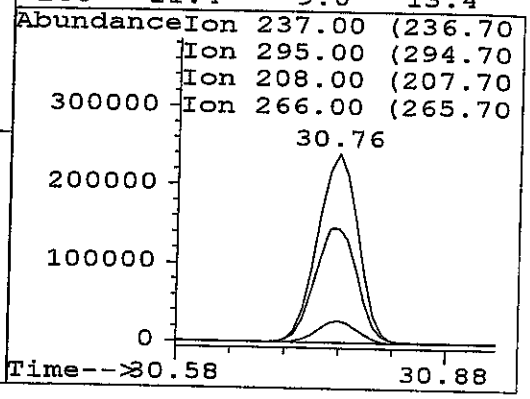


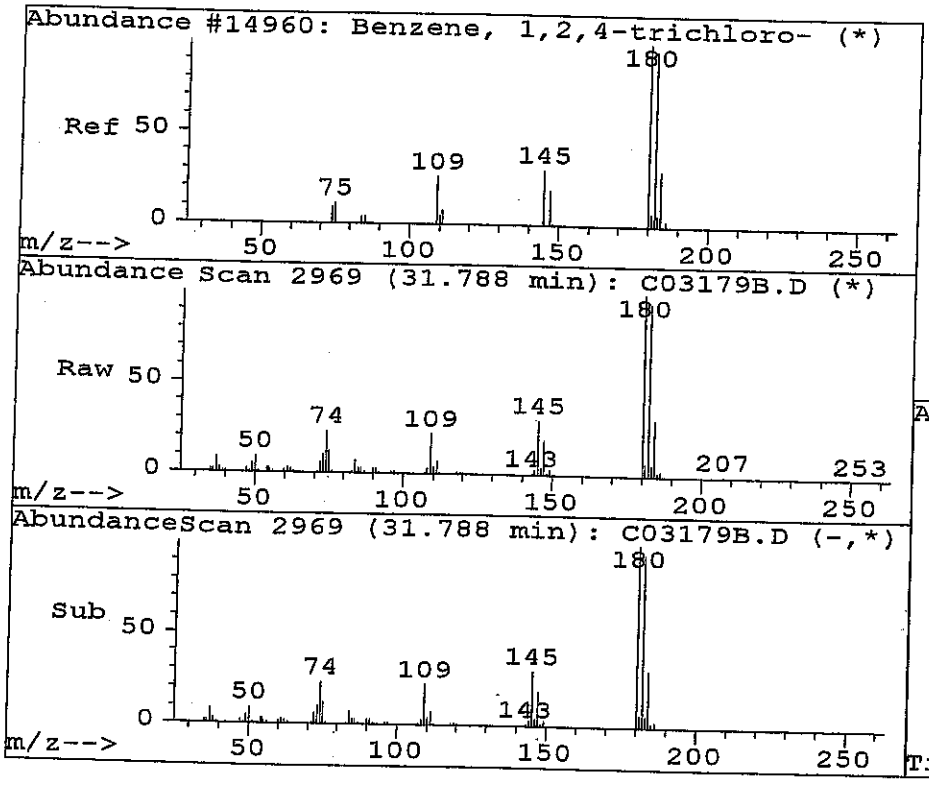


#85
Tetraethyl lead
Concen: 2.58 ppbV
RT: 30.76 min Scan# 2863
Delta R.T. -0.22 min
Lab File: C03179B.D
Acq: 17 Mar 109 9:42 am

Tgt Ion:237 Resp: 750701

Ion	Ratio	Lower	Upper
237	100		
295	0.0	0.0	0.0
208	64.0	47.4	71.2
266	11.4	9.0	13.4

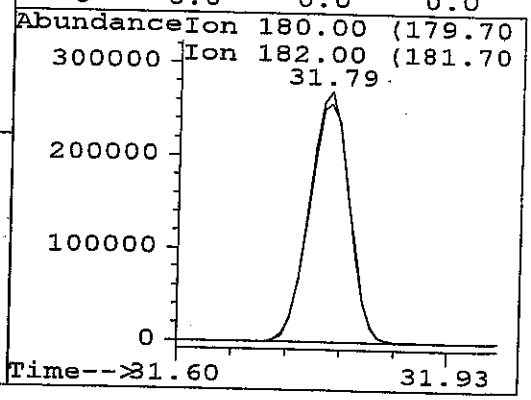


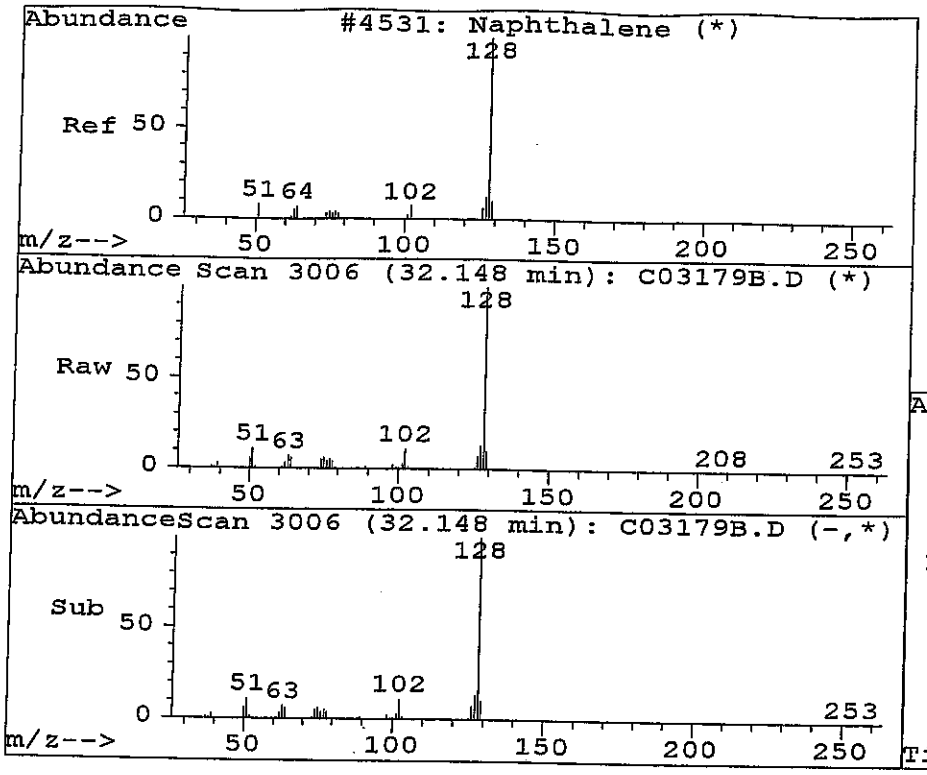


#86
1,2,4-Trichlorobenzene
Concen: 1.42 ppbV
RT: 31.79 min Scan# 2969
Delta R.T. -0.39 min
Lab File: C03179B.D
Acq: 17 Mar 109 9:42 am

Tgt Ion:180 Resp: 905400

Ion	Ratio	Lower	Upper
180	100		
182	95.1	67.8	101.6
0	0.0	0.0	0.0
0	0.0	0.0	0.0

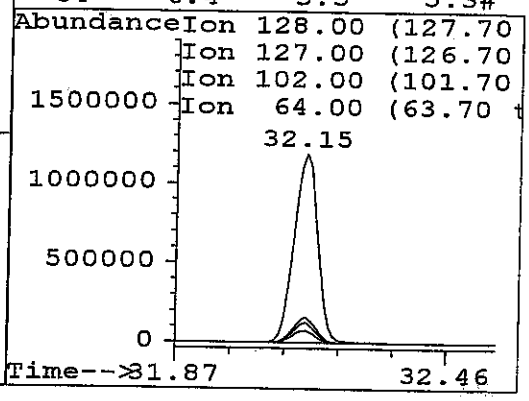


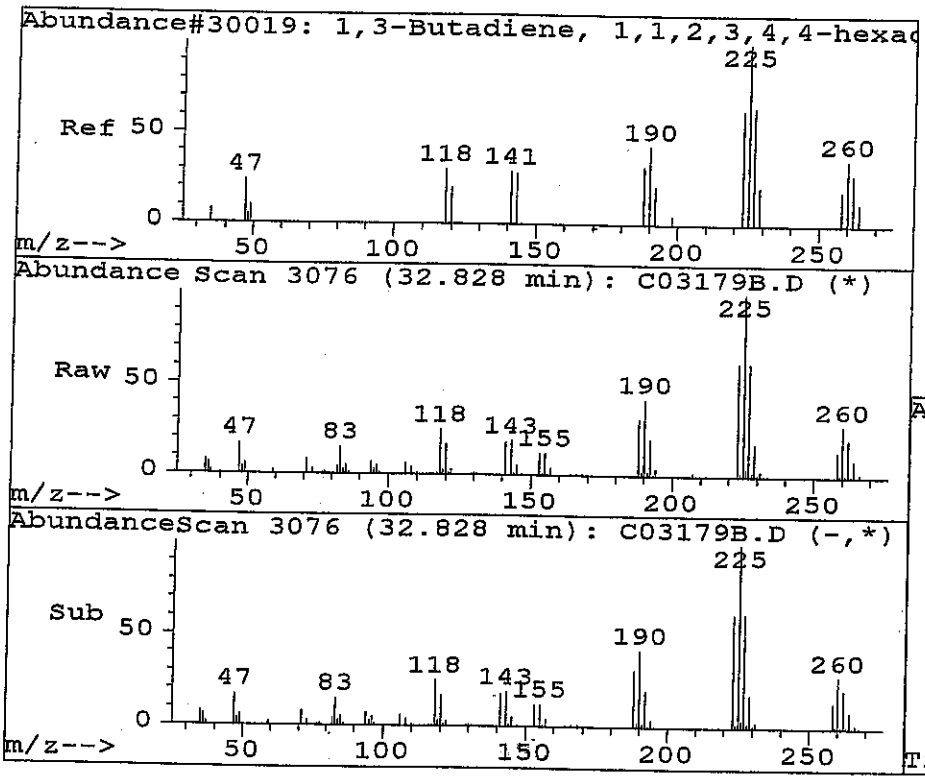


#87
Naphthalene
Concen: 6.14 ppbV
RT: 32.15 min Scan# 3006
Delta R.T. -0.26 min
Lab File: C03179B.D
Acq: 17 Mar 109 9:42 am

Tgt Ion:128 Resp: 4198495

Ion	Ratio	Lower	Upper
128	100		
127	13.3	10.6	16.0
102	10.6	9.3	13.9
64	6.4	3.5	5.3#

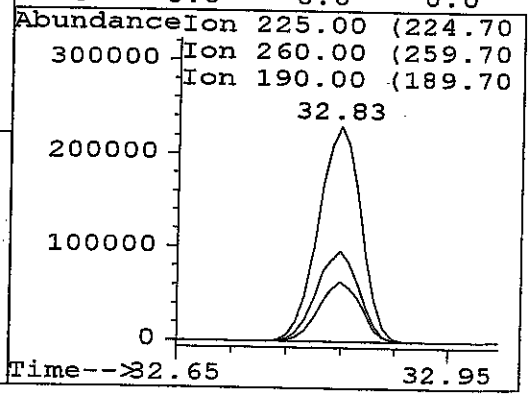


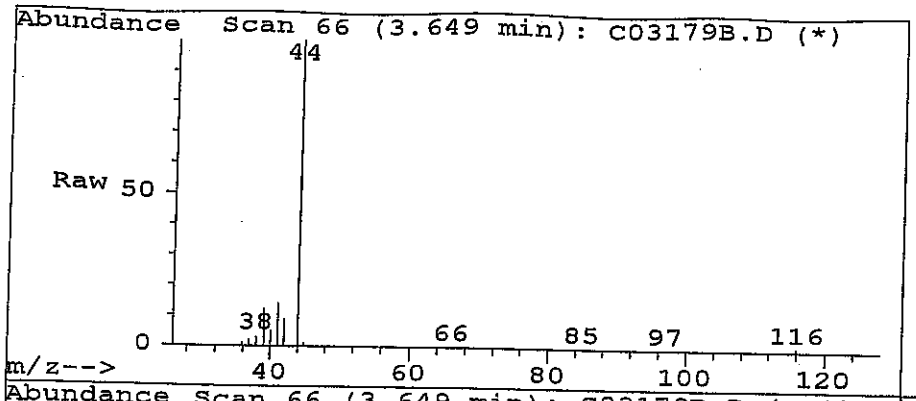


#88
Hexachlorobutadiene
Concen: 1.52 ppbV
RT: 32.83 min Scan# 3076
Delta R.T. -0.25 min
Lab File: C03179B.D
Acq: 17 Mar 109 9:42 am

Tgt Ion:225 Resp: 758051

Ion	Ratio	Lower	Upper
225	100		
260	27.8	21.0	31.6
190	42.0	36.0	54.0
0	0.0	0.0	0.0

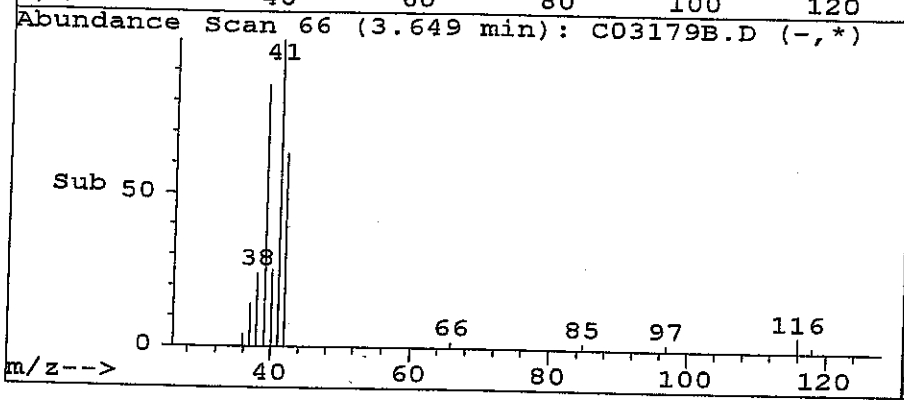


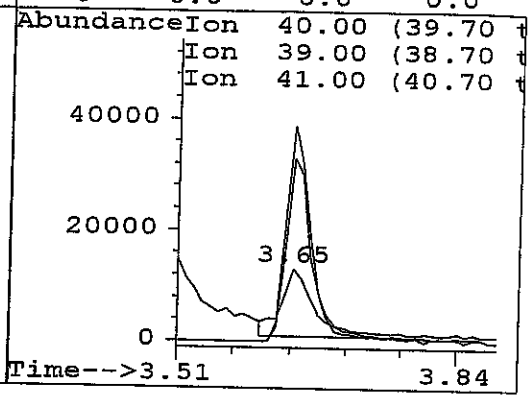


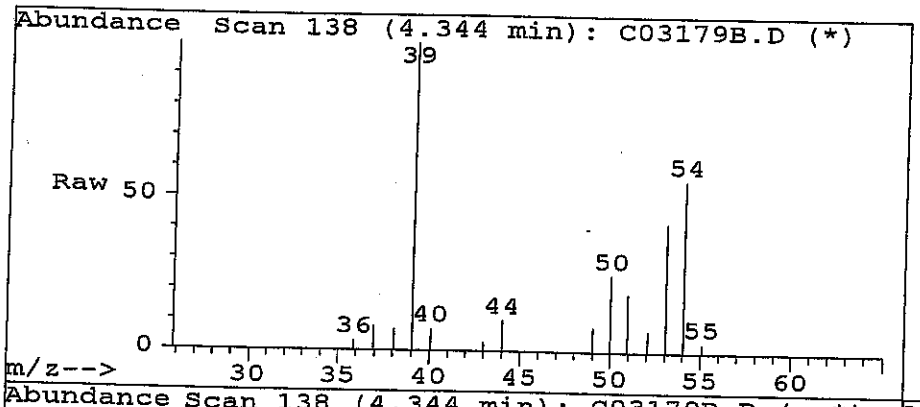
#89
Propylene
Concen: 3.00 ppbV
RT: 3.65 min Scan# 66
Delta R.T. -0.11 min
Lab File: C03179B.D
Acq: 17 Mar 109 9:42 am

Tgt Ion:40 Resp: 34907

Ion	Ratio	Lower	Upper
40	100		
39	199.3	238.8	358.2#
41	236.9	287.0	430.4#
0	0.0	0.0	0.0



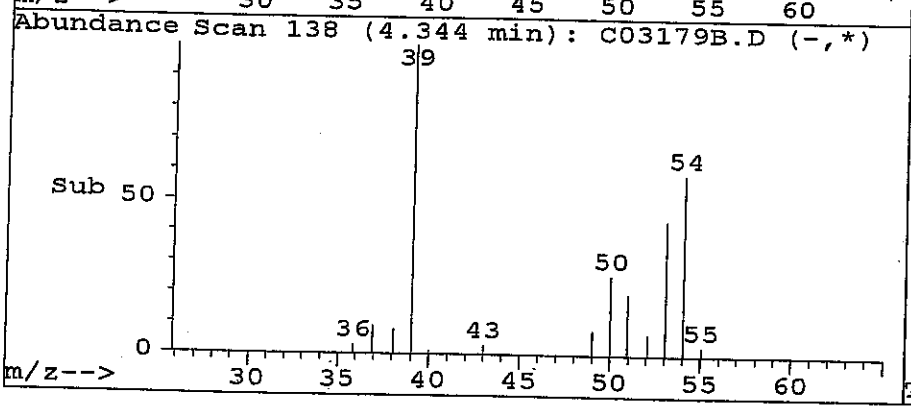


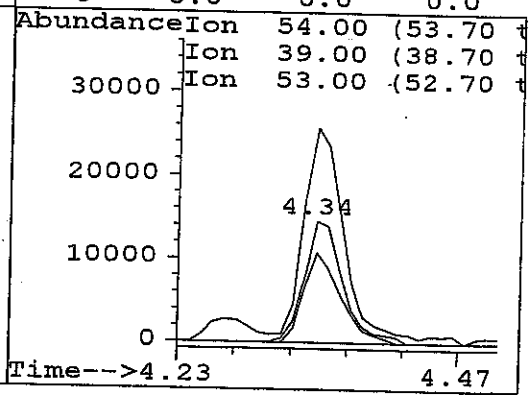


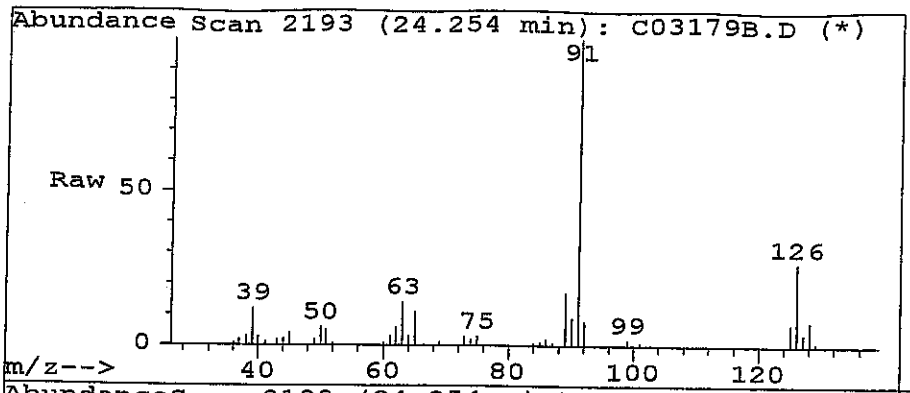
#90
1,3-Butadiene
Concen: 1.34 ppbV
RT: 4.34 min Scan# 138
Delta R.T. -0.13 min
Lab File: C03179B.D
Acq: 17 Mar 109 9:42 am

Tgt Ion:54 Resp: 32969

Ion	Ratio	Lower	Upper
54	100		
39	185.2	140.9	211.3
53	71.3	58.1	87.1
0	0.0	0.0	0.0



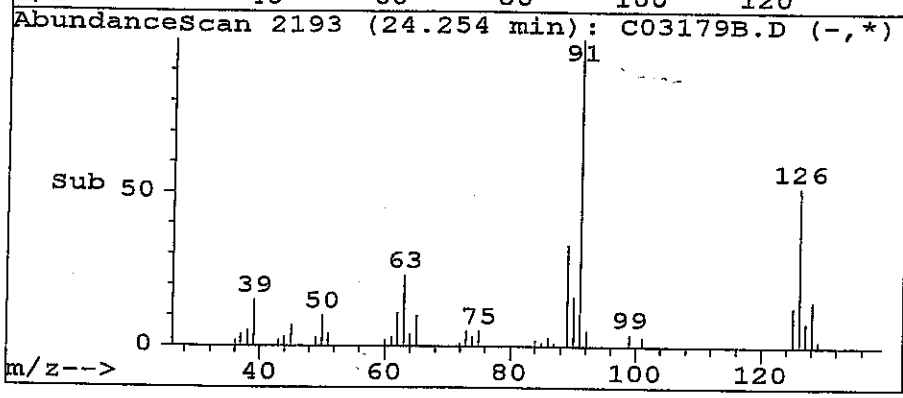


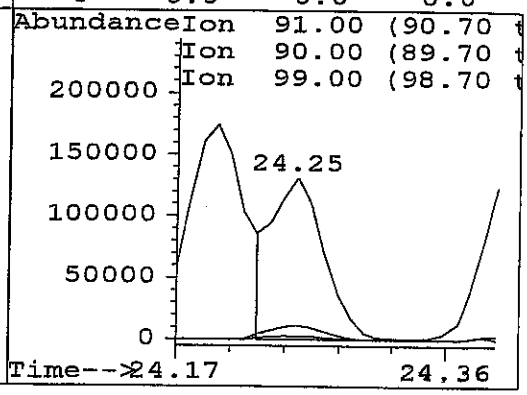


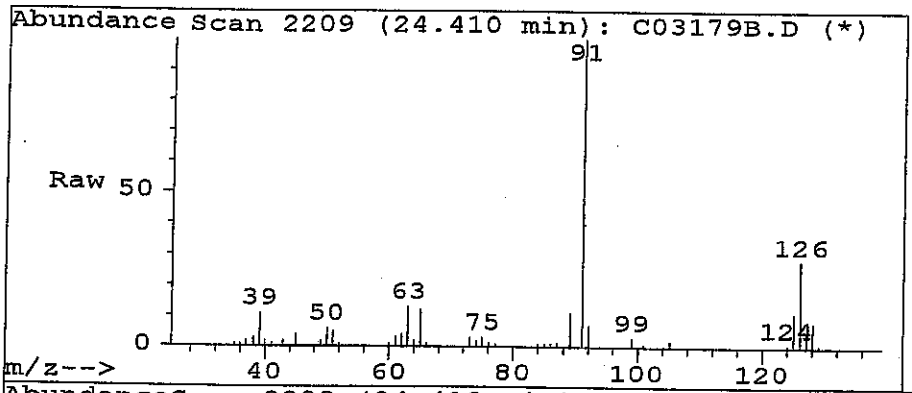
#92
2-Chlorotoluene
Concen: 1.08 ppbV m
RT: 24.25 min Scan# 2193
Delta R.T. -0.21 min
Lab File: C03179B.D
Acq: 17 Mar 109 9:42 am

Tgt Ion:91 Resp: 342293

Ion	Ratio	Lower	Upper
91	100		
90	8.7	0.0	0.0#
99	2.0	0.0	0.0#
0	0.0	0.0	0.0



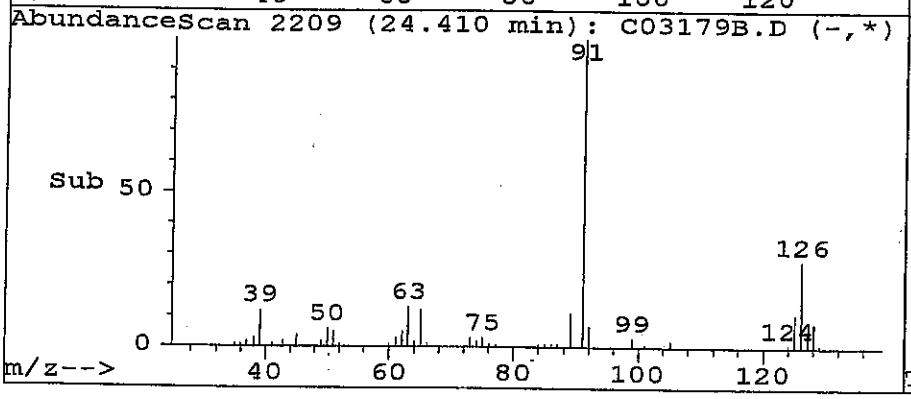


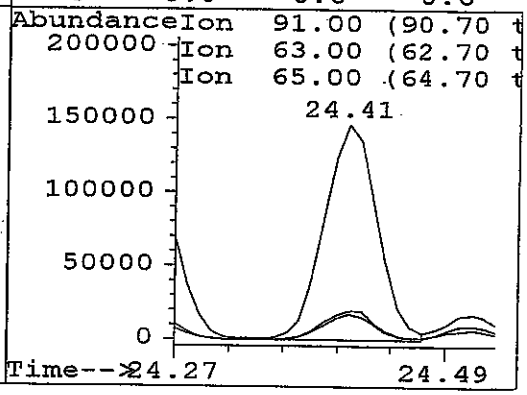


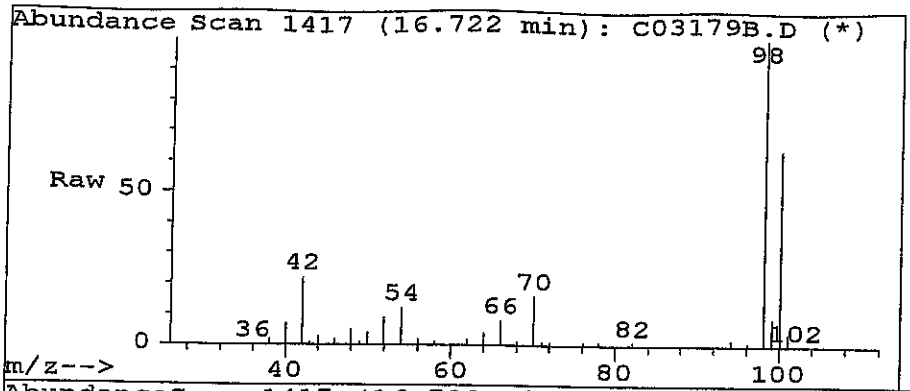
#93
4-Chlorotoluene
Concen: 1.29 ppbV
RT: 24.41 min Scan# 2209
Delta R.T. -0.24 min
Lab File: C03179B.D
Acq: 17 Mar 109 9:42 am

Tgt Ion:91 Resp: 427755

Ion	Ratio	Lower	Upper
91	100		
63	13.7	11.4	17.2
65	11.7	9.6	14.4
0	0.0	0.0	0.0



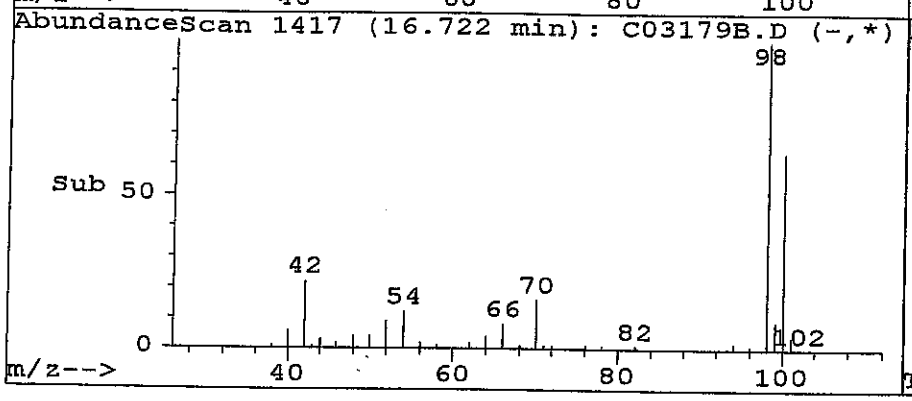


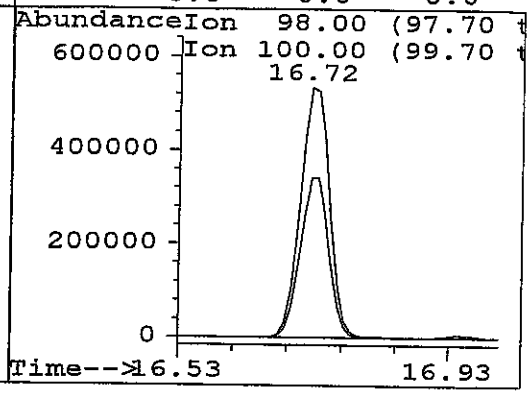


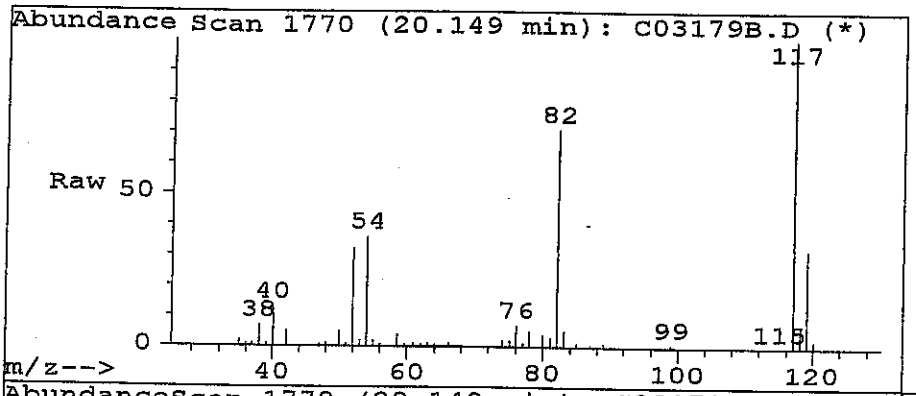
#94
Toluene-d8
Concen: 10.44 ppbV
RT: 16.72 min Scan# 1417
Delta R.T. -0.22 min
Lab File: C03179B.D
Acq: 17 Mar 109 9:42 am

Tgt Ion:98 Resp: 1590486

Ion	Ratio	Lower	Upper
98	100		
100	63.8	50.2	75.2
0	0.0	0.0	0.0
0	0.0	0.0	0.0



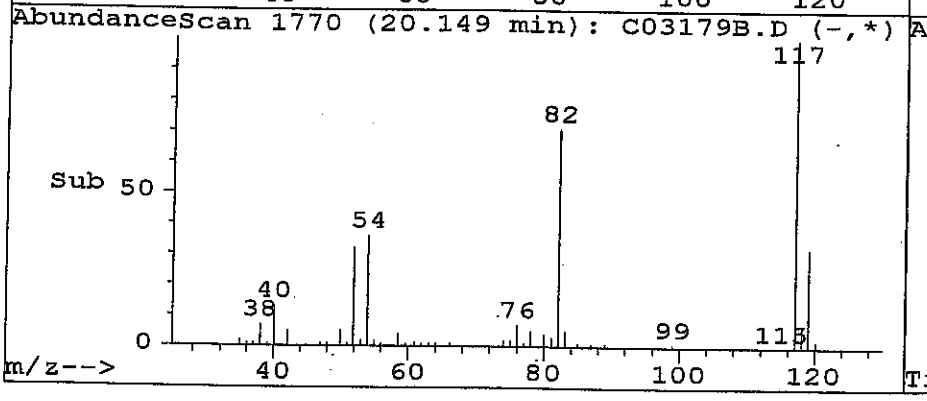


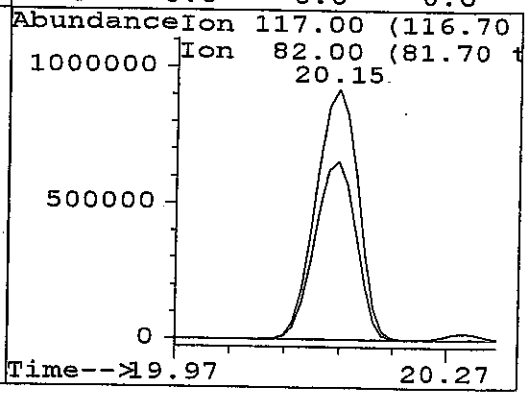


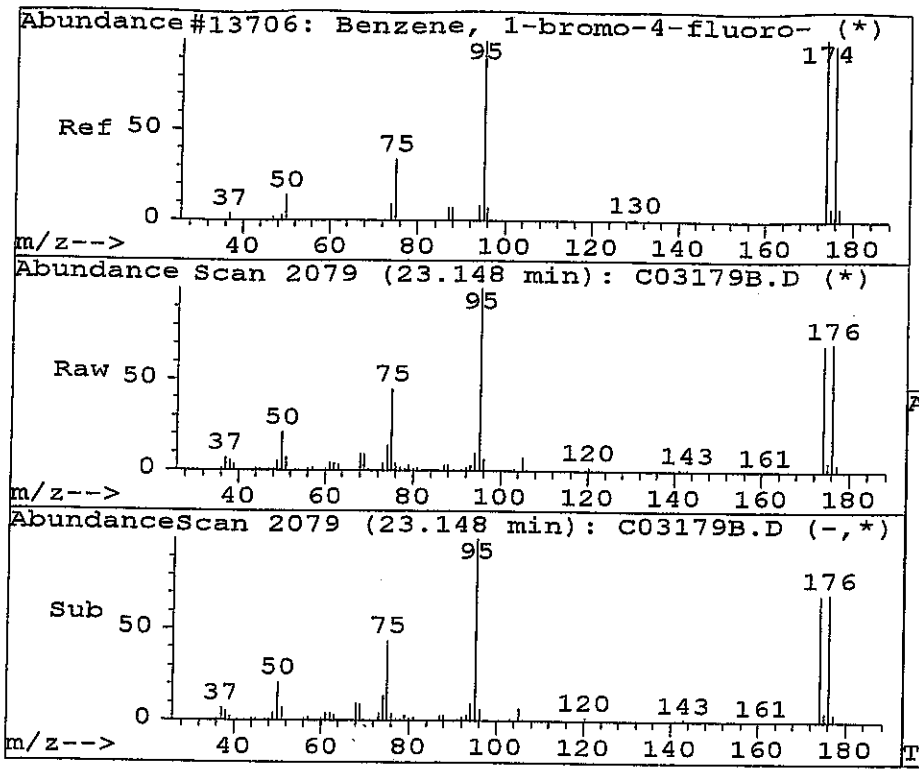
#95
Chlorobenzene-d5
Concen: 22.12 ppbV
RT: 20.15 min Scan# 1770
Delta R.T. -0.21 min
Lab File: C03179B.D
Acq: 17 Mar 109 9:42 am

Tgt Ion:117 Resp: 2937451

Ion	Ratio	Lower	Upper
117	100		
82	71.3	54.6	82.0
0	0.0	0.0	0.0
0	0.0	0.0	0.0



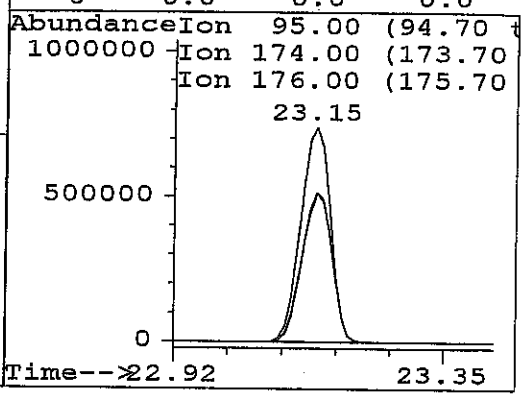




#96
1,4-Bromofluorobenzene
Concen: 11.12 ppbV
RT: 23.15 min Scan# 2079
Delta R.T. -0.23 min
Lab File: C03179B.D
Acq: 17 Mar 109 9:42 am

Tgt Ion:95 Resp: 2352342

Ion	Ratio	Lower	Upper
95	100		
174	69.2	56.4	84.6
176	69.6	56.7	85.1
0	0.0	0.0	0.0



Quantitation Report

Data File : C:\MSCHEM\2\DATA\03179M~1\C03179C.D
Acq Time : 17 Mar 109 10:25 am
Sample : ST60022 + ST60350
Misc : 0.25
Quant Time: Mar 17 12:04 19109

Operator: KB
Inst : 5970 - In
Multiplr: 1.00

Method : C:\MSCHEM\2\METHODS\1T15EXAY.M
Title : EPA TO-15
Last Update : Tue Mar 17 14:18:15 2009
Response via : Multiple Level Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene	11.16	168	2643183	20.00	ppbV	-0.22
35) 1,4-Difluorobenzene	12.94	114	2659938	20.00	ppbV	-0.23
System Monitoring Compounds						%Recovery
94) Toluene-d8	16.72	98	1479389	9.89	ppbV	197.78%
95) Chlorobenzene-d5	20.15	117	2736627	19.78	ppbV	197.77%
96) 1,4-Bromofluorobenzene	23.16	95	2176179	10.27	ppbV	205.46%
Target Compounds						Qvalue
2) Dichlorodifluoromethane	3.74	85	22559	0.31	ppbV #	89
3) Chloromethane	3.99	50	15230	0.26	ppbV #	89
4) Freon 114	4.01	85	25317	0.33	ppbV	93
5) Vinyl chloride	4.22	62	7909	0.31	ppbV	92
6) Bromomethane	4.78	94	8153	0.32	ppbV	89
7) Chloroethane	4.99	64	4307	0.31	ppbV	88
8) Ethanol	5.05	45	39087	0.60	ppbV	89
9) Acrolein	5.72	56	12977	0.59	ppbV #	76
10) Trichlorofluoromethane	5.79	101	22371	0.32	ppbV	88
11) Acetonitrile	5.77	41	51682	0.49	ppbV	99
12) Acetone	5.86	43	42851	0.35	ppbV	93
13) 2-propanol	5.97	45	19578	0.11	ppbV #	100
14) Methyl iodide	6.80	142	20175	0.16	ppbV	97
15) 1,1-Dichloroethene	6.71	61	16793	0.27	ppbV #	90
16) Acrylonitrile	6.75	53	36242	0.58	ppbV #	94
17) Freon 113	6.98	151	13083	0.25	ppbV #	80
18) Allyl chloride	7.16	41	21580	0.12	ppbV #	91
19) Dichloromethane	7.11	84	8354	0.32	ppbV #	81
20) Carbon disulfide	7.36	76	8703	0.10	ppbV #	93
21) trans-1,2-Dichloroethene	8.18	96	5940	0.17	ppbV	86
22) Methyl tert butyl ether	8.33	73	24271	0.14	ppbV #	88
23) Propionitrile	8.58	54	28323	0.30	ppbV	98
24) 1,1-Dichloroethane	8.68	63	22823	0.31	ppbV	97
25) Vinyl acetate	10.09	43	40148	0.18	ppbV	97
26) 2-Butanone	9.33	72	5400	0.11	ppbV	74
27) Hexane	9.50	57	15036	0.10	ppbV #	77
28) Bromochloromethane	10.27	49	22610	0.11	ppbV #	93
29) Tetrahydrofuran	10.61	42	81815	0.20	ppbV m	49
30) Isobutyl alcohol	10.62	74	4214	0.39	ppbV #	82
31) Methacrylonitrile	9.48	67	21857	0.69	ppbV	95
32) cis-1,2-Dichloroethene	9.89	96	11695	0.30	ppbV	96
33) 2,2-Dichloropropane	10.20	77	18638	0.17	ppbV #	89
34) Chloroform	10.30	83	27147	0.30	ppbV	94
36) 1,1,1-Trichloroethane	11.58	97	26931	0.29	ppbV #	86
37) 1,2-Dichloroethane	11.64	62	26512	0.30	ppbV	96
38) 1,1-Dichloropropene	12.01	75	18414	0.09	ppbV	95
39) Cyclohexane	12.35	56	21052	0.09	ppbV	95
40) Benzene	12.29	78	87322	0.44	ppbV	98
41) Carbon tetrachloride	12.35	117	26276	0.28	ppbV	82
42) n-Heptane	13.81	43	41261	0.10	ppbV #	95
43) 1,2-Dichloropropane	13.83	63	18588	0.33	ppbV	97
44) 1,4 Dioxane	14.17	88	11252	0.10	ppbV #	93
45) Dibromomethane	13.97	174	25221	0.08	ppbV	98
46) Trichloroethene	13.90	130	27013	0.35	ppbV	91
47) Bromodichloromethane	14.17	83	27507	0.08	ppbV #	89
48) Methyl methacrylate	14.30	69	43778	0.26	ppbV	98
49) Methyl Isobutyl Ketone	15.51	43	67434	0.09	ppbV	95

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

Quantitation Report

Data File : C:\MSCHEM\2\DATA\03179M~1\C03179C.D
Acq Time : 17 Mar 109 10:25 am
Sample : ST60022 + ST60350
Misc : 0.25
Quant Time: Mar 17 12:04 19109

Operator: KB
Inst : 5970 - In
Multiplr: 1.00

Method : C:\MSCHEM\2\METHODS\1T15EXAY.M
Title : EPA TO-15
Last Update : Tue Mar 17 14:18:15 2009
Response via : Multiple Level Calibration

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
50)	cis-1,3-Dichloropropene	15.60	75	28339	0.31 ppbV	96
51)	Toluene	16.89	91	97636	0.41 ppbV	96
52)	trans-1,3-Dichloropropene	16.62	75	33546	0.31 ppbV	99
53)	1,1,2-Trichloroethane	16.94	61	18573	0.31 ppbV	94
54)	2-Hexanone	17.56	43	84018	0.10 ppbV	98
55)	1,3-Dichloropropane	17.51	76	29285	0.09 ppbV	98
56)	Octane	18.05	57	19635	0.20 ppbV #	91
57)	Dibromochloromethane	18.06	129	43801	0.09 ppbV	89
58)	1,2-Dibromoethane	18.56	107	46912	0.31 ppbV	95
59)	Tetrachloroethene	18.75	166	40710	0.30 ppbV	95
60)	Chlorobenzene	20.23	112	64660	0.33 ppbV #	93
61)	1,1,1,2-Tetrachloroethane	20.29	131	33923	0.09 ppbV	92
62)	Ethylbenzene	20.77	91	107037	0.33 ppbV	99
63)	m & p-Xylene	21.06	91	192864	0.69 ppbV	100
64)	Styrene	21.90	104	70964	0.36 ppbV	94
65)	Bromoform	21.79	173	90991	0.10 ppbV	100
66)	o-Xylene	22.02	91	105567	0.34 ppbV	99
67)	1,1,2,2-Tetrachloroethane	22.54	83	102201	0.39 ppbV	99
68)	1,2,3-Trichloropropane	22.86	110	25437	0.12 ppbV	96
69)	t-1,4-Dichloro-2-butene	22.99	53	61455	0.38 ppbV	98
70)	n-Propylbenzene	24.20	91	190755	0.10 ppbV	98
71)	Isopropylbenzene	24.52	105	177029	0.13 ppbV m	1
72)	4-Ethyltoluene	24.52	105	177076	0.13 ppbV m	1
73)	1,3,5-Trimethylbenzene	24.67	105	184274	0.46 ppbV	95
74)	Methylstyrene	25.14	118	112656	0.19 ppbV	97
75)	tert-butyl benzene	25.59	119	158367	0.34 ppbV	97
76)	1,2,4-Trimethylbenzene	25.62	105	209998	0.51 ppbV	98
77)	sec-butylbenzene	26.21	105	238727	0.35 ppbV	99
78)	1,3-Dichlorobenzene	26.18	146	173602	0.51 ppbV	97
79)	Isopropyltoluene	26.60	119	241584	0.38 ppbV	99
80)	Benzyl chloride	26.34	91	203166	0.38 ppbV	99
81)	1,4-Dichlorobenzene	26.38	146	179740	0.51 ppbV m	96
82)	n-Butylbenzene	27.65	91	311314	0.43 ppbV	98
83)	1,2-Dichlorobenzene	27.23	146	199190	0.50 ppbV	96
84)	1,2-Dibromo-3-chloropropan	28.72	75	449541	1.56 ppbV	91
85)	Tetraethyl lead	30.76	237	364827	1.40 ppbV #	99
86)	1,2,4-Trichlorobenzene	31.78	180	468171	0.65 ppbV	99
87)	Naphthalene	32.14	128	2349483	1.87 ppbV	99
88)	Hexachlorobutadiene	32.82	225	442421	0.81 ppbV	99
89)	Propylene	3.67	40	4399	0.29 ppbV m	70
90)	1,3-Butadiene	4.36	54	9949	0.23 ppbV	95
92)	2-Chlorotoluene	24.26	91	128657	0.31 ppbV	97
93)	4-Chlorotoluene	24.42	91	166049	0.31 ppbV	99

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

Quantitation Report

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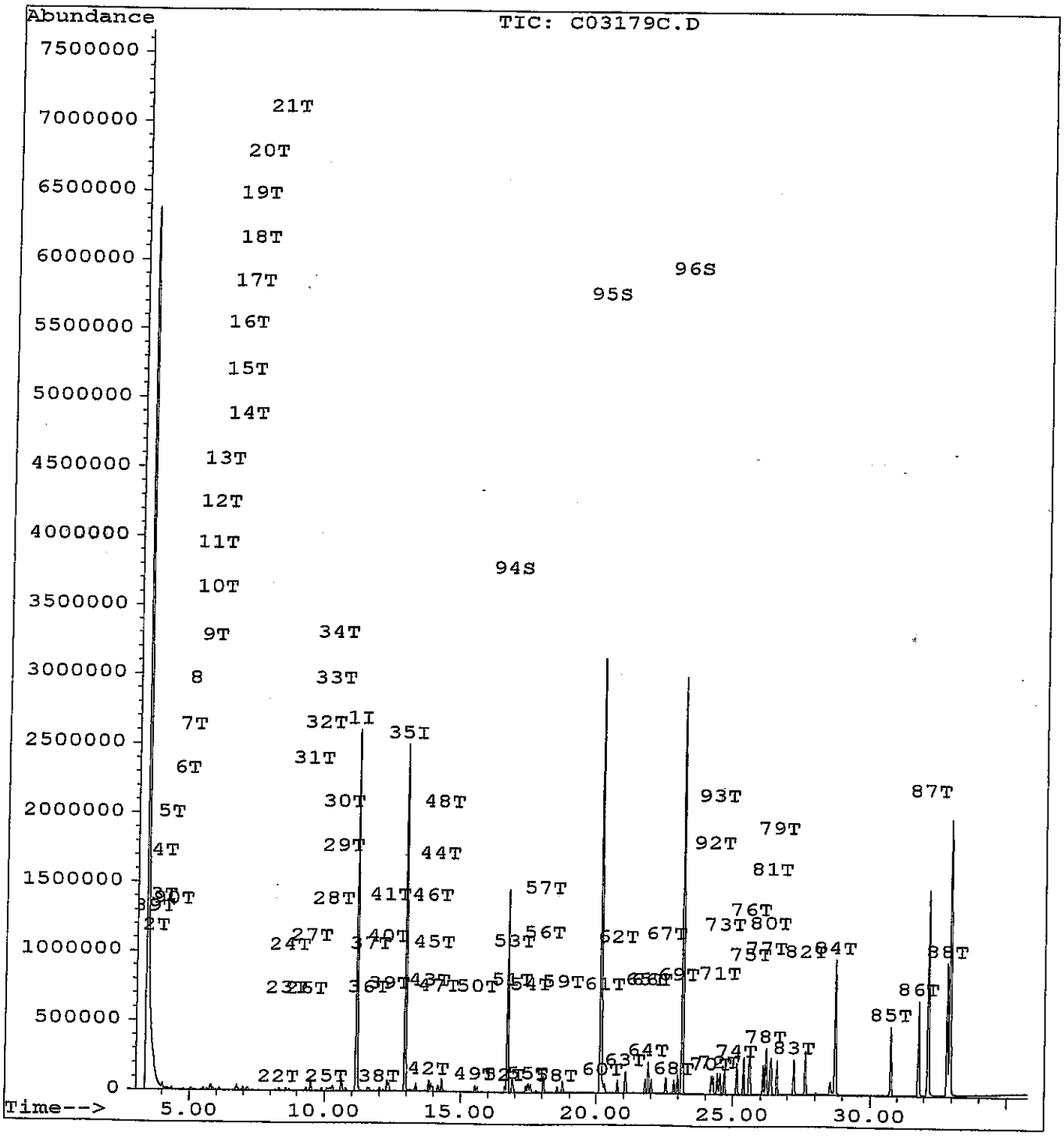
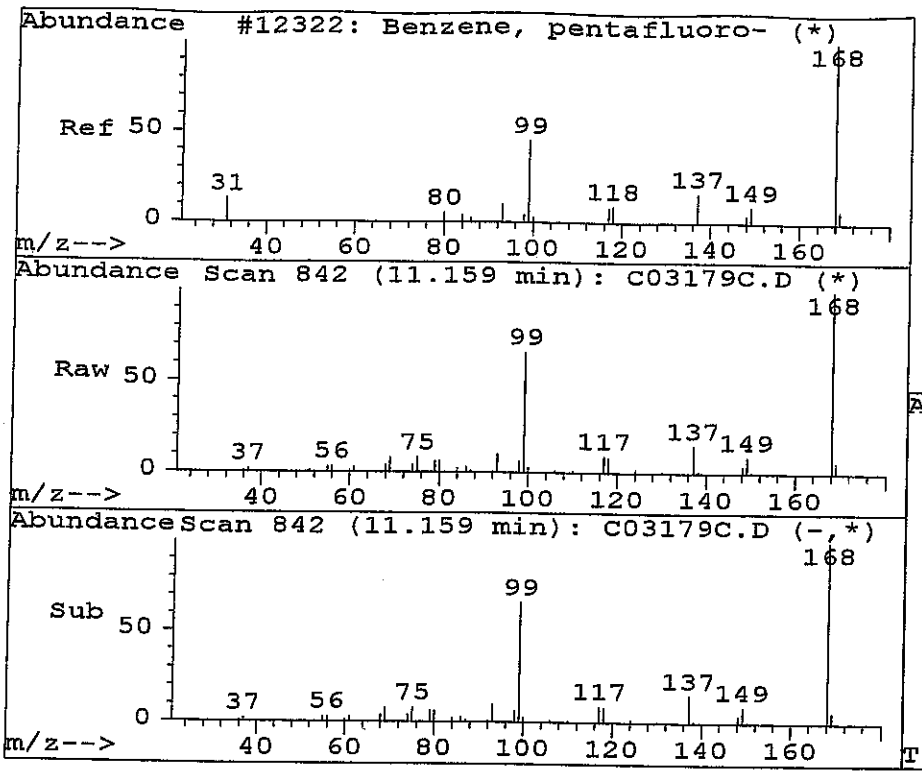
Acq Time : 17 Mar 109 10:25 am
Sample : ST60022 + ST60350
Misc : 0.25
Quant Time: Mar 17 12:04 19109

Operator: KB
Inst : 5970 - In
Multiplr: 1.00

Method : C:\MSCHEM\2\METHODS\1T15EXAY.M
Title : EPA TO-15
Last Update : Tue Mar 17 14:18:15 2009
Response via : Multiple Level Calibration

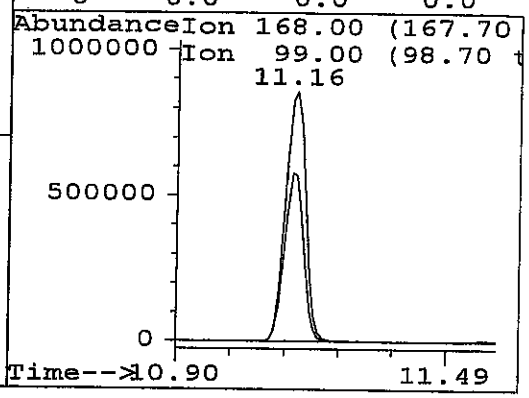


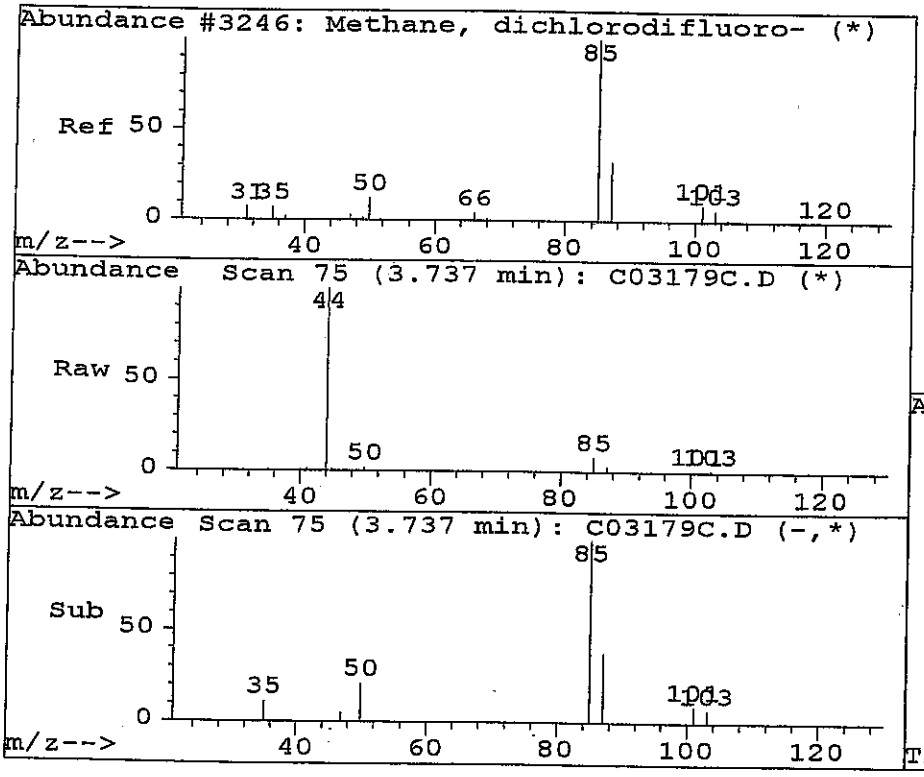


#1
Pentafluorobenzene
Concen: 20.00 ppbV
RT: 11.16 min Scan# 842
Delta R.T. -0.22 min
Lab File: C03179C.D
Acq: 17 Mar 109 10:25 am

Tgt Ion:168 Resp: 2643183

Ion	Ratio	Lower	Upper
168	100		
99	66.3	51.1	76.7
0	0.0	0.0	0.0
0	0.0	0.0	0.0

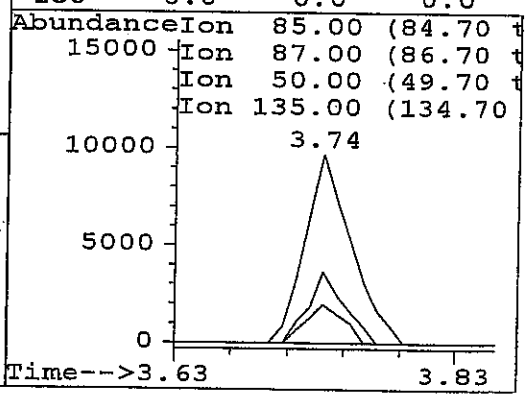


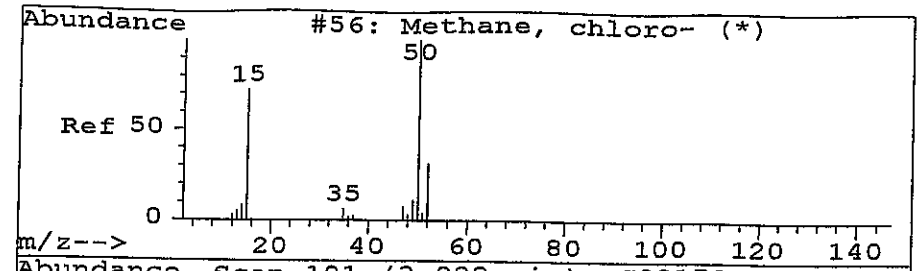


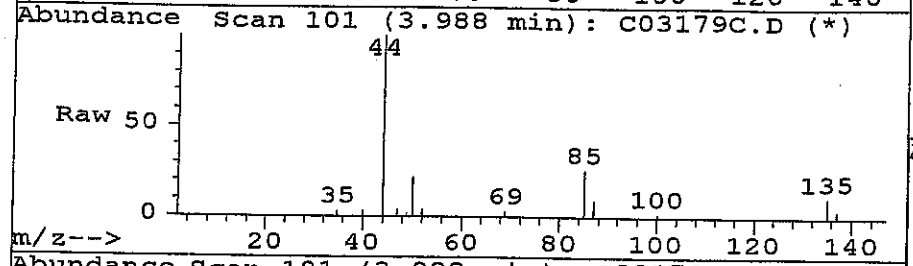
#2
Dichlorodifluoromethane
Concen: 0.31 ppbV
RT: 3.74 min Scan# 75
Delta R.T. -0.09 min
Lab File: C03179C.D
Acq: 17 Mar 109 10:25 am

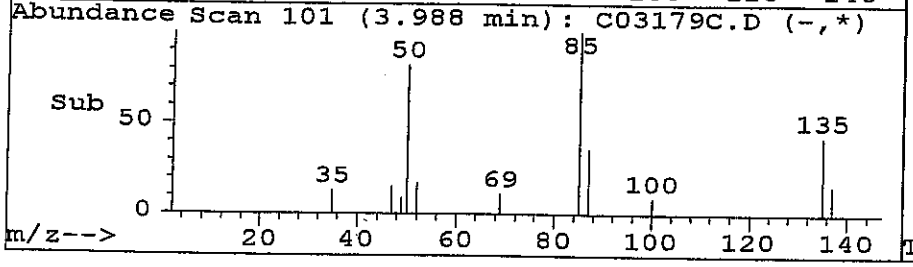
Tgt Ion:85 Resp: 22559

Ion	Ratio	Lower	Upper
85	100		
87	37.7	25.4	38.2
50	20.5	12.6	19.0#
135	0.0	0.0	0.0





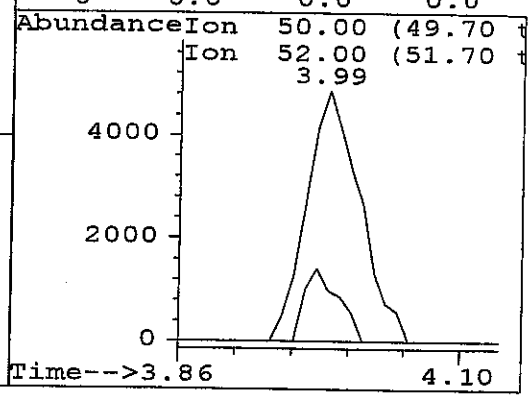


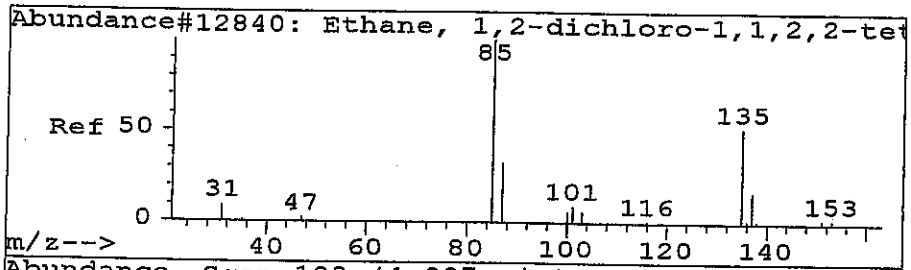


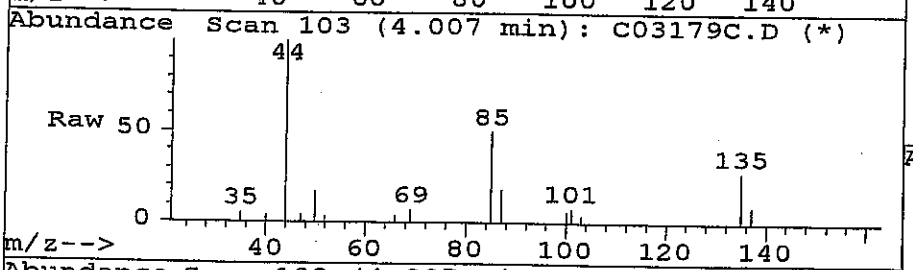
#3
Chloromethane
Concen: 0.26 ppbV
RT: 3.99 min Scan# 101
Delta R.T. -0.10 min
Lab File: C03179C.D
Acq: 17 Mar 109 10:25 am

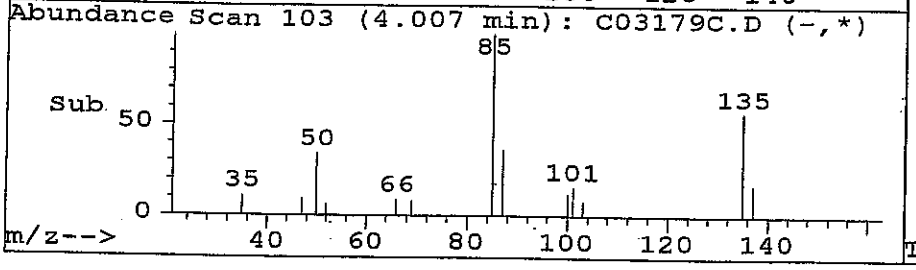
Tgt Ion:50 Resp: 15230

Ion	Ratio	Lower	Upper
50	100		
52	20.3	20.5	30.7#
0	0.0	0.0	0.0
0	0.0	0.0	0.0





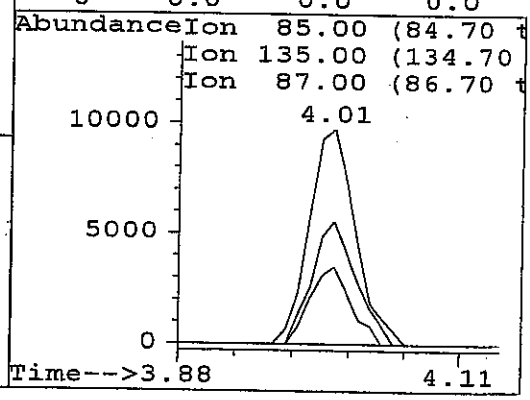


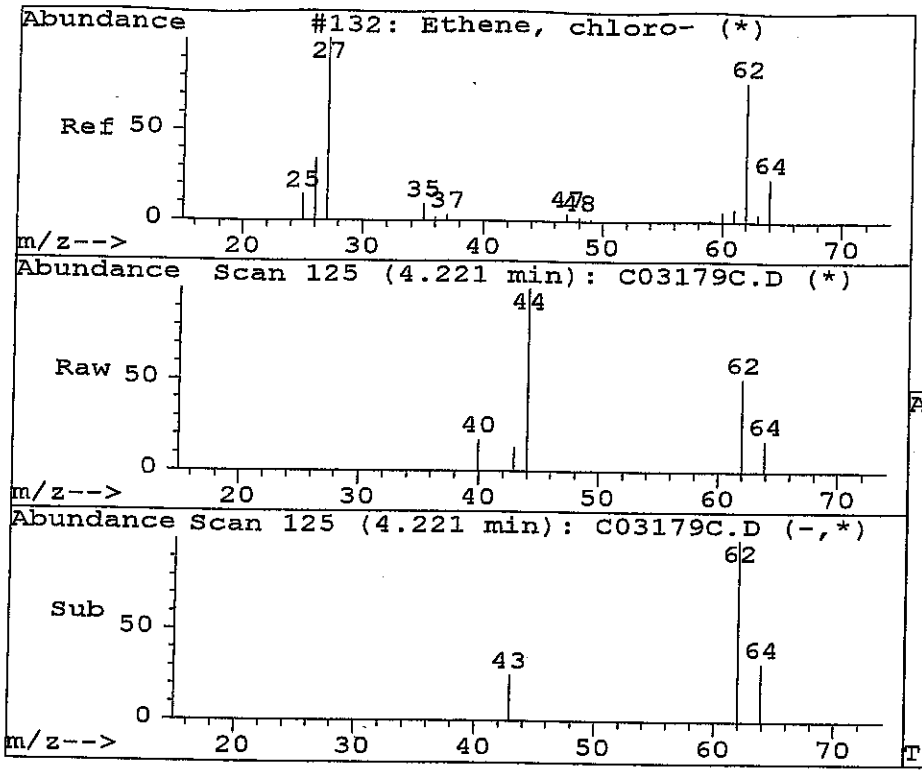


#4
Freon 114
Concen: 0.33 ppbV
RT: 4.01 min Scan# 103
Delta R.T. -0.10 min
Lab File: C03179C.D
Acq: 17 Mar 109 10:25 am

Tgt Ion:85 Resp: 25317

Ion	Ratio	Lower	Upper
85	100		
135	57.1	42.2	63.2
87	35.9	24.6	37.0
0	0.0	0.0	0.0

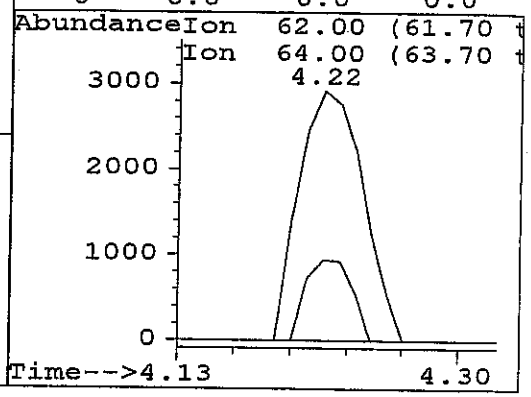


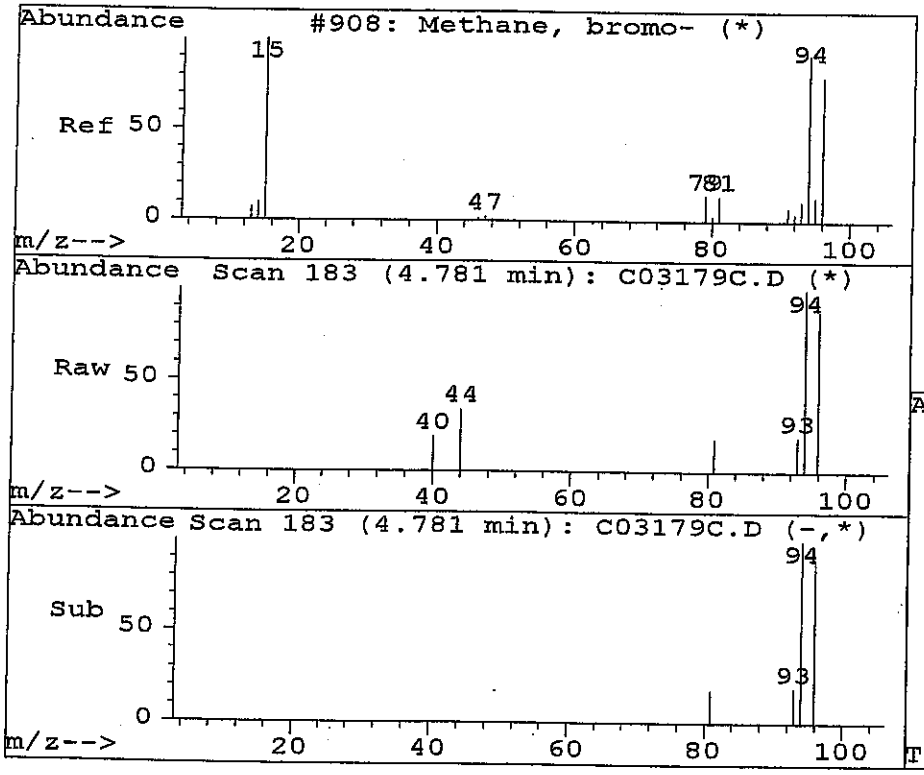


#5
Vinyl chloride
Concen: 0.31 ppbV
RT: 4.22 min Scan# 125
Delta R.T. -0.11 min
Lab File: C03179C.D
Acq: 17 Mar 109 10:25 am

Tgt Ion:62 Resp: 7909

Ion	Ratio	Lower	Upper
62	100		
64	32.4	22.6	33.8
0	0.0	0.0	0.0
0	0.0	0.0	0.0

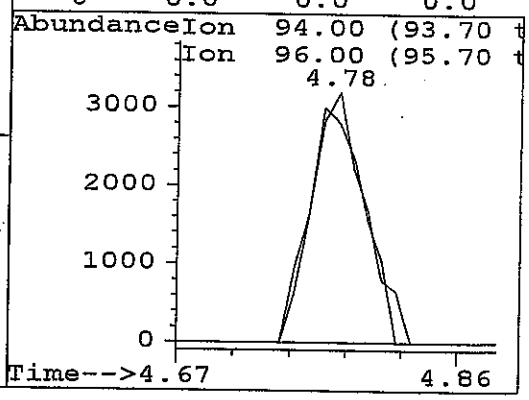


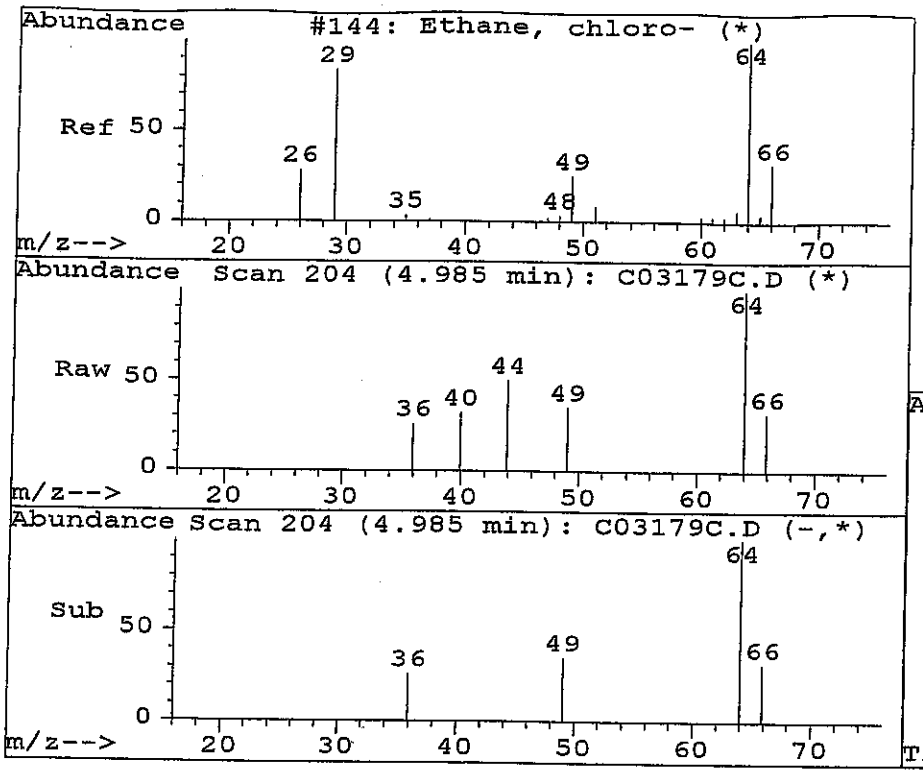


#6
Bromomethane
Concen: 0.32 ppbV
RT: 4.78 min Scan# 183
Delta R.T. -0.14 min
Lab File: C03179C.D
Acq: 17 Mar 109 10:25 am

Tgt Ion:94 Resp: 8153

Ion	Ratio	Lower	Upper
94	100		
96	87.8	79.1	118.7
0	0.0	0.0	0.0
0	0.0	0.0	0.0

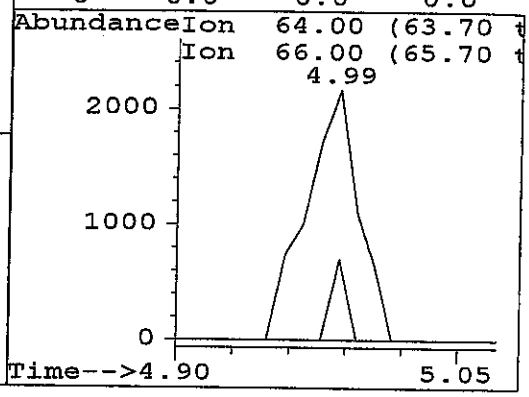


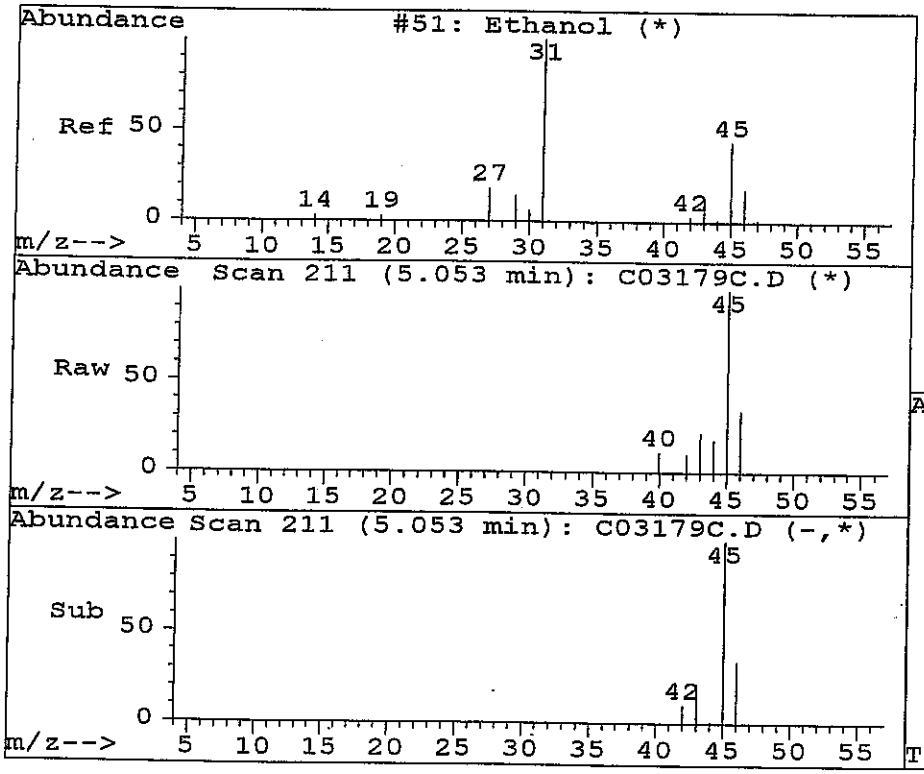


#7
Chloroethane
Concen: 0.31 ppbV
RT: 4.99 min Scan# 204
Delta R.T. -0.13 min
Lab File: C03179C.D
Acq: 17 Mar 109 10:25 am

Tgt Ion:64 Resp: 4307

Ion	Ratio	Lower	Upper
64	100		
66	32.4	31.8	47.8
0	0.0	0.0	0.0
0	0.0	0.0	0.0

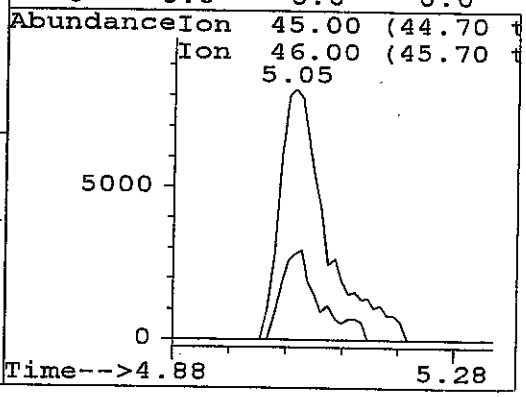


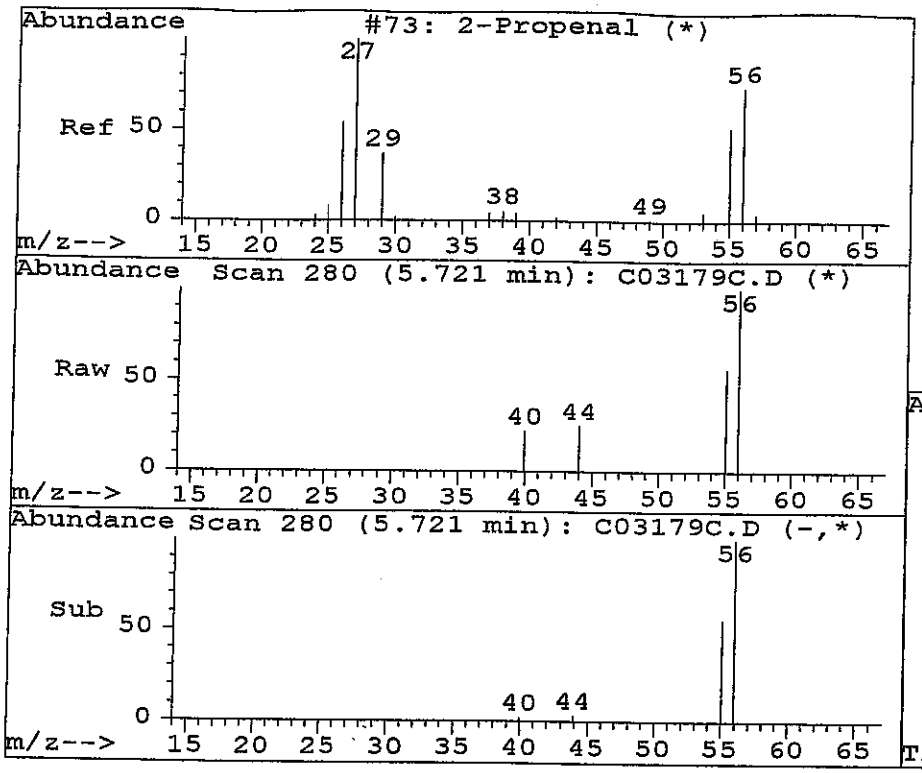


#8
Ethanol
Concen: 0.60 ppbV
RT: 5.05 min Scan# 211
Delta R.T. -0.15 min
Lab File: C03179C.D
Acq: 17 Mar 109 10:25 am

Tgt Ion:45 Resp: 3908-7

Ion	Ratio	Lower	Upper
45	100		
46	26.1	25.6	38.4
0	0.0	0.0	0.0
0	0.0	0.0	0.0

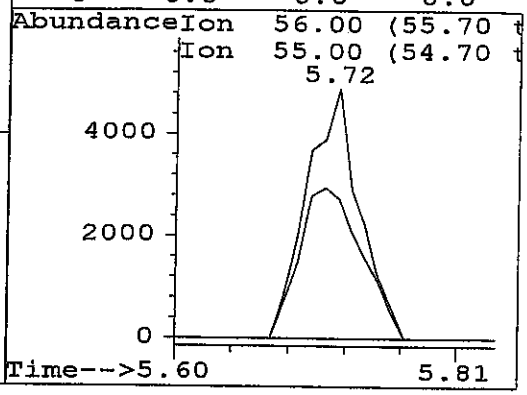


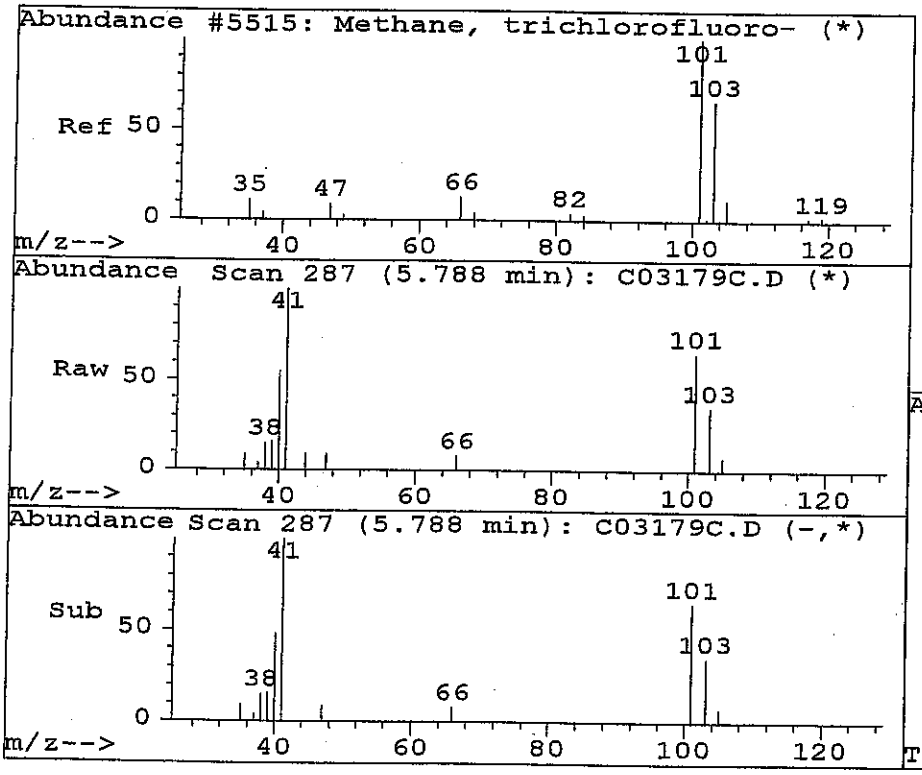


#9
Acrolein
Concen: 0.59 ppbV
RT: 5.72 min Scan# 280
Delta R.T. -0.17 min
Lab File: C03179C.D
Acq: 17 Mar 109 10:25 am

Tgt Ion:56 Resp: 12977

Ion	Ratio	Lower	Upper
56	100		
55	55.9	61.7	92.5#
0	0.0	0.0	0.0
0	0.0	0.0	0.0

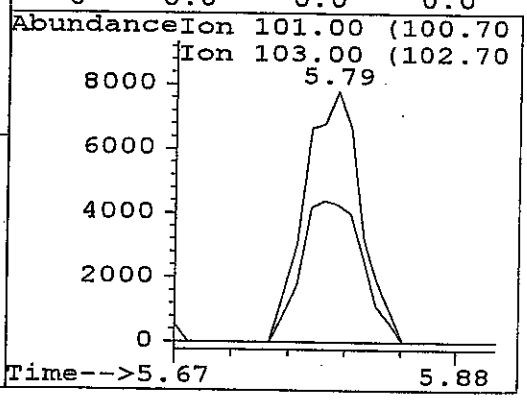


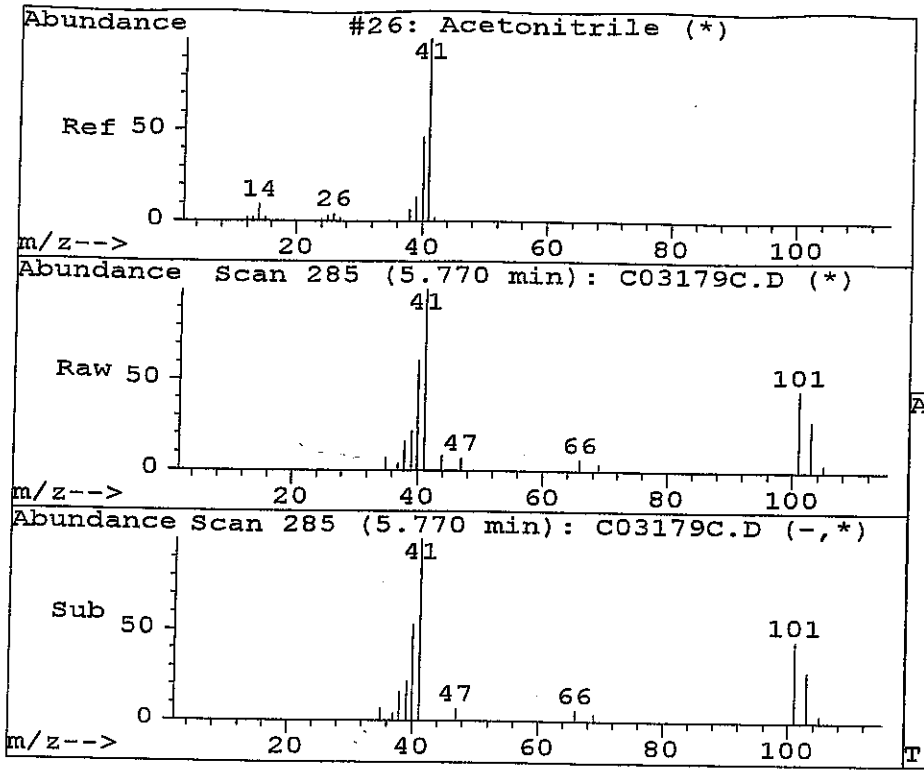


#10
Trichlorofluoromethane
Concen: 0.32 ppbV
RT: 5.79 min Scan# 287
Delta R.T. -0.15 min
Lab File: C03179C.D
Acq: 17 Mar 109 10:25 am

Tgt Ion:101 Resp: 22371

Ion	Ratio	Lower	Upper
101	100		
103	54.9	51.1	76.7
0	0.0	0.0	0.0
0	0.0	0.0	0.0

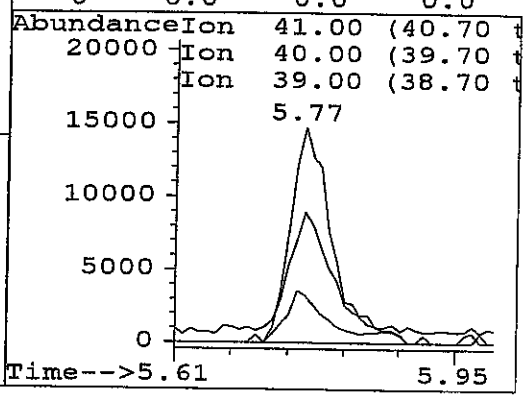


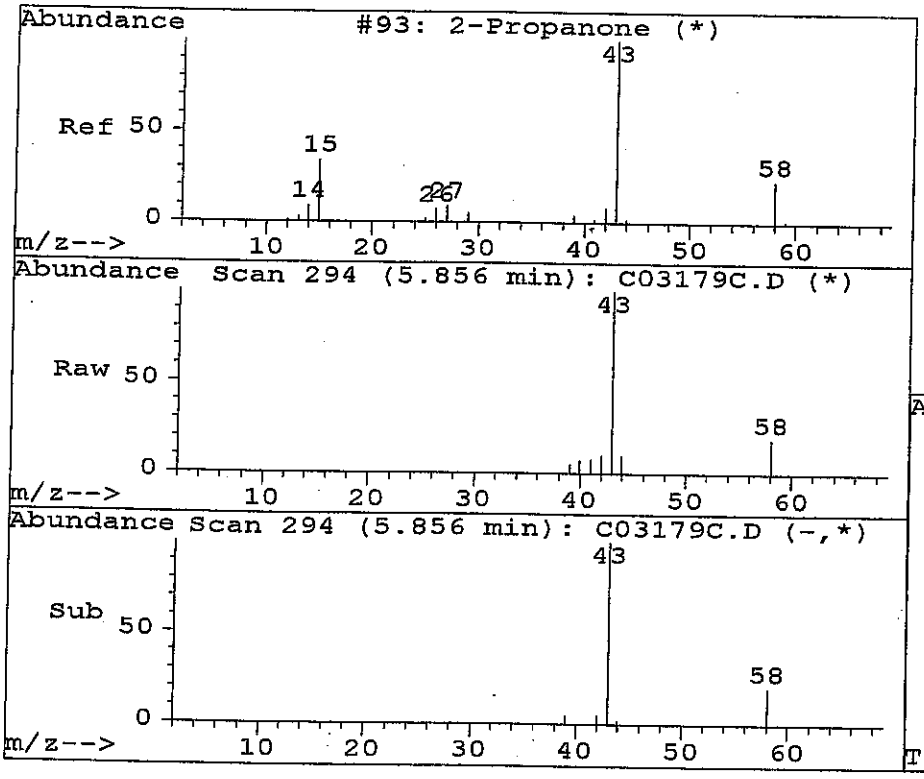


#11
Acetonitrile
Concen: 0.49 ppbV
RT: 5.77 min Scan# 285
Delta R.T. -0.19 min
Lab File: C03179C.D
Acq: 17 Mar 109 10:25 am

Tgt Ion:41 Resp: 51682

Ion	Ratio	Lower	Upper
41	100		
40	54.8	43.8	65.6
39	20.4	17.8	26.8
0	0.0	0.0	0.0

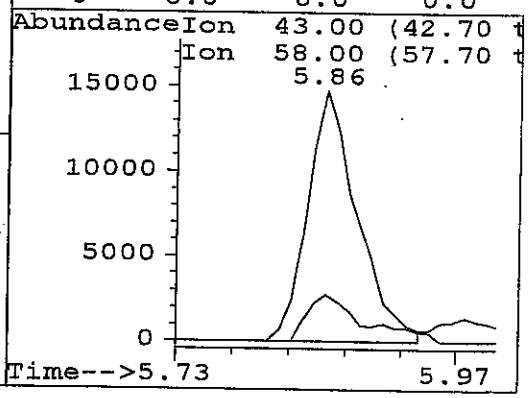


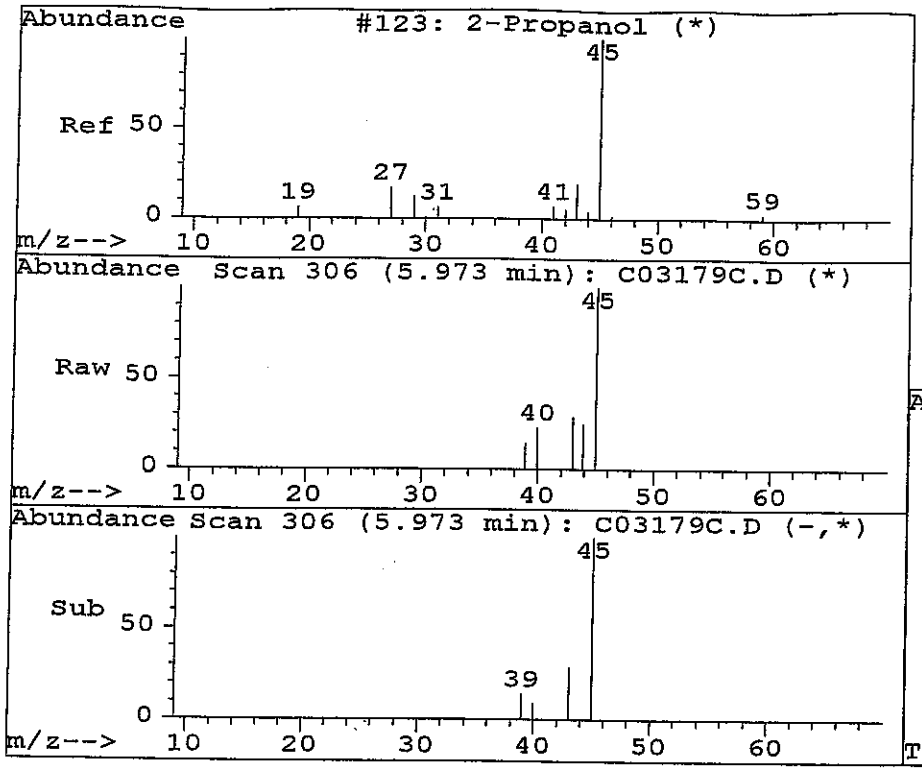


#12
Acetone
Concen: 0.35 ppbV
RT: 5.86 min Scan# 294
Delta R.T. -0.18 min
Lab File: C03179C.D
Acq: 17 Mar 109 10:25 am

Tgt Ion:43 Resp: 42851

Ion	Ratio	Lower	Upper
43	100		
58	17.2	16.2	24.4
0	0.0	0.0	0.0
0	0.0	0.0	0.0

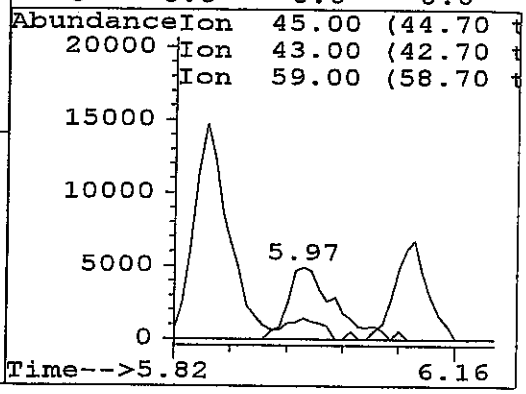


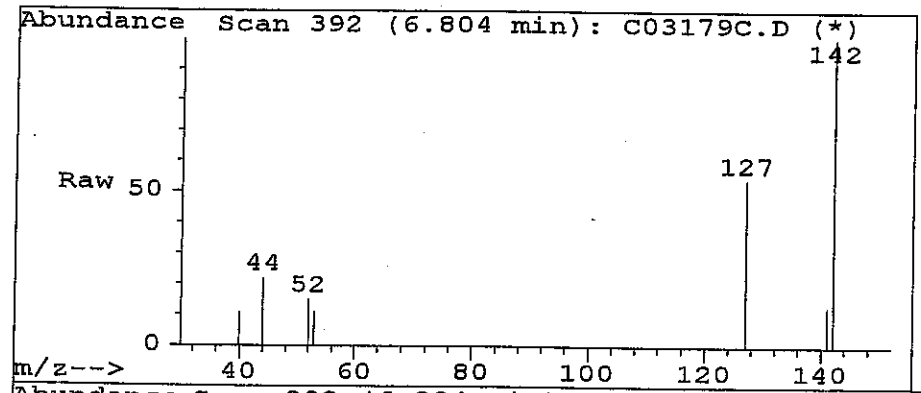


#13
2-propanol
Concen: 0.11 ppbV
RT: 5.97 min Scan# 306
Delta R.T. -0.17 min
Lab File: C03179C.D
Acq: 17 Mar 109 10:25 am

Tgt Ion:45 Resp: 19578

Ion	Ratio	Lower	Upper
45	100		
43	22.1	0.0	0.0#
59	0.0	0.0	0.0
0	0.0	0.0	0.0

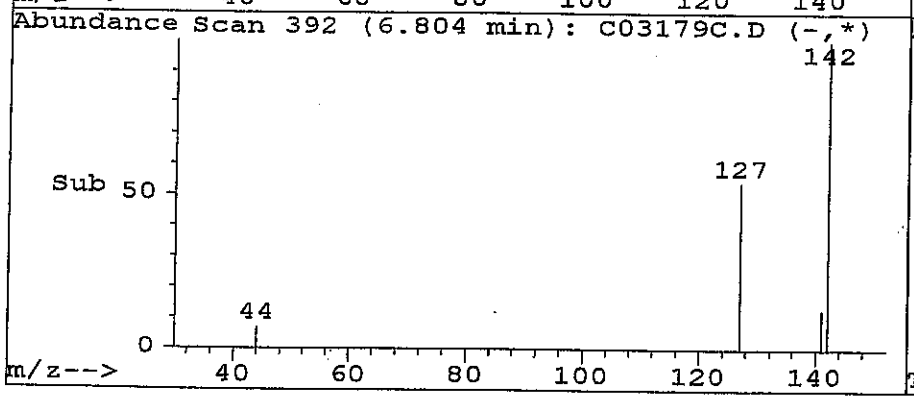


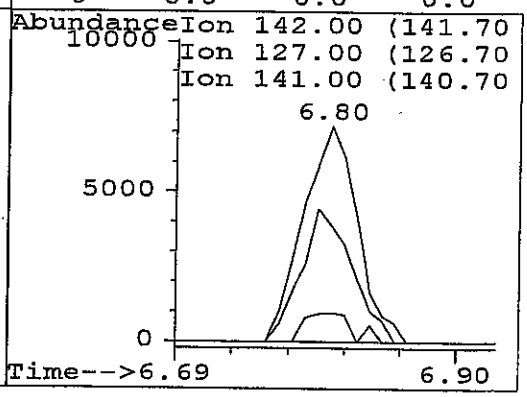


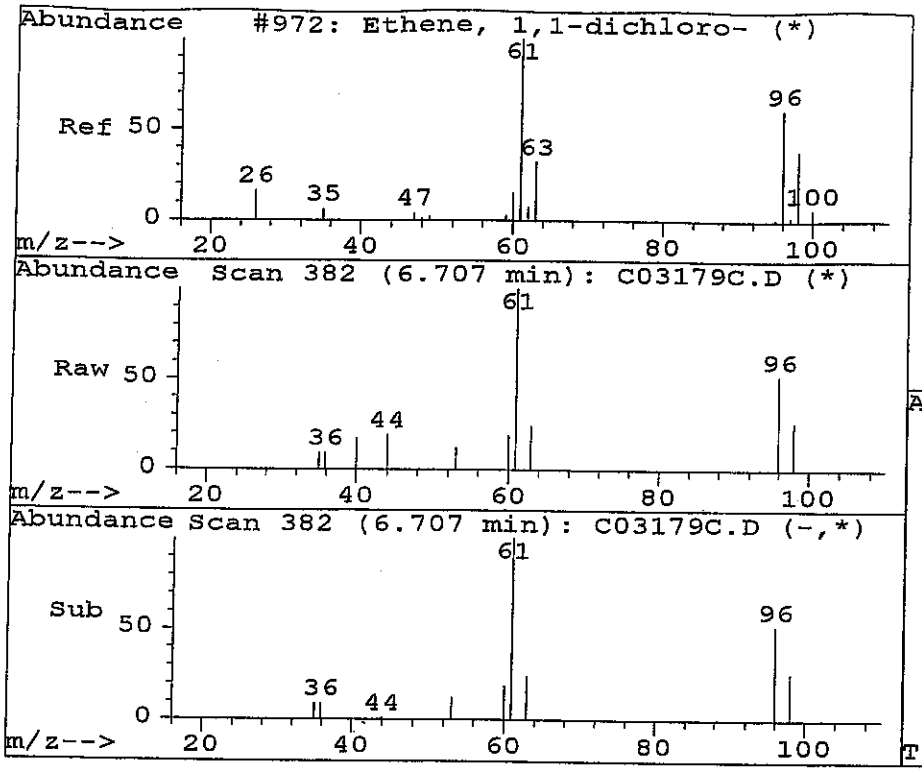
#14
Methyl iodide
Concen: 0.16 ppbV
RT: 6.80 min Scan# 392
Delta R.T. -0.19 min
Lab File: C03179C.D
Acq: 17 Mar 109 10:25 am

Tgt Ion:142 Resp: 20175

Ion	Ratio	Lower	Upper
142	100		
127	53.8	44.4	66.6
141	13.4	12.6	19.0
0	0.0	0.0	0.0



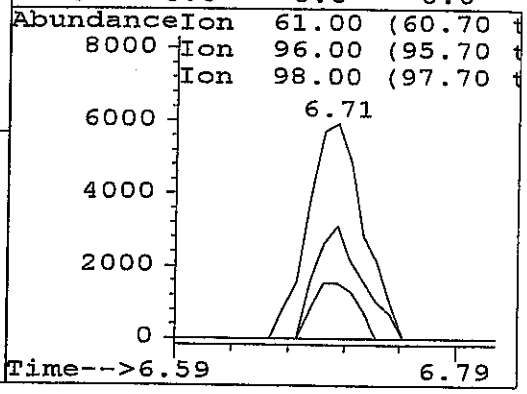


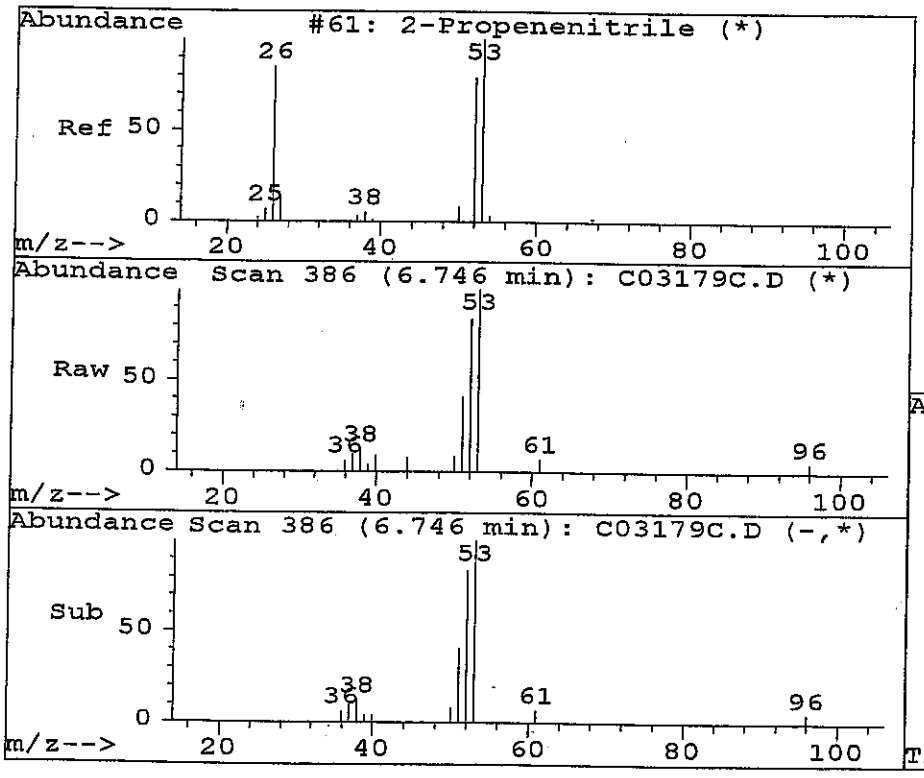


#15
1,1-Dichloroethene
Concen: 0.27 ppbV
RT: 6.71 min Scan# 382
Delta R.T. -0.18 min
Lab File: C03179C.D
Acq: 17 Mar 109 10:25 am

Tgt Ion:61 Resp: 16793

Ion	Ratio	Lower	Upper
61	100		
96	52.3	33.5	50.3#
98	25.9	21.1	31.7
0	0.0	0.0	0.0

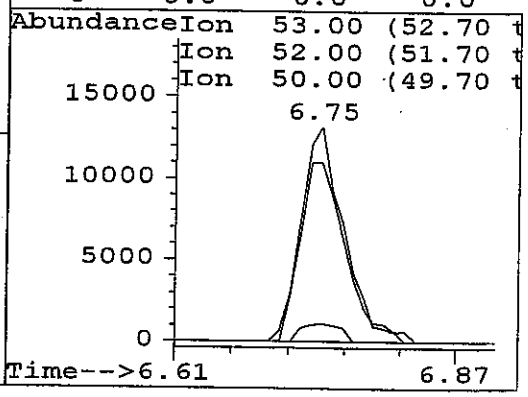


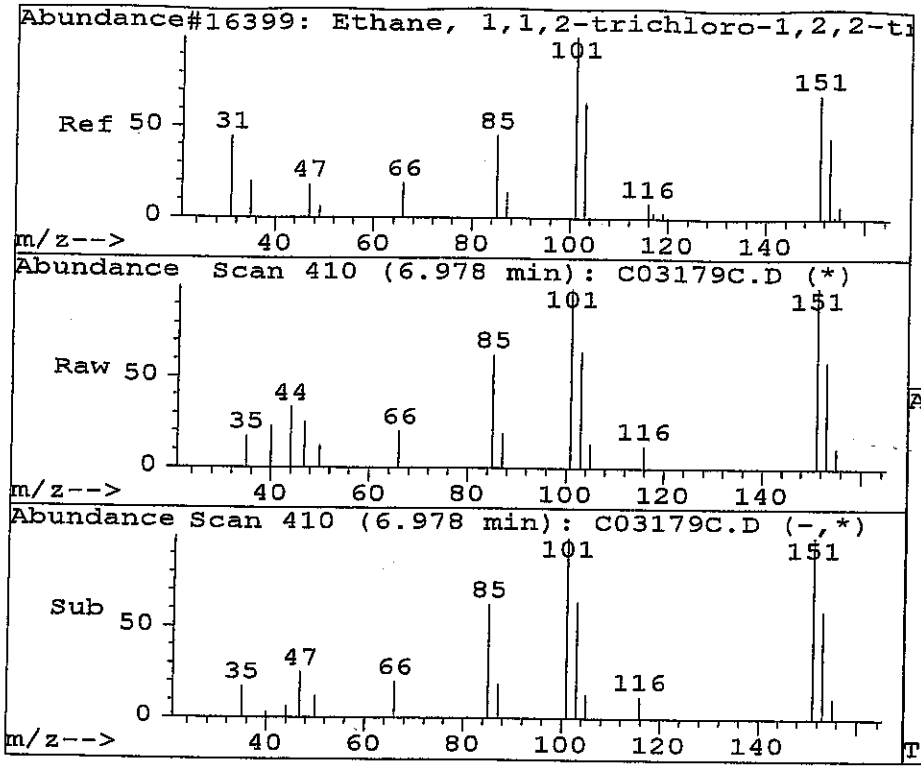


#16
Acrylonitrile
Concen: 0.58 ppbV
RT: 6.75 min Scan# 386
Delta R.T. -0.21 min
Lab File: C03179C.D
Acq: 17 Mar 109 10:25 am

Tgt Ion:53 Resp: 36242

Ion	Ratio	Lower	Upper
53	100		
52	83.5	71.5	107.3
50	8.4	9.1	13.7#
0	0.0	0.0	0.0

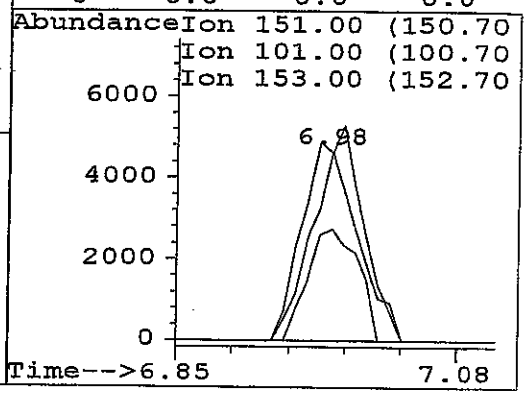


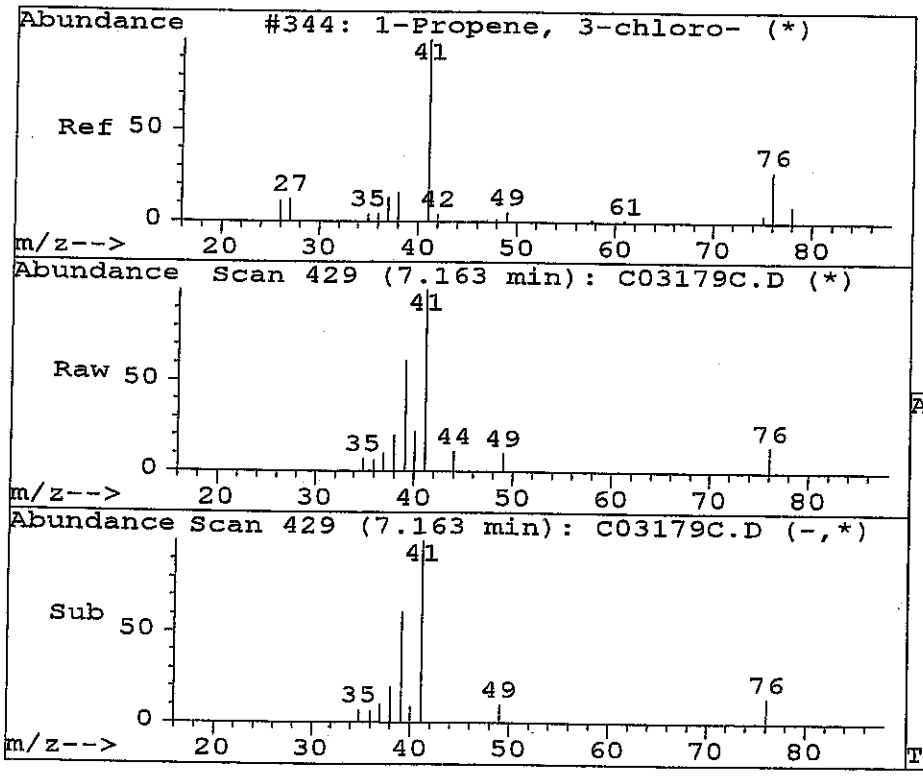


#17
Freon 113
Concen: 0.25 ppbV
RT: 6.98 min Scan# 410
Delta R.T. -0.18 min
Lab File: C03179C.D
Acq: 17 Mar 109 10:25 am

Tgt Ion:151 Resp: 13083

Ion	Ratio	Lower	Upper
151	100		
101	99.1	105.3	157.9#
153	58.9	48.6	73.0
0	0.0	0.0	0.0

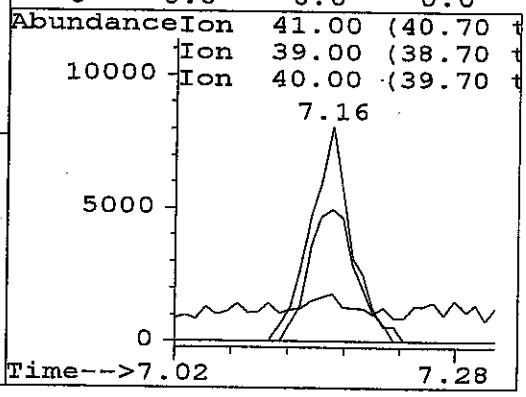


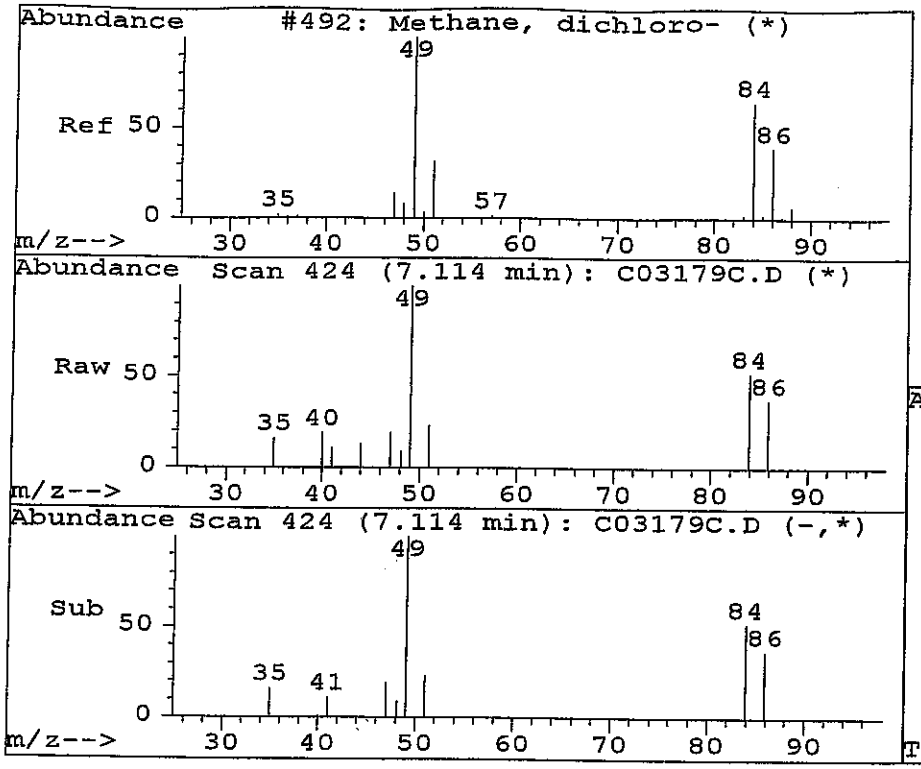


#18
Allyl chloride
Concen: 0.12 ppbV
RT: 7.16 min Scan# 429
Delta R.T. -0.19 min
Lab File: C03179C.D
Acq: 17 Mar 109 10:25 am

Tgt Ion:41 Resp: 21580

Ion	Ratio	Lower	Upper
41	100		
39	61.3	55.0	82.4
40	7.0	8.6	13.0#
0	0.0	0.0	0.0

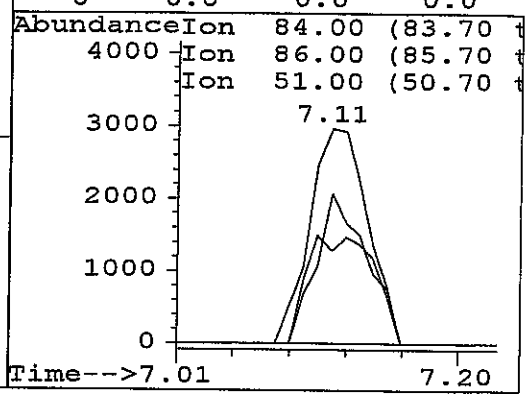


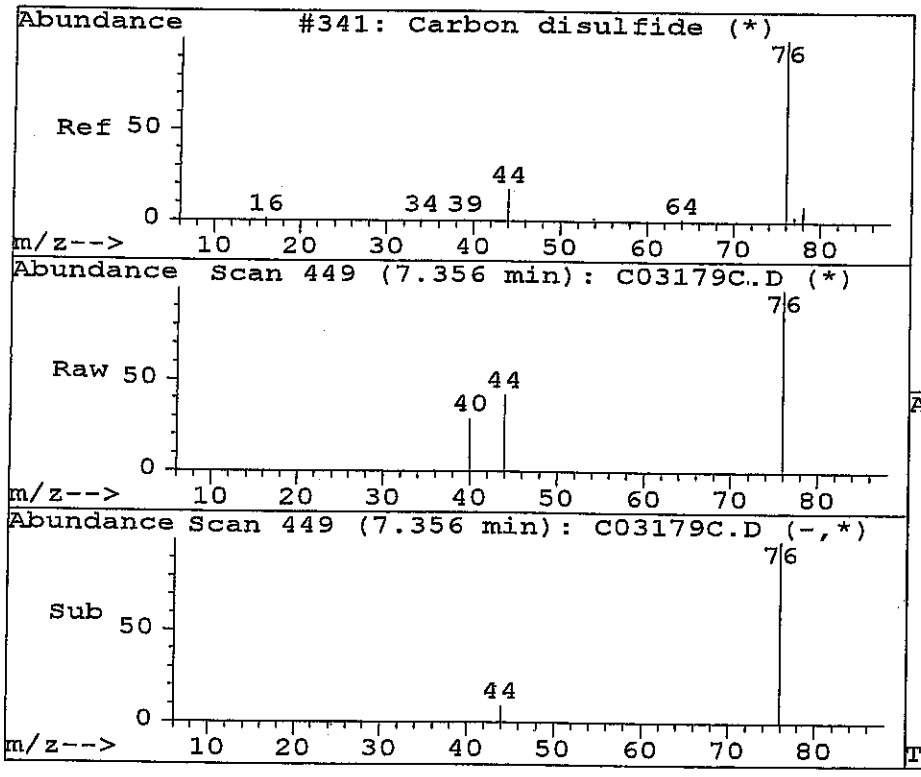


#19
Dichloromethane
Concen: 0.32 ppbV
RT: 7.11 min Scan# 424
Delta R.T. -0.20 min
Lab File: C03179C.D
Acq: 17 Mar 109 10:25 am

Tgt Ion:84 Resp: 8354

Ion	Ratio	Lower	Upper
84	100		
86	69.8	48.0	72.0
51	43.3	50.1	75.1#
0	0.0	0.0	0.0

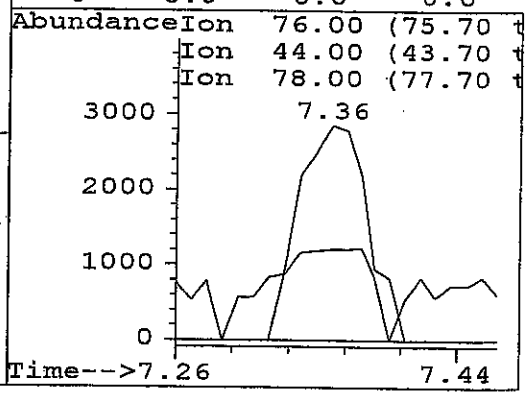


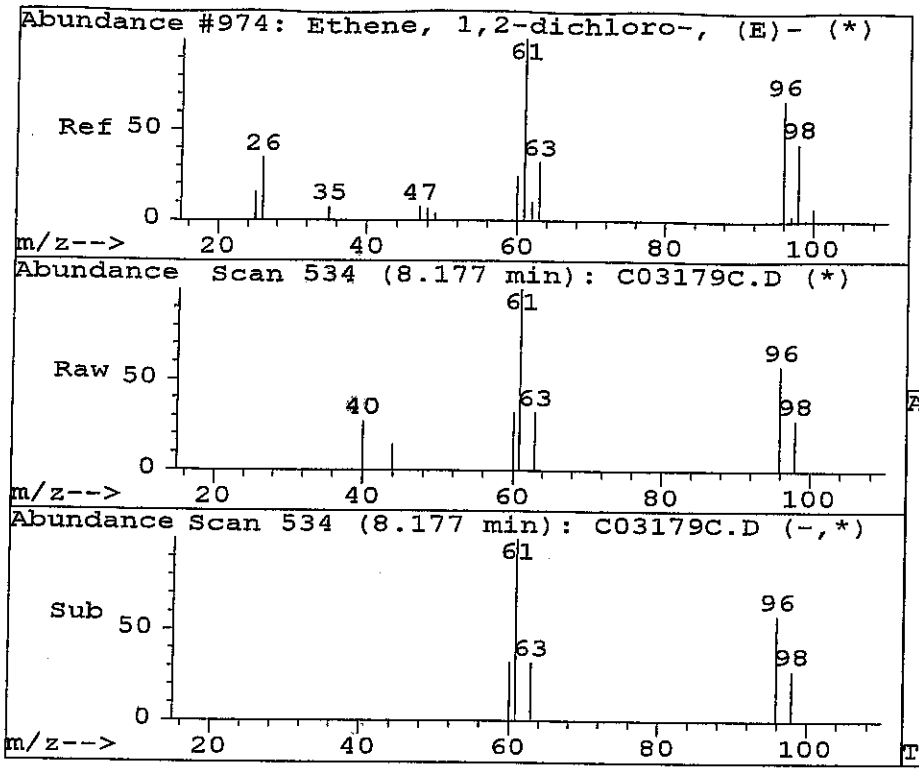


#20
Carbon disulfide
Concen: 0.10 ppbV
RT: 7.36 min Scan# 449
Delta R.T. -0.18 min
Lab File: C03179C.D
Acq: 17 Mar 109 10:25 am

Tgt Ion:76 Resp: 8703

Ion	Ratio	Lower	Upper
76	100		
44	17.6	14.2	21.2
78	0.0	5.8	9.7#
0	0.0	0.0	0.0

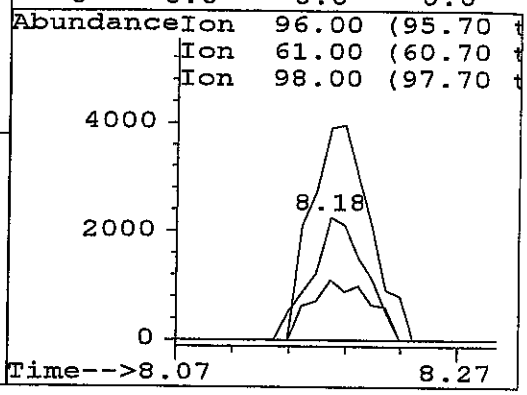


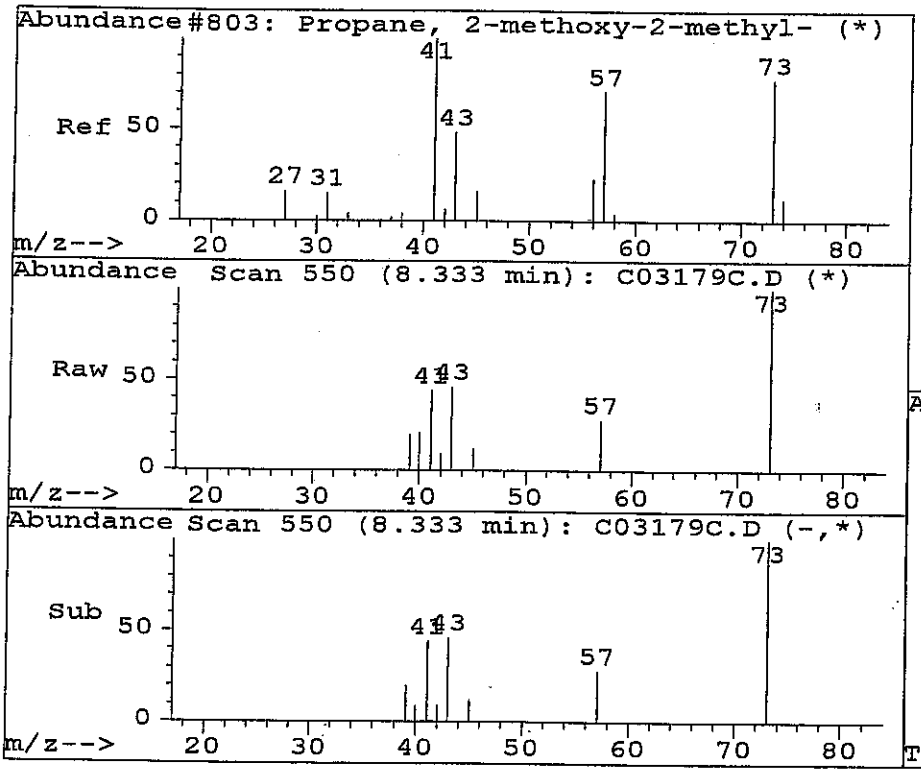


#21
trans-1,2-Dichloroethene
Concen: 0.17 ppbV
RT: 8.18 min Scan# 534
Delta R.T. -0.20 min
Lab File: C03179C.D
Acq: 17 Mar 109 10:25 am

Tgt Ion:96 Resp: 5940

Ion	Ratio	Lower	Upper
96	100		
61	173.2	155.7	233.5
98	49.3	47.4	71.2
0	0.0	0.0	0.0

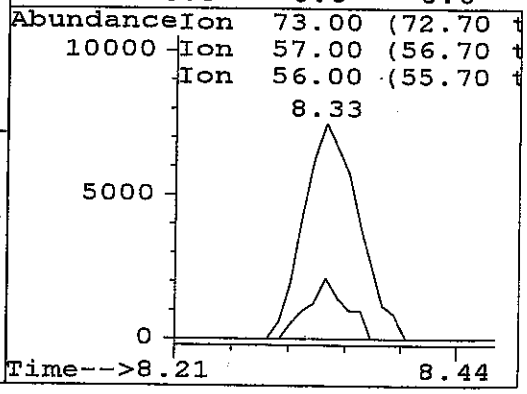


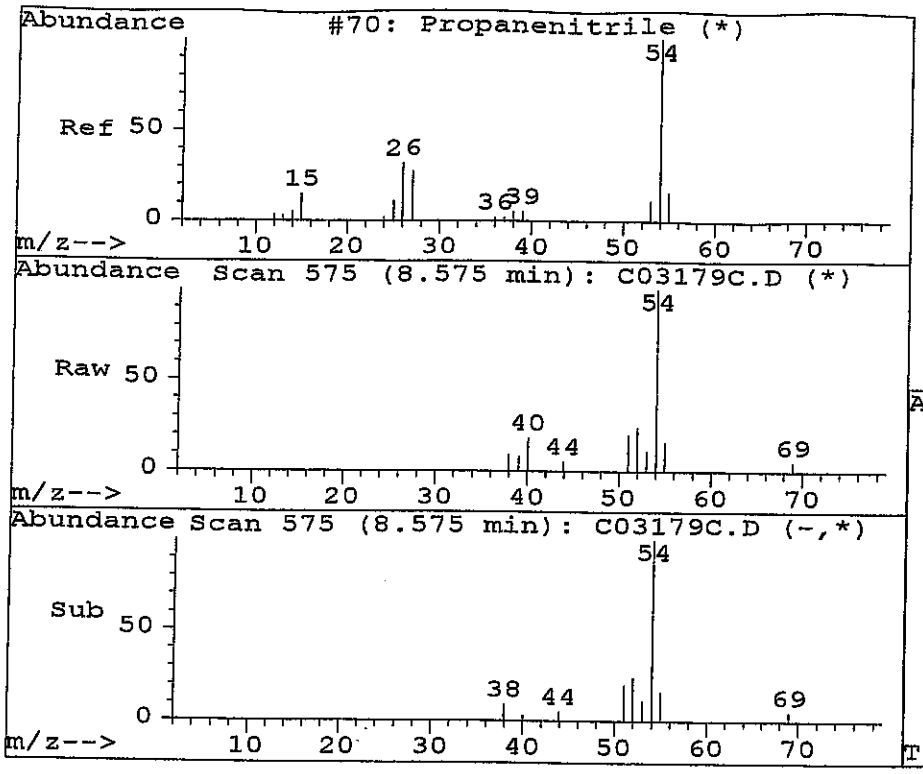


#22
Methyl tert butyl ether
Concen: 0.14 ppbV
RT: 8.33 min Scan# 550
Delta R.T. -0.21 min
Lab File: C03179C.D
Acq: 17 Mar 109 10:25 am

Tgt Ion:73 Resp: 2427-1

Ion	Ratio	Lower	Upper
73	100		
57	28.1	18.2	27.2#
56	0.0	4.6	6.8#
0	0.0	0.0	0.0

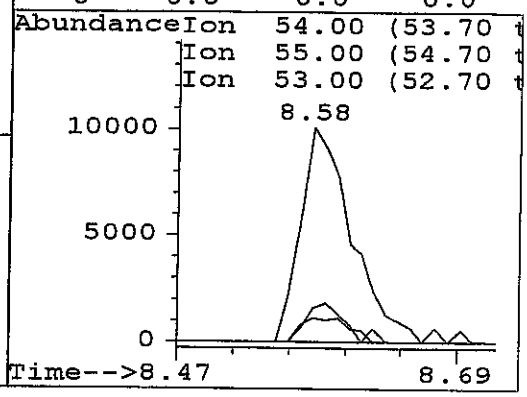


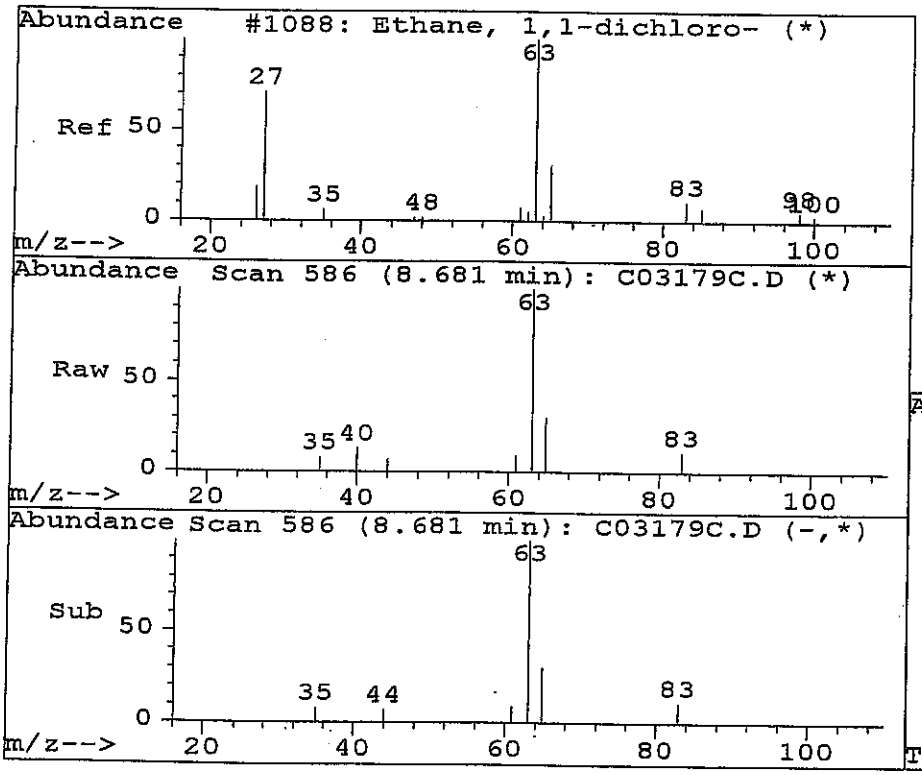


#23
Propionitrile
Concen: 0.30 ppbV
RT: 8.58 min Scan# 575
Delta R.T. -0.25 min
Lab File: C03179C.D
Acq: 17 Mar 109 10:25 am

Tgt Ion:54 Resp: 28323

Ion	Ratio	Lower	Upper
54	100		
55	15.7	13.3	19.9
53	11.1	8.0	12.0
0	0.0	0.0	0.0

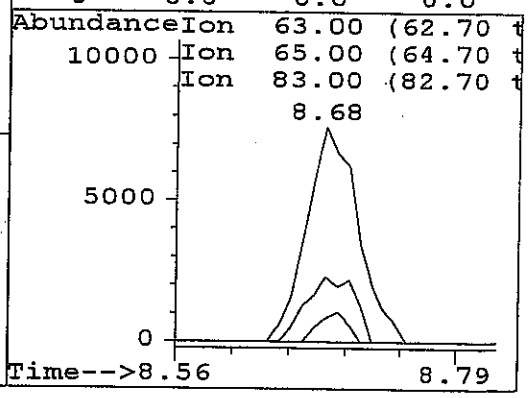


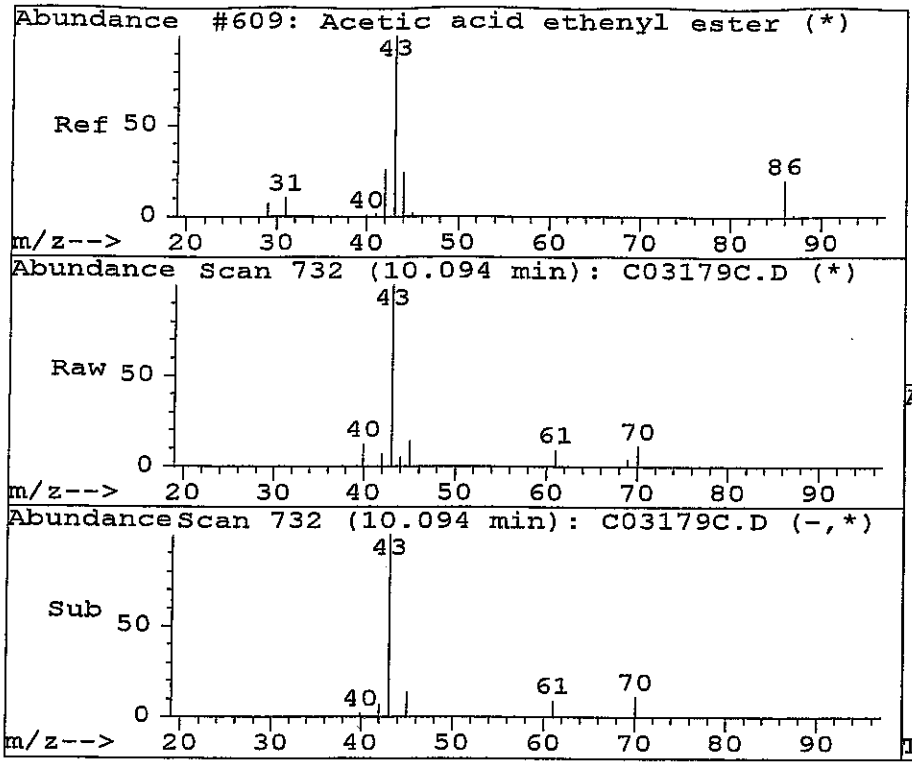


#24
1,1-Dichloroethane
Concen: 0.31 ppbV
RT: 8.68 min Scan# 586
Delta R.T. -0.22 min
Lab File: C03179C.D
Acq: 17 Mar 109 10:25 am

Tgt Ion:63 Resp: 22823

Ion	Ratio	Lower	Upper
63	100		
65	30.0	25.8	38.8
83	10.9	9.0	13.6
0	0.0	0.0	0.0

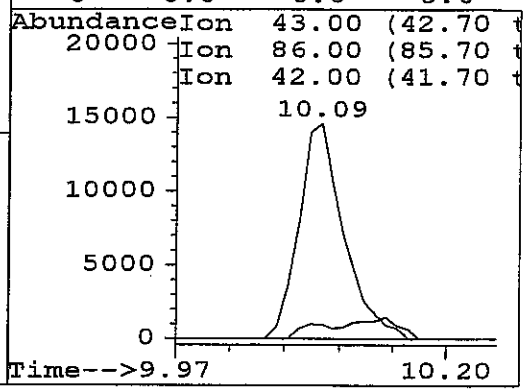


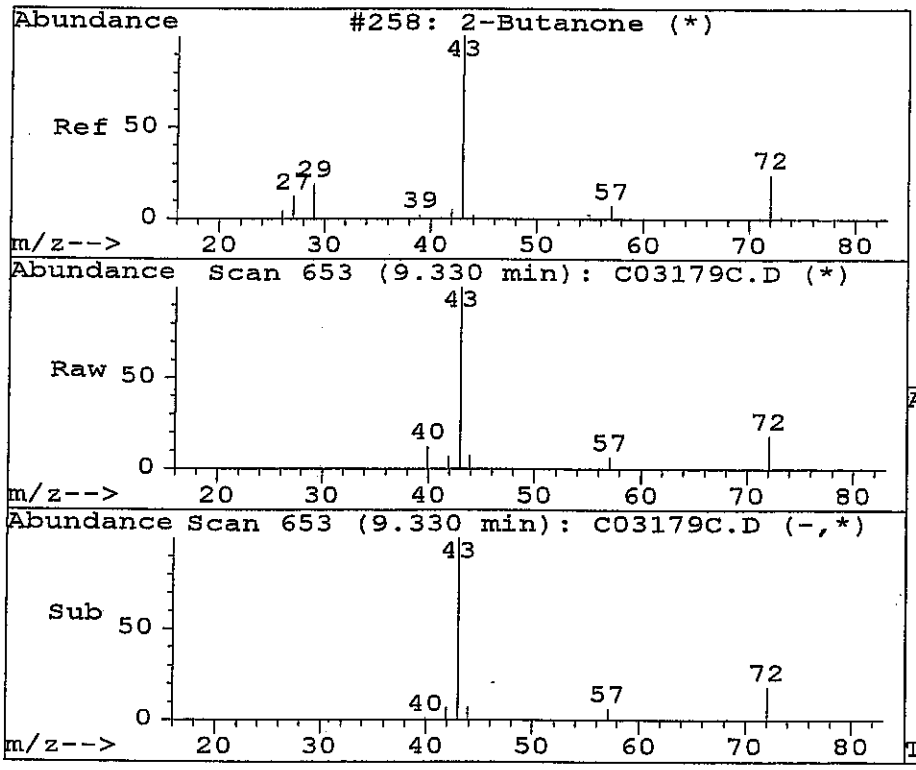


#25
Vinyl acetate
Concen: 0.18 ppbV
RT: 10.09 min Scan# 732
Delta R.T. -0.23 min
Lab File: C03179C.D
Acq: 17 Mar 109 10:25 am

Tgt Ion:43 Resp: 40148

Ion	Ratio	Lower	Upper
43	100		
86	0.0	0.0	0.0
42	6.7	6.2	9.2
0	0.0	0.0	0.0

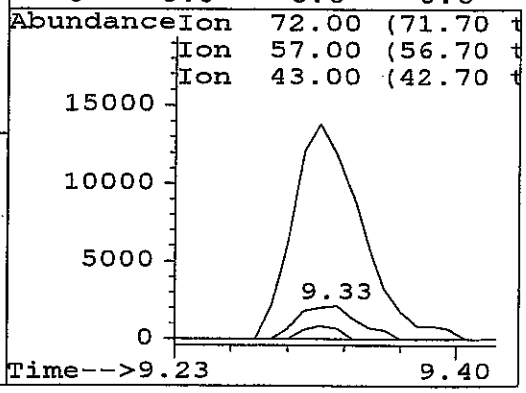


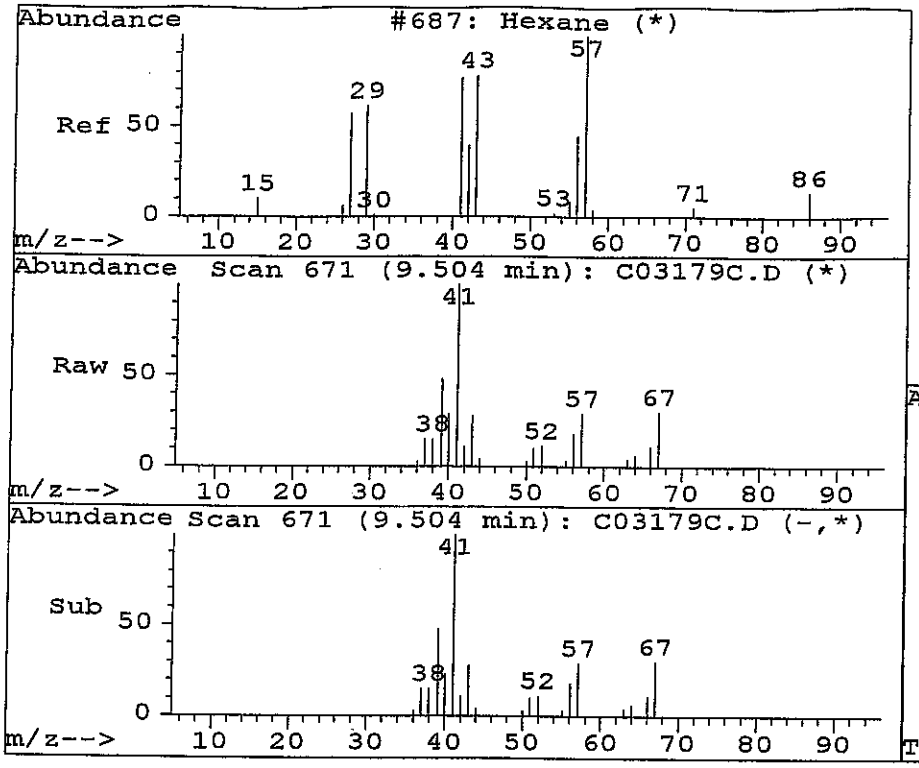


#26
2-Butanone
Concen: 0.11 ppbV
RT: 9.33 min Scan# 653
Delta R.T. -0.21 min
Lab File: C03179C.D
Acq: 17 Mar 109 10:25 am

Tgt Ion:72 Resp: 5400

Ion	Ratio	Lower	Upper
72	100		
57	31.6	25.8	38.6
43	531.3	493.3	739.9
0	0.0	0.0	0.0

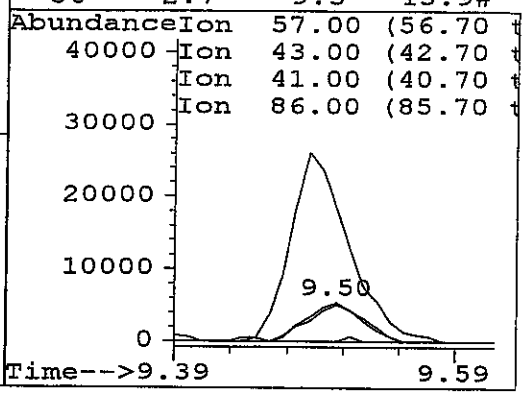


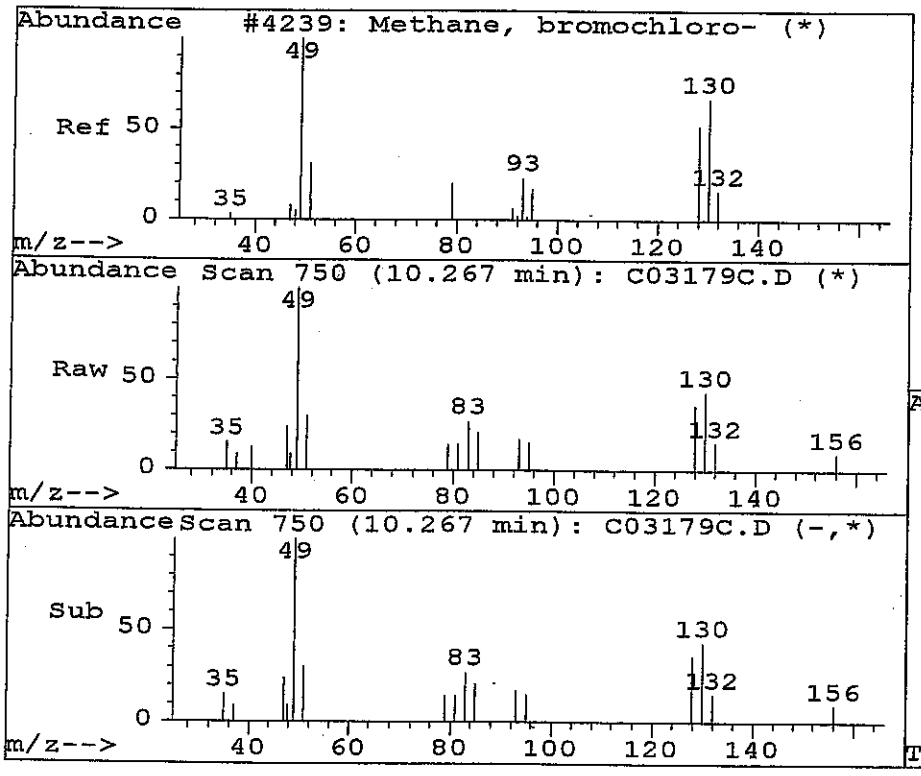


#27
Hexane
Concen: 0.10 ppbV
RT: 9.50 min Scan# 671
Delta R.T. -0.21 min
Lab File: C03179C.D
Acq: 17 Mar 109 10:25 am

Tgt Ion:57 Resp: 15036

Ion	Ratio	Lower	Upper
57	100		
43	97.5	75.0	112.4
41	498.9	461.1	691.7
86	2.7	9.3	13.9#

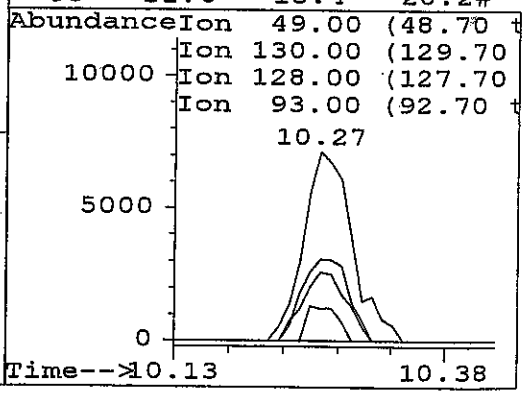


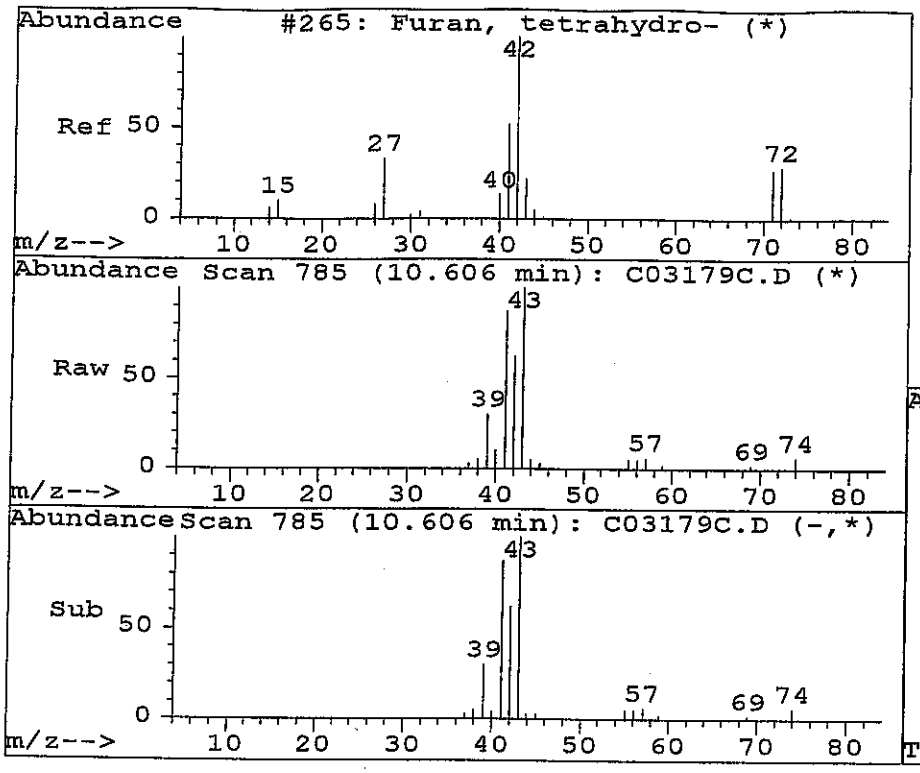


#28
Bromochloromethane
Concen: 0.11 ppbV
RT: 10.27 min Scan# 750
Delta R.T. -0.23 min
Lab File: C03179C.D
Acq: 17 Mar 109 10:25 am

Tgt Ion:49 Resp: 22610

Ion	Ratio	Lower	Upper
49	100		
130	41.6	35.3	52.9
128	32.7	30.0	45.0
93	11.6	13.4	20.2#

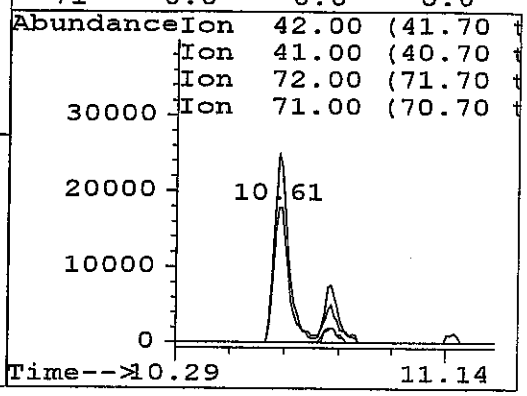


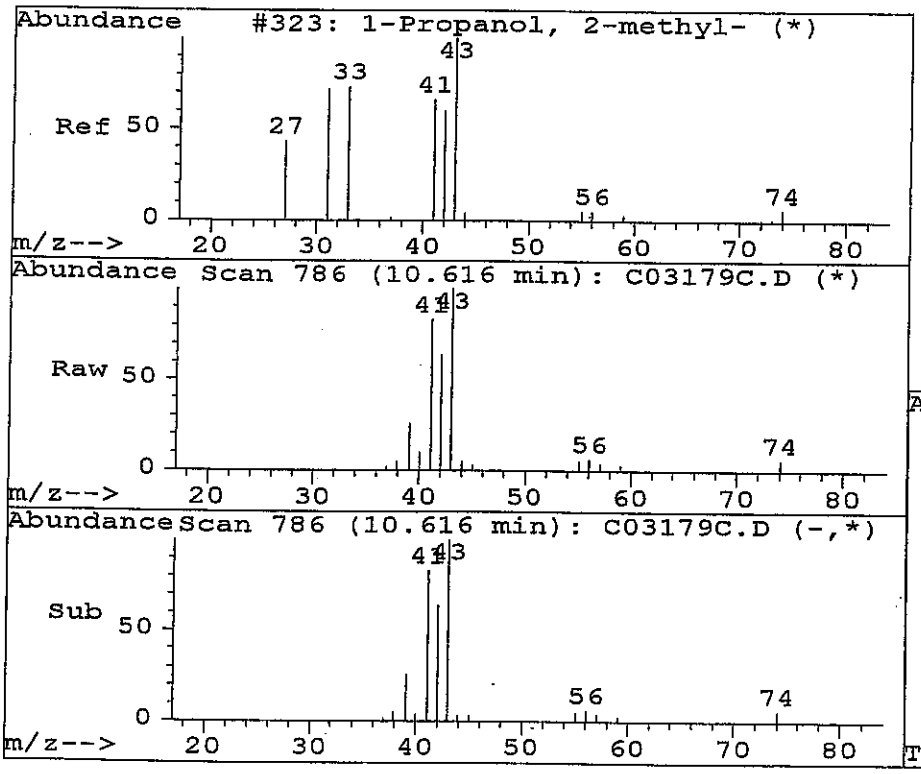


#29
Tetrahydrofuran
Concen: 0.20 ppbV m
RT: 10.61 min Scan# 785
Delta R.T. -0.31 min
Lab File: C03179C.D
Acq: 17 Mar 109 10:25 am

Tgt Ion:42 Resp: 81815

Ion	Ratio	Lower	Upper
42	100		
41	139.8	103.3	154.9
72	0.0	0.0	0.0
71	0.0	0.0	0.0

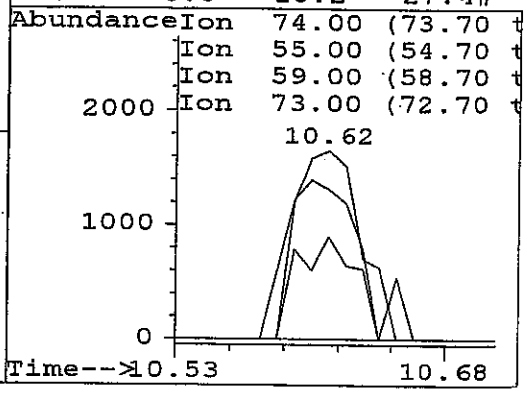


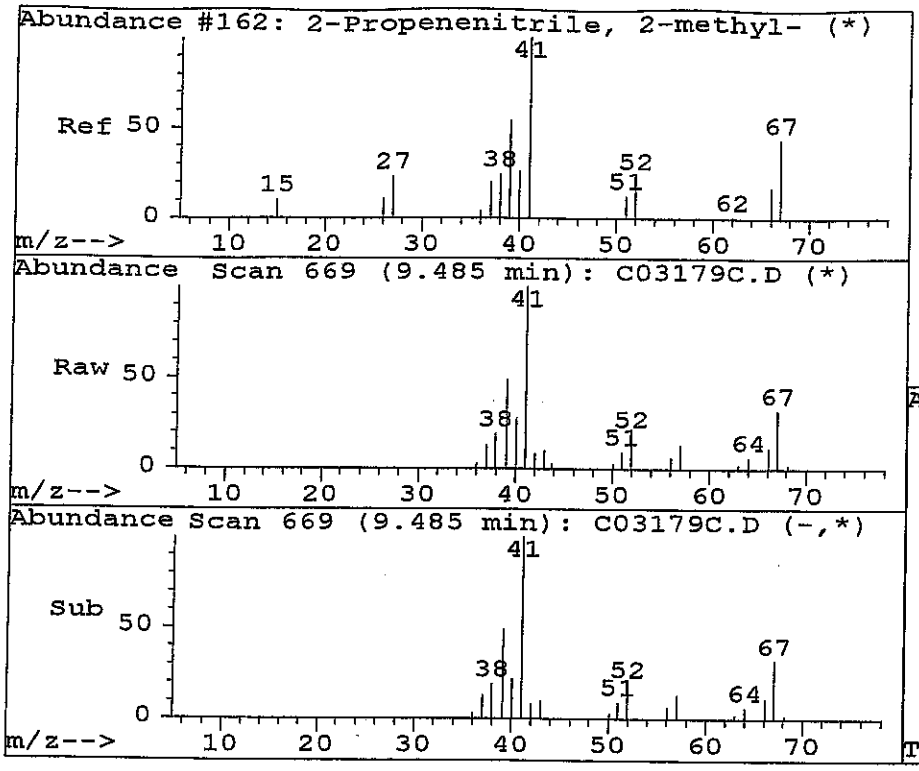


#30
Isobutyl alcohol
Concen: 0.39 ppbV
RT: 10.62 min Scan# 786
Delta R.T. -0.30 min
Lab File: C03179C.D
Acq: 17 Mar 109 10:25 am

Tgt Ion:74 Resp: 4214

Ion	Ratio	Lower	Upper
74	100		
55	79.5	64.8	97.2
59	54.2	27.1	40.7#
73	0.0	18.2	27.4#

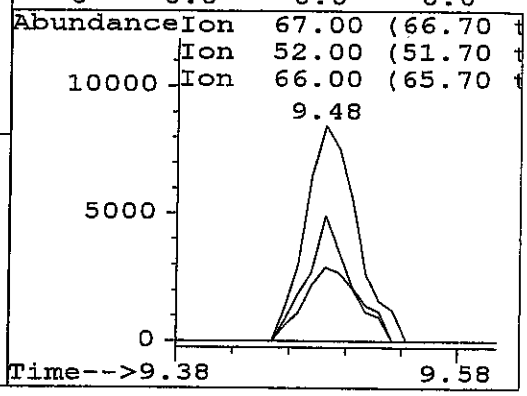


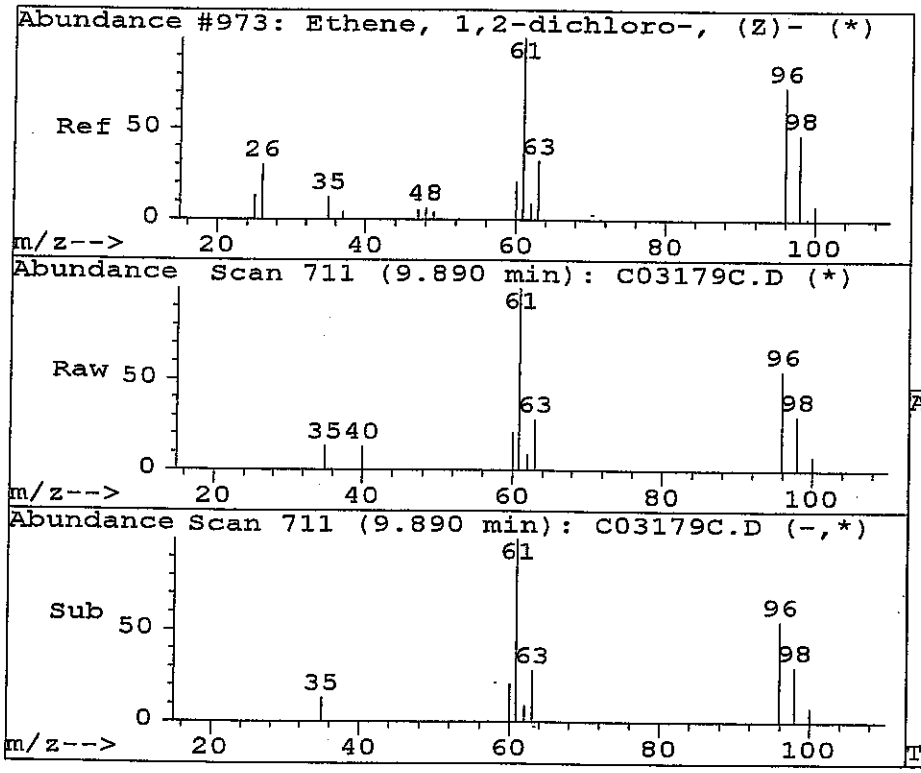


#31
Methacrylonitrile
Concen: 0.69 ppbV
RT: 9.48 min Scan# 669
Delta R.T. -0.26 min
Lab File: C03179C.D
Acq: 17 Mar 109 10:25 am

