Groundwater Monitoring Report
First Quarter 2004

Brenntag Mid-South, Inc.
Brenntag Chemical Distribution Facility
139 East Soper Street
St. Louis, Missouri
EPA ID No. MOD000830414

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SUPERFUND RECORDS

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April 2004

PREPARED FOR:

Brenntag Mid-South, Inc.
139 East Soper Street
St. Louis, Missouri

ARCADIS
Infrastructure, buildings, environment, communications

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1.0 Introduction

ARCADIS G&M, Inc. (ARCADIS), on behalf of Brenntag Mid-South, Inc. (Brenntag) conducts quarterly groundwater monitoring activities at the chemical distribution facility located at 139 East Soper Street, St. Louis, Missouri (Figure 1).

Groundwater quality monitoring is performed on a quarterly basis to evaluate the nature and extent of volatile organic compounds (VOCs) in groundwater. This report presents the results of the quarterly groundwater monitoring event conducted on February 10-12, 2004. The groundwater monitoring activities were performed in general accordance with ARCADIS' standard operating procedures, which are consistent with general environmental industry standards.

1.1 Background

Brenntag owns and operates the chemical distribution facility, located on the southeast side of St. Louis. The site, encompassing approximately 14.89 acres, is located in an industrial area on the west bank of the Mississippi River. Brenntag AG acquired Holland Chemical International (HCI) - Chemtech in December of 2000 and currently operates the facility under their subsidiary Brenntag Mid-South, Inc. HCI acquired the site from Chemtech Industries, Inc. (CII) in 1992 and operated under the name HCI- Chemtech Distribution, Inc. CII initiated operations at the facility in 1979.

The site is located in an industrial area east of Broadway Avenue that runs parallel to the Mississippi river approximately 200 feet (ft) northwest of the facility. Broadway Avenue separates the industrial area from residential areas to the northwest. An inactive United States Coast Guard (USCG) station is located immediately adjacent and northeast of the site. A metal recycler, Southern Metal, is located to the northwest of the facility. The Mississippi River and the facility barge dock are located east and southeast of the site, respectively. To the southwest are Lone Star Cement Company, a cement mixing and distribution facility, and Rhone-Poulene Agricultural Company, an agricultural chemical mixing and storage facility. The closest residences are approximately 1,000 ft to the northwest of the facility. There are no schools, hospitals, or sensitive environments reported to be near the site (Figure 2).

The current layout of the Brenntag/HCI Chemtech St. Louis facility is shown in Figure 3. The facility consists of a 4,700 square foot office, a 32,900 square foot warehouse, and a 5,700 square foot maintenance shop. The warehouse includes space for the storage of drums, a maintenance area, a solvent drum filling area, an acid drum filling

room, an acid and caustic drum rinsing room, a "white room" for handling pharmaceutical and food grade chemicals, and an 8,500 gallon blend tank in the solvent drum filling room. A small laboratory building is located across Broadway Avenue approximately 500 ft west of the facility (Figure 2).

In 1995, Chemtech acquired the adjacent property located south of the Chemtech facility from St. Louis Steel Castings, Inc. (Steel Castings). The area of the acquired site was 8.69 acres. All of the buildings were removed prior to the Chemtech purchase of the Steel Castings site. Subsequent to the purchase of the Steel Castings site, two new tank farms, with improved secondary containment, have been constructed. Several original tanks have been relocated to these new tank farms (Figure 3).

There are no underground storage tanks or underground pipelines at the facility. Currently, there are 76 above ground storage tanks at the site with a storage capacity of 7, 728,629 gallons. Liquid chemicals handled at the site include caustics, acids, chlorinated solvents, aliphatic solvents, ketones, alcohols, surfactants, heat transfer fluids, glycols, and acetates. The facility receives bulk liquid chemicals in barges, rail cars, and trucks. These chemicals are transferred to bulk storage tanks. Dry chemicals and packaged liquid chemicals are received by truck. From the bulk storage tanks, chemicals are delivered to customers in bulk or are transferred to 55-gallon drums for shipment to customers.

Each tank is individually pumped to the truck loading areas and the solvent filling areas to minimize the need for line flushing. Chemicals may also be blended prior to delivery in bulk or prior to being transferred to drums. Blending operations are conducted in 4,000 and 1,000-gallon tanks in the warehouse, and in a 1,100-gallon tank in the white room. All chemical transfer operations take place in areas with spill containment, including concrete catch basins. All drums are sent off-site for reclaiming or recycling, except acid or caustic drums that are rinsed at the site.

1.2 Hydrogeologic Setting

The ground surface slopes gently east-toward the west bank of the Mississippi River. There are no notable drainage channels on the site, although easterly flowing drainage channels are present both north and south of the site.

The site is underlain by a heterogeneous fill, sand and silt layers which appear to be composed of natural sediments mixed with slag, an underlying silty clay, and limestone bedrock. The fill consists of sandy silt to silty sand with some gravel rich layers. A distinct material described as slag is found in amounts varying from 0 to greater than

50 percent of the fill. Two thin layers (less than six inches thick) composed completely of slag have been defined. The amount of slag appears to increase to the north, toward the Coast Guard property, and to the east towards the river, particularly on the Coast Guard property. Predominantly slag was encountered from near surface to greater than 40 feet below ground surface at the location of recovery well RW-1 that was installed for the purpose of conducting a groundwater pump test. The source of the slag is unknown. A reasonable speculation is that the slag was imported as fill from the operations at the St. Louis Steel Castings facility that is adjacent to the Brenntag/HCI Chemtech facility to the south.

The sand and silt layers have apparently been distinguished in the drill logs by the lack of slag in the sediment and relative amounts of silt and sand. These units have less continuity than the layer composed as fill. Neither this unit nor the associated fill have distinct layers described in the drill logs; however, it is probable that some indistinct layering exists based on the variability of the fill described in the logs.

A silty clay unit comprised of river sediments underlies the heterogeneous fill material. The features which distinguish this unit from the overlying fill material are: 1) the black to dark gray color; 2) the increased amount of organic material; 3) the soft texture; 4) the presence of distinct layers; and 5) the sharp decrease in organic vapor meter readings of headspace sample to zero in this layer.

The limestone bedrock consists of one to two ft of weathered limestone overlying competent bedrock. Both the drill augers and drive samplers were unable to penetrate the bedrock.

Previous investigations determined that the groundwater beneath the site is hydraulically connected and therefore is affected by the river elevation. At normal river stage, groundwater is approximately 20 ft below the ground surface (bgs). Groundwater flow under normal flow conditions is toward the Mississippi River. However, during periods of high precipitation and/or high flow in the Mississippi River, significant changes in the groundwater flow direction can occur, including reversal of flow away from the River. There are no known beneficial uses of the groundwater near the site, and there are no known water supply wells in the site vicinity.

1.3 Recent Site Characterization Activities

Additional site characterization activities were conducted in 2003 at the United States Coast Guard (USCG) Old Base located adjacent and north of the Brenntag facility. A

recovery well and three observation wells were installed near the eastern property boundary of the USCG Old Base in late July 2003. These wells were utilized to conduct a short-term groundwater pump test. Slug tests were conducted at selected monitoring wells at the USCG Old Base and Brenntag facility in late August 2003. A survey was conducted to obtain the top of casing elevation of the recovery and observation wells. The elevation was also determined on the east side of the boom dock at the USCG Old Base. This point will provide a station to gauge the river elevation during future fluid level monitoring events.

2.0 Description of Monitoring Activities

2.1 Monitoring Well Selection and Location

Several subsurface investigations have been conducted at the Brenntag facility commencing in 1992 with the installation of two groundwater monitoring wells (MW-1 and MW-2) and one soil boring. All monitoring well locations are depicted on Figure 3. The USCG also conducted a subsurface investigation in 1992 on their property located north of the Brenntag facility. Nine monitoring wells and eight boreholes were installed on the USCG property. As a result of the USCG investigation, three additional monitoring wells (MW-3, MW-4, and MW-5) were installed at the Brenntag site in 1997. Eight monitoring wells (MW-6 through MW-13) were installed in November 1999 in attempt to define the limits of groundwater impacts at the Brenntag site. Currently, a total of 13 monitoring wells are located on the Brenntag property. USCG Wells MW-4 and MW-7 were either destroyed or covered with soil during decommission of the site structures in 2003.

All of the Brenntag monitoring wells are completed in the Mississippi River alluvial aquifer with total depths ranging from approximately 22 ft below land surface (bls) to 47 ft bls. Several wells were installed with screens below the water table. These wells include MW-3, MW-4, MW-5, MW-9, and MW-12. All wells were constructed with 2-inch diameter Schedule 40 PVC riser pipe with 10 to 20 ft of 0.020-inch machine-slotted PVC well screen. Specific well completion data is summarized in Table 1.

2.2 Summary of Quarterly Monitoring Event

ARCADIS personnel conducted quarterly monitoring activities on February 10 -12, 2004. Static groundwater level measurements were collected from all monitoring wells during the February 2004 sampling event. Groundwater samples were collected from each of the 13 monitoring wells.

3.0 Fluid-Level Monitoring

An electronic water level probe was used to gauge the static water level in each well. Water level measurements began with the upgradient wells (i.e., inferred least potential for impact) and proceeded to the downgradient wells (i.e., inferred most potential for impact). All water-level measurements were collected within a single 24-hour period, measured at least two times to check the reproducibility of the measurement data, and then recorded on field logs. The water level probe was decontaminated prior to measuring the first well, and between each subsequent well. The water level data is included in Table 2.

4.0 Groundwater Quality Monitoring

Prior to well purging and sampling, each well was inspected for damage that may impact the groundwater-monitoring program. No evidence of standing water, tampering, subsidence, or frost heaving, was observed. Well depth measurements indicate excessive silt or sand has accumulated within most of the well screens.

4.1 Well Purging and Sample Collection

Depth to groundwater and total well depth was used to calculate the volume of water in the well casing. All wells were purged and sampled using low-flow purging and sampling procedures with the exception of MW – 11,which was purged and sampled using a disposable bailer.

The groundwater samples were immediately placed on ice, then promptly transported to Severn Trent Laboratories in Denver, Colorado for analysis of VOCs by United States Environmental Protection Agency (USEPA) Method 8260B. Groundwater parameter measurements of pH, specific conductance, and temperature were collected during purging. Dissolved oxygen measurements were also collected from the wells. The monitoring wells were purged and sampled in the same order as that for water-level measurements (upgradient to downgradient). Prior to introduction into the well, all non-dedicated equipment and materials were decontaminated.

4.2 Quality Control Samples

For quality control purposes, two equipment rinsate or field blanks and two field duplicate samples were collected during the quarterly monitoring event and submitted to the analytical laboratory for analysis of VOCs by USEPA Method 8260B. In addition, a trip blank was included in each cooler for VOC analysis. In each event additional groundwater was collected with two field samples for laboratory preparation of a matrix spike and matrix spike duplicate sample (MS/MSD).

4.3 Laboratory Analytical Data Reporting

A summary of the First Quarter 2004 groundwater analytical data for groundwater and quality control samples analyzed for VOCs by USEPA Method 8260B is provided in Table 4. Laboratory analytical results for the USCG monitoring wells and recovery well RW-1 groundwater samples are provided in Table 5. A historical summary of VOCs detected in groundwater from the Brenntag monitoring wells is provided in

Appendix A. The laboratory analytical report for the recent quarterly sampling event is included in Appendix B.

5.0 Data Results

5.1 Groundwater Flow

A quarterly groundwater flow map derived from fluid level data obtained during the February 2004 monitoring event is provided as Figure 4. Measured groundwater elevations are underlined for those wells with the top of screen below the measured static water level. Water level data obtained from the USCG Old Base are included to reflect the relationship between the water table elevation beneath USCG and Brenntag properties and the Mississippi River elevation. Fluid level data obtained during the previous gauging event conducted in July 2003 are provided in Figure 5.

Figure 5 includes the measured Mississippi River elevation from the December 2003 water level gauging event. This data was obtained from the surveyed elevation of the USCG boom dock. A difference in water table elevation (USCG MW-6) and Mississippi River elevation of approximately 18.40 ft was observed during the December 2003 gauging event.

Groundwater level elevations for the February 2004 gauging event indicate an eastward groundwater flow direction with a calculated hydraulic gradient of 0.02 ft/ft. Review of the December 2003 (Figure 5) groundwater elevation map indicates that a barrier to groundwater flow toward the Mississippi River may exist along the USCG and Brenntag properties. Asphalt, concrete, and saw cut paving or building stone are in place to stabilize the bank slope along the river at the property boundaries. These materials may act as a relative barrier that influences the groundwater flow direction and therefore the orientation of the impacted groundwater plume.

5.2 Groundwater Quality

Groundwater concentration maps were prepared for the quarterly monitoring event conducted in February 2004. Total BTEX (benzene, toluene, ethylbenzene, and total xylenes), and benzene are provided as Figures 6 and 7, respectively. Total chlorinated VOC concentrations detected in groundwater are provided as Figure 8. In addition, groundwater concentration maps for selected VOCs were prepared for the February 2004 monitoring event. Laboratory analytical data obtained from the monitoring wells and recovery well RW-1 installed on the USCG Old Base are included in the groundwater concentration maps.

Based on the elevated concentrations of the primary degradation products of trichloroethene (TCE), mainly cis-1, 2-dichloroethene (cis-1, 2-DCE), 1,1-

dichloroethane, and vinyl chloride, it is evident that the TCE is being naturally degraded through reductive de-chlorination processes active in the facility subsurface. The organic hydrocarbon constituents present in the subsurface at the site are most likely contributing to enhance the anaerobic subsurface conditions and further contributing to the active degradation of the chlorinated compounds. This active degradation/remediation should persist as long as subsurface conditions remain anaerobic.

Figures 9 through 12 show the detected TCE, and the primary degradation products cis-1, 2-DCE, 1,1-dichloroethane, and vinyl chloride. Figure 13 provides the detected concentrations in groundwater for acetone.

Graphs depicting total VOC concentrations and groundwater elevations versus time for selected monitoring wells were developed to show temporal trends in VOC concentrations over time. In addition, the graphs illustrate the relationship between VOC concentrations and static groundwater elevations. The graphs are provided in Appendix C.

A review of maps and graphs of the VOCs detected in groundwater samples collected from the site in February 2004 indicate two main areas of high VOC concentrations. Monitoring wells with detected elevated concentrations of total BTEX in groundwater are MW-1 and MW-2. These wells are located adjacent to and downgradient of the former tank farm where the occurrence of petroleum hydrocarbons was previously documented in shallow soil samples. Monitoring wells with the highest detected concentrations of chlorinated VOCs in groundwater are also MW-1 and MW-2. The BTEX and chlorinated VOCs originating in the central portion of the site have commingled and appear to be migrating toward the Mississippi River.

The main constituents of concern at the sources areas include benzene, toluene, ethylbenzene, xylenes, tetrachloroethene, TCE, cis-1, 2-DCE, 1,1-dichloroethene, 1,1-dichloroethane, and vinyl chloride. The highest levels of the constituents of the concern are consistently observed in Wells MW-1, MW-2, located in the central portion of the site. However, these constituents are also routinely observed in Wells MW-3, MW-4, MW-5, and MW-8 through MW-13. Infrequent detections of VOCs are also observed in Wells MW-6 and MW-7, but these wells are generally non-detect.

5.3 Laboratory Quality Control

Laboratory quality control samples, including two equipment rinsate (field blanks), two field duplicate samples and one trip blank, are used to confirm the groundwater

monitoring results for each quarter. The quality control results were reviewed to determine if any data required qualification or other corrective actions were necessary. The results of the data package review are included in Appendix D.

5.4 Data Validation

The analytical laboratory data reports, including the data packages, quality control results, and chains of custody, were reviewed to determine if any laboratory corrective actions were necessary. Data packages were reviewed for the correct analytical procedures and reporting limits, compliance with holding times, rinse blanks and trip blanks less than reporting limits, field duplicates within acceptable relative percent difference limits, matrix spike/matrix spike duplicates within control limits, and method blanks less than reporting limits. The results of the data package review are included in Appendix D.

6.0 Recommendations

Based on the results of the quarterly monitoring event conducted in February 2004, ARCADIS recommends the following:

- Continue efforts with the USEPA and USCG to implement the mitigation of groundwater impacts.
- Complete the EE/CA per the conditions outlined in the AOC.

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Table 1. Well Completion Summary, Brenntag, 139 East Soper Street, St. Louis, Missouri.

Wells	Date Installed	Ground Elevation (ft amsl)	TOC Elevation (ft amsl)	Top Bentonite (ft bgs)	Top Filter Pack (ft bgs)	Top Screen (ft bgs)	Bottom Screen (ft bgs)	Total Depth (ft bgs)	Top Screen (ft amsl)	Bottom Screen (ft amsl)	Total Depth (ft amsl)
MW-1	5/1/92	*418.0*	417.63			15	30				
MW-2	5/1/92	*416.9*	416.46			12	27				
MW-3	3/1/94	*418.7*	418.24			27.5	47.5	48	*391.2*	*371.2*	*370.7*
MW-4	3/1/94	*417.3*	416.90			21	41	41	*396.3*	*376.3*	*376.3*
MW-5	3/1/94	*417.0*	416.63			17 ??	37 ??	39.2	400	380	377.8
MW-6	11/18/99	423.60	426.29	4	7	9	29	29.5	414.60	394.60	394.10
MW-7	11/19/99	*423.30*	426.08	4	8	9	29	29	*414.30*	*394.30*	*394.30*
MW-8	11/16/99	421.48	421.18	2	5	7	22	22	414.48	399.48	399.48
MW-9	11/16/99	421.56	421.20	4	27	30	40	40	391.56	381.56	381.56
MW-10	11/19/99	417.46	417.15	7	11	12.5	42.5	42.5	404.96	374.96	374.96
MW-11	11/17/99	417.82	417.46	7	11	9	24	24	408.82	393.82	393.82
MW-12	11/17/99	417.82	417.48	3	29	31.5	41.5	42	386.32	376.32	375.82
MW-13	11/18/99	418.57	418.13	5	10	13.5	43.5	43.5	405.07	375.07	375.07

MW-6 through MW-13 are 2-inch diameter Schedule 40 wells with 0.02 screens in an 8-inch boring.
Soil Boring BH1 (at MW-3) drilled on 5/1/92.
Values in italics are estimated. ft bgs - feet below ground surface. ft amsl - feet above mean sea level.

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Table 2. Historical Summary of Fluid-level Measurements, Brenntag, 139 East Soper Street, St. Louis, Missouri.

Well Number	Date Measured	Ground Elevation (ft)	TOC (ft amsl)	Screened Interval (ft bgs)		Depth to Water (ft btoc)	Top of Screen (ft amsl)	Water Level Elevation (ft amsl)	Depth to PSH (ft btoc)	PSH Level Elevation (ft amsl)	PSH Thickness (ft)	Corrected Water Level Elevation (ft amsl)
MW-1	2/10/04	*418.0*	417.63	15	30	18.16	*403.00*	399.47				399.47
	12/2/03					18.34	*403.00*	399.29				399.29
	7/29/03					17.25	*403.00*	400.38				400.38
	5/7/03					20.34	*403.00*	397.29				397.29
	2/5/03					21.68	*403.00*	395.95				395.95
	10/28/02					19.71	*403.00*	397.92				397.92
	8/15/02					17.58	*403.00*	400.05				400.05
	5/29/02					12.15	*403.00*	405.48				405.48
	2/19/02					19.32	*403.00*	398.31				398.31
	12/4/01					19.37	*403.00*	398.26				398.26
	8/21/01					17.70	*403.00*	399.93				399.93
	5/22/01					11.85	*403.00*	405.78				405.78
	3/1/01					19.19	*403.00*	398.44				398.44
	12/27/00					19.42	*403.00*	398.21				398.21
	9/1/00					16.48	*403.00*	401.15				401.15
	4/1/00					16.25	*403.00*	401.38				401.38
	12/2/99					18.61	*403.00*	399.02				399.02
	5/10/97					13.19	*403.00*	404.44				404.44
MW-2	2/10/04	*416.9*	416.46	12	27	11.85	*404.90*	404.61				404.61
	12/2/03					12.33	*404.90*	404.13				404.13
	8/28/03					12.62	*404.90*	403.84				403.84
	7/29/03					11.83	*404.90*	404.63				404.63
	5/8/03					12.34	*404.90*	404.12				404.12
	2/6/03					13.68	*404.90*	402.78				402.78

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Table 2. Historical Summary of Fluid-level Measurements, Brenntag, 139 East Soper Street, St. Louis, Missouri.

Well Number	Date Measured	Ground Elevation (ft)	TOC (ft amsl)	Screened Interval (ft bgs)	Depth to Water (ft btoc)	Top of Screen (ft amsl)	Water Level Elevation (ft amsl)	Depth to PSH (ft btoc)	PSH Level Elevation (ft amsl)	PSH Thickness (ft)	Corrected Water Level Elevation (ft amsl)
MW-2 (cont'd)	10/28/02				11.69	*404.90*	404.77				404.77
	8/16/02				11.85	*404.90*	404.61				404.61
	5/29/02				8.73	*404.90*	407.73				407.73
	2/20/02				12.53	*404.90*	403.93				403.93
	12/4/01				16.20	*404.90*	400.26				400.26
	8/21/01				12.01	*404.90*	404.45				404.45
	5/22/01				10.03	*404.90*	406.43				406.43
	3/1/01				11.89	*404.90*	404.57				404.57
	12/27/00				12.71	*404.90*	403.75				403.75
	9/1/00				11.10	*404.90*	405.36				405.36
	4/1/00				11.47	*404.90*	404.99				404.99
	12/2/99				11.01	*404.90*	405.45				405.45
	5/10/97				10.11	*404.90*	406.35				406.35
MW-3	2/10/04	*418.7*	418.24	27.5 47.5	19.44	*391.20*	398.80				398.80
	12/2/03				20.13	*391.20*	398.11				398.11
	7/29/03				18.75	*391.20*	399.49				399.49
	5/7/03				21.30	*391.20*	396.94				396.94
	2/5/03				22.74	*391.20*	395.50				395.50
	10/28/02				20.52	*391.20*	397.72				397.72
	8/15/02				18.91	*391.20*	399.33				399.33
	5/29/02				12.45	*391.20*	405.79				405.79
	2/19/02				20.35	*391.20*	397.89				397.89
	12/4/01				20.22	*391.20*	398.02				398.02
	8/20/01				18.68	*391.20*	399.56				399.56
	5/22/01				21.00	*391.20*	397.24				397.24
	3/1/01				17.64	*391.20*	400.60				400.60

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Table 2. Historical Summary of Fluid-level Measurements, Brenntag, 139 East Soper Street, St. Louis, Missouri.

Well Number	Date Measured	Ground Elevation (ft)	TOC (ft amsl)	Screened Interval (ft bgs)		Depth to Water (ft btoc)	Top of Screen (ft amsl)	Water Level Elevation (ft amsl)	Depth to PSH (ft btoc)	PSH Level Elevation (ft amsl)	PSH Thickness (ft)	Corrected Water Level Elevation (ft amsl)
MW-3 (cont'd)	12/27/00					20.41	*391.20*	397.83				397.83
	9/1/00					17.72	*391.20*	400.52				400.52
	4/1/00					17.39	*391.20*	400.85				400.85
	12/2/99					19.04	*391.20*	399.20				399.20
	5/10/97					13.88	*391.20*	404.36				404.36
MW-4	2/10/04	*417.3*	416.90	21	41	16.55	*396.30*	400.35				400.35
	12/2/03					16.84	*396.30*	400.06				400.06
	7/29/03					15.79	*396.30*	401.11				401.11
	5/7/03					17.65	*396.30*	399.25				399.25
	2/5/03					18.64	*396.30*	398.26				398.26
	10/28/02					16.79	*396.30*	400.11				400.11
	8/16/02					16.17	*396.30*	400.73				400.73
	5/29/02					11.64	*396.30*	405.26				405.26
	2/19/02					17.30	*396.30*	399.60				399.60
	12/4/01					17.14	*396.30*	399.76				399.76
	8/21/01					16.11	*396.30*	400.79				400.79
	5/22/01					11.03	*396.30*	405.87				405.87
	3/1/01					23.09	*396.30*	393.81				393.81
	12/27/00					16.81	*396.30*	400.09				400.09
	9/1/00					15.00	*396.30*	401.90				401.90
	4/1/00					14.56	*396.30*	402.34				402.34
	12/2/99					15.65	*396.30*	401.25				401.25
	5/10/97					12.24	*396.30*	404.66				404.66

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Table 2. Historical Summary of Fluid-level Measurements, Brenntag, 139 East Soper Street, St. Louis, Missouri.

Well Number	Date Measured	Ground Elevation (ft)	TOC (ft amsl)	Screened Interval (ft bgs)		Depth to Water (ft btoc)	Top of Screen (ft amsl)	Water Level Elevation (ft amsl)	Depth to PSH (ft btoc)	PSH Level Elevation (ft amsl)	PSH Thickness (ft)	Corrected Water Level Elevation (ft amsl)
MW-5	2/10/04	*417.0*	416.63	17	37	12.31	*400.00*	404.32				404.32
	12/2/03					11.90	*400.00*	404.73				404.73
	7/29/03					12.10	*400.00*	404.53				404.53
	5/8/03					12.20	*400.00*	404.43				404.43
	2/5/03					14.33	*400.00*	402.30				402.30
	10/28/02					12.17	*400.00*	404.46				404.46
	8/16/02					11.95	*400.00*	404.68				404.68
	5/29/02					9.93	*400.00*	406.70				406.70
	2/20/02					12.14	*400.00*	404.49				404.49
	12/4/01					11.95	*400.00*	404.68				404.68
	8/21/01					14.74	*400.00*	401.89				401.89
	5/22/01					9.98	*400.00*	406.65				406.65
	3/1/01					10.41	*400.00*	406.22				406.22
	12/27/00					12.15	*400.00*	404.48				404.48
	9/1/00					10.50	*400.00*	406.13				406.13
	4/1/00					10.42	*400.00*	406.21				406.21
	12/2/99					11.30	*400.00*	405.33				405.33
	5/10/97					9.79	*400.00*	406.84				406.84
MW-6	2/10/04	423.60	426.29	9	29	11.84	414.60	414.45				414.45
	12/2/03					11.22	414.60	415.07				415.07
	7/29/03					11.99	414.60	414.30				414.30
	5/6/03					10.06	414.60	416.23				416.23
	2/4/03					14.52	414.60	411.77				411.77
	10/28/02					12.04	414.60	414.25				414.25

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Table 2. Historical Summary of Fluid-level Measurements, Brenntag, 139 East Soper Street, St. Louis, Missouri.

Well Number	Date Measured	Ground Elevation (ft)	TOC (ft amsl)	Screened Interval (ft bgs)		Depth to Water (ft btoc)	Top of Screen (ft amsl)	Water Level Elevation (ft amsl)	Depth to PSH (ft btoc)	PSH Level Elevation (ft amsl)	PSH Thickness (ft)	Corrected Water Level Elevation (ft amsl)
MW-6	8/15/02					11.50	414.60	414.79				414.79
(cont'd)	5/29/02					10.83	414.60	415.46				415.46
	2/19/02					12.70	414.60	413.59				413.59
	12/5/01					11.26	414.60	415.03				415.03
	8/20/01					13.45	414.60	412.84				412.84
	5/22/01					11.03	414.60	415.26				415.26
	3/2/01					12.36	414.60	413.93				413.93
	12/28/00					12.94	414.60	413.35				413.35
	9/6/00					11.72	414.60	414.57				414.57
	4/1/00					13.09	414.60	413.20				413.20
	12/2/99					14.98	414.60	411.31				411.31
MW-7	2/10/04	*423.30*	426.08	9	29	11.87	414.30	414.21				414.21
	12/2/03					10.76	414.30	415.32				415.32
	7/29/03					11.68	414.30	414.40				414.40
	5/6/03					9.50	414.30	416.58				416.58
	2/4/03					14.66	414.30	411.42				411.42
	10/28/02					11.65	414.30	414.43				414.43
	8/15/02					11.04	414.30	415.04				415.04
	5/29/02					9.93	414.30	416.15				416.15
	2/19/02					12.35	414.30	413.73				413.73
	12/5/01					10.71	414.30	415.37				415.37
	8/20/01					19.65	414.30	406.43				406.43
	5/22/01					10.66	414.30	415.42				415.42
	3/2/01					12.10	414.30	413.98				413.98
	12/28/00					12.70	414.30	413.38				413.38

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Table 2. Historical Summary of Fluid-level Measurements, Brenntag, 139 East Soper Street, St. Louis, Missouri.

Well Number	Date Measured	Ground Elevation (ft)	TOC (ft amsl)	Screened Interval (ft bgs)		Depth to Water (ft btoc)	Top of Screen (ft amsl)	Water Level Elevation (ft amsl)	Depth to PSH (ft btoc)	PSH Level Elevation (ft amsl)	PSH Thickness (ft)	Corrected Water Level Elevation (ft amsl)
MW-7 (cont'd)	9/6/00					11.21	414.30	414.87				414.87
	4/1/00					12.95	414.30	413.13				413.13
	12/2/99					15.28	414.30	410.80				410.80
MW-8	2/10/04	421.48	421.18	7	22	9.65	414.48	411.53				411.53
	12/2/03					8.90	414.48	412.28				412.28
	8/28/03					11.07	414.48	410.11				410.11
	7/29/03					9.23	414.48	411.95				411.95
	5/8/03					8.04	414.48	413.14				413.14
	2/6/03					11.94	414.48	409.24				409.24
	10/28/02					9.37	414.48	411.81				411.81
	8/16/02					8.95	414.48	412.23				412.23
	5/29/02					7.81	414.48	413.37				413.37
	2/20/02					9.50	414.48	411.68				411.68
	12/5/01					8.91	414.48	412.27				412.27
	8/21/01					10.01	414.48	411.17				411.17
	5/22/01					8.82	414.48	412.36				412.36
	3/2/01					10.51	414.48	410.67				410.67
	12/27/00					10.76	414.48	410.42				410.42
	4/1/00					10.35	414.48	410.83				410.83
	12/2/99					11.11	414.48	410.07				410.07
MW-9	2/10/04	421.56	421.20	30	40	9.31	391.56	411.89				411.89
	12/2/03					8.34	391.56	412.86				412.86
	8/28/03					10.97	391.56	410.23				410.23
	7/29/03					8.96	391.56	412.24				412.24

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Table 2. Historical Summary of Fluid-level Measurements, Brenntag, 139 East Soper Street, St. Louis, Missouri.

Well Number	Date Measured	Ground Elevation (ft)	TOC (ft amsl)	Screened Interval (ft bgs)	Depth to Water (ft btoc)	Top of Screen (ft amsl)	Water Level Elevation (ft amsl)	Depth to PSH (ft btoc)	PSH Level Elevation (ft amsl)	PSH Thickness (ft)	Corrected Water Level Elevation (ft amsl)
MW-9	5/8/03				7.80	391.56	413.40				413.40
(cont'd)	2/6/03				11.76	391.56	409.44				409.44
	10/28/02				8.89	391.56	412.31				412.31
	8/16/02				8.95	391.56	412.25				412.25
	5/29/02				7.71	391.56	413.49				413.49
	2/20/02				9.53	391.56	411.67				411.67
	12/5/01				8.70	391.56	412.50				412.50
	8/21/01				13.56	391.56	407.64				407.64
	5/22/01				8.71	391.56	412.49				412.49
	3/2/01				10.85	391.56	410.35				410.35
	12/27/00				10.95	391.56	410.25				410.25
	9/6/00				8.97	391.56	412.23				412.23
	4/1/00				10.31	391.56	410.89				410.89
	12/2/99				12.19	391.56	409.01				409.01
MW-10	2/10/04	417.46	417.15	12.5 42.5	17.39	404.96	399.76				399.76
	12/2/03				18.00	404.96	399.15				399.15
	7/29/03				16.96	404.96	400.19				400.19
	5/6/03				18.93	404.96	398.22				398.22
	2/4/03				19.27	404.96	397.88				397.88
	10/28/02				18.29	404.96	398.86				398.86
	8/15/02				17.21	404.96	399.94				399.94
	5/29/02				11.34	404.96	405.81				405.81
	2/19/02				18.08	404.96	399.07				399.07
	12/4/01				18.02	404.96	399.13				399.13

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Table 2. Historical Summary of Fluid-level Measurements, Brenntag, 139 East Soper Street, St. Louis, Missouri.

Well Number	Date Measured	Ground Elevation (ft)	TOC (ft amsl)	Screened Interval (ft bgs)		Depth to Water (ft btoc)	Top of Screen (ft amsl)	Water Level Elevation (ft amsl)	Depth to PSH (ft btoc)	PSH Level Elevation (ft amsl)	PSH Thickness (ft)	Corrected Water Level Elevation (ft amsl)
MW-10 (cont'd)	8/20/01					16.82	404.96	400.33				400.33
	5/22/01					11.33	404.96	405.82				405.82
	3/1/01					20.07	404.96	397.08				397.08
	12/27/00					17.89	404.96	399.26				399.26
	9/1/00					16.00	404.96	401.15				401.15
	4/1/00					15.46	404.96	401.69				401.69
	12/2/99					16.99	404.96	400.16				400.16
MW-11	2/10/04	417.82	417.46	9	24	18.68	408.82	398.78				398.78
	12/2/03					19.03	408.82	398.43				398.43
	8/28/03					19.24	408.82	398.22				398.22
	7/29/03					17.90	408.82	399.56				399.56
	5/7/03					21.67	408.82	395.79				395.79
	2/4/03					22.42	408.82	395.04				395.04
	10/28/02					20.79	408.82	396.67				396.67
	8/15/02					18.27	408.82	399.19				399.19
	5/29/02					11.73	408.82	405.73				405.73
	2/19/02					20.50	408.82	396.96				396.96
	12/4/01					20.50	408.82	396.96				396.96
	8/20/01					18.18	408.82	399.28				399.28
	5/22/01					11.70	408.82	405.76				405.76
	3/1/01					19.17	408.82	398.29				398.29
	12/27/00					20.45	408.82	397.01				397.01
	9/1/00					17.00	408.82	400.46				400.46
	4/1/00					16.89	408.82	400.57				400.57
	12/2/99					19.65	408.82	397.81				397.81

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Table 2. Historical Summary of Fluid-level Measurements, Brenntag, 139 East Soper Street, St. Louis, Missouri.

Well Number	Date Measured	Ground Elevation (ft)	TOC (ft amsl)	Screened Interval (ft bgs)	Depth to Water (ft btoc)	Top of Screen (ft amsl)	Water Level Elevation (ft amsl)	Depth to PSH (ft btoc)	PSH Level Elevation (ft amsl)	PSH Thickness (ft)	Corrected Water Level Elevation (ft amsl)
MW-12	2/10/04	417.82	417.48	31.5 41.5	18.75	386.32	398.73				398.73
	12/2/03				18.93	386.32	398.55				398.55
	8/28/03				19.23	386.32	398.25				398.25
	7/29/03				17.92	386.32	399.56				399.56
	5/7/03				21.68	386.32	395.80				395.80
	2/5/03				23.01	386.32	394.47				394.47
	10/28/02				20.81	386.32	396.67				396.67
	8/15/02				18.27	386.32	399.21				399.21
	5/29/02				11.75	386.32	405.73				405.73
	2/19/02				20.60	386.32	396.88				396.88
	12/4/01				20.55	386.32	396.93				396.93
	8/20/01				18.05	386.32	399.43				399.43
	5/22/01				11.65	386.32	405.83				405.83
	3/1/01				19.17	386.32	398.31				398.31
	12/27/00				20.71	386.32	396.77				396.77
	4/1/00				16.87	386.32	400.61				400.61
	12/2/99				19.59	386.32	397.89				397.89
MW-13	2/10/04	418.57	418.13	13.5 43.5	18.44	405.07	399.69				399.69
	12/2/03				19.40	405.07	398.73				398.73
	7/29/03				22.37	405.07	395.76				395.76
	5/6/03				20.65	405.07	397.48				397.48
	2/4/03				21.25	405.07	396.88				396.88
	10/28/02				20.70	405.07	397.43				397.43

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Table 2. Historical Summary of Fluid-level Measurements, Brenntag, 139 East Soper Street, St. Louis, Missouri.

Well Number	Date Measured	Ground Elevation (ft)	TOC (ft amsl)	Screened Interval (ft bgs)	Depth to Water (ft btoc)	Top of Screen (ft amsl)	Water Level Elevation (ft amsl)	Depth to PSH (ft btoc)	PSH Level Elevation (ft amsl)	PSH Thickness (ft)	Corrected Water Level Elevation (ft amsl)
MW-13	8/15/02				18.50	405.07	399.63				399.63
(cont'd)	5/29/02				12.38	405.07	405.75				405.75
	2/19/02				19.56	405.07	398.57				398.57
	12/4/01				19.36	405.07	398.77				398.77
	8/20/01				18.10	405.07	400.03				400.03
	5/22/01				12.31	405.07	405.82				405.82
	3/1/01				25.00	405.07	393.13				393.13
	12/27/00				19.35	405.07	398.78				398.78
	9/1/00				17.11	405.07	401.02				401.02
	4/1/00				16.57	405.07	401.56				401.56
	12/2/99				18.31	405.07	399.82				399.82

PSH Phase Separated Hydrocarbons.
TOC Top of casing.
ft Feet.
ft btoc Feet below top of casing.
amsl above mean sea level.
bgs below ground surface.
Underlined ground elevations are estimated.
Values in italics are derived from an estimated ground elevation.
Elevations are to USGS Datum, subtract 413.54' to convert to City of St. Louis Datum.
Specific gravity of 0.75 used for PSH.
All Brenntag monitoring wells are 2" in diameter.
Fluid-level data prior to May 2001 provided by CJE, Inc.

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Table 3. Summary of First Quarter 2004 Groundwater Analytical Data
Brenntag, 139 East Soper Street, St. Louis, Missouri

Well Name	CALM	MCLs	MW-1	MW-2	MW-3	MW-4	MW-5	MW-5 (DUP)
Sample Date			2/11/04	2/11/04	2/10/04	2/11/04	2/11/04	2/11/04
Acetone	4000	-	<67000	17,000	<10	44	<200	<100
Benzene	5	5	6,600 J	1,000	1.2	31	<20	<10
Bromobenzene	-	-	<6700	<1000	<1.0	<1.0	<20	<10
Bromochloromethane	-	-	<6700	<1000	<1.0	<1.0	<20	<10
Bromodichloromethane	-	-	<6700	<1000	<1.0	<1.0	<20	<10
Bromoform	-	-	<6700	<1000	<1.0	<1.0	<20	<10
Bromomethane	-	-	<13000	<2000	<2.0	<2.0	<40	<20
2-Butanone (MEK)	-	-	<33000	<5000	<5.0	8.2	<100	<50
n-Butylbenzene	-	-	<6700	<1000	<1.0	<1.0	<20	<10
sec-Butylbenzene	-	-	<6700	<1000	<1.0	<1.0	<20	<10
tert-Butylbenzene	-	-	<6700	<1000	<1.0	0.26 J	<20	<10
Carbon tetrachloride	-	5	<6700	<1000	<1.0	<1.0	<20	<10
Chlorobenzene	100	100	<6700	<1000	<1.0	0.47 J	<20	<10
Chloroethane	-	-	<13000	<2000	<2.0	6.7	<40	<20
Chloroform	100	-	<6700	<1000	<1.0	<1.0	<20	<10
Chloromethane	-	-	<13000	<2000	<2.0	<2.0	<40	<20
2-Chlorotoluene	-	-	<6700	<1000	<1.0	<1.0	<20	<10
4-Chlorotoluene	-	-	<6700	<1000	<1.0	<1.0	<20	<10
Dibromochloromethane	-	-	<6700	<1000	<1.0	<1.0	<20	<10
1,2-Dibromo-3-chloropropane (DBCP)	-	0.2	<13000	<2000	<2.0	<2.0	<40	<20
1,2-Dibromoethane (EDB)	-	-	<6700	<1000	<1.0	<1.0	<20	<10
Dibromomethane	-	5	<6700	<1000	<1.0	<1.0	<20	<10
1,2-Dichlorobenzene	600	600	<6700	<1000	<1.0	0.74 J	<20	<10
1,3-Dichlorobenzene	-	-	<6700	<1000	<1.0	<1.0	<20	<10
1,4-Dichlorobenzene	75	75	<6700	<1000	<1.0	<1.0	<20	<10
Dichlorodifluoromethane	-	-	<13000	<2000	<2.0	<2.0	<40	<20
1,1-Dichloroethane	-	-	<6700	2,400	1.5	6.6	12 J	10
1,2-Dichloroethane	5	5	<6700	<1000	<1.0	<1.0	<20	<10
1,1-Dichloroethene	7	7	<6700	<1000	<1.0	<1.0	<20	<10
cis-1,2-Dichloroethene	70	70	<6700	7,300	<1.0	16	250	250
trans-1,2-Dichloroethene	100	100	<3300	<500	<0.50	<0.50	24	25
1,2-Dichloroethene (total)	-	-	<6700	7,300	<1.0	16	270	280
1,2-Dichloropropane	-	5	<6700	<1000	<1.0	<1.0	<20	<10
1,3-Dichloropropane	-	-	<6700	<1000	<1.0	<1.0	<20	<10
2,2-Dichloropropane	-	-	<33000	<5000	<5.0	<5.0	<100	<50
1,1-Dichloropropene	-	-	<6700	<1000	<1.0	<1.0	<20	<10
cis-1,3-Dichloropropene	-	-	<6700	<1000	<1.0	<1.0	<20	<10
trans-1,3-Dichloropropene	-	-	<6700	<1000	<1.0	<1.0	<20	<10
Ethylbenzene	320	700	3,100 J	1,100	1.3	13	<20	<10
Hexachlorobutadiene	-	-	<6700	<1000	<1.0	<1.0	<20	<10
2-Hexanone	-	-	<33000	<5000	<5.0	<5.0	<100	<50
Isopropylbenzene	-	-	<6700	<1000	0.54 J	1.8	<20	<10
p-Isopropyltoluene	-	-	<6700	<1000	<1.0	<1.0	<20	<10
4-Methyl-2-pentanone	-	-	<33000	1,800 J	<5.0	2.1 J	<100	<50
Methylene chloride	5	-	<33000	<5000	<5.0	<5.0	<100	<50
Naphthalene	20	-	<6700	<1000	<1.0	<1.0	<20	<10
n-Propylbenzene	-	-	<6700	<1000	0.85 J	0.53 J	<20	<10
Styrene	-	100	<6700	<1000	<1.0	<1.0	<20	<10
1,1,1,2-Tetrachloroethane	-	-	<6700	<1000	<1.0	<1.0	<20	<10
1,1,2,2-Tetrachloroethane	-	-	<6700	<1000	<1.0	<1.0	<20	<10
Tetrachloroethene	5	5	<6700	460 J	<1.0	<1.0	<20	<10
Toluene	150	1000	220,000	34,000	0.8 J	29	<20	<10
1,2,3-Trichlorobenzene	-	-	<6700	<1000	<1.0	<1.0	<20	<10
1,2,4-Trichlorobenzene	-	70	<6700	<1000	<1.0	<1.0	<20	<10
1,1,1-Trichloroethane	200	200	<6700	<1000	0.28 J	<1.0	<20	<10
1,1,2-Trichloroethane	-	5	<6700	<1000	<1.0	<1.0	<20	<10
Trichloroethene	5	5	<6700	19,000	0.25 J	<1.0	<20	<10
Trichlorofluoromethane	-	-	<13000	<2000	<2.0	<2.0	<40	<20
1,2,3-Trichloropropane	-	-	<6700	<1000	<1.0	<1.0	<20	<10
1,2,4-Trimethylbenzene	-	-	<6700	650 J	4.1	1.8	<20	<10
1,3,5-Trimethylbenzene	-	-	<6700	630 J	6.1	0.59 J	<20	<10
Vinyl chloride	2	2	<6700	7,500	<1.0	4.2	640	550
m-Xylene & p-Xylene	-	-	13,000	4,400	2.0	13	<40	<20
o-Xylene	-	-	4,800 J	1,800	2.2	4.8	<20	<10
Xylenes (total)	320	10000	18,000	6,300	4.2	18	<40	<20
Total VOCs			247,500	99,040	21	185	926	835
Total Chlorinated VOCs			<33000	38,460	2	38	902	810
Total BTEX			247,500	42,300	8	91	<40	<20

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Table 3. Summary of First Quarter 2004 Groundwater Analytical Data
Brenntag, 139 East Soper Street, St. Louis, Missouri

Well Name	CALM	MCLs	MW-6	MW-7	MW-8	MW-9	MW-10	MW-11	MW-12	MW-13	MW-13 (DUP)
Sample Date			2/10/04	2/10/04	2/12/04	2/12/04	2/10/04	2/12/04	2/12/04	2/10/04	2/10/04
Acetone	4000	-	<10	<10	<1000	<10	5,000	<10	<200	<10	<10
Benzene	5	5	<1.0	<1.0	38 J	1.2	71	0.23 J	280	1.0	0.93 J
Bromobenzene	-	-	<1.0	<1.0	<100	<1.0	<50	<1.0	<20	<1.0	<1.0
Bromochloromethane	-	-	<1.0	<1.0	<100	<1.0	<50	<1.0	<20	<1.0	<1.0
Bromodichloromethane	-	-	<1.0	<1.0	<100	<1.0	<50	<1.0	<20	1.3	1.3
Bromoform	-	-	<1.0	<1.0	<100	<1.0	<50	<1.0	<20	<1.0	<1.0
Bromomethane	-	-	<2.0	<2.0	<200	<2.0	<100	<2.0	<40	<2.0	<2.0
2-Butanone (MEK)	-	-	<5.0	<5.0	<500	<5.0	650	<5.0	<100	<5.0	<5.0
n-Butylbenzene	-	-	<1.0	<1.0	<100	<1.0	<50	<1.0	<20	0.21 J	<1.0
sec-Butylbenzene	-	-	<1.0	<1.0	<100	<1.0	<50	<1.0	<20	<1.0	<1.0
tert-Butylbenzene	-	-	<1.0	<1.0	<100	<1.0	<50	<1.0	<20	<1.0	<1.0
Carbon tetrachloride	-	5	<1.0	<1.0	<100	<1.0	<50	<1.0	<20	<1.0	<1.0
Chlorobenzene	100	100	<1.0	<1.0	<100	<1.0	23 J	<1.0	<20	0.23 J	<1.0
Chloroethane	-	-	<2.0	<2.0	<200	<2.0	<100	<2.0	<40	<2.0	<2.0
Chloroform	100	-	<1.0	<1.0	<100	<1.0	<50	0.24 J	<20	2.9	2.6
Chloromethane	-	-	<2.0	<2.0	<200	<2.0	<100	<2.0	<40	<2.0	<2.0
2-Chlorotoluene	-	-	<1.0	<1.0	<100	<1.0	<50	<1.0	<20	<1.0	<1.0
4-Chlorotoluene	-	-	<1.0	<1.0	<100	<1.0	<50	<1.0	<20	<1.0	<1.0
Dibromochloromethane	-	-	<1.0	<1.0	<100	<1.0	<50	<1.0	<20	0.84 J	0.76 J
1,2-Dibromo-3-chloropropane (DBCP)	-	0.2	<2.0	<2.0	<200	<2.0	<100	<2.0	<40	<2.0	<2.0
1,2-Dibromoethane (EDB)	-	-	<1.0	<1.0	<100	<1.0	<50	<1.0	<20	<1.0	<1.0
Dibromomethane	-	5	<1.0	<1.0	<100	<1.0	<50	<1.0	<20	<1.0	<1.0
1,2-Dichlorobenzene	600	600	<1.0	<1.0	<100	0.29 J	18 J	<1.0	<20	0.65 J	0.56 J
1,3-Dichlorobenzene	-	-	<1.0	<1.0	<100	<1.0	<50	<1.0	<20	<1.0	<1.0
1,4-Dichlorobenzene	75	75	<1.0	<1.0	2,200	10	<50	<1.0	<20	<1.0	<1.0
Dichlorodifluoromethane	-	-	<2.0	<2.0	<200	<2.0	<100	<2.0	<40	<2.0	<2.0
1,1-Dichloroethane	-	-	<1.0	<1.0	65 J	10	210	15	<20	3.2	2.8
1,2-Dichloroethane	5	5	<1.0	<1.0	<100	<1.0	<50	<1.0	<20	<1.0	<1.0
1,1-Dichloroethene	7	7	<1.0	<1.0	<100	<1.0	<50	<1.0	<20	<1.0	<1.0
cis-1,2-Dichloroethene	70	70	<1.0	<1.0	410	21	740	32	6.6 J	8.2	7.4
trans-1,2-Dichloroethene	100	100	<0.50	<0.50	<50	0.51	<25	0.32 J	<10	0.25 J	<0.50
1,2-Dichloroethene (total)	-	-	<1.0	<1.0	410	21	740	32	6.6 J	8.5	7.4
1,2-Dichloropropane	-	5	<1.0	<1.0	<100	<1.0	<50	<1.0	<20	<1.0	<1.0
1,3-Dichloropropane	-	-	<1.0	<1.0	<100	<1.0	<50	<1.0	<20	<1.0	<1.0
2,2-Dichloropropane	-	-	<5.0	<5.0	<500	<5.0	<250	<5.0	<100	<5.0	<5.0
1,1-Dichloropropene	-	-	<1.0	<1.0	<100	<1.0	<50	<1.0	<20	<1.0	<1.0
cis-1,3-Dichloropropene	-	-	<1.0	<1.0	<100	<1.0	<50	<1.0	<20	<1.0	<1.0
trans-1,3-Dichloropropene	-	-	<1.0	<1.0	<100	<1.0	<50	<1.0	<20	<1.0	<1.0
Ethylbenzene	320	700	<1.0	<1.0	<100	0.38 J	170	<1.0	49	2.7	2.6
Hexachlorobutadiene	-	-	<1.0	<1.0	<100	<1.0	<50	<1.0	<20	<1.0	<1.0
2-Hexanone	-	-	<5.0	<5.0	<500	<5.0	<250	<5.0	<100	<5.0	<5.0
Isopropylbenzene	-	-	<1.0	<1.0	<100	<1.0	12 J	<1.0	<20	0.26 J	0.22 J
p-Isopropyltoluene	-	-	<1.0	<1.0	<100	<1.0	<50	<1.0	<20	0.56 J	0.49 J
4-Methyl-2-pentanone	-	-	<5.0	<5.0	<500	<5.0	160 J	<5.0	<100	1.5 J	1.2 J
Methylene chloride	5	-	<5.0	<5.0	<500	<5.0	<250	<5.0	<100	<5.0	0.58 J
Naphthalene	20	-	<1.0	<1.0	<100	<1.0	39 J	<1.0	<20	1.3	0.96 J
n-Propylbenzene	-	-	<1.0	<1.0	<100	<1.0	12 J	<1.0	<20	<1.0	<1.0
Styrene	-	100	<1.0	<1.0	<100	<1.0	<50	<1.0	<20	<1.0	<1.0
1,1,1,2-Tetrachloroethane	-	-	<1.0	<1.0	<100	<1.0	<50	<1.0	<20	<1.0	<1.0
1,1,2,2-Tetrachloroethane	-	-	<1.0	<1.0	<100	<1.0	<50	<1.0	<20	<1.0	<1.0
Tetrachloroethene	5	5	<1.0	<1.0	<100	<1.0	<50	0.39 J	<20	<1.0	<1.0
Toluene	150	1000	0.5 J	0.54 J	34 J	0.31 J	700	<1.0	11 J	8.9	7.9
1,2,3-Trichlorobenzene	-	-	<1.0	<1.0	<100	<1.0	<50	<1.0	<20	<1.0	<1.0
1,2,4-Trichlorobenzene	-	70	<1.0	<1.0	<100	<1.0	<50	<1.0	<20	<1.0	<1.0
1,1,1-Trichloroethane	200	200	<1.0	<1.0	<100	<1.0	<50	<1.0	<20	<1.0	<1.0
1,1,2-Trichloroethane	-	5	<1.0	<1.0	<100	<1.0	<50	<1.0	<20	<1.0	<1.0
Trichloroethene	5	5	<1.0	<1.0	<100	5.5	24 J	1.7	<20	0.69 J	0.64 J
Trichlorofluoromethane	-	-	<2.0	<2.0	<200	<2.0	<100	<2.0	<40	<2.0	<2.0
1,2,3-Trichloropropane	-	-	<1.0	<1.0	<100	<1.0	<50	<1.0	<20	<1.0	<1.0
1,2,4-Trimethylbenzene	-	-	<1.0	<1.0	<100	<1.0	75	<1.0	18 J	1.6	1.5
1,3,5-Trimethylbenzene	-	-	<1.0	<1.0	<100	<1.0	35 J	<1.0	5.3 J	1.1	1
Vinyl chloride	2	2	<1.0	<1.0	780	15	69	0.5 J	<20	0.94 J	0.83 J
m-Xylene & p-Xylene	-	-	<2.0	<2.0	<200	0.42 J	540	<2.0	83	11	10
o-Xylene	-	-	<1.0	<1.0	<100	<1.0	250	<1.0	49	5.5	4.9
Xylenes (total)	320	10000	<2.0	<2.0	<200	0.42 J	790	<2.0	130	16	15
Total VOCs			1	1	3,527	65	8,798	50	502	55	49
Total Chlorinated VOCs			<5.0	<5.0	3,455	62	1,221	50	7	20	18
Total BTEX			1	1	72	2	1,731	0.2	472	29	26

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Table 3. Summary of First Quarter 2004 Groundwater Analytical Data
Brenntag, 139 East Soper Street, St. Louis, Missouri

Well Name	CALM	MCLs	FBGW021004	PURGE COMPOSITE 021204	TB021004
Sample Date			2/10/04	2/12/04	2/10/04
Acetone	4000	-	<10	520 J	<10
Benzene	5	5	<1.0	200	<1.0
Bromobenzene	-	-	<1.0	<200	<1.0
Bromochloromethane	-	-	<1.0	<200	<1.0
Bromodichloromethane	-	-	<1.0	<200	<1.0
Bromoform	-	-	<1.0	<200	<1.0
Bromomethane	-	-	<2.0	<400	<2.0
2-Butanone (MEK)	-	-	<5.0	<1000	<5.0
n-Butylbenzene	-	-	<1.0	<200	<1.0
sec-Butylbenzene	-	-	<1.0	<200	<1.0
tert-Butylbenzene	-	-	<1.0	<200	<1.0
Carbon tetrachloride	-	5	<1.0	<200	<1.0
Chlorobenzene	100	100	<1.0	<200	<1.0
Chloroethane	-	-	<2.0	<400	<2.0
Chloroform	100	-	<1.0	<200	<1.0
Chloromethane	-	-	<2.0	<400	<2.0
2-Chlorotoluene	-	-	<1.0	<200	<1.0
4-Chlorotoluene	-	-	<1.0	<200	<1.0
Dibromochloromethane	-	-	<1.0	<200	<1.0
1,2-Dibromo-3-chloropropane (DBCP)	-	0.2	<2.0	<400	<2.0
1,2-Dibromoethane (EDB)	-	-	<1.0	<200	<1.0
Dibromomethane	-	5	<1.0	<200	<1.0
1,2-Dichlorobenzene	600	600	<1.0	<200	<1.0
1,3-Dichlorobenzene	-	-	<1.0	<200	<1.0
1,4-Dichlorobenzene	75	75	<1.0	69 J	<1.0
Dichlorodifluoromethane	-	-	<2.0	<400	<2.0
1,1-Dichloroethane	-	-	<1.0	<200	<1.0
1,2-Dichloroethane	5	5	<1.0	<200	<1.0
1,1-Dichloroethene	7	7	<1.0	<200	<1.0
cis-1,2-Dichloroethene	70	70	<1.0	73 J	<1.0
trans-1,2-Dichloroethene	100	100	<0.50	<100	<0.50
1,2-Dichloroethene (total)	-	-	<1.0	73 J	<1.0
1,2-Dichloropropane	-	5	<1 0	<200	<1.0
1,3-Dichloropropane	-	-	<1.0	<200	<1.0
2,2-Dichloropropane	-	-	<5.0	<1000	<5.0
1,1-Dichloropropene	-	-	<1.0	<200	<1.0
cis-1,3-Dichloropropene	-	-	<1.0	<200	<1.0
trans-1,3-Dichloropropene	-	-	<1.0	<200	<1.0
Ethylbenzene	320	700	<1.0	73 J	<1.0
Hexachlorobutadiene	-	-	<1.0	<200	<1.0
2-Hexanone	-	-	<5.0	<1000	<5.0
Isopropylbenzene	-	-	<1.0	<200	<1.0
p-Isopropyltoluene	-	-	<1.0	<200	<1.0
4-Methyl-2-pentanone	-	-	<5.0	<1000	<5.0
Methylene chloride	5	-	<5.0	<1000	<5.0
Naphthalene	20	-	<1.0	<200	<1.0
n-Propylbenzene	-	-	<1.0	<200	<1.0
Styrene	-	100	<1.0	<200	<1.0
1,1,1,2-Tetrachloroethane	-	-	<1.0	<200	<1.0
1,1,2,2-Tetrachloroethane	-	-	<1.0	<200	<1.0
Tetrachloroethene	5	5	<1.0	<200	<1.0
Toluene	150	1000	0.26 J	5,500	<1.0
1,2,3-Trichlorobenzene	-	-	<1.0	<200	<1.0
1,2,4-Trichlorobenzene	-	70	<1.0	<200	<1.0
1,1,1-Trichloroethane	200	200	<1.0	<200	<1.0
1,1,2-Trichloroethane	-	5	<1.0	<200	<1.0
Trichloroethene	5	5	<1.0	<200	<1.0
Trichlorofluoromethane	-	-	<2.0	<400	<2.0
1,2,3-Trichloropropane	-	-	<1.0	<200	<1.0
1,2,4-Trimethylbenzene	-	-	<1.0	<200	<1.0
1,3,5-Trimethylbenzene	-	-	<1.0	<200	<1.0
Vinyl chloride	2	2	<1.0	66 J	<1.0
m-Xylene & p-Xylene	-	-	<2.0	290 J	<2.0
o-Xylene	-	-	<1.0	120 J	<1.0
Xylenes (total)	320	10000	<2.0	410	<2.0
Total VOCs			0.3	6,911	<10
Total Chlorinated VOCs			<5.0	208	<5.0
Total BTEX			0.3	6,183	<2.0

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Table 3: Summary of First Quarter 2004 Groundwater Analytical Data, Brenntag, 139 East Soper Street, St. Louis, Missouri

Table Footnotes:

Analytical data prior to May 2001 collected by CJE, Inc.

ug/L	All table values shown in micrograms per liter, equivalent to parts per billion.
<	Not detected at or above laboratory practical quantitative limit, as shown.
ND	Not detected at or above laboratory reporting limits.
MCLs	Maximum Contaminant Level from National Primary Drinking Water Standards, as determined by the U. S. Environmental Protection Agency dated July 2002.
CALM	Cleanup Levels for Missouri as determined by the Missouri Department of Natural Resources dated September 1, 2001.
NA	Not Analyzed.
Bold	Bold values indicate detected constituent concentrations.

Data Flags:

B	Analyte is found in an associated blank as well as in the sample.
J	Detected but below the practical reporting limit; therefore, result is an estimated concentration.
E	Compound concentration exceeds the calibration range of the instrument.
H	Indicates analysis was not performed within recommended holding times Results may be biased low.

G:\Aproject\BRENNTAG\OK12532004\TABLES\1Q04\[SUMTBL1Q4STL.xls]Footnotes

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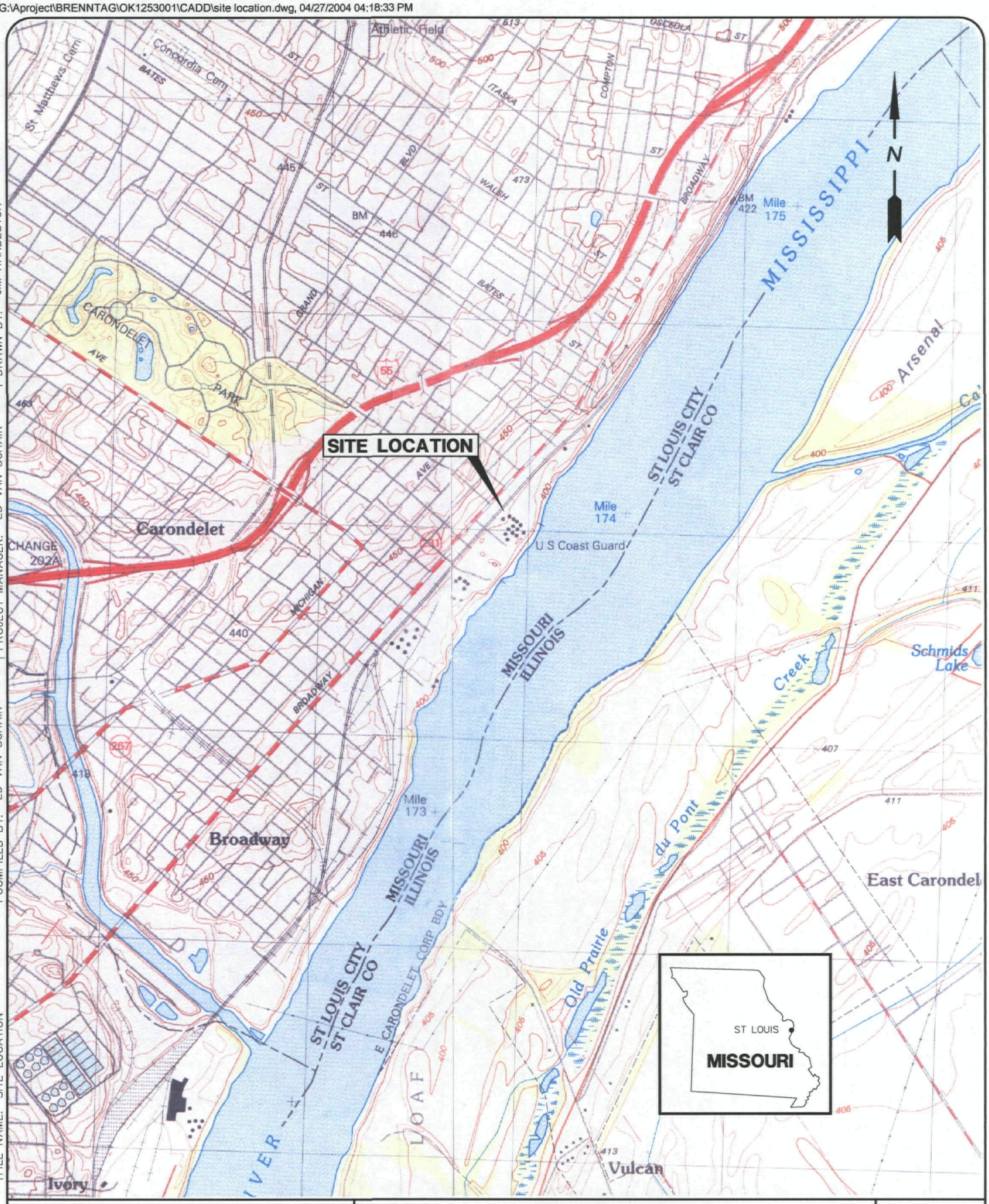

DATE: 13FEB02 | FILE NAME: SITE LOCATION | COMPILED BY: ED VAN SCHAIK | PROJECT MANAGER: ED VAN SCHAIK | DRAWN BY: JIM HARBESTON

ARCADIS G&M

5100 EAST SKELLY DRIVE SUITE 1000
TULSA, OKLAHOMA 74135
Tel: (918) 664-9900 Fax: (918) 664-9925

0 2000 FT.

SITE LOCATION MAP

REF. 7.5' USGS QUADRANGLE - WEBSTER GROVES, MO.

BRENNTAG
139 EAST SOPER STREET
ST. LOUIS, MISSOURI

PROJECT NUMBER
OK001253.0001

FIGURE NUMBER
1

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DATE: 6MAR02 | FILE NAME: AREA MAP | COMPILED BY: ED VAN SHAIK | PROJECT MANAGER: WARREN FRENCH | DRAWN BY: JIM HARBESTON

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Tel: (918) 664-9900 Fax: (918) 664-9925

0 400 FT.

AERIAL PHOTO

BRENNTAG
139 EAST SOPER
ST. LOUIS, MISSOURI

PROJECT NUMBER
OK001253.0001

FIGURE NUMBER
2

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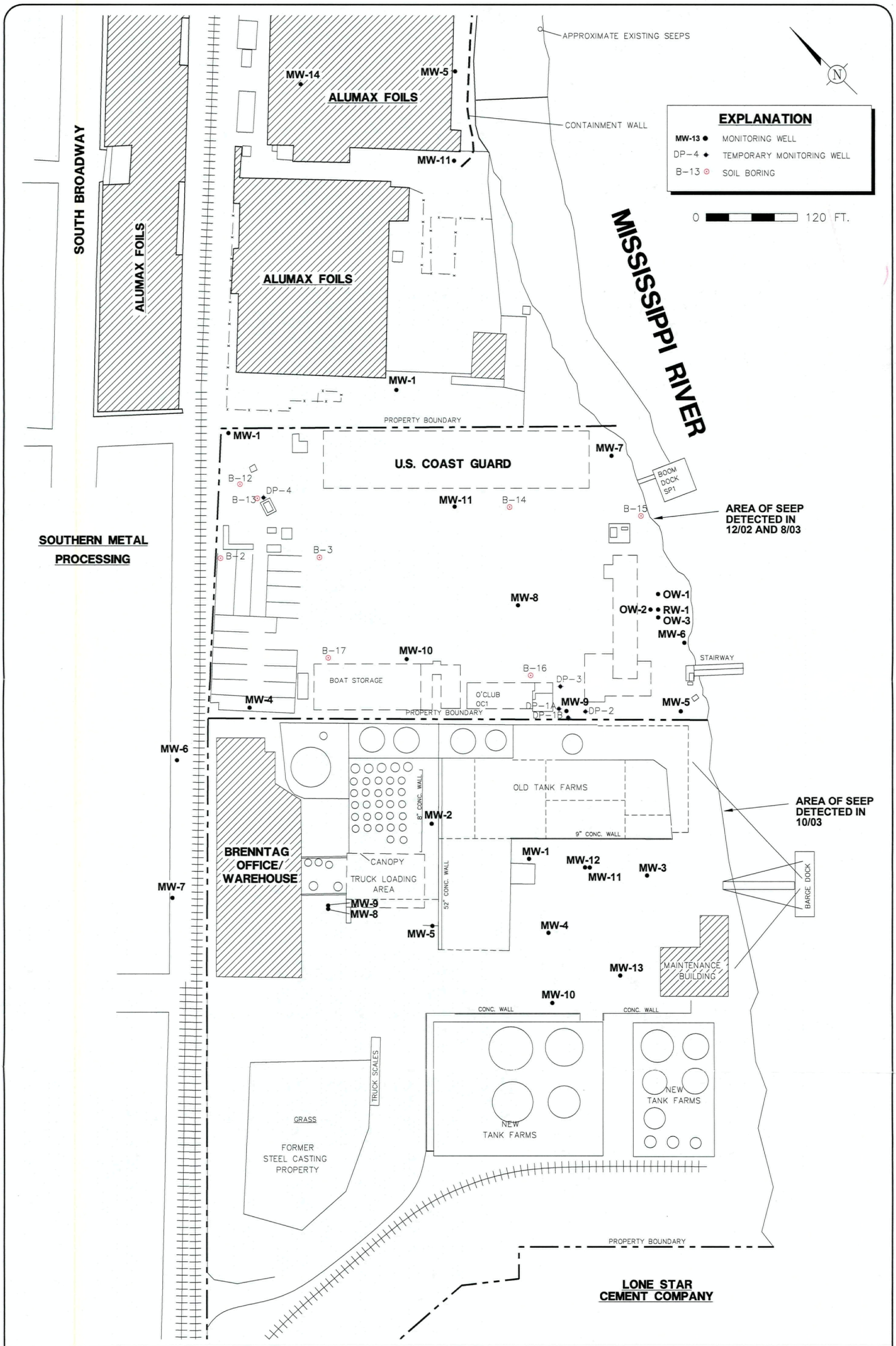

ARCADIS G&M

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VICINITY MAP

BRENNTAG
139 EAST SOPER STREET
ST. LOUIS, MISSOURI

PROJECT NUMBER
OK001253.0002

FIGURE NUMBER
3

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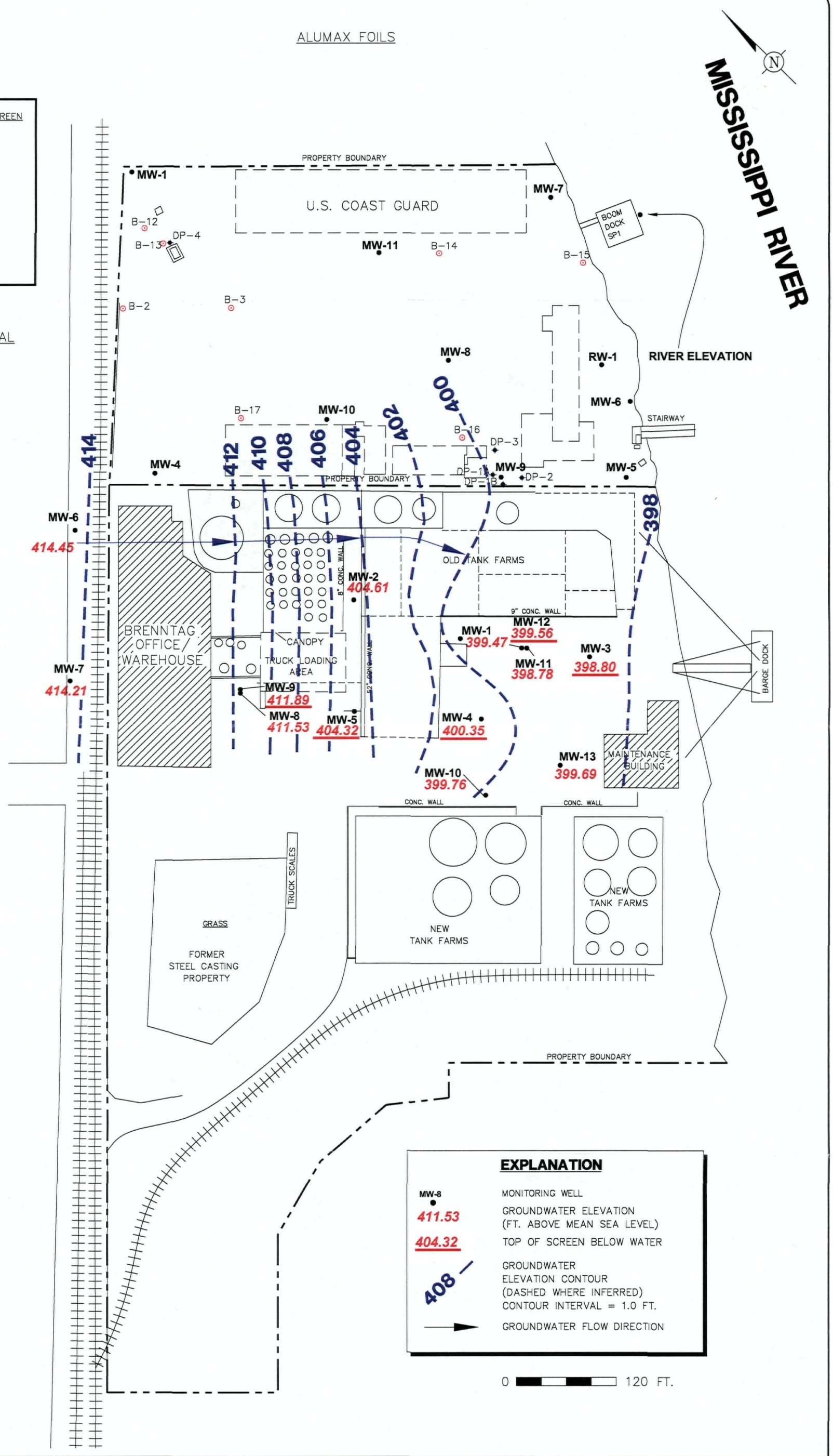
WELL I.D.	TOP OF SCREEN
MW-1	402.63
MW-2	404.46
MW-3	390.74
MW-4	395.90
MW-5	389.63
MW-6	416.79
MW-7	417.08
MW-8	414.18
MW-9	391.20
MW-10	403.65
MW-11	408.46
MW-12	385.98
MW-13	404.63



ARCADIS G&M
5100 EAST SKELLY DRIVE SUITE 1000
TULSA, OKLAHOMA 74135
Tel: (918) 664-9900 Fax: (918) 664-9925

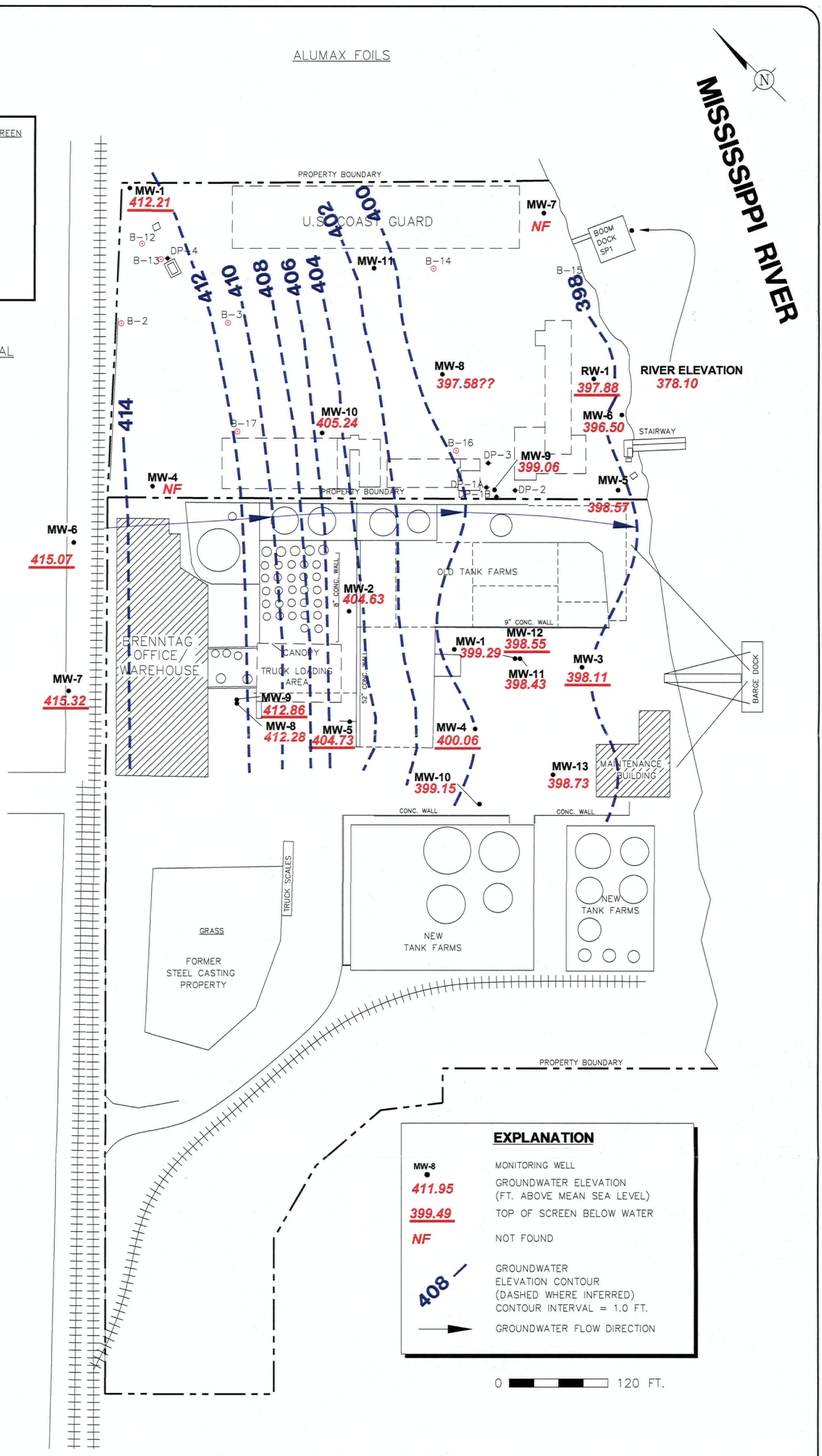
GROUNDWATER ELEVATION MAP
FEBRUARY 10, 2004
BRENNTAG
139 EAST SOPER STREET
ST. LOUIS, MISSOURI

PROJECT NUMBER
OK001253.2004

FIGURE NUMBER
4

DWG DATE: FILE NO.: DEC2003 GW COMPILED BY: WARREN FRENCH PROJ. MGR: WARREN FRENCH DRAFTER: JIM HARBESTON

WELL I.D.	TOP OF SCREEN
MW-1	402.63
MW-2	404.46
MW-3	390.74
MW-4	395.90
MW-5	389.63
MW-6	416.79
MW-7	417.08
MW-8	414.18
MW-9	391.20
MW-10	403.65
MW-11	408.46
MW-12	385.98
MW-13	404.63



ARCADIS G&M
5100 EAST SKELLY DRIVE SUITE 1000
TULSA, OKLAHOMA 74135
Tel: (918) 664-9900 Fax: (918) 664-9925

GROUNDWATER ELEVATION MAP
DECEMBER 2, 2003
BRENNTAG
139 EAST SOPER STREET
ST. LOUIS, MISSOURI

PROJECT NUMBER
OK001253.2003

FIGURE NUMBER
5

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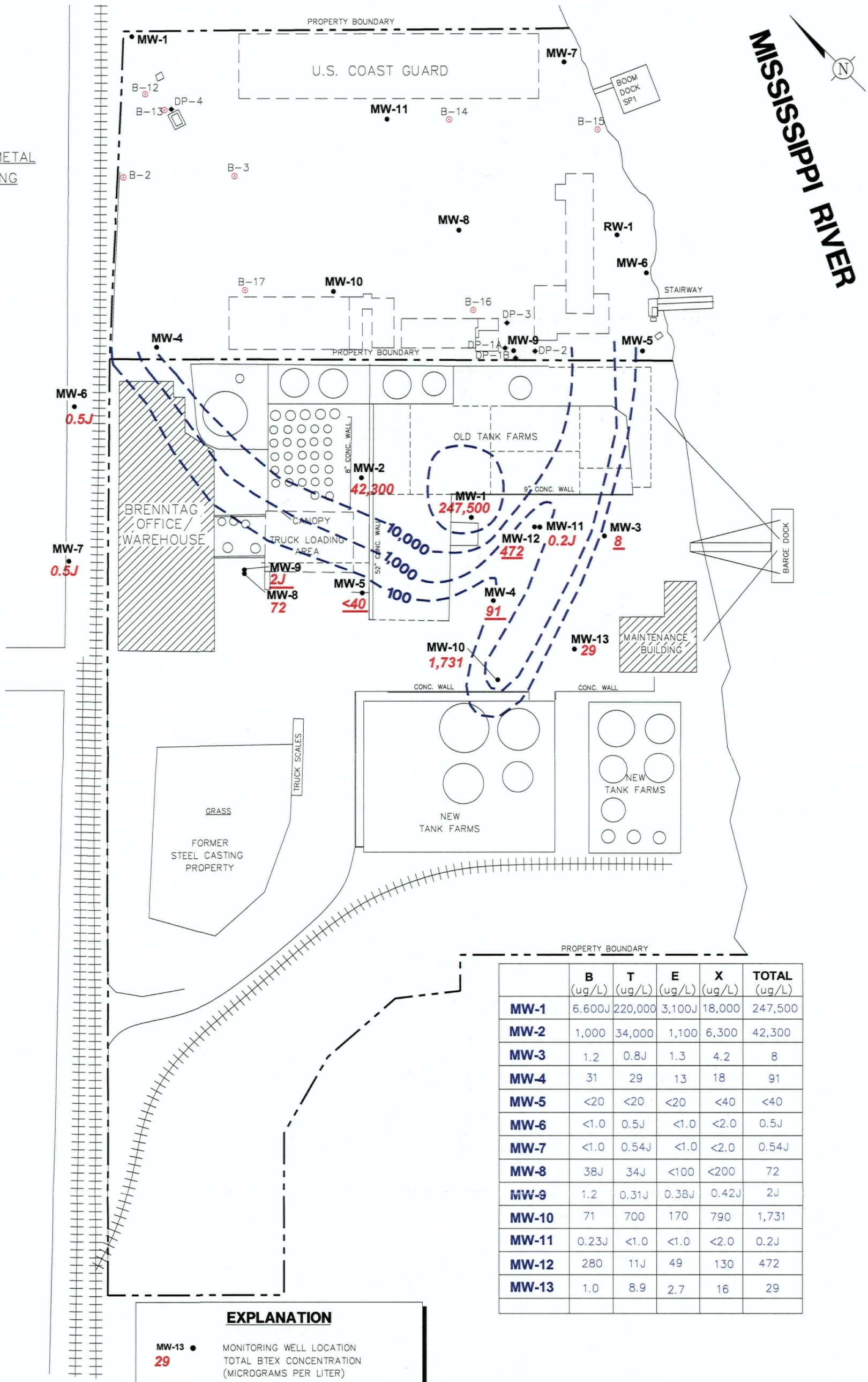

	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	TOTAL (ug/L)
MW-1	6,600J	220,000	3,100J	18,000	247,500
MW-2	1,000	34,000	1,100	6,300	42,300
MW-3	1.2	0.8J	1.3	4.2	8
MW-4	31	29	13	18	91
MW-5	<20	<20	<20	<40	<40
MW-6	<1.0	0.5J	<1.0	<2.0	0.5J
MW-7	<1.0	0.54J	<1.0	<2.0	0.54J
MW-8	38J	34J	<100	<200	72
MW-9	1.2	0.31J	0.38J	0.42J	2J
MW-10	71	700	170	790	1,731
MW-11	0.23J	<1.0	<1.0	<2.0	0.2J
MW-12	280	11J	49	130	472
MW-13	1.0	8.9	2.7	16	29

EXPLANATION

MW-13 ●	MONITORING WELL LOCATION
29	TOTAL BTEX CONCENTRATION (MICROGRAMS PER LITER)
8	TOP OF SCREEN BELOW WATER
J	ESTIMATED VALUE
200	TOTAL BTEX CONCENTRATION CONTOUR (DASHED WHERE INFERRED) CONTOUR INTERVAL VARIES

ARCADIS G&M
5100 EAST SKELLY DRIVE SUITE 1000
TULSA, OKLAHOMA 74135
Tel: (918) 664-9900 Fax: (918) 664-9925

TOTAL BTEX
ISOCONCENTRATIONS IN GROUNDWATER
FEBRUARY 10-12, 2004
BRENNTAG
139 EAST SOPER STREET
ST. LOUIS, MISSOURI

PROJECT NUMBER
OK001253.2004

FIGURE NUMBER
6

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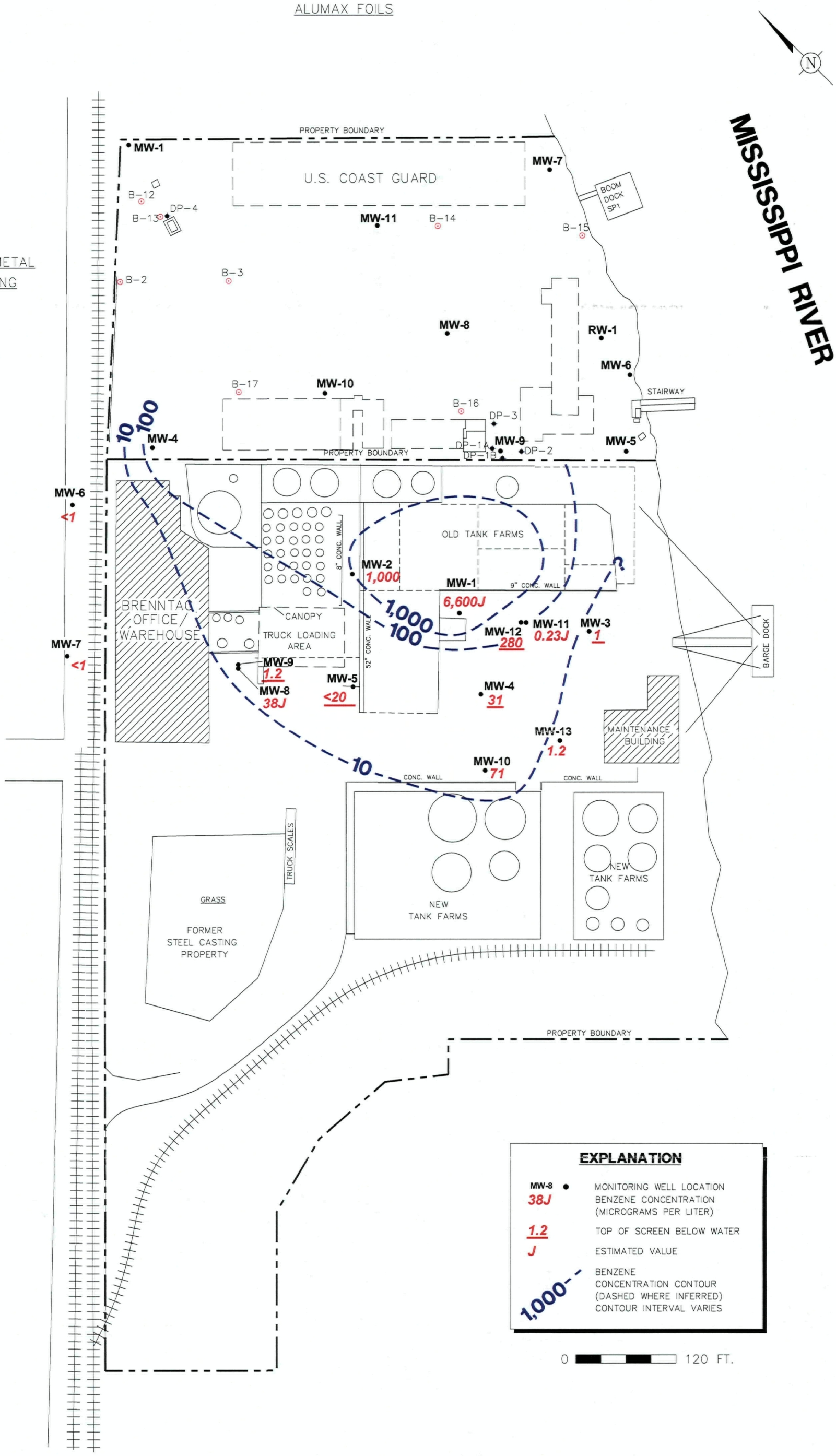

ARCADIS G&M
5100 EAST SKELLY DRIVE SUITE 1000
TULSA, OKLAHOMA 74135
Tel: (918) 664-9900 Fax: (918) 664-9925

BENZENE
ISOCONCENTRATIONS IN GROUNDWATER
FEBRUARY 10-12, 2004
BRENNTAG
139 EAST SOPER STREET
ST. LOUIS, MISSOURI

PROJECT NUMBER
OK001253.2004

FIGURE NUMBER
7

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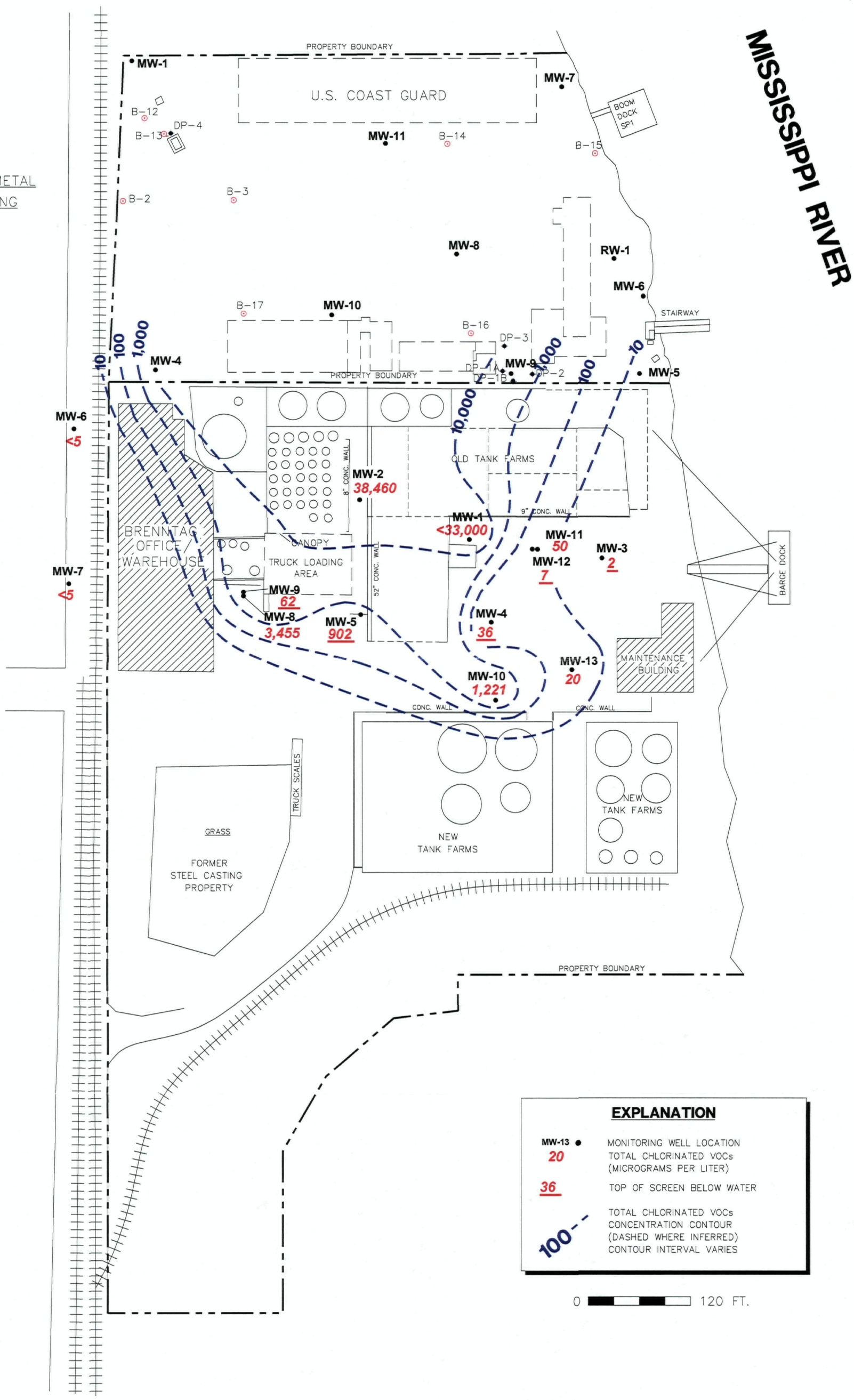

ARCADIS G&M

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TULSA, OKLAHOMA 74135
Tel: (918) 664-9900 Fax: (918) 664-9925

TOTAL CHLORINATED VOC ISOCONCENTRATIONS IN GROUNDWATER FEBRUARY 10-12, 2004

BRENNTAG
139 EAST SOPER STREET
ST. LOUIS, MISSOURI

PROJECT NUMBER
OK001253.2004

FIGURE NUMBER
8

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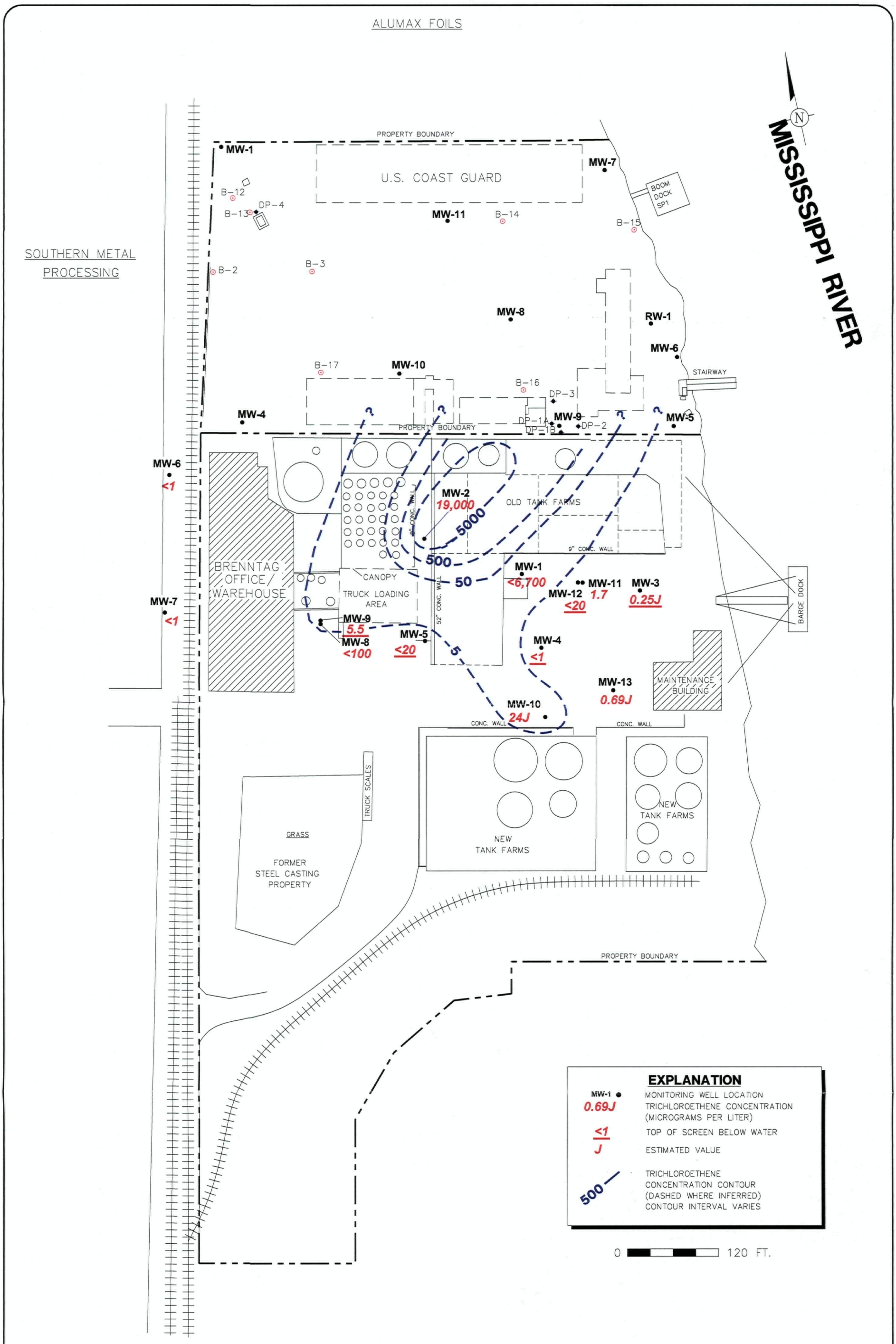

ARCADIS G&M

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TULSA, OKLAHOMA 74135
Tel: (918) 664-9900 Fax: (918) 664-9925

TRICHLOROETHENE ISOCONCENTRATIONS IN GROUNDWATER FEBRUARY 10-12, 2004

BRENNTAG
139 EAST SOPER STREET
ST. LOUIS, MISSOURI

PROJECT NUMBER
OK001253.2004

FIGURE NUMBER
9

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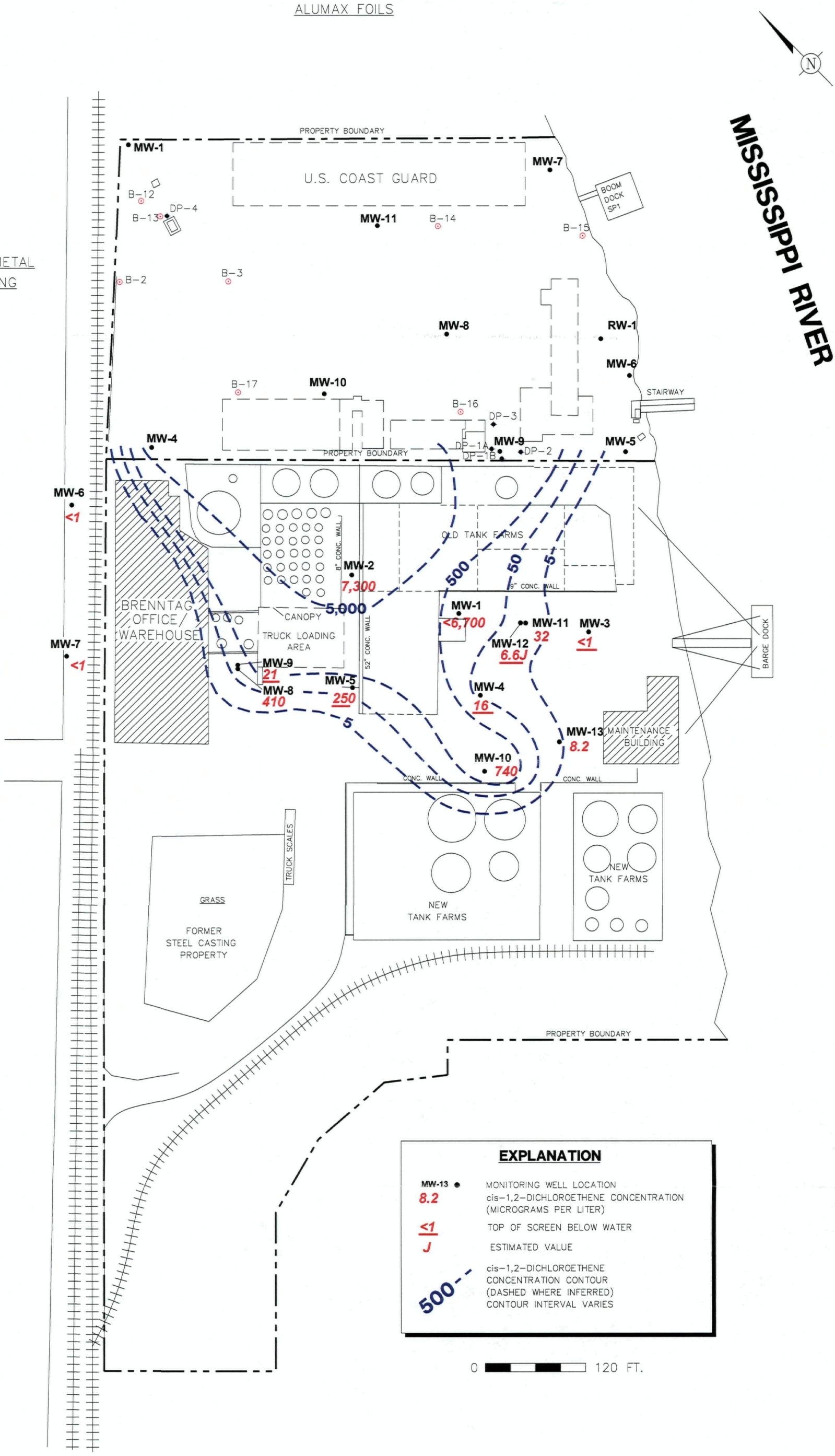

ARCADIS G&M

5100 EAST SKELLY DRIVE SUITE 1000
TULSA, OKLAHOMA 74135
Tel: (918) 664-9900 Fax: (918) 664-9925

cis-1,2-DICHLOROETHENE ISOCONCENTRATIONS IN GROUNDWATER FEBRUARY 10-12, 2004

BRENNTAG
139 EAST SOPER STREET
ST. LOUIS, MISSOURI

PROJECT NUMBER
OK001253.2004

FIGURE NUMBER
10

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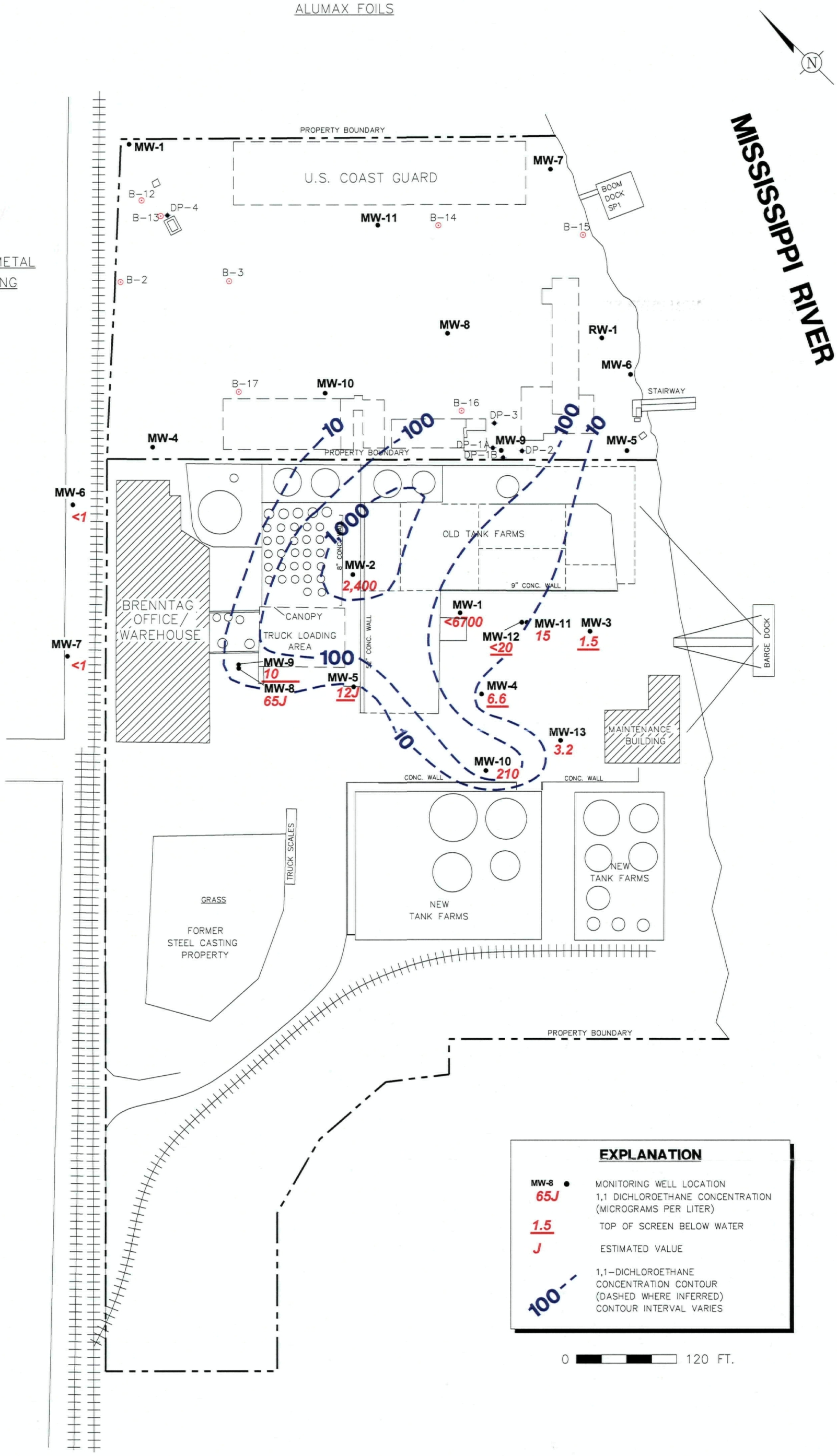

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TULSA, OKLAHOMA 74135
Tel: (918) 664-9900 Fax: (918) 664-9925

1,1-DICHLOROETHANE ISOCONCENTRATIONS IN GROUNDWATER FEBRUARY 10-12, 2004

BRENNTAG
139 EAST SOPER STREET
ST. LOUIS, MISSOURI

PROJECT NUMBER
OK001253.2004

FIGURE NUMBER
11

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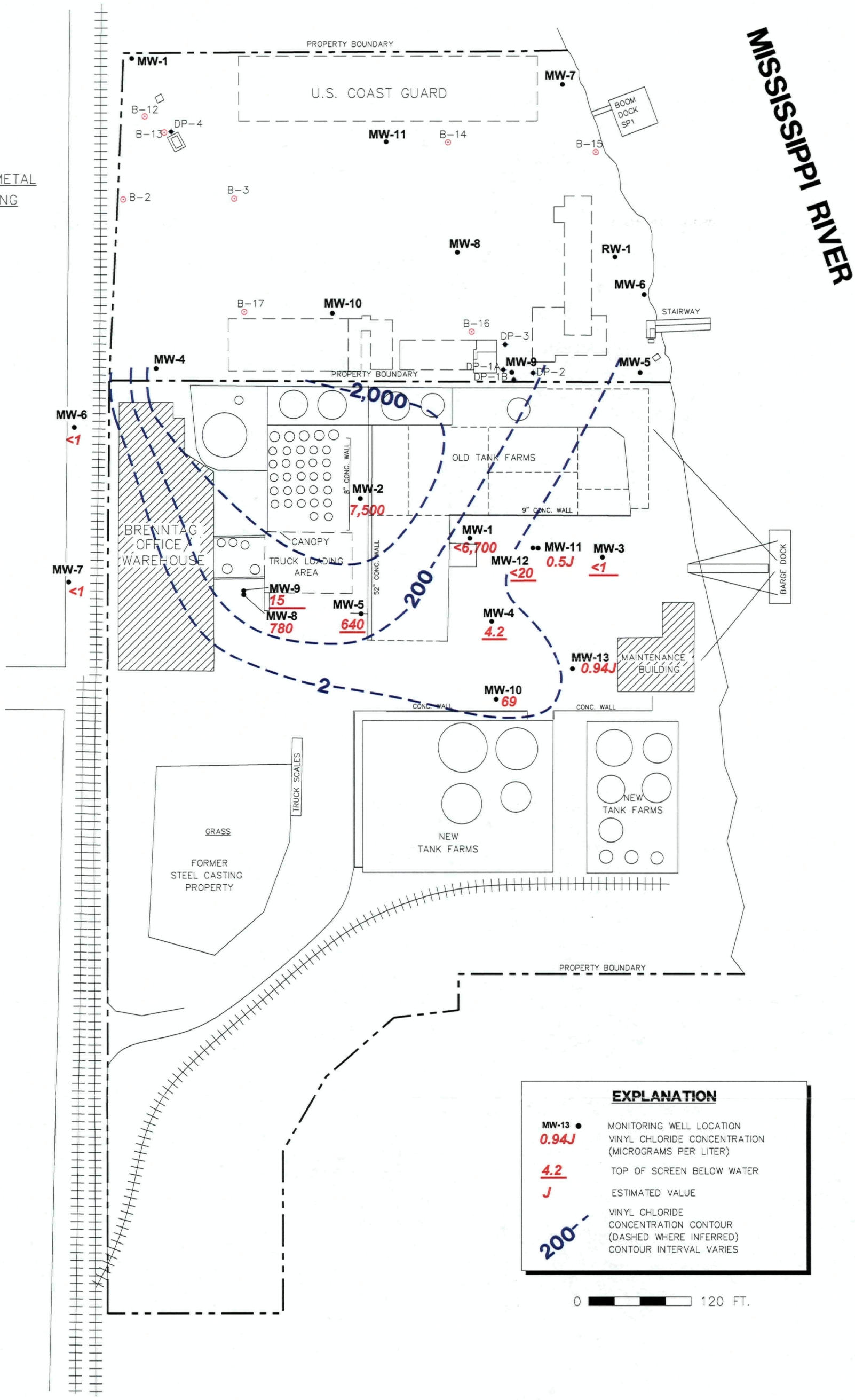

ARCADIS G&M
5100 EAST SKELLY DRIVE SUITE 1000
TULSA, OKLAHOMA 74135
Tel: (918) 664-9900 Fax: (918) 664-9925

VINYL CHLORIDE ISOCONCENTRATIONS IN GROUNDWATER FEBRUARY 10-12, 2004

BRENNTAG
139 EAST SOPER STREET
ST. LOUIS, MISSOURI

PROJECT NUMBER
OK001253.2004

FIGURE NUMBER
12

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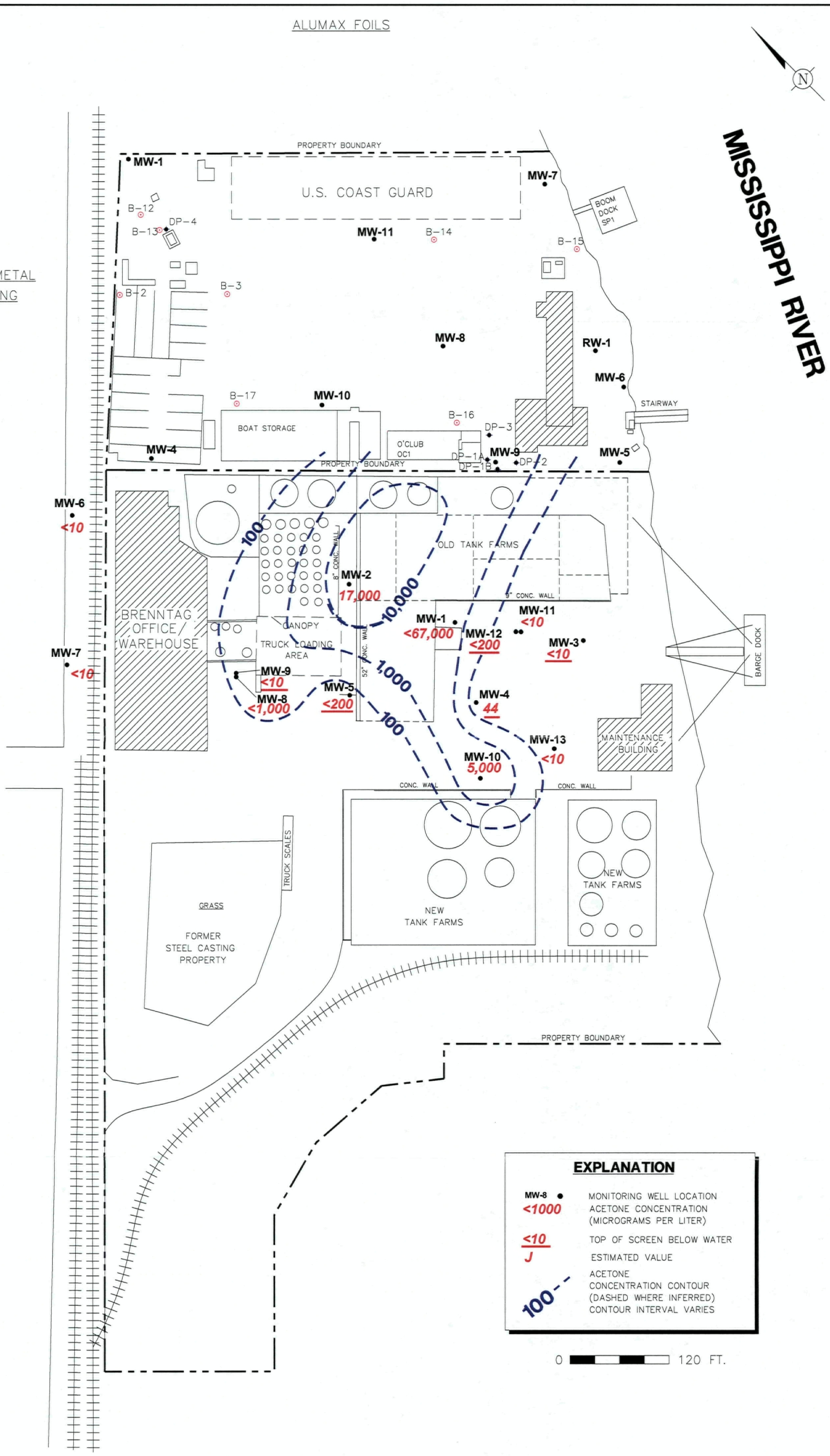

ARCADIS G&M

5100 EAST SKELLY DRIVE SUITE 1000
TULSA, OKLAHOMA 74135
Tel: (918) 664-9900 Fax: (918) 664-9925

ACETONE ISOCONCENTRATIONS IN GROUNDWATER FEBRUARY 10-12, 2004

BRENNTAG
139 EAST SOPER STREET
ST. LOUIS, MISSOURI

PROJECT NUMBER
OK001253.2004

FIGURE NUMBER
13

APPENDIX A

HISTORICAL SUMMARY OF VOLATILE ORGANIC COMPOUNDS DETECTED IN GROUNDWATER

Appendix A: Historical Summary of Volatile Organic Compounds Detected in Groundwater, Brenntag, 139 East Soper Street, St. Louis, Missouri

Well Name	CALM	MCLs	MW-1	MW-1	MW-1	MW-1	MW-1	MW-1	MW-1	MW-1	MW-1	MW-1	MW-1	MW-1
Sample Date	(ug/l)	(ug/l)	4/30/92	3/9/94	12/2/94	12/13/95	9/18/96	5/9/97	1/1/98	12/3/99	4/17/00	9/1/00	12/27/00	3/1/01
Acetone				<4000	<100000	<500000		290	810		<20000	<20000	<1000	1200
Benzene			1100	5400	16000	<25000	4700	1900	9800	6100	5100	5000	7000	4200
Bromobenzene														
Bromochloromethane														
Bromodichloromethane	80									NA				
Bromoform														
Bromomethane														
2-Butanone (MEK)				<500	<100000	<500000		<100	NA		<5000	<5000	<1000	<500
n-Butylbenzene										<5000				
sec-Butylbenzene										NA				
tert-Butylbenzene			NA	NA	NA	NA	NA	NA	NA	NA	<5000	<5000	<100	<50
Carbon Tetrachloride														
Chlorobenzene	100	100	450	500	<5000	<25000	940	420	510	<5000	<5000	<5000	280	170
Chloroethane			<0.5	<500	<10000	<50000	<0.77	<10	NA	NA	<5000	<5000	<100	<50
Chloroform	80		<0.5	<100	<5000	<25000	<0.43	<5	NA	NA	<5000	<5000	<100	<50
Chloromethane			<0.5	<500	<5000	<25000	<1.58	<10	NA	NA	<10000	<10000	<100	<50
2-Chlorotoluene														
4-Chlorotoluene														
Dibromochloromethane														
1,2-Dibromo-3-chloropropane														
1,2-Dibromoethane (EDB)														
Dibromomethane														
1,2-Dichlorobenzene	600		<720	480	<5000	<25000	<0.63	NA	490	<5000	<5000	<5000	560	360
1,3-Dichlorobenzene										NA				
1,4-Dichlorobenzene	75		<590	93	<5000	<25000	NA	NA	NA	<5000	<5000	<5000	<100	<50
Dichlorodifluoromethane														
1,1-Dichloroethene			25	<100	<5000	<25000	34	22	65	<5000	<5000	<5000	<100	<50
1,2-Dichloroethane	5	5								NA				
1,1-Dichloroethene	7	7	5.8	<100	<5000	<25000	<0.52	<5	ND	<5000	<5000	<5000	<100	<50
cis-1,2-Dichloroethene	70	70	NA	1300	NA	NA	330	79	580	<5000	<5000	<5000	410	250
trans-1,2-Dichloroethene	100	100	<0.5	<100	<5000	<25000	<0.43	<5	ND	<5000	<5000	<5000	<100	<50
1,2-Dichloroethene (total)														
1,2-Dichloropropane	5	5								NA				
1,3-Dichloropropane														
2,2-Dichloropropane														
1,1-Dichloropropene														
cis-1,3-Dichloropropene														
trans-1,3-Dichloropropene										NA				
Ethylbenzene			560	1700	<5000	<25000	1600	850	2000	<5000	3100 J	2600 J	3200	3500
Hexachlorobutadiene										NA				
2-Hexanone														
Isopropylbenzene (Cumene)			NA	NA	NA	NA	NA	NA	NA	<5000	<5000	<5000	<100	<50
p-Isopropyltoluene			NA	NA	NA	NA	NA	NA	NA	NA	<5000	<5000	<100	<50
4-Methyl-2-pentanone (MIBK)				<500	<50000	<250000		85	NA		<10000	<10000	<1000	<500
Methylene Chloride	5		1.2	<4000	<85000	<100000	2.7 J	12	79	NA	<20000	12000 J	<100	<50
Naphthalene			NA	100	NA	NA	NA	NA	120	<10000	<10000	<10000	150	130
n-Propylbenzene			NA	NA	NA	NA	NA	NA	NA	<5000	<5000	<5000	<100	<50
Styrene			NA	<100	<5000	<25000	67	<5	ND	<5000	<5000	<5000	170	<50
1,1,1,2-Tetrachloroethane														
1,1,2,2-Tetrachloroethane														
Tetrachloroethene (PCE)	5	5	99	200	<5000	<25000	320	72	200	<5000	<5000	<5000	220	140
Toluene			24000	20000	200000	350000	110000	40000	3100	190000	160000	130000	170000	140000
1,2,3-Trichlorobenzene														
1,2,4-Trichlorobenzene														
1,1,1-Trichloroethane	200	200	<0.5	<100	<5000	<25000	5.6	<5	ND	NA	<5000	<5000	<100	<50
1,1,2-Trichloroethane														
Trichloroethene (TCE)	5	5	71	200	<5000	<25000	79	21	110	<5000	<5000	<5000	<100	<50
Trichlorofluoromethane														
1,2,3-Trichloropropane														
1,2,4-Trimethylbenzene			NA	NA	NA	NA	<700	NA	200	<5000	<5000	<5000	260	200
1,3,5-Trimethylbenzene			NA	NA	NA	NA	NA	NA	71	<5000	<5000	<5000	<100	65
Vinyl Chloride	2	2	53	<500	<10000	<50000	<2.21	13	ND	<5000	<5000	<5000	<100	
m&p-Xylene														
o-Xylene														
Xylenes (total)			3400	9500	23000	<75000	9300	4000	19000	9600 J	16400 J	10900 J	19600	20300
Total VOCs			26365	29973	219000	350000	118279	43764	18146	196100	168200	149800	182250	150215
Total Chlorinated VOCs			255	2273	<85000	<100000	772	219	1534	<5000	<10000	12000	1190	750
Total BTEX			29060	36600	239000	350000	125800	46750	33900	205700	184600	148500	199800	168000

Appendix A: Historical Summary of Volatile Organic Compounds Detected in Groundwater,
Brenntag, 139 East Soper Street, St. Louis, Missouri

Well Name	CALM	MCLs	MW-1	MW-1	MW-1	MW-1	MW-1	MW-1	MW-1	MW-1	MW-1	MW-1	MW-1	MW-1
Sample Date	(ug/l)	(ug/l)	5/22/01	8/21/01	12/4/01	2/19/02	5/30/02	8/15/02	10/29/02	2/5/03	5/7/03	7/30/03	12/3/03	2/11/04
Acetone			<20	2500 B	<4000	20000	73000	8000	<10000	<1000	580 J	3,400	1,700 J	<67000
Benzene			18	8400	4100	4600	<5000	3200	8500	1100	1900	3,900	4,900	6,600 J
Bromobenzene										<100	<100	<200	<500	<6700
Bromochloromethane										<100	<100	<200	<500	<6700
Bromodichloromethane	80						11000	<1200	<1000	<100	<100	<200	<500	<6700
Bromoform										<100	<100	<200	<500	<6700
Bromomethane										<200	<200	<400	<1000	<13000
2-Butanone (MEK)			<10	<1000	<4000	<10000	<50000	<5000	<10000	<500	<500	690 J	<2500	<33000
n-Butylbenzene								<1200	<1000	<100	<100	<200	<500	<6700
sec-Butylbenzene								<1200	<1000	<100	<100	<200	<500	<6700
tert-Butylbenzene			<5	<500	<400	<1000	<5000	<1200	<1000	<100	<100	<200	<500	<6700
Carbon Tetrachloride										<100	<100	<200	<500	<6700
Chlorobenzene	100	100	<5	830	<400	<1000	<5000	<1200	<1000	400	150	340	680	<6700
Chloroethane			<5	<500	<400	<1000	<5000	<1200	<1000	<200	<200	<400	<1000	<13000
Chloroform	80		<5	<500	<400	<1000	52000	610	<1000	<100	<100	<200	<500	<6700
Chloromethane			<5	<500	5700	<1000	<5000	<1200	<1000	<200	<200	<400	<1000	<13000
2-Chlorotoluene										<100	<100	<200	<500	<6700
4-Chlorotoluene										<100	<100	<200	<500	<6700
Dibromochloromethane										<100	<100	<200	<500	<6700
1,2-Dibromo-3-chloropropane										<200	<200	<400	<1000	<13000
1,2-Dibromoethane (EDB)										<100	<100	<200	<500	<6700
Dibromomethane										<100	<100	<200	<500	<6700
1,2-Dichlorobenzene	600		<5	550	<400	<1000	<5000	<1200	580 J	150	170	220	280 J	<6700
1,3-Dichlorobenzene								<1200	<1000	<100	<100	<200	<500	<6700
1,4-Dichlorobenzene	75		<5	<500	<400	<1000	<5000	<1200	<1000	24 J	18 J	<200	<500	<6700
Dichlorodifluoromethane										<200	<200	<400	<1000	<13000
1,1-Dichloroethane			<5	<500	<400	<1000	<5000	<1200	<1000	<100	<100	46 J	<500	<6700
1,2-Dichloroethane	5	5						<1200	<1000	<100	<100	<200	<500	<6700
1,1-Dichloroethene	7	7	<5	<500	<400	<1000	<5000	<1200	<1000	<100	<100	<200	<500	<6700
cis-1,2-Dichloroethene	70	70	<5	520	<400	<1000	<5000	<1200	630 J	54 J	52 J	220	210 J	<6700
trans-1,2-Dichloroethene	100	100	<5	<500	<400	<1000	<5000	<1200	<1000	<50	<50	<100	<250	<3300
1,2-Dichloroethene (total)										54 J	52 J	220	210 J	<6700
1,2-Dichloropropane	5	5						<1200	<1000	<100	<100	<200	<500	<6700
1,3-Dichloropropane										<100	<100	<200	<500	<6700
2,2-Dichloropropane										<500	<500	<1000	<2500	<33000
1,1-Dichloropropene										<100	<100	<200	<500	<6700
cis-1,3-Dichloropropene										<100	<100	<200	<500	<6700
trans-1,3-Dichloropropene								<1200	<1000	<100	<100	<200	<500	<6700
Ethylbenzene			15	2600	<400	1100	<5000	2400	2400	840	1200	3,000	2,600	3,100 J
Hexachlorobutadiene								<1200	<1000	<100	<100	<200	<500	<6700
2-Hexanone									<10000	<500	<500	<1000	<2500	<33000
Isopropylbenzene (Cumene)			<5	<500	<400	<1000	<5000	<1200	<1000	33 J	<100	51 J	<500	<6700
p-Isopropyltoluene			<5	<500	<400	<1000	<5000	<1200	<1000	<100	<100	<200	<500	<6700
4-Methyl-2-pentanone (MIBK)			<10	<1000	<4000	<10000	<50000	<12000	<10000	<500	<500	<1000	<2500	<33000
Methylene Chloride	5		<5	390 JB	<400	2000	<5000	1900	<1000	<500	61 J	43 J	<2500	<33000
Naphthalene			<5	<500	<400	<1000	<5000	<1200	<1000	66 J	66 J	150 J	<500	<6700
n-Propylbenzene			<5	<500	<400	<1000	<5000	<1200	<1000	21 J	25 J	44 J	<500	<6700
Styrene			<5	<500	<400	<1000	<5000	<1200	<1000	<100	<100	140 J	<500	<6700
1,1,1,2-Tetrachloroethane										<100	<100	<200	<500	<6700
1,1,2,2-Tetrachloroethane										<100	<100	<200	<500	<6700
Tetrachloroethene (PCE)	5	5	<5	260 J	<400	<1000	<5000	<1200	<1000	33 J	<100	59 J	<500	<6700
Toluene			410	200000	91000	200000	<5000	39000	190000	35000	47000	120,000	170,000	220,000
1,2,3-Trichlorobenzene										<100	<100	<200	<500	<6700
1,2,4-Trichlorobenzene										<100	<100	<200	<500	<6700
1,1,1-Trichloroethane	200	200	<5	<500	<400	<1000	<5000	<1200	<1000	<100	<100	<200	<500	<6700
1,1,2-Trichloroethane										<100	<100	<200	<500	<6700
Trichloroethene (TCE)	5	5	<5	<500	<400	<1000	<5000	<1200	<1000	<100	<100	38 J	<500	<6700
Trichlorofluoromethane										<200	<200	<400	<1000	<13000
1,2,3-Trichloropropane									<2500	<100	<100	<200	<500	<6700
1,2,4-Trimethylbenzene			<5	120	<400	<1000	<5000	<1200	<1000	89 J	120	200	250 J	<6700
1,3,5-Trimethylbenzene			<5	<500	<400	<1000	<5000	<1200	<1000	32 J	55 J	80 J	<500	<6700
Vinyl Chloride	2	2	<5	<500	<400	<1000	<5000	<1200	<1000	<100	<100	<200	<500	<6700
m&p-Xylene										3400	5000	12,000	11,000	13,000
o-Xylene										1200	1900	4,300	4,200	4,800 J
Xylenes (total)			148	14000	4400	6800	<6500	4300	13700	4600	6900	16,000	15,000	18,000
Total VOCs			443	216170	100800	227700	136000	55110	202110	42442	58297	148,921	195,820	247,500
Total Chlorinated VOCs			<5	1720	5700	2000	63000	2510	1210	661	451	626	1,170	<33000
Total BTEX			592	225000	99500	212500	<6500	48800	214600	41540	57000	142,900	192,500	247,500

Appendix A: Historical Summary of Volatile Organic Compounds Detected in Groundwater, Brenntag, 139 East Soper Street, St. Louis, Missouri

Well Name Sample Date	CALM (ug/l)	MCLs (ug/l)	MW-2 4/30/92	MW-2 3/9/94	MW-2 12/2/94	MW-2 12/13/95	MW-2 9/18/96	MW-2 5/9/97	MW-2 1/1/98	MW-2 12/3/99	MW-2 4/17/00	MW-2 9/1/00	MW-2 12/27/00	MW-2 5/22/01	MW-2 8/21/01
Acetone				<4000	<25000	<500000		880	9800		<4000	5900 J	20000	20000	7300 B
Benzene			<360	1400	1800	<25000	2000	730	1100	940	1200	<2500	1100	1500	1900
Bromobenzene															
Bromochloromethane															
Bromodichloromethane	80									NA					
Bromoform															
Bromomethane															
2-Butanone (MEK)				<500	<25000	<500000		<100	NA		<1000	<2500	<10000	<50	<200
n-Butylbenzene										<500					
sec-Butylbenzene										NA					
tert-Butylbenzene			NA	NA	NA	NA	NA	NA	NA	NA	<1000	<2500	<1000	<25	<100
Carbon Tetrachloride															
Chlorobenzene	100	100	18	<100	<1200	<25000	<1.3	<5	ND	<500	<1000	<2500	<1000	29	<100
Chloroethane			<2.5	<500	<2500	<50000	<3.85	<10	NA	NA	<1000	<2500	<1000	<25	<100
Chloroform	80		<2.5	<100	<1200	<25000	<2.15	<5	NA	NA	<1000	<2500	<1000	<25	<100
Chloromethane			<2.5	<500	<1200	<25000	<7.9	<10	NA	NA	<2000	<5000	<10000	<25	<100
2-Chlorotoluene															
4-Chlorotoluene															
Dibromochloromethane															
1,2-Dibromo-3-chloropropane															
1,2-Dibromoethane (EDB)															
Dibromomethane															
1,2-Dichlorobenzene	600		2400	24	<1200	<25000	78	NA	NA	<500	<1000	<2500	<1000	71	<100
1,3-Dichlorobenzene										NA					
1,4-Dichlorobenzene	75		<590	<10	<1200	<25000	<2.5	NA	NA	<500	<1000	<2500	<1000	<25	<100
Dichlorodifluoromethane															
1,1-Dichloroethane			800	5500	26000	<25000	<1.45	<5	4600	5100	7400	2700	3900	<25	8100
1,2-Dichloroethane	5	5								NA					
1,1-Dichloroethene	7	7	310	300	<1200	<25000	<2.6	380	ND	<500	<1000	<2500	<1000	<25	460
cis-1,2-Dichloroethene	70	70	NA	83000	NA	NA	<2.15	69000	58000	44000	68000	26000	21000	69000	72000
trans-1,2-Dichloroethene	100	100	<2.5	2900	4400	<25000	<2.15	<5	1200	1400	2100	<2500	<1000	<25	700
1,2-Dichloroethene (total)															
1,2-Dichloropropane	5	5								NA					
1,3-Dichloropropane															
2,2-Dichloropropane															
1,1-Dichloropropene															
cis-1,3-Dichloropropene															
trans-1,3-Dichloropropene										NA					
Ethylbenzene			2700	<100	<1200	<25000	210	110	ND	<500	<1000	<2500	<1000	260	350
Hexachlorobutadiene										NA					
2-Hexanone															
Isopropylbenzene (Cumene)			NA	NA	NA	NA	NA	NA	NA	<500	<1000	<2500	<1000	<25	41
p-Isopropyltoluene			NA	NA	NA	NA	NA	NA	NA	NA	<1000	<2500	<1000	<25	<100
4-Methyl-2-pentanone (MIBK)				<500	<12000	<250000		210	NA		1800	<5000	<10000	1800	1900
Methylene Chloride	5		590	<4000	<16000	<100000	<61.65	<5	1400	NA	<4000	5400 J	<1000	92	79 JB
Naphthalene			NA	<100	NA	NA	NA	NA	NA	<1000	<2000	<5000	<1000	79	100
n-Propylbenzene			NA	NA	NA	NA	NA	NA	NA	<500	<1000	<2500	<1000	<25	<100
Styrene			NA	<100	<1200	<25000	22	<5	ND	<500	<1000	<2500	<1000	<25	<100
1,1,1,2-Tetrachloroethane															
1,1,2,2-Tetrachloroethane															
Tetrachloroethene (PCE)	5	5	770	<100	<1200	<25000	74	33	ND	<500	<1000	<2500	<1000	88	130
Toluene			33000	1800	6300	<25000	4600	2200	9800	3400	5300	4100	26000	6800	6900 J
1,2,3-Trichlorobenzene															
1,2,4-Trichlorobenzene															
1,1,1-Trichloroethane	200	200	560	<100	<1200	<25000	<1.3	<5	ND	NA	<1000	<2500	<1000	<25	<100
1,1,2-Trichloroethane															
Trichloroethene (TCE)	5	5	2100	2100	6600	<25000	2600	2400	3500	930	3000	2700	13000	2700	3400
Trichlorofluoromethane															
1,2,3-Trichloropropane															
1,2,4-Trimethylbenzene			NA	NA	NA	NA	130	NA	ND	<500	<1000	<2500	<1000	170	260
1,3,5-Trimethylbenzene			NA	NA	NA	NA	NA	NA	NA	<500	<1000	<2500	<1000	110	47
Vinyl Chloride	2	2	650	<500	<2500	<50000	190	200	ND	11000	11000	4800	6200	12000	17000
m&p-Xylene															
o-Xylene															
Xylenes (total)			20000	400	<3800	<75000	1270	580	2200	840 J	1180 J	<2500	4600	1720	2040
Total VOCs			43898	97024	45100	<500000	9802	76143	89400	66770	99600	51500	91200	114497	120667
Total Chlorinated VOCs			8180	93824	37000	<100000	2940	72013	68700	62430	91500	41600	44100	83940	101869
Total BTEX			55700	3800	8100	<75000	7980	3620	13100	5180	7580	4100	31700	10280	11190

Appendix A: Historical Summary of Volatile Organic Compounds Detected in Groundwater,
Brenntag, 139 East Soper Street, St. Louis, Missouri

Well Name Sample Date	CALM (ug/l)	MCLs (ug/l)	MW-2 12/5/01	MW-2 2/19/02	MW-2 5/30/02	MW-2 8/16/02	MW-2 10/29/02	MW-2 2/6/03	MW-2 5/8/03	MW-2 7/31/03	MW-2 12/4/03	MW-2 2/11/04
Acetone			15000 J	27000	13000	11000	15000	34000	26000	17,000	14,000	17,000
Benzene			<2500	<1000	540	1600	1000	930	1000	1,400	720	1,000
Bromobenzene								<100	<67	<67	<100	<1000
Bromochloromethane								<100	<67	<67	<100	<1000
Bromodichloromethane	80					<200	<50	<100	<67	<67	<100	<1000
Bromoform								<100	<67	<67	<100	<1000
Bromomethane								<200	<130	<130	<200	<2000
2-Butanone (MEK)			<25000	<10000	<5000	1800 J	3100	3800	2600	2,300	1,700	<5000
n-Butylbenzene						<200	<50	<100	<67	<67	<100	<1000
sec-Butylbenzene						<200	<50	<100	<67	<67	<100	<1000
tert-Butylbenzene			<2500	<1000	<500	<200	<50	<100	<67	<67	<100	<1000
Carbon Tetrachloride								<100	<67	<67	<100	<1000
Chlorobenzene	100	100	<2500	<1000	<500	<200	45 J	82 J	110	96	50 J	<1000
Chloroethane			<2500	<1000	<500	<200	<50	<200	<130	<130	<200	<2000
Chloroform	80		<2500	<1000	<500	<200	<50	<100	<67	<67	<100	<1000
Chloromethane			<2500	<1000	<500	<200	<50	<200	<130	<130	<200	<2000
2-Chlorotoluene								<100	<67	<67	<100	<1000
4-Chlorotoluene								<100	<67	<67	<100	<1000
Dibromochloromethane								<100	<67	<67	<100	<1000
1,2-Dibromo-3-chloropropane								<200	<130	<130	<200	<2000
1,2-Dibromoethane (EDB)								<100	<67	<67	<100	<1000
Dibromomethane								<100	<67	<67	<100	<1000
1,2-Dichlorobenzene	600		<2500	<1000	<500	<200	88	110	130	130	80 J	<1000
1,3-Dichlorobenzene						<200	<50	<100	<67	<67	<100	<1000
1,4-Dichlorobenzene	75		<2500	<1000	<500	<200	<50	<100	<67	<67	<100	<1000
Dichlorodifluoromethane								<200	<130	<130	<200	<2000
1,1-Dichloroethane			3300	2400	2200	9600	4700	3000	2900	7,000	1,700	2,400
1,2-Dichloroethane	5	5				<200	<50	<100	<67	<67	<100	<1000
1,1-Dichloroethene	7	7	<2500	<1000	<500	220	140	140	140	140	100	<1000
cis-1,2-Dichloroethene	70	70	16000	13000	9100	20000	180000	7900	7000	18,000	5,800	7,300
trans-1,2-Dichloroethene	100	100	<2500	<1000	<500	600	310	120	110	510	110	<500
1,2-Dichloroethene (total)								8100	7000	18,000	5,900	7,300
1,2-Dichloropropane	5	5				<200	<50	<100	<67	<67	<100	<1000
1,3-Dichloropropane								<100	<67	<67	<100	<1000
2,2-Dichloropropane								<500	<330	<330	<500	<5000
1,1-Dichloropropene								<100	<67	<67	<100	<1000
cis-1,3-Dichloropropene								<100	<67	<67	<100	<1000
trans-1,3-Dichloropropene						<200	<50	<100	<67	<67	<100	<1000
Ethylbenzene			<2500	2100	<500	310	450	900	1000	770	920	1,100
Hexachlorobutadiene						<200	<50	<100	<67	<67	<100	<1000
2-Hexanone							<500	<500	<330	<330	<500	<5000
Isopropylbenzene (Cumene)			<2500	<1000	<500	<200	30 J	76 J	86	83 J	77 J	<1000
p-Isopropyltoluene			<2500	<1000	<500	<200	<50	<100	<67	<67	<100	<1000
4-Methyl-2-pentanone (MIBK)			<25000	<10000	<5000	3200	2500	3200	2100	2,800	1,300	1,800 J
Methylene Chloride	5		<2500	<1000	<500	<200	170	500	600	340	<500	<5000
Naphthalene			<2500	<1000	<500	<200	78	170	190	140	61 J	<1000
n-Propylbenzene			<2500	<1000	<500	<200	42 J	120	150	100	74 J	<1000
Styrene			<2500	<1000	<500	<200	<50	<100	<67	<67	<100	<1000
1,1,1,2-Tetrachloroethane								<100	<67	<67	<100	<1000
1,1,2,2-Tetrachloroethane								<100	<67	<67	<100	<1000
Tetrachloroethene (PCE)	5	5	<2500	<1000	<500	140 J	250	600	620	390	450	460 J
Toluene			15000	16000	10000	12000	17000	31000	27000	22,000	27,000	34,000
1,2,3-Trichlorobenzene								<100	<67	<67	<100	<1000
1,2,4-Trichlorobenzene								<100	<67	<67	<100	<1000
1,1,1-Trichloroethane	200	200	<2500	<1000	<500	<200	<50	49 J	29 J	<67	21 J	<1000
1,1,2-Trichloroethane								<100	<67	<67	<100	<1000
Trichloroethene (TCE)	5	5	7600	7700	5200	8500	8400	15000	13000	9,500	16,000	19,000
Trichlorofluoromethane								<200	<130	<130	<200	<2000
1,2,3-Trichloropropane							<120	<100	<67	<67	<100	<1000
1,2,4-Trimethylbenzene			<2500	<1000	<500	150 J	190	430	580	410	410	650 J
1,3,5-Trimethylbenzene			<2500	<1000	<500	130 J	150	310	510	320	410	630 J
Vinyl Chloride	2	2	3500	3200	2600	19000	8300	4100	5500	15,000	6,100	7,500
m&p-Xylene								3500	4200	3,200	3,500	4,400
o-Xylene								1400	1700	1,400	1,400	1,800
Xylenes (total)			1900 J	1600	1870	1870	2930	4900	5900	4,600	4,900	6,300
Total VOCs			60400	71400	42640	68250	241943	111437	97255	103,009	81,883	98,040
Total Chlorinated VOCs			30400	26300	19100	58060	202358	31601	30130	51,010	31,711	38,460
Total BTEX			16900	19700	12410	15780	21380	37730	34900	28,770	33,540	42,300

Appendix A: Historical Summary of Volatile Organic Compounds Detected in Groundwater,
Brenntag, 139 East Soper Street, St. Louis, Missouri

Well Name	CALM	MCLs	MW-3	MW-3	MW-3	MW-3	MW-3	MW-3	MW-3	MW-3	MW-3	MW-3	MW-3	MW-3	MW-3	MW-3
Sample Date	(ug/l)	(ug/l)	3/9/94	12/2/94	12/13/95	9/18/96	5/9/97	1/1/98	12/3/99	4/17/00	9/1/00	12/27/00	3/1/01	5/21/01	8/20/01	12/4/01
Acetone			<4000	<10000	<50000		<100	ND		<100	<20	<50	<500	<2000	28 B	<200
Benzene			240000	23000	39000	9700	17000	1000	73	380	19	31	2300	13000	530	450
Bromobenzene																
Bromochloromethane																
Bromodichloromethane	80								NA							
Bromoform																
Bromomethane																
2-Butanone (MEK)			<500	<10000	<50000		<100	NA		<25	<5	<50	<500	<1000	<10	<200
n-Butylbenzene									<25							
sec-Butylbenzene									NA							
tert-Butylbenzene			NA	NA	NA	NA	NA	NA	NA	<25	<5	<5	<50	<500	<5	<20
Carbon Tetrachloride																
Chlorobenzene	100	100	<100	<500	<2500	<0.26	<5	ND	<25	<25	<5	<5	<50	<500	<5	<20
Chloroethane			<500	<1000	<5000	<0.77	<10	NA	NA	<25	<5	<5	<50	<500	<5	<20
Chloroform	80		<100	<500	<2500	<0.43	<5	NA	NA	<25	<5	<5	<50	<500	<5	<20
Chloromethane			<500	<500	<2500	<1.58	<10	NA	NA	<50	<10	<5	<50	<500	<5	<20
2-Chlorotoluene																
4-Chlorotoluene																
Dibromochloromethane																
1,2-Dibromo-3-chloropropane																
1,2-Dibromoethane (EDB)																
Dibromomethane																
1,2-Dichlorobenzene	600		<10	<500	<2500	1.5 J	NA	NA	<25	<25	<5	<5	<50	<500	<5	<20
1,3-Dichlorobenzene									NA							
1,4-Dichlorobenzene	75		<10	<500	<2500	<0.5	NA	NA	<25	<25	<5	<5	<50	<500	<5	<20
Dichlorodifluoromethane																
1,1-Dichloroethane			<100	<500	<2500	5.5	11	ND	<25	<25	<5	<5	<50	<500	<5	<20
1,2-Dichloroethane	5	5							NA							
1,1-Dichloroethene	7	7	<100	<500	<2500	<0.52	<5	ND	<25	<25	<5	<5	<50	<500	<5	<20
cis-1,2-Dichloroethene	70	70	<100	NA	NA	8.8	120	ND	<25	<25	3 J	<5	<50	<500	<5	<20
trans-1,2-Dichloroethene	100	100	<100	<500	<2500	<0.43	8	ND	<25	<25	<5	<5	<50	<500	<5	<20
1,2-Dichloroethene (total)																
1,2-Dichloropropane	5	5							NA							
1,3-Dichloropropane																
2,2-Dichloropropane																
1,1-Dichloropropene																
cis-1,3-Dichloropropene																
trans-1,3-Dichloropropene									NA							
Ethylbenzene			100	<500	<2500	40	63	12	27	<25	4.2 J	<5	<50	<500	18	35
Hexachlorobutadiene									NA							
2-Hexanone																
Isopropylbenzene (Cumene)			NA	NA	NA	NA	NA	7.4	<25	<25	<5	<5	<50	<500	6.9	18
p-Isopropyltoluene			NA	NA	NA	NA	NA	NA	NA	<25	<5	<5	<50	<500	<5	<20
4-Methyl-2-pentanone (MIBK)			<500	<5000	<25000		<50	NA		<50	<10	<50	<500	<1000	<10	<200
Methylene Chloride	5		<4000	<6500	<10000	<12.33	7.5	10	NA	<100	4.4 J	<5	<50	<500	<5	<20
Naphthalene			<100	NA	NA	NA	NA	NA	<50	<50	<10	<5	<50	<500	<5	<20
n-Propylbenzene			NA	NA	NA	NA	NA	12	<25	<25	<5	<5	<50	<500	12	37
Styrene			<100	<500	<2500	3.1 J	<5	ND	13 J	<25	<5	<5	<50	<500	<5	<20
1,1,1,2-Tetrachloroethane																
1,1,2,2-Tetrachloroethane																
Tetrachloroethene (PCE)	5	5	<100	<500	<2500	<0.83	<5	ND	<25	<25	<5	<5	<50	<500	<5	<20
Toluene			500	<500	<2500	47	150	11	<25	14 J	4.6 J	30	<50	990	35	38
1,2,3-Trichlorobenzene																
1,2,4-Trichlorobenzene																
1,1,1-Trichloroethane	200	200	<100	<500	<2500	<0.26	<5	ND	NA	<25	<5	<5	<50	<500	<5	<20
1,1,2-Trichloroethane																
Trichloroethene (TCE)	5	5	<100	<500	<2500	3.4 J	8	ND	280	<25	<5	<5	<50	<500	<5	<20
Trichlorofluoromethane																
1,2,3-Trichloropropane																
1,2,4-Trimethylbenzene			NA	NA	NA	150	NA	24	<25	<25	3.1 J	<5	70	<500	32	78
1,3,5-Trimethylbenzene			NA	NA	NA	NA	NA	29	<25	<25	2.8 J	<5	81	<500	7.1	92
Vinyl Chloride	2	2	<500	<1000	<5000	<2.21	<10	ND	<25	<25	<5	<5	<50	<500	<5	<20
m&p-Xylene																
o-Xylene																
Xylenes (total)			500	<1500	<7500	191	230	58	76 J	28 J	12.1	9	77	2090	120	267
Total VOCs			240600	23000	39000	9968	17385.5	1105	393	384	41	61	2451	13990	669	748
Total Chlorinated VOCs			<4000	<6500	<10000	19	153	10	280	<100	7	<5	<50	<500	<5	<20
Total BTEX			241100	23000	39000	9987	17443	1081	176	422	40	70	2377	16080	703	788

Appendix A: Historical Summary of Volatile Organic Compounds Detected in Groundwater, Brenntag, 139 East Soper Street, St. Louis, Missouri

Well Name	CALM	MCLs	MW-3	MW-3	MW-3	MW-3	MW-3	MW-3	MW-3	MW-3	MW-3
Sample Date	(ug/l)	(ug/l)	2/19/02	5/29/02	8/15/02	10/28/02	2/5/03	5/7/03	7/30/03	12/3/03	2/10/04
Acetone			<10	<100	<10	<10	150 J	<67	<10	<100	<10
Benzene			69	4700	80	3100	4800	4200	1,700	3,500	1.2
Bromobenzene							<20	<6.7	<1.0	<10	<1.0
Bromochloromethane							<20	<6.7	<1.0	<10	<1.0
Bromodichloromethane	80				<1	<1	<20	<6.7	<1.0	<10	<1.0
Bromoform							<20	<6.7	<1.0	<10	<1.0
Bromomethane							<40	<13	<2.0	<20	<2.0
2-Butanone (MEK)			<10	<100	<10	5.8 J	<100	<33	<5.0	<50	<5.0
n-Butylbenzene				12	<1	7.8	<20	<6.7	<1.0	<10	<1.0
sec-Butylbenzene					<1	<1	<20	<6.7	<1.0	<10	<1.0
tert-Butylbenzene			<1	<10	<1	<1	<20	<6.7	<1.0	<10	<1.0
Carbon Tetrachloride							<20	<6.7	<1.0	<10	<1.0
Chlorobenzene	100	100	<1	<10	<1	1.5	3.1 J	3.5 J	0.5 J	4.0 J	<1.0
Chloroethane			<1	<10	<1	<1	<40	<13	<2.0	<20	<2.0
Chloroform	80		<1	<10	<1	<1	<20	<6.7	<1.0	<10	<1.0
Chloromethane			<1	<10	<1	<1	<40	<13	<2.0	<20	<2.0
2-Chlorotoluene							<20	<6.7	<1.0	<10	<1.0
4-Chlorotoluene							<20	<6.7	<1.0	<10	<1.0
Dibromochloromethane							<20	<6.7	<1.0	<10	<1.0
1,2-Dibromo-3-chloropropane							<40	<13	<2.0	<20	<2.0
1,2-Dibromoethane (EDB)							<20	<6.7	<1.0	<10	<1.0
Dibromomethane							<20	<6.7	<1.0	<10	<1.0
1,2-Dichlorobenzene	600		<1	<10	<1	<1	<20	<6.7	0.17 J	<10	<1.0
1,3-Dichlorobenzene					<1	<1	<20	<6.7	<1.0	<10	<1.0
1,4-Dichlorobenzene	75		<1	<10	<1	<1	<20	<6.7	<1.0	<10	<1.0
Dichlorodifluoromethane							<40	<13	<2.0	<20	<2.0
1,1-Dichloroethane			1.1	<10	<1	0.69 J	<20	<6.7	1.5	<10	1.5
1,2-Dichloroethane	5	5		190	<1	<1	<20	<6.7	<1.0	<10	<1.0
1,1-Dichloroethene	7	7	<1	<10	<1	<1	<20	<6.7	<1.0	<10	<1.0
cis-1,2-Dichloroethene	70	70	1.5	<10	<1	1.5	4.8 J	2.9 J	1.2	1.9 J	<1.0
trans-1,2-Dichloroethene	100	100	<1	<10	<1	<1	<10	<3.3	0.18 J	<5.0	<0.50
1,2-Dichloroethene (total)							4.8 J	2.9 J	1.4	<10	<1.0
1,2-Dichloropropane	5	5			<1	<1	<20	<6.7	0.19 J	<10	<1.0
1,3-Dichloropropane							<20	<6.7	<1.0	<10	<1.0
2,2-Dichloropropane							<100	<33	<5.0	<50	<5.0
1,1-Dichloropropene							<20	<6.7	<1.0	<10	<1.0
cis-1,3-Dichloropropene							<20	<6.7	<1.0	<10	<1.0
trans-1,3-Dichloropropene					<1	<1	<20	<6.7	<1.0	<10	<1.0
Ethylbenzene			14	140	3.4	35	79	84	11	170	1.3
Hexachlorobutadiene					<1	<1	<20	<6.7	<1.0	<10	<1.0
2-Hexanone						<10	<100	<33	<5.0	<50	<5.0
Isopropylbenzene (Cumene)			4	34	1.8	37	100	84	5.2	85	0.54 J
p-Isopropyltoluene			<1	<10	1.3	<1	<20	9.9	0.31 J	<10	<1.0
4-Methyl-2-pentanone (MIBK)			<10	<100	<10	<10	<100	<33	<5.0	<50	<5.0
Methylene Chloride	5		<1	<10	<1	<1	<100	3.6 J	<5.0	<50	<5.0
Naphthalene			2.8	43	1.2	4.2	14 J	6.6 J	1.5	12	<1.0
n-Propylbenzene			6.9	77	<1	75	170	150	6.6	130	0.85 J
Styrene			<1	12	<1	<1	<20	<6.7	<1.0	<10	<1.0
1,1,1,2-Tetrachloroethane							<20	<6.7	<1.0	<10	<1.0
1,1,2,2-Tetrachloroethane							<20	<6.7	<1.0	<10	<1.0
Tetrachloroethene (PCE)	5	5	<1	<10	<1	<1	<20	<6.7	<1.0	<10	<1.0
Toluene			8.6	190	5.1	32	77	63	9.2	60	0.8 J
1,2,3-Trichlorobenzene							<20	<6.7	<1.0	<10	<1.0
1,2,4-Trichlorobenzene							<20	<6.7	<1.0	<10	<1.0
1,1,1-Trichloroethane	200	200	<1	<10	<1	<1	<20	<6.7	<1.0	<10	0.28 J
1,1,2-Trichloroethane							<20	<6.7	<1.0	<10	<1.0
Trichloroethene (TCE)	5	5	<1	<10	<1	0.9 J	4.1 J	1.2 J	0.62 J	<10	0.25 J
Trichlorofluoromethane							<40	<13	<2.0	<20	<2.0
1,2,3-Trichloropropane						<2.5	<20	<6.7	<1.0	<10	<1.0
1,2,4-Trimethylbenzene			18	190	9.1	82	390	380	16	320	4.1
1,3,5-Trimethylbenzene			22	160	12	130	480	610	22	440	6.1
Vinyl Chloride	2	2	<1	<10	<1	<1	<20	<6.7	0.39 J	<10	<1.0
m&p-Xylene							210	210	24	310	2.0
o-Xylene							550	500	63	690	2.2
Xylenes (total)			63	660	38.8	323	760	780	90	990	4.2
Total VOCs			148	5748	114	3523	7032	6409	1,864	5,723	21
Total Chlorinated VOCs			3	190	<1	3	12	11	4.23	5.98	2
Total BTEX			155	5690	125	3490	5716	5157	1,810	4,720	8

Appendix A: Historical Summary of Volatile Organic Compounds Detected in Groundwater,
Brenntag, 139 East Soper Street, St. Louis, Missouri

Well Name	CALM	MCLs	MW-4	MW-4	MW-4	MW-4	MW-4	MW-4	MW-4	MW-4	MW-4	MW-4	MW-4	MW-4	MW-4	MW-4
Sample Date	(ug/l)	(ug/l)	3/9/94	12/2/94	12/13/95	9/18/96	5/9/97	1/1/98	12/3/99	4/17/00	9/1/00	12/27/00	3/1/01	5/22/01	8/21/01	12/4/01
Acetone			<4000	<100	<100	NA	<100	ND		<200	<20	<10	<50	240 B	<20	<25
Benzene			300	38	53	42	90	33	120	48 J	29	44	9.2	87	39	25
Bromobenzene																
Bromochloromethane																
Bromodichloromethane	80								NA							
Bromoform																
Bromomethane																
2-Butanone (MEK)			<500	<100	<100	NA	<100	NA		<50	<5	<10	56	<50	<10	<25
n-Butylbenzene									<50							
sec-Butylbenzene									NA							
tert-Butylbenzene			NA	NA	NA	NA	NA	NA	NA	<50	<5	<1	<5	<25	<5	<2.5
Carbon Tetrachloride																
Chlorobenzene	100	100	<100	<5	<5	<0.26	<5	ND	<50	<50	<5	<1	<5	<25	<5	<2.5
Chloroethane			<500	<10	<10	<0.77	<10	11	NA	<50	6.8	9	<5	<25	7.5	5.7
Chloroform	80		<100	<5	<5	<0.43	<5	NA	NA	<50	<5	<1	<5	<25	<5	<2.5
Chloromethane			<500	<5	<5	<1.58	<10	NA	NA	<100	<10	<1	<5	<25	<5	<2.5
2-Chlorotoluene																
4-Chlorotoluene																
Dibromochloromethane																
1,2-Dibromo-3-chloropropane																
1,2-Dibromoethane (EDB)																
Dibromomethane																
1,2-Dichlorobenzene	600		3.9 J	<5	<5	2.7 J	NA	NA	<50	<50	<5	1.1	<5	<25	<5	<2.5
1,3-Dichlorobenzene									NA							
1,4-Dichlorobenzene	75		<10	<5	<5	<0.5	NA	NA	<50	<50	<5	<1	<5	<25	<5	<2.5
Dichlorodifluoromethane																
1,1-Dichloroethane			<100	110	32	20	7.6	5.6	<50	<50	5.9	7.4	<5	<25	6.5	5.1
1,2-Dichloroethane	5	5							NA							
1,1-Dichloroethene	7	7	<100	<5	<5	<0.52	<5	ND	<50	<50	<5	<1	<5	<25	<5	<2.5
cis-1,2-Dichloroethene	70	70	<100	NA	NA	30	16	10	<50	<50	6.6	11	<5	<25	10	7.3
trans-1,2-Dichloroethene	100	100	<100	<5	<5	<0.43	<5	ND	<50	<50	<5	<1	<5	<25	<5	<2.5
1,2-Dichloroethene (total)																
1,2-Dichloropropane	5	5							NA							
1,3-Dichloropropane																
2,2-Dichloropropane																
1,1-Dichloropropene																
cis-1,3-Dichloropropene																
trans-1,3-Dichloropropene									NA							
Ethylbenzene			200	34	33	37	62	15	140	33 J	12	14	<5	140	17	8.8
Hexachlorobutadiene									NA							
2-Hexanone																
Isopropylbenzene (Cumene)			NA	NA	NA	NA	NA	NA	<50	<50	2.3 J	2.9	<5	<25	<5	1.5 J
p-Isopropyltoluene			NA	NA	NA	NA	NA	NA	NA	<50	<5	<1	<5	<25	<5	<2.5
4-Methyl-2-pentanone (MIBK)			<500	<50	<50	NA	<50	NA		<100	<10	<10	<50	<50	<10	<25
Methylene Chloride	5		<4000	<65	<20	<12.33	7.4	9.9	NA	<200	6.6 J	<1	<5	<25	<5	<2.5
Naphthalene			<100	NA	NA	NA	NA	NA	<100	<100	<10	<1	<5	<25	<5	<2.5
n-Propylbenzene			NA	NA	NA	NA	NA	NA	<50	<50	<5	<1	<5	<25	<5	<2.5
Styrene			<100	<5	<5	<1.77	<5	ND	<50	<50	<5	<1	<5	<25	<5	<2.5
1,1,1,2-Tetrachloroethane																
1,1,2,2-Tetrachloroethane																
Tetrachloroethene (PCE)	5	5	<100	<5	<5	<0.83	<5	25	<50	<50	<5	<1	<5	<25	<5	<2.5
Toluene			2700	<5	29	190	270	31	1700	1000	20	1.1	<5	580	74	3.1
1,2,3-Trichlorobenzene																
1,2,4-Trichlorobenzene																
1,1,1-Trichloroethane	200	200	<100	<5	<5	<0.26	<5	ND	NA	<50	<5	<1	<5	<25	<5	<2.5
1,1,2-Trichloroethane																
Trichloroethene (TCE)	5	5	<100	<5	<5	<0.39	<5	ND	<50	<50	<5	<1	<5	<25	<5	<2.5
Trichlorofluoromethane																
1,2,3-Trichloropropane																
1,2,4-Trimethylbenzene			NA	NA	NA	2.3 J	NA	ND	24 J	<50	<5	1.4	<5	43	<5	1.1 J
1,3,5-Trimethylbenzene			NA	NA	NA	NA	NA	NA	<50	<50	<5	<1	<5	<25	<5	<2.5
Vinyl Chloride	2	2	<500	<10	<10	5.2 J	<10	ND	<50	<50	3.3 J	2.9	<5	<25	<5	1.9 J
m&p-Xylene																
o-Xylene																
Xylenes (total)			1100	<15	27	22.8	200	28.7	830	115 J	6.4	10.6	<5	1160	16	6.3 J
Total VOCs			3204	180	147	329	453	141	1984	1081	93	95	65	1070	154	60
Total Chlorinated VOCs			4	110	32	58	31	62	<50	<200	29	31	<5	<25	24	20
Total BTEX			4300	70	142	292	622	108	2590	1196	67	70	9	1947	146	43

Appendix A: Historical Summary of Volatile Organic Compounds Detected in Groundwater, Brenntag, 139 East Soper Street, St. Louis, Missouri

Well Name	CALM	MCLs	MW-4	MW-4	MW-4	MW-4	MW-4	MW-4	MW-4	MW-4	MW-4
Sample Date	(ug/l)	(ug/l)	2/19/02	5/30/02	8/16/02	10/29/02	2/5/03	5/7/03	7/30/03	12/3/03	2/11/04
Acetone			75	140	<10	<10	19	5.1 J	<10	<10	44
Benzene			29	<10	23	38	25	19	33	31	31
Bromobenzene							<1.0	<1.0	<1.0	<1.0	<1.0
Bromochloromethane							<1.0	<1.0	<1.0	<1.0	<1.0
Bromodichloromethane	80				<1	<1	<1.0	<1.0	<1.0	<1.0	<1.0
Bromoform							<1.0	<1.0	<1.0	<1.0	<1.0
Bromomethane							<2.0	<2.0	<2.0	<2.0	<2.0
2-Butanone (MEK)			<20	<100	<10	<10	<5.0	<5.0	<5.0	<5.0	8.2
n-Butylbenzene					<1	<1	<1.0	<1.0	<1.0	<1.0	<1.0
sec-Butylbenzene					<1	<1	<1.0	<1.0	<1.0	<1.0	<1.0
tert-Butylbenzene			<2	<10	<1	<1	<1.0	<1.0	<1.0	<1.0	0.26 J
Carbon Tetrachloride							<1.0	<1.0	<1.0	<1.0	<1.0
Chlorobenzene	100	100	<2	<10	<1	0.4 J	0.29 J	<1.0	0.25 J	0.44 J	0.47 J
Chloroethane			22	<10	4.1	<1	4.2	4.1	6	4.9	6.7
Chloroform	80		<2	<10	<1	<1	<1.0	<1.0	<1.0	<1.0	<1.0
Chloromethane			<2	<10	<1	<1	<2.0	<2.0	<2.0	<2.0	<2.0
2-Chlorotoluene							<1.0	<1.0	<1.0	<1.0	<1.0
4-Chlorotoluene							<1.0	<1.0	<1.0	<1.0	<1.0
Dibromochloromethane							<1.0	<1.0	<1.0	<1.0	<1.0
1,2-Dibromo-3-chloropropane							<2.0	<2.0	<2.0	<2.0	<2.0
1,2-Dibromoethane (EDB)							<1.0	<1.0	<1.0	<1.0	<1.0
Dibromomethane							<1.0	<1.0	<1.0	<1.0	<1.0
1,2-Dichlorobenzene	600		1.1 J	<10	<1	0.7 J	0.49 J	0.37 J	0.55 J	0.72 J	0.74 J
1,3-Dichlorobenzene					<1	<1	<1.0	<1.0	<1.0	<1.0	<1.0
1,4-Dichlorobenzene	75		<2	<10	<1	<1	<1.0	<1.0	<1.0	<1.0	<1.0
Dichlorodifluoromethane							<2.0	<2.0	<2.0	<2.0	<2.0
1,1-Dichloroethane			6.6	42	5.2	5.8	4.7	3.7	5.8	6.6	6.6
1,2-Dichloroethane	5	5			<1	<1	<1.0	<1.0	<1.0	<1.0	<1.0
1,1-Dichloroethene	7	7	<2	<10	<1	<1	<1.0	<1.0	<1.0	<1.0	<1.0
cis-1,2-Dichloroethene	70	70	24	170	6.7	10	7.9	7.3	11	14	16
trans-1,2-Dichloroethene	100	100	<2	<10	<1	<1	<0.50	<0.50	<0.50	<0.50	<0.50
1,2-Dichloroethene (total)							8	7.3	11	14	16
1,2-Dichloropropane	5	5			<1	<1	0.41 J	<1.0	<1.0	<1.0	<1.0
1,3-Dichloropropane							<1.0	<1.0	<1.0	<1.0	<1.0
2,2-Dichloropropane							<5.0	<5.0	<5.0	<5.0	<5.0
1,1-Dichloropropene							<1.0	<1.0	<1.0	<1.0	<1.0
cis-1,3-Dichloropropene							<1.0	<1.0	<1.0	<1.0	<1.0
trans-1,3-Dichloropropene					<1	<1	<1.0	<1.0	<1.0	<1.0	<1.0
Ethylbenzene			11	<10	10	13	13	7.3	12	12	13
Hexachlorobutadiene					<1	<1	<1.0	<1.0	<1.0	<1.0	<1.0
2-Hexanone						<10	<5.0	<5.0	<5.0	<5.0	<5.0
Isopropylbenzene (Cumene)			1.6 J	<10	1.5	1.7	1.8	1.2	1.9	1.6	1.8
p-Isopropyltoluene			<2	<10	<1	<1	<1.0	<1.0	<1.0	<1.0	<1.0
4-Methyl-2-pentanone (MIBK)			<20	<100	<10	<10	<5.0	<5.0	<5.0	1.1 J	2.1 J
Methylene Chloride	5		<2	<10	<1	<1	<5.0	<5.0	<5.0	<5.0	<5.0
Naphthalene			<2	<10	0.63 J	<1	1.1	<1.0	<1.0	0.73 J	<1.0
n-Propylbenzene			<2	<10	0.76 J	0.41 J	0.55 J	0.28 J	0.36 J	<1.0	0.53 J
Styrene			<2	<10	<1	<1	<1.0	<1.0	<1.0	<1.0	<1.0
1,1,1,2-Tetrachloroethane							<1.0	<1.0	<1.0	<1.0	<1.0
1,1,2,2-Tetrachloroethane							<1.0	<1.0	<1.0	<1.0	<1.0
Tetrachloroethene (PCE)	5	5	<2	<10	<1	<1	<1.0	<1.0	<1.0	<1.0	<1.0
Toluene			74	170	1.1	110	2.1	0.57 J	1.2	30	29
1,2,3-Trichlorobenzene							<1.0	<1.0	<1.0	<1.0	<1.0
1,2,4-Trichlorobenzene							<1.0	<1.0	<1.0	<1.0	<1.0
1,1,1-Trichloroethane	200	200	<2	<10	<1	<1	<1.0	<1.0	<1.0	<1.0	<1.0
1,1,2-Trichloroethane							<1.0	<1.0	<1.0	<1.0	<1.0
Trichloroethene (TCE)	5	5	6.2	130	<1	<1	<1.0	<1.0	<1.0	<1.0	<1.0
Trichlorofluoromethane							<2.0	<2.0	<2.0	<2.0	<2.0
1,2,3-Trichloropropane						<2.5	<1.0	<1.0	<1.0	<1.0	<1.0
1,2,4-Trimethylbenzene			1.7 J	<10	1.2	1.4	1.9	0.91 J	1.1	1.8	1.8
1,3,5-Trimethylbenzene			<2	<10	<1	0.4 J	0.19 J	0.16 J	<1.0	0.63 J	0.59 J
Vinyl Chloride	2	2	<2	74	2.5	3.2	2.4	2.1	3.1	3.4	4.2
m&p-Xylene							3.4	1.8 J	2.8	14	13
o-Xylene							1.3	0.24 J	0.5 J	5.1	4.8
Xylenes (total)			16.4	21	5.09 J	14.3	4.8	2	3.3	19	18
Total VOCs			252	726	57	185	90	54	79.56	128	185
Total Chlorinated VOCs			60	416	19	20	20	18	26	31	36
Total BTEX			130	191	39	175	45	29	49.5	92	91

Appendix A: Historical Summary of Volatile Organic Compounds Detected in Groundwater,
Brenntag, 139 East Soper Street, St. Louis, Missouri

Well Name	CALM	MCLs	MW-5	MW-5	MW-5	MW-5	MW-5	MW-5	MW-5	MW-5	MW-5	MW-5	MW-5	MW-5	MW-5	MW-5
Sample Date	(ug/l)	(ug/l)	3/9/94	12/2/94	12/13/95	9/18/96	5/9/97	1/1/98	12/3/99	4/17/00	9/1/00	12/27/00	3/1/01	5/22/01	8/21/01	12/4/01
Acetone			11000	<620	<25000		<100	250		<20	6.9 J	<50	21	32 B	410 B	<50
Benzene			100	<31	<1200	8.9	<5	9.8	<5	4.1 J	<10	<5	37	<5	<5	<5
Bromobenzene																
Bromochloromethane																
Bromodichloromethane	80								NA							
Bromoform																
Bromomethane																
2-Butanone (MEK)			600	<620	<25000		<100	NA		35	<10	<50	37	<10	<10	<50
n-Butylbenzene									<5							
sec-Butylbenzene									NA							
tert-Butylbenzene			NA	NA	NA	NA	NA	NA	NA	<5	<10	<5	<2	<5	<5	<5
Carbon Tetrachloride																
Chlorobenzene	100	100	<100	<31	<1200	14	<5	5.2	3.1 J	9.1	<10	<5	2.8	<5	<5	<5
Chloroethane			<500	<62	<2500	<0.77	<10	NA	NA	<5	<10	<5	<2	<5	<5	<5
Chloroform	80		<100	<31	<1200	<0.43	<5	NA	NA	<5	<10	<5	<2	<5	<5	<5
Chloromethane			<500	<31	<1200	<1.56	<10	NA	NA	<10	<20	<5	<2	<5	<5	<5
2-Chlorotoluene																
4-Chlorotoluene																
Dibromochloromethane																
1,2-Dibromo-3-chloropropane																
1,2-Dibromoethane (EDB)																
Dibromomethane																
1,2-Dichlorobenzene	600		71	<31	<1200	<0.63	NA	22	<10	<5	5 J	15	13	<5	11	<5
1,3-Dichlorobenzene									NA							
1,4-Dichlorobenzene	75		7 J	<31	<1200	<0.5	NA	NA	<5	<5	<10	<5	<2	<5	<5	<5
Dichlorodifluoromethane																
1,1-Dichloroethane			<100	120	<1200	52	15	24	4.7 J	19	9.8 J	7.9	6.5	<5	14	8.1
1,2-Dichloroethane	5	5							NA							
1,1-Dichloroethene	7	7	<100	<31	<1200	<0.52	<5	ND	<5	<5	<10	<5	<2	<5	<5	<5
cis-1,2-Dichloroethene	70	70	500	NA	NA	25	880	520	NA	26	110	15	30	5.1	11	88
trans-1,2-Dichloroethene	100	100	<100	<31	<1200	1.7 J	16	12	<5	<5	14	<5	2.2	<5	<5	8.3
1,2-Dichloroethene (total)																
1,2-Dichloropropane	5	5							NA							
1,3-Dichloropropane																
2,2-Dichloropropane																
1,1-Dichloropropene																
cis-1,3-Dichloropropene																
trans-1,3-Dichloropropene									NA							
Ethylbenzene			100	<31	<1200	38	<5	25	6.1	34	<10	7.1	8	<5	9.3	<5
Hexachlorobutadiene									NA							
2-Hexanone																
Isopropylbenzene (Cumene)			NA	NA	NA	NA	NA	NA	<5	<5	<10	<5	<2	<5	<5	<5
p-Isopropyltoluene			NA	NA	NA	NA	NA	NA	NA	<5	7.3 J	<5	<2	<5	<5	
4-Methyl-2-pentanone (MIBK)			<500	<310	<10000		<50	NA		4.2 J	<20	<50	<20	<10	<10	<50
Methylene Chloride	5		<4000	<410	<5000	<12.33	8.8	12	NA	<20	6.4 J	<5	<2	6.2 B	<5	<5
Naphthalene			<100	NA	NA	NA	NA	7.9	2.7 J	<10	<20	<5	3.1	<5	<5	<5
n-Propylbenzene			NA	NA	NA	NA	NA	NA	<5	<5	<10	<5	<2	<5	<5	<5
Styrene			<100	<31	<1200	1 J	<5	ND	<5	<5	<10	<5	<2	<5	<5	<5
1,1,1,2-Tetrachloroethane																
1,1,2,2-Tetrachloroethane																
Tetrachloroethene (PCE)	5	5	200	180	<1200	3.8 J	<5	7.4	2.7 J	33	<10	<5	<2	<5	<5	<5
Toluene			3300	46	4300	140	<5	210	13	190	13	34	17	<5	27	3.2 J
1,2,3-Trichlorobenzene																
1,2,4-Trichlorobenzene																
1,1,1-Trichloroethane	200	200	<100	<31	<1200	<0.26	<5	ND	NA	<5	<10	<5	<2	<5	<5	<5
1,1,2-Trichloroethene																
Trichloroethene (TCE)	5	5	200	270	<1200	2.4 J	<5	11	5.3	34	<10	<5	<2	<5	<5	<5
Trichlorofluoromethane																
1,2,3-Trichloropropane																
1,2,4-Trimethylbenzene			NA	NA	NA	61	NA	17	11	<5	<10	10	9.9	<5	<5	<5
1,3,5-Trimethylbenzene			NA	NA	NA	NA	NA	7.8	4.9	<5	<10	<5	4.9	<5	<5	<5
Vinyl Chloride	2	2	<500	<62	<2500	24	280	200	<5	31	460	9.5	63	<5	26	140
m&p-Xylene																
o-Xylene																
Xylenes (total)			1000	<94	<3800	90	<5	139	182	330	8.3 J	200	135	<5	149	<6.5
Total VOCs			16075	616	4300	370	1200	1341	54	419	632	99	264	43	508	248
Total Chlorinated VOCs			978	570	<10000	109	1200	808	13	143	605	47	124	11	62	244
Total BTEX			4500	46	4300	275	<5	384	201	558	21	241	197	<5	185	3

Appendix A: Historical Summary of Volatile Organic Compounds Detected in Groundwater,
Brenntag, 139 East Soper Street, St. Louis, Missouri

Well Name	CALM	MCLs	MW-5	MW-5	MW-5	MW-5	MW-5	MW-5	MW-5	MW-5	MW-5	MW-5 (dup)	MW-5 (dup)	MW-5 (dup)	MW-5 (dup)	MW-5 (dup)
Sample Date	(ug/l)	(ug/l)	2/20/02	5/30/02	8/16/02	10/29/02	2/5/03	5/8/03	7/30/03	12/4/03	2/11/04	12/27/00	3/1/01	5/22/01	8/21/01	12/4/01
Acetone			<10	1500	<10	<10	1700	<10	<20	<10	<200		200	<20	400 B	<50
Benzene			<1	4.6	0.92 J	0.54 J	21	0.55 J	0.61 J	0.78 J	<20	<5	57	<5	<5	<5
Bromobenzene							<2.5	<1.0	<2.0	<1.0	<20					
Bromochloromethane							<2.5	<1.0	<2.0	<1.0	<20					
Bromodichloromethane	80				<1	<1	<2.5	<1.0	<2.0	<1.0	<20					
Bromoform							<2.5	<1.0	<2.0	<1.0	<20					
Bromomethane							<5.0	<2.0	<4.0	<2.0	<40					
2-Butanone (MEK)			<10	240	<10	<10	260	<5.0	<10	<5.0	<100		<50	<100	<10	<50
n-Butylbenzene					<1	<1	<2.5	<1.0	<2.0	<1.0	<20					
sec-Butylbenzene				2.1	<1	<1	<2.5	<1.0	<2.0	<1.0	<20					
tert-Butylbenzene			<1	<1	<1	<1	<2.5	<1.0	<2.0	<1.0	<20	<5	<10	<5	<5	<5
Carbon Tetrachloride							<2.5	<1.0	<2.0	<1.0	<20					
Chlorobenzene	100	100	<1	10	<1	<1	4.9	0.16 J	<2.0	<1.0	<20	<5	<10	<5	<5	<5
Chloroethane			<1	<1	<1	<1	6	<2.0	<4.0	1.1 J	<40	<5	<10	<5	<5	<5
Chloroform	80		<1	<1	<1	<1	<2.5	<1.0	<2.0	<1.0	<20	<5	<10	<5	<5	<5
Chloromethane			<1	<1	<1	<1	<5.0	<2.0	<4.0	<2.0	<40	<5	<10	<5	<5	1.9 J
2-Chlorotoluene							<2.5	<1.0	<2.0	<1.0	<20					
4-Chlorotoluene							<2.5	<1.0	<2.0	<1.0	<20					
Dibromochloromethane							<2.5	<1.0	<2.0	<1.0	<20					
1,2-Dibromo-3-chloropropane							<5.0	<2.0	<4.0	<2.0	<40					
1,2-Dibromoethane (EDB)							<2.5	<1.0	<2.0	<1.0	<20					
Dibromomethane							<2.5	<1.0	<2.0	<1.0	<20					
1,2-Dichlorobenzene	600		2.2	5.6	1.8	1.1	8.3	0.91 J	0.6 J	0.80 J	<20	15	<10	<5	12	2 J
1,3-Dichlorobenzene				4.9	<1	<1	<2.5	<1.0	<2.0	<1.0	<20					
1,4-Dichlorobenzene	75		<1	5.2	1.5	<1	0.97 J	<1.0	<2.0	<1.0	<20	15	<10	<5	<5	<5
Dichlorodifluoromethane							<5.0	<2.0	<4.0	<2.0	<40					
1,1-Dichloroethane			10	28	15	10	63	8.3	10	8.6	12 J	7.9	<10	9.5	14	8.2
1,2-Dichloroethane	5	5			<1	<1	<2.5	0.47 J	0.68 J	0.61 J	<20					
1,1-Dichloroethene	7	7	<1	<1	<1	<1	<2.5	0.29 J	0.6 J	0.32 J	<20	<5	<10	<5	<5	<5
cis-1,2-Dichloroethene	70	70	140	300	5.1	100	15	330	98	270 E	250	16	11	360	10	97
trans-1,2-Dichloroethene	100	100	20	20	28	20	2.1	21	31	22	24	<5	<10	13	<5	9.2
1,2-Dichloroethene (total)							17	350	530	290 E	270					
1,2-Dichloropropane	5	5		1.3	1.6	0.8 J	0.64 J	0.75 J	1 J	0.92 J	<20					
1,3-Dichloropropane							<2.5	<1.0	<2.0	<1.0	<20					
2,2-Dichloropropane							<12	<5.0	<10	<5.0	<100					
1,1-Dichloropropene							<2.5	<1.0	<2.0	<1.0	<20					
cis-1,3-Dichloropropene							<2.5	<1.0	<2.0	<1.0	<20					
trans-1,3-Dichloropropene				1.2	<1	<1	<2.5	<1.0	<2.0	<1.0	<20					
Ethylbenzene			<1	12	<1	<1	14	0.19 J	<2.0	<1.0	<20	7.8	160	<5	9	<5
Hexachlorobutadiene					<1	<1	<2.5	<1.0	<2.0	<1.0	<20					
2-Hexanone						<10	<12	<5.0	<10	<5.0	<100					
Isopropylbenzene (Cumene)			<1	<1	<1	<1	0.68 J	<1.0	<2.0	<1.0	<20	<5	<10	<5	<5	<5
p-Isopropyltoluene							<2.5	<1.0	<2.0	<1.0	<20	<5	<10	<5	<5	<5
4-Methyl-2-pentanone (MIBK)			<10	<200	<10	<10	71	<5.0	<10	<5.0	<100		<100	<10	<10	<50
Methylene Chloride	5		<1	2.8	<1	<1	1.3 J	<5.0	<10	<5.0	<100	<5	<10	<5	<5	<5
Naphthalene			<1	1.6	<1	<1	4.4	<1.0	<2.0	<1.0	<20	<5	15	<5	<5	<5
n-Propylbenzene			<1	2.7	<1	<1	0.63 J	<1.0	<2.0	<1.0	<20	<5	<10	<5	<5	<5
Styrene			<1	<1	<1	<1	<2.5	<1.0	<2.0	<1.0	<20	<5	<10	<5	<5	<5
1,1,1,2-Tetrachloroethane							<2.5	<1.0	<2.0	<1.0	<20					
1,1,2,2-Tetrachloroethane							<2.5	<1.0	<2.0	<1.0	<20					
Tetrachloroethene (PCE)	5	5	<1	<1	<1	<1	2 J	<1.0	<2.0	<1.0	<20	<5	<10	<5	<5	<5
Toluene			<1	760	<1	<1	47	0.21 J	0.43 J	0.55 J	<20	48	180	<5	26	<5
1,2,3-Trichlorobenzene							<2.5	<1.0	<2.0	<1.0	<20					
1,2,4-Trichlorobenzene							<2.5	<1.0	<2.0	<1.0	<20					
1,1,1-Trichloroethane	200	200	<1	<1	<1	<1	<2.5	<1.0	<2.0	<1.0	<20	<5	<10	<5	<5	<5
1,1,2-Trichloroethane							<2.5	<1.0	<2.0	<1.0	<20					
Trichloroethene (TCE)	5	5	<1	2	<1	<1	3.9	0.17 J	<2.0	0.19 J	<20	<5	<10	<5	<5	<5
Trichlorofluoromethane							<5.0	<2.0	<4.0	<2.0	<40					
1,2,3-Trichloropropane					0.56 J	<2.5	<2.5	0.57 J	<2.0	<1.0	<20					
1,2,4-Trimethylbenzene			<1	2.6	<1	<1	3.2	<1.0	<2.0	<1.0	<20	10	29	<5	<5	<5
1,3,5-Trimethylbenzene			<1	<1	<1	<1	1 J	<1.0	<2.0	<1.0	<20	<5	<10	<5	<5	<5
Vinyl Chloride	2	2	210	220	360	600	13	360	510	400	640	12	<10	310	23	160
m&p-Xylene							21	<2.0	<4.0	0.32 J	<40					
o-Xylene							25	<1.0	<2.0	<1.0	<20					
Xylenes (total)			<1.3	53	<1.3	<1.3	46	<2.0	<4.0	0.46 J	<40	204	473	<5	148	<8.5
Total VOCs			382	3127	414	732	2290	724	653	706	926	132	652	693	464	278
Total Chlorinated VOCs			382	585	413	732	121	723	652	705	902	66	11	693	58	278
Total BTEX			<1.3	830	1	1	128	0.95	1.04	1.77	<40	260	870	<5	183	<8.5

Appendix A: Historical Summary of Volatile Organic Compounds Detected in Groundwater, Brenntag, 139 East Soper Street, St. Louis, Missouri

Well Name Sample Date	CALM (ug/l)	MCLs (ug/l)	MW-5 (dup) 2/20/02	MW-5 (dup) 5/30/02	MW-5 (dup) 8/16/02	MW-5 (dup) 10/29/02	MW-5 (dup) 2/5/03	MW-5 (dup) 5/8/03	MW-5 (dup) 7/30/03	MW-5 (dup) 12/4/03	MW-5 (dup) 2/11/04
Acetone			<10	2200	<10	<20	1700	<10	<20	<10	<100
Benzene			<1	<100	0.92 J	<2	21	0.56 J	0.63 J	0.76 J	<10
Bromobenzene							<2.5	<1.0	<2.0	<1.0	<10
Bromochloromethane							<2.5	<1.0	<2.0	<1.0	<10
Bromodichloromethane	80				<1	<2	<2.5	<1.0	<2.0	<1.0	<10
Bromoform							<2.5	<1.0	<2.0	<1.0	<10
Bromomethane							<5.0	<2.0	<4.0	<2.0	<20
2-Butanone (MEK)			<10	<1000	<10	<20	200	<5.0	<10	<5.0	<50
n-Butylbenzene					<1	<2	<2.5	<1.0	<2.0	<1.0	<10
sec-Butylbenzene					<1	<2	<2.5	<1.0	<2.0	<1.0	<10
tert-Butylbenzene			<1	<100	<1	<2	<2.5	<1.0	<2.0	<1.0	<10
Carbon Tetrachloride							<2.5	<1.0	<2.0	<1.0	<10
Chlorobenzene	100	100	<1	<100	<1	<2	5.5	0.16 J	<2.0	<1.0	<10
Chloroethane			<1	<100	<1	<2	5.9	<2.0	<4.0	1.1 J	<20
Chloroform	80		<1	<100	<1	<2	<2.5	<1.0	<2.0	<1.0	<10
Chloromethane			<1	<100	<1	<2	<5.0	<2.0	<4.0	<2.0	<20
2-Chlorotoluene							<2.5	<1.0	<2.0	<1.0	<10
4-Chlorotoluene							<2.5	<1.0	<2.0	<1.0	<10
Dibromochloromethane							<2.5	<1.0	<2.0	<1.0	<10
1,2-Dibromo-3-chloropropane							<5.0	<2.0	<4.0	<2.0	<20
1,2-Dibromoethane (EDB)							<2.5	<1.0	<2.0	<1.0	<10
Dibromomethane							<2.5	<1.0	<2.0	<1.0	<10
1,2-Dichlorobenzene	600		2	<100	1.9	1.3 J	11	0.88 J	0.92 J	0.80 J	<10
1,3-Dichlorobenzene					<1	<2	<2.5	<1.0	<2.0	<1.0	<10
1,4-Dichlorobenzene	75		<1	<100	1.5	1.6 J	1.2 J	<1.0	<2.0	<1.0	<10
Dichlorodifluoromethane							<5.0	<2.0	<4.0	<2.0	<20
1,1-Dichloroethane			9.5	<100	14	9	65	8.7	9.7	8.6	10
1,2-Dichloroethane	5	5			<1	<2	<2.5	0.54 J	0.65 J	0.61 J	<10
1,1-Dichloroethene	7	7	<1	<100	<1	<2	<2.5	0.27 J	0.69 J	0.32 J	<10
cis-1,2-Dichloroethene	70	70	140	220	100	110	15	320	530	270 E	250
trans-1,2-Dichloroethene	100	100	19	<100	21	17	2.4	25	32	22	25
1,2-Dichloroethene (total)							17	350	560	290 E	280
1,2-Dichloropropane	5	5			1.3	<2	0.75 J	0.8 J	1.1 J	0.92 J	<10
1,3-Dichloropropane							<2.5	<1.0	<2.0	<1.0	<10
2,2-Dichloropropane							<12	<5.0	<10	<5.0	<50
1,1-Dichloropropene							<2.5	<1.0	<2.0	<1.0	<10
cis-1,3-Dichloropropene							<2.5	<1.0	<2.0	<1.0	<10
trans-1,3-Dichloropropene					<1	<2	<2.5	<1.0	<2.0	<1.0	<10
Ethylbenzene			<1	<100	0.55 J	<2	16	0.18 J	<2.0	<1.0	<10
Hexachlorobutadiene					<1	<2	<2.5	<1.0	<2.0	<1.0	<10
2-Hexanone						<20	<12	<5.0	<10	<5.0	<50
Isopropylbenzene (Cumene)			<1	<100	<1	<2	0.87 J	<1.0	<2.0	<1.0	<10
p-Isopropyltoluene			<1	<100	<1	<2	<2.5	<1.0	<2.0	<1.0	<10
4-Methyl-2-pentanone (MIBK)			<10	<1000	<10	<20	76	<5.0	<10	<5.0	<50
Methylene Chloride	5		<1	140	<1	<2	1.1 J	<5.0	0.55 JB	<5.0	<50
Naphthalene			<1	<100	<1	<2	5.6	<1.0	<2.0	<1.0	<10
n-Propylbenzene			<1	<100	<1	<2	0.85 J	<1.0	<2.0	<1.0	<10
Styrene			<1	<100	<1	<2	<2.5	<1.0	<2.0	<1.0	<10
1,1,1,2-Tetrachloroethane							<2.5	<1.0	<2.0	<1.0	<10
1,1,2,2-Tetrachloroethane							<2.5	<1.0	<2.0	<1.0	<10
Tetrachloroethene (PCE)	5	5	<1	<100	<1	<2	2.1 J	<1.0	<2.0	<1.0	<10
Toluene			<1	150 B	<1	<2	50	0.2 J	<2.0	0.55 J	<10
1,2,3-Trichlorobenzene							<2.5	<1.0	<2.0	<1.0	<10
1,2,4-Trichlorobenzene							<2.5	<1.0	<2.0	<1.0	<10
1,1,1-Trichloroethane	200	200	<1	<100	<1	<2	<2.5	<1.0	<2.0	<1.0	<10
1,1,2-Trichloroethane							<2.5	<1.0	<2.0	<1.0	<10
Trichloroethene (TCE)	5	5	<1	<100	<1	<2	4	0.17 J	<2.0	0.19 J	<10
Trichlorofluoromethane							<5.0	<2.0	<4.0	<2.0	<20
1,2,3-Trichloropropane						<5	<2.5	0.63 J	<2.0	<1.0	<10
1,2,4-Trimethylbenzene			<1	<100	<1	<2	4.1	<1.0	<2.0	<1.0	<10
1,3,5-Trimethylbenzene			<1	<100	<1	<2	1.3 J	<1.0	<2.0	<1.0	<10
Vinyl Chloride	2	2	190	150	370	530	14	360	520	400	550
m&p-Xylene							25	<2.0	<4.0	0.32 J	<20
o-Xylene							30	<1.0	<2.0	<1.0	<10
Xylenes (total)			<1.3	<130	<1.3	<2.6	54	<2.0	<4.0	0.48 J	<20
Total VOCs			361	2860	511	660	2349	718	1,096	706	835
Total Chlorinated VOCs			361	510	510	669	128	717	1,096	705	810
Total BTEX			<1.3	150	1.47	<2.6	142	0.94	0.63	1.77	<20

Appendix A: Historical Summary of Volatile Organic Compounds Detected in Groundwater,
Brenntag, 139 East Soper Street, St. Louis, Missouri

Well Name	CALM	MCLs	MW-6	MW-6	MW-6	MW-6	MW-6	MW-6	MW-6	MW-6	MW-6	MW-6	MW-6	MW-6	MW-6	MW-6	MW-6
Sample Date	(ug/l)	(ug/l)	12/3/99	4/17/00	9/8/00	12/27/00	3/1/01	5/21/01	8/20/01	12/5/01	2/19/02	5/29/02	8/15/02	10/28/02	2/4/03	5/6/03	7/29/03
Acetone				<20	<20	<10	<10	<20	<20	<5	<10	<1000	<10	<10	9.1 J	<10	<10
Benzene			<5	<5	<5	<1	<1	<5	<5	<1	<1	<100	<1	<1	<1.0	<1.0	<1.0
Bromobenzene															<1.0	<1.0	<1.0
Bromochloromethane															<1.0	<1.0	<1.0
Bromodichloromethane	80		NA										<1	<1	<1.0	<1.0	<1.0
Bromoform															<1.0	<1.0	<1.0
Bromomethane															<2.0	<2.0	<2.0
2-Butanone (MEK)				<5	<5	<10	<10	<10	<10	<5	<10	<1000	<10	<10	<5.0	<5.0	<5.0
n-Butylbenzene			<5										<1	<1	<1.0	<1.0	<1.0
sec-Butylbenzene			NA										<1	<1	<1.0	<1.0	<1.0
tert-Butylbenzene			NA	<5	<5	<1	<1	<5	<5	<1	<1	<100	<1	<1	<1.0	<1.0	<1.0
Carbon Tetrachloride															<1.0	<1.0	<1.0
Chlorobenzene	100	100	<5	<5	<5	<1	<1	<5	<5	<1	<1	<100	<1	<1	<1.0	<1.0	<1.0
Chloroethane			NA	<5	<5	<1	<1	<5	<5	<1	<1	<100	<1	<1	<2.0	<2.0	<2.0
Chloroform	80		NA	<5	<5	<1	<1	<5	<5	<1	<1	<100	<1	<1	<1.0	<1.0	<1.0
Chloromethane			NA	<10	<10	<1	<1	<5	<5	<1	<1	<100	<1	<1	<2.0	<2.0	<2.0
2-Chlorotoluene															<1.0	<1.0	<1.0
4-Chlorotoluene															<1.0	<1.0	<1.0
Dibromochloromethane															<1.0	<1.0	<1.0
1,2-Dibromo-3-chloropropane															<2.0	<2.0	<2.0
1,2-Dibromoethane (EDB)															<1.0	<1.0	<1.0
Dibromomethane															<1.0	<1.0	<1.0
1,2-Dichlorobenzene	600		<5	<5	<5	<1	<1	<5	<5	<1	<1	<100	<1	<1	<1.0	<1.0	<1.0
1,3-Dichlorobenzene			NA										<1	<1	<1.0	<1.0	<1.0
1,4-Dichlorobenzene	75		<5	<5	<5	<1	<1	<5	<5	<1	<1	<100	<1	<1	<1.0	<1.0	<1.0
Dichlorodifluoromethane															<2.0	<2.0	<2.0
1,1-Dichloroethane			<5	<5	<5	<1	<1	<5	<5	<1	<1	<100	<1	<1	<1.0	<1.0	<1.0
1,2-Dichloroethane	5	5	NA										<1	<1	<1.0	<1.0	<1.0
1,1-Dichloroethene	7	7	<5	<5	<5	<1	<1	<5	<5	<1	<1	<100	<1	<1	<1.0	<1.0	<1.0
cis-1,2-Dichloroethene	70	70	<5	<5	<5	<1	<1	<5	<5	<1	<1	<100	<1	<1	<1.0	<1.0	<1.0
trans-1,2-Dichloroethene	100	100	<5	<5	<5	<1	<1	<5	<5	<1	<1	<100	<1	<1	<0.50	<0.50	<0.50
1,2-Dichloroethene (total)															<1.0	<1.0	<1.0
1,2-Dichloropropane	5	5	NA										<1	<1	<1.0	<1.0	<1.0
1,3-Dichloropropane															<1.0	<1.0	<1.0
2,2-Dichloropropane															<5.0	<5.0	<5.0
1,1-Dichloropropene															<1.0	<1.0	<1.0
cis-1,3-Dichloropropene															<1.0	<1.0	<1.0
trans-1,3-Dichloropropene			NA										<1	<1	<1.0	<1.0	<1.0
Ethylbenzene			<5	<5	<5	<1	<1	<5	<5	<1	<1	<100	<1	<1	<1.0	<1.0	<1.0
Hexachlorobutadiene			NA										<1	<1	<1.0	<1.0	<1.0
2-Hexanone														<10	<5.0	<5.0	<5.0
Isopropylbenzene (Cumene)			<5	<5	<5	<1	<1	<5	<5	<1	<1	<100	<1	<1	<1.0	<1.0	<1.0
p-Isopropyltoluene			NA	<5		<1	<1	<5	<5	<1	<1	<100	<1	<1	<1.0	<1.0	<1.0
4-Methyl-2-pentanone (MIBK)				<10	<10	<10	<10	<10	<10	<5	<10	<1000	<10	<10	3.3 J	<5.0	<5.0
Methylene Chloride	5		NA	<20	3.1 J	<1	<1	<5	<5	<1	<1	<100	<1	<1	<5.0	<5.0	<5.0
Naphthalene			<10	<10	<10	<1	<1	<5	<5	<1	<1	<100	<1	<1	0.8 J	<1.0	<1.0
n-Propylbenzene			<5	<5	<5	<1	<1	<5	<5	<1	<1	<100	<1	<1	<1.0	<1.0	<1.0
Styrene			<5	<5	<5	<1	<1	<5	<5	<1	<1	<100	<1	<1	<1.0	<1.0	<1.0
1,1,1,2-Tetrachloroethane															<1.0	<1.0	<1.0
1,1,2,2-Tetrachloroethane															<1.0	<1.0	<1.0
Tetrachloroethene (PCE)	5	5	<5	<5	<5	<1	<1	<5	<5	<1	<1	<100	<1	<1	<1.0	<1.0	<1.0
Toluene			<5	33	2.1 J	<1	<1	<5	<5	<1	<1	<100	<1	<1	<1.0	<1.0	<1.0
1,2,3-Trichlorobenzene															<1.0	<1.0	<1.0
1,2,4-Trichlorobenzene															<1.0	<1.0	<1.0
1,1,1-Trichloroethane	200	200	NA	<5	<5	<1	<1	<5	<5	<1	<1	<100	<1	<1	<1.0	<1.0	<1.0
1,1,2-Trichloroethane															<1.0	<1.0	<1.0
Trichloroethene (TCE)	5	5	<5	<5	<5	<1	<1	<5	<5	<1	<1	<100	<1	<1	<1.0	<1.0	<1.0
Trichlorofluoromethane															<2.0	<2.0	<2.0
1,2,3-Trichloropropane														<2.5	<1.0	<1.0	<1.0
1,2,4-Trimethylbenzene			<5	<5	<5	<1	<1	<5	<5	<1	<1	<100	<1	<1	<1.0	<1.0	<1.0
1,3,5-Trimethylbenzene			<5	<5	<5	<1	<1	<5	<5	<1	<1	<100	<1	<1	<1.0	<1.0	<1.0
Vinyl Chloride	2	2	<5	<5	<5	<1	<1	<5	<5	<1	<1	<100	<1	<1	<1.0	<1.0	<1.0
m&p-Xylene															<2.0	<2.0	<2.0
o-Xylene															<1.0	<1.0	<1.0
Xylenes (total)			<5	4.3 J	<5	<1	<1	<5	<5	<3	<1.3	<130	<1.3	<1.3	<2.0	<2.0	<2.0
Total VOCs			<10	33	5	<10	<10	<20	<20	<5	<10	<1000	<10	<10	13	<10	<1.0
Total Chlorinated VOCs			<5	<20	3	<1	<1	<5	<5	<1	<1	<100	<1	<1	<5.0	<5.0	<2.0
Total BTEX			<5	37	2	<1	<1	<5	<5	<3	<1.3	<130	<1.3	<1.3	<2.0	<2.0	<2.0

Appendix A: Historical Summary of Volatile Organic Compounds Detected in Groundwater, Brenntag, 139 East Soper Street, St. Louis, Missouri

Well Name Sample Date	CALM (ug/l)	MCLs (ug/l)	MW-6 12/2/03	MW-6 2/10/04
Acetone			<10	<10
Benzene			<1.0	<1.0
Bromobenzene			<1.0	<1.0
Bromochloromethane			<1.0	<1.0
Bromodichloromethane	80		<1.0	<1.0
Bromoform			<1.0	<1.0
Bromomethane			<2.0	<2.0
2-Butanone (MEK)			<5.0	<5.0
n-Butylbenzene			<1.0	<1.0
sec-Butylbenzene			<1.0	<1.0
tert-Butylbenzene			<1.0	<1.0
Carbon Tetrachloride			<1.0	<1.0
Chlorobenzene	100	100	<1.0	<1.0
Chloroethane			<2.0	<2.0
Chloroform	80		<1.0	<1.0
Chloromethane			<2.0	<2.0
2-Chlorotoluene			<1.0	<1.0
4-Chlorotoluene			<1.0	<1.0
Dibromochloromethane			<1.0	<1.0
1,2-Dibromo-3-chloropropane			<2.0	<2.0
1,2-Dibromoethane (EDB)			<1.0	<1.0
Dibromomethane			<1.0	<1.0
1,2-Dichlorobenzene	600		<1.0	<1.0
1,3-Dichlorobenzene			<1.0	<1.0
1,4-Dichlorobenzene	75		<1.0	<1.0
Dichlorodifluoromethane			<2.0	<2.0
1,1-Dichloroethane			<1.0	<1.0
1,2-Dichloroethane	5	5	<1.0	<1.0
1,1-Dichloroethene	7	7	<1.0	<1.0
cis-1,2-Dichloroethene	70	70	<1.0	<1.0
trans-1,2-Dichloroethene	100	100	<0.50	<0.50
1,2-Dichloroethene (total)			<1.0	<1.0
1,2-Dichloropropane	5	5	<1.0	<1.0
1,3-Dichloropropane			<1.0	<1.0
2,2-Dichloropropane			<5.0	<5.0
1,1-Dichloropropene			<1.0	<1.0
cis-1,3-Dichloropropene			<1.0	<1.0
trans-1,3-Dichloropropene			<1.0	<1.0
Ethylbenzene			<1.0	<1.0
Hexachlorobutadiene			<1.0	<1.0
2-Hexanone			<5.0	<5.0
Isopropylbenzene (Cumene)			<1.0	<1.0
p-Isopropyltoluene			<1.0	<1.0
4-Methyl-2-pentanone (MIBK)			<5.0	<5.0
Methylene Chloride	5		<5.0	<5.0
Naphthalene			<1.0	<1.0
n-Propylbenzene			<1.0	<1.0
Styrene			<1.0	<1.0
1,1,1,2-Tetrachloroethane			<1.0	<1.0
1,1,2,2-Tetrachloroethane			<1.0	<1.0
Tetrachloroethene (PCE)	5	5	<1.0	<1.0
Toluene			<1.0	0.5 J
1,2,3-Trichlorobenzene			<1.0	<1.0
1,2,4-Trichlorobenzene			<1.0	<1.0
1,1,1-Trichloroethane	200	200	<1.0	<1.0
1,1,2-Trichloroethane			<1.0	<1.0
Trichloroethene (TCE)	5	5	<1.0	<1.0
Trichlorofluoromethane			<2.0	<2.0
1,2,3-Trichloropropane			<1.0	<1.0
1,2,4-Trimethylbenzene			<1.0	<1.0
1,3,5-Trimethylbenzene			<1.0	<1.0
Vinyl Chloride	2	2	<1.0	<1.0
m&p-Xylene			<2.0	<2.0
o-Xylene			<1.0	<1.0
Xylenes (total)			<2.0	<2.0
Total VOCs			<1.0	1
Total Chlorinated VOCs			<2.0	<5.0
Total BTEX			<2.0	1

Appendix A: Historical Summary of Volatile Organic Compounds Detected in Groundwater,
Brenntag, 139 East Soper Street, St. Louis, Missouri

Well Name	CALM	MCLs	MW-7	MW-7	MW-7	MW-7	MW-7	MW-7	MW-7	MW-7	MW-7	MW-7	MW-7	MW-7	MW-7	MW-7
Sample Date	(ug/l)	(ug/l)	12/3/99	4/17/00	9/6/00	12/27/00	3/1/01	5/21/01	8/20/01	12/5/01	2/19/02	5/29/02	8/15/02	10/28/02	2/4/03	5/6/03
Acetone				<20	<20	<10	<10	<20	<20	<5	<10	<10	<10	<10	<10	<10
Benzene			<5	<5	<5	<1	<1	<5	<5	<1	<1	<1	<1	<1	<1.0	<1.0
Bromobenzene															<1.0	<1.0
Bromochloromethane															<1.0	<1.0
Bromodichloromethane	80		NA										<1	<1	<1.0	<1.0
Bromoform															<1.0	<1.0
Bromomethane															<2.0	<2.0
2-Butanone (MEK)				<5	<5	<10	<10	<10	<10	<5	<10	<10	<10	<10	<5.0	<5.0
n-Butylbenzene			<5										<1	<1	<1.0	<1.0
sec-Butylbenzene			NA										<1		<1.0	<1.0
tert-Butylbenzene			NA	<5	<5	<1	<1	<5	<5	<1	<1	<1	<1	<1	<1.0	<1.0
Carbon Tetrachloride															<1.0	<1.0
Chlorobenzene	100	100	<5	<5	<5	<1	<1	<5	<5	<1	<1	<1	<1	<1	<1.0	<1.0
Chloroethane			NA	<5	<5	<1	<1	<5	<5	<1	<1	<1	<1	<1	<2.0	<2.0
Chloroform	80		NA	<5	<5	<1	<1	<5	<5	<1	<1	<1	<1	<1	<1.0	<1.0
Chloromethane			NA	<10	<10	<1	<1	<5	<5	<1	<1	<1	<1	<1	<2.0	<2.0
2-Chlorotoluene															<1.0	<1.0
4-Chlorotoluene															<1.0	<1.0
Dibromochloromethane															<1.0	<1.0
1,2-Dibromo-3-chloropropane															<2.0	<2.0
1,2-Dibromoethane (EDB)															<1.0	<1.0
Dibromomethane															<1.0	<1.0
1,2-Dichlorobenzene	600		<5	<5	<5	<1	<1	<5	<5	<1	<1	<1	<1	<1	<1.0	<1.0
1,3-Dichlorobenzene			NA										<1	<1	<1.0	<1.0
1,4-Dichlorobenzene	75		<5	<5	<5	<1	1.9	<5	<5	<1	<1	<1	<1	<1	<1.0	<1.0
Dichlorodifluoromethane															<2.0	<2.0
1,1-Dichloroethane			<5	<5	<5	<1	<1	<5	<5	<1	<1	<1	<1	<1	<1.0	<1.0
1,2-Dichloroethane	5	5	NA										<1	<1	<1.0	<1.0
1,1-Dichloroethene	7	7	<5	<5	<5	<1	<1	<5	<5	<1	<1	<1	<1	<1	<1.0	<1.0
cis-1,2-Dichloroethene	70	70	<5	<5	<5	<1	<1	<5	<5	<1	<1	<1	<1	<1	<1.0	<1.0
trans-1,2-Dichloroethene	100	100	<5	<5	<5	<1	<1	<5	<5	<1	<1	<1	<1	<1	<0.50	<0.50
1,2-Dichloroethene (total)															<1.0	<1.0
1,2-Dichloropropane	5	5	NA										<1	<1	<1.0	<1.0
1,3-Dichloropropane															<1.0	<1.0
2,2-Dichloropropane															<5.0	<5.0
1,1-Dichloropropene															<1.0	<1.0
cis-1,3-Dichloropropene															<1.0	<1.0
trans-1,3-Dichloropropene			NA										<1	<1	<1.0	<1.0
Ethylbenzene			<5	2.3 J	<5	<1	<1	<5	<5	<1	<1	<1	<1	<1	<1.0	<1.0
Hexachlorobutadiene			NA									1.2 B	<1	<1	<1.0	<1.0
2-Hexanone														<10	<5.0	<5.0
Isopropylbenzene (Cumene)			<5	<5	<5	<1	<1	<5	<5	<1	<1	<1	<1	<1	<1.0	<1.0
p-Isopropyltoluene			NA	<5	<5	<1	<1	<5	<5	<1	<1	<1	<1	<1	<1.0	<1.0
4-Methyl-2-pentanone (MIBK)				<10	<10	<10	<10	<10	<10	<5	<10	<10	<10	<10	<5.0	<5.0
Methylene Chloride	5		NA	<20	4.7 J	<1	<1	<5	<5	<1	<1	<1	<1	<1	<5.0	<5.0
Naphthalene			<10	<10	<10	<1	<1	<5	<5	<1	<1	<1	<1	<1	0.7 J	<1.0
n-Propylbenzene			<5	<5	<5	<1	<1	<5	<5	<1	<1	<1	<1	<1	<1.0	<1.0
Styrene			<5	<5	<5	<1	<1	<5	<5	<1	<1	<1	<1	<1	<1.0	<1.0
1,1,1,2-Tetrachloroethane															<1.0	<1.0
1,1,2,2-Tetrachloroethane															<1.0	<1.0
Tetrachloroethene (PCE)	5	5	<5	<5	<5	<1	<1	<5	<5	<1	<1	<1	<1	<1	<1.0	<1.0
Toluene			<5	71	2.6 J	<1	<1	<5	<5	<1	<1	<1	<1	<1	<1.0	0.62 J
1,2,3-Trichlorobenzene															<1.0	<1.0
1,2,4-Trichlorobenzene															<1.0	<1.0
1,1,1-Trichloroethane	200	200	NA	<5	<5	<1	<1	<5	<5	<1	<1	<1	<1	<1	<1.0	<1.0
1,1,2-Trichloroethane															<1.0	<1.0
Trichloroethene (TCE)	5	5	<5	<5	<5	<1	<1	<5	<5	<1	<1	<1	<1	<1	<1.0	<1.0
Trichlorofluoromethane															<2.0	<2.0
1,2,3-Trichloropropane														<2.5	<1.0	<1.0
1,2,4-Trimethylbenzene			<5	<5	<5	<1	<1	<5	<5	<1	<1	<1	<1	<1	<1.0	<1.0
1,3,5-Trimethylbenzene			<5	<5	<5	<1	<1	<5	<5	<1	<1	<1	<1	<1	<1.0	<1.0
Vinyl Chloride	2	2	<5	<5	<5	<1	<1	<5	<5	<1	<1	<1	<1	<1	<1.0	<1.0
m&p-Xylene															<2.0	<2.0
o-Xylene															<1.0	<1.0
Xylenes (total)			<5	10.9 J	<5	<1	<1	<5	<5	<3	<1.3	<1.3	<1.3	<1.3	<2.0	<2.0
Total VOCs			<5	73	7	<10	2	<20	<10	<5	<10	1	<10	<10	1	0.62
Total Chlorinated VOCs			<5	<20	5	<1	2	<5	<5	<1	<1	<1	<1	<2.5	<5.0	<5.0
Total BTEX			<5	84	3	<1	<1	<5	<5	<3	<1.3	<1.3	<1.3	<1.3	<2.0	0.62

Appendix A: Historical Summary of Volatile Organic Compounds Detected in Groundwater, Brenntag, 139 East Soper Street, St. Louis, Missouri

Well Name Sample Date	CALM (ug/l)	MCLs (ug/l)	MW-7 7/29/03	MW-7 12/2/03	MW-7 2/10/04
Acetone			<10	<10	<10
Benzene			<1.0	<1.0	<1.0
Bromobenzene			<1.0	<1.0	<1.0
Bromochloromethane			<1.0	<1.0	<1.0
Bromodichloromethane	80		<1.0	<1.0	<1.0
Bromoform			<1.0	<1.0	<1.0
Bromomethane			<2.0	<2.0	<2.0
2-Butanone (MEK)			<5.0	<5.0	<5.0
n-Butylbenzene			<1.0	<1.0	<1.0
sec-Butylbenzene			<1.0	<1.0	<1.0
tert-Butylbenzene			<1.0	<1.0	<1.0
Carbon Tetrachloride			<1.0	<1.0	<1.0
Chlorobenzene	100	100	<1.0	<1.0	<1.0
Chloroethane			<2.0	<2.0	<2.0
Chloroform	80		<1.0	<1.0	<1.0
Chloromethane			<2.0	<2.0	<2.0
2-Chlorotoluene			<1.0	<1.0	<1.0
4-Chlorotoluene			<1.0	<1.0	<1.0
Dibromochloromethane			<1.0	<1.0	<1.0
1,2-Dibromo-3-chloropropane			<2.0	<2.0	<2.0
1,2-Dibromoethane (EDB)			<1.0	<1.0	<1.0
Dibromomethane			<1.0	<1.0	<1.0
1,2-Dichlorobenzene	600		<1.0	<1.0	<1.0
1,3-Dichlorobenzene			<1.0	<1.0	<1.0
1,4-Dichlorobenzene	75		<1.0	<1.0	<1.0
Dichlorodifluoromethane			<2.0	<2.0	<2.0
1,1-Dichloroethane			<1.0	<1.0	<1.0
1,2-Dichloroethane	5	5	<1.0	<1.0	<1.0
1,1-Dichloroethene	7	7	<1.0	<1.0	<1.0
cis-1,2-Dichloroethene	70	70	<1.0	<1.0	<1.0
trans-1,2-Dichloroethene	100	100	<0.50	<0.50	<0.50
1,2-Dichloroethene (total)			<1.0	<1.0	<1.0
1,2-Dichloropropane	5	5	<1.0	<1.0	<1.0
1,3-Dichloropropane			<1.0	<1.0	<1.0
2,2-Dichloropropane			<5.0	<5.0	<5.0
1,1-Dichloropropene			<1.0	<1.0	<1.0
cis-1,3-Dichloropropene			<1.0	<1.0	<1.0
trans-1,3-Dichloropropene			<1.0	<1.0	<1.0
Ethylbenzene			<1.0	<1.0	<1.0
Hexachlorobutadiene			<1.0	<1.0	<1.0
2-Hexanone			<5.0	<5.0	<5.0
Isopropylbenzene (Cumene)			<1.0	<1.0	<1.0
p-Isopropyltoluene			<1.0	<1.0	<1.0
4-Methyl-2-pentanone (MIBK)			<5.0	<5.0	<5.0
Methylene Chloride	5		<5.0	<5.0	<5.0
Naphthalene			<1.0	<1.0	<1.0
n-Propylbenzene			<1.0	<1.0	<1.0
Styrene			<1.0	<1.0	<1.0
1,1,1,2-Tetrachloroethane			<1.0	<1.0	<1.0
1,1,2,2-Tetrachloroethane			<1.0	<1.0	<1.0
Tetrachloroethene (PCE)	5	5	<1.0	<1.0	<1.0
Toluene			<1.0	<1.0	**0.54 J**
1,2,3-Trichlorobenzene			<1.0	<1.0	<1.0
1,2,4-Trichlorobenzene			<1.0	<1.0	<1.0
1,1,1-Trichloroethane	200	200	<1.0	<1.0	<1.0
1,1,2-Trichloroethane			<1.0	<1.0	<1.0
Trichloroethene (TCE)	5	5	<1.0	<1.0	<1.0
Trichlorofluoromethane			<2.0	<2.0	<2.0
1,2,3-Trichloropropane			<1.0	<1.0	<1.0
1,2,4-Trimethylbenzene			<1.0	<1.0	<1.0
1,3,5-Trimethylbenzene			<1.0	<1.0	<1.0
Vinyl Chloride	2	2	<1.0	<1.0	<1.0
m&p-Xylene			<2.0	<2.0	<2.0
o-Xylene			<1.0	<1.0	<1.0
Xylenes (total)			<2.0	<2.0	<2.0
Total VOCs			<1.0	<1.0	1
Total Chlorinated VOCs			<2.0	<2.0	<5.0
Total BTEX			<2.0	<2.0	1

Appendix A: Historical Summary of Volatile Organic Compounds Detected in Groundwater,
Brenntag, 139 East Soper Street, St. Louis, Missouri

Well Name	CALM	MCLs	MW-8	MW-8	MW-8	MW-8	MW-8	MW-8	MW-8	MW-8	MW-8	MW-8	MW-8	MW-8	MW-8
Sample Date	(ug/l)	(ug/l)	12/3/99	4/17/00	12/27/00	3/1/01	5/22/01	8/20/01	12/5/01	2/20/02	5/30/02	8/16/02	10/29/02	2/6/03	5/8/03
Acetone				<200	<1000	<500	40 B	170 B	<50	<200	<100	120	33 J	95	<40
Benzene			41	63	<100	<50	52	51	19	<20	14	47	32	28	30
Bromobenzene														<5.0	<4.0
Bromochloromethane														<5.0	<4.0
Bromodichloromethane	80		NA									<10	<5	1.3 JB	<4.0
Bromoform														11	<4.0
Bromomethane														<10	<8.0
2-Butanone (MEK)				<50	<1000	<500	<10	<50	<50	<200	<100	<100	<50	<25	<20
n-Butylbenzene			<5									<10	<5	<5.0	<4.0
sec-Butylbenzene			NA									<10	<5	<5.0	<4.0
tert-Butylbenzene			NA	<50	<100	<50	<5	<25	<10	<20	<10	<10	<5	<5.0	<4.0
Carbon Tetrachloride														<5.0	<4.0
Chlorobenzene	100	100	<5	<50	<100	<50	<5	7.5 J	<10	<20	<10	<10	2.9 J	2 J	1.8 J
Chloroethane			NA	<50	<100	<50	<5	<25	<10	<20	<10	<10	<5	<10	<8.0
Chloroform	80		NA	<50	<100	<50	<5	<25	<10	<20	<10	<10	<5	0.91 JB	<4.0
Chloromethane			NA	<100	<100	<50	<5	<25	<10	<20	<10	<10	<5	<10	<8.0
2-Chlorotoluene														<5.0	<4.0
4-Chlorotoluene														<5.0	<4.0
Dibromochloromethane														3 JB	<4.0
1,2-Dibromo-3-chloropropane														<10	<8.0
1,2-Dibromoethane (EDB)														<5.0	<4.0
Dibromomethane														<5.0	<4.0
1,2-Dichlorobenzene	600		<5	<50	<100	<50	<5	<25	<10	<20	<10	<10	<5	<5.0	<4.0
1,3-Dichlorobenzene			NA									<10	<5	<5.0	<4.0
1,4-Dichlorobenzene	75		21	680	920	1300	890	1800	1600	1300	140	1200	920	810	400
Dichlorodifluoromethane														<10	<8.0
1,1-Dichloroethane			49	80	<100	<50	55	60	29	28	19	81	45	43	43
1,2-Dichloroethane	5	5	NA									<10	<5	<5.0	<4.0
1,1-Dichloroethene	7	7	10	<50	<100	<50	<5	<25	<10	<20	<10	<10	<5	<5.0	<4.0
cis-1,2-Dichloroethene	70	70	2200	2700	590	1200	2300	1500	570	640	400	840	800	650	680
trans-1,2-Dichloroethene	100	100	95	95	<100	<50	28	17 J	<10	<20	<10	15	10	8.1	9
1,2-Dichloroethene (total)														660	670
1,2-Dichloropropane	5	5	NA									<10	<5	<5.0	<4.0
1,3-Dichloropropane														<5.0	<4.0
2,2-Dichloropropane														<25	<20
1,1-Dichloropropene														<5.0	<4.0
cis-1,3-Dichloropropene														<5.0	<4.0
trans-1,3-Dichloropropene			NA									<10	<5	<5.0	<4.0
Ethylbenzene			<5	<50	<100	<50	<5	<25	<10	<20	<10	<10	<5	<5.0	<4.0
Hexachlorobutadiene			NA									<10	<5	<5.0	<4.0
2-Hexanone													<50	<25	<20
Isopropylbenzene (Cumene)			<5	<50	<100	<50	<5	<25	<10	<20	<10	<10	<5	<5.0	<4.0
p-Isopropyltoluene			NA	<50	<100	<50	<5	<25	<10	<20	<10	<10	<5	<5.0	<4.0
4-Methyl-2-pentanone (MIBK)				21 J	<1000	<500	<10	<50	<50	<200	<100	50 J	8.5 J	<25	<20
Methylene Chloride	5		NA	<200	<100	<50	<5	16 JB	<10	<20	<10	<10	<5	<25	<20
Naphthalene			<10	<100	<100	<50	<5	<25	<10	<20	<10	<10	<5	<5.0	<4.0
n-Propylbenzene			<5	<50	<100	<50	<5	<25	<10	<20	<10	<10	<5	<5.0	<4.0
Styrene			<5	<50	<100	<50	<5	<25	<10	<20	<10	<10	<5	<5.0	<4.0
1,1,1,2-Tetrachloroethane														<5.0	<4.0
1,1,2,2-Tetrachloroethane														<5.0	<4.0
Tetrachloroethene (PCE)	5	5	<5	<50	<100	<50	<5	<25	<10	<20	<10	<10	<5	<5.0	<4.0
Toluene			4.1 J	82	<100	<50	14	44	<10	<20	19 B	30	9	3.8 J	2.4 J
1,2,3-Trichlorobenzene														<5.0	<4.0
1,2,4-Trichlorobenzene														<5.0	<4.0
1,1,1-Trichloroethane	200	200	NA	<50	<100	<50	<5	<25	<10	<20	<10	<10	<5	<5.0	<4.0
1,1,2-Trichloroethane														<5.0	<4.0
Trichloroethene (TCE)	5	5	<5	<50	<100	<50	<5	<25	<10	<20	<10	<10	<5	<5.0	<4.0
Trichlorofluoromethane														<10	<8.0
1,2,3-Trichloropropane													<12	<5.0	<4.0
1,2,4-Trimethylbenzene			<5	<50	<100	<50	<5	<25	<10	<20	<10	<10	<5	<5.0	<4.0
1,3,5-Trimethylbenzene			<5	<50	<100	<50	<5	<25	<10	<20	<10	<10	<5	<5.0	<4.0
Vinyl Chloride	2	2	860	1500	260	570	1400	910	370	430	370	760	1200	1100	1200
m&p-Xylene														<10	<8.0
o-Xylene														1.2 J	<4.0
Xylenes (total)			<5	<50	<100	<50	5.2	<25	<30	<26	<13	<13	<8.5	<10	<8.0
Total VOCs			3280	5221	1770	3070	4779	4578	2588	2398	962	2043	3060	2557	2346
Total Chlorinated VOCs			3235	5055	1770	3070	4673	4303	2569	2398	929	2696	2975	2417	2314
Total BTEX			45	145	<100	<50	71	95	19	<26	33	77	41	33	32

Appendix A: Historical Summary of Volatile Organic Compounds Detected in Groundwater, Brenntag, 139 East Soper Street, St. Louis, Missouri

Well Name Sample Date	CALM (ug/l)	MCLs (ug/l)	MW-8 7/31/03	MW-8 12/4/03	MW-8 2/12/04	MW-8 (DUP) 2/6/03	MW-8 (DUP) 5/8/03
Acetone			300	230	<1000	83	<40
Benzene			27	38	38 J	31	30
Bromobenzene			<2.8	<10	<100	1.3 J	<4.0
Bromochloromethane			<2.8	<10	<100	<5.0	<4.0
Bromodichloromethane	80		<2.8	<10	<100	1.5 JB	<4.0
Bromoform			<2.8	<10	<100	13	<4.0
Bromomethane			<5.7	<20	<200	<10	<8.0
2-Butanone (MEK)			20	<50	<500	<25	<20
n-Butylbenzene			<2.8	<10	<100	<5.0	<4.0
sec-Butylbenzene			<2.8	<10	<100	<5.0	<4.0
tert-Butylbenzene			<2.8	<10	<100	<5.0	<4.0
Carbon Tetrachloride			<2.8	<10	<100	<5.0	<4.0
Chlorobenzene	100	100	3.9	8.0 J	<100	2.1 J	1.6 J
Chloroethane			<5.7	<20	<200	<10	<8.0
Chloroform	80		<2.8	<10	<100	<5.0	<4.0
Chloromethane			<5.7	<20	<200	<10	<8.0
2-Chlorotoluene			<2.8	<10	<100	<5.0	<4.0
4-Chlorotoluene			<2.8	<10	<100	<5.0	<4.0
Dibromochloromethane			<2.8	<10	<100	4 JB	<4.0
1,2-Dibromo-3-chloropropane			<5.7	<20	<200	<10	<8.0
1,2-Dibromoethane (EDB)			<2.8	<10	<100	<5.0	<4.0
Dibromomethane			<2.8	<10	<100	<5.0	<4.0
1,2-Dichlorobenzene	600		0.95 J	<10	<100	<5.0	<4.0
1,3-Dichlorobenzene			<2.8	<10	<100	<5.0	<4.0
1,4-Dichlorobenzene	75		980	2,100	2,200	650	400
Dichlorodifluoromethane			<5.7	<20	<200	<10	<8.0
1,1-Dichloroethane			50	53	65 J	46	43
1,2-Dichloroethane	5	5	<2.8	<10	<100	<5.0	<4.0
1,1-Dichloroethene	7	7	<2.8	<10	<100	<5.0	<4.0
cis-1,2-Dichloroethene	70	70	510	440	410	720	660
trans-1,2-Dichloroethene	100	100	6.7	7	<50	8.8	9
1,2-Dichloroethene (total)			520	440	410	740	670
1,2-Dichloropropane	5	5	<2.8	<10	<100	<5.0	<4.0
1,3-Dichloropropane			<2.8	<10	<100	<5.0	<4.0
2,2-Dichloropropane			<14	<50	<500	<25	<20
1,1-Dichloropropene			<2.8	<10	<100	<5.0	<4.0
cis-1,3-Dichloropropene			<2.8	<10	<100	<5.0	<4.0
trans-1,3-Dichloropropene			<2.8	<10	<100	<5.0	<4.0
Ethylbenzene			0.56 J	<10	<100	1.1 J	<4.0
Hexachlorobutadiene			<2.8	<10	<100	<5.0	<4.0
2-Hexanone			<14	<50	<500	<25	<20
Isopropylbenzene (Cumene)			<2.8	<10	<100	<5.0	<4.0
p-Isopropyltoluene			<2.8	<10	<100	<5.0	<4.0
4-Methyl-2-pentanone (MIBK)			27	36 J	<500	<25	<20
Methylene Chloride	5		1.3 J	<50	<500	<25	<20
Naphthalene			<2.8	<10	<100	5.1	<4.0
n-Propylbenzene			<2.8	<10	<100	<5.0	<4.0
Styrene			<2.8	<10	<100	<5.0	<4.0
1,1,1,2-Tetrachloroethane			<2.8	<10	<100	<5.0	<4.0
1,1,2,2-Tetrachloroethane			<2.8	<10	<100	<5.0	<4.0
Tetrachloroethene (PCE)	5	5	<2.8	<10	<100	<5.0	<4.0
Toluene			16	25	34 J	5.4	2.4 J
1,2,3-Trichlorobenzene			<2.8	<10	<100	<5.0	<4.0
1,2,4-Trichlorobenzene			<2.8	<10	<100	<5.0	<4.0
1,1,1-Trichloroethane	200	200	<2.8	<10	<100	<5.0	<4.0
1,1,2-Trichloroethane			<2.8	<10	<100	<5.0	<4.0
Trichloroethene (TCE)	5	5	0.69 J	<10	<100	<5.0	<4.0
Trichlorofluoromethane			<5.7	<20	<200	<10	<8.0
1,2,3-Trichloropropane			<2.8	<10	<100	<5.0	<4.0
1,2,4-Trimethylbenzene			0.51 J	<10	<100	0.75 J	<4.0
1,3,5-Trimethylbenzene			<2.8	<10	<100	<5.0	<4.0
Vinyl Chloride	2	2	990	880	780	1400	1200
m&p-Xylene			1.1 J	<20	<200	2.8 J	<8.0
o-Xylene			1.4 J	<10	<100	1.5 J	<4.0
Xylenes (total)			2.5 J	<20	<200	4.4 J	<8.0
Total VOCs			2,937	3,813	3,527	2977	2348
Total Chlorinated VOCs			2,540	3,522	3,455	2831	2314
Total BTEX			46.06	61	72	42	32

Appendix A: Historical Summary of Volatile Organic Compounds Detected in Groundwater,
Brenntag, 139 East Soper Street, St. Louis, Missouri

Well Name	CALM	MCLs	MW-9	MW-9	MW-9	MW-9	MW-9	MW-9	MW-9	MW-9	MW-9	MW-9	MW-9	MW-9	MW-9	MW-9	MW-9
Sample Date	(ug/l)	(ug/l)	12/3/99	4/17/00	9/6/00	12/27/01	3/1/01	5/22/01	8/21/01	12/5/01	2/20/02	5/30/02	8/16/02	10/29/02	2/6/03	5/8/03	7/31/03
Acetone				<20	<20	<500	<10	<20	<20	<5	<10	<10	<10	<10	3.8 J	<10	<10
Benzene			<5	<5	<5	<50	<1	<5	<5	<1	<1	<1	<1	<1	1.1	<1.0	<1.0
Bromobenzene															<1.0	<1.0	<1.0
Bromochloromethane															<1.0	<1.0	<1.0
Bromodichloromethane	80		NA										<1	<1	<1.0	<1.0	<1.0
Bromoform															<1.0	<1.0	<1.0
Bromomethane															<2.0	<2.0	<2.0
2-Butanone (MEK)				<5	<5	<500	<10	<10	<10	<5	<10	<10	<10	<10	<5.0	<5.0	<5.0
n-Butylbenzene			<5										<1	<1	<1.0	<1.0	<1.0
sec-Butylbenzene			NA										<1	<1	<1.0	<1.0	<1.0
tert-Butylbenzene			NA	<5	<5	<50	<1	<5	<5	<1	<1	<1	<1	<1	<1.0	<1.0	<1.0
Carbon Tetrachloride															<1.0	<1.0	<1.0
Chlorobenzene	100	100	<5	<5	<5	<50	<1	<5	<5	<1	<1	<1	<1	<1	<1.0	<1.0	<1.0
Chloroethane			NA	<5	<5	<50	<1	<5	<5	<1	<1	<1	<1	<1	<2.0	<2.0	<2.0
Chloroform	80		NA	<5	<5	<50	<1	<5	<5	<1	<1	<1	<1	<1	<1.0	<1.0	<1.0
Chloromethane			NA	<10	<10	<50	<1	<5	<5	<1	<1	<1	<1	<1	<2.0	<2.0	<2.0
2-Chlorotoluene															<1.0	<1.0	<1.0
4-Chlorotoluene															<1.0	<1.0	<1.0
Dibromochloromethane														<1.3	<1.0	<1.0	<1.0
1,2-Dibromo-3-chloropropane															<2.0	<2.0	<2.0
1,2-Dibromoethane (EDB)															<1.0	<1.0	<1.0
Dibromomethane															<1.0	<1.0	<1.0
1,2-Dichlorobenzene	600		<5	<5	<5	<50	<1	<5	<5	2.7	2	1.5	2.9		<1.0	1.7	2.3
1,3-Dichlorobenzene			NA									130	<1	2.9	<1.0	<1.0	<1.0
1,4-Dichlorobenzene	75		21	<5	<5	1300	<1	<5	<5	<1	<1	<1	<1	<1	11	<1.0	0.46 J
Dichlorodifluoromethane														<1	<2.0	<2.0	<2.0
1,1-Dichloroethane			<5	<5	<5	<50	<1	<5	<5	<1	<1	<1	<1		1.1	0.33 J	0.5 J
1,2-Dichloroethane	5	5	NA										<1	<1	<1.0	<1.0	<1.0
1,1-Dichloroethene	7	7	<5	<5	<5	<50	<1	<5	<5	<1	<1	<1	<1	<1	<1.0	<1.0	<1.0
cis-1,2-Dichloroethene	70	70	25	2.5 J	3.2 J	820	3.8	18	15	3.1	2.7	8.3	3.5	<1	20	2.6	3.3
trans-1,2-Dichloroethene	100	100	<5	<5	<5	<50	<1	<5	<5	<1	<1	<1	<1	3.5	0.37 J	0.25 J	0.34 J
1,2-Dichloroethene (total)														<1	20	2.6	3.6
1,2-Dichloropropane	5	5	NA										<1		<1.0	<1.0	<1.0
1,3-Dichloropropane														<1	<1.0	<1.0	<1.0
2,2-Dichloropropane															<5.0	<5.0	<5.0
1,1-Dichloropropene															<1.0	<1.0	<1.0
cis-1,3-Dichloropropene															<1.0	<1.0	<1.0
trans-1,3-Dichloropropene			NA										<1		<1.0	<1.0	<1.0
Ethylbenzene			<5	<5	<5	<50	<1	<5	<5	<1	<1	<1	<1	<1	<1.0	<1.0	<1.0
Hexachlorobutadiene			NA										<1	<1	<1.0	<1.0	<1.0
2-Hexanone														<1	<5.0	<5.0	<5.0
Isopropylbenzene (Cumene)			<5	<5	<5	<50	<1	<5	<5	<1	<1	<1	<1	<10	<1.0	<1.0	<1.0
p-Isopropyltoluene			NA	<5	<5	<50	<1	<5	<5	<1	<1	<1	<1	<1	<1.0	<1.0	<1.0
4-Methyl-2-pentanone (MIBK)				<10	<10	<500	<10	<10	<10	<5	<10	<10	<10	<1	<5.0	<5.0	<5.0
Methylene Chloride	5		NA	<20	5.6 J	<50	<1	<5	<5	<1	<1	<1	<1	<10	0.28 J	<5.0	<5.0
Naphthalene			860 J	<10	<10	<50	<1	<5	<5	<1	<1	<1	<1	<1	0.7 J	<1.0	<1.0
n-Propylbenzene			<5	<5	<5	<50	<1	<5	<5	<1	<1	<1	<1	NA	<1.0	<1.0	<1.0
Styrene			<5	<5	<5	<50	<1	<5	<5	<1	<1	<1	<1	<1	<1.0	<1.0	<1.0
1,1,1,2-Tetrachloroethane														<1	<1.0	<1.0	<1.0
1,1,2,2-Tetrachloroethane															<1.0	<1.0	<1.0
Tetrachloroethene (PCE)	5	5	<5	<5	<5	<50	<1	<5	<5	<1	<1	<1	<1		<1.0	<1.0	<1.0
Toluene			74	48	2.3 J	<50	<1	<5	31	<1	<1	<1	<1	<1	0.21 J	0.38 J	0.57 J
1,2,3-Trichlorobenzene														<1	<1.0	<1.0	<1.0
1,2,4-Trichlorobenzene															<1.0	<1.0	<1.0
1,1,1-Trichloroethane	200	200	NA	<5	<5	<50	<1	<5	<5	<1	<1	<1	<1		<1.0	<1.0	<1.0
1,1,2-Trichloroethane														<1	<1.0	<1.0	<1.0
Trichloroethene (TCE)	5	5	5.2	4.1 J	2.5 J	<50	4	<5	<5	2.7	3.2	3.3	4.3		0.3 J	2.4	3.5
Trichlorofluoromethane															<2.0	<2.0	<2.0
1,2,3-Trichloropropane														4.3	<1.0	<1.0	<1.0
1,2,4-Trimethylbenzene			<5	<5	<5	<50	<1	<5	<5	<1	<1	<1	<1		<1.0	<1.0	<1.0
1,3,5-Trimethylbenzene			<5	<5	<5	<50	<1	<5	<5	<1	<1	<1	<1	<1	<1.0	<1.0	<1.0
Vinyl Chloride	2	2	4.2 J	<5	<5	330	<1	<5	<5	<1	<1	<1	<1	<1	95	0.61 J	0.77 J
m&p-Xylene														<1	<2.0	<2.0	<2.0
o-Xylene															<1.0	<1.0	<1.0
Xylenes (total)			<5	5.2	<5	<50	<1	<5	<5	<3	<1.3	<1.3	<1.3		<2.0	<2.0	<2.0
Total VOCs			989	53	14	2450	8	18	46	9	8	143	11	11	134	8	12
Total Chlorinated VOCs			55	7	11	2450	8	18	15	9	8	13	11	4	128	8	11
Total BTEX			74	51	2	<50	<1	<5	31	<3	<1.3	<1.3	<1.3	<1	1	0.38	0.57

Appendix A: Historical Summary of Volatile Organic Compounds Detected in Groundwater, Brenntag, 139 East Soper Street, St. Louis, Missouri

Well Name Sample Date	CALM (ug/l)	MCLs (ug/l)	MW-9 12/4/03	MW-9 2/12/04
Acetone			<10	<10
Benzene			6.1	1.2
Bromobenzene			<1.0	<1.0
Bromochloromethane			<1.0	<1.0
Bromodichloromethane	80		<1.0	<1.0
Bromoform			<1.0	<1.0
Bromomethane			<2.0	<2.0
2-Butanone (MEK)			<5.0	<5.0
n-Butylbenzene			<1.0	<1.0
sec-Butylbenzene			<1.0	<1.0
tert-Butylbenzene			<1.0	<1.0
Carbon Tetrachloride			<1.0	<1.0
Chlorobenzene	100	100	0.24 J	<1.0
Chloroethane			<2.0	<2.0
Chloroform	80		<1.0	<1.0
Chloromethane			<2.0	<2.0
2-Chlorotoluene			<1.0	<1.0
4-Chlorotoluene			<1.0	<1.0
Dibromochloromethane			<1.0	<1.0
1,2-Dibromo-3-chloropropane			<2.0	<2.0
1,2-Dibromoethane (EDB)			<1.0	<1.0
Dibromomethane			<1.0	<1.0
1,2-Dichlorobenzene	600		0.86 J	0.29 J
1,3-Dichlorobenzene			<1.0	<1.0
1,4-Dichlorobenzene	75		4.6	10
Dichlorodifluoromethane			<2.0	<2.0
1,1-Dichloroethane			16	10
1,2-Dichloroethane	5	5	<1.0	<1.0
1,1-Dichloroethene	7	7	<1.0	<1.0
cis-1,2-Dichloroethene	70	70	48	21
trans-1,2-Dichloroethene	100	100	0.85	0.51
1,2-Dichloroethene (total)			49	21
1,2-Dichloropropane	5	5	<1.0	<1.0
1,3-Dichloropropane			<1.0	<1.0
2,2-Dichloropropane			<5.0	<5.0
1,1-Dichloropropene			<1.0	<1.0
cis-1,3-Dichloropropene			<1.0	<1.0
trans-1,3-Dichloropropene			<1.0	<1.0
Ethylbenzene			0.49 J	0.38 J
Hexachlorobutadiene			<1.0	<1.0
2-Hexanone			<5.0	<5.0
Isopropylbenzene (Cumene)			<1.0	<1.0
p-Isopropyltoluene			<1.0	<1.0
4-Methyl-2-pentanone (MIBK)			16	<5.0
Methylene Chloride	5		<5.0	<5.0
Naphthalene			<1.0	<1.0
n-Propylbenzene			<1.0	<1.0
Styrene			<1.0	<1.0
1,1,1,2-Tetrachloroethane			<1.0	<1.0
1,1,2,2-Tetrachloroethane			<1.0	<1.0
Tetrachloroethene (PCE)	5	5	<1.0	<1.0
Toluene			0.58 J	0.31 J
1,2,3-Trichlorobenzene			<1.0	<1.0
1,2,4-Trichlorobenzene			<1.0	<1.0
1,1,1-Trichloroethane	200	200	<1.0	<1.0
1,1,2-Trichloroethane			<1.0	<1.0
Trichloroethene (TCE)	5	5	6.5	5.5
Trichlorofluoromethane			<2.0	<2.0
1,2,3-Trichloropropane			<1.0	<1.0
1,2,4-Trimethylbenzene			<1.0	<1.0
1,3,5-Trimethylbenzene			<1.0	<1.0
Vinyl Chloride	2	2	44	15
m&p-Xylene			0.62 J	0.42 J
o-Xylene			0.43 J	<1.0
Xylenes (total)			1.0 J	0.42 J
Total VOCs			145	65
Total Chlorinated VOCs			137	62
Total BTEX			8.15	2

Appendix A: Historical Summary of Volatile Organic Compounds Detected in Groundwater,
Brenntag, 139 East Soper Street, St. Louis, Missouri

Well Name	CALM	MCLs	MW-10	MW-10	MW-10	MW-10	MW-10	MW-10	MW-10	MW-10	MW-10	MW-10	MW-10	MW-10	MW-10
Sample Date	(ug/l)	(ug/l)	12/3/99	4/17/00	9/1/00	12/27/00	3/1/01	5/21/01	8/20/01	12/4/01	2/19/02	5/29/02	8/15/02	10/28/02	2/4/03
Acetone				<20	70	<100	88	210 B	240 B	200	770	390	120	360	960
Benzene			10	61	55	34	37	32	44	72	24	23	9.3	53	72
Bromobenzene															<2.0
Bromochloromethane															<2.0
Bromodichloromethane	80		NA										<1		<2.0
Bromoform															<2.0
Bromomethane															<4.0
2-Butanone (MEK)				33	16	<100	24	13	<10	<50	52	<100	8.7 J	25	100
n-Butylbenzene			7.7										<1	1.8	<2.0
sec-Butylbenzene			NA									2.6			2.1
tert-Butylbenzene			NA	<5	<5	<10	<2	<5	<5	<5	<5	<1	<1	<1	<2.0
Carbon Tetrachloride															<2.0
Chlorobenzene	100	100	4.5 J	<5	<5	<10	<2	<5	<5	<5	<5	5	<1		4.1
Chloroethane			NA	<5	<5	<10	<2	<5	<5	<5	<5	<1	<1		<4.0
Chloroform	80		NA	<5	<5	<10	<2	<5	<5	<5	<5	<1	<1		<2.0
Chloromethane			NA	<10	<10	<10	<2	<5	<5	2.7 J	<5	1.2	<1		<4.0
2-Chlorotoluene															<2.0
4-Chlorotoluene															<2.0
Dibromochloromethane															<2.0
1,2-Dibromo-3-chloropropane															<4.0
1,2-Dibromoethane (EDB)															<2.0
Dibromomethane															<2.0
1,2-Dichlorobenzene	600		8.1	2.4 J	3.1 J	<10	<2	<5	<5	4.3 J	3.3 J	9.4	1.1		7.8
1,3-Dichlorobenzene			NA										<1		<2.0
1,4-Dichlorobenzene	75		<5	<5	<5	<10	<2	<5	<5	<5	<5	<1	<1		1.7 J
Dichlorodifluoromethane															<4.0
1,1-Dichloroethane			4.4 J	5.6	5.3	<10	5.1	<5	<5	8.2	7.7	28	4.5		38
1,2-Dichloroethane	5	5	NA									3	<1		<2.0
1,1-Dichloroethene	7	7	<5	<5	<5	<10	<2	<5	<5	<5	<5	<1	<1		<2.0
cis-1,2-Dichloroethene	70	70	5.9	9.9	11	<10	8.7	8	9.2	21	18	25	10		94
trans-1,2-Dichloroethene	100	100	<5	<5	<5	<10	<2	<5	<5	<5	<5	<1	<1		0.65 J
1,2-Dichloroethene (total)															94
1,2-Dichloropropane	5	5	NA									1.4	<1		<2.0
1,3-Dichloropropane															<2.0
2,2-Dichloropropane															<10
1,1-Dichloropropene															<2.0
cis-1,3-Dichloropropene															<2.0
trans-1,3-Dichloropropene			NA	NA	NA	NA	NA	NA	NA	NA			<1		<2.0
Ethylbenzene			45	150	180	88	74	99	130	250	100	94	34	180	280
Hexachlorobutadiene			NA										<1		<2.0
2-Hexanone														0.73 J	<10
Isopropylbenzene (Cumene)			3.7 J	6.6	7.6	<10	5.4	<5	6.5	13	4.5 J	20	2	10	14
p-Isopropyltoluene			NA	<5	<5	<10	<2	<5	<5	<5	<5	2.2	<1	<1	2.1
4-Methyl-2-pentanone (MIBK)				11	5.7 J	<100	<20	<10	<10	<50	<50	42	3.4 J	13	35
Methylene Chloride	5		NA	<20	<20	<10	<2	<5	<5	<5	7.9	<1	<1		<10
Naphthalene			7.6 J	11	18	<10	9.4	7.6	13	30	13	13	4.8	28	35
n-Propylbenzene			4.1 J	4.8 J	6.1	<10	4.2	<5	5.1	9.5	3.3 J	17	3.3	9.4	12
Styrene			<5	<5	<5	<10	<2	<5	<5	<5	<5	<1	<1	<1	<2.0
1,1,1,2-Tetrachloroethane															<2.0
1,1,2,2-Tetrachloroethane															<2.0
Tetrachloroethene (PCE)	5	5	<5	<5	<5	<10	<2	<5	<5	<5	<5	<1	<1		<2.0
Toluene			190	200	310	66	81	51	150	440	180	170	76	360	680
1,2,3-Trichlorobenzene															<2.0
1,2,4-Trichlorobenzene															<2.0
1,1,1-Trichloroethane	200	200	NA	<5	<5	<10	<2	<5	<5	<5	<5	<1	<1		<2.0
1,1,2-Trichloroethane															<2.0
Trichloroethene (TCE)	5	5	3.5 J	<5	<5	<10	<2	<5	<5	<5	<5	1.5	<1		0.51 J
Trichlorofluoromethane															<4.0
1,2,3-Trichloropropane															<2.0
1,2,4-Trimethylbenzene			26	24	28	13	20	19	8.9	55	28	33	11	53	69
1,3,5-Trimethylbenzene			9.3	7.4	8.8	<10	6.5	5.7	6.9	16	7.9	28	3.3	16	22
Vinyl Chloride	2	2	<5	2.8 J	<5	<10	<2	<5	<5	3.1 J	<5	15	<1		8.5
m&p-Xylene															720
o-Xylene															250
Xylenes (total)			178	476	415	263	247	632	409	750	390	390	135	680	970
Total VOCs			336	530	705	201	361	445	614	1125	1220	924	291	1110	3418
Total Chlorinated VOCs			22	21	19	<10	12	8	9	39	37	85	16	<1	155
Total BTEX			423	887	940	451	439	814	733	1512	894	677	254	1273	2012

Appendix A: Historical Summary of Volatile Organic Compounds Detected in Groundwater, Brenntag, 139 East Soper Street, St. Louis, Missouri

Well Name Sample Date	CALM (ug/l)	MCLs (ug/l)	MW-10 5/6/03	MW-10 7/29/03	MW-10 12/2/03	MW-10 2/10/04
Acetone			3200	4,700	1,400 E	5,000
Benzene			30	47	48	71
Bromobenzene			<1.0	<4.0	<2.0	<50
Bromochloromethane			<1.0	<4.0	<2.0	<50
Bromodichloromethane	80		<1.0	<4.0	<2.0	<50
Bromoform			<1.0	<4.0	<2.0	<50
Bromomethane			<2.0	<8.0	<4.0	<100
2-Butanone (MEK)			410	750	210	650
n-Butylbenzene			<1.0	<4.0	<2.0	<50
sec-Butylbenzene			1.8	2.2 J	<2.0	<50
tert-Butylbenzene			<1.0	<4.0	<2.0	<50
Carbon Tetrachloride			<1.0	<4.0	<2.0	<50
Chlorobenzene	100	100	4.8	10	8.6	23 J
Chloroethane			0.74 J	0.84 J	<4.0	<100
Chloroform	80		<1.0	<4.0	<2.0	<50
Chloromethane			<2.0	<8.0	<4.0	<100
2-Chlorotoluene			<1.0	<4.0	<2.0	<50
4-Chlorotoluene			<1.0	<4.0	<2.0	<50
Dibromochloromethane			<1.0	<4.0	<2.0	<50
1,2-Dibromo-3-chloropropane			<2.0	<8.0	<4.0	<100
1,2-Dibromoethane (EDB)			<1.0	<4.0	<2.0	<50
Dibromomethane			<1.0	<4.0	<2.0	<50
1,2-Dichlorobenzene	600		8.3	10	10	18 J
1,3-Dichlorobenzene			<1.0	<4.0	<2.0	<50
1,4-Dichlorobenzene	75		0.59 J	1.1 J	1.1 J	<50
Dichlorodifluoromethane			<2.0	<8.0	<4.0	<100
1,1-Dichloroethane			42	110	58	210
1,2-Dichloroethane	5	5	<1.0	<4.0	<2.0	<50
1,1-Dichloroethene	7	7	0.42 J	1.2 J	<2.0	<50
cis-1,2-Dichloroethene	70	70	130	310	170 E	740
trans-1,2-Dichloroethene	100	100	0.74	1.9 J	2.0	<25
1,2-Dichloroethene (total)			130	310	170 E	740
1,2-Dichloropropane	5	5	<1.0	<4.0	<2.0	<50
1,3-Dichloropropane			<1.0	<4.0	<2.0	<50
2,2-Dichloropropane			<5.0	<20	<10	<250
1,1-Dichloropropene			<1.0	<4.0	<2.0	<50
cis-1,3-Dichloropropene			<1.0	<4.0	<2.0	<50
trans-1,3-Dichloropropene			<1.0	<4.0	<2.0	<50
Ethylbenzene			98	140	160 E	170
Hexachlorobutadiene			<1.0	<4.0	<2.0	<50
2-Hexanone			<5.0	<20	<10	<250
Isopropylbenzene (Cumene)			7.2	10	12	12 J
p-Isopropyltoluene			<1.0	1.8 J	<2.0	<50
4-Methyl-2-pentanone (MIBK)			71	130	62	160 J
Methylene Chloride	5		<5.0	<20	<10	<250
Naphthalene			24	31	29	39 J
n-Propylbenzene			7.3	9.6	8.5	12 J
Styrene			<1.0	<4.0	<2.0	<50
1,1,1,2-Tetrachloroethane			<1.0	<4.0	<2.0	<50
1,1,2,2-Tetrachloroethane			<1.0	<4.0	<2.0	<50
Tetrachloroethene (PCE)	5	5	0.28 J	<4.0	<2.0	<50
Toluene			<1.0	310	270 E	700
1,2,3-Trichlorobenzene			<1.0	<4.0	<2.0	<50
1,2,4-Trichlorobenzene			<1.0	<4.0	<2.0	<50
1,1,1-Trichloroethane	200	200	<1.0	<4.0	<2.0	<50
1,1,2-Trichloroethane			<1.0	<4.0	<2.0	<50
Trichloroethene (TCE)	5	5	2.3	5.2	0.67 J	24 J
Trichlorofluoromethane			<2.0	<8.0	<4.0	<100
1,2,3-Trichloropropane			<1.0	<4.0	<2.0	<50
1,2,4-Trimethylbenzene			43	56	54	75
1,3,5-Trimethylbenzene			16	20	20	35 J
Vinyl Chloride	2	2	9.2	19	<2.0	69
m&p-Xylene			310	420	500	540
o-Xylene			120	190	200	250
Xylenes (total)			430	600	700	790
Total VOCs			4536	7,287	3,224	8,798
Total Chlorinated VOCs			197	459	312	1,221
Total BTEX			558	1,097	1,178	1,731

Appendix A: Historical Summary of Volatile Organic Compounds Detected in Groundwater, Brenntag, 139 East Soper Street, St. Louis, Missouri

Well Name	CALM	MCLs	MW-11	MW-11	MW-11	MW-11	MW-11	MW-11	MW-11	MW-11	MW-11	MW-11	MW-11	MW-11	MW-11
Sample Date	(ug/l)	(ug/l)	12/3/99	4/17/00	9/1/00	12/27/00	3/1/01	5/21/01	8/20/01	12/4/01	2/19/02	5/29/02	8/15/02	7/30/03	12/3/03
Acetone				<20	<100	<100	<50	280 B	220 B	<50	280	<50	<10	<10	<10
Benzene			6.4	2.8 J	280	18	58	110	260	120	9	<5	6.9	4.3	<1.0
Bromobenzene														<1.0	<1.0
Bromochloromethane														<1.0	<1.0
Bromodichloromethane	80		NA										<1	<1.0	<1.0
Bromoform														<1.0	<1.0
Bromomethane														<2.0	<2.0
2-Butanone (MEK)				13	<25	<100	<50	140	<100	<50	34	<50	<10	<5.0	<5.0
n-Butylbenzene			4.3 J										<1	<1.0	<1.0
sec-Butylbenzene			NA										<1	<1.0	<1.0
tert-Butylbenzene			NA	<5	<25	<10	<5	640	<50	<5	<2	<5	<1	<1.0	<1.0
Carbon Tetrachloride														<1.0	<1.0
Chlorobenzene	100	100	9	3.5 J	<25	<10	<5	<25	<50	<5	1.5 J	<5	<1	0.16 J	<1.0
Chloroethane			NA	<5	<25	<10	<5	<25	<50	<5	<2	<5	<1	<2.0	<2.0
Chloroform	80		NA	<5	<25	<10	<5	<25	<50	<5	<2	<5	<1	<1.0	<1.0
Chloromethane			NA	<10	<50	<10	<5	<25	<50	<5	<2	<5	<1	<2.0	<2.0
2-Chlorotoluene														<1.0	<1.0
4-Chlorotoluene														<1.0	<1.0
Dibromochloromethane														<1.0	<1.0
1,2-Dibromo-3-chloropropane														<2.0	<2.0
1,2-Dibromoethane (EDB)														<1.0	<1.0
Dibromomethane														<1.0	<1.0
1,2-Dichlorobenzene	600		6.5	5.8	<25	<10	<5	<25	<50	<5	2.2	<5	0.84 J	<1.0	<1.0
1,3-Dichlorobenzene			NA										<1	<1.0	<1.0
1,4-Dichlorobenzene	75		<5	<5	<25	<10	<5	<25	<50	<5	<2	<5	<1	<1.0	<1.0
Dichlorodifluoromethane														<2.0	<2.0
1,1-Dichloroethane			7.3	2.2 J	<25	<10	<5	<25	<50	<5	2.2	<5	4.7	9.1	1.2
1,2-Dichloroethane	5	5	NA										<1	<1.0	<1.0
1,1-Dichloroethene	7	7	<5	<5	<25	<10	<5	<25	<50	<5	<2	<5	<1	<1.0	<1.0
cis-1,2-Dichloroethene	70	70	7.8	2.4 J	<25	<10	<5	<25	11 J	<5	6.3	<5	6.3	16	1.2
trans-1,2-Dichloroethene	100	100	<5	<5	<25	<10	<5	<25	<50	<5	<2	<5	1.2	0.46 J	<0.50
1,2-Dichloroethene (total)														16	1.2
1,2-Dichloropropane	5	5	NA										0.58 J	0.28 J	<1.0
1,3-Dichloropropane														<1.0	<1.0
2,2-Dichloropropane														<5.0	<5.0
1,1-Dichloropropene														<1.0	<1.0
cis-1,3-Dichloropropene														<1.0	<1.0
trans-1,3-Dichloropropene			NA										<1	<1.0	<1.0
Ethylbenzene			28	23	61	<10	7.7	390	260	22	19	<5	2.6	<1.0	<1.0
Hexachlorobutadiene			NA										<1	<1.0	<1.0
2-Hexanone														<5.0	<5.0
Isopropylbenzene (Cumene)			2.1 J	2.4 J	<25	<10	<5	300	150	2.4 J	1.6 J	<5	<1	<1.0	<1.0
p-Isopropyltoluene			NA	<5	<25	<10	<5	<25	<50	<5	<2	<5	<1	<1.0	<1.0
4-Methyl-2-pentanone (MIBK)				<10	<50	<100	<50	<50	<100	<50	<20	<50	<10	<5.0	<5.0
Methylene Chloride	5		NA	<20	25 J	<10	<5	<25	30 JB	<5	2.2	<5	<1	<5.0	<5.0
Naphthalene			7.6 J	5 J	<50	<10	<5	59	32	1.7 J	3.5	<5	0.71 J	<1.0	<1.0
n-Propylbenzene			<5	2.1 J	<25	<10	<5	730	310	<5	3	<5	<1	<1.0	<1.0
Styrene			<5	<5	<25	<10	<5	<25	<50	<5	<2	<5	<1	<1.0	<1.0
1,1,1,2-Tetrachloroethane														<1.0	<1.0
1,1,2,2-Tetrachloroethane														<1.0	<1.0
Tetrachloroethene (PCE)	5	5	<5	<5	<25	<10	<5	<25	<50	<5	<2	<5	<1	0.44 J	0.27 J
Toluene			15	2.7 J	310	140	40	2400	2100	42	47	<5	0.96 J	<1.0	<1.0
1,2,3-Trichlorobenzene														<1.0	<1.0
1,2,4-Trichlorobenzene														<1.0	<1.0
1,1,1-Trichloroethane	200	200	NA	<5	<25	<10	<5	<25	<50	<5	<2	<5	<1	0.21 J	<1.0
1,1,2-Trichloroethane														<1.0	<1.0
Trichloroethene (TCE)	5	5	2.4 J	3.7 J	<25	<10	<5	<25	<50	<5	1 J	<5	1.3	1.2	0.71 J
Trichlorofluoromethane														<2.0	<2.0
1,2,3-Trichloropropane														<1.0	<1.0
1,2,4-Trimethylbenzene			13	16	<25	33	<5	3000	380	25	20	<5	0.93 J	<1.0	<1.0
1,3,5-Trimethylbenzene			4.3 J	6.4	<25	<10	<5	860	160	6.8	5.4	<5	2.2	<1.0	<1.0
Vinyl Chloride	2	2	<5	<5	<25	<10	<5	<25	<50	<5	<2	<5	1.9	1.8	<1.0
m&p-Xylene														<2.0	<2.0
o-Xylene														<1.0	<1.0
Xylenes (total)			121	105	210	36	38.5	2140	3930	125	117	<6.5	3.38 J	<2.0	<2.0
Total VOCs			114	91	676	191	104	8909	3913	220	438	<50	33	34	3.38
Total Chlorinated VOCs			24	14	25	<10	<5	<25	41	<5	14	<5	19	29	3.38
Total BTEX			170	134	881	194	142	5040	6550	309	192	<6.5	14	4.3	<2.0

Appendix A: Historical Summary of Volatile Organic Compounds Detected in Groundwater, Brenntag, 139 East Soper Street, St. Louis, Missouri

Well Name Sample Date	CALM (ug/l)	MCLs (ug/l)	MW-11 2/12/04
Acetone			<10
Benzene			0.23 J
Bromobenzene			<1.0
Bromochloromethane			<1.0
Bromodichloromethane	80		<1.0
Bromoform			<1.0
Bromomethane			<2.0
2-Butanone (MEK)			<5.0
n-Butylbenzene			<1.0
sec-Butylbenzene			<1.0
tert-Butylbenzene			<1.0
Carbon Tetrachloride			<1.0
Chlorobenzene	100	100	<1.0
Chloroethane			<2.0
Chloroform	80		0.24 J
Chloromethane			<2.0
2-Chlorotoluene			<1.0
4-Chlorotoluene			<1.0
Dibromochloromethane			<1.0
1,2-Dibromo-3-chloropropane			<2.0
1,2-Dibromoethane (EDB)			<1.0
Dibromomethane			<1.0
1,2-Dichlorobenzene	600		<1.0
1,3-Dichlorobenzene			<1.0
1,4-Dichlorobenzene	75		<1.0
Dichlorodifluoromethane			<2.0
1,1-Dichloroethane			15
1,2-Dichloroethane	5	5	<1.0
1,1-Dichloroethene	7	7	<1.0
cis-1,2-Dichloroethene	70	70	32
trans-1,2-Dichloroethene	100	100	0.32 J
1,2-Dichloroethene (total)			32
1,2-Dichloropropane	5	5	<1.0
1,3-Dichloropropane			<1.0
2,2-Dichloropropane			<5.0
1,1-Dichloropropene			<1.0
cis-1,3-Dichloropropene			<1.0
trans-1,3-Dichloropropene			<1.0
Ethylbenzene			<1.0
Hexachlorobutadiene			<1.0
2-Hexanone			<5.0
Isopropylbenzene (Cumene)			<1.0
p-Isopropyltoluene			<1.0
4-Methyl-2-pentanone (MIBK)			<5.0
Methylene Chloride	5		<5.0
Naphthalene			<1.0
n-Propylbenzene			<1.0
Styrene			<1.0
1,1,1,2-Tetrachloroethane			<1.0
1,1,2,2-Tetrachloroethene			<1.0
Tetrachloroethene (PCE)	5	5	0.38 J
Toluene			<1.0
1,2,3-Trichlorobenzene			<1.0
1,2,4-Trichlorobenzene			<1.0
1,1,1-Trichloroethane	200	200	<1.0
1,1,2-Trichloroethane			<1.0
Trichloroethene (TCE)	5	5	1.7
Trichlorofluoromethane			<2.0
1,2,3-Trichloropropane			<1.0
1,2,4-Trimethylbenzene			<1.0
1,3,5-Trimethylbenzene			<1.0
Vinyl Chloride	2	2	0.5 J
m&p-Xylene			<2.0
o-Xylene			<1.0
Xylenes (total)			<2.0
Total VOCs			**50**
Total Chlorinated VOCs			**50**
Total BTEX			**0.2**

Appendix A: Historical Summary of Volatile Organic Compounds Detected in Groundwater,
Brenntag, 139 East Soper Street, St. Louis, Missouri

Well Name	CALM	MCLs	MW-12	MW-12	MW-12	MW-12	MW-12	MW-12	MW-12	MW-12	MW-12	MW-12	MW-12	MW-12	MW-12	MW-12
Sample Date	(ug/l)	(ug/l)	12/3/99	4/17/00	12/27/00	3/1/01	5/21/01	8/20/01	12/4/01	2/19/02	5/29/02	8/15/02	10/29/02	2/5/03	5/7/03	7/30/03
Acetone				<100	<50	<10	<20	<20	130	<20	100	42	28	7.5 J	<10	<10
Benzene			240 J	340	<5	170	9.7	7.1	7.1	94	120	480	120	89	75	180
Bromobenzene														<1.0	<1.0	<1.0
Bromochloromethane														<1.0	<1.0	<1.0
Bromodichloromethane	80		NA									<1		<1.0	<1.0	<1.0
Bromoform														<1.0	<1.0	<1.0
Bromomethane														<2.0	<2.0	<2.0
2-Butanone (MEK)				18 J	<50	<10	<10	<10	12	<20	180	58	<10	<5.0	<5.0	<5.0
n-Butylbenzene			<250								5.6	1.5	0.43 J	<1.0	<1.0	<1.0
sec-Butylbenzene			NA								3.8	<1	<1	<1.0	<1.0	<1.0
tert-Butylbenzene			NA	<25	<5	<1	<5	<5	<1	<2	85	<1	<1	<1.0	<1.0	<1.0
Carbon Tetrachloride														<1.0	<1.0	<1.0
Chlorobenzene	100	100	<250	<25	<5	1.4	<5	<5	2.4	<2	2	<1		<1.0	<1.0	<1.0
Chloroethane			NA	<25	<5	<1	<5	<5	<1	<2	<1	<1		0.29 J	0.49 J	0.7 J
Chloroform	80		NA	<25	<5	<1	<5	<5	<1	<2	<1	<1		<1.0	<1.0	<1.0
Chloromethane			NA	<50	<5	<1	<5	<5	<1	<2	1.9	<1		<2.0	<2.0	<2.0
2-Chlorotoluene														<1.0	<1.0	<1.0
4-Chlorotoluene														<1.0	<1.0	<1.0
Dibromochloromethane														<1.0	<1.0	<1.0
1,2-Dibromo-3-chloropropane														<2.0	<2.0	<2.0
1,2-Dibromoethane (EDB)														<1.0	<1.0	<1.0
Dibromomethane														<1.0	<1.0	<1.0
1,2-Dichlorobenzene	600		<250	<25	<5	1.4	<5	<5	3.8	<2	2.9	1.1		0.2 J	0.21 J	0.37 J
1,3-Dichlorobenzene			NA									<1		<1.0	<1.0	<1.0
1,4-Dichlorobenzene	75		<250	<25	<5	<1	<5	<5	<1	<2	<1	<1		<1.0	<1.0	<1.0
Dichlorodifluoromethane														<2.0	<2.0	<2.0
1,1-Dichloroethane			<250	<25	<5	<1	<5	<5	2.4	<2	2.6	2.8		0.78 J	0.53 J	0.89 J
1,2-Dichloroethane	5	5	NA								7.8	<1		<1.0	<1.0	<1.0
1,1-Dichloroethene	7	7	<250	<25	<5	<1	<5	<5	<1	<2	<1	<1		<1.0	<1.0	<1.0
cis-1,2-Dichloroethene	70	70	<250	<25	5.2	1.8	<5	6.8	7	1.8 J	6.2	6.1		1.8	1.2	3.2
trans-1,2-Dichloroethene	100	100	<250	<25	<5	<1	<5	<5	<1	<2	<1	<1		<0.50	<0.50	<0.50
1,2-Dichloroethene (total)														1.8	1.2	3.2
1,2-Dichloropropane	5	5	NA									<1		<1.0	<1.0	<1.0
1,3-Dichloropropane														<1.0	<1.0	<1.0
2,2-Dichloropropane														<5.0	<5.0	<5.0
1,1-Dichloropropene														<1.0	<1.0	<1.0
cis-1,3-Dichloropropene														<1.0	<1.0	<1.0
trans-1,3-Dichloropropene			NA									<1		<1.0	<1.0	<1.0
Ethylbenzene			150 J	62	14	5.5	<5	19	26	15	96	80	25	12	8	29
Hexachlorobutadiene			NA									<1		<1.0	<1.0	<1.0
2-Hexanone													<10	<5.0	<5.0	<5.0
Isopropylbenzene (Cumene)			<250	<25	<5	<1	<5	<5	3.1	<2	56	20	5.2	1.8	1.2	2.3
p-Isopropyltoluene			NA	<25	<5	<1	<5	<5	<1	<2	2	<1	0.41 J	<1.0	<1.0	<1.0
4-Methyl-2-pentanone (MIBK)				<50	<50	<10	<10	<10	<10	<20	<10	<10	<10	<5.0	<5.0	<5.0
Methylene Chloride	5		NA	<100	<5	<1	<5	<5	<1	1.2 J	<1	<1		<5.0	<5.0	0.46 JB
Naphthalene			<500	<50	5	1.8	<5	<5	6.3	<2	24	5.4	2.4	2.5	1.4	1.5
n-Propylbenzene			180 J	<25	<5	<1	<5	<5	4.5	2.3	110	52	11	3.3	2.9	4.1
Styrene			<250	<25	<5	<1	<5	<5	<1	<2	8.5	<1	<1	<1.0	<1.0	<1.0
1,1,1,2-Tetrachloroethane														<1.0	<1.0	<1.0
1,1,2,2-Tetrachloroethane														<1.0	<1.0	<1.0
Tetrachloroethene (PCE)	5	5	<250	<25	<5	<1	<5	<5	<1	<2	<1	<1		<1.0	<1.0	<1.0
Toluene			1500	240	87	33	<5	<5	34	17	960	50	23	7.8	5.6	8.7
1,2,3-Trichlorobenzene														<1.0	<1.0	<1.0
1,2,4-Trichlorobenzene														<1.0	<1.0	<1.0
1,1,1-Trichloroethane	200	200	NA	<25	<5	<1	<5	<5	<1	<2	<1	<1		<1.0	<1.0	<1.0
1,1,2-Trichloroethane														<1.0	<1.0	<1.0
Trichloroethene (TCE)	5	5	<250	<25	<5	2	<5	<5	2.4	<2	2.2	<1		<1.0	<1.0	<1.0
Trichlorofluoromethane														<2.0	<2.0	<2.0
1,2,3-Trichloropropane														<1.0	<1.0	<1.0
1,2,4-Trimethylbenzene			900	<25	8.1	5.6	<5	<5	23	15	610	370	65	19	14	22
1,3,5-Trimethylbenzene			200 J	<25	<5	4	<5	<5	6.9	3.2	150	53	9.7	3.3	4.3	4.6
Vinyl Chloride	2	2	<250	<25	<5	<1	<5	<5	2	<2	2.2	<1		<1.0	<1.0	1.5
m&p-Xylene														44	33	55
o-Xylene														11	8.7	26
Xylenes (total)			2080	273	85	76	<5	39	111	77	1420	1030	165	55	41	80
Total VOCs			3170	660	119	226	10	33	273	150	2538	1222	290	204	157	340
Total Chlorinated VOCs			<250	<100	5	5	<5	7	17	3	26	10	<10	3	2	7.12
Total BTEX			3970	915	186	285	10	65	178	203	2596	1640	333	164	130	297.7

Appendix A: Historical Summary of Volatile Organic Compounds Detected in Groundwater, Brenntag, 139 East Soper Street, St. Louis, Missouri

Well Name Sample Date	CALM (ug/l)	MCLs (ug/l)	MW-12 12/3/03	MW-12 2/12/04
Acetone			<10	<200
Benzene			250	280
Bromobenzene			<1.0	<20
Bromochloromethane			<1.0	<20
Bromodichloromethane	80		<1.0	<20
Bromoform			<1.0	<20
Bromomethane			<2.0	<40
2-Butanone (MEK)			5.3	<100
n-Butylbenzene			<1.0	<20
sec-Butylbenzene			<1.0	<20
tert-Butylbenzene			<1.0	<20
Carbon Tetrachloride			<1.0	<20
Chlorobenzene	100	100	<1.0	<20
Chloroethane			<2.0	<40
Chloroform	80		<1.0	<20
Chloromethane			<2.0	<40
2-Chlorotoluene			<1.0	<20
4-Chlorotoluene			<1.0	<20
Dibromochloromethane			<1.0	<20
1,2-Dibromo-3-chloropropane			<2.0	<40
1,2-Dibromoethane (EDB)			<1.0	<20
Dibromomethane			<1.0	<20
1,2-Dichlorobenzene	600		0.46 J	<20
1,3-Dichlorobenzene			<1.0	<20
1,4-Dichlorobenzene	75		<1.0	<20
Dichlorodifluoromethane			<2.0	<40
1,1-Dichloroethane			1.2	<20
1,2-Dichloroethene	5	5	<1.0	<20
1,1-Dichloroethene	7	7	<1.0	<20
cis-1,2-Dichloroethene	70	70	3.7	6.6 J
trans-1,2-Dichloroethene	100	100	<0.50	<10
1,2-Dichloroethene (total)			3.7	6.6 J
1,2-Dichloropropane	5	5	<1.0	<20
1,3-Dichloropropane			<1.0	<20
2,2-Dichloropropane			<5.0	<100
1,1-Dichloropropene			<1.0	<20
cis-1,3-Dichloropropene			<1.0	<20
trans-1,3-Dichloropropene			<1.0	<20
Ethylbenzene			47	49
Hexachlorobutadiene			<1.0	<20
2-Hexanone			<5.0	<100
Isopropylbenzene (Cumene)			2.9	<20
p-Isopropyltoluene			<1.0	<20
4-Methyl-2-pentanone (MIBK)			<5.0	<100
Methylene Chloride	5		<5.0	<100
Naphthalene			1.8	<20
n-Propylbenzene			4.2	<20
Styrene			<1.0	<20
1,1,1,2-Tetrachloroethane			<1.0	<20
1,1,2,2-Tetrachloroethane			<1.0	<20
Tetrachloroethene (PCE)	5	5	<1.0	<20
Toluene			49	11 J
1,2,3-Trichlorobenzene			<1.0	<20
1,2,4-Trichlorobenzene			<1.0	<20
1,1,1-Trichloroethane	200	200	<1.0	<20
1,1,2-Trichloroethane			<1.0	<20
Trichloroethene (TCE)	5	5	<1.0	<20
Trichlorofluoromethane			<2.0	<40
1,2,3-Trichloropropane			<1.0	<20
1,2,4-Trimethylbenzene			23	18 J
1,3,5-Trimethylbenzene			6.1	5.3 J
Vinyl Chloride	2	2	<1.0	<20
m&p-Xylene			120	83
o-Xylene			43	49
Xylenes (total)			160	130
Total VOCs			558	502
Total Chlorinated VOCs			5.36	7
Total BTEX			506	472

Appendix A: Historical Summary of Volatile Organic Compounds Detected in Groundwater, Brenntag, 139 East Soper Street, St. Louis, Missouri

Well Name Sample Date	CALM (ug/l)	MCLs (ug/l)	MW-13 12/3/99	MW-13 4/17/00	MW-13 9/1/00	MW-13 12/27/00	MW-13 3/1/01	MW-13 5/21/01	MW-13 8/20/01	MW-13 12/4/01	MW-13 2/19/02	MW-13 5/29/02	MW-13 8/15/02	MW-13 10/28/02	MW-13 2/4/03
Acetone				<20	7.3 J	<100	<20	<20	260 B	<50	150	<10	43	280	410
Benzene			<50	<5	<10	<10	10	<5	16	<5	10	<1	15	16	20
Bromobenzene															<2.0
Bromochloromethane															<2.0
Bromodichloromethane	80		NA										<2		<2.0
Bromoform															<2.0
Bromomethane															<4.0
2-Butanone (MEK)				5.3	<10	<100	<20	<10	<100	<50	<50	<10	6.7 J	20	97
n-Butylbenzene			<50										<2	1.2	0.55 J
sec-Butylbenzene			NA										<2	0.87 J	1.1 J
tert-Butylbenzene			NA	<5	<10	<10	<2	<5	<50	<5	<5	<1	<2	<1	<2.0
Carbon Tetrachloride															<2.0
Chlorobenzene	100	100	<50	<5	<10	<10	<2	<5	<50	<5	<5	<1	2.1		2.6
Chloroethane			NA	<5	<10	<10	<2	<5	<50	<5	<5	<1	<2		<4.0
Chloroform	80		NA	<5	<10	<10	<2	<5	10 J	<5	<5	<1	<2		<2.0
Chloromethane			NA	<10	<20	<10	<2	<5	<50	<5	<5	<1	<2		<4.0
2-Chlorotoluene															<2.0
4-Chlorotoluene															<2.0
Dibromochloromethane															<2.0
1,2-Dibromo-3-chloropropane															<4.0
1,2-Dibromoethane (EDB)															<2.0
Dibromomethane															<2.0
1,2-Dichlorobenzene	600		<50	2.8 J	<10	<10	<2	<5	<50	<5	3.1 J	<1	3.7		5.3
1,3-Dichlorobenzene			NA										<2		<2.0
1,4-Dichlorobenzene	75		<50	<5	<10	<10	<2	<5	<50	<5	<5	<1	<2		0.63 J
Dichlorodifluoromethane															<4.0
1,1-Dichloroethane			<50	<5	<10	<10	<2	<5	<50	<5	2.8 J	<1	3.5		8.4
1,2-Dichloroethane	5	5	NA										<2		<2.0
1,1-Dichloroethene	7	7	<50	<5	<10	<10	<2	<5	<50	<5	<5	<1	<2		<2.0
cis-1,2-Dichloroethene	70	70	<50	<5	4.3 J	<10	2.9	<5	<50	<5	6.5	<1	7.7		21
trans-1,2-Dichloroethene	100	100	<50	<5	<10	<10	<2	<5	<50	<5	<5	<1	<2		1
1,2-Dichloroethene (total)															22
1,2-Dichloropropane	5	5	NA										<2		<2.0
1,3-Dichloropropane															<2.0
2,2-Dichloropropane															<10
1,1-Dichloropropene															<2.0
cis-1,3-Dichloropropene															<2.0
trans-1,3-Dichloropropene			NA										<2		<2.0
Ethylbenzene			60	3.3 J	6.8 J	26	4.6	<5	50	4.4 J	24	<1	30	35	44
Hexachlorobutadiene			NA									1.4 B	<2		<2.0
2-Hexanone														<10	<10
Isopropylbenzene (Cumene)			<50	<5	<10	<10	<2	<5	<50	<5	<5	<1	1.7 J	2	2.8
p-Isopropyltoluene			NA	<5	5.3 J	<10	<2	<5	<50	<5	<5	<1	<2	<1	1.1 J
4-Methyl-2-pentanone (MIBK)				<10	<10	<100	<20	<10	<100	<50	<50	<10	3.9 J	7.9 J	14
Methylene Chloride	5		NA	<20	15 J	<10	<2	<5	33 JB	<5	3.4 J	<1	<2		<10
Naphthalene			74 J	4 J	7.1 J	12	<2	<5	<50	<5	5.2	1.2 B	7.5	8.4	14
n-Propylbenzene			<50	<5	<10	<10	<2	<5	<50	<5	<5	<1	<2	1.5	2.2
Styrene			<50	<5	<10	<10	<2	<5	<50	<5	<5	<1	<2	<1	<2.0
1,1,1,2-Tetrachloroethane															<2.0
1,1,2,2-Tetrachloroethane															<2.0
Tetrachloroethene (PCE)	5	5	<50	<5	<10	<10	<2	<5	<50	<5	<5	<1	<2		0.85 J
Toluene			620	24	140	320	56	16	500	14	230	2.7	220	300	440
1,2,3-Trichlorobenzene															<2.0
1,2,4-Trichlorobenzene															<2.0
1,1,1-Trichloroethane	200	200	NA	<5	<10	<10	<2	<5	<50	<5	<5	<1	<2		<2.0
1,1,2-Trichloroethane															<2.0
Trichloroethene (TCE)	5	5	<50	<5	4.5 J	<10	<2	<5	<50	16	<5	<1	1.3 J		1.2 J
Trichlorofluoromethane															<4.0
1,2,3-Trichloropropane															<2.0
1,2,4-Trimethylbenzene			<50	5.2	7.9 J	11	<2	<5	<50	<5	8.1	<1	11	12	17
1,3,5-Trimethylbenzene			<50	3 J	<10	<10	<2	<5	<50	<5	2.8 J	<1	4.2	4.1	5.9
Vinyl Chloride	2	2	<50	<5	<10	<10	<2	<5	<50	<5	<5	<1	<2		3.2
m&p-Xylene															150
o-Xylene															76
Xylenes (total)			267	80	86	172	25.4	25.4	280	22.2	144	1.9	165	192	230
Total VOCs			754	48	188	369	74	16	869	34	446	5	361	689	1340
Total Chlorinated VOCs			<50	3	24	<10	3	<5	43	16	16	<1	16	<1	44
Total BTEX			947	107	233	518	96	41	848	41	408	5	430	543	730

Appendix A: Historical Summary of Volatile Organic Compounds Detected in Groundwater,
Brenntag, 139 East Soper Street, St. Louis, Missouri

Well Name Sample Date	CALM (ug/l)	MCLs (ug/l)	MW-13 5/6/03	MW-13 7/29/03	MW-13 12/2/03	MW-13 2/10/04	MW-13 (dup) 7/29/03	MW-13 (dup) 12/2/03	MW-13 (dup) 2/10/04
Acetone			110	<10	170	<10	3 J	180	<10
Benzene			16	3.6	14	1.0	3.5	14	0.93 J
Bromobenzene			<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Bromochloromethane			<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Bromodichloromethane	80		<1.0	<1.0	<1.0	1.3	<1.0	<1.0	1.3
Bromoform			<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Bromomethane			<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
2-Butanone (MEK)			<5.0	<5.0	28	<5.0	<5.0	25	<5.0
n-Butylbenzene			<1.0	<1.0	<1.0	0.21 J	<1.0	<1.0	<1.0
sec-Butylbenzene			0.8 J	<1.0	0.72 J	<1.0	<1.0	<1.0	<1.0
tert-Butylbenzene			<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Carbon Tetrachloride			<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Chlorobenzene	100	100	2	0.51 J	2.0	0.23 J	0.51 J	2.0	<1.0
Chloroethane			<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Chloroform	80		<1.0	<1.0	<1.0	2.0	<1.0	<1.0	2.6
Chloromethane			<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
2-Chlorotoluene			<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
4-Chlorotoluene			<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Dibromochloromethane			<1.0	<1.0	<1.0	0.84 J	<1.0	<1.0	0.78 J
1,2-Dibromo-3-chloropropane			<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
1,2-Dibromoethane (EDB)			<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Dibromomethane			<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,2-Dichlorobenzene	600		4.4	0.95 J	3.6	0.65 J	1	3.5	0.56 J
1,3-Dichlorobenzene			<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,4-Dichlorobenzene	75		0.36 J	<1.0	0.66 J	<1.0	<1.0	0.55 J	<1.0
Dichlorodifluoromethane			<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
1,1-Dichloroethane			6.2	3.5	16	3.2	3.5	16	2.8
1,2-Dichloroethane	5	5	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,1-Dichloroethene	7	7	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
cis-1,2-Dichloroethene	70	70	17	7.5	49	8.2	7.6	49	7.4
trans-1,2-Dichloroethene	100	100	0.68	0.31 J	1.0	0.25 J	0.32 J	1.2	<0.50
1,2-Dichloroethene (total)			17	7.8	50	8.5	7.9	51	7.4
1,2-Dichloropropane	5	5	<1.0	<1.0	0.32 J	<1.0	<1.0	0.36 J	<1.0
1,3-Dichloropropane			<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
2,2-Dichloropropane			<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
1,1-Dichloropropene			<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
cis-1,3-Dichloropropene			<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
trans-1,3-Dichloropropene			<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Ethylbenzene			36	5.1	30	2.7	5.6	30	2.6
Hexachlorobutadiene			<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
2-Hexanone			<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
Isopropylbenzene (Cumene)			2.2	0.36 J	1.8	0.26 J	0.37 J	1.7	0.22 J
p-Isopropyltoluene			2.5	<1.0	<1.0	0.56 J	<1.0	<1.0	0.49 J
4-Methyl-2-pentanone (MIBK)			13	2.3 JB	<5.0	1.5 J	2.5 J	<5.0	1.2 J
Methylene Chloride	5		<5.0	0.32 JB	20	<5.0	0.33 JB	23	0.58 J
Naphthalene			14	1.4	5.6	1.3	1.7	5.9	0.96 J
n-Propylbenzene			1.7	<1.0	1.1	<1.0	0.21 J	1.1	<1.0
Styrene			<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,1,1,2-Tetrachloroethane			<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,1,2,2-Tetrachloroethane			<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Tetrachloroethene (PCE)	5	5	0.45 J	0.27 J	0.52 J	<1.0	0.27 J	0.52 J	<1.0
Toluene			290	24	240	8.9	23	240	7.9
1,2,3-Trichlorobenzene			<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,2,4-Trichlorobenzene			<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,1,1-Trichloroethane	200	200	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,1,2-Trichloroethane			<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Trichloroethene (TCE)	5	5	0.8 J	0.78 J	1.7	0.69 J	0.79 J	1.8	0.64 J
Trichlorofluoromethane			<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
1,2,3-Trichloropropane			<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,2,4-Trimethylbenzene			14	2.3	10	1.6	2.2	9.5	1.5
1,3,5-Trimethylbenzene			5.9	1.2	5.2	1.1	1.1	4.7	1
Vinyl Chloride	2	2	<1.0	1.2	4.3	0.94 J	1.2	4.3	0.83 J
m&p-Xylene			130	22	110	11	22	110	10
o-Xylene			63	11	52	5.5	11	52	4.9
Xylenes (total)			200	33	160	16	33	160	15
Total VOCs			731	89	768	55	92	778	40
Total Chlorinated VOCs			32	15	79	20	15	79	18
Total BTEX			535	65.7	444	29	65.1	444	26

Appendix A: Historical Summary of Volatile Organic Compounds Detected in Groundwater, Brenntag, 139 East Soper Street, St. Louis, Missouri

Well Name Sample Date	CALM (ug/l)	MCLs (ug/l)	Equip. Blank 12/27/00	Equip. Blank 03/01/001	Equip. Blank 5/22/01	Equip. Blank 8/21/01	Equip. Blank 12/5/01	Equip Blank 2/20/02	Equip. Blank 5/30/02	Equip. Blank 8/15/02	Equip. Blank 10/28/02
Acetone			<10	59	<20	<20	<5	<10	11	160	<10
Benzene			<1	<1	<5	<5	<1	<1	<1	<1	<1
Bromobenzene											
Bromochloromethane											
Bromodichloromethane	80									3	
Bromoform											
Bromomethane											
2-Butanone (MEK)			<10	<10	<10	<10	<5	<10	<10	7 J	<10
n-Butylbenzene										<1	<1
sec-Butylbenzene										<1	<1
tert-Butylbenzene			<1	<1	<5	<5	<1	<1	<1	<1	<1
Carbon Tetrachloride											
Chlorobenzene	100	100	<1	2.2	<5	<5	<1	<1	<1	<1	
Chloroethane			<1	<1	<5	<5	<1	<1	<1	<1	
Chloroform	80		<1	<1	<5	<5	<1	<1	<1	14	
Chloromethane			<1	<1	<5	<5	<1	<1	<1	<1	
2-Chlorotoluene											
4-Chlorotoluene											
Dibromochloromethane											
1,2-Dibromo-3-chloropropane											
1,2-Dibromoethane (EDB)											
Dibromomethane											
1,2-Dichlorobenzene	600		<1	<1	<5	<5	<1	<1	<1	<1	
1,3-Dichlorobenzene			<1	<1	<5	<5	<1	<1	<1	<1	
1,4-Dichlorobenzene	75		<1	<1	<5	<5	<1	<1	<1	<1	
Dichlorodifluoromethane											
1,1-Dichloroethane			<1	<1	<5	<5	<1	<1	<1	<1	
1,2-Dichloroethane	5	5								<1	
1,1-Dichloroethene	7	7	<1	<1	<5	<5	<1	<1	<1	<1	
cis-1,2-Dichloroethene	70	70	<1	<1	<5	<5	<1	<1	<1	<1	
trans-1,2-Dichloroethene	100	100	<1	<1	<5	<5	<1	<1	<1	<1	
1,2-Dichloroethene (total)											
1,2-Dichloropropane	5	5								3.4	
1,3-Dichloropropane											
2,2-Dichloropropane											
1,1-Dichloropropene											
cis-1,3-Dichloropropene											
trans-1,3-Dichloropropene										<1	
Ethylbenzene			<1	<1	<5	<5	<1	<1	<1	<1	<1
Hexachlorobutadiene										<1	
2-Hexanone											<10
Isopropylbenzene (Cumene)			<1	<1	<5	<5	<1	<1	<1	<1	<1
p-Isopropyltoluene			<1	<1	<5	<5	<1	<1	<1	<1	<1
4-Methyl-2-pentanone (MIBK)			<10	<10	<10	<10	<5	<10	<10	<10	<10
Methylene Chloride	5		<1	<1	<5	<5	<1	<1	<1	<1	
Naphthalene			<1	<5	<5	<1	<1	<1	<1	<1	
n-Propylbenzene			<1	<5	<5	<1	<1	<1	<1	<1	
Styrene			<1	<5	<5	<1	<1	<1	<1	<1	
1,1,1,2-Tetrachloroethane											
1,1,2,2-Tetrachloroethane											
Tetrachloroethene (PCE)	5	5	<1	<1	<5	<5	<1	<1	<1	<1	
Toluene			1.9	<1	<5	<5	<1	<1	<1	<1	<1
1,2,3-Trichlorobenzene											
1,2,4-Trichlorobenzene											
1,1,1-Trichloroethane	200	200	<1	<1	<5	<5	<1	<1	<1	<1	
1,1,2-Trichloroethane											
Trichloroethene (TCE)	5	5	<1	<1	<5	<5	<1	<1	<1	<1	
Trichlorofluoromethane											
1,2,3-Trichloropropane											
1,2,4-Trimethylbenzene			<1	<1	<5	<5	<1	<1	<1	<1	<1
1,3,5-Trimethylbenzene			<1	<1	<5	<5	<1	<1	<1	<1	<1
Vinyl Chloride	2	2	<1	<1	<5	<5	<1	<1	<1	<1	
m&p-Xylene											
o-Xylene											
Xylenes (total)			<1	<1	<5	<5	<3	<1 3	<1.3	<1 3	<1 3
Total VOCs			2	61	<20	<20	<5	<10	11	187	<10
Total Chlorinated VOCs			<1	<1	<5	<10	<1	<1	<1	20	<1
Total BTEX			2	<1	<5	<5	<3	<1.3	<1.3	<1.3	<1 3

Appendix A: Historical Summary of Volatile Organic Compounds Detected in Groundwater,
Brenntag, 139 East Soper Street, St. Louis, Missouri

Well Name	CALM	MCLs	FBGW020403	FBGW020603	FBGW050603	FBGW050703	FBGW073103	FBGW120203	FBGW021004
Sample Date	(ug/l)	(ug/l)	2/4/03	2/6/03	5/6/03	5/7/03	7/31/03	12/2/03	2/10/04
Acetone			3 JB	<10	<10	<10	2.8 J	<10	<10
Benzene			<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Bromobenzene			<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Bromochloromethane			<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Bromodichloromethane	80		2 B	1.9 B	<1.0	<1.0	<1.0	<1.0	<1.0
Bromoform			<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Bromomethane			<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
2-Butanone (MEK)			<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
n-Butylbenzene			<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
sec-Butylbenzene			<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
tert-Butylbenzene			<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Carbon Tetrachloride			<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Chlorobenzene	100	100	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Chloroethane			<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Chloroform	80		1.8 B	1.8 B	<1.0	<1.0	<1.0	<1.0	<1.0
Chloromethane			<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
2-Chlorotoluene			<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
4-Chlorotoluene			<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Dibromochloromethane			0.9 JB	0.89 JB	<1.0	<1.0	<1.0	<1.0	<1.0
1,2-Dibromo-3-chloropropane			<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
1,2-Dibromoethane (EDB)			<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Dibromomethane			<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,2-Dichlorobenzene	600		<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,3-Dichlorobenzene			<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,4-Dichlorobenzene	75		<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Dichlorodifluoromethane			<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
1,1-Dichloroethane			<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,2-Dichloroethane	5	5	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,1-Dichloroethene	7	7	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
cis-1,2-Dichloroethene	70	70	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
trans-1,2-Dichloroethene	100	100	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1,2-Dichloroethene (total)			<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,2-Dichloropropane	5	5	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,3-Dichloropropane			<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
2,2-Dichloropropane			<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
1,1-Dichloropropene			<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
cis-1,3-Dichloropropene			<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
trans-1,3-Dichloropropene			<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Ethylbenzene			<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Hexachlorobutadiene			<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
2-Hexanone			<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
Isopropylbenzene (Cumene)			<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
p-Isopropyltoluene			<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
4-Methyl-2-pentanone (MIBK)			<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
Methylene Chloride	5		<5.0	<5.0	<5.0	<5.0	0.4 JB	<5.0	<5.0
Naphthalene			<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
n-Propylbenzene			<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Styrene			<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,1,1,2-Tetrachloroethane			<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,1,2,2-Tetrachloroethane			<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Tetrachloroethene (PCE)	5	5	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Toluene			<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	0.26 J
1,2,3-Trichlorobenzene			<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,2,4-Trichlorobenzene			<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,1,1-Trichloroethane	200	200	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,1,2-Trichloroethane			<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Trichloroethene (TCE)	5	5	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Trichlorofluoromethane			<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
1,2,3-Trichloropropane			<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,2,4-Trimethylbenzene			<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,3,5-Trimethylbenzene			<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Vinyl Chloride	2	2	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
m&p-Xylene			<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
o-Xylene			<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Xylenes (total)			<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Total VOCs			8	5	<10	<10	3.20	<1.0	0.3
Total Chlorinated VOCs			3	3	<5.0	<5.0	<2.0	<2.0	<5.0
Total BTEX			<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	0.3

Appendix A: Historical Summary of Volatile Organic Compounds Detected in Groundwater, Brenntag, 139 East Soper Street, St. Louis, Missouri

Well Name Sample Date	CALM (ug/l)	MCLs (ug/l)	TB020603 2/6/03	TB050603 5/6/03	TB080103 8/1/03	TB120403 12/4/03	TB021004 2/10/04
Acetone			<10	<10	<10	<10	<10
Benzene			<1.0	<1.0	<1.0	<1.0	<1.0
Bromobenzene			<1.0	<1.0	<1.0	<1.0	<1.0
Bromochloromethane			<1.0	<1.0	<1.0	<1.0	<1.0
Bromodichloromethane	80		<1.0	<1.0	<1.0	<1.0	<1.0
Bromoform			<1.0	<1.0	<1.0	<1.0	<1.0
Bromomethane			<2.0	<2.0	<2.0	<2.0	<2.0
2-Butanone (MEK)			<5.0	<5.0	<5.0	<5.0	<5.0
n-Butylbenzene			<1.0	<1.0	<1.0	<1.0	<1.0
sec-Butylbenzene			<1.0	<1.0	<1.0	<1.0	<1.0
tert-Butylbenzene			<1.0	<1.0	<1.0	<1.0	<1.0
Carbon Tetrachloride			<1.0	<1.0	<1.0	<1.0	<1.0
Chlorobenzene	100	100	<1.0	<1.0	<1.0	<1.0	<1.0
Chloroethane			<2.0	<2.0	<2.0	<2.0	<2.0
Chloroform	80		<1.0	<1.0	<1.0	<1.0	<1.0
Chloromethane			<2.0	<2.0	<2.0	<2.0	<2.0
2-Chlorotoluene			<1.0	<1.0	<1.0	<1.0	<1.0
4-Chlorotoluene			<1.0	<1.0	<1.0	<1.0	<1.0
Dibromochloromethane			<1.0	<1.0	<1.0	<1.0	<1.0
1,2-Dibromo-3-chloropropane			<2.0	<2.0	<2.0	<2.0	<2.0
1,2-Dibromoethane (EDB)			<1.0	<1.0	<1.0	<1.0	<1.0
Dibromomethane			<1.0	<1.0	<1.0	<1.0	<1.0
1,2-Dichlorobenzene	600		<1.0	<1.0	<1.0	<1.0	<1.0
1,3-Dichlorobenzene			<1.0	<1.0	<1.0	<1.0	<1.0
1,4-Dichlorobenzene	75		<1.0	<1.0	<1.0	<1.0	<1.0
Dichlorodifluoromethane			<2.0	<2.0	<2.0	<2.0	<2.0
1,1-Dichloroethane			<1.0	<1.0	<1.0	<1.0	<1.0
1,2-Dichloroethane	5	5	<1.0	<1.0	<1.0	<1.0	<1.0
1,1-Dichloroethene	7	7	<1.0	<1.0	0.27 J	0.27 J	<1.0
cis-1,2-Dichloroethene	70	70	<1.0	<1.0	<1.0	<1.0	<1.0
trans-1,2-Dichloroethene	100	100	<0.50	<0.50	<0.50	<0.50	<0.50
1,2-Dichloroethene (total)			<1.0	<1.0	<1.0	<1.0	<1.0
1,2-Dichloropropane	5	5	<1.0	<1.0	<1.0	<1.0	<1.0
1,3-Dichloropropane			<1.0	<1.0	<1.0	<1.0	<1.0
2,2-Dichloropropane			<5.0	<5.0	<5.0	<5.0	<5.0
1,1-Dichloropropene			<1.0	<1.0	<1.0	<1.0	<1.0
cis-1,3-Dichloropropene			<1.0	<1.0	<1.0	<1.0	<1.0
trans-1,3-Dichloropropene			<1.0	<1.0	<1.0	<1.0	<1.0
Ethylbenzene			<1.0	<1.0	<1.0	<1.0	<1.0
Hexachlorobutadiene			<1.0	<1.0	<1.0	<1.0	<1.0
2-Hexanone			<5.0	<5.0	<5.0	<5.0	<5.0
Isopropylbenzene (Cumene)			<1.0	<1.0	<1.0	<1.0	<1.0
p-Isopropyltoluene			<1.0	<1.0	<1.0	<1.0	<1.0
4-Methyl-2-pentanone (MIBK)			<5.0	<5.0	<5.0	<5.0	<5.0
Methylene Chloride	5		<5.0	<5.0	0.34 JB	0.34 JB	<5.0
Naphthalene			0.68 J	<1.0	<1.0	<1.0	<1.0
n-Propylbenzene			<1.0	<1.0	<1.0	<1.0	<1.0
Styrene			<1.0	<1.0	<1.0	<1.0	<1.0
1,1,1,2-Tetrachloroethane			<1.0	<1.0	<1.0	<1.0	<1.0
1,1,2,2-Tetrachloroethane			<1.0	<1.0	<1.0	<1.0	<1.0
Tetrachloroethene (PCE)	5	5	<1.0	<1.0	<1.0	<1.0	<1.0
Toluene			0.23 J	<1.0	<1.0	<1.0	<1.0
1,2,3-Trichlorobenzene			<1.0	<1.0	<1.0	<1.0	<1.0
1,2,4-Trichlorobenzene			<1.0	<1.0	<1.0	<1.0	<1.0
1,1,1-Trichloroethane	200	200	<1.0	<1.0	<1.0	<1.0	<1.0
1,1,2-Trichloroethane			<1.0	<1.0	<1.0	<1.0	<1.0
Trichloroethene (TCE)	5	5	<1.0	<1.0	<1.0	<1.0	<1.0
Trichlorofluoromethane			<2.0	<2.0	<2.0	<2.0	<2.0
1,2,3-Trichloropropane			<1.0	<1.0	<1.0	<1.0	<1.0
1,2,4-Trimethylbenzene			<1.0	<1.0	<1.0	<1.0	<1.0
1,3,5-Trimethylbenzene			<1.0	<1.0	<1.0	<1.0	<1.0
Vinyl Chloride	2	2	<1.0	<1.0	<1.0	<1.0	<1.0
m&p-Xylene			<2.0	<2.0	<2.0	<2.0	<2.0
o-Xylene			<1.0	<1.0	<1.0	<1.0	<1.0
Xylenes (total)			<2.0	<2.0	<2.0	<2.0	<2.0
Total VOCs			1	<10	0.61	0.61	<10
Total Chlorinated VOCs			<5.0	<5.0	<2.0	<2.0	<5.0
Total BTEX			0.23	<2.0	<2.0	<2.0	<2.0

Appendix A: Historical Summary of Volatile Organic Compounds Detected in Groundwater, Brenntag, 139 East Soper Street, St. Louis, Missouri

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Table Footnotes:

Analytical data prior to May 2001 collected by CJE, Inc.

ug/L	All table values shown in micrograms per liter, equivalent to parts per billion.
<	Not detected at or above laboratory practical quantitative limit, as shown.
ND	Not detected at or above laboratory reporting limits.
MCLs	Maximum Contaminant Level from National Primary Drinking Water Standards, as determined by the U. S. Environmental Protection Agency dated July 2002.
CALM	Cleanup Levels for Missouri as determined by the Missouri Department of Natural Resources dated September 1, 2001.
NA	Not Analyzed.
Bold	Bold values indicate detected constituent concentrations.