Tgt Ion:67 Resp: 21857

Ion	Ratio	Lower	Upper
67	100		
52	58.1	45.4	68.2
66	34.3	32.5	48.7
0	0.0	0.0	0.0

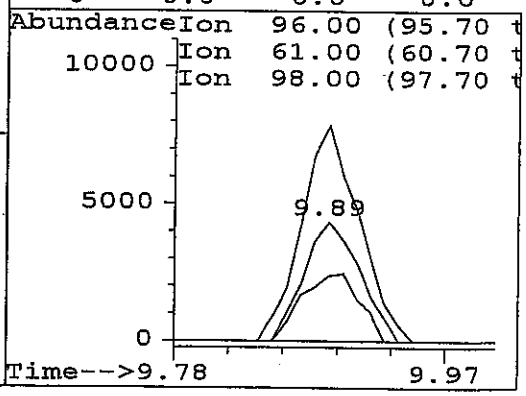


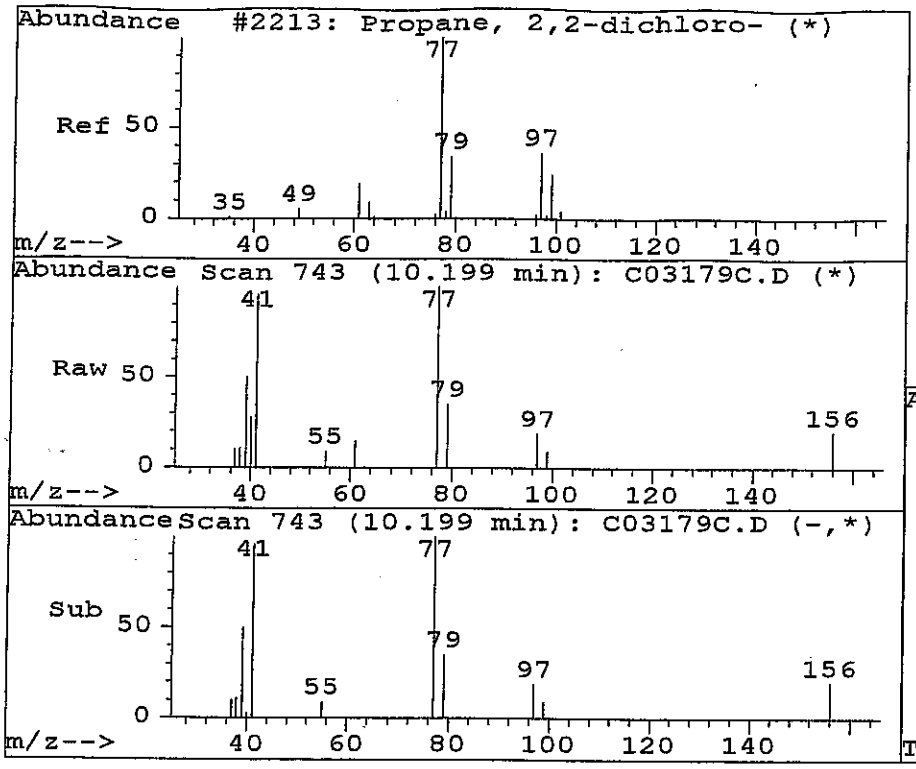


#32
cis-1,2-Dichloroethene
Concen: 0.30 ppbV
RT: 9.89 min Scan# 711
Delta R.T. -0.22 min
Lab File: C03179C.D
Acq: 17 Mar 109 10:25 am

Tgt Ion:96 Resp: 11695

Ion	Ratio	Lower	Upper
96	100		
61	181.6	143.1	214.7
98	54.9	49.1	73.7
0	0.0	0.0	0.0

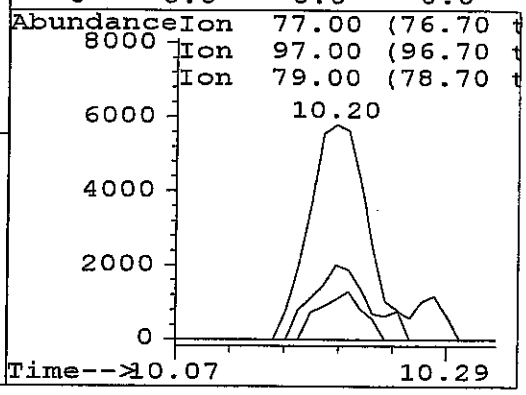


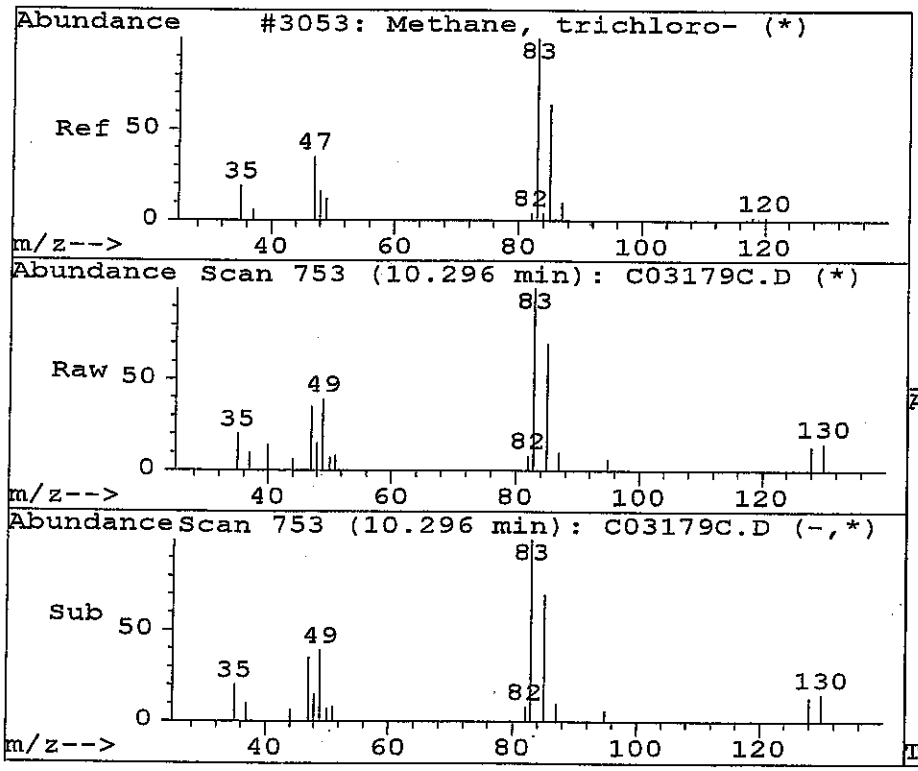


#33
2,2-Dichloropropane
Concen: 0.17 ppbV
RT: 10.20 min Scan# 743
Delta R.T. -0.22 min
Lab File: C03179C.D
Acq: 17 Mar 109 10:25 am

Tgt Ion:77 Resp: 18638

Ion	Ratio	Lower	Upper
77	100		
97	18.7	12.4	18.6#
79	25.9	26.3	39.5#
0	0.0	0.0	0.0

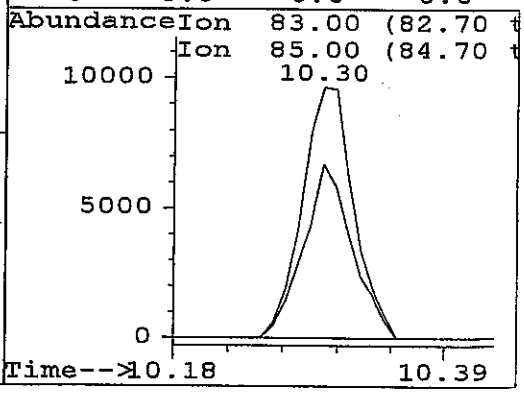


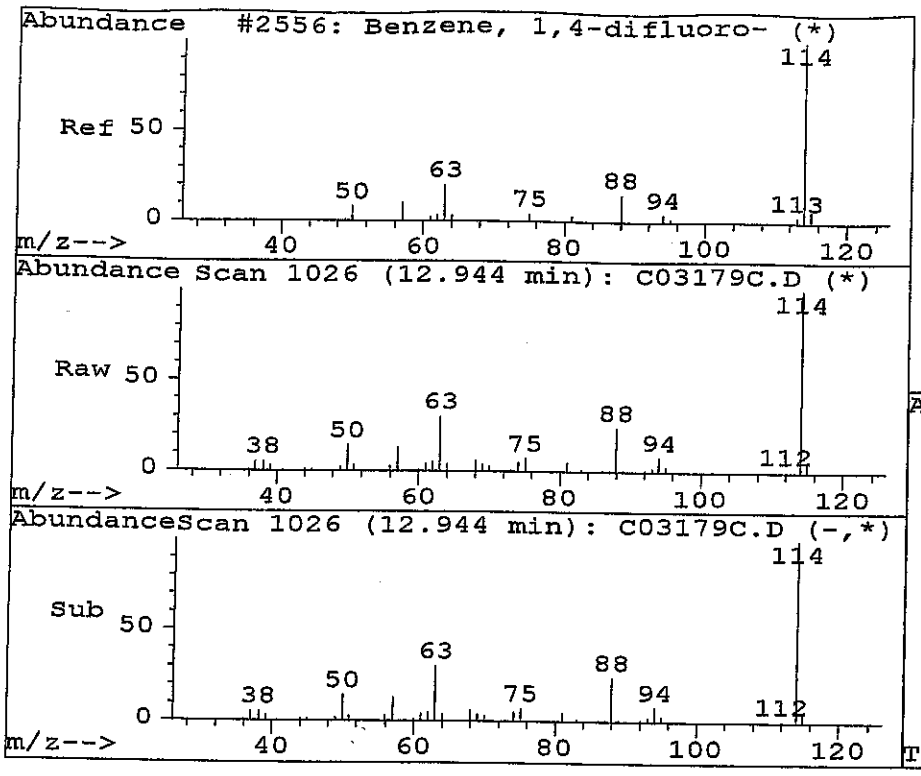


#34
Chloroform
Concen: 0.30 ppbV
RT: 10.30 min Scan# 753
Delta R.T. -0.23 min
Lab File: C03179C.D
Acq: 17 Mar 109 10:25 am

Tgt Ion:83 Resp: 27147

Ion	Ratio	Lower	Upper
83	100		
85	69.6	51.8	77.6
0	0.0	0.0	0.0
0	0.0	0.0	0.0

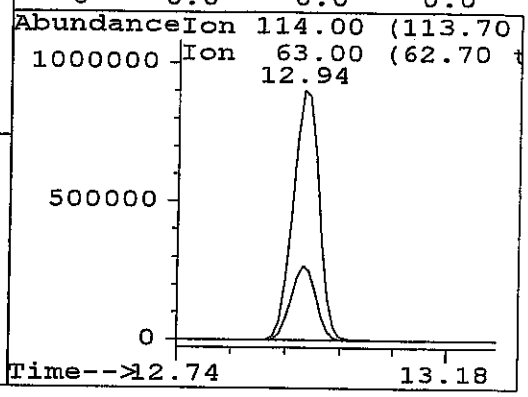


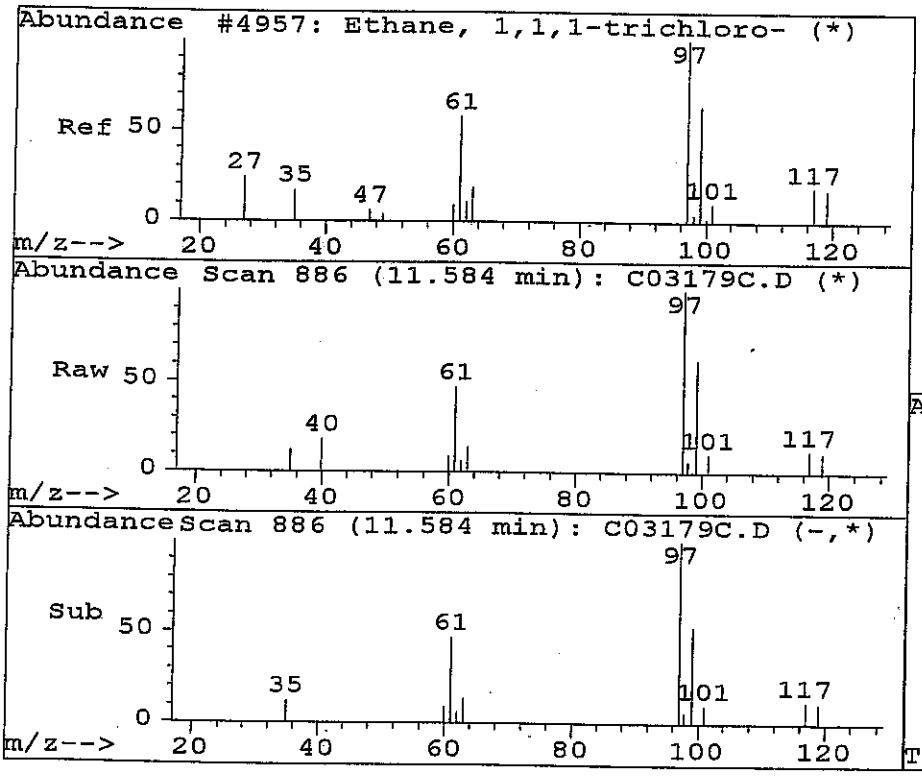


#35
1,4-Difluorobenzene
Concen: 20.00 ppbV
RT: 12.94 min Scan# 1026
Delta R.T. -0.23 min
Lab File: C03179C.D
Acq: 17 Mar 109 10:25 am

Tgt Ion:114 Resp: 2659938

Ion	Ratio	Lower	Upper
114	100		
63	29.9	21.8	36.4
0	0.0	0.0	0.0
0	0.0	0.0	0.0

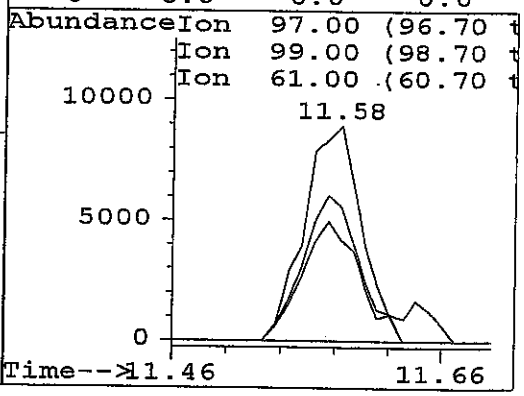


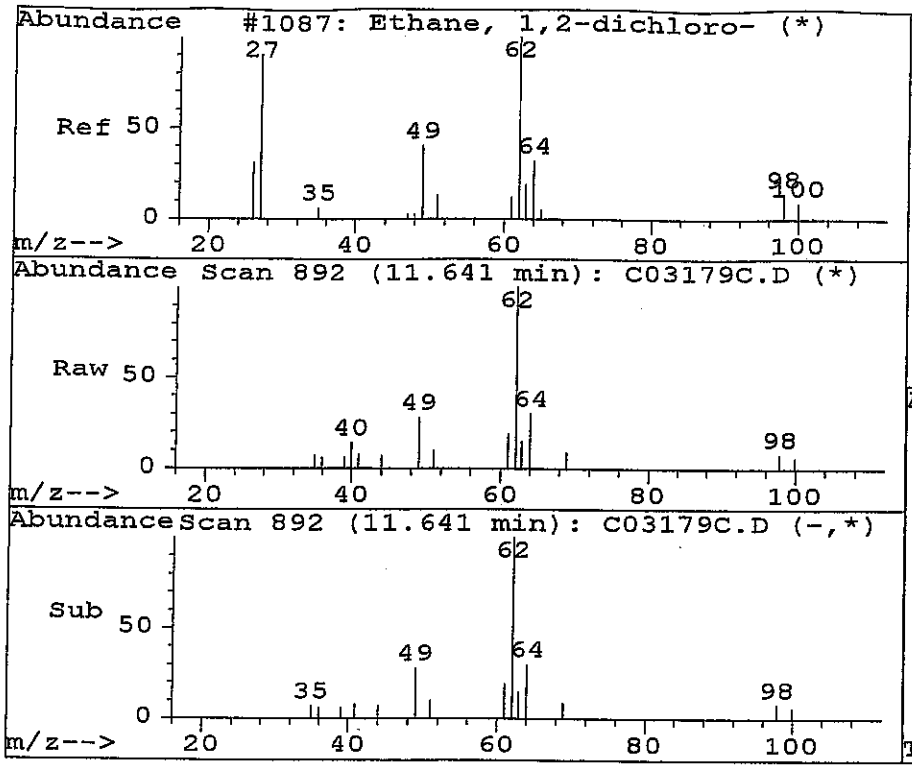


#36
1,1,1-Trichloroethane
Concen: 0.29 ppbV
RT: 11.58 min Scan# 886
Delta R.T. -0.22 min
Lab File: C03179C.D
Acq: 17 Mar 109 10:25 am

Tgt Ion:97 Resp: 26931

Ion	Ratio	Lower	Upper
97	100		
99	62.3	53.2	79.8
61	37.4	44.6	67.0#
0	0.0	0.0	0.0

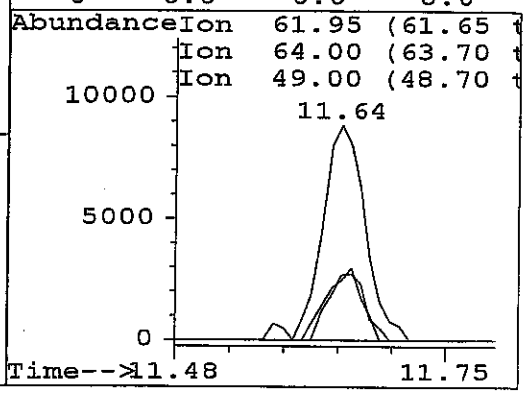


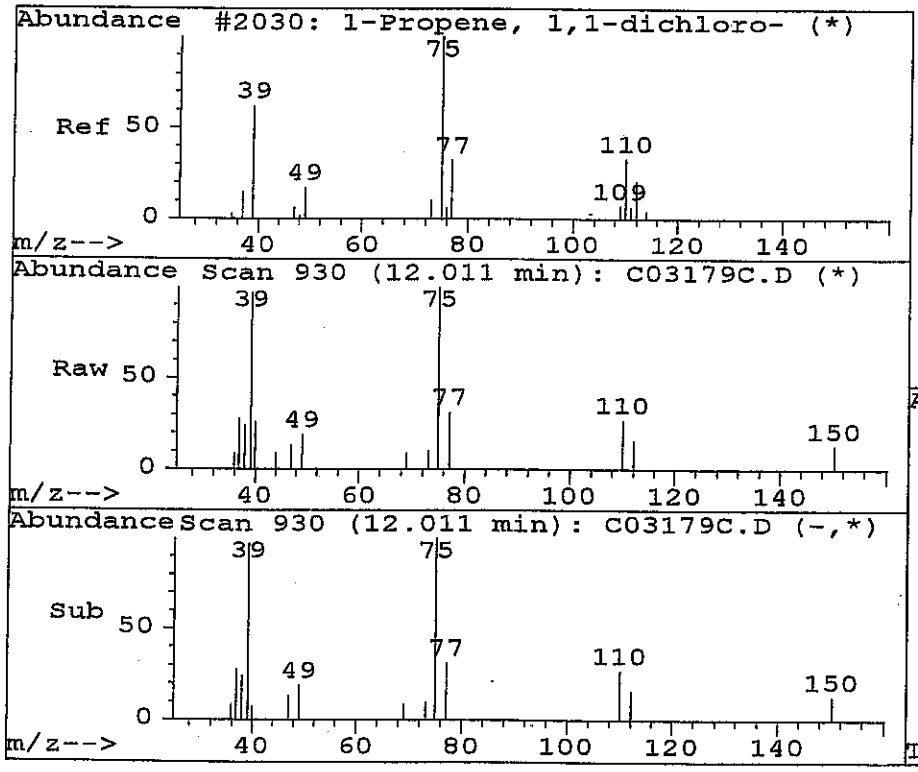


#37
1,2-Dichloroethane
Concen: 0.30 ppbV
RT: 11.64 min Scan# 892
Delta R.T. -0.23 min
Lab File: C03179C.D
Acq: 17 Mar 109 10:25 am

Tgt Ion:61.95 Resp: 26512

Ion	Ratio	Lower	Upper
62	100		
64	30.4	26.4	39.6
49	28.0	23.8	35.6
0	0.0	0.0	0.0

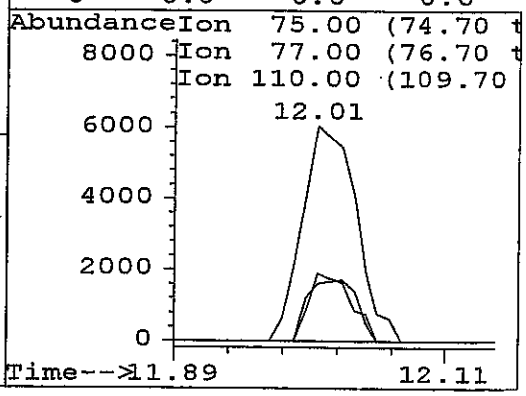


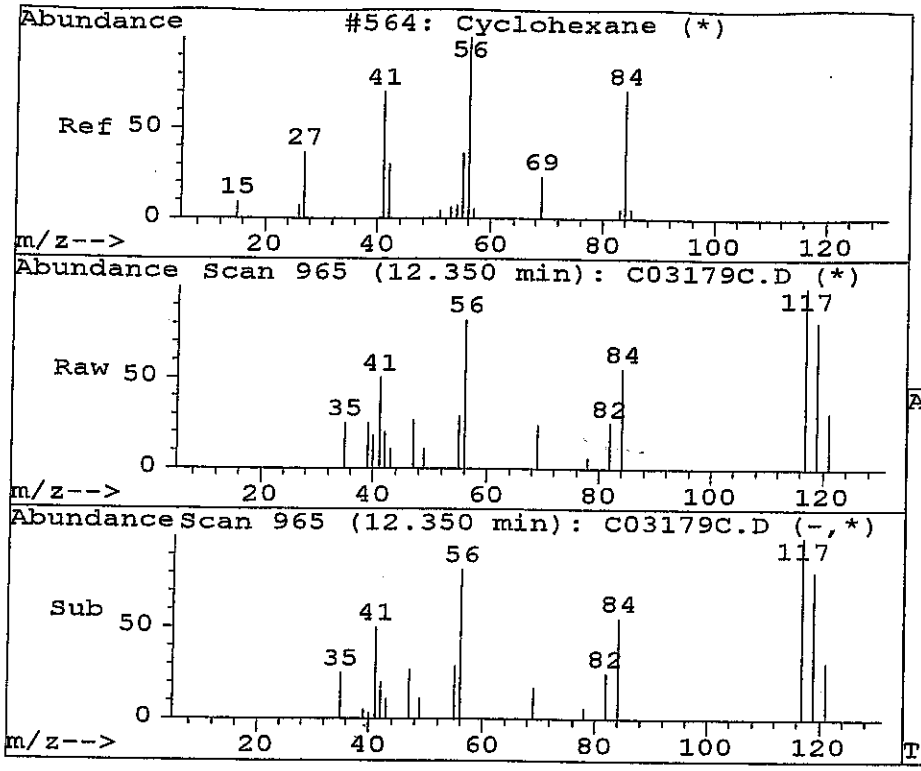


#38
1,1-Dichloropropene
Concen: 0.09 ppbV
RT: 12.01 min Scan# 930
Delta R.T. -0.23 min
Lab File: C03179C.D
Acq: 17 Mar 109 10:25 am

Tgt Ion:75 Resp: 18414

Ion	Ratio	Lower	Upper
75	100		
77	31.2	23.0	34.4
110	26.6	23.1	34.7
0	0.0	0.0	0.0

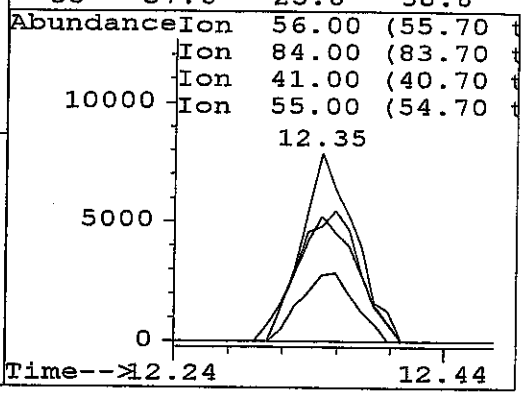


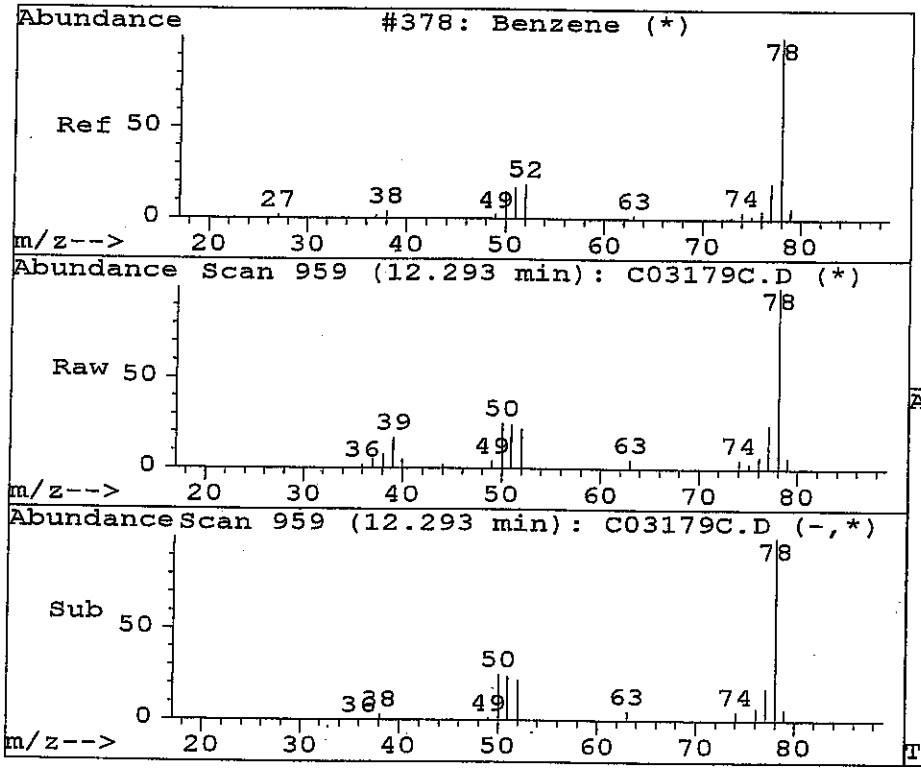


#39
Cyclohexane
Concen: 0.09 ppbV
RT: 12.35 min Scan# 965
Delta R.T. -0.20 min
Lab File: C03179C.D
Acq: 17 Mar 109 10:25 am

Tgt Ion:56 Resp: 21052

Ion	Ratio	Lower	Upper
56	100		
84	75.4	60.3	90.5
41	81.7	59.8	89.6
55	37.6	25.8	38.8

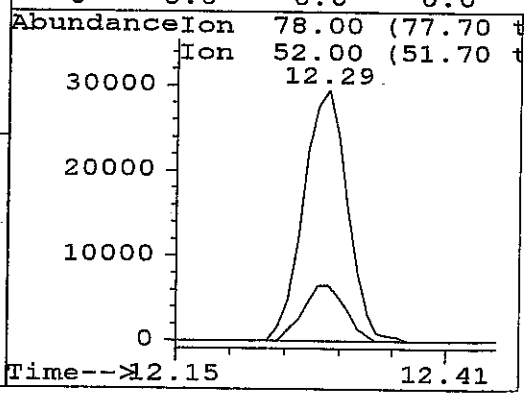


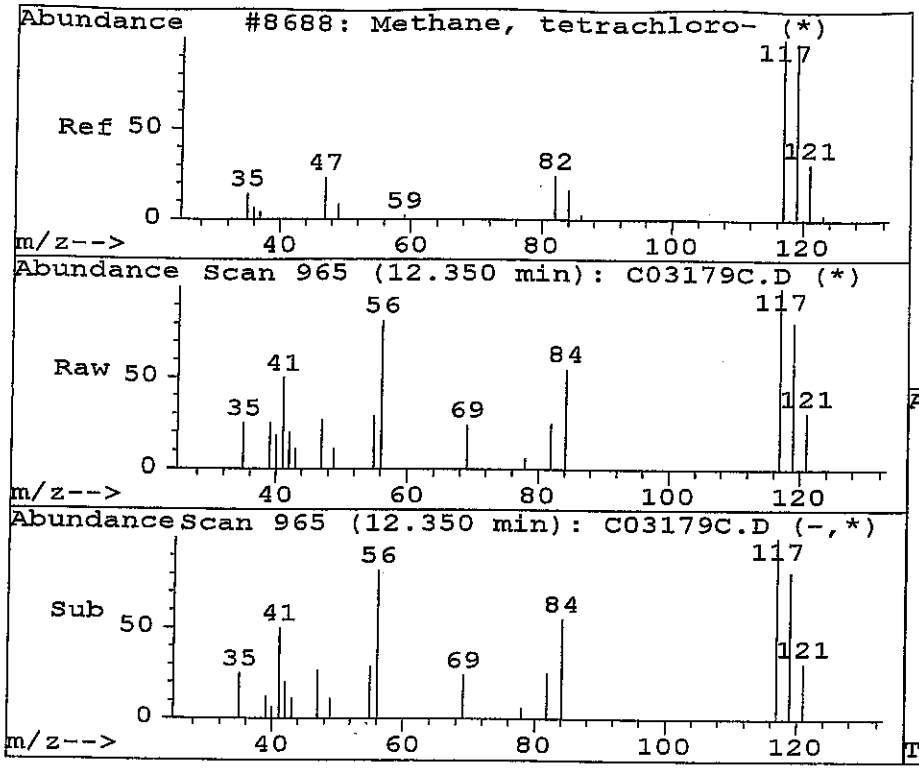


#40
Benzene
Concen: 0.44 ppbV
RT: 12.29 min Scan# 959
Delta R.T. -0.22 min
Lab File: C03179C.D
Acq: 17 Mar 109 10:25 am

Tgt Ion:78 Resp: 87322

Ion	Ratio	Lower	Upper
78	100		
52	22.3	18.6	27.8
0	0.0	0.0	0.0
0	0.0	0.0	0.0

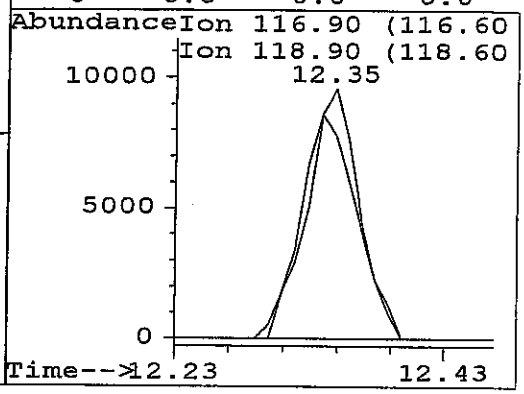


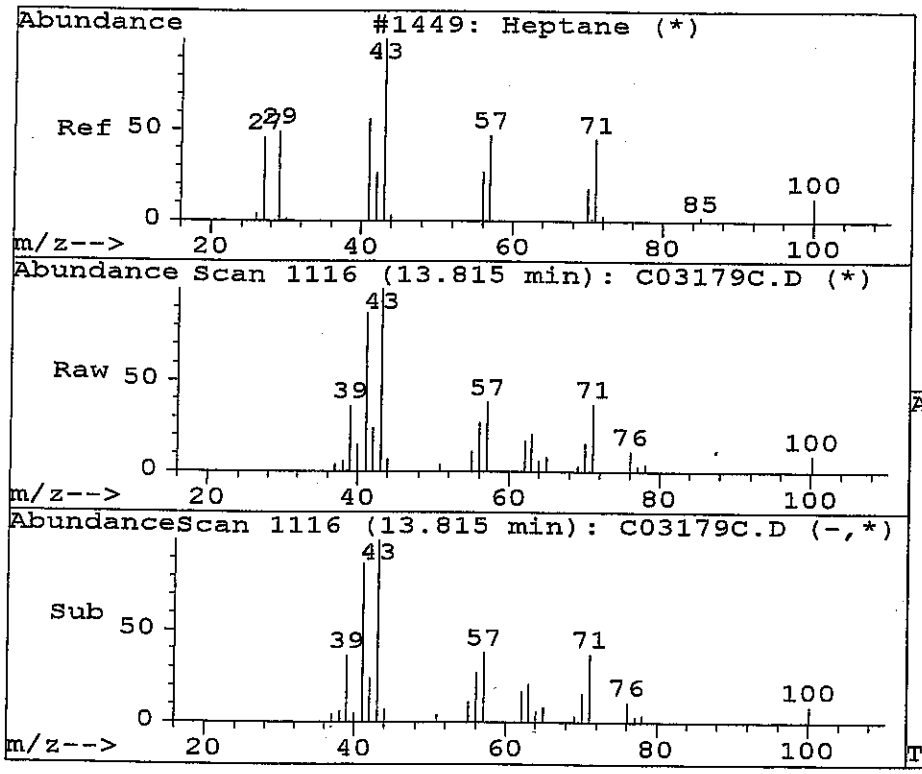


#41
Carbon tetrachloride
Concen: 0.28 ppbV
RT: 12.35 min Scan# 965
Delta R.T. -0.21 min
Lab File: C03179C.D
Acq: 17 Mar 109 10:25 am

Tgt Ion:116.9 Resp: 2627

Ion	Ratio	Lower	Upper
117	100		
119	81.3	79.5	119.3
0	0.0	0.0	0.0
0	0.0	0.0	0.0

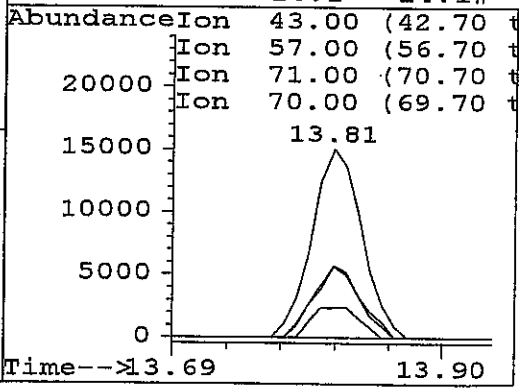


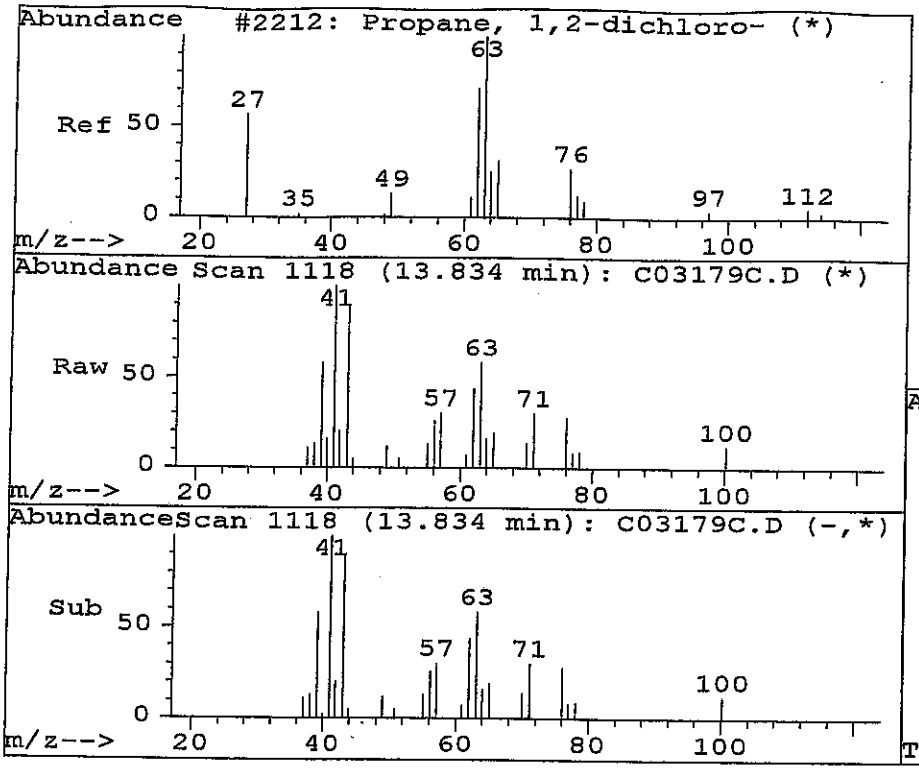


#42
n-Heptane
Concen: 0.10 ppbV
RT: 13.81 min Scan# 1116
Delta R.T. -0.23 min
Lab File: C03179C.D
Acq: 17 Mar 109 10:25 am

Tgt Ion:43 Resp: 41261

Ion	Ratio	Lower	Upper
43	100		
57	37.9	28.9	43.3
71	37.4	27.5	41.3
70	15.8	16.1	24.1#

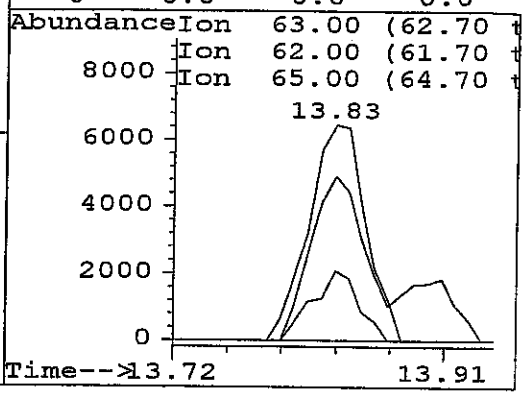


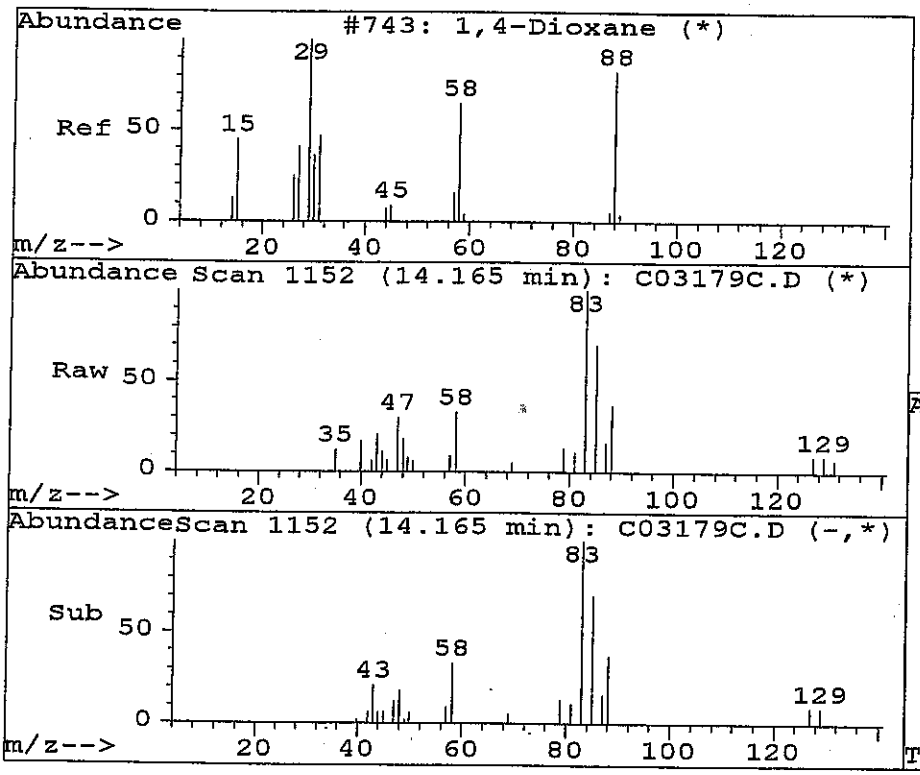


#43
1,2-Dichloropropane
Concen: 0.33 ppbV
RT: 13.83 min Scan# 1118
Delta R.T. -0.24 min
Lab File: C03179C.D
Acq: 17 Mar 109 10:25 am

Tgt Ion:63 Resp: 18588

Ion	Ratio	Lower	Upper
63	100		
62	63.0	50.3	75.5
65	32.2	22.0	33.0
0	0.0	0.0	0.0

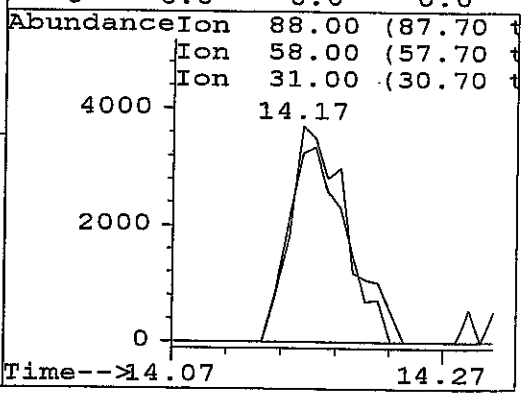


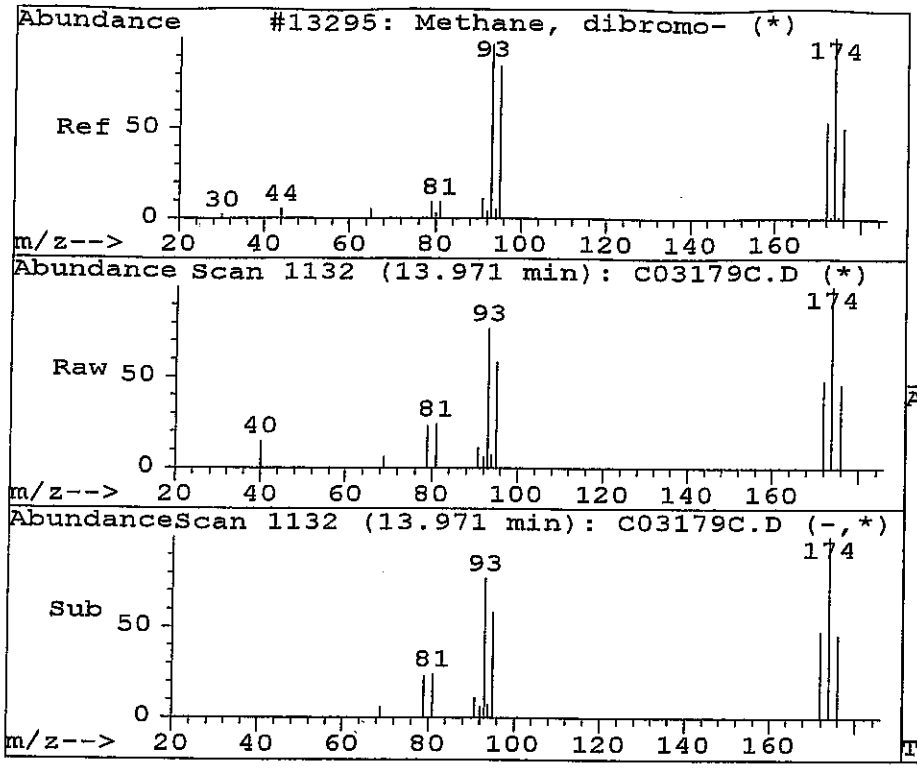


#44
1,4 Dioxane
Concen: 0.10 ppbV
RT: 14.17 min Scan# 1152
Delta R.T. -0.23 min
Lab File: C03179C.D
Acq: 17 Mar 109 10:25 am

Tgt Ion:88 Resp: 11252

Ion	Ratio	Lower	Upper
88	100		
58	89.4	76.6	115.0
31	0.0	0.0	0.0
0	0.0	0.0	0.0

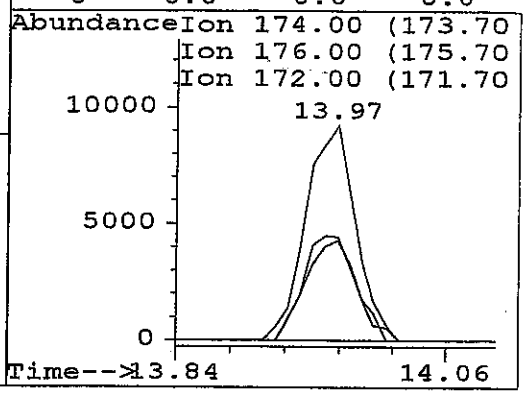


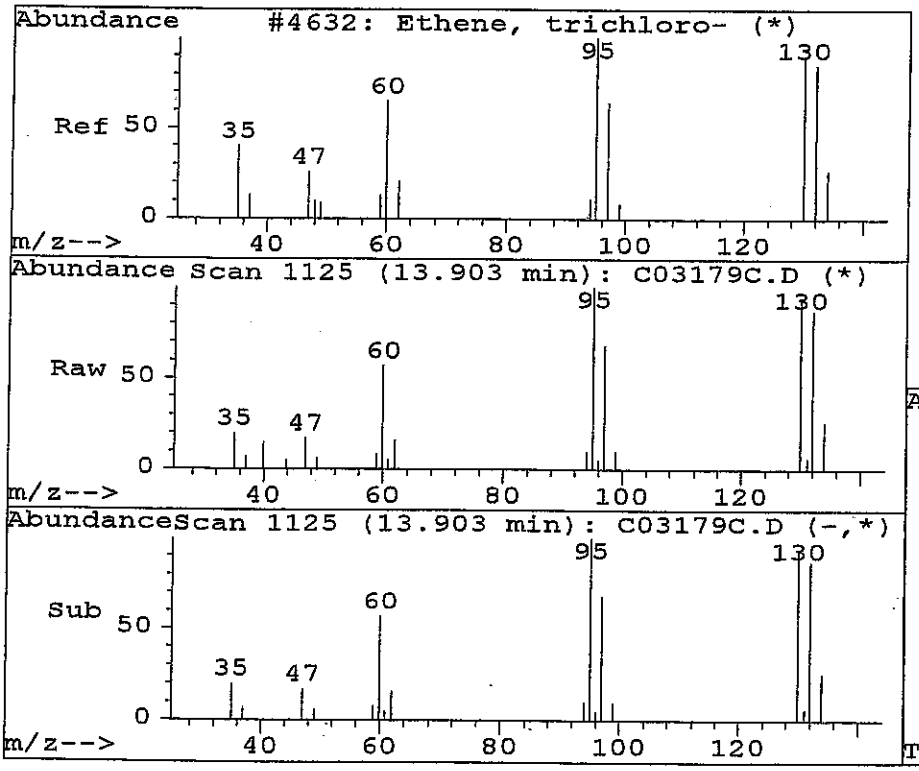


#45
Dibromomethane
Concen: 0.08 ppbV
RT: 13.97 min Scan# 1132
Delta R.T. -0.23 min
Lab File: C03179C.D
Acq: 17 Mar 109 10:25 am

Tgt Ion:174 Resp: 25221

Ion	Ratio	Lower	Upper
174	100		
176	46.4	38.7	58.1
172	48.0	37.8	56.6
0	0.0	0.0	0.0

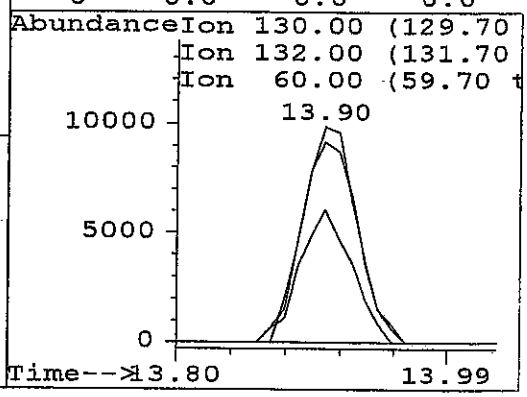


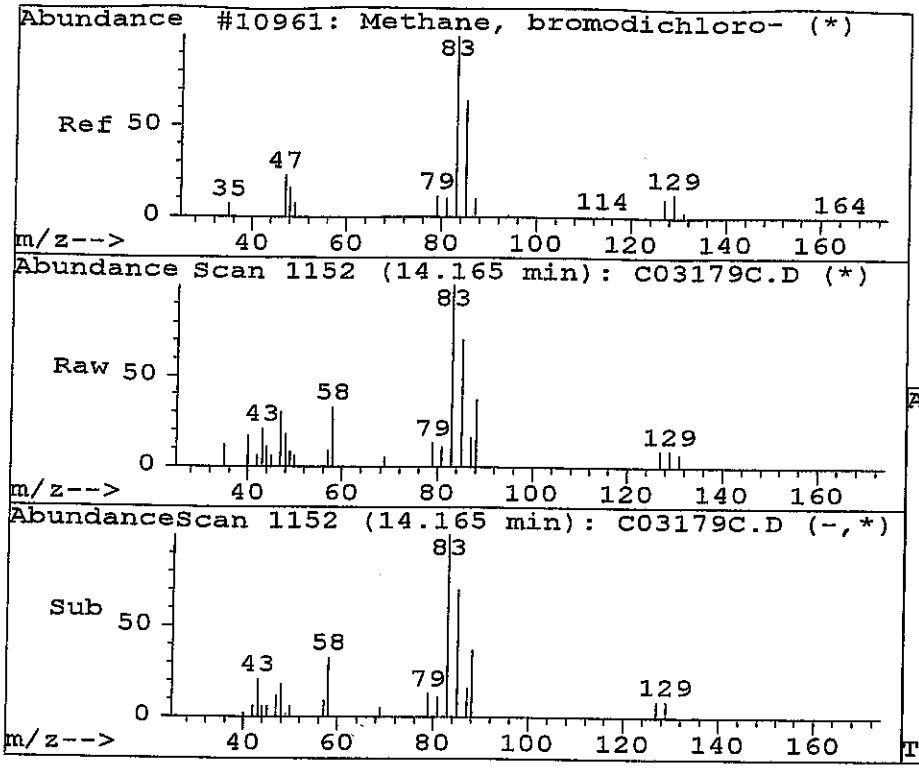


#46
Trichloroethene
Concen: 0.35 ppbV
RT: 13.90 min Scan# 1125
Delta R.T. -0.23 min
Lab File: C03179C.D
Acq: 17 Mar 109 10:25 am

Tgt Ion:130 Resp: 27013

Ion	Ratio	Lower	Upper
130	100		
132	93.0	80.9	121.3
60	61.5	43.4	65.0
0	0.0	0.0	0.0

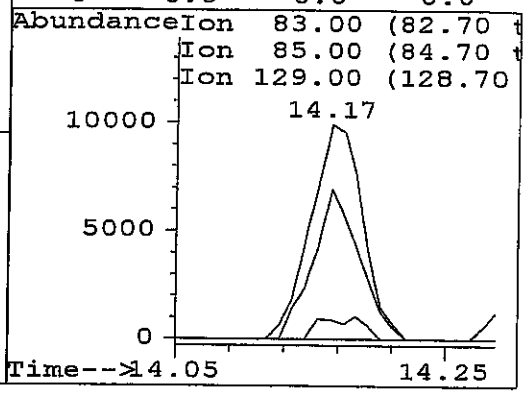


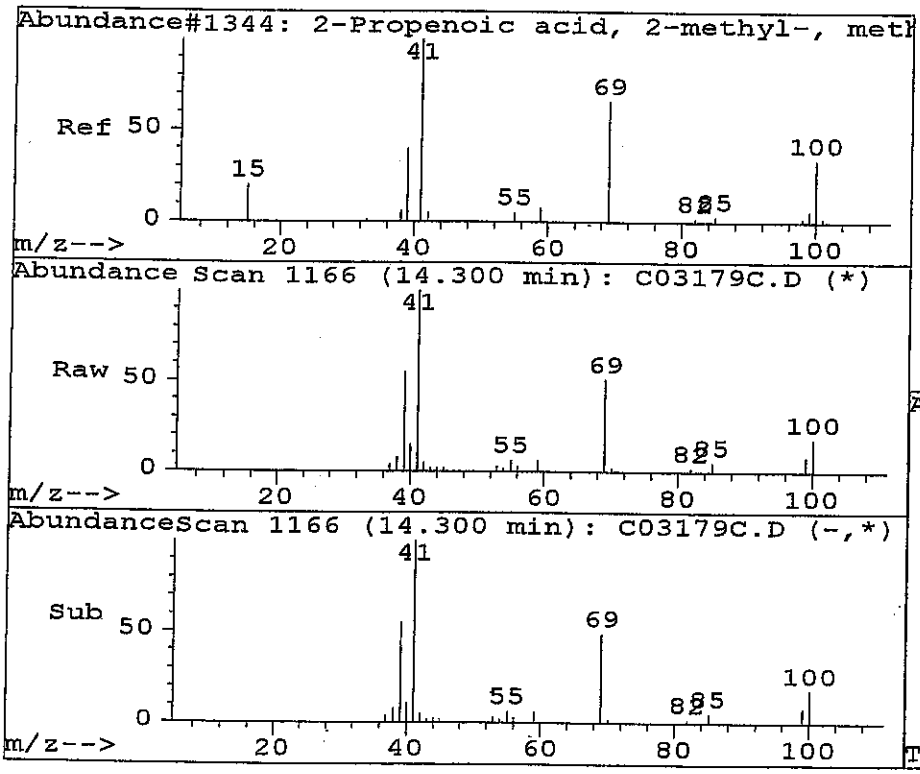


#47
Bromodichloromethane
Concen: 0.08 ppbV
RT: 14.17 min Scan# 1152
Delta R.T. -0.23 min
Lab File: C03179C.D
Acq: 17 Mar 109 10:25 am

Tgt Ion:83 Resp: 27507

Ion	Ratio	Lower	Upper
83	100		
85	70.1	48.8	73.2
129	9.0	9.3	13.9#
0	0.0	0.0	0.0

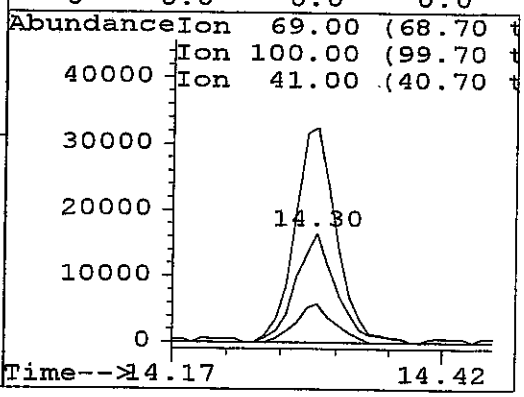


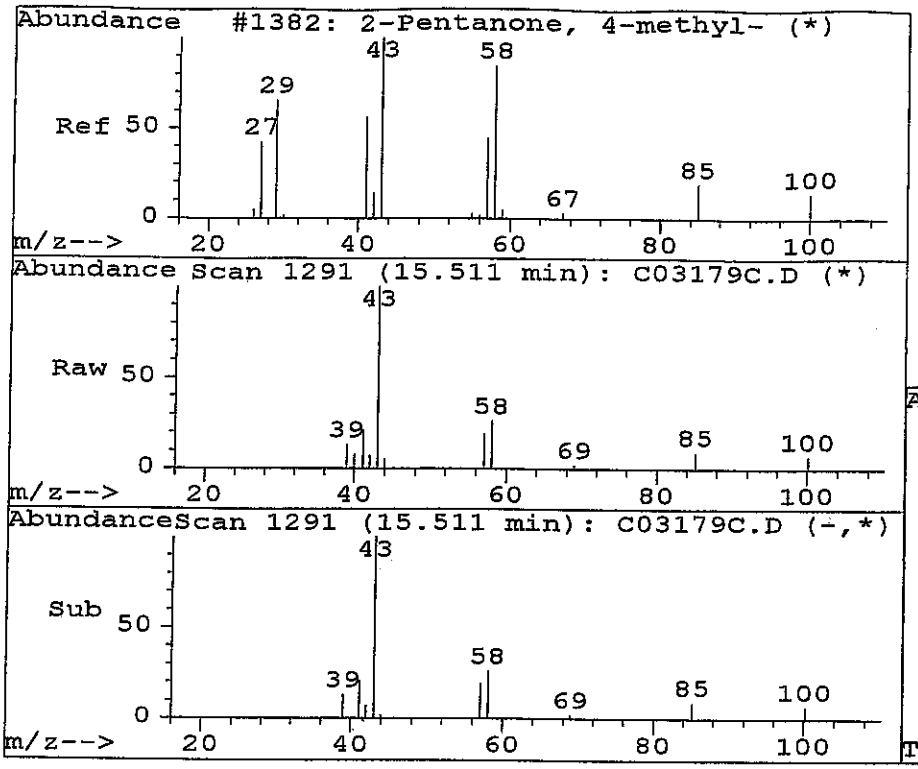


#48
Methyl methacrylate
Concen: 0.26 ppbV
RT: 14.30 min Scan# 1166
Delta R.T. -0.25 min
Lab File: C03179C.D
Acq: 17 Mar 109 10:25 am

Tgt Ion:69 Resp: 43778

Ion	Ratio	Lower	Upper
69	100		
100	35.4	27.7	41.5
41	197.3	160.2	240.4
0	0.0	0.0	0.0

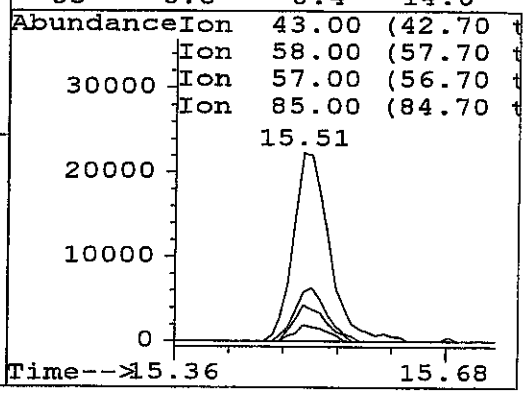


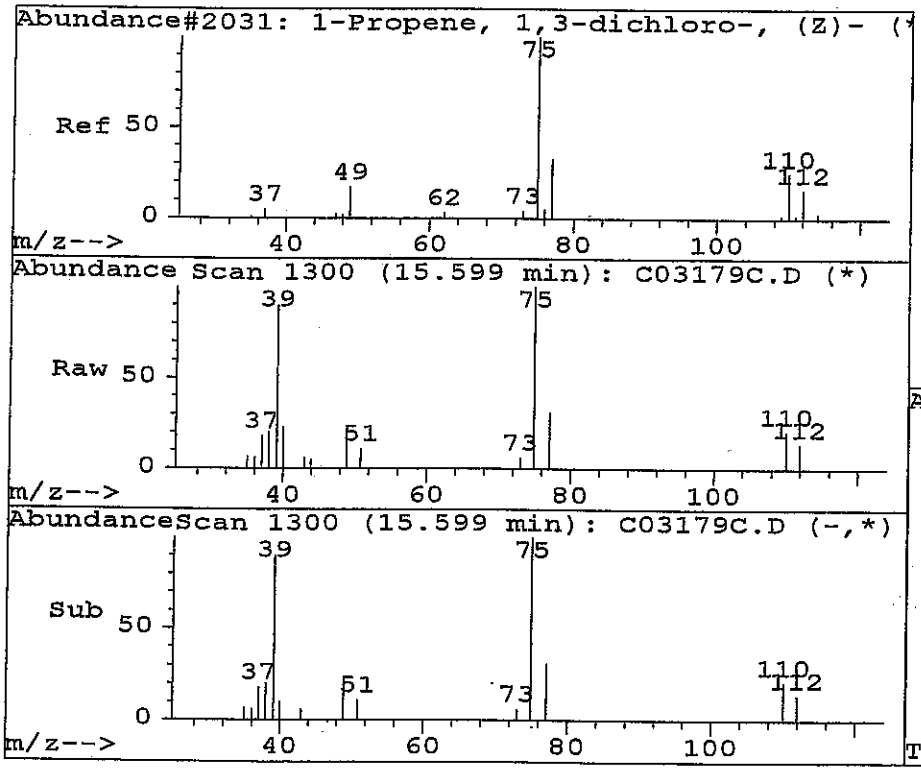


#49
Methyl Isobutyl Ketone
Concen: 0.09 ppbV
RT: 15.51 min Scan# 1291
Delta R.T. -0.19 min
Lab File: C03179C.D
Acq: 17 Mar 109 10:25 am

Tgt Ion:43 Resp: 67434

Ion	Ratio	Lower	Upper
43	100		
58	26.1	21.3	35.5
57	19.2	13.2	22.0
85	8.8	8.4	14.0

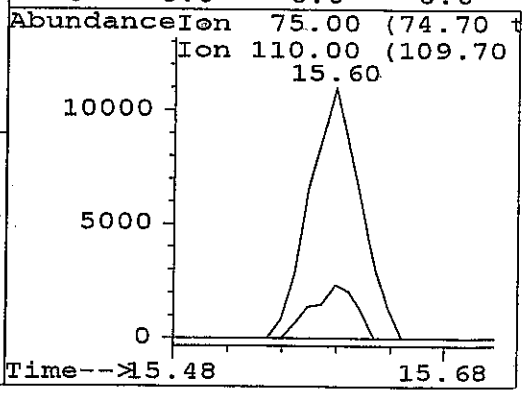


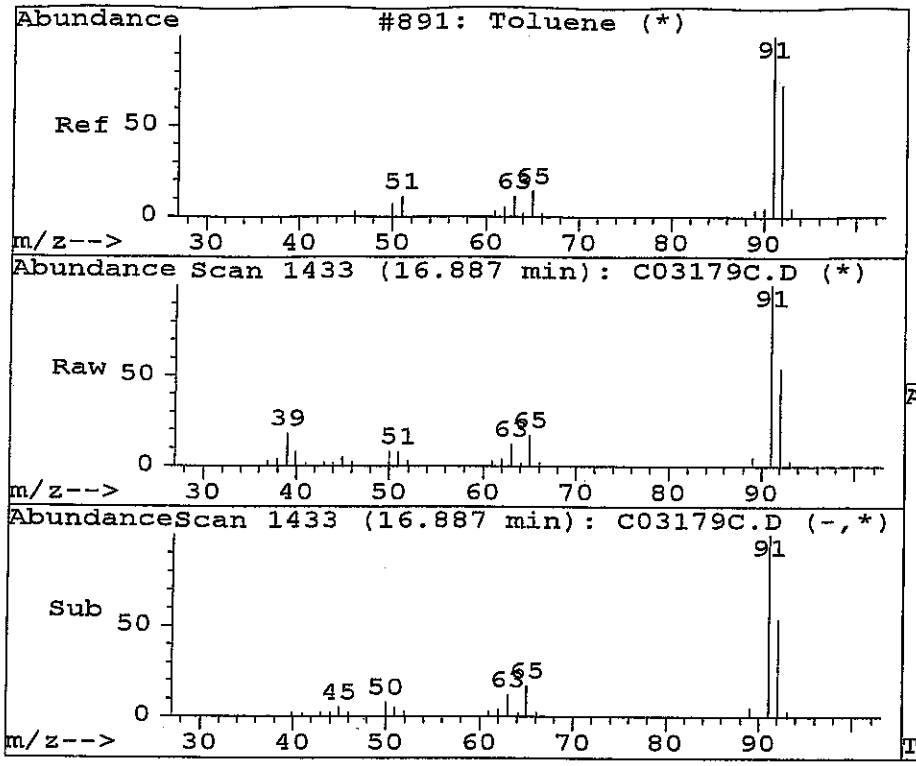


#50
cis-1,3-Dichloropropene
Concen: 0.31 ppbV
RT: 15.60 min Scan# 1300
Delta R.T. -0.22 min
Lab File: C03179C.D
Acq: 17 Mar 109 10:25 am

Tgt Ion:75 Resp: 28339

Ion	Ratio	Lower	Upper
75	100		
110	21.4	15.6	23.4
0	0.0	0.0	0.0
0	0.0	0.0	0.0

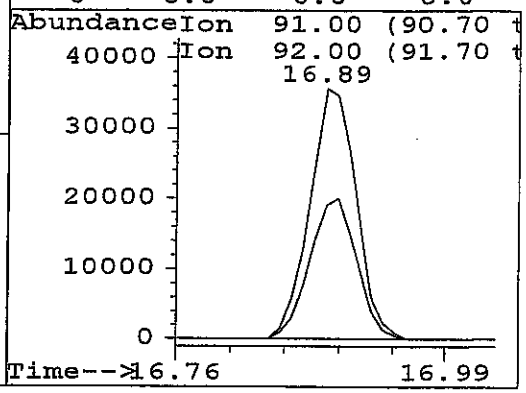


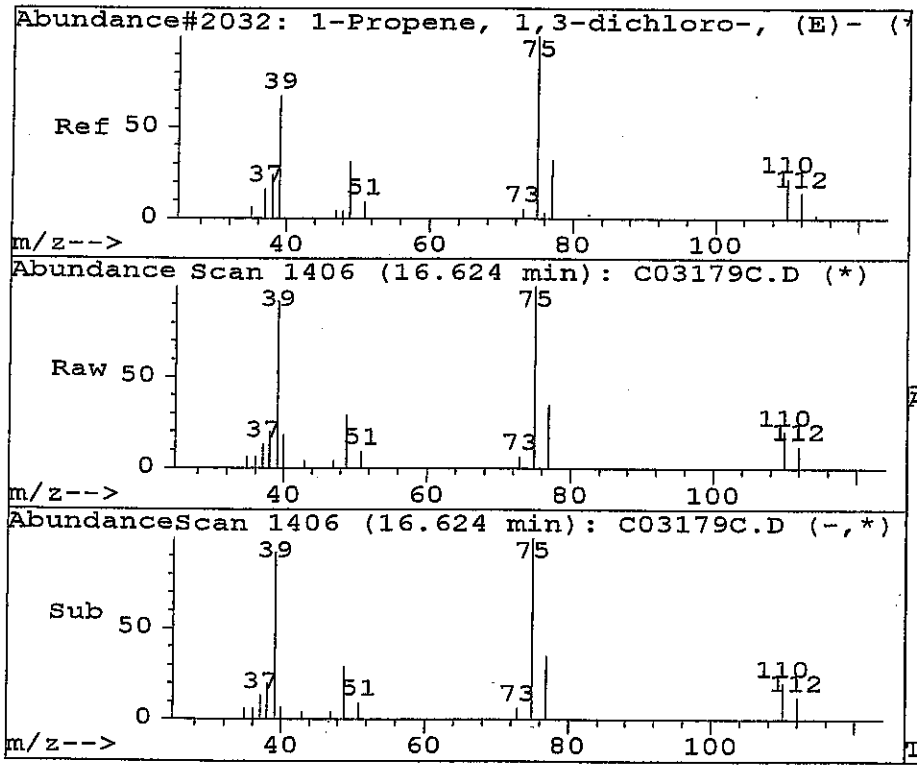


#51
Toluene
Concen: 0.41 ppbV
RT: 16.89 min Scan# 1433
Delta R.T. -0.22 min
Lab File: C03179C.D
Acq: 17 Mar 109 10:25 am

Tgt Ion:91 Resp: 97636

Ion	Ratio	Lower	Upper
91	100		
92	53.6	45.0	67.6
0	0.0	0.0	0.0
0	0.0	0.0	0.0

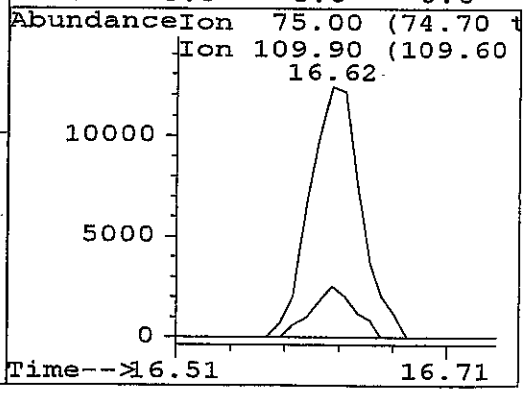


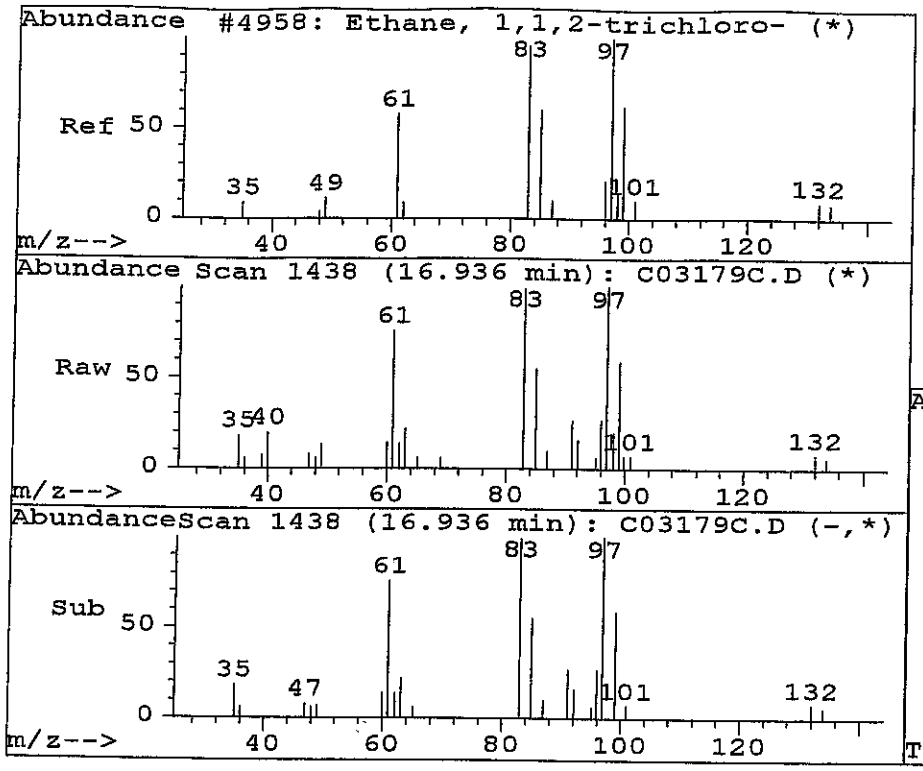


#52
trans-1,3-Dichloropropene
Concen: 0.31 ppbV
RT: 16.62 min Scan# 1406
Delta R.T. -0.23 min
Lab File: C03179C.D
Acq: 17 Mar 109 10:25 am

Tgt Ion:75 Resp: 33546

Ion	Ratio	Lower	Upper
75	100		
110	20.5	16.2	24.2
0	0.0	0.0	0.0
0	0.0	0.0	0.0

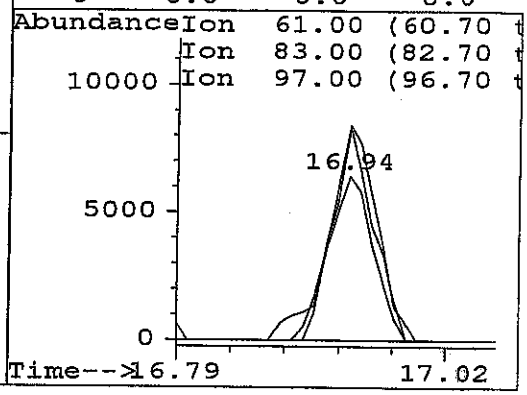


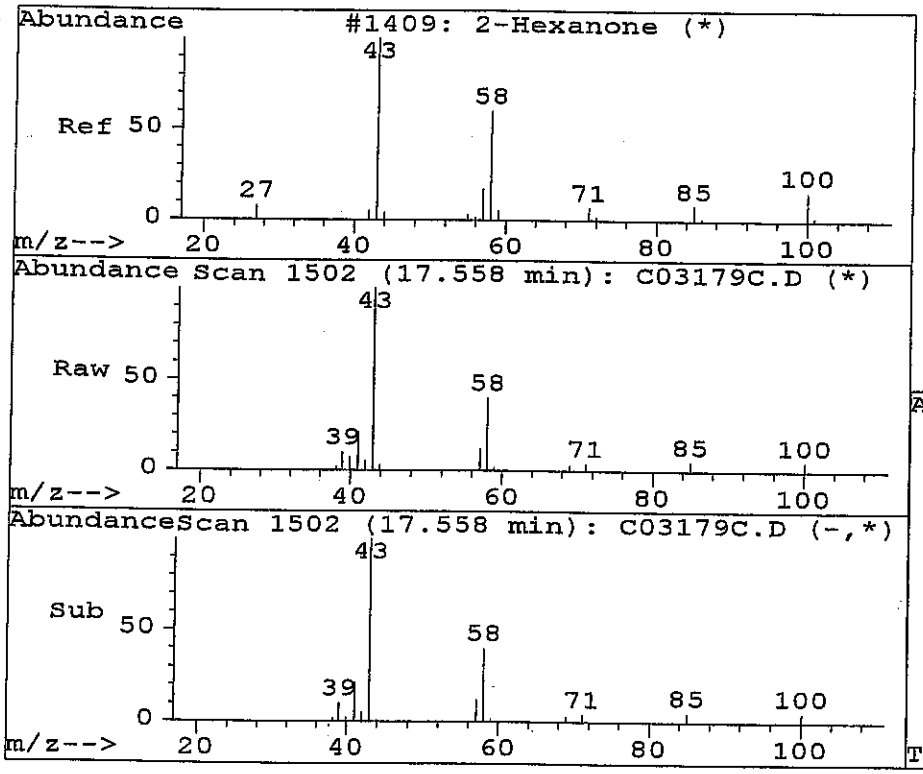


#53
1,1,2-Trichloroethane
Concen: 0.31 ppbV
RT: 16.94 min Scan# 1438
Delta R.T. -0.22 min
Lab File: C03179C.D
Acq: 17 Mar 109 10:25 am

Tgt Ion:61 Resp: 18573

Ion	Ratio	Lower	Upper
61	100		
83	129.5	95.8	143.8
97	131.0	101.8	152.6
0	0.0	0.0	0.0

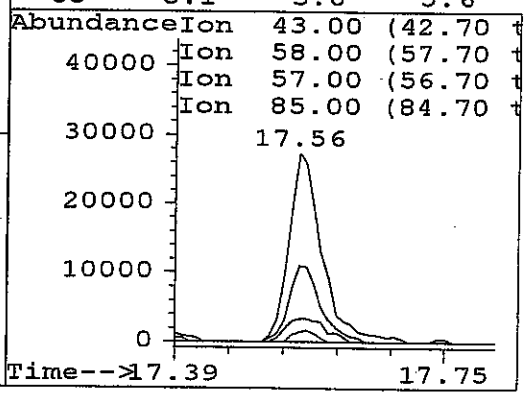


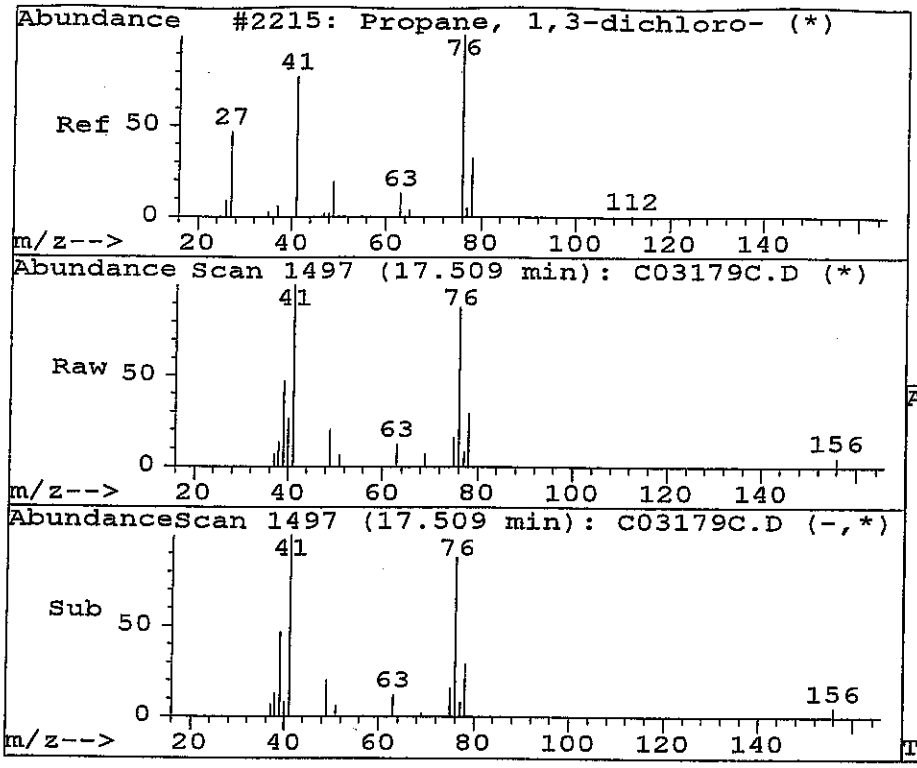


#54
2-Hexanone
Concen: 0.10 ppbV
RT: 17.56 min Scan# 1502
Delta R.T. -0.24 min
Lab File: C03179C.D
Acq: 17 Mar 109 10:25 am

Tgt Ion:43 Resp: 84018

Ion	Ratio	Lower	Upper
43	100		
58	40.0	29.3	48.8
57	12.5	10.3	17.1
85	5.1	3.8	5.6

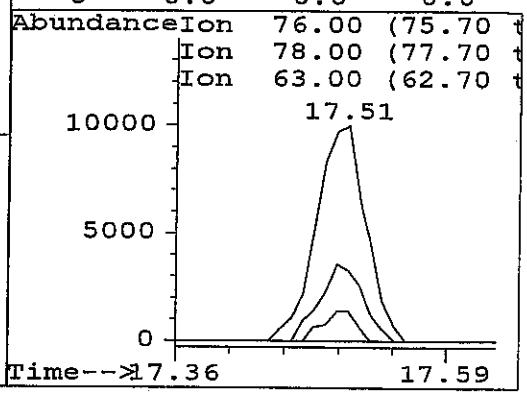


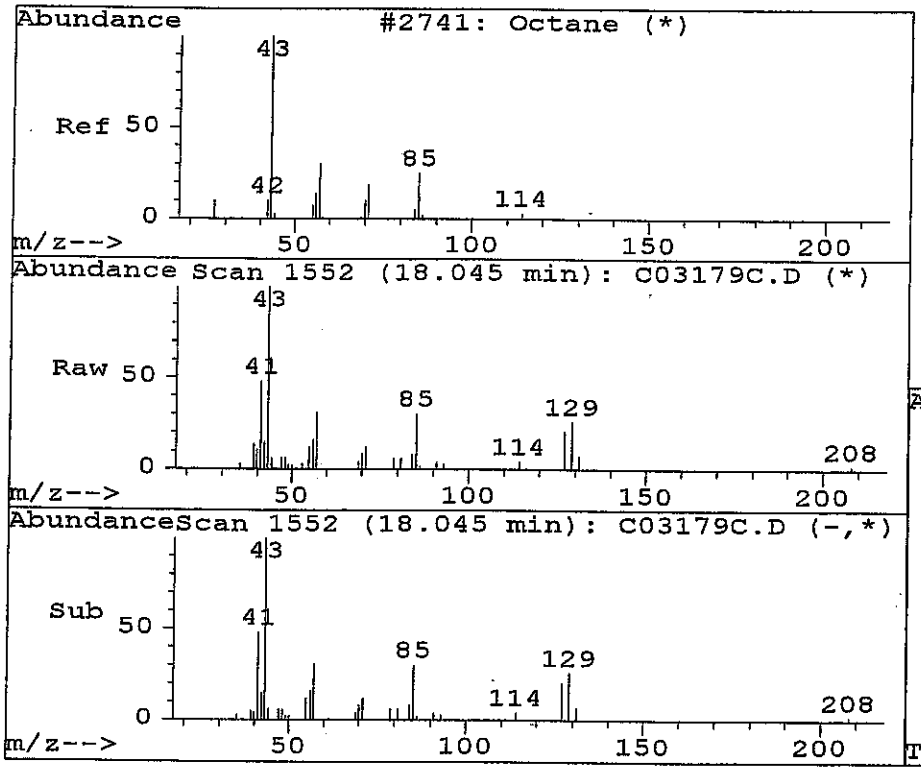


#55
1,3-Dichloropropane
Concen: 0.09 ppbV
RT: 17.51 min Scan# 1497
Delta R.T. -0.21 min
Lab File: C03179C.D
Acq: 17 Mar 109 10:25 am

Tgt Ion:76 Resp: 29285

Ion	Ratio	Lower	Upper
76	100		
78	32.7	25.6	38.4
63	13.9	10.0	15.0
0	0.0	0.0	0.0

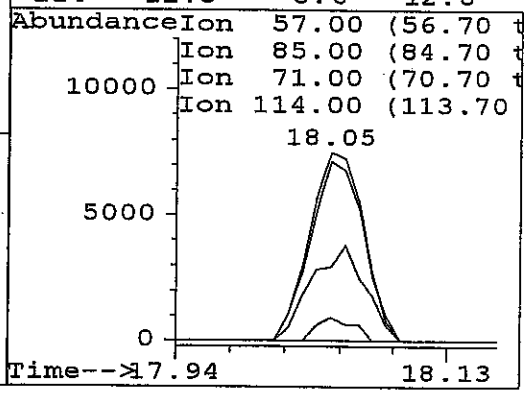


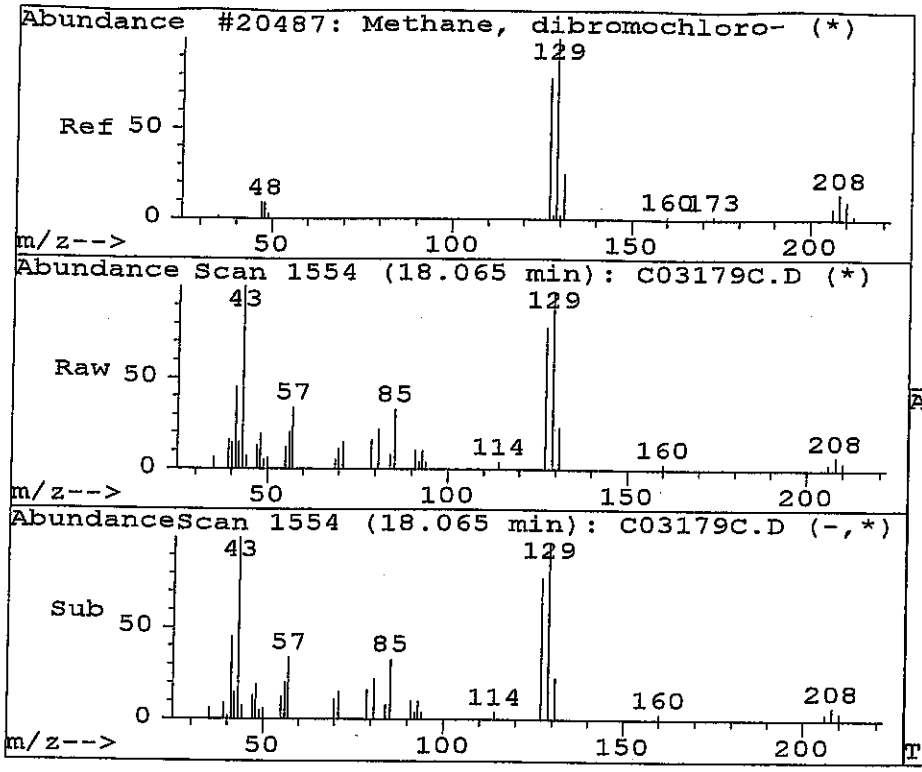


#56
Octane
Concen: 0.20 ppbV
RT: 18.05 min Scan# 1552
Delta R.T. -0.21 min
Lab File: C03179C.D
Acq: 17 Mar 109 10:25 am

Tgt Ion:57 Resp: 19635

Ion	Ratio	Lower	Upper
57	100		
85	95.1	78.7	118.1
71	39.0	43.2	64.8#
114	12.3	8.6	12.8

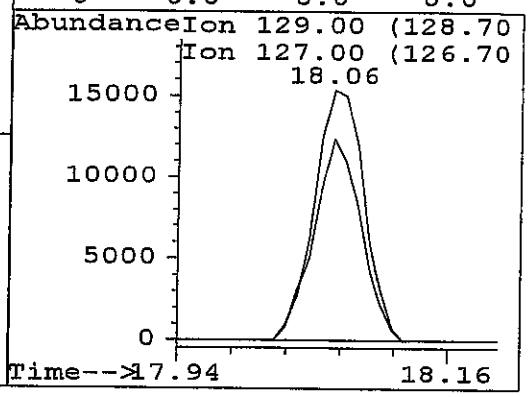


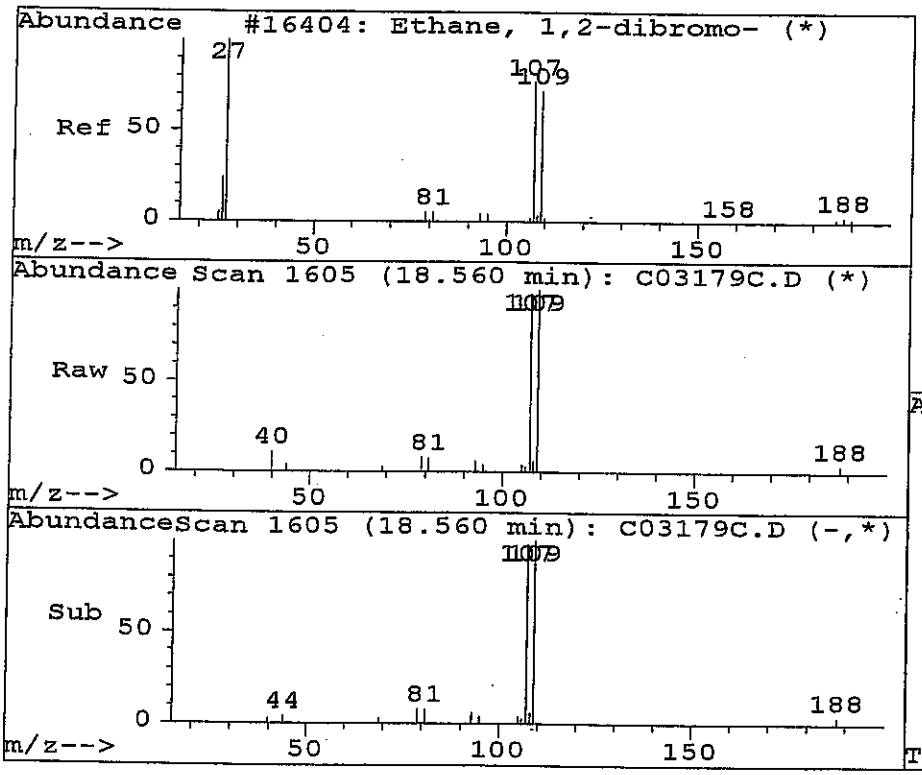


#57
Dibromochloromethane
Concen: 0.09 ppbV
RT: 18.06 min Scan# 1554
Delta R.T. -0.24 min
Lab File: C03179C.D
Acq: 17 Mar 109 10:25 am

Tgt Ion:129 Resp: 43801

Ion	Ratio	Lower	Upper
129	100		
127	80.6	57.4	86.0
0	0.0	0.0	0.0
0	0.0	0.0	0.0

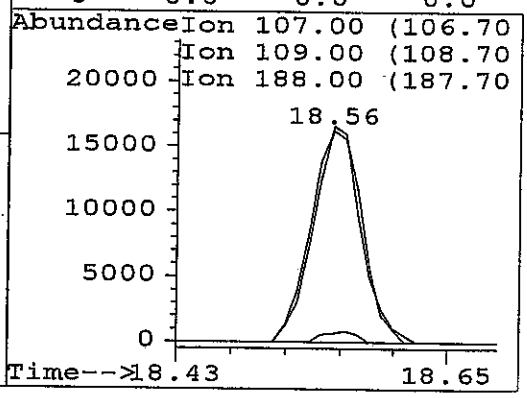


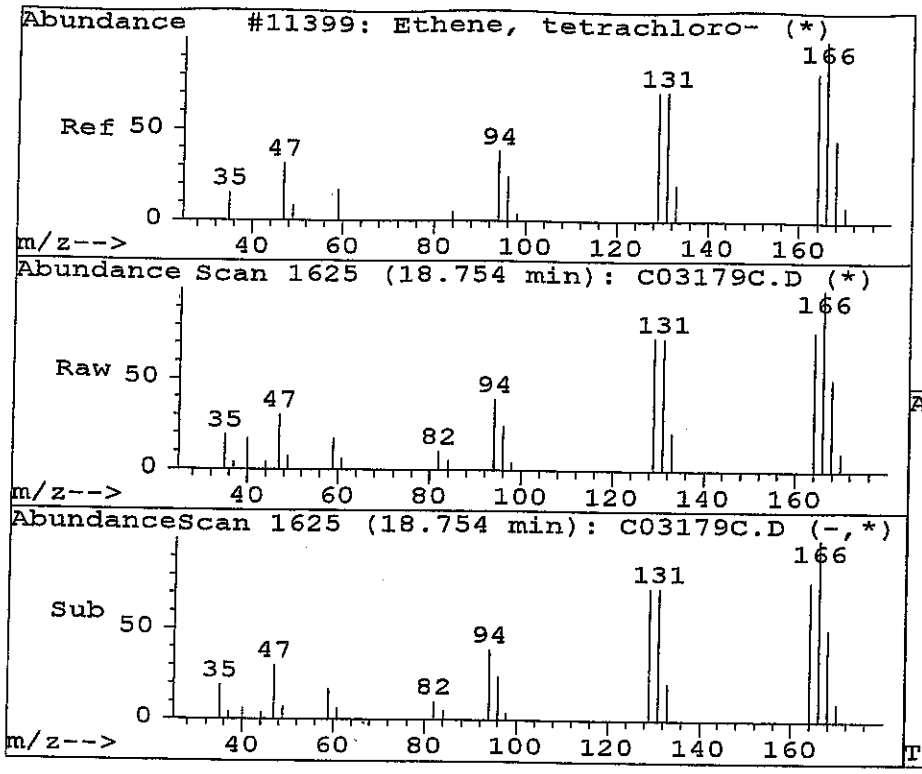


#58
1,2-Dibromoethane
Concen: 0.31 ppbV
RT: 18.56 min Scan# 1605
Delta R.T. -0.24 min
Lab File: C03179C.D
Acq: 17 Mar 109 10:25 am

Tgt Ion:107 Resp: 46912

Ion	Ratio	Lower	Upper
107	100		
109	102.2	78.1	117.1
188	4.2	3.6	5.4
0	0.0	0.0	0.0

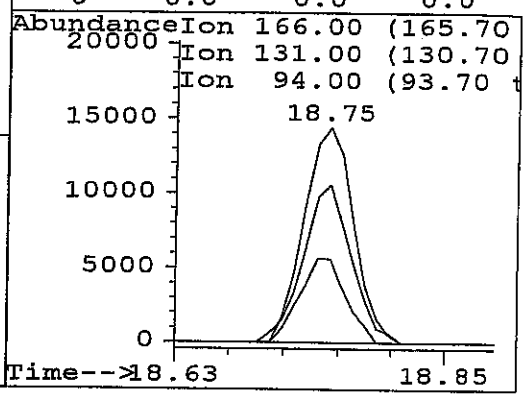


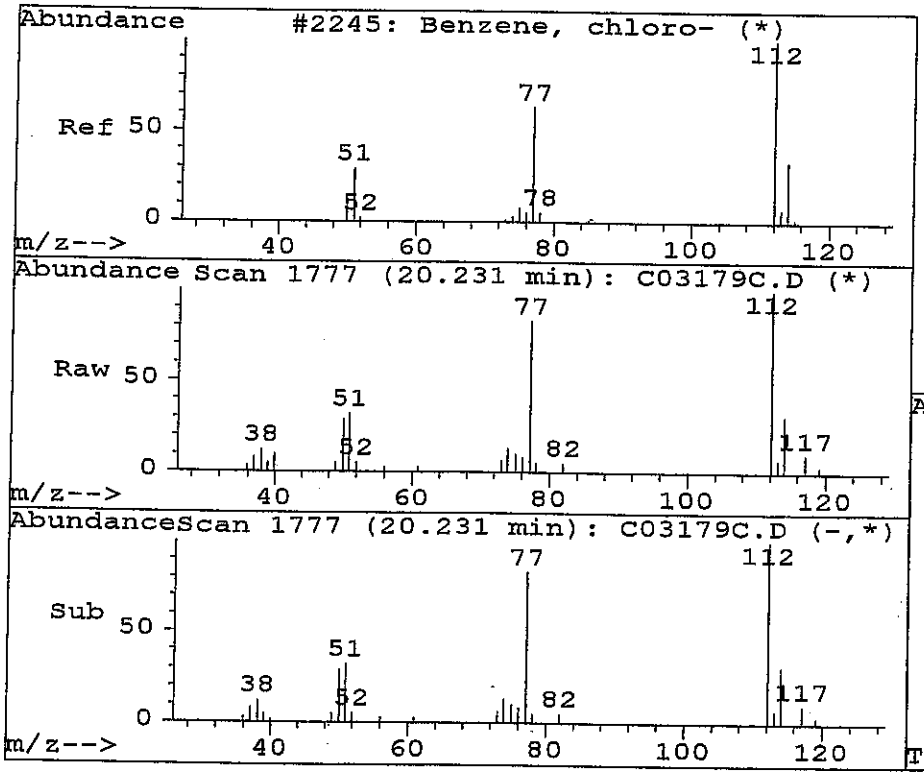


#59
Tetrachloroethene
Concen: 0.30 ppbV
RT: 18.75 min Scan# 1625
Delta R.T. -0.22 min
Lab File: C03179C.D
Acq: 17 Mar 109 10:25 am

Tgt Ion:166 Resp: 40710

Ion	Ratio	Lower	Upper
166	100		
131	73.3	54.3	81.5
94	39.0	32.3	48.5
0	0.0	0.0	0.0

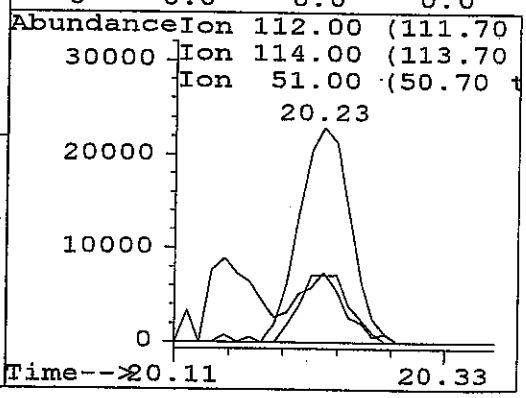


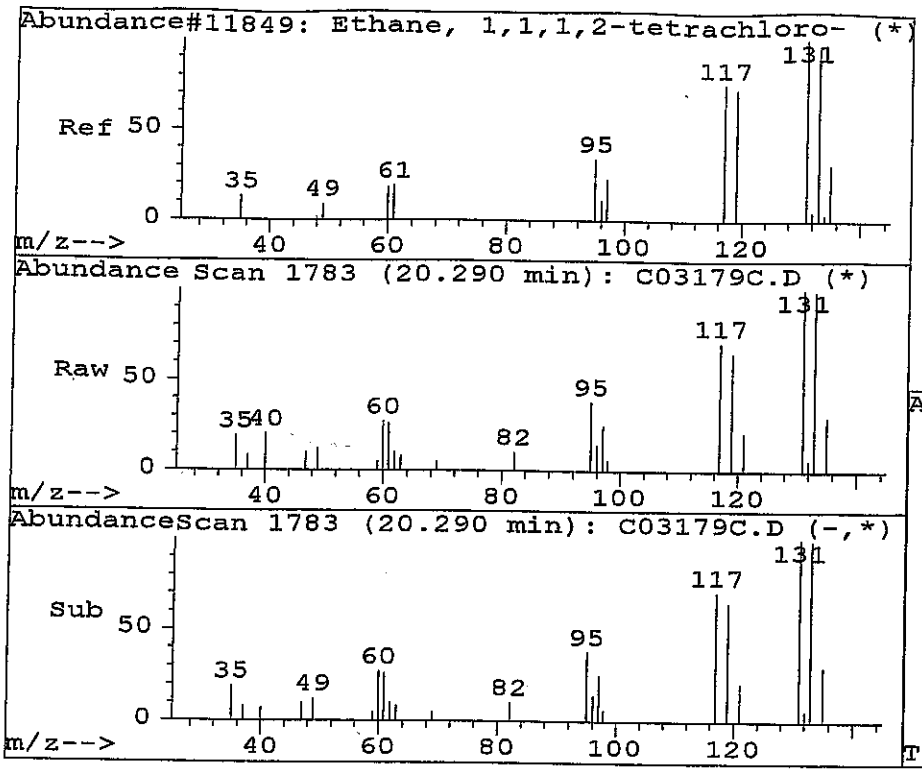


#60
Chlorobenzene
Concen: 0.33 ppbV
RT: 20.23 min Scan# 1777
Delta R.T. -0.22 min
Lab File: C03179C.D
Acq: 17 Mar 109 10:25 am

Tgt Ion:112 Resp: 64660

Ion	Ratio	Lower	Upper
112	100		
114	29.8	25.3	37.9
51	18.2	19.0	28.6#
0	0.0	0.0	0.0

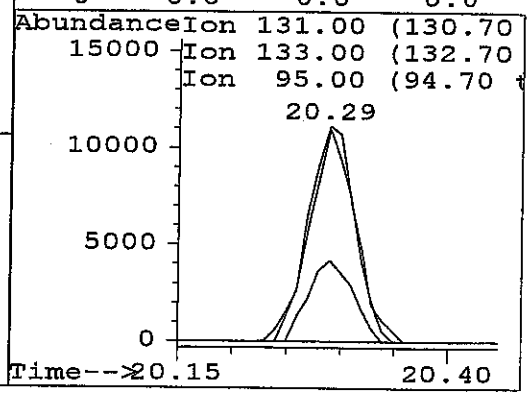


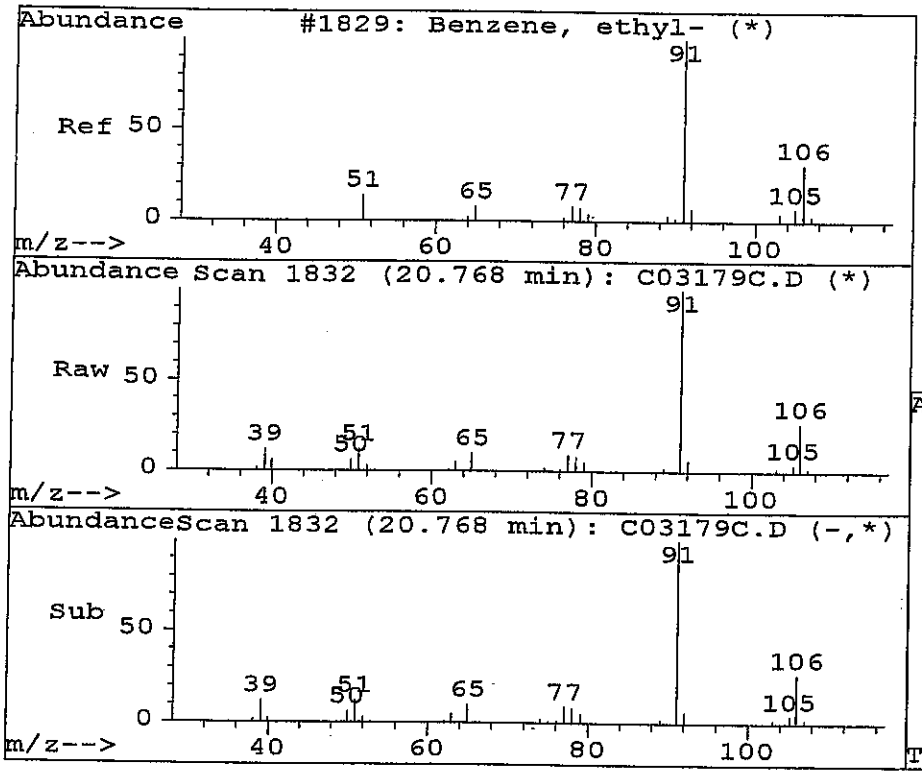


#61
1,1,1,2-Tetrachloroethane
Concen: 0.09 ppbV
RT: 20.29 min Scan# 1783
Delta R.T. -0.22 min
Lab File: C03179C.D
Acq: 17 Mar 109 10:25 am

Tgt Ion:131 Resp: 33923

Ion	Ratio	Lower	Upper
131	100		
133	98.6	71.1	106.7
95	37.7	29.5	44.3
0	0.0	0.0	0.0

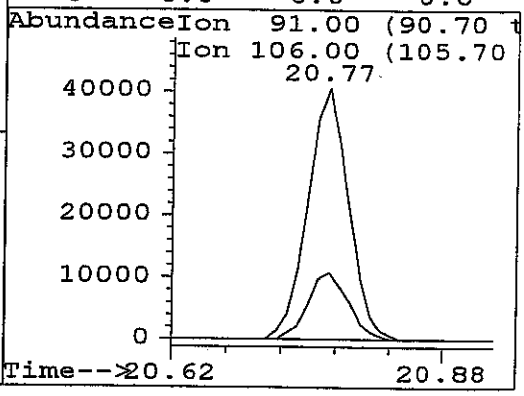


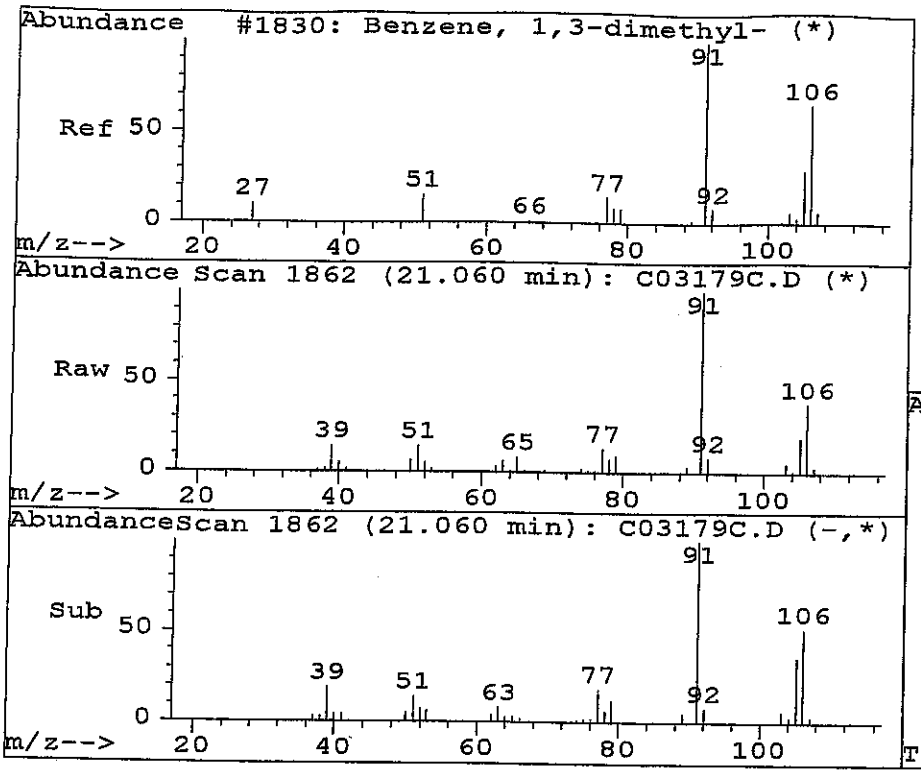


#62
Ethylbenzene
Concen: 0.33 ppbV
RT: 20.77 min Scan# 1832
Delta R.T. -0.22 min
Lab File: C03179C.D
Acq: 17 Mar 109 10:25 am

Tgt Ion:91 Resp: 107037

Ion	Ratio	Lower	Upper
91	100		
106	26.6	21.8	32.6
0	0.0	0.0	0.0
0	0.0	0.0	0.0

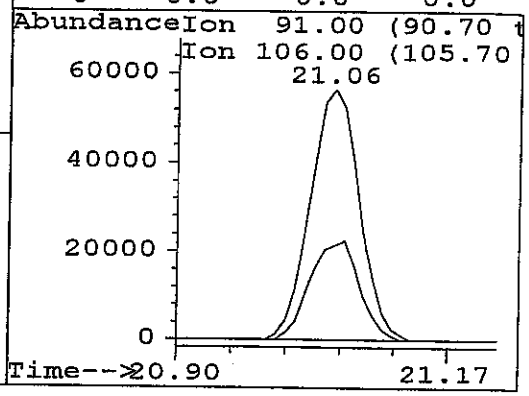


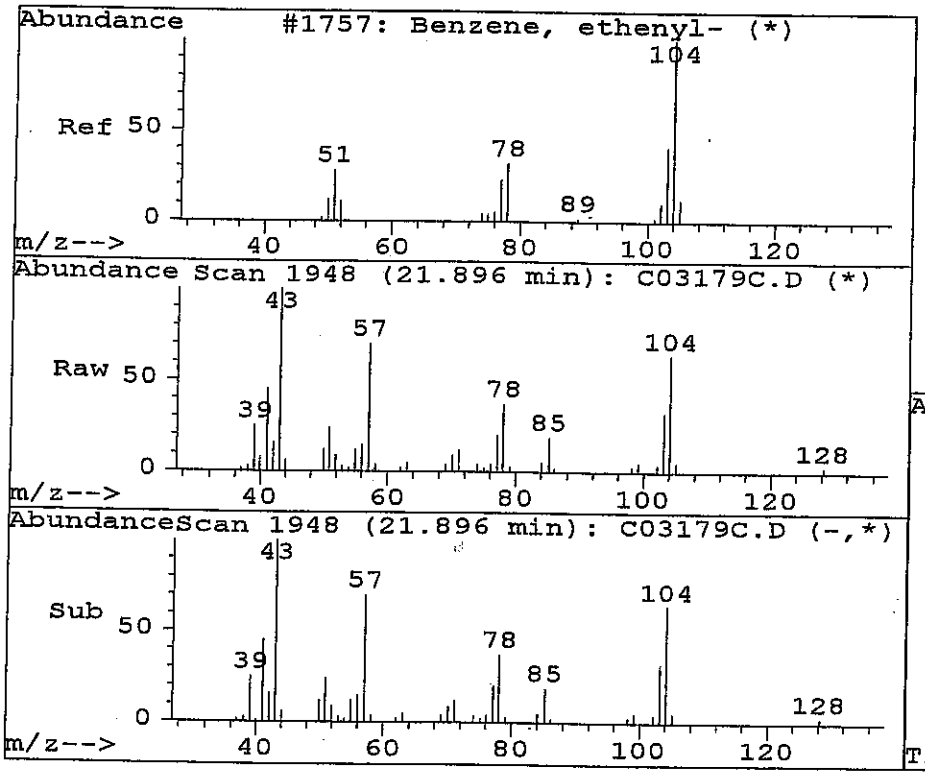


#63
m & p-Xylene
Concen: 0.69 ppbV
RT: 21.06 min Scan# 1862
Delta R.T. -0.22 min
Lab File: C03179C.D
Acq: 17 Mar 109 10:25 am

Tgt Ion:91 Resp: 192864

Ion	Ratio	Lower	Upper
91	100		
106	37.9	30.6	45.8
0	0.0	0.0	0.0
0	0.0	0.0	0.0

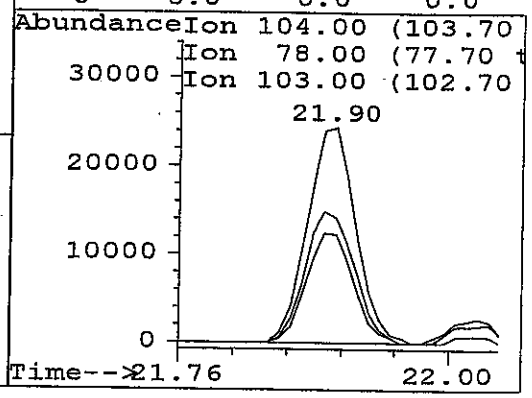


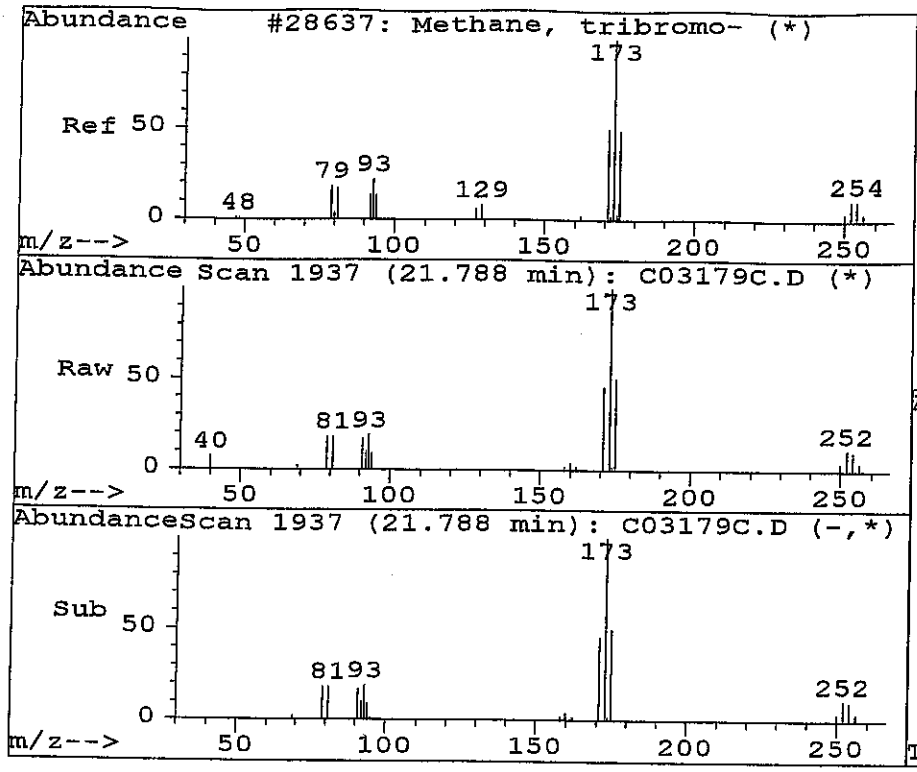


#64
Styrene
Concen: 0.36 ppbV
RT: 21.90 min Scan# 1948
Delta R.T. -0.24 min
Lab File: C03179C.D
Acq: 17 Mar 109 10:25 am

Tgt Ion:104 Resp: 70964

Ion	Ratio	Lower	Upper
104	100		
78	58.0	51.6	77.4
103	50.4	38.4	57.6
0	0.0	0.0	0.0

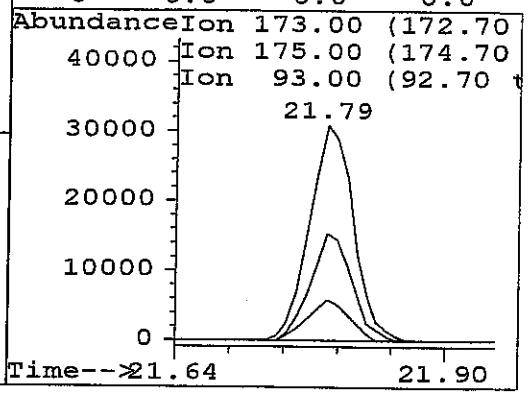


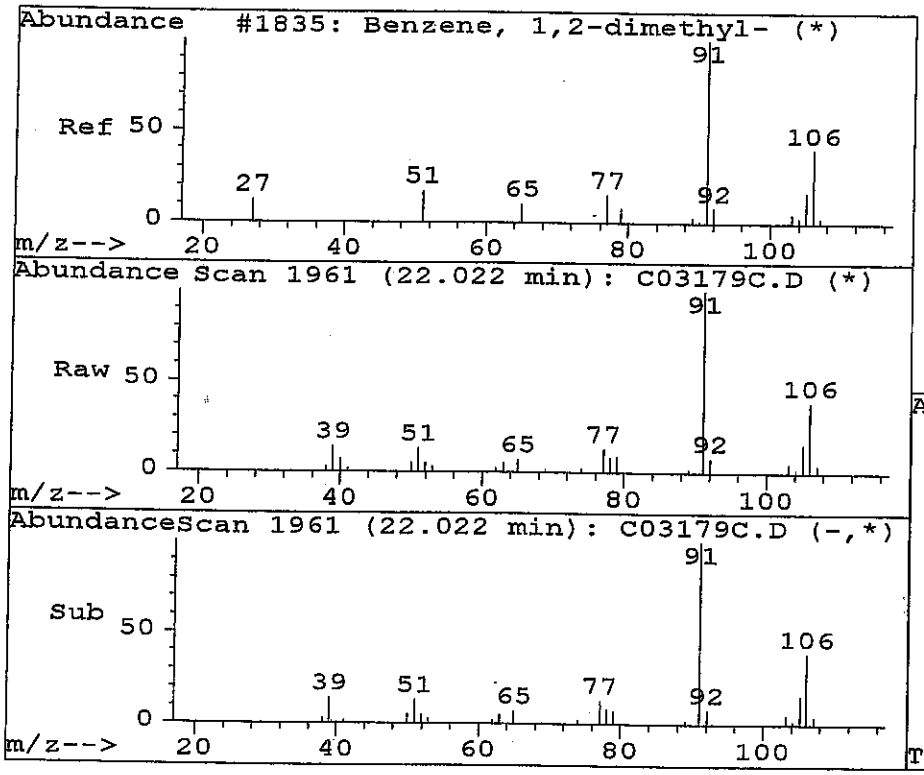


#65
Bromoform
Concen: 0.10 ppbV
RT: 21.79 min Scan# 1937
Delta R.T. -0.21 min
Lab File: C03179C.D
Acq: 17 Mar 109 10:25 am

Tgt Ion:173 Resp: 90991

Ion	Ratio	Lower	Upper
173	100		
175	49.6	40.0	60.0
93	18.9	15.1	22.7
0	0.0	0.0	0.0

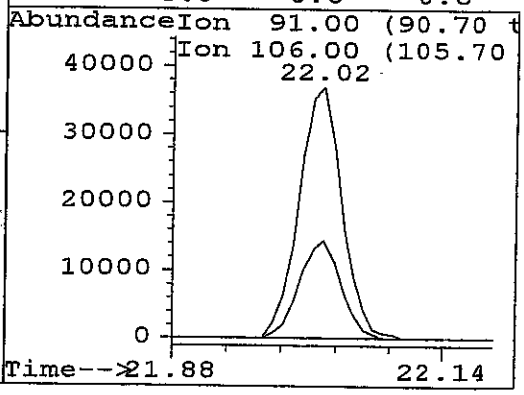


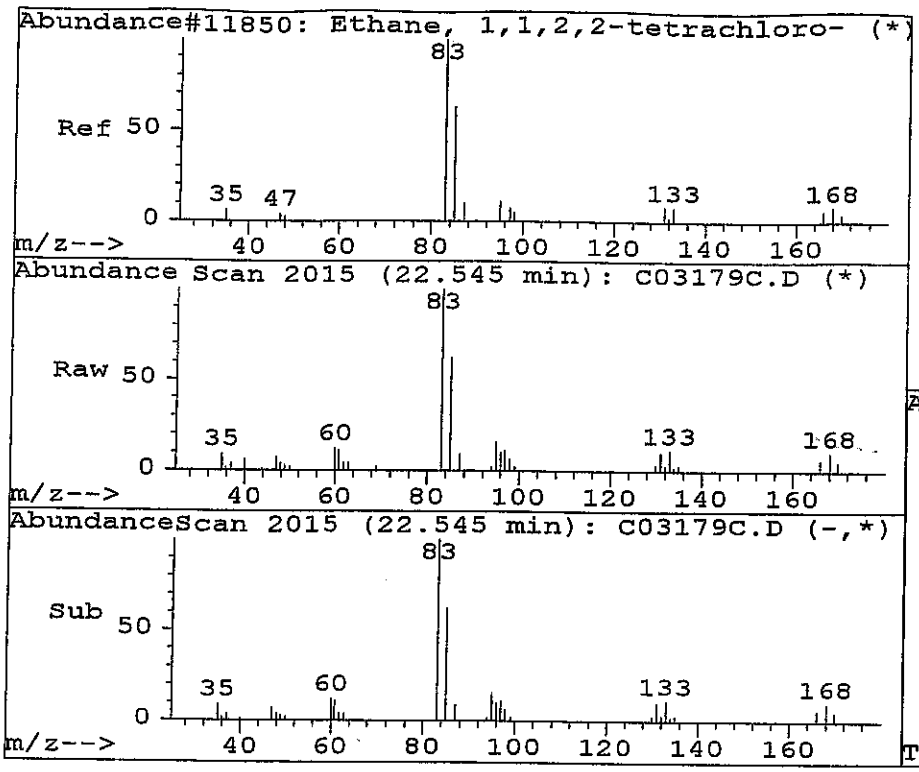


#66
o-Xylene
Concen: 0.34 ppbV
RT: 22.02 min Scan# 1961
Delta R.T. -0.23 min
Lab File: C03179C.D
Acq: 17 Mar 109 10:25 am

Tgt Ion:91 Resp: 105567

Ion	Ratio	Lower	Upper
91	100		
106	39.0	31.8	47.8
0	0.0	0.0	0.0
0	0.0	0.0	0.0

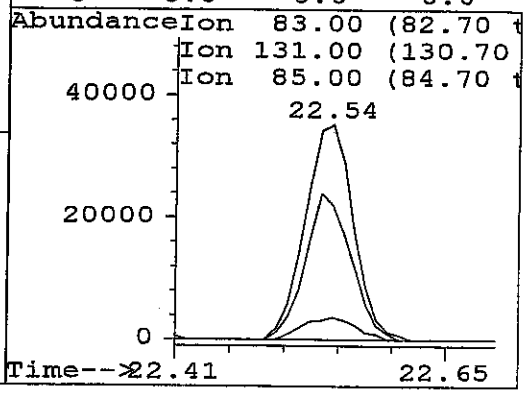


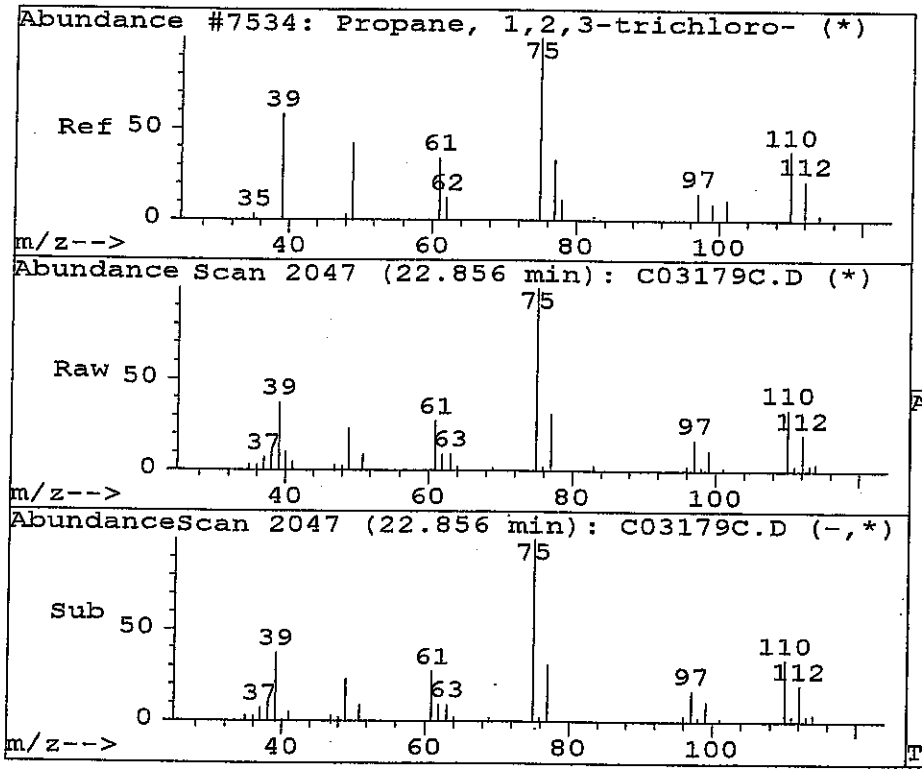


#67
1,1,2,2-Tetrachloroethane
Concen: 0.39 ppbV
RT: 22.54 min Scan# 2015
Delta R.T. -0.21 min
Lab File: C03179C.D
Acq: 17 Mar 109 10:25 am

Tgt Ion:83 Resp: 102201

Ion	Ratio	Lower	Upper
83	100		
131	10.4	9.4	14.0
85	62.5	50.2	75.4
0	0.0	0.0	0.0

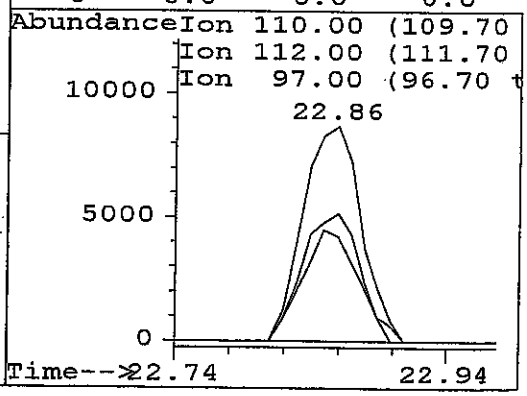


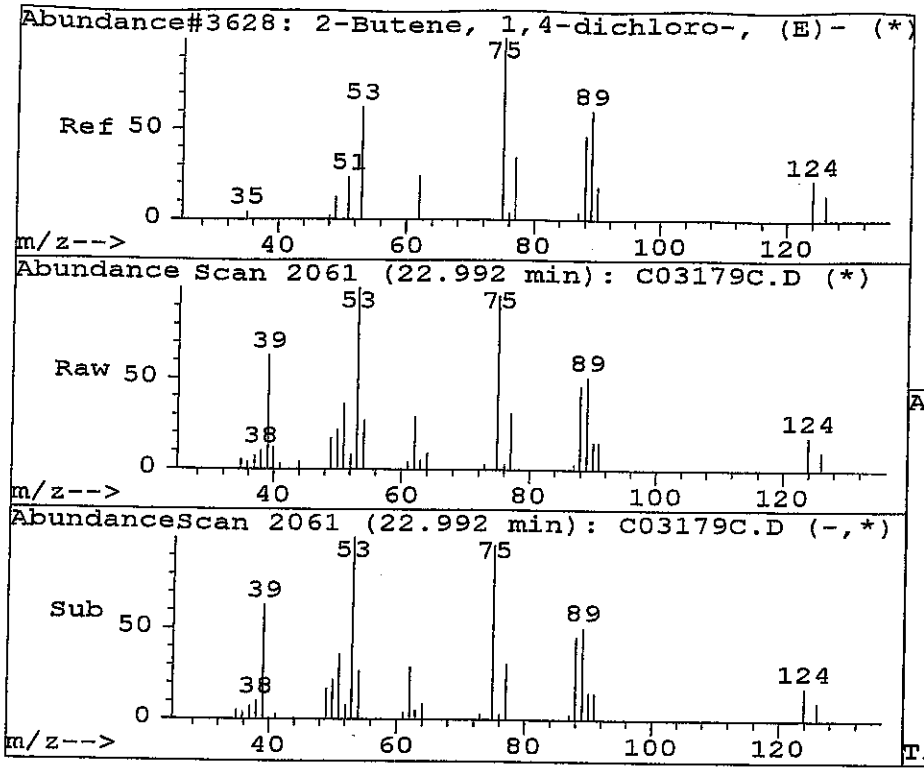


#68
1,2,3-Trichloropropane
Concen: 0.12 ppbV
RT: 22.86 min Scan# 2047
Delta R.T. -0.22 min
Lab File: C03179C.D
Acq: 17 Mar 109 10:25 am

Tgt Ion:110 Resp: 25437

Ion	Ratio	Lower	Upper
110	100		
112	59.5	50.4	75.6
97	48.6	37.0	55.6
0	0.0	0.0	0.0

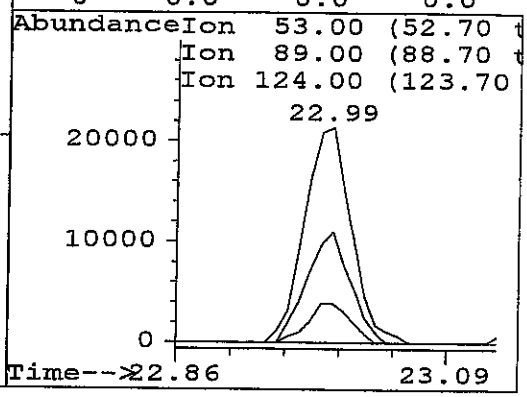


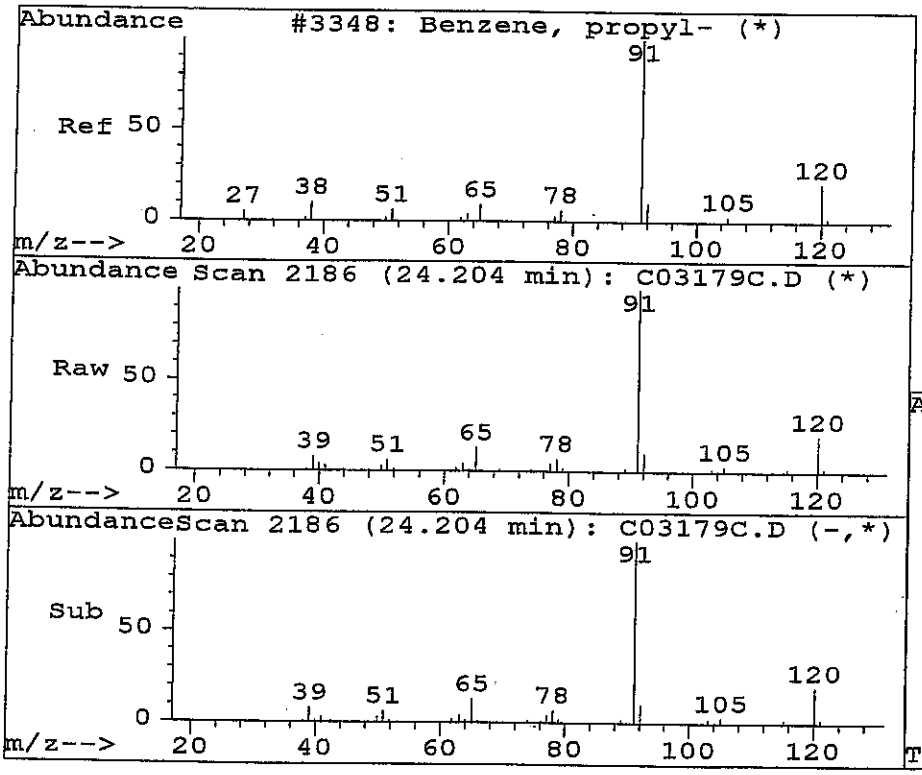


#69
t-1,4-Dichloro-2-butene
Concen: 0.38 ppbV
RT: 22.99 min Scan# 2061
Delta R.T. -0.24 min
Lab File: C03179C.D
Acq: 17 Mar 109 10:25 am

Tgt Ion:53 Resp: 61455

Ion	Ratio	Lower	Upper
53	100		
89	51.4	42.6	64.0
124	18.3	14.3	21.5
0	0.0	0.0	0.0

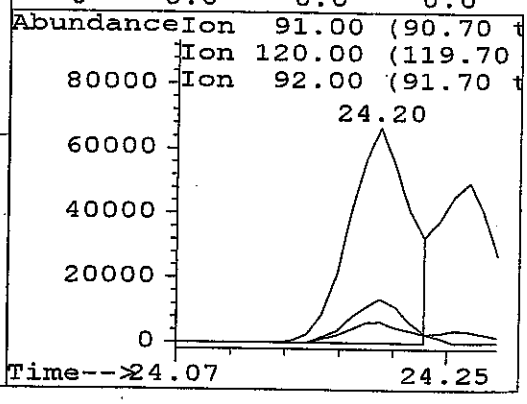


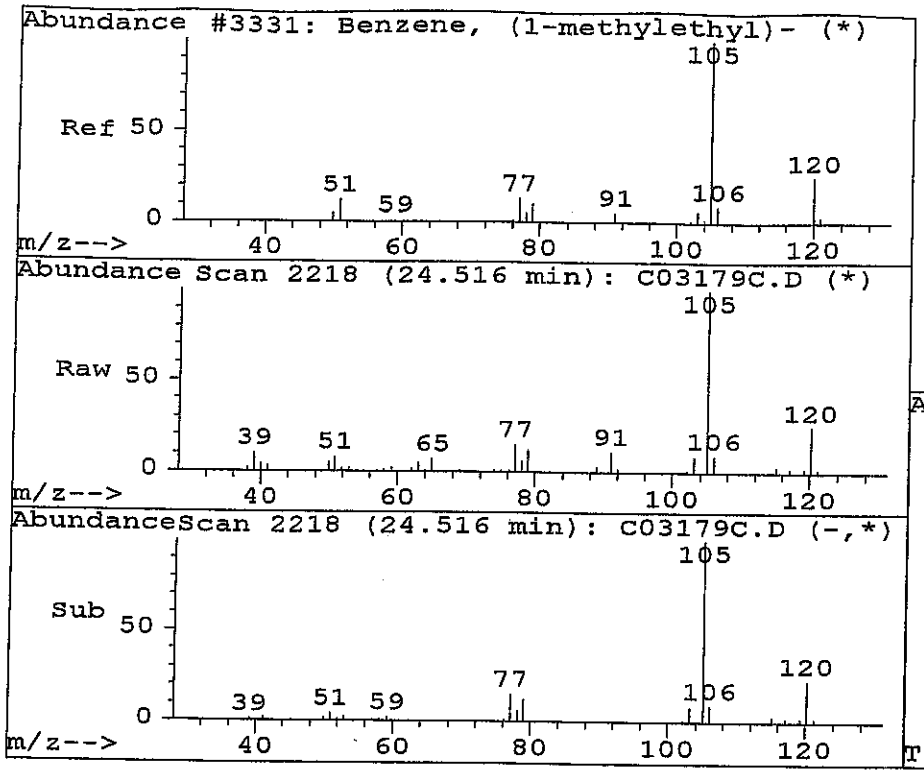


#70
n-Propylbenzene
Concen: 0.10 ppbV
RT: 24.20 min Scan# 2186
Delta R.T. -0.23 min
Lab File: C03179C.D
Acq: 17 Mar 109 10:25 am

Tgt Ion:91 Resp: 190755

Ion	Ratio	Lower	Upper
91	100		
120	18.4	15.1	22.7
92	9.7	8.9	13.3
0	0.0	0.0	0.0

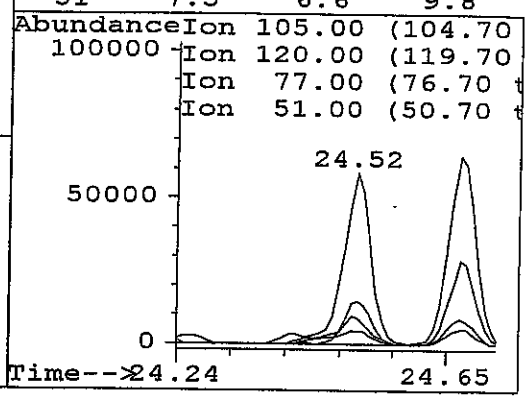


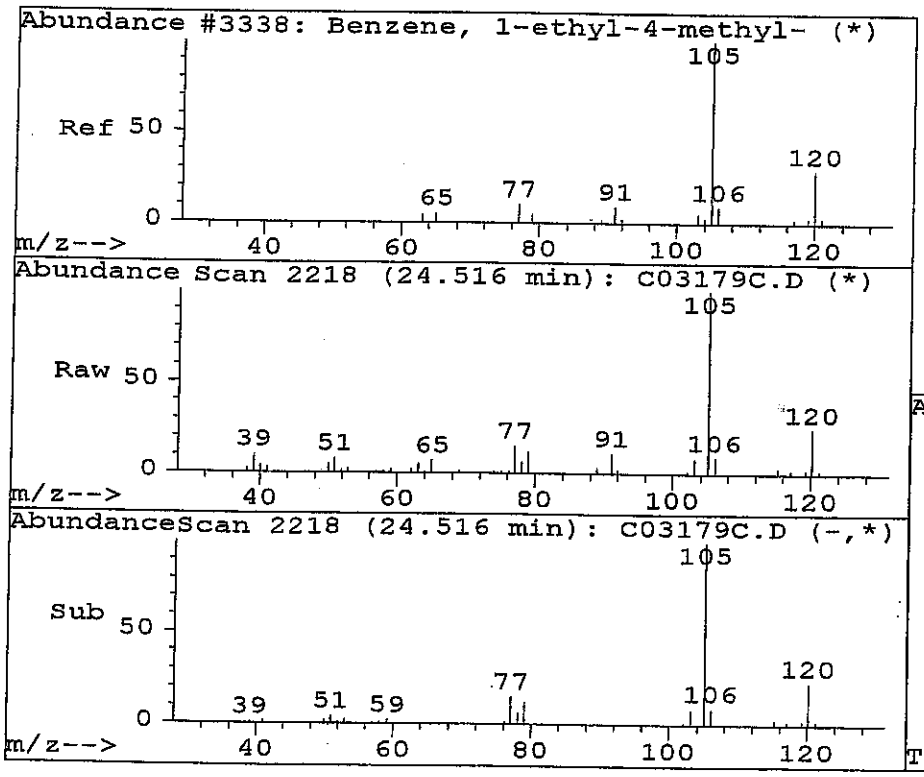


#71
Isopropylbenzene
Concen: 0.13 ppbV m
RT: 24.52 min Scan# 2218
Delta R.T. -0.22 min
Lab File: C03179C.D
Acq: 17 Mar 109 10:25 am

Tgt Ion:105 Resp: 177029

Ion	Ratio	Lower	Upper
105	100		
120	25.3	20.4	30.6
77	15.3	13.4	20.0
51	7.5	6.6	9.8

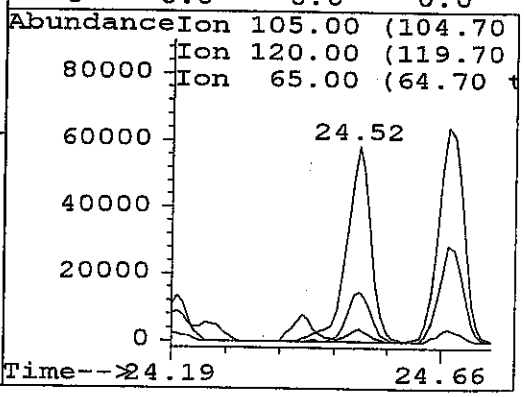


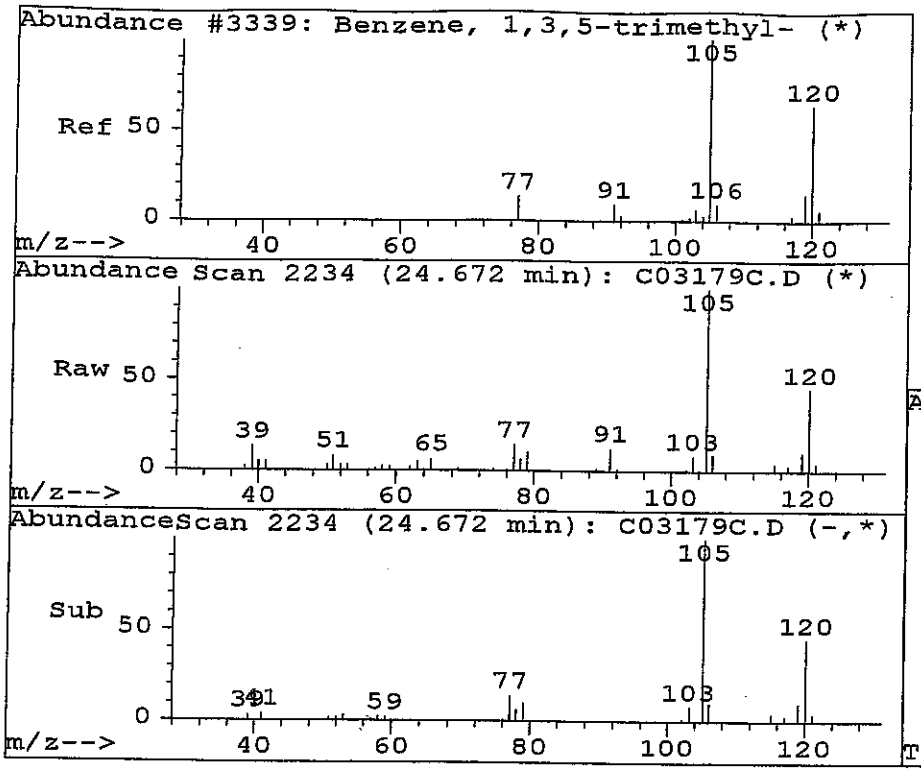


#72
4-Ethyltoluene
Concen: 0.13 ppbV m
RT: 24.52 min Scan# 2218
Delta R.T. -0.22 min
Lab File: C03179C.D
Acq: 17 Mar 109 10:25 am

Tgt Ion:105 Resp: 177076

Ion	Ratio	Lower	Upper
105	100		
120	25.3	21.6	32.4
65	6.5	3.9	5.9#
0	0.0	0.0	0.0

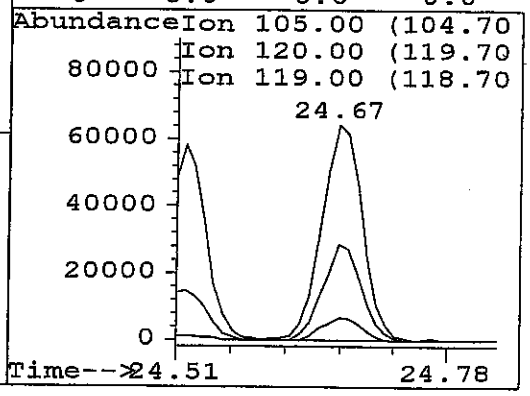


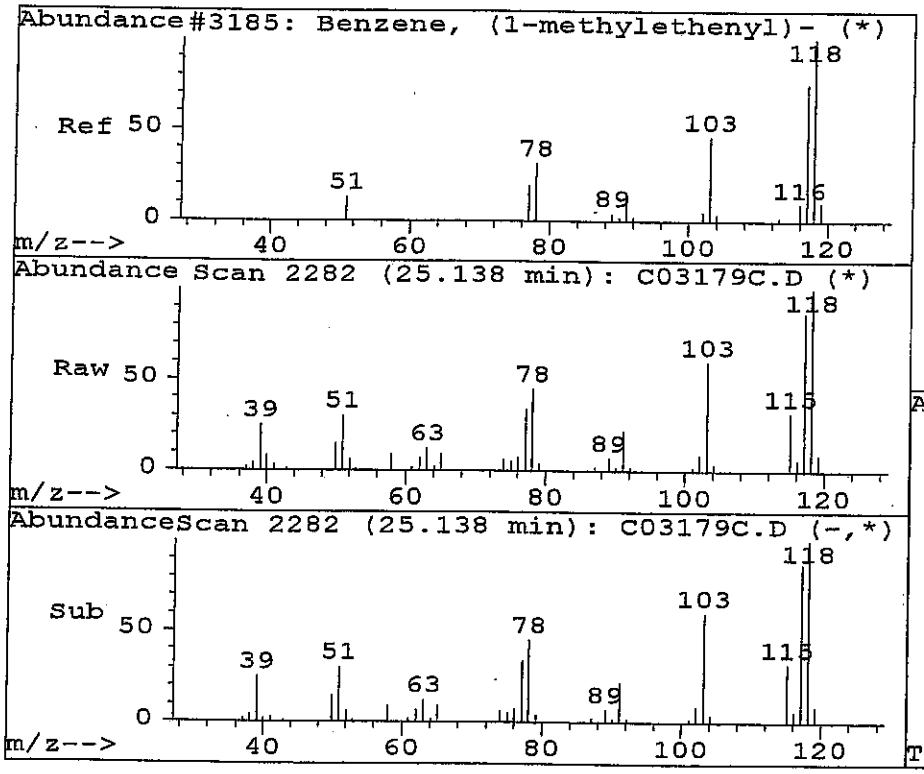


#73
1,3,5-Trimethylbenzene
Concen: 0.46 ppbV
RT: 24.67 min Scan# 2234
Delta R.T. -0.25 min
Lab File: C03179C.D
Acq: 17 Mar 109 10:25 am

Tgt Ion:105 Resp: 184274

Ion	Ratio	Lower	Upper
105	100		
120	44.5	32.4	48.6
119	10.3	8.1	12.1
0	0.0	0.0	0.0

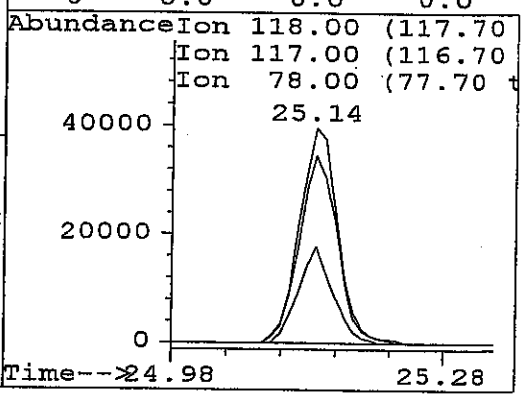


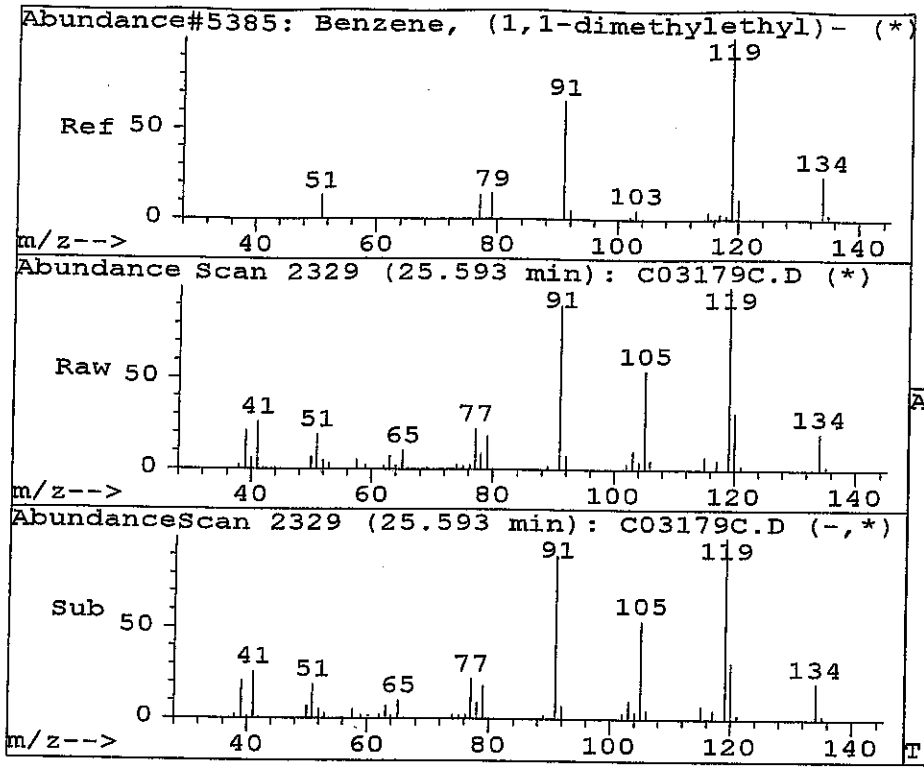


#74
Methylstyrene
Concen: 0.19 ppbV
RT: 25.14 min Scan# 2282
Delta R.T. -0.22 min
Lab File: C03179C.D
Acq: 17 Mar 109 10:25 am

Tgt Ion:118 Resp: 112656

Ion	Ratio	Lower	Upper
118	100		
117	87.0	71.3	106.9
78	44.7	32.7	49.1
0	0.0	0.0	0.0

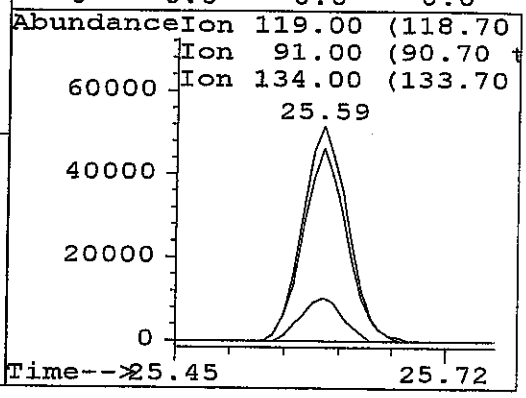


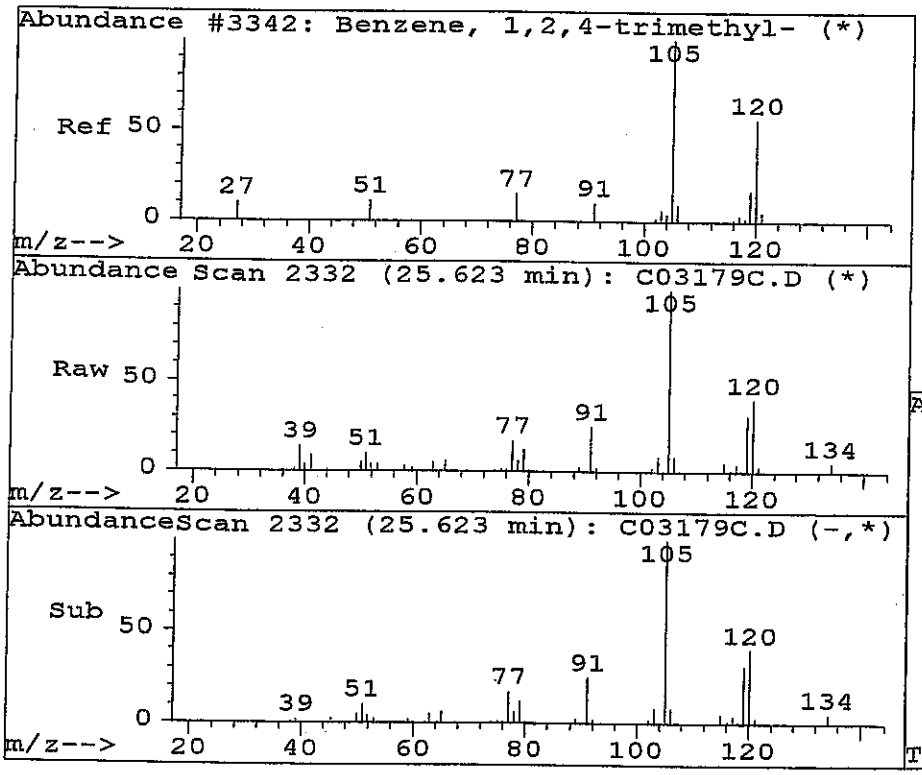


#75
tert-butyl benzene
Concen: 0.34 ppbV
RT: 25.59 min Scan# 2329
Delta R.T. -0.22 min
Lab File: C03179C.D
Acq: 17 Mar 109 10:25 am

Tgt Ion:119 Resp: 158367

Ion	Ratio	Lower	Upper
119	100		
91	87.2	72.2	108.4
134	18.4	15.7	23.5
0	0.0	0.0	0.0

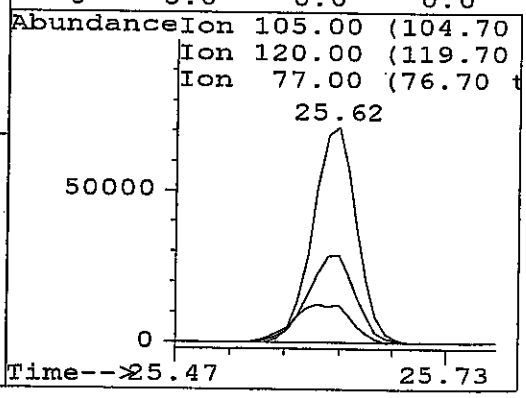


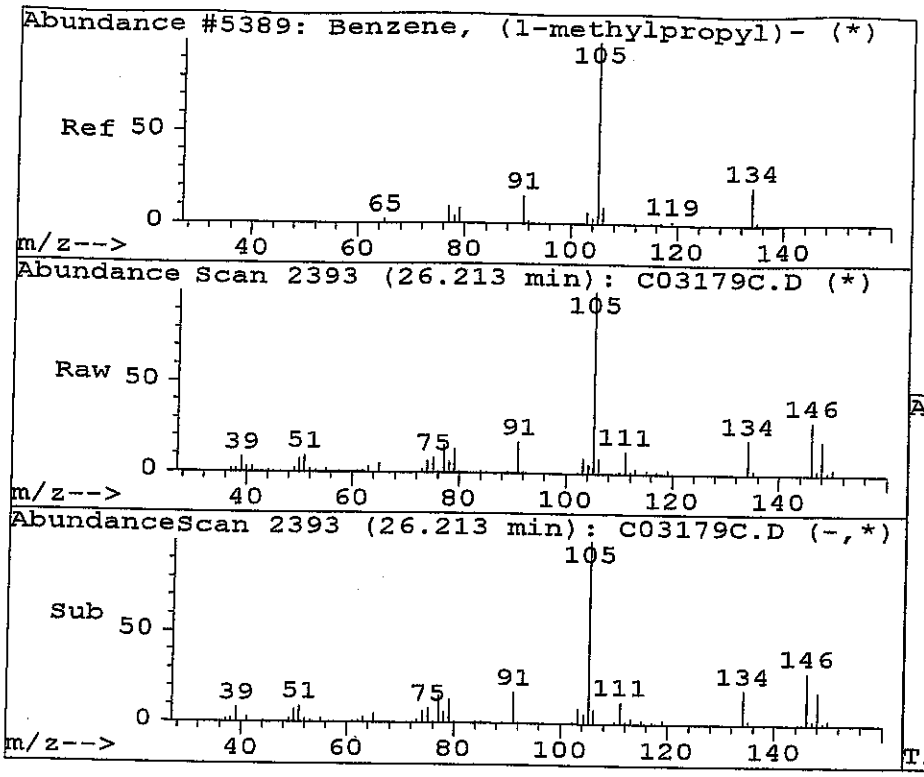


#76
1,2,4-Trimethylbenzene
Concen: 0.51 ppbV
RT: 25.62 min Scan# 2332
Delta R.T. -0.27 min
Lab File: C03179C.D
Acq: 17 Mar 109 10:25 am

Tgt Ion:105 Resp: 209998

Ion	Ratio	Lower	Upper
105	100		
120	40.3	31.0	46.4
77	17.0	13.3	19.9
0	0.0	0.0	0.0

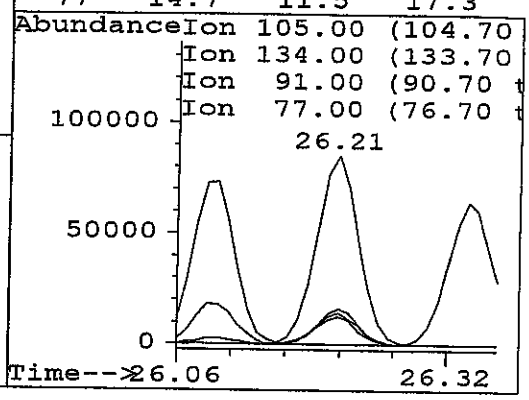


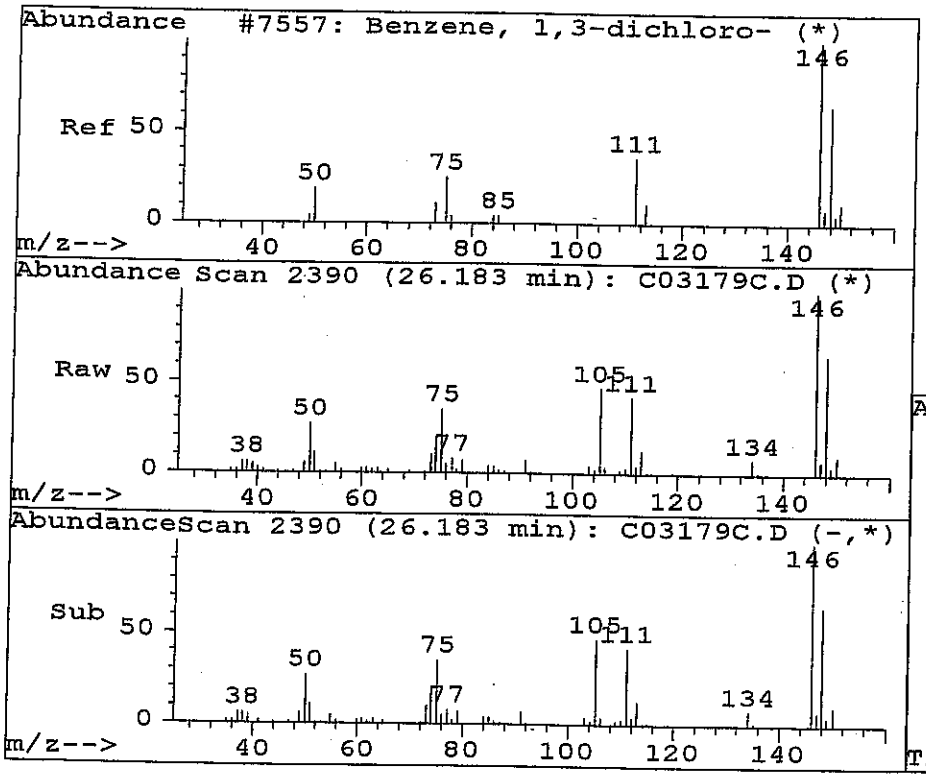


#77
sec-butylbenzene
Concen: 0.35 ppbV
RT: 26.21 min Scan# 2393
Delta R.T. -0.29 min
Lab File: C03179C.D
Acq: 17 Mar 109 10:25 am

Tgt Ion:105 Resp: 238727

Ion	Ratio	Lower	Upper
105	100		
134	18.5	14.5	21.7
91	16.5	13.4	20.2
77	14.7	11.5	17.3

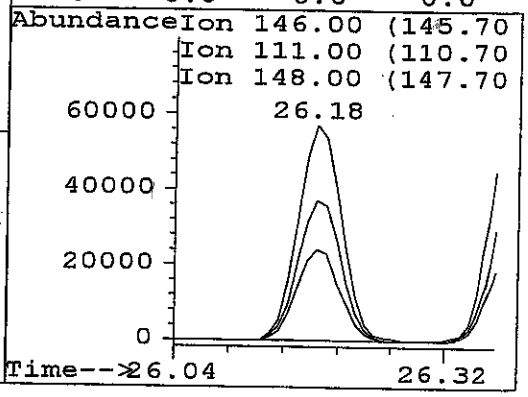


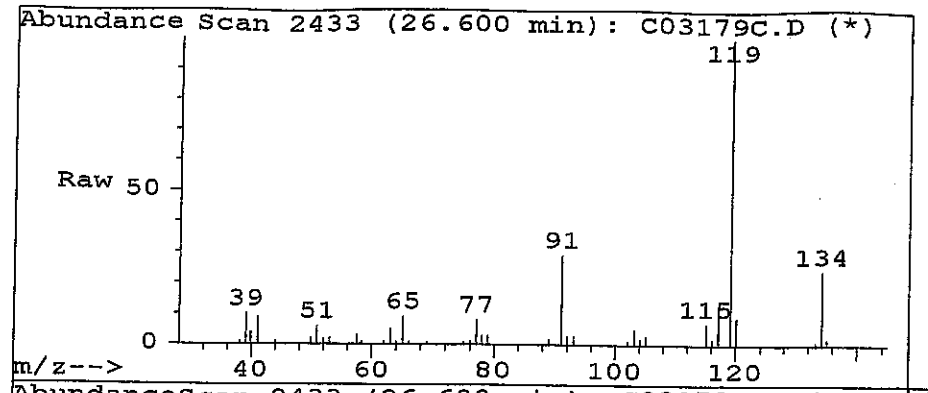


#78
1,3-Dichlorobenzene
Concen: 0.51 ppbV
RT: 26.18 min Scan# 2390
Delta R.T. -0.23 min
Lab File: C03179C.D
Acq: 17 Mar 109 10:25 am

Tgt Ion:146 Resp: 173602

Ion	Ratio	Lower	Upper
146	100		
111	42.1	33.7	50.5
148	65.0	49.4	74.0
0	0.0	0.0	0.0