Data Flags:

B	Analyte is found in an associated blank as well as in the sample.
J	Detected but below the practical reporting limit; therefore, result is an estimated concentration.
E	Compound concentration exceeds the calibration range of the instrument.
H	Indicates analysis was not performed within recommended holding times. Results may be biased low.

G:\Aproject\BRENNTAG\OK12532004\TABLES\1Q04\[1Q04 Wells 11-TB.XLS]NEW Table Footnotes

APPENDIX B

LABORATORY REPORT

Lot # D4B130209

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ANALYTICAL REPORT

BRENNTAG, ST. LOUIS, MISSOURI PROJECT

Lot #: D4B130209

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OK001253.2004

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March 1, 2004

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CASE NARRATIVE
D4B130209

The following report contains the analytical results for 17 water samples plus a Trip Blank and MS/MSD submitted to STL Denver by Arcadis from the Brenntag Site St. Louis. The samples were received February 13, 2004, according to documented sample acceptance procedures.

Dilution factors and footnotes have been provided on each data sheet to assist in the interpretation of the results. In some cases, due to interference or analytes present above the linear calibration curve, samples must be analyzed at a dilution. For samples analyzed at a dilution, the reporting limits are adjusted relative to the dilution required. Dilutions made for reasons other than the presence of target compound(s) are addressed in the Supplemental QC Information section.

STL Denver utilizes USEPA approved methods in all analytical work. The sample presented in this report was analyzed for the parameter listed on the methods summary page in accordance with the method indicated. A summary of QC data for this analysis is included near the end of the report.

The results included in this report have been reviewed for compliance with the laboratory QA/QC plan and meet all requirements of NELAC. All data have been found to be compliant with laboratory protocol, with the exception of any items noted below.

Supplemental QC Information

Sample Arrival and Receipt

The samples presented in this report were received at the laboratory in good condition and at a temperature of 2.7°C. Sample volume was sent for a MS/MSD for sample MW-5 but was not listed on the chain of custody. Also three VOA vials were sent for sample FBGW0210 but this sample was not listed on the chain of custody. The Trip Blank had a collection date of 01/16/04. The client was notified and the samples listed above that were not listed on the chain of custody were logged for Method 8260B. The Trip Blank collection date was changed to 02/10/04 and the identification was changed to TB021004.

Samples MW-2 and MW-8 were received with insufficient preservation. The method requires that samples be preserved with HCl to a pH <2. No other anomalies were observed.

GC/MS Volatiles- 8260B

Samples MW-1, MW-2, MW-5, MW-8, MW-10, MW-12, MW-15 and MW-16 were analyzed at a dilution to bring target compounds within the calibration range of the instrument. Reporting limits were raised accordingly.

Low levels of Methylene chloride, a common laboratory contaminant was present in the method blanks associated with QC batch 4054377. Because the concentration in the method blank is not present at levels greater than the reporting limits, corrective action is deemed unnecessary.

The MS/MSD associated with prep batch 4056525 and performed on a sample from another client and/or lot demonstrated recoveries outside control limits for Benzene and 1,1-Dichloroethene. Method precision and accuracy have been verified by the acceptable LCS/LCSD analysis data; therefore, corrective action is deemed unnecessary. No other anomalies were observed.

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EXECUTIVE SUMMARY - Detection Highlights

D4B130209

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
MW-1 02/11/04 09:30 001				
Benzene	6600 J	6700	ug/L	SW846 8260B
Ethylbenzene	3100 J	6700	ug/L	SW846 8260B
Methylene chloride	2500 J,B	33000	ug/L	SW846 8260B
Toluene	220000	6700	ug/L	SW846 8260B
m-Xylene & p-Xylene	13000	13000	ug/L	SW846 8260B
o-Xylene	4800 J	6700	ug/L	SW846 8260B
Xylenes (total)	18000	13000	ug/L	SW846 8260B
MW-2 02/11/04 15:50 002				
Acetone	17000	10000	ug/L	SW846 8260B
Benzene	1000	1000	ug/L	SW846 8260B
1,1-Dichloroethane	2400	1000	ug/L	SW846 8260B
cis-1,2-Dichloroethene	7300	1000	ug/L	SW846 8260B
1,2-Dichloroethene (total)	7300	1000	ug/L	SW846 8260B
Ethylbenzene	1100	1000	ug/L	SW846 8260B
Methylene chloride	550 J,B	5000	ug/L	SW846 8260B
4-Methyl-2-pentanone	1800 J	5000	ug/L	SW846 8260B
Tetrachloroethene	460 J	1000	ug/L	SW846 8260B
Toluene	34000	1000	ug/L	SW846 8260B
Trichloroethene	19000	1000	ug/L	SW846 8260B
1,2,4-Trimethylbenzene	650 J	1000	ug/L	SW846 8260B
1,3,5-Trimethylbenzene	630 J	1000	ug/L	SW846 8260B
Vinyl chloride	7500	1000	ug/L	SW846 8260B
m-Xylene & p-Xylene	4400	2000	ug/L	SW846 8260B
o-Xylene	1800	1000	ug/L	SW846 8260B
Xylenes (total)	6300	2000	ug/L	SW846 8260B
MW-3 02/10/04 17:50 003				
Benzene	1.2	1.0	ug/L	SW846 8260B
1,1-Dichloroethane	1.5	1.0	ug/L	SW846 8260B
Ethylbenzene	1.3	1.0	ug/L	SW846 8260B
Isopropylbenzene	0.54 J	1.0	ug/L	SW846 8260B
Methylene chloride	0.36 J,B	5.0	ug/L	SW846 8260B
n-Propylbenzene	0.85 J	1.0	ug/L	SW846 8260B
Toluene	0.80 J	1.0	ug/L	SW846 8260B
1,1,1-Trichloroethane	0.28 J	1.0	ug/L	SW846 8260B
Trichloroethene	0.25 J	1.0	ug/L	SW846 8260B
1,2,4-Trimethylbenzene	4.1	1.0	ug/L	SW846 8260B
1,3,5-Trimethylbenzene	6.1	1.0	ug/L	SW846 8260B
m-Xylene & p-Xylene	2.0	2.0	ug/L	SW846 8260B

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EXECUTIVE SUMMARY - Detection Highlights

D4B130209

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
MW-3 02/10/04 17:50 003				
o-Xylene	2.2	1.0	ug/L	SW846 8260B
Xylenes (total)	4.2	2.0	ug/L	SW846 8260B
MW-4 02/11/04 10:55 004				
Acetone	44	10	ug/L	SW846 8260B
Benzene	31	1.0	ug/L	SW846 8260B
2-Butanone (MEK)	8.2	5.0	ug/L	SW846 8260B
tert-Butylbenzene	0.26 J	1.0	ug/L	SW846 8260B
Chlorobenzene	0.47 J	1.0	ug/L	SW846 8260B
Chloroethane	6.7	2.0	ug/L	SW846 8260B
1,2-Dichlorobenzene	0.74 J	1.0	ug/L	SW846 8260B
1,1-Dichloroethane	6.6	1.0	ug/L	SW846 8260B
cis-1,2-Dichloroethene	16	1.0	ug/L	SW846 8260B
1,2-Dichloroethene (total)	16	1.0	ug/L	SW846 8260B
Ethylbenzene	13	1.0	ug/L	SW846 8260B
Isopropylbenzene	1.8	1.0	ug/L	SW846 8260B
Methylene chloride	0.52 J,B	5.0	ug/L	SW846 8260B
4-Methyl-2-pentanone	2.1 J	5.0	ug/L	SW846 8260B
n-Propylbenzene	0.53 J	1.0	ug/L	SW846 8260B
Toluene	29	1.0	ug/L	SW846 8260B
1,2,4-Trimethylbenzene	1.8	1.0	ug/L	SW846 8260B
1,3,5-Trimethylbenzene	0.59 J	1.0	ug/L	SW846 8260B
Vinyl chloride	4.2	1.0	ug/L	SW846 8260B
m-Xylene & p-Xylene	13	2.0	ug/L	SW846 8260B
o-Xylene	4.8	1.0	ug/L	SW846 8260B
Xylenes (total)	18	2.0	ug/L	SW846 8260B
MW-5 02/11/04 12:40 005				
1,1-Dichloroethane	12 J	20	ug/L	SW846 8260B
cis-1,2-Dichloroethene	250	20	ug/L	SW846 8260B
trans-1,2-Dichloroethene	24	10	ug/L	SW846 8260B
1,2-Dichloroethene (total)	270	20	ug/L	SW846 8260B
Methylene chloride	7.1 J,B	100	ug/L	SW846 8260B
Vinyl chloride	640	20	ug/L	SW846 8260B

(Continued on next page)

EXECUTIVE SUMMARY - Detection Highlights

D4B130209

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
MW-6 02/10/04 11:45 006				
Methylene chloride	0.32 J,B	5.0	ug/L	SW846 8260B
Toluene	0.50 J	1.0	ug/L	SW846 8260B
MW-7 02/10/04 10:00 007				
Methylene chloride	0.27 J,B	5.0	ug/L	SW846 8260B
Toluene	0.54 J	1.0	ug/L	SW846 8260B
MW-8 02/12/04 12:10 008				
Benzene	38 J	100	ug/L	SW846 8260B
1,4-Dichlorobenzene	2200	100	ug/L	SW846 8260B
1,1-Dichloroethane	65 J	100	ug/L	SW846 8260B
cis-1,2-Dichloroethene	410	100	ug/L	SW846 8260B
1,2-Dichloroethene (total)	410	100	ug/L	SW846 8260B
Methylene chloride	34 J,B	500	ug/L	SW846 8260B
Toluene	34 J	100	ug/L	SW846 8260B
Vinyl chloride	780	100	ug/L	SW846 8260B
MW-9 02/12/04 14:20 009				
Benzene	1.2	1.0	ug/L	SW846 8260B
1,2-Dichlorobenzene	0.29 J	1.0	ug/L	SW846 8260B
1,4-Dichlorobenzene	10	1.0	ug/L	SW846 8260B
1,1-Dichloroethane	10	1.0	ug/L	SW846 8260B
cis-1,2-Dichloroethene	21	1.0	ug/L	SW846 8260B
trans-1,2-Dichloroethene	0.51	0.50	ug/L	SW846 8260B
1,2-Dichloroethene (total)	21	1.0	ug/L	SW846 8260B
Ethylbenzene	0.38 J	1.0	ug/L	SW846 8260B
Methylene chloride	1.5 J,B	5.0	ug/L	SW846 8260B
Toluene	0.31 J	1.0	ug/L	SW846 8260B
Trichloroethene	5.5	1.0	ug/L	SW846 8260B
Vinyl chloride	15	1.0	ug/L	SW846 8260B
m-Xylene & p-Xylene	0.42 J	2.0	ug/L	SW846 8260B
Xylenes (total)	0.42 J	2.0	ug/L	SW846 8260B
MW-10 02/10/04 13:45 010				
Acetone	5000	500	ug/L	SW846 8260B
Benzene	71	50	ug/L	SW846 8260B
2-Butanone (MEK)	650	250	ug/L	SW846 8260B

(Continued on next page)

EXECUTIVE SUMMARY - Detection Highlights

D4B130209

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
MW-10 02/10/04 13:45 010				
Chlorobenzene	23 J	50	ug/L	SW846 8260B
1,2-Dichlorobenzene	18 J	50	ug/L	SW846 8260B
1,1-Dichloroethane	210	50	ug/L	SW846 8260B
cis-1,2-Dichloroethene	740	50	ug/L	SW846 8260B
1,2-Dichloroethene (total)	740	50	ug/L	SW846 8260B
Ethylbenzene	170	50	ug/L	SW846 8260B
Isopropylbenzene	12 J	50	ug/L	SW846 8260B
Methylene chloride	24 J,B	250	ug/L	SW846 8260B
4-Methyl-2-pentanone	160 J	250	ug/L	SW846 8260B
Naphthalene	39 J	50	ug/L	SW846 8260B
n-Propylbenzene	12 J	50	ug/L	SW846 8260B
Toluene	700	50	ug/L	SW846 8260B
Trichloroethene	24 J	50	ug/L	SW846 8260B
1,2,4-Trimethylbenzene	75	50	ug/L	SW846 8260B
1,3,5-Trimethylbenzene	35 J	50	ug/L	SW846 8260B
Vinyl chloride	69	50	ug/L	SW846 8260B
m-Xylene & p-Xylene	540	100	ug/L	SW846 8260B
o-Xylene	250	50	ug/L	SW846 8260B
Xylenes (total)	790	100	ug/L	SW846 8260B
MW-11 02/12/04 09:45 011				
Benzene	0.23 J	1.0	ug/L	SW846 8260B
Chloroform	0.24 J	1.0	ug/L	SW846 8260B
1,1-Dichloroethane	15	1.0	ug/L	SW846 8260B
cis-1,2-Dichloroethene	32	1.0	ug/L	SW846 8260B
trans-1,2-Dichloroethene	0.32 J	0.50	ug/L	SW846 8260B
1,2-Dichloroethene (total)	32	1.0	ug/L	SW846 8260B
Methylene chloride	0.61 J,B	5.0	ug/L	SW846 8260B
Tetrachloroethene	0.39 J	1.0	ug/L	SW846 8260B
Trichloroethene	1.7	1.0	ug/L	SW846 8260B
Vinyl chloride	0.50 J	1.0	ug/L	SW846 8260B
MW-12 02/12/04 10:50 012				
Benzene	280	20	ug/L	SW846 8260B
cis-1,2-Dichloroethene	6.6 J	20	ug/L	SW846 8260B
1,2-Dichloroethene (total)	6.6 J	20	ug/L	SW846 8260B
Ethylbenzene	49	20	ug/L	SW846 8260B
Methylene chloride	12 J,B	100	ug/L	SW846 8260B

(Continued on next page)

EXECUTIVE SUMMARY - Detection Highlights

D4B130209

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
MW-12 02/12/04 10:50 012				
Toluene	11 J	20	ug/L	SW846 8260B
1,2,4-Trimethylbenzene	18 J	20	ug/L	SW846 8260B
1,3,5-Trimethylbenzene	5.3 J	20	ug/L	SW846 8260B
m-Xylene & p-Xylene	83	40	ug/L	SW846 8260B
o-Xylene	49	20	ug/L	SW846 8260B
Xylenes (total)	130	40	ug/L	SW846 8260B
MW-13 02/10/04 16:00 013				
Bromodichloromethane	1.3	1.0	ug/L	SW846 8260B
Benzene	1.0	1.0	ug/L	SW846 8260B
n-Butylbenzene	0.21 J	1.0	ug/L	SW846 8260B
Chlorobenzene	0.23 J	1.0	ug/L	SW846 8260B
Dibromochloromethane	0.84 J	1.0	ug/L	SW846 8260B
Chloroform	2.9	1.0	ug/L	SW846 8260B
1,2-Dichlorobenzene	0.65 J	1.0	ug/L	SW846 8260B
1,1-Dichloroethane	3.2	1.0	ug/L	SW846 8260B
cis-1,2-Dichloroethene	8.2	1.0	ug/L	SW846 8260B
trans-1,2-Dichloroethene	0.25 J	0.50	ug/L	SW846 8260B
1,2-Dichloroethene (total)	8.5	1.0	ug/L	SW846 8260B
Ethylbenzene	2.7	1.0	ug/L	SW846 8260B
Isopropylbenzene	0.26 J	1.0	ug/L	SW846 8260B
p-Isopropyltoluene	0.56 J	1.0	ug/L	SW846 8260B
Methylene chloride	0.62 J,B	5.0	ug/L	SW846 8260B
4-Methyl-2-pentanone	1.5 J	5.0	ug/L	SW846 8260B
Naphthalene	1.3	1.0	ug/L	SW846 8260B
Toluene	8.9	1.0	ug/L	SW846 8260B
Trichloroethene	0.69 J	1.0	ug/L	SW846 8260B
1,2,4-Trimethylbenzene	1.6	1.0	ug/L	SW846 8260B
1,3,5-Trimethylbenzene	1.1	1.0	ug/L	SW846 8260B
Vinyl chloride	0.94 J	1.0	ug/L	SW846 8260B
m-Xylene & p-Xylene	11	2.0	ug/L	SW846 8260B
o-Xylene	5.5	1.0	ug/L	SW846 8260B
Xylenes (total)	16	2.0	ug/L	SW846 8260B
DUP#1 02/10/04 014				
Benzene	0.93 J	1.0	ug/L	SW846 8260B
Bromodichloromethane	1.3	1.0	ug/L	SW846 8260B
Dibromochloromethane	0.76 J	1.0	ug/L	SW846 8260B
Chloroform	2.6	1.0	ug/L	SW846 8260B
1,2-Dichlorobenzene	0.56 J	1.0	ug/L	SW846 8260B

(Continued on next page)

EXECUTIVE SUMMARY - Detection Highlights

D4B130209

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
DUP#1 02/10/04 014				
1,1-Dichloroethane	2.8	1.0	ug/L	SW846 8260B
cis-1,2-Dichloroethene	7.4	1.0	ug/L	SW846 8260B
1,2-Dichloroethene (total)	7.4	1.0	ug/L	SW846 8260B
Ethylbenzene	2.6	1.0	ug/L	SW846 8260B
Isopropylbenzene	0.22 J	1.0	ug/L	SW846 8260B
p-Isopropyltoluene	0.49 J	1.0	ug/L	SW846 8260B
Methylene chloride	0.58 J	5.0	ug/L	SW846 8260B
4-Methyl-2-pentanone	1.2 J	5.0	ug/L	SW846 8260B
Naphthalene	0.96 J	1.0	ug/L	SW846 8260B
Toluene	7.9	1.0	ug/L	SW846 8260B
Trichloroethene	0.64 J	1.0	ug/L	SW846 8260B
1,2,4-Trimethylbenzene	1.5	1.0	ug/L	SW846 8260B
1,3,5-Trimethylbenzene	1.0	1.0	ug/L	SW846 8260B
Vinyl chloride	0.83 J	1.0	ug/L	SW846 8260B
m-Xylene & p-Xylene	10	2.0	ug/L	SW846 8260B
o-Xylene	4.9	1.0	ug/L	SW846 8260B
Xylenes (total)	15	2.0	ug/L	SW846 8260B
DUP#2 02/11/04 015				
1,1-Dichloroethane	10	10	ug/L	SW846 8260B
cis-1,2-Dichloroethene	250	10	ug/L	SW846 8260B
trans-1,2-Dichloroethene	25	5.0	ug/L	SW846 8260B
1,2-Dichloroethene (total)	280	10	ug/L	SW846 8260B
Vinyl chloride	550	10	ug/L	SW846 8260B
PURGE COMPOSITE 021204 02/12/04 15:45 016				
Acetone	520 J	2000	ug/L	SW846 8260B
Benzene	200	200	ug/L	SW846 8260B
1,4-Dichlorobenzene	69 J	200	ug/L	SW846 8260B
cis-1,2-Dichloroethene	73 J	200	ug/L	SW846 8260B
1,2-Dichloroethene (total)	73 J	200	ug/L	SW846 8260B
Ethylbenzene	73 J	200	ug/L	SW846 8260B
Toluene	5500	200	ug/L	SW846 8260B
Vinyl chloride	66 J	200	ug/L	SW846 8260B
m-Xylene & p-Xylene	290 J	400	ug/L	SW846 8260B
o-Xylene	120 J	200	ug/L	SW846 8260B
Xylenes (total)	410	400	ug/L	SW846 8260B

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EXECUTIVE SUMMARY - Detection Highlights

D4B130209

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
FBGW0210 02/10/04 12:00 017				
Toluene	0.26 J	1.0	ug/L	SW846 8260B

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METHODS SUMMARY

D4B130209

PARAMETER	ANALYTICAL METHOD	PREPARATION METHOD
Volatile Organics by GC/MS	SW846 8260B	SW846 5030B/826

References:

SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 and its updates.

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METHOD / ANALYST SUMMARY

D4B130209

ANALYTICAL METHOD	ANALYST	ANALYST ID
SW846 8260B	Dan Appelhans	001008
SW846 8260B	Mike G. Hoffman	001880

References:

SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 and its updates.

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SAMPLE SUMMARY

D4B130209

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
F9KD4	001	MW-1	02/11/04	09:30
F9KEJ	002	MW-2	02/11/04	15:50
F9KEK	003	MW-3	02/10/04	17:50
F9KEL	004	MW-4	02/11/04	10:55
F9KEM	005	MW-5	02/11/04	12:40
F9KEP	006	MW-6	02/10/04	11:45
F9KEQ	007	MW-7	02/10/04	10:00
F9KET	008	MW-8	02/12/04	12:10
F9KEV	009	MW-9	02/12/04	14:20
F9KEX	010	MW-10	02/10/04	13:45
F9KE1	011	MW-11	02/12/04	09:45
F9KE6	012	MW-12	02/12/04	10:50
F9KE7	013	MW-13	02/10/04	16:00
F9KFC	014	DUP#1	02/10/04	
F9KFF	015	DUP#2	02/11/04	
F9KFG	016	PURGE COMPOSITE 021204	02/12/04	15:45
F9KHA	017	FBGW0210	02/10/04	12:00
F9KHC	018	TB021004	02/10/04	

NOTE(S):

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

ARCADIS GERAGHTY & MILLER, INC

Client Sample ID: MW-1

GC/MS Volatiles

Lot-Sample #...: D4B130209-001 **Work Order #...:** F9KD41AA **Matrix.....:** WATER
Date Sampled...: 02/11/04 09:30 **Date Received..:** 02/13/04
Prep Date.....: 02/20/04 **Analysis Date..:** 02/20/04
Prep Batch #...: 4054377 **Analysis Time..:** 14:52
Dilution Factor: 6667

Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acetone	ND	67000	ug/L
Benzene	**6600 J**	**6700**	**ug/L**
Bromobenzene	ND	6700	ug/L
Bromochloromethane	ND	6700	ug/L
Bromodichloromethane	ND	6700	ug/L
Bromoform	ND	6700	ug/L
Bromomethane	ND	13000	ug/L
2-Butanone (MEK)	ND	33000	ug/L
n-Butylbenzene	ND	6700	ug/L
sec-Butylbenzene	ND	6700	ug/L
tert-Butylbenzene	ND	6700	ug/L
Carbon tetrachloride	ND	6700	ug/L
Chlorobenzene	ND	6700	ug/L
Dibromochloromethane	ND	6700	ug/L
Chloroethane	ND	13000	ug/L
Chloroform	ND	6700	ug/L
Chloromethane	ND	13000	ug/L
2-Chlorotoluene	ND	6700	ug/L
4-Chlorotoluene	ND	6700	ug/L
1,2-Dibromo-3-chloropropane (DBCP)	ND	13000	ug/L
1,2-Dibromoethane (EDB)	ND	6700	ug/L
Dibromomethane	ND	6700	ug/L
1,2-Dichlorobenzene	ND	6700	ug/L
1,3-Dichlorobenzene	ND	6700	ug/L
1,4-Dichlorobenzene	ND	6700	ug/L
Dichlorodifluoromethane	ND	13000	ug/L
1,1-Dichloroethane	ND	6700	ug/L
1,2-Dichloroethane	ND	6700	ug/L
cis-1,2-Dichloroethene	ND	6700	ug/L
trans-1,2-Dichloroethene	ND	3300	ug/L
1,1-Dichloroethene	ND	6700	ug/L
1,2-Dichloroethene (total)	ND	6700	ug/L
1,2-Dichloropropane	ND	6700	ug/L
1,3-Dichloropropane	ND	6700	ug/L
2,2-Dichloropropane	ND	33000	ug/L
cis-1,3-Dichloropropene	ND	6700	ug/L

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ARCADIS GERAGHTY & MILLER, INC

Client Sample ID: MW-1

GC/MS Volatiles

Lot-Sample #...: D4B130209-001 **Work Order #...:** F9KD41AA **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS
trans-1,3-Dichloropropene	ND	6700	ug/L
1,1-Dichloropropene	ND	6700	ug/L
Ethylbenzene	**3100 J**	**6700**	**ug/L**
Hexachlorobutadiene	ND	6700	ug/L
2-Hexanone	ND	33000	ug/L
Isopropylbenzene	ND	6700	ug/L
p-Isopropyltoluene	ND	6700	ug/L
Methylene chloride	**2500 J,B**	**33000**	**ug/L**
4-Methyl-2-pentanone	ND	33000	ug/L
Naphthalene	ND	6700	ug/L
n-Propylbenzene	ND	6700	ug/L
Styrene	ND	6700	ug/L
1,1,1,2-Tetrachloroethane	ND	6700	ug/L
1,1,2,2-Tetrachloroethane	ND	6700	ug/L
Tetrachloroethene	ND	6700	ug/L
Toluene	**220000**	**6700**	**ug/L**
1,2,3-Trichlorobenzene	ND	6700	ug/L
1,2,4-Trichloro-benzene	ND	6700	ug/L
1,1,1-Trichloroethane	ND	6700	ug/L
1,1,2-Trichloroethane	ND	6700	ug/L
Trichloroethene	ND	6700	ug/L
Trichlorofluoromethane	ND	13000	ug/L
1,2,3-Trichloropropane	ND	6700	ug/L
1,2,4-Trimethylbenzene	ND	6700	ug/L
1,3,5-Trimethylbenzene	ND	6700	ug/L
Vinyl chloride	ND	6700	ug/L
m-Xylene & p-Xylene	**13000**	**13000**	**ug/L**
o-Xylene	**4800 J**	**6700**	**ug/L**
Xylenes (total)	**18000**	**13000**	**ug/L**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	95	(76 - 116)
1,2-Dichloroethane-d4	92	(59 - 129)
4-Bromofluorobenzene	101	(74 - 114)
Toluene-d8	99	(76 - 116)

NOTE(S):

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

ARCADIS GERAGHTY & MILLER, INC

Client Sample ID: MW-2

GC/MS Volatiles

Lot-Sample #...: D4B130209-002 **Work Order #...:** F9KEJ1AA **Matrix.....:** WATER
Date Sampled...: 02/11/04 15:50 **Date Received..:** 02/13/04
Prep Date.....: 02/20/04 **Analysis Date..:** 02/20/04
Prep Batch #...: 4054377 **Analysis Time..:** 15:12
Dilution Factor: 1000

Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acetone	**17000**	**10000**	**ug/L**
Benzene	**1000**	**1000**	**ug/L**
Bromobenzene	ND	1000	ug/L
Bromochloromethane	ND	1000	ug/L
Bromodichloromethane	ND	1000	ug/L
Bromoform	ND	1000	ug/L
Bromomethane	ND	2000	ug/L
2-Butanone (MEK)	ND	5000	ug/L
n-Butylbenzene	ND	1000	ug/L
sec-Butylbenzene	ND	1000	ug/L
tert-Butylbenzene	ND	1000	ug/L
Carbon tetrachloride	ND	1000	ug/L
Chlorobenzene	ND	1000	ug/L
Dibromochloromethane	ND	1000	ug/L
Chloroethane	ND	2000	ug/L
Chloroform	ND	1000	ug/L
Chloromethane	ND	2000	ug/L
2-Chlorotoluene	ND	1000	ug/L
4-Chlorotoluene	ND	1000	ug/L
1,2-Dibromo-3-chloropropane (DBCP)	ND	2000	ug/L
1,2-Dibromoethane (EDB)	ND	1000	ug/L
Dibromomethane	ND	1000	ug/L
1,2-Dichlorobenzene	ND	1000	ug/L
1,3-Dichlorobenzene	ND	1000	ug/L
1,4-Dichlorobenzene	ND	1000	ug/L
Dichlorodifluoromethane	ND	2000	ug/L
1,1-Dichloroethane	**2400**	**1000**	**ug/L**
1,2-Dichloroethane	ND	1000	ug/L
cis-1,2-Dichloroethene	**7300**	**1000**	**ug/L**
trans-1,2-Dichloroethene	ND	500	ug/L
1,1-Dichloroethene	ND	1000	ug/L
1,2-Dichloroethene (total)	**7300**	**1000**	**ug/L**
1,2-Dichloropropane	ND	1000	ug/L
1,3-Dichloropropane	ND	1000	ug/L
2,2-Dichloropropane	ND	5000	ug/L
cis-1,3-Dichloropropene	ND	1000	ug/L

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ARCADIS GERAGHTY & MILLER, INC

Client Sample ID: MW-2

GC/MS Volatiles

Lot-Sample #...: D4B130209-002 **Work Order #...:** F9KEJ1AA **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS
trans-1,3-Dichloropropene	ND	1000	ug/L
1,1-Dichloropropene	ND	1000	ug/L
Ethylbenzene	**1100**	**1000**	**ug/L**
Hexachlorobutadiene	ND	1000	ug/L
2-Hexanone	ND	5000	ug/L
Isopropylbenzene	ND	1000	ug/L
p-Isopropyltoluene	ND	1000	ug/L
Methylene chloride	**550 J,B**	**5000**	**ug/L**
4-Methyl-2-pentanone	**1800 J**	**5000**	**ug/L**
Naphthalene	ND	1000	ug/L
n-Propylbenzene	ND	1000	ug/L
Styrene	ND	1000	ug/L
1,1,1,2-Tetrachloroethane	ND	1000	ug/L
1,1,2,2-Tetrachloroethane	ND	1000	ug/L
Tetrachloroethene	**460 J**	**1000**	**ug/L**
Toluene	**34000**	**1000**	**ug/L**
1,2,3-Trichlorobenzene	ND	1000	ug/L
1,2,4-Trichloro-benzene	ND	1000	ug/L
1,1,1-Trichloroethane	ND	1000	ug/L
1,1,2-Trichloroethane	ND	1000	ug/L
Trichloroethene	**19000**	**1000**	**ug/L**
Trichlorofluoromethane	ND	2000	ug/L
1,2,3-Trichloropropane	ND	1000	ug/L
1,2,4-Trimethylbenzene	**650 J**	**1000**	**ug/L**
1,3,5-Trimethylbenzene	**630 J**	**1000**	**ug/L**
Vinyl chloride	**7500**	**1000**	**ug/L**
m-Xylene & p-Xylene	**4400**	**2000**	**ug/L**
o-Xylene	**1800**	**1000**	**ug/L**
Xylenes (total)	**6300**	**2000**	**ug/L**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	101	(76 - 116)
1,2-Dichloroethane-d4	97	(59 - 129)
4-Bromofluorobenzene	105	(74 - 114)
Toluene-d8	103	(76 - 116)

NOTE(S):

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

ARCADIS GERAGHTY & MILLER, INC

Client Sample ID: MW-3

GC/MS Volatiles

Lot-Sample #...: D4B130209-003 **Work Order #...:** F9KEK1AA **Matrix.....:** WATER
Date Sampled...: 02/10/04 17:50 **Date Received..:** 02/13/04
Prep Date.....: 02/20/04 **Analysis Date..:** 02/20/04
Prep Batch #...: 4054377 **Analysis Time..:** 15:32
Dilution Factor: 1

Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acetone	ND	10	ug/L
Benzene	**1.2**	**1.0**	**ug/L**
Bromobenzene	ND	1.0	ug/L
Bromochloromethane	ND	1.0	ug/L
Bromodichloromethane	ND	1.0	ug/L
Bromoform	ND	1.0	ug/L
Bromomethane	ND	2.0	ug/L
2-Butanone (MEK)	ND	5.0	ug/L
n-Butylbenzene	ND	1.0	ug/L
sec-Butylbenzene	ND	1.0	ug/L
tert-Butylbenzene	ND	1.0	ug/L
Carbon tetrachloride	ND	1.0	ug/L
Chlorobenzene	ND	1.0	ug/L
Dibromochloromethane	ND	1.0	ug/L
Chloroethane	ND	2.0	ug/L
Chloroform	ND	1.0	ug/L
Chloromethane	ND	2.0	ug/L
2-Chlorotoluene	ND	1.0	ug/L
4-Chlorotoluene	ND	1.0	ug/L
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.0	ug/L
1,2-Dibromoethane (EDB)	ND	1.0	ug/L
Dibromomethane	ND	1.0	ug/L
1,2-Dichlorobenzene	ND	1.0	ug/L
1,3-Dichlorobenzene	ND	1.0	ug/L
1,4-Dichlorobenzene	ND	1.0	ug/L
Dichlorodifluoromethane	ND	2.0	ug/L
1,1-Dichloroethane	**1.5**	**1.0**	**ug/L**
1,2-Dichloroethane	ND	1.0	ug/L
cis-1,2-Dichloroethene	ND	1.0	ug/L
trans-1,2-Dichloroethene	ND	0.50	ug/L
1,1-Dichloroethene	ND	1.0	ug/L
1,2-Dichloroethene (total)	ND	1.0	ug/L
1,2-Dichloropropane	ND	1.0	ug/L
1,3-Dichloropropane	ND	1.0	ug/L
2,2-Dichloropropane	ND	5.0	ug/L
cis-1,3-Dichloropropene	ND	1.0	ug/L

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ARCADIS GERAGHTY & MILLER, INC

Client Sample ID: MW-3

GC/MS Volatiles

Lot-Sample #...: D4B130209-003 **Work Order #...:** F9KEK1AA **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS
trans-1,3-Dichloropropene	ND	1.0	ug/L
1,1-Dichloropropene	ND	1.0	ug/L
Ethylbenzene	**1.3**	**1.0**	**ug/L**
Hexachlorobutadiene	ND	1.0	ug/L
2-Hexanone	ND	5.0	ug/L
Isopropylbenzene	**0.54 J**	**1.0**	**ug/L**
p-Isopropyltoluene	ND	1.0	ug/L
Methylene chloride	**0.36 J,B**	**5.0**	**ug/L**
4-Methyl-2-pentanone	ND	5.0	ug/L
Naphthalene	ND	1.0	ug/L
n-Propylbenzene	**0.85 J**	**1.0**	**ug/L**
Styrene	ND	1.0	ug/L
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L
Tetrachloroethene	ND	1.0	ug/L
Toluene	**0.80 J**	**1.0**	**ug/L**
1,2,3-Trichlorobenzene	ND	1.0	ug/L
1,2,4-Trichloro-benzene	ND	1.0	ug/L
1,1,1-Trichloroethane	**0.28 J**	**1.0**	**ug/L**
1,1,2-Trichloroethane	ND	1.0	ug/L
Trichloroethene	**0.25 J**	**1.0**	**ug/L**
Trichlorofluoromethane	ND	2.0	ug/L
1,2,3-Trichloropropane	ND	1.0	ug/L
1,2,4-Trimethylbenzene	**4.1**	**1.0**	**ug/L**
1,3,5-Trimethylbenzene	**6.1**	**1.0**	**ug/L**
Vinyl chloride	ND	1.0	ug/L
m-Xylene & p-Xylene	**2.0**	**2.0**	**ug/L**
o-Xylene	**2.2**	**1.0**	**ug/L**
Xylenes (total)	**4.2**	**2.0**	**ug/L**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	92	(76 - 116)
1,2-Dichloroethane-d4	87	(59 - 129)
4-Bromofluorobenzene	97	(74 - 114)
Toluene-d8	90	(76 - 116)

NOTE(S):

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

ARCADIS GERAGHTY & MILLER, INC

Client Sample ID: MW-4

GC/MS Volatiles

Lot-Sample #...: D4B130209-004 **Work Order #...:** F9KEL1AA **Matrix.....:** WATER
Date Sampled...: 02/11/04 10:55 **Date Received..:** 02/13/04
Prep Date.....: 02/20/04 **Analysis Date..:** 02/20/04
Prep Batch #...: 4054377 **Analysis Time..:** 20:11
Dilution Factor: 1

Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acetone	**44**	**10**	**ug/L**
Benzene	**31**	**1.0**	**ug/L**
Bromobenzene	ND	1.0	ug/L
Bromochloromethane	ND	1.0	ug/L
Bromodichloromethane	ND	1.0	ug/L
Bromoform	ND	1.0	ug/L
Bromomethane	ND	2.0	ug/L
2-Butanone (MEK)	**8.2**	**5.0**	**ug/L**
n-Butylbenzene	ND	1.0	ug/L
sec-Butylbenzene	ND	1.0	ug/L
tert-Butylbenzene	**0.26 J**	**1.0**	**ug/L**
Carbon tetrachloride	ND	1.0	ug/L
Chlorobenzene	**0.47 J**	**1.0**	**ug/L**
Dibromochloromethane	ND	1.0	ug/L
Chloroethane	**6.7**	**2.0**	**ug/L**
Chloroform	ND	1.0	ug/L
Chloromethane	ND	2.0	ug/L
2-Chlorotoluene	ND	1.0	ug/L
4-Chlorotoluene	ND	1.0	ug/L
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.0	ug/L
1,2-Dibromoethane (EDB)	ND	1.0	ug/L
Dibromomethane	ND	1.0	ug/L
1,2-Dichlorobenzene	**0.74 J**	**1.0**	**ug/L**
1,3-Dichlorobenzene	ND	1.0	ug/L
1,4-Dichlorobenzene	ND	1.0	ug/L
Dichlorodifluoromethane	ND	2.0	ug/L
1,1-Dichloroethane	**6.6**	**1.0**	**ug/L**
1,2-Dichloroethane	ND	1.0	ug/L
cis-1,2-Dichloroethene	**16**	**1.0**	**ug/L**
trans-1,2-Dichloroethene	ND	0.50	ug/L
1,1-Dichloroethene	ND	1.0	ug/L
1,2-Dichloroethene (total)	**16**	**1.0**	**ug/L**
1,2-Dichloropropane	ND	1.0	ug/L
1,3-Dichloropropane	ND	1.0	ug/L
2,2-Dichloropropane	ND	5.0	ug/L
cis-1,3-Dichloropropene	ND	1.0	ug/L

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ARCADIS GERAGHTY & MILLER, INC

Client Sample ID: MW-4

GC/MS Volatiles

Lot-Sample #...: D4B130209-004 **Work Order #...:** F9KEL1AA **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS
trans-1,3-Dichloropropene	ND	1.0	ug/L
1,1-Dichloropropene	ND	1.0	ug/L
Ethylbenzene	**13**	**1.0**	**ug/L**
Hexachlorobutadiene	ND	1.0	ug/L
2-Hexanone	ND	5.0	ug/L
Isopropylbenzene	**1.8**	**1.0**	**ug/L**
p-Isopropyltoluene	ND	1.0	ug/L
Methylene chloride	**0.52 J,B**	**5.0**	**ug/L**
4-Methyl-2-pentanone	**2.1 J**	**5.0**	**ug/L**
Naphthalene	ND	1.0	ug/L
n-Propylbenzene	**0.53 J**	**1.0**	**ug/L**
Styrene	ND	1.0	ug/L
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L
Tetrachloroethene	ND	1.0	ug/L
Toluene	**29**	**1.0**	**ug/L**
1,2,3-Trichlorobenzene	ND	1.0	ug/L
1,2,4-Trichloro-benzene	ND	1.0	ug/L
1,1,1-Trichloroethane	ND	1.0	ug/L
1,1,2-Trichloroethane	ND	1.0	ug/L
Trichloroethene	ND	1.0	ug/L
Trichlorofluoromethane	ND	2.0	ug/L
1,2,3-Trichloropropane	ND	1.0	ug/L
1,2,4-Trimethylbenzene	**1.8**	**1.0**	**ug/L**
1,3,5-Trimethylbenzene	**0.59 J**	**1.0**	**ug/L**
Vinyl chloride	**4.2**	**1.0**	**ug/L**
m-Xylene & p-Xylene	**13**	**2.0**	**ug/L**
o-Xylene	**4.8**	**1.0**	**ug/L**
Xylenes (total)	**18**	**2.0**	**ug/L**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	88	(76 - 116)
1,2-Dichloroethane-d4	88	(59 - 129)
4-Bromofluorobenzene	91	(74 - 114)
Toluene-d8	87	(76 - 116)

NOTE(S):

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

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ARCADIS GERAGHTY & MILLER, INC

Client Sample ID: MW-5

GC/MS Volatiles

Lot-Sample #...: D4B130209-005 **Work Order #...:** F9KEM1AA **Matrix.....:** WATER
Date Sampled...: 02/11/04 12:40 **Date Received..:** 02/13/04
Prep Date.....: 02/20/04 **Analysis Date..:** 02/20/04
Prep Batch #...: 4054377 **Analysis Time..:** 16:12
Dilution Factor: 20

Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acetone	ND	200	ug/L
Benzene	ND	20	ug/L
Bromobenzene	ND	20	ug/L
Bromochloromethane	ND	20	ug/L
Bromodichloromethane	ND	20	ug/L
Bromoform	ND	20	ug/L
Bromomethane	ND	40	ug/L
2-Butanone (MEK)	ND	100	ug/L
n-Butylbenzene	ND	20	ug/L
sec-Butylbenzene	ND	20	ug/L
tert-Butylbenzene	ND	20	ug/L
Carbon tetrachloride	ND	20	ug/L
Chlorobenzene	ND	20	ug/L
Dibromochloromethane	ND	20	ug/L
Chloroethane	ND	40	ug/L
Chloroform	ND	20	ug/L
Chloromethane	ND	40	ug/L
2-Chlorotoluene	ND	20	ug/L
4-Chlorotoluene	ND	20	ug/L
1,2-Dibromo-3-chloropropane (DBCP)	ND	40	ug/L
1,2-Dibromoethane (EDB)	ND	20	ug/L
Dibromomethane	ND	20	ug/L
1,2-Dichlorobenzene	ND	20	ug/L
1,3-Dichlorobenzene	ND	20	ug/L
1,4-Dichlorobenzene	ND	20	ug/L
Dichlorodifluoromethane	ND	40	ug/L
1,1-Dichloroethane	**12 J**	**20**	**ug/L**
1,2-Dichloroethane	ND	20	ug/L
cis-1,2-Dichloroethene	**250**	**20**	**ug/L**
trans-1,2-Dichloroethene	**24**	**10**	**ug/L**
1,1-Dichloroethene	ND	20	ug/L
1,2-Dichloroethene (total)	**270**	**20**	**ug/L**
1,2-Dichloropropane	ND	20	ug/L
1,3-Dichloropropane	ND	20	ug/L
2,2-Dichloropropane	ND	100	ug/L
cis-1,3-Dichloropropene	ND	20	ug/L

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ARCADIS GERAGHTY & MILLER, INC

Client Sample ID: MW-5

GC/MS Volatiles

Lot-Sample #...: D4B130209-005 **Work Order #...:** F9KEM1AA **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS
trans-1,3-Dichloropropene	ND	20	ug/L
1,1-Dichloropropene	ND	20	ug/L
Ethylbenzene	ND	20	ug/L
Hexachlorobutadiene	ND	20	ug/L
2-Hexanone	ND	100	ug/L
Isopropylbenzene	ND	20	ug/L
p-Isopropyltoluene	ND	20	ug/L
Methylene chloride	**7.1 J,B**	**100**	**ug/L**
4-Methyl-2-pentanone	ND	100	ug/L
Naphthalene	ND	20	ug/L
n-Propylbenzene	ND	20	ug/L
Styrene	ND	20	ug/L
1,1,1,2-Tetrachloroethane	ND	20	ug/L
1,1,2,2-Tetrachloroethane	ND	20	ug/L
Tetrachloroethene	ND	20	ug/L
Toluene	ND	20	ug/L
1,2,3-Trichlorobenzene	ND	20	ug/L
1,2,4-Trichloro-benzene	ND	20	ug/L
1,1,1-Trichloroethane	ND	20	ug/L
1,1,2-Trichloroethane	ND	20	ug/L
Trichloroethene	ND	20	ug/L
Trichlorofluoromethane	ND	40	ug/L
1,2,3-Trichloropropane	ND	20	ug/L
1,2,4-Trimethylbenzene	ND	20	ug/L
1,3,5-Trimethylbenzene	ND	20	ug/L
Vinyl chloride	**640**	**20**	**ug/L**
m-Xylene & p-Xylene	ND	40	ug/L
o-Xylene	ND	20	ug/L
Xylenes (total)	ND	40	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	99	(76 - 116)
1,2-Dichloroethane-d4	92	(59 - 129)
4-Bromofluorobenzene	105	(74 - 114)
Toluene-d8	102	(76 - 116)

NOTE(S):

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

ARCADIS GERAGHTY & MILLER, INC

Client Sample ID: MW-6

GC/MS Volatiles

Lot-Sample #...: D4B130209-006 **Work Order #...:** F9KEP1AA **Matrix.....:** WATER
Date Sampled...: 02/10/04 11:45 **Date Received..:** 02/13/04
Prep Date.....: 02/20/04 **Analysis Date..:** 02/20/04
Prep Batch #...: 4054377 **Analysis Time..:** 17:11
Dilution Factor: 1

Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acetone	ND	10	ug/L
Benzene	ND	1.0	ug/L
Bromobenzene	ND	1.0	ug/L
Bromochloromethane	ND	1.0	ug/L
Bromodichloromethane	ND	1.0	ug/L
Bromoform	ND	1.0	ug/L
Bromomethane	ND	2.0	ug/L
2-Butanone (MEK)	ND	5.0	ug/L
n-Butylbenzene	ND	1.0	ug/L
sec-Butylbenzene	ND	1.0	ug/L
tert-Butylbenzene	ND	1.0	ug/L
Carbon tetrachloride	ND	1.0	ug/L
Chlorobenzene	ND	1.0	ug/L
Dibromochloromethane	ND	1.0	ug/L
Chloroethane	ND	2.0	ug/L
Chloroform	ND	1.0	ug/L
Chloromethane	ND	2.0	ug/L
2-Chlorotoluene	ND	1.0	ug/L
4-Chlorotoluene	ND	1.0	ug/L
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.0	ug/L
1,2-Dibromoethane (EDB)	ND	1.0	ug/L
Dibromomethane	ND	1.0	ug/L
1,2-Dichlorobenzene	ND	1.0	ug/L
1,3-Dichlorobenzene	ND	1.0	ug/L
1,4-Dichlorobenzene	ND	1.0	ug/L
Dichlorodifluoromethane	ND	2.0	ug/L
1,1-Dichloroethane	ND	1.0	ug/L
1,2-Dichloroethane	ND	1.0	ug/L
cis-1,2-Dichloroethene	ND	1.0	ug/L
trans-1,2-Dichloroethene	ND	0.50	ug/L
1,1-Dichloroethene	ND	1.0	ug/L
1,2-Dichloroethene (total)	ND	1.0	ug/L
1,2-Dichloropropane	ND	1.0	ug/L
1,3-Dichloropropane	ND	1.0	ug/L
2,2-Dichloropropane	ND	5.0	ug/L
cis-1,3-Dichloropropene	ND	1.0	ug/L

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ARCADIS GERAGHTY & MILLER, INC

Client Sample ID: MW-6

GC/MS Volatiles

Lot-Sample #...: D4B130209-006 **Work Order #...:** F9KEP1AA **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS
trans-1,3-Dichloropropene	ND	1.0	ug/L
1,1-Dichloropropene	ND	1.0	ug/L
Ethylbenzene	ND	1.0	ug/L
Hexachlorobutadiene	ND	1.0	ug/L
2-Hexanone	ND	5.0	ug/L
Isopropylbenzene	ND	1.0	ug/L
p-Isopropyltoluene	ND	1.0	ug/L
Methylene chloride	**0.32 J,B**	**5.0**	**ug/L**
4-Methyl-2-pentanone	ND	5.0	ug/L
Naphthalene	ND	1.0	ug/L
n-Propylbenzene	ND	1.0	ug/L
Styrene	ND	1.0	ug/L
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L
Tetrachloroethene	ND	1.0	ug/L
Toluene	**0.50 J**	**1.0**	**ug/L**
1,2,3-Trichlorobenzene	ND	1.0	ug/L
1,2,4-Trichloro-benzene	ND	1.0	ug/L
1,1,1-Trichloroethane	ND	1.0	ug/L
1,1,2-Trichloroethane	ND	1.0	ug/L
Trichloroethene	ND	1.0	ug/L
Trichlorofluoromethane	ND	2.0	ug/L
1,2,3-Trichloropropane	ND	1.0	ug/L
1,2,4-Trimethylbenzene	ND	1.0	ug/L
1,3,5-Trimethylbenzene	ND	1.0	ug/L
Vinyl chloride	ND	1.0	ug/L
m-Xylene & p-Xylene	ND	2.0	ug/L
o-Xylene	ND	1.0	ug/L
Xylenes (total)	ND	2.0	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	88	(76 - 116)
1,2-Dichloroethane-d4	84	(59 - 129)
4-Bromofluorobenzene	91	(74 - 114)
Toluene-d8	88	(76 - 116)

NOTE(S):

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

ARCADIS GERAGHTY & MILLER, INC

Client Sample ID: MW-7

GC/MS Volatiles

Lot-Sample #...: D4B130209-007 **Work Order #...:** F9KEQ1AA **Matrix.....:** WATER
Date Sampled...: 02/10/04 10:00 **Date Received..:** 02/13/04
Prep Date.....: 02/20/04 **Analysis Date..:** 02/20/04
Prep Batch #...: 4054377 **Analysis Time..:** 17:31
Dilution Factor: 1

Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acetone	ND	10	ug/L
Benzene	ND	1.0	ug/L
Bromobenzene	ND	1.0	ug/L
Bromochloromethane	ND	1.0	ug/L
Bromodichloromethane	ND	1.0	ug/L
Bromoform	ND	1.0	ug/L
Bromomethane	ND	2.0	ug/L
2-Butanone (MEK)	ND	5.0	ug/L
n-Butylbenzene	ND	1.0	ug/L
sec-Butylbenzene	ND	1.0	ug/L
tert-Butylbenzene	ND	1.0	ug/L
Carbon tetrachloride	ND	1.0	ug/L
Chlorobenzene	ND	1.0	ug/L
Dibromochloromethane	ND	1.0	ug/L
Chloroethane	ND	2.0	ug/L
Chloroform	ND	1.0	ug/L
Chloromethane	ND	2.0	ug/L
2-Chlorotoluene	ND	1.0	ug/L
4-Chlorotoluene	ND	1.0	ug/L
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.0	ug/L
1,2-Dibromoethane (EDB)	ND	1.0	ug/L
Dibromomethane	ND	1.0	ug/L
1,2-Dichlorobenzene	ND	1.0	ug/L
1,3-Dichlorobenzene	ND	1.0	ug/L
1,4-Dichlorobenzene	ND	1.0	ug/L
Dichlorodifluoromethane	ND	2.0	ug/L
1,1-Dichloroethane	ND	1.0	ug/L
1,2-Dichloroethane	ND	1.0	ug/L
cis-1,2-Dichloroethene	ND	1.0	ug/L
trans-1,2-Dichloroethene	ND	0.50	ug/L
1,1-Dichloroethene	ND	1.0	ug/L
1,2-Dichloroethene (total)	ND	1.0	ug/L
1,2-Dichloropropane	ND	1.0	ug/L
1,3-Dichloropropane	ND	1.0	ug/L
2,2-Dichloropropane	ND	5.0	ug/L
cis-1,3-Dichloropropene	ND	1.0	ug/L

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ARCADIS GERAGHTY & MILLER, INC

Client Sample ID: MW-7

GC/MS Volatiles

Lot-Sample #...: D4B130209-007 **Work Order #...:** F9KEQ1AA **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS
trans-1,3-Dichloropropene	ND	1.0	ug/L
1,1-Dichloropropene	ND	1.0	ug/L
Ethylbenzene	ND	1.0	ug/L
Hexachlorobutadiene	ND	1.0	ug/L
2-Hexanone	ND	5.0	ug/L
Isopropylbenzene	ND	1.0	ug/L
p-Isopropyltoluene	ND	1.0	ug/L
Methylene chloride	**0.27 J,B**	**5.0**	**ug/L**
4-Methyl-2-pentanone	ND	5.0	ug/L
Naphthalene	ND	1.0	ug/L
n-Propylbenzene	ND	1.0	ug/L
Styrene	ND	1.0	ug/L
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L
Tetrachloroethene	ND	1.0	ug/L
Toluene	**0.54 J**	**1.0**	**ug/L**
1,2,3-Trichlorobenzene	ND	1.0	ug/L
1,2,4-Trichloro-benzene	ND	1.0	ug/L
1,1,1-Trichloroethane	ND	1.0	ug/L
1,1,2-Trichloroethane	ND	1.0	ug/L
Trichloroethene	ND	1.0	ug/L
Trichlorofluoromethane	ND	2.0	ug/L
1,2,3-Trichloropropane	ND	1.0	ug/L
1,2,4-Trimethylbenzene	ND	1.0	ug/L
1,3,5-Trimethylbenzene	ND	1.0	ug/L
Vinyl chloride	ND	1.0	ug/L
m-Xylene & p-Xylene	ND	2.0	ug/L
o-Xylene	ND	1.0	ug/L
Xylenes (total)	ND	2.0	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	88	(76 - 116)
1,2-Dichloroethane-d4	85	(59 - 129)
4-Bromofluorobenzene	93	(74 - 114)
Toluene-d8	89	(76 - 116)

NOTE(S):

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

ARCADIS GERAGHTY & MILLER, INC

Client Sample ID: MW-8

GC/MS Volatiles

Lot-Sample #...: D4B130209-008 **Work Order #...:** F9KET1AA **Matrix.....:** WATER
Date Sampled...: 02/12/04 12:10 **Date Received..:** 02/13/04
Prep Date.....: 02/20/04 **Analysis Date..:** 02/20/04
Prep Batch #...: 4054377 **Analysis Time..:** 17:51
Dilution Factor: 100

Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acetone	ND	1000	ug/L
Benzene	**38 J**	**100**	**ug/L**
Bromobenzene	ND	100	ug/L
Bromochloromethane	ND	100	ug/L
Bromodichloromethane	ND	100	ug/L
Bromoform	ND	100	ug/L
Bromomethane	ND	200	ug/L
2-Butanone (MEK)	ND	500	ug/L
n-Butylbenzene	ND	100	ug/L
sec-Butylbenzene	ND	100	ug/L
tert-Butylbenzene	ND	100	ug/L
Carbon tetrachloride	ND	100	ug/L
Chlorobenzene	ND	100	ug/L
Dibromochloromethane	ND	100	ug/L
Chloroethane	ND	200	ug/L
Chloroform	ND	100	ug/L
Chloromethane	ND	200	ug/L
2-Chlorotoluene	ND	100	ug/L
4-Chlorotoluene	ND	100	ug/L
1,2-Dibromo-3-chloropropane (DBCP)	ND	200	ug/L
1,2-Dibromoethane (EDB)	ND	100	ug/L
Dibromomethane	ND	100	ug/L
1,2-Dichlorobenzene	ND	100	ug/L
1,3-Dichlorobenzene	ND	100	ug/L
1,4-Dichlorobenzene	**2200**	**100**	**ug/L**
Dichlorodifluoromethane	ND	200	ug/L
1,1-Dichloroethane	**65 J**	**100**	**ug/L**
1,2-Dichloroethane	ND	100	ug/L
cis-1,2-Dichloroethene	**410**	**100**	**ug/L**
trans-1,2-Dichloroethene	ND	50	ug/L
1,1-Dichloroethene	ND	100	ug/L
1,2-Dichloroethene (total)	**410**	**100**	**ug/L**
1,2-Dichloropropane	ND	100	ug/L
1,3-Dichloropropane	ND	100	ug/L
2,2-Dichloropropane	ND	500	ug/L
cis-1,3-Dichloropropene	ND	100	ug/L

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ARCADIS GERAGHTY & MILLER, INC

Client Sample ID: MW-8

GC/MS Volatiles

Lot-Sample #...: D4B130209-008 **Work Order #...:** F9KET1AA **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS
trans-1,3-Dichloropropene	ND	100	ug/L
1,1-Dichloropropene	ND	100	ug/L
Ethylbenzene	ND	100	ug/L
Hexachlorobutadiene	ND	100	ug/L
2-Hexanone	ND	500	ug/L
Isopropylbenzene	ND	100	ug/L
p-Isopropyltoluene	ND	100	ug/L
Methylene chloride	**34 J,B**	**500**	**ug/L**
4-Methyl-2-pentanone	ND	500	ug/L
Naphthalene	ND	100	ug/L
n-Propylbenzene	ND	100	ug/L
Styrene	ND	100	ug/L
1,1,1,2-Tetrachloroethane	ND	100	ug/L
1,1,2,2-Tetrachloroethane	ND	100	ug/L
Tetrachloroethene	ND	100	ug/L
Toluene	**34 J**	**100**	**ug/L**
1,2,3-Trichlorobenzene	ND	100	ug/L
1,2,4-Trichloro-benzene	ND	100	ug/L
1,1,1-Trichloroethane	ND	100	ug/L
1,1,2-Trichloroethane	ND	100	ug/L
Trichloroethene	ND	100	ug/L
Trichlorofluoromethane	ND	200	ug/L
1,2,3-Trichloropropane	ND	100	ug/L
1,2,4-Trimethylbenzene	ND	100	ug/L
1,3,5-Trimethylbenzene	ND	100	ug/L
Vinyl chloride	**780**	**100**	**ug/L**
m-Xylene & p-Xylene	ND	200	ug/L
o-Xylene	ND	100	ug/L
Xylenes (total)	ND	200	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	91	(76 - 116)
1,2-Dichloroethane-d4	86	(59 - 129)
4-Bromofluorobenzene	93	(74 - 114)
Toluene-d8	91	(76 - 116)

NOTE(S):

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

ARCADIS GERAGHTY & MILLER, INC

Client Sample ID: MW-9

GC/MS Volatiles

Lot-Sample #...: D4B130209-009 **Work Order #...:** F9KEV1AA **Matrix.....:** WATER
Date Sampled...: 02/12/04 14:20 **Date Received..:** 02/13/04
Prep Date.....: 02/20/04 **Analysis Date..:** 02/20/04
Prep Batch #...: 4054377 **Analysis Time..:** 18:11
Dilution Factor: 1

Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acetone	ND	10	ug/L
Benzene	**1.2**	**1.0**	**ug/L**
Bromobenzene	ND	1.0	ug/L
Bromochloromethane	ND	1.0	ug/L
Bromodichloromethane	ND	1.0	ug/L
Bromoform	ND	1.0	ug/L
Bromomethane	ND	2.0	ug/L
2-Butanone (MEK)	ND	5.0	ug/L
n-Butylbenzene	ND	1.0	ug/L
sec-Butylbenzene	ND	1.0	ug/L
tert-Butylbenzene	ND	1.0	ug/L
Carbon tetrachloride	ND	1.0	ug/L
Chlorobenzene	ND	1.0	ug/L
Dibromochloromethane	ND	1.0	ug/L
Chloroethane	ND	2.0	ug/L
Chloroform	ND	1.0	ug/L
Chloromethane	ND	2.0	ug/L
2-Chlorotoluene	ND	1.0	ug/L
4-Chlorotoluene	ND	1.0	ug/L
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.0	ug/L
1,2-Dibromoethane (EDB)	ND	1.0	ug/L
Dibromomethane	ND	1.0	ug/L
1,2-Dichlorobenzene	**0.29 J**	**1.0**	**ug/L**
1,3-Dichlorobenzene	ND	1.0	ug/L
1,4-Dichlorobenzene	**10**	**1.0**	**ug/L**
Dichlorodifluoromethane	ND	2.0	ug/L
1,1-Dichloroethane	**10**	**1.0**	**ug/L**
1,2-Dichloroethane	ND	1.0	ug/L
cis-1,2-Dichloroethene	**21**	**1.0**	**ug/L**
trans-1,2-Dichloroethene	**0.51**	**0.50**	**ug/L**
1,1-Dichloroethene	ND	1.0	ug/L
1,2-Dichloroethene (total)	**21**	**1.0**	**ug/L**
1,2-Dichloropropane	ND	1.0	ug/L
1,3-Dichloropropane	ND	1.0	ug/L
2,2-Dichloropropane	ND	5.0	ug/L
cis-1,3-Dichloropropene	ND	1.0	ug/L

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ARCADIS GERAGHTY & MILLER, INC

Client Sample ID: MW-9

GC/MS Volatiles

Lot-Sample #...: D4B130209-009 **Work Order #...:** F9KEV1AA **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS
trans-1,3-Dichloropropene	ND	1.0	ug/L
1,1-Dichloropropene	ND	1.0	ug/L
Ethylbenzene	**0.38 J**	**1.0**	**ug/L**
Hexachlorobutadiene	ND	1.0	ug/L
2-Hexanone	ND	5.0	ug/L
Isopropylbenzene	ND	1.0	ug/L
p-Isopropyltoluene	ND	1.0	ug/L
Methylene chloride	**1.5 J,B**	**5.0**	**ug/L**
4-Methyl-2-pentanone	ND	5.0	ug/L
Naphthalene	ND	1.0	ug/L
n-Propylbenzene	ND	1.0	ug/L
Styrene	ND	1.0	ug/L
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L
Tetrachloroethene	ND	1.0	ug/L
Toluene	**0.31 J**	**1.0**	**ug/L**
1,2,3-Trichlorobenzene	ND	1.0	ug/L
1,2,4-Trichloro-benzene	ND	1.0	ug/L
1,1,1-Trichloroethane	ND	1.0	ug/L
1,1,2-Trichloroethane	ND	1.0	ug/L
Trichloroethene	**5.5**	**1.0**	**ug/L**
Trichlorofluoromethane	ND	2.0	ug/L
1,2,3-Trichloropropane	ND	1.0	ug/L
1,2,4-Trimethylbenzene	ND	1.0	ug/L
1,3,5-Trimethylbenzene	ND	1.0	ug/L
Vinyl chloride	**15**	**1.0**	**ug/L**
m-Xylene & p-Xylene	**0.42 J**	**2.0**	**ug/L**
o-Xylene	ND	1.0	ug/L
Xylenes (total)	**0.42 J**	**2.0**	**ug/L**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	100	(76 - 116)
1,2-Dichloroethane-d4	100	(59 - 129)
4-Bromofluorobenzene	104	(74 - 114)
Toluene-d8	100	(76 - 116)

NOTE(S):

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

ARCADIS GERAGHTY & MILLER, INC

Client Sample ID: MW-10

GC/MS Volatiles

Lot-Sample #...: D4B130209-010 **Work Order #...:** F9KEX1AA **Matrix.....:** WATER
Date Sampled...: 02/10/04 13:45 **Date Received..:** 02/13/04
Prep Date.....: 02/20/04 **Analysis Date..:** 02/20/04
Prep Batch #...: 4054377 **Analysis Time..:** 18:31
Dilution Factor: 50

Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acetone	**5000**	**500**	**ug/L**
Benzene	**71**	**50**	**ug/L**
Bromobenzene	ND	50	ug/L
Bromochloromethane	ND	50	ug/L
Bromodichloromethane	ND	50	ug/L
Bromoform	ND	50	ug/L
Bromomethane	ND	100	ug/L
2-Butanone (MEK)	**650**	**250**	**ug/L**
n-Butylbenzene	ND	50	ug/L
sec-Butylbenzene	ND	50	ug/L
tert-Butylbenzene	ND	50	ug/L
Carbon tetrachloride	ND	50	ug/L
Chlorobenzene	**23 J**	**50**	**ug/L**
Dibromochloromethane	ND	50	ug/L
Chloroethane	ND	100	ug/L
Chloroform	ND	50	ug/L
Chloromethane	ND	100	ug/L
2-Chlorotoluene	ND	50	ug/L
4-Chlorotoluene	ND	50	ug/L
1,2-Dibromo-3-chloropropane (DBCP)	ND	100	ug/L
1,2-Dibromoethane (EDB)	ND	50	ug/L
Dibromomethane	ND	50	ug/L
1,2-Dichlorobenzene	**18 J**	**50**	**ug/L**
1,3-Dichlorobenzene	ND	50	ug/L
1,4-Dichlorobenzene	ND	50	ug/L
Dichlorodifluoromethane	ND	100	ug/L
1,1-Dichloroethane	**210**	**50**	**ug/L**
1,2-Dichloroethane	ND	50	ug/L
cis-1,2-Dichloroethene	**740**	**50**	**ug/L**
trans-1,2-Dichloroethene	ND	25	ug/L
1,1-Dichloroethene	ND	50	ug/L
1,2-Dichloroethene (total)	**740**	**50**	**ug/L**
1,2-Dichloropropane	ND	50	ug/L
1,3-Dichloropropane	ND	50	ug/L
2,2-Dichloropropane	ND	250	ug/L
cis-1,3-Dichloropropene	ND	50	ug/L

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ARCADIS GERAGHTY & MILLER, INC

Client Sample ID: MW-10

GC/MS Volatiles

Lot-Sample #...: D4B130209-010 **Work Order #...:** F9KEX1AA **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS
trans-1,3-Dichloropropene	ND	50	ug/L
1,1-Dichloropropene	ND	50	ug/L
Ethylbenzene	**170**	**50**	**ug/L**
Hexachlorobutadiene	ND	50	ug/L
2-Hexanone	ND	250	ug/L
Isopropylbenzene	**12 J**	**50**	**ug/L**
p-Isopropyltoluene	ND	50	ug/L
Methylene chloride	**24 J,B**	**250**	**ug/L**
4-Methyl-2-pentanone	**160 J**	**250**	**ug/L**
Naphthalene	**39 J**	**50**	**ug/L**
n-Propylbenzene	**12 J**	**50**	**ug/L**
Styrene	ND	50	ug/L
1,1,1,2-Tetrachloroethane	ND	50	ug/L
1,1,2,2-Tetrachloroethane	ND	50	ug/L
Tetrachloroethene	ND	50	ug/L
Toluene	**700**	**50**	**ug/L**
1,2,3-Trichlorobenzene	ND	50	ug/L
1,2,4-Trichloro-benzene	ND	50	ug/L
1,1,1-Trichloroethane	ND	50	ug/L
1,1,2-Trichloroethane	ND	50	ug/L
Trichloroethene	**24 J**	**50**	**ug/L**
Trichlorofluoromethane	ND	100	ug/L
1,2,3-Trichloropropane	ND	50	ug/L
1,2,4-Trimethylbenzene	**75**	**50**	**ug/L**
1,3,5-Trimethylbenzene	**35 J**	**50**	**ug/L**
Vinyl chloride	**69**	**50**	**ug/L**
m-Xylene & p-Xylene	**540**	**100**	**ug/L**
o-Xylene	**250**	**50**	**ug/L**
Xylenes (total)	**790**	**100**	**ug/L**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	89	(76 - 116)
1,2-Dichloroethane-d4	84	(59 - 129)
4-Bromofluorobenzene	94	(74 - 114)
Toluene-d8	89	(76 - 116)

NOTE(S):

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

ARCADIS GERAGHTY & MILLER, INC

Client Sample ID: MW-11

GC/MS Volatiles

Lot-Sample #...: D4B130209-011 **Work Order #...:** F9KE11AA **Matrix.....:** WATER
Date Sampled...: 02/12/04 09:45 **Date Received..:** 02/13/04
Prep Date.....: 02/20/04 **Analysis Date..:** 02/20/04
Prep Batch #...: 4054377 **Analysis Time..:** 18:51
Dilution Factor: 1

Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acetone	ND	10	ug/L
Benzene	**0.23 J**	**1.0**	**ug/L**
Bromobenzene	ND	1.0	ug/L
Bromochloromethane	ND	1.0	ug/L
Bromodichloromethane	ND	1.0	ug/L
Bromoform	ND	1.0	ug/L
Bromomethane	ND	2.0	ug/L
2-Butanone (MEK)	ND	5.0	ug/L
n-Butylbenzene	ND	1.0	ug/L
sec-Butylbenzene	ND	1.0	ug/L
tert-Butylbenzene	ND	1.0	ug/L
Carbon tetrachloride	ND	1.0	ug/L
Chlorobenzene	ND	1.0	ug/L
Dibromochloromethane	ND	1.0	ug/L
Chloroethane	ND	2.0	ug/L
Chloroform	**0.24 J**	**1.0**	**ug/L**
Chloromethane	ND	2.0	ug/L
2-Chlorotoluene	ND	1.0	ug/L
4-Chlorotoluene	ND	1.0	ug/L
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.0	ug/L
1,2-Dibromoethane (EDB)	ND	1.0	ug/L
Dibromomethane	ND	1.0	ug/L
1,2-Dichlorobenzene	ND	1.0	ug/L
1,3-Dichlorobenzene	ND	1.0	ug/L
1,4-Dichlorobenzene	ND	1.0	ug/L
Dichlorodifluoromethane	ND	2.0	ug/L
1,1-Dichloroethane	**15**	**1.0**	**ug/L**
1,2-Dichloroethane	ND	1.0	ug/L
cis-1,2-Dichloroethene	**32**	**1.0**	**ug/L**
trans-1,2-Dichloroethene	**0.32 J**	**0.50**	**ug/L**
1,1-Dichloroethene	ND	1.0	ug/L
1,2-Dichloroethene (total)	**32**	**1.0**	**ug/L**
1,2-Dichloropropane	ND	1.0	ug/L
1,3-Dichloropropane	ND	1.0	ug/L
2,2-Dichloropropane	ND	5.0	ug/L
cis-1,3-Dichloropropene	ND	1.0	ug/L

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ARCADIS GERAGHTY & MILLER, INC

Client Sample ID: MW-11

GC/MS Volatiles

Lot-Sample #...: D4B130209-011 **Work Order #...:** F9KE11AA **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS
trans-1,3-Dichloropropene	ND	1.0	ug/L
1,1-Dichloropropene	ND	1.0	ug/L
Ethylbenzene	ND	1.0	ug/L
Hexachlorobutadiene	ND	1.0	ug/L
2-Hexanone	ND	5.0	ug/L
Isopropylbenzene	ND	1.0	ug/L
p-Isopropyltoluene	ND	1.0	ug/L
Methylene chloride	**0.61 J,B**	**5.0**	**ug/L**
4-Methyl-2-pentanone	ND	5.0	ug/L
Naphthalene	ND	1.0	ug/L
n-Propylbenzene	ND	1.0	ug/L
Styrene	ND	1.0	ug/L
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L
Tetrachloroethene	**0.39 J**	**1.0**	**ug/L**
Toluene	ND	1.0	ug/L
1,2,3-Trichlorobenzene	ND	1.0	ug/L
1,2,4-Trichloro-benzene	ND	1.0	ug/L
1,1,1-Trichloroethane	ND	1.0	ug/L
1,1,2-Trichloroethane	ND	1.0	ug/L
Trichloroethene	**1.7**	**1.0**	**ug/L**
Trichlorofluoromethane	ND	2.0	ug/L
1,2,3-Trichloropropane	ND	1.0	ug/L
1,2,4-Trimethylbenzene	ND	1.0	ug/L
1,3,5-Trimethylbenzene	ND	1.0	ug/L
Vinyl chloride	**0.50 J**	**1.0**	**ug/L**
m-Xylene & p-Xylene	ND	2.0	ug/L
o-Xylene	ND	1.0	ug/L
Xylenes (total)	ND	2.0	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	100	(76 - 116)
1,2-Dichloroethane-d4	94	(59 - 129)
4-Bromofluorobenzene	105	(74 - 114)
Toluene-d8	97	(76 - 116)

NOTE(S):

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

ARCADIS GERAGHTY & MILLER, INC

Client Sample ID: MW-12

GC/MS Volatiles

Lot-Sample #...: D4B130209-012 **Work Order #...:** F9KE61AA **Matrix.....:** WATER
Date Sampled...: 02/12/04 10:50 **Date Received..:** 02/13/04
Prep Date.....: 02/20/04 **Analysis Date..:** 02/20/04
Prep Batch #...: 4054377 **Analysis Time..:** 19:11
Dilution Factor: 20

Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acetone	ND	200	ug/L
Benzene	**280**	**20**	**ug/L**
Bromobenzene	ND	20	ug/L
Bromochloromethane	ND	20	ug/L
Bromodichloromethane	ND	20	ug/L
Bromoform	ND	20	ug/L
Bromomethane	ND	40	ug/L
2-Butanone (MEK)	ND	100	ug/L
n-Butylbenzene	ND	20	ug/L
sec-Butylbenzene	ND	20	ug/L
tert-Butylbenzene	ND	20	ug/L
Carbon tetrachloride	ND	20	ug/L
Chlorobenzene	ND	20	ug/L
Dibromochloromethane	ND	20	ug/L
Chloroethane	ND	40	ug/L
Chloroform	ND	20	ug/L
Chloromethane	ND	40	ug/L
2-Chlorotoluene	ND	20	ug/L
4-Chlorotoluene	ND	20	ug/L
1,2-Dibromo-3-chloropropane (DBCP)	ND	40	ug/L
1,2-Dibromoethane (EDB)	ND	20	ug/L
Dibromomethane	ND	20	ug/L
1,2-Dichlorobenzene	ND	20	ug/L
1,3-Dichlorobenzene	ND	20	ug/L
1,4-Dichlorobenzene	ND	20	ug/L
Dichlorodifluoromethane	ND	40	ug/L
1,1-Dichloroethane	ND	20	ug/L
1,2-Dichloroethane	ND	20	ug/L
cis-1,2-Dichloroethene	**6.6 J**	**20**	**ug/L**
trans-1,2-Dichloroethene	ND	10	ug/L
1,1-Dichloroethene	ND	20	ug/L
1,2-Dichloroethene (total)	**6.6 J**	**20**	**ug/L**
1,2-Dichloropropane	ND	20	ug/L
1,3-Dichloropropane	ND	20	ug/L
2,2-Dichloropropane	ND	100	ug/L
cis-1,3-Dichloropropene	ND	20	ug/L

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ARCADIS GERAGHTY & MILLER, INC

Client Sample ID: MW-12

GC/MS Volatiles

Lot-Sample #...: D4B130209-012 **Work Order #...:** F9KE61AA **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS
trans-1,3-Dichloropropene	ND	20	ug/L
1,1-Dichloropropene	ND	20	ug/L
Ethylbenzene	**49**	**20**	**ug/L**
Hexachlorobutadiene	ND	20	ug/L
2-Hexanone	ND	100	ug/L
Isopropylbenzene	ND	20	ug/L
p-Isopropyltoluene	ND	20	ug/L
Methylene chloride	**12 J,B**	**100**	**ug/L**
4-Methyl-2-pentanone	ND	100	ug/L
Naphthalene	ND	20	ug/L
n-Propylbenzene	ND	20	ug/L
Styrene	ND	20	ug/L
1,1,1,2-Tetrachloroethane	ND	20	ug/L
1,1,2,2-Tetrachloroethane	ND	20	ug/L
Tetrachloroethene	ND	20	ug/L
Toluene	**11 J**	**20**	**ug/L**
1,2,3-Trichlorobenzene	ND	20	ug/L
1,2,4-Trichloro-benzene	ND	20	ug/L
1,1,1-Trichloroethane	ND	20	ug/L
1,1,2-Trichloroethane	ND	20	ug/L
Trichloroethene	ND	20	ug/L
Trichlorofluoromethane	ND	40	ug/L
1,2,3-Trichloropropane	ND	20	ug/L
1,2,4-Trimethylbenzene	**18 J**	**20**	**ug/L**
1,3,5-Trimethylbenzene	**5.3 J**	**20**	**ug/L**
Vinyl chloride	ND	20	ug/L
m-Xylene & p-Xylene	**83**	**40**	**ug/L**
o-Xylene	**49**	**20**	**ug/L**
Xylenes (total)	**130**	**40**	**ug/L**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	104	(76 - 116)
1,2-Dichloroethane-d4	95	(59 - 129)
4-Bromofluorobenzene	100	(74 - 114)
Toluene-d8	98	(76 - 116)

NOTE(S):

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

ARCADIS GERAGHTY & MILLER, INC

Client Sample ID: MW-13

GC/MS Volatiles

Lot-Sample #...: D4B130209-013 **Work Order #...:** F9KE71AA **Matrix.....:** WATER
Date Sampled...: 02/10/04 16:00 **Date Received..:** 02/13/04
Prep Date.....: 02/20/04 **Analysis Date..:** 02/20/04
Prep Batch #...: 4054377 **Analysis Time..:** 19:31
Dilution Factor: 1

Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Bromochloromethane	ND	1.0	ug/L
Bromodichloromethane	**1.3**	**1.0**	**ug/L**
Bromoform	ND	1.0	ug/L
Bromomethane	ND	2.0	ug/L
2-Butanone (MEK)	ND	5.0	ug/L
Acetone	ND	10	ug/L
Benzene	**1.0**	**1.0**	**ug/L**
Bromobenzene	ND	1.0	ug/L
n-Butylbenzene	**0.21 J**	**1.0**	**ug/L**
sec-Butylbenzene	ND	1.0	ug/L
tert-Butylbenzene	ND	1.0	ug/L
Carbon tetrachloride	ND	1.0	ug/L
Chlorobenzene	**0.23 J**	**1.0**	**ug/L**
Dibromochloromethane	**0.84 J**	**1.0**	**ug/L**
Chloroethane	ND	2.0	ug/L
Chloroform	**2.9**	**1.0**	**ug/L**
Chloromethane	ND	2.0	ug/L
2-Chlorotoluene	ND	1.0	ug/L
4-Chlorotoluene	ND	1.0	ug/L
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.0	ug/L
1,2-Dibromoethane (EDB)	ND	1.0	ug/L
Dibromomethane	ND	1.0	ug/L
1,2-Dichlorobenzene	**0.65 J**	**1.0**	**ug/L**
1,3-Dichlorobenzene	ND	1.0	ug/L
1,4-Dichlorobenzene	ND	1.0	ug/L
Dichlorodifluoromethane	ND	2.0	ug/L
1,1-Dichloroethane	**3.2**	**1.0**	**ug/L**
1,2-Dichloroethane	ND	1.0	ug/L
cis-1,2-Dichloroethene	**8.2**	**1.0**	**ug/L**
trans-1,2-Dichloroethene	**0.25 J**	**0.50**	**ug/L**
1,1-Dichloroethene	ND	1.0	ug/L
1,2-Dichloroethene (total)	**8.5**	**1.0**	**ug/L**
1,2-Dichloropropane	ND	1.0	ug/L
1,3-Dichloropropane	ND	1.0	ug/L
2,2-Dichloropropane	ND	5.0	ug/L
cis-1,3-Dichloropropene	ND	1.0	ug/L

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ARCADIS GERAGHTY & MILLER, INC

Client Sample ID: MW-13

GC/MS Volatiles

Lot-Sample #...: D4B130209-013 **Work Order #...:** F9KE71AA **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS
trans-1,3-Dichloropropene	ND	1.0	ug/L
1,1-Dichloropropene	ND	1.0	ug/L
Ethylbenzene	**2.7**	**1.0**	**ug/L**
Hexachlorobutadiene	ND	1.0	ug/L
2-Hexanone	ND	5.0	ug/L
Isopropylbenzene	**0.26 J**	**1.0**	**ug/L**
p-Isopropyltoluene	**0.56 J**	**1.0**	**ug/L**
Methylene chloride	**0.62 J,B**	**5.0**	**ug/L**
4-Methyl-2-pentanone	**1.5 J**	**5.0**	**ug/L**
Naphthalene	**1.3**	**1.0**	**ug/L**
n-Propylbenzene	ND	1.0	ug/L
Styrene	ND	1.0	ug/L
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L
Tetrachloroethene	ND	1.0	ug/L
Toluene	**8.9**	**1.0**	**ug/L**
1,2,3-Trichlorobenzene	ND	1.0	ug/L
1,2,4-Trichloro-benzene	ND	1.0	ug/L
1,1,1-Trichloroethane	ND	1.0	ug/L
1,1,2-Trichloroethane	ND	1.0	ug/L
Trichloroethene	**0.69 J**	**1.0**	**ug/L**
Trichlorofluoromethane	ND	2.0	ug/L
1,2,3-Trichloropropane	ND	1.0	ug/L
1,2,4-Trimethylbenzene	**1.6**	**1.0**	**ug/L**
1,3,5-Trimethylbenzene	**1.1**	**1.0**	**ug/L**
Vinyl chloride	**0.94 J**	**1.0**	**ug/L**
m-Xylene & p-Xylene	**11**	**2.0**	**ug/L**
o-Xylene	**5.5**	**1.0**	**ug/L**
Xylenes (total)	**16**	**2.0**	**ug/L**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	100	(76 - 116)
1,2-Dichloroethane-d4	93	(59 - 129)
4-Bromofluorobenzene	100	(74 - 114)
Toluene-d8	99	(76 - 116)

NOTE(S):

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

ARCADIS GERAGHTY & MILLER, INC

Client Sample ID: DUP#1

GC/MS Volatiles

Lot-Sample #...: D4B130209-014 **Work Order #...:** F9KFC1AA **Matrix.....:** WATER
Date Sampled...: 02/10/04 **Date Received..:** 02/13/04
Prep Date.....: 02/23/04 **Analysis Date..:** 02/23/04
Prep Batch #...: 4056525 **Analysis Time..:** 17:50
Dilution Factor: 1

Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Bromoform	ND	1.0	ug/L
Bromomethane	ND	2.0	ug/L
2-Butanone (MEK)	ND	5.0	ug/L
n-Butylbenzene	ND	1.0	ug/L
sec-Butylbenzene	ND	1.0	ug/L
tert-Butylbenzene	ND	1.0	ug/L
Acetone	ND	10	ug/L
Benzene	**0.93 J**	**1.0**	**ug/L**
Bromobenzene	ND	1.0	ug/L
Bromochloromethane	ND	1.0	ug/L
Bromodichloromethane	**1.3**	**1.0**	**ug/L**
Carbon tetrachloride	ND	1.0	ug/L
Chlorobenzene	ND	1.0	ug/L
Dibromochloromethane	**0.76 J**	**1.0**	**ug/L**
Chloroethane	ND	2.0	ug/L
Chloroform	**2.6**	**1.0**	**ug/L**
Chloromethane	ND	2.0	ug/L
2-Chlorotoluene	ND	1.0	ug/L
4-Chlorotoluene	ND	1.0	ug/L
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.0	ug/L
1,2-Dibromoethane (EDB)	ND	1.0	ug/L
Dibromomethane	ND	1.0	ug/L
1,2-Dichlorobenzene	**0.56 J**	**1.0**	**ug/L**
1,3-Dichlorobenzene	ND	1.0	ug/L
1,4-Dichlorobenzene	ND	1.0	ug/L
Dichlorodifluoromethane	ND	2.0	ug/L
1,1-Dichloroethane	**2.8**	**1.0**	**ug/L**
1,2-Dichloroethane	ND	1.0	ug/L
cis-1,2-Dichloroethene	**7.4**	**1.0**	**ug/L**
trans-1,2-Dichloroethene	ND	0.50	ug/L
1,1-Dichloroethene	ND	1.0	ug/L
1,2-Dichloroethene (total)	**7.4**	**1.0**	**ug/L**
1,2-Dichloropropane	ND	1.0	ug/L
1,3-Dichloropropane	ND	1.0	ug/L
2,2-Dichloropropane	ND	5.0	ug/L
cis-1,3-Dichloropropene	ND	1.0	ug/L

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ARCADIS GERAGHTY & MILLER, INC

Client Sample ID: DUP#1

GC/MS Volatiles

Lot-Sample #...: D4B130209-014 **Work Order #...:** F9KFC1AA **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS
trans-1,3-Dichloropropene	ND	1.0	ug/L
1,1-Dichloropropene	ND	1.0	ug/L
Ethylbenzene	**2.6**	**1.0**	**ug/L**
Hexachlorobutadiene	ND	1.0	ug/L
2-Hexanone	ND	5.0	ug/L
Isopropylbenzene	**0.22 J**	**1.0**	**ug/L**
p-Isopropyltoluene	**0.49 J**	**1.0**	**ug/L**
Methylene chloride	**0.58 J**	**5.0**	**ug/L**
4-Methyl-2-pentanone	**1.2 J**	**5.0**	**ug/L**
Naphthalene	**0.96 J**	**1.0**	**ug/L**
n-Propylbenzene	ND	1.0	ug/L
Styrene	ND	1.0	ug/L
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L
Tetrachloroethene	ND	1.0	ug/L
Toluene	**7.9**	**1.0**	**ug/L**
1,2,3-Trichlorobenzene	ND	1.0	ug/L
1,2,4-Trichloro-benzene	ND	1.0	ug/L
1,1,1-Trichloroethane	ND	1.0	ug/L
1,1,2-Trichloroethane	ND	1.0	ug/L
Trichloroethene	**0.64 J**	**1.0**	**ug/L**
Trichlorofluoromethane	ND	2.0	ug/L
1,2,3-Trichloropropane	ND	1.0	ug/L
1,2,4-Trimethylbenzene	**1.5**	**1.0**	**ug/L**
1,3,5-Trimethylbenzene	**1.0**	**1.0**	**ug/L**
Vinyl chloride	**0.83 J**	**1.0**	**ug/L**
m-Xylene & p-Xylene	**10**	**2.0**	**ug/L**
o-Xylene	**4.9**	**1.0**	**ug/L**
Xylenes (total)	**15**	**2.0**	**ug/L**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	90	(76 - 116)
1,2-Dichloroethane-d4	87	(59 - 129)
4-Bromofluorobenzene	92	(74 - 114)
Toluene-d8	90	(76 - 116)

NOTE(S):

J Estimated result. Result is less than RL.

ARCADIS GERAGHTY & MILLER, INC

Client Sample ID: DUP#2

GC/MS Volatiles

Lot-Sample #...: D4B130209-015 **Work Order #...:** F9KFF1AA **Matrix.....:** WATER
Date Sampled...: 02/11/04 **Date Received..:** 02/13/04
Prep Date.....: 02/20/04 **Analysis Date..:** 02/20/04
Prep Batch #...: 4054378 **Analysis Time..:** 17:12
Dilution Factor: 10

Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acetone	ND	100	ug/L
Benzene	ND	10	ug/L
Bromobenzene	ND	10	ug/L
Bromochloromethane	ND	10	ug/L
Bromodichloromethane	ND	10	ug/L
Bromoform	ND	10	ug/L
Bromomethane	ND	20	ug/L
2-Butanone (MEK)	ND	50	ug/L
n-Butylbenzene	ND	10	ug/L
sec-Butylbenzene	ND	10	ug/L
tert-Butylbenzene	ND	10	ug/L
Carbon tetrachloride	ND	10	ug/L
Chlorobenzene	ND	10	ug/L
Dibromochloromethane	ND	10	ug/L
Chloroethane	ND	20	ug/L
Chloroform	ND	10	ug/L
Chloromethane	ND	20	ug/L
2-Chlorotoluene	ND	10	ug/L
4-Chlorotoluene	ND	10	ug/L
1,2-Dibromo-3-chloropropane (DBCP)	ND	20	ug/L
1,2-Dibromoethane (EDB)	ND	10	ug/L
Dibromomethane	ND	10	ug/L
1,2-Dichlorobenzene	ND	10	ug/L
1,3-Dichlorobenzene	ND	10	ug/L
1,4-Dichlorobenzene	ND	10	ug/L
Dichlorodifluoromethane	ND	20	ug/L
1,1-Dichloroethane	**10**	**10**	**ug/L**
1,2-Dichloroethane	ND	10	ug/L
cis-1,2-Dichloroethene	**250**	**10**	**ug/L**
trans-1,2-Dichloroethene	**25**	**5.0**	**ug/L**
1,1-Dichloroethene	ND	10	ug/L
1,2-Dichloroethene (total)	**280**	**10**	**ug/L**
1,2-Dichloropropane	ND	10	ug/L
1,3-Dichloropropane	ND	10	ug/L
2,2-Dichloropropane	ND	50	ug/L
cis-1,3-Dichloropropene	ND	10	ug/L

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ARCADIS GERAGHTY & MILLER, INC

Client Sample ID: DUP#2

GC/MS Volatiles

Lot-Sample #...: D4B130209-015 **Work Order #...:** F9KFF1AA **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS
trans-1,3-Dichloropropene	ND	10	ug/L
1,1-Dichloropropene	ND	10	ug/L
Ethylbenzene	ND	10	ug/L
Hexachlorobutadiene	ND	10	ug/L
2-Hexanone	ND	50	ug/L
Isopropylbenzene	ND	10	ug/L
p-Isopropyltoluene	ND	10	ug/L
Methylene chloride	ND	50	ug/L
4-Methyl-2-pentanone	ND	50	ug/L
Naphthalene	ND	10	ug/L
n-Propylbenzene	ND	10	ug/L
Styrene	ND	10	ug/L
1,1,1,2-Tetrachloroethane	ND	10	ug/L
1,1,2,2-Tetrachloroethane	ND	10	ug/L
Tetrachloroethene	ND	10	ug/L
Toluene	ND	10	ug/L
1,2,3-Trichlorobenzene	ND	10	ug/L
1,2,4-Trichloro-benzene	ND	10	ug/L
1,1,1-Trichloroethane	ND	10	ug/L
1,1,2-Trichloroethane	ND	10	ug/L
Trichloroethene	ND	10	ug/L
Trichlorofluoromethane	ND	20	ug/L
1,2,3-Trichloropropane	ND	10	ug/L
1,2,4-Trimethylbenzene	ND	10	ug/L
1,3,5-Trimethylbenzene	ND	10	ug/L
Vinyl chloride	**550**	**10**	**ug/L**
m-Xylene & p-Xylene	ND	20	ug/L
o-Xylene	ND	10	ug/L
Xylenes (total)	ND	20	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	106	(76 - 116)
1,2-Dichloroethane-d4	100	(59 - 129)
4-Bromofluorobenzene	99	(74 - 114)
Toluene-d8	100	(76 - 116)

ARCADIS GERAGHTY & MILLER, INC

Client Sample ID: PURGE COMPOSITE 021204

GC/MS Volatiles

Lot-Sample #...: D4B130209-016 **Work Order #...:** F9KFG1AA **Matrix.....:** WATER
Date Sampled...: 02/12/04 15:45 **Date Received..:** 02/13/04
Prep Date.....: 02/20/04 **Analysis Date..:** 02/20/04
Prep Batch #...: 4054378 **Analysis Time..:** 17:35
Dilution Factor: 200

Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acetone	**520 J**	**2000**	**ug/L**
Benzene	**200**	**200**	**ug/L**
Bromobenzene	ND	200	ug/L
Bromochloromethane	ND	200	ug/L
Bromodichloromethane	ND	200	ug/L
Bromoform	ND	200	ug/L
Bromomethane	ND	400	ug/L
2-Butanone (MEK)	ND	1000	ug/L
n-Butylbenzene	ND	200	ug/L
sec-Butylbenzene	ND	200	ug/L
tert-Butylbenzene	ND	200	ug/L
Carbon tetrachloride	ND	200	ug/L
Chlorobenzene	ND	200	ug/L
Dibromochloromethane	ND	200	ug/L
Chloroethane	ND	400	ug/L
Chloroform	ND	200	ug/L
Chloromethane	ND	400	ug/L
2-Chlorotoluene	ND	200	ug/L
4-Chlorotoluene	ND	200	ug/L
1,2-Dibromo-3-chloropropane (DBCP)	ND	400	ug/L
1,2-Dibromoethane (EDB)	ND	200	ug/L
Dibromomethane	ND	200	ug/L
1,2-Dichlorobenzene	ND	200	ug/L
1,3-Dichlorobenzene	ND	200	ug/L
1,4-Dichlorobenzene	**69 J**	**200**	**ug/L**
Dichlorodifluoromethane	ND	400	ug/L
1,1-Dichloroethane	ND	200	ug/L
1,2-Dichloroethane	ND	200	ug/L
cis-1,2-Dichloroethene	**73 J**	**200**	**ug/L**
trans-1,2-Dichloroethene	ND	100	ug/L
1,1-Dichloroethene	ND	200	ug/L
1,2-Dichloroethene (total)	**73 J**	**200**	**ug/L**
1,2-Dichloropropane	ND	200	ug/L
1,3-Dichloropropane	ND	200	ug/L
2,2-Dichloropropane	ND	1000	ug/L
cis-1,3-Dichloropropene	ND	200	ug/L

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ARCADIS GERAGHTY & MILLER, INC

Client Sample ID: PURGE COMPOSITE 021204

GC/MS Volatiles

Lot-Sample #...: D4B130209-016 **Work Order #...:** F9KFG1AA **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS
trans-1,3-Dichloropropene	ND	200	ug/L
1,1-Dichloropropene	ND	200	ug/L
Ethylbenzene	**73 J**	**200**	**ug/L**
Hexachlorobutadiene	ND	200	ug/L
2-Hexanone	ND	1000	ug/L
Isopropylbenzene	ND	200	ug/L
p-Isopropyltoluene	ND	200	ug/L
Methylene chloride	ND	1000	ug/L
4-Methyl-2-pentanone	ND	1000	ug/L
Naphthalene	ND	200	ug/L
n-Propylbenzene	ND	200	ug/L
Styrene	ND	200	ug/L
1,1,1,2-Tetrachloroethane	ND	200	ug/L
1,1,2,2-Tetrachloroethane	ND	200	ug/L
Tetrachloroethene	ND	200	ug/L
Toluene	**5500**	**200**	**ug/L**
1,2,3-Trichlorobenzene	ND	200	ug/L
1,2,4-Trichloro-benzene	ND	200	ug/L
1,1,1-Trichloroethane	ND	200	ug/L
1,1,2-Trichloroethane	ND	200	ug/L
Trichloroethene	ND	200	ug/L
Trichlorofluoromethane	ND	400	ug/L
1,2,3-Trichloropropane	ND	200	ug/L
1,2,4-Trimethylbenzene	ND	200	ug/L
1,3,5-Trimethylbenzene	ND	200	ug/L
Vinyl chloride	**66 J**	**200**	**ug/L**
m-Xylene & p-Xylene	**290 J**	**400**	**ug/L**
o-Xylene	**120 J**	**200**	**ug/L**
Xylenes (total)	**410**	**400**	**ug/L**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	104	(76 - 116)
1,2-Dichloroethane-d4	99	(59 - 129)
4-Bromofluorobenzene	98	(74 - 114)
Toluene-d8	101	(76 - 116)

NOTE(S):

J Estimated result. Result is less than RL.

ARCADIS GERAGHTY & MILLER, INC

Client Sample ID: FBGW0210

GC/MS Volatiles

Lot-Sample #...: D4B130209-017 **Work Order #...:** F9KHA1AA **Matrix.....:** WATER
Date Sampled...: 02/10/04 12:00 **Date Received..:** 02/13/04
Prep Date.....: 02/20/04 **Analysis Date..:** 02/20/04
Prep Batch #...: 4054378 **Analysis Time..:** 17:58
Dilution Factor: 1

Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Vinyl chloride	ND	1.0	ug/L
m-Xylene & p-Xylene	ND	2.0	ug/L
o-Xylene	ND	1.0	ug/L
Xylenes (total)	ND	2.0	ug/L
Dichlorodifluoromethane	ND	2.0	ug/L
1,1-Dichloroethane	ND	1.0	ug/L
1,2-Dichloroethane	ND	1.0	ug/L
cis-1,2-Dichloroethene	ND	1.0	ug/L
trans-1,2-Dichloroethene	ND	0.50	ug/L
1,1-Dichloroethene	ND	1.0	ug/L
1,2-Dichloroethene (total)	ND	1.0	ug/L
1,2-Dichloropropane	ND	1.0	ug/L
1,3-Dichloropropane	ND	1.0	ug/L
2,2-Dichloropropane	ND	5.0	ug/L
cis-1,3-Dichloropropene	ND	1.0	ug/L
trans-1,3-Dichloropropene	ND	1.0	ug/L
1,1-Dichloropropene	ND	1.0	ug/L
Ethylbenzene	ND	1.0	ug/L
Hexachlorobutadiene	ND	1.0	ug/L
2-Hexanone	ND	5.0	ug/L
Isopropylbenzene	ND	1.0	ug/L
p-Isopropyltoluene	ND	1.0	ug/L
Methylene chloride	ND	5.0	ug/L
4-Methyl-2-pentanone	ND	5.0	ug/L
Naphthalene	ND	1.0	ug/L
n-Propylbenzene	ND	1.0	ug/L
Styrene	ND	1.0	ug/L
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L
Tetrachloroethene	ND	1.0	ug/L
Toluene	**0.26 J**	**1.0**	**ug/L**
1,2,3-Trichlorobenzene	ND	1.0	ug/L
1,2,4-Trichloro-benzene	ND	1.0	ug/L
1,1,1-Trichloroethane	ND	1.0	ug/L
1,1,2-Trichloroethane	ND	1.0	ug/L
Trichloroethene	ND	1.0	ug/L

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ARCADIS GERAGHTY & MILLER, INC

Client Sample ID: FBGW0210

GC/MS Volatiles

Lot-Sample #...: D4B130209-017 **Work Order #...:** F9KHA1AA **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Trichlorofluoromethane	ND	2.0	ug/L
1,2,3-Trichloropropane	ND	1.0	ug/L
1,2,4-Trimethylbenzene	ND	1.0	ug/L
1,3,5-Trimethylbenzene	ND	1.0	ug/L
Acetone	ND	10	ug/L
Benzene	ND	1.0	ug/L
Bromobenzene	ND	1.0	ug/L
Bromochloromethane	ND	1.0	ug/L
Bromodichloromethane	ND	1.0	ug/L
Bromoform	ND	1.0	ug/L
Bromomethane	ND	2.0	ug/L
2-Butanone (MEK)	ND	5.0	ug/L
n-Butylbenzene	ND	1.0	ug/L
sec-Butylbenzene	ND	1.0	ug/L
tert-Butylbenzene	ND	1.0	ug/L
Carbon tetrachloride	ND	1.0	ug/L
Chlorobenzene	ND	1.0	ug/L
Dibromochloromethane	ND	1.0	ug/L
Chloroethane	ND	2.0	ug/L
Chloroform	ND	1.0	ug/L
Chloromethane	ND	2.0	ug/L
2-Chlorotoluene	ND	1.0	ug/L
4-Chlorotoluene	ND	1.0	ug/L
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.0	ug/L
1,2-Dibromoethane (EDB)	ND	1.0	ug/L
Dibromomethane	ND	1.0	ug/L
1,2-Dichlorobenzene	ND	1.0	ug/L
1,3-Dichlorobenzene	ND	1.0	ug/L
1,4-Dichlorobenzene	ND	1.0	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	98	(76 - 116)
1,2-Dichloroethane-d4	92	(59 - 129)
4-Bromofluorobenzene	91	(74 - 114)
Toluene-d8	94	(76 - 116)

NOTE(S):

J Estimated result. Result is less than RL.

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ARCADIS GERAGHTY & MILLER, INC

Client Sample ID: TB021004

GC/MS Volatiles

Lot-Sample #...: D4B130209-018 **Work Order #...:** F9KHC1AA **Matrix.....:** WATER
Date Sampled...: 02/10/04 **Date Received..:** 02/13/04
Prep Date.....: 02/20/04 **Analysis Date..:** 02/20/04
Prep Batch #...: 4054378 **Analysis Time..:** 18:22
Dilution Factor: 1

Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acetone	ND	10	ug/L
Benzene	ND	1.0	ug/L
Bromobenzene	ND	1.0	ug/L
Bromochloromethane	ND	1.0	ug/L
Bromodichloromethane	ND	1.0	ug/L
Bromoform	ND	1.0	ug/L
Bromomethane	ND	2.0	ug/L
2-Butanone (MEK)	ND	5.0	ug/L
n-Butylbenzene	ND	1.0	ug/L
sec-Butylbenzene	ND	1.0	ug/L
tert-Butylbenzene	ND	1.0	ug/L
Carbon tetrachloride	ND	1.0	ug/L
Chlorobenzene	ND	1.0	ug/L
Dibromochloromethane	ND	1.0	ug/L
Chloroethane	ND	2.0	ug/L
Chloroform	ND	1.0	ug/L
Chloromethane	ND	2.0	ug/L
2-Chlorotoluene	ND	1.0	ug/L
4-Chlorotoluene	ND	1.0	ug/L
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.0	ug/L
1,2-Dibromoethane (EDB)	ND	1.0	ug/L
Dibromomethane	ND	1.0	ug/L
1,2-Dichlorobenzene	ND	1.0	ug/L
1,3-Dichlorobenzene	ND	1.0	ug/L
1,4-Dichlorobenzene	ND	1.0	ug/L
Dichlorodifluoromethane	ND	2.0	ug/L
1,1-Dichloroethane	ND	1.0	ug/L
1,2-Dichloroethane	ND	1.0	ug/L
cis-1,2-Dichloroethene	ND	1.0	ug/L
trans-1,2-Dichloroethene	ND	0.50	ug/L
1,1-Dichloroethene	ND	1.0	ug/L
1,2-Dichloroethene (total)	ND	1.0	ug/L
1,2-Dichloropropane	ND	1.0	ug/L
1,3-Dichloropropane	ND	1.0	ug/L
2,2-Dichloropropane	ND	5.0	ug/L
cis-1,3-Dichloropropene	ND	1.0	ug/L

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ARCADIS GERAGHTY & MILLER, INC

Client Sample ID: TB021004

GC/MS Volatiles

Lot-Sample #...: D4B130209-018 **Work Order #...:** F9KHC1AA **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS
trans-1,3-Dichloropropene	ND	1.0	ug/L
1,1-Dichloropropene	ND	1.0	ug/L
Ethylbenzene	ND	1.0	ug/L
Hexachlorobutadiene	ND	1.0	ug/L
2-Hexanone	ND	5.0	ug/L
Isopropylbenzene	ND	1.0	ug/L
p-Isopropyltoluene	ND	1.0	ug/L
Methylene chloride	ND	5.0	ug/L
4-Methyl-2-pentanone	ND	5.0	ug/L
Naphthalene	ND	1.0	ug/L
n-Propylbenzene	ND	1.0	ug/L
Styrene	ND	1.0	ug/L
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L
Tetrachloroethene	ND	1.0	ug/L
Toluene	ND	1.0	ug/L
1,2,3-Trichlorobenzene	ND	1.0	ug/L
1,2,4-Trichloro-benzene	ND	1.0	ug/L
1,1,1-Trichloroethane	ND	1.0	ug/L
1,1,2-Trichloroethane	ND	1.0	ug/L
Trichloroethene	ND	1.0	ug/L
Trichlorofluoromethane	ND	2.0	ug/L
1,2,3-Trichloropropane	ND	1.0	ug/L
1,2,4-Trimethylbenzene	ND	1.0	ug/L
1,3,5-Trimethylbenzene	ND	1.0	ug/L
Vinyl chloride	ND	1.0	ug/L
m-Xylene & p-Xylene	ND	2.0	ug/L
o-Xylene	ND	1.0	ug/L
Xylenes (total)	ND	2.0	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	106	(76 - 116)
1,2-Dichloroethane-d4	102	(59 - 129)
4-Bromofluorobenzene	98	(74 - 114)
Toluene-d8	103	(76 - 116)

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QC DATA ASSOCIATION SUMMARY

D4B130209

Sample Preparation and Analysis Control Numbers

SAMPLE#	MATRIX	ANALYTICAL METHOD	LEACH BATCH #	PREP BATCH #	MS RUN#
001	WATER	SW846 8260B		4054377	4054219
002	WATER	SW846 8260B		4054377	4054219
003	WATER	SW846 8260B		4054377	4054219
004	WATER	SW846 8260B		4054377	4054219
005	WATER	SW846 8260B		4054377	4054219
006	WATER	SW846 8260B		4054377	4054219
007	WATER	SW846 8260B		4054377	4054219
008	WATER	SW846 8260B		4054377	4054219
009	WATER	SW846 8260B		4054377	4054219
010	WATER	SW846 8260B		4054377	4054219
011	WATER	SW846 8260B		4054377	4054219
012	WATER	SW846 8260B		4054377	4054219
013	WATER	SW846 8260B		4054377	4054219
014	WATER	SW846 8260B		4056525	4056259
015	WATER	SW846 8260B		4054378	4055209
016	WATER	SW846 8260B		4054378	4055209
017	WATER	SW846 8260B		4054378	4055209
018	WATER	SW846 8260B		4054378	4055209

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: D4B130209 **Work Order #...:** F929E1AE **Matrix.....:** WATER
MB Lot-Sample #: D4B230000-377

Prep Date.....: 02/20/04 **Analysis Time..:** 11:58
Analysis Date..: 02/20/04 **Prep Batch #...:** 4054377
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
2-Chlorotoluene	ND	1.0	ug/L	SW846 8260B
1,2-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
1,3-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
1,4-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
cis-1,2-Dichloroethene	ND	1.0	ug/L	SW846 8260B
trans-1,2-Dichloroethene	ND	0.50	ug/L	SW846 8260B
Benzene	ND	1.0	ug/L	SW846 8260B
1,3-Dichloropropane	ND	1.0	ug/L	SW846 8260B
Ethylbenzene	ND	1.0	ug/L	SW846 8260B
Naphthalene	ND	1.0	ug/L	SW846 8260B
Toluene	ND	1.0	ug/L	SW846 8260B
Xylenes (total)	ND	2.0	ug/L	SW846 8260B
2,2-Dichloropropane	ND	5.0	ug/L	SW846 8260B
Bromobenzene	ND	1.0	ug/L	SW846 8260B
Bromochloromethane	ND	1.0	ug/L	SW846 8260B
Acetone	ND	10	ug/L	SW846 8260B
Bromodichloromethane	ND	1.0	ug/L	SW846 8260B
Bromoform	ND	1.0	ug/L	SW846 8260B
Bromomethane	ND	2.0	ug/L	SW846 8260B
Carbon tetrachloride	ND	1.0	ug/L	SW846 8260B
Chlorobenzene	ND	1.0	ug/L	SW846 8260B
Dibromochloromethane	ND	1.0	ug/L	SW846 8260B
Chloroethane	ND	2.0	ug/L	SW846 8260B
Chloroform	ND	1.0	ug/L	SW846 8260B
Chloromethane	ND	2.0	ug/L	SW846 8260B
Dibromomethane	ND	1.0	ug/L	SW846 8260B
Dichlorodifluoromethane	ND	2.0	ug/L	SW846 8260B
1,1-Dichloroethane	ND	1.0	ug/L	SW846 8260B
1,2-Dichloroethane	ND	1.0	ug/L	SW846 8260B
1,1-Dichloroethene	ND	1.0	ug/L	SW846 8260B
1,2-Dichloroethene (total)	ND	1.0	ug/L	SW846 8260B
1,2-Dichloropropane	ND	1.0	ug/L	SW846 8260B
cis-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260B
trans-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260B
Trichlorofluoromethane	ND	2.0	ug/L	SW846 8260B
2-Hexanone	ND	5.0	ug/L	SW846 8260B
Methylene chloride	**0.31 J**	**5.0**	**ug/L**	**SW846 8260B**
4-Methyl-2-pentanone	ND	5.0	ug/L	SW846 8260B
Styrene	ND	1.0	ug/L	SW846 8260B
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	SW846 8260B

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METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: D4B130209 **Work Order #...:** F929E1AE **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	SW846 8260B
Tetrachloroethene	ND	1.0	ug/L	SW846 8260B
1,1,1-Trichloroethane	ND	1.0	ug/L	SW846 8260B
1,1,2-Trichloroethane	ND	1.0	ug/L	SW846 8260B
Trichloroethene	ND	1.0	ug/L	SW846 8260B
1,2,3-Trichloropropane	ND	1.0	ug/L	SW846 8260B
Vinyl chloride	ND	1.0	ug/L	SW846 8260B
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.0	ug/L	SW846 8260B
1,2-Dibromoethane (EDB)	ND	1.0	ug/L	SW846 8260B
2-Butanone (MEK)	ND	5.0	ug/L	SW846 8260B
n-Butylbenzene	ND	1.0	ug/L	SW846 8260B
sec-Butylbenzene	ND	1.0	ug/L	SW846 8260B
tert-Butylbenzene	ND	1.0	ug/L	SW846 8260B
4-Chlorotoluene	ND	1.0	ug/L	SW846 8260B
1,1-Dichloropropene	ND	1.0	ug/L	SW846 8260B
Hexachlorobutadiene	ND	1.0	ug/L	SW846 8260B
Isopropylbenzene	ND	1.0	ug/L	SW846 8260B
p-Isopropyltoluene	ND	1.0	ug/L	SW846 8260B
n-Propylbenzene	ND	1.0	ug/L	SW846 8260B
1,2,3-Trichlorobenzene	ND	1.0	ug/L	SW846 8260B
1,2,4-Trichloro-benzene	ND	1.0	ug/L	SW846 8260B
1,2,4-Trimethylbenzene	ND	1.0	ug/L	SW846 8260B
1,3,5-Trimethylbenzene	ND	1.0	ug/L	SW846 8260B
o-Xylene	ND	1.0	ug/L	SW846 8260B
m-Xylene & p-Xylene	ND	2.0	ug/L	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	90	(76 - 116)
1,2-Dichloroethane-d4	85	(59 - 129)
4-Bromofluorobenzene	95	(74 - 114)
Toluene-d8	93	(76 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

J Estimated result. Result is less than RL.

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: D4B130209 **Work Order #...:** F94261AA **Matrix.....:** WATER
MB Lot-Sample #: D4B230000-378

Prep Date.....: 02/20/04 **Analysis Time..:** 12:12
Analysis Date..: 02/20/04 **Prep Batch #...:** 4054378
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Acetone	ND	10	ug/L	SW846 8260B
Benzene	ND	1.0	ug/L	SW846 8260B
Bromobenzene	ND	1.0	ug/L	SW846 8260B
Bromochloromethane	ND	1.0	ug/L	SW846 8260B
Bromodichloromethane	ND	1.0	ug/L	SW846 8260B
Bromoform	ND	1.0	ug/L	SW846 8260B
Bromomethane	ND	2.0	ug/L	SW846 8260B
n-Butylbenzene	ND	1.0	ug/L	SW846 8260B
sec-Butylbenzene	ND	1.0	ug/L	SW846 8260B
tert-Butylbenzene	ND	1.0	ug/L	SW846 8260B
Carbon tetrachloride	ND	1.0	ug/L	SW846 8260B
Chlorobenzene	ND	1.0	ug/L	SW846 8260B
Dibromochloromethane	ND	1.0	ug/L	SW846 8260B
Chloroethane	ND	2.0	ug/L	SW846 8260B
Chloroform	ND	1.0	ug/L	SW846 8260B
Chloromethane	ND	2.0	ug/L	SW846 8260B
2-Chlorotoluene	ND	1.0	ug/L	SW846 8260B
4-Chlorotoluene	ND	1.0	ug/L	SW846 8260B
Dibromomethane	ND	1.0	ug/L	SW846 8260B
1,2-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
1,3-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
1,4-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
Dichlorodifluoromethane	ND	2.0	ug/L	SW846 8260B
1,1-Dichloroethane	ND	1.0	ug/L	SW846 8260B
1,2-Dichloroethane	ND	1.0	ug/L	SW846 8260B
1,1-Dichloroethene	ND	1.0	ug/L	SW846 8260B
cis-1,2-Dichloroethene	ND	1.0	ug/L	SW846 8260B
trans-1,2-Dichloroethene	ND	0.50	ug/L	SW846 8260B
1,2-Dichloroethene (total)	ND	1.0	ug/L	SW846 8260B
1,2-Dichloropropane	ND	1.0	ug/L	SW846 8260B
1,3-Dichloropropane	ND	1.0	ug/L	SW846 8260B
2,2-Dichloropropane	ND	5.0	ug/L	SW846 8260B
1,1-Dichloropropene	ND	1.0	ug/L	SW846 8260B
cis-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260B
trans-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260B
Ethylbenzene	ND	1.0	ug/L	SW846 8260B
Trichlorofluoromethane	ND	2.0	ug/L	SW846 8260B
Hexachlorobutadiene	ND	1.0	ug/L	SW846 8260B
2-Hexanone	ND	5.0	ug/L	SW846 8260B
Isopropylbenzene	ND	1.0	ug/L	SW846 8260B

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METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: D4B130209 **Work Order #...:** F94261AA **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
p-Isopropyltoluene	ND	1.0	ug/L	SW846 8260B
Methylene chloride	ND	5.0	ug/L	SW846 8260B
4-Methyl-2-pentanone	ND	5.0	ug/L	SW846 8260B
Naphthalene	ND	1.0	ug/L	SW846 8260B
n-Propylbenzene	ND	1.0	ug/L	SW846 8260B
Styrene	ND	1.0	ug/L	SW846 8260B
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	SW846 8260B
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	SW846 8260B
Tetrachloroethene	ND	1.0	ug/L	SW846 8260B
Toluene	ND	1.0	ug/L	SW846 8260B
1,2,3-Trichlorobenzene	ND	1.0	ug/L	SW846 8260B
1,2,4-Trichloro-benzene	ND	1.0	ug/L	SW846 8260B
1,1,1-Trichloroethane	ND	1.0	ug/L	SW846 8260B
1,1,2-Trichloroethane	ND	1.0	ug/L	SW846 8260B
Trichloroethene	ND	1.0	ug/L	SW846 8260B
1,2,3-Trichloropropane	ND	1.0	ug/L	SW846 8260B
1,2,4-Trimethylbenzene	ND	1.0	ug/L	SW846 8260B
1,3,5-Trimethylbenzene	ND	1.0	ug/L	SW846 8260B
Vinyl chloride	ND	1.0	ug/L	SW846 8260B
o-Xylene	ND	1.0	ug/L	SW846 8260B
Xylenes (total)	ND	2.0	ug/L	SW846 8260B
m-Xylene & p-Xylene	ND	2.0	ug/L	SW846 8260B
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.0	ug/L	SW846 8260B
1,2-Dibromoethane (EDB)	ND	1.0	ug/L	SW846 8260B
2-Butanone (MEK)	ND	5.0	ug/L	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	107	(76 - 116)
1,2-Dichloroethane-d4	100	(59 - 129)
4-Bromofluorobenzene	100	(74 - 114)
Toluene-d8	104	(76 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: D4B130209 **Work Order #...:** F97FG1AE **Matrix.....:** WATER
MB Lot-Sample #: D4B250000-525

Prep Date.....: 02/23/04 **Analysis Time..:** 10:01
Analysis Date..: 02/23/04 **Prep Batch #...:** 4056525
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Bromobenzene	ND	1.0	ug/L	SW846 8260B
Bromochloromethane	ND	1.0	ug/L	SW846 8260B
n-Butylbenzene	ND	1.0	ug/L	SW846 8260B
sec-Butylbenzene	ND	1.0	ug/L	SW846 8260B
Acetone	ND	10	ug/L	SW846 8260B
Benzene	ND	1.0	ug/L	SW846 8260B
Bromodichloromethane	ND	1.0	ug/L	SW846 8260B
Bromoform	ND	1.0	ug/L	SW846 8260B
Bromomethane	ND	2.0	ug/L	SW846 8260B
Carbon tetrachloride	ND	1.0	ug/L	SW846 8260B
Chlorobenzene	ND	1.0	ug/L	SW846 8260B
Dibromochloromethane	ND	1.0	ug/L	SW846 8260B
Chloroethane	ND	2.0	ug/L	SW846 8260B
Chloroform	ND	1.0	ug/L	SW846 8260B
Chloromethane	ND	2.0	ug/L	SW846 8260B
1,1-Dichloroethane	ND	1.0	ug/L	SW846 8260B
1,2-Dichloroethane	ND	1.0	ug/L	SW846 8260B
1,1-Dichloroethene	ND	1.0	ug/L	SW846 8260B
cis-1,2-Dichloroethene	ND	1.0	ug/L	SW846 8260B
trans-1,2-Dichloroethene	ND	0.50	ug/L	SW846 8260B
1,2-Dichloropropane	ND	1.0	ug/L	SW846 8260B
cis-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260B
trans-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260B
Ethylbenzene	ND	1.0	ug/L	SW846 8260B
2-Hexanone	ND	5.0	ug/L	SW846 8260B
Methylene chloride	ND	5.0	ug/L	SW846 8260B
4-Methyl-2-pentanone	ND	5.0	ug/L	SW846 8260B
Styrene	ND	1.0	ug/L	SW846 8260B
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	SW846 8260B
Tetrachloroethene	ND	1.0	ug/L	SW846 8260B
Toluene	ND	1.0	ug/L	SW846 8260B
1,1,1-Trichloroethane	ND	1.0	ug/L	SW846 8260B
1,1,2-Trichloroethane	ND	1.0	ug/L	SW846 8260B
Trichloroethene	ND	1.0	ug/L	SW846 8260B
Vinyl chloride	ND	1.0	ug/L	SW846 8260B
Xylenes (total)	ND	2.0	ug/L	SW846 8260B
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.0	ug/L	SW846 8260B
1,2-Dibromoethane (EDB)	ND	1.0	ug/L	SW846 8260B
2-Butanone (MEK)	ND	5.0	ug/L	SW846 8260B
tert-Butylbenzene	ND	1.0	ug/L	SW846 8260B

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METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: D4B130209 **Work Order #...:** F97FG1AE **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
2-Chlorotoluene	ND	1.0	ug/L	SW846 8260B
4-Chlorotoluene	ND	1.0	ug/L	SW846 8260B
Dibromomethane	ND	1.0	ug/L	SW846 8260B
1,2-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
1,3-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
1,4-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
Dichlorodifluoromethane	ND	2.0	ug/L	SW846 8260B
1,2-Dichloroethene (total)	ND	1.0	ug/L	SW846 8260B
1,3-Dichloropropane	ND	1.0	ug/L	SW846 8260B
2,2-Dichloropropane	ND	5.0	ug/L	SW846 8260B
1,1-Dichloropropene	ND	1.0	ug/L	SW846 8260B
Trichlorofluoromethane	ND	2.0	ug/L	SW846 8260B
Hexachlorobutadiene	ND	1.0	ug/L	SW846 8260B
Isopropylbenzene	ND	1.0	ug/L	SW846 8260B
p-Isopropyltoluene	ND	1.0	ug/L	SW846 8260B
Naphthalene	ND	1.0	ug/L	SW846 8260B
n-Propylbenzene	ND	1.0	ug/L	SW846 8260B
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	SW846 8260B
1,2,3-Trichlorobenzene	ND	1.0	ug/L	SW846 8260B
1,2,4-Trichloro-benzene	ND	1.0	ug/L	SW846 8260B
1,2,3-Trichloropropane	ND	1.0	ug/L	SW846 8260B
1,2,4-Trimethylbenzene	ND	1.0	ug/L	SW846 8260B
1,3,5-Trimethylbenzene	ND	1.0	ug/L	SW846 8260B
o-Xylene	ND	1.0	ug/L	SW846 8260B
m-Xylene & p-Xylene	ND	2.0	ug/L	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	92	(76 - 116)
1,2-Dichloroethane-d4	85	(59 - 129)
4-Bromofluorobenzene	97	(74 - 114)
Toluene-d8	92	(76 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: D4B130209 **Work Order #...:** F929E1AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: D4B230000-377 F929E1AD-LCSD
Prep Date.....: 02/20/04 **Analysis Date..:** 02/20/04
Prep Batch #...: 4054377 **Analysis Time..:** 11:18
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Chlorobenzene	**98**	**(77 - 117)**			**SW846 8260B**
	99	**(77 - 117)**	**1.2**	**(0-20)**	**SW846 8260B**
Toluene	**92**	**(74 - 115)**			**SW846 8260B**
	93	**(74 - 115)**	**1.2**	**(0-20)**	**SW846 8260B**
Trichloroethene	**94**	**(80 - 123)**			**SW846 8260B**
	101	**(80 - 123)**	**6.5**	**(0-20)**	**SW846 8260B**
1,1-Dichloroethene	**75**	**(67 - 125)**			**SW846 8260B**
	77	**(67 - 125)**	**1.9**	**(0-20)**	**SW846 8260B**
Benzene	**94**	**(75 - 116)**			**SW846 8260B**
	94	**(75 - 116)**	**0.59**	**(0-20)**	**SW846 8260B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	91	(76 - 116)
	92	(76 - 116)
1,2-Dichloroethane-d4	87	(59 - 129)
	86	(59 - 129)
4-Bromofluorobenzene	94	(74 - 114)
	95	(74 - 114)
Toluene-d8	93	(76 - 116)
	93	(76 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: D4B130209 **Work Order #...:** F929E1AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: D4B230000-377 F929E1AD-LCSD
Prep Date.....: 02/20/04 **Analysis Date..:** 02/20/04
Prep Batch #...: 4054377 **Analysis Time..:** 11:18
Dilution Factor: 1

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	RPD	METHOD
Chlorobenzene	**10.0**	**9.80**	**ug/L**	**98**		**SW846 8260B**
	10.0	**9.92**	**ug/L**	**99**	**1.2**	**SW846 8260B**
Toluene	**10.0**	**9.17**	**ug/L**	**92**		**SW846 8260B**
	10.0	**9.28**	**ug/L**	**93**	**1.2**	**SW846 8260B**
Trichloroethene	**10.0**	**9.42**	**ug/L**	**94**		**SW846 8260B**
	10.0	**10.1**	**ug/L**	**101**	**6.5**	**SW846 8260B**
1,1-Dichloroethene	**10.0**	**7.51**	**ug/L**	**75**		**SW846 8260B**
	10.0	**7.66**	**ug/L**	**77**	**1.9**	**SW846 8260B**
Benzene	**10.0**	**9.39**	**ug/L**	**94**		**SW846 8260B**
	10.0	**9.45**	**ug/L**	**94**	**0.59**	**SW846 8260B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	91	(76 - 116)
	92	(76 - 116)
1,2-Dichloroethane-d4	87	(59 - 129)
	86	(59 - 129)
4-Bromofluorobenzene	94	(74 - 114)
	95	(74 - 114)
Toluene-d8	93	(76 - 116)
	93	(76 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: D4B130209 **Work Order #...:** F94261AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: D4B230000-378 F94261AD-LCSD
Prep Date.....: 02/20/04 **Analysis Date..:** 02/20/04
Prep Batch #...: 4054378 **Analysis Time..:** 11:26
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
1,1-Dichloroethene	**81**	**(67 - 125)**			**SW846 8260B**
	85	**(67 - 125)**	**5.2**	**(0-20)**	**SW846 8260B**
Benzene	**87**	**(75 - 116)**			**SW846 8260B**
	92	**(75 - 116)**	**4.5**	**(0-20)**	**SW846 8260B**
Chlorobenzene	**88**	**(77 - 117)**			**SW846 8260B**
	95	**(77 - 117)**	**7.7**	**(0-20)**	**SW846 8260B**
Toluene	**82**	**(74 - 115)**			**SW846 8260B**
	89	**(74 - 115)**	**8.5**	**(0-20)**	**SW846 8260B**
Trichloroethene	**94**	**(80 - 123)**			**SW846 8260B**
	100	**(80 - 123)**	**6.2**	**(0-20)**	**SW846 8260B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	98	(76 - 116)
	105	(76 - 116)
1,2-Dichloroethane-d4	91	(59 - 129)
	98	(59 - 129)
4-Bromofluorobenzene	91	(74 - 114)
	96	(74 - 114)
Toluene-d8	94	(76 - 116)
	101	(76 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: D4B130209 **Work Order #...:** F94261AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: D4B230000-378 F94261AD-LCSD
Prep Date.....: 02/20/04 **Analysis Date..:** 02/20/04
Prep Batch #...: 4054378 **Analysis Time..:** 11:26
Dilution Factor: 1

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	RPD	METHOD
1,1-Dichloroethene	**10.0**	**8.11**	**ug/L**	**81**		**SW846 8260B**
	10.0	**8.55**	**ug/L**	**85**	**5.2**	**SW846 8260B**
Benzene	**10.0**	**8.75**	**ug/L**	**87**		**SW846 8260B**
	10.0	**9.15**	**ug/L**	**92**	**4.5**	**SW846 8260B**
Chlorobenzene	**10.0**	**8.81**	**ug/L**	**88**		**SW846 8260B**
	10.0	**9.52**	**ug/L**	**95**	**7.7**	**SW846 8260B**
Toluene	**10.0**	**8.20**	**ug/L**	**82**		**SW846 8260B**
	10.0	**8.92**	**ug/L**	**89**	**8.5**	**SW846 8260B**
Trichloroethene	**10.0**	**9.36**	**ug/L**	**94**		**SW846 8260B**
	10.0	**9.96**	**ug/L**	**100**	**6.2**	**SW846 8260B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	98	(76 - 116)
	105	(76 - 116)
1,2-Dichloroethane-d4	91	(59 - 129)
	98	(59 - 129)
4-Bromofluorobenzene	91	(74 - 114)
	96	(74 - 114)
Toluene-d8	94	(76 - 116)
	101	(76 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

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LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: D4B130209 **Work Order #...:** F97FG1AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: D4B250000-525 F97FG1AD-LCSD
Prep Date.....: 02/23/04 **Analysis Date..:** 02/23/04
Prep Batch #...: 4056525 **Analysis Time..:** 09:22
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
1,1-Dichloroethene	**78**	**(67 - 125)**			**SW846 8260B**
	76	**(67 - 125)**	**2.5**	**(0-20)**	**SW846 8260B**
Benzene	**95**	**(75 - 116)**			**SW846 8260B**
	95	**(75 - 116)**	**0.020**	**(0-20)**	**SW846 8260B**
Chlorobenzene	**99**	**(77 - 117)**			**SW846 8260B**
	99	**(77 - 117)**	**0.050**	**(0-20)**	**SW846 8260B**
Toluene	**93**	**(74 - 115)**			**SW846 8260B**
	93	**(74 - 115)**	**0.64**	**(0-20)**	**SW846 8260B**
Trichloroethene	**101**	**(80 - 123)**			**SW846 8260B**
	101	**(80 - 123)**	**0.060**	**(0-20)**	**SW846 8260B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	93	(76 - 116)
	92	(76 - 116)
1,2-Dichloroethane-d4	88	(59 - 129)
	87	(59 - 129)
4-Bromofluorobenzene	96	(74 - 114)
	96	(74 - 114)
Toluene-d8	94	(76 - 116)
	92	(76 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: D4B130209 **Work Order #...:** F97FG1AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: D4B250000-525 F97FG1AD-LCSD
Prep Date.....: 02/23/04 **Analysis Date..:** 02/23/04
Prep Batch #...: 4056525 **Analysis Time..:** 09:22
Dilution Factor: 1

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	RPD	METHOD
1,1-Dichloroethene	**10.0**	**7.80**	**ug/L**	**78**		**SW846 8260B**
	10.0	**7.61**	**ug/L**	**76**	**2.5**	**SW846 8260B**
Benzene	**10.0**	**9.51**	**ug/L**	**95**		**SW846 8260B**
	10.0	**9.51**	**ug/L**	**95**	**0.020**	**SW846 8260B**
Chlorobenzene	**10.0**	**9.86**	**ug/L**	**99**		**SW846 8260B**
	10.0	**9.87**	**ug/L**	**99**	**0.050**	**SW846 8260B**
Toluene	**10.0**	**9.32**	**ug/L**	**93**		**SW846 8260B**
	10.0	**9.26**	**ug/L**	**93**	**0.64**	**SW846 8260B**
Trichloroethene	**10.0**	**10.1**	**ug/L**	**101**		**SW846 8260B**
	10.0	**10.1**	**ug/L**	**101**	**0.060**	**SW846 8260B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	93	(76 - 116)
	92	(76 - 116)
1,2-Dichloroethane-d4	88	(59 - 129)
	87	(59 - 129)
4-Bromofluorobenzene	96	(74 - 114)
	96	(74 - 114)
Toluene-d8	94	(76 - 116)
	92	(76 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: D4B130209 **Work Order #...:** F9KEM1AC-MS **Matrix.....:** WATER
MS Lot-Sample #: D4B130209-005 F9KEM1AD-MSD
Date Sampled...: 02/11/04 12:40 **Date Received..:** 02/13/04
Prep Date.....: 02/20/04 **Analysis Date..:** 02/20/04
Prep Batch #...: 4054377 **Analysis Time..:** 16:31
Dilution Factor: 20

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
1,1-Dichloroethene	**87**	**(67 - 125)**			**SW846 8260B**
	88	**(67 - 125)**	**0.36**	**(0-20)**	**SW846 8260B**
Benzene	**108**	**(75 - 116)**			**SW846 8260B**
	107	**(75 - 116)**	**1.3**	**(0-20)**	**SW846 8260B**
Chlorobenzene	**113**	**(77 - 117)**			**SW846 8260B**
	113	**(77 - 117)**	**0.19**	**(0-20)**	**SW846 8260B**
Toluene	**107**	**(74 - 115)**			**SW846 8260B**
	107	**(74 - 115)**	**0.25**	**(0-20)**	**SW846 8260B**
Trichloroethene	**114**	**(80 - 123)**			**SW846 8260B**
	114	**(80 - 123)**	**0.24**	**(0-20)**	**SW846 8260B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	99	(76 - 116)
	97	(76 - 116)
1,2-Dichloroethane-d4	94	(59 - 129)
	91	(59 - 129)
4-Bromofluorobenzene	103	(74 - 114)
	101	(74 - 114)
Toluene-d8	102	(76 - 116)
	100	(76 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: D4B130209 **Work Order #...:** F9KEM1AC-MS **Matrix.....:** WATER
MS Lot-Sample #: D4B130209-005 F9KEM1AD-MSD
Date Sampled...: 02/11/04 12:40 **Date Received..:** 02/13/04
Prep Date.....: 02/20/04 **Analysis Date..:** 02/20/04
Prep Batch #...: 4054377 **Analysis Time..:** 16:31
Dilution Factor: 20

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
1,1-Dichloroethene	**ND**	**200**	**175**	**ug/L**	**87**		**SW846 8260B**
	ND	**200**	**176**	**ug/L**	**88**	**0.36**	**SW846 8260B**
Benzene	**ND**	**200**	**216**	**ug/L**	**108**		**SW846 8260B**
	ND	**200**	**213**	**ug/L**	**107**	**1.3**	**SW846 8260B**
Chlorobenzene	**ND**	**200**	**226**	**ug/L**	**113**		**SW846 8260B**
	ND	**200**	**225**	**ug/L**	**113**	**0.19**	**SW846 8260B**
Toluene	**ND**	**200**	**215**	**ug/L**	**107**		**SW846 8260B**
	ND	**200**	**214**	**ug/L**	**107**	**0.25**	**SW846 8260B**
Trichloroethene	**ND**	**200**	**228**	**ug/L**	**114**		**SW846 8260B**
	ND	**200**	**228**	**ug/L**	**114**	**0.24**	**SW846 8260B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	99	(76 - 116)
	97	(76 - 116)
1,2-Dichloroethane-d4	94	(59 - 129)
	91	(59 - 129)
4-Bromofluorobenzene	103	(74 - 114)
	101	(74 - 114)
Toluene-d8	102	(76 - 116)
	100	(76 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

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MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: D4B130209 **Work Order #...:** F9RDV1D1-MS **Matrix.....:** WATER
MS Lot-Sample #: D4B180233-017 F9RDV1D2-MSD
Date Sampled...: 02/16/04 17:45 **Date Received..:** 02/18/04
Prep Date.....: 02/20/04 **Analysis Date..:** 02/20/04
Prep Batch #...: 4054378 **Analysis Time..:** 16:19
Dilution Factor: 666.7

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
1,1-Dichloroethene	**86**	**(67 - 125)**			**SW846 8260B**
	79	**(67 - 125)**	**7.7**	**(0-20)**	**SW846 8260B**
Benzene	**90**	**(75 - 116)**			**SW846 8260B**
	84	**(75 - 116)**	**7.6**	**(0-20)**	**SW846 8260B**
Chlorobenzene	**91**	**(77 - 117)**			**SW846 8260B**
	86	**(77 - 117)**	**6.1**	**(0-20)**	**SW846 8260B**
Toluene	**88**	**(74 - 115)**			**SW846 8260B**
	83	**(74 - 115)**	**5.7**	**(0-20)**	**SW846 8260B**
Trichloroethene	**101**	**(80 - 123)**			**SW846 8260B**
	93	**(80 - 123)**	**7.7**	**(0-20)**	**SW846 8260B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	105	(76 - 116)
	98	(76 - 116)
1,2-Dichloroethane-d4	100	(59 - 129)
	92	(59 - 129)
4-Bromofluorobenzene	97	(74 - 114)
	90	(74 - 114)
Toluene-d8	97	(76 - 116)
	93	(76 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: D4B130209 **Work Order #...:** F9RDV1D1-MS **Matrix.....:** WATER
MS Lot-Sample #: D4B180233-017 F9RDV1D2-MSD
Date Sampled...: 02/16/04 17:45 **Date Received..:** 02/18/04
Prep Date.....: 02/20/04 **Analysis Date..:** 02/20/04
Prep Batch #...: 4054378 **Analysis Time..:** 16:19
Dilution Factor: 666.7

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
1,1-Dichloroethene	**ND**	**6670**	**5720**	**ug/L**	**86**		**SW846 8260B**
	ND	**6670**	**5300**	**ug/L**	**79**	**7.7**	**SW846 8260B**
Benzene	**ND**	**6670**	**6020**	**ug/L**	**90**		**SW846 8260B**
	ND	**6670**	**5580**	**ug/L**	**84**	**7.6**	**SW846 8260B**
Chlorobenzene	**ND**	**6670**	**6090**	**ug/L**	**91**		**SW846 8260B**
	ND	**6670**	**5730**	**ug/L**	**86**	**6.1**	**SW846 8260B**
Toluene	**ND**	**6670**	**5840**	**ug/L**	**88**		**SW846 8260B**
	ND	**6670**	**5510**	**ug/L**	**83**	**5.7**	**SW846 8260B**
Trichloroethene	**360**	**6670**	**7110**	**ug/L**	**101**		**SW846 8260B**
	360	**6670**	**6580**	**ug/L**	**93**	**7.7**	**SW846 8260B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	105	(76 - 116)
	98	(76 - 116)
1,2-Dichloroethane-d4	100	(59 - 129)
	92	(59 - 129)
4-Bromofluorobenzene	97	(74 - 114)
	90	(74 - 114)
Toluene-d8	97	(76 - 116)
	93	(76 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: D4B130209 **Work Order #...:** F9MNJ1AD-MS **Matrix.....:** WATER
MS Lot-Sample #: D4B160153-007 F9MNJ1AE-MSD
Date Sampled...: 02/13/04 12:45 **Date Received..:** 02/14/04
Prep Date.....: 02/23/04 **Analysis Date..:** 02/23/04
Prep Batch #...: 4056525 **Analysis Time..:** 13:51
Dilution Factor: 2.5

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
1,1-Dichloroethene	**119**	**(67 - 125)**			**SW846 8260B**
	136 a	**(67 - 125)**	**14**	**(0-20)**	**SW846 8260B**
Benzene	**124 a**	**(75 - 116)**			**SW846 8260B**
	121 a	**(75 - 116)**	**1.4**	**(0-20)**	**SW846 8260B**
Chlorobenzene	**111**	**(77 - 117)**			**SW846 8260B**
	108	**(77 - 117)**	**2.7**	**(0-20)**	**SW846 8260B**
Toluene	**112**	**(74 - 115)**			**SW846 8260B**
	109	**(74 - 115)**	**2.5**	**(0-20)**	**SW846 8260B**
Trichloroethene	**120**	**(80 - 123)**			**SW846 8260B**
	121	**(80 - 123)**	**1.5**	**(0-20)**	**SW846 8260B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	103	(76 - 116)
	103	(76 - 116)
1,2-Dichloroethane-d4	90	(59 - 129)
	87	(59 - 129)
4-Bromofluorobenzene	109	(74 - 114)
	104	(74 - 114)
Toluene-d8	109	(76 - 116)
	105	(76 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

a Spiked analyte recovery is outside stated control limits.

MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: D4B130209 **Work Order #...:** F9MNJ1AD-MS **Matrix.....:** WATER
MS Lot-Sample #: D4B160153-007 F9MNJ1AE-MSD
Date Sampled...: 02/13/04 12:45 **Date Received..:** 02/14/04
Prep Date.....: 02/23/04 **Analysis Date..:** 02/23/04
Prep Batch #...: 4056525 **Analysis Time..:** 13:51
Dilution Factor: 2.5

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
1,1-Dichloroethene	**ND**	**25.0**	**29.7**	**ug/L**	**119**		**SW846 8260B**
	ND	**25.0**	**34.0**	**ug/L**	**136 a**	**14**	**SW846 8260B**
Benzene	**23**	**25.0**	**53.9**	**ug/L**	**124 a**		**SW846 8260B**
	23	**25.0**	**53.2**	**ug/L**	**121 a**	**1.4**	**SW846 8260B**
Chlorobenzene	**ND**	**25.0**	**27.8**	**ug/L**	**111**		**SW846 8260B**
	ND	**25.0**	**27.0**	**ug/L**	**108**	**2.7**	**SW846 8260B**
Toluene	**3.8**	**25.0**	**31.8**	**ug/L**	**112**		**SW846 8260B**
	3.8	**25.0**	**31.0**	**ug/L**	**109**	**2.5**	**SW846 8260B**
Trichloroethene	**ND**	**25.0**	**29.9**	**ug/L**	**120**		**SW846 8260B**
	ND	**25.0**	**30.3**	**ug/L**	**121**	**1.5**	**SW846 8260B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	103	(76 - 116)
	103	(76 - 116)
1,2-Dichloroethane-d4	90	(59 - 129)
	87	(59 - 129)
4-Bromofluorobenzene	109	(74 - 114)
	104	(74 - 114)
Toluene-d8	109	(76 - 116)
	105	(76 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

a Spiked analyte recovery is outside stated control limits.

Chain of Custody Record

2.7°
2-13

SEVERN TRENT **STL**

Severn Trent Laboratories, Inc.

STL Denver
4955 Yarrow Street
Arvada, CO 80002

STL-4124 (0901)

Client	Project Manager	Date	Chain of Custody Number
ARCADIS	Warren French	02/12/04	302164
Address	**Telephone Number (Area Code)/Fax Number**	**Lab Number**	**Page 1 of 2**
5100 E Skelly Dr #1000	918/664/9990 // 918 664 9925		

City	State	Zip Code	Site Contact	Lab Contact
Tulsa	OK	74135		

Project Name and Location (State): OK001253.2004 Bremerton St. Louis MO

Carrier/Waybill Number:

Contract/Purchase Order/Quote No.:

Analysis (Attach list if more space is needed): VOCs 8260

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date 2004	Time	Matrix: Air	Aqueous	Sed.	Soil		Containers & Preservatives: Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH		VOCs 8260	Special Instructions/ Conditions of Receipt
MW-1	02/11	0930		X							3				X	
MW-2	02/11	1550		X							3				X	
MW-3	02/10	1750 ~~1055~~		X							3				X	
MW-4	02/11	1055		X							3				X	
MW-5	02/11	1240		X							3				X	
MW-6	02/10	1145		X							3				X	
MW-7	02/10	1000		X							3				X	
MW-8	02/12	1210		X							3				X	
MW-9	02/12	1420		X							3				X	
MW-10	02/10	1345		X							3				X	
MW-11	02/12	0945		X							3				X	
MW-12	02/12	1050		X							3				X	

Possible Hazard Identification: ☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal: ☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months (A fee may be assessed if samples are retained longer than 1 month)

Turn Around Time Required: ☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☐ 14 Days ☐ 21 Days ☒ Other Standard

QC Requirements (Specify):

	Date	Time		Date	Time
1. Relinquished By	02/12/04	1630	1. Received By	2/13/04	0845
2. Relinquished By			2. Received By		
3. Relinquished By			3. Received By		

Comments:

DISTRIBUTION: WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

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Chain of Custody Record

STL-4124 (0901)

SEVERN TRENT **STL**

Severn Trent Laboratories, Inc.

STL Denver
4955 Yarrow Street
Arvada, CO 80002

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Client: ARCADIS	Project Manager: WARREN FRENCH	Date: 02/12/04	Chain of Custody Number: 302168
Address: 5100 E Skelly Dr #1000	Telephone Number (Area Code)/Fax Number: 918 664 9900 / 918 664 9925	Lab Number	Page 2 of 2
City: TULSA; State: OK; Zip Code: 74135	Site Contact	Lab Contact	
Project Name and Location (State): OK001253.2004	Carrier/Waybill Number		
Contract/Purchase Order/Quote No.			

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date 2004	Time	Matrix: Air	Aqueous	Sed.	Soil		Containers & Preservatives: Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH		Analysis (Attach list if more space is needed): VOCs 8260	Special Instructions/ Conditions of Receipt
MW-13	02/10	1600		X						3	3				X	
Dup#1	02/10			X							3				X	
Dup#2	02/11			X							3				X	
Purge Composite 02/2004	02/12	1545		X							3				X	
TB011604 changed to	01/16			X							2				X	
TB021004 per client																
DR 2/16/04																

Possible Hazard Identification: ☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal: ☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months (A fee may be assessed if samples are retained longer than 1 month)

Turn Around Time Required: ☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☐ 14 Days ☐ 21 Days ☒ Other STANDARD

QC Requirements (Specify)

	Date	Time		Date	Time
1. Relinquished By	02/12/04	1630	1. Received By	2/13/04	0845
2. Relinquished By			2. Received By		
3. Relinquished By			3. Received By		

Comments

DISTRIBUTION: WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

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Volatile GC/MS

Supporting Documentation

Sample Sequence, Chromatograms/Mass Spectra

SEVERN TRENT STL

Lot ID: D4B130209

Client: Arcadis

Method: 8260

Associated Samples: 15-18

Batch #(s): 4054378

I certify that, to the best of my knowledge, the attached package represents a complete and accurate copy of the original data.

Signature/Date: 2/24/04

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GC /MS VOLATILE ORGANIC EXTRACTION LOG SHEETS

SEVERN TRENT STL

RQC058

Severn Trent Laboratories, Inc.
EXTRACTION BENCH WORKSHEET

Run Date: 2/24/04
Time: 15:14:02

LEV 1	LEV 2		LEV 1	LEV 2	
_	_	Blank	_	_	Weights/Volumes
_	_	Check	_	_	Spike & Surrogate Worksheet
_	_	MS/MSD	_	_	Vial contains correct volume
			_	_	Labels, greenbars, worksheets
			_	_	computer batch: correct & all match
			_	_	Anomalies to Extraction Method

_ Expanded Deliverable
_ COC Completed
_ Bench Sheet Copied
_ Package Submitted to AnalyticalGr
_ Bench Sheet Copied per COC

Extractionist: _____
_____

Concentrationist: _____
_____

Reviewer/Date: _____ / 0/00/00

QC BATCH: 4054378

PREP DATE: 2/20/04 9:39
COMP DATE: 2/20/04 9:39

Volatile Organics, GC/MS (8260B)
PURGE AND TRAP - 25 mL purge (Waters)

EXTR EXPR	ANL DUE	LOT#,MSRUN#/ WORK ORDER	TEST FLGS	EXT	MTH	MATRIX	INIT/FIN WT/VOL	INIT	PH"S ADJ1	ADJ2	SOLVENTS EXTRACTION VOL	SOLVENTS EXCHANGE VOL	SPIKE STANDARD/ SURROGATE ID
0/00/00	3/01/04	D4B130209-015 **F9KFF-1-AA**	D	25	QK	WATER	**2** 20.00mL	NA	NA	NA	.0	.0	
COMMENTS:													
0/00/00	3/01/04	D4B130209-016 **F9KFG-1-AA**	D	25	QK	WATER	**0.1mL** 20.00mL	NA	NA	NA	.0	.0	
COMMENTS:													
0/00/00	3/01/04	D4B130209-017 **F9KHA-1-AA**	D	25	QK	WATER	**20mL** 20.00mL	NA	NA	NA	.0	.0	
COMMENTS:													
0/00/00	3/01/04	D4B130209-018 **F9KHC-1-AA**	D	25	QK	WATER	**20mL** 20.00mL	NA	NA	NA	.0	.0	
COMMENTS:													
0/00/00	2/27/04	D4B170287-002 **F9PVX-1-AF**	DR	25	RI	WATER	**20mL** 20.00mL	NA	NA	NA	.0	.0	
COMMENTS:													
0/00/00	2/27/04	D4B170287-003 **F9PV5-1-AA**	DR	25	RI	WATER	**20mL** 20.00mL	NA	NA	NA	.0	.0	
COMMENTS:													
0/00/00	2/27/04	D4B170287-004 **F9PV6-1-AA**	DR	25	RI	WATER	**0.5mL** 20.00mL	NA	NA	NA	.0	.0	
COMMENTS:													

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RQC058

Severn Trent Laboratories, Inc.
EXTRACTION BENCH WORKSHEET

Run Date: 2/24/04
Time: 15:14:02

QC BATCH: 4054378

PREP DATE: 2/20/04 9:39
COMP DATE: 2/20/04 9:39

EXTR EXPR	ANL DUE	LOT#,MSRUN#/ WORK ORDER	TEST FLGS	EXT	MTH	MATRIX	INIT/FIN WT/VOL	INIT	PH"S ADJ1	ADJ2	SOLVENTS EXTRACTION	VOL	EXCHANGE	VOL	SPIKE STANDARD/ SURROGATE ID
0/00/00	2/27/04	D4B170287-005 F9PV7-1-AA	DR	25	RI	WATER	20mL 20.00mL	NA	NA	NA		.0		.0	
COMMENTS:															
0/00/00	3/01/04	D4B180233-008 F9RCF-1-AA	R	25	RI	WATER	20mL 20.00mL	NA	NA	NA		.0		.0	
COMMENTS:															
0/00/00	3/01/04	D4B180233-013 F9RDN-1-AA	R	25	RI	WATER	20mL 20.00mL	NA	NA	NA		.0		.0	
COMMENTS:															
0/00/00	3/01/04	D4B180233-014 F9RDP-1-AA	R	25	RI	WATER	20mL 20.00mL	NA	NA	NA		.0		.0	
COMMENTS:															
0/00/00	3/01/04	D4B180233-015 F9RDR-1-AL	R	25	RI	WATER	0.1mL 20.00mL	NA	NA	NA		.0		.0	
COMMENTS:															
0/00/00	3/01/04	D4B180233-016 F9RDT-1-AA	R	25	RI	WATER	20mL 20.00mL	NA	NA	NA		.0		.0	
COMMENTS:															
0/00/00	3/01/04	D4B180233-017 F9RDV-1-AW	R	25	RI	WATER	0.03mL 20.00mL	NA	NA	NA		.0		.0	
COMMENTS:															
0/00/00	3/01/04	D4B180233-017 F9RDV-1-D1S	R	25	RI	WATER	0.03mL 20.00mL	NA	NA	NA		.0		.0	
COMMENTS:															
0/00/00	3/01/04	D4B180233-017 F9RDV-1-D2D	R	25	RI	WATER	0.03mL 20.00mL	NA	NA	NA		.0		.0	
COMMENTS:															
0/00/00	3/01/04	D4B180233-018 F9RD1-1-AA	R	25	RI	WATER	20mL 20.00mL	NA	NA	NA		.0		.0	
COMMENTS:															

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RQC058

Severn Trent Laboratories, Inc.
EXTRACTION BENCH WORKSHEET

Run Date: 2/24/04
Time: 15:14:02

QC BATCH: 4054378

PREP DATE: 2/20/04 9:39
COMP DATE: 2/20/04 9:39

EXTR EXPR	ANL DUE	LOT#,MSRUN#/ WORK ORDER	TEST FLGS	EXT	MTH	MATRIX	INIT/FIN WT/VOL	INIT	PH"S ADJ1	ADJ2	SOLVENTS EXTRACTION VOL	EXCHANGE VOL	SPIKE STANDARD/ SURROGATE ID
0/00/00	0/00/00	D4B230000-378 **F9426-1-AAB**		25	QK	WATER	**20mL** 20.00mL	NA	NA	NA	.0	.0	
COMMENTS:													
0/00/00	0/00/00	D4B230000-378 **F9426-1-ACC**		25	QK	WATER	**20mL** 20.00mL	NA	NA	NA	.0	.0	
COMMENTS:													
0/00/00	0/00/00	D4B230000-378 **F9426-1-ADL**	R	25	QK	WATER	**20mL** 20.00mL	NA	NA	NA	.0	.0	
COMMENTS:													

R = RUSH C = CLP
E = EPA 600 D = EXP.DEL)
M = CLIENT REQ MS/MSD

NUMBER OF WORK ORDERS IN BATCH: 20

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GC/MS VOLATILE INSTRUMENT LOG SHEETS

SEVERN TRENT STL

GC/MS Volatile Analysis

STL, Denver

Instrument 5
5972 MSD

Column	Phase	Inj Temp	Init. Time	Ramp Rate	Final Temp	Flow cc/min	Press. Psi	Type	Vac. Range	Source Temp	Mass Range
75M	DB-624	200C	2 min.	5C/min	65C	18	20	MS	10^-6	~175C	35-300/2^2
			0 min.	12C/min	155C						
			0 min.	25C/min	210C						

DEN-MS-0010 (8260B/624/524.2)
(Circle as appropriate)

Comments

Target Batch (Directory): S 022004.b

QuantIMS Batch: 4054378

Lot #	Sample	W.O.#	Purge vol (ml)	Sample amt (ml/g)	Date 2004	Initials	File Number	IS OK	SS OK	DIL OK	24 hr 12 hr	pH	MSVOA # Comments	ALS
BFB			1/Dr	Inj	2-20	DA	S 6727.d						#237-03 (09:39)	
MAIN010			20	5mT			28	—					#022/040-04	
SUPP010				↓			29	—	—				#246-03/011-04	
LCS		F9426 1AC		10.1			30	—	—	—	—		#304-03	
LCSD		AD		↓			31	—	—	—	—		IS-# 020-04	
VBK		AA		20			32	—	—	—	—		SS-# 002-04	
D4B180233	15	F9RDRIAL		0.1			33	—	—	—	—	1	T.C.	
	17	VIAW		0.03			34	—	—	—	—	1	T.C.	
	8	CFIAA		20			35	—	—	—	—	1		
	13	DN					36	—	—	—	—	1		
	14	P					37	—	—	—	—	1		
	16	T					38	—	—	—	—	1		
	18	↓		↓			39	—	—	—	—	1		
	17MS	VID1		0.03			40	—	—	—	—	1	#304-03	
	17SD	ID2		↓			41	—	—	—	—	1		
D4B130209	15	F9KFFIAA		2			42	—	—	—	—	<2	T.C.	
	16	G		0.1			43	—	—	—	—	<2	T.C.	
	17	HA		20			44	—	—	—	—	<2		
	18	C					45	—	—	—	—	<2		
3170287	2	F9PNXIAF					46	—	—	—	—	1		

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GC/MS Volatile Analysis

STL, Denver

Instrument S
5972 MSD

Column	Phase	Inj. Temp	Init. Time	Ramp Rate	Final Temp	Flow cc/min	Press. Psi	Type	Vac. Range	Source Temp	Mass Range
75M	DB-624	200C	2 min.	5C/min	65C	18	20	MS	10^-6	~175C	35-300/2^2
			0 min.	12C/min	155C						
			0 min.	25C/min	210C						

DEN-MS-0010 (8260B/624/524.2)
(Circle as appropriate)

Comments

Target Batch (Directory): S022004.b

QuantIMS Batch:

Lot #	Sample	W.O.#	Purge vol (ml)	Sample amt (ml/g)	Date 2004	Initials	File Number	IS OK	SS OK	DIL OK	24 hr 12 hr	pH	Comments	ALS
D4B170281	3	F9PV5TAA	20	20	2-20	DA	S6747.d	—	—	—	—	7		
↓	4	↓ 6	↓	0.5	↓	↓	48	—	—	—	—	7		
↓	5	↓ 7	↓	20	↓	↓	49	—	—	—	—	7		

DA 2-23

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GC/MS VOLATILE STANDARD DATA

SEVERN TRENT STL

GC/MS Initial Calibration Review Checklist

STL Denver

Instrument ID and Date: S MAIN 11/20/03

Check Method Used: Analysis ☐ 625 ☐ 8270 ☐ Other SV _____

☐ 524.2 ☐ 624 ☐ 8260B ☐ Other VOA _

VOA Preparation_ ☐ 5mL ☐ 20mL ☐ 5035 Low ☐ 5035 High ☐ 5030 Low ☐ 5030 High

Review Items	Level 1 Yes	Level 1 No	Level 1 N/A	Level 2	Comments
Initial Calibration					
1. BFB/DFTPP meets criteria?	/			/	
2. ICAL date and instrument ID verified?	/			/	
3. Sufficient number of calibration points used?	/			/	
4. Reasons for removal of points documented?	/			/	Some pts < RL Removed
5. %RSD or correlation coefficient within method limits?	/			/	
6. If RRF used for ICAL, were all compounds within 15% RSD?	/		✓	NA	List all exceptions below (cpd & RSD)
7. Response factors meet criteria?	/			/	
8. Isomeric pairs checked for correct peak assignment?	/			/	
9. Data checked for detector saturation?	/			/	
10. Standards traceability properly documented?	/			/	
11. Manual integrations documented and checked?	/			/	
12. 2nd source ICV recovery 75-125% for DoD projects, 65-135% (±55% of expected for poor performers) for non-DoD?	/			/	

1st Level Reviewer: [signature] Date: 11/20/03

2nd Level Reviewer: [signature] Date: 11-24-03

GC/MS Volatile Analysis

STL, Denver

Instrument S
5972 MS

Column	Phase	Inj. Temp	Init. Time	Ramp Rate	Final Temp	Flow cc/min	Press. Psi	Type	Vac. Range	Source Temp	Mass Range
75M	DB-624	200C	2 min.	5C/min	65C	18	20	MS	10^-6	~175C	35-300/2^2
			0 min.	12C/min	155C						
			0 min.	25C/min	210C						

DEN-MS-0010 (8260B/624/524.2
(Circle as appropriate)

Comments

Target Batch (Directory): S 112003P.b IS/BS # 162/225 MAIN # 254/277 SUPP # 192/246 SSV # 218/231/268 QuantIMS Batch:

Lot #	Sample	W.O.#	Purge vol (ml)	Sample amt (ml/g)	Date	Initials	File Number	IS OK	SS OK	DIL OK	24 hr 12 hr	pH	Comments	AL
BFB					11/20/03	[illegible]	S4913						#237.03	
BTB		1ul dir inj					14	—	—	N/A	/	N/A		
MAIN			20	5ul			15	/	N/A		/			
SUPP				5ul			16	/	/		/			
MAIN 001				0.5ul			17	/	N/A		/			
2				1			18	/			/			
5				2.5			19	/			/			
10				5			20	/			/			
30				15			21	/			/			
60				30			22	/			/			
SEC Source 30				15			23	/			/			

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STL Denver 80

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Report Date: 21-Nov-2003 04:24

Calibration History

Method : /chem/S.i/112003p.b/S-20ml-h2o.m
Start Cal Date: 09-SEP-2003 01:23
End Cal Date : 20-NOV-2003 20:25

Initial Calibration

Injection Date	Sublist	Calibration File
Cal Level: 1 , Cal Amount: 1.00000		
09-SEP-2003 03:46	2-supp	/chem/S.i/090903.b/s3089.d
20-NOV-2003 18:24	1-main	/chem/S.i/112003p.b/s4917.d
Cal Level: 2 , Cal Amount: 2.00000		
09-SEP-2003 04:09	2-supp	/chem/S.i/090903.b/s3090.d
20-NOV-2003 18:48	1-main	/chem/S.i/112003p.b/s4918.d
Cal Level: 3 , Cal Amount: 5.00000		
09-SEP-2003 04:33	2-supp	/chem/S.i/090903.b/s3091.d
20-NOV-2003 19:12	1-main	/chem/S.i/112003p.b/s4919.d
Cal Level: 4 , Cal Amount: 10.0000		
09-SEP-2003 04:57	2-supp	/chem/S.i/090903.b/s3092.d
20-NOV-2003 19:36	1-main	/chem/S.i/112003p.b/s4920.d
Cal Level: 5 , Cal Amount: 30.0000		
09-SEP-2003 05:20	2-supp	/chem/S.i/090903.b/s3093.d
20-NOV-2003 20:01	1-main	/chem/S.i/112003p.b/s4921.d
Cal Level: 6 , Cal Amount: 60.0000		
09-SEP-2003 05:44	2-supp	/chem/S.i/090903.b/s3094.d
20-NOV-2003 20:25	1-main	/chem/S.i/112003p.b/s4922.d

Continuing Calibration

20-NOV-2003 17:52	2-supp	/chem/S.i/112003p.b/s4916.d
20-NOV-2003 19:36	1-main	/chem/S.i/112003p.b/s4920.d

Report Date : 22-Nov-2003 02:35

STL Denver

INITIAL CALIBRATION DATA

Start Cal Date : 09-SEP-2003 01:23
End Cal Date : 20-NOV-2003 20:25
Quant Method : ISTD
Target Version : 3.40
Integrator : HP RTE
Method file : /chem/S.i/112003p.b/S-20ml-h2o.m
Cal Date : 21-Nov-2003 22:43 reinharj

Calibration File Names:
Level 1: /chem/S.i/090903.b/s3089.d
Level 2: /chem/S.i/090903.b/s3090.d
Level 3: /chem/S.i/090903.b/s3091.d
Level 4: /chem/S.i/090903.b/s3092.d
Level 5: /chem/S.i/090903.b/s3093.d
Level 6: /chem/S.i/090903.b/s3094.d

	Compound	1 Level 1	2 Level 2	5 Level 3	10 Level 4	30 Level 5	60 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
M	1 1,2-Dichloroethene (total)	0.38596	0.38336	0.37605	0.35179	0.33837	0.35630	AVRG		0.36531		5.27571
M	2 Xylene (total)	9.52486	8.98809	8.92690	8.65403	8.39945	8.56646	AVRG		8.84330		4.52871
	3 dichlorodifluoromethane	0.52346	0.45849	0.38932	0.41076	0.41876	0.43234	AVRG		0.43885		10.80003
	4 Chloromethane	0.34281	0.27558	0.28084	0.28116	0.28362	0.30345	AVRG		0.29457		8.66135
	6 Vinyl Chloride	0.37840	0.31959	0.29041	0.28617	0.29814	0.32017	AVRG		0.31548		10.78347
	8 Bromomethane	0.33881	0.28825	0.26978	0.26479	0.26646	0.27984	AVRG		0.28465		9.83103
	9 Chloroethane	0.26886	0.23521	0.20789	0.19890	0.19868	0.21698	AVRG		0.22109		12.24926
	11 Trichlorofluoromethane	+++++	0.53296	0.49542	0.50963	0.52468	0.57703	AVRG		0.52794		5.86751
	12 Ethanol	+++++	0.00070	0.00058	0.00059	0.00073	0.00057	AVRG		0.00063		11.81783

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Report Date : 22-Nov-2003 02:35

STL Denver

INITIAL CALIBRATION DATA

Start Cal Date : 09-SEP-2003 01:23
End Cal Date : 20-NOV-2003 20:25
Quant Method : ISTD
Target Version : 3.40
Integrator : HP RTE
Method file : /chem/S.i/112003p.b/S-20ml-h2o.m
Cal Date : 21-Nov-2003 22:43 reinharj

Compound	1 Level 1	2 Level 2	5 Level 3	10 Level 4	30 Level 5	60 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
16 Acrolein	0.01275	0.01144	0.01107	0.01051	0.01092	0.01170	AVRG		0.01140		6.85487
18 1,1-Dichloroethene	0.39026	0.38349	0.37244	0.34186	0.33446	0.35918	AVRG		0.36362		6.18156
19 Acetone	+++++	43904	74437	143976	450252	852514	WLINR	-0.19228	0.02258		0.99742
21 Iodomethane	0.58915	0.55849	0.54570	0.51257	0.50950	0.55398	AVRG		0.54490		5.52073
25 Acetonitrile	0.00410	0.00427	0.00444	0.00419	0.00492	0.00444	AVRG		0.00439		6.63703
26 Methylene Chloride	+++++	130520	251621	452894	1225620	2431337	WLINR	-0.09267	0.25039		0.99912
27 tert-Butyl alcohol	+++++	0.00693	0.00614	0.00605	0.00671	0.00607	AVRG		0.00638		6.45466
30 Acrylonitrile	+++++	0.01881	0.01953	0.01850	0.01891	0.01932	AVRG		0.01902		2.15233
29 trans-1,2-Dichloroethene	0.40841	0.39448	0.39148	0.37124	0.35630	0.37573	AVRG		0.38294		4.88994
33 1,1-Dichloroethane	0.64951	0.60429	0.58986	0.53668	0.52925	0.57291	AVRG		0.58042		7.71325
32 Isopropyl ether	0.24247	0.23514	0.23091	0.21283	0.21530	0.22990	AVRG		0.22776		5.05757
35 Chloroprene	0.60857	0.57276	0.55251	0.50397	0.49627	0.54339	AVRG		0.54625		7.73191
39 cis-1,2-Dichloroethene	0.36351	0.37225	0.36063	0.33235	0.32045	0.33687	AVRG		0.34767		5.91602
40 2-Butanone	0.03718	0.03641	0.03335	0.03302	0.03237	0.03292	AVRG		0.03421		5.96826
37 2,2-Dichloropropane	0.52546	0.50069	0.48508	0.44753	0.42557	0.43873	AVRG		0.47051		8.34128
41 Propionitrile	0.00633	0.00635	0.00662	0.00640	0.00679	0.00668	AVRG		0.00653		2.95463
42 Methacrylonitrile	0.04924	0.04848	0.04882	0.04639	0.04634	0.04890	AVRG		0.04803		2.72541

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Report Date : 22-Nov-2003 02:35

STL Denver

INITIAL CALIBRATION DATA

Start Cal Date : 09-SEP-2003 01:23
End Cal Date : 20-NOV-2003 20:25
Quant Method : ISTD
Target Version : 3.40
Integrator : HP RTE
Method file : /chem/S.i/112003p.b/S-20ml-h2o.m
Cal Date : 21-Nov-2003 22:43 reinharj

Compound	1 Level 1	2 Level 2	5 Level 3	10 Level 4	30 Level 5	60 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
43 Bromochloromethane	0.14071	0.13233	0.13232	0.12635	0.12236	0.12943	AVRG		0.13058		4.78918
45 Chloroform	0.62528	0.59943	0.60442	0.55773	0.53958	0.57241	AVRG		0.58314		5.50531
47 1,1,1-Trichloroethane	0.68693	0.65646	0.65328	0.60236	0.58946	0.61543	AVRG		0.63399		5.90480
50 1,1-Dichloropropene	0.58101	0.56623	0.55420	0.51212	0.49332	0.51735	AVRG		0.53737		6.44618
49 Carbon Tetrachloride	0.63664	0.59508	0.59867	0.55290	0.54797	0.57396	AVRG		0.58421		5.66424
51 Isobutanol	+++++	14600	27729	60589	245761	404169	LINR	0.71105	0.00228		0.99055
53 Benzene	1.10332	1.05539	1.02155	0.96047	0.93420	0.99339	AVRG		1.01139		6.15352
55 1,2-Dichloroethane	0.22677	0.25403	0.24081	0.23004	0.22854	0.23778	AVRG		0.23633		4.34508
57 n-Butanol	+++++	0.00233	0.00191	0.00178	0.00217	0.00181	AVRG		0.00200		12.08977
58 Trichloroethene	0.46145	0.44933	0.43108	0.40106	0.40014	0.41126	AVRG		0.42572		6.06597
61 1,2-Dichloropropane	0.34206	0.31473	0.31792	0.31018	0.30452	0.31468	AVRG		0.31735		4.08661
64 Dibromomethane	0.15638	0.16050	0.15569	0.15122	0.15539	0.15871	AVRG		0.15632		2.03013
63 1,4-Dioxane	+++++	0.00101	0.00084	0.00088	0.00110	0.00084	AVRG		0.00093		12.44247
65 Bromodichloromethane	0.47645	0.46529	0.47222	0.44529	0.44599	0.46813	AVRG		0.46223		2.89713
68 cis-1,3-Dichloropropene	2.21270	2.11764	2.15600	2.13356	2.11762	2.13712	AVRG		2.14577		1.66636
69 4-Methyl-2-pentanone	0.51982	0.53548	0.51230	0.50356	0.50324	0.50098	AVRG		0.51256		2.58834
71 Toluene	6.79001	6.48369	6.43675	6.15145	5.99912	6.27073	AVRG		6.35529		4.38133

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Report Date : 22-Nov-2003 02:35

STL Denver

INITIAL CALIBRATION DATA

Start Cal Date : 09-SEP-2003 01:23
End Cal Date : 20-NOV-2003 20:25
Quant Method : ISTD
Target Version : 3.40
Integrator : HP RTE
Method file : /chem/S.i/112003p.b/S-20ml-h2o.m
Cal Date : 21-Nov-2003 22:43 reinharj

Compound	1 Level 1	2 Level 2	5 Level 3	10 Level 4	30 Level 5	60 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
72 trans-1,3-Dichloropropene	1.61384	1.57216	1.49226	1.46646	1.48506	1.49809	AVRG		1.52131		3.81629
74 1,1,2-Trichloroethane	1.00471	0.95323	0.93215	0.92512	0.91154	0.92036	AVRG		0.94119		3.62867
76 1,3-Dichloropropane	1.47163	1.41808	1.45801	1.44353	1.39926	1.40470	AVRG		1.43254		2.06828
75 Tetrachloroethene	1.88986	1.83194	1.84701	1.75478	1.71046	1.74023	AVRG		1.79571		3.92425
77 2-Hexanone	0.31584	0.33279	0.32637	0.33044	0.33067	0.32164	AVRG		0.32629		1.98267
79 Dibromochloromethane	1.45042	1.47171	1.39105	1.41517	1.43085	1.47069	AVRG		1.43832		2.22790
80 1,2-Dibromoethane	1.16015	1.11687	1.12925	1.13827	1.14407	1.15548	AVRG		1.14068		1.42065
81 1-Chlorohexane	3.51850	3.35558	3.30347	3.18685	3.06997	3.15948	AVRG		3.26564		4.92284
83 Chlorobenzene	4.31066	4.27630	4.23891	4.05161	4.00723	4.10131	AVRG		4.16434		3.05393
85 1,1,1,2-Tetrachloroethane	1.74195	1.57403	1.58164	1.53303	1.50796	1.54658	AVRG		1.58086		5.27537
84 Ethylbenzene	2.45893	2.33621	2.32552	2.20698	2.13695	2.24701	AVRG		2.28527		4.94940
86 m and p-Xylene	3.39811	3.19138	3.11853	3.02803	2.94161	2.99079	AVRG		3.11141		5.35836
87 o-Xylene	2.72864	2.60532	2.68984	2.59797	2.51623	2.58488	AVRG		2.62048		2.92526
88 Styrene	4.19622	3.92384	4.02194	3.92099	3.99776	4.07347	AVRG		4.02237		2.56987
89 Bromoform	0.71864	0.67333	0.69089	0.68032	0.66998	0.68241	AVRG		0.68593		2.56798
90 isopropyl benzene	9.63026	9.12246	9.22240	8.89987	8.59134	8.73299	AVRG		9.03322		4.15211
92 Cyclohexanone	0.05056	0.04737	0.04546	0.04577	0.04702	0.04484	AVRG		0.04684		4.39642

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Report Date : 22-Nov-2003 02:35

STL Denver

INITIAL CALIBRATION DATA

Start Cal Date : 09-SEP-2003 01:23
End Cal Date : 20-NOV-2003 20:25
Quant Method : ISTD
Target Version : 3.40
Integrator : HP RTE
Method file : /chem/S.i/112003p.b/S-20ml-h2o.m
Cal Date : 21-Nov-2003 22:43 reinharj

Compound	1 Level 1	2 Level 2	5 Level 3	10 Level 4	30 Level 5	60 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
94 1,1,2,2-Tetrachloroethane	1.01442	0.99343	0.97229	0.96011	0.92471	0.95613	AVRG		0.97018		3.21646
95 Bromobenzene	1.14719	1.16588	1.12035	1.08351	1.07234	1.09240	AVRG		1.11361		3.35142
97 1,2,3-Trichloropropane	0.20407	0.20610	0.18145	0.18285	0.17786	0.18340	AVRG		0.18929		6.55342
96 n-Propylbenzene	1.84089	1.78127	1.69255	1.56672	1.56938	1.60713	AVRG		1.67633		6.88460
99 2-Chlorotoluene	1.26939	1.33475	1.23372	1.23431	1.17110	1.23367	AVRG		1.24616		4.31742
100 1,3,5-Trimethylbenzene	5.48342	5.31337	5.14094	4.93811	4.91499	5.03330	AVRG		5.13735		4.35888
101 4-Chlorotoluene	1.43054	1.24114	1.32248	1.22801	1.26087	1.27321	AVRG		1.29271		5.80156
102 tert-Butylbenzene	6.05291	5.77928	5.51756	5.26114	5.23505	5.39105	AVRG		5.53950		5.78671
103 1,2,4-Trimethylbenzene	4.93312	4.91132	4.69691	4.34981	4.42526	4.39621	AVRG		4.61877		5.72683
104 sec-Butylbenzene	1.49053	1.39485	1.31225	1.27466	1.25380	1.27055	AVRG		1.33277		6.92965
106 m-Dichlorobenzene	2.01789	2.17810	2.05834	1.94818	1.95929	1.91799	AVRG		2.01330		4.73552
105 4-Isopropyltoluene	6.39999	6.49984	6.14142	5.85531	5.74731	5.99104	AVRG		6.10582		4.89977
108 p-dichlorobenzene	2.43172	2.26032	2.15731	2.14903	2.12146	2.13255	AVRG		2.20873		5.43354
110 n-Butylbenzene	6.07845	6.07106	5.77726	5.60494	5.47008	5.53027	AVRG		5.75534		4.65711
111 o-Dichlorobenzene	1.61564	1.63869	1.60386	1.55213	1.53899	1.53453	AVRG		1.58064		2.80210
112 1,2-Dibromo-3-chloropropane	0.10076	0.10153	0.10170	0.10530	0.11331	0.10646	AVRG		0.10484		4.51380
113 1,2,4-Trichlorobenzene	1.28982	1.18803	1.09437	1.05417	1.02510	0.99988	AVRG		1.10856		9.97241

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STL Denver

INITIAL CALIBRATION DATA

Start Cal Date : 09-SEP-2003 01:23
End Cal Date : 20-NOV-2003 20:25
Quant Method : ISTD
Target Version : 3.40
Integrator : HP RTE
Method file : /chem/S.i/112003p.b/S-20ml-h2o.m
Cal Date : 21-Nov-2003 22:43 reinharj

Compound	1 Level 1	2 Level 2	5 Level 3	10 Level 4	30 Level 5	60 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
114 Hexachlorobutadiene	1.13621	1.04372	1.00862	0.99769	0.95436	0.91234	AVRG		1.00882		7.65839
115 Napthalene	1.33415	1.28282	1.13278	1.12423	1.12834	1.07626	AVRG		1.17976		8.73564
116 1,2,3-Trichlorobenzene	43643	74020	157194	310626	865931	1572637	WLINR	-0.03560	0.72842		0.99927

Curve	Formula	Units
Averaged	Amt = Rsp/m1	Response
Linear	Amt = b + Rsp/m1	Response
Wt Linear	Amt = b + Rsp/m1	Response

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Data File: /chem/S.i/112003p.b/s4914.d

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Date : 20-NOV-2003 16:55

Client ID: BFB

Instrument: S.i

Sample Info: BFB,, #237-03

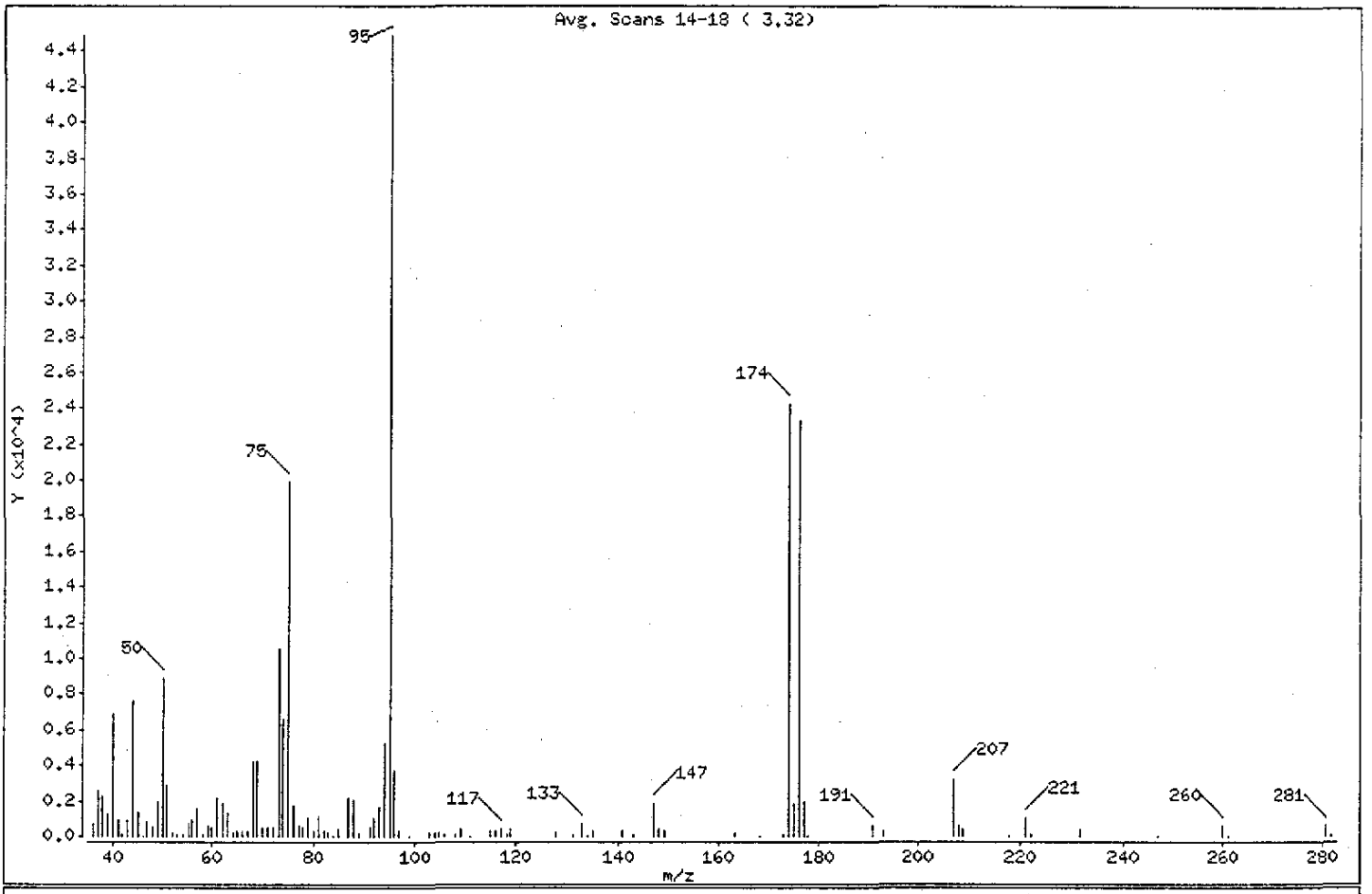
Volume Injected (uL): 1.0

Operator: appelhansd

Column phase: DB624

Column diameter: 0.53

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	19.66
75	30.00 - 60.00% of mass 95	44.30
96	5.00 - 9.00% of mass 95	8.38
173	Less than 2.00% of mass 174	0.22 (0.40)
174	50.00 - 100.00% of mass 95	53.97
175	5.00 - 9.00% of mass 174	4.14 (7.67)
176	95.00 - 101.00% of mass 174	52.07 (96.48)
177	5.00 - 9.00% of mass 176	4.28 (8.22)

Data File: /chem/S.i/112003p.b/s4914.d

Date : 20-NOV-2003 16:55

Client ID: BFB

Instrument: S.i

Sample Info: BFB,, #237-03

Volume Injected (uL): 1.0

Operator: appelhansd

Column phase: DB624

Column diameter: 0.53

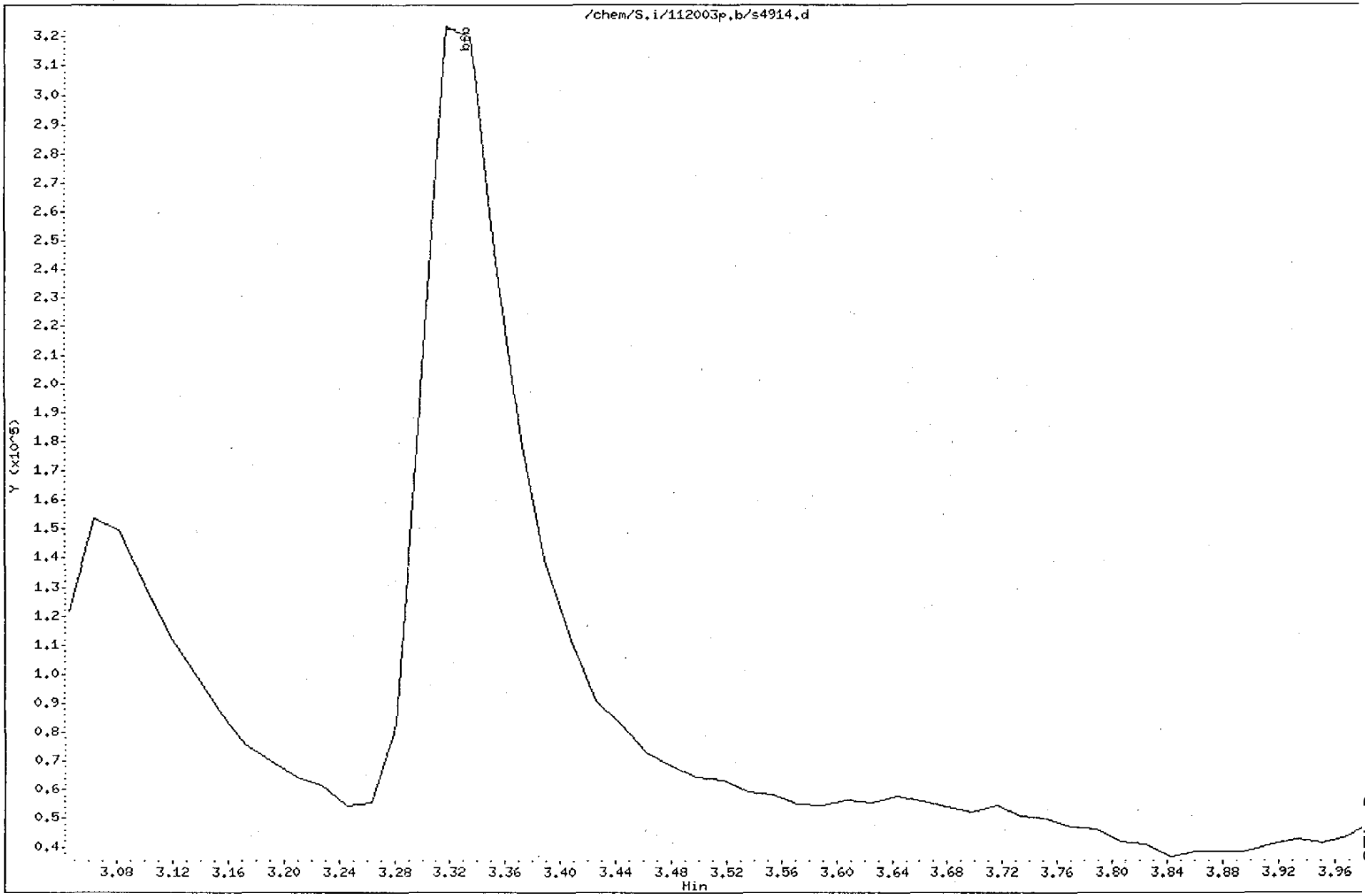
Data File: s4914.d
Spectrum: Avg. Scans 14-18 (3.32)
Location of Maximum: 95.00
Number of points: 105

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	751	63.00	1318	92.00	994	148.00	391
37.00	2613	64.00	173	93.00	1625	149.00	327
38.00	2240	65.00	352	94.00	5249	163.00	215
39.00	1230	66.00	303	95.00	44864	168.00	40
40.00	6881	67.00	355	96.00	3761	173.00	97
41.00	921	68.00	4204	97.00	346	174.00	24208
42.00	102	69.00	4236	99.00	42	175.00	1858
43.00	963	70.00	488	103.00	208	176.00	23360
44.00	7608	71.00	550	104.00	165	177.00	1920
45.00	1342	72.00	497	105.00	212	178.00	40
46.00	46	73.00	10525	106.00	106	191.00	621
47.00	834	74.00	6594	108.00	151	193.00	273
48.00	499	75.00	19872	109.00	398	207.00	3169
49.00	2003	76.00	1769	111.00	47	208.00	640
50.00	8821	77.00	602	115.00	321	209.00	452
51.00	2892	78.00	557	116.00	264	218.00	47
52.00	197	79.00	999	117.00	439	221.00	1015
53.00	93	80.00	285	118.00	130	222.00	95
54.00	118	81.00	1144	119.00	422	232.00	402
55.00	768	82.00	330	128.00	216	247.00	51
56.00	884	83.00	220	131.00	145	260.00	631
57.00	1553	84.00	49	133.00	737	261.00	41
58.00	90	85.00	383	134.00	41	281.00	571
59.00	570	87.00	2128	135.00	302	282.00	84
60.00	471	88.00	2022	141.00	267		
61.00	2214	89.00	226	143.00	60		
62.00	1821	91.00	564	147.00	1886		

Data File: /chem/S.i/112003p.b/s4914.d
Date : 20-NOV-2003 16:55
Client ID: BFB
Sample Info: BFB,, #237-03
Volume Injected (uL): 1.0
Column phase: DB624

Instrument: S.i
Operator: appelhansd
Column diameter: 0.53

Page 1



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STL Denver

INITIAL CALIBRATION DATA

Start Cal Date : 09-SEP-2003 01:23
End Cal Date : 20-NOV-2003 20:25
Quant Method : ISTD
Origin : Disabled
Target Version : 3.40
Integrator : HP RTE
Method file : /chem/S.i/112003p.b/S-20ml-h2o.m
Cal Date : 20-Nov-2003 21:28 reinharj
Curve Type : Average

Calibration File Names:
Level 1: /chem/S.i/090903.b/s3089.d
Level 2: /chem/S.i/090903.b/s3090.d
Level 3: /chem/S.i/090903.b/s3091.d
Level 4: /chem/S.i/090903.b/s3092.d
Level 5: /chem/S.i/090903.b/s3093.d
Level 6: /chem/S.i/090903.b/s3094.d

	Compound	1.000 Level 1	2.000 Level 2	5.000 Level 3	10.000 Level 4	30.000 Level 5	60.000 Level 6	___ RRF	% RSD	
M	1 1,2-Dichloroethene (total)	0.38596	0.38336	0.37605	0.35179	0.33837	0.35630	0.36531	5.276	
M	2 Xylene (total)	9.52486	8.98809	8.92690	8.65403	8.39945	8.56646	8.84330	4.529	
	3 dichlorodifluoromethane	0.52346	0.45849	0.38932	0.41076	0.41876	0.43234	0.43885	10.800	
	4 Chloromethane	0.34281	0.27558	0.28084	0.28116	0.28362	0.30345	0.29457	8.661	
	6 Vinyl Chloride	0.37840	0.31959	0.29041	0.28617	0.29814	0.32017	0.31548	10.783	
	8 Bromomethane	0.33881	0.28825	0.26978	0.26479	0.26646	0.27984	0.28465	9.831	
	9 Chloroethane	0.26886	0.23521	0.20789	0.19890	0.19868	0.21698	0.22109	12.249	
	11 Trichlorofluoromethane	+++++	0.31968	0.30508	0.31094	0.33725	0.40767	0.33612	12.435	
	12 Ethanol	+++++	0.00051	0.00075	0.00059	0.00073	0.00057	0.00063	16.950	<- integration
	16 Acrolein	0.01275	0.01144	0.01107	0.01051	0.01092	0.01170	0.01140	6.855	
	18 1,1-Dichloroethene	0.39026	0.38349	0.37244	0.34186	0.33446	0.35918	0.36362	6.182	
	19 Acetone	+++++	0.03321	0.02311	0.02183	0.02325	0.02303	0.02489	18.840	<- Δ tout linear
	21 Iodomethane	0.58915	0.55849	0.54570	0.51257	0.50950	0.55398	0.54490	5.521	
	25 Acetonitrile	0.00410	0.00427	0.00444	0.00419	0.00492	0.00444	0.00439	6.637	
	26 Methylene Chloride	+++++	0.39492	0.31254	0.27466	0.25311	0.26268	0.29958	19.319	<- Δ tout linear
	27 tert-Butyl alcohol	+++++	0.00693	0.00614	0.00605	0.00671	0.00607	0.00638	6.455	
	30 Acrylonitrile	+++++	0.01881	0.01953	0.01850	0.01891	0.01932	0.01902	2.152	
	29 trans-1,2-Dichloroethene	0.40841	0.39448	0.39148	0.37124	0.35630	0.37573	0.38294	4.890	
	33 1,1-Dichloroethane	0.64951	0.60429	0.58986	0.53668	0.52925	0.57291	0.58042	7.713	
	32 Isopropyl ether	0.24247	0.23514	0.23091	0.21283	0.21530	0.22990	0.22776	5.058	
	35 Chloroprene	0.60857	0.57276	0.55251	0.50397	0.49627	0.54339	0.54625	7.732	
	39 cis-1,2-Dichloroethene	0.36351	0.37225	0.36063	0.33235	0.32045	0.33687	0.34767	5.916	
	40 2-Butanone	0.03718	0.03641	0.03335	0.03302	0.03237	0.03292	0.03421	5.968	
	37 2,2-Dichloropropane	0.52546	0.50069	0.48508	0.44753	0.42557	0.43873	0.47051	8.341	
	41 Propionitrile	0.00633	0.00635	0.00662	0.00640	0.00679	0.00668	0.00653	2.955	

STL Denver

INITIAL CALIBRATION DATA

Start Cal Date : 09-SEP-2003 01:23
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Quant Method : ISTD
Origin : Disabled
Target Version : 3.40
Integrator : HP RTE
Method file : /chem/S.i/112003p.b/S-20ml-h2o.m
Cal Date : 20-Nov-2003 21:28 reinharj
Curve Type : Average

Compound	1.000 Level 1	2.000 Level 2	5.000 Level 3	10.000 Level 4	30.000 Level 5	60.000 Level 6	RRF	% RSD
42 Methacrylonitrile	0.04924	0.04848	0.04882	0.04639	0.04634	0.04890	0.04803	2.725
43 Bromochloromethane	0.14071	0.13233	0.13232	0.12635	0.12236	0.12943	0.13058	4.789
45 Chloroform	0.62528	0.59943	0.60442	0.55773	0.53958	0.57241	0.58314	5.505
47 1,1,1-Trichloroethane	0.68693	0.65646	0.65328	0.60236	0.58946	0.61543	0.63399	5.905
50 1,1-Dichloropropene	0.58101	0.56623	0.55420	0.51212	0.49332	0.51735	0.53737	6.446
49 Carbon Tetrachloride	0.63664	0.59508	0.59867	0.55290	0.54797	0.57396	0.58421	5.664
51 Isobutanol	+++++	0.00221	0.00172	0.00184	0.00254	0.00218	0.00210	15.487
53 Benzene	1.10332	1.05539	1.02155	0.96047	0.93420	0.99339	1.01139	6.154
55 1,2-Dichloroethane	0.22677	0.25403	0.24081	0.23004	0.22854	0.23778	0.23633	4.345
57 n-Butanol	+++++	0.00233	0.00191	0.00178	0.00217	0.00181	0.00200	12.090
58 Trichloroethene	0.46145	0.44933	0.43108	0.40106	0.40014	0.41126	0.42572	6.066
61 1,2-Dichloropropane	0.34206	0.31473	0.31792	0.31018	0.30452	0.31468	0.31735	4.087
64 Dibromomethane	0.15638	0.16050	0.15569	0.15122	0.15539	0.15871	0.15632	2.030
63 1,4-Dioxane	+++++	0.00101	0.00084	0.00088	0.00110	0.00084	0.00093	12.442
65 Bromodichloromethane	0.47645	0.46529	0.47222	0.44529	0.44599	0.46813	0.46223	2.897
68 cis-1,3-Dichloropropene	2.21270	2.11764	2.15600	2.13356	2.11762	2.13712	2.14577	1.666
69 4-Methyl-2-pentanone	0.51982	0.53548	0.51230	0.50356	0.50324	0.50098	0.51256	2.588
71 Toluene	6.79001	6.48369	6.43675	6.15145	5.99912	6.27073	6.35529	4.381
72 trans-1,3-Dichloropropene	1.61384	1.57216	1.49226	1.46646	1.48506	1.49809	1.52131	3.816
74 1,1,2-Trichloroethane	1.00471	0.95323	0.93215	0.92512	0.91154	0.92036	0.94119	3.629
76 1,3-Dichloropropane	1.47163	1.41808	1.45801	1.44353	1.39926	1.40470	1.43254	2.068
75 Tetrachloroethene	1.88986	1.83194	1.84701	1.75478	1.71046	1.74023	1.79571	3.924
77 2-Hexanone	0.31584	0.33279	0.32637	0.33044	0.33067	0.32164	0.32629	1.983
79 Dibromochloromethane	1.45042	1.47171	1.39105	1.41517	1.43085	1.47069	1.43832	2.228
80 1,2-Dibromoethane	1.16015	1.11687	1.12925	1.13827	1.14407	1.15548	1.14068	1.421
81 1-Chlorohexane	3.51850	3.35558	3.30347	3.18685	3.06997	3.15948	3.26564	4.923
83 Chlorobenzene	4.31066	4.27630	4.23891	4.05161	4.00723	4.10131	4.16434	3.054
85 1,1,1,2-Tetrachloroethane	1.74195	1.57403	1.58164	1.53303	1.50796	1.54658	1.58086	5.275
84 Ethylbenzene	2.45893	2.33621	2.32552	2.20698	2.13695	2.24701	2.28527	4.949
86 m and p-Xylene	3.39811	3.19138	3.11853	3.02803	2.94161	2.99079	3.11141	5.358
87 o-Xylene	2.72864	2.60532	2.68984	2.59797	2.51623	2.58488	2.62048	2.925
88 Styrene	4.19622	3.92384	4.02194	3.92099	3.99776	4.07347	4.02237	2.570
89 Bromoform	0.71864	0.67333	0.69089	0.68032	0.66998	0.68241	0.68593	2.568

Linear ~~Linear loop~~ pt added

STL Denver

INITIAL CALIBRATION DATA

Start Cal Date : 09-SEP-2003 01:23
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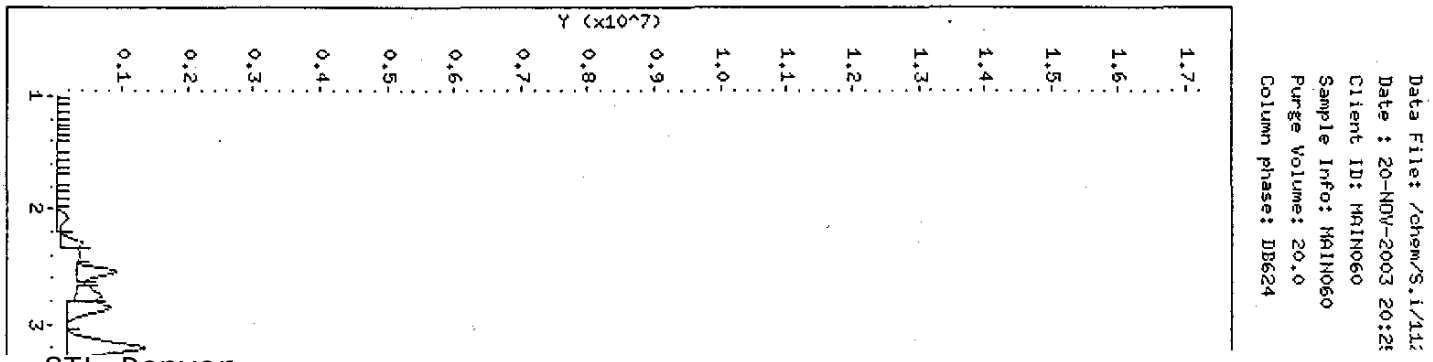
Cal Date : 20-Nov-2003 21:28 reinharj
Curve Type : Average

Compound	1.000 Level 1	2.000 Level 2	5.000 Level 3	10.000 Level 4	30.000 Level 5	60.000 Level 6	___ RRF	% RSD
90 isopropyl benzene	9.63026	9.12246	9.22240	8.89987	8.59134	8.73299	9.03322	4.152
92 Cyclohexanone	0.05056	0.04737	0.04546	0.04577	0.04702	0.04484	0.04684	4.396
94 1,1,2,2-Tetrachloroethane	1.01442	0.99343	0.97229	0.96011	0.92471	0.95613	0.97018	3.216
95 Bromobenzene	1.14719	1.16588	1.12035	1.08351	1.07234	1.09240	1.11361	3.351
97 1,2,3-Trichloropropane	0.20407	0.20610	0.18145	0.18285	0.17786	0.18340	0.18929	6.553
96 n-Propylbenzene	1.84089	1.78127	1.69255	1.56672	1.56938	1.60713	1.67633	6.885
99 2-Chlorotoluene	1.26939	1.33475	1.23372	1.23431	1.17110	1.23367	1.24616	4.317
100 1,3,5-Trimethylbenzene	5.48342	5.31337	5.14094	4.93811	4.91499	5.03330	5.13735	4.359
101 4-Chlorotoluene	1.43054	1.24114	1.32248	1.22801	1.26087	1.27321	1.29271	5.802
102 tert-Butylbenzene	6.05291	5.77928	5.51756	5.26114	5.23505	5.39105	5.53950	5.787
103 1,2,4-Trimethylbenzene	4.93312	4.91132	4.69691	4.34981	4.42526	4.39621	4.61877	5.727
104 sec-Butylbenzene	1.49053	1.39485	1.31225	1.27466	1.25380	1.27055	1.33277	6.930
106 m-Dichlorobenzene	2.01789	2.17810	2.05834	1.94818	1.95929	1.91799	2.01330	4.736
105 4-Isopropyltoluene	6.39999	6.49984	6.14142	5.85531	5.74731	5.99104	6.10582	4.900
108 p-dichlorobenzene	2.43172	2.26032	2.15731	2.14903	2.12146	2.13255	2.20873	5.434
110 n-Butylbenzene	6.07845	6.07106	5.77726	5.60494	5.47008	5.53027	5.75534	4.657
111 o-Dichlorobenzene	1.61564	1.63869	1.60386	1.55213	1.53899	1.53453	1.58064	2.802
112 1,2-Dibromo-3-chloropropane	0.10076	0.10153	0.10170	0.10530	0.11331	0.10646	0.10484	4.514
113 1,2,4-Trichlorobenzene	1.28982	1.18803	1.09437	1.05417	1.02510	0.99988	1.10856	9.972
114 Hexachlorobutadiene	1.13621	1.04372	1.00862	0.99769	0.95436	0.91234	1.00882	7.658
115 Napthalene	1.33415	1.28282	1.13278	1.12423	1.12834	1.07626	1.17976	8.736
116 1,2,3-Trichlorobenzene	1.04180	0.91225	0.78790	0.77320	0.74243	0.71080	0.82806	15.130

<- Out liner



Data File: /chem/S.i/112003p.b/s4922.d Page 1
Report Date: 11/20/2003

INITIAL CALIBRATION REPORT

Instrument ID: S.i
Lab File ID: s4922.d
Analysis Type: WATER

Injection Date: 20-NOV-2003 20:25
Lab Sample ID: MAIN060
Method File: /chem/S.i/112003p.b/S-20ml-h2o.m

COMPOUND	%RSD
1,2-Dichloroethene (total)	5.3
Xylene (total)	4.5
dichlorodifluoromethane	10.8
Chloromethane	8.7
Vinyl Chloride	10.8
Bromomethane	9.8
Chloroethane	12.2
Trichlorofluoromethane	12.4
Ethanol	17.0
Acrolein	6.9
1,1-Dichloroethene	6.2
Acetone	18.8
Iodomethane	5.5
Acetonitrile	6.6
Methylene Chloride	19.3
tert-Butyl alcohol	6.5
trans-1,2-Dichloroethene	4.9
Acrylonitrile	2.2
Isopropyl ether	5.1
1,1-Dichloroethane	7.7
Chloroprene	7.7
2-Butanone	6.0
2,2-Dichloropropane	8.3
cis-1,2-Dichloroethene	5.9
Propionitrile	3.0
Bromochloromethane	4.8
Methacrylonitrile	2.7
Chloroform	5.5
1,1,1-Trichloroethane	5.9
Carbon Tetrachloride	5.7
1,1-Dichloropropene	6.4
Isobutanol	15.5
Benzene	6.2
1,2-Dichloroethane	4.3
n-Butanol	12.1
Trichloroethene	6.1
1,2-Dichloropropane	4.1
1,4-Dioxane	12.4
Dibromomethane	2.0

Data File: /chem/S.i/112003p.b/s4922.d Page 2
Report Date: 11/20/2003

INITIAL CALIBRATION REPORT

Instrument ID: S.i
Lab File ID: s4922.d
Analysis Type: WATER

Injection Date: 20-NOV-2003 20:25
Lab Sample ID: MAIN060
Method File: /chem/S.i/112003p.b/S-20ml-h2o.m

COMPOUND	%RSD
Bromodichloromethane	2.9
cis-1,3-Dichloropropene	1.7
4-Methyl-2-pentanone	2.6
Toluene	4.4
trans-1,3-Dichloropropene	3.8
1,1,2-Trichloroethane	3.6
Tetrachloroethene	3.9
1,3-Dichloropropane	2.1
2-Hexanone	2.0
Dibromochloromethane	2.2
1,2-Dibromoethane	1.4
1-Chlorohexane	4.9
Chlorobenzene	3.1
Ethylbenzene	4.9
1,1,1,2-Tetrachloroethane	5.3
m and p-Xylene	5.4
o-Xylene	2.9
Styrene	2.6
Bromoform	2.6
isopropyl benzene	4.2
Cyclohexanone	4.4
Bromobenzene	3.4
1,1,2,2-Tetrachloroethane	3.2
1,2,3-Trichloropropane	6.6
n-Propylbenzene	6.9
2-Chlorotoluene	4.3
1,3,5-Trimethylbenzene	4.4
4-Chlorotoluene	5.8
tert-Butylbenzene	5.8
1,2,4-Trimethylbenzene	5.7
sec-Butylbenzene	6.9
4-Isopropyltoluene	4.9
m-Dichlorobenzene	4.7
p-dichlorobenzene	5.4
n-Butylbenzene	4.7
o-Dichlorobenzene	2.8
1,2-Dibromo-3-chloropropane	4.5
1,2,4-Trichlorobenzene	10.0
Hexachlorobutadiene	7.7

Data File: /chem/S.i/112003p.b/s4922.d
Report Date: 11/20/2003

INITIAL CALIBRATION REPORT

Instrument ID: S.i
Lab File ID: s4922.d
Analysis Type: WATER

Injection Date: 20-NOV-2003 20:25
Lab Sample ID: MAIN060
Method File: /chem/S.i/112003p.b/S-20ml-h2o.m

COMPOUND	%RSD
Napthalene	8.7
1,2,3-Trichlorobenzene	15.1

The average of all %RSD's in the initial calibration is 6.2

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STL Denver

VOLATILE REPORT SW-846

Data file : /chem/S.i/112003p.b/s4917.d
Lab Smp Id: MAIN001 Client Smp ID: MAIN001
Inj Date : 20-NOV-2003 18:24
Operator : reinharj Inst ID: S.i
Smp Info : MAIN001
Misc Info :
Comment :
Method : /chem/S.i/112003p.b/S-20ml-h2o.m
Meth Date : 21-Nov-2003 22:43 reinharj Quant Type: ISTD
Cal Date : 09-SEP-2003 03:46 Cal File: s3089.d
Als bottle: 2 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 1-main.sub
Target Version: 3.40
Processing Host: chemsv02

Concentration Formula: Amt * DF * Vp/Vs

Name	Value	Description
DF	1.000	Dilution Factor
Vp	20.000	Purge Volume (ml)
Vs	20.000	Sample Volume Purged (ml)

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	ON-COL (ug/L)
* 56 Fluorobenzene	96	7.088	7.087	(1.000)	2110113	12.5000	
* 82 Chlorobenzene-d5	119	10.691	10.691	(1.000)	407855	12.5000	
* 107 1,4-Dichlorobenzene-d4	152	13.752	13.751	(1.000)	523647	12.5000	
M 1 1,2-Dichloroethene (total)	96				130307	2.00000	2.11206
M 2 Xylene (total)	106				310781	1.00000	3.22556
3 dichlorodifluoromethane	85	2.542	2.542	(0.359)	88364	1.00000	1.19278(a)
4 Chloromethane	50	2.687	2.705	(0.379)	57869	1.00000	1.16374(a)
6 Vinyl Chloride	62	2.832	2.832	(0.400)	63878	1.00000	1.19946(a)
8 Bromomethane	94	3.140	3.140	(0.443)	57194	1.00000	1.19024(a)
9 Chloroethane	64	3.194	3.212	(0.451)	45386	1.00000	1.21609(a)
11 Trichlorofluoromethane	101	3.484	3.502	(0.492)	110650	1.00000	1.24156(aM)
12 Ethanol	45	3.665	3.629	(0.517)	8320	50.0000	57.4017(aM) — lumpt not used DM 4/12.
16 Acrolein	56	3.846	3.846	(0.543)	21524	10.0000	11.1861(a)
18 1,1-Dichloroethene	96	3.937	3.937	(0.555)	65880	1.00000	1.07328
19 Acetone	43	3.991	3.991	(0.563)	24675	4.00000	4.07039(a)
21 Iodomethane	142	4.136	4.136	(0.584)	99454	1.00000	1.08121

Data File: /chem/S.i/112003p.b/s4917.d
Report Date: 21-Nov-2003 22:49

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
25 Acetonitrile	41	4.371	4.371	(0.617)	6915	10.0000	9.32636(a)
26 Methylene Chloride	84	4.444	4.462	(0.627)	88463	1.00000	0.934535(a)
27 tert-Butyl alcohol	59	4.480	4.480	(0.632)	23379	20.0000	21.7054(a)
30 Acrylonitrile	53	4.752	4.751	(0.670)	33731	10.0000	10.5084(a)
29 trans-1,2-Dichloroethene	96	4.697	4.697	(0.663)	68943	1.00000	1.06650
33 1,1-Dichloroethane	63	5.186	5.186	(0.732)	109644	1.00000	1.11905
32 Isopropyl ether	87	5.150	5.150	(0.727)	204654	5.00000	5.32296(a)
35 Chloroprene	53	5.241	5.240	(0.739)	102732	1.00000	1.11409
39 cis-1,2-Dichloroethene	96	5.820	5.820	(0.821)	61364	1.00000	1.04555
40 2-Butanone	43	5.838	5.820	(0.824)	25107	4.00000	4.34761(a)
37 2,2-Dichloropropane	77	5.820	5.802	(0.821)	88703	1.00000	1.11679(a)
41 Propionitrile	54	5.965	5.965	(0.842)	10691	10.0000	9.69595(a)
42 Methacrylonitrile	41	6.110	6.110	(0.862)	83116	10.0000	10.2520
43 Bromochloromethane	128	6.110	6.110	(0.862)	23753	1.00000	1.07754
45 Chloroform	83	6.146	6.146	(0.867)	105553	1.00000	1.07226
47 1,1,1-Trichloroethane	97	6.363	6.363	(0.898)	115960	1.00000	1.08351
50 1,1-Dichloropropene	75	6.526	6.526	(0.921)	98079	1.00000	1.08120
49 Carbon Tetrachloride	117	6.526	6.508	(0.921)	107471	1.00000	1.08976
51 Isobutanol	41	6.599	6.617	(0.931)	7632	20.0000	28.7477(a)
53 Benzene	78	6.762	6.761	(0.954)	186251	1.00000	1.09090
55 1,2-Dichloroethane	62	6.852	6.852	(0.967)	38281	1.00000	0.959556(a)
57 n-Butanol	56	7.377	7.377	(1.041)	11602	20.0000	34.3503(a)
58 Trichloroethene	130	7.504	7.486	(1.059)	77897	1.00000	1.08393
61 1,2-Dichloropropane	63	7.812	7.812	(1.102)	57743	1.00000	1.07787
64 Dibromomethane	93	7.939	7.957	(1.120)	26399	1.00000	1.00043
63 1,4-Dioxane	88	7.921	7.920	(1.118)	8610	50.0000	54.6377(aM)
65 Bromodichloromethane	83	8.102	8.101	(1.143)	80429	1.00000	1.03077
68 cis-1,3-Dichloropropene	75	8.627	8.627	(0.807)	72197	1.00000	1.03119
69 4-Methyl-2-pentanone	43	8.790	8.790	(0.822)	67844	4.00000	4.05666(a)
71 Toluene	91	8.989	8.989	(0.841)	221547	1.00000	1.06840
72 trans-1,3-Dichloropropene	75	9.315	9.297	(0.871)	52657	1.00000	1.06082
74 1,1,2-Trichloroethane	97	9.532	9.532	(0.892)	32782	1.00000	1.06749
76 1,3-Dichloropropane	76	9.750	9.749	(0.912)	48017	1.00000	1.02729
75 Tetrachloroethene	164	9.623	9.623	(0.900)	61663	1.00000	1.05243
77 2-Hexanone	43	9.786	9.786	(0.915)	41222	4.00000	3.87193(a)
79 Dibromochloromethane	129	9.985	9.985	(0.934)	47325	1.00000	1.00842
80 1,2-Dibromoethane	107	10.166	10.166	(0.951)	37854	1.00000	1.01707
81 1-Chlorohexane	91	10.655	10.655	(0.997)	114803	1.00000	1.07743
83 Chlorobenzene	112	10.727	10.727	(1.003)	140650	1.00000	1.03514
85 1,1,1,2-Tetrachloroethane	131	10.818	10.818	(1.012)	56837	1.00000	1.10190
84 Ethylbenzene	106	10.818	10.818	(1.012)	80231	1.00000	1.07599
86 m and p-Xylene	106	10.963	10.963	(1.025)	221750	2.00000	2.18429
87 o-Xylene	106	11.470	11.470	(1.073)	89031	1.00000	1.04127
88 Styrene	104	11.488	11.488	(1.075)	136916	1.00000	1.04322
89 Bromoform	173	11.760	11.759	(1.100)	23448	1.00000	1.04769
90 isopropyl benzene	105	11.923	11.922	(1.115)	314220	1.00000	1.06609
92 Cyclohexanone	55	12.140	12.140	(1.135)	65986	40.0000	43.1800

Data File: /chem/S.i/112003p.b/s4917.d
Report Date: 21-Nov-2003 22:49

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
94 1,1,2,2-Tetrachloroethane	83	12.412	12.393	(1.161)	33099	1.00000	1.04560
95 Bromobenzene	156	12.412	12.411	(0.903)	48058	1.00000	1.03016
97 1,2,3-Trichloropropane	110	12.502	12.502	(0.909)	8549	1.00000	1.07810
96 n-Propylbenzene	120	12.502	12.502	(0.909)	77118	1.00000	1.09817
99 2-Chlorotoluene	126	12.665	12.665	(0.921)	53177	1.00000	1.01864
100 1,3,5-Trimethylbenzene	105	12.756	12.755	(0.928)	229710	1.00000	1.06736
101 4-Chlorotoluene	126	12.828	12.828	(0.933)	59928	1.00000	1.10662
102 tert-Butylbenzene	119	13.190	13.190	(0.959)	253567	1.00000	1.09268
103 1,2,4-Trimethylbenzene	105	13.263	13.262	(0.964)	206657	1.00000	1.06806
104 sec-Butylbenzene	134	13.462	13.462	(0.979)	62441	1.00000	1.11837
106 m-Dichlorobenzene	146	13.661	13.661	(0.993)	84533	1.00000	1.00228
105 4-Isopropyltoluene	119	13.643	13.643	(0.992)	268107	1.00000	1.04818
108 p-dichlorobenzene	146	13.770	13.769	(1.001)	101869	1.00000	1.10096
110 n-Butylbenzene	91	14.150	14.132	(1.029)	254637	1.00000	1.05614
111 o-Dichlorobenzene	146	14.222	14.222	(1.034)	67682	1.00000	1.02214
112 1,2-Dibromo-3-chloropropane	157	15.092	15.091	(1.097)	4221	1.00000	0.961057(a)
113 1,2,4-Trichlorobenzene	180	15.979	15.979	(1.162)	54033	1.00000	1.16351
114 Hexachlorobutadiene	225	16.124	16.124	(1.173)	47598	1.00000	1.12628
115 Napthalene	128	16.287	16.287	(1.184)	55890	1.00000	1.13086
116 1,2,3-Trichlorobenzene	180	16.576	16.594	(1.205)	43643	1.00000	0.985214(a)

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
M - Compound response manually integrated.

Data File: /chem/S.i/112003p.b/s4917.d
Report Date: 21-Nov-2003 22:49

STL Denver

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: S.i
Lab File ID: s4917.d
Lab Smp Id: MAIN001
Analysis Type: VOA
Quant Type: ISTD
Operator: reinharj
Method File: /chem/S.i/112003p.b/S-20ml-h2o.m
Misc Info:

Calibration Date: 11/20/3
Calibration Time: 1752
Client Smp ID: MAIN001
Level: LOW
Sample Type: WATER

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
56 Fluorobenzene	1999876	999938	3999752	2110113	5.51
82 Chlorobenzene-d5	447803	223902	895606	407855	-8.92
107 1,4-Dichlorobenze	545091	272546	1090182	523647	-3.93

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
56 Fluorobenzene	7.09	6.59	7.59	7.09	-0.02
82 Chlorobenzene-d5	10.69	10.19	11.19	10.69	-0.01
107 1,4-Dichlorobenze	13.75	13.25	14.25	13.75	-0.01

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem/S.i/112003p.b/s4917.d
Date : 20-NOV-2003 18:24
Client ID: MAIN001
Sample Info: MAIN001
Purge Volume: 20.0
Column phase: DB624

Instrument: S.i
Operator: reinharj
Column diameter: 0.53

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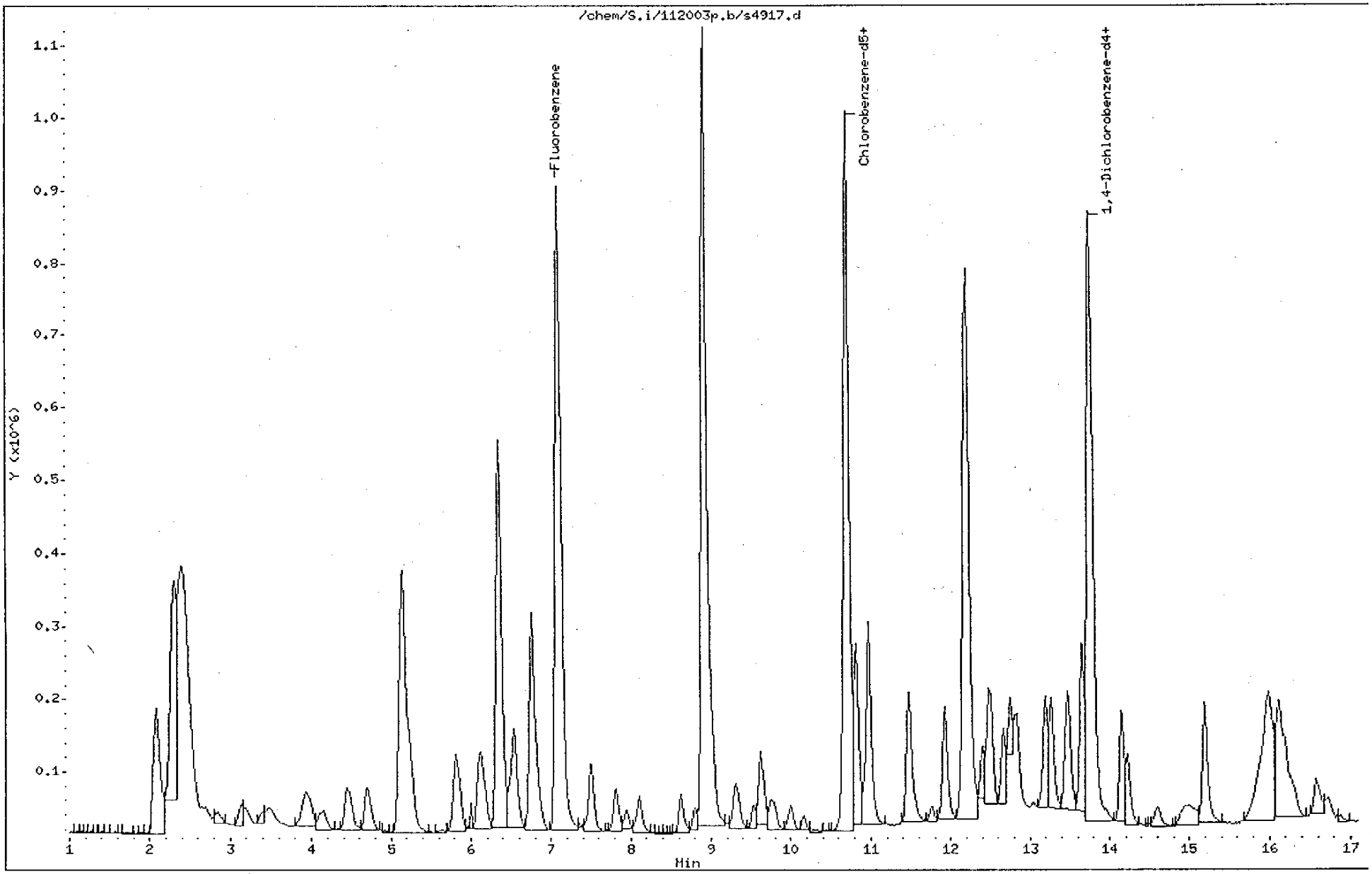

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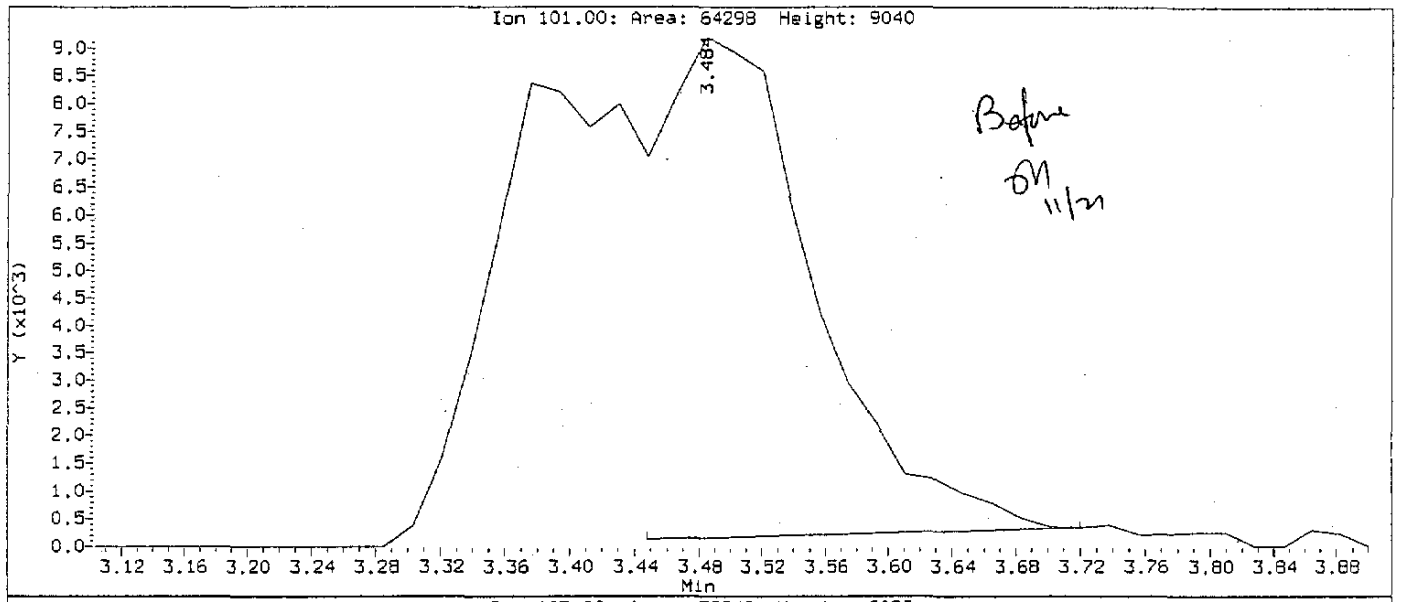
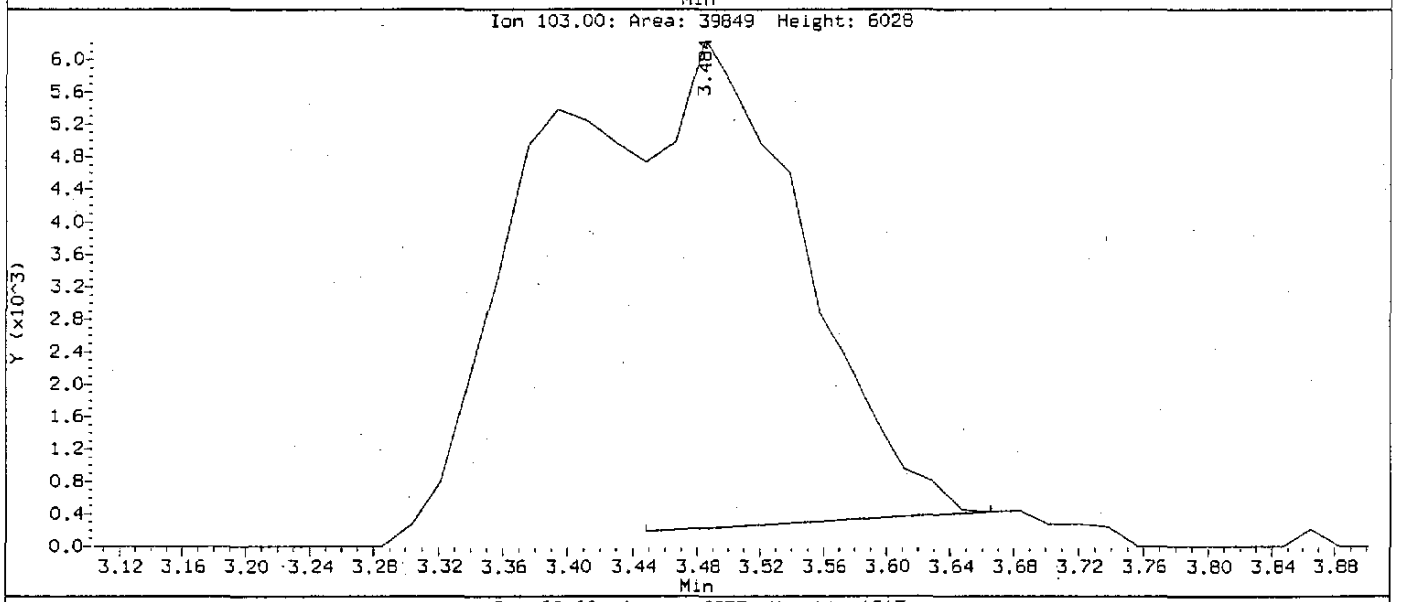
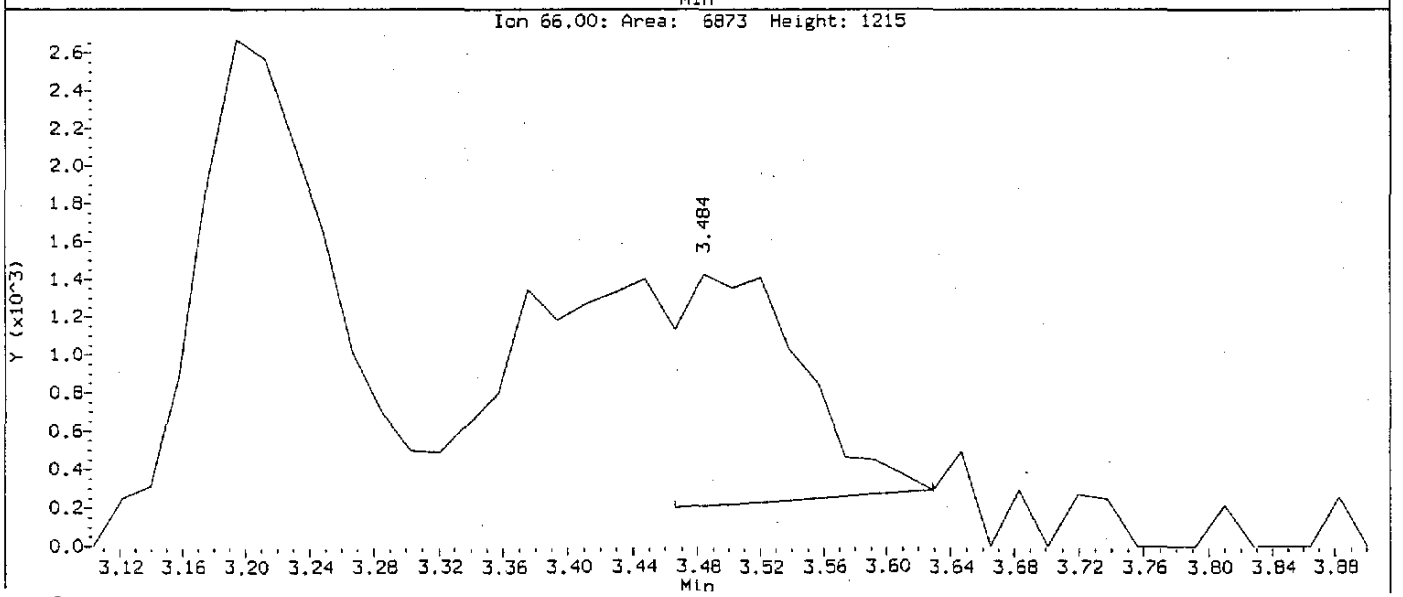
Data File: /chem/S.i/112003p.b/s4917.d
Injection Date: 20-NOV-2003 18:24
Instrument: S.i
Client Sample ID: MAIN001

Compound: Trichlorofluoromethane
CAS Number: 75-69-4

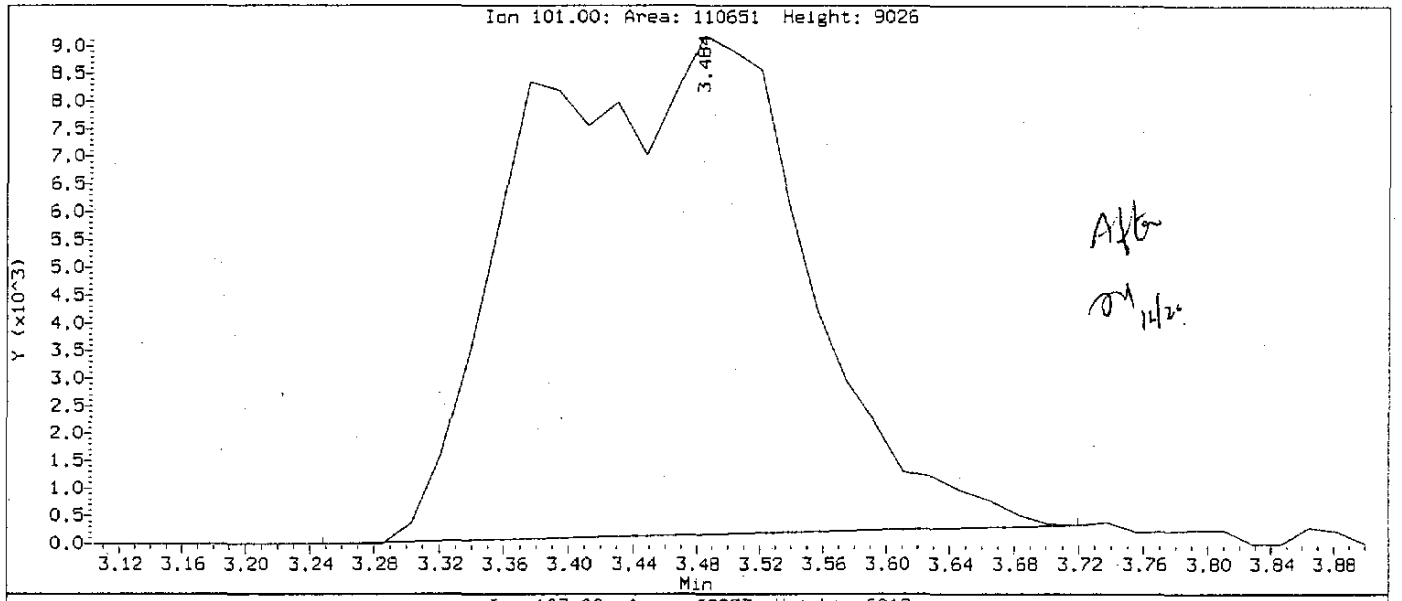


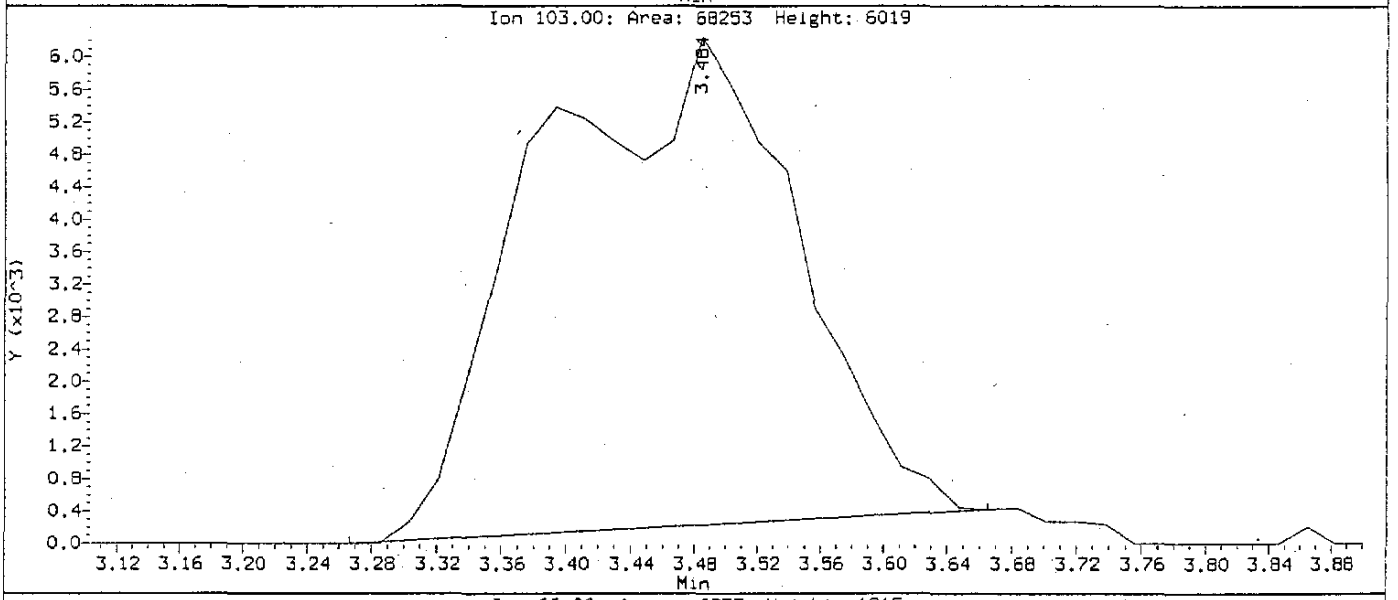


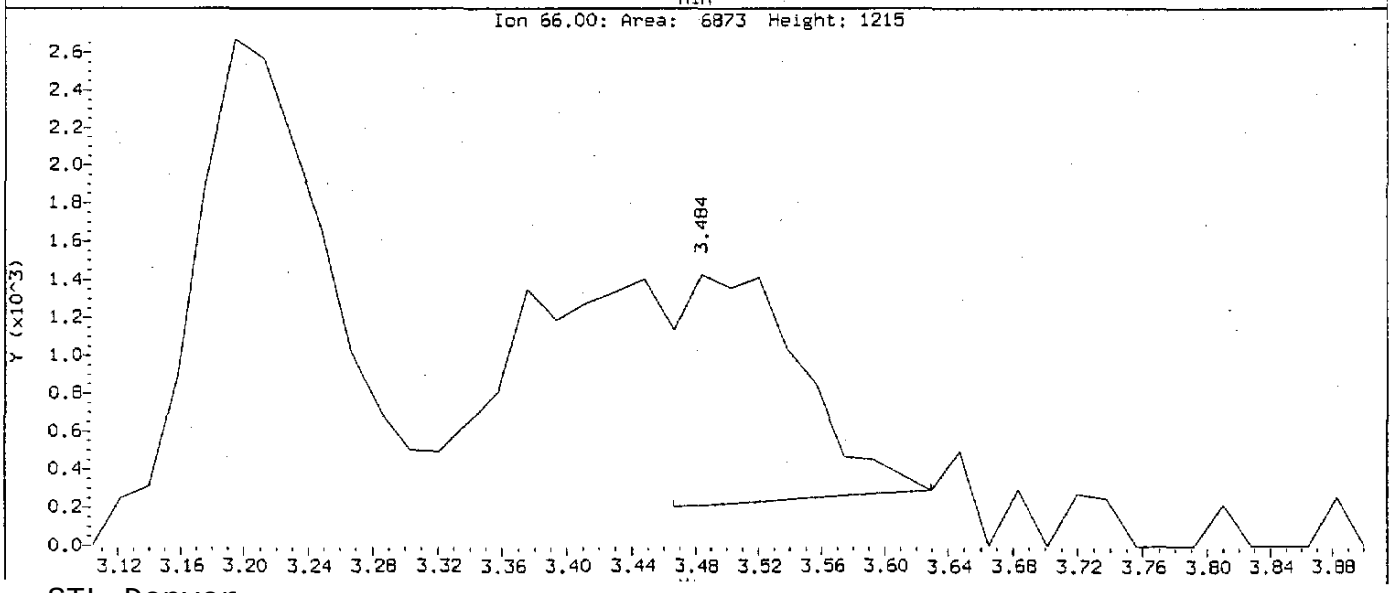


Data File: /chem/S.i/112003p.b/s4917.d
Injection Date: 20-NOV-2003 18:24
Instrument: S.i
Client Sample ID: MAIN001

Compound: Trichlorofluoromethane
CAS Number: 75-69-4







Data File: /chem/S.i/112003p.b/s4918.d Page 1
Report Date: 21-Nov-2003 22:49

STL Denver

VOLATILE REPORT SW-846

Data file : /chem/S.i/112003p.b/s4918.d
Lab Smp Id: MAIN002 Client Smp ID: MAIN002
Inj Date : 20-NOV-2003 18:48
Operator : reinharj Inst ID: S.i
Smp Info : MAIN002
Misc Info :
Comment :
Method : /chem/S.i/112003p.b/S-20ml-h2o.m
Meth Date : 21-Nov-2003 22:43 reinharj Quant Type: ISTD
Cal Date : 09-SEP-2003 04:09 Cal File: s3090.d
Als bottle: 2 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 1-main.sub
Target Version: 3.40
Processing Host: chemsv02

Concentration Formula: Amt * DF * Vp/Vs

Name	Value	Description
DF	1.000	Dilution Factor
Vp	20.000	Purge Volume (ml)
Vs	20.000	Sample Volume Purged (ml)

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
* 56 Fluorobenzene	96	7.087	7.087	(1.000)	2065633	12.5000	
* 82 Chlorobenzene-d5	119	10.691	10.691	(1.000)	401596	12.5000	
* 107 1,4-Dichlorobenzene-d4	152	13.751	13.751	(1.000)	507123	12.5000	
M 1 1,2-Dichloroethene (total)	96				253404	4.00000	4.20162
M 2 Xylene (total)	106				577533	2.00000	6.09125
3 dichlorodifluoromethane	85	2.542	2.542	(0.359)	151531	2.00000	2.08948
4 Chloromethane	50	2.705	2.705	(0.382)	91078	2.00000	1.87101(a)
6 Vinyl Chloride	62	2.832	2.832	(0.400)	105624	2.00000	2.02604
8 Bromomethane	94	3.140	3.140	(0.443)	95267	2.00000	2.02526
9 Chloroethane	64	3.212	3.212	(0.453)	77736	2.00000	2.12774
11 Trichlorofluoromethane	101	3.502	3.502	(0.494)	176144	2.00000	2.01900(M)
12 Ethanol	45	3.629	3.629	(0.512)	11550	100.000	110.491(aM)
16 Acrolein	56	3.846	3.846	(0.543)	37810	20.0000	20.0731
18 1,1-Dichloroethene	96	3.937	3.937	(0.555)	126745	2.00000	2.10933
19 Acetone	43	3.991	3.991	(0.563)	43904	8.00000	9.36344(a)
21 Iodomethane	142	4.136	4.136	(0.584)	184583	2.00000	2.04990

Data File: /chem/S.i/112003p.b/s4918.d
Report Date: 21-Nov-2003 22:49

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
25 Acetonitrile	41	4.371	4.371	(0.617)	14119	20.0000	19.4526(a)
26 Methylene Chloride	84	4.462	4.462	(0.630)	130520	2.00000	1.99605
27 tert-Butyl alcohol	59	4.480	4.480	(0.632)	45823	40.0000	43.4588(a)
30 Acrylonitrile	53	4.751	4.751	(0.670)	62182	20.0000	19.7890(a)
29 trans-1,2-Dichloroethene	96	4.697	4.697	(0.663)	130376	2.00000	2.06027
33 1,1-Dichloroethane	63	5.186	5.186	(0.732)	199720	2.00000	2.08227
32 Isopropyl ether	87	5.150	5.150	(0.727)	388565	10.0000	10.3240
35 Chloroprene	53	5.240	5.240	(0.739)	189297	2.00000	2.09707
39 cis-1,2-Dichloroethene	96	5.820	5.820	(0.821)	123028	2.00000	2.14135
40 2-Butanone	43	5.820	5.820	(0.821)	48129	8.00000	8.51365
37 2,2-Dichloropropane	77	5.802	5.802	(0.819)	165480	2.00000	2.12830(a)
41 Propionitrile	54	5.965	5.965	(0.842)	20999	20.0000	19.4546
42 Methacrylonitrile	41	6.110	6.110	(0.862)	160215	20.0000	20.1874
43 Bromochloromethane	128	6.110	6.110	(0.862)	43735	2.00000	2.02674
45 Chloroform	83	6.146	6.146	(0.867)	198114	2.00000	2.05588
47 1,1,1-Trichloroethane	97	6.363	6.363	(0.898)	216960	2.00000	2.07089
50 1,1-Dichloropropene	75	6.526	6.526	(0.921)	187141	2.00000	2.10742
49 Carbon Tetrachloride	117	6.508	6.508	(0.918)	196676	2.00000	2.03724
51 Isobutanol	41	6.617	6.617	(0.934)	14600	40.0000	47.6976(a)
53 Benzene	78	6.761	6.761	(0.954)	348809	2.00000	2.08702
55 1,2-Dichloroethane	62	6.852	6.852	(0.967)	83958	2.00000	2.14982
57 n-Butanol	56	7.377	7.377	(1.041)	15416	40.0000	46.6253(a)
58 Trichloroethene	130	7.486	7.486	(1.056)	148503	2.00000	2.11091
61 1,2-Dichloropropane	63	7.812	7.812	(1.102)	104019	2.00000	1.98350
64 Dibromomethane	93	7.957	7.957	(1.123)	53044	2.00000	2.05346
63 1,4-Dioxane	88	7.920	7.920	(1.118)	16650	100.000	107.933(a)
65 Bromodichloromethane	83	8.101	8.101	(1.143)	153780	2.00000	2.01326
68 cis-1,3-Dichloropropene	75	8.627	8.627	(0.807)	136070	2.00000	1.97378
69 4-Methyl-2-pentanone	43	8.790	8.790	(0.822)	137629	8.00000	8.35764
71 Toluene	91	8.989	8.989	(0.841)	416612	2.00000	2.04041
72 trans-1,3-Dichloropropene	75	9.297	9.297	(0.870)	101020	2.00000	2.06685
74 1,1,2-Trichloroethane	97	9.532	9.532	(0.892)	61250	2.00000	2.02559
76 1,3-Dichloropropane	76	9.749	9.749	(0.912)	91119	2.00000	1.97981
75 Tetrachloroethene	164	9.623	9.623	(0.900)	117712	2.00000	2.04035
77 2-Hexanone	43	9.786	9.786	(0.915)	85533	8.00000	8.15922
79 Dibromochloromethane	129	9.985	9.985	(0.934)	94565	2.00000	2.04643
80 1,2-Dibromoethane	107	10.166	10.166	(0.951)	71765	2.00000	1.95825
81 1-Chlorohexane	91	10.655	10.655	(0.997)	215614	2.00000	2.05508
83 Chlorobenzene	112	10.727	10.727	(1.003)	274775	2.00000	2.05377
85 1,1,1,2-Tetrachloroethane	131	10.818	10.818	(1.012)	101140	2.00000	1.99136
84 Ethylbenzene	106	10.818	10.818	(1.012)	150114	2.00000	2.04458
86 m and p-Xylene	106	10.963	10.963	(1.025)	410127	4.00000	4.10281
87 o-Xylene	106	11.470	11.470	(1.073)	167406	2.00000	1.98843
88 Styrene	104	11.488	11.488	(1.075)	252128	2.00000	1.95101
89 Bromoform	173	11.759	11.759	(1.100)	43265	2.00000	1.96326
90 isopropyl benzene	105	11.922	11.922	(1.115)	586167	2.00000	2.01976
92 Cyclohexanone	55	12.140	12.140	(1.135)	121745	80.0000	80.9094

Data File: /chem/S.i/112003p.b/s4918.d
Report Date: 21-Nov-2003 22:49

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
94 1,1,2,2-Tetrachloroethane	83	12.393	12.393	(1.159)	63833	2.00000	2.04792
95 Bromobenzene	156	12.411	12.411	(0.903)	94599	2.00000	2.09387
97 1,2,3-Trichloropropane	110	12.502	12.502	(0.909)	16723	2.00000	2.17763
96 n-Propylbenzene	120	12.502	12.502	(0.909)	144532	2.00000	2.12521
99 2-Chlorotoluene	126	12.665	12.665	(0.921)	108301	2.00000	2.14218
100 1,3,5-Trimethylbenzene	105	12.755	12.755	(0.928)	431125	2.00000	2.06852
101 4-Chlorotoluene	126	12.828	12.828	(0.933)	100706	2.00000	1.92022
102 tert-Butylbenzene	119	13.190	13.190	(0.959)	468929	2.00000	2.08657
103 1,2,4-Trimethylbenzene	105	13.262	13.262	(0.964)	398503	2.00000	2.12668
104 sec-Butylbenzene	134	13.462	13.462	(0.979)	113178	2.00000	2.09316
106 m-Dichlorobenzene	146	13.661	13.661	(0.993)	176730	2.00000	2.16371
105 4-Isopropyltoluene	119	13.643	13.643	(0.992)	527395	2.00000	2.12906
108 p-dichlorobenzene	146	13.769	13.769	(1.001)	183402	2.00000	2.04672
110 n-Butylbenzene	91	14.132	14.132	(1.028)	492604	2.00000	2.10971
111 o-Dichlorobenzene	146	14.222	14.222	(1.034)	132963	2.00000	2.07345
112 1,2-Dibromo-3-chloropropane	157	15.091	15.091	(1.097)	8238	2.00000	1.93678(a)
113 1,2,4-Trichlorobenzene	180	15.979	15.979	(1.162)	96396	2.00000	2.14336
114 Hexachlorobutadiene	225	16.124	16.124	(1.173)	84687	2.00000	2.06918
115 Napthalene	128	16.287	16.287	(1.184)	104088	2.00000	2.17471
116 1,2,3-Trichlorobenzene	180	16.594	16.594	(1.207)	74020	2.00000	2.05974

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
M - Compound response manually integrated.

Data File: /chem/S.i/112003p.b/s4918.d
Report Date: 21-Nov-2003 22:49

STL Denver

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: S.i
Lab File ID: s4918.d
Lab Smp Id: MAIN002
Analysis Type: VOA
Quant Type: ISTD
Operator: reinharj
Method File: /chem/S.i/112003p.b/S-20ml-h2o.m
Misc Info:

Calibration Date: 11/20/3
Calibration Time: 1752
Client Smp ID: MAIN002
Level: LOW
Sample Type: WATER

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
56 Fluorobenzene	1999876	999938	3999752	2065633	3.29
82 Chlorobenzene-d5	447803	223902	895606	401596	-10.32
107 1,4-Dichlorobenze	545091	272546	1090182	507123	-6.97

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
56 Fluorobenzene	7.09	6.59	7.59	7.09	-0.02
82 Chlorobenzene-d5	10.69	10.19	11.19	10.69	-0.01
107 1,4-Dichlorobenze	13.75	13.25	14.25	13.75	-0.01

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem/S.i/112003p.b/s4918.d
Date : 20-NOV-2003 18:48
Client ID: MAIN002
Sample Info: MAIN002
Purge Volume: 20.0
Column phase: DB624

Instrument: S.i
Operator: reinharj
Column diameter: 0.53

Page 5

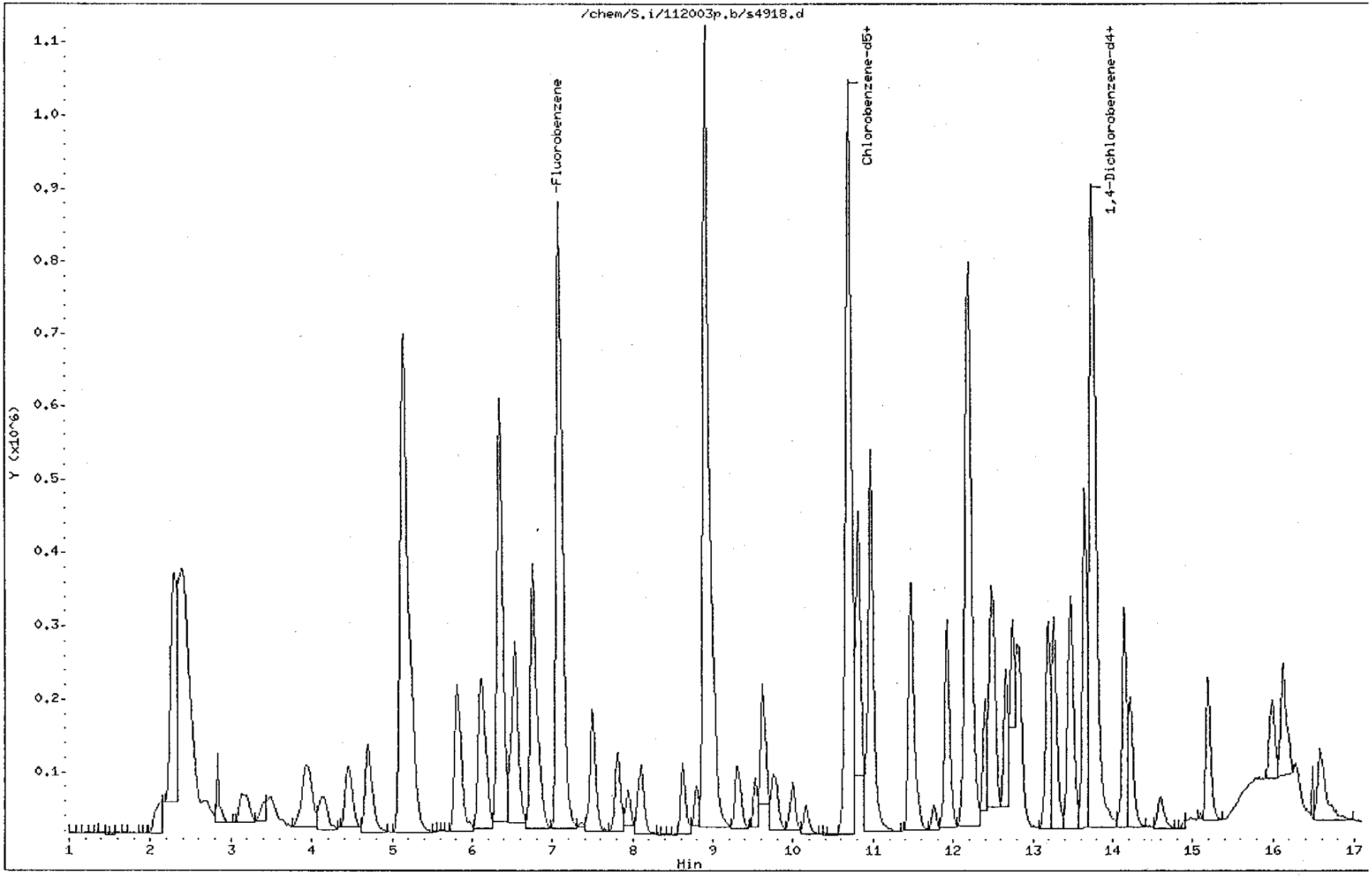
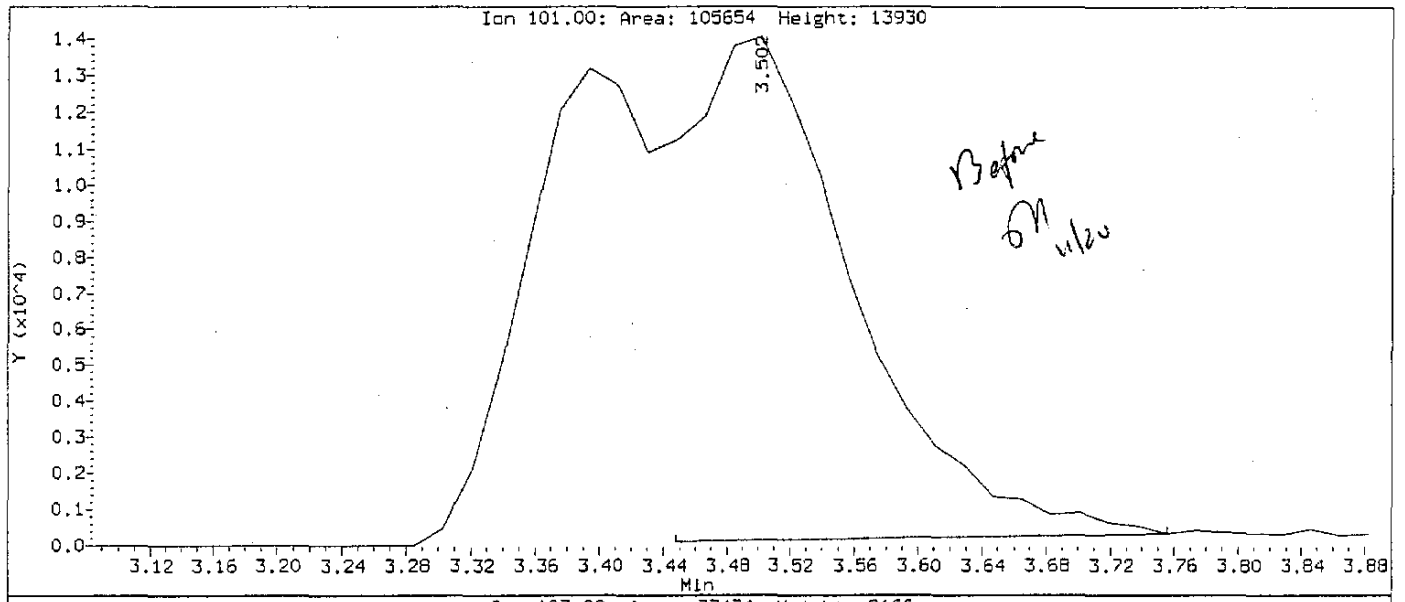
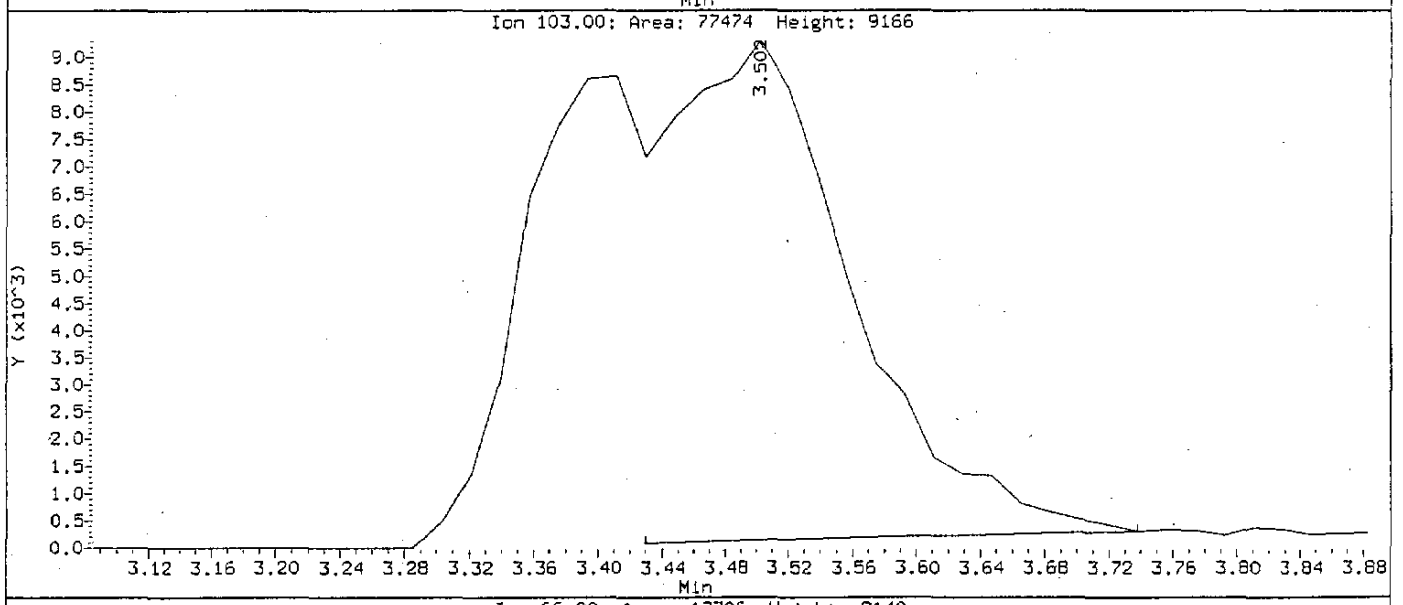


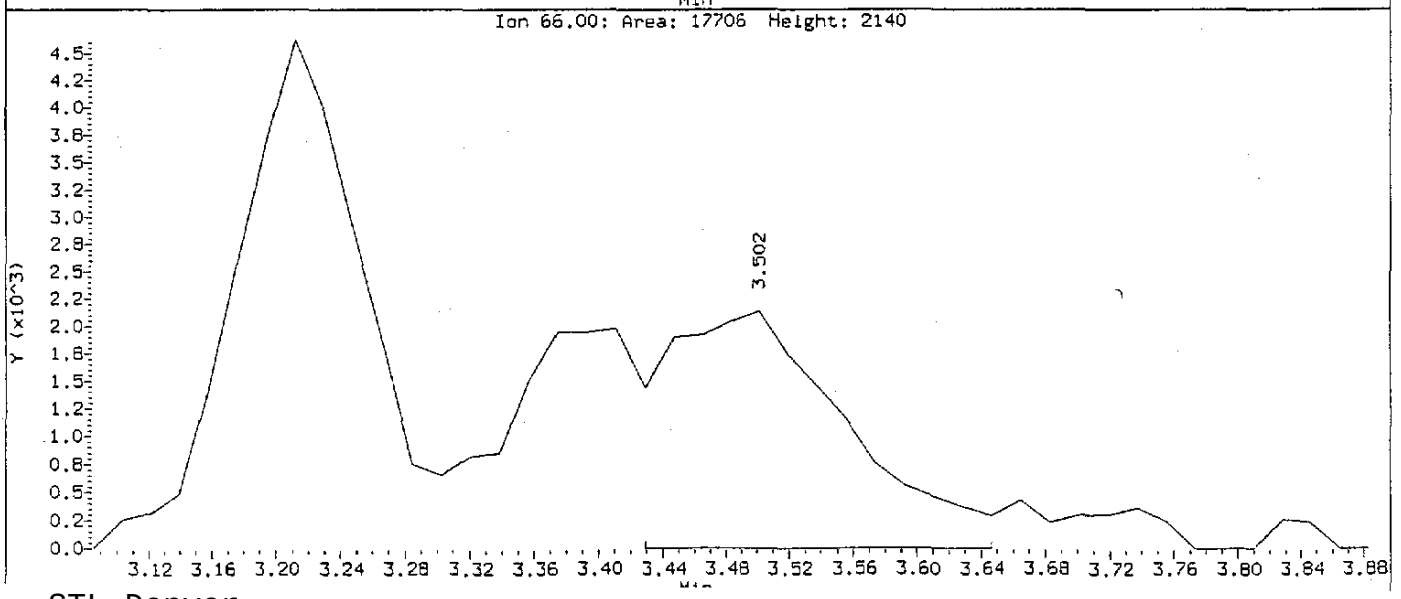
Table of Contents

Data File: /chem/5.i/112003p.b/s4918.d
Injection Date: 20-NOV-2003 18:48
Instrument: 5.i
Client Sample ID: MAIN002

Compound: Trichlorofluoromethane
CAS Number: 75-69-4

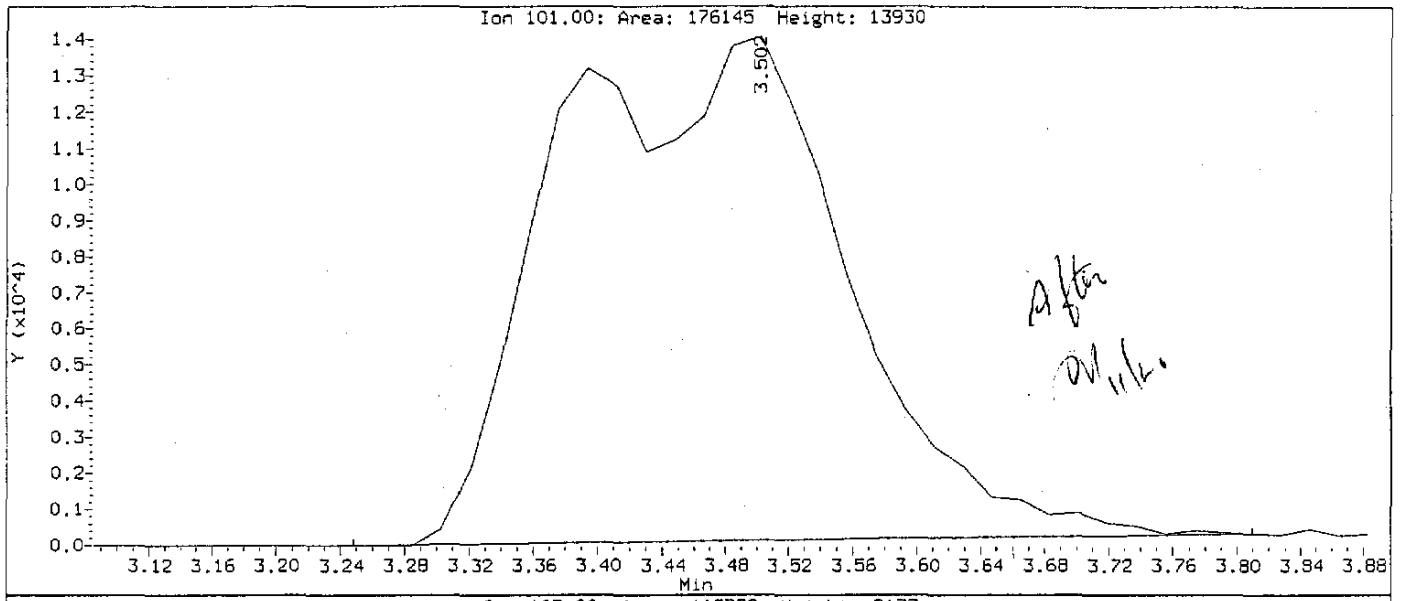


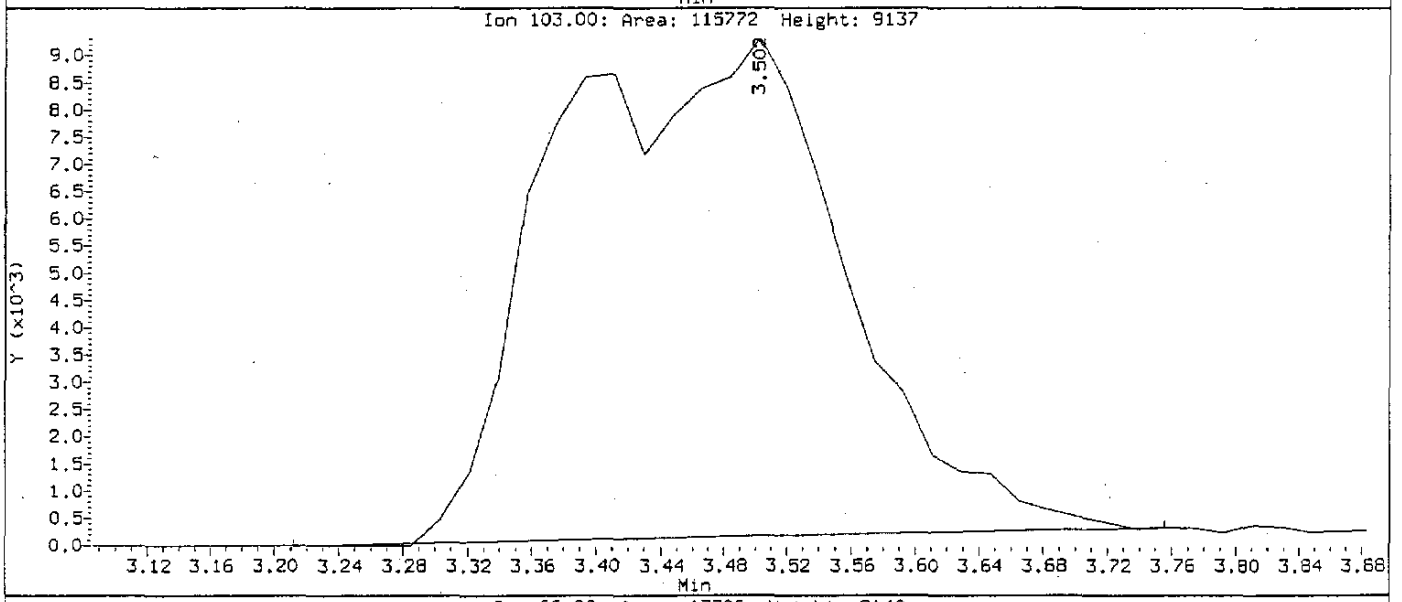


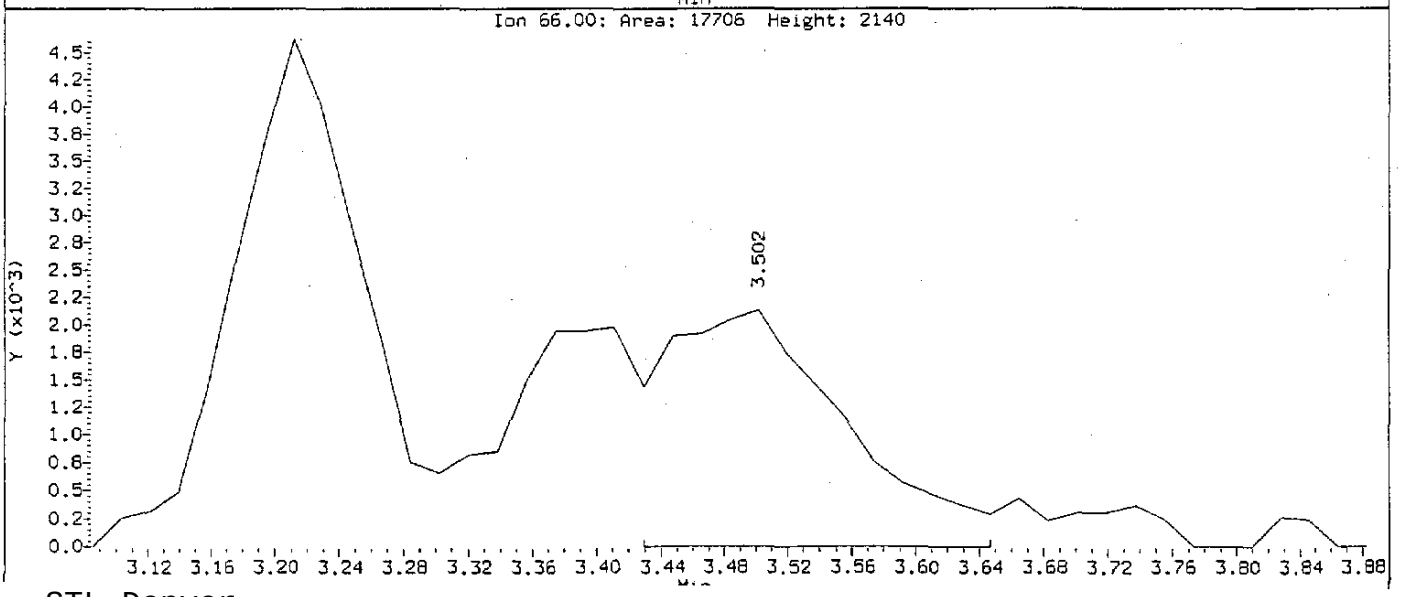


Data File: /chem/S.i/112003p.b/s4918.d
Injection Date: 20-NOV-2003 18:48
Instrument: S.i
Client Sample ID: MAIN002

Compound: Trichlorofluoromethane
CAS Number: 75-69-4

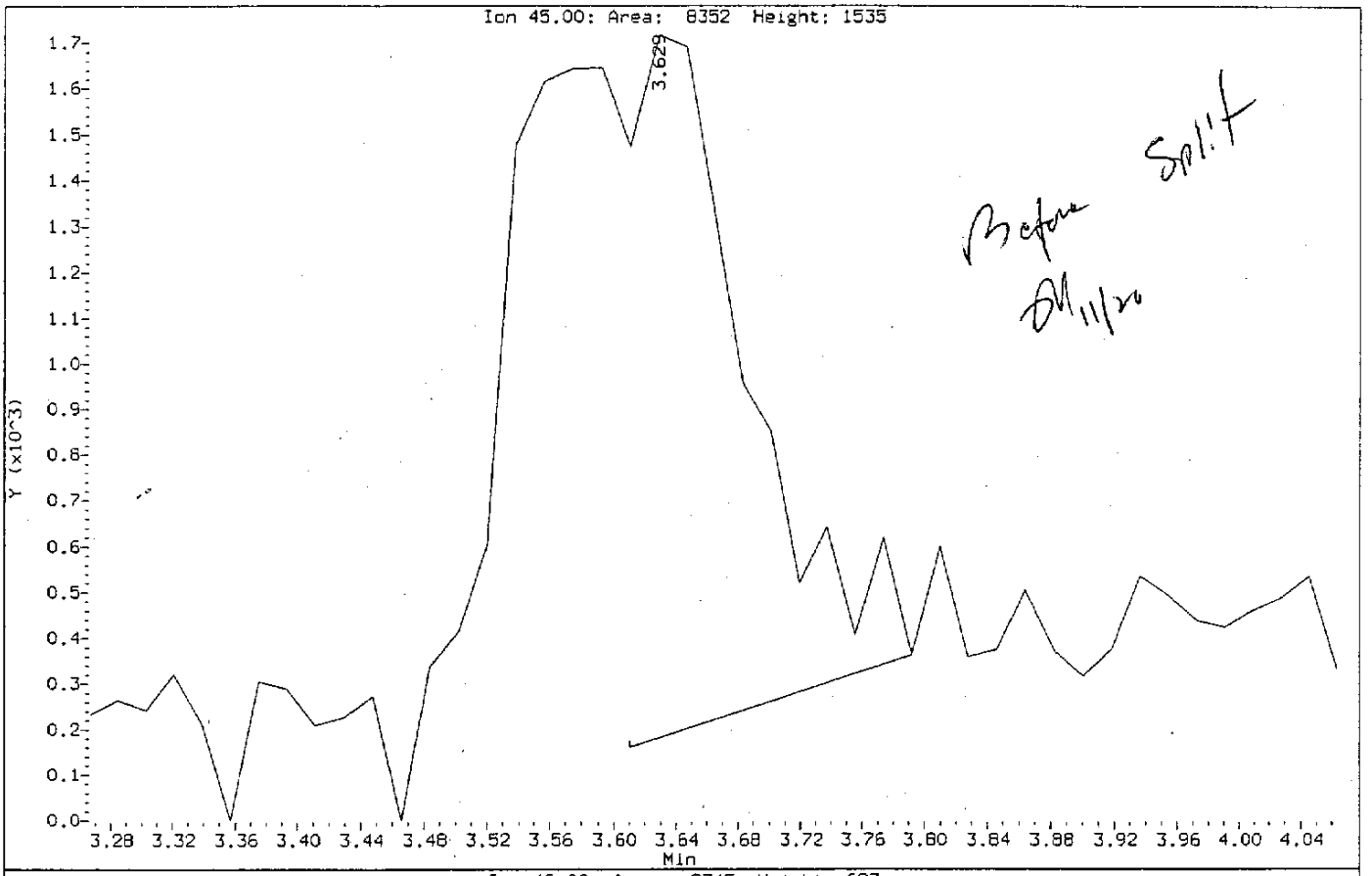


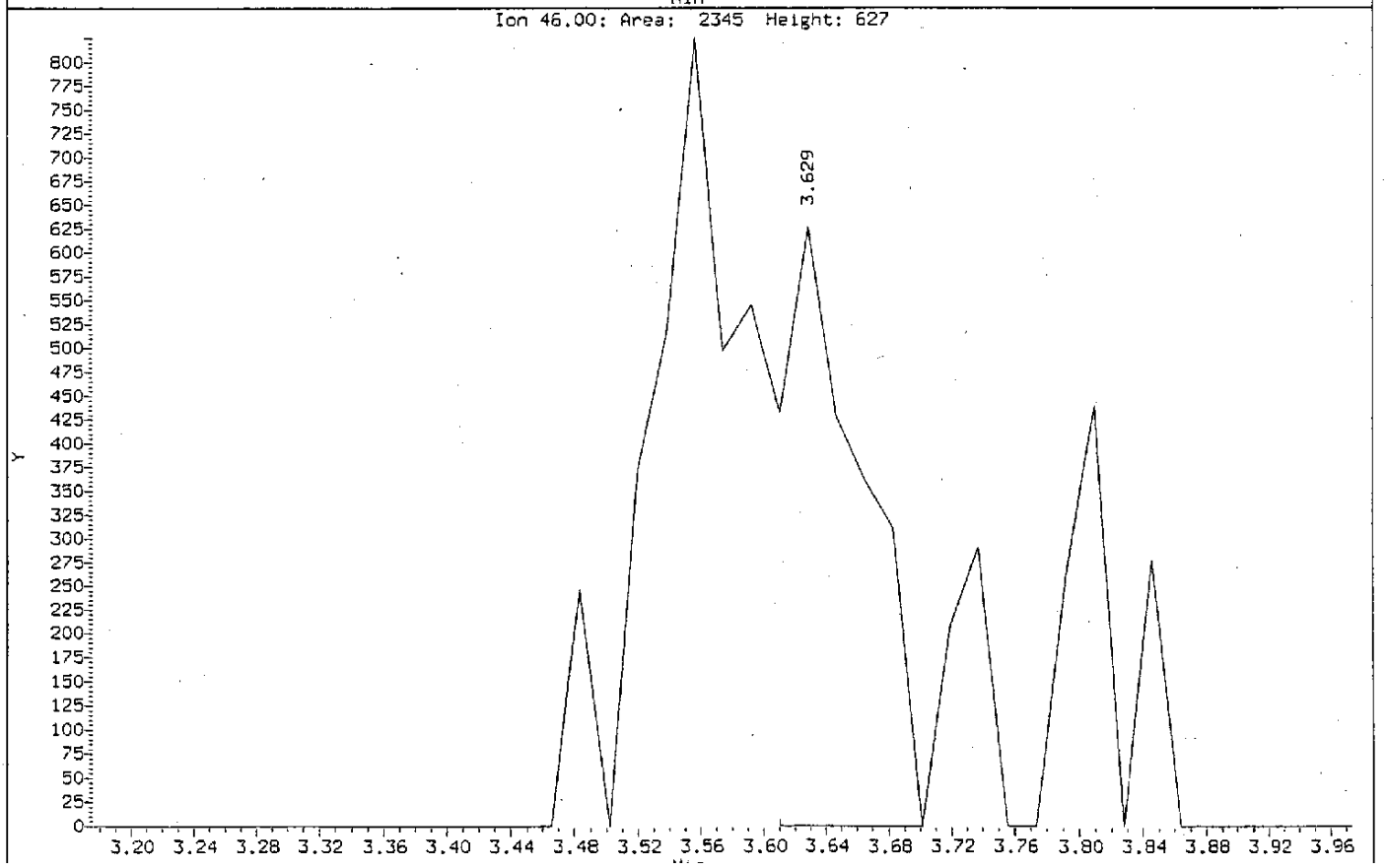




Data File: /chem/S.i/112003p.b/s4918.d
Injection Date: 20-NOV-2003 18:48
Instrument: S.i
Client Sample ID: MAIN002

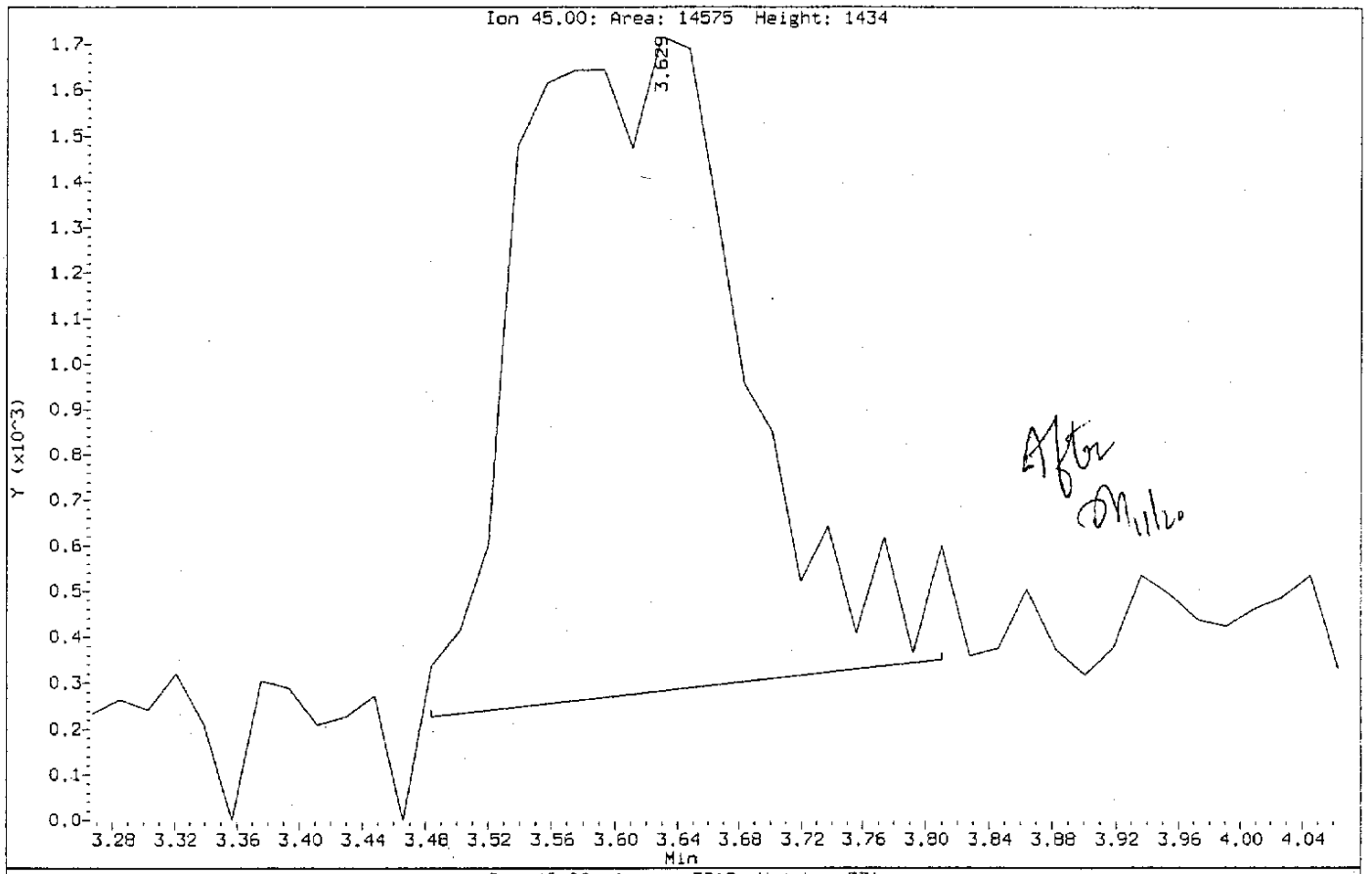
Compound: Ethanol
CAS Number: 64-17-5

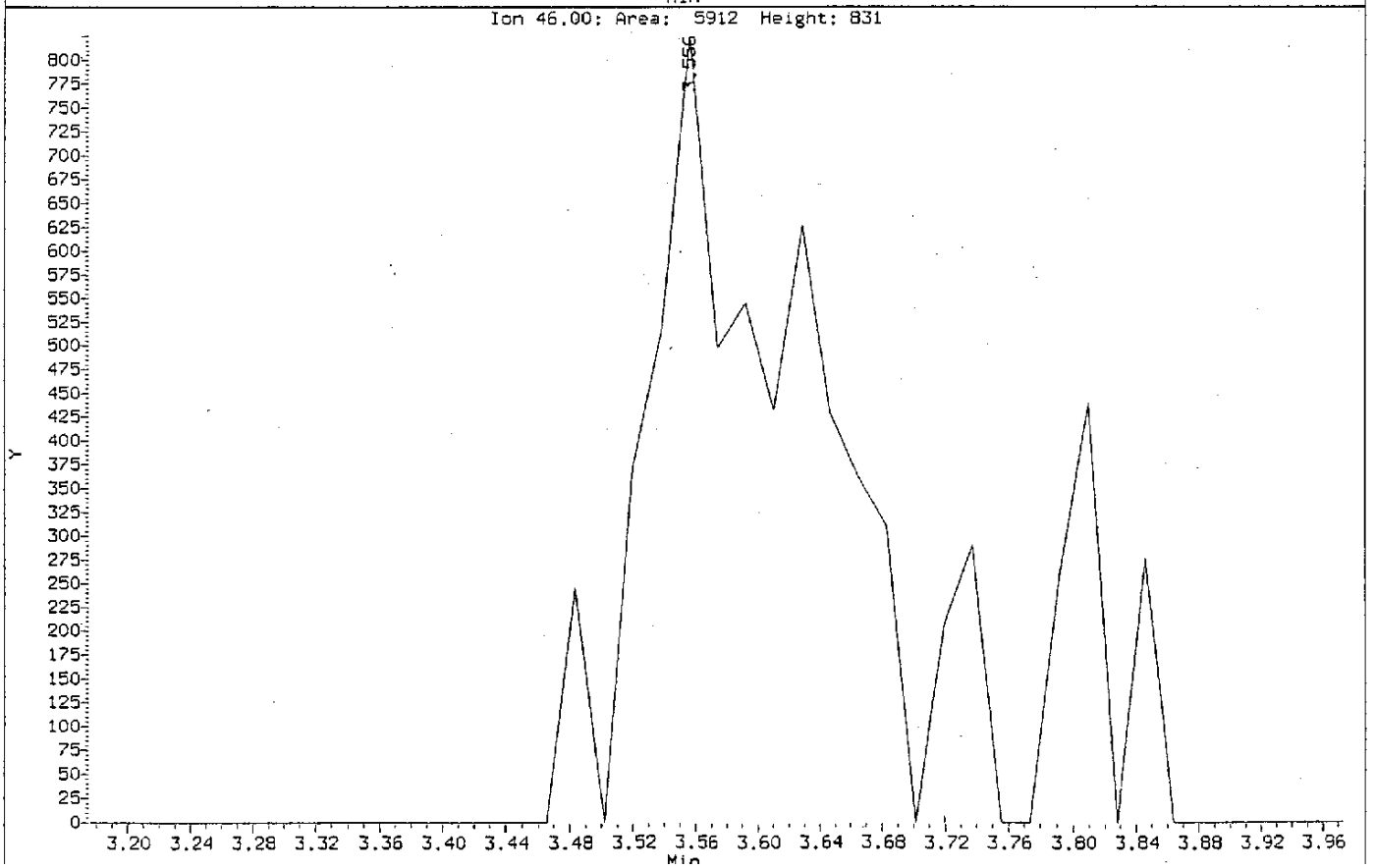




Data File: /chem/5.i/112003p.b/s4918.d
Injection Date: 20-NOV-2003 18:48
Instrument: 5.i
Client Sample ID: MAIN002

Compound: Ethanol
CAS Number: 64-17-5





Data File: /chem/S.i/112003p.b/s4919.d
Report Date: 21-Nov-2003 22:49

STL Denver

VOLATILE REPORT SW-846

Data file : /chem/S.i/112003p.b/s4919.d
Lab Smp Id: MAIN005 Client Smp ID: MAIN005
Inj Date : 20-NOV-2003 19:12
Operator : reinharj Inst ID: S.i
Smp Info : MAIN005
Misc Info :
Comment :
Method : /chem/S.i/112003p.b/S-20ml-h2o.m
Meth Date : 21-Nov-2003 22:43 reinharj Quant Type: ISTD
Cal Date : 09-SEP-2003 04:33 Cal File: s3091.d
Als bottle: 2 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 1-main.sub
Target Version: 3.40
Processing Host: chemsv02

Concentration Formula: Amt * DF * Vp/Vs

Name	Value	Description
DF	1.000	Dilution Factor
Vp	20.000	Purge Volume (ml)
Vs	20.000	Sample Volume Purged (ml)

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
* 56 Fluorobenzene	96	7.089	7.087	(1.000)	2012741	12.5000	
* 82 Chlorobenzene-d5	119	10.693	10.691	(1.000)	378506	12.5000	
* 107 1,4-Dichlorobenzene-d4	152	13.753	13.751	(1.000)	498778	12.5000	
M 1 1,2-Dichloroethene (total)	96				605519	10.0000	10.2978
M 2 Xylene (total)	106				1351554	5.00000	15.1552
3 dichlorodifluoromethane	85	2.544	2.542	(0.359)	313439	5.00000	4.43563
4 Chloromethane	50	2.707	2.705	(0.382)	226104	5.00000	4.76689
6 Vinyl Chloride	62	2.852	2.832	(0.402)	233808	5.00000	4.60267
8 Bromomethane	94	3.142	3.140	(0.443)	217196	5.00000	4.73866
9 Chloroethane	64	3.214	3.212	(0.453)	167374	5.00000	4.70164
11 Trichlorofluoromethane	101	3.504	3.502	(0.494)	398863	5.00000	4.69199(M)
12 Ethanol	45	3.576	3.629	(0.504)	23460	250.000	193.469(aM)
16 Acrolein	56	3.848	3.846	(0.543)	89162	50.0000	48.5794
18 1,1-Dichloroethene	96	3.938	3.937	(0.556)	299853	5.00000	5.12138
19 Acetone	43	3.993	3.991	(0.563)	74437	20.0000	18.0710
21 Iodomethane	142	4.156	4.136	(0.586)	439343	5.00000	5.00737

Data File: /chem/S.i/112003p.b/s4919.d
Report Date: 21-Nov-2003 22:49

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
25 Acetonitrile	41	4.355	4.371	(0.614)	35757	50.0000	50.5591
26 Methylene Chloride	84	4.445	4.462	(0.627)	251621	5.00000	5.08266
27 tert-Butyl alcohol	59	4.500	4.480	(0.635)	98917	100.000	96.2786
30 Acrylonitrile	53	4.753	4.751	(0.670)	157203	50.0000	51.3435
29 trans-1,2-Dichloroethene	96	4.699	4.697	(0.663)	315181	5.00000	5.11153
33 1,1-Dichloroethane	63	5.188	5.186	(0.732)	474891	5.00000	5.08131
32 Isopropyl ether	87	5.152	5.150	(0.727)	929518	25.0000	25.3460
35 Chloroprene	53	5.242	5.240	(0.739)	444827	5.00000	5.05738
39 cis-1,2-Dichloroethene	96	5.822	5.820	(0.821)	290338	5.00000	5.18624
40 2-Butanone	43	5.840	5.820	(0.824)	107414	20.0000	19.5000
37 2,2-Dichloropropane	77	5.822	5.802	(0.821)	390539	5.00000	5.15486
41 Propionitrile	54	5.985	5.965	(0.844)	53336	50.0000	50.7119
42 Methacrylonitrile	41	6.111	6.110	(0.862)	393012	50.0000	50.8216
43 Bromochloromethane	128	6.111	6.110	(0.862)	106534	5.00000	5.06668
45 Chloroform	83	6.148	6.146	(0.867)	486620	5.00000	5.18248
47 1,1,1-Trichloroethane	97	6.365	6.363	(0.898)	525950	5.00000	5.15213
50 1,1-Dichloropropene	75	6.528	6.526	(0.921)	446187	5.00000	5.15662
49 Carbon Tetrachloride	117	6.510	6.508	(0.918)	481989	5.00000	5.12382
51 Isobutanol	41	6.618	6.617	(0.934)	27729	100.000	84.5339
53 Benzene	78	6.763	6.761	(0.954)	822444	5.00000	5.05022
55 1,2-Dichloroethane	62	6.854	6.852	(0.967)	193876	5.00000	5.09482
57 n-Butanol	56	7.379	7.377	(1.041)	30806	100.000	95.6204
58 Trichloroethene	130	7.488	7.486	(1.056)	347061	5.00000	5.06297
61 1,2-Dichloropropane	63	7.795	7.812	(1.100)	255956	5.00000	5.00899
64 Dibromomethane	93	7.958	7.957	(1.123)	125349	5.00000	4.98009
63 1,4-Dioxane	88	7.922	7.920	(1.117)	33806	250.000	224.906
65 Bromodichloromethane	83	8.103	8.101	(1.143)	380179	5.00000	5.10803
68 cis-1,3-Dichloropropene	75	8.628	8.627	(0.807)	326424	5.00000	5.02383
69 4-Methyl-2-pentanone	43	8.791	8.790	(0.822)	310253	20.0000	19.9897
71 Toluene	91	8.991	8.989	(0.841)	974540	5.00000	5.06409
72 trans-1,3-Dichloropropene	75	9.298	9.297	(0.870)	225931	5.00000	4.90450
74 1,1,2-Trichloroethane	97	9.534	9.532	(0.892)	141129	5.00000	4.95197
76 1,3-Dichloropropane	76	9.751	9.749	(0.912)	220746	5.00000	5.08891
75 Tetrachloroethene	164	9.624	9.623	(0.900)	279642	5.00000	5.14284
77 2-Hexanone	43	9.787	9.786	(0.915)	197652	20.0000	20.0047
79 Dibromochloromethane	129	9.987	9.985	(0.934)	210609	5.00000	4.83570
80 1,2-Dibromoethane	107	10.168	10.166	(0.951)	170971	5.00000	4.94989
81 1-Chlorohexane	91	10.657	10.655	(0.997)	500153	5.00000	5.05792
83 Chlorobenzene	112	10.729	10.727	(1.003)	641781	5.00000	5.08954
85 1,1,1,2-Tetrachloroethane	131	10.820	10.818	(1.012)	239464	5.00000	5.00245
84 Ethylbenzene	106	10.820	10.818	(1.012)	352090	5.00000	5.08808
86 m and p-Xylene	106	10.964	10.963	(1.025)	944306	10.0000	10.0229
87 o-Xylene	106	11.472	11.470	(1.073)	407248	5.00000	5.13234
88 Styrene	104	11.490	11.488	(1.075)	608931	5.00000	4.99946
89 Bromoform	173	11.761	11.759	(1.100)	104602	5.00000	5.03615
90 isopropyl benzene	105	11.924	11.922	(1.115)	1396293	5.00000	5.10471
92 Cyclohexanone	55	12.142	12.140	(1.135)	275284	200.000	194.109

Data File: /chem/S.i/112003p.b/s4919.d
Report Date: 21-Nov-2003 22:49

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
94 1,1,2,2-Tetrachloroethane	83	12.395	12.393	(1.159)	147207	5.00000	5.01086
95 Bromobenzene	156	12.413	12.411	(0.903)	223522	5.00000	5.03024
97 1,2,3-Trichloropropane	110	12.486	12.502	(0.908)	36201	5.00000	4.79289
96 n-Propylbenzene	120	12.504	12.502	(0.909)	337683	5.00000	5.04840
99 2-Chlorotoluene	126	12.667	12.665	(0.921)	246140	5.00000	4.95009
100 1,3,5-Trimethylbenzene	105	12.757	12.755	(0.928)	1025675	5.00000	5.00349
101 4-Chlorotoluene	126	12.830	12.828	(0.933)	263849	5.00000	5.11513
102 tert-Butylbenzene	119	13.192	13.190	(0.959)	1100816	5.00000	4.98020
103 1,2,4-Trimethylbenzene	105	13.264	13.262	(0.964)	937087	5.00000	5.08459
104 sec-Butylbenzene	134	13.482	13.462	(0.980)	261809	5.00000	4.92301
106 m-Dichlorobenzene	146	13.663	13.661	(0.993)	410662	5.00000	5.11186
105 4-Isopropyltoluene	119	13.645	13.643	(0.992)	1225283	5.00000	5.02916
108 p-dichlorobenzene	146	13.771	13.769	(1.001)	430407	5.00000	4.88359
110 n-Butylbenzene	91	14.133	14.132	(1.028)	1152628	5.00000	5.01904
111 o-Dichlorobenzene	146	14.224	14.222	(1.034)	319989	5.00000	5.07346
112 1,2-Dibromo-3-chloropropane	157	15.093	15.091	(1.097)	20290	5.00000	4.85006
113 1,2,4-Trichlorobenzene	180	15.981	15.979	(1.162)	218340	5.00000	4.93601
114 Hexachlorobutadiene	225	16.125	16.124	(1.172)	201230	5.00000	4.99897
115 Napthalene	128	16.288	16.287	(1.184)	226003	5.00000	4.80089
116 1,2,3-Trichlorobenzene	180	16.596	16.594	(1.207)	157194	5.00000	4.96327

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
M - Compound response manually integrated.

Data File: /chem/S.i/112003p.b/s4919.d
Report Date: 21-Nov-2003 22:49

STL Denver

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: S.i
Lab File ID: s4919.d
Lab Smp Id: MAIN005
Analysis Type: VOA
Quant Type: ISTD
Operator: reinharj
Method File: /chem/S.i/112003p.b/S-20ml-h2o.m
Misc Info:

Calibration Date: 11/20/3
Calibration Time: 1752
Client Smp ID: MAIN005
Level: LOW
Sample Type: WATER

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
56 Fluorobenzene	1999876	999938	3999752	2012741	0.64
82 Chlorobenzene-d5	447803	223902	895606	378506	-15.47
107 1,4-Dichlorobenze	545091	272546	1090182	498778	-8.50

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
56 Fluorobenzene	7.09	6.59	7.59	7.09	0.01
82 Chlorobenzene-d5	10.69	10.19	11.19	10.69	0.00
107 1,4-Dichlorobenze	13.75	13.25	14.25	13.75	0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem/S.i/112003p.b/s4919.d
Date : 20-NOV-2003 19:12
Client ID: MAIN005
Sample Info: MAIN005
Purge Volume: 20.0
Column phase: DB624

Instrument: S.i
Operator: reinharj
Column diameter: 0.53

Page 5

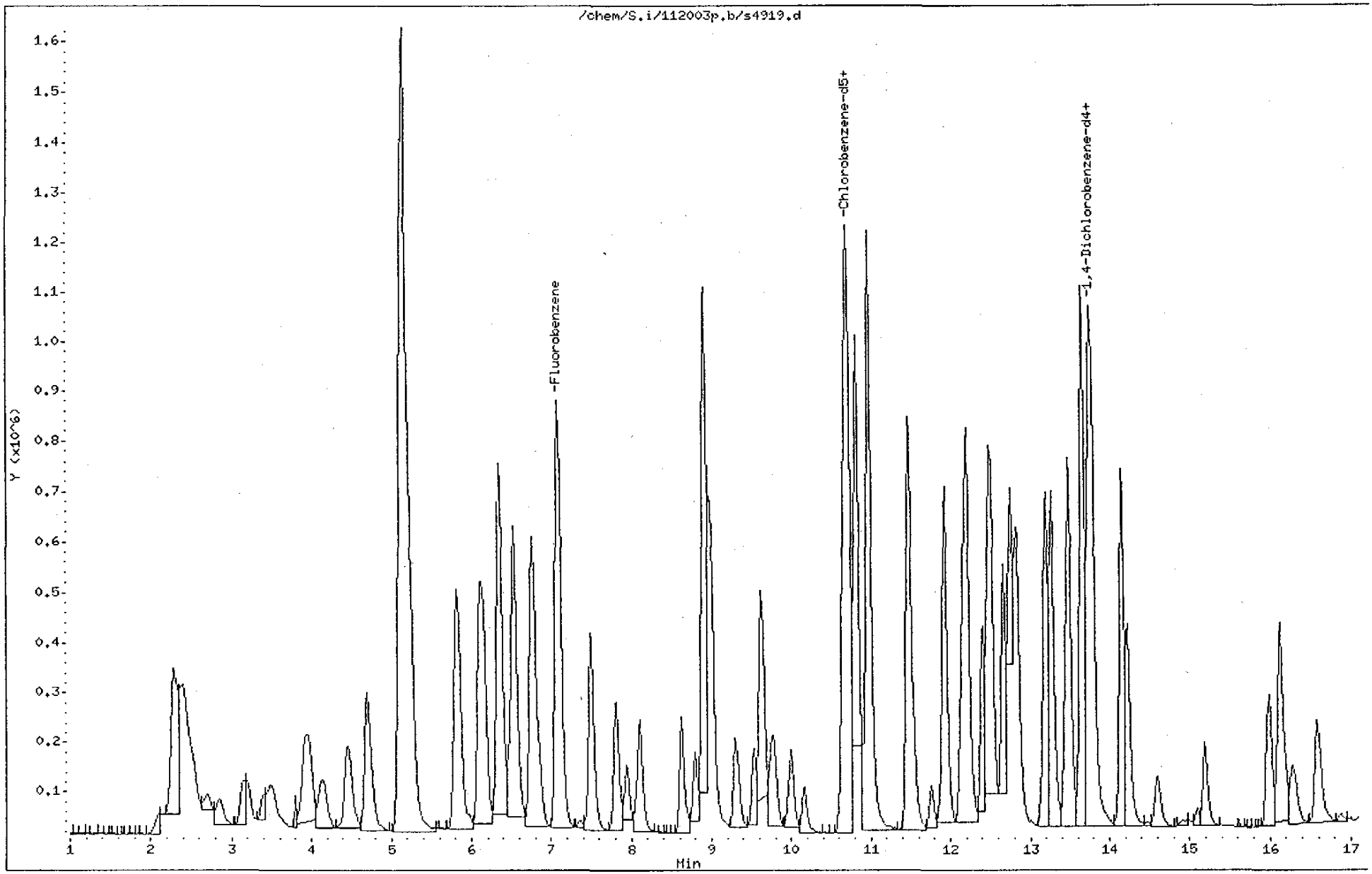
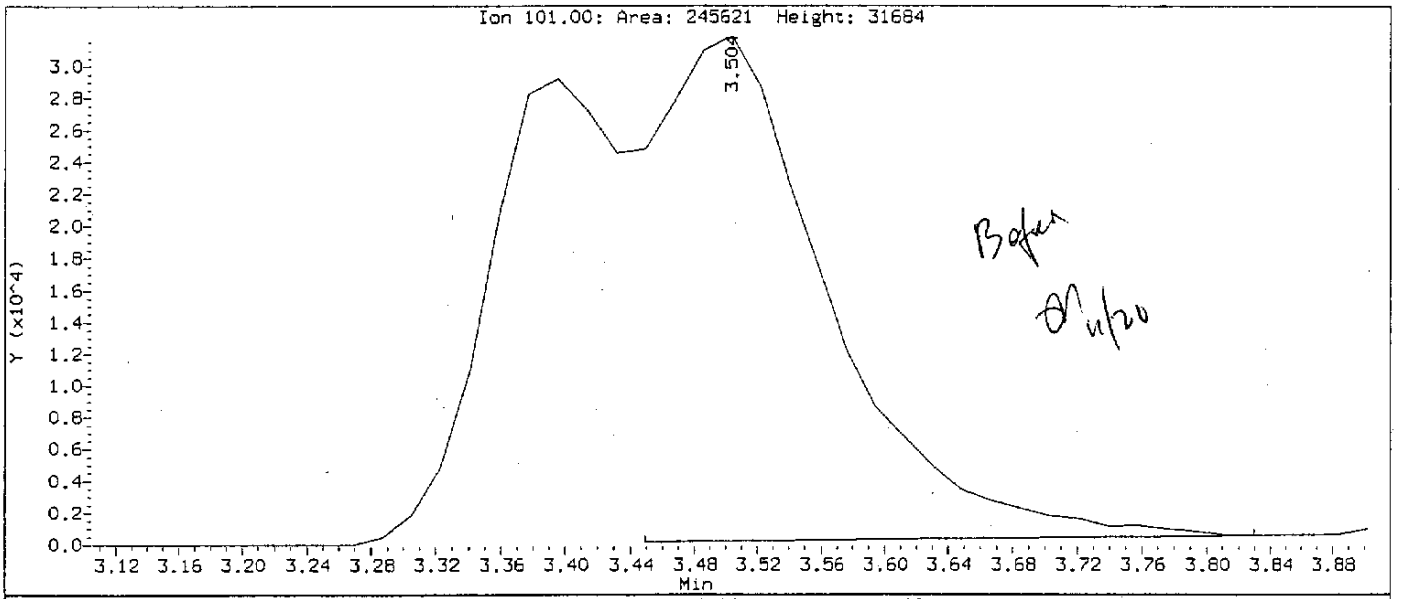


Table of Contents

Data File: /chem/S.i/112003p.b/s4919.d
Injection Date: 20-NOV-2003 19:12
Instrument: S.i
Client Sample ID: MAIN005

Compound: Trichlorofluoromethane
CAS Number: 75-69-4



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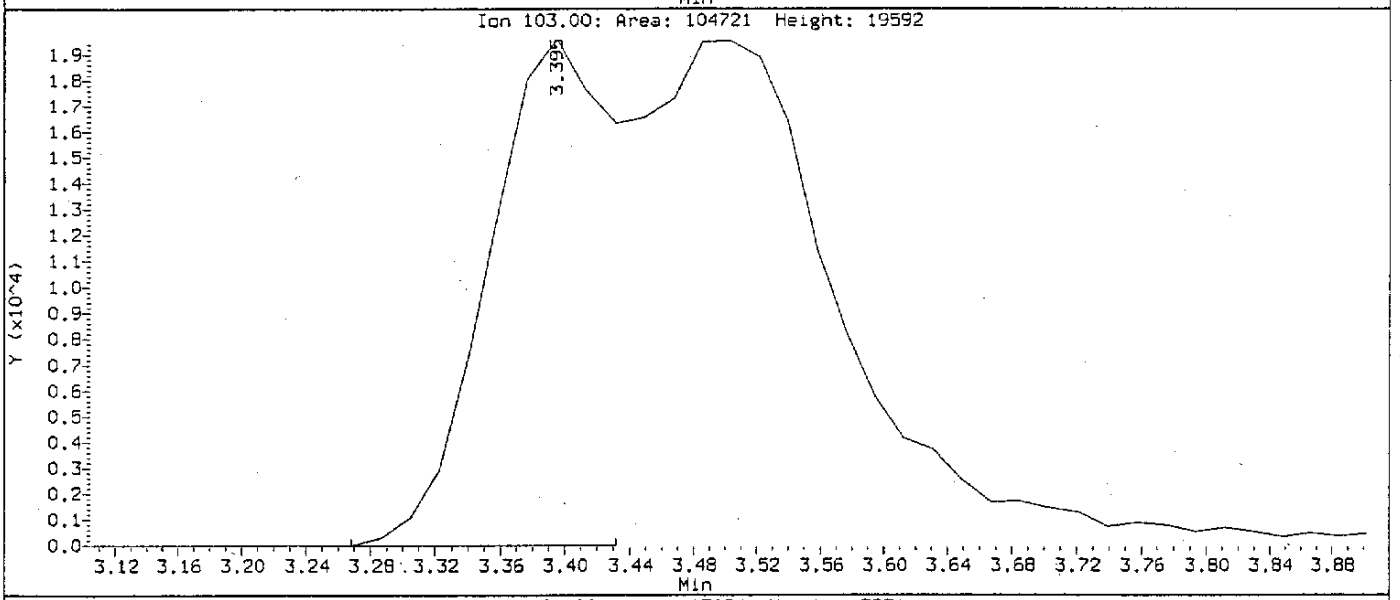
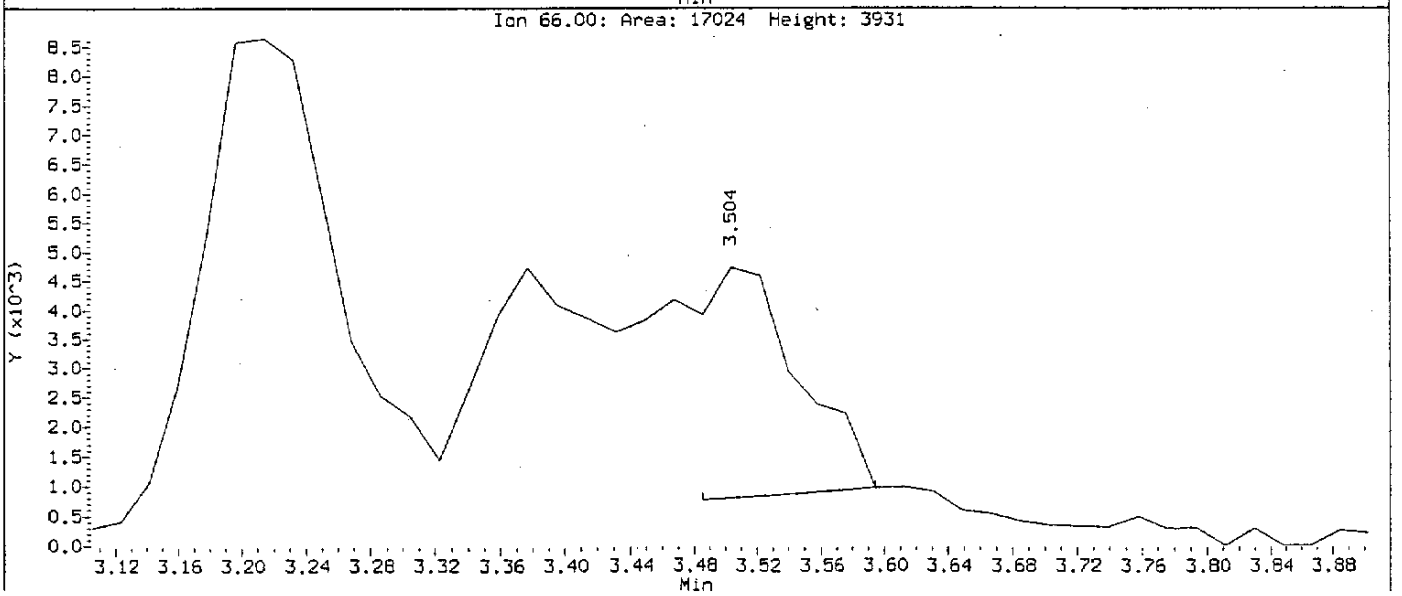
11/20





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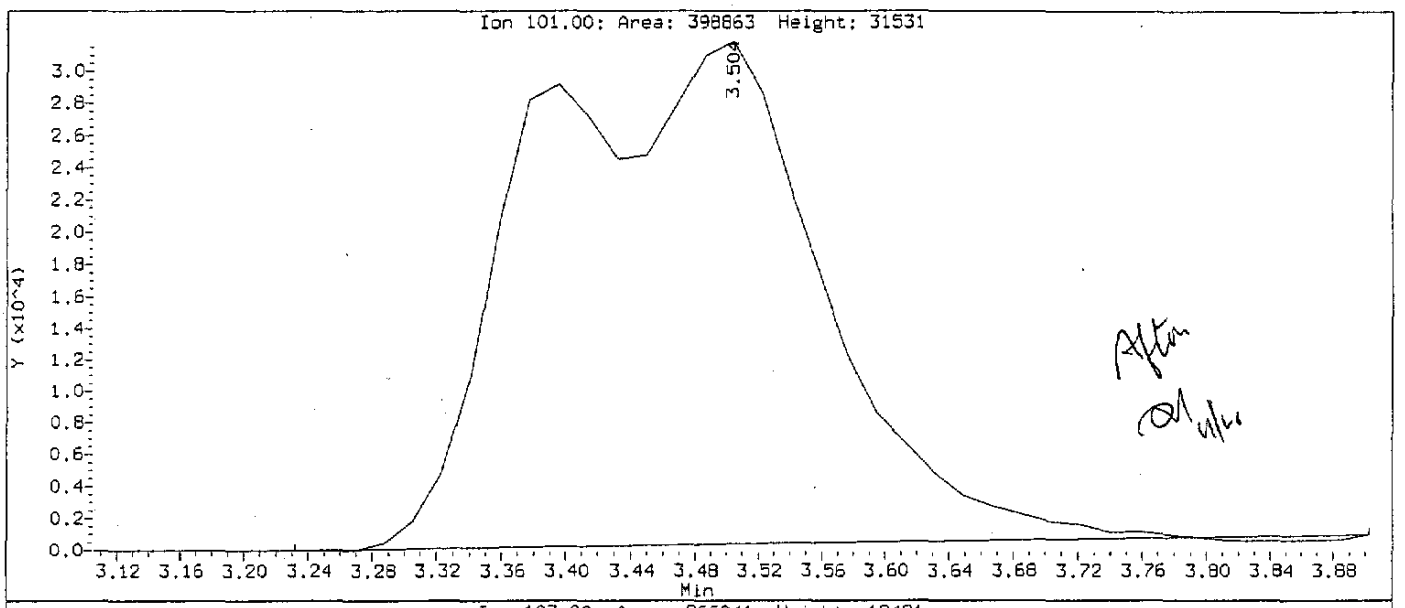
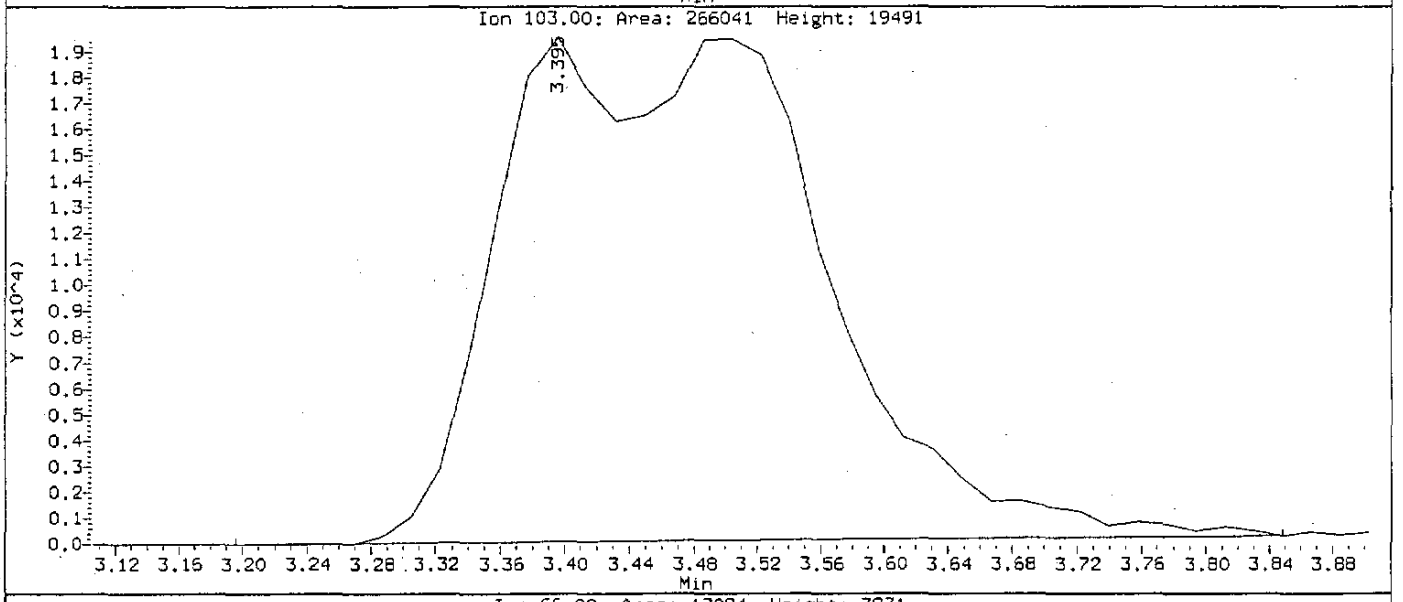
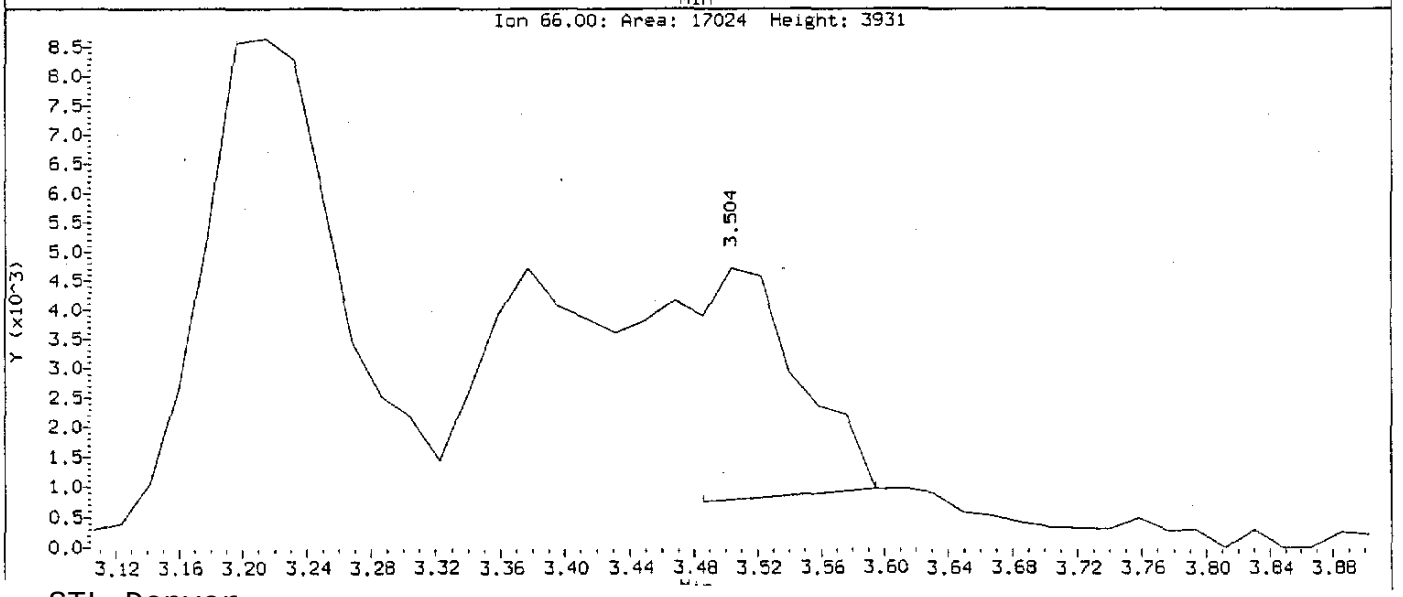
Instrument: S.i
Client Sample ID: MAIN005

Compound: Trichlorofluoromethane
CAS Number: 75-69-4







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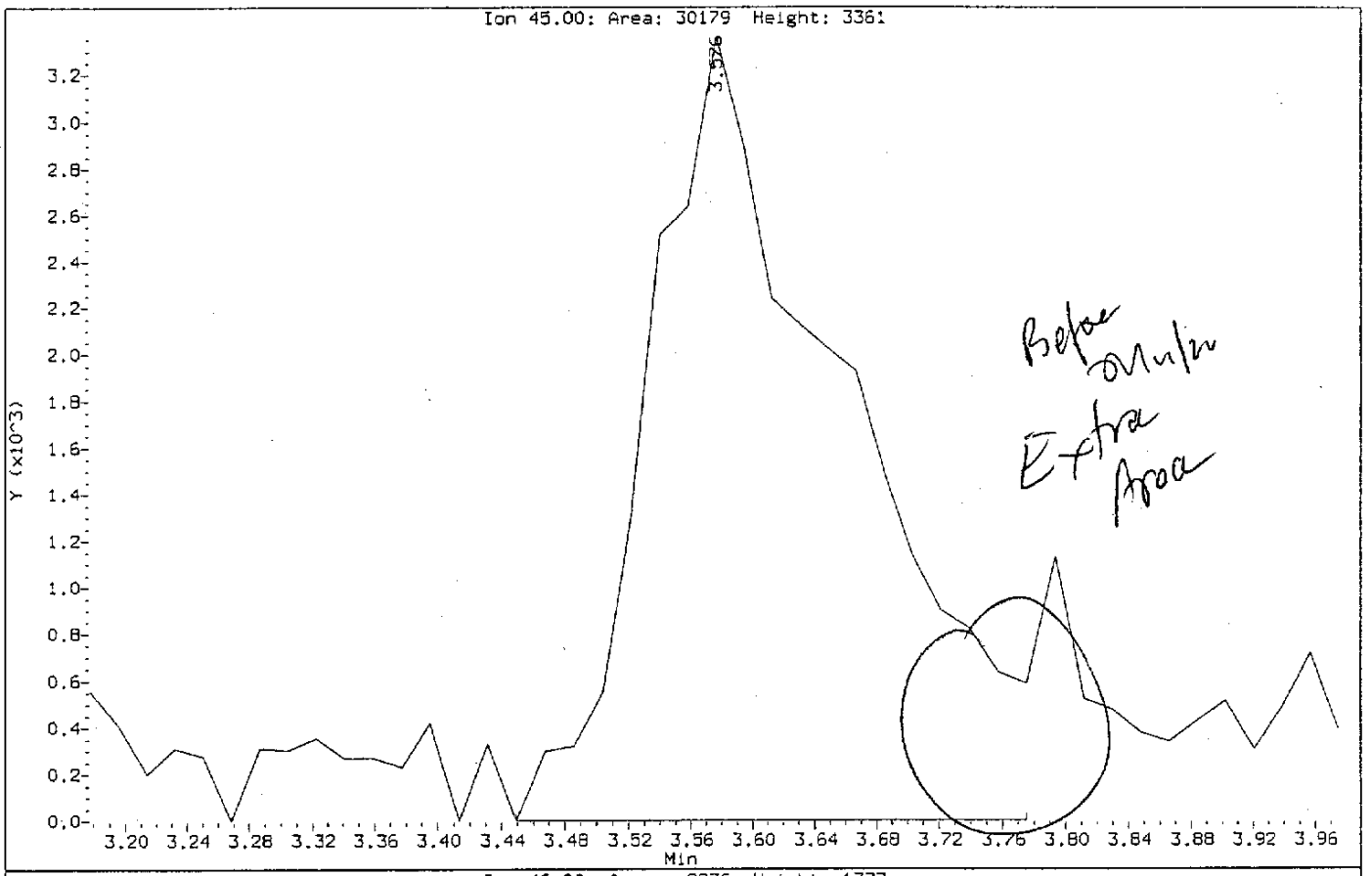
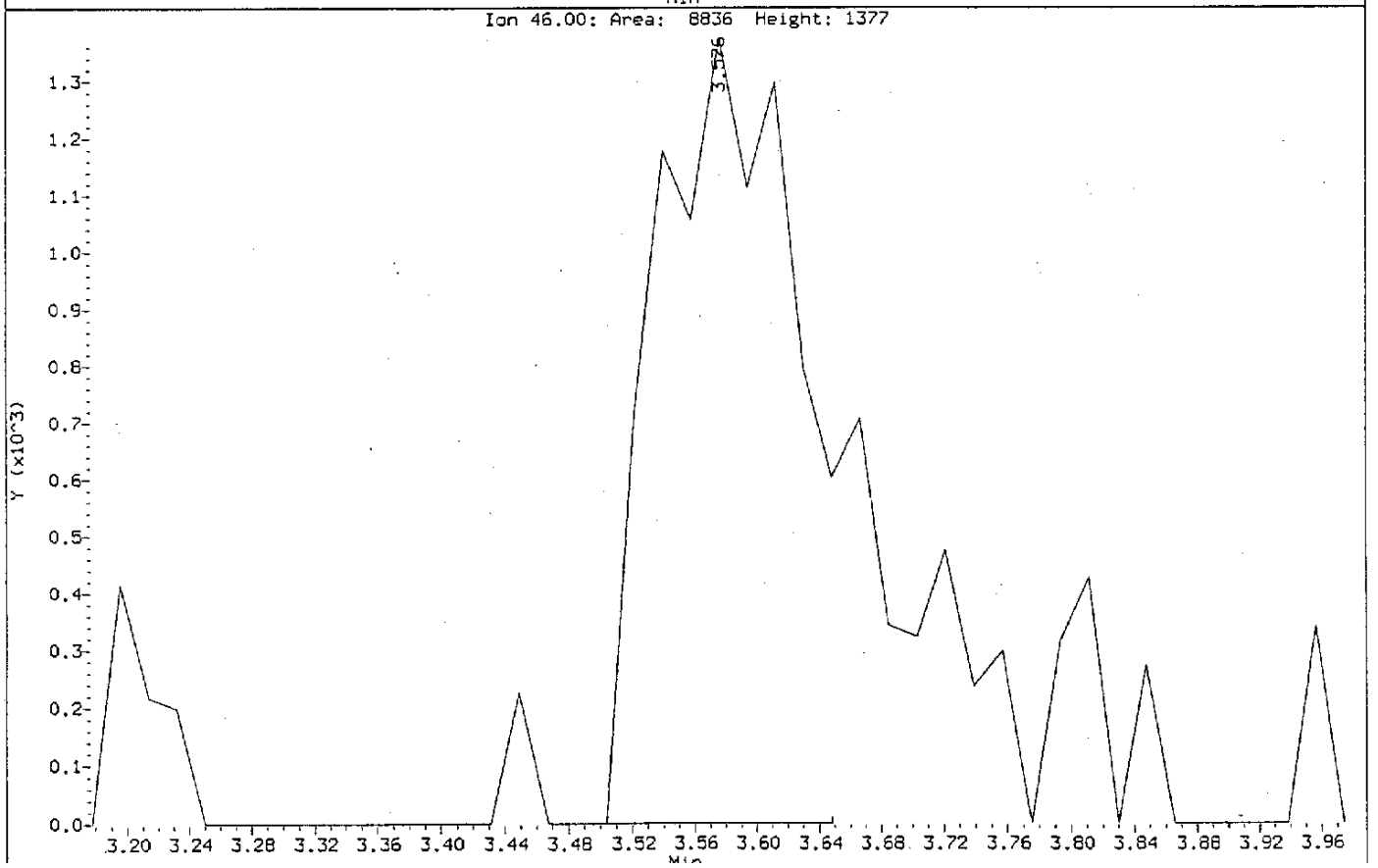
Injection Date: 20-NOV-2003 19:12
Instrument: 5.i
Client Sample ID: MAIN005

Compound: Ethanol
CAS Number: 64-17-5





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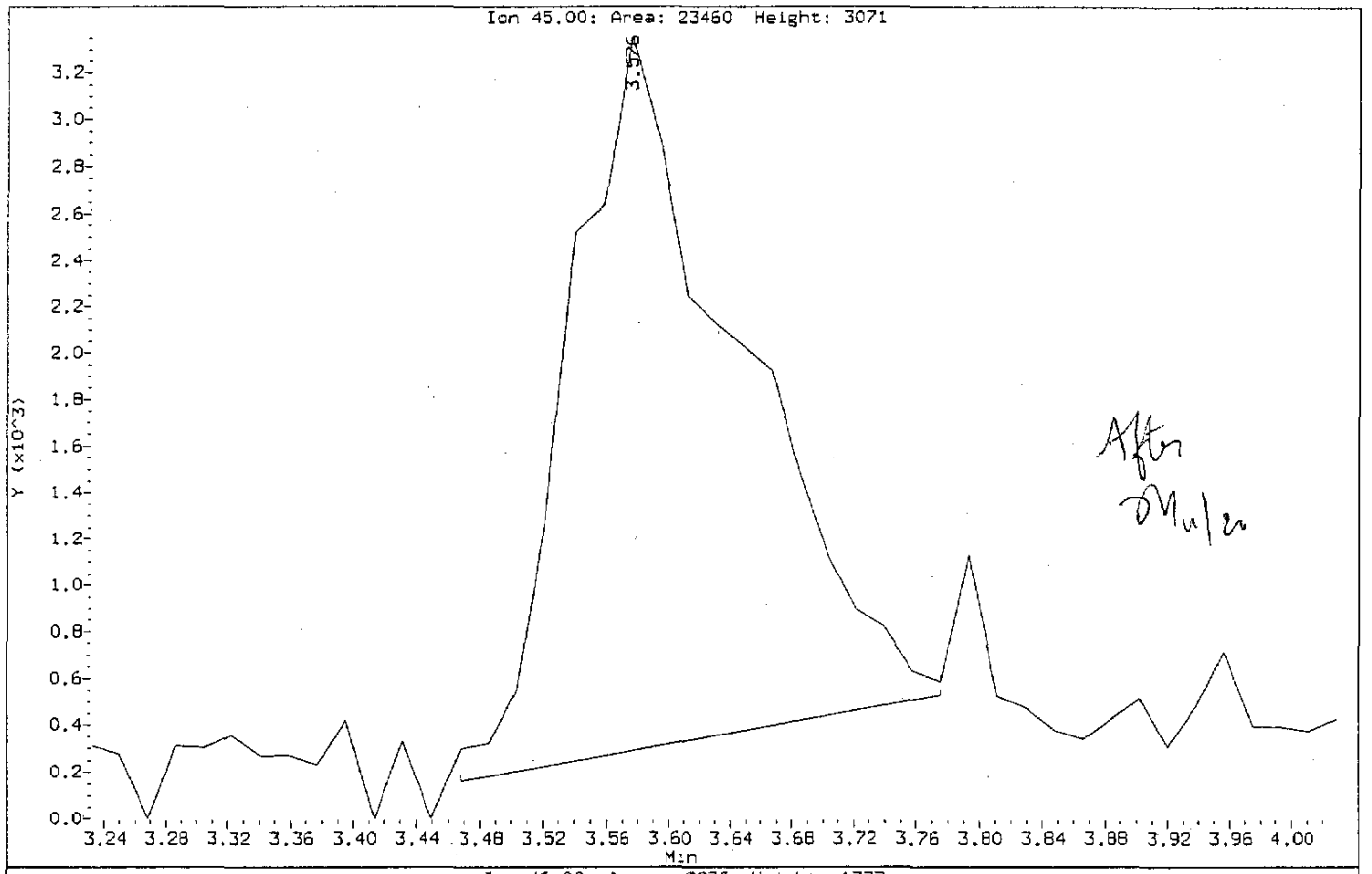
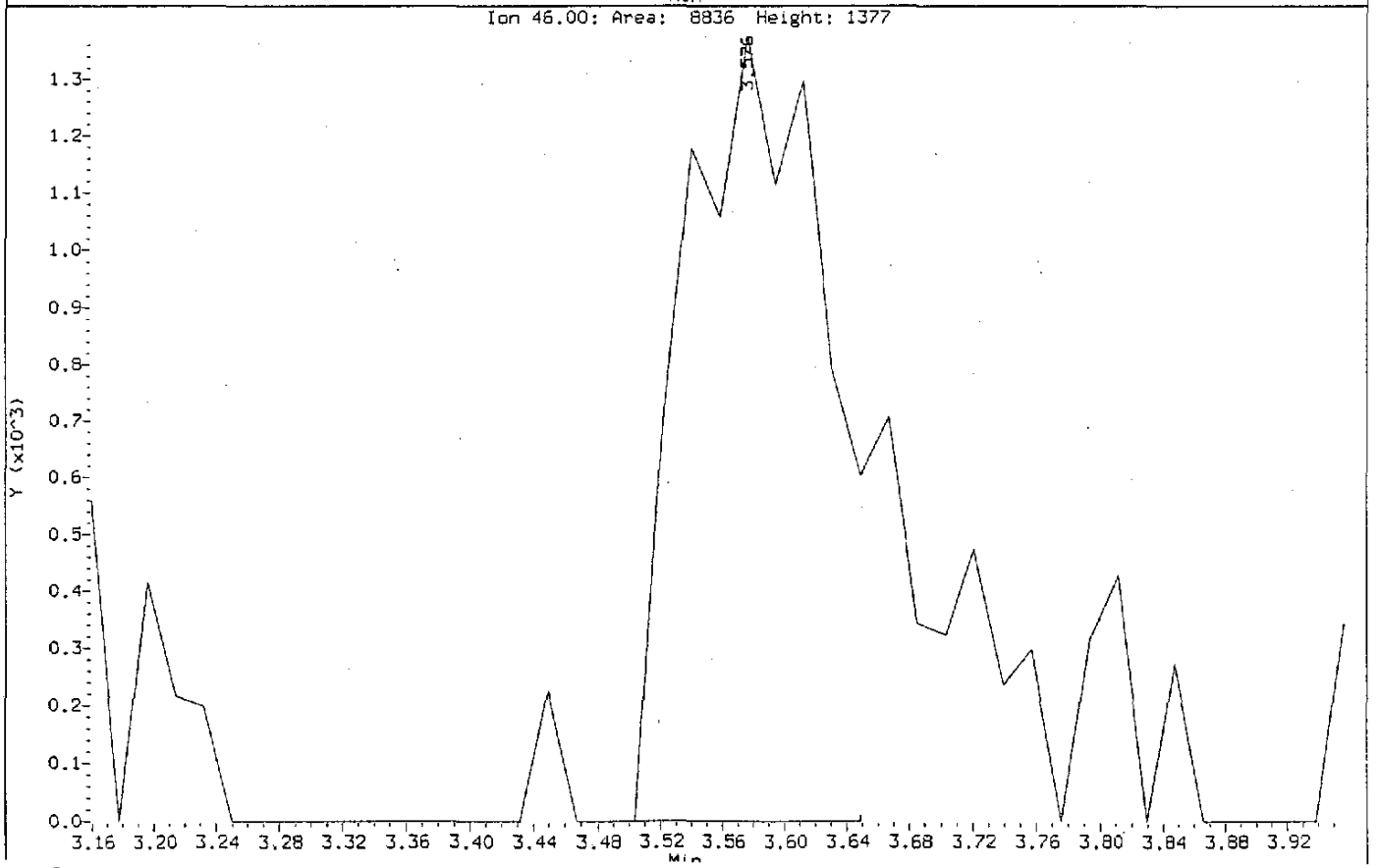
Injection Date: 20-NOV-2003 19:12
Instrument: S.i
Client Sample ID: MAIN005

Compound: Ethanol
CAS Number: 64-17-5





Data File: /chem/S.i/112003p.b/s4920.d
Report Date: 21-Nov-2003 18:48

STL Denver

VOLATILE REPORT SW-846

Data file : /chem/S.i/112003p.b/s4920.d
Lab Smp Id: MAIN010 Client Smp ID: MAIN010
Inj Date : 20-NOV-2003 19:36
Operator : reinharj Inst ID: S.i
Smp Info : MAIN010
Misc Info :
Comment :
Method : /chem/S.i/112003p.b/S-20ml-h2o.m
Meth Date : 21-Nov-2003 05:55 reinharj Quant Type: ISTD
Cal Date : 09-SEP-2003 04:57 Cal File: s3092.d
Als bottle: 2 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 1-main.sub
Target Version: 3.40
Processing Host: chemsv02

Concentration Formula: Amt * DF * Vp/Vs

Name	Value	Description
DF	1.000	Dilution Factor
Vp	20.000	Purge Volume (ml)
Vs	20.000	Sample Volume Purged (ml)

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
* 56 Fluorobenzene	96	7.087	7.087	(1.000)	2061187	12.5000	
* 82 Chlorobenzene-d5	119	10.690	10.690	(1.000)	377982	12.5000	
* 107 1,4-Dichlorobenzene-d4	152	13.751	13.751	(1.000)	502173	12.5000	
M 1 1,2-Dichloroethene (total)	96				1160179	20.0000	19.2536
M 2 Xylene (total)	106				2616854	10.0000	29.3781
3 dichlorodifluoromethane	85	2.542	2.542	(0.359)	677323	10.0000	9.35984
4 Chloromethane	50	2.723	2.741	(0.384)	463614	10.0000	9.54452
6 Vinyl Chloride	62	2.849	2.849	(0.402)	471881	10.0000	9.07097
8 Bromomethane	94	3.157	3.175	(0.446)	436630	10.0000	9.30224
9 Chloroethane	64	3.212	3.212	(0.453)	327971	10.0000	8.99637
11 Trichlorofluoromethane	101	3.501	3.501	(0.494)	840352	10.0000	11.1617(M)
12 Ethanol	45	3.574	3.574	(0.504)	48417	500.000	408.194
16 Acrolein	56	3.845	3.845	(0.543)	173240	100.000	92.1704
18 1,1-Dichloroethene	96	3.936	3.954	(0.555)	563716	10.0000	9.40176
19 Acetone	43	3.990	3.990	(0.563)	143976	40.0000	36.2674
21 Iodomethane	142	4.153	4.153	(0.586)	845201	10.0000	9.40669

Data File: /chem/S.i/112003p.b/s4920.d
Report Date: 21-Nov-2003 18:48

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
25 Acetonitrile	41	4.352	4.353	(0.614)	69045	100.000	95.3324
26 Methylene Chloride	84	4.461	4.461	(0.629)	452894	10.0000	9.81090
27 tert-Butyl alcohol	59	4.497	4.497	(0.635)	199526	200.000	189.640
30 Acrylonitrile	53	4.751	4.751	(0.670)	305104	100.000	97.3067
29 trans-1,2-Dichloroethene	96	4.696	4.697	(0.663)	612154	10.0000	9.69443
33 1,1-Dichloroethane	63	5.185	5.185	(0.732)	884953	10.0000	9.24639
32 Isopropyl ether	87	5.149	5.149	(0.727)	1754719	50.0000	46.7228
35 Chloroprene	53	5.258	5.258	(0.742)	831017	10.0000	9.22602
39 cis-1,2-Dichloroethene	96	5.819	5.837	(0.821)	548025	10.0000	9.55916
40 2-Butanone	43	5.819	5.819	(0.821)	217817	40.0000	38.6132
37 2,2-Dichloropropane	77	5.819	5.819	(0.821)	737953	10.0000	9.51156
41 Propionitrile	54	5.982	5.982	(0.844)	105612	100.000	98.0558
42 Methacrylonitrile	41	6.109	6.109	(0.862)	764998	100.000	96.5991
43 Bromochloromethane	128	6.109	6.109	(0.862)	208344	10.0000	9.67579
45 Chloroform	83	6.163	6.163	(0.870)	919662	10.0000	9.56415
47 1,1,1-Trichloroethane	97	6.362	6.363	(0.898)	993258	10.0000	9.50113
50 1,1-Dichloropropene	75	6.544	6.544	(0.923)	844457	10.0000	9.53007
49 Carbon Tetrachloride	117	6.525	6.526	(0.921)	911710	10.0000	9.46420
51 Isobutanol	41	6.616	6.616	(0.934)	60589	200.000	170.292
53 Benzene	78	6.779	6.779	(0.957)	1583772	10.0000	9.49659
55 1,2-Dichloroethane	62	6.851	6.851	(0.967)	379318	10.0000	9.73372
57 n-Butanol	56	7.377	7.377	(1.041)	58638	200.000	177.732
58 Trichloroethene	130	7.503	7.503	(1.059)	661332	10.0000	9.42083
61 1,2-Dichloropropane	63	7.811	7.811	(1.102)	511476	10.0000	9.77418
64 Dibromomethane	93	7.956	7.956	(1.123)	249362	10.0000	9.67424
63 1,4-Dioxane	88	7.920	7.920	(1.118)	72682	500.000	472.177
65 Bromodichloromethane	83	8.101	8.101	(1.143)	734264	10.0000	9.63359
68 cis-1,3-Dichloropropene	75	8.626	8.626	(0.807)	645157	10.0000	9.94307
69 4-Methyl-2-pentanone	43	8.789	8.789	(0.822)	609078	40.0000	39.2975
71 Toluene	91	8.988	8.988	(0.841)	1860109	10.0000	9.67925
72 trans-1,3-Dichloropropene	75	9.314	9.314	(0.871)	443436	10.0000	9.63943
74 1,1,2-Trichloroethane	97	9.531	9.532	(0.892)	279744	10.0000	9.82934
76 1,3-Dichloropropane	76	9.749	9.749	(0.912)	436504	10.0000	10.0768
75 Tetrachloroethene	164	9.622	9.640	(0.900)	530621	10.0000	9.77206
77 2-Hexanone	43	9.785	9.785	(0.915)	399679	40.0000	40.5084
79 Dibromochloromethane	129	9.984	9.984	(0.934)	427928	10.0000	9.83910
80 1,2-Dibromoethane	107	10.165	10.165	(0.951)	344195	10.0000	9.97882
81 1-Chlorohexane	91	10.654	10.654	(0.997)	963657	10.0000	9.75872
83 Chlorobenzene	112	10.727	10.727	(1.003)	1225149	10.0000	9.72931
85 1,1,1,2-Tetrachloroethane	131	10.835	10.835	(1.014)	463565	10.0000	9.69739
84 Ethylbenzene	106	10.817	10.817	(1.012)	667360	10.0000	9.65744
86 m and p-Xylene	106	10.962	10.962	(1.025)	1831266	20.0000	19.4640
87 o-Xylene	106	11.469	11.469	(1.073)	785588	10.0000	9.91409
88 Styrene	104	11.487	11.505	(1.075)	1185652	10.0000	9.74796
89 Bromoform	173	11.759	11.759	(1.100)	205719	10.0000	9.91824
90 isopropyl benzene	105	11.922	11.922	(1.115)	2691194	10.0000	9.85238
92 Cyclohexanone	55	12.139	12.139	(1.135)	553593	400.000	390.892

Data File: /chem/S.i/112003p.b/s4920.d
Report Date: 21-Nov-2003 18:48

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
94 1,1,2,2-Tetrachloroethane	83	12.411	12.411	(1.161)	290324	10.0000	9.89621
95 Bromobenzene	156	12.411	12.411	(0.903)	435289	10.0000	9.72972
97 1,2,3-Trichloropropane	110	12.501	12.501	(0.909)	73456	10.0000	9.65958
96 n-Propylbenzene	120	12.501	12.501	(0.909)	629411	10.0000	9.34615
99 2-Chlorotoluene	126	12.664	12.664	(0.921)	495871	10.0000	9.90497
100 1,3,5-Trimethylbenzene	105	12.755	12.755	(0.928)	1983828	10.0000	9.61216
101 4-Chlorotoluene	126	12.827	12.827	(0.933)	493339	10.0000	9.49950
102 tert-Butylbenzene	119	13.189	13.189	(0.959)	2113602	10.0000	9.49750
103 1,2,4-Trimethylbenzene	105	13.262	13.280	(0.964)	1747486	10.0000	9.41768
104 sec-Butylbenzene	134	13.479	13.479	(0.980)	512081	10.0000	9.56398
106 m-Dichlorobenzene	146	13.660	13.660	(0.993)	782659	10.0000	9.67656
105 4-Isopropyltoluene	119	13.642	13.660	(0.992)	2352301	10.0000	9.58971
108 p-dichlorobenzene	146	13.769	13.787	(1.001)	863348	10.0000	9.72970
110 n-Butylbenzene	91	14.149	14.149	(1.029)	2251721	10.0000	9.73868
111 o-Dichlorobenzene	146	14.222	14.222	(1.034)	623549	10.0000	9.81961
112 1,2-Dibromo-3-chloropropane	157	15.091	15.091	(1.097)	42305	10.0000	10.0441
113 1,2,4-Trichlorobenzene	180	15.978	15.978	(1.162)	423500	10.0000	9.50933
114 Hexachlorobutadiene	225	16.123	16.123	(1.173)	400810	10.0000	9.88963
115 Napthalene	128	16.286	16.286	(1.184)	451646	10.0000	9.52926
116 1,2,3-Trichlorobenzene	180	16.594	16.594	(1.207)	310626	10.0000	10.1699

QC Flag Legend

M - Compound response manually integrated.

Data File: /chem/S.i/112003p.b/s4920.d
Report Date: 21-Nov-2003 18:48

STL Denver

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: S.i
Lab File ID: s4920.d
Lab Smp Id: MAIN010
Analysis Type: VOA
Quant Type: ISTD
Operator: reinharj
Method File: /chem/S.i/112003p.b/S-20ml-h2o.m
Misc Info:

Calibration Date: 11/20/3
Calibration Time: 2001
Client Smp ID: MAIN010
Level: LOW
Sample Type: WATER

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
56 Fluorobenzene	2017597	1008798	4035194	2061187	2.16
82 Chlorobenzene-d5	373049	186524	746098	377982	1.32
107 1,4-Dichlorobenze	485981	242990	971962	502173	3.33

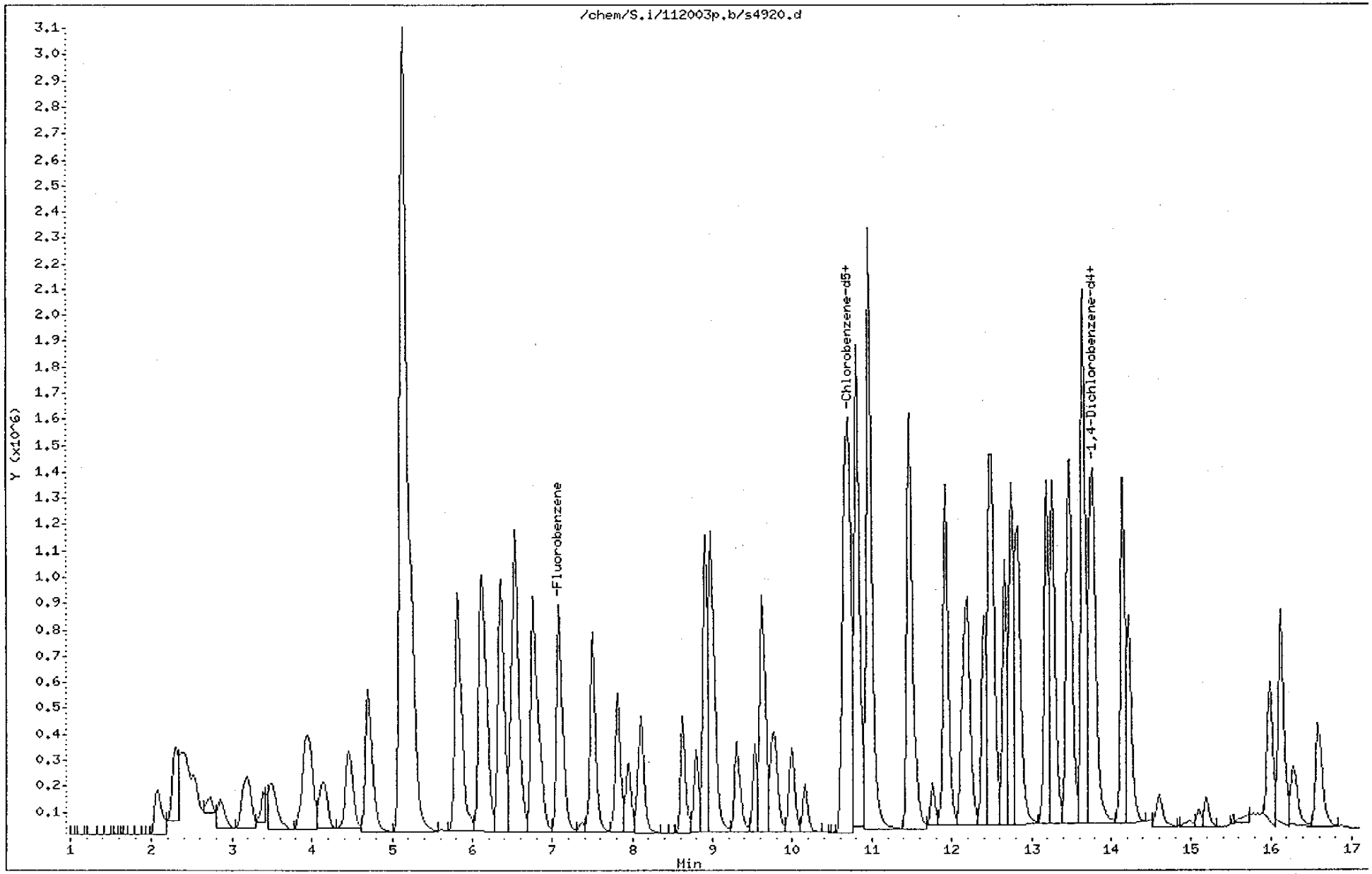
COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
56 Fluorobenzene	7.09	6.59	7.59	7.09	-0.02
82 Chlorobenzene-d5	10.69	10.19	11.19	10.69	-0.01
107 1,4-Dichlorobenze	13.75	13.25	14.25	13.75	-0.01

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem/S.i/112003p.b/s4920.d
Date : 20-NOV-2003 19:36
Client ID: MAIN010
Sample Info: MAIN010
Purge Volume: 20.0
Column phase: DB624

Instrument: S.i
Operator: reinharj
Column diameter: 0.53

Page 5



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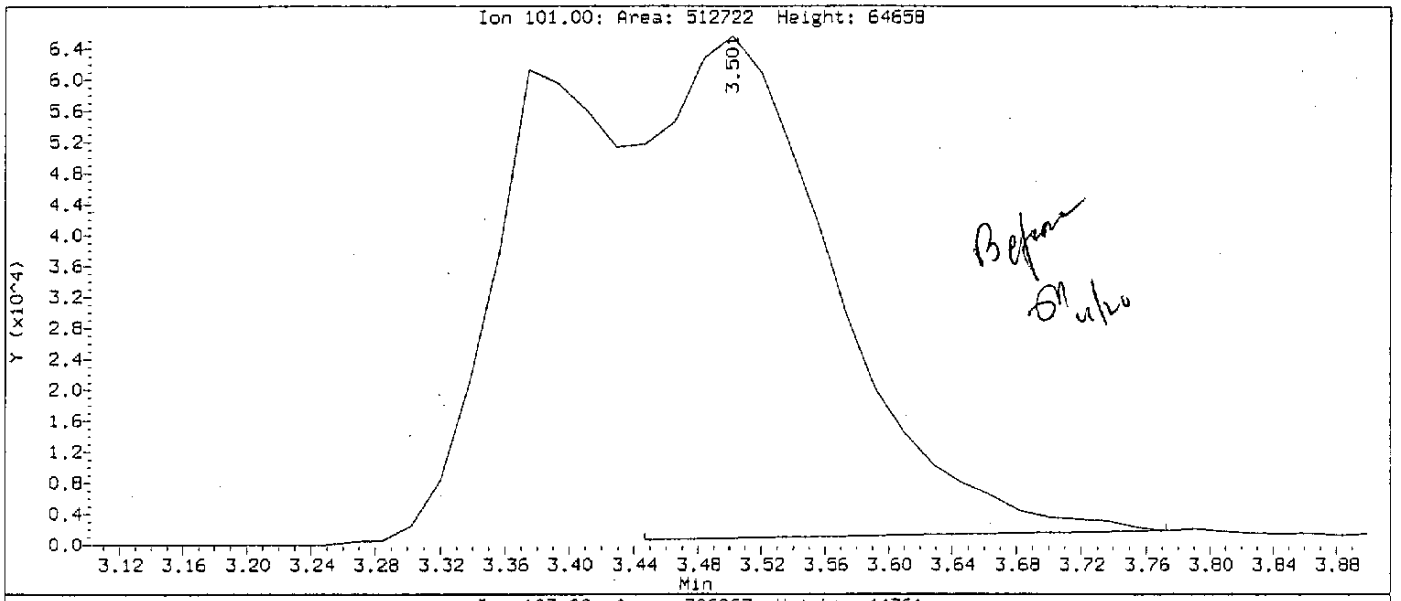
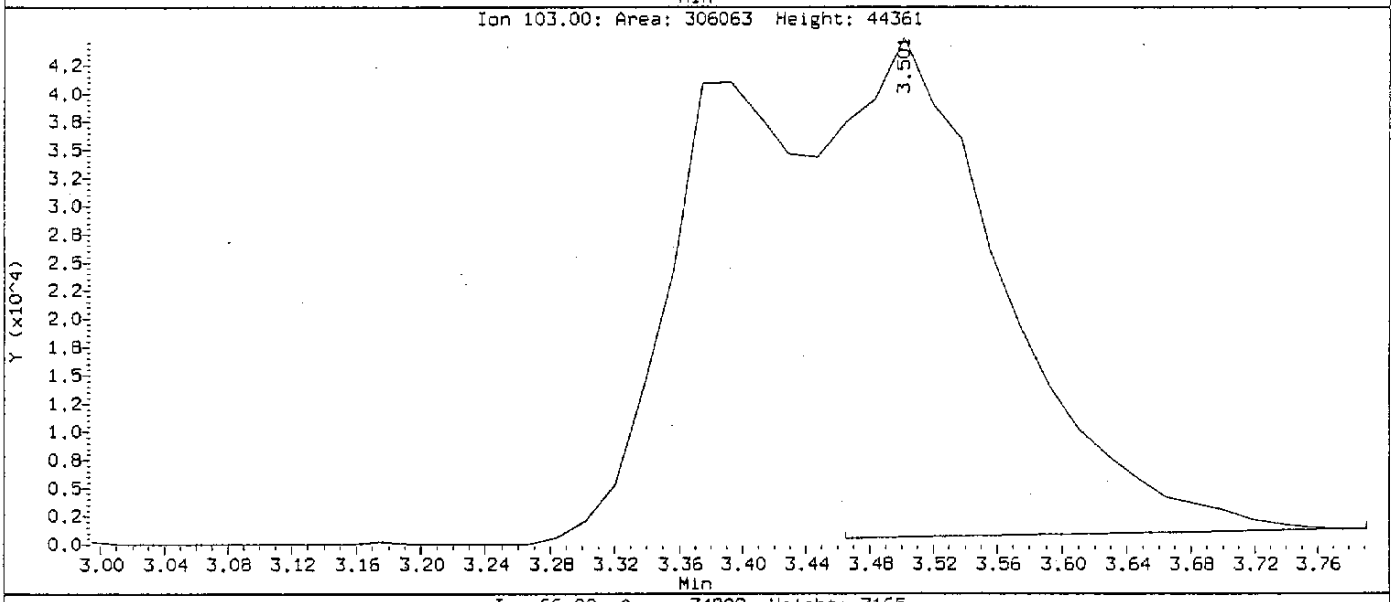
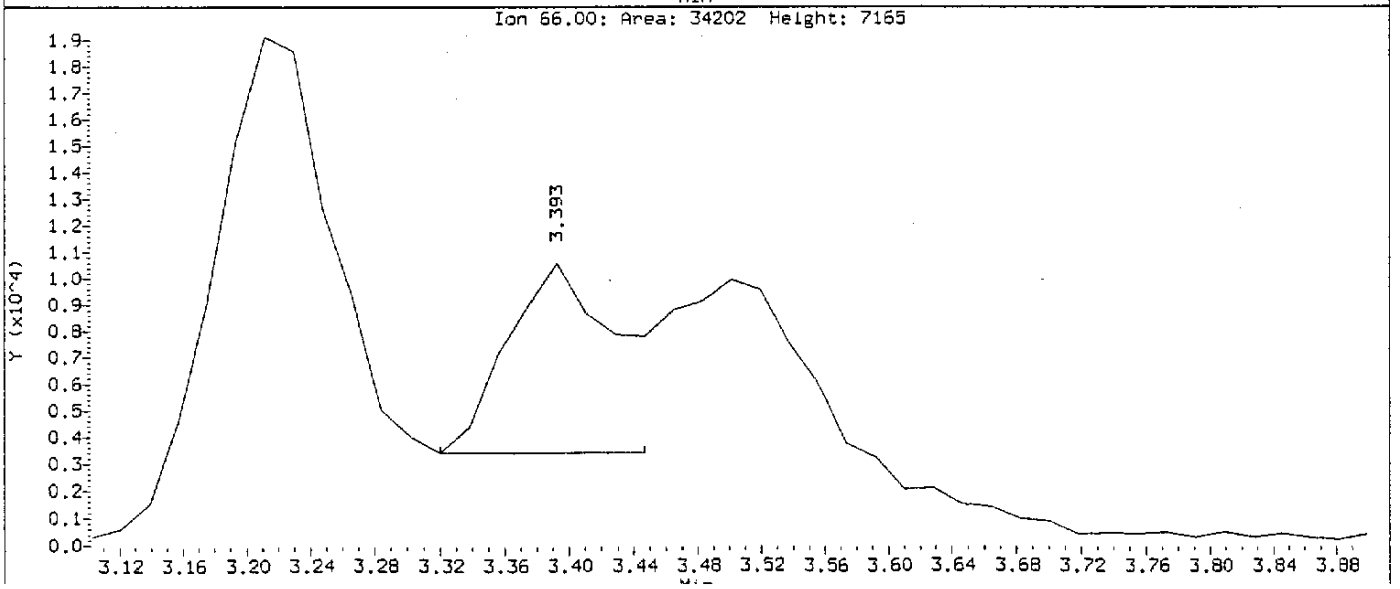
Data File: /chem/S.i/112003p.b/s4920.d
Injection Date: 20-NOV-2003 19:36
Instrument: S.i
Client Sample ID: MAIN010

Compound: Trichlorofluoromethane
CAS Number: 75-69-4







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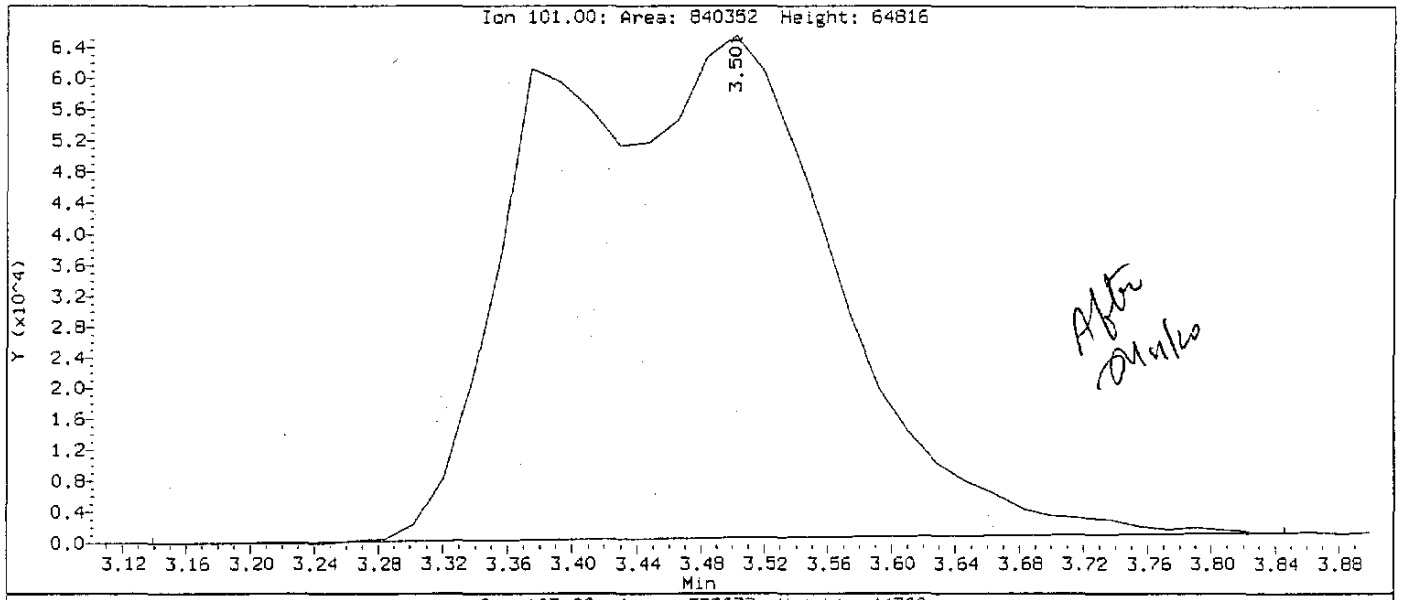
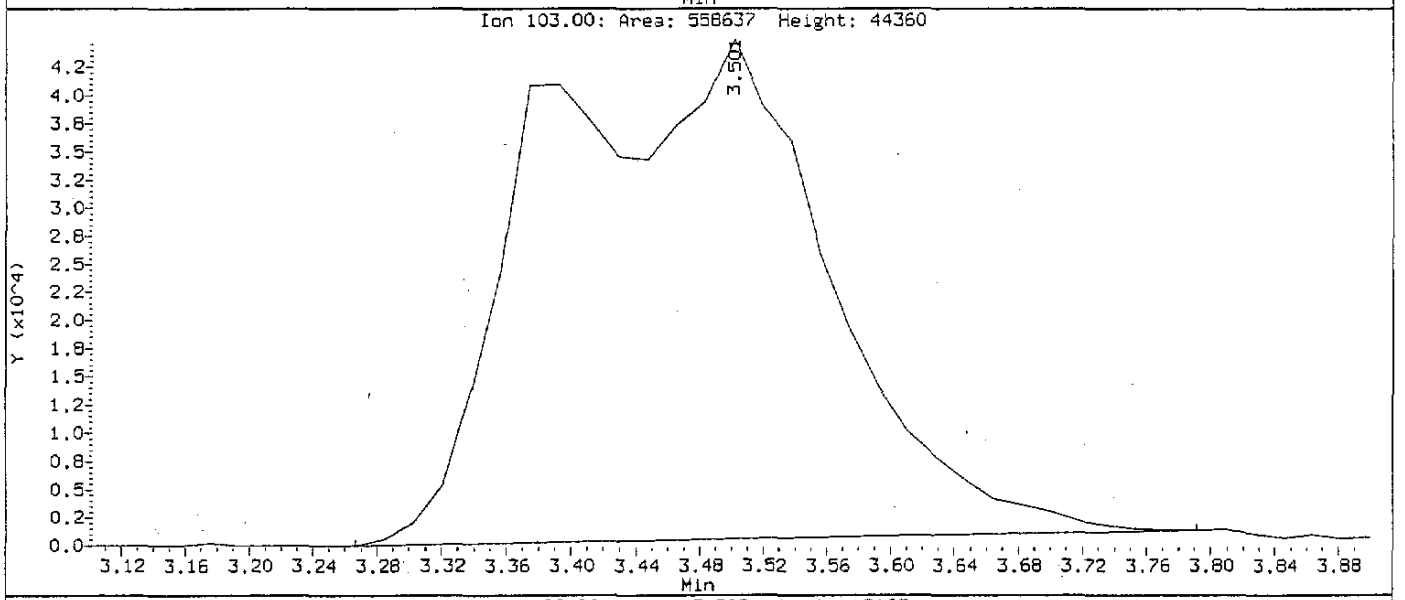
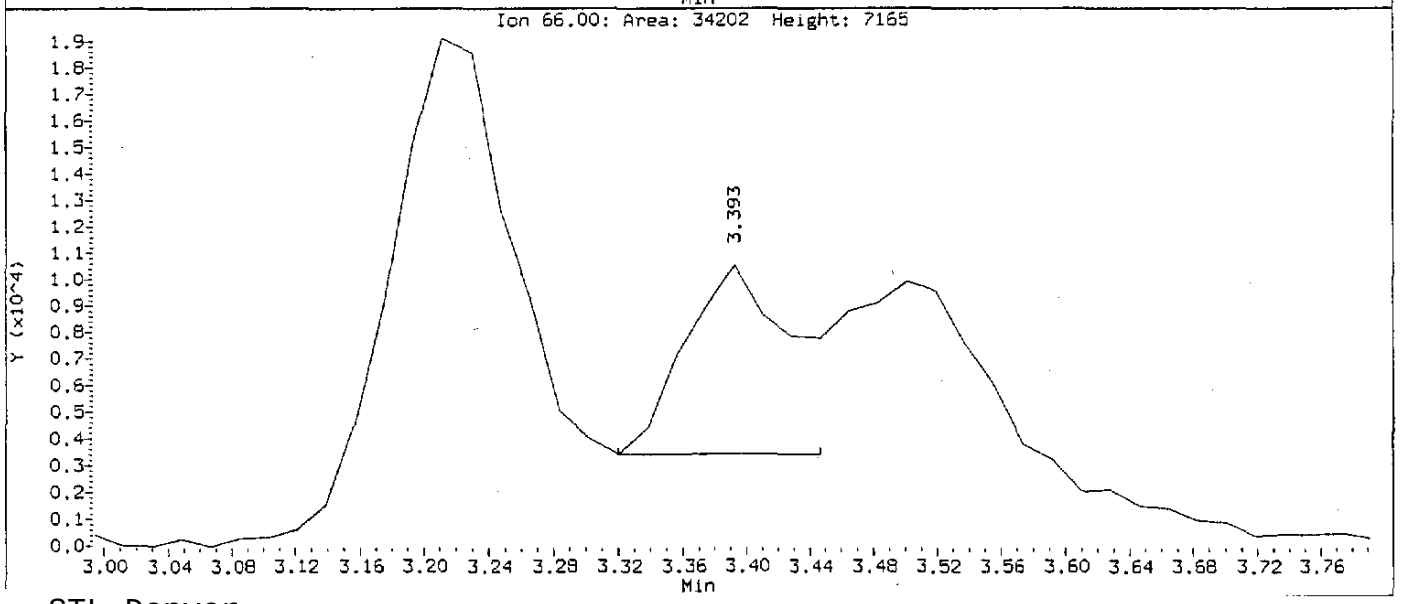
Injection Date: 20-NOV-2003 19:36
Instrument: S.i
Client Sample ID: MAIN010

Compound: Trichlorofluoromethane
CAS Number: 75-69-4







Data File: /chem/S.i/112003p.b/s4921.d Page 1
Report Date: 21-Nov-2003 18:48

STL Denver

VOLATILE REPORT SW-846

Data file : /chem/S.i/112003p.b/s4921.d
Lab Smp Id: MAIN030 Client Smp ID: MAIN030
Inj Date : 20-NOV-2003 20:01
Operator : reinharj Inst ID: S.i
Smp Info : MAIN030
Misc Info :
Comment :
Method : /chem/S.i/112003p.b/S-20ml-h2o.m
Meth Date : 21-Nov-2003 05:55 reinharj Quant Type: ISTD
Cal Date : 09-SEP-2003 05:20 Cal File: s3093.d
Als bottle: 2 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 1-main.sub
Target Version: 3.40
Processing Host: chemsv02

Concentration Formula: Amt * DF * Vp/Vs

Name	Value	Description
DF	1.000	Dilution Factor
Vp	20.000	Purge Volume (ml)
Vs	20.000	Sample Volume Purged (ml)

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
* 56 Fluorobenzene	96	7.088	7.087	(1.000)	2017597	12.5000	
* 82 Chlorobenzene-d5	119	10.692	10.690	(1.000)	373049	12.5000	
* 107 1,4-Dichlorobenzene-d4	152	13.752	13.751	(1.000)	485981	12.5000	
M 1 1,2-Dichloroethene (total)	96				3276971	60.0000	55.5636
M 2 Xylene (total)	106				7520174	30.0000	85.5321
3 dichlorodifluoromethane	85	2.543	2.542	(0.359)	2027744	30.0000	28.6265
4 Chloromethane	50	2.724	2.741	(0.384)	1373338	30.0000	28.8840
6 Vinyl Chloride	62	2.851	2.849	(0.402)	1443640	30.0000	28.3507
8 Bromomethane	94	3.177	3.175	(0.448)	1290266	30.0000	28.0825
9 Chloroethane	64	3.213	3.212	(0.453)	962061	30.0000	26.9598
11 Trichlorofluoromethane	101	3.502	3.501	(0.494)	2540637	30.0000	31.8587(M)
12 Ethanol	45	3.575	3.574	(0.504)	176179	1500.00	1517.42
16 Acrolein	56	3.847	3.845	(0.543)	528712	300.000	287.372
18 1,1-Dichloroethene	96	3.955	3.954	(0.558)	1619528	30.0000	27.5944
19 Acetone	43	3.991	3.990	(0.563)	450252	120.000	121.143
21 Iodomethane	142	4.154	4.153	(0.586)	2467099	30.0000	28.0509

Data File: /chem/S.i/112003p.b/s4921.d
Report Date: 21-Nov-2003 18:48

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
25 Acetonitrile	41	4.354	4.353	(0.614)	238135	300.000	335.904
26 Methylene Chloride	84	4.462	4.461	(0.630)	1225620	30.0000	29.1680
27 tert-Butyl alcohol	59	4.480	4.497	(0.632)	649971	600.000	631.112
30 Acrylonitrile	53	4.752	4.751	(0.670)	915595	300.000	298.319
29 trans-1,2-Dichloroethene	96	4.698	4.697	(0.663)	1725297	30.0000	27.9131
33 1,1-Dichloroethane	63	5.187	5.185	(0.732)	2562750	30.0000	27.3553
32 Isopropyl ether	87	5.150	5.149	(0.727)	5212655	150.000	141.796
35 Chloroprene	53	5.259	5.258	(0.742)	2403078	30.0000	27.2556
39 cis-1,2-Dichloroethene	96	5.820	5.837	(0.821)	1551674	30.0000	27.6505
40 2-Butanone	43	5.820	5.819	(0.821)	627013	120.000	113.554
37 2,2-Dichloropropane	77	5.820	5.819	(0.821)	2060691	30.0000	27.1343
41 Propionitrile	54	5.965	5.982	(0.842)	328869	300.000	311.936
42 Methacrylonitrile	41	6.110	6.109	(0.862)	2243824	300.000	289.457
43 Bromochloromethane	128	6.110	6.109	(0.862)	592478	30.0000	28.1100
45 Chloroform	83	6.164	6.163	(0.870)	2612748	30.0000	27.7587
47 1,1,1-Trichloroethane	97	6.364	6.363	(0.898)	2854313	30.0000	27.8932
50 1,1-Dichloropropene	75	6.527	6.544	(0.921)	2388768	30.0000	27.5407
49 Carbon Tetrachloride	117	6.508	6.526	(0.918)	2653404	30.0000	28.1393
51 Isobutanol	41	6.617	6.616	(0.934)	245761	600.000	677.720
53 Benzene	78	6.762	6.779	(0.954)	4523598	30.0000	27.7103
55 1,2-Dichloroethane	62	6.853	6.851	(0.967)	1106645	30.0000	29.0113
57 n-Butanol	56	7.360	7.377	(1.038)	210437	600.000	651.614
58 Trichloroethene	130	7.504	7.503	(1.059)	1937547	30.0000	28.1971
61 1,2-Dichloropropane	63	7.812	7.811	(1.102)	1474550	30.0000	28.7871
64 Dibromomethane	93	7.957	7.956	(1.123)	752455	30.0000	29.8229
63 1,4-Dioxane	88	7.921	7.920	(1.118)	266448	1500.00	1768.37
65 Bromodichloromethane	83	8.102	8.101	(1.143)	2159599	30.0000	28.9462
68 cis-1,3-Dichloropropene	75	8.627	8.626	(0.807)	1895939	30.0000	29.6063
69 4-Methyl-2-pentanone	43	8.790	8.789	(0.822)	1802226	120.000	117.817
71 Toluene	91	8.989	8.988	(0.841)	5371116	30.0000	28.3187
72 trans-1,3-Dichloropropene	75	9.297	9.314	(0.870)	1329604	30.0000	29.2852
74 1,1,2-Trichloroethane	97	9.533	9.532	(0.892)	816122	30.0000	29.0552
76 1,3-Dichloropropane	76	9.750	9.749	(0.912)	1252783	30.0000	29.3032
75 Tetrachloroethene	164	9.623	9.640	(0.900)	1531406	30.0000	28.5757
77 2-Hexanone	43	9.786	9.785	(0.915)	1184209	120.000	121.609
79 Dibromochloromethane	129	9.985	9.984	(0.934)	1281069	30.0000	29.8444
80 1,2-Dibromoethane	107	10.166	10.165	(0.951)	1024304	30.0000	30.0891
81 1-Chlorohexane	91	10.655	10.654	(0.997)	2748597	30.0000	28.2024
83 Chlorobenzene	112	10.728	10.727	(1.003)	3587745	30.0000	28.8682
85 1,1,1,2-Tetrachloroethane	131	10.836	10.835	(1.014)	1350101	30.0000	28.6165
84 Ethylbenzene	106	10.818	10.817	(1.012)	1913246	30.0000	28.0529
86 m and p-Xylene	106	10.963	10.962	(1.025)	5267352	60.0000	56.7256
87 o-Xylene	106	11.470	11.469	(1.073)	2252822	30.0000	28.8065
88 Styrene	104	11.488	11.505	(1.075)	3579262	30.0000	29.8164
89 Bromoform	173	11.760	11.759	(1.100)	599846	30.0000	29.3025
90 isopropyl benzene	105	11.923	11.922	(1.115)	7691980	30.0000	28.5325
92 Cyclohexanone	55	12.140	12.139	(1.135)	1683901	1200.00	1204.72

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
94 1,1,2,2-Tetrachloroethane	83	12.412	12.411	(1.161)	827905	30.0000	28.5938
95 Bromobenzene	156	12.412	12.411	(0.903)	1250723	30.0000	28.8880
97 1,2,3-Trichloropropane	110	12.502	12.501	(0.909)	207453	30.0000	28.1893
96 n-Propylbenzene	120	12.502	12.501	(0.909)	1830459	30.0000	28.0862
99 2-Chlorotoluene	126	12.665	12.664	(0.921)	1365914	30.0000	28.1930
100 1,3,5-Trimethylbenzene	105	12.756	12.755	(0.928)	5732619	30.0000	28.7015
101 4-Chlorotoluene	126	12.828	12.827	(0.933)	1470625	30.0000	29.2612
102 tert-Butylbenzene	119	13.191	13.189	(0.959)	6105922	30.0000	28.3512
103 1,2,4-Trimethylbenzene	105	13.263	13.280	(0.964)	5161425	30.0000	28.7431
104 sec-Butylbenzene	134	13.480	13.479	(0.980)	1462371	30.0000	28.2222
106 m-Dichlorobenzene	146	13.661	13.660	(0.993)	2285221	30.0000	29.1952
105 4-Isopropyltoluene	119	13.643	13.660	(0.992)	6703405	30.0000	28.2385
108 p-dichlorobenzene	146	13.770	13.787	(1.001)	2474372	30.0000	28.8146
110 n-Butylbenzene	91	14.132	14.149	(1.028)	6380057	30.0000	28.5131
111 o-Dichlorobenzene	146	14.223	14.222	(1.034)	1795006	30.0000	29.2095
112 1,2-Dibromo-3-chloropropane	157	15.110	15.091	(1.099)	132154	30.0000	32.4215
113 1,2,4-Trichlorobenzene	180	15.979	15.978	(1.162)	1195630	30.0000	27.7413
114 Hexachlorobutadiene	225	16.124	16.123	(1.173)	1113124	30.0000	28.3804
115 Napthalene	128	16.287	16.286	(1.184)	1316047	30.0000	28.6924
116 1,2,3-Trichlorobenzene	180	16.595	16.594	(1.207)	865931	30.0000	30.1320

QC Flag Legend

M - Compound response manually integrated.

Data File: /chem/S.i/112003p.b/s4921.d
Report Date: 21-Nov-2003 18:48

STL Denver

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: S.i
Lab File ID: s4921.d
Lab Smp Id: MAIN030
Analysis Type: VOA
Quant Type: ISTD
Operator: reinharj
Method File: /chem/S.i/112003p.b/S-20ml-h2o.m
Misc Info:

Calibration Date: 11/20/3
Calibration Time: 2001
Client Smp ID: MAIN030
Level: LOW
Sample Type: WATER

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
56 Fluorobenzene	2017597	1008798	4035194	2017597	0.00
82 Chlorobenzene-d5	373049	186524	746098	373049	0.00
107 1,4-Dichlorobenze	485981	242990	971962	485981	0.00

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
56 Fluorobenzene	7.09	6.59	7.59	7.09	0.00
82 Chlorobenzene-d5	10.69	10.19	11.19	10.69	0.00
107 1,4-Dichlorobenze	13.75	13.25	14.25	13.75	0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem/S.i/112003p.b/s4921.d
Date : 20-NOV-2003 20:01
Client ID: MAIN030
Sample Info: MAIN030
Purge Volume: 20.0
Column phase: DB624

Instrument: S.i
Operator: reinharj
Column diameter: 0.53

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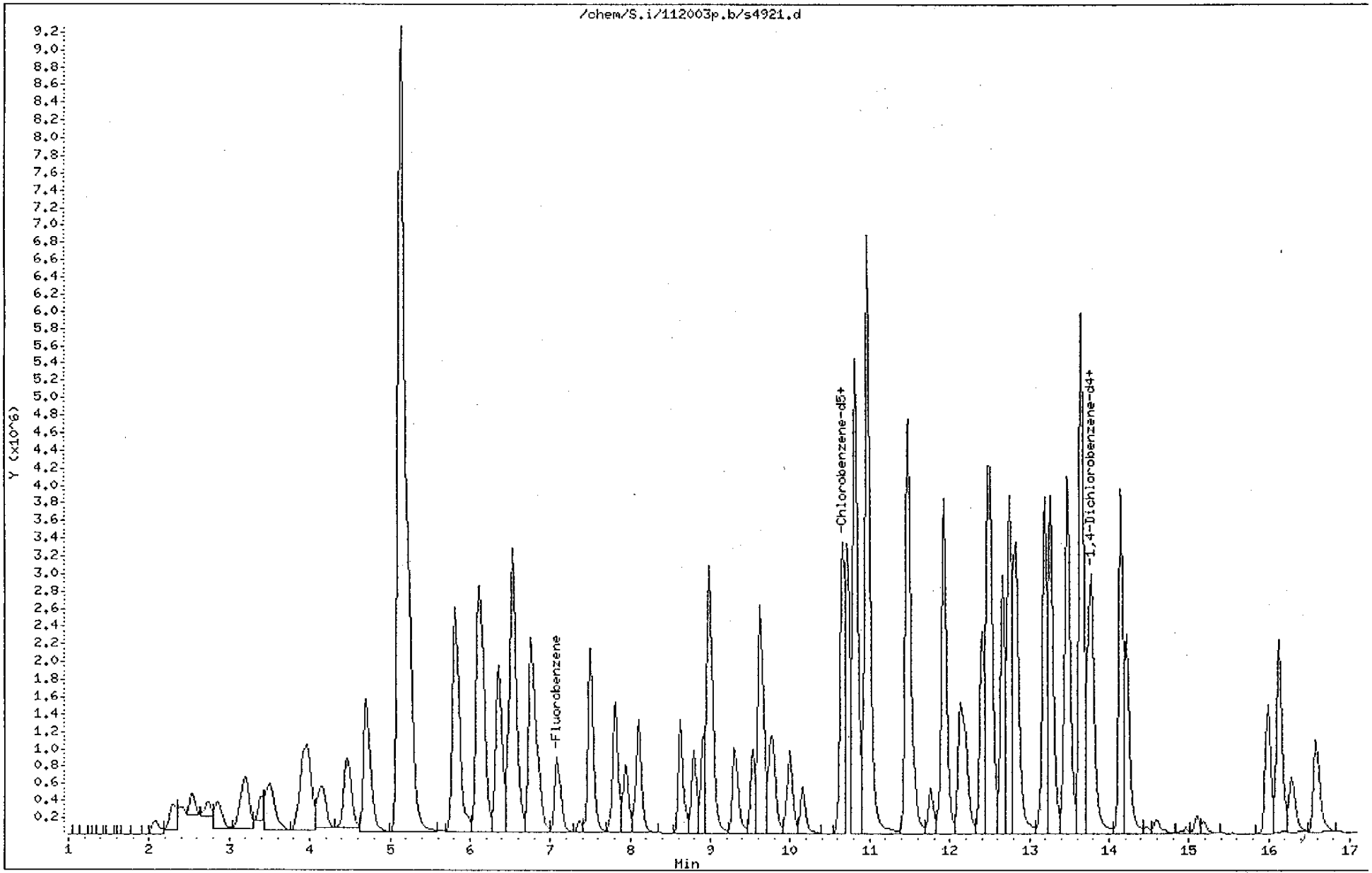

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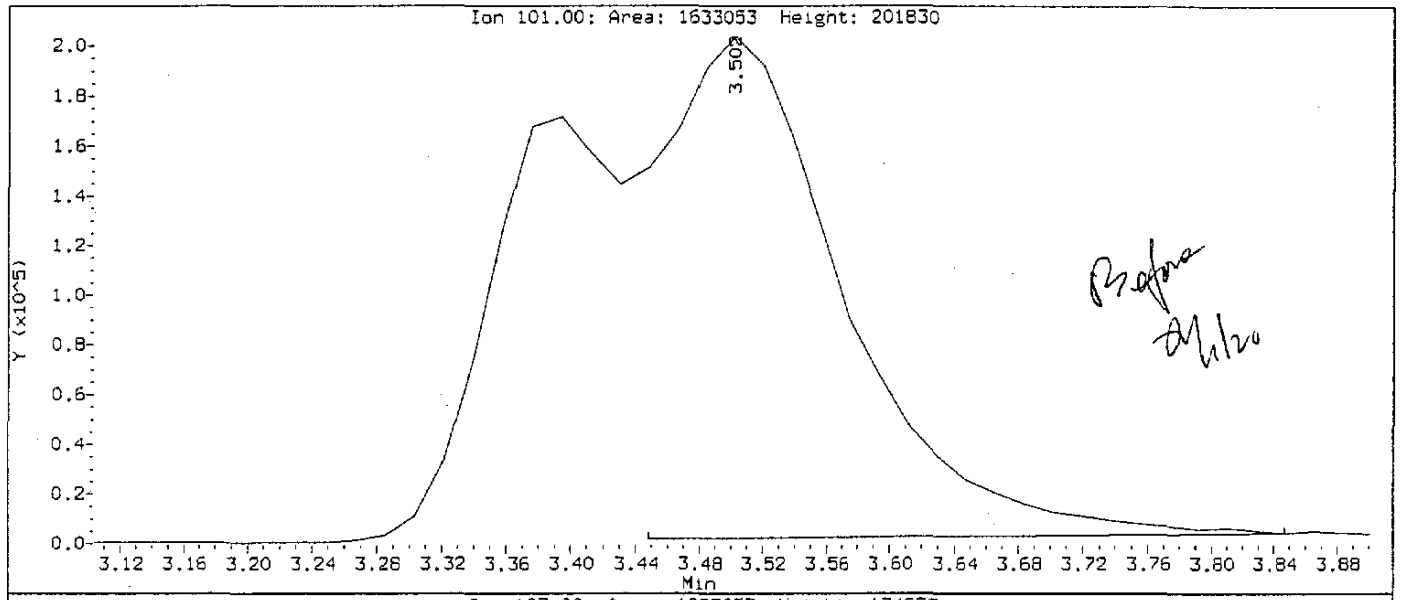
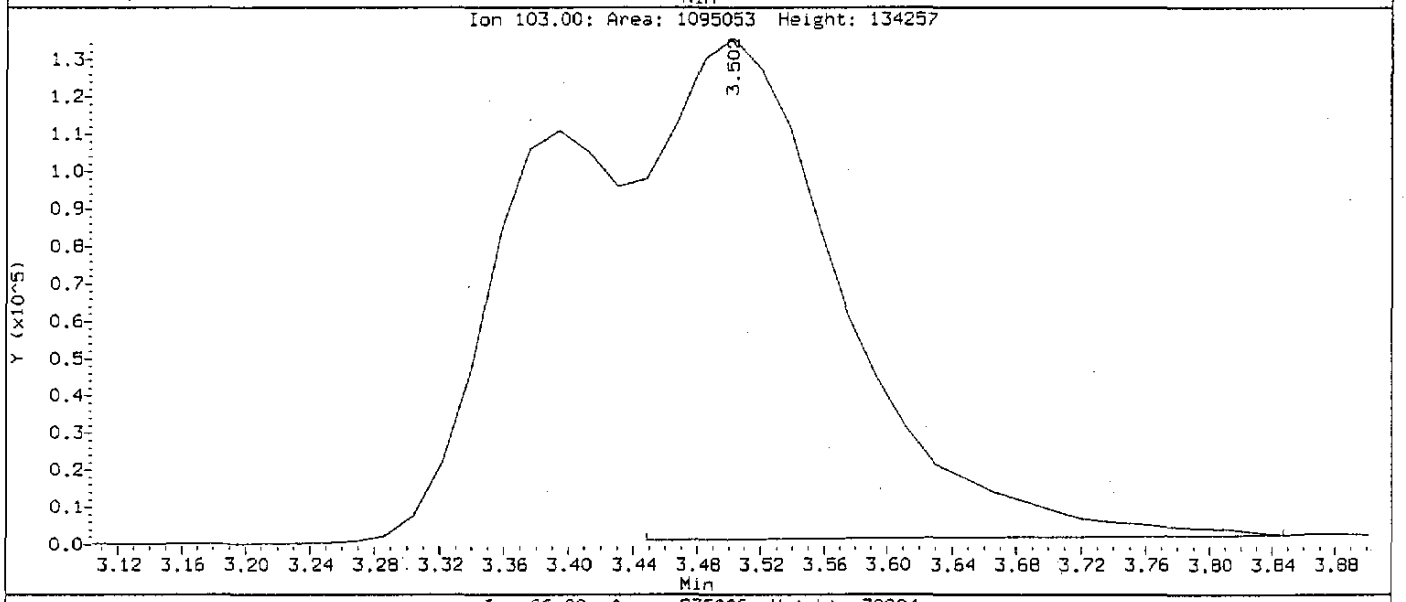
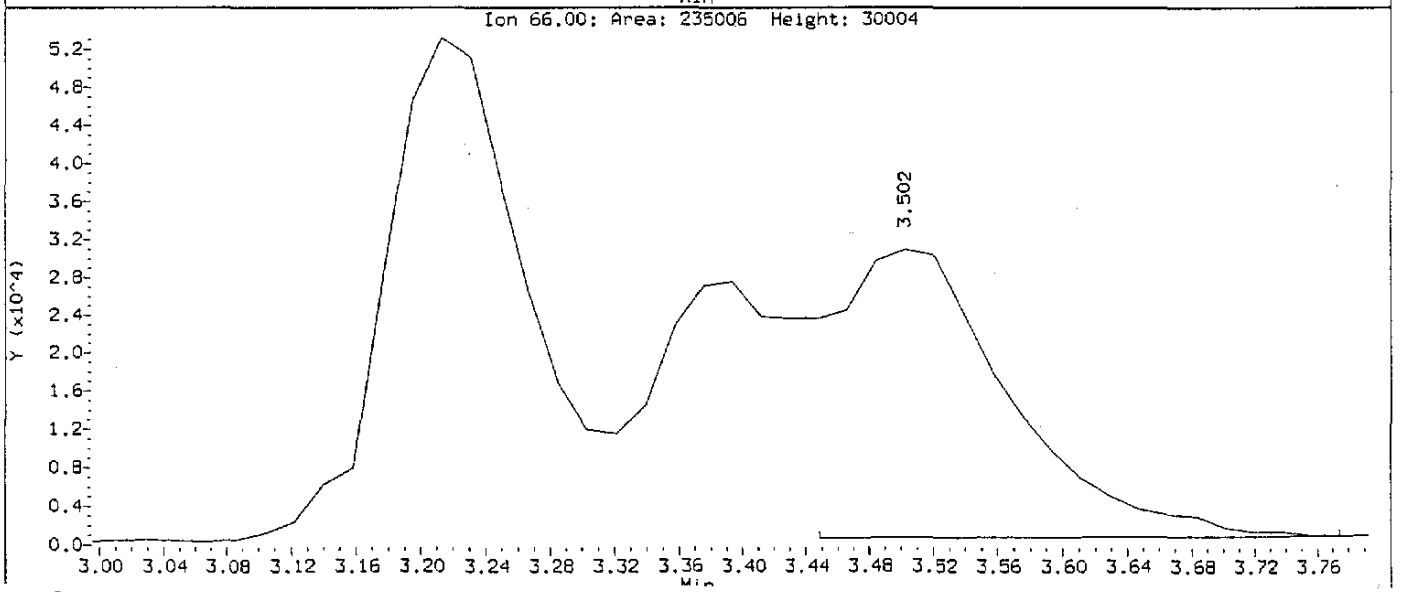
Data File: /chem/S.i/112003p.b/s4921.d
Injection Date: 20-NOV-2003 20:01
Instrument: S.i
Client Sample ID: MAIN030

Compound: Trichlorofluoromethane
CAS Number: 75-69-4

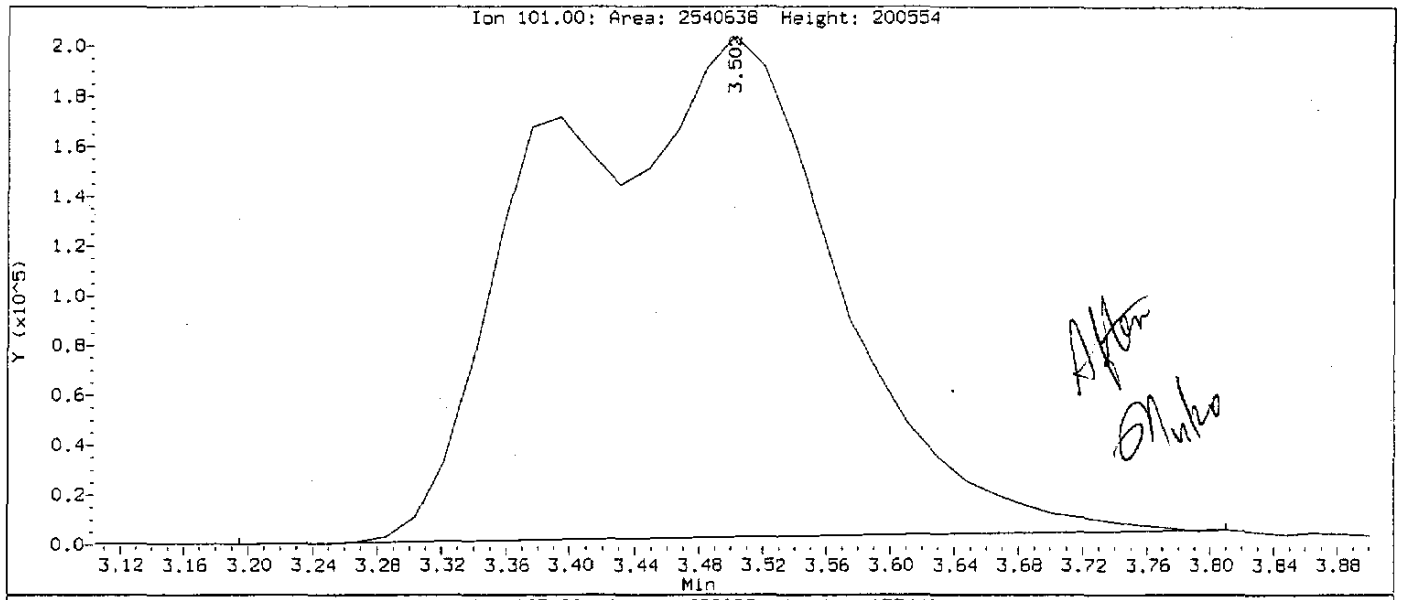


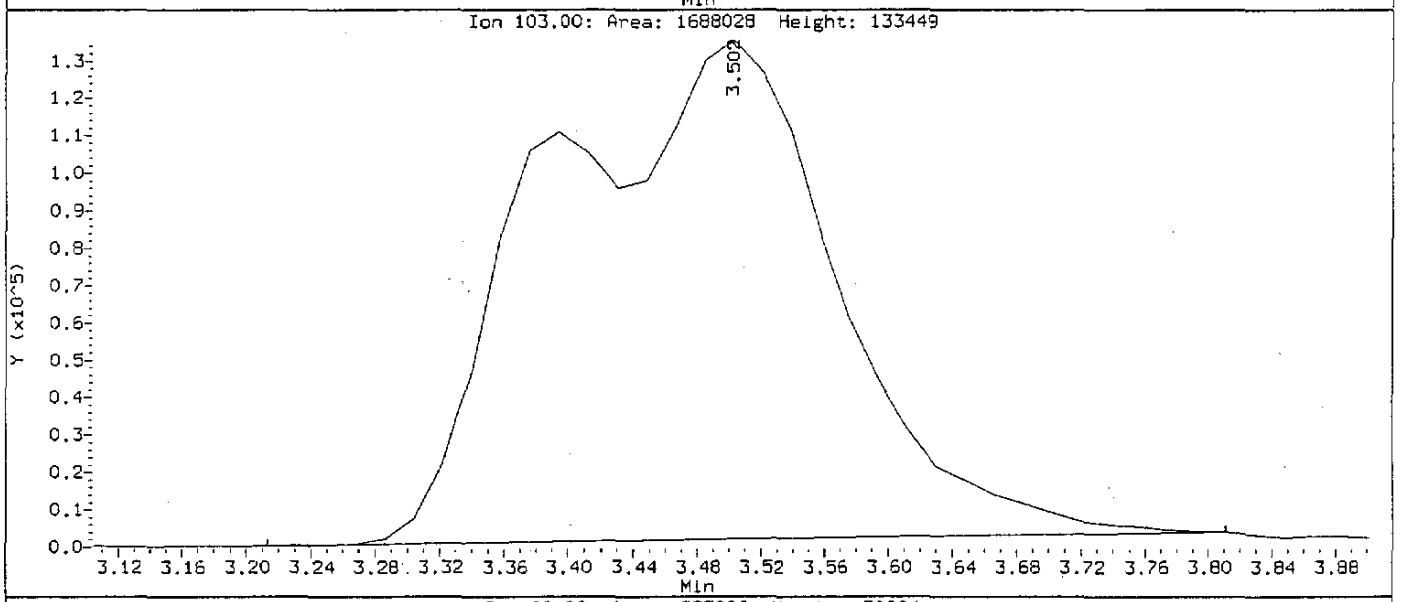


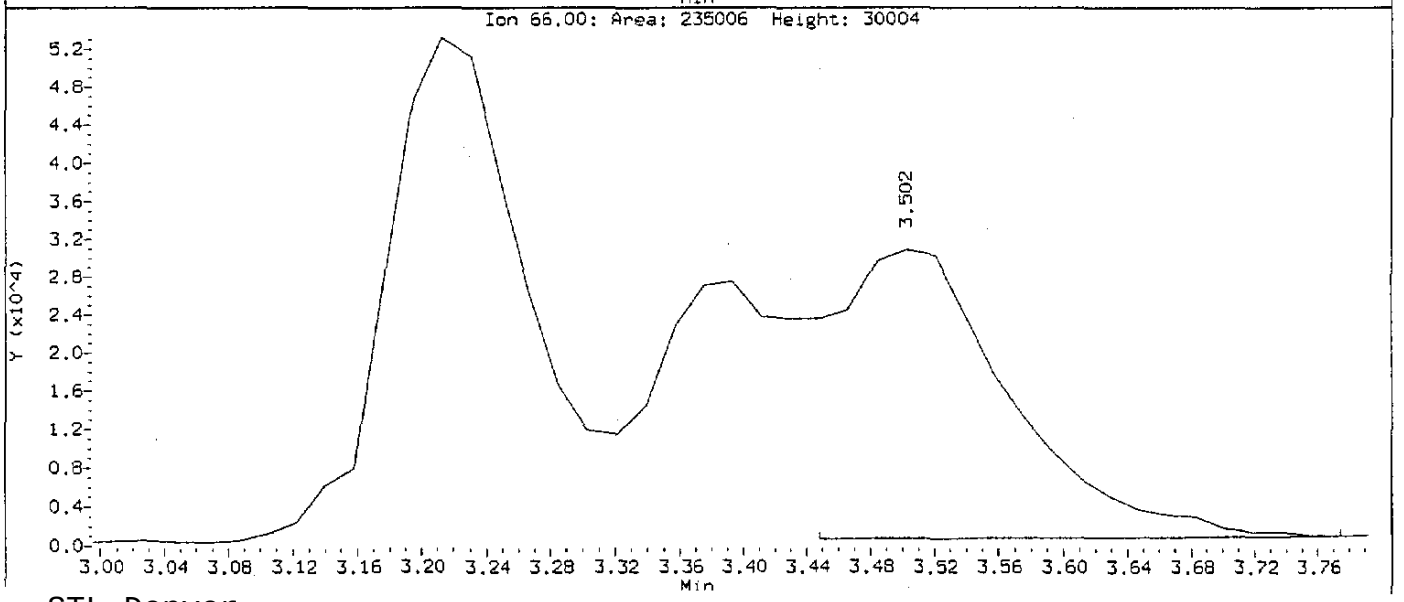


Data File: /chem/S.i/112003p.b/s4921.d
Injection Date: 20-NOV-2003 20:01
Instrument: S.i
Client Sample ID: MAIN030

Compound: Trichlorofluoromethane
CAS Number: 75-69-4







Data File: /chem/S.i/112003p.b/s4922.d
Report Date: 21-Nov-2003 18:30

STL Denver

VOLATILE REPORT SW-846

Data file : /chem/S.i/112003p.b/s4922.d
Lab Smp Id: MAIN060 Client Smp ID: MAIN060
Inj Date : 20-NOV-2003 20:25
Operator : reinharj Inst ID: S.i
Smp Info : MAIN060
Misc Info :
Comment :
Method : /chem/S.i/112003p.b/S-20ml-h2o.m
Meth Date : 21-Nov-2003 05:55 reinharj Quant Type: ISTD
Cal Date : 09-SEP-2003 05:44 Cal File: s3094.d
Als bottle: 2 Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 1-main.sub
Target Version: 3.40
Processing Host: chemsv02

Concentration Formula: Amt * DF * Vp/Vs

Name	Value	Description
DF	1.000	Dilution Factor
Vp	20.000	Purge Volume (ml)
Vs	20.000	Sample Volume Purged (ml)

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	ON-COL (ug/L)
* 56 Fluorobenzene	96	7.087	7.087	(1.000)	1928307	12.5000	
* 82 Chlorobenzene-d5	119	10.690	10.690	(1.000)	360840	12.5000	
* 107 1,4-Dichlorobenzene-d4	152	13.751	13.751	(1.000)	460934	12.5000	
M 1 1,2-Dichloroethene (total)	96				6595763	120.000	117.006
M 2 Xylene (total)	106				14837378	60.0000	174.533
3 dichlorodifluoromethane	85	2.542	2.542	(0.359)	4001661	60.0000	59.1091
4 Chloromethane	50	2.741	2.741	(0.387)	2808685	60.0000	61.8076(A)
6 Vinyl Chloride	62	2.849	2.849	(0.402)	2963460	60.0000	60.8922(A)
8 Bromomethane	94	3.175	3.175	(0.448)	2590160	60.0000	58.9850
9 Chloroethane	64	3.212	3.212	(0.453)	2008313	60.0000	58.8850
11 Trichlorofluoromethane	101	3.501	3.501	(0.494)	5340920	60.0000	65.5785(AM)
12 Ethanol	45	3.574	3.574	(0.504)	262140	3000.00	2362.34
16 Acrolein	56	3.845	3.845	(0.543)	1083034	600.000	615.923(A)
18 1,1-Dichloroethene	96	3.954	3.954	(0.558)	3324499	60.0000	59.2674
19 Acetone	43	3.990	3.990	(0.563)	852514	240.000	242.354(A)
21 Iodomethane	142	4.153	4.153	(0.586)	5127575	60.0000	61.0000(A)

Data File: /chem/S.i/112003p.b/s4922.d
Report Date: 21-Nov-2003 18:30

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
25 Acetonitrile	41	4.353	4.353	(0.614)	410828	600.000	606.331(A)
26 Methylene Chloride	84	4.461	4.461	(0.629)	2431337	60.0000	61.7876(A)
27 tert-Butyl alcohol	59	4.497	4.497	(0.635)	1122926	1200.00	1140.83
30 Acrylonitrile	53	4.751	4.751	(0.670)	1788551	600.000	609.730(A)
29 trans-1,2-Dichloroethene	96	4.697	4.697	(0.663)	3477724	60.0000	58.8705
33 1,1-Dichloroethane	63	5.185	5.185	(0.732)	5302815	60.0000	59.2243
32 Isopropyl ether	87	5.149	5.149	(0.727)	10639519	300.000	302.820(A)
35 Chloroprene	53	5.258	5.258	(0.742)	5029556	60.0000	59.6864
39 cis-1,2-Dichloroethene	96	5.837	5.837	(0.824)	3118039	60.0000	58.1356
40 2-Butanone	43	5.819	5.819	(0.821)	1218774	240.000	230.945
37 2,2-Dichloropropane	77	5.819	5.819	(0.821)	4060813	60.0000	55.9470
41 Propionitrile	54	5.982	5.982	(0.844)	618533	600.000	613.853(A)
42 Methacrylonitrile	41	6.109	6.109	(0.862)	4525948	600.000	610.890(A)
43 Bromochloromethane	128	6.109	6.109	(0.862)	1197985	60.0000	59.4700
45 Chloroform	83	6.163	6.163	(0.870)	5298164	60.0000	58.8959
47 1,1,1-Trichloroethane	97	6.363	6.363	(0.898)	5696350	60.0000	58.2440
50 1,1-Dichloropropene	75	6.544	6.544	(0.923)	4788487	60.0000	57.7641
49 Carbon Tetrachloride	117	6.526	6.526	(0.921)	5312492	60.0000	58.9476
51 Isobutanol	41	6.616	6.616	(0.934)	404169	1200.00	1159.76
53 Benzene	78	6.779	6.779	(0.957)	9194706	60.0000	58.9324
55 1,2-Dichloroethane	62	6.851	6.851	(0.967)	2200892	60.0000	60.3692(A)
57 n-Butanol	56	7.377	7.377	(1.041)	334637	1200.00	1084.18
58 Trichloroethene	130	7.503	7.503	(1.059)	3806552	60.0000	57.9619
61 1,2-Dichloropropane	63	7.811	7.811	(1.102)	2912656	60.0000	59.4957
64 Dibromomethane	93	7.956	7.956	(1.123)	1468984	60.0000	60.9179(A)
63 1,4-Dioxane	88	7.920	7.920	(1.118)	387855	3000.00	2693.32
65 Bromodichloromethane	83	8.101	8.101	(1.143)	4332943	60.0000	60.7659(A)
68 cis-1,3-Dichloropropene	75	8.626	8.626	(0.807)	3701559	60.0000	59.7580
69 4-Methyl-2-pentanone	43	8.789	8.789	(0.822)	3470842	240.000	234.576
71 Toluene	91	8.988	8.988	(0.841)	10861111	60.0000	59.2017
72 trans-1,3-Dichloropropene	75	9.314	9.314	(0.871)	2594746	60.0000	59.0842
74 1,1,2-Trichloroethane	97	9.532	9.532	(0.892)	1594097	60.0000	58.6726
76 1,3-Dichloropropane	76	9.749	9.749	(0.912)	2432990	60.0000	58.8342
75 Tetrachloroethene	164	9.640	9.640	(0.902)	3014128	60.0000	58.1460
77 2-Hexanone	43	9.785	9.785	(0.915)	2228392	240.000	236.582
79 Dibromochloromethane	129	9.984	9.984	(0.934)	2547274	60.0000	61.3503(A)
80 1,2-Dibromoethane	107	10.165	10.165	(0.951)	2001323	60.0000	60.7783(A)
81 1-Chlorohexane	91	10.654	10.654	(0.997)	5472328	60.0000	58.0496
83 Chlorobenzene	112	10.727	10.727	(1.003)	7103598	60.0000	59.0919
85 1,1,1,2-Tetrachloroethane	131	10.835	10.835	(1.014)	2678724	60.0000	58.6988
84 Ethylbenzene	106	10.817	10.817	(1.012)	3891895	60.0000	58.9956
86 m and p-Xylene	106	10.962	10.962	(1.025)	10360280	120.000	115.348
87 o-Xylene	106	11.469	11.469	(1.073)	4477098	60.0000	59.1849
88 Styrene	104	11.505	11.505	(1.076)	7055388	60.0000	60.7623(A)
89 Bromoform	173	11.759	11.759	(1.100)	1181962	60.0000	59.6926
90 isopropyl benzene	105	11.922	11.922	(1.115)	15125819	60.0000	58.0058
92 Cyclohexanone	55	12.139	12.139	(1.135)	3106646	2400.00	2297.81

Data File: /chem/S.i/112003p.b/s4922.d
Report Date: 21-Nov-2003 18:30

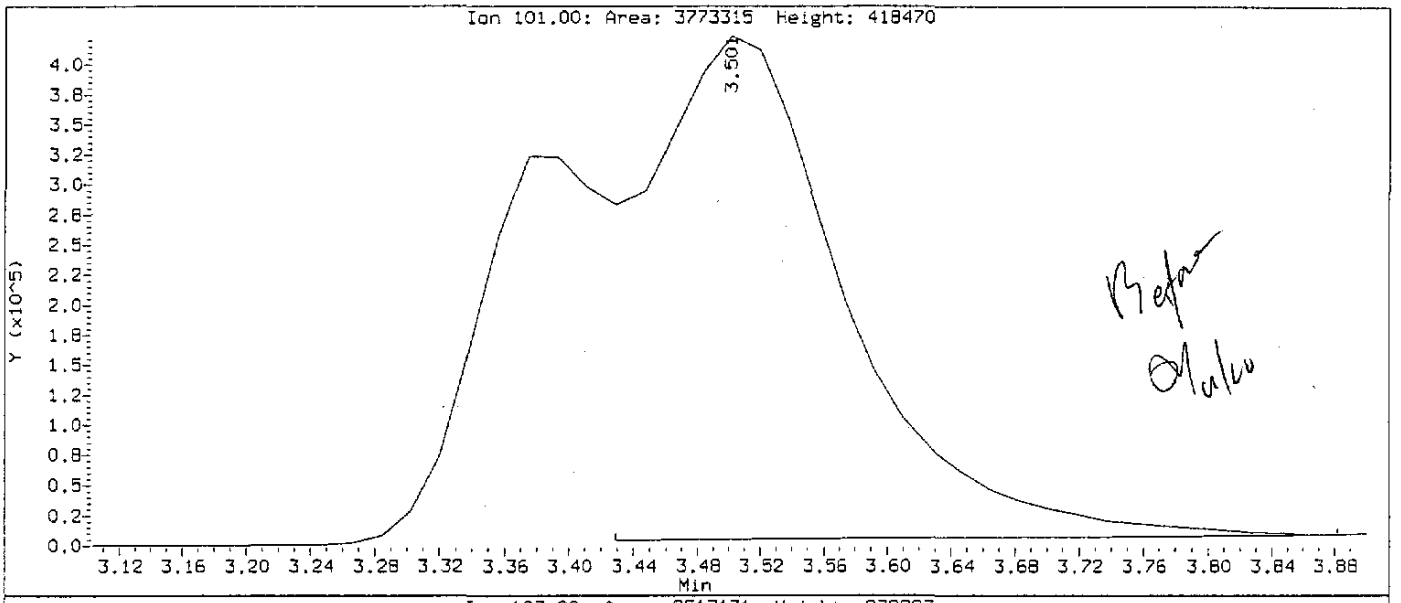
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
94 1,1,2,2-Tetrachloroethane	83	12.411	12.411	(1.161)	1656054	60.0000	59.1312
95 Bromobenzene	156	12.411	12.411	(0.903)	2416917	60.0000	58.8571
97 1,2,3-Trichloropropane	110	12.501	12.501	(0.909)	405774	60.0000	58.1339
96 n-Propylbenzene	120	12.501	12.501	(0.909)	3555759	60.0000	57.5235
99 2-Chlorotoluene	126	12.664	12.664	(0.921)	2729470	60.0000	59.3988
100 1,3,5-Trimethylbenzene	105	12.755	12.755	(0.928)	11136097	60.0000	58.7848
101 4-Chlorotoluene	126	12.827	12.827	(0.933)	2816965	60.0000	59.0951
102 tert-Butylbenzene	119	13.189	13.189	(0.959)	11927612	60.0000	58.3921
103 1,2,4-Trimethylbenzene	105	13.280	13.280	(0.966)	9726531	60.0000	57.1088
104 sec-Butylbenzene	134	13.479	13.479	(0.980)	2811072	60.0000	57.1987
106 m-Dichlorobenzene	146	13.660	13.660	(0.993)	4243530	60.0000	57.1598
105 4-Isopropyltoluene	119	13.660	13.660	(0.993)	13255072	60.0000	58.8721
108 p-dichlorobenzene	146	13.787	13.787	(1.003)	4718226	60.0000	57.9305
110 n-Butylbenzene	91	14.149	14.149	(1.029)	12235627	60.0000	57.6536
111 o-Dichlorobenzene	146	14.222	14.222	(1.034)	3395121	60.0000	58.2497
112 1,2-Dibromo-3-chloropropane	157	15.091	15.091	(1.097)	235537	60.0000	60.9246(A)
113 1,2,4-Trichlorobenzene	180	15.978	15.978	(1.162)	2212227	60.0000	54.1179
114 Hexachlorobutadiene	225	16.123	16.123	(1.173)	2018536	60.0000	54.2616
115 Napthalene	128	16.286	16.286	(1.184)	2381198	60.0000	54.7358
116 1,2,3-Trichlorobenzene	180	16.594	16.594	(1.207)	1572637	60.0000	58.1041

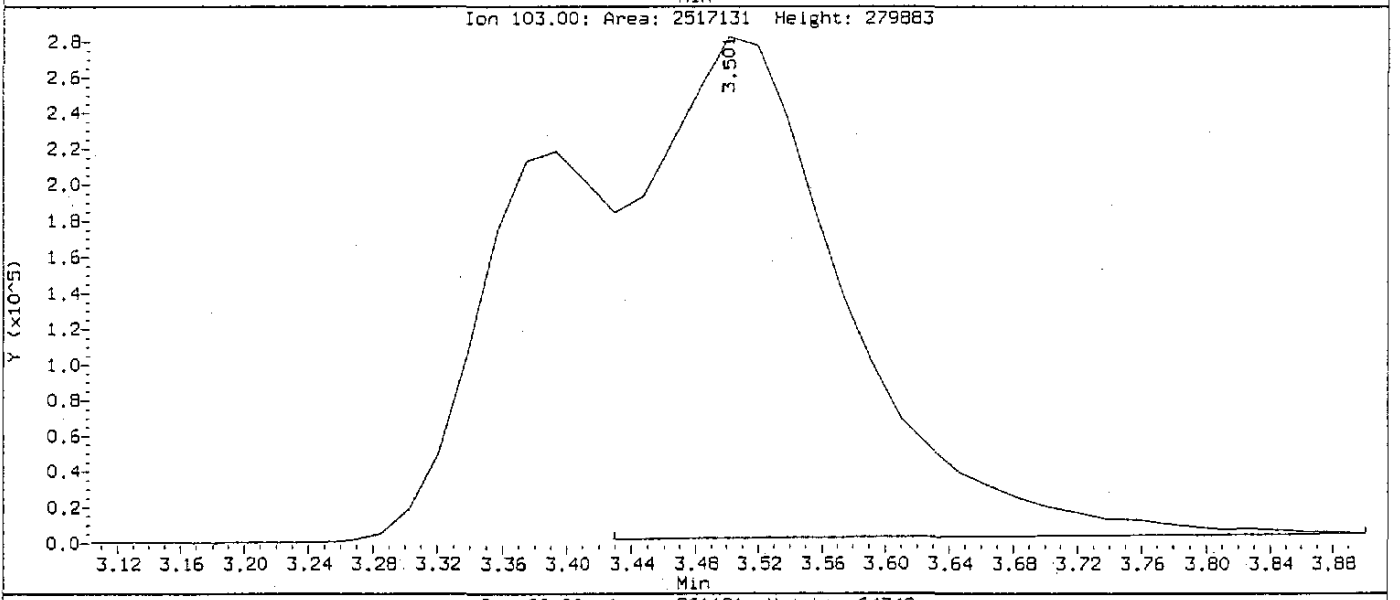
QC Flag Legend

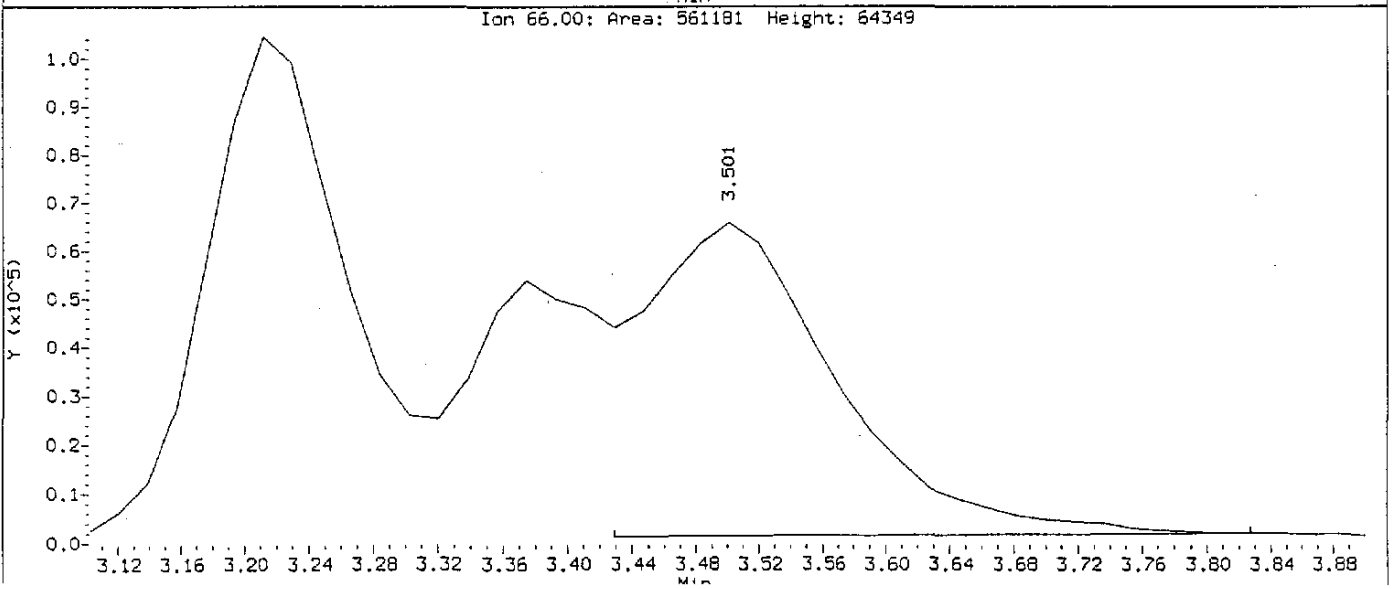
A - Target compound detected but, quantitated amount exceeded maximum amount.
M - Compound response manually integrated.

Data File: /chem/S.i/112003p.b/s4922.d
Injection Date: 20-NOV-2003 20:25
Instrument: S.i
Client Sample ID: MAIN060

Compound: Trichlorofluoromethane
CAS Number: 75-69-4







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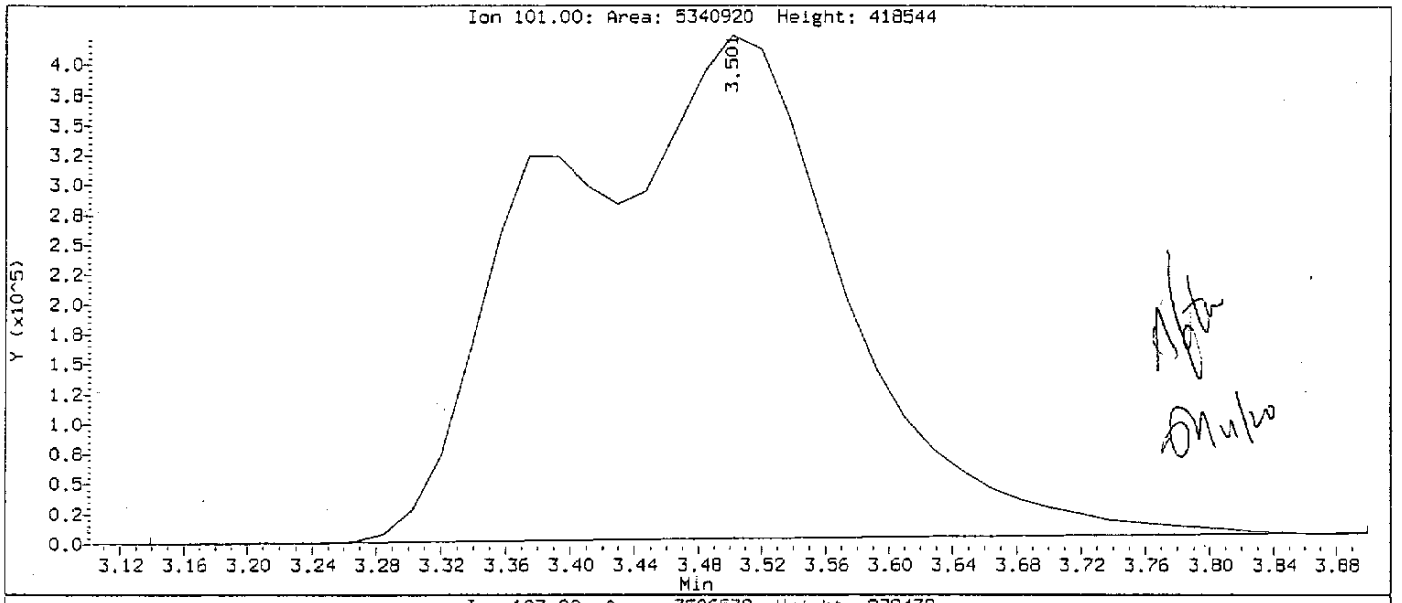
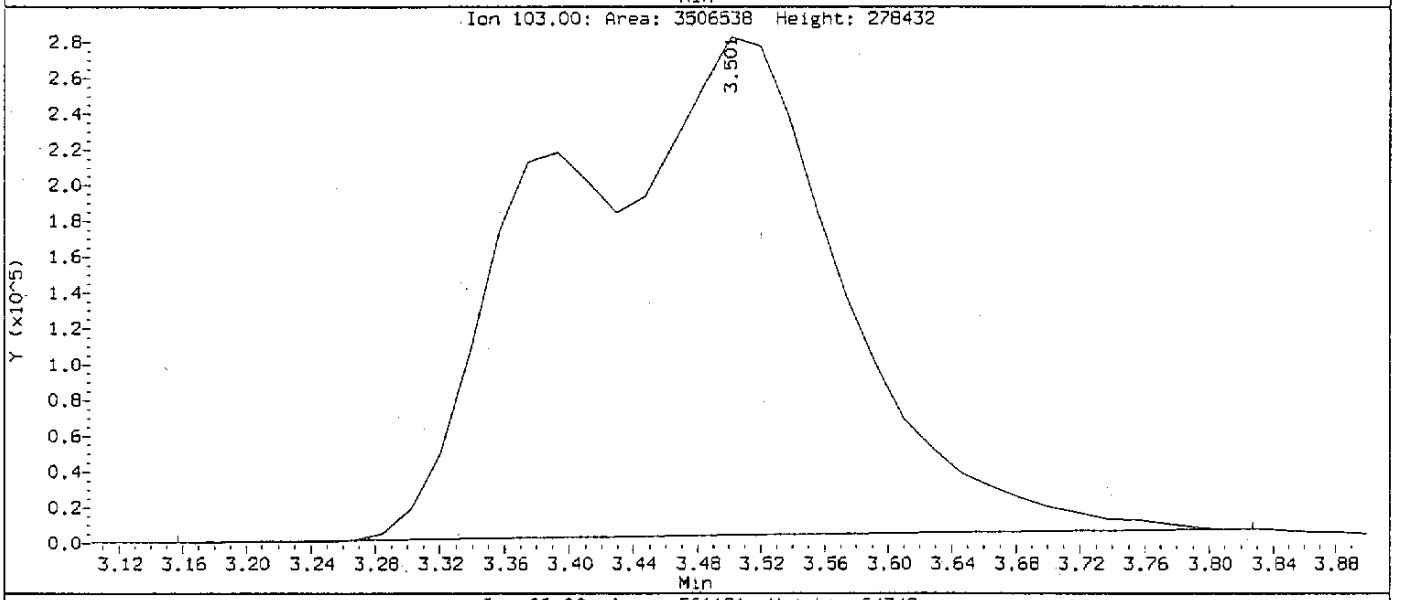
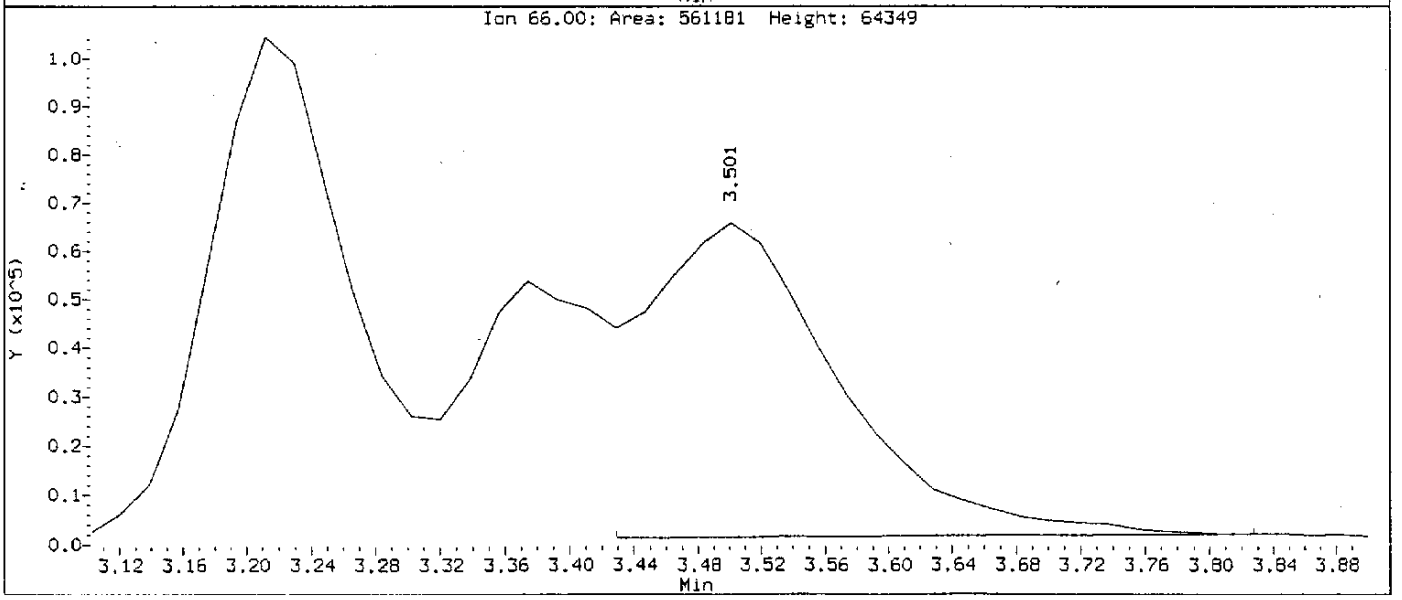
Data File: /chem/S.i/112003p.b/s4922.d
Injection Date: 20-NOV-2003 20:25
Instrument: S.i
Client Sample ID: MAIN060

Compound: Trichlorofluoromethane
CAS Number: 75-69-4







Data File: /chem/S.i/112003p.b/s4923.d
Report Date: 11/22/2003

INITIAL CALIBRATION VERIFICATION

Instrument ID: S.i
Lab File ID: s4923.d
Analysis Type: WATER

Injection Date: 20-NOV-2003 20:49
Lab Sample ID: SSV030
Method File: /chem/S.i/112003p.b/S-20ml-h2o.m

COMPOUND	EXPECTED CONC.	MEASURED CONC.	%D	MAX %D	
85 1,2-Dichloroethene (total)	60.0000	54.2873	9.5	25.0	
83 Xylene (total)	90.0000	83.4671	7.3	25.0	
64 dichlorodifluoromethane	30.0000	26.1616	12.8	25.0	
1 Chloromethane	30.0000	29.8136	0.6	25.0	
4 Vinyl Chloride	30.0000	31.4248	4.7	25.0	
2 Bromomethane	30.0000	30.0904	0.3	25.0	
5 Chloroethane	30.0000	29.0423	3.2	25.0	
11 Trichlorofluoromethane	30.0000	31.2572	4.2	25.0	
0 1,1-Dichloroethene	30.0000	27.7139	7.6	25.0	
7 Acetone	60 ~~120~~.0000	56.5239	52.9	25.0	<- 5.8%
6 Methylene Chloride	30.0000	29.7767	0.7	25.0	
0 trans-1,2-Dichloroethene	30.0000	26.8899	10.4	25.0	
15 1,1-Dichloroethane	30.0000	29.5235	1.6	25.0	
93 2,2-Dichloropropane	30.0000	26.6959	11.0	25.0	
0 cis-1,2-Dichloroethene	30.0000	27.3974	8.7	25.0	
20 2-Butanone	60 ~~120~~.0000	58.3063	51.4	25.0	<- 2.8%
13 Bromochloromethane	30.0000	30.2954	1.0	25.0	
17 Chloroform	30.0000	28.6888	4.4	25.0	
22 1,1,1-Trichloroethane	30.0000	25.8378	13.9	25.0	
23 Carbon Tetrachloride	30.0000	26.9661	10.1	25.0	
94 1,1-Dichloropropene	30.0000	27.1485	9.5	25.0	
0 Benzene	30.0000	27.2289	9.2	25.0	
16 1,2-Dichloroethane	30.0000	29.4878	1.7	25.0	
90 Fluorobenzene	12.5000	12.5000	0.0	25.0	
0 Trichloroethene	30.0000	26.8653	10.4	25.0	
26 1,2-Dichloropropane	30.0000	28.1974	6.0	25.0	
34 Dibromomethane	30.0000	29.8905	0.4	25.0	
25 Bromodichloromethane	30.0000	28.7494	4.2	25.0	
28 cis-1,3-Dichloropropene	30.0000	30.2749	0.9	25.0	
38 4-Methyl-2-pentanone	60 ~~120~~.0000	62.4848	47.9	25.0	<- 4.1%
0 Toluene	30.0000	27.4424	8.5	25.0	
31 trans-1,3-Dichloropropene	30.0000	29.9078	0.3	25.0	
32 1,1,2-Trichloroethane	30.0000	29.0167	3.3	25.0	
42 Tetrachloroethene	30.0000	27.1103	9.6	25.0	
109 1,3-Dichloropropane	30.0000	30.3197	1.1	25.0	
43 2-Hexanone	60 ~~120~~.0000	62.0954	48.3	25.0	<- 3.5%
36 Dibromochloromethane	30.0000	29.8708	0.4	25.0	
58 1,2-Dibromoethane	30.0000	30.7021	2.3	25.0	
92 1-Chlorohexane	30.0000	26.7806	10.7	25.0	

All < 25%

DM 11/21/03

Data File: /chem/S.i/112003p.b/s4923.d Page 2
Report Date: 11/22/2003

INITIAL CALIBRATION VERIFICATION

Instrument ID: S.i
Lab File ID: s4923.d
Analysis Type: WATER

Injection Date: 20-NOV-2003 20:49
Lab Sample ID: SSV030
Method File: /chem/S.i/112003p.b/S-20ml-h2o.m

COMPOUND	EXPECTED CONC.	MEASURED CONC.	%D	MAX %D
39 Chlorobenzene-d5	12.5000	12.5000	0.0	25.0
0 Chlorobenzene	30.0000	28.5919	4.7	25.0
47 Ethylbenzene	30.0000	26.5777	11.4	25.0
74 1,1,1,2-Tetrachloroethane	30.0000	28.6430	4.5	25.0
0 m and p-Xylene	60.0000	54.8608	8.6	25.0
0 o-Xylene	30.0000	28.6063	4.6	25.0
49 Styrene	30.0000	29.3075	2.3	25.0
37 Bromoform	30.0000	29.3828	2.1	25.0
79 isopropyl benzene	30.0000	26.1816	12.7	25.0
95 Bromobenzene	30.0000	28.9407	3.5	25.0
40 1,1,2,2-Tetrachloroethane	30.0000	29.4057	2.0	25.0
96 n-Propylbenzene	30.0000	27.2556	9.1	25.0
50 1,2,3-Trichloropropane	30.0000	29.1252	2.9	25.0
97 2-Chlorotoluene	30.0000	28.3531	5.5	25.0
98 1,3,5-Trimethylbenzene	30.0000	27.5152	8.3	25.0
99 4-Chlorotoluene	30.0000	28.5437	4.9	25.0
100 tert-Butylbenzene	30.0000	27.1970	9.3	25.0
101 1,2,4-Trimethylbenzene	30.0000	28.1358	6.2	25.0
102 sec-Butylbenzene	30.0000	27.7393	7.5	25.0
103 4-Isopropyltoluene	30.0000	26.7932	10.7	25.0
61 m-Dichlorobenzene	30.0000	28.6619	4.5	25.0
91 1,4-Dichlorobenzene-d4	12.5000	12.5000	0.0	25.0
62 p-dichlorobenzene	30.0000	28.9342	3.6	25.0
104 n-Butylbenzene	30.0000	27.7435	7.5	25.0
63 o-Dichlorobenzene	30.0000	29.4694	1.8	25.0
75 1,2-Dibromo-3-chloropropane	30.0000	30.5709	1.9	25.0
105 1,2,4-Trichlorobenzene	30.0000	29.2792	2.4	25.0
106 Hexachlorobutadiene	30.0000	28.2901	5.7	25.0
107 Napthalene	30.0000	30.4940	1.6	25.0
108 1,2,3-Trichlorobenzene	30.0000	32.7555	9.2	25.0

Data File: /chem/S.i/112003p.b/s4923.d Page 1
Report Date: 22-Nov-2003 02:40

STL Denver

VOLATILE REPORT SW-846

Data file : /chem/S.i/112003p.b/s4923.d
Lab Smp Id: SSV030 Client Smp ID: SSV030
Inj Date : 20-NOV-2003 20:49
Operator : reinharj Inst ID: S.i
Smp Info : SSV030
Misc Info :
Comment :
Method : /chem/S.i/112003p.b/S-20ml-h2o.m
Meth Date : 21-Nov-2003 22:43 reinharj Quant Type: ISTD
Cal Date : 09-SEP-2003 05:44 Cal File: s3094.d
Als bottle: 2
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ss.sub
Target Version: 3.40
Processing Host: chemsv02

Concentration Formula: Amt * DF * Vp/Vs

Name	Value	Description
DF	1.000	Dilution Factor
Vp	20.000	Purge Volume (ml)
Vs	20.000	Sample Volume Purged (ml)

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/L)
* 56 Fluorobenzene	96	7.088	7.087	(1.000)	1986097	12.5000	
* 82 Chlorobenzene-d5	119	10.692	10.691	(1.000)	365366	12.5000	
* 107 1,4-Dichlorobenzene-d4	152	13.752	13.751	(1.000)	474848	12.5000	(Q)
M 1 1,2-Dichloroethene (total)	96				3149570	54.2873	54.2873
M 2 Xylene (total)	106				7180370	83.4671	83.4671
3 dichlorodifluoromethane	85	2.543	2.542	(0.359)	1824211	26.1616	26.1616
4 Chloromethane	50	2.724	2.705	(0.384)	1395402	29.8136	29.8136
6 Vinyl Chloride	62	2.851	2.832	(0.402)	1575196	31.4248	31.4248
8 Bromomethane	94	3.177	3.140	(0.448)	1360934	30.0904	30.0904
9 Chloroethane	64	3.213	3.212	(0.453)	1020193	29.0423	29.0423
11 Trichlorofluoromethane	101	3.503	3.502	(0.494)	2621975	31.2572	31.2572(M)
18 1,1-Dichloroethene	96	3.955	3.937	(0.558)	1601152	27.7139	27.7139
19 Acetone	43	3.991	3.991	(0.563)	211401	56.5239	56.5239
26 Methylene Chloride	84	4.462	4.462	(0.630)	1230700	29.7767	29.7767
29 trans-1,2-Dichloroethene	96	4.698	4.697	(0.663)	1636101	26.8899	26.8898
33 1,1-Dichloroethane	63	5.187	5.186	(0.732)	2722691	29.5235	29.5235

Data File: /chem/S.i/112003p.b/s4923.d
Report Date: 22-Nov-2003 02:40

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/L)
39 cis-1,2-Dichloroethene	96	5.820	5.820	(0.821)	1513469	27.3974	27.3974
40 2-Butanone	43	5.820	5.820	(0.821)	316923	58.3063	58.3063
37 2,2-Dichloropropane	77	5.820	5.802	(0.821)	1995740	26.6959	26.6959
43 Bromochloromethane	128	6.110	6.110	(0.862)	628570	30.2954	30.2954
45 Chloroform	83	6.165	6.146	(0.870)	2658139	28.6888	28.6888
47 1,1,1-Trichloroethane	97	6.364	6.363	(0.898)	2602703	25.8378	25.8378
50 1,1-Dichloropropene	75	6.545	6.526	(0.923)	2317982	27.1485	27.1485
49 Carbon Tetrachloride	117	6.527	6.508	(0.921)	2503081	26.9661	26.9661
53 Benzene	78	6.762	6.761	(0.954)	4375598	27.2289	27.2288
55 1,2-Dichloroethane	62	6.853	6.852	(0.967)	1107260	29.4878	29.4878
58 Trichloroethene	130	7.505	7.486	(1.059)	1817207	26.8653	26.8653
61 1,2-Dichloropropane	63	7.812	7.812	(1.102)	1421797	28.1974	28.1974
64 Dibromomethane	93	7.957	7.957	(1.123)	742386	29.8905	29.8905
65 Bromodichloromethane	83	8.102	8.101	(1.143)	2111428	28.7494	28.7494
68 cis-1,3-Dichloropropene	75	8.627	8.627	(0.807)	1898825	30.2749	30.2749
69 4-Methyl-2-pentanone	43	8.790	8.790	(0.822)	936137	62.4848	62.4848
71 Toluene	91	8.989	8.989	(0.841)	5097724	27.4424	27.4424
72 trans-1,3-Dichloropropene	75	9.315	9.297	(0.871)	1329907	29.9078	29.9078
74 1,1,2-Trichloroethane	97	9.533	9.532	(0.892)	798254	29.0167	29.0167
76 1,3-Dichloropropane	76	9.750	9.749	(0.912)	1269548	30.3197	30.3197
75 Tetrachloroethene	164	9.623	9.623	(0.900)	1422949	27.1103	27.1103
77 2-Hexanone	43	9.786	9.786	(0.915)	592220	62.0954	62.0954
79 Dibromochloromethane	129	9.985	9.985	(0.934)	1255797	29.8708	29.8708
80 1,2-Dibromoethane	107	10.166	10.166	(0.951)	1023648	30.7021	30.7021
81 1-Chlorohexane	91	10.655	10.655	(0.997)	2556271	26.7806	26.7806
83 Chlorobenzene	112	10.728	10.727	(1.003)	3480217	28.5919	28.5918
85 1,1,1,2-Tetrachloroethane	131	10.837	10.818	(1.014)	1323522	28.6430	28.6430
84 Ethylbenzene	106	10.818	10.818	(1.012)	1775303	26.5777	26.5777
86 m and p-Xylene	106	10.963	10.963	(1.025)	4989279	54.8608	54.8608
87 o-Xylene	106	11.470	11.470	(1.073)	2191091	28.6063	28.6063
88 Styrene	104	11.488	11.488	(1.075)	3445710	29.3075	29.3075
89 Bromoform	173	11.760	11.759	(1.100)	589102	29.3828	29.3828
90 isopropyl benzene	105	11.923	11.922	(1.115)	6912846	26.1816	26.1816
94 1,1,2,2-Tetrachloroethane	83	12.412	12.393	(1.161)	833878	29.4057	29.4057
95 Bromobenzene	156	12.412	12.411	(0.903)	1224299	28.9407	28.9407
97 1,2,3-Trichloropropane	110	12.502	12.502	(0.909)	209430	29.1252	29.1252(Q)
96 n-Propylbenzene	120	12.502	12.502	(0.909)	1735634	27.2556	27.2556
99 2-Chlorotoluene	126	12.665	12.665	(0.921)	1342198	28.3531	28.3530
100 1,3,5-Trimethylbenzene	105	12.756	12.755	(0.928)	5369787	27.5152	27.5152
101 4-Chlorotoluene	126	12.828	12.828	(0.933)	1401705	28.5437	28.5437
102 tert-Butylbenzene	119	13.191	13.190	(0.959)	5723157	27.1970	27.1970
103 1,2,4-Trimethylbenzene	105	13.263	13.262	(0.964)	4936636	28.1358	28.1358
104 sec-Butylbenzene	134	13.490	13.462	(0.980)	1404418	27.7393	27.7393(Q)
106 m-Dichlorobenzene	146	13.661	13.661	(0.993)	2192085	28.6619	28.6619
105 4-Isopropyltoluene	119	13.643	13.643	(0.992)	6214594	26.7932	26.7932
108 p-dichlorobenzene	146	13.770	13.769	(1.001)	2427725	28.9342	28.9342
110 n-Butylbenzene	91	14.150	14.132	(1.029)	6065643	27.7435	27.7435

Data File: /chem/S.i/112003p.b/s4923.d
Report Date: 22-Nov-2003 02:40

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/L)
111 o-Dichlorobenzene	146	14.223	14.222	(1.034)	1769493	29.4694	29.4694
112 1,2-Dibromo-3-chloropropane	157	15.092	15.091	(1.097)	121756	30.5709	30.5709
113 1,2,4-Trichlorobenzene	180	15.979	15.979	(1.162)	1233003	29.2792	29.2792
114 Hexachlorobutadiene	225	16.124	16.124	(1.172)	1084162	28.2901	28.2901
115 Napthalene	128	16.287	16.287	(1.184)	1366640	30.4940	30.4940
116 1,2,3-Trichlorobenzene	180	16.595	16.594	(1.207)	918688	32.7555	32.7555

QC Flag Legend

Q - Qualifier signal failed the ratio test.
M - Compound response manually integrated.

Data File: /chem/S.i/112003p.b/s4923.d
Report Date: 22-Nov-2003 02:40

STL Denver

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: S.i
Lab File ID: s4923.d
Lab Smp Id: SSV030
Analysis Type: VOA
Quant Type: ISTD
Operator: reinharj
Method File: /chem/S.i/112003p.b/S-20ml-h2o.m
Misc Info:

Calibration Date: 11/20/3
Calibration Time: 1752
Client Smp ID: SSV030
Level: LOW
Sample Type: WATER

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
56 Fluorobenzene	1999876	999938	3999752	1986097	-0.69
82 Chlorobenzene-d5	447803	223902	895606	365366	-18.41
107 1,4-Dichlorobenze	545091	272546	1090182	474848	-12.89

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
56 Fluorobenzene	7.09	6.59	7.59	7.09	-0.01
82 Chlorobenzene-d5	10.69	10.19	11.19	10.69	-0.01
107 1,4-Dichlorobenze	13.75	13.25	14.25	13.75	-0.01

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem/S.i/112003p.b/s4923.d
Date : 20-NOV-2003 20:49
Client ID: SSV030
Sample Info: SSV030
Purge Volume: 20.0
Column phase: DB624

Instrument: S.i

Operator: reinharj
Column diameter: 0.53

Page 5

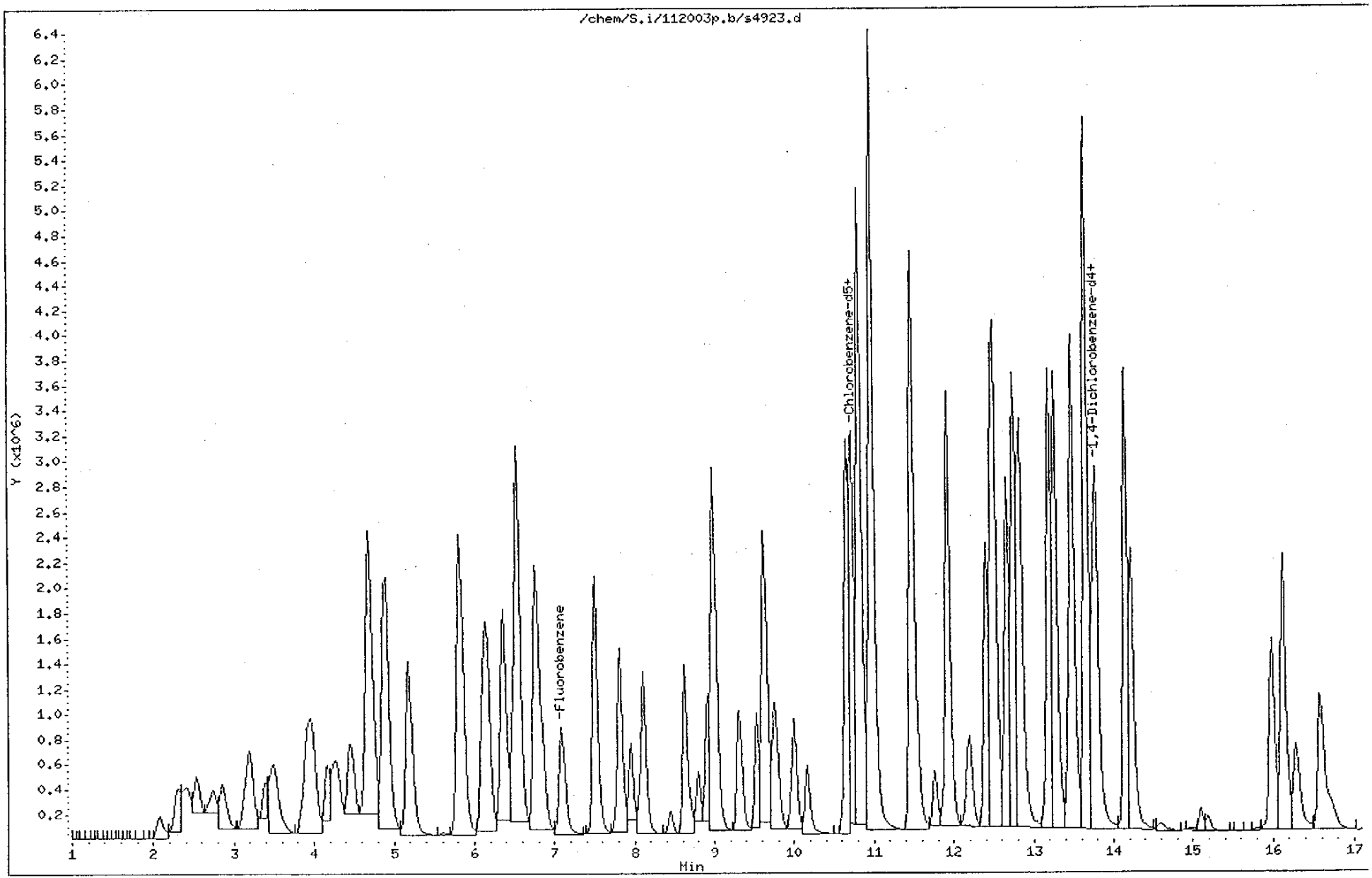
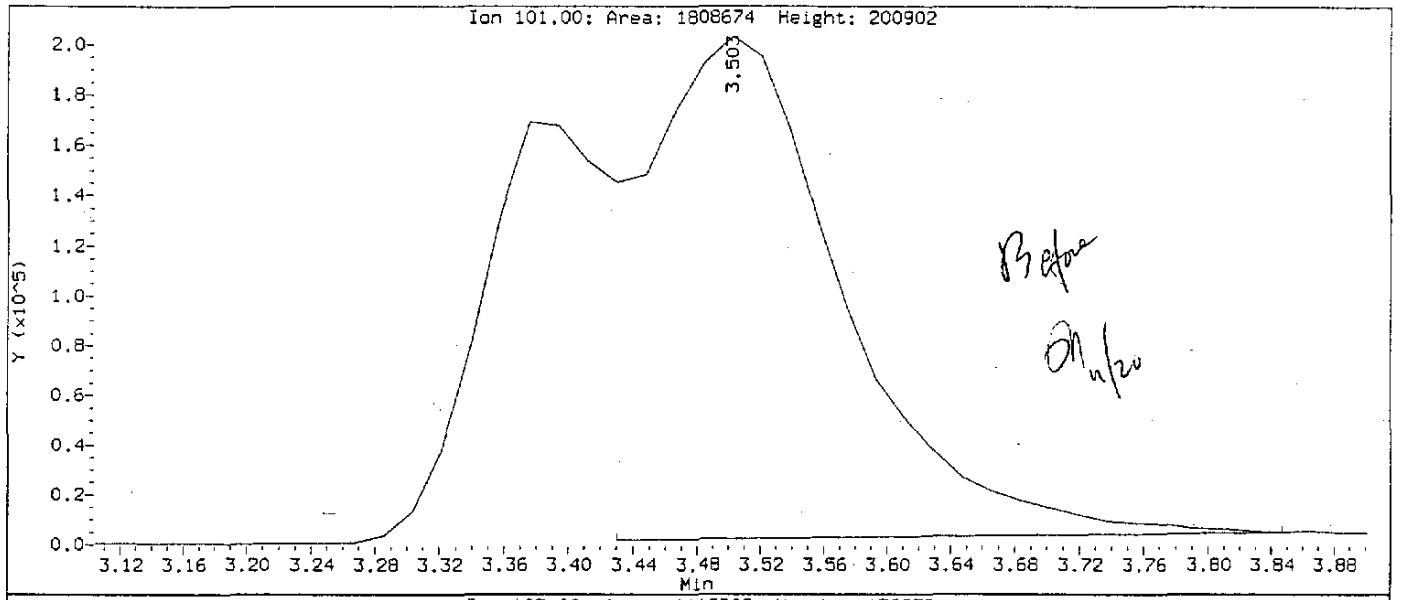
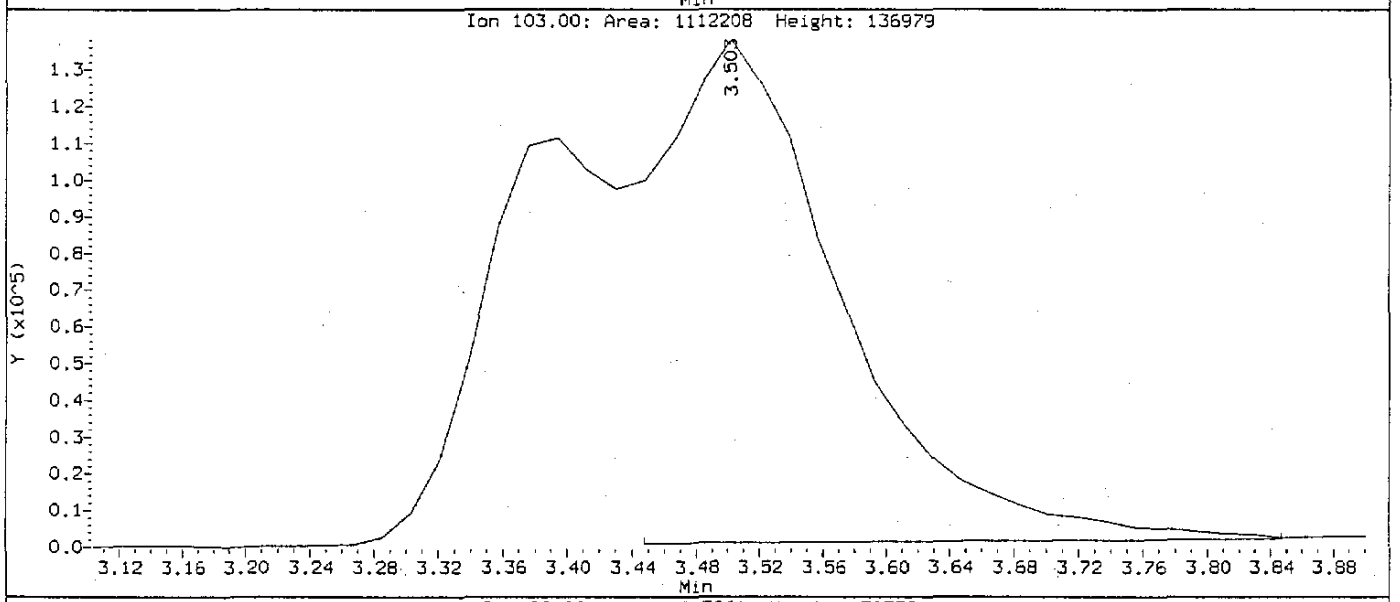


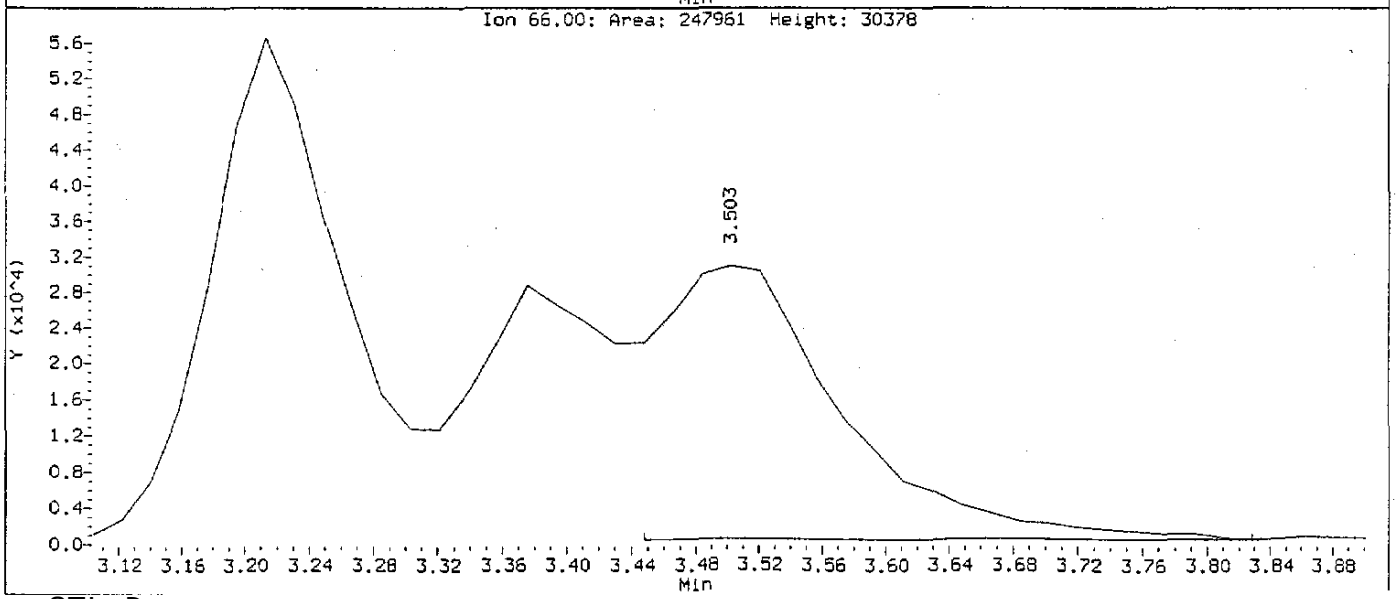
Table of Contents

Data File: /chem/S.1/112003p.b/s4923.d
Injection Date: 20-NOV-2003 20:49
Instrument: S.1
Client Sample ID: SSV030

Compound: Trichlorofluoromethane
CAS Number: 75-69-4

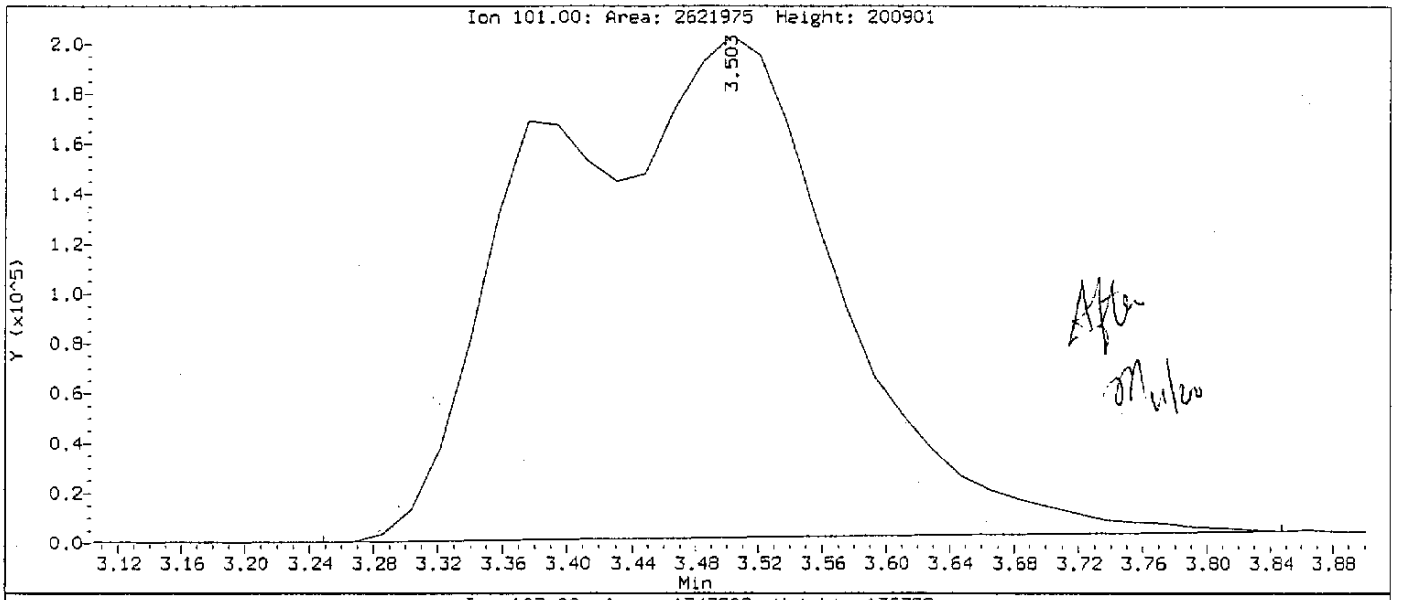


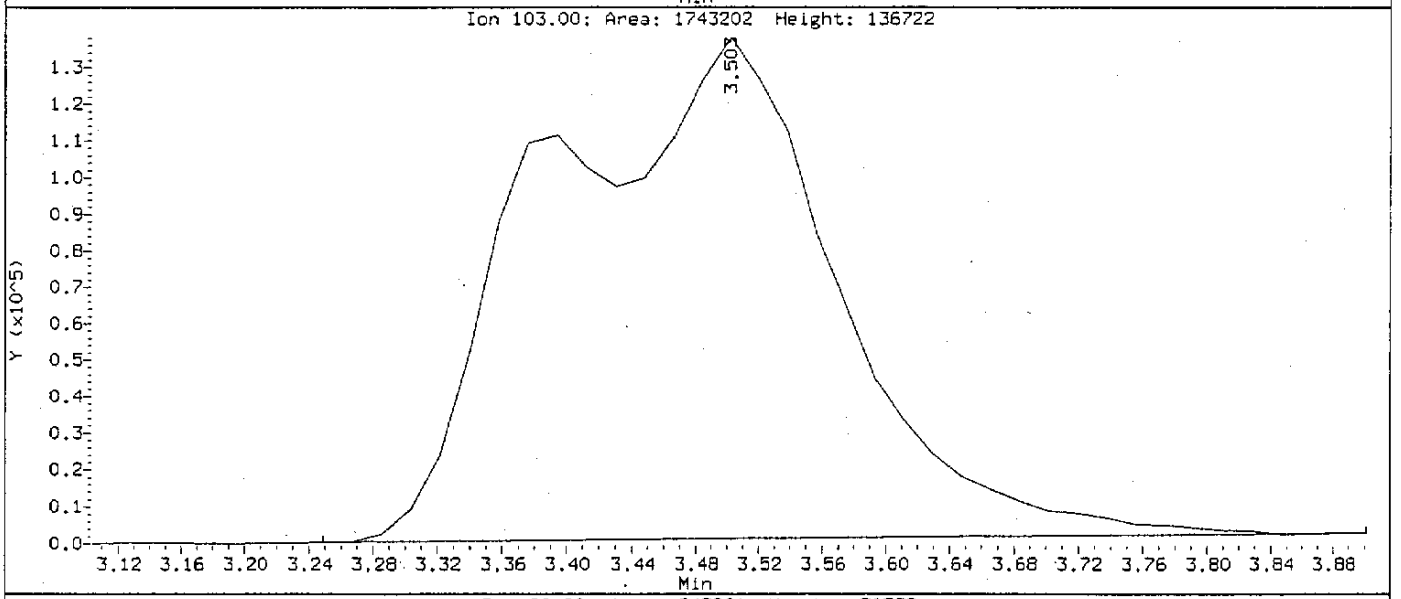


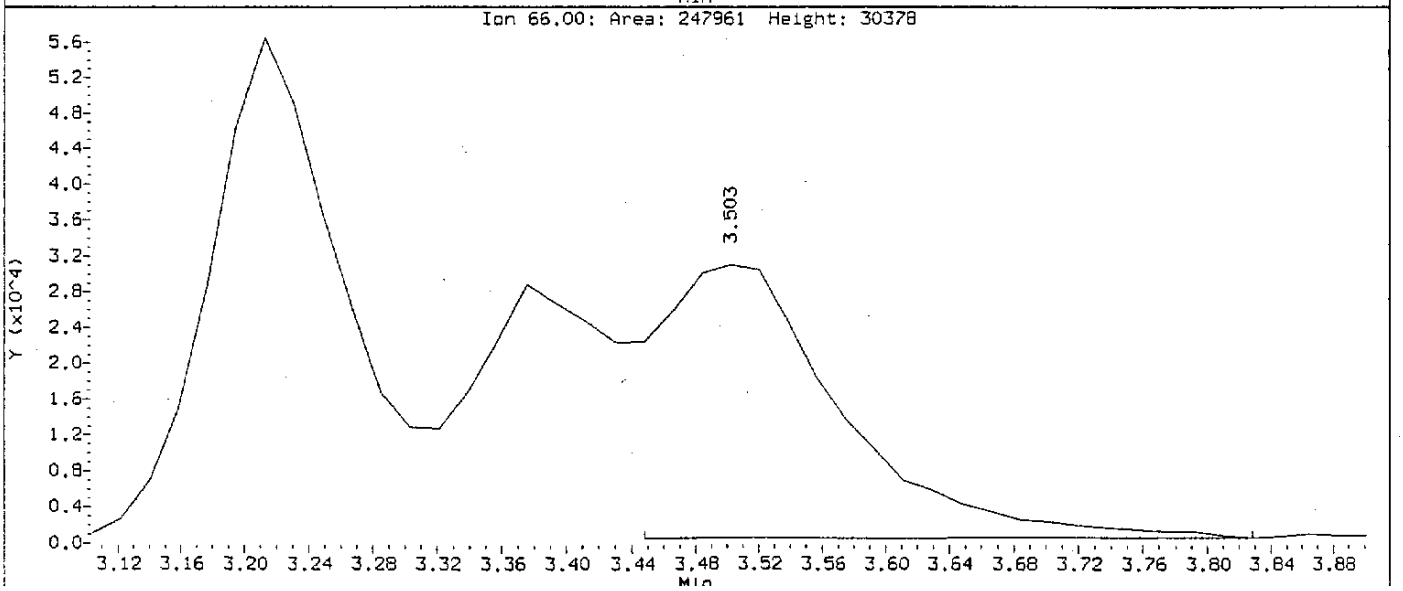


Data File: /chem/5.i/112003p.b/s4923.d
Injection Date: 20-NOV-2003 20:49
Instrument: S.i
Client Sample ID: SSV030

Compound: Trichlorofluoromethane
CAS Number: 75-69-4







GC/MS Initial Calibration Review Checklist

STL Denver

Instrument ID and Date: S 2-19-04 Supp.

Check Method Used: Analysis ☐ 625 ☐ 8270 ☐ Other SV _____

☐ 524.2 ☐ 624 ☑ 8260B ☐ Other VOA _

VOA Preparation ☐ 5mL ☑ 20mL ☐ 5035 Low ☐ 5035 High ☐ 5030 Low ☐ 5030 High

Review Items	Level 1 Yes	Level 1 No	Level 1 N/A	Level 2	Comments
Initial Calibration					
1. BFB/DFTPP meets criteria?	✓			✓	
2. ICAL date and instrument ID verified?	✓			✓	
3. Sufficient number of calibration points used?	✓			✓	
4. Reasons for removal of points documented?	✓			✓	Some pts below RL removed.
5. %RSD or correlation coefficient within method limits?	✓			✓	
6. If RRF used for ICAL, were all compounds within 15% RSD?	✓			✓	List all exceptions below (cpd & RSD)
7. Response factors meet criteria?	✓			✓	
8. Isomeric pairs checked for correct peak assignment?	✓			✓	
9. Data checked for detector saturation?	✓			✓	
10. Standards traceability properly documented?	✓			✓	
11. Manual integrations documented and checked?			✓	N/A	
12. 2nd source ICV recovery 75-125% for DoD projects, 65-135% (±55% of expected for poor performers) for non-DoD?			✓	N/A	

1st Level Reviewer: DA Date: 2-20-04

2nd Level Reviewer: Gm Date: 2/21/04

GC/MS Volatile Analysis

STL, Denver

Instrument S
5972 MSD

Column	Phase	Inj. Temp	Init. Time	Ramp Rate	Final Temp	Flow cc/min	Press. Psi	Type	Vac. Range	Source Temp	Mass Range
75M	DB-624	200C	2 min.	5C/min	65C	18	20	MS	10^-6	~175C	35-300/2^2
			0 min.	12C/min	155C						
			0 min	25C/min	210C						

DEN-MS-0010 (8260B/624/524.2)
(Circle as appropriate)

Comments

Target Batch (Directory): S 021904.b

QuantIMS Batch:

Lot #	Sample	W.O.#	Purge vol (ml)	Sample amt (ml/g)	Date 2004	Initials	File Number	IS OK	SS OK	DIL OK	24 hr 12 hr	pH	MSVOA# Comments	ALS
BFB			1ml Dir	Inj	2-19	DA	S 1714.d						#237-03 (14:49)	
MAIN010			20	5 ml			15	—					#022/040-04	
SUPP001				0.5			16						#246-03/011-04	
002				1.0			17						IS #030-04	
005				2.5			18						SS #002-04	
010				5.0			19							
030				15			20							
060				30			21							
LCS				10.0			22	—	—	—	—		#304-03	
LCSD							23	—	—	—	—			
VBLK				20ml			24	—	—	—	—			

DA 2-20-04

Revised 6/3/03

public/QA/forms/VOA Logbookr3.xls

Table of Contents

Report Date: 20-Feb-2004 09:19

Calibration History

Method : /chem/S.i/021904.b/S-20ml-h2o.m
Start Cal Date: 09-SEP-2003 01:23
End Cal Date : 19-FEB-2004 17:35

Initial Calibration

Injection Date	Sublist	Calibration File
Cal Level: 1 , Cal Amount: 1.00000		
19-FEB-2004 15:40	2-supp	/chem/S.i/021904.b/s6716.d
20-NOV-2003 18:24	1-main	/chem/S.i/112003p.b/s4917.d
Cal Level: 2 , Cal Amount: 2.00000		
19-FEB-2004 16:03	2-supp	/chem/S.i/021904.b/s6717.d
20-NOV-2003 18:48	1-main	/chem/S.i/112003p.b/s4918.d
Cal Level: 3 , Cal Amount: 5.00000		
19-FEB-2004 16:26	2-supp	/chem/S.i/021904.b/s6718.d
20-NOV-2003 19:12	1-main	/chem/S.i/112003p.b/s4919.d
Cal Level: 4 , Cal Amount: 10.0000		
19-FEB-2004 16:49	2-supp	/chem/S.i/021904.b/s6719.d
20-NOV-2003 19:36	1-main	/chem/S.i/112003p.b/s4920.d
Cal Level: 5 , Cal Amount: 30.0000		
19-FEB-2004 17:12	2-supp	/chem/S.i/021904.b/s6720.d
20-NOV-2003 20:01	1-main	/chem/S.i/112003p.b/s4921.d
Cal Level: 6 , Cal Amount: 60.0000		
19-FEB-2004 17:35	2-supp	/chem/S.i/021904.b/s6721.d
20-NOV-2003 20:25	1-main	/chem/S.i/112003p.b/s4922.d

Continuing Calibration

19-FEB-2004 16:49	2-supp	/chem/S.i/021904.b/s6719.d
19-FEB-2004 14:58	1-main	/chem/S.i/021904.b/s6715.d

STL Denver

INITIAL CALIBRATION DATA

Start Cal Date : 09-SEP-2003 01:23
End Cal Date : 19-FEB-2004 17:35
Quant Method : ISTD
Origin : Disabled
Target Version : 3.40
Integrator : HP RTE
Method file : /chem/S.i/021904.b/S-20ml-h2o.m
Cal Date : 20-Feb-2004 08:29 appelhad
Curve Type : Average

Calibration File Names:
Level 1: /chem/S.i/021904.b/s6716.d
Level 2: /chem/S.i/021904.b/s6717.d
Level 3: /chem/S.i/021904.b/s6718.d
Level 4: /chem/S.i/021904.b/s6719.d
Level 5: /chem/S.i/021904.b/s6720.d
Level 6: /chem/S.i/021904.b/s6721.d

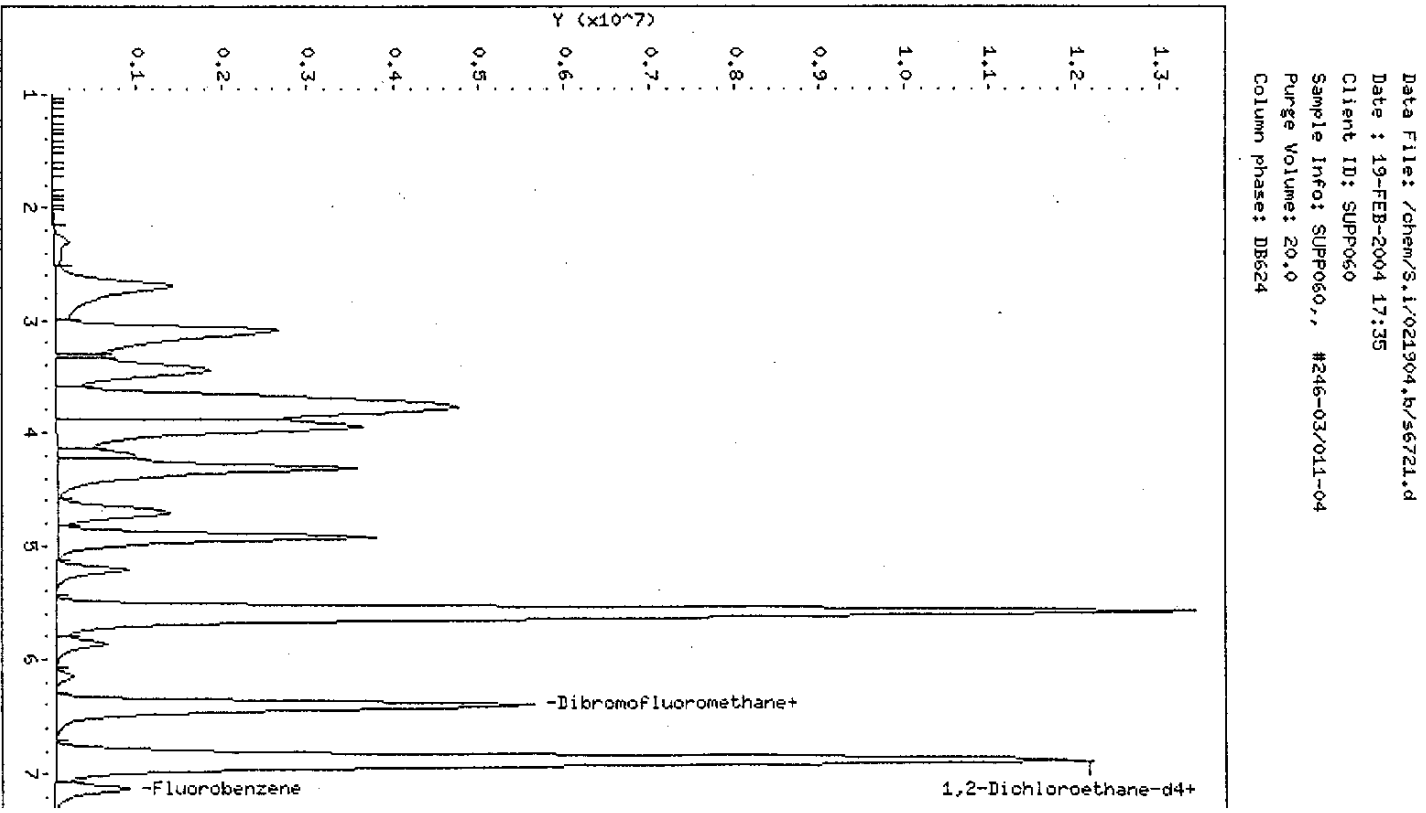
Compound	1.000 Level 1	2.000 Level 2	5.000 Level 3	10.000 Level 4	30.000 Level 5	60.000 Level 6	___ RRF	% RSD
5 Dichlorotetrafluoroethane	0.87864	0.74826	0.71039	0.70676	0.65318	0.62607	0.72055	12.338
7 Ethylene Oxide	+++++	0.00443	0.00375	0.00385	0.00385	0.00374	0.00392	7.299
10 Dichlorofluoromethane	0.86088	0.78802	0.72714	0.74196	0.72977	0.74395	0.76529	6.757
13 Ethyl Ether	0.18895	0.17009	0.15417	0.15638	0.15647	0.15749	0.16392	8.245
14 1,2-Dichloro-1,1,2-trifluorom	0.66081	0.60871	0.54659	0.57084	0.53865	0.52680	0.57540	8.851
15 2,2-Dichloro-1,1,1-trifluorom	1.03487	0.93152	0.84581	0.83260	0.79625	0.77829	0.86989	11.122
17 Trichlorotrifluoroethane	0.58869	0.52467	0.48613	0.47634	0.45153	0.43592	0.49388	11.258
20 2-Propanol	0.00529	0.00509	0.00440	0.00440	0.00437	0.00464	0.00470	8.439
22 Carbon Disulfide	1.39887	1.26964	1.16076	1.15599	1.09984	1.09777	1.19715	9.764
24 Allyl Chloride	0.63049	0.56526	0.51389	0.51853	0.49144	0.48490	0.53409	10.308
23 Methyl Acetate	0.01660	0.01676	0.01531	0.01543	0.01470	0.01460	0.01557	5.932
28 Methyl t-butyl ether	0.54930	0.51583	0.45429	0.45040	0.43679	0.43735	0.47399	9.937
31 Hexane	3.86636	3.21311	3.12012	2.93613	2.79761	2.70620	3.10659	13.455
34 Vinyl acetate	0.22834	0.21720	0.16608	0.21868	0.17109	0.18708	0.19808	13.506
36 ETBE	1.02500	0.93360	0.84343	0.83240	0.82511	0.82387	0.88057	9.318
38 Ethyl Acetate	0.11303	0.10550	0.10243	0.09756	0.09758	0.09885	0.10249	5.883
44 Tetrahydrofuran	+++++	0.02556	0.01924	0.01909	0.01951	0.01889	0.02046	13.977
48 Cyclohexane	0.80252	0.72016	0.63774	0.62554	0.58025	0.57443	0.65677	13.487
54 TAME	0.70604	0.64019	0.57801	0.57202	0.57148	0.57324	0.60683	9.138
60 2-Pentanone	0.09084	0.08776	0.07995	0.08362	0.08326	0.08335	0.08480	4.554
59 Methyl-Cyclohexane	0.75147	0.66694	0.60385	0.59903	0.55279	0.55257	0.62111	12.313
62 Methyl Methacrylate	0.05173	0.04390	0.04077	0.04136	0.04185	0.04171	0.04355	9.515
78 Tetrahydrothiophene	0.27817	0.29509	0.26545	0.26560	0.26951	0.27064	0.27408	4.119
66 2-nitropropane	+++++	0.16439	0.12980	0.13717	0.14392	0.13844	0.14275	9.183
67 2-Chloroethyl vinyl ether	0.43203	0.42129	0.37558	0.37132	0.39539	0.39519	0.39847	6.074

STL Denver

INITIAL CALIBRATION DATA

Start Cal Date : 09-SEP-2003 01:23
End Cal Date : 19-FEB-2004 17:35
Quant Method : ISTD
Origin : Disabled
Target Version : 3.40
Integrator : HP RTE
Method file : /chem/S.i/021904.b/S-20ml-h2o.m
Cal Date : 20-Feb-2004 08:29 appelhad
Curve Type : Average

Compound	1.000 Level 1	2.000 Level 2	5.000 Level 3	10.000 Level 4	30.000 Level 5	60.000 Level 6	RRF	% RSD
73 Ethyl methacrylate	1.11922	1.08228	1.00217	0.97536	1.00811	1.02870	1.03597	5.238
91 cis-1,4-dichloro-2-butene	0.17951	0.15814	0.13563	0.13308	0.12727	0.12916	0.14380	14.421
98 t-1,4-Dichloro-2-butene	0.16212	0.15486	0.13408	0.12362	0.12032	0.12436	0.13656	12.993
109 1,2,3-Trimethylbenzene	4.34286	3.84901	3.59757	3.43438	3.16725	3.38710	3.62969	11.483
$ 46 Dibromofluoromethane	+++++	0.56642	0.48654	0.48474	0.46538	0.47258	0.49513	8.239
$ 52 1,2-Dichloroethane-d4	+++++	0.26787	0.23376	0.23260	0.22575	0.22376	0.23675	7.568
$ 70 Toluene-d8	+++++	5.63541	5.19534	4.89464	4.77922	4.81942	5.06481	7.073
$ 93 Bromofluorobenzene	+++++	3.38009	2.98321	2.73013	2.59796	2.66648	2.87157	11.122



Data File: /chem/S.i/021904.b/s6714.d

Date : 19-FEB-2004 14:49

Client ID: BFB

Instrument: S.i

Sample Info: BFB,, #237-03

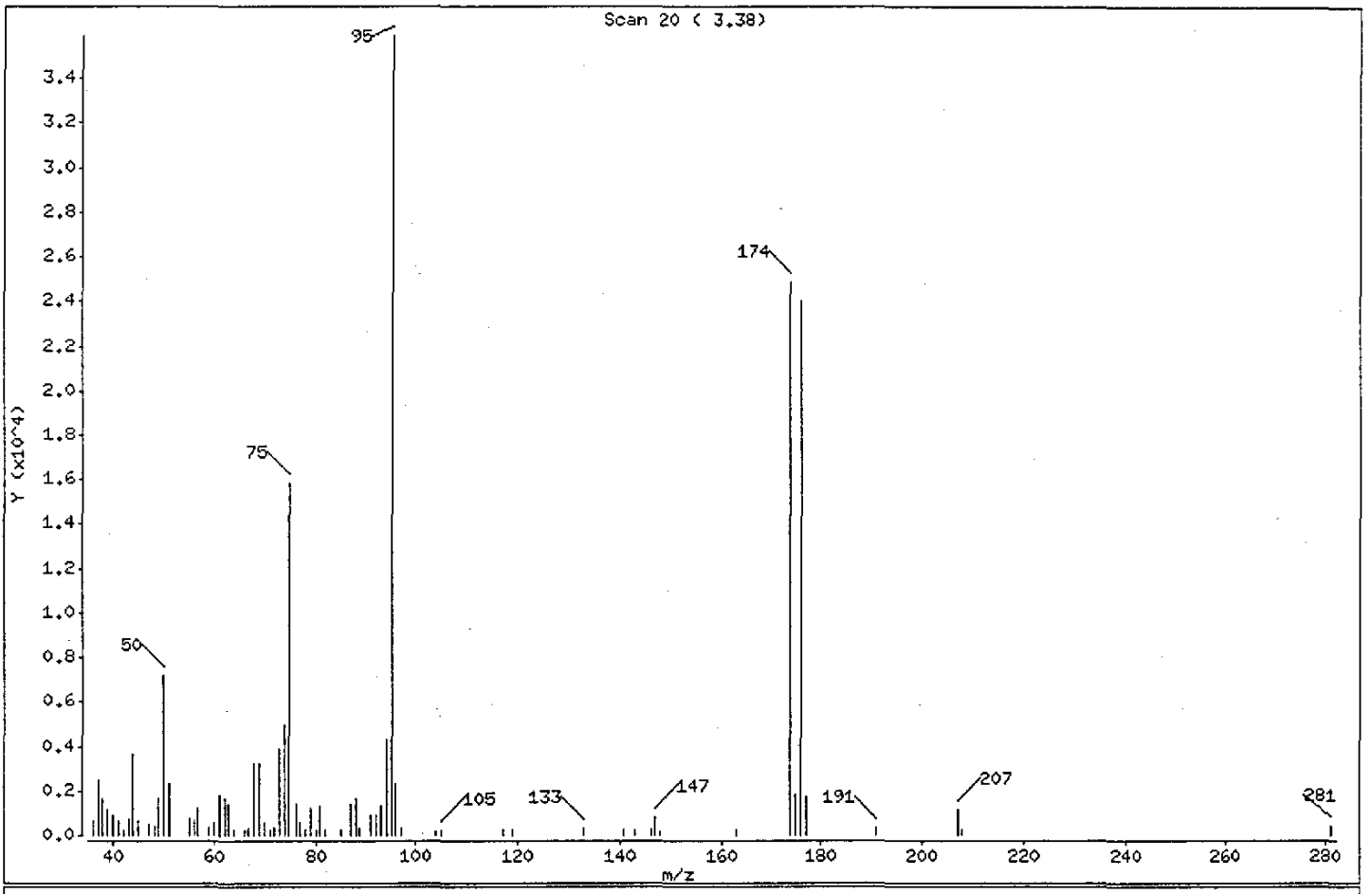
Volume Injected (uL): 1.0

Operator: appelhansd

Column phase: DB624

Column diameter: 0.53

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	19.94
75	30.00 - 60.00% of mass 95	44.22
96	5.00 - 9.00% of mass 95	6.52
173	Less than 2.00% of mass 174	0.00 (0.00)
174	50.00 - 100.00% of mass 95	69.12
175	5.00 - 9.00% of mass 174	5.13 (7.42)
176	95.00 - 101.00% of mass 174	66.84 (96.71)
177	5.00 - 9.00% of mass 176	4.81 (7.20)

Data File: /chem/S.i/021904.b/s6714.d

Date : 19-FEB-2004 14:49

Client ID: BFB

Instrument: S.i

Sample Info: BFB,, #237-03

Volume Injected (uL): 1.0

Operator: appelhansd

Column phase: DB624

Column diameter: 0.53

Data File: s6714.d
Spectrum: Scan 20 (3.38)
Location of Maximum: 95.05
Number of points: 72

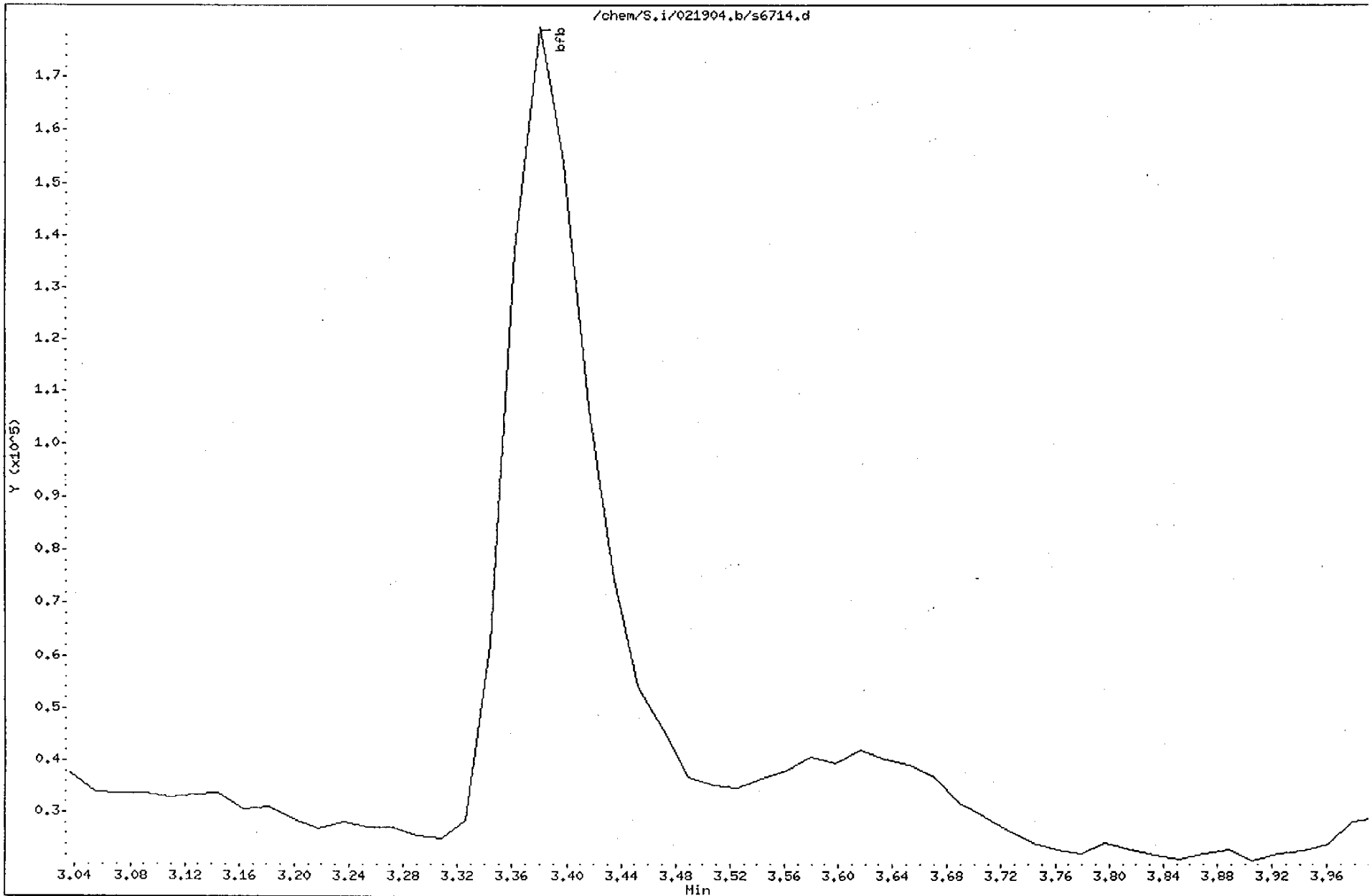
m/z	Y	m/z	Y	m/z	Y	m/z	Y
35.95	691	60.05	579	78.95	1244	132.85	339
36.95	2438	61.00	1807	80.05	255	140.85	243
37.95	1662	62.10	1669	80.95	1292	142.80	225
38.95	1179	63.00	1429	81.80	254	146.00	252
40.05	905	63.90	267	85.10	239	147.00	833
41.00	670	66.10	234	87.00	1416	147.90	205
42.00	266	67.00	346	88.00	1661	163.00	241
43.10	779	68.00	3231	88.90	303	173.95	24816
44.00	3646	69.10	3208	91.00	874	174.95	1842
44.90	673	70.00	541	91.95	893	175.95	24000
47.10	492	71.05	262	92.95	1342	176.85	1727
48.20	391	72.05	294	94.05	4274	190.90	338
49.00	1661	73.05	3905	95.05	35904	207.00	1183
50.00	7158	73.95	4965	95.95	2341	207.90	244
50.95	2349	74.95	15877	96.95	316	281.15	424
54.95	734	76.05	1385	103.90	204		
56.05	632	77.05	542	104.90	271		
56.95	1274	77.85	264	117.05	265		
59.05	330	78.15	275	119.05	208		

Data File: /chem/S.i/021904.b/s6714.d
Date : 19-FEB-2004 14:49
Client ID: BFB
Sample Info: BFB,, #237-03
Volume Injected (uL): 1.0
Column phase: DB624

Page 1

Instrument: S.i

Operator: appelhansd
Column diameter: 0.53



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Data File: /chem/S.i/021904.b/s6716.d
Report Date: 20-Feb-2004 08:29

STL Denver

VOLATILE REPORT SW-846

Data file : /chem/S.i/021904.b/s6716.d
Lab Smp Id: SUPP001 Client Smp ID: SUPP001
Inj Date : 19-FEB-2004 15:40
Operator : appelhansd Inst ID: S.i
Smp Info : SUPP001,, #246-03/011-04
Misc Info :
Comment :
Method : /chem/S.i/021904.b/S-20ml-h2o.m
Meth Date : 20-Feb-2004 08:29 appelhad Quant Type: ISTD
Cal Date : 19-FEB-2004 17:35 Cal File: s6721.d
Als bottle: 2 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 2-supp.sub
Target Version: 3.40
Processing Host: chemsv02

Concentration Formula: Amt * DF * Vp/Vs

Name	Value	Description
DF	1.000	Dilution Factor
Vp	20.000	Purge Volume (ml)
Vs	20.000	Sample Volume Purged (ml)

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
* 56 Fluorobenzene	96	7.153	7.137	(1.000)	1731008	12.5000	
* 82 Chlorobenzene-d5	119	10.740	10.724	(1.000)	354778	12.5000	
* 107 1,4-Dichlorobenzene-d4	152	13.783	13.785	(1.000)	501570	12.5000	(Q)
$ 46 Dibromofluoromethane	111	6.392	6.376	(0.894)	97379	1.00000	1.42022
$ 52 1,2-Dichloroethane-d4	65	6.809	6.793	(0.952)	49448	1.00000	1.50825
$ 70 Toluene-d8	98	8.964	8.948	(0.835)	204782	1.00000	1.42456
$ 93 Bromofluorobenzene	95	12.243	12.245	(1.140)	135045	1.00000	1.65696
5 Dichlorotetrafluoroethane	85	2.697	2.681	(0.377)	121674	1.00000	1.21940
7 Ethylene Oxide	43	3.113	3.097	(0.435)	68312	125.000	125.711
10 Dichlorofluoromethane	67	3.457	3.441	(0.483)	119215	1.00000	1.12491(a)
13 Ethyl Ether	59	3.675	3.659	(0.514)	26166	1.00000	1.15267(a)
14 1,2-Dichloro-1,1,2-trifluorome	117	3.765	3.731	(0.526)	91509	1.00000	1.14843
15 2,2-Dichloro-1,1,1-trifluorome	83	3.820	3.804	(0.534)	143309	1.00000	1.18965
17 Trichlorotrifluoroethane	151	3.965	3.949	(0.554)	81522	1.00000	1.19197
20 2-Propanol	45	4.146	4.112	(0.580)	14660	20.0000	22.5182
22 Carbon Disulfide	76	4.309	4.293	(0.602)	193717	1.00000	1.16851

Data File: /chem/S.i/021904.b/s6716.d
Report Date: 20-Feb-2004 08:29

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	ON-COL (ug/L)
24 Allyl Chloride	41	4.327	4.311	(0.605)	87311	1.00000	1.18051(aQ)
23 Methyl Acetate	74	4.345	4.311	(0.607)	11495	5.00000	5.33224
28 Methyl t-butyl ether	73	4.726	4.709	(0.661)	76068	1.00000	1.15888(a)
31 Hexane	57	4.943	4.927	(0.460)	109736	1.00000	1.24457
34 Vinyl acetate	43	5.233	5.217	(0.732)	63241	2.00000	2.30554
36 ETBE	59	5.595	5.579	(0.782)	709713	5.00000	5.82010
38 Ethyl Acetate	43	5.885	5.869	(0.823)	31304	2.00000	2.20563(aQ)
44 Tetrahydrofuran	42	6.175	6.141	(0.863)	7452	2.00000	2.63043(a)
48 Cyclohexane	56	6.428	6.412	(0.899)	111133	1.00000	1.22191(a)
54 TAME	73	6.899	6.883	(0.965)	488865	5.00000	5.81746
60 2-Pentanone	43	7.769	7.753	(1.086)	50318	4.00000	4.28495
59 Methyl-Cyclohexane	55	7.714	7.717	(1.079)	104064	1.00000	1.20989
62 Methyl Methacrylate	100	7.932	7.898	(1.109)	14328	2.00000	2.37554
78 Tetrahydrothiophene	60	10.033	10.017	(0.934)	7895	1.00000	1.01492
66 2-nitropropane	41.00	Compound Not Detected.					
67 2-Chloroethyl vinyl ether	63	8.493	8.477	(0.791)	12262	1.00000	1.08423(a)
73 Ethyl methacrylate	69	9.381	9.365	(0.873)	63532	2.00000	2.16071
91 cis-1,4-dichloro-2-butene	53	12.134	12.137	(0.880)	7203	1.00000	1.24834
98 t-1,4-Dichloro-2-butene	53	12.569	12.553	(0.912)	6505	1.00000	1.18715
109 1,2,3-Trimethylbenzene	105	13.837	13.839	(1.004)	174260	1.00000	1.19648

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
Q - Qualifier signal failed the ratio test.

Data File: /chem/S.i/021904.b/s6716.d
Report Date: 20-Feb-2004 08:29

STL Denver

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: S.i
Lab File ID: s6716.d
Lab Smp Id: SUPP001
Analysis Type: VOA
Quant Type: ISTD
Operator: appelhansd
Method File: /chem/S.i/021904.b/S-20ml-h2o.m
Misc Info:

Calibration Date: 02/19/4
Calibration Time: 1649
Client Smp ID: SUPP001
Level: LOW
Sample Type: WATER

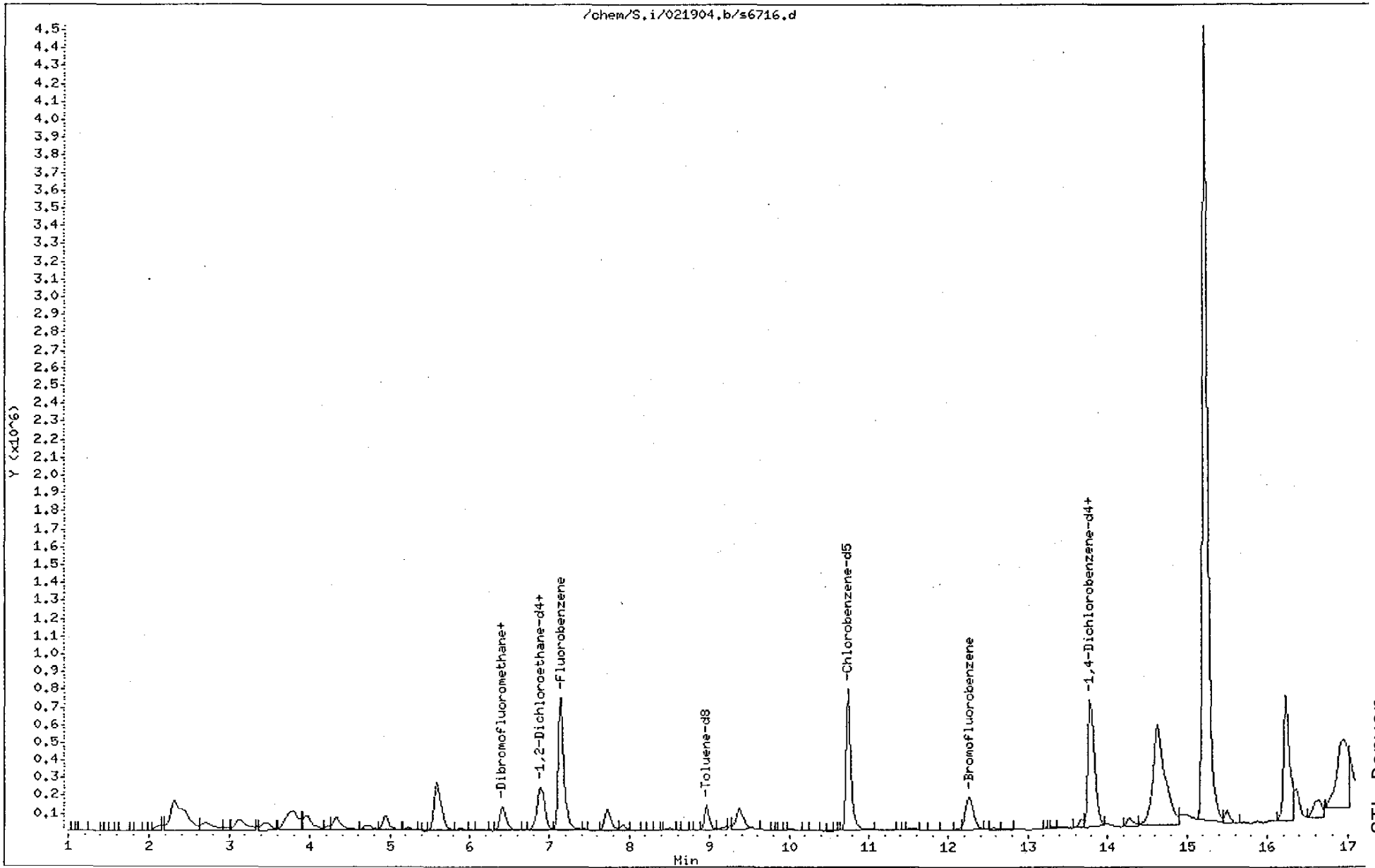
COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
56 Fluorobenzene	1790092	895046	3580184	1731008	-3.30
82 Chlorobenzene-d5	367171	183586	734342	354778	-3.38
107 1,4-Dichlorobenze	511480	255740	1022960	501570	-1.94

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
56 Fluorobenzene	7.14	6.64	7.64	7.15	0.22
82 Chlorobenzene-d5	10.72	10.22	11.22	10.74	0.15
107 1,4-Dichlorobenze	13.79	13.29	14.29	13.78	-0.02

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem/S.i/021904.b/s6716.d
Date : 19-FEB-2004 15:40
Client ID: SUPP001
Sample Info: SUPP001,, #246-03/011-04
Purge Volume: 20.0
Column phase: DB624

Instrument: S.i
Operator: appelhansd
Column diameter: 0.53



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Data File: /chem/S.i/021904.b/s6717.d
Report Date: 20-Feb-2004 08:29

STL Denver

VOLATILE REPORT SW-846

Data file : /chem/S.i/021904.b/s6717.d
Lab Smp Id: SUPP002 Client Smp ID: SUPP002
Inj Date : 19-FEB-2004 16:03
Operator : appelhansd Inst ID: S.i
Smp Info : SUPP002,, #246-03/011-04
Misc Info :
Comment :
Method : /chem/S.i/021904.b/S-20ml-h2o.m
Meth Date : 20-Feb-2004 08:29 appelhad Quant Type: ISTD
Cal Date : 19-FEB-2004 17:35 Cal File: s6721.d
Als bottle: 2 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 2-supp.sub
Target Version: 3.40
Processing Host: chemsv02

Concentration Formula: Amt * DF * Vp/Vs

Name	Value	Description
DF	1.000	Dilution Factor
Vp	20.000	Purge Volume (ml)
Vs	20.000	Sample Volume Purged (ml)

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	ON-COL (ug/L)
* 56 Fluorobenzene	96	7.120	7.137	(1.000)	1695238	12.5000	
* 82 Chlorobenzene-d5	119	10.725	10.724	(1.000)	353913	12.5000	
* 107 1,4-Dichlorobenzene-d4	152	13.786	13.785	(1.000)	477977	12.5000	(Q)
$ 46 Dibromofluoromethane	111	6.377	6.376	(0.896)	153634	2.00000	2.28794
$ 52 1,2-Dichloroethane-d4	65	6.794	6.793	(0.954)	72656	2.00000	2.26289
$ 70 Toluene-d8	98	8.949	8.948	(0.834)	319111	2.00000	2.22532
$ 93 Bromofluorobenzene	95	12.228	12.245	(1.140)	191401	2.00000	2.35417
5 Dichlorotetrafluoroethane	85	2.682	2.681	(0.377)	202957	2.00000	2.07692
7 Ethylene Oxide	43	3.098	3.097	(0.435)	150114	250.000	282.077(Q)
10 Dichlorofluoromethane	67	3.442	3.441	(0.483)	213741	2.00000	2.05941
13 Ethyl Ether	59	3.678	3.659	(0.517)	46135	2.00000	2.07523
14 1,2-Dichloro-1,1,2-trifluorome	117	3.750	3.731	(0.527)	165106	2.00000	2.11579
15 2,2-Dichloro-1,1,1-trifluorome	83	3.805	3.804	(0.534)	252663	2.00000	2.14169
17 Trichlorotrifluoroethane	151	3.950	3.949	(0.555)	142311	2.00000	2.12469
20 2-Propanol	45	4.095	4.112	(0.575)	27603	40.0000	43.2936
22 Carbon Disulfide	76	4.312	4.293	(0.606)	344374	2.00000	2.12111

Data File: /chem/S.i/021904.b/s6717.d
Report Date: 20-Feb-2004 08:29

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
24 Allyl Chloride	41	4.312	4.311	(0.606)	153320	2.00000	2.11674(Q)
23 Methyl Acetate	74	4.312	4.311	(0.606)	22732	10.0000	10.7673
28 Methyl t-butyl ether	73	4.692	4.709	(0.659)	139912	2.00000	2.17651(a)
31 Hexane	57	4.928	4.927	(0.459)	181946	2.00000	2.06858
34 Vinyl acetate	43	5.218	5.217	(0.733)	117827	4.00000	4.38619
36 ETBE	59	5.580	5.579	(0.784)	1266137	10.0000	10.6022
38 Ethyl Acetate	43	5.870	5.869	(0.824)	57229	4.00000	4.11735(a)
44 Tetrahydrofuran	42	6.160	6.141	(0.865)	13864	4.00000	4.99701(a)
48 Cyclohexane	56	6.395	6.412	(0.898)	195334	2.00000	2.19302
54 TAME	73	6.866	6.883	(0.964)	868213	10.0000	10.5497
60 2-Pentanone	43	7.754	7.753	(1.089)	95216	8.00000	8.27944
59 Methyl-Cyclohexane	55	7.699	7.717	(1.081)	180899	2.00000	2.14758
62 Methyl Methacrylate	100	7.899	7.898	(1.109)	23817	4.00000	4.03211
78 Tetrahydrothiophene	60	10.000	10.017	(0.932)	16710	2.00000	2.15336
66 2-nitropropane	41	8.460	8.477	(0.789)	9309	2.00000	2.30331
67 2-Chloroethyl vinyl ether	63	8.478	8.477	(0.791)	23856	2.00000	2.11456
73 Ethyl methacrylate	69	9.366	9.365	(0.873)	122571	4.00000	4.17880
91 cis-1,4-dichloro-2-butene	53	12.120	12.137	(0.879)	12094	2.00000	2.19945
98 t-1,4-Dichloro-2-butene	53	12.536	12.553	(0.909)	11843	2.00000	2.26801
109 1,2,3-Trimethylbenzene	105	13.840	13.839	(1.004)	294358	2.00000	2.12084

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
Q - Qualifier signal failed the ratio test.

Data File: /chem/S.i/021904.b/s6717.d
Report Date: 20-Feb-2004 08:29

STL Denver

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: S.i
Lab File ID: s6717.d
Lab Smp Id: SUPP002
Analysis Type: VOA
Quant Type: ISTD
Operator: appelhansd
Method File: /chem/S.i/021904.b/S-20ml-h2o.m
Misc Info:

Calibration Date: 02/19/4
Calibration Time: 1649
Client Smp ID: SUPP002
Level: LOW
Sample Type: WATER

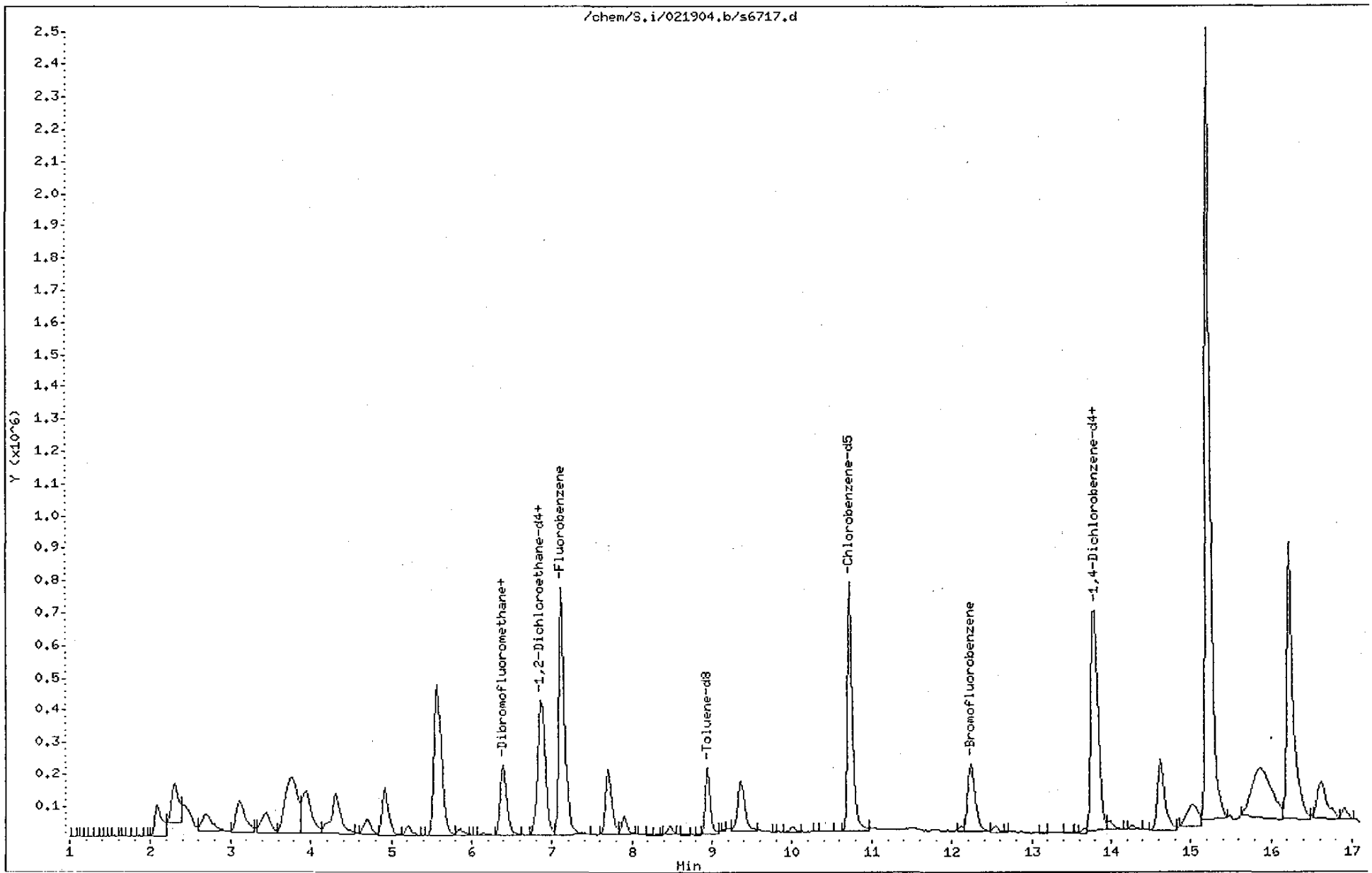
COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
56 Fluorobenzene	1790092	895046	3580184	1695238	-5.30
82 Chlorobenzene-d5	367171	183586	734342	353913	-3.61
107 1,4-Dichlorobenze	511480	255740	1022960	477977	-6.55

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
56 Fluorobenzene	7.14	6.64	7.64	7.12	-0.24
82 Chlorobenzene-d5	10.72	10.22	11.22	10.72	0.01
107 1,4-Dichlorobenze	13.79	13.29	14.29	13.79	0.01

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem/S.i/021904.b/s6717.d
Date : 19-FEB-2004 16:03
Client ID: SUPP002
Sample Info: SUPP002,, #246-03/011-04
Purge Volume: 20.0
Column phase: DB624

Instrument: S.i
Operator: appelhansd
Column diameter: 0.53



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VOLATILE REPORT SW-846

Data file : /chem/S.i/021904.b/s6718.d
Lab Smp Id: SUPP005 Client Smp ID: SUPP005
Inj Date : 19-FEB-2004 16:26
Operator : appelhansd Inst ID: S.i
Smp Info : SUPP005,, #246-03/011-04
Misc Info :
Comment :
Method : /chem/S.i/021904.b/S-20ml-h2o.m
Meth Date : 20-Feb-2004 08:29 appelhad Quant Type: ISTD
Cal Date : 19-FEB-2004 17:35 Cal File: s6721.d
Als bottle: 2 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 2-supp.sub
Target Version: 3.40
Processing Host: chemsv02

Concentration Formula: Amt * DF * Vp/Vs

Name	Value	Description
DF	1.000	Dilution Factor
Vp	20.000	Purge Volume (ml)
Vs	20.000	Sample Volume Purged (ml)

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	ON-COL (ug/L)
* 56 Fluorobenzene	96	7.134	7.137	(1.000)	1806429	12.5000	
* 82 Chlorobenzene-d5	119	10.721	10.724	(1.000)	363432	12.5000	
* 107 1,4-Dichlorobenzene-d4	152	13.782	13.785	(1.000)	524922	12.5000	(Q)
$ 46 Dibromofluoromethane	111	6.373	6.376	(0.893)	351562	5.00000	4.91325
$ 52 1,2-Dichloroethane-d4	65	6.790	6.793	(0.952)	168908	5.00000	4.93688
$ 70 Toluene-d8	98	8.945	8.948	(0.834)	755261	5.00000	5.12886
$ 93 Bromofluorobenzene	95	12.224	12.245	(1.140)	433677	5.00000	5.19438
5 Dichlorotetrafluoroethane	85	2.696	2.681	(0.378)	513305	5.00000	4.92948
7 Ethylene Oxide	43	3.094	3.097	(0.434)	339078	625.000	597.937
10 Dichlorofluoromethane	67	3.438	3.441	(0.482)	525413	5.00000	4.75080
13 Ethyl Ether	59	3.674	3.659	(0.515)	111401	5.00000	4.70256
14 1,2-Dichloro-1,1,2-trifluorome	117	3.746	3.731	(0.525)	394949	5.00000	4.74964
15 2,2-Dichloro-1,1,1-trifluorome	83	3.801	3.804	(0.533)	611156	5.00000	4.86158
17 Trichlorotrifluoroethane	151	3.964	3.949	(0.556)	351267	5.00000	4.92159
20 2-Propanol	45	4.109	4.112	(0.576)	63655	100.000	93.6936
22 Carbon Disulfide	76	4.308	4.293	(0.604)	838734	5.00000	4.84804

Data File: /chem/S.i/021904.b/s6718.d
Report Date: 20-Feb-2004 08:29

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
24 Allyl Chloride	41	4.308	4.311	(0.604)	371323	5.00000	4.81094(Q)
23 Methyl Acetate	74	4.308	4.311	(0.604)	55299	25.0000	24.5808(Q)
28 Methyl t-butyl ether	73	4.707	4.709	(0.660)	328258	5.00000	4.79216(a)
31 Hexane	57	4.924	4.927	(0.459)	453580	5.00000	5.02177
34 Vinyl acetate	43	5.214	5.217	(0.731)	240016	10.0000	8.38481
36 ETBE	59	5.576	5.579	(0.782)	3047196	25.0000	23.9456
38 Ethyl Acetate	43	5.866	5.869	(0.822)	148023	10.0000	9.99404
44 Tetrahydrofuran	42	6.156	6.141	(0.863)	27808	10.0000	9.40592
48 Cyclohexane	56	6.409	6.412	(0.898)	460812	5.00000	4.85511
54 TAME	73	6.880	6.883	(0.964)	2088270	25.0000	23.8127
60 2-Pentanone	43	7.750	7.753	(1.086)	231092	20.0000	18.8576
59 Methyl-Cyclohexane	55	7.695	7.717	(1.079)	436326	5.00000	4.86110
62 Methyl Methacrylate	100	7.895	7.898	(1.107)	58924	10.0000	9.36153
78 Tetrahydrothiophene	60	10.014	10.017	(0.934)	38589	5.00000	4.84258
66 2-nitropropane	41	8.474	8.477	(0.790)	18869	5.00000	4.54644
67 2-Chloroethyl vinyl ether	63	8.474	8.477	(0.790)	54599	5.00000	4.71281
73 Ethyl methacrylate	69	9.362	9.365	(0.873)	291377	10.0000	9.67371
91 cis-1,4-dichloro-2-butene	53	12.115	12.137	(0.879)	28479	5.00000	4.71609
98 t-1,4-Dichloro-2-butene	53	12.550	12.553	(0.911)	28152	5.00000	4.90914
109 1,2,3-Trimethylbenzene	105	13.836	13.839	(1.004)	755377	5.00000	4.95574

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
Q - Qualifier signal failed the ratio test.

Data File: /chem/S.i/021904.b/s6718.d
Report Date: 20-Feb-2004 08:29

STL Denver

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: S.i
Lab File ID: s6718.d
Lab Smp Id: SUPP005
Analysis Type: VOA
Quant Type: ISTD
Operator: appelhansd
Method File: /chem/S.i/021904.b/S-20ml-h2o.m
Misc Info:

Calibration Date: 02/19/4
Calibration Time: 1649
Client Smp ID: SUPP005
Level: LOW
Sample Type: WATER

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
56 Fluorobenzene	1790092	895046	3580184	1806429	0.91
82 Chlorobenzene-d5	367171	183586	734342	363432	-1.02
107 1,4-Dichlorobenze	511480	255740	1022960	524922	2.63

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
56 Fluorobenzene	7.14	6.64	7.64	7.13	-0.05
82 Chlorobenzene-d5	10.72	10.22	11.22	10.72	-0.03
107 1,4-Dichlorobenze	13.79	13.29	14.29	13.78	-0.02

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem/S.i/021904.b/s6718.d
Date : 19-FEB-2004 16:26
Client ID: SUPP005
Sample Info: SUPP005,, #246-03/011-04
Purge Volume: 20.0
Column phase: DB624

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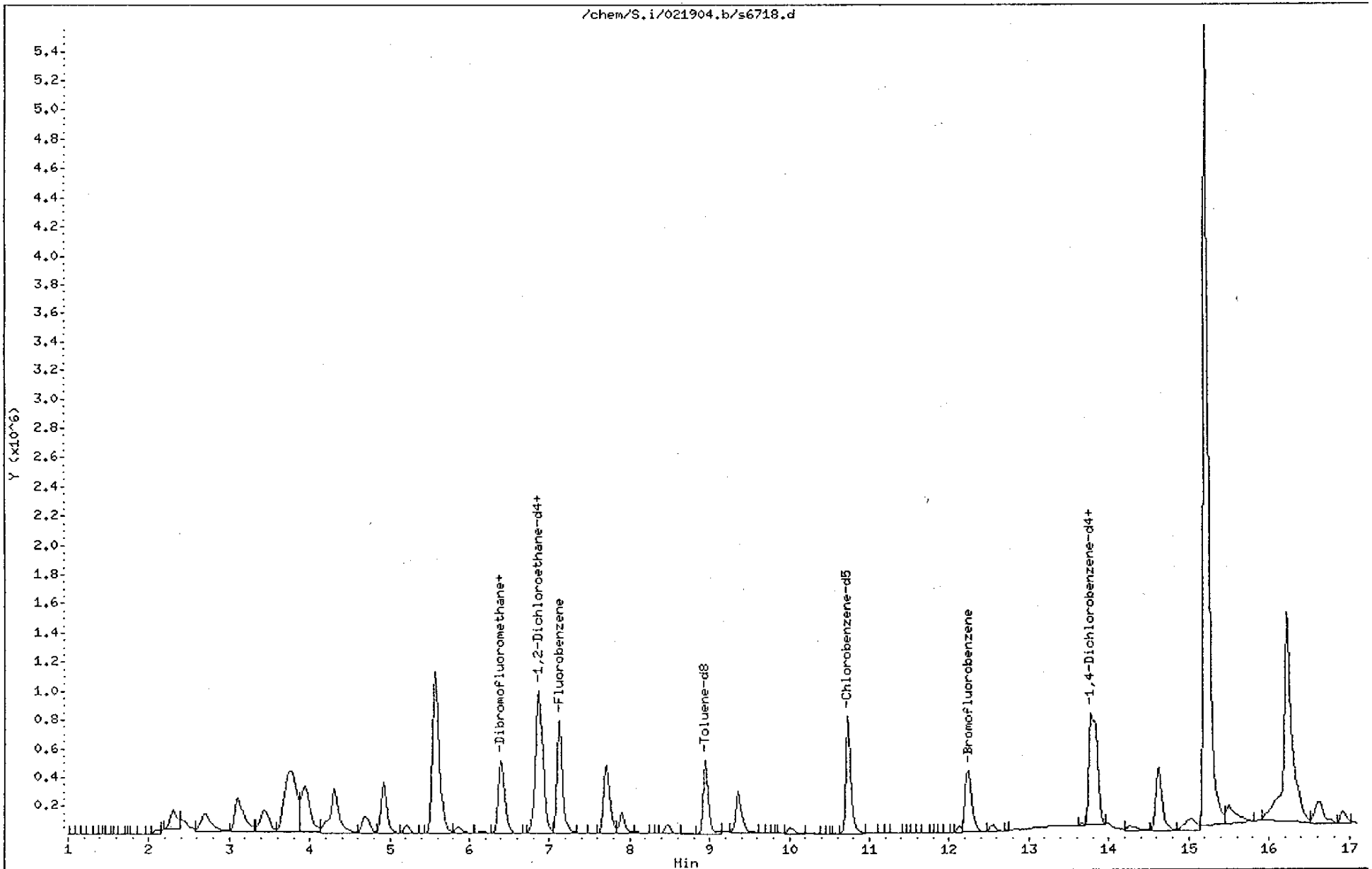
Instrument: S.i

Operator: appelhansd
Column diameter: 0.53



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Data File: /chem/S.i/021904.b/s6719.d
Report Date: 20-Feb-2004 08:29

STL Denver

VOLATILE REPORT SW-846

Data file : /chem/S.i/021904.b/s6719.d
Lab Smp Id: SUPP010 Client Smp ID: SUPP010
Inj Date : 19-FEB-2004 16:49
Operator : appelhansd Inst ID: S.i
Smp Info : SUPP010,, #246-03/011-04
Misc Info :
Comment :
Method : /chem/S.i/021904.b/S-20ml-h2o.m
Meth Date : 20-Feb-2004 08:29 appelhad Quant Type: ISTD
Cal Date : 19-FEB-2004 17:35 Cal File: s6721.d
Als bottle: 2 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 2-supp.sub
Target Version: 3.40
Processing Host: chemsv02

Concentration Formula: Amt * DF * Vp/Vs

Name	Value	Description
DF	1.000	Dilution Factor
Vp	20.000	Purge Volume (ml)
Vs	20.000	Sample Volume Purged (ml)

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	ON-COL (ug/L)
* 56 Fluorobenzene	96	7.137	7.137	(1.000)	1790092	12.5000	
* 82 Chlorobenzene-d5	119	10.724	10.724	(1.000)	367171	12.5000	
* 107 1,4-Dichlorobenzene-d4	152	13.785	13.785	(1.000)	511480	12.5000	(Q)
$ 46 Dibromofluoromethane	111	6.376	6.376	(0.893)	867738	12.5000	12.2377
$ 52 1,2-Dichloroethane-d4	65	6.793	6.793	(0.952)	416373	12.5000	12.2809
$ 70 Toluene-d8	98	8.949	8.949	(0.834)	1797170	12.5000	12.0800
$ 93 Bromofluorobenzene	95	12.227	12.227	(1.140)	1002425	12.5000	11.8843
5 Dichlorotetrafluoroethane	85	2.699	2.699	(0.378)	1012131	10.0000	9.80862
7 Ethylene Oxide	43	3.116	3.116	(0.437)	688636	1250.00	1225.44
10 Dichlorofluoromethane	67	3.442	3.442	(0.482)	1062536	10.0000	9.69516
13 Ethyl Ether	59	3.659	3.659	(0.513)	223943	10.0000	9.53955
14 1,2-Dichloro-1,1,2-trifluorome	117	3.750	3.750	(0.525)	817487	10.0000	9.92078
15 2,2-Dichloro-1,1,1-trifluorome	83	3.804	3.804	(0.533)	1192351	10.0000	9.57139
17 Trichlorotrifluoroethane	151	3.949	3.949	(0.553)	682151	10.0000	9.64481
20 2-Propanol	45	4.112	4.112	(0.576)	126110	200.000	187.315
22 Carbon Disulfide	76	4.311	4.311	(0.604)	1655463	10.0000	9.65622

Data File: /chem/S.i/021904.b/s6719.d
Report Date: 20-Feb-2004 08:29

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	ON-COL (ug/L)
24 Allyl Chloride	41	4.311	4.311	(0.604)	742573	10.0000	9.70874(Q)
23 Methyl Acetate	74	4.311	4.311	(0.604)	110485	50.0000	49.5596
28 Methyl t-butyl ether	73	4.692	4.692	(0.657)	645007	10.0000	9.50224
31 Hexane	57	4.927	4.927	(0.459)	862448	10.0000	9.45129
34 Vinyl acetate	43	5.217	5.217	(0.731)	626318	20.0000	22.0797
36 ETBE	59	5.579	5.579	(0.782)	5960320	50.0000	47.2652
38 Ethyl Acetate	43	5.869	5.869	(0.822)	279418	20.0000	19.0376
44 Tetrahydrofuran	42	6.159	6.159	(0.863)	54668	20.0000	18.6600
48 Cyclohexane	56	6.413	6.413	(0.898)	895821	10.0000	9.52449
54 TAME	73	6.884	6.884	(0.964)	4095907	50.0000	47.1322
60 2-Pentanone	43	7.753	7.753	(1.086)	479021	40.0000	39.4458
59 Methyl-Cyclohexane	55	7.699	7.699	(1.079)	857850	10.0000	9.64451
62 Methyl Methacrylate	100	7.898	7.898	(1.107)	118465	20.0000	18.9928
78 Tetrahydrothiophene	60	10.017	10.017	(0.934)	78017	10.0000	9.69075
66 2-nitropropane	41	8.478	8.478	(0.791)	40293	10.0000	9.60964
67 2-Chloroethyl vinyl ether	63	8.478	8.478	(0.791)	109069	10.0000	9.31861
73 Ethyl methacrylate	69	9.365	9.365	(0.873)	572997	20.0000	18.8298
91 cis-1,4-dichloro-2-butene	53	12.119	12.119	(0.879)	54456	10.0000	9.25484
98 t-1,4-Dichloro-2-butene	53	12.535	12.535	(0.909)	50584	10.0000	9.05264
109 1,2,3-Trimethylbenzene	105	13.840	13.840	(1.004)	1405293	10.0000	9.46190

QC Flag Legend

Q - Qualifier signal failed the ratio test.

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STL Denver

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: S.i
Lab File ID: s6719.d
Lab Smp Id: SUPP010
Analysis Type: VOA
Quant Type: ISTD
Operator: appelhansd
Method File: /chem/S.i/021904.b/S-20ml-h2o.m
Misc Info:

Calibration Date: 02/19/4
Calibration Time: 1649
Client Smp ID: SUPP010
Level: LOW
Sample Type: WATER

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
56 Fluorobenzene	1790092	895046	3580184	1790092	0.00
82 Chlorobenzene-d5	367171	183586	734342	367171	0.00
107 1,4-Dichlorobenze	511480	255740	1022960	511480	0.00

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
56 Fluorobenzene	7.14	6.64	7.64	7.14	0.00
82 Chlorobenzene-d5	10.72	10.22	11.22	10.72	0.00
107 1,4-Dichlorobenze	13.79	13.29	14.29	13.79	0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem/S.i/021904.b/s6719.d
Date : 19-FEB-2004 16:49
Client ID: SUPP010
Sample Info: SUPP010,, #246-03/011-04
Purge Volume: 20.0
Column phase: DB624

Instrument: S.i
Operator: appelhansd
Column diameter: 0.53

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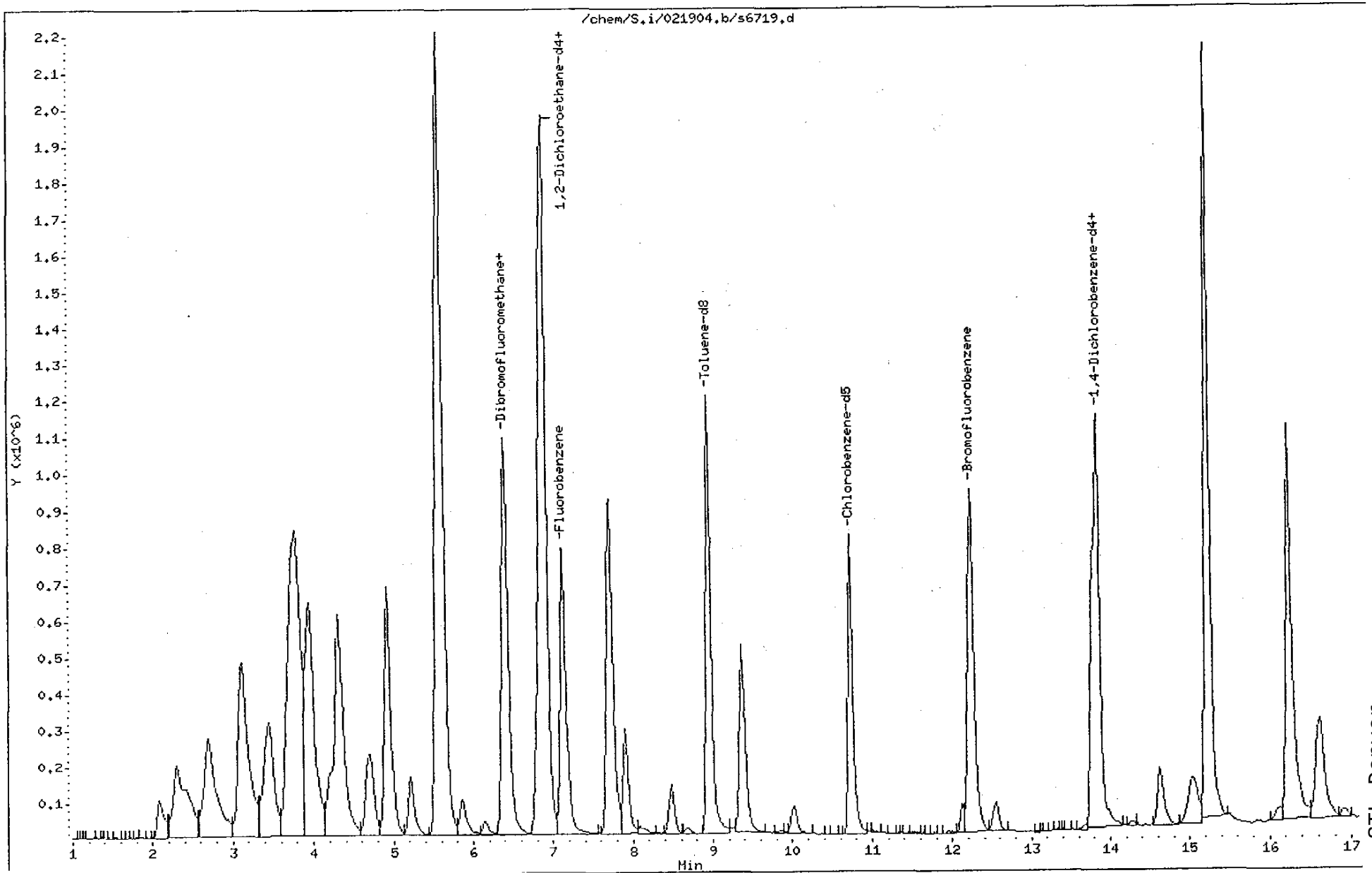

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Data File: /chem/S.i/021904.b/s6720.d
Report Date: 20-Feb-2004 08:29

STL Denver

VOLATILE REPORT SW-846

Data file : /chem/S.i/021904.b/s6720.d
Lab Smp Id: SUPP030 Client Smp ID: SUPP030
Inj Date : 19-FEB-2004 17:12
Operator : appelhansd Inst ID: S.i
Smp Info : SUPP030,, #246-03/011-04
Misc Info :
Comment :
Method : /chem/S.i/021904.b/S-20ml-h2o.m
Meth Date : 20-Feb-2004 08:29 appelhad Quant Type: ISTD
Cal Date : 19-FEB-2004 17:35 Cal File: s6721.d
Als bottle: 2 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 2-supp.sub
Target Version: 3.40
Processing Host: chemsv02

Concentration Formula: Amt * DF * Vp/Vs

Name	Value	Description
DF	1.000	Dilution Factor
Vp	20.000	Purge Volume (ml)
Vs	20.000	Sample Volume Purged (ml)

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	ON-COL (ug/L)
* 56 Fluorobenzene	96	7.137	7.137	(1.000)	1838459	12.5000	
* 82 Chlorobenzene-d5	119	10.724	10.724	(1.000)	367719	12.5000	
* 107 1,4-Dichlorobenzene-d4	152	13.785	13.785	(1.000)	529308	12.5000	(Q)
$ 46 Dibromofluoromethane	111	6.376	6.376	(0.893)	2053379	30.0000	28.1970
$ 52 1,2-Dichloroethane-d4	65	6.793	6.793	(0.952)	996092	30.0000	28.6068
$ 70 Toluene-d8	98	8.948	8.949	(0.834)	4217785	30.0000	28.3084
$ 93 Bromofluorobenzene	95	12.227	12.227	(1.140)	2292769	30.0000	27.1415
5 Dichlorotetrafluoroethane	85	2.681	2.699	(0.376)	2882036	30.0000	27.1952
7 Ethylene Oxide	43	3.097	3.116	(0.434)	2125958	3750.00	3683.64
10 Dichlorofluoromethane	67	3.442	3.442	(0.482)	3219946	30.0000	28.6076
13 Ethyl Ether	59	3.659	3.659	(0.513)	690381	30.0000	28.6352
14 1,2-Dichloro-1,1,2-trifluorome	117	3.731	3.750	(0.523)	2376683	30.0000	28.0839
15 2,2-Dichloro-1,1,1-trifluorome	83	3.804	3.804	(0.533)	3513279	30.0000	27.4603
17 Trichlorotrifluoroethane	151	3.949	3.949	(0.553)	1992286	30.0000	27.4275
20 2-Propanol	45	4.112	4.112	(0.576)	386056	600.000	558.335
22 Carbon Disulfide	76	4.311	4.311	(0.604)	4852815	30.0000	27.5615

Data File: /chem/S.i/021904.b/s6720.d
Report Date: 20-Feb-2004 08:29

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
24 Allyl Chloride	41	4.311	4.311	(0.604)	2168378	30.0000	27.6045(Q)
23 Methyl Acetate	74	4.311	4.311	(0.604)	324289	150.000	141.637(Q)
28 Methyl t-butyl ether	73	4.692	4.692	(0.657)	1927260	30.0000	27.6454
31 Hexane	57	4.927	4.927	(0.459)	2468965	30.0000	27.0163
34 Vinyl acetate	43	5.217	5.217	(0.731)	1509795	60.0000	51.8248
36 ETBE	59	5.579	5.579	(0.782)	18203237	150.000	140.553
38 Ethyl Acetate	43	5.869	5.869	(0.822)	861093	60.0000	57.1253
44 Tetrahydrofuran	42	6.159	6.159	(0.863)	172153	60.0000	57.2154
48 Cyclohexane	56	6.412	6.413	(0.898)	2560220	30.0000	26.5045
54 TAME	73	6.883	6.884	(0.964)	12607675	150.000	141.262
60 2-Pentanone	43	7.753	7.753	(1.086)	1469520	120.000	117.826
59 Methyl-Cyclohexane	55	7.717	7.699	(1.081)	2439059	30.0000	26.7001
62 Methyl Methacrylate	100	7.898	7.898	(1.107)	369299	60.0000	57.6501
78 Tetrahydrothiophene	60	10.017	10.017	(0.934)	237849	30.0000	29.5000
66 2-nitropropane	41	8.478	8.478	(0.791)	127014	30.0000	30.2470
67 2-Chloroethyl vinyl ether	63	8.478	8.478	(0.791)	348942	30.0000	29.7684
73 Ethyl methacrylate	69	9.365	9.365	(0.873)	1779369	60.0000	58.3863
91 cis-1,4-dichloro-2-butene	53	12.137	12.119	(0.880)	161673	30.0000	26.5510
98 t-1,4-Dichloro-2-butene	53	12.553	12.535	(0.911)	152846	30.0000	26.4324
109 1,2,3-Trimethylbenzene	105	13.839	13.840	(1.004)	4023480	30.0000	26.1778

QC Flag Legend

Q - Qualifier signal failed the ratio test.

Data File: /chem/S.i/021904.b/s6720.d
Report Date: 20-Feb-2004 08:29

STL Denver

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: S.i
Lab File ID: s6720.d
Lab Smp Id: SUPP030
Analysis Type: VOA
Quant Type: ISTD
Operator: appelhansd
Method File: /chem/S.i/021904.b/S-20ml-h2o.m
Misc Info:

Calibration Date: 02/19/4
Calibration Time: 1649
Client Smp ID: SUPP030
Level: LOW
Sample Type: WATER

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
56 Fluorobenzene	1790092	895046	3580184	1838459	2.70
82 Chlorobenzene-d5	367171	183586	734342	367719	0.15
107 1,4-Dichlorobenze	511480	255740	1022960	529308	3.49

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
56 Fluorobenzene	7.14	6.64	7.64	7.14	0.00
82 Chlorobenzene-d5	10.72	10.22	11.22	10.72	0.00
107 1,4-Dichlorobenze	13.79	13.29	14.29	13.79	0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem/S.i/021904.b/s6720.d
Date : 19-FEB-2004 17:12
Client ID: SUPP030
Sample Info: SUPP030,, #246-03/011-04
Purge Volume: 20.0
Column phase: DB624

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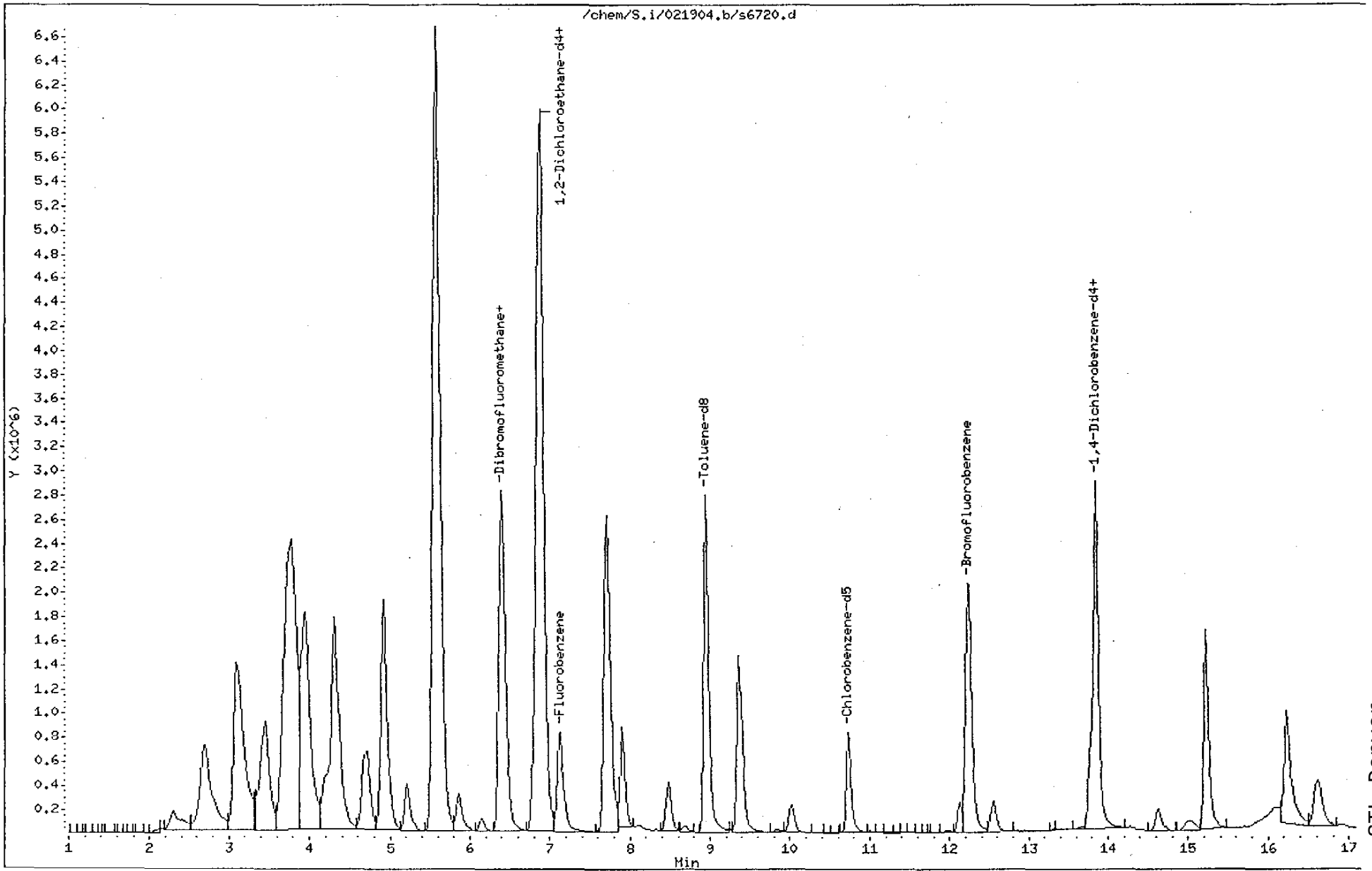
Instrument: S.i

Operator: appelhansd
Column diameter: 0.53



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VOLATILE REPORT SW-846

Data file : /chem/S.i/021904.b/s6721.d
Lab Smp Id: SUPP060 Client Smp ID: SUPP060
Inj Date : 19-FEB-2004 17:35
Operator : appelhansd Inst ID: S.i
Smp Info : SUPP060,, #246-03/011-04
Misc Info :
Comment :
Method : /chem/S.i/021904.b/S-20ml-h2o.m
Meth Date : 20-Feb-2004 08:29 appelhad Quant Type: ISTD
Cal Date : 19-FEB-2004 17:35 Cal File: s6721.d
Als bottle: 2 Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 2-supp.sub
Target Version: 3.40
Processing Host: chemsv02

Concentration Formula: Amt * DF * Vp/Vs

Name	Value	Description
DF	1.000	Dilution Factor
Vp	20.000	Purge Volume (ml)
Vs	20.000	Sample Volume Purged (ml)

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
* 56 Fluorobenzene	96	7.137	7.137	(1.000)	1867613	12.5000	
* 82 Chlorobenzene-d5	119	10.724	10.724	(1.000)	377368	12.5000	
* 107 1,4-Dichlorobenzene-d4	152	13.785	13.785	(1.000)	532033	12.5000	
$ 46 Dibromofluoromethane	111	6.376	6.376	(0.893)	4236501	60.0000	57.2675
$ 52 1,2-Dichloroethane-d4	65	6.793	6.793	(0.952)	2005918	60.0000	56.7087
$ 70 Toluene-d8	98	8.948	8.949	(0.834)	8729735	60.0000	57.0930
$ 93 Bromofluorobenzene	95	12.245	12.227	(1.142)	4829964	60.0000	55.7146
5 Dichlorotetrafluoroethane	85	2.681	2.699	(0.376)	5612417	60.0000	52.1326
7 Ethylene Oxide	43	3.097	3.116	(0.434)	4187570	7500.00	7142.53
10 Dichlorofluoromethane	67	3.441	3.442	(0.482)	6669173	60.0000	58.3272
13 Ethyl Ether	59	3.659	3.659	(0.513)	1411825	60.0000	57.6447
14 1,2-Dichloro-1,1,2-trifluorome	117	3.731	3.750	(0.523)	4722510	60.0000	54.9321
15 2,2-Dichloro-1,1,1-trifluorome	83	3.804	3.804	(0.533)	6977042	60.0000	53.6822
17 Trichlorotrifluoroethane	151	3.949	3.949	(0.553)	3907791	60.0000	52.9582
20 2-Propanol	45	4.112	4.112	(0.576)	832502	1200.00	1185.21
22 Carbon Disulfide	76	4.293	4.311	(0.602)	9841006	60.0000	55.0194

Data File: /chem/S.i/021904.b/s6721.d
Report Date: 20-Feb-2004 08:29

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
24 Allyl Chloride	41	4.311	4.311	(0.604)	4346918	60.0000	54.4746
23 Methyl Acetate	74	4.311	4.311	(0.604)	654606	300.000	281.444(AQ)
28 Methyl t-butyl ether	73	4.709	4.692	(0.660)	3920642	60.0000	55.3614
31 Hexane	57	4.927	4.927	(0.459)	4901916	60.0000	52.2670
34 Vinyl acetate	43	5.217	5.217	(0.731)	3354138	120.000	113.336
36 ETBE	59	5.579	5.579	(0.782)	36927872	300.000	280.682(A)
38 Ethyl Acetate	43	5.869	5.869	(0.822)	1772252	120.000	115.737
44 Tetrahydrofuran	42	6.141	6.159	(0.860)	338753	120.000	110.828
48 Cyclohexane	56	6.412	6.413	(0.898)	5149474	60.0000	52.4774
54 TAME	73	6.883	6.884	(0.964)	25694048	300.000	283.393(A)
60 2-Pentanone	43	7.753	7.753	(1.086)	2988795	240.000	235.901
59 Methyl-Cyclohexane	55	7.717	7.699	(1.081)	4953500	60.0000	53.3789
62 Methyl Methacrylate	100	7.898	7.898	(1.107)	747764	120.000	114.909
78 Tetrahydrothiophene	60	10.017	10.017	(0.934)	490237	60.0000	59.2485
66 2-nitropropane	41	8.477	8.478	(0.791)	250772	60.0000	58.1916
67 2-Chloroethyl vinyl ether	63	8.477	8.478	(0.791)	715840	60.0000	59.5071
73 Ethyl methacrylate	69	9.365	9.365	(0.873)	3726706	120.000	119.157
91 cis-1,4-dichloro-2-butene	53	12.137	12.119	(0.880)	329844	60.0000	53.8917
98 t-1,4-Dichloro-2-butene	53	12.553	12.535	(0.911)	317585	60.0000	54.6402
109 1,2,3-Trimethylbenzene	105	13.839	13.840	(1.004)	8649839	60.0000	55.9898

QC Flag Legend

A - Target compound detected but, quantitated amount exceeded maximum amount.
Q - Qualifier signal failed the ratio test.