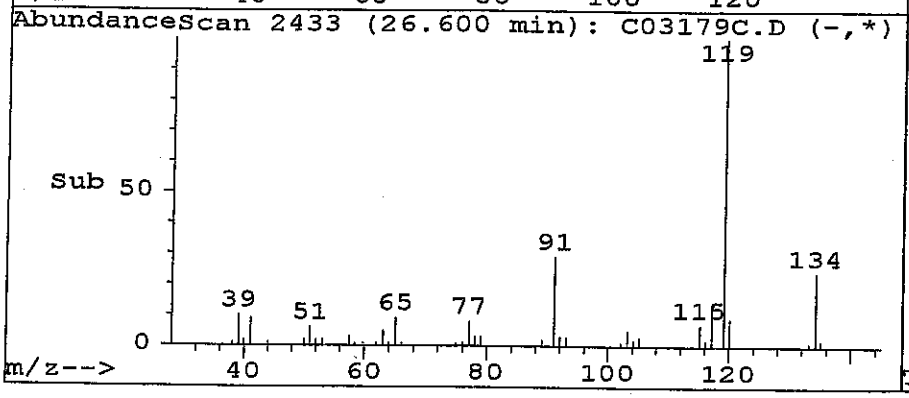


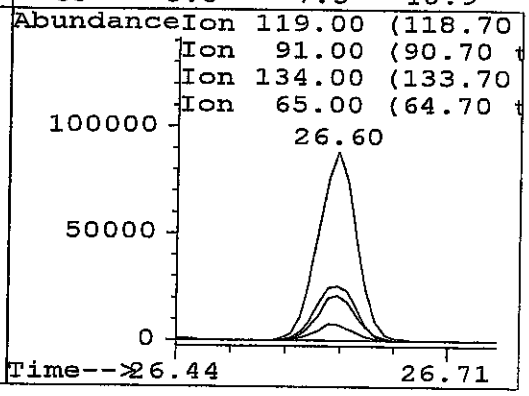


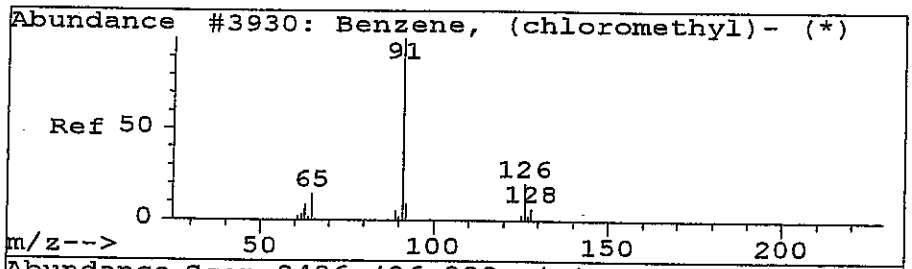
#79
Isopropyltoluene
Concen: 0.38 ppbV
RT: 26.60 min Scan# 2433
Delta R.T. -0.23 min
Lab File: C03179C.D
Acq: 17 Mar 109 10:25 am

Tgt Ion:119 Resp: 241584

Ion	Ratio	Lower	Upper
119	100		
91	31.3	25.4	38.2
134	24.1	19.3	28.9
65	8.8	7.3	10.9



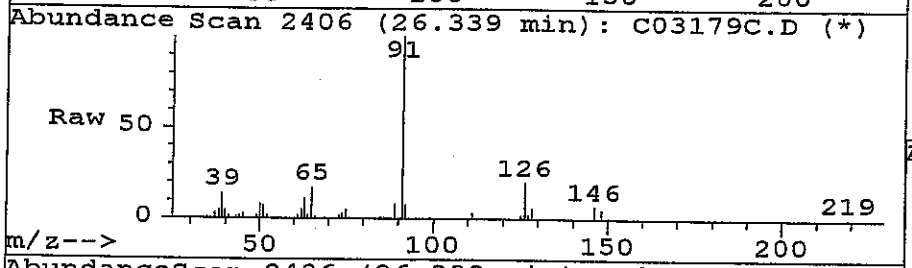


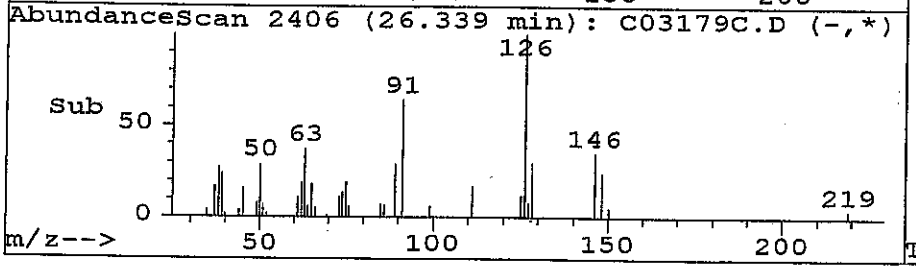


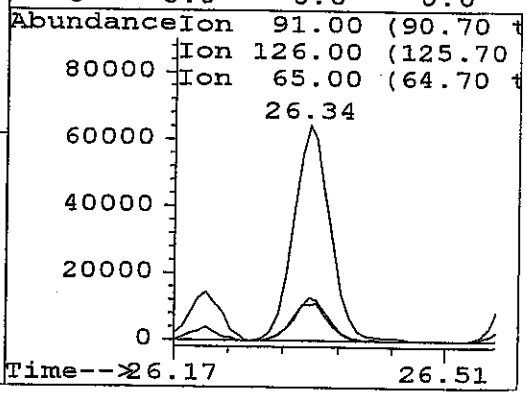
#80
Benzyl chloride
Concen: 0.38 ppbV
RT: 26.34 min Scan# 2406
Delta R.T. -0.27 min
Lab File: C03179C.D
Acq: 17 Mar 109 10:25 am

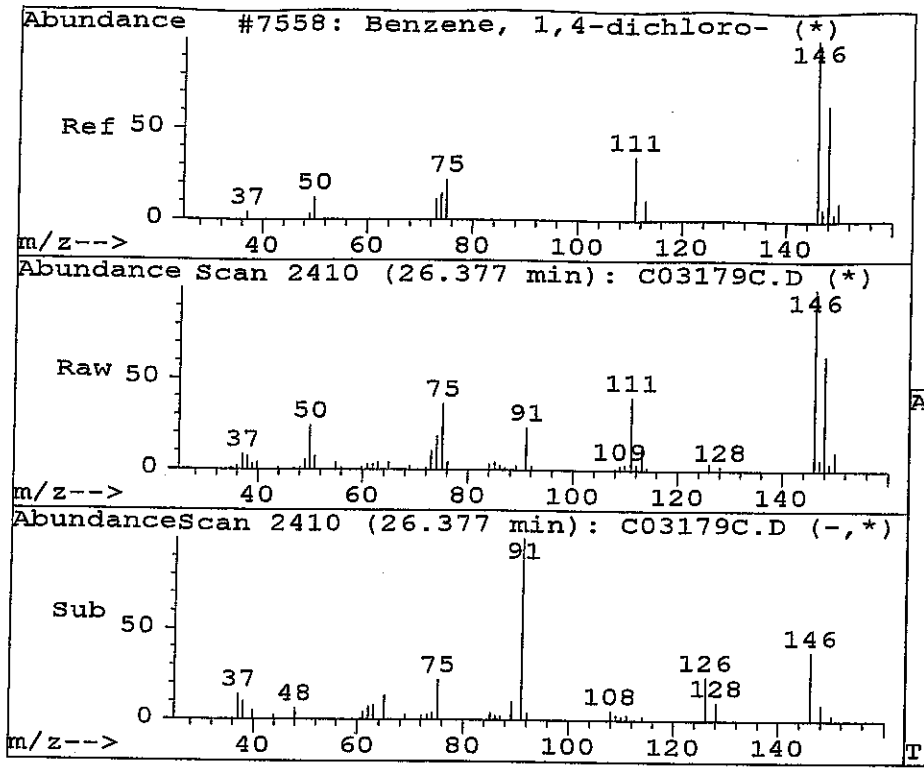
Tgt Ion:91 Resp: 203166

Ion	Ratio	Lower	Upper
91	100		
126	19.9	15.7	23.5
65	16.5	14.0	21.0
0	0.0	0.0	0.0





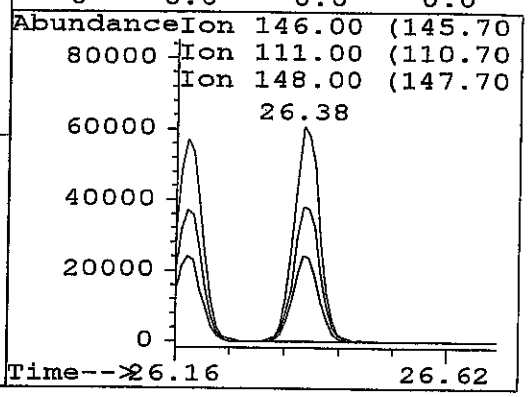


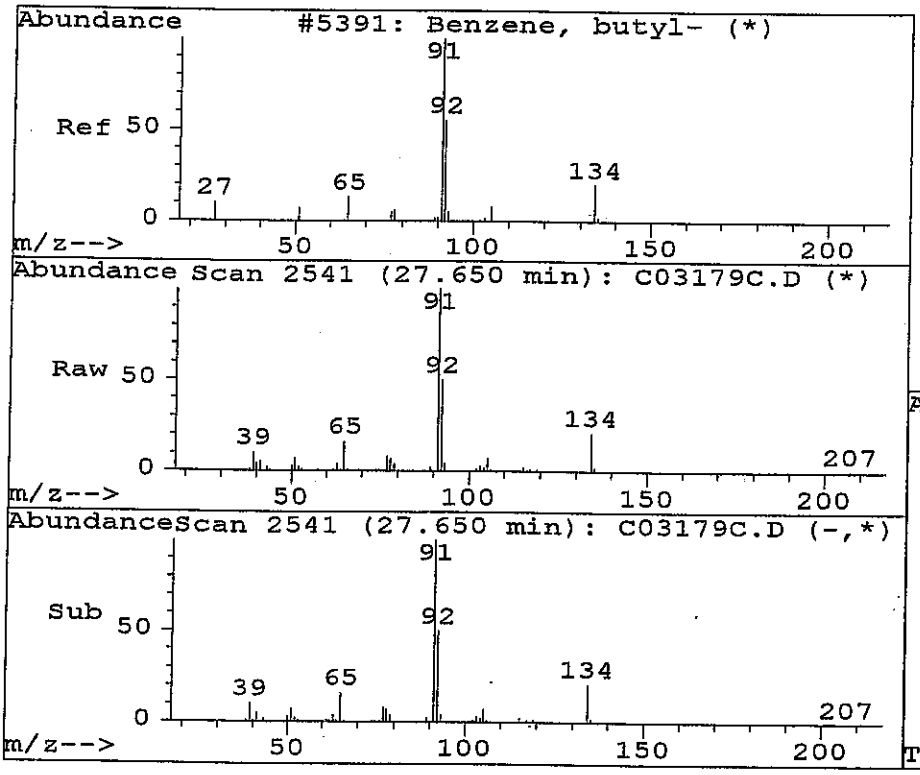


#81
1,4-Dichlorobenzene
Concen: 0.51 ppbV m
RT: 26.38 min Scan# 2410
Delta R.T. -0.30 min
Lab File: C03179C.D
Acq: 17 Mar 109 10:25 am

Tgt Ion:146 Resp: 179740

Ion	Ratio	Lower	Upper
146	100		
111	40.1	32.4	48.6
148	62.6	49.1	73.7
0	0.0	0.0	0.0

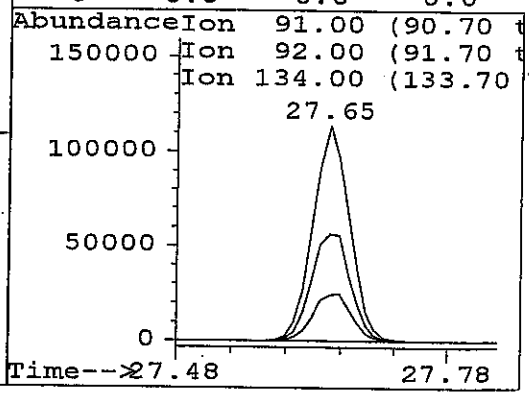


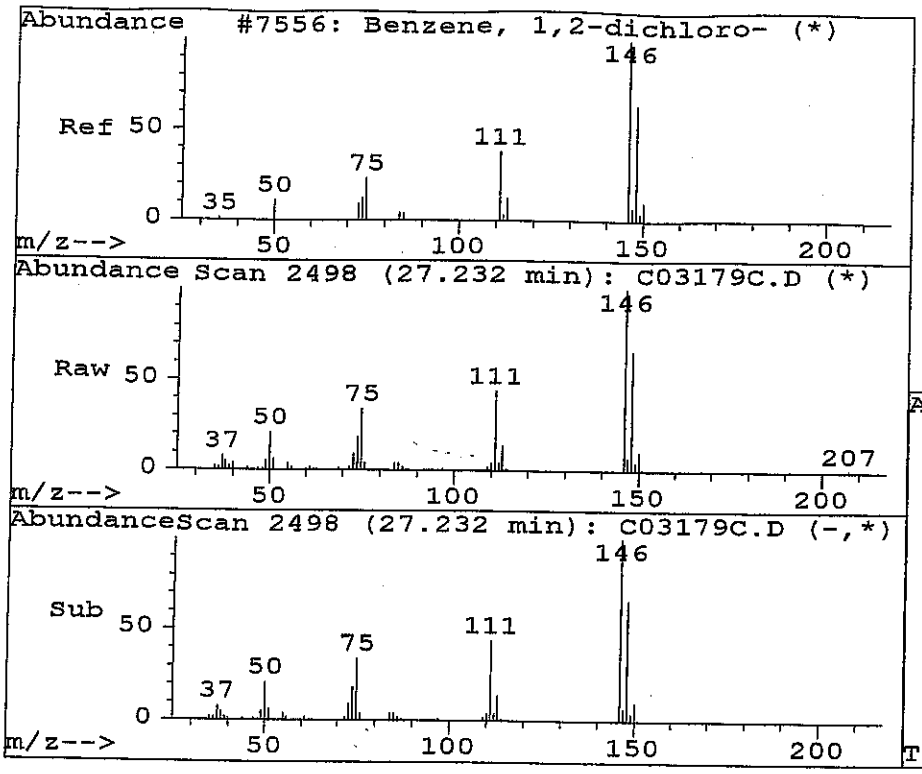


#82
n-Butylbenzene
Concen: 0.43 ppbV
RT: 27.65 min Scan# 2541
Delta R.T. -0.23 min
Lab File: C03179C.D
Acq: 17 Mar 109 10:25 am

Tgt Ion:91 Resp: 311314

Ion	Ratio	Lower	Upper
91	100		
92	53.5	43.9	65.9
134	23.4	18.4	27.6
0	0.0	0.0	0.0

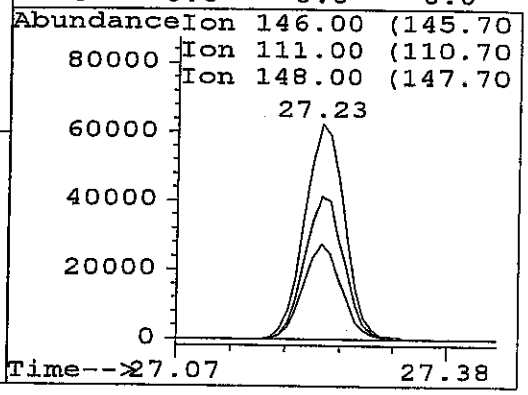


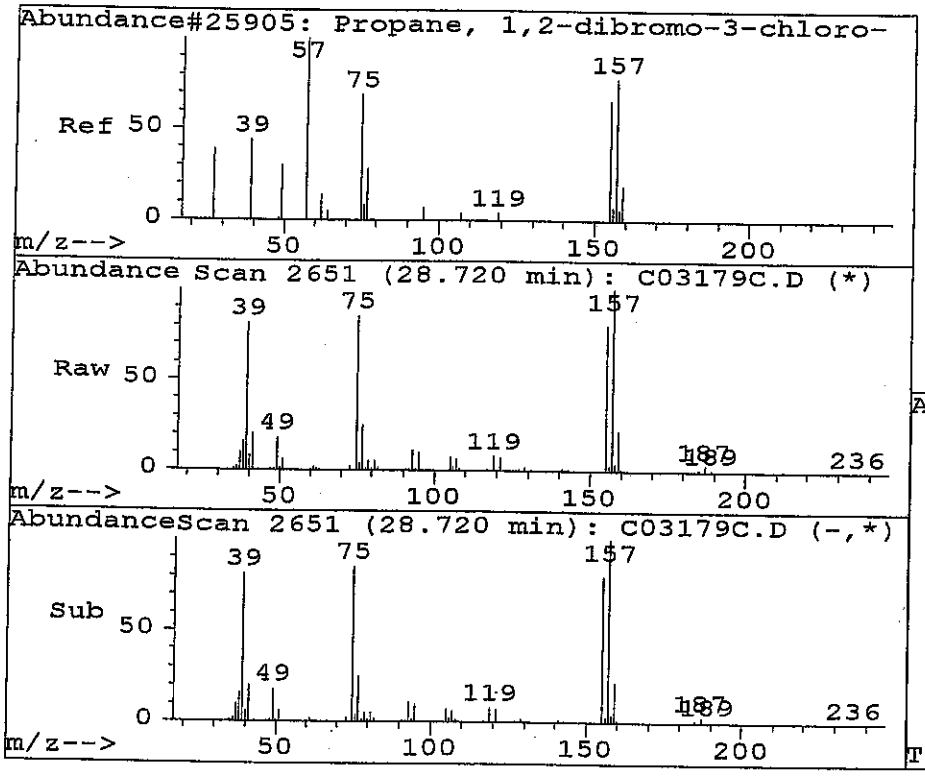


#83
1,2-Dichlorobenzene
Concen: 0.50 ppbV
RT: 27.23 min Scan# 2498
Delta R.T. -0.24 min
Lab File: C03179C.D
Acq: 17 Mar 109 10:25 am

Tgt Ion:146 Resp: 199190

Ion	Ratio	Lower	Upper
146	100		
111	44.0	38.0	57.0
148	66.1	50.6	75.8
0	0.0	0.0	0.0

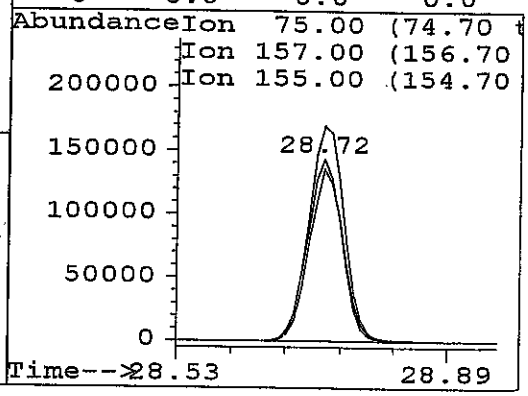


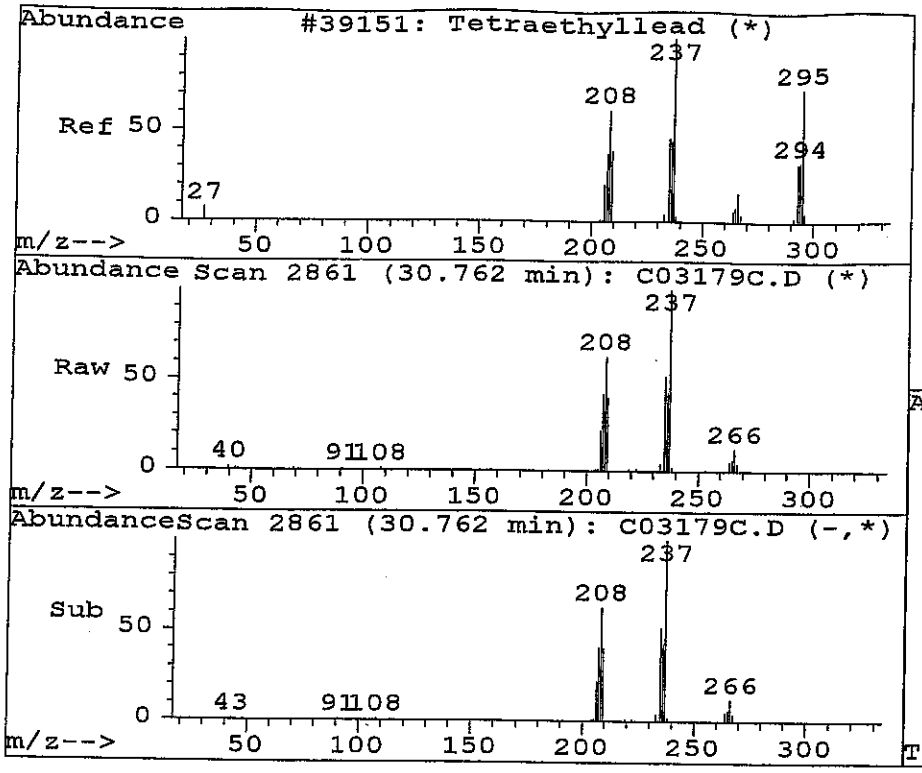


#84
1,2-Dibromo-3-chloropropane
Concen: 1.56 ppbV
RT: 28.72 min Scan# 2651
Delta R.T. -0.24 min
Lab File: C03179C.D
Acq: 17 Mar 109 10:25 am

Tgt Ion:75 Resp: 449541

Ion	Ratio	Lower	Upper
75	100		
157	118.3	87.0	130.6
155	94.7	69.8	104.8
0	0.0	0.0	0.0

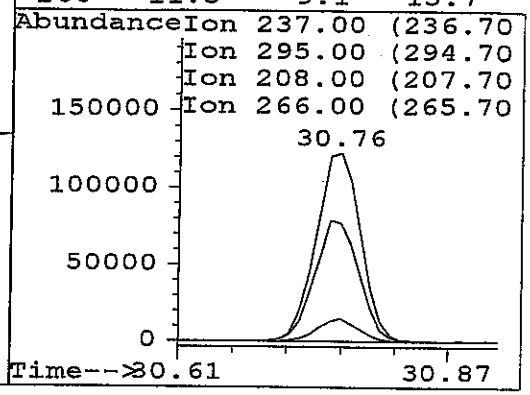


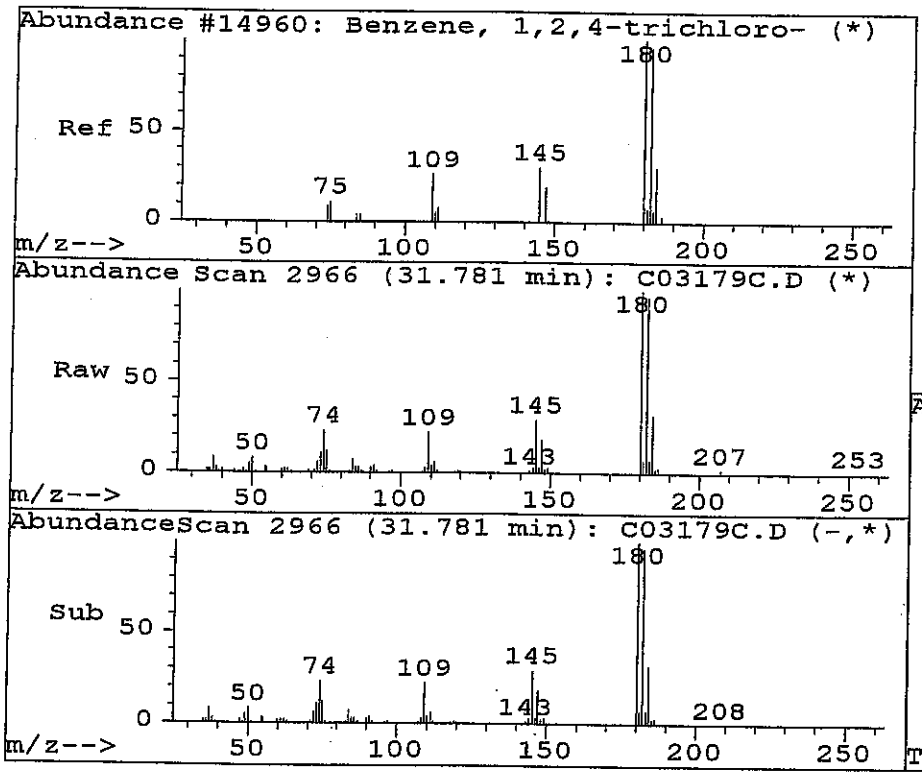


#85
Tetraethyl lead
Concen: 1.40 ppbV
RT: 30.76 min Scan# 2861
Delta R.T. -0.22 min
Lab File: C03179C.D
Acq: 17 Mar 109 10:25 am

Tgt Ion:237 Resp: 364827

Ion	Ratio	Lower	Upper
237	100		
295	0.0	0.0	0.0
208	64.5	51.2	76.8
266	11.3	9.1	13.7

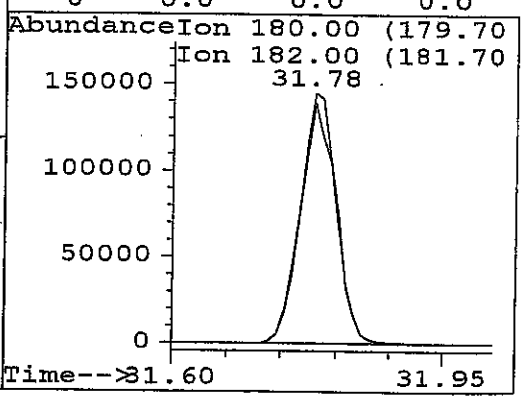


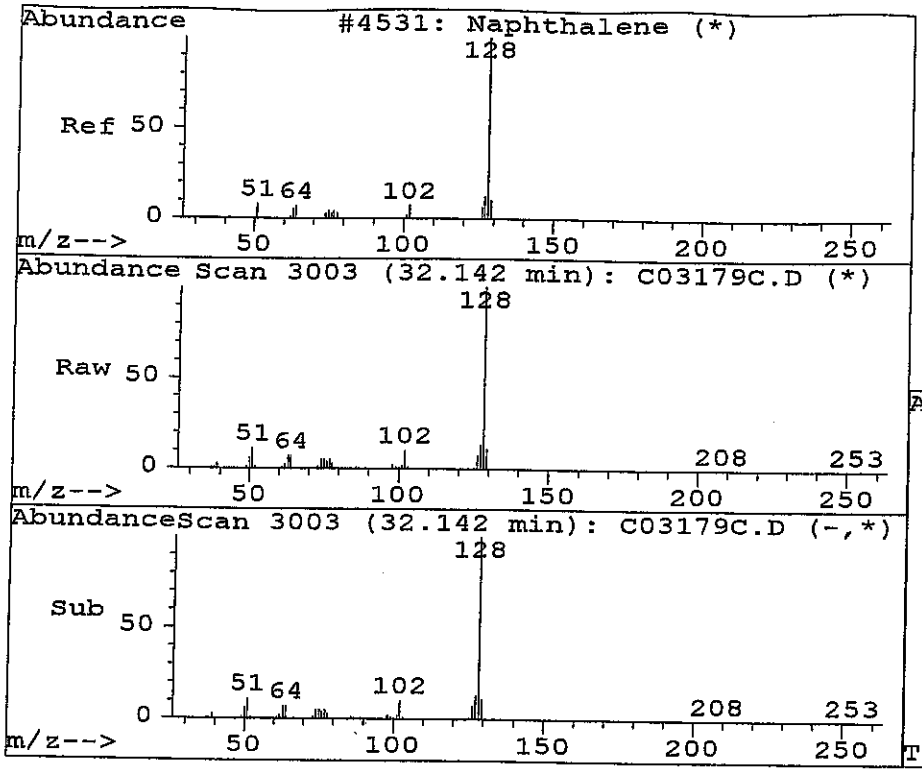


#86
1,2,4-Trichlorobenzene
Concen: 0.65 ppbV
RT: 31.78 min Scan# 2966
Delta R.T. -0.40 min
Lab File: C03179C.D
Acq: 17 Mar 109 10:25 am

Tgt Ion:180 Resp: 468171

Ion	Ratio	Lower	Upper
180	100		
182	96.0	76.1	114.1
0	0.0	0.0	0.0
0	0.0	0.0	0.0

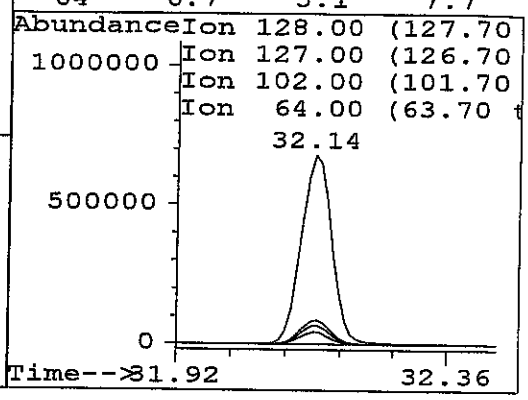


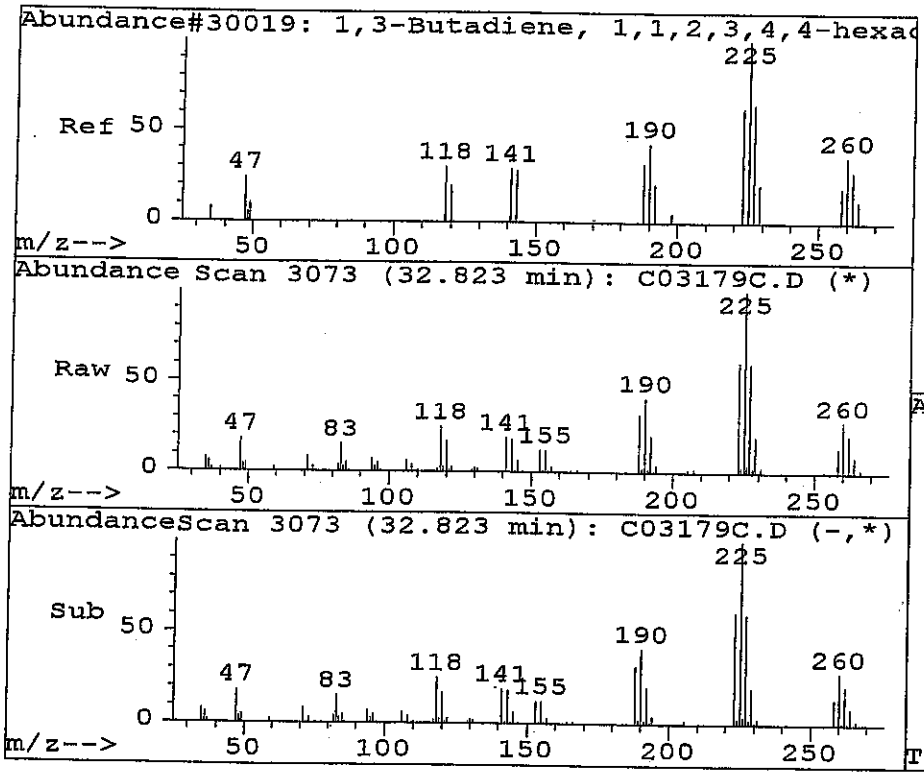


#87
Naphthalene
Concen: 1.87 ppbV
RT: 32.14 min Scan# 3003
Delta R.T. -0.27 min
Lab File: C03179C.D
Acq: 17 Mar 109 10:25 am

Tgt Ion:128 Resp: 2349483

Ion	Ratio	Lower	Upper
128	100		
127	12.9	10.6	16.0
102	10.2	8.5	12.7
64	6.7	5.1	7.7

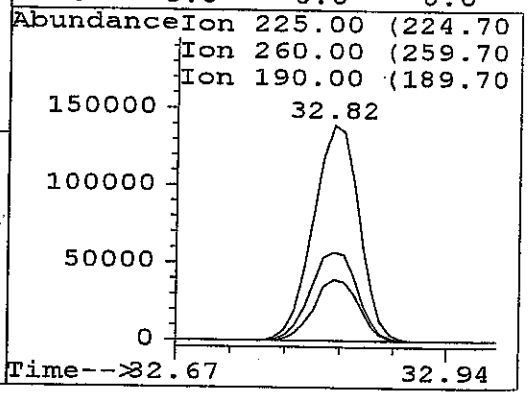


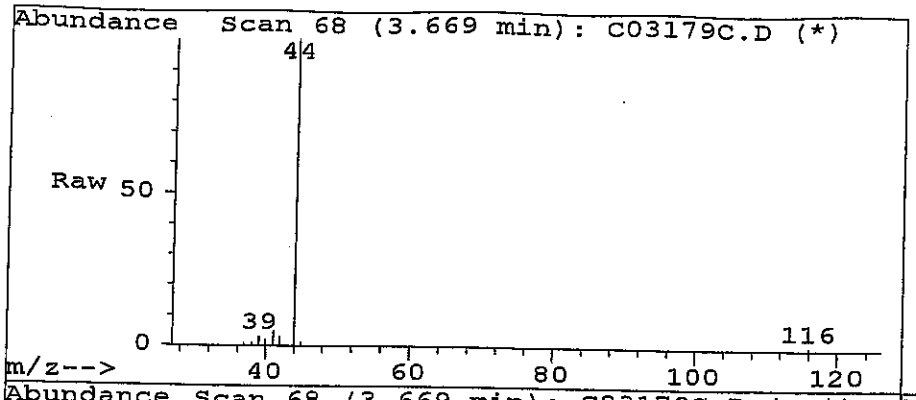


#88
Hexachlorobutadiene
Concen: 0.81 ppbV
RT: 32.82 min Scan# 3073
Delta R.T. -0.26 min
Lab File: C03179C.D
Acq: 17 Mar 109 10:25 am

Tgt Ion:225 Resp: 442421

Ion	Ratio	Lower	Upper
225	100		
260	28.3	22.2	33.4
190	40.9	33.6	50.4
0	0.0	0.0	0.0

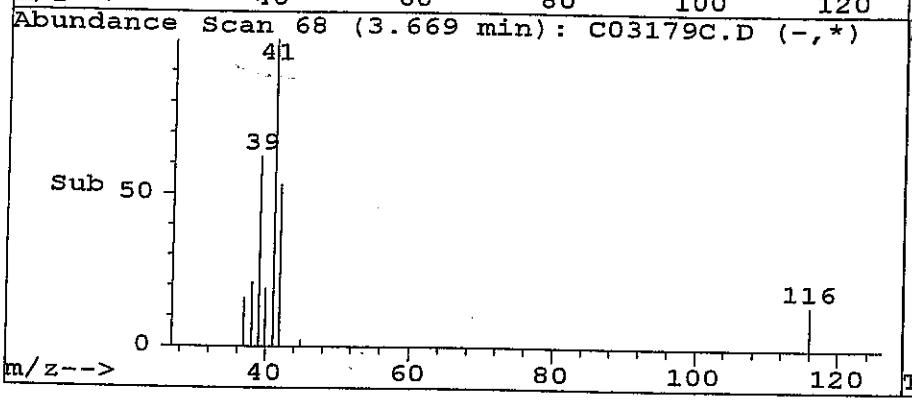


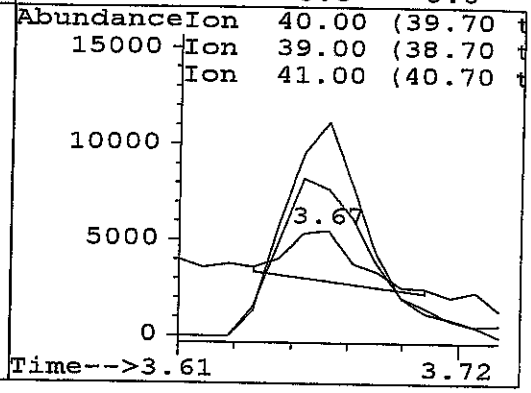


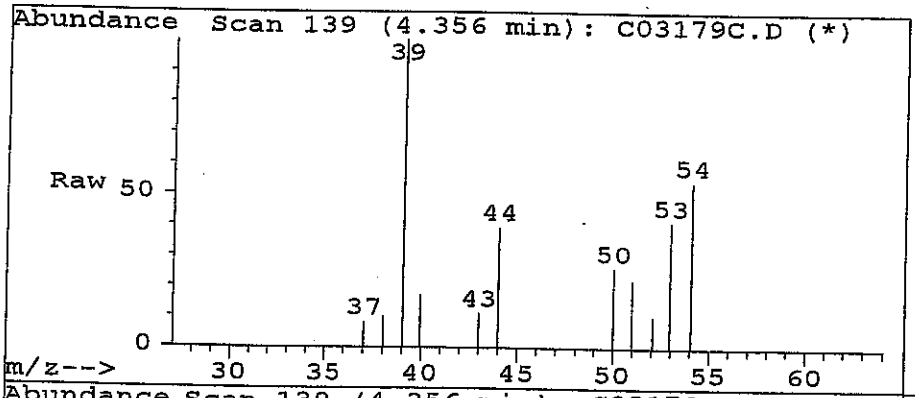
#89
Propylene
Concen: 0.29 ppbV m
RT: 3.67 min Scan# 68
Delta R.T. -0.09 min
Lab File: C03179C.D
Acq: 17 Mar 109 10:25 am

Tgt Ion:40 Resp: 4399

Ion	Ratio	Lower	Upper
40	100		
39	139.2	159.4	239.2#
41	202.9	189.5	284.3
0	0.0	0.0	0.0



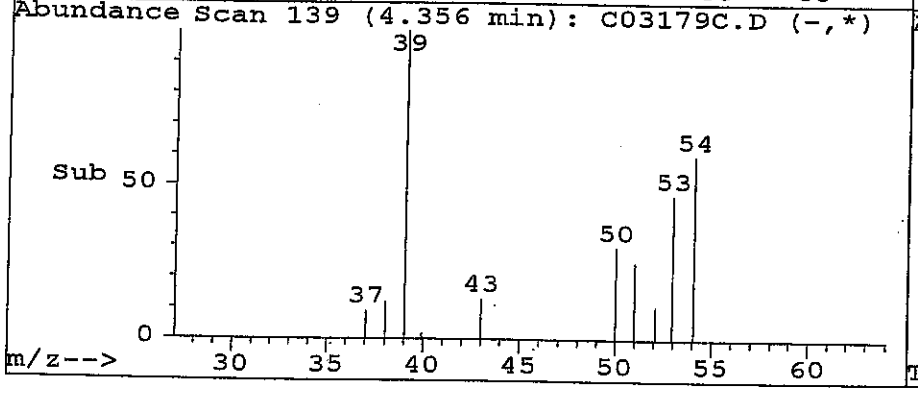


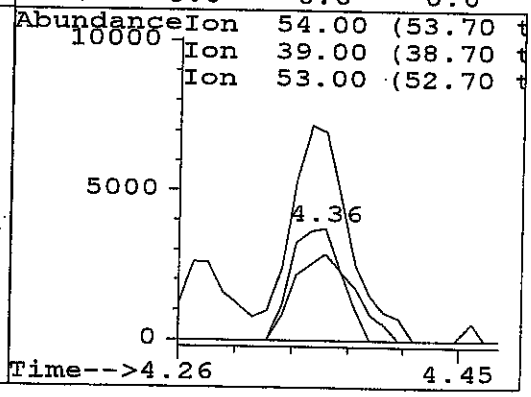


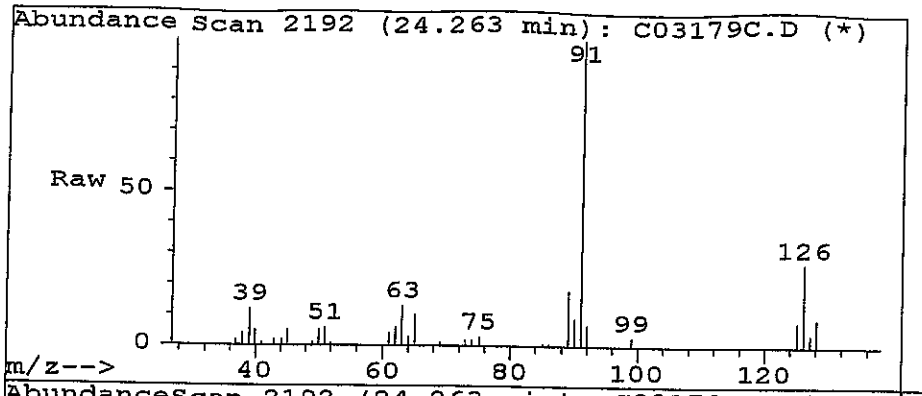
#90
1,3-Butadiene
Concen: 0.23 ppbV
RT: 4.36 min Scan# 139
Delta R.T. -0.11 min
Lab File: C03179C.D
Acq: 17 Mar 109 10:25 am

Tgt Ion:54 Resp: 9949

Ion	Ratio	Lower	Upper
54	100		
39	193.4	148.2	222.2
53	68.0	57.0	85.6
0	0.0	0.0	0.0



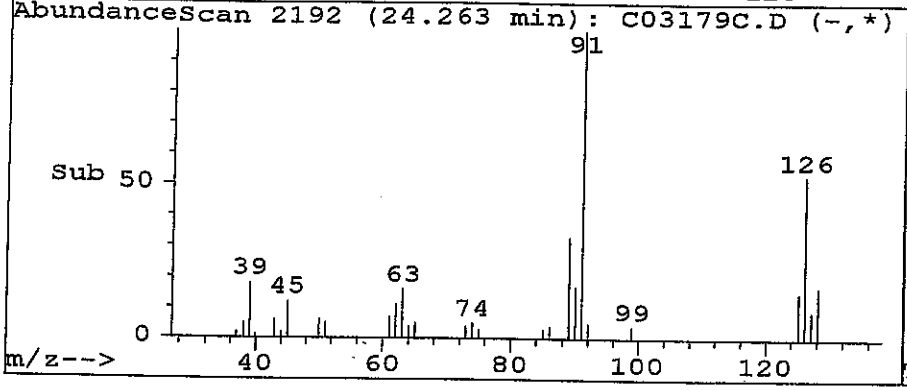


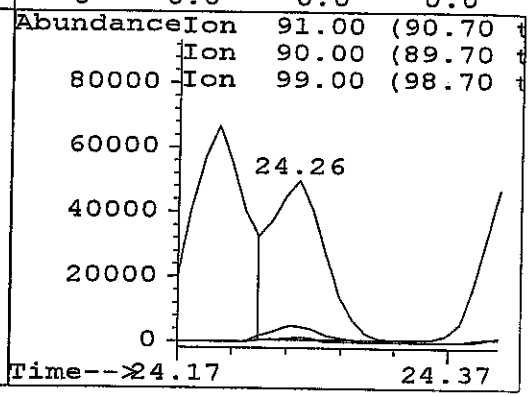


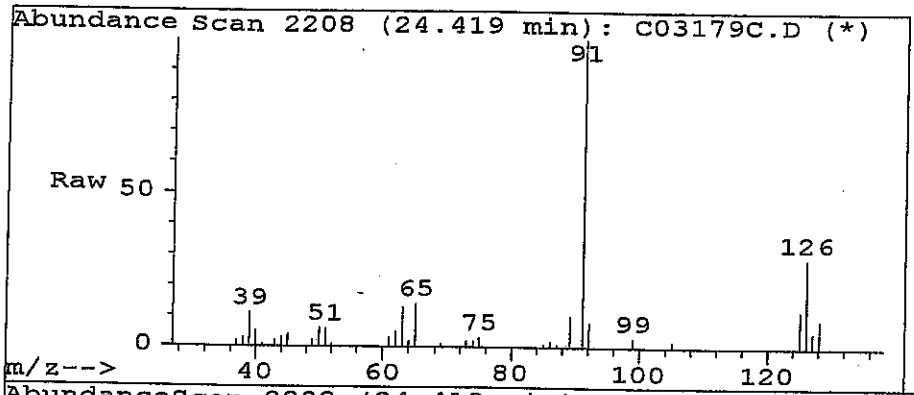
#92
2-Chlorotoluene
Concen: 0.31 ppbV
RT: 24.26 min Scan# 2192
Delta R.T. -0.20 min
Lab File: C03179C.D
Acq: 17 Mar 109 10:25 am

Tgt Ion:91 Resp: 128657

Ion	Ratio	Lower	Upper
91	100		
90	9.8	7.0	10.4
99	2.0	1.6	2.4
0	0.0	0.0	0.0



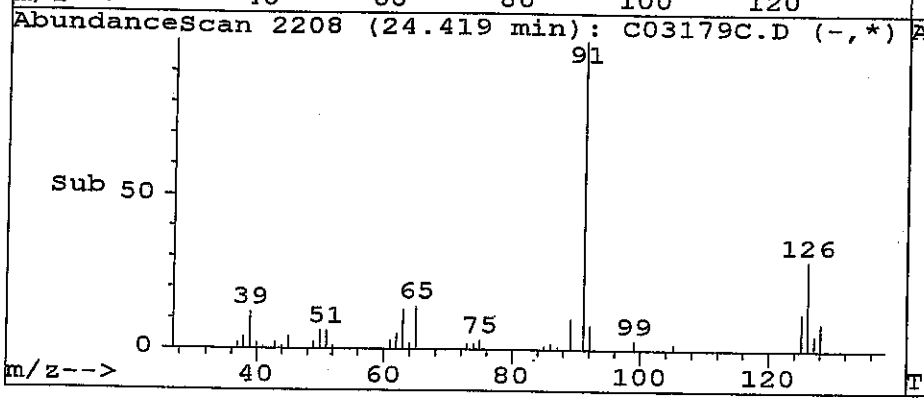


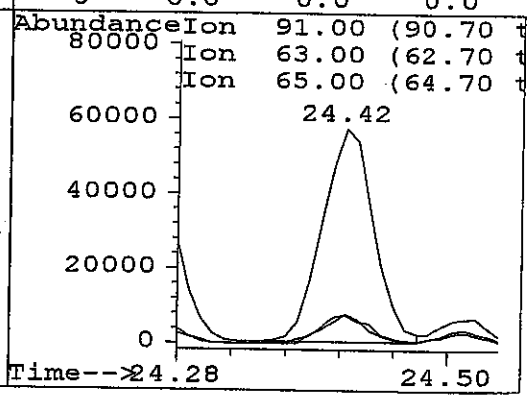


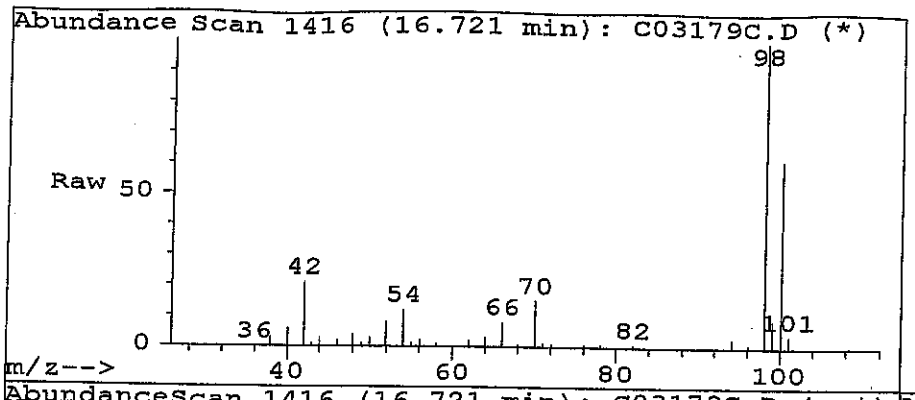
#93
4-Chlorotoluene
Concen: 0.31 ppbV
RT: 24.42 min Scan# 2208
Delta R.T. -0.23 min
Lab File: C03179C.D
Acq: 17 Mar 109 10:25 am

Tgt Ion:91 Resp: 166049

Ion	Ratio	Lower	Upper
91	100		
63	13.4	11.0	16.4
65	12.3	9.4	14.0
0	0.0	0.0	0.0



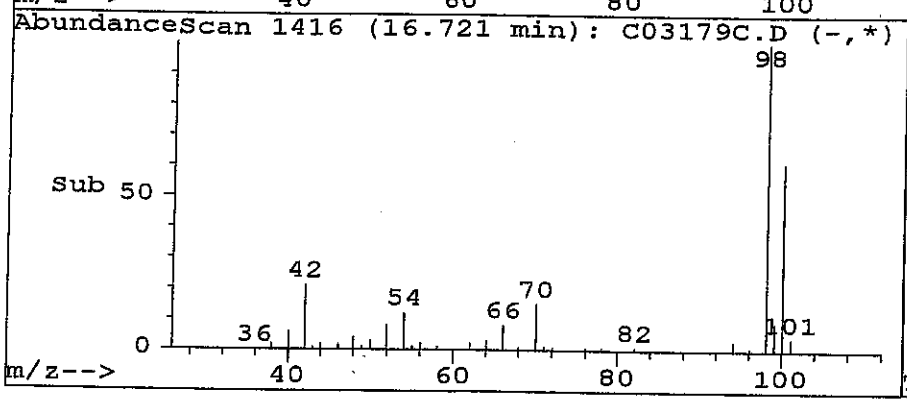


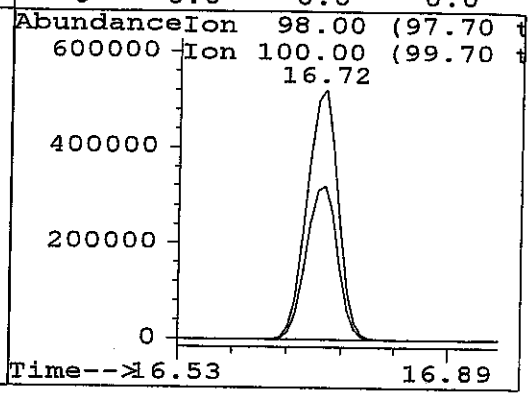


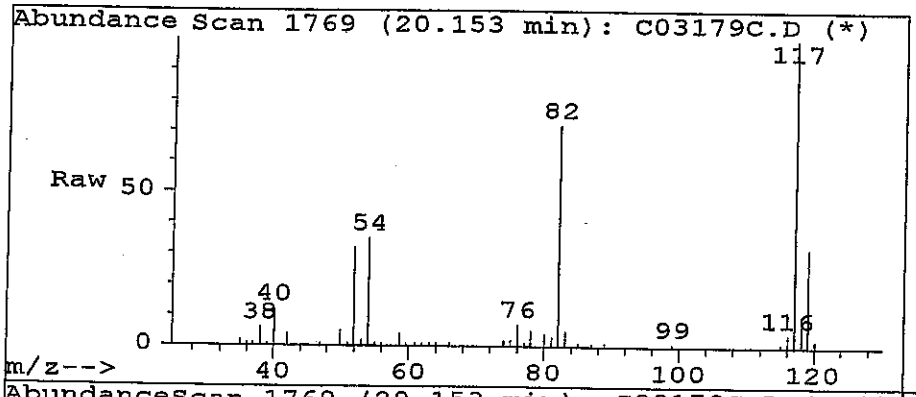
#94
Toluene-d8
Concen: 9.89 ppbV
RT: 16.72 min Scan# 1416
Delta R.T. -0.22 min
Lab File: C03179C.D
Acq: 17 Mar 109 10:25 am

Tgt Ion:98 Resp: 1479389

Ion	Ratio	Lower	Upper
98	100		
100	61.4	51.0	76.6
0	0.0	0.0	0.0
0	0.0	0.0	0.0



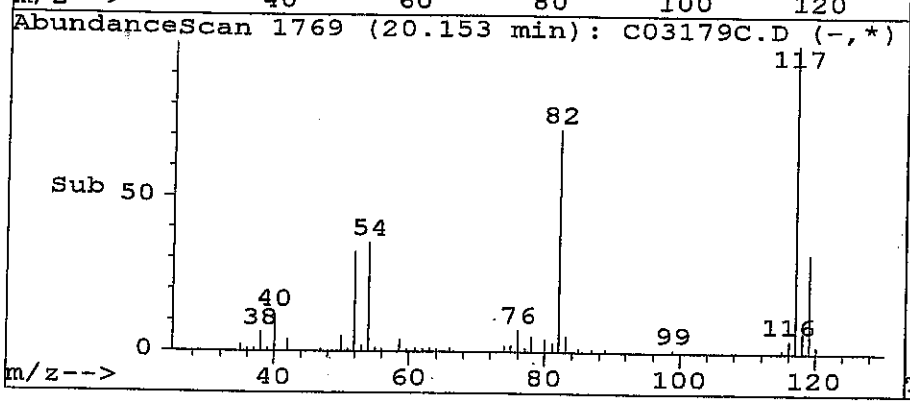


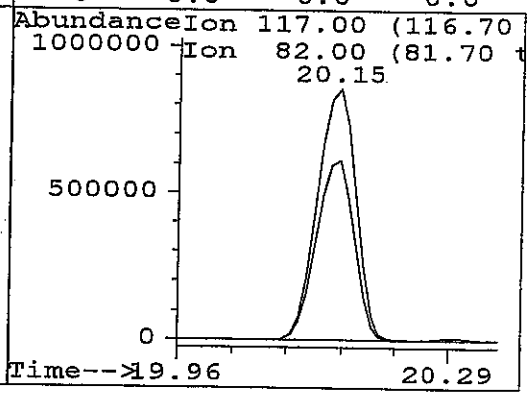


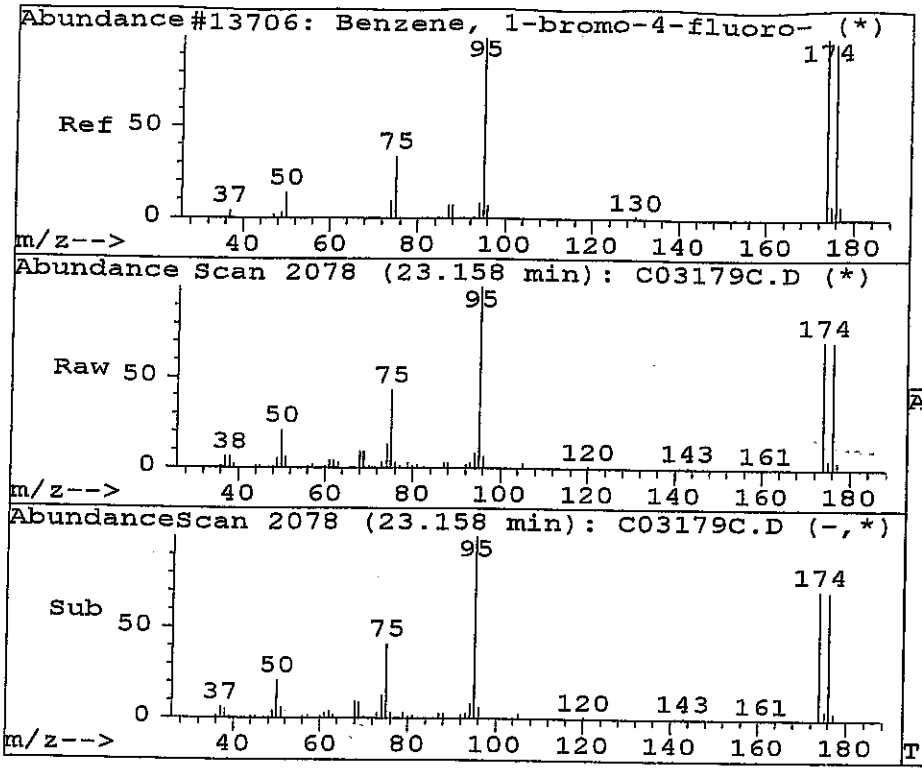
#95
Chlorobenzene-d5
Concen: 19.78 ppbV
RT: 20.15 min Scan# 1769
Delta R.T. -0.21 min
Lab File: C03179C.D
Acq: 17 Mar 109 10:25 am

Tgt Ion:117 Resp: 2736627

Ion	Ratio	Lower	Upper
117	100		
82	71.7	57.0	85.6
0	0.0	0.0	0.0
0	0.0	0.0	0.0



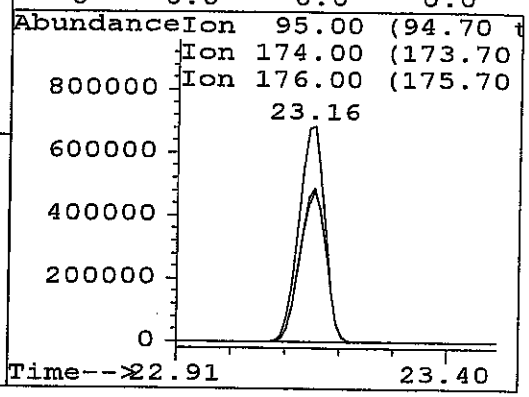




#96
1,4-Bromofluorobenzene
Concen: 10.27 ppbV
RT: 23.16 min Scan# 2078
Delta R.T. -0.22 min
Lab File: C03179C.D
Acq: 17 Mar 109 10:25 am

Tgt Ion:95 Resp: 2176179

Ion	Ratio	Lower	Upper
95	100		
174	71.3	55.4	83.0
176	69.7	55.7	83.5
0	0.0	0.0	0.0



Quantitation Report

Data File : C:\MSCHEM\2\DATA\03179M~1\C03179D.D
Acq Time : 17 Mar 109 11:35 am
Sample : ST60022 + ST60350
Misc : 2.0 ML
Quant Time: Mar 17 13:44 19109

Operator: KB
Inst : 5970 - In
Multiplr: 1.00

Method : C:\MSCHEM\2\METHODS\1T15EXAY.M
Title : EPA TO-15
Last Update : Tue Mar 17 14:18:15 2009
Response via : Multiple Level Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene	11.18	168	3022845	20.00	ppbV	-0.20
35) 1,4-Difluorobenzene	12.96	114	3020264	20.00	ppbV	-0.21
System Monitoring Compounds						%Recovery
94) Toluene-d8	16.72	98	1730275	10.13	ppbV	202.62%
95) Chlorobenzene-d5	20.15	117	3122484	19.94	ppbV	199.35%
96) 1,4-Bromofluorobenzene	23.16	95	2472723	10.20	ppbV	203.98%
Target Compounds						Qvalue
2) Dichlorodifluoromethane	3.72	85	185058	2.16	ppbV	92
3) Chloromethane	3.97	50	113562	1.90	ppbV	93
4) Freon 114	3.99	85	193013	2.12	ppbV	95
5) Vinyl chloride	4.20	62	62953	2.09	ppbV	92
6) Bromomethane	4.77	94	66325	2.25	ppbV	98
7) Chloroethane	4.98	64	32925	2.12	ppbV	93
8) Ethanol	5.09	45	165280	2.87	ppbV #	83
9) Acrolein	5.73	56	60990	3.80	ppbV	89
10) Trichlorofluoromethane	5.78	101	179451	2.19	ppbV m	88
11) Acetonitrile	5.78	41	253782	3.36	ppbV	98
12) Acetone	5.87	43	184591	1.33	ppbV	99
13) 2-propanol	6.01	45	154437	1.34	ppbV m	89
14) Methyl iodide	6.81	142	247256	2.79	ppbV	99
15) 1,1-Dichloroethene	6.71	61	150732	2.08	ppbV	94
16) Acrylonitrile	6.76	53	287296	5.82	ppbV	96
17) Freon 113	6.99	151	132996	2.31	ppbV #	82
18) Allyl chloride	7.18	41	155953	1.43	ppbV #	93
19) Dichloromethane	7.14	84	71297	2.27	ppbV #	86
20) Carbon disulfide	7.36	76	78232	1.44	ppbV #	98
21) trans-1,2-Dichloroethene	8.20	96	52404	1.27	ppbV #	76
22) Methyl tert butyl ether	8.35	73	233954	1.21	ppbV #	89
23) Propionitrile	8.60	54	217366	3.51	ppbV	99
24) 1,1-Dichloroethane	8.70	63	183187	2.09	ppbV	97
25) Vinyl acetate	10.11	43	338492	1.33	ppbV	100
26) 2-Butanone	9.34	72	45058	1.35	ppbV #	47
27) Hexane	9.52	57	106477	1.09	ppbV #	76
28) Bromochloromethane	10.29	49	177279	1.37	ppbV #	85
29) Tetrahydrofuran	10.62	42	617718	1.32	ppbV m	41
30) Isobutyl alcohol	10.63	74	45653	3.69	ppbV #	89
31) Methacrylonitrile	9.51	67	179608	4.98	ppbV	93
32) cis-1,2-Dichloroethene	9.91	96	95703	2.09	ppbV	92
33) 2,2-Dichloropropane	10.22	77	171804	1.37	ppbV	96
34) Chloroform	10.32	83	213353	2.02	ppbV	92
36) 1,1,1-Trichloroethane	11.60	97	210683	1.97	ppbV #	86
37) 1,2-Dichloroethane	11.66	62	187037	1.85	ppbV	94
38) 1,1-Dichloropropene	12.04	75	151371	1.28	ppbV	96
39) Cyclohexane	12.37	56	182159	1.34	ppbV	98
40) Benzene	12.30	78	364766	1.77	ppbV	100
41) Carbon tetrachloride	12.36	117	220983	2.07	ppbV #	79
42) n-Heptane	13.83	43	300149	1.27	ppbV #	95
43) 1,2-Dichloropropane	13.85	63	132416	1.98	ppbV	95
44) 1,4 Dioxane	14.17	88	80192	1.21	ppbV #	89
45) Dibromomethane	13.98	174	200417	1.32	ppbV	97
46) Trichloroethene	13.92	130	165489	1.88	ppbV	96
47) Bromodichloromethane	14.18	83	218119	1.21	ppbV #	89
48) Methyl methacrylate	14.31	69	346363	3.74	ppbV	89
49) Methyl Isobutyl Ketone	15.52	43	566705	1.44	ppbV	97

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

Quantitation Report

Data File : C:\MSCHEM\2\DATA\03179M~1\C03179D.D
Acq Time : 17 Mar 109 11:35 am
Sample : ST60022 + ST60350
Misc : 2.0 ML
Quant Time: Mar 17 13:44 19109

Operator: KB
Inst : 5970 - In
Multiplr: 1.00

Method : C:\MSCHEM\2\METHODS\1T15EXAY.M
Title : EPA TO-15
Last Update : Tue Mar 17 14:18:15 2009
Response via : Multiple Level Calibration

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
50)	cis-1,3-Dichloropropene	15.60	75	206495	1.95	ppbV	94
51)	Toluene	16.90	91	478350	1.81	ppbV	96
52)	trans-1,3-Dichloropropene	16.63	75	242137	1.92	ppbV	98
53)	1,1,2-Trichloroethane	16.94	61	127239	1.87	ppbV	90
54)	2-Hexanone	17.56	43	678898	1.44	ppbV	97
55)	1,3-Dichloropropane	17.51	76	220671	1.24	ppbV #	96
56)	Octane	18.06	57	146267	1.31	ppbV #	92
57)	Dibromochloromethane	18.08	129	322250	1.35	ppbV	94
58)	1,2-Dibromoethane	18.57	107	324567	1.90	ppbV	89
59)	Tetrachloroethene	18.76	166	300057	1.98	ppbV	93
60)	Chlorobenzene	20.23	112	410336	1.86	ppbV #	87
61)	1,1,1,2-Tetrachloroethane	20.30	131	228762	1.32	ppbV	98
62)	Ethylbenzene	20.77	91	722767	1.95	ppbV	99
63)	m & p-Xylene	21.06	91	1220126	3.86	ppbV	98
64)	Styrene	21.89	104	428714	1.93	ppbV	94
65)	Bromoform	21.79	173	530300	1.34	ppbV	96
66)	o-Xylene	22.02	91	643280	1.83	ppbV	99
67)	1,1,2,2-Tetrachloroethane	22.54	83	560899	1.90	ppbV	99
68)	1,2,3-Trichloropropane	22.85	110	128657	1.19	ppbV	95
69)	t-1,4-Dichloro-2-butene	22.98	53	351682	3.85	ppbV	98
70)	n-Propylbenzene	24.20	91	1169202	1.28	ppbV	99
71)	Isopropylbenzene	24.51	105	943267	1.46	ppbV	99
72)	4-Ethyltoluene	24.51	105	943267	1.40	ppbV	100
73)	1,3,5-Trimethylbenzene	24.67	105	994445	2.17	ppbV	95
74)	Methylstyrene	25.13	118	416310	1.22	ppbV	99
75)	tert-butyl benzene	25.60	119	821357	1.57	ppbV	98
76)	1,2,4-Trimethylbenzene	25.62	105	1033463	2.22	ppbV	99
77)	sec-butylbenzene	26.22	105	1215111	1.57	ppbV	100
78)	1,3-Dichlorobenzene	26.18	146	837609	2.15	ppbV	98
79)	Isopropyltoluene	26.60	119	1156820	1.60	ppbV	100
80)	Benzyl chloride	26.34	91	884546	1.47	ppbV	97
81)	1,4-Dichlorobenzene	26.39	146	896732	2.24	ppbV m	95
82)	n-Butylbenzene	27.65	91	1379437	1.68	ppbV	99
83)	1,2-Dichlorobenzene	27.24	146	912351	2.00	ppbV	98
84)	1,2-Dibromo-3-chloropropan	28.73	75	1381868	4.23	ppbV	91
85)	Tetraethyl lead	30.77	237	1570438	5.29	ppbV #	98
86)	1,2,4-Trichlorobenzene	31.79	180	1987175	2.42	ppbV	99
87)	Naphthalene	32.16	128	6661715	4.68	ppbV	99
88)	Hexachlorobutadiene	32.83	225	1622637	2.61	ppbV	97
89)	Propylene	3.64	40	46990	2.73	ppbV m	84
90)	1,3-Butadiene	4.34	54	70986	1.96	ppbV	90
92)	2-Chlorotoluene	24.25	91	676208	1.42	ppbV m	77
93)	4-Chlorotoluene	24.42	91	884150	1.47	ppbV	99

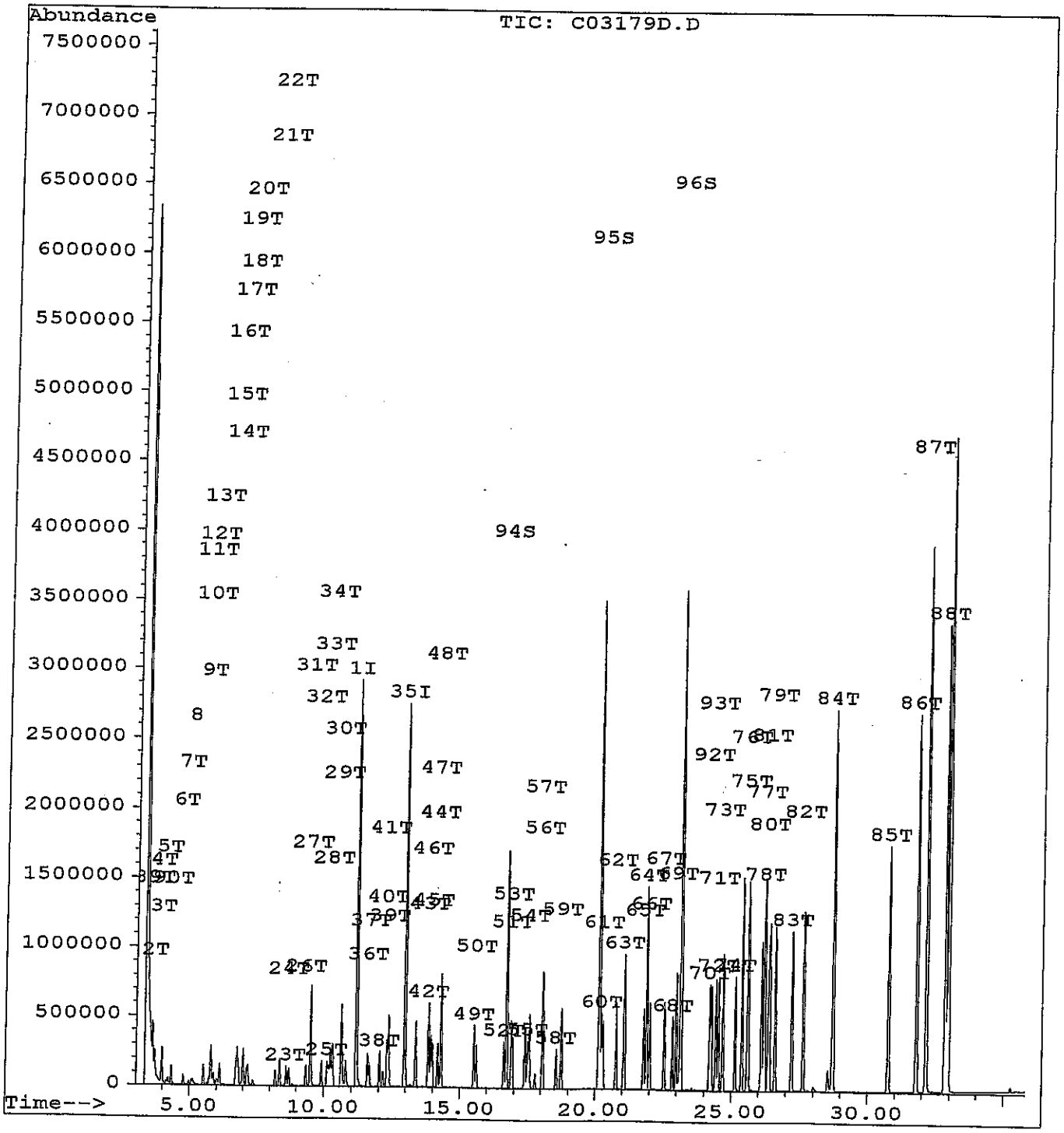
(#) = qualifier out of range (m) = manual integration

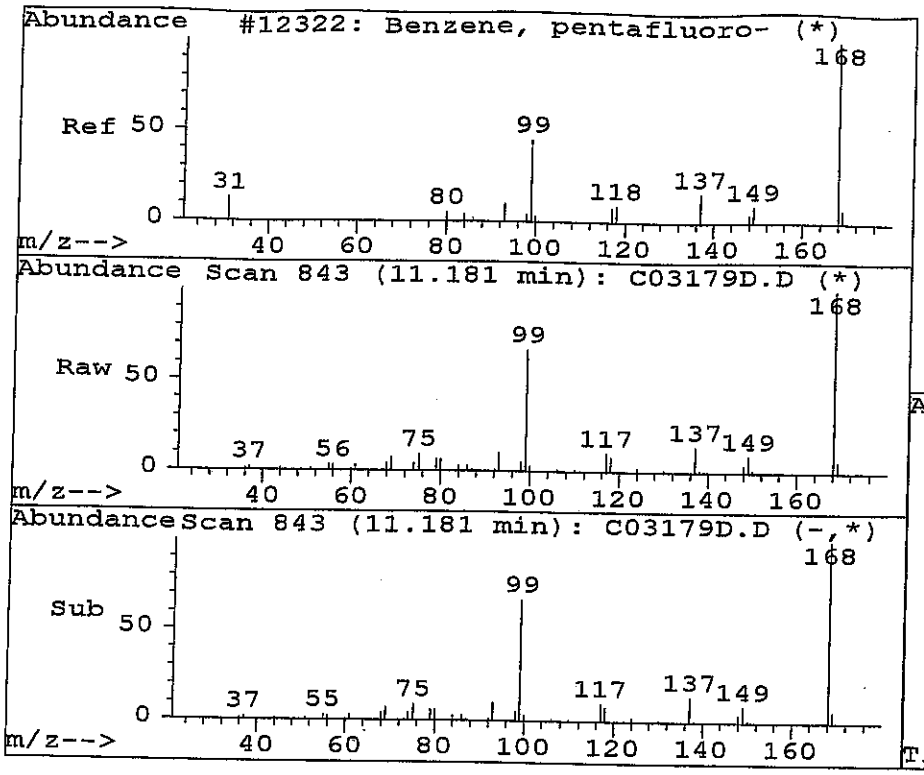
Quantitation Report

Data File : C:\MSCHEM\2\DATA\03179M~1\C03179D.D
Acq Time : 17 Mar 109 11:35 am
Sample : ST60022 + ST60350
Misc : 2.0 ML
Quant Time: Mar 17 13:44 19109

Operator: KB
Inst : 5970 - In
Multiplr: 1.00

Method : C:\MSCHEM\2\METHODS\1T15EXAY.M
Title : EPA TO-15
Last Update : Tue Mar 17 14:18:15 2009
Response via : Multiple Level Calibration

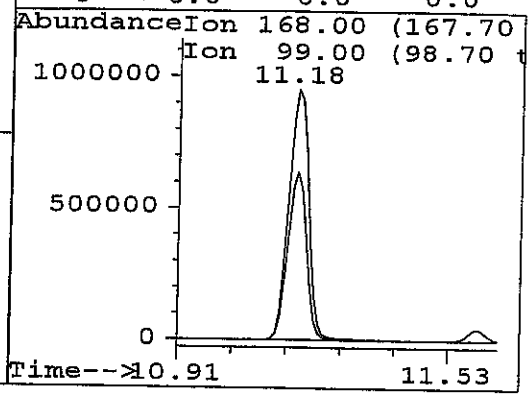


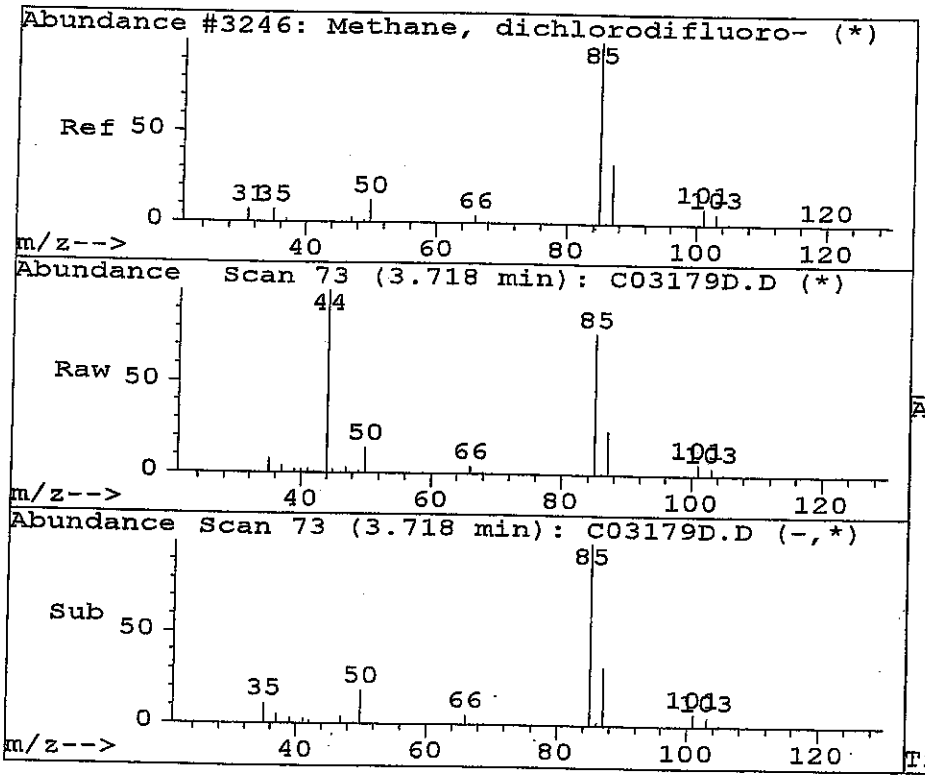


#1
Pentafluorobenzene
Concen: 20.00 ppbV
RT: 11.18 min Scan# 843
Delta R.T. -0.20 min
Lab File: C03179D.D
Acq: 17 Mar 109 11:35 am

Tgt Ion:168 Resp: 3022845

Ion	Ratio	Lower	Upper
168	100		
99	67.3	53.0	79.6
0	0.0	0.0	0.0
0	0.0	0.0	0.0

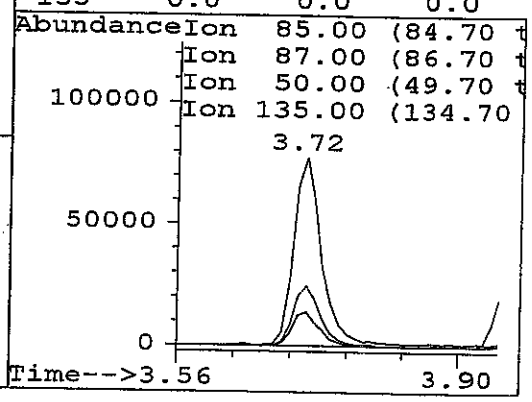


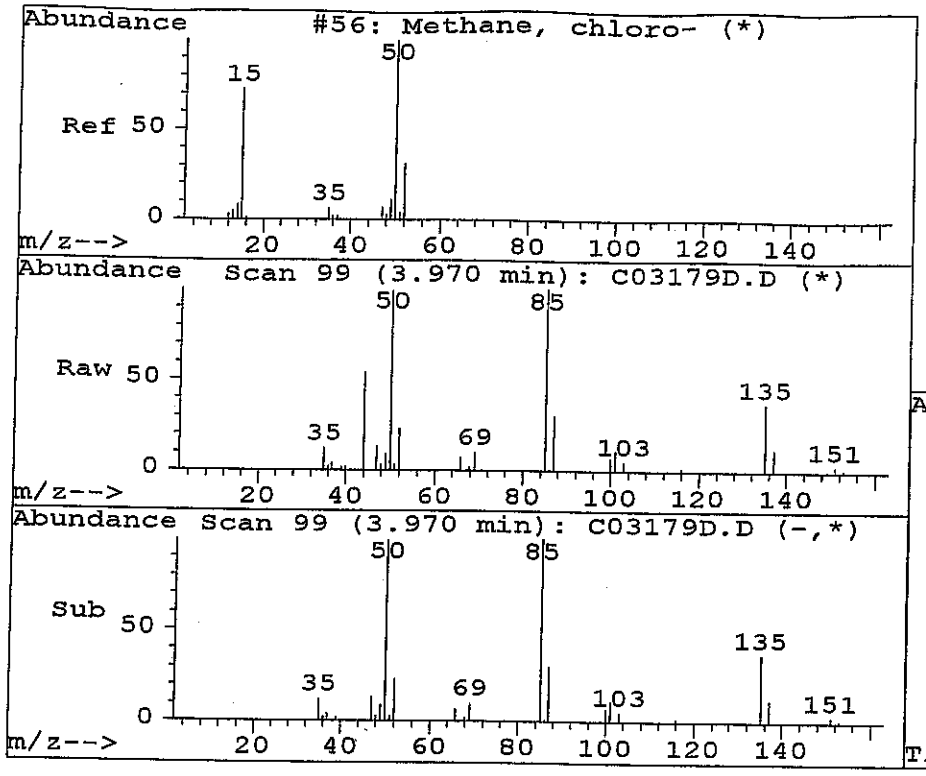


#2
Dichlorodifluoromethane
Concen: 2.16 ppbV
RT: 3.72 min Scan# 73
Delta R.T. -0.11 min
Lab File: C03179D.D
Acq: 17 Mar 109 11:35 am

Tgt Ion:85 Resp: 185058

Ion	Ratio	Lower	Upper
85	100		
87	31.8	30.2	45.2
50	18.2	16.4	24.6
135	0.0	0.0	0.0

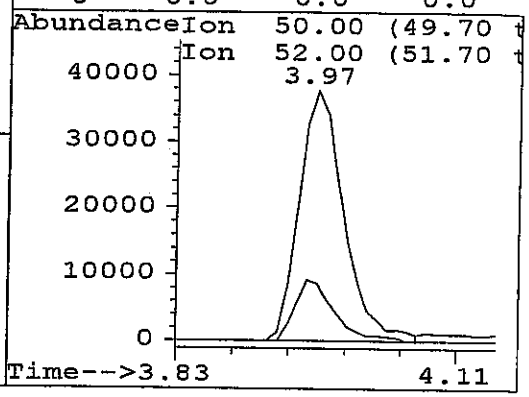


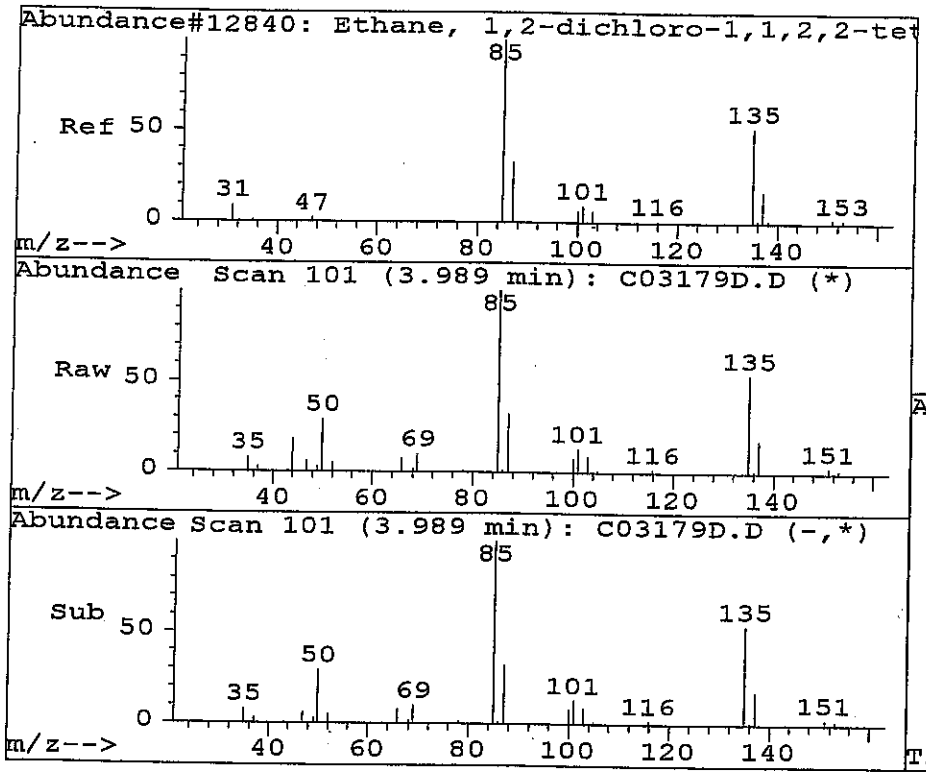


#3
Chloromethane
Concen: 1.90 ppbV
RT: 3.97 min Scan# 99
Delta R.T. -0.12 min
Lab File: C03179D.D
Acq: 17 Mar 109 11:35 am

Tgt Ion:50 Resp: 113562

Ion	Ratio	Lower	Upper
50	100		
52	23.4	16.2	24.4
0	0.0	0.0	0.0
0	0.0	0.0	0.0

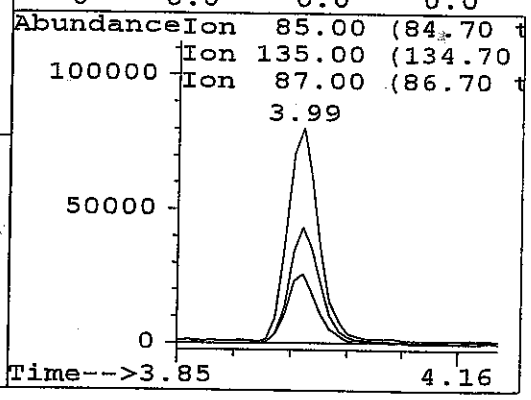


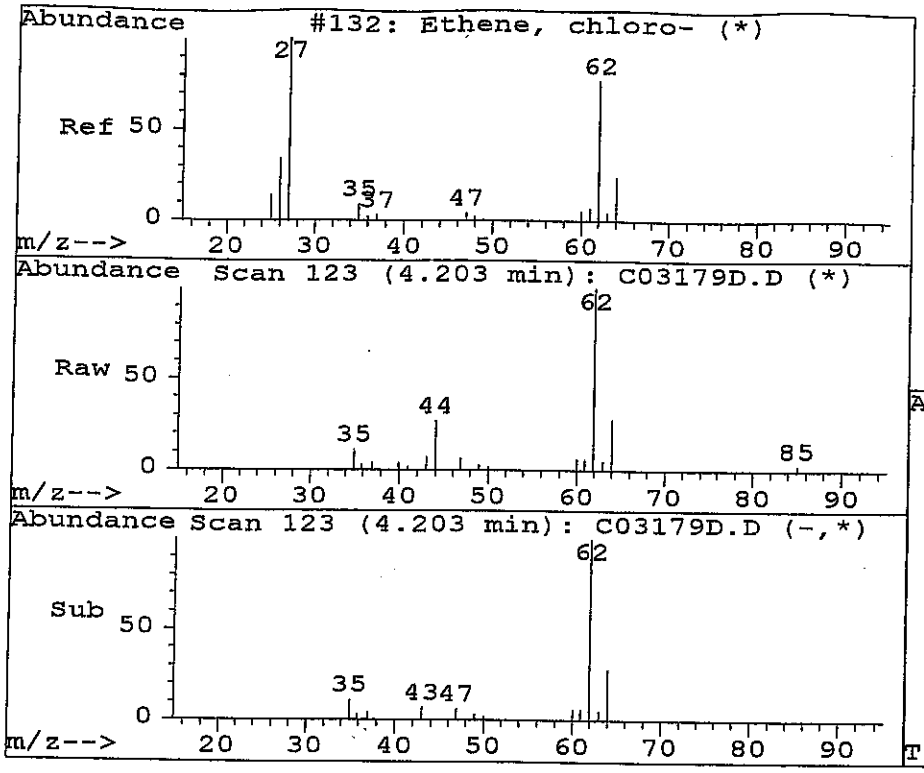


#4
Freon 114
Concen: 2.12 ppbV
RT: 3.99 min Scan# 101
Delta R.T. -0.12 min
Lab File: C03179D.D
Acq: 17 Mar 109 11:35 am

Tgt Ion:85 Resp: 193013

Ion	Ratio	Lower	Upper
85	100		
135	54.2	45.7	68.5
87	32.7	28.7	43.1
0	0.0	0.0	0.0

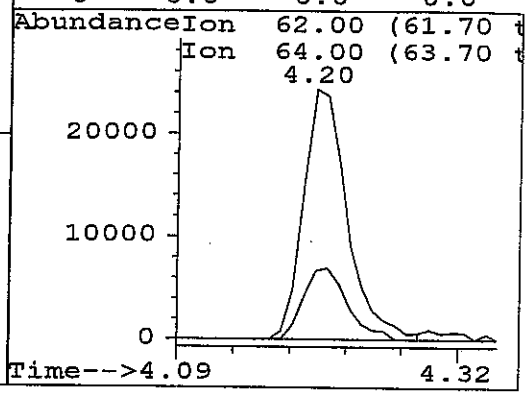


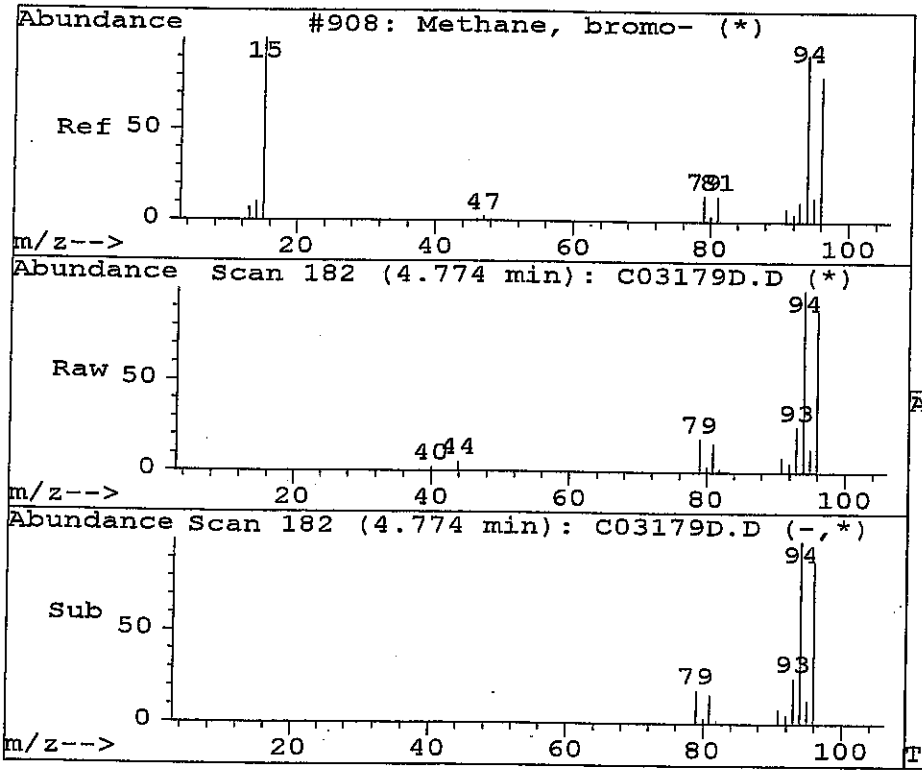


#5
Vinyl chloride
Concen: 2.09 ppbV
RT: 4.20 min Scan# 123
Delta R.T. -0.13 min
Lab File: C03179D.D
Acq: 17 Mar 109 11:35 am

Tgt Ion:62 Resp: 62953

Ion	Ratio	Lower	Upper
62	100		
64	27.9	25.9	38.9
0	0.0	0.0	0.0
0	0.0	0.0	0.0

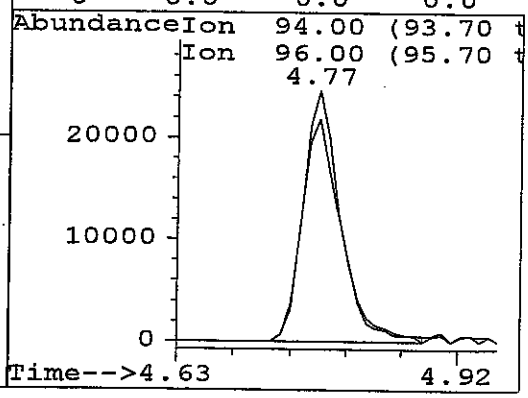


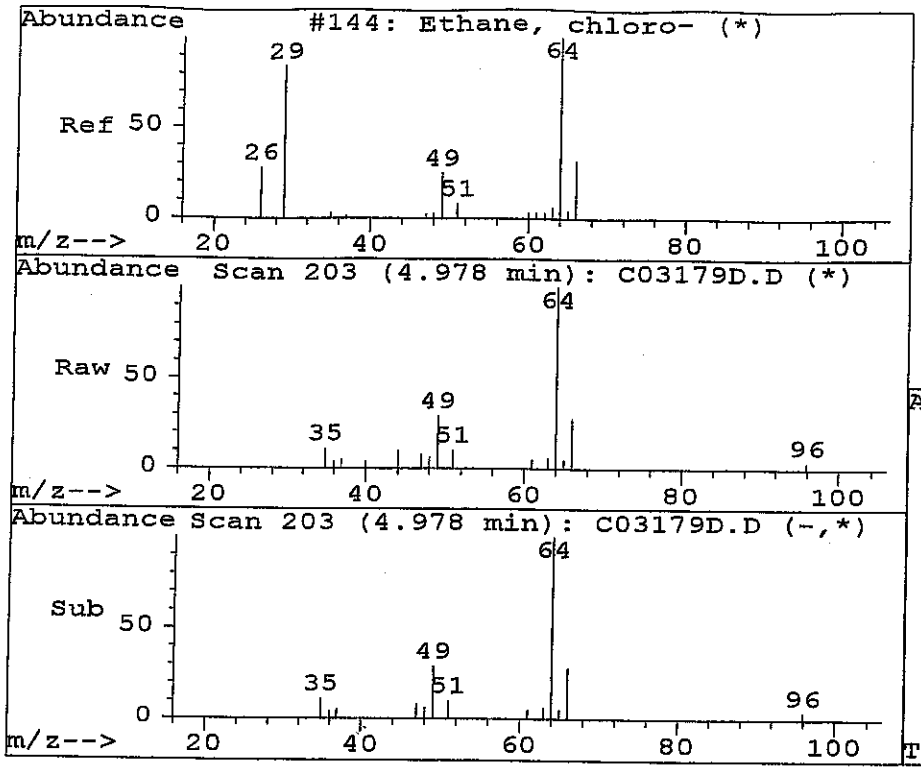


#6
Bromomethane
Concen: 2.25 ppbV
RT: 4.77 min Scan# 182
Delta R.T. -0.15 min
Lab File: C03179D.D
Acq: 17 Mar 109 11:35 am

Tgt Ion:94 Resp: 66325

Ion	Ratio	Lower	Upper
94	100		
96	89.9	70.2	105.4
0	0.0	0.0	0.0
0	0.0	0.0	0.0

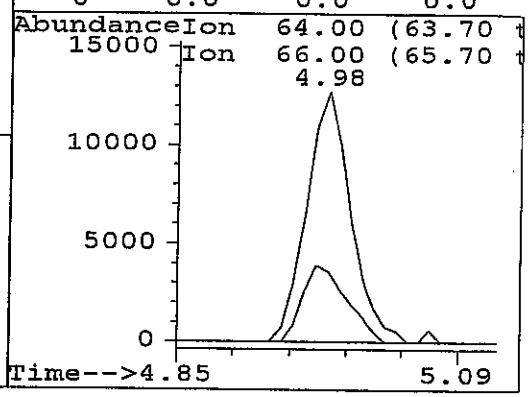


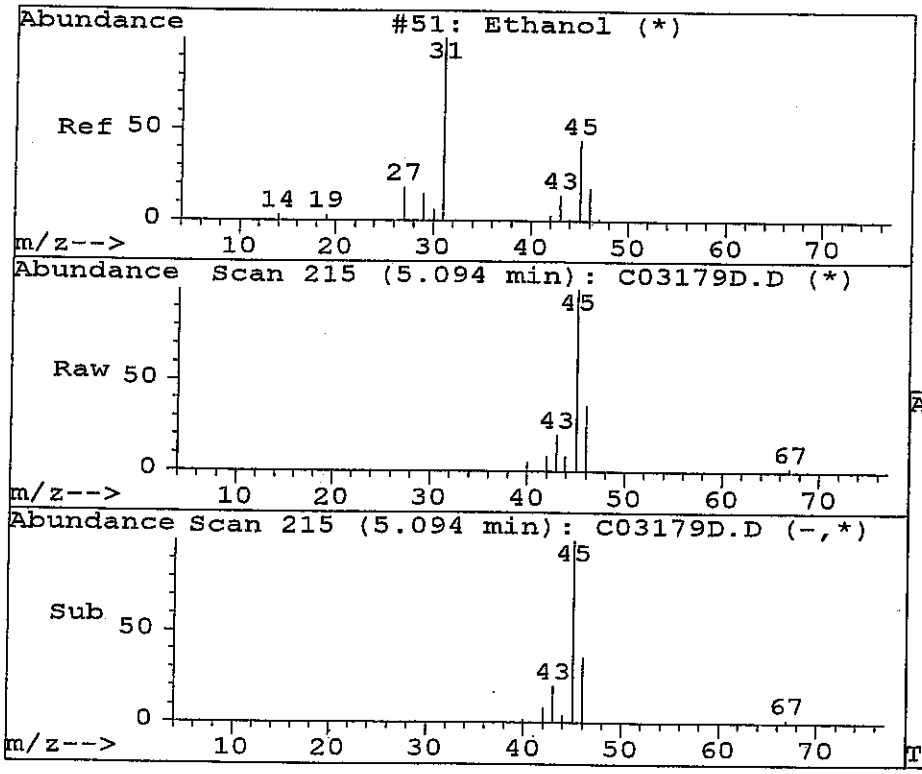


#7
Chloroethane
Concen: 2.12 ppbV
RT: 4.98 min Scan# 203
Delta R.T. -0.14 min
Lab File: C03179D.D
Acq: 17 Mar 109 11:35 am

Tgt Ion:64 Resp: 32925

Ion	Ratio	Lower	Upper
64	100		
66	28.3	25.9	38.9
0	0.0	0.0	0.0
0	0.0	0.0	0.0

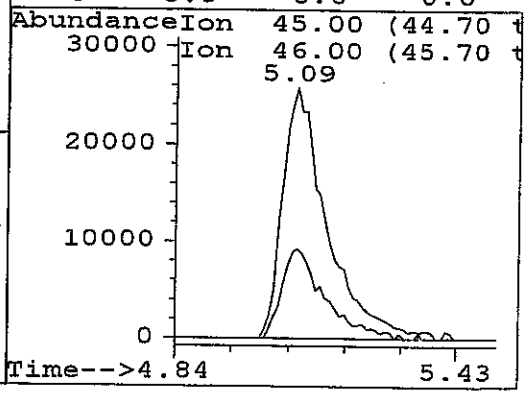


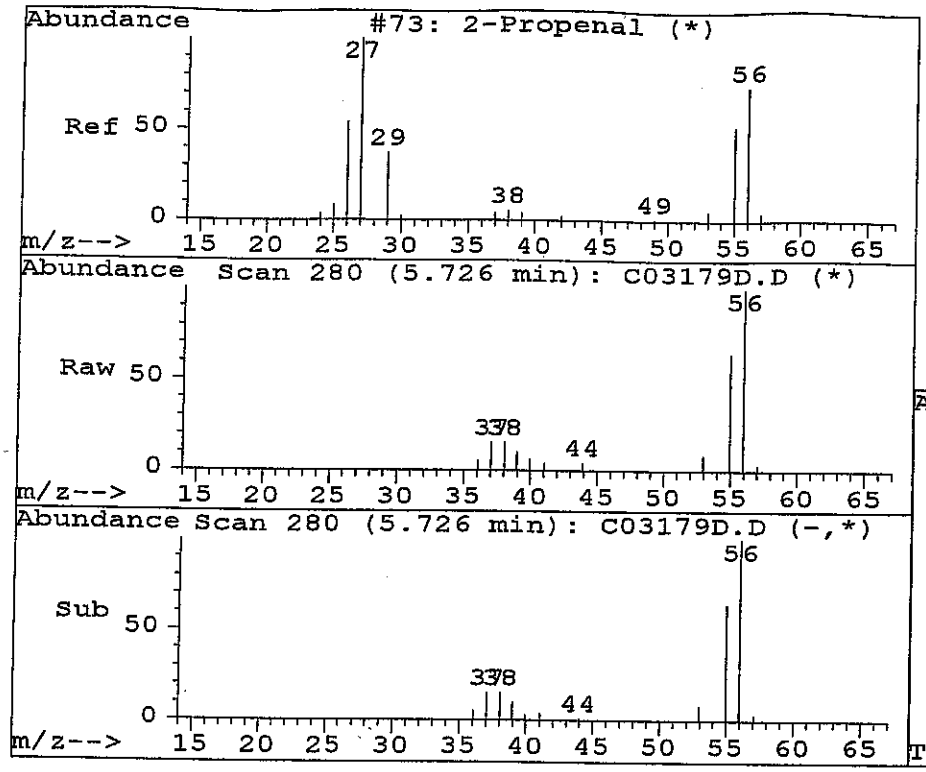


#8
Ethanol
Concen: 2.87 ppbV
RT: 5.09 min Scan# 215
Delta R.T. -0.11 min
Lab File: C03179D.D
Acq: 17 Mar 109 11:35 am

Tgt Ion:45 Resp: 165280

Ion	Ratio	Lower	Upper
45	100		
46	34.9	20.9	31.3#
0	0.0	0.0	0.0
0	0.0	0.0	0.0

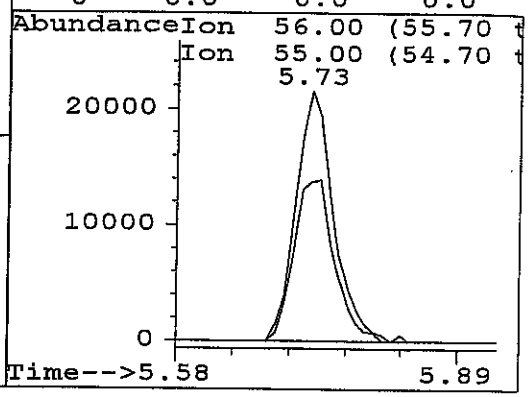


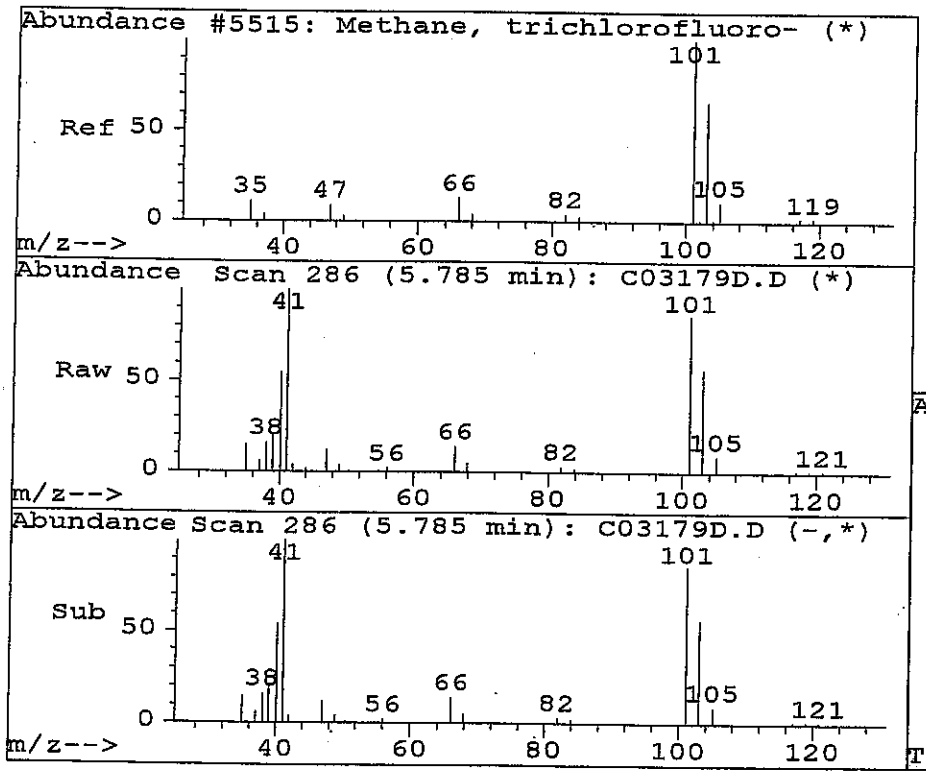


#9
Acrolein
Concen: 3.80 ppbV
RT: 5.73 min Scan# 280
Delta R.T. -0.16 min
Lab File: C03179D.D
Acq: 17 Mar 109 11:35 am

Tgt Ion:56 Resp: 60990

Ion	Ratio	Lower	Upper
56	100		
55	64.0	44.7	67.1
0	0.0	0.0	0.0
0	0.0	0.0	0.0

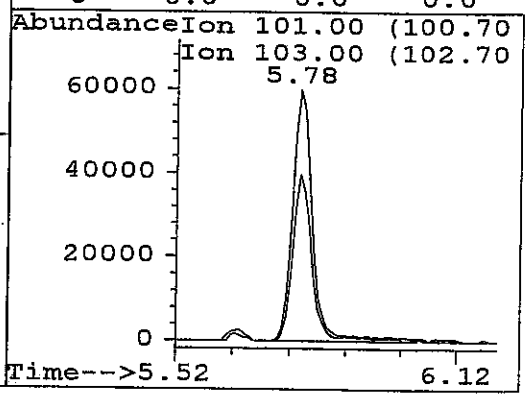


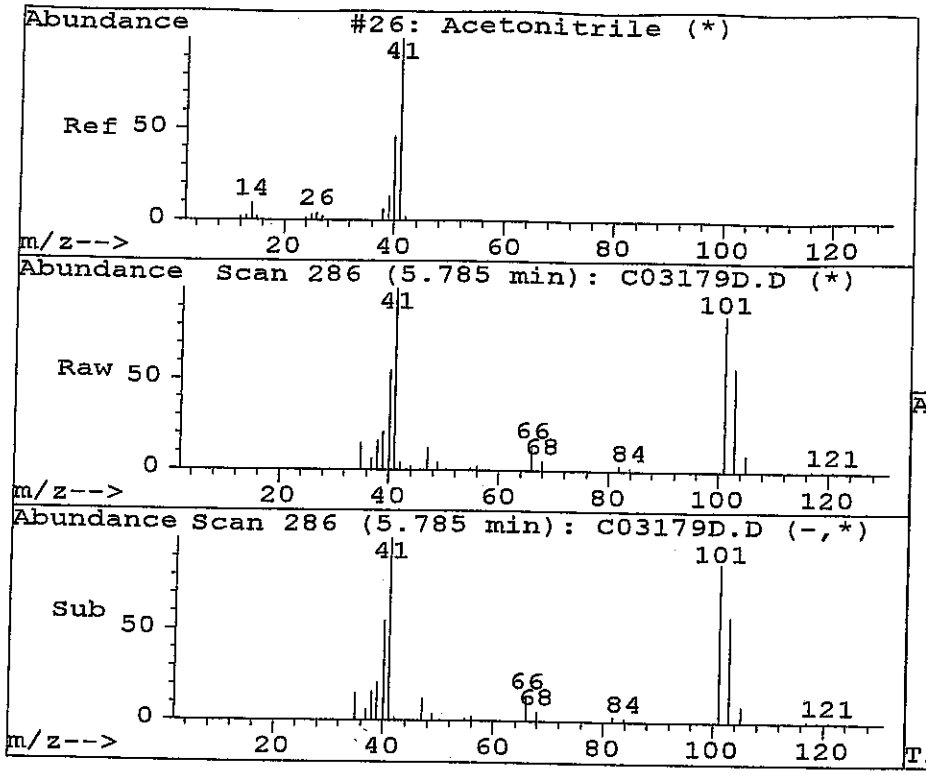


#10
Trichlorofluoromethane
Concen: 2.19 ppbV m
RT: 5.78 min Scan# 286
Delta R.T. -0.16 min
Lab File: C03179D.D
Acq: 17 Mar 109 11:35 am

Tgt Ion:101 Resp: 179451

Ion	Ratio	Lower	Upper
101	100		
103	66.5	43.9	65.9#
0	0.0	0.0	0.0
0	0.0	0.0	0.0

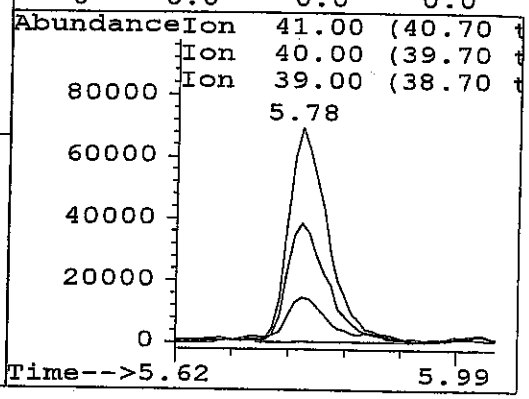


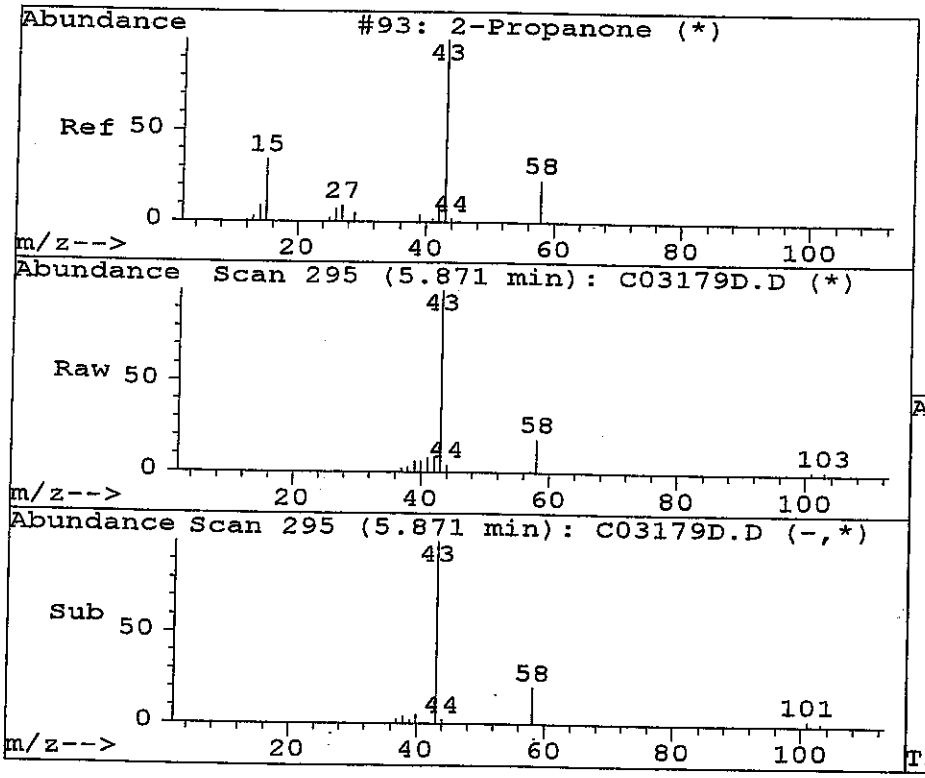


#11
Acetonitrile
Concen: 3.36 ppbV
RT: 5.78 min Scan# 286
Delta R.T. -0.18 min
Lab File: C03179D.D
Acq: 17 Mar 109 11:35 am

Tgt Ion:41 Resp: 253782

Ion	Ratio	Lower	Upper
41	100		
40	54.0	43.8	65.8
39	19.2	16.3	24.5
0	0.0	0.0	0.0

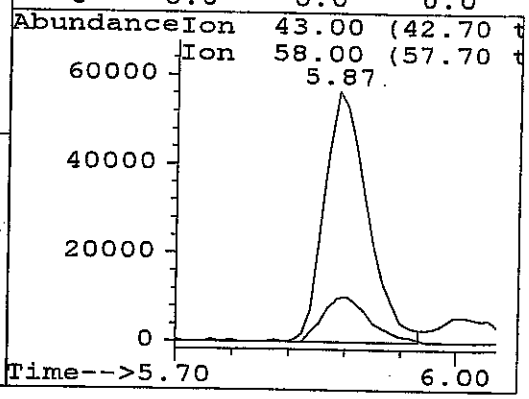


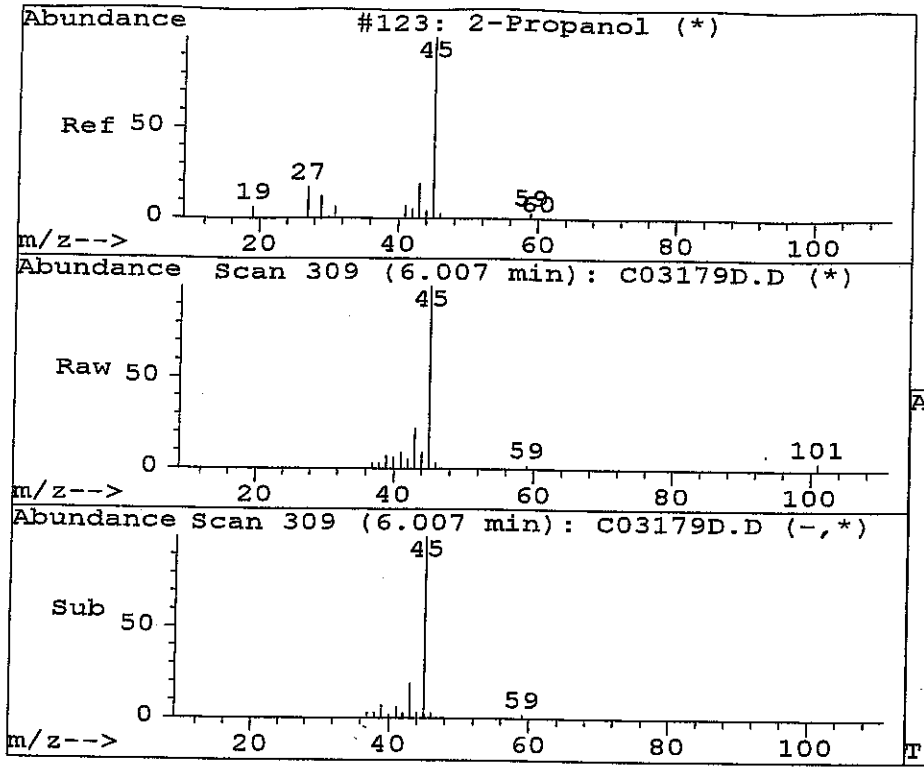


#12
Acetone
Concen: 1.33 ppbV
RT: 5.87 min Scan# 295
Delta R.T. -0.17 min
Lab File: C03179D.D
Acq: 17 Mar 109 11:35 am

Tgt Ion:43 Resp: 184591

Ion	Ratio	Lower	Upper
43	100		
58	17.7	13.8	20.6
0	0.0	0.0	0.0
0	0.0	0.0	0.0

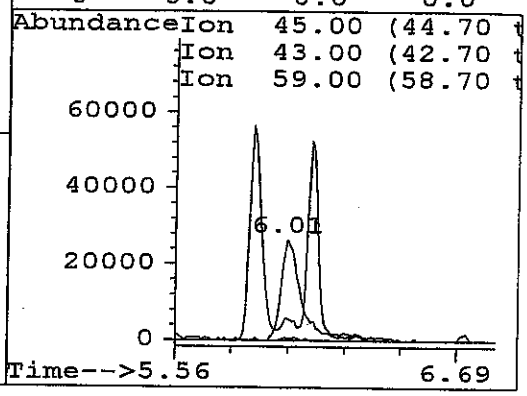


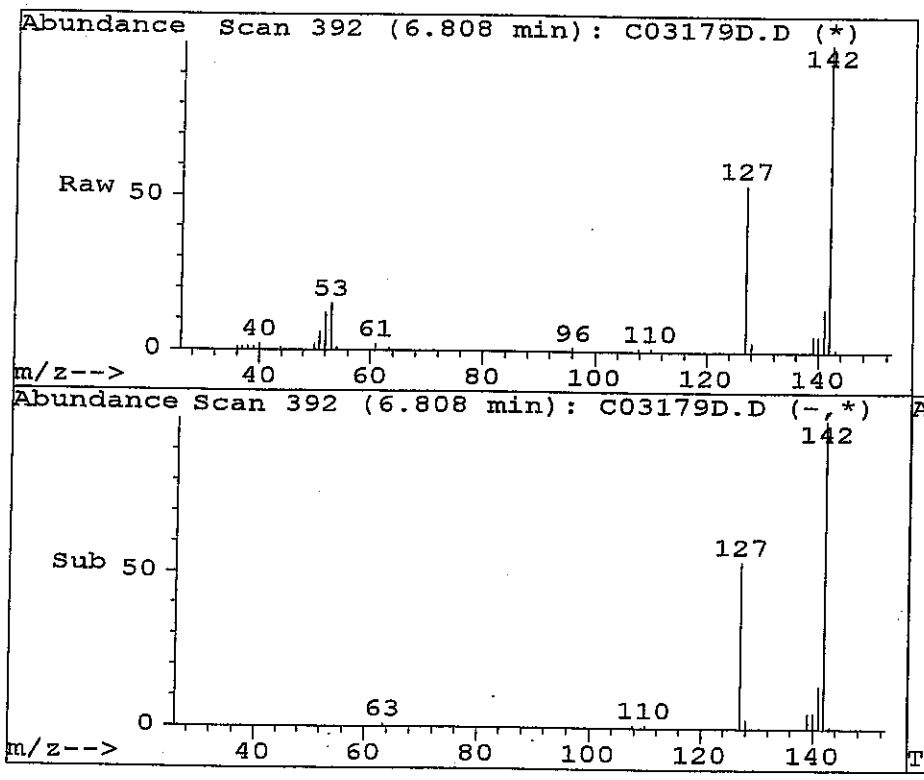


#13
2-propanol
Concen: 1.34 ppbV m
RT: 6.01 min Scan# 309
Delta R.T. -0.13 min
Lab File: C03179D.D
Acq: 17 Mar 109 11:35 am

Tgt Ion:45 Resp: 154437

Ion	Ratio	Lower	Upper
45	100		
43	21.7	17.7	26.5
59	2.2	0.0	0.0#
0	0.0	0.0	0.0

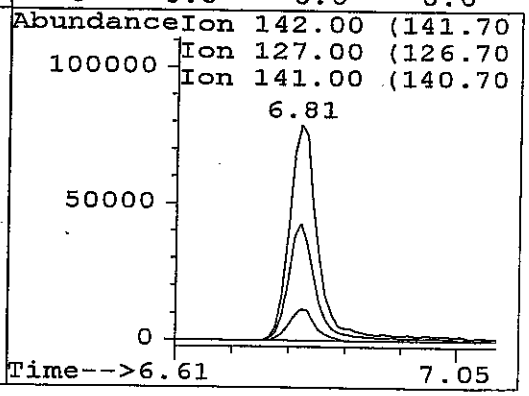


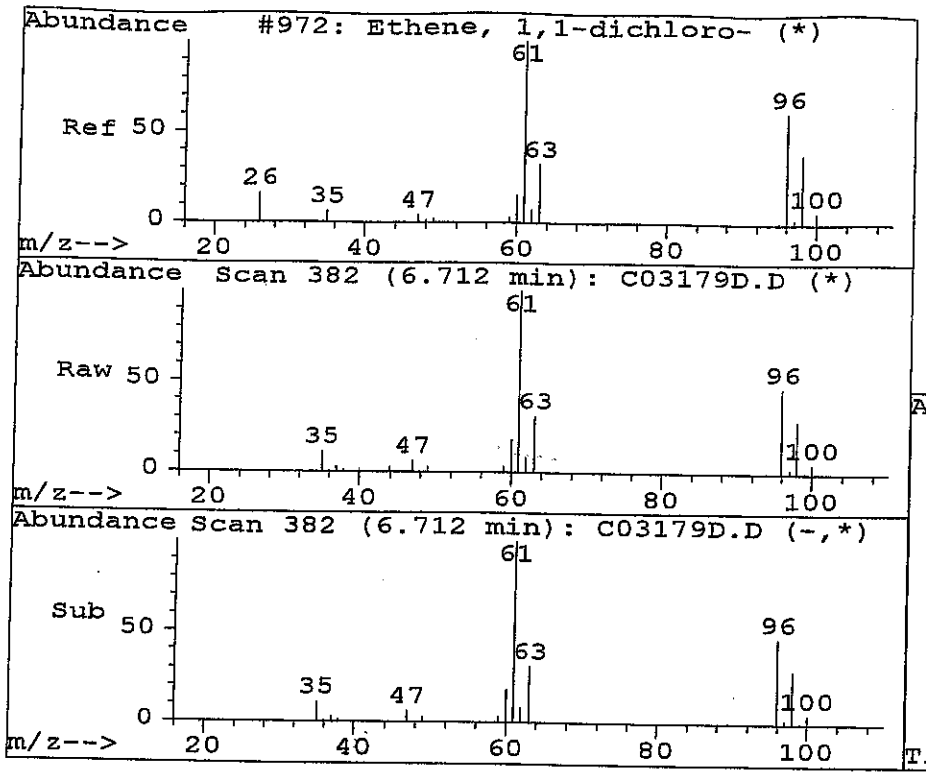


#14
Methyl iodide
Concen: 2.79 ppbV
RT: 6.81 min Scan# 392
Delta R.T. -0.18 min
Lab File: C03179D.D
Acq: 17 Mar 109 11:35 am

Tgt Ion:142 Resp: 247256

Ion	Ratio	Lower	Upper
142	100		
127	53.8	43.0	64.6
141	14.5	10.7	16.1
0	0.0	0.0	0.0

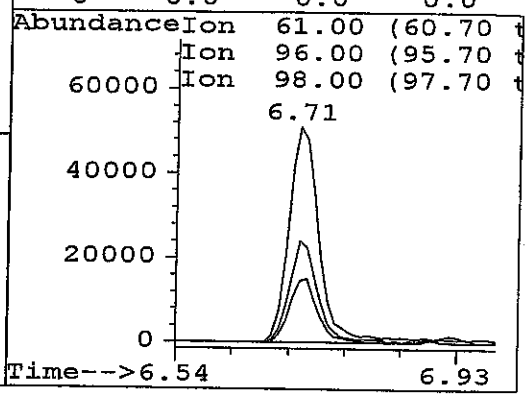


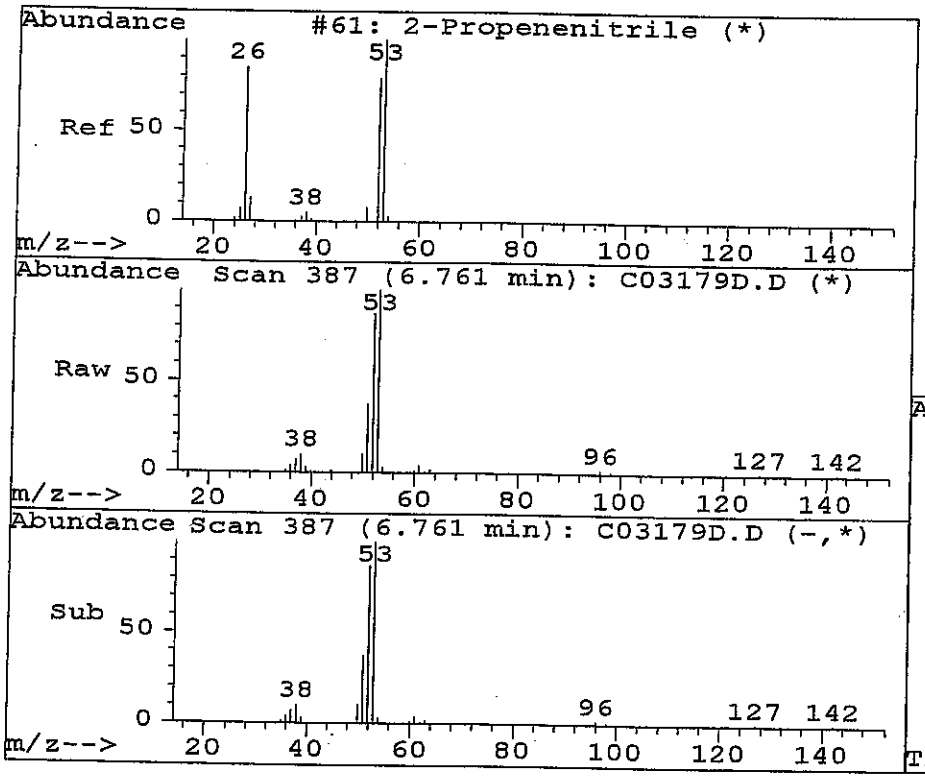


#15
1,1-Dichloroethene
Concen: 2.08 ppbV
RT: 6.71 min Scan# 382
Delta R.T. -0.18 min
Lab File: C03179D.D
Acq: 17 Mar 109 11:35 am

Tgt Ion:61 Resp: 150732

Ion	Ratio	Lower	Upper
61	100		
96	47.4	41.8	62.8
98	28.8	20.7	31.1
0	0.0	0.0	0.0

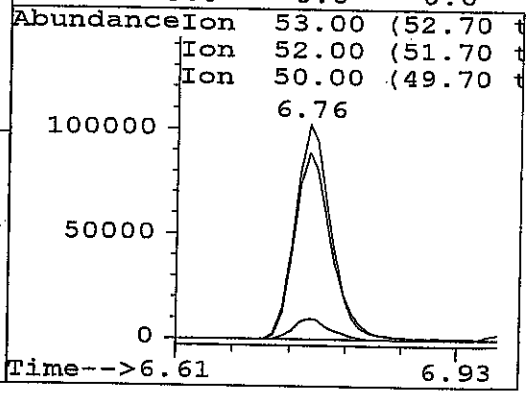


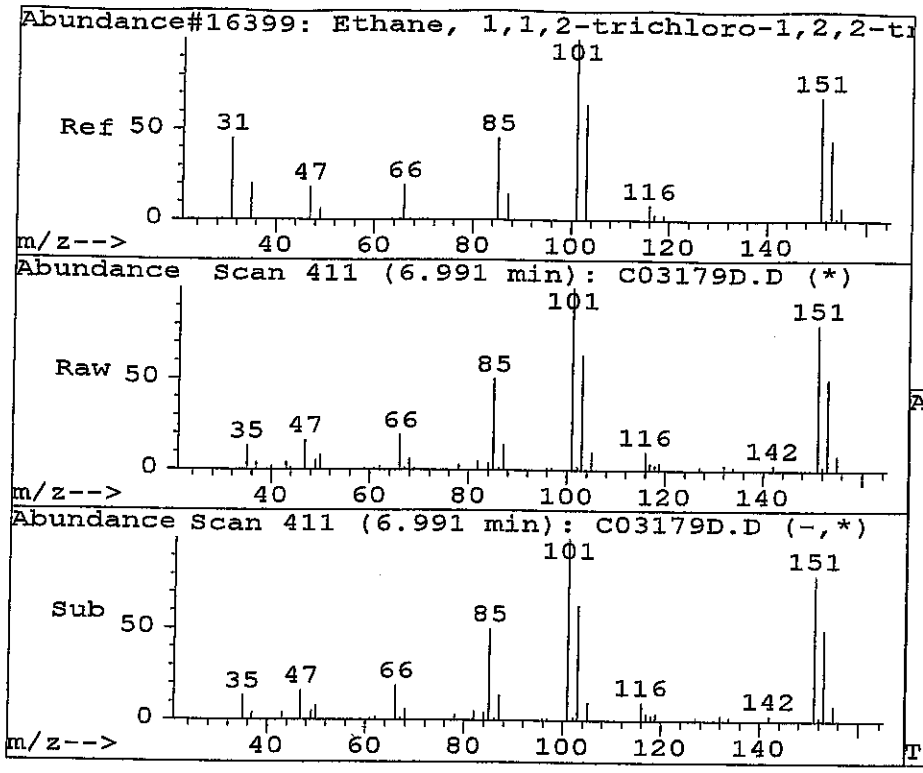


#16
Acrylonitrile
Concen: 5.82 ppbV
RT: 6.76 min Scan# 387
Delta R.T. -0.20 min
Lab File: C03179D.D
Acq: 17 Mar 109 11:35 am

Tgt Ion:53 Resp: 287296

Ion	Ratio	Lower	Upper
53	100		
52	86.9	66.8	100.2
50	9.7	6.7	10.1
0	0.0	0.0	0.0

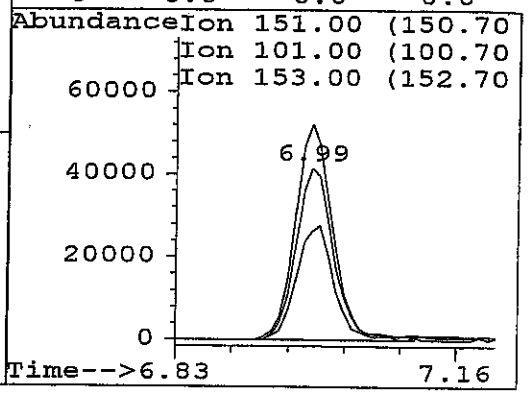


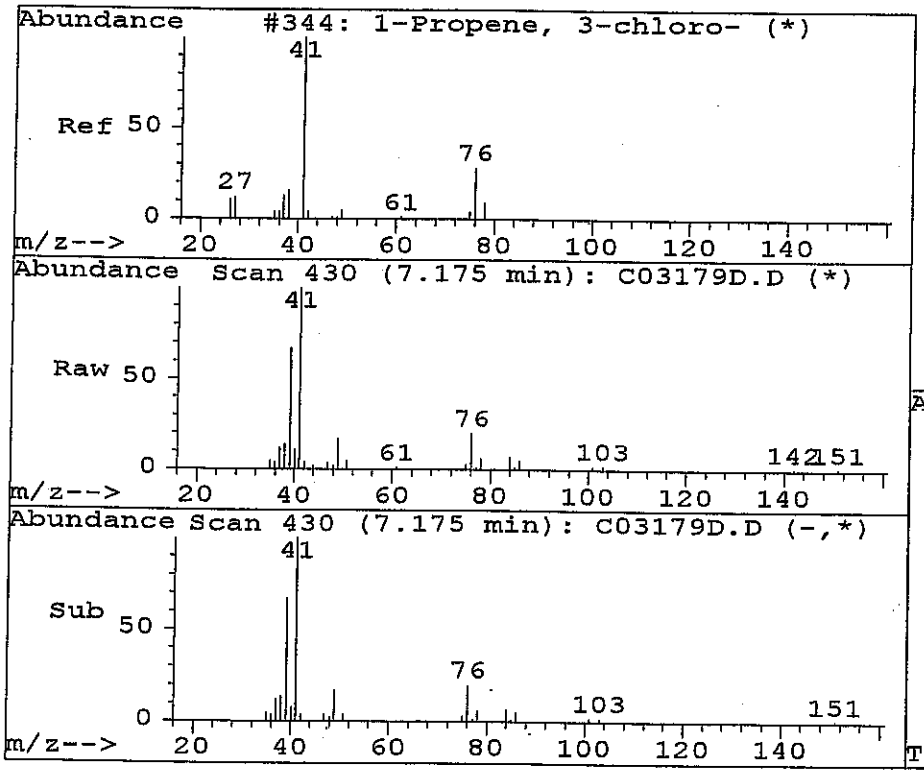


#17
Freon 113
Concen: 2.31 ppbV
RT: 6.99 min Scan# 411
Delta R.T. -0.17 min
Lab File: C03179D.D
Acq: 17 Mar 109 11:35 am

Tgt Ion:151 Resp: 132996

Ion	Ratio	Lower	Upper
151	100		
101	124.9	79.3	118.9#
153	62.6	47.1	70.7
0	0.0	0.0	0.0

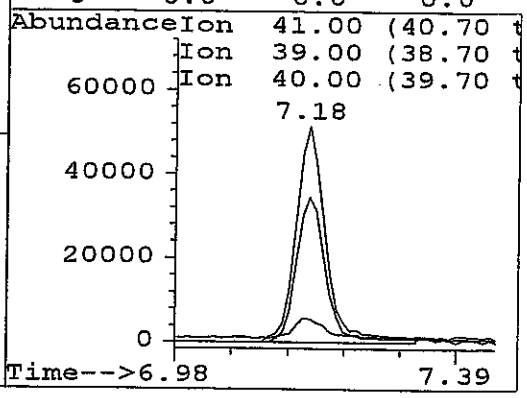


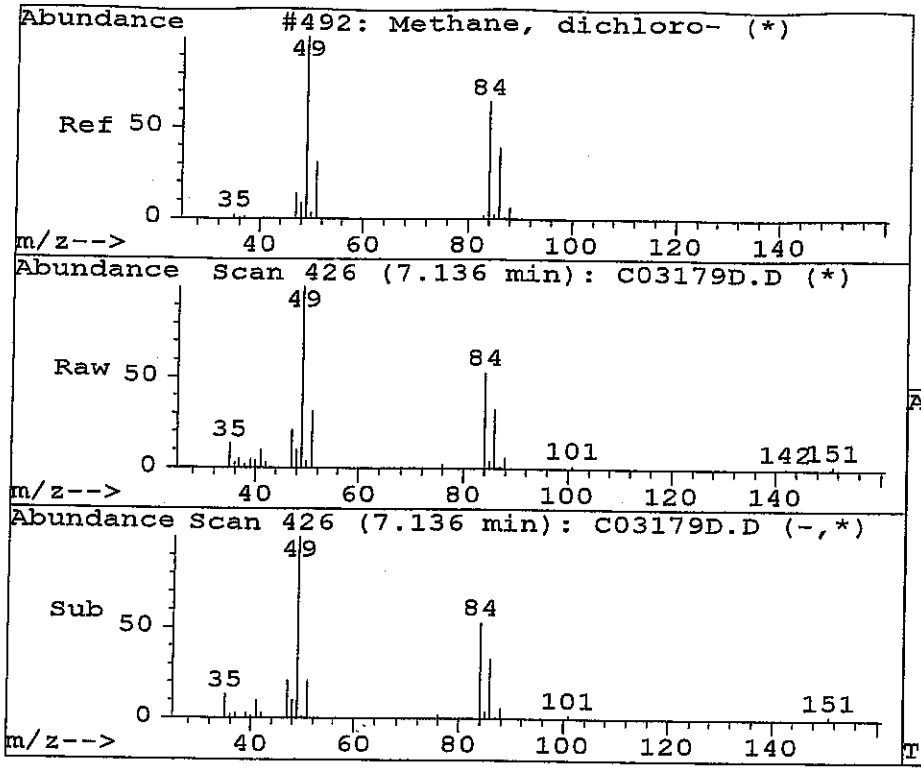


#18
Allyl chloride
Concen: 1.43 ppbV
RT: 7.18 min Scan# 430
Delta R.T. -0.17 min
Lab File: C03179D.D
Acq: 17 Mar 109 11:35 am

Tgt Ion:41 Resp: 155953

Ion	Ratio	Lower	Upper
41	100		
39	66.8	49.0	73.6
40	8.9	5.6	8.4#
0	0.0	0.0	0.0

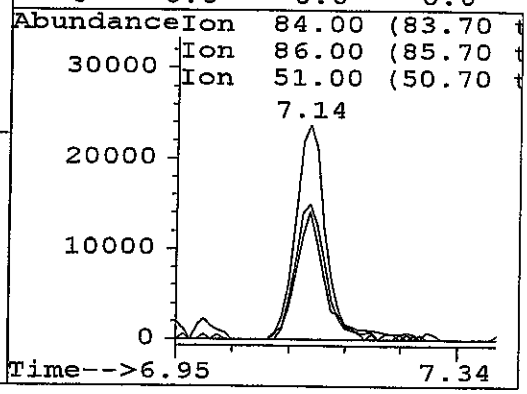


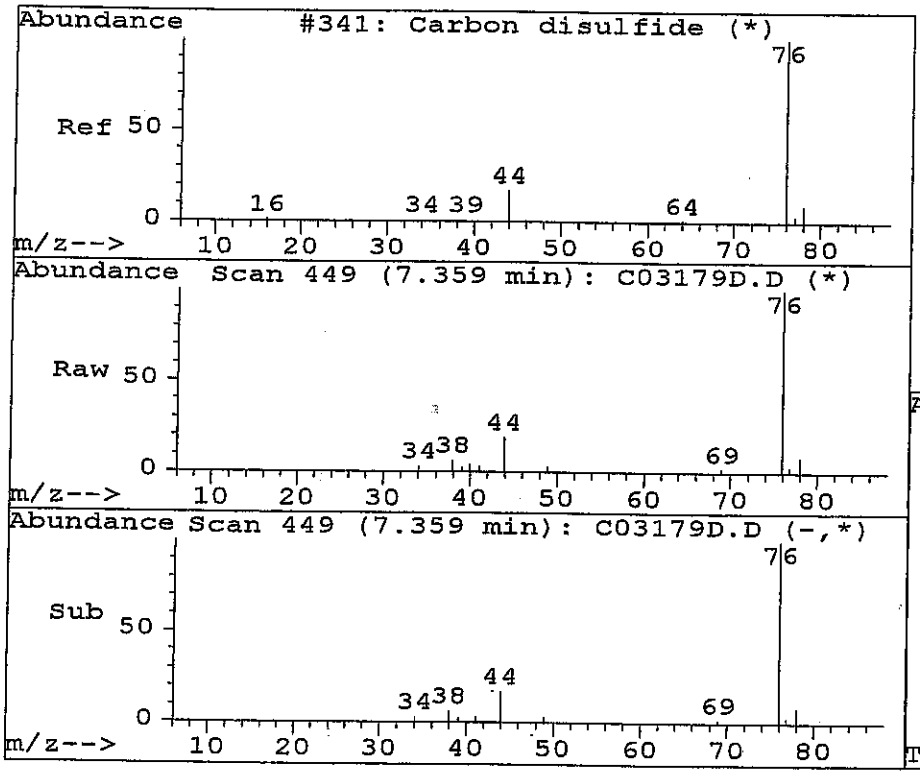


#19
Dichloromethane
Concen: 2.27 ppbV
RT: 7.14 min Scan# 426
Delta R.T. -0.17 min
Lab File: C03179D.D
Acq: 17 Mar 109 11:35 am

Tgt Ion:84 Resp: 71297

Ion	Ratio	Lower	Upper
84	100		
86	63.0	55.8	83.8
51	58.3	34.6	52.0#
0	0.0	0.0	0.0

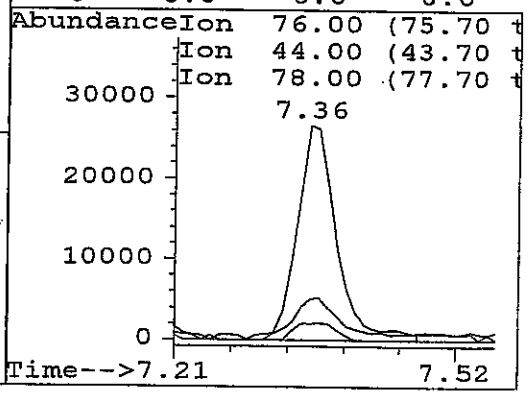


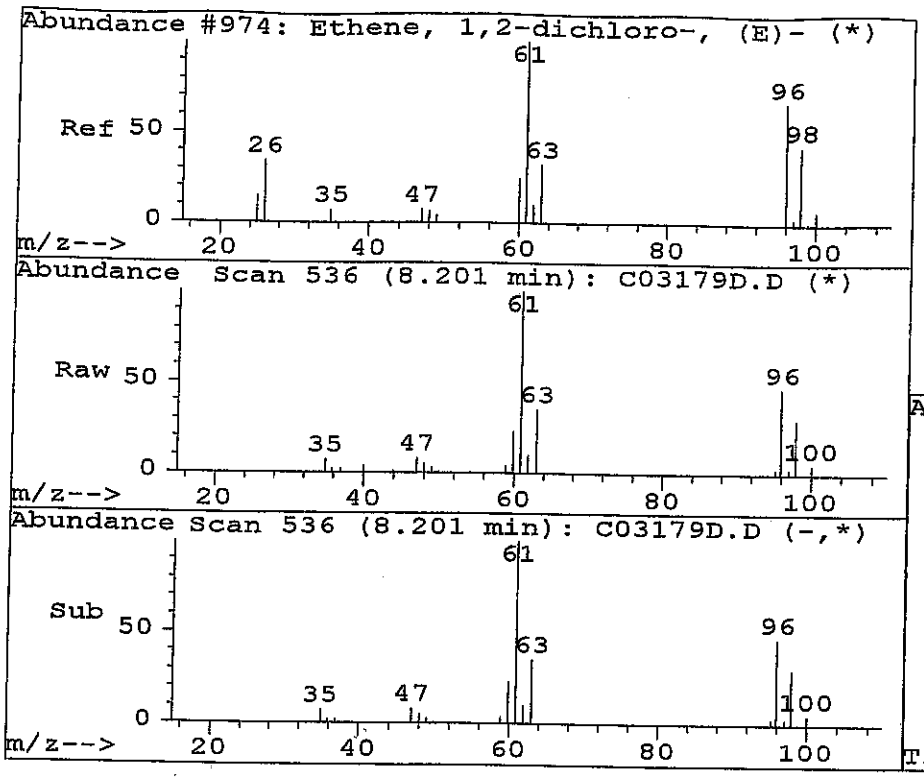


#20
Carbon disulfide
Concen: 1.44 ppbV
RT: 7.36 min Scan# 449
Delta R.T. -0.18 min
Lab File: C03179D.D
Acq: 17 Mar 109 11:35 am

Tgt Ion:76 Resp: 78232

Ion	Ratio	Lower	Upper
76	100		
44	16.5	14.1	21.1
78	7.7	0.0	0.0#
0	0.0	0.0	0.0

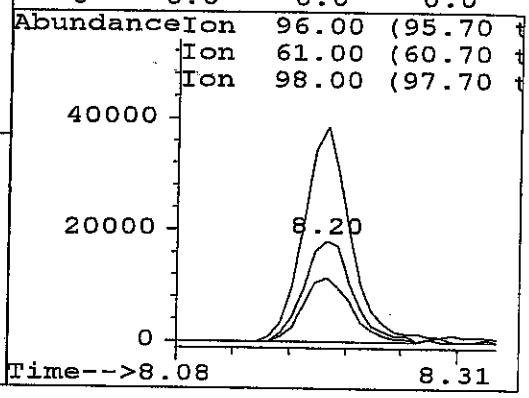


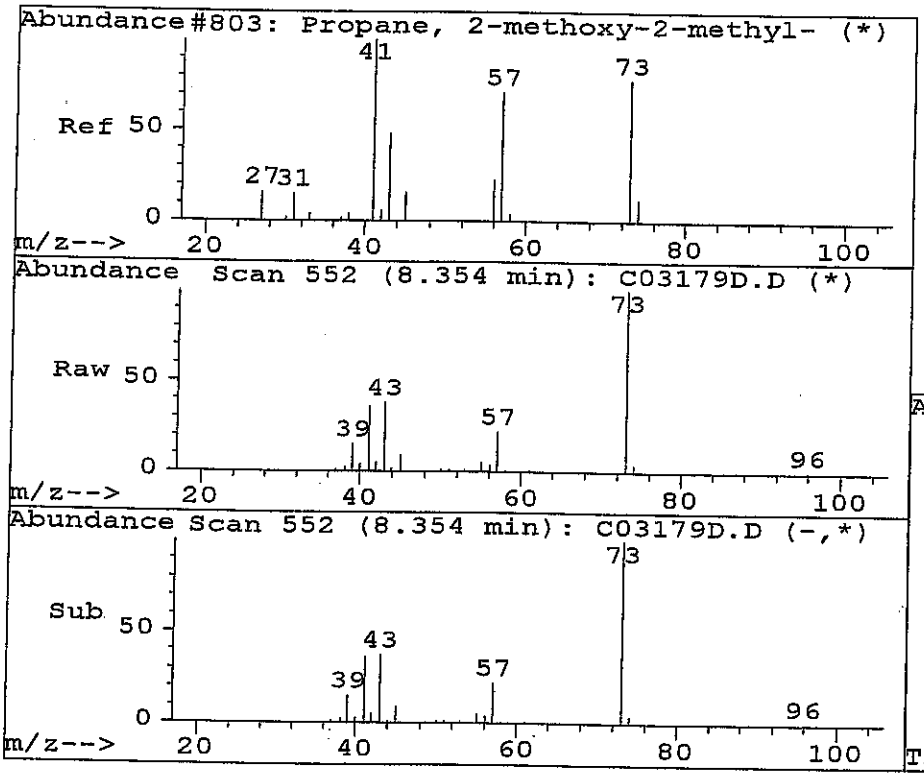


#21
trans-1,2-Dichloroethene
Concen: 1.27 ppbV
RT: 8.20 min Scan# 536
Delta R.T. -0.18 min
Lab File: C03179D.D
Acq: 17 Mar 109 11:35 am

Tgt Ion:96 Resp: 52404

Ion	Ratio	Lower	Upper
96	100		
61	208.7	138.6	207.8#
98	63.3	39.4	59.2#
0	0.0	0.0	0.0

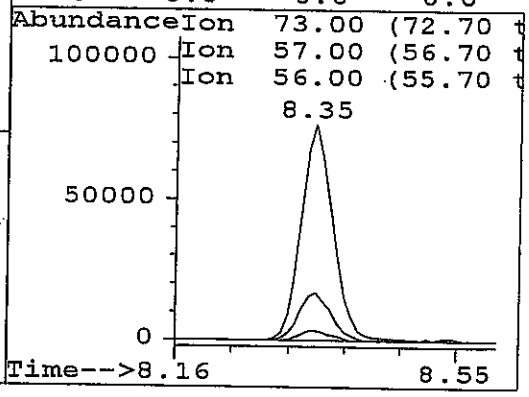


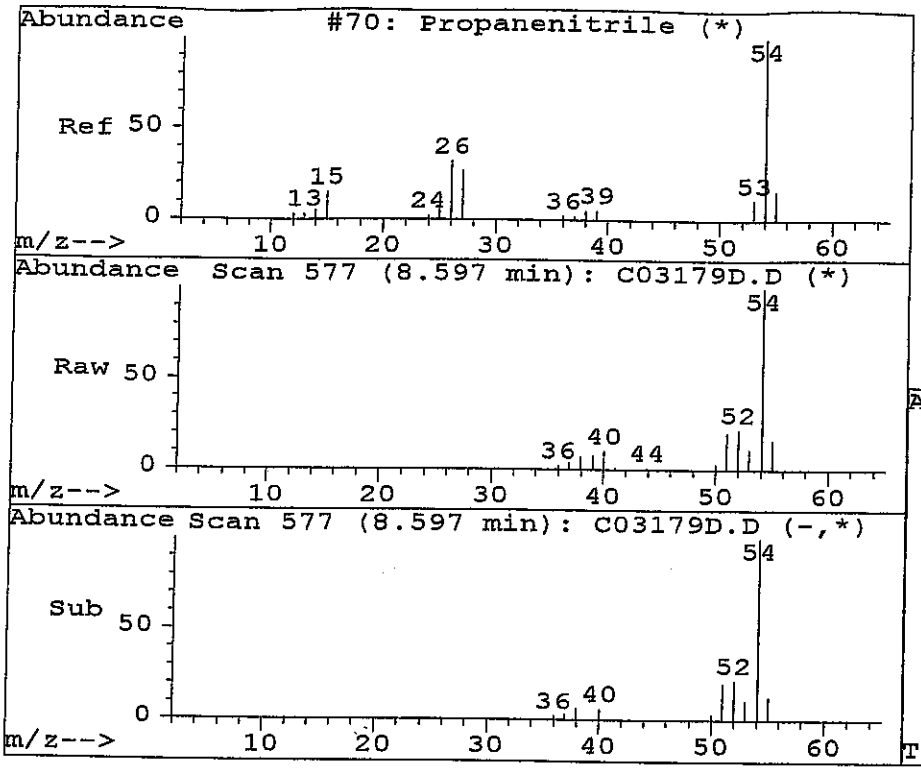


#22
Methyl tert butyl ether
Concen: 1.21 ppbV
RT: 8.35 min Scan# 552
Delta R.T. -0.19 min
Lab File: C03179D.D
Acq: 17 Mar 109 11:35 am

Tgt Ion:73 Resp: 233954

Ion	Ratio	Lower	Upper
73	100		
57	22.1	22.5	33.7#
56	4.4	0.0	0.0#
0	0.0	0.0	0.0

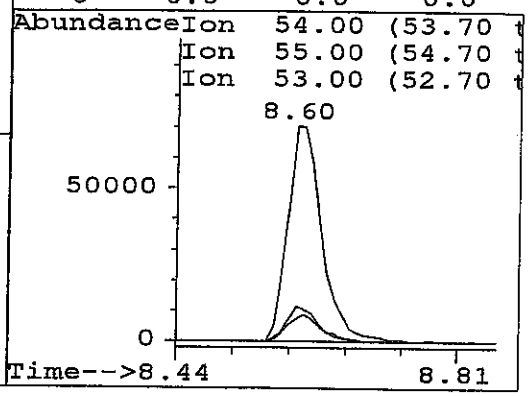


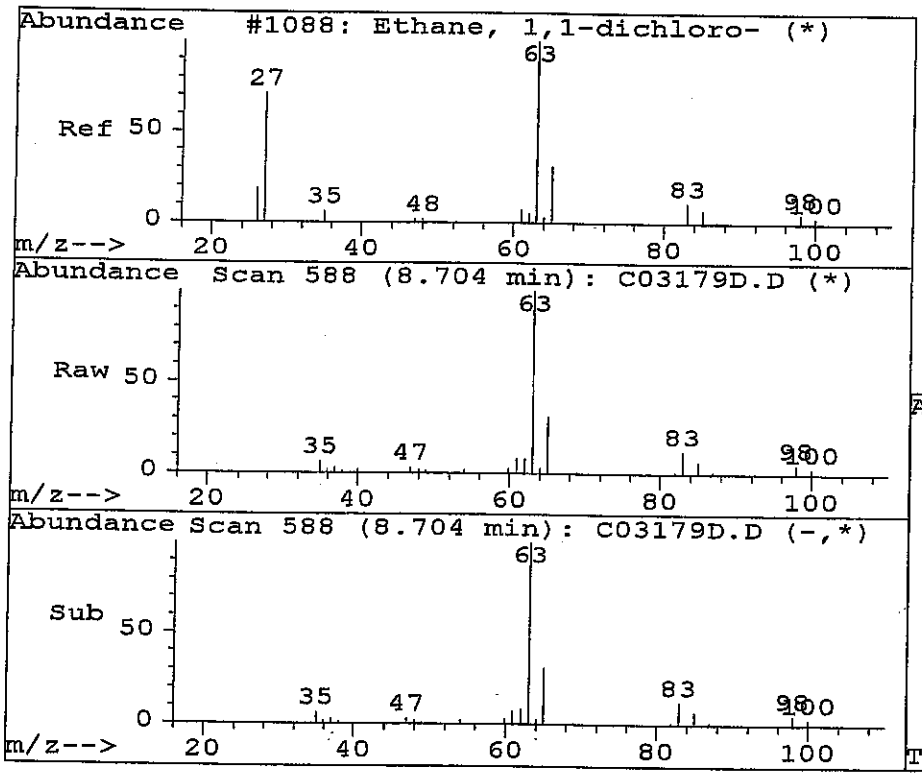


#23
Propionitrile
Concen: 3.51 ppbV
RT: 8.60 min Scan# 577
Delta R.T. -0.23 min
Lab File: C03179D.D
Acq: 17 Mar 109 11:35 am

Tgt Ion:54 Resp: 217366

Ion	Ratio	Lower	Upper
54	100		
55	16.4	12.6	18.8
53	10.7	8.9	13.3
0	0.0	0.0	0.0

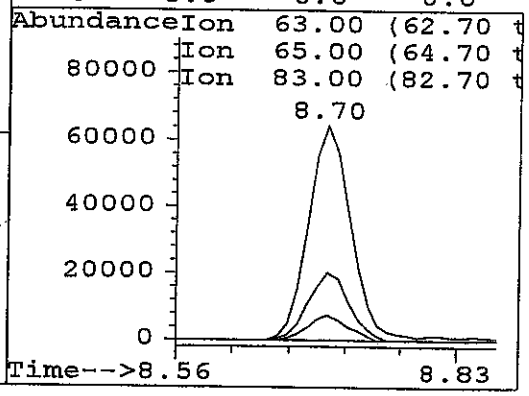


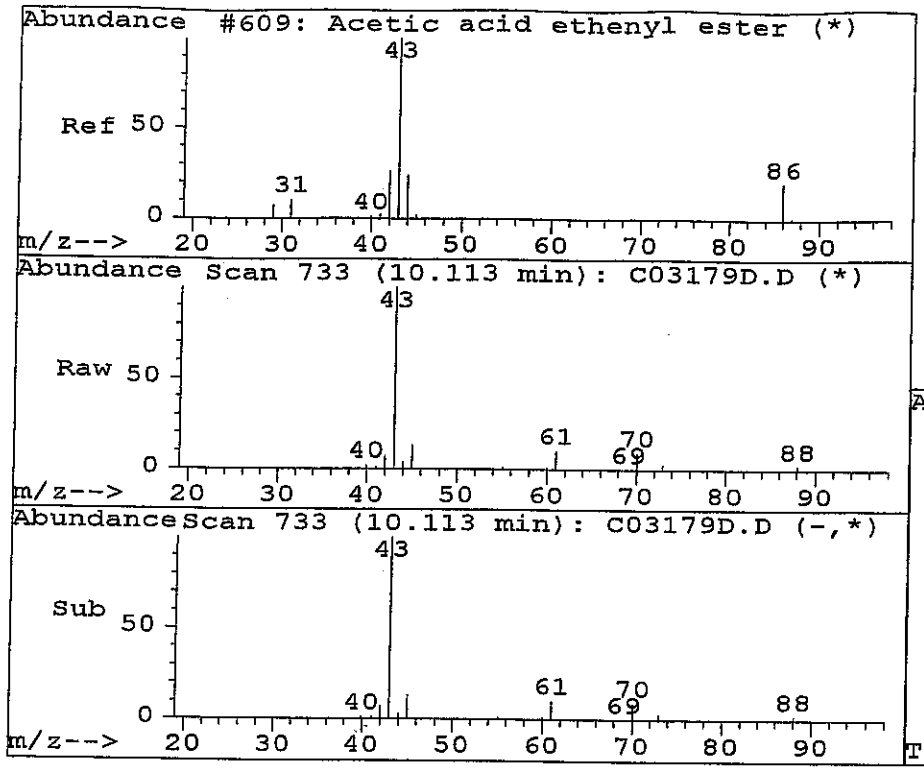


#24
1,1-Dichloroethane
Concen: 2.09 ppbV
RT: 8.70 min Scan# 588
Delta R.T. -0.20 min
Lab File: C03179D.D
Acq: 17 Mar 109 11:35 am

Tgt Ion:63 Resp: 183187

Ion	Ratio	Lower	Upper
63	100		
65	31.5	24.0	36.0
83	11.8	8.7	13.1
0	0.0	0.0	0.0

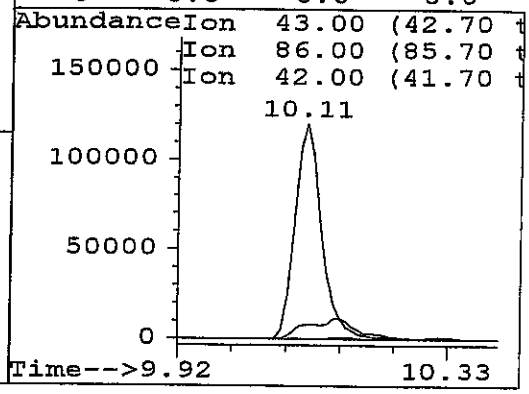


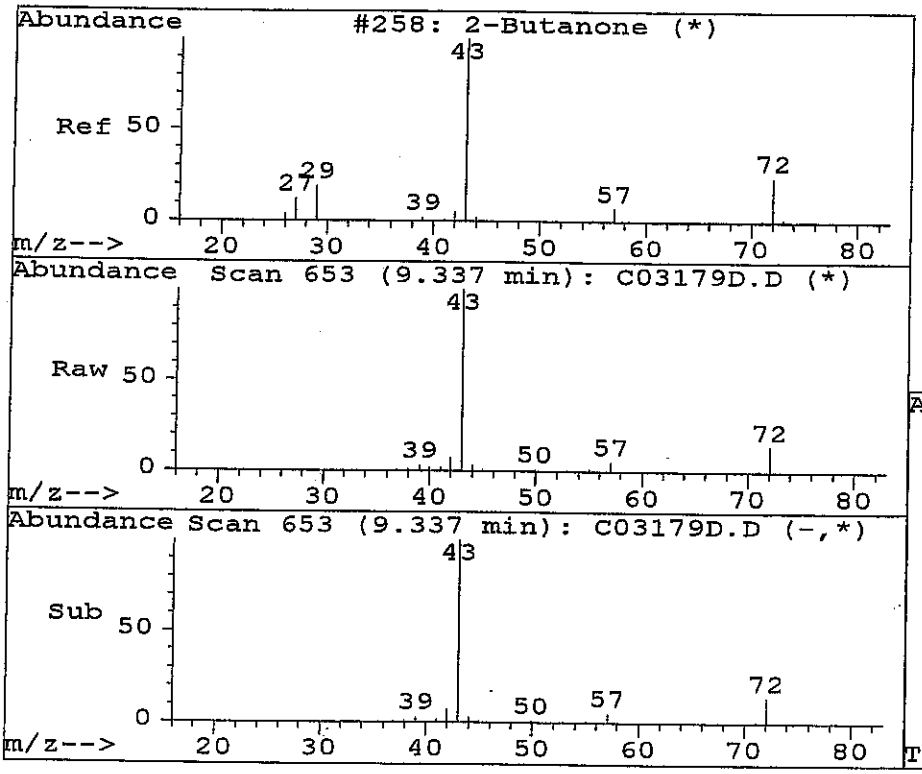


#25
Vinyl acetate
Concen: 1.33 ppbV
RT: 10.11 min Scan# 733
Delta R.T. -0.21 min
Lab File: C03179D.D
Acq: 17 Mar 109 11:35 am

Tgt Ion:43 Resp: 338492

Ion	Ratio	Lower	Upper
43	100		
86	0.0	0.0	0.0
42	6.5	5.4	8.0
0	0.0	0.0	0.0

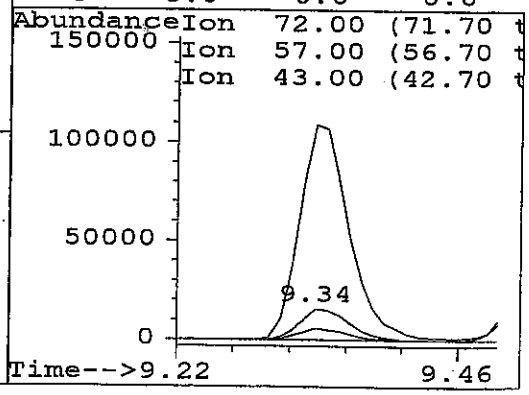


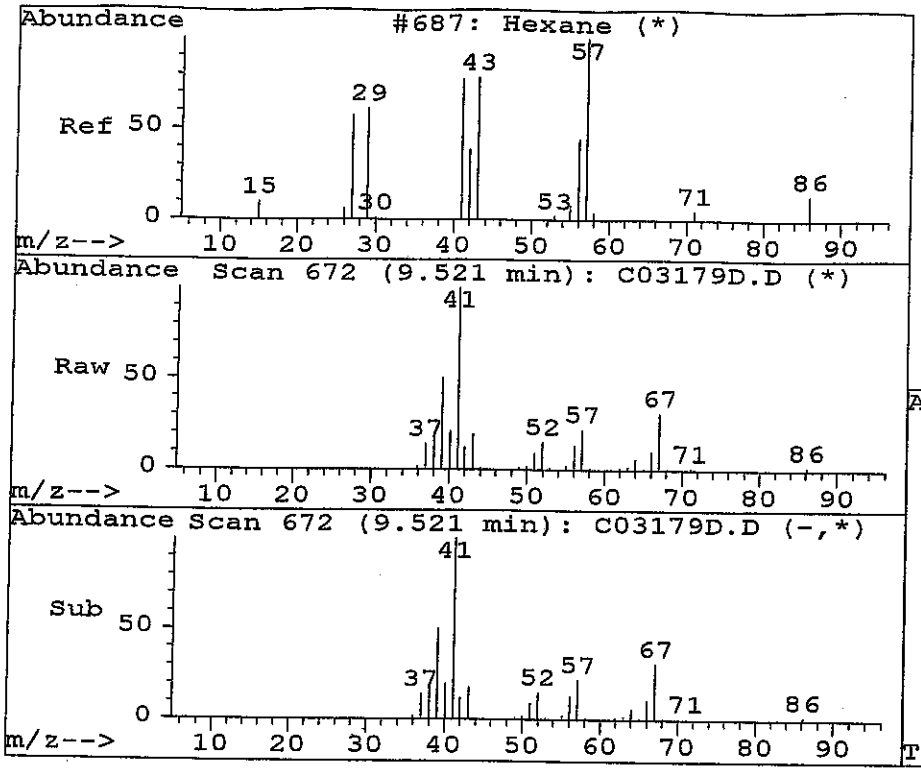


#26
2-Butanone
Concen: 1.35 ppbV
RT: 9.34 min Scan# 653
Delta R.T. -0.20 min
Lab File: C03179D.D
Acq: 17 Mar 109 11:35 am

Tgt Ion:72 Resp: 45058

Ion	Ratio	Lower	Upper
72	100		
57	37.9	25.3	37.9
43	690.5	425.0	637.6#
0	0.0	0.0	0.0

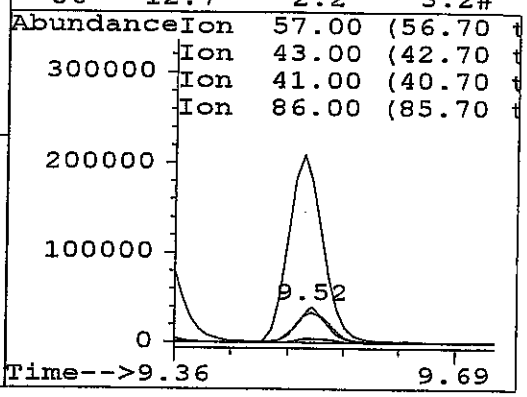


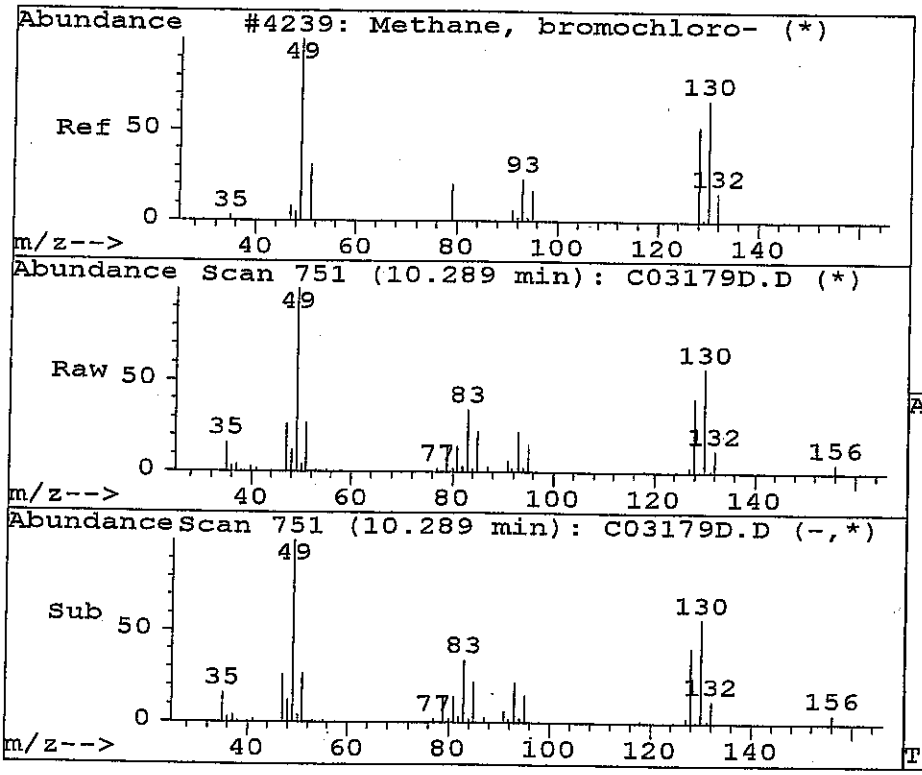


#27
Hexane
Concen: 1.09 ppbV
RT: 9.52 min Scan# 672
Delta R.T. -0.19 min
Lab File: C03179D.D
Acq: 17 Mar 109 11:35 am

Tgt Ion:57 Resp: 106477

Ion	Ratio	Lower	Upper
57	100		
43	92.4	78.0	117.0
41	573.9	399.1	598.7
86	12.7	2.2	3.2#

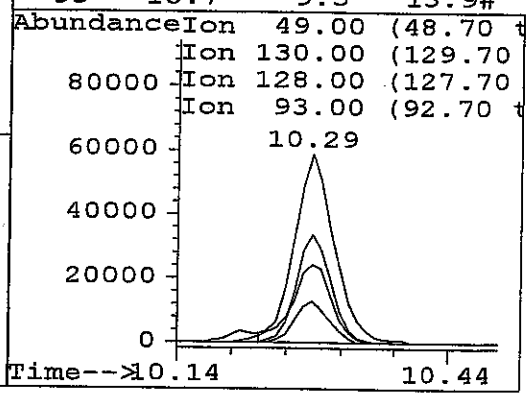


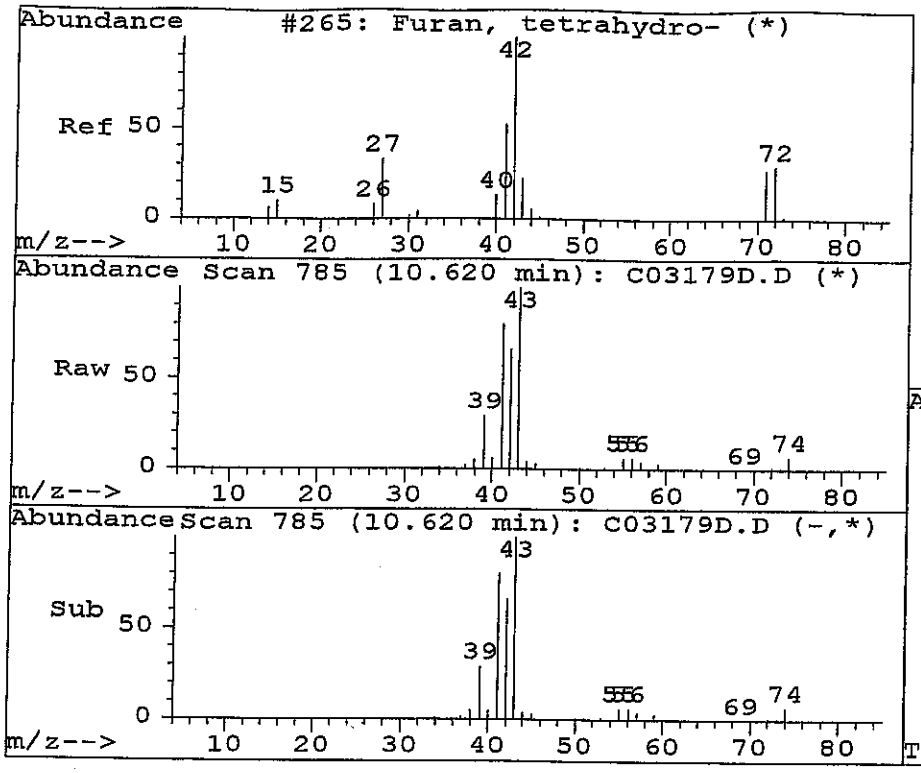


#28
Bromochloromethane
Concen: 1.37 ppbV
RT: 10.29 min Scan# 751
Delta R.T. -0.21 min
Lab File: C03179D.D
Acq: 17 Mar 109 11:35 am

Tgt Ion:49 Resp: 177279

Ion	Ratio	Lower	Upper
49	100		
130	49.8	33.3	49.9
128	41.8	26.2	39.2#
93	18.7	9.3	13.9#

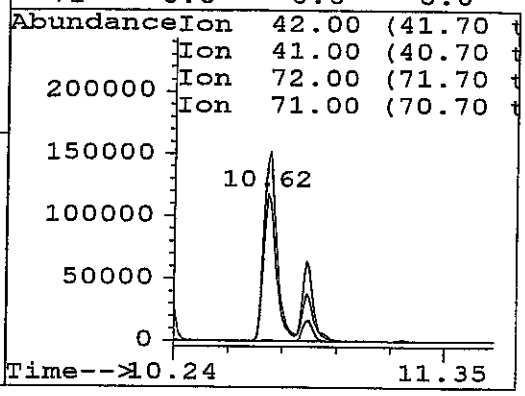


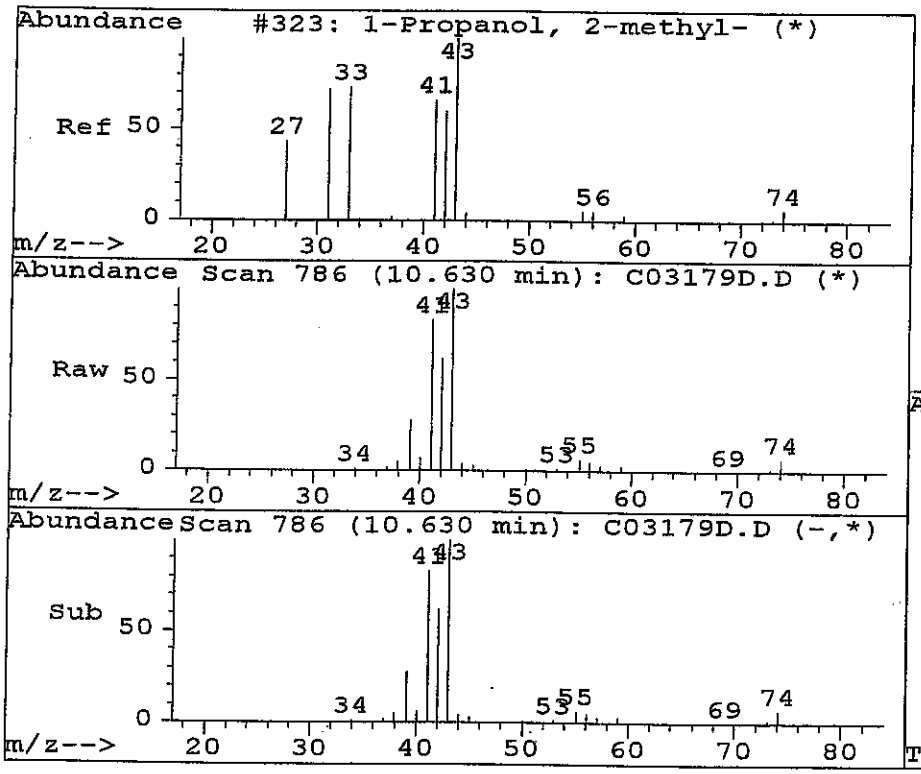


#29
Tetrahydrofuran
Concen: 1.32 ppbV m
RT: 10.62 min Scan# 785
Delta R.T. -0.30 min
Lab File: C03179D.D
Acq: 17 Mar 109 11:35 am

Tgt Ion:42 Resp: 617718

Ion	Ratio	Lower	Upper
42	100		
41	121.5	111.8	167.8
72	0.8	0.0	0.0#
71	0.0	0.0	0.0

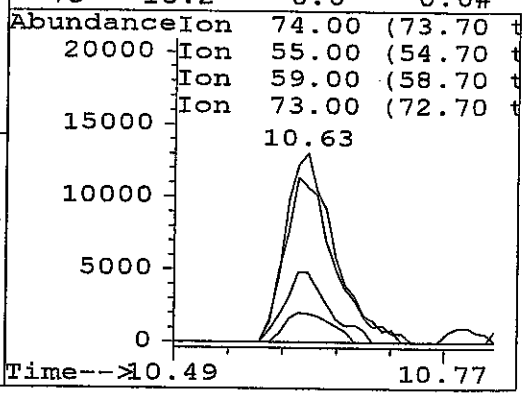


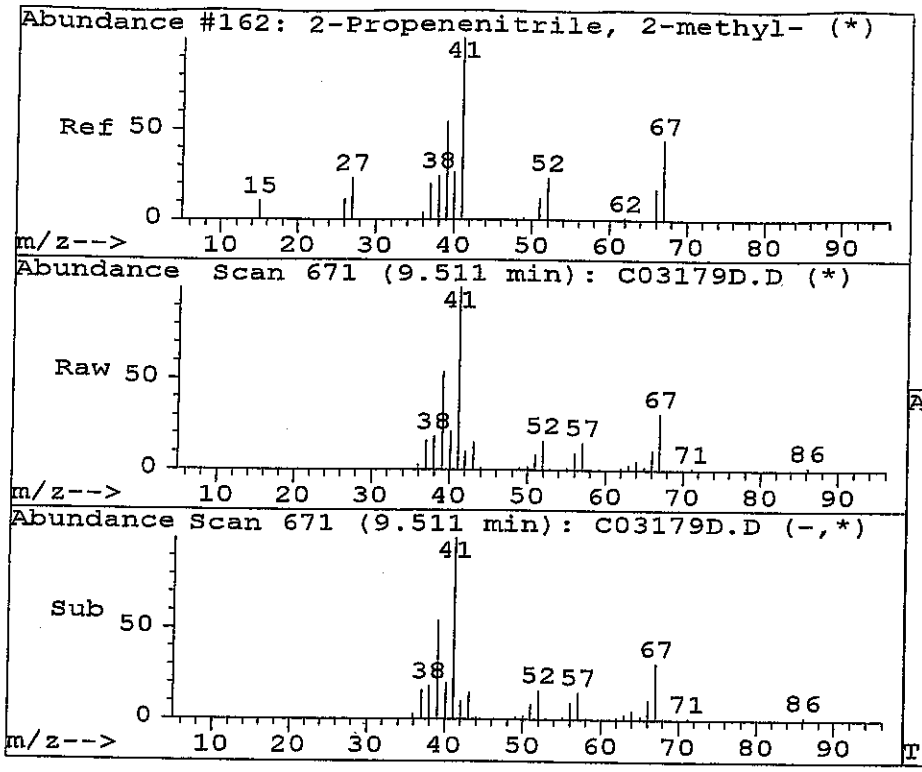


#30
Isobutyl alcohol
Concen: 3.69 ppbV
RT: 10.63 min Scan# 786
Delta R.T. -0.29 min
Lab File: C03179D.D
Acq: 17 Mar 109 11:35 am

Tgt Ion:74 Resp: 45653

Ion	Ratio	Lower	Upper
74	100		
55	81.9	63.6	95.4
59	36.8	43.4	65.0#
73	15.2	0.0	0.0#

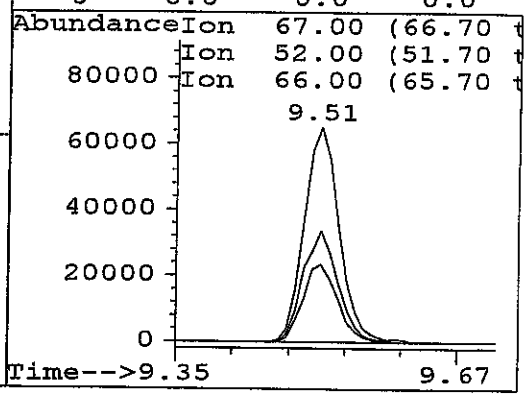


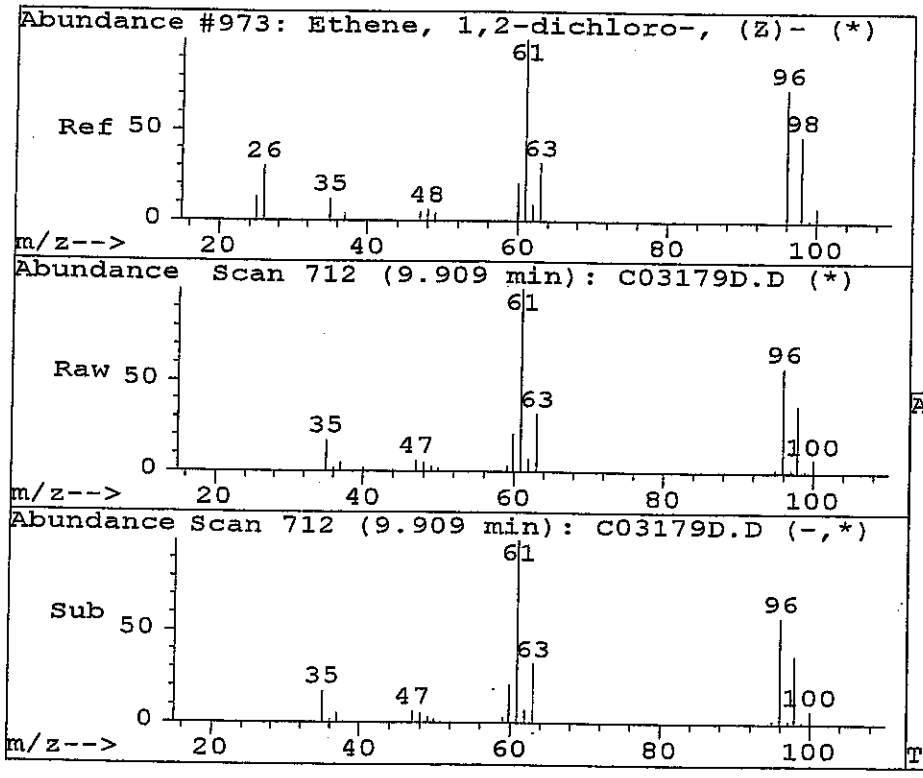


#31
Methacrylonitrile
Concen: 4.98 ppbV
RT: 9.51 min Scan# 671
Delta R.T. -0.23 min
Lab File: C03179D.D
Acq: 17 Mar 109 11:35 am

Tgt Ion:67 Resp: 179608

Ion	Ratio	Lower	Upper
67	100		
52	51.4	46.5	69.7
66	36.0	27.4	41.2
0	0.0	0.0	0.0

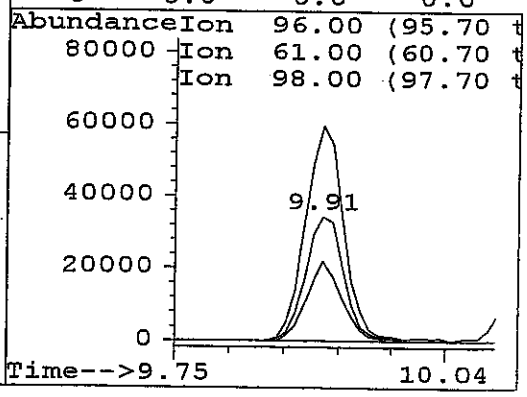


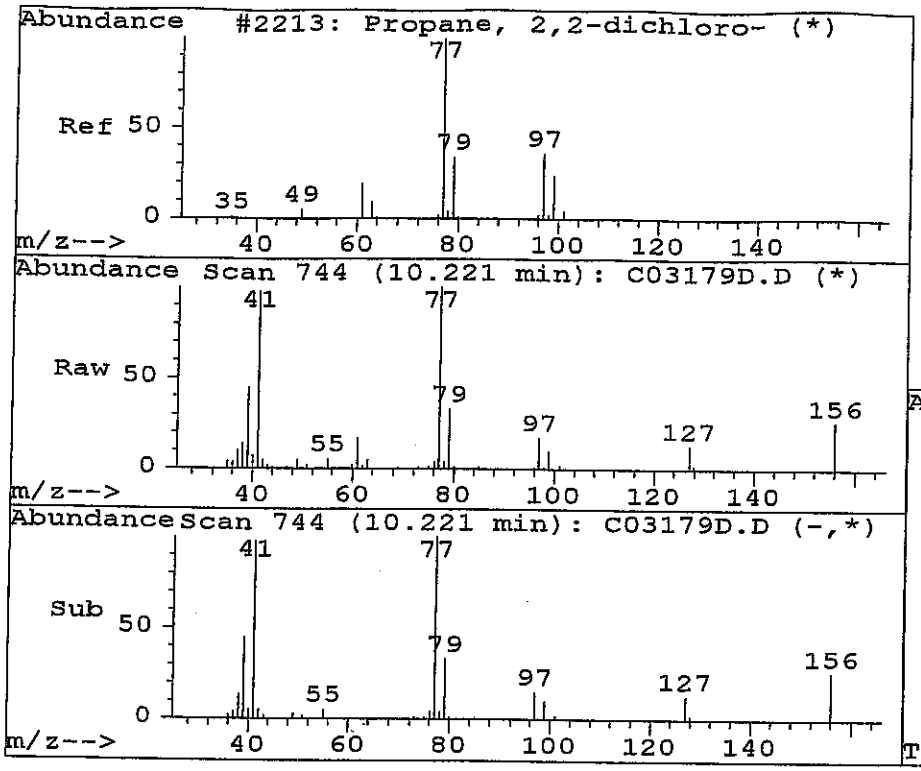


#32
cis-1,2-Dichloroethene
Concen: 2.09 ppbV
RT: 9.91 min Scan# 712
Delta R.T. -0.20 min
Lab File: C03179D.D
Acq: 17 Mar 109 11:35 am

Tgt Ion:96 Resp: 95703

Ion	Ratio	Lower	Upper
96	100		
61	172.8	145.3	217.9
98	63.9	43.9	65.9
0	0.0	0.0	0.0

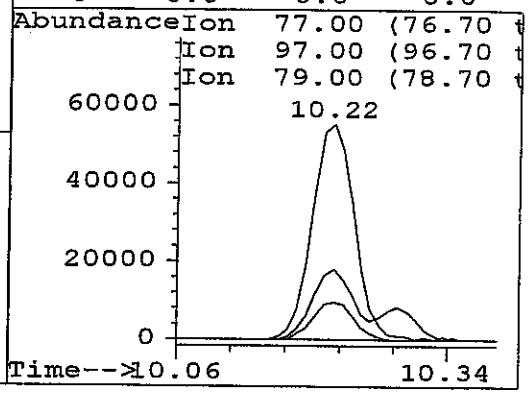


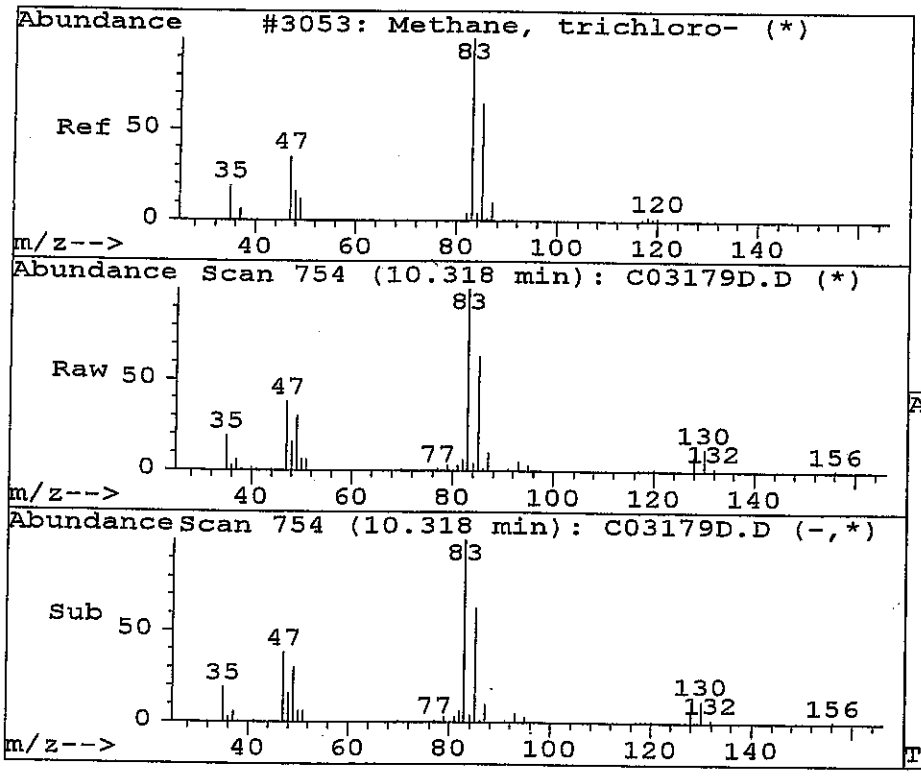


#33
2,2-Dichloropropane
Concen: 1.37 ppbV
RT: 10.22 min Scan# 744
Delta R.T. -0.20 min
Lab File: C03179D.D
Acq: 17 Mar 109 11:35 am

Tgt Ion:77 Resp: 171804

Ion	Ratio	Lower	Upper
77	100		
97	17.3	15.0	22.4
79	27.8	20.7	31.1
0	0.0	0.0	0.0

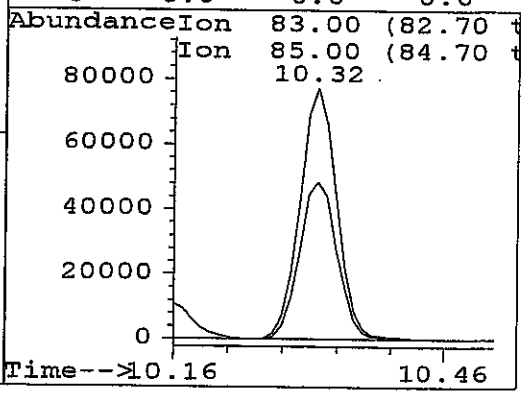


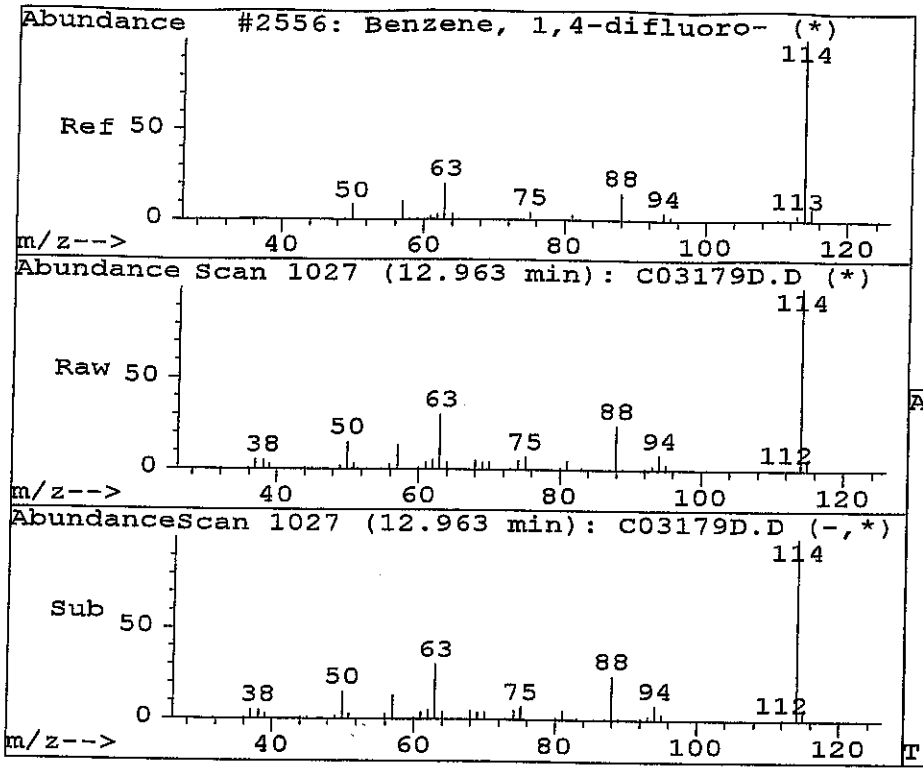


#34
Chloroform
Concen: 2.02 ppbV
RT: 10.32 min Scan# 754
Delta R.T. -0.21 min
Lab File: C03179D.D
Acq: 17 Mar 109 11:35 am

Tgt Ion:83 Resp: 213353

Ion	Ratio	Lower	Upper
83	100		
85	62.8	55.7	83.5
0	0.0	0.0	0.0
0	0.0	0.0	0.0

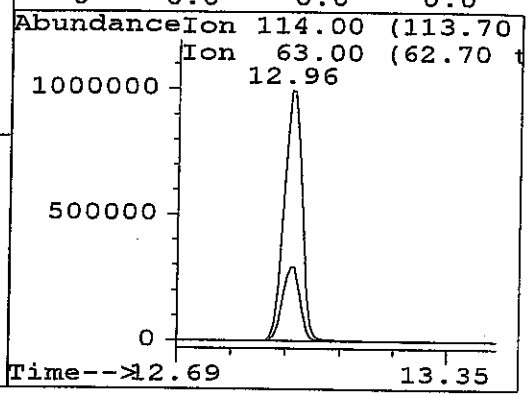


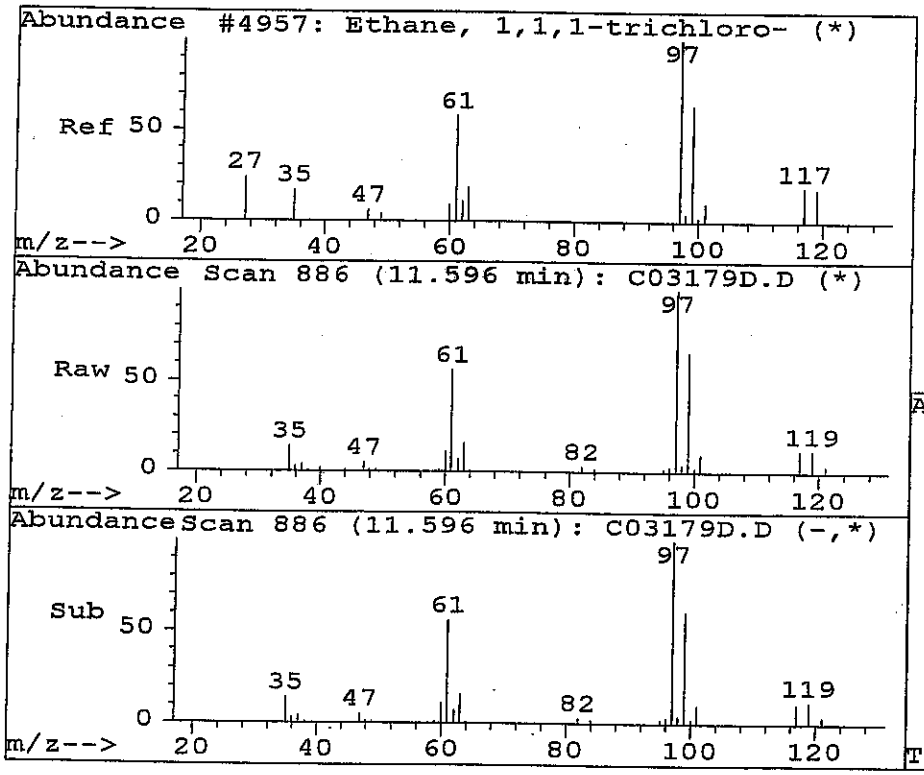


#35
1,4-Difluorobenzene
Concen: 20.00 ppbV
RT: 12.96 min Scan# 1027
Delta R.T. -0.21 min
Lab File: C03179D.D
Acq: 17 Mar 109 11:35 am

Tgt Ion:114 Resp: 3020264

Ion	Ratio	Lower	Upper
114	100		
63	29.5	22.4	37.4
0	0.0	0.0	0.0
0	0.0	0.0	0.0

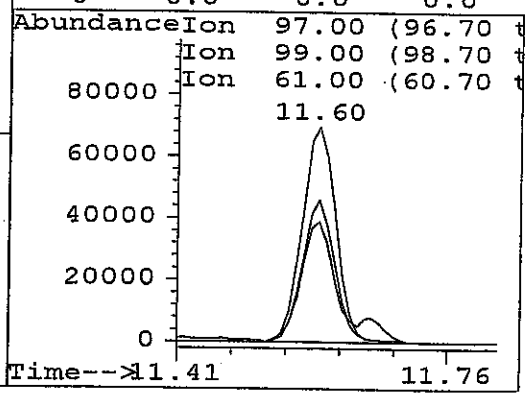


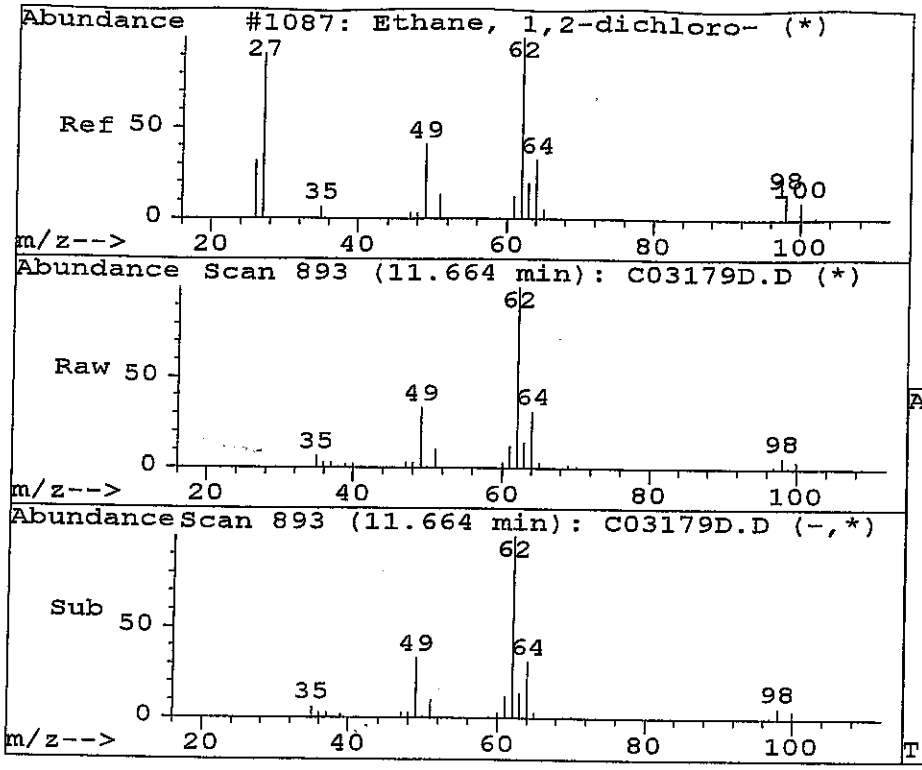


#36
1,1,1-Trichloroethane
Concen: 1.97 ppbV
RT: 11.60 min Scan# 886
Delta R.T. -0.20 min
Lab File: C03179D.D
Acq: 17 Mar 109 11:35 am

Tgt Ion:97 Resp: 210683

Ion	Ratio	Lower	Upper
97	100		
99	65.5	49.8	74.8
61	55.7	29.9	44.9#
0	0.0	0.0	0.0

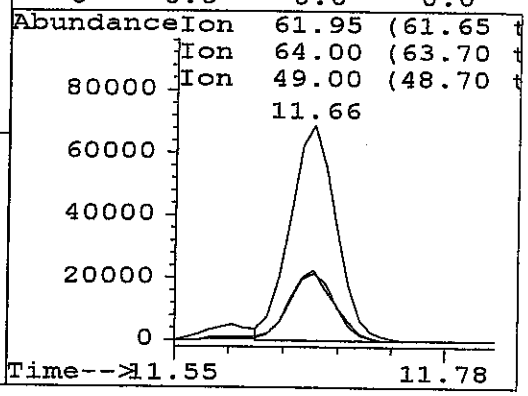


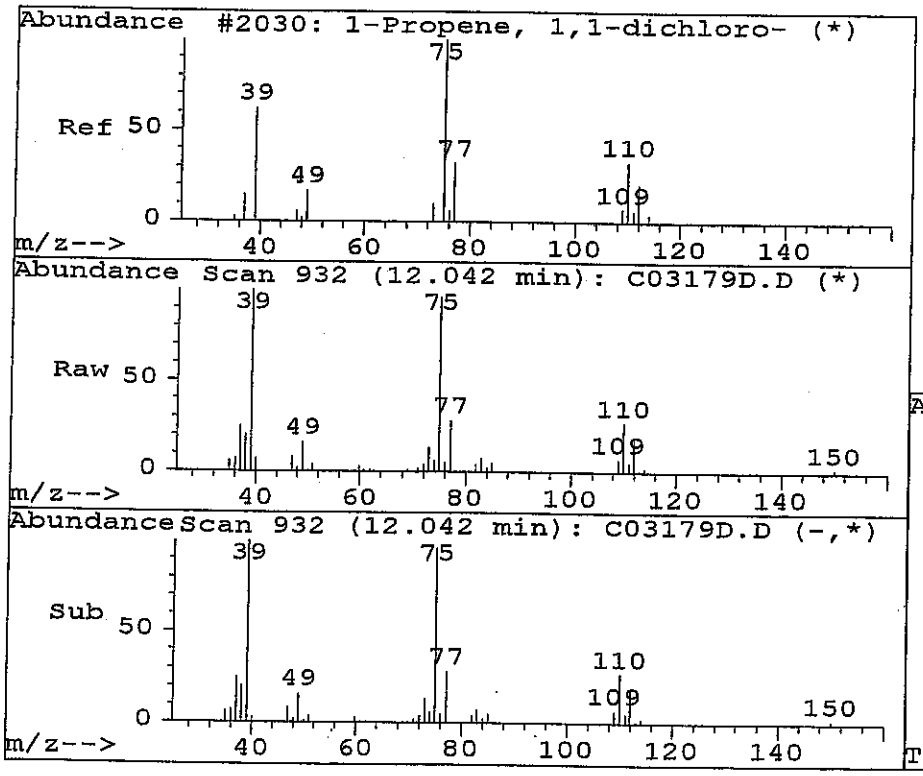


#37
1,2-Dichloroethane
Concen: 1.85 ppbV
RT: 11.66 min Scan# 893
Delta R.T. -0.21 min
Lab File: C03179D.D
Acq: 17 Mar 109 11:35 am

Tgt Ion:61.95 Resp: 187037

Ion	Ratio	Lower	Upper
62	100		
64	31.6	24.3	36.5
49	32.8	22.4	33.6
0	0.0	0.0	0.0

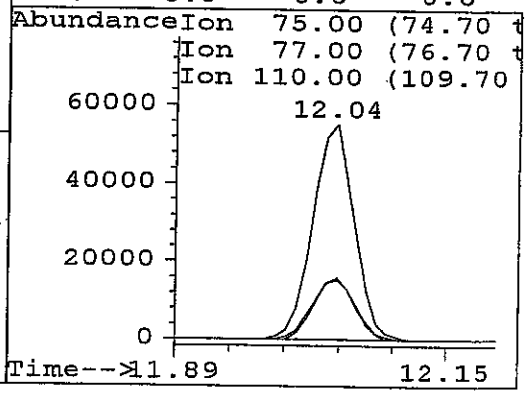


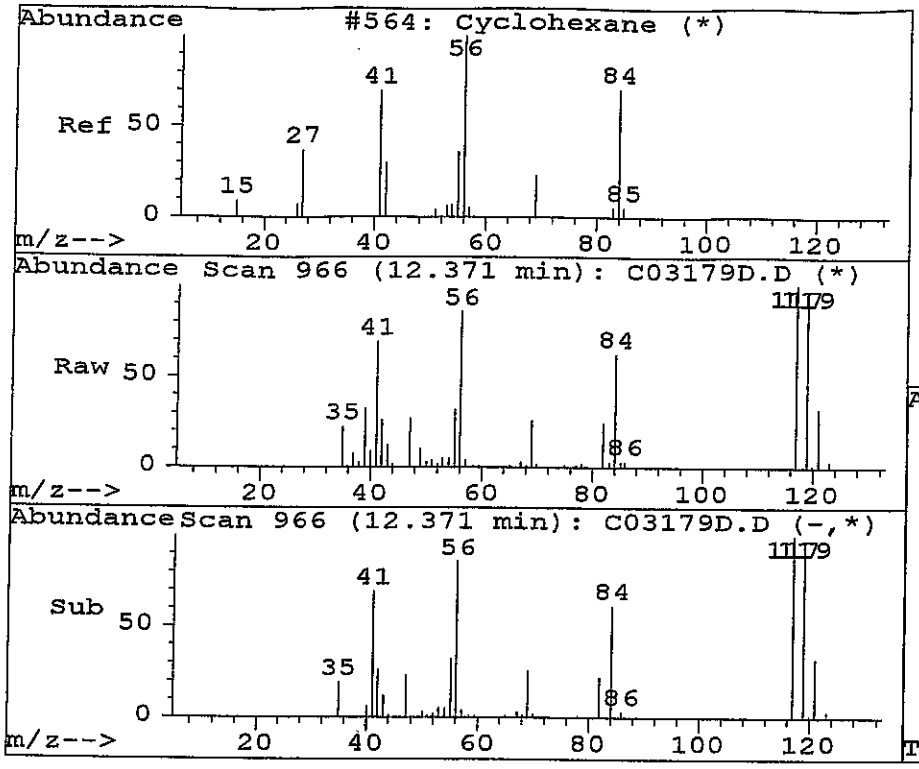


#38
1,1-Dichloropropene
Concen: 1.28 ppbV
RT: 12.04 min Scan# 932
Delta R.T. -0.20 min
Lab File: C03179D.D
Acq: 17 Mar 109 11:35 am

Tgt Ion:75 Resp: 151371

Ion	Ratio	Lower	Upper
75	100		
77	28.7	25.0	37.4
110	27.8	21.3	31.9
0	0.0	0.0	0.0

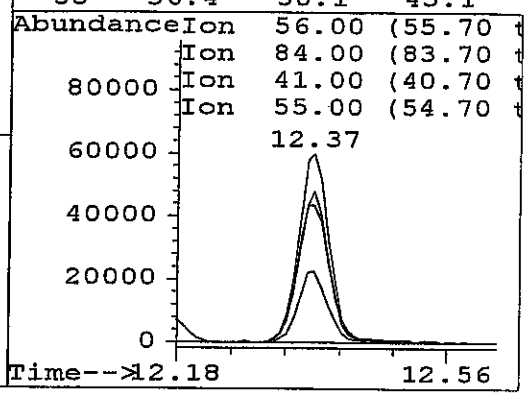


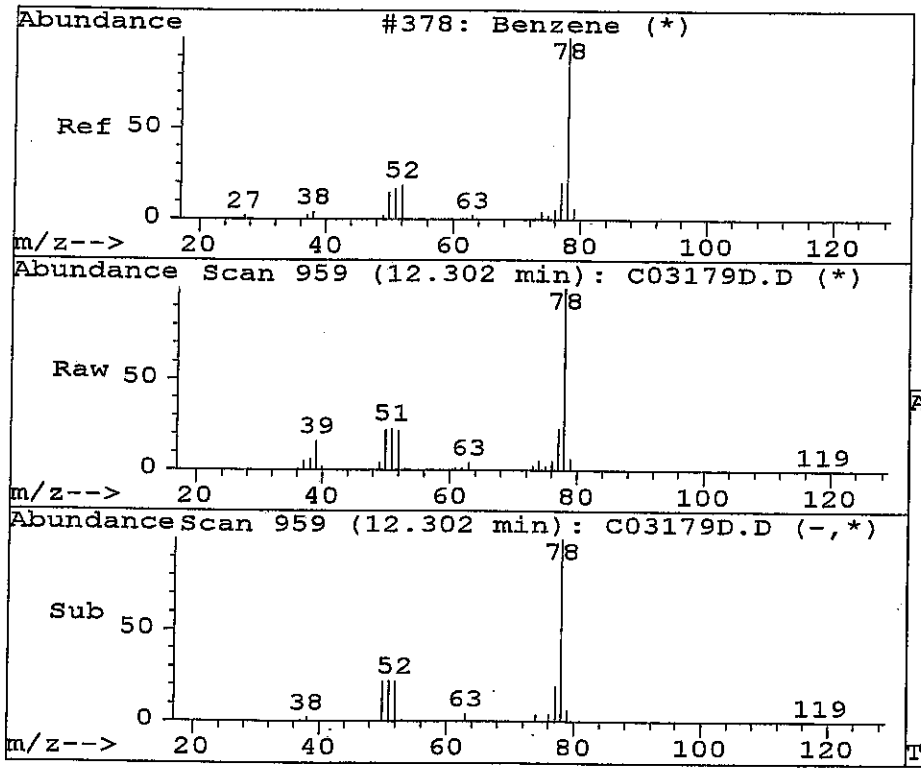


#39
Cyclohexane
Concen: 1.34 ppbV
RT: 12.37 min Scan# 966
Delta R.T. -0.18 min
Lab File: C03179D.D
Acq: 17 Mar 109 11:35 am

Tgt Ion:56 Resp: 182159

Ion	Ratio	Lower	Upper
56	100		
84	76.1	60.3	90.5
41	78.3	65.4	98.0
55	36.4	30.1	45.1

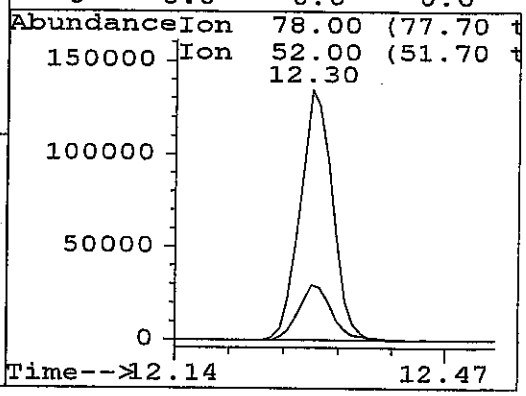


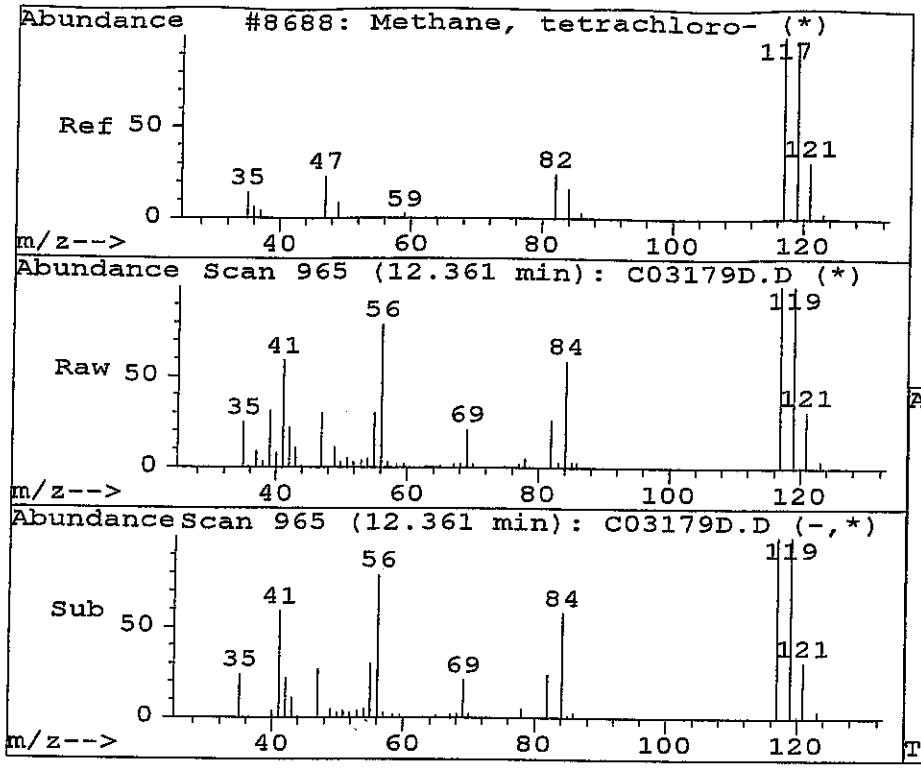


#40
Benzene
Concen: 1.77 ppbV
RT: 12.30 min Scan# 959
Delta R.T. -0.21 min
Lab File: C03179D.D
Acq: 17 Mar 109 11:35 am

Tgt Ion:78 Resp: 364766

Ion	Ratio	Lower	Upper
78	100		
52	22.1	17.8	26.8
0	0.0	0.0	0.0
0	0.0	0.0	0.0

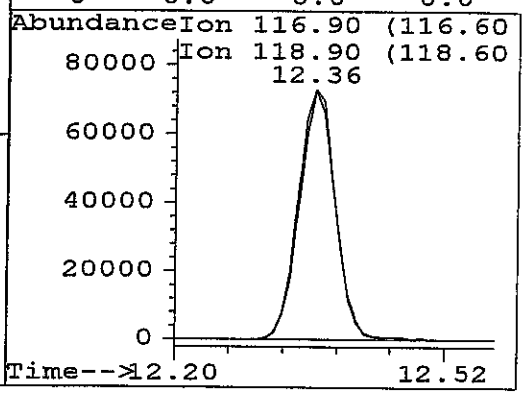


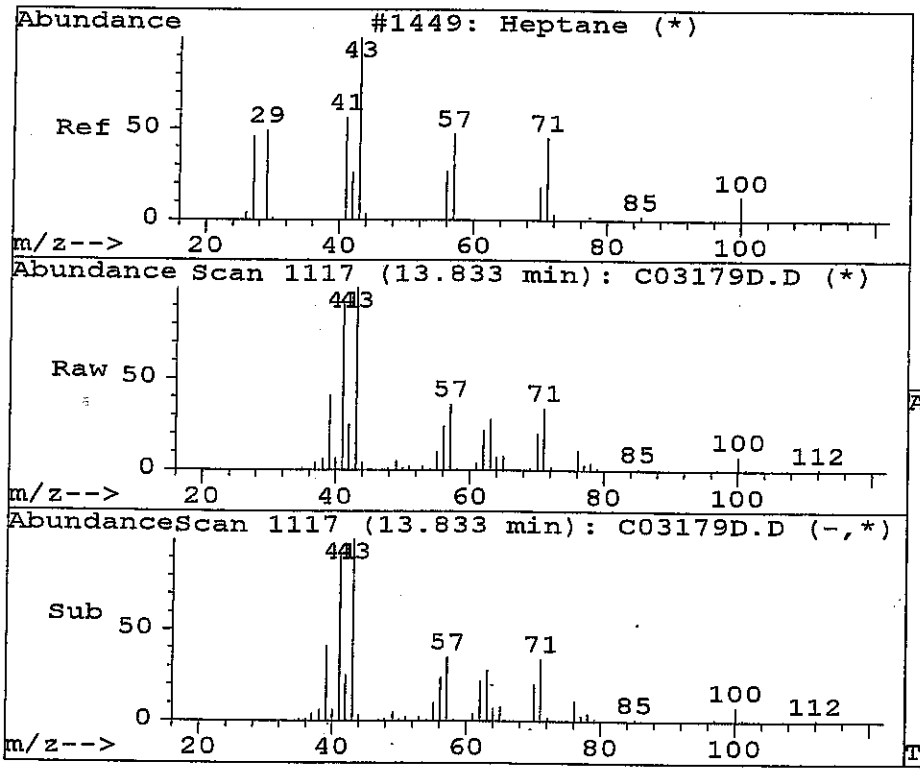


#41
Carbon tetrachloride
Concen: 2.07 ppbV
RT: 12.36 min Scan# 965
Delta R.T. -0.20 min
Lab File: C03179D.D
Acq: 17 Mar 109 11:35 am

Tgt Ion:116.9 Resp: 220983

Ion	Ratio	Lower	Upper
117	100		
119	99.7	65.0	97.6#
0	0.0	0.0	0.0
0	0.0	0.0	0.0

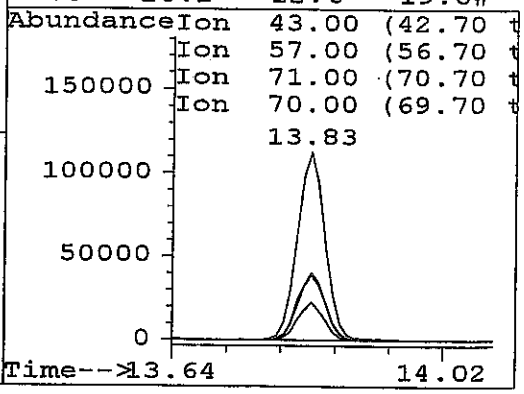


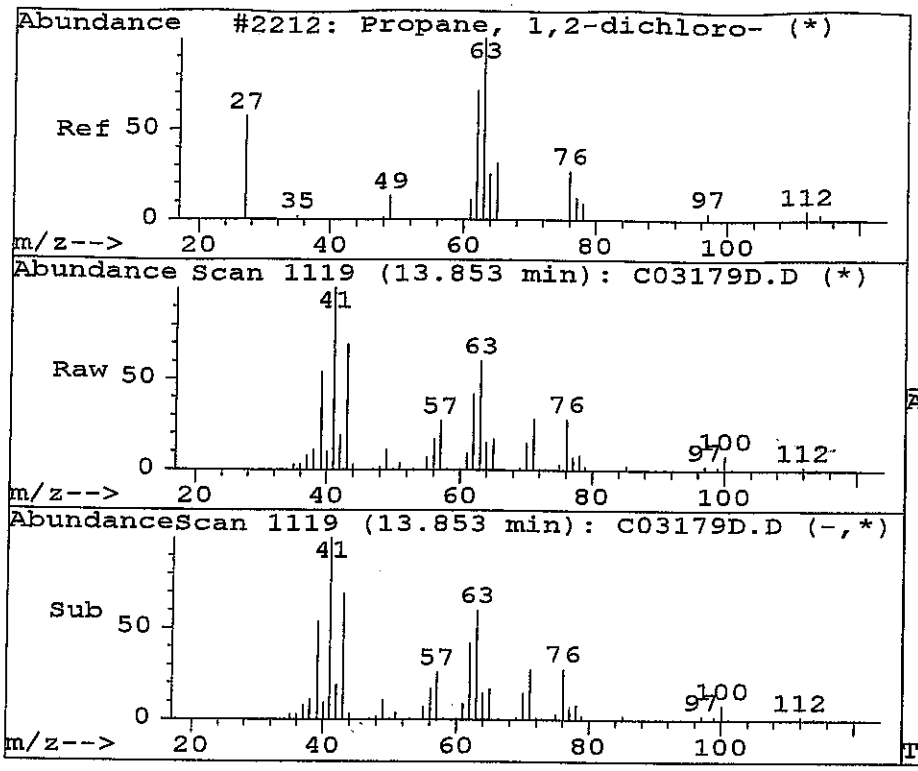


#42
n-Heptane
Concen: 1.27 ppbV
RT: 13.83 min Scan# 1117
Delta R.T. -0.21 min
Lab File: C03179D.D
Acq: 17 Mar 109 11:35 am

Tgt Ion:43 Resp: 300149

Ion	Ratio	Lower	Upper
43	100		
57	35.8	30.3	45.5
71	34.3	29.9	44.9
70	20.2	12.6	19.0#

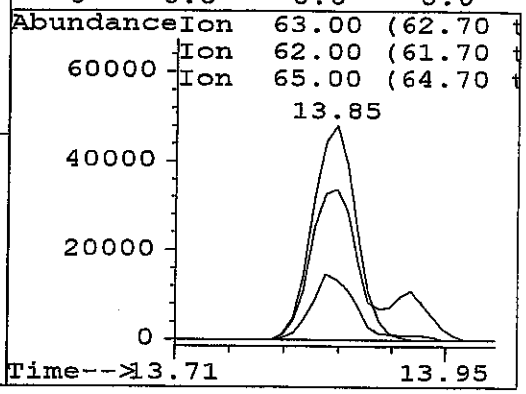


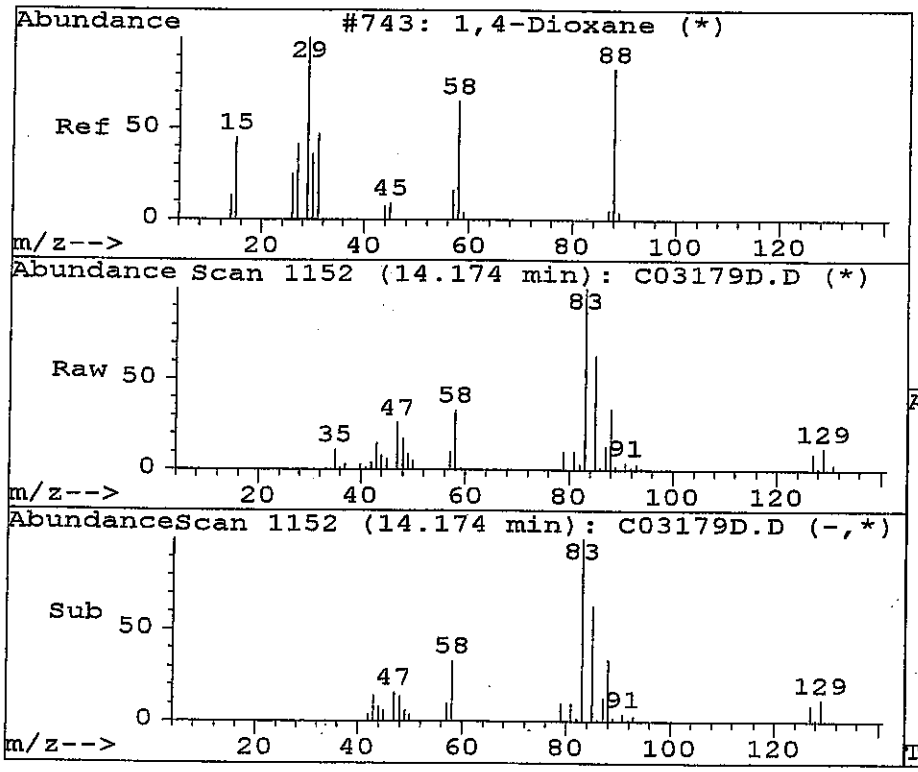


#43
1,2-Dichloropropane
Concen: 1.98 ppbV
RT: 13.85 min Scan# 1119
Delta R.T. -0.22 min
Lab File: C03179D.D
Acq: 17 Mar 109 11:35 am

Tgt Ion:63 Resp: 132416

Ion	Ratio	Lower	Upper
63	100		
62	61.4	50.4	75.6
65	26.9	25.8	38.6
0	0.0	0.0	0.0

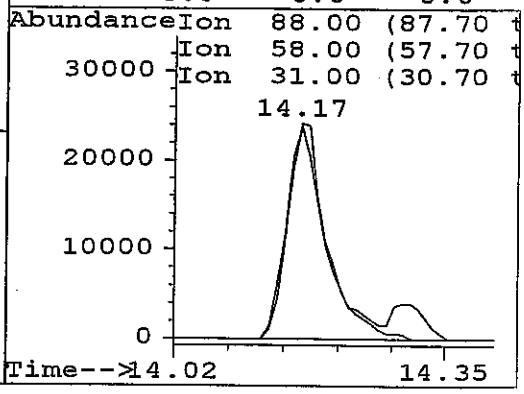


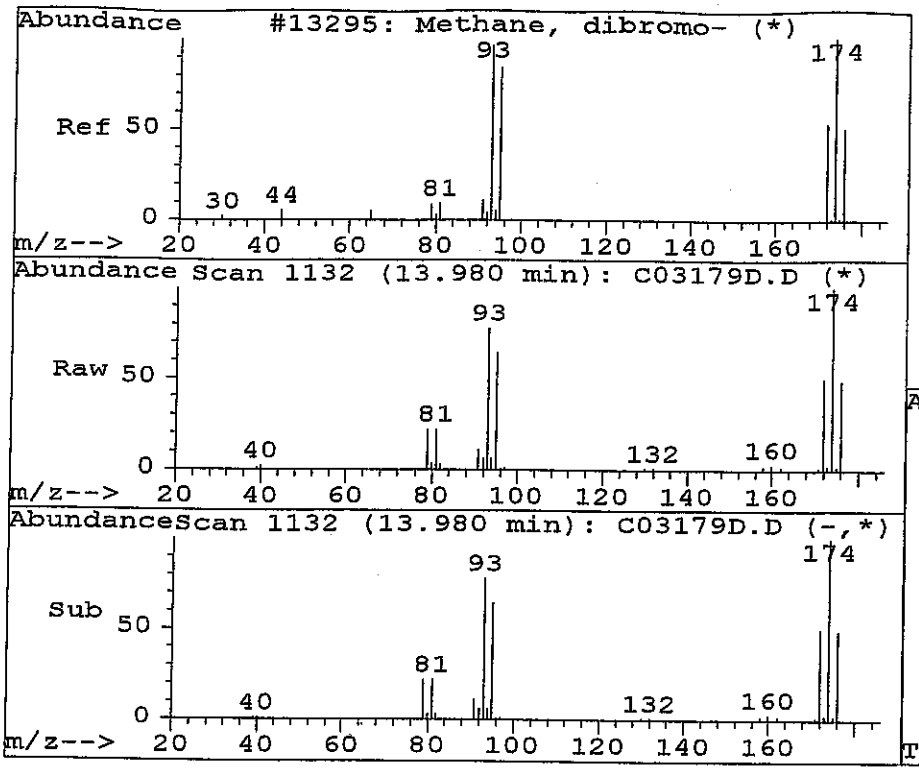


#44
1,4 Dioxane
Concen: 1.21 ppbV
RT: 14.17 min Scan# 1152
Delta R.T. -0.23 min
Lab File: C03179D.D
Acq: 17 Mar 109 11:35 am

Tgt Ion:88 Resp: 80192

Ion	Ratio	Lower	Upper
88	100		
58	100.0	71.5	107.3
31	0.0	0.0	0.0
0	0.0	0.0	0.0

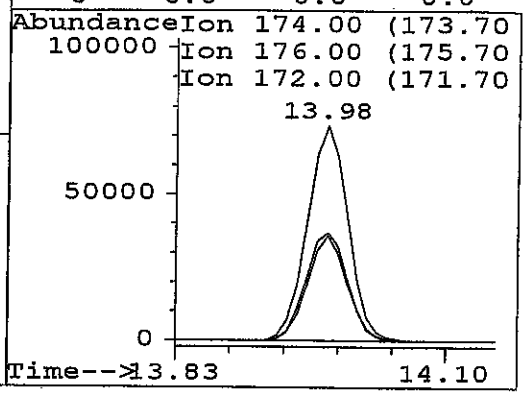


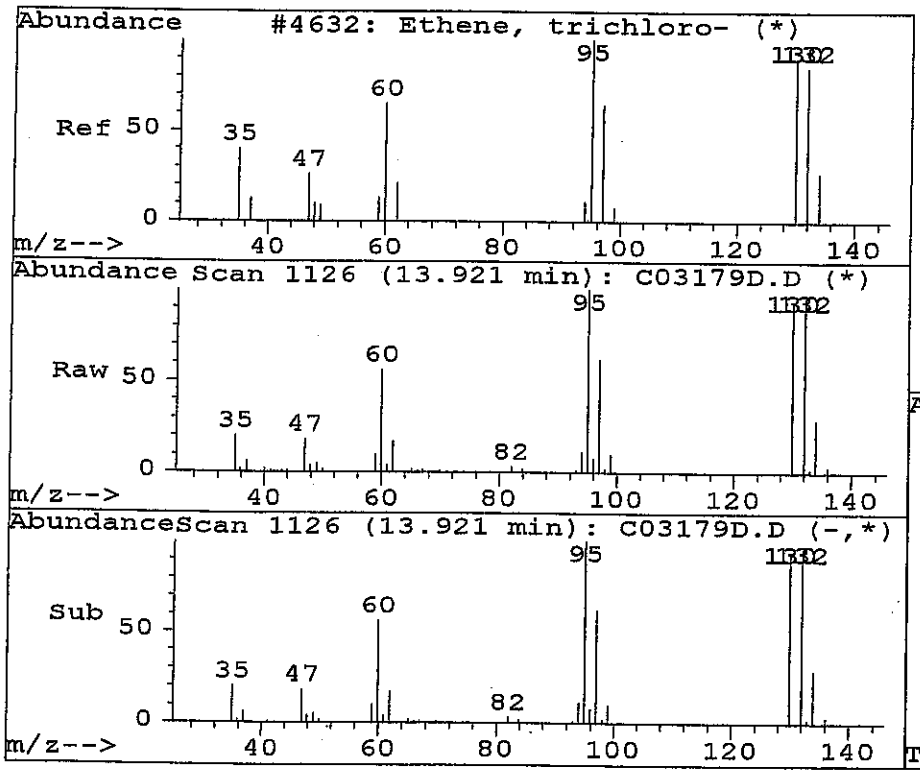


#45
Dibromomethane
Concen: 1.32 ppbV
RT: 13.98 min Scan# 1132
Delta R.T. -0.22 min
Lab File: C03179D.D
Acq: 17 Mar 109 11:35 am

Tgt Ion:174 Resp: 200417

Ion	Ratio	Lower	Upper
174	100		
176	48.9	37.1	55.7
172	50.2	38.4	57.6
0	0.0	0.0	0.0

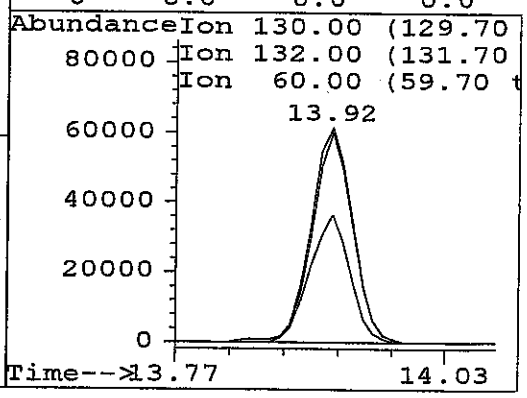


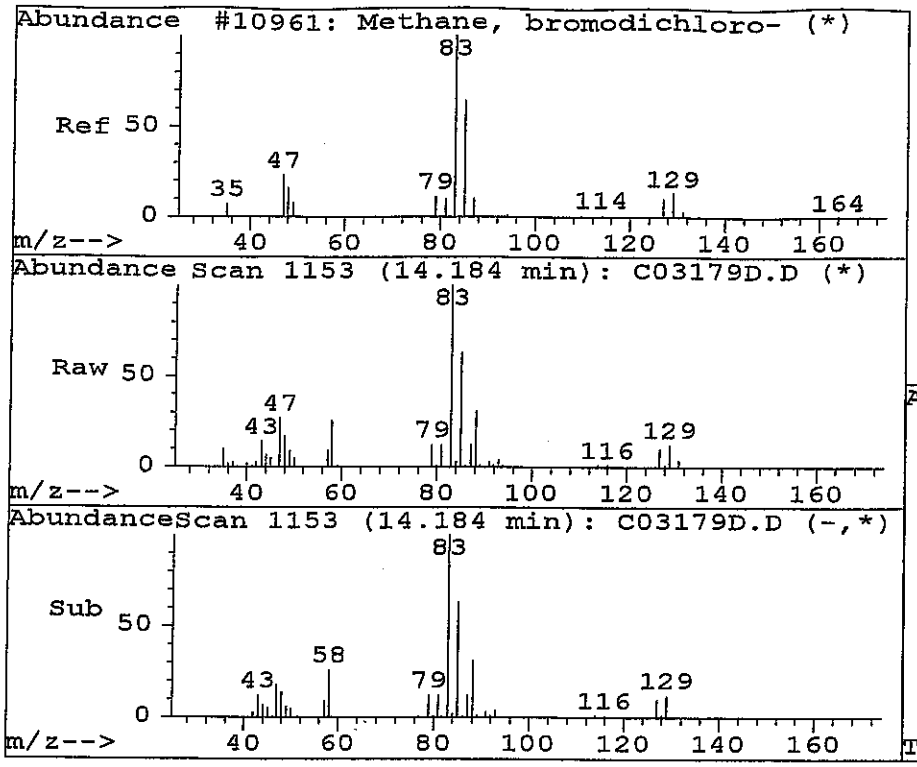


#46
Trichloroethene
Concen: 1.88 ppbV
RT: 13.92 min Scan# 1126
Delta R.T. -0.21 min
Lab File: C03179D.D
Acq: 17 Mar 109 11:35 am

Tgt Ion:130 Resp: 165489

Ion	Ratio	Lower	Upper
130	100		
132	97.9	74.4	111.6
60	58.7	49.2	73.8
0	0.0	0.0	0.0

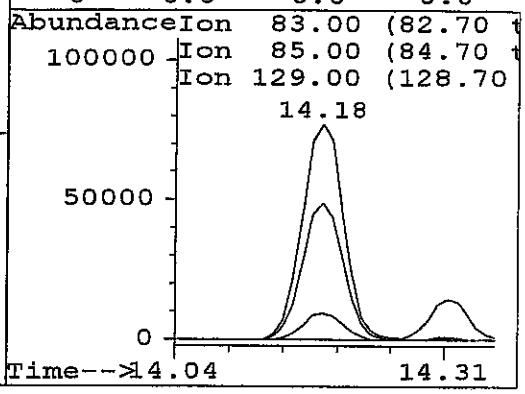


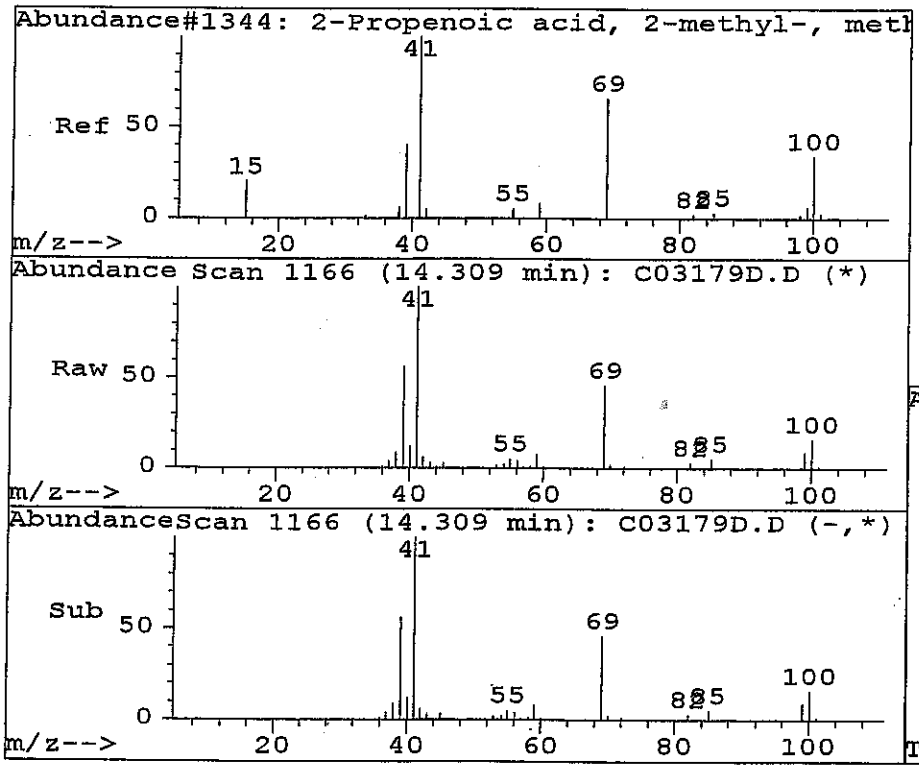


#47
Bromodichloromethane
Concen: 1.21 ppbV
RT: 14.18 min Scan# 1153
Delta R.T. -0.22 min
Lab File: C03179D.D
Acq: 17 Mar 109 11:35 am

Tgt Ion:83 Resp: 218119

Ion	Ratio	Lower	Upper
83	100		
85	61.1	56.1	84.1
129	12.2	7.2	10.8#
0	0.0	0.0	0.0

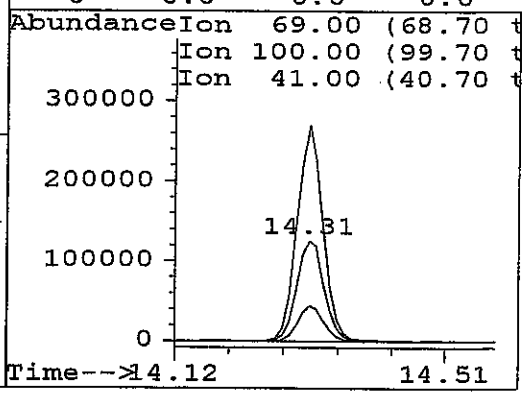


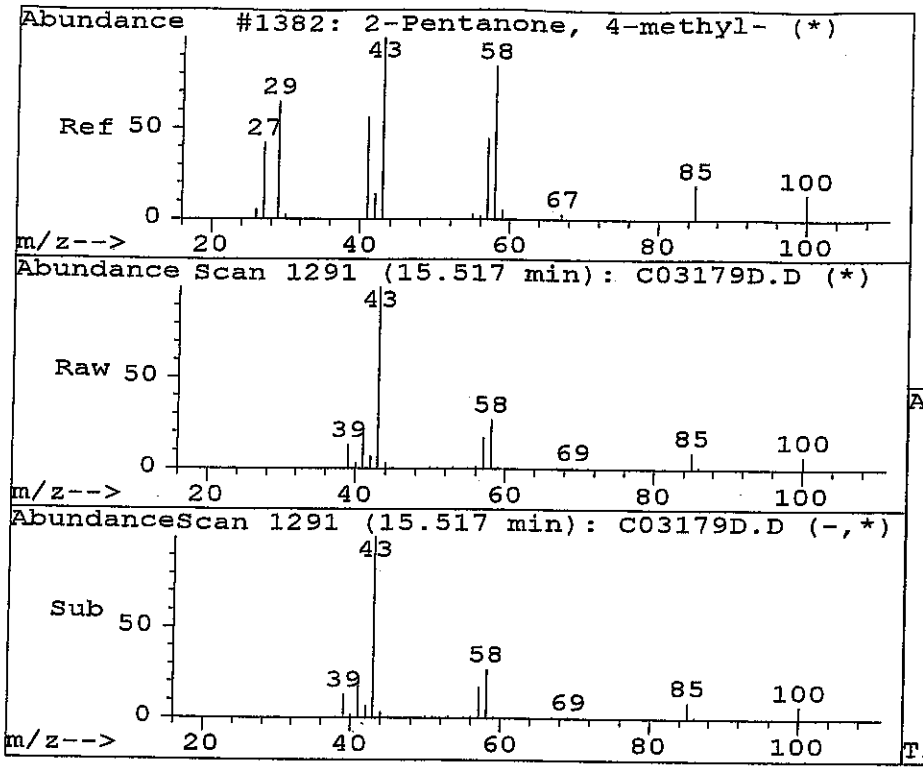


#48
Methyl methacrylate
Concen: 3.74 ppbV
RT: 14.31 min Scan# 1166
Delta R.T. -0.24 min
Lab File: C03179D.D
Acq: 17 Mar 109 11:35 am

Tgt Ion:69 Resp: 346363

Ion	Ratio	Lower	Upper
69	100		
100	35.4	28.3	42.5
41	216.0	157.8	236.8
0	0.0	0.0	0.0

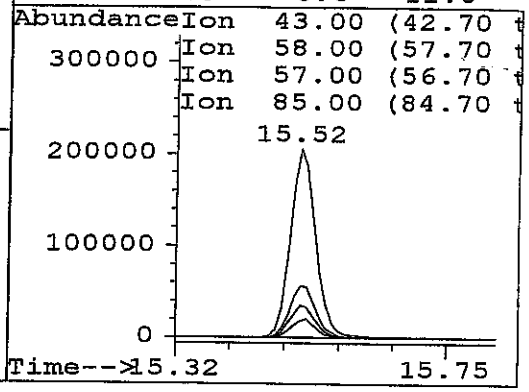


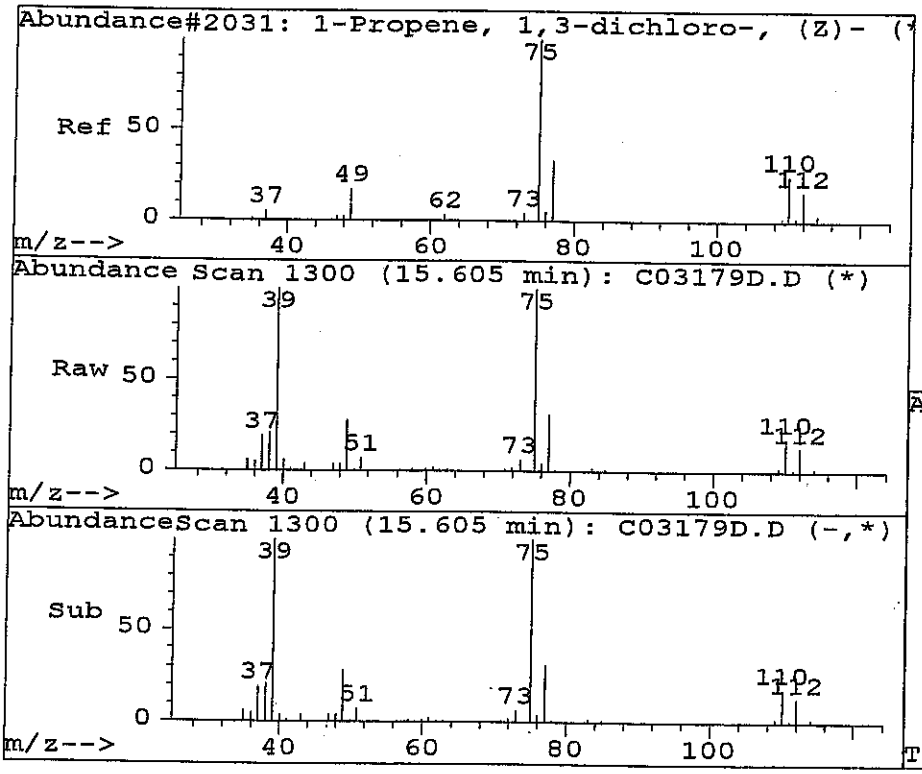


#49
Methyl Isobutyl Ketone
Concen: 1.44 ppbV
RT: 15.52 min Scan# 1291
Delta R.T. -0.18 min
Lab File: C03179D.D
Acq: 17 Mar 109 11:35 am

Tgt Ion:43 Resp: 566705

Ion	Ratio	Lower	Upper
43	100		
58	27.4	19.6	32.6
57	17.0	14.4	24.0
85	8.9	6.6	11.0

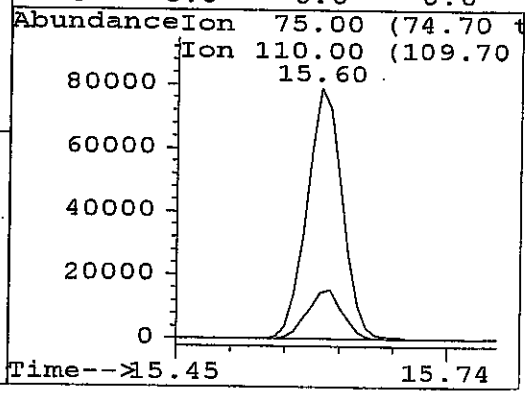


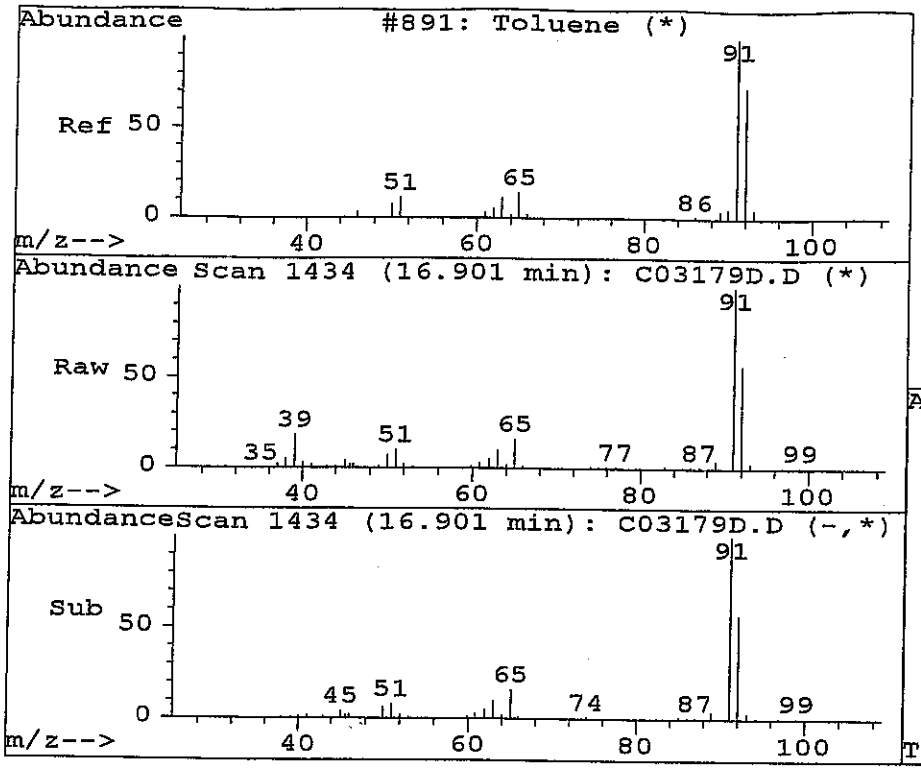


#50
cis-1,3-Dichloropropene
Concen: 1.95 ppbV
RT: 15.60 min Scan# 1300
Delta R.T. -0.22 min
Lab File: C03179D.D
Acq: 17 Mar 109 11:35 am

Tgt Ion:75 Resp: 206495

Ion	Ratio	Lower	Upper
75	100		
110	18.4	17.1	25.7
0	0.0	0.0	0.0
0	0.0	0.0	0.0

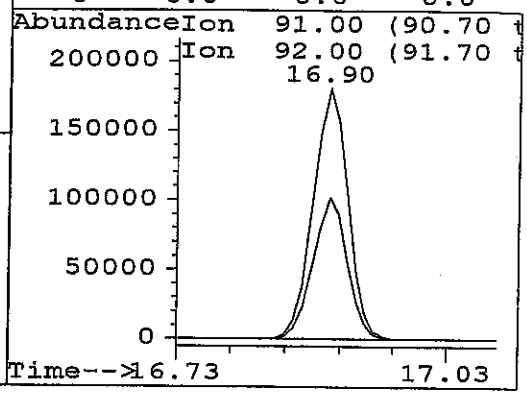


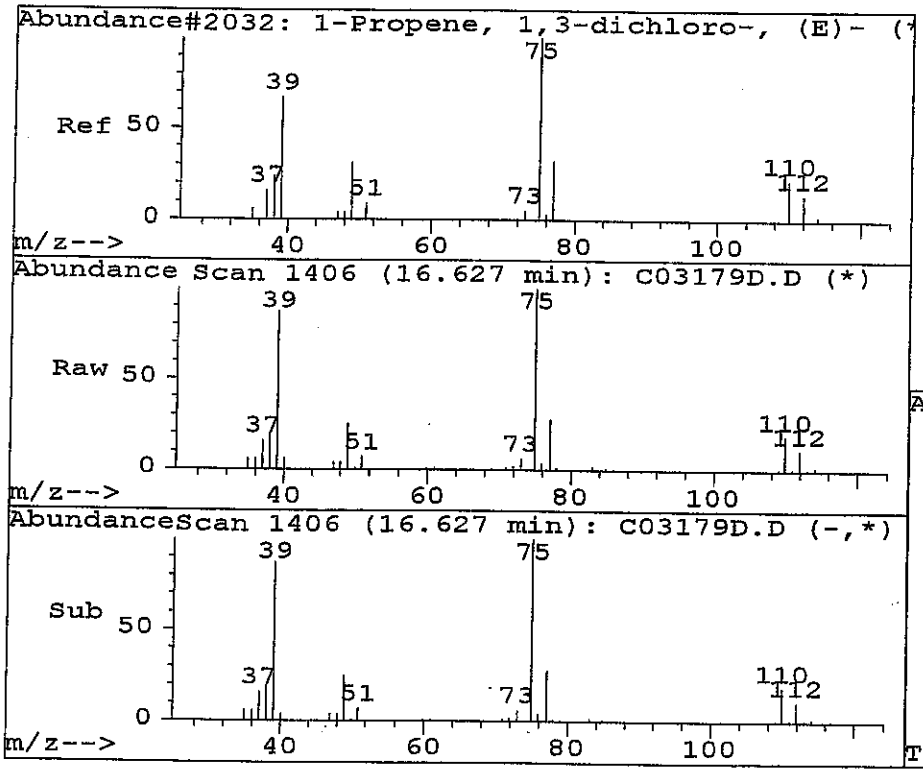


#51
Toluene
Concen: 1.81 ppbV
RT: 16.90 min Scan# 1434
Delta R.T. -0.21 min
Lab File: C03179D.D
Acq: 17 Mar 109 11:35 am

Tgt Ion:91 Resp: 478350

Ion	Ratio	Lower	Upper
91	100		
92	56.6	42.9	64.3
0	0.0	0.0	0.0
0	0.0	0.0	0.0

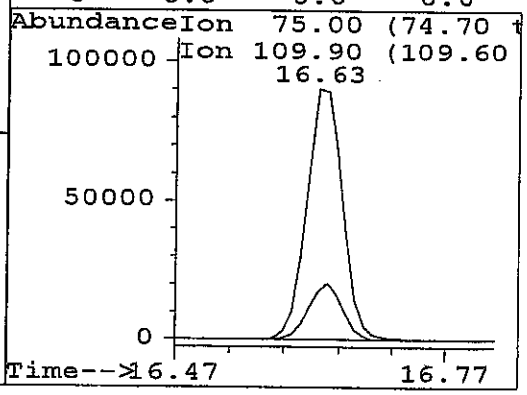


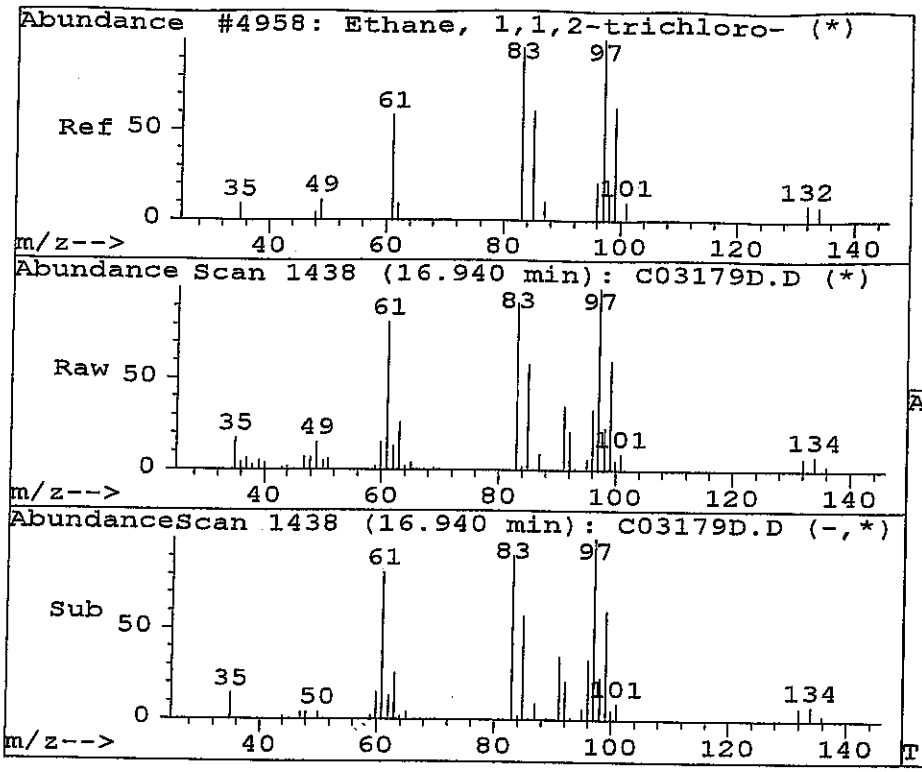


#52
trans-1,3-Dichloropropene
Concen: 1.92 ppbV
RT: 16.63 min Scan# 1406
Delta R.T. -0.22 min
Lab File: C03179D.D
Acq: 17 Mar 109 11:35 am

Tgt Ion:75 Resp: 242137

Ion	Ratio	Lower	Upper
75	100		
110	19.3	16.4	24.6
0	0.0	0.0	0.0
0	0.0	0.0	0.0

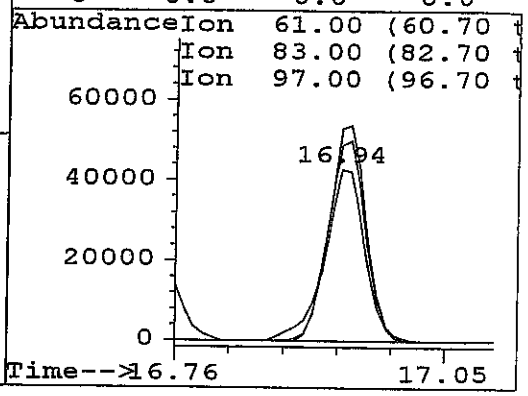


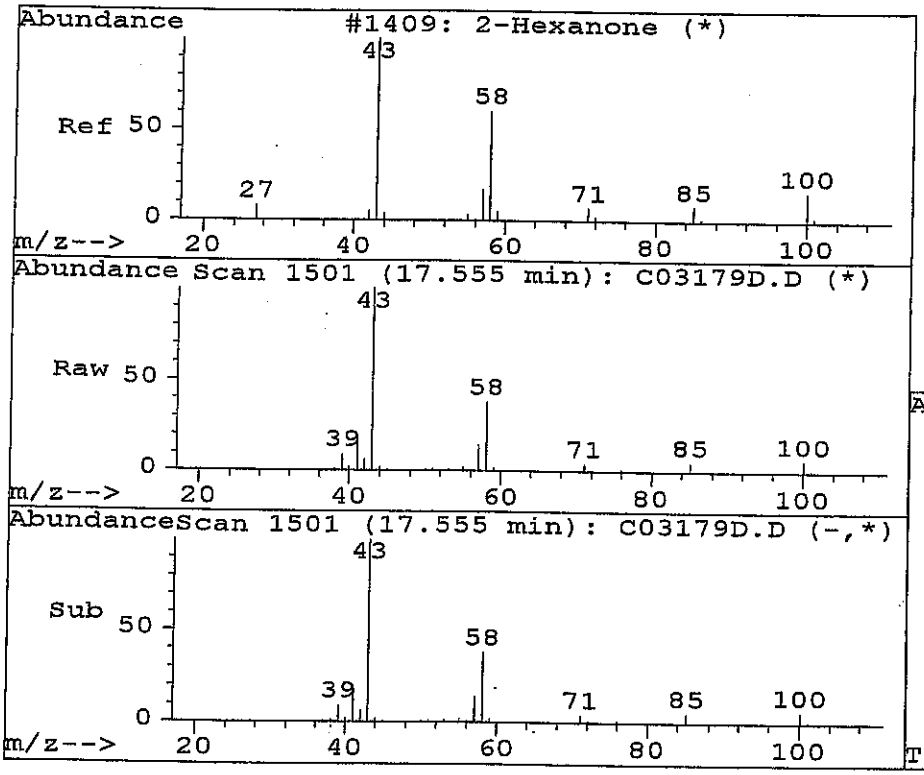


#53
1,1,2-Trichloroethane
Concen: 1.87 ppbV
RT: 16.94 min Scan# 1438
Delta R.T. -0.22 min
Lab File: C03179D.D
Acq: 17 Mar 109 11:35 am

Tgt Ion:61 Resp: 127239

Ion	Ratio	Lower	Upper
61	100		
83	114.0	103.6	155.4
97	124.0	104.8	157.2
0	0.0	0.0	0.0

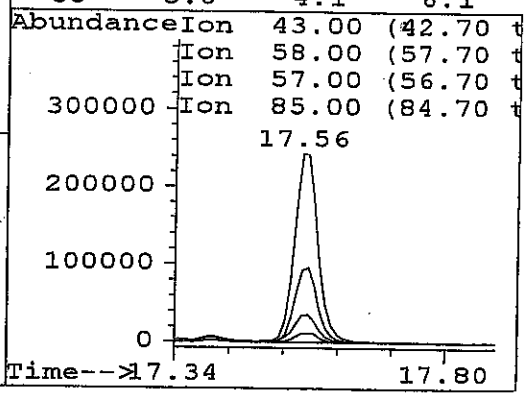


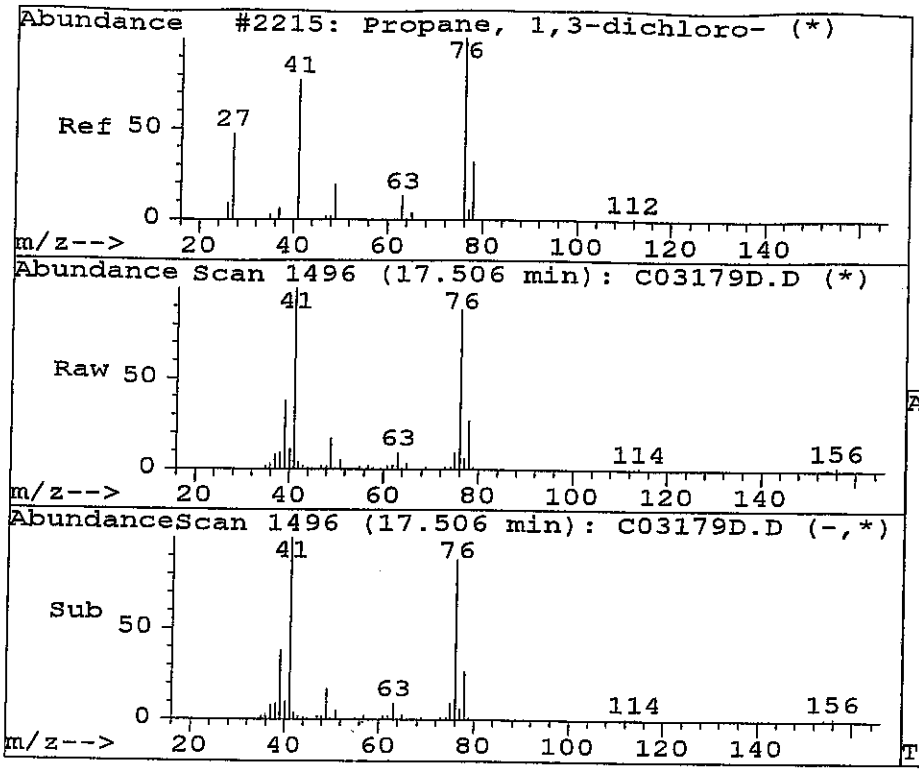


#54
2-Hexanone
Concen: 1.44 ppbV
RT: 17.56 min Scan# 1501
Delta R.T. -0.25 min
Lab File: C03179D.D
Acq: 17 Mar 109 11:35 am

Tgt Ion:43 Resp: 678898

Ion	Ratio	Lower	Upper
43	100		
58	38.1	30.0	50.0
57	14.2	9.4	15.6
85	5.0	4.1	6.1

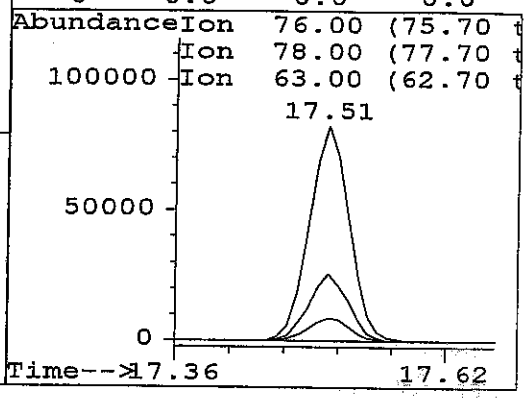


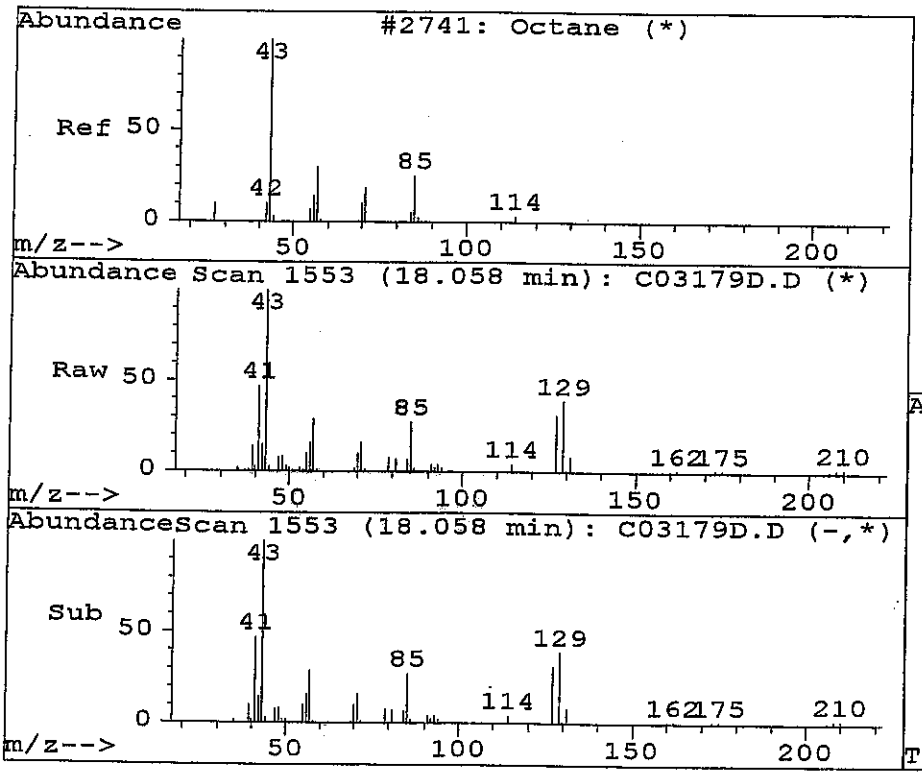


#55
1,3-Dichloropropane
Concen: 1.24 ppbV
RT: 17.51 min Scan# 1496
Delta R.T. -0.21 min
Lab File: C03179D.D
Acq: 17 Mar 109 11:35 am

Tgt Ion:76 Resp: 220671

Ion	Ratio	Lower	Upper
76	100		
78	31.2	26.2	39.2
63	10.5	11.1	16.7#
0	0.0	0.0	0.0

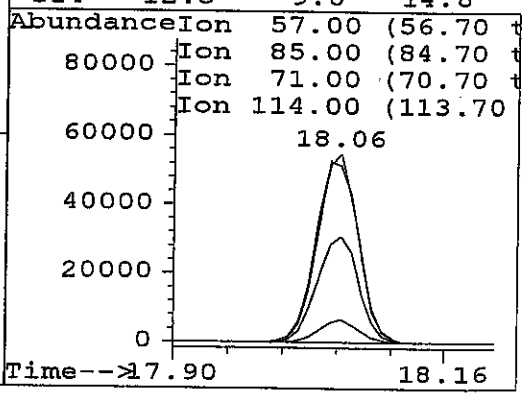


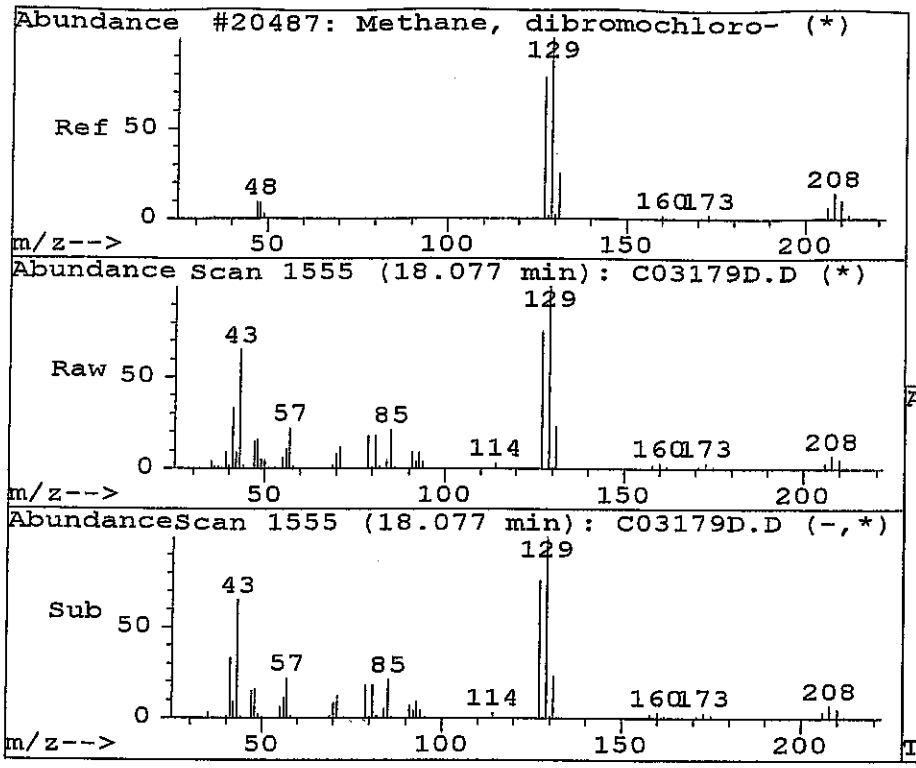


#56
Octane
Concen: 1.31 ppbV
RT: 18.06 min Scan# 1553
Delta R.T. -0.20 min
Lab File: C03179D.D
Acq: 17 Mar 109 11:35 am

Tgt Ion:57 Resp: 146267

Ion	Ratio	Lower	Upper
57	100		
85	93.7	76.1	114.1
71	56.1	31.2	46.8#
114	12.3	9.8	14.8

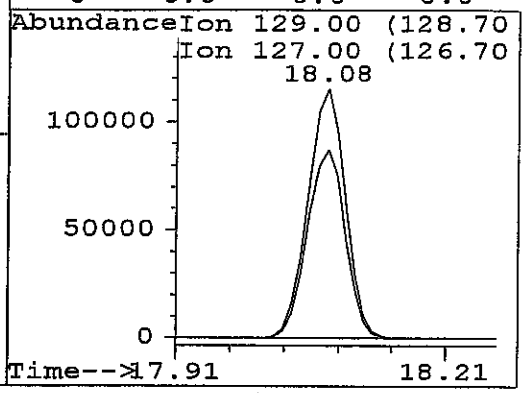


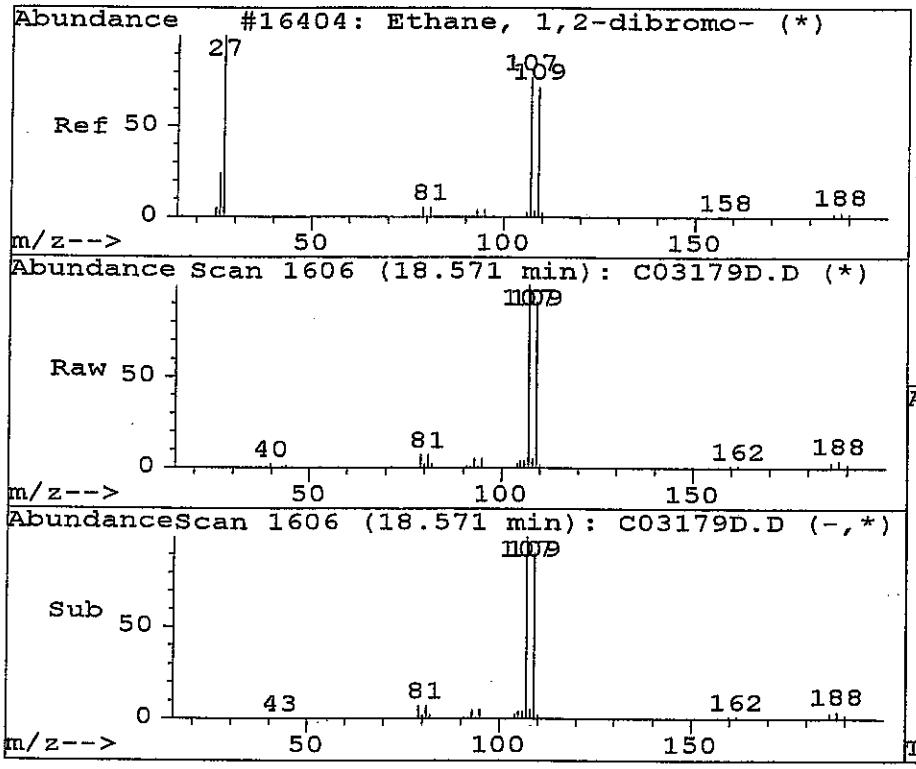


#57
Dibromochloromethane
Concen: 1.35 ppbV
RT: 18.08 min Scan# 1555
Delta R.T. -0.22 min
Lab File: C03179D.D
Acq: 17 Mar 109 11:35 am

Tgt Ion:129 Resp: 322250

Ion	Ratio	Lower	Upper
129	100		
127	75.6	64.5	96.7
0	0.0	0.0	0.0
0	0.0	0.0	0.0

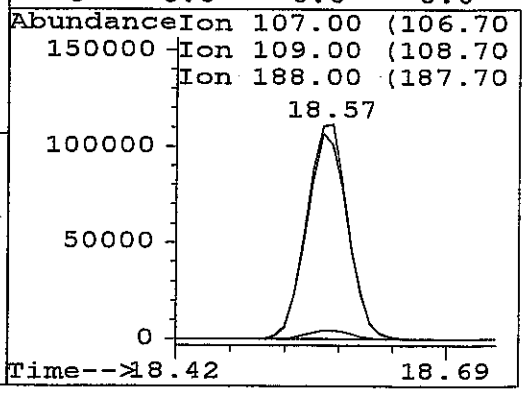


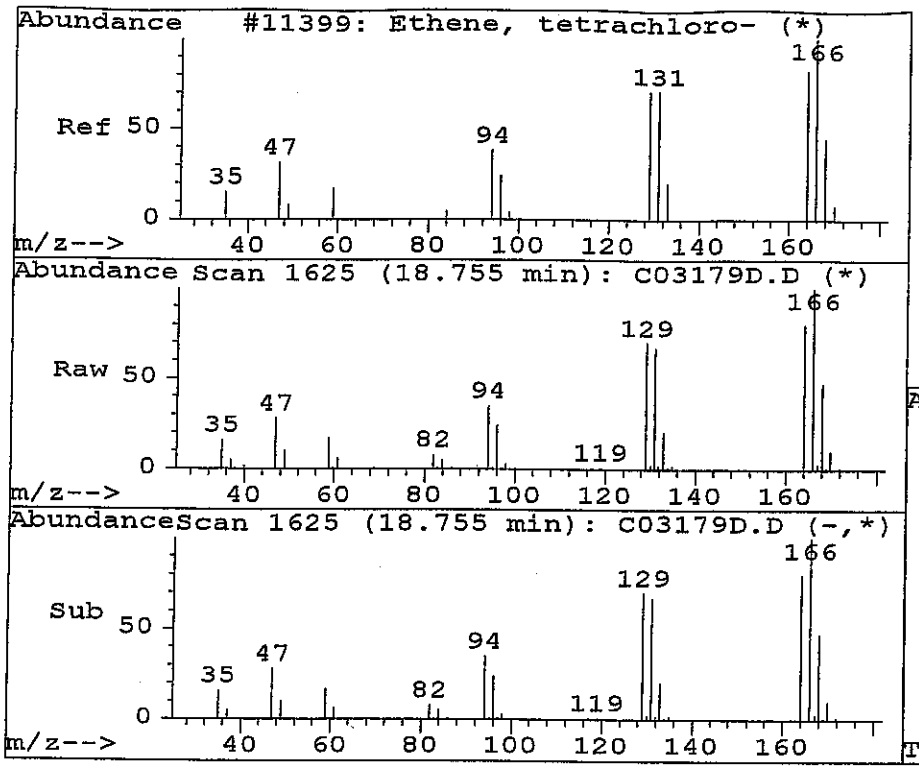


#58
1,2-Dibromoethane
Concen: 1.90 ppbV
RT: 18.57 min Scan# 1606
Delta R.T. -0.23 min
Lab File: C03179D.D
Acq: 17 Mar 109 11:35 am

Tgt Ion:107 Resp: 324567

Ion	Ratio	Lower	Upper
107	100		
109	90.7	81.8	122.6
188	4.0	3.4	5.0
0	0.0	0.0	0.0

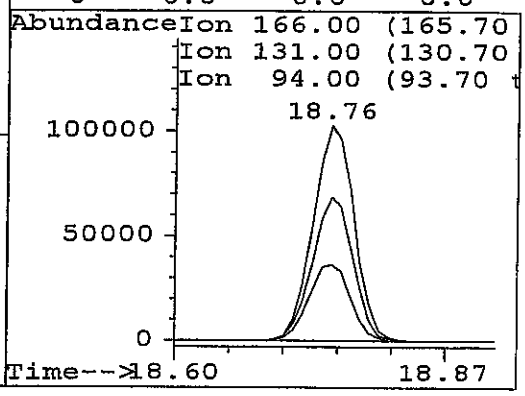


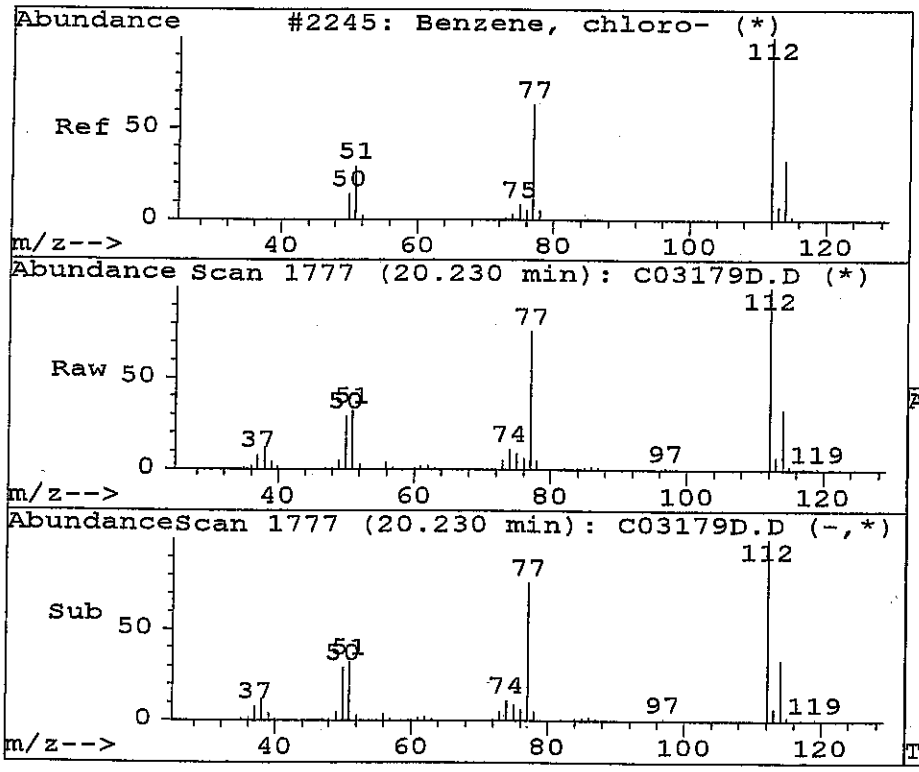


#59
Tetrachloroethene
Concen: 1.98 ppbV
RT: 18.76 min Scan# 1625
Delta R.T. -0.21 min
Lab File: C03179D.D
Acq: 17 Mar 109 11:35 am

Tgt Ion:166 Resp: 300057

Ion	Ratio	Lower	Upper
166	100		
131	66.9	58.6	88.0
94	35.5	31.2	46.8
0	0.0	0.0	0.0

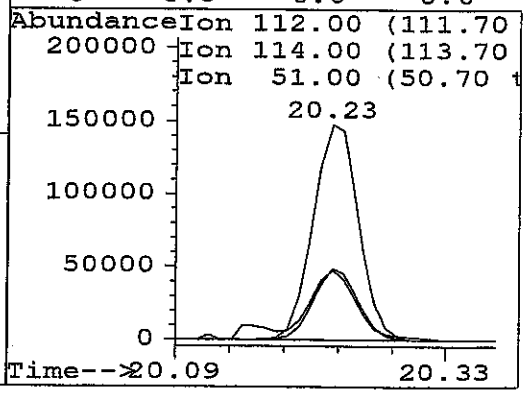


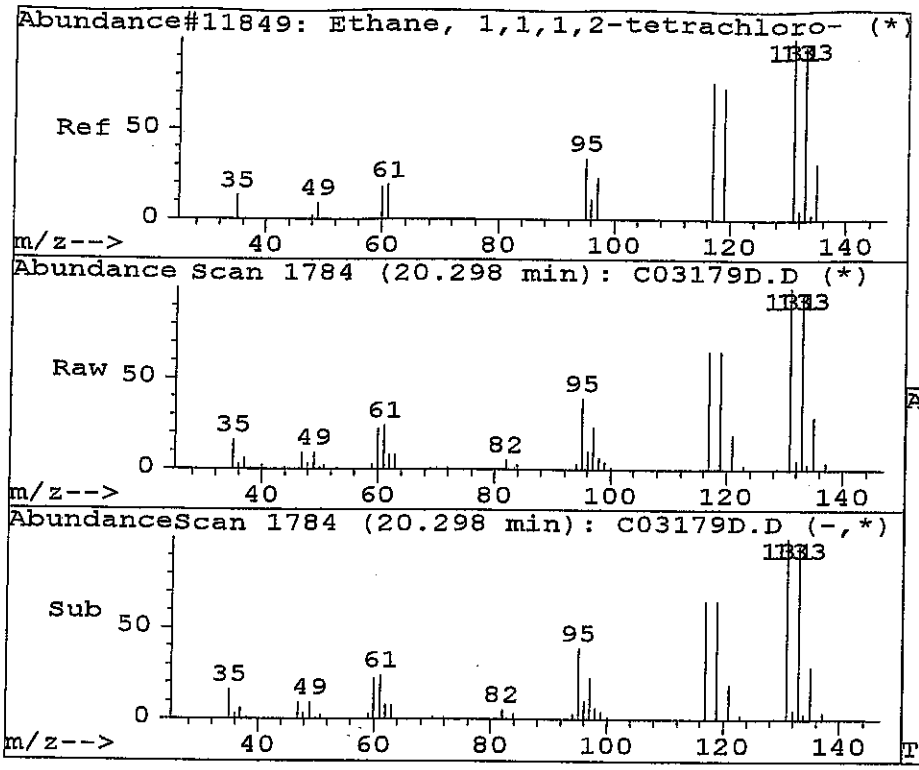


#60
Chlorobenzene
Concen: 1.86 ppbV
RT: 20.23 min Scan# 1777
Delta R.T. -0.22 min
Lab File: C03179D.D
Acq: 17 Mar 109 11:35 am

Tgt Ion:112 Resp: 410336

Ion	Ratio	Lower	Upper
112	100		
114	32.9	23.8	35.8
51	28.7	14.6	21.8#
0	0.0	0.0	0.0

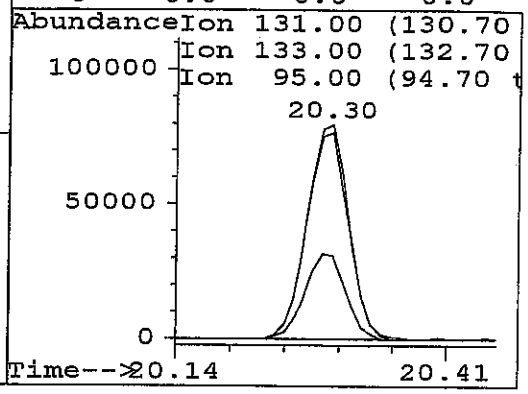


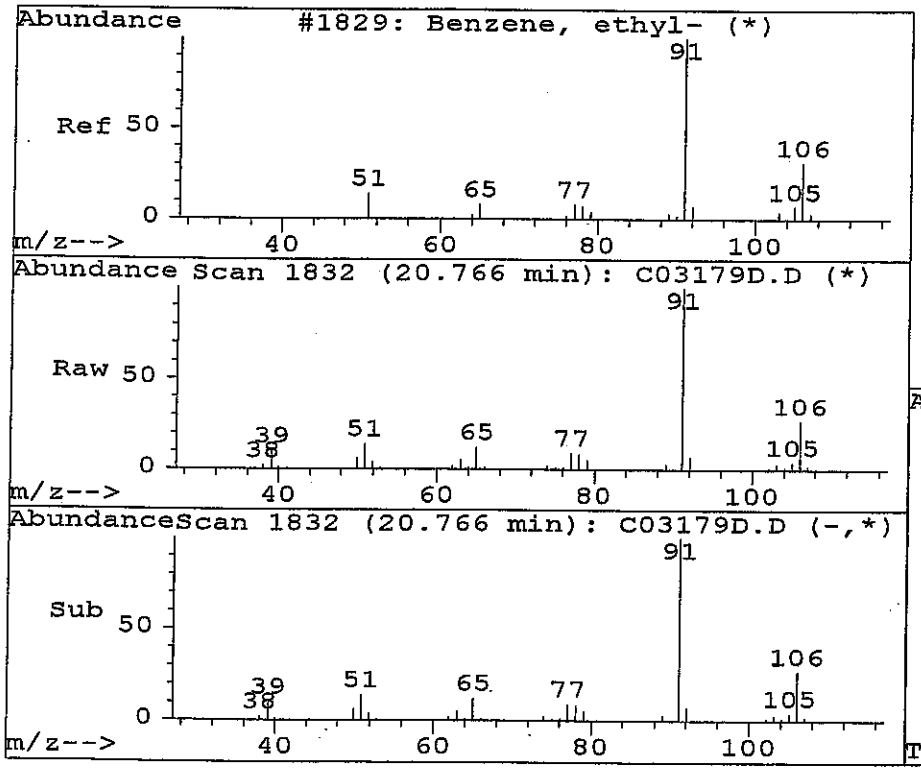


#61
1,1,1,2-Tetrachloroethane
Concen: 1.32 ppbV
RT: 20.30 min Scan# 1784
Delta R.T. -0.21 min
Lab File: C03179D.D
Acq: 17 Mar 109 11:35 am

Tgt Ion:131 Resp: 228762

Ion	Ratio	Lower	Upper
131	100		
133	96.3	78.9	118.3
95	38.6	30.2	45.2
0	0.0	0.0	0.0

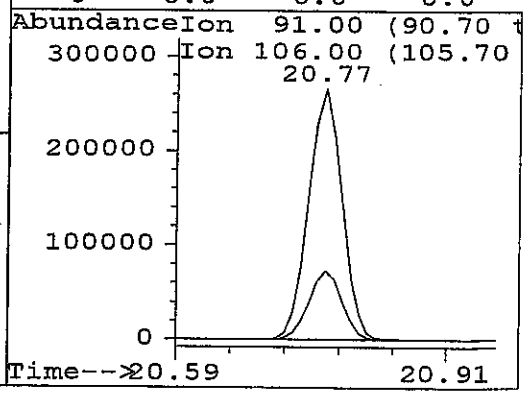


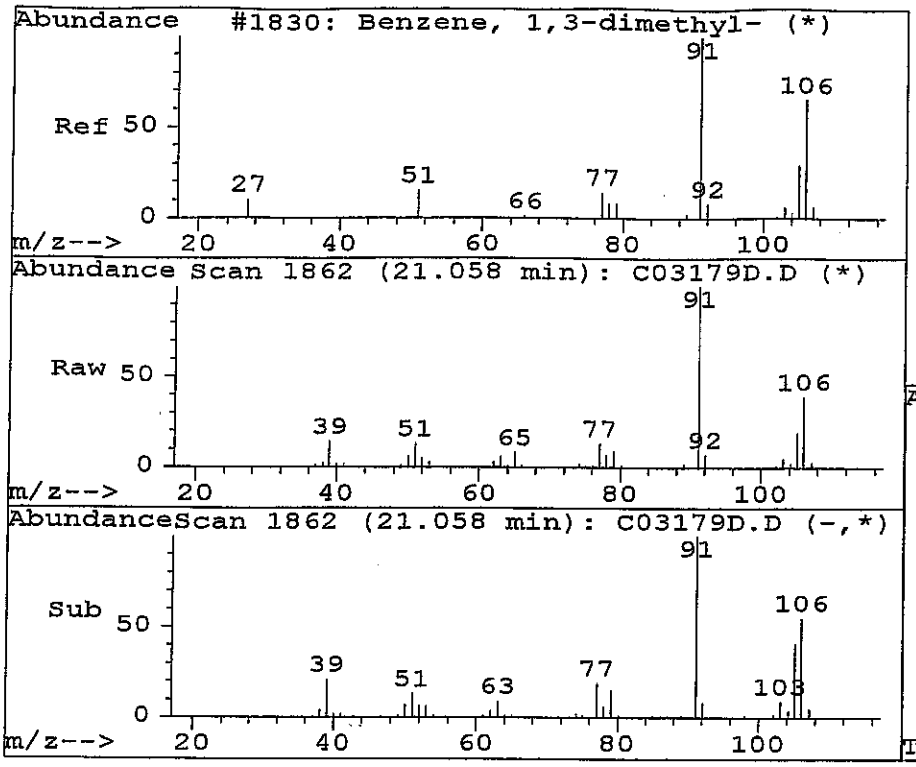


#62
Ethylbenzene
Concen: 1.95 ppbV
RT: 20.77 min Scan# 1832
Delta R.T. -0.22 min
Lab File: C03179D.D
Acq: 17 Mar 109 11:35 am

Tgt Ion:91 Resp: 722767

Ion	Ratio	Lower	Upper
91	100		
106	27.3	21.3	31.9
0	0.0	0.0	0.0
0	0.0	0.0	0.0

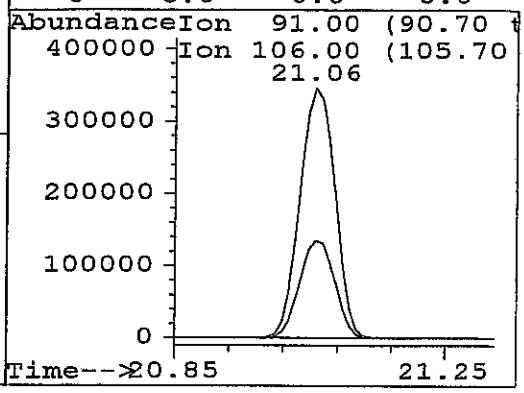


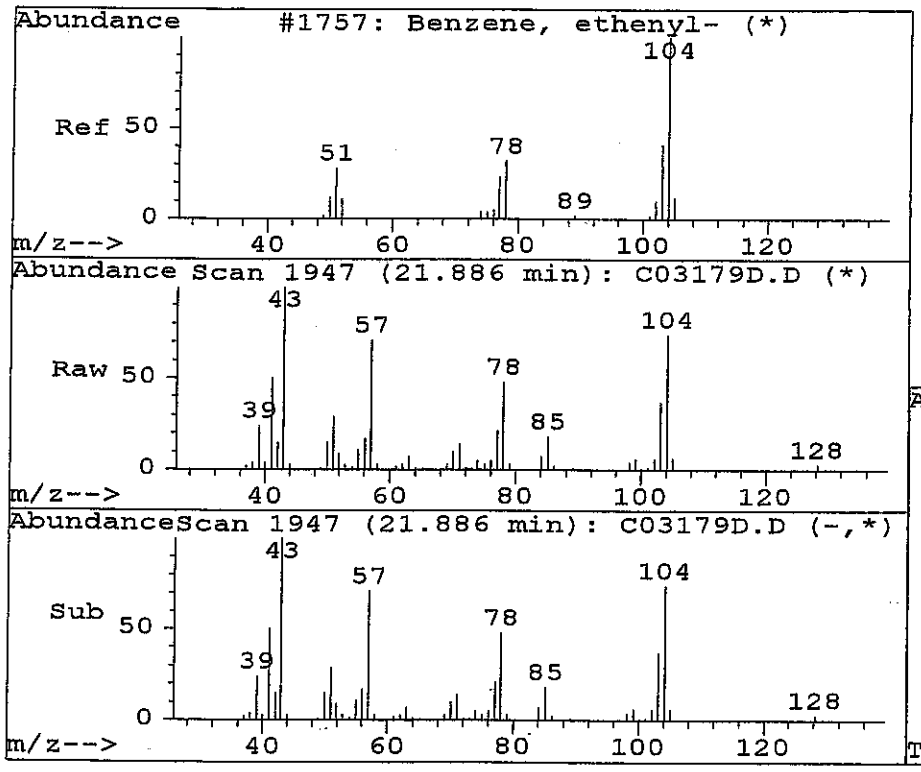


#63
m & p-Xylene
Concen: 3.86 ppbV
RT: 21.06 min Scan# 1862
Delta R.T. -0.22 min
Lab File: C03179D.D
Acq: 17 Mar 109 11:35 am

Tgt Ion:91 Resp: 1220126

Ion	Ratio	Lower	Upper
91	100		
106	39.0	30.3	45.5
0	0.0	0.0	0.0
0	0.0	0.0	0.0

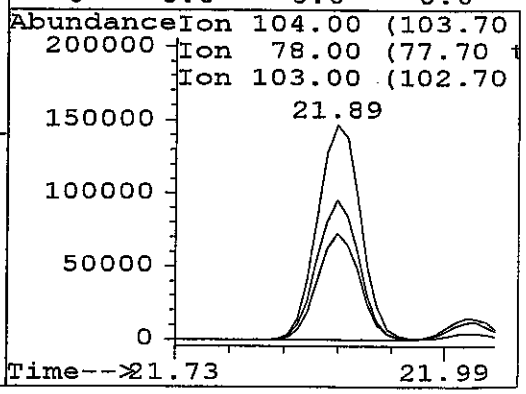


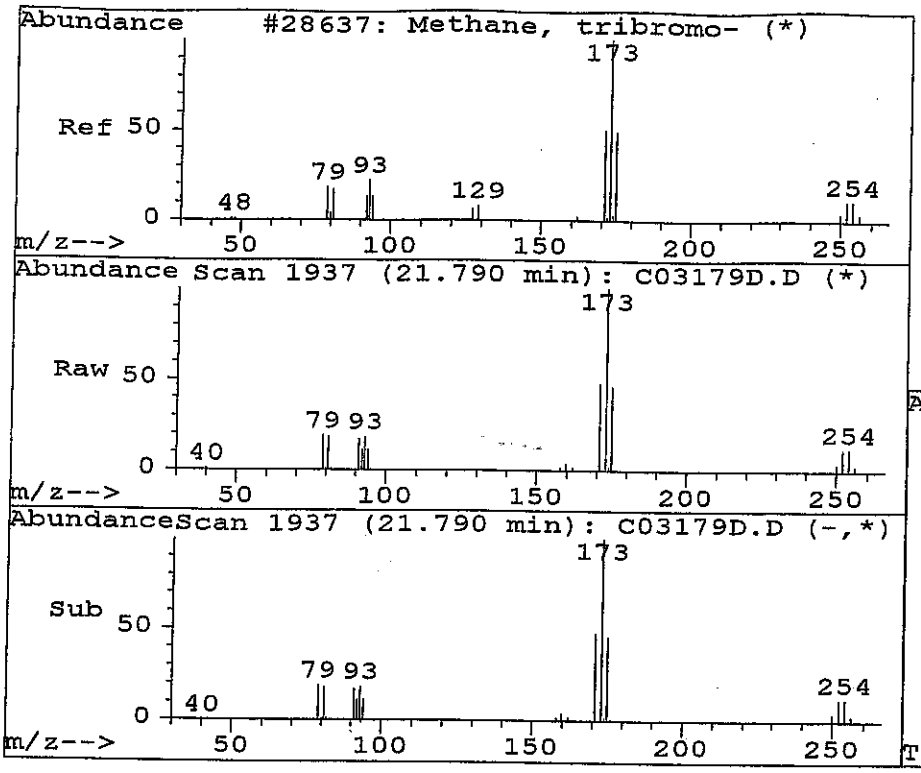


#64
Styrene
Concen: 1.93 ppbV
RT: 21.89 min Scan# 1947
Delta R.T. -0.25 min
Lab File: C03179D.D
Acq: 17 Mar 109 11:35 am

Tgt Ion:104 Resp: 428714

Ion	Ratio	Lower	Upper
104	100		
78	65.1	46.4	69.6
103	49.4	40.3	60.5
0	0.0	0.0	0.0

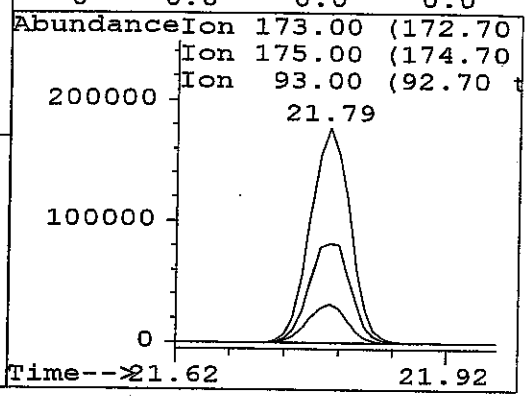


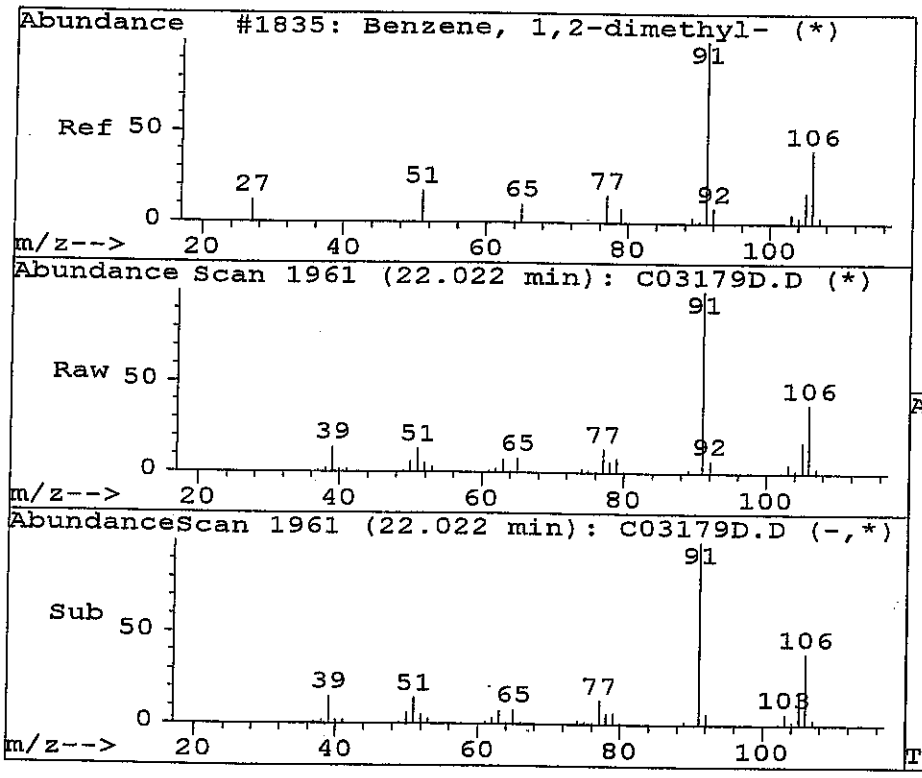


#65
Bromoform
Concen: 1.34 ppbV
RT: 21.79 min Scan# 1937
Delta R.T. -0.21 min
Lab File: C03179D.D
Acq: 17 Mar 109 11:35 am

Tgt Ion:173 Resp: 530300

Ion	Ratio	Lower	Upper
173	100		
175	46.1	39.7	59.5
93	17.9	15.1	22.7
0	0.0	0.0	0.0

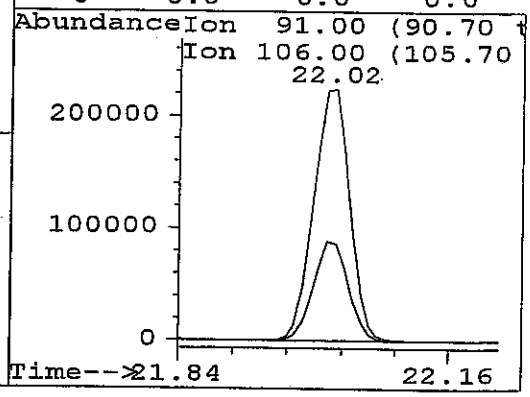


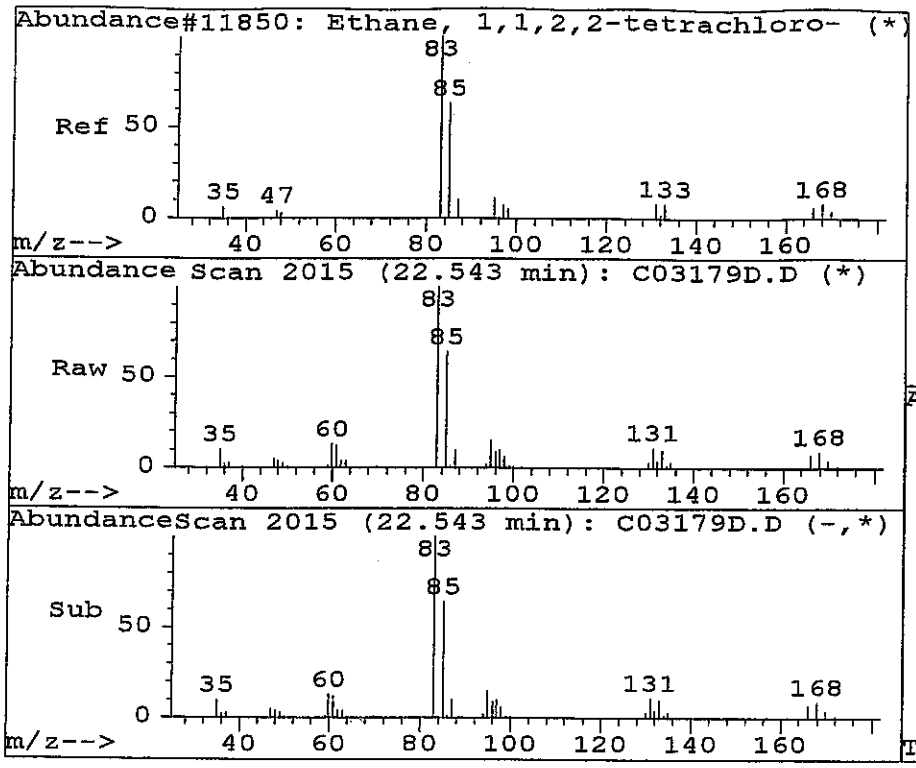


#66
o-Xylene
Concen: 1.83 ppbV
RT: 22.02 min Scan# 1961
Delta R.T. -0.23 min
Lab File: C03179D.D
Acq: 17 Mar 109 11:35 am

Tgt Ion:91 Resp: 643280

Ion	Ratio	Lower	Upper
91	100		
106	38.5	31.2	46.8
0	0.0	0.0	0.0
0	0.0	0.0	0.0

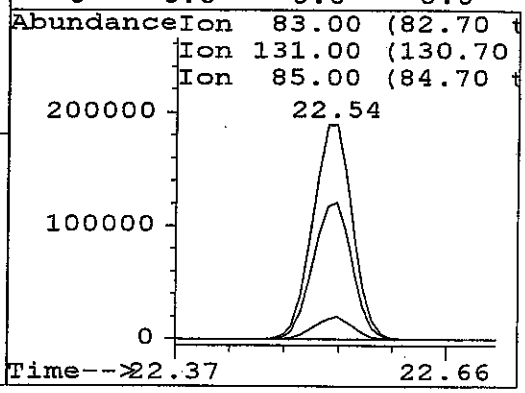


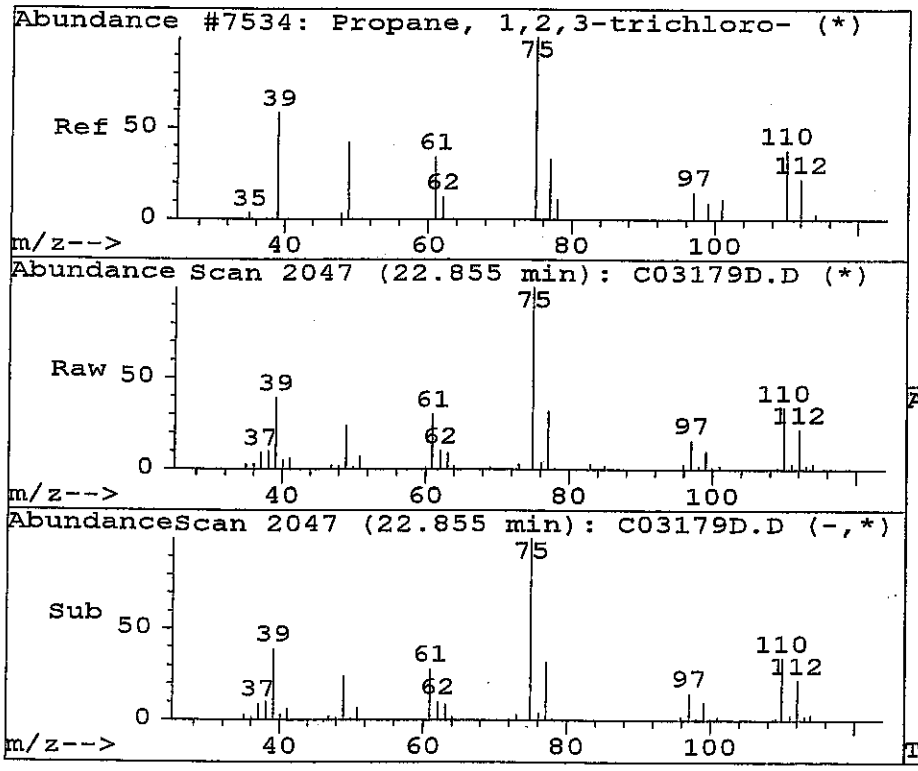


#67
1,1,2,2-Tetrachloroethane
Concen: 1.90 ppbV
RT: 22.54 min Scan# 2015
Delta R.T. -0.21 min
Lab File: C03179D.D
Acq: 17 Mar 109 11:35 am

Tgt Ion:83 Resp: 560899

Ion	Ratio	Lower	Upper
83	100		
131	10.6	8.3	12.5
85	63.8	50.0	75.0
0	0.0	0.0	0.0

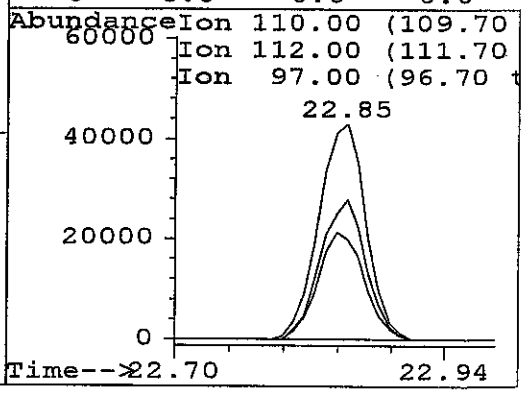


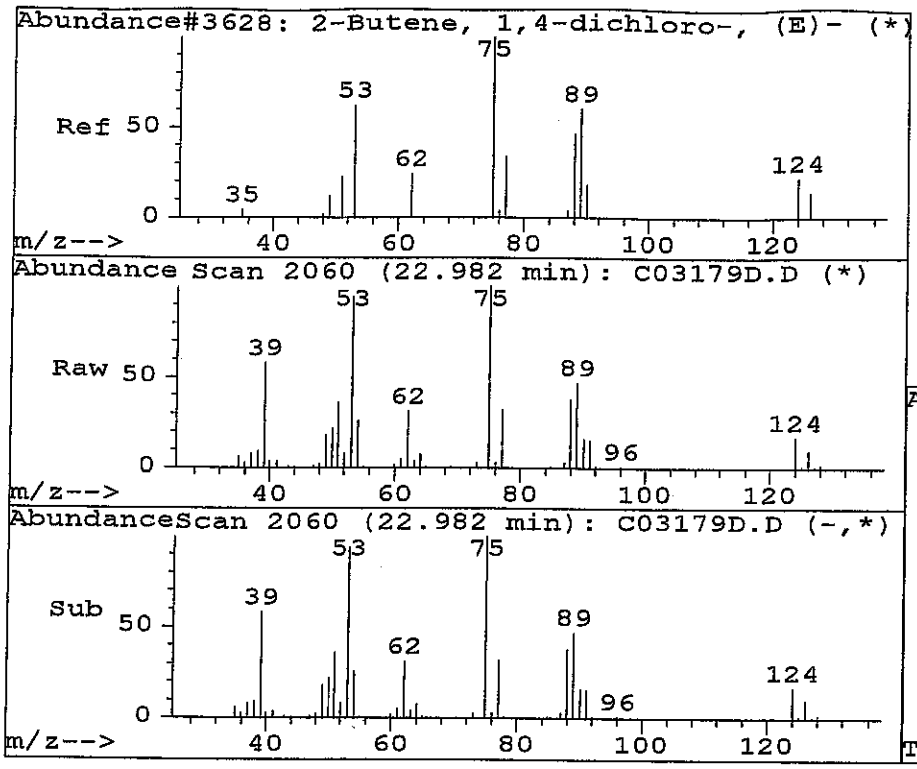


#68
1,2,3-Trichloropropane
Concen: 1.19 ppbV
RT: 22.85 min Scan# 2047
Delta R.T. -0.23 min
Lab File: C03179D.D
Acq: 17 Mar 109 11:35 am

Tgt Ion:110 Resp: 128657

Ion	Ratio	Lower	Upper
110	100		
112	64.8	47.6	71.4
97	46.4	38.9	58.3
0	0.0	0.0	0.0

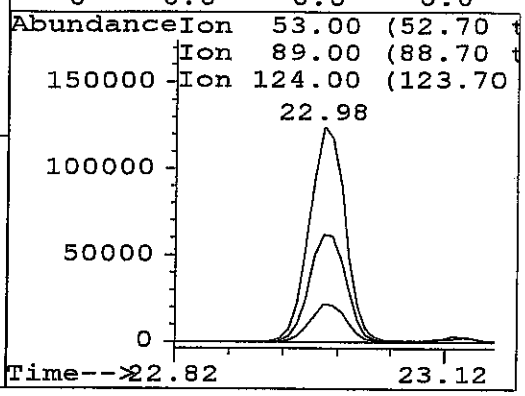


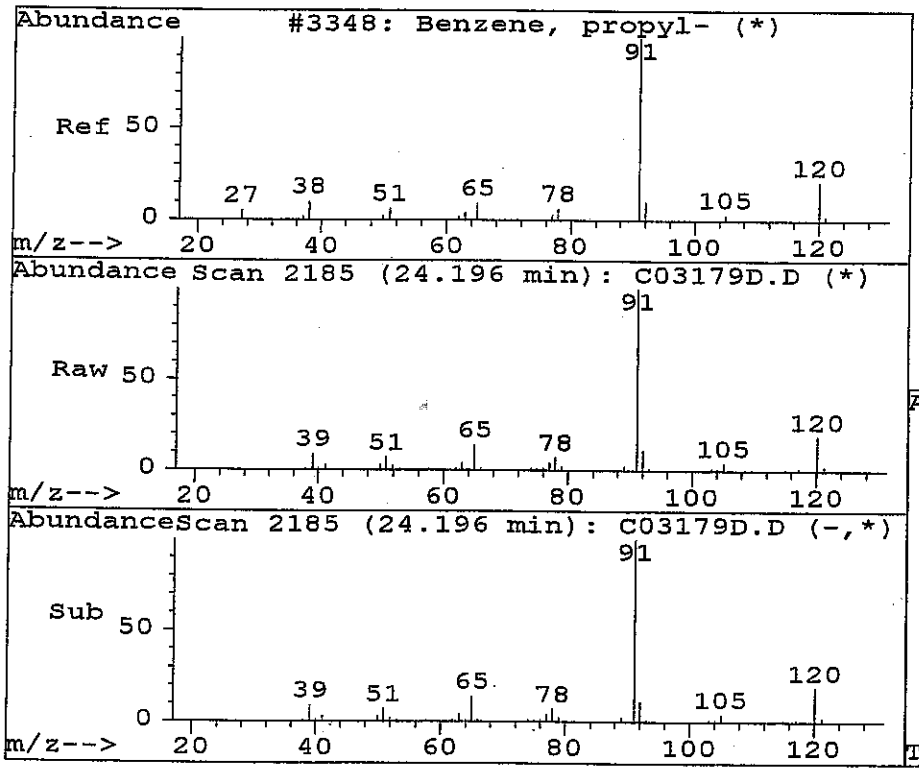


#69
t-1,4-Dichloro-2-butene
Concen: 3.85 ppbV
RT: 22.98 min Scan# 2060
Delta R.T. -0.25 min
Lab File: C03179D.D
Acq: 17 Mar 109 11:35 am

Tgt Ion:53 Resp: 351682

Ion	Ratio	Lower	Upper
53	100		
89	49.8	41.1	61.7
124	17.7	14.6	22.0
0	0.0	0.0	0.0

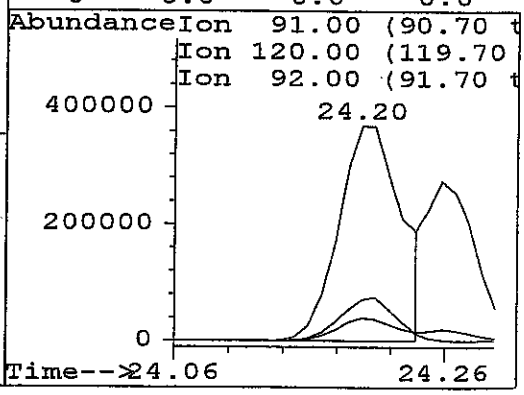


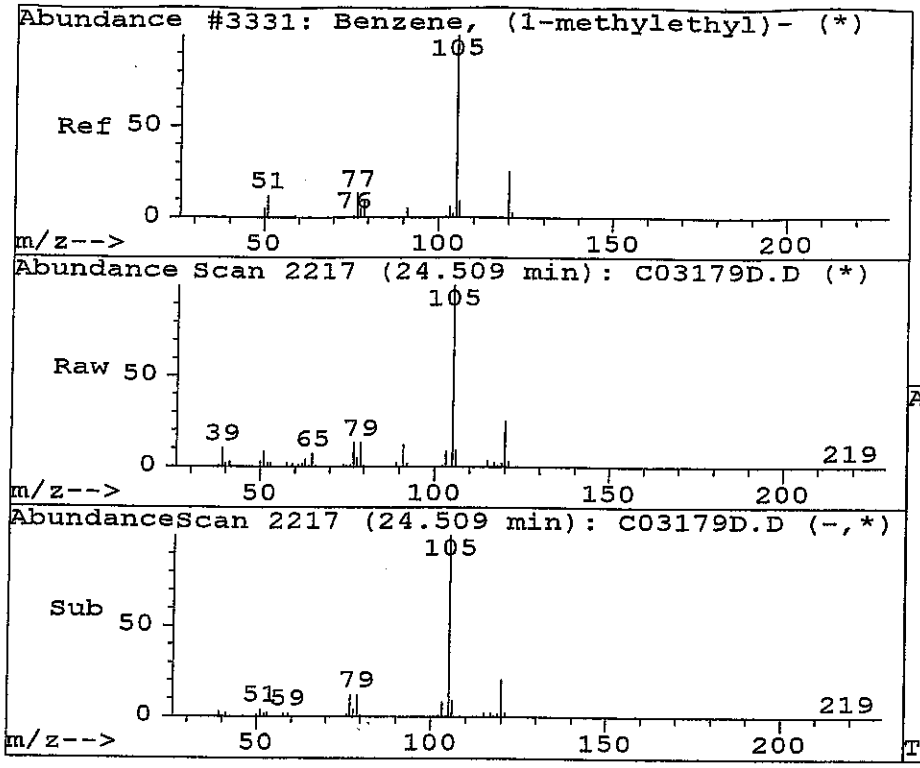


#70
n-Propylbenzene
Concen: 1.28 ppbV
RT: 24.20 min Scan# 2185
Delta R.T. -0.23 min
Lab File: C03179D.D
Acq: 17 Mar 109 11:35 am

Tgt Ion:91 Resp: 1169202

Ion	Ratio	Lower	Upper
91	100		
120	18.0	14.7	22.1
92	10.3	7.8	11.6
0	0.0	0.0	0.0

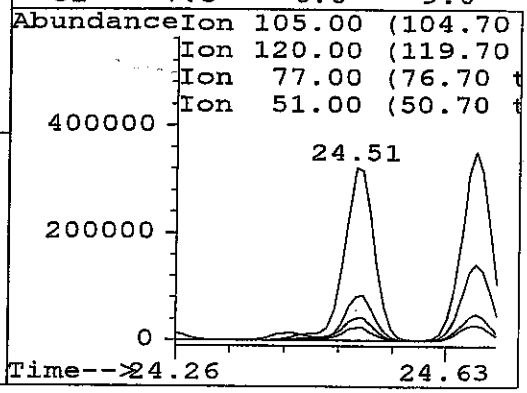


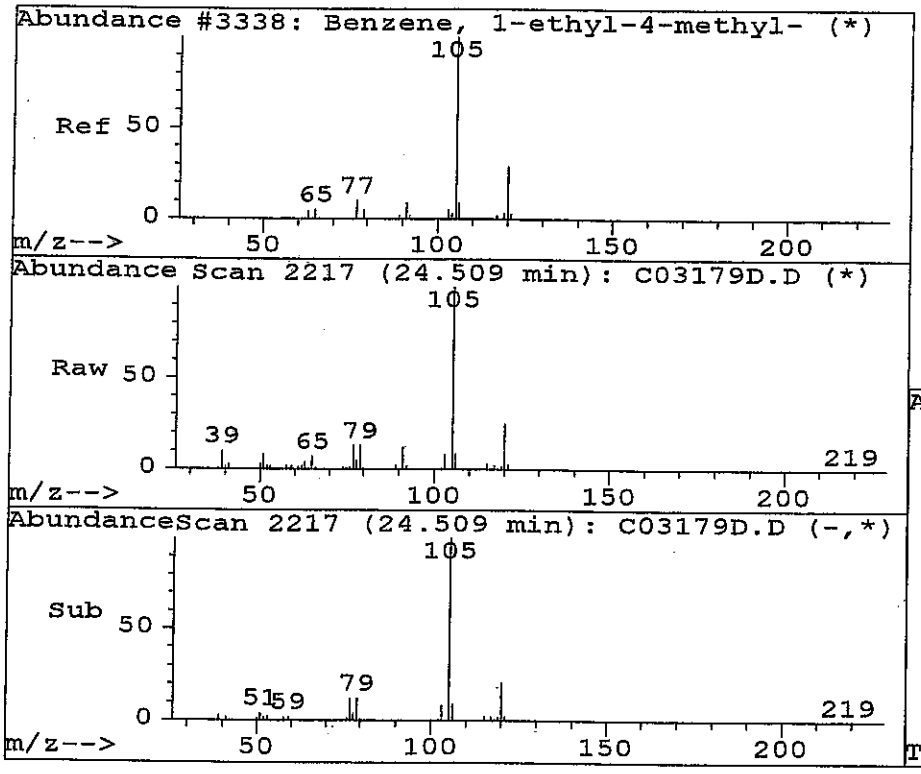


#71
Isopropylbenzene
Concen: 1.46 ppbV
RT: 24.51 min Scan# 2217
Delta R.T. -0.23 min
Lab File: C03179D.D
Acq: 17 Mar 109 11:35 am

Tgt Ion:105 Resp: 943267

Ion	Ratio	Lower	Upper
105	100		
120	26.0	20.2	30.4
77	15.0	12.2	18.4
51	7.5	6.0	9.0

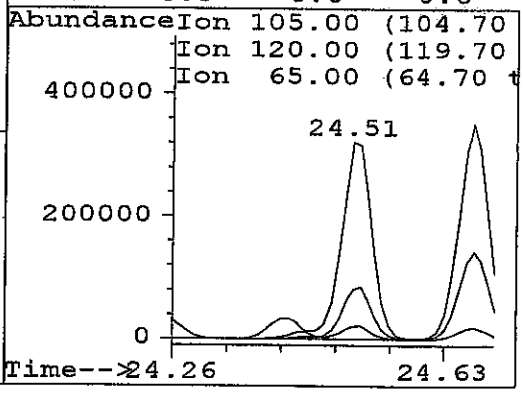


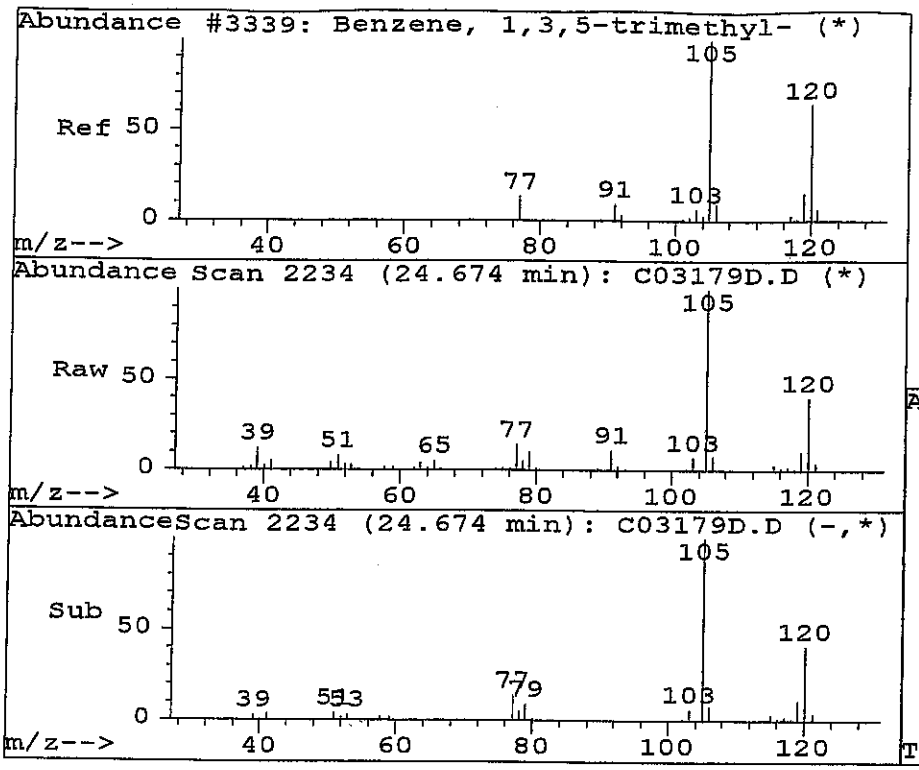


#72
4-Ethyltoluene
Concen: 1.40 ppbV
RT: 24.51 min Scan# 2217
Delta R.T. -0.23 min
Lab File: C03179D.D
Acq: 17 Mar 109 11:35 am