Data File: /chem/S.i/021904.b/s6721.d
Report Date: 20-Feb-2004 08:29

STL Denver

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: S.i
Lab File ID: s6721.d
Lab Smp Id: SUPP060
Analysis Type: VOA
Quant Type: ISTD
Operator: appelhansd
Method File: /chem/S.i/021904.b/S-20ml-h2o.m
Misc Info:

Calibration Date: 02/19/4
Calibration Time: 1649
Client Smp ID: SUPP060
Level: LOW
Sample Type: WATER

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
56 Fluorobenzene	1790092	895046	3580184	1867613	4.33
82 Chlorobenzene-d5	367171	183586	734342	377368	2.78
107 1,4-Dichlorobenze	511480	255740	1022960	532033	4.02

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
56 Fluorobenzene	7.14	6.64	7.64	7.14	0.00
82 Chlorobenzene-d5	10.72	10.22	11.22	10.72	0.00
107 1,4-Dichlorobenze	13.79	13.29	14.29	13.78	0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem/S.i/021904.b/s6721.d
Date : 19-FEB-2004 17:35
Client ID: SUPP060
Sample Info: SUPP060,, #246-03/011-04
Purge Volume: 20.0
Column phase: DB624

Instrument: S.i
Operator: appelhansd
Column diameter: 0.53

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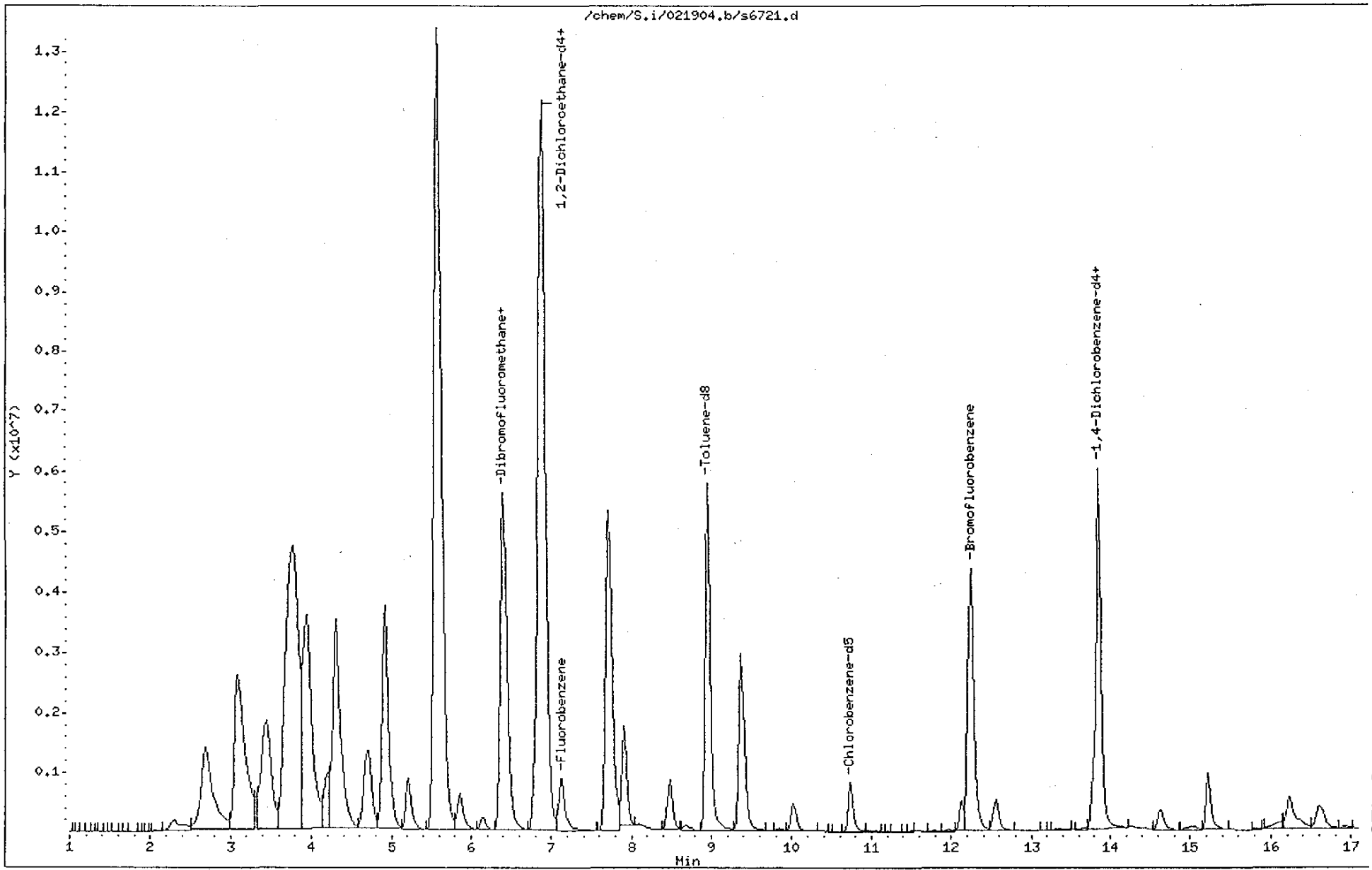

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GC/MS Continuing Calibration Review Checklist *STL Denver*

Instrument ID and Date: 5 2-20-04

Check Method Used: Analysis ☐ 625 ☐ 8270 ☐ Other SV _____

☐ 524.2 ☐ 624 ☑ 8260B ☐ Other VOA _____

VOA Preparation ☐ 5mL ☑ 20mL ☐ 5035 Low ☐ 5035 High ☐ 5030 Low ☐ 5030 High

Review Items	Level 1 Yes	Level 1 No	Level 1 N/A	Level 2	Comments
Continuing Calibration					
1. BFB/DFTPP meets criteria?	✓			✓	
2. ICAL date and instrument ID verified?	✓			✓	
3. Do SPCC RRFs and CCC %Ds meet method criteria?	✓			✓	
4. Does %D meet criteria for non-CCC compounds?	✓			✓	
5. Isomeric pairs checked for correct peak assignment?	✓			✓	
6. Standards traceability properly documented?	✓			✓	
7. Manual integrations documented and checked?			✓	N/A	
8. Do the Internal Standards meet criteria for %D against ICAL?	✓			✓	

1st Level Reviewer: SA Date: 2-20-04

2nd Level Reviewer: GM Date: 2/21/04

Report Date: 23-Feb-2004 11:15

Calibration History

Method : /chem/S.i/022004.b/S-20ml-h2o.m
Start Cal Date: 09-SEP-2003 01:23
End Cal Date : 19-FEB-2004 17:35

Initial Calibration

Injection Date	Sublist	Calibration File
Cal Level: 1 , Cal Amount: 1.00000		
19-FEB-2004 15:40	2-supp	/chem/S.i/021904.b/s6716.d
20-NOV-2003 18:24	1-main	/chem/S.i/112003p.b/s4917.d
Cal Level: 2 , Cal Amount: 2.00000		
19-FEB-2004 16:03	2-supp	/chem/S.i/021904.b/s6717.d
20-NOV-2003 18:48	1-main	/chem/S.i/112003p.b/s4918.d
Cal Level: 3 , Cal Amount: 5.00000		
19-FEB-2004 16:26	2-supp	/chem/S.i/021904.b/s6718.d
20-NOV-2003 19:12	1-main	/chem/S.i/112003p.b/s4919.d
Cal Level: 4 , Cal Amount: 10.0000		
19-FEB-2004 16:49	2-supp	/chem/S.i/021904.b/s6719.d
20-NOV-2003 19:36	1-main	/chem/S.i/112003p.b/s4920.d
Cal Level: 5 , Cal Amount: 30.0000		
19-FEB-2004 17:12	2-supp	/chem/S.i/021904.b/s6720.d
20-NOV-2003 20:01	1-main	/chem/S.i/112003p.b/s4921.d
Cal Level: 6 , Cal Amount: 60.0000		
19-FEB-2004 17:35	2-supp	/chem/S.i/021904.b/s6721.d
20-NOV-2003 20:25	1-main	/chem/S.i/112003p.b/s4922.d

Continuing Calibration

20-FEB-2004 11:03	2-supp	/chem/S.i/022004.b/s6729.d
20-FEB-2004 09:54	1-main	/chem/S.i/022004.b/s6728.d

Data File: /chem/S.i/022004.b/s6727.d

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Date : 20-FEB-2004 09:39

Client ID: BFB

Instrument: S.i

Sample Info: BFB,, #237-03

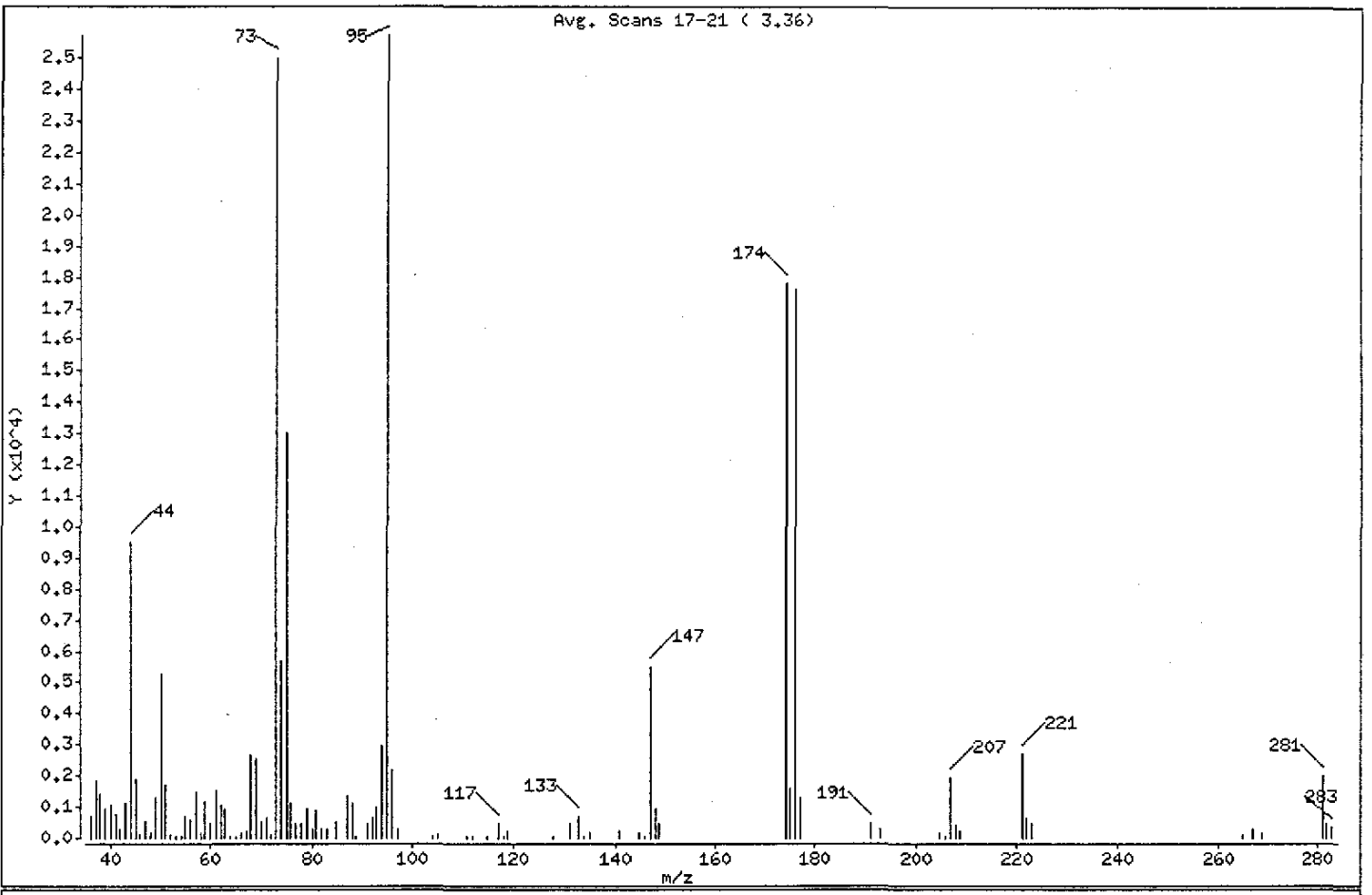
Volume Injected (uL): 1.0

Operator: appelhansd

Column phase: DB624

Column diameter: 0.53

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	20.51
75	30.00 - 60.00% of mass 95	50.58
96	5.00 - 9.00% of mass 95	8.55
173	Less than 2.00% of mass 174	0.00 (0.00)
174	50.00 - 100.00% of mass 95	69.26
175	5.00 - 9.00% of mass 174	6.13 (8.85)
176	95.00 - 101.00% of mass 174	68.46 (98.84)
177	5.00 - 9.00% of mass 176	5.05 (7.37)

DAE 20

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Data File: /chem/S.i/022004.b/s6727.d

Date : 20-FEB-2004 09:39

Client ID: BFB

Instrument: S.i

Sample Info: BFB,, #237-03

Volume Injected (uL): 1.0

Operator: appelhansd

Column phase: DB624

Column diameter: 0.53

Data File: s6727.d
Spectrum: Avg. Scans 17-21 (3.36)
Location of Maximum: 95.00
Number of points: 98

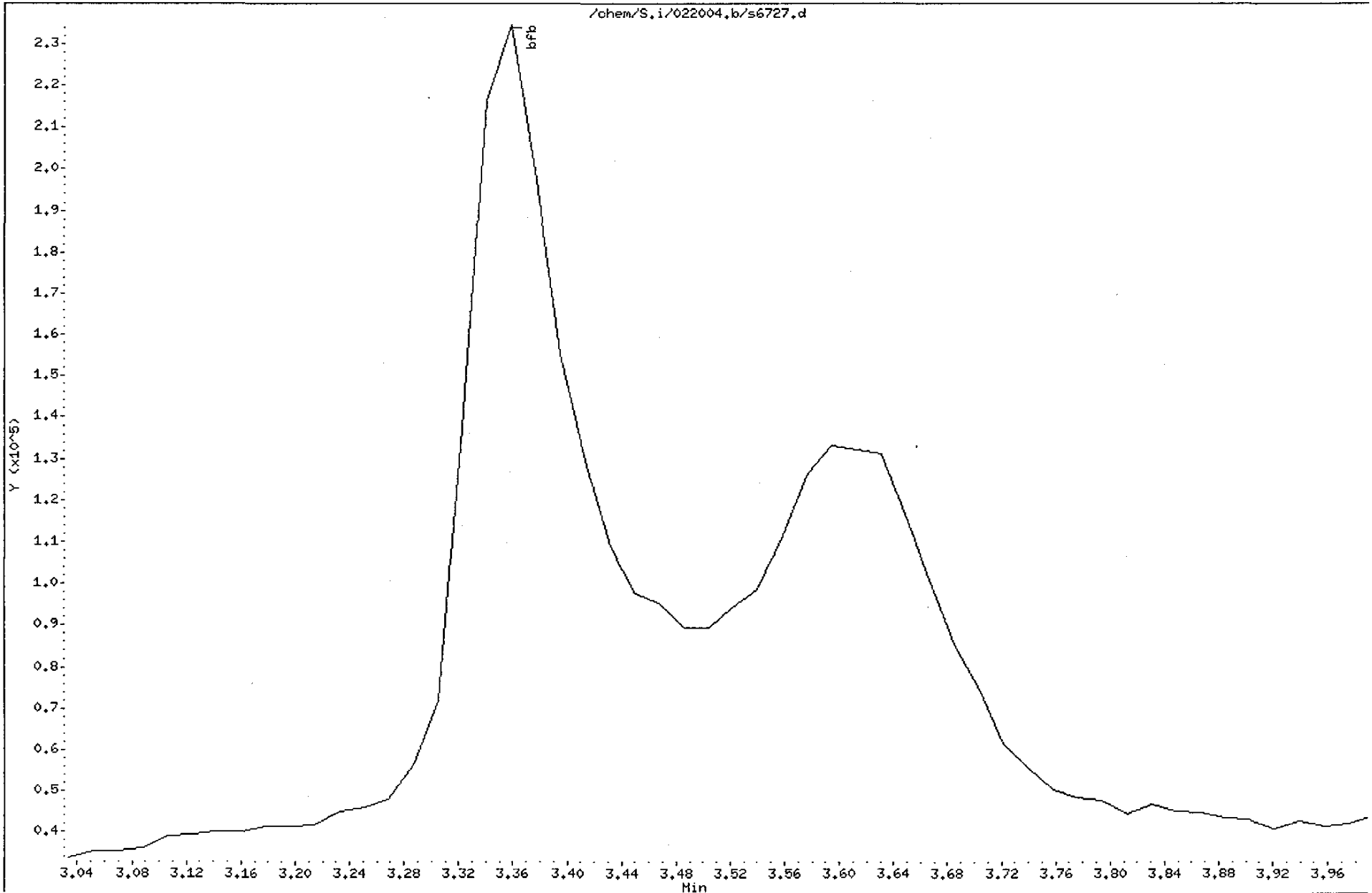
m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	690	61.00	1528	88.00	1116	147.00	5505
37.00	1813	62.00	1045	89.00	44	148.00	933
38.00	1439	63.00	919	91.00	447	149.00	473
39.00	935	64.00	47	92.00	652	174.00	17816
40.00	1077	65.00	41	93.00	1035	175.00	1577
41.00	796	66.00	172	94.00	2986	176.00	17608
42.00	290	67.00	258	95.00	25728	177.00	1299
43.00	1115	68.00	2676	96.00	2199	191.00	490
44.00	9536	69.00	2561	97.00	313	193.00	275
45.00	1898	70.00	515	104.00	52	205.00	177
46.00	139	71.00	641	105.00	127	206.00	41
47.00	545	72.00	137	111.00	83	207.00	1948
48.00	198	73.00	25000	112.00	42	208.00	425
49.00	1292	74.00	5676	115.00	59	209.00	232
50.00	5277	75.00	13013	117.00	472	221.00	2728
51.00	1709	76.00	1107	118.00	41	222.00	658
52.00	103	77.00	470	119.00	216	223.00	466
53.00	85	78.00	475	128.00	43	265.00	98
54.00	48	79.00	956	131.00	495	267.00	281
55.00	693	80.00	272	133.00	729	269.00	159
56.00	577	81.00	910	134.00	47	281.00	1998
57.00	1484	82.00	321	135.00	203	282.00	489
58.00	182	83.00	284	141.00	226	283.00	353
59.00	1168	85.00	520	145.00	195		
60.00	477	87.00	1384	146.00	59		

Data File: /chem/S.i/022004.b/s6727.d
Date : 20-FEB-2004 09:39
Client ID: BFB
Sample Info: BFB,, #237-03
Volume Injected (uL): 1.0
Column phase: DB624

Page 1

Instrument: S.i

Operator: appelhansd
Column diameter: 0.53



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Data File: /chem/S.i/022004.b/s6728.d Page 1
Report Date: 02/20/2004

CONTINUING CALIBRATION COMPOUNDS
PERCENT DRIFT REPORT

Instrument ID: S.i
Lab File ID: s6728.d
Analysis Type: WATER

Injection Date: 20-FEB-2004 09:54
Lab Sample ID: MAIN010
Method File: /chem/S.i/022004.b/S-20ml-h2o.m

COMPOUND	EXPECTED CONC.	MEASURED CONC.	%D	MAX %D
85 1,2-Dichloroethene (total)	20.0000	20.1388	0.7	50.0
83 Xylene (total)	30.0000	26.2740	12.4	50.0
64 dichlorodifluoromethane	10.0000	10.1145	1.1	50.0
1 Chloromethane	10.0000	8.0459	19.5	50.0
4 Vinyl Chloride	10.0000	8.7650	12.4	20.0
2 Bromomethane	10.0000	8.5146	14.9	50.0
5 Chloroethane	10.0000	9.0019	10.0	50.0
11 Trichlorofluoromethane	10.0000	13.1721	31.7	50.0
3 Ethanol	500.0000	468.8331	6.2	50.0
8 Acrolein	100.0000	102.9144	2.9	50.0
0 1,1-Dichloroethene	10.0000	10.5508	5.5	20.0
7 Acetone	40.0000	40.6230	1.6	50.0
21 Iodomethane	10.0000	12.5568	25.6	50.0
68 Acetonitrile	100.0000	92.4577	7.5	50.0
6 Methylene Chloride	10.0000	9.1842	8.2	50.0
86 tert-Butyl alcohol	200.0000	207.1960	3.6	50.0
0 trans-1,2-Dichloroethene	10.0000	10.1123	1.1	50.0
9 Acrylonitrile	100.0000	100.3693	0.4	50.0
84 Isopropyl ether	50.0000	51.3887	2.8	50.0
15 1,1-Dichloroethane	10.0000	9.7401	2.6	50.0
69 Chloroprene	10.0000	9.7060	2.9	50.0
0 cis-1,2-Dichloroethene	10.0000	10.0264	0.3	50.0
93 2,2-Dichloropropane	10.0000	10.5803	5.8	50.0
20 2-Butanone	40.0000	37.5618	6.1	50.0
70 Propionitrile	100.0000	103.6079	3.6	50.0
13 Bromochloromethane	10.0000	10.6599	6.6	50.0
72 Methacrylonitrile	100.0000	96.5028	3.5	50.0
17 Chloroform	10.0000	9.8327	1.7	20.0
22 1,1,1-Trichloroethane	10.0000	10.0115	0.1	50.0
23 Carbon Tetrachloride	10.0000	9.9848	0.2	50.0
94 1,1-Dichloropropene	10.0000	9.2918	7.1	50.0
71 Isobutanol	200.0000	176.3417	11.8	50.0
0 Benzene	10.0000	9.4792	5.2	50.0
16 1,2-Dichloroethane	10.0000	10.5504	5.5	50.0
88 n-Butanol	200.0000	138.6379	30.7	50.0
0 Trichloroethene	10.0000	10.0080	0.1	50.0
26 1,2-Dichloropropane	10.0000	9.5940	4.1	20.0
57 1,4-Dioxane	500.0000	448.5986	10.3	50.0
34 Dibromomethane	10.0000	10.3703	3.7	50.0

Dx 2-20

Data File: /chem/S.i/022004.b/s6728.d Page 2
Report Date: 02/20/2004

CONTINUING CALIBRATION COMPOUNDS
PERCENT DRIFT REPORT

Instrument ID: S.i
Lab File ID: s6728.d
Analysis Type: WATER

Injection Date: 20-FEB-2004 09:54
Lab Sample ID: MAIN010
Method File: /chem/S.i/022004.b/S-20ml-h2o.m

COMPOUND	EXPECTED CONC.	MEASURED CONC.	%D	MAX %D
25 Bromodichloromethane	10.0000	9.8962	1.0	50.0
28 cis-1,3-Dichloropropene	10.0000	8.7786	12.2	50.0
38 4-Methyl-2-pentanone	40.0000	35.4810	11.3	50.0
0 Toluene	10.0000	8.7336	12.7	20.0
31 trans-1,3-Dichloropropene	10.0000	8.6617	13.4	50.0
32 1,1,2-Trichloroethane	10.0000	8.6898	13.1	50.0
42 Tetrachloroethene	10.0000	10.9058	9.1	50.0
109 1,3-Dichloropropane	10.0000	8.7986	12.0	50.0
43 2-Hexanone	40.0000	36.0300	9.9	50.0
36 Dibromochloromethane	10.0000	9.8470	1.5	50.0
58 1,2-Dibromoethane	10.0000	9.1024	9.0	50.0
92 1-Chlorohexane	10.0000	8.6915	13.1	50.0
0 Chlorobenzene	10.0000	8.7997	12.0	50.0
47 Ethylbenzene	10.0000	8.9199	10.8	20.0
74 1,1,1,2-Tetrachloroethane	10.0000	9.5492	4.5	50.0
0 m and p-Xylene	20.0000	17.4254	12.9	50.0
0 o-Xylene	10.0000	8.8486	11.5	50.0
49 Styrene	10.0000	9.2104	7.9	50.0
37 Bromoform	10.0000	11.9148	19.1	50.0
79 isopropyl benzene	10.0000	8.5605	14.4	50.0
76 Cyclohexanone	400.0000	454.3071	13.6	50.0
40 1,1,2,2-Tetrachloroethane	10.0000	9.3102	6.9	50.0
95 Bromobenzene	10.0000	10.1037	1.0	50.0
50 1,2,3-Trichloropropane	10.0000	8.4598	15.4	50.0
96 n-Propylbenzene	10.0000	7.6495	23.5	50.0
97 2-Chlorotoluene	10.0000	8.3293	16.7	50.0
98 1,3,5-Trimethylbenzene	10.0000	7.9202	20.8	50.0
99 4-Chlorotoluene	10.0000	8.5451	14.5	50.0
100 tert-Butylbenzene	10.0000	7.7123	22.9	50.0
101 1,2,4-Trimethylbenzene	10.0000	7.8074	21.9	50.0
102 sec-Butylbenzene	10.0000	8.0138	19.9	50.0
103 4-Isopropyltoluene	10.0000	7.8496	21.5	50.0
61 m-Dichlorobenzene	10.0000	9.1279	8.7	50.0
62 p-dichlorobenzene	10.0000	9.1832	8.2	50.0
104 n-Butylbenzene	10.0000	7.9777	20.2	50.0
63 o-Dichlorobenzene	10.0000	9.1223	8.8	50.0
75 1,2-Dibromo-3-chloropropane	10.0000	9.6743	3.3	50.0
105 1,2,4-Trichlorobenzene	10.0000	9.8776	1.2	50.0
106 Hexachlorobutadiene	10.0000	9.7183	2.8	50.0

Data File: /chem/S.i/022004.b/s6728.d Page 3
Report Date: 02/20/2004

CONTINUING CALIBRATION COMPOUNDS
PERCENT DRIFT REPORT

Instrument ID: S.i
Lab File ID: s6728.d
Analysis Type: WATER

Injection Date: 20-FEB-2004 09:54
Lab Sample ID: MAIN010
Method File: /chem/S.i/022004.b/S-20ml-h2o.m

COMPOUND	EXPECTED CONC.	MEASURED CONC.	%D	MAX %D
107 Napthalene	10.0000	7.2690	27.3	50.0
108 1,2,3-Trichlorobenzene	10.0000	10.7396	7.4	50.0

Data File: /chem/S.i/022004.b/s6728.d
Report Date: 20-Feb-2004 09:53

STL Denver

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: S.i
Lab File ID: s6728.d
Analysis Type: WATER
Lab Sample ID: MAIN010
Quant Type: ISTD

Injection Date: 20-FEB-2004 09:54
Init. Calibration Date(s): 09/09/3 02/19/4
Init. Calibration Times: 01:23 17:35
Method File: /chem/S.i/022004.b/S-20ml-h2o.m

COMPOUND	RRF	RF10	MIN RRF	%D	MAX %D
M 1 1,2-Dichloroethene (total)	0.365	0.368	0.010	-0.7	50.0
M 2 Xylene (total)	8.843	7.741	0.010	12.5	50.0
3 dichlorodifluoromethane	0.439	0.444	0.010	-1.1	50.0
4 Chloromethane	0.295	0.237	0.100	19.5	50.0
6 Vinyl Chloride	0.315	0.277	0.020	12.4	20.0
8 Bromomethane	0.285	0.242	0.010	14.9	50.0
9 Chloroethane	0.221	0.199	0.010	10.0	50.0
11 Trichlorofluoromethane	0.528	0.695	0.010	-31.7	50.0
12 Ethanol	0.001	0.001	0.000	6.2	50.0
16 Acrolein	0.011	0.012	0.001	-2.9	50.0
18 1,1-Dichloroethene	0.364	0.384	0.020	-5.5	20.0
19 Acetone	0.023	0.024	0.001	N/A	N/A
21 Iodomethane	0.545	0.684	0.010	-25.6	50.0
25 Acetonitrile	0.004	0.004	0.000	7.5	50.0
26 Methylene Chloride	0.250	0.259	0.010	N/A	N/A
27 tert-Butyl alcohol	0.006	0.007	0.001	-3.6	50.0
30 Acrylonitrile	0.019	0.019	0.001	-0.4	50.0
29 trans-1,2-Dichloroethene	0.383	0.387	0.010	-1.1	50.0
33 1,1-Dichloroethane	0.580	0.565	0.100	2.6	50.0
32 Isopropyl ether	0.228	0.234	0.010	-2.8	50.0
35 Chloroprene	0.546	0.530	0.010	2.9	50.0
39 cis-1,2-Dichloroethene	0.348	0.349	0.010	-0.3	50.0
40 2-Butanone	0.034	0.032	0.010	6.1	50.0
37 2,2-Dichloropropane	0.471	0.498	0.010	-5.8	50.0
41 Propionitrile	0.007	0.007	0.001	-3.6	50.0
42 Methacrylonitrile	0.048	0.046	0.010	3.5	50.0
43 Bromochloromethane	0.131	0.139	0.010	-6.6	50.0
45 Chloroform	0.583	0.573	0.020	1.7	20.0
47 1,1,1-Trichloroethane	0.634	0.635	0.010	-0.1	50.0
50 1,1-Dichloropropene	0.537	0.499	0.010	7.1	50.0
49 Carbon Tetrachloride	0.584	0.583	0.010	0.2	50.0
51 Isobutanol	0.002	0.002	0.000	N/A	N/A
53 Benzene	1.011	0.959	0.010	5.2	50.0
55 1,2-Dichloroethane	0.236	0.249	0.010	-5.5	50.0
57 n-Butanol	0.002	0.001	0.000	30.7	50.0

Data File: /chem/S.i/022004.b/s6728.d Page 6
Report Date: 20-Feb-2004 09:53

STL Denver

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: S.i
Lab File ID: s6728.d
Analysis Type: WATER
Lab Sample ID: MAIN010
Quant Type: ISTD

Injection Date: 20-FEB-2004 09:54
Init. Calibration Date(s): 09/09/3 02/19/4
Init. Calibration Times: 01:23 17:35
Method File: /chem/S.i/022004.b/S-20ml-h2o.m

COMPOUND	RRF	RF10	MIN RRF	%D	MAX %D
58 Trichloroethene	0.426	0.426	0.010	-0.1	50.0
61 1,2-Dichloropropane	0.317	0.304	0.020	4.1	20.0
64 Dibromomethane	0.156	0.162	0.010	-3.7	50.0
63 1,4-Dioxane	0.001	0.001	0.000	10.3	50.0
65 Bromodichloromethane	0.462	0.457	0.010	1.0	50.0
68 cis-1,3-Dichloropropene	2.146	1.884	0.010	12.2	50.0
69 4-Methyl-2-pentanone	0.513	0.455	0.010	11.3	50.0
71 Toluene	6.355	5.550	0.020	12.7	20.0
72 trans-1,3-Dichloropropene	1.521	1.318	0.010	13.4	50.0
74 1,1,2-Trichloroethane	0.941	0.818	0.010	13.1	50.0
76 1,3-Dichloropropane	1.433	1.260	0.010	12.0	50.0
75 Tetrachloroethene	1.796	1.958	0.010	-9.1	50.0
77 2-Hexanone	0.326	0.294	0.010	9.9	50.0
79 Dibromochloromethane	1.438	1.416	0.010	1.5	50.0
80 1,2-Dibromoethane	1.141	1.038	0.010	9.0	50.0
81 1-Chlorohexane	3.266	2.838	0.010	13.1	50.0
83 Chlorobenzene	4.164	3.665	0.300	12.0	50.0
85 1,1,1,2-Tetrachloroethane	1.581	1.510	0.010	4.5	50.0
84 Ethylbenzene	2.285	2.038	0.020	10.8	20.0
86 m and p-Xylene	3.111	2.711	0.010	12.9	50.0
87 o-Xylene	2.620	2.319	0.010	11.5	50.0
88 Styrene	4.022	3.705	0.010	7.9	50.0
89 Bromoform	0.686	0.817	0.101	-19.1	50.0
90 isopropyl benzene	9.033	7.733	0.010	14.4	50.0
92 Cyclohexanone	0.047	0.053	0.001	-13.6	50.0
94 1,1,2,2-Tetrachloroethane	0.970	0.903	0.300	6.9	50.0
95 Bromobenzene	1.114	1.125	0.010	-1.0	50.0
97 1,2,3-Trichloropropane	0.189	0.160	0.010	15.4	50.0
96 n-Propylbenzene	1.676	1.282	0.010	23.5	50.0
99 2-Chlorotoluene	1.246	1.038	0.010	16.7	50.0
100 1,3,5-Trimethylbenzene	5.137	4.069	0.010	20.8	50.0
101 4-Chlorotoluene	1.293	1.105	0.010	14.5	50.0
102 tert-Butylbenzene	5.539	4.272	0.010	22.9	50.0
103 1,2,4-Trimethylbenzene	4.619	3.606	0.010	21.9	50.0
104 sec-Butylbenzene	1.333	1.068	0.010	19.9	50.0

Data File: /chem/S.i/022004.b/s6728.d Page 7
Report Date: 20-Feb-2004 09:53

STL Denver

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: S.i
Lab File ID: s6728.d
Analysis Type: WATER
Lab Sample ID: MAIN010
Quant Type: ISTD

Injection Date: 20-FEB-2004 09:54
Init. Calibration Date(s): 09/09/3 02/19/4
Init. Calibration Times: 01:23 17:35
Method File: /chem/S.i/022004.b/S-20ml-h2o.m

COMPOUND	RRF	RF10	MIN RRF	%D	MAX %D
106 m-Dichlorobenzene	2.013	1.838	0.010	8.7	50.0
105 4-Isopropyltoluene	6.106	4.793	0.010	21.5	50.0
108 p-dichlorobenzene	2.209	2.028	0.010	8.2	50.0
110 n-Butylbenzene	5.755	4.591	0.010	20.2	50.0
111 o-Dichlorobenzene	1.581	1.442	0.010	8.8	50.0
112 1,2-Dibromo-3-chloropropane	0.105	0.101	0.010	3.3	50.0
113 1,2,4-Trichlorobenzene	1.109	1.095	0.010	1.2	50.0
114 Hexachlorobutadiene	1.009	0.980	0.010	2.8	50.0
115 Napthalene	1.180	0.858	0.010	27.3	50.0
116 1,2,3-Trichlorobenzene	0.728	0.815	0.010	N/A	N/A

Data File: /chem/S.i/022004.b/s6728.d
Report Date: 20-Feb-2004 09:53

STL Denver

VOLATILE REPORT SW-846

Data file : /chem/S.i/022004.b/s6728.d
Lab Smp Id: MAIN010 Client Smp ID: MAIN010
Inj Date : 20-FEB-2004 09:54
Operator : appelhansd Inst ID: S.i
Smp Info : MAIN010,, #022/040-04
Misc Info :
Comment :
Method : /chem/S.i/022004.b/S-20ml-h2o.m
Meth Date : 20-Feb-2004 09:53 appelhad Quant Type: ISTD
Cal Date : 19-FEB-2004 17:35 Cal File: s6721.d
Als bottle: 2 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 1-main.sub
Target Version: 3.40
Processing Host: chemsv02

Concentration Formula: Amt * DF * Vp/Vs

Name	Value	Description
DF	1.000	Dilution Factor
Vp	20.000	Purge Volume (ml)
Vs	20.000	Sample Volume Purged (ml)

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)	
* 56 Fluorobenzene	96	7.135	7.135	(1.000)	1678826	12.5000		
* 82 Chlorobenzene-d5	119	10.721	10.721	(1.000)	350180	12.5000		
* 107 1,4-Dichlorobenzene-d4	152	13.783	13.783	(1.000)	511536	12.5000		(Q)
M 1 1,2-Dichloroethene (total)	96				988272	20.0000	20.1388	
M 2 Xylene (total)	106				2168459	10.0000	26.2740	
3 dichlorodifluoromethane	85	2.552	2.552	(0.358)	596157	10.0000	10.1145	
4 Chloromethane	50	2.715	2.715	(0.380)	318320	10.0000	8.04587	
6 Vinyl Chloride	62	2.878	2.878	(0.403)	371379	10.0000	8.76497	
8 Bromomethane	94	3.168	3.168	(0.444)	325519	10.0000	8.51456	
9 Chloroethane	64	3.240	3.240	(0.454)	267295	10.0000	9.00190	
11 Trichlorofluoromethane	101	3.494	3.494	(0.490)	933987	10.0000	13.1721	
12 Ethanol	45	3.620	3.620	(0.507)	39834	500.000	468.833	
16 Acrolein	56	3.892	3.892	(0.546)	157551	100.000	102.914	
18 1,1-Dichloroethene	96	3.983	3.983	(0.558)	515257	10.0000	10.5508	
19 Acetone	43	4.019	4.019	(0.563)	130476	40.0000	40.6230	
21 Iodomethane	142	4.182	4.182	(0.586)	918947	10.0000	12.5568	

Data File: /chem/S.i/022004.b/s6728.d Page 2
Report Date: 20-Feb-2004 09:53

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
25 Acetonitrile	41	4.399	4.399	(0.617)	54541	100.000	92.4577
26 Methylene Chloride	84	4.490	4.490	(0.629)	347804	10.0000	9.18417
27 tert-Butyl alcohol	59	4.526	4.526	(0.634)	177558	200.000	207.196
30 Acrylonitrile	53	4.780	4.780	(0.670)	256327	100.000	100.369
29 trans-1,2-Dichloroethene	96	4.725	4.725	(0.662)	520090	10.0000	10.1123
33 1,1-Dichloroethane	63	5.233	5.233	(0.733)	759273	10.0000	9.74006
32 Isopropyl ether	87	5.178	5.178	(0.726)	1571934	50.0000	51.3887(Q)
35 Chloroprene	53	5.287	5.287	(0.741)	712074	10.0000	9.70603
39 cis-1,2-Dichloroethene	96	5.867	5.867	(0.822)	468182	10.0000	10.0264
40 2-Butanone	43	5.867	5.867	(0.822)	172580	40.0000	37.5618
37 2,2-Dichloropropane	77	5.867	5.867	(0.822)	668593	10.0000	10.5803
41 Propionitrile	54	6.030	6.030	(0.845)	90891	100.000	103.608
42 Methacrylonitrile	41	6.156	6.156	(0.863)	622466	100.000	96.5028
43 Bromochloromethane	128	6.138	6.138	(0.860)	186954	10.0000	10.6599
45 Chloroform	83	6.193	6.193	(0.868)	770093	10.0000	9.83271
47 1,1,1-Trichloroethane	97	6.410	6.410	(0.898)	852462	10.0000	10.0115
50 1,1-Dichloropropene	75	6.573	6.573	(0.921)	670609	10.0000	9.29179
49 Carbon Tetrachloride	117	6.555	6.555	(0.919)	783430	10.0000	9.98479
51 Isobutanol	41	6.646	6.646	(0.931)	51199	200.000	176.342
53 Benzene	78	6.809	6.809	(0.954)	1287612	10.0000	9.47920
55 1,2-Dichloroethane	62	6.899	6.899	(0.967)	334874	10.0000	10.5504
57 n-Butanol	56	7.425	7.425	(1.041)	37255	200.000	138.638
58 Trichloroethene	130	7.533	7.533	(1.056)	572221	10.0000	10.0080
61 1,2-Dichloropropane	63	7.841	7.841	(1.099)	408914	10.0000	9.59398
64 Dibromomethane	93	7.986	7.986	(1.119)	217717	10.0000	10.3703
63 1,4-Dioxane	88	7.950	7.950	(1.114)	56243	500.000	448.599
65 Bromodichloromethane	83	8.149	8.149	(1.142)	614358	10.0000	9.89621
68 cis-1,3-Dichloropropene	75	8.674	8.674	(0.809)	527707	10.0000	8.77865
69 4-Methyl-2-pentanone	43	8.837	8.837	(0.824)	509476	40.0000	35.4810
71 Toluene	91	9.037	9.037	(0.843)	1554919	10.0000	8.73355
72 trans-1,3-Dichloropropene	75	9.345	9.345	(0.872)	369148	10.0000	8.66165
74 1,1,2-Trichloroethane	97	9.562	9.562	(0.892)	229122	10.0000	8.68981
76 1,3-Dichloropropane	76	9.779	9.779	(0.912)	353102	10.0000	8.79860
75 Tetrachloroethene	164	9.671	9.671	(0.902)	548626	10.0000	10.9058
77 2-Hexanone	43	9.834	9.834	(0.917)	329345	40.0000	36.0300
79 Dibromochloromethane	129	10.033	10.033	(0.936)	396771	10.0000	9.84701
80 1,2-Dibromoethane	107	10.196	10.196	(0.951)	290871	10.0000	9.10238
81 1-Chlorohexane	91	10.685	10.685	(0.997)	795138	10.0000	8.69146
83 Chlorobenzene	112	10.758	10.758	(1.003)	1026588	10.0000	8.79972
85 1,1,1,2-Tetrachloroethane	131	10.866	10.866	(1.014)	422907	10.0000	9.54925
84 Ethylbenzene	106	10.848	10.848	(1.012)	571056	10.0000	8.91990
86 m and p-Xylene	106	10.993	10.993	(1.025)	1518870	20.0000	17.4254
87 o-Xylene	106	11.500	11.500	(1.073)	649589	10.0000	8.84864
88 Styrene	104	11.537	11.537	(1.076)	1037871	10.0000	9.21043
89 Bromoform	173	11.808	11.808	(1.101)	228954	10.0000	11.9148
90 isopropyl benzene	105	11.953	11.953	(1.115)	2166319	10.0000	8.56049
92 Cyclohexanone	55	12.171	12.171	(1.135)	596079	400.000	454.307

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
94 1,1,2,2-Tetrachloroethane	83	12.442	12.442	(1.161)	253042	10.0000	9.31018
95 Bromobenzene	156	12.460	12.460	(0.904)	460448	10.0000	10.1037
97 1,2,3-Trichloropropane	110	12.533	12.533	(0.909)	65532	10.0000	8.45982(Q)
96 n-Propylbenzene	120	12.533	12.533	(0.909)	524755	10.0000	7.64948
99 2-Chlorotoluene	126	12.714	12.714	(0.922)	424761	10.0000	8.32926
100 1,3,5-Trimethylbenzene	105	12.787	12.787	(0.928)	1665108	10.0000	7.92021
101 4-Chlorotoluene	126	12.877	12.877	(0.934)	452047	10.0000	8.54508
102 tert-Butylbenzene	119	13.221	13.221	(0.959)	1748321	10.0000	7.71231
103 1,2,4-Trimethylbenzene	105	13.312	13.312	(0.966)	1475708	10.0000	7.80742
104 sec-Butylbenzene	134	13.511	13.511	(0.980)	437080	10.0000	8.01379
106 m-Dichlorobenzene	146	13.692	13.692	(0.993)	752047	10.0000	9.12790
105 4-Isopropyltoluene	119	13.692	13.692	(0.993)	1961374	10.0000	7.84965
108 p-dichlorobenzene	146	13.819	13.819	(1.003)	830048	10.0000	9.18320
110 n-Butylbenzene	91	14.181	14.181	(1.029)	1878956	10.0000	7.97772
111 o-Dichlorobenzene	146	14.254	14.254	(1.034)	590068	10.0000	9.12227
112 1,2-Dibromo-3-chloropropane	157	15.123	15.123	(1.097)	41507	10.0000	9.67426
113 1,2,4-Trichlorobenzene	180	16.011	16.011	(1.162)	448105	10.0000	9.87764
114 Hexachlorobutadiene	225	16.156	16.156	(1.172)	401209	10.0000	9.71828
115 Napthalene	128	16.319	16.319	(1.184)	350942	10.0000	7.26898
116 1,2,3-Trichlorobenzene	180	16.627	16.627	(1.206)	333400	10.0000	10.7396

QC Flag Legend

Q - Qualifier signal failed the ratio test.

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Report Date: 02/20/2004

Internal Standard
Check Report

Instrument ID: S.i
Lab File ID: s6728.d
Analysis Type: WATER

Injection Date: 20-FEB-2004 09:54
Lab Sample ID: MAIN010
Method File: /chem/S.i/022004.b/S-20ml-h2o.m

INTERNAL STANDARD	ICAL AREA	SAMP AREA	ICAL RT	SAMP RT	%R
Fluorobenzene	2061187	1678826	7.087	7.135	81.4
Chlorobenzene-d5	377982	350180	10.690	10.721	92.6
1,4-Dichlorobenzene-d4	502173	511536	13.751	13.783	101.9

Data File: /chem/S.i/022004.b/s6728.d
Report Date: 20-Feb-2004 09:53

STL Denver

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: S.i
Lab File ID: s6728.d
Lab Smp Id: MAIN010
Analysis Type: VOA
Quant Type: ISTD
Operator: appelhansd
Method File: /chem/S.i/022004.b/S-20ml-h2o.m
Misc Info:

Calibration Date: 02/20/4
Calibration Time: 0954
Client Smp ID: MAIN010
Level: LOW
Sample Type: WATER

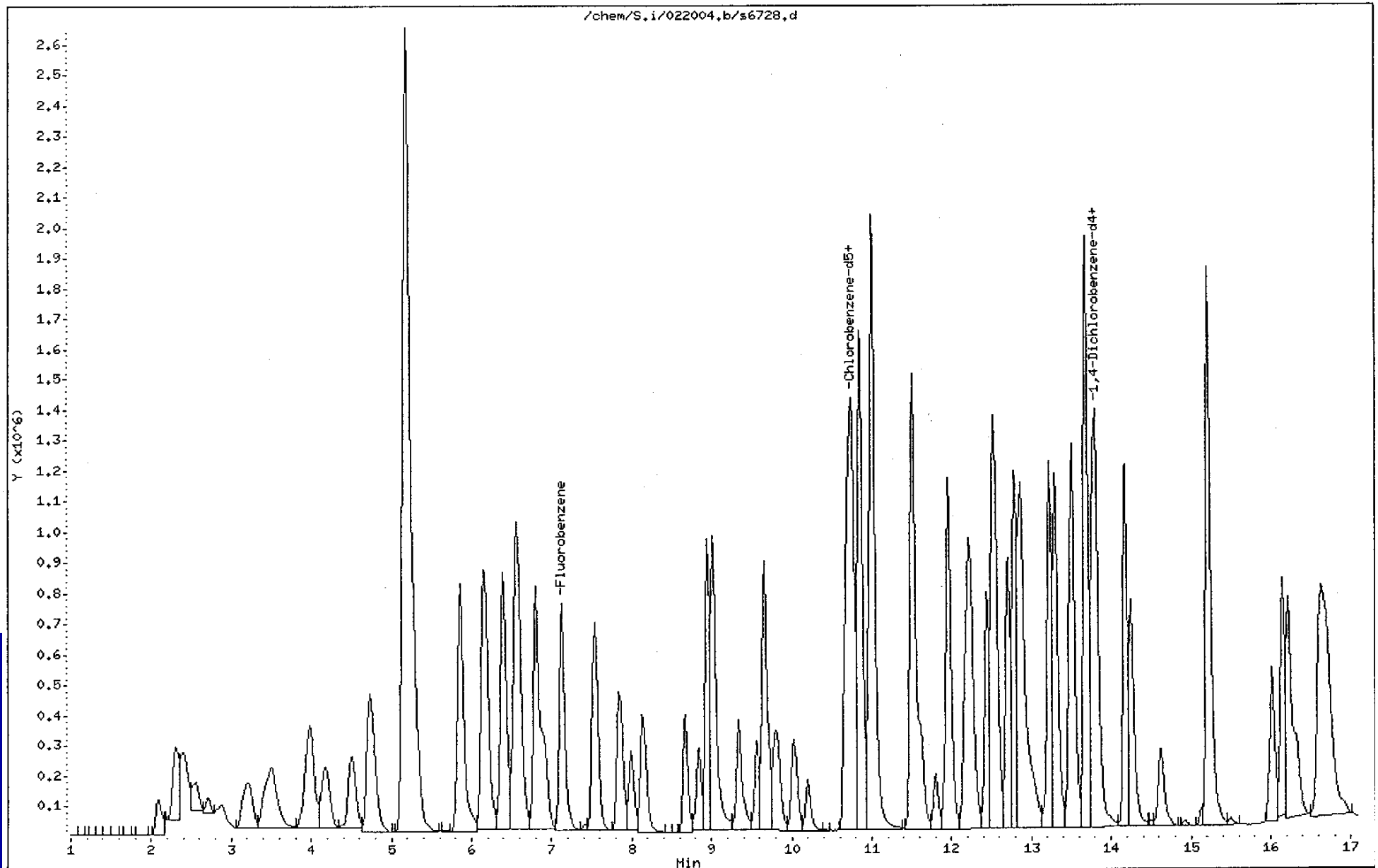
COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
56 Fluorobenzene	1678826	839413	3357652	1678826	0.00
82 Chlorobenzene-d5	350180	175090	700360	350180	0.00
107 1,4-Dichlorobenze	511536	255768	1023072	511536	0.00

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
56 Fluorobenzene	7.13	6.63	7.63	7.13	0.00
82 Chlorobenzene-d5	10.72	10.22	11.22	10.72	0.00
107 1,4-Dichlorobenze	13.78	13.28	14.28	13.78	0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem/S.i/022004.b/s6728.d
Date : 20-FEB-2004 09:54
Client ID: MAIN010
Sample Info: MAIN010,, #022/040-04
Purge Volume: 20.0
Column phase: DB624

Instrument: S.i
Operator: appelhansd
Column diameter: 0.53



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Data File: /chem/S.i/022004.b/s6729.d Page 1
Report Date: 02/20/2004

CONTINUING CALIBRATION COMPOUNDS
PERCENT DRIFT REPORT

Instrument ID: S.i
Lab File ID: s6729.d
Analysis Type: WATER

Injection Date: 20-FEB-2004 11:03
Lab Sample ID: SUPP010
Method File: /chem/S.i/022004.b/S-20ml-h2o.m

COMPOUND	EXPECTED CONC.	MEASURED CONC.	%D	MAX %D
118 Dichlorotetrafluoroethane	10.0000	10.3377	3.4	50.0
110 Ethylene Oxide	1250.0000	1189.4078	4.8	50.0
87 Dichlorofluoromethane	10.0000	9.8172	1.8	50.0
77 Ethyl Ether	10.0000	9.3545	6.5	50.0
124 1,2-Dichloro-1,1,2-trifluoromet	10.0000	10.7206	7.2	50.0
125 2,2-Dichloro-1,1,1-trifluoromet	10.0000	10.1520	1.5	50.0
65 Trichlorotrifluoroethane	10.0000	10.5996	6.0	50.0
126 2-Propanol	200.0000	190.6171	4.7	50.0
10 Carbon Disulfide	10.0000	9.9623	0.4	50.0
120 Methyl Acetate	50.0000	44.6949	10.6	50.0
67 Allyl Chloride	10.0000	9.1301	8.7	50.0
53 Methyl t-butyl ether	10.0000	8.7193	12.8	50.0
54 Hexane	10.0000	8.9840	10.2	50.0
24 Vinyl acetate	20.0000	23.3689	16.8	50.0
121 ETBE	50.0000	42.7551	14.5	50.0
78 Ethyl Acetate	20.0000	17.7705	11.1	50.0
56 Tetrahydrofuran	20.0000	16.5114	17.4	50.0
89 Dibromofluoromethane	12.5000	10.1329	18.9	50.0
115 Cyclohexane	10.0000	9.4146	5.9	50.0
303 1,2-Dichloroethane-d4	12.5000	9.7916	21.7	50.0
122 TAME	50.0000	42.9244	14.2	50.0
123 Methyl-Cyclohexane	10.0000	9.4909	5.1	50.0
116 2-Pentanone	40.0000	36.7385	8.2	50.0
73 Methyl Methacrylate	20.0000	18.0047	10.0	50.0
82 2-nitropropane	10.0000	8.3413	16.6	50.0
35 2-Chloroethyl vinyl ether	10.0000	9.8089	1.9	50.0
301 Toluene-d8	12.5000	9.6258	23.0	50.0
41 Ethyl methacrylate	20.0000	16.8465	15.8	50.0
127 Tetrahydrothiophene	10.0000	8.5213	14.8	50.0
117 cis-1,4-dichloro-2-butene	10.0000	8.1873	18.1	50.0
302 Bromofluorobenzene	12.5000	9.3478	25.2	50.0
60 t-1,4-Dichloro-2-butene	10.0000	8.6091	13.9	50.0
119 1,2,3-Trimethylbenzene	10.0000	8.5508	14.5	50.0

DK 2-20

Data File: /chem/S.i/022004.b/s6729.d
Report Date: 20-Feb-2004 11:15

STL Denver

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: S.i
Lab File ID: s6729.d
Analysis Type: WATER
Lab Sample ID: SUPP010
Quant Type: ISTD

Injection Date: 20-FEB-2004 11:03
Init. Calibration Date(s): 09/09/3 02/19/4
Init. Calibration Times: 01:23 17:35
Method File: /chem/S.i/022004.b/S-20ml-h2o.m

COMPOUND	RRF	RF10	MIN RRF	%D	MAX %D
$ 46 Dibromofluoromethane	0.495	0.401	0.010	18.9	50.0
$ 52 1,2-Dichloroethane-d4	0.237	0.185	0.010	21.7	50.0
$ 70 Toluene-d8	5.065	3.900	0.010	23.0	50.0
$ 93 Bromofluorobenzene	2.872	2.147	0.010	25.2	50.0
5 Dichlorotetrafluoroethane	0.721	0.745	0.010	-3.4	50.0
7 Ethylene Oxide	0.004	0.004	0.001	4.8	50.0
10 Dichlorofluoromethane	0.765	0.751	0.010	1.8	50.0
13 Ethyl Ether	0.164	0.153	0.010	6.5	50.0
14 1,2-Dichloro-1,1,2-trifluor	0.575	0.617	0.010	-7.2	50.0
15 2,2-Dichloro-1,1,1-trifluor	0.870	0.883	0.010	-1.5	50.0
17 Trichlorotrifluoroethane	0.494	0.523	0.010	-6.0	50.0
20 2-Propanol	0.005	0.004	0.001	4.7	50.0
22 Carbon Disulfide	1.197	1.193	0.010	0.4	50.0
24 Allyl Chloride	0.534	0.488	0.010	8.7	50.0
23 Methyl Acetate	0.016	0.014	0.001	10.6	50.0
28 Methyl t-butyl ether	0.474	0.413	0.010	12.8	50.0
31 Hexane	3.107	2.791	0.010	10.2	50.0
34 Vinyl acetate	0.198	0.231	0.010	-16.8	50.0
36 ETBE	0.881	0.753	0.010	14.5	50.0
38 Ethyl Acetate	0.102	0.091	0.010	11.1	50.0
44 Tetrahydrofuran	0.020	0.017	0.003	17.4	50.0
48 Cyclohexane	0.657	0.618	0.010	5.9	50.0
54 TAME	0.607	0.521	0.010	14.2	50.0
60 2-Pentanone	0.085	0.078	0.010	8.2	50.0
59 Methyl-Cyclohexane	0.621	0.589	0.010	5.1	50.0
62 Methyl Methacrylate	0.044	0.039	0.010	10.0	50.0
78 Tetrahydrothiophene	0.274	0.234	0.010	14.8	50.0
66 2-nitropropane	0.143	0.119	0.010	16.6	50.0
67 2-Chloroethyl vinyl ether	0.398	0.391	0.001	1.9	50.0
73 Ethyl methacrylate	1.036	0.873	0.010	15.8	50.0
91 cis-1,4-dichloro-2-butene	0.144	0.118	0.010	18.1	50.0
98 t-1,4-Dichloro-2-butene	0.137	0.118	0.010	13.9	50.0
109 1,2,3-Trimethylbenzene	3.630	3.104	0.010	14.5	50.0

Data File: /chem/S.i/022004.b/s6729.d
Report Date: 20-Feb-2004 11:15

STL Denver

VOLATILE REPORT SW-846

Data file : /chem/S.i/022004.b/s6729.d
Lab Smp Id: SUPP010 Client Smp ID: SUPP010
Inj Date : 20-FEB-2004 11:03
Operator : appelhansd Inst ID: S.i
Smp Info : SUPP010,, #246-03/011-04
Misc Info :
Comment :
Method : /chem/S.i/022004.b/S-20ml-h2o.m
Meth Date : 20-Feb-2004 11:15 appelhad Quant Type: ISTD
Cal Date : 19-FEB-2004 17:35 Cal File: s6721.d
Als bottle: 2 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 2-supp.sub
Target Version: 3.40
Processing Host: chemsv02

Concentration Formula: Amt * DF * Vp/Vs

Name	Value	Description
DF	1.000	Dilution Factor
Vp	20.000	Purge Volume (ml)
Vs	20.000	Sample Volume Purged (ml)

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	ON-COL (ug/L)
* 56 Fluorobenzene	96	7.137	7.137	(1.000)	1717585	12.5000	
* 82 Chlorobenzene-d5	119	10.724	10.724	(1.000)	368273	12.5000	
* 107 1,4-Dichlorobenzene-d4	152	13.786	13.786	(1.000)	525307	12.5000	(Q)
$ 46 Dibromofluoromethane	111	6.395	6.395	(0.896)	689388	12.5000	10.1329
$ 52 1,2-Dichloroethane-d4	65	6.811	6.811	(0.954)	318528	12.5000	9.79158
$ 70 Toluene-d8	98	8.949	8.949	(0.834)	1436351	12.5000	9.62582
$ 93 Bromofluorobenzene	95	12.228	12.228	(1.140)	790838	12.5000	9.34777
5 Dichlorotetrafluoroethane	85	2.699	2.699	(0.378)	1023521	10.0000	10.3377
7 Ethylene Oxide	43	3.116	3.116	(0.437)	641316	1250.00	1189.41(Q)
10 Dichlorofluoromethane	67	3.442	3.442	(0.482)	1032331	10.0000	9.81719
13 Ethyl Ether	59	3.678	3.678	(0.515)	210705	10.0000	9.35454
14 1,2-Dichloro-1,1,2-trifluorome	117	3.750	3.750	(0.525)	847612	10.0000	10.7206
15 2,2-Dichloro-1,1,1-trifluorome	83	3.804	3.804	(0.533)	1213452	10.0000	10.1520
17 Trichlorotrifluoroethane	151	3.949	3.949	(0.553)	719316	10.0000	10.5996
20 2-Propanol	45	4.112	4.112	(0.576)	123135	200.000	190.617
22 Carbon Disulfide	76	4.221	4.221	(0.591)	1638763	10.0000	9.96233

Data File: /chem/S.i/022004.b/s6729.d
Report Date: 20-Feb-2004 11:15

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
24 Allyl Chloride	41	4.330	4.330	(0.607)	670029	10.0000	9.13008(Q)
23 Methyl Acetate	74	4.330	4.330	(0.607)	95604	50.0000	44.6949
28 Methyl t-butyl ether	73	4.710	4.710	(0.660)	567886	10.0000	8.71926
31 Hexane	57	4.927	4.927	(0.459)	822264	10.0000	8.98396
34 Vinyl acetate	43	5.217	5.217	(0.731)	636038	20.0000	23.3689
36 ETBE	59	5.580	5.580	(0.782)	5173206	50.0000	42.7551
38 Ethyl Acetate	43	5.869	5.869	(0.822)	250257	20.0000	17.7705
44 Tetrahydrofuran	42	6.159	6.159	(0.863)	46414	20.0000	16.5114
48 Cyclohexane	56	6.413	6.413	(0.898)	849615	10.0000	9.41456
54 TAME	73	6.884	6.884	(0.964)	3579144	50.0000	42.9244
60 2-Pentanone	43	7.753	7.753	(1.086)	428073	40.0000	36.7385
59 Methyl-Cyclohexane	55	7.699	7.699	(1.079)	809991	10.0000	9.49087
62 Methyl Methacrylate	100	7.898	7.898	(1.107)	107753	20.0000	18.0047(Q)
78 Tetrahydrothiophene	60	10.018	10.018	(0.934)	68808	10.0000	8.52130
66 2-nitropropane	41	8.478	8.478	(0.791)	35080	10.0000	8.34134
67 2-Chloroethyl vinyl ether	63	8.478	8.478	(0.791)	115152	10.0000	9.80889
73 Ethyl methacrylate	69	9.366	9.366	(0.873)	514185	20.0000	16.8465
91 cis-1,4-dichloro-2-butene	53	12.119	12.119	(0.879)	49477	10.0000	8.18733
98 t-1,4-Dichloro-2-butene	53	12.536	12.536	(0.909)	49406	10.0000	8.60909
109 1,2,3-Trimethylbenzene	105	13.840	13.840	(1.004)	1304302	10.0000	8.55076

QC Flag Legend

Q - Qualifier signal failed the ratio test.

Data File: /chem/S.i/022004.b/s6729.d Page 1
Report Date: 02/20/2004

Internal Standard
Check Report

Instrument ID: S.i
Lab File ID: s6729.d
Analysis Type: WATER

Injection Date: 20-FEB-2004 11:03
Lab Sample ID: SUPP010
Method File: /chem/S.i/022004.b/S-20ml-h2o.m

INTERNAL STANDARD	ICAL AREA	SAMP AREA	ICAL RT	SAMP RT	%R
Fluorobenzene	1790092	1717585	7.137	7.137	95.9
Chlorobenzene-d5	367171	368273	10.724	10.724	100.3
1,4-Dichlorobenzene-d4	511480	525307	13.785	13.786	102.7

Data File: /chem/S.i/022004.b/s6729.d
Report Date: 20-Feb-2004 11:15

STL Denver

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: S.i
Lab File ID: s6729.d
Lab Smp Id: SUPP010
Analysis Type: VOA
Quant Type: ISTD
Operator: appelhansd
Method File: /chem/S.i/022004.b/S-20ml-h2o.m
Misc Info:

Calibration Date: 02/20/4
Calibration Time: 0954
Client Smp ID: SUPP010
Level: LOW
Sample Type: WATER

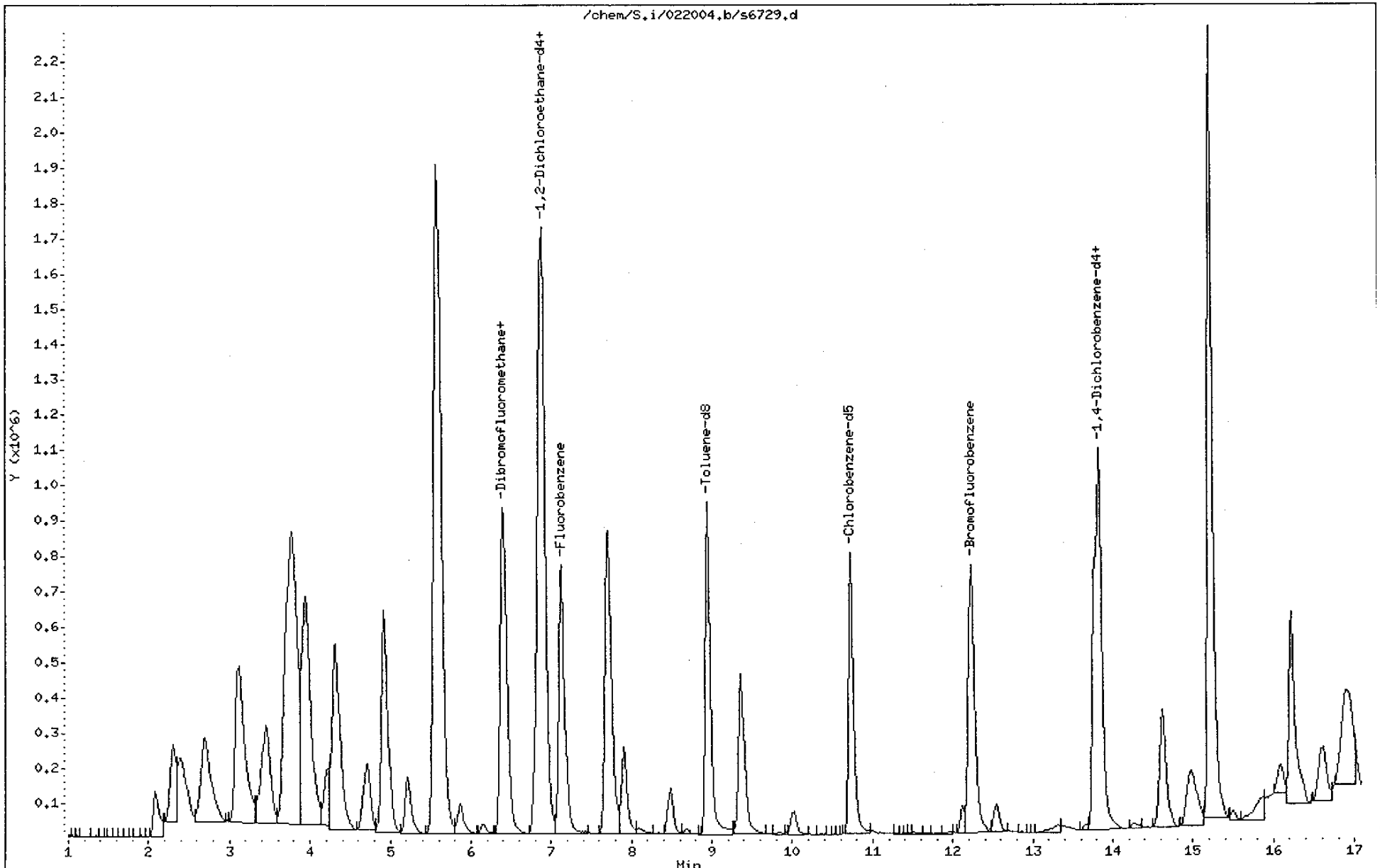
COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
56 Fluorobenzene	1678826	839413	3357652	1717585	2.31
82 Chlorobenzene-d5	350180	175090	700360	368273	5.17
107 1,4-Dichlorobenze	511536	255768	1023072	525307	2.69

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
56 Fluorobenzene	7.13	6.63	7.63	7.14	0.04
82 Chlorobenzene-d5	10.72	10.22	11.22	10.72	0.03
107 1,4-Dichlorobenze	13.78	13.28	14.28	13.79	0.02

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem/S.i/022004.b/s6729.d
Date : 20-FEB-2004 11:03
Client ID: SUPP010
Sample Info: SUPP010,, #246-03/011-04
Purge Volume: 20.0
Column phase: DB624

Instrument: S.i
Operator: appelhansd
Column diameter: 0.53



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GC/MS VOLATILE SAMPLE DATA

SEVERN TRENT STL

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Matrix Spike Report

UNSPIKED SAMPLE
Data File : /chem/S.i/022004.b/s6734.d
Samp Info : F9RDV1AW,0.03,D4B180233-017
Inj Date : 20-FEB-2004 14:00
Sample Amt : 0mL

SPIKE SAMPLE
Data File : /chem/S.i/022004.b/s6740.d
Samp Info : F9RDV1D1,0.03,D4B180233-017MS
Inj Date : 20-FEB-2004 16:19
Sample Amt : 0mL

SPIKE DUPLICATE SAMPLE
Data File : /chem/S.i/022004.b/s6741.d
Samp Info : F9RDV1D2,0.03,D4B180233-017MSD
Inj Date : 20-FEB-2004 16:43
Sample Amt : 0mL

	Concentration					%Recovery					
	Sample	MS		MSD		Measured		Limits		RPD	
	Measured	Spiked	Measured	Spiked	Measured	MS	MSD	Min	Max	Mes	Max
Chlorobenzene											
	0.0000	6666.6667	6089.4600	6666.6667	5729.2000	91	86	77	117	6	20
Toluene											
	0.0000	6666.6667	5834.9500	6666.6667	5511.8600	88	83	74	115	6	20
Trichloroethene											
	360.4020	6666.6667	7105.8600	6666.6667	6579.6000	101	93	80	123	8	20
Benzene											
	0.0000	6666.6667	6019.1900	6666.6667	5576.9600	90	84	75	116	8	20
1,1-Dichloroethene											
	0.0000	6666.6667	5724.3200	6666.6667	5298.8600	86	79	67	125	8	20

100.0 Percent of recoveries are within control limits.
100.0 Percent of RPD values are within control limits.

LCSD Report

LCS SAMPLE
Data File : /chem/S.i/022004.b/s6730.d
Samp Info : LCS,, #304-03
Inj Date : 20-FEB-2004 11:26
Sample Amt : 20mL

LCSD SAMPLE
Data File : /chem/S.i/022004.b/s6731.d
Samp Info : LCSD,, #304-03
Inj Date : 20-FEB-2004 11:49
Sample Amt : 20mL

Sample #	Sample #	Sample #	Sample #	Sample #
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

	Concentration							
		Measured			%Recovery		RPD	
	Spiked	LCS	LCSD	Avg.	Meas.	Min	Max	Meas.	Max
Benzene									
	10.0000	8.7462	9.1518	8.9	89.5	75	116	5	20
Trichloroethene									
	10.0000	9.3601	9.9633	9.7	96.6	80	123	6	20
Toluene									
	10.0000	8.1985	8.9247	8.6	85.6	74	115	8	20
1,1-Dichloroethene									
	10.0000	8.1135	8.5476	8.3	83.3	67	125	5	20
Chlorobenzene									
	10.0000	8.8131	9.5159	9.2	91.6	77	117	8	20

100.0 Percent of recoveries are within control limits.
100.0 Percent of RPD values are within control limits.

Data File: /chem/S.i/022004.b/s6730.d
Report Date: 20-Feb-2004 12:59

STL Denver

VOLATILE REPORT SW-846

Data file : /chem/S.i/022004.b/s6730.d
Lab Smp Id: LCS Client Smp ID: LCS
Inj Date : 20-FEB-2004 11:26
Operator : appelhansd Inst ID: S.i
Smp Info : LCS,, #304-03
Misc Info :
Comment :
Method : /chem/S.i/022004.b/S-20ml-h2o.m
Meth Date : 20-Feb-2004 12:58 appelhad Quant Type: ISTD
Cal Date : 19-FEB-2004 17:35 Cal File: s6721.d
Als bottle: 2 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: dcs.sub
Target Version: 3.40
Processing Host: chemsv02

Concentration Formula: Amt * DF * Vp/Vs

Name	Value	Description
DF	1.000	Dilution Factor
Vp	20.000	Purge Volume (ml)
Vs	20.000	Sample Volume Purged (ml)

TX 2-20

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/L)
* 56 Fluorobenzene	96	7.117	7.137	(1.000)	1706281	12.5000	
* 82 Chlorobenzene-d5	119	10.722	10.724	(1.000)	363540	12.5000	
* 107 1,4-Dichlorobenzene-d4	152	13.765	13.786	(1.000)	531919	12.5000	(Q)
$ 46 Dibromofluoromethane	111	6.374	6.395	(0.896)	663634	9.81897	9.81897
$ 52 1,2-Dichloroethane-d4	65	6.791	6.811	(0.954)	294029	9.09836	9.09836
$ 70 Toluene-d8	98	8.929	8.949	(0.833)	1386124	9.41016	9.41016
$ 93 Bromofluorobenzene	95	12.207	12.228	(1.139)	757249	9.06727	9.06727
18 1,1-Dichloroethene	96	3.965	3.983	(0.557)	402710	8.11350	8.11350
53 Benzene	78	6.791	6.809	(0.954)	1207467	8.74615	8.74615
58 Trichloroethene	130	7.516	7.533	(1.056)	543931	9.36010	9.36010
71 Toluene	91	9.019	9.037	(0.841)	1515343	8.19848	8.19848
83 Chlorobenzene	112	10.758	10.758	(1.003)	1067368	8.81305	8.81305

QC Flag Legend

Q - Qualifier signal failed the ratio test.

Data File: /chem/S.i/022004.b/s6730.d
Report Date: 20-Feb-2004 12:59

STL Denver

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: S.i
Lab File ID: s6730.d
Lab Smp Id: LCS
Analysis Type: VOA
Quant Type: ISTD
Operator: appelhansd
Method File: /chem/S.i/022004.b/S-20ml-h2o.m
Misc Info:

Calibration Date: 02/20/4
Calibration Time: 1103
Client Smp ID: LCS
Level: LOW
Sample Type: WATER

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
56 Fluorobenzene	1717585	858792	3435170	1706281	-0.66
82 Chlorobenzene-d5	368273	184136	736546	363540	-1.29
107 1,4-Dichlorobenze	525307	262654	1050614	531919	1.26

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
56 Fluorobenzene	7.14	6.64	7.64	7.12	-0.29
82 Chlorobenzene-d5	10.72	10.22	11.22	10.72	-0.02
107 1,4-Dichlorobenze	13.79	13.29	14.29	13.77	-0.15

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem/S.i/022004.b/s6730.d
Report Date: 20-Feb-2004 12:59

STL Denver

RECOVERY REPORT

Client Name:
Sample Matrix: LIQUID
Lab Smp Id: LCS
Level: LOW
Data Type: MS DATA
SpikeList File: dcs.spk
Sublist File: dcs.sub
Method File: /chem/S.i/022004.b/S-20ml-h2o.m
Misc Info:

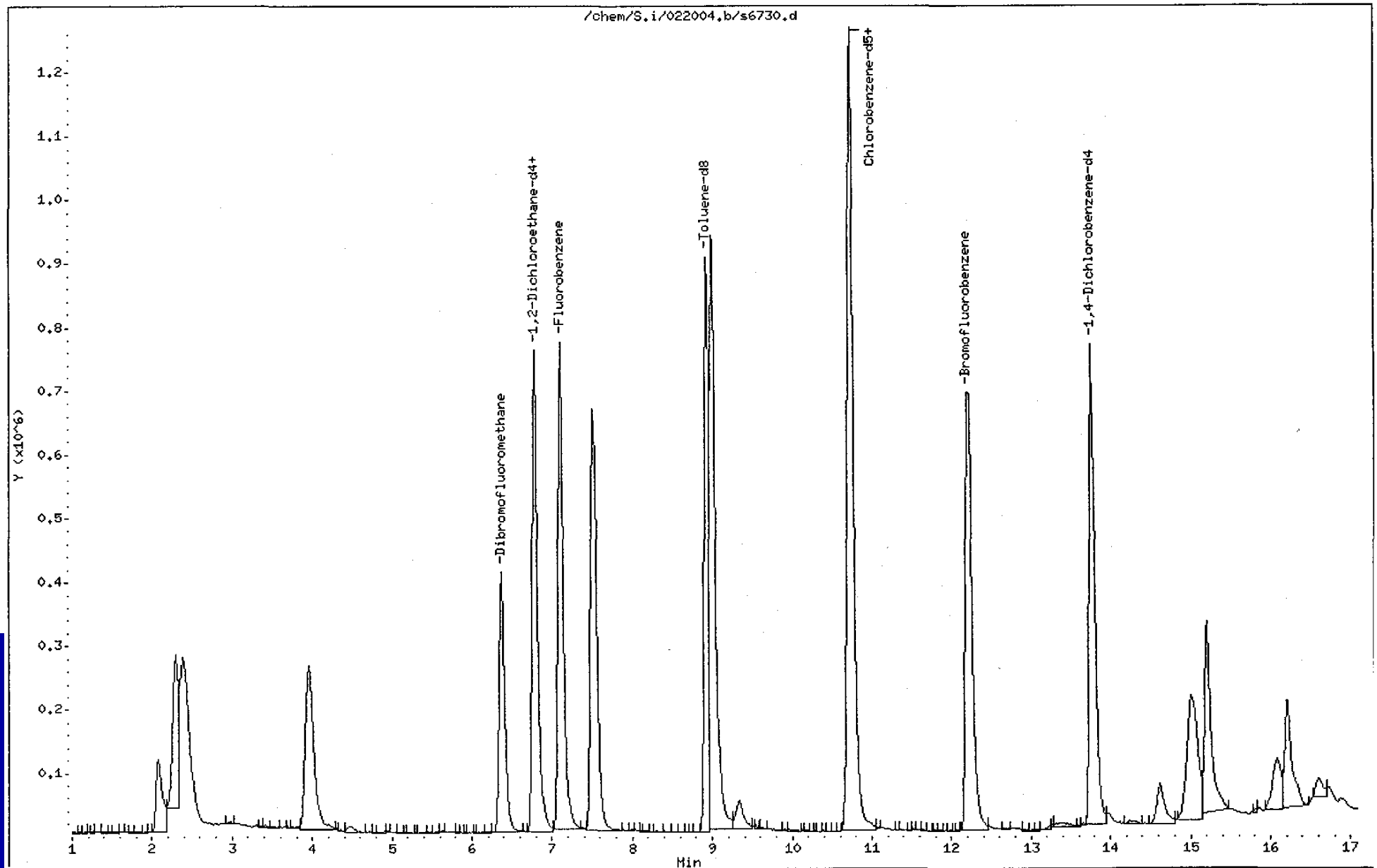
Client SDG: 022004
Fraction: VOA
Client Smp ID: LCS
Operator: appelhansd
SampleType: LCS
Quant Type: ISTD

SPIKE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
18 1,1-Dichloroethene	10.0000	8.11350	81.13	67-125
53 Benzene	10.0000	8.74615	87.46	75-116
58 Trichloroethene	10.0000	9.36010	93.60	80-123
71 Toluene	10.0000	8.19848	81.98	74-115
83 Chlorobenzene	10.0000	8.81305	88.13	77-117

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 46 Dibromofluorometha	10.0000	9.81897	98.19	76-116
$ 52 1,2-Dichloroethane	10.0000	9.09836	90.98	59-129
$ 70 Toluene-d8	10.0000	9.41016	94.10	76-116
$ 93 Bromofluorobenzene	10.0000	9.06727	90.67	74-114

Data File: /chem/S.i/022004.b/s6730.d
Date : 20-FEB-2004 11:26
Client ID: LCS
Sample Info: LCS,, #304-03
Purge Volume: 20.0
Column phase: DB624

Instrument: S.i
Operator: appelhansd
Column diameter: 0.53



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STL Denver

VOLATILE REPORT SW-846

Data file : /chem/S.i/022004.b/s6731.d
Lab Smp Id: LCSD Client Smp ID: LCSD
Inj Date : 20-FEB-2004 11:49
Operator : appelhansd Inst ID: S.i
Smp Info : LCSD,, #304-03
Misc Info : s6730.d
Comment :
Method : /chem/S.i/022004.b/S-20ml-h2o.m
Meth Date : 20-Feb-2004 12:58 appelhad Quant Type: ISTD
Cal Date : 19-FEB-2004 17:35 Cal File: s6721.d
Als bottle: 2 QC Sample: LCSD
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: dcs.sub
Target Version: 3.40
Processing Host: chemsv02

Concentration Formula: Amt * DF * Vp/Vs

Name	Value	Description
DF	1.000	Dilution Factor
Vp	20.000	Purge Volume (ml)
Vs	20.000	Sample Volume Purged (ml)

7/2-20

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/L)	
* 56 Fluorobenzene	96	7.116	7.137	(1.000)	1590800	12.5000		
* 82 Chlorobenzene-d5	119	10.721	10.724	(1.000)	331500	12.5000		
* 107 1,4-Dichlorobenzene-d4	152	13.764	13.786	(1.000)	480136	12.5000		(Q)
$ 46 Dibromofluoromethane	111	6.373	6.395	(0.896)	660549	10.4828	10.4828	
$ 52 1,2-Dichloroethane-d4	65	6.790	6.811	(0.954)	294685	9.78061	9.78061	
$ 70 Toluene-d8	98	8.928	8.949	(0.833)	1360917	10.1320	10.1320	
$ 93 Bromofluorobenzene	95	12.224	12.228	(1.140)	732572	9.61960	9.61960	
18 1,1-Dichloroethene	96	3.964	3.983	(0.557)	395542	8.54758	8.54758	
53 Benzene	78	6.790	6.809	(0.954)	1177961	9.15182	9.15182	
58 Trichloroethene	130	7.515	7.533	(1.056)	539797	9.96327	9.96327	
71 Toluene	91	9.018	9.037	(0.841)	1504191	8.92471	8.92471	
83 Chlorobenzene	112	10.757	10.758	(1.003)	1050918	9.51589	9.51589	

QC Flag Legend

Q - Qualifier signal failed the ratio test.

Data File: /chem/S.i/022004.b/s6731.d
Report Date: 20-Feb-2004 12:59

STL Denver

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: S.i
Lab File ID: s6731.d
Lab Smp Id: LCSD
Analysis Type: VOA
Quant Type: ISTD
Operator: appelhansd
Method File: /chem/S.i/022004.b/S-20ml-h2o.m
Misc Info: s6730.d

Calibration Date: 02/20/4
Calibration Time: 1103
Client Smp ID: LCSD
Level: LOW
Sample Type: WATER

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
56 Fluorobenzene	1717585	858792	3435170	1590800	-7.38
82 Chlorobenzene-d5	368273	184136	736546	331500	-9.99
107 1,4-Dichlorobenze	525307	262654	1050614	480136	-8.60

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
56 Fluorobenzene	7.14	6.64	7.64	7.12	-0.30
82 Chlorobenzene-d5	10.72	10.22	11.22	10.72	-0.03
107 1,4-Dichlorobenze	13.79	13.29	14.29	13.76	-0.16

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem/S.i/022004.b/s6731.d
Report Date: 20-Feb-2004 12:59

STL Denver

RECOVERY REPORT

Client Name:
Sample Matrix: LIQUID
Lab Smp Id: LCSD
Level: LOW
Data Type: MS DATA
SpikeList File: dcs.spk
Sublist File: dcs.sub
Method File: /chem/S.i/022004.b/S-20ml-h2o.m
Misc Info: s6730.d

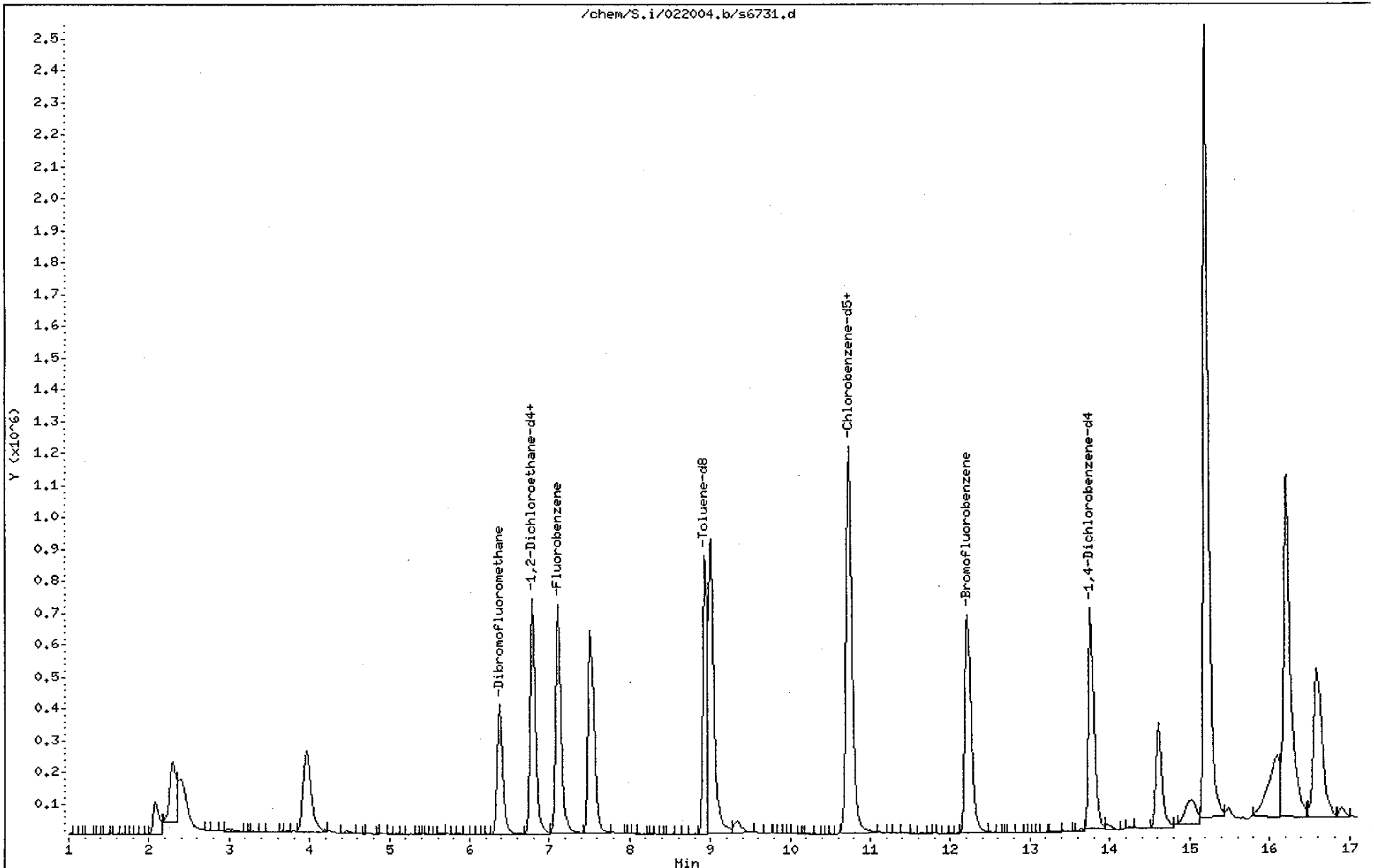
Client SDG: 022004
Fraction: VOA
Client Smp ID: LCSD
Operator: appelhansd
SampleType: LCSD
Quant Type: ISTD

SPIKE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
18 1,1-Dichloroethene	10.0000	8.54758	85.48	67-125
53 Benzene	10.0000	9.15182	91.52	75-116
58 Trichloroethene	10.0000	9.96327	99.63	80-123
71 Toluene	10.0000	8.92471	89.25	74-115
83 Chlorobenzene	10.0000	9.51589	95.16	77-117

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 46 Dibromofluorometha	10.0000	10.4828	104.83	76-116
$ 52 1,2-Dichloroethane	10.0000	9.78061	97.81	59-129
$ 70 Toluene-d8	10.0000	10.1320	101.32	76-116
$ 93 Bromofluorobenzene	10.0000	9.61960	96.20	74-114

Data File: /chem/S.i/022004.b/s6731.d
Date : 20-FEB-2004 11:49
Client ID: LCSD
Sample Info: LCSD,, #304-03
Purge Volume: 20.0
Column phase: DB624

Instrument: S.i
Operator: appelhansd
Column diameter: 0.53



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Data File: /chem/S.i/022004.b/s6732.d
Report Date: 20-Feb-2004 13:00

STL Denver

VOLATILE REPORT SW-846

Data file : /chem/S.i/022004.b/s6732.d
Lab Smp Id: VBLK Client Smp ID: VBLK
Inj Date : 20-FEB-2004 12:12
Operator : appelhansd Inst ID: S.i
Smp Info : VBLK
Misc Info :
Comment :
Method : /chem/S.i/022004.b/S-20ml-h2o.m
Meth Date : 20-Feb-2004 12:58 appelhad Quant Type: ISTD
Cal Date : 19-FEB-2004 17:35 Cal File: s6721.d
Als bottle: 2 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: S-all.sub
Target Version: 3.40
Processing Host: chemsv02

Concentration Formula: Amt * DF * Vp/Vs

Name	Value	Description
DF	1.000	Dilution Factor
Vp	20.000	Purge Volume (ml)
Vs	20.000	Sample Volume Purged (ml)

SA 2-20

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/L)	
* 56 Fluorobenzene	96	7.120	7.137	(1.000)	1536818	12.5000		
* 82 Chlorobenzene-d5	119	10.706	10.724	(1.000)	326394	12.5000		
* 107 1,4-Dichlorobenzene-d4	152	13.768	13.786	(1.000)	480178	12.5000		(Q)
$ 46 Dibromofluoromethane	111	6.377	6.395	(0.896)	653082	10.7284	10.7284	
$ 52 1,2-Dichloroethane-d4	65	6.793	6.811	(0.954)	292106	10.0356	10.0356	
$ 70 Toluene-d8	98	8.931	8.949	(0.834)	1375055	10.3974	10.3974	
$ 93 Bromofluorobenzene	95	12.210	12.228	(1.140)	750667	10.0114	10.0114	
M 1 1,2-Dichloroethene (total)	96.00	Compound Not Detected.						
M 2 Xylene (total)	106.00	Compound Not Detected.						
3 dichlorodifluoromethane	85.00	Compound Not Detected.						
5 Dichlorotetrafluoroethane	85.00	Compound Not Detected.						
4 Chloromethane	50.00	Compound Not Detected.						
6 Vinyl Chloride	62.00	Compound Not Detected.						
7 Ethylene Oxide	43.00	Compound Not Detected.						
8 Bromomethane	94.00	Compound Not Detected.						
9 Chloroethane	64.00	Compound Not Detected.						

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)
10 Dichlorofluoromethane	67.00	Compound Not Detected.					
11 Trichlorofluoromethane	101.00	Compound Not Detected.					
12 Ethanol	45.00	Compound Not Detected.					
13 Ethyl Ether	59.00	Compound Not Detected.					
14 1,2-Dichloro-1,1,2-trifluorome	117.00	Compound Not Detected.					
16 Acrolein	56.00	Compound Not Detected.					
15 2,2-Dichloro-1,1,1-trifluorome	83.00	Compound Not Detected.					
18 1,1-Dichloroethene	96.00	Compound Not Detected.					
19 Acetone	43.00	Compound Not Detected.					
17 Trichlorotrifluoroethane	151.00	Compound Not Detected.					
21 Iodomethane	142.00	Compound Not Detected.					
20 2-Propanol	45.00	Compound Not Detected.					
22 Carbon Disulfide	76.00	Compound Not Detected.					
25 Acetonitrile	41.00	Compound Not Detected.					
24 Allyl Chloride	41.00	Compound Not Detected.					
23 Methyl Acetate	74.00	Compound Not Detected.					
26 Methylene Chloride	84.00	Compound Not Detected.					
27 tert-Butyl alcohol	59.00	Compound Not Detected.					
30 Acrylonitrile	53.00	Compound Not Detected.					
29 trans-1,2-Dichloroethene	96.00	Compound Not Detected.					
28 Methyl t-butyl ether	73.00	Compound Not Detected.					
31 Hexane	57.00	Compound Not Detected.					
33 1,1-Dichloroethane	63.00	Compound Not Detected.					
34 Vinyl acetate	43.00	Compound Not Detected.					
32 Isopropyl ether	87.00	Compound Not Detected.					
35 Chloroprene	53.00	Compound Not Detected.					
36 ETBE	59.00	Compound Not Detected.					
39 cis-1,2-Dichloroethene	96.00	Compound Not Detected.					
40 2-Butanone	43.00	Compound Not Detected.					
37 2,2-Dichloropropane	77.00	Compound Not Detected.					
41 Propionitrile	54.00	Compound Not Detected.					
38 Ethyl Acetate	43.00	Compound Not Detected.					
42 Methacrylonitrile	41.00	Compound Not Detected.					
43 Bromochloromethane	128.00	Compound Not Detected.					
45 Chloroform	83.00	Compound Not Detected.					
44 Tetrahydrofuran	42.00	Compound Not Detected.					
47 1,1,1-Trichloroethane	97.00	Compound Not Detected.					
48 Cyclohexane	56.00	Compound Not Detected.					
50 1,1-Dichloropropene	75.00	Compound Not Detected.					
49 Carbon Tetrachloride	117.00	Compound Not Detected.					
51 Isobutanol	41.00	Compound Not Detected.					
53 Benzene	78.00	Compound Not Detected.					
55 1,2-Dichloroethane	62.00	Compound Not Detected.					
54 TAME	73.00	Compound Not Detected.					
57 n-Butanol	56.00	Compound Not Detected.					
58 Trichloroethene	130.00	Compound Not Detected.					
60 2-Pentanone	43.00	Compound Not Detected.					

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)
59 Methyl-Cyclohexane	55.00	Compound Not Detected.					
61 1,2-Dichloropropane	63.00	Compound Not Detected.					
62 Methyl Methacrylate	100.00	Compound Not Detected.					
64 Dibromomethane	93.00	Compound Not Detected.					
63 1,4-Dioxane	88.00	Compound Not Detected.					
65 Bromodichloromethane	83.00	Compound Not Detected.					
78 Tetrahydrothiophene	60.00	Compound Not Detected.					
66 2-nitropropane	41.00	Compound Not Detected.					
67 2-Chloroethyl vinyl ether	63.00	Compound Not Detected.					
68 cis-1,3-Dichloropropene	75.00	Compound Not Detected.					
69 4-Methyl-2-pentanone	43.00	Compound Not Detected.					
71 Toluene	91.00	Compound Not Detected.					
72 trans-1,3-Dichloropropene	75.00	Compound Not Detected.					
73 Ethyl methacrylate	69.00	Compound Not Detected.					
74 1,1,2-Trichloroethane	97.00	Compound Not Detected.					
76 1,3-Dichloropropane	76.00	Compound Not Detected.					
75 Tetrachloroethene	164.00	Compound Not Detected.					
77 2-Hexanone	43.00	Compound Not Detected.					
79 Dibromochloromethane	129.00	Compound Not Detected.					
80 1,2-Dibromoethane	107.00	Compound Not Detected.					
81 1-Chlorohexane	91.00	Compound Not Detected.					
83 Chlorobenzene	112.00	Compound Not Detected.					
85 1,1,1,2-Tetrachloroethane	131.00	Compound Not Detected.					
84 Ethylbenzene	106.00	Compound Not Detected.					
86 m and p-Xylene	106.00	Compound Not Detected.					
87 o-Xylene	106.00	Compound Not Detected.					
88 Styrene	104.00	Compound Not Detected.					
89 Bromoform	173.00	Compound Not Detected.					
90 isopropyl benzene	105.00	Compound Not Detected.					
92 Cyclohexanone	55.00	Compound Not Detected.					
91 cis-1,4-dichloro-2-butene	53.00	Compound Not Detected.					
94 1,1,2,2-Tetrachloroethane	83.00	Compound Not Detected.					
95 Bromobenzene	156.00	Compound Not Detected.					
97 1,2,3-Trichloropropane	110.00	Compound Not Detected.					
98 t-1,4-Dichloro-2-butene	53.00	Compound Not Detected.					
96 n-Propylbenzene	120.00	Compound Not Detected.					
99 2-Chlorotoluene	126.00	Compound Not Detected.					
100 1,3,5-Trimethylbenzene	105.00	Compound Not Detected.					
101 4-Chlorotoluene	126.00	Compound Not Detected.					
102 tert-Butylbenzene	119.00	Compound Not Detected.					
103 1,2,4-Trimethylbenzene	105.00	Compound Not Detected.					
104 sec-Butylbenzene	134.00	Compound Not Detected.					
106 m-Dichlorobenzene	146.00	Compound Not Detected.					
105 4-Isopropyltoluene	119.00	Compound Not Detected.					
109 1,2,3-Trimethylbenzene	105.00	Compound Not Detected.					
108 p-dichlorobenzene	146.00	Compound Not Detected.					
110 n-Butylbenzene	91.00	Compound Not Detected.					

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/L)
111 o-Dichlorobenzene	146.00	Compound Not Detected.					
112 1,2-Dibromo-3-chloropropane	157.00	Compound Not Detected.					
113 1,2,4-Trichlorobenzene	180.00	Compound Not Detected.					
114 Hexachlorobutadiene	225.00	Compound Not Detected.					
115 Napthalene	128.00	Compound Not Detected.					
116 1,2,3-Trichlorobenzene	180.00	Compound Not Detected.					

QC Flag Legend

Q - Qualifier signal failed the ratio test.

STL Denver

VOLATILE REPORT SW-846

Data file : /chem/S.i/022004.b/s6732.d
Lab Smp Id: VBLK Client Smp ID: VBLK
Inj Date : 20-FEB-2004 12:12
Operator : appelhansd Inst ID: S.i
Smp Info : VBLK
Misc Info :
Comment :
Method : /chem/S.i/022004.b/S-20ml-h2o.m
Meth Date : 20-Feb-2004 12:58 appelhad Quant Type: ISTD
Cal Date : 19-FEB-2004 17:35 Cal File: s6721.d
Als bottle: 2 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: S-all.sub
Target Version: 3.40
Processing Host: chemsv02

Concentration Formula: Amt * DF * Vp/Vs

Name	Value	Description
DF	1.000	Dilution Factor
Vp	20.000	Purge Volume (ml)
Vs	20.000	Sample Volume Purged (ml)

ISTD	RT	AREA	AMOUNT
* 107 1,4-Dichlorobenzene-d4	13.768	3107361	12.500

	CONCENTRATIONS				QUANT		
RT	AREA	ON-COL(ug/L)	FINAL(ug/L)	QUAL	LIBRARY	LIB ENTRY	CPND #
Unknown				CAS #:			
14.619	1820308	7.32256407	7.32256	0		0	107
Unknown				CAS #:			
15.036	1169567	4.70482429	4.70482	0		0	107
Acetic acid, 2-ethylhexyl ester				CAS #: 103-09-3			
15.199	17517814	70.4690170	70.4690	91	NBS75K.1	15793	107

Data File: /chem/S.i/022004.b/s6732.d Page 6
Report Date: 20-Feb-2004 13:00

RT	AREA	CONCENTRATIONS ON-COL(ug/L)	FINAL(ug/L)	QUAL	QUANT LIBRARY	LIB ENTRY	CPND #
Unknown				CAS #:			
15.489	505368	2.03294693	2.03295	0		0	107
Unknown				CAS #:			
16.086	408472	1.64316280	1.64316	0		0	107
Unknown				CAS #:			
16.213	4636763	18.6523347	18.6523	0		0	107
Hexadecane				CAS #: 544-76-3			
16.340	1730693	6.96206926	6.96207	83	NBS75K.l	70785	107
Unknown				CAS #:			
16.594	1761819	7.08728001	7.08728	0		0	107
Dodecane, 2,6,11-trimethyl-				CAS #: 31295-56-4			
16.902	1245849	5.01168435	5.01168	87	NBS75K.l	70272	107

Data File: /chem/S.i/022004.b/s6732.d
Report Date: 20-Feb-2004 13:00

STL Denver

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: S.i
Lab File ID: s6732.d
Lab Smp Id: VBLK
Analysis Type: VOA
Quant Type: ISTD
Operator: appelhansd
Method File: /chem/S.i/022004.b/S-20ml-h2o.m
Misc Info:

Calibration Date: 02/20/4
Calibration Time: 1103
Client Smp ID: VBLK
Level: LOW
Sample Type: WATER

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
56 Fluorobenzene	1717585	858792	3435170	1536818	-10.52
82 Chlorobenzene-d5	368273	184136	736546	326394	-11.37
107 1,4-Dichlorobenze	525307	262654	1050614	480178	-8.59

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
56 Fluorobenzene	7.14	6.64	7.64	7.12	-0.25
82 Chlorobenzene-d5	10.72	10.22	11.22	10.71	-0.17
107 1,4-Dichlorobenze	13.79	13.29	14.29	13.77	-0.13

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem/S.i/022004.b/s6732.d
Report Date: 20-Feb-2004 13:00

STL Denver

RECOVERY REPORT

Client Name:
Sample Matrix: LIQUID
Lab Smp Id: VBLK
Level: LOW
Data Type: MS DATA
SpikeList File: dcs.spk
Sublist File: S-all.sub
Method File: /chem/S.i/022004.b/S-20ml-h2o.m
Misc Info:

Client SDG: 022004
Fraction: VOA
Client Smp ID: VBLK
Operator: appelhansd
SampleType: BLANK
Quant Type: ISTD

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 46 Dibromofluorometha	10.0000	10.7284	107.28	76-116
$ 52 1,2-Dichloroethane	10.0000	10.0356	100.36	59-129
$ 70 Toluene-d8	10.0000	10.3974	103.97	76-116
$ 93 Bromofluorobenzene	10.0000	10.0114	100.11	74-114

Data File: /chem/S.i/022004.b/s6732.d
Date : 20-FEB-2004 12:12
Client ID: VBLK
Sample Info: VBLK
Purge Volume: 20.0
Column phase: DB624

Instrument: S.i
Operator: appelhansd
Column diameter: 0.53

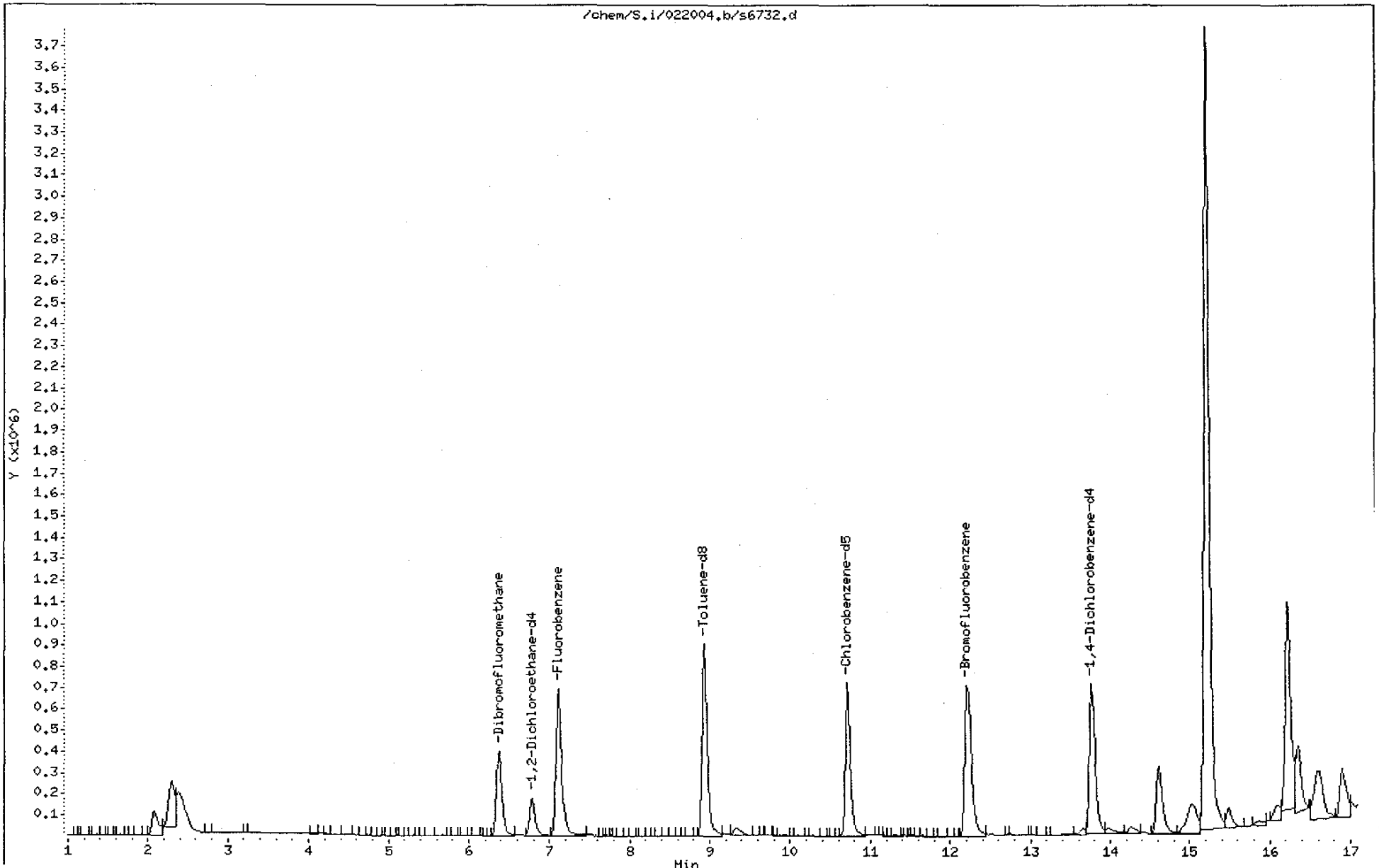


Table of Contents

Data File: /chem/S.i/022004.b/s6732.d

Date : 20-FEB-2004 12:12

Client ID: VBLK

Instrument: S.i

Sample Info: VBLK

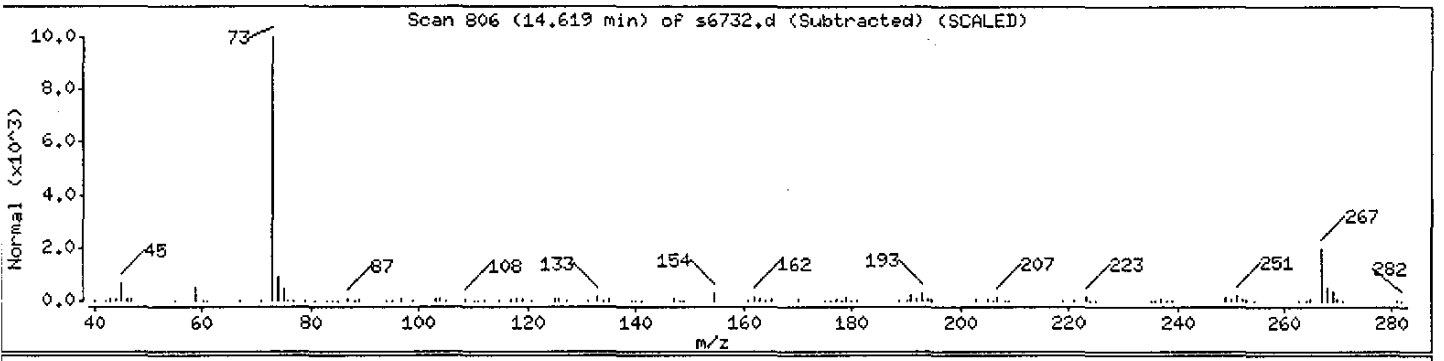
Purge Volume: 20.0

Operator: appelhansd

Column phase: DB624

Column diameter: 0.53

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown			0	0		0



Data File: /chem/S.i/022004.b/s6732.d

Date : 20-FEB-2004 12:12

Client ID: VBLK

Instrument: S.i

Sample Info: VBLK

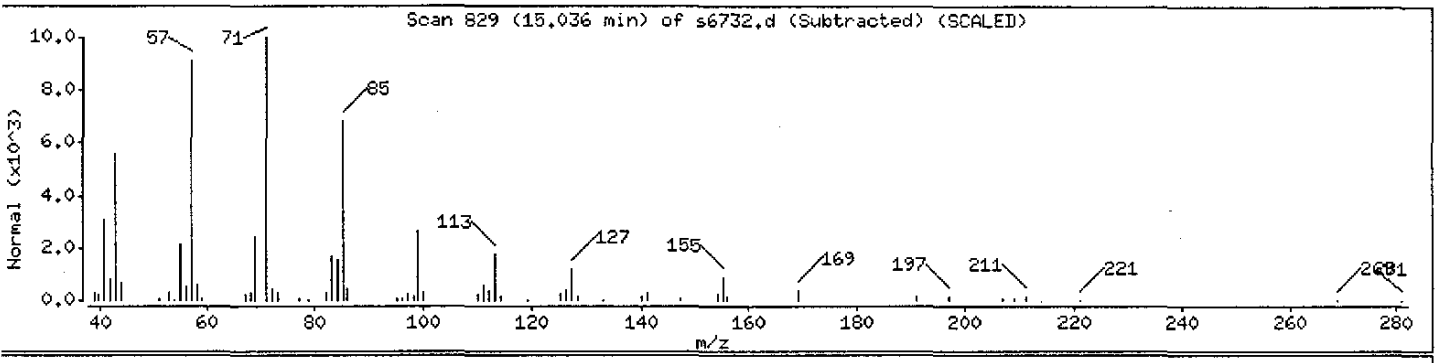
Purge Volume: 20.0

Operator: appelhansd

Column phase: DB624

Column diameter: 0.53

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown			0	0		0



Data File: /chem/S.i/022004.b/s6732.d

Date : 20-FEB-2004 12:12

Client ID: VBLK

Instrument: S.i

Sample Info: VBLK

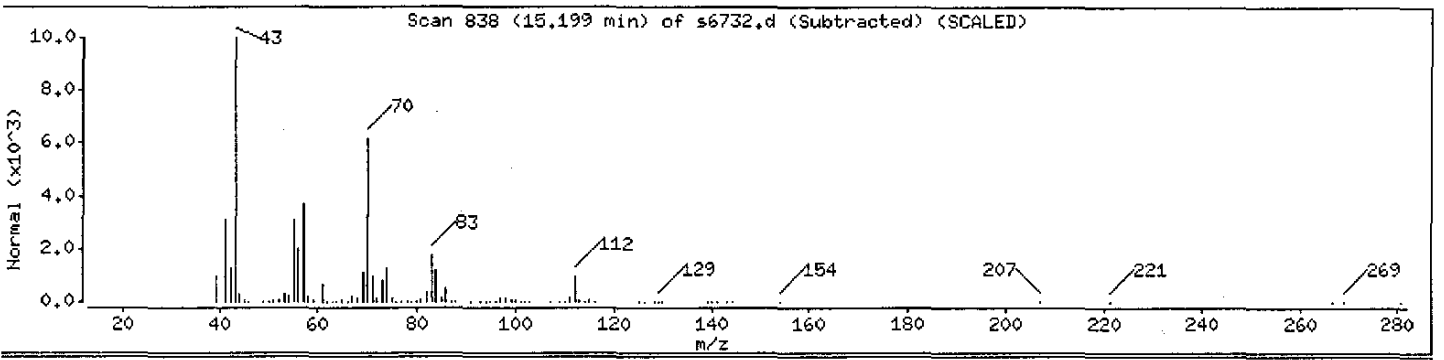
Purge Volume: 20.0

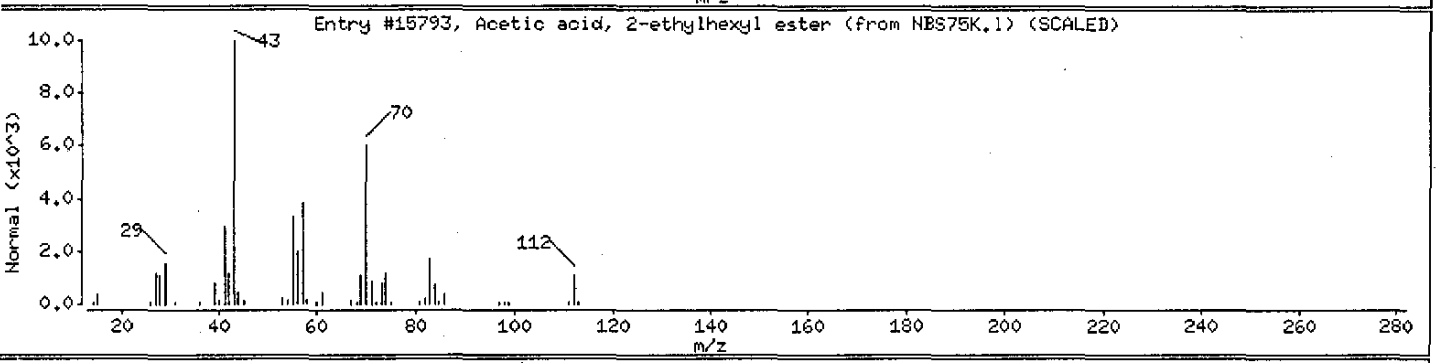
Operator: appelhansd

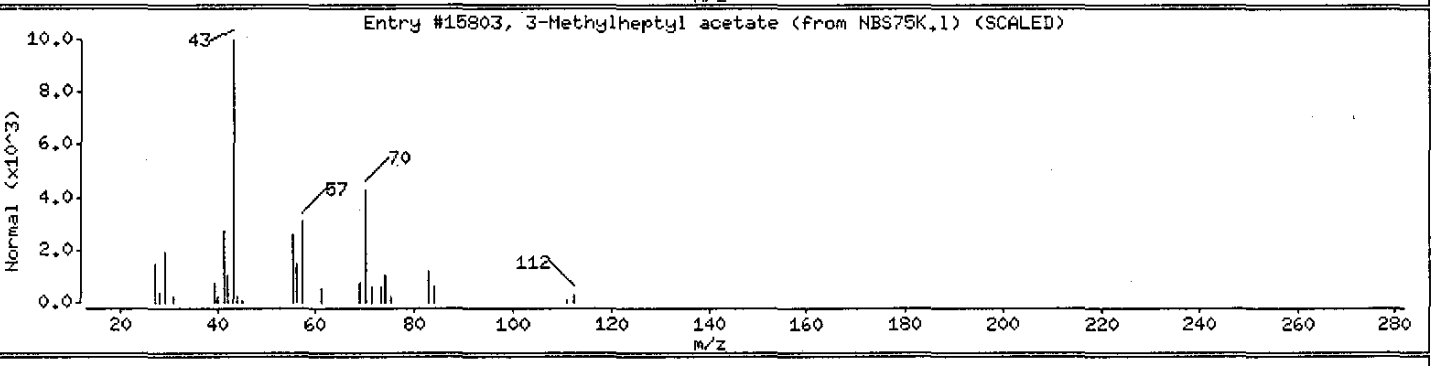
Column phase: DB624

Column diameter: 0.53

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Acetic acid, 2-ethylhexyl ester	103-09-3	NBS75K.l	15793	91	C10H20O2	172
3-Methylheptyl acetate	72218-58-7	NBS75K.l	15803	86	C10H20O2	172







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Date : 20-FEB-2004 12:12

Client ID: VBLK

Instrument: S.i

Sample Info: VBLK

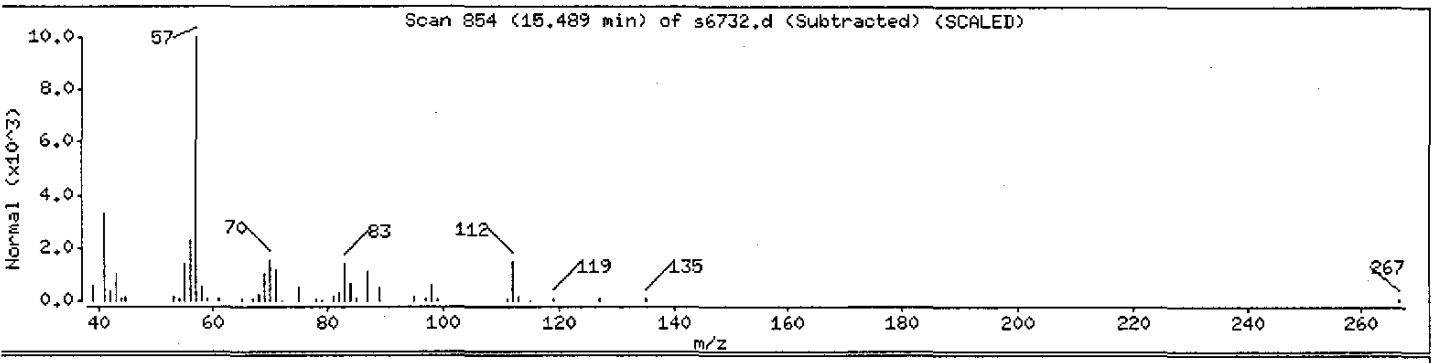
Purge Volume: 20.0

Operator: appelhansd

Column phase: DB624

Column diameter: 0.53

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown			0	0		0



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Date : 20-FEB-2004 12:12

Client ID: VBLK

Instrument: S.i

Sample Info: VBLK

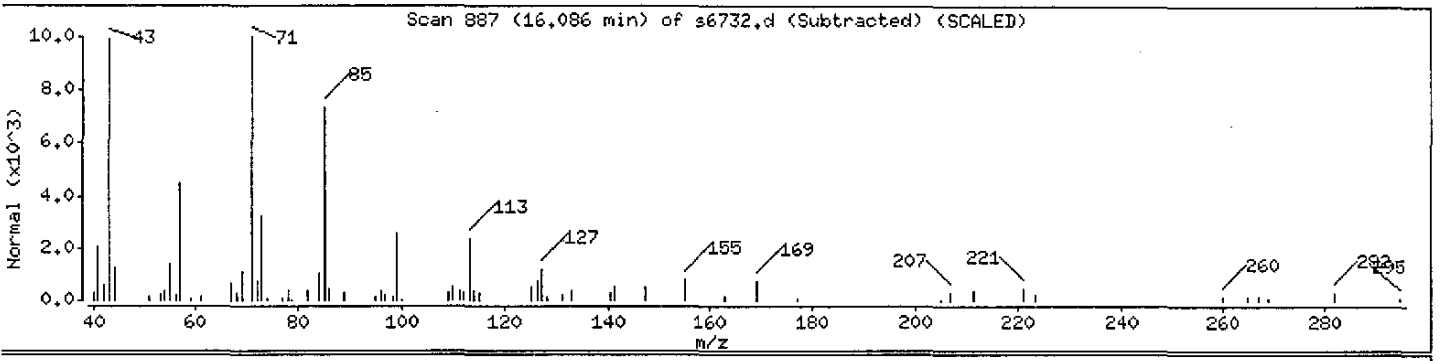
Purge Volume: 20.0

Operator: appelhansd

Column phase: DB624

Column diameter: 0.53

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown			0	0		0



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Date : 20-FEB-2004 12:12

Client ID: VBLK

Instrument: S.i

Sample Info: VBLK

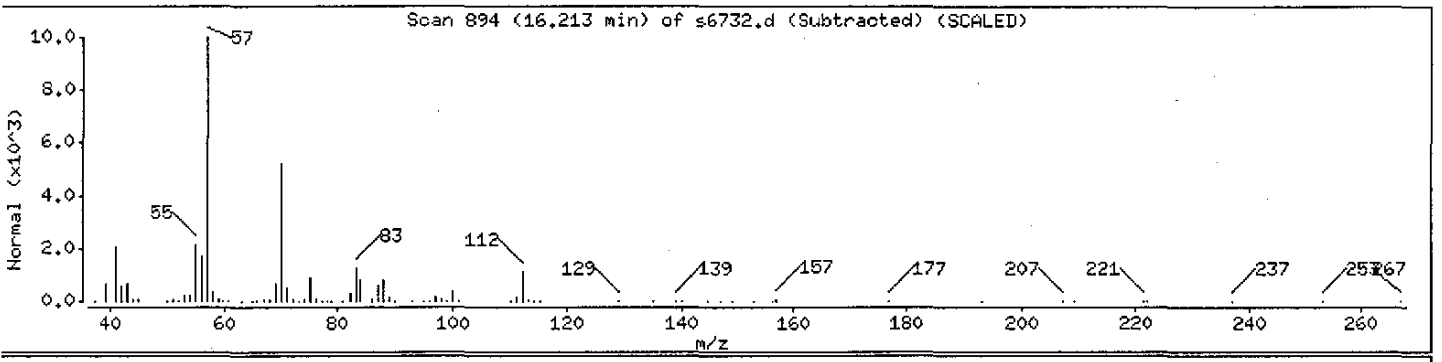
Purge Volume: 20.0

Operator: appelhansd

Column phase: DB624

Column diameter: 0.53

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown			0	0		0



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Date : 20-FEB-2004 12:12

Client ID: VBLK

Instrument: S.i

Sample Info: VBLK

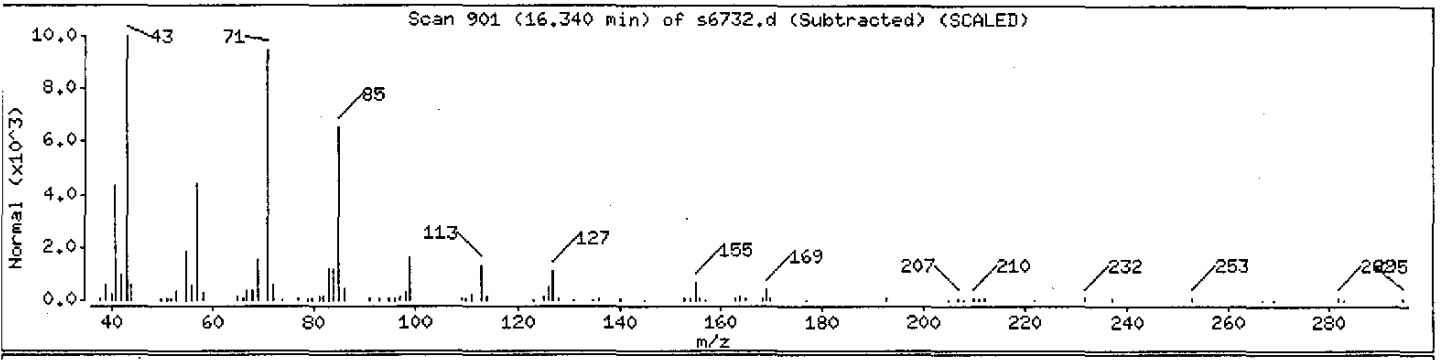
Purge Volume: 20.0

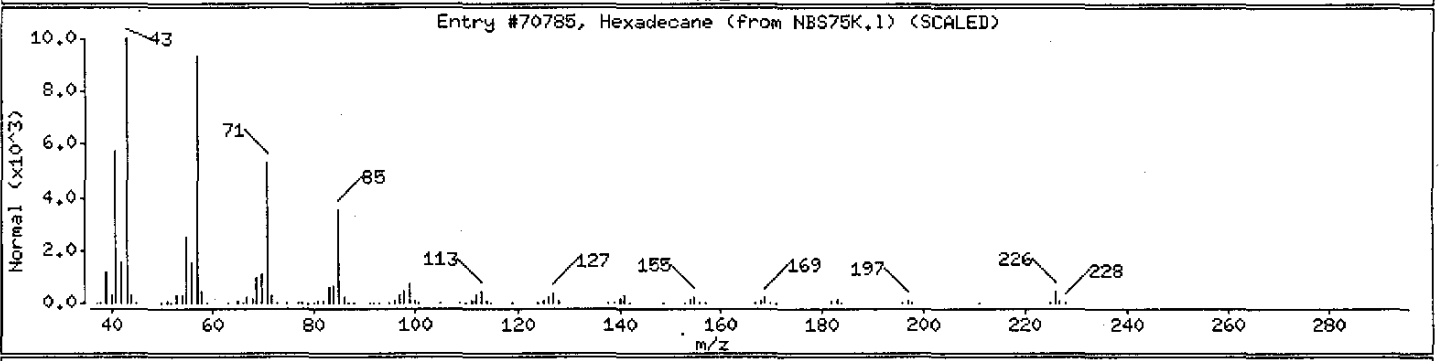
Operator: appelhansd

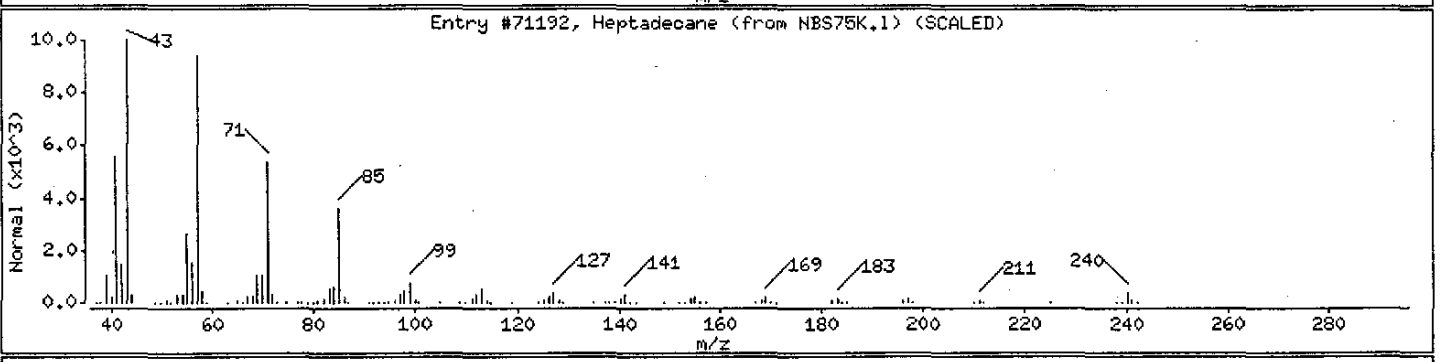
Column phase: DB624

Column diameter: 0.53

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Hexadecane	544-76-3	NBS75K.1	70785	83	C16H34	226
Heptadecane	629-78-7	NBS75K.1	71192	83	C17H36	240







Data File: /chem/S.i/022004.b/s6732.d

Date : 20-FEB-2004 12:12

Client ID: VBLK

Instrument: S.i

Sample Info: VBLK

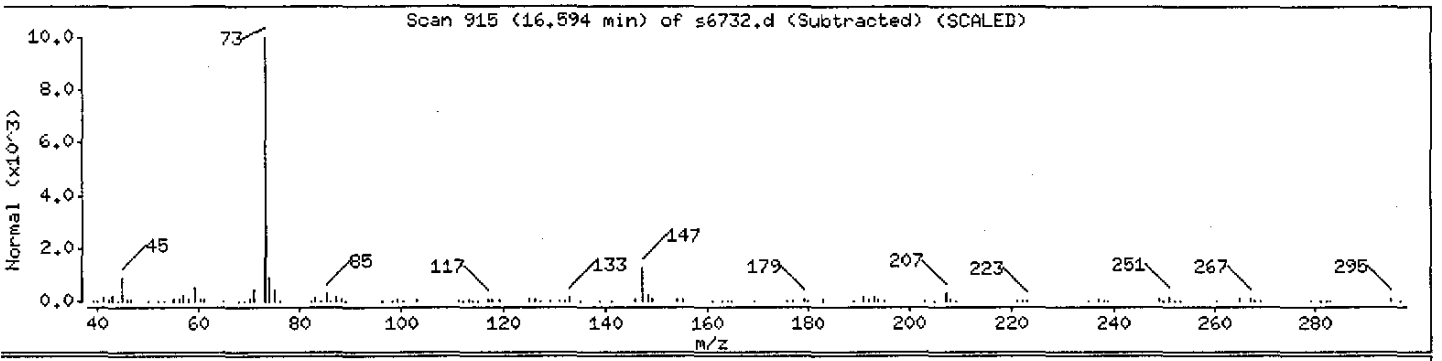
Purge Volume: 20.0

Operator: appelhansd

Column phase: DB624

Column diameter: 0.53

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown			0	0		0



Data File: /chem/S.i/022004.b/s6732.d

Date : 20-FEB-2004 12:12

Client ID: VBLK

Instrument: S.i

Sample Info: VBLK

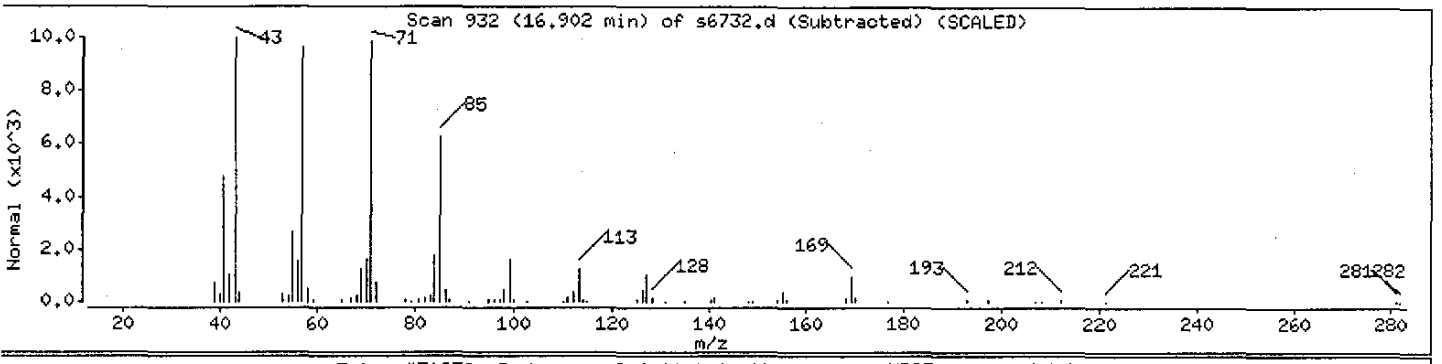
Purge Volume: 20.0

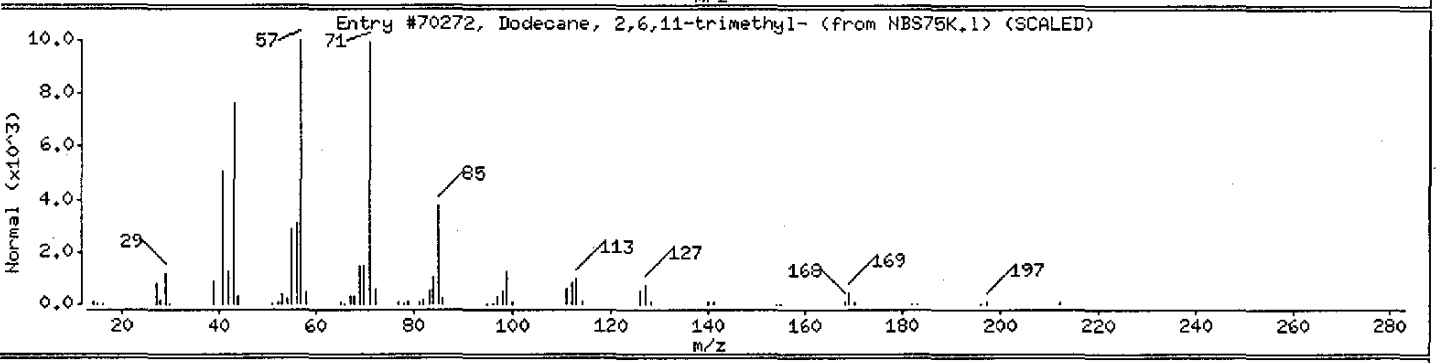
Operator: appelhansd

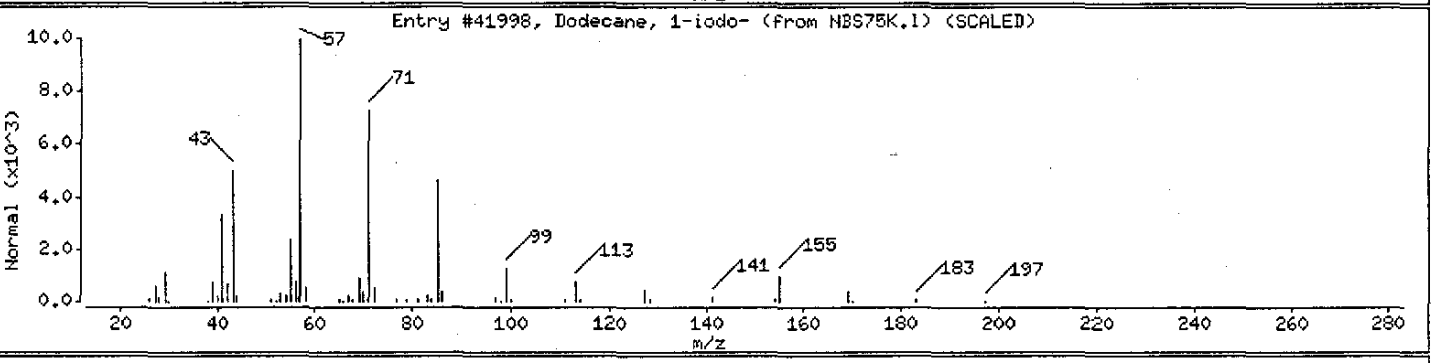
Column phase: DB624

Column diameter: 0.53

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Dodecane, 2,6,11-trimethyl-	31295-56-4	NBS75K.l	70272	87	C15H32	212
Dodecane, 1-iodo-	4292-19-7	NBS75K.l	41998	80	C12H25I	296







Data File: /chem/S.i/022004.b/s6742.d
Report Date: 23-Feb-2004 08:16

STL Denver

VOLATILE REPORT SW-846

Data file : /chem/S.i/022004.b/s6742.d
Lab Smp Id: F9KFF1AA Client Smp ID: DUP#2
Inj Date : 20-FEB-2004 17:12
Operator : appelhansd Inst ID: S.i
Smp Info : F9KFF1AA,2,D4B130209-015
Misc Info :
Comment :
Method : /chem/S.i/022004.b/S-20ml-h2o.m
Meth Date : 20-Feb-2004 12:58 appelhad Quant Type: ISTD
Cal Date : 19-FEB-2004 17:35 Cal File: s6721.d
Als bottle: 2
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: S-all.sub
Target Version: 3.40
Processing Host: chemsv02

Concentration Formula: Amt * DF * Vp/Vs

Name	Value	Description
DF	1.000	Dilution Factor
Vp	20.000	Purge Volume (ml)
Vs	2.000	Sample Volume Purged (ml)

2.2 %
T.C.

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/L)	
* 56 Fluorobenzene	96	7.117	7.137	(1.000)	1439114	12.5000		
* 82 Chlorobenzene-d5	119	10.722	10.724	(1.000)	302753	12.5000		
* 107 1,4-Dichlorobenzene-d4	152	13.765	13.786	(1.000)	431879	12.5000		(Q)
$ 46 Dibromofluoromethane	111	6.374	6.395	(0.896)	606735	10.6437	106.437	
$ 52 1,2-Dichloroethane-d4	65	6.791	6.811	(0.954)	273150	10.0214	100.214	
$ 70 Toluene-d8	98	8.947	8.949	(0.834)	1228092	10.0113	100.113	
$ 93 Bromofluorobenzene	95	12.225	12.228	(1.140)	686403	9.86918	98.6918	
M 1 1,2-Dichloroethene (total)	96				1120562	27.7441	277.441	
M 2 Xylene (total)	106.00	Compound Not Detected.						
3 dichlorodifluoromethane	85.00	Compound Not Detected.						
5 Dichlorotetrafluoroethane	85.00	Compound Not Detected.						
4 Chloromethane	50.00	Compound Not Detected.						
6 Vinyl Chloride	62	2.878	2.878	(0.404)	2005756	55.2232	552.232	
7 Ethylene Oxide	43.00	Compound Not Detected.						
8 Bromomethane	94.00	Compound Not Detected.						
9 Chloroethane	64.00	Compound Not Detected.						

Data File: /chem/S.i/022004.b/s6742.d
Report Date: 23-Feb-2004 08:16

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/L)
10 Dichlorofluoromethane	67.00	Compound Not Detected.					
11 Trichlorofluoromethane	101.00	Compound Not Detected.					
12 Ethanol	45.00	Compound Not Detected.					
13 Ethyl Ether	59.00	Compound Not Detected.					
14 1,2-Dichloro-1,1,2-trifluorome	117.00	Compound Not Detected.					
16 Acrolein	56.00	Compound Not Detected.					
15 2,2-Dichloro-1,1,1-trifluorome	83.00	Compound Not Detected.					
18 1,1-Dichloroethene	96.00	Compound Not Detected.					
19 Acetone	43.00	Compound Not Detected.					
17 Trichlorotrifluoroethane	151.00	Compound Not Detected.					
21 Iodomethane	142.00	Compound Not Detected.					
20 2-Propanol	45.00	Compound Not Detected.					
22 Carbon Disulfide	76.00	Compound Not Detected.					
25 Acetonitrile	41.00	Compound Not Detected.					
24 Allyl Chloride	41.00	Compound Not Detected.					
23 Methyl Acetate	74.00	Compound Not Detected.					
26 Methylene Chloride	84.00	Compound Not Detected.					
27 tert-Butyl alcohol	59.00	Compound Not Detected.					
30 Acrylonitrile	53.00	Compound Not Detected.					
29 trans-1,2-Dichloroethene	96	4.726	4.725	(0.664)	108986	2.47203	24.7203
28 Methyl t-butyl ether	73.00	Compound Not Detected.					
31 Hexane	57.00	Compound Not Detected.					
33 1,1-Dichloroethane	63	5.215	5.233	(0.733)	69983	1.04729	10.4729
34 Vinyl acetate	43.00	Compound Not Detected.					
32 Isopropyl ether	87.00	Compound Not Detected.					
35 Chloroprene	53.00	Compound Not Detected.					
36 ETBE	59.00	Compound Not Detected.					
39 cis-1,2-Dichloroethene	96	5.867	5.867	(0.824)	1011576	25.2720	252.720
40 2-Butanone	43.00	Compound Not Detected.					
37 2,2-Dichloropropane	77.00	Compound Not Detected.					
41 Propionitrile	54.00	Compound Not Detected.					
38 Ethyl Acetate	43.00	Compound Not Detected.					
42 Methacrylonitrile	41.00	Compound Not Detected.					
43 Bromochloromethane	128.00	Compound Not Detected.					
45 Chloroform	83.00	Compound Not Detected.					
44 Tetrahydrofuran	42.00	Compound Not Detected.					
47 1,1,1-Trichloroethane	97.00	Compound Not Detected.					
48 Cyclohexane	56.00	Compound Not Detected.					
50 1,1-Dichloropropene	75.00	Compound Not Detected.					
49 Carbon Tetrachloride	117.00	Compound Not Detected.					
51 Isobutanol	41.00	Compound Not Detected.					
53 Benzene	78.00	Compound Not Detected.					
55 1,2-Dichloroethane	62.00	Compound Not Detected.					
54 TAME	73.00	Compound Not Detected.					
57 n-Butanol	56.00	Compound Not Detected.					
58 Trichloroethene	130.00	Compound Not Detected.					
60 2-Pentanone	43.00	Compound Not Detected.					

Data File: /chem/S.i/022004.b/s6742.d
Report Date: 23-Feb-2004 08:16

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/L)
59 Methyl-Cyclohexane	55.00	Compound Not Detected.					
61 1,2-Dichloropropane	63.00	Compound Not Detected.					
62 Methyl Methacrylate	100.00	Compound Not Detected.					
64 Dibromomethane	93.00	Compound Not Detected.					
63 1,4-Dioxane	88.00	Compound Not Detected.					
65 Bromodichloromethane	83.00	Compound Not Detected.					
78 Tetrahydrothiophene	60.00	Compound Not Detected.					
66 2-nitropropane	41.00	Compound Not Detected.					
67 2-Chloroethyl vinyl ether	63.00	Compound Not Detected.					
68 cis-1,3-Dichloropropene	75.00	Compound Not Detected.					
69 4-Methyl-2-pentanone	43.00	Compound Not Detected.					
71 Toluene	91.00	Compound Not Detected.					
72 trans-1,3-Dichloropropene	75.00	Compound Not Detected.					
73 Ethyl methacrylate	69.00	Compound Not Detected.					
74 1,1,2-Trichloroethane	97.00	Compound Not Detected.					
76 1,3-Dichloropropane	76.00	Compound Not Detected.					
75 Tetrachloroethene	164.00	Compound Not Detected.					
77 2-Hexanone	43.00	Compound Not Detected.					
79 Dibromochloromethane	129.00	Compound Not Detected.					
80 1,2-Dibromoethane	107.00	Compound Not Detected.					
81 1-Chlorohexane	91.00	Compound Not Detected.					
83 Chlorobenzene	112.00	Compound Not Detected.					
85 1,1,1,2-Tetrachloroethane	131.00	Compound Not Detected.					
84 Ethylbenzene	106.00	Compound Not Detected.					
86 m and p-Xylene	106.00	Compound Not Detected.					
87 o-Xylene	106.00	Compound Not Detected.					
88 Styrene	104.00	Compound Not Detected.					
89 Bromoform	173.00	Compound Not Detected.					
90 isopropyl benzene	105.00	Compound Not Detected.					
92 Cyclohexanone	55.00	Compound Not Detected.					
91 cis-1,4-dichloro-2-butene	53.00	Compound Not Detected.					
94 1,1,2,2-Tetrachloroethane	83.00	Compound Not Detected.					
95 Bromobenzene	156.00	Compound Not Detected.					
97 1,2,3-Trichloropropane	110.00	Compound Not Detected.					
98 t-1,4-Dichloro-2-butene	53.00	Compound Not Detected.					
96 n-Propylbenzene	120.00	Compound Not Detected.					
99 2-Chlorotoluene	126.00	Compound Not Detected.					
100 1,3,5-Trimethylbenzene	105.00	Compound Not Detected.					
101 4-Chlorotoluene	126.00	Compound Not Detected.					
102 tert-Butylbenzene	119.00	Compound Not Detected.					
103 1,2,4-Trimethylbenzene	105.00	Compound Not Detected.					
104 sec-Butylbenzene	134.00	Compound Not Detected.					
106 m-Dichlorobenzene	146.00	Compound Not Detected.					
105 4-Isopropyltoluene	119.00	Compound Not Detected.					
109 1,2,3-Trimethylbenzene	105.00	Compound Not Detected.					
108 p-dichlorobenzene	146.00	Compound Not Detected.					
110 n-Butylbenzene	91.00	Compound Not Detected.					

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/L)
111 o-Dichlorobenzene	146.00	Compound Not Detected.					
112 1,2-Dibromo-3-chloropropane	157.00	Compound Not Detected.					
113 1,2,4-Trichlorobenzene	180.00	Compound Not Detected.					
114 Hexachlorobutadiene	225.00	Compound Not Detected.					
115 Napthalene	128.00	Compound Not Detected.					
116 1,2,3-Trichlorobenzene	180.00	Compound Not Detected.					

QC Flag Legend

Q - Qualifier signal failed the ratio test.

STL Denver

VOLATILE REPORT SW-846

Data file : /chem/S.i/022004.b/s6742.d
Lab Smp Id: F9KFF1AA Client Smp ID: DUP#2
Inj Date : 20-FEB-2004 17:12
Operator : appelhansd Inst ID: S.i
Smp Info : F9KFF1AA,2,D4B130209-015
Misc Info :
Comment :
Method : /chem/S.i/022004.b/S-20ml-h2o.m
Meth Date : 20-Feb-2004 12:58 appelhad Quant Type: ISTD
Cal Date : 19-FEB-2004 17:35 Cal File: s6721.d
Als bottle: 2
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: S-all.sub
Target Version: 3.40
Processing Host: chemsv02

Concentration Formula: Amt * DF * Vp/Vs

Name	Value	Description
DF	1.000	Dilution Factor
Vp	20.000	Purge Volume (ml)
Vs	2.000	Sample Volume Purged (ml)

ISTD	RT	AREA	AMOUNT
* 107 1,4-Dichlorobenzene-d4	13.765	2742136	12.500

		CONCENTRATIONS			QUANT		
RT	AREA	ON-COL(ug/L)	FINAL(ug/L)	QUAL	LIBRARY	LIB ENTRY	CPND #
Unknown				CAS #:			
14.617	2229676	10.1639561	101.640	0		0	107
Docosane				CAS #: 629-97-0			
15.015	1105077	5.03748264	50.3748	91	NBS75K.l	44318	107
Acetic acid, 2-ethylhexyl ester				CAS #: 103-09-3			
15.214	4946475	22.5484577	225.484	91	NBS75K.l	15793	107

Data File: /chem/S.i/022004.b/s6742.d Page 6
Report Date: 23-Feb-2004 08:16

		CONCENTRATIONS			QUANT		
RT	AREA	ON-COL(ug/L)	FINAL(ug/L)	QUAL	LIBRARY	LIB ENTRY	CPND #
Unknown				CAS #:			
16.084	411850	1.87741418	18.7741	0		0	107
Unknown				CAS #:			
16.229	2536393	11.5621226	115.621	0		0	107
Unknown				CAS #:			
16.609	2236595	10.1954963	101.955	0		0	107

Data File: /chem/S.i/022004.b/s6742.d
Report Date: 23-Feb-2004 08:16

STL Denver

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: S.i
Lab File ID: s6742.d
Lab Smp Id: F9KFF1AA
Analysis Type: VOA
Quant Type: ISTD
Operator: appelhansd
Method File: /chem/S.i/022004.b/S-20ml-h2o.m
Misc Info:

Calibration Date: 02/20/4
Calibration Time: 1103
Client Smp ID: DUP#2
Level: LOW
Sample Type: WATER

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
56 Fluorobenzene	1717585	858792	3435170	1439114	-16.21
82 Chlorobenzene-d5	368273	184136	736546	302753	-17.79
107 1,4-Dichlorobenze	525307	262654	1050614	431879	-17.79

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
56 Fluorobenzene	7.14	6.64	7.64	7.12	-0.29
82 Chlorobenzene-d5	10.72	10.22	11.22	10.72	-0.02
107 1,4-Dichlorobenze	13.79	13.29	14.29	13.77	-0.15

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem/S.i/022004.b/s6742.d Page 8
Report Date: 23-Feb-2004 08:16

STL Denver

RECOVERY REPORT

Client Name: ARCADIS GERAGHTY & M13-FEB-2004 Client SDG: D4B130209
Sample Matrix: LIQUID Fraction: VOA
Lab Smp Id: F9KFF1AA Client Smp ID: DUP#2
Level: LOW Operator: appelhansd
Data Type: MS DATA SampleType: SAMPLE
SpikeList File: dcs.spk Quant Type: ISTD
Sublist File: S-all.sub
Method File: /chem/S.i/022004.b/S-20ml-h2o.m
Misc Info:

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 46 Dibromofluorometha	100.000	106.437	106.44	76-116
$ 52 1,2-Dichloroethane	100.000	100.214	100.21	59-129
$ 70 Toluene-d8	100.000	100.113	100.11	76-116
$ 93 Bromofluorobenzene	100.000	98.6918	98.69	74-114

Data File: /chem/S.i/022004.b/s6742.d
Date : 20-FEB-2004 17:12
Client ID: DUP#2
Sample Info: F9KFF1AA,2,D4B130209-015
Purge Volume: 20.0
Column phase: DB624

Instrument: S.i
Operator: appelhansd
Column diameter: 0.53

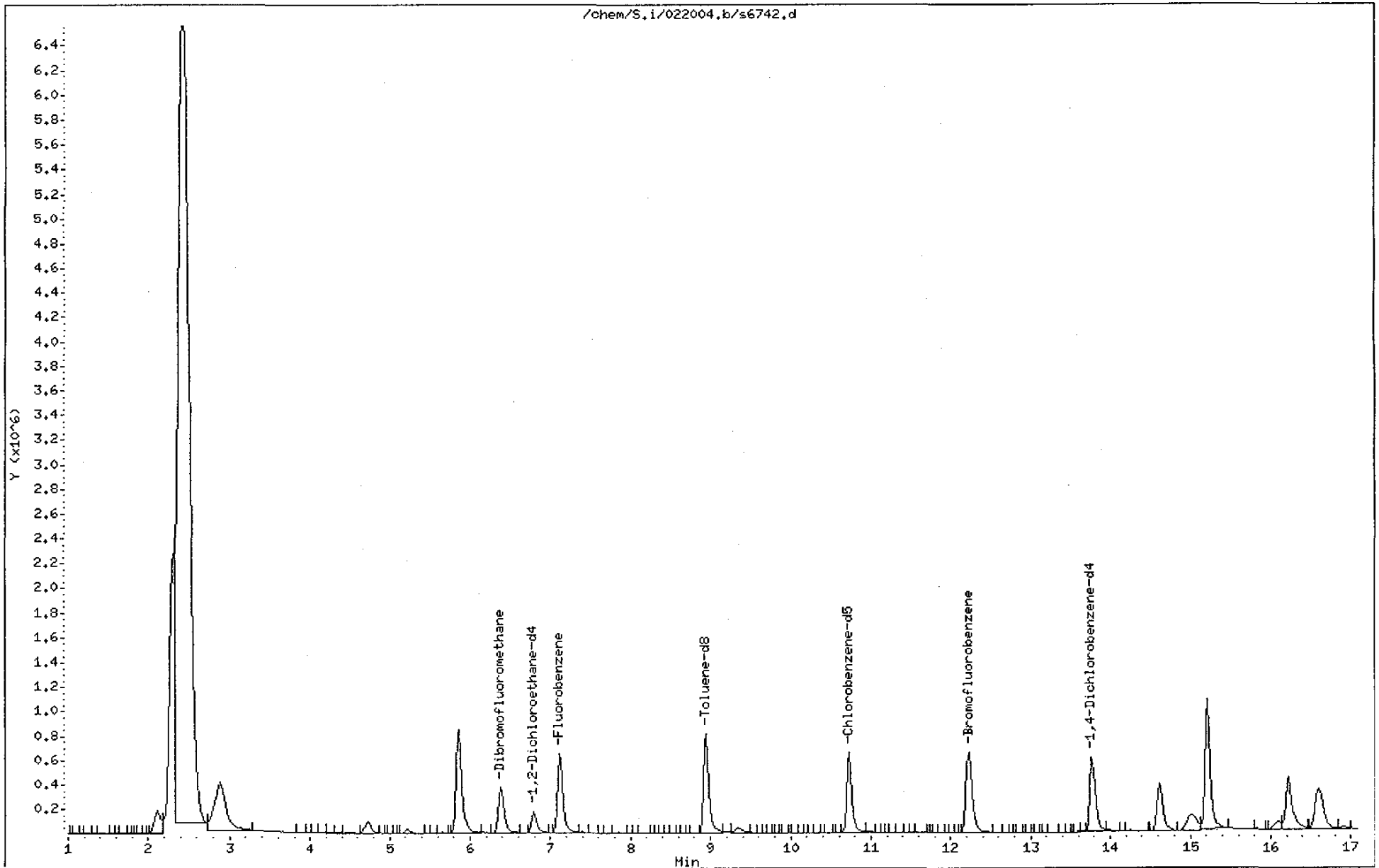


Table of Contents

Data File: /chem/S.i/022004.b/s6742.d

Date : 20-FEB-2004 17:12

Client ID: DUP#2

Instrument: S.i

Sample Info: F9KFF1AA,2,D4B130209-015

Purge Volume: 20.0

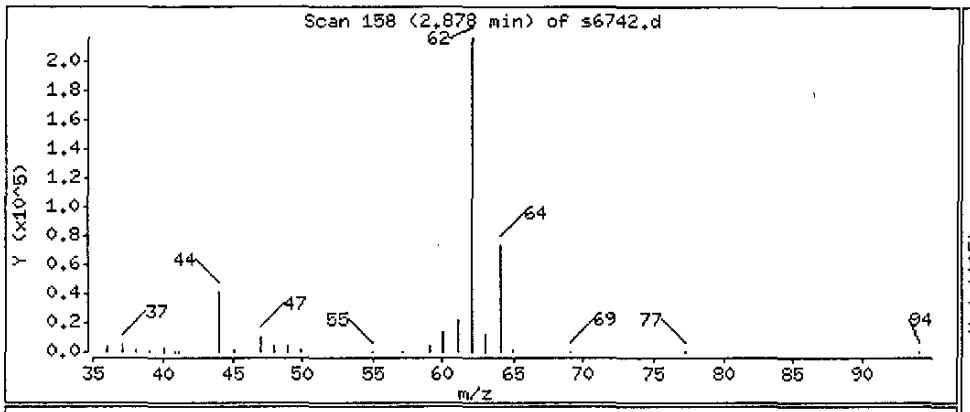
Operator: appelhansd

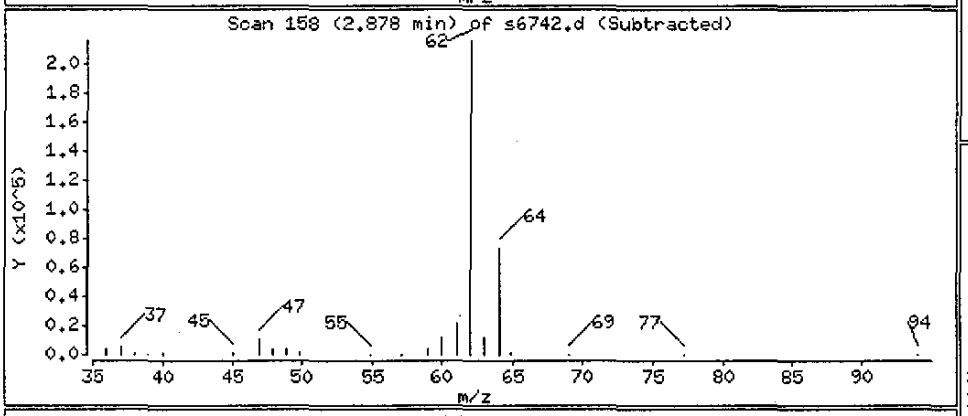
Column phase: DB624

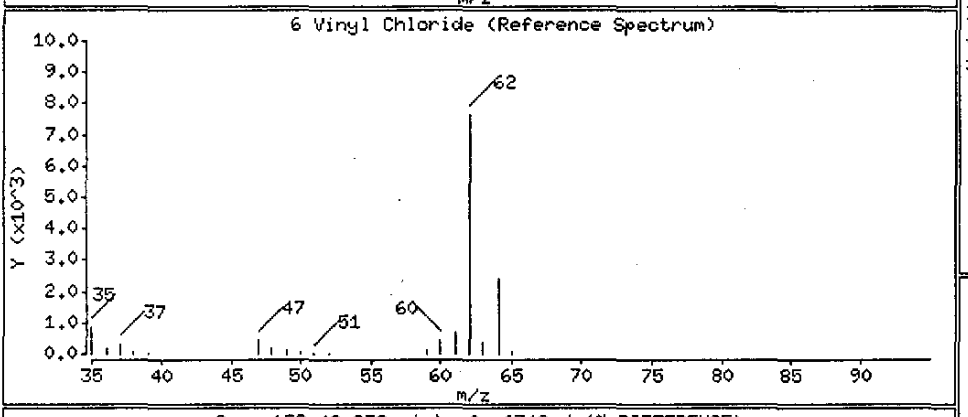
Column diameter: 0.53

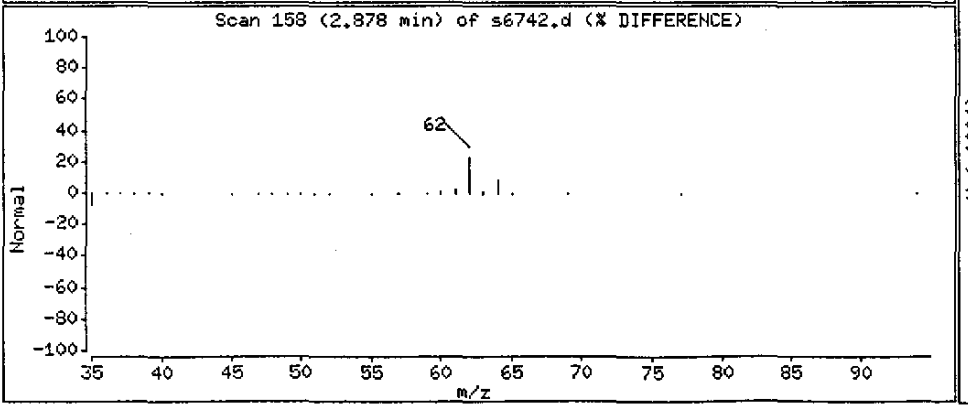
6 Vinyl Chloride

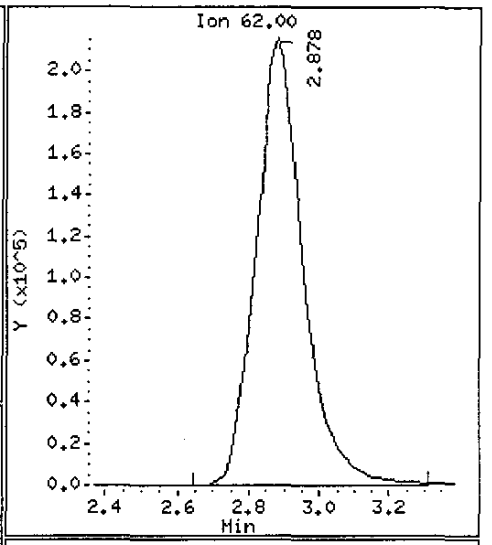
Concentration: 552.232 ug/L

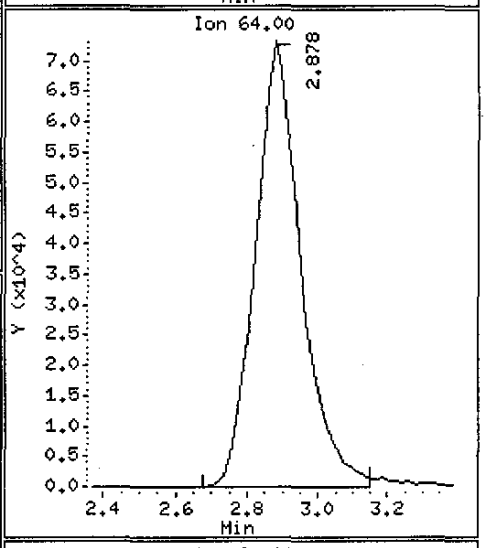


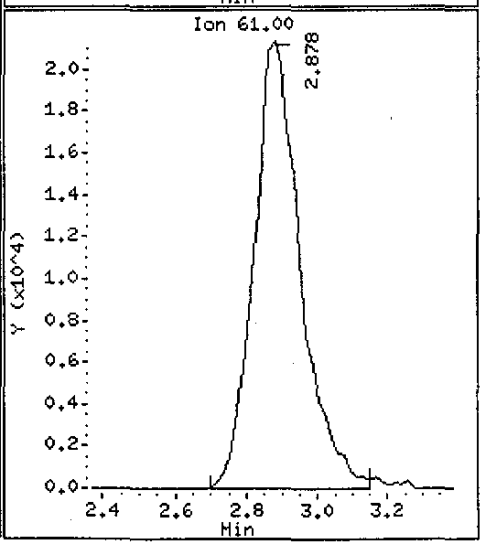












Data File: /chem/S.i/022004.b/s6742.d

Date : 20-FEB-2004 17:12

Client ID: DUP#2

Instrument: S.i

Sample Info: F9KFF1AA,2,D4B130209-015

Purge Volume: 20.0

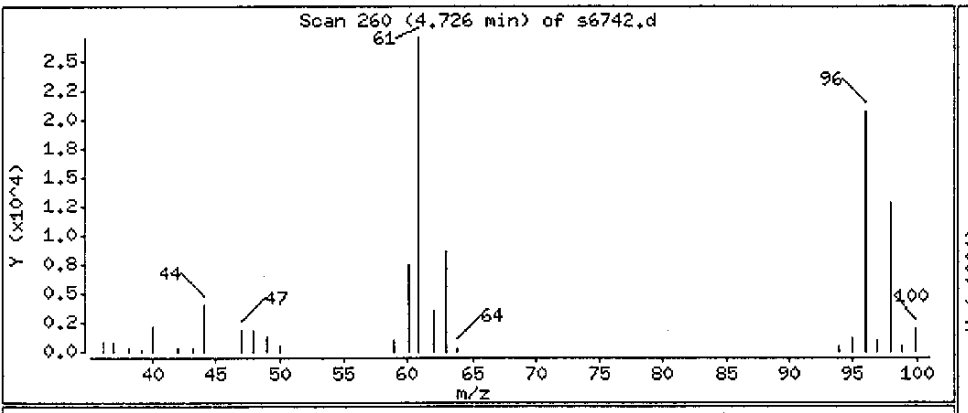
Operator: appelhansd

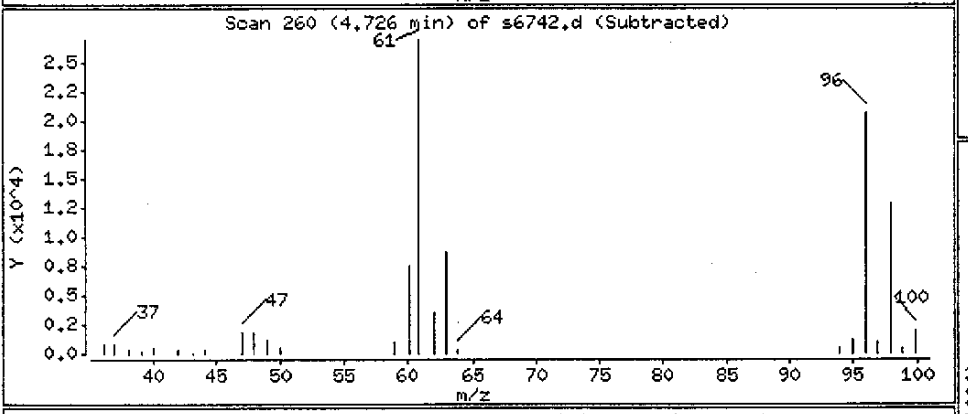
Column phase: DB624

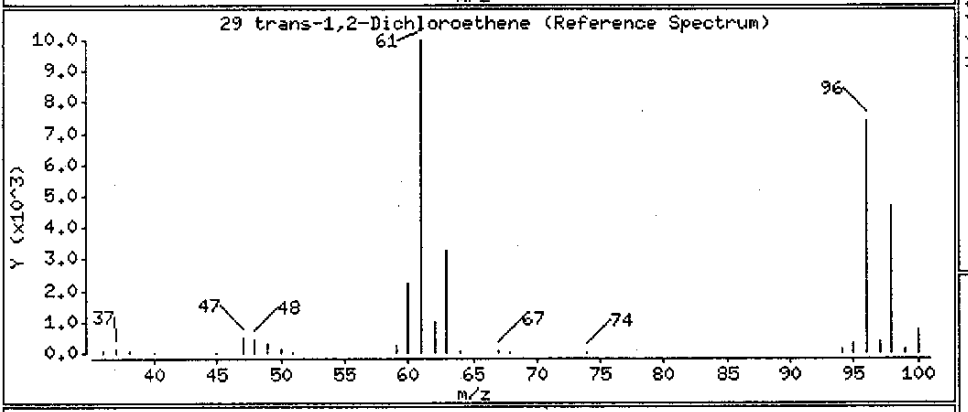
Column diameter: 0.53

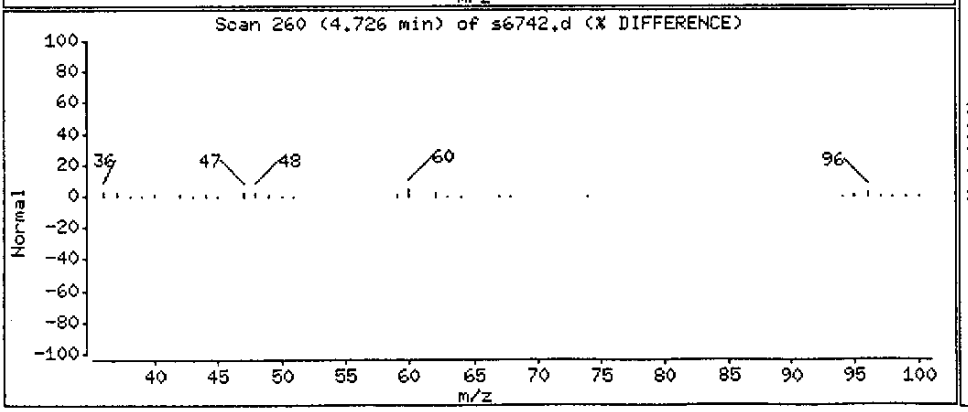
29 trans-1,2-Dichloroethene

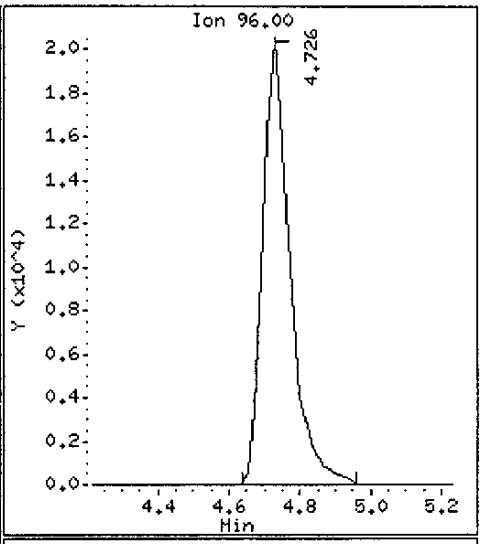
Concentration: 24.7203 ug/L

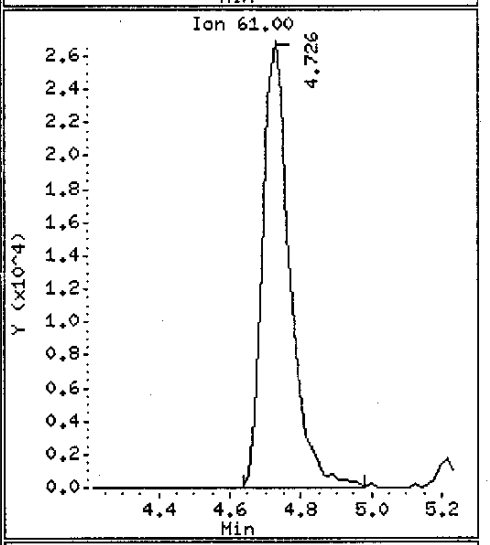


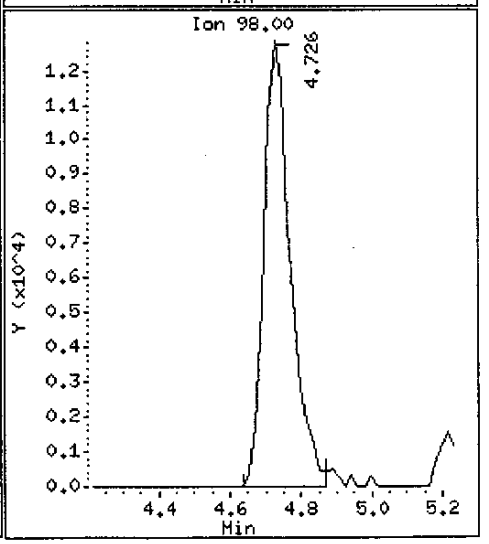












Data File: /chem/S.i/022004.b/s6742.d

Date : 20-FEB-2004 17:12

Client ID: DUP#2

Instrument: S.i

Sample Info: F9KFF1AA,2,D4B130209-015

Purge Volume: 20.0

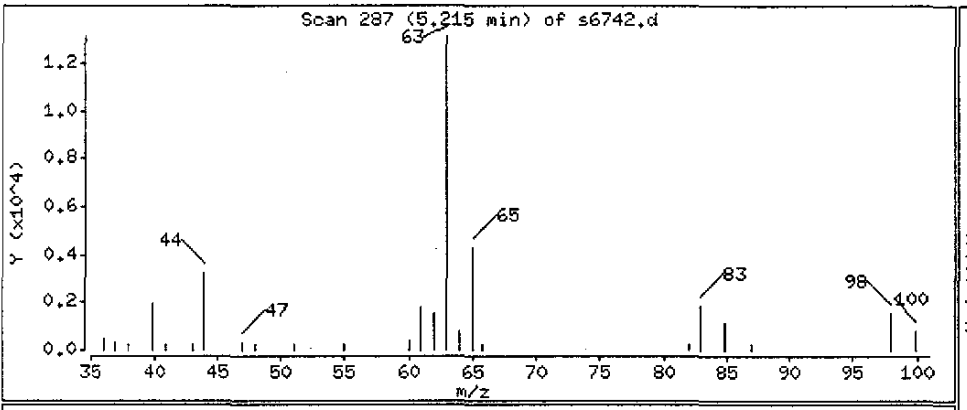
Operator: appelhansd

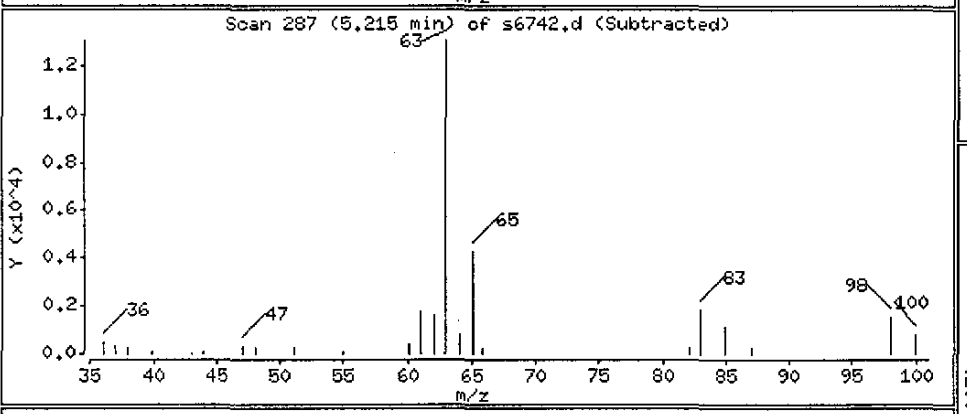
Column phase: DB624

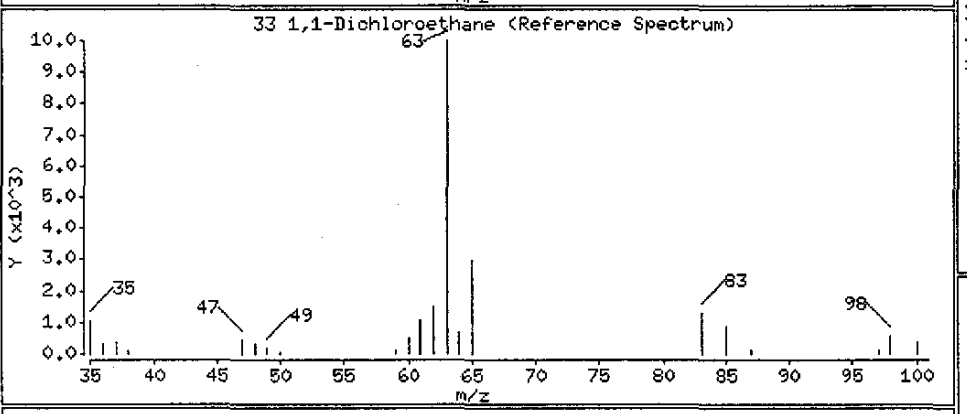
Column diameter: 0.53

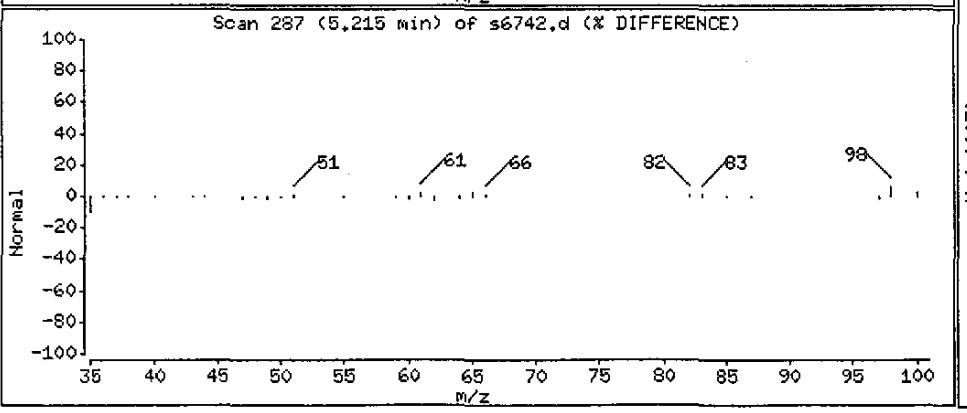
33 1,1-Dichloroethane

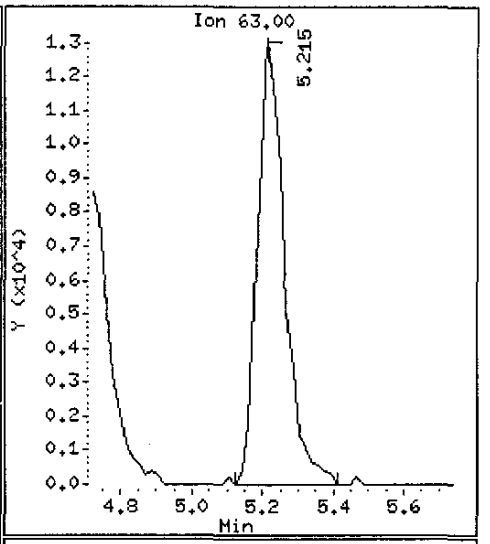
Concentration: 10.4729 ug/L

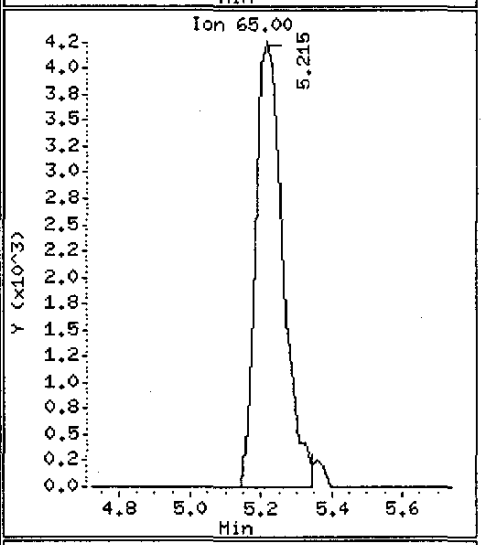


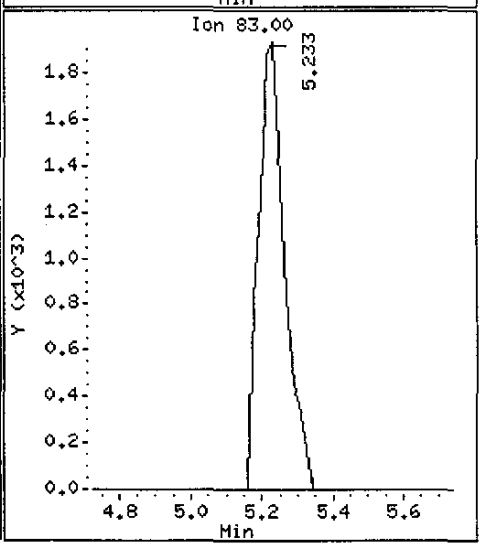












Data File: /chem/S.i/022004.b/s6742.d

Date : 20-FEB-2004 17:12

Client ID: DUP#2

Instrument: S.i

Sample Info: F9KFF1AA,2,D4B130209-015

Purge Volume: 20.0

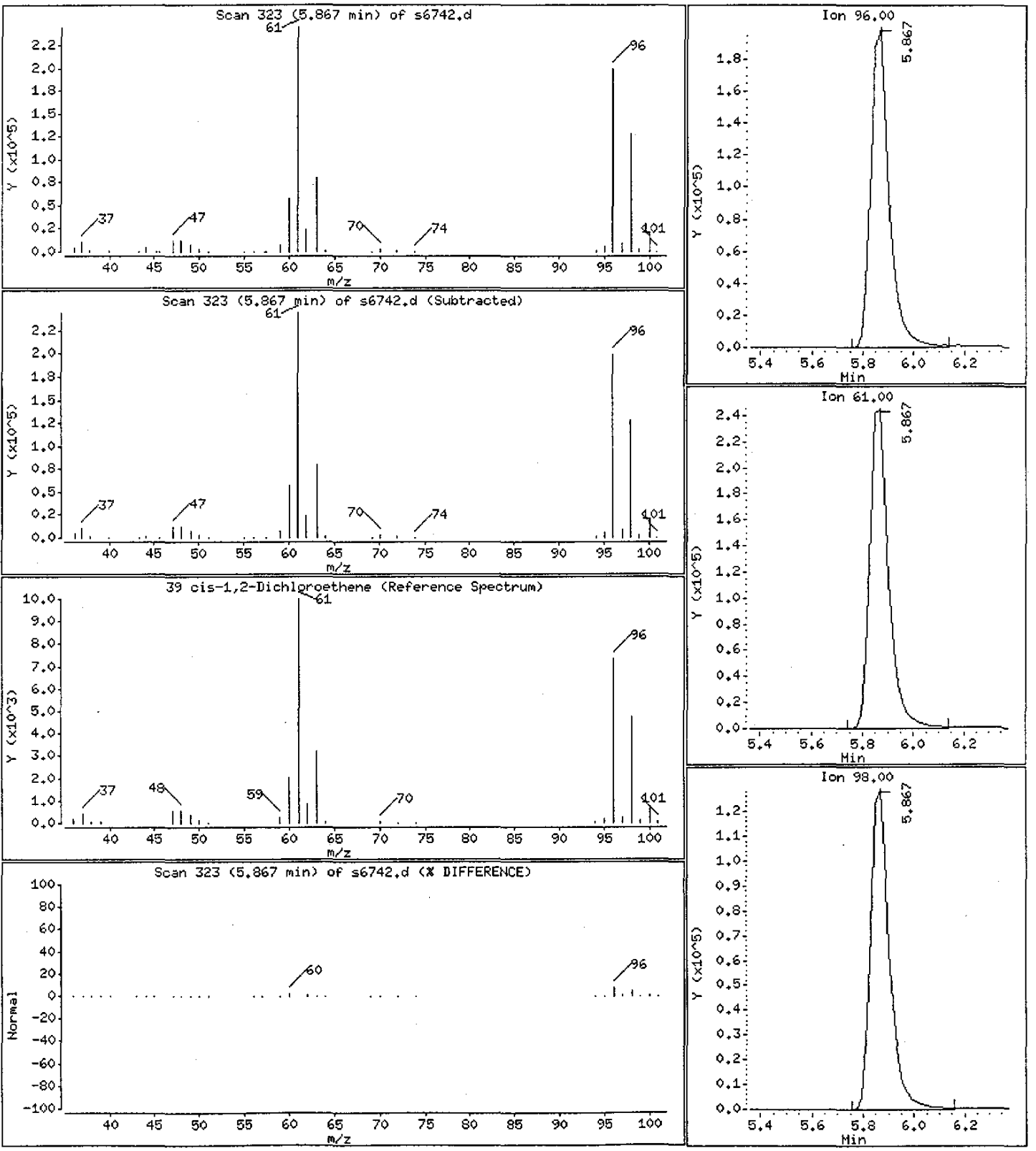
Operator: appelhansd

Column phase: DB624

Column diameter: 0.53

39 cis-1,2-Dichloroethene

Concentration: 252.720 ug/L



Data File: /chem/S.i/022004.b/s6742.d

Date : 20-FEB-2004 17:12

Client ID: DUP#2

Instrument: S.i

Sample Info: F9KFF1AA,2,D4B130209-015

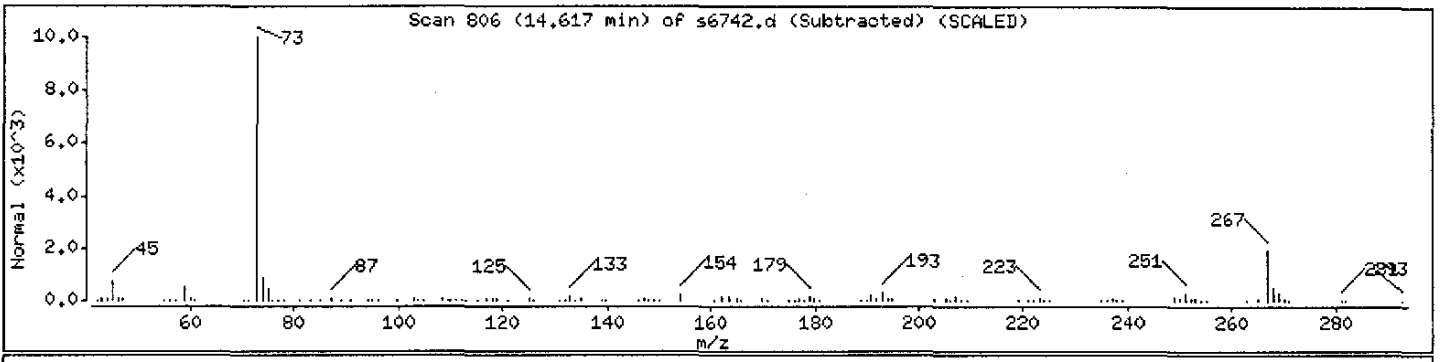
Purge Volume: 20.0

Operator: appelhansd

Column phase: DB624

Column diameter: 0.53

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown			0	0		0



Data File: /chem/S.i/022004.b/s6742.d

Date : 20-FEB-2004 17:12

Client ID: DUP#2

Instrument: S.i

Sample Info: F9KFF1AA,2,D4B130209-015

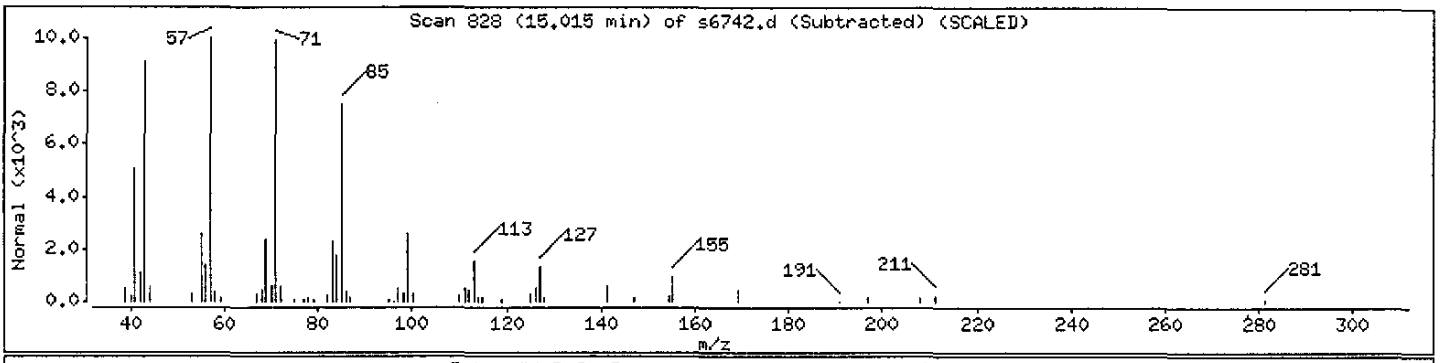
Purge Volume: 20.0

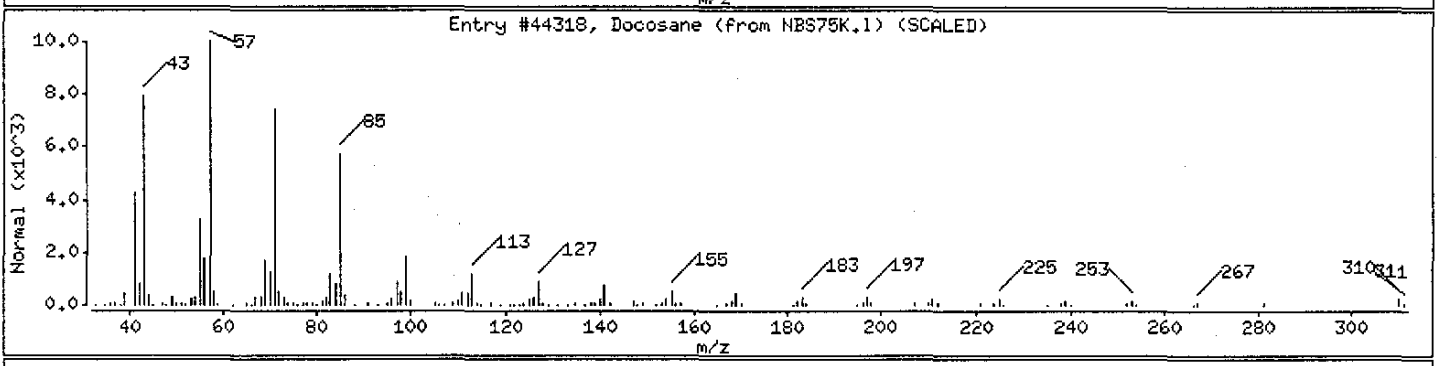
Operator: appelhansd

Column phase: DB624

Column diameter: 0.53

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Docosane	629-97-0	NBS75K.l	44318	91	C22H46	310





Data File: /chem/S.i/022004.b/s6742.d

Date : 20-FEB-2004 17:12

Client ID: DUP#2

Instrument: S.i

Sample Info: F9KFF1AA,2,D4B130209-015

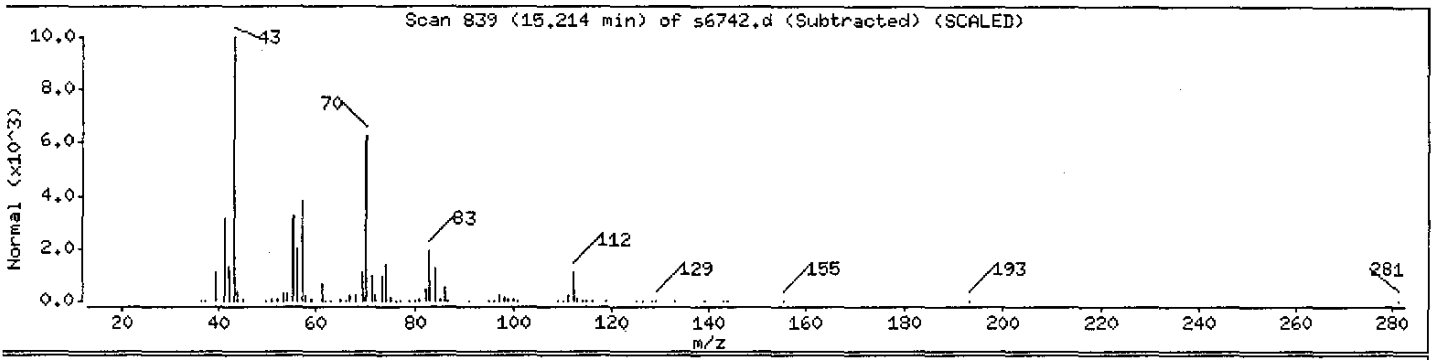
Purge Volume: 20.0

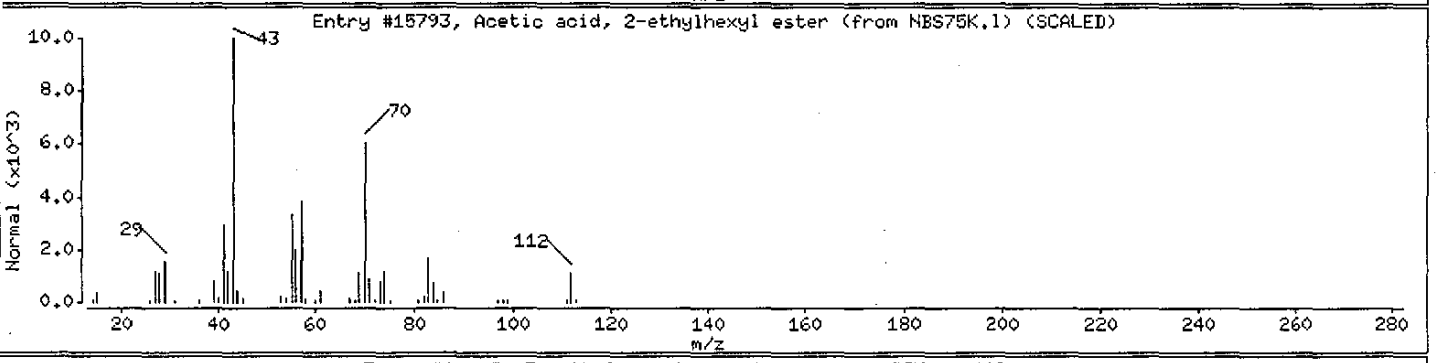
Operator: appelhansd

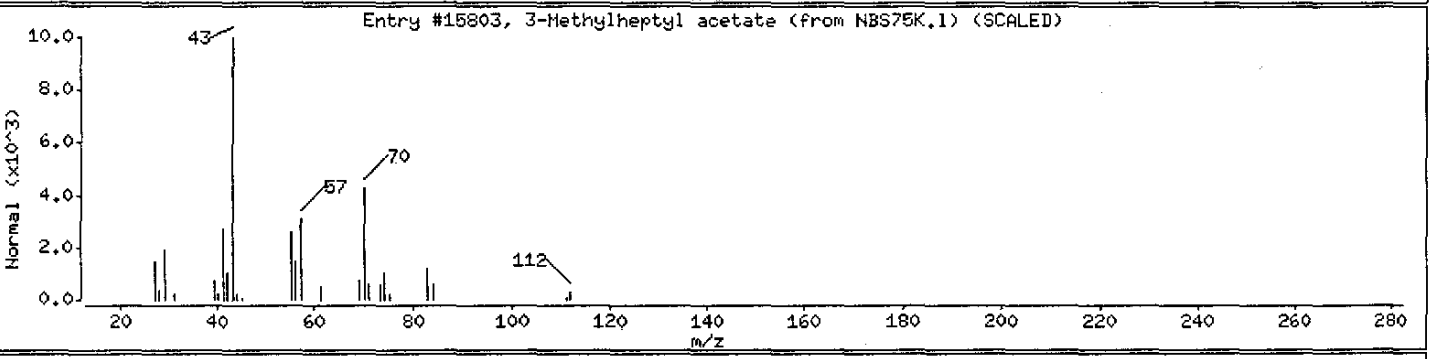
Column phase: DB624

Column diameter: 0.53

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Acetic acid, 2-ethylhexyl ester	103-09-3	NBS75K.l	15793	91	C10H2OO2	172
3-Methylheptyl acetate	72218-58-7	NBS75K.l	15803	80	C10H2OO2	172







Data File: /chem/S.i/022004.b/s6742.d

Date : 20-FEB-2004 17:12

Client ID: DUP#2

Instrument: S.i

Sample Info: F9KFF1AA,2,D4B130209-015

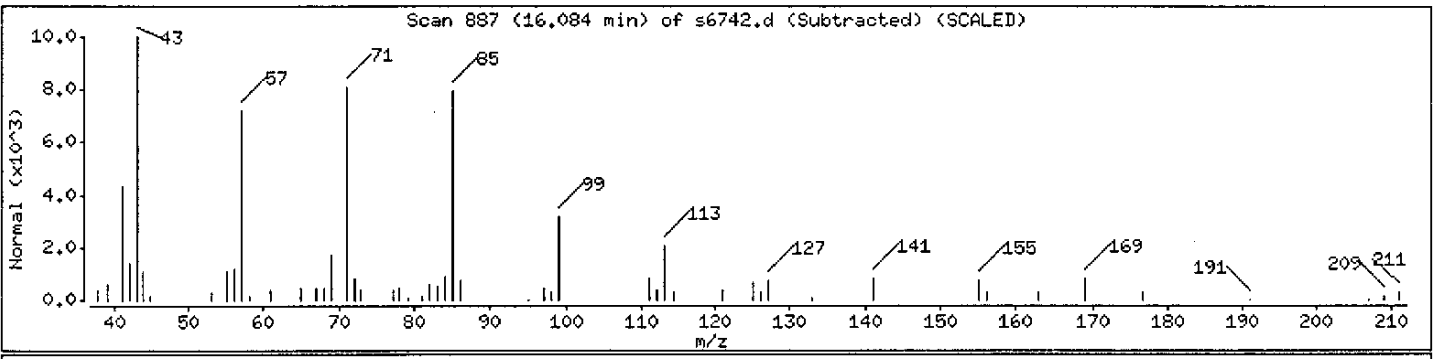
Purge Volume: 20.0

Operator: appelhansd

Column phase: DB624

Column diameter: 0.53

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown			0	0		0



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Data File: /chem/S.i/022004.b/s6742.d

Date : 20-FEB-2004 17:12

Client ID: DUP#2

Instrument: S.i

Sample Info: F9KFF1AA,2,D4B130209-015

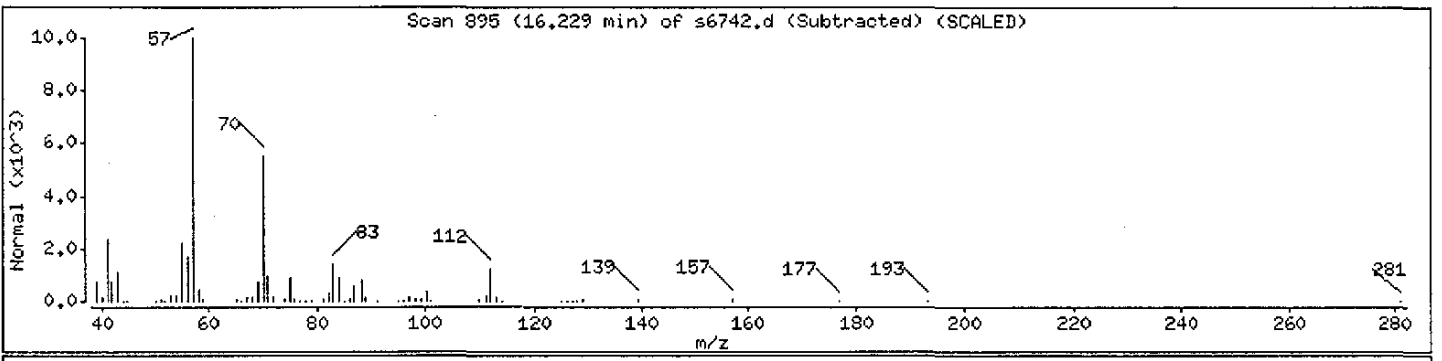
Purge Volume: 20.0

Operator: appelhansd

Column phase: DB624

Column diameter: 0.53

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown			0	0		0



Data File: /chem/S.i/022004.b/s6742.d

Date : 20-FEB-2004 17:12

Client ID: DUP#2

Instrument: S.i

Sample Info: F9KFF1AA,2,D4B130209-015

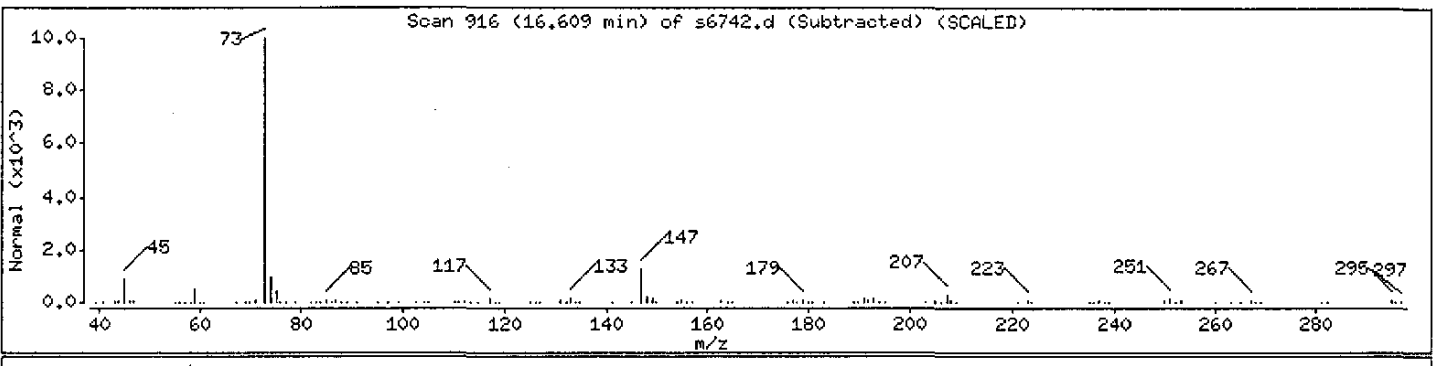
Purge Volume: 20.0

Operator: appelhansd

Column phase: DB624

Column diameter: 0.53

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown			0	0		0



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STL Denver

VOLATILE REPORT SW-846

Data file : /chem/S.i/022004.b/s6743.d
Lab Smp Id: F9KFG1AA Client Smp ID: PURGE COMPOSITE 021
Inj Date : 20-FEB-2004 17:35
Operator : appelhansd Inst ID: S.i
Smp Info : F9KFG1AA,0.1,D4B130209-016
Misc Info :
Comment :
Method : /chem/S.i/022004.b/S-20ml-h2o.m
Meth Date : 20-Feb-2004 12:58 appelhad Quant Type: ISTD
Cal Date : 19-FEB-2004 17:35 Cal File: s6721.d
Als bottle: 2
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: S-all.sub
Target Version: 3.40
Processing Host: chemsv02

Concentration Formula: Amt * DF * Vp/Vs

Name	Value	Description
DF	1.000	Dilution Factor
Vp	20.000	Purge Volume (ml)
Vs	0.100	Sample Volume Purged (ml)

DA 2-23

T.C.

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/L)
* 56 Fluorobenzene	96	7.137	7.137	(1.000)	1438843	12.5000	
* 82 Chlorobenzene-d5	119	10.724	10.724	(1.000)	296620	12.5000	
* 107 1,4-Dichlorobenzene-d4	152	13.785	13.786	(1.000)	427767	12.5000	(Q)
$ 46 Dibromofluoromethane	111	6.376	6.395	(0.893)	592995	10.4046	2080.92
$ 52 1,2-Dichloroethane-d4	65	6.793	6.811	(0.952)	269379	9.88493	1976.99
$ 70 Toluene-d8	98	8.949	8.949	(0.834)	1218915	10.1419	2028.38
$ 93 Bromofluorobenzene	95	12.228	12.228	(1.140)	670298	9.83689	1967.38
M 1 1,2-Dichloroethene (total)	96				14578	0.36427	72.8537(a)
M 2 Xylene (total)	106				145016	2.05666	411.332
3 dichlorodifluoromethane	85.00	Compound Not Detected.					
5 Dichlorotetrafluoroethane	85.00	Compound Not Detected.					
4 Chloromethane	50.00	Compound Not Detected.					
6 Vinyl Chloride	62	2.844	2.878	(0.398)	11920	0.32825	65.6495(a)
7 Ethylene Oxide	43.00	Compound Not Detected.					
8 Bromomethane	94.00	Compound Not Detected.					
9 Chloroethane	64.00	Compound Not Detected.					

Data File: /chem/S.i/022004.b/s6743.d
Report Date: 23-Feb-2004 08:17

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/L)
10 Dichlorofluoromethane	67.00	Compound Not Detected.					
11 Trichlorofluoromethane	101.00	Compound Not Detected.					
12 Ethanol	45.00	Compound Not Detected.					
13 Ethyl Ether	59.00	Compound Not Detected.					
14 1,2-Dichloro-1,1,2-trifluorome	117.00	Compound Not Detected.					
16 Acrolein	56.00	Compound Not Detected.					
15 2,2-Dichloro-1,1,1-trifluorome	83.00	Compound Not Detected.					
18 1,1-Dichloroethene	96.00	Compound Not Detected.					
19 Acetone	43	4.003	4.019	(0.561)	12987	2.59351	518.703(a)
17 Trichlorotrifluoroethane	151.00	Compound Not Detected.					
21 Iodomethane	142.00	Compound Not Detected.					
20 2-Propanol	45.00	Compound Not Detected.					
22 Carbon Disulfide	76.00	Compound Not Detected.					
25 Acetonitrile	41.00	Compound Not Detected.					
24 Allyl Chloride	41.00	Compound Not Detected.					
23 Methyl Acetate	74.00	Compound Not Detected.					
26 Methylene Chloride	84.00	Compound Not Detected.					
27 tert-Butyl alcohol	59.00	Compound Not Detected.					
30 Acrylonitrile	53.00	Compound Not Detected.					
29 trans-1,2-Dichloroethene	96.00	Compound Not Detected.					
28 Methyl t-butyl ether	73.00	Compound Not Detected.					
31 Hexane	57.00	Compound Not Detected.					
33 1,1-Dichloroethane	63.00	Compound Not Detected.					
34 Vinyl acetate	43.00	Compound Not Detected.					
32 Isopropyl ether	87.00	Compound Not Detected.					
35 Chloroprene	53.00	Compound Not Detected.					
36 ETBE	59.00	Compound Not Detected.					
39 cis-1,2-Dichloroethene	96	5.851	5.867	(0.820)	14578	0.36427	72.8537(a)
40 2-Butanone	43.00	Compound Not Detected.					
37 2,2-Dichloropropane	77.00	Compound Not Detected.					
41 Propionitrile	54.00	Compound Not Detected.					
38 Ethyl Acetate	43.00	Compound Not Detected.					
42 Methacrylonitrile	41.00	Compound Not Detected.					
43 Bromochloromethane	128.00	Compound Not Detected.					
45 Chloroform	83.00	Compound Not Detected.					
44 Tetrahydrofuran	42.00	Compound Not Detected.					
47 1,1,1-Trichloroethane	97.00	Compound Not Detected.					
48 Cyclohexane	56.00	Compound Not Detected.					
50 1,1-Dichloropropene	75.00	Compound Not Detected.					
49 Carbon Tetrachloride	117.00	Compound Not Detected.					
51 Isobutanol	41.00	Compound Not Detected.					
53 Benzene	78	6.811	6.809	(0.954)	116990	1.00491	200.982
55 1,2-Dichloroethane	62.00	Compound Not Detected.					
54 TAME	73.00	Compound Not Detected.					
57 n-Butanol	56.00	Compound Not Detected.					
58 Trichloroethene	130.00	Compound Not Detected.					
60 2-Pentanone	43.00	Compound Not Detected.					

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)
59 Methyl-Cyclohexane	55.00	Compound Not Detected.					
61 1,2-Dichloropropane	63.00	Compound Not Detected.					
62 Methyl Methacrylate	100.00	Compound Not Detected.					
64 Dibromomethane	93.00	Compound Not Detected.					
63 1,4-Dioxane	88.00	Compound Not Detected.					
65 Bromodichloromethane	83.00	Compound Not Detected.					
78 Tetrahydrothiophene	60.00	Compound Not Detected.					
66 2-nitropropane	41.00	Compound Not Detected.					
67 2-Chloroethyl vinyl ether	63.00	Compound Not Detected.					
68 cis-1,3-Dichloropropene	75.00	Compound Not Detected.					
69 4-Methyl-2-pentanone	43.00	Compound Not Detected.					
71 Toluene	91	9.021	9.037	(0.841)	4124947	27.3522	5470.44
72 trans-1,3-Dichloropropene	75.00	Compound Not Detected.					
73 Ethyl methacrylate	69.00	Compound Not Detected.					
74 1,1,2-Trichloroethane	97.00	Compound Not Detected.					
76 1,3-Dichloropropane	76.00	Compound Not Detected.					
75 Tetrachloroethene	164.00	Compound Not Detected.					
77 2-Hexanone	43.00	Compound Not Detected.					
79 Dibromochloromethane	129.00	Compound Not Detected.					
80 1,2-Dibromoethane	107.00	Compound Not Detected.					
81 1-Chlorohexane	91.00	Compound Not Detected.					
83 Chlorobenzene	112.00	Compound Not Detected.					
85 1,1,1,2-Tetrachloroethane	131.00	Compound Not Detected.					
84 Ethylbenzene	106	10.851	10.848	(1.012)	19889	0.36676	73.3526(a)
86 m and p-Xylene	106	10.996	10.993	(1.025)	108547	1.47018	294.036
87 o-Xylene	106	11.503	11.500	(1.073)	36469	0.58648	117.296
88 Styrene	104.00	Compound Not Detected.					
89 Bromoform	173.00	Compound Not Detected.					
90 isopropyl benzene	105.00	Compound Not Detected.					
92 Cyclohexanone	55.00	Compound Not Detected.					
91 cis-1,4-dichloro-2-butene	53.00	Compound Not Detected.					
94 1,1,2,2-Tetrachloroethane	83.00	Compound Not Detected.					
95 Bromobenzene	156.00	Compound Not Detected.					
97 1,2,3-Trichloropropane	110.00	Compound Not Detected.					
98 t-1,4-Dichloro-2-butene	53.00	Compound Not Detected.					
96 n-Propylbenzene	120.00	Compound Not Detected.					
99 2-Chlorotoluene	126.00	Compound Not Detected.					
100 1,3,5-Trimethylbenzene	105.00	Compound Not Detected.					
101 4-Chlorotoluene	126.00	Compound Not Detected.					
102 tert-Butylbenzene	119.00	Compound Not Detected.					
103 1,2,4-Trimethylbenzene	105.00	Compound Not Detected.					
104 sec-Butylbenzene	134.00	Compound Not Detected.					
106 m-Dichlorobenzene	146.00	Compound Not Detected.					
105 4-Isopropyltoluene	119.00	Compound Not Detected.					
109 1,2,3-Trimethylbenzene	105.00	Compound Not Detected.					
108 p-dichlorobenzene	146	13.804	13.819	(1.001)	26192	0.34652	69.3040(a)
110 n-Butylbenzene	91.00	Compound Not Detected.					

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/L)
111 o-Dichlorobenzene	146.00	Compound Not Detected.					
112 1,2-Dibromo-3-chloropropane	157.00	Compound Not Detected.					
113 1,2,4-Trichlorobenzene	180.00	Compound Not Detected.					
114 Hexachlorobutadiene	225.00	Compound Not Detected.					
115 Napthalene	128.00	Compound Not Detected.					
116 1,2,3-Trichlorobenzene	180.00	Compound Not Detected.					

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
Q - Qualifier signal failed the ratio test.

STL Denver

VOLATILE REPORT SW-846

Data file : /chem/S.i/022004.b/s6743.d
Lab Smp Id: F9KFG1AA Client Smp ID: PURGE COMPOSITE 021
Inj Date : 20-FEB-2004 17:35
Operator : appelhansd Inst ID: S.i
Smp Info : F9KFG1AA,0.1,D4B130209-016
Misc Info :
Comment :
Method : /chem/S.i/022004.b/S-20ml-h2o.m
Meth Date : 20-Feb-2004 12:58 appelhad Quant Type: ISTD
Cal Date : 19-FEB-2004 17:35 Cal File: s6721.d
Als bottle: 2
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: S-all.sub
Target Version: 3.40
Processing Host: chemsv02

Concentration Formula: Amt * DF * Vp/Vs

Name	Value	Description
DF	1.000	Dilution Factor
Vp	20.000	Purge Volume (ml)
Vs	0.100	Sample Volume Purged (ml)

ISTD	RT	AREA	AMOUNT
* 82 Chlorobenzene-d5	10.724	3138500	12.500
* 107 1,4-Dichlorobenzene-d4	13.785	2838995	12.500

		CONCENTRATIONS			QUANT		
RT	AREA	ON-COL(ug/L)	FINAL(ug/L)	QUAL	LIBRARY	LIB ENTRY	CPND #
Cyclotrisiloxane, hexamethyl-				CAS #: 541-05-9			
9.365	387252	1.54234507	308.469	90	NBS75K.1	70586	82
Unknown				CAS #:			
14.619	727947	3.20512629	641.025	0		0	107

Data File: /chem/S.i/022004.b/s6743.d
Report Date: 23-Feb-2004 08:17

RT	AREA	CONCENTRATIONS ON-COL(ug/L)	FINAL(ug/L)	QUAL	QUANT LIBRARY	LIB ENTRY	CPND #
Docosane				CAS #: 629-97-0			
15.035	1182870	5.20813703	1041.63	90	NBS75K.l	44318	107
Acetic acid, 2-ethylhexyl ester				CAS #: 103-09-3			
15.216	1675047	7.37517590	1475.04	91	NBS75K.l	15793	107
Unknown				CAS #:			
16.104	580645	2.55656051	511.312	0		0	107
Unknown				CAS #:			
16.231	1147282	5.05144426	1010.29	0		0	107
Unknown				CAS #:			
16.611	1307657	5.75757002	1151.51	0		0	107

Data File: /chem/S.i/022004.b/s6743.d
Report Date: 23-Feb-2004 08:17

STL Denver

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: S.i
Lab File ID: s6743.d
Lab Smp Id: F9KFG1AA
Analysis Type: VOA
Quant Type: ISTD
Operator: appelhansd
Method File: /chem/S.i/022004.b/S-20ml-h2o.m
Misc Info:

Calibration Date: 02/20/4
Calibration Time: 1103
Client Smp ID: PURGE COMPOSITE 021
Level: LOW
Sample Type: WATER

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
56 Fluorobenzene	1717585	858792	3435170	1438843	-16.23
82 Chlorobenzene-d5	368273	184136	736546	296620	-19.46
107 1,4-Dichlorobenze	525307	262654	1050614	427767	-18.57

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
56 Fluorobenzene	7.14	6.64	7.64	7.14	0.00
82 Chlorobenzene-d5	10.72	10.22	11.22	10.72	0.00
107 1,4-Dichlorobenze	13.79	13.29	14.29	13.79	0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem/S.i/022004.b/s6743.d
Report Date: 23-Feb-2004 08:17

STL Denver

RECOVERY REPORT

Client Name: ARCADIS GERAGHTY & M13-FEB-2004 Client SDG: D4B130209
Sample Matrix: LIQUID Fraction: VOA
Lab Smp Id: F9KFG1AA Client Smp ID: PURGE COMPOSITE 021
Level: LOW Operator: appelhansd
Data Type: MS DATA SampleType: SAMPLE
SpikeList File: dcs.spk Quant Type: ISTD
Sublist File: S-all.sub
Method File: /chem/S.i/022004.b/S-20ml-h2o.m
Misc Info:

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 46 Dibromofluorometha	2000.00	2080.92	104.05	76-116
$ 52 1,2-Dichloroethane	2000.00	1976.99	98.85	59-129
$ 70 Toluene-d8	2000.00	2028.38	101.42	76-116
$ 93 Bromofluorobenzene	2000.00	1967.38	98.37	74-114

Data File: /chem/S.i/022004.b/s6743.d
Date : 20-FEB-2004 17:35
Client ID: PURGE COMPOSITE 021
Sample Info: F9KFG1AA,0.1,D4B130209-016
Purge Volume: 20.0
Column phase: DB624

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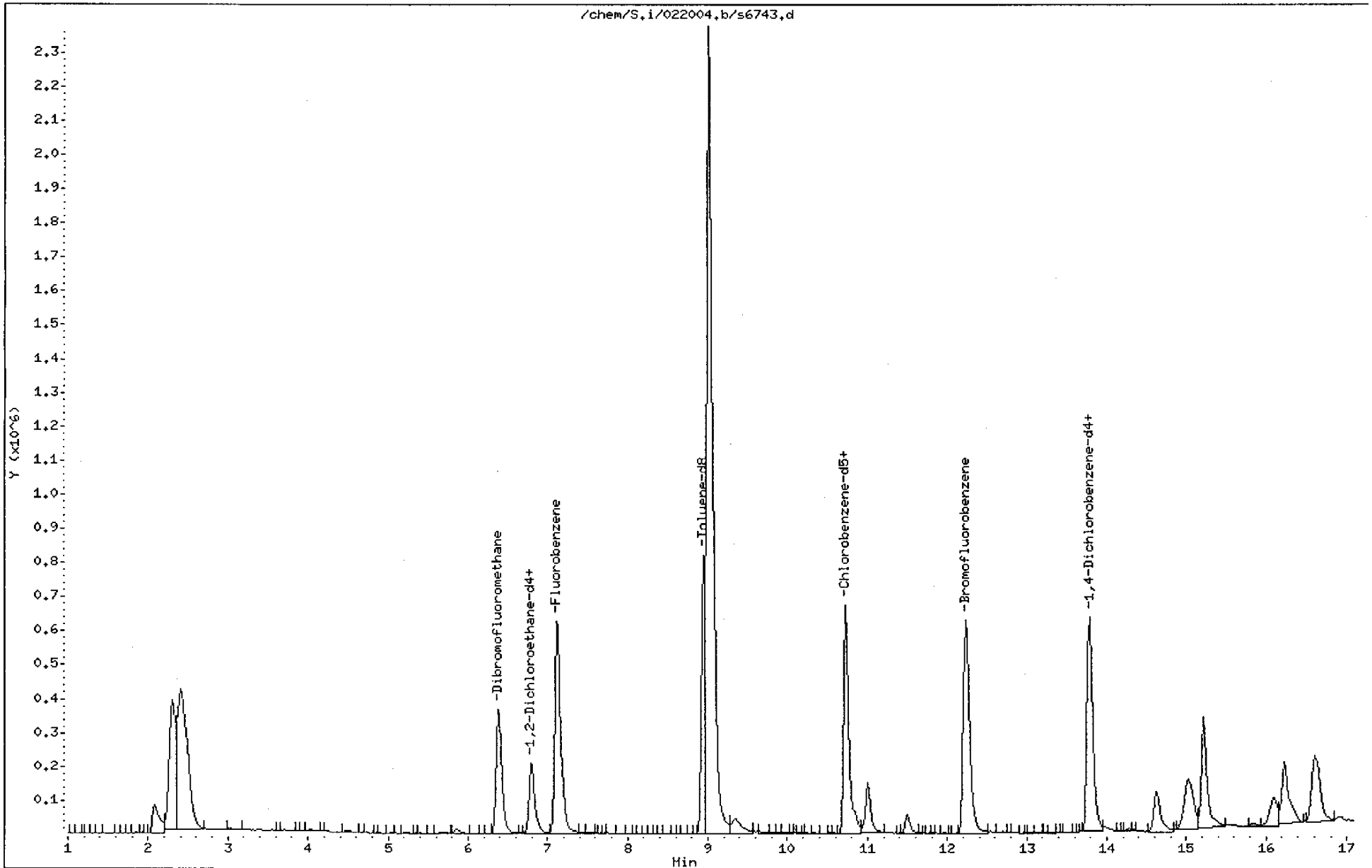
Instrument: S.i

Operator: appelhansd
Column diameter: 0.53



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Data File: /chem/S.i/022004.b/s6743.d

Date : 20-FEB-2004 17:35

Client ID: PURGE COMPOSITE 021

Instrument: S.i

Sample Info: F9KFG1AA,0.1,D4B130209-016

Purge Volume: 20.0

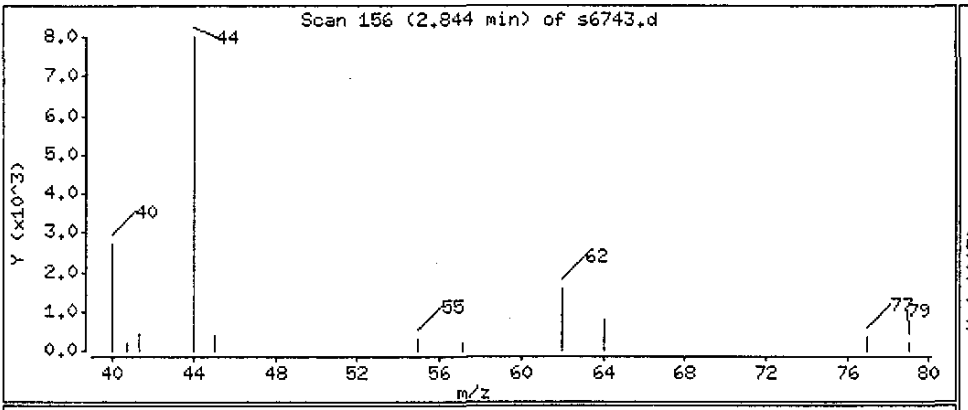
Operator: appelhansd

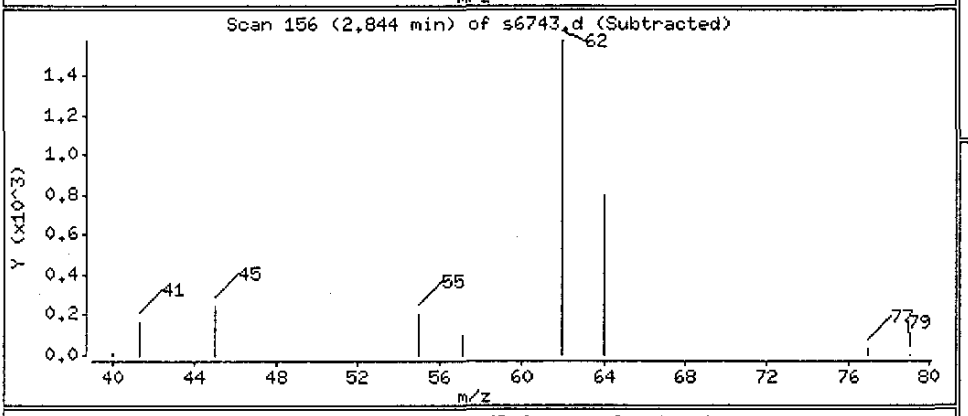
Column phase: DB624

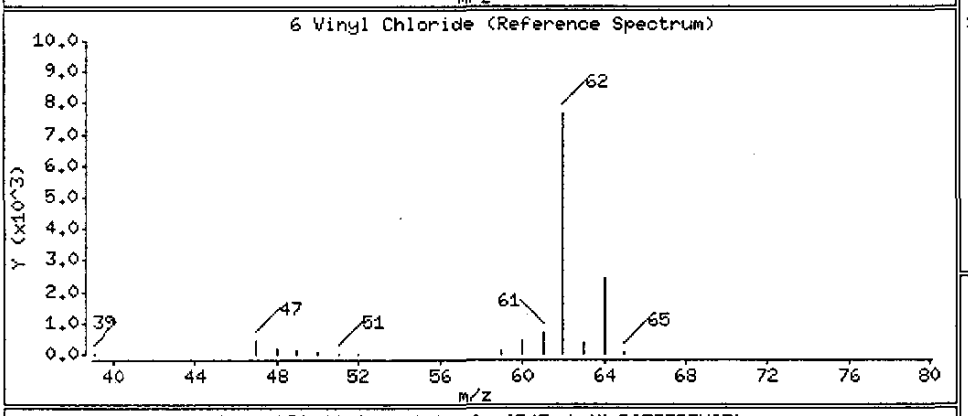
Column diameter: 0.53

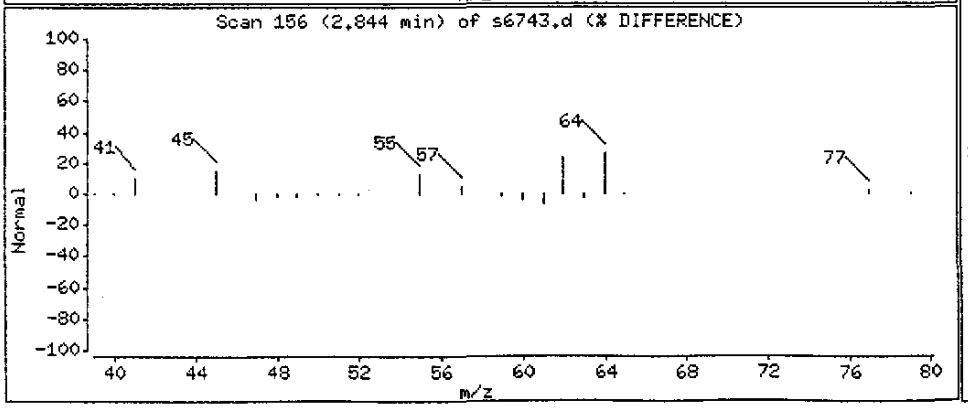
6 Vinyl Chloride

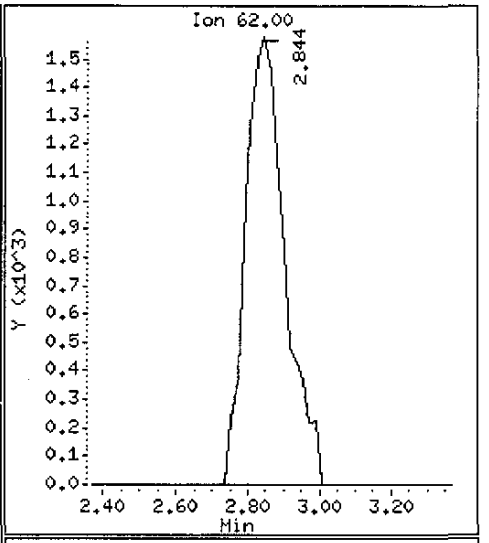
Concentration: 65.6495 ug/L

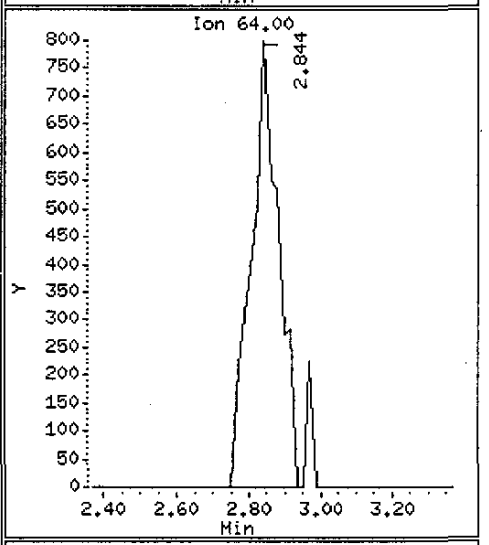


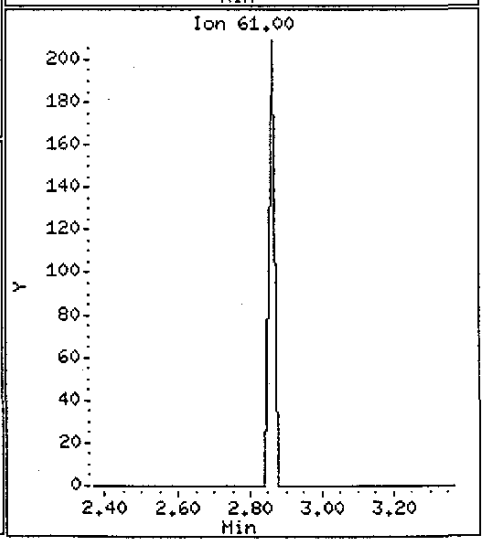












Data File: /chem/S.i/022004.b/s6743.d

Date : 20-FEB-2004 17:35

Client ID: PURGE COMPOSITE 021

Instrument: S.i

Sample Info: F9KFG1AA,0.1,D4B130209-016

Purge Volume: 20.0

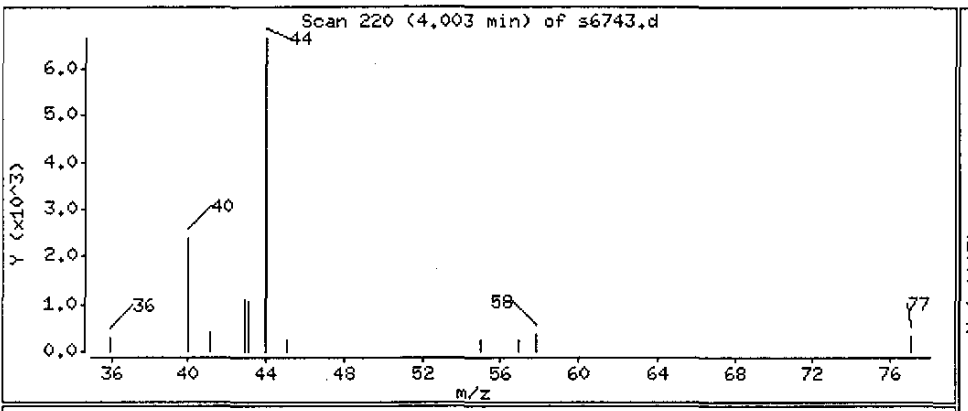
Operator: appelhansd

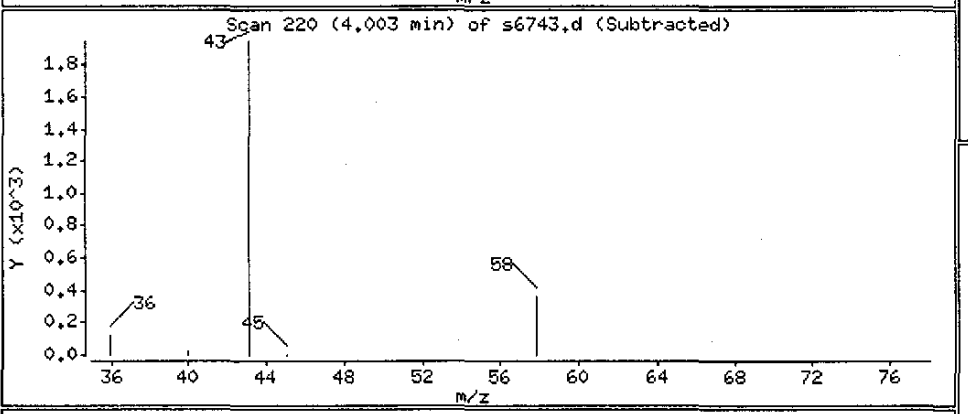
Column phase: DB624

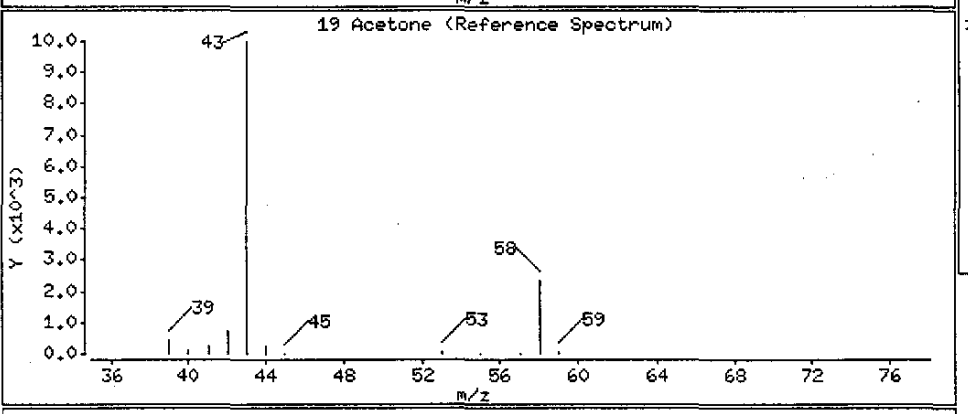
Column diameter: 0.53

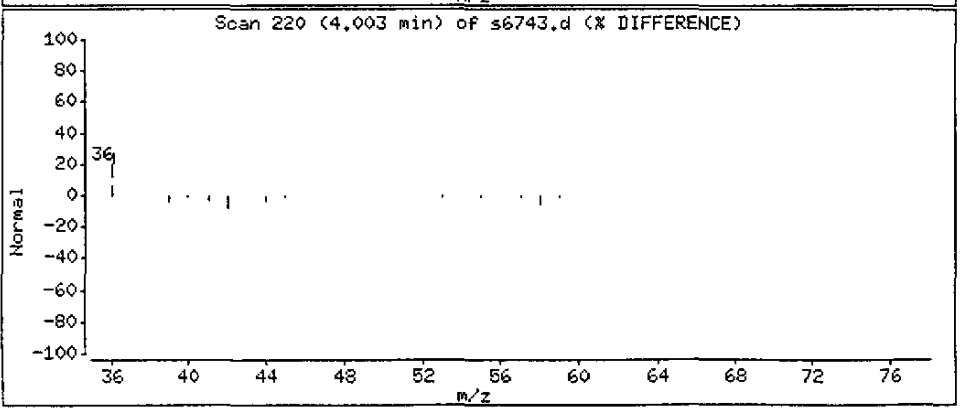
19 Acetone

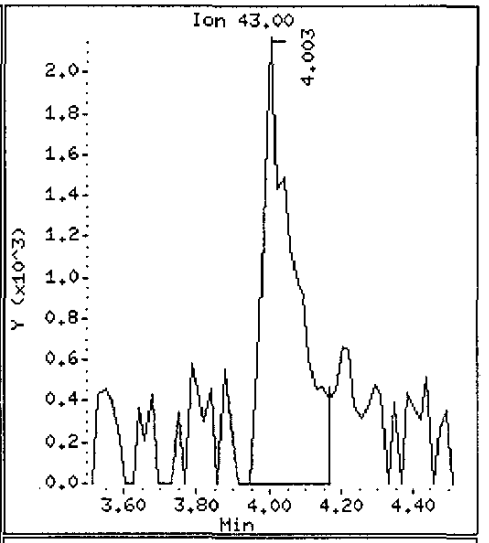
Concentration: 518.703 ug/L

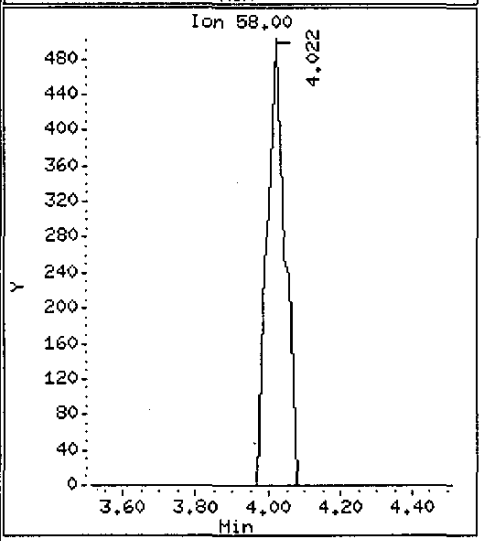












Data File: /chem/S.i/022004.b/s6743.d

Date : 20-FEB-2004 17:35

Client ID: PURGE COMPOSITE 021

Instrument: S.i

Sample Info: F9KFG1AA,0.1,D4B130209-016

Purge Volume: 20.0

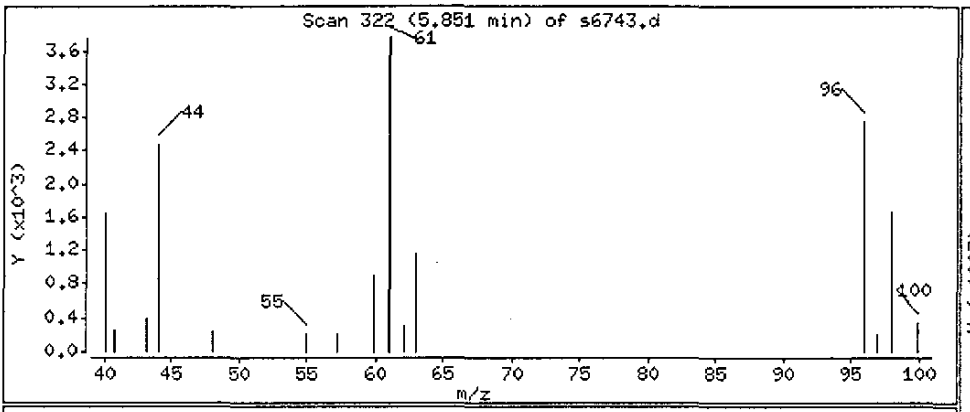
Operator: appelhansd

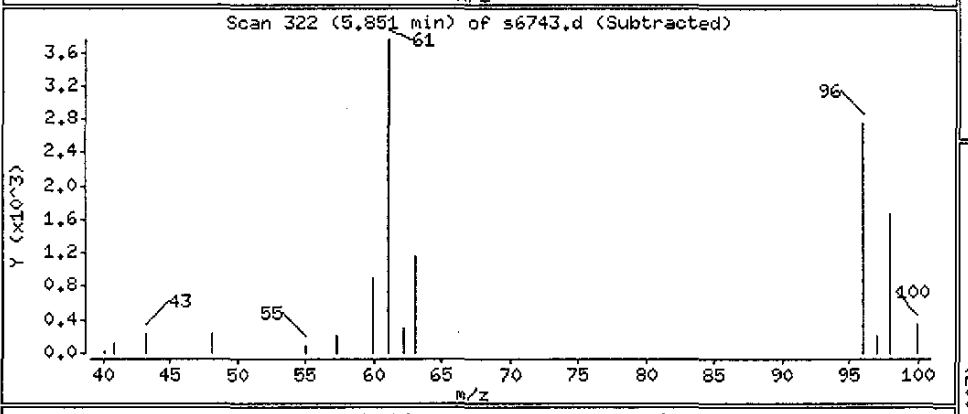
Column phase: DB624

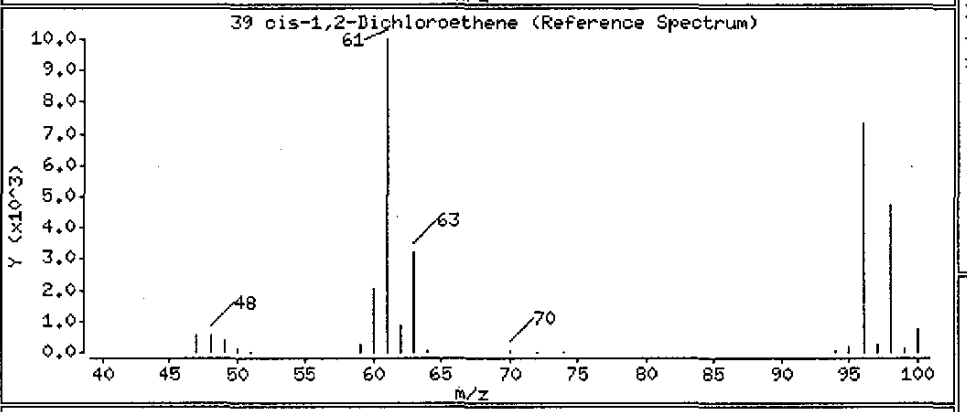
Column diameter: 0.53

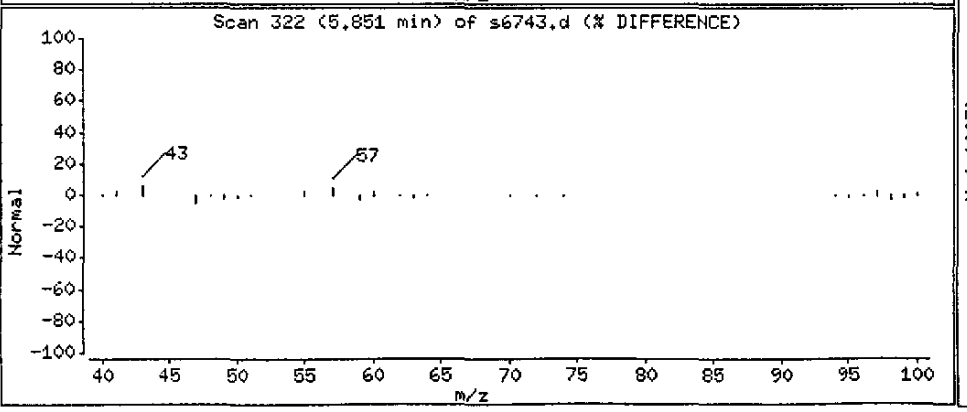
39 cis-1,2-Dichloroethene

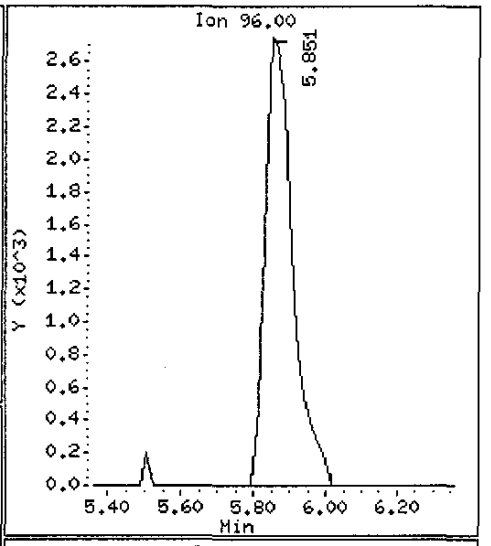
Concentration: 72.8537 ug/L

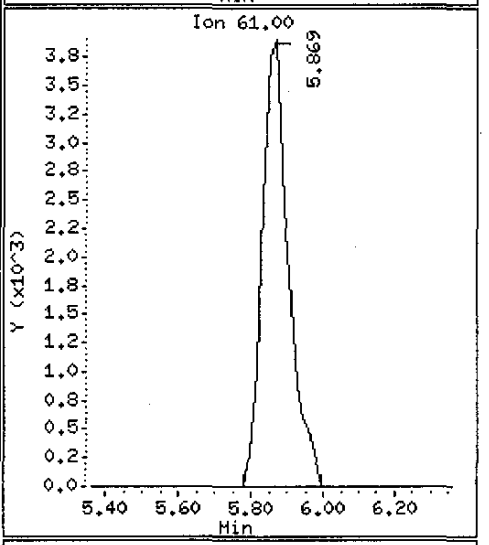


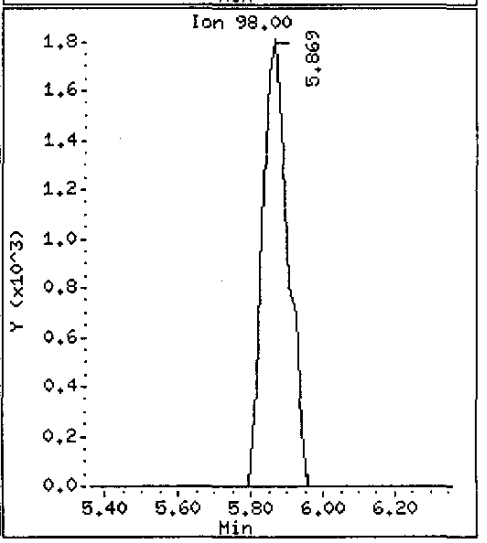












Data File: /chem/S.i/022004.b/s6743.d

Date : 20-FEB-2004 17:35

Client ID: PURGE COMPOSITE 021

Instrument: S.i

Sample Info: F9KFG1AA,0.1,D4B130209-016

Purge Volume: 20.0

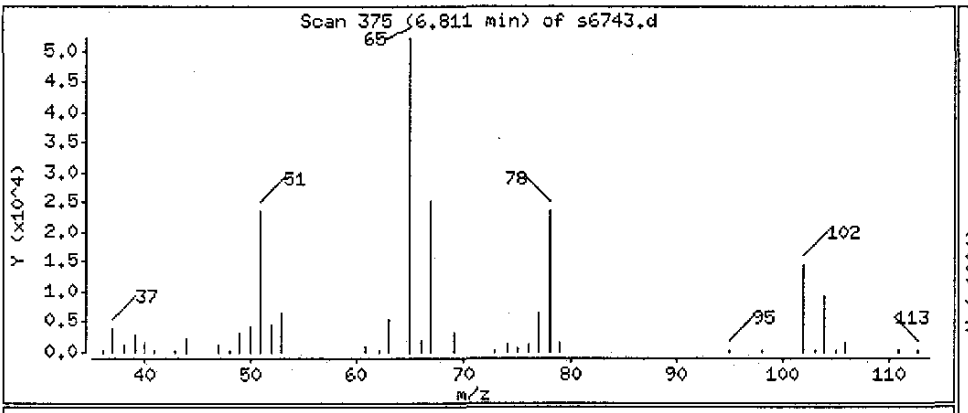
Operator: appelhansd

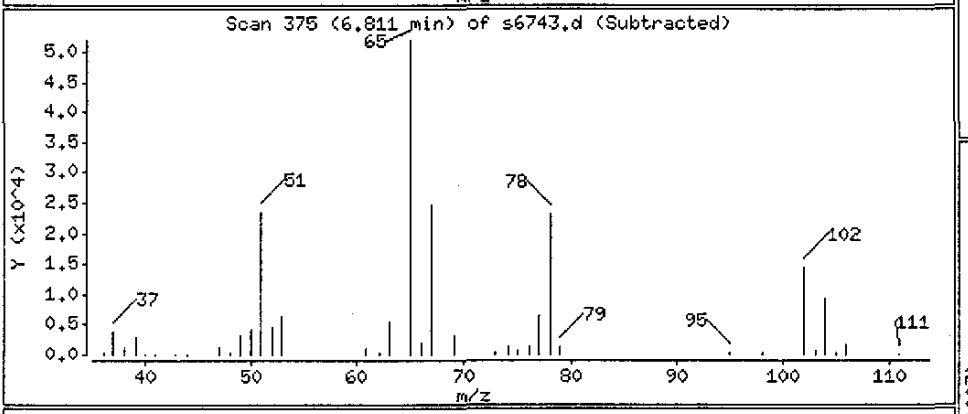
Column phase: DB624

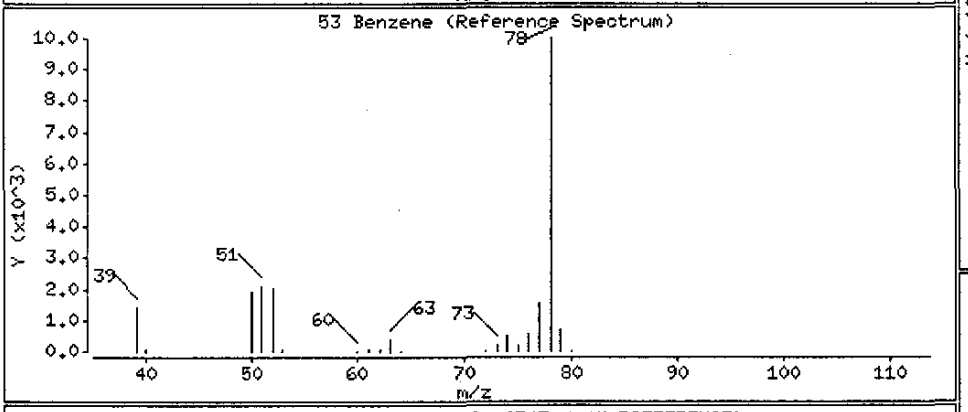
Column diameter: 0.53

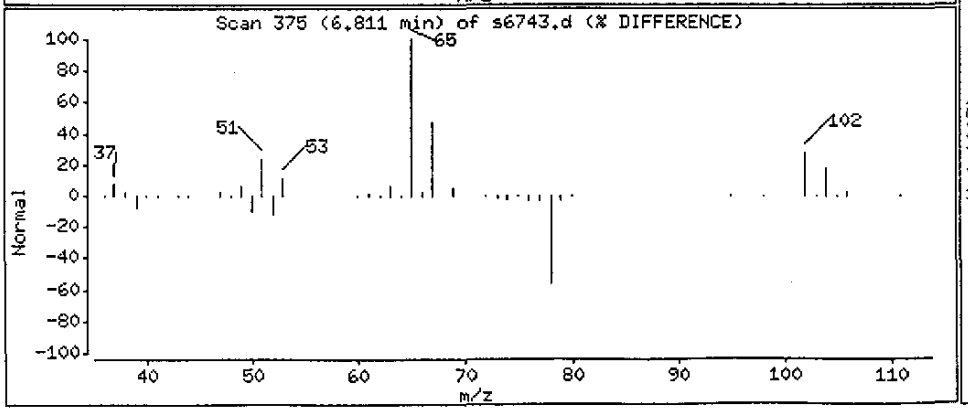
53 Benzene

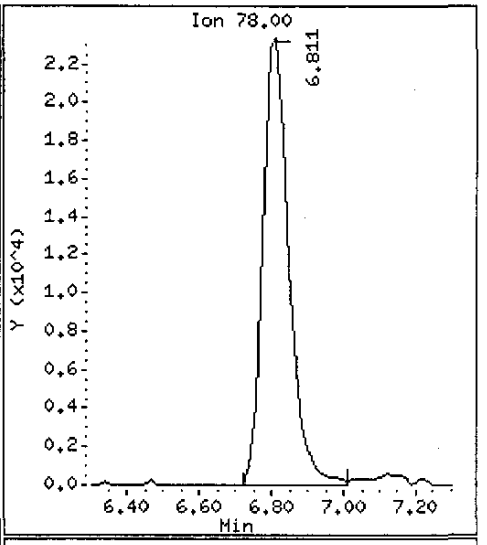
Concentration: 200.982 ug/L

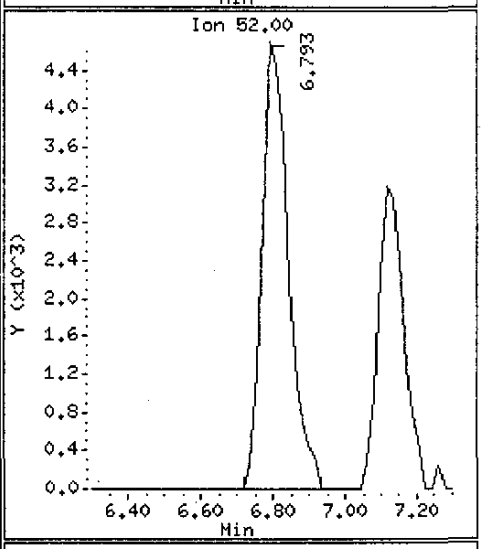


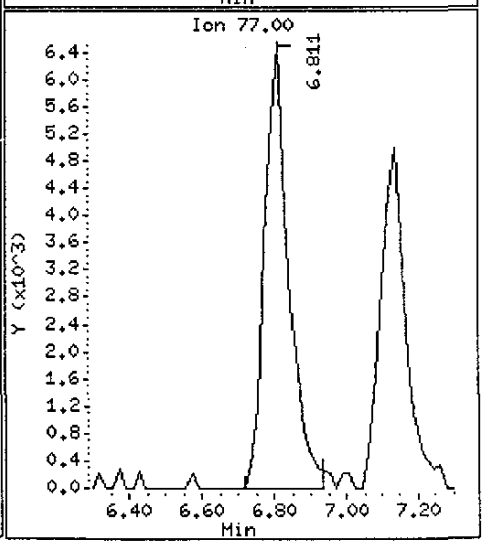












Data File: /chem/S.i/022004.b/s6743.d

Date : 20-FEB-2004 17:35

Client ID: PURGE COMPOSITE 021

Instrument: S.i

Sample Info: F9KFG1AA,0.1,D4B130209-016

Purge Volume: 20.0

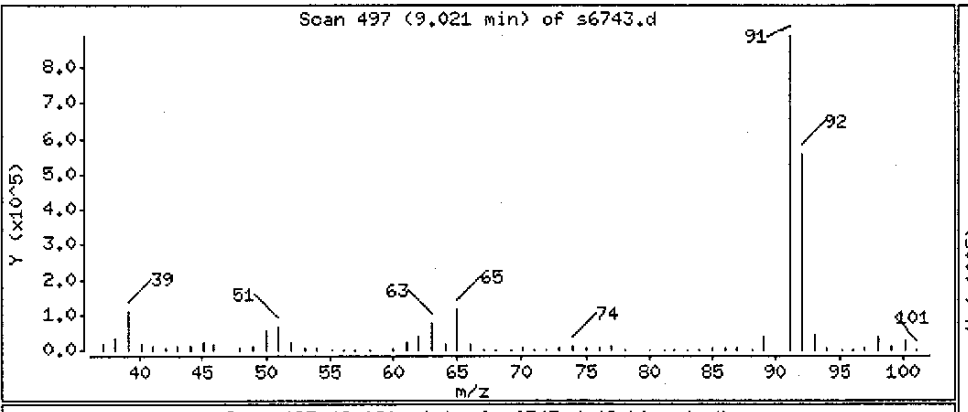
Operator: appelhansd

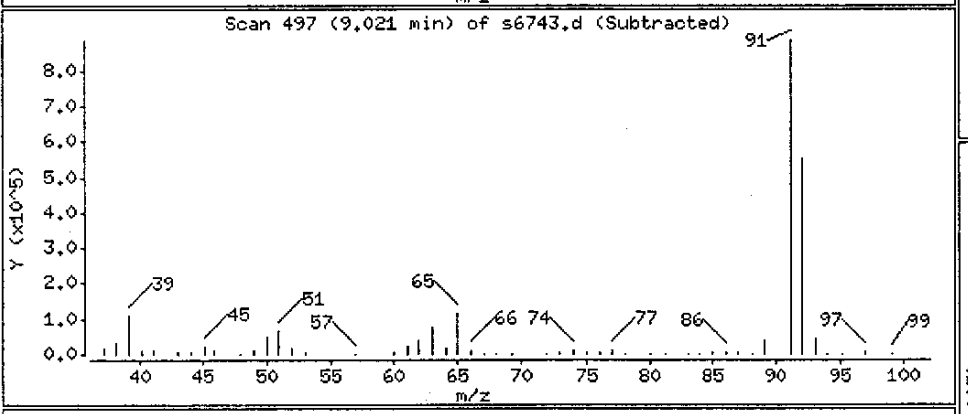
Column phase: DB624

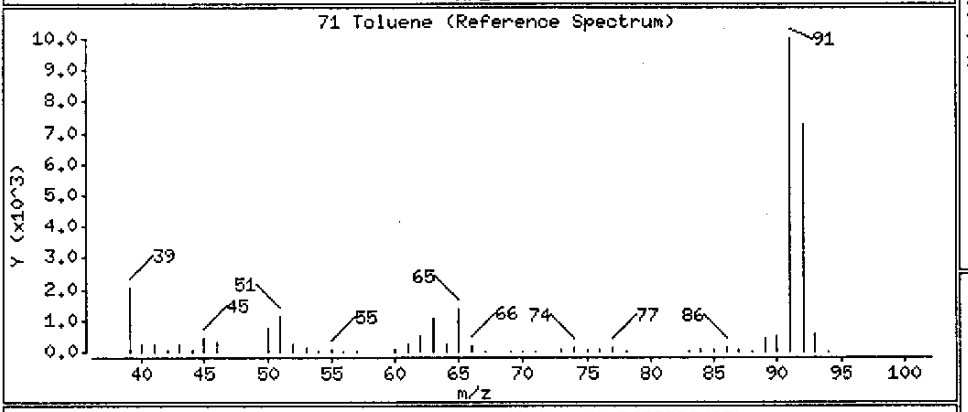
Column diameter: 0.53

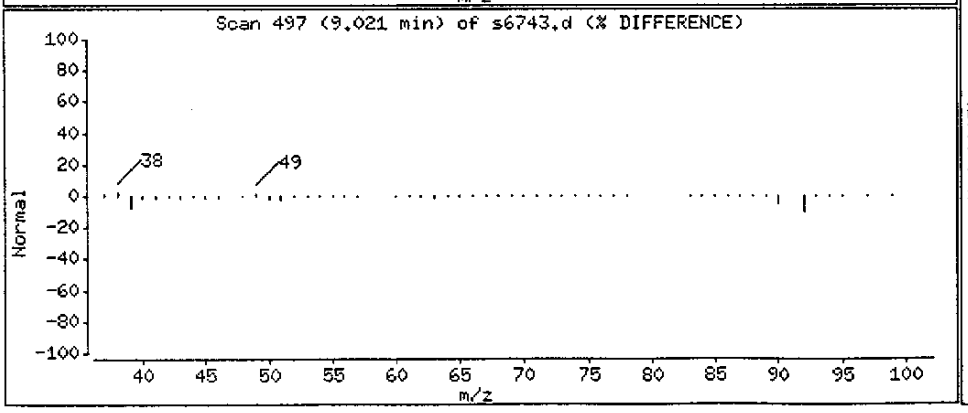
71 Toluene

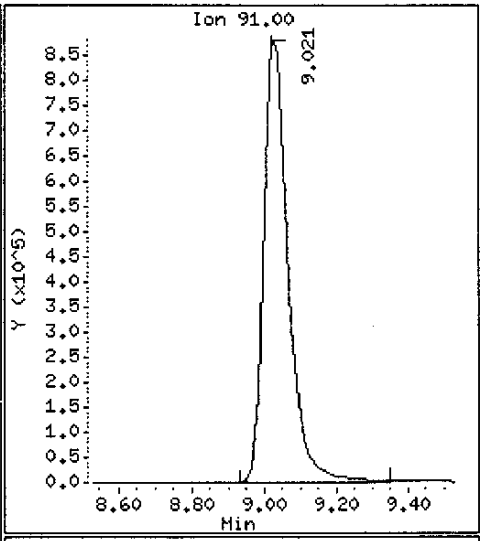
Concentration: 5470.44 ug/L

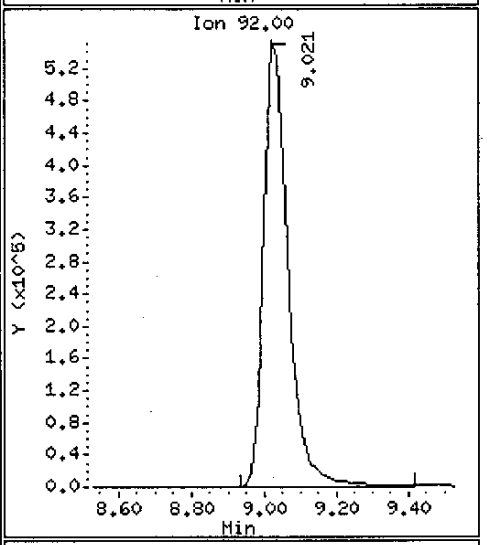


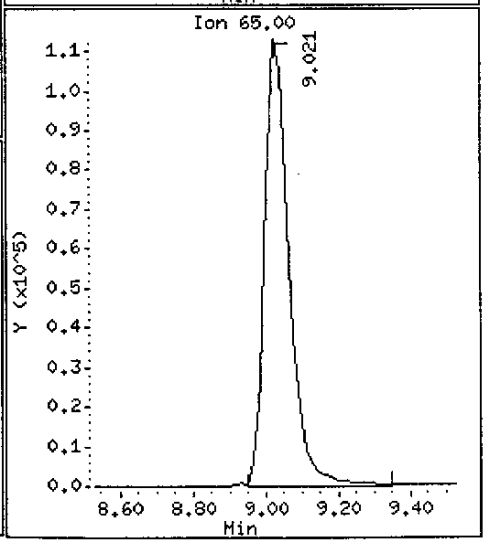












Data File: /chem/S.i/022004.b/s6743.d

Date : 20-FEB-2004 17:35

Client ID: PURGE COMPOSITE 021

Instrument: S.i

Sample Info: F9KFC1AA,0.1,D4B130209-016

Purge Volume: 20.0

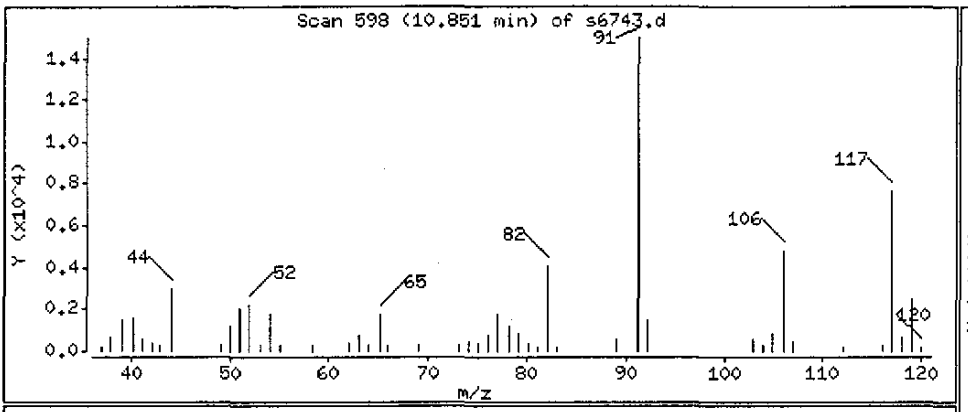
Operator: appelhansd

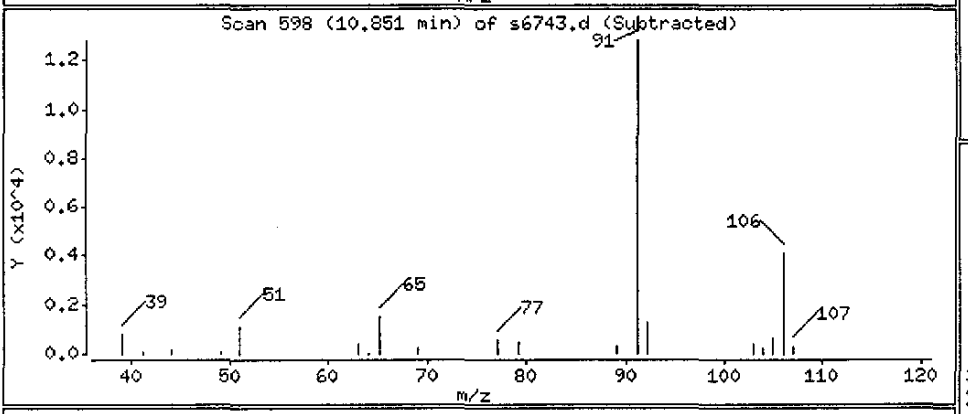
Column phase: DB624

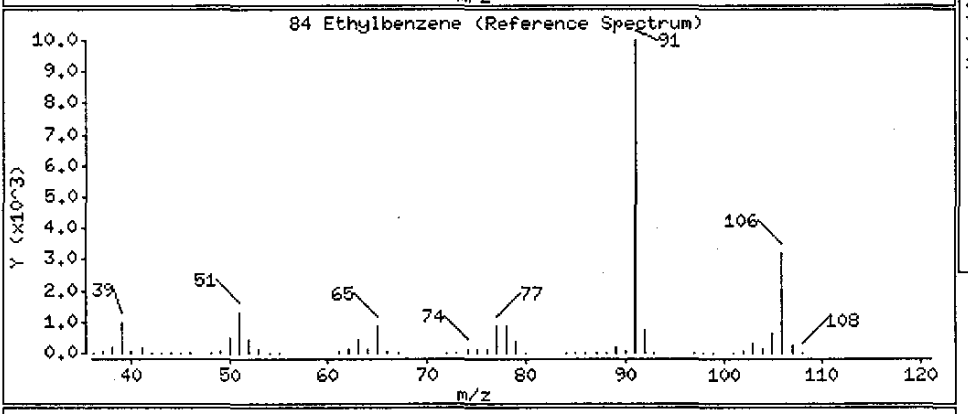
Column diameter: 0.53

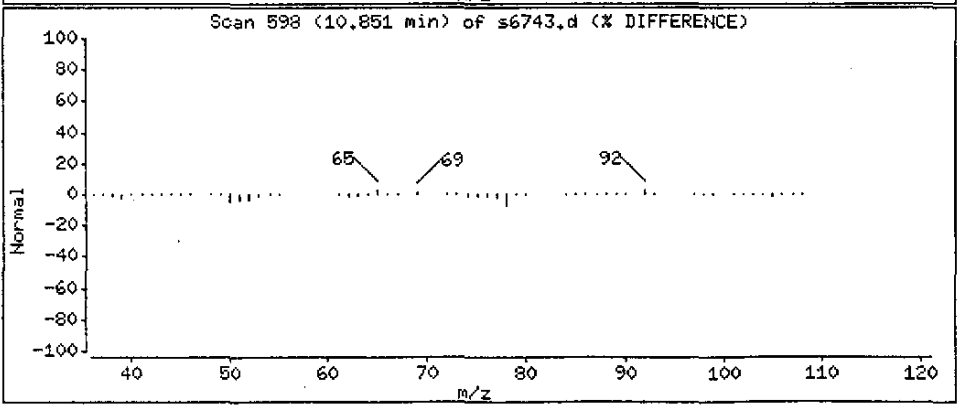
84 Ethylbenzene

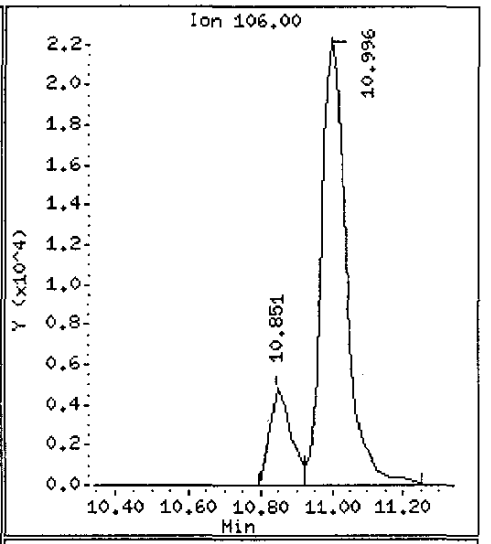
Concentration: 73.3526 ug/L

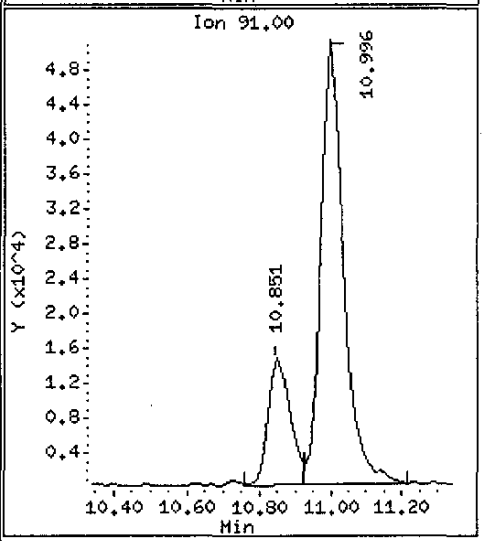












Data File: /chem/S.i/022004.b/s6743.d

Date : 20-FEB-2004 17:35

Client ID: PURGE COMPOSITE 021

Instrument: S.i

Sample Info: F9KFG1AA,0.1,D4B130209-016

Purge Volume: 20.0

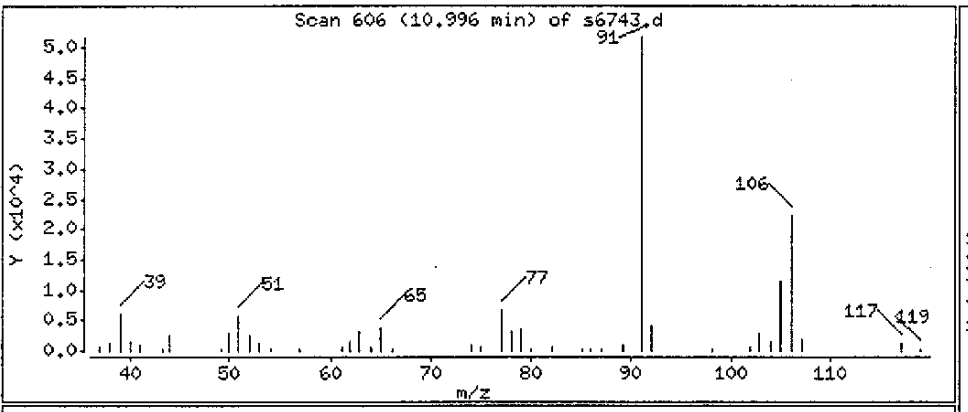
Operator: appelhansd

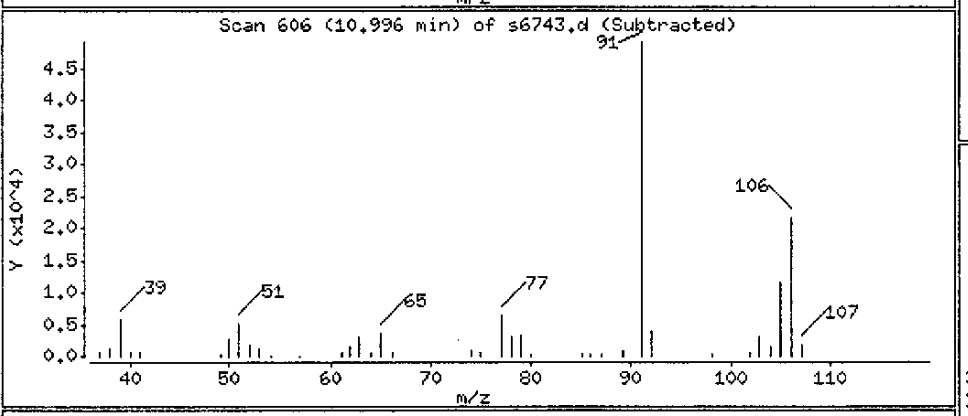
Column phase: DB624

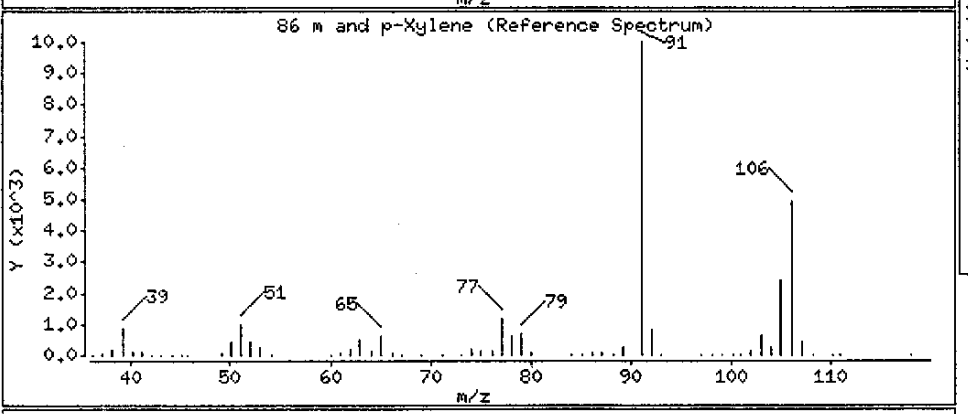
Column diameter: 0.53

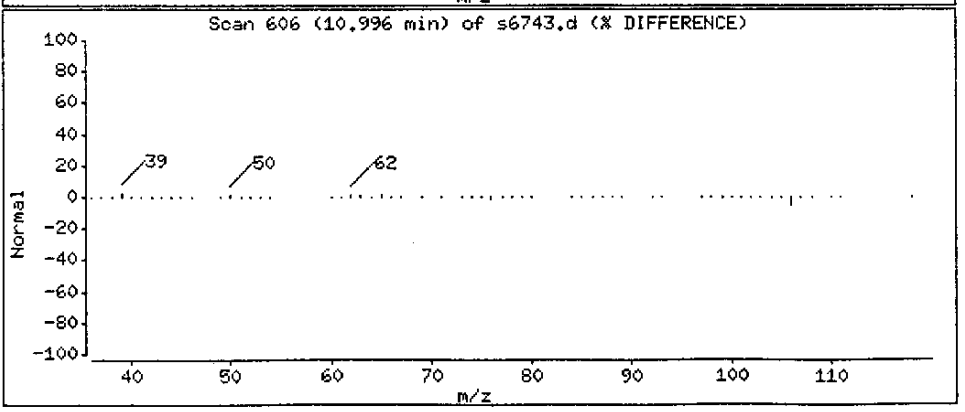
86 m and p-Xylene

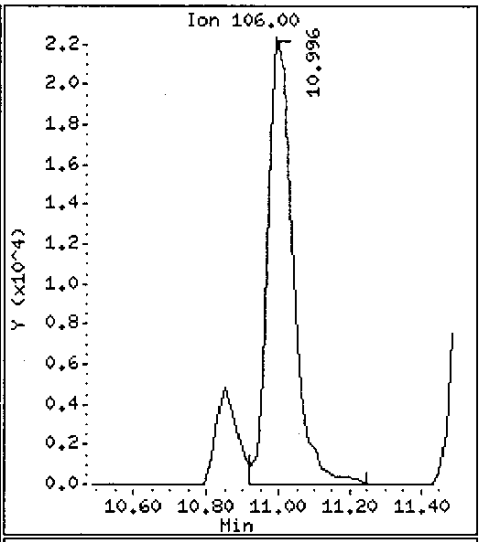
Concentration: 294.036 ug/L

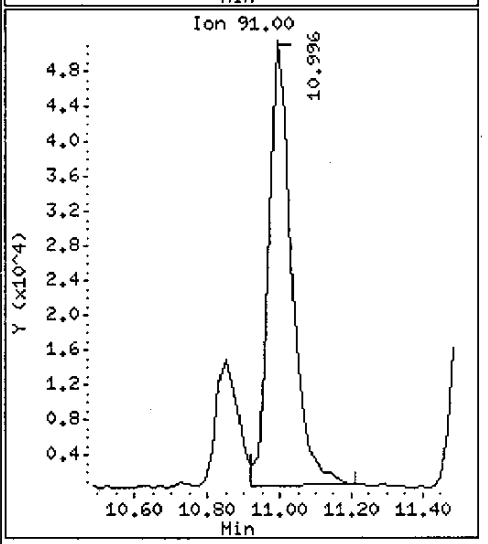












Data File: /chem/S.i/022004.b/s6743.d

Date : 20-FEB-2004 17:35

Client ID: PURGE COMPOSITE 021

Instrument: S.i

Sample Info: F9KFG1AA,0.1,D4B130209-016

Purge Volume: 20.0

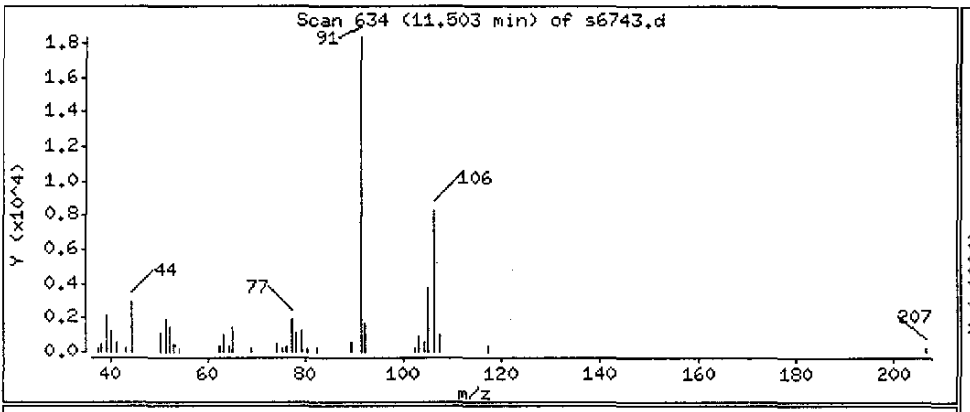
Operator: appelhansd

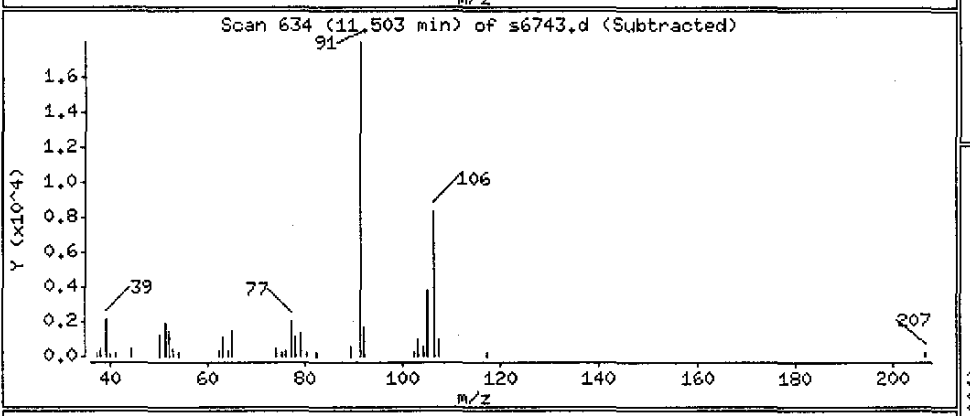
Column phase: DB624

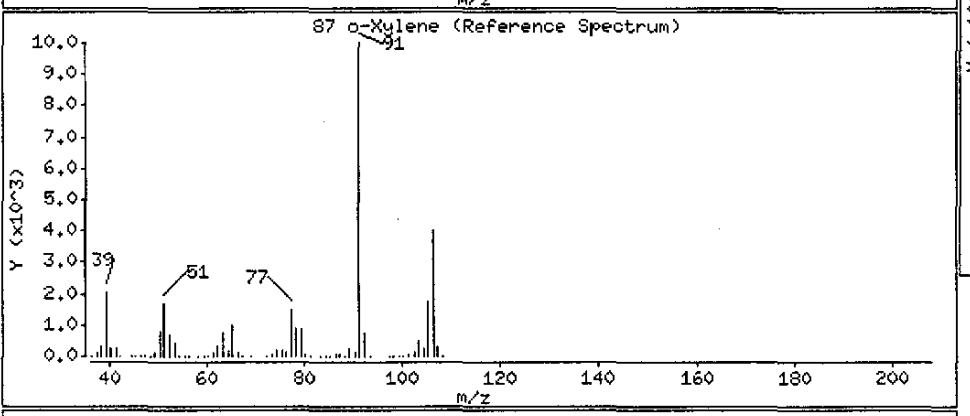
Column diameter: 0.53

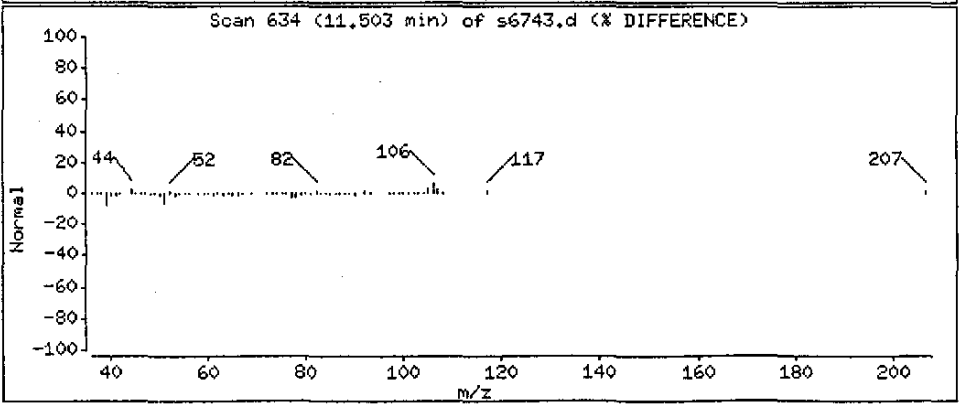
87 o-Xylene

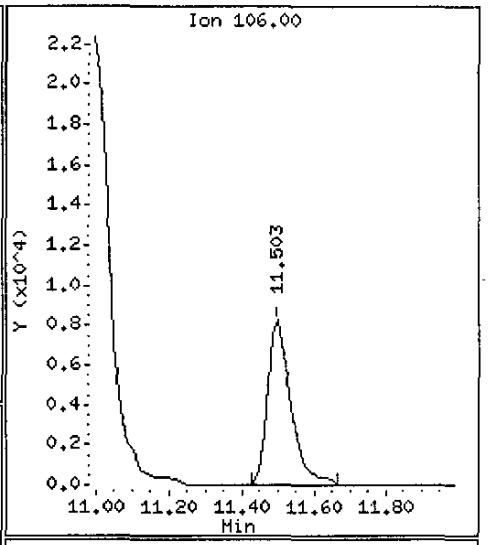
Concentration: 117.296 ug/L

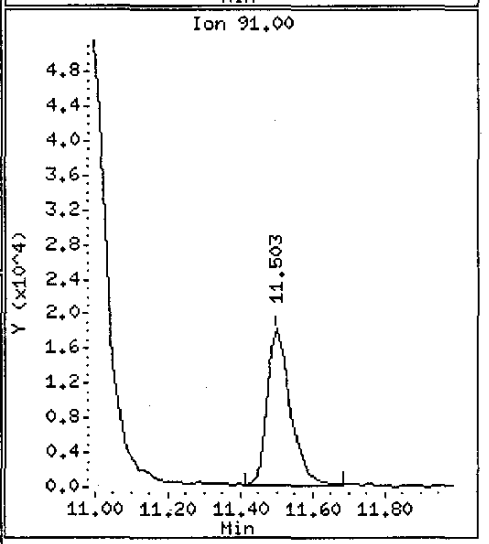












Data File: /chem/S.i/022004.b/s6743.d

Date : 20-FEB-2004 17:35

Client ID: PURGE COMPOSITE 021

Instrument: S.i

Sample Info: F9KFG1AA,0.1,D4B130209-016

Purge Volume: 20.0

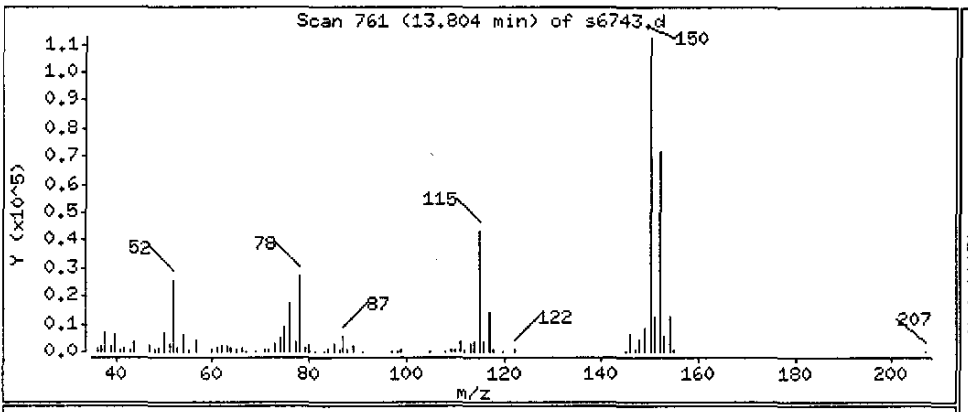
Operator: appelhansd

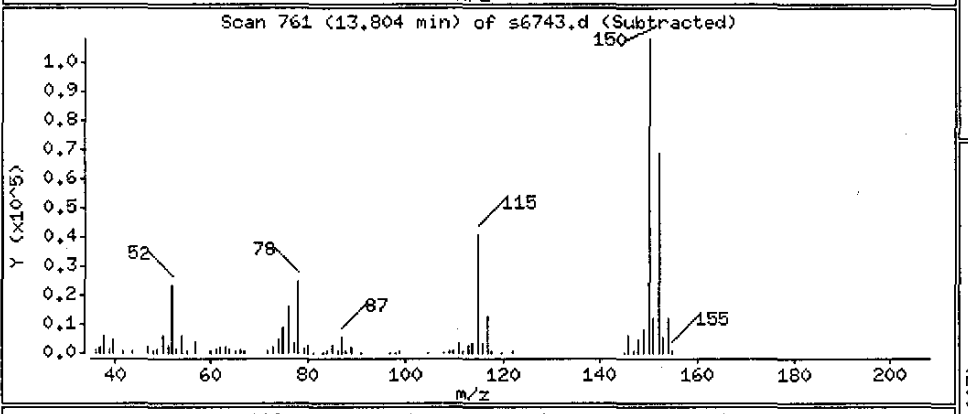
Column phase: DB624

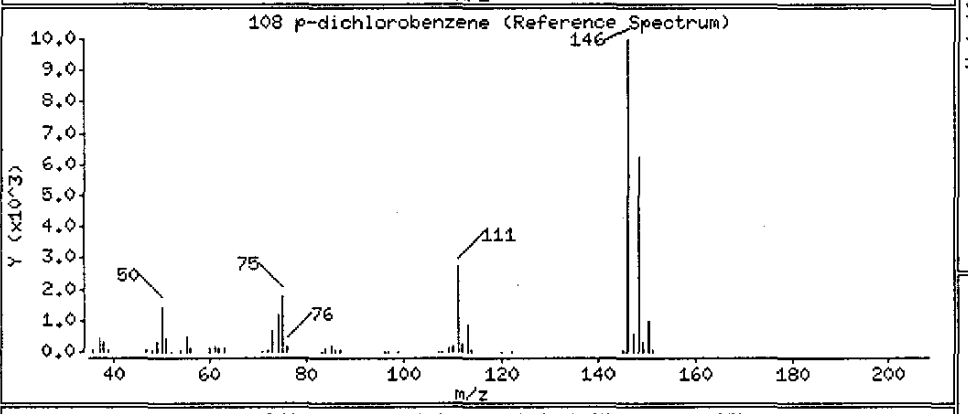
Column diameter: 0.53

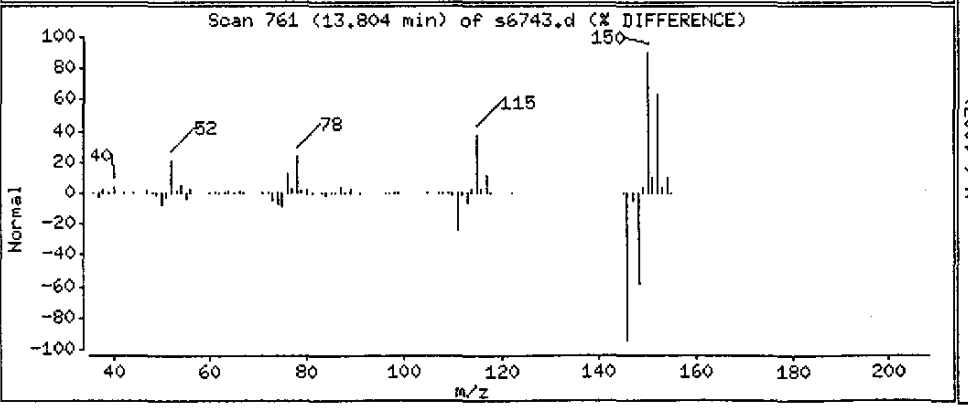
108 p-dichlorobenzene

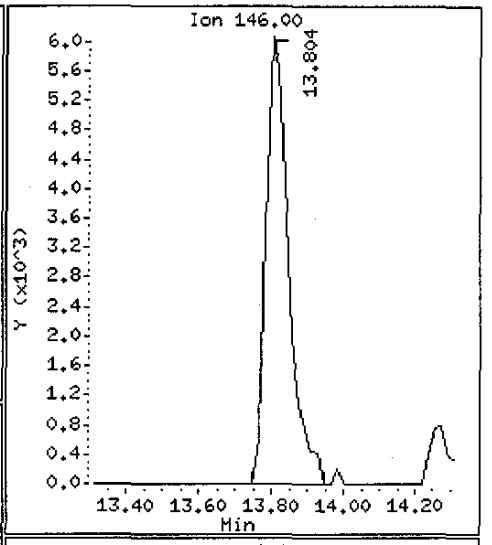
Concentration: 69.3040 ug/L

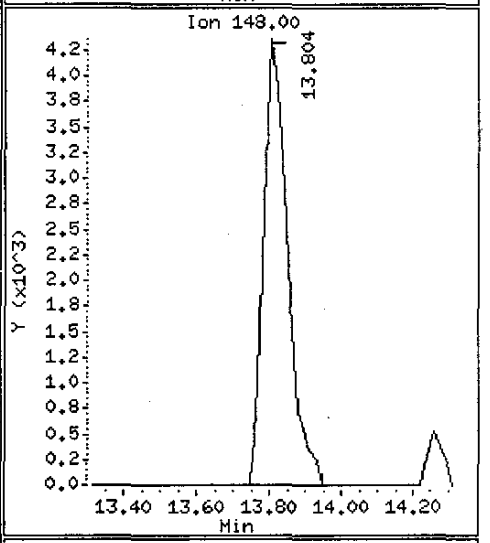


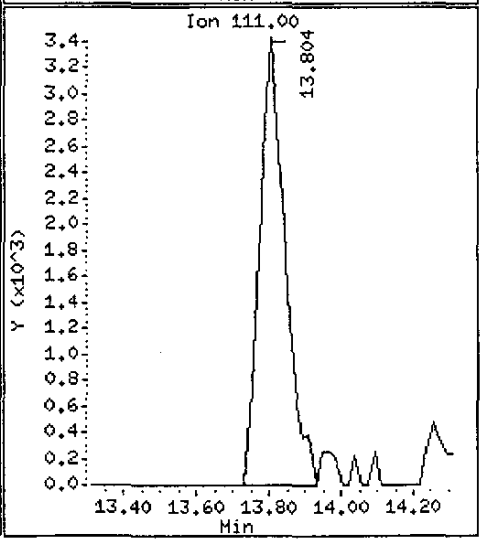












Data File: /chem/S.i/022004.b/s6743.d

Date : 20-FEB-2004 17:35

Client ID: PURGE COMPOSITE 021

Instrument: S.i

Sample Info: F9KFG1AA,0.1,D4B130209-016

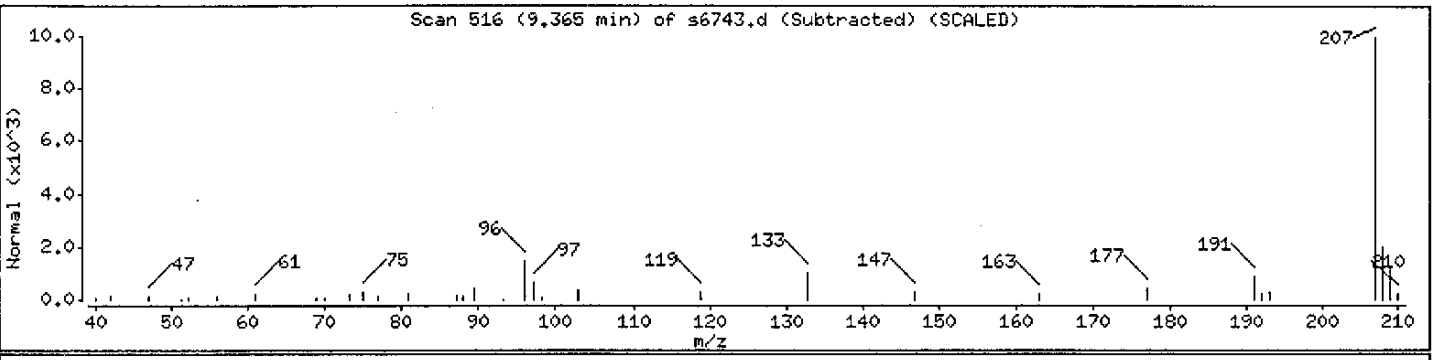
Purge Volume: 20.0

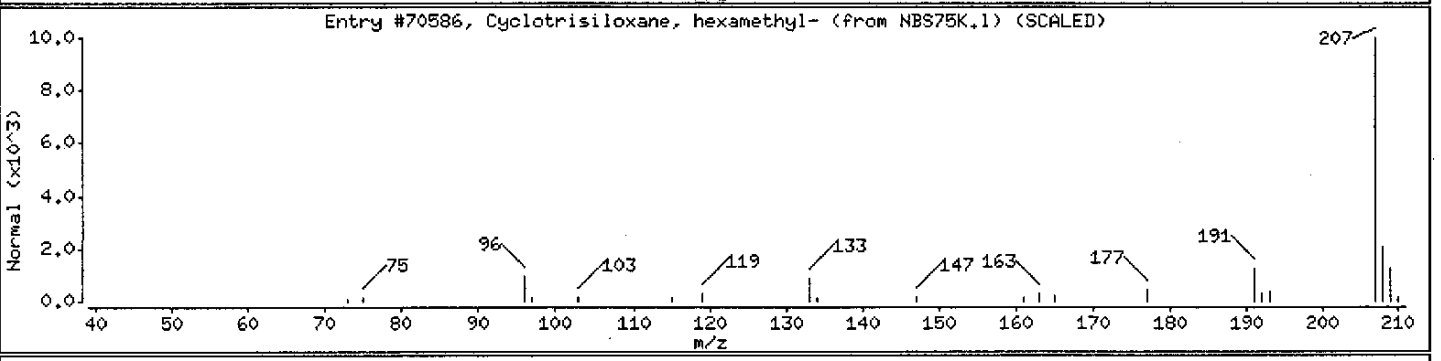
Operator: appelhansd

Column phase: DB624

Column diameter: 0.53

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Cyclotrisiloxane, hexamethyl-	541-05-9	NBS75K.l	70586	90	C6H18O3Si3	222





Data File: /chem/S.i/022004.b/s6743.d

Date : 20-FEB-2004 17:35

Client ID: PURGE COMPOSITE 021

Instrument: S.i

Sample Info: F9KFG1AA,0.1,D4B130209-016

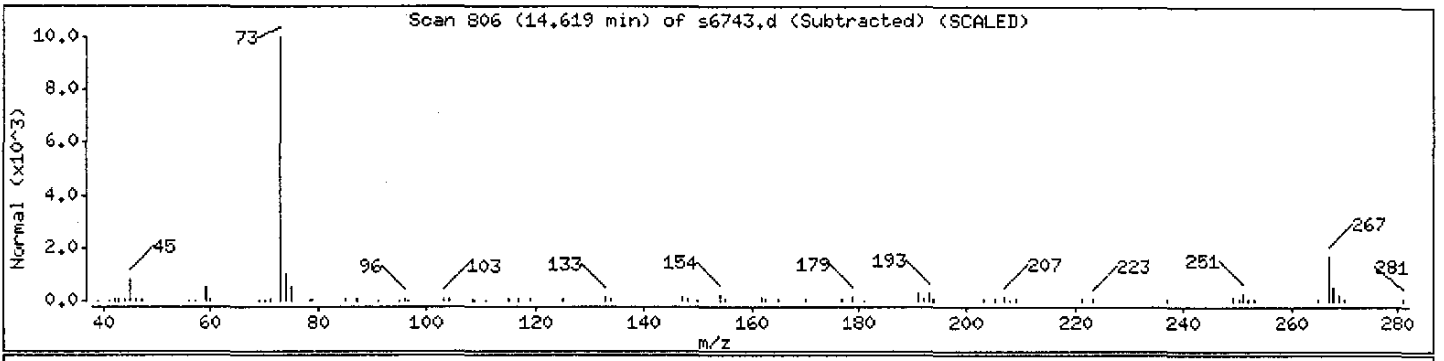
Purge Volume: 20.0

Operator: appelhansd

Column phase: DB624

Column diameter: 0.53

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown			0	0		0



Data File: /chem/S.i/022004.b/s6743.d

Date : 20-FEB-2004 17:35

Client ID: PURGE COMPOSITE 021

Instrument: S.i

Sample Info: F9KFG1AA,0.1,D4B130209-016

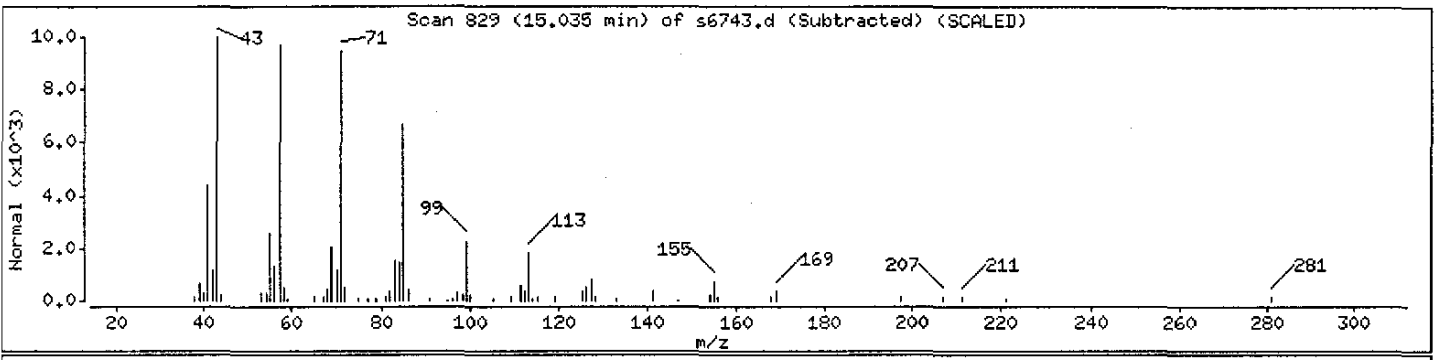
Purge Volume: 20.0

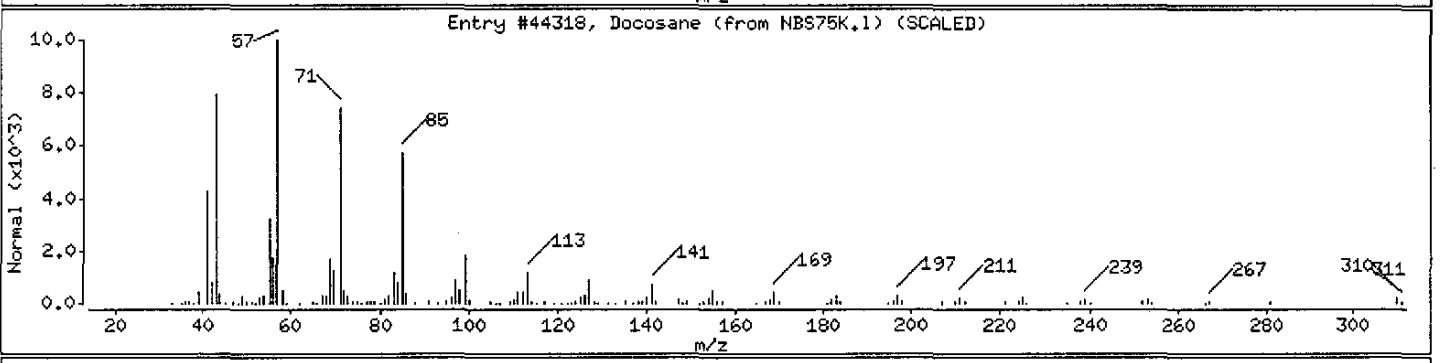
Operator: appelhansd

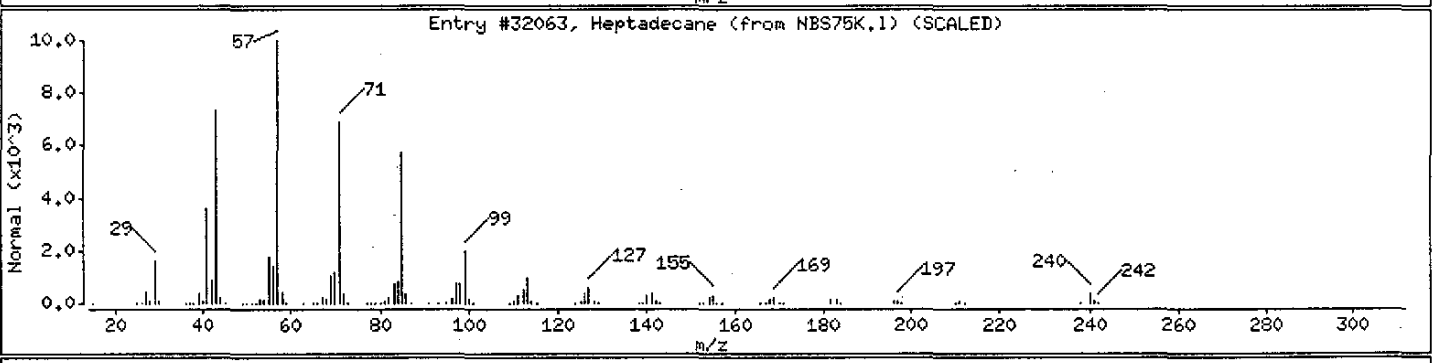
Column phase: DB624

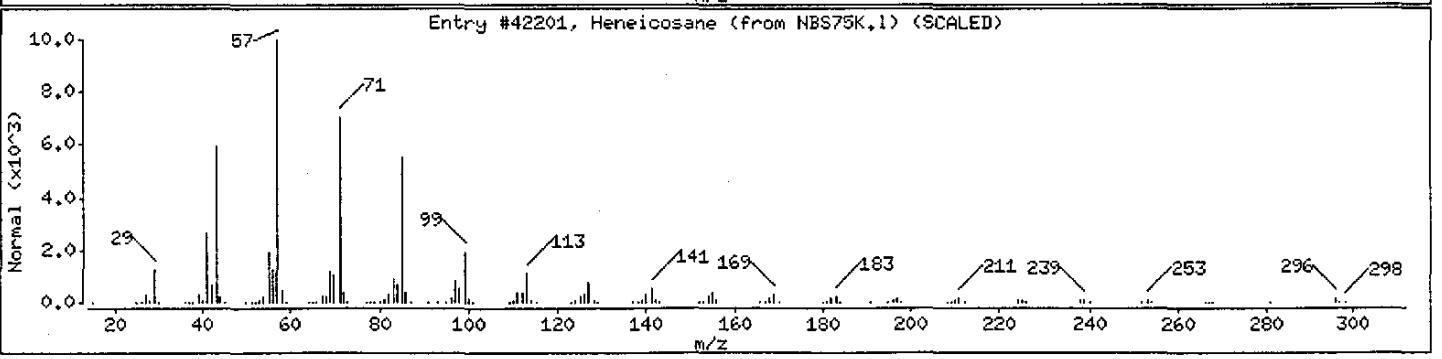
Column diameter: 0.53

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Docosane	629-97-0	NBS75K.l	44318	90	C22H46	310
Heptadecane	629-78-7	NBS75K.l	32063	86	C17H36	240
Heneicosane	629-94-7	NBS75K.l	42201	86	C21H44	296









Data File: /chem/S.i/022004.b/s6743.d

Date : 20-FEB-2004 17:35

Client ID: PURGE COMPOSITE 021

Instrument: S.i

Sample Info: F9KFG1AA,0.1,D4B130209-016

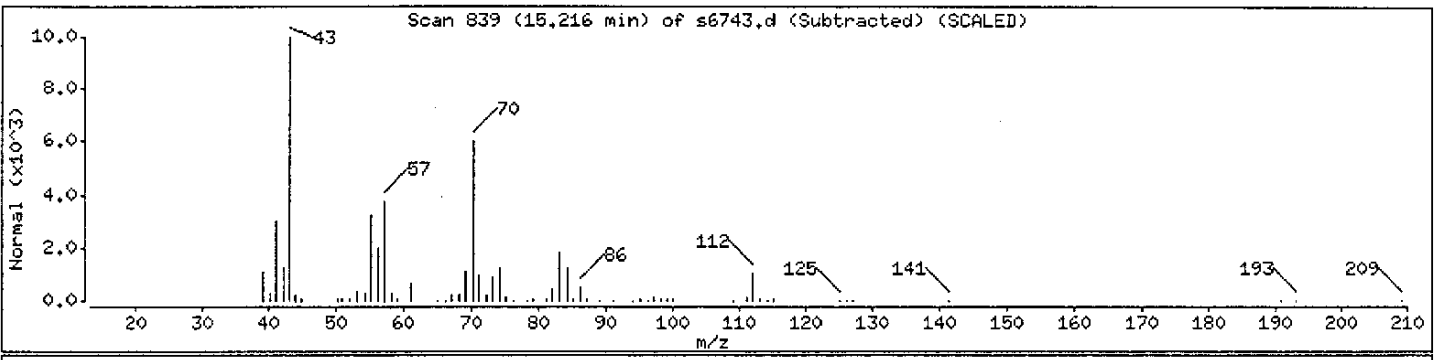
Purge Volume: 20.0

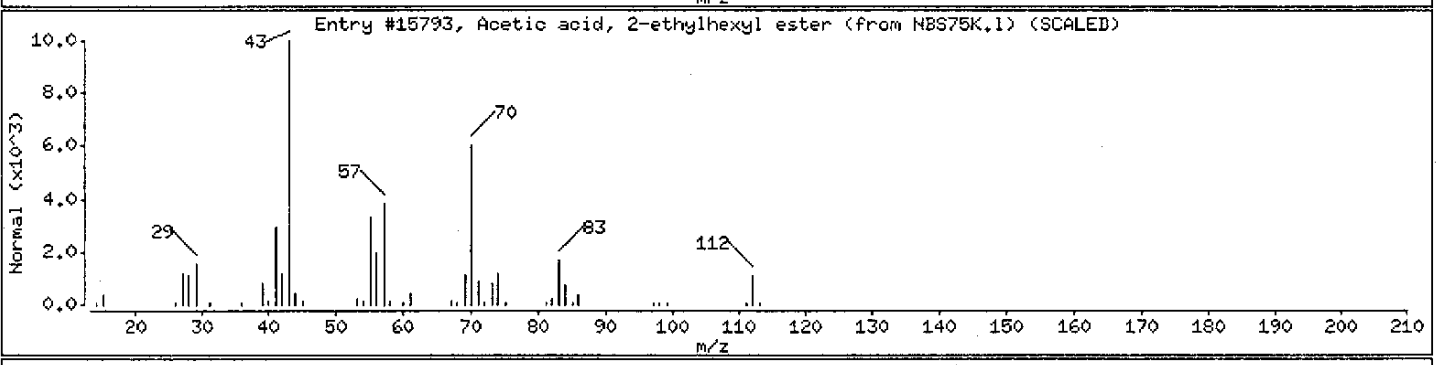
Operator: appelhansd

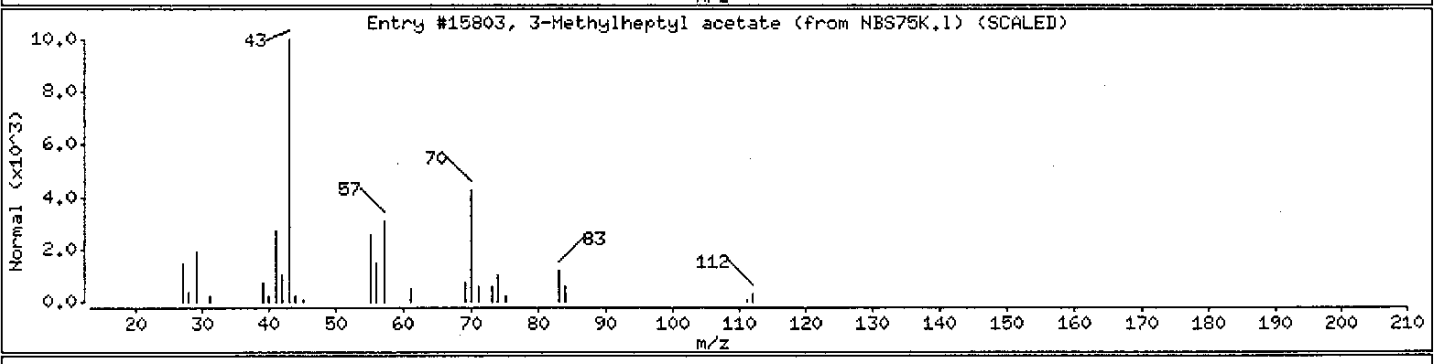
Column phase: DB624

Column diameter: 0.53

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Acetic acid, 2-ethylhexyl ester	103-09-3	NBS75K.l	15793	91	C10H20O2	172
3-Methylheptyl acetate	72218-58-7	NBS75K.l	15803	86	C10H20O2	172







Data File: /chem/S.i/022004.b/s6743.d

Date : 20-FEB-2004 17:35

Client ID: PURGE COMPOSITE 021

Instrument: S.i

Sample Info: F9KFG1AA,0.1,D4B130209-016

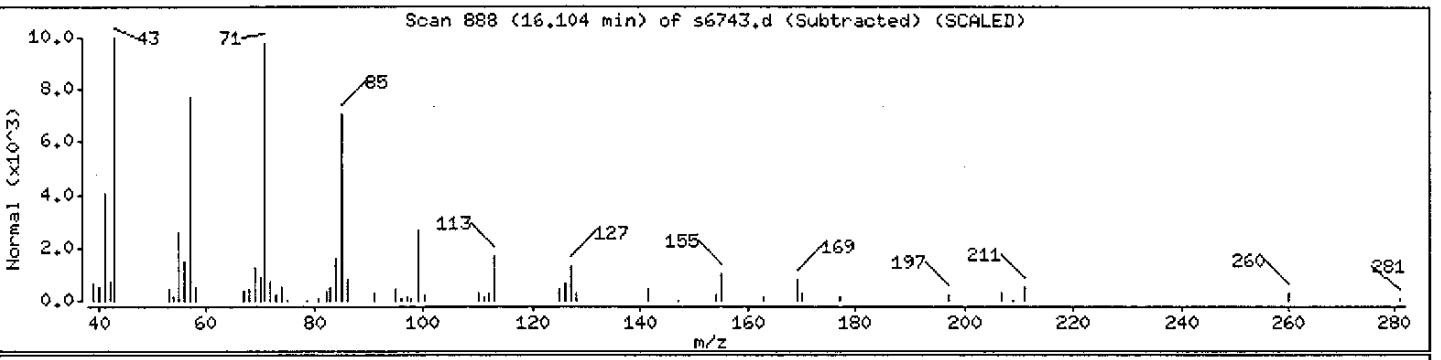
Purge Volume: 20.0

Operator: appelhansd

Column phase: DB624

Column diameter: 0.53

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown			0	0		0



Data File: /chem/S.i/022004.b/s6743.d

Date : 20-FEB-2004 17:35

Client ID: PURGE COMPOSITE 021

Instrument: S.i

Sample Info: F9KFG1AA,0.1,D4B130209-016

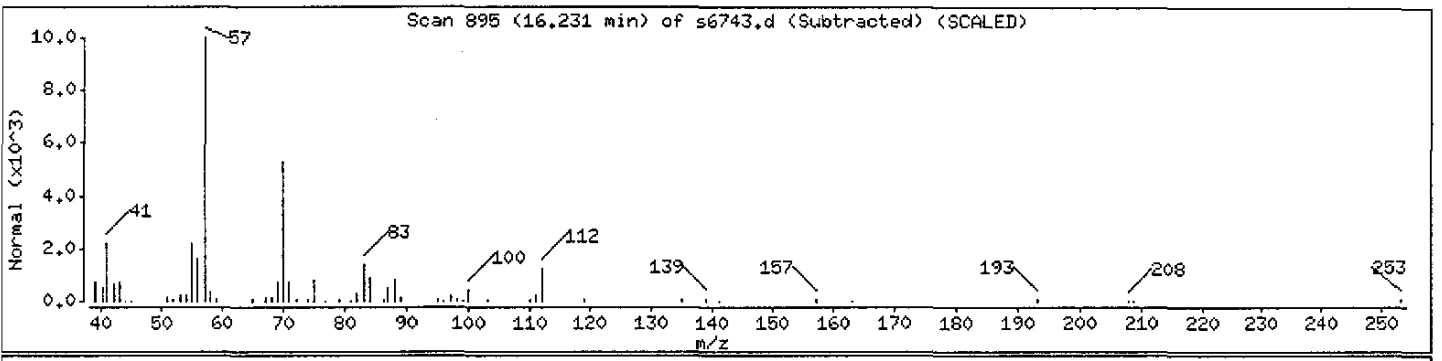
Purge Volume: 20.0

Operator: appelhansd

Column phase: DB624

Column diameter: 0.53

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown			0	0		0



Data File: /chem/S.i/022004.b/s6743.d

Date : 20-FEB-2004 17:35

Client ID: PURGE COMPOSITE 021

Instrument: S.i

Sample Info: F9KFG1AA,0.1,D4B130209-016

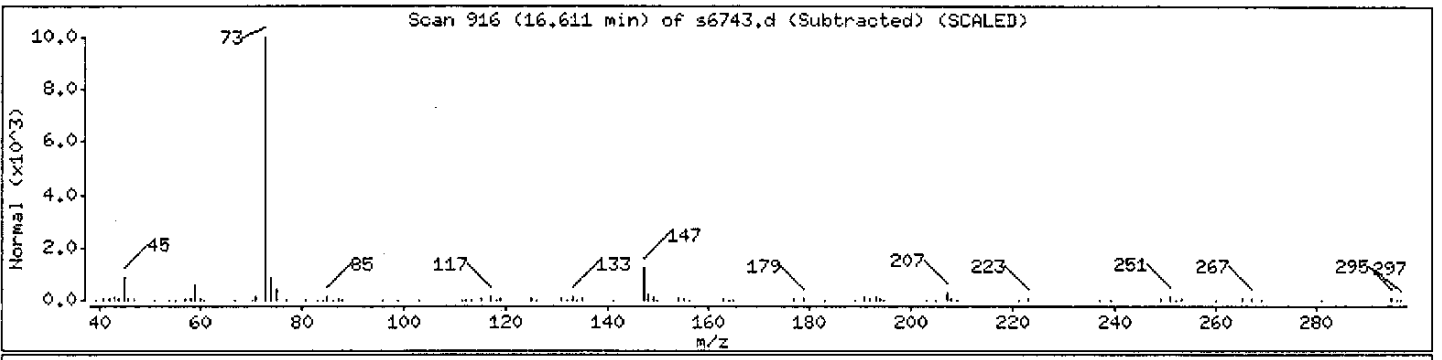
Purge Volume: 20.0

Operator: appelhansd

Column phase: DB624

Column diameter: 0.53

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown			0	0		0



Data File: /chem/S.i/022004.b/s6744.d
Report Date: 23-Feb-2004 08:17

STL Denver

VOLATILE REPORT SW-846

Data file : /chem/S.i/022004.b/s6744.d
Lab Smp Id: F9KHA1AA Client Smp ID: FBGW0210
Inj Date : 20-FEB-2004 17:58
Operator : appelhansd Inst ID: S.i
Smp Info : F9KHA1AA,,D4B130209-017
Misc Info :
Comment :
Method : /chem/S.i/022004.b/S-20ml-h2o.m
Meth Date : 20-Feb-2004 12:58 appelhad Quant Type: ISTD
Cal Date : 19-FEB-2004 17:35 Cal File: s6721.d
Als bottle: 2
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: S-all.sub
Target Version: 3.40
Processing Host: chemsv02

Concentration Formula: Amt * DF * Vp/Vs

Name	Value	Description
DF	1.000	Dilution Factor
Vp	20.000	Purge Volume (ml)
Vs	20.000	Sample Volume Purged (ml)

4-2-23

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/L)	
* 56 Fluorobenzene	96	7.134	7.137	(1.000)	1544193	12.5000		
* 82 Chlorobenzene-d5	119	10.721	10.724	(1.000)	323265	12.5000		
* 107 1,4-Dichlorobenzene-d4	152	13.782	13.786	(1.000)	461912	12.5000		(Q)
$ 46 Dibromofluoromethane	111	6.391	6.395	(0.896)	600280	9.81387	9.81387	
$ 52 1,2-Dichloroethane-d4	65	6.808	6.811	(0.954)	270389	9.24508	9.24508	
$ 70 Toluene-d8	98	8.945	8.949	(0.834)	1229520	9.38694	9.38694	
$ 93 Bromofluorobenzene	95	12.224	12.228	(1.140)	674550	9.08334	9.08334	
M 1 1,2-Dichloroethene (total)	96.00	Compound Not Detected.						
M 2 Xylene (total)	106.00	Compound Not Detected.						
3 dichlorodifluoromethane	85.00	Compound Not Detected.						
5 Dichlorotetrafluoroethane	85.00	Compound Not Detected.						
4 Chloromethane	50.00	Compound Not Detected.						
6 Vinyl Chloride	62.00	Compound Not Detected.						
7 Ethylene Oxide	43.00	Compound Not Detected.						
8 Bromomethane	94.00	Compound Not Detected.						
9 Chloroethane	64.00	Compound Not Detected.						