Tgt Ion:105 Resp: 943267

Ion	Ratio	Lower	Upper
105	100		
120	25.4	20.2	30.4
65	6.3	5.2	7.8
0	0.0	0.0	0.0

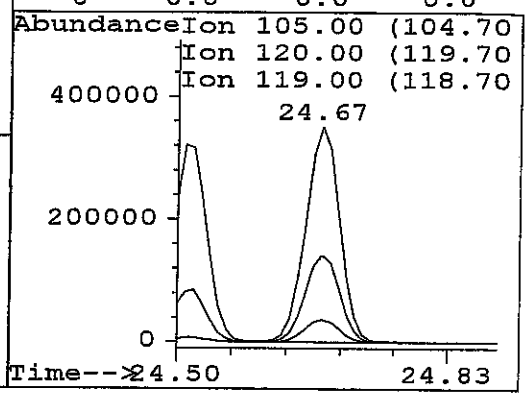


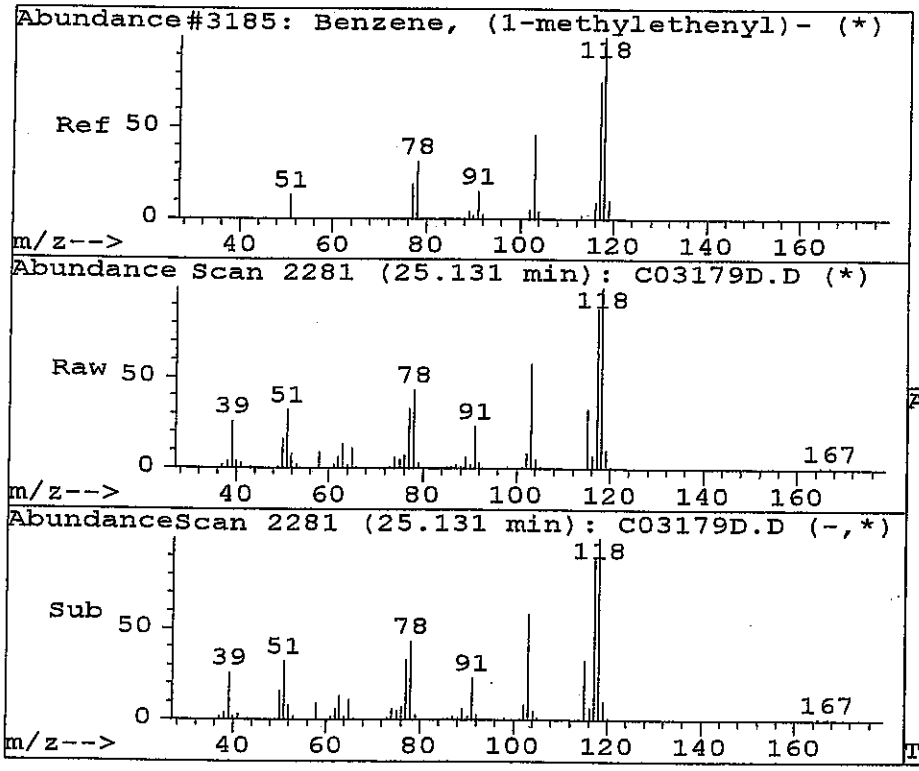


#73
1,3,5-Trimethylbenzene
Concen: 2.17 ppbV
RT: 24.67 min Scan# 2234
Delta R.T. -0.25 min
Lab File: C03179D.D
Acq: 17 Mar 109 11:35 am

Tgt Ion:105 Resp: 994445

Ion	Ratio	Lower	Upper
105	100		
120	40.5	35.6	53.4
119	10.4	8.2	12.4
0	0.0	0.0	0.0

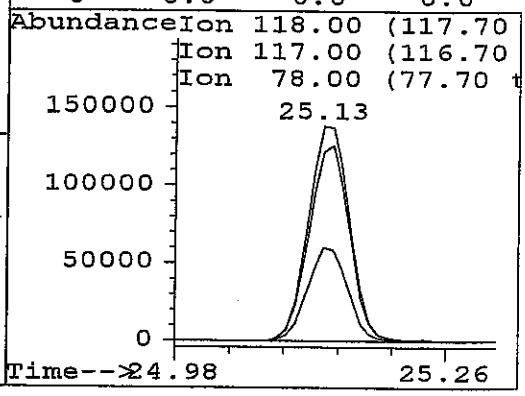


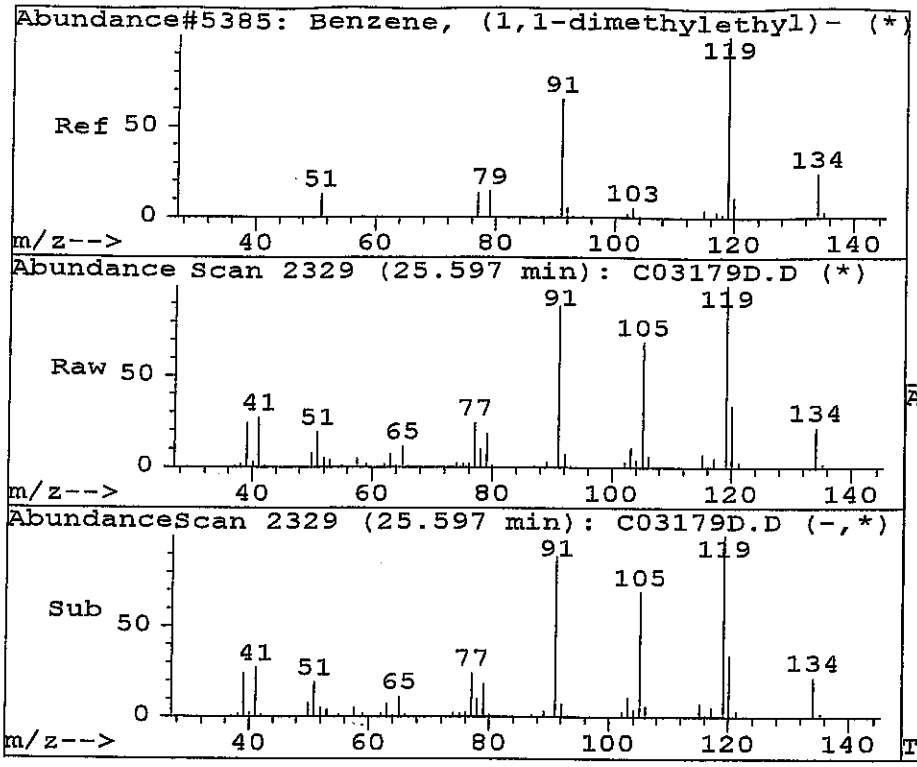


#74
Methylstyrene
Concen: 1.22 ppbV
RT: 25.13 min Scan# 2281
Delta R.T. -0.23 min
Lab File: C03179D.D
Acq: 17 Mar 109 11:35 am

Tgt Ion:118 Resp: 416310

Ion	Ratio	Lower	Upper
118	100		
117	87.8	69.6	104.4
78	43.6	35.8	53.6
0	0.0	0.0	0.0

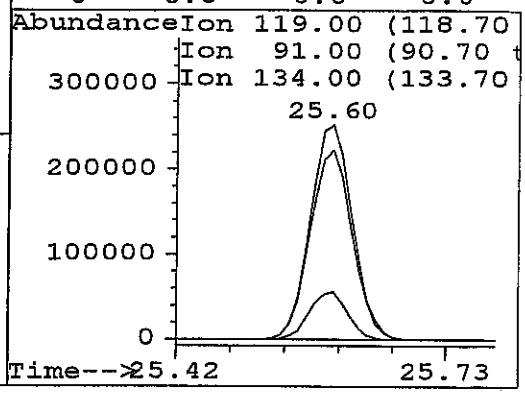


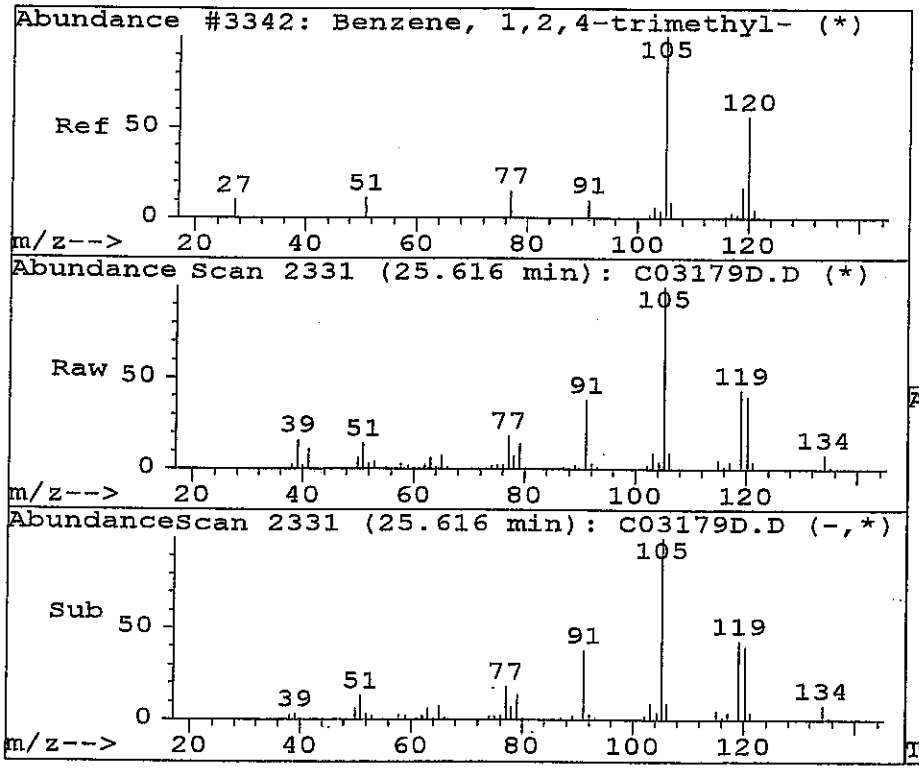


#75
tert-butyl benzene
Concen: 1.57 ppbV
RT: 25.60 min Scan# 2329
Delta R.T. -0.21 min
Lab File: C03179D.D
Acq: 17 Mar 109 11:35 am

Tgt Ion:119 Resp: 821357

Ion	Ratio	Lower	Upper
119	100		
91	88.9	69.8	104.6
134	20.0	14.7	22.1
0	0.0	0.0	0.0

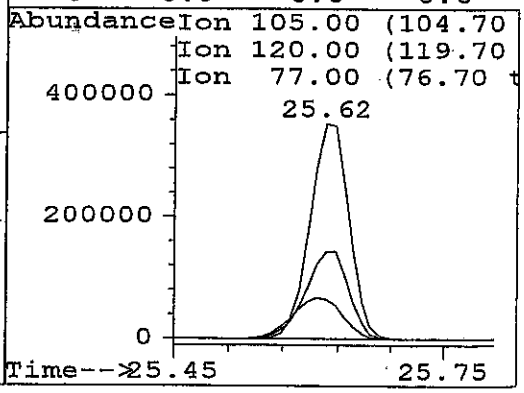


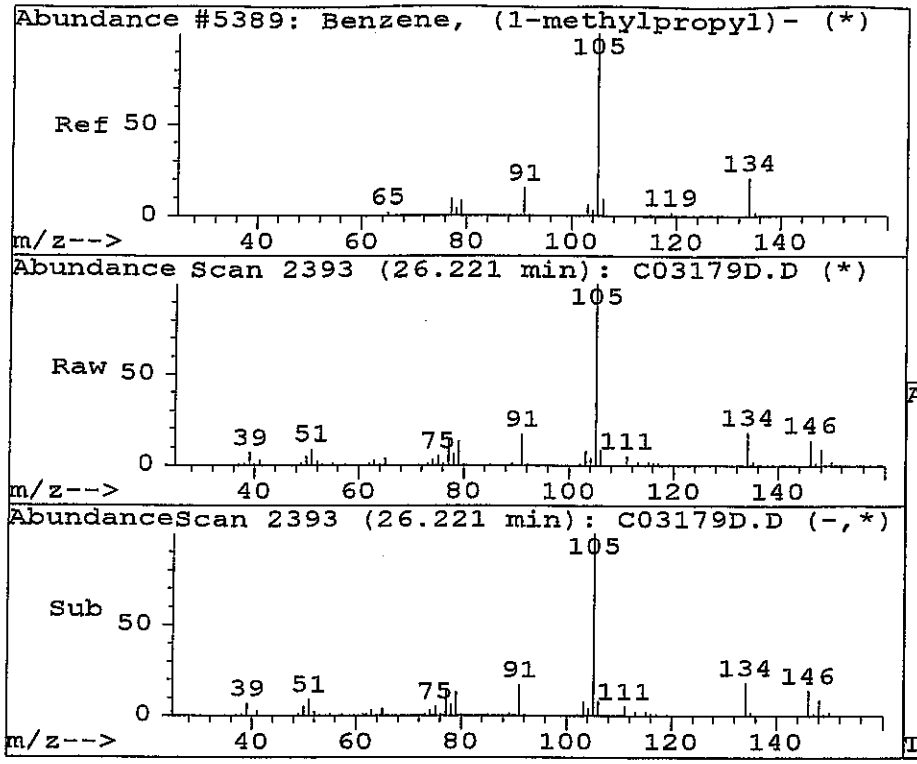


#76
1,2,4-Trimethylbenzene
Concen: 2.22 ppbV
RT: 25.62 min Scan# 2331
Delta R.T. -0.27 min
Lab File: C03179D.D
Acq: 17 Mar 109 11:35 am

Tgt Ion:105 Resp: 1033463

Ion	Ratio	Lower	Upper
105	100		
120	40.0	32.2	48.4
77	18.1	13.6	20.4
0	0.0	0.0	0.0

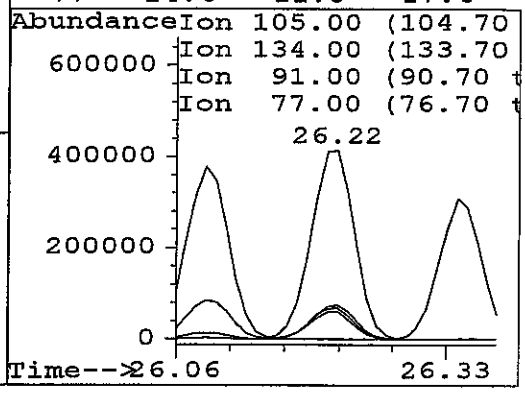


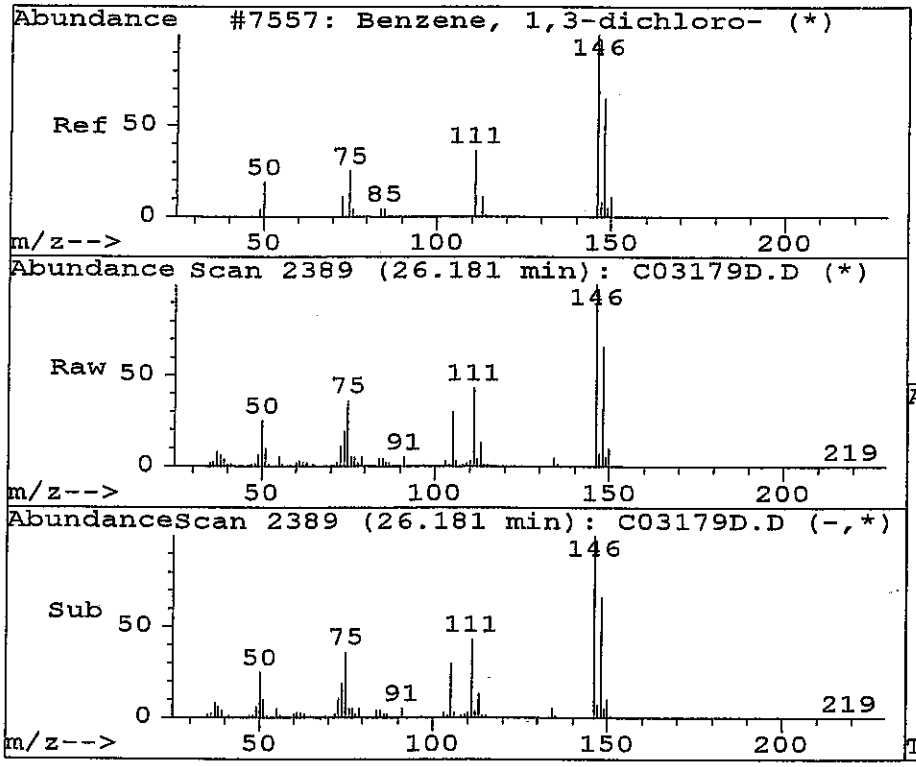


#77
sec-butylbenzene
Concen: 1.57 ppbV
RT: 26.22 min Scan# 2393
Delta R.T. -0.28 min
Lab File: C03179D.D
Acq: 17 Mar 109 11:35 am

Tgt Ion:105 Resp: 1215111

Ion	Ratio	Lower	Upper
105	100		
134	18.0	14.8	22.2
91	16.5	13.2	19.8
77	14.6	11.8	17.6

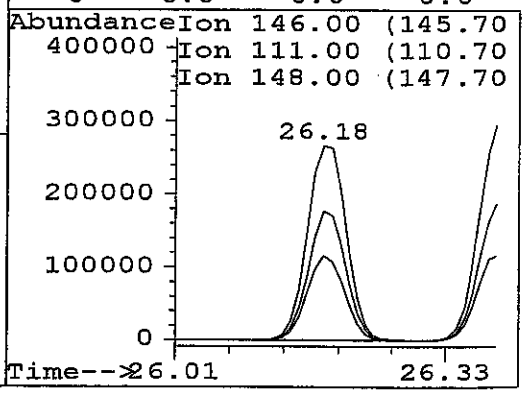


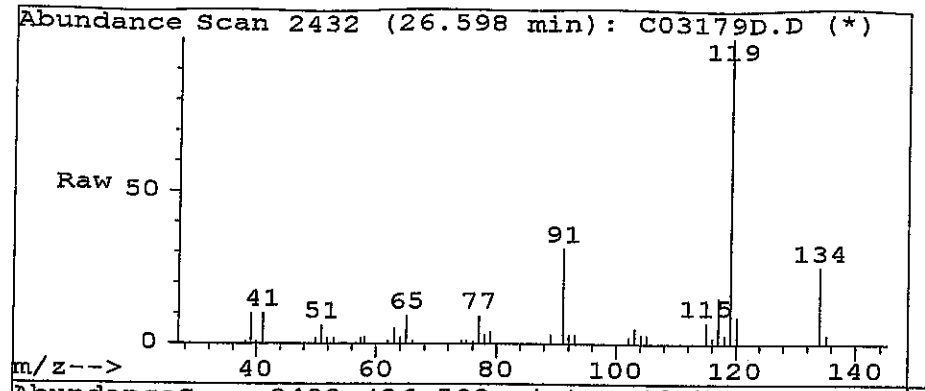


#78
1,3-Dichlorobenzene
Concen: 2.15 ppbV
RT: 26.18 min Scan# 2389
Delta R.T. -0.23 min
Lab File: C03179D.D
Acq: 17 Mar 109 11:35 am

Tgt Ion:146 Resp: 837609

Ion	Ratio	Lower	Upper
146	100		
111	43.5	33.7	50.5
148	66.4	52.0	78.0
0	0.0	0.0	0.0

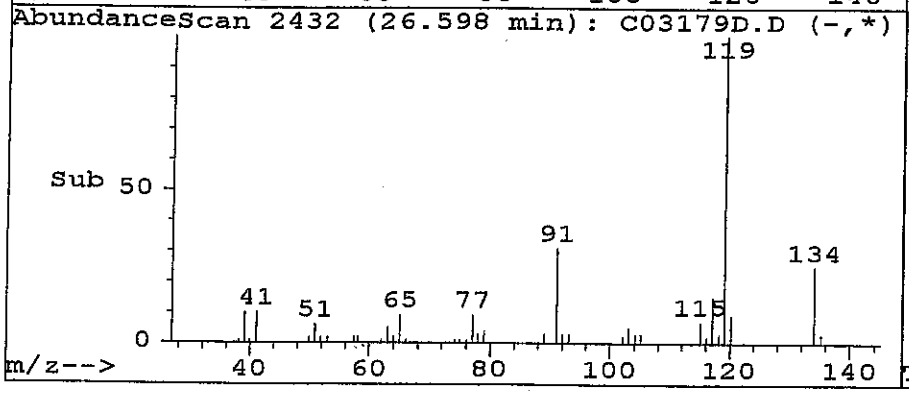


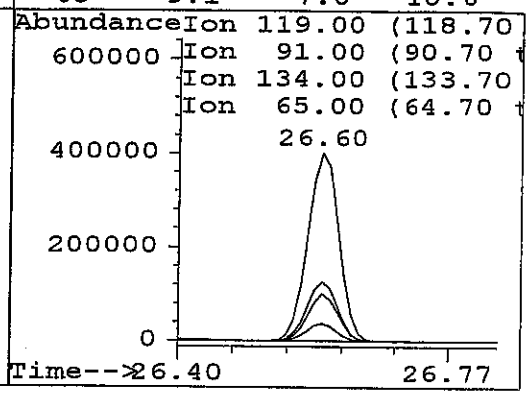


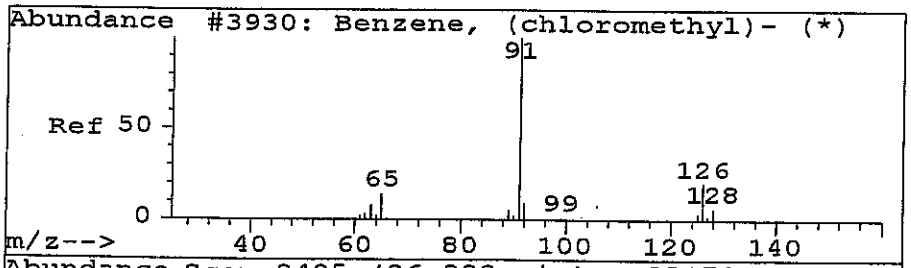
#79
Isopropyltoluene
Concen: 1.60 ppbV
RT: 26.60 min Scan# 2432
Delta R.T. -0.23 min
Lab File: C03179D.D
Acq: 17 Mar 109 11:35 am

Tgt Ion:119 Resp: 1156820

Ion	Ratio	Lower	Upper
119	100		
91	31.3	25.0	37.6
134	24.6	19.3	28.9
65	9.1	7.0	10.6



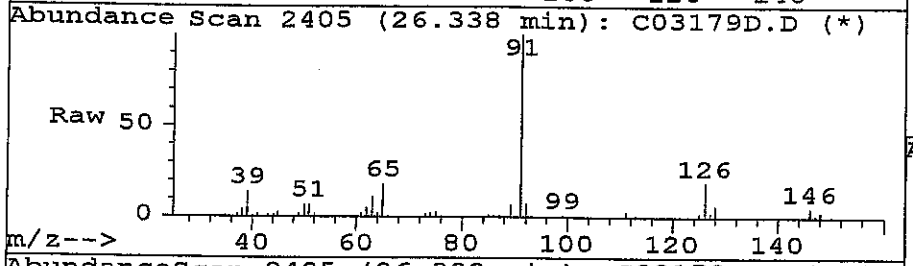


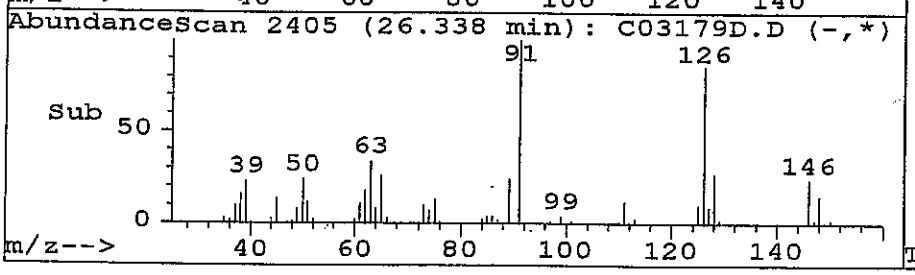


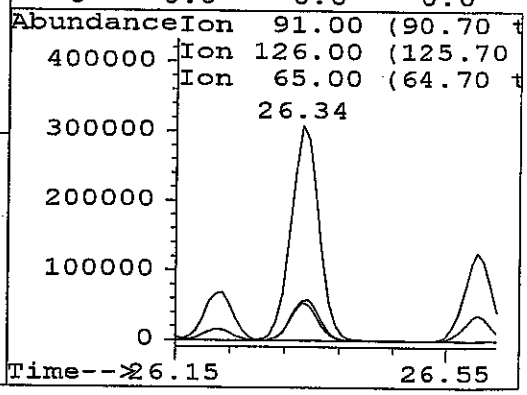
#80
Benzyl chloride
Concen: 1.47 ppbV
RT: 26.34 min Scan# 2405
Delta R.T. -0.27 min
Lab File: C03179D.D
Acq: 17 Mar 109 11:35 am

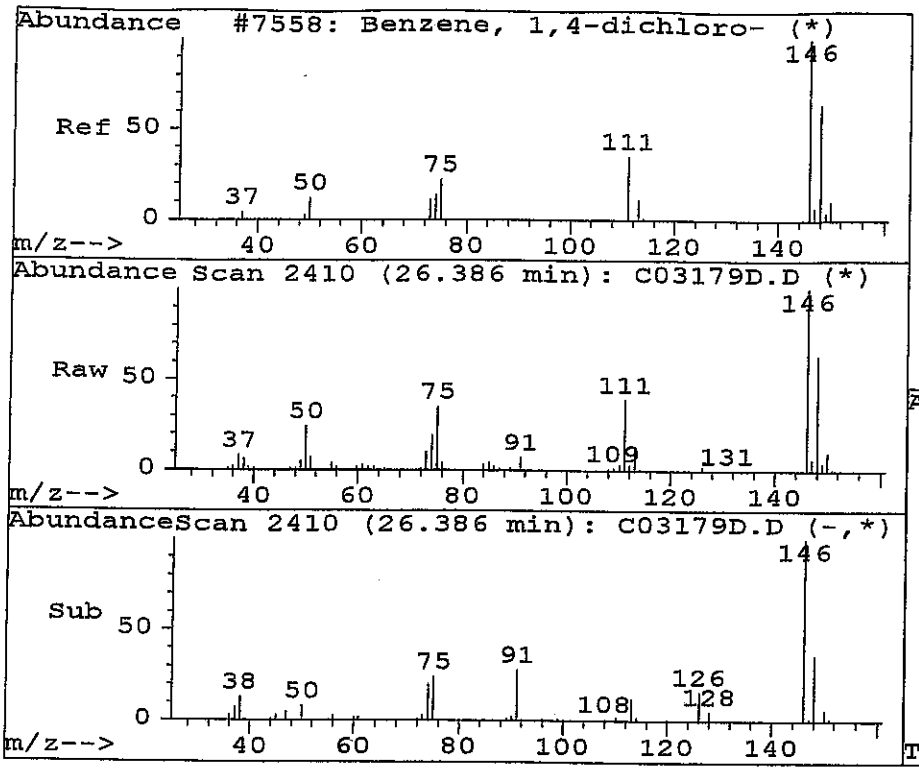
Tgt Ion:91 Resp: 884546

Ion	Ratio	Lower	Upper
91	100		
126	18.6	15.9	23.9
65	17.6	13.2	19.8
0	0.0	0.0	0.0





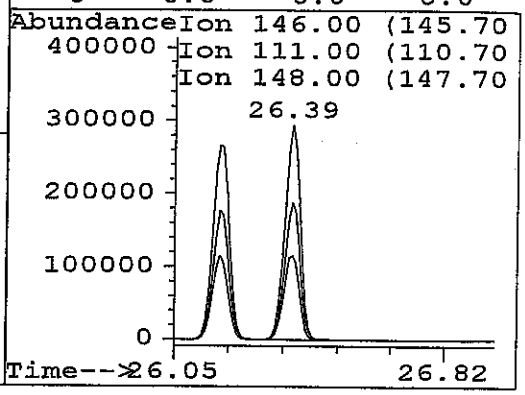


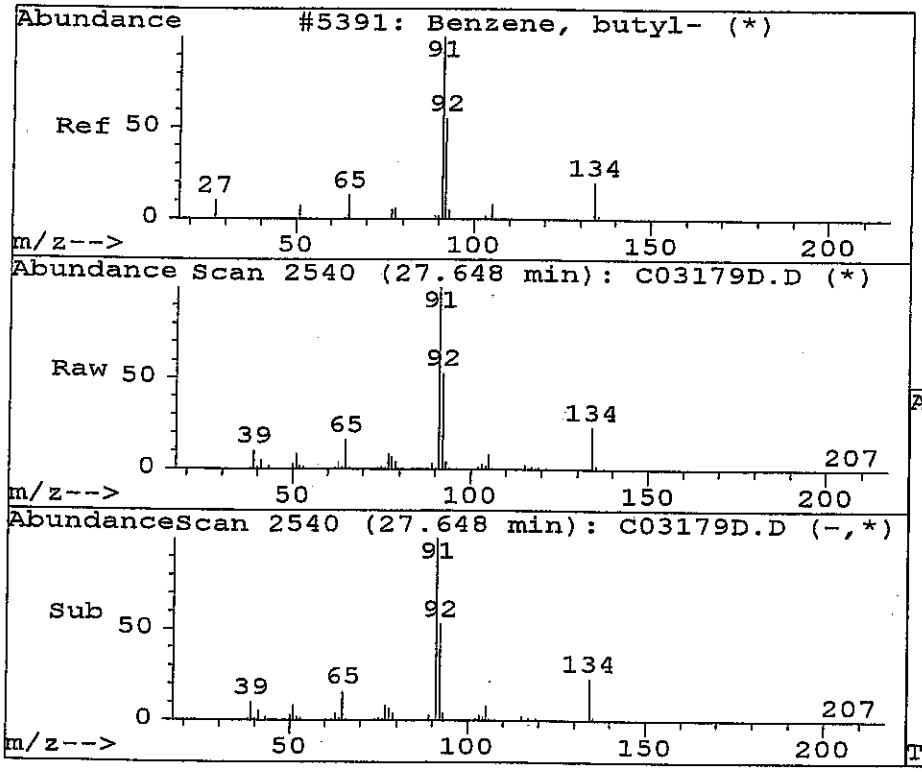


#81
1,4-Dichlorobenzene
Concen: 2.24 ppbV m
RT: 26.39 min Scan# 2410
Delta R.T. -0.29 min
Lab File: C03179D.D
Acq: 17 Mar 109 11:35 am

Tgt Ion:146 Resp: 896732

Ion	Ratio	Lower	Upper
146	100		
111	39.2	32.1	48.1
148	63.4	50.1	75.1
0	0.0	0.0	0.0

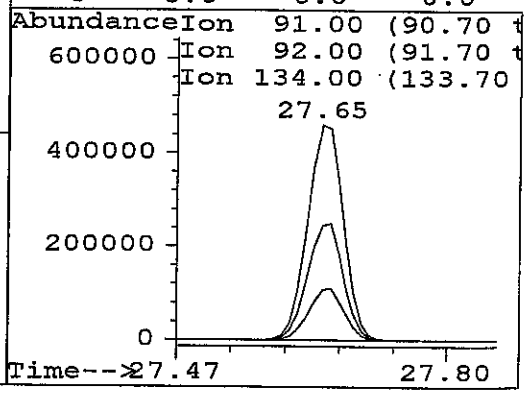


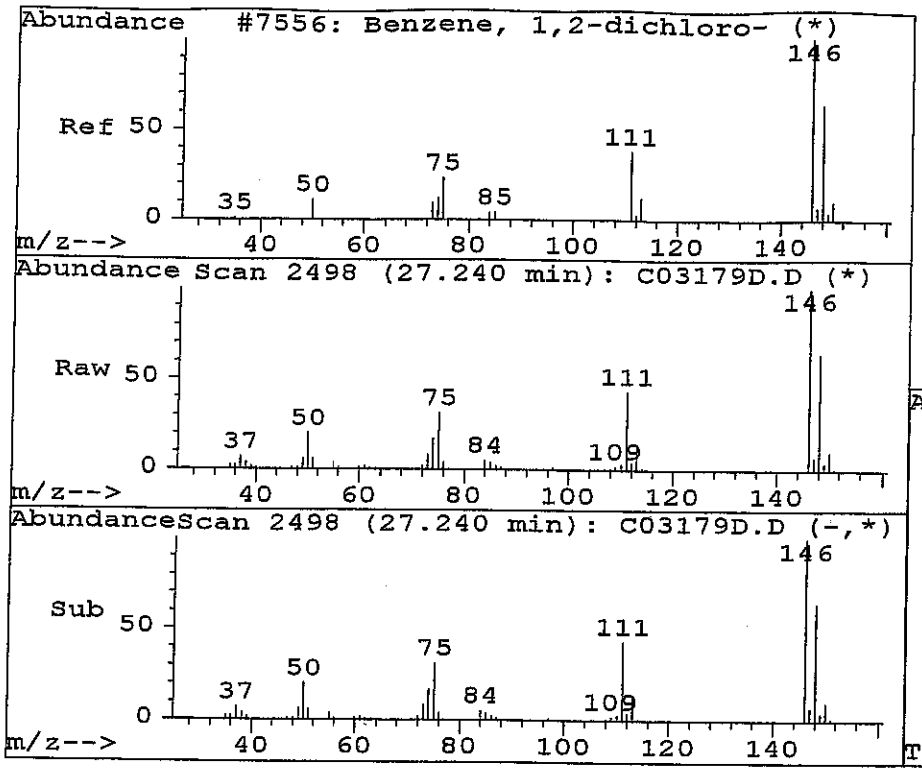


#82
n-Butylbenzene
Concen: 1.68 ppbV
RT: 27.65 min Scan# 2540
Delta R.T. -0.23 min
Lab File: C03179D.D
Acq: 17 Mar 109 11:35 am

Tgt Ion:91 Resp: 1379437

Ion	Ratio	Lower	Upper
91	100		
92	53.9	42.8	64.2
134	23.6	18.7	28.1
0	0.0	0.0	0.0

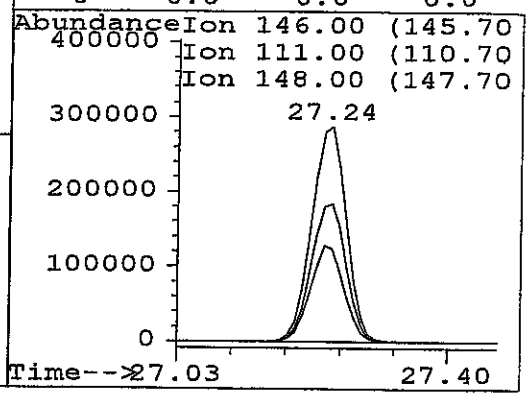


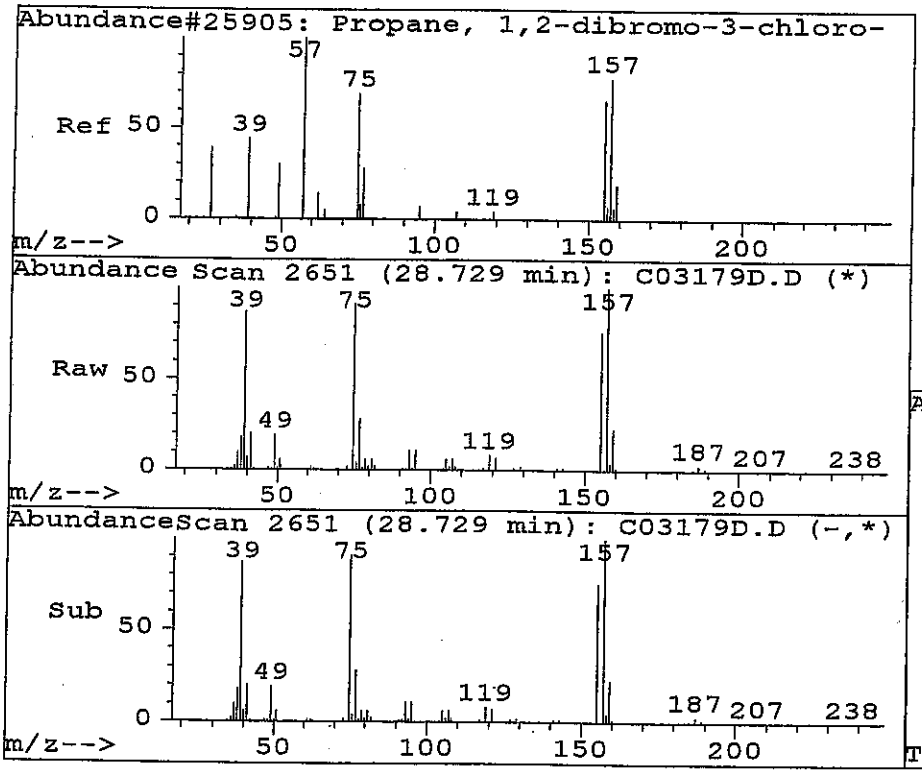


#83
1,2-Dichlorobenzene
Concen: 2.00 ppbV
RT: 27.24 min Scan# 2498
Delta R.T. -0.23 min
Lab File: C03179D.D
Acq: 17 Mar 109 11:35 am

Tgt Ion:146 Resp: 912351

Ion	Ratio	Lower	Upper
146	100		
111	42.9	35.2	52.8
148	63.9	52.9	79.3
0	0.0	0.0	0.0

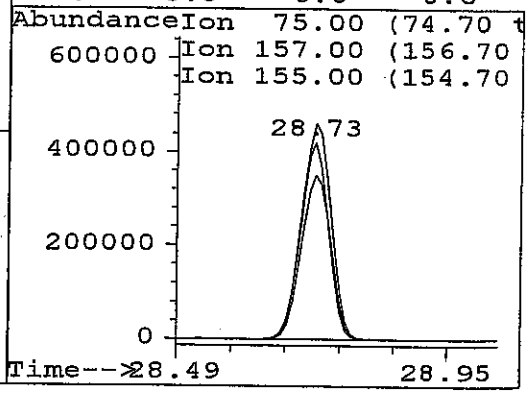


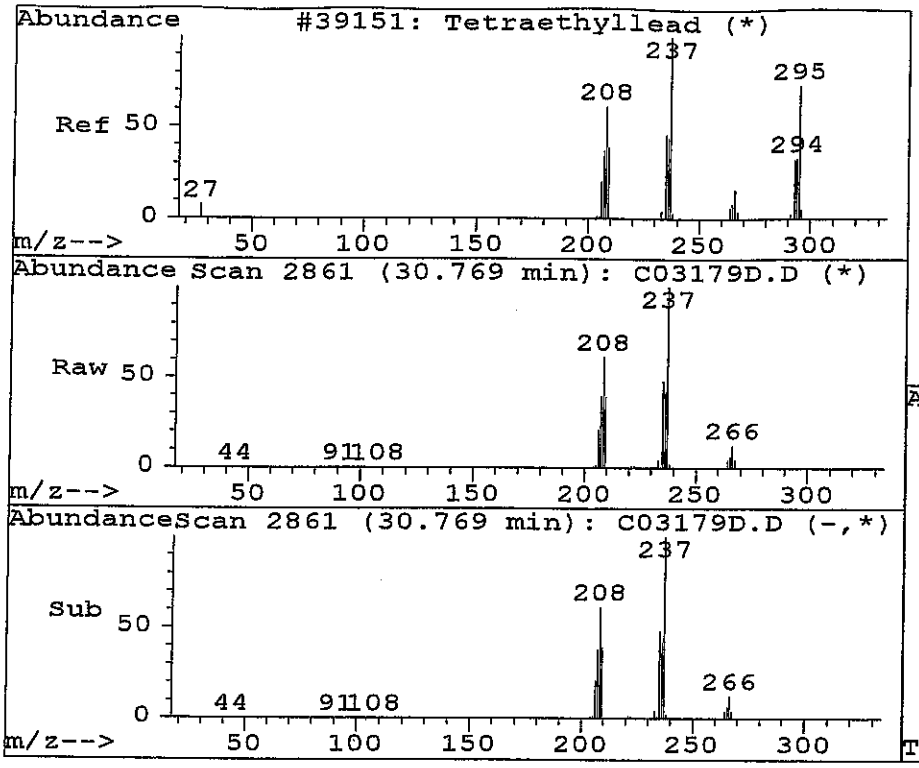


#84
1,2-Dibromo-3-chloropropane
Concen: 4.23 ppbV
RT: 28.73 min Scan# 2651
Delta R.T. -0.23 min
Lab File: C03179D.D
Acq: 17 Mar 109 11:35 am

Tgt Ion:75 Resp: 1381868

Ion	Ratio	Lower	Upper
75	100		
157	109.9	94.6	142.0
155	83.4	75.8	113.6
0	0.0	0.0	0.0

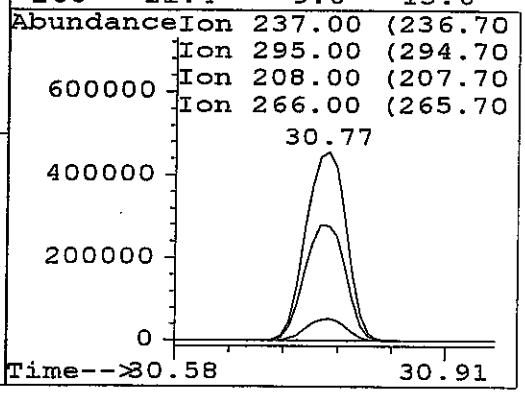


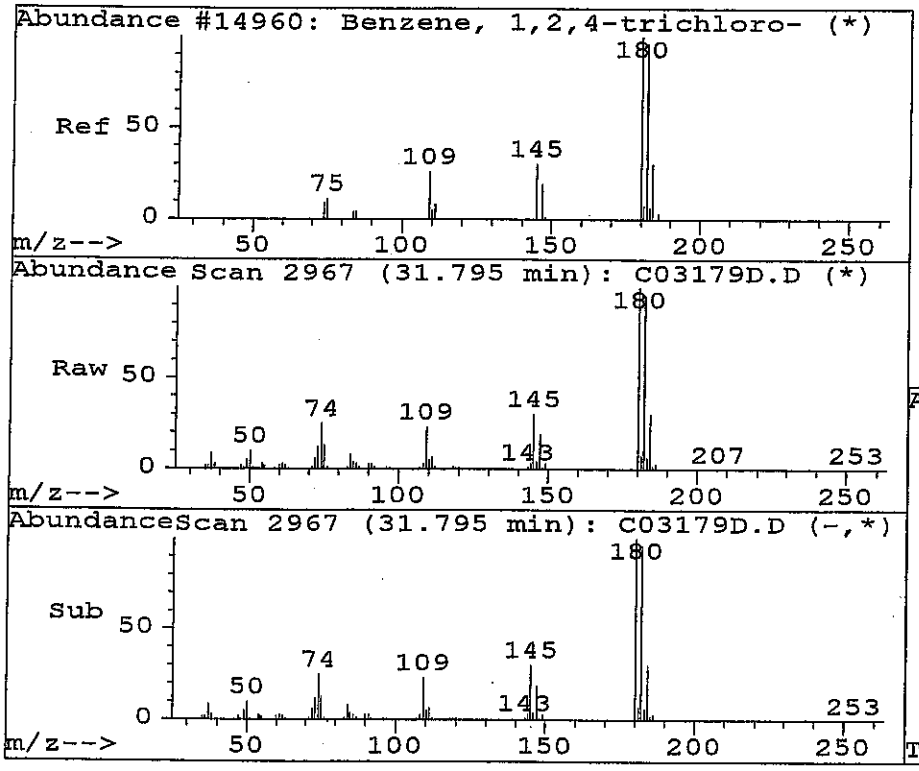


#85
Tetraethyl lead
Concen: 5.29 ppbV
RT: 30.77 min Scan# 2861
Delta R.T. -0.21 min
Lab File: C03179D.D
Acq: 17 Mar 109 11:35 am

Tgt Ion:237 Resp: 1570438

Ion	Ratio	Lower	Upper
237	100		
295	0.0	0.0	0.0
208	62.5	51.6	77.4
266	11.4	9.0	13.6

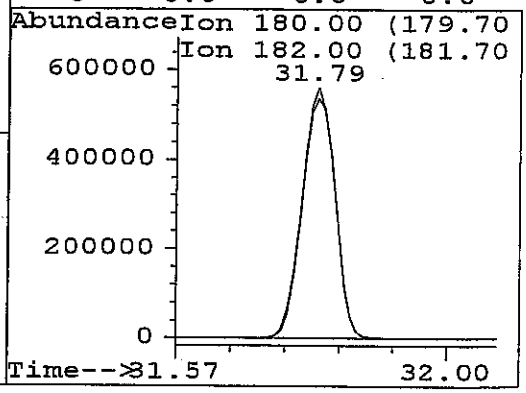


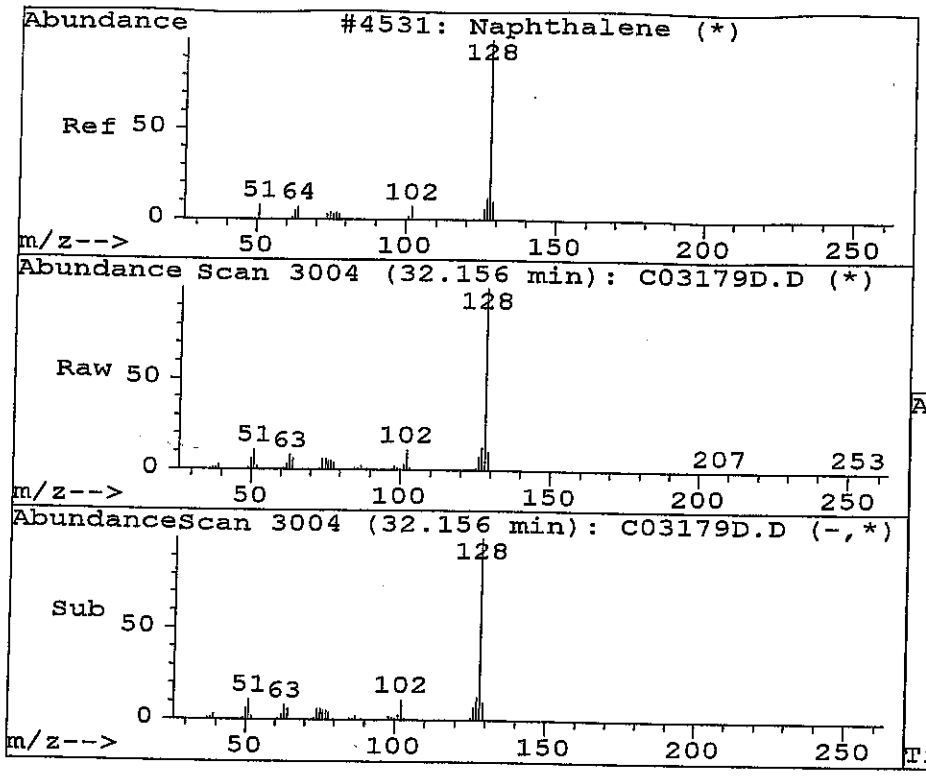


#86
1,2,4-Trichlorobenzene
Concen: 2.42 ppbV
RT: 31.79 min Scan# 2967
Delta R.T. -0.39 min
Lab File: C03179D.D
Acq: 17 Mar 109 11:35 am

Tgt Ion:180 Resp: 1987175

Ion	Ratio	Lower	Upper
180	100		
182	95.5	76.8	115.2
0	0.0	0.0	0.0
0	0.0	0.0	0.0

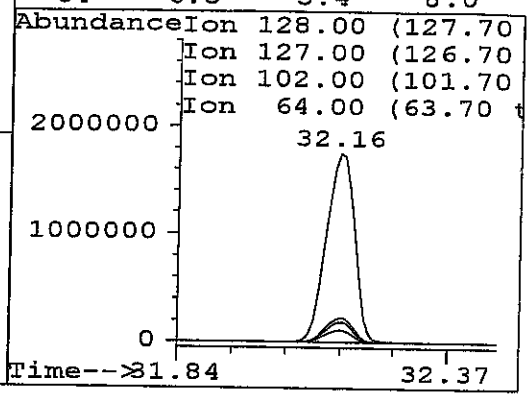


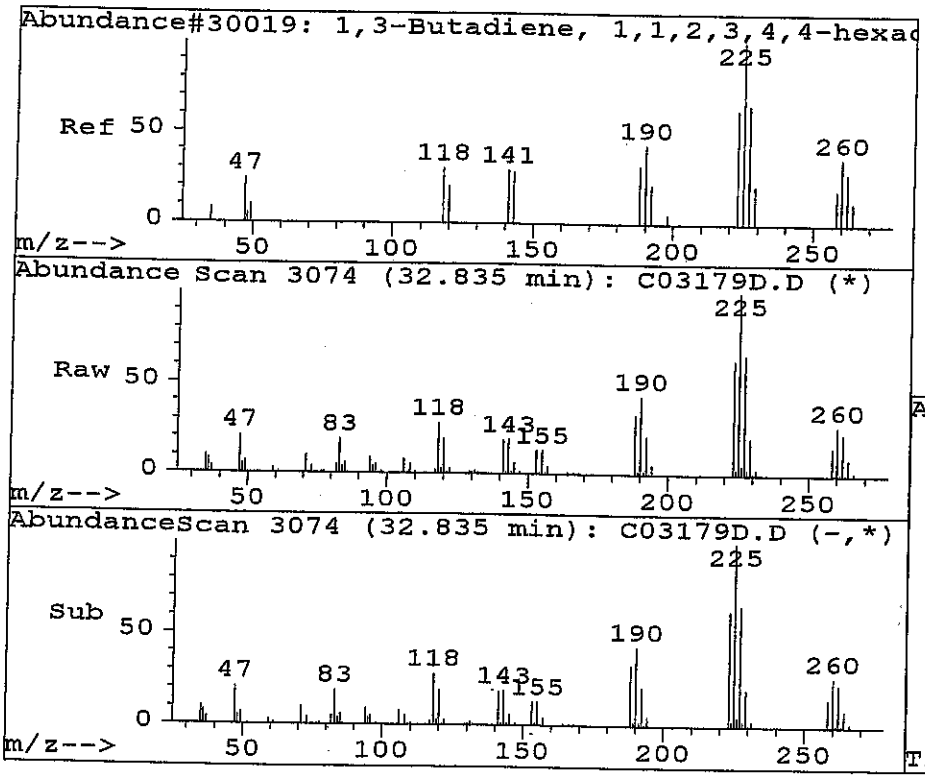


#87
Naphthalene
Concen: 4.68 ppbV
RT: 32.16 min Scan# 3004
Delta R.T. -0.25 min
Lab File: C03179D.D
Acq: 17 Mar 109 11:35 am

Tgt Ion:128 Resp: 6661715

Ion	Ratio	Lower	Upper
128	100		
127	13.0	10.3	15.5
102	10.7	8.2	12.2
64	6.5	5.4	8.0

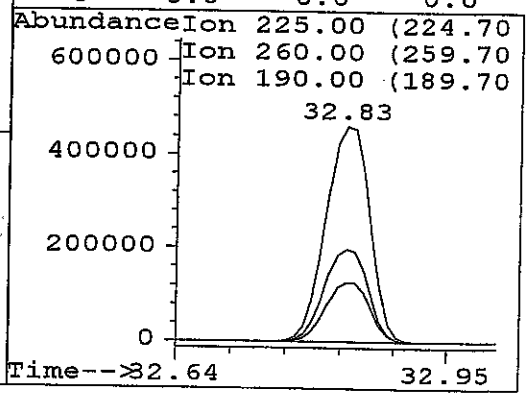


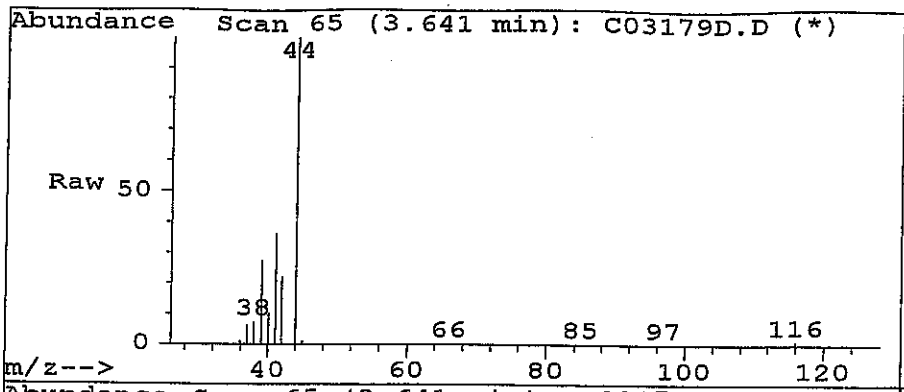


#88
Hexachlorobutadiene
Concen: 2.61 ppbV
RT: 32.83 min Scan# 3074
Delta R.T. -0.25 min
Lab File: C03179D.D
Acq: 17 Mar 109 11:35 am

Tgt Ion:225 Resp: 1622637

Ion	Ratio	Lower	Upper
225	100		
260	27.4	22.6	34.0
190	42.9	32.7	49.1
0	0.0	0.0	0.0

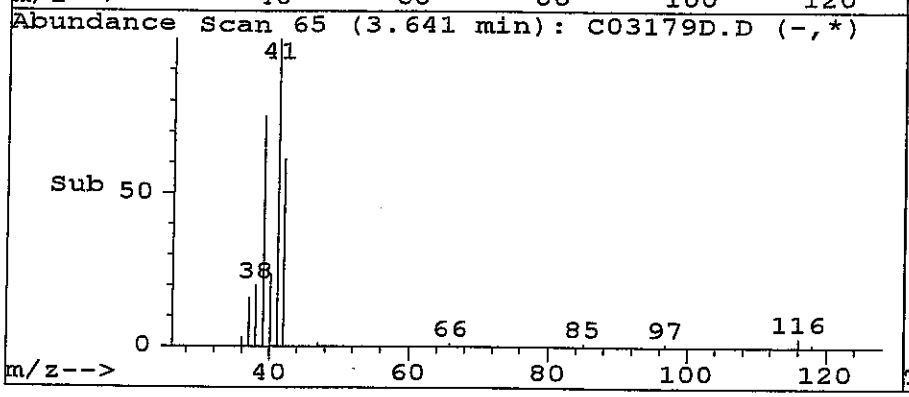


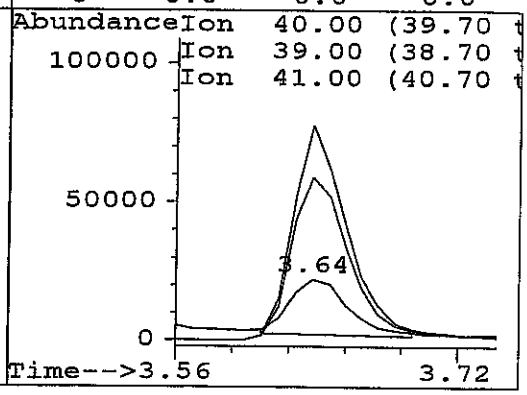


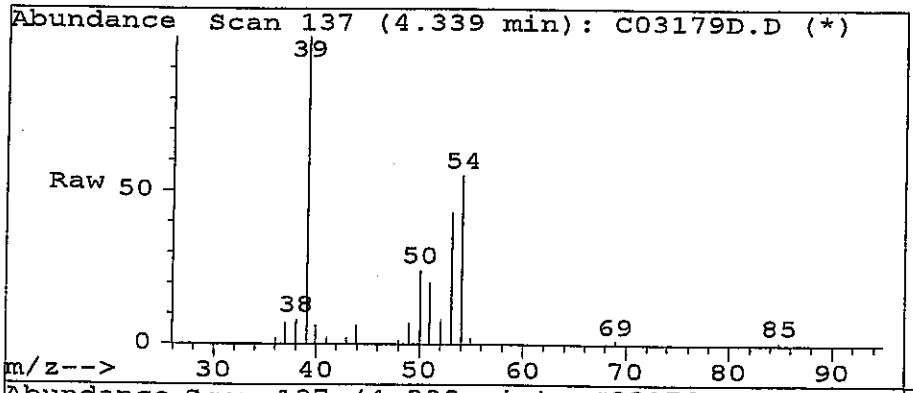
#89
Propylene
Concen: 2.73 ppbV m
RT: 3.64 min Scan# 65
Delta R.T. -0.12 min
Lab File: C03179D.D
Acq: 17 Mar 109 11:35 am

Tgt Ion:40 Resp: 46990

Ion	Ratio	Lower	Upper
40	100		
39	267.2	111.4	167.0#
41	352.6	162.3	243.5#
0	0.0	0.0	0.0



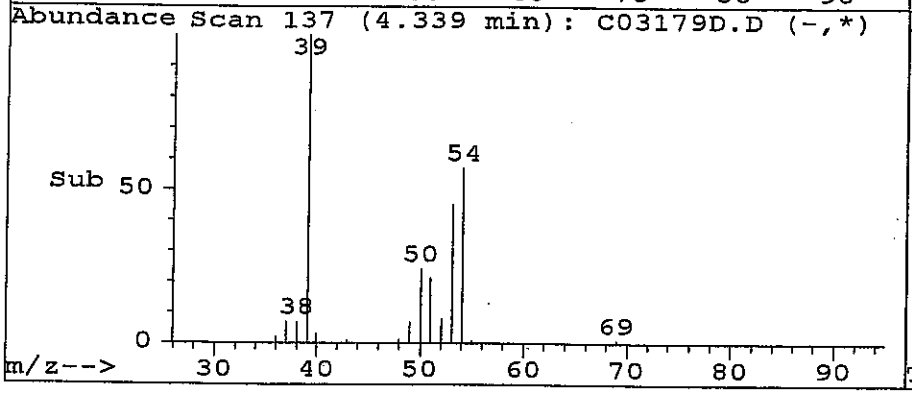


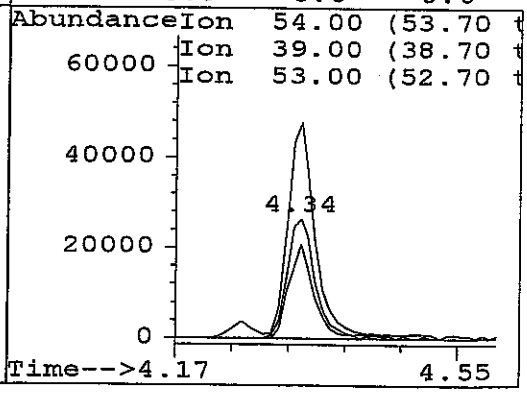


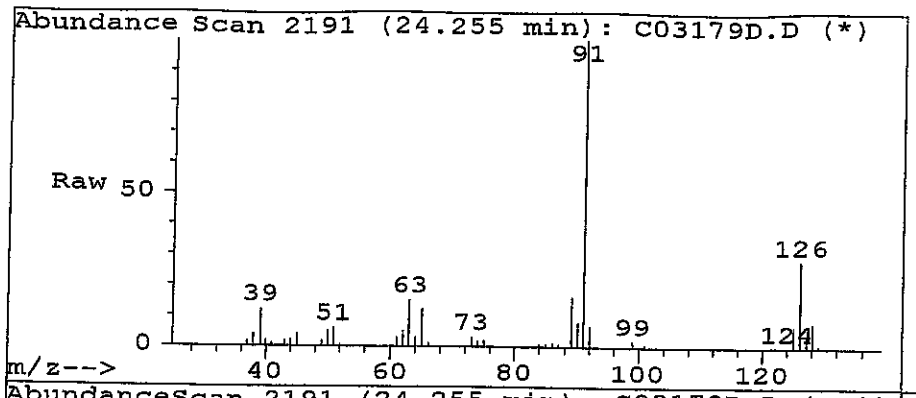
#90
1,3-Butadiene
Concen: 1.96 ppbV
RT: 4.34 min Scan# 137
Delta R.T. -0.13 min
Lab File: C03179D.D
Acq: 17 Mar 109 11:35 am

Tgt Ion:54 Resp: 70986

Ion	Ratio	Lower	Upper
54	100		
39	173.6	154.7	232.1
53	68.6	54.4	81.6
0	0.0	0.0	0.0



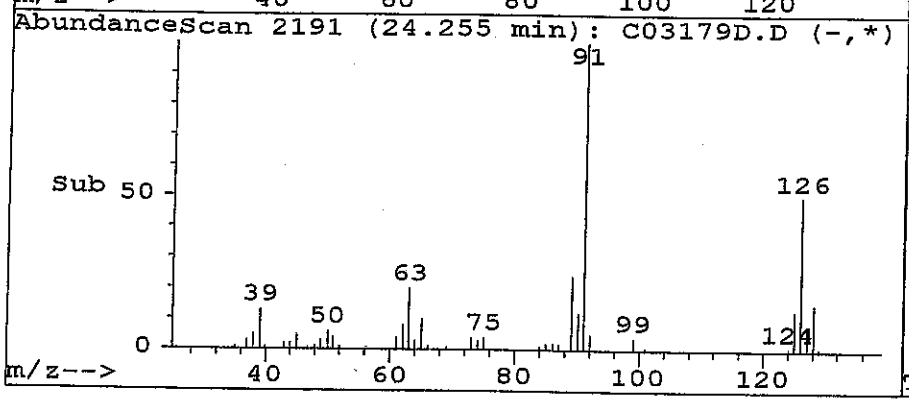


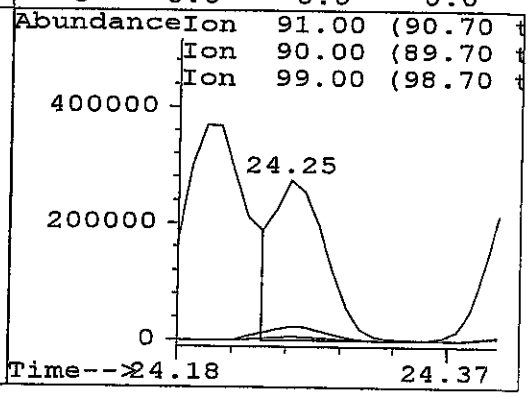


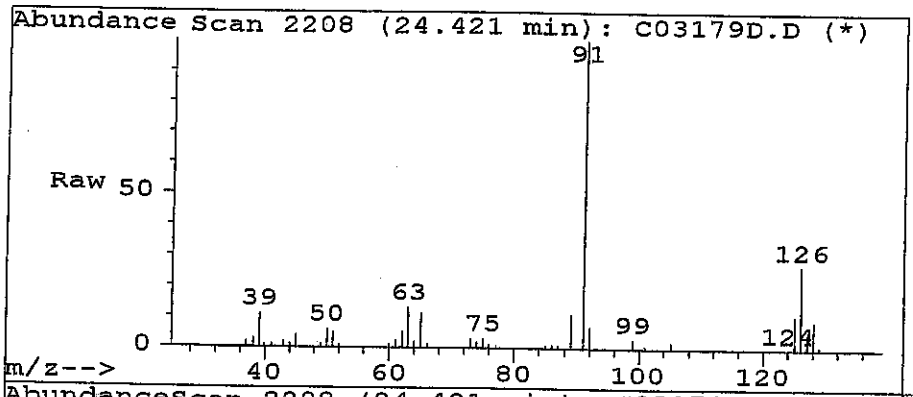
#92
2-Chlorotoluene
Concen: 1.42 ppbV m
RT: 24.25 min Scan# 2191
Delta R.T. -0.21 min
Lab File: C03179D.D
Acq: 17 Mar 109 11:35 am

Tgt Ion:91 Resp: 676208

Ion	Ratio	Lower	Upper
91	100		
90	8.4	7.8	11.8
99	2.4	1.6	2.4
0	0.0	0.0	0.0



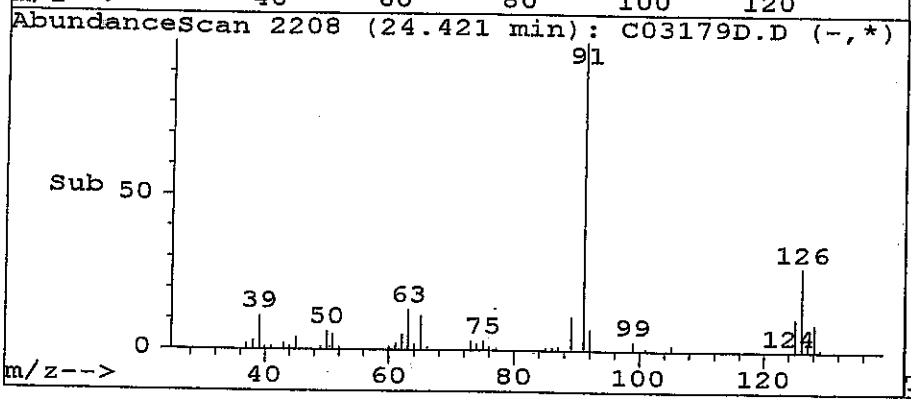


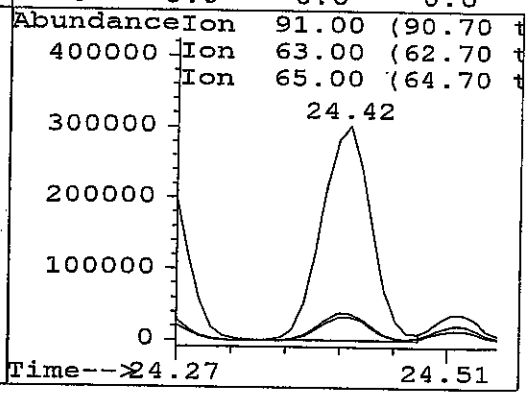


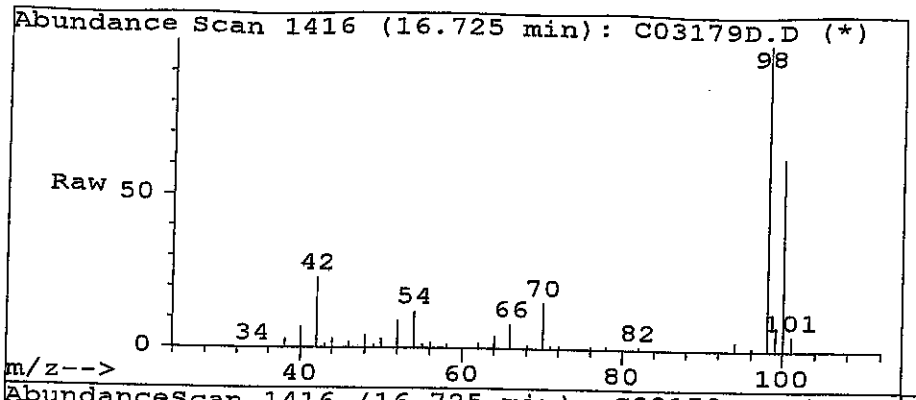
#93
4-Chlorotoluene
Concen: 1.47 ppbV
RT: 24.42 min Scan# 2208
Delta R.T. -0.23 min
Lab File: C03179D.D
Acq: 17 Mar 109 11:35 am

Tgt Ion:91 Resp: 884150

Ion	Ratio	Lower	Upper
91	100		
63	13.4	10.7	16.1
65	11.7	9.8	14.8
0	0.0	0.0	0.0



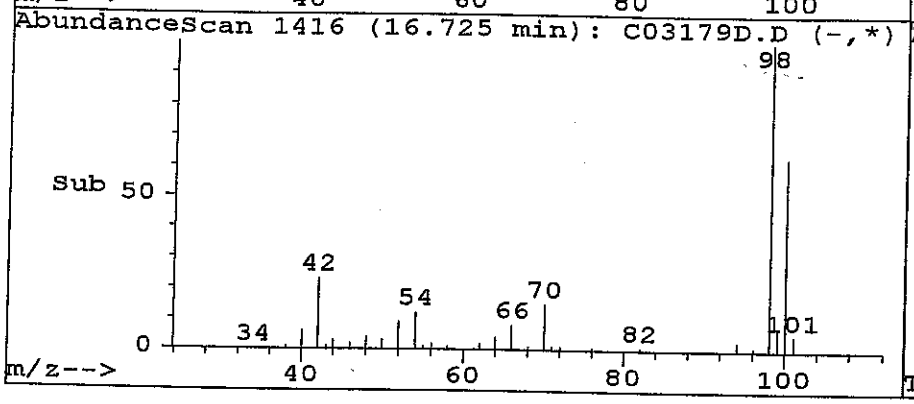


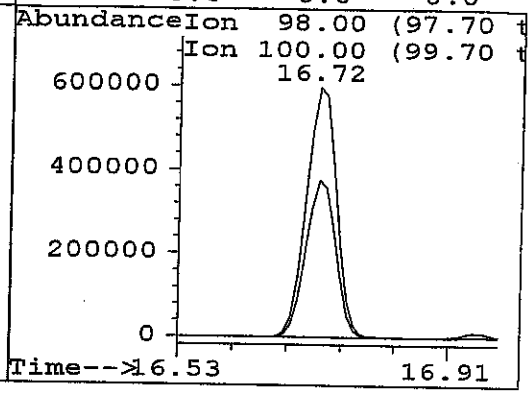


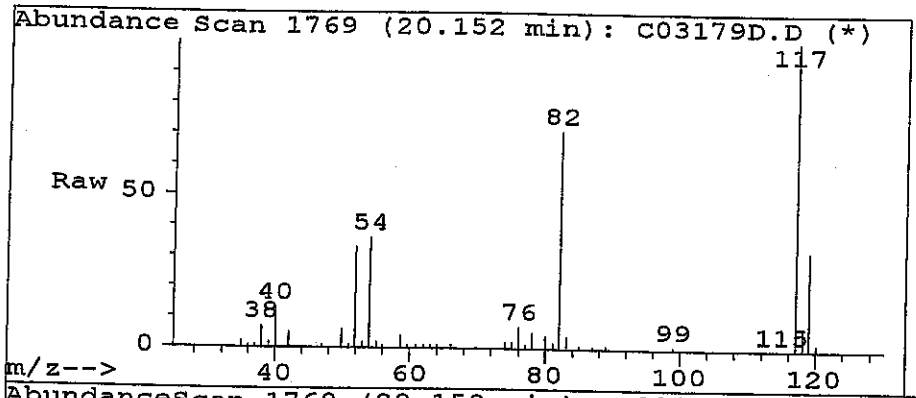
#94
Toluene-d8
Concen: 10.13 ppbV
RT: 16.72 min Scan# 1416
Delta R.T. -0.22 min
Lab File: C03179D.D
Acq: 17 Mar 109 11:35 am

Tgt Ion:98 Resp: 1730275

Ion	Ratio	Lower	Upper
98	100		
100	63.1	49.1	73.7
0	0.0	0.0	0.0
0	0.0	0.0	0.0



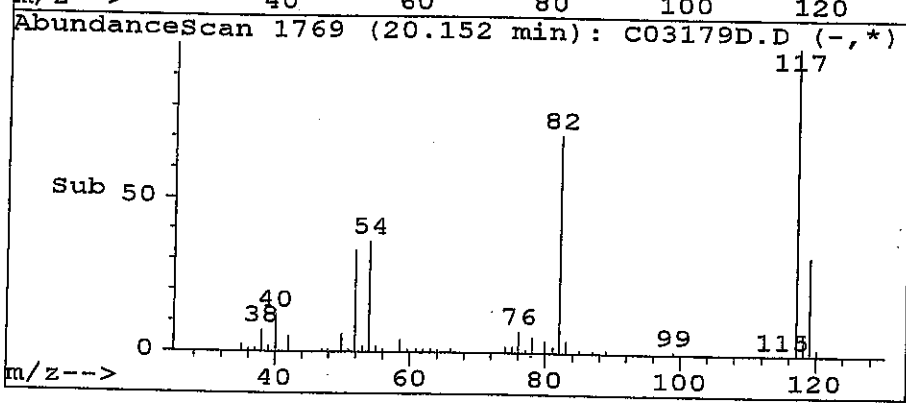


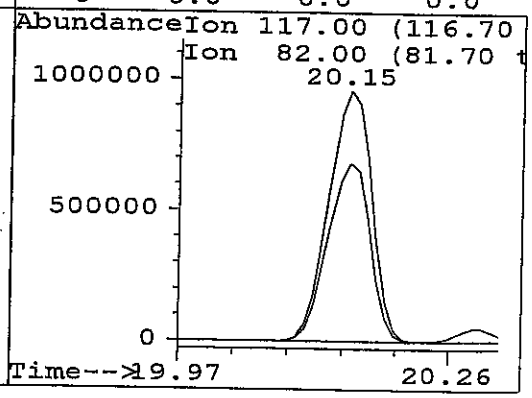


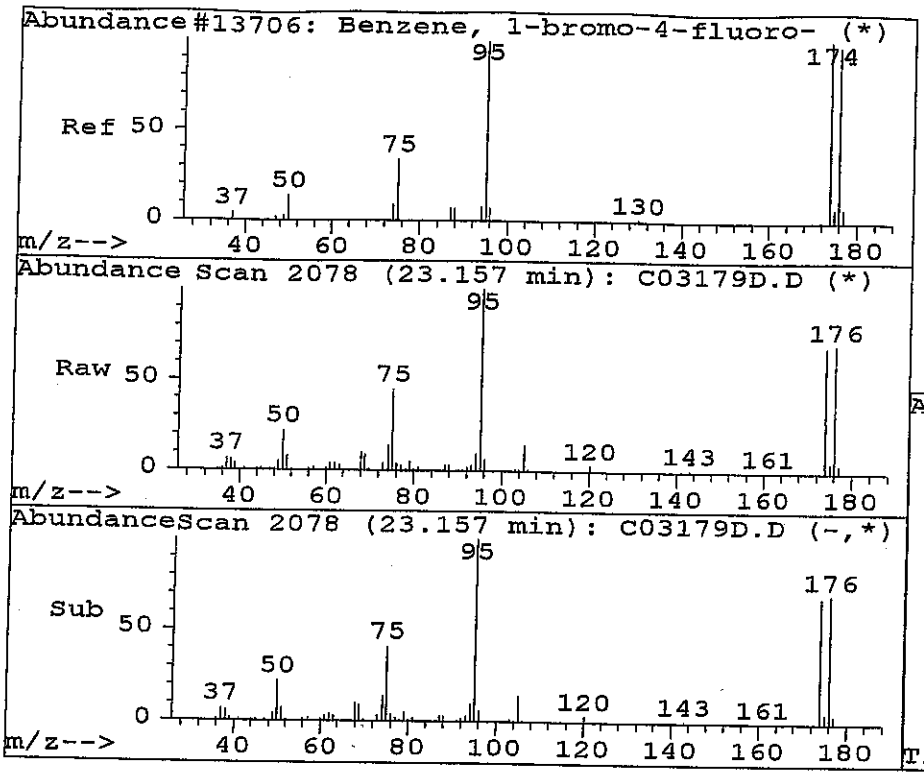
#95
Chlorobenzene-d5
Concen: 19.94 ppbV
RT: 20.15 min Scan# 1769
Delta R.T. -0.21 min
Lab File: C03179D.D
Acq: 17 Mar 109 11:35 am

Tgt Ion:117 Resp: 3122484

Ion	Ratio	Lower	Upper
117	100		
82	71.3	57.4	86.0
0	0.0	0.0	0.0
0	0.0	0.0	0.0



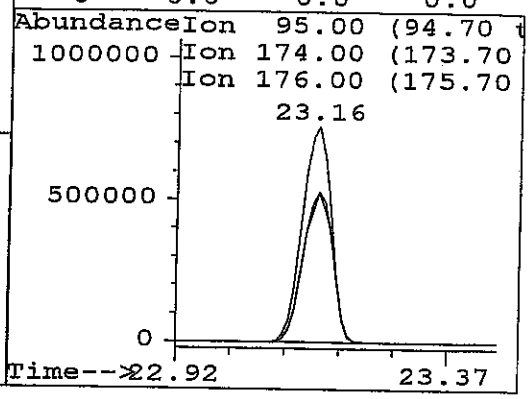




#96
1,4-Bromofluorobenzene
Concen: 10.20 ppbV
RT: 23.16 min Scan# 2078
Delta R.T. -0.22 min
Lab File: C03179D.D
Acq: 17 Mar 109 11:35 am

Tgt Ion:95 Resp: 2472723

Ion	Ratio	Lower	Upper
95	100		
174	69.4	57.0	85.6
176	69.7	55.8	83.6
0	0.0	0.0	0.0



Quantitation Report

Data File : C:\MSCHEM\2\DATA\03179M~1\C03179E.D
Acq Time : 17 Mar 109 1:25 pm
Sample : ST60022 + ST60350
Misc : 4.0 ML
Quant Time: Mar 17 15:03 19109

Operator: KB
Inst : 5970 - In
Multiplr: 1.00

Method : C:\MSCHEM\2\METHODS\1T15EXAY.M
Title : EPA TO-15
Last Update : Tue Mar 17 14:18:15 2009
Response via : Multiple Level Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene	11.16	168	2935915	20.00	ppbV	-0.22
35) 1,4-Difluorobenzene	12.95	114	2870629	20.00	ppbV	-0.22
System Monitoring Compounds						%Recovery
94) Toluene-d8	16.72	98	1629143	9.98	ppbV	199.69%
95) Chlorobenzene-d5	20.15	117	3026382	20.57	ppbV	205.68%
96) 1,4-Bromofluorobenzene	23.15	95	2385587	10.50	ppbV	210.10%
Target Compounds						Qvalue
2) Dichlorodifluoromethane	3.69	85	398558	4.80	ppbV	91
3) Chloromethane	3.94	50	241294	4.40	ppbV m	29
4) Freon 114	3.96	85	399238	4.53	ppbV	96
5) Vinyl chloride	4.17	62	132864	4.56	ppbV	95
6) Bromomethane	4.74	94	136639	4.77	ppbV	96
7) Chloroethane	4.94	64	71497	4.73	ppbV	99
8) Ethanol	4.99	45	337417	6.32	ppbV m	83
9) Acrolein	5.69	56	168949	11.11	ppbV #	84
10) Trichlorofluoromethane	5.75	101	364524	4.63	ppbV	92
11) Acetonitrile	5.75	41	532977	8.07	ppbV	99
12) Acetone	5.83	43	442389	3.37	ppbV m	95
13) 2-propanol	5.92	45	321532	3.17	ppbV m	73
14) Methyl iodide	6.77	142	321955	5.36	ppbV	94
15) 1,1-Dichloroethene	6.68	61	248606	3.69	ppbV	90
16) Acrylonitrile	6.72	53	435309	10.32	ppbV #	92
17) Freon 113	6.95	151	220191	4.16	ppbV #	79
18) Allyl chloride	7.13	41	282890	3.30	ppbV #	84
19) Dichloromethane	7.09	84	124766	4.23	ppbV #	86
20) Carbon disulfide	7.32	76	137347	3.23	ppbV #	95
21) trans-1,2-Dichloroethene	8.16	96	117954	3.83	ppbV #	72
22) Methyl tert butyl ether	8.32	73	482973	3.30	ppbV #	90
23) Propionitrile	8.57	54	434833	8.39	ppbV	98
24) 1,1-Dichloroethane	8.67	63	387657	4.66	ppbV	99
25) Vinyl acetate	10.09	43	687529	3.37	ppbV	99
26) 2-Butanone	9.31	72	92652	3.44	ppbV #	48
27) Hexane	9.49	57	226768	2.85	ppbV #	82
28) Bromochloromethane	10.27	49	372741	3.53	ppbV #	84
29) Tetrahydrofuran	10.62	42	1207319	2.97	ppbV m	40
30) Isobutyl alcohol	10.62	74	90372	8.44	ppbV #	84
31) Methacrylonitrile	9.49	67	367703	12.65	ppbV	94
32) cis-1,2-Dichloroethene	9.88	96	190337	4.40	ppbV	94
33) 2,2-Dichloropropane	10.19	77	370695	3.89	ppbV	99
34) Chloroform	10.30	83	449509	4.50	ppbV	93
36) 1,1,1-Trichloroethane	11.57	97	432442	4.42	ppbV #	88
37) 1,2-Dichloroethane	11.64	62	398927	4.35	ppbV	98
38) 1,1-Dichloropropene	12.02	75	325075	3.59	ppbV	97
39) Cyclohexane	12.35	56	380141	3.71	ppbV	97
40) Benzene	12.28	78	712515	3.73	ppbV	96
41) Carbon tetrachloride	12.34	117	451629	4.58	ppbV #	80
42) n-Heptane	13.81	43	616569	3.38	ppbV	96
43) 1,2-Dichloropropane	13.83	63	266688	4.34	ppbV	90
44) 1,4 Dioxane	14.15	88	171544	3.22	ppbV #	94
45) Dibromomethane	13.97	174	411463	3.66	ppbV	97
46) Trichloroethene	13.90	130	323273	4.15	ppbV	94
47) Bromodichloromethane	14.16	83	476051	3.47	ppbV	90
48) Methyl methacrylate	14.30	69	694276	9.46	ppbV	96
49) Methyl Isobutyl Ketone	15.50	43	1179200	3.85	ppbV	97

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

Quantitation Report

Data File : C:\MSCHEM\2\DATA\03179M~1\C03179E.D
Acq Time : 17 Mar 109 1:25 pm
Sample : ST60022 + ST60350
Misc : 4.0 ML
Quant Time: Mar 17 15:03 19109

Operator: KB
Inst : 5970 - In
Multiplr: 1.00

Method : C:\MSCHEM\2\METHODS\1T15EXAY.M
Title : EPA TO-15
Last Update : Tue Mar 17 14:18:15 2009
Response via : Multiple Level Calibration

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
50) cis-1,3-Dichloropropene	15.59	75	441906	4.61 ppbV	95
51) Toluene	16.89	91	944443	3.94 ppbV	98
52) trans-1,3-Dichloropropene	16.62	75	509168	4.47 ppbV	98
53) 1,1,2-Trichloroethane	16.93	61	263308	4.29 ppbV	89
54) 2-Hexanone	17.55	43	1413472	3.69 ppbV	97
55) 1,3-Dichloropropane	17.50	76	468984	3.44 ppbV #	97
56) Octane	18.05	57	297294	3.43 ppbV #	88
57) Dibromochloromethane	18.07	129	688881	3.80 ppbV	94
58) 1,2-Dibromoethane	18.55	107	660815	4.37 ppbV	92
59) Tetrachloroethene	18.75	166	589393	4.40 ppbV	93
60) Chlorobenzene	20.22	112	836027	4.27 ppbV #	89
61) 1,1,1,2-Tetrachloroethane	20.28	131	487316	3.72 ppbV	96
62) Ethylbenzene	20.76	91	1527752	4.62 ppbV	100
63) m & p-Xylene	21.06	91	2440351	8.66 ppbV	97
64) Styrene	21.88	104	837020	4.20 ppbV	92
65) Bromoform	21.78	173	1151698	3.78 ppbV	99
66) o-Xylene	22.01	91	1325719	4.26 ppbV	97
67) 1,1,2,2-Tetrachloroethane	22.53	83	1142635	3.99 ppbV	100
68) 1,2,3-Trichloropropane	22.84	110	265915	3.08 ppbV	95
69) t-1,4-Dichloro-2-butene	22.99	53	736289	9.62 ppbV	99
70) n-Propylbenzene	24.19	91	2547503	3.56 ppbV	98
71) Isopropylbenzene	24.50	105	1912961	3.72 ppbV	100
72) 4-Ethyltoluene	24.50	105	1912961	3.56 ppbV	100
73) 1,3,5-Trimethylbenzene	24.67	105	1936506	4.28 ppbV	95
74) Methylstyrene	25.13	118	837727	3.00 ppbV	98
75) tert-butyl benzene	25.59	119	1667799	3.63 ppbV	95
76) 1,2,4-Trimethylbenzene	25.62	105	1979227	4.09 ppbV	99
77) sec-butylbenzene	26.21	105	2467689	3.64 ppbV	99
78) 1,3-Dichlorobenzene	26.18	146	1499786	3.75 ppbV	99
79) Isopropyltoluene	26.59	119	2332248	3.55 ppbV	99
80) Benzyl chloride	26.34	91	1944712	3.41 ppbV	98
81) 1,4-Dichlorobenzene	26.39	146	1616283	3.93 ppbV m	97
82) n-Butylbenzene	27.64	91	2765408	3.49 ppbV	98
83) 1,2-Dichlorobenzene	27.23	146	1708595	3.69 ppbV	96
84) 1,2-Dibromo-3-chloropropan	28.73	75	2702050	7.31 ppbV #	79
85) Tetraethyl lead	30.76	237	2512900	7.55 ppbV #	99
86) 1,2,4-Trichlorobenzene	31.80	180	3172331	3.43 ppbV	99
87) Naphthalene	32.16	128	11453402	6.59 ppbV	98
88) Hexachlorobutadiene	32.84	225	2443776	3.22 ppbV	99
89) Propylene	3.62	40	100226	7.89 ppbV #	1
90) 1,3-Butadiene	4.31	54	134305	4.21 ppbV	86
92) 2-Chlorotoluene	24.25	91	1357175	3.64 ppbV m	77
93) 4-Chlorotoluene	24.42	91	1836466	3.94 ppbV	99

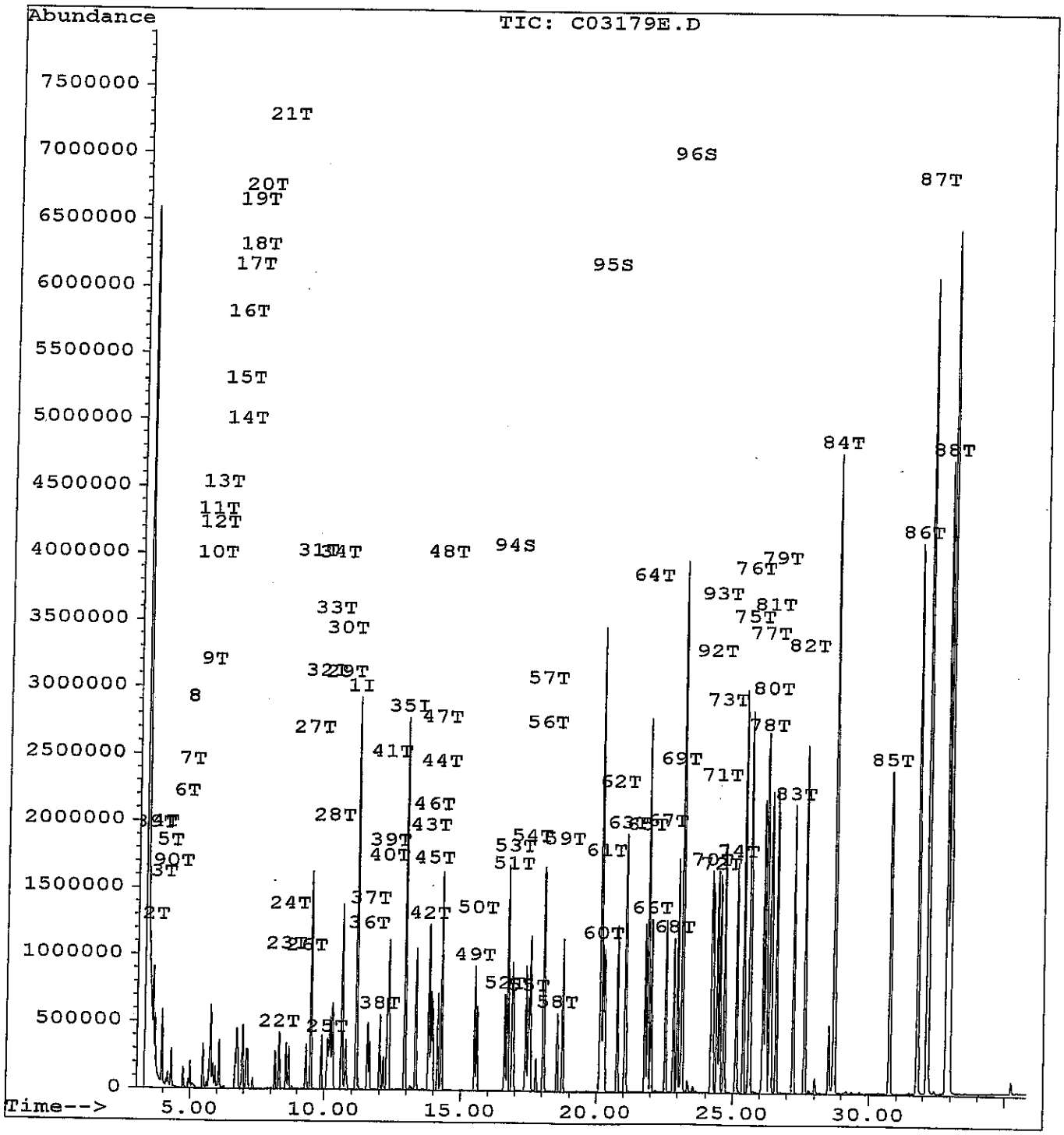
(#) = qualifier out of range (m) = manual integration

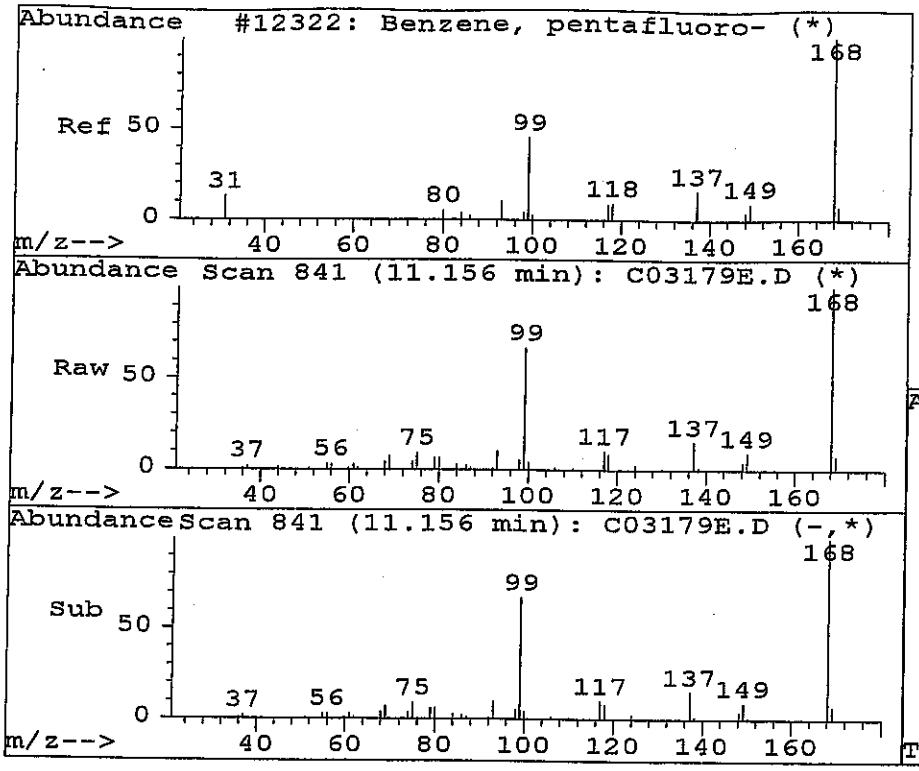
Quantitation Report

Data File : C:\MSCHEM\2\DATA\03179M~1\C03179E.D
Acq Time : 17 Mar 109 1:25 pm
Sample : ST60022 + ST60350
Misc : 4.0 ML
Quant Time: Mar 17 15:03 19109

Operator: KB
Inst : 5970 - In
Multiplr: 1.00

Method : C:\MSCHEM\2\METHODS\1T15EXAY.M
Title : EPA TO-15
Last Update : Tue Mar 17 14:18:15 2009
Response via : Multiple Level Calibration

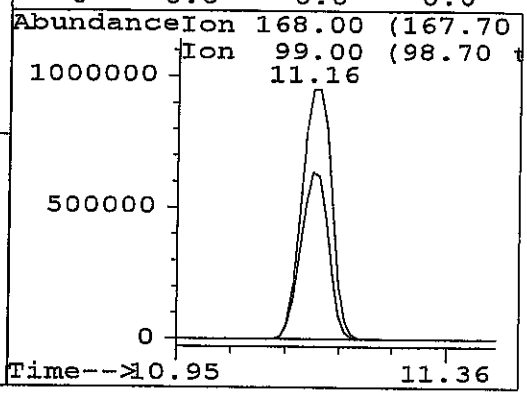


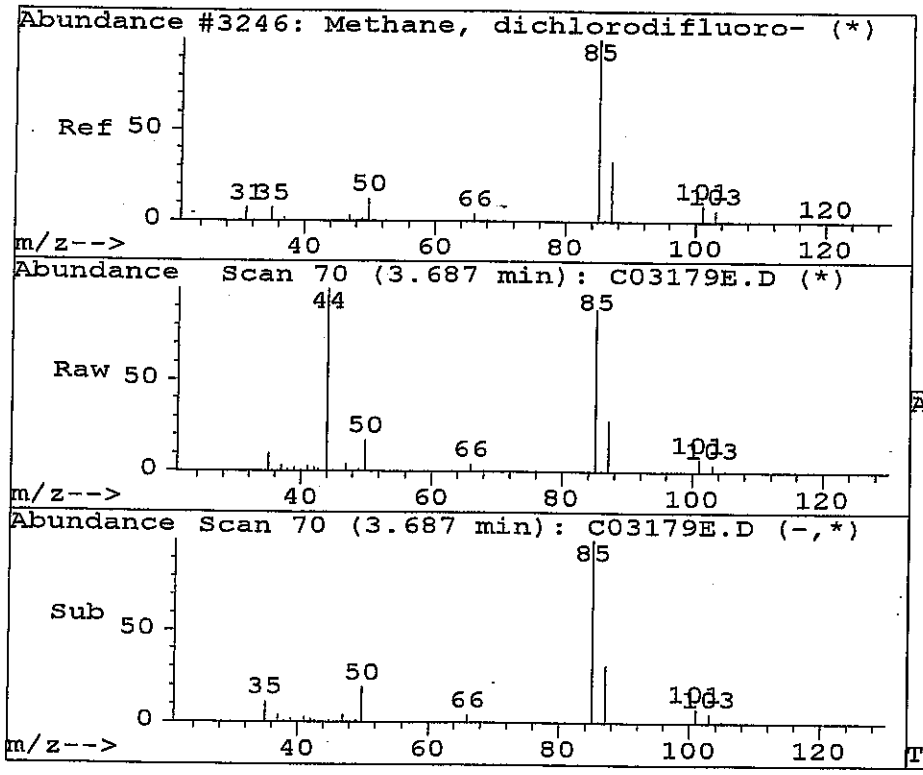


#1
Pentafluorobenzene
Concen: 20.00 ppbV
RT: 11.16 min Scan# 841
Delta R.T. -0.22 min
Lab File: C03179E.D
Acq: 17 Mar 109 1:25 pm

Tgt Ion:168 Resp: 2935915

Ion	Ratio	Lower	Upper
168	100		
99	67.0	53.0	79.6
0	0.0	0.0	0.0
0	0.0	0.0	0.0

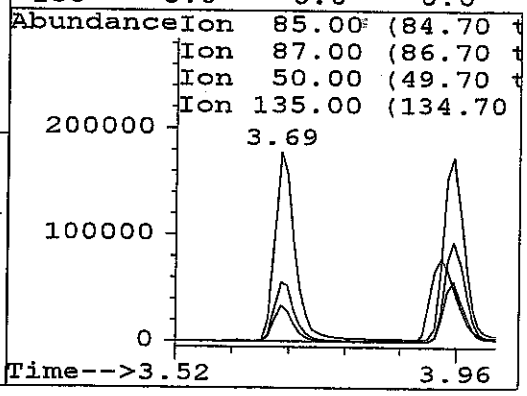


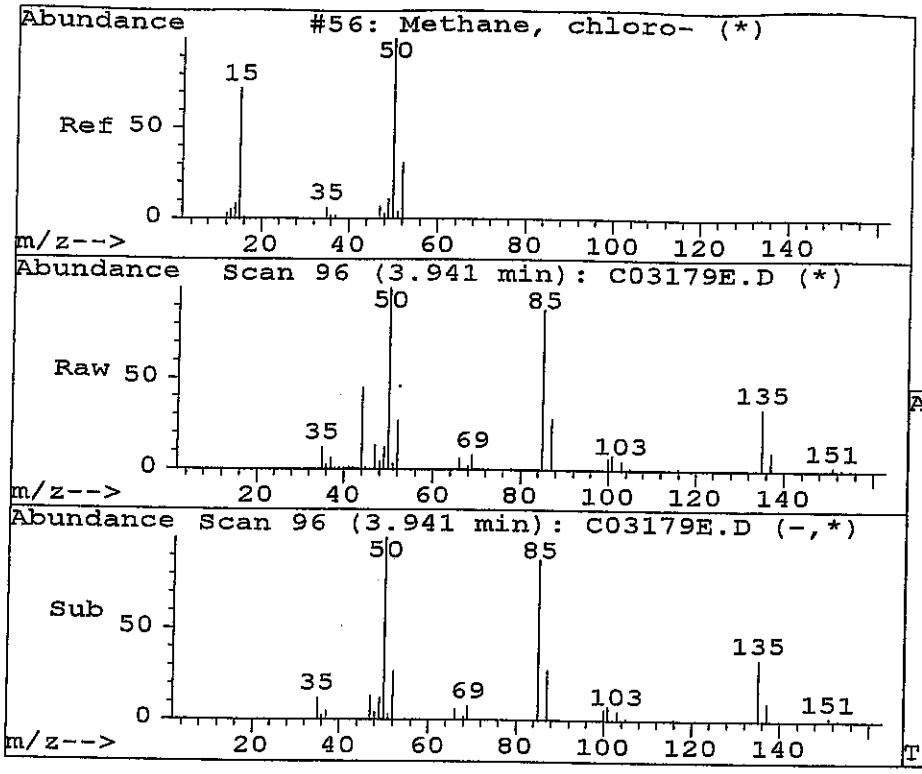


#2
Dichlorodifluoromethane
Concen: 4.80 ppbV
RT: 3.69 min Scan# 70
Delta R.T. -0.14 min
Lab File: C03179E.D
Acq: 17 Mar 109 1:25 pm

Tgt Ion:85 Resp: 398558

Ion	Ratio	Lower	Upper
85	100		
87	31.1	30.2	45.2
50	18.6	16.4	24.6
135	0.0	0.0	0.0

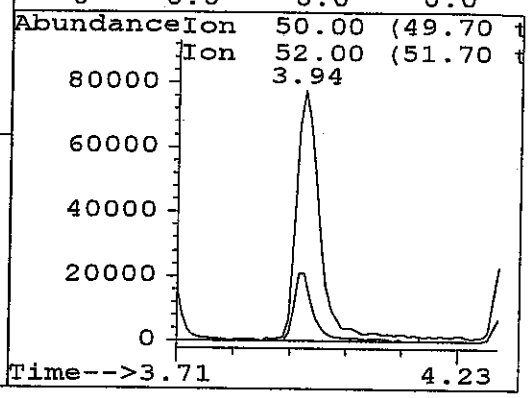


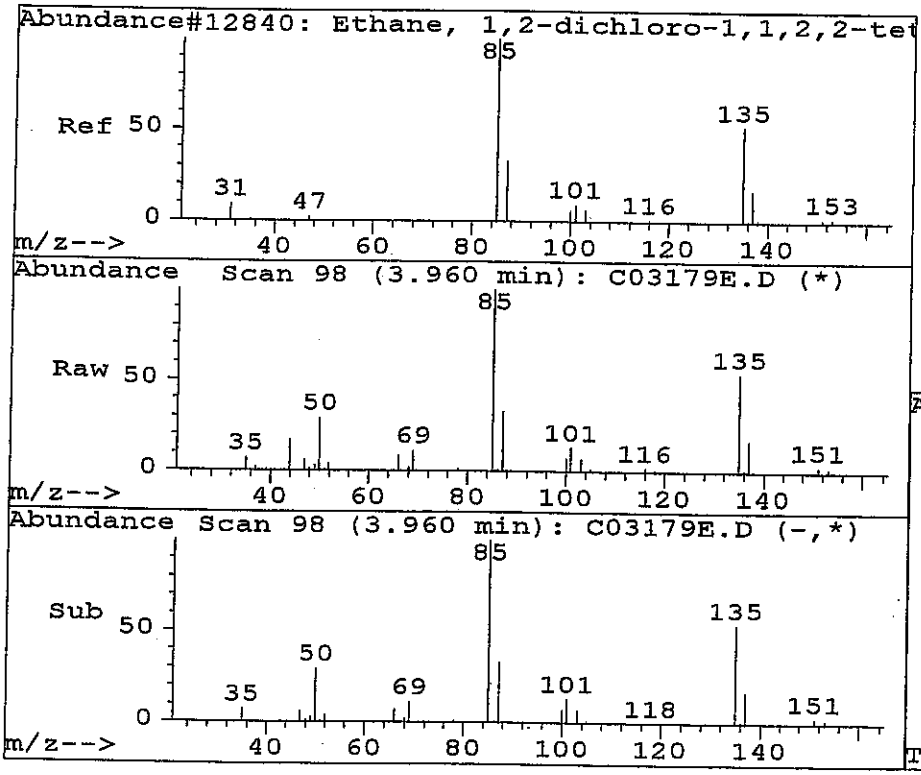


#3
Chloromethane
Concen: 4.40 ppbV m
RT: 3.94 min Scan# 96
Delta R.T. -0.15 min
Lab File: C03179E.D
Acq: 17 Mar 109 1:25 pm

Tgt Ion:50 Resp: 241294

Ion	Ratio	Lower	Upper
50	100		
52	26.9	16.2	24.4#
0	0.0	0.0	0.0
0	0.0	0.0	0.0

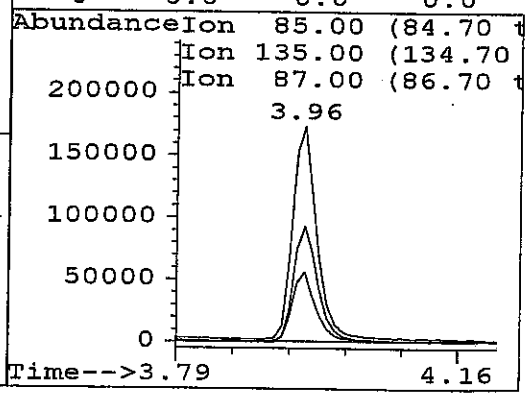


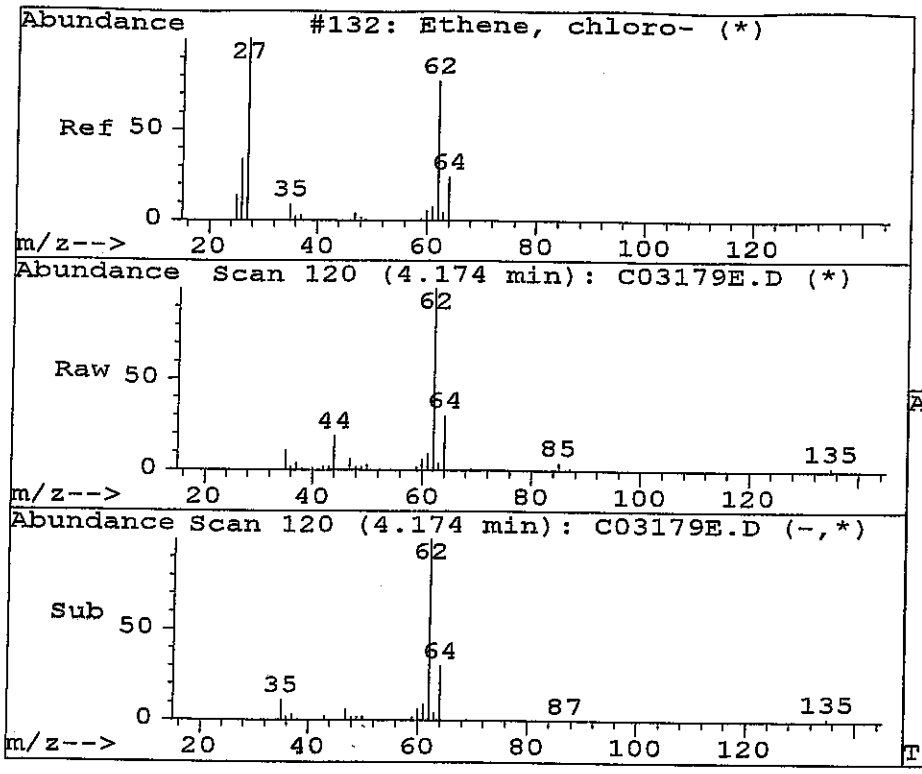


#4
Freon 114
Concen: 4.53 ppbV
RT: 3.96 min Scan# 98
Delta R.T. -0.15 min
Lab File: C03179E.D
Acq: 17 Mar 109 1:25 pm

Tgt Ion:85 Resp: 399238

Ion	Ratio	Lower	Upper
85	100		
135	54.4	45.7	68.5
87	32.6	28.7	43.1
0	0.0	0.0	0.0

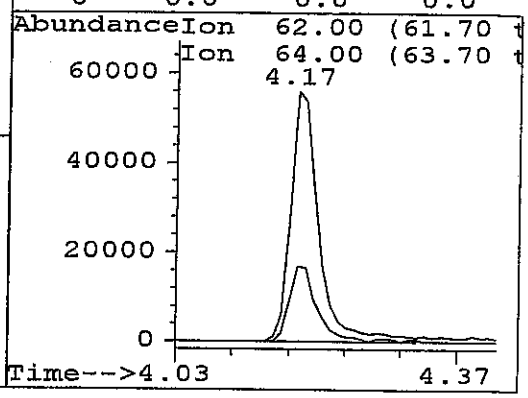


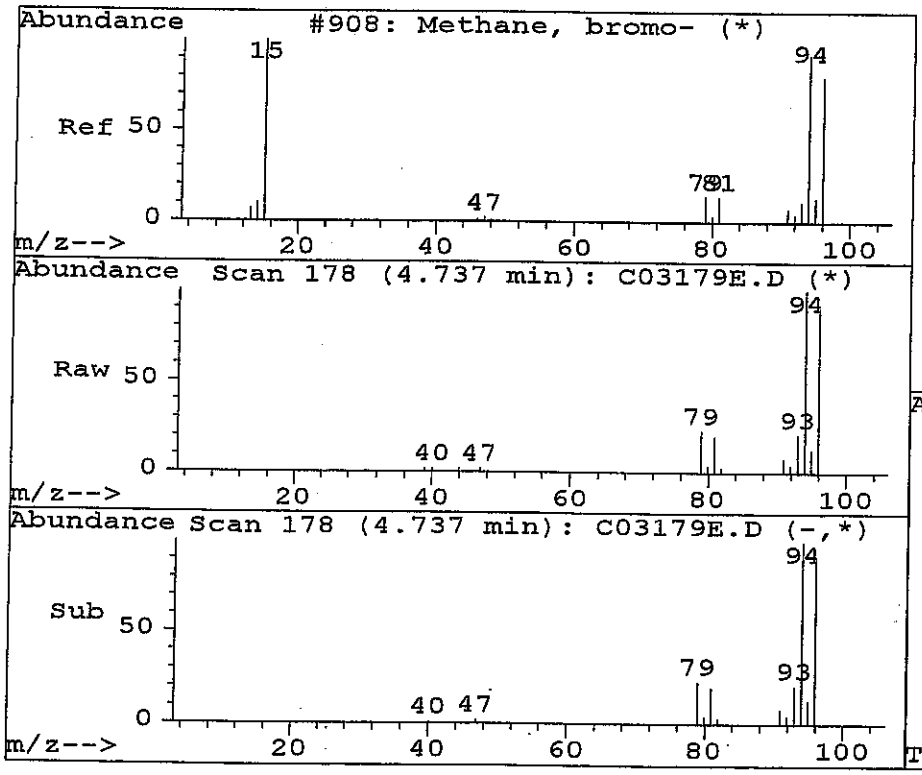


#5
Vinyl chloride
Concen: 4.56 ppbV
RT: 4.17 min Scan# 120
Delta R.T. -0.16 min
Lab File: C03179E.D
Acq: 17 Mar 109 1:25 pm

Tgt Ion:62 Resp: 132864

Ion	Ratio	Lower	Upper
62	100		
64	29.8	25.9	38.9
0	0.0	0.0	0.0
0	0.0	0.0	0.0

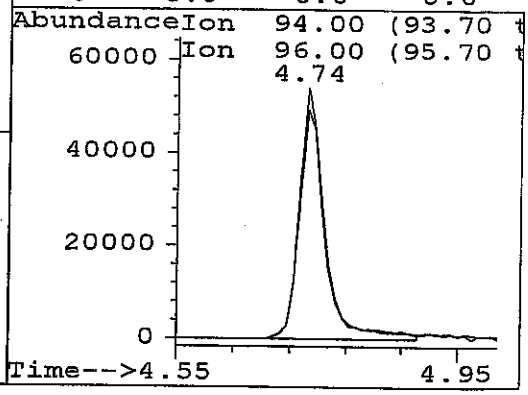


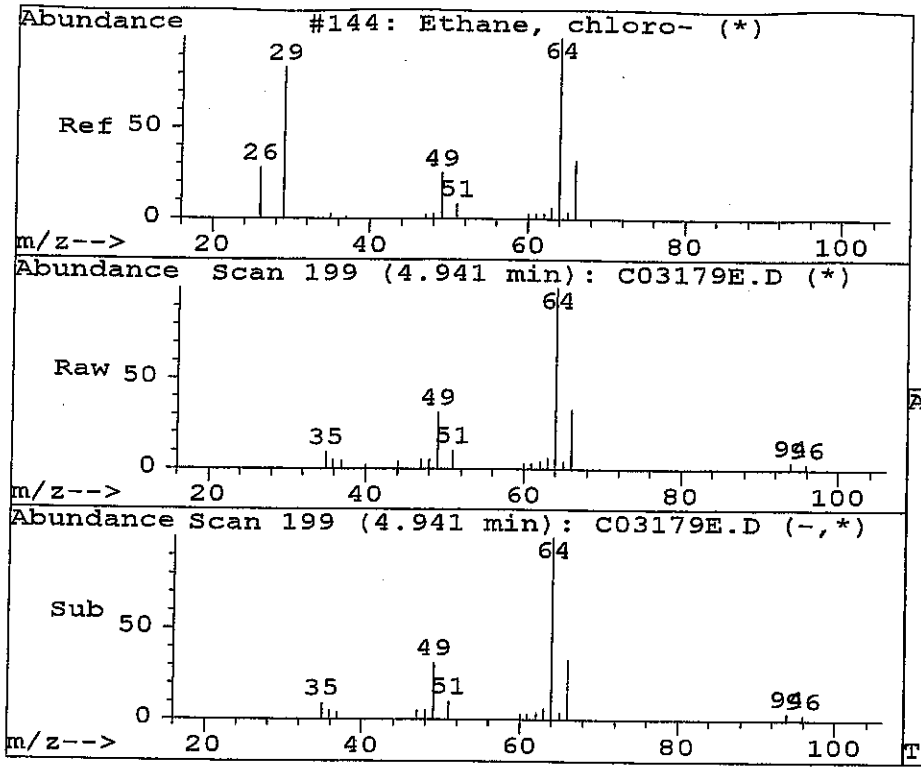


#6
Bromomethane
Concen: 4.77 ppbV
RT: 4.74 min Scan# 178
Delta R.T. -0.18 min
Lab File: C03179E.D
Acq: 17 Mar 109 1:25 pm

Tgt Ion:94 Resp: 136639

Ion	Ratio	Lower	Upper
94	100		
96	91.2	70.2	105.4
0	0.0	0.0	0.0
0	0.0	0.0	0.0

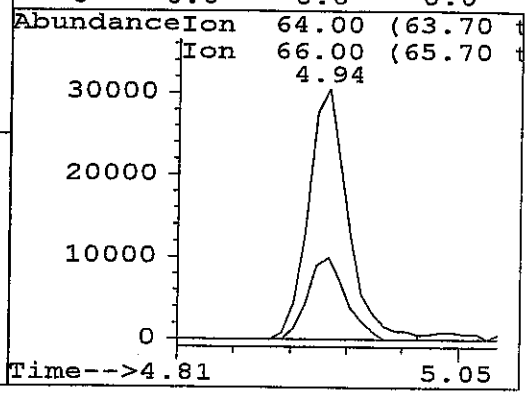


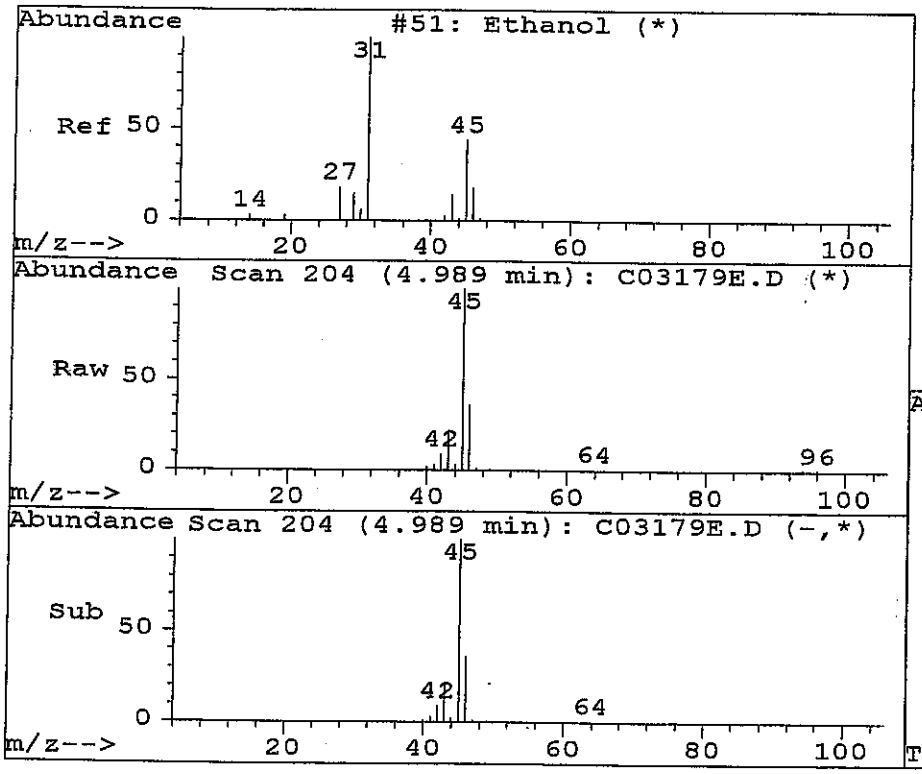


#7
Chloroethane
Concen: 4.73 ppbV
RT: 4.94 min Scan# 199
Delta R.T. -0.18 min
Lab File: C03179E.D
Acq: 17 Mar 109 1:25 pm

Tgt Ion:64 Resp: 71497

Ion	Ratio	Lower	Upper
64	100		
66	33.0	25.9	38.9
0	0.0	0.0	0.0
0	0.0	0.0	0.0

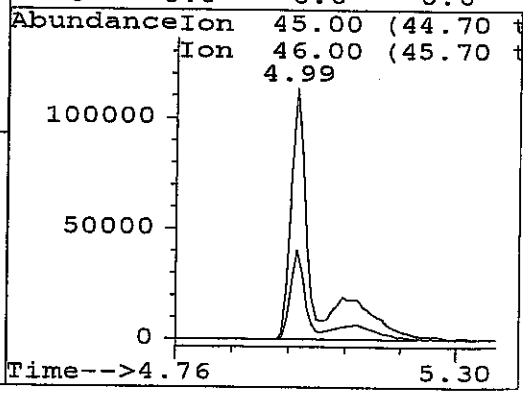


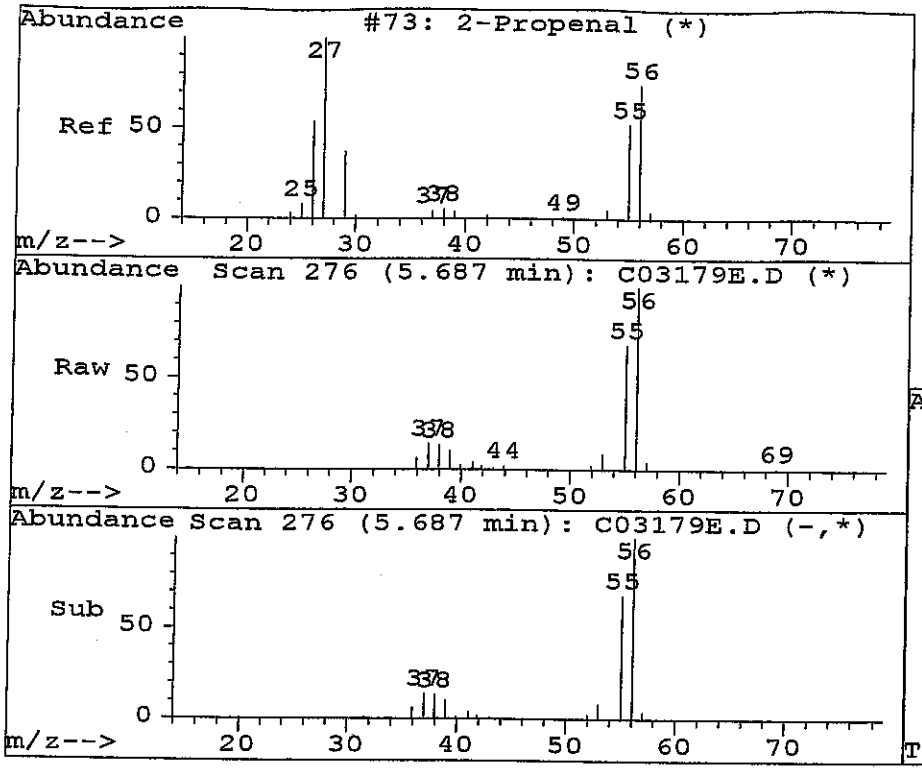


#8
Ethanol
Concen: 6.32 ppbV m
RT: 4.99 min Scan# 204
Delta R.T. -0.21 min
Lab File: C03179E.D
Acq: 17 Mar 109 1:25 pm

Tgt Ion:45 Resp: 337417

Ion	Ratio	Lower	Upper
45	100		
46	35.6	20.9	31.3#
0	0.0	0.0	0.0
0	0.0	0.0	0.0

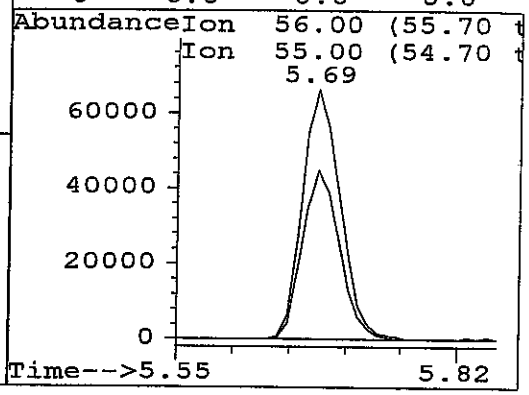


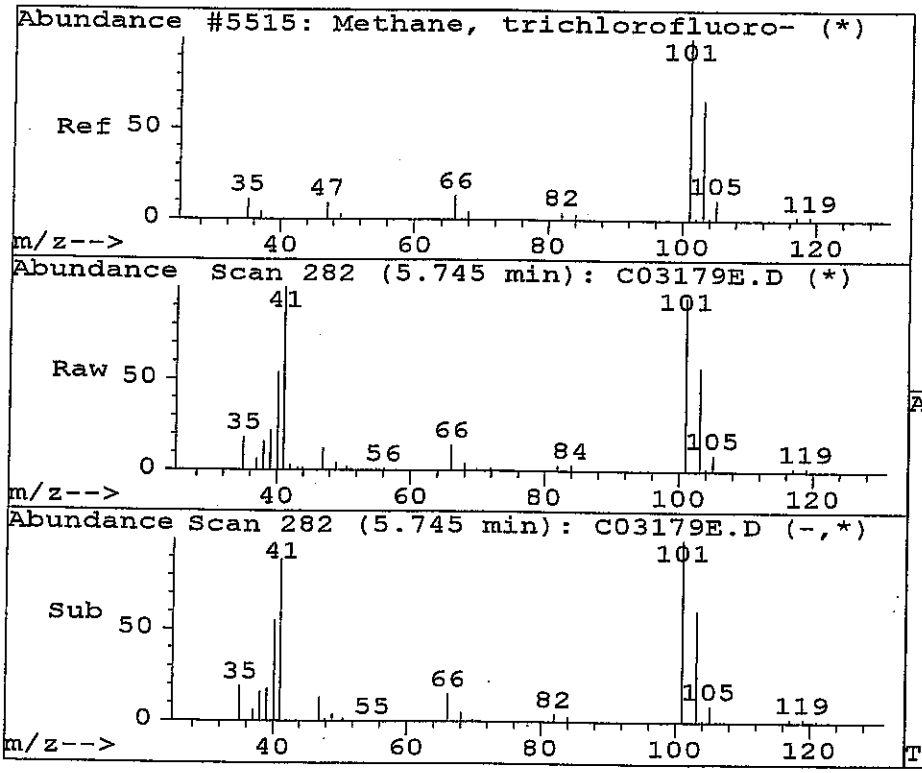


#9
Acrolein
Concen: 11.11 ppbV
RT: 5.69 min Scan# 276
Delta R.T. -0.20 min
Lab File: C03179E.D
Acq: 17 Mar 109 1:25 pm

Tgt Ion:56 Resp: 168949

Ion	Ratio	Lower	Upper
56	100		
55	67.8	44.7	67.1#
0	0.0	0.0	0.0
0	0.0	0.0	0.0

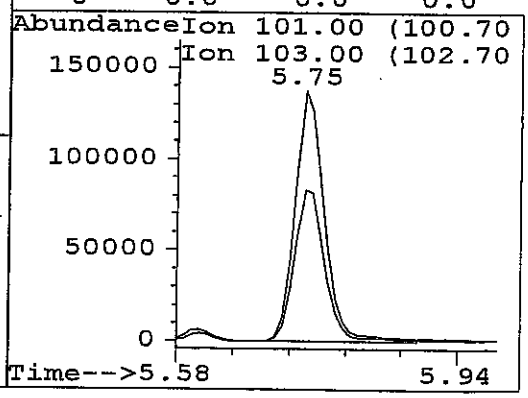


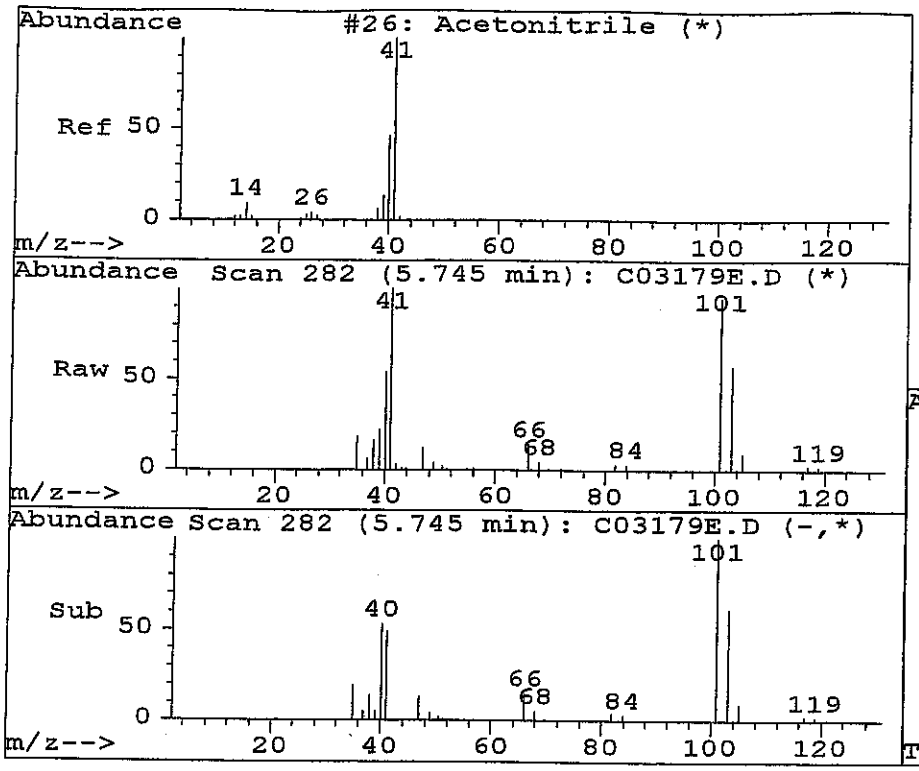


#10
Trichlorofluoromethane
Concen: 4.63 ppbV
RT: 5.75 min Scan# 282
Delta R.T. -0.19 min
Lab File: C03179E.D
Acq: 17 Mar 109 1:25 pm

Tgt Ion:101 Resp: 364524

Ion	Ratio	Lower	Upper
101	100		
103	60.5	43.9	65.9
0	0.0	0.0	0.0
0	0.0	0.0	0.0

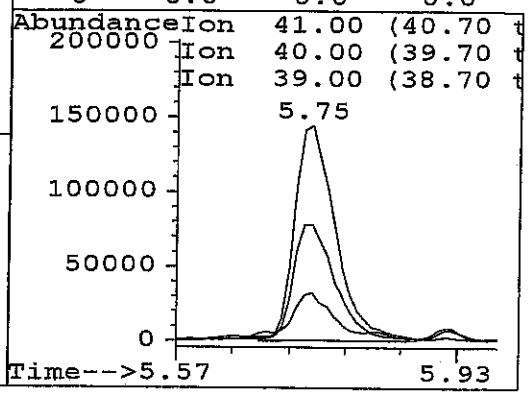


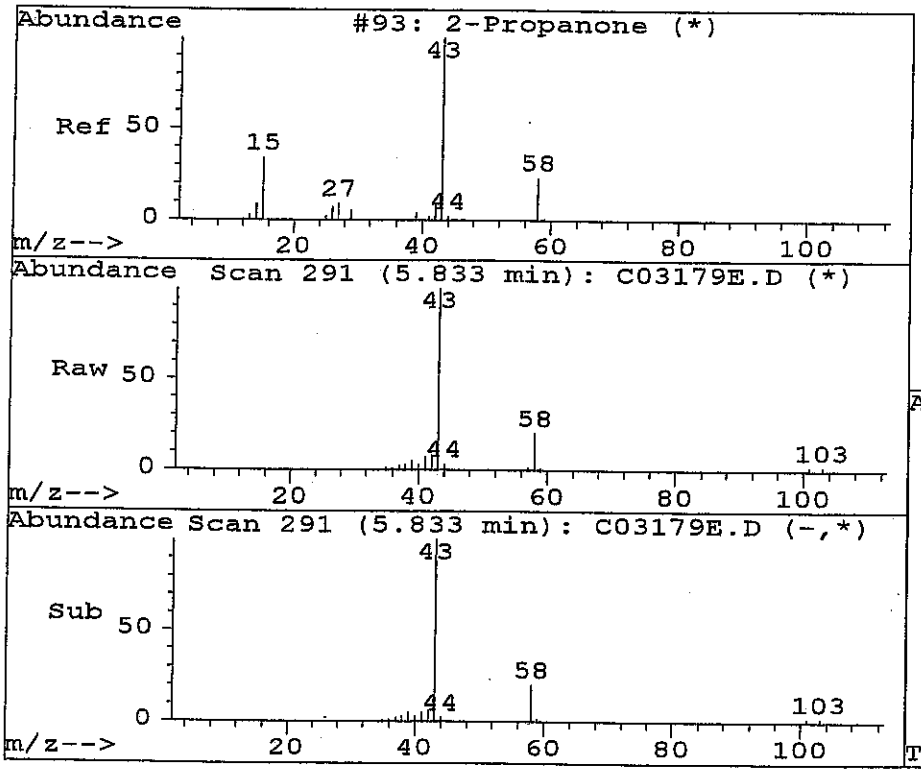


#11
Acetonitrile
Concen: 8.07 ppbV
RT: 5.75 min Scan# 282
Delta R.T. -0.21 min
Lab File: C03179E.D
Acq: 17 Mar 109 1:25 pm

Tgt Ion:41 Resp: 532977

Ion	Ratio	Lower	Upper
41	100		
40	53.6	43.8	65.8
39	20.5	16.3	24.5
0	0.0	0.0	0.0

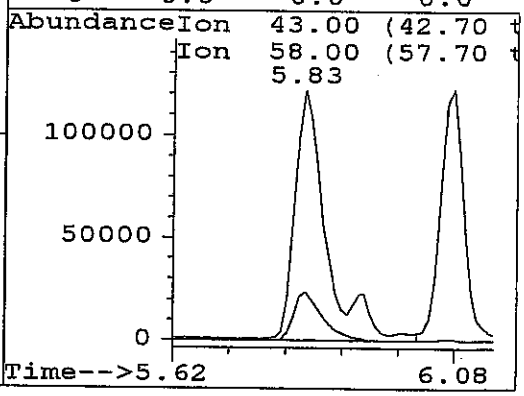


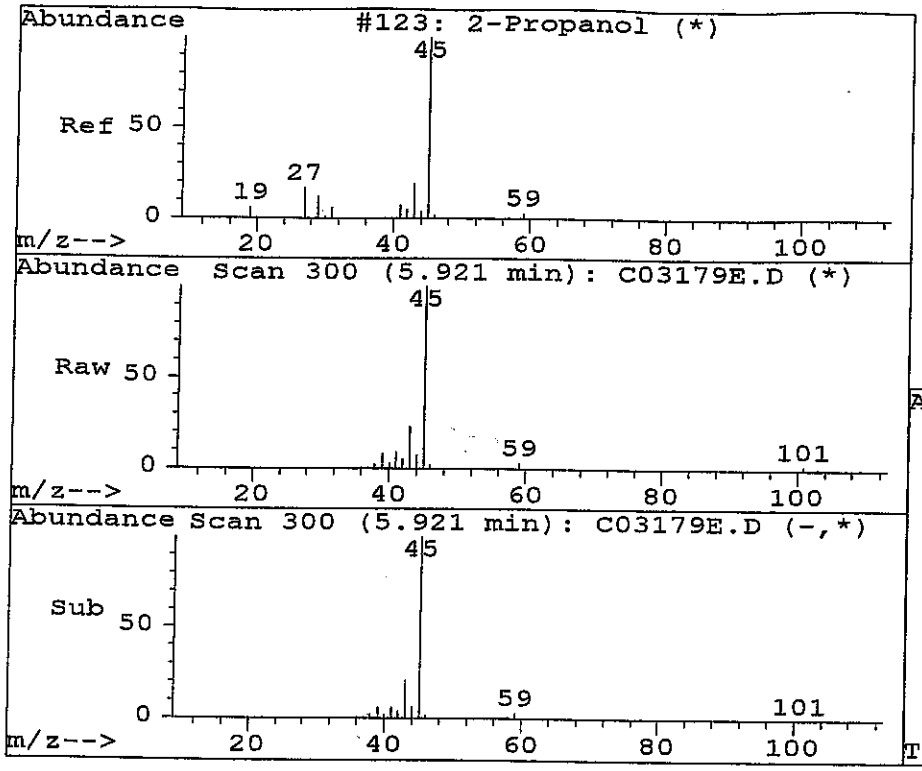


#12
Acetone
Concen: 3.37 ppbV m
RT: 5.83 min Scan# 291
Delta R.T. -0.21 min
Lab File: C03179E.D
Acq: 17 Mar 109 1:25 pm

Tgt Ion:43 Resp: 442389

Ion	Ratio	Lower	Upper
43	100		
58	19.6	13.8	20.6
0	0.0	0.0	0.0
0	0.0	0.0	0.0

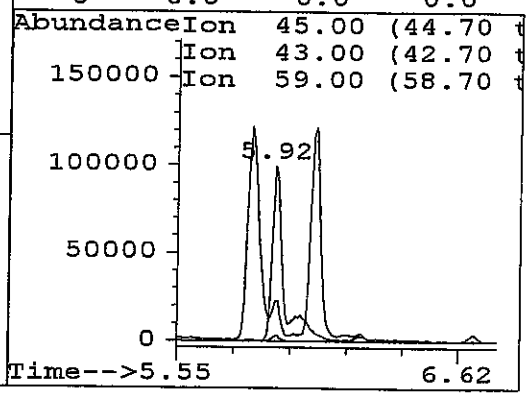


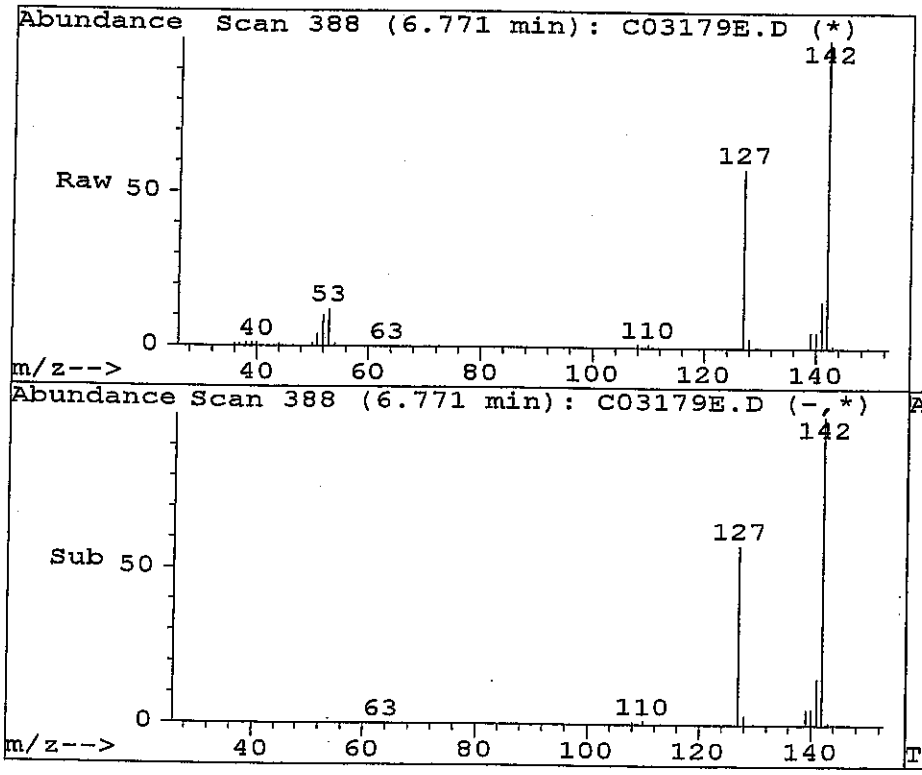


#13
2-propanol
Concen: 3.17 ppbV m
RT: 5.92 min Scan# 300
Delta R.T. -0.22 min
Lab File: C03179E.D
Acq: 17 Mar 109 1:25 pm

Tgt Ion:45 Resp: 321532

Ion	Ratio	Lower	Upper
45	100		
43	22.7	17.7	26.5
59	3.2	0.0	0.0#
0	0.0	0.0	0.0

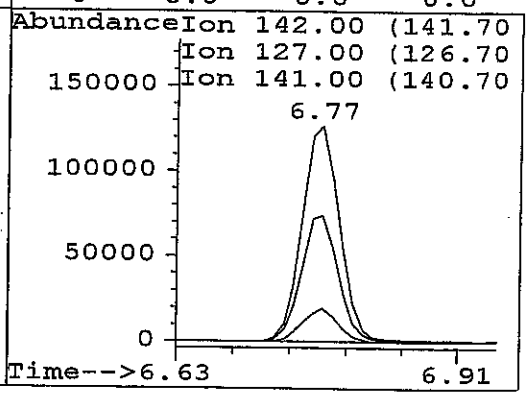


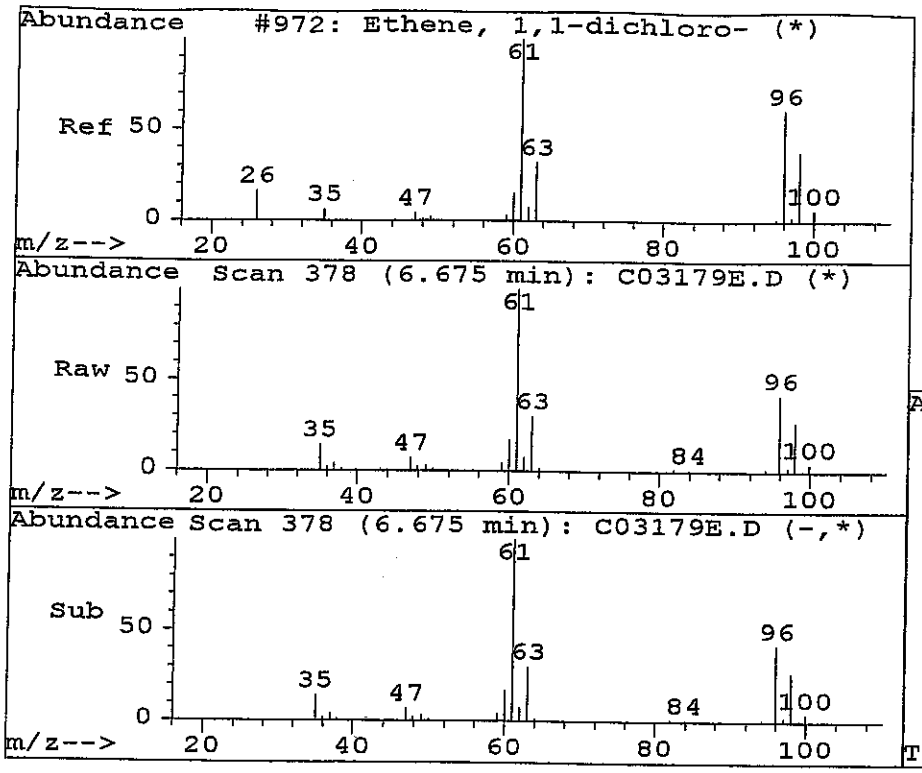


#14
Methyl iodide
Concen: 5.36 ppbV
RT: 6.77 min Scan# 388
Delta R.T. -0.22 min
Lab File: C03179E.D
Acq: 17 Mar 109 1:25 pm

Tgt Ion:142 Resp: 321955

Ion	Ratio	Lower	Upper
142	100		
127	58.2	43.0	64.6
141	15.5	10.7	16.1
0	0.0	0.0	0.0

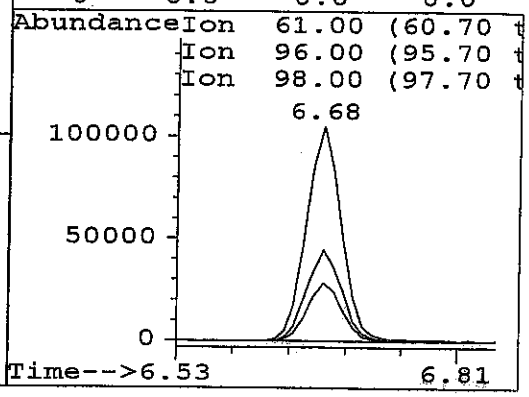


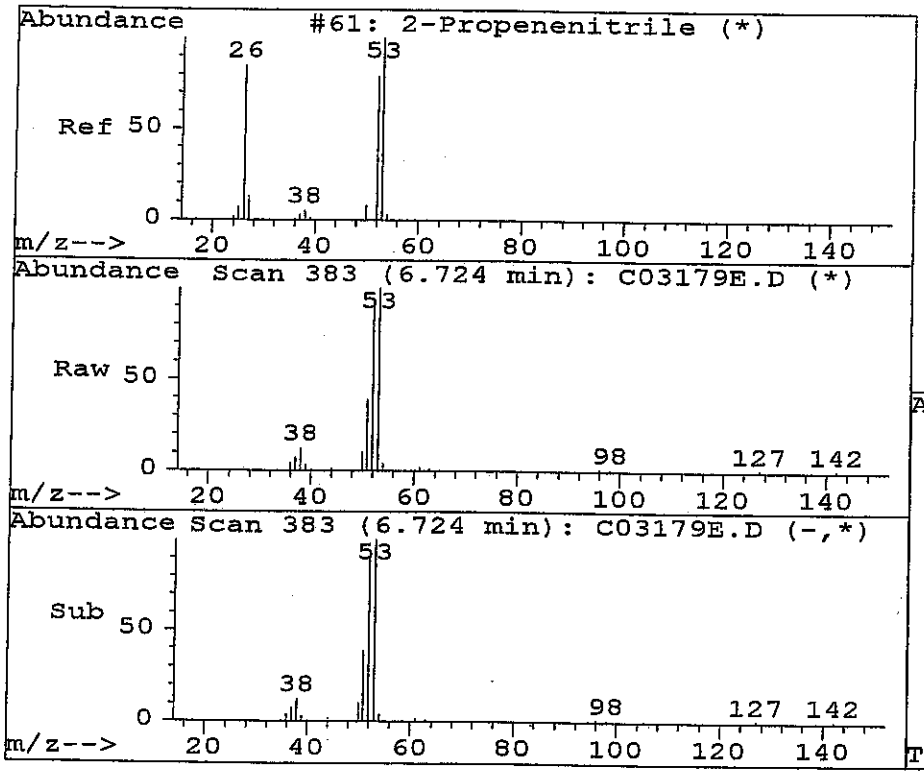


#15
1,1-Dichloroethene
Concen: 3.69 ppbV
RT: 6.68 min Scan# 378
Delta R.T. -0.21 min
Lab File: C03179E.D
Acq: 17 Mar 109 1:25 pm

Tgt Ion:61 Resp: 248606

Ion	Ratio	Lower	Upper
61	100		
96	42.6	41.8	62.8
98	27.1	20.7	31.1
0	0.0	0.0	0.0

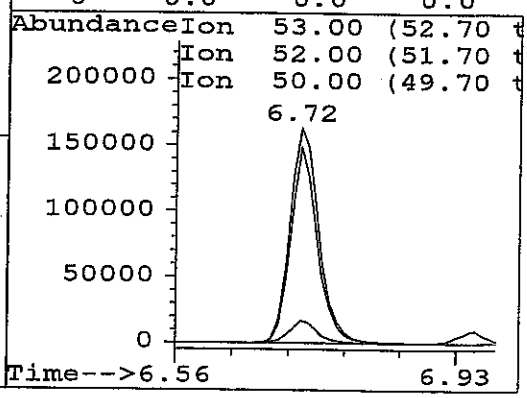


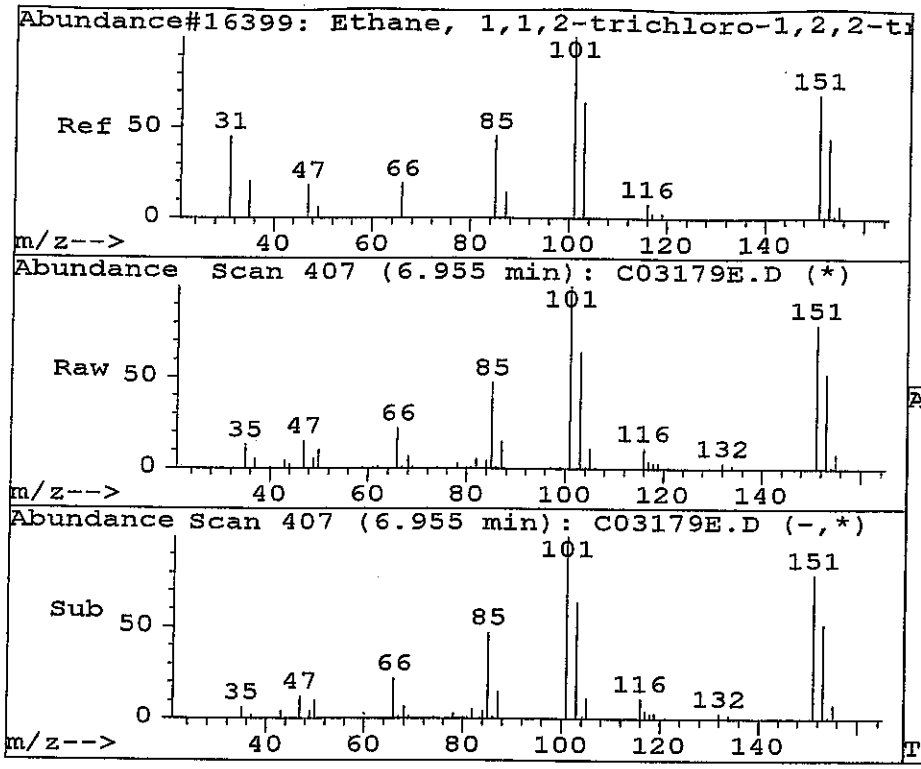


#16
Acrylonitrile
Concen: 10.32 ppbV
RT: 6.72 min Scan# 383
Delta R.T. -0.24 min
Lab File: C03179E.D
Acq: 17 Mar 109 1:25 pm

Tgt Ion:53 Resp: 435309

Ion	Ratio	Lower	Upper
53	100		
52	91.2	66.8	100.2
50	10.4	6.7	10.1#
0	0.0	0.0	0.0

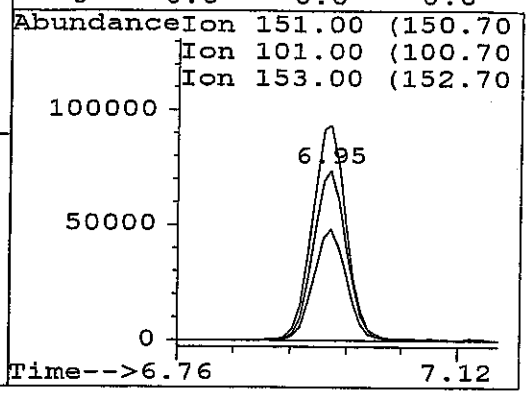


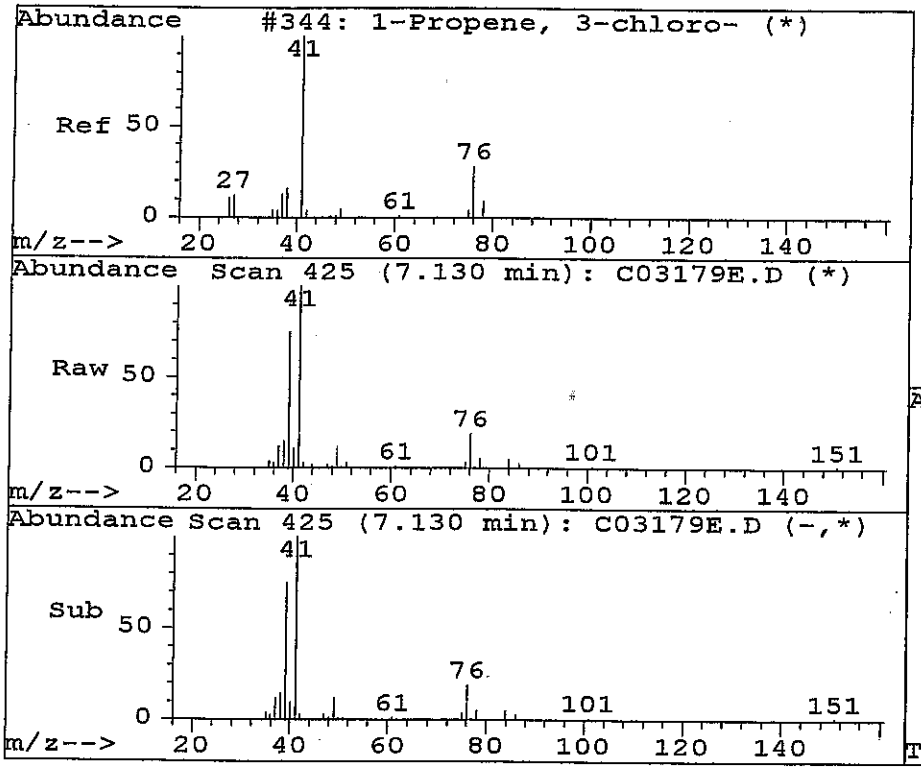


#17
Freon 113
Concen: 4.16 ppbV
RT: 6.95 min Scan# 407
Delta R.T. -0.21 min
Lab File: C03179E.D
Acq: 17 Mar 109 1:25 pm

Tgt Ion:151 Resp: 220191

Ion	Ratio	Lower	Upper
151	100		
101	126.6	79.3	118.9#
153	65.4	47.1	70.7
0	0.0	0.0	0.0

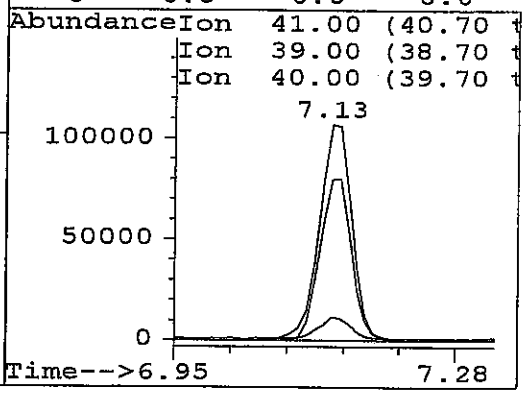


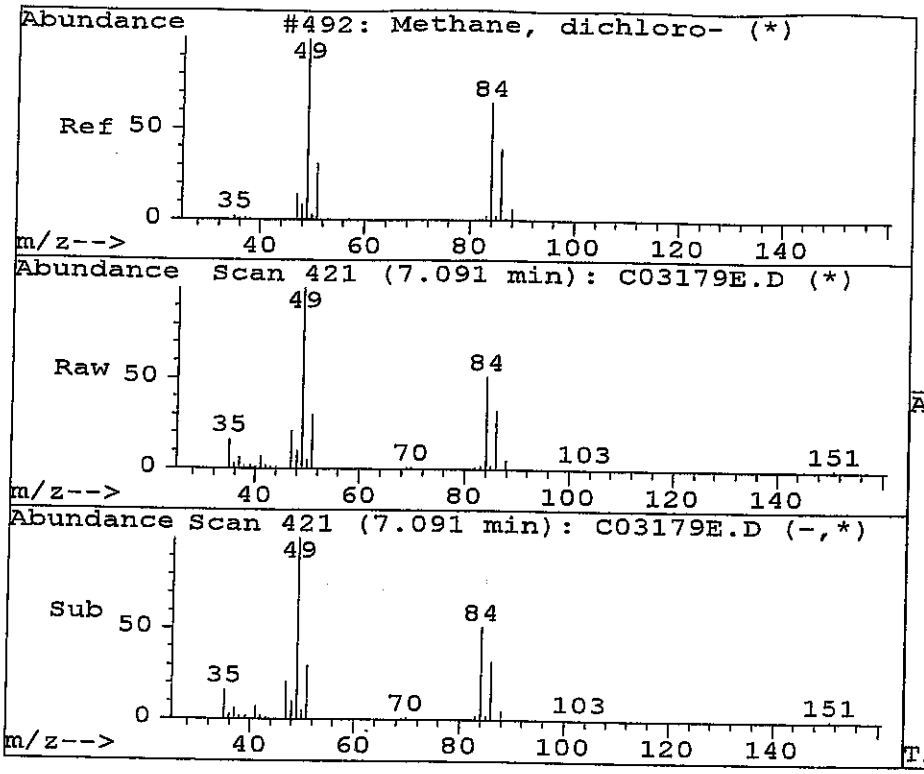


#18
Allyl chloride
Concen: 3.30 ppbV
RT: 7.13 min Scan# 425
Delta R.T. -0.22 min
Lab File: C03179E.D
Acq: 17 Mar 109 1:25 pm

Tgt Ion:41 Resp: 282890

Ion	Ratio	Lower	Upper
41	100		
39	74.3	49.0	73.6#
40	9.8	5.6	8.4#
0	0.0	0.0	0.0

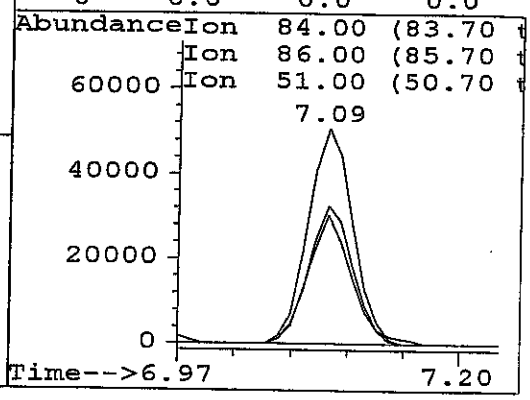


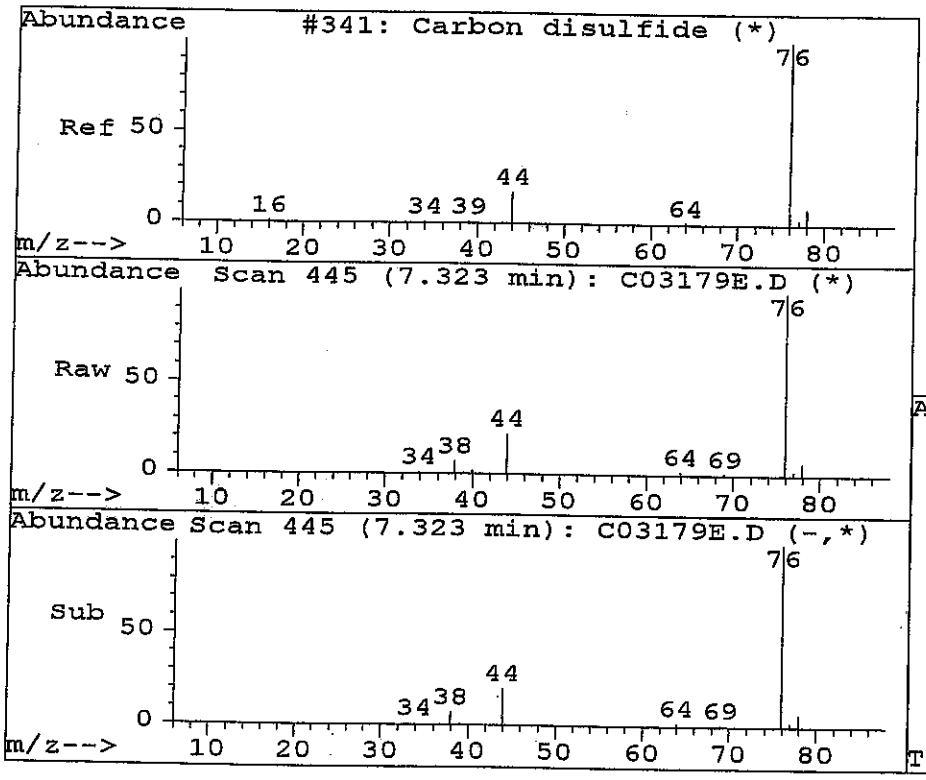


#19
Dichloromethane
Concen: 4.23 ppbV
RT: 7.09 min Scan# 421
Delta R.T. -0.22 min
Lab File: C03179E.D
Acq: 17 Mar 109 1:25 pm