Data File: /chem/S.i/022004.b/s6744.d
Report Date: 23-Feb-2004 08:17

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/L)
10 Dichlorofluoromethane	67.00	Compound Not Detected.					
11 Trichlorofluoromethane	101.00	Compound Not Detected.					
12 Ethanol	45.00	Compound Not Detected.					
13 Ethyl Ether	59.00	Compound Not Detected.					
14 1,2-Dichloro-1,1,2-trifluorome	117.00	Compound Not Detected.					
16 Acrolein	56.00	Compound Not Detected.					
15 2,2-Dichloro-1,1,1-trifluorome	83.00	Compound Not Detected.					
18 1,1-Dichloroethene	96.00	Compound Not Detected.					
19 Acetone	43.00	Compound Not Detected.					
17 Trichlorotrifluoroethane	151.00	Compound Not Detected.					
21 Iodomethane	142.00	Compound Not Detected.					
20 2-Propanol	45.00	Compound Not Detected.					
22 Carbon Disulfide	76.00	Compound Not Detected.					
25 Acetonitrile	41.00	Compound Not Detected.					
24 Allyl Chloride	41.00	Compound Not Detected.					
23 Methyl Acetate	74.00	Compound Not Detected.					
26 Methylene Chloride	84.00	Compound Not Detected.					
27 tert-Butyl alcohol	59.00	Compound Not Detected.					
30 Acrylonitrile	53.00	Compound Not Detected.					
29 trans-1,2-Dichloroethene	96.00	Compound Not Detected.					
28 Methyl t-butyl ether	73.00	Compound Not Detected.					
31 Hexane	57.00	Compound Not Detected.					
33 1,1-Dichloroethane	63.00	Compound Not Detected.					
34 Vinyl acetate	43.00	Compound Not Detected.					
32 Isopropyl ether	87.00	Compound Not Detected.					
35 Chloroprene	53.00	Compound Not Detected.					
36 ETBE	59.00	Compound Not Detected.					
39 cis-1,2-Dichloroethene	96.00	Compound Not Detected.					
40 2-Butanone	43.00	Compound Not Detected.					
37 2,2-Dichloropropane	77.00	Compound Not Detected.					
41 Propionitrile	54.00	Compound Not Detected.					
38 Ethyl Acetate	43.00	Compound Not Detected.					
42 Methacrylonitrile	41.00	Compound Not Detected.					
43 Bromochloromethane	128.00	Compound Not Detected.					
45 Chloroform	83.00	Compound Not Detected.					
44 Tetrahydrofuran	42.00	Compound Not Detected.					
47 1,1,1-Trichloroethane	97.00	Compound Not Detected.					
48 Cyclohexane	56.00	Compound Not Detected.					
50 1,1-Dichloropropene	75.00	Compound Not Detected.					
49 Carbon Tetrachloride	117.00	Compound Not Detected.					
51 Isobutanol	41.00	Compound Not Detected.					
53 Benzene	78.00	Compound Not Detected.					
55 1,2-Dichloroethane	62.00	Compound Not Detected.					
54 TAME	73.00	Compound Not Detected.					
57 n-Butanol	56.00	Compound Not Detected.					
58 Trichloroethene	130.00	Compound Not Detected.					
60 2-Pentanone	43.00	Compound Not Detected.					

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/L)
59 Methyl-Cyclohexane	55.00	Compound Not Detected.					
61 1,2-Dichloropropane	63.00	Compound Not Detected.					
62 Methyl Methacrylate	100.00	Compound Not Detected.					
64 Dibromomethane	93.00	Compound Not Detected.					
63 1,4-Dioxane	88.00	Compound Not Detected.					
65 Bromodichloromethane	83.00	Compound Not Detected.					
78 Tetrahydrothiophene	60.00	Compound Not Detected.					
66 2-nitropropane	41.00	Compound Not Detected.					
67 2-Chloroethyl vinyl ether	63.00	Compound Not Detected.					
68 cis-1,3-Dichloropropene	75.00	Compound Not Detected.					
69 4-Methyl-2-pentanone	43.00	Compound Not Detected.					
71 Toluene	91	9.036	9.037	(0.843)	42574	0.25904	0.259036(a)
72 trans-1,3-Dichloropropene	75.00	Compound Not Detected.					
73 Ethyl methacrylate	69.00	Compound Not Detected.					
74 1,1,2-Trichloroethane	97.00	Compound Not Detected.					
76 1,3-Dichloropropane	76.00	Compound Not Detected.					
75 Tetrachloroethene	164.00	Compound Not Detected.					
77 2-Hexanone	43.00	Compound Not Detected.					
79 Dibromochloromethane	129.00	Compound Not Detected.					
80 1,2-Dibromoethane	107.00	Compound Not Detected.					
81 1-Chlorohexane	91.00	Compound Not Detected.					
83 Chlorobenzene	112.00	Compound Not Detected.					
85 1,1,1,2-Tetrachloroethane	131.00	Compound Not Detected.					
84 Ethylbenzene	106.00	Compound Not Detected.					
86 m and p-Xylene	106.00	Compound Not Detected.					
87 o-Xylene	106.00	Compound Not Detected.					
88 Styrene	104.00	Compound Not Detected.					
89 Bromoform	173.00	Compound Not Detected.					
90 isopropyl benzene	105.00	Compound Not Detected.					
92 Cyclohexanone	55.00	Compound Not Detected.					
91 cis-1,4-dichloro-2-butene	53.00	Compound Not Detected.					
94 1,1,2,2-Tetrachloroethane	83.00	Compound Not Detected.					
95 Bromobenzene	156.00	Compound Not Detected.					
97 1,2,3-Trichloropropane	110.00	Compound Not Detected.					
98 t-1,4-Dichloro-2-butene	53.00	Compound Not Detected.					
96 n-Propylbenzene	120.00	Compound Not Detected.					
99 2-Chlorotoluene	126.00	Compound Not Detected.					
100 1,3,5-Trimethylbenzene	105.00	Compound Not Detected.					
101 4-Chlorotoluene	126.00	Compound Not Detected.					
102 tert-Butylbenzene	119.00	Compound Not Detected.					
103 1,2,4-Trimethylbenzene	105.00	Compound Not Detected.					
104 sec-Butylbenzene	134.00	Compound Not Detected.					
106 m-Dichlorobenzene	146.00	Compound Not Detected.					
105 4-Isopropyltoluene	119.00	Compound Not Detected.					
109 1,2,3-Trimethylbenzene	105.00	Compound Not Detected.					
108 p-dichlorobenzene	146.00	Compound Not Detected.					
110 n-Butylbenzene	91.00	Compound Not Detected.					

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)
111 o-Dichlorobenzene	146.00	Compound Not Detected.					
112 1,2-Dibromo-3-chloropropane	157.00	Compound Not Detected.					
113 1,2,4-Trichlorobenzene	180.00	Compound Not Detected.					
114 Hexachlorobutadiene	225.00	Compound Not Detected.					
115 Napthalene	128.00	Compound Not Detected.					
116 1,2,3-Trichlorobenzene	180.00	Compound Not Detected.					

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
Q - Qualifier signal failed the ratio test.

STL Denver

VOLATILE REPORT SW-846

Data file : /chem/S.i/022004.b/s6744.d
Lab Smp Id: F9KHA1AA Client Smp ID: FBGW0210
Inj Date : 20-FEB-2004 17:58
Operator : appelhansd Inst ID: S.i
Smp Info : F9KHA1AA,,D4B130209-017
Misc Info :
Comment :
Method : /chem/S.i/022004.b/S-20ml-h2o.m
Meth Date : 20-Feb-2004 12:58 appelhad Quant Type: ISTD
Cal Date : 19-FEB-2004 17:35 Cal File: s6721.d
Als bottle: 2
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: S-all.sub
Target Version: 3.40
Processing Host: chemsv02

Concentration Formula: Amt * DF * Vp/Vs

Name	Value	Description
DF	1.000	Dilution Factor
Vp	20.000	Purge Volume (ml)
Vs	20.000	Sample Volume Purged (ml)

ISTD	RT	AREA	AMOUNT
* 82 Chlorobenzene-d5	10.721	3160740	12.500
* 107 1,4-Dichlorobenzene-d4	13.782	2995925	12.500

		CONCENTRATIONS			QUANT		
RT	AREA	ON-COL(ug/L)	FINAL(ug/L)	QUAL	LIBRARY	LIB ENTRY	CPND #
Cyclotrisiloxane, hexamethyl-				CAS #: 541-05-9			
9.362	549617	2.17360887	2.17361	86	NBS75K.1	70586	82
Unknown				CAS #:			
14.634	2860890	11.9365889	11.9366	0		0	107

Data File: /chem/S.i/022004.b/s6744.d
Report Date: 23-Feb-2004 08:17

RT	AREA	CONCENTRATIONS ON-COL(ug/L)	FINAL(ug/L)	QUAL	QUANT LIBRARY	LIB ENTRY	CPND #
Docosane				CAS #: 629-97-0			
15.032	569781	2.37731669	2.37732	90	NBS75K.l	44318	107
Acetic acid, 2-ethylhexyl ester				CAS #: 103-09-3			
15.213	7321098	30.5460667	30.5461	91	NBS75K.l	15793	107
Unknown				CAS #:			
16.228	3677270	15.3427990	15.3428	0		0	107
Unknown				CAS #:			
16.608	2255239	9.40961055	9.40961	0		0	107

Data File: /chem/S.i/022004.b/s6744.d
Report Date: 23-Feb-2004 08:17

STL Denver

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: S.i
Lab File ID: s6744.d
Lab Smp Id: F9KHA1AA
Analysis Type: VOA
Quant Type: ISTD
Operator: appelhansd
Method File: /chem/S.i/022004.b/S-20ml-h2o.m
Misc Info:

Calibration Date: 02/20/4
Calibration Time: 1103
Client Smp ID: FBGW0210
Level: LOW
Sample Type: WATER

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
56 Fluorobenzene	1717585	858792	3435170	1544193	-10.10
82 Chlorobenzene-d5	368273	184136	736546	323265	-12.22
107 1,4-Dichlorobenze	525307	262654	1050614	461912	-12.07

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
56 Fluorobenzene	7.14	6.64	7.64	7.13	-0.05
82 Chlorobenzene-d5	10.72	10.22	11.22	10.72	-0.03
107 1,4-Dichlorobenze	13.79	13.29	14.29	13.78	-0.03

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem/S.i/022004.b/s6744.d Page 8
Report Date: 23-Feb-2004 08:17

STL Denver

RECOVERY REPORT

Client Name: ARCADIS GERAGHTY & M13-FEB-2004 Client SDG: D4B130209
Sample Matrix: LIQUID Fraction: VOA
Lab Smp Id: F9KHA1AA Client Smp ID: FBGW0210
Level: LOW Operator: appelhansd
Data Type: MS DATA SampleType: SAMPLE
SpikeList File: dcs.spk Quant Type: ISTD
Sublist File: S-all.sub
Method File: /chem/S.i/022004.b/S-20ml-h2o.m
Misc Info:

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 46 Dibromofluorometha	10.0000	9.81387	98.14	76-116
$ 52 1,2-Dichloroethane	10.0000	9.24508	92.45	59-129
$ 70 Toluene-d8	10.0000	9.38694	93.87	76-116
$ 93 Bromofluorobenzene	10.0000	9.08334	90.83	74-114

Data File: /chem/S.i/022004.b/s6744.d
Date : 20-FEB-2004 17:58
Client ID: FBGW0210
Sample Info: F9KHA1AA,,D4B130209-017
Purge Volume: 20.0
Column phase: DB624

Instrument: S.i
Operator: appelhansd
Column diameter: 0.53

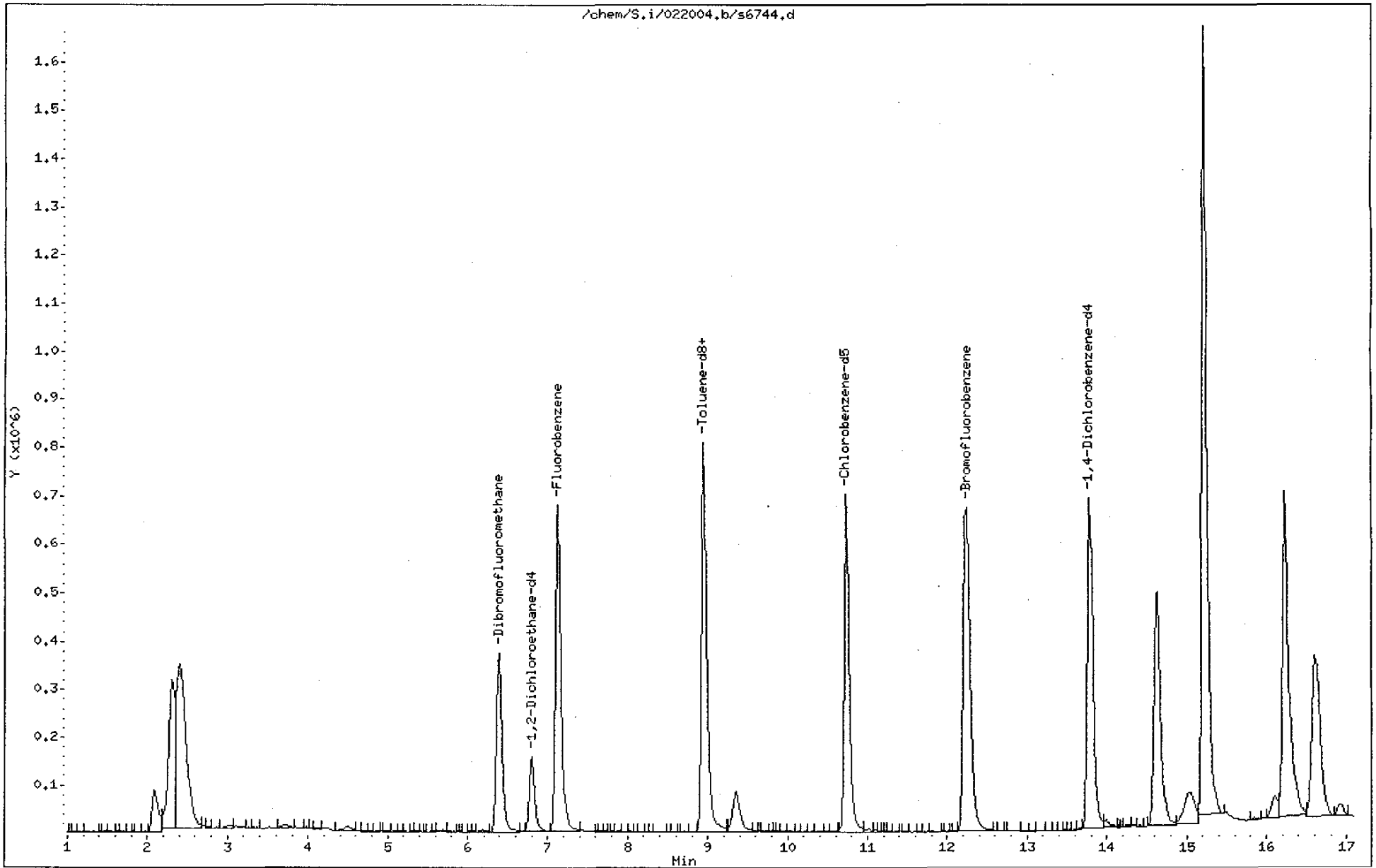


Table of Contents

Data File: /chem/S.i/022004.b/s6744.d

Date : 20-FEB-2004 17:58

Client ID: FBGW0210

Instrument: S.i

Sample Info: F9KHA1AA,,D4B130209-017

Purge Volume: 20.0

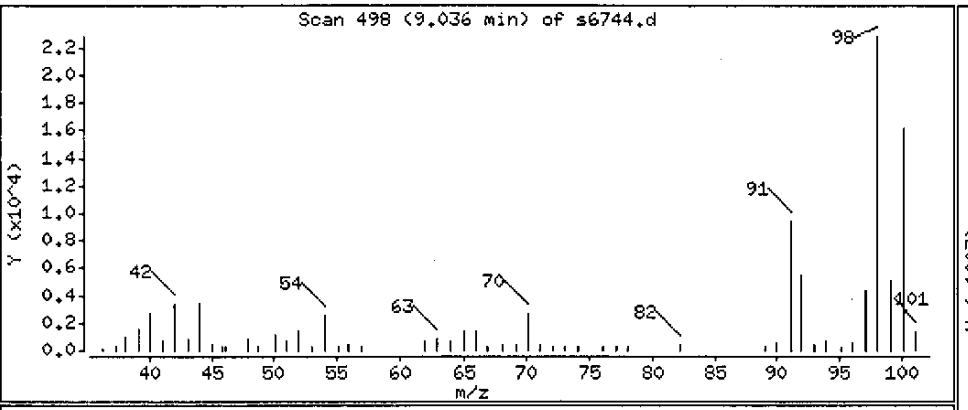
Operator: appelhansd

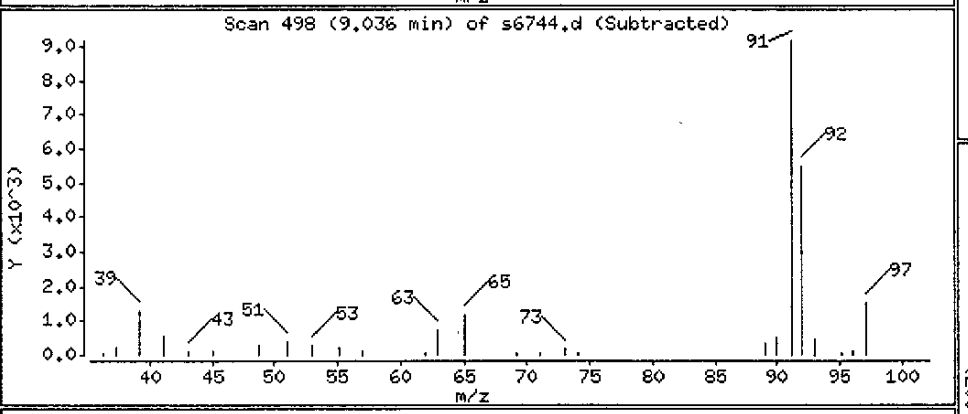
Column phase: DB624

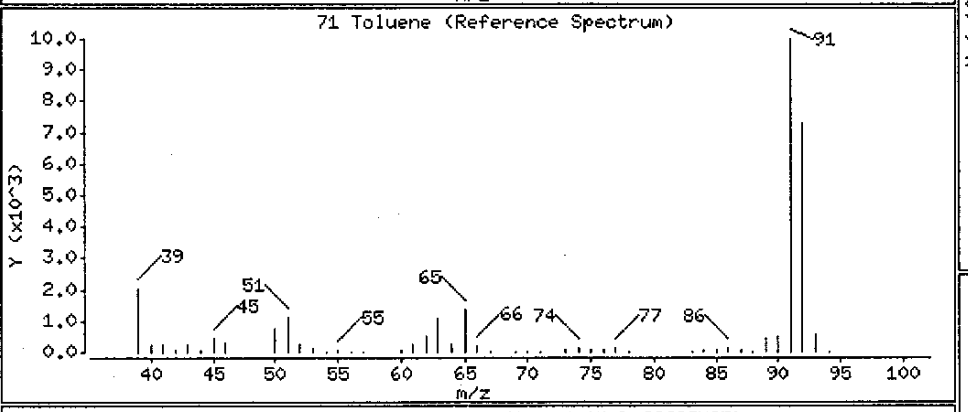
Column diameter: 0.53

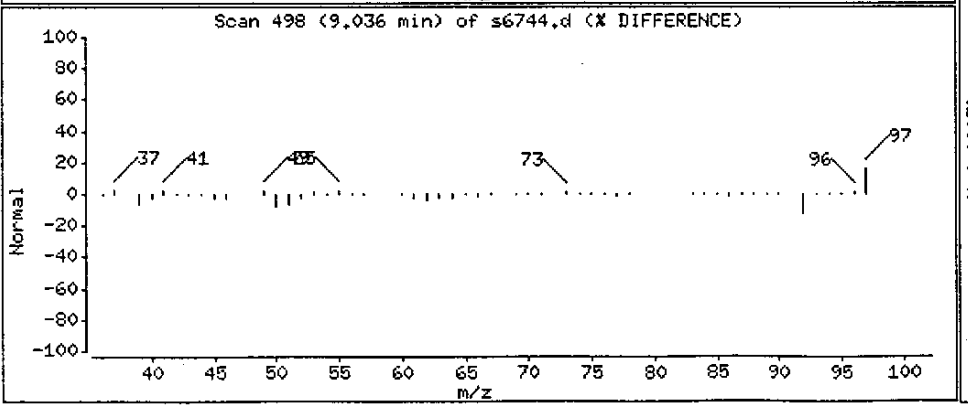
71 Toluene

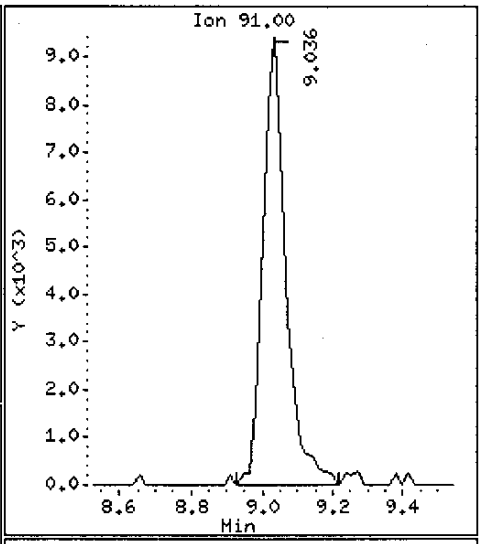
Concentration: 0.259036 ug/L

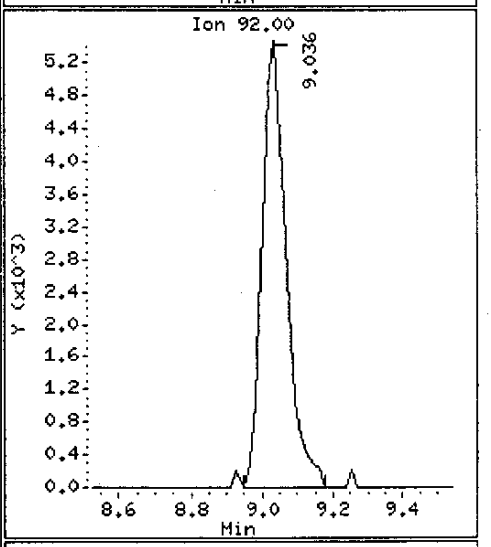


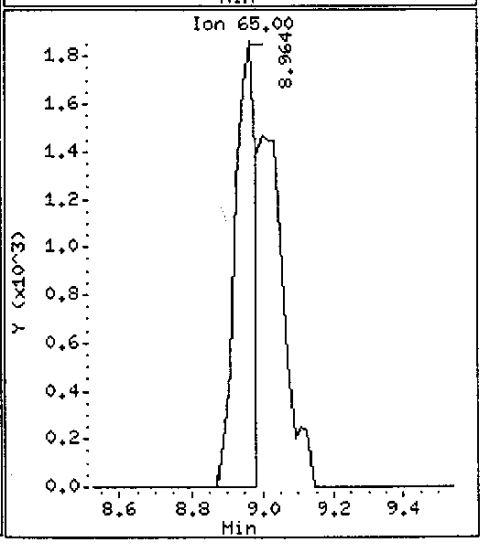












Data File: /chem/S.i/022004.b/s6744.d

Date : 20-FEB-2004 17:58

Client ID: FBGW0210

Instrument: S.i

Sample Info: F9KHA1AA,,D4B130209-017

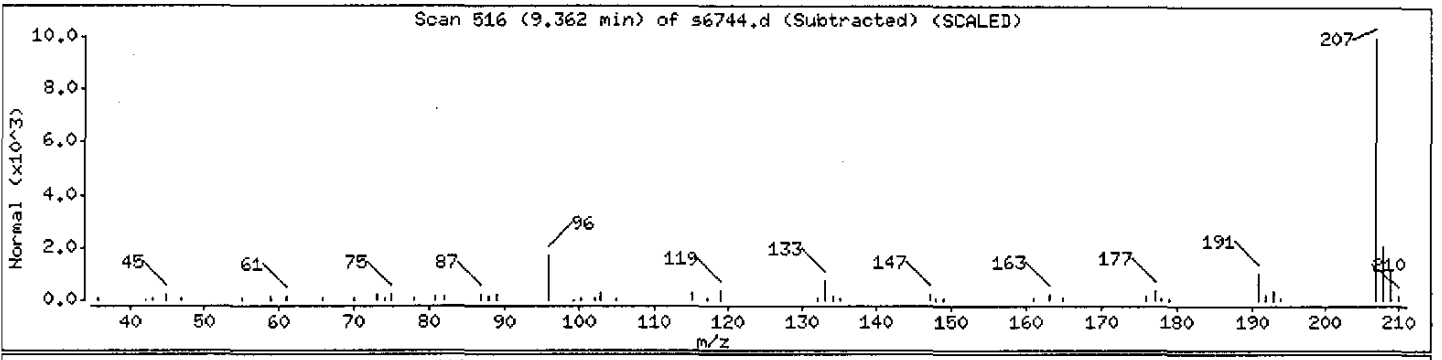
Purge Volume: 20.0

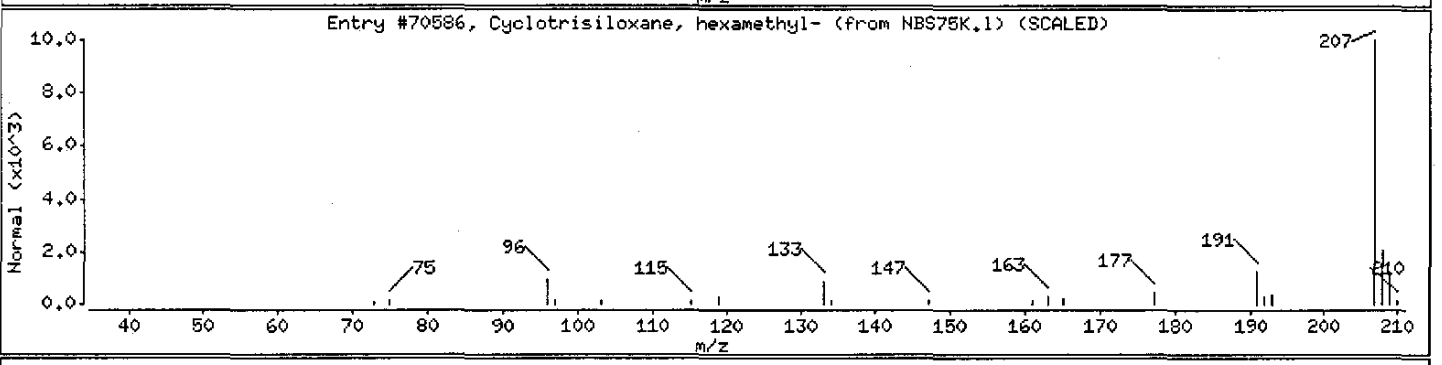
Operator: appelhansd

Column phase: DB624

Column diameter: 0.53

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Cyclotrisiloxane, hexamethyl-	541-05-9	NBS75K.l	70586	86	C6H18O3Si3	222





Data File: /chem/S.i/022004.b/s6744.d

Date : 20-FEB-2004 17:58

Client ID: FBGW0210

Instrument: S.i

Sample Info: F9KHA1AA,,D4B130209-017

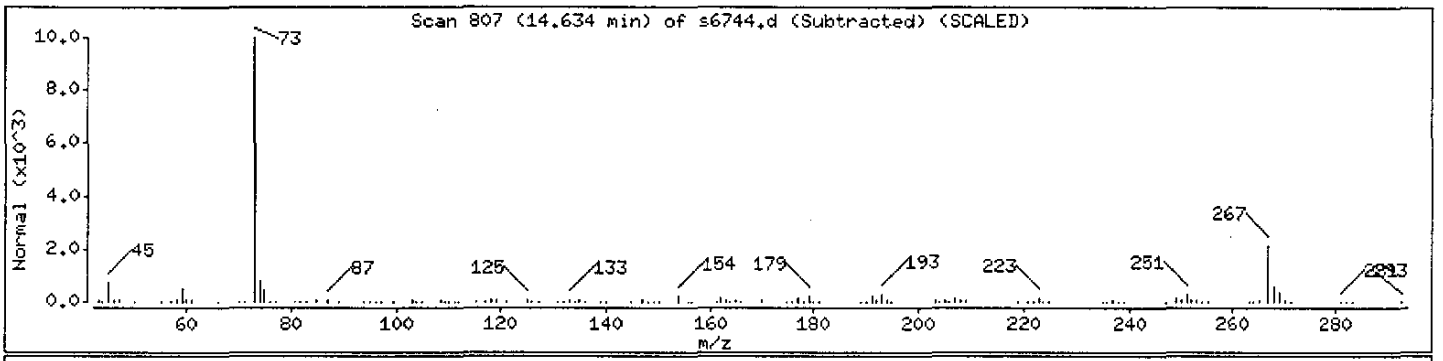
Purge Volume: 20.0

Operator: appelhansd

Column phase: DB624

Column diameter: 0.53

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown			0	0		0



Data File: /chem/S.i/022004.b/s6744.d

Date : 20-FEB-2004 17:58

Client ID: FBGW0210

Instrument: S.i

Sample Info: F9KHA1AA,,D4B130209-017

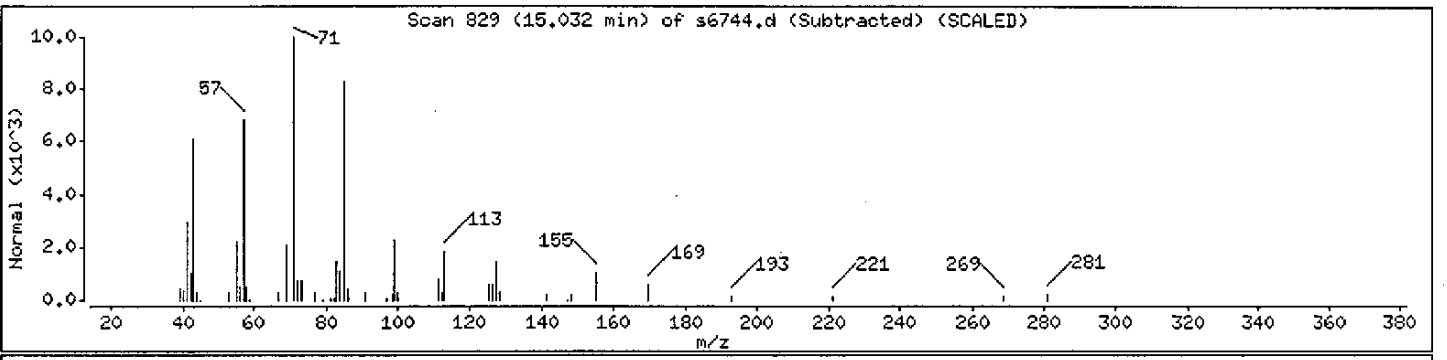
Purge Volume: 20.0

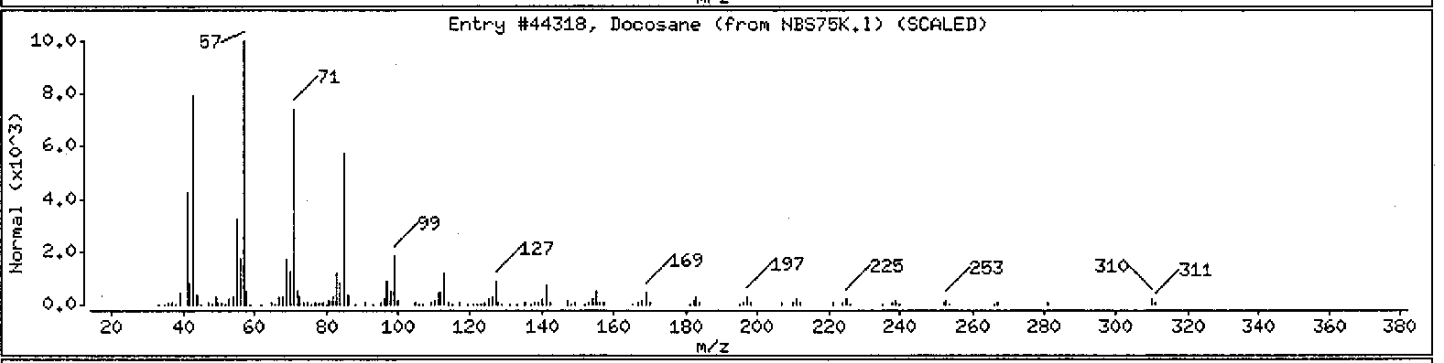
Operator: appelhansd

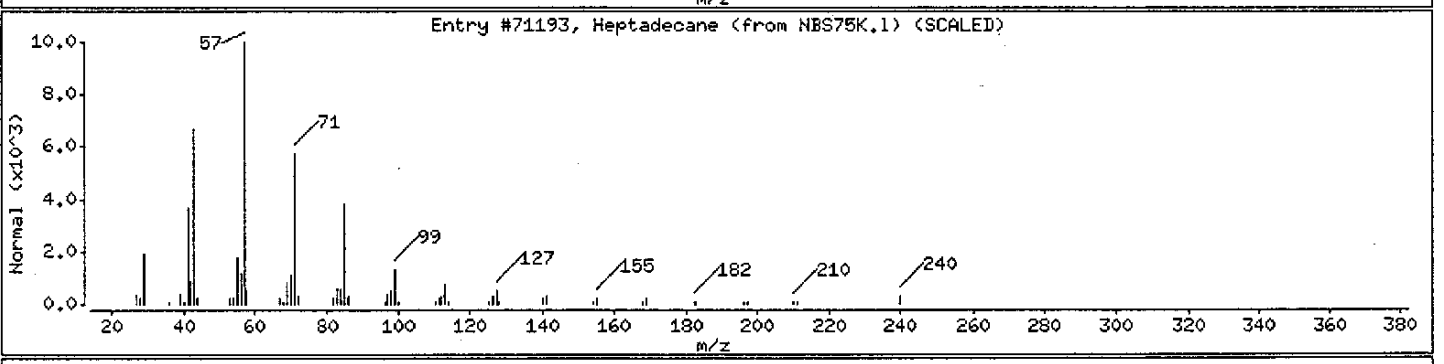
Column phase: DB624

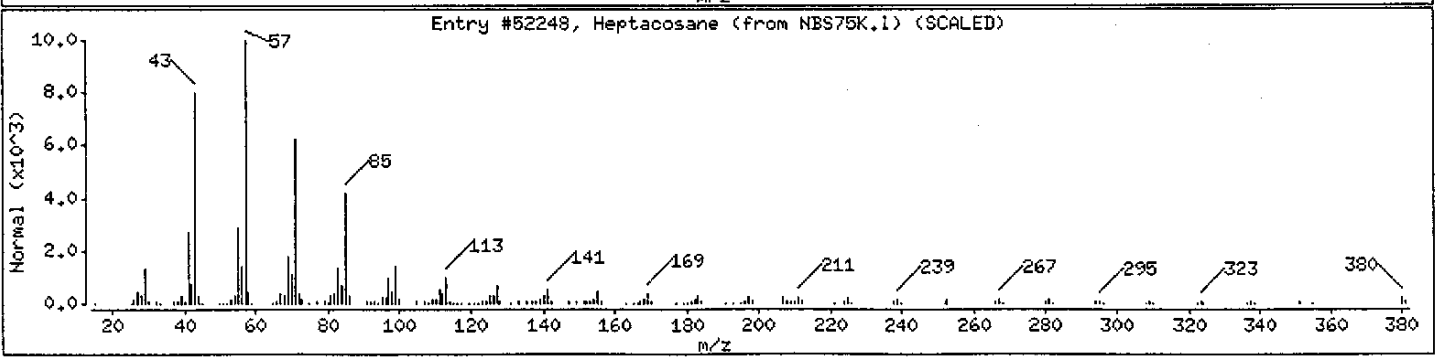
Column diameter: 0.53

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Docosane	629-97-0	NBS75K.l	44318	90	C22H46	310
Heptadecane	629-78-7	NBS75K.l	71193	83	C17H36	240
Heptacosane	593-49-7	NBS75K.l	52248	83	C27H56	380









Data File: /chem/S.i/022004.b/s6744.d

Date : 20-FEB-2004 17:58

Client ID: FBGW0210

Instrument: S.i

Sample Info: F9KHA1AA,,D4B130209-017

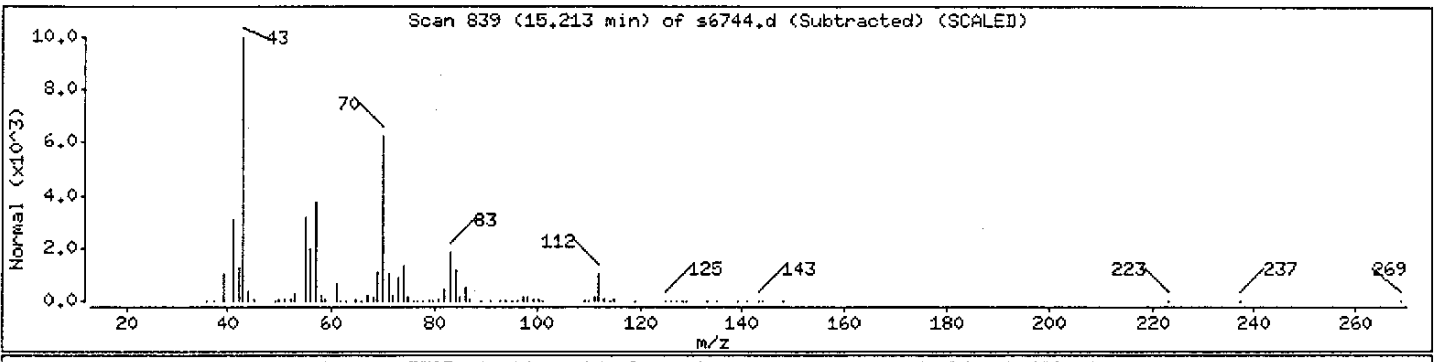
Purge Volume: 20.0

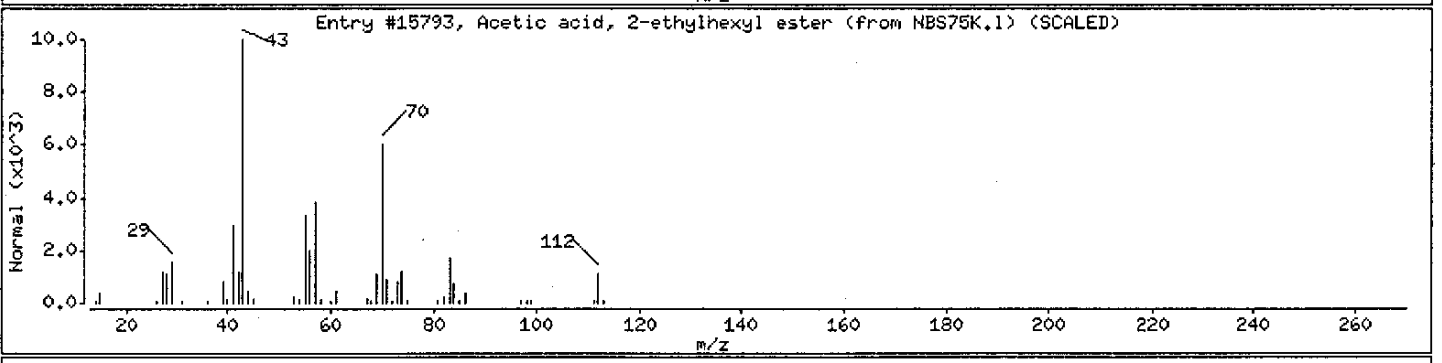
Operator: appelhansd

Column phase: DB624

Column diameter: 0.53

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Acetic acid, 2-ethylhexyl ester	103-09-3	NBS75K.l	15793	91	C10H2002	172





Data File: /chem/S.i/022004.b/s6744.d

Date : 20-FEB-2004 17:58

Client ID: FBGW0210

Instrument: S.i

Sample Info: F9KHA1AA,,D4B130209-017

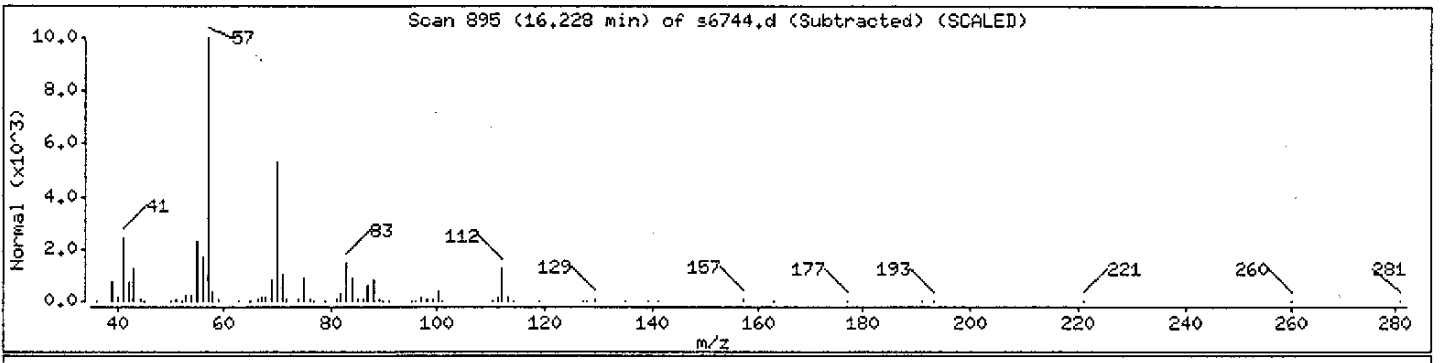
Purge Volume: 20.0

Operator: appelhansd

Column phase: DB624

Column diameter: 0.53

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown			0	0		0



Data File: /chem/S.i/022004.b/s6744.d

Date : 20-FEB-2004 17:58

Client ID: FBGW0210

Instrument: S.i

Sample Info: F9KHA1AA,,D4B130209-017

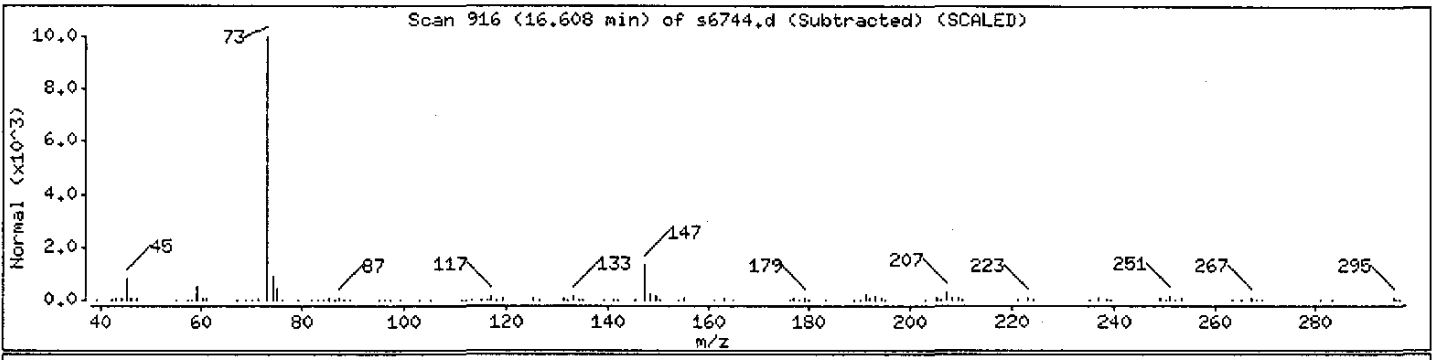
Purge Volume: 20.0

Operator: appelhansd

Column phase: DB624

Column diameter: 0.53

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown			0	0		0



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STL Denver

VOLATILE REPORT SW-846

Data file : /chem/S.i/022004.b/s6745.d
Lab Smp Id: F9KHC1AA Client Smp ID: TB011604
Inj Date : 20-FEB-2004 18:22
Operator : appelhansd Inst ID: S.i
Smp Info : F9KHC1AA,,D4B130209-018
Misc Info :
Comment :
Method : /chem/S.i/022004.b/S-20ml-h2o.m
Meth Date : 20-Feb-2004 12:58 appelhad Quant Type: ISTD
Cal Date : 19-FEB-2004 17:35 Cal File: s6721.d
Als bottle: 2
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: S-all.sub
Target Version: 3.40
Processing Host: chemsv02

Concentration Formula: Amt * DF * Vp/Vs

Name	Value	Description
DF	1.000	Dilution Factor
Vp	20.000	Purge Volume (ml)
Vs	20.000	Sample Volume Purged (ml)

DK 2-23

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/L)	
* 56 Fluorobenzene	96	7.137	7.137	(1.000)	1398038	12.5000		
* 82 Chlorobenzene-d5	119	10.724	10.724	(1.000)	296288	12.5000		
* 107 1,4-Dichlorobenzene-d4	152	13.785	13.786	(1.000)	432343	12.5000		(Q)
$ 46 Dibromofluoromethane	111	6.394	6.395	(0.896)	589049	10.6370	10.6370	
$ 52 1,2-Dichloroethane-d4	65	6.811	6.811	(0.954)	268958	10.1575	10.1575	
$ 70 Toluene-d8	98	8.949	8.949	(0.834)	1235741	10.2934	10.2934	
$ 93 Bromofluorobenzene	95	12.227	12.228	(1.140)	666120	9.78653	9.78653	
M 1 1,2-Dichloroethene (total)	96.00	Compound Not Detected.						
M 2 Xylene (total)	106.00	Compound Not Detected.						
3 dichlorodifluoromethane	85.00	Compound Not Detected.						
5 Dichlorotetrafluoroethane	85.00	Compound Not Detected.						
4 Chloromethane	50.00	Compound Not Detected.						
6 Vinyl Chloride	62.00	Compound Not Detected.						
7 Ethylene Oxide	43.00	Compound Not Detected.						
8 Bromomethane	94.00	Compound Not Detected.						
9 Chloroethane	64.00	Compound Not Detected.						

Data File: /chem/S.i/022004.b/s6745.d
Report Date: 23-Feb-2004 08:18

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/L)
10 Dichlorofluoromethane	67.00	Compound Not Detected.					
11 Trichlorofluoromethane	101.00	Compound Not Detected.					
12 Ethanol	45.00	Compound Not Detected.					
13 Ethyl Ether	59.00	Compound Not Detected.					
14 1,2-Dichloro-1,1,2-trifluorome	117.00	Compound Not Detected.					
16 Acrolein	56.00	Compound Not Detected.					
15 2,2-Dichloro-1,1,1-trifluorome	83.00	Compound Not Detected.					
18 1,1-Dichloroethene	96.00	Compound Not Detected.					
19 Acetone	43.00	Compound Not Detected.					
17 Trichlorotrifluoroethane	151.00	Compound Not Detected.					
21 Iodomethane	142.00	Compound Not Detected.					
20 2-Propanol	45.00	Compound Not Detected.					
22 Carbon Disulfide	76.00	Compound Not Detected.					
25 Acetonitrile	41.00	Compound Not Detected.					
24 Allyl Chloride	41.00	Compound Not Detected.					
23 Methyl Acetate	74.00	Compound Not Detected.					
26 Methylene Chloride	84.00	Compound Not Detected.					
27 tert-Butyl alcohol	59.00	Compound Not Detected.					
30 Acrylonitrile	53.00	Compound Not Detected.					
29 trans-1,2-Dichloroethene	96.00	Compound Not Detected.					
28 Methyl t-butyl ether	73.00	Compound Not Detected.					
31 Hexane	57.00	Compound Not Detected.					
33 1,1-Dichloroethane	63.00	Compound Not Detected.					
34 Vinyl acetate	43.00	Compound Not Detected.					
32 Isopropyl ether	87.00	Compound Not Detected.					
35 Chloroprene	53.00	Compound Not Detected.					
36 ETBE	59.00	Compound Not Detected.					
39 cis-1,2-Dichloroethene	96.00	Compound Not Detected.					
40 2-Butanone	43.00	Compound Not Detected.					
37 2,2-Dichloropropane	77.00	Compound Not Detected.					
41 Propionitrile	54.00	Compound Not Detected.					
38 Ethyl Acetate	43.00	Compound Not Detected.					
42 Methacrylonitrile	41.00	Compound Not Detected.					
43 Bromochloromethane	128.00	Compound Not Detected.					
45 Chloroform	83.00	Compound Not Detected.					
44 Tetrahydrofuran	42.00	Compound Not Detected.					
47 1,1,1-Trichloroethane	97.00	Compound Not Detected.					
48 Cyclohexane	56.00	Compound Not Detected.					
50 1,1-Dichloropropene	75.00	Compound Not Detected.					
49 Carbon Tetrachloride	117.00	Compound Not Detected.					
51 Isobutanol	41.00	Compound Not Detected.					
53 Benzene	78.00	Compound Not Detected.					
55 1,2-Dichloroethane	62.00	Compound Not Detected.					
54 TAME	73.00	Compound Not Detected.					
57 n-Butanol	56.00	Compound Not Detected.					
58 Trichloroethene	130.00	Compound Not Detected.					
60 2-Pentanone	43.00	Compound Not Detected.					

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/L)
59 Methyl-Cyclohexane	55.00	Compound Not Detected.					
61 1,2-Dichloropropane	63.00	Compound Not Detected.					
62 Methyl Methacrylate	100.00	Compound Not Detected.					
64 Dibromomethane	93.00	Compound Not Detected.					
63 1,4-Dioxane	88.00	Compound Not Detected.					
65 Bromodichloromethane	83.00	Compound Not Detected.					
78 Tetrahydrothiophene	60.00	Compound Not Detected.					
66 2-nitropropane	41.00	Compound Not Detected.					
67 2-Chloroethyl vinyl ether	63.00	Compound Not Detected.					
68 cis-1,3-Dichloropropene	75.00	Compound Not Detected.					
69 4-Methyl-2-pentanone	43.00	Compound Not Detected.					
71 Toluene	91.00	Compound Not Detected.					
72 trans-1,3-Dichloropropene	75.00	Compound Not Detected.					
73 Ethyl methacrylate	69.00	Compound Not Detected.					
74 1,1,2-Trichloroethane	97.00	Compound Not Detected.					
76 1,3-Dichloropropane	76.00	Compound Not Detected.					
75 Tetrachloroethene	164.00	Compound Not Detected.					
77 2-Hexanone	43.00	Compound Not Detected.					
79 Dibromochloromethane	129.00	Compound Not Detected.					
80 1,2-Dibromoethane	107.00	Compound Not Detected.					
81 1-Chlorohexane	91.00	Compound Not Detected.					
83 Chlorobenzene	112.00	Compound Not Detected.					
85 1,1,1,2-Tetrachloroethane	131.00	Compound Not Detected.					
84 Ethylbenzene	106.00	Compound Not Detected.					
86 m and p-Xylene	106.00	Compound Not Detected.					
87 o-Xylene	106.00	Compound Not Detected.					
88 Styrene	104.00	Compound Not Detected.					
89 Bromoform	173.00	Compound Not Detected.					
90 isopropyl benzene	105.00	Compound Not Detected.					
92 Cyclohexanone	55.00	Compound Not Detected.					
91 cis-1,4-dichloro-2-butene	53.00	Compound Not Detected.					
94 1,1,2,2-Tetrachloroethane	83.00	Compound Not Detected.					
95 Bromobenzene	156.00	Compound Not Detected.					
97 1,2,3-Trichloropropane	110.00	Compound Not Detected.					
98 t-1,4-Dichloro-2-butene	53.00	Compound Not Detected.					
96 n-Propylbenzene	120.00	Compound Not Detected.					
99 2-Chlorotoluene	126.00	Compound Not Detected.					
100 1,3,5-Trimethylbenzene	105.00	Compound Not Detected.					
101 4-Chlorotoluene	126.00	Compound Not Detected.					
102 tert-Butylbenzene	119.00	Compound Not Detected.					
103 1,2,4-Trimethylbenzene	105.00	Compound Not Detected.					
104 sec-Butylbenzene	134.00	Compound Not Detected.					
106 m-Dichlorobenzene	146.00	Compound Not Detected.					
105 4-Isopropyltoluene	119.00	Compound Not Detected.					
109 1,2,3-Trimethylbenzene	105.00	Compound Not Detected.					
108 p-dichlorobenzene	146.00	Compound Not Detected.					
110 n-Butylbenzene	91.00	Compound Not Detected.					

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/L)
111 o-Dichlorobenzene	146.00	Compound Not Detected.					
112 1,2-Dibromo-3-chloropropane	157.00	Compound Not Detected.					
113 1,2,4-Trichlorobenzene	180.00	Compound Not Detected.					
114 Hexachlorobutadiene	225.00	Compound Not Detected.					
115 Napthalene	128.00	Compound Not Detected.					
116 1,2,3-Trichlorobenzene	180.00	Compound Not Detected.					

QC Flag Legend

Q - Qualifier signal failed the ratio test.

STL Denver

VOLATILE REPORT SW-846

Data file : /chem/S.i/022004.b/s6745.d
Lab Smp Id: F9KHC1AA Client Smp ID: TB011604
Inj Date : 20-FEB-2004 18:22
Operator : appelhansd Inst ID: S.i
Smp Info : F9KHC1AA,,D4B130209-018
Misc Info :
Comment :
Method : /chem/S.i/022004.b/S-20ml-h2o.m
Meth Date : 20-Feb-2004 12:58 appelhad Quant Type: ISTD
Cal Date : 19-FEB-2004 17:35 Cal File: s6721.d
Als bottle: 2
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: S-all.sub
Target Version: 3.40
Processing Host: chemsv02

Concentration Formula: Amt * DF * Vp/Vs

Name	Value	Description
DF	1.000	Dilution Factor
Vp	20.000	Purge Volume (ml)
Vs	20.000	Sample Volume Purged (ml)

ISTD	RT	AREA	AMOUNT
* 82 Chlorobenzene-d5	10.724	2877995	12.500
* 107 1,4-Dichlorobenzene-d4	13.785	2731825	12.500

		CONCENTRATIONS			QUANT		
RT	AREA	ON-COL(ug/L)	FINAL(ug/L)	QUAL	LIBRARY	LIB ENTRY	CPND #
Cyclotrisiloxane, hexamethyl-				CAS #: 541-05-9			
9.347	751623	3.26452530	3.26452	90	NBS75K.1	70586	82
Unknown				CAS #:			
14.619	4245281	19.4251142	19.4251	0		0	107

Data File: /chem/S.i/022004.b/s6745.d
Report Date: 23-Feb-2004 08:18

RT	AREA	CONCENTRATIONS ON-COL(ug/L)	FINAL(ug/L)	QUAL	QUANT LIBRARY	LIB ENTRY	CPND #
Docosane				CAS #: 629-97-0			
15.035	987435	4.51820212	4.51820	86	NBS75K.1	44318	107
Acetic acid, 2-ethylhexyl ester				CAS #: 103-09-3			
15.216	5770730	26.4051046	26.4051	91	NBS75K.1	15793	107
Unknown				CAS #:			
16.122	407697	1.86549742	1.86550	0		0	107
Unknown				CAS #:			
16.231	1542005	7.05574570	7.05574	0		0	107
Unknown				CAS #:			
16.611	1432495	6.55466126	6.55466	0		0	107
Unknown				CAS #:			
16.919	560966	2.56680973	2.56681	0		0	107

Data File: /chem/S.i/022004.b/s6745.d
Report Date: 23-Feb-2004 08:18

STL Denver

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: S.i
Lab File ID: s6745.d
Lab Smp Id: F9KHC1AA
Analysis Type: VOA
Quant Type: ISTD
Operator: appelhansd
Method File: /chem/S.i/022004.b/S-20ml-h2o.m
Misc Info:

Calibration Date: 02/20/4
Calibration Time: 1103
Client Smp ID: TB011604
Level: LOW
Sample Type: WATER

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
56 Fluorobenzene	1717585	858792	3435170	1398038	-18.60
82 Chlorobenzene-d5	368273	184136	736546	296288	-19.55
107 1,4-Dichlorobenze	525307	262654	1050614	432343	-17.70

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
56 Fluorobenzene	7.14	6.64	7.64	7.14	0.00
82 Chlorobenzene-d5	10.72	10.22	11.22	10.72	0.00
107 1,4-Dichlorobenze	13.79	13.29	14.29	13.79	0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem/S.i/022004.b/s6745.d Page 8
Report Date: 23-Feb-2004 08:18

STL Denver

RECOVERY REPORT

Client Name: ARCADIS GERAGHTY & M13-FEB-2004 Client SDG: D4B130209
Sample Matrix: LIQUID Fraction: VOA
Lab Smp Id: F9KHC1AA Client Smp ID: TB011604
Level: LOW Operator: appelhansd
Data Type: MS DATA SampleType: SAMPLE
SpikeList File: dcs.spk Quant Type: ISTD
Sublist File: S-all.sub
Method File: /chem/S.i/022004.b/S-20ml-h2o.m
Misc Info:

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 46 Dibromofluorometha	10.0000	10.6370	106.37	76-116
$ 52 1,2-Dichloroethane	10.0000	10.1575	101.58	59-129
$ 70 Toluene-d8	10.0000	10.2934	102.93	76-116
$ 93 Bromofluorobenzene	10.0000	9.78653	97.87	74-114

Data File: /chem/S.i/022004.b/s6745.d
Date : 20-FEB-2004 18:22
Client ID: TB011604
Sample Info: F9KHC1AA,,D4B130209-018
Purge Volume: 20.0
Column phase: DB624

Instrument: S.i

Operator: appelhansd
Column diameter: 0.53

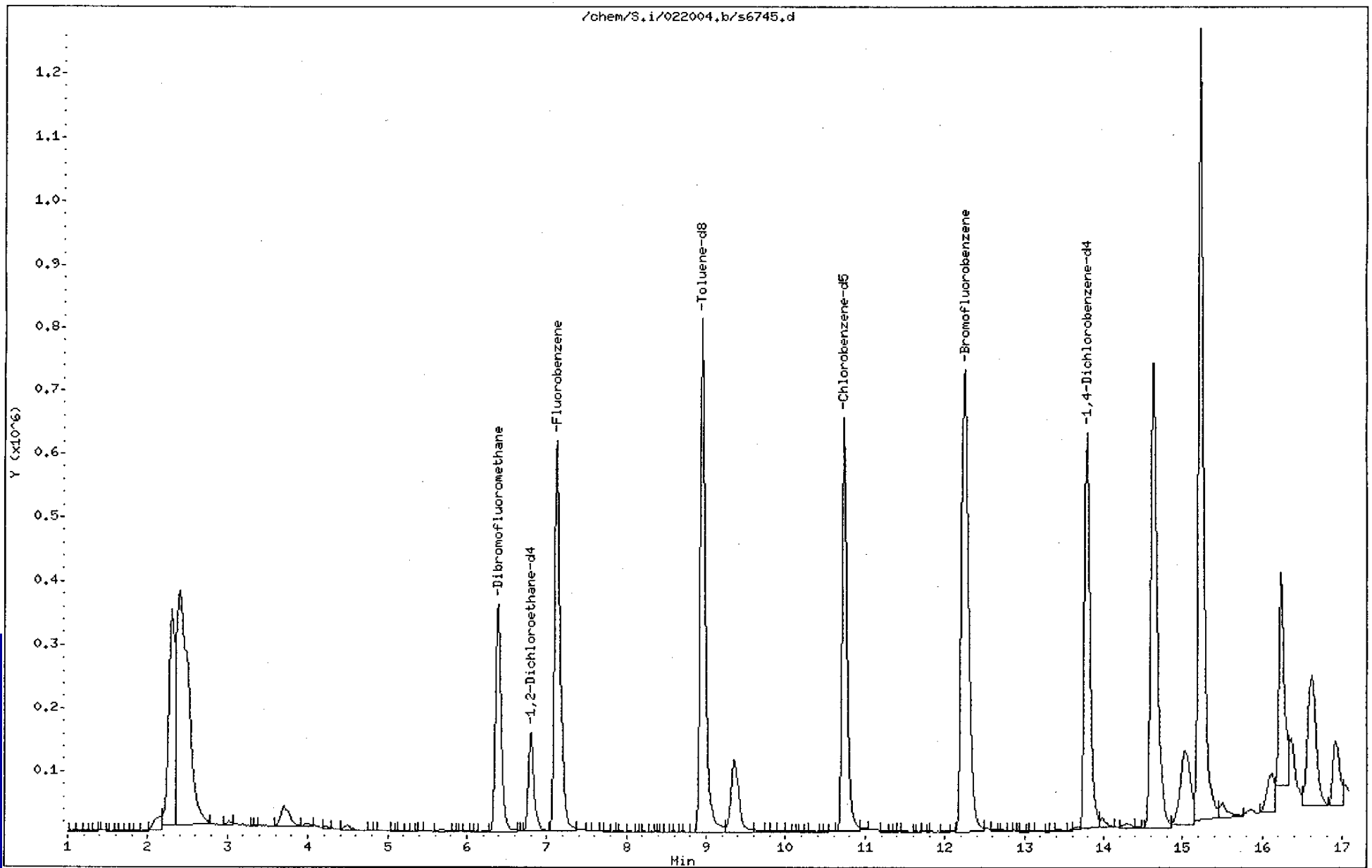


Table of Contents

Data File: /chem/S.i/022004.b/s6745.d

Date : 20-FEB-2004 18:22

Client ID: TB011604

Instrument: S.i

Sample Info: F9KHC1AA,,D4B130209-018

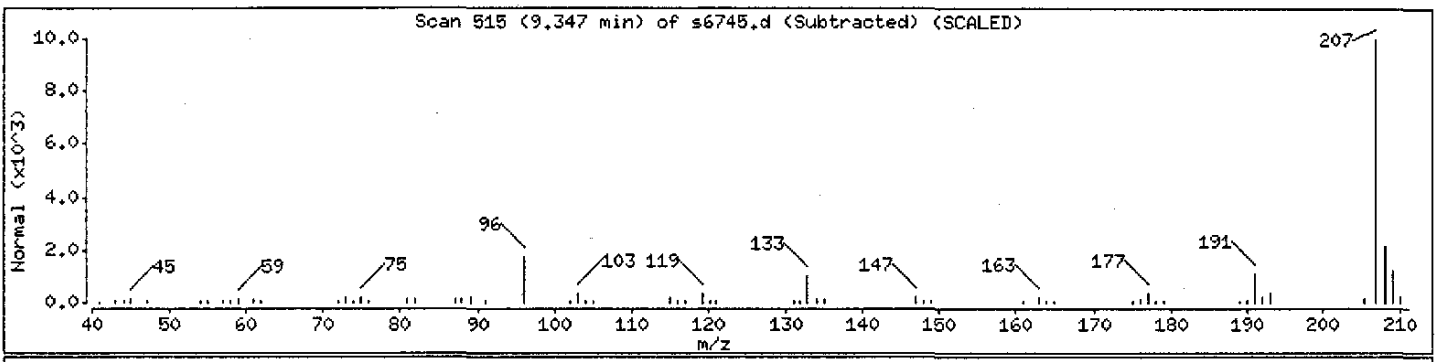
Purge Volume: 20.0

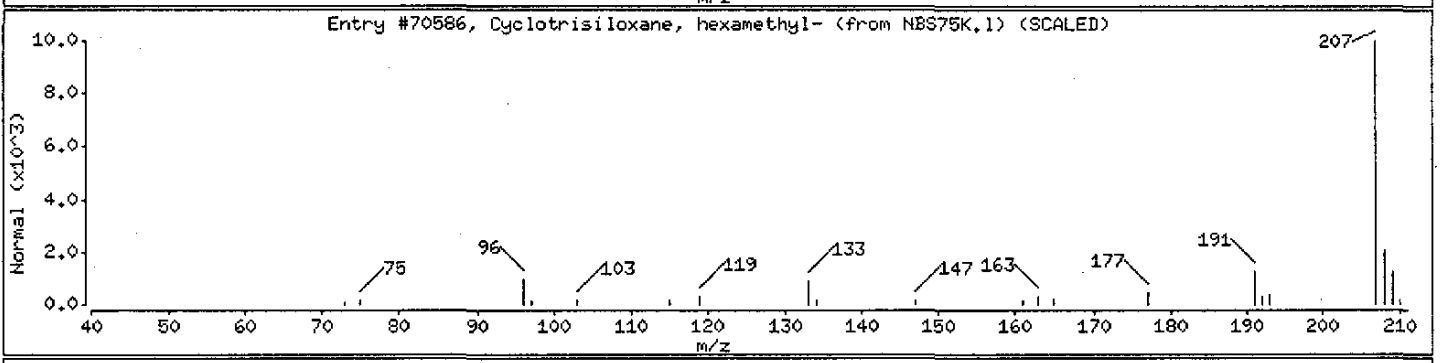
Operator: appelhansd

Column phase: DB624

Column diameter: 0.53

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Cyclotrisiloxane, hexamethyl-	541-05-9	NBS75K.l	70586	90	C6H18O3Si3	222





Data File: /chem/S.i/022004.b/s6745.d

Date : 20-FEB-2004 18:22

Client ID: TB011604

Instrument: S.i

Sample Info: F9KHC1AA,,D4B130209-018

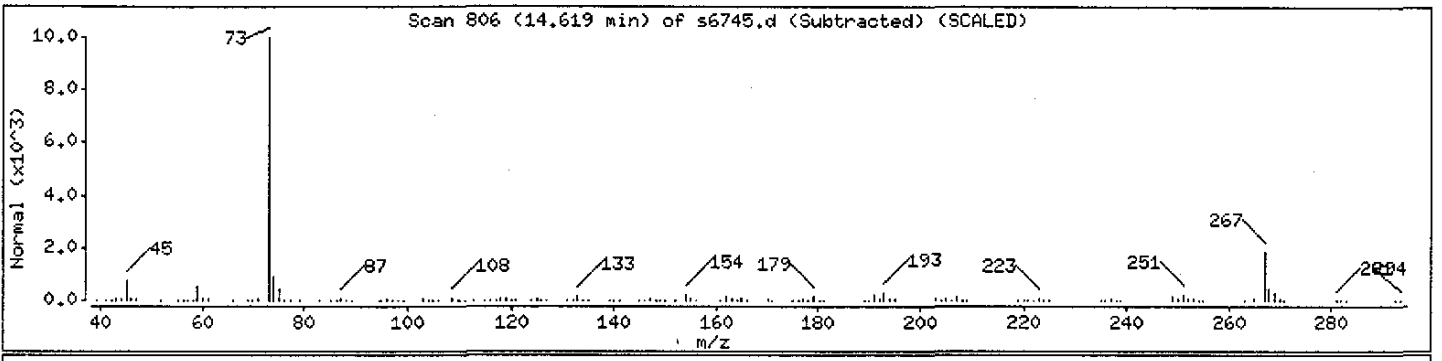
Purge Volume: 20.0

Operator: appelhansd

Column phase: DB624

Column diameter: 0.53

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown			0	0		0



Data File: /chem/S.i/022004.b/s6745.d

Date : 20-FEB-2004 18:22

Client ID: TB011604

Instrument: S.i

Sample Info: F9KHC1AA,,D4B130209-018

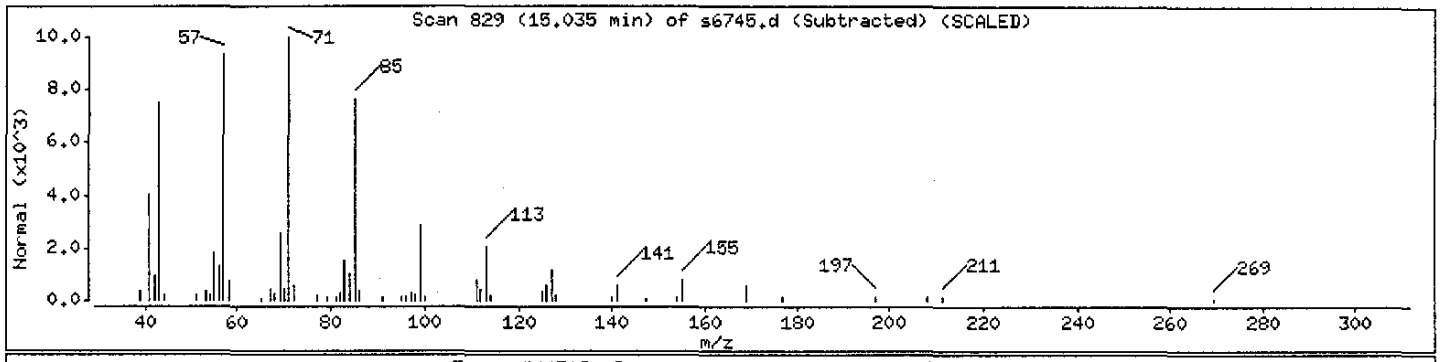
Purge Volume: 20.0

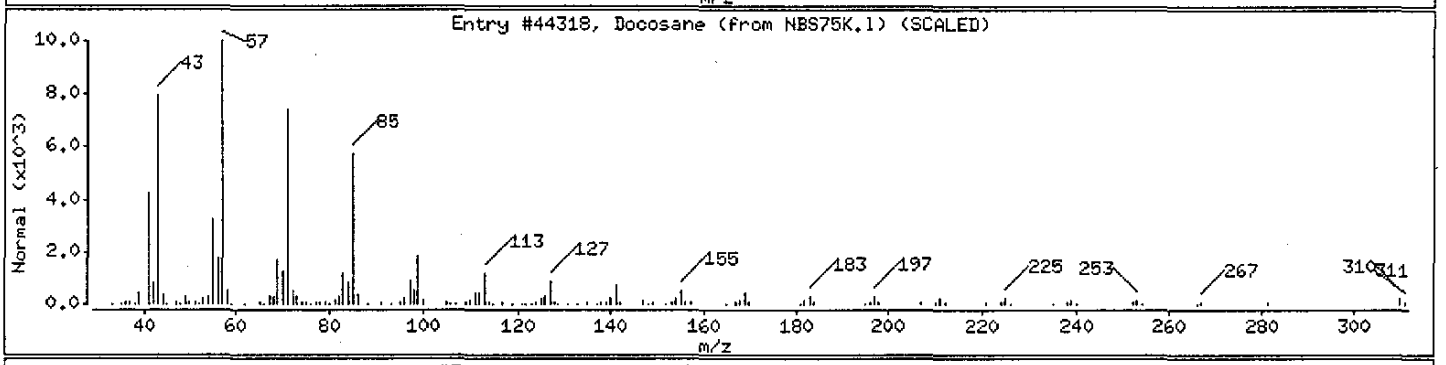
Operator: appelhansd

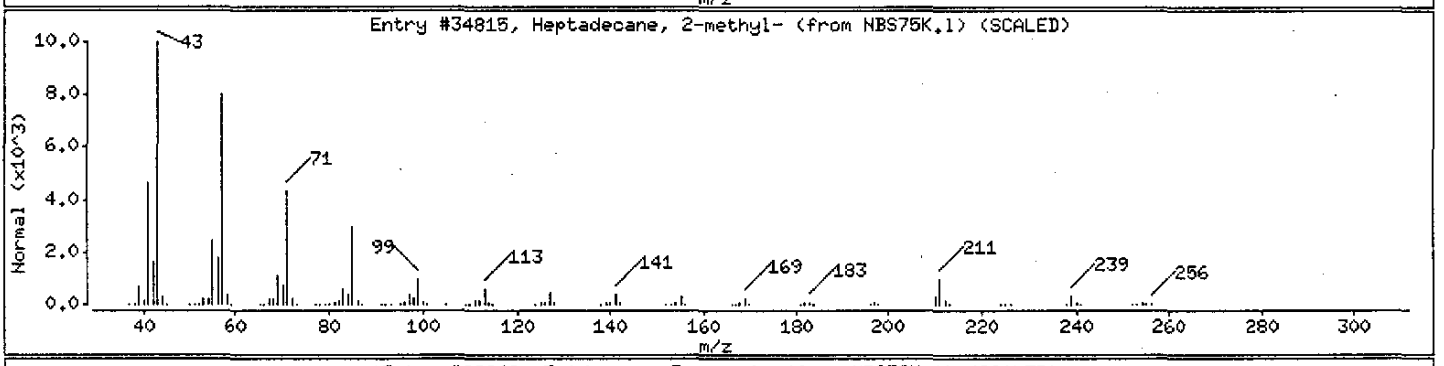
Column phase: DB624

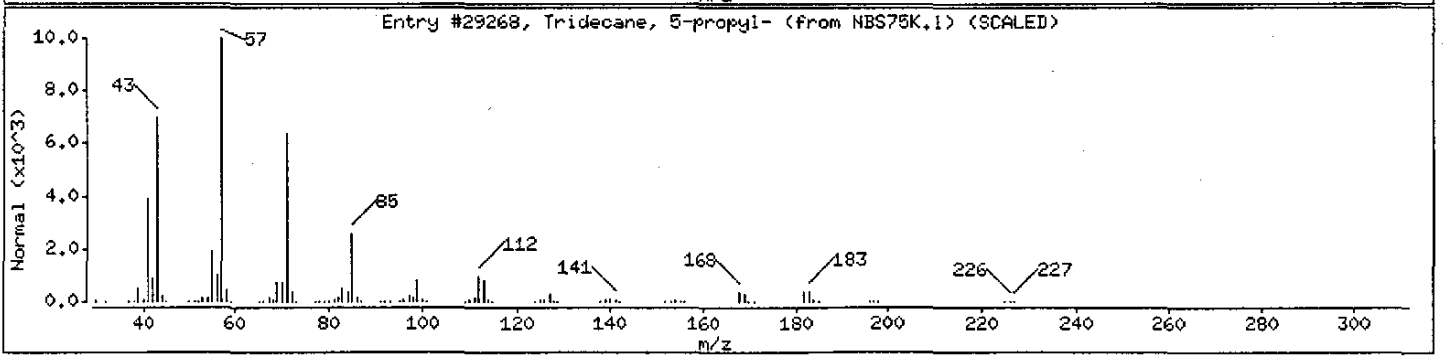
Column diameter: 0.53

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Docosane	629-97-0	NBS75K.l	44318	86	C22H46	310
Heptadecane, 2-methyl-	1560-89-0	NBS75K.l	34815	83	C18H38	254
Tridecane, 5-propyl-	55045-11-9	NBS75K.l	29268	83	C16H34	226









Data File: /chem/S.i/022004.b/s6745.d

Date : 20-FEB-2004 18:22

Client ID: TB011604

Instrument: S.i

Sample Info: F9KHC1AA,,D4B130209-018

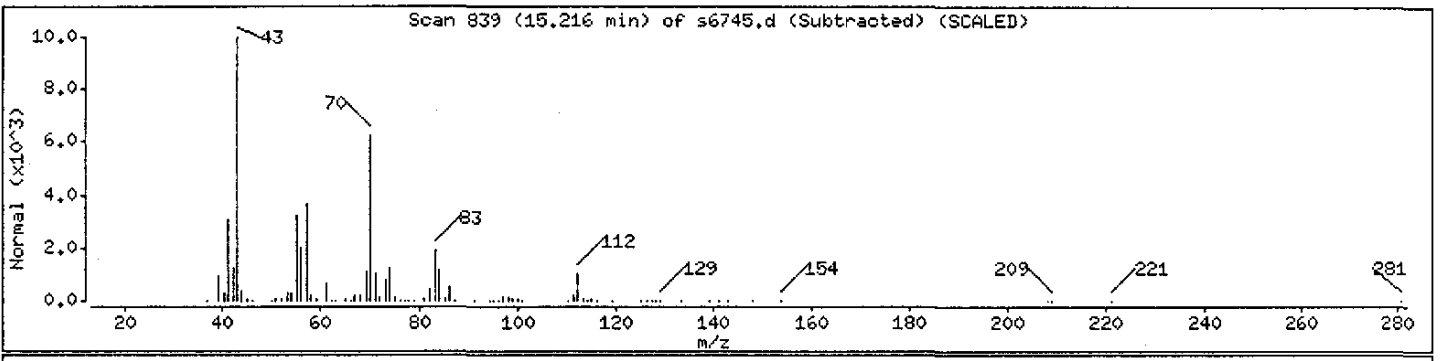
Purge Volume: 20.0

Operator: appelhansd

Column phase: DB624

Column diameter: 0.53

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Acetic acid, 2-ethylhexyl ester	103-09-3	NBS75K.l	15793	91	C10H2002	172



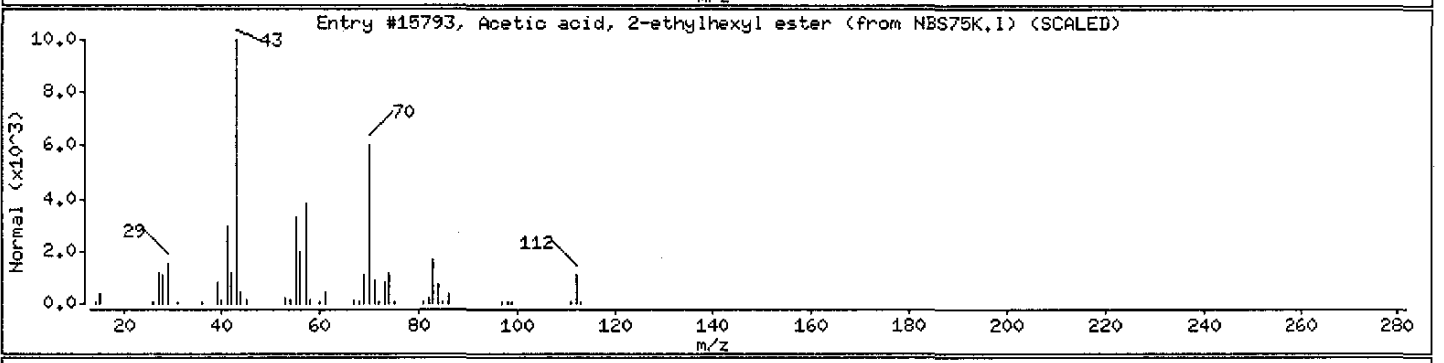


Table of Contents

Data File: /chem/S.i/022004.b/s6745.d

Date : 20-FEB-2004 18:22

Client ID: TB011604

Instrument: S.i

Sample Info: F9KHC1AA,,D4B130209-018

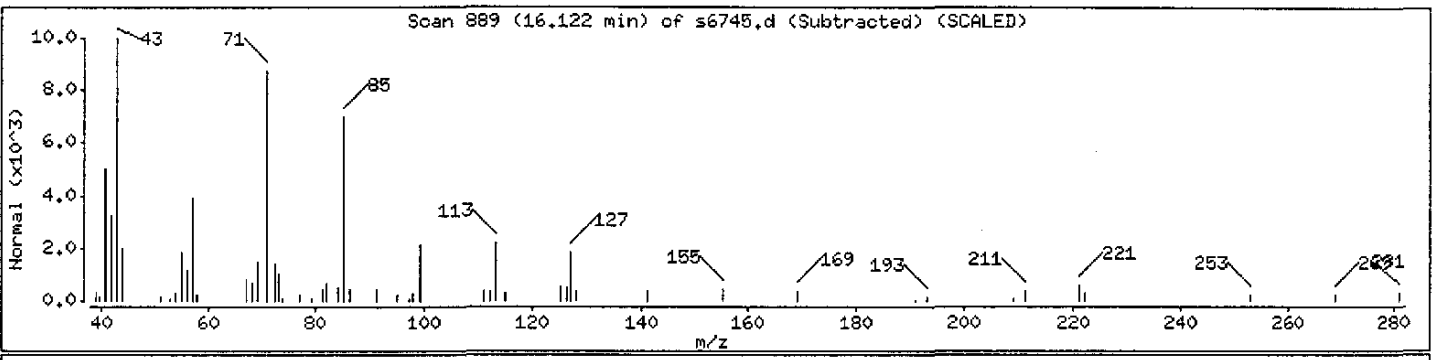
Purge Volume: 20.0

Operator: appelhansd

Column phase: DB624

Column diameter: 0.53

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown			0	0		0



Data File: /chem/S.i/022004.b/s6745.d

Date : 20-FEB-2004 18:22

Client ID: TB011604

Instrument: S.i

Sample Info: F9KHC1AA,,D4B130209-018

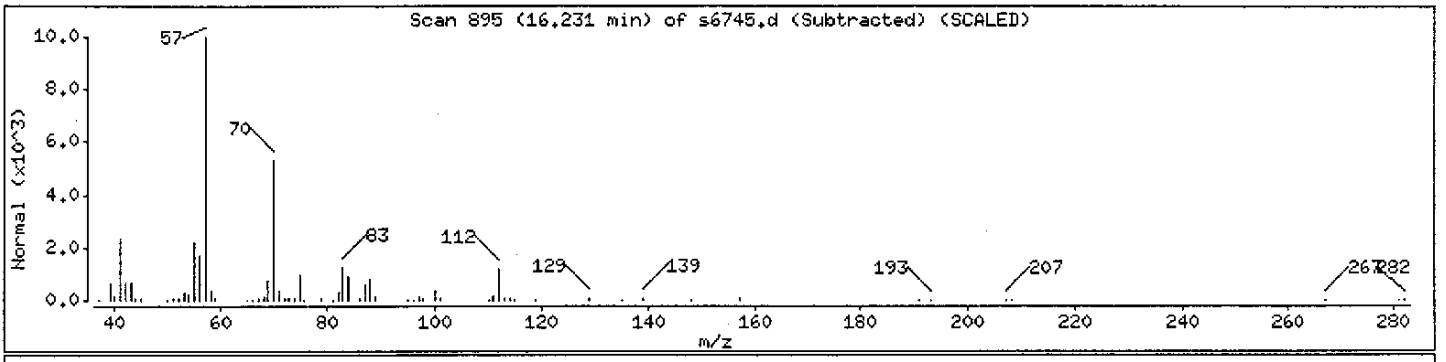
Purge Volume: 20.0

Operator: appelhansd

Column phase: DB624

Column diameter: 0.53

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown			0	0		0



Data File: /chem/S.i/022004.b/s6745.d

Date : 20-FEB-2004 18:22

Client ID: TB011604

Instrument: S.i

Sample Info: F9KHC1AA,,D4B130209-018

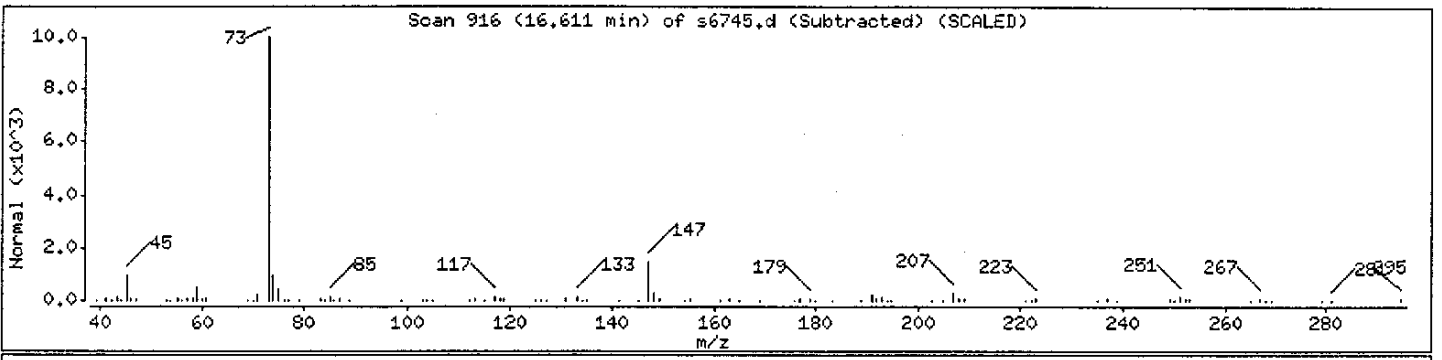
Purge Volume: 20.0

Operator: appelhansd

Column phase: DB624

Column diameter: 0.53

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown			0	0		0



Data File: /chem/S.i/022004.b/s6745.d

Date : 20-FEB-2004 18:22

Client ID: TB011604

Instrument: S.i

Sample Info: F9KHC1AA,,D4B130209-018

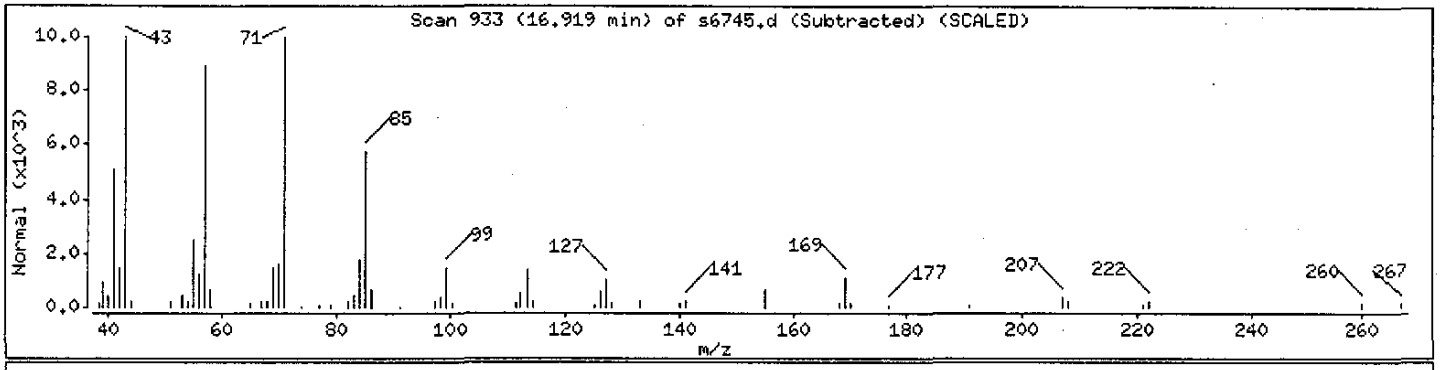
Purge Volume: 20.0

Operator: appelhansd

Column phase: DB624

Column diameter: 0.53

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown			0	0		0



Volatile GC/MS

Supporting Documentation

Sample Sequence, Chromatograms/Mass Spectra

SEVERN TRENT STL

Lot ID: D4B130209

Client: arcadis

Method: 8260

Associated Samples: 14

Batch #(s): 4056 S25

I certify that, to the best of my knowledge, the attached package represents a complete and accurate copy of the original data.

Signature/Date: 2/25/08

GC /MS VOLATILE ORGANIC EXTRACTION LOG SHEETS

SEVERN TRENT STL

RQC058

Severn Trent Laboratories, Inc.
EXTRACTION BENCH WORKSHEET

Run Date: 2/25/04
Time: 16:35:17

LEV 1	LEV 2		LEV 1	LEV 2	
		Blank			Weights/Volumes
_	_	Check	_	_	Spike & Surrogate Worksheet
_	_	MS/MSD	_	_	Vial contains correct volume
_	_		_	_	Labels, greenbars, worksheets
			_	_	computer batch: correct & all match
			_	_	Anomalies to Extraction Method

_ Expanded Deliverable
_ COC Completed
_ Bench Sheet Copied
_ Package Submitted to AnalyticalGroup
_ Bench Sheet Copied per COC

Extractionist: _____
_____

Concentrationist: _____
_____

****
* *
* QC BATCH: 4056525 *
* *
****

PREP DATE: 2/23/04 8:28
COMP DATE: 2/23/04 8:28

Reviewer/Date: _____ / 0/00/00

Volatile Organics, GC/MS (8260B)
PURGE AND TRAP - 25 mL purge (Waters)

EXTR EXPR	ANL DUE	LOT#,MSRUN#/ WORK ORDER	TEST FLGS	EXT	MTH	MATRIX	INIT/FIN WT/VOL	INIT	PH"S ADJ1	ADJ2	SOLVENTS EXTRACTION	VOL	EXCHANGE	VOL	SPIKE STANDARD/ SURROGATE ID
0/00/00	2/24/04	D4B120325-001 F9HV5-1-AA	DR	25	QK	WATER	20mL 20.00mL	NA	NA	NA		.0		.0	
COMMENTS:															
0/00/00	2/24/04	D4B120325-002 F9HWA-1-AA	DR	25	QK	WATER	20mL 20.00mL	NA	NA	NA		.0		.0	
COMMENTS:															
0/00/00	2/24/04	D4B120325-003 F9HWG-1-AA	DR	25	QK	WATER	20mL 20.00mL	NA	NA	NA		.0		.0	
COMMENTS:															
0/00/00	2/24/04	D4B120325-004 F9HWK-1-AA	DR	25	QK	WATER	20mL 20.00mL	NA	NA	NA		.0		.0	
COMMENTS:															
0/00/00	2/24/04	D4B120325-005 F9HWM-1-AA	DR	25	QK	WATER	20mL 20.00mL	NA	NA	NA		.0		.0	
COMMENTS:															
0/00/00	2/24/04	D4B120325-006 F9HWQ-1-AA	DR	25	QK	WATER	20mL 20.00mL	NA	NA	NA		.0		.0	
COMMENTS:															
0/00/00	2/24/04	D4B120325-008 F9HW7-1-AA	DR	25	QK	WATER	20mL 20.00mL	NA	NA	NA		.0		.0	
COMMENTS:															

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RQC058

Severn Trent Laboratories, Inc.
EXTRACTION BENCH WORKSHEET

Run Date: 2/25/04
Time: 16:35:17

QC BATCH: 4056525

PREP DATE: 2/23/04 8:28
COMP DATE: 2/23/04 8:28

EXTR EXPR	ANL DUE	LOT#,MSRUN#/ WORK ORDER	TEST FLGS	EXT	MTH	MATRIX	INIT/FIN WT/VOL	PH"S INIT	PH"S ADJ1	PH"S ADJ2	SOLVENTS EXTRACTION	SOLVENTS VOL	SOLVENTS EXCHANGE	SOLVENTS VOL	SPIKE STANDARD/ SURROGATE ID
0/00/00	2/27/04	D4B130189-001 **F9J8D-1-AA**		25	QK	WATER	**20mL** 20.00mL	NA	NA	NA		.0		.0	
COMMENTS:															
0/00/00	2/27/04	D4B130189-002 **F9KAT-1-AM**		25	QK	WATER	**20mL** 20.00mL	NA	NA	NA		.0		.0	
COMMENTS:															
0/00/00	2/27/04	D4B130189-003 **F9KA4-1-AM**		25	QK	WATER	**20mL** 20.00mL	NA	NA	NA		.0		.0	
COMMENTS:															
0/00/00	2/27/04	D4B130189-004 **F9KA7-1-AA**		25	QK	WATER	**20mL** 20.00mL	NA	NA	NA		.0		.0	
COMMENTS:															
0/00/00	2/27/04	D4B130189-005 **F9KC1-1-AA**		25	QK	WATER	**20mL** 20.00mL	NA	NA	NA		.0		.0	
COMMENTS:															
0/00/00	2/27/04	D4B130189-006 **F9KC7-1-AM**		25	QK	WATER	**20mL** 20.00mL	NA	NA	NA		.0		.0	
COMMENTS:															
0/00/00	3/01/04	D4B130209-014 **F9KFC-1-AA**	D	25	QK	WATER	**20mL** 20.00mL	NA	NA	NA		.0		.0	
COMMENTS:															
0/00/00	2/26/04	D4B160153-007 **F9MNJ-1-AA**	R	25	QK	WATER	**8.0mL** 20.00mL	NA	NA	NA		.0		.0	
COMMENTS:															
0/00/00	2/26/04	D4B160153-007 **F9MNJ-1-ADS**	R	25	QK	WATER	**8.0mL** 20.00mL	NA	NA	NA		.0		.0	
COMMENTS:															
0/00/00	2/26/04	D4B160153-007 **F9MNJ-1-AED**	R	25	QK	WATER	**8.0mL** 20.00mL	NA	NA	NA		.0		.0	
COMMENTS:															

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RQC058

Severn Trent Laboratories, Inc.
EXTRACTION BENCH WORKSHEET

Run Date: 2/25/04
Time: 16:35:17

QC BATCH: 4056525

PREP DATE: 2/23/04 8:28
COMP DATE: 2/23/04 8:28

EXTR EXPR	ANL DUE	LOT#,MSRUN#/ WORK ORDER	TEST FLGS	EXT	MTH	MATRIX	INIT/FIN WT/VOL	INIT	PH"S ADJI	ADJ2	SOLVENTS EXTRACTION VOL	EXCHANGE VOL	SPIKE STANDARD/ SURROGATE ID
0/00/00	2/26/04	D4B160153-008 **F9MNK-1-AA**	R	25	QK	WATER	**20mL** 20.00mL	NA	NA	NA	.0	.0	
COMMENTS:													
0/00/00	2/26/04	D4B160153-009 **F9MNL-1-AA**	R	25	QK	WATER	**2.0mL** 20.00mL	NA	NA	NA	.0	.0	
COMMENTS:													
0/00/00	2/26/04	D4B160153-010 **F9MNM-1-AA**	R	25	QK	WATER	**20mL** 20.00mL	NA	NA	NA	.0	.0	
COMMENTS:													
0/00/00	3/01/04	D4B180291-001 **F9RRQ-1-AA**	R	25	RI	WATER	**20mL** 20.00mL	NA	NA	NA	.0	.0	
COMMENTS:													
0/00/00	3/01/04	D4B180291-002 **F9RRR-1-A2**	R	25	RI	WATER	**20mL** 20.00mL	NA	NA	NA	.0	.0	
COMMENTS:													
0/00/00	0/00/00	D4B250000-525 **F97FG-1-AAB**		25	QK	WATER	**20mL** 20.00mL	NA	NA	NA	.0	.0	
COMMENTS:													
0/00/00	0/00/00	D4B250000-525 **F97FG-1-ACC**		25	QK	WATER	**20mL** 20.00mL	NA	NA	NA	.0	.0	
COMMENTS:													
0/00/00	0/00/00	D4B250000-525 **F97FG-1-ADL**	R	25	QK	WATER	**20mL** 20.00mL	NA	NA	NA	.0	.0	
COMMENTS:													

R = RUSH C = CLP
E = EPA 600 D = EXP.DEL)
M = CLIENT REQ MS/MSD

NUMBER OF WORK ORDERS IN BATCH: 25

Table of Contents

GC/MS VOLATILE INSTRUMENT LOG SHEETS

SEVERN TRENT STL

GC/MS Volatile Analysis

TL, Denver

Instrument H
5972 MSD

Column	Phase	Inj. Temp	Init. Time	Ramp Rate	Final Temp	Flow cc/min	Press. Psi	Type	Vac. Range	Source Temp	Mass Range
75M	DB-624	200C	2 min.	5C/min	65C	18	20	MS	10^-6	~175C	35-300/2^2
			0 min.	12C/min	155C						
			0 min.	25C/min	210C						

DEN-MS-0010 (8260B/624/524.2)
(Circle as appropriate)

omments

arget Batch (Directory):

QuantIMS Batch:

Lot #	Sample	W.O.#	Purge vol (ml)	Sample amt (ml/g)	Date	Initials	File Number	IS OK	SS OK	DIL OK	24 hr 12 hr	pH	Comments	ALS
D4B120325	-008	F9HW7 1AA	20mL	20mL	2/23/04	MA	h1114.d	✓	✓	✓	✓	<2	OK	
D4B130189	-001	F9J8D					15	✓	✓	✓	✓	<2		
	-002	F9KAT 1AM					16	✓	✓	✓	✓	<2		
	-003	A4					17	✓	✓	✓	✓	<2		
	-004	A7 1AA					18	✓	✓	✓	✓	<2		
	-005	C1					19	✓	✓	✓	✓	<2		
	-006	C7 1AM					20	✓	✓	✓	✓	<2		
D4B130209	-014	FC 1AQ					21	✓	✓	✓	✓	<2		
D4B180291	-001	F9RRQ 1AA					22	✓	✓	✓	✓	7		
	-002	RR 1A2					23	✓	✓	✓	✓	7		

MA 2/25/04

GC/MS Volatile Analysis

STL, Denver

Instrument 4
5972 MSD

Column	Phase	Inj. Temp	Init. Time	Ramp Rate	Final Temp	Flow cc/min	Press. Psi	Type	Vac. Range	Source Temp	Mass Range
75M	DB-624	200C	2 min.	5C/min	65C	18	20	MS	10^-6	~175C	35-300/2^2
			0 min.	12C/min	155C						
			0 min.	25C/min	210C						

MS-VOA
ISSS # 305-03 (10mL)
Main # 022/040-04 (5mL)
Supp# 011-04/246-03
LCS/MS# 303-03 (10mL)

DEN-MS-0010 (8260B/624/524.2)
(Circle as appropriate)

Comments

Target Batch (Directory): 022304.b

QuantIMS Batch: 4056525

Lot #	Sample	W.O.#	Purge vol (ml)	Sample amt (ml/g)	Date	Initials	File Number	IS OK	SS OK	DIL OK	24 hr 12 hr	pH	Comments	ALS
BFB	—	—	1µl On Inj.		2/23/04	MH	h1094.d	—	—	—	—	NA	OK 08:28	—
Main 010	—	—	20mL	20mL			95	✓	✓	✓	✓		OK	
Supp 010	—	—					96	✓	✓	✓	✓			
LCS	—	F97FG					97	✓	✓	✓	✓			
LCSD	—						98	✓	✓	✓	✓			
VBLK	—						99	✓	✓	✓	✓			
04B160153	-007	F9MNJ 1AA		1.0mL			100	✓	✓	✓	✓	<2	OK RR 8mL	
	-008	NK		4.0mL			1	✓	✓	✓	✓	<2	OK RR 20mL	
	-009	NL		2.0mL			2	✓	✓	✓	✓	<2	OK	
	-010	NM		20mL			3	✓	✓	✓	✓	<2		
04B120325	-001	F9HV5					4	✓	✓	✓	✓	<2		
	-002	WA					5	✓	✓	✓	✓	<2		
	-003	WG					6	✓	✓	✓	✓	<2		
	-004	WK					7	✓	✓	✓	✓	<2		
04B160153	-007	F9MNJ		8.0mL			8	✓	✓	✓	✓	<2		
	-7MS	D					9	✓	✓	✓	✓	<2		
	-7SD	E					10	✓	✓	✓	✓	<2		
	-008	F9MNK 1AA		20mL			11	✓	✓	✓	✓	<2		
04B120325	-005	F9HWM 1AA					12	✓	✓	✓	✓	<2		
	-006	WQ b					13	✓	✓	✓	✓	<2		

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GC/MS VOLATILE STANDARD DATA

SEVERN TRENT STL

GC/MS Initial Calibration Review Checklist

STL Denver

Instrument ID and Date: Inst. H 01/07/04 - Main I-CAL

Check Method Used: Analysis ☐ 625 ☐ 8270 ☐ Other SV _____

☐ 524.2 ☐ 624 ☒ 8260B ☐ Other VOA _

VOA Preparation ☐ 5mL ☒ 20mL ☐ 5035 Low ☐ 5035 High ☐ 5030 Low ☐ 5030 High

Review Items	----- Level 1 ----- Yes	No	N/A	Level 2	Comments
Initial Calibration					
1. BFB/DFTPP meets criteria?	✓			✓	
2. ICAL date and instrument ID verified?	✓			✓	
3. Sufficient number of calibration points used?	✓			✓	
4. Reasons for removal of points documented?	✓			✓	*
5. %RSD or correlation coefficient within method limits?	✓			✓	
6. If RRF used for ICAL, were all compounds within 15% RSD?			✓	N/A	List all exceptions below (cpd & RSD)
7. Response factors meet criteria?	✓			✓	
8. Isomeric pairs checked for correct peak assignment?	✓			✓	
9. Data checked for detector saturation?	✓			✓	
10. Standards traceability properly documented?	✓			✓	
11. Manual integrations documented and checked?	✓			✓	
12. 2nd source ICV recovery 75-125% for DoD projects, 65-135% (±55% of expected for poor performers) for non-DoD?	✓			✓	1,1Dichloroethene @ 25.8%D. Hexachlorobutadiene @ 27.1%D.

* Some low points (below R.L.) removed, and the high point for ethanol removed.

1st Level Reviewer: MM Date: 1/9/04

2nd Level Reviewer: DA Date: 1-9-04

GC/MS Volatile Analysis

STL, Denver

Instrument H
5972 MSD

Column	Phase	Inj. Temp	Init. Time	Ramp Rate	Final Temp	Flow cc/min	Press. Psi	Type	Vac. Range	Source Temp	Mass Range
75M	DB-624	200C	2 min.	5C/min	65C	18	20	MS	10^-6	~175C	35-300/2^2
			0 min.	12C/min	155C						
			0 min.	25C/min	210C						

DEN-MS-0010 (8260B/624/524.2)
(Circle as appropriate)

Comments

MS VOA
Main # 254/277.03
Supp # 192/246-03
ISSS # 281/282.03

Target Batch (Directory): 010704.b

QuantIMS Batch:

Lot #	Sample	W.O.#	Purge vol (ml)	Sample amt (ml/g)	Date	Initials	File Number	IS OK	SS OK	DIL OK	24 hr 12 hr	pH	Comments	ALS
BFB	—	—	1µl air	Inj.	1/7/04	MH	h0001.d	—	—	—	—	NA	OK	—
Primer	—	—	20mL	20mL			2	✓	NA	✓	✓		OK	1
Main 001	—	—					3	✓		✓	✓			2
002	—	—					4	✓		✓	✓			3
005	—	—					5	✓		✓	✓			4
010	—	—					6	✓		✓	✓			5
030	—	—					7	✓		✓	✓			6
060	—	—					8	✓		✓	✓			7
Supp 001	—	—					9	✓	✓	✓	✓			8
002	—	—					10	✓	✓	✓	✓			9
005	—	—					11	✓	✓	✓	✓			10
010	—	—					12	✓	✓	✓	✓			11
030	—	—					13	✓	✓	✓	✓			12
060	—	—					14	✓	✓	✓	✓			13
ICV: VSTD010	—	—					15	✓	✓	✓	✓		All <35%D.	14
cleanup	—	—					16	—	—	—	—		—	15
screens	—	—		—			17	✓	✓	✓	✓			16
	—	—		—			18	✓	✓	✓	✓			17
	—	—		—			19	✓	✓	✓	✓			18
Surr. Chks	—	—		20mL			20-21-22	✓	✓	✓	✓		19	21

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-Jan-2004 13:28

Calibration History

Method : /chem/H.i/010704.b/H-20ml-h2o.m
Start Cal Date: 07-JAN-2004 11:17
End Cal Date : 07-JAN-2004 15:24

Initial Calibration

Injection Date	Sublist	Calibration File
Cal Level: 1 , Cal Amount: 1.00000		
07-JAN-2004 13:31	2-supp	/chem/H.i/010704.b/h0009.d
07-JAN-2004 11:17	1-main	/chem/H.i/010704.b/h0003.d
Cal Level: 2 , Cal Amount: 2.00000		
07-JAN-2004 13:54	2-supp	/chem/H.i/010704.b/h0010.d
07-JAN-2004 11:40	1-main	/chem/H.i/010704.b/h0004.d
Cal Level: 3 , Cal Amount: 5.00000		
07-JAN-2004 14:16	2-supp	/chem/H.i/010704.b/h0011.d
07-JAN-2004 12:02	1-main	/chem/H.i/010704.b/h0005.d
Cal Level: 4 , Cal Amount: 10.0000		
07-JAN-2004 14:39	2-supp	/chem/H.i/010704.b/h0012.d
07-JAN-2004 12:24	1-main	/chem/H.i/010704.b/h0006.d
Cal Level: 5 , Cal Amount: 30.0000		
07-JAN-2004 15:01	2-supp	/chem/H.i/010704.b/h0013.d
07-JAN-2004 12:47	1-main	/chem/H.i/010704.b/h0007.d
Cal Level: 6 , Cal Amount: 60.0000		
07-JAN-2004 15:24	2-supp	/chem/H.i/010704.b/h0014.d
07-JAN-2004 13:09	1-main	/chem/H.i/010704.b/h0008.d

Continuing Calibration

07-JAN-2004 14:39	2-supp	/chem/H.i/010704.b/h0012.d
07-JAN-2004 12:24	1-main	/chem/H.i/010704.b/h0006.d

Report Date : 08-Jan-2004 16:03

STL Denver

INITIAL CALIBRATION DATA

Start Cal Date : 07-JAN-2004 11:17
End Cal Date : 07-JAN-2004 15:24
Quant Method : ISTD
Target Version : 3.40
Integrator : HP RTE
Method file : /chem/H.i/010704.b/H-20ml-h2o.m
Cal Date : 08-Jan-2004 10:26 hoffmanm

Calibration File Names:
Level 1: /chem/H.i/010704.b/h0009.d
Level 2: /chem/H.i/010704.b/h0010.d
Level 3: /chem/H.i/010704.b/h0011.d
Level 4: /chem/H.i/010704.b/h0012.d
Level 5: /chem/H.i/010704.b/h0013.d
Level 6: /chem/H.i/010704.b/h0014.d

Compound	1 Level 1	2 Level 2	5 Level 3	10 Level 4	30 Level 5	60 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
M 1 1,2-Dichloroethene (total)	0.38456	0.35419	0.39090	0.38085	0.38196	0.36503	AVRG		0.37625		3.66371
M 2 Xylene (total)	7.90055	7.80462	8.11999	8.12336	8.31411	7.61230	AVRG		7.97916		3.19053
3 dichlorodifluoromethane	0.51690	0.51368	0.49255	0.51929	0.51079	0.46155	AVRG		0.50246		4.41322
4 Chloromethane	0.26543	0.26689	0.27289	0.27767	0.27107	0.24560	AVRG		0.26659		4.19279
5 Vinyl Chloride	0.26942	0.27770	0.27940	0.29455	0.28896	0.25891	AVRG		0.27816		4.64333
7 Bromomethane	0.26279	0.28271	0.29147	0.29263	0.29367	0.27319	AVRG		0.28274		4.42539
8 Chloroethane	0.19141	0.19643	0.19450	0.20042	0.20285	0.18100	AVRG		0.19444		3.98635
10 Trichlorofluoromethane	0.63609	0.66119	0.64466	0.71674	0.72931	0.65362	AVRG		0.67360		5.84950
11 Ethanol	7716	8690	30982	58993	182612	+++++	LINR	0.77127	0.00068		0.99898

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Cal Date : 08-Jan-2004 10:26 hoffmanm

Compound	1 Level 1	2 Level 2	5 Level 3	10 Level 4	30 Level 5	60 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
13 Acrolein	+++++	0.00802	0.00886	0.00895	0.00936	0.00846	AVRG		0.00873		5.83187
14 1,1-Dichloroethene	0.35069	0.33828	0.36285	0.36561	0.36300	0.33646	AVRG		0.35281		3.69844
15 Acetone	+++++	53826	106226	185077	510136	907328	WLINR	-0.48545	0.02157		0.99384
17 Iodomethane	0.64174	0.64464	0.69651	0.67344	0.70489	0.66281	AVRG		0.67067		3.90137
19 Acetonitrile	+++++	0.00464	0.00479	0.00520	0.00537	0.00415	AVRG		0.00483		9.93975
21 Methylene Chloride	+++++	0.33311	0.32344	0.29576	0.31280	0.29091	AVRG		0.31121		5.75307
22 tert-Butyl alcohol	0.00850	0.00746	0.00870	0.00862	0.00913	0.00812	AVRG		0.00842		6.79681
23 Acrylonitrile	0.02007	0.01797	0.02078	0.02129	0.02348	0.02155	AVRG		0.02086		8.72232
24 trans-1,2-Dichloroethene	0.40597	0.34726	0.39138	0.38451	0.37450	0.36253	AVRG		0.37769		5.55397
27 1,1-Dichloroethane	0.61585	0.61935	0.64655	0.64420	0.66398	0.62950	AVRG		0.63657		2.88374
28 Chloroprene	0.49851	0.50104	0.53490	0.53905	0.54719	0.51753	AVRG		0.52303		3.91491
30 Isopropyl ether	0.22915	0.23294	0.26058	0.26011	0.27424	0.26182	AVRG		0.25314		7.08492
32 cis-1,2-Dichloroethene	0.36315	0.36111	0.39042	0.37720	0.38941	0.36754	AVRG		0.37481		3.45617
31 2,2-Dichloropropane	0.48785	0.45182	0.46557	0.45679	0.45178	0.40916	AVRG		0.45383		5.66756
33 2-Butanone	0.05681	0.04213	0.04434	0.04358	0.04618	0.04421	AVRG		0.04621		11.59014
34 Propionitrile	0.00711	0.00643	0.00782	0.00804	0.00890	0.00842	AVRG		0.00779		11.53135
36 Methacrylonitrile	0.05295	0.05532	0.06225	0.06343	0.06842	0.06552	AVRG		0.06132		9.76824

STL Denver

INITIAL CALIBRATION DATA

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Integrator : HP RTE
Method file : /chem/H.i/010704.b/H-20ml-h2o.m
Cal Date : 08-Jan-2004 10:26 hoffmanm

Compound	1 Level 1	2 Level 2	5 Level 3	10 Level 4	30 Level 5	60 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
37 Bromochloromethane	0.13023	0.13784	0.15663	0.15633	0.16281	0.15308	AVRG		0.14949		8.43573
38 Chloroform	0.65498	0.66294	0.72546	0.71388	0.74008	0.69981	AVRG		0.69952		4.88850
41 1,1,1-Trichloroethane	0.68301	0.69469	0.71942	0.70543	0.71499	0.66836	AVRG		0.69765		2.80582
42 1,1-Dichloropropene	0.57172	0.55194	0.57523	0.56924	0.57242	0.53613	AVRG		0.56278		2.74985
43 Carbon Tetrachloride	0.57425	0.58228	0.62512	0.60579	0.61710	0.58199	AVRG		0.59776		3.53175
45 Isobutanol	+++++	0.00193	0.00253	0.00248	0.00281	0.00266	AVRG		0.00248		13.39254
46 Benzene	1.07064	1.03396	1.08870	1.08623	1.10125	1.04039	AVRG		1.07020		2.56415
47 1,2-Dichloroethane	0.24267	0.25107	0.28447	0.28118	0.29267	0.27950	AVRG		0.27193		7.39399
49 n-Butanol	+++++	10396	36467	72870	264914	518322	WLINR	1.25704	0.00235		0.99532
50 Trichloroethene	0.39382	0.39871	0.41929	0.41682	0.41749	0.38894	AVRG		0.40585		3.33972
52 1,2-Dichloropropane	0.32078	0.32830	0.35762	0.35086	0.36209	0.34157	AVRG		0.34354		4.78374
53 Dibromomethane	0.19721	0.18272	0.20985	0.20876	0.21627	0.20340	AVRG		0.20304		5.83195
55 1,4-Dioxane	+++++	0.00079	0.00116	0.00098	0.00110	0.00094	AVRG		0.00099		14.76683
56 Bromodichloromethane	0.53695	0.54094	0.58360	0.57331	0.60185	0.57148	AVRG		0.56802		4.40164
59 cis-1,3-Dichloropropene	2.32914	2.44289	2.61012	2.57720	2.76458	2.53158	AVRG		2.54259		5.85109
60 4-Methyl-2-pentanone	0.55048	0.56915	0.65749	0.67381	0.74056	0.68622	AVRG		0.64628		11.26344
62 Toluene	6.76507	6.39625	6.65328	6.58509	6.86835	6.29512	AVRG		6.59386		3.29872

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STL Denver

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Method file : /chem/H.i/010704.b/H-20ml-h2o.m
Cal Date : 08-Jan-2004 10:26 hoffmanm

Compound	1 Level 1	2 Level 2	5 Level 3	10 Level 4	30 Level 5	60 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
63 trans-1,3-Dichloropropene	1.68760	1.85247	1.91134	1.90119	2.04130	1.87430	AVRG		1.87803		6.08192
65 1,1,2-Trichloroethane	0.93004	1.05399	1.10497	1.08554	1.16323	1.07344	AVRG		1.06854		7.24925
67 1,3-Dichloropropane	1.66306	1.69443	1.85264	1.85459	1.95419	1.78740	AVRG		1.80105		6.06060
66 Tetrachloroethene	2.14384	2.08510	2.14822	2.15107	2.16546	1.95611	AVRG		2.10830		3.77396
68 2-Hexanone	0.35468	0.36746	0.41464	0.42533	0.47016	0.43318	AVRG		0.41091		10.48322
69 Dibromochloromethane	1.68634	1.68235	1.90906	1.93671	2.08318	1.91661	AVRG		1.86904		8.37579
70 1,2-Dibromoethane	1.25167	1.23465	1.38464	1.39470	1.47542	1.34902	AVRG		1.34835		6.78809
71 1-Chlorohexane	3.24595	3.05113	3.13945	3.09998	3.11192	2.84415	AVRG		3.08210		4.32694
73 Chlorobenzene	3.88856	3.86746	4.09160	4.02375	4.17839	3.84283	AVRG		3.98210		3.43490
74 1,1,1,2-Tetrachloroethane	1.80612	1.91174	1.93026	1.93925	2.03989	1.87878	AVRG		1.91767		4.00893
75 Ethylbenzene	2.03662	1.99641	2.09701	2.06394	2.12124	1.93947	AVRG		2.04245		3.27745
76 m and p-Xylene	2.70458	2.71019	2.80167	2.82529	2.87413	2.63060	AVRG		2.75774		3.29538
77 o-Xylene	2.49139	2.38424	2.51665	2.47277	2.56585	2.35111	AVRG		2.46367		3.30135
78 Styrene	3.74901	3.75000	4.05423	4.04768	4.17230	3.84367	AVRG		3.93615		4.54994
79 Bromoform	0.91538	0.95625	1.08080	1.10078	1.19413	1.08315	AVRG		1.05508		9.68014
80 isopropyl benzene	8.18263	8.05947	8.35044	8.31021	8.32537	7.49360	AVRG		8.12029		4.01477
81 Cyclohexanone	0.02303	0.02141	0.02472	0.02476	0.02747	0.02270	AVRG		0.02402		8.83342

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STL Denver

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Method file : /chem/H.i/010704.b/H-20ml-h2o.m
Cal Date : 08-Jan-2004 10:26 hoffmanm

Compound	1 Level 1	2 Level 2	5 Level 3	10 Level 4	30 Level 5	60 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
83 1,1,2,2-Tetrachloroethane	1.20961	1.24183	1.37403	1.38081	1.48398	1.34947	AVRG		1.33996		7.48379
84 Bromobenzene	1.06479	1.05559	1.12627	1.11475	1.15925	1.08515	AVRG		1.10097		3.59785
85 1,2,3-Trichloropropane	0.20020	0.19748	0.18454	0.18440	0.19121	0.17735	AVRG		0.18920		4.60009
87 n-Propylbenzene	1.12762	1.11381	1.09120	1.07255	1.08480	1.00582	AVRG		1.08263		3.93553
88 2-Chlorotoluene	0.91603	0.90568	0.89013	0.90576	0.93895	0.87792	AVRG		0.90575		2.32964
89 1,3,5-Trimethylbenzene	3.67578	3.60238	3.73258	3.69071	3.73278	3.43100	AVRG		3.64420		3.15323
90 4-Chlorotoluene	1.01839	1.00535	1.03131	0.99581	0.99820	0.93668	AVRG		0.99762		3.27682
91 tert-Butylbenzene	3.78055	3.68053	3.79510	3.74125	3.78843	3.43206	AVRG		3.70299		3.76466
92 1,2,4-Trimethylbenzene	3.47575	3.33802	3.46668	3.46528	3.47542	3.18211	AVRG		3.40054		3.51528
93 sec-Butylbenzene	1.00520	0.97467	1.00073	0.99237	0.97860	0.87738	AVRG		0.97149		4.90294
94 m-Dichlorobenzene	1.79533	1.76535	1.89089	1.79270	1.89552	1.75021	AVRG		1.81500		3.46634
95 4-Isopropyltoluene	4.13963	4.12112	4.29732	4.23437	4.18661	3.74983	AVRG		4.12148		4.68420
97 p-dichlorobenzene	2.13872	2.15829	2.22260	2.24556	2.23341	2.06433	AVRG		2.17715		3.21341
98 n-Butylbenzene	4.82362	4.63276	4.77494	4.70157	4.56086	4.01397	AVRG		4.58462		6.43768
99 o-Dichlorobenzene	1.61104	1.59798	1.64141	1.63195	1.66625	1.51572	AVRG		1.61072		3.24551
100 1,2-Dibromo-3-chloropropane	0.12718	0.12162	0.14188	0.14180	0.15513	0.13993	AVRG		0.13792		8.65203
101 1,2,4-Trichlorobenzene	1.10591	1.00037	1.12522	1.10675	1.09886	0.97078	AVRG		1.06798		6.09585

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Method file : /chem/H.i/010704.b/H-20ml-h2o.m
Cal Date : 08-Jan-2004 10:26 hoffmanm

Compound	1 Level 1	2 Level 2	5 Level 3	10 Level 4	30 Level 5	60 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
102 Hexachlorobutadiene	1.04680	0.88518	0.98070	0.95556	0.88093	0.72341	AVRG		0.91210		12.21246
127 Naphthalene	1.04906	1.11120	1.19442	1.25358	1.25883	1.14908	AVRG		1.16936		7.05102
104 1,2,3-Trichlorobenzene	0.82340	0.80849	0.86015	0.86420	0.84710	0.76293	AVRG		0.82771		4.63032

Curve	Formula	Units
Averaged	Amt = Rsp/m1	Response
Linear	Amt = b + Rsp/m1	Response
Wt Linear	Amt = b + Rsp/m1	Response

STL Denver

INITIAL CALIBRATION DATA

Start Cal Date : 07-JAN-2004 11:17
End Cal Date : 07-JAN-2004 15:24
Quant Method : ISTD
Origin : Disabled
Target Version : 3.40
Integrator : HP RTE
Method file : /chem/H.i/010704.b/H-20ml-h2o.m
Cal Date : 09-Jan-2004 13:28 hoffmanm
Curve Type : Average

Calibration File Names:
Level 1: /chem/H.i/010704.b/h0009.d
Level 2: /chem/H.i/010704.b/h0010.d
Level 3: /chem/H.i/010704.b/h0011.d
Level 4: /chem/H.i/010704.b/h0012.d
Level 5: /chem/H.i/010704.b/h0013.d
Level 6: /chem/H.i/010704.b/h0014.d

	Compound	1.000 Level 1	2.000 Level 2	5.000 Level 3	10.000 Level 4	30.000 Level 5	60.000 Level 6	___ RRF	% RSD
M	1 1,2-Dichloroethene (total)	0.38456	0.35419	0.39090	0.38085	0.38196	0.36503	0.37625	3.664
M	2 Xylene (total)	7.90055	7.80462	8.11999	8.12336	8.31411	7.61230	7.97916	3.191
	3 dichlorodifluoromethane	0.51690	0.51368	0.49255	0.51929	0.51079	0.46155	0.50246	4.413
	4 Chloromethane	0.26543	0.26689	0.27289	0.27767	0.27107	0.24560	0.26659	4.193
	5 Vinyl Chloride	0.26942	0.27770	0.27940	0.29455	0.28896	0.25891	0.27816	4.643
	7 Bromomethane	0.26279	0.28271	0.29147	0.29263	0.29367	0.27319	0.28274	4.425
	8 Chloroethane	0.19141	0.19643	0.19450	0.20042	0.20285	0.18100	0.19444	3.986
	10 Trichlorofluoromethane	0.63609	0.66119	0.64466	0.71674	0.72931	0.65362	0.67360	5.850
	11 Ethanol	0.00087	0.00048	0.00068	0.00064	0.00068	+++++	0.00067	20.494
	13 Acrolein	+++++	0.00802	0.00886	0.00895	0.00936	0.00846	0.00873	5.832
	14 1,1-Dichloroethene	0.35069	0.33828	0.36285	0.36561	0.36300	0.33646	0.35281	3.698
	15 Acetone	+++++	0.03742	0.02927	0.02507	0.02363	0.01991	0.02706	24.737
	17 Iodomethane	0.64174	0.64464	0.69651	0.67344	0.70489	0.66281	0.67067	3.901
	19 Acetonitrile	+++++	0.00464	0.00479	0.00520	0.00537	0.00415	0.00483	9.940
	21 Methylene Chloride	+++++	0.33311	0.32344	0.29576	0.31280	0.29091	0.31121	5.753
	22 tert-Butyl alcohol	0.00850	0.00746	0.00870	0.00862	0.00913	0.00812	0.00842	6.797
	23 Acrylonitrile	0.02007	0.01797	0.02078	0.02129	0.02348	0.02155	0.02086	8.722
	24 trans-1,2-Dichloroethene	0.40597	0.34726	0.39138	0.38451	0.37450	0.36253	0.37769	5.554
	27 1,1-Dichloroethane	0.61585	0.61935	0.64655	0.64420	0.66398	0.62950	0.63657	2.884
	28 Chloroprene	0.49851	0.50104	0.53490	0.53905	0.54719	0.51753	0.52303	3.915
	30 Isopropyl ether	0.22915	0.23294	0.26058	0.26011	0.27424	0.26182	0.25314	7.085
	32 cis-1,2-Dichloroethene	0.36315	0.36111	0.39042	0.37720	0.38941	0.36754	0.37481	3.456
	31 2,2-Dichloropropane	0.48785	0.45182	0.46557	0.45679	0.45178	0.40916	0.45383	5.668
	33 2-Butanone	0.05681	0.04213	0.04434	0.04358	0.04618	0.04421	0.04621	11.590
	34 Propionitrile	0.00711	0.00643	0.00782	0.00804	0.00890	0.00842	0.00779	11.531

STL Denver

INITIAL CALIBRATION DATA

Start Cal Date : 07-JAN-2004 11:17
End Cal Date : 07-JAN-2004 15:24
Quant Method : ISTD
Origin : Disabled
Target Version : 3.40
Integrator : HP RTE
Method file : /chem/H.i/010704.b/H-20ml-h2o.m
Cal Date : 09-Jan-2004 13:28 hoffmanm
Curve Type : Average

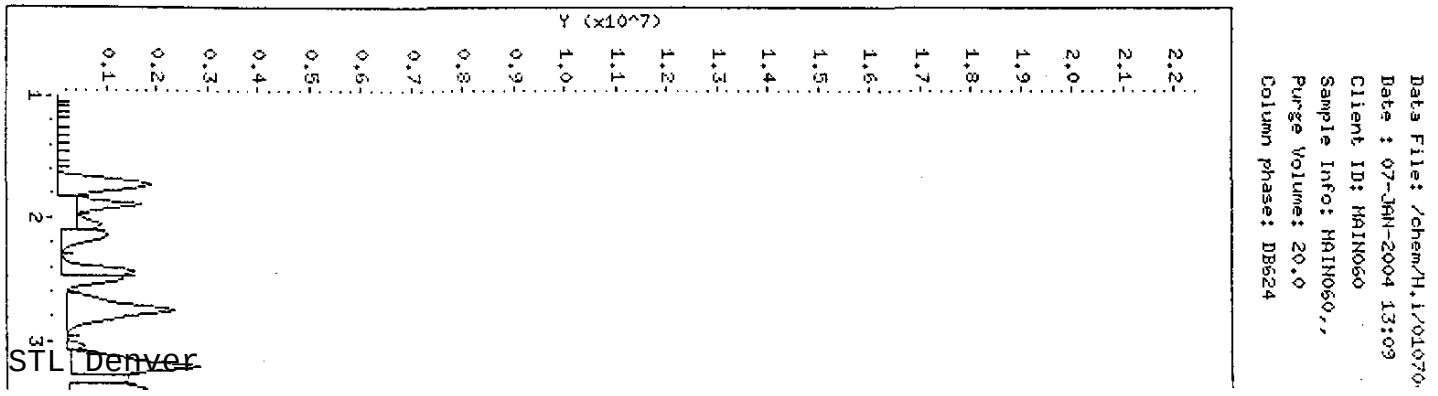
Compound	1.000 Level 1	2.000 Level 2	5.000 Level 3	10.000 Level 4	30.000 Level 5	60.000 Level 6	___ RRF	% RSD
36 Methacrylonitrile	0.05295	0.05532	0.06225	0.06343	0.06842	0.06552	0.06132	9.768
37 Bromochloromethane	0.13023	0.13784	0.15663	0.15633	0.16281	0.15308	0.14949	8.436
38 Chloroform	0.65498	0.66294	0.72546	0.71388	0.74008	0.69981	0.69952	4.889
41 1,1,1-Trichloroethane	0.68301	0.69469	0.71942	0.70543	0.71499	0.66836	0.69765	2.806
42 1,1-Dichloropropene	0.57172	0.55194	0.57523	0.56924	0.57242	0.53613	0.56278	2.750
43 Carbon Tetrachloride	0.57425	0.58228	0.62512	0.60579	0.61710	0.58199	0.59776	3.532
45 Isobutanol	+++++	0.00193	0.00253	0.00248	0.00281	0.00266	0.00248	13.393
46 Benzene	1.07064	1.03396	1.08870	1.08623	1.10125	1.04039	1.07020	2.564
47 1,2-Dichloroethane	0.24267	0.25107	0.28447	0.28118	0.29267	0.27950	0.27193	7.394
49 n-Butanol	+++++	0.00145	0.00201	0.00197	0.00245	0.00227	0.00203	18.817
50 Trichloroethene	0.39382	0.39871	0.41929	0.41682	0.41749	0.38894	0.40585	3.340
52 1,2-Dichloropropane	0.32078	0.32830	0.35762	0.35086	0.36209	0.34157	0.34354	4.784
53 Dibromomethane	0.19721	0.18272	0.20985	0.20876	0.21627	0.20340	0.20304	5.832
55 1,4-Dioxane	+++++	0.00079	0.00116	0.00098	0.00110	0.00094	0.00099	14.767
56 Bromodichloromethane	0.53695	0.54094	0.58360	0.57331	0.60185	0.57148	0.56802	4.402
59 cis-1,3-Dichloropropene	2.32914	2.44289	2.61012	2.57720	2.76458	2.53158	2.54259	5.851
60 4-Methyl-2-pentanone	0.55048	0.56915	0.65749	0.67381	0.74056	0.68622	0.64628	11.263
62 Toluene	6.76507	6.39625	6.65328	6.58509	6.86835	6.29512	6.59386	3.299
63 trans-1,3-Dichloropropene	1.68760	1.85247	1.91134	1.90119	2.04130	1.87430	1.87803	6.082
65 1,1,2-Trichloroethane	0.93004	1.05399	1.10497	1.08554	1.16323	1.07344	1.06854	7.249
67 1,3-Dichloropropane	1.66306	1.69443	1.85264	1.85459	1.95419	1.78740	1.80105	6.061
66 Tetrachloroethene	2.14384	2.08510	2.14822	2.15107	2.16546	1.95611	2.10830	3.774
68 2-Hexanone	0.35468	0.36746	0.41464	0.42533	0.47016	0.43318	0.41091	10.483
69 Dibromochloromethane	1.68634	1.68235	1.90906	1.93671	2.08318	1.91661	1.86904	8.376
70 1,2-Dibromoethane	1.25167	1.23465	1.38464	1.39470	1.47542	1.34902	1.34835	6.788
71 1-Chlorohexane	3.24595	3.05113	3.13945	3.09998	3.11192	2.84415	3.08210	4.327
73 Chlorobenzene	3.88856	3.86746	4.09160	4.02375	4.17839	3.84283	3.98210	3.435
74 1,1,1,2-Tetrachloroethane	1.80612	1.91174	1.93026	1.93925	2.03989	1.87878	1.91767	4.009
75 Ethylbenzene	2.03662	1.99641	2.09701	2.06394	2.12124	1.93947	2.04245	3.277
76 m and p-Xylene	2.70458	2.71019	2.80167	2.82529	2.87413	2.63060	2.75774	3.295
77 o-Xylene	2.49139	2.38424	2.51665	2.47277	2.56585	2.35111	2.46367	3.301
78 Styrene	3.74901	3.75000	4.05423	4.04768	4.17230	3.84367	3.93615	4.550
79 Bromoform	0.91538	0.95625	1.08080	1.10078	1.19413	1.08315	1.05508	9.680

STL Denver

INITIAL CALIBRATION DATA

Start Cal Date : 07-JAN-2004 11:17
End Cal Date : 07-JAN-2004 15:24
Quant Method : ISTD
Origin : Disabled
Target Version : 3.40
Integrator : HP RTE
Method file : /chem/H.i/010704.b/H-20ml-h2o.m
Cal Date : 09-Jan-2004 13:28 hoffmanm
Curve Type : Average

Compound	1.000 Level 1	2.000 Level 2	5.000 Level 3	10.000 Level 4	30.000 Level 5	60.000 Level 6	RRF	% RSD
80 isopropyl benzene	8.18263	8.05947	8.35044	8.31021	8.32537	7.49360	8.12029	4.015
81 Cyclohexanone	0.02303	0.02141	0.02472	0.02476	0.02747	0.02270	0.02402	8.833
83 1,1,2,2-Tetrachloroethane	1.20961	1.24183	1.37403	1.38081	1.48398	1.34947	1.33996	7.484
84 Bromobenzene	1.06479	1.05559	1.12627	1.11475	1.15925	1.08515	1.10097	3.598
85 1,2,3-Trichloropropane	0.20020	0.19748	0.18454	0.18440	0.19121	0.17735	0.18920	4.600
87 n-Propylbenzene	1.12762	1.11381	1.09120	1.07255	1.08480	1.00582	1.08263	3.936
88 2-Chlorotoluene	0.91603	0.90568	0.89013	0.90576	0.93895	0.87792	0.90575	2.330
89 1,3,5-Trimethylbenzene	3.67578	3.60238	3.73258	3.69071	3.73278	3.43100	3.64420	3.153
90 4-Chlorotoluene	1.01839	1.00535	1.03131	0.99581	0.99820	0.93668	0.99762	3.277
91 tert-Butylbenzene	3.78055	3.68053	3.79510	3.74125	3.78843	3.43206	3.70299	3.765
92 1,2,4-Trimethylbenzene	3.47575	3.33802	3.46668	3.46528	3.47542	3.18211	3.40054	3.515
93 sec-Butylbenzene	1.00520	0.97467	1.00073	0.99237	0.97860	0.87738	0.97149	4.903
94 m-Dichlorobenzene	1.79533	1.76535	1.89089	1.79270	1.89552	1.75021	1.81500	3.466
95 4-Isopropyltoluene	4.13963	4.12112	4.29732	4.23437	4.18661	3.74983	4.12148	4.684
97 p-dichlorobenzene	2.13872	2.15829	2.22260	2.24556	2.23341	2.06433	2.17715	3.213
98 n-Butylbenzene	4.82362	4.63276	4.77494	4.70157	4.56086	4.01397	4.58462	6.438
99 o-Dichlorobenzene	1.61104	1.59798	1.64141	1.63195	1.66625	1.51572	1.61072	3.246
100 1,2-Dibromo-3-chloropropane	0.12718	0.12162	0.14188	0.14180	0.15513	0.13993	0.13792	8.652
101 1,2,4-Trichlorobenzene	1.10591	1.00037	1.12522	1.10675	1.09886	0.97078	1.06798	6.096
102 Hexachlorobutadiene	1.04680	0.88518	0.98070	0.95556	0.88093	0.72341	0.91210	12.212
127 Naphthalene	1.04906	1.11120	1.19442	1.25358	1.25883	1.14908	1.16936	7.051
104 1,2,3-Trichlorobenzene	0.82340	0.80849	0.86015	0.86420	0.84710	0.76293	0.82771	4.630



Data File: /chem/H.i/010704.b/h0001.d

Date : 07-JAN-2004 10:44

Client ID: BFB

Instrument: H.i

Sample Info: BFB,,MSVOA-237-03

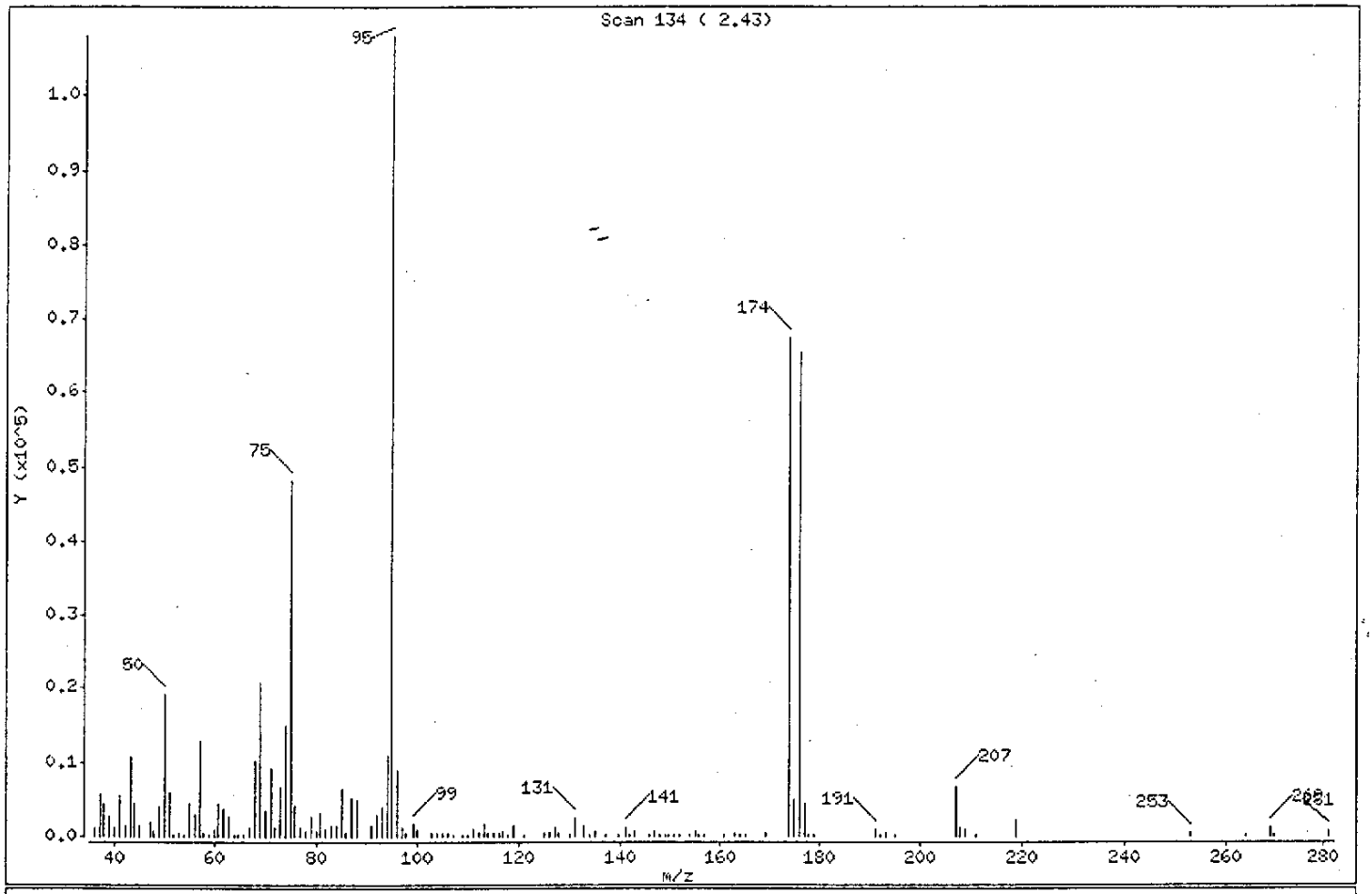
Volume Injected (uL): 1.0

Operator: mhoffman

Column phase: DB624

Column diameter: 0.53

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	17.68
75	30.00 - 60.00% of mass 95	44.55
96	5.00 - 9.00% of mass 95	8.29
173	Less than 2.00% of mass 174	0.00 (0.00)
174	50.00 - 100.00% of mass 95	62.30
175	5.00 - 9.00% of mass 174	4.58 (7.35)
176	95.00 - 101.00% of mass 174	60.56 (97.19)
177	5.00 - 9.00% of mass 176	4.14 (6.83)

Data File: /chem/H.i/010704.b/h0001.d

Date : 07-JAN-2004 10:44

Client ID: BFB

Instrument: H.i

Sample Info: BFB,,MSVOA-237-03

Volume Injected (uL): 1.0

Operator: mhoffman

Column phase: DB624

Column diameter: 0.53

Data File: h0001.d
Spectrum: Scan 134 (2.43)
Location of Maximum: 94.95
Number of points: 129

m/z	Y	m/z	Y	m/z	Y	m/z	Y
35.95	1248	69.95	3534	106.90	322	151.95	213
36.95	5829	71.00	9297	108.90	362	153.95	219
37.95	4459	72.00	1155	110.00	343	155.00	729
39.05	2752	73.00	6625	111.00	948	155.90	246
39.95	1323	74.00	14880	112.10	606	156.90	204
40.95	5447	75.00	48128	113.05	1663	160.90	326
42.05	1392	76.00	4160	113.95	518	162.90	521
43.10	10761	77.00	1266	114.85	455	163.90	225
44.00	4478	77.90	809	115.85	440	165.00	318
45.00	1582	78.90	2688	116.85	651	169.05	426
47.00	1864	80.00	721	117.95	296	173.85	67304
47.90	717	80.90	3328	118.85	1486	174.85	4946
48.90	3860	81.90	1117	121.05	264	175.85	65416
50.00	19096	82.90	1543	125.05	481	176.85	4470
51.00	6047	84.00	1549	126.05	474	177.85	273
51.90	363	85.05	6441	127.00	1121	178.85	297
53.00	497	85.95	520	128.00	511	190.90	906
54.00	305	86.95	5193	129.90	319	192.00	245
55.00	4576	87.85	4996	130.90	2578	193.00	559
56.00	3055	90.95	1480	133.00	1483	194.80	211
57.05	12795	91.95	2954	134.00	307	206.95	6774
58.05	618	92.95	4096	134.90	645	207.95	1361
58.85	312	93.95	10865	137.00	346	208.95	878
59.95	1092	94.95	108024	139.50	371	211.10	259
60.95	4544	95.95	8956	140.95	1132	218.90	2280
61.95	3804	96.85	1229	141.85	207	253.05	531
62.95	2850	97.85	404	142.85	733	263.95	346
64.05	299	99.00	1851	145.85	278	269.10	1284
64.85	313	100.00	1054	146.95	847	270.00	274
65.95	216	102.90	471	147.85	366	281.05	815
66.95	1215	103.90	584	148.85	324		
67.95	10080	105.00	536	149.85	354		
68.95	20968	105.90	406	150.85	204		

Data File: /chem/H.i/010704.b/h0001.d
Date : 07-JAN-2004 10:44
Client ID: BFB
Sample Info: BFB,,MSVOA-237-03
Volume Injected (uL): 1.0
Column phase: DB624

Instrument: H.i
Operator: mhoffman
Column diameter: 0.53

Page 1

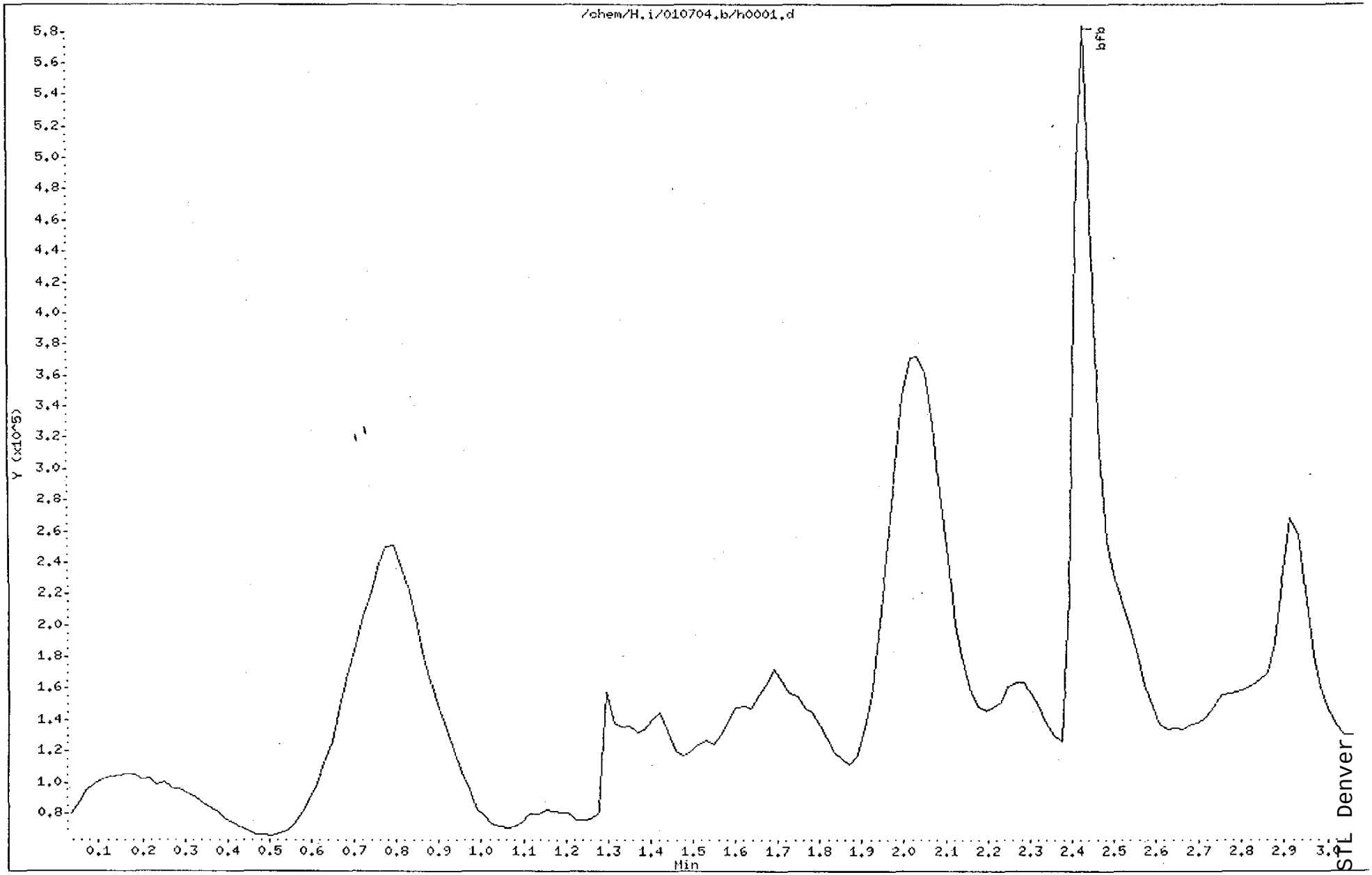


Table of Contents

Data File: /chem/H.i/010704.b/h0003.d
Report Date: 08-Jan-2004 16:02

STL Denver

VOLATILE REPORT SW-846

Data file : /chem/H.i/010704.b/h0003.d
Lab Smp Id: MAIN001 Client Smp ID: MAIN001
Inj Date : 07-JAN-2004 11:17
Operator : hoffmanm Inst ID: H.i
Smp Info : MAIN001,,
Misc Info :
Comment : Purge and Trap Analysis
Method : /chem/H.i/010704.b/H-20ml-h2o.m
Meth Date : 08-Jan-2004 10:26 hoffmanm Quant Type: ISTD
Cal Date : 07-JAN-2004 13:31 Cal File: h0009.d
Als bottle: 2 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 1-main.sub
Target Version: 3.40
Processing Host: chemsv02

Concentration Formula: Amt * DF * Vp/Vs

Name	Value	Description
DF	1.000	Dilution Factor
Vp	20.000	Purge Volume (ml)
Vs	20.000	Sample Volume (ml)

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
* 48 Fluorobenzene	96	6.395	6.396	(1.000)	2220674	12.5000	
* 72 Chlorobenzene-d5	119	10.079	10.079	(1.000)	394754	12.5000	
* 96 1,4-Dichlorobenzene-d4	152	12.972	12.972	(1.000)	668263	12.5000	
M 1 1,2-Dichloroethene (total)	96				136638	2.00000	2.45014
M 2 Xylene (total)	106				249502	1.00000	3.56851
3 dichlorodifluoromethane	85	1.903	1.886	(0.298)	91830	1.00000	1.23308
4 Chloromethane	50	2.028	2.048	(0.317)	47155	1.00000	1.19499
5 Vinyl Chloride	62	2.172	2.156	(0.340)	47863	1.00000	1.16375
7 Bromomethane	94	2.424	2.425	(0.379)	46685	1.00000	1.11846
8 Chloroethane	64	2.514	2.515	(0.393)	34004	1.00000	1.18204
10 Trichlorofluoromethane	101	2.765	2.749	(0.432)	113004	1.00000	1.13570
11 Ethanol	45	2.819	2.803	(0.441)	7716	50.0000	88.0421(H)
13 Acrolein	56.00	Compound Not Detected.					
14 1,1-Dichloroethene	96	3.214	3.198	(0.503)	62301	1.00000	1.19305
15 Acetone	43.00	Compound Not Detected.					
17 Iodomethane	142	3.394	3.378	(0.531)	114007	1.00000	1.15021
19 Acetonitrile	41.00	Compound Not Detected.					

Data File: /chem/H.i/010704.b/h0003.d
Report Date: 08-Jan-2004 16:02

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
21 Methylene Chloride	84.00	Compound Not Detected.					
22 tert-Butyl alcohol	59	3.717	3.719	(0.581)	30204	20.0000	24.2191
23 Acrylonitrile	53	3.861	3.845	(0.604)	35661	10.0000	11.5662
24 trans-1,2-Dichloroethene	96	3.915	3.899	(0.612)	72123	1.00000	1.28601
27 1,1-Dichloroethane	63	4.364	4.348	(0.682)	109409	1.00000	1.16246
28 Chloroprene	53	4.472	4.456	(0.699)	88562	1.00000	1.14588
30 Isopropyl ether	87	4.436	4.420	(0.694)	203545	5.00000	5.45202
32 cis-1,2-Dichloroethene	96	5.029	5.013	(0.786)	64515	1.00000	1.16413
31 2,2-Dichloropropane	77	5.029	5.013	(0.786)	86668	1.00000	1.28609
33 2-Butanone	43	5.047	5.031	(0.789)	40370	4.00000	5.84766
34 Propionitrile	54	5.101	5.085	(0.798)	12625	10.0000	10.9910
36 Methacrylonitrile	41	5.281	5.264	(0.826)	94074	10.0000	10.4202
37 Bromochloromethane	128	5.317	5.300	(0.831)	23135	1.00000	1.05080
38 Chloroform	83	5.407	5.372	(0.845)	116359	1.00000	1.12645
41 1,1,1-Trichloroethane	97	5.640	5.624	(0.882)	121339	1.00000	1.17580
42 1,1-Dichloropropene	75	5.820	5.803	(0.910)	101569	1.00000	1.21830
43 Carbon Tetrachloride	117	5.838	5.821	(0.913)	102017	1.00000	1.15462
45 Isobutanol	41.00	Compound Not Detected.					
46 Benzene	78	6.071	6.055	(0.949)	190203	1.00000	1.20048
47 1,2-Dichloroethane	62	6.089	6.073	(0.952)	43112	1.00000	1.07553
49 n-Butanol	56.00	Compound Not Detected.					
50 Trichloroethene	130	6.844	6.828	(1.070)	69963	1.00000	1.16582
52 1,2-Dichloropropane	63	7.114	7.079	(1.112)	56987	1.00000	1.12347
53 Dibromomethane	93	7.257	7.223	(1.135)	35036	1.00000	1.16692
55 1,4-Dioxane	88.00	Compound Not Detected.					
56 Bromodichloromethane	83	7.437	7.421	(1.163)	95391	1.00000	1.13684
59 cis-1,3-Dichloropropene	75	7.976	7.960	(0.791)	73555	1.00000	1.10297
60 4-Methyl-2-pentanone	43	8.156	8.139	(0.809)	69537	4.00000	4.11282
62 Toluene	91	8.389	8.373	(0.832)	213643	1.00000	1.22988
63 trans-1,3-Dichloropropene	75	8.641	8.625	(0.857)	53295	1.00000	1.08271
65 1,1,2-Trichloroethane	97	8.875	8.858	(0.881)	29371	1.00000	1.04991
67 1,3-Dichloropropane	76	9.072	9.056	(0.900)	52520	1.00000	1.11146
66 Tetrachloroethene	164	9.072	9.038	(0.900)	67703	1.00000	1.21940
68 2-Hexanone	43	9.180	9.146	(0.911)	44804	4.00000	4.16599
69 Dibromochloromethane	129	9.360	9.343	(0.929)	53255	1.00000	1.08694
70 1,2-Dibromoethane	107	9.503	9.487	(0.943)	39528	1.00000	1.11716
71 1-Chlorohexane	91	10.079	10.044	(1.000)	102508	1.00000	1.26111
73 Chlorobenzene	112	10.114	10.080	(1.004)	122802	1.00000	1.17291
74 1,1,1,2-Tetrachloroethane	131	10.204	10.188	(1.012)	57038	1.00000	1.13283
75 Ethylbenzene	106	10.240	10.224	(1.016)	64317	1.00000	1.19671
76 m and p-Xylene	106	10.384	10.368	(1.030)	170823	2.00000	2.35555
77 o-Xylene	106	10.887	10.871	(1.080)	78679	1.00000	1.21296
78 Styrene	104	10.905	10.889	(1.082)	118395	1.00000	1.14512
79 Bromoform	173	11.157	11.140	(1.107)	28908	1.00000	1.04665
80 isopropyl benzene	105	11.372	11.356	(1.128)	258410	1.00000	1.20884
81 Cyclohexanone	55	11.498	11.464	(1.141)	29088	40.0000	46.1006
83 1,1,2,2-Tetrachloroethane	83	11.750	11.733	(1.166)	38200	1.00000	1.08750

Data File: /chem/H.i/010704.b/h0003.d
Report Date: 08-Jan-2004 16:02

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
84 Bromobenzene	156	11.768	11.751	(0.907)	56925	1.00000	1.16210
85 1,2,3-Trichloropropane	110	11.804	11.787	(0.910)	10703	1.00000	1.26685
87 n-Propylbenzene	120	11.893	11.877	(0.917)	60284	1.00000	1.24779
88 2-Chlorotoluene	126	12.019	11.985	(0.927)	48972	1.00000	1.21308
89 1,3,5-Trimethylbenzene	105	12.127	12.093	(0.935)	196511	1.00000	1.20998
90 4-Chlorotoluene	126	12.145	12.129	(0.936)	54444	1.00000	1.22396
91 tert-Butylbenzene	119	12.522	12.488	(0.965)	202112	1.00000	1.22411
92 1,2,4-Trimethylbenzene	105	12.576	12.560	(0.970)	185817	1.00000	1.22545
93 sec-Butylbenzene	134	12.774	12.757	(0.985)	53739	1.00000	1.23991
94 m-Dichlorobenzene	146	12.900	12.883	(0.994)	95980	1.00000	1.18751
95 4-Isopropyltoluene	119	12.936	12.919	(0.997)	221309	1.00000	1.20507
97 p-dichlorobenzene	146	13.007	12.973	(1.003)	114338	1.00000	1.17965
98 n-Butylbenzene	91	13.385	13.368	(1.032)	257876	1.00000	1.25993
99 o-Dichlorobenzene	146	13.403	13.386	(1.033)	86128	1.00000	1.20023
100 1,2-Dibromo-3-chloropropane	157	14.211	14.195	(1.096)	6799	1.00000	1.10995
101 1,2,4-Trichlorobenzene	180	15.038	15.004	(1.159)	59123	1.00000	1.24085
102 Hexachlorobutadiene	225	15.200	15.183	(1.172)	55963	1.00000	1.36913
127 Naphthalene	128	15.272	15.255	(1.177)	56084	1.00000	1.08100(a)
104 1,2,3-Trichlorobenzene	180	15.523	15.507	(1.197)	44020	1.00000	1.19400

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
H - Operator selected an alternate compound hit.

Data File: /chem/H.i/010704.b/h0003.d
Report Date: 08-Jan-2004 16:02

STL Denver

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: H.i
Lab File ID: h0003.d
Lab Smp Id: MAIN001
Analysis Type: VOA
Quant Type: ISTD
Operator: hoffmanm
Method File: /chem/H.i/010704.b/H-20ml-h2o.m
Misc Info:

Calibration Date: JAN/07/4
Calibration Time: 1439
Client Smp ID: MAIN001
Level: LOW
Sample Type: WATER

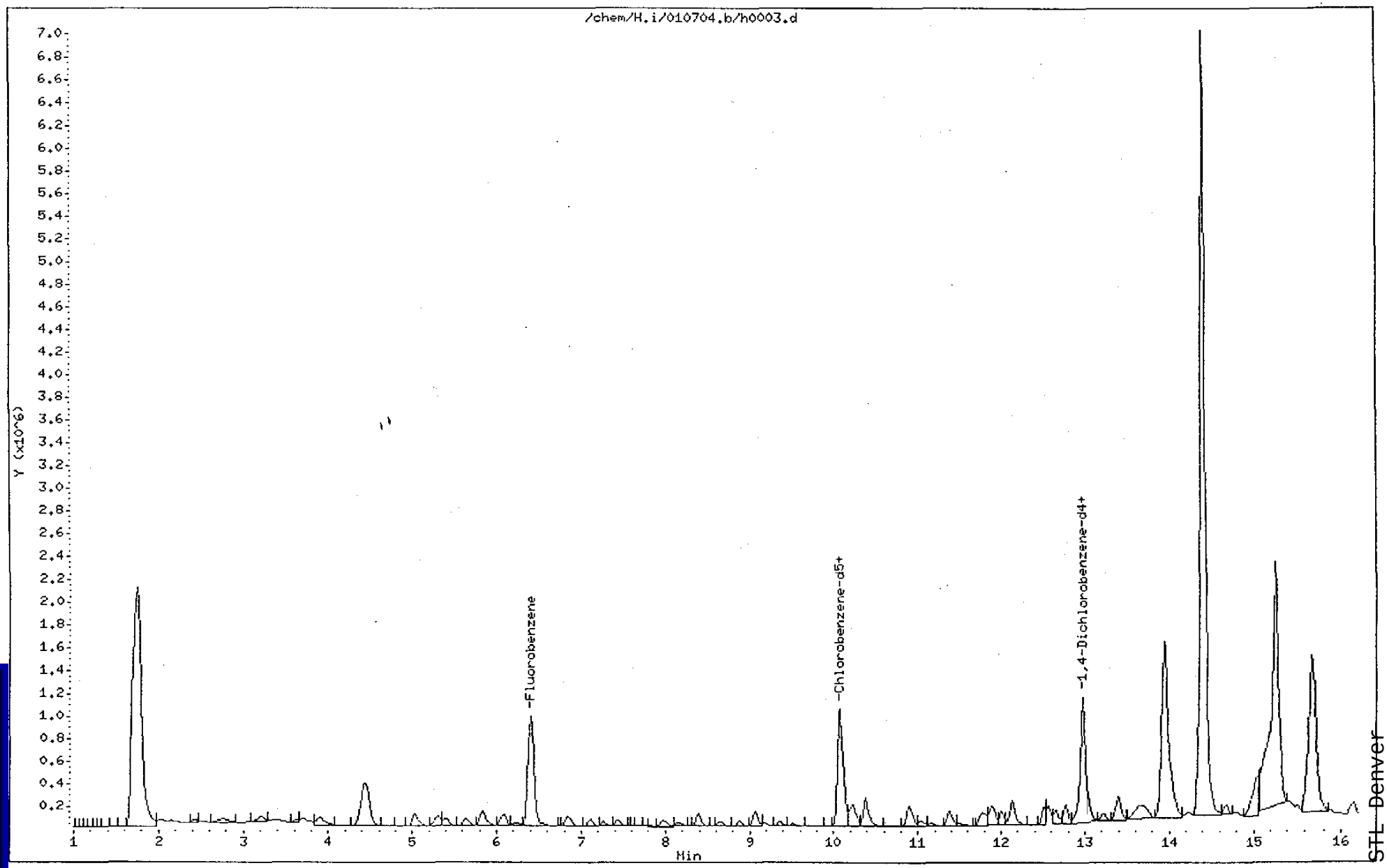
COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
48 Fluorobenzene	2399820	1199910	4799640	2220674	-7.46
72 Chlorobenzene-d5	457381	228690	914762	394754	-13.69
96 1,4-Dichlorobenze	747017	373508	1494034	668263	-10.54

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
48 Fluorobenzene	6.39	5.89	6.89	6.39	0.00
72 Chlorobenzene-d5	10.06	9.56	10.56	10.08	0.18
96 1,4-Dichlorobenze	12.97	12.47	13.47	12.97	0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem/H.i/010704.b/h0003.d
Date : 07-JAN-2004 11:17
Client ID: MAIN001
Sample Info: MAIN001,,
Purge Volume: 20.0
Column phase: DB624

Instrument: H.i
Operator: hoffmann
Column diameter: 0.53



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Report Date: 08-Jan-2004 16:02

STL Denver

VOLATILE REPORT SW-846

Data file : /chem/H.i/010704.b/h0004.d
Lab Smp Id: MAIN002 Client Smp ID: MAIN002
Inj Date : 07-JAN-2004 11:40
Operator : hoffmanm Inst ID: H.i
Smp Info : MAIN002,,
Misc Info :
Comment : Purge and Trap Analysis
Method : /chem/H.i/010704.b/H-20ml-h2o.m
Meth Date : 08-Jan-2004 10:26 hoffmanm Quant Type: ISTD
Cal Date : 07-JAN-2004 13:31 Cal File: h0009.d
Als bottle: 2 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 1-main.sub
Target Version: 3.40
Processing Host: chemsv02

Concentration Formula: Amt * DF * Vp/Vs

Name	Value	Description
DF	1.000	Dilution Factor
Vp	20.000	Purge Volume (ml)
Vs	20.000	Sample Volume (ml)

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	ON-COL (ug/L)	
* 48 Fluorobenzene	96	6.398	6.396	(1.000)	2247279	12.5000		
* 72 Chlorobenzene-d5	119	10.081	10.079	(1.000)	401333	12.5000		(H)
* 96 1,4-Dichlorobenzene-d4	152	12.974	12.972	(1.000)	678380	12.5000		
M 1 1,2-Dichloroethene (total)	96				254706	4.00000	4.35140	
M 2 Xylene (total)	106				501160	2.00000	6.77727	
3 dichlorodifluoromethane	85	1.905	1.886	(0.298)	184701	2.00000	2.35459	
4 Chloromethane	50	2.031	2.048	(0.317)	95965	2.00000	2.31059	
5 Vinyl Chloride	62	2.157	2.156	(0.337)	99851	2.00000	2.30682	
7 Bromomethane	94	2.427	2.425	(0.379)	101652	2.00000	2.31371	
8 Chloroethane	64	2.516	2.515	(0.393)	70631	2.00000	2.33190	
10 Trichlorofluoromethane	101	2.768	2.749	(0.433)	237742	2.00000	2.27166	
11 Ethanol	45	2.822	2.803	(0.441)	8690	100.000	89.2909	
13 Acrolein	56	3.055	3.036	(0.478)	28839	20.0000	21.9561	
14 1,1-Dichloroethene	96	3.217	3.198	(0.503)	121635	2.00000	2.21668	
15 Acetone	43	3.199	3.180	(0.500)	53826	8.00000	7.96354	
17 Iodomethane	142	3.397	3.378	(0.531)	231790	2.00000	2.22514	

Data File: /chem/H.i/010704.b/h0004.d
Report Date: 08-Jan-2004 16:02

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
19 Acetonitrile	41	3.469	3.450	(0.542)	16675	20.0000	22.9045
21 Methylene Chloride	84	3.702	3.683	(0.579)	119773	2.00000	2.54000
22 tert-Butyl alcohol	59	3.738	3.719	(0.584)	53624	40.0000	41.0364
23 Acrylonitrile	53	3.864	3.845	(0.604)	64596	20.0000	20.0123
24 trans-1,2-Dichloroethene	96	3.918	3.899	(0.612)	124862	2.00000	2.12221
27 1,1-Dichloroethane	63	4.367	4.348	(0.683)	222695	2.00000	2.25041
28 Chloroprene	53	4.475	4.456	(0.699)	180155	2.00000	2.21822
30 Isopropyl ether	87	4.439	4.420	(0.694)	418778	10.0000	10.6894
32 cis-1,2-Dichloroethene	96	5.032	5.013	(0.787)	129844	2.00000	2.22919
31 2,2-Dichloropropane	77	5.050	5.013	(0.789)	162458	2.00000	2.29126
33 2-Butanone	43	5.050	5.031	(0.789)	60596	8.00000	8.37098
34 Propionitrile	54	5.104	5.085	(0.798)	23103	20.0000	19.2375
36 Methacrylonitrile	41	5.284	5.264	(0.826)	198909	20.0000	21.0092
37 Bromochloromethane	128	5.320	5.300	(0.831)	49561	2.00000	2.14492
38 Chloroform	83	5.409	5.372	(0.846)	238368	2.00000	2.19679
41 1,1,1-Trichloroethane	97	5.643	5.624	(0.882)	249787	2.00000	2.30014
42 1,1-Dichloropropene	75	5.841	5.803	(0.913)	198458	2.00000	2.26354
43 Carbon Tetrachloride	117	5.841	5.821	(0.913)	209366	2.00000	2.25359
45 Isobutanol	41	5.949	5.929	(0.930)	13911	40.0000	37.4754
46 Benzene	78	6.074	6.055	(0.949)	371776	2.00000	2.23243
47 1,2-Dichloroethane	62	6.092	6.073	(0.952)	90276	2.00000	2.14590
49 n-Butanol	56	6.775	6.720	(1.059)	10396	40.0000	41.4622
50 Trichloroethene	130	6.847	6.828	(1.070)	143361	2.00000	2.27123
52 1,2-Dichloropropane	63	7.116	7.079	(1.112)	118046	2.00000	2.21477
53 Dibromomethane	93	7.260	7.223	(1.135)	65701	2.00000	2.08714
55 1,4-Dioxane	88	7.278	7.241	(1.138)	14173	100.000	95.2764
56 Bromodichloromethane	83	7.440	7.421	(1.163)	194504	2.00000	2.20637
59 cis-1,3-Dichloropropene	75	7.979	7.960	(0.782)	156866	2.00000	2.22776
60 4-Methyl-2-pentanone	43	8.159	8.139	(0.799)	146187	8.00000	8.21356
62 Toluene	91	8.392	8.373	(0.822)	410724	2.00000	2.23888
63 trans-1,3-Dichloropropene	75	8.644	8.625	(0.847)	118953	2.00000	2.28639
65 1,1,2-Trichloroethane	97	8.877	8.858	(0.870)	67680	2.00000	2.28888
67 1,3-Dichloropropane	76	9.075	9.056	(0.889)	108805	2.00000	2.18248
66 Tetrachloroethene	164	9.075	9.038	(0.889)	133891	2.00000	2.28178
68 2-Hexanone	43	9.183	9.146	(0.900)	94384	8.00000	8.33250
69 Dibromochloromethane	129	9.363	9.343	(0.917)	108029	2.00000	2.09309
70 1,2-Dibromoethane	107	9.506	9.487	(0.931)	79281	2.00000	2.12586
71 1-Chlorohexane	91	10.081	10.044	(0.988)	195923	2.00000	2.28072
73 Chlorobenzene	112	10.117	10.080	(0.991)	248342	2.00000	2.24577
74 1,1,1,2-Tetrachloroethane	131	10.207	10.188	(1.000)	122759	2.00000	2.30598
75 Ethylbenzene	106	10.243	10.224	(1.004)	128196	2.00000	2.25788
76 m and p-Xylene	106	10.387	10.368	(1.018)	348060	4.00000	4.54217
77 o-Xylene	106	10.890	10.871	(1.067)	153100	2.00000	2.23510
78 Styrene	104	10.908	10.889	(1.069)	240800	2.00000	2.20661
79 Bromoform	173	11.159	11.140	(1.093)	61404	2.00000	2.10987
80 isopropyl benzene	105	11.375	11.356	(1.114)	517525	2.00000	2.29039
81 Cyclohexanone	55	11.501	11.464	(1.127)	55000	80.0000	82.7813

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
83 1,1,2,2-Tetrachloroethane	83	11.752	11.733	(1.151)	79742	2.00000	2.15282
84 Bromobenzene	156	11.770	11.751	(0.907)	114575	2.00000	2.21890
85 1,2,3-Trichloropropane	110	11.806	11.787	(0.910)	21435	2.00000	2.39934
87 n-Propylbenzene	120	11.896	11.877	(0.917)	120894	2.00000	2.36774
88 2-Chlorotoluene	126	12.004	11.985	(0.925)	98303	2.00000	2.30652
89 1,3,5-Trimethylbenzene	105	12.130	12.093	(0.935)	391005	2.00000	2.28145
90 4-Chlorotoluene	126	12.148	12.129	(0.936)	109121	2.00000	2.32301
91 tert-Butylbenzene	119	12.507	12.488	(0.964)	399488	2.00000	2.29239
92 1,2,4-Trimethylbenzene	105	12.579	12.560	(0.970)	362311	2.00000	2.26494
93 sec-Butylbenzene	134	12.777	12.757	(0.985)	105791	2.00000	2.31186
94 m-Dichlorobenzene	146	12.902	12.883	(0.994)	191613	2.00000	2.24787
95 4-Isopropyltoluene	119	12.938	12.919	(0.997)	447310	2.00000	2.30711
97 p-dichlorobenzene	146	12.992	12.973	(1.001)	234262	2.00000	2.29002
98 n-Butylbenzene	91	13.388	13.368	(1.032)	502843	2.00000	2.32632
99 o-Dichlorobenzene	146	13.406	13.386	(1.033)	173446	2.00000	2.29011
100 1,2-Dibromo-3-chloropropane	157	14.214	14.195	(1.096)	13201	2.00000	2.05040
101 1,2,4-Trichlorobenzene	180	15.023	15.004	(1.158)	108581	2.00000	2.16391
102 Hexachlorobutadiene	225	15.203	15.183	(1.172)	96078	2.00000	2.22945
127 Naphthalene	128	15.274	15.255	(1.177)	120610	2.00000	2.20585(a)
104 1,2,3-Trichlorobenzene	180	15.526	15.507	(1.197)	87754	2.00000	2.25656

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
H - Operator selected an alternate compound hit.

Data File: /chem/H.i/010704.b/h0004.d
Report Date: 08-Jan-2004 16:02

STL Denver

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: H.i
Lab File ID: h0004.d
Lab Smp Id: MAIN002
Analysis Type: VOA
Quant Type: ISTD
Operator: hoffmanm
Method File: /chem/H.i/010704.b/H-20ml-h2o.m
Misc Info:

Calibration Date: JAN/07/4
Calibration Time: 1439
Client Smp ID: MAIN002
Level: LOW
Sample Type: WATER

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
48 Fluorobenzene	2399820	1199910	4799640	2247279	-6.36
72 Chlorobenzene-d5	457381	228690	914762	401333	-12.25
96 1,4-Dichlorobenze	747017	373508	1494034	678380	-9.19

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
48 Fluorobenzene	6.39	5.89	6.89	6.40	0.05
72 Chlorobenzene-d5	10.06	9.56	10.56	10.08	0.21
96 1,4-Dichlorobenze	12.97	12.47	13.47	12.97	0.02

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem/H.i/010704.b/h0004.d
Date : 07-JAN-2004 11:40
Client ID: HAIN002
Sample Info: HAIN002,,
Purge Volume: 20.0
Column phase: DB624

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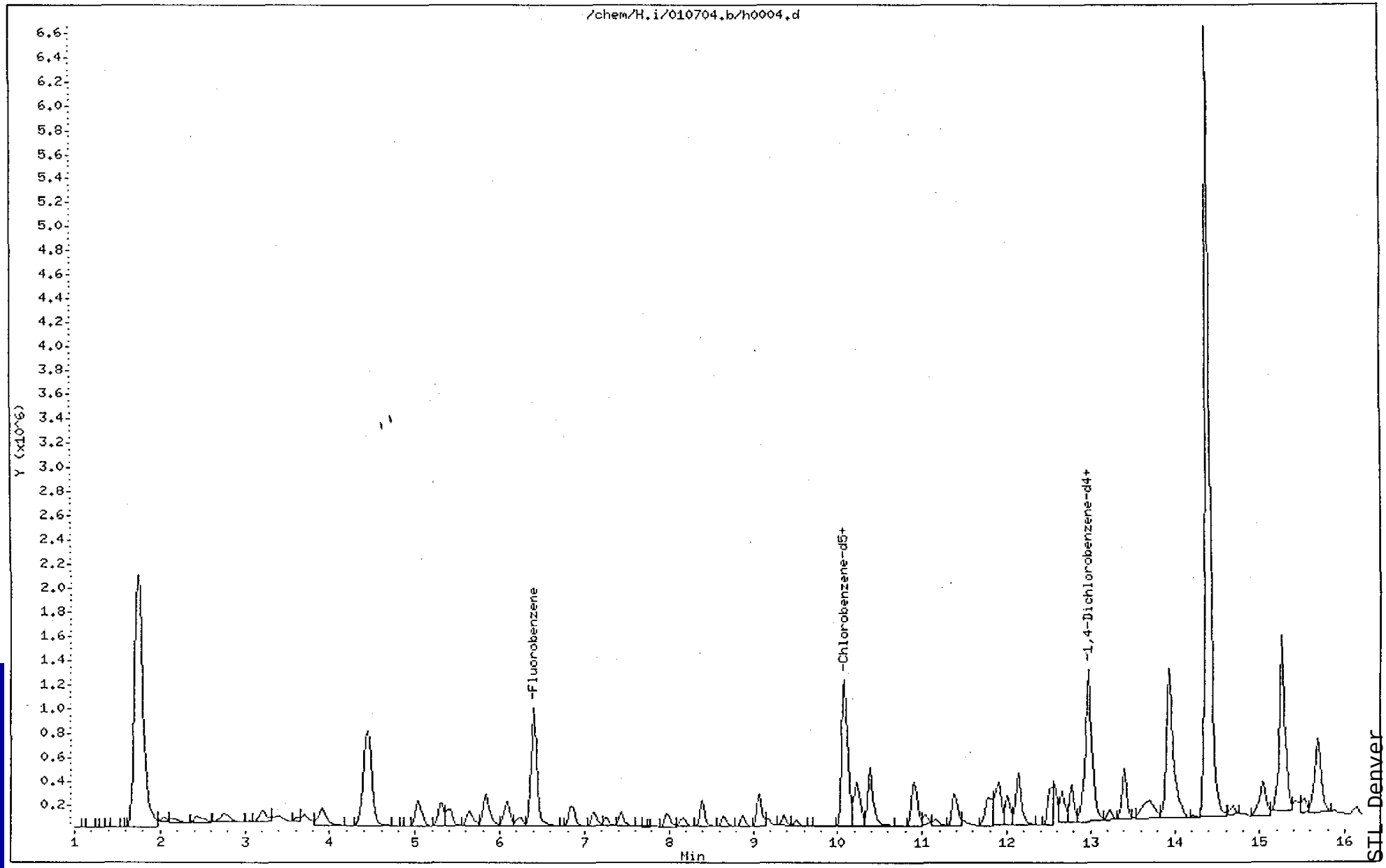
Instrument: H.i

Operator: hoffmann
Column diameter: 0.53



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Data File: /chem/H.i/010704.b/h0005.d
Report Date: 08-Jan-2004 16:02

STL Denver

VOLATILE REPORT SW-846

Data file : /chem/H.i/010704.b/h0005.d
Lab Smp Id: MAIN005 Client Smp ID: MAIN005
Inj Date : 07-JAN-2004 12:02
Operator : hoffmanm Inst ID: H.i
Smp Info : MAIN005,,
Misc Info :
Comment : Purge and Trap Analysis
Method : /chem/H.i/010704.b/H-20ml-h2o.m
Meth Date : 08-Jan-2004 10:26 hoffmanm Quant Type: ISTD
Cal Date : 07-JAN-2004 13:31 Cal File: h0009.d
Als bottle: 2 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 1-main.sub
Target Version: 3.40
Processing Host: chemsv02

Concentration Formula: Amt * DF * Vp/Vs

Name	Value	Description
DF	1.000	Dilution Factor
Vp	20.000	Purge Volume (ml)
Vs	20.000	Sample Volume (ml)

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	ON-COL (ug/L)
* 48 Fluorobenzene	96	6.396	6.396	(1.000)	2268310	12.5000	
* 72 Chlorobenzene-d5	119	10.079	10.079	(1.000)	409934	12.5000	(H)
* 96 1,4-Dichlorobenzene-d4	152	12.972	12.972	(1.000)	703312	12.5000	
M 1 1,2-Dichloroethene (total)	96				709348	10.0000	11.5430
M 2 Xylene (total)	106				1331464	5.00000	16.9716
3 dichlorodifluoromethane	85	1.903	1.886	(0.298)	446903	5.00000	5.43966
4 Chloromethane	50	2.047	2.048	(0.320)	247596	5.00000	5.68245
5 Vinyl Chloride	62	2.173	2.156	(0.340)	253508	5.00000	5.58631
7 Bromomethane	94	2.443	2.425	(0.382)	264455	5.00000	5.73545
8 Chloroethane	64	2.532	2.515	(0.396)	176474	5.00000	5.55840
10 Trichlorofluoromethane	101	2.784	2.749	(0.435)	584912	5.00000	5.33998
11 Ethanol	45	2.820	2.803	(0.441)	30982	250.000	301.878
13 Acrolein	56	3.054	3.036	(0.477)	80423	50.0000	57.8535
14 1,1-Dichloroethene	96	3.233	3.198	(0.506)	329220	5.00000	5.71752
15 Acetone	43	3.197	3.180	(0.500)	106226	20.0000	23.9675
17 Iodomethane	142	3.395	3.378	(0.531)	631960	5.00000	5.77889

Data File: /chem/H.i/010704.b/h0005.d
Report Date: 08-Jan-2004 16:02

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
19 Acetonitrile	41	3.467	3.450	(0.542)	43468	50.0000	56.4805
21 Methylene Chloride	84	3.700	3.683	(0.579)	293468	5.00000	5.87596
22 tert-Butyl alcohol	59	3.736	3.719	(0.584)	157914	100.000	115.130
23 Acrylonitrile	53	3.862	3.845	(0.604)	188558	50.0000	55.7249
24 trans-1,2-Dichloroethene	96	3.916	3.899	(0.612)	355112	5.00000	5.75045
27 1,1-Dichloroethane	63	4.365	4.348	(0.683)	586628	5.00000	5.65181
28 Chloroprene	53	4.473	4.456	(0.699)	485324	5.00000	5.69552
30 Isopropyl ether	87	4.437	4.420	(0.694)	1182132	25.0000	28.7484
32 cis-1,2-Dichloroethene	96	5.030	5.013	(0.786)	354236	5.00000	5.79254
31 2,2-Dichloropropane	77	5.048	5.013	(0.789)	422425	5.00000	5.67904
33 2-Butanone	43	5.048	5.031	(0.789)	160930	20.0000	21.2455
34 Propionitrile	54	5.102	5.085	(0.798)	70957	50.0000	56.3385
36 Methacrylonitrile	41	5.282	5.264	(0.826)	564847	50.0000	56.8665
37 Bromochloromethane	128	5.318	5.300	(0.831)	142114	5.00000	5.85557
38 Chloroform	83	5.407	5.372	(0.845)	658228	5.00000	5.77843
41 1,1,1-Trichloroethane	97	5.641	5.624	(0.882)	652745	5.00000	5.72763
42 1,1-Dichloropropene	75	5.839	5.803	(0.913)	521916	5.00000	5.67448
43 Carbon Tetrachloride	117	5.839	5.821	(0.913)	567186	5.00000	5.81407
45 Isobutanol	41	5.947	5.929	(0.930)	45996	100.000	117.016
46 Benzene	78	6.072	6.055	(0.949)	987802	5.00000	5.65499
47 1,2-Dichloroethane	62	6.090	6.073	(0.952)	258110	5.00000	5.84176
49 n-Butanol	56	6.755	6.720	(1.056)	36467	100.000	114.667
50 Trichloroethene	130	6.845	6.828	(1.070)	380434	5.00000	5.74263
52 1,2-Dichloropropane	63	7.114	7.079	(1.112)	324478	5.00000	5.79825
53 Dibromomethane	93	7.258	7.223	(1.135)	190406	5.00000	5.76237
55 1,4-Dioxane	88	7.276	7.241	(1.138)	52790	250.000	332.860
56 Bromodichloromethane	83	7.438	7.421	(1.163)	529517	5.00000	5.72384
59 cis-1,3-Dichloropropene	75	7.977	7.960	(0.782)	427990	5.00000	5.72359
60 4-Methyl-2-pentanone	43	8.157	8.139	(0.799)	431244	20.0000	22.8190
62 Toluene	91	8.390	8.373	(0.822)	1090962	5.00000	5.60458
63 trans-1,3-Dichloropropene	75	8.642	8.625	(0.847)	313409	5.00000	5.67453
65 1,1,2-Trichloroethane	97	8.875	8.858	(0.870)	181186	5.00000	5.76830
67 1,3-Dichloropropane	76	9.073	9.056	(0.889)	303784	5.00000	5.73746
66 Tetrachloroethene	164	9.073	9.038	(0.889)	352251	5.00000	5.65556
68 2-Hexanone	43	9.181	9.146	(0.900)	271962	20.0000	22.6197
69 Dibromochloromethane	129	9.361	9.343	(0.917)	313035	5.00000	5.71178
70 1,2-Dibromoethane	107	9.504	9.487	(0.931)	227044	5.00000	5.73249
71 1-Chlorohexane	91	10.061	10.044	(0.986)	514787	5.00000	5.64603
73 Chlorobenzene	112	10.097	10.080	(0.989)	670915	5.00000	5.71357
74 1,1,1,2-Tetrachloroethane	131	10.205	10.188	(1.000)	316511	5.00000	5.60336
75 Ethylbenzene	106	10.241	10.224	(1.004)	343854	5.00000	5.70369
76 m and p-Xylene	106	10.385	10.368	(1.018)	918800	10.0000	11.2967
77 o-Xylene	106	10.888	10.871	(1.067)	412664	5.00000	5.67492
78 Styrene	104	10.906	10.889	(1.069)	664787	5.00000	5.73599
79 Bromoform	173	11.157	11.140	(1.093)	177223	5.00000	5.73382
80 isopropyl benzene	105	11.373	11.356	(1.114)	1369251	5.00000	5.70698
81 Cyclohexanone	55	11.499	11.464	(1.127)	162154	200.000	229.789

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
83 1,1,2,2-Tetrachloroethane	83	11.750	11.733	(1.151)	225305	5.00000	5.72761
84 Bromobenzene	156	11.768	11.751	(0.907)	316849	5.00000	5.69402
85 1,2,3-Trichloropropane	110	11.804	11.787	(0.910)	51916	5.00000	5.40334
87 n-Propylbenzene	120	11.894	11.877	(0.917)	306981	5.00000	5.58332
88 2-Chlorotoluene	126	12.002	11.985	(0.925)	250416	5.00000	5.46099
89 1,3,5-Trimethylbenzene	105	12.110	12.093	(0.933)	1050067	5.00000	5.68577
90 4-Chlorotoluene	126	12.146	12.129	(0.936)	290132	5.00000	5.72991
91 tert-Butylbenzene	119	12.505	12.488	(0.964)	1067655	5.00000	5.68538
92 1,2,4-Trimethylbenzene	105	12.559	12.560	(0.968)	975263	5.00000	5.65875
93 sec-Butylbenzene	134	12.775	12.757	(0.985)	281531	5.00000	5.70838
94 m-Dichlorobenzene	146	12.900	12.883	(0.994)	531955	5.00000	5.78708
95 4-Isopropyltoluene	119	12.936	12.919	(0.997)	1208943	5.00000	5.78252
97 p-dichlorobenzene	146	12.990	12.973	(1.001)	625273	5.00000	5.67268
98 n-Butylbenzene	91	13.386	13.368	(1.032)	1343308	5.00000	5.76394
99 o-Dichlorobenzene	146	13.404	13.386	(1.033)	461769	5.00000	5.65901
100 1,2-Dibromo-3-chloropropane	157	14.212	14.195	(1.096)	39915	5.00000	5.75063
101 1,2,4-Trichlorobenzene	180	15.021	15.004	(1.158)	316553	5.00000	5.84773
102 Hexachlorobutadiene	225	15.200	15.183	(1.172)	275895	5.00000	5.93093
127 Naphthalene	128	15.272	15.255	(1.177)	336019	5.00000	5.70230
104 1,2,3-Trichlorobenzene	180	15.524	15.507	(1.197)	241982	5.00000	5.77099

QC Flag Legend

H - Operator selected an alternate compound hit.

Data File: /chem/H.i/010704.b/h0005.d
Report Date: 08-Jan-2004 16:02

STL Denver

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: H.i
Lab File ID: h0005.d
Lab Smp Id: MAIN005
Analysis Type: VOA
Quant Type: ISTD
Operator: hoffmanm
Method File: /chem/H.i/010704.b/H-20ml-h2o.m
Misc Info:

Calibration Date: JAN/07/4
Calibration Time: 1439
Client Smp ID: MAIN005
Level: LOW
Sample Type: WATER

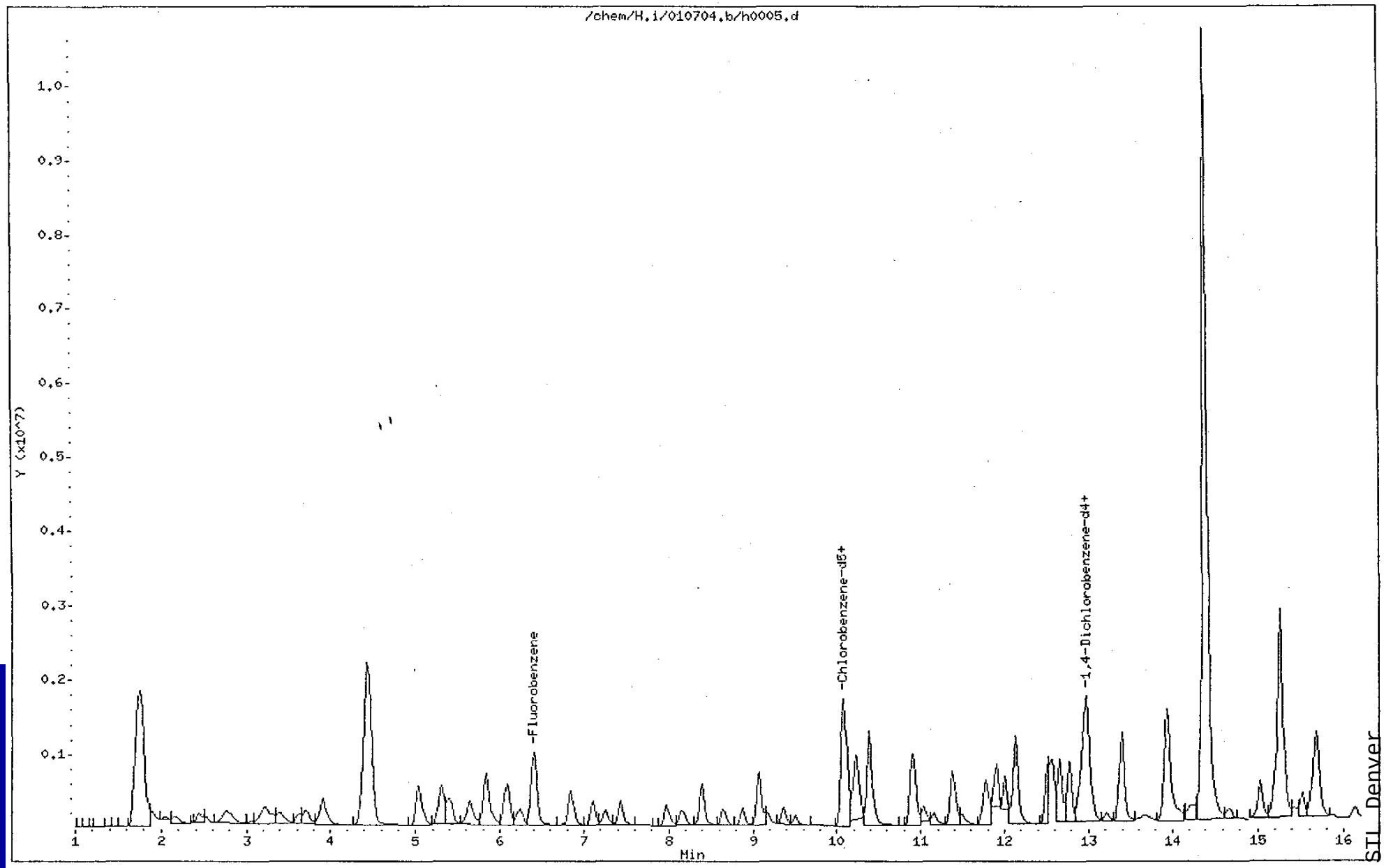
COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
48 Fluorobenzene	2399820	1199910	4799640	2268310	-5.48
72 Chlorobenzene-d5	457381	228690	914762	409934	-10.37
96 1,4-Dichlorobenze	747017	373508	1494034	703312	-5.85

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
48 Fluorobenzene	6.39	5.89	6.89	6.40	0.01
72 Chlorobenzene-d5	10.06	9.56	10.56	10.08	0.19
96 1,4-Dichlorobenze	12.97	12.47	13.47	12.97	0.01

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem/H.i/010704.b/h0005.d
Date : 07-JAN-2004 12:02
Client ID: MAIN005
Sample Info: MAIN005,,
Purge Volume: 20.0
Column phase: DB624

Instrument: H.i
Operator: hoffmanm
Column diameter: 0.53



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Data File: /chem/H.i/010704.b/h0006.d
Report Date: 08-Jan-2004 16:02

STL Denver

VOLATILE REPORT SW-846

Data file : /chem/H.i/010704.b/h0006.d
Lab Smp Id: MAIN010 Client Smp ID: MAIN010
Inj Date : 07-JAN-2004 12:24
Operator : hoffmanm Inst ID: H.i
Smp Info : MAIN010,,
Misc Info :
Comment : Purge and Trap Analysis
Method : /chem/H.i/010704.b/H-20ml-h2o.m
Meth Date : 08-Jan-2004 10:26 hoffmanm Quant Type: ISTD
Cal Date : 07-JAN-2004 13:31 Cal File: h0009.d
Als bottle: 2 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 1-main.sub
Target Version: 3.40
Processing Host: chemsv02

Concentration Formula: Amt * DF * Vp/Vs

Name	Value	Description
DF	1.000	Dilution Factor
Vp	20.000	Purge Volume (ml)
Vs	20.000	Sample Volume (ml)

		Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	ON-COL (ug/L)	
*	48	Fluorobenzene	96	6.399	6.396	(1.000)	2307102	12.5000		
*	72	Chlorobenzene-d5	119	10.065	10.079	(1.000)	416478	12.5000		(H)
*	96	1,4-Dichlorobenzene-d4	152	12.958	12.972	(1.000)	716331	12.5000		
M	1	1,2-Dichloroethene (total)	96				1405867	20.0000	21.6790	
M	2	Xylene (total)	106				2706559	10.0000	32.7026	
	3	dichlorodifluoromethane	85	1.889	1.886	(0.295)	958445	10.0000	11.0476	
	4	Chloromethane	50	2.050	2.048	(0.320)	512498	10.0000	11.1351	
	5	Vinyl Chloride	62	2.158	2.156	(0.337)	543652	10.0000	11.3335	
	7	Bromomethane	94	2.428	2.425	(0.379)	540110	10.0000	11.0910	
	8	Chloroethane	64	2.518	2.515	(0.393)	369912	10.0000	11.0339	
	10	Trichlorofluoromethane	101	2.751	2.749	(0.430)	1322877	10.0000	11.4221	
	11	Ethanol	45	2.823	2.803	(0.441)	58993	500.000	555.370	
	13	Acrolein	56	3.039	3.036	(0.475)	165245	100.000	111.653	
	14	1,1-Dichloroethene	96	3.218	3.198	(0.503)	674796	10.0000	11.0959	
	15	Acetone	43	3.182	3.180	(0.497)	185077	40.0000	45.6689	
	17	Iodomethane	142	3.398	3.378	(0.531)	1242950	10.0000	10.7736	(M)

Data File: /chem/H.i/010704.b/h0006.d
Report Date: 08-Jan-2004 16:02

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
19 Acetonitrile	41	3.452	3.450	(0.539)	95930	100.000	116.825
21 Methylene Chloride	84	3.704	3.683	(0.579)	545885	10.0000	10.3033(M)
22 tert-Butyl alcohol	59	3.721	3.719	(0.582)	318054	200.000	219.639
23 Acrylonitrile	53	3.865	3.845	(0.604)	392970	100.000	109.996
24 trans-1,2-Dichloroethene	96	3.901	3.899	(0.610)	709677	10.0000	10.8887
27 1,1-Dichloroethane	63	4.350	4.348	(0.680)	1188995	10.0000	10.8551
28 Chloroprene	53	4.458	4.456	(0.697)	994916	10.0000	11.0564
30 Isopropyl ether	87	4.422	4.420	(0.691)	2400440	50.0000	55.2798
32 cis-1,2-Dichloroethene	96	5.033	5.013	(0.787)	696190	10.0000	10.7902
31 2,2-Dichloropropane	77	5.033	5.013	(0.787)	843095	10.0000	10.7448
33 2-Butanone	43	5.033	5.031	(0.787)	321718	40.0000	40.3539
34 Propionitrile	54	5.087	5.085	(0.795)	148387	100.000	111.529
36 Methacrylonitrile	41	5.285	5.264	(0.826)	1170769	100.000	111.576
37 Bromochloromethane	128	5.303	5.300	(0.829)	288531	10.0000	11.2502
38 Chloroform	83	5.393	5.372	(0.843)	1317598	10.0000	10.9570
41 1,1,1-Trichloroethane	97	5.626	5.624	(0.879)	1301992	10.0000	10.8271
42 1,1-Dichloropropene	75	5.824	5.803	(0.910)	1050638	10.0000	10.8256
43 Carbon Tetrachloride	117	5.824	5.821	(0.910)	1118096	10.0000	10.8606
45 Isobutanol	41	5.932	5.929	(0.927)	91582	200.000	219.036
46 Benzene	78	6.075	6.055	(0.949)	2004826	10.0000	10.8752
47 1,2-Dichloroethane	62	6.075	6.073	(0.949)	518968	10.0000	11.1202
49 n-Butanol	56	6.740	6.720	(1.053)	72870	200.000	207.895
50 Trichloroethene	130	6.830	6.828	(1.067)	769325	10.0000	10.9990
52 1,2-Dichloropropane	63	7.100	7.079	(1.110)	647582	10.0000	10.9616
53 Dibromomethane	93	7.243	7.223	(1.132)	385312	10.0000	11.0428
55 1,4-Dioxane	88	7.261	7.241	(1.135)	90173	500.000	535.084
56 Bromodichloromethane	83	7.423	7.421	(1.160)	1058139	10.0000	10.8394
59 cis-1,3-Dichloropropene	75	7.962	7.960	(0.781)	858677	10.0000	10.8924
60 4-Methyl-2-pentanone	43	8.142	8.139	(0.799)	898011	40.0000	45.0166
62 Toluene	91	8.375	8.373	(0.822)	2194035	10.0000	10.6986
63 trans-1,3-Dichloropropene	75	8.627	8.625	(0.847)	633442	10.0000	10.8794
65 1,1,2-Trichloroethane	97	8.861	8.858	(0.870)	361682	10.0000	10.9211
67 1,3-Dichloropropane	76	9.058	9.056	(0.889)	617918	10.0000	11.0634
66 Tetrachloroethene	164	9.058	9.038	(0.889)	716700	10.0000	10.9141
68 2-Hexanone	43	9.166	9.146	(0.899)	566850	40.0000	44.6776
69 Dibromochloromethane	129	9.346	9.343	(0.917)	645279	10.0000	11.1580
70 1,2-Dibromoethane	107	9.490	9.487	(0.931)	464688	10.0000	11.1202
71 1-Chlorohexane	91	10.065	10.044	(0.988)	1032860	10.0000	10.7505
73 Chlorobenzene	112	10.100	10.080	(0.991)	1340644	10.0000	10.8319
74 1,1,1,2-Tetrachloroethane	131	10.190	10.188	(1.000)	646123	10.0000	10.8517
75 Ethylbenzene	106	10.226	10.224	(1.004)	687669	10.0000	10.8225
76 m and p-Xylene	106	10.370	10.368	(1.018)	1882677	20.0000	21.9504
77 o-Xylene	106	10.873	10.871	(1.067)	823882	10.0000	10.7522
78 Styrene	104	10.891	10.889	(1.069)	1348615	10.0000	11.0322
79 Bromoform	173	11.143	11.140	(1.093)	366760	10.0000	11.2419
80 isopropyl benzene	105	11.376	11.356	(1.116)	2768817	10.0000	10.9446
81 Cyclohexanone	55	11.484	11.464	(1.127)	329957	400.000	443.236

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
83 1,1,2,2-Tetrachloroethane	83	11.736	11.733	(1.152)	460061	10.0000	11.0863
84 Bromobenzene	156	11.754	11.751	(0.907)	638822	10.0000	10.8633
85 1,2,3-Trichloropropane	110	11.790	11.787	(0.910)	105673	10.0000	10.4232
87 n-Propylbenzene	120	11.897	11.877	(0.918)	614643	10.0000	10.5884
88 2-Chlorotoluene	126	12.005	11.985	(0.926)	519061	10.0000	10.7168
89 1,3,5-Trimethylbenzene	105	12.113	12.093	(0.935)	2115014	10.0000	10.8378
90 4-Chlorotoluene	126	12.131	12.129	(0.936)	570665	10.0000	10.6718
91 tert-Butylbenzene	119	12.508	12.488	(0.965)	2143976	10.0000	10.8056
92 1,2,4-Trimethylbenzene	105	12.562	12.560	(0.969)	1985829	10.0000	10.9018
93 sec-Butylbenzene	134	12.760	12.757	(0.985)	568693	10.0000	10.9097
94 m-Dichlorobenzene	146	12.886	12.883	(0.994)	1027334	10.0000	10.5859
95 4-Isopropyltoluene	119	12.922	12.919	(0.997)	2426571	10.0000	10.9786
97 p-dichlorobenzene	146	12.993	12.973	(1.003)	1286849	10.0000	11.0407
98 n-Butylbenzene	91	13.371	13.368	(1.032)	2694306	10.0000	10.9370
99 o-Dichlorobenzene	146	13.389	13.386	(1.033)	935215	10.0000	10.8460
100 1,2-Dibromo-3-chloropropane	157	14.215	14.195	(1.097)	81262	10.0000	11.0706
101 1,2,4-Trichlorobenzene	180	15.024	15.004	(1.159)	634239	10.0000	11.0786
102 Hexachlorobutadiene	225	15.186	15.183	(1.172)	547598	10.0000	11.1290
127 Naphthalene	128	15.258	15.255	(1.177)	718380	10.0000	11.5102
104 1,2,3-Trichlorobenzene	180	15.509	15.507	(1.197)	495240	10.0000	11.1647

QC Flag Legend

M - Compound response manually integrated.
H - Operator selected an alternate compound hit.

Data File: /chem/H.i/010704.b/h0006.d
Report Date: 08-Jan-2004 16:02

STL Denver

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: H.i
Lab File ID: h0006.d
Lab Smp Id: MAIN010
Analysis Type: VOA
Quant Type: ISTD
Operator: hoffmanm
Method File: /chem/H.i/010704.b/H-20ml-h2o.m
Misc Info:

Calibration Date: JAN/07/4
Calibration Time: 1439
Client Smp ID: MAIN010
Level: LOW
Sample Type: WATER

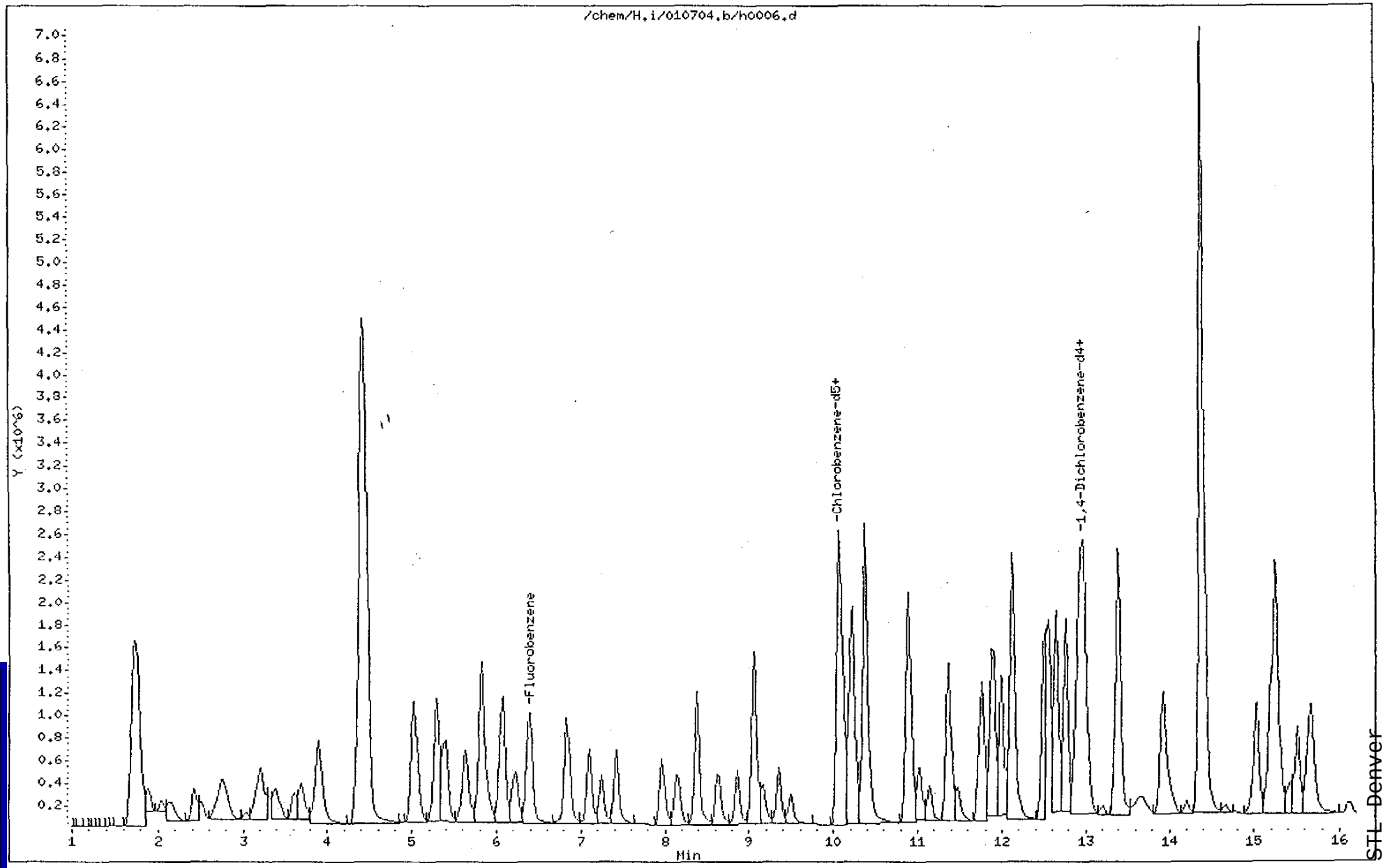
COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
48 Fluorobenzene	2399820	1199910	4799640	2307102	-3.86
72 Chlorobenzene-d5	457381	228690	914762	416478	-8.94
96 1,4-Dichlorobenze	747017	373508	1494034	716331	-4.11

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
48 Fluorobenzene	6.39	5.89	6.89	6.40	0.06
72 Chlorobenzene-d5	10.06	9.56	10.56	10.06	0.04
96 1,4-Dichlorobenze	12.97	12.47	13.47	12.96	-0.11

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem/H.i/010704.b/h0006.d
Date : 07-JAN-2004 12:24
Client ID: MAIN010
Sample Info: MAIN010,,
Purge Volume: 20.0
Column phase: DB624

Instrument: H.i
Operator: hoffmanm
Column diameter: 0.53



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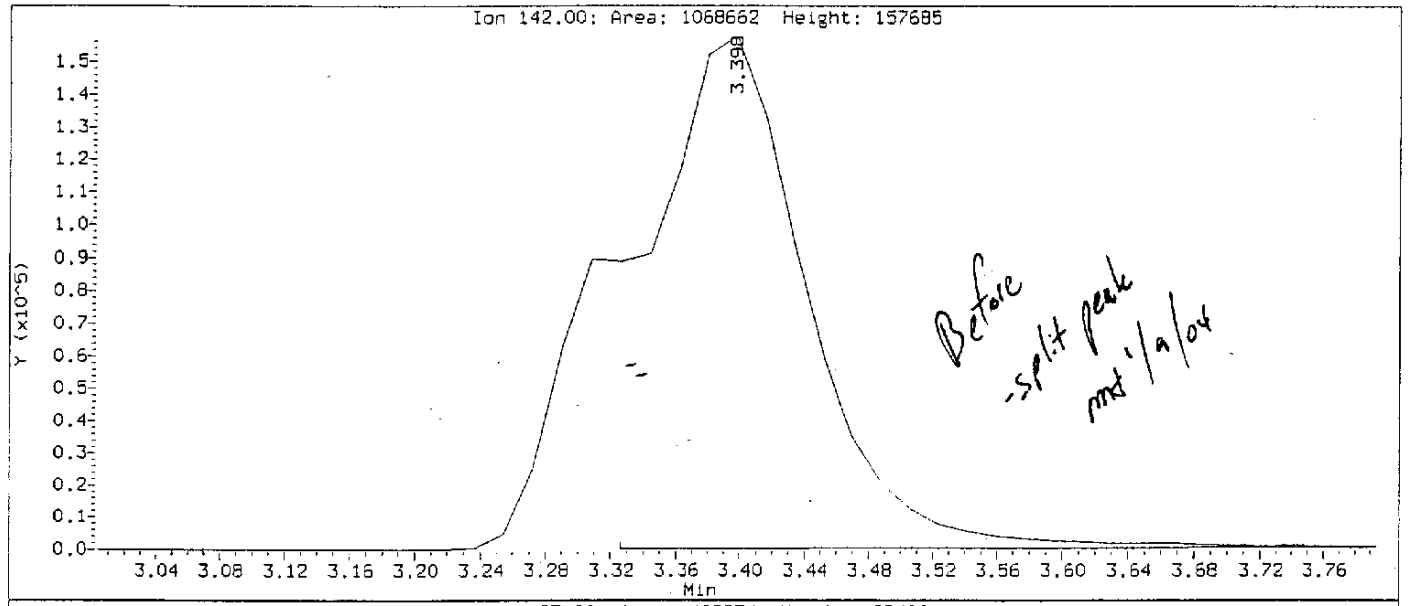
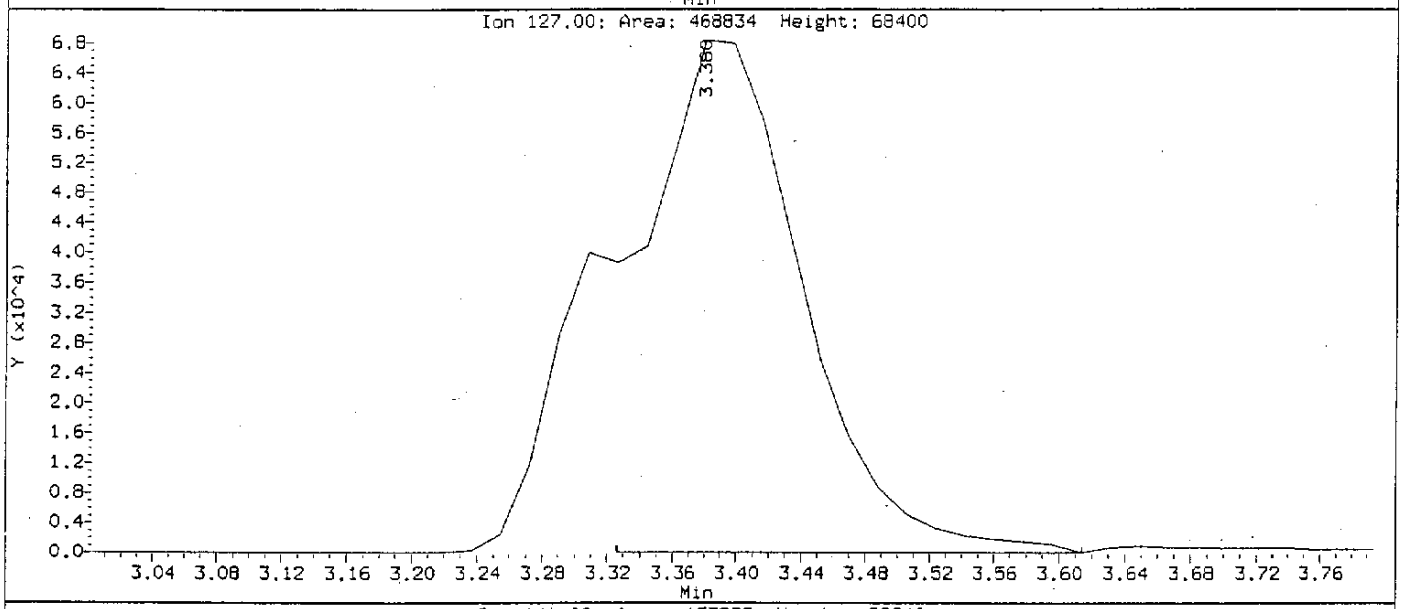
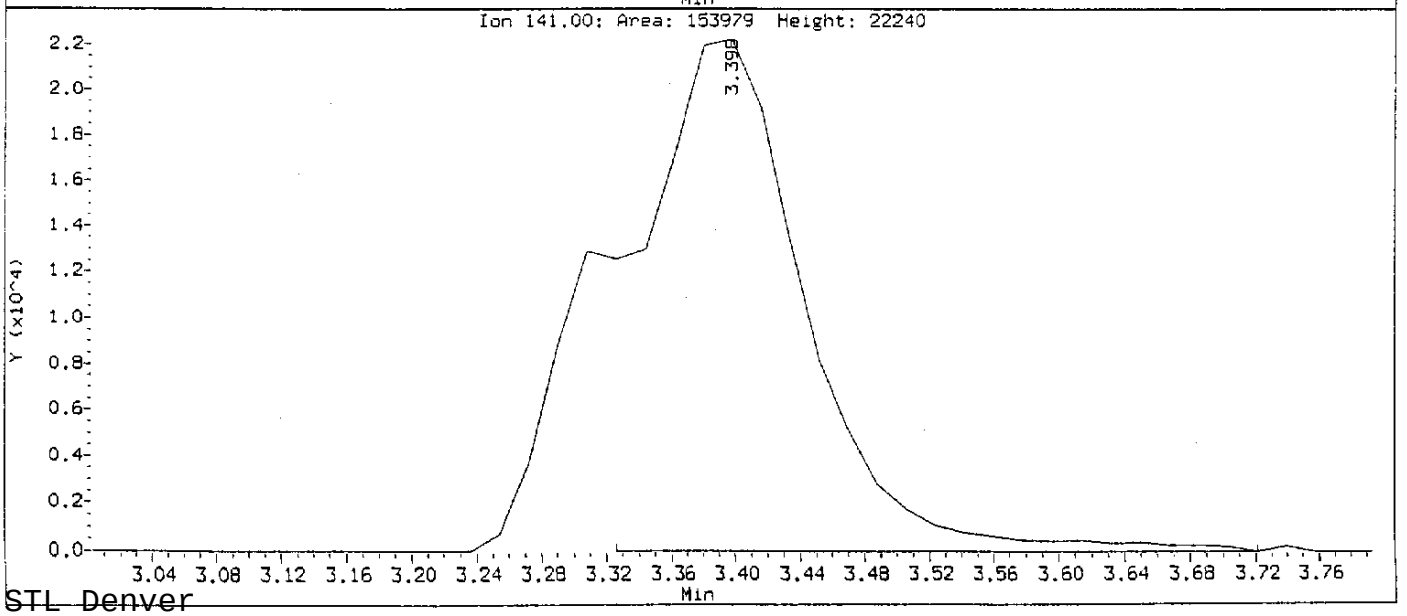
Data File: /chem/H.i/010704.b/h0006.d
Injection Date: 07-JAN-2004 12:24
Instrument: H.i
Client Sample ID: MAIN010

Compound: Iodomethane
CAS Number: 74-88-4

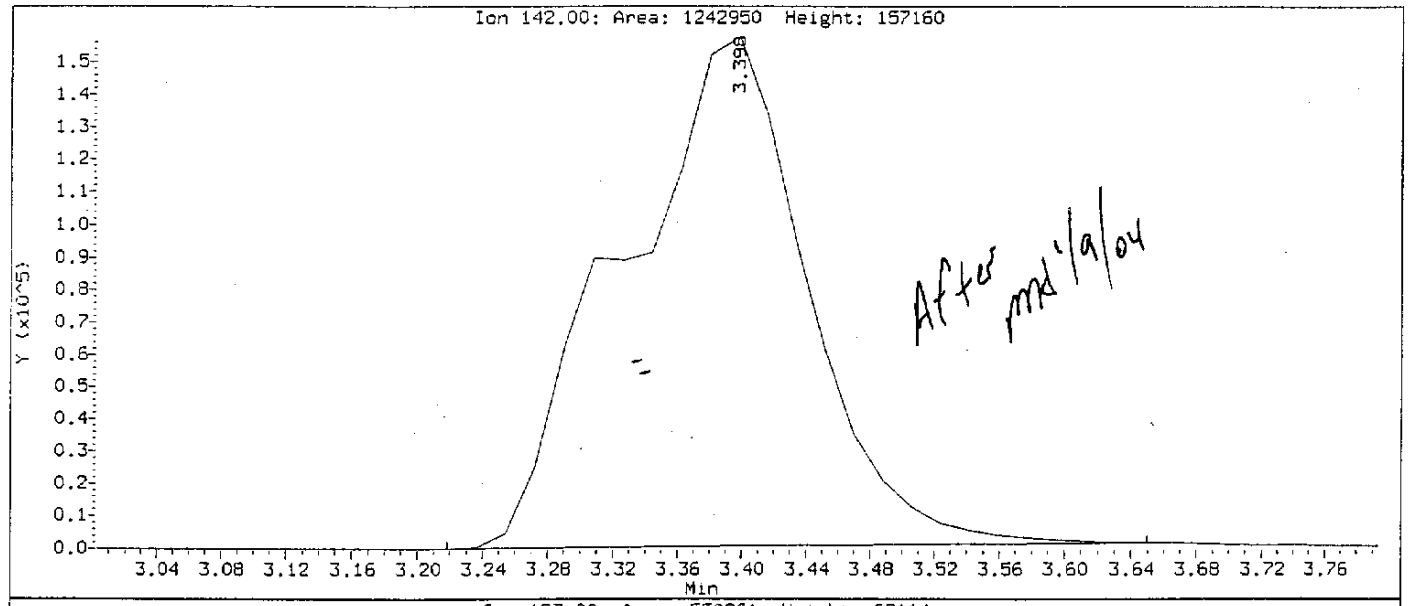


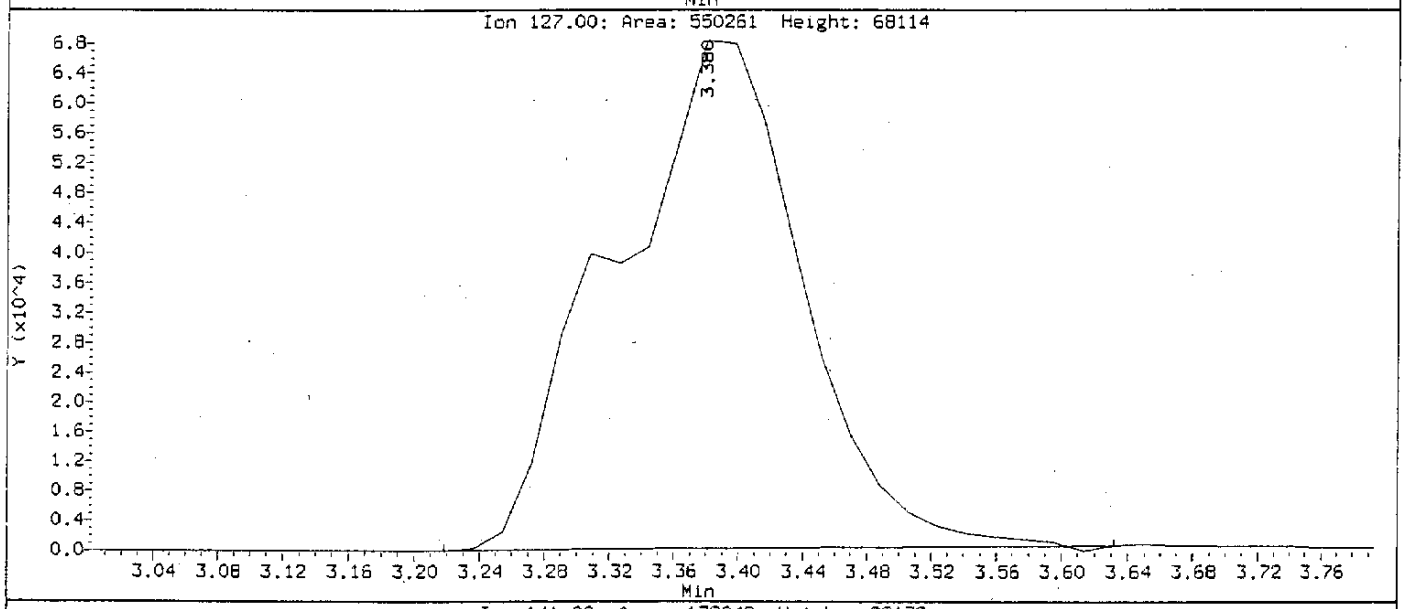


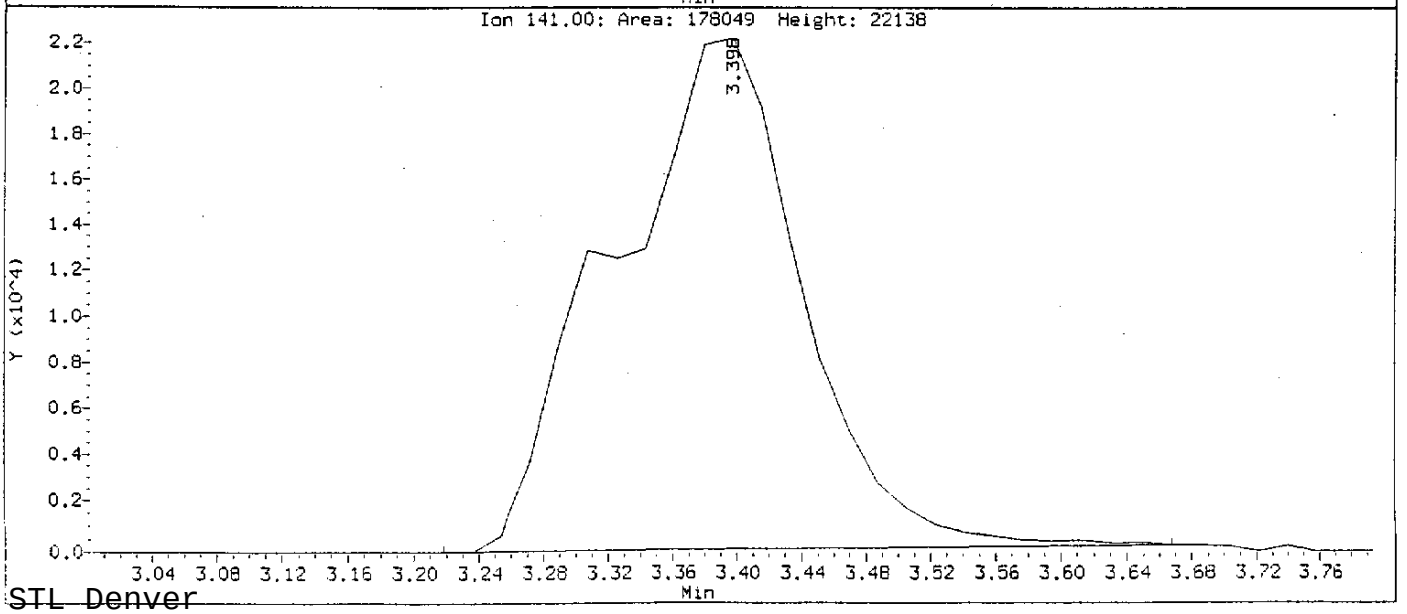


Data File: /chem/H.i/010704.b/h0006.d
Injection Date: 07-JAN-2004 12:24
Instrument: H.i
Client Sample ID: MAIN010

Compound: Iodomethane
CAS Number: 74-88-4

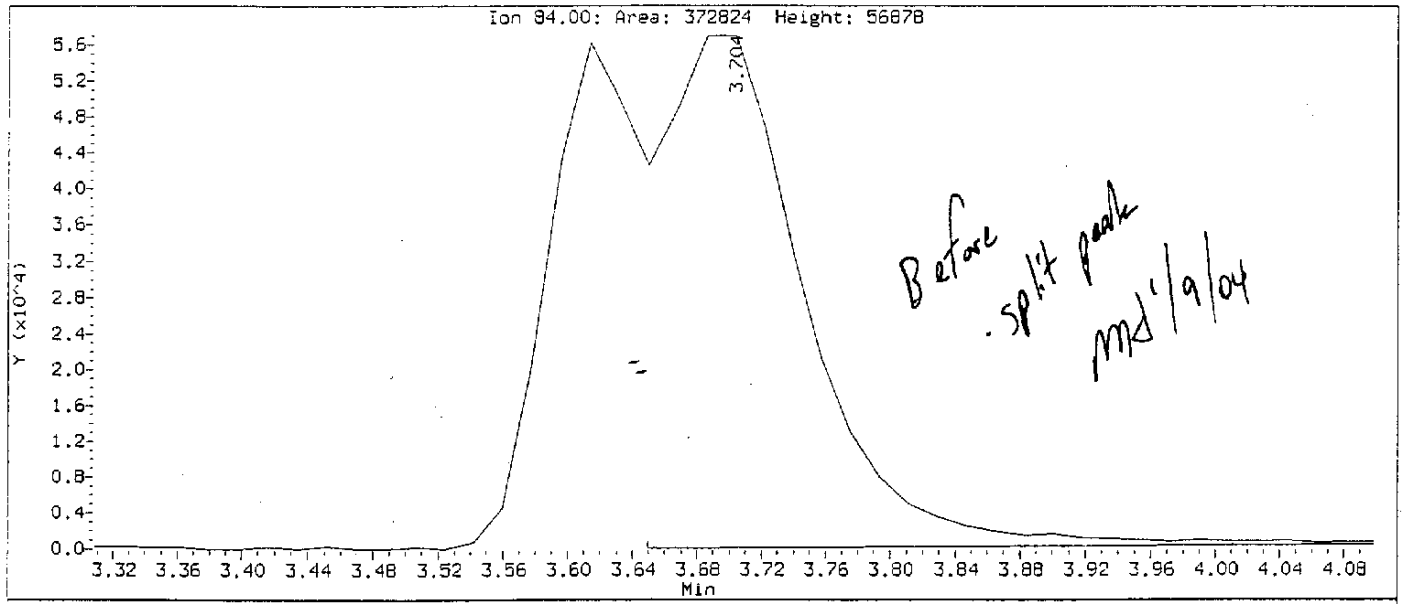


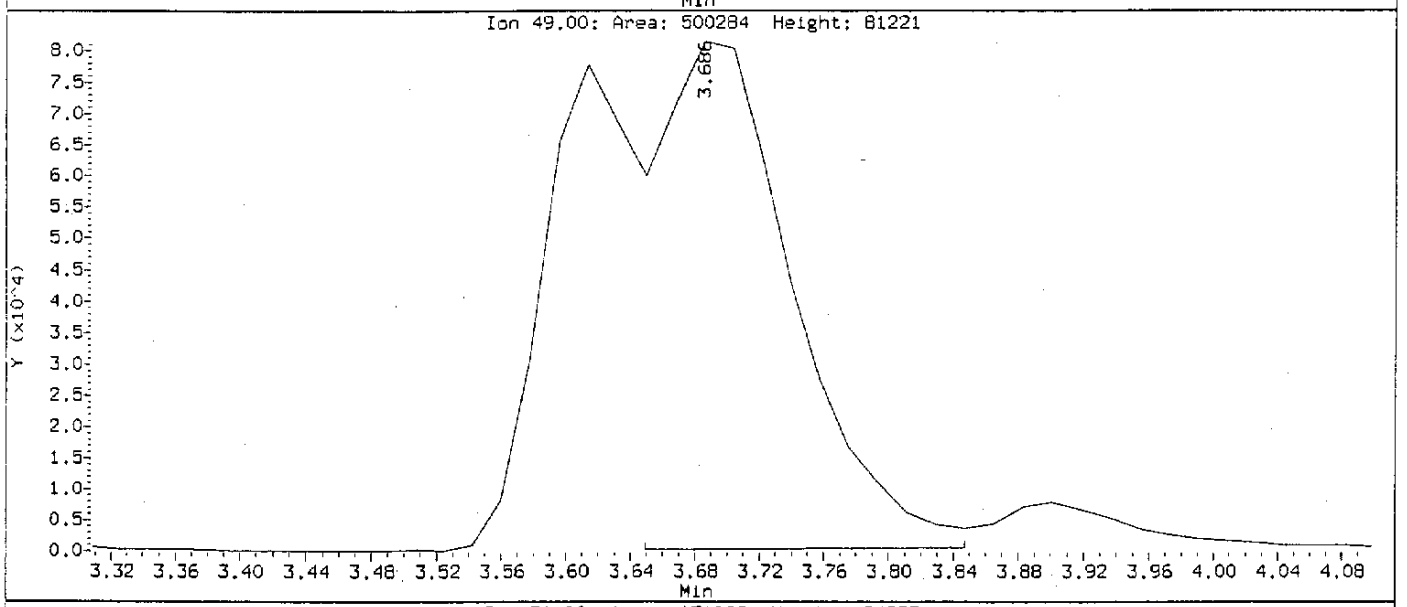


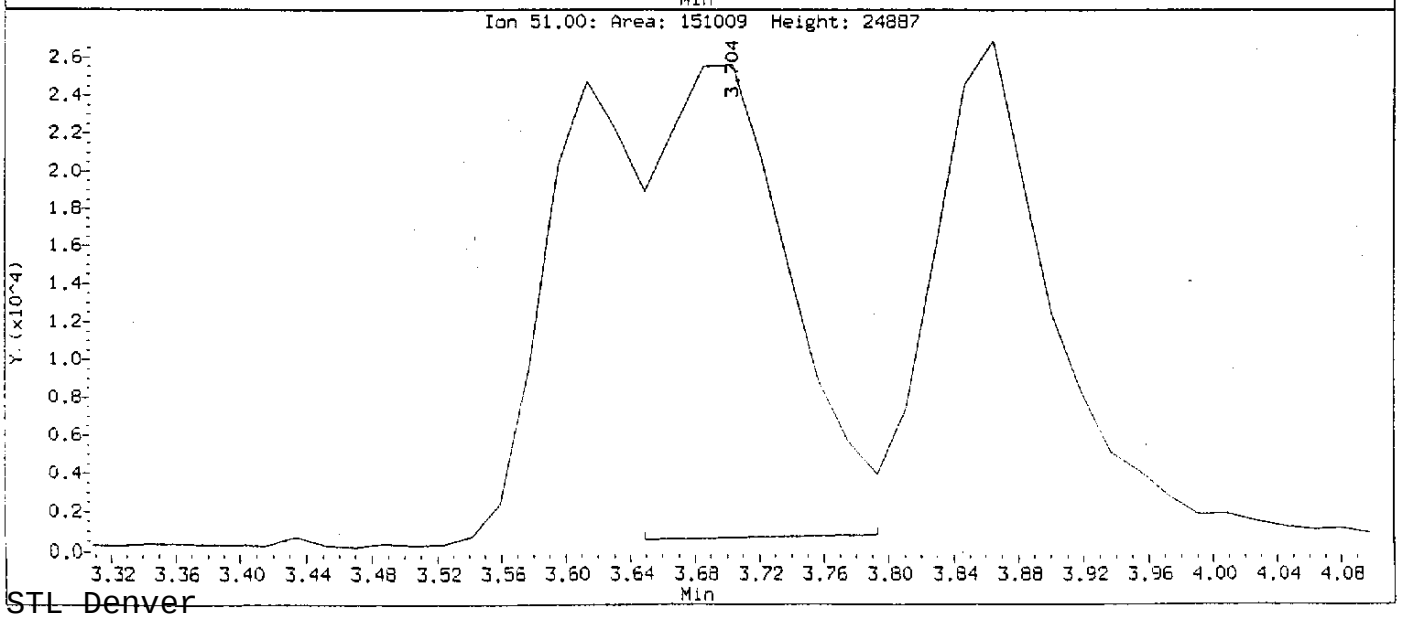


Data File: /chem/H.i/010704.b/h0006.d
Injection Date: 07-JAN-2004 12:24
Instrument: H.i
Client Sample ID: MAIN010

Compound: Methylene Chloride
CAS Number: 75-09-2

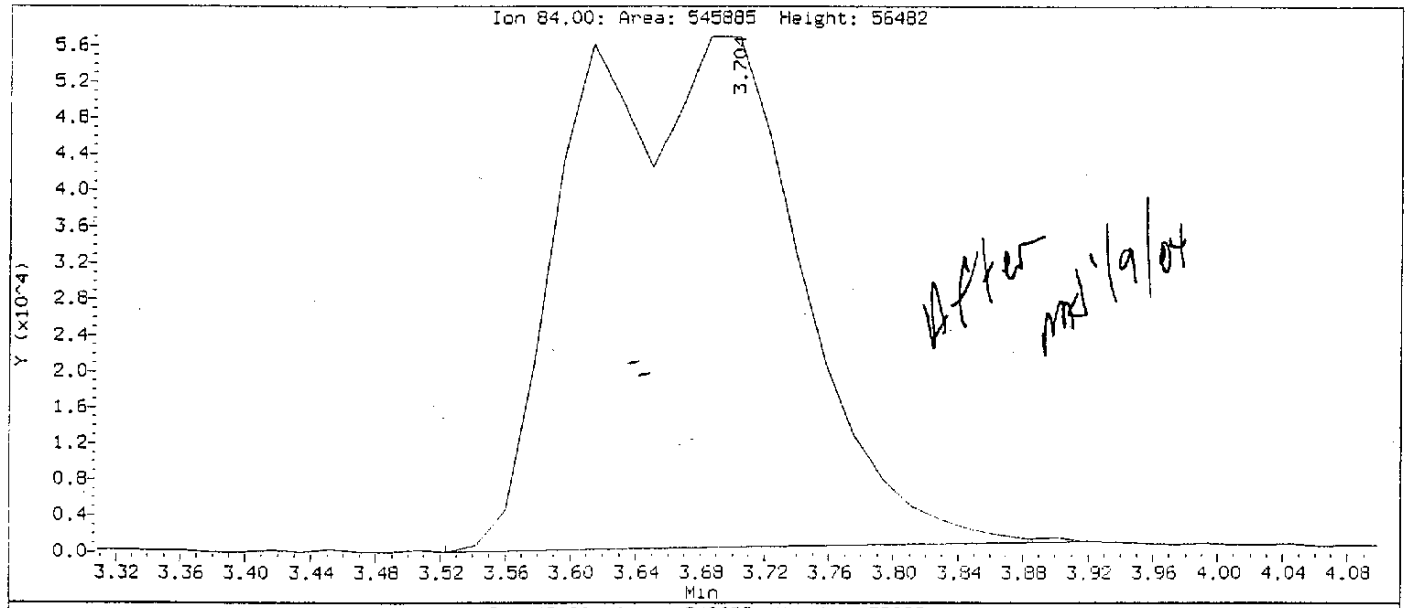


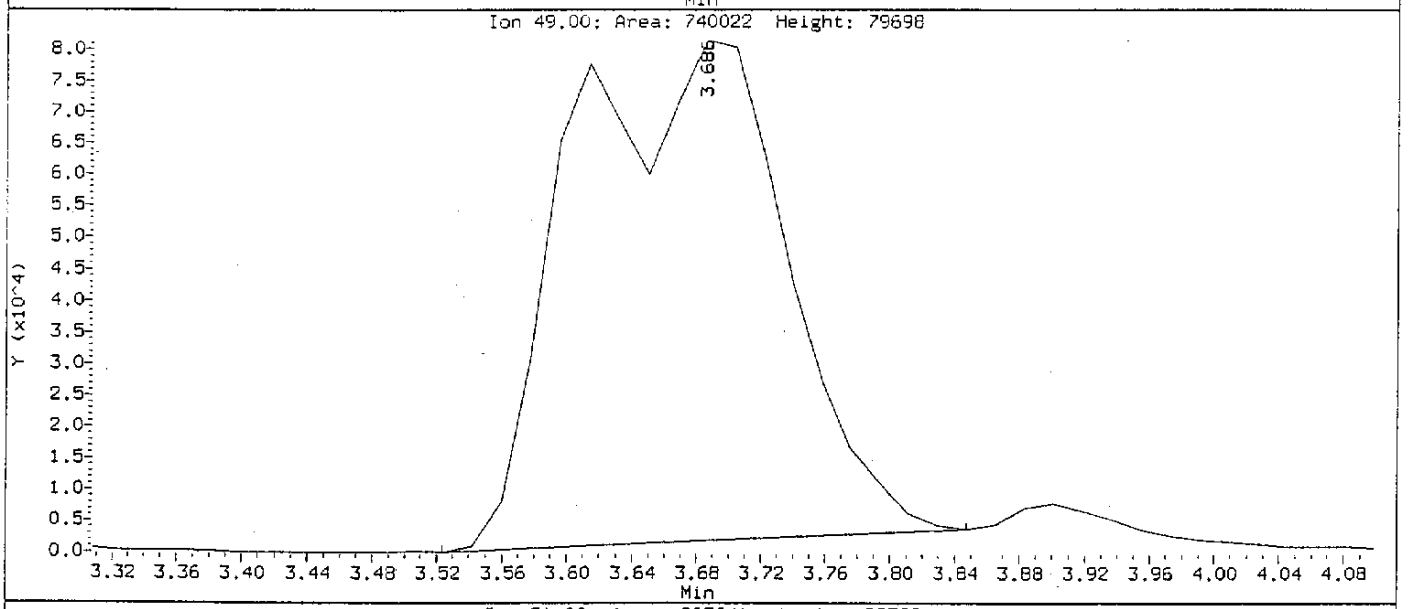


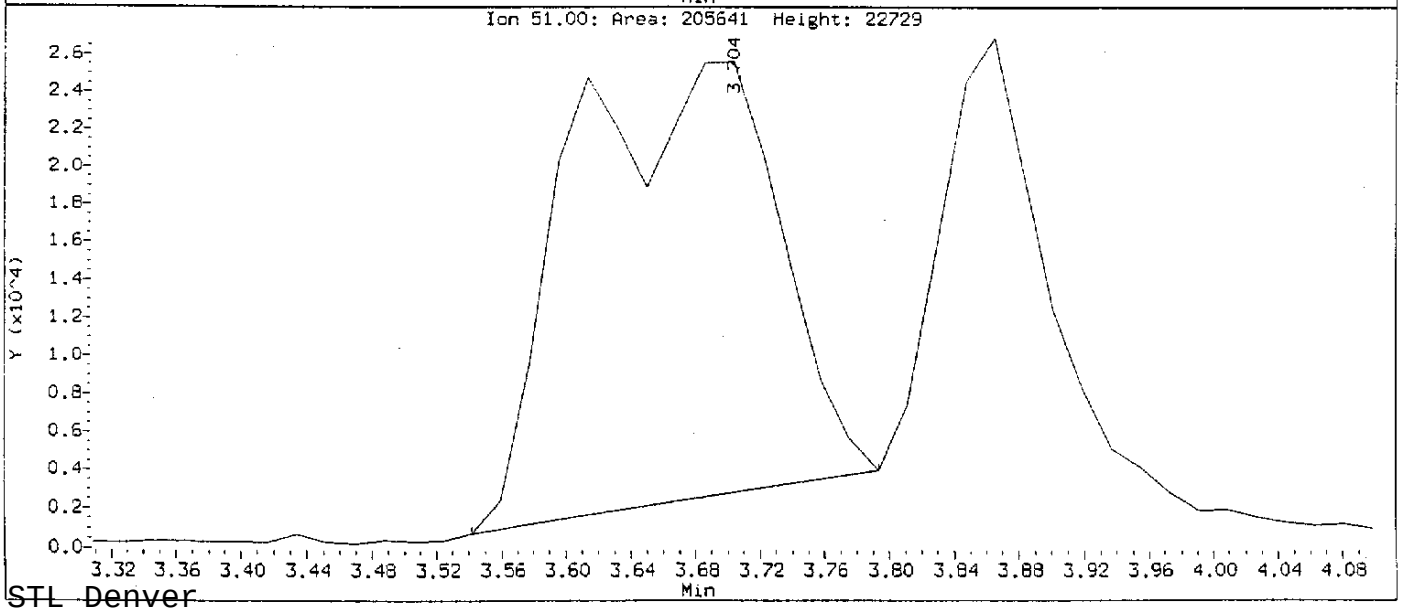


Data File: /chem/H.i/010704.b/h0006.d
Injection Date: 07-JAN-2004 12:24
Instrument: H.i
Client Sample ID: MAIN010

Compound: Methylene Chloride
CAS Number: 75-09-2







Data File: /chem/H.i/010704.b/h0007.d
Report Date: 08-Jan-2004 16:02

STL Denver

VOLATILE REPORT SW-846

Data file : /chem/H.i/010704.b/h0007.d
Lab Smp Id: MAIN030 Client Smp ID: MAIN030
Inj Date : 07-JAN-2004 12:47
Operator : hoffmanm Inst ID: H.i
Smp Info : MAIN030,,
Misc Info :
Comment : Purge and Trap Analysis
Method : /chem/H.i/010704.b/H-20ml-h2o.m
Meth Date : 08-Jan-2004 10:26 hoffmanm Quant Type: ISTD
Cal Date : 07-JAN-2004 13:31 Cal File: h0009.d
Als bottle: 2 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 1-main.sub
Target Version: 3.40
Processing Host: chemsv02

Concentration Formula: Amt * DF * Vp/Vs

Name	Value	Description
DF	1.000	Dilution Factor
Vp	20.000	Purge Volume (ml)
Vs	20.000	Sample Volume (ml)

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	ON-COL (ug/L)
* 48 Fluorobenzene	96	6.381	6.396	(1.000)	2248879	12.5000	
* 72 Chlorobenzene-d5	119	10.064	10.079	(1.000)	393302	12.5000	(H)
* 96 1,4-Dichlorobenzene-d4	152	12.957	12.972	(1.000)	670825	12.5000	
M 1 1,2-Dichloroethene (total)	96				4123061	60.0000	62.9519
M 2 Xylene (total)	106				7847899	30.0000	96.8567
3 dichlorodifluoromethane	85	1.888	1.886	(0.296)	2756874	30.0000	31.4604
4 Chloromethane	50	2.050	2.048	(0.321)	1463022	30.0000	31.4699
5 Vinyl Chloride	62	2.158	2.156	(0.338)	1559625	30.0000	32.1633
7 Bromomethane	94	2.427	2.425	(0.380)	1585014	30.0000	32.1961
8 Chloroethane	64	2.517	2.515	(0.395)	1094862	30.0000	32.3011
10 Trichlorofluoromethane	101	2.751	2.749	(0.431)	3936309	30.0000	33.5668
11 Ethanol	45	2.823	2.803	(0.442)	182612	1500.00	1504.25
13 Acrolein	56	3.038	3.036	(0.476)	505077	300.000	334.492
14 1,1-Dichloroethene	96	3.218	3.198	(0.504)	1959227	30.0000	31.8796
15 Acetone	43	3.182	3.180	(0.499)	510136	120.000	134.847
17 Iodomethane	142	3.380	3.378	(0.530)	3804532	30.0000	32.6049

Data File: /chem/H.i/010704.b/h0007.d
Report Date: 08-Jan-2004 16:02

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
19 Acetonitrile	41	3.452	3.450	(0.541)	289826	300.000	345.416
21 Methylene Chloride	84	3.685	3.683	(0.578)	1688280	30.0000	31.3251
22 tert-Butyl alcohol	59	3.721	3.719	(0.583)	985026	600.000	671.798
23 Acrylonitrile	53	3.847	3.845	(0.603)	1267436	300.000	349.806
24 trans-1,2-Dichloroethene	96	3.901	3.899	(0.611)	2021269	30.0000	30.7294
27 1,1-Dichloroethane	63	4.350	4.348	(0.682)	3583703	30.0000	32.3583
28 Chloroprene	53	4.458	4.456	(0.699)	2953346	30.0000	32.4559
30 Isopropyl ether	87	4.422	4.420	(0.693)	7400734	150.000	168.305
32 cis-1,2-Dichloroethene	96	5.015	5.013	(0.786)	2101792	30.0000	32.2226
31 2,2-Dichloropropane	77	5.015	5.013	(0.786)	2438422	30.0000	30.7902
33 2-Butanone	43	5.033	5.031	(0.789)	996892	120.000	123.866
34 Propionitrile	54	5.087	5.085	(0.797)	480529	300.000	355.870
36 Methacrylonitrile	41	5.266	5.264	(0.825)	3692892	300.000	347.125
37 Bromochloromethane	128	5.302	5.300	(0.831)	878758	30.0000	33.8298
38 Chloroform	83	5.392	5.372	(0.845)	3994434	30.0000	32.8341
41 1,1,1-Trichloroethane	97	5.626	5.624	(0.882)	3859043	30.0000	31.7600
42 1,1-Dichloropropene	75	5.806	5.803	(0.910)	3089534	30.0000	31.5147
43 Carbon Tetrachloride	117	5.823	5.821	(0.913)	3330699	30.0000	32.0099
45 Isobutanol	41	5.931	5.929	(0.930)	303533	600.000	709.524
46 Benzene	78	6.057	6.055	(0.949)	5943810	30.0000	31.9045
47 1,2-Dichloroethane	62	6.075	6.073	(0.952)	1579617	30.0000	33.4336
49 n-Butanol	56	6.722	6.720	(1.054)	264914	600.000	694.968
50 Trichloroethene	130	6.830	6.828	(1.070)	2253342	30.0000	31.8794
52 1,2-Dichloropropane	63	7.099	7.079	(1.113)	1954325	30.0000	32.7042
53 Dibromomethane	93	7.243	7.223	(1.135)	1167278	30.0000	33.0591
55 1,4-Dioxane	88	7.261	7.241	(1.138)	298006	1500.00	1730.43
56 Bromodichloromethane	83	7.423	7.421	(1.163)	3248351	30.0000	32.8895
59 cis-1,3-Dichloropropene	75	7.962	7.960	(0.781)	2609560	30.0000	33.7391
60 4-Methyl-2-pentanone	43	8.141	8.139	(0.799)	2796115	120.000	142.549
62 Toluene	91	8.375	8.373	(0.822)	6483204	30.0000	32.2760
63 trans-1,3-Dichloropropene	75	8.627	8.625	(0.847)	1926829	30.0000	33.7301
65 1,1,2-Trichloroethane	97	8.860	8.858	(0.870)	1098006	30.0000	33.7903
67 1,3-Dichloropropane	76	9.058	9.056	(0.889)	1844604	30.0000	33.6644
66 Tetrachloroethene	164	9.058	9.038	(0.889)	2044027	30.0000	31.7967
68 2-Hexanone	43	9.148	9.146	(0.898)	1775199	120.000	142.305
69 Dibromochloromethane	129	9.345	9.343	(0.917)	1966363	30.0000	34.6205
70 1,2-Dibromoethane	107	9.489	9.487	(0.931)	1392681	30.0000	33.9598
71 1-Chlorohexane	91	10.064	10.044	(0.988)	2937422	30.0000	31.2516
73 Chlorobenzene	112	10.100	10.080	(0.991)	3944085	30.0000	32.5250
74 1,1,1,2-Tetrachloroethane	131	10.190	10.188	(1.000)	1925500	30.0000	32.9893
75 Ethylbenzene	106	10.226	10.224	(1.004)	2002288	30.0000	32.1757
76 m and p-Xylene	106	10.370	10.368	(1.018)	5425933	60.0000	64.5859
77 o-Xylene	106	10.873	10.871	(1.067)	2421966	30.0000	32.2708
78 Styrene	104	10.891	10.889	(1.069)	3938334	30.0000	32.8698
79 Bromoform	173	11.142	11.140	(1.093)	1127170	30.0000	35.1568
80 isopropyl benzene	105	11.358	11.356	(1.115)	7858523	30.0000	31.7338
81 Cyclohexanone	55	11.484	11.464	(1.127)	1037338	1200.00	1417.48(A)

Data File: /chem/H.i/010704.b/h0007.d
Report Date: 08-Jan-2004 16:02

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
83 1,1,2,2-Tetrachloroethane	83	11.735	11.733	(1.152)	1400761	30.0000	34.3785
84 Bromobenzene	156	11.753	11.751	(0.907)	1866377	30.0000	32.6613
85 1,2,3-Trichloropropane	110	11.789	11.787	(0.910)	307838	30.0000	31.2963
87 n-Propylbenzene	120	11.879	11.877	(0.917)	1746501	30.0000	31.0206
88 2-Chlorotoluene	126	11.987	11.985	(0.925)	1511685	30.0000	32.1380
89 1,3,5-Trimethylbenzene	105	12.095	12.093	(0.933)	6009696	30.0000	31.7248
90 4-Chlorotoluene	126	12.131	12.129	(0.936)	1607090	30.0000	30.9873
91 tert-Butylbenzene	119	12.490	12.488	(0.964)	6099296	30.0000	31.6707
92 1,2,4-Trimethylbenzene	105	12.562	12.560	(0.969)	5595351	30.0000	31.6477
93 sec-Butylbenzene	134	12.759	12.757	(0.985)	1575525	30.0000	31.1574
94 m-Dichlorobenzene	146	12.885	12.883	(0.994)	3051757	30.0000	32.3715
95 4-Isopropyltoluene	119	12.921	12.919	(0.997)	6740361	30.0000	31.4272
97 p-dichlorobenzene	146	12.975	12.973	(1.001)	3595739	30.0000	31.7796
98 n-Butylbenzene	91	13.370	13.368	(1.032)	7342891	30.0000	30.7417
99 o-Dichlorobenzene	146	13.388	13.386	(1.033)	2682622	30.0000	32.0391
100 1,2-Dibromo-3-chloropropane	157	14.197	14.195	(1.096)	249755	30.0000	34.9233
101 1,2,4-Trichlorobenzene	180	15.006	15.004	(1.158)	1769142	30.0000	31.8319
102 Hexachlorobutadiene	225	15.185	15.183	(1.172)	1418279	30.0000	29.7617
127 Naphthalene	128	15.257	15.255	(1.177)	2026698	30.0000	33.3891
104 1,2,3-Trichlorobenzene	180	15.509	15.507	(1.197)	1363818	30.0000	31.6760

QC Flag Legend

A - Target compound detected but, quantitated amount exceeded maximum amount.
H - Operator selected an alternate compound hit.

Data File: /chem/H.i/010704.b/h0007.d
Report Date: 08-Jan-2004 16:02

STL Denver

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: H.i
Lab File ID: h0007.d
Lab Smp Id: MAIN030
Analysis Type: VOA
Quant Type: ISTD
Operator: hoffmanm
Method File: /chem/H.i/010704.b/H-20ml-h2o.m
Misc Info:

Calibration Date: JAN/07/4
Calibration Time: 1439
Client Smp ID: MAIN030
Level: LOW
Sample Type: WATER

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
48 Fluorobenzene	2399820	1199910	4799640	2248879	-6.29
72 Chlorobenzene-d5	457381	228690	914762	393302	-14.01
96 1,4-Dichlorobenze	747017	373508	1494034	670825	-10.20

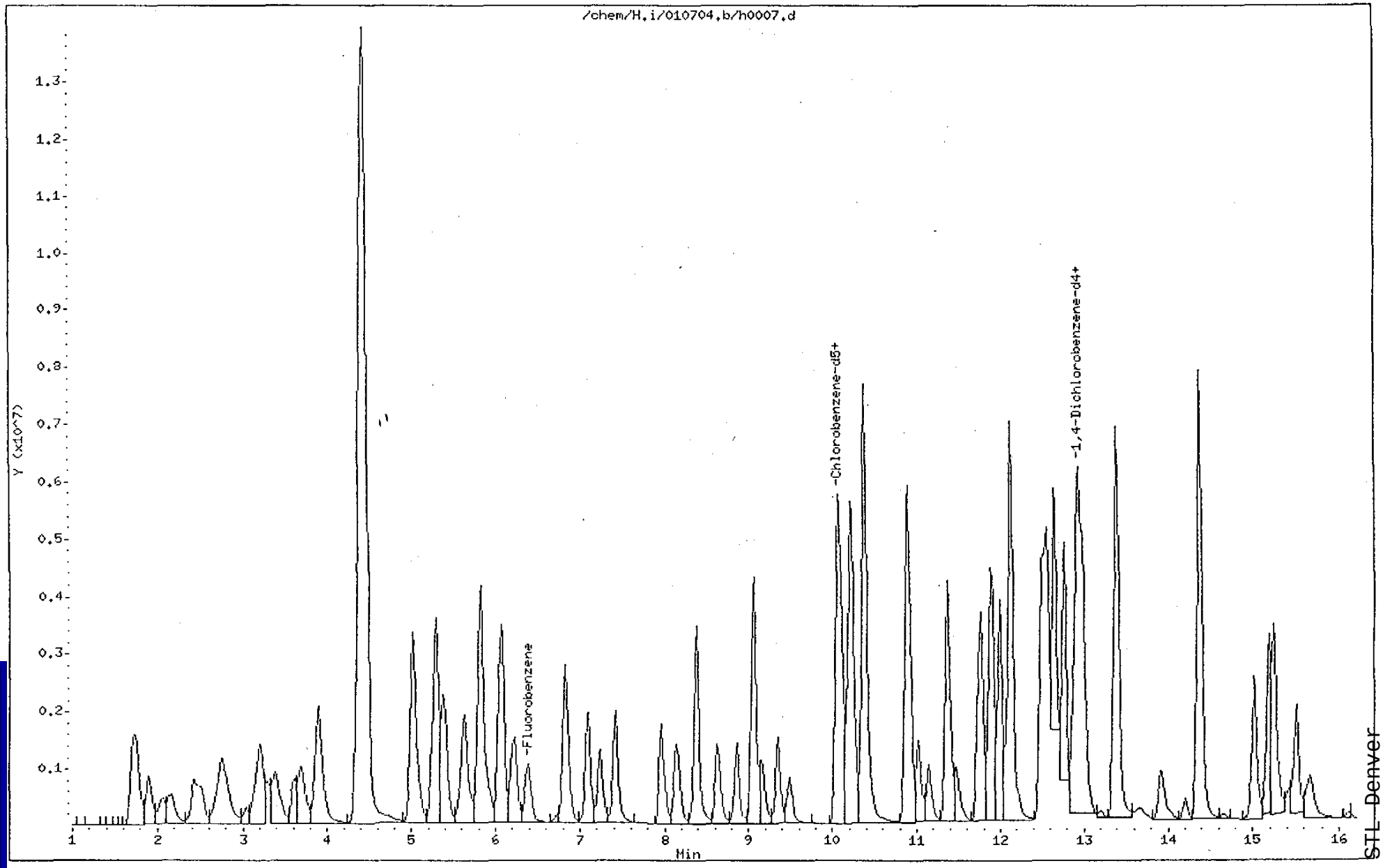
COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
48 Fluorobenzene	6.39	5.89	6.89	6.38	-0.22
72 Chlorobenzene-d5	10.06	9.56	10.56	10.06	0.04
96 1,4-Dichlorobenze	12.97	12.47	13.47	12.96	-0.11

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem/H.i/010704.b/h0007.d
Date : 07-JAN-2004 12:47
Client ID: MAIN030
Sample Info: MAIN030,,
Purge Volume: 20.0
Column phase: DB624

Instrument: H.i

Operator: hoffmanm
Column diameter: 0.53



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Data File: /chem/H.i/010704.b/h0008.d
Report Date: 08-Jan-2004 16:02

STL Denver

VOLATILE REPORT SW-846

Data file : /chem/H.i/010704.b/h0008.d
Lab Smp Id: MAIN060 Client Smp ID: MAIN060
Inj Date : 07-JAN-2004 13:09
Operator : hoffmanm Inst ID: H.i
Smp Info : MAIN060,,
Misc Info :
Comment : Purge and Trap Analysis
Method : /chem/H.i/010704.b/H-20ml-h2o.m
Meth Date : 08-Jan-2004 10:26 hoffmanm Quant Type: ISTD
Cal Date : 07-JAN-2004 13:31 Cal File: h0009.d
Als bottle: 2 Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 1-main.sub
Target Version: 3.40
Processing Host: chemsv02

Concentration Formula: Amt * DF * Vp/Vs

Name	Value	Description
DF	1.000	Dilution Factor
Vp	20.000	Purge Volume (ml)
Vs	20.000	Sample Volume (ml)

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	ON-COL (ug/L)
* 48 Fluorobenzene	96	6.378	6.396	(1.000)	2374049	12.5000	
* 72 Chlorobenzene-d5	119	10.044	10.079	(1.000)	428895	12.5000	(H)
* 96 1,4-Dichlorobenzene-d4	152	12.955	12.972	(1.000)	712584	12.5000	
M 1 1,2-Dichloroethene (total)	96				8319437	120.000	116.428
M 2 Xylene (total)	106				15671417	60.0000	171.726
3 dichlorodifluoromethane	85	1.886	1.886	(0.296)	5259610	60.0000	55.1152
4 Chloromethane	50	2.048	2.048	(0.321)	2798676	60.0000	55.2748
5 Vinyl Chloride	62	2.156	2.156	(0.338)	2950430	60.0000	55.8488
7 Bromomethane	94	2.425	2.425	(0.380)	3113129	60.0000	57.9731
8 Chloroethane	64	2.515	2.515	(0.394)	2062569	60.0000	55.8538
10 Trichlorofluoromethane	101	2.749	2.749	(0.431)	7448239	60.0000	58.2198
11 Ethanol	45	2.803	2.803	(0.439)	255335	3000.00	1989.28
13 Acrolein	56	3.036	3.036	(0.476)	964271	600.000	581.478
14 1,1-Dichloroethene	96	3.198	3.198	(0.501)	3834067	60.0000	57.2182
15 Acetone	43	3.180	3.180	(0.499)	907328	240.000	215.446(A)
17 Iodomethane	142	3.378	3.378	(0.530)	7552982	60.0000	59.2965

Data File: /chem/H.i/010704.b/h0008.d
Report Date: 08-Jan-2004 16:02

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
19 Acetonitrile	41	3.450	3.450	(0.541)	473376	600.000	516.040
21 Methylene Chloride	84	3.683	3.683	(0.577)	3315075	60.0000	56.0876
22 tert-Butyl alcohol	59	3.719	3.719	(0.583)	1851302	1200.00	1157.58
23 Acrylonitrile	53	3.845	3.845	(0.603)	2455892	600.000	619.962(A)
24 trans-1,2-Dichloroethene	96	3.899	3.899	(0.611)	4131170	60.0000	57.5912
27 1,1-Dichloroethane	63	4.348	4.348	(0.682)	7173400	60.0000	59.3332
28 Chloroprene	53	4.456	4.456	(0.699)	5897445	60.0000	59.3682
30 Isopropyl ether	87	4.420	4.420	(0.693)	14917952	300.000	310.292(A)
32 cis-1,2-Dichloroethene	96	5.013	5.013	(0.786)	4188267	60.0000	58.8367
31 2,2-Dichloropropane	77	5.013	5.013	(0.786)	4662510	60.0000	54.0939
33 2-Butanone	43	5.031	5.031	(0.789)	2015224	240.000	229.630(A)
34 Propionitrile	54	5.085	5.085	(0.797)	959661	600.000	648.962(A)
36 Methacrylonitrile	41	5.264	5.264	(0.825)	7465813	600.000	641.095(A)
37 Bromochloromethane	128	5.300	5.300	(0.831)	1744383	60.0000	61.4419(A)
38 Chloroform	83	5.372	5.372	(0.842)	7974695	60.0000	60.0249(A)
41 1,1,1-Trichloroethane	97	5.624	5.624	(0.882)	7616308	60.0000	57.4813
42 1,1-Dichloropropene	75	5.803	5.803	(0.910)	6109402	60.0000	57.1585
43 Carbon Tetrachloride	117	5.821	5.821	(0.913)	6632083	60.0000	58.4180
45 Isobutanol	41	5.929	5.929	(0.930)	606007	1200.00	1284.43(A)
46 Benzene	78	6.055	6.055	(0.949)	11855748	60.0000	58.3292
47 1,2-Dichloroethane	62	6.073	6.073	(0.952)	3185049	60.0000	61.6712(A)
49 n-Butanol	56	6.720	6.720	(1.054)	518322	1200.00	1176.39
50 Trichloroethene	130	6.828	6.828	(1.070)	4432112	60.0000	57.5004
52 1,2-Dichloropropane	63	7.079	7.079	(1.110)	3892366	60.0000	59.6567
53 Dibromomethane	93	7.223	7.223	(1.132)	2317848	60.0000	60.1074(A)
55 1,4-Dioxane	88	7.241	7.241	(1.135)	536123	3000.00	2837.40
56 Bromodichloromethane	83	7.421	7.421	(1.163)	6512272	60.0000	60.3654(A)
59 cis-1,3-Dichloropropene	75	7.960	7.960	(0.781)	5211757	60.0000	59.7403
60 4-Methyl-2-pentanone	43	8.139	8.139	(0.799)	5650886	240.000	254.831(A)
62 Toluene	91	8.373	8.373	(0.822)	12959738	60.0000	57.2817
63 trans-1,3-Dichloropropene	75	8.625	8.625	(0.847)	3858614	60.0000	59.8808
65 1,1,2-Trichloroethane	97	8.858	8.858	(0.869)	2209889	60.0000	60.2755(A)
67 1,3-Dichloropropane	76	9.056	9.056	(0.889)	3679716	60.0000	59.5452
66 Tetrachloroethene	164	9.038	9.038	(0.887)	4027027	60.0000	55.6688
68 2-Hexanone	43	9.146	9.146	(0.898)	3567135	240.000	253.006(A)
69 Dibromochloromethane	129	9.343	9.343	(0.917)	3945723	60.0000	61.5272(A)
70 1,2-Dibromoethane	107	9.487	9.487	(0.931)	2777217	60.0000	60.0298(A)
71 1-Chlorohexane	91	10.044	10.044	(0.986)	5855232	60.0000	55.3678
73 Chlorobenzene	112	10.080	10.080	(0.989)	7911214	60.0000	57.9015
74 1,1,1,2-Tetrachloroethane	131	10.188	10.188	(1.000)	3867829	60.0000	58.7830
75 Ethylbenzene	106	10.224	10.224	(1.004)	3992775	60.0000	56.9748
76 m and p-Xylene	106	10.368	10.368	(1.018)	10831193	120.000	114.467
77 o-Xylene	106	10.871	10.871	(1.067)	4840224	60.0000	57.2588
78 Styrene	104	10.889	10.889	(1.069)	7912951	60.0000	58.5903
79 Bromoform	173	11.140	11.140	(1.093)	2229867	60.0000	61.5959(A)
80 isopropyl benzene	105	11.356	11.356	(1.115)	15427054	60.0000	55.3695
81 Cyclohexanone	55	11.464	11.464	(1.125)	1869059	2400.00	2268.27(A)

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
83 1,1,2,2-Tetrachloroethane	83	11.733	11.733	(1.152)	2778154	60.0000	60.4262(A)
84 Bromobenzene	156	11.751	11.751	(0.907)	3711645	60.0000	59.1378
85 1,2,3-Trichloropropane	110	11.787	11.787	(0.910)	606625	60.0000	56.2442
87 n-Propylbenzene	120	11.877	11.877	(0.917)	3440294	60.0000	55.7427
88 2-Chlorotoluene	126	11.985	11.985	(0.925)	3002840	60.0000	58.1568
89 1,3,5-Trimethylbenzene	105	12.093	12.093	(0.933)	11735390	60.0000	56.4896
90 4-Chlorotoluene	126	12.129	12.129	(0.936)	3203815	60.0000	56.3346
91 tert-Butylbenzene	119	12.488	12.488	(0.964)	11739038	60.0000	55.6102
92 1,2,4-Trimethylbenzene	105	12.560	12.560	(0.969)	10884110	60.0000	56.1460
93 sec-Butylbenzene	134	12.757	12.757	(0.985)	3001010	60.0000	54.1879
94 m-Dichlorobenzene	146	12.883	12.883	(0.994)	5986415	60.0000	57.8580
95 4-Isopropyltoluene	119	12.919	12.919	(0.997)	12825944	60.0000	54.5896
97 p-dichlorobenzene	146	12.973	12.973	(1.001)	7060824	60.0000	56.8907
98 n-Butylbenzene	91	13.368	13.368	(1.032)	13729387	60.0000	52.5317
99 o-Dichlorobenzene	146	13.386	13.386	(1.033)	5184358	60.0000	56.4609
100 1,2-Dibromo-3-chloropropane	157	14.195	14.195	(1.096)	478630	60.0000	60.8741(A)
101 1,2,4-Trichlorobenzene	180	15.004	15.004	(1.158)	3320443	60.0000	54.5389
102 Hexachlorobutadiene	225	15.183	15.183	(1.172)	2474362	60.0000	47.5879
127 Naphthalene	128	15.255	15.255	(1.178)	3930317	60.0000	58.9594
104 1,2,3-Trichlorobenzene	180	15.507	15.507	(1.197)	2609525	60.0000	55.3040

QC Flag Legend

A - Target compound detected but, quantitated amount exceeded maximum amount.
H - Operator selected an alternate compound hit.