Tgt Ion:84 Resp: 124766

Ion	Ratio	Lower	Upper
84	100		
86	63.9	55.8	83.8
51	59.0	34.6	52.0#
0	0.0	0.0	0.0

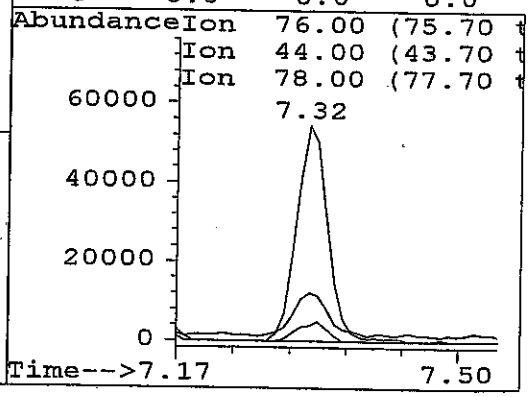


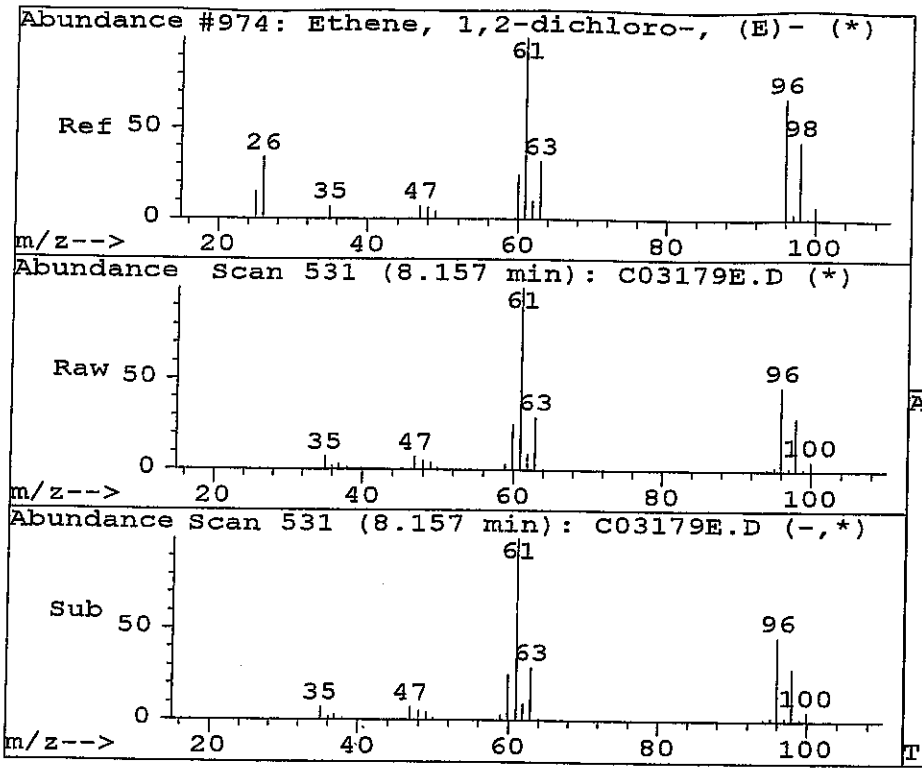


#20
Carbon disulfide
Concen: 3.23 ppbV
RT: 7.32 min Scan# 445
Delta R.T. -0.22 min
Lab File: C03179E.D
Acq: 17 Mar 109 1:25 pm

Tgt Ion:76 Resp: 137347

Ion	Ratio	Lower	Upper
76	100		
44	19.7	14.1	21.1
78	7.1	0.0	0.0#
0	0.0	0.0	0.0

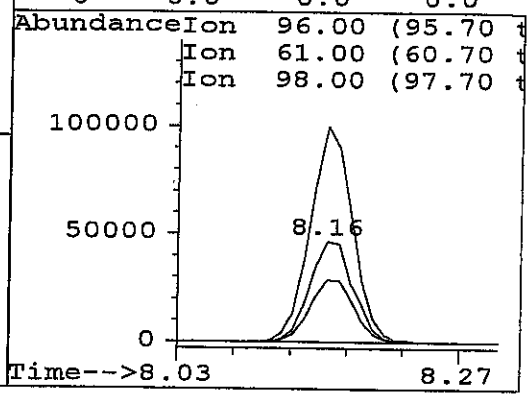


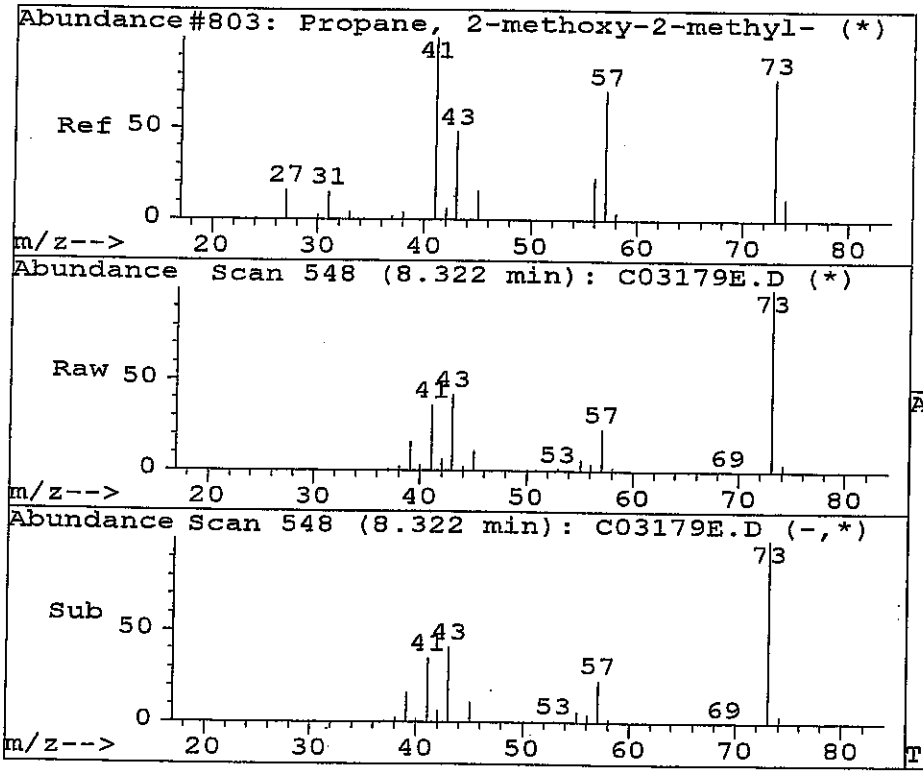


#21
trans-1,2-Dichloroethene
Concen: 3.83 ppbV
RT: 8.16 min Scan# 531
Delta R.T. -0.22 min
Lab File: C03179E.D
Acq: 17 Mar 109 1:25 pm

Tgt Ion:96 Resp: 117954

Ion	Ratio	Lower	Upper
96	100		
61	215.3	138.6	207.8#
98	62.0	39.4	59.2#
0	0.0	0.0	0.0

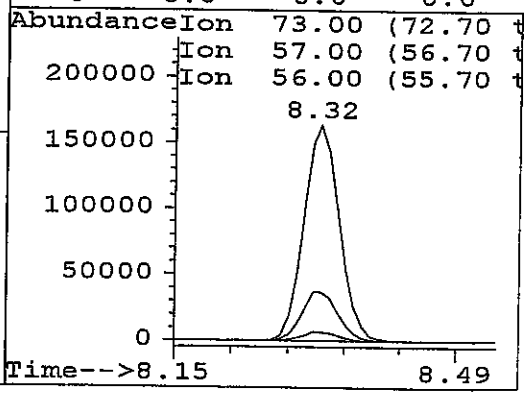


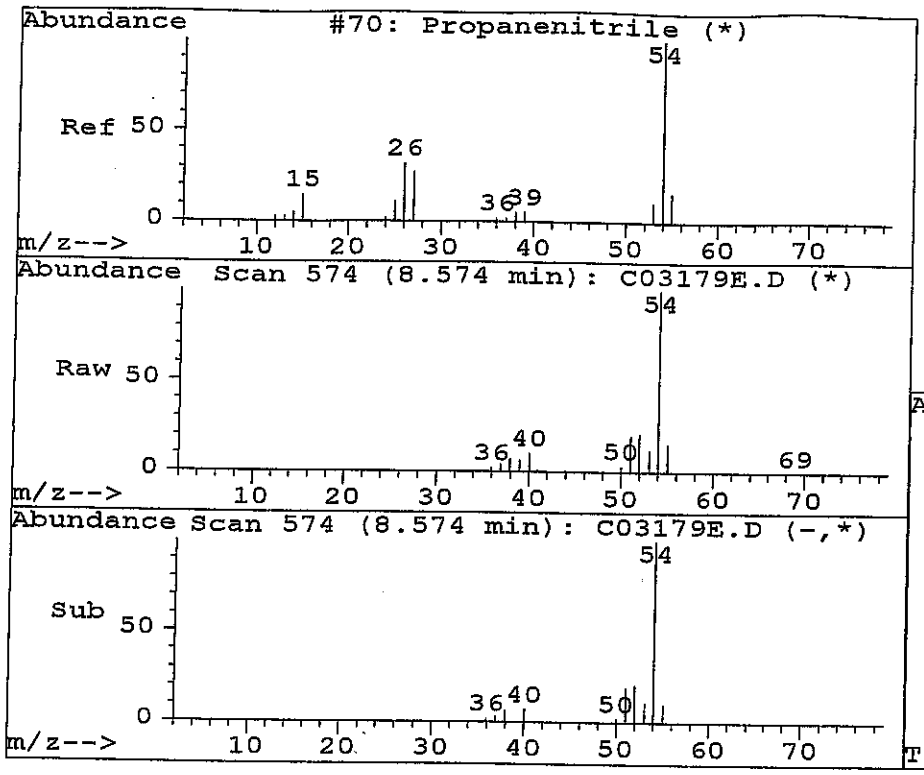


#22
Methyl tert butyl ether
Concen: 3.30 ppbV
RT: 8.32 min Scan# 548
Delta R.T. -0.22 min
Lab File: C03179E.D
Acq: 17 Mar 109 1:25 pm

Tgt Ion:73 Resp: 482973

Ion	Ratio	Lower	Upper
73	100		
57	22.7	22.5	33.7
56	3.8	0.0	0.0#
0	0.0	0.0	0.0

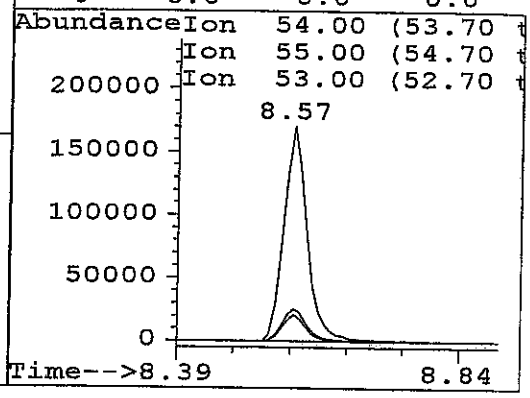


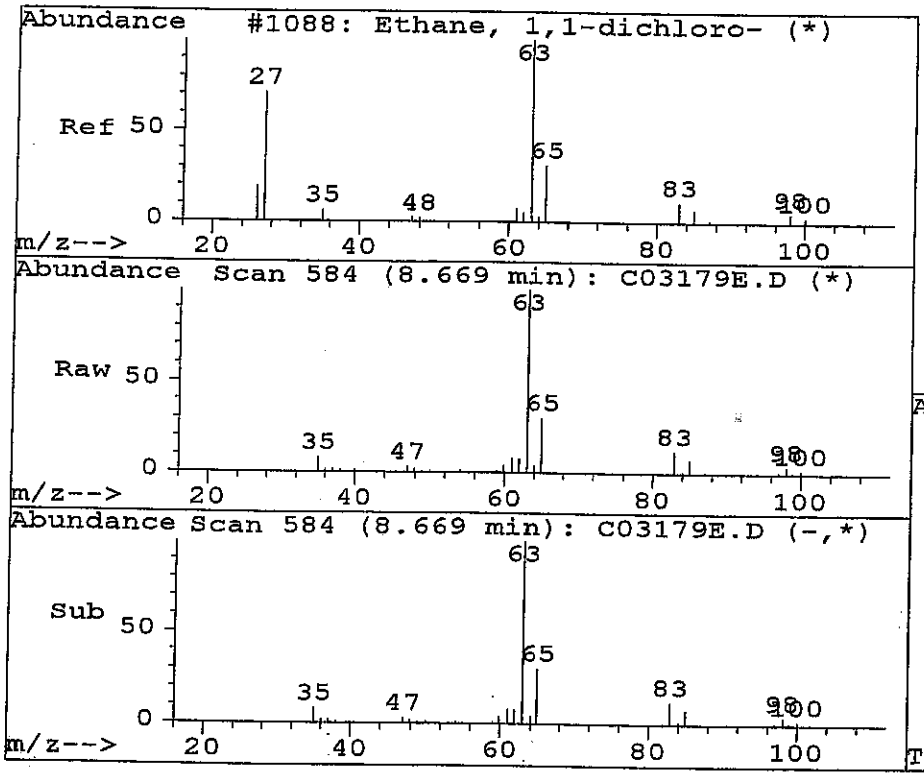


#23
Propionitrile
Concen: 8.39 ppbV
RT: 8.57 min Scan# 574
Delta R.T. -0.26 min
Lab File: C03179E.D
Acq: 17 Mar 109 1:25 pm

Tgt Ion:54 Resp: 434833

Ion	Ratio	Lower	Upper
54	100		
55	15.1	12.6	18.8
53	12.3	8.9	13.3
0	0.0	0.0	0.0

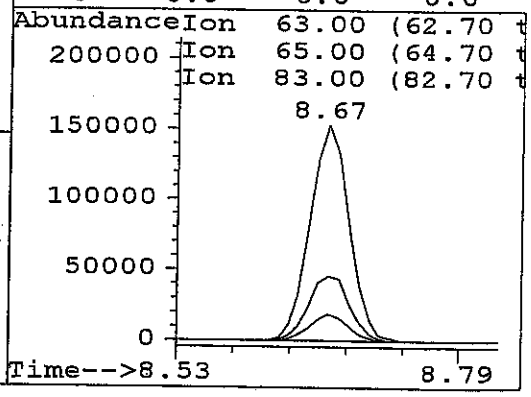


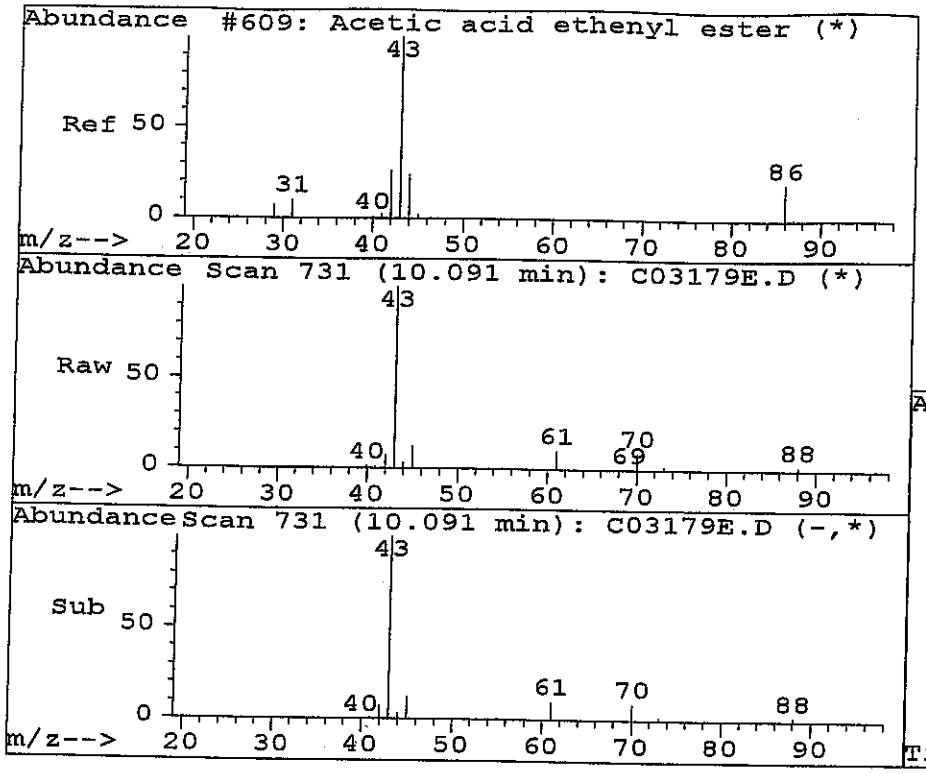


#24
1,1-Dichloroethane
Concen: 4.66 ppbV
RT: 8.67 min Scan# 584
Delta R.T. -0.23 min
Lab File: C03179E.D
Acq: 17 Mar 109 1:25 pm

Tgt Ion:63 Resp: 387657

Ion	Ratio	Lower	Upper
63	100		
65	29.8	24.0	36.0
83	12.3	8.7	13.1
0	0.0	0.0	0.0

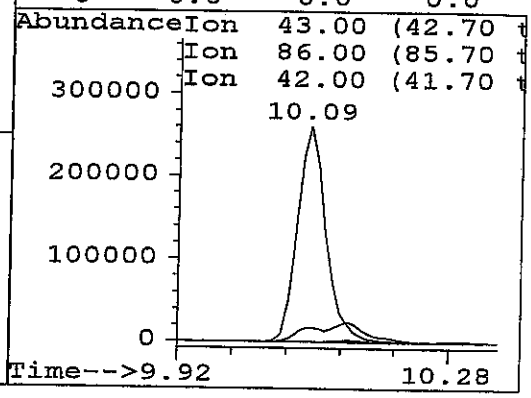


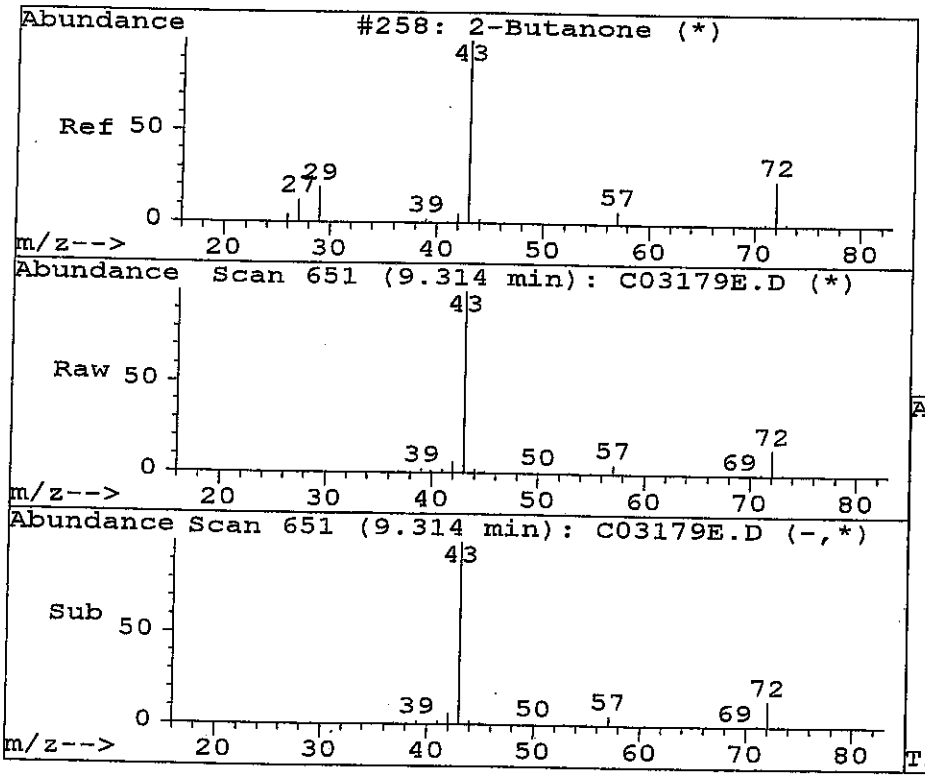


#25
Vinyl acetate
Concen: 3.37 ppbV
RT: 10.09 min Scan# 731
Delta R.T. -0.23 min
Lab File: C03179E.D
Acq: 17 Mar 109 1:25 pm

Tgt Ion:43 Resp: 687529

Ion	Ratio	Lower	Upper
43	100		
86	0.0	0.0	0.0
42	6.5	5.4	8.0
0	0.0	0.0	0.0

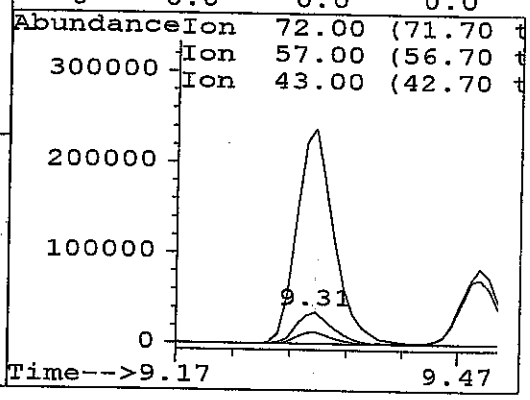


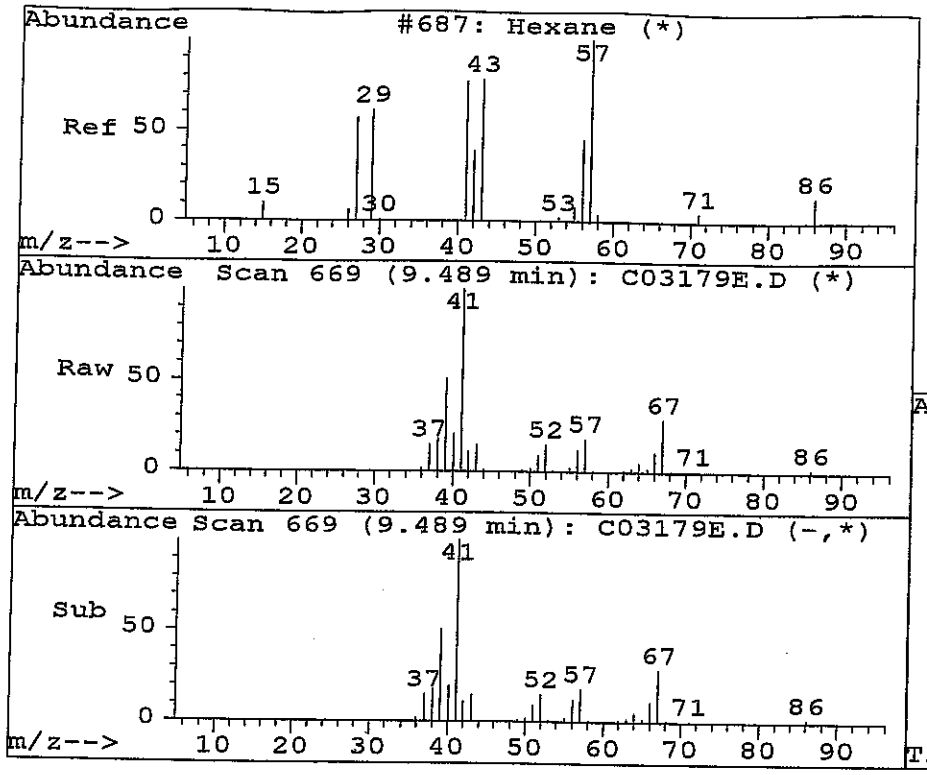


#26
2-Butanone
Concen: 3.44 ppbV
RT: 9.31 min Scan# 651
Delta R.T. -0.23 min
Lab File: C03179E.D
Acq: 17 Mar 109 1:25 pm

Tgt Ion:72 Resp: 92652

Ion	Ratio	Lower	Upper
72	100		
57	37.2	25.3	37.9
43	689.2	425.0	637.6#
0	0.0	0.0	0.0

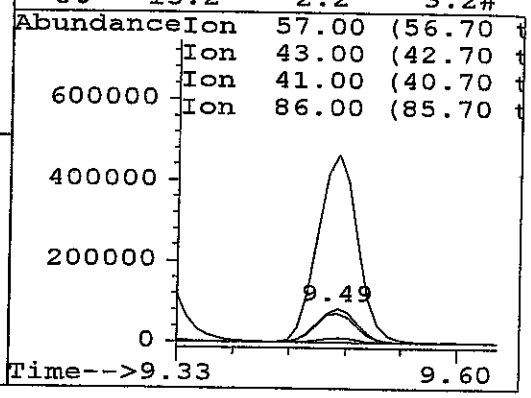


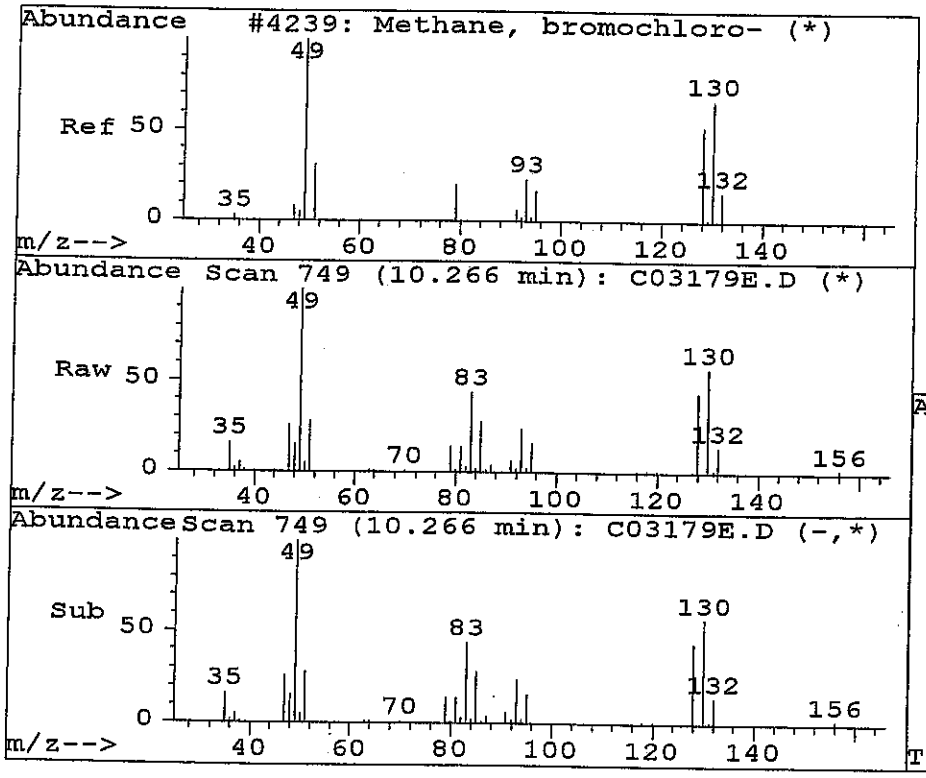


#27
Hexane
Concen: 2.85 ppbV
RT: 9.49 min Scan# 669
Delta R.T. -0.22 min
Lab File: C03179E.D
Acq: 17 Mar 109 1:25 pm

Tgt Ion:57 Resp: 226768

Ion	Ratio	Lower	Upper
57	100		
43	89.0	78.0	117.0
41	552.9	399.1	598.7
86	13.2	2.2	3.2#

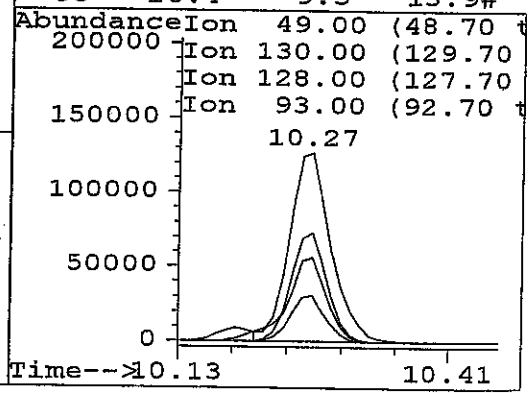


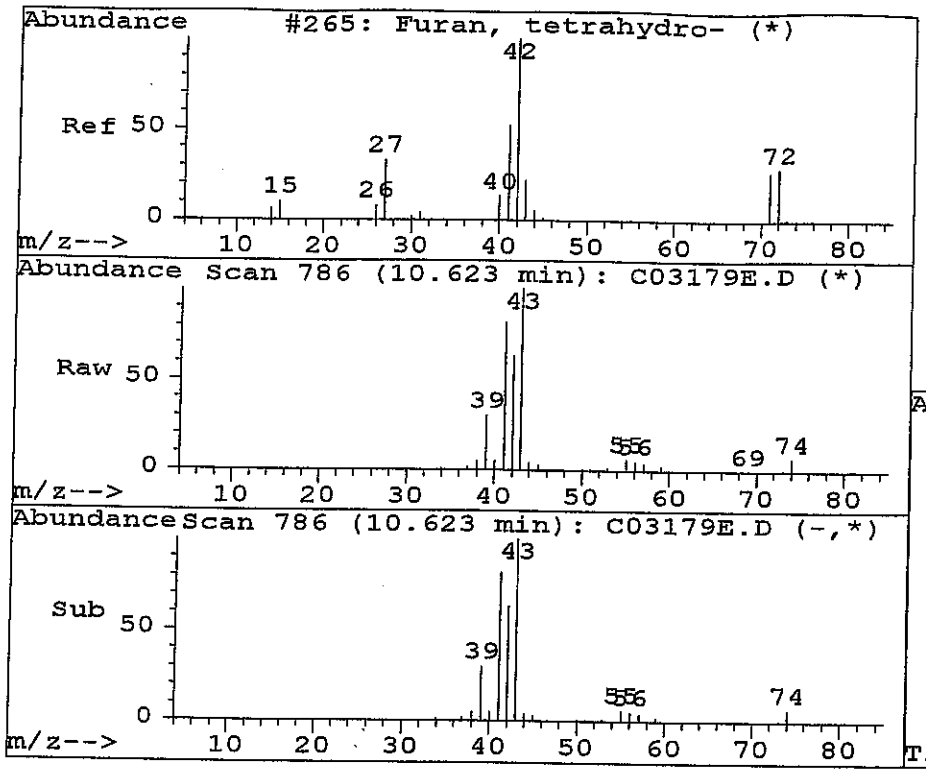


#28
Bromochloromethane
Concen: 3.53 ppbV
RT: 10.27 min Scan# 749
Delta R.T. -0.23 min
Lab File: C03179E.D
Acq: 17 Mar 109 1:25 pm

Tgt Ion:49 Resp: 372741

Ion	Ratio	Lower	Upper
49	100		
130	50.0	33.3	49.9#
128	42.7	26.2	39.2#
93	20.4	9.3	13.9#

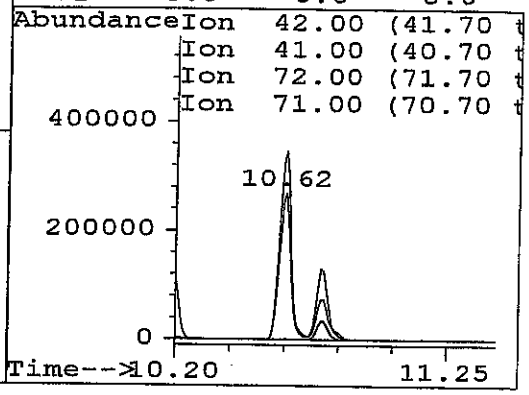


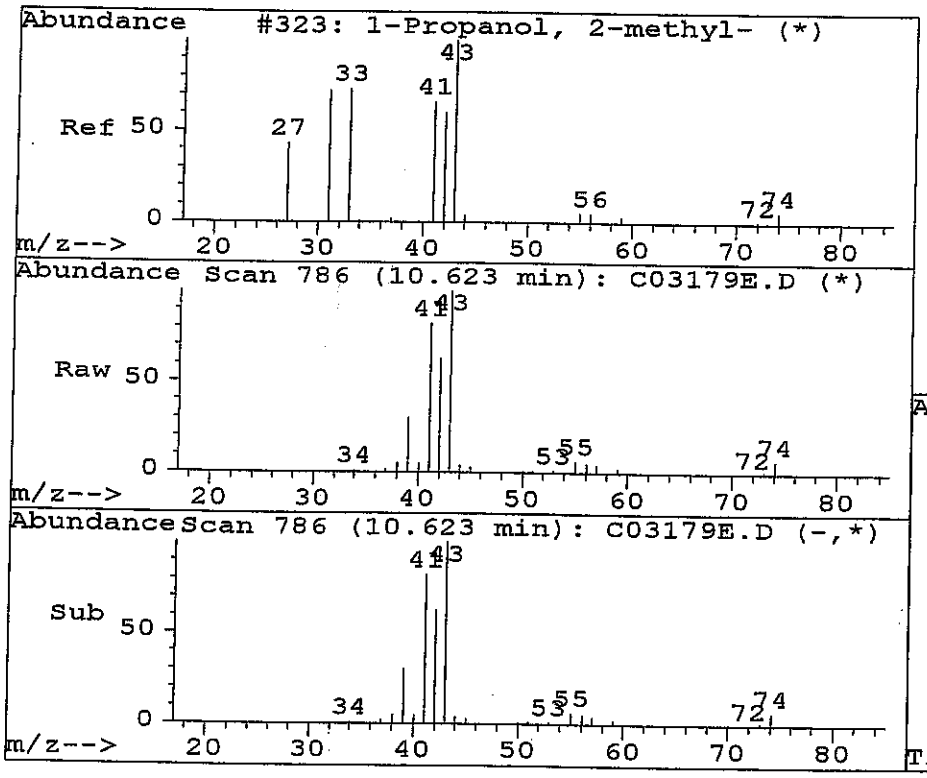


#29
Tetrahydrofuran
Concen: 2.97 ppbV m
RT: 10.62 min Scan# 786
Delta R.T. -0.30 min
Lab File: C03179E.D
Acq: 17 Mar 109 1:25 pm

Tgt Ion:42 Resp: 1207319

Ion	Ratio	Lower	Upper
42	100		
41	129.4	111.8	167.8
72	0.4	0.0	0.0#
71	0.0	0.0	0.0

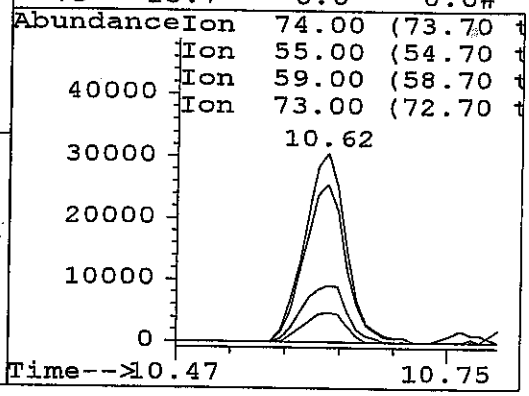


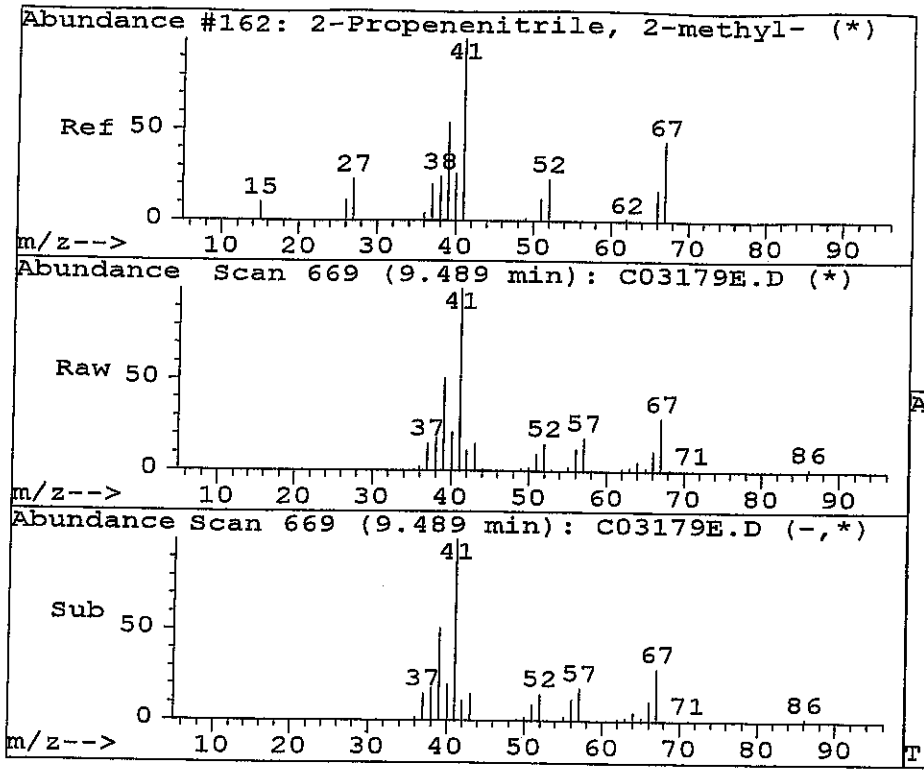


#30
Isobutyl alcohol
Concen: 8.44 ppbV
RT: 10.62 min Scan# 786
Delta R.T. -0.30 min
Lab File: C03179E.D
Acq: 17 Mar 109 1:25 pm

Tgt Ion:74 Resp: 90372

Ion	Ratio	Lower	Upper
74	100		
55	83.5	63.6	95.4
59	29.9	43.4	65.0#
73	15.7	0.0	0.0#

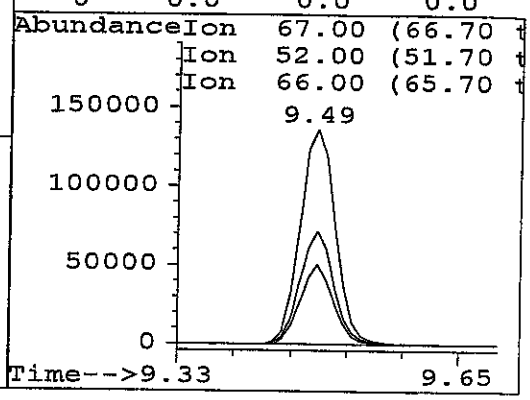


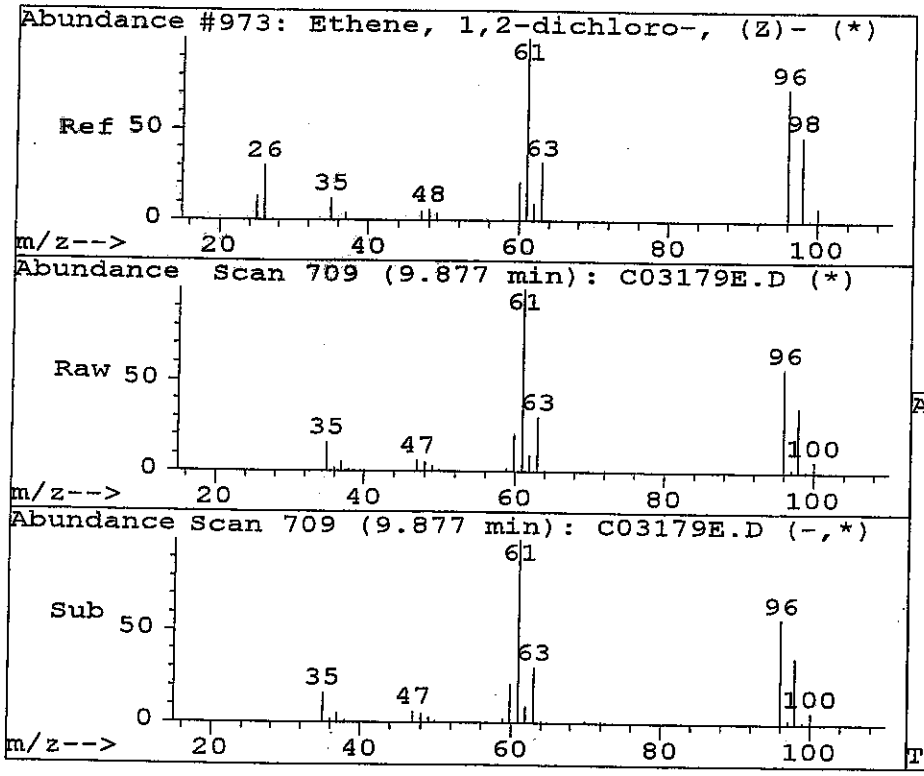


#31
Methacrylonitrile
Concen: 12.65 ppbV
RT: 9.49 min Scan# 669
Delta R.T. -0.25 min
Lab File: C03179E.D
Acq: 17 Mar 109 1:25 pm

Tgt Ion:67 Resp: 367703

Ion	Ratio	Lower	Upper
67	100		
52	52.6	46.5	69.7
66	37.1	27.4	41.2
0	0.0	0.0	0.0

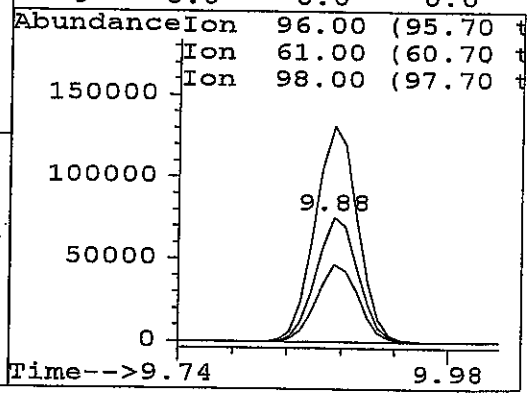


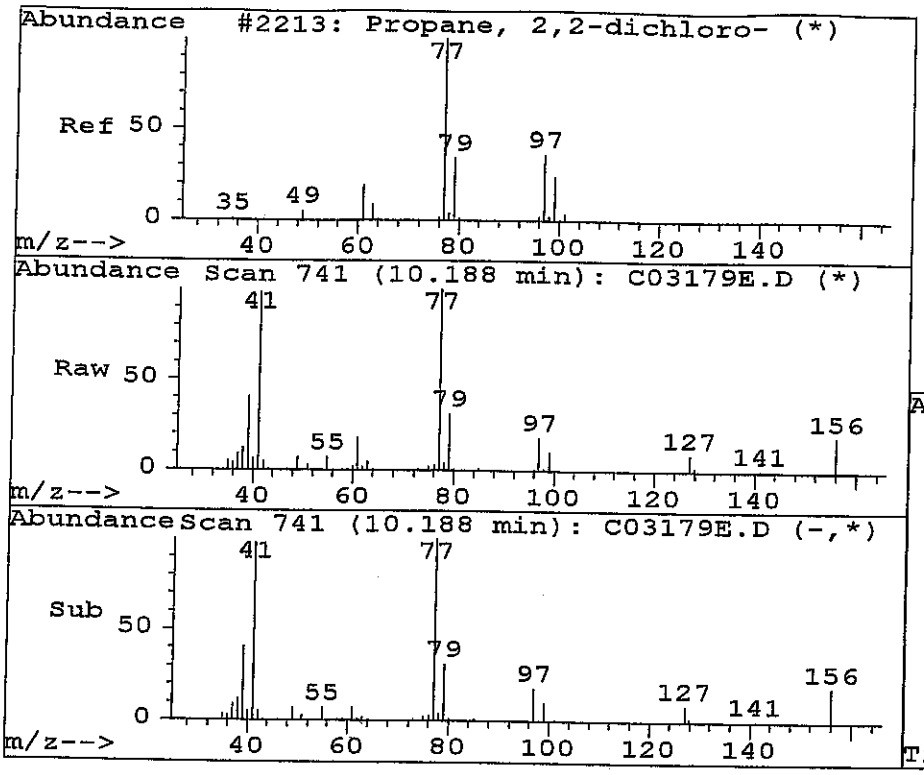


#32
cis-1,2-Dichloroethene
Concen: 4.40 ppbV
RT: 9.88 min Scan# 709
Delta R.T. -0.23 min
Lab File: C03179E.D
Acq: 17 Mar 109 1:25 pm

Tgt Ion:96 Resp: 190337

Ion	Ratio	Lower	Upper
96	100		
61	173.9	145.3	217.9
98	61.9	43.9	65.9
0	0.0	0.0	0.0

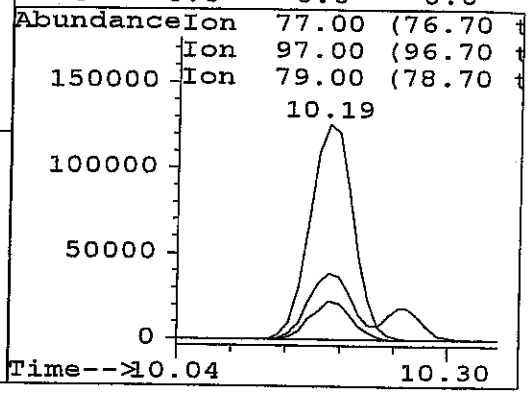


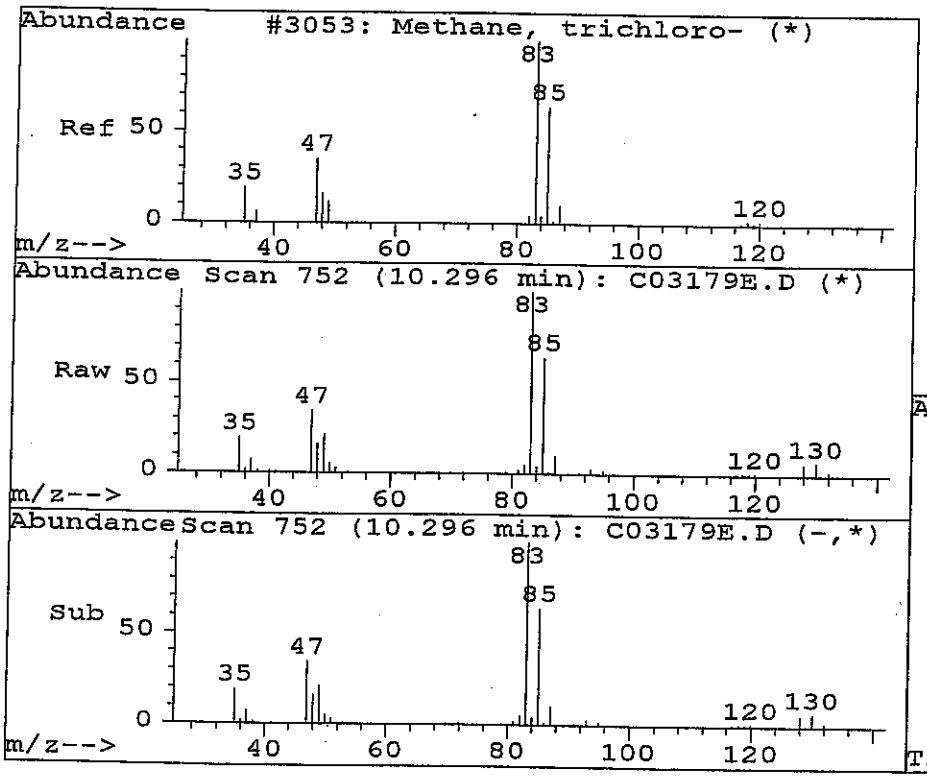


#33
2,2-Dichloropropane
Concen: 3.89 ppbV
RT: 10.19 min Scan# 741
Delta R.T. -0.23 min
Lab File: C03179E.D
Acq: 17 Mar 109 1:25 pm

Tgt Ion:77 Resp: 370695

Ion	Ratio	Lower	Upper
77	100		
97	17.9	15.0	22.4
79	25.3	20.7	31.1
0	0.0	0.0	0.0

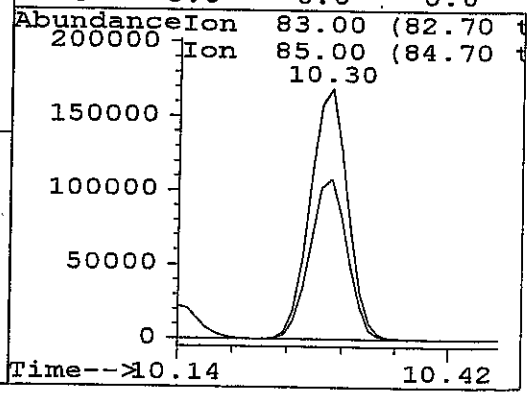


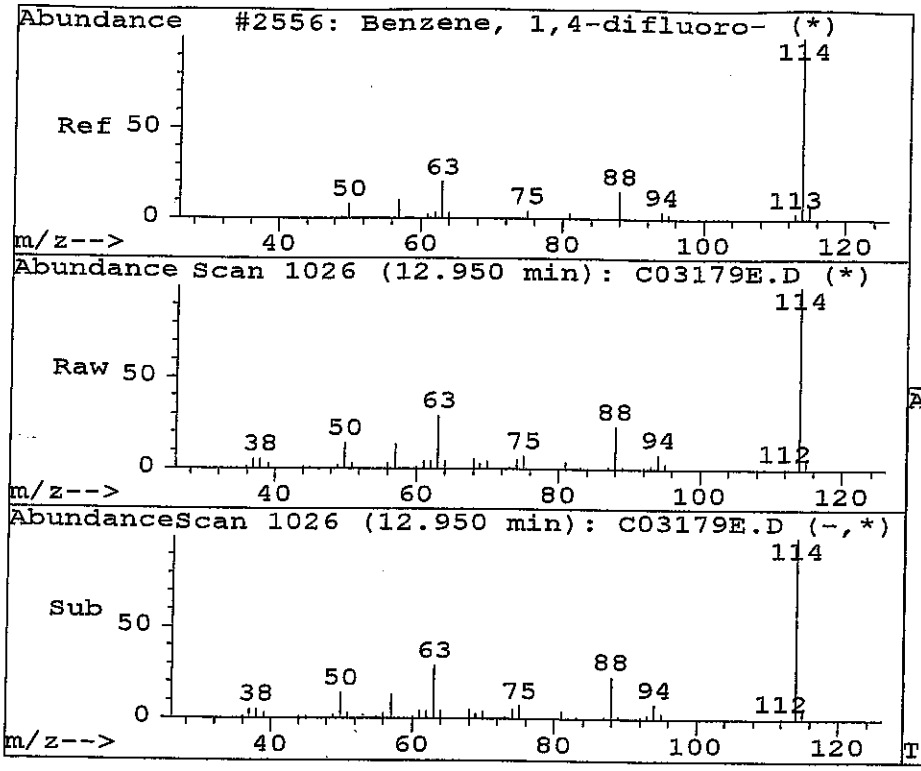


#34
Chloroform
Concen: 4.50 ppbV
RT: 10.30 min Scan# 752
Delta R.T. -0.23 min
Lab File: C03179E.D
Acq: 17 Mar 109 1:25 pm

Tgt Ion:83 Resp: 449509

Ion	Ratio	Lower	Upper
83	100		
85	64.1	55.7	83.5
0	0.0	0.0	0.0
0	0.0	0.0	0.0

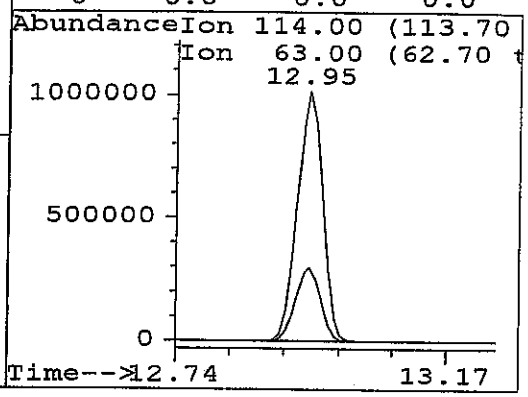


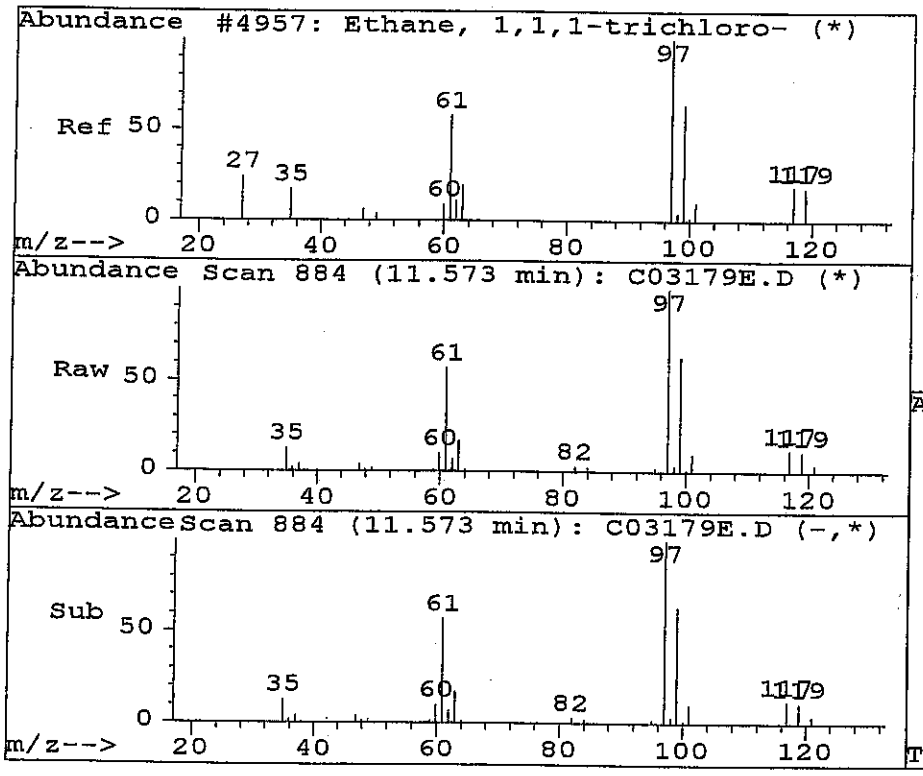


#35
1,4-Difluorobenzene
Concen: 20.00 ppbV
RT: 12.95 min Scan# 1026
Delta R.T. -0.22 min
Lab File: C03179E.D
Acq: 17 Mar 109 1:25 pm

Tgt Ion:114 Resp: 2870629

Ion	Ratio	Lower	Upper
114	100		
63	29.3	22.4	37.4
0	0.0	0.0	0.0
0	0.0	0.0	0.0

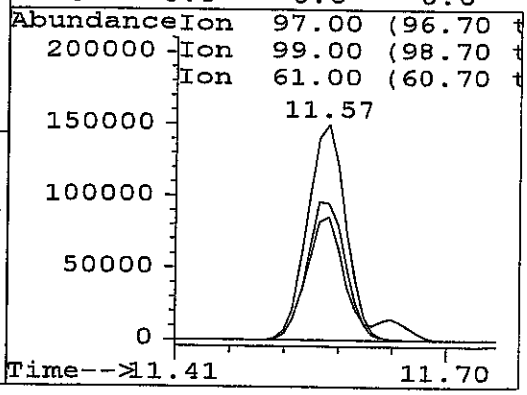


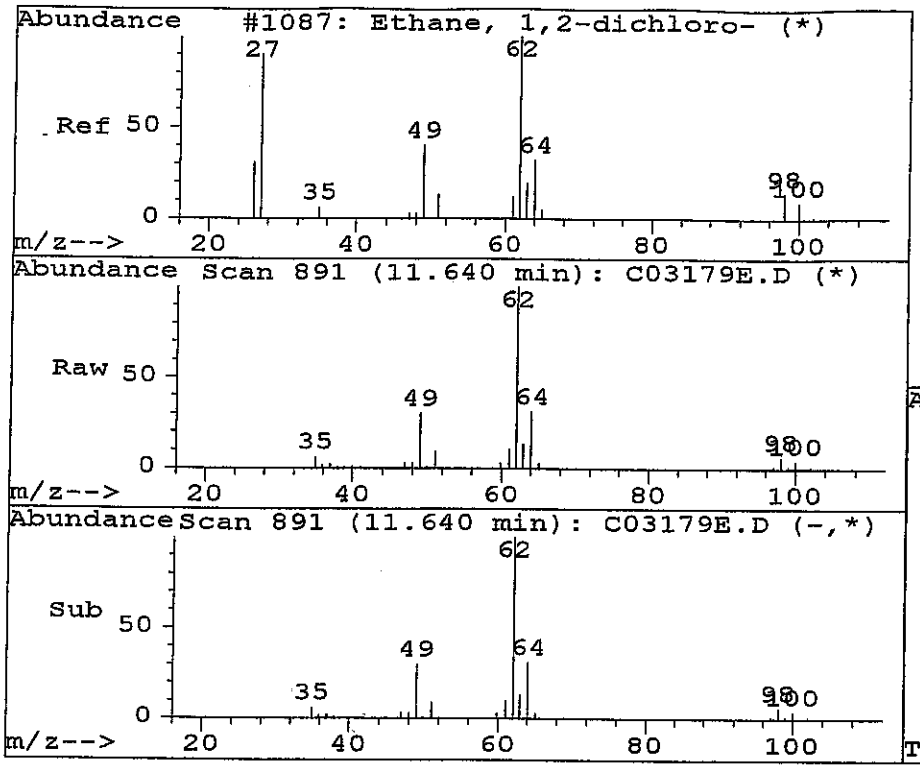


#36
1,1,1-Trichloroethane
Concen: 4.42 ppbV
RT: 11.57 min Scan# 884
Delta R.T. -0.23 min
Lab File: C03179E.D
Acq: 17 Mar 109 1:25 pm

Tgt Ion:97 Resp: 432442

Ion	Ratio	Lower	Upper
97	100		
99	63.2	49.8	74.8
61	55.4	29.9	44.9#
0	0.0	0.0	0.0

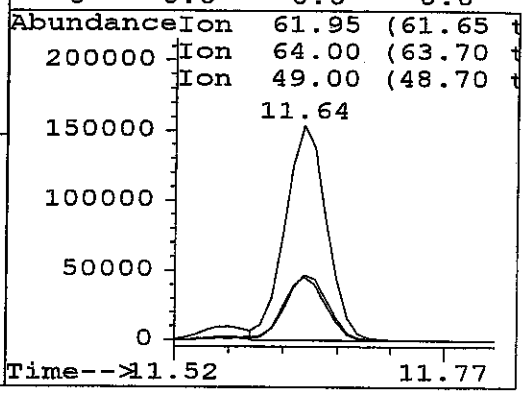


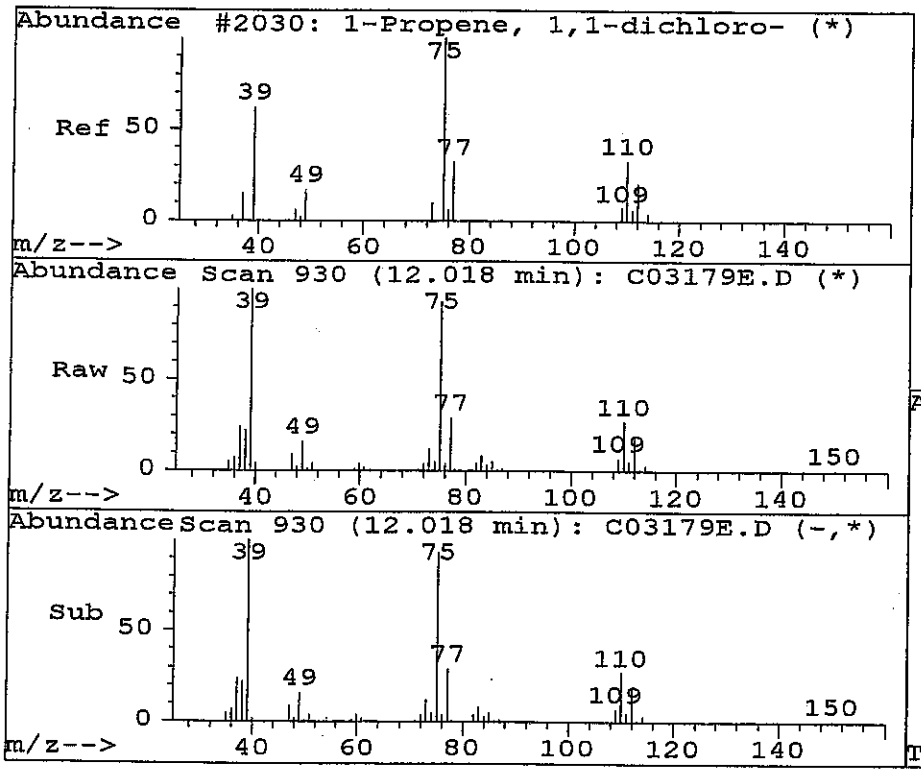


#37
1,2-Dichloroethane
Concen: 4.35 ppbV
RT: 11.64 min Scan# 891
Delta R.T. -0.23 min
Lab File: C03179E.D
Acq: 17 Mar 109 1:25 pm

Tgt Ion:61.95 Resp: 39892

Ion	Ratio	Lower	Upper
62	100		
64	30.9	24.3	36.5
49	29.7	22.4	33.6
0	0.0	0.0	0.0

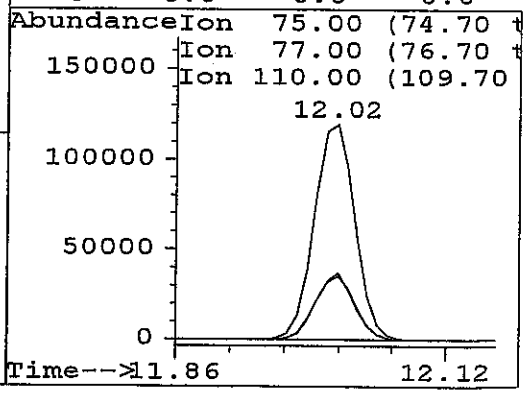


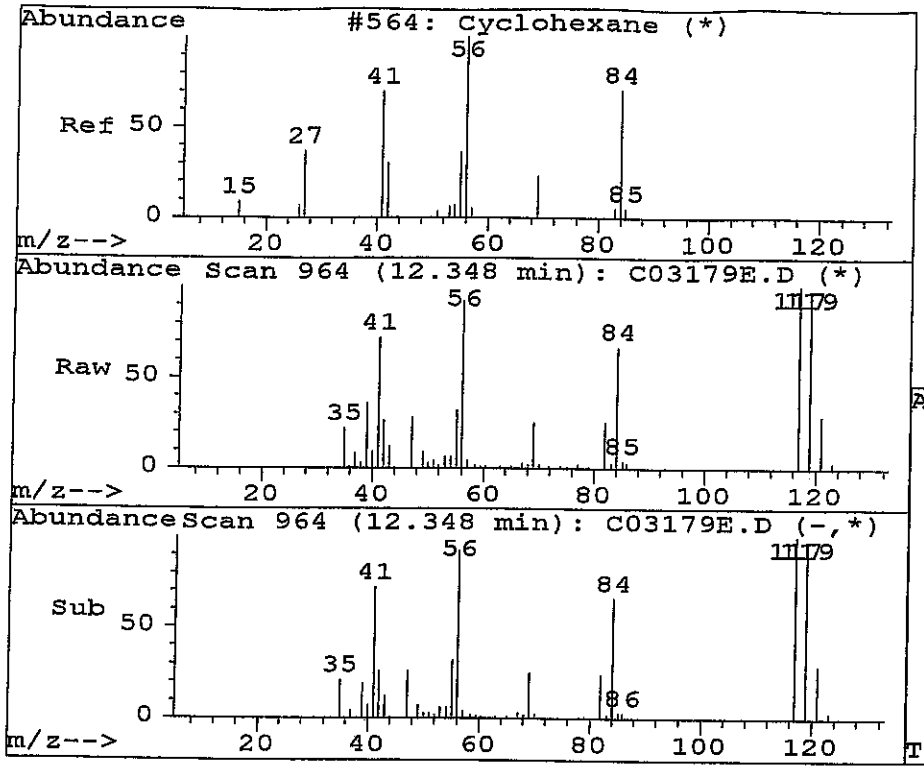


#38
1,1-Dichloropropene
Concen: 3.59 ppbV
RT: 12.02 min Scan# 930
Delta R.T. -0.22 min
Lab File: C03179E.D
Acq: 17 Mar 109 1:25 pm

Tgt Ion:75 Resp: 325075

Ion	Ratio	Lower	Upper
75	100		
77	30.9	25.0	37.4
110	29.4	21.3	31.9
0	0.0	0.0	0.0

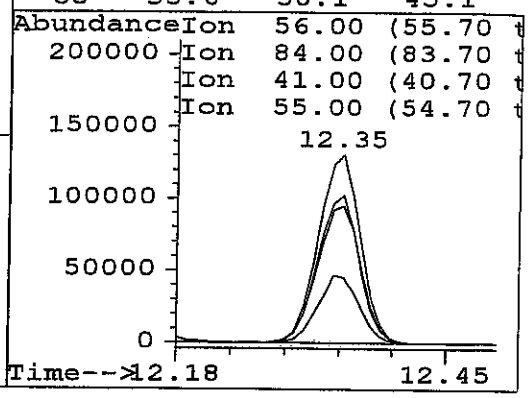


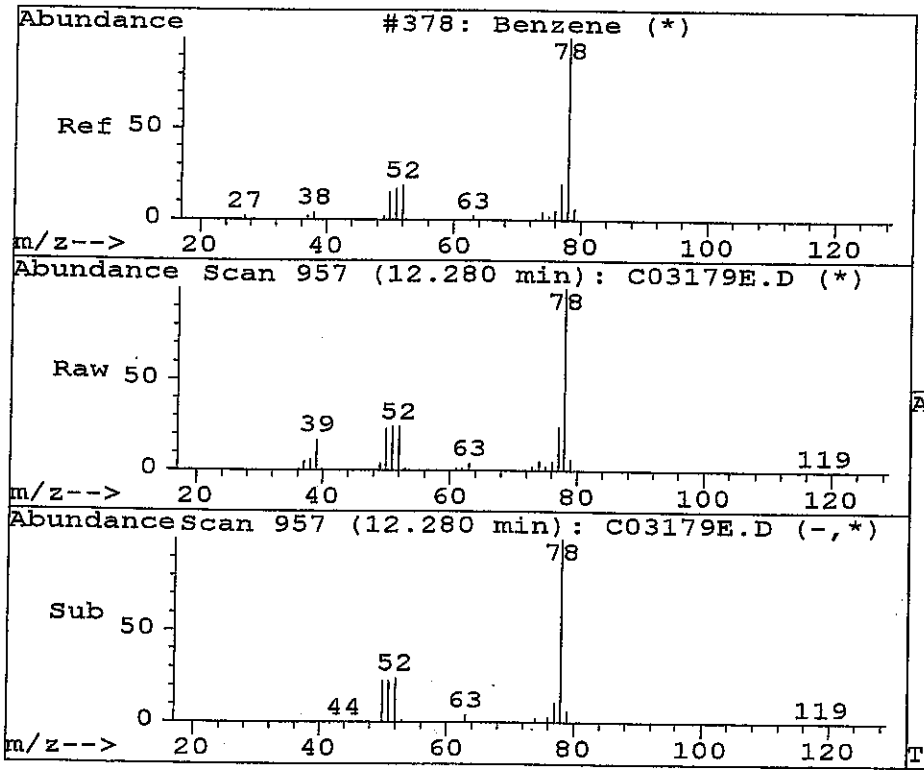


#39
Cyclohexane
Concen: 3.71 ppbV
RT: 12.35 min Scan# 964
Delta R.T. -0.20 min
Lab File: C03179E.D
Acq: 17 Mar 109 1:25 pm

Tgt Ion:56 Resp: 380141

Ion	Ratio	Lower	Upper
56	100		
84	75.7	60.3	90.5
41	78.0	65.4	98.0
55	35.6	30.1	45.1

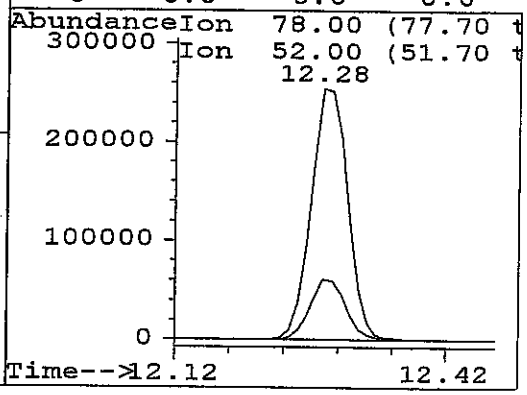


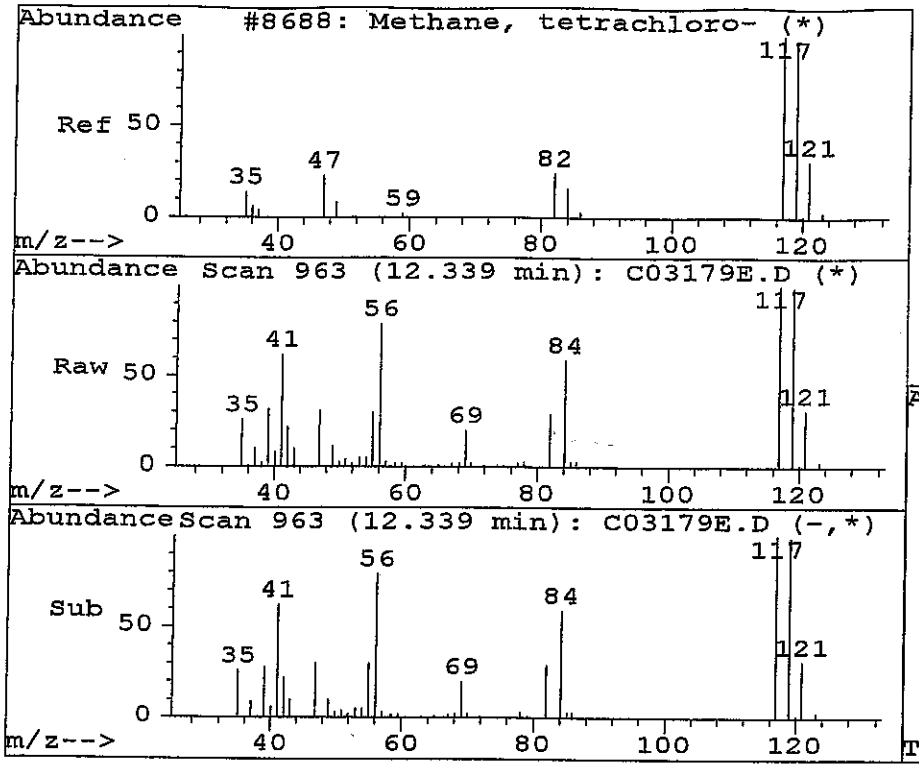


#40
Benzene
Concen: 3.73 ppbV
RT: 12.28 min Scan# 957
Delta R.T. -0.23 min
Lab File: C03179E.D
Acq: 17 Mar 109 1:25 pm

Tgt Ion:78 Resp: 712515

Ion	Ratio	Lower	Upper
78	100		
52	24.0	17.8	26.8
0	0.0	0.0	0.0
0	0.0	0.0	0.0

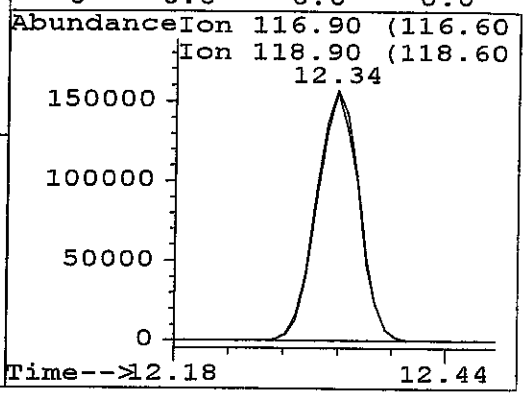


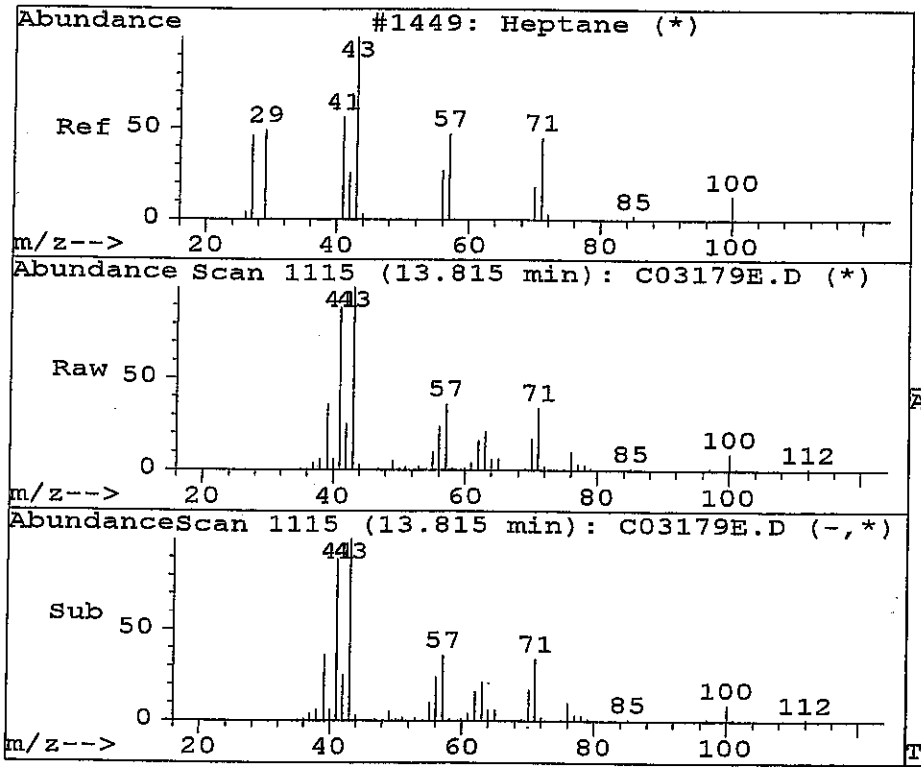


#41
Carbon tetrachloride
Concen: 4.58 ppbV
RT: 12.34 min Scan# 963
Delta R.T. -0.22 min
Lab File: C03179E.D
Acq: 17 Mar 109 1:25 pm

Tgt Ion:116.9 Resp: 451629

Ion	Ratio	Lower	Upper
117	100		
119	99.2	65.0	97.6#
0	0.0	0.0	0.0
0	0.0	0.0	0.0

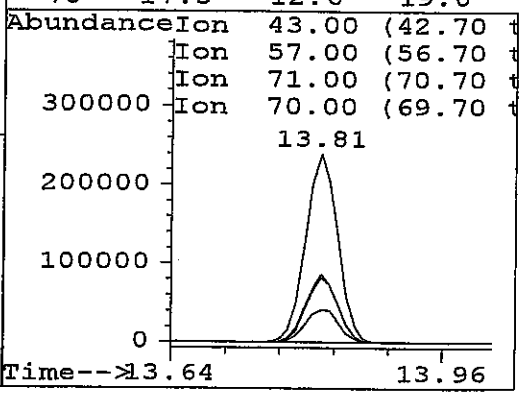


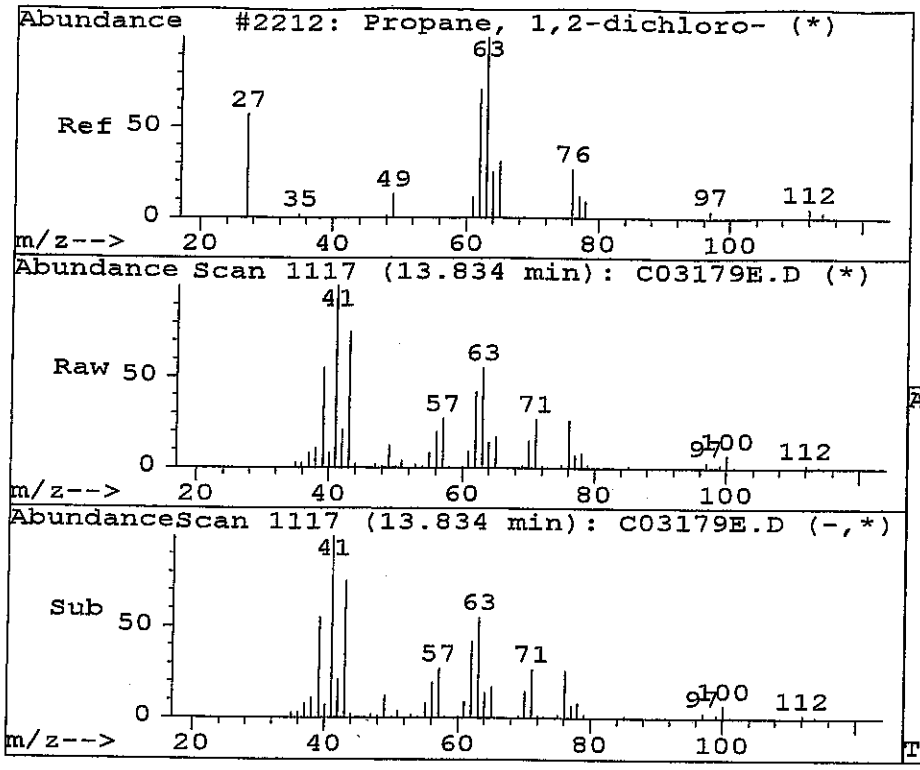


#42
n-Heptane
Concen: 3.38 ppbV
RT: 13.81 min Scan# 1115
Delta R.T. -0.23 min
Lab File: C03179E.D
Acq: 17 Mar 109 1:25 pm

Tgt Ion:43 Resp: 616569

Ion	Ratio	Lower	Upper
43	100		
57	35.9	30.3	45.5
71	34.2	29.9	44.9
70	17.3	12.6	19.0

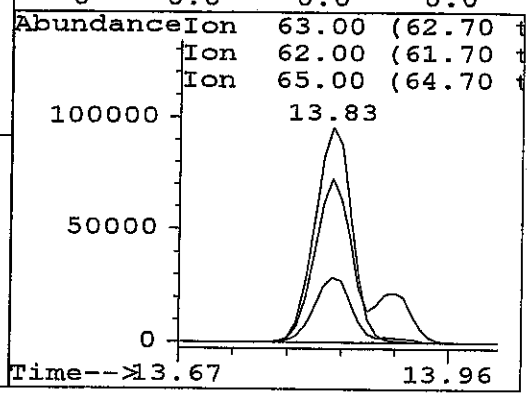


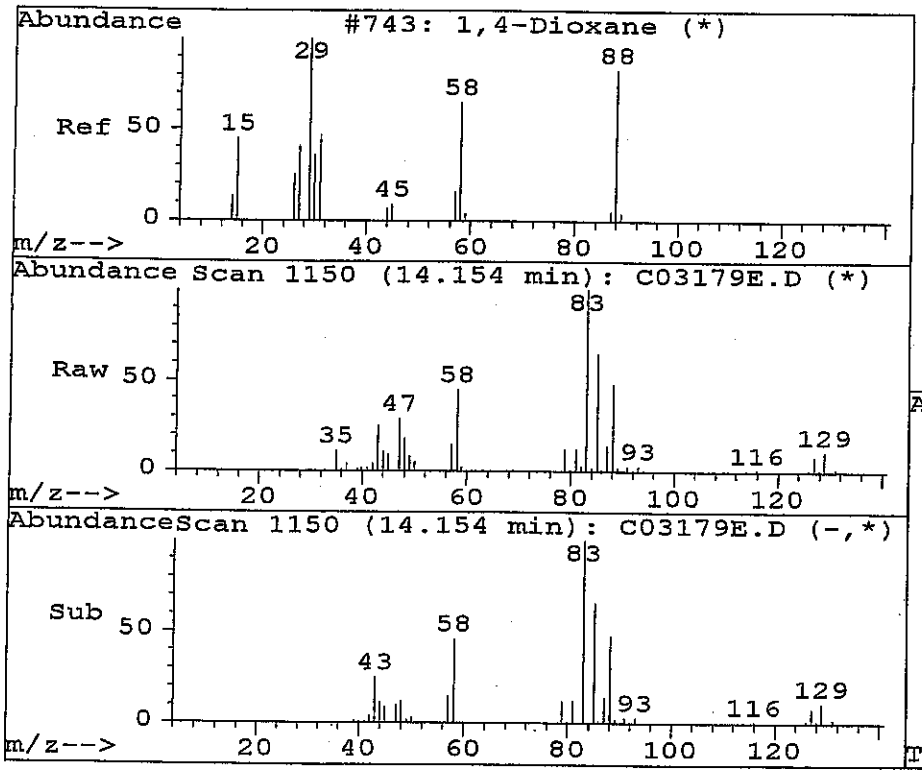


#43
1,2-Dichloropropane
Concen: 4.34 ppbV
RT: 13.83 min Scan# 1117
Delta R.T. -0.24 min
Lab File: C03179E.D
Acq: 17 Mar 109 1:25 pm

Tgt Ion:63 Resp: 266688

Ion	Ratio	Lower	Upper
63	100		
62	72.9	50.4	75.6
65	29.8	25.8	38.6
0	0.0	0.0	0.0

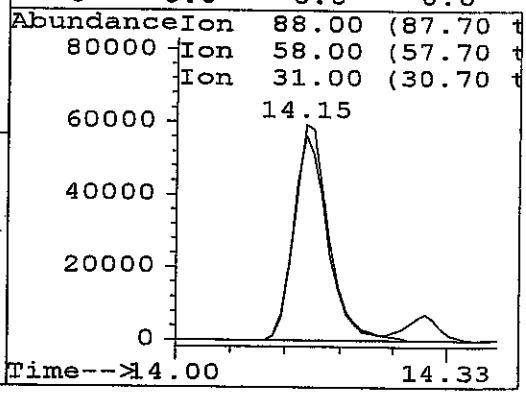


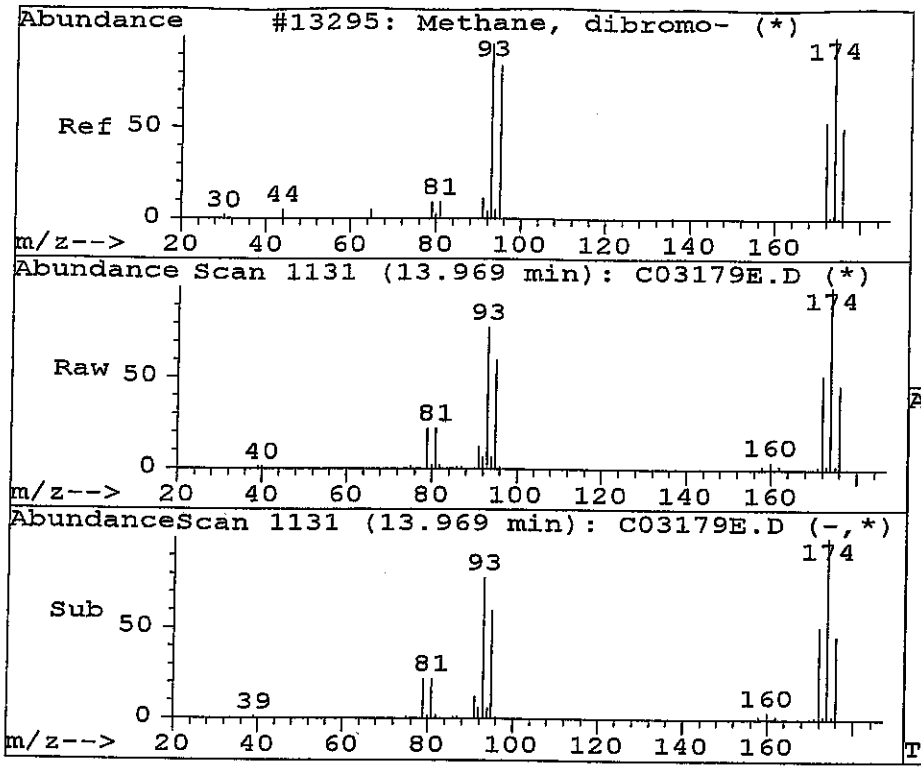


#44
1,4 Dioxane
Concen: 3.22 ppbV
RT: 14.15 min Scan# 1150
Delta R.T. -0.25 min
Lab File: C03179E.D
Acq: 17 Mar 109 1:25 pm

Tgt Ion:88 Resp: 171544

Ion	Ratio	Lower	Upper
88	100		
58	94.7	71.5	107.3
31	0.0	0.0	0.0
0	0.0	0.0	0.0

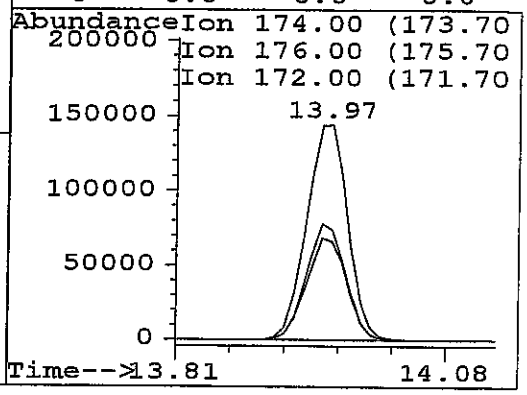


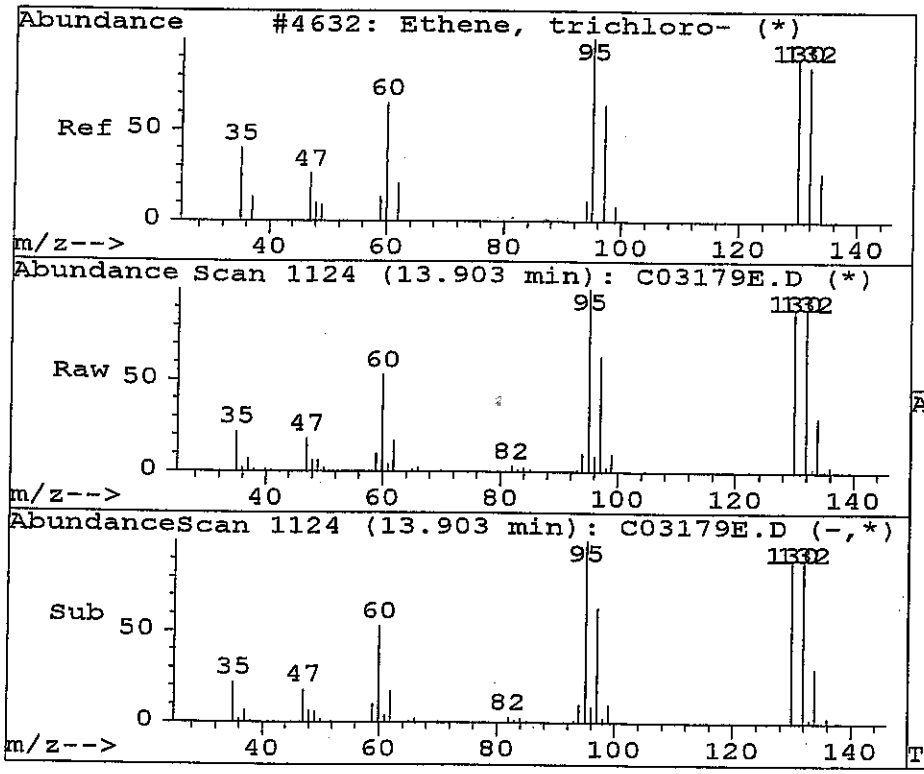


#45
Dibromomethane
Concen: 3.66 ppbV
RT: 13.97 min Scan# 1131
Delta R.T. -0.23 min
Lab File: C03179E.D
Acq: 17 Mar 109 1:25 pm

Tgt Ion:174 Resp: 411463

Ion	Ratio	Lower	Upper
174	100		
176	45.7	37.1	55.7
172	51.1	38.4	57.6
0	0.0	0.0	0.0

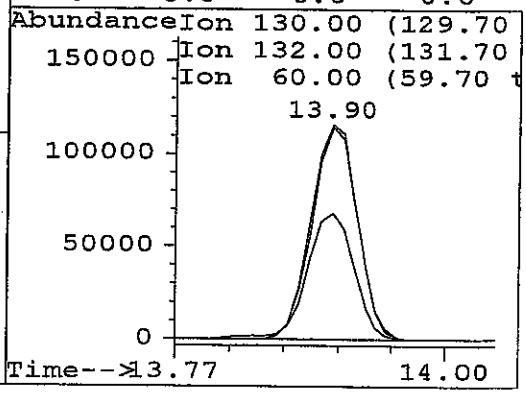


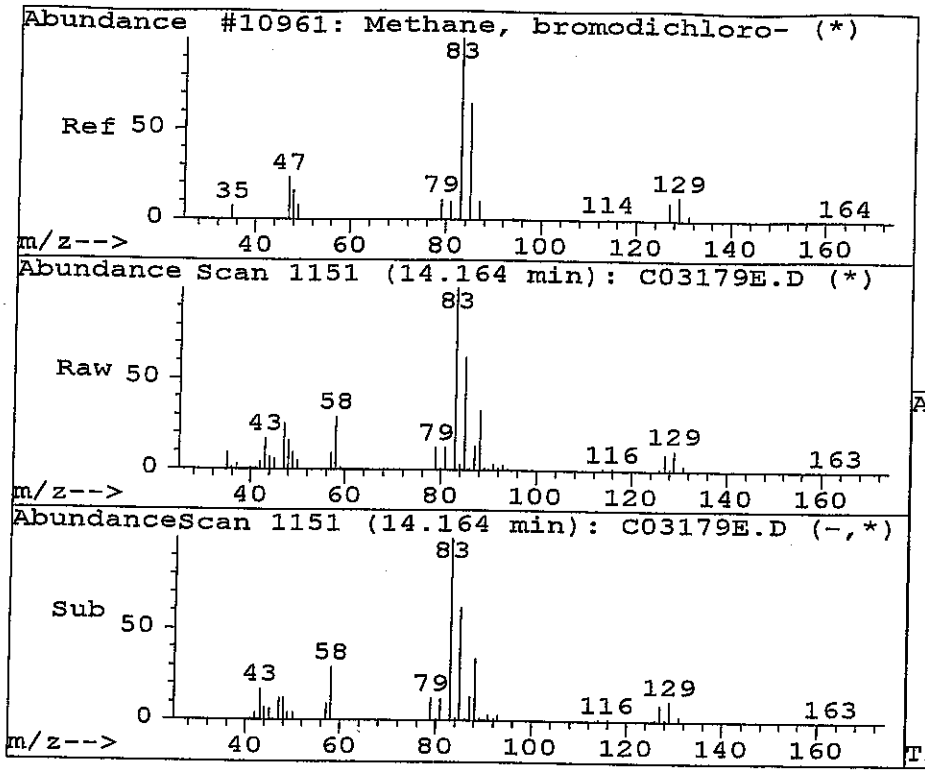


#46
Trichloroethene
Concen: 4.15 ppbV
RT: 13.90 min Scan# 1124
Delta R.T. -0.23 min
Lab File: C03179E.D
Acq: 17 Mar 109 1:25 pm

Tgt Ion:130 Resp: 323273

Ion	Ratio	Lower	Upper
130	100		
132	98.9	74.4	111.6
60	57.9	49.2	73.8
0	0.0	0.0	0.0

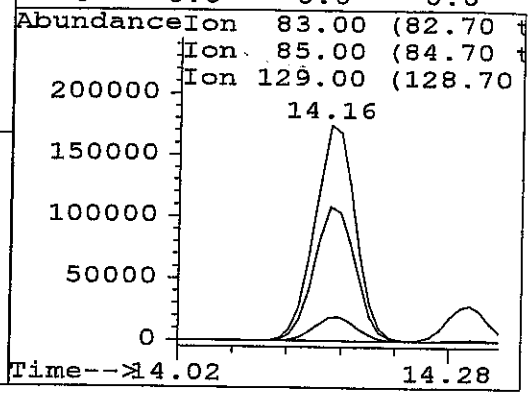


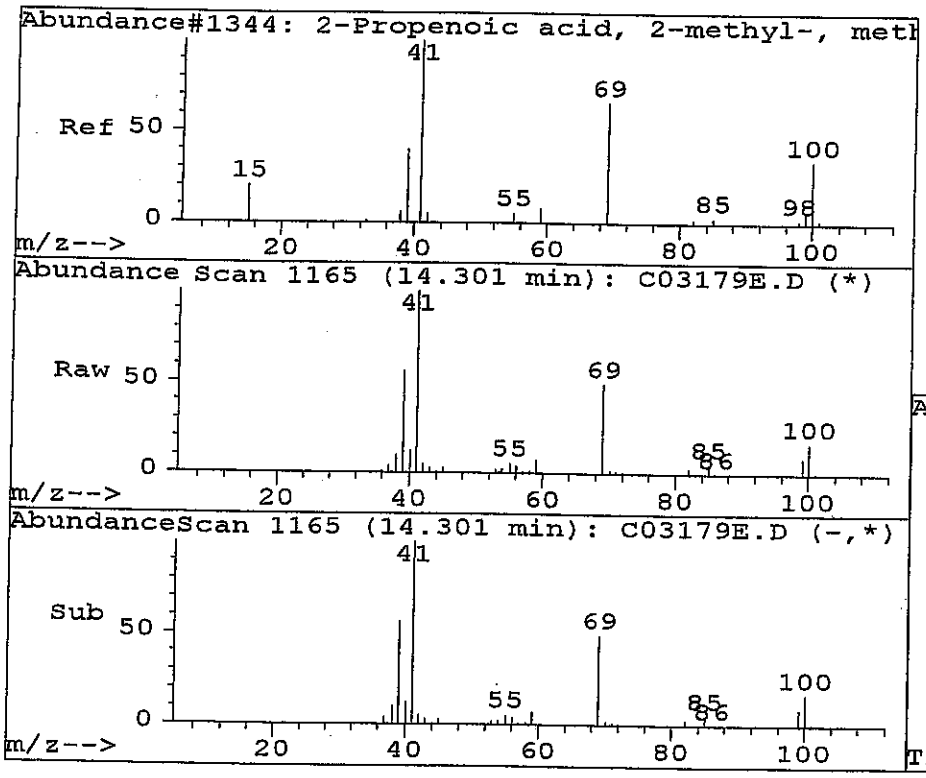


#47
Bromodichloromethane
Concen: 3.47 ppbV
RT: 14.16 min Scan# 1151
Delta R.T. -0.24 min
Lab File: C03179E.D
Acq: 17 Mar 109 1:25 pm

Tgt Ion:83 Resp: 476051

Ion	Ratio	Lower	Upper
83	100		
85	61.6	56.1	84.1
129	10.8	7.2	10.8
0	0.0	0.0	0.0

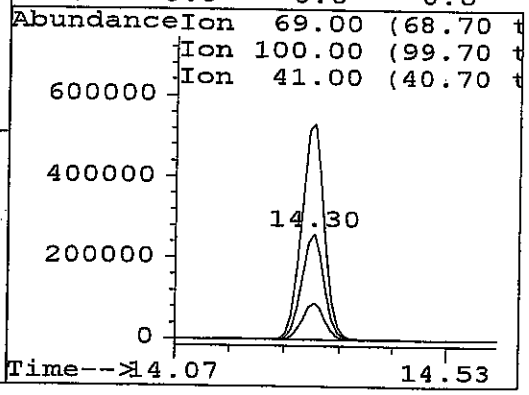


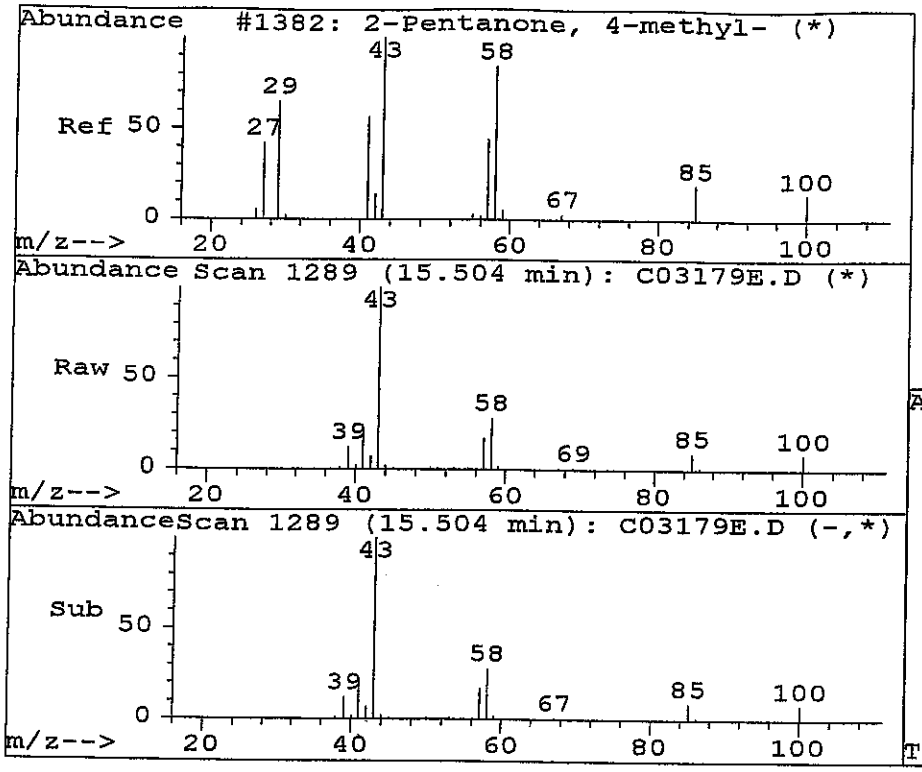


#48
Methyl methacrylate
Concen: 9.46 ppbV
RT: 14.30 min Scan# 1165
Delta R.T. -0.25 min
Lab File: C03179E.D
Acq: 17 Mar 109 1:25 pm

Tgt Ion:69 Resp: 694276

Ion	Ratio	Lower	Upper
69	100		
100	34.4	28.3	42.5
41	203.9	157.8	236.8
0	0.0	0.0	0.0

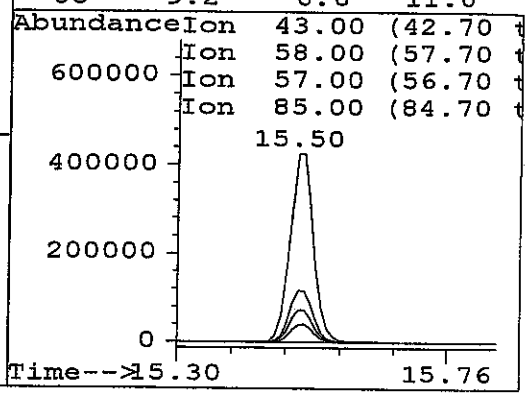


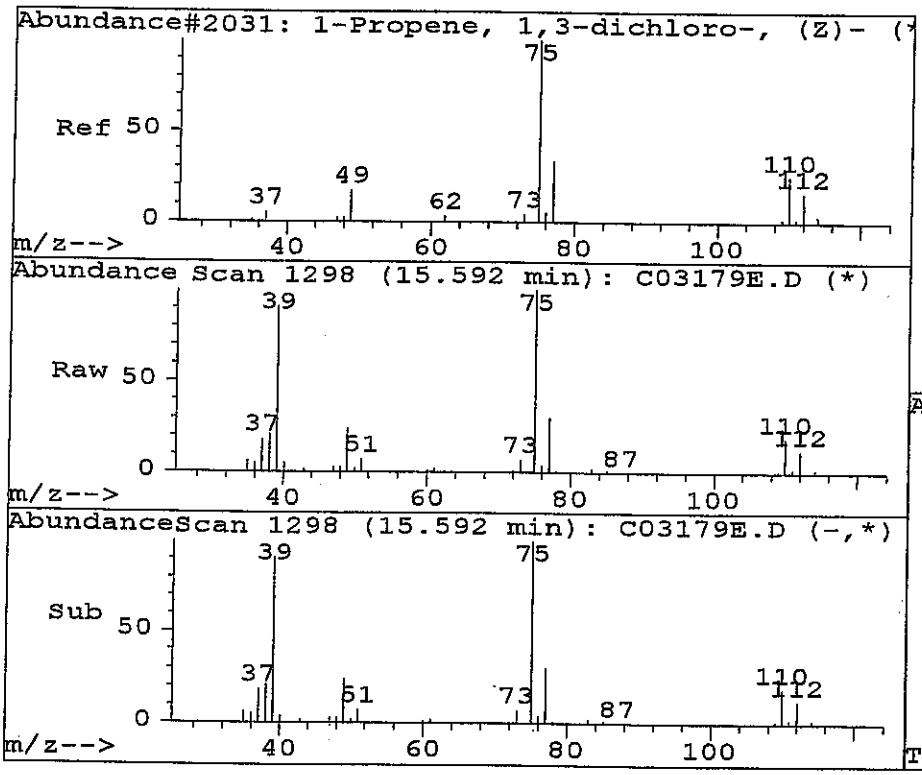


#49
Methyl Isobutyl Ketone
Concen: 3.85 ppbV
RT: 15.50 min Scan# 1289
Delta R.T. -0.20 min
Lab File: C03179E.D
Acq: 17 Mar 109 1:25 pm

Tgt Ion:43 Resp: 1179200

Ion	Ratio	Lower	Upper
43	100		
58	27.6	19.6	32.6
57	17.1	14.4	24.0
85	9.2	6.6	11.0

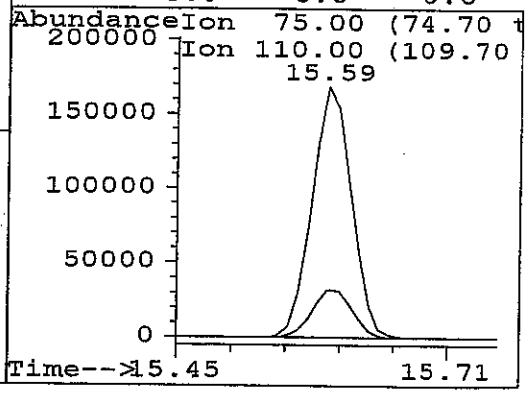


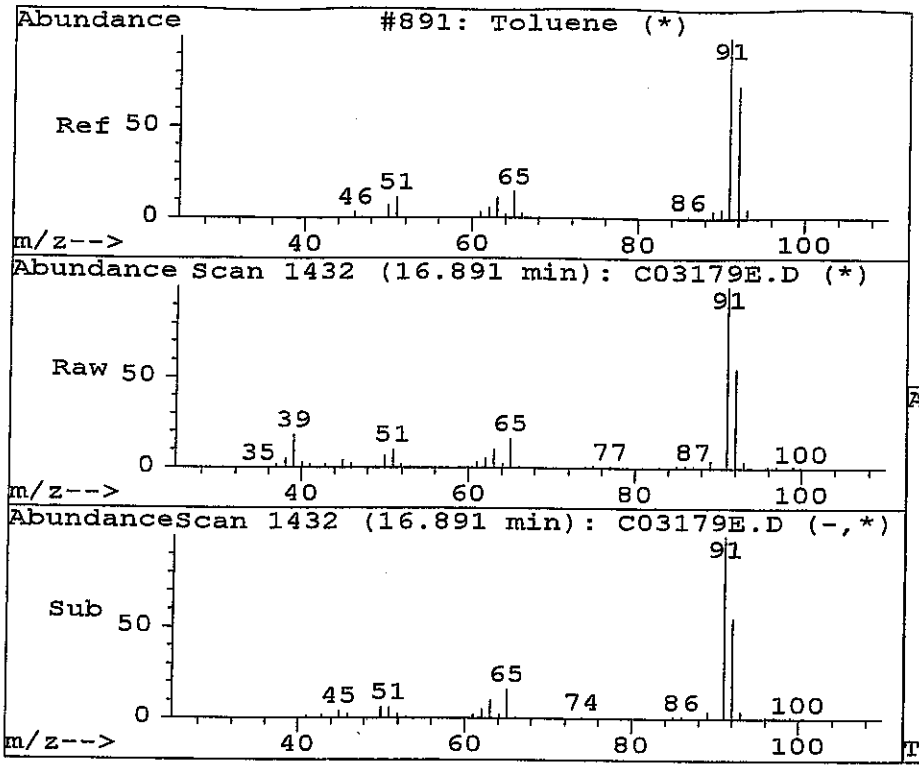


#50
cis-1,3-Dichloropropene
Concen: 4.61 ppbV
RT: 15.59 min Scan# 1298
Delta R.T. -0.23 min
Lab File: C03179E.D
Acq: 17 Mar 109 1:25 pm

Tgt Ion:75 Resp: 441906

Ion	Ratio	Lower	Upper
75	100		
110	19.1	17.1	25.7
0	0.0	0.0	0.0
0	0.0	0.0	0.0

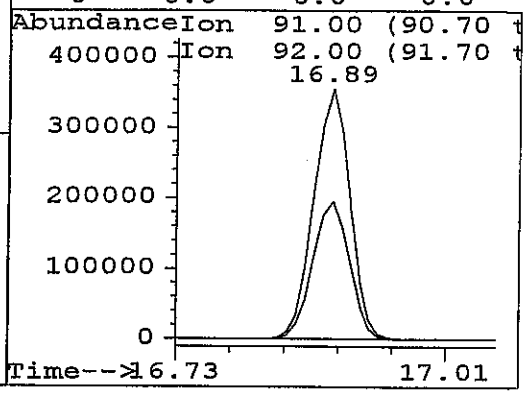


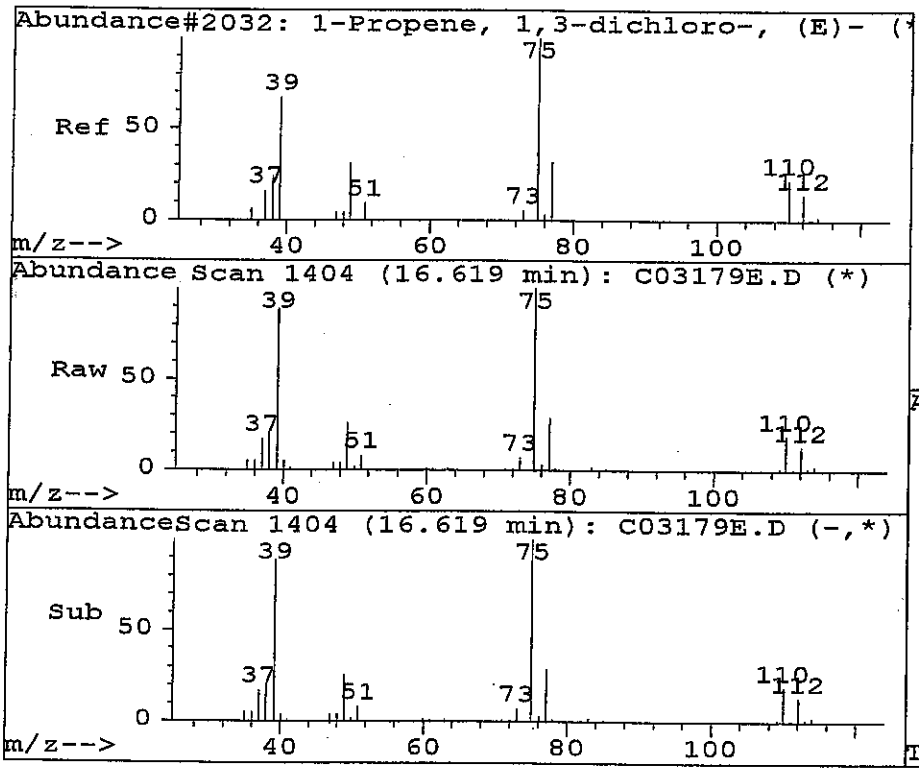


#51
Toluene
Concen: 3.94 ppbV
RT: 16.89 min Scan# 1432
Delta R.T. -0.22 min
Lab File: C03179E.D
Acq: 17 Mar 109 1:25 pm

Tgt Ion:91 Resp: 944443

Ion	Ratio	Lower	Upper
91	100		
92	54.9	42.9	64.3
0	0.0	0.0	0.0
0	0.0	0.0	0.0

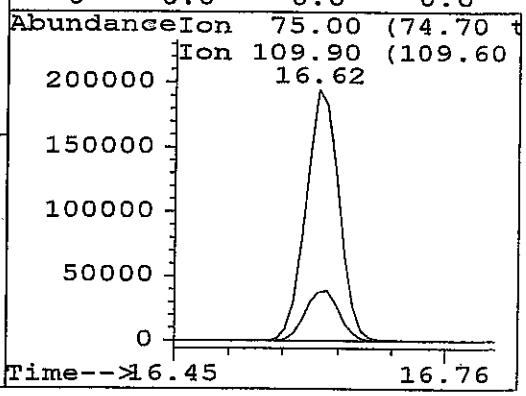


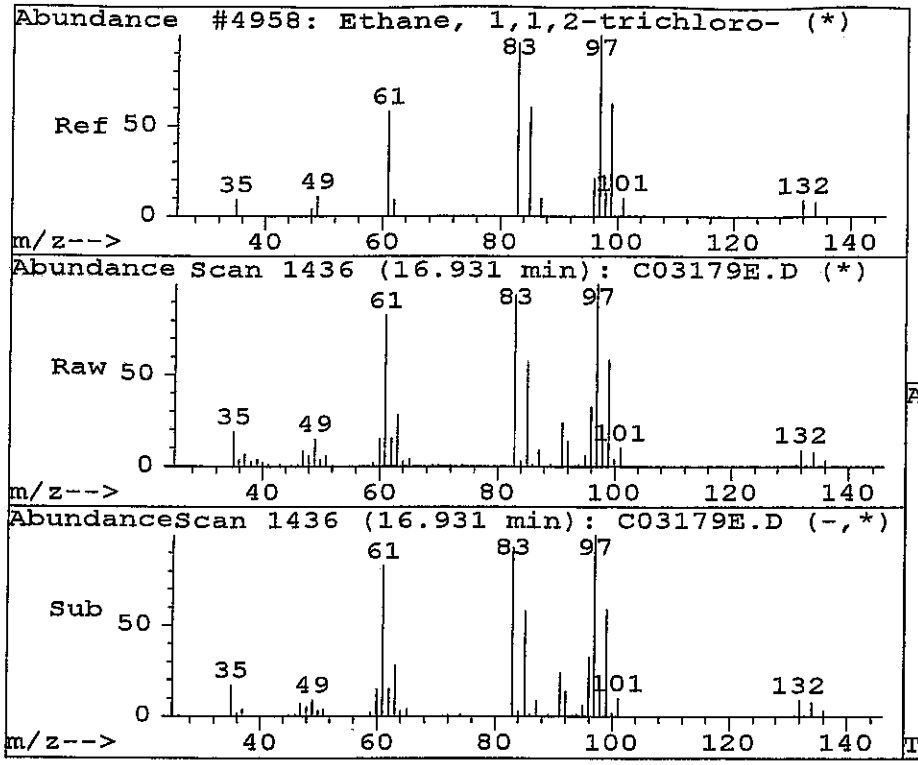


#52
trans-1,3-Dichloropropene
Concen: 4.47 ppbV
RT: 16.62 min Scan# 1404
Delta R.T. -0.23 min
Lab File: C03179E.D
Acq: 17 Mar 109 1:25 pm

Tgt Ion:75 Resp: 509168

Ion	Ratio	Lower	Upper
75	100		
110	19.4	16.4	24.6
0	0.0	0.0	0.0
0	0.0	0.0	0.0

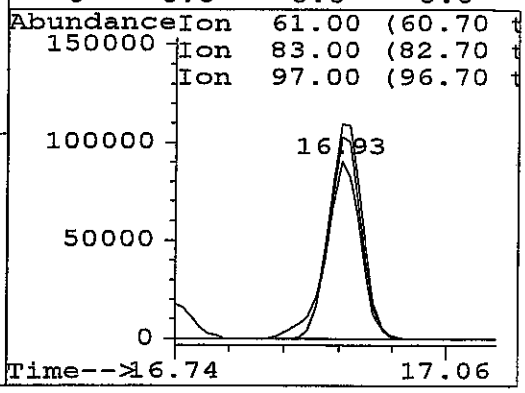


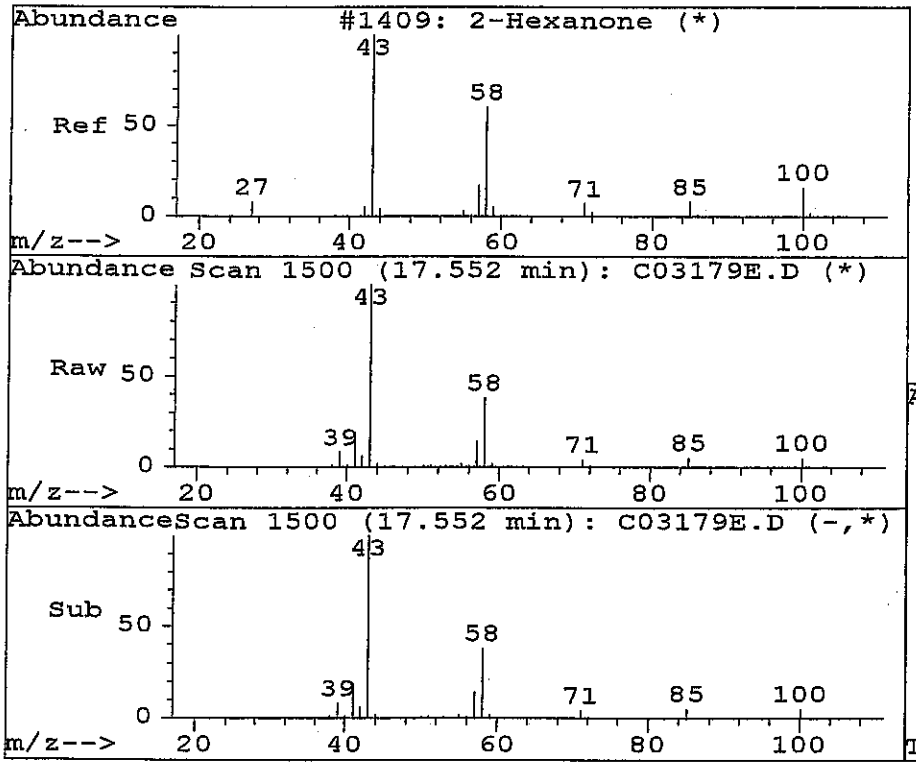


#53
1,1,2-Trichloroethane
Concen: 4.29 ppbV
RT: 16.93 min Scan# 1436
Delta R.T. -0.23 min
Lab File: C03179E.D
Acq: 17 Mar 109 1:25 pm

Tgt Ion:61 Resp: 263308

Ion	Ratio	Lower	Upper
61	100		
83	113.6	103.6	155.4
97	120.9	104.8	157.2
0	0.0	0.0	0.0

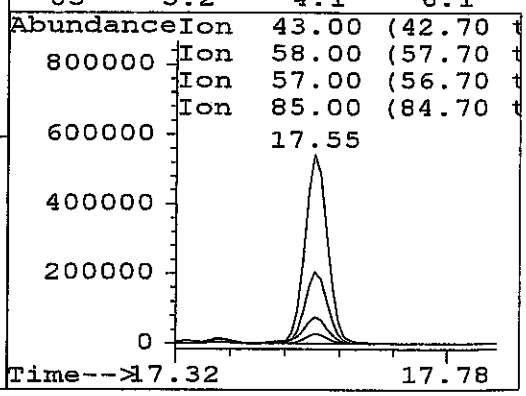


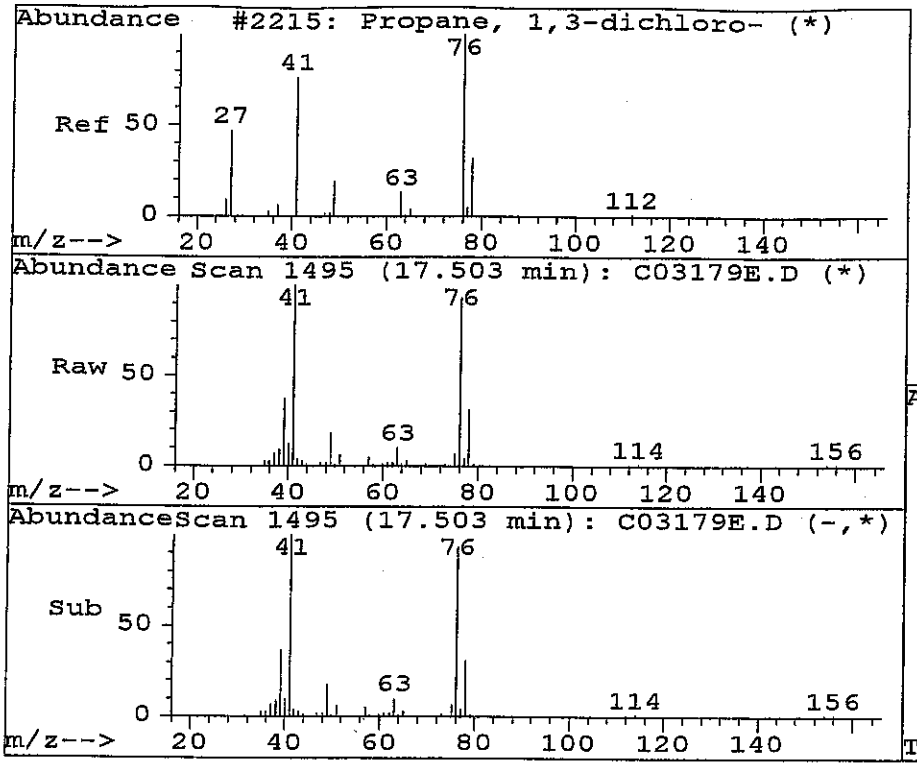


#54
2-Hexanone
Concen: 3.69 ppbV
RT: 17.55 min Scan# 1500
Delta R.T. -0.25 min
Lab File: C03179E.D
Acq: 17 Mar 109 1:25 pm

Tgt Ion:43 Resp: 1413472

Ion	Ratio	Lower	Upper
43	100		
58	37.6	30.0	50.0
57	13.8	9.4	15.6
85	5.2	4.1	6.1

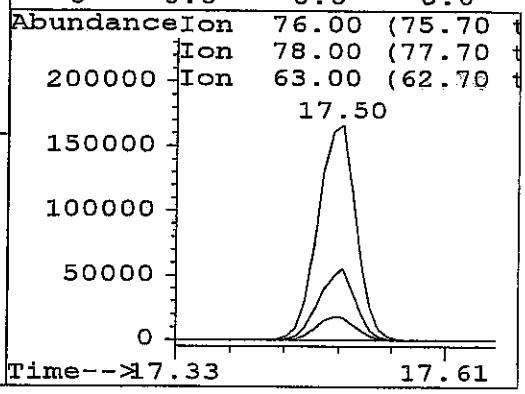


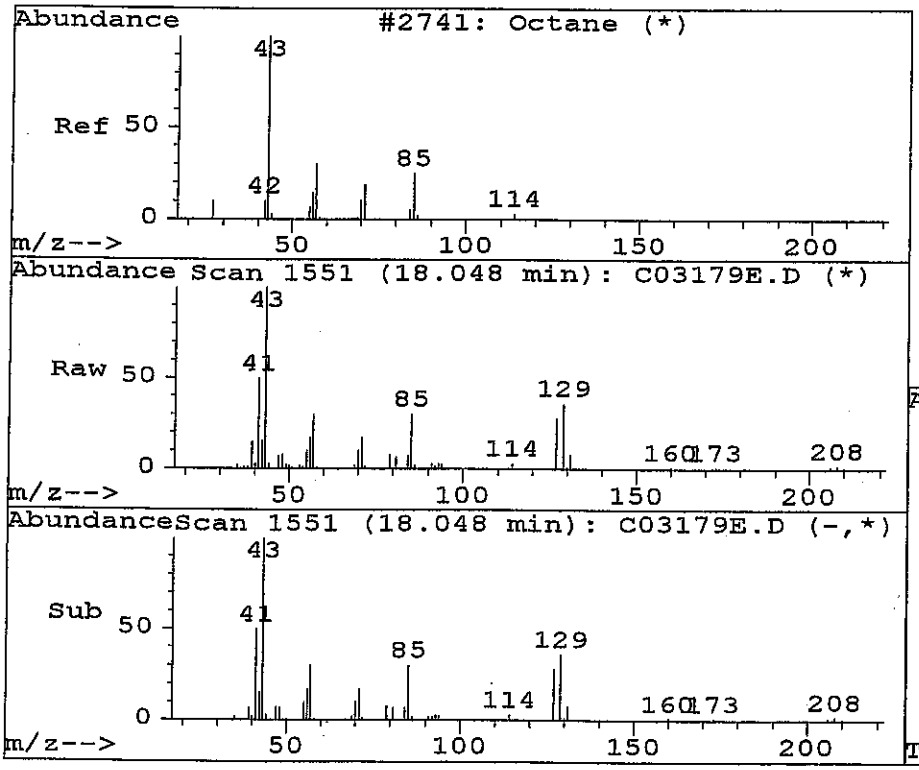


#55
1,3-Dichloropropane
Concen: 3.44 ppbV
RT: 17.50 min Scan# 1495
Delta R.T. -0.22 min
Lab File: C03179E.D
Acq: 17 Mar 109 1:25 pm

Tgt Ion:76 Resp: 468984

Ion	Ratio	Lower	Upper
76	100		
78	33.3	26.2	39.2
63	10.6	11.1	16.7#
0	0.0	0.0	0.0

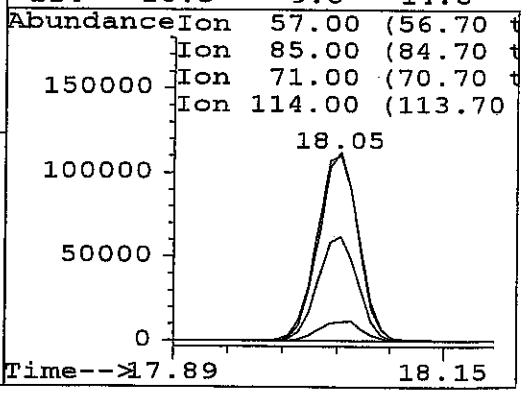


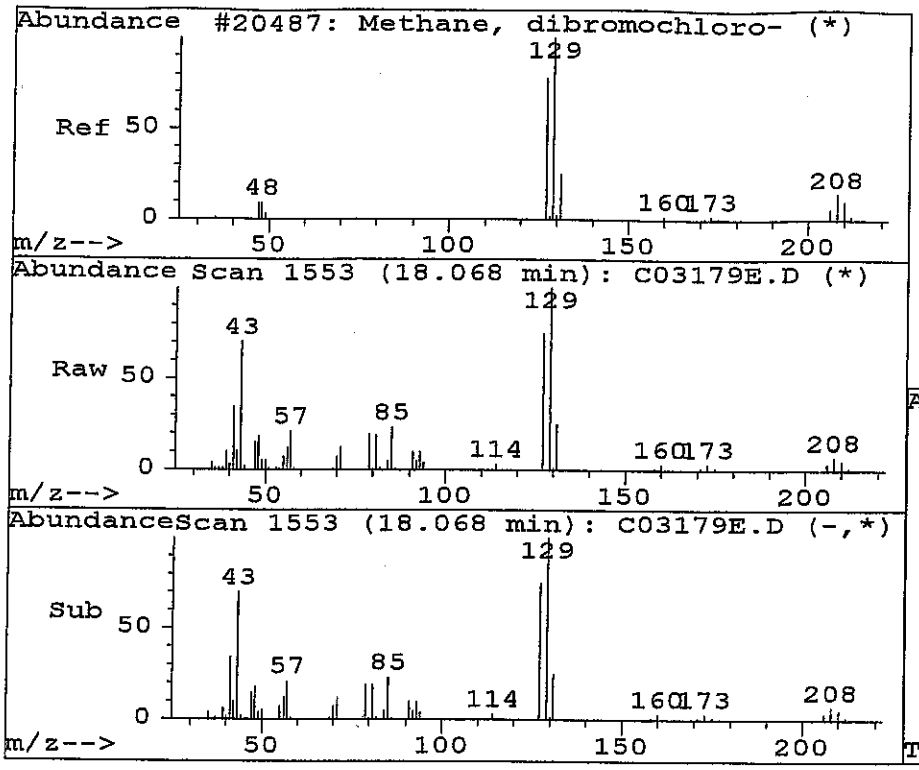


#56
Octane
Concen: 3.43 ppbV
RT: 18.05 min Scan# 1551
Delta R.T. -0.21 min
Lab File: C03179E.D
Acq: 17 Mar 109 1:25 pm

Tgt Ion:57 Resp: 297294

Ion	Ratio	Lower	Upper
57	100		
85	101.6	76.1	114.1
71	56.2	31.2	46.8#
114	10.3	9.8	14.8

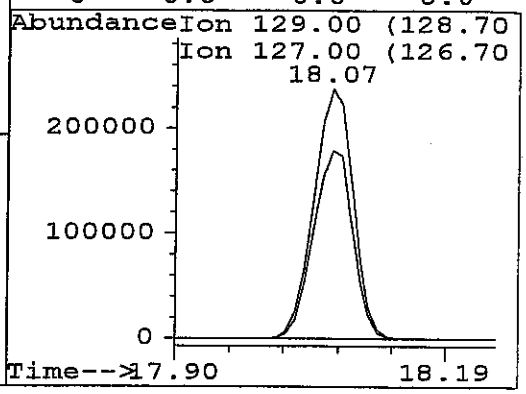


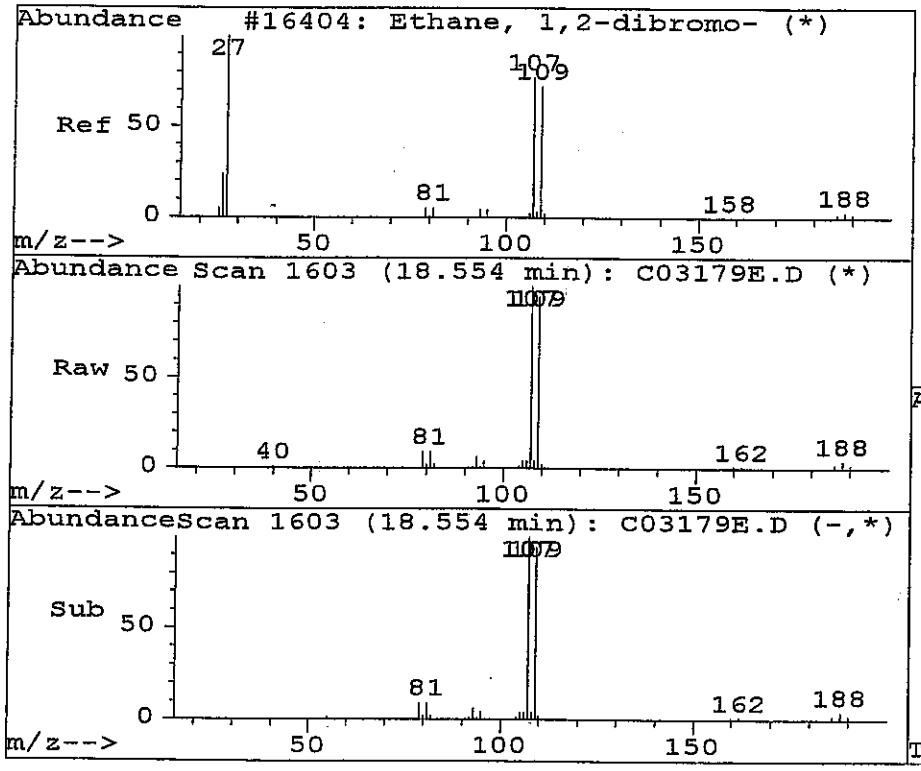


#57
Dibromochloromethane
Concen: 3.80 ppbV
RT: 18.07 min Scan# 1553
Delta R.T. -0.23 min
Lab File: C03179E.D
Acq: 17 Mar 109 1:25 pm

Tgt Ion:129 Resp: 688881

Ion	Ratio	Lower	Upper
129	100		
127	75.4	64.5	96.7
0	0.0	0.0	0.0
0	0.0	0.0	0.0

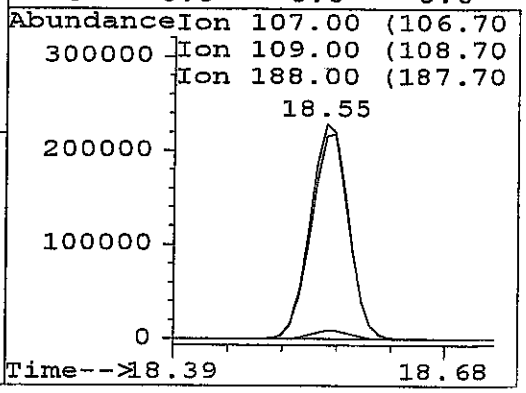


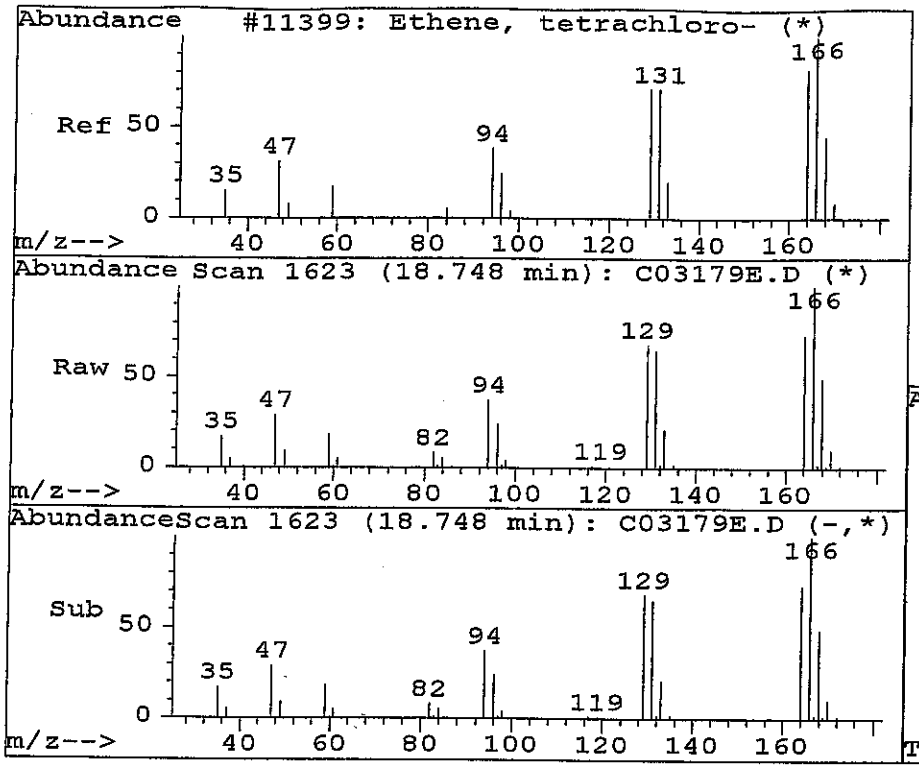


#58
1,2-Dibromoethane
Concen: 4.37 ppbV
RT: 18.55 min Scan# 1603
Delta R.T. -0.25 min
Lab File: C03179E.D
Acq: 17 Mar 109 1:25 pm

Tgt Ion:107 Resp: 660815

Ion	Ratio	Lower	Upper
107	100		
109	94.2	81.8	122.6
188	3.8	3.4	5.0
0	0.0	0.0	0.0

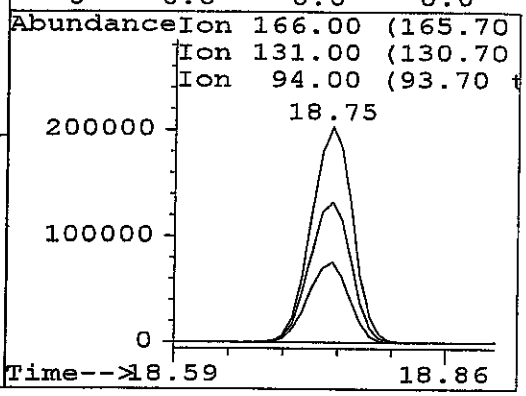


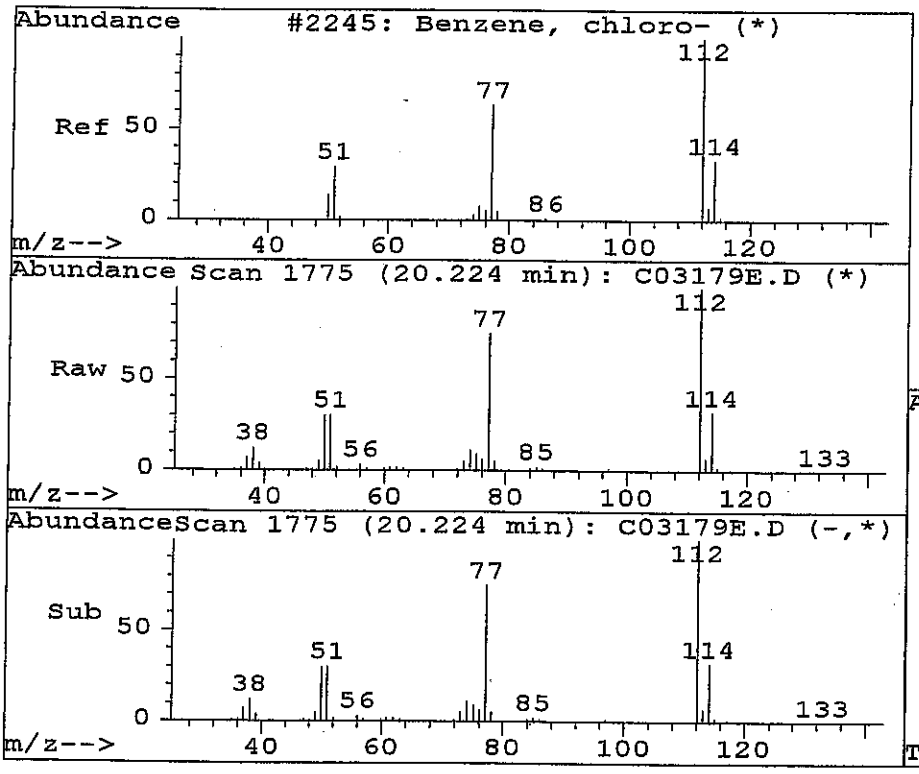


#59
Tetrachloroethene
Concen: 4.40 ppbV
RT: 18.75 min Scan# 1623
Delta R.T. -0.22 min
Lab File: C03179E.D
Acq: 17 Mar 109 1:25 pm

Tgt Ion:166 Resp: 589393

Ion	Ratio	Lower	Upper
166	100		
131	65.1	58.6	88.0
94	37.4	31.2	46.8
0	0.0	0.0	0.0

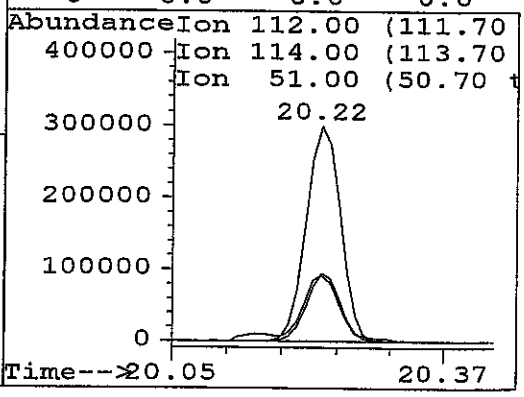


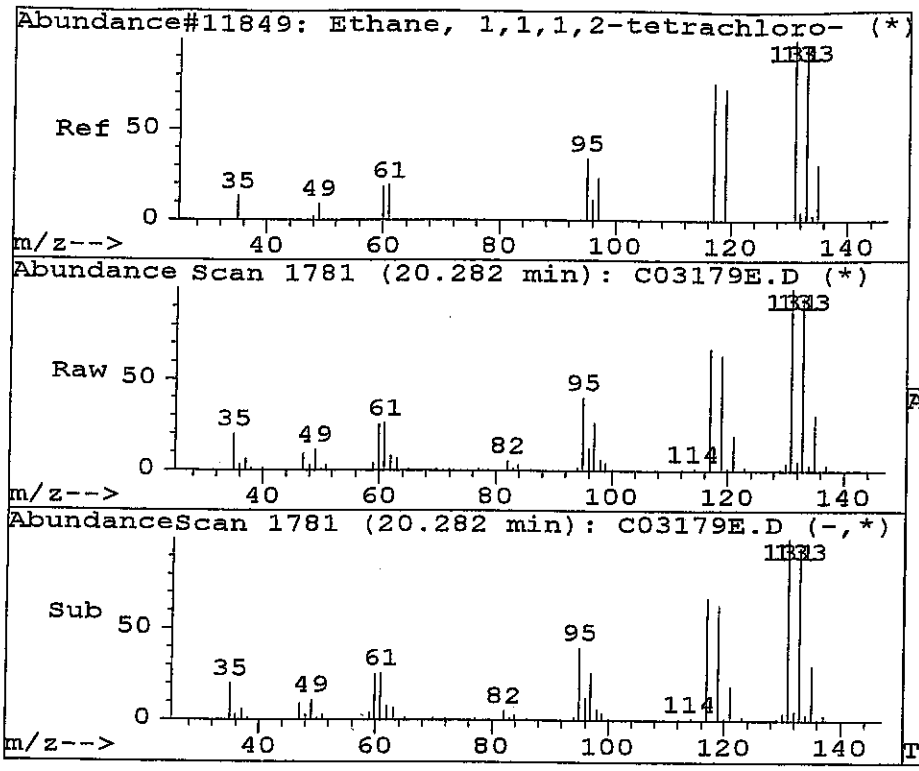


#60
Chlorobenzene
Concen: 4.27 ppbV
RT: 20.22 min Scan# 1775
Delta R.T. -0.23 min
Lab File: C03179E.D
Acq: 17 Mar 109 1:25 pm

Tgt Ion:112 Resp: 836027

Ion	Ratio	Lower	Upper
112	100		
114	31.6	23.8	35.8
51	28.8	14.6	21.8#
0	0.0	0.0	0.0

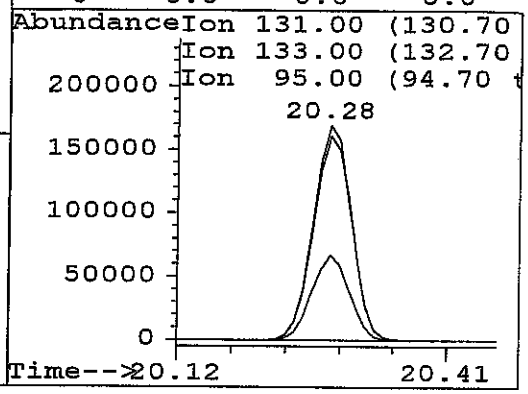


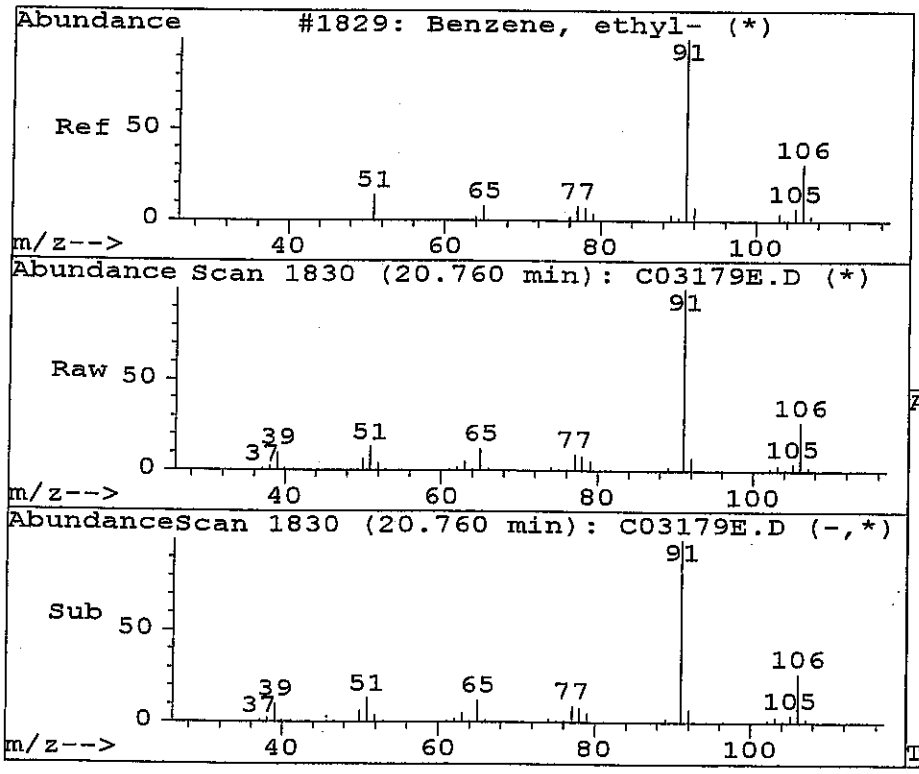


#61
1,1,1,2-Tetrachloroethane
Concen: 3.72 ppbV
RT: 20.28 min Scan# 1781
Delta R.T. -0.23 min
Lab File: C03179E.D
Acq: 17 Mar 109 1:25 pm

Tgt Ion:131 Resp: 487316

Ion	Ratio	Lower	Upper
131	100		
133	95.0	78.9	118.3
95	39.7	30.2	45.2
0	0.0	0.0	0.0

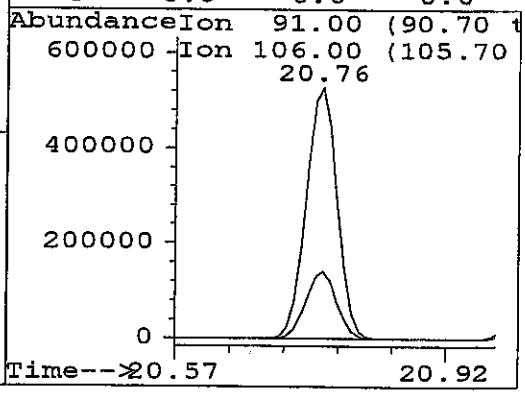


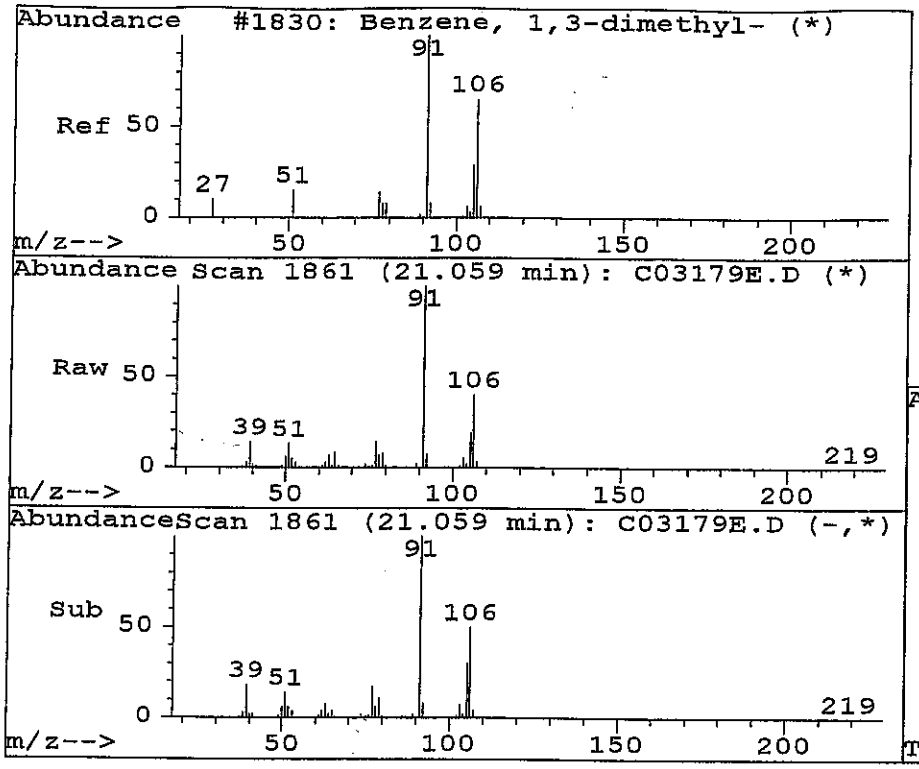


#62
Ethylbenzene
Concen: 4.62 ppbV
RT: 20.76 min Scan# 1830
Delta R.T. -0.23 min
Lab File: C03179E.D
Acq: 17 Mar 109 1:25 pm

Tgt Ion:91 Resp: 1527752

Ion	Ratio	Lower	Upper
91	100		
106	26.7	21.3	31.9
0	0.0	0.0	0.0
0	0.0	0.0	0.0

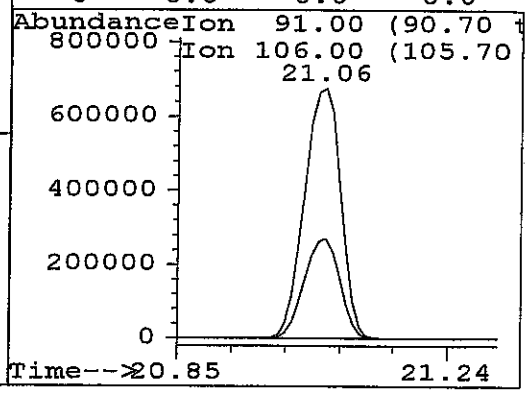


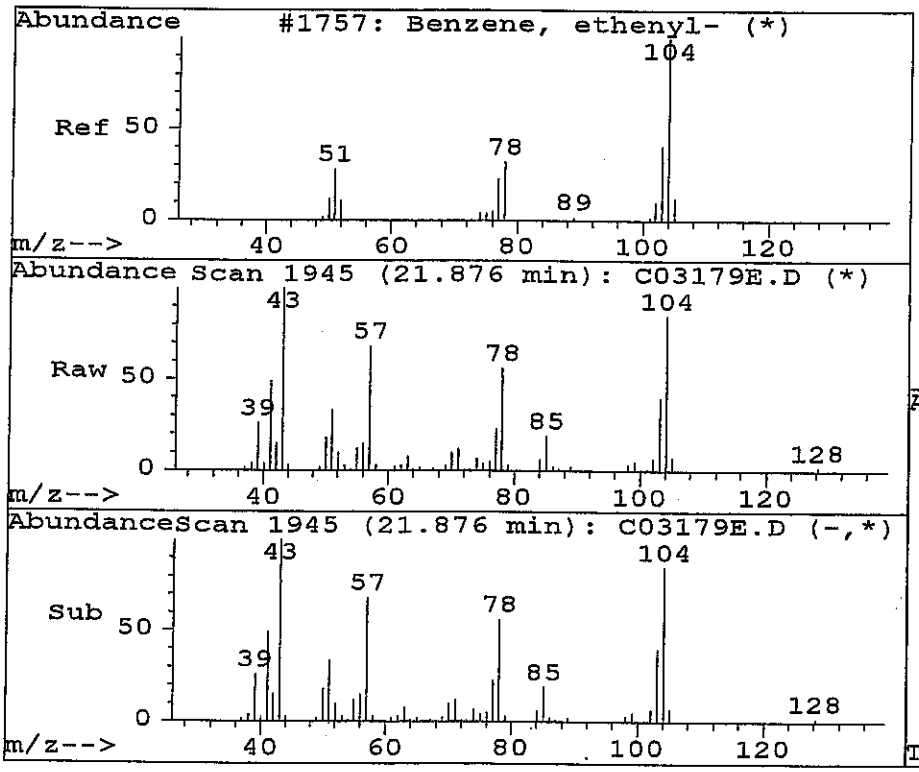


#63
m & p-Xylene
Concen: 8.66 ppbV
RT: 21.06 min Scan# 1861
Delta R.T. -0.22 min
Lab File: C03179E.D
Acq: 17 Mar 109 1:25 pm

Tgt Ion:91 Resp: 2440351

Ion	Ratio	Lower	Upper
91	100		
106	39.9	30.3	45.5
0	0.0	0.0	0.0
0	0.0	0.0	0.0

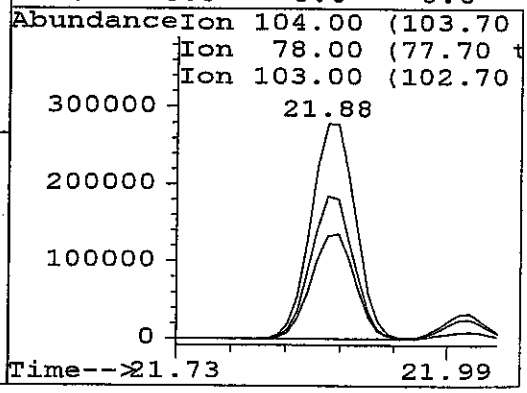


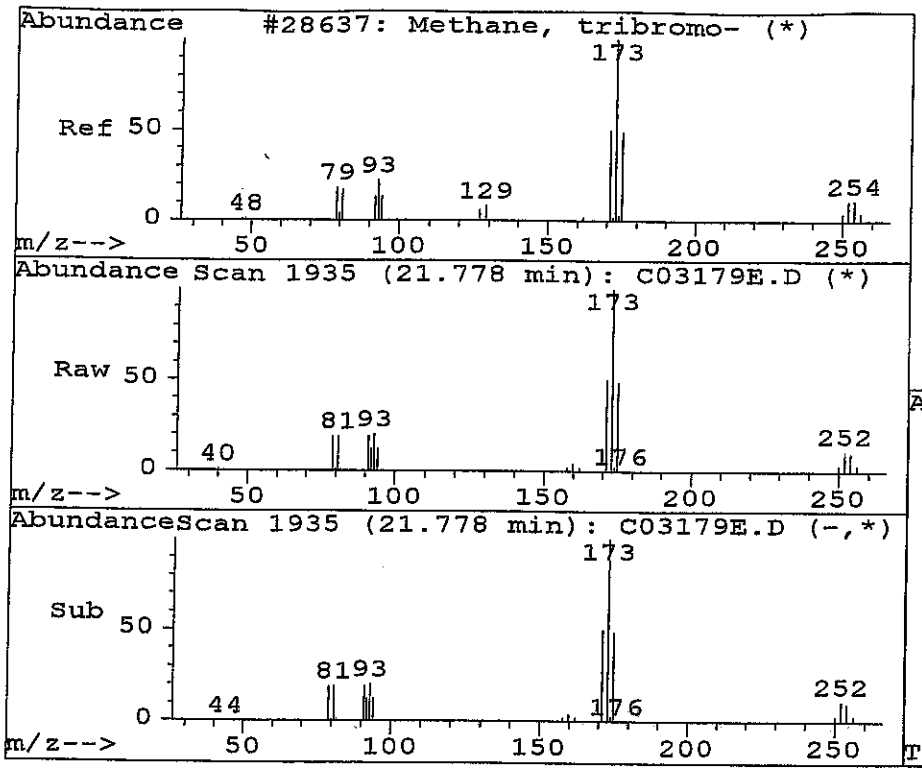


#64
Styrene
Concen: 4.20 ppbV
RT: 21.88 min Scan# 1945
Delta R.T. -0.26 min
Lab File: C03179E.D
Acq: 17 Mar 109 1:25 pm

Tgt Ion:104 Resp: 837020

Ion	Ratio	Lower	Upper
104	100		
78	66.0	46.4	69.6
103	47.4	40.3	60.5
0	0.0	0.0	0.0

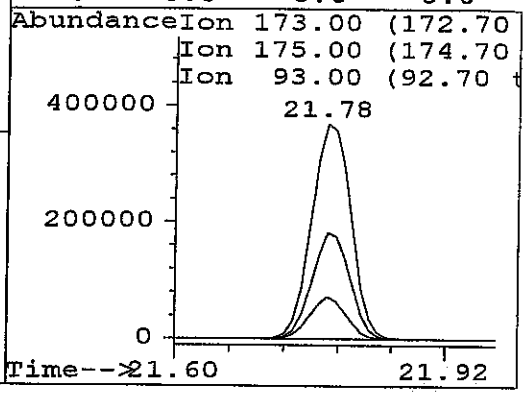


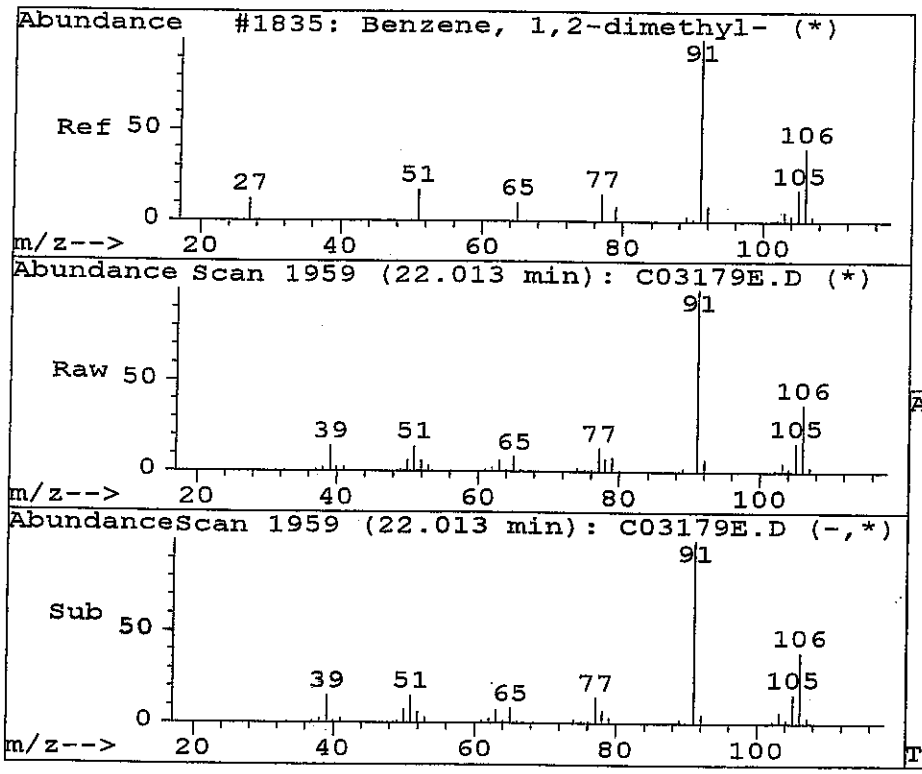


#65
Bromoform
Concen: 3.78 ppbV
RT: 21.78 min Scan# 1935
Delta R.T. -0.22 min
Lab File: C03179E.D
Acq: 17 Mar 109 1:25 pm

Tgt Ion:173 Resp: 1151698

Ion	Ratio	Lower	Upper
173	100		
175	49.2	39.7	59.5
93	19.5	15.1	22.7
0	0.0	0.0	0.0

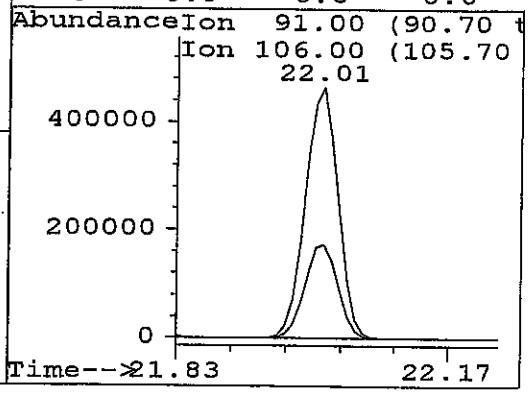


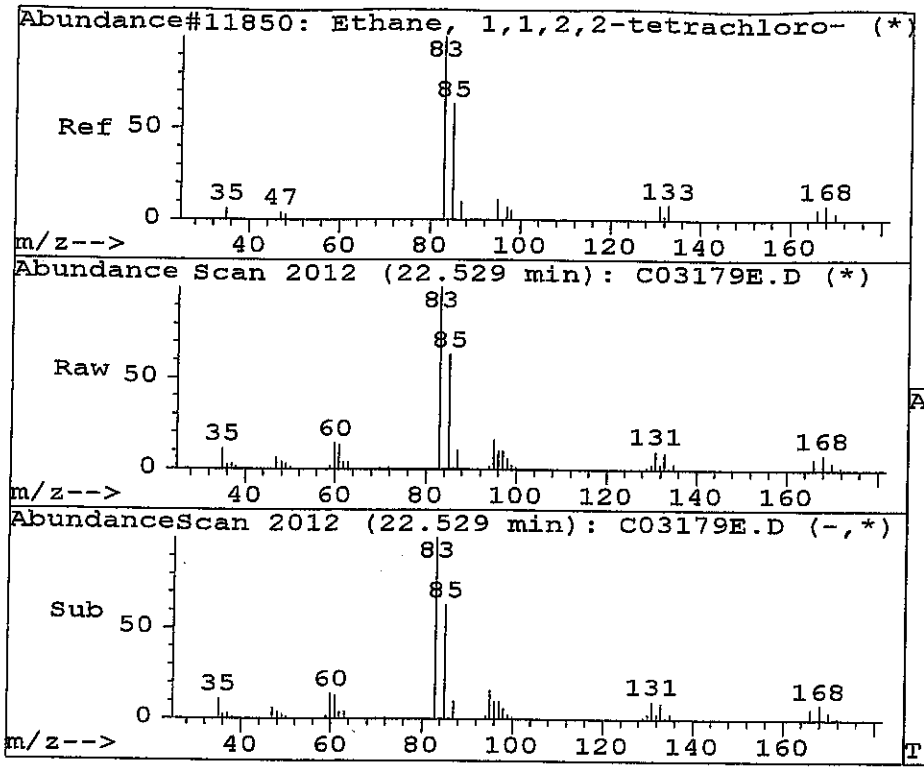


#66
o-Xylene
Concen: 4.26 ppbV
RT: 22.01 min Scan# 1959
Delta R.T. -0.24 min
Lab File: C03179E.D
Acq: 17 Mar 109 1:25 pm

Tgt Ion:91 Resp: 1325719

Ion	Ratio	Lower	Upper
91	100		
106	37.3	31.2	46.8
0	0.0	0.0	0.0
0	0.0	0.0	0.0

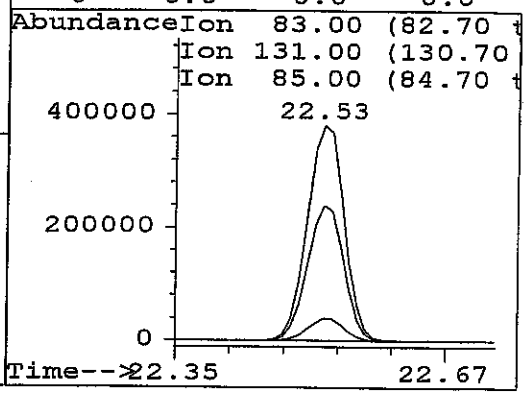


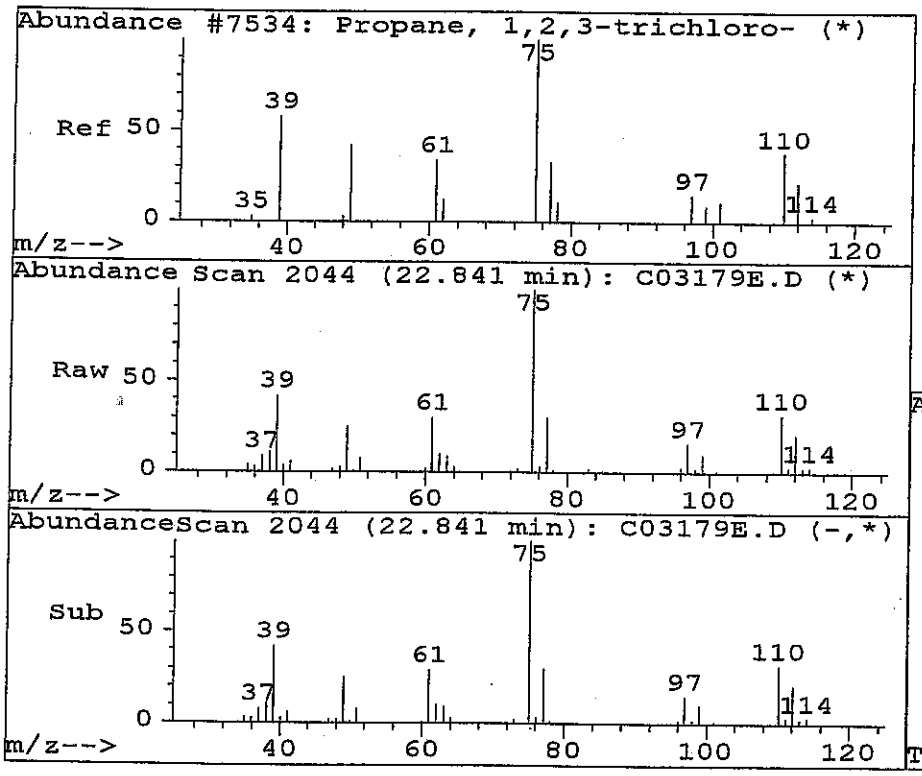


#67
1,1,2,2-Tetrachloroethane
Concen: 3.99 ppbV
RT: 22.53 min Scan# 2012
Delta R.T. -0.22 min
Lab File: C03179E.D
Acq: 17 Mar 109 1:25 pm

Tgt Ion:83 Resp: 1142635

Ion	Ratio	Lower	Upper
83	100		
131	10.4	8.3	12.5
85	62.7	50.0	75.0
0	0.0	0.0	0.0

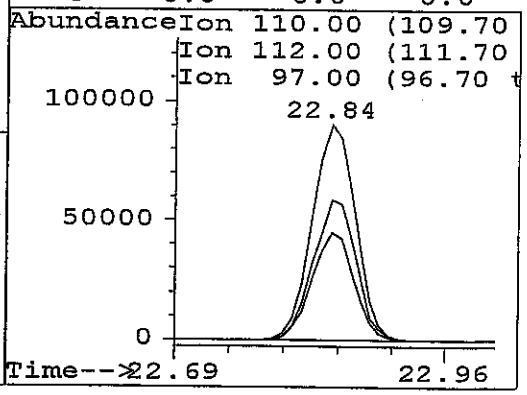


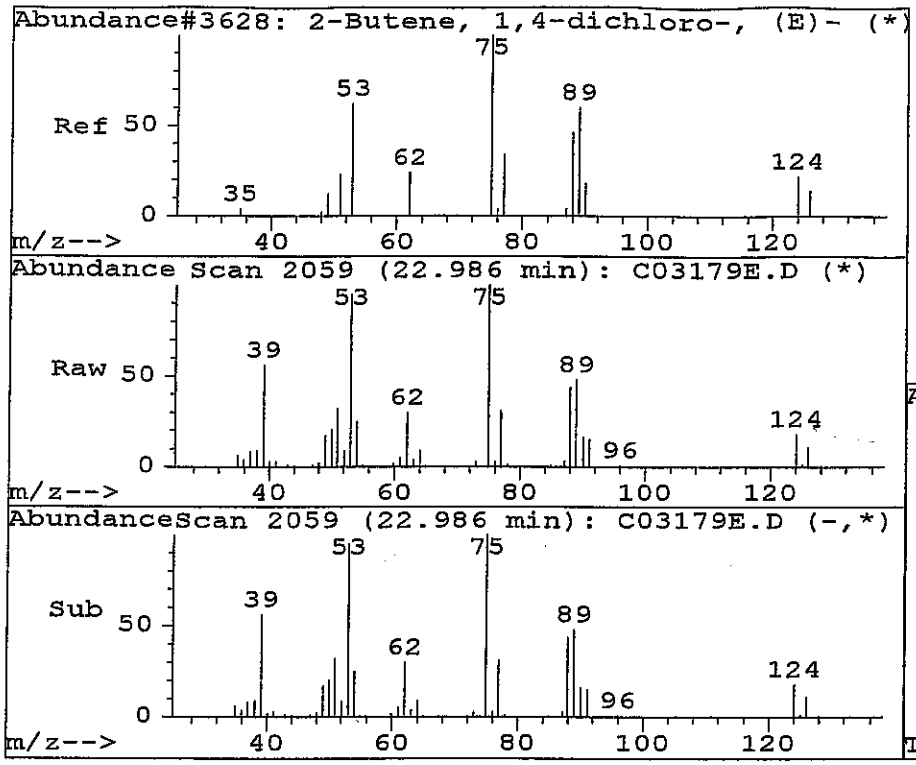


#68
1,2,3-Trichloropropane
Concen: 3.08 ppbV
RT: 22.84 min Scan# 2044
Delta R.T. -0.24 min
Lab File: C03179E.D
Acq: 17 Mar 109 1:25 pm

Tgt Ion:110 Resp: 265915

Ion	Ratio	Lower	Upper
110	100		
112	64.9	47.6	71.4
97	49.7	38.9	58.3
0	0.0	0.0	0.0

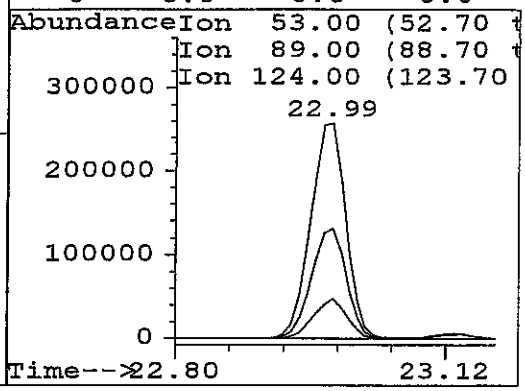


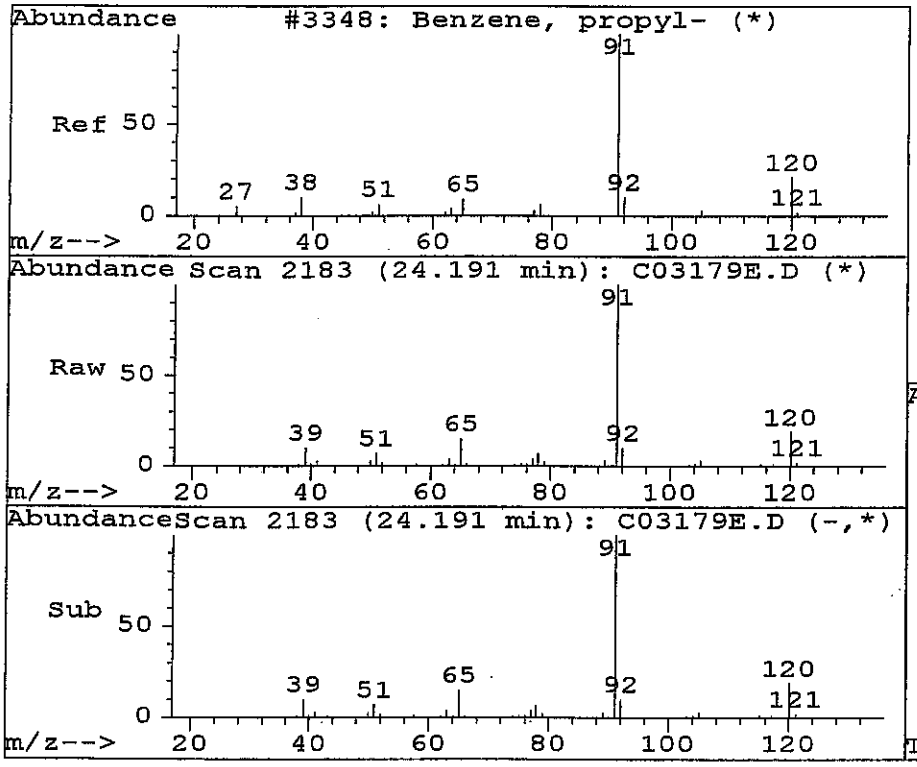


#69
t-1,4-Dichloro-2-butene
Concen: 9.62 ppbV
RT: 22.99 min Scan# 2059
Delta R.T. -0.24 min
Lab File: C03179E.D
Acq: 17 Mar 109 1:25 pm

Tgt Ion:53 Resp: 736289

Ion	Ratio	Lower	Upper
53	100		
89	51.0	41.1	61.7
124	18.7	14.6	22.0
0	0.0	0.0	0.0

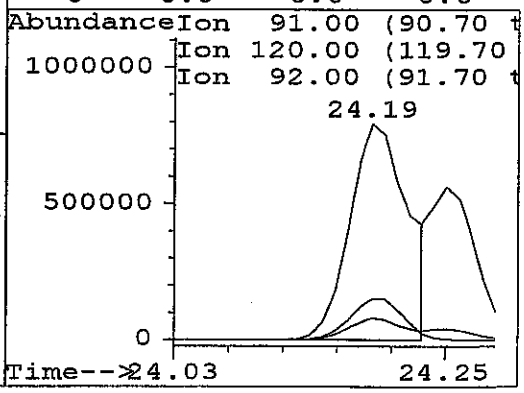


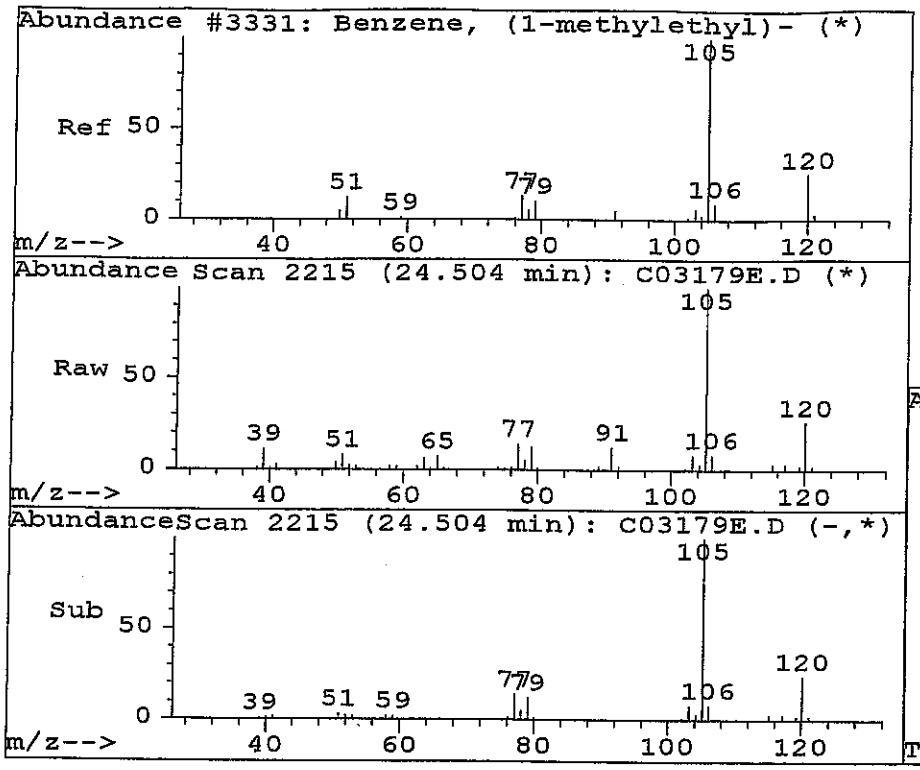


#70
n-Propylbenzene
Concen: 3.56 ppbV
RT: 24.19 min Scan# 2183
Delta R.T. -0.24 min
Lab File: C03179E.D
Acq: 17 Mar 109 1:25 pm

Tgt Ion:91 Resp: 2547503

Ion	Ratio	Lower	Upper
91	100		
120	17.4	14.7	22.1
92	9.7	7.8	11.6
0	0.0	0.0	0.0

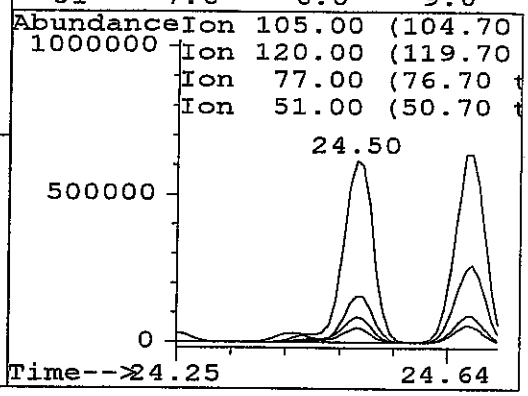


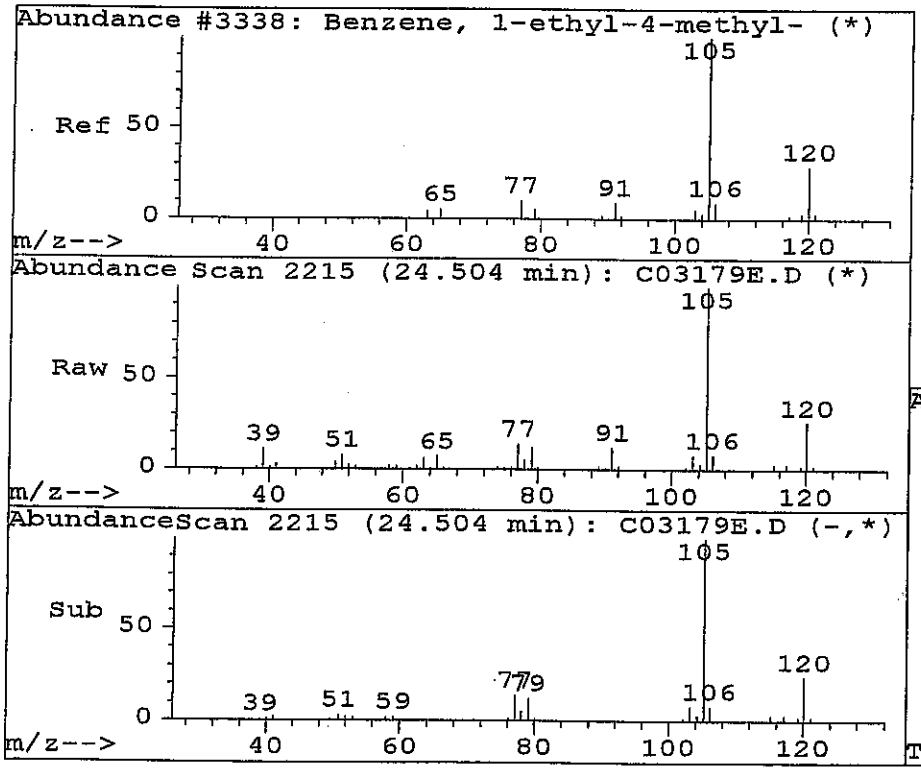


#71
Isopropylbenzene
Concen: 3.72 ppbV
RT: 24.50 min Scan# 2215
Delta R.T. -0.24 min
Lab File: C03179E.D
Acq: 17 Mar 109 1:25 pm

Tgt Ion:105 Resp: 1912961

Ion	Ratio	Lower	Upper
105	100		
120	25.4	20.2	30.4
77	15.1	12.2	18.4
51	7.6	6.0	9.0

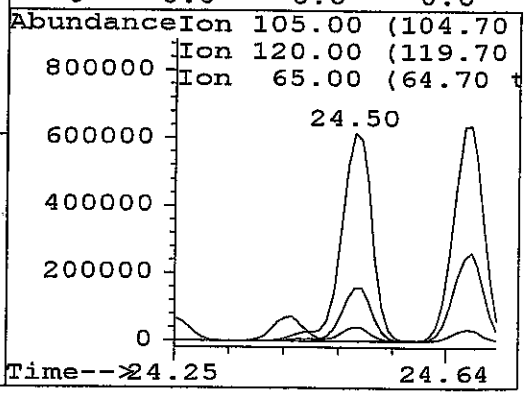


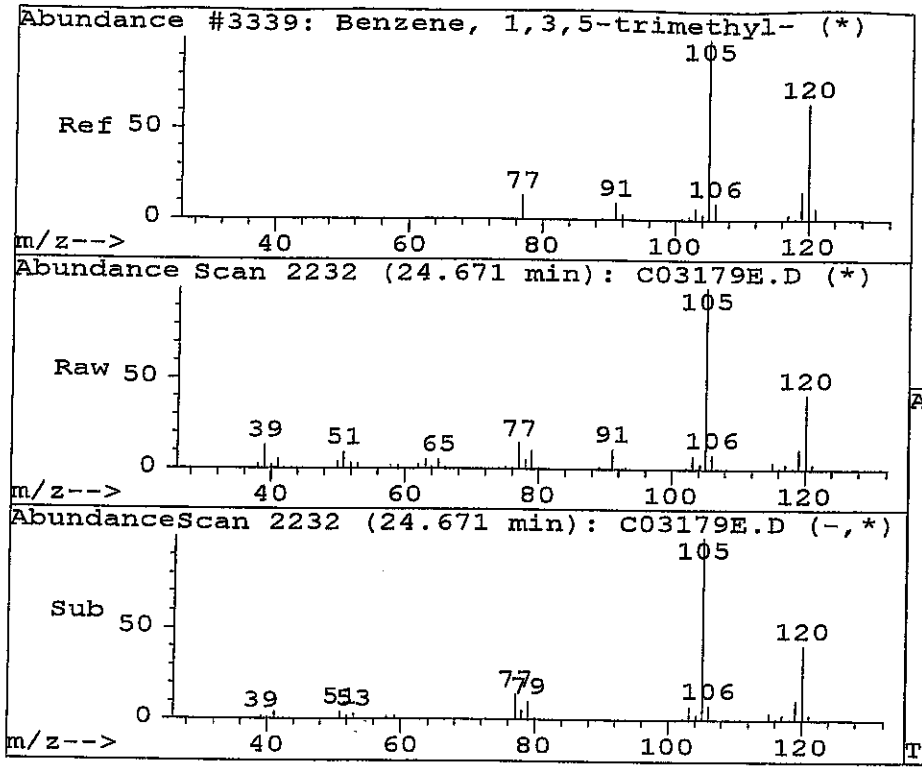


#72
4-Ethyltoluene
Concen: 3.56 ppbV
RT: 24.50 min Scan# 2215
Delta R.T. -0.24 min
Lab File: C03179E.D
Acq: 17 Mar 109 1:25 pm

Tgt Ion:105 Resp: 1912961

Ion	Ratio	Lower	Upper
105	100		
120	25.5	20.2	30.4
65	6.4	5.2	7.8
0	0.0	0.0	0.0

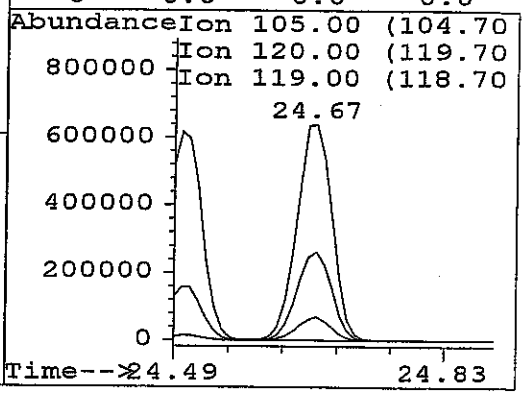


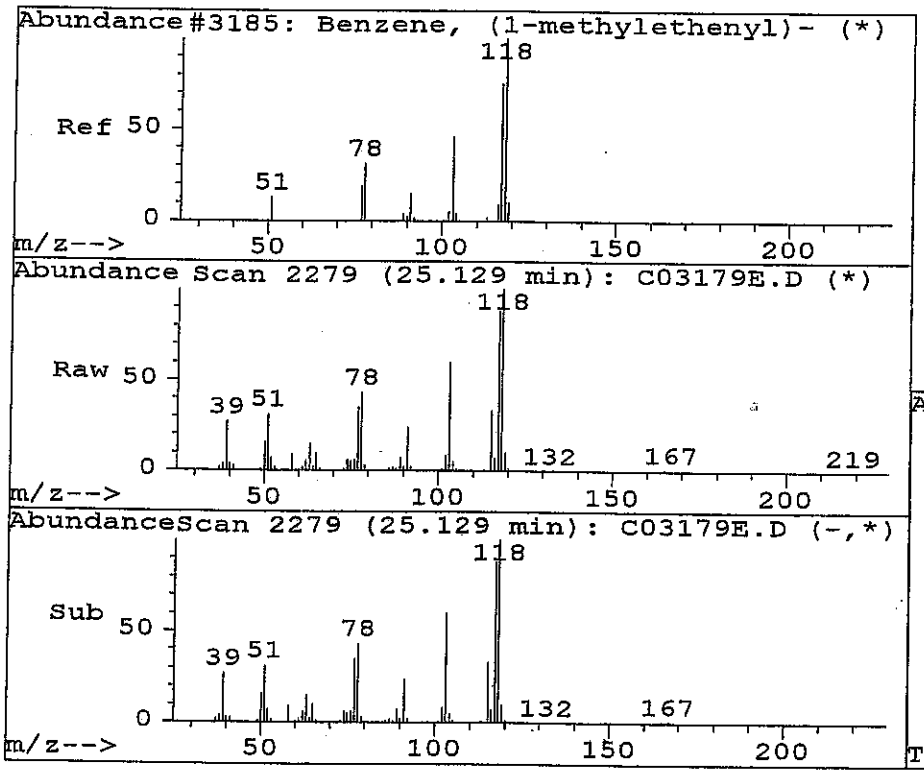


#73
1,3,5-Trimethylbenzene
Concen: 4.28 ppbV
RT: 24.67 min Scan# 2232
Delta R.T. -0.25 min
Lab File: C03179E.D
Acq: 17 Mar 109 1:25 pm

Tgt Ion:105 Resp: 1936506

Ion	Ratio	Lower	Upper
105	100		
120	41.0	35.6	53.4
119	10.9	8.2	12.4
0	0.0	0.0	0.0

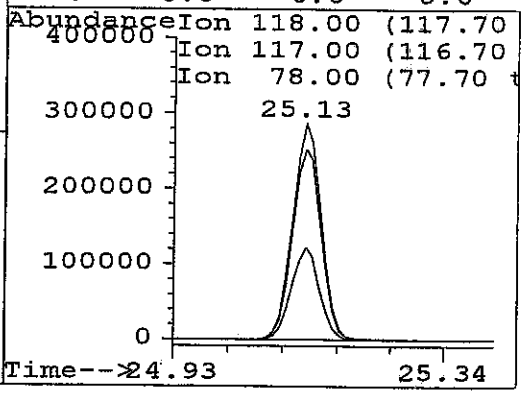


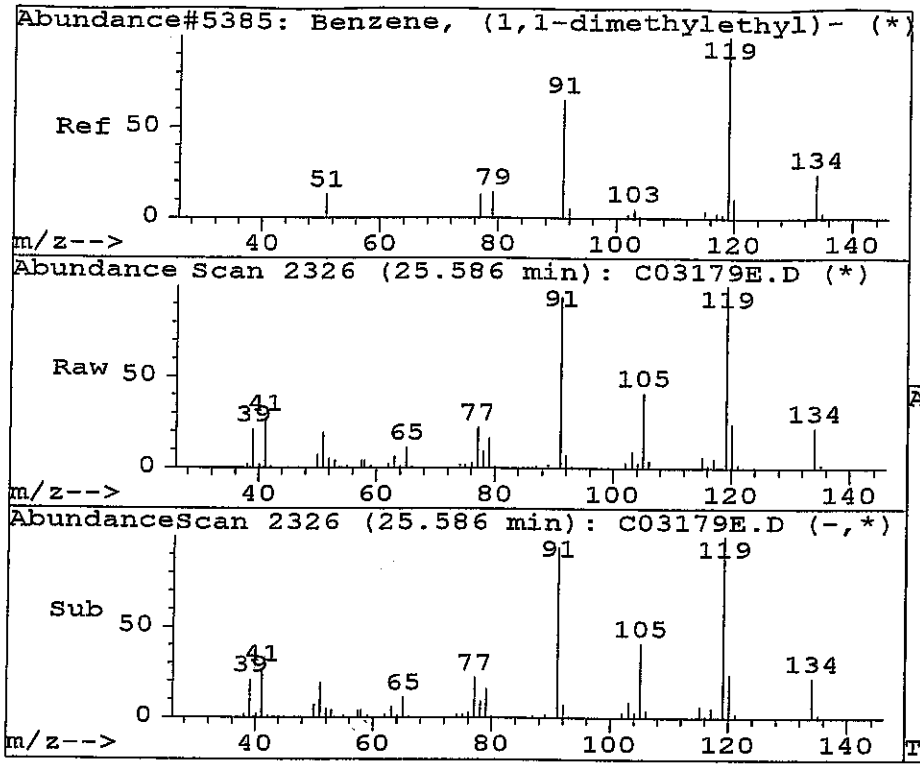


#74
Methylstyrene
Concen: 3.00 ppbV
RT: 25.13 min Scan# 2279
Delta R.T. -0.23 min
Lab File: C03179E.D
Acq: 17 Mar 109 1:25 pm

Tgt Ion:118 Resp: 837727

Ion	Ratio	Lower	Upper
118	100		
117	87.9	69.6	104.4
78	42.7	35.8	53.6
0	0.0	0.0	0.0

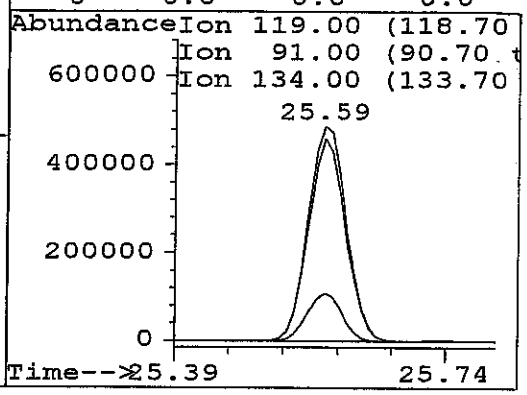


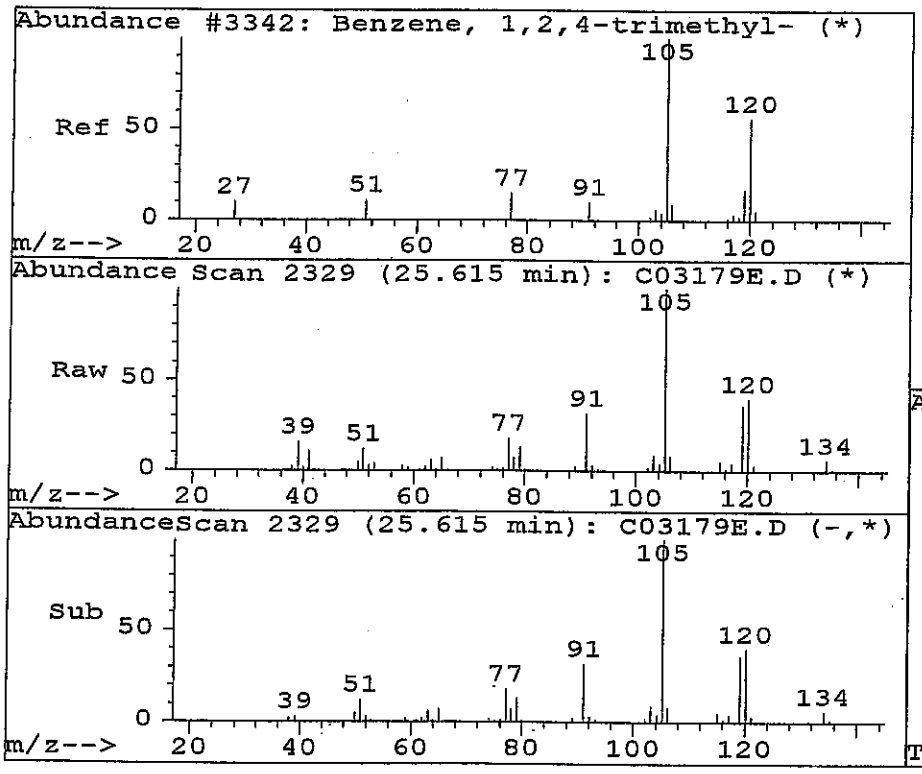


#75
tert-butyl benzene
Concen: 3.63 ppbV
RT: 25.59 min Scan# 2326
Delta R.T. -0.22 min
Lab File: C03179E.D
Acq: 17 Mar 109 1:25 pm

Tgt Ion:119 Resp: 1667799

Ion	Ratio	Lower	Upper
119	100		
91	92.2	69.8	104.6
134	20.3	14.7	22.1
0	0.0	0.0	0.0

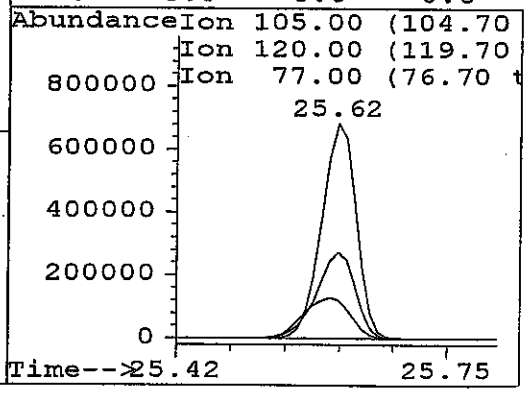


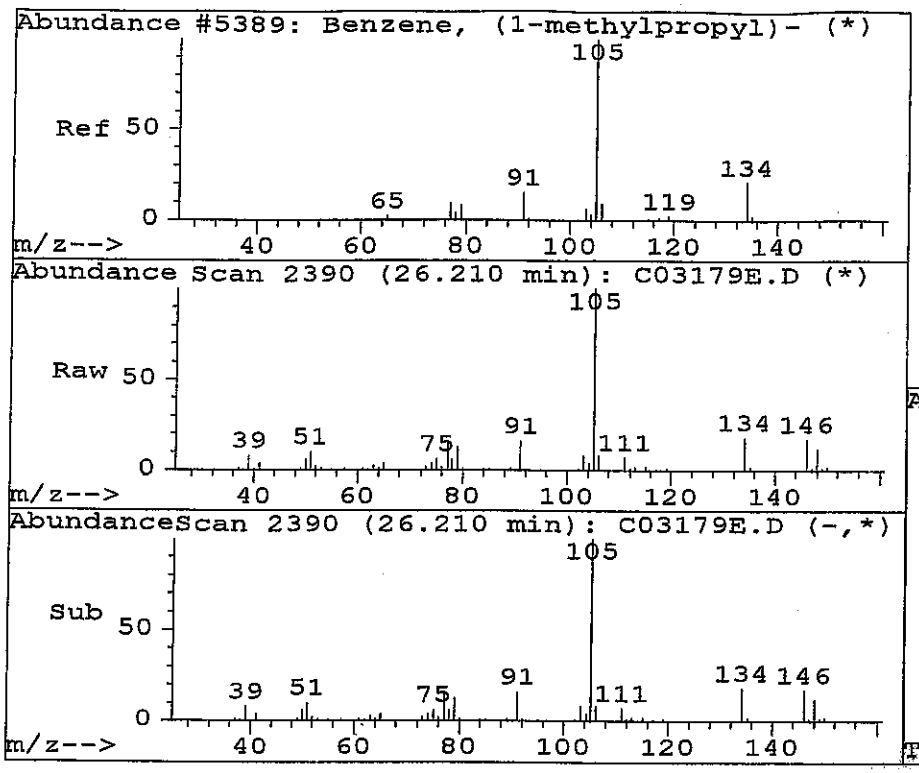


#76
1,2,4-Trimethylbenzene
Concen: 4.09 ppbV
RT: 25.62 min Scan# 2329
Delta R.T. -0.27 min
Lab File: C03179E.D
Acq: 17 Mar 109 1:25 pm

Tgt Ion:105 Resp: 1979227

Ion	Ratio	Lower	Upper
105	100		
120	39.9	32.2	48.4
77	17.7	13.6	20.4
0	0.0	0.0	0.0

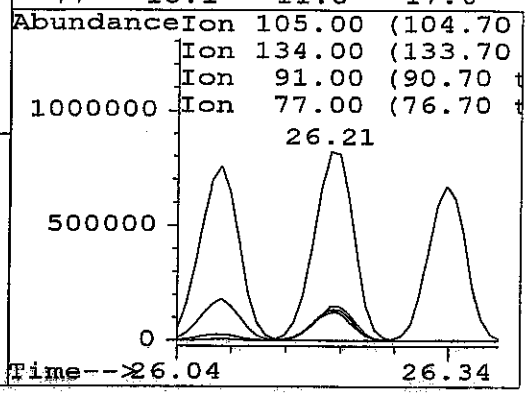


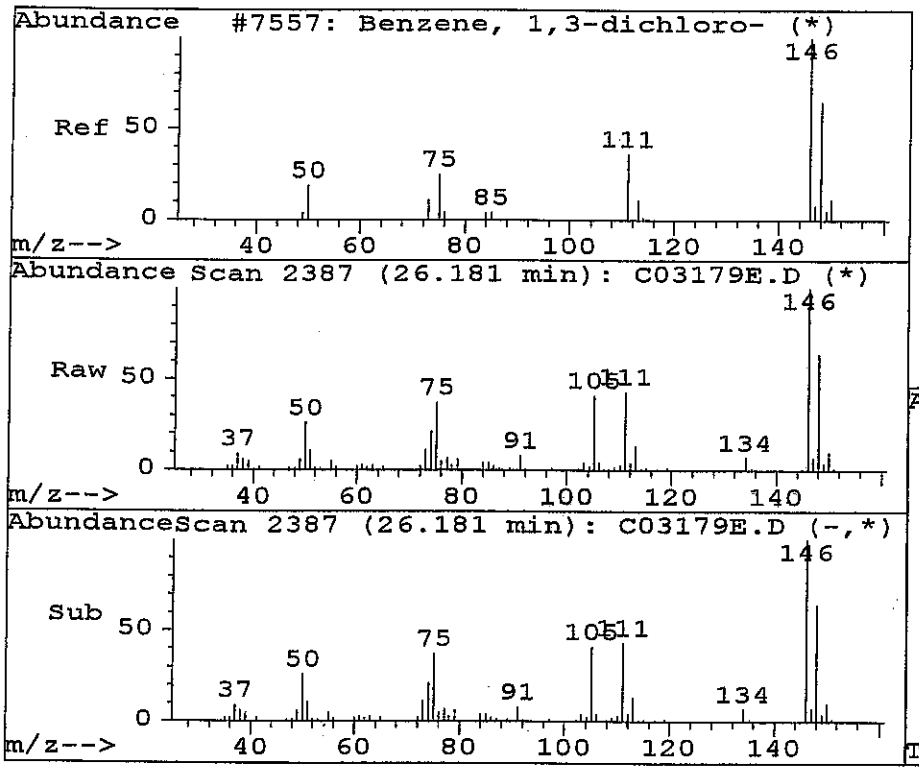


#77
sec-butylbenzene
Concen: 3.64 ppbV
RT: 26.21 min Scan# 2390
Delta R.T. -0.29 min
Lab File: C03179E.D
Acq: 17 Mar 109 1:25 pm

Tgt Ion:105 Resp: 2467689

Ion	Ratio	Lower	Upper
105	100		
134	18.0	14.8	22.2
91	16.7	13.2	19.8
77	15.1	11.8	17.6

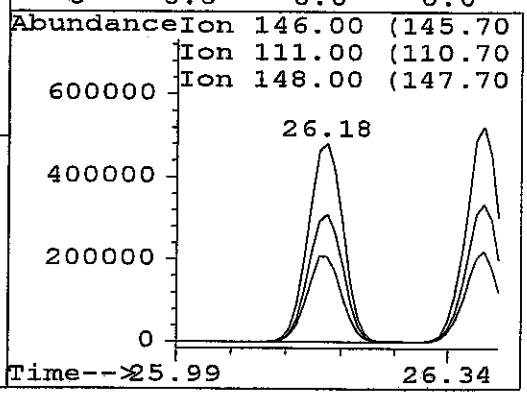


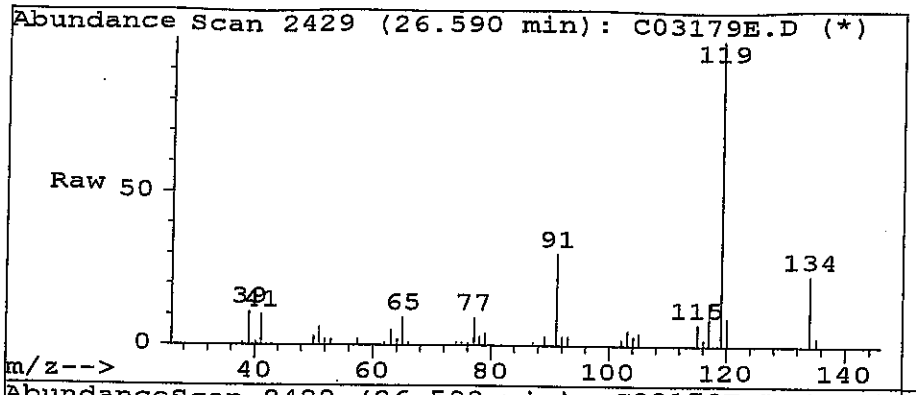


#78
1,3-Dichlorobenzene
Concen: 3.75 ppbV
RT: 26.18 min Scan# 2387
Delta R.T. -0.23 min
Lab File: C03179E.D
Acq: 17 Mar 109 1:25 pm

Tgt Ion:146 Resp: 1499786

Ion	Ratio	Lower	Upper
146	100		
111	42.8	33.7	50.5
148	64.5	52.0	78.0
0	0.0	0.0	0.0

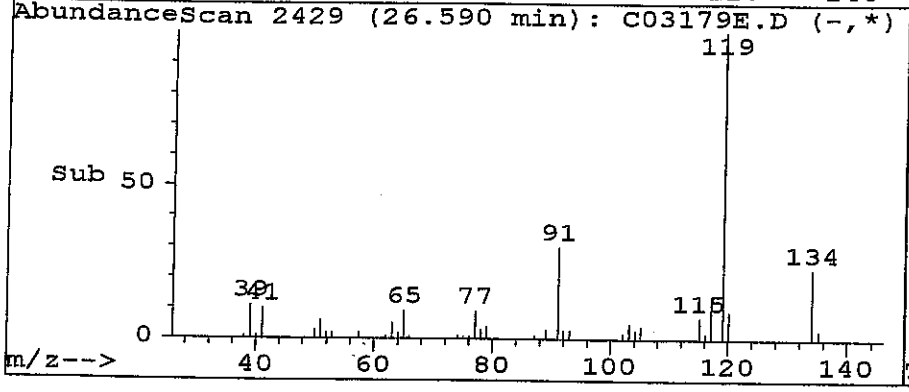


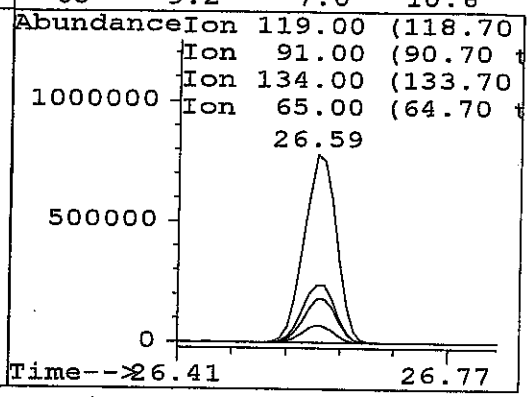


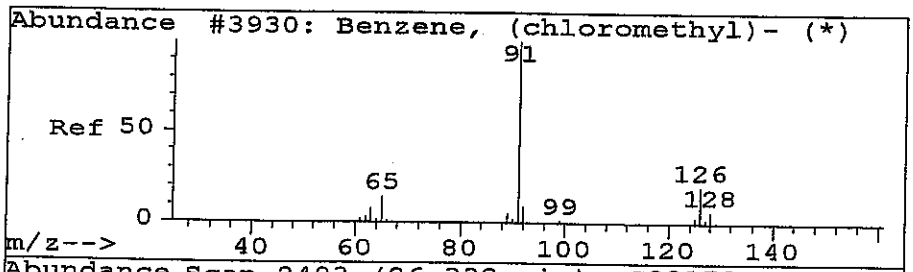
#79
Isopropyltoluene
Concen: 3.55 ppbV
RT: 26.59 min Scan# 2429
Delta R.T. -0.24 min
Lab File: C03179E.D
Acq: 17 Mar 109 1:25 pm

Tgt Ion:119 Resp: 2332248

Ion	Ratio	Lower	Upper
119	100		
91	31.7	25.0	37.6
134	23.8	19.3	28.9
65	9.2	7.0	10.6



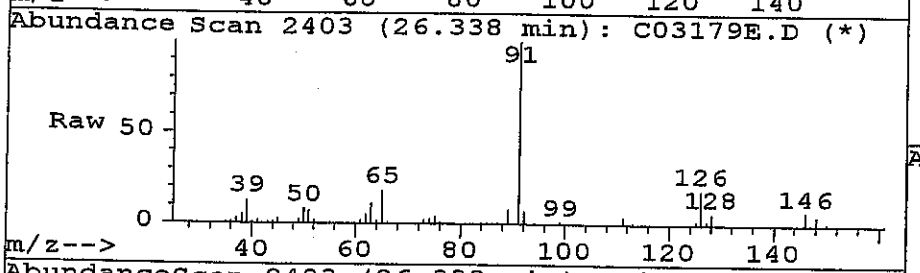


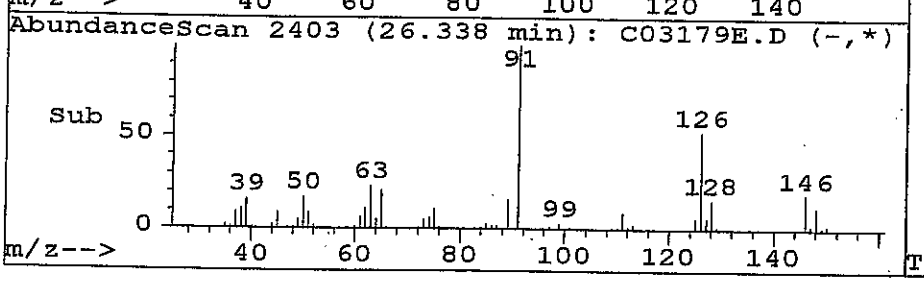


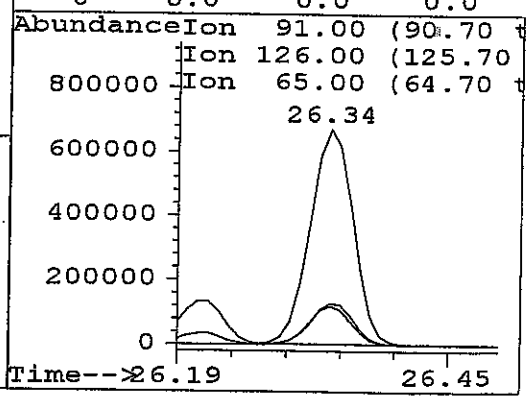
#80
Benzyl chloride
Concen: 3.41 ppbV
RT: 26.34 min Scan# 2403
Delta R.T. -0.27 min
Lab File: C03179E.D
Acq: 17 Mar 109 1:25 pm

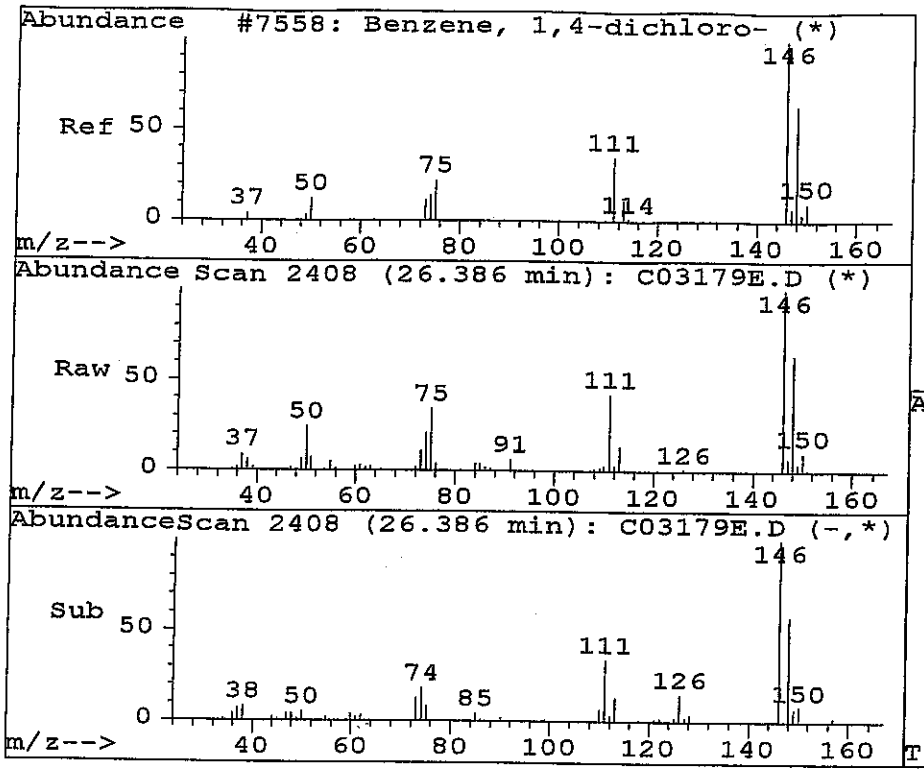
Tgt Ion:91 Resp: 1944712

Ion	Ratio	Lower	Upper
91	100		
126	19.2	15.9	23.9
65	17.8	13.2	19.8
0	0.0	0.0	0.0





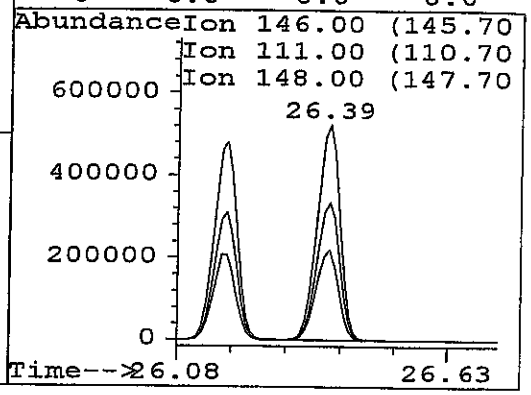


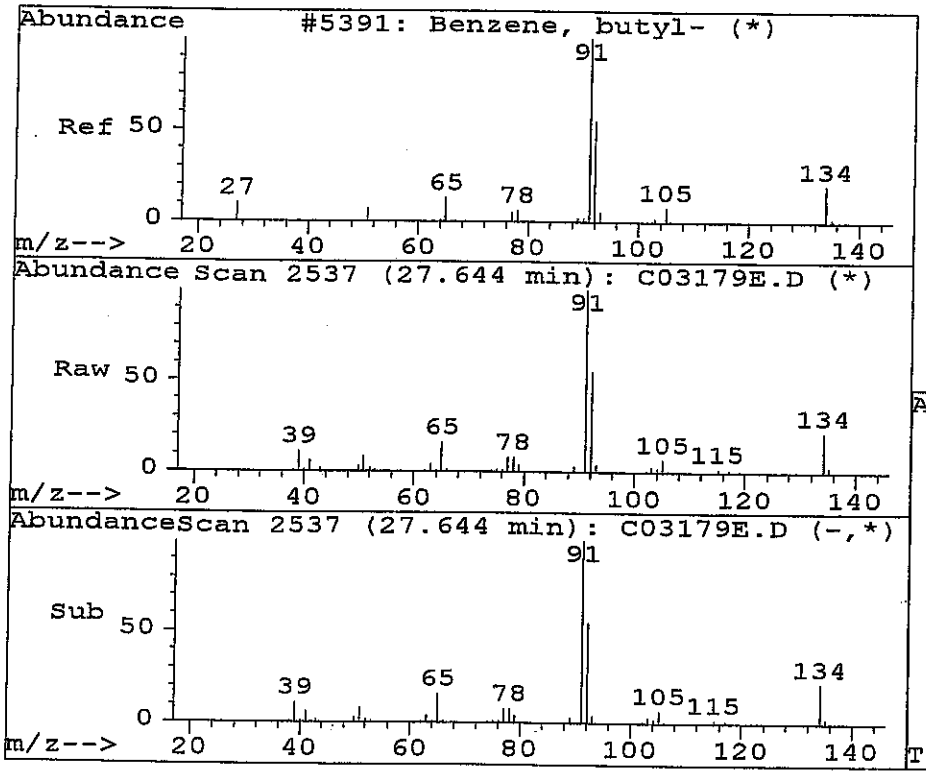


#81
1,4-Dichlorobenzene
Concen: 3.93 ppbV m
RT: 26.39 min Scan# 2408
Delta R.T. -0.29 min
Lab File: C03179E.D
Acq: 17 Mar 109 1:25 pm

Tgt Ion:146 Resp: 1616283

Ion	Ratio	Lower	Upper
146	100		
111	42.1	32.1	48.1
148	64.0	50.1	75.1
0	0.0	0.0	0.0

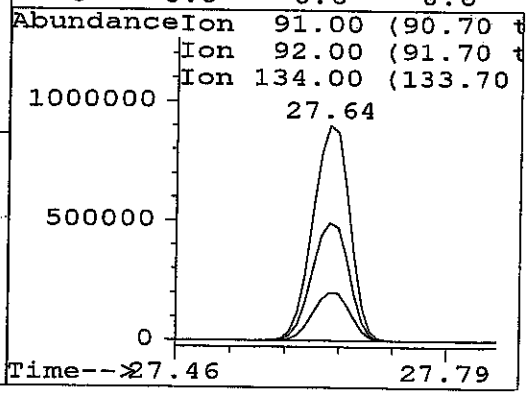


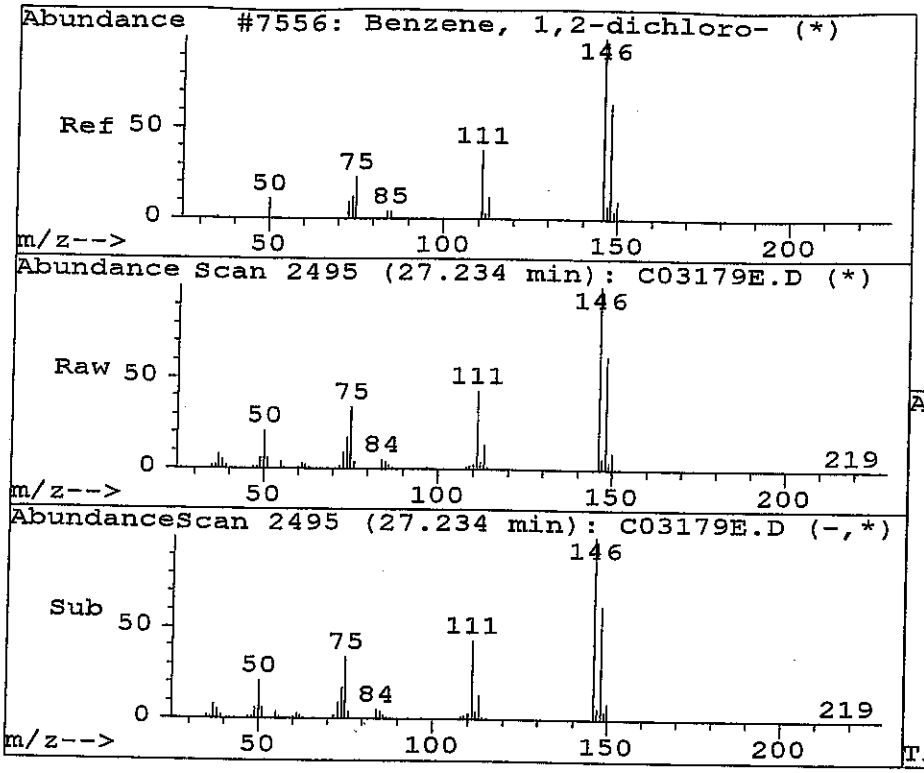


#82
n-Butylbenzene
Concen: 3.49 ppbV
RT: 27.64 min Scan# 2537
Delta R.T. -0.24 min
Lab File: C03179E.D
Acq: 17 Mar 109 1:25 pm

Tgt Ion:91 Resp: 2765408

Ion	Ratio	Lower	Upper
91	100		
92	55.3	42.8	64.2
134	22.8	18.7	28.1
0	0.0	0.0	0.0

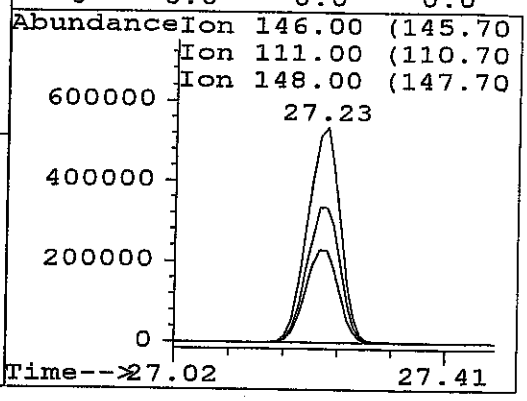


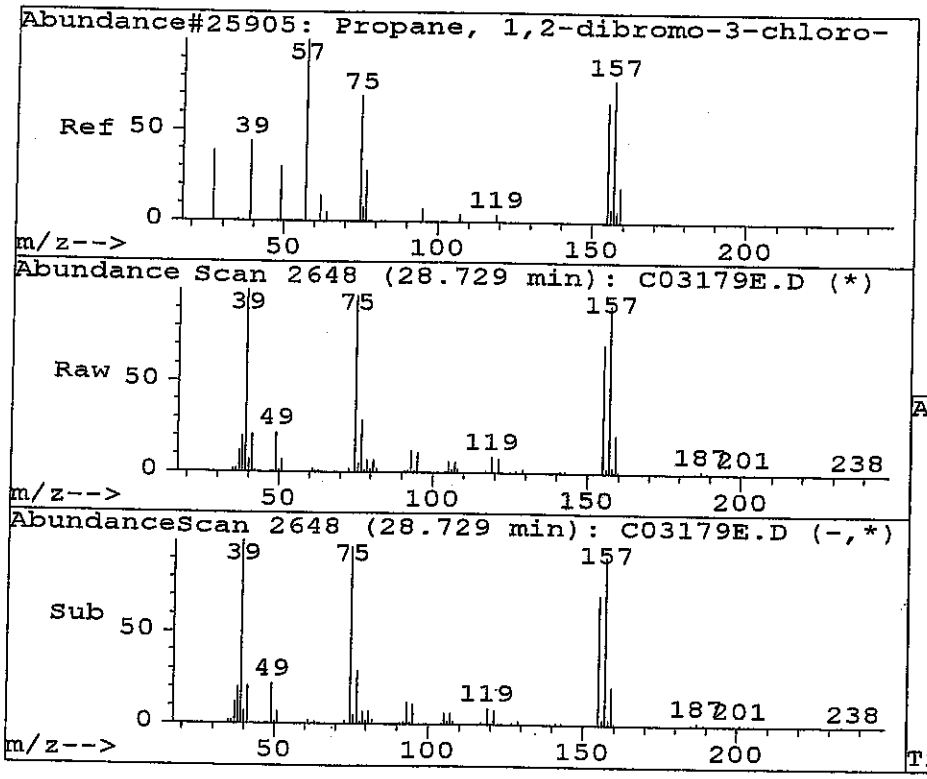


#83
1,2-Dichlorobenzene
Concen: 3.69 ppbV
RT: 27.23 min Scan# 2495
Delta R.T. -0.24 min
Lab File: C03179E.D
Acq: 17 Mar 109 1:25 pm

Tgt Ion:146 Resp: 1708595

Ion	Ratio	Lower	Upper
146	100		
111	42.6	35.2	52.8
148	62.4	52.9	79.3
0	0.0	0.0	0.0

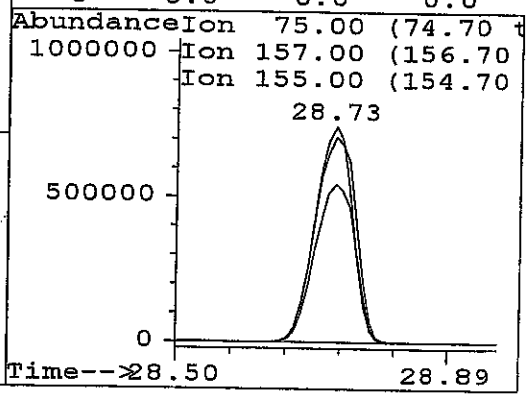


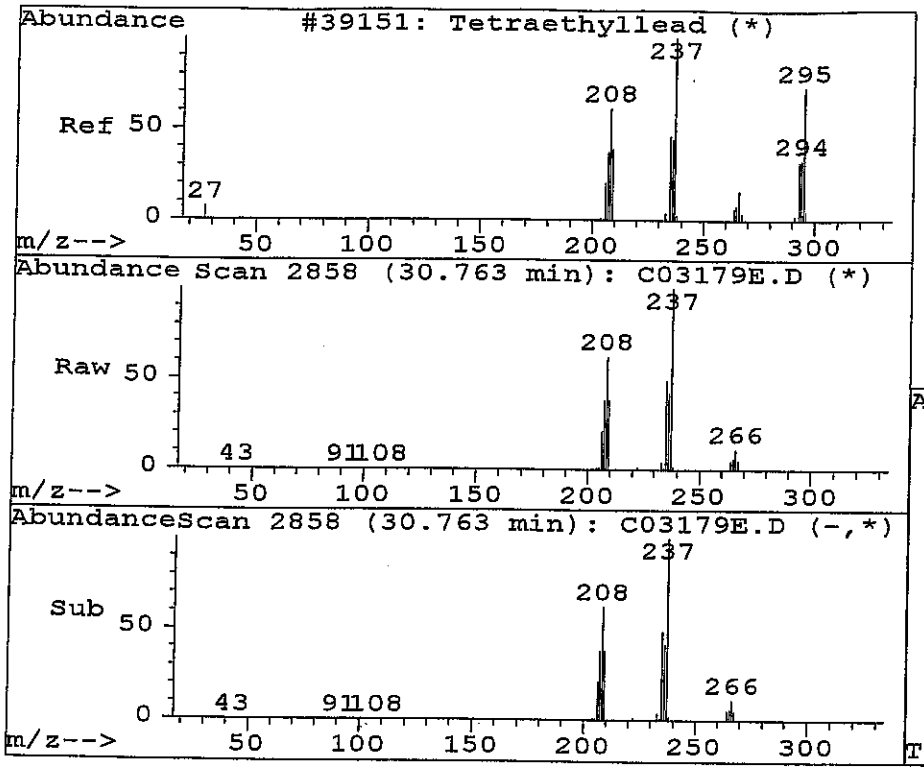


#84
1,2-Dibromo-3-chloropropane
Concen: 7.31 ppbV
RT: 28.73 min Scan# 2648
Delta R.T. -0.23 min
Lab File: C03179E.D
Acq: 17 Mar 109 1:25 pm

Tgt Ion:75 Resp: 2702050

Ion	Ratio	Lower	Upper
75	100		
157	95.2	94.6	142.0
155	73.2	75.8	113.6#
0	0.0	0.0	0.0

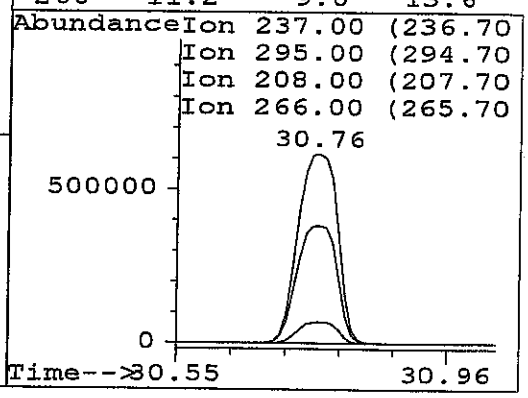


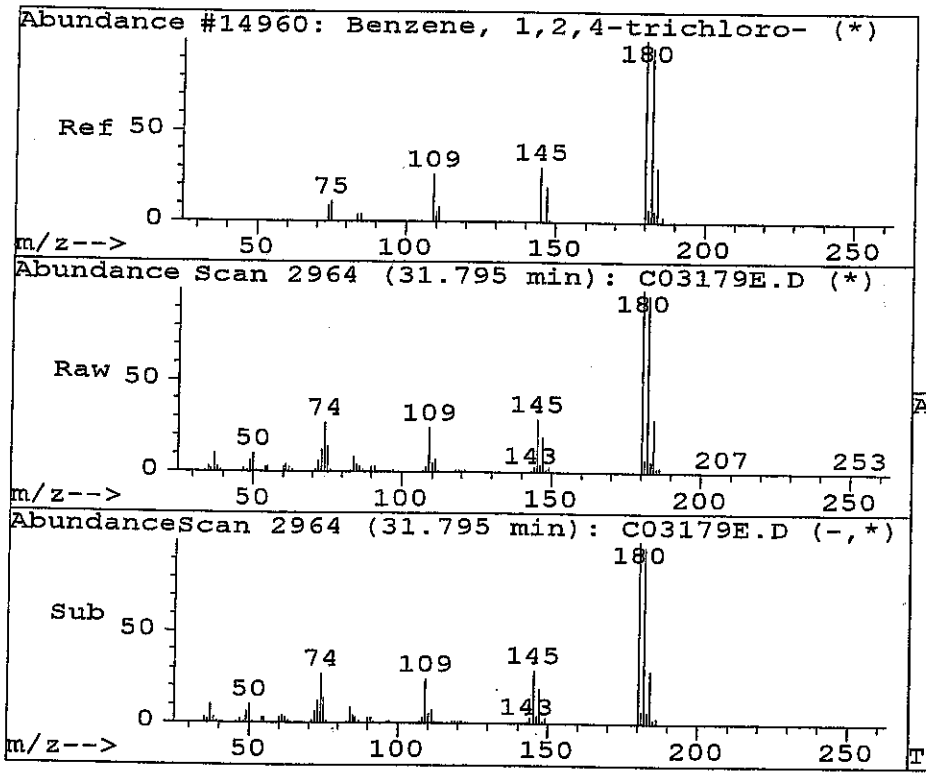


#85
Tetraethyl lead
Concen: 7.55 ppbV
RT: 30.76 min Scan# 2858
Delta R.T. -0.22 min
Lab File: C03179E.D
Acq: 17 Mar 109 1:25 pm

Tgt Ion:237 Resp: 2512900

Ion	Ratio	Lower	Upper
237	100		
295	0.0	0.0	0.0
208	63.2	51.6	77.4
266	11.2	9.0	13.6

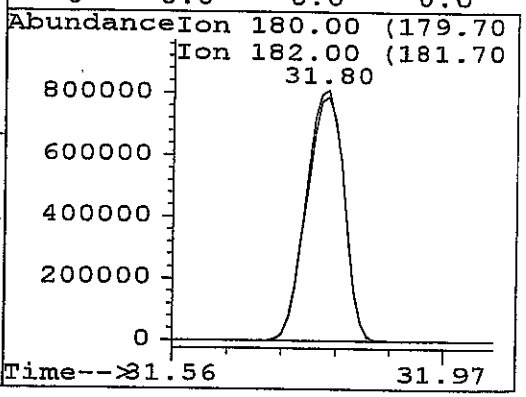


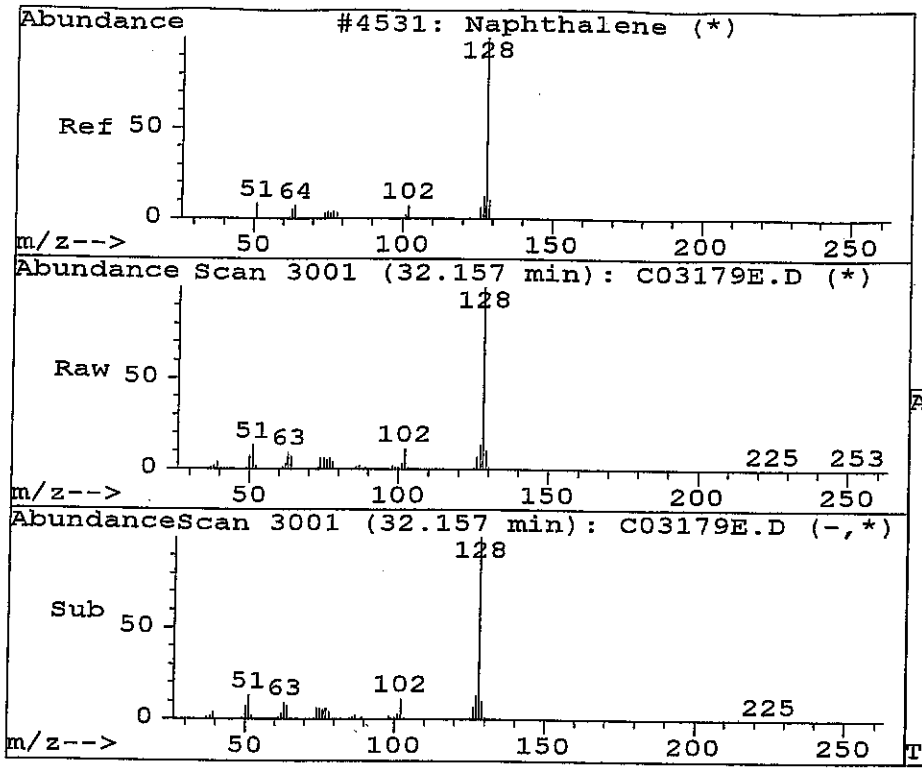


#86
1,2,4-Trichlorobenzene
Concen: 3.43 ppbV
RT: 31.80 min Scan# 2964
Delta R.T. -0.38 min
Lab File: C03179E.D
Acq: 17 Mar 109 1:25 pm

Tgt Ion:180 Resp: 3172331

Ion	Ratio	Lower	Upper
180	100		
182	97.3	76.8	115.2
0	0.0	0.0	0.0
0	0.0	0.0	0.0

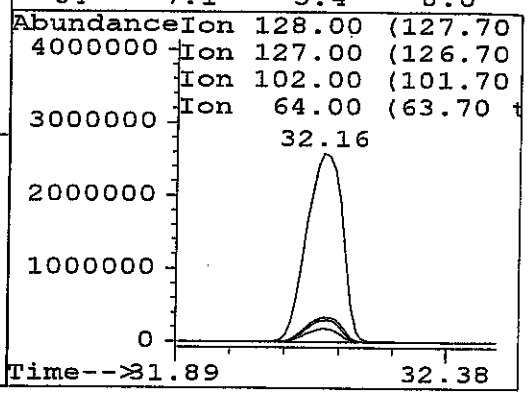


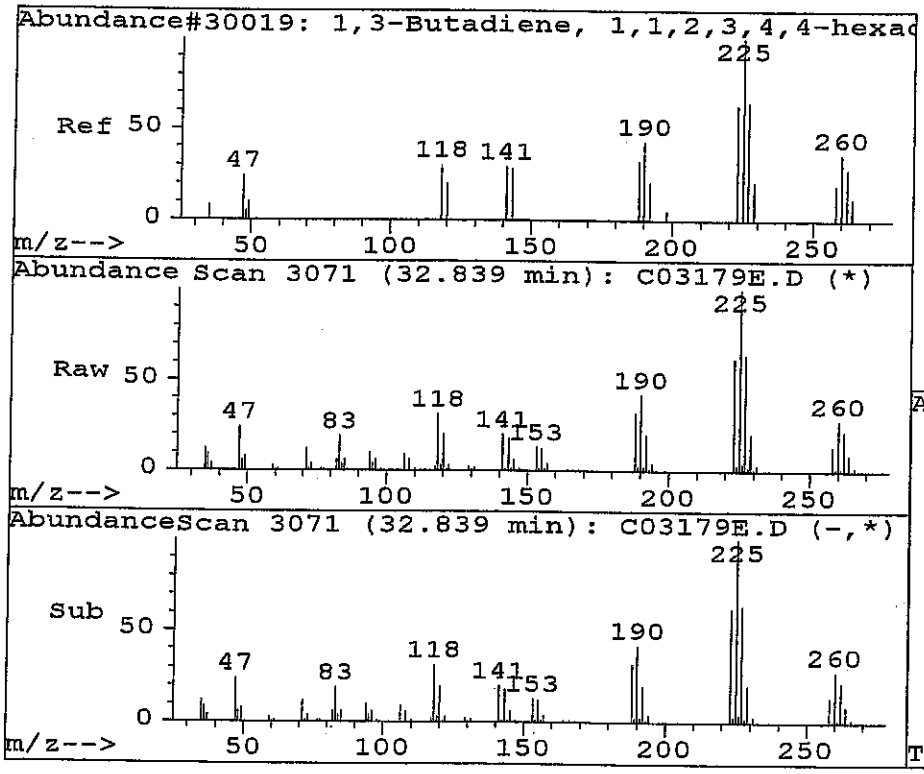


#87
Naphthalene
Concen: 6.59 ppbV
RT: 32.16 min Scan# 3001
Delta R.T. -0.25 min
Lab File: C03179E.D
Acq: 17 Mar 109 1:25 pm

Tgt Ion:128 Resp:11453402

Ion	Ratio	Lower	Upper
128	100		
127	13.0	10.3	15.5
102	11.5	8.2	12.2
64	7.1	5.4	8.0

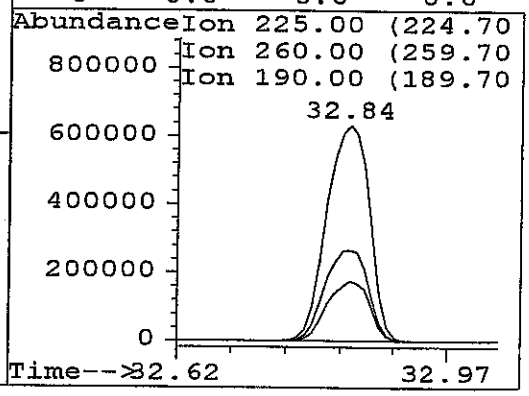


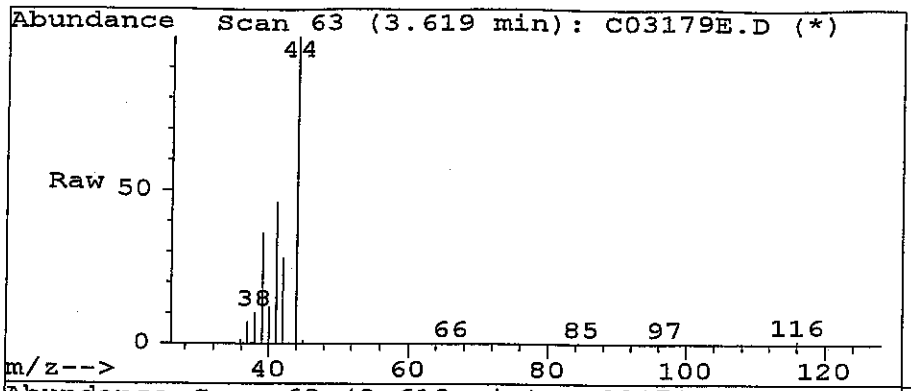


#88
Hexachlorobutadiene
Concen: 3.22 ppbV
RT: 32.84 min Scan# 3071
Delta R.T. -0.24 min
Lab File: C03179E.D
Acq: 17 Mar 109 1:25 pm

Tgt Ion:225 Resp: 2443776

Ion	Ratio	Lower	Upper
225	100		
260	27.7	22.6	34.0
190	42.0	32.7	49.1
0	0.0	0.0	0.0

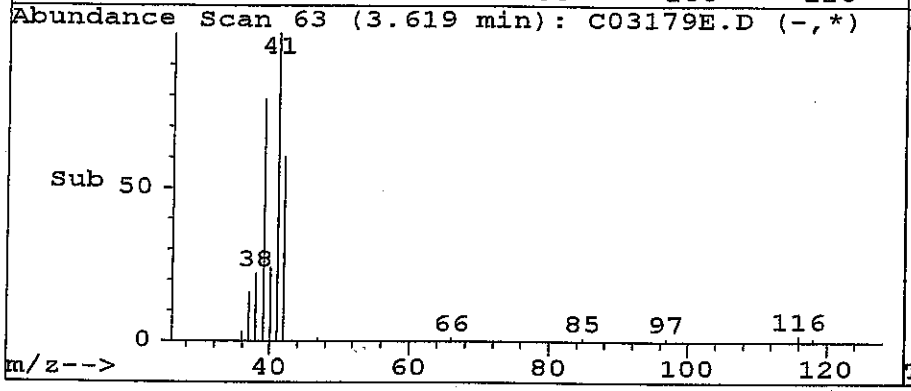


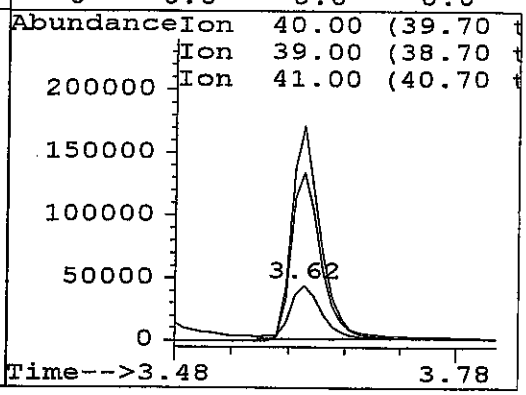


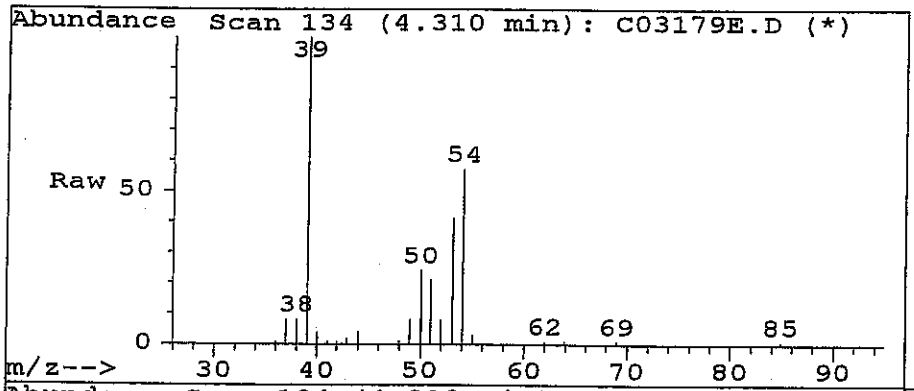
#89
Propylene
Concen: 7.89 ppbV
RT: 3.62 min Scan# 63
Delta R.T. -0.14 min
Lab File: C03179E.D
Acq: 17 Mar 109 1:25 pm

Tgt Ion:40 Resp: 100226

Ion	Ratio	Lower	Upper
40	100		
39	298.6	111.4	167.0#
41	387.8	162.3	243.5#
0	0.0	0.0	0.0



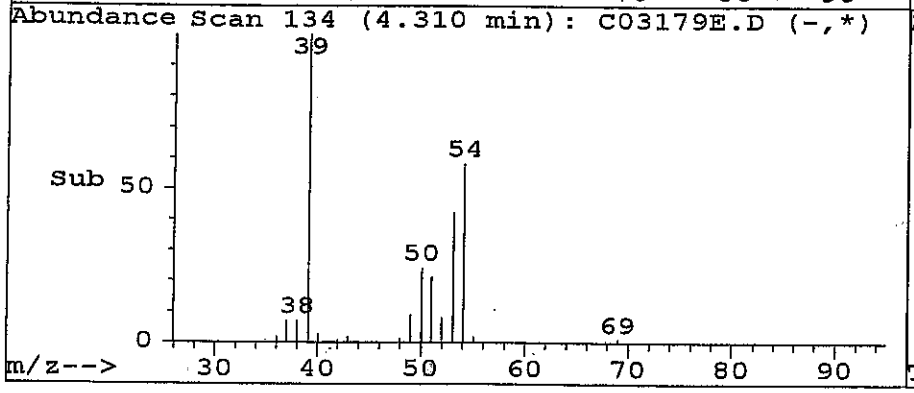


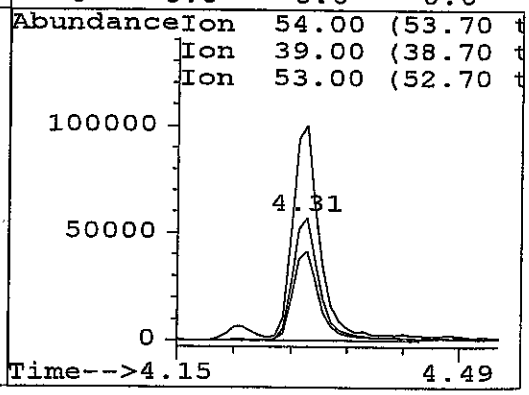


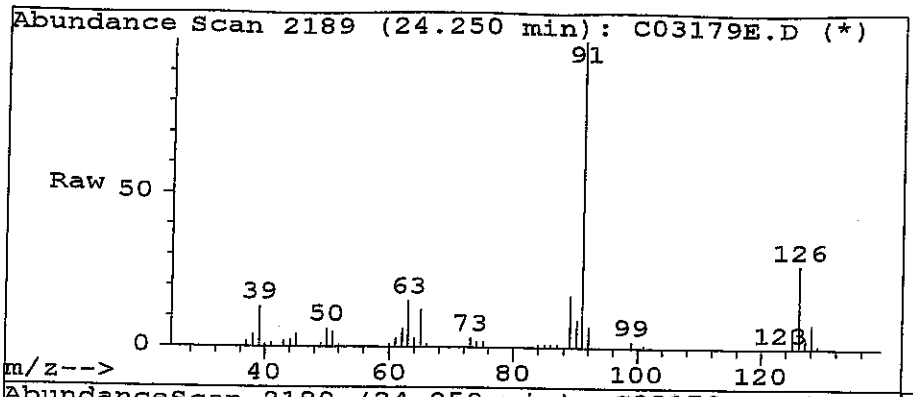
#90
1,3-Butadiene
Concen: 4.21 ppbV
RT: 4.31 min Scan# 134
Delta R.T. -0.16 min
Lab File: C03179E.D
Acq: 17 Mar 109 1:25 pm

Tgt Ion:54 Resp: 134305

Ion	Ratio	Lower	Upper
54	100		
39	169.9	154.7	232.1
53	73.7	54.4	81.6
0	0.0	0.0	0.0



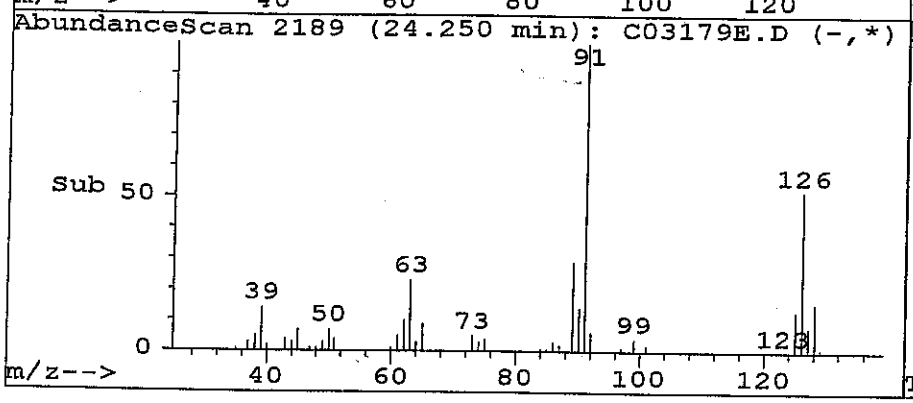


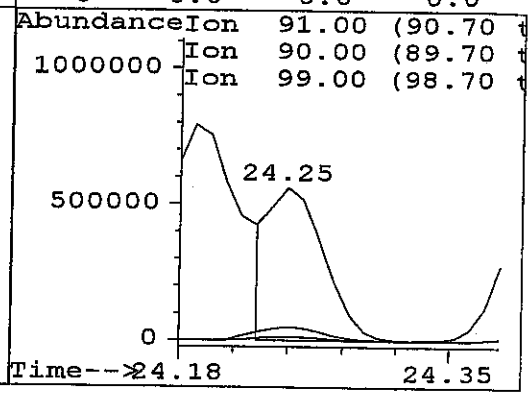


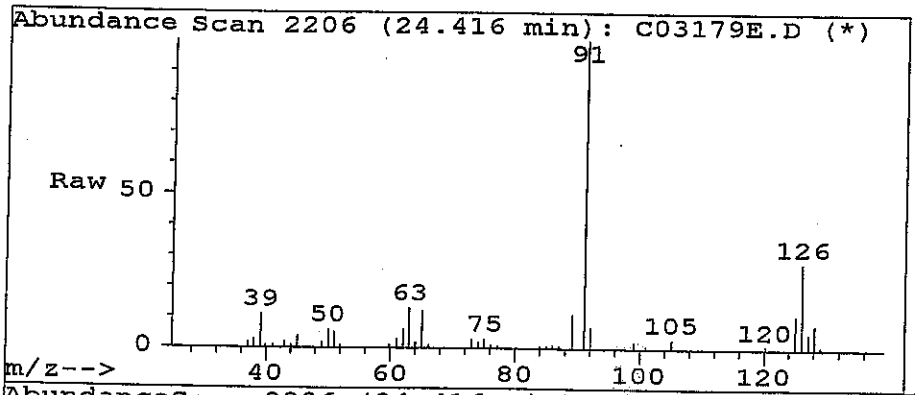
#92
2-Chlorotoluene
Concen: 3.64 ppbV m
RT: 24.25 min Scan# 2189
Delta R.T. -0.21 min
Lab File: C03179E.D
Acq: 17 Mar 109 1:25 pm

Tgt Ion:91 Resp: 1357175

Ion	Ratio	Lower	Upper
91	100		
90	8.7	7.8	11.8
99	2.3	1.6	2.4
0	0.0	0.0	0.0



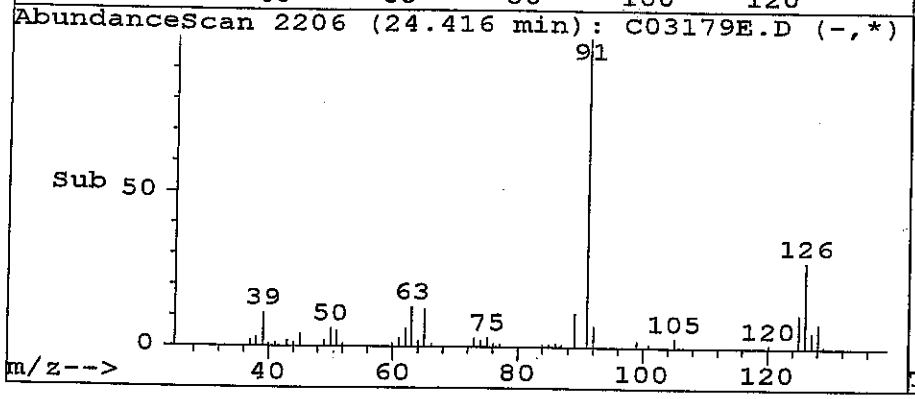


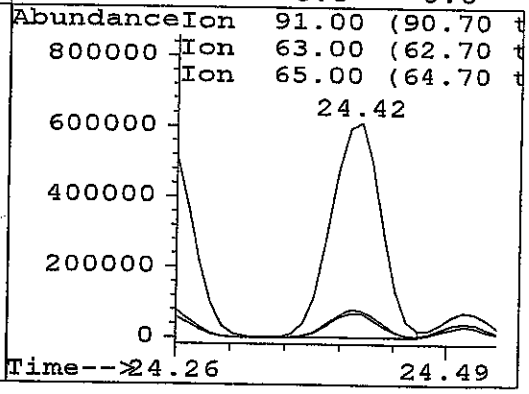


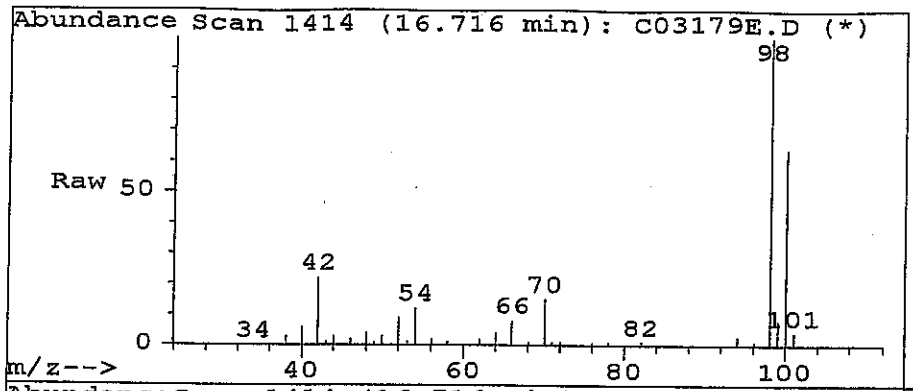
#93
4-Chlorotoluene
Concen: 3.94 ppbV
RT: 24.42 min Scan# 2206
Delta R.T. -0.23 min
Lab File: C03179E.D
Acq: 17 Mar 109 1:25 pm

Tgt Ion:91 Resp: 1836466

Ion	Ratio	Lower	Upper
91	100		
63	13.3	10.7	16.1
65	11.9	9.8	14.8
0	0.0	0.0	0.0



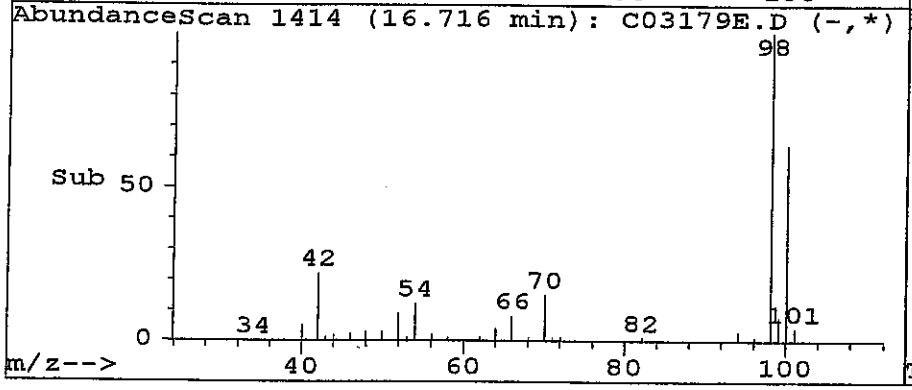


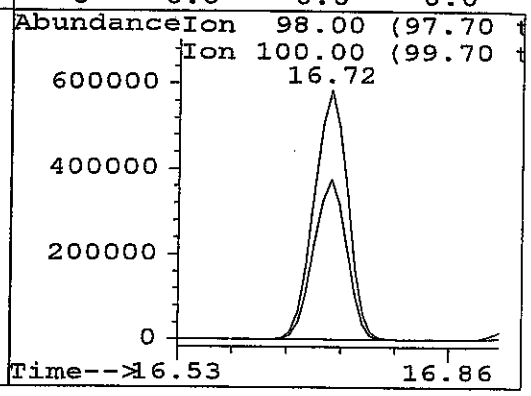


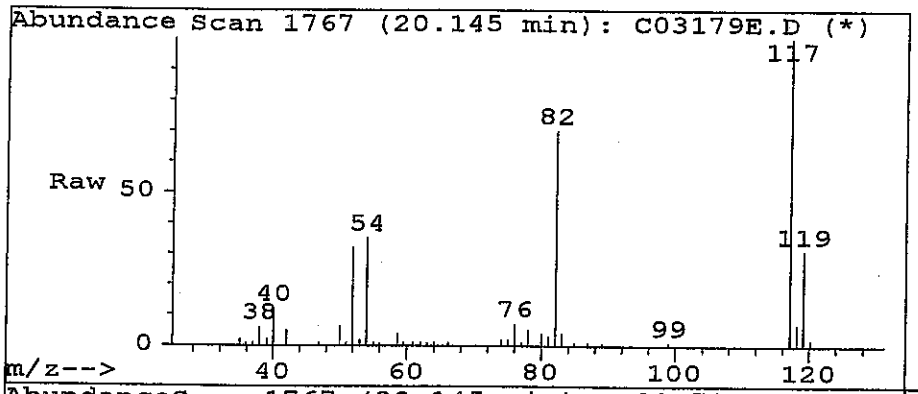
#94
Toluene-d8
Concen: 9.98 ppbV
RT: 16.72 min Scan# 1414
Delta R.T. -0.22 min
Lab File: C03179E.D
Acq: 17 Mar 109 1:25 pm

Tgt Ion:98 Resp: 1629143

Ion	Ratio	Lower	Upper
98	100		
100	64.3	49.1	73.7
0	0.0	0.0	0.0
0	0.0	0.0	0.0



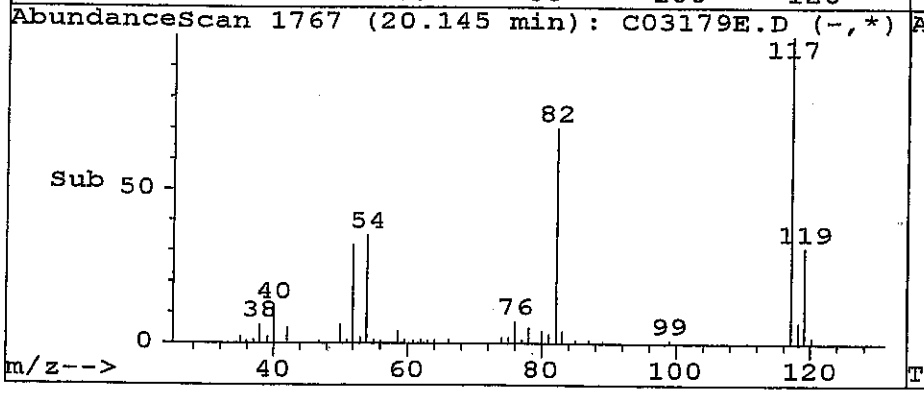


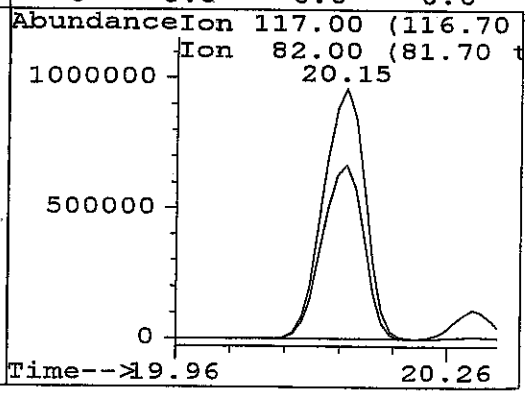


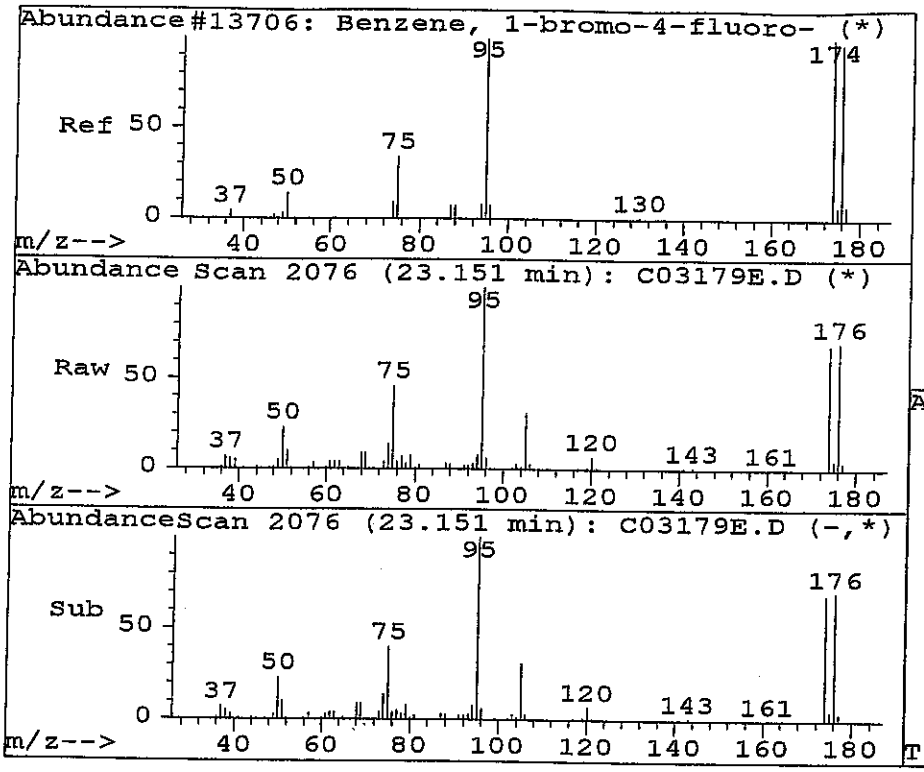
#95
Chlorobenzene-d5
Concen: 20.57 ppbV
RT: 20.15 min Scan# 1767
Delta R.T. -0.21 min
Lab File: C03179E.D
Acq: 17 Mar 109 1:25 pm

Tgt Ion:117 Resp: 3026382

Ion	Ratio	Lower	Upper
117	100		
82	69.6	57.4	86.0
0	0.0	0.0	0.0
0	0.0	0.0	0.0



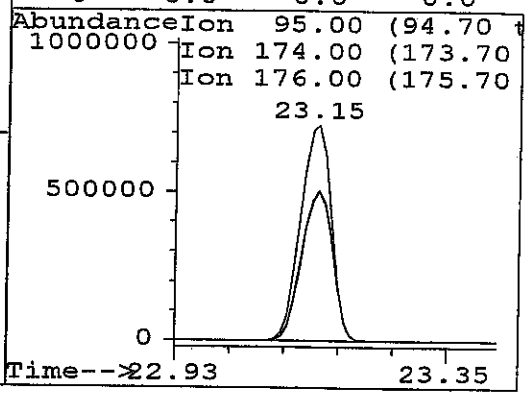




#96
1,4-Bromofluorobenzene
Concen: 10.50 ppbV
RT: 23.15 min Scan# 2076
Delta R.T. -0.23 min
Lab File: C03179E.D
Acq: 17 Mar 109 1:25 pm

Tgt Ion:95 Resp: 2385587

Ion	Ratio	Lower	Upper
95	100		
174	69.4	57.0	85.6
176	69.6	55.8	83.6
0	0.0	0.0	0.0



SECTION 8
Internal Standard and RT Summaries

This section contains information equivalent to that found in EPA FORM VII – Volatile Organics Analysis Internal Standard Area and Retention Time Study.

8.1: Internal Standard and RT Summary Table

SDG	Sampno	Fieldsampid	Parameter	Qcbatchno	RT	AREA	LL	UL	FLAG
LABQC	QC07029	ST60421	1,4-Difluorobenzene	070209-MS1	13.12	3791500	2236520	5218546	
LABQC	QC07029	ST60421	1,4-Difluorobenzene	070209-MS1	13.10	3623010	2236520	5218546	
LABQC	B07029	ST60022 + ST60350	1,4-Difluorobenzene	070209-MS1	13.11	3727533	2236520	5218546	
LABQC	B07029	METHOD BLANK	1,4-Difluorobenzene	070209-MS1	13.11	3731853	2236520	5218546	
209277	03	44-003	1,4-Difluorobenzene	070209-MS1	13.12	3868867	2236520	5218546	
209277	02	44-002	1,4-Difluorobenzene	070209-MS1	13.14	3748245	2236520	5218546	
LABQC	QC07029	ST60421	Pentafluorobenzene	070209-MS1	11.34	4236154	2549933	5949843	
LABQC	QC07029	ST60421	Pentafluorobenzene	070209-MS1	11.32	3980889	2549933	5949843	
LABQC	B07029	ST60022 + ST60350	Pentafluorobenzene	070209-MS1	11.31	4249888	2549933	5949843	
LABQC	B07029	METHOD BLANK	Pentafluorobenzene	070209-MS1	11.32	4064626	2549933	5949843	
209277	03	44-003	Pentafluorobenzene	070209-MS1	11.32	4338364	2549933	5949843	
209277	02	44-002	Pentafluorobenzene	070209-MS1	11.35	4338723	2549933	5949843	
LABQC	QC07069	ST60421	1,4-Difluorobenzene	070609-MS1	13.12	3901304	2757085	6433199	
LABQC	QC07069	ST60421	1,4-Difluorobenzene	070609-MS1	13.12	3791665	2757085	6433199	
LABQC	C07069	ST60022 + ST60350	1,4-Difluorobenzene	070609-MS1	13.11	4595142	2757085	6433199	
LABQC	B07069	METHOD BLANK	1,4-Difluorobenzene	070609-MS1	13.10	4052016	2757085	6433199	
209277	05	44-005	1,4-Difluorobenzene	070609-MS1	13.10	4289621	2757085	6433199	
209277	01	44-001	1,4-Difluorobenzene	070609-MS1	13.07	4396947	2757085	6433199	
209277	04	44-004	1,4-Difluorobenzene	070609-MS1	13.07	4452824	2757085	6433199	
209277	03	44-003	1,4-Difluorobenzene	070609-MS1	13.09	4248087	2757085	6433199	
LABQC	QC07069	ST60421	Pentafluorobenzene	070609-MS1	11.33	4244113	3074813	7174565	
LABQC	QC07069	ST60421	Pentafluorobenzene	070609-MS1	11.33	4157284	3074813	7174565	
LABQC	C07069	ST60022 + ST60350	Pentafluorobenzene	070609-MS1	11.33	5124689	3074813	7174565	
LABQC	B07069	METHOD BLANK	Pentafluorobenzene	070609-MS1	11.31	4498948	3074813	7174565	
209277	05	44-005	Pentafluorobenzene	070609-MS1	11.31	4734856	3074813	7174565	
209277	01	44-001	Pentafluorobenzene	070609-MS1	11.28	5094117	3074813	7174565	
209277	04	44-004	Pentafluorobenzene	070609-MS1	11.27	4903714	3074813	7174565	
209277	03	44-003	Pentafluorobenzene	070609-MS1	11.30	4687399	3074813	7174565	
LABQC	QC07089	ST60421	1,4-Difluorobenzene	070809-MS1	13.22	4473387	2602886	6073402	
LABQC	QC07089	ST60421	1,4-Difluorobenzene	070809-MS1	13.19	4175396	2602886	6073402	
LABQC	C07089	ST60022 + ST60350	1,4-Difluorobenzene	070809-MS1	13.23	4338144	2602886	6073402	
LABQC	B07089	METHOD BLANK	1,4-Difluorobenzene	070809-MS1	13.20	4489502	2602886	6073402	
209277	04	44-004	1,4-Difluorobenzene	070809-MS1	13.17	4573707	2602886	6073402	
LABQC	QC07089	ST60421	Pentafluorobenzene	070809-MS1	11.43	4516986	2602886	6073402	
LABQC	QC07089	ST60421	Pentafluorobenzene	070809-MS1	11.39	4246658	2602886	6073402	
LABQC	C07089	ST60022 + ST60350	Pentafluorobenzene	070809-MS1	11.43	4592723	2602886	6073402	
LABQC	B07089	METHOD BLANK	Pentafluorobenzene	070809-MS1	11.40	4790129	2602886	6073402	
209277	04	44-004	Pentafluorobenzene	070809-MS1	11.37	5115411	2602886	6073402	

APPENDIX E

Data Validation and Usability Assessment Report

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APPENDIX E
DATA VALIDATION AND USABILITY ASSESSMENT

E1.1 QUALITY ASSURANCE

Quality assurance (QA) oversight involves the performance of first-level screening of data for an indication of any deviation from their precision, accuracy, detection limit, or laboratory quality assurance/quality control (QA/QC) criteria stated in the Sampling and Analysis Plan (SAP) for the investigation scope of work.

In this investigation, indoor air was sampled from nine locations inside of Buildings 163 and 163A, outdoor air was sampled from two outside locations near Building 163, and soil gas was sampled from three locations inside of Buildings 163 and 163A. All air samples were collected using SUMMA™ canisters and analyzed in accordance with the Final *Sampling and Analysis Plan, Indoor Air, Outdoor Air, and Soil Gas Sampling – Building 163 and 163A, OU-2B, IR Site 4, Alameda Point, Alameda, California* (SES-TECH 2009). Sample analysis was performed by Environmental Analytical Services (EAS) located in San Luis Obispo, California. EAS followed the TO-15 analytical procedures, screening for the leak compound, 2-propanol, using gas chromatography/flame ionization detector (GC/FID) and analyzing samples using gas chromatography/mass spectrometry (GC/MS). Field duplicates and trip blanks were collected and analyzed according to the frequency stated in the SAP. A copy of the chain-of-custody and laboratory reports can be found in Appendix C.

All samples were received in acceptable condition and analyzed within the 30-day holding time. The air and soil gas sample analytical results are summarized in Tables 5 through 7. No major QA issues were noted by the analytical or validation laboratories and all results are deemed reportable. The EAS QC manager signed the analytical data sheets, ensuring that required review of the reported results had been completed per the laboratory's SOPs. The following sections discuss the results of sample data validation and usability assessment.

E1.2 DATA VERIFICATION

Sampling data verification is conducted during field sampling activities and laboratory analytical activities. Data verification includes reviewing chain-of-custody forms, sample receipts, sample log-ins, and laboratory data packages prior to start of data validation process. All samples were collected with flow regulators with the flow rate pre-set by the analytical laboratory and were analyzed by EPA Method TO-15.

Indoor air at sample location IND-001 was collected using two SUMMA™ canisters and the same flow regulator; the samples were identified for analysis as 44-006A and 44-006B. The pre-set flow regulator used on both SUMMA™ canisters varied in intake rate and as a result samples were collected in less than 6 hours. Sample 44-006A was collected within a 2 hour span and sample 44-006B was collected within a 5.25 hour span. Both samples were analyzed and presented in Table 5. The relative percent difference (RPD) for compounds detected in both samples were less than 45 percent indicating concentrations in the indoor did not change in the 7.25 hours of total sample time.

E1.3 Data Validation

Data validation was completed by Laboratory Data Consultants, Inc. (LDC), a third-party data validator. A USEPA Level III data validation was performed on 90 percent of the air samples and the remaining 10 percent of the samples underwent a Level IV data validation process. All data validation was performed in accordance with the *U.S. Department of Defense Quality Systems Manual for Environmental Laboratories, Version 4.1* (DOD 2009) and the *U.S. Environmental Protection Agency (EPA) Contract Laboratory Program National Functional Guidelines for Superfund Organic Data review, June 2008* (EPA 2008). Where specific guidance is not available, the data was evaluated in a conservative manner consistent with industry standards using professional experience.

E1.3.1 Holding Times

All samples were analyzed within the 30-day holding time requirement listed in the SAP.

E1.3.2 Canister Pressure and Certification

All samples were collected using 6 Liter (L) SUMMA™ canisters. Canisters used for indoor and outdoor air samples were individually certified cleaned and canisters for soil gas samples were certified cleaned in batches. Canister vacuum pressure was measured prior to sample collection and after air sample was collected. All canisters were received with pressure in acceptable range.

E1.3.3 Leak Check Compound

The compound 2-propanol, also known as isopropyl alcohol, was used as the leak check compound when sampling for soil gas. This compound was analyzed for using the GC/FID and a modified TO-15 method and was not detected in any of the soil gas samples. Even though isopropyl alcohol was used for leak check only during soil gas sampling, EAS screened all samples for the compound and 2-propanol was not detected in any vapor samples.

E1.3.4 Initial and Continuing Calibrations

All laboratory instruments were calibrated to the acceptance criteria detailed in the SAP before samples were analyzed. LDC noted the initial calibration percent response factor (%RPD) and the continuing calibration %RPD did not meet the less than 30percent limit listed in the *USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review, June 2008* (EPA 2008). Limits listed in the National Functional Guidelines are intended to be a guide and are different than the limits established by the laboratory. The %RPD limit established by EAS is less than 50 percent for compound list of eight or more. For this project, more than eight compounds were analyzed for and the %RPD was less than 50 percent for all initial and continuing calibration compounds, which meets the project requirement.

E1.3.5 Trip Blanks

Two trip blank SUMMA™ canisters were supplied by EAS and shipped with indoor and outdoor air samples and soil gas samples. The trip blank canisters were certified by EAS not to contain any analytes at concentrations above the method detection limits (MDLs). The acceptable QC criteria listed in the SAP for trip blank is that no analyte should be

detected greater than the reporting limit (RL). The COPC, 1,4-dioxane, was detected above the RL at 0.552 ug/m^3 in trip blank 44-016 that traveled with indoor and outdoor air canisters. Field samples from locations IND-006, IND-006-FD, and IND-009 contain 1,4-dioxane detectable above RL and were analyzed before the trip blank. The COPC, 1,4-dioxane is also present in the indoor air as presented in Table 5. Remnants of 1,4-dioxane from Building 163 indoor air and from the analytical instrument may have contributed to detection above the RL in the trip blank.

Acetone was detected above the RL at 6.76 ug/m^3 in trip blank 44-005 that traveled with the soil gas canisters. Acetone was detected in the laboratory method blank below the RL, but at a concentration of 1.68 ug/m^3. This indicates acetone contamination may be present in the laboratory system and may have contributed to acetone being detected in the trip blank. Other VOCs were detected in the trip blanks at concentrations below the RL which is within the acceptable criteria set for this project. Results usually are not qualified due to trip blank outliers. Trip blank results are presented in Table D-1.

E1.3.6 Method Blanks

A method blank is a prepared quality control sample free of any contaminants carried through the entire sample preparation process and is included with each batch of samples. The method blank criteria established for this project is that no compound should be detected at greater than the RL. All method blank analytes were reported to have concentrations less than the reporting limit and no samples were affected.

E1.3.7 Surrogates

Analysis of surrogates are not required by the TO-15 method, however EAS included analysis of surrogate Toluene-d8. The acceptable limits established by EAS are 70-130 percent recoveries (%R). Surrogate %R were within QC limits for all samples.

E1.3.8 Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) and matrix spike duplicate (MSD) analysis are not required by the TO-15 method. MS/MSD analysis was not performed.

E1.3.9 Laboratory Control Samples

Laboratory control samples (LCS) were spiked with all target compounds identified as analytes for this project. LCS analysis is conducted to evaluate laboratory accuracy. For this project, the LCS %R limits are 70-130 percent and the RPD is ≤30 percent. The %R for o-xylene was 69 percent in the LCS batched with analysis of samples from locations IND-001A, IND-003, and OTD-002. Effected samples were qualified with "J" flags as estimated values. The RPD for remaining analytes were all within the QC limits.

E1.3.10 Detection and Reporting Limits

Detection limits for the project were set below the project action limits listed in the SAP. Due to dilution factor caused by matrix effect and canister pressurization, not all compounds could be detected below the project action limit (PAL). Canister dilution occurs when the canister is pressurized by the laboratory at the time of receipt and results in an increase in detection and reporting limits. Canister pressurization also causes detection and reporting limits in each sample to vary. Matrix effects, such as compounds

detected in field samples at concentrations greater than 5 times the detection limit, require sample dilution. Matrix effects dilution caused field samples to be diluted up to 10 times for the indoor air samples, up to 2 times for the outdoor air samples, and up to 4000 times for the soil gas samples.

Table 5 through Table 7 identify detection limits that are greater than PALs (see "boxed" values). Non-detected results presented in these tables are reported at less than the method detection limit (MDL) values. On Table 7, eight (8) soil gas constituents have non-detect results that are higher than the PALs. Of those, benzene, vinyl chloride, naphthalene, 1,1,2,2-PCA, and 1,2-DCA are COPCs and may be present at levels exceeding the PALs.

E1.3.11 Field Duplicate Samples

Two field duplicates were collected during this sampling event. One field duplicate sample was collected from the indoor location IND-006 and the other duplicate was collected from soil gas location SG-003. Duplicate samples were analyzed for the same compounds as the parent samples. The indoor duplicate pair sample was collected simultaneously to minimize concentration variability. The soil gas duplicate sample was collected immediately after the parent sample. The duplicate sample locations and sample identifications were recorded in the field logbook; therefore "blind" to the laboratory. The field duplicate RPD limit listed in the SAP is less than or equal to 30 percent. For the indoor air duplicate sample, RPD for nine VOCs (benzene, cis-1,2-dichloroethene, carbon tetrachloride, trichloroethene, tetrachloroethene, m,p-xylene, o-xylene, 1,2-trichlorobenzene, and 1,4-dioxane), were greater than 30 percent. Concentrations of the nine VOCs were reported less than 5 times the reporting limit. When both the parent and the duplicate results are less than 5 times the reporting limit, a large RPD value is produced. Therefore, the RPD values for indoor air duplicate pair are non-representative.

For the soil gas duplicate pair samples, RPD for four VOCs (trans-1,2-dichloroethene, 1,1-dichloroethene, cis-1,2-dichloroethene, toluene) were greater than 30 percent. Generally, results are not qualified due to field duplicate outliers.

E1.4 DATA USABILITY SUMMARY

Analytical results from the indoor, outdoor, and soil gas sampling generally met all analytical criteria and are usable. With few exceptions mentioned above, such as VOCs detected at greater than the RLs in the trip blanks, percentR outlier in the LCS, and RPD outliers of field duplicate pairs, all other criteria were met. Impacted analytical data were qualified as estimated. Affected analytes with qualifiers are summarized in Table D-2.

REFERENCES

DOD (Department of Defense). 2009. *Quality Systems Manual for Environmental Laboratories, Version 4.1*. April 22.

EPA (U.S. Environmental Protection Agency). 2008. *Contract Laboratory Program National Functional Guidelines for Superfund Organic Data Review*. June.

EAS (Environmental Analytical Service). 2008. *11.TO15.03*, May.

SES-TECH (Sealaska Environmental Services, LLC and Tetra Tech EC, Inc.). 2009. *Final Sampling and Analysis Plan for Indoor Air, Outdoor Air, and Soil Gas Sampling – Buildings 163 and 163A*. June 8.

Table E-1
Trip Blank Results Summary Table

Sample ID / Analytes	44-016 Ambient Air Trip Blank	44-005 Soil Gas Trip Blank
1,1,1-Trichloroethane	<0.575	<14.37
1,1,2,2-Tetrachloroethane	<0.723	<18.07
1,1,2-Trichloroethane	<0.575	<14.37
1,1-Dichloroethane	<0.426	<10.56
1,1-Dichloroethene	<0.426	<10.33
1,2,4-Trichlorobenzene	0.080 J	<19.73
1,2,4-Trimethylbenzene	<0.517	<12.94
1,2-Dibromoethane	<0.825	<20.63
1,2-Dichlorobenzene	<0.621	<15.52
1,2-Dichloroethane	<0.435	<10.77
1,2-Dichloropropane	<0.496	<12.29
1,3,5-Trimethylbenzene	<0.538	<13.45
1,3-Dichlorobenzene	<0.633	<15.83
1,4 Dioxane	0.552	<8.18
1,4-Dichlorobenzene	<0.633	<15.83
2-Butanone	NA	1.91 J
2-Hexanone	<1.86	<9.31
4-Ethyltoluene	<2.31	<11.55
Acetone	NA	6.76
Benzene	<0.343	<8.49
Benzyl chloride	<0.406	<12.03
Bromodichloromethane	<0.470	<13.83
Bromoform	NA	<24.81
Bromomethane	0.276 J	<10.42
Carbon disulfide	NA	<7.15
Carbon tetrachloride	<0.662	<16.56
Chlorobenzene	<0.485	<12.13
Chloroethane	<0.283	<7.08
Chloroform	<0.514	<12.86
Chloromethane	<0.218	<5.44
cis-1,2-Dichloroethene	<0.426	<10.54
cis-1,3-Dichloropropene	<2.48	<12.42
Dibromochloromethane	<3.92	<19.57
Dichlorodifluoromethane	<0.541	<13.40
Dichloromethane	<0.373	<9.32
Ethylbenzene	0.054 J	<11.66

Sample ID / Analytes	44-016 Ambient Air Trip Blank	44-005 Soil Gas Trip Blank
Freon 113	<0.807	<20.17
Freon 114	<3.75	<18.76
Hexachlorobutadiene	<22.69	<28.36
m & p-Xylene	0.180 J	<23.10
Methyl Isobutyl Ketone	<1.95	<9.73
Methyl tert butyl ether	<0.246	<7.25
Naphthalene	<1.159	<32.35
o-Xylene	0.052 J	<11.44
Styrene	<0.458	<11.33
Tetrachloroethene	<0.714	<17.85
Toluene	0.138 J	3.89 J
trans-1,2-Dichloroethene	<0.303	<8.90
trans-1,3-Dichloropropene	<2.44	<12.19
Trichloroethene	<0.577	<14.29
Trichlorofluoromethane	<0.603	<15.09
Vinyl acetate	<1.56	<7.82
Vinyl chloride	<0.274	<6.86

Notes:

< less than. Analyte not detected at .

NA Not Analyzed

Table E-2
Data Qualification Summary

Affected Analyte	Qualifier	Affected Samples	Reason
o-xylene	J	IND-001A IND-003 OTD-002	Percent recovery outlier in laboratory control sample batch 62409.

LABORATORY DATA CONSULTANTS, INC.
7750 El Camino Real, Suite 2L Carlsbad, CA 92009 Phone: 760/634-0437 Fax: 760/634-0439

Sealaska Environmental Services, LLC
28513 Salerno Dr.
Traburco Canyon, CA 92679
ATTN: Ms. Lynn Jefferson

August 27, 2009

SUBJECT: NAS Alameda, Bldg 163, Data Validation

Dear Ms. Jefferson,

Enclosed is the final validation report and Excel qualification sheet for the fractions listed below. These SDGs were received on July 28th, 2009.

LDC project# 21217:

SDG #	**Fraction**
209270, 209277	Volatiles (EPA Method TO-15)

The following deliverables are submitted under this report:

- Attachment I — Sample ID Cross Reference and Data Review Level
- Attachment II — Overall Data Qualification Summary
- Attachment III — Sealaska Qualification Summary
- Attachment IV — Field Blank Summary
- Enclosure I — EPA Level III ADR Outliers (including manual review outliers)
- Enclosure II — EPA Level IV DVR (manual review)

The data validation was performed in accordance to the U.S. Department of Defense Quality Systems Manual for Environmental Laboratories, Version 4.1 (April 22, 2009) and USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Data Review, June 2008. Where specific guidance is not available, the data has been evaluated in a conservative manner consistent with industry standards using professional experience. The following items were evaluated during the review:

- Holding Times
- Sample Preservation
- Cooler Temperatures
- Initial Calibration (Manual Review)
- Continuing Calibration (Manual Review)
- Blanks
- Surrogates

- Internal Standards (Manual Review)
- Matrix Spike/Matrix Spike Duplicates
- Laboratory Control Samples
- Detection and Quantitation Limits
- Field QC Samples

Please feel free to contact us if you have any questions.

Sincerely,

ERauto

Erlinda T. Rauto
Operations Manager/Senior Chemist

Attachment I

Sample ID Cross Reference and Data Review Level

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
16-Jun-2009	44-006A	01	N	Gen Prep	TO-15	3
16-Jun-2009	44-006A	01	N	Gen Prep	TO-15 SIM_Short	3
16-Jun-2009	44-007	02	N	Gen Prep	TO-15	3
16-Jun-2009	44-007	02	N	Gen Prep	TO-15 SIM_Short	3
16-Jun-2009	44-008	03	N	Gen Prep	TO-15	3
16-Jun-2009	44-008	03	N	Gen Prep	TO-15 SIM_Short	3
16-Jun-2009	44-009	04	N	Gen Prep	TO-15	3
16-Jun-2009	44-009	04	N	Gen Prep	TO-15 SIM_Short	3
16-Jun-2009	44-010	05	N	Gen Prep	TO-15	3
16-Jun-2009	44-010	05	N	Gen Prep	TO-15 SIM_Short	3
16-Jun-2009	44-011	06	N	Gen Prep	TO-15	3
16-Jun-2009	44-011	06	N	Gen Prep	TO-15 SIM_Short	3
16-Jun-2009	44-012	07	N	Gen Prep	TO-15	3
16-Jun-2009	44-012	07	N	Gen Prep	TO-15 SIM_Short	3
16-Jun-2009	44-013	08	N	Gen Prep	TO-15	3
16-Jun-2009	44-013	08	N	Gen Prep	TO-15 SIM_Short	3
16-Jun-2009	44-014	09	N	Gen Prep	TO-15	3
16-Jun-2009	44-014	09	N	Gen Prep	TO-15 SIM_Short	3
16-Jun-2009	44-015	10	FD	Gen Prep	TO-15	3
16-Jun-2009	44-015	10	FD	Gen Prep	TO-15 SIM	4
16-Jun-2009	44-016	11	TB	Gen Prep	TO-15 SIM	3
16-Jun-2009	44-016	11	TB	Gen Prep	TO-15_Short	3
16-Jun-2009	44-017	12	N	Gen Prep	TO-15 SIM	3
16-Jun-2009	44-017	12	N	Gen Prep	TO-15_Short	3
16-Jun-2009	44-018	13	N	Gen Prep	TO-15 SIM	3
16-Jun-2009	44-018	13	N	Gen Prep	TO-15_Short	3

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
16-Jun-2009	44-006B	14	FD	Gen Prep	TO-15	3
16-Jun-2009	44-006B	14	FD	Gen Prep	TO-15 SIM_Short	3
19-Jun-2009	44-001	01	N	Gen Prep	TO-15	3
19-Jun-2009	44-002	02	N	Gen Prep	TO-15	3
19-Jun-2009	44-003	03	N	Gen Prep	TO-15	3
19-Jun-2009	44-004	04	FD	Gen Prep	TO-15	4
19-Jun-2009	44-005	05	TB	Gen Prep	TO-15	3

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Attachment II

Overall Data Qualification Summary

Overall Qualified Results

Analytical Method	Field Sample ID	Matrix	Sample Type	Analyte	RL	Lab Result	Unc / Error	Overall Qualifier	Units	Reason Code
SDG: 209270										
TO-15	44-008	AIR	N							
				2-propanol	4.37	4.21J		J	UG/M3	
TO-15	44-009	AIR	N							
				2-propanol	4.48	1.82J		J	UG/M3	
TO-15	44-012	AIR	N							
				2-propanol	4.31	2.09J		J	UG/M3	
TO-15	44-013	AIR	N							
				2-propanol	4.83	2.76J		J	UG/M3	
TO-15	44-014	AIR	N							
				2-propanol	6.25	1.88J		J	UG/M3	
TO-15	44-015	AIR	FD							
				2-propanol	4.69	1.50J		J	UG/M3	
TO-15 SIM	44-015	AIR	FD							
				1,1,2,2-Tetrachloroethane	1.171	0.117U		UJ	UG/M3	
				1,1,2-Trichloroethane	0.931	0.093U		UJ	UG/M3	
				1,1-Dichloroethane	0.691	0.069U		UJ	UG/M3	
				1,1-Dichloroethene	0.689	0.069U		UJ	UG/M3	
				1,2,4-Trichlorobenzene	1.291	0.162J		UJ	UG/M3	
				1,2-Dichloroethane	0.704	0.070U		UJ	UG/M3	
				1,4 Dioxane	0.446	0.045U		UJ	UG/M3	
				Benzene	0.556	0.629		J	UG/M3	
				BromoMethylene Chloride	0.762	0.076U		UJ	UG/M3	
				Carbon tetrachloride	1.073	0.325J		J	UG/M3	
				cis-1,2-Dichloroethene	0.689	0.086J		J	UG/M3	
				M,P-Xylenes	1.497	0.239J		UJ	UG/M3	
				Naphthalene	1.877	0.188U		UJ	UG/M3	
				o-Xylene	0.741	0.088J		UJ	UG/M3	
				Tetrachloroethene	1.157	0.116U		UJ	UG/M3	
				Trichloroethene	0.935	0.946		J	UG/M3	
				Vinyl chloride	0.445	0.044U		UJ	UG/M3	

N = Normal Sample *TB = Trip Blank*
FD = Field Duplicate *FB = Field Blank*

Overall Qualified Results

Analytical Method	Field Sample ID	Matrix	Sample Type	Analyte	RL	Lab Result	Unc / Error	Overall Qualifier	Units	Reason Code
SDG: 209270										
TO-15 SIM	44-016	AIR	TB							
				1,1,1-Trichloroethane	0.575	0.057U		UJ	UG/M3	
				1,1,2,2-Tetrachloroethane	0.263	0.024U		UJ	UG/M3	
				1,1,2-Trichloroethane	0.575	0.057U		UJ	UG/M3	
				1,1-Dichloroethane	0.426	0.043U		UJ	UG/M3	
				1,1-Dichloroethene	0.152	0.013U		UJ	UG/M3	
				1,2,4-Trichlorobenzene	0.797	0.080J		UJ	UG/M3	
				1,2,4-Trimethylbenzene	0.517	0.052U		UJ	UG/M3	
				1,2-Dibromoethane	0.295	0.035U		UJ	UG/M3	
				1,2-Dichlorobenzene	0.621	0.062U		UJ	UG/M3	
				1,2-Dichloroethane	0.435	0.043U		UJ	UG/M3	
				1,2-Dichloropropane	0.496	0.050U		UJ	UG/M3	
				1,3,5-Trimethylbenzene	0.538	0.054U		UJ	UG/M3	
				1,3-Dichlorobenzene	0.633	0.063U		UJ	UG/M3	
				1,4 Dioxane	0.275	0.552		J	UG/M3	
				1,4-Dichlorobenzene	0.633	0.063U		UJ	UG/M3	
				Benzene	0.343	0.034U		UJ	UG/M3	
				Benzyl chloride	0.406	0.041U		UJ	UG/M3	
				Bromomethane	0.417	0.276J		J	UG/M3	
				BromoMethylene Chloride	0.470	0.047U		UJ	UG/M3	
				Carbon tetrachloride	0.662	0.066U		UJ	UG/M3	
				Chlorobenzene	0.485	0.049U		UJ	UG/M3	
				Chloroethane	0.283	0.028U		UJ	UG/M3	
				Chloroform	0.514	0.051U		UJ	UG/M3	
				Chloromethane	0.218	0.022U		UJ	UG/M3	
				cis-1,2-Dichloroethene	0.426	0.043U		UJ	UG/M3	
				Dichlorodifluoromethane	0.541	0.054U		UJ	UG/M3	
				Ethylbenzene	0.466	0.054J		UJ	UG/M3	
				Freon 113	0.807	0.081U		UJ	UG/M3	
				M,P-Xylenes	0.924	0.180J		UJ	UG/M3	
				Methyl tert butyl ether	0.246	0.025U		UJ	UG/M3	
				Methylene Chloride	0.373	0.037U		UJ	UG/M3	
				Naphthalene	0.410	0.101J		J	UG/M3	

N = Normal Sample *TB = Trip Blank*
FD = Field Duplicate *FB = Field Blank*

Overall Qualified Results

Analytical Method	Field Sample ID	Matrix	Sample Type	Analyte	RL	Lab Result	Unc / Error	Overall Qualifier	Units	Reason Code
SDG: 209270										
				o-Xylene	0.457	0.052J		UJ	UG/M3	
				Styrene	0.458	0.046U		UJ	UG/M3	
				Tetrachloroethene	0.714	0.071U		UJ	UG/M3	
				Toluene	0.404	0.138J		UJ	UG/M3	
				trans-1,2-Dichloroethene	0.303	0.030U		UJ	UG/M3	
				Trichloroethene	0.577	0.058U		UJ	UG/M3	
				Trichlorofluoromethane	0.603	0.060U		UJ	UG/M3	
				Vinyl chloride	0.098	0.010U		UJ	UG/M3	
TO-15 SIM	44-017	AIR	N							
				1,2,4-Trichlorobenzene	1.490	0.180J		UJ	UG/M3	
				1,2,4-Trimethylbenzene	0.967	0.227J		UJ	UG/M3	
				1,2-Dichlorobenzene	1.161	0.116U		UJ	UG/M3	
				1,3,5-Trimethylbenzene	1.006	0.313J		U	UG/M3	
				1,3-Dichlorobenzene	1.184	0.118U		UJ	UG/M3	
				1,4-Dichlorobenzene	1.184	0.118U		UJ	UG/M3	
				Benzene	0.641	0.218J		J	UG/M3	
				Benzyl chloride	0.760	0.076U		UJ	UG/M3	
				Carbon tetrachloride	1.239	0.324J		J	UG/M3	
				Ethylbenzene	0.872	0.345J		U	UG/M3	
				M,P-Xylenes	1.728	1.085J		U	UG/M3	
				Methylene Chloride	0.697	0.138J		J	UG/M3	
				Naphthalene	1.073	0.144U		UJ	UG/M3	
				o-Xylene	0.855	0.307J		U	UG/M3	
				Styrene	0.856	0.156J		U	UG/M3	
				Tetrachloroethene	1.336	0.342J		J	UG/M3	
				Trichlorofluoromethane	1.128	0.190J		J	UG/M3	

N = Normal Sample *TB = Trip Blank*
FD = Field Duplicate *FB = Field Blank*

Overall Qualified Results

Analytical Method	Field Sample ID	Matrix	Sample Type	Analyte	RL	Lab Result	Unc / Error	Overall Qualifier	Units	Reason Code
SDG: 209270										
TO-15 SIM	44-018	AIR	N							
				1,1,1-Trichloroethane	0.468	0.067J		J	UG/M3	
				1,1,2,2-Tetrachloroethane	0.300	0.028U		UJ	UG/M3	
				1,2,4-Trichlorobenzene	0.649	0.155J		UJ	UG/M3	
				1,2,4-Trimethylbenzene	0.421	0.139J		UJ	UG/M3	
				1,2-Dichlorobenzene	0.506	0.080J		UJ	UG/M3	
				1,3,5-Trimethylbenzene	0.439	0.076J		J	UG/M3	
				1,3-Dichlorobenzene	0.516	0.090J		UJ	UG/M3	
				1,4-Dichlorobenzene	0.516	0.109J		UJ	UG/M3	
				Benzene	0.280	0.250J		J	UG/M3	
				Benzyl chloride	0.331	0.033U		UJ	UG/M3	
				Chlorobenzene	0.395	0.044J		UJ	UG/M3	
				Chloroform	0.419	0.087J		J	UG/M3	
				Chloromethane	0.177	0.121J		J	UG/M3	
				Ethylbenzene	0.380	0.146J		J	UG/M3	
				Freon 113	0.658	0.491J		J	UG/M3	
				M,P-Xylenes	0.753	0.537J		J	UG/M3	
				Methylene Chloride	0.304	0.194J		J	UG/M3	
				Naphthalene	0.468	0.063U		UJ	UG/M3	
				o-Xylene	0.373	0.171J		J	UG/M3	
				Styrene	0.373	0.072J		J	UG/M3	
				Tetrachloroethene	0.582	0.090J		J	UG/M3	
				Trichlorofluoromethane	0.492	0.453J		J	UG/M3	

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Overall Qualified Results

Analytical Method	Field Sample ID	Matrix	Sample Type	Analyte	RL	Lab Result	Unc / Error	Overall Qualifier	Units	Reason Code
SDG: 209270										
TO-15 SIM_Short	44-006A	AIR	N							
				1,1,2,2-Tetrachloroethane	0.940	0.117J		J	UG/M3	
				1,1,2-Trichloroethane	3.663	0.366U		UJ	UG/M3	
				1,1-Dichloroethane	2.719	0.272U		UJ	UG/M3	
				1,2,4-Trichlorobenzene	5.079	0.508U		UJ	UG/M3	
				1,2-Dibromoethane	1.053	0.223J		J	UG/M3	
				1,2-Dichloroethane	2.772	0.277U		UJ	UG/M3	
				1,4 Dioxane	1.755	0.176U		UJ	UG/M3	
				Benzene	2.187	1.466J		J	UG/M3	
				BromoMethylene Chloride	2.999	0.300U		UJ	UG/M3	
				Carbon tetrachloride	4.223	1.727J		J	UG/M3	
				cis-1,2-Dichloroethene	2.713	0.271U		UJ	UG/M3	
				M,P-Xylenes	5.890	2.967J		J	UG/M3	
				Naphthalene	1.463	0.298J		UJ	UG/M3	
				o-Xylene	2.916	0.903J		J	UG/M3	
				Tetrachloroethene	4.553	0.455U		UJ	UG/M3	
				Trichloroethene	3.679	0.368U		UJ	UG/M3	
TO-15 SIM_Short	44-006B	AIR	FD							
				1,1,2-Trichloroethane	1.488	0.149U		UJ	UG/M3	
				1,1-Dichloroethane	1.104	0.110U		UJ	UG/M3	
				1,2,4-Trichlorobenzene	2.063	0.542J		UJ	UG/M3	
				1,2-Dichloroethane	1.126	0.113U		UJ	UG/M3	
				1,4 Dioxane	0.713	0.071U		UJ	UG/M3	
				Benzene	0.888	1.357		J	UG/M3	
				BromoMethylene Chloride	1.218	0.122U		UJ	UG/M3	
				Carbon tetrachloride	1.716	2.585		J	UG/M3	
				cis-1,2-Dichloroethene	1.102	0.110U		UJ	UG/M3	
				M,P-Xylenes	2.393	4.534		J	UG/M3	
				Naphthalene	1.486	0.199U		UJ	UG/M3	
				o-Xylene	1.185	1.331		J	UG/M3	
				Tetrachloroethene	1.850	0.588J		UJ	UG/M3	
				Trichloroethene	1.495	0.150J		UJ	UG/M3	

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Overall Qualified Results

Analytical Method	Field Sample ID	Matrix	Sample Type	Analyte	RL	Lab Result	Unc / Error	Overall Qualifier	Units	Reason Code
SDG: 209270										
TO-15 SIM_Short	44-007	AIR	N							
				1,1,2-Trichloroethane	0.856	0.086U		UJ	UG/M3	
				1,1-Dichloroethane	0.635	0.064U		UJ	UG/M3	
				1,2,4-Trichlorobenzene	1.187	0.188J		UJ	UG/M3	
				1,2-Dichloroethane	0.648	0.065U		UJ	UG/M3	
				1,4 Dioxane	0.410	0.041U		UJ	UG/M3	
				Benzene	0.511	1.243		J	UG/M3	
				BromoMethylene Chloride	0.701	0.070U		UJ	UG/M3	
				Carbon tetrachloride	0.987	1.046		J	UG/M3	
				cis-1,2-Dichloroethene	0.634	0.063U		UJ	UG/M3	
				M,P-Xylenes	1.377	4.341		J	UG/M3	
				Naphthalene	0.855	0.168J		UJ	UG/M3	
				o-Xylene	0.682	1.305		J	UG/M3	
				Tetrachloroethene	1.064	0.670J		UJ	UG/M3	
				Trichloroethene	0.860	0.154J		UJ	UG/M3	
TO-15 SIM_Short	44-008	AIR	N							
				1,1,2-Trichloroethane	2.169	0.217U		UJ	UG/M3	
				1,1-Dichloroethane	1.610	0.161U		UJ	UG/M3	
				1,2,4-Trichlorobenzene	3.008	0.522J		J	UG/M3	
				1,2-Dichloroethane	1.641	0.164U		UJ	UG/M3	
				1,4 Dioxane	1.039	1.800		J	UG/M3	
				Benzene	1.295	0.807J		J	UG/M3	
				BromoMethylene Chloride	1.776	0.178U		UJ	UG/M3	
				Carbon tetrachloride	2.501	0.628J		J	UG/M3	
				cis-1,2-Dichloroethene	1.607	0.161U		UJ	UG/M3	
				M,P-Xylenes	3.488	3.149J		J	UG/M3	
				Naphthalene	0.867	0.116U		UJ	UG/M3	
				o-Xylene	1.727	0.951J		J	UG/M3	
				Tetrachloroethene	2.696	0.270U		UJ	UG/M3	
				Trichloroethene	2.179	0.675J		J	UG/M3	

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Overall Qualified Results

Analytical Method	Field Sample ID	Matrix	Sample Type	Analyte	RL	Lab Result	Unc / Error	Overall Qualifier	Units	Reason Code
SDG: 209270										
TO-15 SIM_Short	44-009	AIR	N							
				1,1,2,2-Tetrachloroethane	1.120	0.112U		UJ	UG/M3	
				1,1,2-Trichloroethane	0.891	0.089U		UJ	UG/M3	
				1,1-Dichloroethane	0.661	0.066U		UJ	UG/M3	
				1,1-Dichloroethene	0.660	0.066U		UJ	UG/M3	
				1,2,4-Trichlorobenzene	1.235	0.268J		UJ	UG/M3	
				1,2-Dichloroethane	0.674	0.067U		UJ	UG/M3	
				1,4 Dioxane	0.427	0.043U		UJ	UG/M3	
				Benzene	0.532	3.422		J	UG/M3	
				BromoMethylene Chloride	0.729	0.073U		UJ	UG/M3	
				Carbon tetrachloride	1.027	1.513		J	UG/M3	
				cis-1,2-Dichloroethene	0.660	0.066U		UJ	UG/M3	
				M,P-Xylenes	1.432	16.752		J	UG/M3	
				Naphthalene	1.796	0.223J		UJ	UG/M3	
				o-Xylene	0.709	5.224		J	UG/M3	
				Tetrachloroethene	1.107	0.578J		UJ	UG/M3	
				Trichloroethene	0.894	3.168		J	UG/M3	
				Vinyl chloride	0.425	0.043U		UJ	UG/M3	
TO-15 SIM_Short	44-010	AIR	N							
				1,1,2-Trichloroethane	0.977	0.106J		J	UG/M3	
				1,2,4-Trichlorobenzene	1.354	0.604J		J	UG/M3	
				1,2-Dichloroethane	0.739	0.192J		J	UG/M3	
				Carbon tetrachloride	1.126	1.027J		J	UG/M3	
				cis-1,2-Dichloroethene	0.723	0.172J		J	UG/M3	
				Naphthalene	1.970	0.445J		J	UG/M3	
				Tetrachloroethene	1.214	0.398J		J	UG/M3	

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Overall Qualified Results

Analytical Method	Field Sample ID	Matrix	Sample Type	Analyte	RL	Lab Result	Unc / Error	Overall Qualifier	Units	Reason Code
SDG: 209270										
TO-15 SIM_Short	44-011	AIR	N							
				1,1,2-Trichloroethane	0.845	0.084U		UJ	UG/M3	
				1,1-Dichloroethane	0.627	0.063U		UJ	UG/M3	
				1,2,4-Trichlorobenzene	1.171	0.385J		J	UG/M3	
				1,2-Dichloroethane	0.639	0.064U		UJ	UG/M3	
				1,4 Dioxane	0.405	1.563		J	UG/M3	
				Benzene	0.504	1.103		J	UG/M3	
				BromoMethylene Chloride	0.691	0.069U		UJ	UG/M3	
				Carbon tetrachloride	0.974	0.573J		J	UG/M3	
				cis-1,2-Dichloroethene	0.626	0.063J		J	UG/M3	
				M,P-Xylenes	1.358	5.497		J	UG/M3	
				Naphthalene	0.844	0.113U		UJ	UG/M3	
				o-Xylene	0.672	1.728		J	UG/M3	
				Tetrachloroethene	1.050	0.208J		J	UG/M3	
				Trichloroethene	0.848	2.743		J	UG/M3	
TO-15 SIM_Short	44-012	AIR	N							
				1,1,2,2-Tetrachloroethane	5.385	0.670J		J	UG/M3	
				1,1,2-Trichloroethane	4.281	0.494J		U	UG/M3	
				1,2,4-Trichlorobenzene	5.935	2.518J		UJ	UG/M3	
				1,2-Dichloroethane	3.239	0.557J		U	UG/M3	
				1,4 Dioxane	2.051	4.307		U	UG/M3	
				Benzene	2.555	0.841J		J	UG/M3	
				Carbon tetrachloride	4.935	1.584J		J	UG/M3	
				M,P-Xylenes	6.883	1.704J		U	UG/M3	
				Naphthalene	8.631	1.681J		J	UG/M3	
				o-Xylene	3.408	0.568J		U	UG/M3	
				Trichloroethene	4.299	0.519J		J	UG/M3	

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Overall Qualified Results

Analytical Method	Field Sample ID	Matrix	Sample Type	Analyte	RL	Lab Result	Unc / Error	Overall Qualifier	Units	Reason Code
SDG: 209270										
TO-15 SIM_Short	44-013	AIR	N							
				1,2,4-Trichlorobenzene	1.330	0.269J		J	UG/M3	
				1,2-Dibromoethane	0.689	0.117J		J	UG/M3	
				Carbon tetrachloride	1.106	0.641J		J	UG/M3	
				cis-1,2-Dichloroethene	0.711	0.095J		J	UG/M3	
				Naphthalene	0.958	0.483J		UJ	UG/M3	
				Tetrachloroethene	1.193	0.423J		J	UG/M3	
TO-15 SIM_Short	44-014	AIR	N							
				1,2,4-Trichlorobenzene	1.721	0.253J		J	UG/M3	
				Carbon tetrachloride	1.431	0.656J		J	UG/M3	
				cis-1,2-Dichloroethene	0.919	0.171J		J	UG/M3	
				Naphthalene	1.240	0.233J		UJ	UG/M3	
				Tetrachloroethene	1.543	0.303J		J	UG/M3	
TO-15_Short	44-016	AIR	TB							
				4-Ethyltoluene	2.31	0.46U		UJ	UG/M3	
				Freon 114	3.75	0.75U		UJ	UG/M3	
				Hexachlorobutadiene	22.69	2.27U		UJ	UG/M3	
				Vinyl acetate	1.56	0.31U		UJ	UG/M3	
TO-15_Short	44-017	AIR	N							
				4-Ethyltoluene	4.33	0.86U		UJ	UG/M3	
				Freon 114	7.02	1.40U		UJ	UG/M3	
				Hexachlorobutadiene	42.43	4.24U		UJ	UG/M3	
				Vinyl acetate	2.92	0.58U		UJ	UG/M3	
TO-15_Short	44-018	AIR	N							
				4-Ethyltoluene	3.77	0.75U		UJ	UG/M3	
				Freon 114	6.12	1.22U		UJ	UG/M3	
				Hexachlorobutadiene	36.98	3.70U		UJ	UG/M3	
				Vinyl acetate	2.55	0.51U		UJ	UG/M3	

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Overall Qualified Results

Analytical Method	Field Sample ID	Matrix	Sample Type	Analyte	RL	Lab Result	Unc / Error	Overall Qualifier	Units	Reason Code
SDG: 209277										
TO-15	44-001	AIR	N							
				1,1,2,2-Tetrachloroethane	25.84	5.17U		UJ	UG/M3	
				1,2-Dichlorobenzene	22.19	4.44U		UJ	UG/M3	
				1,2-Dichloroethane	15.39	3.47J		J	UG/M3	
				1,3-Dichlorobenzene	22.64	4.53U		UJ	UG/M3	
				1,4 Dioxane	11.70	2.34U		UJ	UG/M3	
				1,4-Dichlorobenzene	22.64	4.53U		UJ	UG/M3	
				2-Butanone	9.36	3.76J		J	UG/M3	
				2-Hexanone	13.31	2.66U		UJ	UG/M3	
				2-propanol	8.26	1.65U		UJ	UG/M3	
				4-Ethyltoluene	16.51	3.30U		UJ	UG/M3	
				Acetone	7.89	13.90		UJ	UG/M3	
				Benzene	12.14	5.03J		J	UG/M3	
				Benzyl chloride	17.20	3.44U		UJ	UG/M3	
				Bromoform	35.48	7.10U		UJ	UG/M3	
				Chloroform	18.39	8.01J		J	UG/M3	
				Freon 113	28.84	12.89J		J	UG/M3	
				Freon 114	26.83	5.37U		UJ	UG/M3	
				Hexachlorobutadiene	40.55	8.11U		UJ	UG/M3	
				Naphthalene	46.26	9.25U		UJ	UG/M3	
				Toluene	14.32	8.46J		U	UG/M3	

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Overall Qualified Results

Analytical Method	Field Sample ID	Matrix	Sample Type	Analyte	RL	Lab Result	Unc / Error	Overall Qualifier	Units	Reason Code
SDG: 209277										
TO-15	44-002	AIR	N							
				1,1,2,2-Tetrachloroethane	248	50U		UJ	UG/M3	
				1,2,4-Trichlorobenzene	270	54U		UJ	UG/M3	
				1,2-Dichlorobenzene	213	43U		UJ	UG/M3	
				2-propanol	79	16U		UJ	UG/M3	
				4-Ethyltoluene	158	32U		UJ	UG/M3	
				Acetone	76	50J		J	UG/M3	
				Benzyl chloride	165	33U		UJ	UG/M3	
				Freon 114	257	51U		UJ	UG/M3	
				Hexachlorobutadiene	389	78U		UJ	UG/M3	
				Naphthalene	443	89U		UJ	UG/M3	
				Toluene	137	44J		U	UG/M3	
				trans-1,2-Dichloroethene	122	35J		J	UG/M3	
TO-15	44-003	AIR	N							
				1,1,2,2-Tetrachloroethane	2,873	575U		UJ	UG/M3	
				1,1-Dichloroethane	1,678	386J		J	UG/M3	
				1,2,4-Trichlorobenzene	3,136	627U		UJ	UG/M3	
				1,2-Dichlorobenzene	2,468	494U		UJ	UG/M3	
				2-propanol	918	184U		UJ	UG/M3	
				4-Ethyltoluene	1,836	367U		UJ	UG/M3	
				Acetone	878	176U		UJ	UG/M3	
				Benzyl chloride	1,913	383U		UJ	UG/M3	
				Freon 114	2,984	597U		UJ	UG/M3	
				Hexachlorobutadiene	4,509	902U		UJ	UG/M3	
				Naphthalene	5,143	1,029U		UJ	UG/M3	
				Toluene	1,592	489J		U	UG/M3	
				trans-1,2-Dichloroethene	1,415	771J		J	UG/M3	

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Overall Qualified Results

Analytical Method	Field Sample ID	Matrix	Sample Type	Analyte	RL	Lab Result	Unc / Error	Overall Qualifier	Units	Reason Code
SDG: 209277										
TO-15	44-004	AIR	FD							
				1,1,2,2-Tetrachloroethane	2,602	520U		UJ	UG/M3	
				1,2,4-Trimethylbenzene	1,864	373U		UJ	UG/M3	
				1,2-Dichlorobenzene	2,235	547J		J	UG/M3	
				1,3,5-Trimethylbenzene	1,937	387U		UJ	UG/M3	
				1,3-Dichlorobenzene	2,279	456U		UJ	UG/M3	
				1,4-Dichlorobenzene	2,279	689J		J	UG/M3	
				2-propanol	831	166U		UJ	UG/M3	
				4-Ethyltoluene	1,663	333U		UJ	UG/M3	
				Acetone	795	159U		UJ	UG/M3	
				Benzene	1,223	357J		J	UG/M3	
				Benzyl chloride	1,732	346U		UJ	UG/M3	
				Bromomethane	1,500	300U		UJ	UG/M3	
				Freon 114	2,702	540U		UJ	UG/M3	
				Hexachlorobutadiene	4,084	817U		UJ	UG/M3	
				Naphthalene	4,658	932U		UJ	UG/M3	
				Styrene	1,632	326U		UJ	UG/M3	
				Toluene	1,442	671J		U	UG/M3	
				Vinyl chloride	988	198U		UJ	UG/M3	

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Overall Qualified Results

Analytical Method	Field Sample ID	Matrix	Sample Type	Analyte	RL	Lab Result	Unc / Error	Overall Qualifier	Units	Reason Code
SDG: 209277										
TO-15	44-005	AIR	TB							
				1,1,2,2-Tetrachloroethane	18.07	3.61U		UJ	UG/M3	
				1,2-Dichlorobenzene	15.52	3.10U		UJ	UG/M3	
				1,3-Dichlorobenzene	15.83	3.17U		UJ	UG/M3	
				1,4 Dioxane	8.18	1.64U		UJ	UG/M3	
				1,4-Dichlorobenzene	15.83	3.17U		UJ	UG/M3	
				2-Butanone	6.55	1.91J		J	UG/M3	
				2-Hexanone	9.31	1.86U		UJ	UG/M3	
				2-propanol	5.77	1.15U		UJ	UG/M3	
				4-Ethyltoluene	11.55	2.31U		UJ	UG/M3	
				Acetone	5.52	6.76		UJ	UG/M3	
				Benzyl chloride	12.03	2.41U		UJ	UG/M3	
				Bromoform	24.81	4.96U		UJ	UG/M3	
				Freon 114	18.76	3.75U		UJ	UG/M3	
				Hexachlorobutadiene	28.36	5.67U		UJ	UG/M3	
				Naphthalene	32.35	6.47U		UJ	UG/M3	
				Toluene	10.02	3.89J		U	UG/M3	

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Attachment III

Sealaska Qualification Summary

Sealaska

Reason for Qualified Results

SDG Nos. : 209270,209277

Sample Del Group (SDG)	Sample ID	Test Method	CAS No.	Detected Qualifier	Non Detected Qualifier	Analyte Name	Reason
209270	44-006A	TO-15 SIM_Short	120821		J	1,2,4-Trichlorobenzene	Continuing calibration percent difference
209270	44-006A	TO-15 SIM_Short	120821		J	1,2,4-Trichlorobenzene	Initial calibration %RSD
209270	44-006A	TO-15 SIM_Short	91203	J		Naphthalene	Continuing calibration percent difference
209270	44-006A	TO-15 SIM_Short	91203	J		Naphthalene	Initial calibration %RSD
209270	44-006A	TO-15 SIM_Short	91203	J		Naphthalene	LCS RPD
209270	44-006A	TO-15 SIM_Short	91203	U		Naphthalene	Present in method blank
209270	44-006B	TO-15 SIM_Short	120821	J		1,2,4-Trichlorobenzene	Initial calibration %RSD
209270	44-006B	TO-15 SIM_Short	120821	U		1,2,4-Trichlorobenzene	Present in method blank
209270	44-006B	TO-15 SIM_Short	91203		J	Naphthalene	Continuing calibration percent difference
209270	44-006B	TO-15 SIM_Short	91203		J	Naphthalene	Initial calibration %RSD
209270	44-006B	TO-15 SIM_Short	91203		J	Naphthalene	LCS spike recovery
209270	44-006B	TO-15 SIM_Short	127184	U		Tetrachloroethene	Present in method blank
209270	44-006B	TO-15 SIM_Short	79016	U		Trichloroethene	Present in method blank
209270	44-007	TO-15 SIM_Short	120821	J		1,2,4-Trichlorobenzene	Initial calibration %RSD
209270	44-007	TO-15 SIM_Short	120821	U		1,2,4-Trichlorobenzene	Present in method blank
209270	44-007	TO-15 SIM_Short	91203	J		Naphthalene	Continuing calibration percent difference
209270	44-007	TO-15 SIM_Short	91203	J		Naphthalene	Initial calibration %RSD
209270	44-007	TO-15 SIM_Short	91203	J		Naphthalene	LCS RPD
209270	44-007	TO-15 SIM_Short	91203	U		Naphthalene	Present in method blank
209270	44-007	TO-15 SIM_Short	127184	U		Tetrachloroethene	Present in method blank
209270	44-007	TO-15 SIM_Short	79016	U		Trichloroethene	Present in method blank
209270	44-008	TO-15 SIM_Short	120821	J		1,2,4-Trichlorobenzene	Continuing calibration percent difference
209270	44-008	TO-15 SIM_Short	120821	J		1,2,4-Trichlorobenzene	Initial calibration %RSD
209270	44-008	TO-15 SIM_Short	91203		J	Naphthalene	Continuing calibration percent difference
209270	44-008	TO-15 SIM_Short	91203		J	Naphthalene	Initial calibration %RSD
209270	44-008	TO-15 SIM_Short	91203		J	Naphthalene	LCS RPD
209270	44-009	TO-15 SIM_Short	120821	J		1,2,4-Trichlorobenzene	Initial calibration %RSD
209270	44-009	TO-15 SIM_Short	120821	U		1,2,4-Trichlorobenzene	Present in method blank
209270	44-009	TO-15 SIM_Short	91203	J		Naphthalene	Continuing calibration percent difference
209270	44-009	TO-15 SIM_Short	91203	J		Naphthalene	Initial calibration %RSD
209270	44-009	TO-15 SIM_Short	91203	U		Naphthalene	Present in method blank
209270	44-009	TO-15 SIM_Short	127184	U		Tetrachloroethene	Present in method blank

Sealaska

Reason for Qualified Results

SDG Nos. : 209270,209277

Sample Del Group (SDG)	Sample ID	Test Method	CAS No.	Detected Qualifier	Non Detected Qualifier	Analyte Name	Reason
209270	44-010	TO-15 SIM_Short	120821	J		1,2,4-Trichlorobenzene	Initial calibration %RSD
209270	44-010	TO-15 SIM_Short	91203	J		Naphthalene	Initial calibration %RSD
209270	44-011	TO-15 SIM_Short	120821	J		1,2,4-Trichlorobenzene	Initial calibration %RSD
209270	44-011	TO-15 SIM_Short	91203		J	Naphthalene	Continuing calibration percent difference
209270	44-011	TO-15 SIM_Short	91203		J	Naphthalene	Initial calibration %RSD
209270	44-011	TO-15 SIM_Short	91203		J	Naphthalene	LCS RPD
209270	44-012	TO-15 SIM_Short	79345	J		1,1,2,2-Tetrachloroethane	Continuing calibration percent difference
209270	44-012	TO-15 SIM_Short	79005	U		1,1,2-Trichloroethane	Present in method blank
209270	44-012	TO-15 SIM_Short	120821	J		1,2,4-Trichlorobenzene	Continuing calibration percent difference
209270	44-012	TO-15 SIM_Short	120821	J		1,2,4-Trichlorobenzene	Initial calibration %RSD
209270	44-012	TO-15 SIM_Short	120821	U		1,2,4-Trichlorobenzene	Present in method blank
209270	44-012	TO-15 SIM_Short	107062	U		1,2-Dichloroethane	Present in method blank
209270	44-012	TO-15 SIM_Short	123911	U		1,4 Dioxane	Present in method blank
209270	44-012	TO-15 SIM_Short	1330207	U		M,P-Xylenes	Present in method blank
209270	44-012	TO-15 SIM_Short	91203	J		Naphthalene	Continuing calibration percent difference
209270	44-012	TO-15 SIM_Short	91203	J		Naphthalene	Initial calibration %RSD
209270	44-012	TO-15 SIM_Short	95476	U		o-Xylene	Present in method blank
209270	44-013	TO-15 SIM_Short	120821	J		1,2,4-Trichlorobenzene	Initial calibration %RSD
209270	44-013	TO-15 SIM_Short	91203	J		Naphthalene	Continuing calibration percent difference
209270	44-013	TO-15 SIM_Short	91203	J		Naphthalene	Initial calibration %RSD
209270	44-013	TO-15 SIM_Short	91203	J		Naphthalene	LCS spike recovery
209270	44-013	TO-15 SIM_Short	91203	U		Naphthalene	Present in method blank
209270	44-014	TO-15 SIM_Short	120821	J		1,2,4-Trichlorobenzene	Initial calibration %RSD
209270	44-014	TO-15 SIM_Short	91203	J		Naphthalene	Continuing calibration percent difference
209270	44-014	TO-15 SIM_Short	91203	J		Naphthalene	Initial calibration %RSD
209270	44-014	TO-15 SIM_Short	91203	J		Naphthalene	LCS spike recovery
209270	44-014	TO-15 SIM_Short	91203	U		Naphthalene	Present in method blank
209270	44-015	TO-15 SIM	120821	J		1,2,4-Trichlorobenzene	Initial calibration %RSD
209270	44-015	TO-15 SIM	120821	U		1,2,4-Trichlorobenzene	Present in method blank
209270	44-015	TO-15 SIM	1330207	U		M,P-Xylenes	Present in method blank
209270	44-015	TO-15 SIM	91203		J	Naphthalene	Initial calibration %RSD
209270	44-015	TO-15 SIM	95476	U		o-Xylene	Present in method blank

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Reason for Qualified Results

SDG Nos. : 209270,209277

Sample Del Group (SDG)	Sample ID	Test Method	CAS No.	Detected Qualifier	Non Detected Qualifier	Analyte Name	Reason
209270	44-016	TO-15 SIM	120821	J		1,2,4-Trichlorobenzene	Initial calibration %RSD
209270	44-016	TO-15 SIM	120821	U		1,2,4-Trichlorobenzene	Present in method blank
209270	44-016	TO-15 SIM	95636		J	1,2,4-Trimethylbenzene	Initial calibration %RSD
209270	44-016	TO-15 SIM	95501		J	1,2-Dichlorobenzene	Initial calibration %RSD
209270	44-016	TO-15 SIM	541731		J	1,3-Dichlorobenzene	Initial calibration %RSD
209270	44-016	TO-15 SIM	106467		J	1,4-Dichlorobenzene	Initial calibration %RSD
209270	44-016	TO-15 SIM	100447		J	Benzyl chloride	Initial calibration %RSD
209270	44-016	TO-15 SIM	100414	U		Ethylbenzene	Present in method blank
209270	44-016	TO-15 SIM	1330207	U		M,P-Xylenes	Present in method blank
209270	44-016	TO-15 SIM	91203	J		Naphthalene	Continuing calibration percent difference
209270	44-016	TO-15 SIM	91203	J		Naphthalene	Initial calibration %RSD
209270	44-016	TO-15 SIM	95476	U		o-Xylene	Present in method blank
209270	44-016	TO-15 SIM	108883	U		Toluene	Present in method blank
209270	44-016	TO-15_Short	622968		J	4-Ethyltoluene	Continuing calibration percent difference
209270	44-016	TO-15_Short	622968		J	4-Ethyltoluene	Initial calibration %RSD
209270	44-016	TO-15_Short	76142		J	Freon 114	Continuing calibration percent difference
209270	44-016	TO-15_Short	87683		J	Hexachlorobutadiene	Continuing calibration percent difference
209270	44-016	TO-15_Short	108054		J	Vinyl acetate	Continuing calibration percent difference
209270	44-017	TO-15 SIM	120821	J		1,2,4-Trichlorobenzene	Initial calibration %RSD
209270	44-017	TO-15 SIM	120821	U		1,2,4-Trichlorobenzene	Present in method blank
209270	44-017	TO-15 SIM	95636	J		1,2,4-Trimethylbenzene	Initial calibration %RSD
209270	44-017	TO-15 SIM	95636	U		1,2,4-Trimethylbenzene	Present in method blank
209270	44-017	TO-15 SIM	95501		J	1,2-Dichlorobenzene	Initial calibration %RSD
209270	44-017	TO-15 SIM	108678	U		1,3,5-Trimethylbenzene	Present in method blank
209270	44-017	TO-15 SIM	541731		J	1,3-Dichlorobenzene	Initial calibration %RSD
209270	44-017	TO-15 SIM	106467		J	1,4-Dichlorobenzene	Initial calibration %RSD
209270	44-017	TO-15 SIM	100447		J	Benzyl chloride	Initial calibration %RSD
209270	44-017	TO-15 SIM	100414	U		Ethylbenzene	Present in method blank
209270	44-017	TO-15 SIM	1330207	U		M,P-Xylenes	Present in method blank
209270	44-017	TO-15 SIM	91203		J	Naphthalene	Continuing calibration percent difference
209270	44-017	TO-15 SIM	91203		J	Naphthalene	Initial calibration %RSD
209270	44-017	TO-15 SIM	95476	U		o-Xylene	Present in method blank

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Reason for Qualified Results

SDG Nos. : 209270,209277

Sample Del Group (SDG)	Sample ID	Test Method	CAS No.	Detected Qualifier	Non Detected Qualifier	Analyte Name	Reason
209270	44-017	TO-15 SIM	100425	U		Styrene	Present in method blank
209270	44-017	TO-15_Short	622968		J	4-Ethyltoluene	Continuing calibration percent difference
209270	44-017	TO-15_Short	622968		J	4-Ethyltoluene	Initial calibration %RSD
209270	44-017	TO-15_Short	76142		J	Freon 114	Continuing calibration percent difference
209270	44-017	TO-15_Short	87683		J	Hexachlorobutadiene	Continuing calibration percent difference
209270	44-017	TO-15_Short	108054		J	Vinyl acetate	Continuing calibration percent difference
209270	44-018	TO-15 SIM	79345		J	1,1,2,2-Tetrachloroethane	Continuing calibration percent difference
209270	44-018	TO-15 SIM	120821	J		1,2,4-Trichlorobenzene	Continuing calibration percent difference
209270	44-018	TO-15 SIM	120821	J		1,2,4-Trichlorobenzene	Initial calibration %RSD
209270	44-018	TO-15 SIM	120821	U		1,2,4-Trichlorobenzene	Present in method blank
209270	44-018	TO-15 SIM	95636	J		1,2,4-Trimethylbenzene	Initial calibration %RSD
209270	44-018	TO-15 SIM	95636	U		1,2,4-Trimethylbenzene	Present in method blank
209270	44-018	TO-15 SIM	95501	J		1,2-Dichlorobenzene	Continuing calibration percent difference
209270	44-018	TO-15 SIM	95501	J		1,2-Dichlorobenzene	Initial calibration %RSD
209270	44-018	TO-15 SIM	95501	U		1,2-Dichlorobenzene	Present in method blank
209270	44-018	TO-15 SIM	541731	J		1,3-Dichlorobenzene	Continuing calibration percent difference
209270	44-018	TO-15 SIM	541731	J		1,3-Dichlorobenzene	Initial calibration %RSD
209270	44-018	TO-15 SIM	541731	U		1,3-Dichlorobenzene	Present in method blank
209270	44-018	TO-15 SIM	106467	J		1,4-Dichlorobenzene	Continuing calibration percent difference
209270	44-018	TO-15 SIM	106467	J		1,4-Dichlorobenzene	Initial calibration %RSD
209270	44-018	TO-15 SIM	106467	U		1,4-Dichlorobenzene	Present in method blank
209270	44-018	TO-15 SIM	100447		J	Benzyl chloride	Initial calibration %RSD
209270	44-018	TO-15 SIM	108907	J		Chlorobenzene	Continuing calibration percent difference
209270	44-018	TO-15 SIM	108907	U		Chlorobenzene	Present in method blank
209270	44-018	TO-15 SIM	91203		J	Naphthalene	Continuing calibration percent difference
209270	44-018	TO-15 SIM	91203		J	Naphthalene	Initial calibration %RSD
209270	44-018	TO-15 SIM	100425	J		Styrene	Continuing calibration percent difference
209270	44-018	TO-15_Short	622968		J	4-Ethyltoluene	Continuing calibration percent difference
209270	44-018	TO-15_Short	622968		J	4-Ethyltoluene	Initial calibration %RSD
209270	44-018	TO-15_Short	76142		J	Freon 114	Continuing calibration percent difference
209270	44-018	TO-15_Short	87683		J	Hexachlorobutadiene	Continuing calibration percent difference
209270	44-018	TO-15_Short	108054		J	Vinyl acetate	Continuing calibration percent difference

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Reason for Qualified Results

SDG Nos. : 209270,209277

Sample Del Group (SDG)	Sample ID	Test Method	CAS No.	Detected Qualifier	Non Detected Qualifier	Analyte Name	Reason
209277	44-001	TO-15	79345		J	1,1,2,2-Tetrachloroethane	Continuing calibration percent difference
209277	44-001	TO-15	95501		J	1,2-Dichlorobenzene	Continuing calibration percent difference
209277	44-001	TO-15	541731		J	1,3-Dichlorobenzene	Continuing calibration percent difference
209277	44-001	TO-15	123911		J	1,4 Dioxane	Continuing calibration percent difference
209277	44-001	TO-15	106467		J	1,4-Dichlorobenzene	Continuing calibration percent difference
209277	44-001	TO-15	591786		J	2-Hexanone	Continuing calibration percent difference
209277	44-001	TO-15	67630		J	2-propanol	Continuing calibration percent difference
209277	44-001	TO-15	67630		J	2-propanol	Initial calibration %RSD
209277	44-001	TO-15	622968		J	4-Ethyltoluene	Continuing calibration percent difference
209277	44-001	TO-15	622968		J	4-Ethyltoluene	Initial calibration %RSD
209277	44-001	TO-15	67641	J		Acetone	Continuing calibration percent difference
209277	44-001	TO-15	67641	J		Acetone	Initial calibration %RSD
209277	44-001	TO-15	67641	U		Acetone	Present in method blank
209277	44-001	TO-15	100447		J	Benzyl chloride	Continuing calibration percent difference
209277	44-001	TO-15	75252		J	Bromoform	Continuing calibration percent difference
209277	44-001	TO-15	76142		J	Freon 114	Continuing calibration percent difference
209277	44-001	TO-15	87683		J	Hexachlorobutadiene	Continuing calibration percent difference
209277	44-001	TO-15	91203		J	Naphthalene	Continuing calibration percent difference
209277	44-001	TO-15	108883	U		Toluene	Present in method blank
209277	44-002	TO-15	79345		J	1,1,2,2-Tetrachloroethane	Continuing calibration percent difference
209277	44-002	TO-15	120821		J	1,2,4-Trichlorobenzene	Continuing calibration percent difference
209277	44-002	TO-15	95501		J	1,2-Dichlorobenzene	Continuing calibration percent difference
209277	44-002	TO-15	67630		J	2-propanol	Continuing calibration percent difference
209277	44-002	TO-15	67630		J	2-propanol	Initial calibration %RSD
209277	44-002	TO-15	622968		J	4-Ethyltoluene	Continuing calibration percent difference
209277	44-002	TO-15	622968		J	4-Ethyltoluene	Initial calibration %RSD
209277	44-002	TO-15	67641	J		Acetone	Initial calibration %RSD
209277	44-002	TO-15	100447		J	Benzyl chloride	Continuing calibration percent difference
209277	44-002	TO-15	76142		J	Freon 114	Continuing calibration percent difference
209277	44-002	TO-15	87683		J	Hexachlorobutadiene	Continuing calibration percent difference
209277	44-002	TO-15	91203		J	Naphthalene	Continuing calibration percent difference
209277	44-002	TO-15	108883	U		Toluene	Present in method blank

Sealaska

Reason for Qualified Results

SDG Nos. : 209270,209277

Sample Del Group (SDG)	Sample ID	Test Method	CAS No.	Detected Qualifier	Non Detected Qualifier	Analyte Name	Reason
209277	44-003	TO-15	79345		J	1,1,2,2-Tetrachloroethane	Continuing calibration percent difference
209277	44-003	TO-15	120821		J	1,2,4-Trichlorobenzene	Continuing calibration percent difference
209277	44-003	TO-15	95501		J	1,2-Dichlorobenzene	Continuing calibration percent difference
209277	44-003	TO-15	67630		J	2-propanol	Continuing calibration percent difference
209277	44-003	TO-15	67630		J	2-propanol	Initial calibration %RSD
209277	44-003	TO-15	622968		J	4-Ethyltoluene	Continuing calibration percent difference
209277	44-003	TO-15	622968		J	4-Ethyltoluene	Initial calibration %RSD
209277	44-003	TO-15	67641		J	Acetone	Initial calibration %RSD
209277	44-003	TO-15	100447		J	Benzyl chloride	Continuing calibration percent difference
209277	44-003	TO-15	76142		J	Freon 114	Continuing calibration percent difference
209277	44-003	TO-15	87683		J	Hexachlorobutadiene	Continuing calibration percent difference
209277	44-003	TO-15	91203		J	Naphthalene	Continuing calibration percent difference
209277	44-003	TO-15	108883	U		Toluene	Present in method blank
209277	44-004	TO-15	79345		J	1,1,2,2-Tetrachloroethane	Continuing calibration percent difference
209277	44-004	TO-15	95636		J	1,2,4-Trimethylbenzene	Continuing calibration percent difference
209277	44-004	TO-15	95501	J		1,2-Dichlorobenzene	Continuing calibration percent difference
209277	44-004	TO-15	108678		J	1,3,5-Trimethylbenzene	Continuing calibration percent difference
209277	44-004	TO-15	541731		J	1,3-Dichlorobenzene	Continuing calibration percent difference
209277	44-004	TO-15	106467	J		1,4-Dichlorobenzene	Continuing calibration percent difference
209277	44-004	TO-15	67630		J	2-propanol	Initial calibration %RSD
209277	44-004	TO-15	622968		J	4-Ethyltoluene	Continuing calibration percent difference
209277	44-004	TO-15	622968		J	4-Ethyltoluene	Initial calibration %RSD
209277	44-004	TO-15	67641		J	Acetone	Initial calibration %RSD
209277	44-004	TO-15	100447		J	Benzyl chloride	Continuing calibration percent difference
209277	44-004	TO-15	74839		J	Bromomethane	Continuing calibration percent difference
209277	44-004	TO-15	76142		J	Freon 114	Continuing calibration percent difference
209277	44-004	TO-15	87683		J	Hexachlorobutadiene	Continuing calibration percent difference
209277	44-004	TO-15	91203		J	Naphthalene	Continuing calibration percent difference
209277	44-004	TO-15	100425		J	Styrene	Continuing calibration percent difference
209277	44-004	TO-15	108883	U		Toluene	Present in method blank
209277	44-004	TO-15	75014		J	Vinyl chloride	LCS RPD
209277	44-005	TO-15	79345		J	1,1,2,2-Tetrachloroethane	Continuing calibration percent difference

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Reason for Qualified Results

SDG Nos. : 209270,209277

Sample Del Group (SDG)	Sample ID	Test Method	CAS No.	Detected Qualifier	Non Detected Qualifier	Analyte Name	Reason
209277	44-005	TO-15	95501		J	1,2-Dichlorobenzene	Continuing calibration percent difference
209277	44-005	TO-15	541731		J	1,3-Dichlorobenzene	Continuing calibration percent difference
209277	44-005	TO-15	123911		J	1,4 Dioxane	Continuing calibration percent difference
209277	44-005	TO-15	106467		J	1,4-Dichlorobenzene	Continuing calibration percent difference
209277	44-005	TO-15	591786		J	2-Hexanone	Continuing calibration percent difference
209277	44-005	TO-15	67630		J	2-propanol	Continuing calibration percent difference
209277	44-005	TO-15	67630		J	2-propanol	Initial calibration %RSD
209277	44-005	TO-15	622968		J	4-Ethyltoluene	Continuing calibration percent difference
209277	44-005	TO-15	622968		J	4-Ethyltoluene	Initial calibration %RSD
209277	44-005	TO-15	67641	J		Acetone	Continuing calibration percent difference
209277	44-005	TO-15	67641	J		Acetone	Initial calibration %RSD
209277	44-005	TO-15	67641	U		Acetone	Present in method blank
209277	44-005	TO-15	100447		J	Benzyl chloride	Continuing calibration percent difference
209277	44-005	TO-15	75252		J	Bromoform	Continuing calibration percent difference
209277	44-005	TO-15	76142		J	Freon 114	Continuing calibration percent difference
209277	44-005	TO-15	87683		J	Hexachlorobutadiene	Continuing calibration percent difference
209277	44-005	TO-15	91203		J	Naphthalene	Continuing calibration percent difference
209277	44-005	TO-15	108883	U		Toluene	Present in method blank

Attachment IV

Field Blank Summary

Field QC Detect Summary

SDG	Method	QC Type	Client Sample ID	Matrix	Sample Date	Analyte	Client Analyte ID	Lab Result	Units	Lab Qualifier	Reporting Limit
209270	TO-15_Short	TB	44-016	AIR	06/16/2009 0:00	2-propanol	67-63-0	3.34	UG/M3		1.16
209270	TO-15_Short	TB	44-016	AIR	06/16/2009 0:00	2-Butanone	78-93-3	2.43	UG/M3		1.31
209270	TO-15 SIM	TB	44-016	AIR	06/16/2009 0:00	Bromomethane	74-83-9	0.276	UG/M3	J	0.417
209270	TO-15 SIM	TB	44-016	AIR	06/16/2009 0:00	Naphthalene	91-20-3	0.101	UG/M3	J	0.410
209270	TO-15 SIM	TB	44-016	AIR	06/16/2009 0:00	1,4 Dioxane	123-91-1	0.552	UG/M3		0.275
209270	TO-15 SIM	TB	44-016	AIR	06/16/2009 0:00	1,2,4-Trichlorobenzene	120-82-1	0.080	UG/M3	J	0.797
209270	TO-15 SIM	TB	44-016	AIR	06/16/2009 0:00	M,P-Xylenes	1330-20-7	0.180	UG/M3	J	0.924
209270	TO-15 SIM	TB	44-016	AIR	06/16/2009 0:00	Ethylbenzene	100-41-4	0.054	UG/M3	J	0.466
209270	TO-15 SIM	TB	44-016	AIR	06/16/2009 0:00	Toluene	108-88-3	0.138	UG/M3	J	0.404
209270	TO-15 SIM	TB	44-016	AIR	06/16/2009 0:00	o-Xylene	95-47-6	0.052	UG/M3	J	0.457
209277	TO-15	TB	44-005	AIR	06/19/2009 0:00	Toluene	108-88-3	3.89	UG/M3	J	10.02
209277	TO-15	TB	44-005	AIR	06/19/2009 0:00	Acetone	67-64-1	6.76	UG/M3		5.52
209277	TO-15	TB	44-005	AIR	06/19/2009 0:00	2-Butanone	78-93-3	1.91	UG/M3	J	6.55

Enclosure I

EPA Level III ADR Outliers
(including Manual Review Outliers)

Quality Control Outlier Reports

209270

Laboratory Control Sample / Laboratory Control Sample Duplicate Outlier Report

Method Batch : 062409-MS1 **Analysis Method :** TO-15 **Analysis Date :** 06/24/2009

Preparation Batch : 062409-MS1 **Preparation Type :** Gen Prep **Preparation Date :**

Lab Reporting Batch : LABQC **Lab ID:** EAS

			Reported Values		Project Limits (Percent)			
LCS Lab Sample ID	**Matrix**	**Analyte Name**	**Percent Recovery**	**RPD**	**Rejection Point**	**Lower Limit**	**Upper Limit**	**RPD**
QC06249	AIR	o-Xylene	68.62	7	10.00	70.00	130.00	20.00

Associated Samples

Client Sample ID	**Lab Sample ID**
44-006A	01
44-006B	14
44-007	02
44-008	03
44-010	05
44-011	06

Scope of Data Qualification: The outlier in the LCS qualifies that analyte in all samples with the same Preparation Batch ID as the LCS

Project Number and Name: CT 0044 - Alameda

Laboratory Control Sample / Laboratory Control Sample Duplicate Outlier Report

Method Batch : 070909-MS2 **Analysis Method :** TO-15 SIM_Short **Analysis Date :** 07/09/2009

Preparation Batch : 070909-MS2 **Preparation Type :** Gen Prep **Preparation Date :**

Lab Reporting Batch : LABQC **Lab ID:** EAS

			Reported Values		Project Limits (Percent)			
LCS Lab Sample ID	**Matrix**	**Analyte Name**	**Percent Recovery**	**RPD**	**Rejection Point**	**Lower Limit**	**Upper Limit**	**RPD**
QC07099D	AIR	Naphthalene	100	26	10.00	70.00	130.00	20.00

Associated Samples

Client Sample ID	**Lab Sample ID**
44-006A	01
44-007	02
44-008	03
44-011	06

Scope of Data Qualification: The outlier in the LCS qualifies that analyte in all samples with the same Preparation Batch ID as the LCS

Project Number and Name: CT 0044 - Alameda

Laboratory Control Sample / Laboratory Control Sample Duplicate Outlier Report

Method Batch : 071009-MS2 **Analysis Method :** TO-15 SIM_Short **Analysis Date :** 07/10/2009

Preparation Batch : 071009-MS2 **Preparation Type :** Gen Prep **Preparation Date :**

Lab Reporting Batch : LABQC **Lab ID:** EAS

			Reported Values		Project Limits (Percent)			
LCS Lab Sample ID	**Matrix**	**Analyte Name**	**Percent Recovery**	**RPD**	**Rejection Point**	**Lower Limit**	**Upper Limit**	**RPD**
QC07109	AIR	Naphthalene	64.89	11	10.00	70.00	130.00	20.00

Associated Samples

Client Sample ID	**Lab Sample ID**
44-006B	14
44-013	08
44-014	09

Scope of Data Qualification: The outlier in the LCS qualifies that analyte in all samples with the same Preparation Batch ID as the LCS

Project Number and Name: CT 0044 - Alameda

Method Blank Outlier Report

Lab Reporting Batch : LABQC
Analysis Method : TO-15 SIM_Short
Preparation Type : Gen Prep
Method Blank Lab Sample ID : B06229

Lab ID: EAS
Analysis Date : 06/22/2009
Preparation Date :
Preparation Batch : 062209-MS2

1,2,4-Trichlorobenzene	Result	Reporting Limit	Units	Lab Qual	Comments
Method Blank Result:	0.205	0.797	UG/M3	J	

1,2,4-Trichlorobenzene was qualified due to method blank contamination in the following associated samples:

Client Sample ID	Lab Sample ID	Dilution	Result	Lab Qual	Result Units
44-006B	14	5	0.542	J	UG/M3
44-007	02	3	0.188	J	UG/M3
44-009	04	3	0.268	J	UG/M3

Benzene	Result	Reporting Limit	Units	Lab Qual	Comments
Method Blank Result:	0.053	0.343	UG/M3	J	

Benzene contamination found in the method blank did not qualify any samples.