Data File: /chem/H.i/010704.b/h0008.d
Report Date: 08-Jan-2004 16:03

STL Denver

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: H.i
Lab File ID: h0008.d
Lab Smp Id: MAIN060
Analysis Type: VOA
Quant Type: ISTD
Operator: hoffmanm
Method File: /chem/H.i/010704.b/H-20ml-h2o.m
Misc Info:

Calibration Date: JAN/07/4
Calibration Time: 1439
Client Smp ID: MAIN060
Level: LOW
Sample Type: WATER

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
48 Fluorobenzene	2399820	1199910	4799640	2374049	-1.07
72 Chlorobenzene-d5	457381	228690	914762	428895	-6.23
96 1,4-Dichlorobenze	747017	373508	1494034	712584	-4.61

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
48 Fluorobenzene	6.39	5.89	6.89	6.38	-0.26
72 Chlorobenzene-d5	10.06	9.56	10.56	10.04	-0.16
96 1,4-Dichlorobenze	12.97	12.47	13.47	12.96	-0.13

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem/H.i/010704.b/h0008.d
Date : 07-JAN-2004 13:09
Client ID: MAIN060
Sample Info: MAIN060,,
Purge Volume: 20.0
Column phase: DB624

Instrument: H.i
Operator: hoffmanm
Column diameter: 0.53

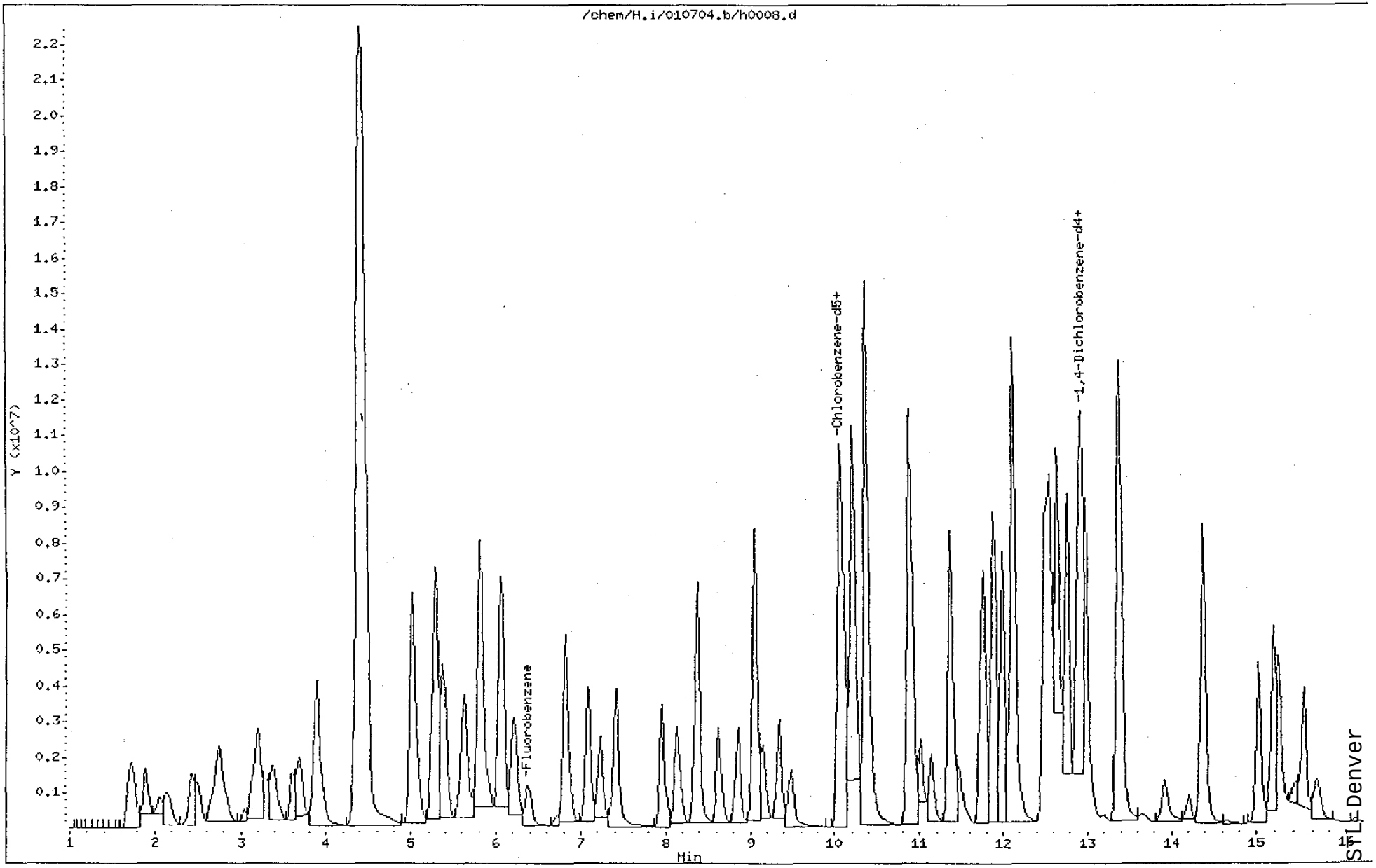


Table of Contents

Data File: /chem/H.i/010704.b/h0015.d Page 1
Report Date: 01/09/2004

CONTINUING CALIBRATION COMPOUNDS
PERCENT DRIFT REPORT

Instrument ID: H.i
Lab File ID: h0015.d
Analysis Type: WATER

Injection Date: 07-JAN-2004 15:46
Lab Sample ID: VSTD010
Method File: /chem/H.i/010704.b/H-20ml-h2o.m

	COMPOUND	EXPECTED CONC.	MEASURED CONC.	%D	MAX %D
85	1,2-Dichloroethene (total)	20.0000	16.9494	15.3	50.0
83	Xylene (total)	30.0000	25.0283	16.6	50.0
64	dichlorodifluoromethane	10.0000	8.6091	13.9	50.0
1	Chloromethane	10.0000	9.2138	7.9	50.0
4	Vinyl Chloride	10.0000	10.0928	0.9	20.0
2	Bromomethane	10.0000	10.5003	5.0	50.0
5	Chloroethane	10.0000	9.8332	1.7	50.0
11	Trichlorofluoromethane	10.0000	9.9086	0.9	50.0
7	Acetone	20 ~~40~~.0000	21.4590	~~46.4~~	50.0
12	1,1-Dichloroethene	10.0000	7.4214	25.8	20.0
6	Methylene Chloride	10.0000	8.8477	11.5	50.0
0	trans-1,2-Dichloroethene	10.0000	8.2604	17.4	50.0
15	1,1-Dichloroethane	10.0000	9.1085	8.9	50.0
93	2,2-Dichloropropane	10.0000	7.6584	23.4	50.0
0	cis-1,2-Dichloroethene	10.0000	8.6890	13.1	50.0
20	2-Butanone	20 ~~40~~.0000	20.0763	~~49.8~~	50.0
13	Bromochloromethane	10.0000	9.7460	2.5	50.0
17	Chloroform	10.0000	9.2827	7.2	20.0
22	1,1,1-Trichloroethane	10.0000	8.2722	17.3	50.0
94	1,1-Dichloropropene	10.0000	8.2140	17.9	50.0
23	Carbon Tetrachloride	10.0000	8.3563	16.4	50.0
30	Benzene	10.0000	8.6240	13.8	50.0
16	1,2-Dichloroethane	10.0000	9.8601	1.4	50.0
29	Trichloroethene	10.0000	8.5726	14.3	50.0
26	1,2-Dichloropropane	10.0000	9.5004	5.0	20.0
34	Dibromomethane	10.0000	9.8063	1.9	50.0
25	Bromodichloromethane	10.0000	9.5992	4.0	50.0
28	cis-1,3-Dichloropropene	10.0000	9.7580	2.4	50.0
38	4-Methyl-2-pentanone	20 ~~40~~.0000	~~22~~.8312	~~42.9~~	50.0
45	Toluene	10.0000	8.3606	16.4	20.0
31	trans-1,3-Dichloropropene	10.0000	9.6431	3.6	50.0
32	1,1,2-Trichloroethane	10.0000	10.0644	0.6	50.0
42	Tetrachloroethene	10.0000	7.8535	21.5	50.0
109	1,3-Dichloropropane	10.0000	10.0825	0.8	50.0
43	2-Hexanone	20 ~~40~~.0000	21.7390	~~45.7~~	50.0
36	Dibromochloromethane	10.0000	9.9119	0.9	50.0
58	1,2-Dibromoethane	10.0000	10.0825	0.8	50.0
92	1-Chlorohexane	10.0000	7.5170	24.8	50.0
46	Chlorobenzene	10.0000	8.7222	12.8	50.0

All <35% D ok for 8260
mt 1/9/04

Data File: /chem/H.i/010704.b/h0015.d Page 2
Report Date: 01/09/2004

CONTINUING CALIBRATION COMPOUNDS
PERCENT DRIFT REPORT

Instrument ID: H.i
Lab File ID: h0015.d
Analysis Type: WATER

Injection Date: 07-JAN-2004 15:46
Lab Sample ID: VSTD010
Method File: /chem/H.i/010704.b/H-20ml-h2o.m

	COMPOUND	EXPECTED CONC.	MEASURED CONC.	%D	MAX %D
74	1,1,1,2-Tetrachloroethane	10.0000	9.1675	8.3	50.0
47	Ethylbenzene	10.0000	8.0896	19.1	20.0
0	m and p-Xylene	20.0000	16.5218	17.4	50.0
0	o-Xylene	10.0000	8.5065	14.9	50.0
49	Styrene	10.0000	8.8704	11.3	50.0
37	Bromoform	10.0000	10.2400	2.4	50.0
79	isopropyl benzene	10.0000	7.5553	24.4	50.0
40	1,1,2,2-Tetrachloroethane	10.0000	10.4818	4.8	50.0
95	Bromobenzene	10.0000	9.0448	9.6	50.0
50	1,2,3-Trichloropropane	10.0000	10.0809	0.8	50.0
96	n-Propylbenzene	10.0000	7.8961	21.0	50.0
97	2-Chlorotoluene	10.0000	8.3542	16.5	50.0
98	1,3,5-Trimethylbenzene	10.0000	8.1474	18.5	50.0
99	4-Chlorotoluene	10.0000	8.3855	16.1	50.0
100	tert-Butylbenzene	10.0000	8.0335	19.7	50.0
101	1,2,4-Trimethylbenzene	10.0000	8.3222	16.8	50.0
102	sec-Butylbenzene	10.0000	7.9114	20.9	50.0
61	m-Dichlorobenzene	10.0000	8.4303	15.7	50.0
103	4-Isopropyltoluene	10.0000	7.6258	23.7	50.0
62	p-dichlorobenzene	10.0000	8.8921	11.1	50.0
104	n-Butylbenzene	10.0000	7.6704	23.3	50.0
63	o-Dichlorobenzene	10.0000	8.9284	10.7	50.0
75	1,2-Dibromo-3-chloropropane	10.0000	10.8435	8.4	50.0
105	1,2,4-Trichlorobenzene	10.0000	8.5546	14.5	50.0
106	Hexachlorobutadiene	10.0000	7.2890	27.1	50.0
107	Naphthalene	10.0000	9.4362	5.6	50.0
108	1,2,3-Trichlorobenzene	10.0000	8.6632	13.4	50.0

Data File: /chem/H.i/010704.b/h0015.d
Report Date: 09-Jan-2004 13:11

STL Denver

VOLATILE REPORT SW-846

Data file : /chem/H.i/010704.b/h0015.d
Lab Smp Id: VSTD010 Client Smp ID: VSTD010
Inj Date : 07-JAN-2004 15:46
Operator : hoffmanm Inst ID: H.i
Smp Info : VSTD010,,ICV
Misc Info :
Comment : Purge and Trap Analysis
Method : /chem/H.i/010704.b/H-20ml-h2o.m
Meth Date : 09-Jan-2004 13:10 hoffmanm Quant Type: ISTD
Cal Date : 07-JAN-2004 15:24 Cal File: h0014.d
Als bottle: 2
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: SecSource.sub
Target Version: 3.40
Processing Host: chemsv02

Concentration Formula: Amt * DF * Vp/Vs

Name	Value	Description
DF	1.000	Dilution Factor
Vp	20.000	Purge Volume (ml)
Vs	20.000	Sample Volume (ml)

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/L)
* 48 Fluorobenzene	96	6.399	6.396	(1.000)	2292249	12.5000	
* 72 Chlorobenzene-d5	119	10.082	10.079	(1.000)	415466	12.5000	
* 96 1,4-Dichlorobenzene-d4	152	12.975	12.972	(1.000)	692957	12.5000	
M 1 1,2-Dichloroethene (total)	96				1169332	16.9494	16.9494
M 2 Xylene (total)	106				2210947	25.0283	25.0283
3 dichlorodifluoromethane	85	1.907	1.886	(0.298)	793253	8.60910	8.60910
4 Chloromethane	50	2.050	2.048	(0.320)	450440	9.21382	9.21382
5 Vinyl Chloride	62	2.176	2.156	(0.340)	514821	10.0928	10.0928
7 Bromomethane	94	2.446	2.425	(0.382)	544432	10.5003	10.5003
8 Chloroethane	64	2.536	2.515	(0.396)	350607	9.83316	9.83316
10 Trichlorofluoromethane	101	2.769	2.749	(0.433)	1223956	9.90857	9.90857
14 1,1-Dichloroethene	96	3.236	3.198	(0.506)	480160	7.42144	7.42144
15 Acetone	43	3.200	3.180	(0.500)	108867	21.4590	21.4590
21 Methylene Chloride	84	3.704	3.683	(0.579)	504926	8.84768	8.84768
24 trans-1,2-Dichloroethene	96	3.919	3.899	(0.612)	572123	8.26039	8.26039
27 1,1-Dichloroethane	63	4.368	4.348	(0.683)	1063277	9.10851	9.10851

Data File: /chem/H.i/010704.b/h0015.d
Report Date: 09-Jan-2004 13:11

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)
33 2-Butanone	43	5.051	5.031	(0.789)	170118	20.0763	20.0762
32 cis-1,2-Dichloroethene	96	5.033	5.013	(0.787)	597209	8.68896	8.68896
31 2,2-Dichloropropane	77	5.033	5.013	(0.787)	637353	7.65837	7.65837
37 Bromochloromethane	128	5.321	5.300	(0.832)	267162	9.74597	9.74597
38 Chloroform	83	5.411	5.372	(0.846)	1190771	9.28268	9.28268
41 1,1,1-Trichloroethane	97	5.644	5.624	(0.882)	1058309	8.27223	8.27223
42 1,1-Dichloropropene	75	5.824	5.803	(0.910)	847702	8.21397	8.21397
43 Carbon Tetrachloride	117	5.842	5.821	(0.913)	915982	8.35626	8.35626
47 1,2-Dichloroethane	62	6.093	6.073	(0.952)	491686	9.86012	9.86012
46 Benzene	78	6.075	6.055	(0.949)	1692483	8.62402	8.62402
50 Trichloroethene	130	6.848	6.828	(1.070)	638004	8.57257	8.57257
52 1,2-Dichloropropane	63	7.118	7.079	(1.112)	598508	9.50044	9.50044
53 Dibromomethane	93	7.261	7.223	(1.135)	365121	9.80635	9.80635
56 Bromodichloromethane	83	7.441	7.421	(1.163)	999885	9.59917	9.59917
59 cis-1,3-Dichloropropene	75	7.980	7.960	(0.791)	824633	9.75798	9.75798
60 4-Methyl-2-pentanone	43	8.160	8.139	(0.809)	490431	22.8312	22.8312
62 Toluene	91	8.393	8.373	(0.832)	1832329	8.36062	8.36062
63 trans-1,3-Dichloropropene	75	8.645	8.625	(0.857)	601930	9.64312	9.64312
65 1,1,2-Trichloroethane	97	8.879	8.858	(0.881)	357438	10.0644	10.0644
67 1,3-Dichloropropane	76	9.076	9.056	(0.900)	603560	10.0825	10.0825
66 Tetrachloroethene	164	9.076	9.038	(0.900)	550324	7.85346	7.85346
68 2-Hexanone	43	9.184	9.146	(0.911)	296902	21.7390	21.7390
69 Dibromochloromethane	129	9.364	9.343	(0.929)	615744	9.91188	9.91188
70 1,2-Dibromoethane	107	9.507	9.487	(0.943)	451850	10.0825	10.0825
73 Chlorobenzene	112	10.118	10.080	(1.004)	1154418	8.72219	8.72219
74 1,1,1,2-Tetrachloroethane	131	10.208	10.188	(1.012)	584318	9.16747	9.16747
75 Ethylbenzene	106	10.244	10.224	(1.016)	549166	8.08961	8.08961
76 m and p-Xylene	106	10.388	10.368	(1.030)	1514385	16.5218	16.5218
77 o-Xylene	106	10.909	10.871	(1.082)	696562	8.50652	8.50652
78 Styrene	104	10.927	10.889	(1.084)	1160483	8.87037	8.87037
71 1-Chlorohexane	91	10.082	10.044	(1.000)	770042	7.51697	7.51697
79 Bromoform	173	11.161	11.140	(1.107)	359095	10.2400	10.2400
80 isopropyl benzene	105	11.394	11.356	(1.130)	2039158	7.55534	7.55534
83 1,1,2,2-Tetrachloroethane	83	11.754	11.733	(1.166)	466823	10.4818	10.4818
84 Bromobenzene	156	11.772	11.751	(0.907)	552037	9.04476	9.04476
85 1,2,3-Trichloropropane	110	11.807	11.787	(0.910)	105733	10.0809	10.0809
87 n-Propylbenzene	120	11.915	11.877	(0.918)	473901	7.89605	7.89605
88 2-Chlorotoluene	126	12.023	11.985	(0.927)	419478	8.35424	8.35424
89 1,3,5-Trimethylbenzene	105	12.131	12.093	(0.935)	1645945	8.14735	8.14735
90 4-Chlorotoluene	126	12.149	12.129	(0.936)	463756	8.38547	8.38546
91 tert-Butylbenzene	119	12.526	12.488	(0.965)	1649124	8.03350	8.03350
92 1,2,4-Trimethylbenzene	105	12.580	12.560	(0.970)	1568857	8.32222	8.32222
93 sec-Butylbenzene	134	12.778	12.757	(0.985)	426077	7.91138	7.91138
94 m-Dichlorobenzene	146	12.904	12.883	(0.994)	848231	8.43026	8.43026
95 4-Isopropyltoluene	119	12.940	12.919	(0.997)	1742356	7.62583	7.62583
97 p-dichlorobenzene	146	13.011	12.973	(1.003)	1073221	8.89211	8.89211
98 n-Butylbenzene	91	13.389	13.368	(1.032)	1949473	7.67039	7.67039

Data File: /chem/H.i/010704.b/h0015.d
Report Date: 09-Jan-2004 13:11

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/L)
99 o-Dichlorobenzene	146	13.407	13.386	(1.033)	797245	8.92841	8.92841
100 1,2-Dibromo-3-chloropropane	157	14.215	14.195	(1.096)	82910	10.8435	10.8435
101 1,2,4-Trichlorobenzene	180	15.024	15.004	(1.158)	506478	8.55462	8.55462
102 Hexachlorobutadiene	225	15.204	15.183	(1.172)	368557	7.28899	7.28899
127 Naphthalene	128	15.276	15.255	(1.177)	611708	9.43625	9.43625
104 1,2,3-Trichlorobenzene	180	15.527	15.507	(1.197)	397517	8.66324	8.66324

Data File: /chem/H.i/010704.b/h0015.d
Report Date: 09-Jan-2004 13:11

STL Denver

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: H.i
Lab File ID: h0015.d
Lab Smp Id: VSTD010
Analysis Type: VOA
Quant Type: ISTD
Operator: hoffmanm
Method File: /chem/H.i/010704.b/H-20ml-h2o.m
Misc Info:

Calibration Date: JAN/07/4
Calibration Time: 1439
Client Smp ID: VSTD010
Level: LOW
Sample Type: WATER

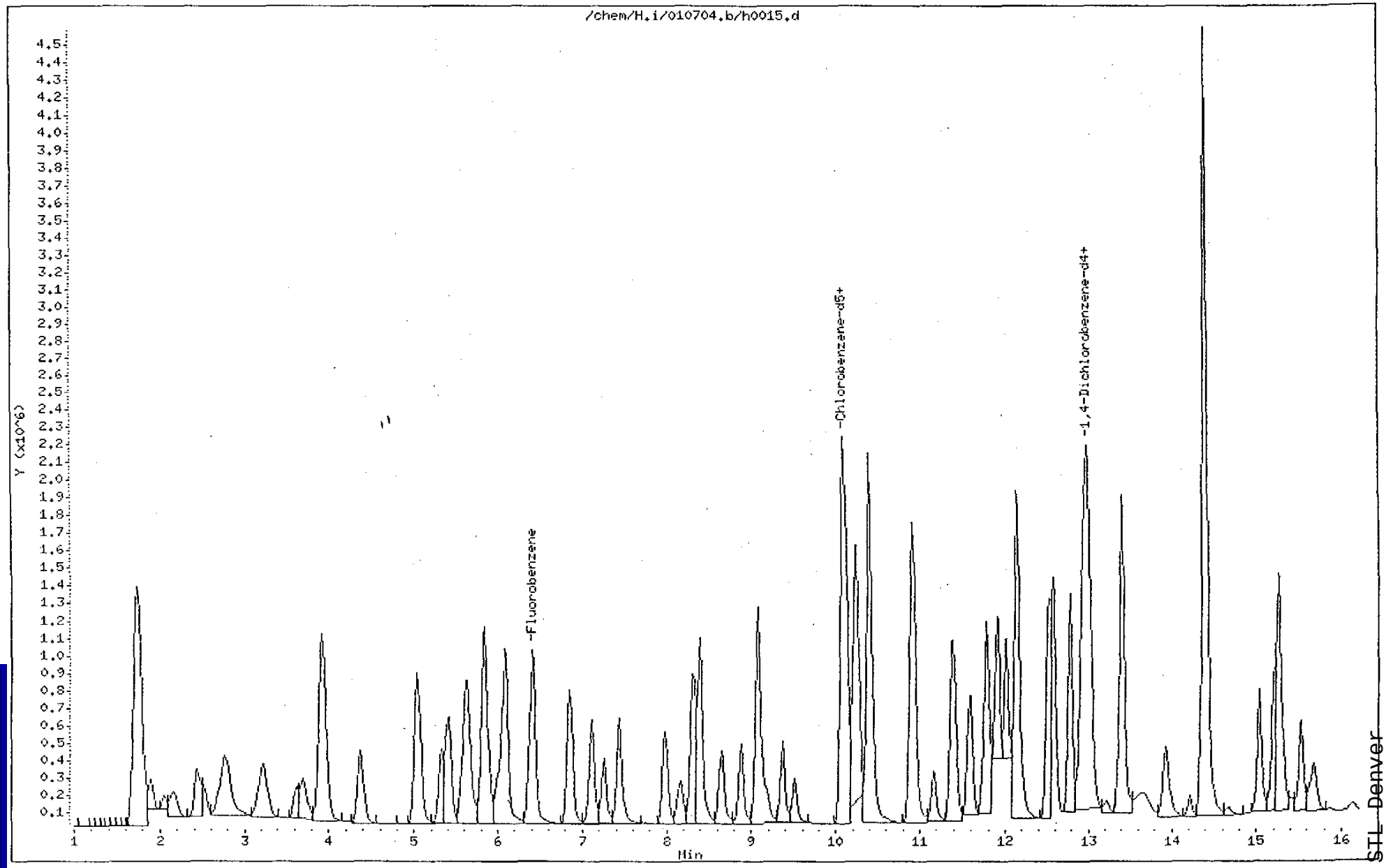
COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
48 Fluorobenzene	2399820	1199910	4799640	2292249	-4.48
72 Chlorobenzene-d5	457381	228690	914762	415466	-9.16
96 1,4-Dichlorobenze	747017	373508	1494034	692957	-7.24

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
48 Fluorobenzene	6.39	5.89	6.89	6.40	0.06
72 Chlorobenzene-d5	10.06	9.56	10.56	10.08	0.22
96 1,4-Dichlorobenze	12.97	12.47	13.47	12.98	0.03

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem/H.i/010704.b/h0015.d
Date : 07-JAN-2004 15:46
Client ID: VSTD010
Sample Info: VSTD010,,ICV
Purge Volume: 20.0
Column phase: DB624

Instrument: H.i
Operator: hoffmanm
Column diameter: 0.53



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GC/MS Initial Calibration Review Checklist

STL Denver

Instrument ID and Date: Inst. H 1/7/04 - Supp I-CAL

Check Method Used: Analysis ☐ 625 ☐ 8270 ☐ Other SV _____

☐ 524.2 ☐ 624 ☑ 8260B ☐ Other VOA _

VOA Preparation ☐ 5mL ☑ 20mL ☐ 5035 Low ☐ 5035 High ☐ 5030 Low ☐ 5030 High

Review Items	----- Level 1 ----- Yes	No	N/A	Level 2	Comments
Initial Calibration					
1. BFB/DFTPP meets criteria?	✓			✓	
2. ICAL date and instrument ID verified?	✓			✓	
3. Sufficient number of calibration points used?	✓			✓	
4. Reasons for removal of points documented?	✓			✓	Some low points (below R.L.) removed.
5. %RSD or correlation coefficient within method limits?	✓			✓	
6. If RRF used for ICAL, were all compounds within 15% RSD?	✓			✓	List all exceptions below (cpd & RSD)
7. Response factors meet criteria?	✓			✓	
8. Isomeric pairs checked for correct peak assignment?	✓			✓	
9. Data checked for detector saturation?	✓			✓	
10. Standards traceability properly documented?	✓			✓	
11. Manual integrations documented and checked?			✓	N/A	
12. 2nd source ICV recovery 75-125% for DoD projects, 65-135% (±55% of expected for poor performers) for non-DoD?			✓	N/A	

1st Level Reviewer: MJ Date: 1/9/04

2nd Level Reviewer: TA Date: 1-9-04

GC/MS Volatile Analysis

STL, Denver

Instrument H
5972 MSD

Column	Phase	Inj. Temp	Init. Time	Ramp Rate	Final Temp	Flow cc/min	Press. Psi	Type	Vac. Range	Source Temp	Mass Range
75M	DB-624	200C	2 min.	5C/min	65C	18	20	MS	10^-6	~175C	35-300/2^2
			0 min.	12C/min	155C						
			0 min.	25C/min	210C						

DEN-MS-0010 (8260B/624/524.2)
(Circle as appropriate)

Comments

MS VOA
Main # 254/277.03
Supp # 192/246-03
ISSS # 281/282.03

Target Batch (Directory): 010704.b

QuantIMS Batch:

Lot #	Sample	W.O.#	Purge vol (ml)	Sample amt (ml/g)	Date	Initials	File Number	IS OK	SS OK	DIL OK	24 hr 12 hr	pH	Comments	ALS
BFB			1µl Air Inj.		1/7/04	MH	h0001.d					NA	OK	—
Primer			20mL	20mL			2	✓	NA	✓	✓		OK	1
Main 001							3	✓		✓	✓			2
002							4	✓		✓	✓			3
005							5	✓		✓	✓			4
010							6	✓		✓	✓			5
030							7	✓		✓	✓			6
060							8	✓		✓	✓			7
Supp 001							9	✓	✓	✓	✓			8
002							10	✓	✓	✓	✓			9
005							11	✓	✓	✓	✓			10
010							12	✓	✓	✓	✓			11
030							13	✓	✓	✓	✓			12
060							14	✓	✓	✓	✓			13
ICV: V5ID010							15	✓	✓	✓	✓		All <35%D.	14
cleanup							16						—	15
screens				—			17	✓	✓	✓	✓			16
				—			18	✓	✓	✓	✓			17
				—			19	✓	✓	✓	✓			18
Surr. Chks				20mL			20-21-22	✓	✓	✓	✓			19-21

Revised 6/3/03

public/QA/forms/VOA Logbookr3.xls

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Calibration History

Method : /chem/H.i/010704.b/H-20ml-h2o.m
Start Cal Date: 07-JAN-2004 11:17
End Cal Date : 07-JAN-2004 15:24

Initial Calibration

Injection Date	Sublist	Calibration File
Cal Level: 1 , Cal Amount: 1.00000		
07-JAN-2004 13:31	2-supp	/chem/H.i/010704.b/h0009.d
07-JAN-2004 11:17	1-main	/chem/H.i/010704.b/h0003.d
Cal Level: 2 , Cal Amount: 2.00000		
07-JAN-2004 13:54	2-supp	/chem/H.i/010704.b/h0010.d
07-JAN-2004 11:40	1-main	/chem/H.i/010704.b/h0004.d
Cal Level: 3 , Cal Amount: 5.00000		
07-JAN-2004 14:16	2-supp	/chem/H.i/010704.b/h0011.d
07-JAN-2004 12:02	1-main	/chem/H.i/010704.b/h0005.d
Cal Level: 4 , Cal Amount: 10.0000		
07-JAN-2004 14:39	2-supp	/chem/H.i/010704.b/h0012.d
07-JAN-2004 12:24	1-main	/chem/H.i/010704.b/h0006.d
Cal Level: 5 , Cal Amount: 30.0000		
07-JAN-2004 15:01	2-supp	/chem/H.i/010704.b/h0013.d
07-JAN-2004 12:47	1-main	/chem/H.i/010704.b/h0007.d
Cal Level: 6 , Cal Amount: 60.0000		
07-JAN-2004 15:24	2-supp	/chem/H.i/010704.b/h0014.d
07-JAN-2004 13:09	1-main	/chem/H.i/010704.b/h0008.d

Continuing Calibration

07-JAN-2004 14:39	2-supp	/chem/H.i/010704.b/h0012.d
07-JAN-2004 12:24	1-main	/chem/H.i/010704.b/h0006.d

STL Denver

INITIAL CALIBRATION DATA

Start Cal Date : 07-JAN-2004 11:17
End Cal Date : 07-JAN-2004 15:24
Quant Method : ISTD
Origin : Disabled
Target Version : 3.40
Integrator : HP RTE
Method file : /chem/H.i/010704.b/H-20ml-h2o.m
Cal Date : 08-Jan-2004 10:26 hoffmanm
Curve Type : Average

Calibration File Names:
Level 1: /chem/H.i/010704.b/h0009.d
Level 2: /chem/H.i/010704.b/h0010.d
Level 3: /chem/H.i/010704.b/h0011.d
Level 4: /chem/H.i/010704.b/h0012.d
Level 5: /chem/H.i/010704.b/h0013.d
Level 6: /chem/H.i/010704.b/h0014.d

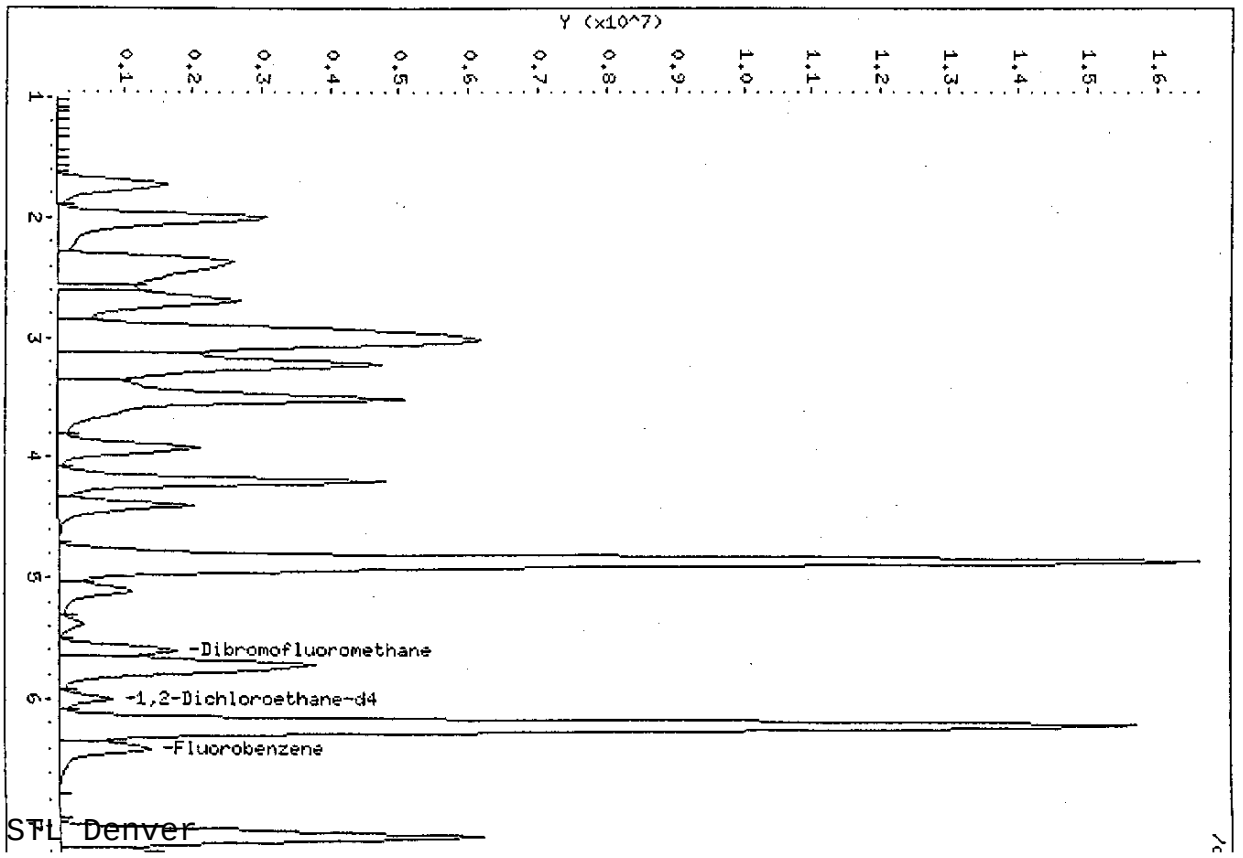
Compound	1.000 Level 1	2.000 Level 2	5.000 Level 3	10.000 Level 4	30.000 Level 5	60.000 Level 6	RRF	% RSD
117 Dichlorotetrafluoroethane	0.64761	0.73926	0.78612	0.71231	0.70876	0.71459	0.71811	6.282
6 Ethylene Oxide	+++++	0.00409	0.00455	0.00418	0.00453	0.00430	0.00433	4.713
9 Dichlorofluoromethane	0.59773	0.62695	0.69128	0.65465	0.70838	0.72854	0.66792	7.527
12 Ethyl Ether	0.14665	0.15516	0.15743	0.14452	0.15658	0.15428	0.15244	3.583
16 Trichlorotrifluoroethane	0.46470	0.46710	0.49449	0.44176	0.44077	0.45582	0.46077	4.317
18 Carbon Disulfide	1.10635	1.16833	1.20112	1.08414	1.09656	1.12833	1.13080	4.015
20 Allyl Chloride	0.52354	0.57054	0.55983	0.51640	0.53803	0.53648	0.54080	3.849
119 Methyl Acetate	0.08521	0.09285	0.08890	0.08353	0.09078	0.09006	0.08855	3.986
25 Methyl t-butyl ether	0.47018	0.50149	0.50514	0.47083	0.51501	0.50633	0.49483	3.912
26 Hexane	2.86016	2.85242	3.03241	2.68843	2.64984	2.84549	2.82146	4.877
29 Vinyl acetate	0.31694	0.29578	0.31854	0.29212	0.31575	0.34250	0.31360	5.801
35 Ethyl Acetate	+++++	0.13260	0.12233	0.11606	0.12573	0.12533	0.12441	4.818
39 Tetrahydrofuran	0.02752	0.02548	0.02653	0.02440	0.02581	0.02576	0.02592	4.041
120 ETBE	0.85257	0.86672	0.85626	0.81813	0.88602	0.82395	0.85061	3.027
114 Cyclohexane	0.58098	0.56819	0.60531	0.53439	0.51762	0.55069	0.55953	5.707
115 2-Pentanone	0.09207	0.08956	0.09016	0.08877	0.09495	0.09521	0.09178	3.026
121 TAME	0.63310	0.64656	0.67121	0.63148	0.68189	0.67061	0.65581	3.291
54 Methyl Methacrylate	0.04014	0.03786	0.04103	0.03699	0.04126	0.03958	0.03948	4.365
122 Methyl Cyclohexane	0.54516	0.52654	0.56775	0.50055	0.47455	0.50751	0.52034	6.406
57 2-nitropropane	+++++	0.13214	0.16285	0.14922	0.17005	0.16035	0.15492	9.533
113 2-Chloroethyl vinyl ether	0.46171	0.43553	0.43272	0.46156	0.48024	0.47449	0.45771	4.300
64 Ethyl methacrylate	1.27425	1.16318	1.16692	1.10948	1.24729	1.22000	1.19685	5.114
116 cis-1,4-Dichloro-2-butene	0.12731	0.11831	0.13496	0.12138	0.13396	0.12921	0.12752	5.226
86 t-1,4-Dichloro-2-butene	0.10759	0.10925	0.11187	0.11302	0.12531	0.12564	0.11545	6.929
118 1,2,3-Trimethylbenzene	0.91409	0.84269	0.87973	0.80925	0.78203	0.82190	0.84162	5.746

STL Denver

INITIAL CALIBRATION DATA

Start Cal Date : 07-JAN-2004 11:17
End Cal Date : 07-JAN-2004 15:24
Quant Method : ISTD
Origin : Disabled
Target Version : 3.40
Integrator : HP RTE
Method file : /chem/H.i/010704.b/H-20ml-h2o.m
Cal Date : 08-Jan-2004 10:26 hoffmanm
Curve Type : Average

Compound	1.000 Level 1	2.000 Level 2	5.000 Level 3	10.000 Level 4	30.000 Level 5	60.000 Level 6	RRF	% RSD
123 1,2-dichloro-1,1,2-triflourom	0.48490	0.48343	0.51040	0.46398	0.46848	0.47445	0.48094	3.447
124 2,2-dichloro-1,1,1-trifluorom	0.82337	0.83499	0.87738	0.79319	0.80769	0.82037	0.82616	3.496
125 2-Propanol	0.00599	0.00581	0.00554	0.00467	0.00513	0.00494	0.00535	9.635
126 Tetrahydrothiophene	+++++	0.35479	0.33909	0.32536	0.35333	0.35597	0.34571	3.836
$ 40 Dibromofluoromethane	0.48880	0.48510	0.49354	0.49759	0.49185	0.49339	0.49171	0.877
$ 44 1,2-Dichloroethane-d4	0.21873	0.22259	0.21896	0.22120	0.21565	0.21786	0.21917	1.120
$ 61 Toluene-d8	4.85785	4.80260	4.84282	4.76365	4.63208	4.77104	4.77834	1.693
$ 82 Bromofluorobenzene	2.62465	2.58967	2.66216	2.65404	2.56658	2.62447	2.62026	1.402



Data File: /chem/H.i/010704.b/h0014.d
Date : 07-JAN-2004 15:24
Client ID: SUPP060
Sample Info: SUPP060,,
Purge Volume: 20.0
Column phase: DB624

Data File: /chem/H.i/010704.b/h0001.d

Date : 07-JAN-2004 10:44

Client ID: BFB

Instrument: H.i

Sample Info: BFB,,MSVOA-237-03

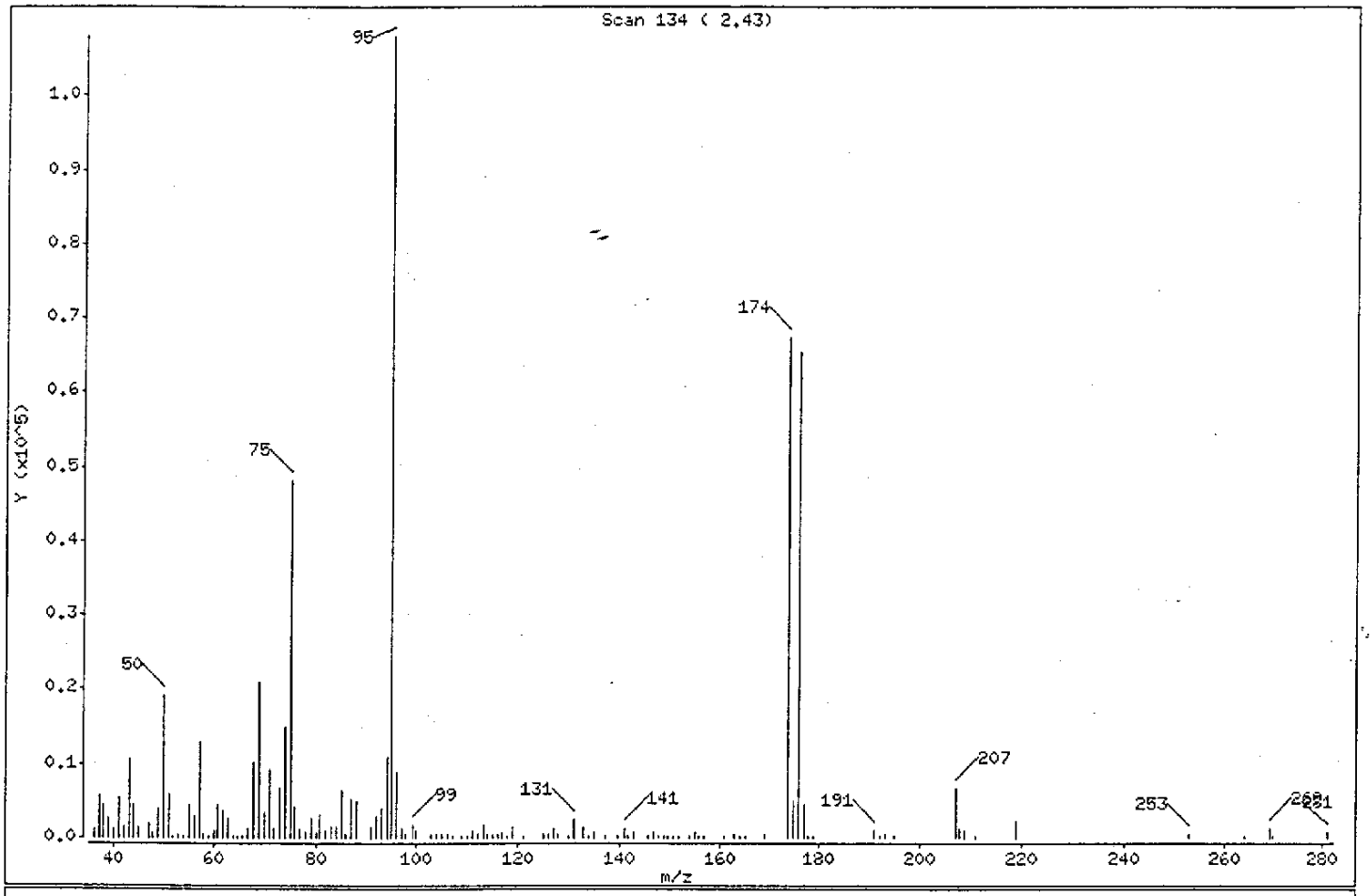
Volume Injected (uL): 1.0

Operator: mhoffman

Column phase: DB624

Column diameter: 0.53

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	17.68
75	30.00 - 60.00% of mass 95	44.55
96	5.00 - 9.00% of mass 95	8.29
173	Less than 2.00% of mass 174	0.00 (0.00)
174	50.00 - 100.00% of mass 95	62.30
175	5.00 - 9.00% of mass 174	4.58 (7.35)
176	95.00 - 101.00% of mass 174	60.56 (97.19)
177	5.00 - 9.00% of mass 176	4.14 (6.83)

Data File: /chem/H.i/010704.b/h0001.d

Date : 07-JAN-2004 10:44

Client ID: BFB

Instrument: H.i

Sample Info: BFB,,MSVOA-237-03

Volume Injected (uL): 1.0

Operator: mhoffman

Column phase: DB624

Column diameter: 0.53

Data File: h0001.d
Spectrum: Scan 134 (2.43)
Location of Maximum: 94.95
Number of points: 129

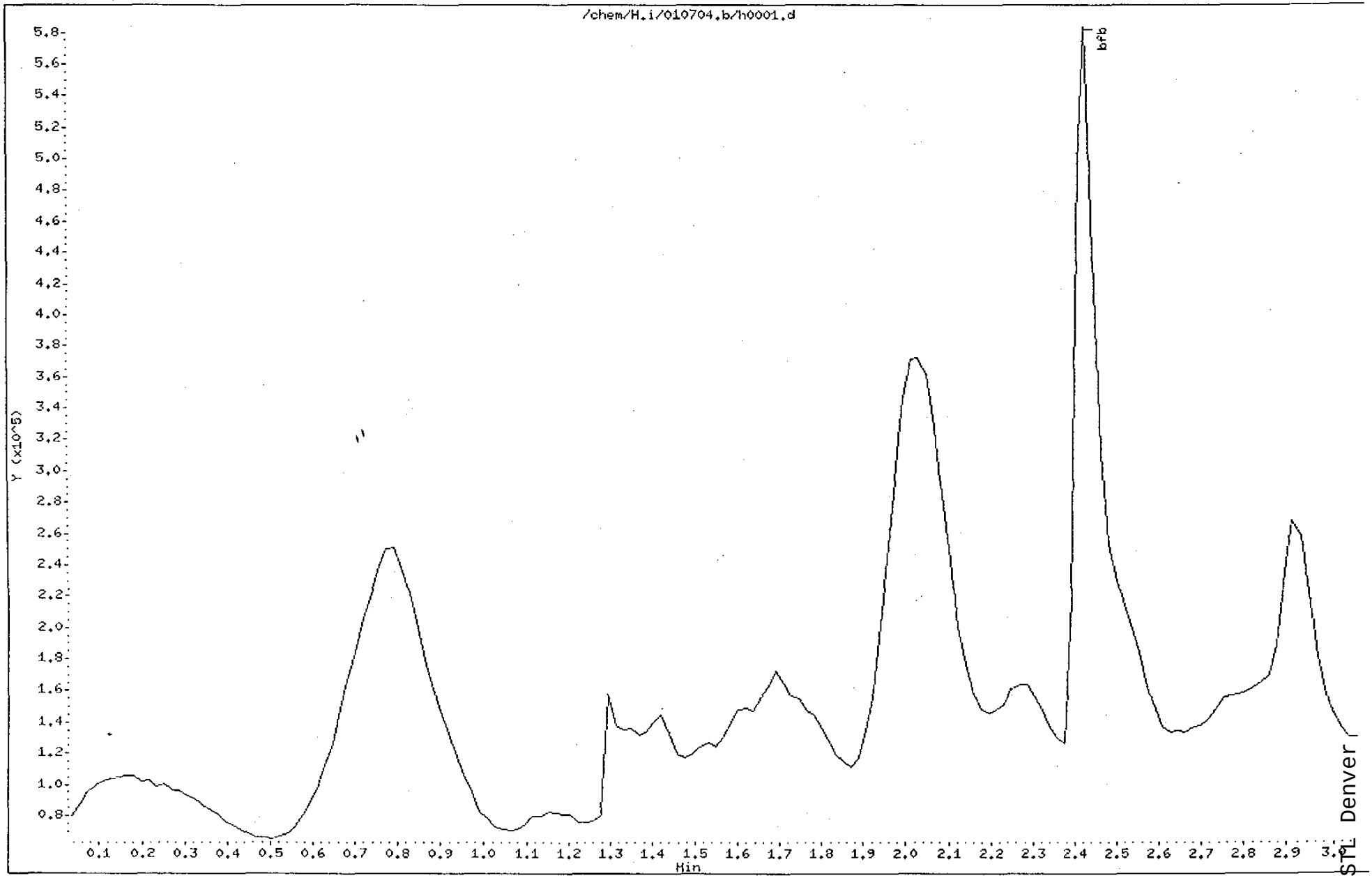
m/z	Y	m/z	Y	m/z	Y	m/z	Y
35.95	1248	69.95	3584	106.90	322	151.95	213
36.95	5829	71.00	9297	108.90	362	153.95	219
37.95	4459	72.00	1155	110.00	343	155.00	729
39.05	2752	73.00	6625	111.00	948	155.90	246
39.95	1323	74.00	14880	112.10	606	156.90	204
40.95	5447	75.00	48128	113.05	1663	160.90	326
42.05	1392	76.00	4160	113.95	518	162.90	521
43.10	10761	77.00	1266	114.85	455	163.90	225
44.00	4478	77.90	809	115.85	440	165.00	318
45.00	1582	78.90	2688	116.85	651	169.05	426
47.00	1864	80.00	721	117.95	296	173.85	67304
47.90	717	80.90	3328	118.85	1486	174.85	4946
48.90	3860	81.90	1117	121.05	264	175.85	65416
50.00	19096	82.90	1543	125.05	481	176.85	4470
51.00	6047	84.00	1549	126.05	474	177.85	273
51.90	363	85.05	6441	127.00	1121	178.85	297
53.00	497	85.95	520	128.00	511	190.90	906
54.00	305	86.95	5193	129.90	319	192.00	245
55.00	4576	87.85	4996	130.90	2578	193.00	559
56.00	3055	90.95	1480	133.00	1483	194.80	211
57.05	12795	91.95	2954	134.00	307	206.95	6774
58.05	618	92.95	4096	134.90	645	207.95	1361
58.85	312	93.95	10865	137.00	346	208.95	878
59.95	1092	94.95	108024	139.50	371	211.10	259
60.95	4544	95.95	8956	140.95	1132	218.90	2280
61.95	3804	96.85	1229	141.85	207	253.05	531
62.95	2850	97.85	404	142.85	733	263.95	346
64.05	299	99.00	1851	145.85	278	269.10	1284
64.85	313	100.00	1054	146.95	847	270.00	274
65.95	216	102.90	471	147.85	366	281.05	815
66.95	1215	103.90	584	148.85	324		
67.95	10080	105.00	536	149.85	354		
68.95	20968	105.90	406	150.85	204		

Data File: /chem/H.i/010704.b/h0001.d
Date : 07-JAN-2004 10:44
Client ID: BFB
Sample Info: BFB,,MSVOA-237-03
Volume Injected (uL): 1.0
Column phase: DB624

Page 1

Instrument: H.i

Operator: mhoffman
Column diameter: 0.53



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Data File: /chem/H.i/010704.b/h0009.d
Report Date: 08-Jan-2004 16:03

STL Denver

VOLATILE REPORT SW-846

Data file : /chem/H.i/010704.b/h0009.d
Lab Smp Id: SUPP001 Client Smp ID: SUPP001
Inj Date : 07-JAN-2004 13:31
Operator : hoffmanm Inst ID: H.i
Smp Info : SUPP001,,
Misc Info :
Comment : Purge and Trap Analysis
Method : /chem/H.i/010704.b/H-20ml-h2o.m
Meth Date : 08-Jan-2004 10:26 hoffmanm Quant Type: ISTD
Cal Date : 07-JAN-2004 13:31 Cal File: h0009.d
Als bottle: 2 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 2-supp.sub
Target Version: 3.40
Processing Host: chemsv02

Concentration Formula: Amt * DF * Vp/Vs

Name	Value	Description
DF	1.000	Dilution Factor
Vp	20.000	Purge Volume (ml)
Vs	20.000	Sample Volume (ml)

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
* 48 Fluorobenzene	96	6.380	6.396	(1.000)	2280273	12.5000	
* 72 Chlorobenzene-d5	119	10.046	10.079	(1.000)	432362	12.5000	
* 96 1,4-Dichlorobenzene-d4	152	12.957	12.972	(1.000)	710357	12.5000	
$ 40 Dibromofluoromethane	111	5.572	5.587	(0.873)	89168	1.00000	1.19318
$ 44 1,2-Dichloroethane-d4	65	5.985	6.001	(0.938)	39902	1.00000	1.19772
$ 61 Toluene-d8	98	8.285	8.301	(0.825)	168028	1.00000	1.21916
$ 82 Bromofluorobenzene	95	11.555	11.571	(1.150)	90784	1.00000	1.20193
117 Dichlorotetrafluoroethane	85	1.996	1.993	(0.313)	118138	1.00000	1.08646(a)
6 Ethylene Oxide	43.00	Compound Not Detected.					
9 Dichlorofluoromethane	67	2.679	2.676	(0.420)	109039	1.00000	1.07842
12 Ethyl Ether	59	2.912	2.928	(0.456)	26752	1.00000	1.15618(a)
16 Trichlorotrifluoroethane	151	3.200	3.215	(0.501)	84772	1.00000	1.20982
18 Carbon Disulfide	76	3.469	3.467	(0.544)	201822	1.00000	1.17506
20 Allyl Chloride	41	3.487	3.485	(0.547)	95505	1.00000	1.16318(a)
119 Methyl Acetate	43	3.487	3.503	(0.547)	77718	5.00000	5.78194
25 Methyl t-butyl ether	73	3.900	3.916	(0.611)	85772	1.00000	1.14251(a)

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
26 Hexane	57	4.170	4.186	(0.415)	98930	1.00000	1.21579
29 Vinyl acetate	43	4.386	4.401	(0.687)	115632	2.00000	2.42446
35 Ethyl Acetate	43.00	Compound Not Detected.					
39 Tetrahydrofuran	42	5.374	5.390	(0.842)	10041	2.00000	2.54233(a)
120 ETBE	59	4.835	4.851	(0.758)	777641	5.00000	6.01331
114 Cyclohexane	56	5.697	5.713	(0.893)	105983	1.00000	1.24409(a)
115 2-Pentanone	43	7.027	7.043	(1.101)	67179	4.00000	4.81410
121 TAME	73	6.183	6.198	(0.969)	577459	5.00000	5.80029
54 Methyl Methacrylate	100	7.225	7.240	(1.132)	14644	2.00000	2.43861
122 Methyl Cyclohexane	55	7.063	7.079	(1.107)	99449	1.00000	1.25484
57 2-nitropropane	41.00	Compound Not Detected.					
113 2-Chloroethyl vinyl ether	63	7.764	7.797	(0.773)	15970	1.00000	1.21006(a)
64 Ethyl methacrylate	69	8.734	8.750	(0.869)	88150	2.00000	2.54861
116 cis-1,4-Dichloro-2-butene	53	11.429	11.463	(0.882)	7235	1.00000	1.19810
86 t-1,4-Dichloro-2-butene	53	11.807	11.822	(0.911)	6114	1.00000	1.12136
118 1,2,3-Trimethylbenzene	105	13.029	13.062	(2.042)	166750	1.00000	1.29886(a)
123 1,2-dichloro-1,1,2-triflourom	117	2.966	3.000	(0.465)	88456	1.00000	1.20948(a)
124 2,2-dichloro-1,1,1-trifluorom	83	3.020	3.036	(0.473)	150201	1.00000	1.19610(a)
125 2-Propanol	45	3.308	3.323	(0.518)	21841	20.0000	26.7465
126 Tetrahydrothiophene	60.00	Compound Not Detected.					

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

Data File: /chem/H.i/010704.b/h0009.d
Report Date: 08-Jan-2004 16:03

STL Denver

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: H.i
Lab File ID: h0009.d
Lab Smp Id: SUPP001
Analysis Type: VOA
Quant Type: ISTD
Operator: hoffmanm
Method File: /chem/H.i/010704.b/H-20ml-h2o.m
Misc Info:

Calibration Date: JAN/07/4
Calibration Time: 1439
Client Smp ID: SUPP001
Level: LOW
Sample Type: WATER

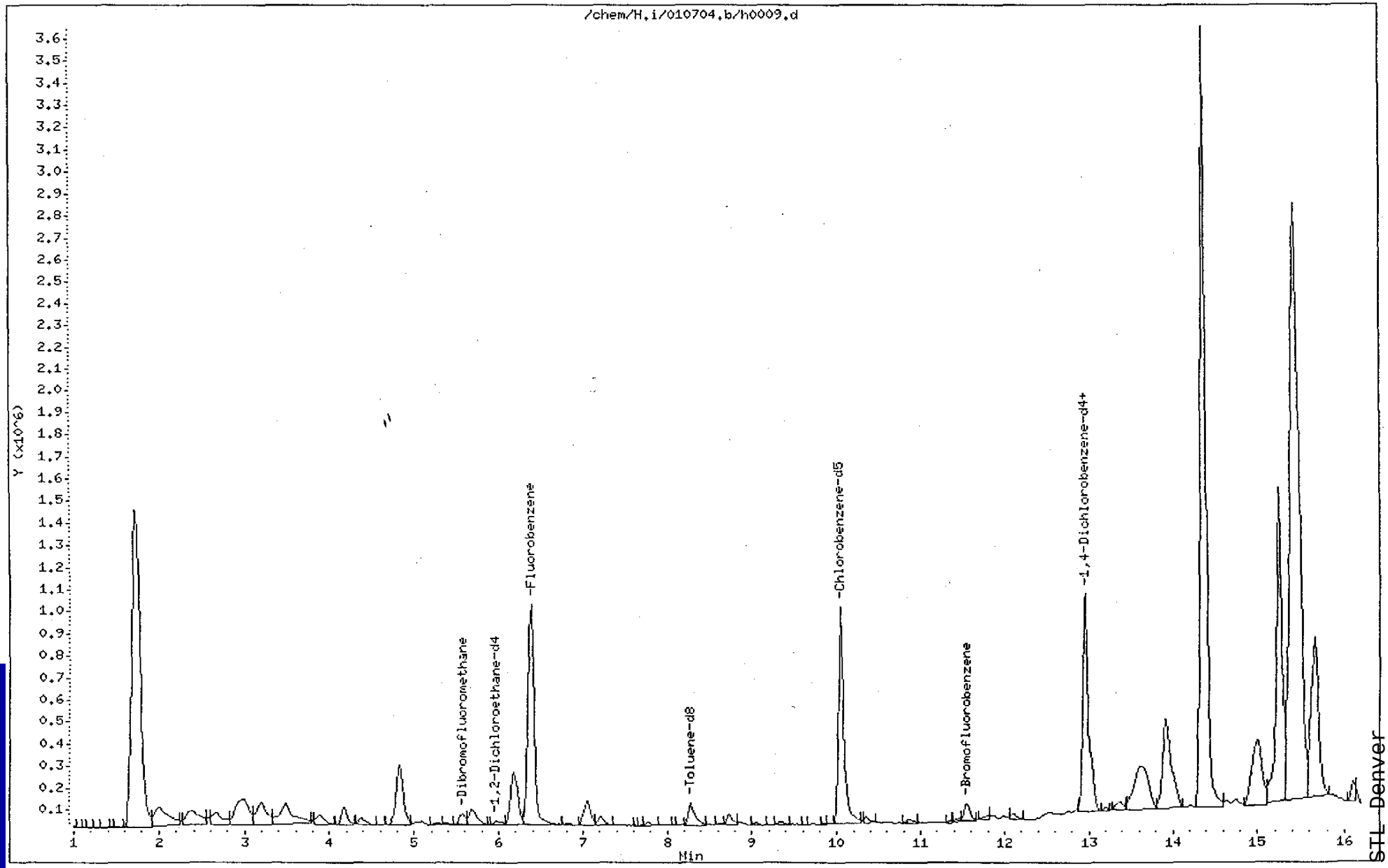
COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
48 Fluorobenzene	2399820	1199910	4799640	2280273	-4.98
72 Chlorobenzene-d5	457381	228690	914762	432362	-5.47
96 1,4-Dichlorobenze	747017	373508	1494034	710357	-4.91

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
48 Fluorobenzene	6.39	5.89	6.89	6.38	-0.23
72 Chlorobenzene-d5	10.06	9.56	10.56	10.05	-0.15
96 1,4-Dichlorobenze	12.97	12.47	13.47	12.96	-0.11

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem/H.i/010704.b/h0009.d
Date : 07-JAN-2004 13:31
Client ID: SUPP001
Sample Info: SUPP001,,
Purge Volume: 20.0
Column phase: DB624

Instrument: H.i
Operator: hoffmanm
Column diameter: 0.53



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Data File: /chem/H.i/010704.b/h0010.d
Report Date: 08-Jan-2004 16:03

STL Denver

VOLATILE REPORT SW-846

Data file : /chem/H.i/010704.b/h0010.d
Lab Smp Id: SUPP002 Client Smp ID: SUPP002
Inj Date : 07-JAN-2004 13:54
Operator : hoffmanm Inst ID: H.i
Smp Info : SUPP002,,
Misc Info :
Comment : Purge and Trap Analysis
Method : /chem/H.i/010704.b/H-20ml-h2o.m
Meth Date : 08-Jan-2004 10:26 hoffmanm Quant Type: ISTD
Cal Date : 07-JAN-2004 13:31 Cal File: h0009.d
Als bottle: 2 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 2-supp.sub
Target Version: 3.40
Processing Host: chemsv02

Concentration Formula: Amt * DF * Vp/Vs

Name	Value	Description
DF	1.000	Dilution Factor
Vp	20.000	Purge Volume (ml)
Vs	20.000	Sample Volume (ml)

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
* 48 Fluorobenzene	96	6.380	6.396	(1.000)	2296170	12.5000	
* 72 Chlorobenzene-d5	119	10.046	10.079	(1.000)	436136	12.5000	
* 96 1,4-Dichlorobenzene-d4	152	12.957	12.972	(1.000)	692592	12.5000	
$ 40 Dibromofluoromethane	111	5.572	5.587	(0.873)	178219	2.00000	2.27836
$ 44 1,2-Dichloroethane-d4	65	5.967	6.001	(0.935)	81778	2.00000	2.34253
$ 61 Toluene-d8	98	8.285	8.301	(0.825)	335134	2.00000	2.31747
$ 82 Bromofluorobenzene	95	11.555	11.571	(1.150)	180712	2.00000	2.28163
117 Dichlorotetrafluoroethane	85	1.996	1.993	(0.313)	271593	2.00000	2.38195(a)
6 Ethylene Oxide	43	2.355	2.353	(0.369)	187866	250.000	281.925
9 Dichlorofluoromethane	67	2.661	2.676	(0.417)	230335	2.00000	2.18010
12 Ethyl Ether	59	2.912	2.928	(0.456)	57004	2.00000	2.35072
16 Trichlorotrifluoroethane	151	3.200	3.215	(0.502)	171605	2.00000	2.33736
18 Carbon Disulfide	76	3.469	3.467	(0.544)	429229	2.00000	2.38321
20 Allyl Chloride	41	3.487	3.485	(0.547)	209609	2.00000	2.43242
119 Methyl Acetate	43	3.487	3.503	(0.547)	170561	10.0000	12.0933
25 Methyl t-butyl ether	73	3.901	3.916	(0.611)	184241	2.00000	2.34202(a)

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
26 Hexane	57	4.170	4.186	(0.415)	199047	2.00000	2.33080
29 Vinyl acetate	43	4.386	4.401	(0.687)	217330	4.00000	4.36077
35 Ethyl Acetate	43	5.087	5.102	(0.797)	97431	4.00000	5.05948
39 Tetrahydrofuran	42	5.356	5.390	(0.839)	18719	4.00000	4.52910(a)
120 ETBE	59	4.835	4.851	(0.758)	1592104	10.0000	11.7474
114 Cyclohexane	56	5.680	5.713	(0.890)	208747	2.00000	2.33858(a)
115 2-Pentanone	43	7.027	7.043	(1.101)	131607	8.00000	9.01400
121 TAME	73	6.183	6.198	(0.969)	1187684	10.0000	11.3970
54 Methyl Methacrylate	100	7.225	7.240	(1.132)	27817	4.00000	4.43035
122 Methyl Cyclohexane	55	7.063	7.079	(1.107)	193445	2.00000	2.32985
57 2-nitropropane	41	7.674	7.690	(0.764)	9221	2.00000	2.04516
113 2-Chloroethyl vinyl ether	63	7.764	7.797	(0.773)	30392	2.00000	2.19923(a)
64 Ethyl methacrylate	69	8.734	8.750	(0.869)	162337	4.00000	4.47922
116 cis-1,4-Dichloro-2-butene	53	11.430	11.463	(0.882)	13111	2.00000	2.14715
86 t-1,4-Dichloro-2-butene	53	11.789	11.822	(0.910)	12107	2.00000	2.19420
118 1,2,3-Trimethylbenzene	105	13.029	13.062	(2.042)	309595	2.00000	2.30290(a)
123 1,2-dichloro-1,1,2-triflourom	117	2.984	3.000	(0.468)	177606	2.00000	2.31844(a)
124 2,2-dichloro-1,1,1-trifluorom	83	3.020	3.036	(0.473)	306764	2.00000	2.33168(a)
125 2-Propanol	45	3.290	3.323	(0.516)	42670	40.0000	49.7410
126 Tetrahydrothiophene	60	9.327	9.343	(0.928)	24758	2.00000	2.44045(a)

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

Data File: /chem/H.i/010704.b/h0010.d
Report Date: 08-Jan-2004 16:03

STL Denver

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: H.i
Lab File ID: h0010.d
Lab Smp Id: SUPP002
Analysis Type: VOA
Quant Type: ISTD
Operator: hoffmanm
Method File: /chem/H.i/010704.b/H-20ml-h2o.m
Misc Info:

Calibration Date: JAN/07/4
Calibration Time: 1439
Client Smp ID: SUPP002
Level: LOW
Sample Type: WATER

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
48 Fluorobenzene	2399820	1199910	4799640	2296170	-4.32
72 Chlorobenzene-d5	457381	228690	914762	436136	-4.64
96 1,4-Dichlorobenze	747017	373508	1494034	692592	-7.29

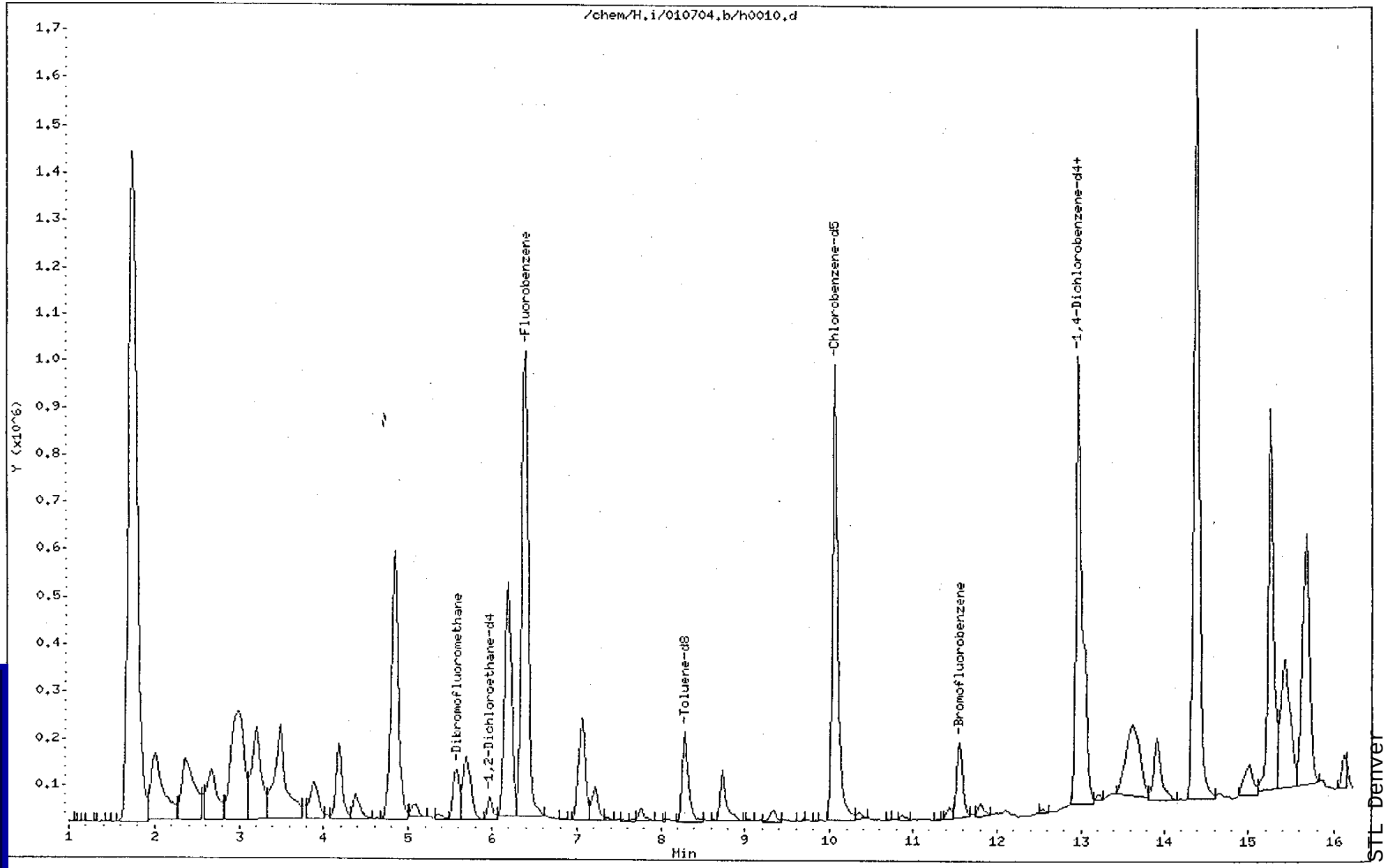
COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
48 Fluorobenzene	6.39	5.89	6.89	6.38	-0.23
72 Chlorobenzene-d5	10.06	9.56	10.56	10.05	-0.14
96 1,4-Dichlorobenze	12.97	12.47	13.47	12.96	-0.11

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem/H.i/010704.b/h0010.d
Date : 07-JAN-2004 13:54
Client ID: SUPP002
Sample Info: SUPP002,,
Purge Volume: 20.0
Column phase: DB624

Instrument: H.i

Operator: hoffmanm
Column diameter: 0.53



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Report Date: 08-Jan-2004 16:03

STL Denver

VOLATILE REPORT SW-846

Data file : /chem/H.i/010704.b/h0011.d
Lab Smp Id: SUPP005 Client Smp ID: SUPP005
Inj Date : 07-JAN-2004 14:16
Operator : hoffmanm Inst ID: H.i
Smp Info : SUPP005,,
Misc Info :
Comment : Purge and Trap Analysis
Method : /chem/H.i/010704.b/H-20ml-h2o.m
Meth Date : 08-Jan-2004 10:26 hoffmanm Quant Type: ISTD
Cal Date : 07-JAN-2004 13:31 Cal File: h0009.d
Als bottle: 2 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 2-supp.sub
Target Version: 3.40
Processing Host: chemsv02

Concentration Formula: Amt * DF * Vp/Vs

Name	Value	Description
DF	1.000	Dilution Factor
Vp	20.000	Purge Volume (ml)
Vs	20.000	Sample Volume (ml)

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	ON-COL (ug/L)
* 48 Fluorobenzene	96	6.377	6.396	(1.000)	2310884	12.5000	
* 72 Chlorobenzene-d5	119	10.060	10.079	(1.000)	436818	12.5000	
* 96 1,4-Dichlorobenzene-d4	152	12.953	12.972	(1.000)	690442	12.5000	
$ 40 Dibromofluoromethane	111	5.568	5.587	(0.873)	456204	5.00000	5.57943
$ 44 1,2-Dichloroethane-d4	65	5.982	6.001	(0.938)	202395	5.00000	5.54763
$ 61 Toluene-d8	98	8.300	8.301	(0.825)	846173	5.00000	5.62319
$ 82 Bromofluorobenzene	95	11.570	11.571	(1.150)	465151	5.00000	5.64313
117 Dichlorotetrafluoroethane	85	2.010	1.993	(0.315)	726651	5.00000	6.07587
6 Ethylene Oxide	43	2.352	2.353	(0.369)	525564	625.000	746.249
9 Dichlorofluoromethane	67	2.675	2.676	(0.420)	638988	5.00000	5.77797
12 Ethyl Ether	59	2.909	2.928	(0.456)	145522	5.00000	5.73484
16 Trichlorotrifluoroethane	151	3.214	3.215	(0.504)	457079	5.00000	5.94104
18 Carbon Disulfide	76	3.466	3.467	(0.543)	1110260	5.00000	5.88494
20 Allyl Chloride	41	3.484	3.485	(0.546)	517481	5.00000	5.73864
119 Methyl Acetate	43	3.502	3.503	(0.549)	410871	25.0000	27.8708
25 Methyl t-butyl ether	73	3.897	3.916	(0.611)	466929	5.00000	5.67457

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
26 Hexane	57	4.185	4.186	(0.416)	529844	5.00000	5.94901
29 Vinyl acetate	43	4.382	4.401	(0.687)	588885	10.0000	11.2987
35 Ethyl Acetate	43	5.083	5.102	(0.797)	226152	10.0000	11.1486
39 Tetrahydrofuran	42	5.371	5.390	(0.842)	49047	10.0000	11.3455
120 ETBE	59	4.832	4.851	(0.758)	3957455	25.0000	27.9336
114 Cyclohexane	56	5.694	5.713	(0.893)	559525	5.00000	5.98010
115 2-Pentanone	43	7.024	7.043	(1.101)	333350	20.0000	21.8598
121 TAME	73	6.179	6.198	(0.969)	3102196	25.0000	28.4569
54 Methyl Methacrylate	100	7.221	7.240	(1.132)	75849	10.0000	11.5416
122 Methyl Cyclohexane	55	7.060	7.079	(1.107)	524800	5.00000	6.02805
57 2-nitropropane	41	7.689	7.690	(0.764)	28454	5.00000	5.99867
113 2-Chloroethyl vinyl ether	63	7.778	7.797	(0.773)	75608	5.00000	5.27067(a)
64 Ethyl methacrylate	69	8.749	8.750	(0.870)	407785	10.0000	10.8286
116 cis-1,4-Dichloro-2-butene	53	11.444	11.463	(0.883)	37272	5.00000	5.88280
86 t-1,4-Dichloro-2-butene	53	11.821	11.822	(0.913)	30896	5.00000	5.41410
118 1,2,3-Trimethylbenzene	105	13.043	13.062	(2.045)	813186	5.00000	5.77877
123 1,2-dichloro-1,1,2-triflourom	117	2.981	3.000	(0.467)	471787	5.00000	5.87956
124 2,2-dichloro-1,1,1-trifluorom	83	3.035	3.036	(0.476)	811009	5.00000	5.88485
125 2-Propanol	45	3.304	3.323	(0.518)	102431	100.000	114.131
126 Tetrahydrothiophene	60	9.342	9.343	(0.929)	59249	5.00000	5.57129

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

Data File: /chem/H.i/010704.b/h0011.d
Report Date: 08-Jan-2004 16:03

STL Denver

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: H.i
Lab File ID: h0011.d
Lab Smp Id: SUPP005
Analysis Type: VOA
Quant Type: ISTD
Operator: hoffmanm
Method File: /chem/H.i/010704.b/H-20ml-h2o.m
Misc Info:

Calibration Date: JAN/07/4
Calibration Time: 1439
Client Smp ID: SUPP005
Level: LOW
Sample Type: WATER

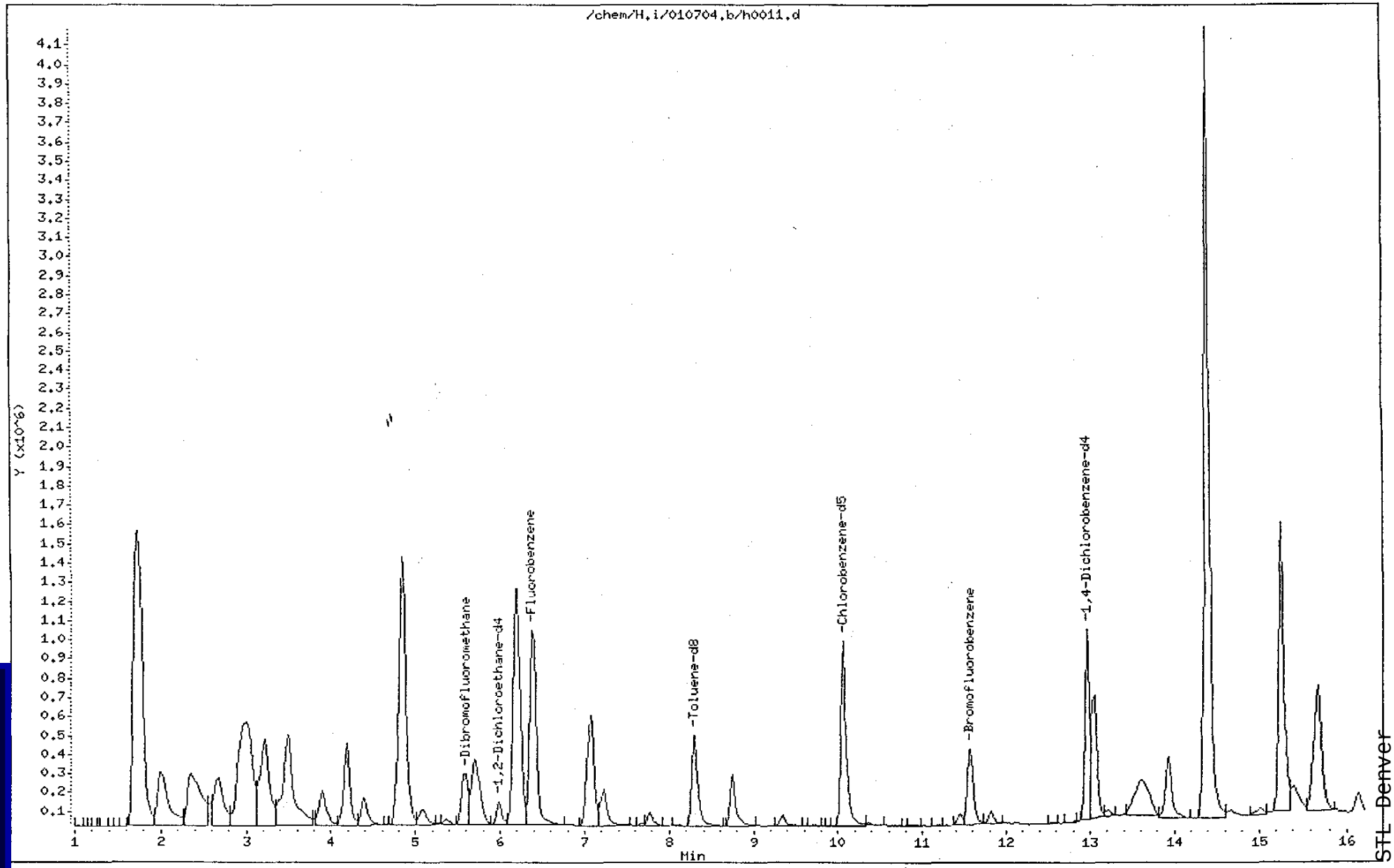
COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
48 Fluorobenzene	2399820	1199910	4799640	2310884	-3.71
72 Chlorobenzene-d5	457381	228690	914762	436818	-4.50
96 1,4-Dichlorobenze	747017	373508	1494034	690442	-7.57

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
48 Fluorobenzene	6.39	5.89	6.89	6.38	-0.28
72 Chlorobenzene-d5	10.06	9.56	10.56	10.06	0.00
96 1,4-Dichlorobenze	12.97	12.47	13.47	12.95	-0.14

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem/H.i/010704.b/h0011.d
Date : 07-JAN-2004 14:16
Client ID: SUPP005
Sample Info: SUPP005,,
Purge Volume: 20.0
Column phase: DB624

Instrument: H.i
Operator: hoffmanm
Column diameter: 0.53



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Data File: /chem/H.i/010704.b/h0012.d
Report Date: 08-Jan-2004 16:03

STL Denver

VOLATILE REPORT SW-846

Data file : /chem/H.i/010704.b/h0012.d
Lab Smp Id: SUPP010 Client Smp ID: SUPP010
Inj Date : 07-JAN-2004 14:39
Operator : hoffmanm Inst ID: H.i
Smp Info : SUPP010,,
Misc Info :
Comment : Purge and Trap Analysis
Method : /chem/H.i/010704.b/H-20ml-h2o.m
Meth Date : 08-Jan-2004 10:26 hoffmanm Quant Type: ISTD
Cal Date : 07-JAN-2004 13:31 Cal File: h0009.d
Als bottle: 2 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 2-supp.sub
Target Version: 3.40
Processing Host: chemsv02

Concentration Formula: Amt * DF * Vp/Vs

Name	Value	Description
DF	1.000	Dilution Factor
Vp	20.000	Purge Volume (ml)
Vs	20.000	Sample Volume (ml)

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
* 48 Fluorobenzene	96	6.395	6.396	(1.000)	2399820	12.5000	
* 72 Chlorobenzene-d5	119	10.061	10.079	(1.000)	457381	12.5000	
* 96 1,4-Dichlorobenzene-d4	152	12.971	12.972	(1.000)	747017	12.5000	
$ 40 Dibromofluoromethane	111	5.586	5.587	(0.874)	955299	10.0000	10.8438
$ 44 1,2-Dichloroethane-d4	65	6.000	6.001	(0.938)	424678	10.0000	10.8053
$ 61 Toluene-d8	98	8.300	8.301	(0.825)	1743041	10.0000	10.6691
$ 82 Bromofluorobenzene	95	11.570	11.571	(1.150)	971126	10.0000	10.8451
117 Dichlorotetrafluoroethane	85	1.992	1.993	(0.312)	1367526	10.0000	10.6210
6 Ethylene Oxide	43	2.352	2.353	(0.368)	1003111	1250.00	1313.87
9 Dichlorofluoromethane	67	2.675	2.676	(0.418)	1256831	10.0000	10.5584
12 Ethyl Ether	59	2.927	2.928	(0.458)	277456	10.0000	10.1720
16 Trichlorotrifluoroethane	151	3.214	3.215	(0.503)	848111	10.0000	10.2523
18 Carbon Disulfide	76	3.466	3.467	(0.542)	2081390	10.0000	10.2602
20 Allyl Chloride	41	3.502	3.485	(0.548)	991413	10.0000	10.2260
119 Methyl Acetate	43	3.502	3.503	(0.548)	801807	50.0000	50.6068
25 Methyl t-butyl ether	73	3.915	3.916	(0.612)	903925	10.0000	10.2180

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
26 Hexane	57	4.185	4.186	(0.416)	983709	10.0000	10.1901
29 Vinyl acetate	43	4.400	4.401	(0.688)	1121648	20.0000	20.0312
35 Ethyl Acetate	43	5.101	5.102	(0.798)	445644	20.0000	20.2961
39 Tetrahydrofuran	42	5.371	5.390	(0.840)	93685	20.0000	20.1667
120 ETBE	59	4.850	4.851	(0.758)	7853444	50.0000	51.5447
114 Cyclohexane	56	5.712	5.713	(0.893)	1025949	10.0000	10.1998
115 2-Pentanone	43	7.042	7.043	(1.101)	681679	40.0000	41.5547
121 TAME	73	6.197	6.198	(0.969)	6061798	50.0000	51.6995
54 Methyl Methacrylate	100	7.239	7.240	(1.132)	142028	20.0000	20.1132
122 Methyl Cyclohexane	55	7.078	7.079	(1.107)	960975	10.0000	10.2654
57 2-nitropropane	41	7.689	7.690	(0.764)	54602	10.0000	10.5306
113 2-Chloroethyl vinyl ether	63	7.778	7.797	(0.773)	168888	10.0000	10.8378
64 Ethyl methacrylate	69	8.749	8.750	(0.870)	811930	20.0000	19.9080
116 cis-1,4-Dichloro-2-butene	53	11.444	11.463	(0.882)	72541	10.0000	10.2218
86 t-1,4-Dichloro-2-butene	53	11.821	11.822	(0.911)	67540	10.0000	10.5543
118 1,2,3-Trimethylbenzene	105	13.043	13.062	(2.040)	1553641	10.0000	10.2677
123 1,2-dichloro-1,1,2-triflourom	117	2.999	3.000	(0.469)	890781	10.0000	10.3220
124 2,2-dichloro-1,1,1-trifluorom	83	3.035	3.036	(0.475)	1522805	10.0000	10.2758
125 2-Propanol	45	3.304	3.323	(0.517)	179401	200.000	186.502
126 Tetrahydrothiophene	60	9.342	9.343	(0.929)	119052	10.0000	10.2529

Data File: /chem/H.i/010704.b/h0012.d
Report Date: 08-Jan-2004 16:03

STL Denver

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: H.i
Lab File ID: h0012.d
Lab Smp Id: SUPP010
Analysis Type: VOA
Quant Type: ISTD
Operator: hoffmanm
Method File: /chem/H.i/010704.b/H-20ml-h2o.m
Misc Info:

Calibration Date: JAN/07/4
Calibration Time: 1439
Client Smp ID: SUPP010
Level: LOW
Sample Type: WATER

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
48 Fluorobenzene	2399820	1199910	4799640	2399820	0.00
72 Chlorobenzene-d5	457381	228690	914762	457381	0.00
96 1,4-Dichlorobenze	747017	373508	1494034	747017	0.00

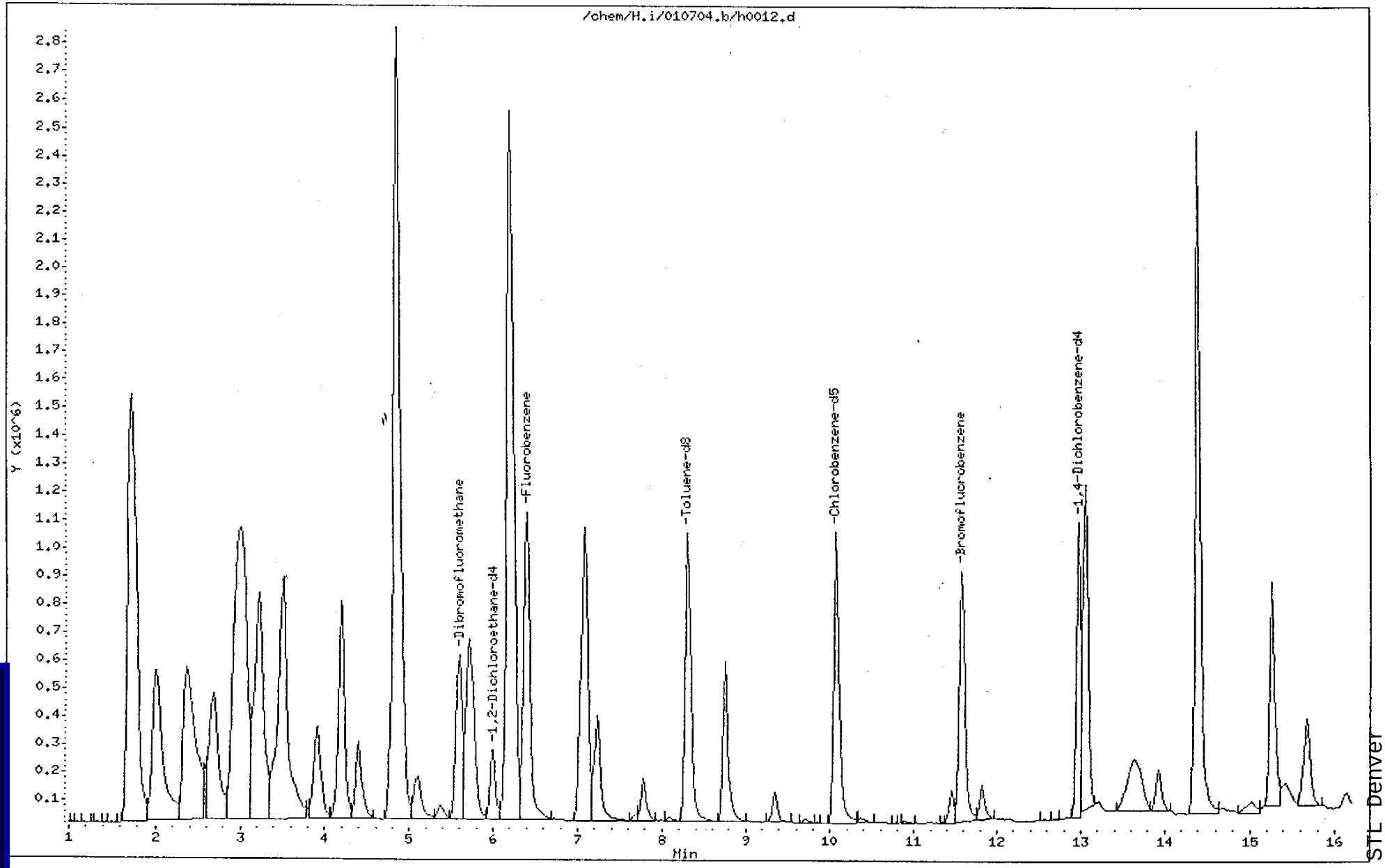
COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
48 Fluorobenzene	6.39	5.89	6.89	6.39	0.00
72 Chlorobenzene-d5	10.06	9.56	10.56	10.06	0.00
96 1,4-Dichlorobenze	12.97	12.47	13.47	12.97	0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem/H.i/010704.b/h0012.d
Date : 07-JAN-2004 14:39
Client ID: SUPP010
Sample Info: SUPP010,,,
Purge Volume: 20.0
Column phase: DB624

Instrument: H.i

Operator: hoffmanm
Column diameter: 0.53



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Data File: /chem/H.i/010704.b/h0013.d
Report Date: 08-Jan-2004 16:03

STL Denver

VOLATILE REPORT SW-846

Data file : /chem/H.i/010704.b/h0013.d
Lab Smp Id: SUPP030 Client Smp ID: SUPP030
Inj Date : 07-JAN-2004 15:01
Operator : hoffmanm Inst ID: H.i
Smp Info : SUPP030,,
Misc Info :
Comment : Purge and Trap Analysis
Method : /chem/H.i/010704.b/H-20ml-h2o.m
Meth Date : 08-Jan-2004 10:26 hoffmanm Quant Type: ISTD
Cal Date : 07-JAN-2004 13:31 Cal File: h0009.d
Als bottle: 2 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 2-supp.sub
Target Version: 3.40
Processing Host: chemsv02

Concentration Formula: Amt * DF * Vp/Vs

Name	Value	Description
DF	1.000	Dilution Factor
Vp	20.000	Purge Volume (ml)
Vs	20.000	Sample Volume (ml)

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
* 48 Fluorobenzene	96	6.398	6.396	(1.000)	2361581	12.5000	
* 72 Chlorobenzene-d5	119	10.064	10.079	(1.000)	440643	12.5000	
* 96 1,4-Dichlorobenzene-d4	152	12.975	12.972	(1.000)	696225	12.5000	
$ 40 Dibromofluoromethane	111	5.590	5.587	(0.874)	1858487	20.0000	20.6981
$ 44 1,2-Dichloroethane-d4	65	6.003	6.001	(0.938)	814857	20.0000	20.3538
$ 61 Toluene-d8	98	8.303	8.301	(0.825)	3265752	20.0000	20.0553
$ 82 Bromofluorobenzene	95	11.573	11.571	(1.150)	1809510	20.0000	20.2669
117 Dichlorotetrafluoroethane	85	1.996	1.993	(0.312)	4017111	30.0000	30.6254
6 Ethylene Oxide	43	2.355	2.353	(0.368)	3206595	3750.00	4082.15
9 Dichlorofluoromethane	67	2.679	2.676	(0.419)	4014980	30.0000	33.0178
12 Ethyl Ether	59	2.930	2.928	(0.458)	887491	30.0000	31.8920
16 Trichlorotrifluoroethane	151	3.218	3.215	(0.503)	2498216	30.0000	29.6765
18 Carbon Disulfide	76	3.487	3.467	(0.545)	6215058	30.0000	30.0923
20 Allyl Chloride	41	3.487	3.485	(0.545)	3049449	30.0000	30.8669
119 Methyl Acetate	43	3.505	3.503	(0.548)	2572739	150.000	159.173
25 Methyl t-butyl ether	73	3.919	3.916	(0.612)	2918965	30.0000	32.3259

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
26 Hexane	57	4.188	4.186	(0.416)	2802315	30.0000	29.1553
29 Vinyl acetate	43	4.404	4.401	(0.688)	3579262	60.0000	62.6936
35 Ethyl Acetate	43	5.105	5.102	(0.798)	1425273	60.0000	63.1842
39 Tetrahydrofuran	42	5.374	5.390	(0.840)	292568	60.0000	61.8007
120 ETBE	59	4.853	4.851	(0.758)	25108837	150.000	161.457
114 Cyclohexane	56	5.715	5.713	(0.893)	2933787	30.0000	28.6945
115 2-Pentanone	43	7.045	7.043	(1.101)	2152617	120.000	128.584
121 TAME	73	6.201	6.198	(0.969)	19323953	150.000	161.468
54 Methyl Methacrylate	100	7.243	7.240	(1.132)	467719	60.0000	64.8820
122 Methyl Cyclohexane	55	7.081	7.079	(1.107)	2689637	30.0000	28.2791
57 2-nitropropane	41	7.692	7.690	(0.764)	179832	30.0000	34.3511
113 2-Chloroethyl vinyl ether	63	7.782	7.797	(0.773)	507878	30.0000	32.6037
64 Ethyl methacrylate	69	8.752	8.750	(0.870)	2638128	60.0000	64.7278
116 cis-1,4-Dichloro-2-butene	53	11.448	11.463	(0.882)	223833	30.0000	32.6150
86 t-1,4-Dichloro-2-butene	53	11.825	11.822	(0.911)	209382	30.0000	33.7885
118 1,2,3-Trimethylbenzene	105	13.047	13.062	(2.039)	4432401	30.0000	28.8140
123 1,2-dichloro-1,1,2-triflourom	117	3.002	3.000	(0.469)	2655256	30.0000	30.2164
124 2,2-dichloro-1,1,1-trifluorom	83	3.038	3.036	(0.475)	4577845	30.0000	30.3333
125 2-Propanol	45	3.308	3.323	(0.517)	581591	600.000	594.122
126 Tetrahydrothiophene	60	9.345	9.343	(0.929)	373662	30.0000	31.9784

Data File: /chem/H.i/010704.b/h0013.d
Report Date: 08-Jan-2004 16:03

STL Denver

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: H.i
Lab File ID: h0013.d
Lab Smp Id: SUPP030
Analysis Type: VOA
Quant Type: ISTD
Operator: hoffmanm
Method File: /chem/H.i/010704.b/H-20ml-h2o.m
Misc Info:

Calibration Date: JAN/07/4
Calibration Time: 1439
Client Smp ID: SUPP030
Level: LOW
Sample Type: WATER

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
48 Fluorobenzene	2399820	1199910	4799640	2361581	-1.59
72 Chlorobenzene-d5	457381	228690	914762	440643	-3.66
96 1,4-Dichlorobenze	747017	373508	1494034	696225	-6.80

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
48 Fluorobenzene	6.39	5.89	6.89	6.40	0.05
72 Chlorobenzene-d5	10.06	9.56	10.56	10.06	0.03
96 1,4-Dichlorobenze	12.97	12.47	13.47	12.97	0.03

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem/H.i/010704.b/h0013.d
Date : 07-JAN-2004 15:01
Client ID: SUPP030
Sample Info: SUPP030,,
Purge Volume: 20.0
Column phase: DB624

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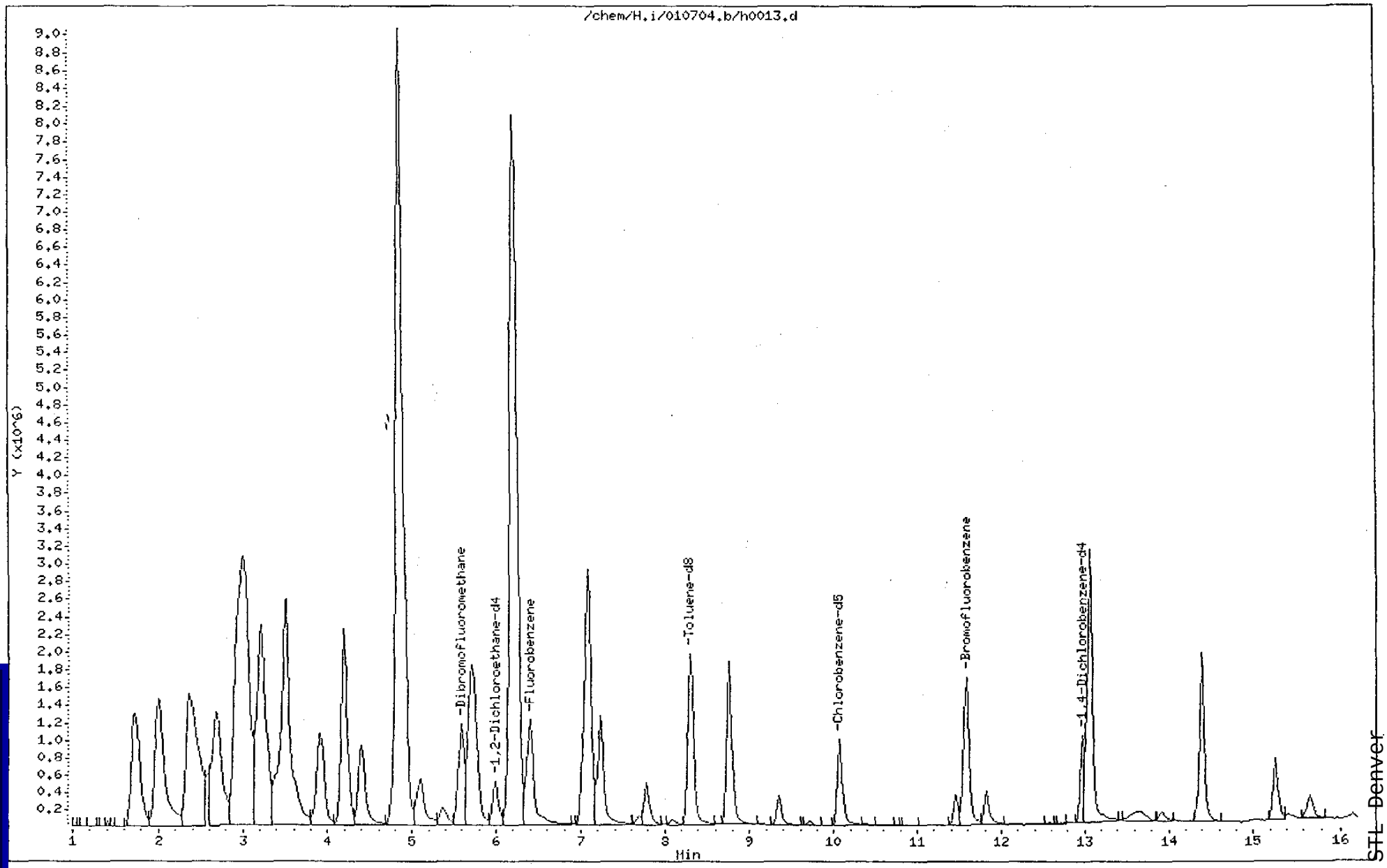
Instrument: H.i

Operator: hoffmanm
Column diameter: 0.53



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Data File: /chem/H.i/010704.b/h0014.d
Report Date: 08-Jan-2004 16:03

STL Denver

VOLATILE REPORT SW-846

Data file : /chem/H.i/010704.b/h0014.d
Lab Smp Id: SUPP060 Client Smp ID: SUPP060
Inj Date : 07-JAN-2004 15:24
Operator : hoffmanm Inst ID: H.i
Smp Info : SUPP060,,
Misc Info :
Comment : Purge and Trap Analysis
Method : /chem/H.i/010704.b/H-20ml-h2o.m
Meth Date : 08-Jan-2004 10:26 hoffmanm Quant Type: ISTD
Cal Date : 07-JAN-2004 15:24 Cal File: h0014.d
Als bottle: 2 Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 2-supp.sub
Target Version: 3.40
Processing Host: chemsv02

Concentration Formula: Amt * DF * Vp/Vs

Name	Value	Description
DF	1.000	Dilution Factor
Vp	20.000	Purge Volume (ml)
Vs	20.000	Sample Volume (ml)

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	ON-COL (ug/L)
* 48 Fluorobenzene	96	6.396	6.396	(1.000)	2376718	12.5000	
* 72 Chlorobenzene-d5	119	10.079	10.079	(1.000)	438659	12.5000	
* 96 1,4-Dichlorobenzene-d4	152	12.972	12.972	(1.000)	682461	12.5000	
$ 40 Dibromofluoromethane	111	5.587	5.587	(0.874)	2814332	30.0000	30.1022
$ 44 1,2-Dichloroethane-d4	65	6.001	6.001	(0.938)	1242727	30.0000	29.8216
$ 61 Toluene-d8	98	8.301	8.301	(0.824)	5022867	30.0000	29.9542
$ 82 Bromofluorobenzene	95	11.571	11.571	(1.148)	2762992	30.0000	30.0482
117 Dichlorotetrafluoroethane	85	1.993	1.993	(0.312)	8152179	60.0000	59.7059
6 Ethylene Oxide	43	2.353	2.353	(0.368)	6138179	7500.00	7455.68
9 Dichlorofluoromethane	67	2.676	2.676	(0.418)	8311395	60.0000	65.4454(A)
12 Ethyl Ether	59	2.928	2.928	(0.458)	1760116	60.0000	60.7267(A)
16 Trichlorotrifluoroethane	151	3.215	3.215	(0.503)	5200078	60.0000	59.3548
18 Carbon Disulfide	76	3.467	3.467	(0.542)	12872280	60.0000	59.8688
20 Allyl Chloride	41	3.485	3.485	(0.545)	6120276	60.0000	59.5202
119 Methyl Acetate	43	3.503	3.503	(0.548)	5136965	300.000	305.091(A)
25 Methyl t-butyl ether	73	3.916	3.916	(0.612)	5776357	60.0000	61.3945(A)

Data File: /chem/H.i/010704.b/h0014.d
Report Date: 08-Jan-2004 16:03

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
26 Hexane	57	4.186	4.186	(0.415)	5991352	60.0000	60.5110(A)
29 Vinyl acetate	43	4.401	4.401	(0.688)	7814744	120.000	131.058(A)
35 Ethyl Acetate	43	5.102	5.102	(0.798)	2859583	120.000	120.886(A)
39 Tetrahydrofuran	42	5.390	5.390	(0.843)	587798	120.000	119.285
120 ETBE	59	4.851	4.851	(0.758)	46999181	300.000	290.598
114 Cyclohexane	56	5.713	5.713	(0.893)	6282388	60.0000	59.0518
115 2-Pentanone	43	7.043	7.043	(1.101)	4344807	240.000	248.962(A)
121 TAME	73	6.198	6.198	(0.969)	38252448	300.000	306.771(A)
54 Methyl Methacrylate	100	7.240	7.240	(1.132)	903093	120.000	120.319(A)
122 Methyl Cyclohexane	55	7.079	7.079	(1.107)	5789775	60.0000	58.5201
57 2-nitropropane	41	7.690	7.690	(0.763)	337623	60.0000	62.1016(A)
113 2-Chloroethyl vinyl ether	63	7.797	7.797	(0.774)	999060	60.0000	62.1993(A)
64 Ethyl methacrylate	69	8.750	8.750	(0.868)	5137568	120.000	122.321(A)
116 cis-1,4-Dichloro-2-butene	53	11.463	11.463	(0.884)	423282	60.0000	60.7957(A)
86 t-1,4-Dichloro-2-butene	53	11.822	11.822	(0.911)	411574	60.0000	65.2982(A)
118 1,2,3-Trimethylbenzene	105	13.062	13.062	(2.042)	9376462	60.0000	58.5945
123 1,2-dichloro-1,1,2-triflourom	117	3.000	3.000	(0.469)	5412690	60.0000	59.1908
124 2,2-dichloro-1,1,1-trifluorom	83	3.036	3.036	(0.475)	9358961	60.0000	59.5790
125 2-Propanol	45	3.323	3.323	(0.520)	1126943	1200.00	1108.66
126 Tetrahydrothiophene	60	9.343	9.343	(0.927)	749512	60.0000	61.7803(A)

QC Flag Legend

A - Target compound detected but, quantitated amount exceeded maximum amount.

Data File: /chem/H.i/010704.b/h0014.d
Report Date: 08-Jan-2004 16:03

STL Denver

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: H.i
Lab File ID: h0014.d
Lab Smp Id: SUPP060
Analysis Type: VOA
Quant Type: ISTD
Operator: hoffmanm
Method File: /chem/H.i/010704.b/H-20ml-h2o.m
Misc Info:

Calibration Date: JAN/07/4
Calibration Time: 1439
Client Smp ID: SUPP060
Level: LOW
Sample Type: WATER

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
48 Fluorobenzene	2399820	1199910	4799640	2376718	-0.96
72 Chlorobenzene-d5	457381	228690	914762	438659	-4.09
96 1,4-Dichlorobenze	747017	373508	1494034	682461	-8.64

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
48 Fluorobenzene	6.39	5.89	6.89	6.40	0.02
72 Chlorobenzene-d5	10.06	9.56	10.56	10.08	0.19
96 1,4-Dichlorobenze	12.97	12.47	13.47	12.97	0.01

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem/H.i/010704.b/h0014.d
Date : 07-JAN-2004 15:24
Client ID: SUPP060
Sample Info: SUPP060,,
Purge Volume: 20.0
Column phase: DB624

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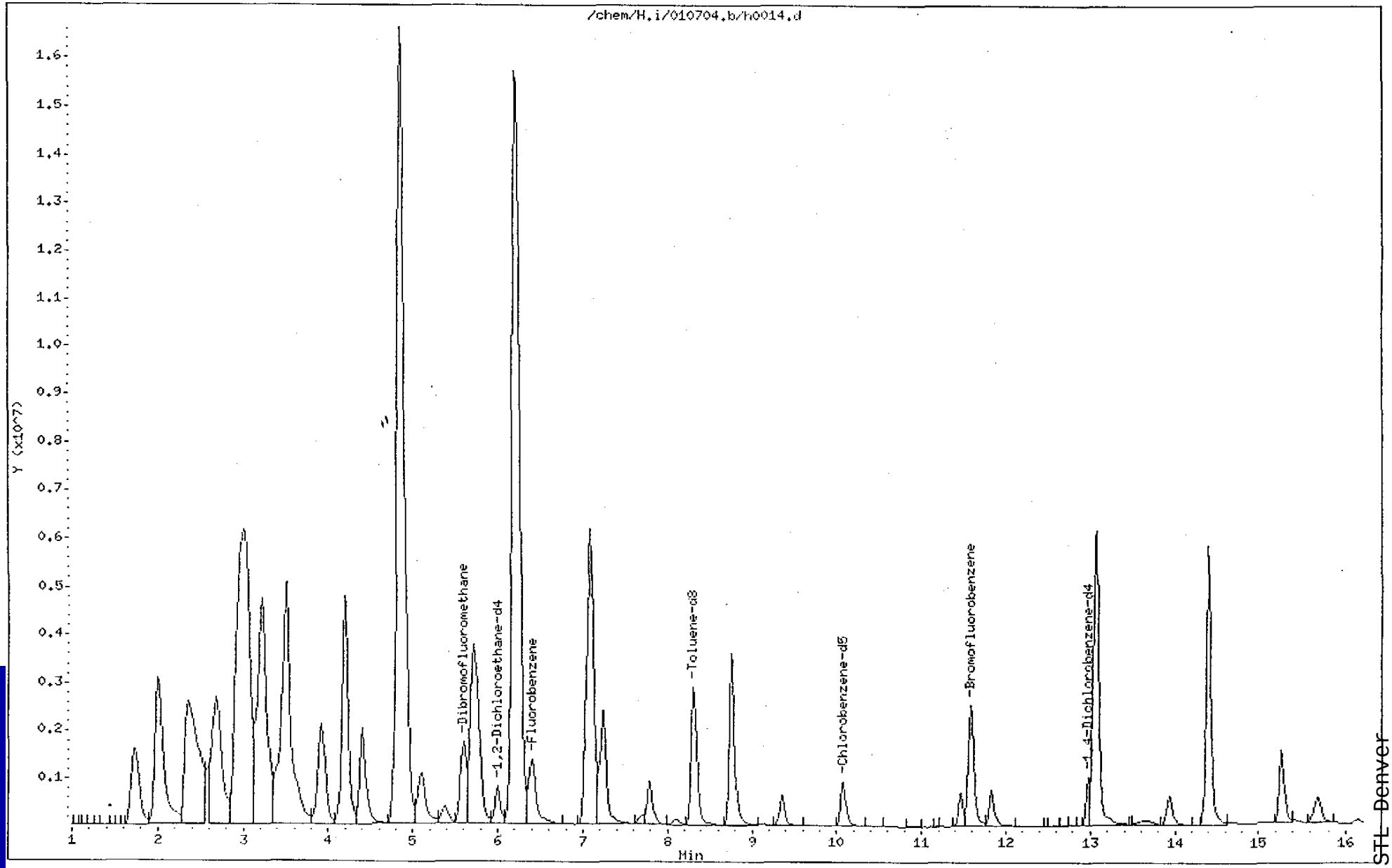
Instrument: H.i

Operator: hoffmann
Column diameter: 0.53



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GC/MS Continuing Calibration Review Checklist *STL Denver*

Instrument ID and Date: Inst. H 2/23/04

Check Method Used: Analysis ☐ 625 ☐ 8270 ☐ Other SV _____

☐ 524.2 ☐ 624 ☑ 8260B ☐ Other VOA _____

VOA Preparation ☐ 5mL ☑ 20mL ☐ 5035 Low ☐ 5035 High ☐ 5030 Low ☐ 5030 High

Review Items	Level 1 Yes	Level 1 No	Level 1 N/A	Level 2	Comments
Continuing Calibration					
1. BFB/DFTPP meets criteria?	✓			✓	
2. ICAL date and instrument ID verified?	✓			✓	
3. Do SPCC RRFs and CCC %Ds meet method criteria?	✓			✓	
4. Does %D meet criteria for non-CCC compounds?	✓			✓	
5. Isomeric pairs checked for correct peak assignment?	✓			✓	
6. Standards traceability properly documented?	✓			✓	
7. Manual integrations documented and checked?			✓	NA	
8. Do the Internal Standards meet criteria for %D against ICAL?	✓			✓	

1st Level Reviewer: MH Date: 2/24/04

2nd Level Reviewer: TA Date: 2-24-04

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Report Date: 23-Feb-2004 09:12

Calibration History

Method : /chem/H.i/022304.b/H-20ml-h2o.m
Start Cal Date: 07-JAN-2004 11:17
End Cal Date : 07-JAN-2004 15:24

Initial Calibration

Injection Date	Sublist	Calibration File
Cal Level: 1 , Cal Amount: 1.00000		
07-JAN-2004 13:31	2-supp	/chem/H.i/010704.b/h0009.d
07-JAN-2004 11:17	1-main	/chem/H.i/010704.b/h0003.d
Cal Level: 2 , Cal Amount: 2.00000		
07-JAN-2004 13:54	2-supp	/chem/H.i/010704.b/h0010.d
07-JAN-2004 11:40	1-main	/chem/H.i/010704.b/h0004.d
Cal Level: 3 , Cal Amount: 5.00000		
07-JAN-2004 14:16	2-supp	/chem/H.i/010704.b/h0011.d
07-JAN-2004 12:02	1-main	/chem/H.i/010704.b/h0005.d
Cal Level: 4 , Cal Amount: 10.0000		
07-JAN-2004 14:39	2-supp	/chem/H.i/010704.b/h0012.d
07-JAN-2004 12:24	1-main	/chem/H.i/010704.b/h0006.d
Cal Level: 5 , Cal Amount: 30.0000		
07-JAN-2004 15:01	2-supp	/chem/H.i/010704.b/h0013.d
07-JAN-2004 12:47	1-main	/chem/H.i/010704.b/h0007.d
Cal Level: 6 , Cal Amount: 60.0000		
07-JAN-2004 15:24	2-supp	/chem/H.i/010704.b/h0014.d
07-JAN-2004 13:09	1-main	/chem/H.i/010704.b/h0008.d

Continuing Calibration

23-FEB-2004 09:02	2-supp	/chem/H.i/022304.b/h1096.d
23-FEB-2004 08:42	1-main	/chem/H.i/022304.b/h1095.d

Data File: /chem/H.i/022304.b/h1094.d

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Date : 23-FEB-2004 08:28

Client ID: BFB

Instrument: H.i

Sample Info: BFB,, #237-03

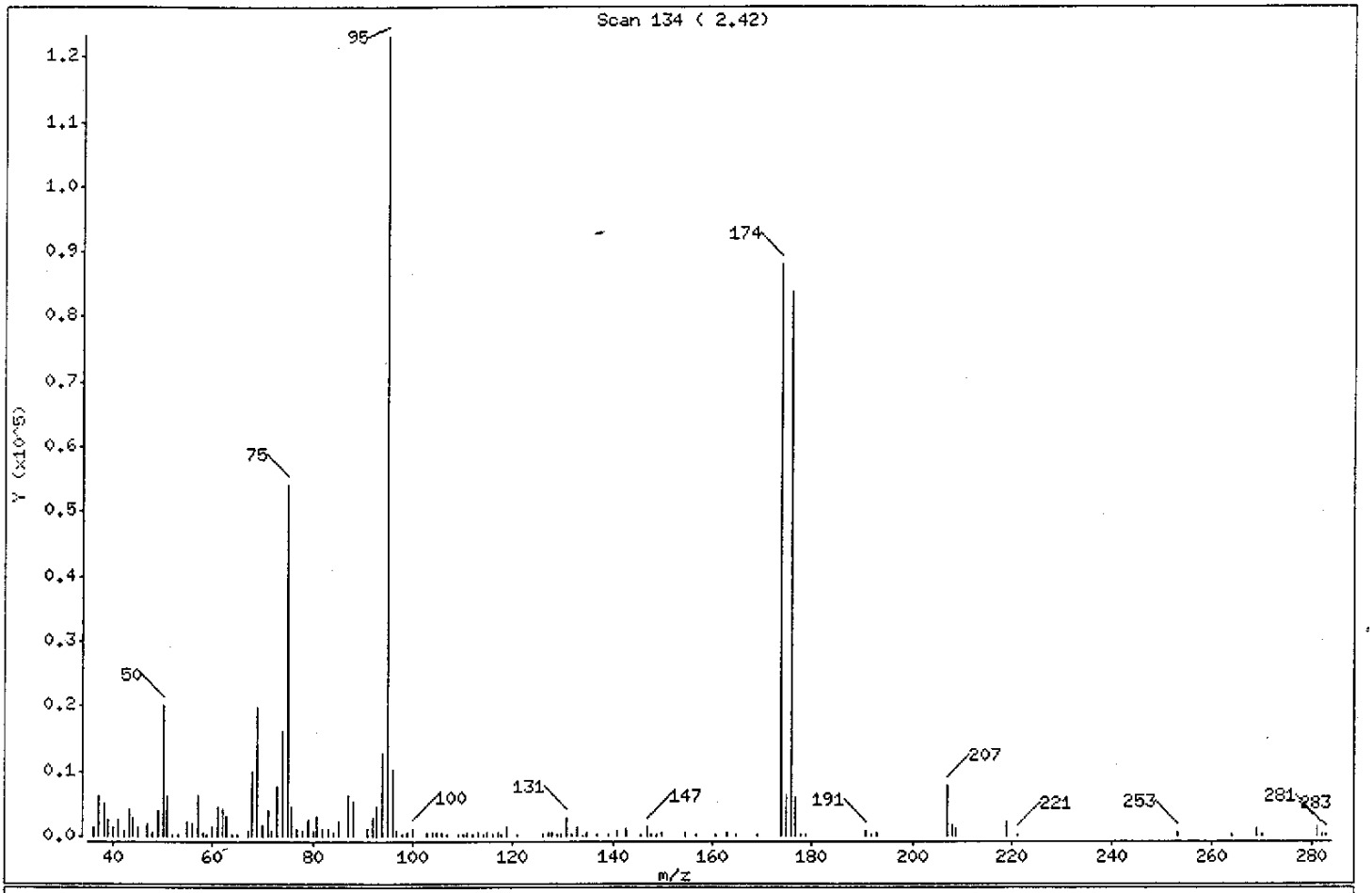
Volume Injected (uL): 1.0

Operator: mhoffman

Column phase: DB624

Column diameter: 0.53

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	16.30
75	30.00 - 60.00% of mass 95	44.01
96	5.00 - 9.00% of mass 95	8.34
173	Less than 2.00% of mass 174	0.00 (0.00)
174	50.00 - 100.00% of mass 95	71.60
175	5.00 - 9.00% of mass 174	5.01 (7.00)
176	95.00 - 101.00% of mass 174	68.03 (95.01)
177	5.00 - 9.00% of mass 176	4.94 (7.26)

Data File: /chem/H.i/022304.b/h1094.d

Date : 23-FEB-2004 08:28

Client ID: BFB

Instrument: H.i

Sample Info: BFB,, #237-03

Volume Injected (uL): 1.0

Operator: mhoffman

Column phase: DB624

Column diameter: 0.53

Data File: h1094.d
Spectrum: Scan 134 (2.42)
Location of Maximum: 94.95
Number of points: 122

m/z	Y	m/z	Y	m/z	Y	m/z	Y
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37.05	6136	71.10	3825	106.90	300	149.85	487
38.05	5083	72.00	780	108.90	345	154.75	466
39.05	2647	73.00	7737	110.00	304	156.90	265
39.95	1401	74.00	16002	111.00	460	160.90	298
40.95	2407	75.00	54208	112.00	389	162.80	448
42.05	741	75.90	4525	113.05	495	164.90	348
43.10	4265	76.90	1212	113.95	367	168.95	297
44.00	2858	77.80	761	114.95	474	173.85	88200
45.00	1376	78.90	2631	115.85	335	174.85	6171
47.00	1880	80.00	855	116.85	677	175.85	83800
47.80	687	80.90	3248	117.85	417	176.85	6088
49.00	4057	82.00	1010	118.95	1429	177.85	246
50.00	20072	83.00	1017	120.95	222	178.85	209
51.00	6113	84.00	648	126.05	226	190.90	972
51.90	305	85.05	2373	127.10	570	191.90	267
52.90	264	86.95	6157	127.90	532	192.90	508
55.00	2221	87.95	5456	128.90	238	206.95	7766
56.00	1974	90.85	1009	129.80	396	207.95	1656
57.05	6337	91.95	2783	130.90	2891	208.95	1111
57.95	540	92.95	4595	131.90	239	218.90	2285
58.95	379	93.95	12727	132.90	1279	221.00	285
60.05	1284	94.95	123176	133.90	293	253.05	507
60.95	4392	95.95	10273	134.90	641	263.85	397
61.95	4178	96.95	938	137.00	283	269.00	1111
62.95	3084	97.95	214	139.10	244	270.00	276
64.05	326	99.10	647	140.95	959	281.05	1285
64.85	214	100.00	1017	142.85	1084	282.15	369
66.95	928	102.80	587	145.75	243	283.05	234
67.95	9943	103.90	493	146.95	1416		
68.95	19944	104.80	610	147.85	412		

Data File: /chem/H.i/022304.b/h1094.d
Date : 23-FEB-2004 08:28
Client ID: BFB
Sample Info: BFB,, #237-03
Volume Injected (uL): 1.0
Column phase: DB624

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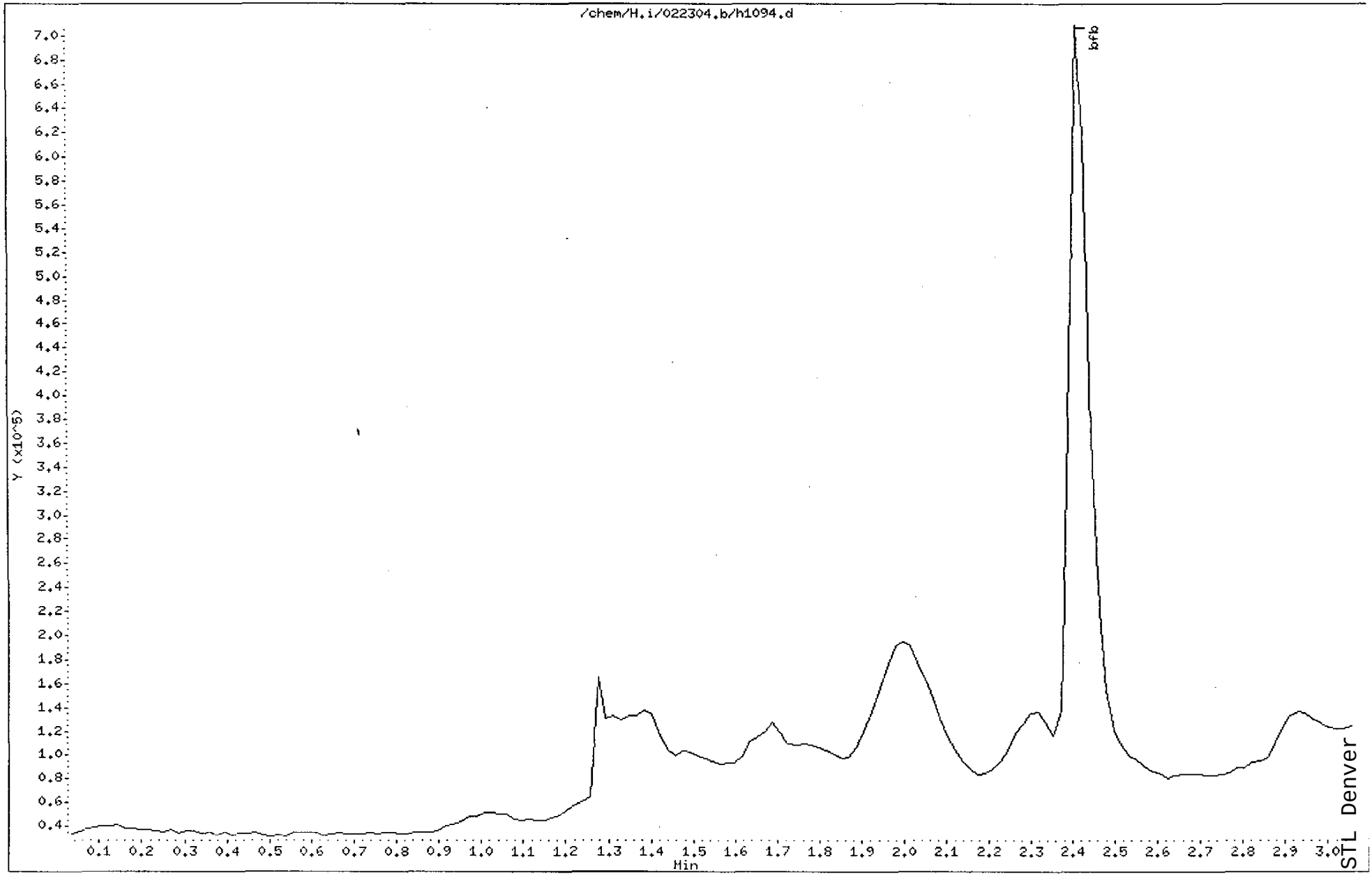
Instrument: H.i
Operator: mhoffman
Column diameter: 0.53



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Data File: /chem/H.i/022304.b/h1095.d Page 1
Report Date: 02/23/2004

Internal Standard
Check Report

Instrument ID: H.i
Lab File ID: h1095.d
Analysis Type: WATER

Injection Date: 23-FEB-2004 08:42
Lab Sample ID: MAIN010
Method File: /chem/H.i/022304.b/H-20ml-h2o.m

INTERNAL STANDARD	ICAL AREA	SAMP AREA	ICAL RT	SAMP RT	%R
Fluorobenzene	2307102	2338655	6.399	6.396	101.4
Chlorobenzene-d5	416478	419286	10.065	10.062	100.7
1,4-Dichlorobenzene-d4	716331	744047	12.958	12.919	103.9

Data File: /chem/H.i/022304.b/h1095.d
Report Date: 02/23/2004

CONTINUING CALIBRATION COMPOUNDS
PERCENT DRIFT REPORT

Instrument ID: H.i
Lab File ID: h1095.d
Analysis Type: WATER

Injection Date: 23-FEB-2004 08:42
Lab Sample ID: MAIN010
Method File: /chem/H.i/022304.b/H-20ml-h2o.m

COMPOUND	EXPECTED CONC.	MEASURED CONC.	%D	MAX %D
83 Xylene (total)	30.0000	30.1363	0.5	50.0
85 1,2-Dichloroethene (total)	20.0000	18.8857	5.6	50.0
64 dichlorodifluoromethane	10.0000	10.1846	1.8	50.0
1 Chloromethane	10.0000	10.0063	0.1	50.0
4 Vinyl Chloride	10.0000	9.1020	9.0	20.0
2 Bromomethane	10.0000	9.0844	9.2	50.0
5 Chloroethane	10.0000	9.9029	1.0	50.0
11 Trichlorofluoromethane	10.0000	10.1694	1.7	50.0
3 Ethanol	500.0000	402.8637	19.4	50.0
8 Acrolein	100.0000	121.1702	21.2	50.0
7 Acetone	40.0000	36.4300	8.9	50.0
12 1,1-Dichloroethene	10.0000	9.5504	4.5	20.0
21 Iodomethane	10.0000	8.6260	13.7	50.0
68 Acetonitrile	100.0000	93.7887	6.2	50.0
6 Methylene Chloride	10.0000	9.0550	9.4	50.0
86 tert-Butyl alcohol	200.0000	169.6402	15.2	50.0
9 Acrylonitrile	100.0000	89.0310	11.0	50.0
0 trans-1,2-Dichloroethene	10.0000	9.4270	5.7	50.0
15 1,1-Dichloroethane	10.0000	9.3723	6.3	50.0
84 Isopropyl ether	50.0000	47.5668	4.9	50.0
69 Chloroprene	10.0000	9.6647	3.4	50.0
93 2,2-Dichloropropane	10.0000	9.9309	0.7	50.0
0 cis-1,2-Dichloroethene	10.0000	9.4587	5.4	50.0
20 2-Butanone	40.0000	32.1479	19.6	50.0
70 Propionitrile	100.0000	91.5421	8.5	50.0
72 Methacrylonitrile	100.0000	88.4890	11.5	50.0
13 Bromochloromethane	10.0000	9.1878	8.1	50.0
17 Chloroform	10.0000	9.3691	6.3	20.0
22 1,1,1-Trichloroethane	10.0000	9.2920	7.1	50.0
94 1,1-Dichloropropene	10.0000	9.7628	2.4	50.0
23 Carbon Tetrachloride	10.0000	9.4214	5.8	50.0
71 Isobutanol	200.0000	185.0424	7.5	50.0
30 Benzene	10.0000	9.5139	4.9	50.0
16 1,2-Dichloroethane	10.0000	8.8778	11.2	50.0
88 n-Butanol	200.0000	155.2867	22.4	50.0
29 Trichloroethene	10.0000	9.9651	0.3	50.0
26 1,2-Dichloropropane	10.0000	9.5472	4.5	20.0
34 Dibromomethane	10.0000	8.7599	12.4	50.0
57 1,4-Dioxane	500.0000	416.4200	16.7	50.0

CONTINUING CALIBRATION COMPOUNDS
PERCENT DRIFT REPORT

Instrument ID: H.i
Lab File ID: h1095.d
Analysis Type: WATER

Injection Date: 23-FEB-2004 08:42
Lab Sample ID: MAIN010
Method File: /chem/H.i/022304.b/H-20ml-h2o.m

COMPOUND	EXPECTED CONC.	MEASURED CONC.	%D	MAX %D	
25 Bromodichloromethane	10.0000	9.0917	9.1	50.0	
28 cis-1,3-Dichloropropene	10.0000	9.1397	8.6	50.0	
38 4-Methyl-2-pentanone	40.0000	36.2495	9.4	50.0	
45 Toluene	10.0000	9.6500	3.5	20.0	
31 trans-1,3-Dichloropropene	10.0000	8.7045	13.0	50.0	
32 1,1,2-Trichloroethane	10.0000	8.9989	10.0	50.0	
42 Tetrachloroethene	10.0000	9.9958	0.0	50.0	
109 1,3-Dichloropropane	10.0000	8.8898	11.1	50.0	
43 2-Hexanone	40.0000	38.1472	4.6	50.0	
36 Dibromochloromethane	10.0000	8.8946	11.1	50.0	
58 1,2-Dibromoethane	10.0000	8.8906	11.1	50.0	
92 1-Chlorohexane	10.0000	10.1332	1.3	50.0	
46 Chlorobenzene	10.0000	9.7833	2.2	50.0	
74 1,1,1,2-Tetrachloroethane	10.0000	9.4381	5.6	50.0	
47 Ethylbenzene	10.0000	10.1340	1.3	20.0	
0 m and p-Xylene	20.0000	20.0998	0.5	50.0	
0 o-Xylene	10.0000	10.0364	0.4	50.0	
49 Styrene	10.0000	9.9775	0.2	50.0	
37 Bromoform	10.0000	8.9273	10.7	50.0	
79 isopropyl benzene	10.0000	10.2067	2.1	50.0	
76 Cyclohexanone	400.0000	1297.8862	224.5	50.0	<-
40 1,1,2,2-Tetrachloroethane	10.0000	9.1925	8.1	50.0	
95 Bromobenzene	10.0000	9.3437	6.6	50.0	
50 1,2,3-Trichloropropane	10.0000	8.0014	20.0	50.0	
96 n-Propylbenzene	10.0000	9.9432	0.6	50.0	
97 2-Chlorotoluene	10.0000	9.8165	1.8	50.0	
98 1,3,5-Trimethylbenzene	10.0000	9.7847	2.2	50.0	
99 4-Chlorotoluene	10.0000	9.5172	4.8	50.0	
100 tert-Butylbenzene	10.0000	9.9038	1.0	50.0	
101 1,2,4-Trimethylbenzene	10.0000	9.7357	2.6	50.0	
102 sec-Butylbenzene	10.0000	10.1452	1.5	50.0	
61 m-Dichlorobenzene	10.0000	9.1420	8.6	50.0	
103 4-Isopropyltoluene	10.0000	10.1896	1.9	50.0	
62 p-dichlorobenzene	10.0000	10.0955	1.0	50.0	
104 n-Butylbenzene	10.0000	10.2311	2.3	50.0	
63 o-Dichlorobenzene	10.0000	9.2650	7.3	50.0	
75 1,2-Dibromo-3-chloropropane	10.0000	8.8349	11.7	50.0	
105 1,2,4-Trichlorobenzene	10.0000	9.4349	5.7	50.0	
106 Hexachlorobutadiene	10.0000	10.4638	4.6	50.0	

Data File: /chem/H.i/022304.b/h1095.d Page 3
Report Date: 02/23/2004

CONTINUING CALIBRATION COMPOUNDS
PERCENT DRIFT REPORT

Instrument ID: H.i
Lab File ID: h1095.d
Analysis Type: WATER

Injection Date: 23-FEB-2004 08:42
Lab Sample ID: MAIN010
Method File: /chem/H.i/022304.b/H-20ml-h2o.m

COMPOUND	EXPECTED CONC.	MEASURED CONC.	%D	MAX %D
107 Naphthalene	10.0000	8.4498	15.5	50.0
108 1,2,3-Trichlorobenzene	10.0000	8.8923	11.1	50.0

Data File: /chem/H.i/022304.b/h1095.d
Report Date: 23-Feb-2004 08:54

STL Denver

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: H.i
Lab File ID: h1095.d
Analysis Type: WATER
Lab Sample ID: MAIN010
Quant Type: ISTD

Injection Date: 23-FEB-2004 08:42
Init. Calibration Date(s): JAN/07/4 JAN/07/4
Init. Calibration Times: 11:17 15:24
Method File: /chem/H.i/022304.b/H-20ml-h2o.m

COMPOUND	RRF	RF10	MIN RRF	%D	MAX %D
M 1 1,2-Dichloroethene (total)	0.376	0.355	0.010	5.6	50.0
M 2 Xylene (total)	7.979	8.016	0.010	-0.5	50.0
3 dichlorodifluoromethane	0.502	0.512	0.010	-1.8	50.0
4 Chloromethane	0.267	0.267	0.100	-0.1	50.0
5 Vinyl Chloride	0.278	0.253	0.020	9.0	20.0
7 Bromomethane	0.283	0.257	0.010	9.2	50.0
8 Chloroethane	0.194	0.193	0.010	1.0	50.0
10 Trichlorofluoromethane	0.674	0.685	0.010	-1.7	50.0
11 Ethanol	0.001	0.001	0.000	N/A	N/A
13 Acrolein	0.009	0.011	0.001	-21.2	50.0
14 1,1-Dichloroethene	0.353	0.337	0.020	4.5	20.0
15 Acetone	0.022	0.023	0.001	N/A	N/A
17 Iodomethane	0.671	0.579	0.010	13.7	50.0
19 Acetonitrile	0.005	0.005	0.000	6.2	50.0
21 Methylene Chloride	0.311	0.282	0.010	9.4	50.0
22 tert-Butyl alcohol	0.008	0.007	0.001	15.2	50.0
23 Acrylonitrile	0.021	0.019	0.001	11.0	50.0
24 trans-1,2-Dichloroethene	0.378	0.356	0.010	5.7	50.0
27 1,1-Dichloroethane	0.637	0.597	0.100	6.3	50.0
28 Chloroprene	0.523	0.505	0.010	3.4	50.0
30 Isopropyl ether	0.253	0.241	0.010	4.9	50.0
32 cis-1,2-Dichloroethene	0.375	0.355	0.010	5.4	50.0
31 2,2-Dichloropropane	0.454	0.451	0.010	0.7	50.0
33 2-Butanone	0.046	0.037	0.010	19.6	50.0
34 Propionitrile	0.008	0.007	0.001	8.5	50.0
36 Methacrylonitrile	0.061	0.054	0.010	11.5	50.0
37 Bromochloromethane	0.149	0.137	0.010	8.1	50.0
38 Chloroform	0.700	0.655	0.020	6.3	20.0
41 1,1,1-Trichloroethane	0.698	0.648	0.010	7.1	50.0
42 1,1-Dichloropropene	0.563	0.549	0.010	2.4	50.0
43 Carbon Tetrachloride	0.598	0.563	0.010	5.8	50.0
45 Isobutanol	0.002	0.002	0.000	7.5	50.0
46 Benzene	1.070	1.018	0.010	4.9	50.0
47 1,2-Dichloroethane	0.272	0.241	0.010	11.2	50.0
49 n-Butanol	0.002	0.002	0.000	N/A	N/A

Data File: /chem/H.i/022304.b/h1095.d
Report Date: 23-Feb-2004 08:54

STL Denver

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: H.i
Lab File ID: h1095.d
Analysis Type: WATER
Lab Sample ID: MAIN010
Quant Type: ISTD

Injection Date: 23-FEB-2004 08:42
Init. Calibration Date(s): JAN/07/4 JAN/07/4
Init. Calibration Times: 11:17 15:24
Method File: /chem/H.i/022304.b/H-20ml-h2o.m

COMPOUND	RRF	RF10	MIN RRF	%D	MAX %D	
50 Trichloroethene	0.406	0.404	0.010	0.3	50.0	
52 1,2-Dichloropropane	0.344	0.328	0.020	4.5	20.0	
53 Dibromomethane	0.203	0.178	0.010	12.4	50.0	
55 1,4-Dioxane	0.001	0.001	0.000	16.7	50.0	
56 Bromodichloromethane	0.568	0.516	0.010	9.1	50.0	
59 cis-1,3-Dichloropropene	2.543	2.324	0.010	8.6	50.0	
60 4-Methyl-2-pentanone	0.646	0.586	0.010	9.4	50.0	
62 Toluene	6.594	6.363	0.020	3.5	20.0	
63 trans-1,3-Dichloropropene	1.878	1.635	0.010	13.0	50.0	
65 1,1,2-Trichloroethane	1.069	0.962	0.010	10.0	50.0	
67 1,3-Dichloropropane	1.801	1.601	0.010	11.1	50.0	
66 Tetrachloroethene	2.108	2.107	0.010	0.0	50.0	
68 2-Hexanone	0.411	0.392	0.010	4.6	50.0	
69 Dibromochloromethane	1.869	1.662	0.010	11.1	50.0	
70 1,2-Dibromoethane	1.348	1.199	0.010	11.1	50.0	
71 1-Chlorohexane	3.082	3.123	0.010	-1.3	50.0	
73 Chlorobenzene	3.982	3.896	0.300	2.2	50.0	
74 1,1,1,2-Tetrachloroethane	1.918	1.810	0.010	5.6	50.0	
75 Ethylbenzene	2.042	2.070	0.010	-1.3	20.0	
76 m and p-Xylene	2.758	2.772	0.010	-0.5	50.0	
77 o-Xylene	2.464	2.473	0.010	-0.4	50.0	
78 Styrene	3.936	3.927	0.010	0.2	50.0	
79 Bromoform	1.055	0.942	0.101	10.7	50.0	
80 isopropyl benzene	8.120	8.288	0.010	-2.1	50.0	
81 Cyclohexanone	0.024	0.078	0.001	-224.5	50.0	<-
83 1,1,2,2-Tetrachloroethane	1.340	1.232	0.300	8.1	50.0	
84 Bromobenzene	1.101	1.029	0.010	6.6	50.0	
85 1,2,3-Trichloropropane	0.189	0.151	0.010	20.0	50.0	
87 n-Propylbenzene	1.083	1.076	0.010	0.6	50.0	
88 2-Chlorotoluene	0.906	0.889	0.010	1.8	50.0	
89 1,3,5-Trimethylbenzene	3.644	3.566	0.010	2.2	50.0	
90 4-Chlorotoluene	0.998	0.949	0.010	4.8	50.0	
91 tert-Butylbenzene	3.703	3.667	0.010	1.0	50.0	
92 1,2,4-Trimethylbenzene	3.401	3.311	0.010	2.6	50.0	
93 sec-Butylbenzene	0.971	0.986	0.010	-1.5	50.0	

Data File: /chem/H.i/022304.b/h1095.d Page 7
Report Date: 23-Feb-2004 08:54

STL Denver

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: H.i
Lab File ID: h1095.d
Analysis Type: WATER
Lab Sample ID: MAIN010
Quant Type: ISTD

Injection Date: 23-FEB-2004 08:42
Init. Calibration Date(s): JAN/07/4 JAN/07/4
Init. Calibration Times: 11:17 15:24
Method File: /chem/H.i/022304.b/H-20ml-h2o.m

COMPOUND	RRF	RF10	MIN RRF	%D	MAX %D
94 m-Dichlorobenzene	1.815	1.659	0.010	8.6	50.0
95 4-Isopropyltoluene	4.121	4.200	0.010	-1.9	50.0
97 p-dichlorobenzene	2.177	2.198	0.010	-1.0	50.0
98 n-Butylbenzene	4.585	4.691	0.010	-2.3	50.0
99 o-Dichlorobenzene	1.611	1.492	0.010	7.3	50.0
100 1,2-Dibromo-3-chloropropane	0.138	0.122	0.010	11.7	50.0
101 1,2,4-Trichlorobenzene	1.068	1.008	0.010	5.7	50.0
102 Hexachlorobutadiene	0.912	0.954	0.010	-4.6	50.0
127 Naphthalene	1.169	0.988	0.010	15.5	50.0
104 1,2,3-Trichlorobenzene	0.828	0.736	0.010	11.1	50.0

Data File: /chem/H.i/022304.b/h1095.d
Report Date: 23-Feb-2004 08:54

STL Denver

VOLATILE REPORT SW-846

Data file : /chem/H.i/022304.b/h1095.d
Lab Smp Id: MAIN010 Client Smp ID: MAIN010
Inj Date : 23-FEB-2004 08:42
Operator : hoffmanm Inst ID: H.i
Smp Info : MAIN010,, #022/040-04
Misc Info :
Comment : Purge and Trap Analysis
Method : /chem/H.i/022304.b/H-20ml-h2o.m
Meth Date : 23-Feb-2004 08:54 hoffmanm Quant Type: ISTD
Cal Date : 07-JAN-2004 15:24 Cal File: h0014.d
Als bottle: 2 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 1-main.sub
Target Version: 3.40
Processing Host: chemsv02

Concentration Formula: Amt * DF * Vp/Vs

Name	Value	Description
DF	1.000	Dilution Factor
Vp	20.000	Purge Volume (ml)
Vs	20.000	Sample Volume (ml)

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
* 48 Fluorobenzene	96	6.396	6.396	(1.000)	2338655	12.5000	
* 72 Chlorobenzene-d5	119	10.062	10.062	(1.000)	419286	12.5000	
* 96 1,4-Dichlorobenzene-d4	152	12.919	12.919	(1.000)	744047	12.5000	
M 1 1,2-Dichloroethene (total)	96				1329416	20.0000	18.8857
M 2 Xylene (total)	106				2688683	10.0000	30.1362
3 dichlorodifluoromethane	85	1.886	1.886	(0.295)	957421	10.0000	10.1846
4 Chloromethane	50	2.048	2.048	(0.320)	499088	10.0000	10.0063
5 Vinyl Chloride	62	2.138	2.138	(0.334)	473681	10.0000	9.10202
7 Bromomethane	94	2.443	2.443	(0.382)	480555	10.0000	9.08439
8 Chloroethane	64	2.533	2.533	(0.396)	360241	10.0000	9.90288
10 Trichlorofluoromethane	101	2.731	2.731	(0.427)	1281610	10.0000	10.1694
11 Ethanol	45	2.820	2.820	(0.441)	49962	500.000	402.864
13 Acrolein	56	3.054	3.054	(0.477)	197942	100.000	121.170
14 1,1-Dichloroethene	96	3.198	3.198	(0.500)	630410	10.0000	9.55039
15 Acetone	43	3.198	3.198	(0.500)	171478	40.0000	36.4300
17 Iodomethane	142	3.324	3.324	(0.520)	1082370	10.0000	8.62601

Data File: /chem/H.i/022304.b/h1095.d
Report Date: 23-Feb-2004 08:54

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
19 Acetonitrile	41	3.467	3.467	(0.542)	84752	100.000	93.7887
21 Methylene Chloride	84	3.629	3.629	(0.567)	527220	10.0000	9.05501
22 tert-Butyl alcohol	59	3.719	3.719	(0.581)	267259	200.000	169.640
23 Acrylonitrile	53	3.863	3.863	(0.604)	347426	100.000	89.0310
24 trans-1,2-Dichloroethene	96	3.917	3.917	(0.612)	666143	10.0000	9.42702
27 1,1-Dichloroethane	63	4.366	4.366	(0.683)	1116216	10.0000	9.37227
28 Chloroprene	53	4.474	4.474	(0.699)	945747	10.0000	9.66470
30 Isopropyl ether	87	4.438	4.438	(0.694)	2252782	50.0000	47.5668
32 cis-1,2-Dichloroethene	96	5.031	5.031	(0.786)	663273	10.0000	9.45866
31 2,2-Dichloropropane	77	5.031	5.031	(0.786)	843213	10.0000	9.93091
33 2-Butanone	43	5.049	5.049	(0.789)	277923	40.0000	32.1479
34 Propionitrile	54	5.102	5.102	(0.798)	133351	100.000	91.5421
36 Methacrylonitrile	41	5.282	5.282	(0.826)	1015126	100.000	88.4890
37 Bromochloromethane	128	5.318	5.318	(0.831)	256960	10.0000	9.18780
38 Chloroform	83	5.408	5.408	(0.845)	1226184	10.0000	9.36907
41 1,1,1-Trichloroethane	97	5.642	5.642	(0.882)	1212840	10.0000	9.29200
42 1,1-Dichloropropene	75	5.821	5.821	(0.910)	1027948	10.0000	9.76285
43 Carbon Tetrachloride	117	5.839	5.839	(0.913)	1053650	10.0000	9.42143
45 Isobutanol	41	5.947	5.947	(0.930)	86003	200.000	185.042
46 Benzene	78	6.073	6.073	(0.949)	1904917	10.0000	9.51386
47 1,2-Dichloroethane	62	6.091	6.091	(0.952)	451664	10.0000	8.87780
49 n-Butanol	56	6.756	6.756	(1.056)	61400	200.000	155.287
50 Trichloroethene	130	6.845	6.845	(1.070)	756656	10.0000	9.96511
52 1,2-Dichloropropane	63	7.097	7.097	(1.110)	613629	10.0000	9.54718
53 Dibromomethane	93	7.241	7.241	(1.132)	332760	10.0000	8.75986
55 1,4-Dioxane	88	7.277	7.277	(1.138)	77509	500.000	416.420
56 Bromodichloromethane	83	7.420	7.420	(1.160)	966193	10.0000	9.09166
59 cis-1,3-Dichloropropene	75	7.960	7.960	(0.791)	779488	10.0000	9.13973
60 4-Methyl-2-pentanone	43	8.157	8.157	(0.811)	785824	40.0000	36.2494
62 Toluene	91	8.373	8.373	(0.832)	2134364	10.0000	9.65003
63 trans-1,3-Dichloropropene	75	8.642	8.642	(0.859)	548339	10.0000	8.70454
65 1,1,2-Trichloroethane	97	8.858	8.858	(0.880)	322537	10.0000	8.99892
67 1,3-Dichloropropane	76	9.074	9.074	(0.902)	537055	10.0000	8.88980
66 Tetrachloroethene	164	9.056	9.056	(0.900)	706884	10.0000	9.99576
68 2-Hexanone	43	9.163	9.163	(0.911)	525788	40.0000	38.1472
69 Dibromochloromethane	129	9.361	9.361	(0.930)	557627	10.0000	8.89456
70 1,2-Dibromoethane	107	9.505	9.505	(0.945)	402099	10.0000	8.89060
71 1-Chlorohexane	91	10.062	10.062	(1.000)	1047595	10.0000	10.1332
73 Chlorobenzene	112	10.098	10.098	(1.004)	1306761	10.0000	9.78326
74 1,1,1,2-Tetrachloroethane	131	10.206	10.206	(1.014)	607099	10.0000	9.43811
75 Ethylbenzene	106	10.242	10.242	(1.018)	694279	10.0000	10.1340
76 m and p-Xylene	106	10.385	10.385	(1.032)	1859286	20.0000	20.0998
77 o-Xylene	106	10.888	10.888	(1.082)	829397	10.0000	10.0364
78 Styrene	104	10.906	10.906	(1.084)	1317322	10.0000	9.97746
79 Bromoform	173	11.158	11.158	(1.109)	315942	10.0000	8.92732
80 isopropyl benzene	105	11.374	11.374	(1.130)	2780076	10.0000	10.2067
81 Cyclohexanone	55	11.481	11.481	(1.141)	1045502	400.000	1297.89(A)

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
83 1,1,2,2-Tetrachloroethane	83	11.733	11.733	(1.166)	413166	10.0000	9.19250
84 Bromobenzene	156	11.751	11.751	(0.910)	612328	10.0000	9.34370
85 1,2,3-Trichloropropane	110	11.805	11.805	(0.914)	90110	10.0000	8.00141
87 n-Propylbenzene	120	11.895	11.895	(0.921)	640763	10.0000	9.94319
88 2-Chlorotoluene	126	12.003•	12.003	(0.929)	529239	10.0000	9.81647
89 1,3,5-Trimethylbenzene	105	12.110	12.110	(0.937)	2122458	10.0000	9.78467
90 4-Chlorotoluene	126	12.128•	12.128	(0.939)	565153	10.0000	9.51721
91 tert-Butylbenzene	119	12.488	12.488	(0.967)	2182960	10.0000	9.90383
92 1,2,4-Trimethylbenzene	105	12.542	12.542	(0.971)	1970639	10.0000	9.73573
93 sec-Butylbenzene	134	12.739	12.739	(0.986)	586667	10.0000	10.1452
94 m-Dichlorobenzene	146	12.865•	12.865	(0.996)	987659	10.0000	9.14197
95 4-Isopropyltoluene	119	12.883	12.883	(0.997)	2499777	10.0000	10.1896
97 p-dichlorobenzene	146	12.955•	12.955	(1.003)	1308297	10.0000	10.0955
98 n-Butylbenzene	91	13.314	13.314	(1.031)	2792005	10.0000	10.2311
99 o-Dichlorobenzene	146	13.350	13.350	(1.033)	888298	10.0000	9.26504
100 1,2-Dibromo-3-chloropropane	157	14.123	14.123	(1.093)	72533	10.0000	8.83494
101 1,2,4-Trichlorobenzene	180	14.896	14.896	(1.153)	599781	10.0000	9.43493
102 Hexachlorobutadiene	225	15.057	15.057	(1.166)	568094	10.0000	10.4638
127 Naphthalene	128	15.129	15.129	(1.171)	588143	10.0000	8.44975
104 1,2,3-Trichlorobenzene	180	15.381	15.381	(1.191)	438110	10.0000	8.89229

QC Flag Legend

A - Target compound detected but, quantitated amount exceeded maximum amount.

Data File: /chem/H.i/022304.b/h1095.d
Report Date: 23-Feb-2004 08:54

STL Denver

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: H.i
Lab File ID: h1095.d
Lab Smp Id: MAIN010
Analysis Type: VOA
Quant Type: ISTD
Operator: hoffmanm
Method File: /chem/H.i/022304.b/H-20ml-h2o.m
Misc Info:

Calibration Date: 02/23/4
Calibration Time: 0842
Client Smp ID: MAIN010
Level: LOW
Sample Type: WATER

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
48 Fluorobenzene	2338655	1169328	4677310	2338655	0.00
72 Chlorobenzene-d5	419286	209643	838572	419286	0.00
96 1,4-Dichlorobenze	744047	372024	1488094	744047	0.00

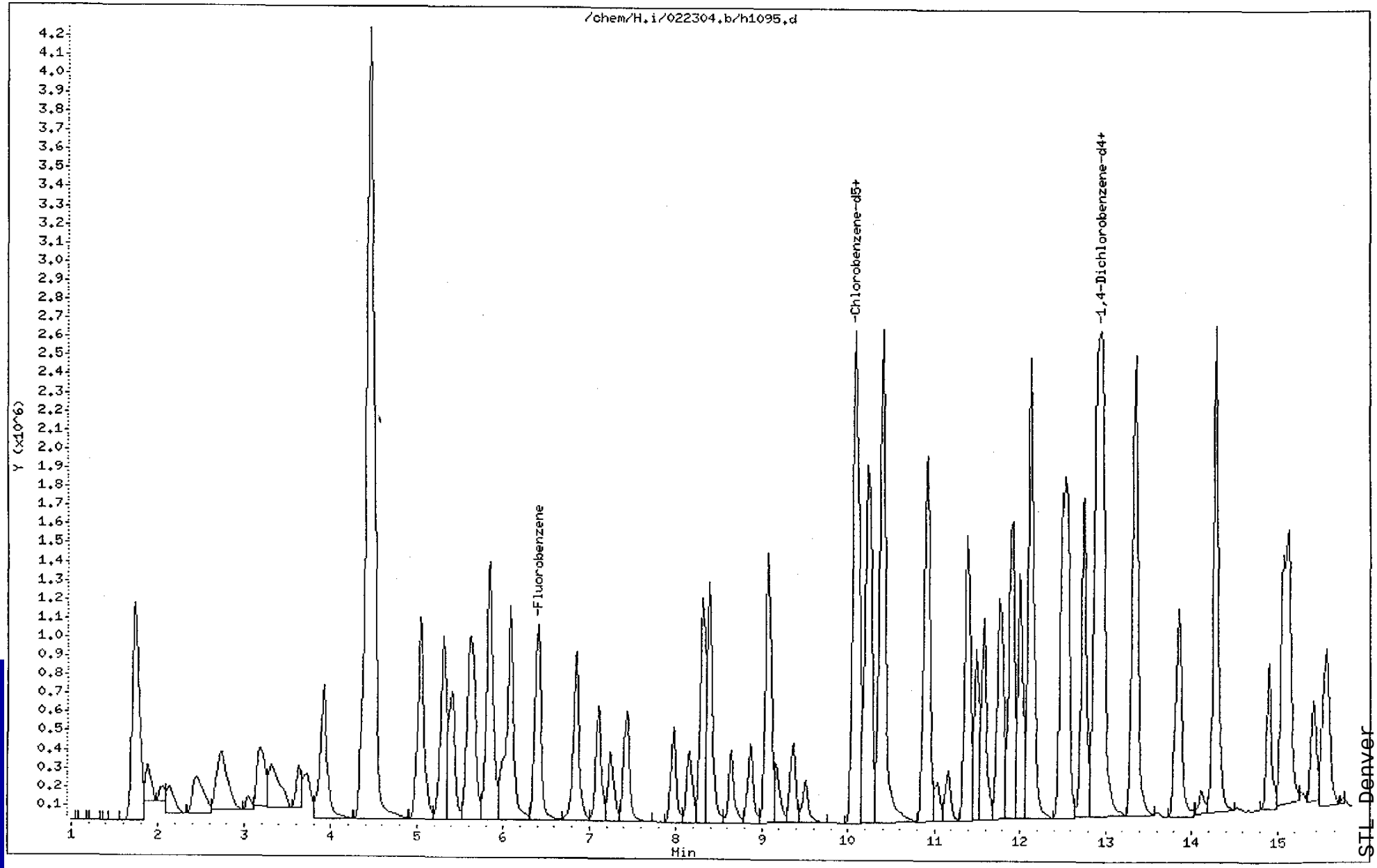
COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
48 Fluorobenzene	6.40	5.90	6.90	6.40	0.00
72 Chlorobenzene-d5	10.06	9.56	10.56	10.06	0.00
96 1,4-Dichlorobenze	12.92	12.42	13.42	12.92	0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem/H.i/022304.b/h1095.d
Date : 23-FEB-2004 08:42
Client ID: MAIN010
Sample Info: MAIN010,, #022/040-04
Purge Volume: 20.0
Column phase: DB624

Instrument: H.i

Operator: hoffmanm
Column diameter: 0.53



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Data File: /chem/H.i/022304.b/h1096.d Page 1
Report Date: 02/23/2004

Internal Standard
Check Report

Instrument ID: H.i
Lab File ID: h1096.d
Analysis Type: WATER

Injection Date: 23-FEB-2004 09:02
Lab Sample ID: SUPP010
Method File: /chem/H.i/022304.b/H-20ml-h2o.m

INTERNAL STANDARD	ICAL AREA	SAMP AREA	ICAL RT	SAMP RT	%R
Fluorobenzene	2399820	2280591	6.395	6.399	95.0
Chlorobenzene-d5	457381	439562	10.061	10.065	96.1
1,4-Dichlorobenzene-d4	747017	726942	12.971	12.922	97.3

Data File: /chem/H.i/022304.b/h1096.d Page 1
Report Date: 02/23/2004

CONTINUING CALIBRATION COMPOUNDS
PERCENT DRIFT REPORT

Instrument ID: H.i
Lab File ID: h1096.d
Analysis Type: WATER

Injection Date: 23-FEB-2004 09:02
Lab Sample ID: SUPP010
Method File: /chem/H.i/022304.b/H-20ml-h2o.m

COMPOUND	EXPECTED CONC.	MEASURED CONC.	%D	MAX %D
117 Dichlorotetrafluoroethane	10.0000	10.4968	5.0	80.0
110 Ethylene Oxide	1250.0000	1222.1879	2.2	50.0
87 Dichlorofluoromethane	10.0000	12.0113	20.1	50.0
123 1,2-dichloro-1,1,2-triflourom	10.0000	11.6102	16.1	50.0
77 Ethyl Ether	10.0000	9.6514	3.5	50.0
124 2,2-dichloro-1,1,1-trifluorom	10.0000	11.0869	10.9	50.0
65 Trichlorotrifluoroethane	10.0000	10.7398	7.4	50.0
125 2-Propanol	200.0000	175.1337	12.4	50.0
10 Carbon Disulfide	10.0000	11.4976	15.0	50.0
119 Methyl Acetate	50.0000	46.0397	7.9	50.0
67 Allyl Chloride	10.0000	10.4445	4.4	50.0
53 Methyl t-butyl ether	10.0000	9.3367	6.6	50.0
54 Hexane	10.0000	11.1120	11.1	50.0
24 Vinyl acetate	20.0000	19.6157	1.9	50.0
120 ETBE	50.0000	48.2930	3.4	50.0
78 Ethyl Acetate	20.0000	17.1276	14.4	50.0
56 Tetrahydrofuran	20.0000	17.3745	13.1	50.0
89 Dibromofluoromethane	10.0000	10.7490	7.5	50.0
114 Cyclohexane	10.0000	11.1770	11.8	50.0
303 1,2-Dichloroethane-d4	10.0000	10.1042	1.0	50.0
121 TAME	50.0000	47.8340	4.3	50.0
115 2-Pentanone	40.0000	38.7284	3.2	50.0
122 Methyl Cyclohexane	10.0000	11.4903	14.9	50.0
73 Methyl Methacrylate	20.0000	17.6206	11.9	50.0
82 2-nitropropane	10.0000	8.7984	12.0	50.0
35 2-Chloroethyl vinyl ether	10.0000	10.0648	0.6	50.0
301 Toluene-d8	10.0000	10.7424	7.4	50.0
41 Ethyl methacrylate	20.0000	18.8635	5.7	50.0
126 Tetrahydrothiophene	10.0000	8.6620	13.4	50.0
116 cis-1,4-Dichloro-2-butene	10.0000	7.5949	24.1	50.0
302 Bromofluorobenzene	10.0000	10.9822	9.8	50.0
60 t-1,4-Dichloro-2-butene	10.0000	7.8972	21.0	50.0
118 1,2,3-Trimethylbenzene	10.0000	12.1048	21.0	50.0

Data File: /chem/H.i/022304.b/h1096.d
Report Date: 23-Feb-2004 09:12

STL Denver

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: H.i
Lab File ID: h1096.d
Analysis Type: WATER
Lab Sample ID: SUPP010
Quant Type: ISTD

Injection Date: 23-FEB-2004 09:02
Init. Calibration Date(s): JAN/07/4 JAN/07/4
Init. Calibration Times: 11:17 15:24
Method File: /chem/H.i/022304.b/H-20ml-h2o.m

COMPOUND	RRF	RF10	MIN RRF	%D	MAX %D
$ 40 Dibromofluoromethane	0.492	0.529	0.010	-7.5	50.0
$ 44 1,2-Dichloroethane-d4	0.219	0.221	0.010	-1.0	50.0
$ 61 Toluene-d8	4.778	5.133	0.010	-7.4	50.0
$ 82 Bromofluorobenzene	2.620	2.878	0.010	-9.8	50.0
117 Dichlorotetrafluoroethane	0.718	0.754	0.010	-5.0	80.0
6 Ethylene Oxide	0.004	0.004	0.001	2.2	50.0
9 Dichlorofluoromethane	0.668	0.802	0.010	-20.1	50.0
12 Ethyl Ether	0.152	0.147	0.010	3.5	50.0
16 Trichlorotrifluoroethane	0.461	0.495	0.010	-7.4	50.0
18 Carbon Disulfide	1.131	1.300	0.010	-15.0	50.0
20 Allyl Chloride	0.541	0.565	0.010	-4.4	50.0
119 Methyl Acetate	0.089	0.082	0.010	7.9	50.0
25 Methyl t-butyl ether	0.495	0.462	0.010	6.6	50.0
26 Hexane	2.821	3.135	0.010	-11.1	50.0
29 Vinyl acetate	0.314	0.308	0.010	1.9	50.0
35 Ethyl Acetate	0.124	0.107	0.010	14.4	50.0
39 Tetrahydrofuran	0.026	0.023	0.003	13.1	50.0
120 ETBE	0.851	0.822	0.010	3.4	50.0
114 Cyclohexane	0.560	0.625	0.010	-11.8	50.0
115 2-Pentanone	0.092	0.089	0.005	3.2	50.0
121 TAME	0.656	0.627	0.010	4.3	50.0
54 Methyl Methacrylate	0.039	0.035	0.010	11.9	50.0
122 Methyl Cyclohexane	0.520	0.598	0.010	-14.9	50.0
57 2-nitropropane	0.155	0.136	0.010	12.0	50.0
113 2-Chloroethyl vinyl ether	0.458	0.461	0.010	-0.6	50.0
64 Ethyl methacrylate	1.197	1.129	0.010	5.7	50.0
116 cis-1,4-Dichloro-2-butene	0.128	0.097	0.010	24.1	50.0
86 t-1,4-Dichloro-2-butene	0.115	0.091	0.010	21.0	50.0
118 1,2,3-Trimethylbenzene	0.842	1.019	0.010	-21.0	50.0
123 1,2-dichloro-1,1,2-triflour	0.481	0.558	0.010	-16.1	50.0
124 2,2-dichloro-1,1,1-trifluor	0.826	0.916	0.010	-10.9	50.0
125 2-Propanol	0.005	0.005	0.001	12.4	50.0
126 Tetrahydrothiophene	0.346	0.299	0.010	13.4	50.0

Data File: /chem/H.i/022304.b/h1096.d
Report Date: 23-Feb-2004 09:12

STL Denver

VOLATILE REPORT SW-846

Data file : /chem/H.i/022304.b/h1096.d
Lab Smp Id: SUPP010 Client Smp ID: SUPP010
Inj Date : 23-FEB-2004 09:02
Operator : hoffmanm Inst ID: H.i
Smp Info : SUPP010,, #246-03/011-04
Misc Info :
Comment : Purge and Trap Analysis
Method : /chem/H.i/022304.b/H-20ml-h2o.m
Meth Date : 23-Feb-2004 09:12 H Quant Type: ISTD
Cal Date : 07-JAN-2004 15:24 Cal File: h0014.d
Als bottle: 2 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 2-supp.sub
Target Version: 3.40
Processing Host: chemsv02

Concentration Formula: Amt * DF * Vp/Vs

Name	Value	Description
DF	1.000	Dilution Factor
Vp	20.000	Purge Volume (ml)
Vs	20.000	Sample Volume (ml)

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
* 48 Fluorobenzene	96	6.399	6.399	(1.000)	2280591	12.5000	
* 72 Chlorobenzene-d5	119	10.065	10.065	(1.000)	439562	12.5000	
* 96 1,4-Dichlorobenzene-d4	152	12.922	12.922	(1.000)	726942	12.5000	
$ 40 Dibromofluoromethane	111	5.591	5.591	(0.874)	964309	10.0000	10.7490
$ 44 1,2-Dichloroethane-d4	65	6.004	6.004	(0.938)	404034	10.0000	10.1042
$ 61 Toluene-d8	98	8.304	8.304	(0.825)	1805054	10.0000	10.7424
$ 82 Bromofluorobenzene	95	11.574	11.574	(1.150)	1011917	10.0000	10.9822
117 Dichlorotetrafluoroethane	85	1.979	1.979	(0.309)	1375260	10.0000	10.4968
6 Ethylene Oxide	43	2.374	2.374	(0.371)	965517	1250.00	1222.19
9 Dichlorofluoromethane	67	2.680	2.680	(0.419)	1463709	10.0000	12.0113
12 Ethyl Ether	59	2.931	2.931	(0.458)	268425	10.0000	9.65143
16 Trichlorotrifluoroethane	151	3.201	3.201	(0.500)	902858	10.0000	10.7398
18 Carbon Disulfide	76	3.434	3.434	(0.537)	2372093	10.0000	11.4976
20 Allyl Chloride	41	3.506	3.506	(0.548)	1030535	10.0000	10.4445
119 Methyl Acetate	43	3.506	3.506	(0.548)	743840	50.0000	46.0397
25 Methyl t-butyl ether	73	3.919	3.919	(0.612)	842924	10.0000	9.33671

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
26 Hexane	57	4.189	4.189	(0.416)	1102495	10.0000	11.1120
29 Vinyl acetate	43	4.405	4.405	(0.688)	1122341	20.0000	19.6157
35 Ethyl Acetate	43	5.105	5.105	(0.798)	388771	20.0000	17.1276
39 Tetrahydrofuran	42	5.393	5.393	(0.843)	82153	20.0000	17.3745
120 ETBE	59	4.854	4.854	(0.758)	7494650	50.0000	48.2930
114 Cyclohexane	56	5.716	5.716	(0.893)	1141005	10.0000	11.1770
115 2-Pentanone	43	7.046	7.046	(1.101)	648540	40.0000	38.7284
121 TAME	73	6.201	6.201	(0.969)	5723372	50.0000	47.8340
54 Methyl Methacrylate	100	7.226	7.226	(1.129)	126908	20.0000	17.6206
122 Methyl Cyclohexane	55	7.082	7.082	(1.107)	1090830	10.0000	11.4903
57 2-nitropropane	41	7.693	7.693	(0.764)	47932	10.0000	8.79839
113 2-Chloroethyl vinyl ether	63	7.783	7.783	(0.773)	161996	10.0000	10.0648
64 Ethyl methacrylate	69	8.753	8.753	(0.870)	793912	20.0000	18.8635
116 cis-1,4-Dichloro-2-butene	53	11.448	11.448	(0.886)	56325	10.0000	7.59490
86 t-1,4-Dichloro-2-butene	53	11.808	11.808	(0.914)	53020	10.0000	7.89716
118 1,2,3-Trimethylbenzene	105	13.012	13.012	(2.033)	1858704	10.0000	12.1048
123 1,2-dichloro-1,1,2-triflourom	117	2.931	2.931	(0.458)	1018753	10.0000	11.6102
124 2,2-dichloro-1,1,1-trifluorom	83	2.985	2.985	(0.466)	1671145	10.0000	11.0869
125 2-Propanol	45	3.308	3.308	(0.517)	170821	200.000	175.134
126 Tetrahydrothiophene	60	9.346	9.346	(0.929)	105303	10.0000	8.66202

Data File: /chem/H.i/022304.b/h1096.d
Report Date: 23-Feb-2004 09:12

STL Denver

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: H.i
Lab File ID: h1096.d
Lab Smp Id: SUPP010
Analysis Type: VOA
Quant Type: ISTD
Operator: hoffmanm
Method File: /chem/H.i/022304.b/H-20ml-h2o.m
Misc Info:

Calibration Date: 02/23/4
Calibration Time: 0842
Client Smp ID: SUPP010
Level: LOW
Sample Type: WATER

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
48 Fluorobenzene	2338655	1169328	4677310	2280591	-2.48
72 Chlorobenzene-d5	419286	209643	838572	439562	4.84
96 1,4-Dichlorobenze	744047	372024	1488094	726942	-2.30

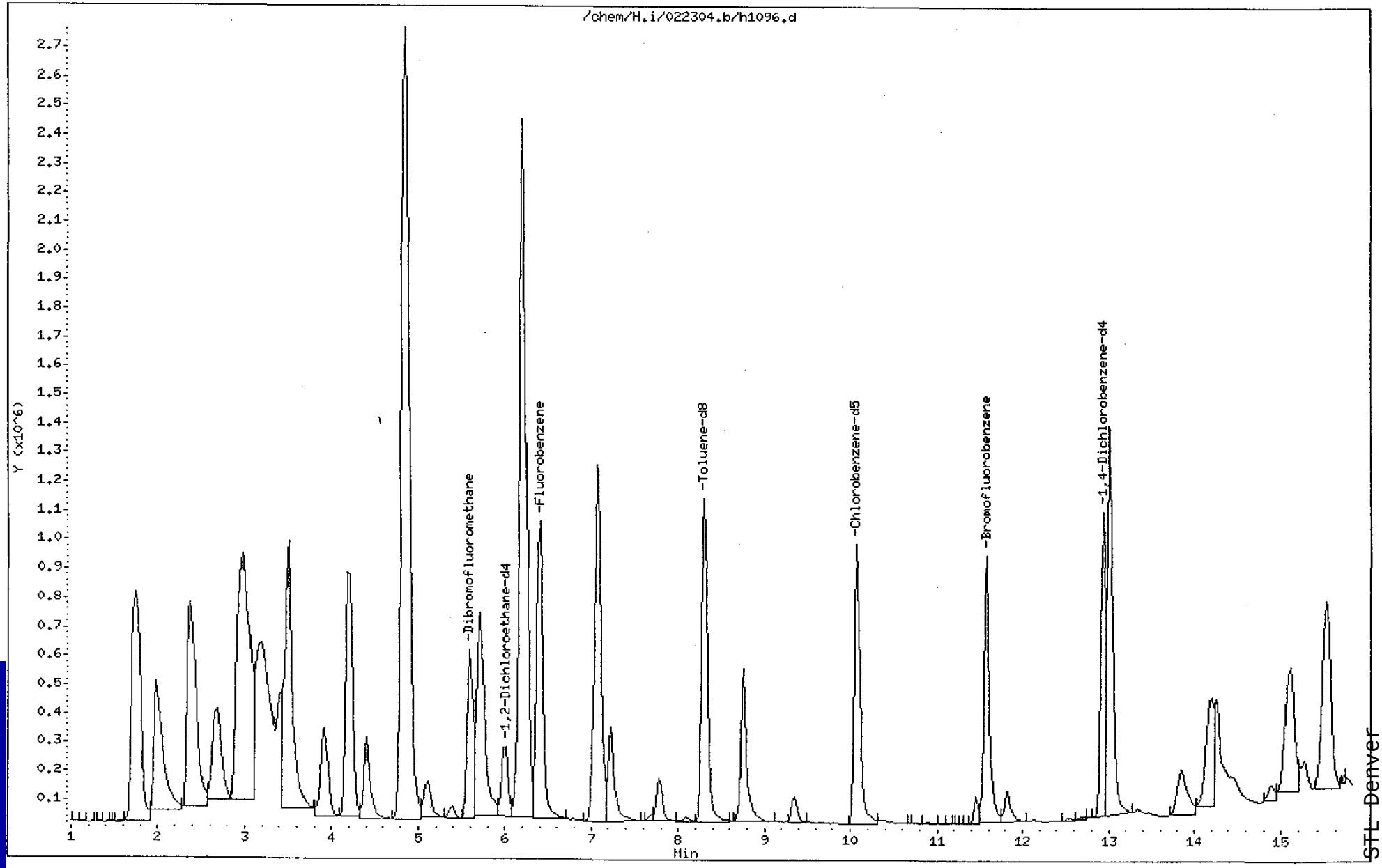
COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
48 Fluorobenzene	6.40	5.90	6.90	6.40	0.05
72 Chlorobenzene-d5	10.06	9.56	10.56	10.06	0.03
96 1,4-Dichlorobenze	12.92	12.42	13.42	12.92	0.02

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem/H.i/022304.b/h1096.d
Date : 23-FEB-2004 09:02
Client ID: SUPP010
Sample Info: SUPP010,, #246-03/011-04
Purge Volume: 20.0
Column phase: DB624

Instrument: H.i

Operator: hoffmanm
Column diameter: 0.53



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GC/MS VOLATILE SAMPLE DATA

SEVERN TRENT STL

Matrix Spike Report

UNSPIKED SAMPLE
Data File : /chem/H.i/022304.b/h1108.d
Samp Info : F9MNJ1AA,8.0,D4B160153-007
Inj Date : 23-FEB-2004 13:31
Sample Amt : 8mL

SPIKE SAMPLE
Data File : /chem/H.i/022304.b/h1109.d
Samp Info : MS,8.0,D4B160153-007MS
Inj Date : 23-FEB-2004 13:51
Sample Amt : 8mL

SPIKE DUPLICATE SAMPLE
Data File : /chem/H.i/022304.b/h1110.d
Samp Info : MSD,8.0,D4B160153-007MSD
Inj Date : 23-FEB-2004 14:11
Sample Amt : 8mL

	Concentration				%Recovery						
	Sample	MS		MSD		Measured		Limits		RPD	
	Measured	Spiked	Measured	Spiked	Measured	MS	MSD	Min	Max	Mes	Max
1,1-Dichloroethene											
	0.0000	25.0000	29.7011	25.0000	34.0109	119	136*	67	125	14	20
Trichloroethene											
	0.0000	25.0000	29.8912	25.0000	30.3418	120	121	80	123	1	20
Benzene											
	22.8719	25.0000	53.9259	25.0000	53.1978	124*	121*	75	116	1	20
Toluene											
	3.7824	25.0000	31.7922	25.0000	30.9938	112	109	74	115	3	20
Chlorobenzene											
	0.0000	25.0000	27.7594	25.0000	27.0067	111	108	77	117	3	20

70.0 Percent of recoveries are within control limits.
100.0 Percent of RPD values are within control limits.

LCSD Report

LCS SAMPLE
Data File : /chem/H.i/022304.b/h1097.d
Samp Info : LCS,, #304-03
Inj Date : 23-FEB-2004 09:22
Sample Amt : 20mL

LCSD SAMPLE
Data File : /chem/H.i/022304.b/h1098.d
Samp Info : LCSD,, #304-03
Inj Date : 23-FEB-2004 09:42
Sample Amt : 20mL

MM 2/23/04

Sample #	Sample #	Sample #	Sample #	Sample #

	Concentration Measured			%Recovery			RPD	
Spiked	LCS	LCSD	Avg.	Meas.	Min	Max	Meas.	Max
1,1-Dichloroethene								
10.0000	7.8022	7.6076	7.7	77.0	67	125	3	20
Trichloroethene								
10.0000	10.1399	10.1331	10.1	101.4	80	123	0	20
Benzene								
10.0000	9.5099	9.5127	9.5	95.1	75	116	0	20
Toluene								
10.0000	9.3189	9.2586	9.3	92.9	74	115	1	20
Chlorobenzene								
10.0000	9.8616	9.8666	9.9	98.6	77	117	0	20

100.0 Percent of recoveries are within control limits.
100.0 Percent of RPD values are within control limits.

Data File: /chem/H.i/022304.b/h1097.d
Report Date: 23-Feb-2004 12:16

STL Denver

VOLATILE REPORT SW-846

Data file : /chem/H.i/022304.b/h1097.d
Lab Smp Id: LCS Client Smp ID: LCS
Inj Date : 23-FEB-2004 09:22
Operator : hoffmanm Inst ID: H.i
Smp Info : LCS,, #304-03
Misc Info :
Comment : Purge and Trap Analysis
Method : /chem/H.i/022304.b/H-20ml-h2o.m
Meth Date : 23-Feb-2004 09:12 H Quant Type: ISTD
Cal Date : 07-JAN-2004 15:24 Cal File: h0014.d
Als bottle: 2 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: dcs.sub
Target Version: 3.40
Processing Host: chemsv02

Concentration Formula: Amt * DF * Vp/Vs

Name	Value	Description
DF	1.000	Dilution Factor
Vp	20.000	Purge Volume (ml)
Vs	20.000	Sample Volume (ml)

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/L)
* 48 Fluorobenzene	96	6.399	6.399	(1.000)	2291055	12.5000	
* 72 Chlorobenzene-d5	119	10.065	10.065	(1.000)	448126	12.5000	
* 96 1,4-Dichlorobenzene-d4	152	12.922	12.922	(1.000)	732825	12.5000	
$ 40 Dibromofluoromethane	111	5.590	5.591	(0.874)	968643	10.7480	10.7480
$ 44 1,2-Dichloroethane-d4	65	6.004	6.004	(0.938)	404622	10.0727	10.0727
$ 61 Toluene-d8	98	8.304	8.304	(0.825)	1842210	10.7540	10.7540
$ 82 Bromofluorobenzene	95	11.574	11.574	(1.150)	1040361	11.0751	11.0751
14 1,1-Dichloroethene	96	3.183	3.198	(0.497)	504530	7.80218	7.80218
46 Benzene	78	6.076	6.073	(0.949)	1865358	9.50985	9.50985
50 Trichloroethene	130	6.848	6.845	(1.070)	754258	10.1399	10.1399
62 Toluene	91	8.376	8.373	(0.832)	2202896	9.31889	9.31889
73 Chlorobenzene	112	10.101	10.098	(1.004)	1407827	9.86160	9.86160

Data File: /chem/H.i/022304.b/h1097.d
Report Date: 23-Feb-2004 12:16

STL Denver

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: H.i
Lab File ID: h1097.d
Lab Smp Id: LCS
Analysis Type: VOA
Quant Type: ISTD
Operator: hoffmanm
Method File: /chem/H.i/022304.b/H-20ml-h2o.m
Misc Info:

Calibration Date: 02/23/4
Calibration Time: 0902
Client Smp ID: LCS
Level: LOW
Sample Type: WATER

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
48 Fluorobenzene	2280591	1140296	4561182	2291055	0.46
72 Chlorobenzene-d5	439562	219781	879124	448126	1.95
96 1,4-Dichlorobenze	726942	363471	1453884	732825	0.81

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
48 Fluorobenzene	6.40	5.90	6.90	6.40	0.00
72 Chlorobenzene-d5	10.06	9.56	10.56	10.06	0.00
96 1,4-Dichlorobenze	12.92	12.42	13.42	12.92	0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem/H.i/022304.b/h1097.d
Report Date: 23-Feb-2004 12:16

STL Denver

RECOVERY REPORT

Client Name:
Sample Matrix: LIQUID
Lab Smp Id: LCS
Level: LOW
Data Type: MS DATA
SpikeList File: dcs-h20.spk
Sublist File: dcs.sub
Method File: /chem/H.i/022304.b/H-20ml-h2o.m
Misc Info:

Client SDG: 022304
Fraction: VOA
Client Smp ID: LCS
Operator: hoffmanm
SampleType: LCS
Quant Type: ISTD

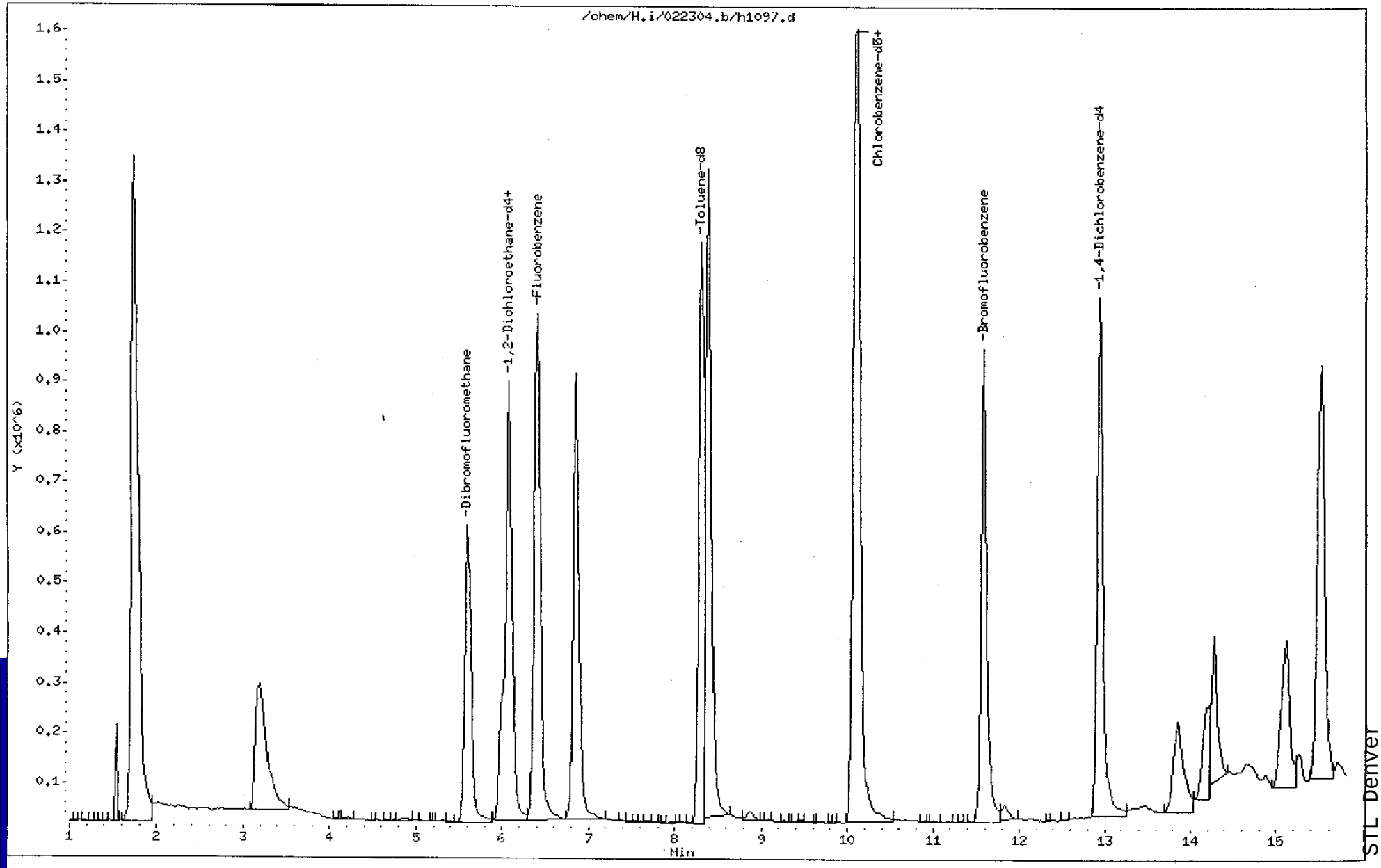
SPIKE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
14 1,1-Dichloroethene	10.0000	7.80218	78.02	67-125
50 Trichloroethene	10.0000	10.1399	101.40	80-123
46 Benzene	10.0000	9.50985	95.10	75-116
62 Toluene	10.0000	9.31889	93.19	74-115
73 Chlorobenzene	10.0000	9.86160	98.62	77-117

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 40 Dibromofluorometha	11.5000	10.7480	93.46	76-116
$ 44 1,2-Dichloroethane	11.5000	10.0727	87.59	59-129
$ 61 Toluene-d8	11.5000	10.7540	93.51	76-116
$ 82 Bromofluorobenzene	11.5000	11.0751	96.31	74-114

Data File: /chem/H.i/022304.b/h1097.d
Date : 23-FEB-2004 09:22
Client ID: LCS
Sample Info: LCS,, #304-03
Purge Volume: 20.0
Column phase: DB624

Instrument: H.i

Operator: hoffmanm
Column diameter: 0.53



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Data File: /chem/H.i/022304.b/h1098.d
Report Date: 23-Feb-2004 12:16

STL Denver

VOLATILE REPORT SW-846

Data file : /chem/H.i/022304.b/h1098.d
Lab Smp Id: LCSD Client Smp ID: LCSD
Inj Date : 23-FEB-2004 09:42
Operator : hoffmanm Inst ID: H.i
Smp Info : LCSD,, #304-03
Misc Info : h1097.d
Comment : Purge and Trap Analysis
Method : /chem/H.i/022304.b/H-20ml-h2o.m
Meth Date : 23-Feb-2004 09:12 H Quant Type: ISTD
Cal Date : 07-JAN-2004 15:24 Cal File: h0014.d
Als bottle: 2 QC Sample: LCSD
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: dcs.sub
Target Version: 3.40
Processing Host: chemsv02

Concentration Formula: Amt * DF * Vp/Vs

Name	Value	Description
DF	1.000	Dilution Factor
Vp	20.000	Purge Volume (ml)
Vs	20.000	Sample Volume (ml)

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/L)
* 48 Fluorobenzene	96	6.398	6.399	(1.000)	2310242	12.5000	
* 72 Chlorobenzene-d5	119	10.064	10.065	(1.000)	459239	12.5000	
* 96 1,4-Dichlorobenzene-d4	152	12.921	12.922	(1.000)	753240	12.5000	
$ 40 Dibromofluoromethane	111	5.608	5.591	(0.876)	965144	10.6202	10.6202
$ 44 1,2-Dichloroethane-d4	65	6.003	6.004	(0.938)	406623	10.0385	10.0384
$ 61 Toluene-d8	98	8.303	8.304	(0.825)	1864482	10.6207	10.6207
$ 82 Bromofluorobenzene	95	11.573	11.574	(1.150)	1062511	11.0372	11.0372
14 1,1-Dichloroethene	96	3.182	3.198	(0.497)	496070	7.60764	7.60764
46 Benzene	78	6.075	6.073	(0.949)	1881534	9.51265	9.51265
50 Trichloroethene	130	6.848	6.845	(1.070)	760067	10.1331	10.1331
62 Toluene	91	8.375	8.373	(0.832)	2242927	9.25863	9.25863
73 Chlorobenzene	112	10.100	10.098	(1.004)	1443476	9.86663	9.86663

Data File: /chem/H.i/022304.b/h1098.d
Report Date: 23-Feb-2004 12:16

STL Denver

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: H.i
Lab File ID: h1098.d
Lab Smp Id: LCSD
Analysis Type: VOA
Quant Type: ISTD
Operator: hoffmanm
Method File: /chem/H.i/022304.b/H-20ml-h2o.m
Misc Info: h1097.d

Calibration Date: 02/23/4
Calibration Time: 0902
Client Smp ID: LCSD
Level: LOW
Sample Type: WATER

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
48 Fluorobenzene	2280591	1140296	4561182	2310242	1.30
72 Chlorobenzene-d5	439562	219781	879124	459239	4.48
96 1,4-Dichlorobenze	726942	363471	1453884	753240	3.62

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
48 Fluorobenzene	6.40	5.90	6.90	6.40	-0.01
72 Chlorobenzene-d5	10.06	9.56	10.56	10.06	-0.01
96 1,4-Dichlorobenze	12.92	12.42	13.42	12.92	-0.01

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem/H.i/022304.b/h1098.d
Report Date: 23-Feb-2004 12:16

STL Denver

RECOVERY REPORT

Client Name:
Sample Matrix: LIQUID
Lab Smp Id: LCSD
Level: LOW
Data Type: MS DATA
SpikeList File: dcs-h20.spk
Sublist File: dcs.sub
Method File: /chem/H.i/022304.b/H-20ml-h2o.m
Misc Info: h1097.d

Client SDG: 022304
Fraction: VOA
Client Smp ID: LCSD
Operator: hoffmanm
SampleType: LCSD
Quant Type: ISTD

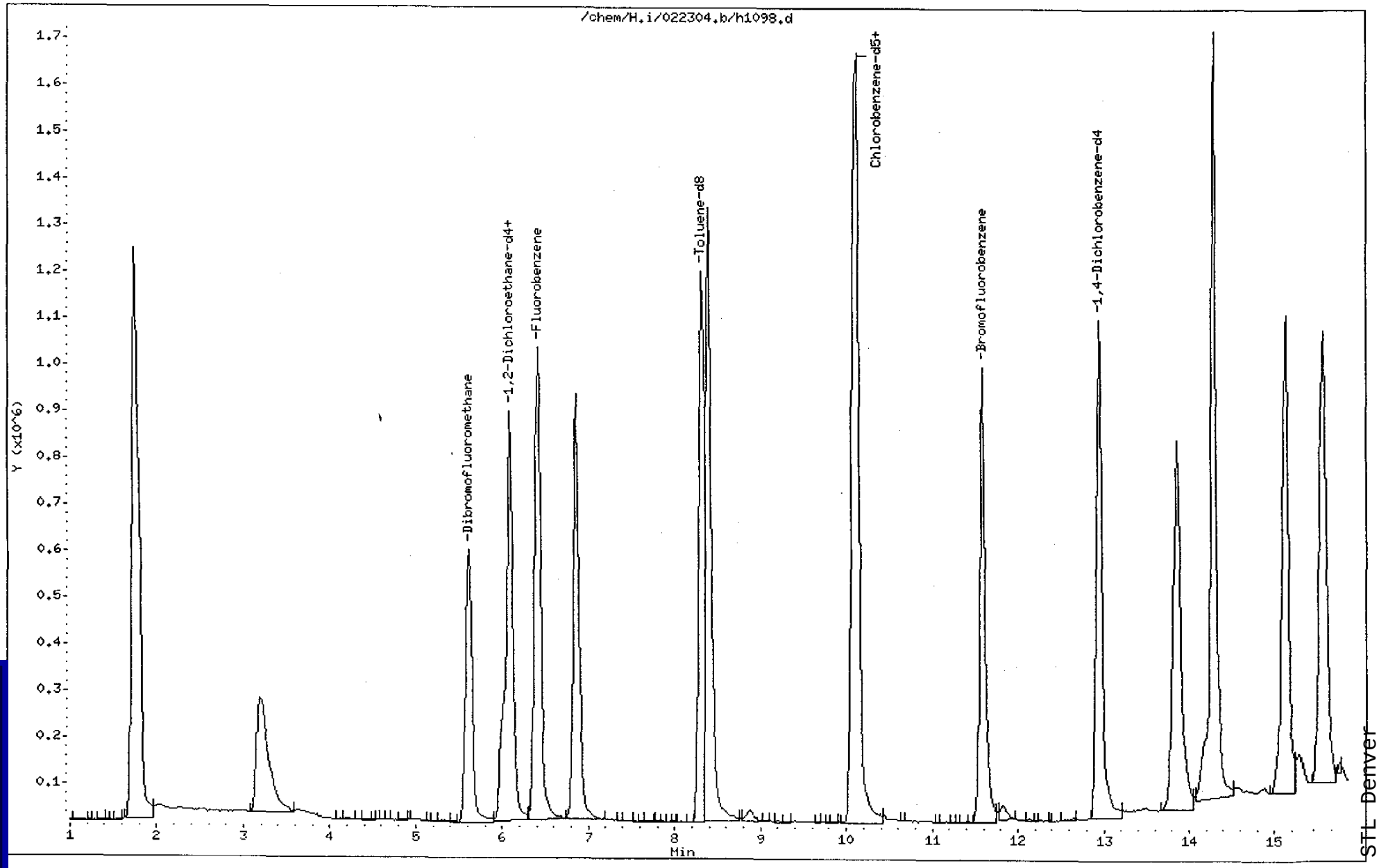
SPIKE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
14 1,1-Dichloroethene	10.0000	7.60764	76.08	67-125
50 Trichloroethene	10.0000	10.1331	101.33	80-123
46 Benzene	10.0000	9.51265	95.13	75-116
62 Toluene	10.0000	9.25863	92.59	74-115
73 Chlorobenzene	10.0000	9.86663	98.67	77-117

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 40 Dibromofluorometha	11.5000	10.6202	92.35	76-116
$ 44 1,2-Dichloroethane	11.5000	10.0384	87.29	59-129
$ 61 Toluene-d8	11.5000	10.6207	92.35	76-116
$ 82 Bromofluorobenzene	11.5000	11.0372	95.98	74-114

Data File: /chem/H.i/022304.b/h1098.d
Date : 23-FEB-2004 09:42
Client ID: LCSD
Sample Info: LCSD,, #304-03
Purge Volume: 20.0
Column phase: DB624

Instrument: H.i

Operator: hoffmann
Column diameter: 0.53



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Report Date: 25-Feb-2004 16:09

STL Denver

VOLATILE REPORT SW-846

Data file : /chem/H.i/022304.b/h1099.d
Lab Smp Id: VBLK Client Smp ID: VBLK
Inj Date : 23-FEB-2004 10:01
Operator : hoffmanm Inst ID: H.i
Smp Info : VBLK,,
Misc Info :
Comment : Purge and Trap Analysis
Method : /chem/H.i/022304.b/H-20ml-h2o.m
Meth Date : 23-Feb-2004 12:21 hoffmanm Quant Type: ISTD
Cal Date : 07-JAN-2004 15:24 Cal File: h0014.d
Als bottle: 2
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: H-all.sub
Target Version: 3.40
Processing Host: chemsv02

Concentration Formula: Amt * DF * Vp/Vs

Name	Value	Description
DF	1.000	Dilution Factor
Vp	20.000	Purge Volume (ml)
Vs	20.000	Sample Volume (ml)

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/L)
* 48 Fluorobenzene	96	6.395	6.399	(1.000)	2302452	12.5000	
* 72 Chlorobenzene-d5	119	10.079	10.065	(1.000)	448798	12.5000	
* 96 1,4-Dichlorobenzene-d4	152	12.918	12.922	(1.000)	753399	12.5000	
$ 40 Dibromofluoromethane	111	5.587	5.591	(0.874)	956059	10.5559	10.5559
$ 44 1,2-Dichloroethane-d4	65	6.000	6.004	(0.938)	393857	9.75620	9.75620
$ 61 Toluene-d8	98	8.300	8.304	(0.824)	1821408	10.6167	10.6167
$ 82 Bromofluorobenzene	95	11.570	11.574	(1.148)	1044169	11.0990	11.0990
M 1 1,2-Dichloroethene (total)	96.00	Compound Not Detected.					
M 2 Xylene (total)	106.00	Compound Not Detected.					
3 dichlorodifluoromethane	85.00	Compound Not Detected.					
4 Chloromethane	50.00	Compound Not Detected.					
5 Vinyl Chloride	62.00	Compound Not Detected.					
6 Ethylene Oxide	43.00	Compound Not Detected.					
117 Dichlorotetrafluoroethane	85.00	Compound Not Detected.					
123 1,2-dichloro-1,1,2-triflourom	117.00	Compound Not Detected.					
124 2,2-dichloro-1,1,1-trifluorom	83.00	Compound Not Detected.					

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)
7 Bromomethane	94.00	Compound Not Detected.					
8 Chloroethane	64.00	Compound Not Detected.					
9 Dichlorofluoromethane	67.00	Compound Not Detected.					
10 Trichlorofluoromethane	101.00	Compound Not Detected.					
11 Ethanol	45.00	Compound Not Detected.					
12 Ethyl Ether	59.00	Compound Not Detected.					
13 Acrolein	56.00	Compound Not Detected.					
15 Acetone	43.00	Compound Not Detected.					
14 1,1-Dichloroethene	96.00	Compound Not Detected.					
16 Trichlorotrifluoroethane	151.00	Compound Not Detected.					
17 Iodomethane	142.00	Compound Not Detected.					
19 Acetonitrile	41.00	Compound Not Detected.					
18 Carbon Disulfide	76.00	Compound Not Detected.					
20 Allyl Chloride	41.00	Compound Not Detected.					
119 Methyl Acetate	43.00	Compound Not Detected.					
21 Methylene Chloride	84.00	Compound Not Detected.					
125 2-Propanol	45.00	Compound Not Detected.					
22 tert-Butyl alcohol	59.00	Compound Not Detected.					
23 Acrylonitrile	53.00	Compound Not Detected.					
24 trans-1,2-Dichloroethene	96.00	Compound Not Detected.					
25 Methyl t-butyl ether	73.00	Compound Not Detected.					
26 Hexane	57.00	Compound Not Detected.					
27 1,1-Dichloroethane	63.00	Compound Not Detected.					
29 Vinyl acetate	43.00	Compound Not Detected.					
30 Isopropyl ether	87.00	Compound Not Detected.					
28 Chloroprene	53.00	Compound Not Detected.					
120 ETBE	59.00	Compound Not Detected.					
33 2-Butanone	43.00	Compound Not Detected.					
32 cis-1,2-Dichloroethene	96.00	Compound Not Detected.					
31 2,2-Dichloropropane	77.00	Compound Not Detected.					
35 Ethyl Acetate	43.00	Compound Not Detected.					
34 Propionitrile	54.00	Compound Not Detected.					
36 Methacrylonitrile	41.00	Compound Not Detected.					
37 Bromochloromethane	128.00	Compound Not Detected.					
39 Tetrahydrofuran	42.00	Compound Not Detected.					
38 Chloroform	83.00	Compound Not Detected.					
41 1,1,1-Trichloroethane	97.00	Compound Not Detected.					
114 Cyclohexane	56.00	Compound Not Detected.					
42 1,1-Dichloropropene	75.00	Compound Not Detected.					
43 Carbon Tetrachloride	117.00	Compound Not Detected.					
45 Isobutanol	41.00	Compound Not Detected.					
46 Benzene	78.00	Compound Not Detected.					
47 1,2-Dichloroethane	62.00	Compound Not Detected.					
121 TAME	73.00	Compound Not Detected.					
49 n-Butanol	56.00	Compound Not Detected.					
50 Trichloroethene	130.00	Compound Not Detected.					
115 2-Pentanone	43.00	Compound Not Detected.					

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/L)
52 1,2-Dichloropropane	63.00	Compound Not Detected.					
122 Methyl Cyclohexane	55.00	Compound Not Detected.					
53 Dibromomethane	93.00	Compound Not Detected.					
54 Methyl Methacrylate	100.00	Compound Not Detected.					
55 1,4-Dioxane	88.00	Compound Not Detected.					
56 Bromodichloromethane	83.00	Compound Not Detected.					
57 2-nitropropane	41.00	Compound Not Detected.					
113 2-Chloroethyl vinyl ether	63.00	Compound Not Detected.					
59 cis-1,3-Dichloropropene	75.00	Compound Not Detected.					
60 4-Methyl-2-pentanone	43.00	Compound Not Detected.					
62 Toluene	91.00	Compound Not Detected.					
63 trans-1,3-Dichloropropene	75.00	Compound Not Detected.					
64 Ethyl methacrylate	69.00	Compound Not Detected.					
65 1,1,2-Trichloroethane	97.00	Compound Not Detected.					
67 1,3-Dichloropropane	76.00	Compound Not Detected.					
66 Tetrachloroethene	164.00	Compound Not Detected.					
68 2-Hexanone	43.00	Compound Not Detected.					
126 Tetrahydrothiophene	60.00	Compound Not Detected.					
69 Dibromochloromethane	129.00	Compound Not Detected.					
70 1,2-Dibromoethane	107.00	Compound Not Detected.					
71 1-Chlorohexane	91.00	Compound Not Detected.					
73 Chlorobenzene	112.00	Compound Not Detected.					
74 1,1,1,2-Tetrachloroethane	131.00	Compound Not Detected.					
75 Ethylbenzene	106.00	Compound Not Detected.					
76 m and p-Xylene	106.00	Compound Not Detected.					
77 o-Xylene	106.00	Compound Not Detected.					
78 Styrene	104.00	Compound Not Detected.					
79 Bromoform	173.00	Compound Not Detected.					
80 isopropyl benzene	105.00	Compound Not Detected.					
116 cis-1,4-Dichloro-2-butene	53.00	Compound Not Detected.					
81 Cyclohexanone	55.00	Compound Not Detected.					
83 1,1,2,2-Tetrachloroethane	83.00	Compound Not Detected.					
84 Bromobenzene	156.00	Compound Not Detected.					
85 1,2,3-Trichloropropane	110.00	Compound Not Detected.					
86 t-1,4-Dichloro-2-butene	53.00	Compound Not Detected.					
87 n-Propylbenzene	120.00	Compound Not Detected.					
88 2-Chlorotoluene	126.00	Compound Not Detected.					
89 1,3,5-Trimethylbenzene	105.00	Compound Not Detected.					
90 4-Chlorotoluene	126.00	Compound Not Detected.					
91 tert-Butylbenzene	119.00	Compound Not Detected.					
92 1,2,4-Trimethylbenzene	105.00	Compound Not Detected.					
93 sec-Butylbenzene	134.00	Compound Not Detected.					
94 m-Dichlorobenzene	146.00	Compound Not Detected.					
95 4-Isopropyltoluene	119.00	Compound Not Detected.					
97 p-dichlorobenzene	146.00	Compound Not Detected.					
118 1,2,3-Trimethylbenzene	105.00	Compound Not Detected.					
98 n-Butylbenzene	91.00	Compound Not Detected.					

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/L)
99 o-Dichlorobenzene	146.00	Compound Not Detected.					
100 1,2-Dibromo-3-chloropropane	157.00	Compound Not Detected.					
101 1,2,4-Trichlorobenzene	180.00	Compound Not Detected.					
102 Hexachlorobutadiene	225.00	Compound Not Detected.					
127 Naphthalene	128.00	Compound Not Detected.					
104 1,2,3-Trichlorobenzene	180.00	Compound Not Detected.					

STL Denver

VOLATILE REPORT SW-846

Data file : /chem/H.i/022304.b/h1099.d
Lab Smp Id: VBLK Client Smp ID: VBLK
Inj Date : 23-FEB-2004 10:01
Operator : hoffmanm Inst ID: H.i
Smp Info : VBLK,,
Misc Info :
Comment : Purge and Trap Analysis
Method : /chem/H.i/022304.b/H-20ml-h2o.m
Meth Date : 23-Feb-2004 12:21 hoffmanm Quant Type: ISTD
Cal Date : 07-JAN-2004 15:24 Cal File: h0014.d
Als bottle: 2
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: H-all.sub
Target Version: 3.40
Processing Host: chemsv02

Concentration Formula: Amt * DF * Vp/Vs

Name	Value	Description
DF	1.000	Dilution Factor
Vp	20.000	Purge Volume (ml)
Vs	20.000	Sample Volume (ml)

ISTD	RT	AREA	AMOUNT
* 96 1,4-Dichlorobenzene-d4	12.918	4721690	12.500

		CONCENTRATIONS			QUANT		
RT	AREA	ON-COL(ug/L)	FINAL(ug/L)	QUAL	LIBRARY	LIB ENTRY	CPND #
Unknown				CAS #:			
13.835	2571950	6.80887034	6.80887	0		0	96
Acetic acid, 2-ethylhexyl ester				CAS #: 103-09-3			
14.266	2042553	5.40736738	5.40737	83	NBS75K.1	15793	96
Unknown				CAS #:			
15.092	2884735	7.63692396	7.63692	0		0	96

		CONCENTRATIONS			QUANT		
RT	AREA	ON-COL(ug/L)	FINAL(ug/L)	QUAL	LIBRARY	LIB ENTRY	CPND #
====	====	==========	==========	====	=======	=========	======
Unknown				CAS #:			
15.506	3547011	9.39020510	9.39020	0		0	96

Data File: /chem/H.i/022304.b/h1099.d
Report Date: 25-Feb-2004 16:09

STL Denver

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: H.i
Lab File ID: h1099.d
Lab Smp Id: VBLK
Analysis Type: VOA
Quant Type: ISTD
Operator: hoffmanm
Method File: /chem/H.i/022304.b/H-20ml-h2o.m
Misc Info:

Calibration Date: 02/23/4
Calibration Time: 0902
Client Smp ID: VBLK
Level: LOW
Sample Type: WATER

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
48 Fluorobenzene	2280591	1140296	4561182	2302452	0.96
72 Chlorobenzene-d5	439562	219781	879124	448798	2.10
96 1,4-Dichlorobenze	726942	363471	1453884	753399	3.64

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
48 Fluorobenzene	6.40	5.90	6.90	6.40	-0.06
72 Chlorobenzene-d5	10.06	9.56	10.56	10.08	0.14
96 1,4-Dichlorobenze	12.92	12.42	13.42	12.92	-0.03

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem/H.i/022304.b/h1099.d
Report Date: 25-Feb-2004 16:09

STL Denver

RECOVERY REPORT

Client Name:
Sample Matrix: LIQUID
Lab Smp Id: VBLK
Level: LOW
Data Type: MS DATA
SpikeList File: dcs-h20.spk
Sublist File: H-all.sub
Method File: /chem/H.i/022304.b/H-20ml-h2o.m
Misc Info:

Client SDG: 022304
Fraction: VOA
Client Smp ID: VBLK
Operator: hoffmanm
SampleType: SAMPLE
Quant Type: ISTD

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 40 Dibromofluorometha	11.5000	10.5559	91.79	76-116
$ 44 1,2-Dichloroethane	11.5000	9.75620	84.84	59-129
$ 61 Toluene-d8	11.5000	10.6167	92.32	76-116
$ 82 Bromofluorobenzene	11.5000	11.0990	96.51	74-114

Data File: /chem/H.i/022304.b/h1099.d
Date : 23-FEB-2004 10:01
Client ID: VBLK
Sample Info: VBLK,,
Purge Volume: 20.0
Column phase: DB624

Instrument: H.i
Operator: hoffmanm
Column diameter: 0.53

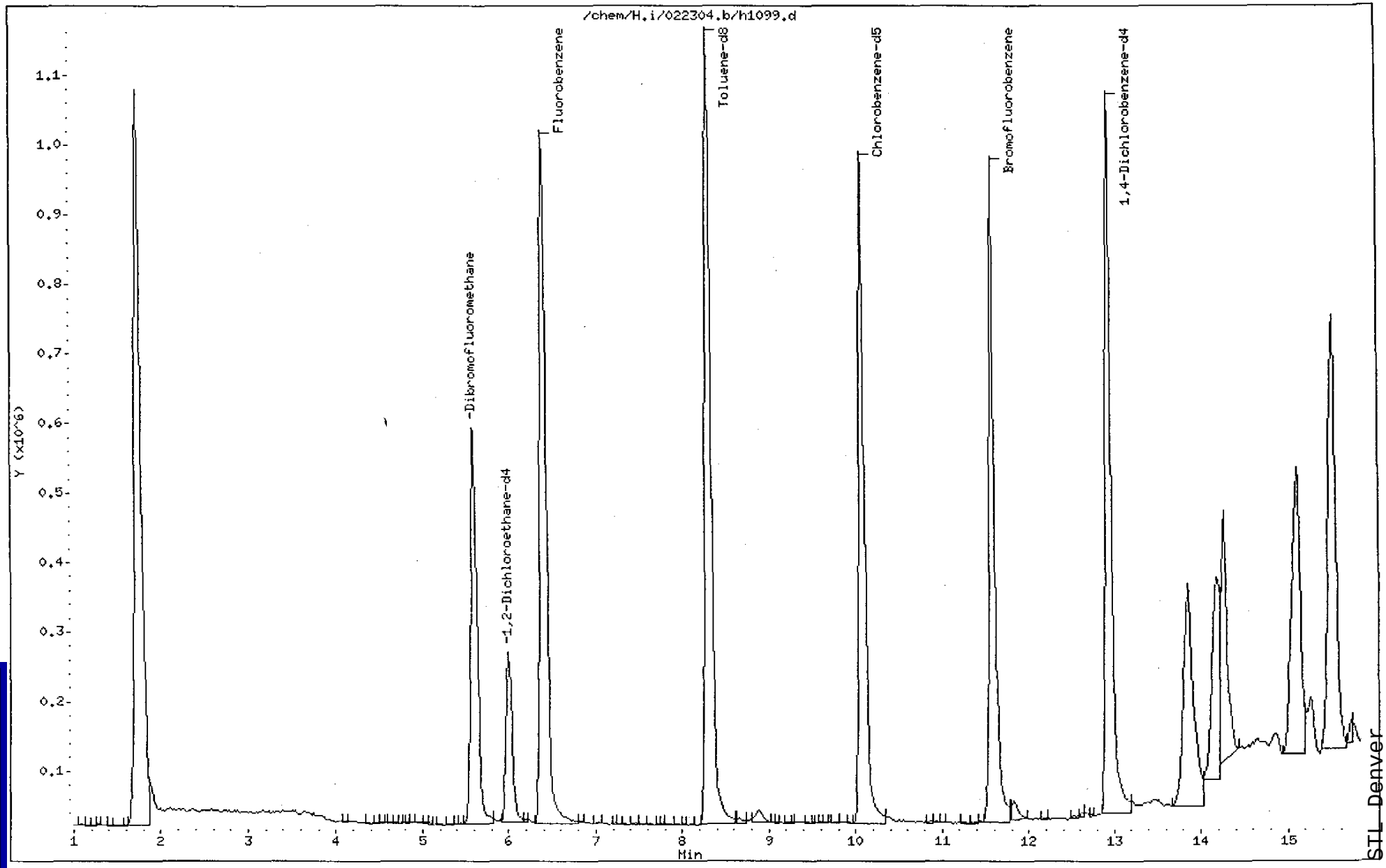


Table of Contents

Data File: /chem/H.i/022304.b/h1099.d

Date : 23-FEB-2004 10:01

Client ID: VBLK

Instrument: H.i

Sample Info: VBLK,,

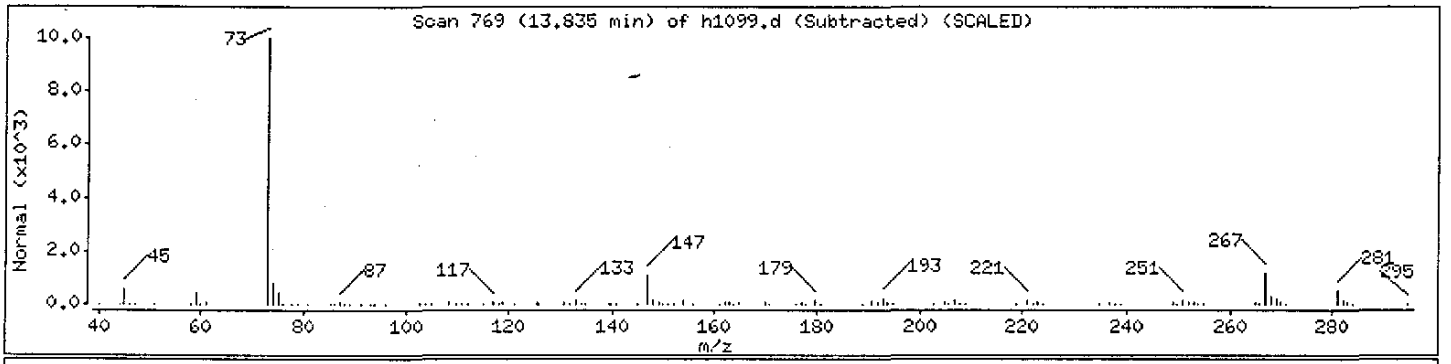
Purge Volume: 20.0

Operator: hoffmann

Column phase: DB624

Column diameter: 0.53

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown			0	0		0



Data File: /chem/H.i/022304.b/h1099.d

Date : 23-FEB-2004 10:01

Client ID: VBLK

Instrument: H.i

Sample Info: VBLK,,

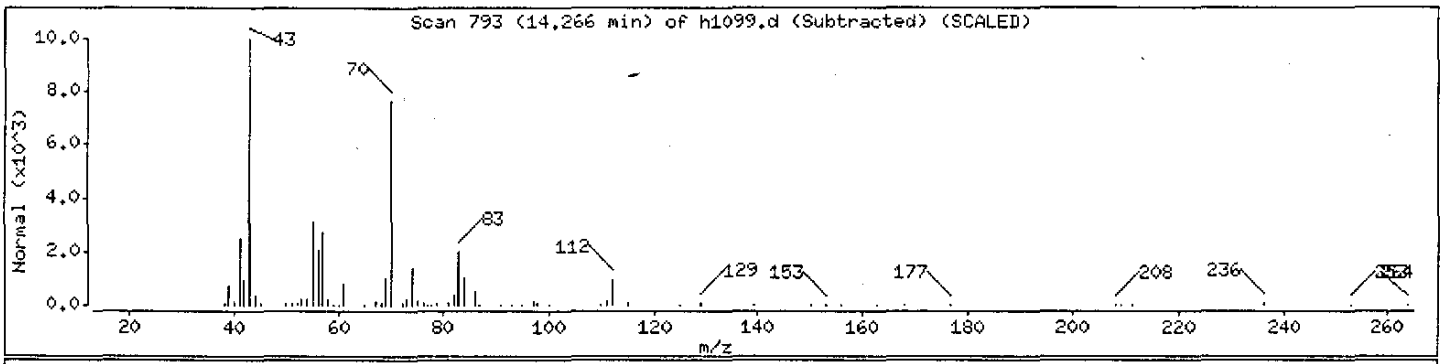
Purge Volume: 20.0

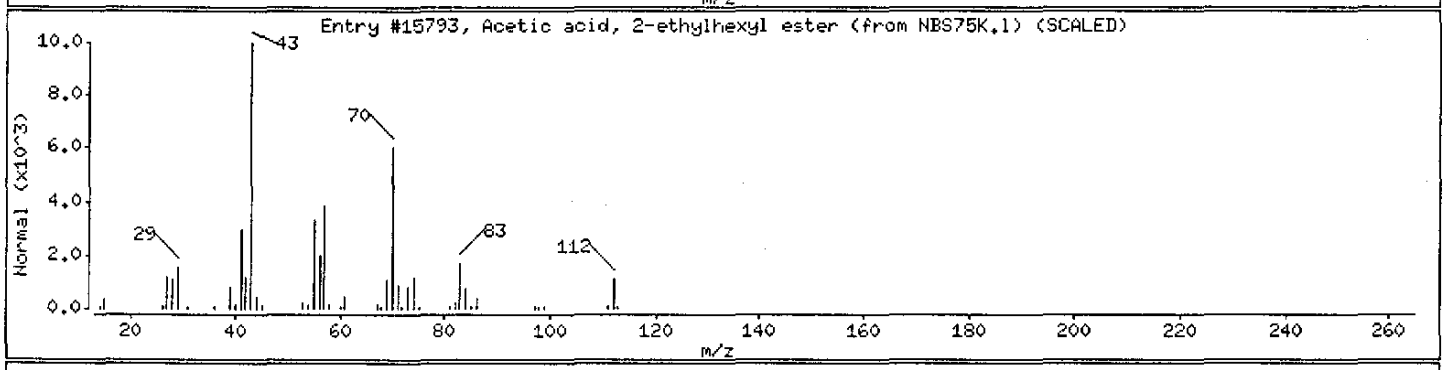
Operator: hoffmanm

Column phase: DB624

Column diameter: 0.53

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Acetic acid, 2-ethylhexyl ester	103-09-3	NBS75K.l	15793	83	C10H2002	172





Data File: /chem/H.i/022304.b/h1099.d

Date : 23-FEB-2004 10:01

Client ID: VBLK

Instrument: H.i

Sample Info: VBLK,,

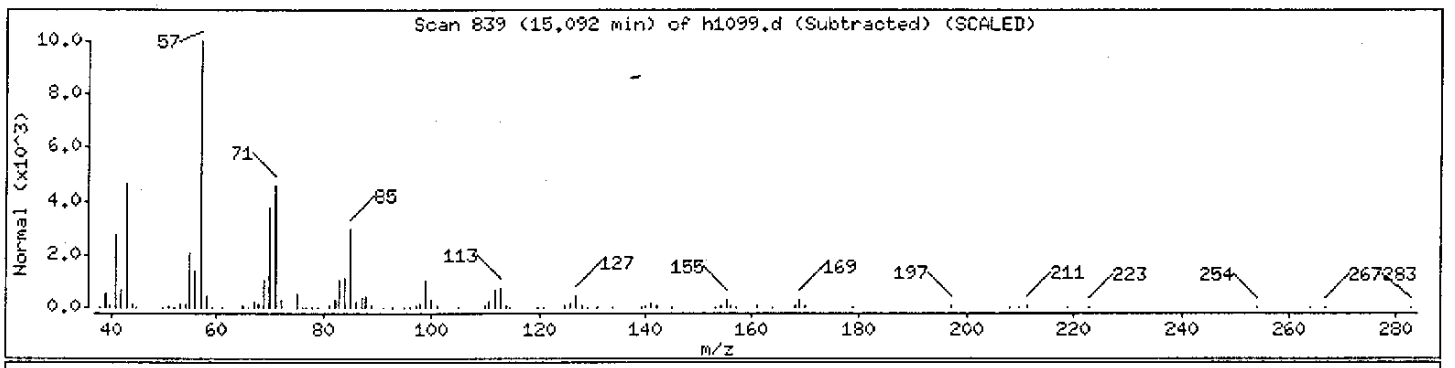
Purge Volume: 20.0

Operator: hoffmanm

Column phase: DB624

Column diameter: 0.53

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown			0	0		0



Data File: /chem/H.i/022304.b/h1099.d

Date : 23-FEB-2004 10:01

Client ID: VBLK

Instrument: H.i

Sample Info: VBLK,,

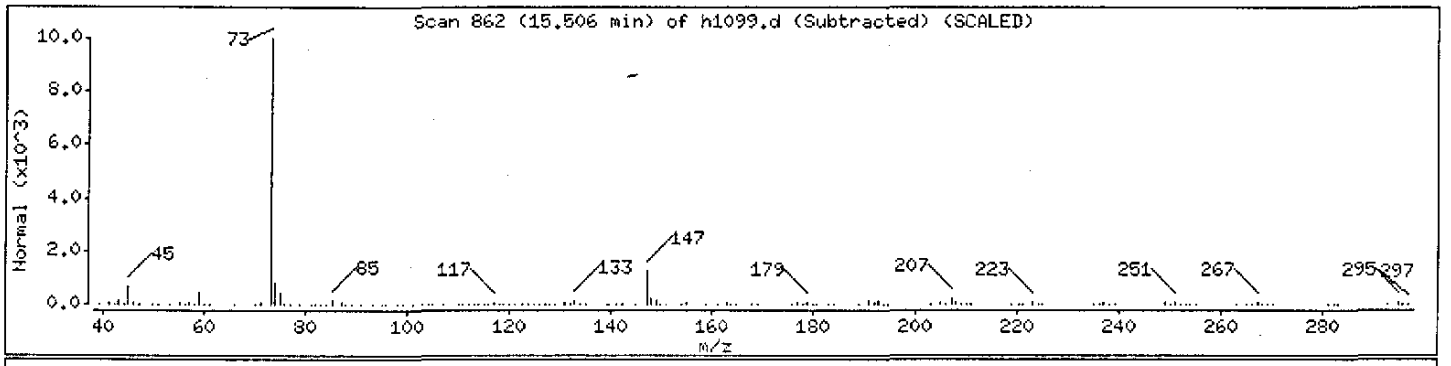
Purge Volume: 20.0

Operator: hoffmanm

Column phase: DB624

Column diameter: 0.53

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown			0	0		0



Data File: /chem/H.i/022304.b/h1121.d
Report Date: 24-Feb-2004 07:38

STL Denver

VOLATILE REPORT SW-846

MMB 2/24/04

Data file : /chem/H.i/022304.b/h1121.d
Lab Smp Id: F9KFC1AQ
Inj Date : 23-FEB-2004 17:50
Operator : hoffmanm Inst ID: H.i
Smp Info : F9KFC1AQ,,D4B130209-014
Misc Info :
Comment : Purge and Trap Analysis
Method : /chem/H.i/022304.b/H-20ml-h2o.m
Meth Date : 23-Feb-2004 12:21 hoffmanm Quant Type: ISTD
Cal Date : 07-JAN-2004 15:24 Cal File: h0014.d
Als bottle: 2
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: H-all.sub
Target Version: 3.40
Processing Host: chemsv02

Concentration Formula: Amt * DF * Vp/Vs

Name	Value	Description
DF	1.000	Dilution Factor
Vp	20.000	Purge Volume (ml)
Vs	20.000	Sample Volume (ml)

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/L)
* 48 Fluorobenzene	96	6.396	6.399	(1.000)	2293467	12.5000	
* 72 Chlorobenzene-d5	119	10.062	10.065	(1.000)	455458	12.5000	
* 96 1,4-Dichlorobenzene-d4	152	12.919	12.922	(1.000)	746674	12.5000	
$ 40 Dibromofluoromethane	111	5.587	5.591	(0.874)	938267	10.4000	10.4000
$ 44 1,2-Dichloroethane-d4	65	6.001	6.004	(0.938)	400874	9.96892	9.96892
$ 61 Toluene-d8	98	8.301	8.304	(0.825)	1800328	10.3404	10.3404
$ 82 Bromofluorobenzene	95	11.571	11.574	(1.150)	1009253	10.5710	10.5710
M 1 1,2-Dichloroethene (total)	96				506029	7.35845	7.35845
M 2 Xylene (total)	106				1473188	15.1885	15.1885
3 dichlorodifluoromethane	85.00	Compound Not Detected.					
4 Chloromethane	50.00	Compound Not Detected.					
5 Vinyl Chloride	62	2.155	2.138	(0.337)	42267	0.82818	0.828185
6 Ethylene Oxide	43.00	Compound Not Detected.					
117 Dichlorotetrafluoroethane	85.00	Compound Not Detected.					
123 1,2-dichloro-1,1,2-triflourom	117.00	Compound Not Detected.					
124 2,2-dichloro-1,1,1-trifluorom	83.00	Compound Not Detected.					

Data File: /chem/H.i/022304.b/h1121.d
Report Date: 24-Feb-2004 07:38

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)
7 Bromomethane	94.00	Compound Not Detected.					
8 Chloroethane	64.00	Compound Not Detected.					
9 Dichlorofluoromethane	67.00	Compound Not Detected.					
10 Trichlorofluoromethane	101.00	Compound Not Detected.					
11 Ethanol	45.00	Compound Not Detected.					
12 Ethyl Ether	59.00	Compound Not Detected.					
13 Acrolein	56.00	Compound Not Detected.					
15 Acetone	43.00	Compound Not Detected.					
14 1,1-Dichloroethene	96.00	Compound Not Detected.					
16 Trichlorotrifluoroethane	151.00	Compound Not Detected.					
17 Iodomethane	142.00	Compound Not Detected.					
19 Acetonitrile	41.00	Compound Not Detected.					
18 Carbon Disulfide	76.00	Compound Not Detected.					
20 Allyl Chloride	41.00	Compound Not Detected.					
119 Methyl Acetate	43.00	Compound Not Detected.					
21 Methylene Chloride	84	3.629	3.629	(0.567)	32943	0.57694	0.576944
125 2-Propanol	45.00	Compound Not Detected.					
22 tert-Butyl alcohol	59.00	Compound Not Detected.					
23 Acrylonitrile	53.00	Compound Not Detected.					
24 trans-1,2-Dichloroethene	96.00	Compound Not Detected.					
25 Methyl t-butyl ether	73.00	Compound Not Detected.					
26 Hexane	57	4.204	4.189	(0.418)	183743	1.78731	1.78731
27 1,1-Dichloroethane	63	4.365	4.366	(0.683)	332636	2.84800	2.84800
29 Vinyl acetate	43.00	Compound Not Detected.					
30 Isopropyl ether	87.00	Compound Not Detected.					
28 Chloroprene	53.00	Compound Not Detected.					
120 ETBE	59.00	Compound Not Detected.					
33 2-Butanone	43.00	Compound Not Detected.					
32 cis-1,2-Dichloroethene	96	5.030	5.031	(0.786)	506029	7.35845	7.35845
31 2,2-Dichloropropane	77.00	Compound Not Detected.					
35 Ethyl Acetate	43.00	Compound Not Detected.					
34 Propionitrile	54.00	Compound Not Detected.					
36 Methacrylonitrile	41.00	Compound Not Detected.					
37 Bromochloromethane	128.00	Compound Not Detected.					
39 Tetrahydrofuran	42.00	Compound Not Detected.					
38 Chloroform	83	5.408	5.408	(0.845)	329193	2.56487	2.56487
41 1,1,1-Trichloroethane	97.00	Compound Not Detected.					
114 Cyclohexane	56.00	Compound Not Detected.					
42 1,1-Dichloropropene	75.00	Compound Not Detected.					
43 Carbon Tetrachloride	117.00	Compound Not Detected.					
45 Isobutanol	41.00	Compound Not Detected.					
46 Benzene	78	6.073	6.073	(0.949)	183006	0.93201	0.932008
47 1,2-Dichloroethane	62.00	Compound Not Detected.					
121 TAME	73.00	Compound Not Detected.					
49 n-Butanol	56.00	Compound Not Detected.					
50 Trichloroethene	130	6.845	6.845	(1.070)	47385	0.63635	0.636353
115 2-Pentanone	43.00	Compound Not Detected.					

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/L)
52 1,2-Dichloropropane	63.00	Compound Not Detected.					
122 Methyl Cyclohexane	55	7.079	7.082	(1.107)	26778	0.28048	0.280483(a)
53 Dibromomethane	93.00	Compound Not Detected.					
54 Methyl Methacrylate	100.00	Compound Not Detected.					
55 1,4-Dioxane	88.00	Compound Not Detected.					
56 Bromodichloromethane	83	7.438	7.420	(1.163)	130526	1.25242	1.25242
57 2-nitropropane	41.00	Compound Not Detected.					
113 2-Chloroethyl vinyl ether	63.00	Compound Not Detected.					
59 cis-1,3-Dichloropropene	75.00	Compound Not Detected.					
60 4-Methyl-2-pentanone	43	8.157	8.157	(0.811)	28017	1.18976	1.18976
62 Toluene	91	8.373	8.373	(0.832)	1908542	7.94372	7.94372
63 trans-1,3-Dichloropropene	75.00	Compound Not Detected.					
64 Ethyl methacrylate	69.00	Compound Not Detected.					
65 1,1,2-Trichloroethane	97.00	Compound Not Detected.					
67 1,3-Dichloropropane	76.00	Compound Not Detected.					
66 Tetrachloroethene	164	9.055	9.056	(0.900)	17004	0.22135	0.221351
68 2-Hexanone	43.00	Compound Not Detected.					
126 Tetrahydrothiophene	60.00	Compound Not Detected.					
69 Dibromochloromethane	129	9.361	9.361	(0.930)	51716	0.75940	0.759395
70 1,2-Dibromoethane	107.00	Compound Not Detected.					
71 1-Chlorohexane	91.00	Compound Not Detected.					
73 Chlorobenzene	112.00	Compound Not Detected.					
74 1,1,1,2-Tetrachloroethane	131.00	Compound Not Detected.					
75 Ethylbenzene	106	10.241	10.242	(1.018)	190577	2.56083	2.56083
76 m and p-Xylene	106	10.385	10.385	(1.032)	1029227	10.2428	10.2428
77 o-Xylene	106	10.888	10.888	(1.082)	443961	4.94566	4.94566
78 Styrene	104.00	Compound Not Detected.					
79 Bromoform	173	11.158	11.158	(1.109)	7915	0.20589	0.205886
80 isopropyl benzene	105	11.373	11.374	(1.130)	65127	0.22012	0.220116
116 cis-1,4-Dichloro-2-butene	53.00	Compound Not Detected.					
81 Cyclohexanone	55.00	Compound Not Detected.					
83 1,1,2,2-Tetrachloroethane	83.00	Compound Not Detected.					
84 Bromobenzene	156.00	Compound Not Detected.					
85 1,2,3-Trichloropropane	110.00	Compound Not Detected.					
86 t-1,4-Dichloro-2-butene	53.00	Compound Not Detected.					
87 n-Propylbenzene	120.00	Compound Not Detected.					
88 2-Chlorotoluene	126.00	Compound Not Detected.					
89 1,3,5-Trimethylbenzene	105	12.092	12.110	(0.936)	226875	1.04223	1.04223
90 4-Chlorotoluene	126.00	Compound Not Detected.					
91 tert-Butylbenzene	119.00	Compound Not Detected.					
92 1,2,4-Trimethylbenzene	105	12.541	12.542	(0.971)	299782	1.47583	1.47583
93 sec-Butylbenzene	134.00	Compound Not Detected.					
94 m-Dichlorobenzene	146.00	Compound Not Detected.					
95 4-Isopropyltoluene	119	12.829	12.883	(0.993)	119573	0.48569	0.485689
97 p-dichlorobenzene	146.00	Compound Not Detected.					
118 1,2,3-Trimethylbenzene	105	13.009	13.012	(2.034)	284455	1.84211	1.84211(a)
98 n-Butylbenzene	91.00	Compound Not Detected.					

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/L)
99 o-Dichlorobenzene	146	13.350	13.350	(1.033)	53983	0.56107	0.561067
100 1,2-Dibromo-3-chloropropane	157.00	Compound Not Detected.					
101 1,2,4-Trichlorobenzene	180.00	Compound Not Detected.					
102 Hexachlorobutadiene	225.00	Compound Not Detected.					
127 Naphthalene	128	15.129	15.129	(1.171)	67121	0.96092	0.960924(a)
104 1,2,3-Trichlorobenzene	180.00	Compound Not Detected.					

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

STL Denver

VOLATILE REPORT SW-846

Data file : /chem/H.i/022304.b/h1121.d
Lab Smp Id: F9KFC1AQ
Inj Date : 23-FEB-2004 17:50
Operator : hoffmanm Inst ID: H.i
Smp Info : F9KFC1AQ,,D4B130209-014
Misc Info :
Comment : Purge and Trap Analysis
Method : /chem/H.i/022304.b/H-20ml-h2o.m
Meth Date : 23-Feb-2004 12:21 hoffmanm Quant Type: ISTD
Cal Date : 07-JAN-2004 15:24 Cal File: h0014.d
Als bottle: 2
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: H-all.sub
Target Version: 3.40
Processing Host: chemsv02

Concentration Formula: Amt * DF * Vp/Vs

Name	Value	Description
DF	1.000	Dilution Factor
Vp	20.000	Purge Volume (ml)
Vs	20.000	Sample Volume (ml)

ISTD	RT	AREA	AMOUNT
* 48 Fluorobenzene	6.396	4771608	12.500
* 96 1,4-Dichlorobenzene-d4	12.919	5465771	12.500

		CONCENTRATIONS			QUANT		
RT	AREA	ON-COL(ug/L)	FINAL(ug/L)	QUAL	LIBRARY	LIB ENTRY	CPND #
Unknown				CAS #:			
3.916	636292	1.66686995	1.66687	0		0	48
Cyclopentane, methyl-				CAS #: 96-37-7			
4.923	1702625	4.46030196	4.46030	91	NBS75K.1	594	48

Data File: /chem/H.i/022304.b/h1121.d
Report Date: 24-Feb-2004 07:38

RT	AREA	CONCENTRATIONS ON-COL(ug/L)	FINAL(ug/L)	QUANT QUAL	LIBRARY	LIB ENTRY	CPND #
Unknown				CAS #:			
11.823	1772376	4.05335313	4.05335	0		0	96
Benzene, 1,3,5-trimethyl-				CAS #: 108-67-8			
12.344	637620	1.45821148	1.45821	91	NBS75K.l	64570	96
Unknown				CAS #:			
13.224	664453	1.51957748	1.51958	0		0	96
Unknown				CAS #:			
13.835	1573105	3.59762831	3.59763	0		0	96
Benzene, 1-ethyl-3,5-dimethyl-				CAS #: 934-74-7			
14.105	810126	1.85272581	1.85272	94	NBS75K.l	65553	96
Acetic acid, 2-ethylhexyl ester				CAS #: 103-09-3			
14.266	1073947	2.45607390	2.45607	87	NBS75K.l	15793	96
Unknown				CAS #:			
14.518	977622	2.23578247	2.23578	0		0	96
Unknown				CAS #:			
15.506	712448	1.62934012	1.62934	0		0	96
1H-Indene, 2,3-dihydro-4,6-dimethyl-				CAS #: 1685-82-1			
15.704	627282	1.43456888	1.43457	93	NBS75K.l	8950	96

Data File: /chem/H.i/022304.b/h1121.d
Report Date: 24-Feb-2004 07:38

STL Denver

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: H.i
Lab File ID: h1121.d
Lab Smp Id: F9KFC1AQ
Analysis Type: VOA
Quant Type: ISTD
Operator: hoffmanm
Method File: /chem/H.i/022304.b/H-20ml-h2o.m
Misc Info:

Calibration Date: 02/23/4
Calibration Time: 0902

Level: LOW
Sample Type: WATER

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
48 Fluorobenzene	2280591	1140296	4561182	2293467	0.56
72 Chlorobenzene-d5	439562	219781	879124	455458	3.62
96 1,4-Dichlorobenze	726942	363471	1453884	746674	2.71

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
48 Fluorobenzene	6.40	5.90	6.90	6.40	-0.05
72 Chlorobenzene-d5	10.06	9.56	10.56	10.06	-0.03
96 1,4-Dichlorobenze	12.92	12.42	13.42	12.92	-0.02

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem/H.i/022304.b/h1121.d
Report Date: 24-Feb-2004 07:38

STL Denver

RECOVERY REPORT

Client Name:
Sample Matrix: LIQUID
Lab Smp Id: F9KFC1AQ
Level: LOW
Data Type: MS DATA
SpikeList File: dcs-h20.spk
Sublist File: H-all.sub
Method File: /chem/H.i/022304.b/H-20ml-h2o.m
Misc Info:

Client SDG: 022304
Fraction: VOA

Operator: hoffmanm
SampleType: SAMPLE
Quant Type: ISTD

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 40 Dibromofluorometha	11.5000	10.4000	90.43	76-116
$ 44 1,2-Dichloroethane	11.5000	9.96892	86.69	59-129
$ 61 Toluene-d8	11.5000	10.3404	89.92	76-116
$ 82 Bromofluorobenzene	11.5000	10.5710	91.92	74-114

Data File: /chem/H.i/022304.b/h1121.d
Date : 23-FEB-2004 17:50
Client ID:
Sample Info: F9KFC1AQ,,D4B130209-014
Purge Volume: 20.0
Column phase: DB624

Page 9

Instrument: H.i

Operator: hoffmanm
Column diameter: 0.53

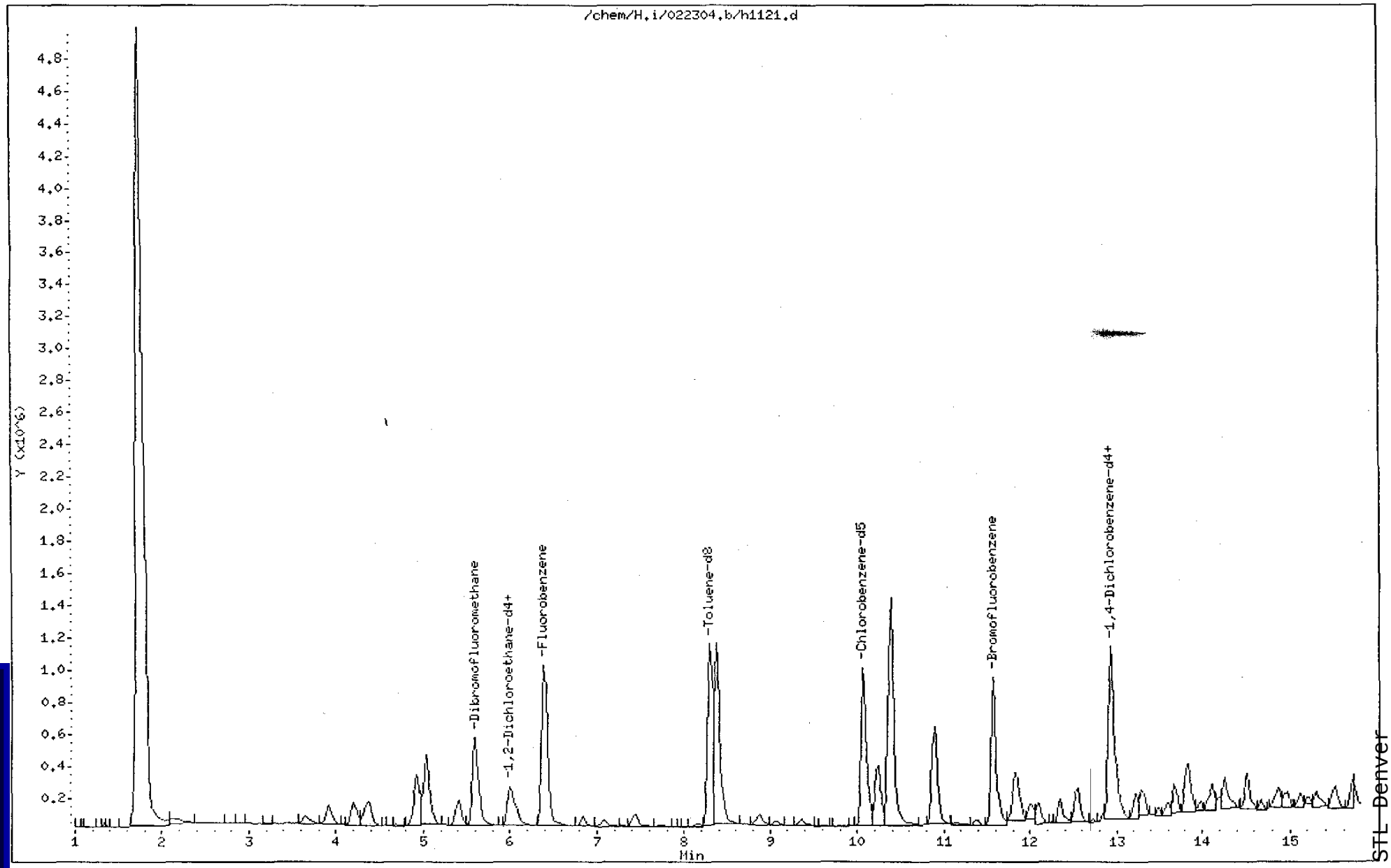


Table of Contents

Data File: /chem/H.i/022304.b/h1121.d

Date : 23-FEB-2004 17:50

Client ID:

Instrument: H.i

Sample Info: F9KFC1AQ,,D4B130209-014

Purge Volume: 20.0

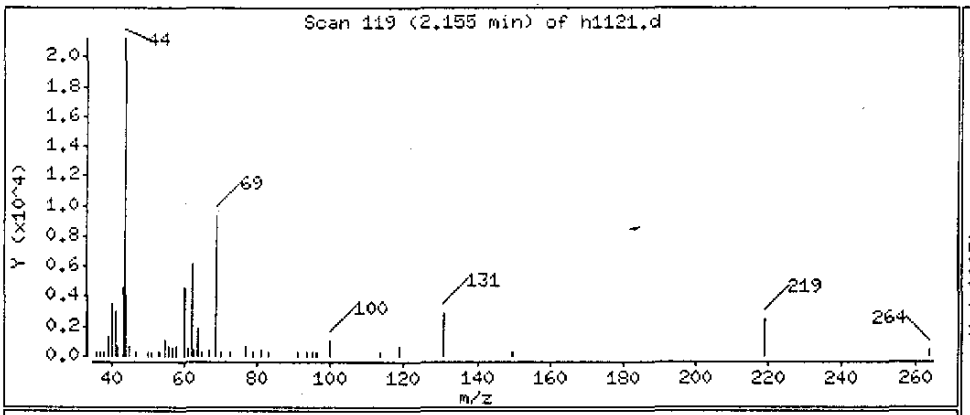
Operator: hoffmann

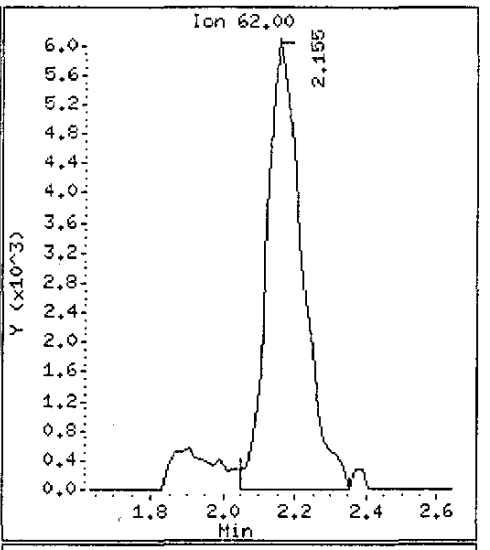
Column phase: DB624

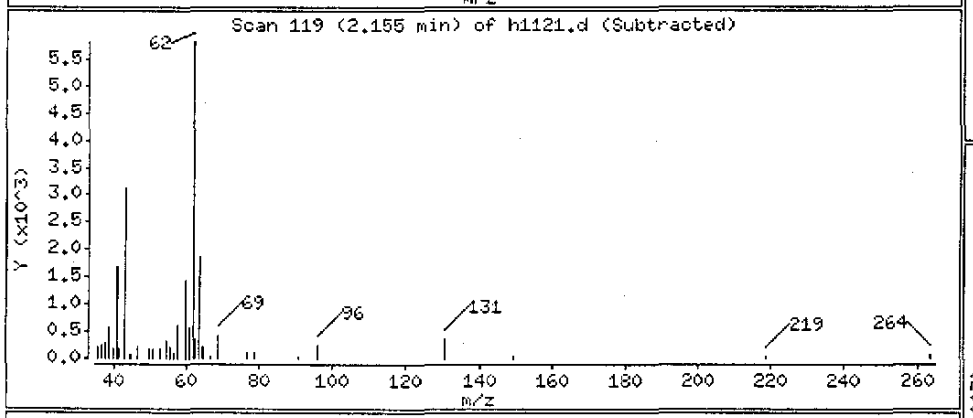
Column diameter: 0.53

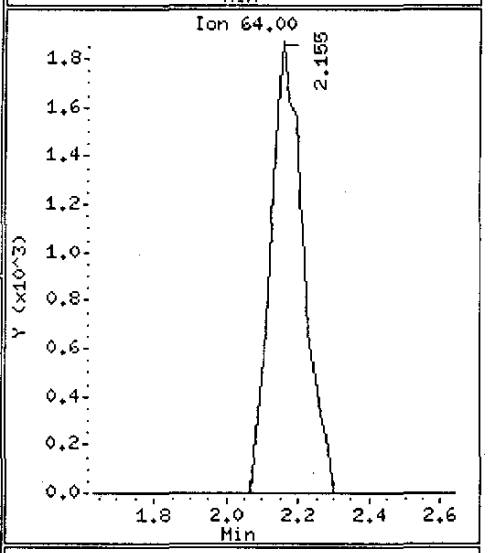
5 Vinyl Chloride

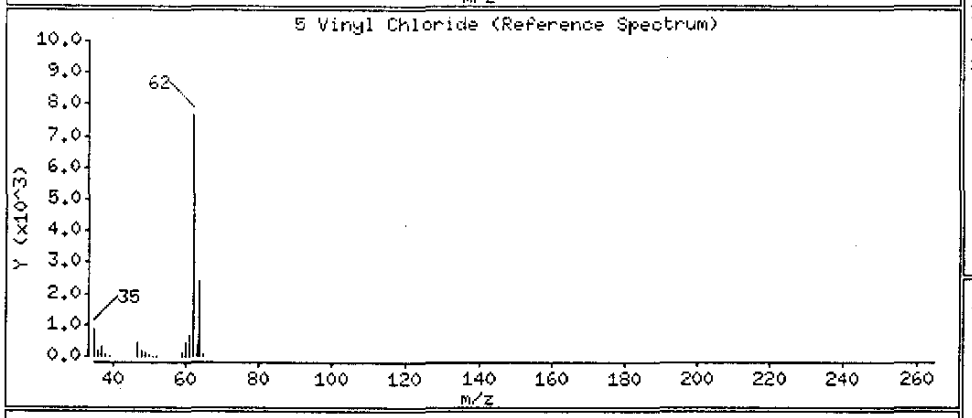
Concentration: 0.828185 ug/L

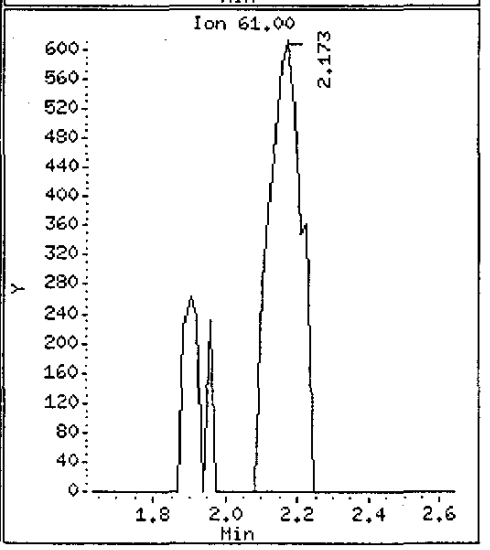


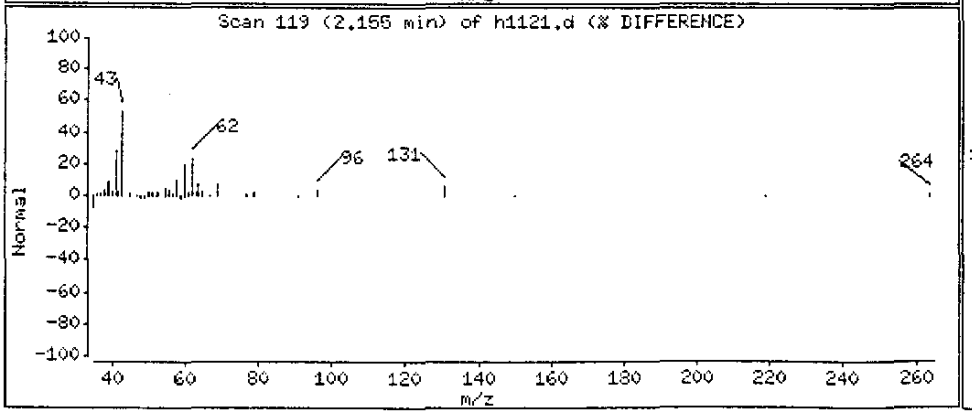












Data File: /chem/H.i/022304.b/h1121.d

Date : 23-FEB-2004 17:50

Client ID:

Instrument: H.i

Sample Info: F9KFC1AQ,,D4B130209-014

Purge Volume: 20.0

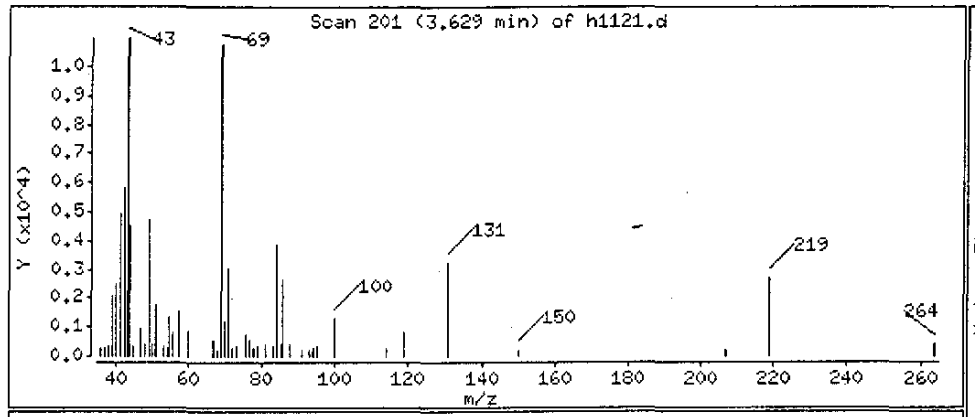
Operator: hoffmanm

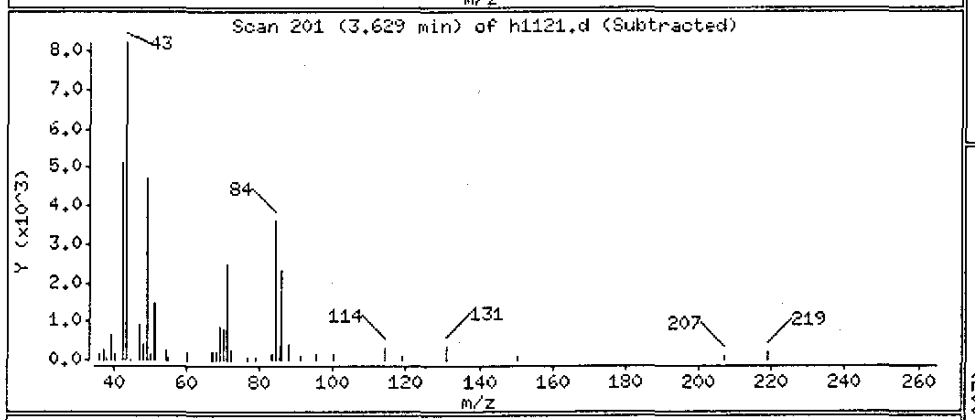
Column phase: DB624

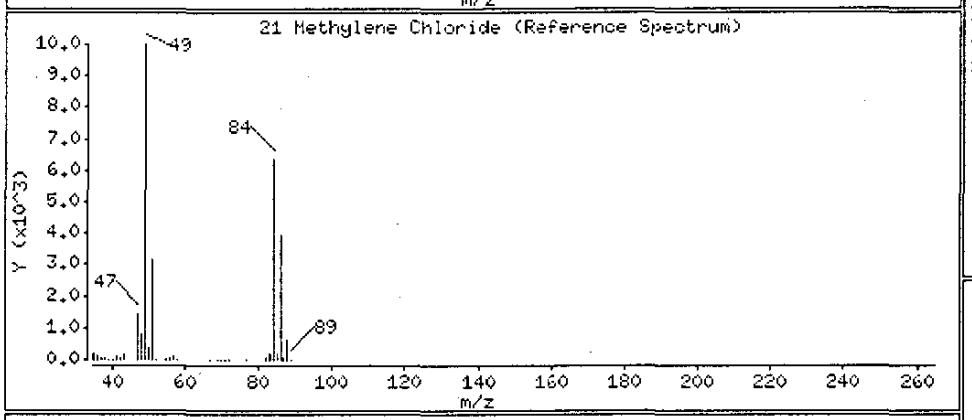
Column diameter: 0.53

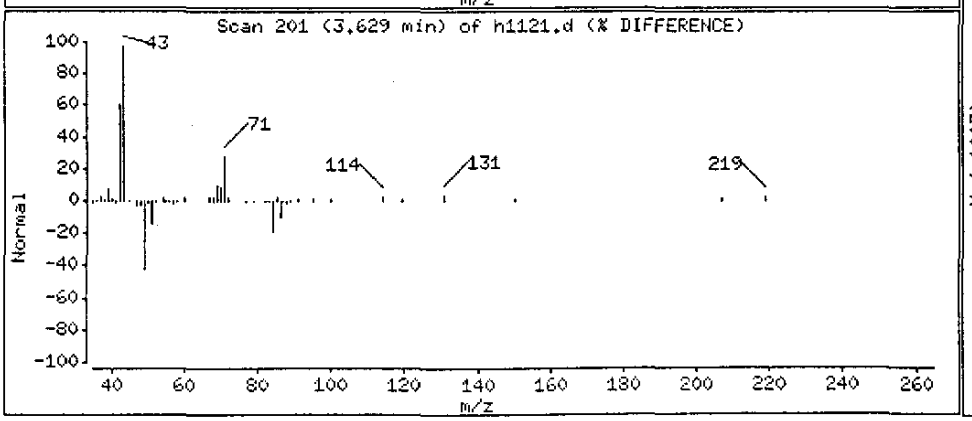
21 Methylene Chloride

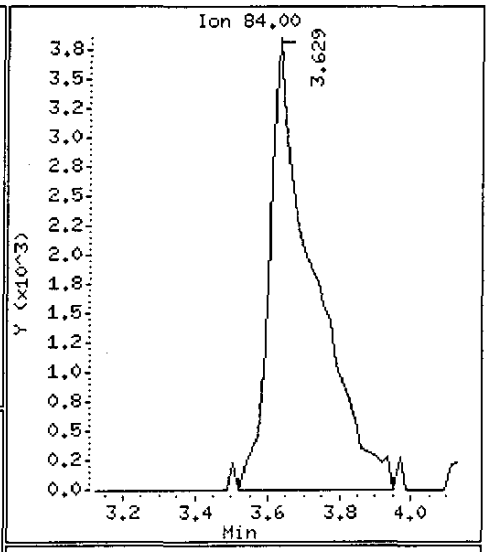
Concentration: 0.576944 ug/L

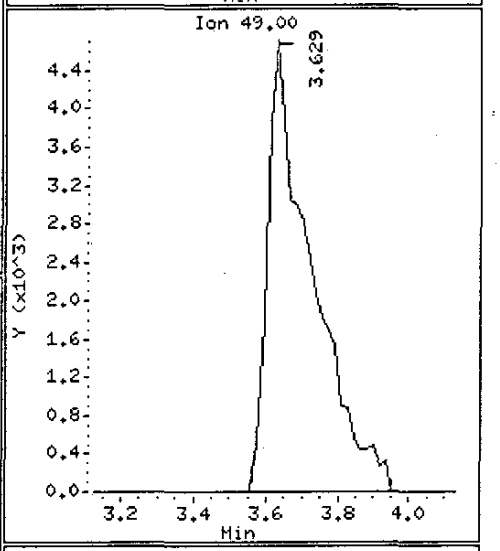


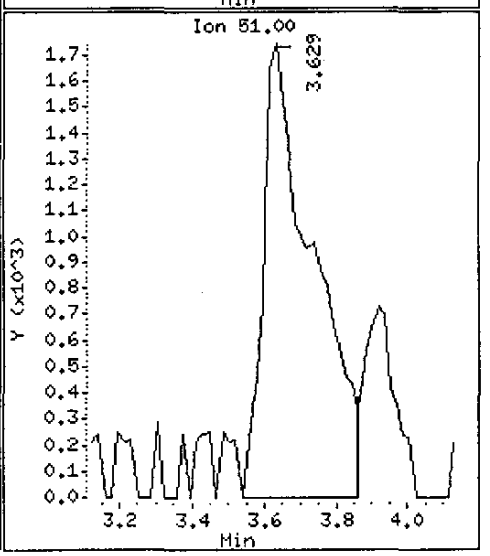












Data File: /chem/H.i/022304.b/h1121.d

Date : 23-FEB-2004 17:50

Client ID:

Instrument: H.i

Sample Info: F9KFC1AQ,,D4B130209-014

Purge Volume: 20.0

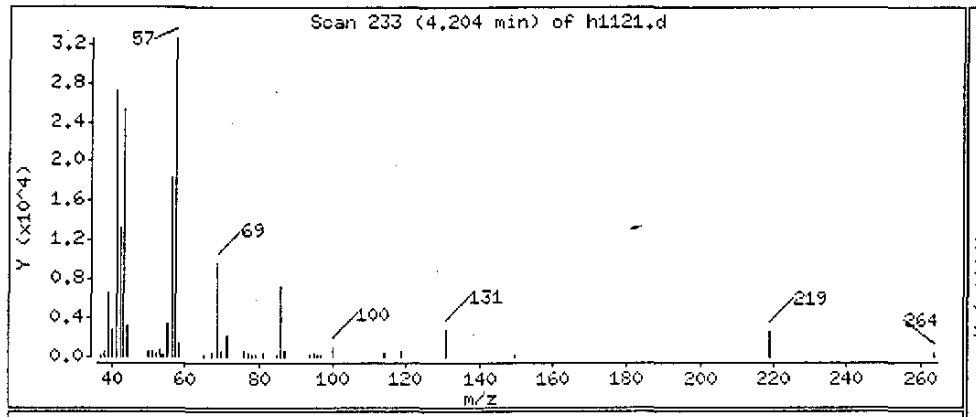
Operator: hoffmanm

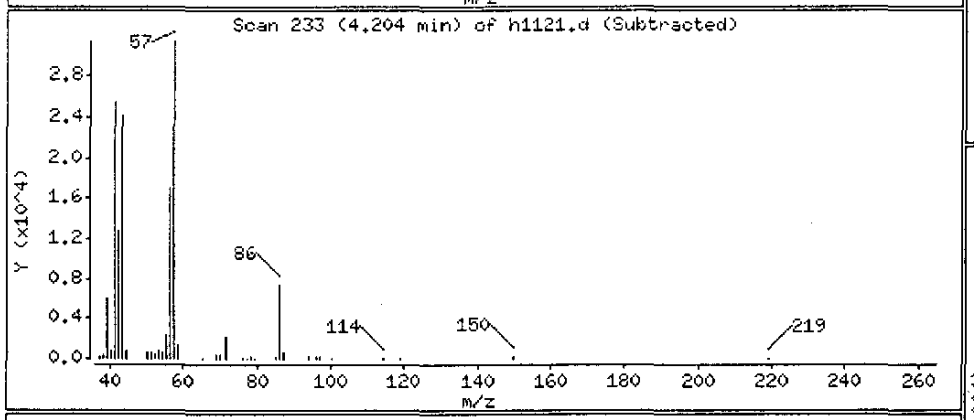
Column phase: DB624

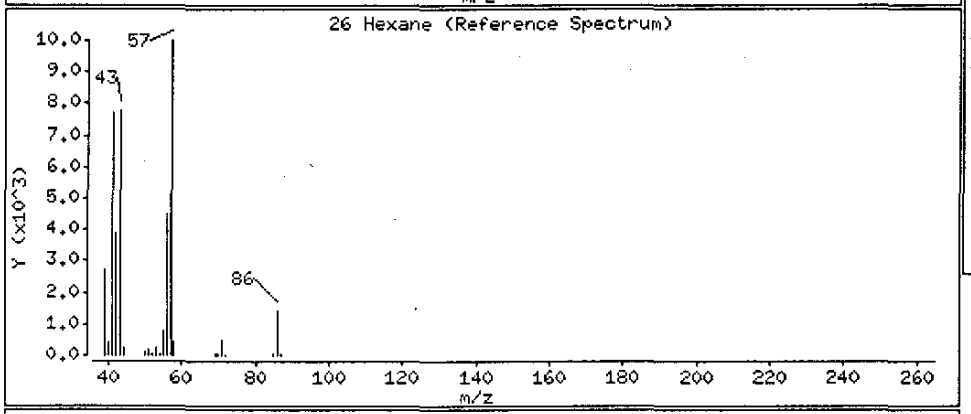
Column diameter: 0.53

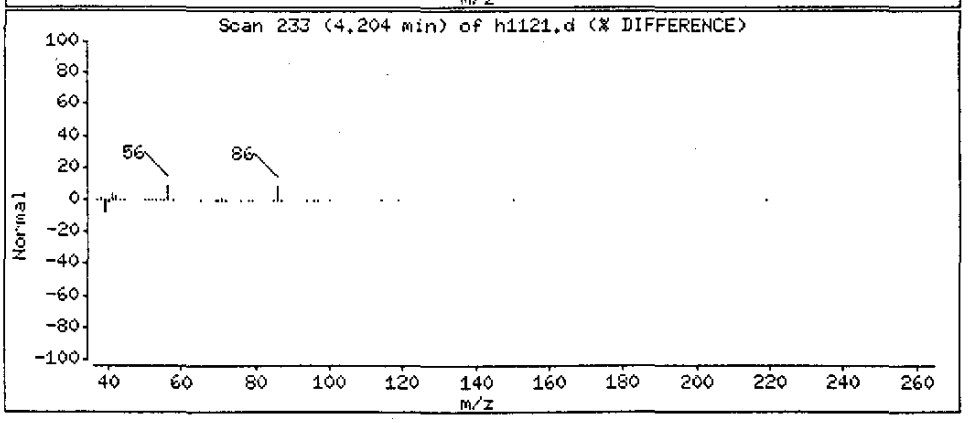
26 Hexane

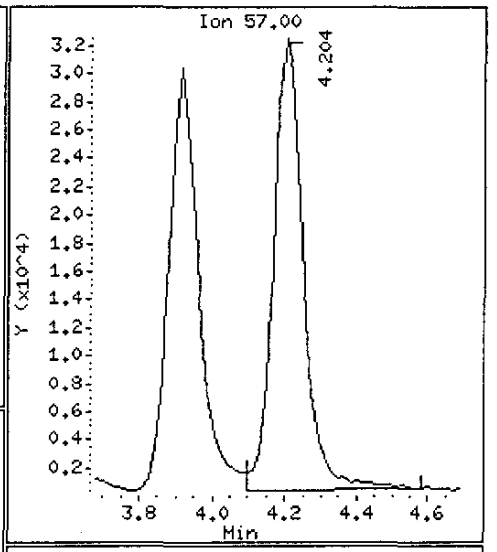
Concentration: 1.78731 ug/L

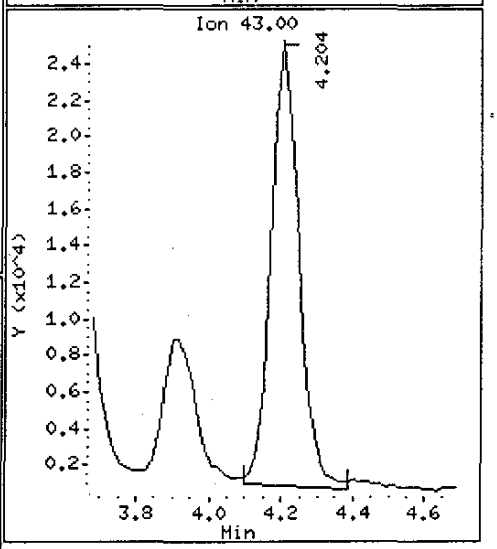












Data File: /chem/H.i/022304.b/h1121.d

Date : 23-FEB-2004 17:50

Client ID:

Instrument: H.i

Sample Info: F9KFC1AQ,,D4B130209-014

Purge Volume: 20.0

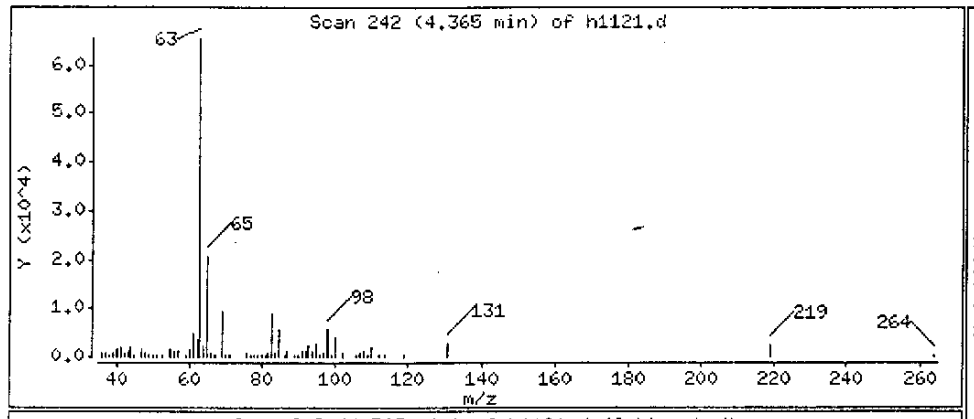
Operator: hoffmanm

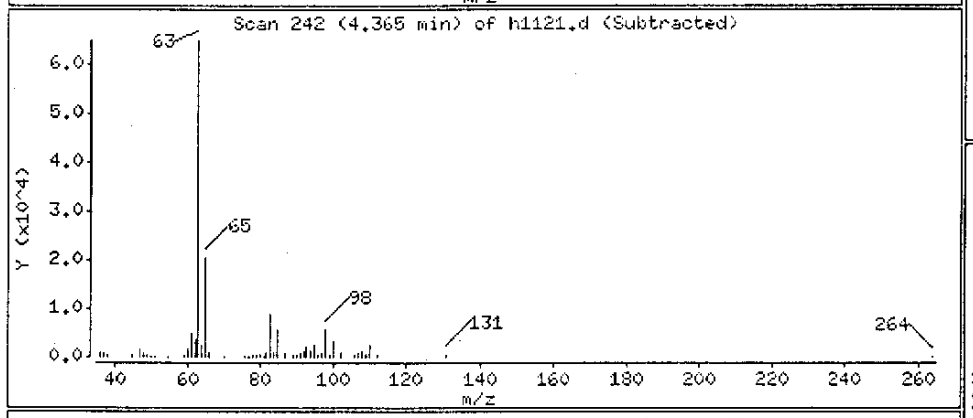
Column phase: DB624

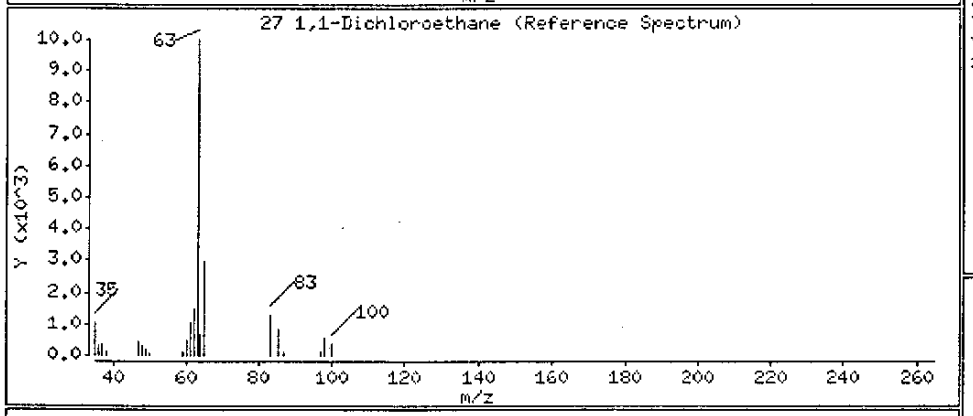
Column diameter: 0.53

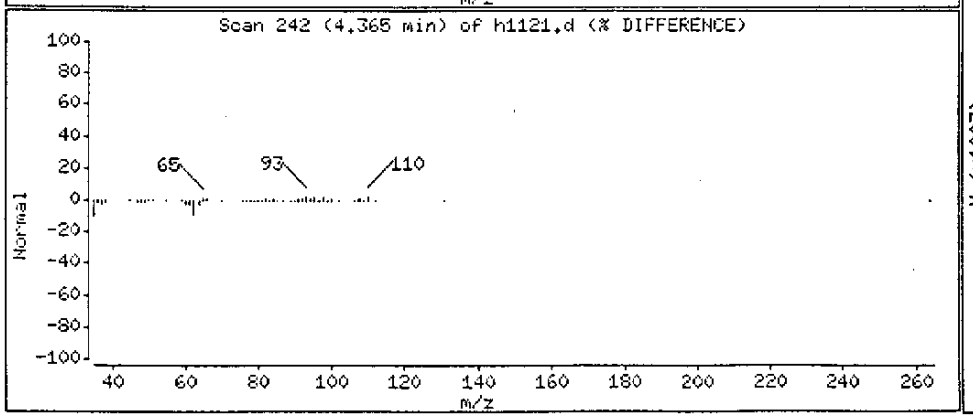
27 1,1-Dichloroethane

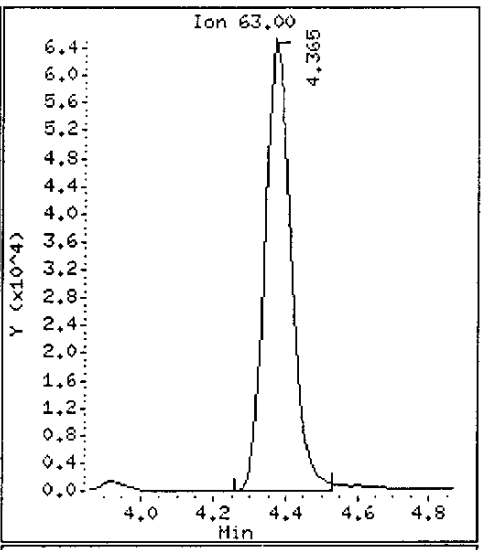
Concentration: 2.84800 ug/L

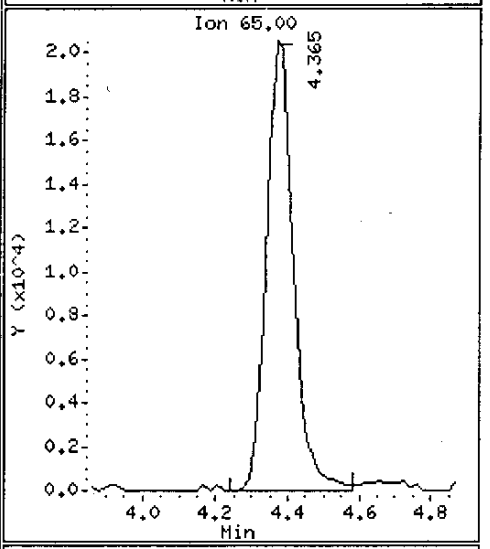


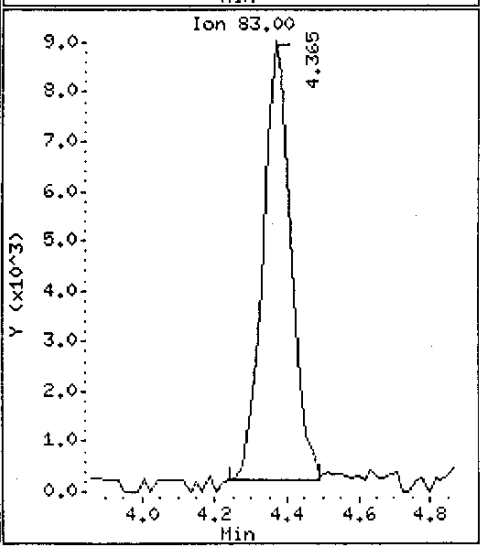












Data File: /chem/H.i/022304.b/h1121.d

Date : 23-FEB-2004 17:50

Client ID:

Instrument: H.i

Sample Info: F9KFC1AQ,,D4B130209-014

Purge Volume: 20.0

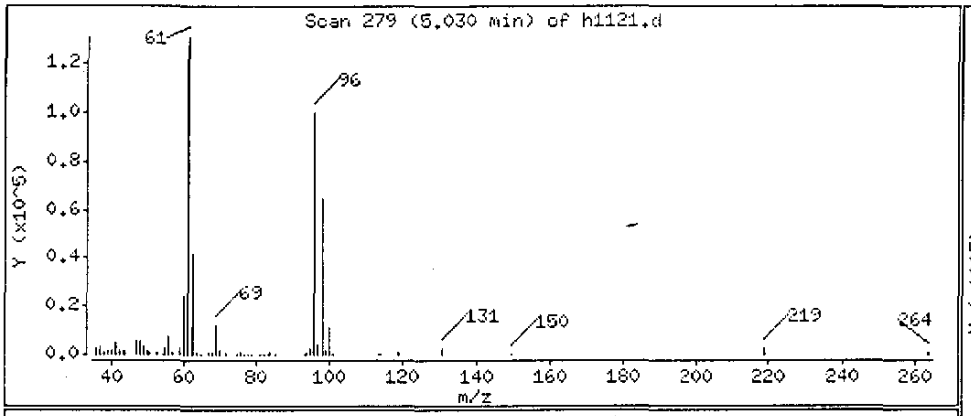
Operator: hoffmanm

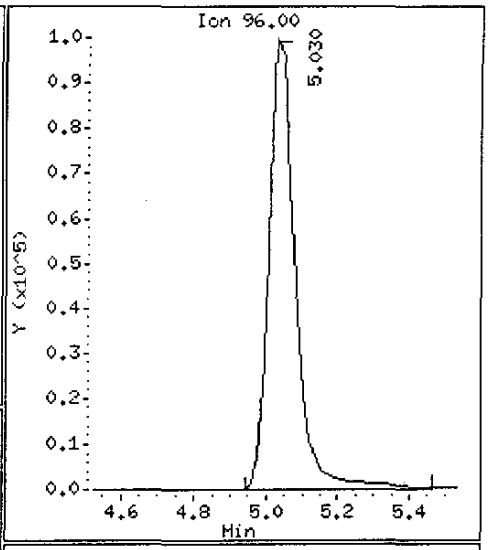
Column phase: DB624

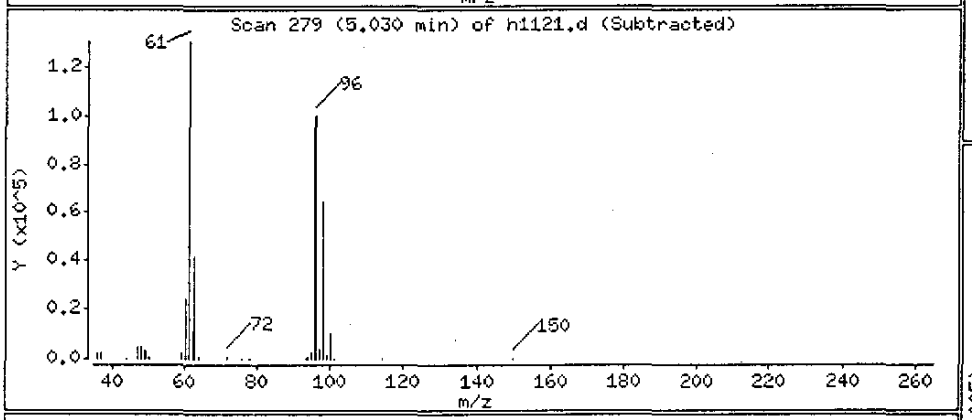
Column diameter: 0.53

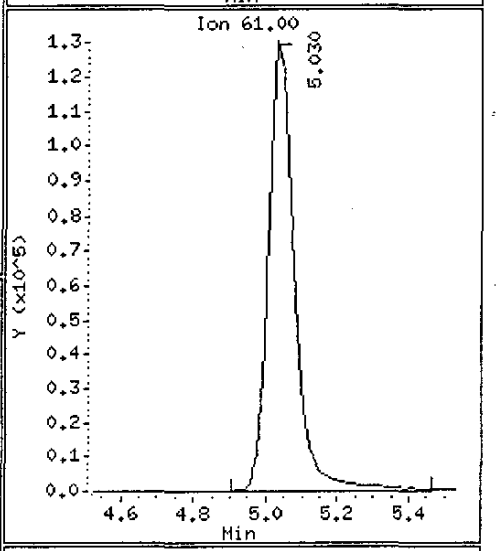
32 cis-1,2-Dichloroethene

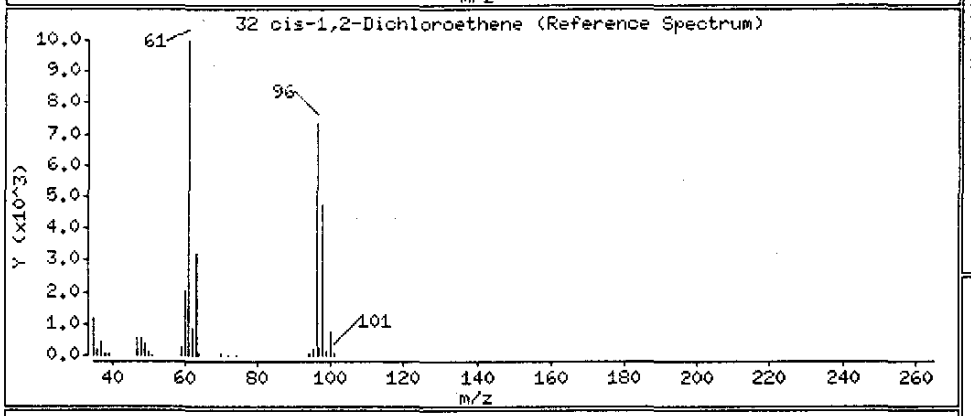
Concentration: 7.35845 ug/L

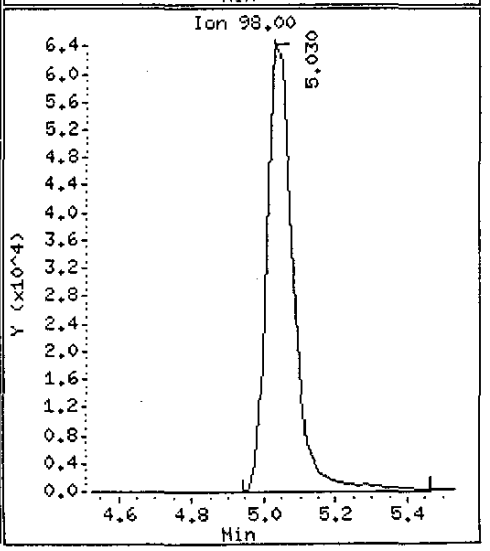


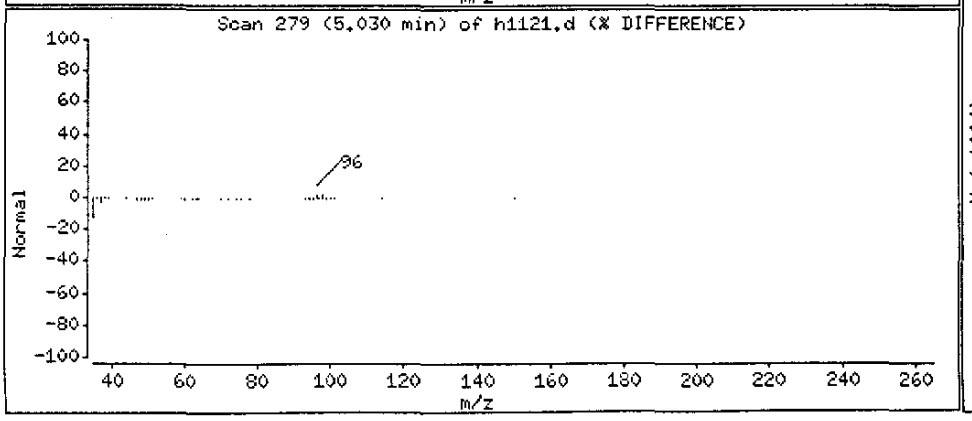












Data File: /chem/H.i/022304.b/h1121.d

Date : 23-FEB-2004 17:50

Client ID:

Instrument: H.i

Sample Info: F9KFC1AQ,,D4B130209-014

Purge Volume: 20.0

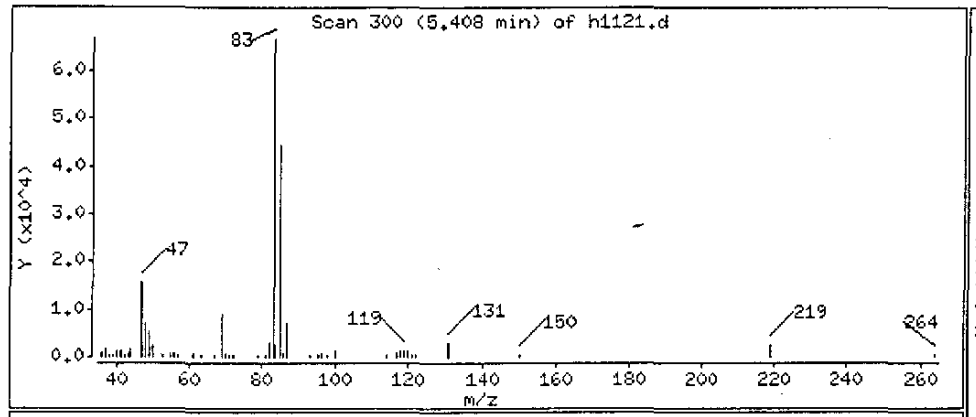
Operator: hoffmanm

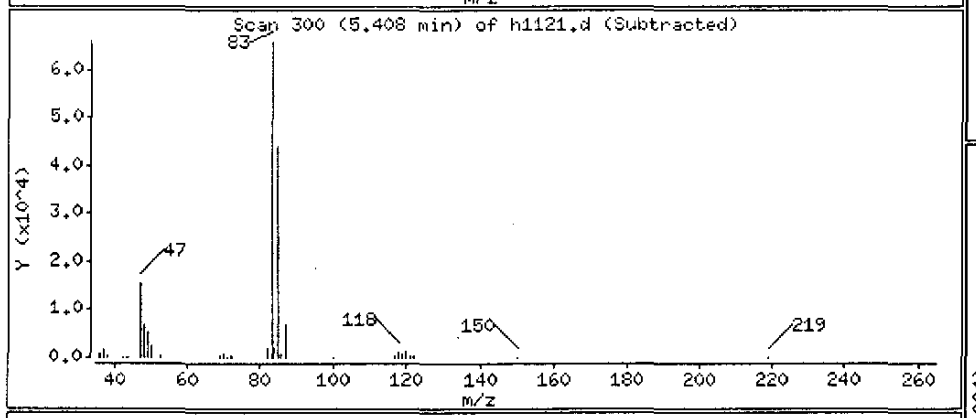
Column phase: DB624

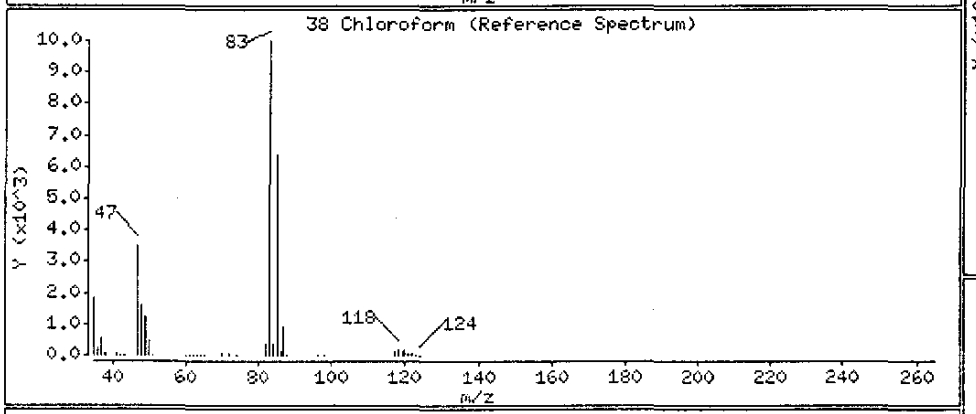
Column diameter: 0.53

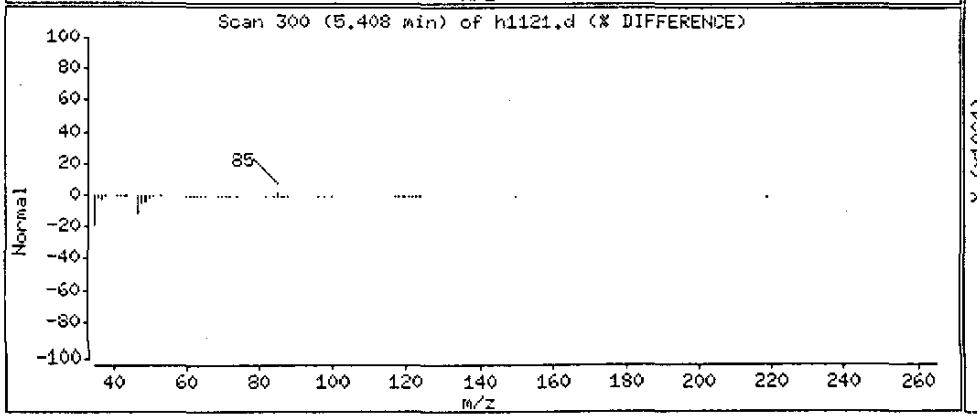
38 Chloroform

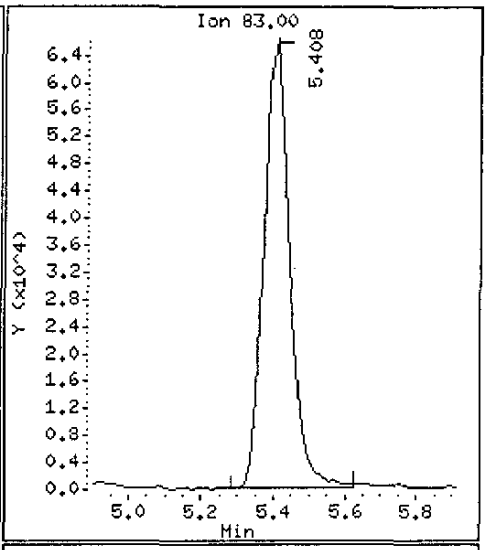
Concentration: 2.56487 ug/L

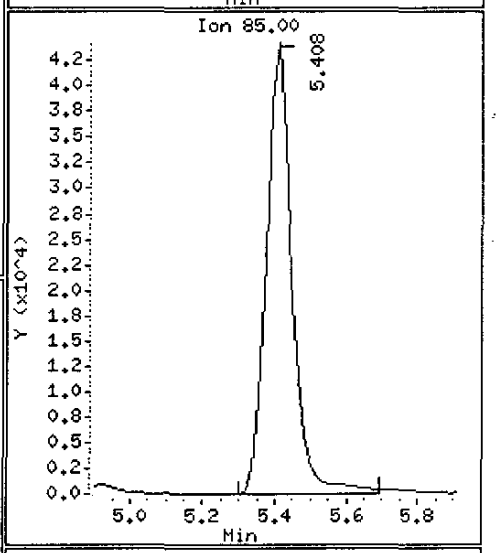


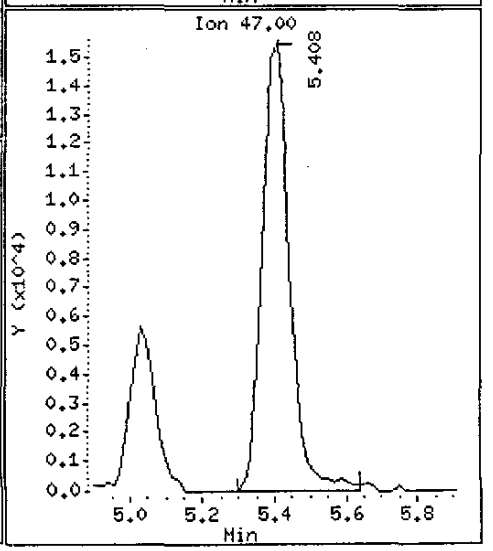












Data File: /chem/H.i/022304.b/h1121.d

Date : 23-FEB-2004 17:50

Client ID:

Instrument: H.i

Sample Info: F9KFC1AQ,,D4B130209-014

Purge Volume: 20.0

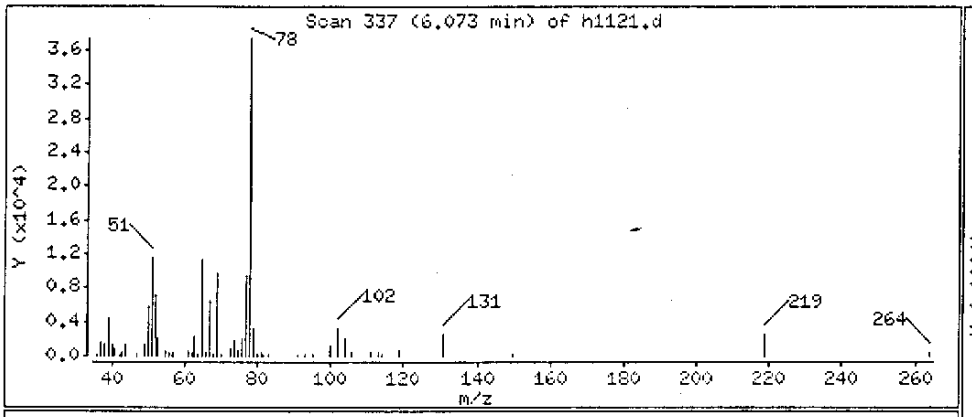
Operator: hoffmanm

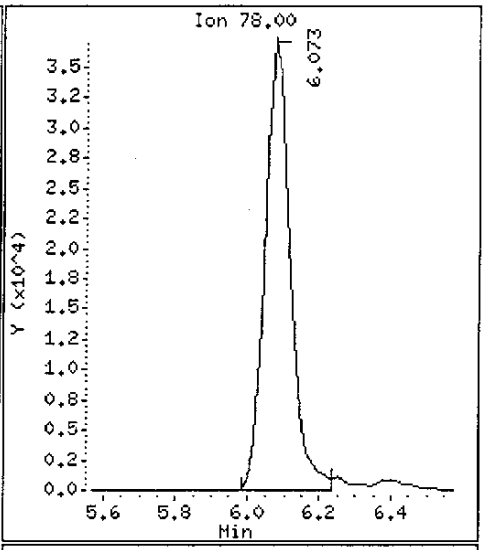
Column phase: DB624

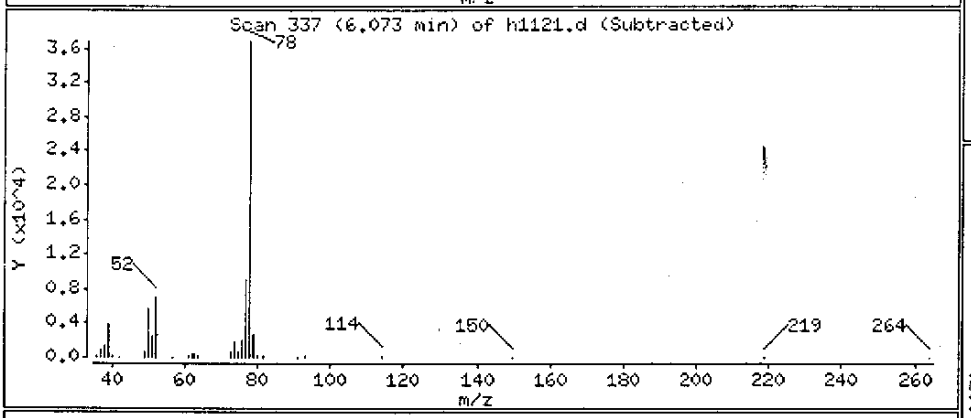
Column diameter: 0.53

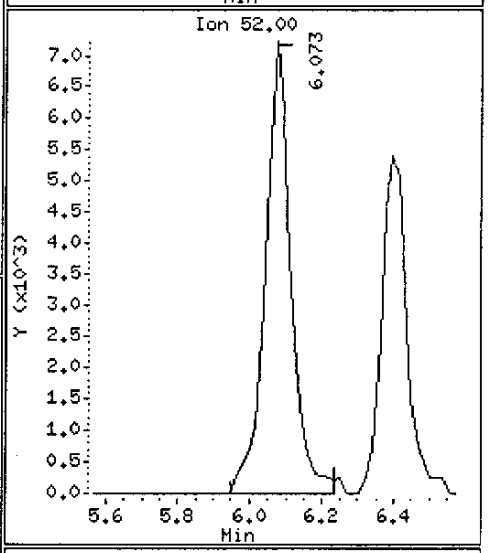
46 Benzene

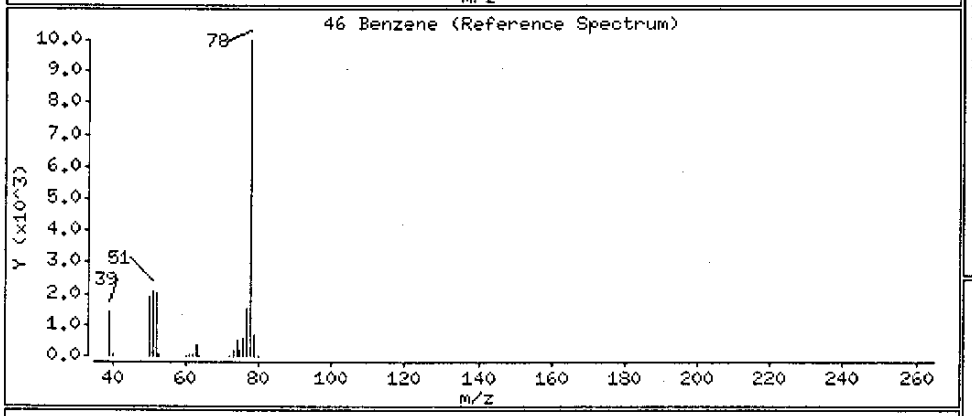
Concentration: 0.932008 ug/L

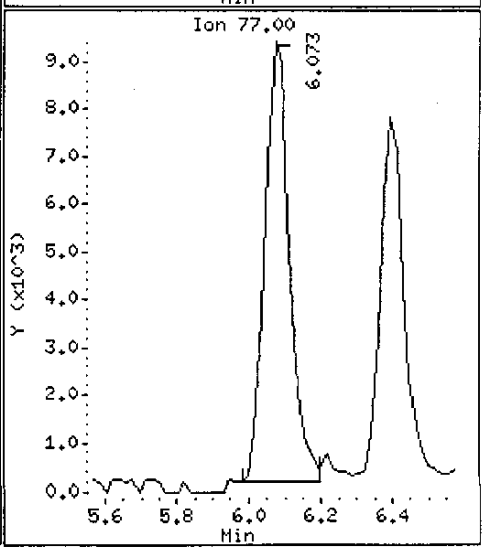


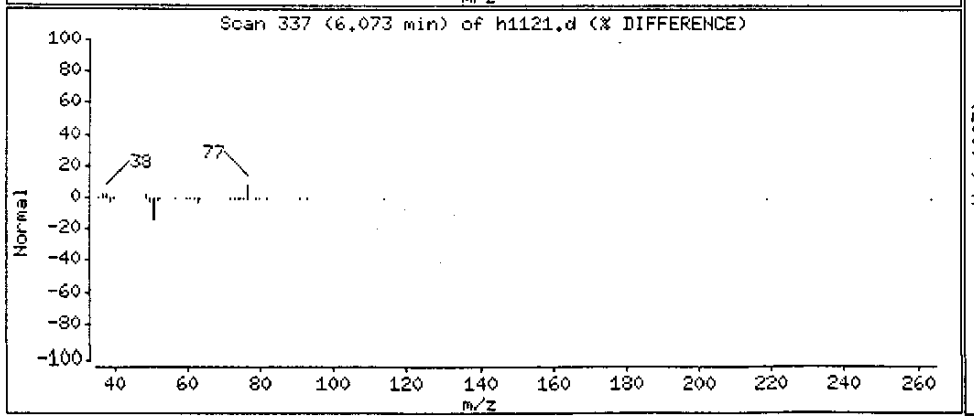












Data File: /chem/H.i/022304.b/h1121.d

Date : 23-FEB-2004 17:50

Client ID:

Instrument: H.i

Sample Info: F9KFC1AQ,,D4B130209-014

Purge Volume: 20.0

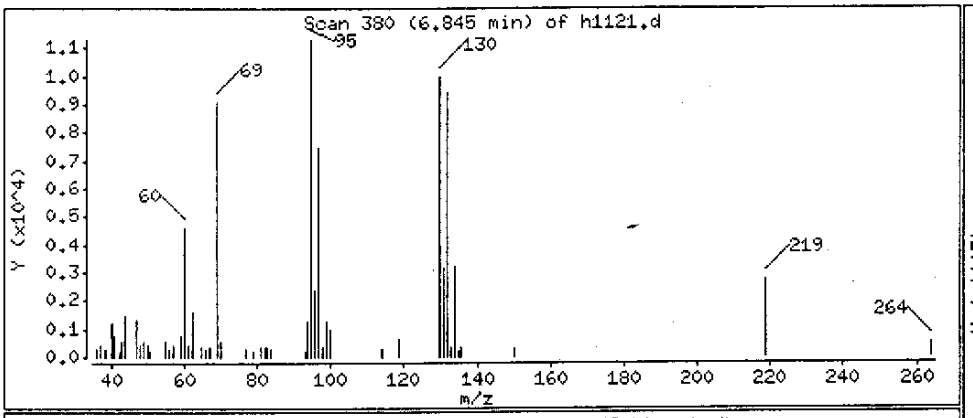
Operator: hoffmanm

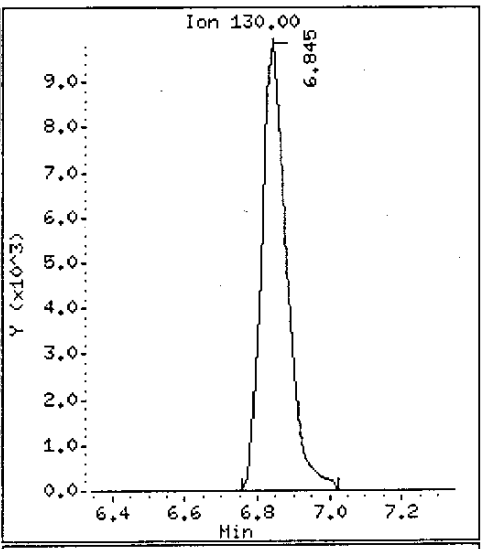
Column phase: DB624

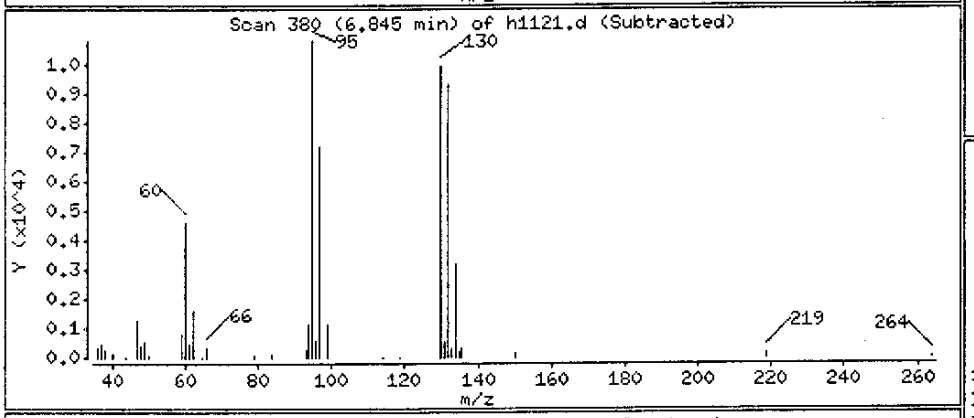
Column diameter: 0.53

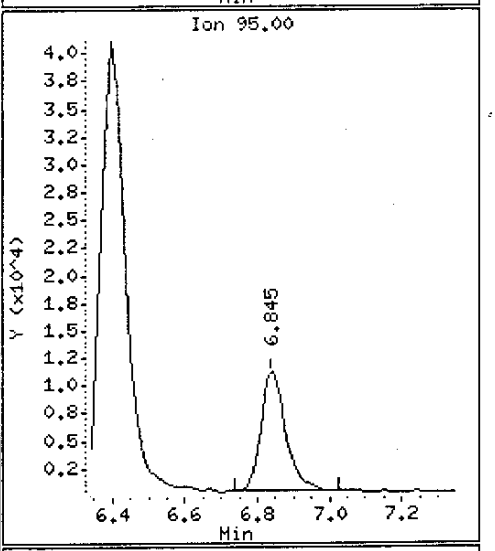
50 Trichloroethene

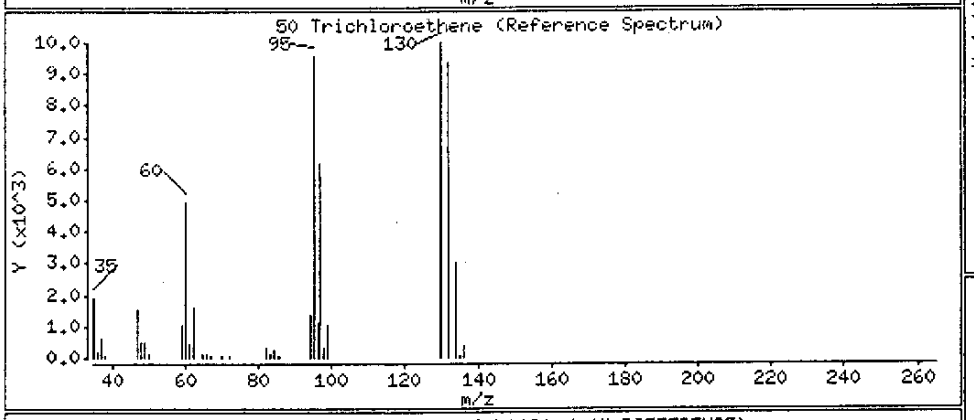
Concentration: 0.636353 ug/L

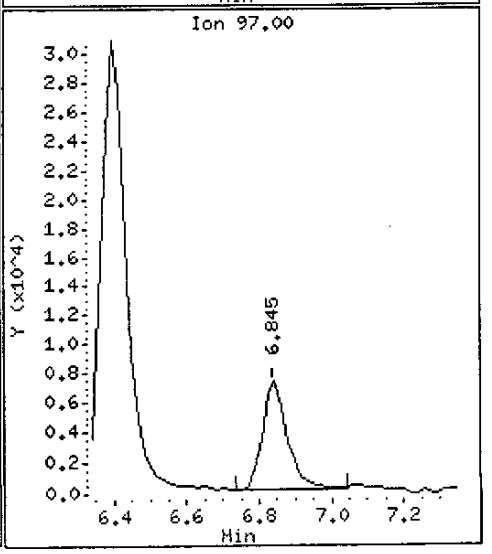


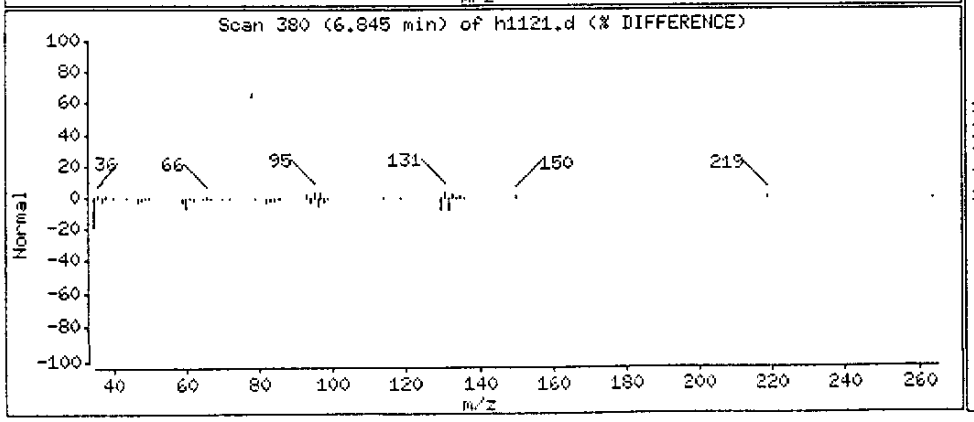












Data File: /chem/H.i/022304.b/h1121.d

Date : 23-FEB-2004 17:50

Client ID:

Instrument: H.i

Sample Info: F9KFC1AQ,,D4B130209-014

Purge Volume: 20.0

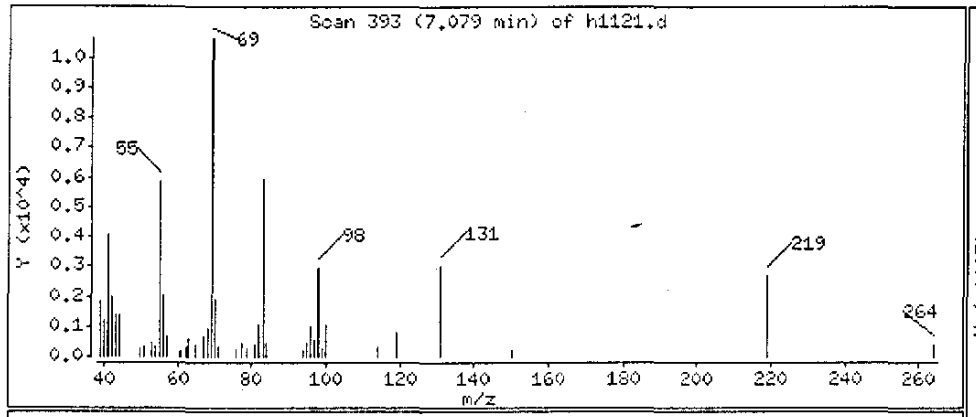
Operator: hoffmanm

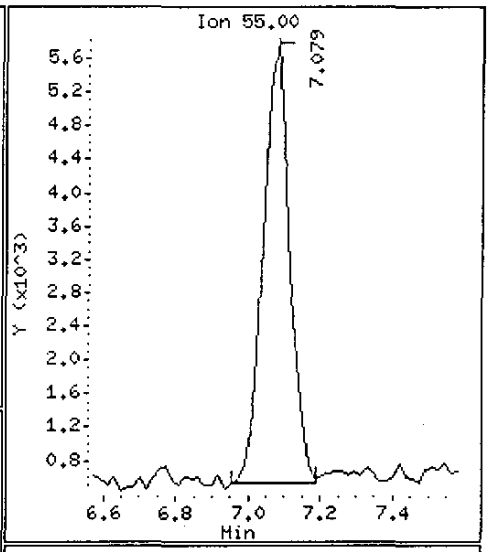
Column phase: DB624

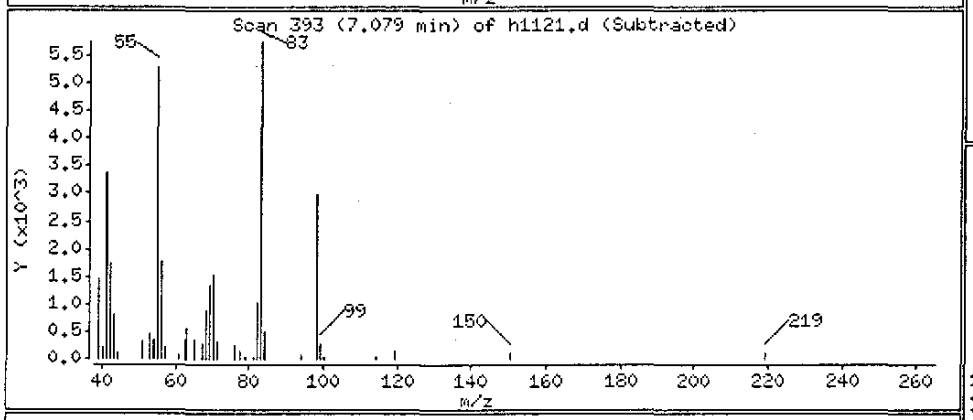
Column diameter: 0.53

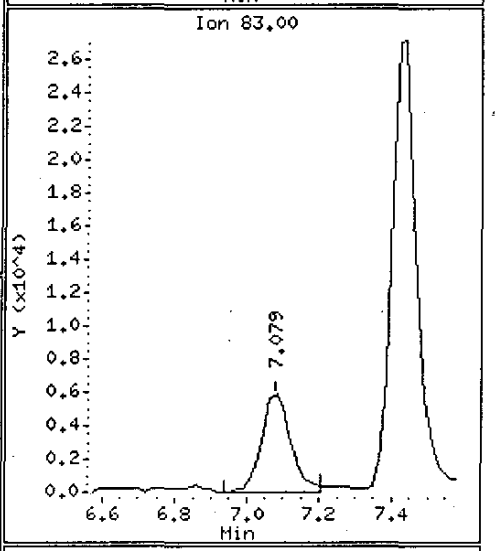
122 Methyl Cyclohexane

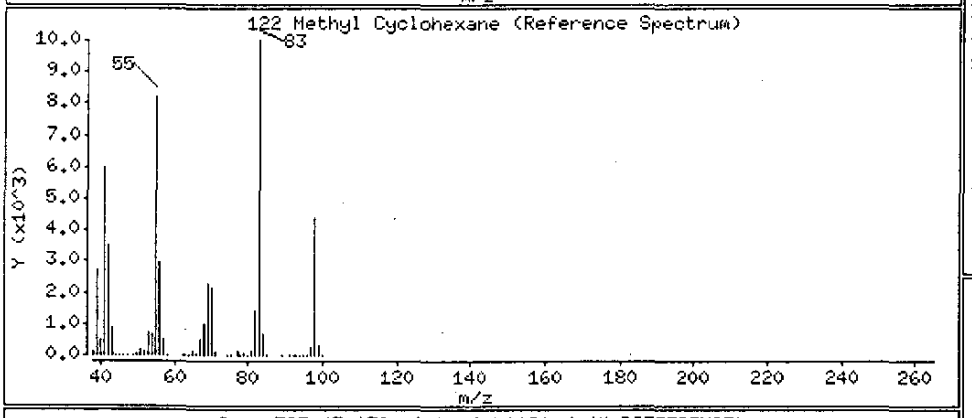
Concentration: 0.280483 ug/L

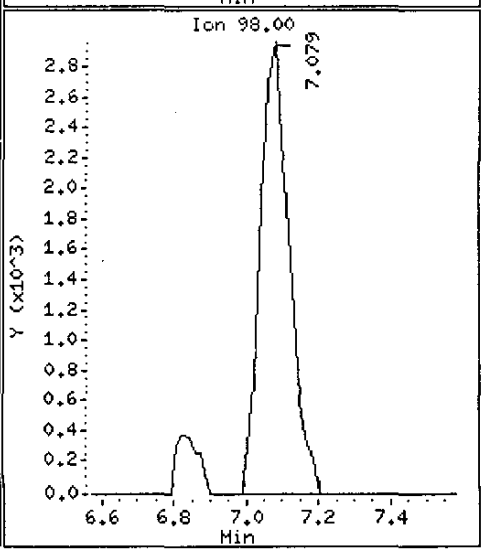


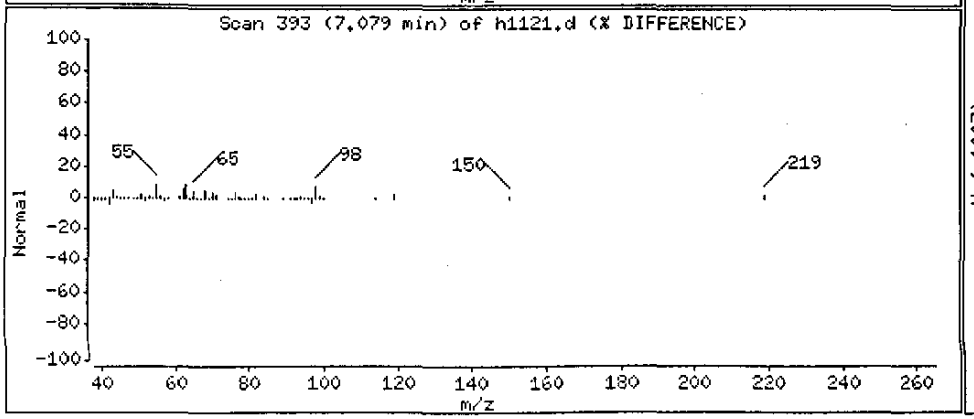












Data File: /chem/H.i/022304.b/h1121.d

Date : 23-FEB-2004 17:50

Client ID:

Instrument: H.i

Sample Info: F9KFC1AQ,,D4B130209-014

Purge Volume: 20.0

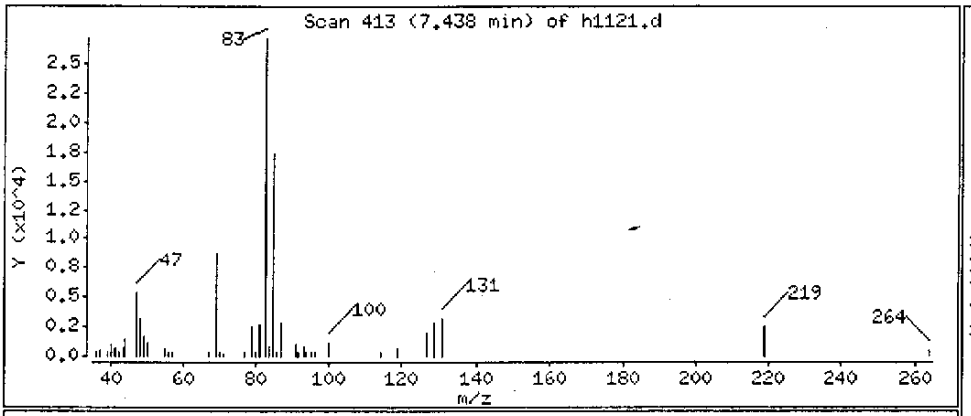
Operator: hoffmanm

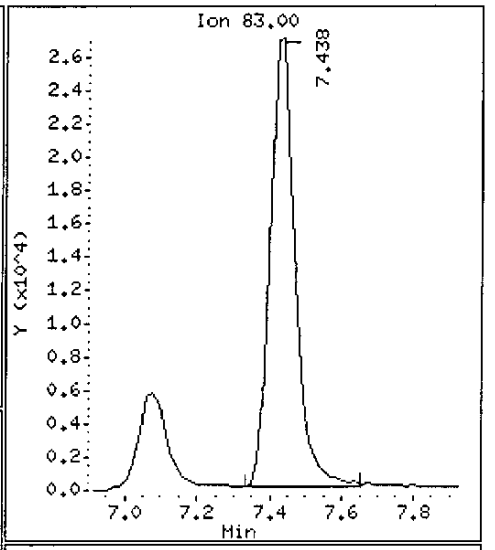
Column phase: DB624

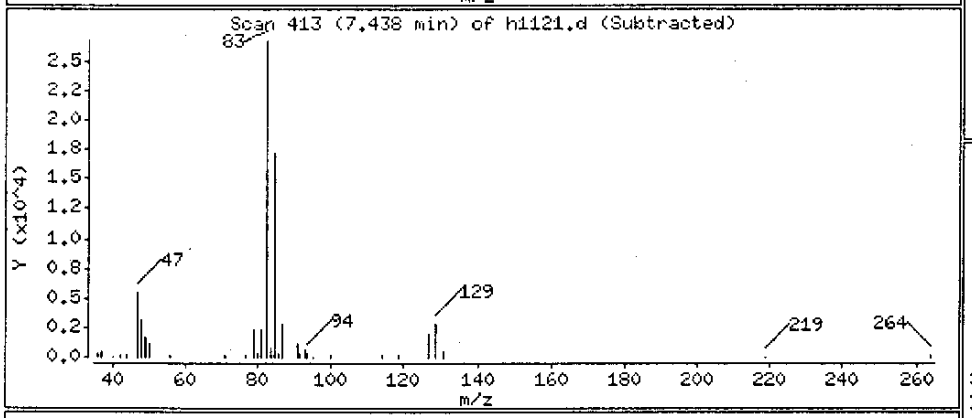
Column diameter: 0.53

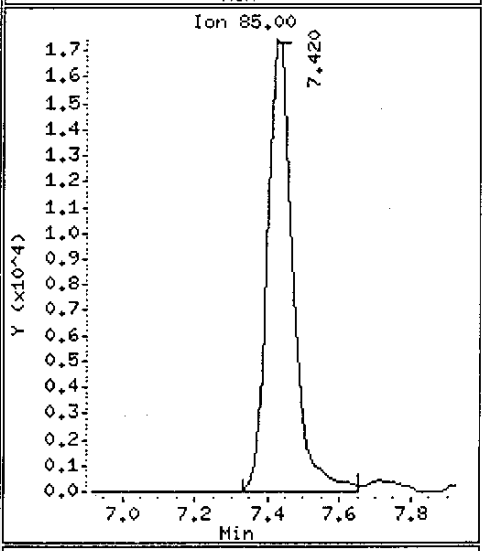
56 Bromodichloromethane

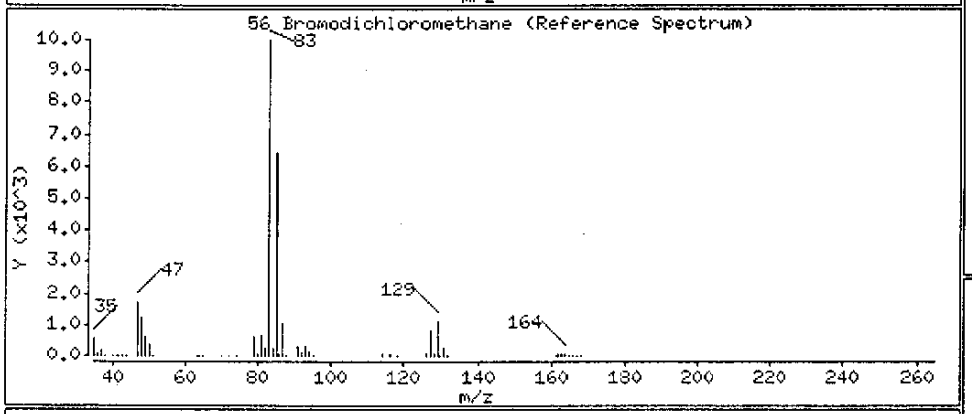
Concentration: 1.25242 ug/L

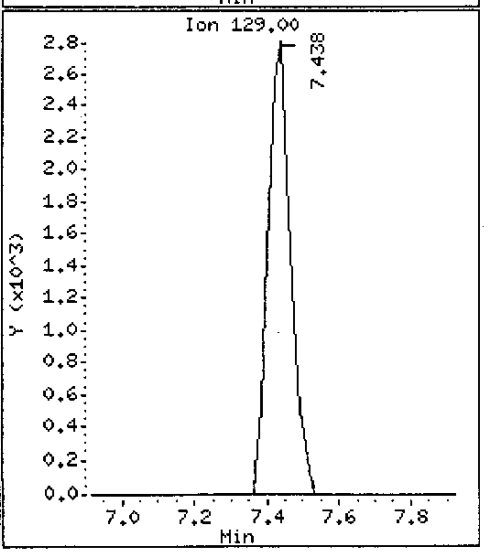


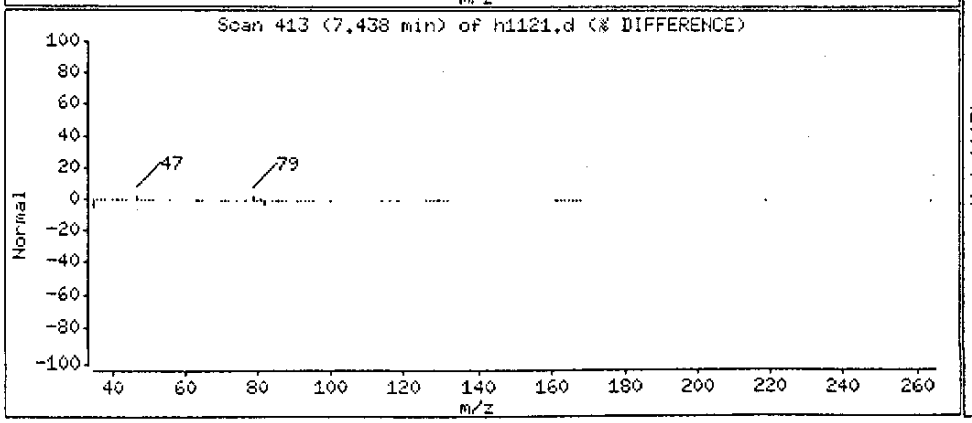












Data File: /chem/H.i/022304.b/h1121.d

Date : 23-FEB-2004 17:50

Client ID:

Instrument: H.i

Sample Info: F9KFC1AQ,,D4B130209-014

Purge Volume: 20.0

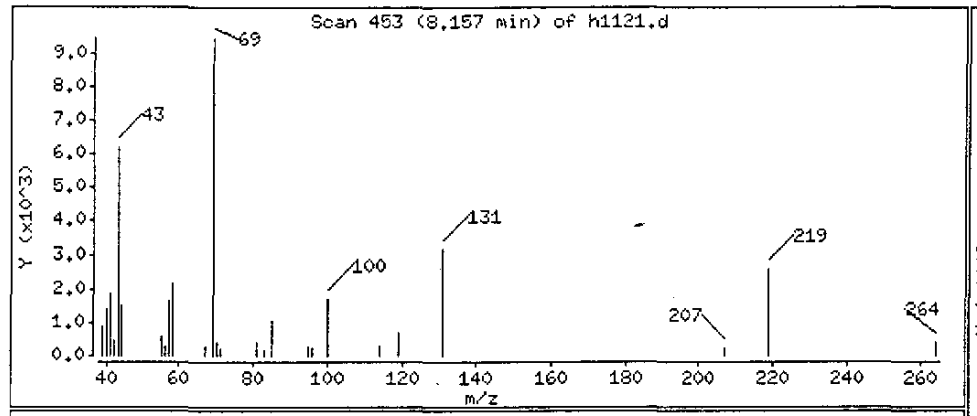
Operator: hoffmanm

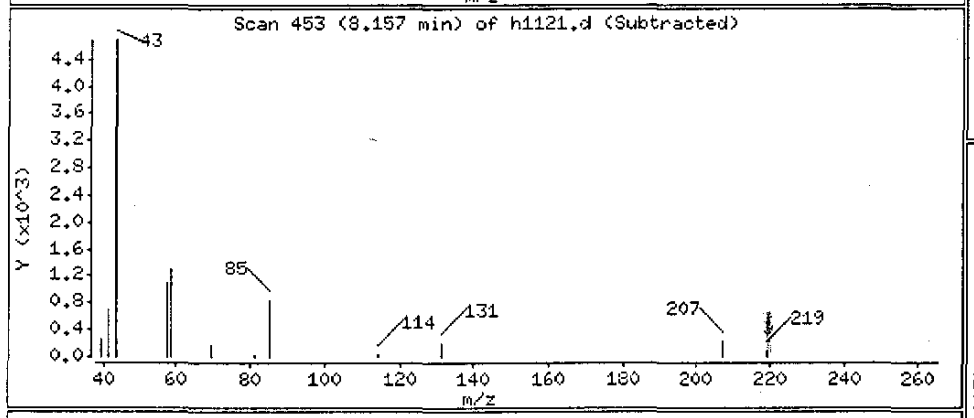
Column phase: DB624

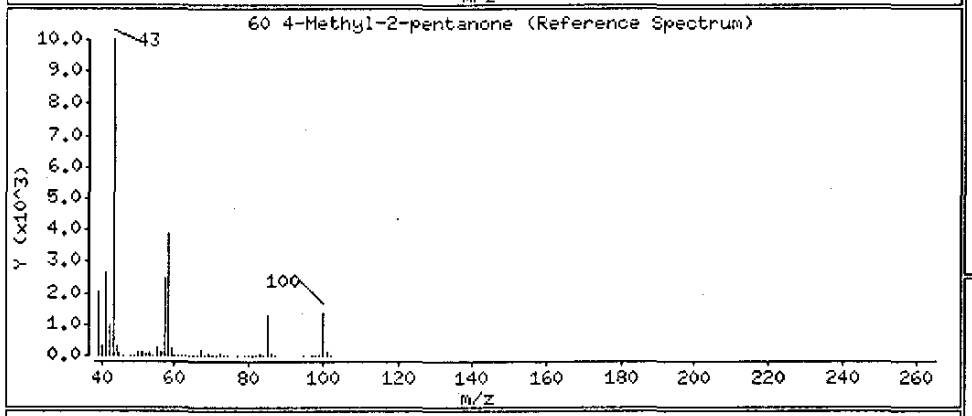
Column diameter: 0.53

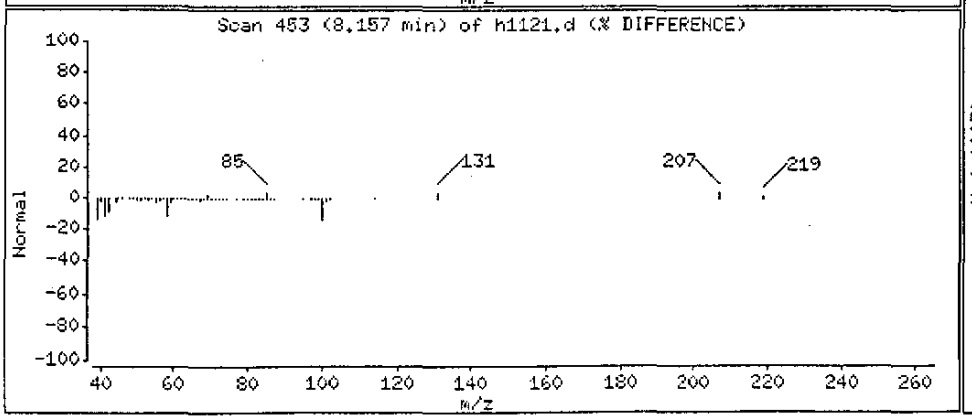
60 4-Methyl-2-pentanone

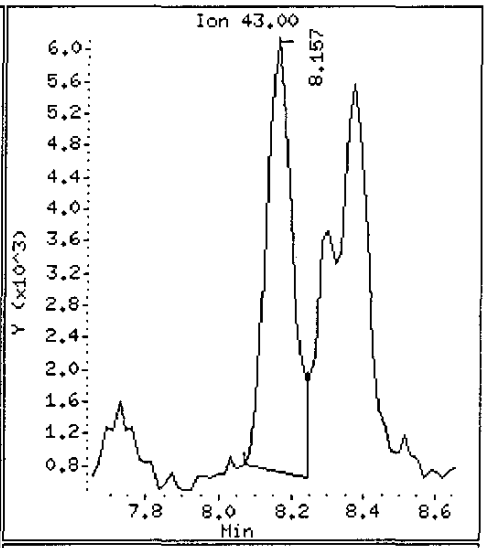
Concentration: 1.18976 ug/L

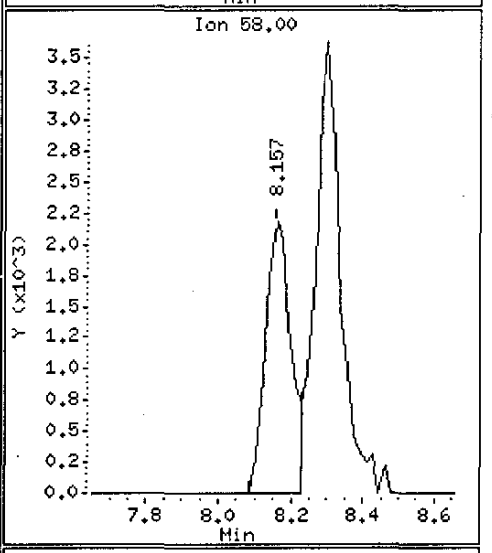


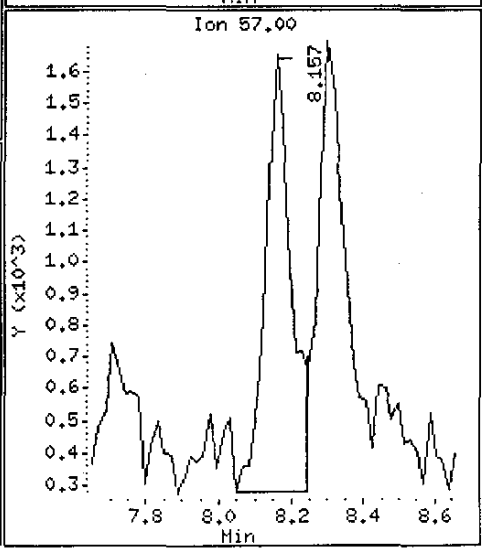












Data File: /chem/H.i/022304.b/h1121.d

Date : 23-FEB-2004 17:50

Client ID:

Instrument: H.i

Sample Info: F9KFC1AQ,,D4B130209-014

Purge Volume: 20.0

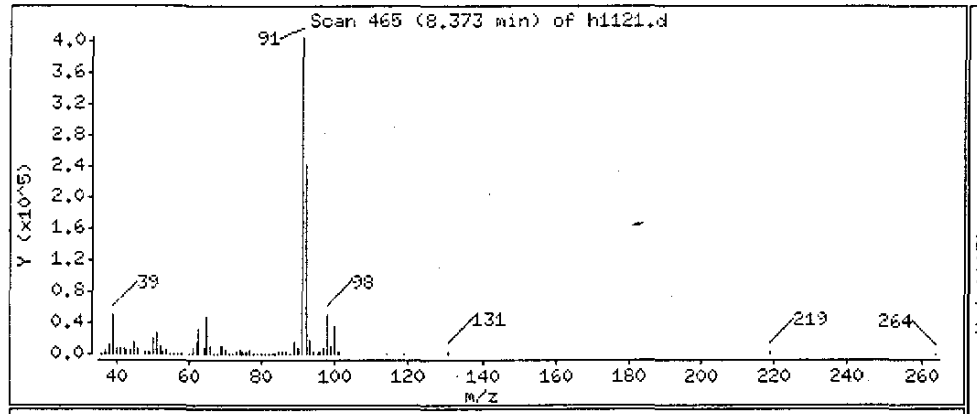
Operator: hoffmanm

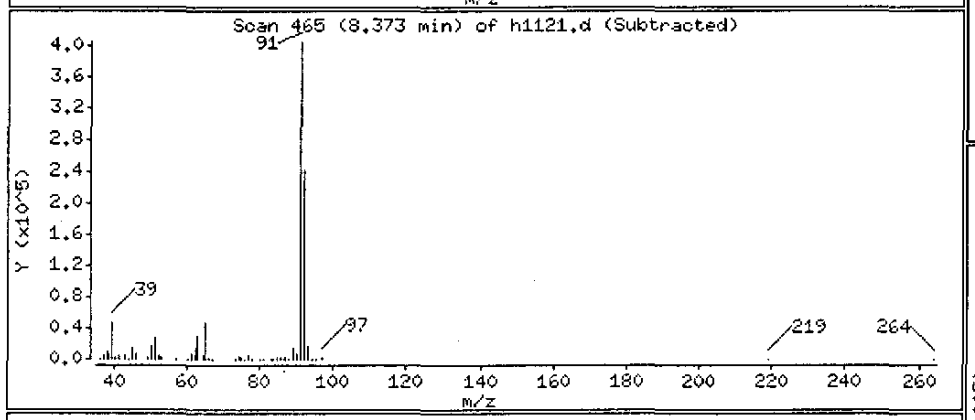
Column phase: DB624

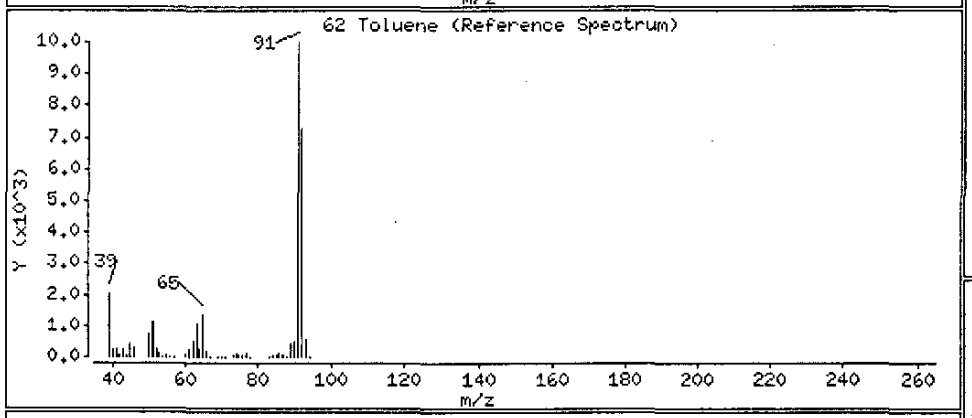
Column diameter: 0.53

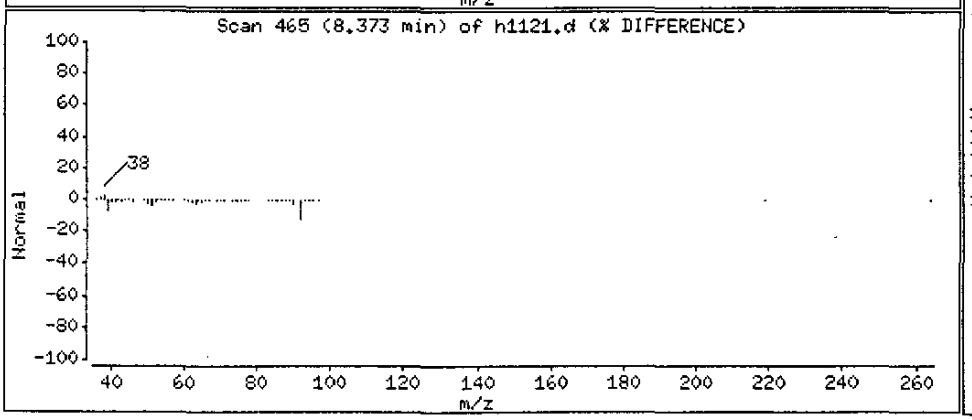
62 Toluene

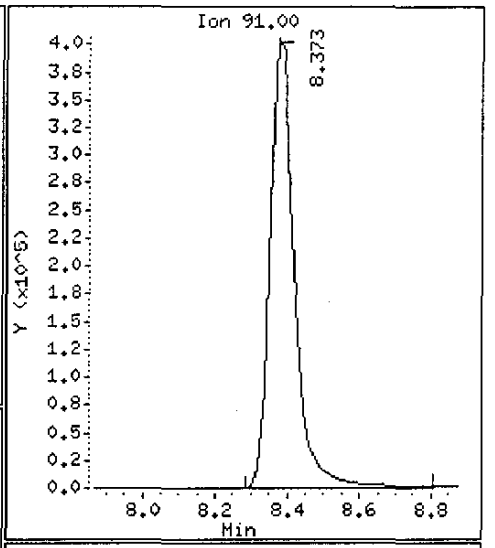
Concentration: 7.94372 ug/L

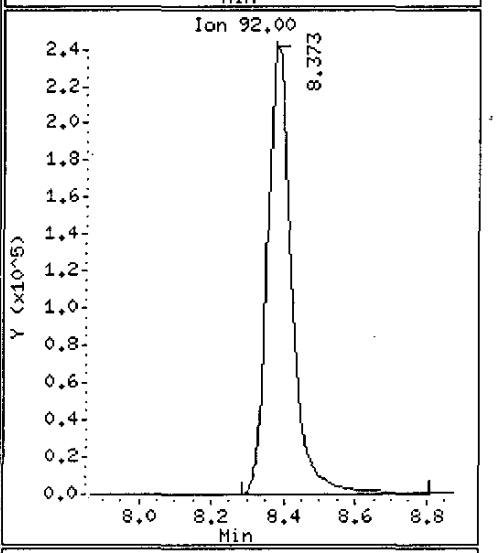


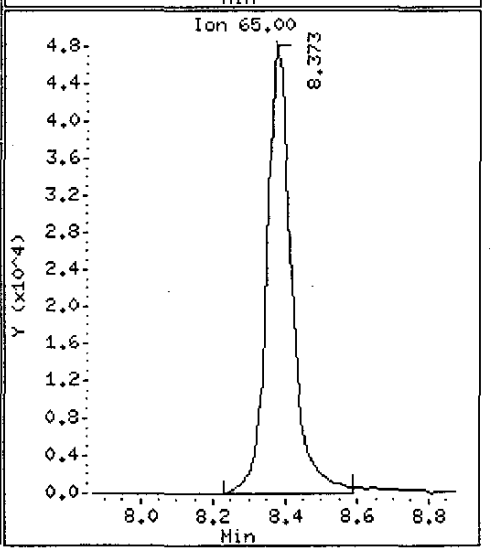












Data File: /chem/H.i/022304.b/h1121.d

Date : 23-FEB-2004 17:50

Client ID:

Instrument: H.i

Sample Info: F9KFC1AQ,,D4B130209-014

Purge Volume: 20.0

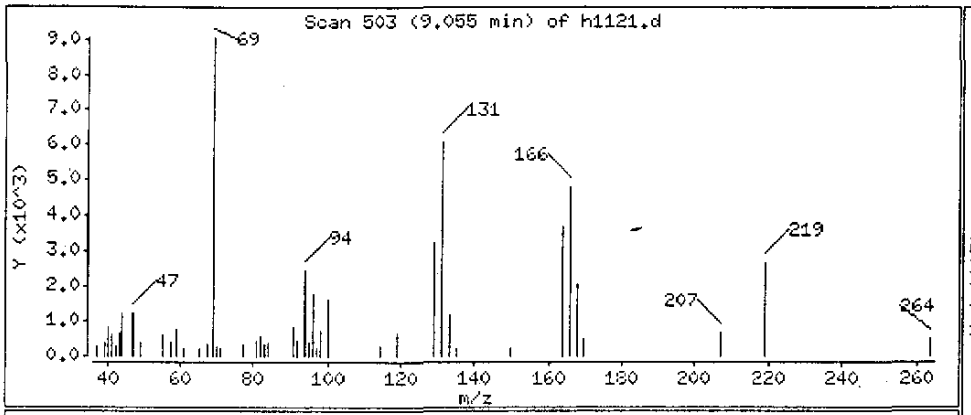
Operator: hoffmanm

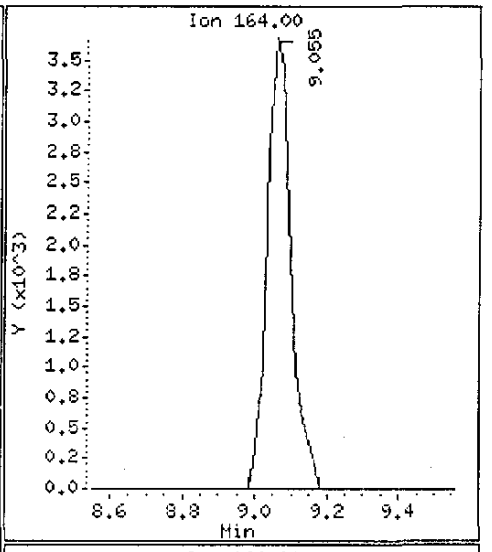
Column phase: DB624

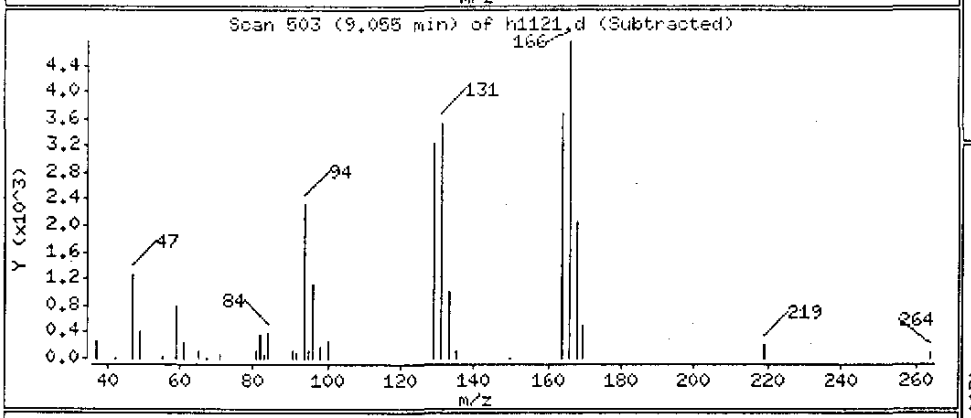
Column diameter: 0.53

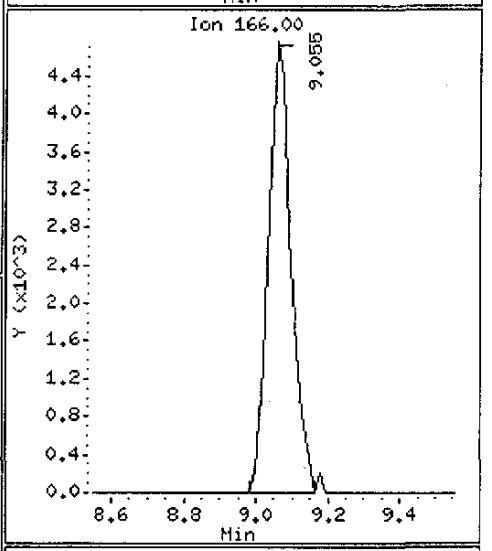
66 Tetrachloroethene

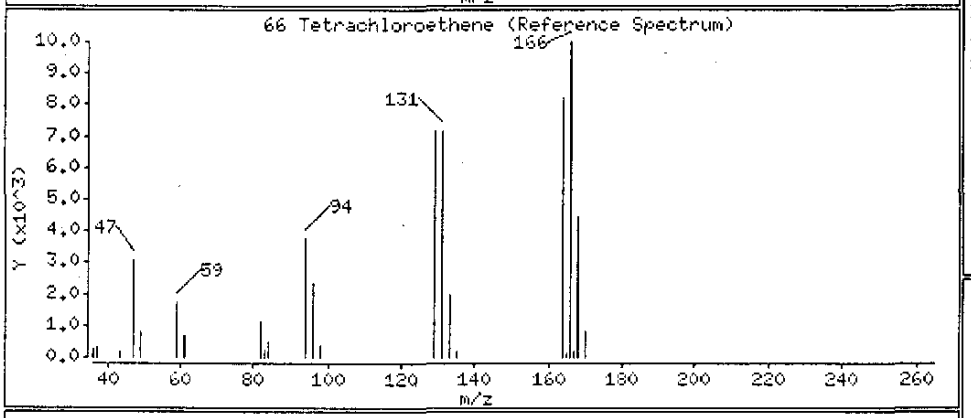
Concentration: 0.221351 ug/L

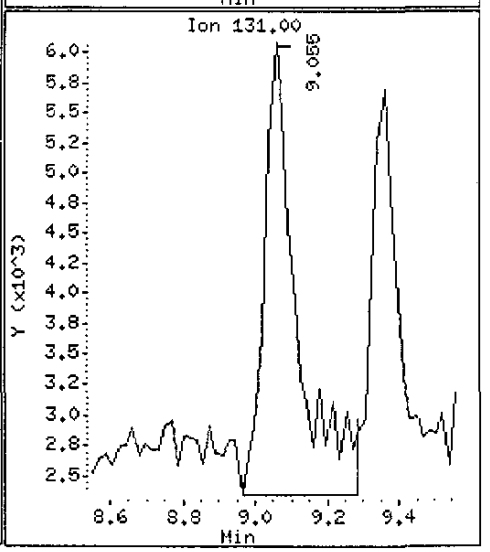


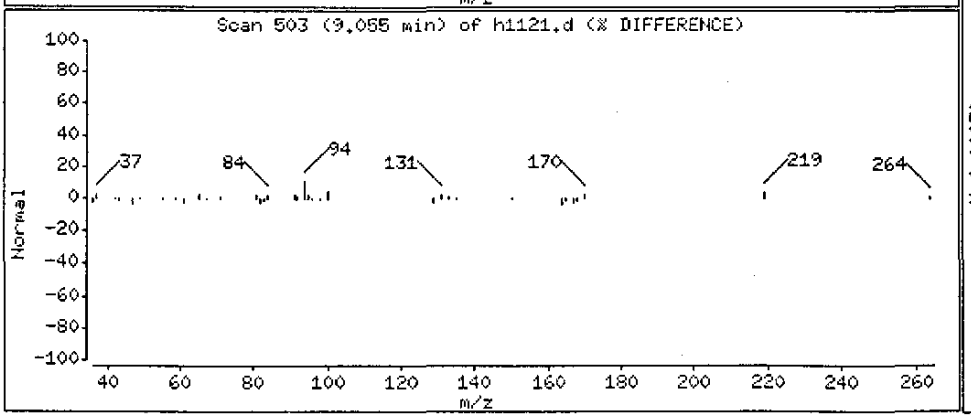












Data File: /chem/H.i/022304.b/h1121.d

Date : 23-FEB-2004 17:50

Client ID:

Instrument: H.i

Sample Info: F9KFC1AQ,,D4B130209-014

Purge Volume: 20.0

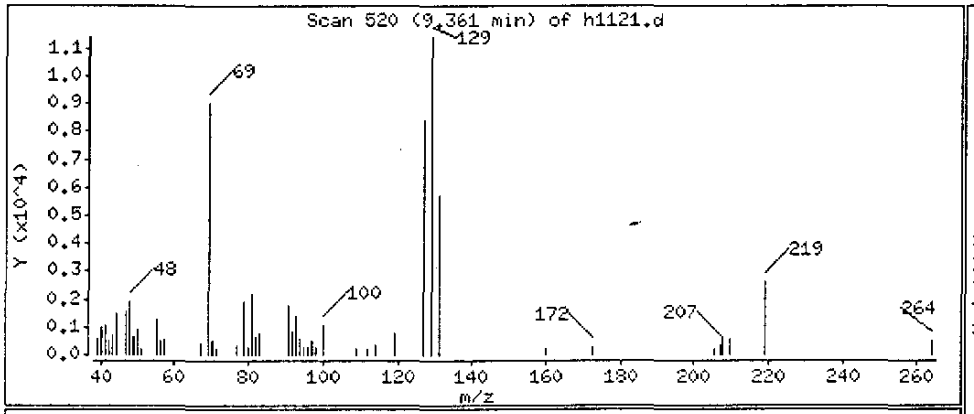
Operator: hoffmanm

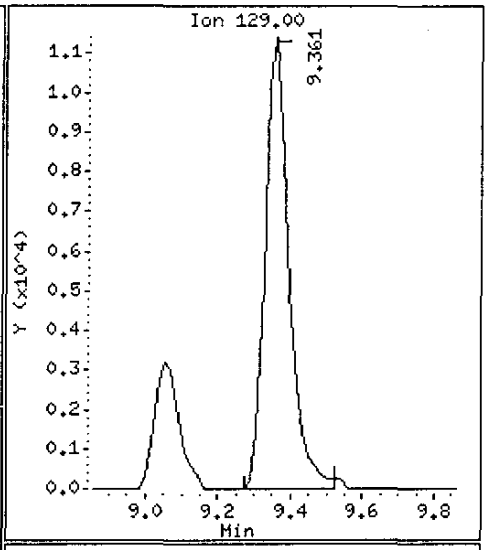
Column phase: DB624

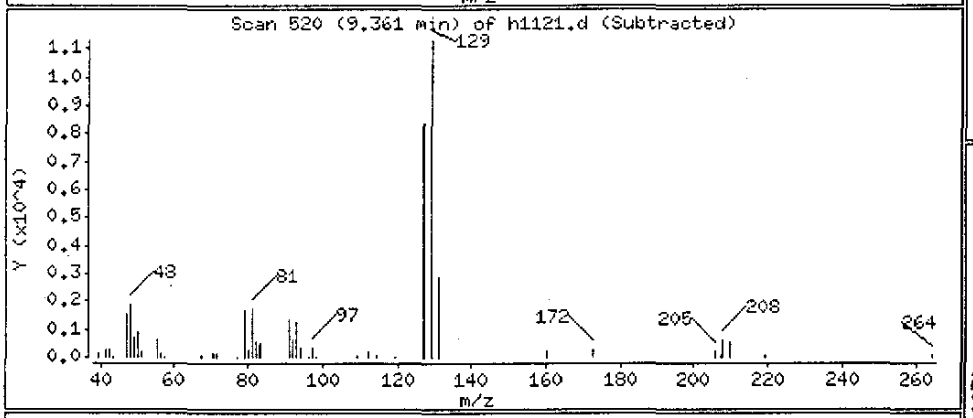
Column diameter: 0.53

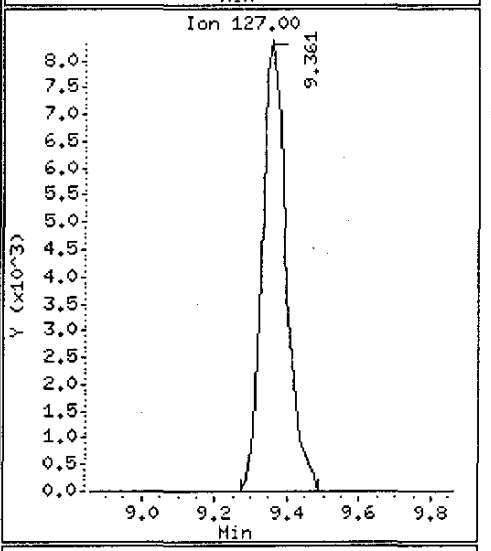
69 Dibromochloromethane

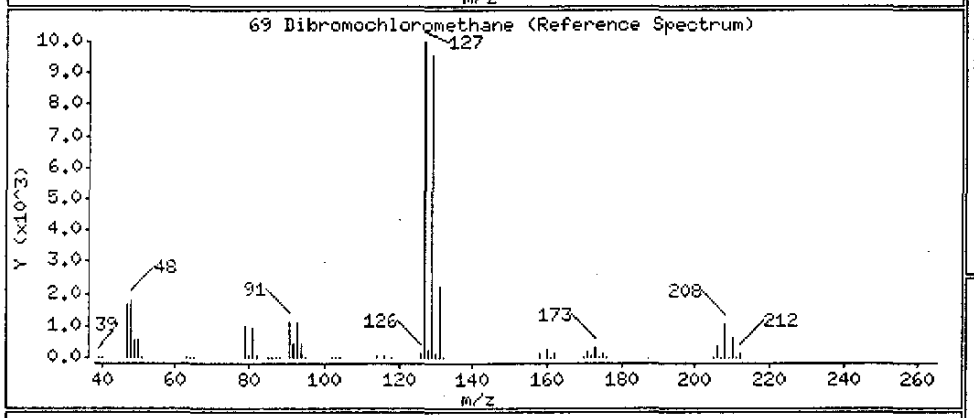
Concentration: 0.759395 ug/L

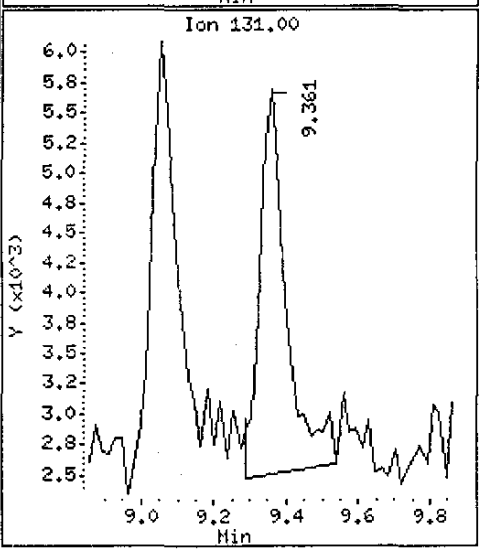


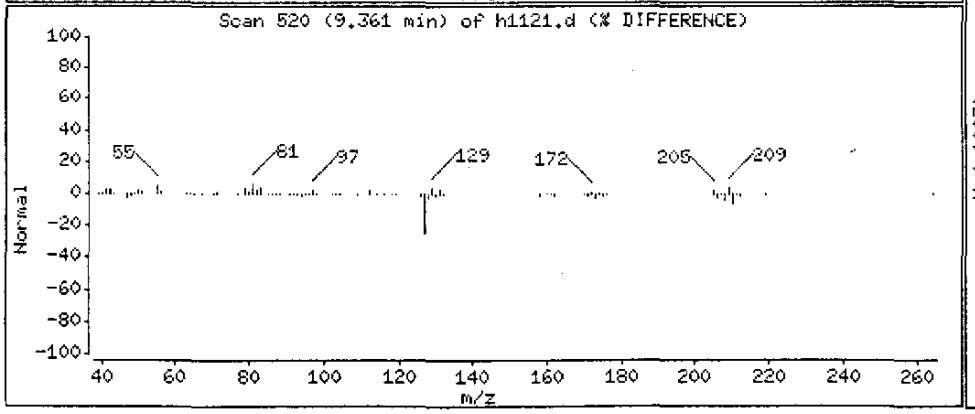












Data File: /chem/H.i/022304.b/h1121.d

Date : 23-FEB-2004 17:50

Client ID:

Instrument: H.i

Sample Info: F9KFC1AQ,,D4B130209-014

Purge Volume: 20.0

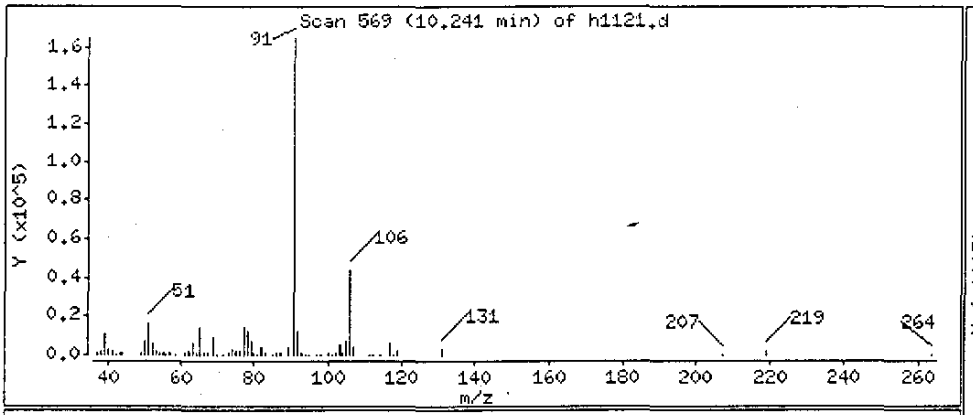
Operator: hoffmanm

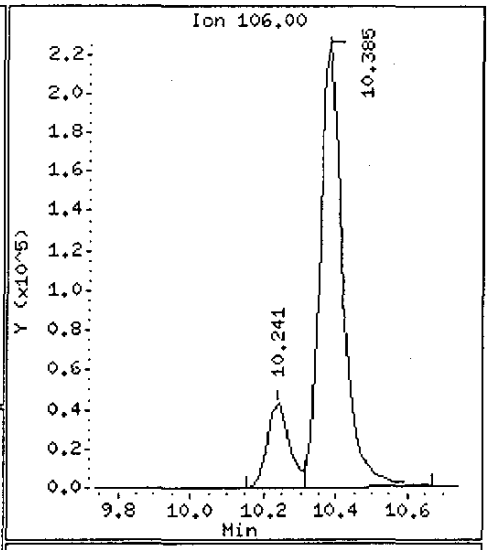
Column phase: DB624

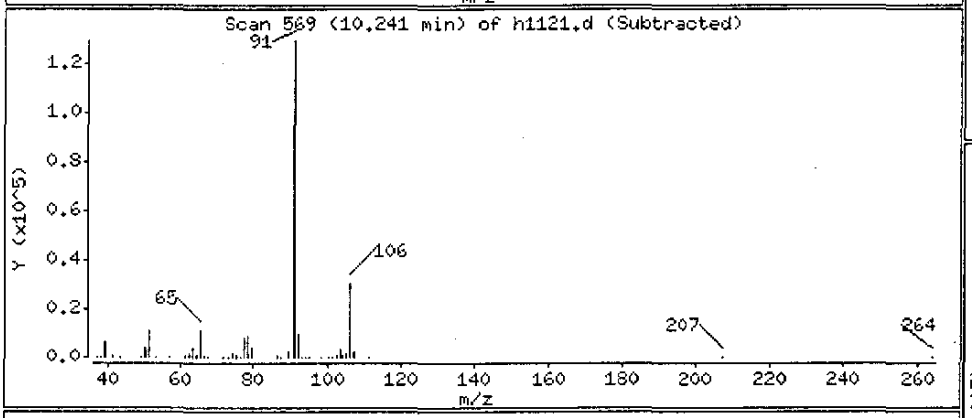
Column diameter: 0.53

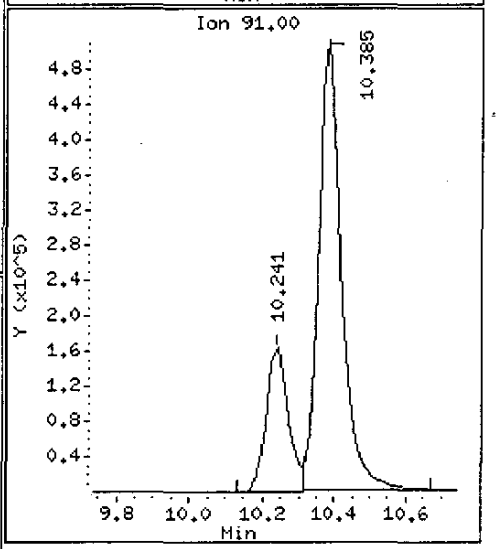
75 Ethylbenzene

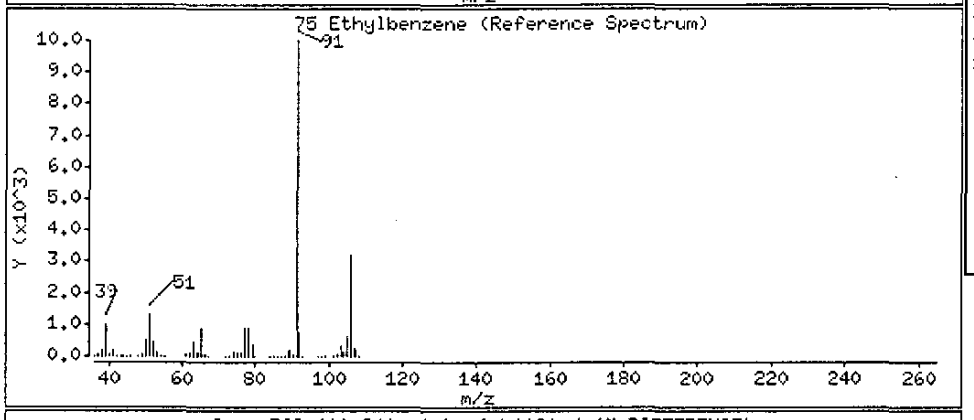
Concentration: 2.56083 ug/L

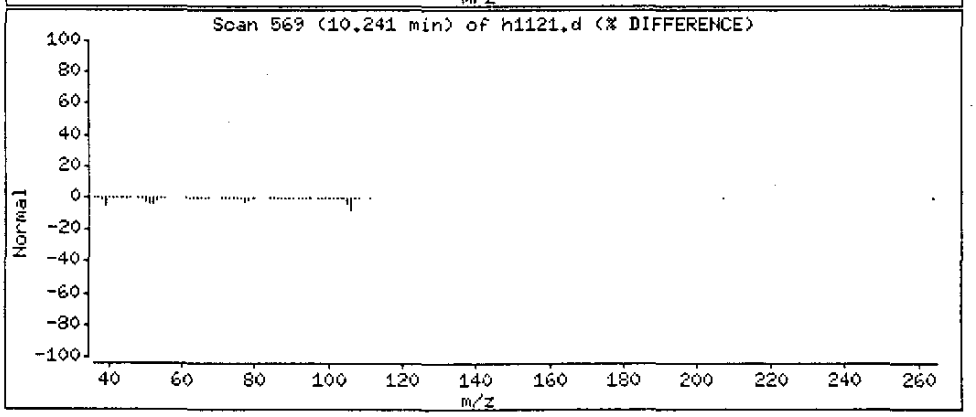












Data File: /chem/H.i/022304.b/h1121.d

Date : 23-FEB-2004 17:50

Client ID:

Instrument: H.i

Sample Info: F9KFC1AQ,,D4B130209-014

Purge Volume: 20.0

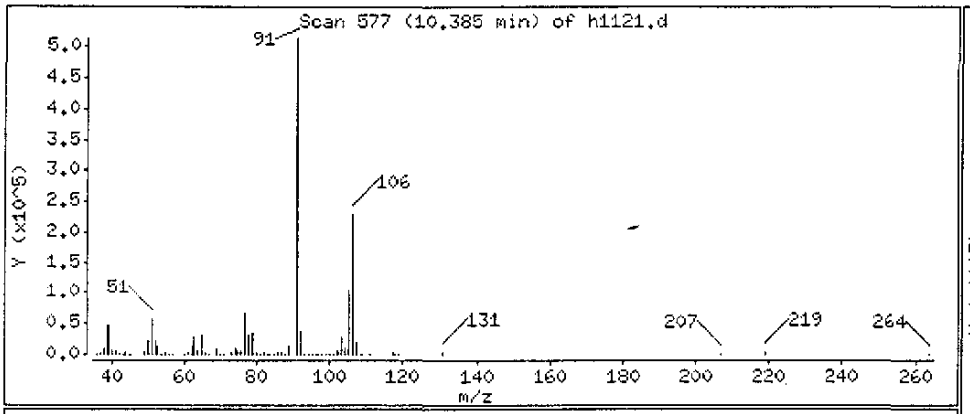
Operator: hoffmanm

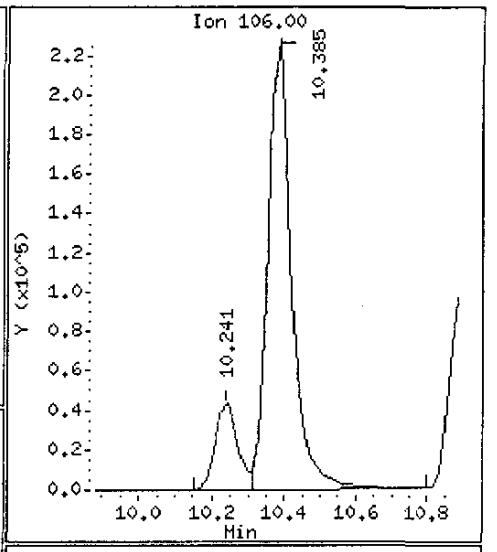
Column phase: DB624

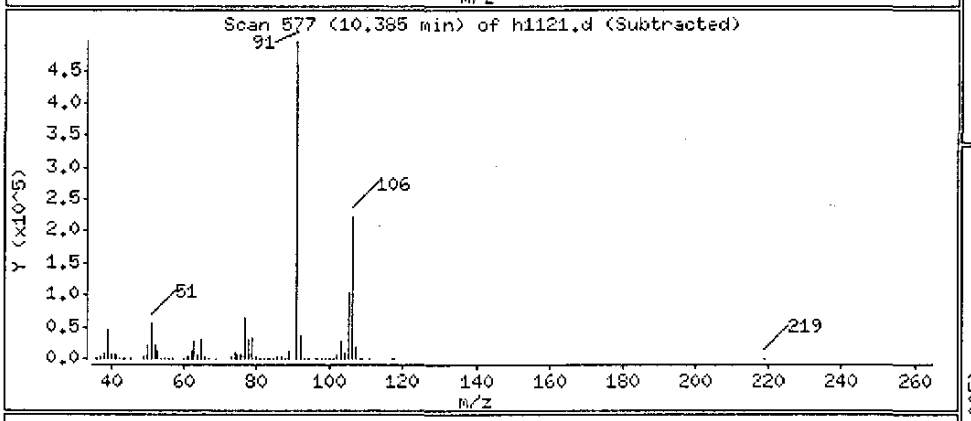
Column diameter: 0.53

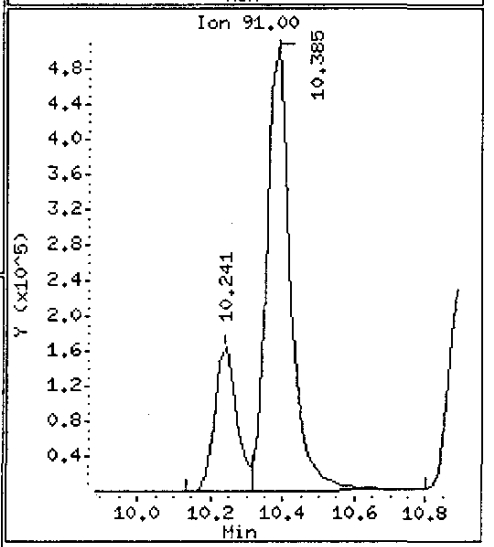
76 m and p-Xylene

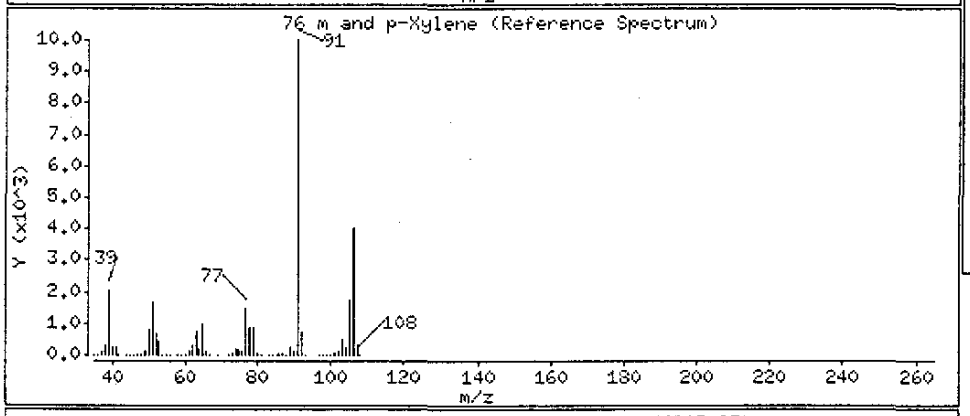
Concentration: 10.2428 ug/L

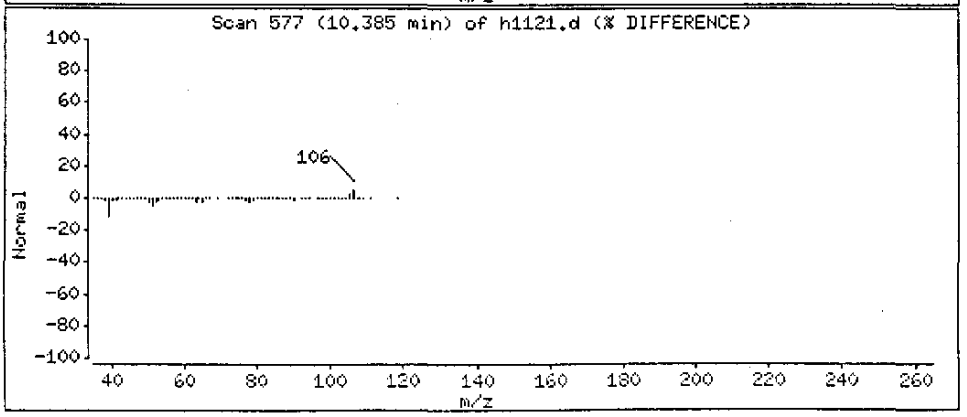












Data File: /chem/H.i/022304.b/h1121.d

Date : 23-FEB-2004 17:50

Client ID:

Instrument: H.i

Sample Info: F9KFC1AQ,,D4B130209-014

Purge Volume: 20.0

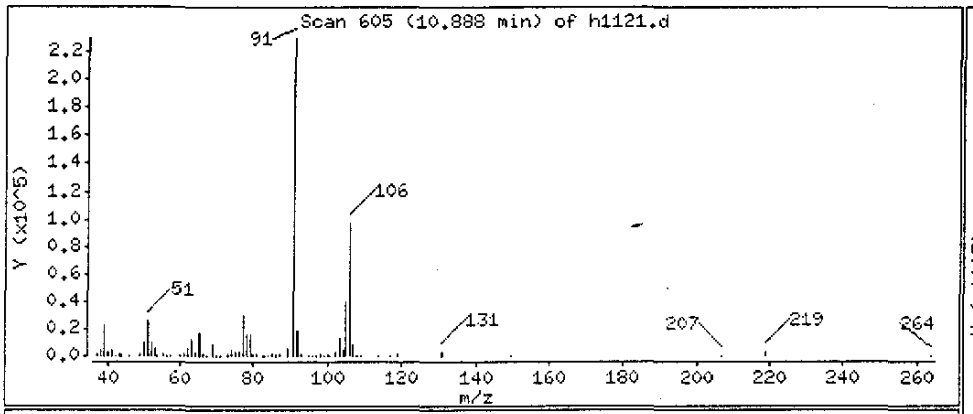
Operator: hoffmanm

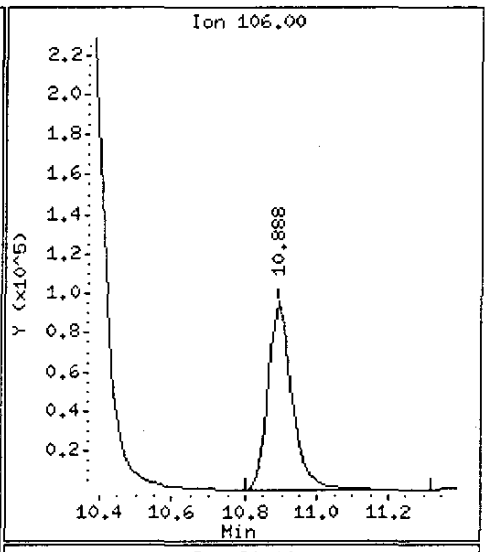
Column phase: DB624

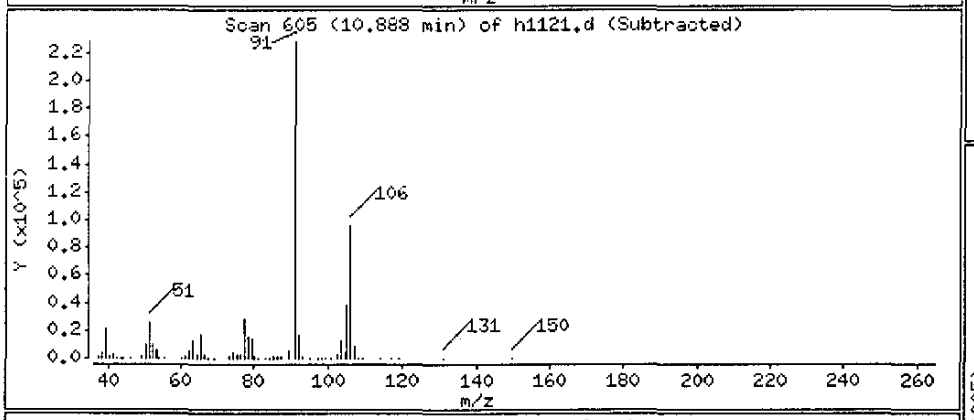
Column diameter: 0.53

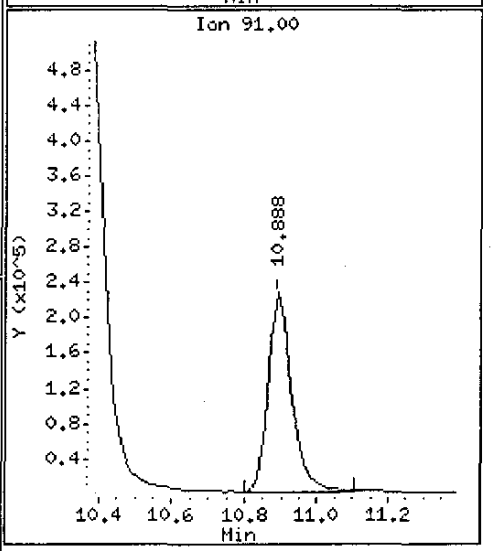
77 o-Xylene

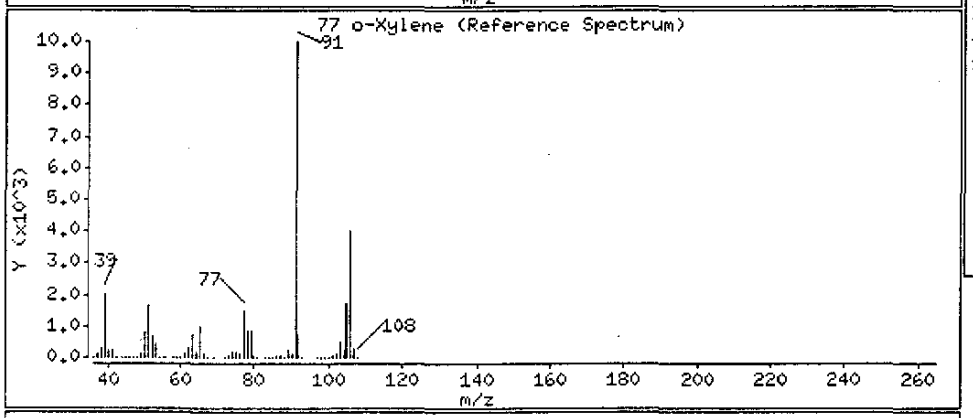
Concentration: 4.94566 ug/L

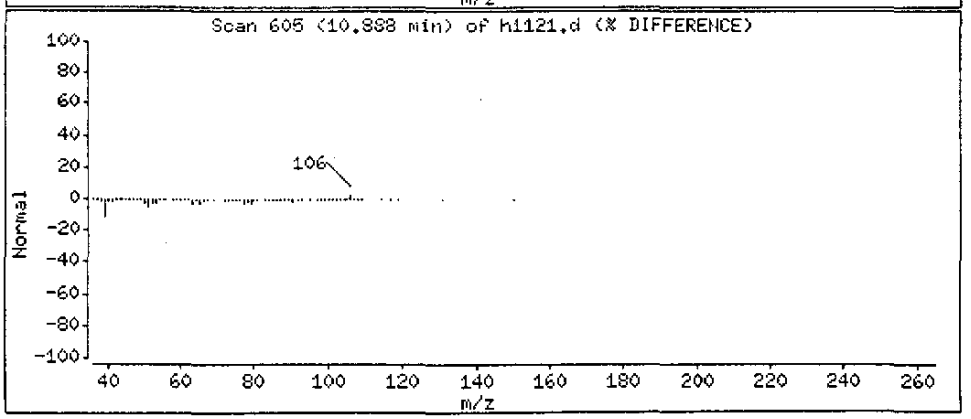












Data File: /chem/H.i/022304.b/h1121.d

Date : 23-FEB-2004 17:50

Client ID:

Instrument: H.i

Sample Info: F9KFC1AQ,,D4B130209-014

Purge Volume: 20.0

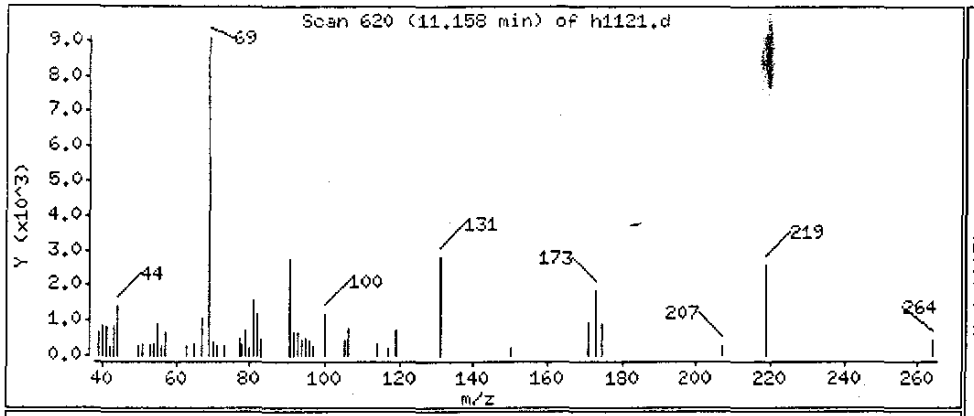
Operator: hoffmanm

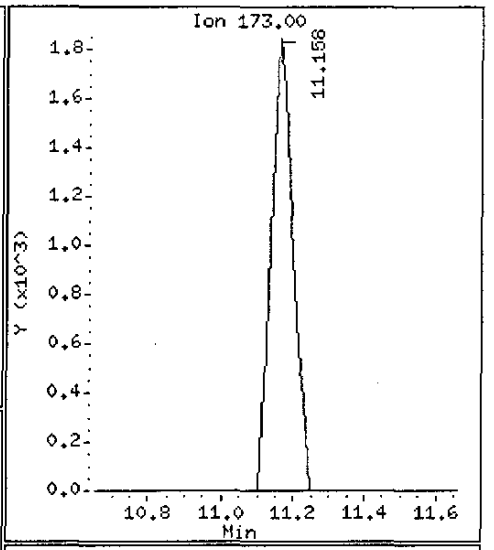
Column phase: DB624

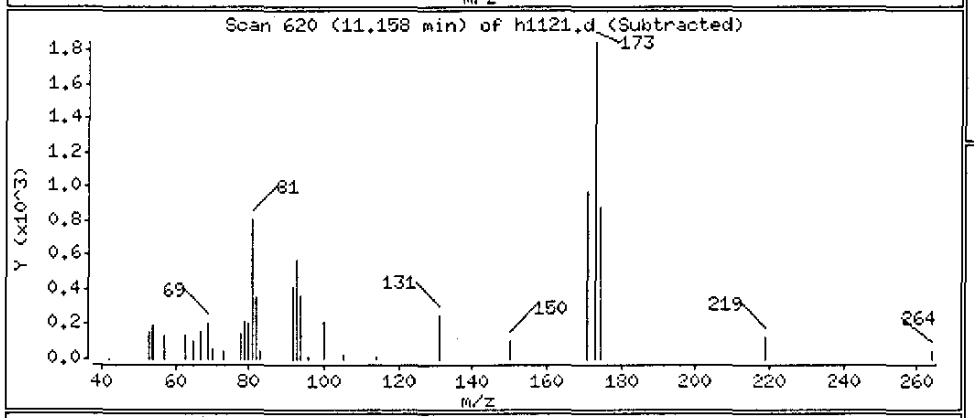
Column diameter: 0.53

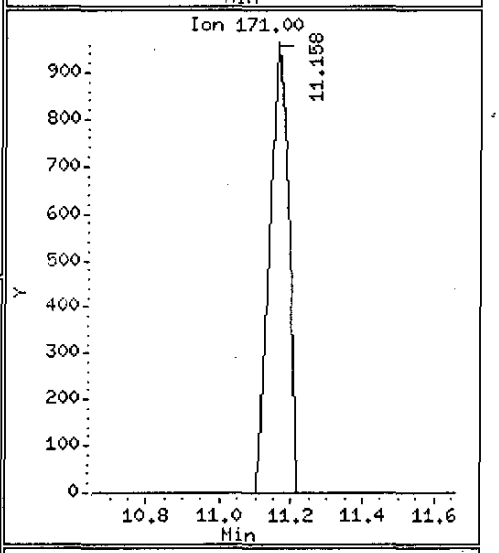
79 Bromoform

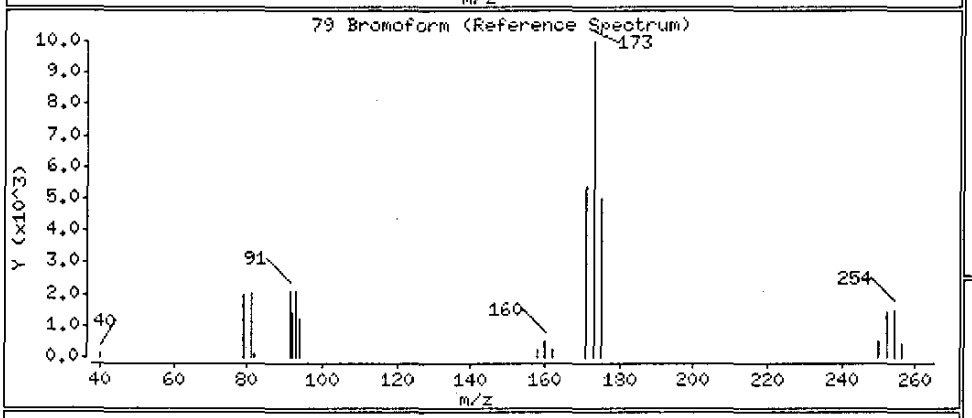
Concentration: 0.205886 ug/L

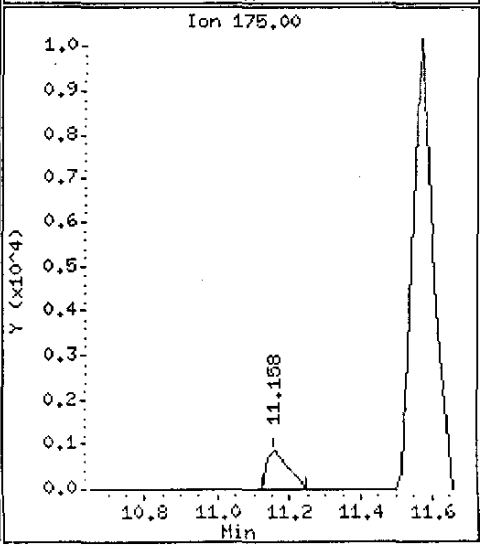


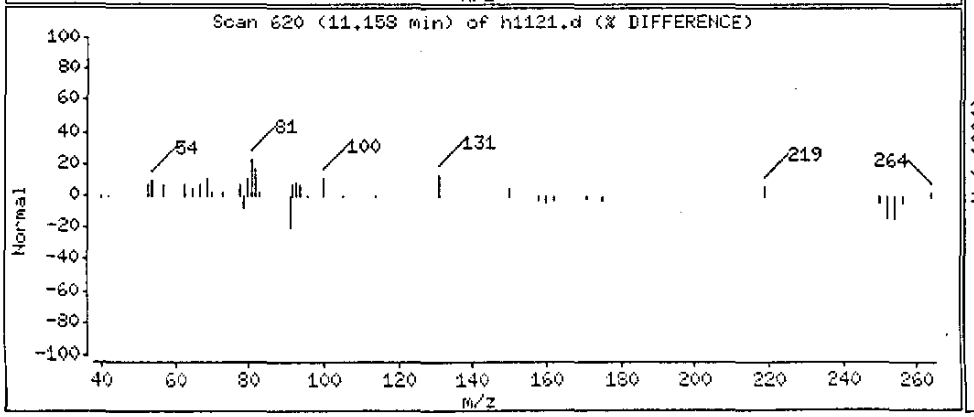












Data File: /chem/H.i/022304.b/h1121.d

Date : 23-FEB-2004 17:50

Client ID:

Instrument: H.i

Sample Info: F9KFC1AQ,,D4B130209-014

Purge Volume: 20.0

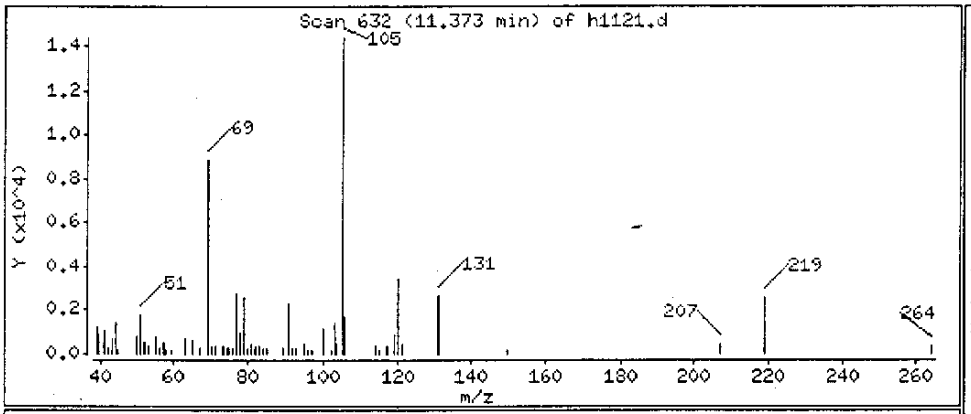
Operator: hoffmanm

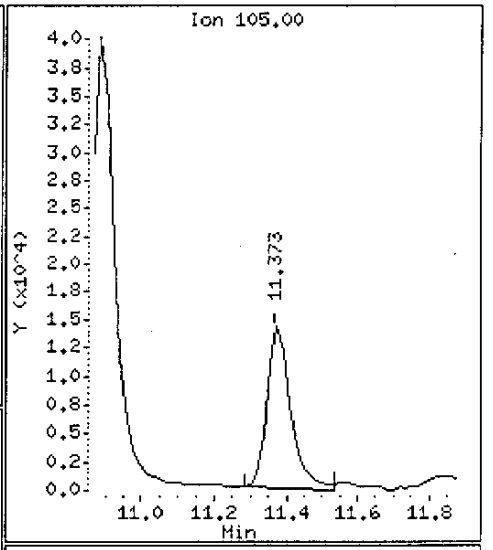
Column phase: DB624

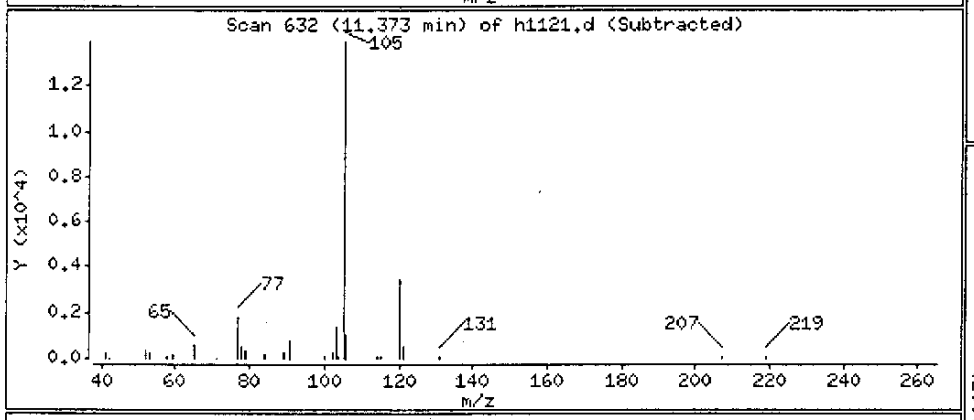
Column diameter: 0.53

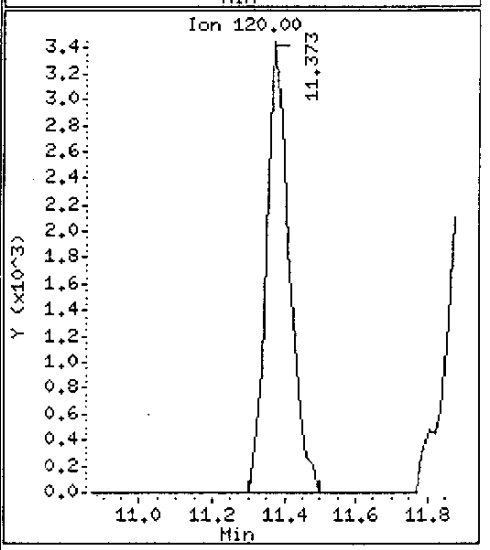
80 isopropyl benzene

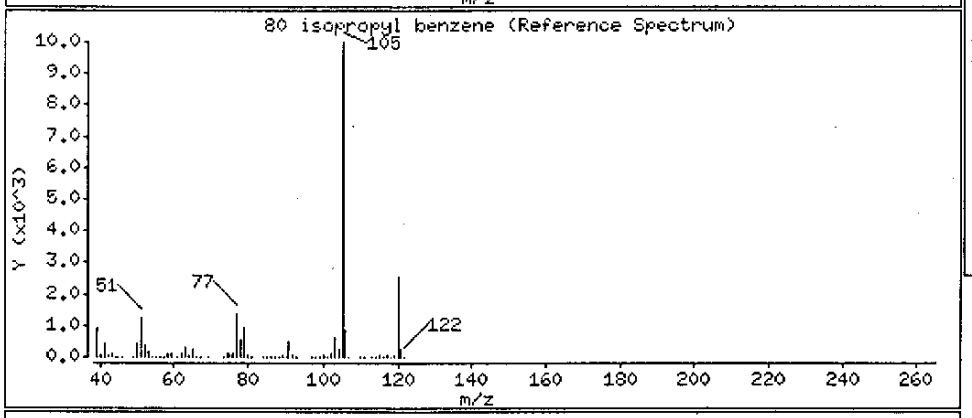
Concentration: 0.220116 ug/L

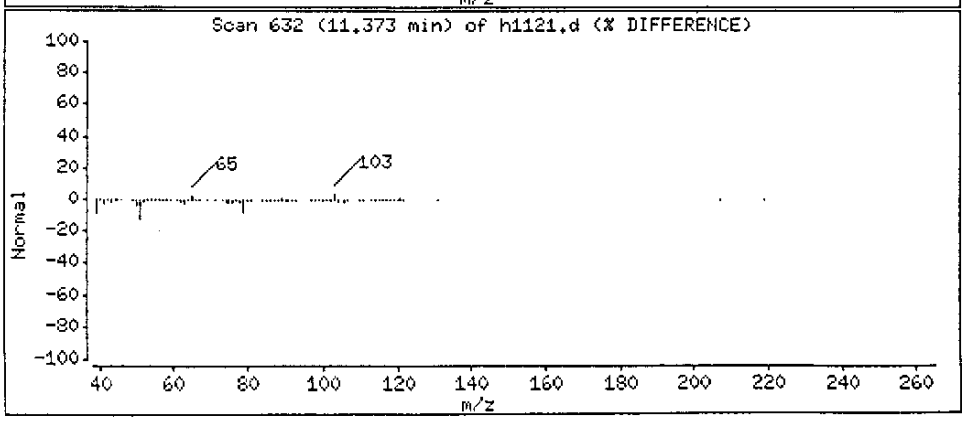












Data File: /chem/H.i/022304.b/h1121.d

Date : 23-FEB-2004 17:50

Client ID:

Instrument: H.i

Sample Info: F9KFC1AQ,,D4B130209-014

Purge Volume: 20.0

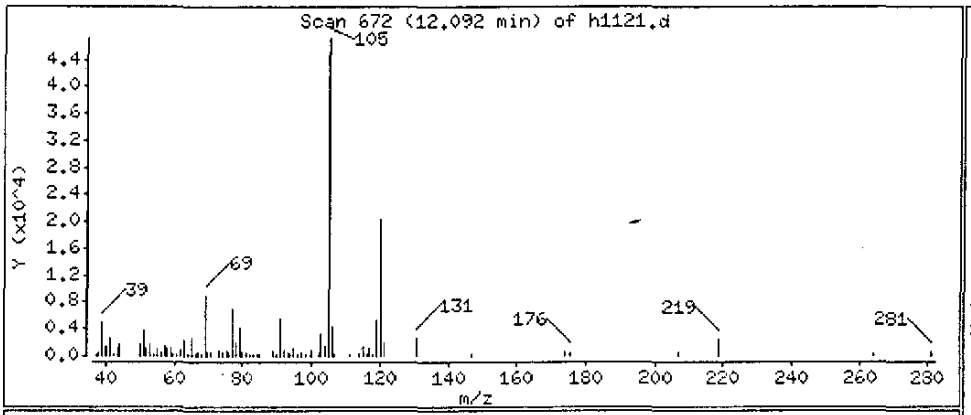
Operator: hoffmanm

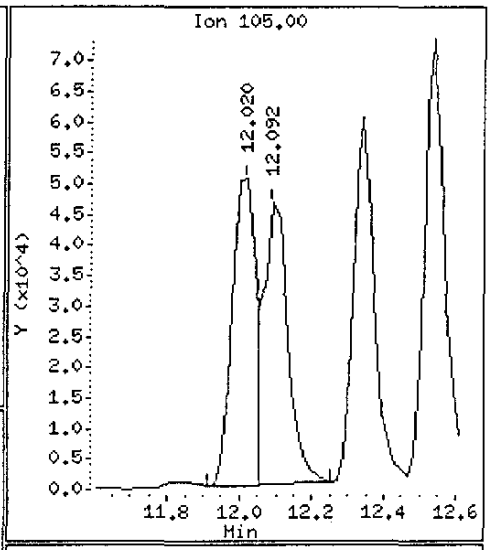
Column phase: DB624

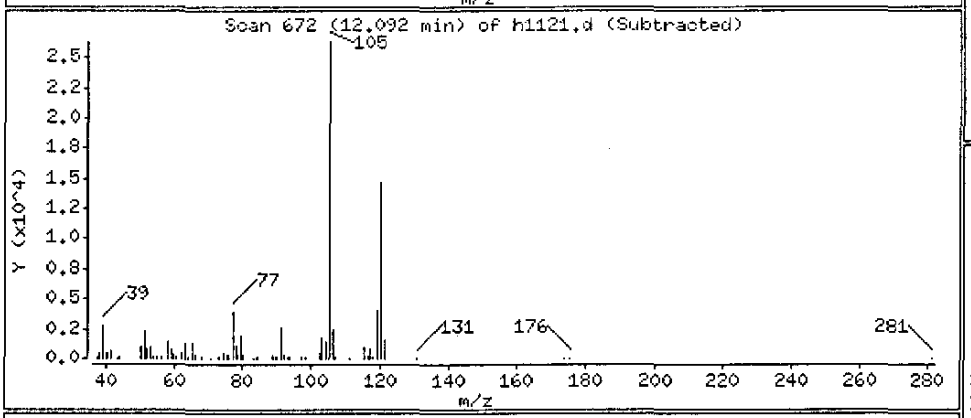
Column diameter: 0.53

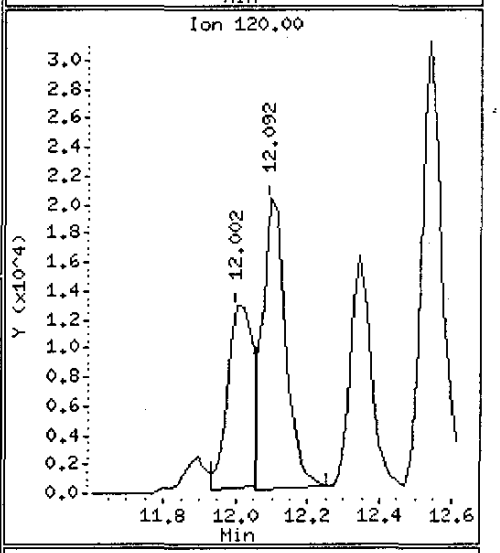
89 1,3,5-Trimethylbenzene

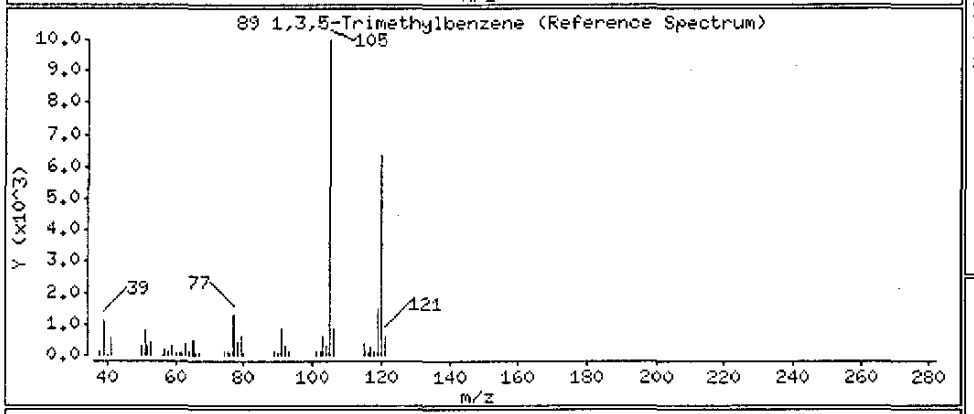
Concentration: 1.04223 ug/L

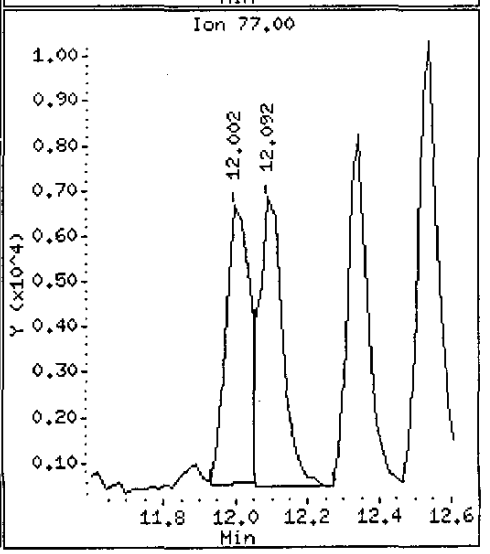


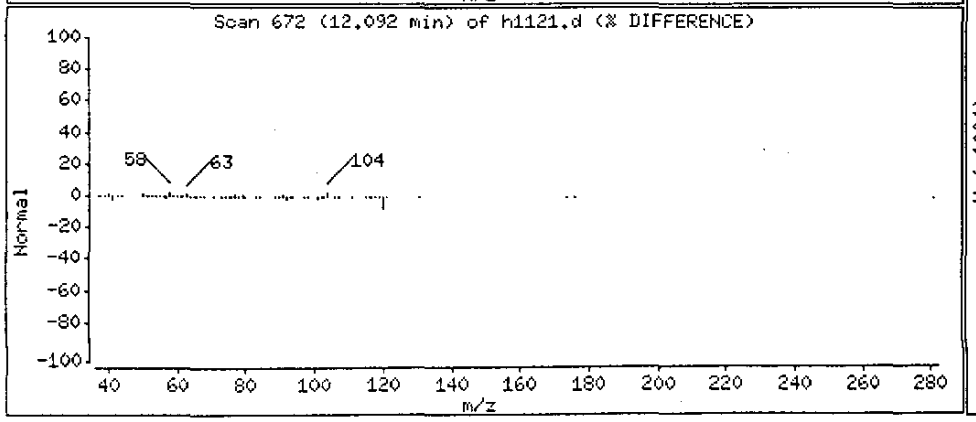












Data File: /chem/H.i/022304.b/h1121.d

Date : 23-FEB-2004 17:50

Client ID:

Instrument: H.i

Sample Info: F9KFC1AQ,,D4B130209-014

Purge Volume: 20.0

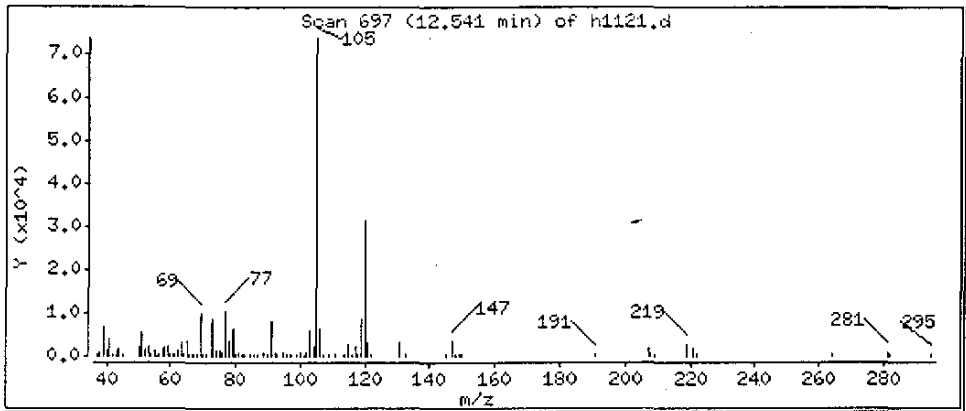
Operator: hoffmann

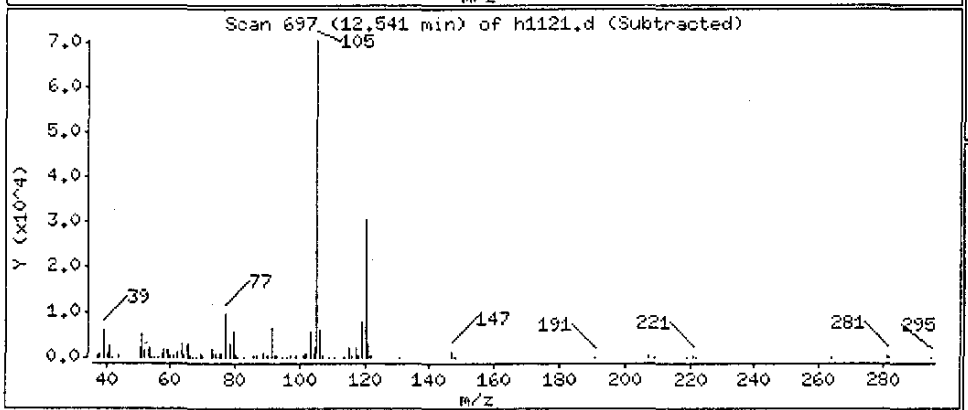
Column phase: DB624

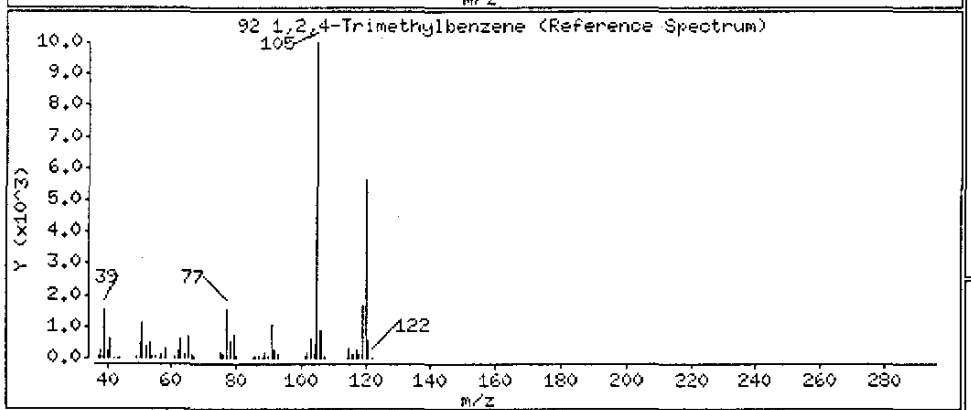
Column diameter: 0.53

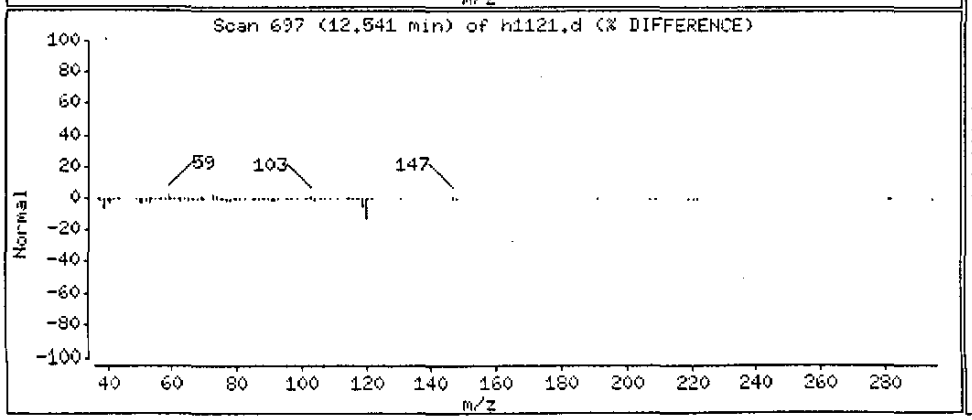
92 1,2,4-Trimethylbenzene

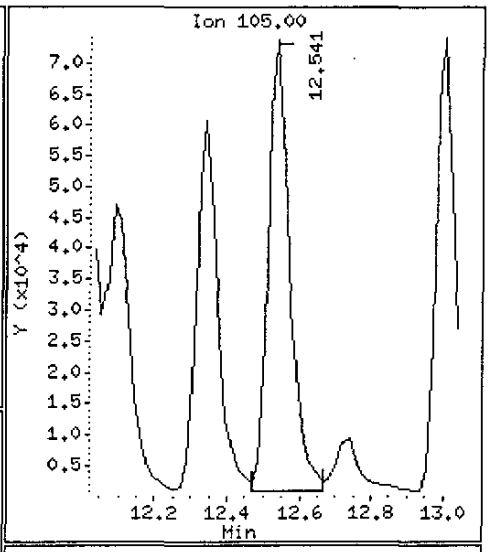
Concentration: 1.47583 ug/L

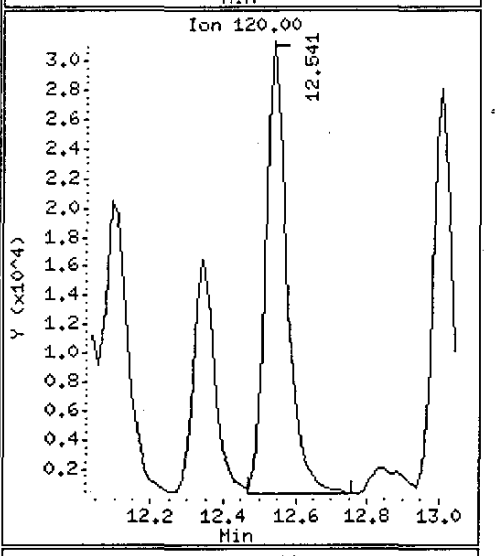


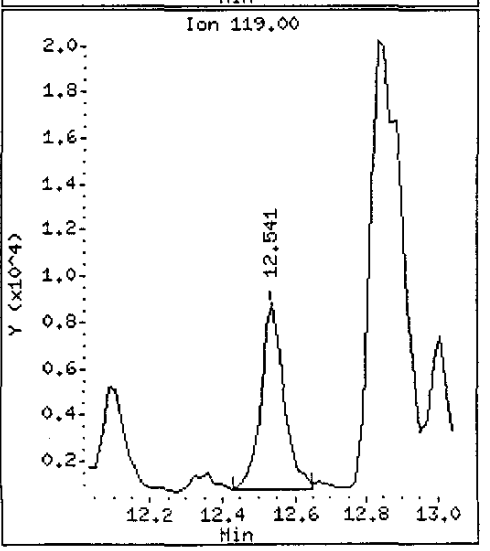












Data File: /chem/H.i/022304.b/h1121.d

Date : 23-FEB-2004 17:50

Client ID:

Instrument: H.i

Sample Info: F9KFC1AQ,,D4B130209-014

Purge Volume: 20.0

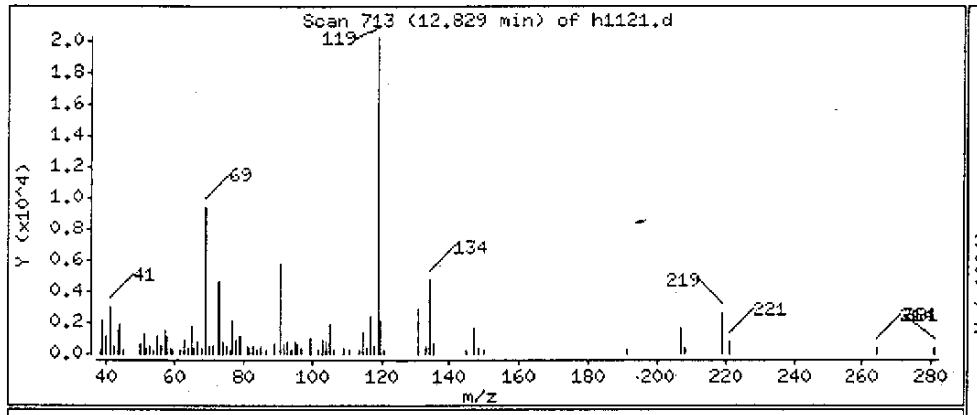
Operator: hoffmanm

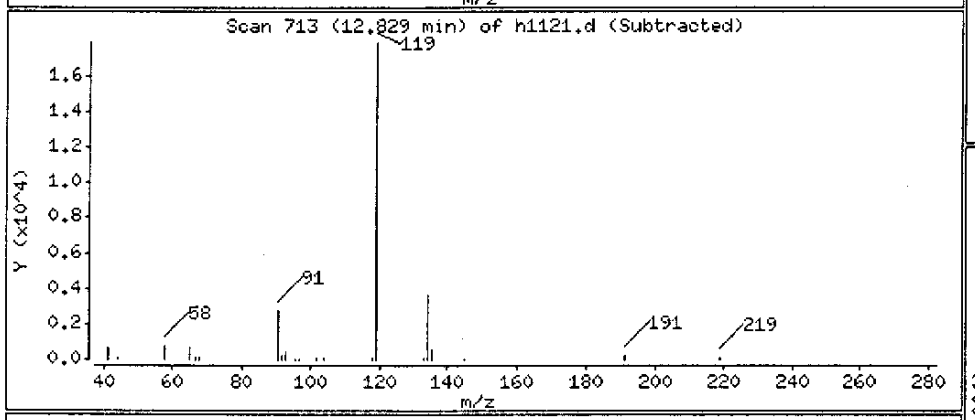
Column phase: DB624

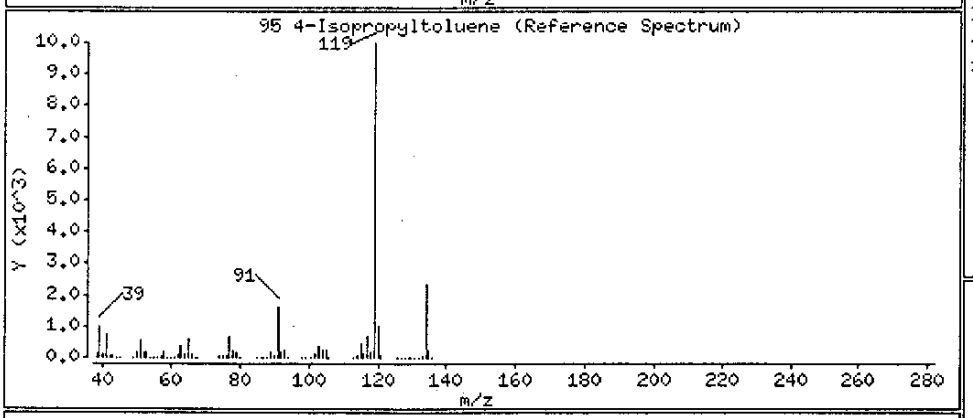
Column diameter: 0.53

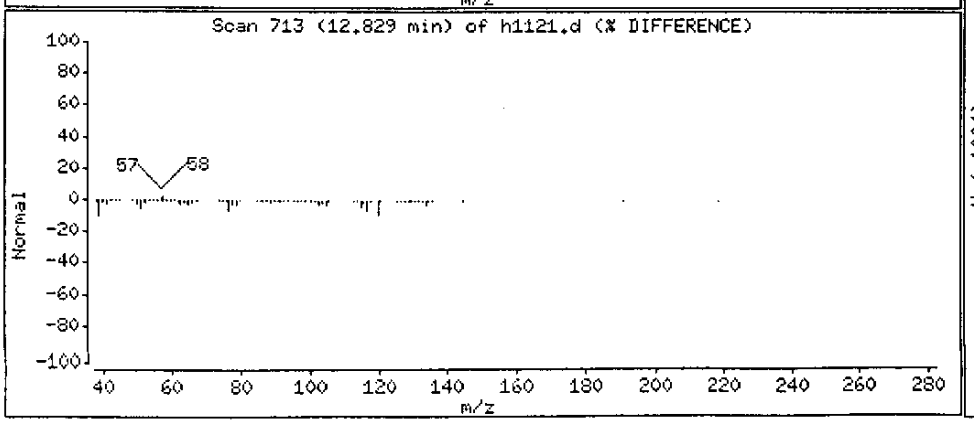
95 4-Isopropyltoluene

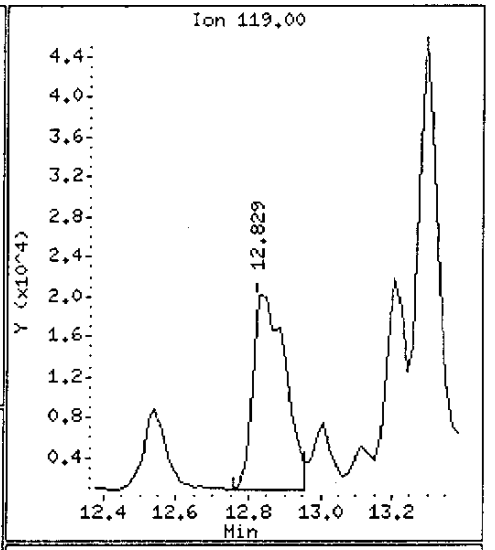
Concentration: 0.485689 ug/L

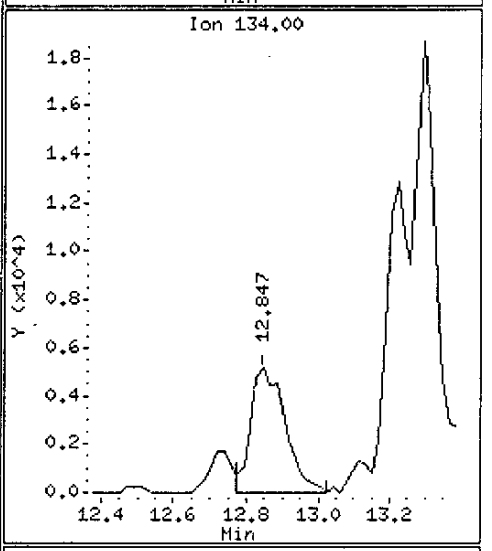


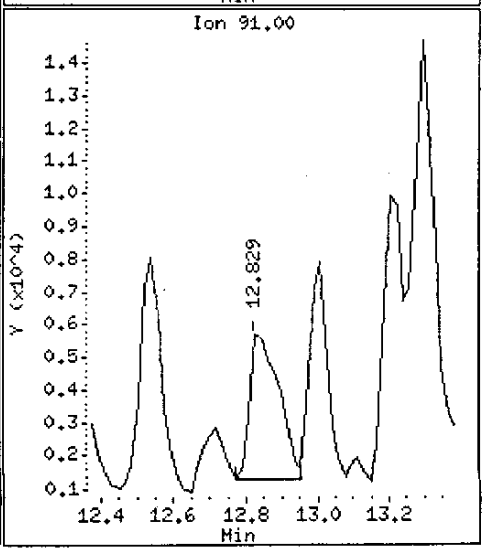












Data File: /chem/H.i/022304.b/h1121.d

Date : 23-FEB-2004 17:50

Client ID:

Instrument: H.i

Sample Info: F9KFC1AQ,,D4B130209-014

Purge Volume: 20.0

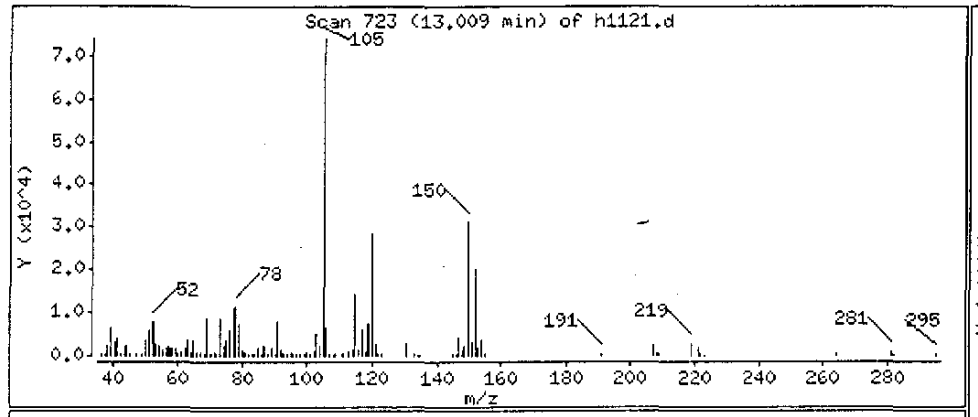
Operator: hoffmanm

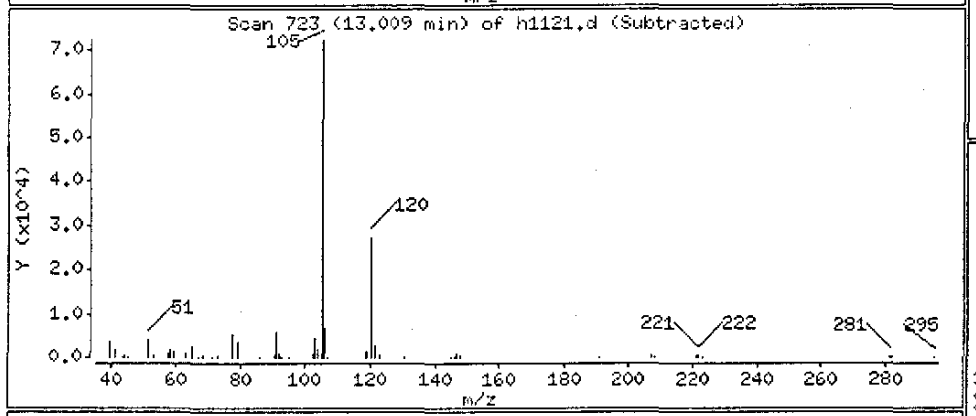
Column phase: DB624

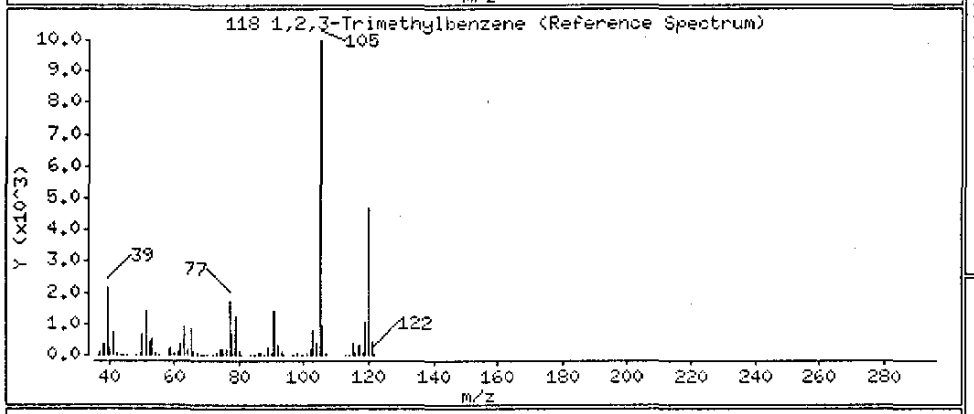
Column diameter: 0.53

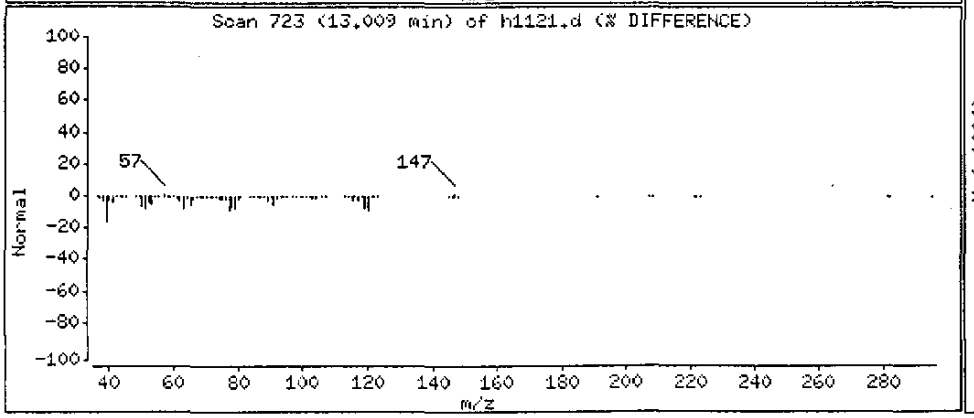
118 1,2,3-Trimethylbenzene

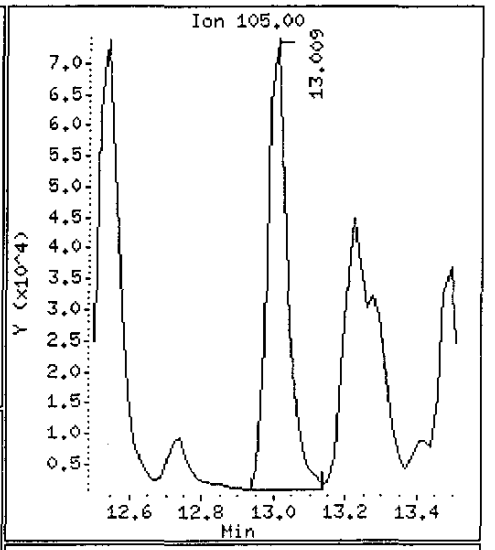
Concentration: 1.84211 ug/L

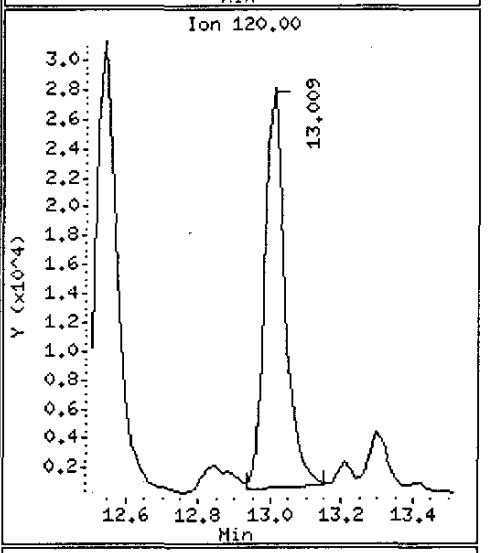


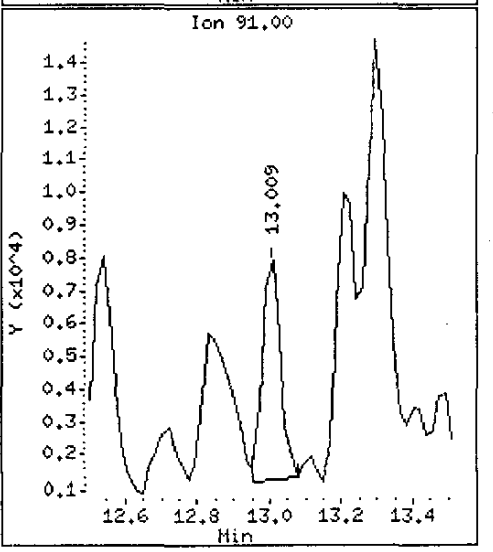












Data File: /chem/H.i/022304.b/h1121.d

Date : 23-FEB-2004 17:50

Client ID:

Instrument: H.i

Sample Info: F9KFC1AQ,,D4B130209-014

Purge Volume: 20.0

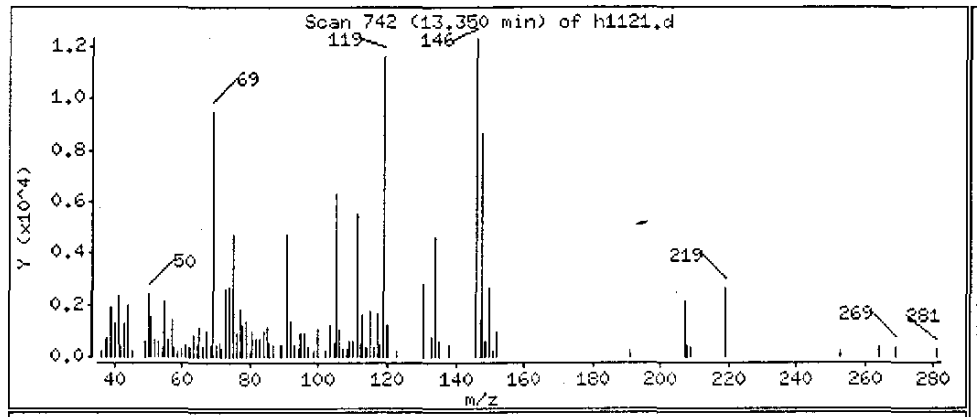
Operator: hoffmanm

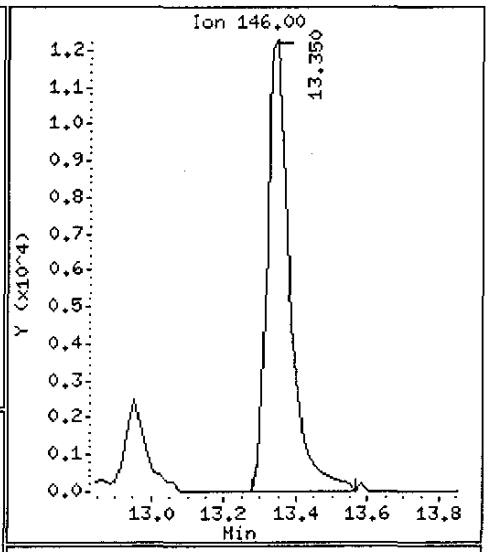
Column phase: DB624

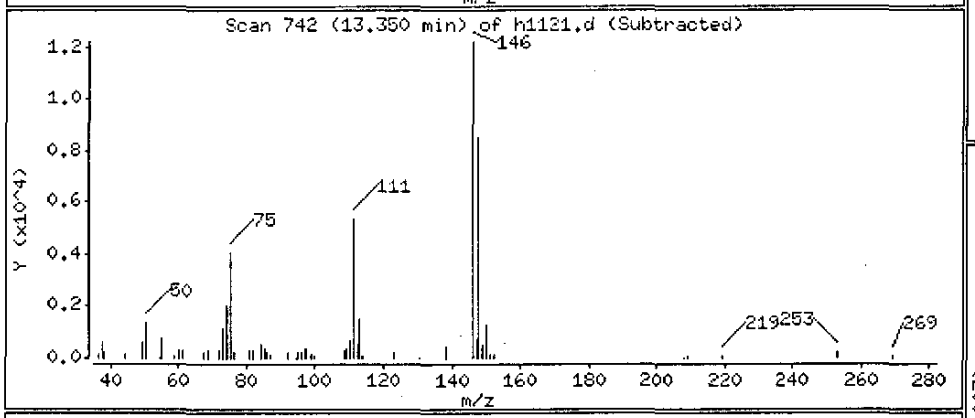
Column diameter: 0.53

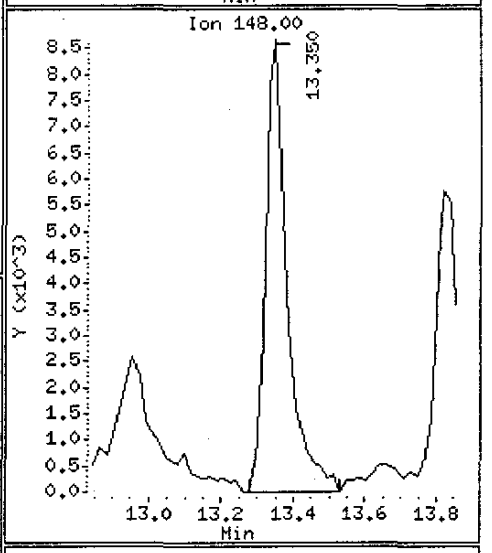
99 o-Dichlorobenzene

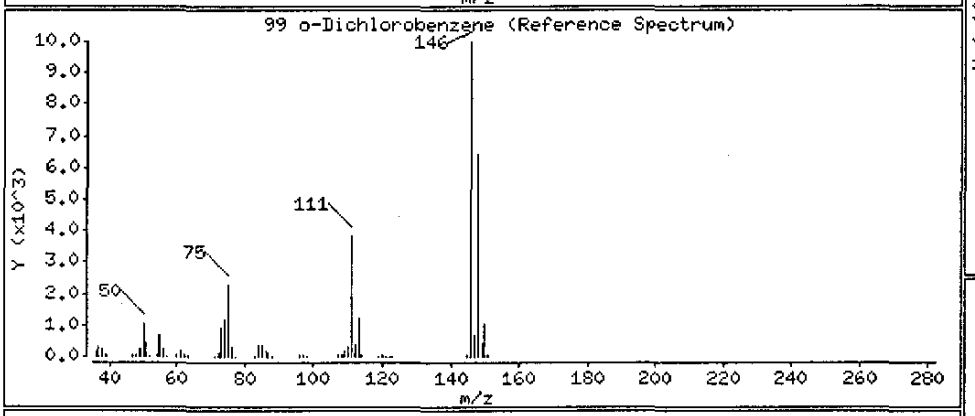
Concentration: 0.561067 ug/L

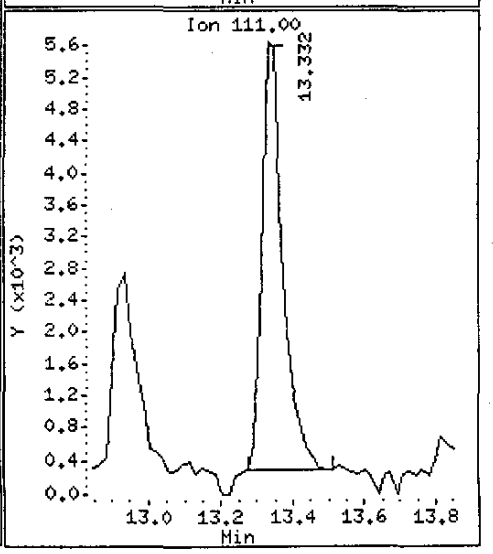


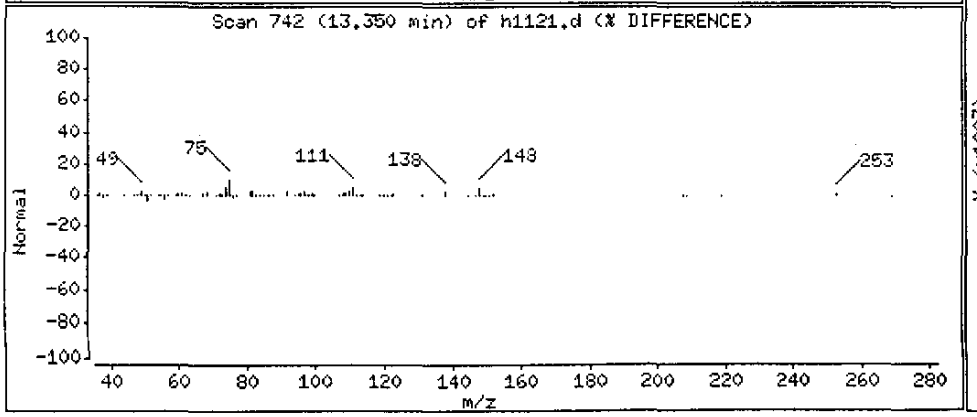












Data File: /chem/H.i/022304.b/h1121.d

Date : 23-FEB-2004 17:50

Client ID:

Instrument: H.i

Sample Info: F9KFC1AQ,,D4B130209-014

Purge Volume: 20.0

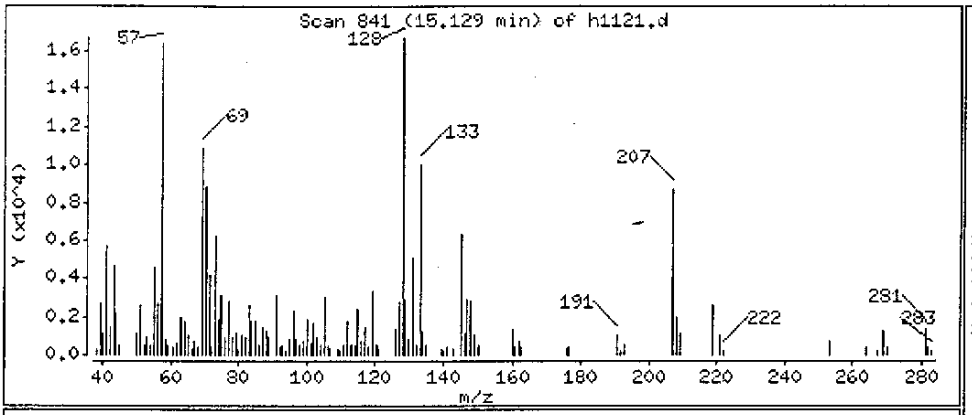
Operator: hoffmanm

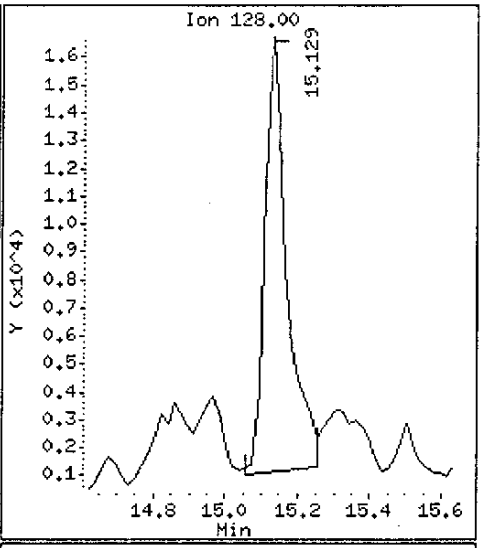
Column phase: DB624

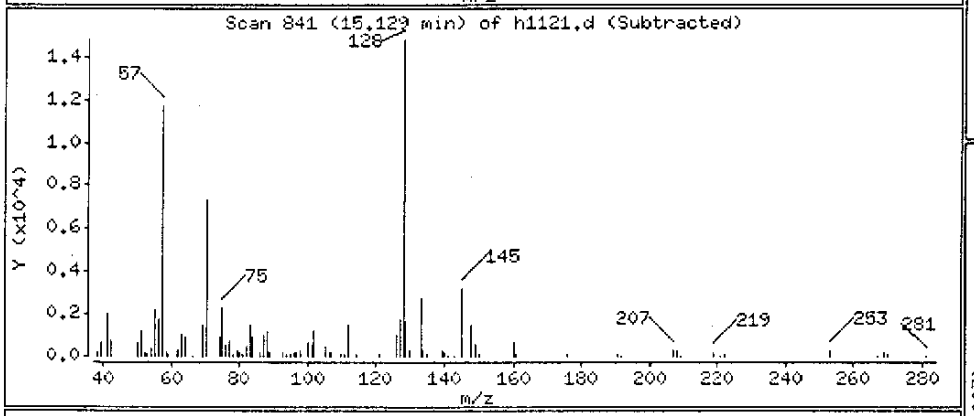
Column diameter: 0.53

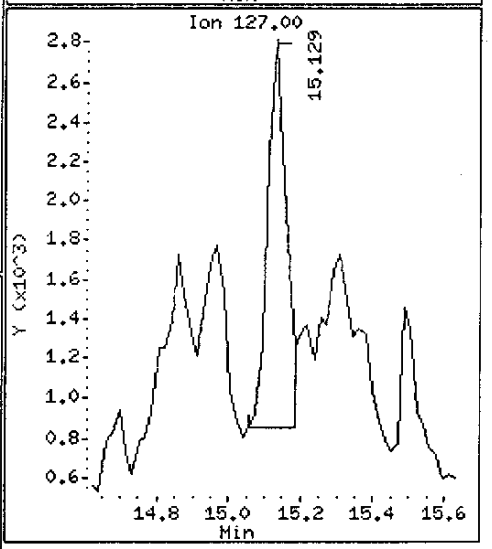
127 Naphthalene

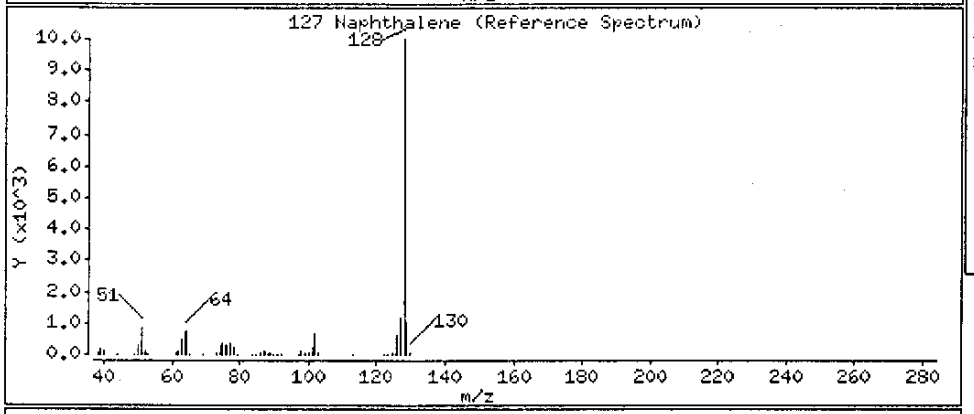
Concentration: 0.960924 ug/L

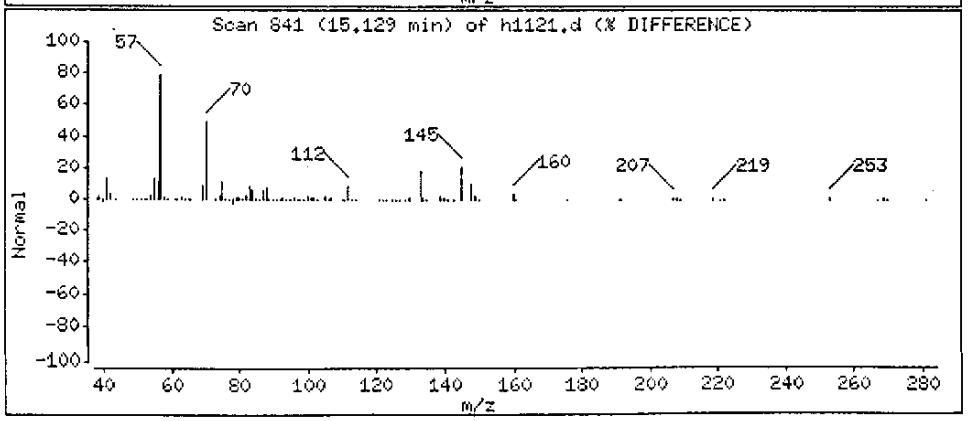












Data File: /chem/H.i/022304.b/h1121.d

Date : 23-FEB-2004 17:50

Client ID:

Instrument: H.i

Sample Info: F9KFC1AQ,,D4B130209-014

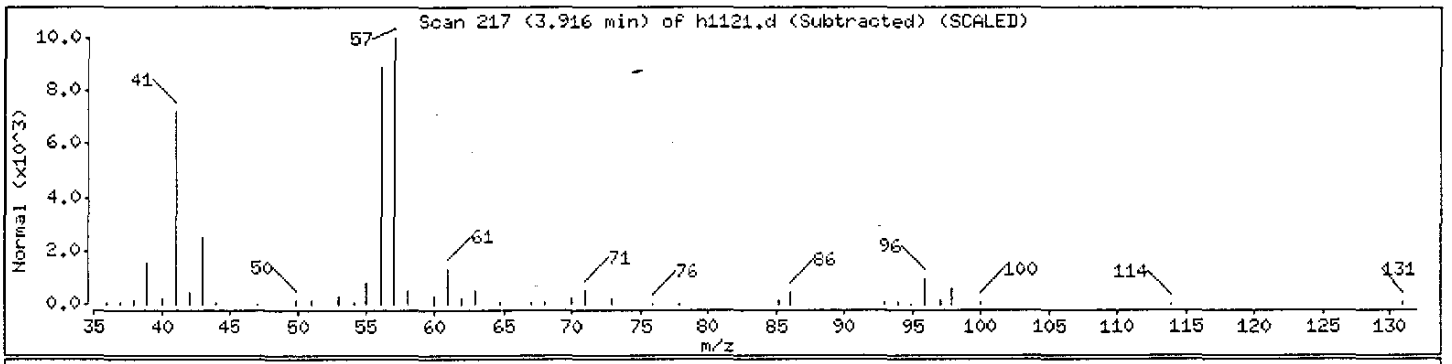
Purge Volume: 20.0

Operator: hoffmanm

Column phase: DB624

Column diameter: 0.53

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown			0	0		0



Data File: /chem/H.i/022304.b/h1121.d

Date : 23-FEB-2004 17:50

Client ID:

Instrument: H.i

Sample Info: F9KFC1AQ,,D4B130209-014

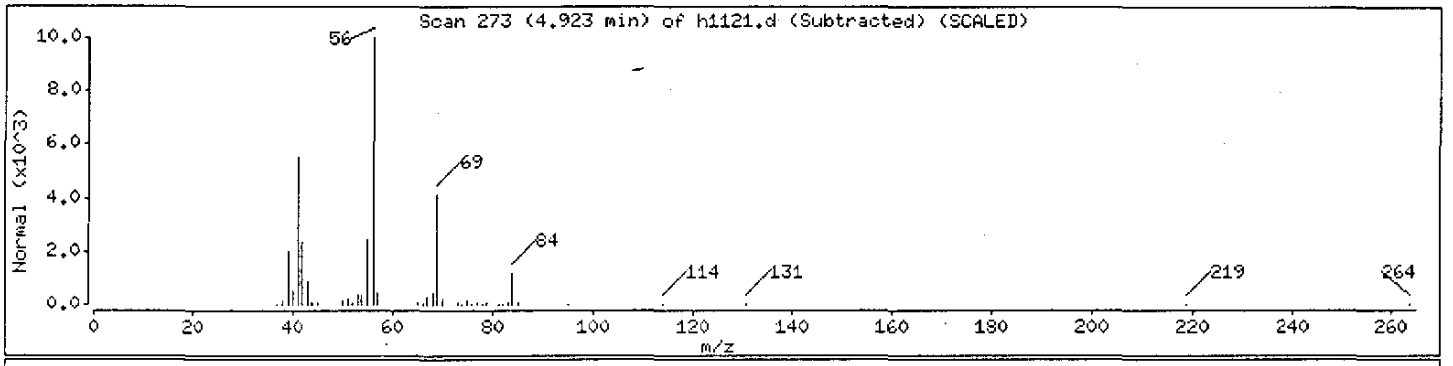
Purge Volume: 20.0

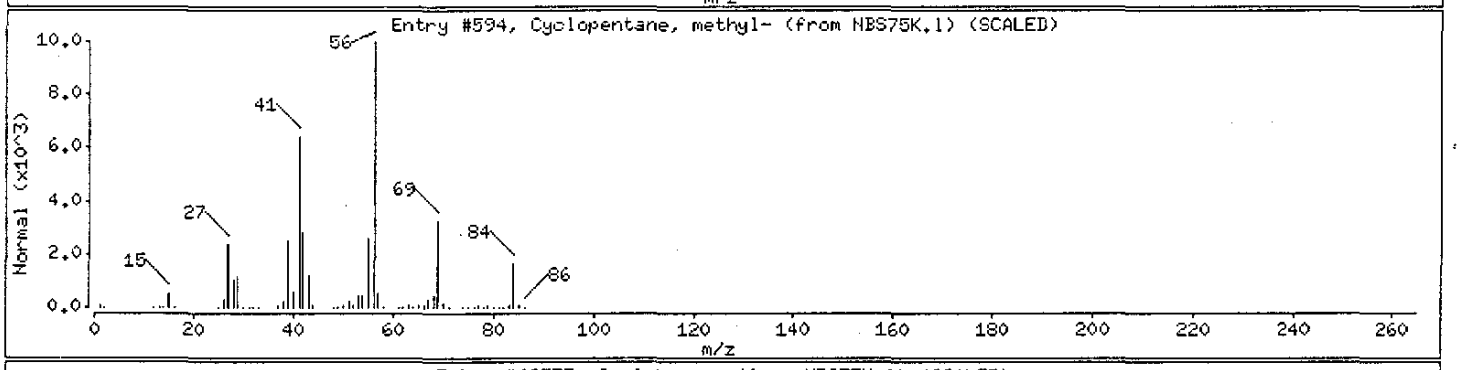
Operator: hoffmann

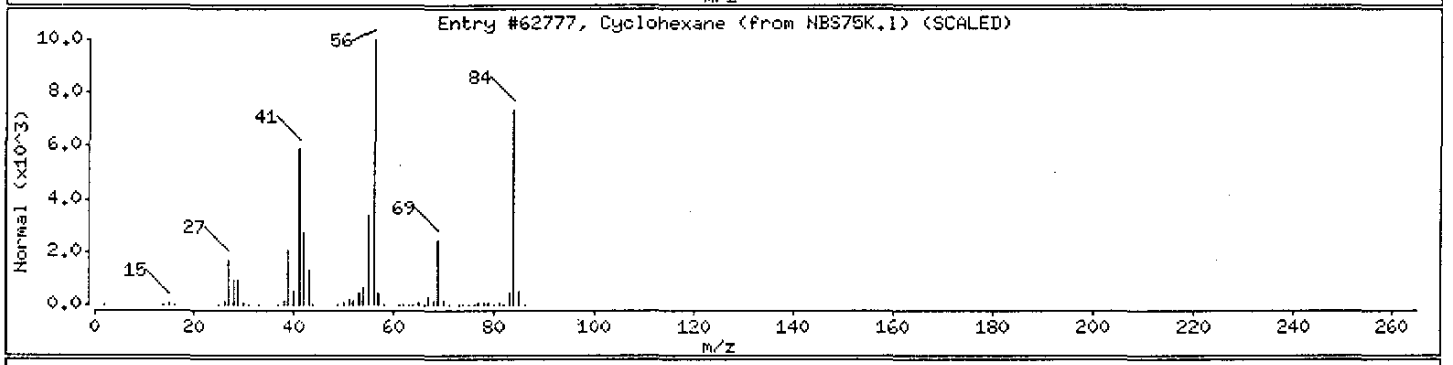
Column phase: DB624

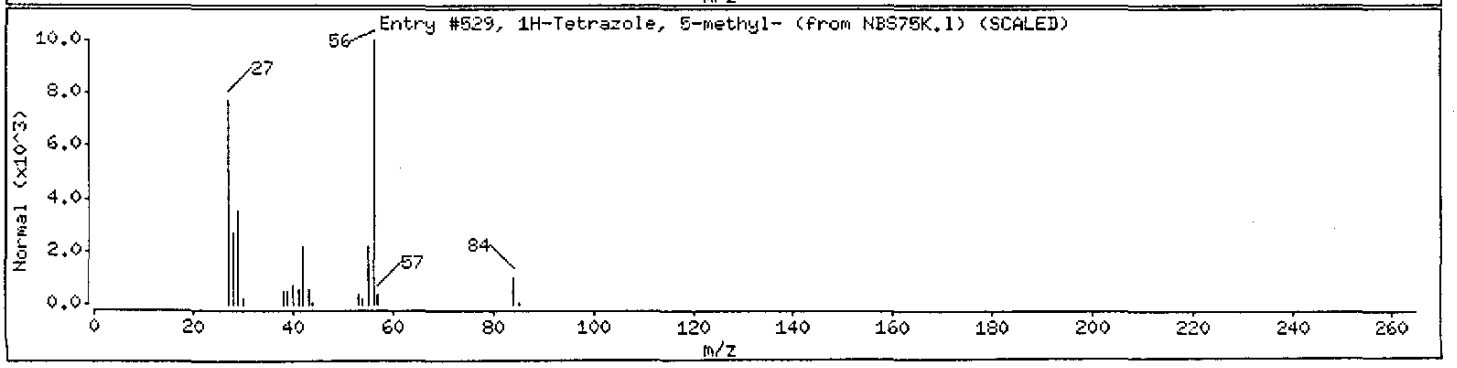
Column diameter: 0.53

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Cyclopentane, methyl-	96-37-7	NBS75K.l	594	91	C6H12	84
Cyclohexane	110-82-7	NBS75K.l	62777	83	C6H12	84
1H-Tetrazole, 5-methyl-	4076-36-2	NBS75K.l	529	80	C2H4N4	84









Data File: /chem/H.i/022304.b/h1121.d

Date : 23-FEB-2004 17:50

Client ID:

Instrument: H.i

Sample Info: F9KFC1AQ,,D4B130209-014

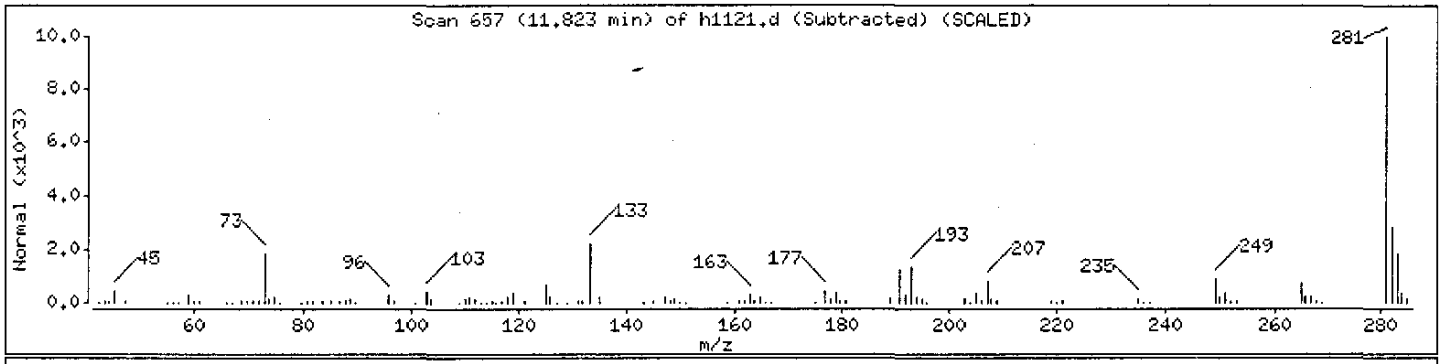
Purge Volume: 20.0

Operator: hoffmanm

Column phase: DB624

Column diameter: 0.53

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown			0	0		0



Data File: /chem/H.i/022304.b/h1121.d

Date : 23-FEB-2004 17:50

Client ID:

Instrument: H.i

Sample Info: F9KFC1AQ,,D4B130209-014

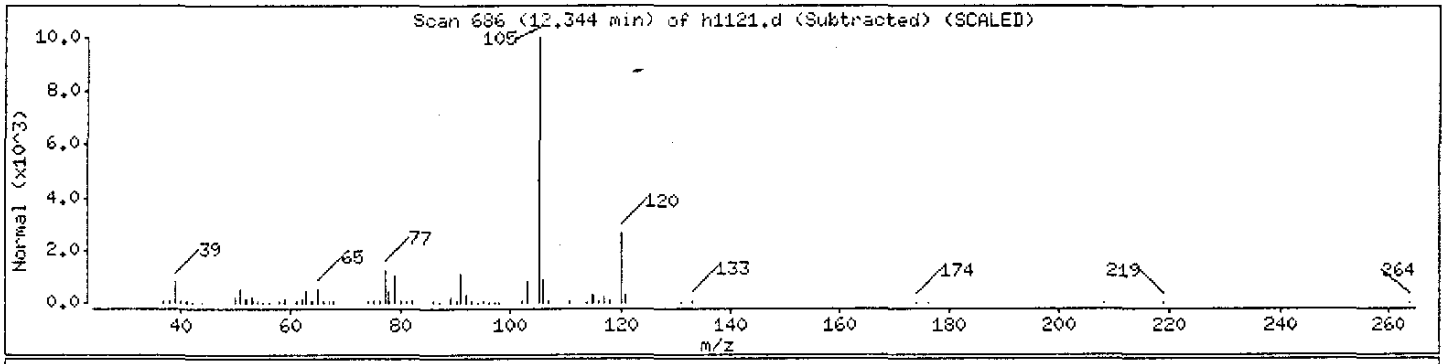
Purge Volume: 20.0

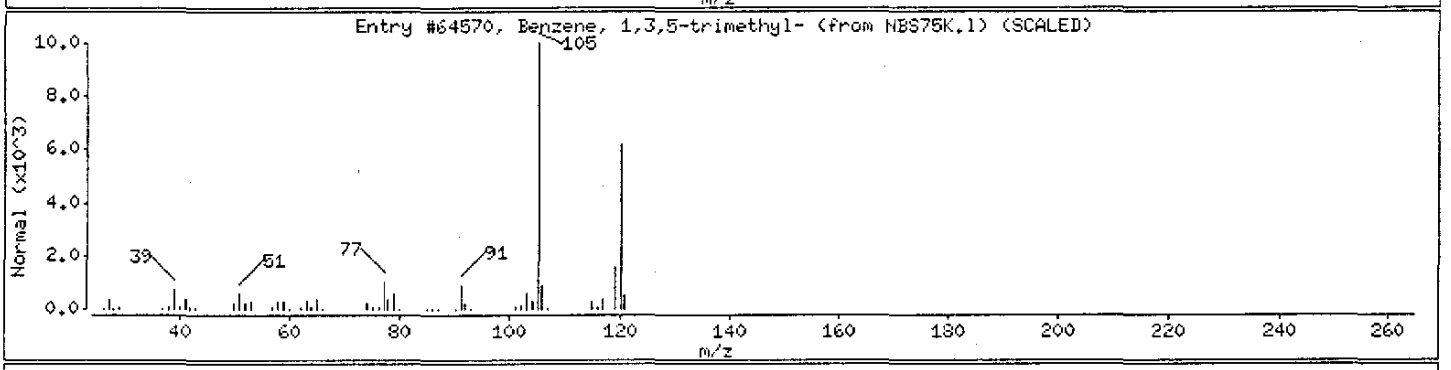
Operator: hoffmanm

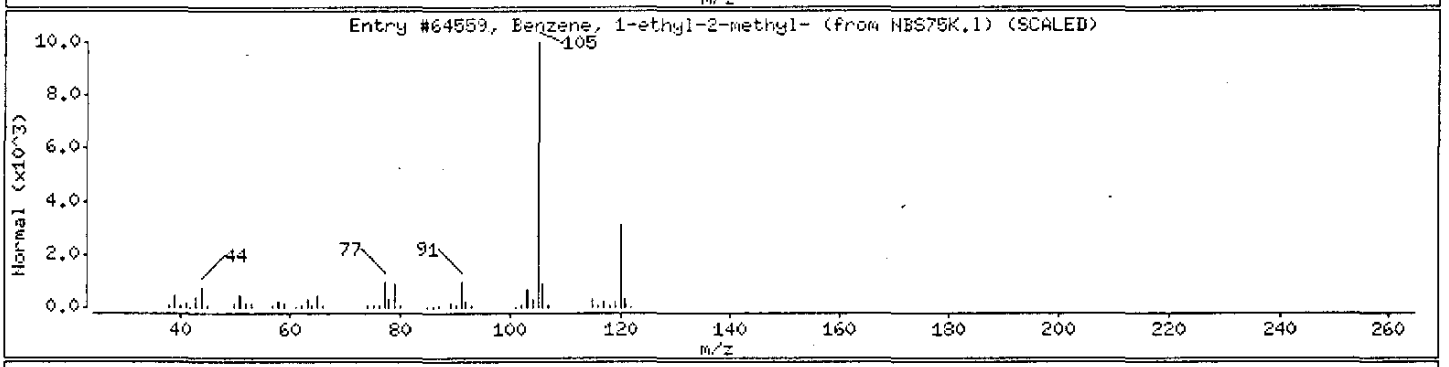
Column phase: DB624

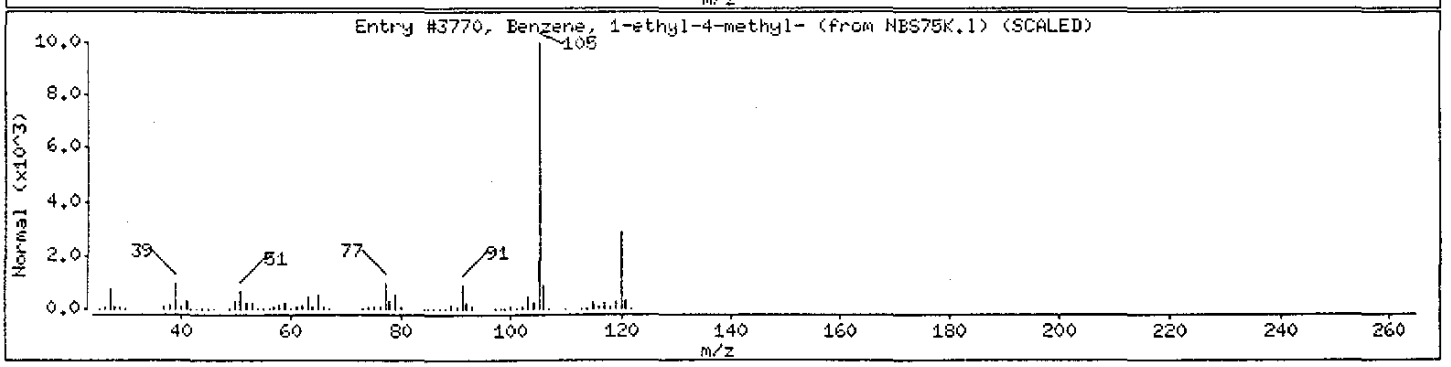
Column diameter: 0.53

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Benzene, 1,3,5-trimethyl-	108-67-8	NBS75K.l	64570	91	C9H12	120
Benzene, 1-ethyl-2-methyl-	611-14-3	NBS75K.l	64559	91	C9H12	120
Benzene, 1-ethyl-4-methyl-	622-96-8	NBS75K.l	3770	91	C9H12	120









Data File: /chem/H.i/022304.b/h1121.d

Date : 23-FEB-2004 17:50

Client ID:

Instrument: H.i

Sample Info: F9KFC1AQ,,D4B130209-014

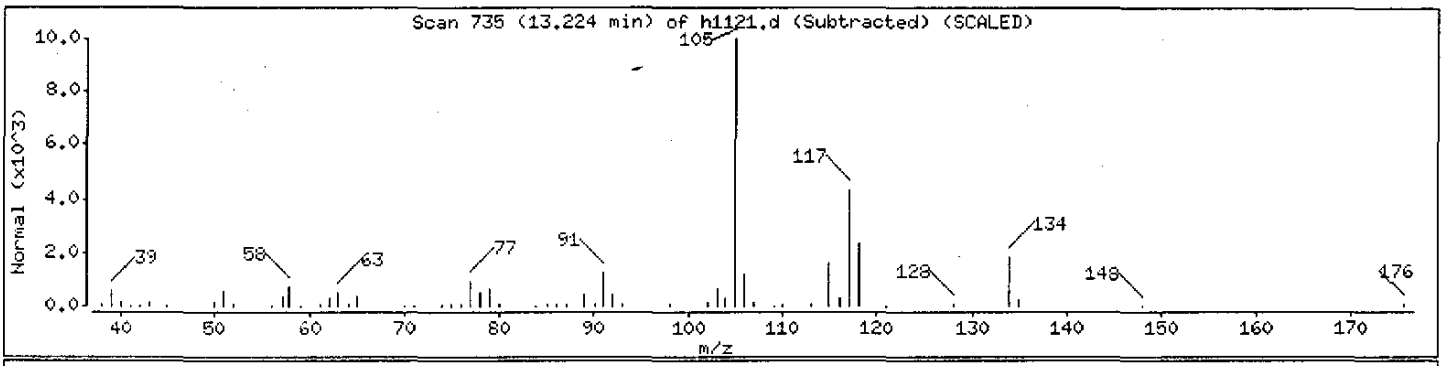
Purge Volume: 20.0

Operator: hoffmanm

Column phase: DB624

Column diameter: 0.53

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown			0	0		0



Data File: /chem/H.i/022304.b/h1121.d

Date : 23-FEB-2004 17:50

Client ID:

Instrument: H.i

Sample Info: F9KFC1AQ,,D4B130209-014

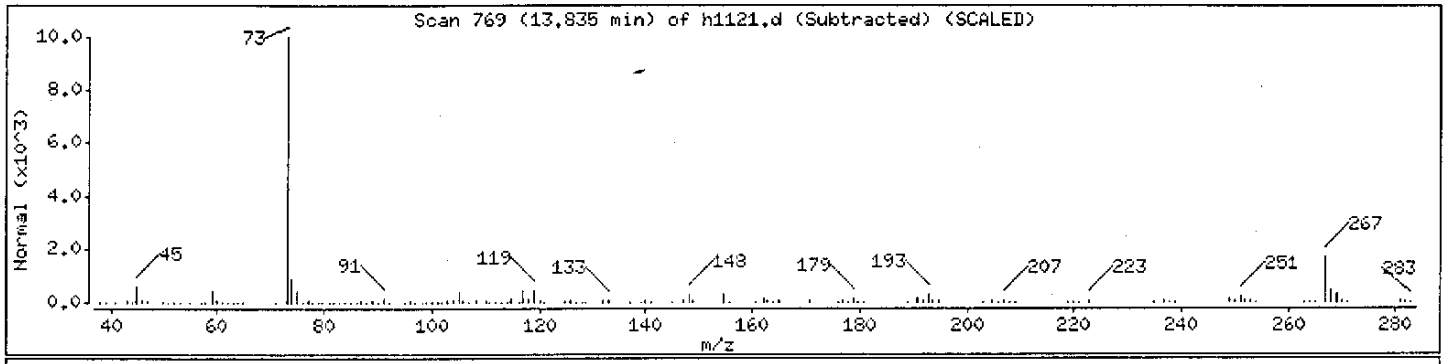
Purge Volume: 20.0

Operator: hoffmanm

Column phase: DB624

Column diameter: 0.53

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown			0	0		0



Data File: /chem/H.i/022304.b/h1121.d

Date : 23-FEB-2004 17:50

Client ID:

Instrument: H.i

Sample Info: F9KFC1AQ,,D4B130209-014

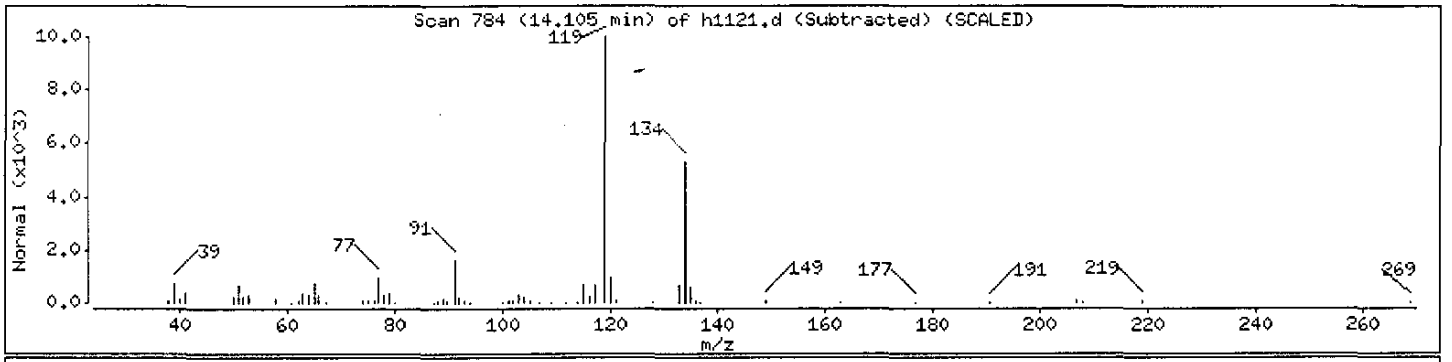
Purge Volume: 20.0

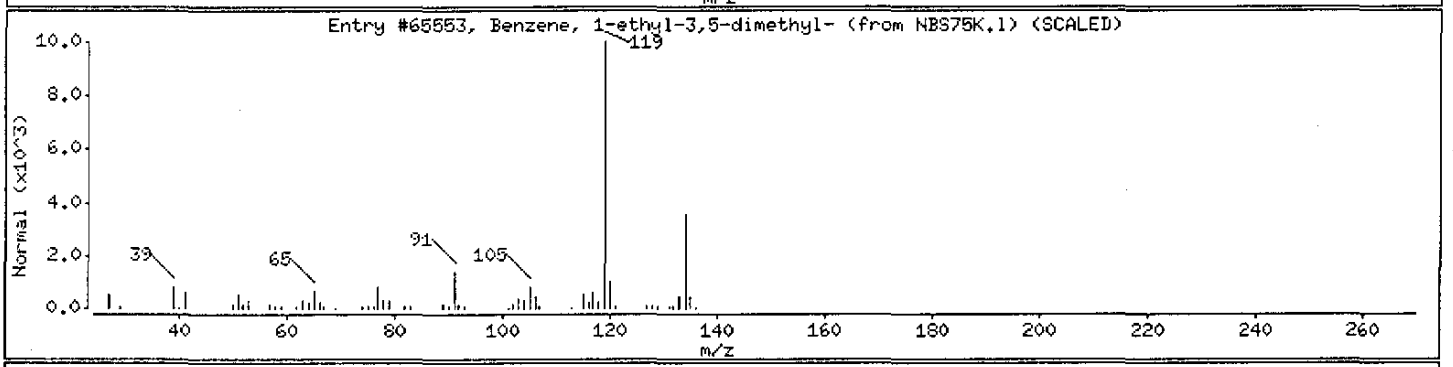
Operator: hoffmanm

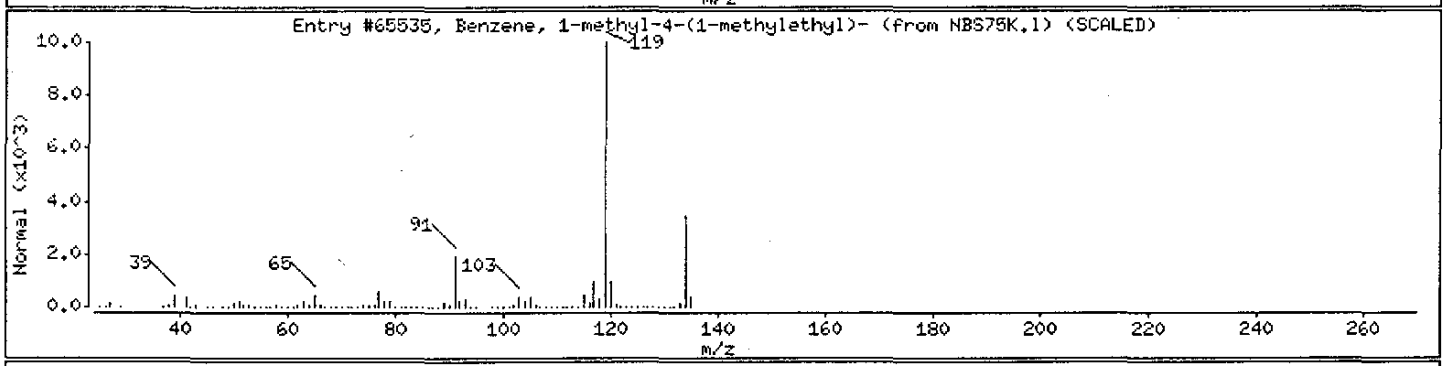
Column phase: DB624

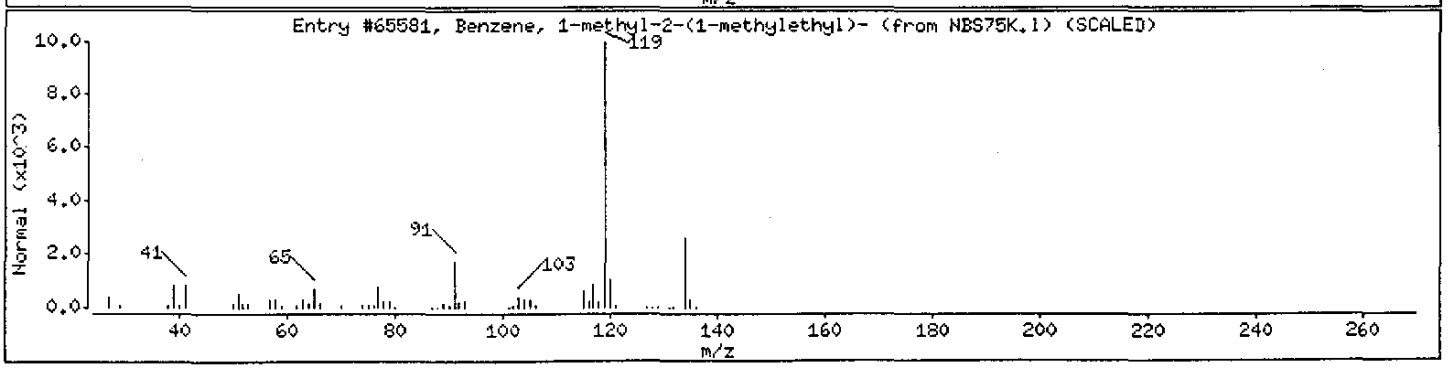
Column diameter: 0.53

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Benzene, 1-ethyl-3,5-dimethyl-	934-74-7	NBS75K.l	65553	94	C10H14	134
Benzene, 1-methyl-4-(1-methylethyl)-	99-87-6	NBS75K.l	65535	94	C10H14	134
Benzene, 1-methyl-2-(1-methylethyl)-	527-84-4	NBS75K.l	65581	94	C10H14	134









Data File: /chem/H.i/022304.b/h1121.d

Date : 23-FEB-2004 17:50

Client ID:

Instrument: H.i

Sample Info: F9KFC1AQ,,D4B130209-014

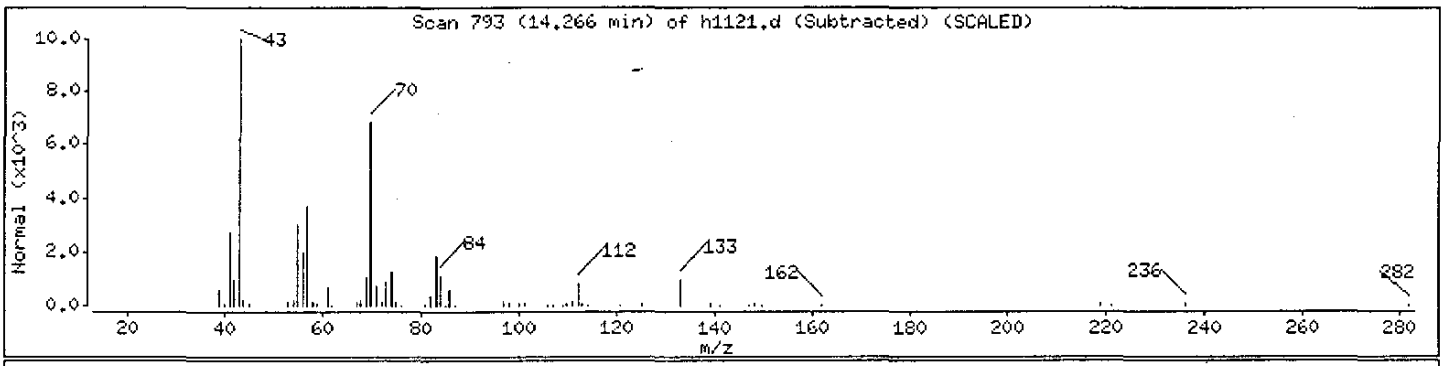
Purge Volume: 20.0

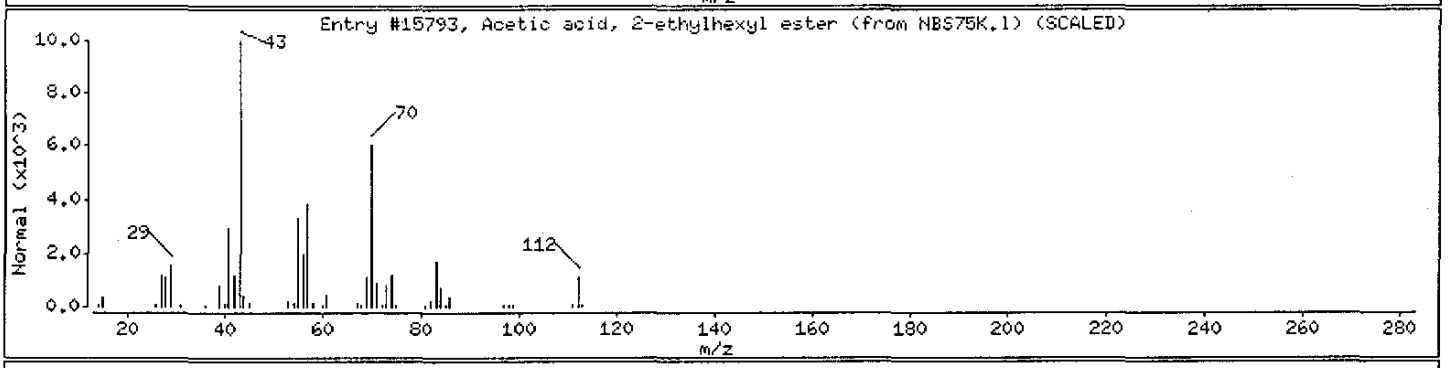
Operator: hoffmanm

Column phase: DB624

Column diameter: 0.53

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Acetic acid, 2-ethylhexyl ester	103-09-3	NBS75K.l	15793	87	C10H20O2	172





Data File: /chem/H.i/022304.b/h1121.d

Date : 23-FEB-2004 17:50

Client ID:

Instrument: H.i

Sample Info: F9KFC1AQ,,D4B130209-014

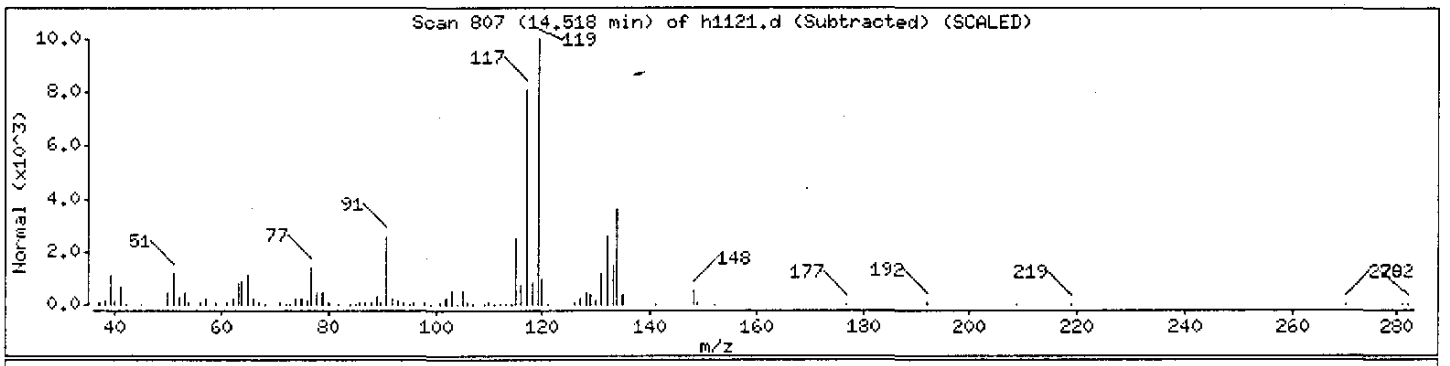
Purge Volume: 20.0

Operator: hoffmanm

Column phase: DB624

Column diameter: 0.53

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown			0	0		0



Data File: /chem/H.i/022304.b/h1121.d

Date : 23-FEB-2004 17:50

Client ID:

Instrument: H.i

Sample Info: F9KFC1AQ,,D4B130209-014

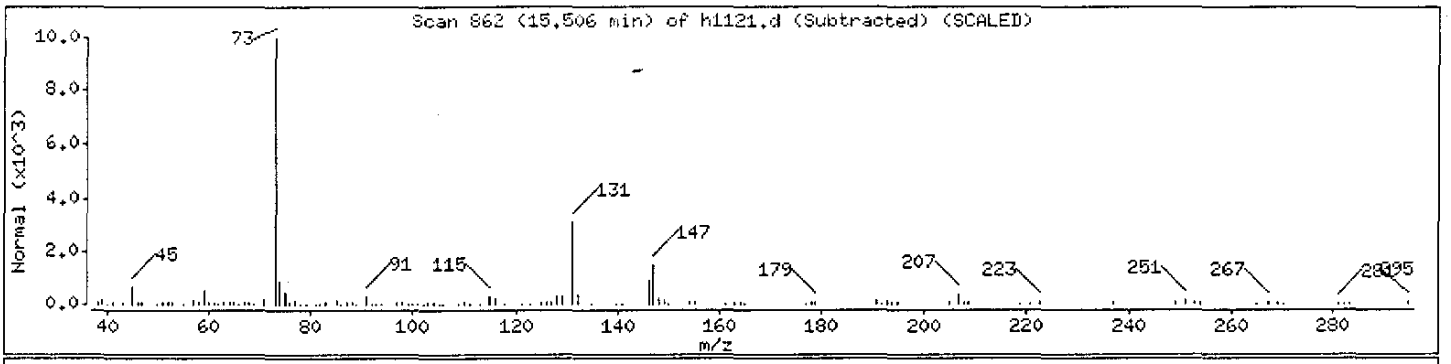
Purge Volume: 20.0

Operator: hoffmann

Column phase: DB624

Column diameter: 0.53

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown			0	0		0



Data File: /chem/H.i/022304.b/h1121.d

Date : 23-FEB-2004 17:50

Client ID:

Instrument: H.i

Sample Info: F9KFC1AQ,,D4B130209-014

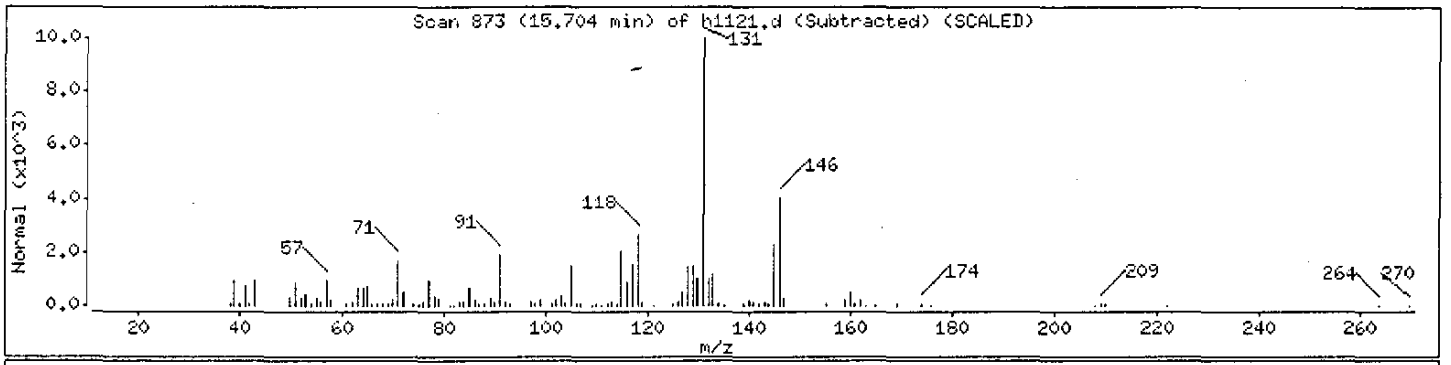
Purge Volume: 20.0

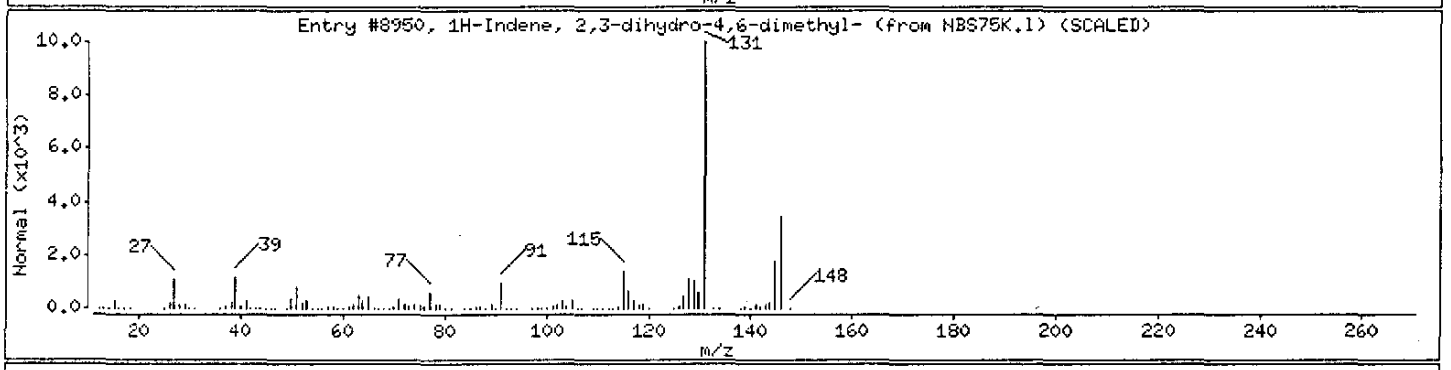
Operator: hoffmanm

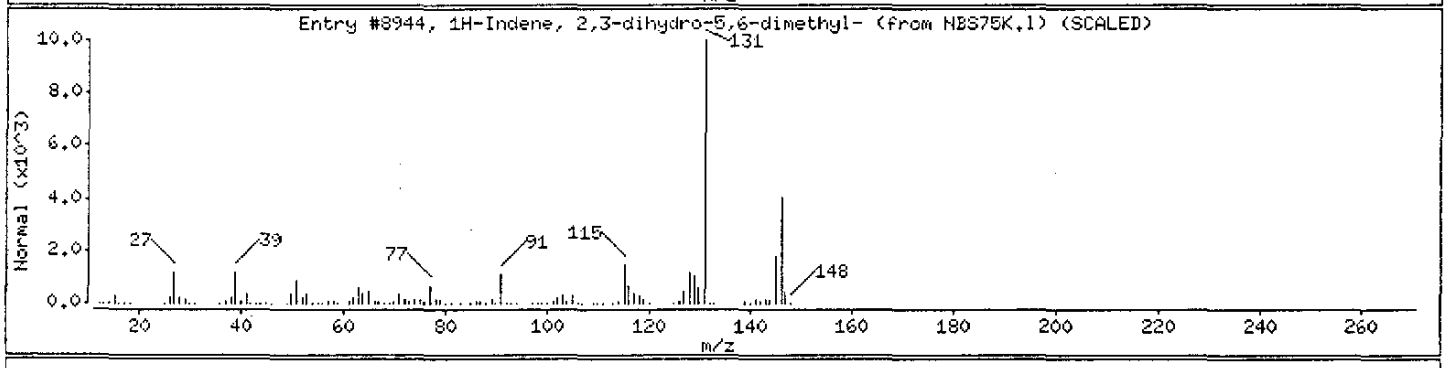
Column phase: DB624

Column diameter: 0.53

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
1H-Indene, 2,3-dihydro-4,6-dimethyl-	1685-82-1	NBS75K.l	8950	93	C11H14	146
1H-Indene, 2,3-dihydro-5,6-dimethyl-	1075-22-5	NBS75K.l	8944	81	C11H14	146







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Volatile GC/MS

Supporting Documentation

Sample Sequence, Chromatograms/Mass Spectra

SEVERN TRENT STL

Lot ID: D4B130209

Client: arcadis

Method: 8260

Associated Samples: 1-13

Batch #(s): 4054377

I certify that, to the best of my knowledge, the attached package represents a complete and accurate copy of the original data.

Signature/Date: 2/23/02

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GC /MS VOLATILE ORGANIC EXTRACTION LOG SHEETS

SEVERN TRENT

STL

RQC058

Severn Trent Laboratories, Inc.
EXTRACTION BENCH WORKSHEET

Run Date: 2/23/04
Time: 14:59:36

LEV 1	LEV 2		LEV 1	LEV 2	
_	_	Blank	_	_	Weights/Volumes
_	_	Check	_	_	Spike & Surrogate Worksheet
_	_	MS/MSD	_	_	Vial contains correct volume
			_	_	Labels, greenbars, worksheets
			_	_	computer batch: correct & all match
			_	_	Anomalies to Extraction Method

_ Expanded Deliverable
_ COC Completed
_ Bench Sheet Copied
_ Package Submitted to AnalyticalGroup
_ Bench Sheet Copied per COC

Extractionist: _____
_____

Concentrationist: _____
_____

****
* *
* QC BATCH: 4054377 *
* *
****

PREP DATE: 2/20/04 10:06
COMP DATE: 2/20/04 10:06

Reviewer/Date: _____ / 0/00/00

Volatile Organics, GC/MS (8260B)
PURGE AND TRAP - 25 mL purge (Waters)

EXTR EXPR	ANL DUE	LOT#,MSRUN#/ WORK ORDER	TEST FLGS	EXT	MTH	MATRIX	INIT/FIN WT/VOL	INIT	PH"S ADJT	ADJ2	SOLVENTS EXTRACTION	VOL	EXCHANGE	VOL	SPIKE STANDARD/ SURROGATE ID
0/00/00	2/23/04	D4B110184-001 **F9EM1-1-AF**	R	25	QK	WATER	**20mL** 20.00mL	NA	NA	NA		.0		.0	
COMMENTS:															
0/00/00	3/01/04	D4B130209-001 **F9KD4-1-AA**	D	25	QK	WATER	**0.003mL** 20.00mL	NA	NA	NA		.0		.0	
COMMENTS:															
0/00/00	3/01/04	D4B130209-002 **F9KEJ-1-AA**	D	25	QK	WATER	**0.02mL** 20.00mL	NA	NA	NA		.0		.0	
COMMENTS:															
0/00/00	3/01/04	D4B130209-003 **F9KEK-1-AA**	D	25	QK	WATER	**20mL** 20.00mL	NA	NA	NA		.0		.0	
COMMENTS:															
0/00/00	3/01/04	D4B130209-004 **F9KEL-1-AA**	D	25	QK	WATER	**20mL** 20.00mL	NA	NA	NA		.0		.0	
COMMENTS:															
0/00/00	3/01/04	D4B130209-005 **F9KEM-1-AA**	D	25	QK	WATER	**1** 20.00mL	NA	NA	NA		.0		.0	
COMMENTS:															
0/00/00	3/01/04	D4B130209-005 **F9KEM-1-ACS**	D	25	QK	WATER	**1** 20.00mL	NA	NA	NA		.0		.0	
COMMENTS:															

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RQC058

Severn Trent Laboratories, Inc.
EXTRACTION BENCH WORKSHEET

Run Date: 2/23/04
Time: 14:59:36

QC BATCH: 4054377

PREP DATE: 2/20/04 10:06
COMP DATE: 2/20/04 10:06

EXTR EXPR	ANL DUE	LOT#,MSRUN#/ WORK ORDER	TEST FLGS	EXT	MTH	MATRIX	INIT/FIN WT/VOL	PH"S INIT	PH"S ADJ1	ADJ2	SOLVENTS EXTRACTION	VOL	EXCHANGE	VOL	SPIKE STANDARD/ SURROGATE ID
0/00/00	3/01/04	D4B130209-005 **F9KEM-1-ADD**	D	25	QK	WATER	**1** 20.00mL	NA	NA	NA		.0		.0	
COMMENTS:															
0/00/00	3/01/04	D4B130209-006 **F9KEP-1-AA**	D	25	QK	WATER	**20mL** 20.00mL	NA	NA	NA		.0		.0	
COMMENTS:															
0/00/00	3/01/04	D4B130209-007 **F9KEQ-1-AA**	D	25	QK	WATER	**20mL** 20.00mL	NA	NA	NA		.0		.0	
COMMENTS:															
0/00/00	3/01/04	D4B130209-008 **F9KET-1-AA**	D	25	QK	WATER	**0.2mL** 20.00mL	NA	NA	NA		.0		.0	
COMMENTS:															
0/00/00	3/01/04	D4B130209-009 **F9KEV-1-AA**	D	25	QK	WATER	**20mL** 20.00mL	NA	NA	NA		.0		.0	
COMMENTS:															
0/00/00	3/01/04	D4B130209-010 **F9KEX-1-AA**	D	25	QK	WATER	**0.4mL** 20.00mL	NA	NA	NA		.0		.0	
COMMENTS:															
0/00/00	3/01/04	D4B130209-011 **F9KE1-1-AA**	D	25	QK	WATER	**20mL** 20.00mL	NA	NA	NA		.0		.0	
COMMENTS:															
0/00/00	3/01/04	D4B130209-012 **F9KE6-1-AA**	D	25	QK	WATER	**1** 20.00mL	NA	NA	NA		.0		.0	
COMMENTS:															
0/00/00	3/01/04	D4B130209-013 **F9KE7-1-AA**	D	25	QK	WATER	**20mL** 20.00mL	NA	NA	NA		.0		.0	
COMMENTS:															
0/00/00	2/27/04	D4B160215-002 **F9NFW-1-AK**	R	25	RI	WATER	**20mL** 20.00mL	NA	NA	NA		.0		.0	
COMMENTS:															

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RQC058

Severn Trent Laboratories, Inc.
EXTRACTION BENCH WORKSHEET

Run Date: 2/23/04
Time: 14:59:36

****
* QC BATCH: 4054377 *
****

PREP DATE: 2/20/04 10:06
COMP DATE: 2/20/04 10:06

EXTR EXPR	ANL DUE	LOT#,MSRUN#/ WORK ORDER	TEST FLGS	EXT	MTH	MATRIX	INIT/FIN WT/VOL	INIT	PH"S ADJ1	ADJ2	SOLVENTS EXTRACTION	VOL	EXCHANGE	VOL	SPIKE STANDARD/ SURROGATE ID
0/00/00	3/02/04	D4B170229-011 F9PD2-1-AG		25	RI	WATER	20mL 20.00mL	NA	NA	NA		.0		.0	
COMMENTS:															
0/00/00	3/02/04	D4B170229-012 F9PD9-1-AA		25	RI	WATER	20mL 20.00mL	NA	NA	NA		.0		.0	
COMMENTS:															
0/00/00	3/02/04	D4B170229-013 F9PEE-1-AG		25	RI	WATER	20mL 20.00mL	NA	NA	NA		.0		.0	
COMMENTS:															
0/00/00	3/02/04	D4B170229-014 F9PEG-1-AA		25	RI	WATER	20mL 20.00mL	NA	NA	NA		.0		.0	
COMMENTS:															
0/00/00	0/00/00	D4B230000-377 F929E-1-AAB		25	QK	WATER	20mL 20.00mL	NA	NA	NA		.0		.0	
COMMENTS:															
0/00/00	0/00/00	D4B230000-377 F929E-1-ACC		25	QK	WATER	20mL 20.00mL	NA	NA	NA		.0		.0	
COMMENTS:															
0/00/00	0/00/00	D4B230000-377 F929E-1-ADL	R	25	QK	WATER	20mL 20.00mL	NA	NA	NA		.0		.0	
COMMENTS:															

R = RUSH C = CLP
E = EPA 600 D = EXP.DEL)
M = CLIENT REQ MS/MSD

NUMBER OF WORK ORDERS IN BATCH: 24

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GC/MS VOLATILE INSTRUMENT LOG SHEETS

SEVERN TRENT STL

GC/MS Volatile Analysis

STL, Denver

Instrument H
5972 MSD

Column	Phase	Inj. Temp	Init. Time	Ramp Rate	Final Temp	Flow cc/min	Press. Psi	Type	Vac. Range	Source Temp	Mass Range
75M	DB-624	200C	2 min.	5C/min	65C	18	20	MS	10^-6	~175C	35-300/2^2
			0 min.	12C/min	155C						
			0 min.	25C/min	210C						

DEN-MS-0010 (8260B/624/524.2)
(Circle as appropriate)

Comments

Target Batch (Directory): H0022004.b

QuantIMS Batch: H054377

Lot #	Sample	W.O.#	Purge vol (ml)	Sample amt (ml/g)	Date 2004	Initials	File Number	IS OK	SS OK	DIL OK	24 hr 12 hr	pH	MSVOA # Comments	ALS
BFB			Int Dir	Inj	2-20	DA	H1063.d						#237-03 (10:06)	
MAIN010			20	5ml			64	—					#022/040-04	
SUPP010				↓			65	—	—				#246-03/011-04	
LCS		F929E1AC		10ml			66	—	—	—	—		#304-03	
LCSD		AD		↓			67	—	—	—	—		IS-#030-04	
VBIK		AA		20			68	—	—	—	—		SS-#002-04	
D4B160215	2	F9NFW1AK					69	—	—	—	—	1		
D4B170229	11	F9PD21AG					70	—	—	—	—	1		
	12	91AA					71	—	—	—	—	1		
	13	EE1AG					72	—	—	—	—	1		
	14	G1AA					73	—	—	—	—	1		
D4B110184	1	F9EM11AF					74	—	—	—	—	<2		
D4B130209	1	F9KD41AA		0.003			75	—	—	—	—	<2	T.C.	
	2	E		0.02			76	—	—	—	—	11		
	3	K		20			77	—	—	—	—	<2		
	4	L		0.1			78	—	—	X	—	<2	RE 20ml	
	5	M		1.0			79	—	—	—	—	<2	T.C.	
	5ms	M1AC					80	—	—	—	—	<2	#304-03	
	5D	M1AD					81	—	—	—	—	<2		
	6	P1AA		20			82	—	—	—	—	<2		

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GC/MS Volatile Analysis

STL, Denver

Instrument ____
5972 MSD

Column	Phase	Inj. Temp	Init. Time	Ramp Rate	Final Temp	Flow cc/min	Press. Psi	Type	Vac. Range	Source Temp	Mass Range
75M	DB-624	200C	2 min.	5C/min	65C	18	20	MS	10^-6	~175C	35-300/2^2
			0 min.	12C/min	155C						
			0 min.	25C/min	210C						

DEN-MS-0010 (8260B/624/524.2)
(Circle as appropriate)

Comments

Target Batch (Directory): H022004.b

QuantIMS Batch:

Lot #	Sample	W.O.#	Purge vol (ml)	Sample amt (ml/g)	Date ~~2004~~	Initials	File Number	IS OK	SS OK	DIL OK	24 hr (72 hr)	pH	Comments	ALS
D4B130209	7	F9KEQIAA	20	20	2-20	DA	H1083.d	—	—	—	—	<2		
	8	T		0.2			84	—	—	—	—	(7)	T.C.	
	9	U		20			85	—	—	—	—	<2		
	10	X		0.4			86	—	—	—	—	<2	T.C.	
	11	1		20			87	—	—	—	—	<2		
	12	6		1.0			88	—	—	—	—	<2		
	13	7		20			89	—	—	—	—	<2		
	14	FC		10			90	—	—	X	—	<2	(RE) 20ml	
	4	EL		20			91	—	—	—	—	<2		

DA 2-23

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STL Denver

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GC/MS VOLATILE STANDARD DATA

SEVERN TRENT STL

GC/MS Initial Calibration Review Checklist

STL Denver

Instrument ID and Date: Inst. H 01/07/04 - Main I-CAL

Check Method Used: Analysis ☐ 625 ☐ 8270 ☐ Other SV _____

☐ 524.2 ☐ 624 ☒ 8260B ☐ Other VOA _

VOA Preparation ☐ 5mL ☒ 20mL ☐ 5035 Low ☐ 5035 High ☐ 5030 Low ☐ 5030 High

Review Items	Level 1 Yes	Level 1 No	Level 1 N/A	Level 2	Comments
Initial Calibration					
1. BFB/DFTPP meets criteria?	✓			✓	
2. ICAL date and instrument ID verified?	✓			✓	
3. Sufficient number of calibration points used?	✓			✓	
4. Reasons for removal of points documented?	✓			✓	*
5. %RSD or correlation coefficient within method limits?	✓			✓	
6. If RRF used for ICAL, were all compounds within 15% RSD?			✓	N/A	List all exceptions below (cpd & RSD)
7. Response factors meet criteria?	✓			✓	
8. Isomeric pairs checked for correct peak assignment?	✓			✓	
9. Data checked for detector saturation?	✓			✓	
10. Standards traceability properly documented?	✓			✓	
11. Manual integrations documented and checked?	✓			✓	
12. 2nd source ICV recovery 75-125% for DoD projects, 65-135% (±55% of expected for poor performers) for non-DoD?	✓			✓	1,1 Dichloroethene @ 25.8% D Hexachlorobutadiene @ 27.1% D.

* Some low points (below R.L.) removed, and the high point for ethanol removed.

1st Level Reviewer: MM Date: 1/9/04

2nd Level Reviewer: DA Date: 1-9-04

STL, Denver

GC/MS Volatile Analysis

Instrument H
5972 MSD

Column	Phase	Inj. Temp	Init. Time	Ramp Rate	Final Temp	Flow cc/min	Press. Psi	Type	Vac. Range	Source Temp	Mass Range
75M	DB-624	200C	2 min.	5C/min	65C	18	20	MS	10^-6	~175C	35-300/2^2
			0 min.	12C/min	155C						
			0 min.	25C/min	210C						

Comments

MS VOA
Main # 254/277-03
Supp # 192/246-03
ISSS # 281/282-03

DEN-MS-0010 (8260B/624/524.2)
(Circle as appropriate)

Target Batch (Directory): 010704.b

QuantIMS Batch:

Lot #	Sample	W.O.#	Purge vol (ml)	Sample amt (ml/g)	Date	Initials	File Number	IS OK	SS OK	DIL OK	24 hr 12 hr	pH	Comments	ALS
BFB	—	—	1µl Air	Inj.	1/7/04	MH	h0001.d	—	—	—	—	NA	OK	—
Primer	—	—	20mL	20mL			2	✓	NA	✓	✓		OK	1
Main 001	—	—					3	✓		✓	✓			2
002	—	—					4	✓		✓	✓			3
005	—	—					5	✓		✓	✓			4
010	—	—					6	✓		✓	✓			5
030	—	—					7	✓		✓	✓			6
060	—	—					8	✓		✓	✓			7
Supp 001	—	—					9	✓	✓	✓	✓			8
002	—	—					10	✓	✓	✓	✓			9
005	—	—					11	✓	✓	✓	✓			10
010	—	—					12	✓	✓	✓	✓			11
030	—	—					13	✓	✓	✓	✓			12
060	—	—					14	✓	✓	✓	✓			13
ICV: VSTD010	—	—					15	✓	✓	✓	✓		All <35%D.	14
cleanup	—	—		↓			16	—	—	—	—		—	15
screens	—	—		—			17	✓	✓	✓	✓			16
	—	—		—			18	✓	✓	✓	✓			17
	—	—		—			19	✓	✓	✓	✓			18
Surr. Chk	—	—		20mL			20-21-22	✓	✓	✓	✓		19	21

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STL Denver

Report Date: 09-Jan-2004 13:28

Calibration History

Method : /chem/H.i/010704.b/H-20ml-h2o.m
Start Cal Date: 07-JAN-2004 11:17
End Cal Date : 07-JAN-2004 15:24

Initial Calibration

Injection Date	Sublist	Calibration File
Cal Level: 1 , Cal Amount: 1.00000		
07-JAN-2004 13:31	2-supp	/chem/H.i/010704.b/h0009.d
07-JAN-2004 11:17	1-main	/chem/H.i/010704.b/h0003.d
Cal Level: 2 , Cal Amount: 2.00000		
07-JAN-2004 13:54	2-supp	/chem/H.i/010704.b/h0010.d
07-JAN-2004 11:40	1-main	/chem/H.i/010704.b/h0004.d
Cal Level: 3 , Cal Amount: 5.00000		
07-JAN-2004 14:16	2-supp	/chem/H.i/010704.b/h0011.d
07-JAN-2004 12:02	1-main	/chem/H.i/010704.b/h0005.d
Cal Level: 4 , Cal Amount: 10.0000		
07-JAN-2004 14:39	2-supp	/chem/H.i/010704.b/h0012.d
07-JAN-2004 12:24	1-main	/chem/H.i/010704.b/h0006.d
Cal Level: 5 , Cal Amount: 30.0000		
07-JAN-2004 15:01	2-supp	/chem/H.i/010704.b/h0013.d
07-JAN-2004 12:47	1-main	/chem/H.i/010704.b/h0007.d
Cal Level: 6 , Cal Amount: 60.0000		
07-JAN-2004 15:24	2-supp	/chem/H.i/010704.b/h0014.d
07-JAN-2004 13:09	1-main	/chem/H.i/010704.b/h0008.d

Continuing Calibration

07-JAN-2004 14:39	2-supp	/chem/H.i/010704.b/h0012.d
07-JAN-2004 12:24	1-main	/chem/H.i/010704.b/h0006.d

STL Denver

INITIAL CALIBRATION DATA

Start Cal Date : 07-JAN-2004 11:17
End Cal Date : 07-JAN-2004 15:24
Quant Method : ISTD
Target Version : 3.40
Integrator : HP RTE
Method file : /chem/H.i/010704.b/H-20ml-h2o.m
Cal Date : 08-Jan-2004 10:26 hoffmanm

Calibration File Names:
Level 1: /chem/H.i/010704.b/h0009.d
Level 2: /chem/H.i/010704.b/h0010.d
Level 3: /chem/H.i/010704.b/h0011.d
Level 4: /chem/H.i/010704.b/h0012.d
Level 5: /chem/H.i/010704.b/h0013.d
Level 6: /chem/H.i/010704.b/h0014.d

Compound	1 Level 1	2 Level 2	5 Level 3	10 Level 4	30 Level 5	60 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
M 1 1,2-Dichloroethene (total)	0.38456	0.35419	0.39090	0.38085	0.38196	0.36503	AVRG		0.37625		3.66371
M 2 Xylene (total)	7.90055	7.80462	8.11999	8.12336	8.31411	7.61230	AVRG		7.97916		3.19053
3 dichlorodifluoromethane	0.51690	0.51368	0.49255	0.51929	0.51079	0.46155	AVRG		0.50246		4.41322
4 Chloromethane	0.26543	0.26689	0.27289	0.27767	0.27107	0.24560	AVRG		0.26659		4.19279
5 Vinyl Chloride	0.26942	0.27770	0.27940	0.29455	0.28896	0.25891	AVRG		0.27816		4.64333
7 Bromomethane	0.26279	0.28271	0.29147	0.29263	0.29367	0.27319	AVRG		0.28274		4.42539
8 Chloroethane	0.19141	0.19643	0.19450	0.20042	0.20285	0.18100	AVRG		0.19444		3.98635
10 Trichlorofluoromethane	0.63609	0.66119	0.64466	0.71674	0.72931	0.65362	AVRG		0.67360		5.84950
11 Ethanol	7716	8690	30982	58993	182612	+++++	LINR	0.77127	0.00068		0.99898

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STL Denver

INITIAL CALIBRATION DATA

Start Cal Date : 07-JAN-2004 11:17
End Cal Date : 07-JAN-2004 15:24
Quant Method : ISTD
Target Version : 3.40
Integrator : HP RTE
Method file : /chem/H.i/010704.b/H-20ml-h2o.m
Cal Date : 08-Jan-2004 10:26 hoffmanm

Compound	1 Level 1	2 Level 2	5 Level 3	10 Level 4	30 Level 5	60 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
13 Acrolein	+++++	0.00802	0.00886	0.00895	0.00936	0.00846	AVRG		0.00873		5.83187
14 1,1-Dichloroethene	0.35069	0.33828	0.36285	0.36561	0.36300	0.33646	AVRG		0.35281		3.69844
15 Acetone	+++++	53826	106226	185077	510136	907328	WLINR	-0.48545	0.02157		0.99384
17 Iodomethane	0.64174	0.64464	0.69651	0.67344	0.70489	0.66281	AVRG		0.67067		3.90137
19 Acetonitrile	+++++	0.00464	0.00479	0.00520	0.00537	0.00415	AVRG		0.00483		9.93975
21 Methylene Chloride	+++++	0.33311	0.32344	0.29576	0.31280	0.29091	AVRG		0.31121		5.75307
22 tert-Butyl alcohol	0.00850	0.00746	0.00870	0.00862	0.00913	0.00812	AVRG		0.00842		6.79681
23 Acrylonitrile	0.02007	0.01797	0.02078	0.02129	0.02348	0.02155	AVRG		0.02086		8.72232
24 trans-1,2-Dichloroethene	0.40597	0.34726	0.39138	0.38451	0.37450	0.36253	AVRG		0.37769		5.55397
27 1,1-Dichloroethane	0.61585	0.61935	0.64655	0.64420	0.66398	0.62950	AVRG		0.63657		2.88374
28 Chloroprene	0.49851	0.50104	0.53490	0.53905	0.54719	0.51753	AVRG		0.52303		3.91491
30 Isopropyl ether	0.22915	0.23294	0.26058	0.26011	0.27424	0.26182	AVRG		0.25314		7.08492
32 cis-1,2-Dichloroethene	0.36315	0.36111	0.39042	0.37720	0.38941	0.36754	AVRG		0.37481		3.45617
31 2,2-Dichloropropane	0.48785	0.45182	0.46557	0.45679	0.45178	0.40916	AVRG		0.45383		5.66756
33 2-Butanone	0.05681	0.04213	0.04434	0.04358	0.04618	0.04421	AVRG		0.04621		11.59014
34 Propionitrile	0.00711	0.00643	0.00782	0.00804	0.00890	0.00842	AVRG		0.00779		11.53135
36 Methacrylonitrile	0.05295	0.05532	0.06225	0.06343	0.06842	0.06552	AVRG		0.06132		9.76824

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STL Denver

INITIAL CALIBRATION DATA

Start Cal Date : 07-JAN-2004 11:17
End Cal Date : 07-JAN-2004 15:24
Quant Method : ISTD
Target Version : 3.40
Integrator : HP RTE
Method file : /chem/H.i/010704.b/H-20ml-h2o.m
Cal Date : 08-Jan-2004 10:26 hoffmanm

Compound	1 Level 1	2 Level 2	5 Level 3	10 Level 4	30 Level 5	60 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
37 Bromochloromethane	0.13023	0.13784	0.15663	0.15633	0.16281	0.15308	AVRG		0.14949		8.43573
38 Chloroform	0.65498	0.66294	0.72546	0.71388	0.74008	0.69981	AVRG		0.69952		4.88850
41 1,1,1-Trichloroethane	0.68301	0.69469	0.71942	0.70543	0.71499	0.66836	AVRG		0.69765		2.80582
42 1,1-Dichloropropene	0.57172	0.55194	0.57523	0.56924	0.57242	0.53613	AVRG		0.56278		2.74985
43 Carbon Tetrachloride	0.57425	0.58228	0.62512	0.60579	0.61710	0.58199	AVRG		0.59776		3.53175
45 Isobutanol	+++++	0.00193	0.00253	0.00248	0.00281	0.00266	AVRG		0.00248		13.39254
46 Benzene	1.07064	1.03396	1.08870	1.08623	1.10125	1.04039	AVRG		1.07020		2.56415
47 1,2-Dichloroethane	0.24267	0.25107	0.28447	0.28118	0.29267	0.27950	AVRG		0.27193		7.39399
49 n-Butanol	+++++	10396	36467	72870	264914	518322	WLINR	1.25704	0.00235		0.99532
50 Trichloroethene	0.39382	0.39871	0.41929	0.41682	0.41749	0.38894	AVRG		0.40585		3.33972
52 1,2-Dichloropropane	0.32078	0.32830	0.35762	0.35086	0.36209	0.34157	AVRG		0.34354		4.78374
53 Dibromomethane	0.19721	0.18272	0.20985	0.20876	0.21627	0.20340	AVRG		0.20304		5.83195
55 1,4-Dioxane	+++++	0.00079	0.00116	0.00098	0.00110	0.00094	AVRG		0.00099		14.76683
56 Bromodichloromethane	0.53695	0.54094	0.58360	0.57331	0.60185	0.57148	AVRG		0.56802		4.40164
59 cis-1,3-Dichloropropene	2.32914	2.44289	2.61012	2.57720	2.76458	2.53158	AVRG		2.54259		5.85109
60 4-Methyl-2-pentanone	0.55048	0.56915	0.65749	0.67381	0.74056	0.68622	AVRG		0.64628		11.26344
62 Toluene	6.76507	6.39625	6.65328	6.58509	6.86835	6.29512	AVRG		6.59386		3.29872

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STL Denver

INITIAL CALIBRATION DATA

Start Cal Date : 07-JAN-2004 11:17
End Cal Date : 07-JAN-2004 15:24
Quant Method : ISTD
Target Version : 3.40
Integrator : HP RTE
Method file : /chem/H.i/010704.b/H-20ml-h2o.m
Cal Date : 08-Jan-2004 10:26 hoffmanm

Compound	1 Level 1	2 Level 2	5 Level 3	10 Level 4	30 Level 5	60 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
63 trans-1,3-Dichloropropene	1.68760	1.85247	1.91134	1.90119	2.04130	1.87430	AVRG		1.87803		6.08192
65 1,1,2-Trichloroethane	0.93004	1.05399	1.10497	1.08554	1.16323	1.07344	AVRG		1.06854		7.24925
67 1,3-Dichloropropane	1.66306	1.69443	1.85264	1.85459	1.95419	1.78740	AVRG		1.80105		6.06060
66 Tetrachloroethene	2.14384	2.08510	2.14822	2.15107	2.16546	1.95611	AVRG		2.10830		3.77396
68 2-Hexanone	0.35468	0.36746	0.41464	0.42533	0.47016	0.43318	AVRG		0.41091		10.48322
69 Dibromochloromethane	1.68634	1.68235	1.90906	1.93671	2.08318	1.91661	AVRG		1.86904		8.37579
70 1,2-Dibromoethane	1.25167	1.23465	1.38464	1.39470	1.47542	1.34902	AVRG		1.34835		6.78809
71 1-Chlorohexane	3.24595	3.05113	3.13945	3.09998	3.11192	2.84415	AVRG		3.08210		4.32694
73 Chlorobenzene	3.88856	3.86746	4.09160	4.02375	4.17839	3.84283	AVRG		3.98210		3.43490
74 1,1,1,2-Tetrachloroethane	1.80612	1.91174	1.93026	1.93925	2.03989	1.87878	AVRG		1.91767		4.00893
75 Ethylbenzene	2.03662	1.99641	2.09701	2.06394	2.12124	1.93947	AVRG		2.04245		3.27745
76 m and p-Xylene	2.70458	2.71019	2.80167	2.82529	2.87413	2.63060	AVRG		2.75774		3.29538
77 o-Xylene	2.49139	2.38424	2.51665	2.47277	2.56585	2.35111	AVRG		2.46367		3.30135
78 Styrene	3.74901	3.75000	4.05423	4.04768	4.17230	3.84367	AVRG		3.93615		4.54994
79 Bromoform	0.91538	0.95625	1.08080	1.10078	1.19413	1.08315	AVRG		1.05508		9.68014
80 isopropyl benzene	8.18263	8.05947	8.35044	8.31021	8.32537	7.49360	AVRG		8.12029		4.01477
81 Cyclohexanone	0.02303	0.02141	0.02472	0.02476	0.02747	0.02270	AVRG		0.02402		8.83342

STL Denver

INITIAL CALIBRATION DATA

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End Cal Date : 07-JAN-2004 15:24
Quant Method : ISTD
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Integrator : HP RTE
Method file : /chem/H.i/010704.b/H-20ml-h2o.m
Cal Date : 08-Jan-2004 10:26 hoffmanm

Compound	1 Level 1	2 Level 2	5 Level 3	10 Level 4	30 Level 5	60 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
83 1,1,2,2-Tetrachloroethane	1.20961	1.24183	1.37403	1.38081	1.48398	1.34947	AVRG		1.33996		7.48379
84 Bromobenzene	1.06479	1.05559	1.12627	1.11475	1.15925	1.08515	AVRG		1.10097		3.59785
85 1,2,3-Trichloropropane	0.20020	0.19748	0.18454	0.18440	0.19121	0.17735	AVRG		0.18920		4.60009
87 n-Propylbenzene	1.12762	1.11381	1.09120	1.07255	1.08480	1.00582	AVRG		1.08263		3.93553
88 2-Chlorotoluene	0.91603	0.90568	0.89013	0.90576	0.93895	0.87792	AVRG		0.90575		2.32964
89 1,3,5-Trimethylbenzene	3.67578	3.60238	3.73258	3.69071	3.73278	3.43100	AVRG		3.64420		3.15323
90 4-Chlorotoluene	1.01839	1.00535	1.03131	0.99581	0.99820	0.93668	AVRG		0.99762		3.27682
91 tert-Butylbenzene	3.78055	3.68053	3.79510	3.74125	3.78843	3.43206	AVRG		3.70299		3.76466
92 1,2,4-Trimethylbenzene	3.47575	3.33802	3.46668	3.46528	3.47542	3.18211	AVRG		3.40054		3.51528
93 sec-Butylbenzene	1.00520	0.97467	1.00073	0.99237	0.97860	0.87738	AVRG		0.97149		4.90294
94 m-Dichlorobenzene	1.79533	1.76535	1.89089	1.79270	1.89552	1.75021	AVRG		1.81500		3.46634
95 4-Isopropyltoluene	4.13963	4.12112	4.29732	4.23437	4.18661	3.74983	AVRG		4.12148		4.68420
97 p-dichlorobenzene	2.13872	2.15829	2.22260	2.24556	2.23341	2.06433	AVRG		2.17715		3.21341
98 n-Butylbenzene	4.82362	4.63276	4.77494	4.70157	4.56086	4.01397	AVRG		4.58462		6.43768
99 o-Dichlorobenzene	1.61104	1.59798	1.64141	1.63195	1.66625	1.51572	AVRG		1.61072		3.24551
100 1,2-Dibromo-3-chloropropane	0.12718	0.12162	0.14188	0.14180	0.15513	0.13993	AVRG		0.13792		8.65203
101 1,2,4-Trichlorobenzene	1.10591	1.00037	1.12522	1.10675	1.09886	0.97078	AVRG		1.06798		6.09585

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STL Denver

INITIAL CALIBRATION DATA

Start Cal Date : 07-JAN-2004 11:17
End Cal Date : 07-JAN-2004 15:24
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Integrator : HP RTE
Method file : /chem/H.i/010704.b/H-20ml-h2o.m
Cal Date : 08-Jan-2004 10:26 hoffmanm

Compound	1 Level 1	2 Level 2	5 Level 3	10 Level 4	30 Level 5	60 Level 6	Curve	Coefficients b	ml	m2	%RSD or R^2
102 Hexachlorobutadiene	1.04680	0.88518	0.98070	0.95556	0.88093	0.72341	AVRG		0.91210		12.21246
127 Naphthalene	1.04906	1.11120	1.19442	1.25358	1.25883	1.14908	AVRG		1.16936		7.05102
104 1,2,3-Trichlorobenzene	0.82340	0.80849	0.86015	0.86420	0.84710	0.76293	AVRG		0.82771		4.63032

Curve	Formula	Units
Averaged	Amt = Rsp/ml	Response
Linear	Amt = b + Rsp/ml	Response
Wt Linear	Amt = b + Rsp/ml	Response

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STL Denver

INITIAL CALIBRATION DATA

Start Cal Date : 07-JAN-2004 11:17
End Cal Date : 07-JAN-2004 15:24
Quant Method : ISTD
Origin : Disabled
Target Version : 3.40
Integrator : HP RTE
Method file : /chem/H.i/010704.b/H-20ml-h2o.m
Cal Date : 09-Jan-2004 13:28 hoffmanm
Curve Type : Average

Calibration File Names:
Level 1: /chem/H.i/010704.b/h0009.d
Level 2: /chem/H.i/010704.b/h0010.d
Level 3: /chem/H.i/010704.b/h0011.d
Level 4: /chem/H.i/010704.b/h0012.d
Level 5: /chem/H.i/010704.b/h0013.d
Level 6: /chem/H.i/010704.b/h0014.d

Compound	1.000 Level 1	2.000 Level 2	5.000 Level 3	10.000 Level 4	30.000 Level 5	60.000 Level 6	RRF	% RSD
M 1 1,2-Dichloroethene (total)	0.38456	0.35419	0.39090	0.38085	0.38196	0.36503	0.37625	3.664
M 2 Xylene (total)	7.90055	7.80462	8.11999	8.12336	8.31411	7.61230	7.97916	3.191
3 dichlorodifluoromethane	0.51690	0.51368	0.49255	0.51929	0.51079	0.46155	0.50246	4.413
4 Chloromethane	0.26543	0.26689	0.27289	0.27767	0.27107	0.24560	0.26659	4.193
5 Vinyl Chloride	0.26942	0.27770	0.27940	0.29455	0.28896	0.25891	0.27816	4.643
7 Bromomethane	0.26279	0.28271	0.29147	0.29263	0.29367	0.27319	0.28274	4.425
8 Chloroethane	0.19141	0.19643	0.19450	0.20042	0.20285	0.18100	0.19444	3.986
10 Trichlorofluoromethane	0.63609	0.66119	0.64466	0.71674	0.72931	0.65362	0.67360	5.850
11 Ethanol	0.00087	0.00048	0.00068	0.00064	0.00068	+++++	0.00067	20.494
13 Acrolein	+++++	0.00802	0.00886	0.00895	0.00936	0.00846	0.00873	5.832
14 1,1-Dichloroethene	0.35069	0.33828	0.36285	0.36561	0.36300	0.33646	0.35281	3.698
15 Acetone	+++++	0.03742	0.02927	0.02507	0.02363	0.01991	0.02706	24.737
17 Iodomethane	0.64174	0.64464	0.69651	0.67344	0.70489	0.66281	0.67067	3.901
19 Acetonitrile	+++++	0.00464	0.00479	0.00520	0.00537	0.00415	0.00483	9.940
21 Methylene Chloride	+++++	0.33311	0.32344	0.29576	0.31280	0.29091	0.31121	5.753
22 tert-Butyl alcohol	0.00850	0.00746	0.00870	0.00862	0.00913	0.00812	0.00842	6.797
23 Acrylonitrile	0.02007	0.01797	0.02078	0.02129	0.02348	0.02155	0.02086	8.722
24 trans-1,2-Dichloroethene	0.40597	0.34726	0.39138	0.38451	0.37450	0.36253	0.37769	5.554
27 1,1-Dichloroethane	0.61585	0.61935	0.64655	0.64420	0.66398	0.62950	0.63657	2.884
28 Chloroprene	0.49851	0.50104	0.53490	0.53905	0.54719	0.51753	0.52303	3.915
30 Isopropyl ether	0.22915	0.23294	0.26058	0.26011	0.27424	0.26182	0.25314	7.085
32 cis-1,2-Dichloroethene	0.36315	0.36111	0.39042	0.37720	0.38941	0.36754	0.37481	3.456
31 2,2-Dichloropropane	0.48785	0.45182	0.46557	0.45679	0.45178	0.40916	0.45383	5.668
33 2-Butanone	0.05681	0.04213	0.04434	0.04358	0.04618	0.04421	0.04621	11.590
34 Propionitrile	0.00711	0.00643	0.00782	0.00804	0.00890	0.00842	0.00779	11.531

STL Denver

INITIAL CALIBRATION DATA

Start Cal Date : 07-JAN-2004 11:17
End Cal Date : 07-JAN-2004 15:24
Quant Method : ISTD
Origin : Disabled
Target Version : 3.40
Integrator : HP RTE
Method file : /chem/H.i/010704.b/H-20ml-h2o.m
Cal Date : 09-Jan-2004 13:28 hoffmanm
Curve Type : Average

Compound	1.000 Level 1	2.000 Level 2	5.000 Level 3	10.000 Level 4	30.000 Level 5	60.000 Level 6	RRF	% RSD
36 Methacrylonitrile	0.05295	0.05532	0.06225	0.06343	0.06842	0.06552	0.06132	9.768
37 Bromochloromethane	0.13023	0.13784	0.15663	0.15633	0.16281	0.15308	0.14949	8.436
38 Chloroform	0.65498	0.66294	0.72546	0.71388	0.74008	0.69981	0.69952	4.889
41 1,1,1-Trichloroethane	0.68301	0.69469	0.71942	0.70543	0.71499	0.66836	0.69765	2.806
42 1,1-Dichloropropene	0.57172	0.55194	0.57523	0.56924	0.57242	0.53613	0.56278	2.750
43 Carbon Tetrachloride	0.57425	0.58228	0.62512	0.60579	0.61710	0.58199	0.59776	3.532
45 Isobutanol	+++++	0.00193	0.00253	0.00248	0.00281	0.00266	0.00248	13.393
46 Benzene	1.07064	1.03396	1.08870	1.08623	1.10125	1.04039	1.07020	2.564
47 1,2-Dichloroethane	0.24267	0.25107	0.28447	0.28118	0.29267	0.27950	0.27193	7.394
49 n-Butanol	+++++	0.00145	0.00201	0.00197	0.00245	0.00227	0.00203	18.817
50 Trichloroethene	0.39382	0.39871	0.41929	0.41682	0.41749	0.38894	0.40585	3.340
52 1,2-Dichloropropane	0.32078	0.32830	0.35762	0.35086	0.36209	0.34157	0.34354	4.784
53 Dibromomethane	0.19721	0.18272	0.20985	0.20876	0.21627	0.20340	0.20304	5.832
55 1,4-Dioxane	+++++	0.00079	0.00116	0.00098	0.00110	0.00094	0.00099	14.767
56 Bromodichloromethane	0.53695	0.54094	0.58360	0.57331	0.60185	0.57148	0.56802	4.402
59 cis-1,3-Dichloropropene	2.32914	2.44289	2.61012	2.57720	2.76458	2.53158	2.54259	5.851
60 4-Methyl-2-pentanone	0.55048	0.56915	0.65749	0.67381	0.74056	0.68622	0.64628	11.263
62 Toluene	6.76507	6.39625	6.65328	6.58509	6.86835	6.29512	6.59386	3.299
63 trans-1,3-Dichloropropene	1.68760	1.85247	1.91134	1.90119	2.04130	1.87430	1.87803	6.082
65 1,1,2-Trichloroethane	0.93004	1.05399	1.10497	1.08554	1.16323	1.07344	1.06854	7.249
67 1,3-Dichloropropane	1.66306	1.69443	1.85264	1.85459	1.95419	1.78740	1.80105	6.061
66 Tetrachloroethene	2.14384	2.08510	2.14822	2.15107	2.16546	1.95611	2.10830	3.774
68 2-Hexanone	0.35468	0.36746	0.41464	0.42533	0.47016	0.43318	0.41091	10.483
69 Dibromochloromethane	1.68634	1.68235	1.90906	1.93671	2.08318	1.91661	1.86904	8.376
70 1,2-Dibromoethane	1.25167	1.23465	1.38464	1.39470	1.47542	1.34902	1.34835	6.788
71 1-Chlorohexane	3.24595	3.05113	3.13945	3.09998	3.11192	2.84415	3.08210	4.327
73 Chlorobenzene	3.88856	3.86746	4.09160	4.02375	4.17839	3.84283	3.98210	3.435
74 1,1,1,2-Tetrachloroethane	1.80612	1.91174	1.93026	1.93925	2.03989	1.87878	1.91767	4.009
75 Ethylbenzene	2.03662	1.99641	2.09701	2.06394	2.12124	1.93947	2.04245	3.277
76 m and p-Xylene	2.70458	2.71019	2.80167	2.82529	2.87413	2.63060	2.75774	3.295
77 o-Xylene	2.49139	2.38424	2.51665	2.47277	2.56585	2.35111	2.46367	3.301
78 Styrene	3.74901	3.75000	4.05423	4.04768	4.17230	3.84367	3.93615	4.550
79 Bromoform	0.91538	0.95625	1.08080	1.10078	1.19413	1.08315	1.05508	9.680

STL Denver

INITIAL CALIBRATION DATA

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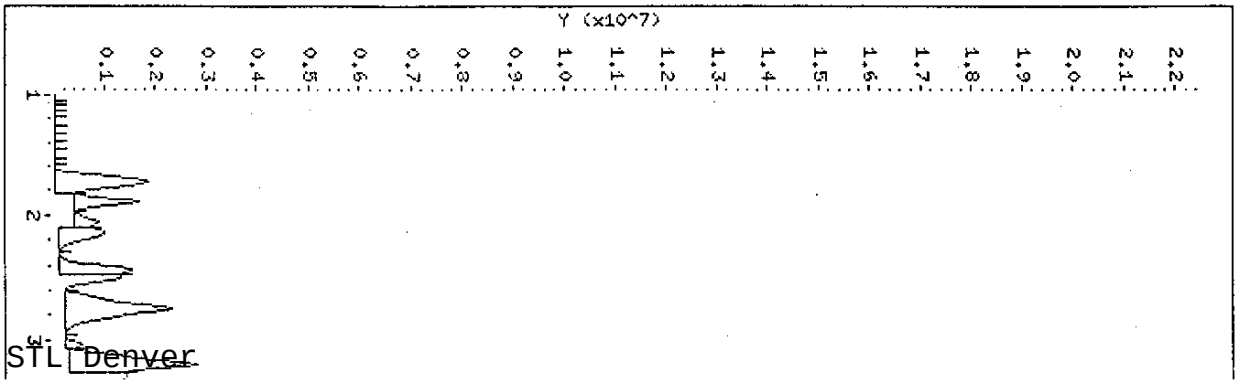
Integrator : HP RTE
Method file : /chem/H.i/010704.b/H-20ml-h2o.m
Cal Date : 09-Jan-2004 13:28 hoffmanm
Curve Type : Average

Compound	1.000 Level 1	2.000 Level 2	5.000 Level 3	10.000 Level 4	30.000 Level 5	60.000 Level 6	RRF	% RSD
80 isopropyl benzene	8.18263	8.05947	8.35044	8.31021	8.32537	7.49360	8.12029	4.015
81 Cyclohexanone	0.02303	0.02141	0.02472	0.02476	0.02747	0.02270	0.02402	8.833
83 1,1,2,2-Tetrachloroethane	1.20961	1.24183	1.37403	1.38081	1.48398	1.34947	1.33996	7.484
84 Bromobenzene	1.06479	1.05559	1.12627	1.11475	1.15925	1.08515	1.10097	3.598
85 1,2,3-Trichloropropane	0.20020	0.19748	0.18454	0.18440	0.19121	0.17735	0.18920	4.600
87 n-Propylbenzene	1.12762	1.11381	1.09120	1.07255	1.08480	1.00582	1.08263	3.936
88 2-Chlorotoluene	0.91603	0.90568	0.89013	0.90576	0.93895	0.87792	0.90575	2.330
89 1,3,5-Trimethylbenzene	3.67578	3.60238	3.73258	3.69071	3.73278	3.43100	3.64420	3.153
90 4-Chlorotoluene	1.01839	1.00535	1.03131	0.99581	0.99820	0.93668	0.99762	3.277
91 tert-Butylbenzene	3.78055	3.68053	3.79510	3.74125	3.78843	3.43206	3.70299	3.765
92 1,2,4-Trimethylbenzene	3.47575	3.33802	3.46668	3.46528	3.47542	3.18211	3.40054	3.515
93 sec-Butylbenzene	1.00520	0.97467	1.00073	0.99237	0.97860	0.87738	0.97149	4.903
94 m-Dichlorobenzene	1.79533	1.76535	1.89089	1.79270	1.89552	1.75021	1.81500	3.466
95 4-Isopropyltoluene	4.13963	4.12112	4.29732	4.23437	4.18661	3.74983	4.12148	4.684
97 p-dichlorobenzene	2.13872	2.15829	2.22260	2.24556	2.23341	2.06433	2.17715	3.213
98 n-Butylbenzene	4.82362	4.63276	4.77494	4.70157	4.56086	4.01397	4.58462	6.438
99 o-Dichlorobenzene	1.61104	1.59798	1.64141	1.63195	1.66625	1.51572	1.61072	3.246
100 1,2-Dibromo-3-chloropropane	0.12718	0.12162	0.14188	0.14180	0.15513	0.13993	0.13792	8.652
101 1,2,4-Trichlorobenzene	1.10591	1.00037	1.12522	1.10675	1.09886	0.97078	1.06798	6.096
102 Hexachlorobutadiene	1.04680	0.88518	0.98070	0.95556	0.88093	0.72341	0.91210	12.212
127 Naphthalene	1.04906	1.11120	1.19442	1.25358	1.25883	1.14908	1.16936	7.051
104 1,2,3-Trichlorobenzene	0.82340	0.80849	0.86015	0.86420	0.84710	0.76293	0.82771	4.630



Data File: /chem/H.i/01070
Date : 07-JAN-2004 13:09
Client ID: MAIN060
Sample Info: MAIN060,,
Purge Volume: 20.0
Column phase: DB624

Data File: /chem/H.i/010704.b/h0001.d

Date : 07-JAN-2004 10:44

Client ID: BFB

Instrument: H.i

Sample Info: BFB,,MSVOA-237-03

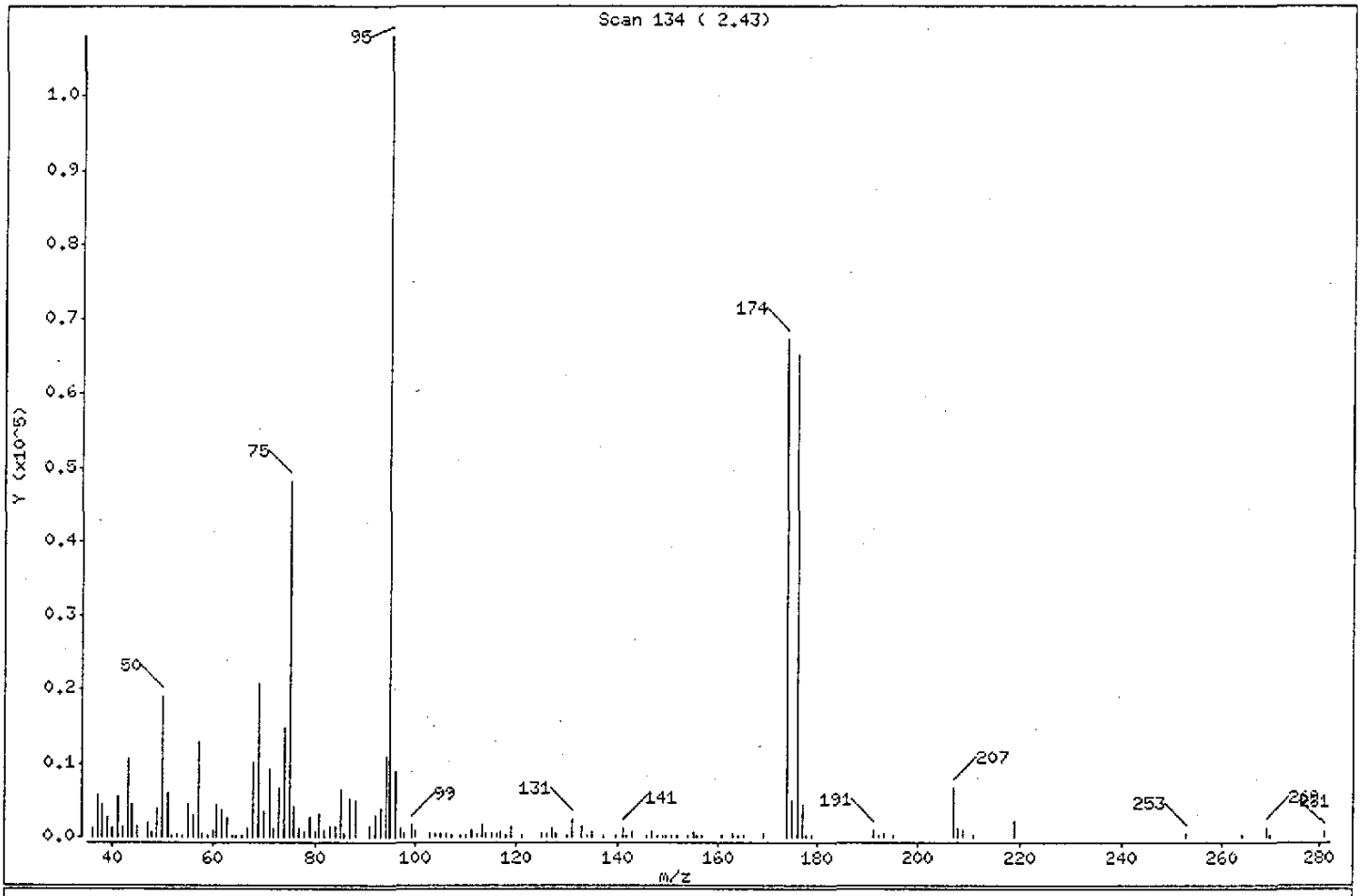
Volume Injected (uL): 1.0

Operator: mhoffman

Column phase: DB624

Column diameter: 0.53

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	17.68
75	30.00 - 60.00% of mass 95	44.55
96	5.00 - 9.00% of mass 95	8.29
173	Less than 2.00% of mass 174	0.00 (0.00)
174	50.00 - 100.00% of mass 95	62.30
175	5.00 - 9.00% of mass 174	4.58 (7.35)
176	95.00 - 101.00% of mass 174	60.56 (97.19)
177	5.00 - 9.00% of mass 176	4.14 (6.83)

Data File: /chem/H.i/010704.b/h0001.d

Date : 07-JAN-2004 10:44

Client ID: BFB

Instrument: H.i

Sample Info: BFB,,MSVOA-237-03

Volume Injected (uL): 1.0

Operator: mhoffman

Column phase: DB624

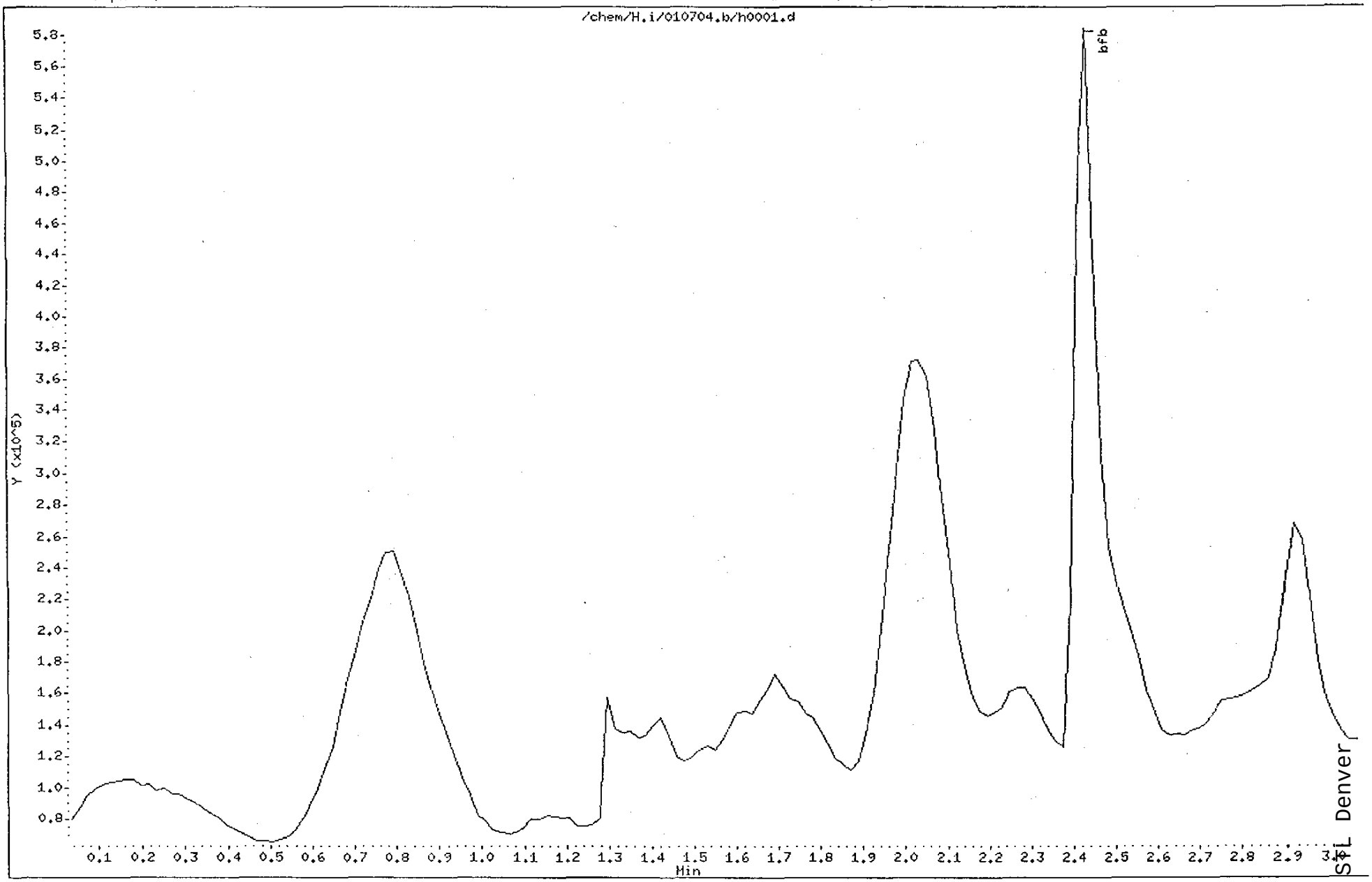
Column diameter: 0.53

Data File: h0001.d
Spectrum: Scan 134 (2.43)
Location of Maximum: 94.95
Number of points: 129

m/z	Y	m/z	Y	m/z	Y	m/z	Y
35.95	1248	69.95	3584	106.90	322	151.95	213
36.95	5829	71.00	9297	108.90	362	153.95	219
37.95	4459	72.00	1155	110.00	343	155.00	729
39.05	2752	73.00	6625	111.00	948	155.90	246
39.95	1323	74.00	14880	112.10	606	156.90	204
40.95	5447	75.00	48128	113.05	1663	160.90	326
42.05	1392	76.00	4160	113.95	518	162.90	521
43.10	10761	77.00	1266	114.85	455	163.90	225
44.00	4478	77.90	809	115.85	440	165.00	318
45.00	1582	78.90	2638	116.85	651	169.05	426
47.00	1864	80.00	721	117.95	296	173.85	67304
47.90	717	80.90	3328	118.85	1486	174.85	4946
48.90	3860	81.90	1117	121.05	264	175.85	65416
50.00	19096	82.90	1543	125.05	481	176.85	4470
51.00	6047	84.00	1549	126.05	474	177.85	273
51.90	363	85.05	6441	127.00	1121	178.85	297
53.00	497	85.95	520	128.00	511	190.90	906
54.00	305	86.95	5193	129.90	319	192.00	245
55.00	4576	87.85	4996	130.90	2578	193.00	559
56.00	3055	90.95	1480	133.00	1483	194.80	211
57.05	12795	91.95	2954	134.00	307	206.95	6774
58.05	618	92.95	4096	134.90	645	207.95	1361
58.85	312	93.95	10865	137.00	346	208.95	878
59.95	1092	94.95	108024	139.50	371	211.10	259
60.95	4544	95.95	8956	140.95	1132	218.90	2280
61.95	3804	96.85	1229	141.85	207	253.05	531
62.95	2850	97.85	404	142.85	733	263.95	346
64.05	299	99.00	1851	145.85	278	269.10	1284
64.85	313	100.00	1054	146.95	847	270.00	274
65.95	216	102.90	471	147.85	366	281.05	815
66.95	1215	103.90	584	148.85	324		
67.95	10080	105.00	536	149.85	354		
68.95	20968	105.90	406	150.85	204		

Data File: /chem/H.i/010704.b/h0001.d
Date : 07-JAN-2004 10:44
Client ID: BFB
Sample Info: BFB,,MSVOA-237-03
Volume Injected (uL): 1.0
Column phase: DB624

Instrument: H.i
Operator: mhoffman
Column diameter: 0.53



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Data File: /chem/H.i/010704.b/h0003.d
Report Date: 08-Jan-2004 16:02

STL Denver

VOLATILE REPORT SW-846

Data file : /chem/H.i/010704.b/h0003.d
Lab Smp Id: MAIN001 Client Smp ID: MAIN001
Inj Date : 07-JAN-2004 11:17
Operator : hoffmanm Inst ID: H.i
Smp Info : MAIN001,,
Misc Info :
Comment : Purge and Trap Analysis
Method : /chem/H.i/010704.b/H-20ml-h2o.m
Meth Date : 08-Jan-2004 10:26 hoffmanm Quant Type: ISTD
Cal Date : 07-JAN-2004 13:31 Cal File: h0009.d
Als bottle: 2 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 1-main.sub
Target Version: 3.40
Processing Host: chemsv02

Concentration Formula: Amt * DF * Vp/Vs

Name	Value	Description
DF	1.000	Dilution Factor
Vp	20.000	Purge Volume (ml)
Vs	20.000	Sample Volume (ml)

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	ON-COL (ug/L)
* 48 Fluorobenzene	96	6.395	6.396	(1.000)	2220674	12.5000	
* 72 Chlorobenzene-d5	119	10.079	10.079	(1.000)	394754	12.5000	
* 96 1,4-Dichlorobenzene-d4	152	12.972	12.972	(1.000)	668263	12.5000	
M 1 1,2-Dichloroethene (total)	96				136638	2.00000	2.45014
M 2 Xylene (total)	106				249502	1.00000	3.56851
3 dichlorodifluoromethane	85	1.903	1.886	(0.298)	91830	1.00000	1.23308
4 Chloromethane	50	2.028	2.048	(0.317)	47155	1.00000	1.19499
5 Vinyl Chloride	62	2.172	2.156	(0.340)	47863	1.00000	1.16375
7 Bromomethane	94	2.424	2.425	(0.379)	46685	1.00000	1.11846
8 Chloroethane	64	2.514	2.515	(0.393)	34004	1.00000	1.18204
10 Trichlorofluoromethane	101	2.765	2.749	(0.432)	113004	1.00000	1.13570
11 Ethanol	45	2.819	2.803	(0.441)	7716	50.0000	88.0421(H)
13 Acrolein	56.00	Compound Not Detected.					
14 1,1-Dichloroethene	96	3.214	3.198	(0.503)	62301	1.00000	1.19305
15 Acetone	43.00	Compound Not Detected.					
17 Iodomethane	142	3.394	3.378	(0.531)	114007	1.00000	1.15021
19 Acetonitrile	41.00	Compound Not Detected.					

Data File: /chem/H.i/010704.b/h0003.d
Report Date: 08-Jan-2004 16:02

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
21 Methylene Chloride	84.00	Compound Not Detected.					
22 tert-Butyl alcohol	59	3.717	3.719	(0.581)	30204	20.0000	24.2191
23 Acrylonitrile	53	3.861	3.845	(0.604)	35661	10.0000	11.5662
24 trans-1,2-Dichloroethene	96	3.915	3.899	(0.612)	72123	1.00000	1.28601
27 1,1-Dichloroethane	63	4.364	4.348	(0.682)	109409	1.00000	1.16246
28 Chloroprene	53	4.472	4.456	(0.699)	88562	1.00000	1.14588
30 Isopropyl ether	87	4.436	4.420	(0.694)	203545	5.00000	5.45202
32 cis-1,2-Dichloroethene	96	5.029	5.013	(0.786)	64515	1.00000	1.16413
31 2,2-Dichloropropane	77	5.029	5.013	(0.786)	86668	1.00000	1.28609
33 2-Butanone	43	5.047	5.031	(0.789)	40370	4.00000	5.84766
34 Propionitrile	54	5.101	5.085	(0.798)	12625	10.0000	10.9910
36 Methacrylonitrile	41	5.281	5.264	(0.826)	94074	10.0000	10.4202
37 Bromochloromethane	128	5.317	5.300	(0.831)	23135	1.00000	1.05080
38 Chloroform	83	5.407	5.372	(0.845)	116359	1.00000	1.12645
41 1,1,1-Trichloroethane	97	5.640	5.624	(0.882)	121339	1.00000	1.17580
42 1,1-Dichloropropene	75	5.820	5.803	(0.910)	101569	1.00000	1.21830
43 Carbon Tetrachloride	117	5.838	5.821	(0.913)	102017	1.00000	1.15462
45 Isobutanol	41.00	Compound Not Detected.					
46 Benzene	78	6.071	6.055	(0.949)	190203	1.00000	1.20048
47 1,2-Dichloroethane	62	6.089	6.073	(0.952)	43112	1.00000	1.07553
49 n-Butanol	56.00	Compound Not Detected.					
50 Trichloroethene	130	6.844	6.828	(1.070)	69963	1.00000	1.16582
52 1,2-Dichloropropane	63	7.114	7.079	(1.112)	56987	1.00000	1.12347
53 Dibromomethane	93	7.257	7.223	(1.135)	35036	1.00000	1.16692
55 1,4-Dioxane	88.00	Compound Not Detected.					
56 Bromodichloromethane	83	7.437	7.421	(1.163)	95391	1.00000	1.13684
59 cis-1,3-Dichloropropene	75	7.976	7.960	(0.791)	73555	1.00000	1.10297
60 4-Methyl-2-pentanone	43	8.156	8.139	(0.809)	69537	4.00000	4.11282
62 Toluene	91	8.389	8.373	(0.832)	213643	1.00000	1.22988
63 trans-1,3-Dichloropropene	75	8.641	8.625	(0.857)	53295	1.00000	1.08271
65 1,1,2-Trichloroethane	97	8.875	8.858	(0.881)	29371	1.00000	1.04991
67 1,3-Dichloropropane	76	9.072	9.056	(0.900)	52520	1.00000	1.11146
66 Tetrachloroethene	164	9.072	9.038	(0.900)	67703	1.00000	1.21940
68 2-Hexanone	43	9.180	9.146	(0.911)	44804	4.00000	4.16599
69 Dibromochloromethane	129	9.360	9.343	(0.929)	53255	1.00000	1.08694
70 1,2-Dibromoethane	107	9.503	9.487	(0.943)	39528	1.00000	1.11716
71 1-Chlorohexane	91	10.079	10.044	(1.000)	102508	1.00000	1.26111
73 Chlorobenzene	112	10.114	10.080	(1.004)	122802	1.00000	1.17291
74 1,1,1,2-Tetrachloroethane	131	10.204	10.188	(1.012)	57038	1.00000	1.13283
75 Ethylbenzene	106	10.240	10.224	(1.016)	64317	1.00000	1.19671
76 m and p-Xylene	106	10.384	10.368	(1.030)	170823	2.00000	2.35555
77 o-Xylene	106	10.887	10.871	(1.080)	78679	1.00000	1.21296
78 Styrene	104	10.905	10.889	(1.082)	118395	1.00000	1.14512
79 Bromoform	173	11.157	11.140	(1.107)	28908	1.00000	1.04665
80 isopropyl benzene	105	11.372	11.356	(1.128)	258410	1.00000	1.20884
81 Cyclohexanone	55	11.498	11.464	(1.141)	29088	40.0000	46.1006
83 1,1,2,2-Tetrachloroethane	83	11.750	11.733	(1.166)	38200	1.00000	1.08750

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
84 Bromobenzene	156	11.768	11.751	(0.907)	56925	1.00000	1.16210
85 1,2,3-Trichloropropane	110	11.804	11.787	(0.910)	10703	1.00000	1.26685
87 n-Propylbenzene	120	11.893	11.877	(0.917)	60284	1.00000	1.24779
88 2-Chlorotoluene	126	12.019	11.985	(0.927)	48972	1.00000	1.21308
89 1,3,5-Trimethylbenzene	105	12.127	12.093	(0.935)	196511	1.00000	1.20998
90 4-Chlorotoluene	126	12.145	12.129	(0.936)	54444	1.00000	1.22396
91 tert-Butylbenzene	119	12.522	12.488	(0.965)	202112	1.00000	1.22411
92 1,2,4-Trimethylbenzene	105	12.576	12.560	(0.970)	185817	1.00000	1.22545
93 sec-Butylbenzene	134	12.774	12.757	(0.985)	53739	1.00000	1.23991
94 m-Dichlorobenzene	146	12.900	12.883	(0.994)	95980	1.00000	1.18751
95 4-Isopropyltoluene	119	12.936	12.919	(0.997)	221309	1.00000	1.20507
97 p-dichlorobenzene	146	13.007	12.973	(1.003)	114338	1.00000	1.17965
98 n-Butylbenzene	91	13.385	13.368	(1.032)	257876	1.00000	1.25993
99 o-Dichlorobenzene	146	13.403	13.386	(1.033)	86128	1.00000	1.20023
100 1,2-Dibromo-3-chloropropane	157	14.211	14.195	(1.096)	6799	1.00000	1.10995
101 1,2,4-Trichlorobenzene	180	15.038	15.004	(1.159)	59123	1.00000	1.24085
102 Hexachlorobutadiene	225	15.200	15.183	(1.172)	55963	1.00000	1.36913
127 Naphthalene	128	15.272	15.255	(1.177)	56084	1.00000	1.08100(a)
104 1,2,3-Trichlorobenzene	180	15.523	15.507	(1.197)	44020	1.00000	1.19400

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
H - Operator selected an alternate compound hit.

Data File: /chem/H.i/010704.b/h0003.d
Report Date: 08-Jan-2004 16:02

STL Denver

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: H.i
Lab File ID: h0003.d
Lab Smp Id: MAIN001
Analysis Type: VOA
Quant Type: ISTD
Operator: hoffmanm
Method File: /chem/H.i/010704.b/H-20ml-h2o.m
Misc Info:

Calibration Date: JAN/07/4
Calibration Time: 1439
Client Smp ID: MAIN001
Level: LOW
Sample Type: WATER

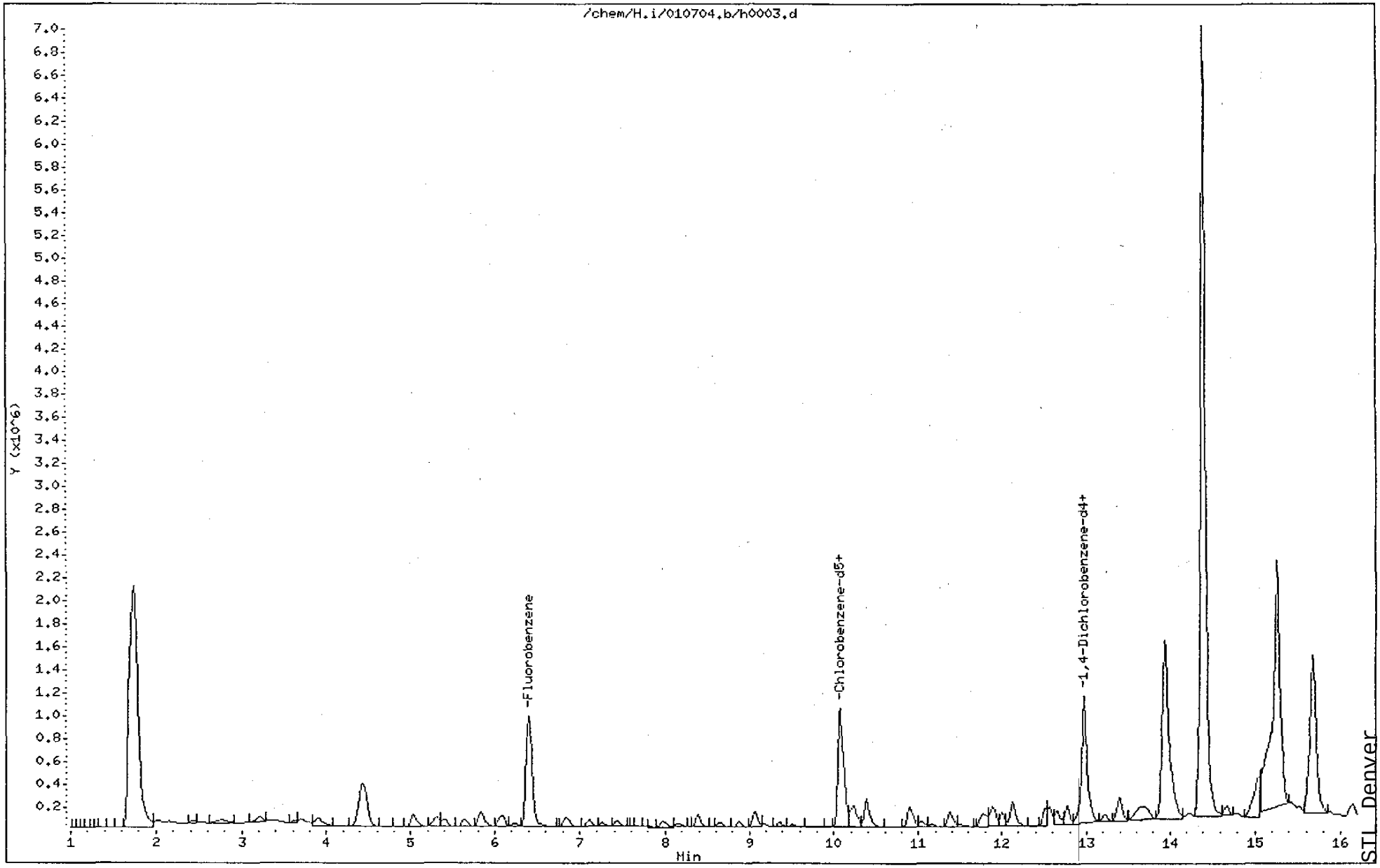
COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
48 Fluorobenzene	2399820	1199910	4799640	2220674	-7.46
72 Chlorobenzene-d5	457381	228690	914762	394754	-13.69
96 1,4-Dichlorobenze	747017	373508	1494034	668263	-10.54

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
48 Fluorobenzene	6.39	5.89	6.89	6.39	0.00
72 Chlorobenzene-d5	10.06	9.56	10.56	10.08	0.18
96 1,4-Dichlorobenze	12.97	12.47	13.47	12.97	0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem/H.i/010704.b/h0003.d
Date : 07-JAN-2004 11:17
Client ID: MAIN001
Sample Info: MAIN001,,
Purge Volume: 20.0
Column phase: DB624

Instrument: H.i
Operator: hoffmanm
Column diameter: 0.53



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Data File: /chem/H.i/010704.b/h0004.d
Report Date: 08-Jan-2004 16:02

STL Denver

VOLATILE REPORT SW-846

Data file : /chem/H.i/010704.b/h0004.d
Lab Smp Id: MAIN002 Client Smp ID: MAIN002
Inj Date : 07-JAN-2004 11:40
Operator : hoffmanm Inst ID: H.i
Smp Info : MAIN002,,
Misc Info :
Comment : Purge and Trap Analysis
Method : /chem/H.i/010704.b/H-20ml-h2o.m
Meth Date : 08-Jan-2004 10:26 hoffmanm Quant Type: ISTD
Cal Date : 07-JAN-2004 13:31 Cal File: h0009.d
Als bottle: 2 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 1-main.sub
Target Version: 3.40
Processing Host: chemsv02

Concentration Formula: Amt * DF * Vp/Vs

Name	Value	Description
DF	1.000	Dilution Factor
Vp	20.000	Purge Volume (ml)
Vs	20.000	Sample Volume (ml)

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	ON-COL (ug/L)	
* 48 Fluorobenzene	96	6.398	6.396	(1.000)	2247279	12.5000		
* 72 Chlorobenzene-d5	119	10.081	10.079	(1.000)	401333	12.5000		(H)
* 96 1,4-Dichlorobenzene-d4	152	12.974	12.972	(1.000)	678380	12.5000		
M 1 1,2-Dichloroethene (total)	96				254706	4.00000	4.35140	
M 2 Xylene (total)	106				501160	2.00000	6.77727	
3 dichlorodifluoromethane	85	1.905	1.886	(0.298)	184701	2.00000	2.35459	
4 Chloromethane	50	2.031	2.048	(0.317)	95965	2.00000	2.31059	
5 Vinyl Chloride	62	2.157	2.156	(0.337)	99851	2.00000	2.30682	
7 Bromomethane	94	2.427	2.425	(0.379)	101652	2.00000	2.31371	
8 Chloroethane	64	2.516	2.515	(0.393)	70631	2.00000	2.33190	
10 Trichlorofluoromethane	101	2.768	2.749	(0.433)	237742	2.00000	2.27166	
11 Ethanol	45	2.822	2.803	(0.441)	8690	100.000	89.2909	
13 Acrolein	56	3.055	3.036	(0.478)	28839	20.0000	21.9561	
14 1,1-Dichloroethene	96	3.217	3.198	(0.503)	121635	2.00000	2.21668	
15 Acetone	43	3.199	3.180	(0.500)	53826	8.00000	7.96354	
17 Iodomethane	142	3.397	3.378	(0.531)	231790	2.00000	2.22514	

Data File: /chem/H.i/010704.b/h0004.d
Report Date: 08-Jan-2004 16:02

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
19 Acetonitrile	41	3.469	3.450	(0.542)	16675	20.0000	22.9045
21 Methylene Chloride	84	3.702	3.683	(0.579)	119773	2.00000	2.54000
22 tert-Butyl alcohol	59	3.738	3.719	(0.584)	53624	40.0000	41.0364
23 Acrylonitrile	53	3.864	3.845	(0.604)	64596	20.0000	20.0123
24 trans-1,2-Dichloroethene	96	3.918	3.899	(0.612)	124862	2.00000	2.12221
27 1,1-Dichloroethane	63	4.367	4.348	(0.683)	222695	2.00000	2.25041
28 Chloroprene	53	4.475	4.456	(0.699)	180155	2.00000	2.21822
30 Isopropyl ether	87	4.439	4.420	(0.694)	418778	10.0000	10.6894
32 cis-1,2-Dichloroethene	96	5.032	5.013	(0.787)	129844	2.00000	2.22919
31 2,2-Dichloropropane	77	5.050	5.013	(0.789)	162458	2.00000	2.29126
33 2-Butanone	43	5.050	5.031	(0.789)	60596	8.00000	8.37098
34 Propionitrile	54	5.104	5.085	(0.798)	23103	20.0000	19.2375
36 Methacrylonitrile	41	5.284	5.264	(0.826)	198909	20.0000	21.0092
37 Bromochloromethane	128	5.320	5.300	(0.831)	49561	2.00000	2.14492
38 Chloroform	83	5.409	5.372	(0.846)	238368	2.00000	2.19679
41 1,1,1-Trichloroethane	97	5.643	5.624	(0.882)	249787	2.00000	2.30014
42 1,1-Dichloropropene	75	5.841	5.803	(0.913)	198458	2.00000	2.26354
43 Carbon Tetrachloride	117	5.841	5.821	(0.913)	209366	2.00000	2.25359
45 Isobutanol	41	5.949	5.929	(0.930)	13911	40.0000	37.4754
46 Benzene	78	6.074	6.055	(0.949)	371776	2.00000	2.23243
47 1,2-Dichloroethane	62	6.092	6.073	(0.952)	90276	2.00000	2.14590
49 n-Butanol	56	6.775	6.720	(1.059)	10396	40.0000	41.4622
50 Trichloroethene	130	6.847	6.828	(1.070)	143361	2.00000	2.27123
52 1,2-Dichloropropane	63	7.116	7.079	(1.112)	118046	2.00000	2.21477
53 Dibromomethane	93	7.260	7.223	(1.135)	65701	2.00000	2.08714
55 1,4-Dioxane	88	7.278	7.241	(1.138)	14173	100.000	95.2764
56 Bromodichloromethane	83	7.440	7.421	(1.163)	194504	2.00000	2.20637
59 cis-1,3-Dichloropropene	75	7.979	7.960	(0.782)	156866	2.00000	2.22776
60 4-Methyl-2-pentanone	43	8.159	8.139	(0.799)	146187	8.00000	8.21356
62 Toluene	91	8.392	8.373	(0.822)	410724	2.00000	2.23888
63 trans-1,3-Dichloropropene	75	8.644	8.625	(0.847)	118953	2.00000	2.28639
65 1,1,2-Trichloroethane	97	8.877	8.858	(0.870)	67680	2.00000	2.28888
67 1,3-Dichloropropane	76	9.075	9.056	(0.889)	108805	2.00000	2.18248
66 Tetrachloroethene	164	9.075	9.038	(0.889)	133891	2.00000	2.28178
68 2-Hexanone	43	9.183	9.146	(0.900)	94384	8.00000	8.33250
69 Dibromochloromethane	129	9.363	9.343	(0.917)	108029	2.00000	2.09309
70 1,2-Dibromoethane	107	9.506	9.487	(0.931)	79281	2.00000	2.12586
71 1-Chlorohexane	91	10.081	10.044	(0.988)	195923	2.00000	2.28072
73 Chlorobenzene	112	10.117	10.080	(0.991)	248342	2.00000	2.24577
74 1,1,1,2-Tetrachloroethane	131	10.207	10.188	(1.000)	122759	2.00000	2.30598
75 Ethylbenzene	106	10.243	10.224	(1.004)	128196	2.00000	2.25788
76 m and p-Xylene	106	10.387	10.368	(1.018)	348060	4.00000	4.54217
77 o-Xylene	106	10.890	10.871	(1.067)	153100	2.00000	2.23510
78 Styrene	104	10.908	10.889	(1.069)	240800	2.00000	2.20661
79 Bromoform	173	11.159	11.140	(1.093)	61404	2.00000	2.10987
80 isopropyl benzene	105	11.375	11.356	(1.114)	517525	2.00000	2.29039
81 Cyclohexanone	55	11.501	11.464	(1.127)	55000	80.0000	82.7813

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
83 1,1,2,2-Tetrachloroethane	83	11.752	11.733	(1.151)	79742	2.00000	2.15282
84 Bromobenzene	156	11.770	11.751	(0.907)	114575	2.00000	2.21890
85 1,2,3-Trichloropropane	110	11.806	11.787	(0.910)	21435	2.00000	2.39934
87 n-Propylbenzene	120	11.896	11.877	(0.917)	120894	2.00000	2.36774
88 2-Chlorotoluene	126	12.004	11.985	(0.925)	98303	2.00000	2.30652
89 1,3,5-Trimethylbenzene	105	12.130	12.093	(0.935)	391005	2.00000	2.28145
90 4-Chlorotoluene	126	12.148	12.129	(0.936)	109121	2.00000	2.32301
91 tert-Butylbenzene	119	12.507	12.488	(0.964)	399488	2.00000	2.29239
92 1,2,4-Trimethylbenzene	105	12.579	12.560	(0.970)	362311	2.00000	2.26494
93 sec-Butylbenzene	134	12.777	12.757	(0.985)	105791	2.00000	2.31186
94 m-Dichlorobenzene	146	12.902	12.883	(0.994)	191613	2.00000	2.24787
95 4-Isopropyltoluene	119	12.938	12.919	(0.997)	447310	2.00000	2.30711
97 p-dichlorobenzene	146	12.992	12.973	(1.001)	234262	2.00000	2.29002
98 n-Butylbenzene	91	13.388	13.368	(1.032)	502843	2.00000	2.32632
99 o-Dichlorobenzene	146	13.406	13.386	(1.033)	173446	2.00000	2.29011
100 1,2-Dibromo-3-chloropropane	157	14.214	14.195	(1.096)	13201	2.00000	2.05040
101 1,2,4-Trichlorobenzene	180	15.023	15.004	(1.158)	108581	2.00000	2.16391
102 Hexachlorobutadiene	225	15.203	15.183	(1.172)	96078	2.00000	2.22945
127 Naphthalene	128	15.274	15.255	(1.177)	120610	2.00000	2.20585(a)
104 1,2,3-Trichlorobenzene	180	15.526	15.507	(1.197)	87754	2.00000	2.25656

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
H - Operator selected an alternate compound hit.