M,P-Xylenes	Result	Reporting Limit	Units	Lab Qual	Comments
Method Blank Result:	0.108	0.924	UG/M3	J	

M,P-Xylenes contamination found in the method blank did not qualify any samples.

Naphthalene	Result	Reporting Limit	Units	Lab Qual	Comments
Method Blank Result:	0.128	1.159	UG/M3	J	

Naphthalene was qualified due to method blank contamination in the following associated samples:

Client Sample ID	Lab Sample ID	Dilution	Result	Lab Qual	Result Units
44-009	04	3	0.223	J	UG/M3

Tetrachloroethene	Result	Reporting Limit	Units	Lab Qual	Comments
Method Blank Result:	0.087	0.714	UG/M3	J	

Tetrachloroethene was qualified due to method blank contamination in the following associated samples:

Client Sample ID	Lab Sample ID	Dilution	Result	Lab Qual	Result Units
44-006B	14	5	0.588	J	UG/M3
44-007	02	3	0.670	J	UG/M3
44-009	04	3	0.578	J	UG/M3

Method Blank Outlier Report

Lab Reporting Batch : LABQC
Lab ID: EAS
Analysis Method : TO-15 SIM_Short
Analysis Date : 06/22/2009
Preparation Type : Gen Prep
Preparation Date :
Method Blank Lab Sample ID : B06229
Preparation Batch : 062209-MS2

Trichloroethene	Result	Reporting Limit	Units	Lab Qual	Comments
Method Blank Result:	0.079	0.577	UG/M3	J	

Trichloroethene was qualified due to method blank contamination in the following associated samples:

Client Sample ID	Lab Sample ID	Dilution	Result	Lab Qual	Result Units
44-006B	14	5	0.150	J	UG/M3
44-007	02	3	0.154	J	UG/M3

Method Blank Outlier Report

Lab Reporting Batch : LABQC
Analysis Method : TO-15 SIM
Preparation Type : Gen Prep
Method Blank Lab Sample ID : B06239

Lab ID: EAS
Analysis Date : 06/23/2009
Preparation Date :
Preparation Batch : 062309-MS2

1,1,2-Trichloroethane	Result	Reporting Limit	Units	Lab Qual	Comments
Method Blank Result:	0.070	0.575	UG/M3	J	

1,1,2-Trichloroethane contamination found in the method blank did not qualify any samples.

1,2,4-Trichlorobenzene	Result	Reporting Limit	Units	Lab Qual	Comments
Method Blank Result:	0.368	0.797	UG/M3	J	

1,2,4-Trichlorobenzene was qualified due to method blank contamination in the following associated samples:

Client Sample ID	Lab Sample ID	Dilution	Result	Lab Qual	Result Units
44-015	10	3	0.162	J	UG/M3
44-016	11	2	0.080	J	UG/M3
44-017	12	4	0.180	J	UG/M3

1,2,4-Trimethylbenzene	Result	Reporting Limit	Units	Lab Qual	Comments
Method Blank Result:	0.091	0.517	UG/M3	J	

1,2,4-Trimethylbenzene was qualified due to method blank contamination in the following associated samples:

Client Sample ID	Lab Sample ID	Dilution	Result	Lab Qual	Result Units
44-017	12	4	0.227	J	UG/M3

1,2-Dibromoethane	Result	Reporting Limit	Units	Lab Qual	Comments
Method Blank Result:	0.148	0.825	UG/M3	J	

1,2-Dibromoethane contamination found in the method blank did not qualify any samples.

1,2-Dichlorobenzene	Result	Reporting Limit	Units	Lab Qual	Comments
Method Blank Result:	0.151	0.621	UG/M3	J	

1,2-Dichlorobenzene contamination found in the method blank did not qualify any samples.

1,2-Dichloroethane	Result	Reporting Limit	Units	Lab Qual	Comments
Method Blank Result:	0.046	0.435	UG/M3	J	

1,2-Dichloroethane contamination found in the method blank did not qualify any samples.

Method Blank Outlier Report

Lab Reporting Batch : LABQC
Analysis Method : TO-15 SIM
Preparation Type : Gen Prep
Method Blank Lab Sample ID : B06239

Lab ID: EAS
Analysis Date : 06/23/2009
Preparation Date :
Preparation Batch : 062309-MS2

1,3,5-Trimethylbenzene	Result	Reporting Limit	Units	Lab Qual	Comments
Method Blank Result:	0.059	0.538	UG/M3	J	

1,3,5-Trimethylbenzene was qualified due to method blank contamination in the following associated samples:

Client Sample ID	Lab Sample ID	Dilution	Result	Lab Qual	Result Units
44-017	12	4	0.313	J	UG/M3

1,3-Dichlorobenzene	Result	Reporting Limit	Units	Lab Qual	Comments
Method Blank Result:	0.153	0.633	UG/M3	J	

1,3-Dichlorobenzene contamination found in the method blank did not qualify any samples.

1,4 Dioxane	Result	Reporting Limit	Units	Lab Qual	Comments
Method Blank Result:	0.046	0.275	UG/M3	J	

1,4 Dioxane contamination found in the method blank did not qualify any samples.

1,4-Dichlorobenzene	Result	Reporting Limit	Units	Lab Qual	Comments
Method Blank Result:	0.189	0.633	UG/M3	J	

1,4-Dichlorobenzene contamination found in the method blank did not qualify any samples.

Chlorobenzene	Result	Reporting Limit	Units	Lab Qual	Comments
Method Blank Result:	0.085	0.485	UG/M3	J	

Chlorobenzene contamination found in the method blank did not qualify any samples.

Ethylbenzene	Result	Reporting Limit	Units	Lab Qual	Comments
Method Blank Result:	0.053	0.466	UG/M3	J	

Ethylbenzene was qualified due to method blank contamination in the following associated samples:

Client Sample ID	Lab Sample ID	Dilution	Result	Lab Qual	Result Units
44-016	11	2	0.054	J	UG/M3
44-017	12	4	0.345	J	UG/M3

Method Blank Outlier Report

Lab Reporting Batch : LABQC
Analysis Method : TO-15 SIM
Preparation Type : Gen Prep
Method Blank Lab Sample ID : B06239

Lab ID: EAS
Analysis Date : 06/23/2009
Preparation Date :
Preparation Batch : 062309-MS2

M,P-Xylenes	Result	Reporting Limit	Units	Lab Qual	Comments
Method Blank Result:	0.142	0.924	UG/M3	J	

M,P-Xylenes was qualified due to method blank contamination in the following associated samples:

Client Sample ID	Lab Sample ID	Dilution	Result	Lab Qual	Result Units
44-015	10	3	0.239	J	UG/M3
44-016	11	2	0.180	J	UG/M3
44-017	12	4	1.085	J	UG/M3

o-Xylene	Result	Reporting Limit	Units	Lab Qual	Comments
Method Blank Result:	0.058	0.457	UG/M3	J	

o-Xylene was qualified due to method blank contamination in the following associated samples:

Client Sample ID	Lab Sample ID	Dilution	Result	Lab Qual	Result Units
44-015	10	3	0.088	J	UG/M3
44-016	11	2	0.052	J	UG/M3
44-017	12	4	0.307	J	UG/M3

Styrene	Result	Reporting Limit	Units	Lab Qual	Comments
Method Blank Result:	0.075	0.458	UG/M3	J	

Styrene was qualified due to method blank contamination in the following associated samples:

Client Sample ID	Lab Sample ID	Dilution	Result	Lab Qual	Result Units
44-017	12	4	0.156	J	UG/M3

Toluene	Result	Reporting Limit	Units	Lab Qual	Comments
Method Blank Result:	0.043	0.404	UG/M3	J	

Toluene was qualified due to method blank contamination in the following associated samples:

Client Sample ID	Lab Sample ID	Dilution	Result	Lab Qual	Result Units
44-016	11	2	0.138	J	UG/M3

Method Blank Outlier Report

Lab Reporting Batch : LABQC
Analysis Method : TO-15 SIM
Preparation Type : Gen Prep
Method Blank Lab Sample ID : B06249

Lab ID: EAS
Analysis Date : 06/24/2009
Preparation Date :
Preparation Batch : 062409-MS2

1,2,4-Trichlorobenzene	Result	Reporting Limit	Units	Lab Qual	Comments
Method Blank Result:	0.112	0.398	UG/M3	J	

1,2,4-Trichlorobenzene was qualified due to method blank contamination in the following associated samples:

Client Sample ID	Lab Sample ID	Dilution	Result	Lab Qual	Result Units
44-018	13	2	0.155	J	UG/M3

1,2,4-Trimethylbenzene	Result	Reporting Limit	Units	Lab Qual	Comments
Method Blank Result:	0.033	0.258	UG/M3	J	

1,2,4-Trimethylbenzene was qualified due to method blank contamination in the following associated samples:

Client Sample ID	Lab Sample ID	Dilution	Result	Lab Qual	Result Units
44-018	13	2	0.139	J	UG/M3

1,2-Dibromoethane	Result	Reporting Limit	Units	Lab Qual	Comments
Method Blank Result:	0.051	0.413	UG/M3	J	

1,2-Dibromoethane contamination found in the method blank did not qualify any samples.

1,2-Dichlorobenzene	Result	Reporting Limit	Units	Lab Qual	Comments
Method Blank Result:	0.054	0.310	UG/M3	J	

1,2-Dichlorobenzene was qualified due to method blank contamination in the following associated samples:

Client Sample ID	Lab Sample ID	Dilution	Result	Lab Qual	Result Units
44-018	13	2	0.080	J	UG/M3

1,3-Dichlorobenzene	Result	Reporting Limit	Units	Lab Qual	Comments
Method Blank Result:	0.055	0.317	UG/M3	J	

1,3-Dichlorobenzene was qualified due to method blank contamination in the following associated samples:

Client Sample ID	Lab Sample ID	Dilution	Result	Lab Qual	Result Units
44-018	13	2	0.090	J	UG/M3

Method Blank Outlier Report

Lab Reporting Batch : LABQC
Lab ID: EAS
Analysis Method : TO-15 SIM
Analysis Date : 06/24/2009
Preparation Type : Gen Prep
Preparation Date :
Method Blank Lab Sample ID : B06249
Preparation Batch : 062409-MS2

1,4 Dioxane	Result	Reporting Limit	Units	Lab Qual	Comments
Method Blank Result:	0.016	0.138	UG/M3	J	

1,4 Dioxane contamination found in the method blank did not qualify any samples.

1,4-Dichlorobenzene	Result	Reporting Limit	Units	Lab Qual	Comments
Method Blank Result:	0.068	0.317	UG/M3	J	

1,4-Dichlorobenzene was qualified due to method blank contamination in the following associated samples:

Client Sample ID	Lab Sample ID	Dilution	Result	Lab Qual	Result Units
44-018	13	2	0.109	J	UG/M3

Chlorobenzene	Result	Reporting Limit	Units	Lab Qual	Comments
Method Blank Result:	0.031	0.243	UG/M3	J	

Chlorobenzene was qualified due to method blank contamination in the following associated samples:

Client Sample ID	Lab Sample ID	Dilution	Result	Lab Qual	Result Units
44-018	13	2	0.044	J	UG/M3

Method Blank Outlier Report

Lab Reporting Batch : LABQC
Lab ID: EAS
Analysis Method : TO-15 SIM_Short
Analysis Date : 06/25/2009
Preparation Type : Gen Prep
Preparation Date :
Method Blank Lab Sample ID : B06259
Preparation Batch : 062509-MS2

1,1,2-Trichloroethane	Result	Reporting Limit	Units	Lab Qual	Comments
Method Blank Result:	0.408	2.873	UG/M3	J	

1,1,2-Trichloroethane was qualified due to method blank contamination in the following associated samples:

Client Sample ID	Lab Sample ID	Dilution	Result	Lab Qual	Result Units
44-012	07	15	0.494	J	UG/M3

1,2,4-Trichlorobenzene	Result	Reporting Limit	Units	Lab Qual	Comments
Method Blank Result:	1.287	3.983	UG/M3	J	

1,2,4-Trichlorobenzene was qualified due to method blank contamination in the following associated samples:

Client Sample ID	Lab Sample ID	Dilution	Result	Lab Qual	Result Units
44-012	07	15	2.518	J	UG/M3

1,2-Dichloroethane	Result	Reporting Limit	Units	Lab Qual	Comments
Method Blank Result:	0.291	2.174	UG/M3	J	

1,2-Dichloroethane was qualified due to method blank contamination in the following associated samples:

Client Sample ID	Lab Sample ID	Dilution	Result	Lab Qual	Result Units
44-012	07	15	0.557	J	UG/M3

1,4 Dioxane	Result	Reporting Limit	Units	Lab Qual	Comments
Method Blank Result:	0.182	1.377	UG/M3	J	

1,4 Dioxane was qualified due to method blank contamination in the following associated samples:

Client Sample ID	Lab Sample ID	Dilution	Result	Lab Qual	Result Units
44-012	07	15	4.307		UG/M3

Method Blank Outlier Report

Lab Reporting Batch : LABQC
Analysis Method : TO-15 SIM_Short
Preparation Type : Gen Prep
Method Blank Lab Sample ID : B06259

Lab ID: EAS
Analysis Date : 06/25/2009
Preparation Date :
Preparation Batch : 062509-MS2

M,P-Xylenes	Result	Reporting Limit	Units	Lab Qual	Comments
Method Blank Result:	0.627	4.619	UG/M3	J	

M,P-Xylenes was qualified due to method blank contamination in the following associated samples:

Client Sample ID	Lab Sample ID	Dilution	Result	Lab Qual	Result Units
44-012	07	15	1.704	J	UG/M3

o-Xylene	Result	Reporting Limit	Units	Lab Qual	Comments
Method Blank Result:	0.279	2.287	UG/M3	J	

o-Xylene was qualified due to method blank contamination in the following associated samples:

Client Sample ID	Lab Sample ID	Dilution	Result	Lab Qual	Result Units
44-012	07	15	0.568	J	UG/M3

Method Blank Outlier Report

Lab Reporting Batch : LABQC
Lab ID: EAS
Analysis Method : TO-15 SIM_Short
Analysis Date : 07/09/2009
Preparation Type : Gen Prep
Preparation Date :
Method Blank Lab Sample ID : B07099
Preparation Batch : 070909-MS2

Naphthalene	Result	Reporting Limit	Units	Lab Qual	Comments
Method Blank Result:	0.082	0.574	UG/M3	J	

Naphthalene was qualified due to method blank contamination in the following associated samples:

Client Sample ID	Lab Sample ID	Dilution	Result	Lab Qual	Result Units
44-006A	01	5	0.298	J	UG/M3
44-007	02	3	0.168	J	UG/M3

Method Blank Outlier Report

Lab Reporting Batch : LABQC
Analysis Method : TO-15 SIM_Short
Preparation Type : Gen Prep
Method Blank Lab Sample ID : B07109

Lab ID: EAS
Analysis Date : 07/10/2009
Preparation Date :
Preparation Batch : 071009-MS2

Naphthalene	Result	Reporting Limit	Units	Lab Qual	Comments
Method Blank Result:	0.048	0.287	UG/M3	J	

Naphthalene was qualified due to method blank contamination in the following associated samples:

Client Sample ID	Lab Sample ID	Dilution	Result	Lab Qual	Result Units
44-013	08	3	0.483	J	UG/M3
44-014	09	4	0.233	J	UG/M3

QC Outlier Report: Field Duplicates (Non-qualified Outliers)

Lab Report Batch: 209270 **Lab ID:** EAS

			Field Sample				Field Sample Duplicate						
Analysis Method	Matrix	Analyte Name	Client Sample ID	Ana Type	Result	Lab Qualifier	Client Sample Duplicate ID	Ana Type	Result	Lab Qualifier	RPD Dup* (%)	RPD Criteria (%)	Result Units
TO-15 SIM	AIR	1,1,2,2-Tetrachloroethane	44-006A	RE	0.117	J	44-006B	RE	0.088	U	200.0	30	UG/M3
	AIR	1,2,4-Trichlorobenzene		RES	0.508	U		RES	0.542	J	200.0	30	UG/M3
	AIR	1,2-Dibromoethane		RE	0.223	J		RE	0.127	U	200.0	30	UG/M3
	AIR	Carbon tetrachloride		RES	1.727	J		RES	2.585		39.8	30	UG/M3
	AIR	M,P-Xylenes		RES	2.967	J		RES	4.534		41.8	30	UG/M3
	AIR	Naphthalene		RE	0.298	J		RE	0.199	U	200.0	30	UG/M3
	AIR	o-Xylene		RES	0.903	J		RES	1.331		38.3	30	UG/M3
	AIR	Tetrachloroethene		RES	0.455	U		RES	0.588	J	200.0	30	UG/M3
	AIR	Trichloroethene		RES	0.368	U		RES	0.150	J	200.0	30	UG/M3
TO-15	AIR	2-propanol	44-011	RES	0.85	U	44-015	RES	1.50	J	200.0	30	UG/M3
TO-15 SIM	AIR	1,2,4-Trichlorobenzene		RES	0.385	J		RES	0.162	J	81.5	30	UG/M3
	AIR	1,4 Dioxane		RES	1.563			RES	0.045	U	200.0	30	UG/M3
	AIR	Benzene		RES	1.103			RES	0.629		54.7	30	UG/M3
	AIR	Carbon tetrachloride		RES	0.573	J		RES	0.325	J	55.2	30	UG/M3
	AIR	cis-1,2-Dichloroethene		RES	0.063	J		RES	0.086	J	30.9	30	UG/M3
	AIR	M,P-Xylenes		RES	5.497			RES	0.239	J	183.3	30	UG/M3
	AIR	o-Xylene		RES	1.728			RES	0.088	J	180.6	30	UG/M3
	AIR	Tetrachloroethene		RES	0.208	J		RES	0.116	U	200.0	30	UG/M3
	AIR	Trichloroethene		RES	2.743			RES	0.946		97.4	30	UG/M3

**Note: Outlier report also includes analytes detected in one sample but not in the related sample, i.e., analyte was detected in the field sample but not in the field duplicate sample, or vice versa. In this case, RPD value assigned to the field duplicate sample is 200.*

Project Number and Name: ***CT 0044 - Alameda***

Reporting Limits Outlier Report (detected results reported below the reporting limit)

Lab Report Batch: 209270 **Lab ID:** EAS

Client Sample ID	Lab Sample ID	Analysis Method	Matrix	Analyte Name	Lab Qualifier	Result	EDD Reporting Limit	Units
44-006A	01	TO-15 SIM_S	AIR	1,1,2,2-Tetrachloroethane	J	0.117	0.940	UG/M3
				1,2-Dibromoethane	J	0.223	1.053	UG/M3
				Benzene	J	1.466	2.187	UG/M3
				Carbon tetrachloride	J	1.727	4.223	UG/M3
				M,P-Xylenes	J	2.967	5.890	UG/M3
				o-Xylene	J	0.903	2.916	UG/M3
44-008	03	TO-15		2-propanol	J	4.21	4.37	UG/M3
		TO-15 SIM_S		1,2,4-Trichlorobenzene	J	0.522	3.008	UG/M3
				Benzene	J	0.807	1.295	UG/M3
				Carbon tetrachloride	J	0.628	2.501	UG/M3
				M,P-Xylenes	J	3.149	3.488	UG/M3
				o-Xylene	J	0.951	1.727	UG/M3
				Trichloroethene	J	0.675	2.179	UG/M3
44-009	04	TO-15		2-propanol	J	1.82	4.48	UG/M3
44-010	05	TO-15 SIM_S		1,1,2-Trichloroethane	J	0.106	0.977	UG/M3
				1,2,4-Trichlorobenzene	J	0.604	1.354	UG/M3
				1,2-Dichloroethane	J	0.192	0.739	UG/M3
				Carbon tetrachloride	J	1.027	1.126	UG/M3
				cis-1,2-Dichloroethene	J	0.172	0.723	UG/M3
				Naphthalene	J	0.445	1.970	UG/M3
				Tetrachloroethene	J	0.398	1.214	UG/M3
44-011	06			1,2,4-Trichlorobenzene	J	0.385	1.171	UG/M3
				Carbon tetrachloride	J	0.573	0.974	UG/M3
				cis-1,2-Dichloroethene	J	0.063	0.626	UG/M3
				Tetrachloroethene	J	0.208	1.050	UG/M3
44-012	07	TO-15		2-propanol	J	2.09	4.31	UG/M3
		TO-15 SIM_S		1,1,2,2-Tetrachloroethane	J	0.670	5.385	UG/M3
				Benzene	J	0.841	2.555	UG/M3
				Carbon tetrachloride	J	1.584	4.935	UG/M3
				Naphthalene	J	1.681	8.631	UG/M3
				Trichloroethene	J	0.519	4.299	UG/M3
44-013	08	TO-15		2-propanol	J	2.76	4.83	UG/M3
		TO-15 SIM_S		1,2,4-Trichlorobenzene	J	0.269	1.330	UG/M3
				1,2-Dibromoethane	J	0.117	0.689	UG/M3
				Carbon tetrachloride	J	0.641	1.106	UG/M3
				cis-1,2-Dichloroethene	J	0.095	0.711	UG/M3

Project Number and Name: **CT 0044 - Alameda**

Reporting Limits Outlier Report (detected results reported below the reporting limit)

Lab Report Batch: 209270 **Lab ID:** EAS

Client Sample ID	Lab Sample ID	Analysis Method	Matrix	Analyte Name	Lab Qualifier	Result	EDD Reporting Limit	Units
44-013	08	TO-15 SIM_S	AIR	Tetrachloroethene	J	0.423	1.193	UG/M3
44-014	09	TO-15		2-propanol	J	1.88	6.25	UG/M3
		TO-15 SIM_S		1,2,4-Trichlorobenzene	J	0.253	1.721	UG/M3
				Carbon tetrachloride	J	0.656	1.431	UG/M3
				cis-1,2-Dichloroethene	J	0.171	0.919	UG/M3
				Tetrachloroethene	J	0.303	1.543	UG/M3
44-015	10	TO-15		2-propanol	J	1.50	4.69	UG/M3
		TO-15 SIM		Carbon tetrachloride	J	0.325	1.073	UG/M3
				cis-1,2-Dichloroethene	J	0.086	0.689	UG/M3
44-016	11			Bromomethane	J	0.276	0.417	UG/M3
				Naphthalene	J	0.101	0.410	UG/M3
44-017	12			Benzene	J	0.218	0.641	UG/M3
				Carbon tetrachloride	J	0.324	1.239	UG/M3
				Methylene Chloride	J	0.138	0.697	UG/M3
				Tetrachloroethene	J	0.342	1.336	UG/M3
				Trichlorofluoromethane	J	0.190	1.128	UG/M3
44-018	13			1,1,1-Trichloroethane	J	0.067	0.468	UG/M3
				1,2-Dibromoethane	J	0.070	0.673	UG/M3
				1,3,5-Trimethylbenzene	J	0.076	0.439	UG/M3
				Benzene	J	0.250	0.280	UG/M3
				Chloroform	J	0.087	0.419	UG/M3
				Chloromethane	J	0.121	0.177	UG/M3
				Ethylbenzene	J	0.146	0.380	UG/M3
				Freon 113	J	0.491	0.658	UG/M3
				M,P-Xylenes	J	0.537	0.753	UG/M3
				Methylene Chloride	J	0.194	0.304	UG/M3
				o-Xylene	J	0.171	0.373	UG/M3
				Styrene	J	0.072	0.373	UG/M3
				Tetrachloroethene	J	0.090	0.582	UG/M3
				Trichlorofluoromethane	J	0.453	0.492	UG/M3

Quality Control Outlier Reports

209277

Laboratory Control Sample / Laboratory Control Sample Duplicate Outlier Report

Method Batch : 070809-MS1 **Analysis Method :** TO-15 **Analysis Date :** 07/08/2009

Preparation Batch : 070809-MS1 **Preparation Type :** Gen Prep **Preparation Date :**

Lab Reporting Batch : LABQC **Lab ID:** EAS

			Reported Values		Project Limits (Percent)			
LCS Lab Sample ID	**Matrix**	**Analyte Name**	**Percent Recovery**	**RPD**	**Rejection Point**	**Lower Limit**	**Upper Limit**	**RPD**
QC07089D	AIR	Vinyl chloride	89.4	23	10.00	70.00	130.00	20.00

Associated Samples

Client Sample ID	**Lab Sample ID**
44-004	04

Scope of Data Qualification: The outlier in the LCS qualifies that analyte in all samples with the same Preparation Batch ID as the LCS

Project Number and Name: CTO 0044 - Alameda

Method Blank Outlier Report

Lab Reporting Batch : LABQC
Analysis Method : TO-15
Preparation Type : Gen Prep
Method Blank Lab Sample ID : B07029

Lab ID: EAS
Analysis Date : 07/02/2009
Preparation Date :
Preparation Batch : 070209-MS1

Toluene	Result	Reporting Limit	Units	Lab Qual	Comments
Method Blank Result:	26.9	100.2	UG/M3	J	

Toluene was qualified due to method blank contamination in the following associated samples:

Client Sample ID	Lab Sample ID	Dilution	Result	Lab Qual	Result Units
44-002	02	69	44	J	UG/M3
44-003	03	795	489	J	UG/M3

Method Blank Outlier Report

Lab Reporting Batch : LABQC
Analysis Method : TO-15
Preparation Type : Gen Prep
Method Blank Lab Sample ID : B07069

Lab ID: EAS
Analysis Date : 07/06/2009
Preparation Date :
Preparation Batch : 070609-MS1

Acetone	Result	Reporting Limit	Units	Lab Qual	Comments
Method Blank Result:	1.68	5.52	UG/M3	J	Common Contaminant

Acetone was qualified due to method blank contamination in the following associated samples:

Client Sample ID	Lab Sample ID	Dilution	Result	Lab Qual	Result Units
44-001	01	7	13.90		UG/M3
44-005	05	5	6.76		UG/M3

Toluene	Result	Reporting Limit	Units	Lab Qual	Comments
Method Blank Result:	2.94	10.02	UG/M3	J	

Toluene was qualified due to method blank contamination in the following associated samples:

Client Sample ID	Lab Sample ID	Dilution	Result	Lab Qual	Result Units
44-001	01	7	8.46	J	UG/M3
44-005	05	5	3.89	J	UG/M3

Method Blank Outlier Report

Lab Reporting Batch : LABQC
Analysis Method : TO-15
Preparation Type : Gen Prep
Method Blank Lab Sample ID : B07089

Lab ID: EAS
Analysis Date : 07/08/2009
Preparation Date :
Preparation Batch : 070809-MS1

2-propanol	Result	Reporting Limit	Units	Lab Qual	Comments
Method Blank Result:	284	577	UG/M3	J	

2-propanol contamination found in the method blank did not qualify any samples.

Acetone	Result	Reporting Limit	Units	Lab Qual	Comments
Method Blank Result:	278	552	UG/M3	J	Common Contaminant

Acetone contamination found in the method blank did not qualify any samples.

Toluene	Result	Reporting Limit	Units	Lab Qual	Comments
Method Blank Result:	345	1,002	UG/M3	J	

Toluene was qualified due to method blank contamination in the following associated samples:

Client Sample ID	Lab Sample ID	Dilution	Result	Lab Qual	Result Units
44-004	04	720	671	J	UG/M3

Reporting Limits Outlier Report (detected results reported below the reporting limit)

Lab Report Batch: 209277 **Lab ID:** EAS

Client Sample ID	Lab Sample ID	Analysis Method	Matrix	Analyte Name	Lab Qualifier	Result	EDD Reporting Limit	Units
44-001	01	TO-15	AIR	1,2-Dichloroethane	J	3.47	15.39	UG/M3
				2-Butanone	J	3.76	9.36	UG/M3
				Benzene	J	5.03	12.14	UG/M3
				Chloroform	J	8.01	18.39	UG/M3
				Freon 113	J	12.89	28.84	UG/M3
44-002	02			Acetone	J	50	76	UG/M3
				trans-1,2-Dichloroethene	J	35	122	UG/M3
44-003	03			1,1-Dichloroethane	J	386	1,678	UG/M3
				trans-1,2-Dichloroethene	J	771	1,415	UG/M3
44-004	04			1,2-Dichlorobenzene	J	547	2,235	UG/M3
				1,4-Dichlorobenzene	J	689	2,279	UG/M3
				Benzene	J	357	1,223	UG/M3
44-005	05			2-Butanone	J	1.91	6.55	UG/M3

QC Outlier Report: Field Duplicates (Non-qualified Outliers)

Lab Report Batch: 209277

Lab ID: EAS

			Field Sample				Field Sample Duplicate						
Analysis Method	Matrix	Analyte Name	Client Sample ID	Ana Type	Result	Lab Qualifier	Client Sample Duplicate ID	Ana Type	Result	Lab Qualifier	RPD Dup* (%)	RPD Criteria (%)	Result Units
TO-15	AIR	1,1-Dichloroethane	44-003	RES	386	J	44-004	RES	1,623		123.1	30	UG/M3
	AIR	1,2-Dichlorobenzene		RES	494	U		RES	547	J	200.0	30	UG/M3
	AIR	1,4-Dichlorobenzene		RES	503	U		RES	689	J	200.0	30	UG/M3
	AIR	Benzene		RES	270	U		RES	357	J	200.0	30	UG/M3
	AIR	cis-1,2-Dichloroethene		RES	8,295			RES	32,426		118.5	30	UG/M3
	AIR	Toluene		RES	489	J		RES	671	J	31.4	30	UG/M3
	AIR	trans-1,2-Dichloroethene		RES	771	J		RES	3,413		126.3	30	UG/M3

**Note: Outlier report also includes analytes detected in one sample but not in the related sample, i.e., analyte was detected in the field sample but not in the field duplicate sample, or vice versa. In this case, RPD value assigned to the field duplicate sample is 200.*

Project Number and Name: ***CTO 0044 - Alameda***

Enclosure II

EPA Level IV Validation Reports

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: NAS Alameda, Bldg. 163

Collection Date: June 16, 2009

LDC Report Date: August 7, 2009

Matrix: Air

Parameters: Volatiles

Validation Level: EPA Level IV

Laboratory: Environmental Analytical Services, Inc.

Sample Delivery Group (SDG): 209270

Sample Identification

44-015

Introduction

This data review covers one air sample listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA Method TO-15 using Selected Ion Monitoring (SIM) for Volatiles.

This review follows the NAVFAC NW Field Procedures, Version 4.0 (Navy 2006) and a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review (June 2008) as there are no current guidelines for the method stated above.

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Blank results are summarized in Section V.

Field duplicates are summarized in Section XVI.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

N Presumptive evidence of presence of the constituent.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

II. GC/MS Instrument Performance Check

Instrument performance was checked at 12 hour intervals.

All ion abundance requirements were met.

III. Initial Calibration

Initial calibration was performed using required standard concentrations.

Percent relative standard deviations (%RSD) were less than or equal to 30.0% for all compounds with the following exceptions:

Date	Compound	%RSD	Associated Samples	Flag	A or P
6/19/09	1,2,4-Trichlorobenzene Naphthalene	46.46 46.42	All samples in SDG 209270	J (all detects) UJ (all non-detects) J (all detects) UJ (all non-detects)	P

IV. Continuing Calibration

Continuing calibration was performed at the required frequencies.

All of the continuing calibration percent differences (%D) between the initial calibration RRF and the continuing calibration RRF were less than or equal to 30.0% .

V. Blanks

Method blank analyses were performed at the required frequency. No volatile contaminants were found in the method blanks with the following exceptions:

Method Blank ID	Analysis Date	Compound TIC (RT in minutes)	Concentration	Associated Samples
062309-MS2MB	6/23/09	1,2-Dichloroethane 1,1,2-Trichloroethane m,p-Xylenes o-Xylene 1,2,4-Trichlorobenzene 1,4-Dioxane	0.046 ug/m^3 0.070 ug/m^3 0.142 ug/m^3 0.058 ug/m^3 0.368 ug/m^3 0.046 ug/m^3	44-015

Sample concentrations were compared to concentrations detected in the method blanks. The sample concentrations were either not detected or were significantly greater (>10X for common contaminants, >5X for other contaminants) than the concentrations found in the associated method blanks with the following exceptions:

Sample	Compound TIC (RT in minutes)	Reported Concentration	Modified Final Concentration
44-015 (1.62X)	m,p-Xylenes o-Xylene 1,2,4-Trichlorobenzene	0.239 ug/m^3 0.088 ug/m^3 0.162 ug/m^3	1.497U ug/m^3 0.741U ug/m^3 1.291U ug/m^3

VI. Surrogate Spikes

Although surrogates were not required by the method, surrogate analysis was performed by the laboratory. Surrogate recoveries (%R) were within QC limits.

VII. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) and matrix spike duplicate (MSD) analyses were not required by the method.

VIII. Laboratory Control Samples (LCS)

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits.

IX. Regional Quality Assurance and Quality Control

Not applicable.

X. Internal Standards

All internal standard areas and retention times were within QC limits with the following exceptions:

Sample	Internal Standards	Area (Limits)	Compound	Flag	A or P
44-015	Chlorobenzene-d5	310499 (824107-1922916)	All TCL compounds	J (all detects) UJ (all non-detects)	P

XI. Target Compound Identifications

All target compound identifications were within validation criteria.

XII. Compound Quantitation and CRQLs

All compound quantitation and CRQLs were within validation criteria.

All compounds reported below the RL were qualified as follows:

Sample	Finding	Flag	A or P
All samples in SDG 209270	All compounds reported below the RL.	J (all detects)	A

XIII. Tentatively Identified Compounds (TICs)

Tentatively identified compounds were not reported by the laboratory.

XIV. System Performance

The system performance was acceptable.

XV. Overall Assessment of Data

Data flags are summarized at the end of this report if data has been qualified.

XVI. Field Duplicates

Samples 44-011 and 44-015 were identified as field duplicates. No volatiles were detected in any of the samples with the following exceptions:

Compound	Concentration (ug/m^3)		RPD (Limits)
	44-011	44-015	
cis-1,2-Dichloroethene	0.063	0.086	31 (≤30)
Benzene	1.103	0.629	55 (≤30)
Carbon tetrachloride	0.573	0.325	55 (≤30)
Trichloroethene	2.743	0.946	97 (≤30)
Tetrachloroethene	0.208	0.116U	Not calculable
m,p-Xylenes	5.497	0.239	183 (≤30)
o-Xylene	1.728	0.088	181 (≤30)

Compound	Concentration (ug/m^3)		RPD (Limits)
	44-011	44-015	
1,2,4-Trichlorobenzene	0.385	0.162	82 (≤30)
1,4-Dioxane	1.563	0.045U	Not calculable

XVII. Field Blanks

Sample 44-016 was identified as a trip blank. No volatile contaminants were found in this blank with the following exceptions:

Trip Blank ID	Compound	Concentration
44-016	m,p-Xylenes o-Xylene 1,2,4-Trichlorobenzene 1,4-Dioxane	0.180 ug/m^3 0.052 ug/m^3 0.080 ug/m^3 0.552 ug/m^3

NAS Alameda, Bldg. 163
Volatiles - Data Qualification Summary - SDG 209270

SDG	Sample	Compound	Flag	A or P	Reason
209270	44-015	1,2,4-Trichlorobenzene Naphthalene	J (all detects) UJ (all non-detects) J (all detects) UJ (all non-detects)	P	Initial calibration (%RSD)
209270	44-015	All TCL compounds	J (all detects) UJ (all non-detects)	P	Internal standards (area)
209270	44-015	All compounds reported below the RL.	J (all detects)	A	Compound quantitation and CRQLs

NAS Alameda, Bldg. 163
Volatiles - Laboratory Blank Data Qualification Summary - SDG 209270

SDG	Sample	Compound TIC (RT in minutes)	Modified Final Concentration	A or P
209270	44-015 (1.62X)	m,p-Xylenes o-Xylene 1,2,4-Trichlorobenzene	1.497U ug/m^3 0.741U ug/m^3 1.291U ug/m^3	A

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: NAS Alameda, Bldg. 163

Collection Date: June 19, 2009

LDC Report Date: August 26, 2009

Matrix: Air

Parameters: Volatiles

Validation Level: EPA Level IV

Laboratory: Environmental Analytical Services, Inc.

Sample Delivery Group (SDG): 209277

Sample Identification

44-004

Introduction

This data review covers one air sample listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA Method TO-15 for Volatiles.

This review follows the NAVFAC NW Field Procedures, Version 4.0 (Navy 2006) and a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review (June 2008) as there are no current guidelines for the method stated above.

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Blank results are summarized in Section V.

Field duplicates are summarized in Section XVI.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

N Presumptive evidence of presence of the constituent.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

II. GC/MS Instrument Performance Check

Instrument performance was checked at 12 hour intervals.

All ion abundance requirements were met.

III. Initial Calibration

Initial calibration was performed using required standard concentrations.

Percent relative standard deviations (%RSD) were less than or equal to 30.0% for all compounds with the following exceptions:

Date	Compound	%RSD	Associated Samples	Flag	A or P
3/17/09	Acetone 2-Propanol 4-Ethyltoluene	33.28 36.24 31.30	All samples in SDG 209277	J (all detects) UJ (all non-detects)	P

IV. Continuing Calibration

Continuing calibration was performed at the required frequencies.

All of the continuing calibration percent differences (%D) between the initial calibration RRF and the continuing calibration RRF were less than or equal to 30.0% with the following exceptions:

Date	Compound	%D	Associated Samples	Flag	A or P
7/8/09	Freon-114 Bromomethane Styrene 1,1,2,2-Tetrachloroethane 4-Ethyltoluene 1,3,5-Trimethylbenzene 1,2,4-Trimethylbenzene 1,3-Dichlorobenzene Benzyl chloride 1,4-Dichlorobenzene 1,2-Dichlorobenzene Naphthalene Hexachlorobutadiene	43.6 35.5 33.8 43.5 31.6 35.1 31.0 40.0 50.9 36.0 43.0 77.3 56.9	All samples in SDG 209277	J (all detects) UJ (all non-detects)	P

V. Blanks

Method blank analyses were performed at the required frequency. No volatile contaminants were found in the method blanks with the following exceptions:

Method Blank ID	Analysis Date	Compound TIC (RT in minutes)	Concentration	Associated Samples
070809-MS1MB	7/8/09	Acetone 2-Propanol Toluene	278 ug/m^3 284 ug/m^3 345 ug/m^3	44-004

Sample concentrations were compared to concentrations detected in the method blanks. The sample concentrations were either not detected or were significantly greater (>10X for common contaminants, >5X for other contaminants) than the concentrations found in the associated method blanks with the following exceptions:

Sample	Compound TIC (RT in minutes)	Reported Concentration	Modified Final Concentration
44-004 (1.44X)	Toluene	671 ug/m^3	1442U ug/m^3

VI. Surrogate Spikes

Although surrogates were not required by the method, surrogate analysis was performed by the laboratory. Surrogate recoveries (%R) were within QC limits.

VII. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) and matrix spike duplicate (MSD) analyses were not required by the method.

VIII. Laboratory Control Samples (LCS)

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits with the following exceptions:

LCS ID (Associated Samples)	Compound	LCS %R (Limits)	LCSD %R (Limits)	RPD (Limits)	Flag	A or P
QC07089D (All samples in SDG 209277)	Vinyl chloride	-	-	23 (≤20)	J (all detects) UJ (all non-detects)	P

IX. Regional Quality Assurance and Quality Control

Not applicable.

X. Internal Standards

All internal standard areas and retention times were within QC limits.

XI. Target Compound Identifications

All target compound identifications were within validation criteria.

XII. Compound Quantitation and CRQLs

All compound quantitation and CRQLs were within validation criteria.

All compounds reported below the RL were qualified as follows:

Sample	Finding	Flag	A or P
All samples in SDG 209277	All compounds reported below the RL.	J (all detects)	A

XIII. Tentatively Identified Compounds (TICs)

Tentatively identified compounds were not reported by the laboratory.

XIV. System Performance

The system performance was acceptable.

XV. Overall Assessment of Data

Data flags are summarized at the end of this report if data has been qualified.

XVI. Field Duplicates

Samples 44-003 and 44-004 were identified as field duplicates. No volatiles were detected in any of the samples with the following exceptions:

Compound	Concentration (ug/m^3)		RPD (Limits)
	44-003	44-004	
Trichloroethene	4132497	4190042	1 (≤30)
trans-1,2-Dichloroethene	771	3413	126 (≤30)

Compound	Concentration (ug/m^3)		RPD (Limits)
	44-003	44-004	
1,1-Dichloroethane	386	1623	123 (≤30)
cis-1,2-Dichloroethene	8295	32426	119 (≤30)
Toluene	489	671	31 (≤30)
Benzene	270U	357	Not calculable
1,2-Dichlorobenzene	494U	547	Not calculable
1,4-Dichlorobenzene	503U	689	Not calculable

XVII. Field Blanks

Sample 44-005 was identified as a trip blank. No volatile contaminants were found in this blank with the following exceptions:

Trip Blank ID	Compound	Concentration
44-005	Acetone 2-Butanone Toluene	6.76 ug/m^3 1.91 ug/m^3 3.89 ug/m^3

NAS Alameda, Bldg. 163
Volatiles - Data Qualification Summary - SDG 209277

SDG	Sample	Compound	Flag	A or P	Reason
209277	44-004	Acetone 2-Propanol 4-Ethyltoluene	J (all detects) UJ (all non-detects)	P	Initial calibration (%RSD)
209277	44-004	Freon-114 Bromomethane Styrene 1,1,2,2-Tetrachloroethane 4-Ethyltoluene 1,3,5-Trimethylbenzene 1,2,4-Trimethylbenzene 1,3-Dichlorobenzene Benzyl chloride 1,4-Dichlorobenzene 1,2-Dichlorobenzene Naphthalene Hexachlorobutadiene	J (all detects) UJ (all non-detects)	P	Continuing calibration (%D)
209277	44-004	Vinyl chloride	J (all detects) UJ (all non-detects)	P	Laboratory control samples (RPD)
209277	44-004	All compounds reported below the RL.	J (all detects)	A	Compound quantitation and CRQLs

NAS Alameda, Bldg. 163
Volatiles - Laboratory Blank Data Qualification Summary - SDG 209277

SDG	Sample	Compound TIC (RT in minutes)	Modified Final Concentration	A or P
209277	44-004 (1.44X)	Toluene	1442U ug/m^3	A

LDC #: 21217B48a

SDG #: 209277

Laboratory: Environmental Analytical Service, Inc.

VALIDATION COMPLETENESS WORKSHEET

ADR/IV

Date: 8/06/09

Page: 1 of 1

Reviewer: JVG

2nd Reviewer: [illegible]

ETHOD: GC/MS Volatiles (EPA Method TO-15)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	N	Sampling dates: 6/19/09
II.	GC/MS Instrument performance check	A	
III.	Initial calibration	SW	% RSD ≤ 30 %
IV.	Continuing calibration ~~ICV~~	SW	CCV ≤ 30 %
V.	Blanks	N	Not reviewed for ADR validation.
VI.	Surrogate spikes		Not reviewed for ADR validation.
VII.	Matrix spike/Matrix spike duplicates		Not reviewed for ADR validation.
VIII.	Laboratory control samples		Not reviewed for ADR validation.
IX.	Regional Quality Assurance and Quality Control	N	
X.	Internal standards	A	Not reviewed for ADR validation.
XI.	Target compound identification	N	Not reviewed for ADR validation.
XII.	Compound quantitation/CRQLs		Not reviewed for ADR validation.
XIII.	Tentitatively identified compounds (TICs)		Not reviewed for ADR validation.
XIV.	System performance		Not reviewed for ADR validation.
XV.	Overall assessment of data		Not reviewed for ADR validation.
XVI.	Field duplicates	SW	D = 3, 4
XVII.	Field blanks	SW	TB = 5

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples: ** Indicates sample underwent Level IV validation

Air

1 1	44-001	11 1	070609-MS1 MB	21		31	
2 2	44-002	12 2	070209-MS1	22		32	
3 1/2	44-003 D	13 3	070809-MS1	23		33	
4 1/3	44-004** D	14		24		34	
5 1	44-005	15		25		35	
6		16		26		36	
7		17		27		37	
8		18		28		38	
9		19		29		39	
10		20		30		40	

(no ICV)

TARGET COMPOUND WORKSHEET

METHOD: VOA (EPA Method TO-15)

A. Chloromethane	S. Trichloroethene	KK. Trichlorofluoromethane	CCC. tert-Butylbenzene	UUU. 1,2-Dichlorotetrafluoroethane	MMMM. Ethyl ether
B. Bromomethane	T. Dibromochloromethane	LL. Methyl-tert-butyl ether	DDD. 1,2,4-Trimethylbenzene	VVV. 4-Ethyltoluene	NNNN. Benzyl chloride
C. Vinyl choride	U. 1,1,2-Trichloroethane	MM. 1,2-Dibromo-3-chloropropane	EEE. sec-Butylbenzene	WWW. Ethanol	OOOO. From 114
D. Chloroethane	V. Benzene	NN. Diethyl ether	FFF. 1,3-Dichlorobenzene	XXX. Di-isopropyl ether	
E. Methylene chloride	W. trans-1,3-Dichloropropene	OO. 2,2-Dichloropropane	GGG. p-Isopropyltoluene	YYY. tert-Butanol	
F. Acetone	X. Bromoform	PP. Bromochloromethane	HHH. 1,4-Dichlorobenzene	ZZZ. tert-Butyl alcohol	
G. Carbon disulfide	Y. 4-Methyl-2-pentanone	QQ. 1,1-Dichloropropene	III. n-Butylbenzene	AAAA. Ethyl tert-butyl ether	
H. 1,1-Dichloroethene	Z. 2-Hexanone	RR. Dibromomethane	JJJ. 1,2-Dichlorobenzene	BBBB. tert-Amyl methyl ether	
I. 1,1-Dichloroethane	AA. Tetrachloroethene	SS. 1,3-Dichloropropane	KKK. 1,2,4-Trichlorobenzene	CCCC.1-Chlorohexane	
J. 1,2-Dichloroethene, total	BB. 1,1,2,2-Tetrachloroethane	TT. 1,2-Dibromoethane	LLL. Hexachlorobutadiene	DDDD. Isopropyl alcohol (2-propanol)	
K. Chloroform	CC. Toluene	UU. 1,1,1,2-Tetrachloroethane	MMM. Naphthalene	EEEE. Acetonitrile	
L. 1,2-Dichloroethane	DD. Chlorobenzene	VV. Isopropylbenzene	NNN. 1,2,3-Trichlorobenzene	FFFF. Acrolein	
M. 2-Butanone	EE. Ethylbenzene	WW. Bromobenzene	OOO. 1,3,5-Trichlorobenzene	GGGG. Acrylonitrile	
N. 1,1,1-Trichloroethane	FF. Styrene	XX. 1,2,3-Trichloropropane	PPP. trans-1,2-Dichloroethene	HHHH. 1,4-Dioxane	
O. Carbon tetrachloride	GG. Xylenes, total	YY. n-Propylbenzene	QQQ. cis-1,2-Dichloroethene	IIII. Isobutyl alcohol	
P. Bromodichloromethane	HH. Vinyl acetate	ZZ. 2-Chlorotoluene	RRR. m,p-Xylenes	JJJJ. Methacrylonitrile	
Q. 1,2-Dichloropropane	II. 2-Chloroethylvinyl ether	AAA. 1,3,5-Trimethylbenzene	SSS. o-Xylene	KKKK. Propionitrile	
R. cis-1,3-Dichloropropene	JJ. Dichlorodifluoromethane	BBB. 4-Chlorotoluene	TTT. 1,1,2-Trichloro-1,2,2-trifluoroethane	LLLL. Methyl ethyl ketone	

LDC #: 212 B48q
SDG #: Sulcrow

VALIDATION FINDINGS WORKSHEET
Initial Calibration

Page: 1 of 1
Reviewer: JVG
2nd Reviewer: [illegible]

METHOD: GC/MS VOA (EPA Method TO-15)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Did the laboratory perform a 5 point calibration prior to sample analysis?

Y N N/A Were all percent relative standard deviations (%RSD) ≤ 30% and relative response factors (RRF) ≥ 0.05?

#	Date	Standard ID	Compound	Finding %RSD (Limit: ≤30.0%)	Finding RRF (Limit: ≥0.05)	Associated Samples	Qualifications
	3/17/09	ICAL	F	33.28		All + Blks	J/UJ/P
			DDDD	36.24		↓	↓
			VVV	31.30			

INICAL.15A

LDC #: 212 ~ B48a
SDG #: See ...

VALIDATION FINDINGS WORKSHEET
Continuing ...ibration

Page: 1 of 2
Re... r: JVG
2nd Reviewer: [illegible]

METHOD: GC/MS VOA (EPA TO-15)
Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".
Y N N/A Was a continuing calibration standard analyzed at least once every 12 hours for each instrument?
Y N N/A Were all percent differences (%D) ≤ 30% and relative response factors (RRF) ≥ 0.05?

#	Date	Standard ID	Compound	Finding %D (Limit: ≤30.0%)	Finding RRF (Limit: ≥0.05)	Associated Samples	Qualifications
	7/02/09	070209-MS1 CCV	0000	51.9		2, 3, 070209-MS1 MB	J/UJ/P
			DDDD	30.8			
			BB	30.4			
			VVV	38.9			
			NNNN	45.8			
			JJJ	32.5			
			KKK	83.5			
			MMM	86.8			
			LLL	56.8			
	7/06/09	070609-MS1 CCV	0000	45.5		1, 5, 070609-MS1 MB	
			F	35.8			
			DDDD	39.0			
			HHHH	32.2			
			Z	36.5			
			X	35.8			
			BB	34.3			
			VVV	48.2			
			FFF	31.6			
			NNNN	57.6			
			HHH	30.1			
			JJJ	44.6			
			MMM	63.6			
			LLL	55.0			

LDC #: 21217 B48a
SDG #: See

VALIDATION FINDINGS WORKSHEET
Continuing Calibration

Reviewer: JVL
2nd Reviewer: [illegible]

METHOD: GC/MS VOA (EPA TO-15)
Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".
Y N N/A Was a continuing calibration standard analyzed at least once every 12 hours for each instrument?
Y N N/A Were all percent differences (%D) ≤ 30% and relative response factors (RRF) ≥ 0.05?

#	Date	Standard ID	Compound	Finding %D (Limit: <30.0%)	Finding RRF (Limit: >0.05)	Associated Samples	Qualifications
	7/08/09	070809-MS1 MB	OOOO -	43.6		4, 070809-MS1 MB	J/UJ/P
			B -	35.5			
			FF -	33.8			
			BB -	43.5			
			VVV -	31.6			
			AAA -	35.1			
			DDD -	31.0			
			FFF -	40.0			
			NNNN -	50.9			
			HHH -	36.0			
			JJJ -	43.0			
			MMM -	77.3			
			LLL -	56.9			

LDC #: 21217B48a

VALIDATION COMPLETENESS WORKSHEET

ADR/IV

SDG #: 209277

Laboratory: Environmental Analytical Service, Inc.

Date: 8/16/09

Page: 1 of 1

Reviewer: JW

2nd Reviewer: 9

HOD: GC/MS Volatiles (EPA Method TO-15)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 6/11/09
II.	GC/MS Instrument performance check	A	
III.	Initial calibration	SW	% RSD ≤ 30%
IV.	Continuing calibration/~~ICV~~	SW	CCV ≤ 30%
V.	Blanks	SW	~~Not reviewed for ADR validation.~~
VI.	Surrogate spikes	A	Not reviewed for ADR validation.
VII.	Matrix spike/Matrix spike duplicates	N	Not reviewed for ADR validation.
VIII.	Laboratory control samples	~~A~~ SW	~~Not reviewed for ADR validation.~~ LCS/D
IX.	Regional Quality Assurance and Quality Control	N	
X.	Internal standards	A	~~Not reviewed for ADR validation.~~
XI.	Target compound identification	A	Not reviewed for ADR validation.
XII.	Compound quantitation/CRQLs	A	Not reviewed for ADR validation.
XIII.	Tentitatively identified compounds (TICs)	N	Not reviewed for ADR validation.
XIV.	System performance	A	Not reviewed for ADR validation.
XV.	Overall assessment of data	A	Not ~~reviewed for ADR validation.~~
XVI.	Field duplicates	SW	D = 3, 4
XVII.	Field blanks	SW	TB = 5

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples: ** Indicates sample underwent Level IV validation

Air

1	~~44-001~~	11	070609-MSIMB (S only)	21		31	
2	44-002	12	070809-MSIMB	22		32	
3	~~44-003~~	13		23		33	
4	44-004**	14		24		34	
5	~~44-005~~	15		25		35	
6		16		26		36	
7		17		27		37	
8		18		28		38	
		19		29		39	
10		20		30		40	

(no ICV)

LDC #: 21217B48a
SDG #: See Cover

VALIDATION FINDINGS CHECKLIST

Reviewer: JVG
2nd Reviewer: Q

Method: Volatiles (EPA Method TO-15)

Validation Area	Yes	No	NA	Findings/Comments
I. Technical holding times				
All technical holding times were met.	✓			
Canister pressure criteria was met.	✓			
II. GC/MS instrument performance check				
Were the BFB performance results reviewed and found to be within the specified criteria?	✓			
Were all samples analyzed within the 12 hour clock criteria?	✓			
III. Initial calibration				
Did the laboratory perform a 5 point calibration prior to sample analysis?	✓			
Were all percent relative standard deviations (%RSD) ≤ 30% and relative response factors (RRF) > 0.05?		✓		
IV. Continuing calibration				
Was a continuing calibration standard analyzed at least once every 12 hours for each instrument?	✓			
Were all percent differences (%D) < 30% and relative response factors (RRF) > 0.05?		✓		
V. Blanks				
Was a method blank associated with every sample in this SDG?	✓			
Was a method blank analyzed at least once every 12 hours for each matrix and concentration?	✓			
Was there contamination in the method blanks? If yes, please see the Blanks validation completeness worksheet.	✓			
VI. Surrogate spikes				
Were all surrogate %R within QC limits?	✓			
If the percent recovery (%R) for one or more surrogates was out of QC limits, was a reanalysis performed to confirm samples with %R outside of criteria?			✓	
VII. Matrix spike/Matrix spike duplicates				
Was a matrix spike (MS) and matrix spike duplicate (MSD) analyzed for this SDG?			✓	
Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?			✓	
VIII. Laboratory control samples				
Was an LCS analyzed for this SDG?	✓			
Was an LCS analyzed per analytical batch?	✓			
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?	✓			

LDC #: 21217 B48a
SDG #: See Cover

VALIDATION FINDINGS CHECKLIST

Page: 2 of 2
Reviewer: JG
2nd Reviewer: [illegible]

Validation Area	Yes	No	NA	Findings/Comments
IX. Regional Quality Assurance and Quality Control				
Were performance evaluation (PE) samples performed?		✓		
Were the performance evaluation (PE) samples within the acceptance limits?			✓	
X. Internal standards				
Were internal standard area counts within +/-40% from the associated calibration standard?	✓			
Were retention times within +/- 20.0 seconds from the associated calibration standard?	✓			
XI. Target compound identification				
Were relative retention times (RRT's) within ± 0.06 RRT units of the standard?	✓			
Did compound spectra meet specified EPA "Functional Guidelines" criteria?	✓			
Were chromatogram peaks verified and accounted for?	✓			
XII. Compound quantitation/CRQLs				
Were the correct internal standard (IS), quantitation ion and relative response factor (RRF) used to quantitate the compound?	✓			
Were compound quantitation and CRQLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation?	✓			
XIII. Tentatively identified compounds (TICs)				
Were the major ions (> 10 percent relative intensity) in the reference spectrum evaluated in sample spectrum?			✓	
Were relative intensities of the major ions within ± 20% between the sample and the reference spectra?			✓	
Did the raw data indicate that the laboratory performed a library search for all required peaks in the chromatograms (samples and blanks)?		✓		
XIV. System performance				
System performance was found to be acceptable.	✓			
XV. Overall assessment of data				
Overall assessment of data was found to be acceptable.	✓			
XVI. Field duplicates				
Field duplicate pairs were identified in this SDG.	✓			
Target compounds were detected in the field duplicates.	✓			
XVII. Field blanks				
Field blanks were identified in this SDG.	✓	✓		
Target compounds were detected in the field blanks.	✓			

TARGET COMPOUND WORKSHEET

METHOD: VOA (EPA Method TO-15)

A. Chloromethane	S. Trichloroethene	KK. Trichlorofluoromethane	CCC. tert-Butylbenzene	UUU. 1,2-Dichlorotetrafluoroethane	MMMM. Ethyl ether
B. Bromomethane	T. Dibromochloromethane	LL. Methyl-tert-butyl ether	DDD. 1,2,4-Trimethylbenzene	VVV. 4-Ethyltoluene	NNNN. Benzyl chloride
C. Vinyl choride	U. 1,1,2-Trichloroethane	MM. 1,2-Dibromo-3-chloropropane	EEE. sec-Butylbenzene	WWW. Ethanol	OOOO. Freon 114
D. Chloroethane	V. Benzene	NN. Diethyl ether	FFF. 1,3-Dichlorobenzene	XXX. Di-isopropyl ether	
E. Methylene chloride	W. trans-1,3-Dichloropropene	OO. 2,2-Dichloropropane	GGG. p-Isopropyltoluene	YYY. tert-Butanol	
F. Acetone	X. Bromoform	PP. Bromochloromethane	HHH. 1,4-Dichlorobenzene	ZZZ. tert-Butyl alcohol	
G. Carbon disulfide	Y. 4-Methyl-2-pentanone	QQ. 1,1-Dichloropropene	III. n-Butylbenzene	AAAA. Ethyl tert-butyl ether	
H. 1,1-Dichloroethene	Z. 2-Hexanone	RR. Dibromomethane	JJJ. 1,2-Dichlorobenzene	BBBB. tert-Amyl methyl ether	
I. 1,1-Dichloroethane	AA. Tetrachloroethene	SS. 1,3-Dichloropropane	KKK. 1,2,4-Trichlorobenzene	CCCC.1-Chlorohexane	
J. 1,2-Dichloroethene, total	BB. 1,1,2,2-Tetrachloroethane	TT. 1,2-Dibromoethane	LLL. Hexachlorobutadiene	DDDD. Isopropyl alcohol (2-propanol)	
K. Chloroform	CC. Toluene	UU. 1,1,1,2-Tetrachloroethane	MMM. Naphthalene	EEEE. Acetonitrile	
L. 1,2-Dichloroethane	DD. Chlorobenzene	VV. Isopropylbenzene	NNN. 1,2,3-Trichlorobenzene	FFFF. Acrolein	
M. 2-Butanone	EE. Ethylbenzene	WW. Bromobenzene	OOO. 1,3,5-Trichlorobenzene	GGGG. Acrylonitrile	
N. 1,1,1-Trichloroethane	FF. Styrene	XX. 1,2,3-Trichloropropane	PPP. trans-1,2-Dichloroethene	HHHH. 1,4-Dioxane	
O. Carbon tetrachloride	GG. Xylenes, total	YY. n-Propylbenzene	QQQ. cis-1,2-Dichloroethene	IIII. Isobutyl alcohol	
P. Bromodichloromethane	HH. Vinyl acetate	ZZ. 2-Chlorotoluene	RRR. m,p-Xylenes	JJJJ. Methacrylonitrile	
Q. 1,2-Dichloropropane	II. 2-Chloroethylvinyl ether	AAA. 1,3,5-Trimethylbenzene	SSS. o-Xylene	KKKK. Propionitrile	
R. cis-1,3-Dichloropropene	JJ. Dichlorodifluoromethane	BBB. 4-Chlorotoluene	TTT. 1,1,2-Trichloro-1,2,2-trifluoroethane	LLLL. Methyl ethyl ketone	

LDC #: 21 B48a
SDG #: See Cover

VALIDATION FINDINGS WORKSHEET
Initial Calibration

Page: 1 of 1
Reviewer: DVG
2nd Reviewer:

METHOD: GC/MS VOA (EPA Method TO-15)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Did the laboratory perform a 5 point calibration prior to sample analysis?

Y N N/A Were all percent relative standard deviations (%RSD) ≤ 30% and relative response factors (RRF) ≥ 0.05?

#	Date	Standard ID	Compound	Finding %RSD (Limit: <30.0%)	Finding RRF (Limit: >0.05)	Associated Samples	Qualifications
	3/17/09	ICAL	F	33.28		4, 090809-MS MB	J/UJ/P
			DDDD	36.24			
			VVV	31.30			

INICAL 15A

LDC #: 21217 B489
SDG #: Se

VALIDATION FINDINGS WORKSHEET
Continuing Calibration

Page: 1 of 1
Reviewer: JVG
2nd Reviewer:

METHOD: GC/MS VOA (EPA TO-15)
Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".
Y N N/A Was a continuing calibration standard analyzed at least once every 12 hours for each instrument?
Y N N/A Were all percent differences (%D) ≤ 30% and relative response factors (RRF) ≥ 0.05?

#	Date	Standard ID	Compound	Finding %D (Limit: ≤30.0%)	Finding RRF (Limit: ≥0.05)	Associated Samples	Qualifications
	7/08/09	070809-MS1 MB	OOOO	43.6		4, 070809-MS1 MB	J/UJ/P
			B	35.5			
			FF	33.8			
			BB	43.5			
			VVV	31.6			
			AAA	35.1			
			DDD	31.0			
			FFF	40.0			
			NNNN	50.9			
			HHH	36.0			
			JJJ	43.0			
			MMM	77.3			
			LLL	56.9			

CONCAL.15A

LDC #: 217B48a
SDG #: See Cover

VALIDATION FINDINGS WORKSHEET
Blanks

Page: 1 of 1
Reviewer: JVC
2nd Reviewer: [illegible]

METHOD: GC/MS VOA (EPA TO-15)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Was a method blank associated with every sample in this SDG?
Y N N/A Was a method blank analyzed at least once every 12 hours for each matrix and concentration?
Y N N/A Was there contamination in the method blanks? If yes, please see the qualifications below.

Blank analysis date: 7/08/09
Conc. units: ug/m3 Associated Samples: 4

Compound	Blank ID	Sample Identification								
	070809-MS1 MB	4 (1.44x)								
F	278									
DDDD	284									
CC	345		671/1442 U							
CRQL										

1725

Blank analysis date:
Conc. units: Associated Samples:

Compound	Blank ID	Sample Identification								
CRQL										

CIRCLED RESULTS WERE NOT QUALIFIED. ALL RESULTS NOT CIRCLED WERE QUALIFIED BY THE FOLLOWING STATEMENT:

Note: Common contaminants such as Methylene chloride, Acetone, 2-Butanone, and TICs that were detected in samples within ten times the associated method blank concentration were qualified as not detected, "U". Other contaminants within five times the method blank concentration were also qualified as not detected, "U".

LDC #: 21217A48a
SDG #: Cover

VALIDATION FINDINGS WORKSHEET
Laboratory Control Samples (LCS)

Reviewer: JVG
2nd Reviewer: [illegible]

METHOD: GC/MS VOA (EPA SW 846 Method 8260B)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Was a LCS required?
Y N N/A Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?

#	Date	LCS/LCSD ID	Compound	LCS %R (Limits)	LCSD %R (Limits)	RPD (Limits)	Associated Samples	Qualifications
		QC 07089D	C	( )	( )	23 (20)	All	J/UJ/P
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
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				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		

LDC #: 21217B48a
SDG #: See Cover

VALIDATION FINDINGS WORKSHEET
Field Duplicates

Reviewer: JVG
2nd reviewer: [illegible]

METHOD: GC/MS VOA (EPA Method TO-15)

Y N N/A Were field duplicate pairs identified in this SDG?
Y N N/A Were target compounds detected in the field duplicate pairs?

Compound	Concentration (ug/m3) 3	4	(≤ 30%) RPD
S	4132497	4190042	1
PPP	771	3413	126
I	386	1623	123
QQQ	8295	32426	119
CC	489	671	31
V	270 ~~350~~ U	357	NC

Compound	Concentration ( )		RPD
JJJ	494 U	547	NC
HHH	503 U	689	

Compound	Concentration ( )		RPD

Compound	Concentration ( )		RPD

LDC #: 21217 B48a
SDG #: See Cover

VALIDATION FINDINGS WORKSHEET
Field Blanks

Reviewer: JG
2nd reviewer: [illegible]

METHOD: GC/MS VOA (EPA ~~SW-846 Method 8260B~~ TO-15)

Y N N/A Were field blanks identified in this SDG?
Y N N/A Were target compounds detected in the field blanks?

Sample: 5 Field Blank / Trip Blank / Rinsate / Other _____ (circle one)

Compound	Concentration Units (ug/m3)
F	6.76
M	1.91
CC	3.89

Sample: _____ Field Blank / Trip Blank / Rinsate / Other _____ (circle one)

Compound	Concentration Units ( )

Sample: _____ Field Blank / Trip Blank / Rinsate / Other _____ (circle one)

Compound	Concentration Units ( )

LDC #: 2. 7B48a
SDG #: See Cover

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

Page: 1 of 1
Reviewer: JVG
2nd Reviewer: [illegible]

METHOD: GC/MS VOA (EPA Method TO-15)

The Relative Response Factor (RRF), average RRF, and percent relative standard deviation (%RSD) were recalculated for the compounds identified below using the following calculations:

$RRF = (A_x)(C_{is})/(A_{is})(C_x)$
average RRF = sum of the RRFs/number of standards
%RSD = 100 * (S/X)

A_x = Area of compound,
C_x = Concentration of compound,
S = Standard deviation of the RRFs
X = Mean of the RRFs

A_{is} = Area of associated internal standard
C_{is} = Concentration of internal standard

#	Standard ID	Calibration Date	Compound (Reference Internal Standard)	Reported RRF (5.0 std)	Recalculated RRF (5.0 std)	Reported Average RRF (initial)	Recalculated Average RRF (initial)	Reported %RSD	Recalculated %RSD
1	LCAL	3/17/09	~~Methylene chloride~~ C (1st internal standard) 5.2	0.213	0.213	0.213	0.213	5.40	5.39
			Trichlorethene (2nd internal standard) 5.15	0.521	0.521	0.573	0.573	19.12	19.10
			Toluene (3rd internal standard)						
2			Methylene chloride (1st internal standard)						
			Trichlorethene (2nd internal standard)						
			Toluene (3rd internal standard)						
3			Methylene chloride (1st internal standard)						
			Trichlorethene (2nd internal standard)						
			Toluene (3rd internal standard)						
4			Methylene chloride (1st internal standard)						
			Trichlorethene (2nd internal standard)						
			Toluene (3rd internal standard)						

Comments: Refer to Initial Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 17B48q
SDG #: See Cover

VALIDATION FINDINGS WORKSHEET
Continuing Calibration Results Verification

Page: 1 of 1
Reviewer: SVG
2nd Reviewer: CV

METHOD: GC/MS VOA (EPA TO-15)

The percent difference (%D) of the initial calibration average Relative Response Factors (RRFs) and the continuing calibration RRFs were recalculated for the compounds identified below using the following calculation:

% Difference = 100 * (ave. RRF - RRF)/ave. RRF
RRF = $(A_x)(C_{is})/(A_{is})(C_x)$

Where: ave. RRF = initial calibration average RRF
RRF = continuing calibration RRF
A_x = Area of compound, A_{is} = Area of associated internal standard
C_x = Concentration of compound, C_{is} = Concentration of internal standard

#	Standard ID	Calibration Date	Compound (Reference Internal Standard)	Average RRF (Initial)	Reported RRF (CC)	Recalculated RRF (CC)	Reported %D	Recalculated %D
1	070809-MS1	7/08/09	~~Methylene chloride~~ C (1st internal standard)	0.213	0.179	0.179	16.1	15.93
	CCV		Trichlorethene (2nd internal standard)	0.573	0.497	0.497	13.3	13.3
			Toluene (3rd internal standard)					
2	070609-MS1	7/06/09	Methylene chloride (1st internal standard)					
	CCV		Trichlorethene (2nd internal standard)	0.573	0.634	0.634	10.7	10.7
			Toluene (3rd internal standard)					
3			Methylene chloride (1st internal standard)					
			Trichlorethene (2nd internal standard)					
			Toluene (3rd internal standard)					
4			Methylene chloride (1st internal standard)					
			Trichlorethene (2nd internal standard)					
			Toluene (3rd internal standard)					

Comments: Refer to Continuing Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 21217B489
SDG #: See Cover

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Reviewer: JMG
2nd reviewer: [illegible]

METHOD: GC/MS VOA (EPA Method TO-15)

Y N N/A Were all reported results recalculated and verified for all level IV samples?

Y N N/A Were all recalculated results for detected target compounds agree within 10.0% of the reported results?

Concentration = $\frac{(A_x)(I_s)(DF)}{(A_{is})(RRF)(V_o)(\%S)}$

A_x	=	Area of the characteristic ion (EICP) for the compound to be measured
A_{is}	=	Area of the characteristic ion (EICP) for the specific internal standard
I_s	=	Amount of internal standard added in nanograms (ng)
RRF	=	Relative response factor of the calibration standard.
V_o	=	Volume or weight of sample pruged in milliliters (ml) or grams (g).
Df	=	Dilution factor.
%S	=	Percent solids, applicable to soils and solid matrices only.

Example:

Sample I.D. #4, S:

Conc. = $\frac{(3344634)(20)(1.44)(1000)}{(4452824)(0.573)(0.05ml)(\quad)}$

= 755059 ≈ 755100 ppbv

ug/m³ = $\frac{(755100)(131.39)}{23.68}$ = 4189721 ug/m³

#	Sample ID	Compound	Reported Concentration ( )	Calculated Concentration ( )	Qualification

LDC #: 21217A48a

SDG #: 209270

Laboratory: Environmental Analytical Service, Inc.

VALIDATION COMPLETENESS WORKSHEET

ADR/IV

Date: 8/06/09

Page: 1 of 1

Reviewer: SVR

2nd Reviewer: [illegible]

ETHOD: GC/MS Volatiles (EPA Method TO-15)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	N	Sampling dates: 6/16/09
II.	GC/MS Instrument performance check	A	
III.	Initial calibration	SW	% RSD ≤ 30%
IV.	Continuing calibration/~~ICV~~	SW	CCV ≤ 30%
V.	Blanks	N	Not reviewed for ADR validation.
VI.	Surrogate spikes		Not reviewed for ADR validation.
VII.	Matrix spike/Matrix spike duplicates		Not reviewed for ADR validation.
VIII.	Laboratory control samples		Not reviewed for ADR validation.
IX.	Regional Quality Assurance and Quality Control	N	
X.	Internal standards	A	Not reviewed for ADR validation.
XI.	Target compound identification	N	Not reviewed for ADR validation.
XII.	Compound quantitation/CRQLs		Not reviewed for ADR validation.
XIII.	Tentitatively identified compounds (TICs)		Not reviewed for ADR validation.
XIV.	System performance		Not reviewed for ADR validation.
XV.	Overall assessment of data		Not reviewed for ADR validation.
XVI.	Field duplicates		
XVII.	Field blanks		

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples: ** Indicates sample underwent Level IV validation

Air

1	~~44-006A~~	11	44-016	21		31	
2	44-007	12	44-017	22		32	
3	44-008	13	44-018	23		33	
4	44-009	14	~~44-006B~~	24		34	
5	44-010	15		25		35	
6	44-011	16		26		36	
7	44-012	17		27		37	
8	44-013	18		28		38	
9	44-014	19		29		39	
10	~~44-015**~~	20		30		40	

(2-Propanol - Not validated)

11-13: 11 compds

21217A48aW.wpd

TARGET COMPOUND WORKSHEET

METHOD: VOA (EPA Method TO-15)

A. Chloromethane	S. Trichloroethene	KK. Trichlorofluoromethane	CCC. tert-Butylbenzene	UUU. 1,2-Dichlorotetrafluoroethane	MMMM. Ethyl ether
B. Bromomethane	T. Dibromochloromethane	LL. Methyl-tert-butyl ether	DDD. 1,2,4-Trimethylbenzene	VVV. 4-Ethyltoluene	NNNN. Benzyl chloride
C. Vinyl choride	U. 1,1,2-Trichloroethane	MM. 1,2-Dibromo-3-chloropropane	EEE. sec-Butylbenzene	WWW. Ethanol	OOOO. Freon 114
D. Chloroethane	V. Benzene	NN. Diethyl ether	FFF. 1,3-Dichlorobenzene	XXX. Di-isopropyl ether	
E. Methylene chloride	W. trans-1,3-Dichloropropene	OO. 2,2-Dichloropropane	GGG. p-Isopropyltoluene	YYY. tert-Butanol	
F. Acetone	X. Bromoform	PP. Bromochloromethane	HHH. 1,4-Dichlorobenzene	ZZZ. tert-Butyl alcohol	
G. Carbon disulfide	Y. 4-Methyl-2-pentanone	QQ. 1,1-Dichloropropene	III. n-Butylbenzene	AAAA. Ethyl tert-butyl ether	
H. 1,1-Dichloroethene	Z. 2-Hexanone	RR. Dibromomethane	JJJ. 1,2-Dichlorobenzene	BBBB. tert-Amyl methyl ether	
I. 1,1-Dichloroethane	AA. Tetrachloroethene	SS. 1,3-Dichloropropane	KKK. 1,2,4-Trichlorobenzene	CCCC.1-Chlorohexane	
J. 1,2-Dichloroethene, total	BB. 1,1,2,2-Tetrachloroethane	TT. 1,2-Dibromoethane	LLL. Hexachlorobutadiene	DDDD. Isopropyl alcohol	
K. Chloroform	CC. Toluene	UU. 1,1,1,2-Tetrachloroethane	MMM. Naphthalene	EEEE. Acetonitrile	
L. 1,2-Dichloroethane	DD. Chlorobenzene	VV. Isopropylbenzene	NNN. 1,2,3-Trichlorobenzene	FFFF. Acrolein	
M. 2-Butanone	EE. Ethylbenzene	WW. Bromobenzene	OOO. 1,3,5-Trichlorobenzene	GGGG. Acrylonitrile	
N. 1,1,1-Trichloroethane	FF. Styrene	XX. 1,2,3-Trichloropropane	PPP. trans-1,2-Dichloroethene	HHHH. 1,4-Dioxane	
O. Carbon tetrachloride	GG. Xylenes, total	YY. n-Propylbenzene	QQQ. cis-1,2-Dichloroethene	IIII. Isobutyl alcohol	
P. Bromodichloromethane	HH. Vinyl acetate	ZZ. 2-Chlorotoluene	RRR. m,p-Xylenes	JJJJ. Methacrylonitrile	
Q. 1,2-Dichloropropane	II. 2-Chloroethylvinyl ether	AAA. 1,3,5-Trimethylbenzene	SSS. o-Xylene	KKKK. Propionitrile	
R. cis-1,3-Dichloropropene	JJ. Dichlorodifluoromethane	BBB. 4-Chlorotoluene	TTT. 1,1,2-Trichloro-1,2,2-trifluoroethane	LLLL. Methyl ethyl ketone	

LDC #: 21 7A48a
SDG #: See cover

VALIDATION FINDINGS WORKSHEET
Initial Calibration

Page: 1 of 1
Reviewer: JVB
2nd Reviewer: [illegible]

METHOD: GC/MS VOA (EPA Method TO-15)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Did the laboratory perform a 5 point calibration prior to sample analysis?

Y N N/A Were all percent relative standard deviations (%RSD) ≤ 30% and relative response factors (RRF) ≥ 0.05?

#	Date	Standard ID	Compound	Finding %RSD (Limit: ≤30.0%)	Finding RRF (Limit: ≥0.05)	Associated Samples	Qualifications
	6/25/09	~~06~~ ICAL	VVV	31.30		11-13, 062509q MSI MB	J/UJ/P

LDC #: 21217A48a
SDG #: See

VALIDATION FINDINGS WORKSHEET
Continuing Calibration

Page: 1 of 1
Reviewer: JVG
2nd Reviewer: [illegible]

METHOD: GC/MS VOA (EPA TO-15)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Was a continuing calibration standard analyzed at least once every 12 hours for each instrument?

Y N N/A Were all percent differences (%D) ≤ 30% and relative response factors (RRF) ≥ 0.05?

#	Date	Standard ID	Compound	Finding %D (Limit: ≤30.0%)	Finding RRF (Limit: ≥0.05)	Associated Samples	Qualifications
	6/25/09	062509-MS1 BC	DOOO -	45.9		11-13, 062509-MS1 MB	J/UJ/P
			HH -	31.6			
			VVV -	38.0			
			LLL	65.6			

CONCAL.15A

LDC #: 21217A48b

SDG #: 209270

Laboratory: Environmental Analytical Service, Inc.

VALIDATION COMPLETENESS WORKSHEET

ADR/IV

Date: 8/06/09

Page: 1 of 1

Reviewer:

2nd Reviewer:

ETHOD: GC/MS Volatiles (EPA Method TO-15-SIM)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	N	Sampling dates: 6/16/09
II.	GC/MS Instrument performance check	A	
III.	Initial calibration	SW	% RSD ≤ 30%
IV.	Continuing calibration ~~ICV~~	SW	CCV ≤ 30%
V.	Blanks	N	Not reviewed for ADR validation.
VI.	Surrogate spikes		Not reviewed for ADR validation.
VII.	Matrix spike/Matrix spike duplicates		Not reviewed for ADR validation.
VIII.	Laboratory control samples		Not reviewed for ADR validation.
IX.	Regional Quality Assurance and Quality Control	N	
X.	Internal standards	SW	Not reviewed for ADR validation.
XI.	Target compound identification	N	Not reviewed for ADR validation.
XII.	Compound quantitation/CRQLs		Not reviewed for ADR validation.
XIII.	Tentitatively identified compounds (TICs)		Not reviewed for ADR validation.
XIV.	System performance		Not reviewed for ADR validation.
XV.	Overall assessment of data		Not reviewed for ADR validation.
XVI.	Field duplicates		D_1 = 1, 14 D_2 = 6, 10
XVII.	Field blanks		TB = 11

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples: ** Indicates sample underwent Level IV validation

Air

1 1/5	44-006A	D_1	11 3/6	44-016	21 1	062409-MS2	MB	31	
2 2/5	44-007		12 3/6	44-017	22 2	062209-MS2		32	
3 1/5	44-008		13 1/6	44-018	23 3	062309-MS2		33	
4 2	44-009		14 2/6	44-006B	D_4 24 4	062509-MS2		34	
5 3	44-010		15		25 5	070909-MS2		35	
6 3/5	44-011	D_2	16		26 6	071009-MS2		36	
7 4	44-012		17		27			37	
8 3/6	44-013		18		28			38	
9 3/6	44-014		19		29			39	
10 3	44-015**	D_2	20		30			40	

(no ICV)

11-13 - Long list

All others - Short list

21217A48bW.wpd

TARGET COMPOUND WORKSHEET

METHOD: VOA (EPA Method TO-15)

A. Chloromethane	S. Trichloroethene	KK. Trichlorofluoromethane	CCC. tert-Butylbenzene	UUU. 1,2-Dichlorotetrafluoroethane	MMMM. Ethyl ether
B. Bromomethane	T. Dibromochloromethane	LL. Methyl-tert-butyl ether	DDD. 1,2,4-Trimethylbenzene	VVV. 4-Ethyltoluene	NNNN. Benzyl chloride
C. Vinyl choride	U. 1,1,2-Trichloroethane	MM. 1,2-Dibromo-3-chloropropane	EEE. sec-Butylbenzene	WWW. Ethanol	
D. Chloroethane	V. Benzene	NN. Diethyl ether	FFF. 1,3-Dichlorobenzene	XXX. Di-isopropyl ether	
E. Methylene chloride	W. trans-1,3-Dichloropropene	OO. 2,2-Dichloropropane	GGG. p-Isopropyltoluene	YYY. tert-Butanol	
F. Acetone	X. Bromoform	PP. Bromochloromethane	HHH. 1,4-Dichlorobenzene	ZZZ. tert-Butyl alcohol	
G. Carbon disulfide	Y. 4-Methyl-2-pentanone	QQ. 1,1-Dichloropropene	III. n-Butylbenzene	AAAA. Ethyl tert-butyl ether	
H. 1,1-Dichloroethene	Z. 2-Hexanone	RR. Dibromomethane	JJJ. 1,2-Dichlorobenzene	BBBB. tert-Amyl methyl ether	
I. 1,1-Dichloroethane	AA. Tetrachloroethene	SS. 1,3-Dichloropropane	KKK. 1,2,4-Trichlorobenzene	CCCC.1-Chlorohexane	
J. 1,2-Dichloroethene, total	BB. 1,1,2,2-Tetrachloroethane	TT. 1,2-Dibromoethane	LLL. Hexachlorobutadiene	DDDD. Isopropyl alcohol	
K. Chloroform	CC. Toluene	UU. 1,1,1,2-Tetrachloroethane	MMM. Naphthalene	EEEE. Acetonitrile	
L. 1,2-Dichloroethane	DD. Chlorobenzene	VV. Isopropylbenzene	NNN. 1,2,3-Trichlorobenzene	FFFF. Acrolein	
M. 2-Butanone	EE. Ethylbenzene	WW. Bromobenzene	OOO. 1,3,5-Trichlorobenzene	GGGG. Acrylonitrile	
N. 1,1,1-Trichloroethane	FF. Styrene	XX. 1,2,3-Trichloropropane	PPP. trans-1,2-Dichloroethene	HHHH. 1,4-Dioxane	
O. Carbon tetrachloride	GG. Xylenes, total	YY. n-Propylbenzene	QQQ. cis-1,2-Dichloroethene	IIII. Isobutyl alcohol	
P. Bromodichloromethane	HH. Vinyl acetate	ZZ. 2-Chlorotoluene	RRR. m,p-Xylenes	JJJJ. Methacrylonitrile	
Q. 1,2-Dichloropropane	II. 2-Chloroethylvinyl ether	AAA. 1,3,5-Trimethylbenzene	SSS. o-Xylene	KKKK. Propionitrile	
R. cis-1,3-Dichloropropene	JJ. Dichlorodifluoromethane	BBB. 4-Chlorotoluene	TTT. 1,1,2-Trichloro-1,2,2-trifluoroethane	LLLL. Methyl ethyl ketone	

LDC #: 21 #48 b
SDG #: See Cover

VALIDATION FINDINGS WORKSHEET
Initial Calibration

Page: 1 of 1
Reviewer: JVG
2nd Reviewer: d

METHOD: GC/MS VOA (EPA Method TO-15)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Did the laboratory perform a 5 point calibration prior to sample analysis?

Y N N/A Were all percent relative standard deviations (%RSD) ≤ 30% and relative response factors (RRF) ≥ 0.05?

#	Date	Standard ID	Compound	Finding %RSD (Limit: <30.0%)	Finding RRF (Limit: >0.05)	Associated Samples	Qualifications
	6/19/09	ICAL	KKK	46.46		All + Blks	J/NJ/P
			MMM	46.62			
			DDD	32.85		11-13, 062309-MS2 MB	
			FFF	35.57		062409-MS2 MB	
			NNNN	32.20			
			HHH	39.39			
			JJJ	33.09			

INICAL 15A

LDC #: 21217 A f8b
SDG #: See ✓

VALIDATION FINDINGS WORKSHEET
Continuing Calibration

Page: 1 of 1
Reviewer: JVG
2nd Reviewer: ✓

METHOD: GC/MS VOA (EPA TO-15)
Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".
Y N N/A Was a continuing calibration standard analyzed at least once every 12 hours for each instrument?
Y N N/A Were all percent differences (%D) ≤ 30% and relative response factors (RRF) ≥ 0.05?

#	Date	Standard ID	Compound	Finding %D (Limit: <30.0%)	Finding RRF (Limit: >0.05)	Associated Samples	Qualifications
	06/22/09	062209-MS2 cal	MMM	30.7		4, 062209-MS2MB	J/UJ/P
	6/24/09	062409-MS2 cal	KKK	67.1		1, 3, 13, 062409-MS2 MB	
			DD	31.0		13, 062409-MS2 MB	
			FF	37.0			
			BB	38.3			
			FFF	46.9			
			HHH	45.5			
			JJJ	48.3			
	6/25/09	062509-MS2 cal	BB	48.6		7, 062509-MS2 MB	
			KKK	76.5			
			MMM	41.0			
	7/09/09	070909-MS2 cal	MMM	66.8		1, 2, 3, 6, 070909-MS2 MB	
	7/10/09	071009-MS2 cal	MMM	43.7		8, 9, 11, 12, 13, 14	

CONCAL.15A

LDC #: 21[illegible]7A486
SDG #: See cover

VALIDATION FIN[illegible]GS WORKSHEET
Internal [illegible]andards

Page: 1 of [illegible]
Re[illegible]ver: JVG
2nd Reviewer: [illegible]

METHOD: GC/MS VOA (EPA Method TO-15)
Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".
Y (N) N/A Were all internal standard area counts within +/- 40% of the associated calibration standard?
(Y) N N/A Were the retention times of the internal standards within +/- 20 seconds of the retention times of the associated calibration standard?

	#	Date	Lab ID/Reference	Internal Standard	Area (Limits)	RT (Limits)	Qualifications
CCV=	1357329		062209-MS2 MB	CBZ	453663 (814397-1900261)		J/UJ/P (all TCL)
			-2 (6/22)		775666		J/UJ/A (per date indicate)
			-4 ~~(6/22)~~		771601		J/UJ/P
			-14 (6/22)		639000		J/UJ/A
CCV=	1373512		-6 (6/23)		683336 (824107-1922916)		
			-10		310499		J/UJ/P
			-11 (6/23)		294772		J/UJ/A
CCV=	1165567		-1 (6/24)		348362 (699337-1631787)		
			-3 (6/24)		672066		
CCV=	1456174		-4		434929 (873704-2038644)		J/UJ/P
CCV=	774107		070909-MS2 MB		1122878 (464464-1083750)		
			-11		410216		J/UJ/A

IS1 (BCM) = Bromochloromethane
IS2 (DFB) = 1,4-Difluorobenzene
IS3 (CBZ) = Chlorobenzene-d5

LDC #: 21217A48b

SDG #: 209270

Laboratory: Environmental Analytical Service, Inc.

VALIDATION COMPLETENESS WORKSHEET

ADR/IV

Date: 8/06/09

Page: 1 of 1

Reviewer: SVG

2nd Reviewer: [illegible]

HOD: GC/MS Volatiles (EPA Method TO-15-SIM)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 6/16/09
II.	GC/MS Instrument performance check	A	
III.	Initial calibration	SW	% RSD ≤ 30%
IV.	Continuing calibration/ICV	A	CCV ≤ 30%
V.	Blanks	SW	~~Not reviewed for ADR validation.~~
VI.	Surrogate spikes	A	Not reviewed for ADR validation.
VII.	Matrix spike/Matrix spike duplicates	N	Not reviewed for ADR validation. Not reqd.
VIII.	Laboratory control samples	A	~~Not reviewed for ADR validation.~~ LCS/D
IX.	Regional Quality Assurance and Quality Control	N	
X.	Internal standards	SW	~~Not reviewed for ADR validation.~~
XI.	Target compound identification	A	Not reviewed for ADR validation.
XII.	Compound quantitation/CRQLs	A	Not reviewed for ADR validation.
XIII.	Tentitatively identified compounds (TICs)	N	Not reviewed for ADR validation.
XIV.	System performance	A	Not reviewed for ADR validation.
XV.	Overall assessment of data	A	~~Not reviewed for ADR validation.~~
XVI.	Field duplicates	SW	D = 6, 10
XVII.	Field blanks	SW	TB = 11

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples: ** Indicates sample underwent Level IV validation

Air

1	~~44-006A~~	11	~~44-016~~	21	062309-MS2 MB1		
2	44-007	12	44-017	22		32	
3	44-008	13	44-018	23		33	
4	44-009	14	~~44-006B~~	24		34	
5	44-010	15		25		35	
6	44-011 D	16		26		36	
7	44-012	17		27		37	
8	44-013	18		28		38	
	~~44-014~~	19		29		39	
10	44-015** D	20		30		40	

(no ICV) (no r²)

LDC #: 21217 A48b
SDG #: See Cover

VALIDATION FINDINGS CHECKLIST

Reviewer: JVG
2nd Reviewer: CF

Method: Volatiles (EPA Method TO-15)

Validation Area	Yes	No	NA	Findings/Comments
I. Technical holding times				
All technical holding times were met.	✓			
Canister pressure criteria was met.	✓			
II. GC/MS Instrument performance check				
Were the BFB performance results reviewed and found to be within the specified criteria?	✓			
Were all samples analyzed within the 12 hour clock criteria?	✓			
III. Initial calibration				
Did the laboratory perform a 5 point calibration prior to sample analysis?	✓			
Were all percent relative standard deviations (%RSD) ≤ 30% and relative response factors (RRF) > 0.05?		✓		
IV. Continuing calibration				
Was a continuing calibration standard analyzed at least once every 12 hours for each instrument?	✓			
Were all percent differences (%D) < 30% and relative response factors (RRF) > 0.05?	✓			
V. Blanks				
Was a method blank associated with every sample in this SDG?	✓			
Was a method blank analyzed at least once every 12 hours for each matrix and concentration?	✓			
Was there contamination in the method blanks? If yes, please see the Blanks validation completeness worksheet.	✓			
VI. Surrogate spikes				
Were all surrogate %R within QC limits?	✓			
If the percent recovery (%R) for one or more surrogates was out of QC limits, was a reanalysis performed to confirm samples with %R outside of criteria?			✓	
VII. Matrix spike/Matrix spike duplicates				
Was a matrix spike (MS) and matrix spike duplicate (MSD) analyzed for this SDG?		✓	✓	
Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?			✓	
VIII. Laboratory control samples				
Was an LCS analyzed for this SDG?	✓			
Was an LCS analyzed per analytical batch?	✓			
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?	✓			

LDC #: 21217A48b
SDG #: See Cover

VALIDATION FINDINGS CHECKLIST

Page: 2 of 2
Reviewer: JVG
2nd Reviewer: [illegible]

Validation Area	Yes	No	NA	Findings/Comments
IX. Regional Quality Assurance and Quality Control				
Were performance evaluation (PE) samples performed?		✓		
Were the performance evaluation (PE) samples within the acceptance limits?			✓	
X. Internal standards				
Were internal standard area counts within +/-40% from the associated calibration standard?		✓		
Were retention times within +/- 20.0 seconds from the associated calibration standard?	✓			
XI. Target compound identification				
Were relative retention times (RRT's) within + 0.06 RRT units of the standard?	✓			
Did compound spectra meet specified EPA "Functional Guidelines" criteria?	✓			
Were chromatogram peaks verified and accounted for?	✓			
XII. Compound quantitation/CRQLs				
Were the correct internal standard (IS), quantitation ion and relative response factor (RRF) used to quantitate the compound?	✓			
Were compound quantitation and CRQLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation?	✓			
XIII. Tentatively identified compounds (TICs)				
Were the major ions (> 10 percent relative intensity) in the reference spectrum evaluated in sample spectrum?			✓	
Were relative intensities of the major ions within ± 20% between the sample and the reference spectra?			✓	
Did the raw data indicate that the laboratory performed a library search for all required peaks in the chromatograms (samples and blanks)?		✓		
XIV. System performance				
System performance was found to be acceptable.	✓			
XV. Overall assessment of data				
Overall assessment of data was found to be acceptable.	✓			
XVI. Field duplicates				
Field duplicate pairs were identified in this SDG.	✓			
Target compounds were detected in the field duplicates.	✓			
XVII. Field blanks				
Field blanks were identified in this SDG.	✓			
Target compounds were detected in the field blanks.	✓			

TARGET COMPOUND WORKSHEET

METHOD: VOA (EPA Method TO-15)

A. Chloromethane	S. Trichloroethene	KK. Trichlorofluoromethane	CCC. tert-Butylbenzene	UUU. 1,2-Dichlorotetrafluoroethane	MMMM. Ethyl ether
B. Bromomethane	T. Dibromochloromethane	LL. Methyl-tert-butyl ether	DDD. 1,2,4-Trimethylbenzene	VVV. 4-Ethyltoluene	NNNN. Benzyl chloride
C. Vinyl choride	U. 1,1,2-Trichloroethane	MM. 1,2-Dibromo-3-chloropropane	EEE. sec-Butylbenzene	WWW. Ethanol	
D. Chloroethane	V. Benzene	NN. Diethyl ether	FFF. 1,3-Dichlorobenzene	XXX. Di-isopropyl ether	
E. Methylene chloride	W. trans-1,3-Dichloropropene	OO. 2,2-Dichloropropane	GGG. p-Isopropyltoluene	YYY. tert-Butanol	
F. Acetone	X. Bromoform	PP. Bromochloromethane	HHH. 1,4-Dichlorobenzene	ZZZ. tert-Butyl alcohol	
G. Carbon disulfide	Y. 4-Methyl-2-pentanone	QQ. 1,1-Dichloropropene	III. n-Butylbenzene	AAAA. Ethyl tert-butyl ether	
H. 1,1-Dichloroethene	Z. 2-Hexanone	RR. Dibromomethane	JJJ. 1,2-Dichlorobenzene	BBBB. tert-Amyl methyl ether	
I. 1,1-Dichloroethane	AA. Tetrachloroethene	SS. 1,3-Dichloropropane	KKK. 1,2,4-Trichlorobenzene	CCCC.1-Chlorohexane	
J. 1,2-Dichloroethene, total	BB. 1,1,2,2-Tetrachloroethane	TT. 1,2-Dibromoethane	LLL. Hexachlorobutadiene	DDDD. Isopropyl alcohol	
K. Chloroform	CC. Toluene	UU. 1,1,1,2-Tetrachloroethane	MMM. Naphthalene	EEEE. Acetonitrile	
L. 1,2-Dichloroethane	DD. Chlorobenzene	VV. Isopropylbenzene	NNN. 1,2,3-Trichlorobenzene	FFFF. Acrolein	
M. 2-Butanone	EE. Ethylbenzene	WW. Bromobenzene	OOO. 1,3,5-Trichlorobenzene	GGGG. Acrylonitrile	
N. 1,1,1-Trichloroethane	FF. Styrene	XX. 1,2,3-Trichloropropane	PPP. trans-1,2-Dichloroethene	HHHH. 1,4-Dioxane	
O. Carbon tetrachloride	GG. Xylenes, total	YY. n-Propylbenzene	QQQ. cis-1,2-Dichloroethene	IIII. Isobutyl alcohol	
P. Bromodichloromethane	HH. Vinyl acetate	ZZ. 2-Chlorotoluene	RRR. m,p-Xylenes	JJJJ. Methacrylonitrile	
Q. 1,2-Dichloropropane	II. 2-Chloroethylvinyl ether	AAA. 1,3,5-Trimethylbenzene	SSS. o-Xylene	KKKK. Propionitrile	
R. cis-1,3-Dichloropropene	JJ. Dichlorodifluoromethane	BBB. 4-Chlorotoluene	TTT. 1,1,2-Trichloro-1,2,2-trifluoroethane	LLLL. Methyl ethyl ketone	

LDC #: 21217A486
SDG #: 1 Cover

VALIDATION FINDINGS WORKSHEET
Initial bration

Reviewer: JVG
2nd Reviewer: [illegible]

METHOD: GC/MS VOA (EPA Method TO-15)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Did the laboratory perform a 5 point calibration prior to sample analysis?

Y N N/A Were all percent relative standard deviations (%RSD) ≤ 30% and relative response factors (RRF) ≥ 0.05?

#	Date	Standard ID	Compound	Finding %RSD (Limit: <30.0%)	Finding RRF (Limit: >0.05)	Associated Samples	Qualifications
	6/19/09	LCAL	KKK	46.46		10, 062309-MS2, MB	J/UJ/P
			MMM	46.42			

INICAL.15A

LDC #: 217 A & 8b
SDG #: See Cover

VALIDATION FINDINGS WORKSHEET
Blanks

Page: 1 of 1
Reviewer: DR
2nd Reviewer: [illegible]

METHOD: GC/MS VOA (EPA TO-15)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Was a method blank associated with every sample in this SDG?
Y N N/A Was a method blank analyzed at least once every 12 hours for each matrix and concentration?
Y N N/A Was there contamination in the method blanks? If yes, please see the qualifications below.

Blank analysis date: 6/23/09
Conc. units: ug/m3 Associated Samples: 10

Compound	Blank ID	Sample Identification								
	062309-MS2 MB	10 (1.62x)								
L	0.046									
U	0.070									
RRR	0.142		0.239/1.447 U							
SSS	0.058		0.088/0.741 U							
KKK	0.368		0.162/1.291 U							
HHHH	0.046									
CRQL										

Blank analysis date:
Conc. units: Associated Samples:

Compound	Blank ID	Sample Identification								
CRQL										

CIRCLED RESULTS WERE NOT QUALIFIED. ALL RESULTS NOT CIRCLED WERE QUALIFIED BY THE FOLLOWING STATEMENT:

Note: Common contaminants such as Methylene chloride, Acetone, 2-Butanone, and TICs that were detected in samples within ten times the associated method blank concentration were qualified as not detected, "U". Other contaminants within five times the method blank concentration were also qualified as not detected, "U".

LDC #: 2 17 A48b
SDG #: [illegible] Cover

Page: 1 of 1
Reviewer: JVG
2nd Reviewer: Q

VALIDATION FINDINGS WORKSHEET
Internal Standards

METHOD: GC/MS VOA (EPA Method TO-15)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y (N) N/A Were all internal standard area counts within +/- 40% of the associated calibration standard?

(Y) N N/A Were the retention times of the internal standards within +/- 20 seconds of the retention times of the associated calibration standard?

#	Date	Lab ID/Reference	Internal Standard	Area (Limits)	RT (Limits)	Qualifications
CCV = 1373512		10	CBZ	310499 (824107 - 1922916)		J/UJ/P (all TCL)

IS1 (BCM) = Bromochloromethane
IS2 (DFB) = 1,4-Difluorobenzene
IS3 (CBZ) = Chlorobenzene-d5

LDC#: 21217A48b
SDG#: See cover

VALIDATION FINDINGS WORKSHEET
Field Duplicates

Reviewer: JVL
2nd Reviewer: [illegible]

METHOD: GC/MS VOA (EPA Method TO 15-SIM)
Y N NA Were field duplicate pairs identified in this SDG?
Y N NA Were target analytes detected in the field duplicate pairs?

Compound Name	Conc (ug/m3)		RPD	Quals
	6	10	(≤30%)	
cis-1,2-Dichloroethene	0.063	0.086	31	
Benzene	1.103	0.629	55	
Carbon tetrachloride	0.573	0.325	55	
Trichloroethene	2.743	0.946	97	
Tetrachloroethene	0.208	1.157U 0.116U	NC	
m,p-Xylene	5.497	0.239	183	
o-Xylene	1.728	0.088	181	
1,2,4-Trichlorobenzene	0.385	0.162	82	
1,4-Dioxane	1.563	0.446U 0.045U	NC	

V:\FIELD DUPLICATES\21217A48b.wpd

LDC #: 21217A486
SDG #: See Cover

VALIDATION FINDINGS WORKSHEET
Field Blanks

Page: 1 of 1
Reviewer: JVG
2nd reviewer: [illegible]

METHOD: GC/MS VOA (EPA ~~SW-846 Method 8260B~~) TO-15

Y N N/A Were field blanks identified in this SDG?
Y N N/A Were target compounds detected in the field blanks?

Sample: 11 Field Blank / Trip Blank / Rinsate / Other _____ (circle one)

Compound	Concentration Units (ug/m3)
RRR	0.180
SSS	0.052
kkk	0.080
HHHH	0.552

Sample: _____ Field Blank / Trip Blank / Rinsate / Other _____ (circle one)

Compound	Concentration Units ( )

Sample: _____ Field Blank / Trip Blank / Rinsate / Other _____ (circle one)

Compound	Concentration Units ( )

LDC #: 2, 7A48b
SDG #: See Cover

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

Page: 1 of 1
Reviewer: SVG
2nd Reviewer: [illegible]

METHOD: GC/MS VOA (EPA Method TO-15)

The Relative Response Factor (RRF), average RRF, and percent relative standard deviation (%RSD) were recalculated for the compounds identified below using the following calculations:

$RRF = (A_x)(C_{is})/(A_{is})(C_x)$
average RRF = sum of the RRFs/number of standards
%RSD = 100 * (S/X)

A_x = Area of compound,
C_x = Concentration of compound,
S = Standard deviation of the RRFs
X = Mean of the RRFs

A_{is} = Area of associated internal standard
C_{is} = Concentration of internal standard

#	Standard ID	Calibration Date	Compound (Reference Internal Standard)	Reported RRF (0.20 std)	Recalculated RRF (0.20 std)	Reported Average RRF (Initial)	Recalculated Average RRF (Initial)	Reported %RSD	Recalculated %RSD
1	1 CAL	6/19/09	Methylene chloride (1st internal standard)	0.166	0.166	0.183	0.183	13.13	13.13
			Trichlorethene (2nd internal standard)						
			Toluene (3rd internal standard)						
2			Methylene chloride (1st internal standard)						
			Trichlorethene (2nd internal standard)						
			Toluene (3rd internal standard)						
3			Methylene chloride (1st internal standard)						
			Trichlorethene (2nd internal standard)						
			Toluene (3rd internal standard)						
4			Methylene chloride (1st internal standard)						
			Trichlorethene (2nd internal standard)						
			Toluene (3rd internal standard)						

Comments: Refer to Initial Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 217A48b
SDG #: See Cover

VALIDATION FINDINGS WORKSHEET
Continuing Calibration Results Verification

Reviewer: SVG
2nd Reviewer:

METHOD: GC/MS VOA (EPA TO-15)

The percent difference (%D) of the initial calibration average Relative Response Factors (RRFs) and the continuing calibration RRFs were recalculated for the compounds identified below using the following calculation:

% Difference = 100 * (ave. RRF - RRF)/ave. RRF
RRF = $(A_x)(C_{is})/(A_{is})(C_x)$

Where: ave. RRF = initial calibration average RRF
RRF = continuing calibration RRF
A_x = Area of compound, A_{is} = Area of associated internal standard
C_x = Concentration of compound, C_{is} = Concentration of internal standard

#	Standard ID	Calibration Date	Compound (Reference Internal Standard)	Average RRF (Initial)	Reported RRF (CC)	Recalculated RRF (CC)	Reported %D	Recalculated %D
1	062304-MS CCV	6/23/09	~~Methylene chloride~~ (1st Internal standard)	0.183	0.162	0.162	11.4	11.3
			Trichlorethene (2nd internal standard)					
			Toluene (3rd internal standard)					
2			Methylene chloride (1st internal standard)					
			Trichlorethene (2nd internal standard)					
			Toluene (3rd internal standard)					
3			Methylene chloride (1st internal standard)					
			Trichlorethene (2nd internal standard)					
			Toluene (3rd internal standard)					
4			Methylene chloride (1st internal standard)					
			Trichlorethene (2nd internal standard)					
			Toluene (3rd internal standard)					

Comments: Refer to Continuing Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 21217 A48b
SDG #: See Cover

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Reviewer: SJG
2nd reviewer: [illegible]

METHOD: GC/MS VOA (EPA Method TO-15)

Y N N/A Were all reported results recalculated and verified for all level IV samples?
Y N N/A Were all recalculated results for detected target compounds agree within 10.0% of the reported results?

Concentration = $\frac{(A_x)(I_s)(DF)}{(A_{is})(RRF)(V_o)(\%S)}$

A_x = Area of the characteristic ion (EICP) for the compound to be measured

A_{is} = Area of the characteristic ion (EICP) for the specific internal standard

I_s = Amount of internal standard added in nanograms (ng)

RRF = Relative response factor of the calibration standard.

V_o = Volume or weight of sample pruged in milliliters (ml) or grams (g).

Df = Dilution factor.

%S = Percent solids, applicable to soils and solid matrices only.

Example:

Sample I.D. # 10, ✓:

Conc. = $\frac{(16735)(0.2)(1.62)}{(310949)(0.183)(0.500)(\quad)}$

= 0.191 ppbv

ug/m3 = $\frac{(0.191)(78)}{23.68}$ = 0.629 ug/m3

#	Sample ID	Compound	Reported Concentration ( )	Calculated Concentration ( )	Qualification

APPENDIX F

Sampling Location Survey Report

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MERIDIAN SURVEYING ENGINEERING, INC

Wednesday, November 11, 2009

Sealaska Environmental Service LLC
1230 Columbia Street Suite 540
San Diego, CA 92101

RE Survey Services

Dear Michael R. Lewis ,

The letter is written to inform you of the survey we performed on November 6, 2009

Our survey data was based on NGS (National Geodetic Survey) Designation 941 4750 TIDAL 7 PID HT 0882 (see attached NGS datasheet). The Epoch data was 2007.00. California Coordinate system 83 (CCS83) State Plane Zone III. The vertical datum was NAVD 88 (North American Vertical Datum of 1988).

The Soil Gas Northing and Easting is measured form the north PVC. Also the PVC and rim elevations are measured from the north

Attached is a document with the coordinates and descriptions of the points that were located in the field. All points were located as directed by Duane in the field.

Sincerely,
MSE, Inc.

PROFESSIONAL LAND SURVEYOR
STANLEY T. GRAY
PLS 6784
Expires 09/30/10
STATE OF CALIFORNIA

Stanley T. Gray P.L.S
Principal

1812 Union Street
San Francisco 94123
TEL: (415) 440-4131
FAX: (415) 440-4132

777 Grand Avenue, Suite 202
San Rafael, CA 94901
TEL: (415) 456-5450
FAX: (415) 456-5451

Northing	Easting	Elevation PVC or Locate	Elevation RIM	Code
2110828.23	6043038.93	12.43		OTD 001
2110817.97	6043122.01	12.79		OTD 002
2110900.43	6043061.10	12.65		IND 001
2110894.69	6043103.07	12.72		IND 002
2110885.71	6043100.23	12.35	12.81	SG 001
2110868.32	6043085.78	12.84		IND 003
2110852.17	6043062.17	12.56	12.88	CG 002
2110853.45	6043051.09	12.79		IND 004
2110834.73	6043096.02	12.87		IND 005
2110820.43	6043080.97	12.91		IND 006
2110811.38	6043048.99	12.87		IND 007
2110784.87	6043050.43	12.89		INC 008
2110786.30	6043050.39	12.51	12.90	SG 003
2110782.98	6043108.61	12.88		IND 009

PROFESSIONAL LAND SURVEYOR
STANLEY T. GRAY
PLS 6784
Expires 09/30/10
STATE OF CALIFORNIA

11/11/09

The NGS Data Sheet

See file dsdata.txt for more information about the datasheet.

```
DATABASE =  ,PROGRAM = datasheet, VERSION = 7.73
1        National Geodetic Survey,   Retrieval Date = NOVEMBER  2, 2009
 HT0882 ***********************************************************************
 HT0882  FBN         -  This is a Federal Base Network Control Station.
 HT0882  TIDAL BM    -  This is a Tidal Bench Mark.
 HT0882  DESIGNATION -  941 4750 TIDAL 7
 HT0882  PID         -  HT0882
 HT0882  STATE/COUNTY-  CA/ALAMEDA
 HT0882  USGS QUAD   -  OAKLAND WEST (1993)
 HT0882
 HT0882                         *CURRENT SURVEY CONTROL
 HT0882  ___________________________________________________________________
 HT0882* NAD 83(2007)-  37 46 48.04867(N)    122 17 53.51878(W)     NO CHECK
 HT0882* NAVD 88     -         2.783  (meters)       9.13   (feet)  ADJUSTED
 HT0882  ___________________________________________________________________
 HT0882  EPOCH DATE  -        2007.00
 HT0882  X           -  -2,696,956.891 (meters)                     COMP
 HT0882  Y           -  -4,266,460.748 (meters)                     COMP
 HT0882  Z           -   3,886,155.927 (meters)                     COMP
 HT0882  LAPLACE CORR-           0.71  (seconds)                   USDV2009
 HT0882  ELLIP HEIGHT-         -29.645 (meters)          (02/10/07) NO CHECK
 HT0882  GEOID HEIGHT-         -32.44  (meters)                     GEOID09
 HT0882  DYNAMIC HT  -           2.781 (meters)       9.12  (feet)  COMP
 HT0882
 HT0882  ------- Accuracy Estimates (at 95% Confidence Level in cm) --------
 HT0882  Type    PID    Designation                      North   East  Ellip
 HT0882  ------------------------------------------------------------------
 HT0882  NETWORK HT0882 941 4750 TIDAL 7                  0.29   0.49   2.35
 HT0882  ------------------------------------------------------------------
 HT0882  MODELED GRAV-     979,975.4   (mgal)                       NAVD 88
 HT0882
 HT0882  VERT ORDER  -  FIRST     CLASS II
 HT0882
 HT0882.ITRF positions are available for this station.
 HT0882.The horizontal coordinates were established by GPS observations
 HT0882.and adjusted by the National Geodetic Survey in February 2007.
 HT0882
 HT0882.The datum tag of NAD 83(2007) is equivalent to NAD 83(NSRS2007).
 HT0882.See National Readjustment for more information.
 HT0882.No horizontal observational check was made to the station.
 HT0882.The horizontal coordinates are valid at the epoch date displayed above.
 HT0882.The epoch date for horizontal control is a decimal equivalence
 HT0882.of Year/Month/Day.
 HT0882
 HT0882.The orthometric height was determined by differential leveling
 HT0882.and adjusted in June 1991.
 HT0882
 HT0882.This Tidal Bench Mark is designated as VM 984
 HT0882.by the Center for Operational Oceanographic Products and Services.
 HT0882
 HT0882.The X, Y, and Z were computed from the position and the ellipsoidal ht.
 HT0882
 HT0882.The Laplace correction was computed from DEFLEC99 derived deflections.
```

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HT0882
HT0882.The ellipsoidal height was determined by GPS observations
HT0882.and is referenced to NAD 83.
HT0882
HT0882.The geoid height was determined by GEOID09.
HT0882
HT0882.The dynamic height is computed by dividing the NAVD 88
HT0882.geopotential number by the normal gravity value computed on the
HT0882.Geodetic Reference System of 1980 (GRS 80) ellipsoid at 45
HT0882.degrees latitude (g = 980.6199 gals.).
HT0882
HT0882.The modeled gravity was interpolated from observed gravity values.
HT0882
HT0882;                    North         East     Units Scale Factor Converg.
HT0882;SPC CA 3     -   643,578.886 1,841,610.008   MT  0.99992931   -1 06 03.3
HT0882;SPC CA 3     - 2,111,475.06  6,042,015.50   sFT  0.99992931   -1 06 03.3
HT0882;UTM  10      - 4,181,639.400   561,800.190   MT  0.99964704   +0 25 47.9
HT0882
HT0882!             -  Elev Factor  x  Scale Factor =   Combined Factor
HT0882!SPC CA 3     -   1.00000465  x   0.99992931  =   0.99993396
HT0882!UTM  10      -   1.00000465  x   0.99964704  =   0.99965169
HT0882
HT0882                          SUPERSEDED SURVEY CONTROL
HT0882
HT0882  NAD 83(1998)-  37 46 48.04137(N)    122 17 53.51060(W) AD(1998.50) A
HT0882  ELLIP H (04/06/00)  -29.632  (m)                       GP(1998.50) 3 1
HT0882  NAD 83(1992)-  37 46 48.04032(N)    122 17 53.50989(W) AD(1997.30) 1
HT0882  ELLIP H (07/10/98)  -29.615  (m)                       GP(1997.30) 4 1
HT0882  NAD 83(1992)-  37 46 48.03852(N)    122 17 53.50877(W) AD(1995.42) 1
HT0882  ELLIP H (12/22/97)  -29.564  (m)                       GP(1995.42) 4 1
HT0882  NAVD 88 (12/22/97)    2.78   (m)            9.1    (f) LEVELING    3
HT0882  NGVD 29 (10/21/93)    1.958  (m)            6.42   (f) ADJUSTED    1 2
HT0882
HT0882.Superseded values are not recommended for survey control.
HT0882.NGS no longer adjusts projects to the NAD 27 or NGVD 29 datums.
HT0882.See file dsdata.txt to determine how the superseded data were derived.
HT0882
HT0882_U.S. NATIONAL GRID SPATIAL ADDRESS: 10SEG6180081639(NAD 83)
HT0882_MARKER: DB = BENCH MARK DISK
HT0882_SETTING: 32 = SET IN A RETAINING WALL OR CONCRETE LEDGE
HT0882_SP_SET: CONCRETE SEAWALL
HT0882_STAMPING: NO 7 1939
HT0882_MARK LOGO: CGS
HT0882_PROJECTION: FLUSH
HT0882_MAGNETIC: N = NO MAGNETIC MATERIAL
HT0882_STABILITY: C = MAY HOLD, BUT OF TYPE COMMONLY SUBJECT TO
HT0882+STABILITY: SURFACE MOTION
HT0882_SATELLITE: THE SITE LOCATION WAS REPORTED AS SUITABLE FOR
HT0882+SATELLITE: SATELLITE OBSERVATIONS - August 06, 2007
HT0882
HT0882  HISTORY     - Date     Condition        Report By
HT0882  HISTORY     - 1939     MONUMENTED       CGS
HT0882  HISTORY     - 1956     GOOD             NGS
HT0882  HISTORY     - 1963     GOOD             NGS
HT0882  HISTORY     - 19880930 GOOD             NGS
HT0882  HISTORY     - 19950915 GOOD             NGS
HT0882  HISTORY     - 19980429 GOOD             NGS
HT0882  HISTORY     - 20010323 GOOD             NGS
HT0882  HISTORY     - 20070806 GOOD             NGS
HT0882
```

```
HT0882                          STATION DESCRIPTION
HT0882
HT0882'DESCRIBED BY NATIONAL GEODETIC SURVEY 1956
HT0882'AT ALAMEDA.
HT0882'AT ALAMEDA, AT THE U.S. NAVAL AIR STATION, AT THE T JUNCTION OF
HT0882'ATLANTIC AVENUE AND 5TH STREET, IN TOP OF THE CONCRETE BULKHEAD
HT0882'AT THE NORTHEAST CORNER OF A LAGOON, 100.0 FEET SOUTHWEST OF AND
HT0882'ACROSS 5TH STREET FROM THE SOUTHWEST CORNER OF BUILDING 66, 38.9
HT0882'FEET WEST OF THE WEST CURB OF THE STREET, 22 FEET NORTH OF THE
HT0882'PROLONGATION OF ATLANTIC AVENUE, 9.5 FEET NORTHWEST OF THE CENTER
HT0882'ONE OF THREE RAILS PAINTED YELLOW TO PROTECT HIGH VOLTAGE BOXES,
HT0882'7.5 FEET WEST OF BENCH MARK LAGOON N.E. (USN), AND ABOUT LEVEL
HT0882'WITH THE STREET.
HT0882
HT0882                          STATION RECOVERY (1963)
HT0882
HT0882'RECOVERY NOTE BY NATIONAL GEODETIC SURVEY 1963
HT0882'RECOVERED IN GOOD CONDITION.
HT0882
HT0882                          STATION RECOVERY (1988)
HT0882
HT0882'RECOVERY NOTE BY NATIONAL GEODETIC SURVEY 1988
HT0882'RECOVERED IN GOOD CONDITION WITH THE FOLLOWING EXCEPTIONS.
HT0882'DELETE--100.4 FT SOUTHWEST AND ACROSS 5TH STREET FROM THE SOUTHWEST
HT0882'CORNER OF BUILDING 66.  ADD--36.9 M (121.1 FT) SOUTHWEST OF THE
HT0882'SOUTHWEST CORNER OF BUILDING 66.
HT0882
HT0882                          STATION RECOVERY (1995)
HT0882
HT0882'RECOVERY NOTE BY NATIONAL GEODETIC SURVEY 1995 (JDD)
HT0882'RECOVERED AS DESCRIBED.
HT0882
HT0882                          STATION RECOVERY (1998)
HT0882
HT0882'RECOVERY NOTE BY NATIONAL GEODETIC SURVEY 1998 (CSM)
HT0882'THE STATION IS LOCATED IN ALAMEDA, AT THE U.S. NAVAL AIR STATION AT
HT0882'ALAMEDA POINT, ON THE WEST SIDE OF THE JUNCTION OF WEST ATLANTIC AVE
HT0882'AND 5TH STREET, AT THE SOUTHEAST CORNER OF ABANDONED TAXIWAY H, IN TOP
HT0882'OF THE SEAWALL AT THE NORTHEAST CORNER OF SEAPLANE LAGOON.
HT0882'OWNERSHIP--U.S. NAVY.  TO REACH THE STATION FROM THE NORTHBOUND LANES
HT0882'OF INTERSTATE HIGHWAY 880 AT THE BROADWAY EXIT IN OAKLAND, GO NORTH
HT0882'FOR 0.64 KM (0.40 MI) ON THE EXIT RAMP TO A TRAFFIC LIGHT. TURN LEFT,
HT0882'WEST FOR ABOUT 30 M (98.4 FT) TO 5TH ST.  TURN LEFT, SOUTH AND GO INTO
HT0882'THE WEBSTER ST TUBE (UNDER FREEWAY) FOR 2.41 KM (1.50 MI) TO THE
HT0882'INTERSECTION OF ATLANTIC AVE.  TURN RIGHT, WEST-SOUTHWEST FOR 1.44 KM
HT0882'(0.90 MI) ON ATLANTIC AVE TO THE ALAMEDA POINT GATE AND GUARDHOUSE AT
HT0882'THE NAVAL AIR STATION.  CHECK IN AND CONTINUE WESTERLY FOR 0.48 KM
HT0882'(0.30 MI) ON ATLANTIC AVENUE TO THE JUNCTION OF 5TH STREET AND THE
HT0882'STATION AHEAD IN THE SEAWALL.  LOCATED 18.0 M (59.1 FT) WEST OF THE
HT0882'CENTER OF 5TH STREET, 6.7 M (22.0 FT) NORTH OF THE EXTENDED CENTER OF
HT0882'ATLANTIC AVENUE, 4.9 M (16.1 FT) EAST OF THE EAST END OF A CHAIN LINK
HT0882'FENCE, 4.0 M (13.1 FT) WEST OF THE EAST END OF THE SEAWALL, 0.8 M (2.6
HT0882'FT) NORTH OF THE SOUTH EDGE OF THE SEAWALL, ABOUT LEVEL WITH THE
HT0882'GROUND SURFACE AND FLUSH WITH THE TOP OF THE SEAWALL.
HT0882
HT0882                          STATION RECOVERY (2001)
HT0882
HT0882'RECOVERY NOTE BY NATIONAL GEODETIC SURVEY 2001 (AJL)
HT0882'RECOVERED AS DESCRIBED.
HT0882'
```

```
HT0882
HT0882                          STATION RECOVERY (2007)
HT0882
HT0882'RECOVERY NOTE BY NATIONAL GEODETIC SURVEY 2007 (CDL)
HT0882'GO TO THE ATLANTIC AVE GATE OF THE OLD ALAMEDA NAVAL AIR STATION.
HT0882'DRIVE   WEST ON ATLANTIC AVE TO THE WEST SIDE OF THE T INTERSECTION OF
HT0882'ATLANTIC AVE AND FERRY POINT. GO NORTH WEST 5 METERS TO THE THE CORNER
HT0882'OF THE FENCE. LOOK DOWN THROUGH THE FENCE TO SEE THE TIDAL BENCH MARK.
HT0882'
HT0882'
HT0882'PICTURES THAT SHOW THE AREA HAVE BEEN SUBMITTED TO OPUS DB

*** retrieval complete.
Elapsed Time = 00:00:00
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APPENDIX G

RESPONSES TO COMMENTS

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RESPONSE TO COMMENTS FOR
DRAFT INDOOR AIR, OUTDOOR AIR, AND SOIL GAS SAMPLING REPORT
BUILDINGS 163 AND 163A, OU-2B, IR SITE 4
ALAMEDA POINT
ALAMEDA, CA
FEBRUARY 2010
DCN: SEST-1104-0044-0035

Reviewed by: James M. Polisini, PhD, Senior Toxicologist, and Michael J. Wade, PhD, Senior Toxicologist, Department of Toxic Substances Control (DTSC), Office of Human and Ecological Risk (HERO), Ecological Risk Assessment Section (ERAS)
Comments Dated: April 8, 2010
Comments Received by SES-TECH: May 3, 2010

GENERAL COMMENT	RESPONSE
Comment 1: The investigation of risk and/or hazard associated with indoor air exposure to Volatile Organic Compounds (VOCs) follows the general outline of increasing complexity and site-specific nature recommended by HERO of Johnson and Ettinger modeling of indoor air concentration, sub-slab soil gas collection and indoor air sampling. Estimates of risk and/or hazard are based on commercial/ industrial use criteria. Remediation based on these risk and/or hazard estimates would require a deed restriction, or document of similar legal standing, to prevent development of residential housing, school, day care facilities or hospitals.	**Response 1:** Comment acknowledged. The objective of this investigation was primarily to assess exposure to current tenants under existing conditions (commercial/industrial use). Future use is being evaluated under CERCLA. The Navy is in the process of developing the revised draft Feasibility Study (FS) for OU-2B. Remedial alternatives and appropriate site controls will be evaluated in the FS.

RESPONSE TO COMMENTS FOR
DRAFT INDOOR AIR, OUTDOOR AIR, AND SOIL GAS SAMPLING REPORT
BUILDINGS 163 AND 163A, OU-2B, IR SITE 4
ALAMEDA POINT
ALAMEDA, CA
FEBRUARY 2010
DCN: SEST-1104-0044-0035

SPECIFIC COMMENTS	RESPONSES
Comment 1: Building 163 is described as a large brick building with a 28 to 32 foot-high vaulted ceiling (Section 2.1, page 2-1). There appears to be no description of the number and size of windows and doors for Building 163, whether any windows and doors were closed or open during indoor air sampling and how long Building 163 was allowed to equilibrate with doors and windows closed prior to indoor air sampling. Please provide this information in the text. Also, please provide a photograph of the exterior of Building 163 showing any significant penetrations.	**Response 1:** The number and general dimensions of windows and doors will be noted in the text of Section 2.1, page 2-1. The status of doors and windows were left in their natural working state for this time of year (summer). That is, doors and windows were left in their normal work use configuration which, based on tenant interviews, were variously open or closed as encountered during this sampling event. Photographs of the building exterior will be provided in Appendix B.
Comment 2: Two indoor air investigations conducted on Building 163 and Building 163A are described as having been conducted on 'behalf of Alameda Reuse and Redevelopment Authority (ARRA)' (Section 2.2.4, page 2-4). The rationale for the sampling locations for this June, 2009 sampling (Figure 6 to Figure 13) appears to have been association with observed penetrations of the Building 163 slab (Section 4.2.1, page 4-4). This comment is meant for the DTSC Project Manager and no response is required from the Navy or Navy contractors.	**Response 2:** Comment acknowledged. No response required.

RESPONSE TO COMMENTS FOR DRAFT INDOOR AIR, OUTDOOR AIR, AND SOIL GAS SAMPLING REPORT BUILDINGS 163 AND 163A, OU-2B, IR SITE 4 ALAMEDA POINT ALAMEDA, CA FEBRUARY 2010 DCN: SEST-1104-0044-0035	
Comment 3: A chemical inventory of products found stored in tenant office and shop areas was conducted to evaluate the potential for work product contribution to indoor air concentrations (Section 4.1, page 4-1). Interviews of an individual identified as 'Mr. Kichi' (Section 4.1.4, page 4-3) indicated that the tenants no longer actually perform work within Building 163, but maintain their supplies in the separate office or shop areas. Despite this description, products were photographed in the southwest corner of Building 163 following the interview, but then were stored in cabinets and on shelves by the time the indoor air sampling was performed (Section 4.1.4, page 4-4; Appendix B Photographs). This description is meant for the DTSC Project Manager and no response is required from the Navy or Navy contractor.	**Response 3:** Comment acknowledged. No response required.
Comment 4: Please indicate in the text (Section 4.2, page 4-4) and on the figures of sample location (Figure 3 and Figure 4) the wind direction potentially affecting the 'upwind' and 'downwind' outdoor air samples based on the atmospheric data (Table 4). The 'upwind' and 'downwind' location should also be indicated along with the Location ID in the tabular presentation of the outdoor air concentrations (Table 6).	**Response 4:** The observed wind direction will be added to Figures 3 and 4 as measured near the outdoor air sampling locations to better illustrate the effect on 'upwind' and 'downwind' air samples and described in the text of Section 4.2, paragraph 2, page 4-4. The outdoor air samples will be labeled in Table 6 as to their 'upwind' and 'downwind' location.

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Comment 5: The 48 hour equilibration period after installation of sub-slab sampling ports (Section 4.3.1, page 4-7) is in accordance with DTSC guidance (http://www.dtsc.ca.gov/AssessingRisk/upload/HERD_POL_Eval_Subsurface_Vapor_Intrusion_interim_final.pdf). This comment is meant for the DTSC Project Manager and no response is required from the Navy or Navy contractor.	**Response 5:** Comment acknowledged. No response required.
Comment 6: Indoor air samples, outdoor air samples and sub-slab soil gas samples were analyzed using EPA Method TO-15 (Section 5.0, page 5-1). The accuracy and/or precision of naphthalene analysis by TO-15 can be affected if the moisture content of the standard does not match the moisture content of the air sample (Hayes, et al., 2005). Please list the moisture content of each indoor air sample, outdoor air sample and sub-slab air sample in addition to the moisture content of the laboratory standard used for naphthalene in the TO-15 analysis.	**Response 6:** Moisture content analyses of the outdoor air, indoor air and sub-slab vapor samples were not specified in the Sampling and Analysis Plan. Both analytical laboratory and data validation found the resultant analysis data valid and usable, and analytical procedure for TO-15 was properly followed as presented in Appendix D.

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Comment 7: Estimates of cancer risk and/or hazard are made by comparison to the OEHHA CHHSLs and the risk-based SFRWQCB ESLs (Section 5.4, page 5-5). More recent ESLs have been released in 2008 (http://www.swrcb.ca.gov/rwqcb2/esl.shtml) subsequent to the 2007 ESLs specified in the work plan. As this is the first document estimating risk and/or hazard based on these 2009 air samples, HERO/ERAS recommends that the ELS-based estimates of risk and/or hazard be based on the most recent SFRWQCB ESL values. This may involve only a comparison of the 2007 to the 2008 ESL values for the Building 163/163A 15 Contaminants of Potential Concern (COPC) and a change in the citation if there is no difference in ESL values between the 2007 and 2008 ELS releases.	**Response 7:** The 2008 SFRWQCB ESLs were reviewed relative to the 2007 ESLs used in the report (Section 5.4, page 5-5) and presented in Table 10. The ESLs for the COPC's for this project did not change between 2007 and 2008. The citations in Sections 5.1 and 7.0, and Tables 1, 5, 6, 7, 9, and 10 will be corrected to reflect the 2008 ESL source.
Comment 8: The detected 1,4-dioxane air concentration is correctly compared to the EPA Regional Screening Level (RSL) (Section 5.1.2, page 5-3; Section 5.4.1, page 5-6) as outlined in HERO guidance on the use of RSLs and Preliminary Remediation Goals (PRGs) (http://www.dtsc.ca.gov/AssessingRisk/upload/HHRA-Note-3.pdf). The value used, 1.59 µg/m3, is correct. This comment is meant for the DTSC Project Manager and no response is required from the Navy or Navy contractors.	**Response 8:** Comment acknowledged. No response required.

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Comment 9: One objective of this 2009 investigation is to calculate attenuation factors (AFs) between the sub-slab soil gas concentration and the indoor air concentration (Section 5.3, page 5-4). While the fact that some of the derived AFs approximate the AF estimated by the Johnson and Ettinger model is informative, HERO does not recommend use of the cross-sample average AF based on a single sampling event as the definitive AF for each COPC at Building 163/163A. Additional sampling events to develop AFs based on a different sampling event may be required to demonstrate that the AFs developed from this sampling are representative of AFs over different weather conditions. At a minimum some upper-bound estimate of each COPC-specific AF (e.g., 95 % Upper Confidence Limit on the mean, or upper percentile AF value) should be used in any application of the derived AFs.	**Response 9:** The sampling results presented in this report were for a single event (Summer 2009) however, it is follow-on work from previous sampling events (Winter 2006, Fall 2006 and Spring 2007 – See Appendix A). Sub-slab soil gas sampling has now been performed at Bldgs. 163/163A covering all seasons, and indoor air sampling has been performed during Summer and Winter. The comparison of current sub-slab sampling results with previous sampling results indicates that all COPC concentrations were generally order-of-magnitude similar except for trichloroethene (TCE) which was elevated this sampling event; notably in the southwest corner of Building 163 (SG-003). A comparison of previous indoor air sampling results (Appendix A) and this sampling events' results (Table 5) indicates very similar results for TCE and other chlorinated VOCs known to be present in sub-slab soil gas. The primary objectives for this sampling effort were to identify TCE 'hot spots' beneath Bldgs 163/163A, and determine whether an unacceptable industrial exposure risk existed. Both these objectives were accomplished. No additional indoor air, outdoor air or sub-slab soil gas sampling is planned for Building 163/163A.

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Comment 10: Adjusted Indoor Air Concentration, calculated as the indoor air concentration minus the outdoor air concentration is used to develop the AF comparison to sub-slab air concentration (Section 5.3, page 5-4). The estimate of outdoor air concentration is based on only two samples. First, the location of the groundwater plume and any soil contamination must be indicated with the outdoor air sample locations (Figure 3). Given the proximity of the downwind outdoor air sample location to the building, any entrainment of COPCs from the groundwater plume or soil contamination would elevate the estimate of outdoor air concentration with a subsequent decrease in the derived AF. Second, the method of developing the outdoor air concentration based on two outdoor air samples requires more detailed discussion. While a comparison of upwind to downwind outdoor air concentrations may provide some comparison of releases to air outside the Building 163/163A footprint, it would seem reasonable to base the outdoor air concentration for the calculation of 'adjusted indoor air' only on the upwind outdoor air sample. Development of the outdoor air concentration term as the average of the two outdoor air samples (Section 5.4.2, page 5-6) may lead to an underestimate of the risk and/or hazard estimate for 'adjusted' indoor air concentrations if the downwind outdoor air sample is influenced by the groundwater plume or soil contamination. Regardless of the term developed as representative of outdoor air concentration the risk and/or hazard estimates must continue to include both the total risk and/or hazard together with some estimate of 'incremental' risk and/or hazard as now presented	**Response 10:** Plume 4-2, the chlorinated solvent plume originating from Bldg. 360 immediately east of Bldg. 163/163A is primarily a 1,1 DCE plume. Separately, TCE has been reported in soil and groundwater beneath and adjacent to Bldg 163 (former OWS-163-southwest corner of the building) at levels indicative of a local release (TtEC, 2009). Current and previous results for sub-slab soil gas support this spatial difference of these two VOCs(Table 1) (i.e., , 1,1-DCE is not reported above the reporting limit beneath Bldg 163 and TCE is elevated). Both outdoor air sampling locations are equally located within the plume area, although the 'down wind' outdoor air sample (OTD-002) is physically located closer to Plume 4-2. Neither TCE, nor 1, 1-DCE were reported in outdoor air. The wind direction will be added to Figure 3. Regarding averaging the outdoor air concentrations to calculate the adjusted indoor air concentrations and, consequently, the AFs: The use of *only* the up wind outdoor air concentrations (OTD-001) would lower the adjusted indoor air concentration for naphthalene and raise it for carbon tetrachloride. This variability was the reason for using the averaged outdoor air concentrations from both sides of the building to represent ambient outdoor air.

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Comment 11: One soil gas concentration is described as 'above the MCL for PCE' (Section 5.3, page 5-5). This is most likely a typographic error for Method Detection Limit (MDL) rather than a comparison of soil gas concentration to a drinking water Maximum Contaminant Level. Please correct this typographic error.	**Response 11:** Comment acknowledged. The misuse of 'MCL' in place of MDL will be corrected in Section 5.3, page 5-5.
Comment 12: The two order of magnitude range of AFs for benzene is taken as potentially 'indicative of influence from another source of the chemical besides sub-slab soil gas.' (Section 5.3, page 5-5) without any justification. The difference in AF could as easily be due to differences in the construction of the slab among the sample locations or preferential migration pathways. Please provide some basis for the proposed additional benzene source or amend the text to simply note the large range of benzene AFs.	**Response 12:** Benzene is not present in groundwater beneath Bldg 163/163A. Soil gas results for benzene beneath Building 163/163A are estimated below the laboratory reporting limit. Benzene is, however, a known component of chemicals stored onsite and is present in outdoor air. The above lines of evidence indicate benzene is not a vapor intrusion issue, and negates the calculation of an AF. Photographs of some of the fuel containers are included in Appendix B, page 7. The text will be amended to note the range of benzene AFs.
Comment 13: Estimates of total risk and/or hazard, based on maximum indoor air concentrations, are presented together with 'incremental' indoor air risk and/or hazard after subtraction of an outdoor air concentration. Presentation of both risk and/or hazard estimates is commonly requested by HERO. This comment is meant for the DTSC Project Manager and no response is required from the Navy or Navy contractors.	**Response 13:** Comment acknowledged. No response required.

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CONCLUSIONS	**RESPONSE**
Conclusion 1: Additional details of the Building 163/163A sampling (e.g., closure or non-closure of doors and windows) should be provided. Additional evaluation of differences in the concentrations obtained in the two outdoor air samples, the potential influence of the groundwater plume on the downwind sample, and an acceptable method of developing an outdoor air concentration is required.	**Response 1:** Conclusions acknowledged. Additional details of the building sampling will be provided as described in Response to Comment 1, above. Evaluation of outdoor air sample concentrations will be presented as discussed in Response to Comment 10, above.
Conclusion 2: The risk and/or hazard estimates provided are for a single sampling event. Additional sampling events may be necessary to determine whether indoor air infiltration varies. Some upper bound estimate of the Attenuation Factors (AFs) developed should be used rather than a simple average.	**Response 2:** Three separate indoor air sampling events have reported consistent results for COPCs reported in indoor air. These values are within the risk management range defined for CERCLA under the NCP. Additional indoor air and soil gas sampling are not warranted.