Data File: /chem/H.i/010704.b/h0004.d
Report Date: 08-Jan-2004 16:02

STL Denver

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: H.i
Lab File ID: h0004.d
Lab Smp Id: MAIN002
Analysis Type: VOA
Quant Type: ISTD
Operator: hoffmanm
Method File: /chem/H.i/010704.b/H-20ml-h2o.m
Misc Info:

Calibration Date: JAN/07/4
Calibration Time: 1439
Client Smp ID: MAIN002
Level: LOW
Sample Type: WATER

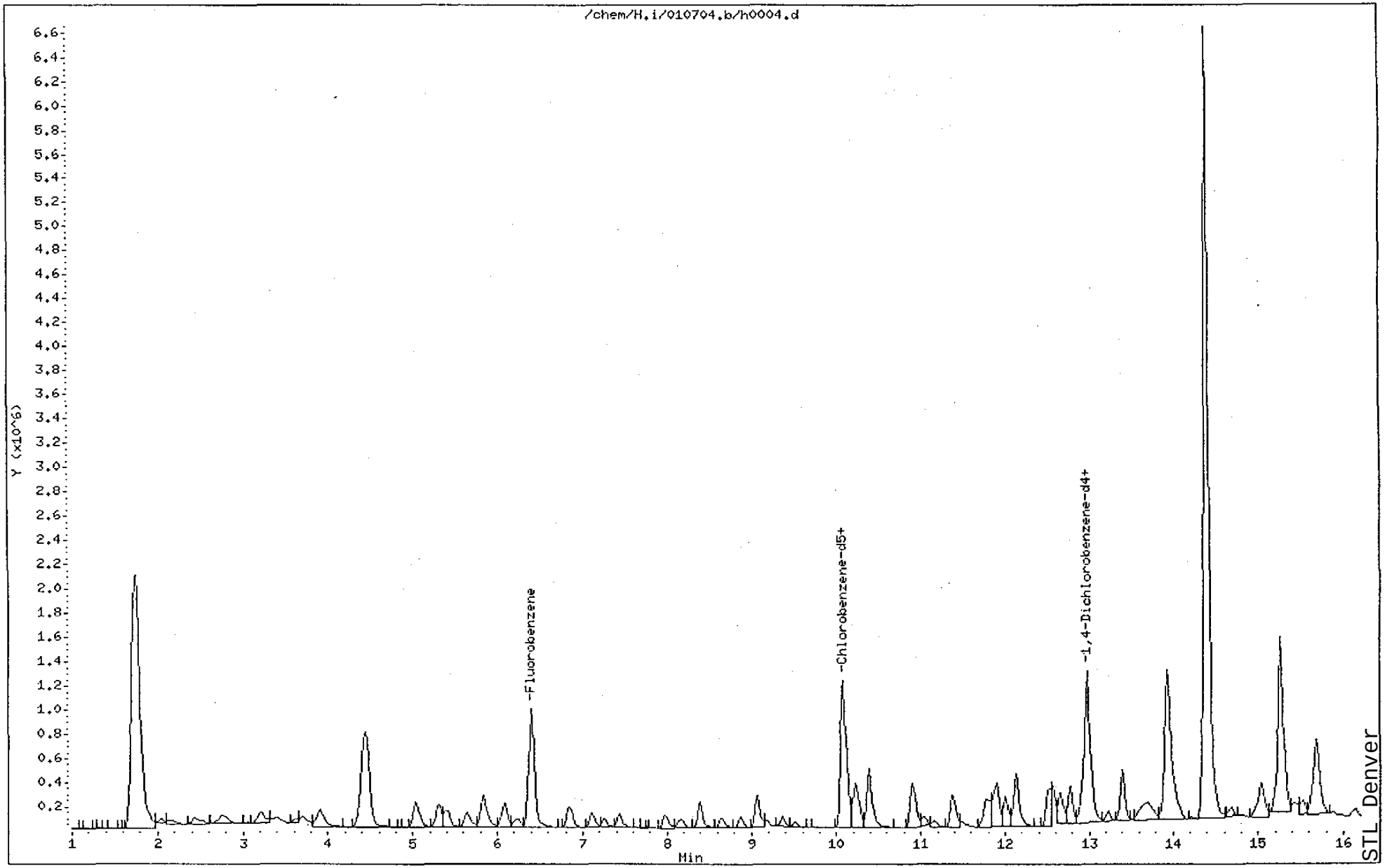
COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
48 Fluorobenzene	2399820	1199910	4799640	2247279	-6.36
72 Chlorobenzene-d5	457381	228690	914762	401333	-12.25
96 1,4-Dichlorobenze	747017	373508	1494034	678380	-9.19

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
48 Fluorobenzene	6.39	5.89	6.89	6.40	0.05
72 Chlorobenzene-d5	10.06	9.56	10.56	10.08	0.21
96 1,4-Dichlorobenze	12.97	12.47	13.47	12.97	0.02

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem/H.i/010704.b/h0004.d
Date : 07-JAN-2004 11:40
Client ID: MAIN002
Sample Info: MAIN002,,
Purge Volume: 20.0
Column phase: DB624

Instrument: H.i
Operator: hoffmanm
Column diameter: 0.53



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Report Date: 08-Jan-2004 16:02

STL Denver

VOLATILE REPORT SW-846

Data file : /chem/H.i/010704.b/h0005.d
Lab Smp Id: MAIN005 Client Smp ID: MAIN005
Inj Date : 07-JAN-2004 12:02
Operator : hoffmanm Inst ID: H.i
Smp Info : MAIN005,,
Misc Info :
Comment : Purge and Trap Analysis
Method : /chem/H.i/010704.b/H-20ml-h2o.m
Meth Date : 08-Jan-2004 10:26 hoffmanm Quant Type: ISTD
Cal Date : 07-JAN-2004 13:31 Cal File: h0009.d
Als bottle: 2 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 1-main.sub
Target Version: 3.40
Processing Host: chemsv02

Concentration Formula: Amt * DF * Vp/Vs

Name	Value	Description
DF	1.000	Dilution Factor
Vp	20.000	Purge Volume (ml)
Vs	20.000	Sample Volume (ml)

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	ON-COL (ug/L)
* 48 Fluorobenzene	96	6.396	6.396	(1.000)	2268310	12.5000	
* 72 Chlorobenzene-d5	119	10.079	10.079	(1.000)	409934	12.5000	(H)
* 96 1,4-Dichlorobenzene-d4	152	12.972	12.972	(1.000)	703312	12.5000	
M 1 1,2-Dichloroethene (total)	96				709348	10.0000	11.5430
M 2 Xylene (total)	106				1331464	5.00000	16.9716
3 dichlorodifluoromethane	85	1.903	1.886	(0.298)	446903	5.00000	5.43966
4 Chloromethane	50	2.047	2.048	(0.320)	247596	5.00000	5.68245
5 Vinyl Chloride	62	2.173	2.156	(0.340)	253508	5.00000	5.58631
7 Bromomethane	94	2.443	2.425	(0.382)	264455	5.00000	5.73545
8 Chloroethane	64	2.532	2.515	(0.396)	176474	5.00000	5.55840
10 Trichlorofluoromethane	101	2.784	2.749	(0.435)	584912	5.00000	5.33998
11 Ethanol	45	2.820	2.803	(0.441)	30982	250.000	301.878
13 Acrolein	56	3.054	3.036	(0.477)	80423	50.0000	57.8535
14 1,1-Dichloroethene	96	3.233	3.198	(0.506)	329220	5.00000	5.71752
15 Acetone	43	3.197	3.180	(0.500)	106226	20.0000	23.9675
17 Iodomethane	142	3.395	3.378	(0.531)	631960	5.00000	5.77889

Data File: /chem/H.i/010704.b/h0005.d
Report Date: 08-Jan-2004 16:02

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
19 Acetonitrile	41	3.467	3.450	(0.542)	43468	50.0000	56.4805
21 Methylene Chloride	84	3.700	3.683	(0.579)	293468	5.00000	5.87596
22 tert-Butyl alcohol	59	3.736	3.719	(0.584)	157914	100.000	115.130
23 Acrylonitrile	53	3.862	3.845	(0.604)	188558	50.0000	55.7249
24 trans-1,2-Dichloroethene	96	3.916	3.899	(0.612)	355112	5.00000	5.75045
27 1,1-Dichloroethane	63	4.365	4.348	(0.683)	586628	5.00000	5.65181
28 Chloroprene	53	4.473	4.456	(0.699)	485324	5.00000	5.69552
30 Isopropyl ether	87	4.437	4.420	(0.694)	1182132	25.0000	28.7484
32 cis-1,2-Dichloroethene	96	5.030	5.013	(0.786)	354236	5.00000	5.79254
31 2,2-Dichloropropane	77	5.048	5.013	(0.789)	422425	5.00000	5.67904
33 2-Butanone	43	5.048	5.031	(0.789)	160930	20.0000	21.2455
34 Propionitrile	54	5.102	5.085	(0.798)	70957	50.0000	56.3385
36 Methacrylonitrile	41	5.282	5.264	(0.826)	564847	50.0000	56.8665
37 Bromochloromethane	128	5.318	5.300	(0.831)	142114	5.00000	5.85557
38 Chloroform	83	5.407	5.372	(0.845)	658228	5.00000	5.77843
41 1,1,1-Trichloroethane	97	5.641	5.624	(0.882)	652745	5.00000	5.72763
42 1,1-Dichloropropene	75	5.839	5.803	(0.913)	521916	5.00000	5.67448
43 Carbon Tetrachloride	117	5.839	5.821	(0.913)	567186	5.00000	5.81407
45 Isobutanol	41	5.947	5.929	(0.930)	45996	100.000	117.016
46 Benzene	78	6.072	6.055	(0.949)	987802	5.00000	5.65499
47 1,2-Dichloroethane	62	6.090	6.073	(0.952)	258110	5.00000	5.84176
49 n-Butanol	56	6.755	6.720	(1.056)	36467	100.000	114.667
50 Trichloroethene	130	6.845	6.828	(1.070)	380434	5.00000	5.74263
52 1,2-Dichloropropane	63	7.114	7.079	(1.112)	324478	5.00000	5.79825
53 Dibromomethane	93	7.258	7.223	(1.135)	190406	5.00000	5.76237
55 1,4-Dioxane	88	7.276	7.241	(1.138)	52790	250.000	332.860
56 Bromodichloromethane	83	7.438	7.421	(1.163)	529517	5.00000	5.72384
59 cis-1,3-Dichloropropene	75	7.977	7.960	(0.782)	427990	5.00000	5.72359
60 4-Methyl-2-pentanone	43	8.157	8.139	(0.799)	431244	20.0000	22.8190
62 Toluene	91	8.390	8.373	(0.822)	1090962	5.00000	5.60458
63 trans-1,3-Dichloropropene	75	8.642	8.625	(0.847)	313409	5.00000	5.67453
65 1,1,2-Trichloroethane	97	8.875	8.858	(0.870)	181186	5.00000	5.76830
67 1,3-Dichloropropane	76	9.073	9.056	(0.889)	303784	5.00000	5.73746
66 Tetrachloroethene	164	9.073	9.038	(0.889)	352251	5.00000	5.65556
68 2-Hexanone	43	9.181	9.146	(0.900)	271962	20.0000	22.6197
69 Dibromochloromethane	129	9.361	9.343	(0.917)	313035	5.00000	5.71178
70 1,2-Dibromoethane	107	9.504	9.487	(0.931)	227044	5.00000	5.73249
71 1-Chlorohexane	91	10.061	10.044	(0.986)	514787	5.00000	5.64603
73 Chlorobenzene	112	10.097	10.080	(0.989)	670915	5.00000	5.71357
74 1,1,1,2-Tetrachloroethane	131	10.205	10.188	(1.000)	316511	5.00000	5.60336
75 Ethylbenzene	106	10.241	10.224	(1.004)	343854	5.00000	5.70369
76 m and p-Xylene	106	10.385	10.368	(1.018)	918800	10.0000	11.2967
77 o-Xylene	106	10.888	10.871	(1.067)	412664	5.00000	5.67492
78 Styrene	104	10.906	10.889	(1.069)	664787	5.00000	5.73599
79 Bromoform	173	11.157	11.140	(1.093)	177223	5.00000	5.73382
80 isopropyl benzene	105	11.373	11.356	(1.114)	1369251	5.00000	5.70698
81 Cyclohexanone	55	11.499	11.464	(1.127)	162154	200.000	229.789

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
83 1,1,2,2-Tetrachloroethane	83	11.750	11.733	(1.151)	225305	5.00000	5.72761
84 Bromobenzene	156	11.768	11.751	(0.907)	316849	5.00000	5.69402
85 1,2,3-Trichloropropane	110	11.804	11.787	(0.910)	51916	5.00000	5.40334
87 n-Propylbenzene	120	11.894	11.877	(0.917)	306981	5.00000	5.58332
88 2-Chlorotoluene	126	12.002	11.985	(0.925)	250416	5.00000	5.46099
89 1,3,5-Trimethylbenzene	105	12.110	12.093	(0.933)	1050067	5.00000	5.68577
90 4-Chlorotoluene	126	12.146	12.129	(0.936)	290132	5.00000	5.72991
91 tert-Butylbenzene	119	12.505	12.488	(0.964)	1067655	5.00000	5.68538
92 1,2,4-Trimethylbenzene	105	12.559	12.560	(0.968)	975263	5.00000	5.65875
93 sec-Butylbenzene	134	12.775	12.757	(0.985)	281531	5.00000	5.70838
94 m-Dichlorobenzene	146	12.900	12.883	(0.994)	531955	5.00000	5.78708
95 4-Isopropyltoluene	119	12.936	12.919	(0.997)	1208943	5.00000	5.78252
97 p-dichlorobenzene	146	12.990	12.973	(1.001)	625273	5.00000	5.67268
98 n-Butylbenzene	91	13.386	13.368	(1.032)	1343308	5.00000	5.76394
99 o-Dichlorobenzene	146	13.404	13.386	(1.033)	461769	5.00000	5.65901
100 1,2-Dibromo-3-chloropropane	157	14.212	14.195	(1.096)	39915	5.00000	5.75063
101 1,2,4-Trichlorobenzene	180	15.021	15.004	(1.158)	316553	5.00000	5.84773
102 Hexachlorobutadiene	225	15.200	15.183	(1.172)	275895	5.00000	5.93093
127 Naphthalene	128	15.272	15.255	(1.177)	336019	5.00000	5.70230
104 1,2,3-Trichlorobenzene	180	15.524	15.507	(1.197)	241982	5.00000	5.77099

QC Flag Legend

H - Operator selected an alternate compound hit.

Data File: /chem/H.i/010704.b/h0005.d
Report Date: 08-Jan-2004 16:02

STL Denver

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: H.i
Lab File ID: h0005.d
Lab Smp Id: MAIN005
Analysis Type: VOA
Quant Type: ISTD
Operator: hoffmanm
Method File: /chem/H.i/010704.b/H-20ml-h2o.m
Misc Info:

Calibration Date: JAN/07/4
Calibration Time: 1439
Client Smp ID: MAIN005
Level: LOW
Sample Type: WATER

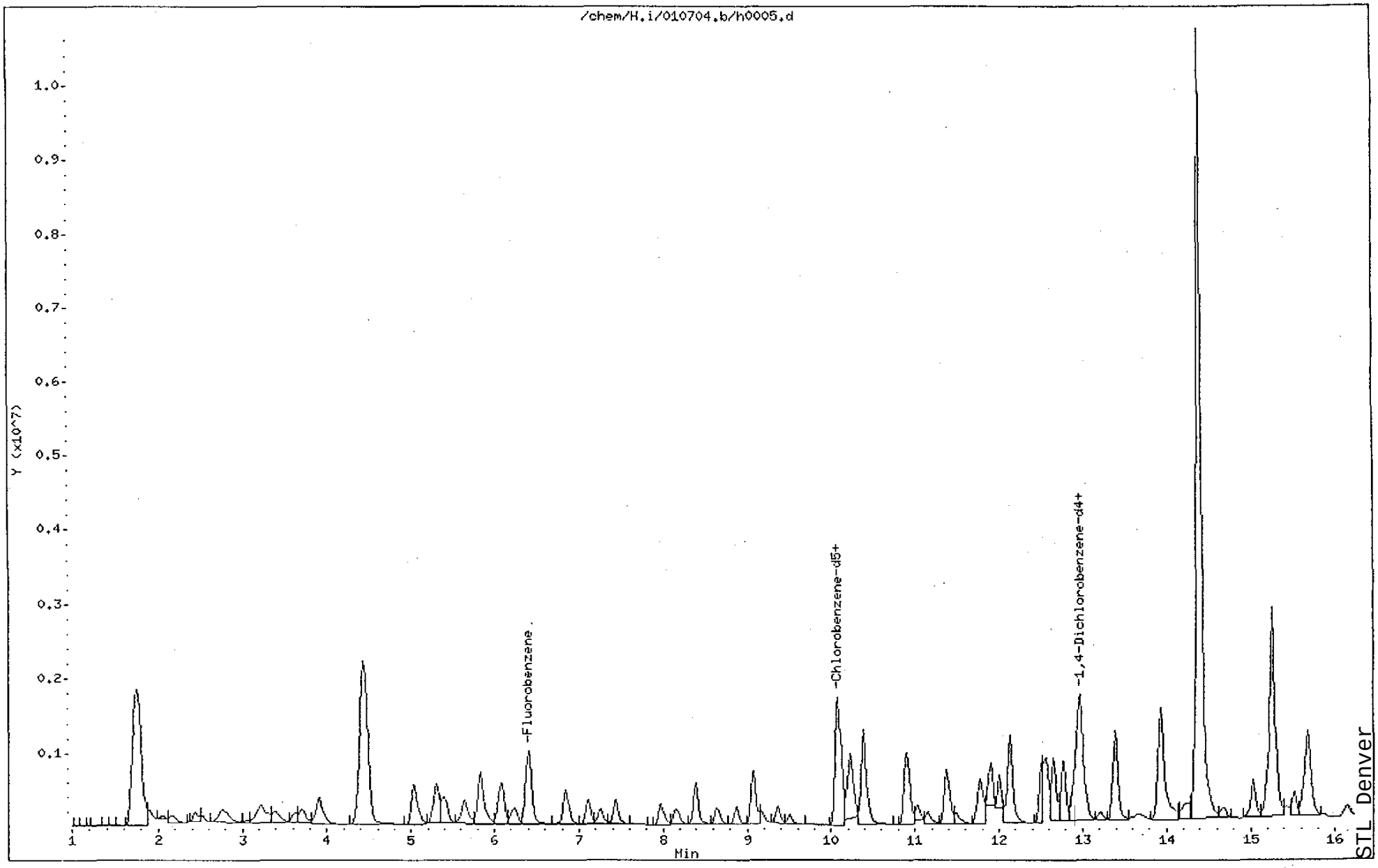
COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
48 Fluorobenzene	2399820	1199910	4799640	2268310	-5.48
72 Chlorobenzene-d5	457381	228690	914762	409934	-10.37
96 1,4-Dichlorobenze	747017	373508	1494034	703312	-5.85

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
48 Fluorobenzene	6.39	5.89	6.89	6.40	0.01
72 Chlorobenzene-d5	10.06	9.56	10.56	10.08	0.19
96 1,4-Dichlorobenze	12.97	12.47	13.47	12.97	0.01

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem/H.i/010704.b/h0005.d
Date : 07-JAN-2004 12:02
Client ID: MAIN005
Sample Info: MAIN005,,
Purge Volume: 20.0
Column phase: DB624

Instrument: H.i
Operator: hoffmann
Column diameter: 0.53



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Data File: /chem/H.i/010704.b/h0006.d
Report Date: 08-Jan-2004 16:02

STL Denver

VOLATILE REPORT SW-846

Data file : /chem/H.i/010704.b/h0006.d
Lab Smp Id: MAIN010 Client Smp ID: MAIN010
Inj Date : 07-JAN-2004 12:24
Operator : hoffmanm Inst ID: H.i
Smp Info : MAIN010,,
Misc Info :
Comment : Purge and Trap Analysis
Method : /chem/H.i/010704.b/H-20ml-h2o.m
Meth Date : 08-Jan-2004 10:26 hoffmanm Quant Type: ISTD
Cal Date : 07-JAN-2004 13:31 Cal File: h0009.d
Als bottle: 2 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 1-main.sub
Target Version: 3.40
Processing Host: chemsv02

Concentration Formula: Amt * DF * Vp/Vs

Name	Value	Description
DF	1.000	Dilution Factor
Vp	20.000	Purge Volume (ml)
Vs	20.000	Sample Volume (ml)

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	ON-COL (ug/L)
* 48 Fluorobenzene	96	6.399	6.396	(1.000)	2307102	12.5000	
* 72 Chlorobenzene-d5	119	10.065	10.079	(1.000)	416478	12.5000	(H)
* 96 1,4-Dichlorobenzene-d4	152	12.958	12.972	(1.000)	716331	12.5000	
M 1 1,2-Dichloroethene (total)	96				1405867	20.0000	21.6790
M 2 Xylene (total)	106				2706559	10.0000	32.7026
3 dichlorodifluoromethane	85	1.889	1.886	(0.295)	958445	10.0000	11.0476
4 Chloromethane	50	2.050	2.048	(0.320)	512498	10.0000	11.1351
5 Vinyl Chloride	62	2.158	2.156	(0.337)	543652	10.0000	11.3335
7 Bromomethane	94	2.428	2.425	(0.379)	540110	10.0000	11.0910
8 Chloroethane	64	2.518	2.515	(0.393)	369912	10.0000	11.0339
10 Trichlorofluoromethane	101	2.751	2.749	(0.430)	1322877	10.0000	11.4221
11 Ethanol	45	2.823	2.803	(0.441)	58993	500.000	555.370
13 Acrolein	56	3.039	3.036	(0.475)	165245	100.000	111.653
14 1,1-Dichloroethene	96	3.218	3.198	(0.503)	674796	10.0000	11.0959
15 Acetone	43	3.182	3.180	(0.497)	185077	40.0000	45.6689
17 Iodomethane	142	3.398	3.378	(0.531)	1242950	10.0000	10.7736(M)

Data File: /chem/H.i/010704.b/h0006.d
Report Date: 08-Jan-2004 16:02

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
19 Acetonitrile	41	3.452	3.450	(0.539)	95930	100.000	116.825
21 Methylene Chloride	84	3.704	3.683	(0.579)	545885	10.0000	10.3033(M)
22 tert-Butyl alcohol	59	3.721	3.719	(0.582)	318054	200.000	219.639
23 Acrylonitrile	53	3.865	3.845	(0.604)	392970	100.000	109.996
24 trans-1,2-Dichloroethene	96	3.901	3.899	(0.610)	709677	10.0000	10.8887
27 1,1-Dichloroethane	63	4.350	4.348	(0.680)	1188995	10.0000	10.8551
28 Chloroprene	53	4.458	4.456	(0.697)	994916	10.0000	11.0564
30 Isopropyl ether	87	4.422	4.420	(0.691)	2400440	50.0000	55.2798
32 cis-1,2-Dichloroethene	96	5.033	5.013	(0.787)	696190	10.0000	10.7902
31 2,2-Dichloropropane	77	5.033	5.013	(0.787)	843095	10.0000	10.7448
33 2-Butanone	43	5.033	5.031	(0.787)	321718	40.0000	40.3539
34 Propionitrile	54	5.087	5.085	(0.795)	148387	100.000	111.529
36 Methacrylonitrile	41	5.285	5.264	(0.826)	1170769	100.000	111.576
37 Bromochloromethane	128	5.303	5.300	(0.829)	288531	10.0000	11.2502
38 Chloroform	83	5.393	5.372	(0.843)	1317598	10.0000	10.9570
41 1,1,1-Trichloroethane	97	5.626	5.624	(0.879)	1301992	10.0000	10.8271
42 1,1-Dichloropropene	75	5.824	5.803	(0.910)	1050638	10.0000	10.8256
43 Carbon Tetrachloride	117	5.824	5.821	(0.910)	1118096	10.0000	10.8606
45 Isobutanol	41	5.932	5.929	(0.927)	91582	200.000	219.036
46 Benzene	78	6.075	6.055	(0.949)	2004826	10.0000	10.8752
47 1,2-Dichloroethane	62	6.075	6.073	(0.949)	518968	10.0000	11.1202
49 n-Butanol	56	6.740	6.720	(1.053)	72870	200.000	207.895
50 Trichloroethene	130	6.830	6.828	(1.067)	769325	10.0000	10.9990
52 1,2-Dichloropropane	63	7.100	7.079	(1.110)	647582	10.0000	10.9616
53 Dibromomethane	93	7.243	7.223	(1.132)	385312	10.0000	11.0428
55 1,4-Dioxane	88	7.261	7.241	(1.135)	90173	500.000	535.084
56 Bromodichloromethane	83	7.423	7.421	(1.160)	1058139	10.0000	10.8394
59 cis-1,3-Dichloropropene	75	7.962	7.960	(0.781)	858677	10.0000	10.8924
60 4-Methyl-2-pentanone	43	8.142	8.139	(0.799)	898011	40.0000	45.0166
62 Toluene	91	8.375	8.373	(0.822)	2194035	10.0000	10.6986
63 trans-1,3-Dichloropropene	75	8.627	8.625	(0.847)	633442	10.0000	10.8794
65 1,1,2-Trichloroethane	97	8.861	8.858	(0.870)	361682	10.0000	10.9211
67 1,3-Dichloropropane	76	9.058	9.056	(0.889)	617918	10.0000	11.0634
66 Tetrachloroethene	164	9.058	9.038	(0.889)	716700	10.0000	10.9141
68 2-Hexanone	43	9.166	9.146	(0.899)	566850	40.0000	44.6776
69 Dibromochloromethane	129	9.346	9.343	(0.917)	645279	10.0000	11.1580
70 1,2-Dibromoethane	107	9.490	9.487	(0.931)	464688	10.0000	11.1202
71 1-Chlorohexane	91	10.065	10.044	(0.988)	1032860	10.0000	10.7505
73 Chlorobenzene	112	10.100	10.080	(0.991)	1340644	10.0000	10.8319
74 1,1,1,2-Tetrachloroethane	131	10.190	10.188	(1.000)	646123	10.0000	10.8517
75 Ethylbenzene	106	10.226	10.224	(1.004)	687669	10.0000	10.8225
76 m and p-Xylene	106	10.370	10.368	(1.018)	1882677	20.0000	21.9504
77 o-Xylene	106	10.873	10.871	(1.067)	823882	10.0000	10.7522
78 Styrene	104	10.891	10.889	(1.069)	1348615	10.0000	11.0322
79 Bromoform	173	11.143	11.140	(1.093)	366760	10.0000	11.2419
80 isopropyl benzene	105	11.376	11.356	(1.116)	2768817	10.0000	10.9446
81 Cyclohexanone	55	11.484	11.464	(1.127)	329957	400.000	443.236

Data File: /chem/H.i/010704.b/h0006.d
Report Date: 08-Jan-2004 16:02

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
83 1,1,2,2-Tetrachloroethane	83	11.736	11.733	(1.152)	460061	10.0000	11.0863
84 Bromobenzene	156	11.754	11.751	(0.907)	638822	10.0000	10.8633
85 1,2,3-Trichloropropane	110	11.790	11.787	(0.910)	105673	10.0000	10.4232
87 n-Propylbenzene	120	11.897	11.877	(0.918)	614643	10.0000	10.5884
88 2-Chlorotoluene	126	12.005	11.985	(0.926)	519061	10.0000	10.7168
89 1,3,5-Trimethylbenzene	105	12.113	12.093	(0.935)	2115014	10.0000	10.8378
90 4-Chlorotoluene	126	12.131	12.129	(0.936)	570665	10.0000	10.6718
91 tert-Butylbenzene	119	12.508	12.488	(0.965)	2143976	10.0000	10.8056
92 1,2,4-Trimethylbenzene	105	12.562	12.560	(0.969)	1985829	10.0000	10.9018
93 sec-Butylbenzene	134	12.760	12.757	(0.985)	568693	10.0000	10.9097
94 m-Dichlorobenzene	146	12.886	12.883	(0.994)	1027334	10.0000	10.5859
95 4-Isopropyltoluene	119	12.922	12.919	(0.997)	2426571	10.0000	10.9786
97 p-dichlorobenzene	146	12.993	12.973	(1.003)	1286849	10.0000	11.0407
98 n-Butylbenzene	91	13.371	13.368	(1.032)	2694306	10.0000	10.9370
99 o-Dichlorobenzene	146	13.389	13.386	(1.033)	935215	10.0000	10.8460
100 1,2-Dibromo-3-chloropropane	157	14.215	14.195	(1.097)	81262	10.0000	11.0706
101 1,2,4-Trichlorobenzene	180	15.024	15.004	(1.159)	634239	10.0000	11.0786
102 Hexachlorobutadiene	225	15.186	15.183	(1.172)	547598	10.0000	11.1290
127 Naphthalene	128	15.258	15.255	(1.177)	718380	10.0000	11.5102
104 1,2,3-Trichlorobenzene	180	15.509	15.507	(1.197)	495240	10.0000	11.1647

QC Flag Legend

M - Compound response manually integrated.
H - Operator selected an alternate compound hit.

Data File: /chem/H.i/010704.b/h0006.d
Report Date: 08-Jan-2004 16:02

STL Denver

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: H.i
Lab File ID: h0006.d
Lab Smp Id: MAIN010
Analysis Type: VOA
Quant Type: ISTD
Operator: hoffmanm
Method File: /chem/H.i/010704.b/H-20ml-h2o.m
Misc Info:

Calibration Date: JAN/07/4
Calibration Time: 1439
Client Smp ID: MAIN010
Level: LOW
Sample Type: WATER

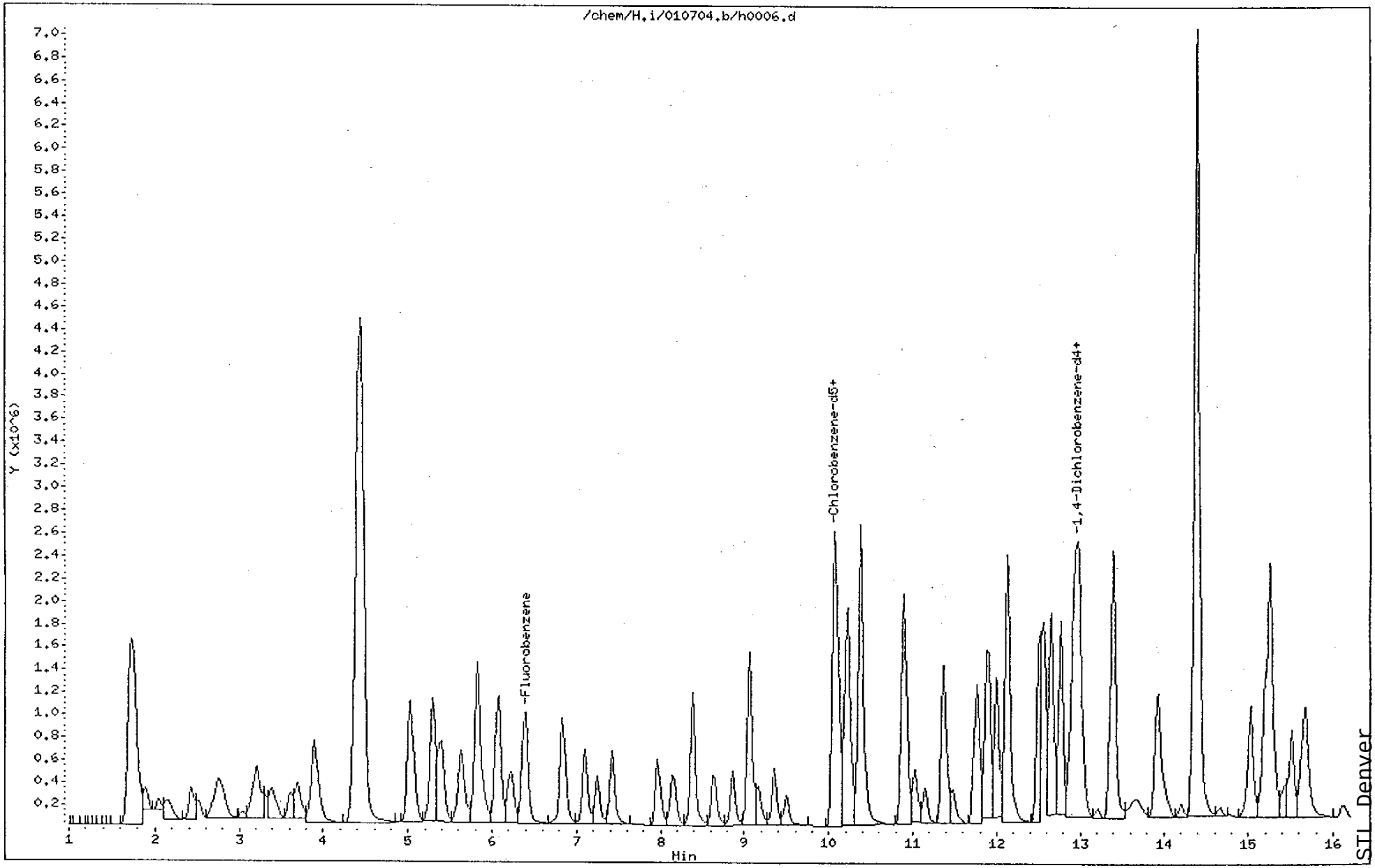
COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
48 Fluorobenzene	2399820	1199910	4799640	2307102	-3.86
72 Chlorobenzene-d5	457381	228690	914762	416478	-8.94
96 1,4-Dichlorobenze	747017	373508	1494034	716331	-4.11

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
48 Fluorobenzene	6.39	5.89	6.89	6.40	0.06
72 Chlorobenzene-d5	10.06	9.56	10.56	10.06	0.04
96 1,4-Dichlorobenze	12.97	12.47	13.47	12.96	-0.11

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem/H.i/010704.b/h0006.d
Date : 07-JAN-2004 12:24
Client ID: MAIN010
Sample Info: MAIN010,,
Purge Volume: 20.0
Column phase: DB624

Instrument: H.i
Operator: hoffmanm
Column diameter: 0.53



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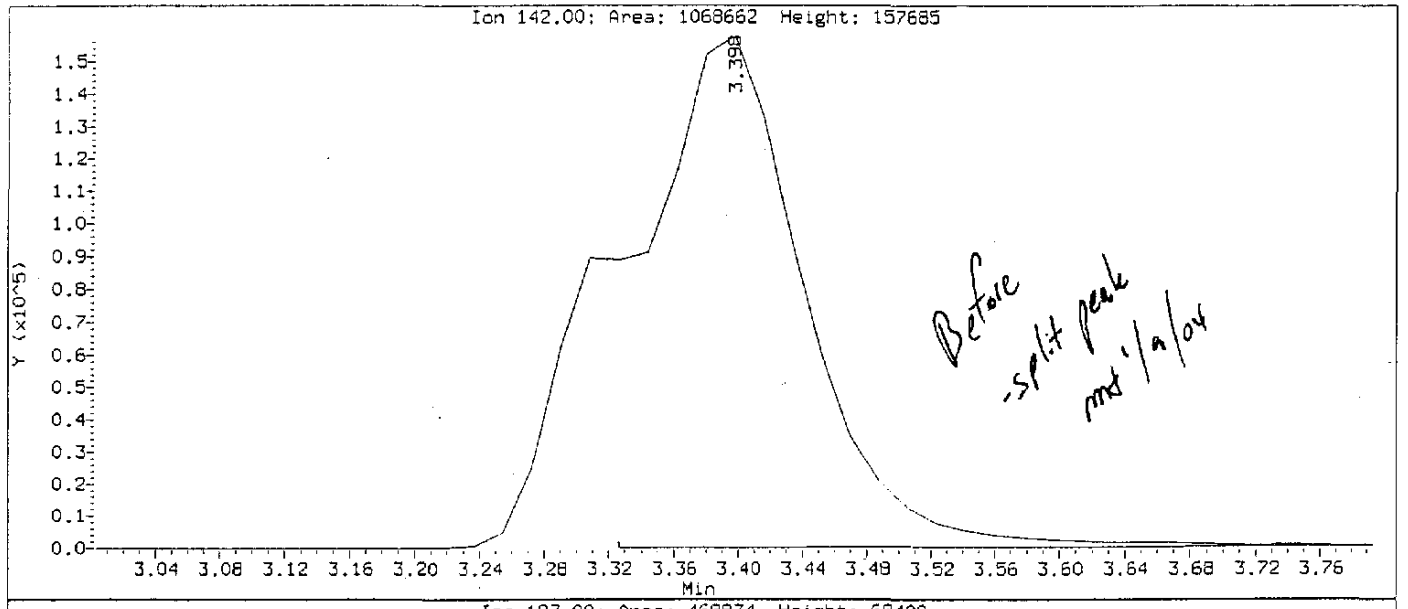
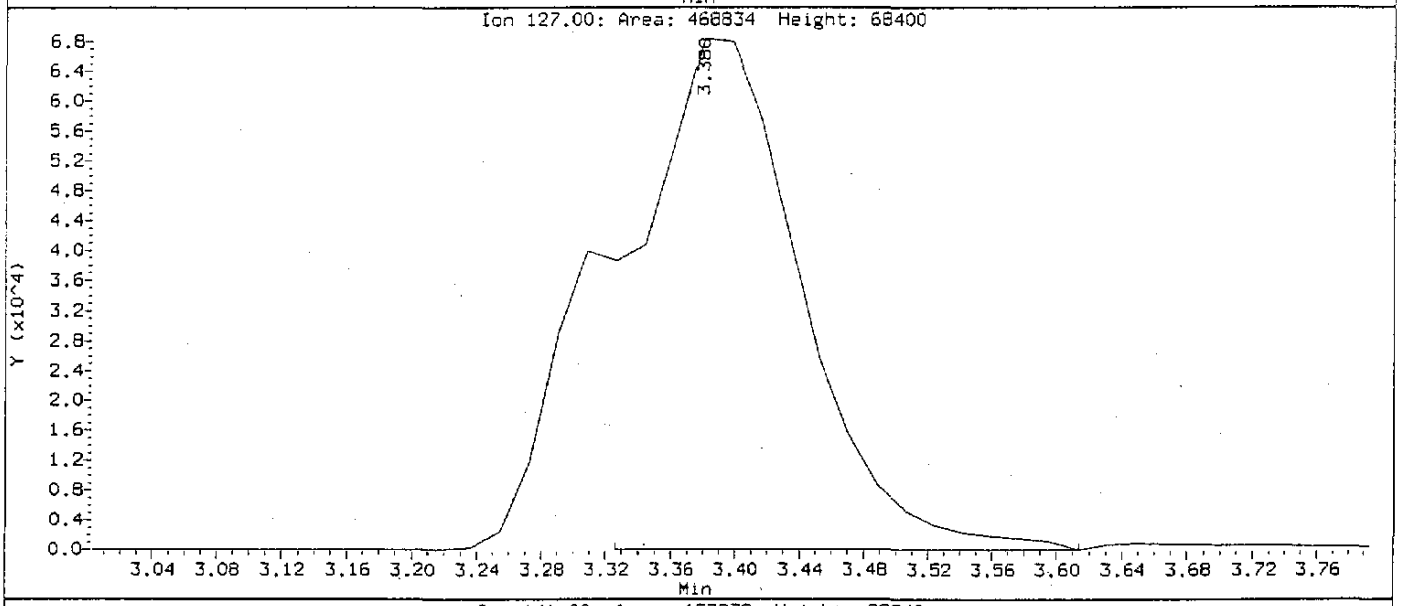
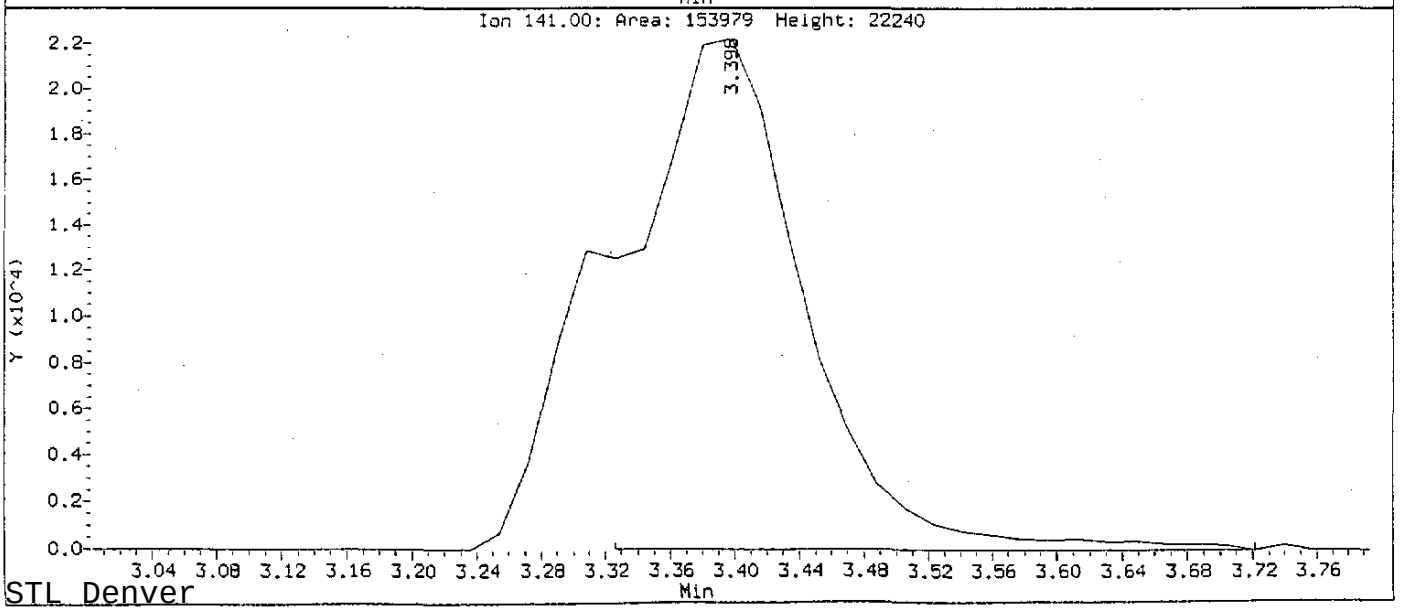
Data File: /chem/H.i/010704.b/h0006.d
Injection Date: 07-JAN-2004 12:24
Instrument: H.i
Client Sample ID: MAIN010

Compound: Iodomethane
CAS Number: 74-88-4

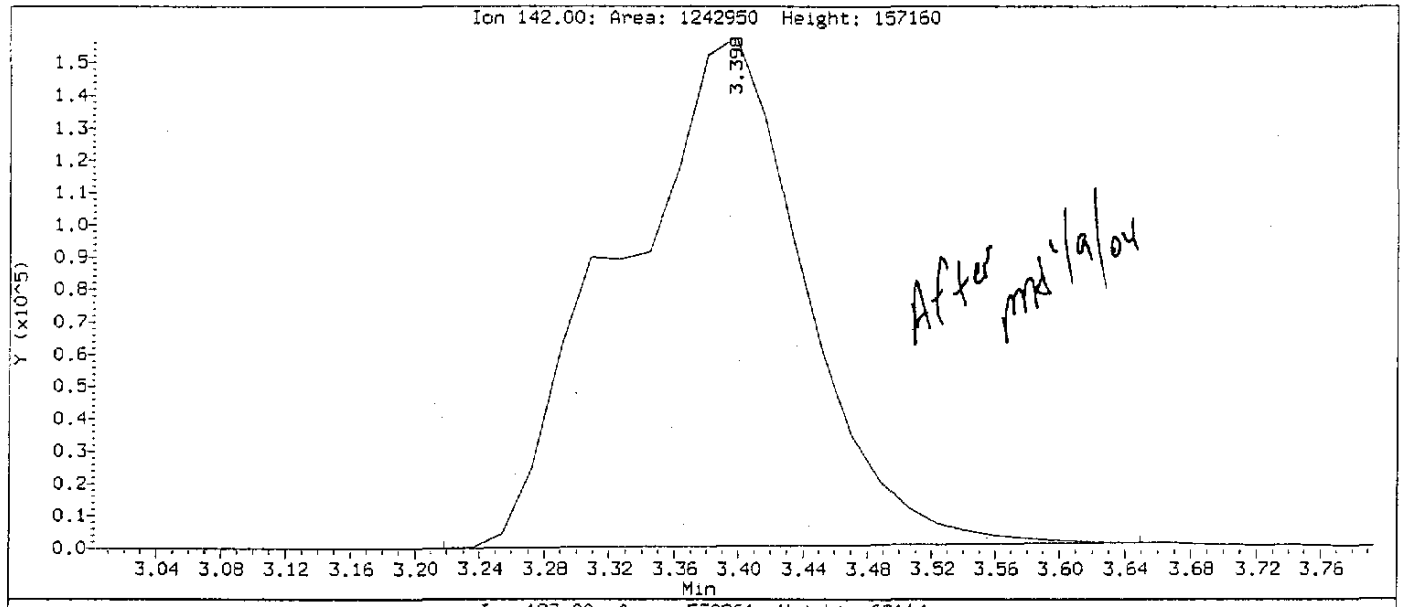


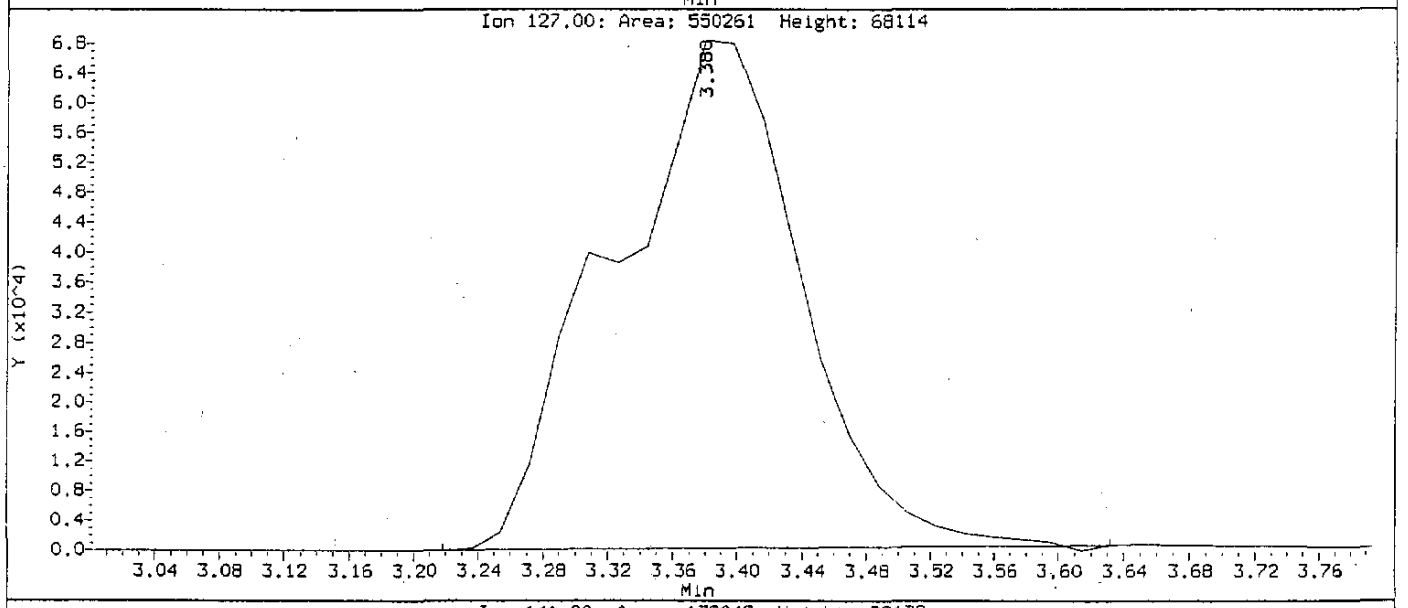


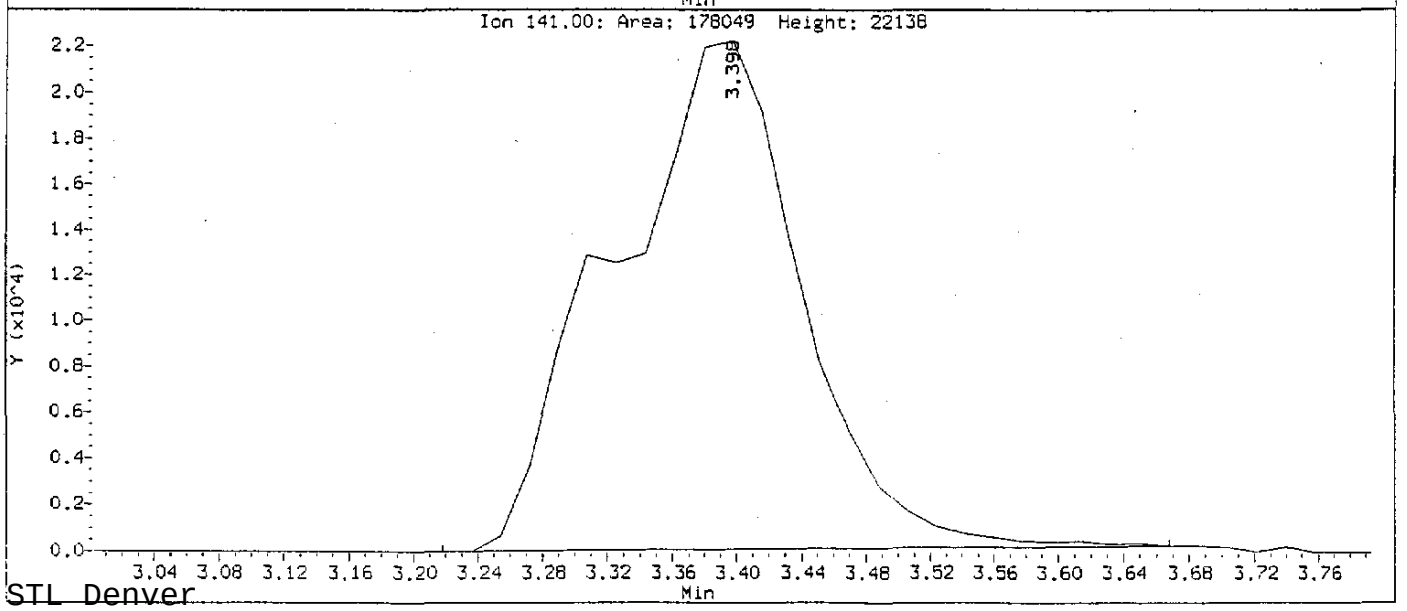


Data File: /chem/H.i/010704.b/h0006.d
Injection Date: 07-JAN-2004 12:24
Instrument: H.i
Client Sample ID: MAIN010

Compound: Iodomethane
CAS Number: 74-88-4

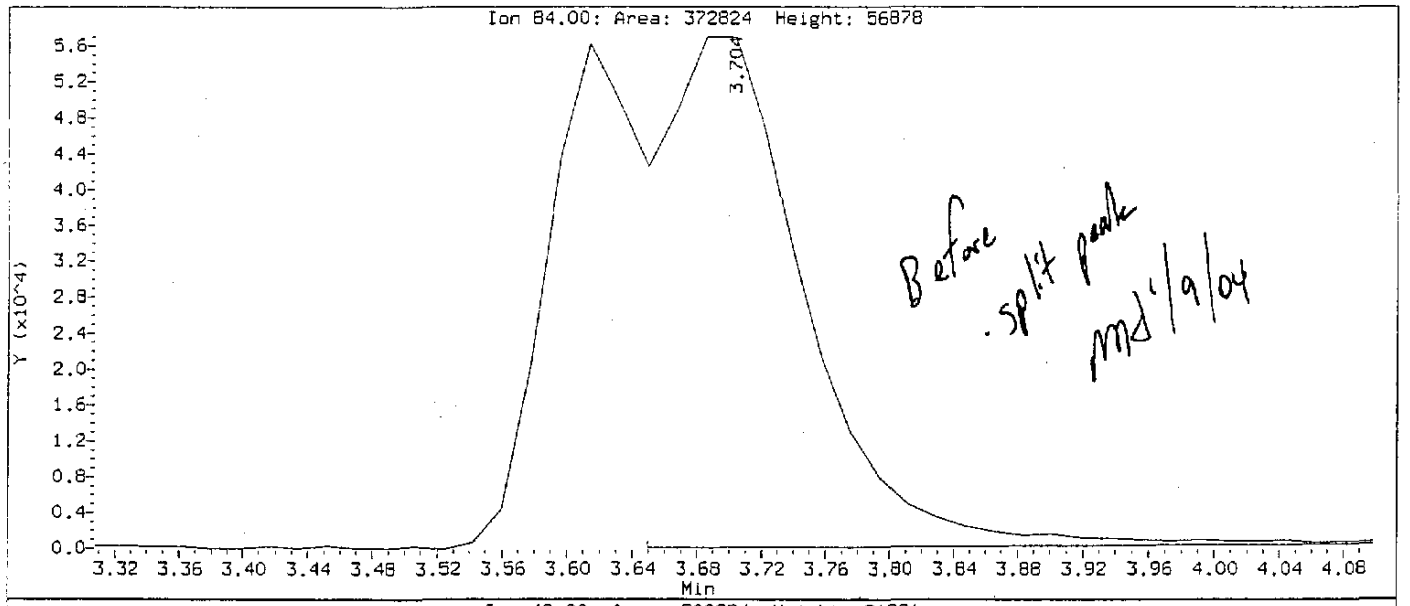


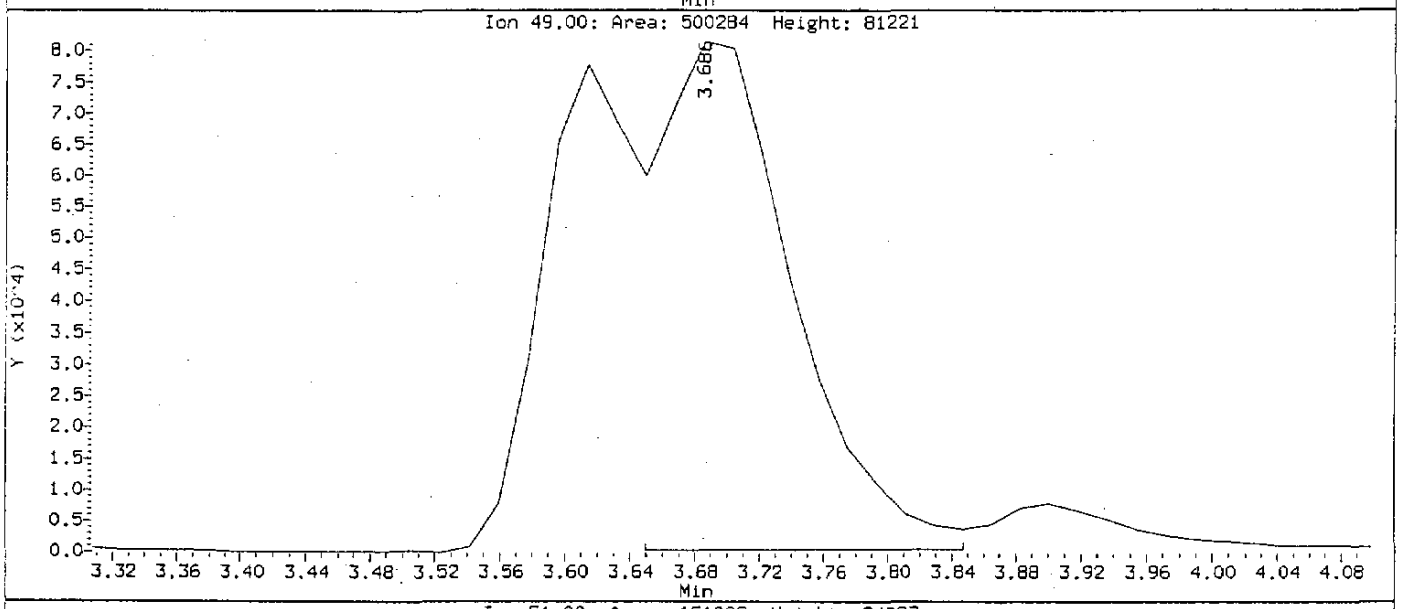


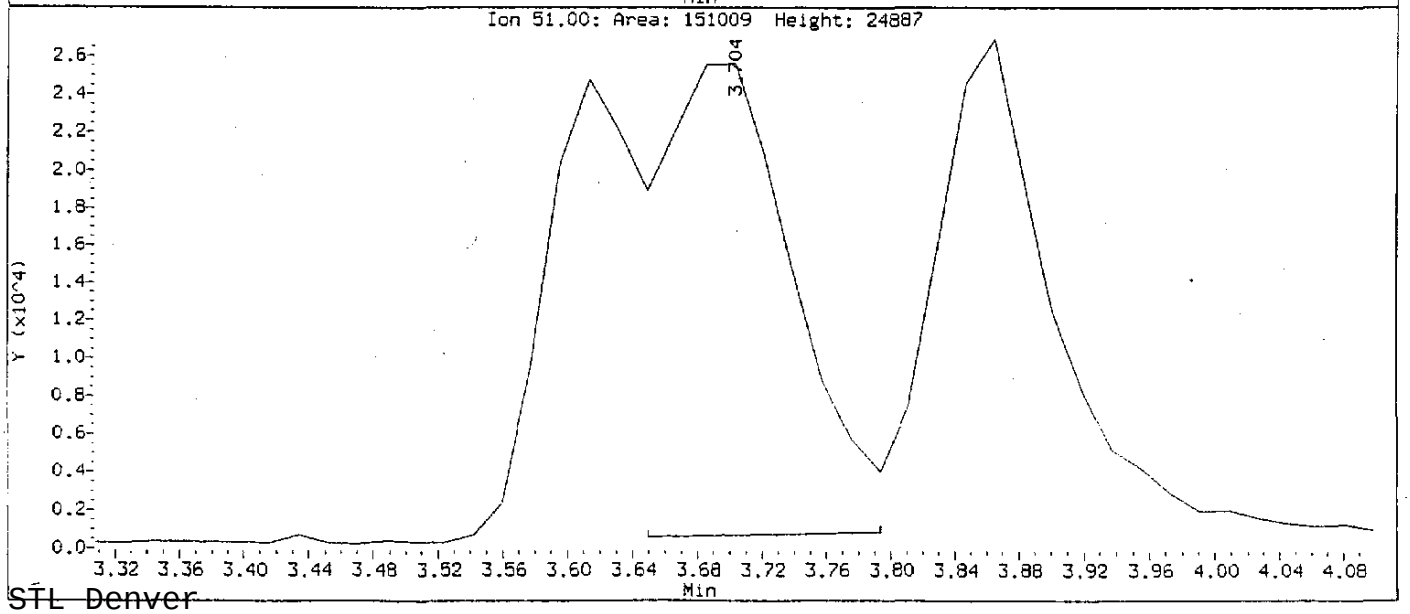


Data File: /chem/H.i/010704.b/h0006.d
Injection Date: 07-JAN-2004 12:24
Instrument: H.i
Client Sample ID: MAIN010

Compound: Methylene Chloride
CAS Number: 75-09-2

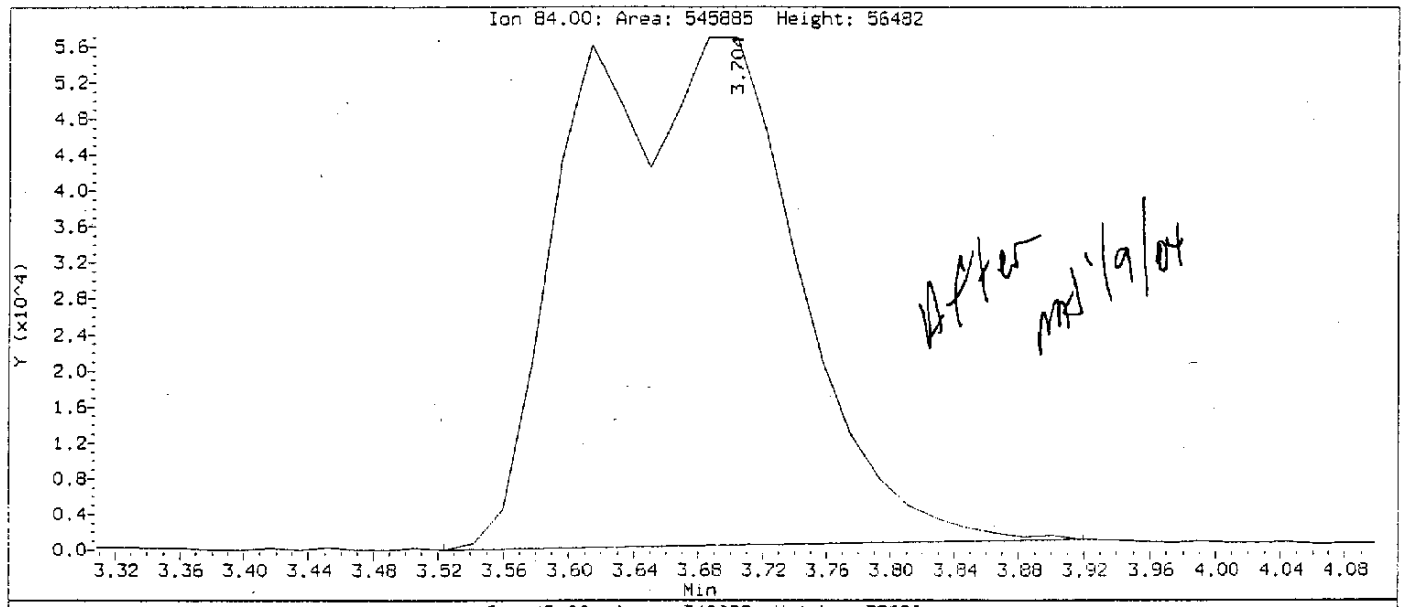


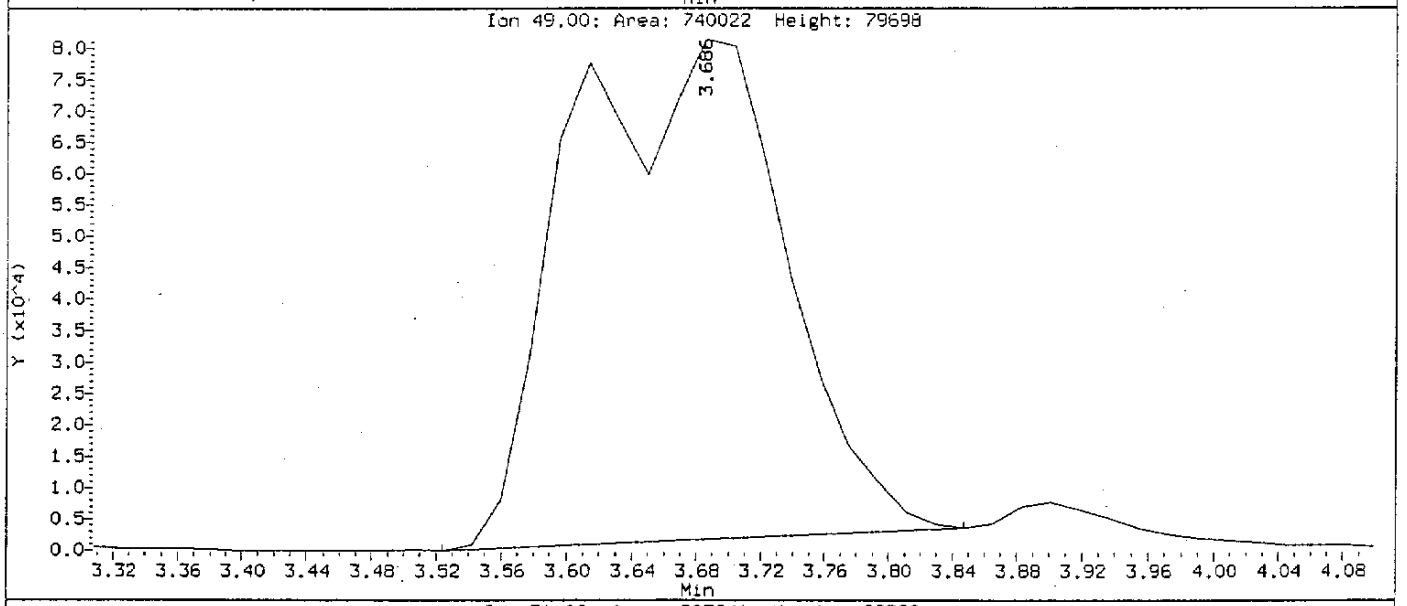


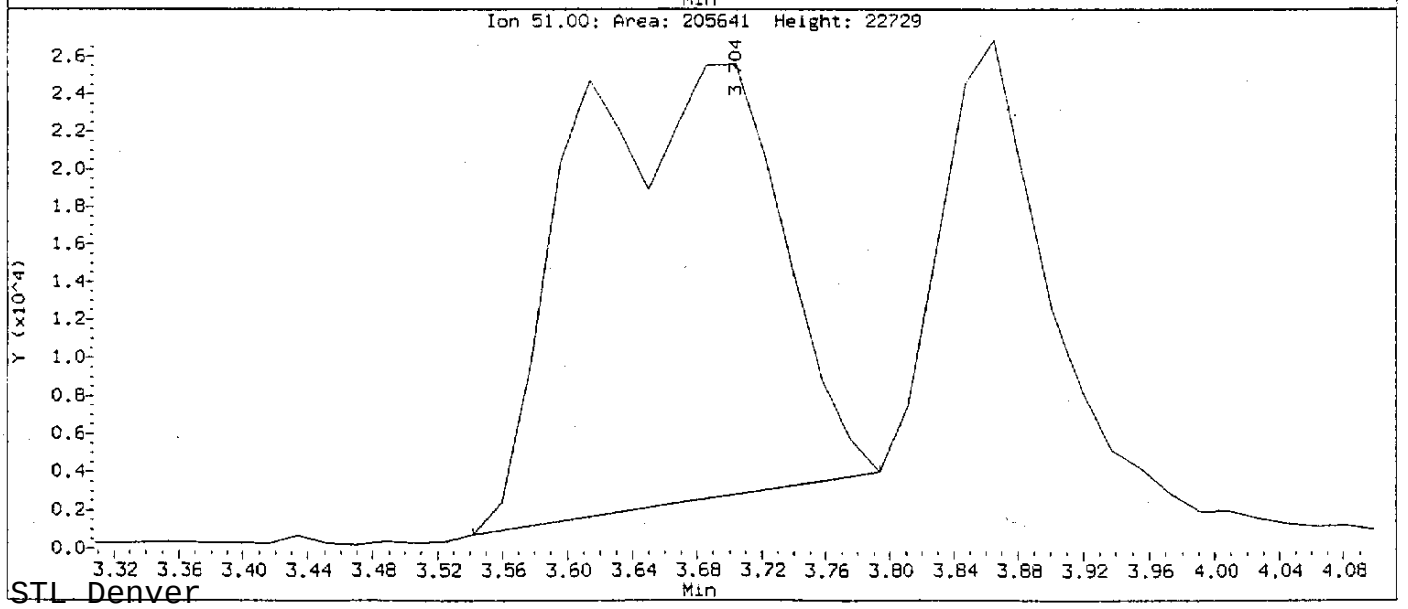


Data File: /chem/H.i/010704.b/h0006.d
Injection Date: 07-JAN-2004 12:24
Instrument: H.i
Client Sample ID: MAIN010

Compound: Methylene Chloride
CAS Number: 75-09-2







Data File: /chem/H.i/010704.b/h0007.d
Report Date: 08-Jan-2004 16:02

STL Denver

VOLATILE REPORT SW-846

Data file : /chem/H.i/010704.b/h0007.d
Lab Smp Id: MAIN030 Client Smp ID: MAIN030
Inj Date : 07-JAN-2004 12:47
Operator : hoffmanm Inst ID: H.i
Smp Info : MAIN030,,
Misc Info :
Comment : Purge and Trap Analysis
Method : /chem/H.i/010704.b/H-20ml-h2o.m
Meth Date : 08-Jan-2004 10:26 hoffmanm Quant Type: ISTD
Cal Date : 07-JAN-2004 13:31 Cal File: h0009.d
Als bottle: 2 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 1-main.sub
Target Version: 3.40
Processing Host: chemsv02

Concentration Formula: Amt * DF * Vp/Vs

Name	Value	Description
DF	1.000	Dilution Factor
Vp	20.000	Purge Volume (ml)
Vs	20.000	Sample Volume (ml)

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	ON-COL (ug/L)
* 48 Fluorobenzene	96	6.381	6.396	(1.000)	2248879	12.5000	
* 72 Chlorobenzene-d5	119	10.064	10.079	(1.000)	393302	12.5000	(H)
* 96 1,4-Dichlorobenzene-d4	152	12.957	12.972	(1.000)	670825	12.5000	
M 1 1,2-Dichloroethene (total)	96				4123061	60.0000	62.9519
M 2 Xylene (total)	106				7847899	30.0000	96.8567
3 dichlorodifluoromethane	85	1.888	1.886	(0.296)	2756874	30.0000	31.4604
4 Chloromethane	50	2.050	2.048	(0.321)	1463022	30.0000	31.4699
5 Vinyl Chloride	62	2.158	2.156	(0.338)	1559625	30.0000	32.1633
7 Bromomethane	94	2.427	2.425	(0.380)	1585014	30.0000	32.1961
8 Chloroethane	64	2.517	2.515	(0.395)	1094862	30.0000	32.3011
10 Trichlorofluoromethane	101	2.751	2.749	(0.431)	3936309	30.0000	33.5668
11 Ethanol	45	2.823	2.803	(0.442)	182612	1500.00	1504.25
13 Acrolein	56	3.038	3.036	(0.476)	505077	300.000	334.492
14 1,1-Dichloroethene	96	3.218	3.198	(0.504)	1959227	30.0000	31.8796
15 Acetone	43	3.182	3.180	(0.499)	510136	120.000	134.847
17 Iodomethane	142	3.380	3.378	(0.530)	3804532	30.0000	32.6049

Data File: /chem/H.i/010704.b/h0007.d
Report Date: 08-Jan-2004 16:02

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
19 Acetonitrile	41	3.452	3.450	(0.541)	289826	300.000	345.416
21 Methylene Chloride	84	3.685	3.683	(0.578)	1688280	30.0000	31.3251
22 tert-Butyl alcohol	59	3.721	3.719	(0.583)	985026	600.000	671.798
23 Acrylonitrile	53	3.847	3.845	(0.603)	1267436	300.000	349.806
24 trans-1,2-Dichloroethene	96	3.901	3.899	(0.611)	2021269	30.0000	30.7294
27 1,1-Dichloroethane	63	4.350	4.348	(0.682)	3583703	30.0000	32.3583
28 Chloroprene	53	4.458	4.456	(0.699)	2953346	30.0000	32.4559
30 Isopropyl ether	87	4.422	4.420	(0.693)	7400734	150.000	168.305
32 cis-1,2-Dichloroethene	96	5.015	5.013	(0.786)	2101792	30.0000	32.2226
31 2,2-Dichloropropane	77	5.015	5.013	(0.786)	2438422	30.0000	30.7902
33 2-Butanone	43	5.033	5.031	(0.789)	996892	120.000	123.866
34 Propionitrile	54	5.087	5.085	(0.797)	480529	300.000	355.870
36 Methacrylonitrile	41	5.266	5.264	(0.825)	3692892	300.000	347.125
37 Bromochloromethane	128	5.302	5.300	(0.831)	878758	30.0000	33.8298
38 Chloroform	83	5.392	5.372	(0.845)	3994434	30.0000	32.8341
41 1,1,1-Trichloroethane	97	5.626	5.624	(0.882)	3859043	30.0000	31.7600
42 1,1-Dichloropropene	75	5.806	5.803	(0.910)	3089534	30.0000	31.5147
43 Carbon Tetrachloride	117	5.823	5.821	(0.913)	3330699	30.0000	32.0099
45 Isobutanol	41	5.931	5.929	(0.930)	303533	600.000	709.524
46 Benzene	78	6.057	6.055	(0.949)	5943810	30.0000	31.9045
47 1,2-Dichloroethane	62	6.075	6.073	(0.952)	1579617	30.0000	33.4336
49 n-Butanol	56	6.722	6.720	(1.054)	264914	600.000	694.968
50 Trichloroethene	130	6.830	6.828	(1.070)	2253342	30.0000	31.8794
52 1,2-Dichloropropane	63	7.099	7.079	(1.113)	1954325	30.0000	32.7042
53 Dibromomethane	93	7.243	7.223	(1.135)	1167278	30.0000	33.0591
55 1,4-Dioxane	88	7.261	7.241	(1.138)	298006	1500.00	1730.43
56 Bromodichloromethane	83	7.423	7.421	(1.163)	3248351	30.0000	32.8895
59 cis-1,3-Dichloropropene	75	7.962	7.960	(0.781)	2609560	30.0000	33.7391
60 4-Methyl-2-pentanone	43	8.141	8.139	(0.799)	2796115	120.000	142.549
62 Toluene	91	8.375	8.373	(0.822)	6483204	30.0000	32.2760
63 trans-1,3-Dichloropropene	75	8.627	8.625	(0.847)	1926829	30.0000	33.7301
65 1,1,2-Trichloroethane	97	8.860	8.858	(0.870)	1098006	30.0000	33.7903
67 1,3-Dichloropropane	76	9.058	9.056	(0.889)	1844604	30.0000	33.6644
66 Tetrachloroethene	164	9.058	9.038	(0.889)	2044027	30.0000	31.7967
68 2-Hexanone	43	9.148	9.146	(0.898)	1775199	120.000	142.305
69 Dibromochloromethane	129	9.345	9.343	(0.917)	1966363	30.0000	34.6205
70 1,2-Dibromoethane	107	9.489	9.487	(0.931)	1392681	30.0000	33.9598
71 1-Chlorohexane	91	10.064	10.044	(0.988)	2937422	30.0000	31.2516
73 Chlorobenzene	112	10.100	10.080	(0.991)	3944085	30.0000	32.5250
74 1,1,1,2-Tetrachloroethane	131	10.190	10.188	(1.000)	1925500	30.0000	32.9893
75 Ethylbenzene	106	10.226	10.224	(1.004)	2002288	30.0000	32.1757
76 m and p-Xylene	106	10.370	10.368	(1.018)	5425933	60.0000	64.5859
77 o-Xylene	106	10.873	10.871	(1.067)	2421966	30.0000	32.2708
78 Styrene	104	10.891	10.889	(1.069)	3938334	30.0000	32.8698
79 Bromoform	173	11.142	11.140	(1.093)	1127170	30.0000	35.1568
80 isopropyl benzene	105	11.358	11.356	(1.115)	7858523	30.0000	31.7338
81 Cyclohexanone	55	11.484	11.464	(1.127)	1037338	1200.00	1417.48(A)

Data File: /chem/H.i/010704.b/h0007.d
Report Date: 08-Jan-2004 16:02

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
83 1,1,2,2-Tetrachloroethane	83	11.735	11.733	(1.152)	1400761	30.0000	34.3785
84 Bromobenzene	156	11.753	11.751	(0.907)	1866377	30.0000	32.6613
85 1,2,3-Trichloropropane	110	11.789	11.787	(0.910)	307838	30.0000	31.2963
87 n-Propylbenzene	120	11.879	11.877	(0.917)	1746501	30.0000	31.0206
88 2-Chlorotoluene	126	11.987	11.985	(0.925)	1511685	30.0000	32.1380
89 1,3,5-Trimethylbenzene	105	12.095	12.093	(0.933)	6009696	30.0000	31.7248
90 4-Chlorotoluene	126	12.131	12.129	(0.936)	1607090	30.0000	30.9873
91 tert-Butylbenzene	119	12.490	12.488	(0.964)	6099296	30.0000	31.6707
92 1,2,4-Trimethylbenzene	105	12.562	12.560	(0.969)	5595351	30.0000	31.6477
93 sec-Butylbenzene	134	12.759	12.757	(0.985)	1575525	30.0000	31.1574
94 m-Dichlorobenzene	146	12.885	12.883	(0.994)	3051757	30.0000	32.3715
95 4-Isopropyltoluene	119	12.921	12.919	(0.997)	6740361	30.0000	31.4272
97 p-dichlorobenzene	146	12.975	12.973	(1.001)	3595739	30.0000	31.7796
98 n-Butylbenzene	91	13.370	13.368	(1.032)	7342891	30.0000	30.7417
99 o-Dichlorobenzene	146	13.388	13.386	(1.033)	2682622	30.0000	32.0391
100 1,2-Dibromo-3-chloropropane	157	14.197	14.195	(1.096)	249755	30.0000	34.9233
101 1,2,4-Trichlorobenzene	180	15.006	15.004	(1.158)	1769142	30.0000	31.8319
102 Hexachlorobutadiene	225	15.185	15.183	(1.172)	1418279	30.0000	29.7617
127 Naphthalene	128	15.257	15.255	(1.177)	2026698	30.0000	33.3891
104 1,2,3-Trichlorobenzene	180	15.509	15.507	(1.197)	1363818	30.0000	31.6760

QC Flag Legend

A - Target compound detected but, quantitated amount exceeded maximum amount.
H - Operator selected an alternate compound hit.

Data File: /chem/H.i/010704.b/h0007.d
Report Date: 08-Jan-2004 16:02

STL Denver

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: H.i
Lab File ID: h0007.d
Lab Smp Id: MAIN030
Analysis Type: VOA
Quant Type: ISTD
Operator: hoffmanm
Method File: /chem/H.i/010704.b/H-20ml-h2o.m
Misc Info:

Calibration Date: JAN/07/4
Calibration Time: 1439
Client Smp ID: MAIN030
Level: LOW
Sample Type: WATER

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
48 Fluorobenzene	2399820	1199910	4799640	2248879	-6.29
72 Chlorobenzene-d5	457381	228690	914762	393302	-14.01
96 1,4-Dichlorobenze	747017	373508	1494034	670825	-10.20

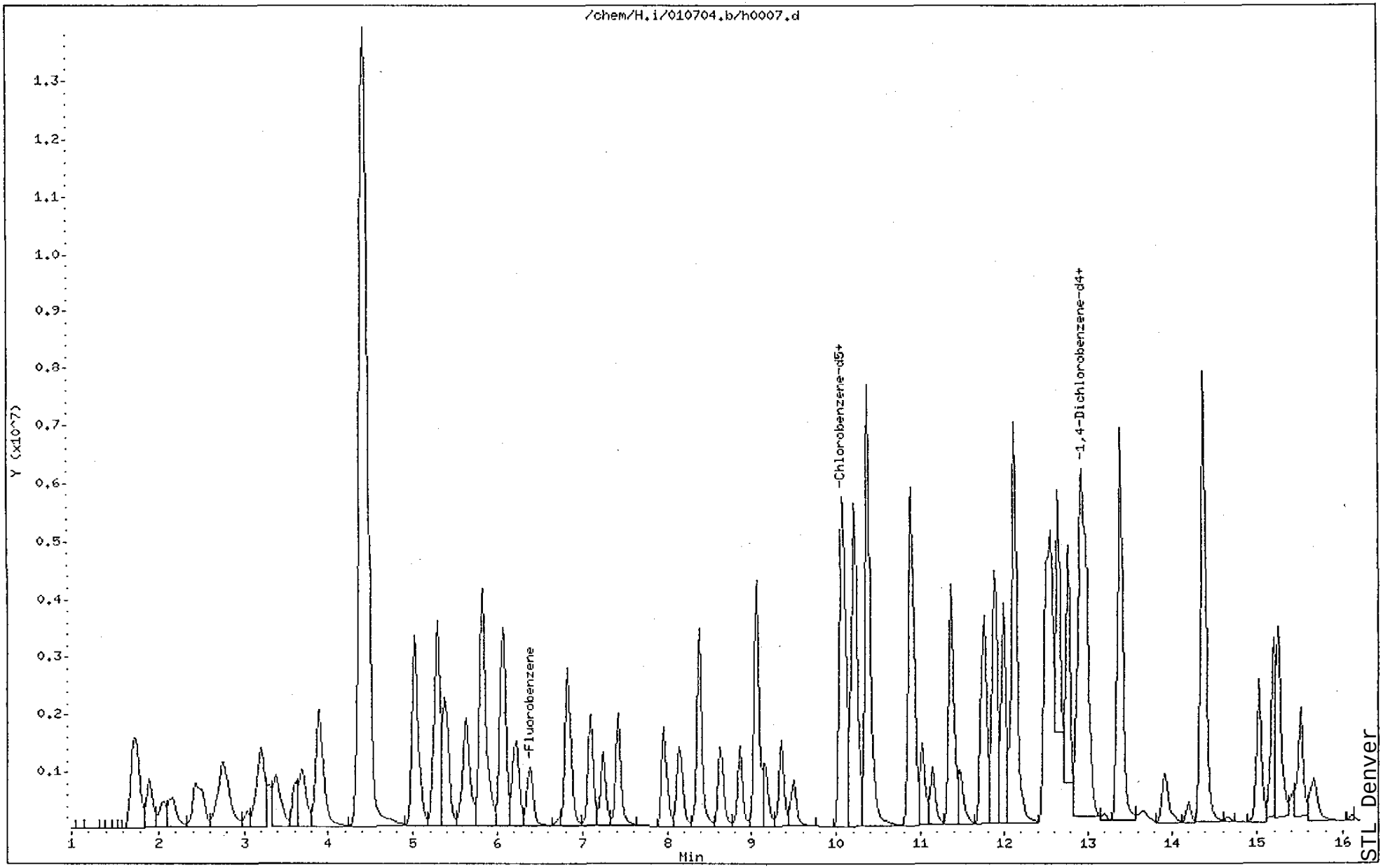
COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
48 Fluorobenzene	6.39	5.89	6.89	6.38	-0.22
72 Chlorobenzene-d5	10.06	9.56	10.56	10.06	0.04
96 1,4-Dichlorobenze	12.97	12.47	13.47	12.96	-0.11

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem/H.i/010704.b/h0007.d
Date : 07-JAN-2004 12:47
Client ID: MAIN030
Sample Info: MAIN030,,
Purge Volume: 20.0
Column phase: DB624

Instrument: H.i

Operator: hoffmanm
Column diameter: 0.53



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Report Date: 08-Jan-2004 16:02

STL Denver

VOLATILE REPORT SW-846

Data file : /chem/H.i/010704.b/h0008.d
Lab Smp Id: MAIN060 Client Smp ID: MAIN060
Inj Date : 07-JAN-2004 13:09
Operator : hoffmanm Inst ID: H.i
Smp Info : MAIN060,,
Misc Info :
Comment : Purge and Trap Analysis
Method : /chem/H.i/010704.b/H-20ml-h2o.m
Meth Date : 08-Jan-2004 10:26 hoffmanm Quant Type: ISTD
Cal Date : 07-JAN-2004 13:31 Cal File: h0009.d
Als bottle: 2 Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 1-main.sub
Target Version: 3.40
Processing Host: chemsv02

Concentration Formula: Amt * DF * Vp/Vs

Name	Value	Description
DF	1.000	Dilution Factor
Vp	20.000	Purge Volume (ml)
Vs	20.000	Sample Volume (ml)

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	ON-COL (ug/L)
* 48 Fluorobenzene	96	6.378	6.396	(1.000)	2374049	12.5000	
* 72 Chlorobenzene-d5	119	10.044	10.079	(1.000)	428895	12.5000	(H)
* 96 1,4-Dichlorobenzene-d4	152	12.955	12.972	(1.000)	712584	12.5000	
M 1 1,2-Dichloroethene (total)	96				8319437	120.000	116.428
M 2 Xylene (total)	106				15671417	60.0000	171.726
3 dichlorodifluoromethane	85	1.886	1.886	(0.296)	5259610	60.0000	55.1152
4 Chloromethane	50	2.048	2.048	(0.321)	2798676	60.0000	55.2748
5 Vinyl Chloride	62	2.156	2.156	(0.338)	2950430	60.0000	55.8488
7 Bromomethane	94	2.425	2.425	(0.380)	3113129	60.0000	57.9731
8 Chloroethane	64	2.515	2.515	(0.394)	2062569	60.0000	55.8538
10 Trichlorofluoromethane	101	2.749	2.749	(0.431)	7448239	60.0000	58.2198
11 Ethanol	45	2.803	2.803	(0.439)	255335	3000.00	1989.28
13 Acrolein	56	3.036	3.036	(0.476)	964271	600.000	581.478
14 1,1-Dichloroethene	96	3.198	3.198	(0.501)	3834067	60.0000	57.2182
15 Acetone	43	3.180	3.180	(0.499)	907328	240.000	215.446(A)
17 Iodomethane	142	3.378	3.378	(0.530)	7552982	60.0000	59.2965

Data File: /chem/H.i/010704.b/h0008.d
Report Date: 08-Jan-2004 16:02

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
19 Acetonitrile	41	3.450	3.450	(0.541)	473376	600.000	516.040
21 Methylene Chloride	84	3.683	3.683	(0.577)	3315075	60.0000	56.0876
22 tert-Butyl alcohol	59	3.719	3.719	(0.583)	1851302	1200.00	1157.58
23 Acrylonitrile	53	3.845	3.845	(0.603)	2455892	600.000	619.962(A)
24 trans-1,2-Dichloroethene	96	3.899	3.899	(0.611)	4131170	60.0000	57.5912
27 1,1-Dichloroethane	63	4.348	4.348	(0.682)	7173400	60.0000	59.3332
28 Chloroprene	53	4.456	4.456	(0.699)	5897445	60.0000	59.3682
30 Isopropyl ether	87	4.420	4.420	(0.693)	14917952	300.000	310.292(A)
32 cis-1,2-Dichloroethene	96	5.013	5.013	(0.786)	4188267	60.0000	58.8367
31 2,2-Dichloropropane	77	5.013	5.013	(0.786)	4662510	60.0000	54.0939
33 2-Butanone	43	5.031	5.031	(0.789)	2015224	240.000	229.630(A)
34 Propionitrile	54	5.085	5.085	(0.797)	959661	600.000	648.962(A)
36 Methacrylonitrile	41	5.264	5.264	(0.825)	7465813	600.000	641.095(A)
37 Bromochloromethane	128	5.300	5.300	(0.831)	1744383	60.0000	61.4419(A)
38 Chloroform	83	5.372	5.372	(0.842)	7974695	60.0000	60.0249(A)
41 1,1,1-Trichloroethane	97	5.624	5.624	(0.882)	7616308	60.0000	57.4813
42 1,1-Dichloropropene	75	5.803	5.803	(0.910)	6109402	60.0000	57.1585
43 Carbon Tetrachloride	117	5.821	5.821	(0.913)	6632083	60.0000	58.4180
45 Isobutanol	41	5.929	5.929	(0.930)	606007	1200.00	1284.43(A)
46 Benzene	78	6.055	6.055	(0.949)	11855748	60.0000	58.3292
47 1,2-Dichloroethane	62	6.073	6.073	(0.952)	3185049	60.0000	61.6712(A)
49 n-Butanol	56	6.720	6.720	(1.054)	518322	1200.00	1176.39
50 Trichloroethene	130	6.828	6.828	(1.070)	4432112	60.0000	57.5004
52 1,2-Dichloropropane	63	7.079	7.079	(1.110)	3892366	60.0000	59.6567
53 Dibromomethane	93	7.223	7.223	(1.132)	2317848	60.0000	60.1074(A)
55 1,4-Dioxane	88	7.241	7.241	(1.135)	536123	3000.00	2837.40
56 Bromodichloromethane	83	7.421	7.421	(1.163)	6512272	60.0000	60.3654(A)
59 cis-1,3-Dichloropropene	75	7.960	7.960	(0.781)	5211757	60.0000	59.7403
60 4-Methyl-2-pentanone	43	8.139	8.139	(0.799)	5650886	240.000	254.831(A)
62 Toluene	91	8.373	8.373	(0.822)	12959738	60.0000	57.2817
63 trans-1,3-Dichloropropene	75	8.625	8.625	(0.847)	3858614	60.0000	59.8808
65 1,1,2-Trichloroethane	97	8.858	8.858	(0.869)	2209889	60.0000	60.2755(A)
67 1,3-Dichloropropane	76	9.056	9.056	(0.889)	3679716	60.0000	59.5452
66 Tetrachloroethene	164	9.038	9.038	(0.887)	4027027	60.0000	55.6688
68 2-Hexanone	43	9.146	9.146	(0.898)	3567135	240.000	253.006(A)
69 Dibromochloromethane	129	9.343	9.343	(0.917)	3945723	60.0000	61.5272(A)
70 1,2-Dibromoethane	107	9.487	9.487	(0.931)	2777217	60.0000	60.0298(A)
71 1-Chlorohexane	91	10.044	10.044	(0.986)	5855232	60.0000	55.3678
73 Chlorobenzene	112	10.080	10.080	(0.989)	7911214	60.0000	57.9015
74 1,1,1,2-Tetrachloroethane	131	10.188	10.188	(1.000)	3867829	60.0000	58.7830
75 Ethylbenzene	106	10.224	10.224	(1.004)	3992775	60.0000	56.9748
76 m and p-Xylene	106	10.368	10.368	(1.018)	10831193	120.000	114.467
77 o-Xylene	106	10.871	10.871	(1.067)	4840224	60.0000	57.2588
78 Styrene	104	10.889	10.889	(1.069)	7912951	60.0000	58.5903
79 Bromoform	173	11.140	11.140	(1.093)	2229867	60.0000	61.5959(A)
80 isopropyl benzene	105	11.356	11.356	(1.115)	15427054	60.0000	55.3695
81 Cyclohexanone	55	11.464	11.464	(1.125)	1869059	2400.00	2268.27(A)

Data File: /chem/H.i/010704.b/h0008.d
Report Date: 08-Jan-2004 16:02

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
83 1,1,2,2-Tetrachloroethane	83	11.733	11.733	(1.152)	2778154	60.0000	60.4262(A)
84 Bromobenzene	156	11.751	11.751	(0.907)	3711645	60.0000	59.1378
85 1,2,3-Trichloropropane	110	11.787	11.787	(0.910)	606625	60.0000	56.2442
87 n-Propylbenzene	120	11.877	11.877	(0.917)	3440294	60.0000	55.7427
88 2-Chlorotoluene	126	11.985	11.985	(0.925)	3002840	60.0000	58.1568
89 1,3,5-Trimethylbenzene	105	12.093	12.093	(0.933)	11735390	60.0000	56.4896
90 4-Chlorotoluene	126	12.129	12.129	(0.936)	3203815	60.0000	56.3346
91 tert-Butylbenzene	119	12.488	12.488	(0.964)	11739038	60.0000	55.6102
92 1,2,4-Trimethylbenzene	105	12.560	12.560	(0.969)	10884110	60.0000	56.1460
93 sec-Butylbenzene	134	12.757	12.757	(0.985)	3001010	60.0000	54.1879
94 m-Dichlorobenzene	146	12.883	12.883	(0.994)	5986415	60.0000	57.8580
95 4-Isopropyltoluene	119	12.919	12.919	(0.997)	12825944	60.0000	54.5896
97 p-dichlorobenzene	146	12.973	12.973	(1.001)	7060824	60.0000	56.8907
98 n-Butylbenzene	91	13.368	13.368	(1.032)	13729387	60.0000	52.5317
99 o-Dichlorobenzene	146	13.386	13.386	(1.033)	5184358	60.0000	56.4609
100 1,2-Dibromo-3-chloropropane	157	14.195	14.195	(1.096)	478630	60.0000	60.8741(A)
101 1,2,4-Trichlorobenzene	180	15.004	15.004	(1.158)	3320443	60.0000	54.5389
102 Hexachlorobutadiene	225	15.183	15.183	(1.172)	2474362	60.0000	47.5879
127 Naphthalene	128	15.255	15.255	(1.178)	3930317	60.0000	58.9594
104 1,2,3-Trichlorobenzene	180	15.507	15.507	(1.197)	2609525	60.0000	55.3040

QC Flag Legend

A - Target compound detected but, quantitated amount exceeded maximum amount.
H - Operator selected an alternate compound hit.

Data File: /chem/H.i/010704.b/h0008.d
Report Date: 08-Jan-2004 16:03

STL Denver

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: H.i
Lab File ID: h0008.d
Lab Smp Id: MAIN060
Analysis Type: VOA
Quant Type: ISTD
Operator: hoffmanm
Method File: /chem/H.i/010704.b/H-20ml-h2o.m
Misc Info:

Calibration Date: JAN/07/4
Calibration Time: 1439
Client Smp ID: MAIN060
Level: LOW
Sample Type: WATER

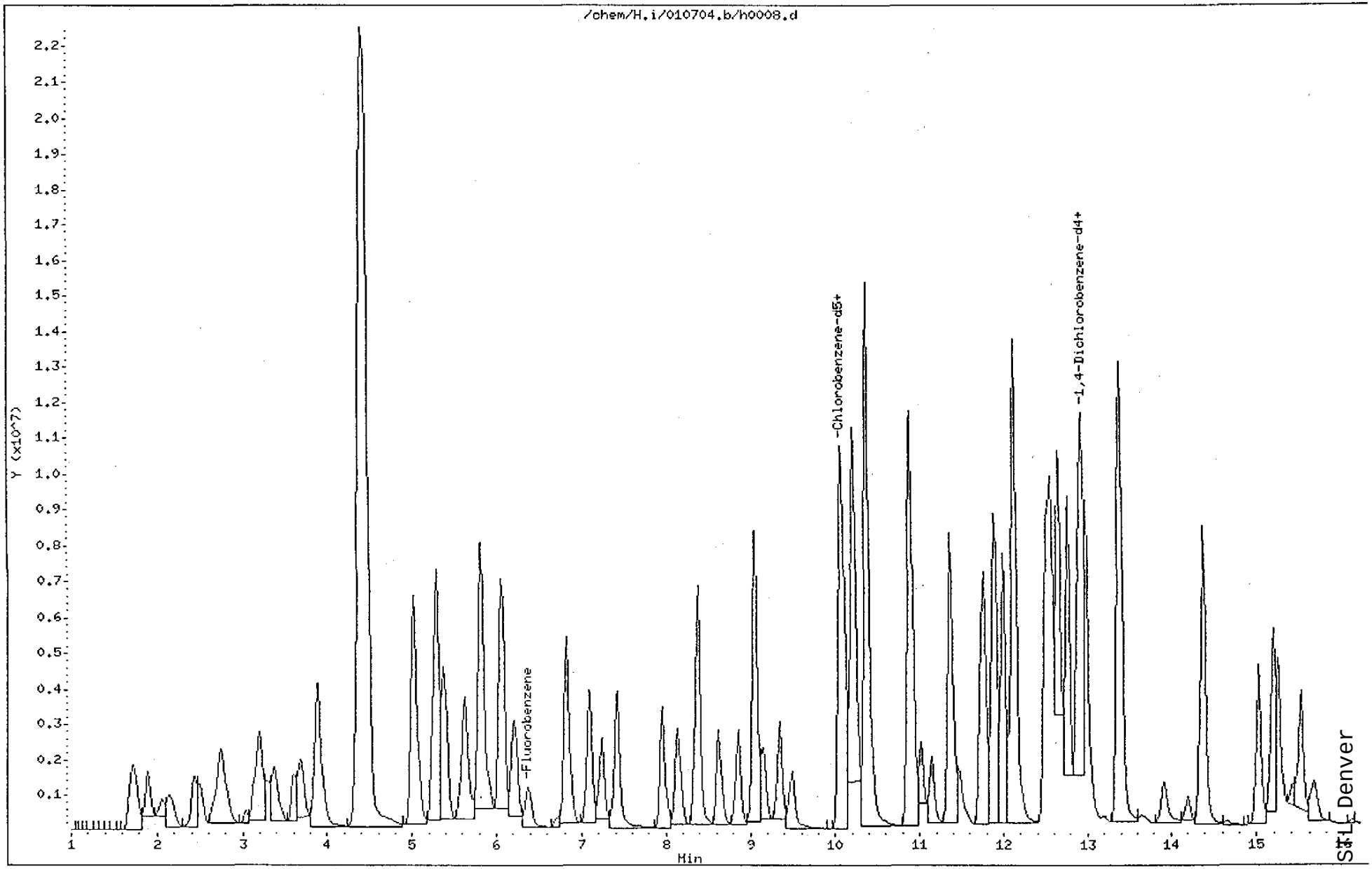
COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
48 Fluorobenzene	2399820	1199910	4799640	2374049	-1.07
72 Chlorobenzene-d5	457381	228690	914762	428895	-6.23
96 1,4-Dichlorobenze	747017	373508	1494034	712584	-4.61

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
48 Fluorobenzene	6.39	5.89	6.89	6.38	-0.26
72 Chlorobenzene-d5	10.06	9.56	10.56	10.04	-0.16
96 1,4-Dichlorobenze	12.97	12.47	13.47	12.96	-0.13

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem/H.i/010704.b/h0008.d
Date : 07-JAN-2004 13:09
Client ID: MAIN060
Sample Info: MAIN060,,
Purge Volume: 20.0
Column phase: DB624

Instrument: H.i
Operator: hoffmanm
Column diameter: 0.53



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Data File: /chem/H.i/010704.b/h0015.d
Report Date: 01/09/2004

CONTINUING CALIBRATION COMPOUNDS
PERCENT DRIFT REPORT

Instrument ID: H.i
Lab File ID: h0015.d
Analysis Type: WATER

Injection Date: 07-JAN-2004 15:46
Lab Sample ID: VSTD010
Method File: /chem/H.i/010704.b/H-20ml-h2o.m

	COMPOUND	EXPECTED CONC.	MEASURED CONC.	%D	MAX %D
85	1,2-Dichloroethene (total)	20.0000	16.9494	15.3	50.0
83	Xylene (total)	30.0000	25.0283	16.6	50.0
64	dichlorodifluoromethane	10.0000	8.6091	13.9	50.0
1	Chloromethane	10.0000	9.2138	7.9	50.0
4	Vinyl Chloride	10.0000	10.0928	0.9	20.0
2	Bromomethane	10.0000	10.5003	5.0	50.0
5	Chloroethane	10.0000	9.8332	1.7	50.0
11	Trichlorofluoromethane	10.0000	9.9086	0.9	50.0
7	Acetone	20 ~~10~~.0000	21.4590	~~46.4~~	50.0
12	1,1-Dichloroethene	10.0000	7.4214	25.8	20.0
6	Methylene Chloride	10.0000	8.8477	11.5	50.0
0	trans-1,2-Dichloroethene	10.0000	8.2604	17.4	50.0
15	1,1-Dichloroethane	10.0000	9.1085	8.9	50.0
93	2,2-Dichloropropane	10.0000	7.6584	23.4	50.0
0	cis-1,2-Dichloroethene	10.0000	8.6890	13.1	50.0
20	2-Butanone	20 ~~10~~.0000	20.0763	~~49.8~~	50.0
13	Bromochloromethane	10.0000	9.7460	2.5	50.0
17	Chloroform	10.0000	9.2827	7.2	20.0
22	1,1,1-Trichloroethane	10.0000	8.2722	17.3	50.0
94	1,1-Dichloropropene	10.0000	8.2140	17.9	50.0
23	Carbon Tetrachloride	10.0000	8.3563	16.4	50.0
30	Benzene	10.0000	8.6240	13.8	50.0
16	1,2-Dichloroethane	10.0000	9.8601	1.4	50.0
29	Trichloroethene	10.0000	8.5726	14.3	50.0
26	1,2-Dichloropropane	10.0000	9.5004	5.0	20.0
34	Dibromomethane	10.0000	9.8063	1.9	50.0
25	Bromodichloromethane	10.0000	9.5992	4.0	50.0
28	cis-1,3-Dichloropropene	10.0000	9.7580	2.4	50.0
38	4-Methyl-2-pentanone	20 ~~10~~.0000	~~22~~.8312	~~43.9~~	50.0
45	Toluene	10.0000	8.3606	16.4	20.0
31	trans-1,3-Dichloropropene	10.0000	9.6431	3.6	50.0
32	1,1,2-Trichloroethane	10.0000	10.0644	0.6	50.0
42	Tetrachloroethene	10.0000	7.8535	21.5	50.0
109	1,3-Dichloropropane	10.0000	10.0825	0.8	50.0
43	2-Hexanone	20 ~~10~~.0000	21.7390	~~45.7~~	50.0
36	Dibromochloromethane	10.0000	9.9119	0.9	50.0
58	1,2-Dibromoethane	10.0000	10.0825	0.8	50.0
92	1-Chlorohexane	10.0000	7.5170	24.8	50.0
46	Chlorobenzene	10.0000	8.7222	12.8	50.0

All <35% D (ok) for 8260
mt 1/9/04

Data File: /chem/H.i/010704.b/h0015.d
Report Date: 01/09/2004

CONTINUING CALIBRATION COMPOUNDS
PERCENT DRIFT REPORT

Instrument ID: H.i
Lab File ID: h0015.d
Analysis Type: WATER

Injection Date: 07-JAN-2004 15:46
Lab Sample ID: VSTD010
Method File: /chem/H.i/010704.b/H-20ml-h2o.m

	COMPOUND	EXPECTED CONC.	MEASURED CONC.	%D	MAX %D
74	1,1,1,2-Tetrachloroethane	10.0000	9.1675	8.3	50.0
47	Ethylbenzene	10.0000	8.0896	19.1	20.0
0	m and p-Xylene	20.0000	16.5218	17.4	50.0
0	o-Xylene	10.0000	8.5065	14.9	50.0
49	Styrene	10.0000	8.8704	11.3	50.0
37	Bromoform	10.0000	10.2400	2.4	50.0
79	isopropyl benzene	10.0000	7.5553	24.4	50.0
40	1,1,2,2-Tetrachloroethane	10.0000	10.4818	4.8	50.0
95	Bromobenzene	10.0000	9.0448	9.6	50.0
50	1,2,3-Trichloropropane	10.0000	10.0809	0.8	50.0
96	n-Propylbenzene	10.0000	7.8961	21.0	50.0
97	2-Chlorotoluene	10.0000	8.3542	16.5	50.0
98	1,3,5-Trimethylbenzene	10.0000	8.1474	18.5	50.0
99	4-Chlorotoluene	10.0000	8.3855	16.1	50.0
100	tert-Butylbenzene	10.0000	8.0335	19.7	50.0
101	1,2,4-Trimethylbenzene	10.0000	8.3222	16.8	50.0
102	sec-Butylbenzene	10.0000	7.9114	20.9	50.0
61	m-Dichlorobenzene	10.0000	8.4303	15.7	50.0
103	4-Isopropyltoluene	10.0000	7.6258	23.7	50.0
62	p-dichlorobenzene	10.0000	8.8921	11.1	50.0
104	n-Butylbenzene	10.0000	7.6704	23.3	50.0
63	o-Dichlorobenzene	10.0000	8.9284	10.7	50.0
75	1,2-Dibromo-3-chloropropane	10.0000	10.8435	8.4	50.0
105	1,2,4-Trichlorobenzene	10.0000	8.5546	14.5	50.0
106	Hexachlorobutadiene	10.0000	7.2890	27.1	50.0
107	Naphthalene	10.0000	9.4362	5.6	50.0
108	1,2,3-Trichlorobenzene	10.0000	8.6632	13.4	50.0

Data File: /chem/H.i/010704.b/h0015.d
Report Date: 09-Jan-2004 13:11

STL Denver

VOLATILE REPORT SW-846

Data file : /chem/H.i/010704.b/h0015.d
Lab Smp Id: VSTD010 Client Smp ID: VSTD010
Inj Date : 07-JAN-2004 15:46
Operator : hoffmanm Inst ID: H.i
Smp Info : VSTD010,,ICV
Misc Info :
Comment : Purge and Trap Analysis
Method : /chem/H.i/010704.b/H-20ml-h2o.m
Meth Date : 09-Jan-2004 13:10 hoffmanm Quant Type: ISTD
Cal Date : 07-JAN-2004 15:24 Cal File: h0014.d
Als bottle: 2
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: SecSource.sub
Target Version: 3.40
Processing Host: chemsv02

Concentration Formula: Amt * DF * Vp/Vs

Name	Value	Description
DF	1.000	Dilution Factor
Vp	20.000	Purge Volume (ml)
Vs	20.000	Sample Volume (ml)

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/L)
* 48 Fluorobenzene	96	6.399	6.396	(1.000)	2292249	12.5000	
* 72 Chlorobenzene-d5	119	10.082	10.079	(1.000)	415466	12.5000	
* 96 1,4-Dichlorobenzene-d4	152	12.975	12.972	(1.000)	692957	12.5000	
M 1 1,2-Dichloroethene (total)	96				1169332	16.9494	16.9494
M 2 Xylene (total)	106				2210947	25.0283	25.0283
3 dichlorodifluoromethane	85	1.907	1.886	(0.298)	793253	8.60910	8.60910
4 Chloromethane	50	2.050	2.048	(0.320)	450440	9.21382	9.21382
5 Vinyl Chloride	62	2.176	2.156	(0.340)	514821	10.0928	10.0928
7 Bromomethane	94	2.446	2.425	(0.382)	544432	10.5003	10.5003
8 Chloroethane	64	2.536	2.515	(0.396)	350607	9.83316	9.83316
10 Trichlorofluoromethane	101	2.769	2.749	(0.433)	1223956	9.90857	9.90857
14 1,1-Dichloroethene	96	3.236	3.198	(0.506)	480160	7.42144	7.42144
15 Acetone	43	3.200	3.180	(0.500)	108867	21.4590	21.4590
21 Methylene Chloride	84	3.704	3.683	(0.579)	504926	8.84768	8.84768
24 trans-1,2-Dichloroethene	96	3.919	3.899	(0.612)	572123	8.26039	8.26039
27 1,1-Dichloroethane	63	4.368	4.348	(0.683)	1063277	9.10851	9.10851

Data File: /chem/H.i/010704.b/h0015.d
Report Date: 09-Jan-2004 13:11

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/L)
33 2-Butanone	43	5.051	5.031	(0.789)	170118	20.0763	20.0762
32 cis-1,2-Dichloroethene	96	5.033	5.013	(0.787)	597209	8.68896	8.68896
31 2,2-Dichloropropane	77	5.033	5.013	(0.787)	637353	7.65837	7.65837
37 Bromochloromethane	128	5.321	5.300	(0.832)	267162	9.74597	9.74597
38 Chloroform	83	5.411	5.372	(0.846)	1190771	9.28268	9.28268
41 1,1,1-Trichloroethane	97	5.644	5.624	(0.882)	1058309	8.27223	8.27223
42 1,1-Dichloropropene	75	5.824	5.803	(0.910)	847702	8.21397	8.21397
43 Carbon Tetrachloride	117	5.842	5.821	(0.913)	915982	8.35626	8.35626
47 1,2-Dichloroethane	62	6.093	6.073	(0.952)	491686	9.86012	9.86012
46 Benzene	78	6.075	6.055	(0.949)	1692483	8.62402	8.62402
50 Trichloroethene	130	6.848	6.828	(1.070)	638004	8.57257	8.57257
52 1,2-Dichloropropane	63	7.118	7.079	(1.112)	598508	9.50044	9.50044
53 Dibromomethane	93	7.261	7.223	(1.135)	365121	9.80635	9.80635
56 Bromodichloromethane	83	7.441	7.421	(1.163)	999885	9.59917	9.59917
59 cis-1,3-Dichloropropene	75	7.980	7.960	(0.791)	824633	9.75798	9.75798
60 4-Methyl-2-pentanone	43	8.160	8.139	(0.809)	490431	22.8312	22.8312
62 Toluene	91	8.393	8.373	(0.832)	1832329	8.36062	8.36062
63 trans-1,3-Dichloropropene	75	8.645	8.625	(0.857)	601930	9.64312	9.64312
65 1,1,2-Trichloroethane	97	8.879	8.858	(0.881)	357438	10.0644	10.0644
67 1,3-Dichloropropane	76	9.076	9.056	(0.900)	603560	10.0825	10.0825
66 Tetrachloroethene	164	9.076	9.038	(0.900)	550324	7.85346	7.85346
68 2-Hexanone	43	9.184	9.146	(0.911)	296902	21.7390	21.7390
69 Dibromochloromethane	129	9.364	9.343	(0.929)	615744	9.91188	9.91188
70 1,2-Dibromoethane	107	9.507	9.487	(0.943)	451850	10.0825	10.0825
73 Chlorobenzene	112	10.118	10.080	(1.004)	1154418	8.72219	8.72219
74 1,1,1,2-Tetrachloroethane	131	10.208	10.188	(1.012)	584318	9.16747	9.16747
75 Ethylbenzene	106	10.244	10.224	(1.016)	549166	8.08961	8.08961
76 m and p-Xylene	106	10.388	10.368	(1.030)	1514385	16.5218	16.5218
77 o-Xylene	106	10.909	10.871	(1.082)	696562	8.50652	8.50652
78 Styrene	104	10.927	10.889	(1.084)	1160483	8.87037	8.87037
71 1-Chlorohexane	91	10.082	10.044	(1.000)	770042	7.51697	7.51697
79 Bromoform	173	11.161	11.140	(1.107)	359095	10.2400	10.2400
80 isopropyl benzene	105	11.394	11.356	(1.130)	2039158	7.55534	7.55534
83 1,1,2,2-Tetrachloroethane	83	11.754	11.733	(1.166)	466823	10.4818	10.4818
84 Bromobenzene	156	11.772	11.751	(0.907)	552037	9.04476	9.04476
85 1,2,3-Trichloropropane	110	11.807	11.787	(0.910)	105733	10.0809	10.0809
87 n-Propylbenzene	120	11.915	11.877	(0.918)	473901	7.89605	7.89605
88 2-Chlorotoluene	126	12.023	11.985	(0.927)	419478	8.35424	8.35424
89 1,3,5-Trimethylbenzene	105	12.131	12.093	(0.935)	1645945	8.14735	8.14735
90 4-Chlorotoluene	126	12.149	12.129	(0.936)	463756	8.38547	8.38546
91 tert-Butylbenzene	119	12.526	12.488	(0.965)	1649124	8.03350	8.03350
92 1,2,4-Trimethylbenzene	105	12.580	12.560	(0.970)	1568857	8.32222	8.32222
93 sec-Butylbenzene	134	12.778	12.757	(0.985)	426077	7.91138	7.91138
94 m-Dichlorobenzene	146	12.904	12.883	(0.994)	848231	8.43026	8.43026
95 4-Isopropyltoluene	119	12.940	12.919	(0.997)	1742356	7.62583	7.62583
97 p-dichlorobenzene	146	13.011	12.973	(1.003)	1073221	8.89211	8.89211
98 n-Butylbenzene	91	13.389	13.368	(1.032)	1949473	7.67039	7.67039

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/L)
99 o-Dichlorobenzene	146	13.407	13.386	(1.033)	797245	8.92841	8.92841
100 1,2-Dibromo-3-chloropropane	157	14.215	14.195	(1.096)	82910	10.8435	10.8435
101 1,2,4-Trichlorobenzene	180	15.024	15.004	(1.158)	506478	8.55462	8.55462
102 Hexachlorobutadiene	225	15.204	15.183	(1.172)	368557	7.28899	7.28899
127 Naphthalene	128	15.276	15.255	(1.177)	611708	9.43625	9.43625
104 1,2,3-Trichlorobenzene	180	15.527	15.507	(1.197)	397517	8.66324	8.66324

Data File: /chem/H.i/010704.b/h0015.d
Report Date: 09-Jan-2004 13:11

STL Denver

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: H.i
Lab File ID: h0015.d
Lab Smp Id: VSTD010
Analysis Type: VOA
Quant Type: ISTD
Operator: hoffmanm
Method File: /chem/H.i/010704.b/H-20ml-h2o.m
Misc Info:

Calibration Date: JAN/07/4
Calibration Time: 1439
Client Smp ID: VSTD010
Level: LOW
Sample Type: WATER

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
48 Fluorobenzene	2399820	1199910	4799640	2292249	-4.48
72 Chlorobenzene-d5	457381	228690	914762	415466	-9.16
96 1,4-Dichlorobenze	747017	373508	1494034	692957	-7.24

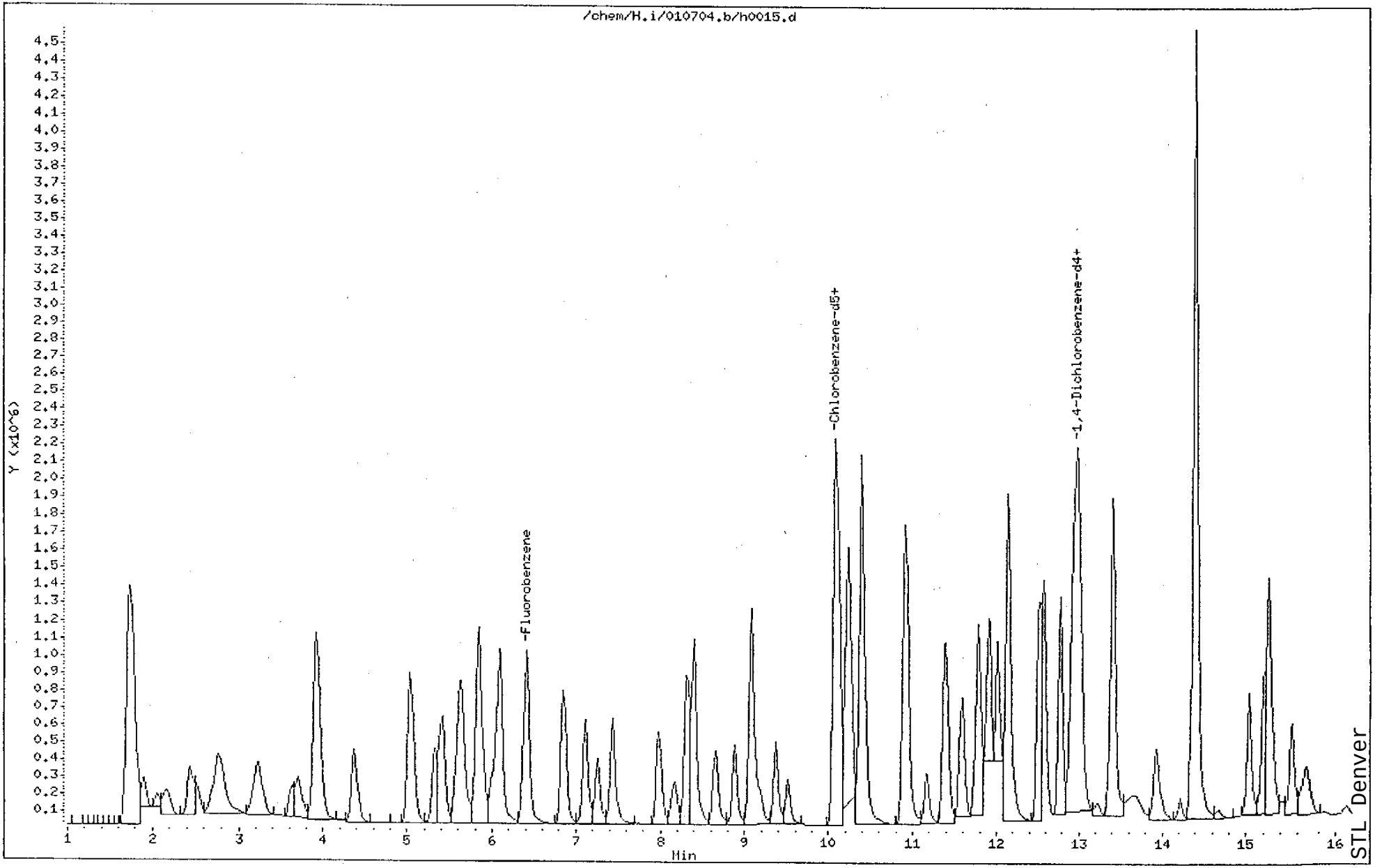
COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
48 Fluorobenzene	6.39	5.89	6.89	6.40	0.06
72 Chlorobenzene-d5	10.06	9.56	10.56	10.08	0.22
96 1,4-Dichlorobenze	12.97	12.47	13.47	12.98	0.03

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem/H.i/010704.b/h0015.d
Date : 07-JAN-2004 15:46
Client ID: VSTD010
Sample Info: VSTD010,,ICV
Purge Volume: 20.0
Column phase: DB624

Instrument: H.i

Operator: hoffmann
Column diameter: 0.53



STL Denver

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GC/MS Initial Calibration Review Checklist

STL Denver

Instrument ID and Date: Inst. H 1/7/04 - Supp I-CAL

Check Method Used: Analysis ☐ 625 ☐ 8270 ☐ Other SV _____

☐ 524.2 ☐ 624 ☑ 8260B ☐ Other VOA _

VOA Preparation ☐ 5mL ☑ 20mL ☐ 5035 Low ☐ 5035 High ☐ 5030 Low ☐ 5030 High

Review Items	Level 1 Yes	Level 1 No	Level 1 N/A	Level 2	Comments
Initial Calibration					
1. BFB/DFTPP meets criteria?	✓			✓	
2. ICAL date and instrument ID verified?	✓			✓	
3. Sufficient number of calibration points used?	✓			✓	
4. Reasons for removal of points documented?	✓			✓	Some low points (below R.L.) removed.
5. %RSD or correlation coefficient within method limits?	✓			✓	
6. If RRF used for ICAL, were all compounds within 15% RSD?	✓			✓	List all exceptions below (cpd & RSD)
7. Response factors meet criteria?	✓			✓	
8. Isomeric pairs checked for correct peak assignment?	✓			✓	
9. Data checked for detector saturation?	✓			✓	
10. Standards traceability properly documented?	✓			✓	
11. Manual integrations documented and checked?			✓	N/A	
12. 2nd source ICV recovery 75-125% for DoD projects, 65-135% (±55% of expected for poor performers) for non-DoD?			✓	N/A	

1st Level Reviewer: MJ Date: 1/9/04

2nd Level Reviewer: TA Date: 1-9-04

STL, Denver

GC/MS Volatile Analysis

Instrument H
5972 MSD

Column	Phase	Inj. Temp	Init. Time	Ramp Rate	Final Temp	Flow cc/min	Press. Psi	Type	Vac. Range	Source Temp	Mass Range
75M	DB-624	200C	2 min.	5C/min	65C	18	20	MS	10^-6	~175C	35-300/2^2
			0 min.	12C/min	155C						
			0 min.	25C/min	210C						

DEN-MS-0010 (8260B/624/524.2)
(Circle as appropriate)

Comments

MS VOA
Main # 254/277-03
Supp # 192/246-03
ISSS # 281/282-03

Target Batch (Directory): 010704.b

QuantIMS Batch:

Lot #	Sample	W.O.#	Purge vol (ml)	Sample amt (ml/g)	Date	Initials	File Number	IS OK	SS OK	DIL OK	24 hr 12 hr	pH	Comments	ALS
BFB			1µl Air	Inj.	1/7/04	MH	h0001.d					NA	OK	—
Primer			20mL	20mL			2	✓	NA	✓	✓		OK	1
Main 001							3	✓		✓	✓			2
002							4	✓		✓	✓			3
005							5	✓		✓	✓			4
010							6	✓		✓	✓			5
030							7	✓		✓	✓			6
060							8	✓		✓	✓			7
Supp 001							9	✓	✓	✓	✓			8
002							10	✓	✓	✓	✓			9
005							11	✓	✓	✓	✓			10
010							12	✓	✓	✓	✓			11
030							13	✓	✓	✓	✓			12
060							14	✓	✓	✓	✓			13
ICV - V5IDD10							15	✓	✓	✓	✓		All <35%D.	14
cleanup							16						—	15
screens				—			17	✓	✓	✓	✓			16
				—			18	✓	✓	✓	✓			17
				—			19	✓	✓	✓	✓			18
Surr. Chks				20mL			20-21-22	✓	✓	✓	✓		19-21	

Revised 6/3/03

public/QA/forms/VOA Logbookr3.xls

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Report Date: 08-Jan-2004 07:45

Calibration History

Method : /chem/H.i/010704.b/H-20ml-h2o.m
Start Cal Date: 07-JAN-2004 11:17
End Cal Date : 07-JAN-2004 15:24

Initial Calibration

Injection Date	Sublist	Calibration File
Cal Level: 1 , Cal Amount: 1.00000		
07-JAN-2004 13:31	2-supp	/chem/H.i/010704.b/h0009.d
07-JAN-2004 11:17	1-main	/chem/H.i/010704.b/h0003.d
Cal Level: 2 , Cal Amount: 2.00000		
07-JAN-2004 13:54	2-supp	/chem/H.i/010704.b/h0010.d
07-JAN-2004 11:40	1-main	/chem/H.i/010704.b/h0004.d
Cal Level: 3 , Cal Amount: 5.00000		
07-JAN-2004 14:16	2-supp	/chem/H.i/010704.b/h0011.d
07-JAN-2004 12:02	1-main	/chem/H.i/010704.b/h0005.d
Cal Level: 4 , Cal Amount: 10.0000		
07-JAN-2004 14:39	2-supp	/chem/H.i/010704.b/h0012.d
07-JAN-2004 12:24	1-main	/chem/H.i/010704.b/h0006.d
Cal Level: 5 , Cal Amount: 30.0000		
07-JAN-2004 15:01	2-supp	/chem/H.i/010704.b/h0013.d
07-JAN-2004 12:47	1-main	/chem/H.i/010704.b/h0007.d
Cal Level: 6 , Cal Amount: 60.0000		
07-JAN-2004 15:24	2-supp	/chem/H.i/010704.b/h0014.d
07-JAN-2004 13:09	1-main	/chem/H.i/010704.b/h0008.d

Continuing Calibration

07-JAN-2004 14:39	2-supp	/chem/H.i/010704.b/h0012.d
07-JAN-2004 12:24	1-main	/chem/H.i/010704.b/h0006.d

STL Denver

INITIAL CALIBRATION DATA

Start Cal Date : 07-JAN-2004 11:17
End Cal Date : 07-JAN-2004 15:24
Quant Method : ISTD
Origin : Disabled
Target Version : 3.40
Integrator : HP RTE
Method file : /chem/H.i/010704.b/H-20ml-h2o.m
Cal Date : 08-Jan-2004 10:26 hoffmanm
Curve Type : Average

Calibration File Names:
Level 1: /chem/H.i/010704.b/h0009.d
Level 2: /chem/H.i/010704.b/h0010.d
Level 3: /chem/H.i/010704.b/h0011.d
Level 4: /chem/H.i/010704.b/h0012.d
Level 5: /chem/H.i/010704.b/h0013.d
Level 6: /chem/H.i/010704.b/h0014.d

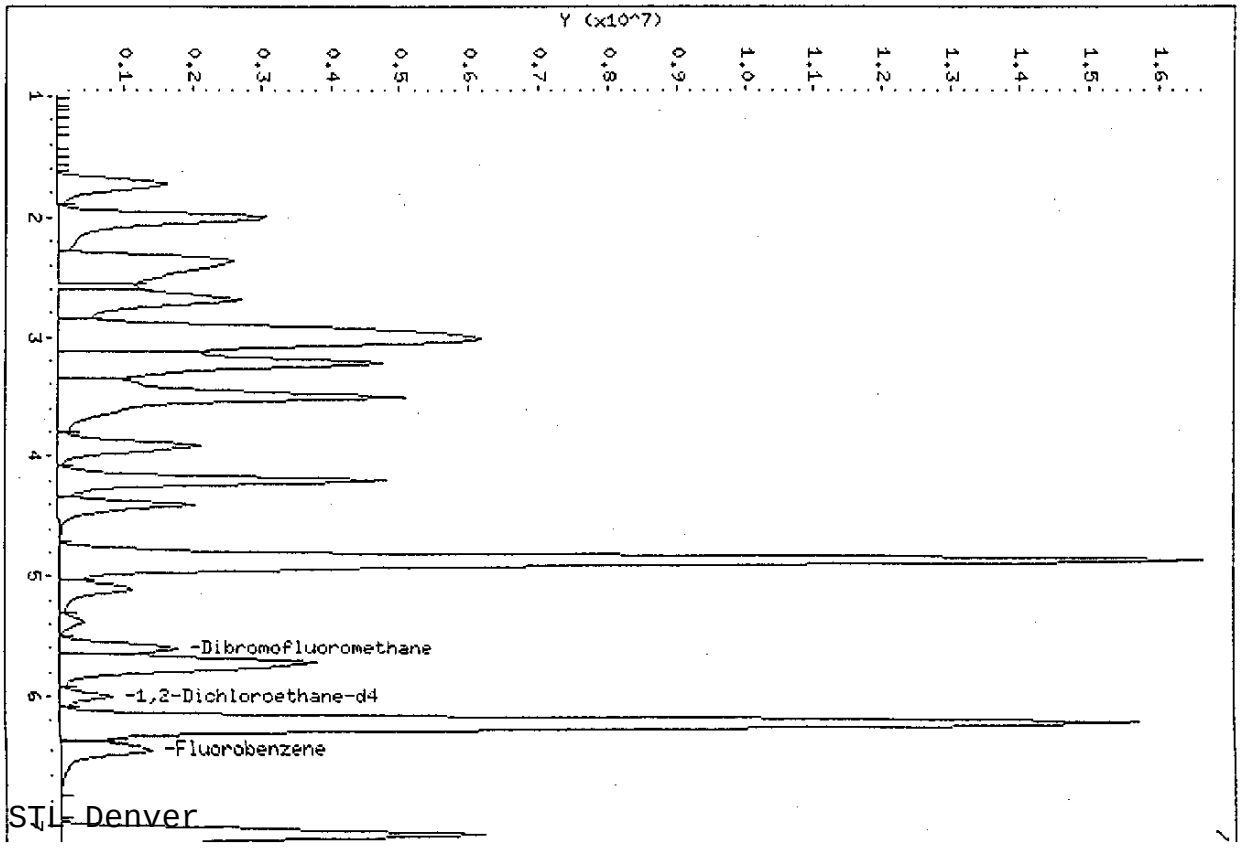
Compound	1.000 Level 1	2.000 Level 2	5.000 Level 3	10.000 Level 4	30.000 Level 5	60.000 Level 6	___ RRF	% RSD
117 Dichlorotetrafluoroethane	0.64761	0.73926	0.78612	0.71231	0.70876	0.71459	0.71811	6.282
6 Ethylene Oxide	+++++	0.00409	0.00455	0.00418	0.00453	0.00430	0.00433	4.713
9 Dichlorofluoromethane	0.59773	0.62695	0.69128	0.65465	0.70838	0.72854	0.66792	7.527
12 Ethyl Ether	0.14665	0.15516	0.15743	0.14452	0.15658	0.15428	0.15244	3.583
16 Trichlorotrifluoroethane	0.46470	0.46710	0.49449	0.44176	0.44077	0.45582	0.46077	4.317
18 Carbon Disulfide	1.10635	1.16833	1.20112	1.08414	1.09656	1.12833	1.13080	4.015
20 Allyl Chloride	0.52354	0.57054	0.55983	0.51640	0.53803	0.53648	0.54080	3.849
119 Methyl Acetate	0.08521	0.09285	0.08890	0.08353	0.09078	0.09006	0.08855	3.986
25 Methyl t-butyl ether	0.47018	0.50149	0.50514	0.47083	0.51501	0.50633	0.49483	3.912
26 Hexane	2.86016	2.85242	3.03241	2.68843	2.64984	2.84549	2.82146	4.877
29 Vinyl acetate	0.31694	0.29578	0.31854	0.29212	0.31575	0.34250	0.31360	5.801
35 Ethyl Acetate	+++++	0.13260	0.12233	0.11606	0.12573	0.12533	0.12441	4.818
39 Tetrahydrofuran	0.02752	0.02548	0.02653	0.02440	0.02581	0.02576	0.02592	4.041
120 ETBE	0.85257	0.86672	0.85626	0.81813	0.88602	0.82395	0.85061	3.027
114 Cyclohexane	0.58098	0.56819	0.60531	0.53439	0.51762	0.55069	0.55953	5.707
115 2-Pentanone	0.09207	0.08956	0.09016	0.08877	0.09495	0.09521	0.09178	3.026
121 TAME	0.63310	0.64656	0.67121	0.63148	0.68189	0.67061	0.65581	3.291
54 Methyl Methacrylate	0.04014	0.03786	0.04103	0.03699	0.04126	0.03958	0.03948	4.365
122 Methyl Cyclohexane	0.54516	0.52654	0.56775	0.50055	0.47455	0.50751	0.52034	6.406
57 2-nitropropane	+++++	0.13214	0.16285	0.14922	0.17005	0.16035	0.15492	9.533
113 2-Chloroethyl vinyl ether	0.46171	0.43553	0.43272	0.46156	0.48024	0.47449	0.45771	4.300
64 Ethyl methacrylate	1.27425	1.16318	1.16692	1.10948	1.24729	1.22000	1.19685	5.114
116 cis-1,4-Dichloro-2-butene	0.12731	0.11831	0.13496	0.12138	0.13396	0.12921	0.12752	5.226
86 t-1,4-Dichloro-2-butene	0.10759	0.10925	0.11187	0.11302	0.12531	0.12564	0.11545	6.929
118 1,2,3-Trimethylbenzene	0.91409	0.84269	0.87973	0.80925	0.78203	0.82190	0.84162	5.746

STL Denver

INITIAL CALIBRATION DATA

Start Cal Date : 07-JAN-2004 11:17
End Cal Date : 07-JAN-2004 15:24
Quant Method : ISTD
Origin : Disabled
Target Version : 3.40
Integrator : HP RTE
Method file : /chem/H.i/010704.b/H-20ml-h2o.m
Cal Date : 08-Jan-2004 10:26 hoffmanm
Curve Type : Average

Compound	1.000 Level 1	2.000 Level 2	5.000 Level 3	10.000 Level 4	30.000 Level 5	60.000 Level 6	___ RRF	% RSD
123 1,2-dichloro-1,1,2-triflourom	0.48490	0.48343	0.51040	0.46398	0.46848	0.47445	0.48094	3.447
124 2,2-dichloro-1,1,1-trifluorom	0.82337	0.83499	0.87738	0.79319	0.80769	0.82037	0.82616	3.496
125 2-Propanol	0.00599	0.00581	0.00554	0.00467	0.00513	0.00494	0.00535	9.635
126 Tetrahydrothiophene	+++++	0.35479	0.33909	0.32536	0.35333	0.35597	0.34571	3.836
$ 40 Dibromofluoromethane	0.48880	0.48510	0.49354	0.49759	0.49185	0.49339	0.49171	0.877
$ 44 1,2-Dichloroethane-d4	0.21873	0.22259	0.21896	0.22120	0.21565	0.21786	0.21917	1.120
$ 61 Toluene-d8	4.85785	4.80260	4.84282	4.76365	4.63208	4.77104	4.77834	1.693
$ 82 Bromofluorobenzene	2.62465	2.58967	2.66216	2.65404	2.56658	2.62447	2.62026	1.402



Data File: /chem/H.i/010704.b/h0014.d
Date : 07-JAN-2004 15:24
Client ID: SUPP060
Sample Info: SUPP060,,
Purge Volume: 20.0
Column phase: DB624

Data File: /chem/H.i/010704.b/h0001.d

Date : 07-JAN-2004 10:44

Client ID: BFB

Instrument: H.i

Sample Info: BFB,,MSWOA-237-03

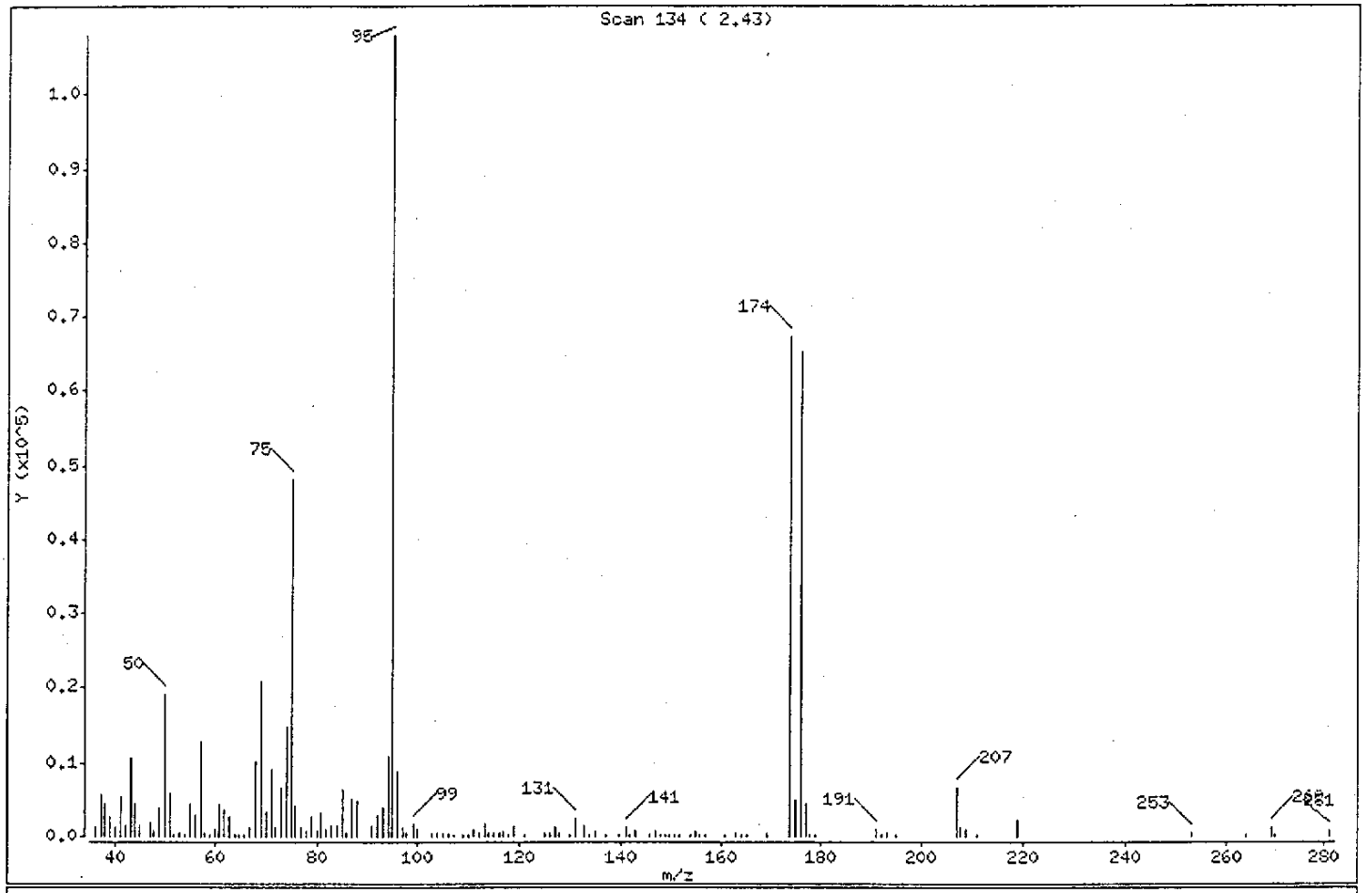
Volume Injected (uL): 1.0

Operator: mhoffman

Column phase: DB624

Column diameter: 0.53

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	17.68
75	30.00 - 60.00% of mass 95	44.55
96	5.00 - 9.00% of mass 95	8.29
173	Less than 2.00% of mass 174	0.00 (0.00)
174	50.00 - 100.00% of mass 95	62.30
175	5.00 - 9.00% of mass 174	4.58 (7.35)
176	95.00 - 101.00% of mass 174	60.56 (97.19)
177	5.00 - 9.00% of mass 176	4.14 (6.83)

Data File: /chem/H.i/010704.b/h0001.d

Date : 07-JAN-2004 10:44

Client ID: BFB

Instrument: H.i

Sample Info: BFB,,MSVOA-237-03

Volume Injected (uL): 1.0

Operator: mhoffman

Column phase: DB624

Column diameter: 0.53

Data File: h0001.d
Spectrum: Scan 134 (2.43)
Location of Maximum: 94.95
Number of points: 129

m/z	Y	m/z	Y	m/z	Y	m/z	Y
35.95	1248	69.95	3584	106.90	322	151.95	213
36.95	5829	71.00	9297	108.90	362	153.95	219
37.95	4459	72.00	1155	110.00	343	155.00	729
39.05	2752	73.00	6625	111.00	948	155.90	246
39.95	1323	74.00	14880	112.10	606	156.90	204
40.95	5447	75.00	48128	113.05	1663	160.90	326
42.05	1392	76.00	4160	113.95	518	162.90	521
43.10	10761	77.00	1266	114.85	455	163.90	225
44.00	4478	77.90	809	115.85	440	165.00	318
45.00	1582	78.90	2688	116.85	651	169.05	426
47.00	1864	80.00	721	117.95	296	173.85	67304
47.90	717	80.90	3328	118.85	1486	174.85	4946
48.90	3860	81.90	1117	121.05	264	175.85	65416
50.00	19096	82.90	1543	125.05	481	176.85	4470
51.00	6047	84.00	1549	126.05	474	177.85	273
51.90	363	85.05	6441	127.00	1121	178.85	297
53.00	497	85.95	520	128.00	511	190.90	906
54.00	305	86.95	5193	129.90	319	192.00	245
55.00	4576	87.85	4996	130.90	2578	193.00	559
56.00	3055	90.95	1480	133.00	1483	194.80	211
57.05	12795	91.95	2954	134.00	307	206.95	6774
58.05	618	92.95	4096	134.90	645	207.95	1361
58.85	312	93.95	10865	137.00	346	208.95	878
59.95	1092	94.95	108024	139.50	371	211.10	259
60.95	4544	95.95	8956	140.95	1132	218.90	2280
61.95	3804	96.85	1229	141.85	207	253.05	531
62.95	2850	97.85	404	142.85	733	263.95	346
64.05	299	99.00	1851	145.85	278	269.10	1284
64.85	313	100.00	1054	146.95	847	270.00	274
65.95	216	102.90	471	147.85	366	281.05	815
66.95	1215	103.90	584	148.85	324		
67.95	10080	105.00	536	149.85	354		
68.95	20968	105.90	406	150.85	204		

Data File: /chem/H.i/010704.b/h0001.d
Date : 07-JAN-2004 10:44
Client ID: BFB
Sample Info: BFB,,MSVOA-237-03
Volume Injected (uL): 1.0
Column phase: DB624

Instrument: H.i
Operator: mhoffman
Column diameter: 0.53

Page 1

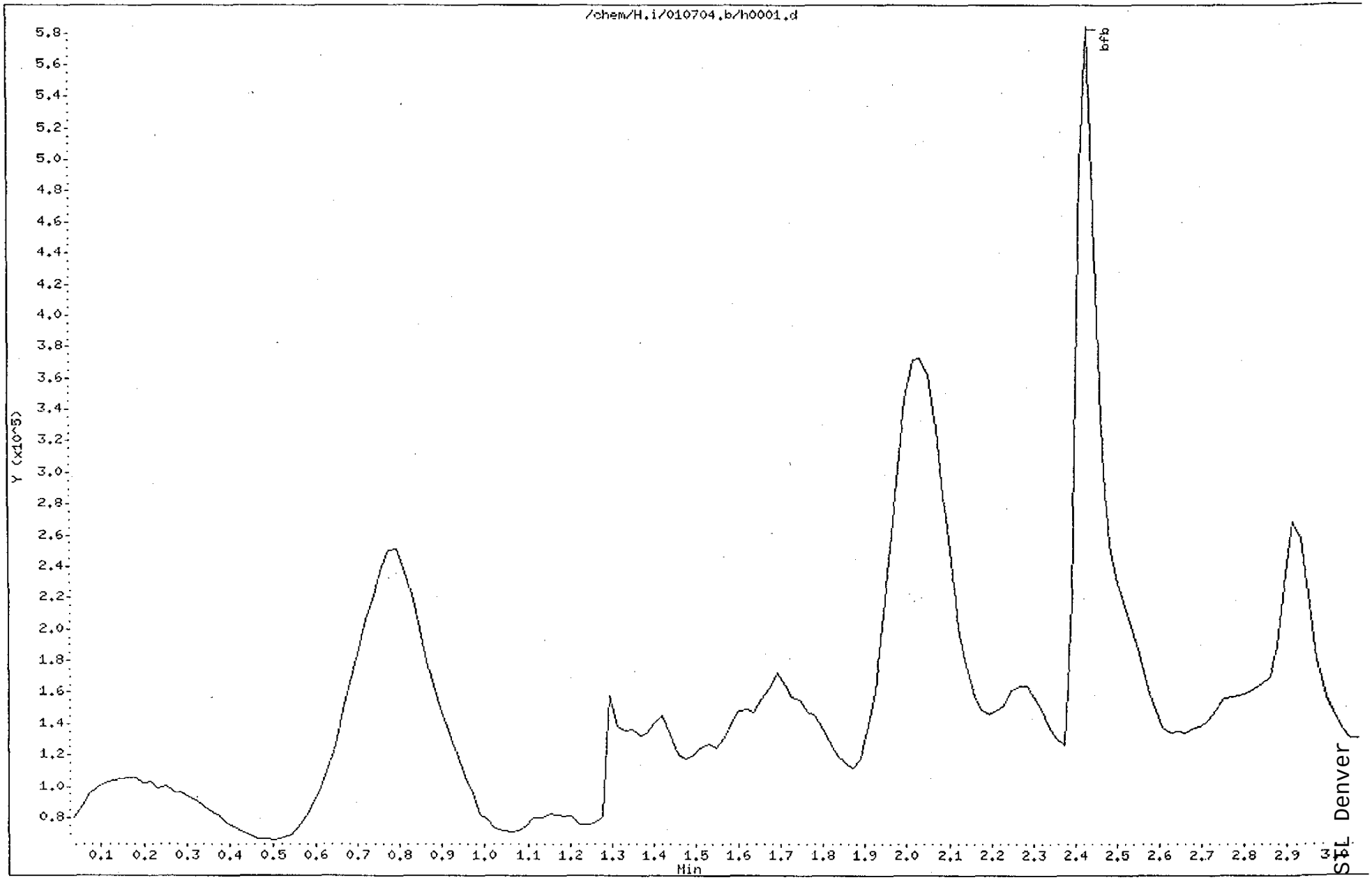


Table of Contents

Data File: /chem/H.i/010704.b/h0009.d
Report Date: 08-Jan-2004 16:03

STL Denver

VOLATILE REPORT SW-846

Data file : /chem/H.i/010704.b/h0009.d
Lab Smp Id: SUPP001 Client Smp ID: SUPP001
Inj Date : 07-JAN-2004 13:31
Operator : hoffmanm Inst ID: H.i
Smp Info : SUPP001,,
Misc Info :
Comment : Purge and Trap Analysis
Method : /chem/H.i/010704.b/H-20ml-h2o.m
Meth Date : 08-Jan-2004 10:26 hoffmanm Quant Type: ISTD
Cal Date : 07-JAN-2004 13:31 Cal File: h0009.d
Als bottle: 2 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 2-supp.sub
Target Version: 3.40
Processing Host: chemsv02

Concentration Formula: Amt * DF * Vp/Vs

Name	Value	Description
DF	1.000	Dilution Factor
Vp	20.000	Purge Volume (ml)
Vs	20.000	Sample Volume (ml)

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
* 48 Fluorobenzene	96	6.380	6.396	(1.000)	2280273	12.5000	
* 72 Chlorobenzene-d5	119	10.046	10.079	(1.000)	432362	12.5000	
* 96 1,4-Dichlorobenzene-d4	152	12.957	12.972	(1.000)	710357	12.5000	
$ 40 Dibromofluoromethane	111	5.572	5.587	(0.873)	89168	1.00000	1.19318
$ 44 1,2-Dichloroethane-d4	65	5.985	6.001	(0.938)	39902	1.00000	1.19772
$ 61 Toluene-d8	98	8.285	8.301	(0.825)	168028	1.00000	1.21916
$ 82 Bromofluorobenzene	95	11.555	11.571	(1.150)	90784	1.00000	1.20193
117 Dichlorotetrafluoroethane	85	1.996	1.993	(0.313)	118138	1.00000	1.08646(a)
6 Ethylene Oxide	43.00	Compound Not Detected.					
9 Dichlorofluoromethane	67	2.679	2.676	(0.420)	109039	1.00000	1.07842
12 Ethyl Ether	59	2.912	2.928	(0.456)	26752	1.00000	1.15618(a)
16 Trichlorotrifluoroethane	151	3.200	3.215	(0.501)	84772	1.00000	1.20982
18 Carbon Disulfide	76	3.469	3.467	(0.544)	201822	1.00000	1.17506
20 Allyl Chloride	41	3.487	3.485	(0.547)	95505	1.00000	1.16318(a)
119 Methyl Acetate	43	3.487	3.503	(0.547)	77718	5.00000	5.78194
25 Methyl t-butyl ether	73	3.900	3.916	(0.611)	85772	1.00000	1.14251(a)

Data File: /chem/H.i/010704.b/h0009.d
Report Date: 08-Jan-2004 16:03

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
26 Hexane	57	4.170	4.186	(0.415)	98930	1.00000	1.21579
29 Vinyl acetate	43	4.386	4.401	(0.687)	115632	2.00000	2.42446
35 Ethyl Acetate	43.00	Compound Not Detected.					
39 Tetrahydrofuran	42	5.374	5.390	(0.842)	10041	2.00000	2.54233(a)
120 ETBE	59	4.835	4.851	(0.758)	777641	5.00000	6.01331
114 Cyclohexane	56	5.697	5.713	(0.893)	105983	1.00000	1.24409(a)
115 2-Pentanone	43	7.027	7.043	(1.101)	67179	4.00000	4.81410
121 TAME	73	6.183	6.198	(0.969)	577459	5.00000	5.80029
54 Methyl Methacrylate	100	7.225	7.240	(1.132)	14644	2.00000	2.43861
122 Methyl Cyclohexane	55	7.063	7.079	(1.107)	99449	1.00000	1.25484
57 2-nitropropane	41.00	Compound Not Detected.					
113 2-Chloroethyl vinyl ether	63	7.764	7.797	(0.773)	15970	1.00000	1.21006(a)
64 Ethyl methacrylate	69	8.734	8.750	(0.869)	88150	2.00000	2.54861
116 cis-1,4-Dichloro-2-butene	53	11.429	11.463	(0.882)	7235	1.00000	1.19810
86 t-1,4-Dichloro-2-butene	53	11.807	11.822	(0.911)	6114	1.00000	1.12136
118 1,2,3-Trimethylbenzene	105	13.029	13.062	(2.042)	166750	1.00000	1.29886(a)
123 1,2-dichloro-1,1,2-triflourom	117	2.966	3.000	(0.465)	88456	1.00000	1.20948(a)
124 2,2-dichloro-1,1,1-trifluorom	83	3.020	3.036	(0.473)	150201	1.00000	1.19610(a)
125 2-Propanol	45	3.308	3.323	(0.518)	21841	20.0000	26.7465
126 Tetrahydrothiophene	60.00	Compound Not Detected.					

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

Data File: /chem/H.i/010704.b/h0009.d
Report Date: 08-Jan-2004 16:03

STL Denver

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: H.i
Lab File ID: h0009.d
Lab Smp Id: SUPP001
Analysis Type: VOA
Quant Type: ISTD
Operator: hoffmanm
Method File: /chem/H.i/010704.b/H-20ml-h2o.m
Misc Info:

Calibration Date: JAN/07/4
Calibration Time: 1439
Client Smp ID: SUPP001
Level: LOW
Sample Type: WATER

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
48 Fluorobenzene	2399820	1199910	4799640	2280273	-4.98
72 Chlorobenzene-d5	457381	228690	914762	432362	-5.47
96 1,4-Dichlorobenze	747017	373508	1494034	710357	-4.91

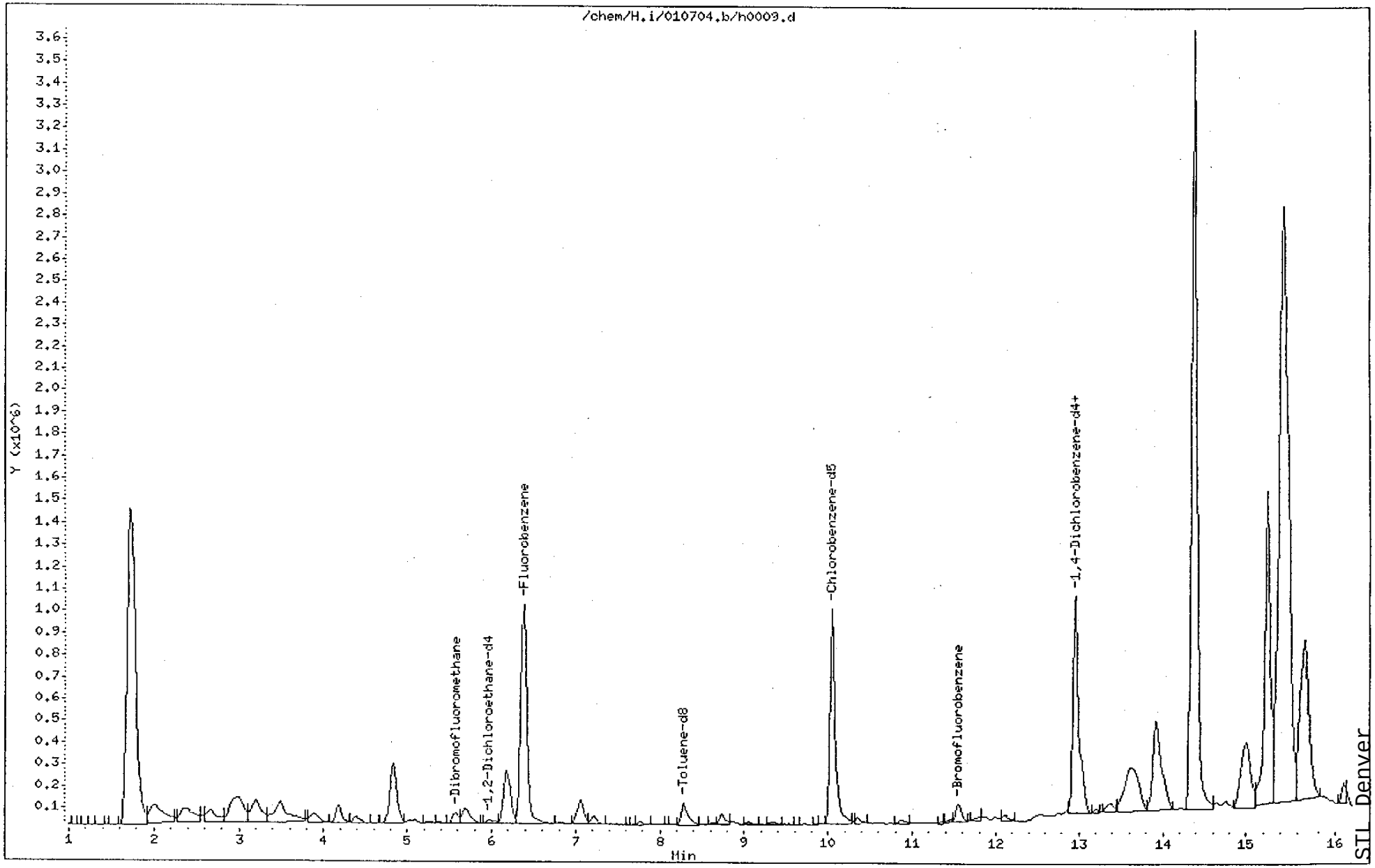
COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
48 Fluorobenzene	6.39	5.89	6.89	6.38	-0.23
72 Chlorobenzene-d5	10.06	9.56	10.56	10.05	-0.15
96 1,4-Dichlorobenze	12.97	12.47	13.47	12.96	-0.11

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem/H.i/010704.b/h0009.d
Date : 07-JAN-2004 13:31
Client ID: SUPP001
Sample Info: SUPP001,,
Purge Volume: 20.0
Column phase: DB624

Instrument: H.i

Operator: hoffmanm
Column diameter: 0.53



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Data File: /chem/H.i/010704.b/h0010.d
Report Date: 08-Jan-2004 16:03

STL Denver

VOLATILE REPORT SW-846

Data file : /chem/H.i/010704.b/h0010.d
Lab Smp Id: SUPP002 Client Smp ID: SUPP002
Inj Date : 07-JAN-2004 13:54
Operator : hoffmanm Inst ID: H.i
Smp Info : SUPP002,,
Misc Info :
Comment : Purge and Trap Analysis
Method : /chem/H.i/010704.b/H-20ml-h2o.m
Meth Date : 08-Jan-2004 10:26 hoffmanm Quant Type: ISTD
Cal Date : 07-JAN-2004 13:31 Cal File: h0009.d
Als bottle: 2 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 2-supp.sub
Target Version: 3.40
Processing Host: chemsv02

Concentration Formula: Amt * DF * Vp/Vs

Name	Value	Description
DF	1.000	Dilution Factor
Vp	20.000	Purge Volume (ml)
Vs	20.000	Sample Volume (ml)

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
* 48 Fluorobenzene	96	6.380	6.396	(1.000)	2296170	12.5000	
* 72 Chlorobenzene-d5	119	10.046	10.079	(1.000)	436136	12.5000	
* 96 1,4-Dichlorobenzene-d4	152	12.957	12.972	(1.000)	692592	12.5000	
$ 40 Dibromofluoromethane	111	5.572	5.587	(0.873)	178219	2.00000	2.27836
$ 44 1,2-Dichloroethane-d4	65	5.967	6.001	(0.935)	81778	2.00000	2.34253
$ 61 Toluene-d8	98	8.285	8.301	(0.825)	335134	2.00000	2.31747
$ 82 Bromofluorobenzene	95	11.555	11.571	(1.150)	180712	2.00000	2.28163
117 Dichlorotetrafluoroethane	85	1.996	1.993	(0.313)	271593	2.00000	2.38195(a)
6 Ethylene Oxide	43	2.355	2.353	(0.369)	187866	250.000	281.925
9 Dichlorofluoromethane	67	2.661	2.676	(0.417)	230335	2.00000	2.18010
12 Ethyl Ether	59	2.912	2.928	(0.456)	57004	2.00000	2.35072
16 Trichlorotrifluoroethane	151	3.200	3.215	(0.502)	171605	2.00000	2.33736
18 Carbon Disulfide	76	3.469	3.467	(0.544)	429229	2.00000	2.38321
20 Allyl Chloride	41	3.487	3.485	(0.547)	209609	2.00000	2.43242
119 Methyl Acetate	43	3.487	3.503	(0.547)	170561	10.0000	12.0933
25 Methyl t-butyl ether	73	3.901	3.916	(0.611)	184241	2.00000	2.34202(a)

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
26 Hexane	57	4.170	4.186	(0.415)	199047	2.00000	2.33080
29 Vinyl acetate	43	4.386	4.401	(0.687)	217330	4.00000	4.36077
35 Ethyl Acetate	43	5.087	5.102	(0.797)	97431	4.00000	5.05948
39 Tetrahydrofuran	42	5.356	5.390	(0.839)	18719	4.00000	4.52910(a)
120 ETBE	59	4.835	4.851	(0.758)	1592104	10.0000	11.7474
114 Cyclohexane	56	5.680	5.713	(0.890)	208747	2.00000	2.33858(a)
115 2-Pentanone	43	7.027	7.043	(1.101)	131607	8.00000	9.01400
121 TAME	73	6.183	6.198	(0.969)	1187684	10.0000	11.3970
54 Methyl Methacrylate	100	7.225	7.240	(1.132)	27817	4.00000	4.43035
122 Methyl Cyclohexane	55	7.063	7.079	(1.107)	193445	2.00000	2.32985
57 2-nitropropane	41	7.674	7.690	(0.764)	9221	2.00000	2.04516
113 2-Chloroethyl vinyl ether	63	7.764	7.797	(0.773)	30392	2.00000	2.19923(a)
64 Ethyl methacrylate	69	8.734	8.750	(0.869)	162337	4.00000	4.47922
116 cis-1,4-Dichloro-2-butene	53	11.430	11.463	(0.882)	13111	2.00000	2.14715
86 t-1,4-Dichloro-2-butene	53	11.789	11.822	(0.910)	12107	2.00000	2.19420
118 1,2,3-Trimethylbenzene	105	13.029	13.062	(2.042)	309595	2.00000	2.30290(a)
123 1,2-dichloro-1,1,2-triflourom	117	2.984	3.000	(0.468)	177606	2.00000	2.31844(a)
124 2,2-dichloro-1,1,1-trifluorom	83	3.020	3.036	(0.473)	306764	2.00000	2.33168(a)
125 2-Propanol	45	3.290	3.323	(0.516)	42670	40.0000	49.7410
126 Tetrahydrothiophene	60	9.327	9.343	(0.928)	24758	2.00000	2.44045(a)

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

Data File: /chem/H.i/010704.b/h0010.d
Report Date: 08-Jan-2004 16:03

STL Denver

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: H.i
Lab File ID: h0010.d
Lab Smp Id: SUPP002
Analysis Type: VOA
Quant Type: ISTD
Operator: hoffmanm
Method File: /chem/H.i/010704.b/H-20ml-h2o.m
Misc Info:

Calibration Date: JAN/07/4
Calibration Time: 1439
Client Smp ID: SUPP002
Level: LOW
Sample Type: WATER

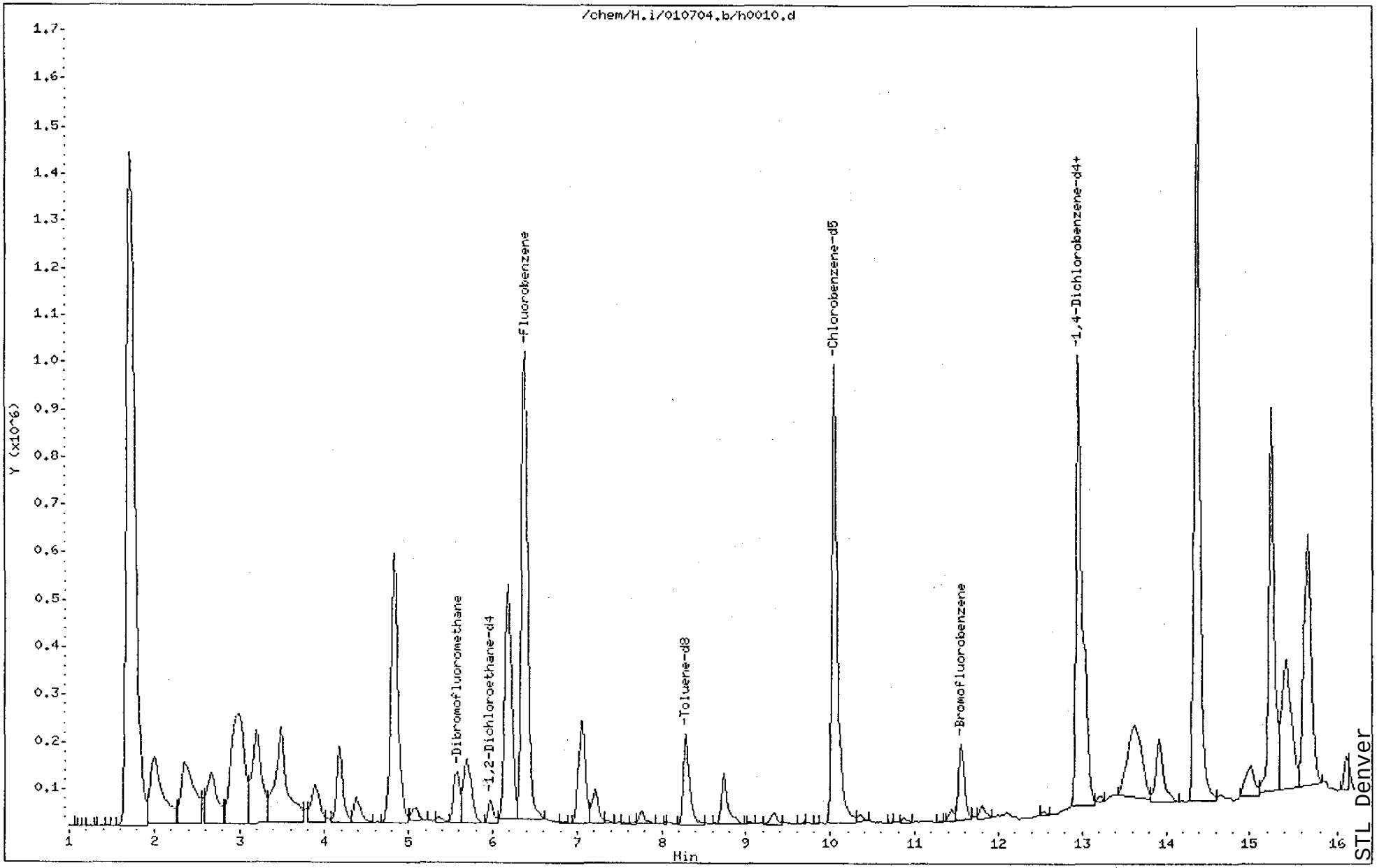
COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
48 Fluorobenzene	2399820	1199910	4799640	2296170	-4.32
72 Chlorobenzene-d5	457381	228690	914762	436136	-4.64
96 1,4-Dichlorobenze	747017	373508	1494034	692592	-7.29

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
48 Fluorobenzene	6.39	5.89	6.89	6.38	-0.23
72 Chlorobenzene-d5	10.06	9.56	10.56	10.05	-0.14
96 1,4-Dichlorobenze	12.97	12.47	13.47	12.96	-0.11

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem/H.i/010704.b/h0010.d
Date : 07-JAN-2004 13:54
Client ID: SUPP002
Sample Info: SUPP002,,
Purge Volume: 20.0
Column phase: DB624

Instrument: H.i
Operator: hoffmanm
Column diameter: 0.53



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Data File: /chem/H.i/010704.b/h0011.d
Report Date: 08-Jan-2004 16:03

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VOLATILE REPORT SW-846

Data file : /chem/H.i/010704.b/h0011.d
Lab Smp Id: SUPP005 Client Smp ID: SUPP005
Inj Date : 07-JAN-2004 14:16
Operator : hoffmanm Inst ID: H.i
Smp Info : SUPP005,,
Misc Info :
Comment : Purge and Trap Analysis
Method : /chem/H.i/010704.b/H-20ml-h2o.m
Meth Date : 08-Jan-2004 10:26 hoffmanm Quant Type: ISTD
Cal Date : 07-JAN-2004 13:31 Cal File: h0009.d
Als bottle: 2 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 2-supp.sub
Target Version: 3.40
Processing Host: chemsv02

Concentration Formula: Amt * DF * Vp/Vs

Name	Value	Description
DF	1.000	Dilution Factor
Vp	20.000	Purge Volume (ml)
Vs	20.000	Sample Volume (ml)

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	ON-COL (ug/L)
* 48 Fluorobenzene	96	6.377	6.396	(1.000)	2310884	12.5000	
* 72 Chlorobenzene-d5	119	10.060	10.079	(1.000)	436818	12.5000	
* 96 1,4-Dichlorobenzene-d4	152	12.953	12.972	(1.000)	690442	12.5000	
$ 40 Dibromofluoromethane	111	5.568	5.587	(0.873)	456204	5.00000	5.57943
$ 44 1,2-Dichloroethane-d4	65	5.982	6.001	(0.938)	202395	5.00000	5.54763
$ 61 Toluene-d8	98	8.300	8.301	(0.825)	846173	5.00000	5.62319
$ 82 Bromofluorobenzene	95	11.570	11.571	(1.150)	465151	5.00000	5.64313
117 Dichlorotetrafluoroethane	85	2.010	1.993	(0.315)	726651	5.00000	6.07587
6 Ethylene Oxide	43	2.352	2.353	(0.369)	525564	625.000	746.249
9 Dichlorofluoromethane	67	2.675	2.676	(0.420)	638988	5.00000	5.77797
12 Ethyl Ether	59	2.909	2.928	(0.456)	145522	5.00000	5.73484
16 Trichlorotrifluoroethane	151	3.214	3.215	(0.504)	457079	5.00000	5.94104
18 Carbon Disulfide	76	3.466	3.467	(0.543)	1110260	5.00000	5.88494
20 Allyl Chloride	41	3.484	3.485	(0.546)	517481	5.00000	5.73864
119 Methyl Acetate	43	3.502	3.503	(0.549)	410871	25.0000	27.8708
25 Methyl t-butyl ether	73	3.897	3.916	(0.611)	466929	5.00000	5.67457

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
26 Hexane	57	4.185	4.186	(0.416)	529844	5.00000	5.94901
29 Vinyl acetate	43	4.382	4.401	(0.687)	588885	10.0000	11.2987
35 Ethyl Acetate	43	5.083	5.102	(0.797)	226152	10.0000	11.1486
39 Tetrahydrofuran	42	5.371	5.390	(0.842)	49047	10.0000	11.3455
120 ETBE	59	4.832	4.851	(0.758)	3957455	25.0000	27.9336
114 Cyclohexane	56	5.694	5.713	(0.893)	559525	5.00000	5.98010
115 2-Pentanone	43	7.024	7.043	(1.101)	333350	20.0000	21.8598
121 TAME	73	6.179	6.198	(0.969)	3102196	25.0000	28.4569
54 Methyl Methacrylate	100	7.221	7.240	(1.132)	75849	10.0000	11.5416
122 Methyl Cyclohexane	55	7.060	7.079	(1.107)	524800	5.00000	6.02805
57 2-nitropropane	41	7.689	7.690	(0.764)	28454	5.00000	5.99867
113 2-Chloroethyl vinyl ether	63	7.778	7.797	(0.773)	75608	5.00000	5.27067(a)
64 Ethyl methacrylate	69	8.749	8.750	(0.870)	407785	10.0000	10.8286
116 cis-1,4-Dichloro-2-butene	53	11.444	11.463	(0.883)	37272	5.00000	5.88280
86 t-1,4-Dichloro-2-butene	53	11.821	11.822	(0.913)	30896	5.00000	5.41410
118 1,2,3-Trimethylbenzene	105	13.043	13.062	(2.045)	813186	5.00000	5.77877
123 1,2-dichloro-1,1,2-triflourom	117	2.981	3.000	(0.467)	471787	5.00000	5.87956
124 2,2-dichloro-1,1,1-trifluorom	83	3.035	3.036	(0.476)	811009	5.00000	5.88485
125 2-Propanol	45	3.304	3.323	(0.518)	102431	100.000	114.131
126 Tetrahydrothiophene	60	9.342	9.343	(0.929)	59249	5.00000	5.57129

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

Data File: /chem/H.i/010704.b/h0011.d
Report Date: 08-Jan-2004 16:03

STL Denver

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: H.i
Lab File ID: h0011.d
Lab Smp Id: SUPP005
Analysis Type: VOA
Quant Type: ISTD
Operator: hoffmanm
Method File: /chem/H.i/010704.b/H-20ml-h2o.m
Misc Info:

Calibration Date: JAN/07/4
Calibration Time: 1439
Client Smp ID: SUPP005
Level: LOW
Sample Type: WATER

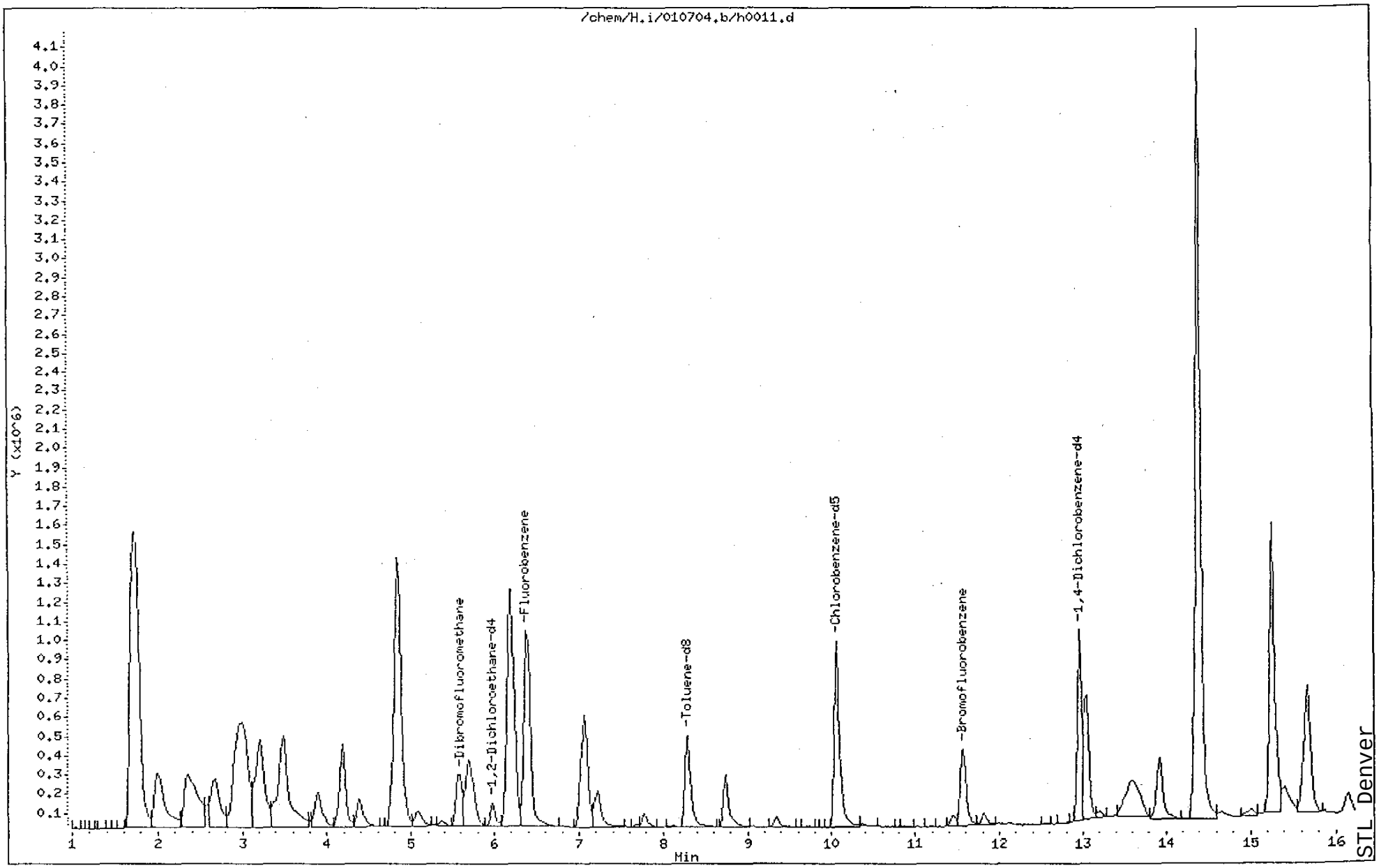
COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
48 Fluorobenzene	2399820	1199910	4799640	2310884	-3.71
72 Chlorobenzene-d5	457381	228690	914762	436818	-4.50
96 1,4-Dichlorobenze	747017	373508	1494034	690442	-7.57

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
48 Fluorobenzene	6.39	5.89	6.89	6.38	-0.28
72 Chlorobenzene-d5	10.06	9.56	10.56	10.06	0.00
96 1,4-Dichlorobenze	12.97	12.47	13.47	12.95	-0.14

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem/H.i/010704.b/h0011.d
Date : 07-JAN-2004 14:16
Client ID: SUPP005
Sample Info: SUPP005,,
Purge Volume: 20.0
Column phase: DB624

Instrument: H.i
Operator: hoffmanm
Column diameter: 0.53



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Data File: /chem/H.i/010704.b/h0012.d
Report Date: 08-Jan-2004 16:03

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VOLATILE REPORT SW-846

Data file : /chem/H.i/010704.b/h0012.d
Lab Smp Id: SUPP010 Client Smp ID: SUPP010
Inj Date : 07-JAN-2004 14:39
Operator : hoffmanm Inst ID: H.i
Smp Info : SUPP010,,
Misc Info :
Comment : Purge and Trap Analysis
Method : /chem/H.i/010704.b/H-20ml-h2o.m
Meth Date : 08-Jan-2004 10:26 hoffmanm Quant Type: ISTD
Cal Date : 07-JAN-2004 13:31 Cal File: h0009.d
Als bottle: 2 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 2-supp.sub
Target Version: 3.40
Processing Host: chemsv02

Concentration Formula: Amt * DF * Vp/Vs

Name	Value	Description
DF	1.000	Dilution Factor
Vp	20.000	Purge Volume (ml)
Vs	20.000	Sample Volume (ml)

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
* 48 Fluorobenzene	96	6.395	6.396	(1.000)	2399820	12.5000	
* 72 Chlorobenzene-d5	119	10.061	10.079	(1.000)	457381	12.5000	
* 96 1,4-Dichlorobenzene-d4	152	12.971	12.972	(1.000)	747017	12.5000	
$ 40 Dibromofluoromethane	111	5.586	5.587	(0.874)	955299	10.0000	10.8438
$ 44 1,2-Dichloroethane-d4	65	6.000	6.001	(0.938)	424678	10.0000	10.8053
$ 61 Toluene-d8	98	8.300	8.301	(0.825)	1743041	10.0000	10.6691
$ 82 Bromofluorobenzene	95	11.570	11.571	(1.150)	971126	10.0000	10.8451
117 Dichlorotetrafluoroethane	85	1.992	1.993	(0.312)	1367526	10.0000	10.6210
6 Ethylene Oxide	43	2.352	2.353	(0.368)	1003111	1250.00	1313.87
9 Dichlorofluoromethane	67	2.675	2.676	(0.418)	1256831	10.0000	10.5584
12 Ethyl Ether	59	2.927	2.928	(0.458)	277456	10.0000	10.1720
16 Trichlorotrifluoroethane	151	3.214	3.215	(0.503)	848111	10.0000	10.2523
18 Carbon Disulfide	76	3.466	3.467	(0.542)	2081390	10.0000	10.2602
20 Allyl Chloride	41	3.502	3.485	(0.548)	991413	10.0000	10.2260
119 Methyl Acetate	43	3.502	3.503	(0.548)	801807	50.0000	50.6068
25 Methyl t-butyl ether	73	3.915	3.916	(0.612)	903925	10.0000	10.2180

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
26 Hexane	57	4.185	4.186	(0.416)	983709	10.0000	10.1901
29 Vinyl acetate	43	4.400	4.401	(0.688)	1121648	20.0000	20.0312
35 Ethyl Acetate	43	5.101	5.102	(0.798)	445644	20.0000	20.2961
39 Tetrahydrofuran	42	5.371	5.390	(0.840)	93685	20.0000	20.1667
120 ETBE	59	4.850	4.851	(0.758)	7853444	50.0000	51.5447
114 Cyclohexane	56	5.712	5.713	(0.893)	1025949	10.0000	10.1998
115 2-Pentanone	43	7.042	7.043	(1.101)	681679	40.0000	41.5547
121 TAME	73	6.197	6.198	(0.969)	6061798	50.0000	51.6995
54 Methyl Methacrylate	100	7.239	7.240	(1.132)	142028	20.0000	20.1132
122 Methyl Cyclohexane	55	7.078	7.079	(1.107)	960975	10.0000	10.2654
57 2-nitropropane	41	7.689	7.690	(0.764)	54602	10.0000	10.5306
113 2-Chloroethyl vinyl ether	63	7.778	7.797	(0.773)	168888	10.0000	10.8378
64 Ethyl methacrylate	69	8.749	8.750	(0.870)	811930	20.0000	19.9080
116 cis-1,4-Dichloro-2-butene	53	11.444	11.463	(0.882)	72541	10.0000	10.2218
86 t-1,4-Dichloro-2-butene	53	11.821	11.822	(0.911)	67540	10.0000	10.5543
118 1,2,3-Trimethylbenzene	105	13.043	13.062	(2.040)	1553641	10.0000	10.2677
123 1,2-dichloro-1,1,2-triflourom	117	2.999	3.000	(0.469)	890781	10.0000	10.3220
124 2,2-dichloro-1,1,1-trifluorom	83	3.035	3.036	(0.475)	1522805	10.0000	10.2758
125 2-Propanol	45	3.304	3.323	(0.517)	179401	200.000	186.502
126 Tetrahydrothiophene	60	9.342	9.343	(0.929)	119052	10.0000	10.2529

Data File: /chem/H.i/010704.b/h0012.d
Report Date: 08-Jan-2004 16:03

STL Denver

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: H.i
Lab File ID: h0012.d
Lab Smp Id: SUPP010
Analysis Type: VOA
Quant Type: ISTD
Operator: hoffmanm
Method File: /chem/H.i/010704.b/H-20ml-h2o.m
Misc Info:

Calibration Date: JAN/07/4
Calibration Time: 1439
Client Smp ID: SUPP010
Level: LOW
Sample Type: WATER

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
48 Fluorobenzene	2399820	1199910	4799640	2399820	0.00
72 Chlorobenzene-d5	457381	228690	914762	457381	0.00
96 1,4-Dichlorobenze	747017	373508	1494034	747017	0.00

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
48 Fluorobenzene	6.39	5.89	6.89	6.39	0.00
72 Chlorobenzene-d5	10.06	9.56	10.56	10.06	0.00
96 1,4-Dichlorobenze	12.97	12.47	13.47	12.97	0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem/H.i/010704.b/h0012.d
Date : 07-JAN-2004 14:39
Client ID: SUPP010
Sample Info: SUPP010,,
Purge Volume: 20.0
Column phase: DB624

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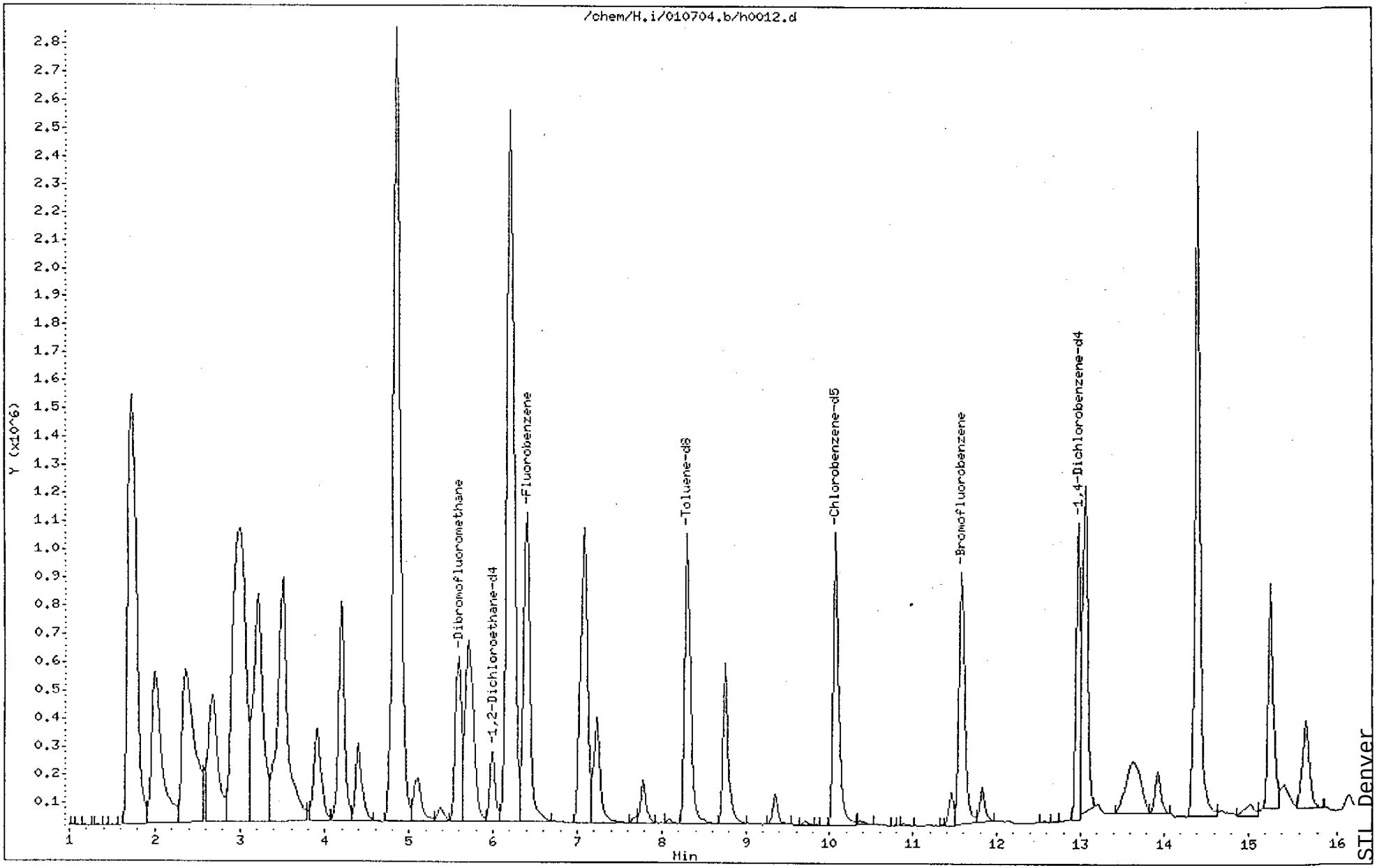
Instrument: H.i

Operator: hoffmanm
Column diameter: 0.53



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Data File: /chem/H.i/010704.b/h0013.d
Report Date: 08-Jan-2004 16:03

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VOLATILE REPORT SW-846

Data file : /chem/H.i/010704.b/h0013.d
Lab Smp Id: SUPP030 Client Smp ID: SUPP030
Inj Date : 07-JAN-2004 15:01
Operator : hoffmanm Inst ID: H.i
Smp Info : SUPP030,,
Misc Info :
Comment : Purge and Trap Analysis
Method : /chem/H.i/010704.b/H-20ml-h2o.m
Meth Date : 08-Jan-2004 10:26 hoffmanm Quant Type: ISTD
Cal Date : 07-JAN-2004 13:31 Cal File: h0009.d
Als bottle: 2 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 2-supp.sub
Target Version: 3.40
Processing Host: chemsv02

Concentration Formula: Amt * DF * Vp/Vs

Name	Value	Description
DF	1.000	Dilution Factor
Vp	20.000	Purge Volume (ml)
Vs	20.000	Sample Volume (ml)

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	ON-COL (ug/L)
* 48 Fluorobenzene	96	6.398	6.396	(1.000)	2361581	12.5000	
* 72 Chlorobenzene-d5	119	10.064	10.079	(1.000)	440643	12.5000	
* 96 1,4-Dichlorobenzene-d4	152	12.975	12.972	(1.000)	696225	12.5000	
$ 40 Dibromofluoromethane	111	5.590	5.587	(0.874)	1858487	20.0000	20.6981
$ 44 1,2-Dichloroethane-d4	65	6.003	6.001	(0.938)	814857	20.0000	20.3538
$ 61 Toluene-d8	98	8.303	8.301	(0.825)	3265752	20.0000	20.0553
$ 82 Bromofluorobenzene	95	11.573	11.571	(1.150)	1809510	20.0000	20.2669
117 Dichlorotetrafluoroethane	85	1.996	1.993	(0.312)	4017111	30.0000	30.6254
6 Ethylene Oxide	43	2.355	2.353	(0.368)	3206595	3750.00	4082.15
9 Dichlorofluoromethane	67	2.679	2.676	(0.419)	4014980	30.0000	33.0178
12 Ethyl Ether	59	2.930	2.928	(0.458)	887491	30.0000	31.8920
16 Trichlorotrifluoroethane	151	3.218	3.215	(0.503)	2498216	30.0000	29.6765
18 Carbon Disulfide	76	3.487	3.467	(0.545)	6215058	30.0000	30.0923
20 Allyl Chloride	41	3.487	3.485	(0.545)	3049449	30.0000	30.8669
119 Methyl Acetate	43	3.505	3.503	(0.548)	2572739	150.000	159.173
25 Methyl t-butyl ether	73	3.919	3.916	(0.612)	2918965	30.0000	32.3259

Data File: /chem/H.i/010704.b/h0013.d
Report Date: 08-Jan-2004 16:03

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
26 Hexane	57	4.188	4.186	(0.416)	2802315	30.0000	29.1553
29 Vinyl acetate	43	4.404	4.401	(0.688)	3579262	60.0000	62.6936
35 Ethyl Acetate	43	5.105	5.102	(0.798)	1425273	60.0000	63.1842
39 Tetrahydrofuran	42	5.374	5.390	(0.840)	292568	60.0000	61.8007
120 ETBE	59	4.853	4.851	(0.758)	25108837	150.000	161.457
114 Cyclohexane	56	5.715	5.713	(0.893)	2933787	30.0000	28.6945
115 2-Pentanone	43	7.045	7.043	(1.101)	2152617	120.000	128.584
121 TAME	73	6.201	6.198	(0.969)	19323953	150.000	161.468
54 Methyl Methacrylate	100	7.243	7.240	(1.132)	467719	60.0000	64.8820
122 Methyl Cyclohexane	55	7.081	7.079	(1.107)	2689637	30.0000	28.2791
57 2-nitropropane	41	7.692	7.690	(0.764)	179832	30.0000	34.3511
113 2-Chloroethyl vinyl ether	63	7.782	7.797	(0.773)	507878	30.0000	32.6037
64 Ethyl methacrylate	69	8.752	8.750	(0.870)	2638128	60.0000	64.7278
116 cis-1,4-Dichloro-2-butene	53	11.448	11.463	(0.882)	223833	30.0000	32.6150
86 t-1,4-Dichloro-2-butene	53	11.825	11.822	(0.911)	209382	30.0000	33.7885
118 1,2,3-Trimethylbenzene	105	13.047	13.062	(2.039)	4432401	30.0000	28.8140
123 1,2-dichloro-1,1,2-triflourom	117	3.002	3.000	(0.469)	2655256	30.0000	30.2164
124 2,2-dichloro-1,1,1-trifluorom	83	3.038	3.036	(0.475)	4577845	30.0000	30.3333
125 2-Propanol	45	3.308	3.323	(0.517)	581591	600.000	594.122
126 Tetrahydrothiophene	60	9.345	9.343	(0.929)	373662	30.0000	31.9784

Data File: /chem/H.i/010704.b/h0013.d
Report Date: 08-Jan-2004 16:03

STL Denver

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: H.i
Lab File ID: h0013.d
Lab Smp Id: SUPP030
Analysis Type: VOA
Quant Type: ISTD
Operator: hoffmanm
Method File: /chem/H.i/010704.b/H-20ml-h2o.m
Misc Info:

Calibration Date: JAN/07/4
Calibration Time: 1439
Client Smp ID: SUPP030
Level: LOW
Sample Type: WATER

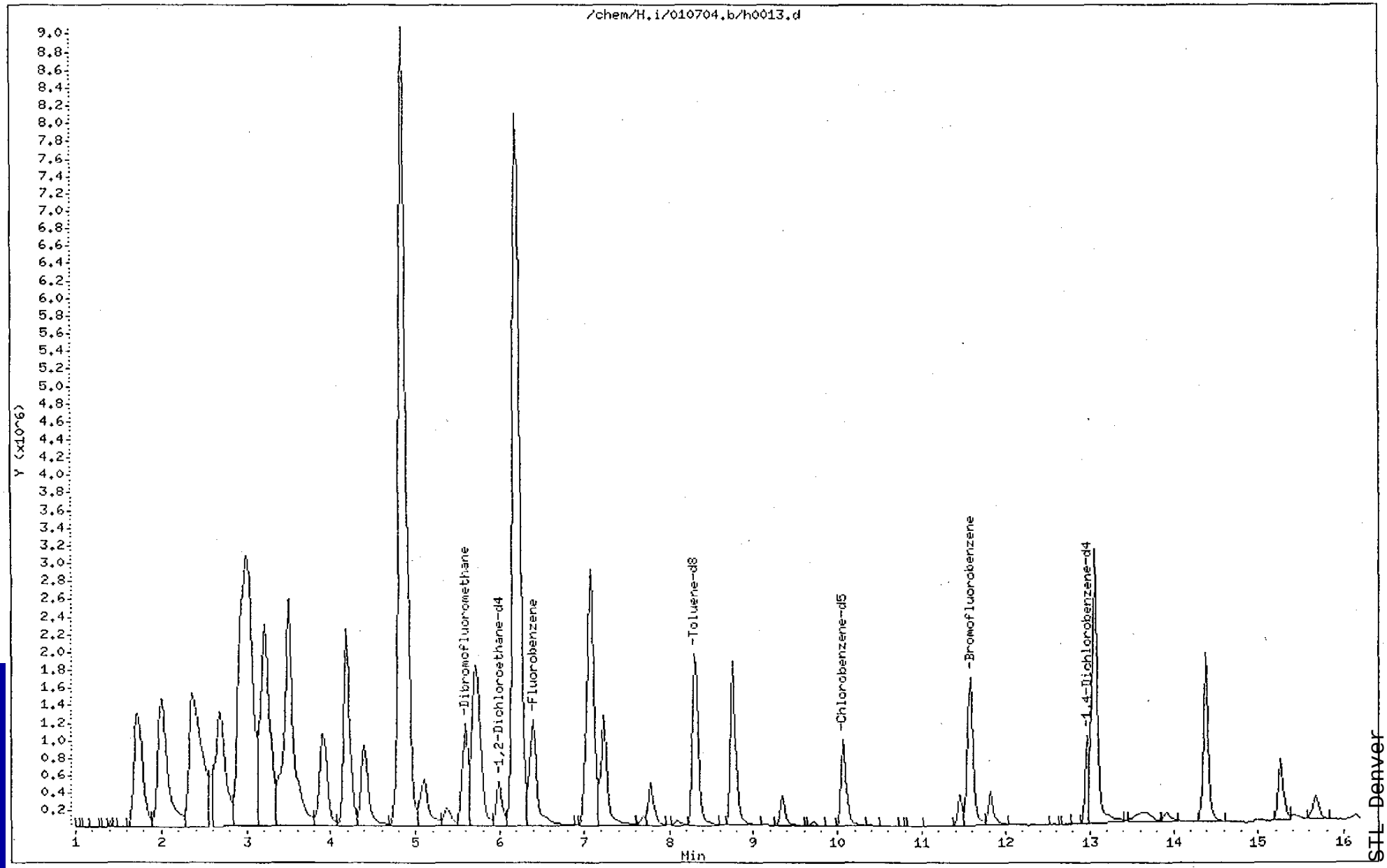
COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
48 Fluorobenzene	2399820	1199910	4799640	2361581	-1.59
72 Chlorobenzene-d5	457381	228690	914762	440643	-3.66
96 1,4-Dichlorobenze	747017	373508	1494034	696225	-6.80

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
48 Fluorobenzene	6.39	5.89	6.89	6.40	0.05
72 Chlorobenzene-d5	10.06	9.56	10.56	10.06	0.03
96 1,4-Dichlorobenze	12.97	12.47	13.47	12.97	0.03

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem/H.i/010704.b/h0013.d
Date : 07-JAN-2004 15:01
Client ID: SUPP030
Sample Info: SUPP030,,
Purge Volume: 20.0
Column phase: DB624

Instrument: H.i
Operator: hoffmanm
Column diameter: 0.53



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Data File: /chem/H.i/010704.b/h0014.d
Report Date: 08-Jan-2004 16:03

STL Denver

VOLATILE REPORT SW-846

Data file : /chem/H.i/010704.b/h0014.d
Lab Smp Id: SUPP060 Client Smp ID: SUPP060
Inj Date : 07-JAN-2004 15:24
Operator : hoffmanm Inst ID: H.i
Smp Info : SUPP060,,
Misc Info :
Comment : Purge and Trap Analysis
Method : /chem/H.i/010704.b/H-20ml-h2o.m
Meth Date : 08-Jan-2004 10:26 hoffmanm Quant Type: ISTD
Cal Date : 07-JAN-2004 15:24 Cal File: h0014.d
Als bottle: 2 Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 2-supp.sub
Target Version: 3.40
Processing Host: chemsv02

Concentration Formula: Amt * DF * Vp/Vs

Name	Value	Description
DF	1.000	Dilution Factor
Vp	20.000	Purge Volume (ml)
Vs	20.000	Sample Volume (ml)

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	ON-COL (ug/L)
* 48 Fluorobenzene	96	6.396	6.396	(1.000)	2376718	12.5000	
* 72 Chlorobenzene-d5	119	10.079	10.079	(1.000)	438659	12.5000	
* 96 1,4-Dichlorobenzene-d4	152	12.972	12.972	(1.000)	682461	12.5000	
$ 40 Dibromofluoromethane	111	5.587	5.587	(0.874)	2814332	30.0000	30.1022
$ 44 1,2-Dichloroethane-d4	65	6.001	6.001	(0.938)	1242727	30.0000	29.8216
$ 61 Toluene-d8	98	8.301	8.301	(0.824)	5022867	30.0000	29.9542
$ 82 Bromofluorobenzene	95	11.571	11.571	(1.148)	2762992	30.0000	30.0482
117 Dichlorotetrafluoroethane	85	1.993	1.993	(0.312)	8152179	60.0000	59.7059
6 Ethylene Oxide	43	2.353	2.353	(0.368)	6138179	7500.00	7455.68
9 Dichlorofluoromethane	67	2.676	2.676	(0.418)	8311395	60.0000	65.4454(A)
12 Ethyl Ether	59	2.928	2.928	(0.458)	1760116	60.0000	60.7267(A)
16 Trichlorotrifluoroethane	151	3.215	3.215	(0.503)	5200078	60.0000	59.3548
18 Carbon Disulfide	76	3.467	3.467	(0.542)	12872280	60.0000	59.8688
20 Allyl Chloride	41	3.485	3.485	(0.545)	6120276	60.0000	59.5202
119 Methyl Acetate	43	3.503	3.503	(0.548)	5136965	300.000	305.091(A)
25 Methyl t-butyl ether	73	3.916	3.916	(0.612)	5776357	60.0000	61.3945(A)

Data File: /chem/H.i/010704.b/h0014.d
Report Date: 08-Jan-2004 16:03

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
26 Hexane	57	4.186	4.186	(0.415)	5991352	60.0000	60.5110(A)
29 Vinyl acetate	43	4.401	4.401	(0.688)	7814744	120.000	131.058(A)
35 Ethyl Acetate	43	5.102	5.102	(0.798)	2859583	120.000	120.886(A)
39 Tetrahydrofuran	42	5.390	5.390	(0.843)	587798	120.000	119.285
120 ETBE	59	4.851	4.851	(0.758)	46999181	300.000	290.598
114 Cyclohexane	56	5.713	5.713	(0.893)	6282398	60.0000	59.0518
115 2-Pentanone	43	7.043	7.043	(1.101)	4344807	240.000	248.962(A)
121 TAME	73	6.198	6.198	(0.969)	38252448	300.000	306.771(A)
54 Methyl Methacrylate	100	7.240	7.240	(1.132)	903093	120.000	120.319(A)
122 Methyl Cyclohexane	55	7.079	7.079	(1.107)	5789775	60.0000	58.5201
57 2-nitropropane	41	7.690	7.690	(0.763)	337623	60.0000	62.1016(A)
113 2-Chloroethyl vinyl ether	63	7.797	7.797	(0.774)	999060	60.0000	62.1993(A)
64 Ethyl methacrylate	69	8.750	8.750	(0.868)	5137568	120.000	122.321(A)
116 cis-1,4-Dichloro-2-butene	53	11.463	11.463	(0.884)	423282	60.0000	60.7957(A)
86 t-1,4-Dichloro-2-butene	53	11.822	11.822	(0.911)	411574	60.0000	65.2982(A)
118 1,2,3-Trimethylbenzene	105	13.062	13.062	(2.042)	9376462	60.0000	58.5945
123 1,2-dichloro-1,1,2-triflourom	117	3.000	3.000	(0.469)	5412690	60.0000	59.1908
124 2,2-dichloro-1,1,1-trifluorom	83	3.036	3.036	(0.475)	9358961	60.0000	59.5790
125 2-Propanol	45	3.323	3.323	(0.520)	1126943	1200.00	1108.66
126 Tetrahydrothiophene	60	9.343	9.343	(0.927)	749512	60.0000	61.7803(A)

QC Flag Legend

A - Target compound detected but, quantitated amount exceeded maximum amount.

Data File: /chem/H.i/010704.b/h0014.d
Report Date: 08-Jan-2004 16:03

STL Denver

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: H.i
Lab File ID: h0014.d
Lab Smp Id: SUPP060
Analysis Type: VOA
Quant Type: ISTD
Operator: hoffmanm
Method File: /chem/H.i/010704.b/H-20ml-h2o.m
Misc Info:

Calibration Date: JAN/07/4
Calibration Time: 1439
Client Smp ID: SUPP060
Level: LOW
Sample Type: WATER

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
48 Fluorobenzene	2399820	1199910	4799640	2376718	-0.96
72 Chlorobenzene-d5	457381	228690	914762	438659	-4.09
96 1,4-Dichlorobenze	747017	373508	1494034	682461	-8.64

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
48 Fluorobenzene	6.39	5.89	6.89	6.40	0.02
72 Chlorobenzene-d5	10.06	9.56	10.56	10.08	0.19
96 1,4-Dichlorobenze	12.97	12.47	13.47	12.97	0.01

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem/H.i/010704.b/h0014.d
Date : 07-JAN-2004 15:24
Client ID: SUPP060
Sample Info: SUPP060,,
Purge Volume: 20.0
Column phase: DB624

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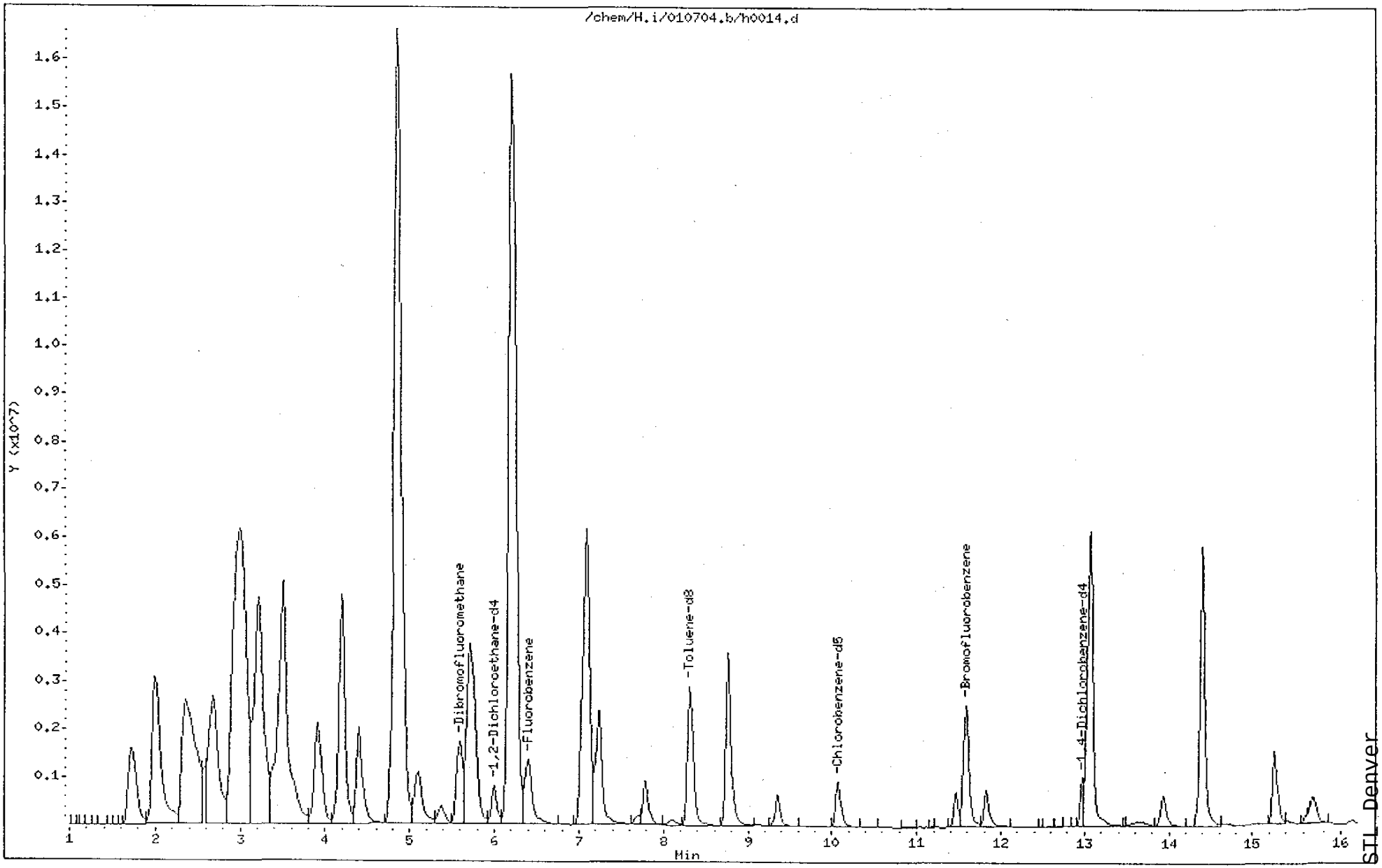
Instrument: H.i

Operator: hoffmanm
Column diameter: 0.53



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GC/MS Continuing Calibration Review Checklist *STL Denver*

Instrument ID and Date: H 2-20-04

Check Method Used: Analysis ☐ 625 ☐ 8270 ☐ Other SV _____

☐ 524.2 ☐ 624 ☑ 8260B ☐ Other VOA _____

VOA Preparation ☐ 5mL ☑ 20mL ☐ 5035 Low ☐ 5035 High ☐ 5030 Low ☐ 5030 High

Review Items	Level 1 Yes	Level 1 No	Level 1 N/A	Level 2	Comments
Continuing Calibration					
1. BFB/DFTPP meets criteria?	✓			✓	
2. ICAL date and instrument ID verified?	✓			✓	
3. Do SPCC RRFs and CCC %Ds meet method criteria?	✓			✓	
4. Does %D meet criteria for non-CCC compounds?	✓			✓	
5. Isomeric pairs checked for correct peak assignment?	✓			✓	
6. Standards traceability properly documented?	✓			✓	
7. Manual integrations documented and checked?			✓	N/A	
8. Do the Internal Standards meet criteria for %D against ICAL?	✓			✓	

1st Level Reviewer: DA Date: 2-20-04

2nd Level Reviewer: GM Date: 2/21/04

Report Date: 20-Feb-2004 11:10

Calibration History

Method : /chem/H.i/022004.b/H-20ml-h2o.m
Start Cal Date: 07-JAN-2004 11:17
End Cal Date : 07-JAN-2004 15:24

Initial Calibration

Injection Date	Sublist	Calibration File
Cal Level: 1 , Cal Amount: 1.00000		
07-JAN-2004 13:31	2-supp	/chem/H.i/010704.b/h0009.d
07-JAN-2004 11:17	1-main	/chem/H.i/010704.b/h0003.d
Cal Level: 2 , Cal Amount: 2.00000		
07-JAN-2004 13:54	2-supp	/chem/H.i/010704.b/h0010.d
07-JAN-2004 11:40	1-main	/chem/H.i/010704.b/h0004.d
Cal Level: 3 , Cal Amount: 5.00000		
07-JAN-2004 14:16	2-supp	/chem/H.i/010704.b/h0011.d
07-JAN-2004 12:02	1-main	/chem/H.i/010704.b/h0005.d
Cal Level: 4 , Cal Amount: 10.0000		
07-JAN-2004 14:39	2-supp	/chem/H.i/010704.b/h0012.d
07-JAN-2004 12:24	1-main	/chem/H.i/010704.b/h0006.d
Cal Level: 5 , Cal Amount: 30.0000		
07-JAN-2004 15:01	2-supp	/chem/H.i/010704.b/h0013.d
07-JAN-2004 12:47	1-main	/chem/H.i/010704.b/h0007.d
Cal Level: 6 , Cal Amount: 60.0000		
07-JAN-2004 15:24	2-supp	/chem/H.i/010704.b/h0014.d
07-JAN-2004 13:09	1-main	/chem/H.i/010704.b/h0008.d

Continuing Calibration

20-FEB-2004 10:59	2-supp	/chem/H.i/022004.b/h1065.d
20-FEB-2004 10:21	1-main	/chem/H.i/022004.b/h1064.d

Data File: /chem/H.i/022004.b/h1063.d

Date : 20-FEB-2004 10:06

Client ID: BFB

Instrument: H.i

Sample Info: BFB,, #237-03

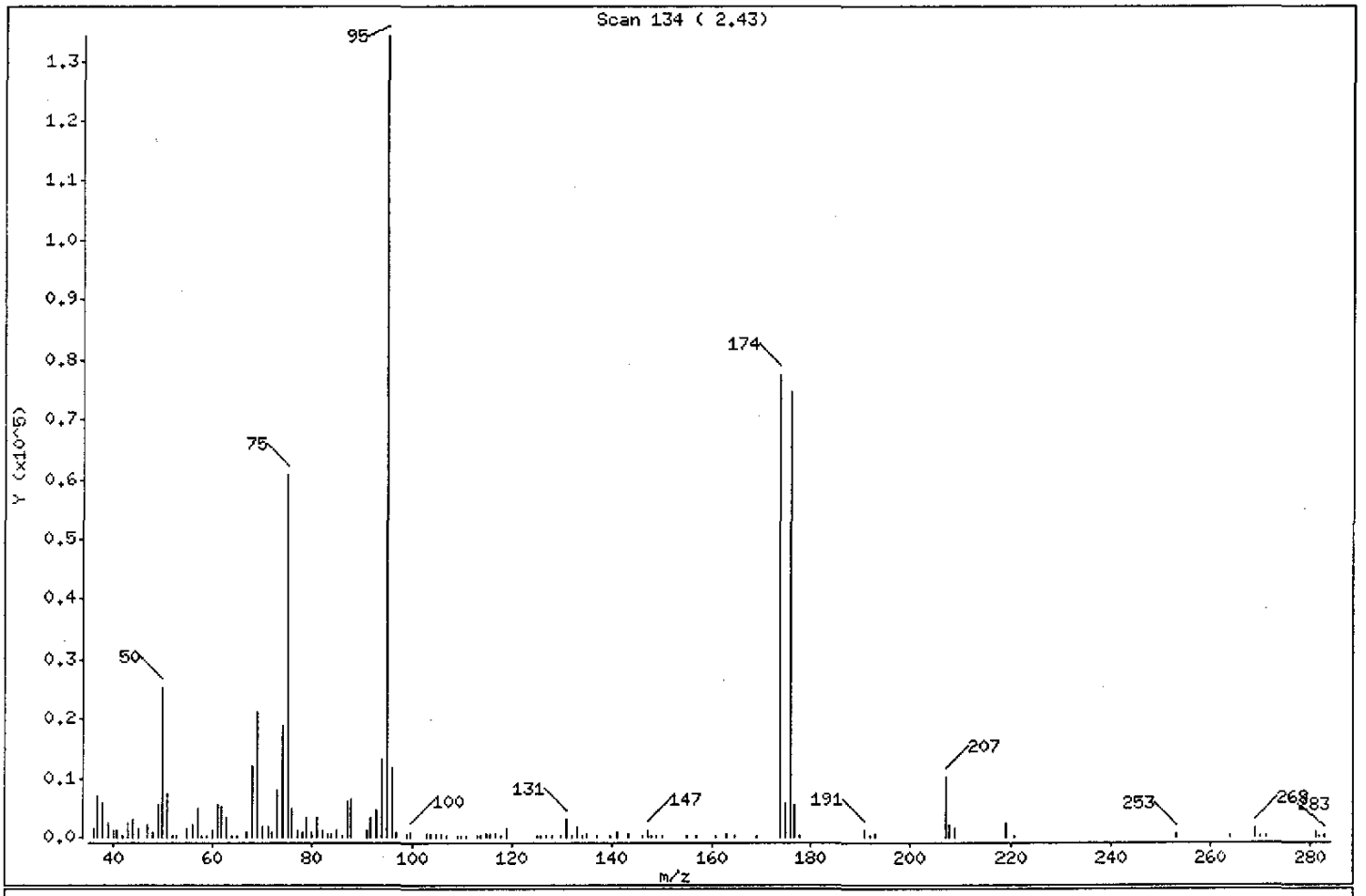
Volume Injected (uL): 1.0

Operator: mhoffman

Column phase: DB624

Column diameter: 0.53

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	18.92
75	30.00 - 60.00% of mass 95	45.30
96	5.00 - 9.00% of mass 95	8.69
173	Less than 2.00% of mass 174	0.00 (0.00)
174	50.00 - 100.00% of mass 95	57.61
175	5.00 - 9.00% of mass 174	4.38 (7.60)
176	95.00 - 101.00% of mass 174	55.64 (96.59)
177	5.00 - 9.00% of mass 176	4.22 (7.58)

JA 2-20

Data File: /chem/H.i/022004.b/h1063.d

Date : 20-FEB-2004 10:06

Client ID: BFB

Instrument: H.i

Sample Info: BFB,, #237-03

Volume Injected (uL): 1.0

Operator: mhoffman

Column phase: DB624

Column diameter: 0.53

Data File: h1063.d
Spectrum: Scan 134 (2.43)
Location of Maximum: 94.95
Number of points: 120

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.05	1556	69.95	1748	105.90	622	155.00	304
36.95	7031	71.10	1723	107.00	280	156.90	244
38.05	5734	72.00	850	109.00	217	160.90	408
38.95	2597	72.90	8119	110.00	297	162.90	482
39.95	1301	74.00	18928	111.00	292	164.80	347
40.95	1281	75.00	60800	113.15	326	169.05	215
42.05	412	76.00	5032	113.95	287	173.85	77312
43.00	2509	76.90	1287	114.95	524	174.85	5879
44.00	3165	77.90	933	115.75	484	175.85	74672
45.00	1541	78.80	3276	116.75	689	176.85	5658
47.10	2075	79.90	1077	117.95	371	177.95	324
47.90	946	80.80	3457	118.95	1610	190.90	1243
49.00	5492	81.90	1086	125.05	285	191.90	287
50.00	25392	83.00	559	125.85	255	193.00	621
51.00	7409	84.00	511	126.75	409	206.95	10314
52.00	446	85.05	1322	127.80	446	207.95	2194
52.90	260	85.95	331	129.80	327	208.95	1431
54.90	1515	86.95	6246	130.90	3141	219.00	2495
56.00	2066	87.95	6428	131.80	207	220.90	311
57.05	4821	90.95	1332	133.00	1812	253.05	723
57.95	389	91.95	3332	133.90	239	263.95	419
59.05	374	92.95	4605	134.90	666	269.00	1579
59.85	1151	93.95	13306	136.90	247	270.00	337
60.95	5636	94.95	134208	139.50	310	271.10	244
61.95	5341	95.95	11664	140.85	938	281.05	941
62.95	3419	96.95	983	142.95	761	282.05	357
63.95	382	99.00	481	145.85	261	283.05	267
65.05	256	99.90	1078	146.95	1359		
66.95	867	102.90	632	147.85	432		
67.95	12058	103.80	564	148.85	325		
68.95	21408	104.90	474	149.85	433		

Data File: /chem/H.i/022004.b/h1063.d
Date : 20-FEB-2004 10:06
Client ID: BFB
Sample Info: BFB,, #237-03
Volume Injected (uL): 1.0
Column phase: DB624

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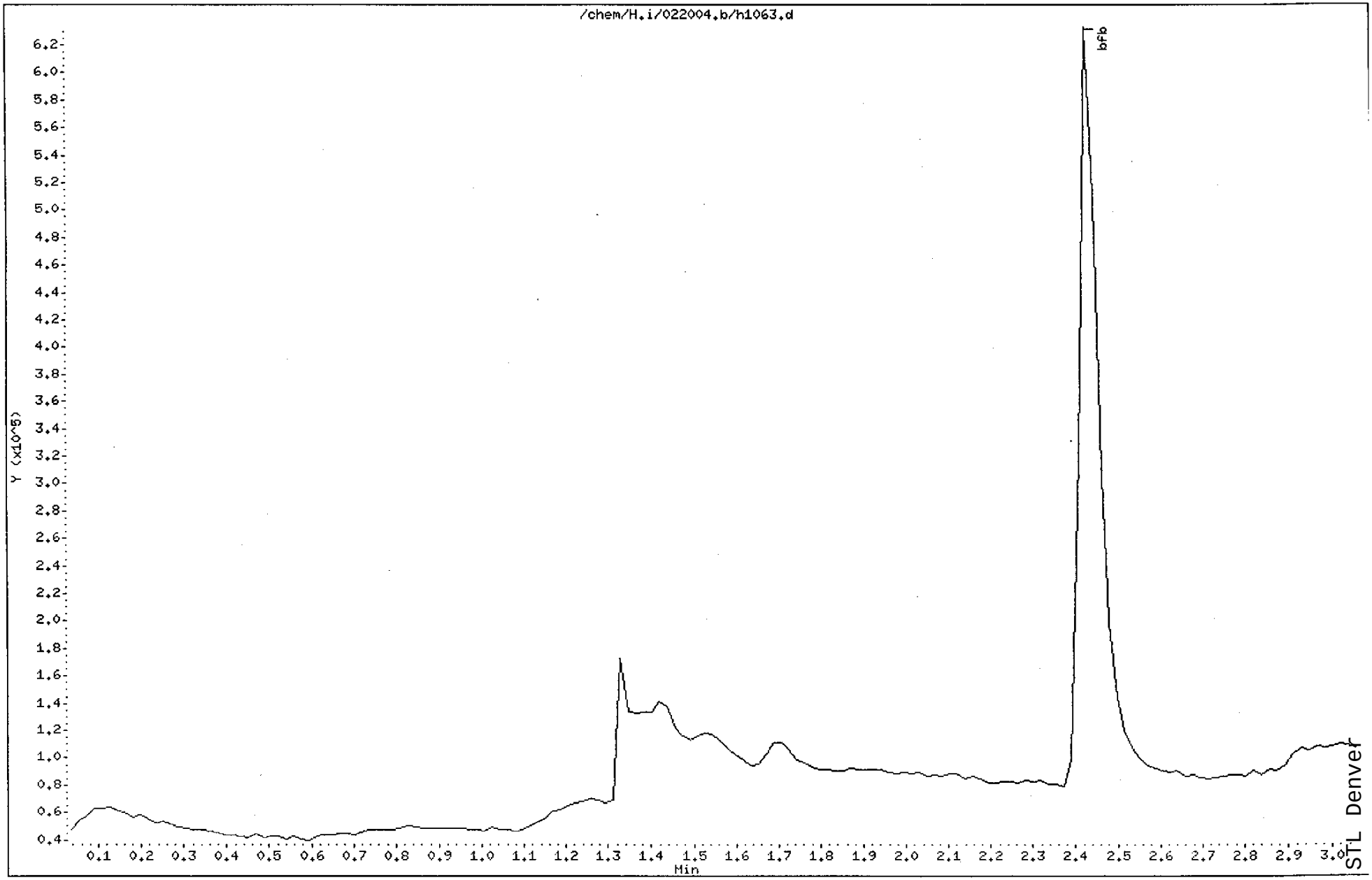
Instrument: H.i

Operator: mhoffman
Column diameter: 0.53



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Data File: /chem/H.i/022004.b/h1064.d
Report Date: 02/20/2004

CONTINUING CALIBRATION COMPOUNDS
PERCENT DRIFT REPORT

Instrument ID: H.i
Lab File ID: h1064.d
Analysis Type: WATER

Injection Date: 20-FEB-2004 10:21
Lab Sample ID: MAIN010
Method File: /chem/H.i/022004.b/H-20ml-h2o.m

COMPOUND	EXPECTED CONC.	MEASURED CONC.	%D	MAX %D
83 Xylene (total)	30.0000	31.2276	4.1	50.0
85 1,2-Dichloroethene (total)	20.0000	19.3817	3.1	50.0
64 dichlorodifluoromethane	10.0000	9.0089	9.9	50.0
1 Chloromethane	10.0000	8.4097	15.9	50.0
4 Vinyl Chloride	10.0000	8.6305	13.7	20.0
2 Bromomethane	10.0000	8.1622	18.4	50.0
5 Chloroethane	10.0000	9.4120	5.9	50.0
11 Trichlorofluoromethane	10.0000	10.1844	1.8	50.0
3 Ethanol	500.0000	414.4319	17.1	50.0
8 Acrolein	100.0000	118.0603	18.1	50.0
7 Acetone	40.0000	38.3005	4.2	50.0
12 1,1-Dichloroethene	10.0000	9.8644	1.4	20.0
21 Iodomethane	10.0000	9.1345	8.7	50.0
68 Acetonitrile	100.0000	108.7573	8.8	50.0
6 Methylene Chloride	10.0000	9.3316	6.7	50.0
86 tert-Butyl alcohol	200.0000	182.4205	8.8	50.0
9 Acrylonitrile	100.0000	92.4547	7.5	50.0
0 trans-1,2-Dichloroethene	10.0000	9.6791	3.2	50.0
15 1,1-Dichloroethane	10.0000	9.6328	3.7	50.0
84 Isopropyl ether	50.0000	48.8544	2.3	50.0
69 Chloroprene	10.0000	9.9917	0.1	50.0
0 cis-1,2-Dichloroethene	10.0000	9.7026	3.0	50.0
20 2-Butanone	40.0000	33.7164	15.7	50.0
93 2,2-Dichloropropane	10.0000	10.2764	2.8	50.0
70 Propionitrile	100.0000	95.7345	4.3	50.0
72 Methacrylonitrile	100.0000	92.4688	7.5	50.0
13 Bromochloromethane	10.0000	9.2308	7.7	50.0
17 Chloroform	10.0000	9.5786	4.2	20.0
22 1,1,1-Trichloroethane	10.0000	9.4253	5.7	50.0
94 1,1-Dichloropropene	10.0000	9.8967	1.0	50.0
23 Carbon Tetrachloride	10.0000	9.6735	3.3	50.0
71 Isobutanol	200.0000	177.0302	11.5	50.0
30 Benzene	10.0000	9.8234	1.8	50.0
16 1,2-Dichloroethane	10.0000	9.1112	8.9	50.0
88 n-Butanol	200.0000	164.1166	17.9	50.0
29 Trichloroethene	10.0000	10.2010	2.0	50.0
26 1,2-Dichloropropane	10.0000	9.7798	2.2	20.0
34 Dibromomethane	10.0000	9.0408	9.6	50.0
57 1,4-Dioxane	500.0000	436.5278	12.7	50.0

DA 2-20

CONTINUING CALIBRATION COMPOUNDS
PERCENT DRIFT REPORT

Instrument ID: H.i
Lab File ID: h1064.d
Analysis Type: WATER

Injection Date: 20-FEB-2004 10:21
Lab Sample ID: MAIN010
Method File: /chem/H.i/022004.b/H-20ml-h2o.m

COMPOUND	EXPECTED CONC.	MEASURED CONC.	%D	MAX %D	
25 Bromodichloromethane	10.0000	9.4002	6.0	50.0	
28 cis-1,3-Dichloropropene	10.0000	9.7923	2.1	50.0	
38 4-Methyl-2-pentanone	40.0000	39.1950	2.0	50.0	
45 Toluene	10.0000	10.1684	1.7	20.0	
31 trans-1,3-Dichloropropene	10.0000	8.9809	10.2	50.0	
32 1,1,2-Trichloroethane	10.0000	9.3618	6.4	50.0	
42 Tetrachloroethene	10.0000	10.2808	2.8	50.0	
109 1,3-Dichloropropane	10.0000	9.2436	7.6	50.0	
43 2-Hexanone	40.0000	41.1482	2.9	50.0	
36 Dibromochloromethane	10.0000	9.4083	5.9	50.0	
58 1,2-Dibromoethane	10.0000	9.3418	6.6	50.0	
92 1-Chlorohexane	10.0000	10.7084	7.1	50.0	
46 Chlorobenzene	10.0000	10.1390	1.4	50.0	
74 1,1,1,2-Tetrachloroethane	10.0000	9.7971	2.0	50.0	
47 Ethylbenzene	10.0000	10.5049	5.0	20.0	
0 m and p-Xylene	20.0000	20.8303	4.2	50.0	
0 o-Xylene	10.0000	10.3973	4.0	50.0	
49 Styrene	10.0000	10.2892	2.9	50.0	
37 Bromoform	10.0000	9.3041	7.0	50.0	
79 isopropyl benzene	10.0000	10.4792	4.8	50.0	
76 Cyclohexanone	400.0000	1162.0458	190.5	50.0	<-
40 1,1,2,2-Tetrachloroethane	10.0000	9.6392	3.6	50.0	
95 Bromobenzene	10.0000	9.7655	2.3	50.0	
50 1,2,3-Trichloropropane	10.0000	8.4849	15.2	50.0	
96 n-Propylbenzene	10.0000	10.2133	2.1	50.0	
97 2-Chlorotoluene	10.0000	10.2208	2.2	50.0	
98 1,3,5-Trimethylbenzene	10.0000	10.0235	0.2	50.0	
99 4-Chlorotoluene	10.0000	9.7706	2.3	50.0	
100 tert-Butylbenzene	10.0000	10.0951	1.0	50.0	
101 1,2,4-Trimethylbenzene	10.0000	10.0207	0.2	50.0	
102 sec-Butylbenzene	10.0000	10.4434	4.4	50.0	
61 m-Dichlorobenzene	10.0000	9.5073	4.9	50.0	
103 4-Isopropyltoluene	10.0000	10.4184	4.2	50.0	
62 p-dichlorobenzene	10.0000	10.3509	3.5	50.0	
104 n-Butylbenzene	10.0000	10.4150	4.1	50.0	
63 o-Dichlorobenzene	10.0000	9.6210	3.8	50.0	
75 1,2-Dibromo-3-chloropropane	10.0000	8.6937	13.1	50.0	
105 1,2,4-Trichlorobenzene	10.0000	9.2920	7.1	50.0	
106 Hexachlorobutadiene	10.0000	10.2560	2.6	50.0	

CONTINUING CALIBRATION COMPOUNDS
PERCENT DRIFT REPORT

Instrument ID: H.i
Lab File ID: h1064.d
Analysis Type: WATER

Injection Date: 20-FEB-2004 10:21
Lab Sample ID: MAIN010
Method File: /chem/H.i/022004.b/H-20ml-h2o.m

COMPOUND	EXPECTED CONC.	MEASURED CONC.	%D	MAX %D
107 Naphthalene	10.0000	8.6892	13.1	50.0
108 1,2,3-Trichlorobenzene	10.0000	8.7970	12.0	50.0

Data File: /chem/H.i/022004.b/h1064.d
Report Date: 20-Feb-2004 10:21

STL Denver

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: H.i
Lab File ID: h1064.d
Analysis Type: WATER
Lab Sample ID: MAIN010
Quant Type: ISTD

Injection Date: 20-FEB-2004 10:21
Init. Calibration Date(s): JAN/07/4 JAN/07/4
Init. Calibration Times: 11:17 15:24
Method File: /chem/H.i/022004.b/H-20ml-h2o.m

COMPOUND	RRF	RF10	MIN RRF	%D	MAX %D
M 1 1,2-Dichloroethene (total)	0.376	0.365	0.010	3.1	50.0
M 2 Xylene (total)	7.979	8.306	0.010	-4.1	50.0
3 dichlorodifluoromethane	0.502	0.453	0.010	9.9	50.0
4 Chloromethane	0.267	0.224	0.100	15.9	50.0
5 Vinyl Chloride	0.278	0.240	0.020	13.7	20.0
7 Bromomethane	0.283	0.231	0.010	18.4	50.0
8 Chloroethane	0.194	0.183	0.010	5.9	50.0
10 Trichlorofluoromethane	0.674	0.686	0.010	-1.8	50.0
11 Ethanol	0.001	0.001	0.000	N/A	N/A
13 Acrolein	0.009	0.010	0.001	-18.1	50.0
14 1,1-Dichloroethene	0.353	0.348	0.020	1.4	20.0
15 Acetone	0.022	0.024	0.001	N/A	N/A
17 Iodomethane	0.671	0.613	0.010	8.7	50.0
19 Acetonitrile	0.005	0.005	0.000	-8.8	50.0
21 Methylene Chloride	0.311	0.290	0.010	6.7	50.0
22 tert-Butyl alcohol	0.008	0.008	0.001	8.8	50.0
23 Acrylonitrile	0.021	0.019	0.001	7.5	50.0
24 trans-1,2-Dichloroethene	0.378	0.366	0.010	3.2	50.0
27 1,1-Dichloroethane	0.637	0.613	0.100	3.7	50.0
28 Chloroprene	0.523	0.523	0.010	0.1	50.0
30 Isopropyl ether	0.253	0.247	0.010	2.3	50.0
32 cis-1,2-Dichloroethene	0.375	0.364	0.010	3.0	50.0
31 2,2-Dichloropropane	0.454	0.466	0.010	-2.8	50.0
33 2-Butanone	0.046	0.039	0.010	15.7	50.0
34 Propionitrile	0.008	0.007	0.001	4.3	50.0
36 Methacrylonitrile	0.061	0.057	0.010	7.5	50.0
37 Bromochloromethane	0.149	0.138	0.010	7.7	50.0
38 Chloroform	0.700	0.670	0.020	4.2	20.0
41 1,1,1-Trichloroethane	0.698	0.658	0.010	5.7	50.0
42 1,1-Dichloropropene	0.563	0.557	0.010	1.0	50.0
43 Carbon Tetrachloride	0.598	0.578	0.010	3.3	50.0
45 Isobutanol	0.002	0.002	0.000	11.5	50.0
46 Benzene	1.070	1.051	0.010	1.8	50.0
47 1,2-Dichloroethane	0.272	0.248	0.010	8.9	50.0
49 n-Butanol	0.002	0.002	0.000	N/A	N/A

STL Denver

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: H.i
Lab File ID: h1064.d
Analysis Type: WATER
Lab Sample ID: MAIN010
Quant Type: ISTD

Injection Date: 20-FEB-2004 10:21
Init. Calibration Date(s): JAN/07/4 JAN/07/4
Init. Calibration Times: 11:17 15:24
Method File: /chem/H.i/022004.b/H-20ml-h2o.m

COMPOUND	RRF	RF10	MIN RRF	%D	MAX %D	
50 Trichloroethene	0.406	0.414	0.010	-2.0	50.0	
52 1,2-Dichloropropane	0.344	0.336	0.020	2.2	20.0	
53 Dibromomethane	0.203	0.184	0.010	9.6	50.0	
55 1,4-Dioxane	0.001	0.001	0.000	12.7	50.0	
56 Bromodichloromethane	0.568	0.534	0.010	6.0	50.0	
59 cis-1,3-Dichloropropene	2.543	2.490	0.010	2.1	50.0	
60 4-Methyl-2-pentanone	0.646	0.633	0.010	2.0	50.0	
62 Toluene	6.594	6.705	0.020	-1.7	20.0	
63 trans-1,3-Dichloropropene	1.878	1.687	0.010	10.2	50.0	
65 1,1,2-Trichloroethane	1.069	1.000	0.010	6.4	50.0	
67 1,3-Dichloropropane	1.801	1.665	0.010	7.6	50.0	
66 Tetrachloroethene	2.108	2.167	0.010	-2.8	50.0	
68 2-Hexanone	0.411	0.423	0.010	-2.9	50.0	
69 Dibromochloromethane	1.869	1.758	0.010	5.9	50.0	
70 1,2-Dibromoethane	1.348	1.260	0.010	6.6	50.0	
71 1-Chlorohexane	3.082	3.300	0.010	-7.1	50.0	
73 Chlorobenzene	3.982	4.037	0.300	-1.4	50.0	
74 1,1,1,2-Tetrachloroethane	1.918	1.879	0.010	2.0	50.0	
75 Ethylbenzene	2.042	2.146	0.010	-5.0	20.0	
76 m and p-Xylene	2.758	2.872	0.010	-4.2	50.0	
77 o-Xylene	2.464	2.562	0.010	-4.0	50.0	
78 Styrene	3.936	4.050	0.010	-2.9	50.0	
79 Bromoform	1.055	0.982	0.101	7.0	50.0	
80 isopropyl benzene	8.120	8.509	0.010	-4.8	50.0	
81 Cyclohexanone	0.024	0.070	0.001	-190.5	50.0	<-
83 1,1,2,2-Tetrachloroethane	1.340	1.292	0.300	3.6	50.0	
84 Bromobenzene	1.101	1.075	0.010	2.3	50.0	
85 1,2,3-Trichloropropane	0.189	0.161	0.010	15.2	50.0	
87 n-Propylbenzene	1.083	1.106	0.010	-2.1	50.0	
88 2-Chlorotoluene	0.906	0.926	0.010	-2.2	50.0	
89 1,3,5-Trimethylbenzene	3.644	3.653	0.010	-0.2	50.0	
90 4-Chlorotoluene	0.998	0.975	0.010	2.3	50.0	
91 tert-Butylbenzene	3.703	3.738	0.010	-1.0	50.0	
92 1,2,4-Trimethylbenzene	3.401	3.408	0.010	-0.2	50.0	
93 sec-Butylbenzene	0.971	1.015	0.010	-4.4	50.0	

STL Denver

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: H.i
Lab File ID: h1064.d
Analysis Type: WATER
Lab Sample ID: MAIN010
Quant Type: ISTD

Injection Date: 20-FEB-2004 10:21
Init. Calibration Date(s): JAN/07/4 JAN/07/4
Init. Calibration Times: 11:17 15:24
Method File: /chem/H.i/022004.b/H-20ml-h2o.m

COMPOUND	RRF	RF10	MIN RRF	%D	MAX %D
94 m-Dichlorobenzene	1.815	1.726	0.010	4.9	50.0
95 4-Isopropyltoluene	4.121	4.294	0.010	-4.2	50.0
97 p-dichlorobenzene	2.177	2.254	0.010	-3.5	50.0
98 n-Butylbenzene	4.585	4.775	0.010	-4.1	50.0
99 o-Dichlorobenzene	1.611	1.550	0.010	3.8	50.0
100 1,2-Dibromo-3-chloropropane	0.138	0.120	0.010	13.1	50.0
101 1,2,4-Trichlorobenzene	1.068	0.992	0.010	7.1	50.0
102 Hexachlorobutadiene	0.912	0.935	0.010	-2.6	50.0
127 Naphthalene	1.169	1.016	0.010	13.1	50.0
104 1,2,3-Trichlorobenzene	0.828	0.728	0.010	12.0	50.0

Data File: /chem/H.i/022004.b/h1064.d
Report Date: 20-Feb-2004 10:21

STL Denver

VOLATILE REPORT SW-846

Data file : /chem/H.i/022004.b/h1064.d
Lab Smp Id: MAIN010 Client Smp ID: MAIN010
Inj Date : 20-FEB-2004 10:21
Operator : appelhansd Inst ID: H.i
Smp Info : MAIN010,, #022/040-04
Misc Info :
Comment : Purge and Trap Analysis
Method : /chem/H.i/022004.b/H-20ml-h2o.m
Meth Date : 20-Feb-2004 10:21 appelhad Quant Type: ISTD
Cal Date : 07-JAN-2004 15:24 Cal File: h0014.d
Als bottle: 2 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 1-main.sub
Target Version: 3.40
Processing Host: chemsv02

Concentration Formula: Amt * DF * Vp/Vs

Name	Value	Description
DF	1.000	Dilution Factor
Vp	20.000	Purge Volume (ml)
Vs	20.000	Sample Volume (ml)

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
* 48 Fluorobenzene	96	6.394	6.394	(1.000)	2419601	12.5000	
* 72 Chlorobenzene-d5	119	10.060	10.060	(1.000)	423776	12.5000	
* 96 1,4-Dichlorobenzene-d4	152	12.917	12.917	(1.000)	748755	12.5000	
M 1 1,2-Dichloroethene (total)	96				1411560	20.0000	19.3817
M 2 Xylene (total)	106				2815909	10.0000	31.2276
3 dichlorodifluoromethane	85	1.884	1.884	(0.295)	876209	10.0000	9.00890
4 Chloromethane	50	2.046	2.046	(0.320)	433968	10.0000	8.40966
5 Vinyl Chloride	62	2.136	2.136	(0.334)	464688	10.0000	8.63050
7 Bromomethane	94	2.441	2.441	(0.382)	446715	10.0000	8.16217
8 Chloroethane	64	2.531	2.531	(0.396)	354233	10.0000	9.41195
10 Trichlorofluoromethane	101	2.729	2.729	(0.427)	1327924	10.0000	10.1844
11 Ethanol	45	2.819	2.819	(0.441)	53212	500.000	414.432
13 Acrolein	56	3.052	3.052	(0.477)	199537	100.000	118.060
14 1,1-Dichloroethene	96	3.196	3.196	(0.500)	673678	10.0000	9.86445
15 Acetone	43	3.196	3.196	(0.500)	185222	40.0000	38.3005
17 Iodomethane	142	3.322	3.322	(0.519)	1185841	10.0000	9.13447

Data File: /chem/H.i/022004.b/h1064.d
Report Date: 20-Feb-2004 10:21

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
19 Acetonitrile	41	3.465	3.465	(0.542)	101680	100.000	108.757
21 Methylene Chloride	84	3.627	3.627	(0.567)	562127	10.0000	9.33156
22 tert-Butyl alcohol	59	3.735	3.735	(0.584)	297341	200.000	182.420
23 Acrylonitrile	53	3.861	3.861	(0.604)	373274	100.000	92.4547
24 trans-1,2-Dichloroethene	96	3.915	3.915	(0.612)	707631	10.0000	9.67912
27 1,1-Dichloroethane	63	4.364	4.364	(0.682)	1186952	10.0000	9.63279
28 Chloroprene	53	4.472	4.472	(0.699)	1011584	10.0000	9.99166
30 Isopropyl ether	87	4.436	4.436	(0.694)	2393849	50.0000	48.8544
32 cis-1,2-Dichloroethene	96	5.029	5.029	(0.786)	703929	10.0000	9.70261
31 2,2-Dichloropropane	77	5.047	5.047	(0.789)	902748	10.0000	10.2764
33 2-Butanone	43	5.047	5.047	(0.789)	301572	40.0000	33.7164
34 Propionitrile	54	5.101	5.101	(0.798)	144285	100.000	95.7344
36 Methacrylonitrile	41	5.280	5.280	(0.826)	1097498	100.000	92.4688
37 Bromochloromethane	128	5.316	5.316	(0.831)	267099	10.0000	9.23083
38 Chloroform	83	5.406	5.406	(0.845)	1297001	10.0000	9.57864
41 1,1,1-Trichloroethane	97	5.640	5.640	(0.882)	1272814	10.0000	9.42526
42 1,1-Dichloropropene	75	5.819	5.819	(0.910)	1078106	10.0000	9.89667
43 Carbon Tetrachloride	117	5.837	5.837	(0.913)	1119285	10.0000	9.67350
45 Isobutanol	41	5.945	5.945	(0.930)	85127	200.000	177.030
46 Benzene	78	6.071	6.071	(0.949)	2034971	10.0000	9.82339
47 1,2-Dichloroethane	62	6.089	6.089	(0.952)	479580	10.0000	9.11116
49 n-Butanol	56	6.754	6.754	(1.056)	67544	200.000	164.117
50 Trichloroethene	130	6.844	6.844	(1.070)	801378	10.0000	10.2010
52 1,2-Dichloropropane	63	7.095	7.095	(1.110)	650339	10.0000	9.77983
53 Dibromomethane	93	7.239	7.239	(1.132)	355319	10.0000	9.04080
55 1,4-Dioxane	88	7.275	7.275	(1.138)	84064	500.000	436.528
56 Bromodichloromethane	83	7.437	7.437	(1.163)	1033554	10.0000	9.40015
59 cis-1,3-Dichloropropene	75	7.976	7.976	(0.793)	844089	10.0000	9.79234
60 4-Methyl-2-pentanone	43	8.155	8.155	(0.811)	858778	40.0000	39.1950
62 Toluene	91	8.389	8.389	(0.834)	2273102	10.0000	10.1684
63 trans-1,3-Dichloropropene	75	8.641	8.641	(0.859)	571807	10.0000	8.98091
65 1,1,2-Trichloroethane	97	8.874	8.874	(0.882)	339137	10.0000	9.36181
67 1,3-Dichloropropane	76	9.072	9.072	(0.902)	564408	10.0000	9.24359
66 Tetrachloroethene	164	9.054	9.054	(0.900)	734825	10.0000	10.2808
68 2-Hexanone	43	9.162	9.162	(0.911)	573224	40.0000	41.1482
69 Dibromochloromethane	129	9.359	9.359	(0.930)	596150	10.0000	9.40828
70 1,2-Dibromoethane	107	9.503	9.503	(0.945)	427032	10.0000	9.34184
71 1-Chlorohexane	91	10.060	10.060	(1.000)	1118917	10.0000	10.7084
73 Chlorobenzene	112	10.096	10.096	(1.004)	1368782	10.0000	10.1390
74 1,1,1,2-Tetrachloroethane	131	10.204	10.204	(1.014)	636942	10.0000	9.79714
75 Ethylbenzene	106	10.240	10.240	(1.018)	727391	10.0000	10.5049
76 m and p-Xylene	106	10.383	10.383	(1.032)	1947491	20.0000	20.8303
77 o-Xylene	106	10.887	10.887	(1.082)	868418	10.0000	10.3973
78 Styrene	104	10.905	10.905	(1.084)	1373027	10.0000	10.2892
79 Bromoform	173	11.156	11.156	(1.109)	332801	10.0000	9.30406
80 isopropyl benzene	105	11.372	11.372	(1.130)	2884866	10.0000	10.4792
81 Cyclohexanone	55	11.480	11.480	(1.141)	946101	400.000	1162.04

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
83 1,1,2,2-Tetrachloroethane	83	11.731	11.731	(1.166)	437881	10.0000	9.63916
84 Bromobenzene	156	11.749	11.749	(0.910)	644022	10.0000	9.76553
85 1,2,3-Trichloropropane	110	11.803	11.803	(0.914)	96160	10.0000	8.48494
87 n-Propylbenzene	120	11.893	11.893	(0.921)	662335	10.0000	10.2133
88 2-Chlorotoluene	126	12.001	12.001	(0.929)	554523	10.0000	10.2208
89 1,3,5-Trimethylbenzene	105	12.091	12.091	(0.936)	2188030	10.0000	10.0235
90 4-Chlorotoluene	126	12.126	12.126	(0.939)	583874	10.0000	9.77065
91 tert-Butylbenzene	119	12.486	12.486	(0.967)	2239192	10.0000	10.0951
92 1,2,4-Trimethylbenzene	105	12.540	12.540	(0.971)	2041154	10.0000	10.0207
93 sec-Butylbenzene	134	12.737	12.737	(0.986)	607731	10.0000	10.4434
94 m-Dichlorobenzene	146	12.863	12.863	(0.996)	1033631	10.0000	9.50734
95 4-Isopropyltoluene	119	12.881	12.881	(0.997)	2572077	10.0000	10.4184
97 p-dichlorobenzene	146	12.953	12.953	(1.003)	1349885	10.0000	10.3509
98 n-Butylbenzene	91	13.312	13.312	(1.031)	2860163	10.0000	10.4150
99 o-Dichlorobenzene	146	13.330	13.330	(1.032)	928263	10.0000	9.62100
100 1,2-Dibromo-3-chloropropane	157	14.121	14.121	(1.093)	71825	10.0000	8.69370
101 1,2,4-Trichlorobenzene	180	14.894	14.894	(1.153)	594431	10.0000	9.29198
102 Hexachlorobutadiene	225	15.055	15.055	(1.166)	560334	10.0000	10.2560
127 Naphthalene	128	15.127	15.127	(1.171)	608636	10.0000	8.68919
104 1,2,3-Trichlorobenzene	180	15.361	15.361	(1.189)	436159	10.0000	8.79703

Data File: /chem/H.i/022004.b/h1064.d Page 1
Report Date: 02/20/2004

Internal Standard
Check Report

Instrument ID: H.i
Lab File ID: h1064.d
Analysis Type: WATER

Injection Date: 20-FEB-2004 10:21
Lab Sample ID: MAIN010
Method File: /chem/H.i/022004.b/H-20ml-h2o.m

INTERNAL STANDARD	ICAL AREA	SAMP AREA	ICAL RT	SAMP RT	%R
Fluorobenzene	2307102	2419601	6.399	6.394	104.9
Chlorobenzene-d5	416478	423776	10.065	10.060	101.8
1,4-Dichlorobenzene-d4	716331	748755	12.958	12.917	104.5

Data File: /chem/H.i/022004.b/h1064.d
Report Date: 20-Feb-2004 10:21

STL Denver

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: H.i
Lab File ID: h1064.d
Lab Smp Id: MAIN010
Analysis Type: VOA
Quant Type: ISTD
Operator: appelhansd
Method File: /chem/H.i/022004.b/H-20ml-h2o.m
Misc Info:

Calibration Date: 02/20/4
Calibration Time: 1021
Client Smp ID: MAIN010
Level: LOW
Sample Type: WATER

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
48 Fluorobenzene	2419601	1209800	4839202	2419601	0.00
72 Chlorobenzene-d5	423776	211888	847552	423776	0.00
96 1,4-Dichlorobenze	748755	374378	1497510	748755	0.00

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
48 Fluorobenzene	6.39	5.89	6.89	6.39	0.00
72 Chlorobenzene-d5	10.06	9.56	10.56	10.06	0.00
96 1,4-Dichlorobenze	12.92	12.42	13.42	12.92	0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem/H.i/022004.b/h1064.d
Date : 20-FEB-2004 10:21
Client ID: MAIN010
Sample Info: MAIN010,, #022/040-04
Purge Volume: 20.0
Column phase: DB624

Instrument: H.i

Operator: appelhansd
Column diameter: 0.53

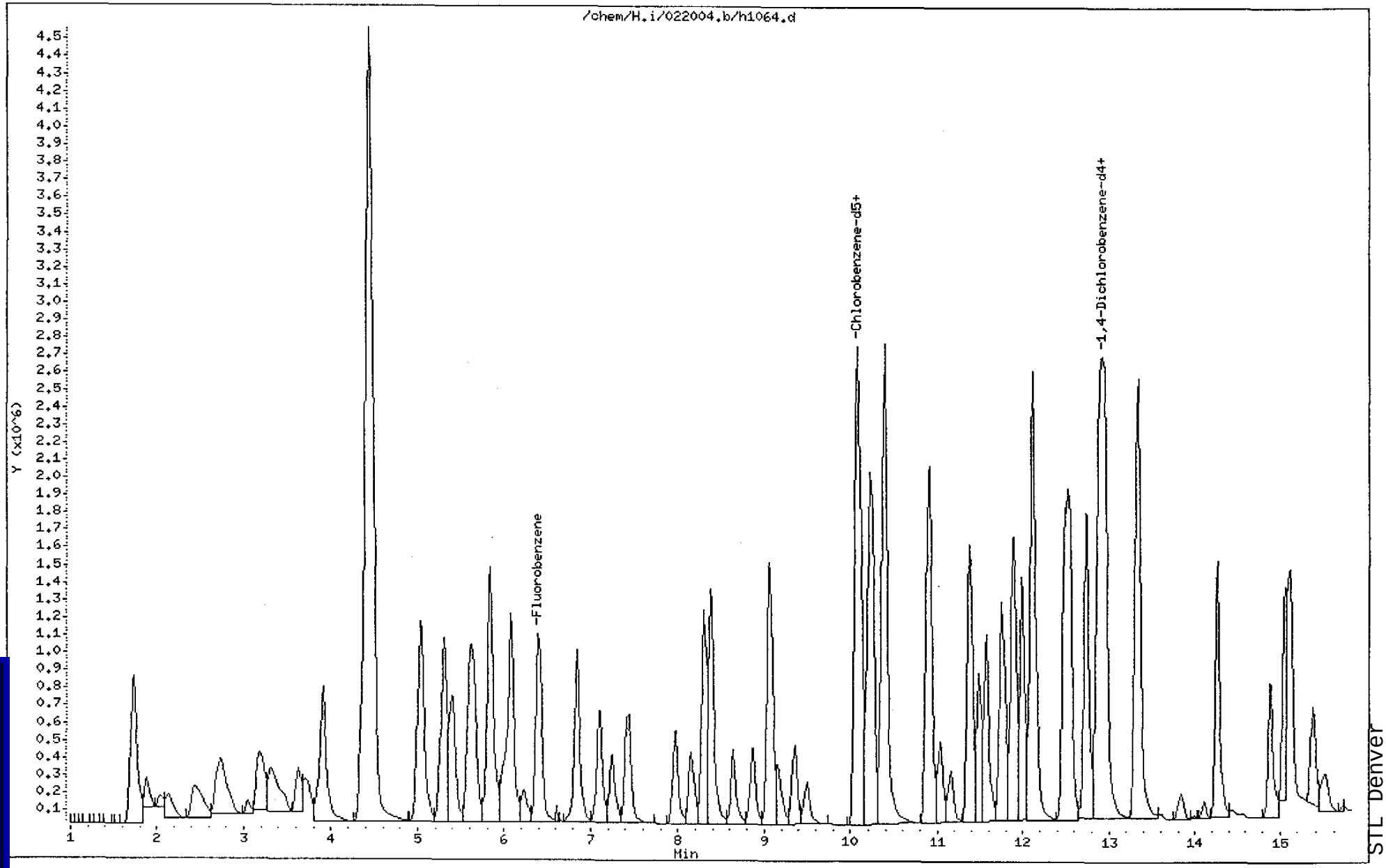

Table of Contents

Report Date: 02/20/2004

CONTINUING CALIBRATION COMPOUNDS
PERCENT DRIFT REPORT

Instrument ID: H.i
Lab File ID: h1065.d
Analysis Type: WATER

Injection Date: 20-FEB-2004 10:59
Lab Sample ID: SUPP010
Method File: /chem/H.i/022004.b/H-20ml-h2o.m

COMPOUND	EXPECTED CONC.	MEASURED CONC.	%D	MAX %D
117 Dichlorotetrafluoroethane	10.0000	10.6482	6.5	80.0
110 Ethylene Oxide	1250.0000	1239.1581	0.9	50.0
87 Dichlorofluoromethane	10.0000	11.5587	15.6	50.0
123 1,2-dichloro-1,1,2-triflourom	10.0000	11.1520	11.5	50.0
77 Ethyl Ether	10.0000	9.7095	2.9	50.0
124 2,2-dichloro-1,1,1-trifluorom	10.0000	10.7412	7.4	50.0
65 Trichlorotrifluoroethane	10.0000	10.2920	2.9	50.0
125 2-Propanol	200.0000	189.9439	5.0	50.0
10 Carbon Disulfide	10.0000	11.4462	14.5	50.0
119 Methyl Acetate	50.0000	46.4303	7.1	50.0
67 Allyl Chloride	10.0000	10.7865	7.9	50.0
53 Methyl t-butyl ether	10.0000	9.4257	5.7	50.0
54 Hexane	10.0000	11.6036	16.0	50.0
24 Vinyl acetate	20.0000	18.1269	9.4	50.0
120 ETBE	50.0000	48.5611	2.9	50.0
78 Ethyl Acetate	20.0000	17.6533	11.7	50.0
56 Tetrahydrofuran	20.0000	17.7273	11.4	50.0
89 Dibromofluoromethane	10.0000	10.2971	3.0	50.0
114 Cyclohexane	10.0000	11.2608	12.6	50.0
303 1,2-Dichloroethane-d4	10.0000	9.8263	1.7	50.0
121 TAME	50.0000	48.3206	3.4	50.0
115 2-Pentanone	40.0000	39.1883	2.0	50.0
122 Methyl Cyclohexane	10.0000	11.5612	15.6	50.0
73 Methyl Methacrylate	20.0000	17.2769	13.6	50.0
82 2-nitropropane	10.0000	9.5867	4.1	50.0
35 2-Chloroethyl vinyl ether	10.0000	11.1874	11.9	50.0
301 Toluene-d8	10.0000	10.8270	8.3	50.0
41 Ethyl methacrylate	20.0000	19.0121	4.9	50.0
126 Tetrahydrothiophene	10.0000	8.1454	18.5	50.0
116 cis-1,4-Dichloro-2-butene	10.0000	8.2728	17.3	50.0
302 Bromofluorobenzene	10.0000	10.7309	7.3	50.0
60 t-1,4-Dichloro-2-butene	10.0000	8.6460	13.5	50.0
118 1,2,3-Trimethylbenzene	10.0000	11.7044	17.0	50.0

HZ-20

STL Denver

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: H.i
Lab File ID: h1065.d
Analysis Type: WATER
Lab Sample ID: SUPP010
Quant Type: ISTD

Injection Date: 20-FEB-2004 10:59
Init. Calibration Date(s): JAN/07/4 JAN/07/4
Init. Calibration Times: 11:17 15:24
Method File: /chem/H.i/022004.b/H-20ml-h2o.m

COMPOUND	RRF	RF10	MIN RRF	%D	MAX %D
$ 40 Dibromofluoromethane	0.492	0.506	0.010	-3.0	50.0
$ 44 1,2-Dichloroethane-d4	0.219	0.215	0.010	1.7	50.0
$ 61 Toluene-d8	4.778	5.174	0.010	-8.3	50.0
$ 82 Bromofluorobenzene	2.620	2.812	0.010	-7.3	50.0
117 Dichlorotetrafluoroethane	0.718	0.765	0.010	-6.5	80.0
6 Ethylene Oxide	0.004	0.004	0.001	0.9	50.0
9 Dichlorofluoromethane	0.668	0.772	0.010	-15.6	50.0
12 Ethyl Ether	0.152	0.148	0.010	2.9	50.0
16 Trichlorotrifluoroethane	0.461	0.474	0.010	-2.9	50.0
18 Carbon Disulfide	1.131	1.294	0.010	-14.5	50.0
20 Allyl Chloride	0.541	0.583	0.010	-7.9	50.0
119 Methyl Acetate	0.089	0.082	0.010	7.1	50.0
25 Methyl t-butyl ether	0.495	0.466	0.010	5.7	50.0
26 Hexane	2.821	3.274	0.010	-16.0	50.0
29 Vinyl acetate	0.314	0.284	0.010	9.4	50.0
35 Ethyl Acetate	0.124	0.110	0.010	11.7	50.0
39 Tetrahydrofuran	0.026	0.023	0.003	11.4	50.0
120 ETBE	0.851	0.826	0.010	2.9	50.0
114 Cyclohexane	0.560	0.630	0.010	-12.6	50.0
115 2-Pentanone	0.092	0.090	0.005	2.0	50.0
121 TAME	0.656	0.634	0.010	3.4	50.0
54 Methyl Methacrylate	0.039	0.034	0.010	13.6	50.0
122 Methyl Cyclohexane	0.520	0.602	0.010	-15.6	50.0
57 2-nitropropane	0.155	0.149	0.010	4.1	50.0
113 2-Chloroethyl vinyl ether	0.458	0.512	0.010	-11.9	50.0
64 Ethyl methacrylate	1.197	1.138	0.010	4.9	50.0
116 cis-1,4-Dichloro-2-butene	0.128	0.105	0.010	17.3	50.0
86 t-1,4-Dichloro-2-butene	0.115	0.100	0.010	13.5	50.0
118 1,2,3-Trimethylbenzene	0.842	0.985	0.010	-17.0	50.0
123 1,2-dichloro-1,1,2-triflour	0.481	0.536	0.010	-11.5	50.0
124 2,2-dichloro-1,1,1-trifluor	0.826	0.887	0.010	-7.4	50.0
125 2-Propanol	0.005	0.005	0.001	5.0	50.0
126 Tetrahydrothiophene	0.346	0.282	0.010	18.5	50.0

Data File: /chem/H.i/022004.b/h1065.d
Report Date: 20-Feb-2004 11:09

STL Denver

VOLATILE REPORT SW-846

Data file : /chem/H.i/022004.b/h1065.d
Lab Smp Id: SUPP010 Client Smp ID: SUPP010
Inj Date : 20-FEB-2004 10:59
Operator : appelhansd Inst ID: H.i
Smp Info : SUPP010,, #246-03/011-04
Misc Info :
Comment : Purge and Trap Analysis
Method : /chem/H.i/022004.b/H-20ml-h2o.m
Meth Date : 20-Feb-2004 11:09 appelhad Quant Type: ISTD
Cal Date : 07-JAN-2004 15:24 Cal File: h0014.d
Als bottle: 2 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 2-supp.sub
Target Version: 3.40
Processing Host: chemsv02

Concentration Formula: Amt * DF * Vp/Vs

Name	Value	Description
DF	1.000	Dilution Factor
Vp	20.000	Purge Volume (ml)
Vs	20.000	Sample Volume (ml)

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
* 48 Fluorobenzene	96	6.395	6.395	(1.000)	2466684	12.5000	
* 72 Chlorobenzene-d5	119	10.060	10.060	(1.000)	459303	12.5000	
* 96 1,4-Dichlorobenzene-d4	152	12.917	12.917	(1.000)	730993	12.5000	
$ 40 Dibromofluoromethane	111	5.586	5.586	(0.874)	999143	10.0000	10.2971
$ 44 1,2-Dichloroethane-d4	65	5.981	5.981	(0.935)	424983	10.0000	9.82631
$ 61 Toluene-d8	98	8.281	8.281	(0.823)	1900970	10.0000	10.8270
$ 82 Bromofluorobenzene	95	11.552	11.552	(1.148)	1033162	10.0000	10.7309
117 Dichlorotetrafluoroethane	85	1.974	1.974	(0.309)	1508927	10.0000	10.6482
6 Ethylene Oxide	43	2.370	2.370	(0.371)	1058802	1250.00	1239.16
9 Dichlorofluoromethane	67	2.675	2.675	(0.418)	1523484	10.0000	11.5587
12 Ethyl Ether	59	2.927	2.927	(0.458)	292074	10.0000	9.70947
16 Trichlorotrifluoroethane	151	3.214	3.214	(0.503)	935811	10.0000	10.2920
18 Carbon Disulfide	76	3.430	3.430	(0.536)	2554176	10.0000	11.4462
20 Allyl Chloride	41	3.502	3.502	(0.548)	1151129	10.0000	10.7865
119 Methyl Acetate	43	3.502	3.502	(0.548)	811362	50.0000	46.4303
25 Methyl t-butyl ether	73	3.915	3.915	(0.612)	920394	10.0000	9.42569

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
26 Hexane	57	4.202	4.202	(0.418)	1202969	10.0000	11.6036
29 Vinyl acetate	43	4.400	4.400	(0.688)	1121788	20.0000	18.1269
35 Ethyl Acetate	43	5.101	5.101	(0.798)	433399	20.0000	17.6533
39 Tetrahydrofuran	42	5.388	5.388	(0.843)	90661	20.0000	17.7273
120 ETBE	59	4.849	4.849	(0.758)	8151200	50.0000	48.5610
114 Cyclohexane	56	5.712	5.712	(0.893)	1243358	10.0000	11.2608
115 2-Pentanone	43	7.041	7.041	(1.101)	709789	40.0000	39.1883
121 TAME	73	6.197	6.197	(0.969)	6253354	50.0000	48.3206
54 Methyl Methacrylate	100	7.221	7.221	(1.129)	134586	20.0000	17.2769
122 Methyl Cyclohexane	55	7.059	7.059	(1.104)	1187123	10.0000	11.5612
57 2-nitropropane	41	7.688	7.688	(0.764)	54572	10.0000	9.58668
113 2-Chloroethyl vinyl ether	63	7.778	7.778	(0.773)	188151	10.0000	11.1874
64 Ethyl methacrylate	69	8.749	8.749	(0.870)	836103	20.0000	19.0121
116 cis-1,4-Dichloro-2-butene	53	11.444	11.444	(0.886)	61694	10.0000	8.27276
86 t-1,4-Dichloro-2-butene	53	11.803	11.803	(0.914)	58371	10.0000	8.64600
118 1,2,3-Trimethylbenzene	105	12.989	12.989	(2.031)	1943863	10.0000	11.7044
123 1,2-dichloro-1,1,2-triflourom	117	2.927	2.927	(0.458)	1058396	10.0000	11.1520
124 2,2-dichloro-1,1,1-trifluorom	83	2.981	2.981	(0.466)	1751152	10.0000	10.7412
125 2-Propanol	45	3.304	3.304	(0.517)	200384	200.000	189.944
126 Tetrahydrothiophene	60	9.341	9.341	(0.929)	103470	10.0000	8.14543

Data File: /chem/H.i/022004.b/h1065.d Page 1
Report Date: 02/20/2004

Internal Standard
Check Report

Instrument ID: H.i
Lab File ID: h1065.d
Analysis Type: WATER

Injection Date: 20-FEB-2004 10:59
Lab Sample ID: SUPP010
Method File: /chem/H.i/022004.b/H-20ml-h2o.m

INTERNAL STANDARD	ICAL AREA	SAMP AREA	ICAL RT	SAMP RT	%R
Fluorobenzene	2399820	2466684	6.395	6.395	102.8
Chlorobenzene-d5	457381	459303	10.061	10.060	100.4
1,4-Dichlorobenzene-d4	747017	730993	12.971	12.917	97.9

Data File: /chem/H.i/022004.b/h1065.d
Report Date: 20-Feb-2004 11:09

STL Denver

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: H.i
Lab File ID: h1065.d
Lab Smp Id: SUPP010
Analysis Type: VOA
Quant Type: ISTD
Operator: appelhansd
Method File: /chem/H.i/022004.b/H-20ml-h2o.m
Misc Info:

Calibration Date: 02/20/4
Calibration Time: 1021
Client Smp ID: SUPP010
Level: LOW
Sample Type: WATER

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
48 Fluorobenzene	2419601	1209800	4839202	2466684	1.95
72 Chlorobenzene-d5	423776	211888	847552	459303	8.38
96 1,4-Dichlorobenze	748755	374378	1497510	730993	-2.37

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
48 Fluorobenzene	6.39	5.89	6.89	6.39	0.00
72 Chlorobenzene-d5	10.06	9.56	10.56	10.06	0.00
96 1,4-Dichlorobenze	12.92	12.42	13.42	12.92	0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem/H.i/022004.b/h1065.d
Date : 20-FEB-2004 10:59
Client ID: SUPP010
Sample Info: SUPP010,, #246-03/011-04
Purge Volume: 20.0
Column phase: DB624

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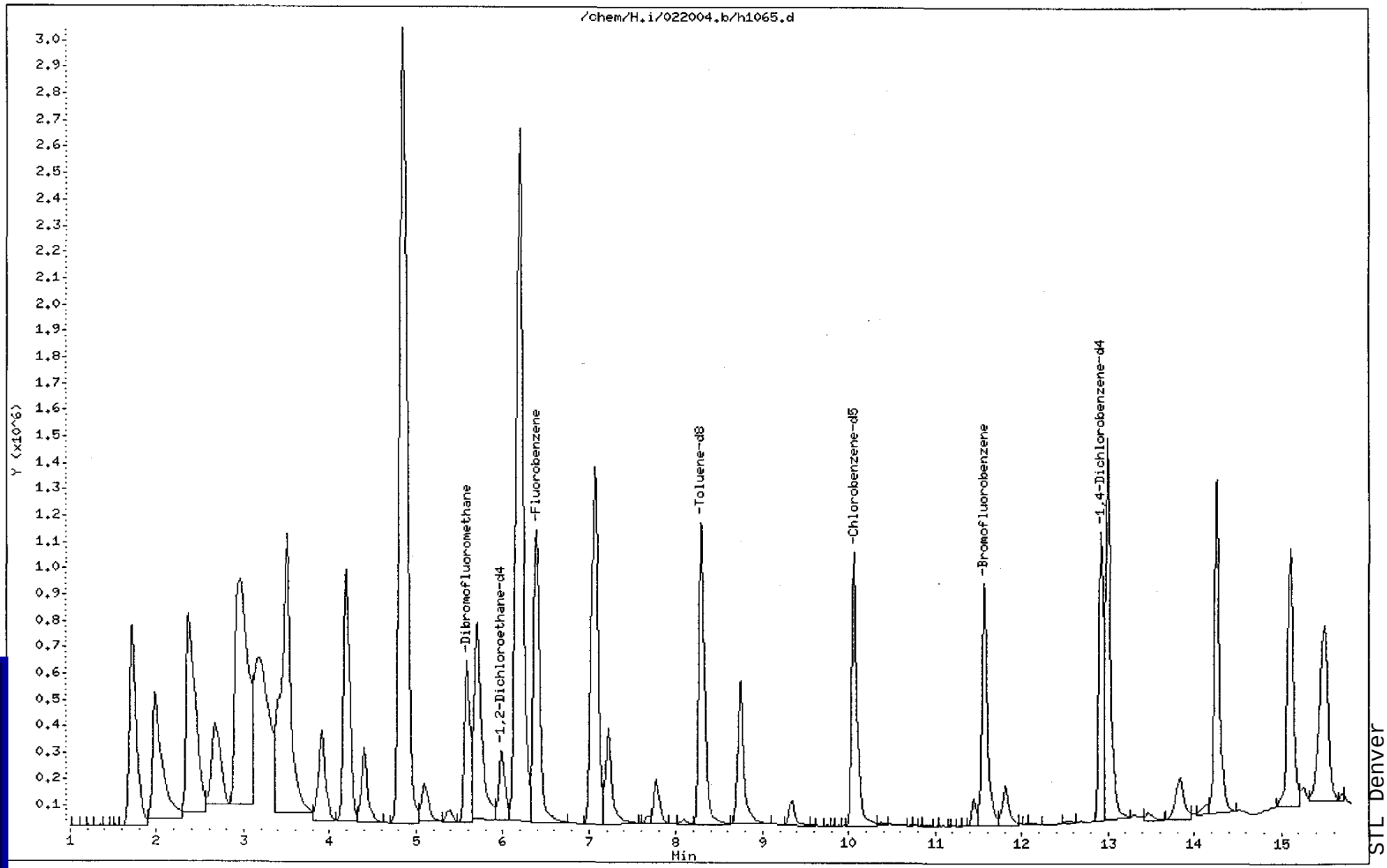
Instrument: H.i

Operator: appelhansd
Column diameter: 0.53



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GC/MS VOLATILE SAMPLE DATA

SEVERN TRENT STL

LCSD Report

LCS SAMPLE
Data File : /chem/H.i/022004.b/h1066.d
Samp Info : LCS,, #304-03
Inj Date : 20-FEB-2004 11:18
Sample Amt : 20mL

LCSD SAMPLE
Data File : /chem/H.i/022004.b/h1067.d
Samp Info : LCSD,, #304-03
Inj Date : 20-FEB-2004 11:38
Sample Amt : 20mL

Sample #	Sample #	Sample #	Sample #	Sample #

	Concentration							
	Measured			%Recovery			RPD	
Spiked	LCS	LCSD	Avg.	Meas.	Min	Max	Meas.	Max
1,1-Dichloroethene								
10.0000	7.5128	7.6551	7.6	75.8	67	125	2	20
Trichloroethene								
10.0000	9.4244	10.0541	9.7	97.4	80	123	6	20
Benzene								
10.0000	9.3920	9.4478	9.4	94.2	75	116	1	20
Toluene								
10.0000	9.1685	9.2787	9.2	92.2	74	115	1	20
Chlorobenzene								
10.0000	9.7965	9.9169	9.9	98.6	77	117	1	20

100.0 Percent of recoveries are within control limits.
100.0 Percent of RPD values are within control limits.

Data File: /chem/H.i/022004.b/h1066.d
Report Date: 20-Feb-2004 11:32

STL Denver

VOLATILE REPORT SW-846

Data file : /chem/H.i/022004.b/h1066.d
Lab Smp Id: LCS Client Smp ID: LCS
Inj Date : 20-FEB-2004 11:18
Operator : appelhansd Inst ID: H.i
Smp Info : LCS,, #304-03
Misc Info :
Comment : Purge and Trap Analysis
Method : /chem/H.i/022004.b/H-20ml-h2o.m
Meth Date : 20-Feb-2004 11:09 appelhad Quant Type: ISTD
Cal Date : 07-JAN-2004 15:24 Cal File: h0014.d
Als bottle: 2 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: dcs.sub
Target Version: 3.40
Processing Host: chemsv02

Concentration Formula: Amt * DF * Vp/Vs

Name	Value	Description
DF	1.000	Dilution Factor
Vp	20.000	Purge Volume (ml)
Vs	20.000	Sample Volume (ml)

+2-23

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/L)
* 48 Fluorobenzene	96	6.396	6.395	(1.000)	2390117	12.5000	
* 72 Chlorobenzene-d5	119	10.061	10.060	(1.000)	474804	12.5000	
* 96 1,4-Dichlorobenzene-d4	152	12.919	12.917	(1.000)	762965	12.5000	
$ 40 Dibromofluoromethane	111	5.587	5.586	(0.874)	987981	10.5082	10.5082
$ 44 1,2-Dichloroethane-d4	65	5.983	5.981	(0.935)	421309	10.0534	10.0534
$ 61 Toluene-d8	98	8.283	8.281	(0.823)	1932699	10.6484	10.6484
$ 82 Bromofluorobenzene	95	11.553	11.552	(1.148)	1078182	10.8329	10.8329
14 1,1-Dichloroethene	96	3.179	3.196	(0.497)	506824	7.51281	7.51281
46 Benzene	78	6.072	6.071	(0.949)	1921908	9.39205	9.39205
50 Trichloroethene	130	6.827	6.844	(1.067)	731349	9.42443	9.42443
62 Toluene	91	8.372	8.389	(0.832)	2296368	9.16848	9.16848
73 Chlorobenzene	112	10.097	10.096	(1.004)	1481785	9.79645	9.79645

Data File: /chem/H.i/022004.b/h1066.d
Report Date: 20-Feb-2004 11:32

STL Denver

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: H.i
Lab File ID: h1066.d
Lab Smp Id: LCS
Analysis Type: VOA
Quant Type: ISTD
Operator: appelhansd
Method File: /chem/H.i/022004.b/H-20ml-h2o.m
Misc Info:

Calibration Date: 02/20/4
Calibration Time: 1059
Client Smp ID: LCS
Level: LOW
Sample Type: WATER

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
48 Fluorobenzene	2466684	1233342	4933368	2390117	-3.10
72 Chlorobenzene-d5	459303	229652	918606	474804	3.37
96 1,4-Dichlorobenze	730993	365496	1461986	762965	4.37

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
48 Fluorobenzene	6.39	5.89	6.89	6.40	0.02
72 Chlorobenzene-d5	10.06	9.56	10.56	10.06	0.01
96 1,4-Dichlorobenze	12.92	12.42	13.42	12.92	0.01

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

STL Denver

RECOVERY REPORT

Client Name:
Sample Matrix: LIQUID
Lab Smp Id: LCS
Level: LOW
Data Type: MS DATA
SpikeList File: dcs-h20.spk
Sublist File: dcs.sub
Method File: /chem/H.i/022004.b/H-20ml-h2o.m
Misc Info:

Client SDG: 022004
Fraction: VOA
Client Smp ID: LCS
Operator: appelhansd
SampleType: LCS
Quant Type: ISTD

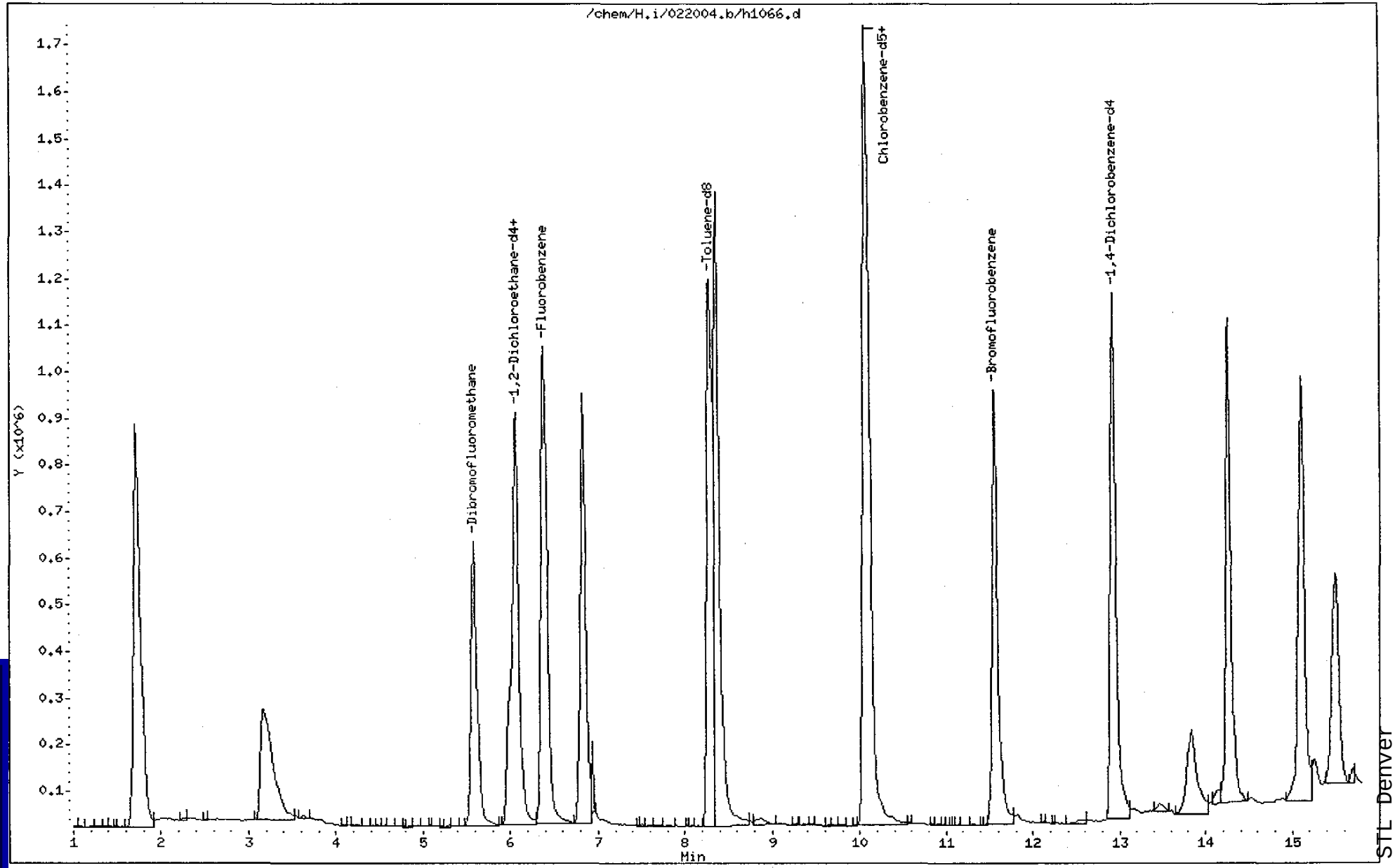
SPIKE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
14 1,1-Dichloroethene	10.0000	7.51281	75.13	67-125
50 Trichloroethene	10.0000	9.42443	94.24	80-123
46 Benzene	10.0000	9.39205	93.92	75-116
62 Toluene	10.0000	9.16848	91.68	74-115
73 Chlorobenzene	10.0000	9.79645	97.96	77-117

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 40 Dibromofluorometha	11.5000	10.5082	91.38	76-116
$ 44 1,2-Dichloroethane	11.5000	10.0534	87.42	59-129
$ 61 Toluene-d8	11.5000	10.6484	92.59	76-116
$ 82 Bromofluorobenzene	11.5000	10.8329	94.20	74-114

Data File: /chem/H.i/022004.b/h1066.d
Date : 20-FEB-2004 11:18
Client ID: LCS
Sample Info: LCS,, #304-03
Purge Volume: 20.0
Column phase: DB624

Instrument: H.i

Operator: appelhansd
Column diameter: 0.53



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Data File: /chem/H.i/022004.b/h1067.d
Report Date: 20-Feb-2004 11:37

STL Denver

VOLATILE REPORT SW-846

Data file : /chem/H.i/022004.b/h1067.d
Lab Smp Id: LCSD Client Smp ID: LCSD
Inj Date : 20-FEB-2004 11:38
Operator : appelhansd Inst ID: H.i
Smp Info : LCSD,, #304-03
Misc Info : h1066.d
Comment : Purge and Trap Analysis
Method : /chem/H.i/022004.b/H-20ml-h2o.m
Meth Date : 20-Feb-2004 11:09 appelhad Quant Type: ISTD
Cal Date : 07-JAN-2004 15:24 Cal File: h0014.d
Als bottle: 2 QC Sample: LCSD
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: dcs.sub
Target Version: 3.40
Processing Host: chemsv02

Concentration Formula: Amt * DF * Vp/Vs

Name	Value	Description
DF	1.000	Dilution Factor
Vp	20.000	Purge Volume (ml)
Vs	20.000	Sample Volume (ml)

JK 2-23

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/L)
* 48 Fluorobenzene	96	6.398	6.395	(1.000)	2364589	12.5000	
* 72 Chlorobenzene-d5	119	10.064	10.060	(1.000)	468018	12.5000	
* 96 1,4-Dichlorobenzene-d4	152	12.921	12.917	(1.000)	769832	12.5000	
$ 40 Dibromofluoromethane	111	5.590	5.586	(0.874)	980012	10.5360	10.5360
$ 44 1,2-Dichloroethane-d4	65	5.985	5.981	(0.935)	411181	9.91768	9.91768
$ 61 Toluene-d8	98	8.303	8.281	(0.825)	1906928	10.6587	10.6587
$ 82 Bromofluorobenzene	95	11.556	11.552	(1.148)	1073520	10.9424	10.9424
14 1,1-Dichloroethene	96	3.182	3.196	(0.497)	510904	7.65505	7.65505
46 Benzene	78	6.075	6.071	(0.949)	1912659	9.44776	9.44776
50 Trichloroethene	130	6.830	6.844	(1.067)	771879	10.0541	10.0541
62 Toluene	91	8.375	8.389	(0.832)	2290767	9.27874	9.27874
73 Chlorobenzene	112	10.100	10.096	(1.004)	1478573	9.91695	9.91695

Data File: /chem/H.i/022004.b/h1067.d
Report Date: 20-Feb-2004 11:37

STL Denver

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: H.i
Lab File ID: h1067.d
Lab Smp Id: LCSD
Analysis Type: VOA
Quant Type: ISTD
Operator: appelhansd
Method File: /chem/H.i/022004.b/H-20ml-h2o.m
Misc Info: h1066.d

Calibration Date: 02/20/4
Calibration Time: 1059
Client Smp ID: LCSD
Level: LOW
Sample Type: WATER

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
48 Fluorobenzene	2466684	1233342	4933368	2364589	-4.14
72 Chlorobenzene-d5	459303	229652	918606	468018	1.90
96 1,4-Dichlorobenze	730993	365496	1461986	769832	5.31

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
48 Fluorobenzene	6.39	5.89	6.89	6.40	0.06
72 Chlorobenzene-d5	10.06	9.56	10.56	10.06	0.04
96 1,4-Dichlorobenze	12.92	12.42	13.42	12.92	0.03

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem/H.i/022004.b/h1067.d
Report Date: 20-Feb-2004 11:37

STL Denver

RECOVERY REPORT

Client Name:
Sample Matrix: LIQUID
Lab Smp Id: LCSD
Level: LOW
Data Type: MS DATA
SpikeList File: dcs-h20.spk
Sublist File: dcs.sub
Method File: /chem/H.i/022004.b/H-20ml-h2o.m
Misc Info: h1066.d

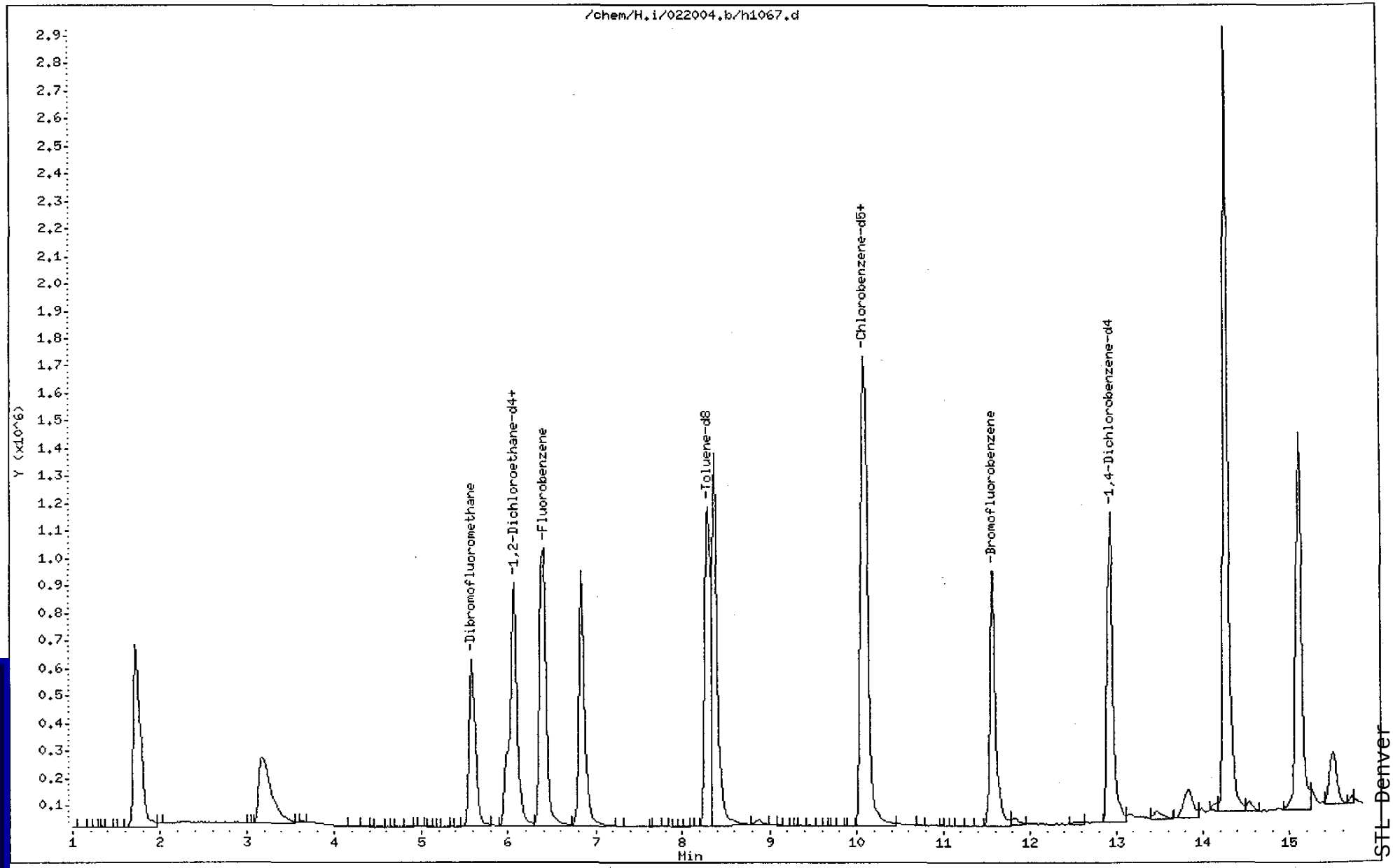
Client SDG: 022004
Fraction: VOA
Client Smp ID: LCSD
Operator: appelhansd
SampleType: LCSD
Quant Type: ISTD

SPIKE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
14 1,1-Dichloroethene	10.0000	7.65505	76.55	67-125
50 Trichloroethene	10.0000	10.0541	100.54	80-123
46 Benzene	10.0000	9.44776	94.48	75-116
62 Toluene	10.0000	9.27874	92.79	74-115
73 Chlorobenzene	10.0000	9.91695	99.17	77-117

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 40 Dibromofluorometha	11.5000	10.5360	91.62	76-116
$ 44 1,2-Dichloroethane	11.5000	9.91768	86.24	59-129
$ 61 Toluene-d8	11.5000	10.6587	92.68	76-116
$ 82 Bromofluorobenzene	11.5000	10.9424	95.15	74-114

Data File: /chem/H.i/022004.b/h1067.d
Date : 20-FEB-2004 11:38
Client ID: LCSD
Sample Info: LCSD,, #304-03
Purge Volume: 20.0
Column phase: DB624

Instrument: H.i
Operator: appelhansd
Column diameter: 0.53



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Data File: /chem/H.i/022004.b/h1068.d
Report Date: 20-Feb-2004 12:06

STL Denver

VOLATILE REPORT SW-846

Data file : /chem/H.i/022004.b/h1068.d
Lab Smp Id: VBLK Client Smp ID: VBLK
Inj Date : 20-FEB-2004 11:58
Operator : appelhansd Inst ID: H.i
Smp Info : VBLK,,
Misc Info :
Comment : Purge and Trap Analysis
Method : /chem/H.i/022004.b/H-20ml-h2o.m
Meth Date : 20-Feb-2004 11:09 appelhad Quant Type: ISTD
Cal Date : 07-JAN-2004 15:24 Cal File: h0014.d
Als bottle: 2 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: H-all.sub
Target Version: 3.40
Processing Host: chemsv02

Concentration Formula: Amt * DF * Vp/Vs

Name	Value	Description
DF	1.000	Dilution Factor
Vp	20.000	Purge Volume (ml)
Vs	20.000	Sample Volume (ml)

A2-23

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/L)
* 48 Fluorobenzene	96	6.396	6.395	(1.000)	2374023	12.5000	
* 72 Chlorobenzene-d5	119	10.061	10.060	(1.000)	457320	12.5000	
* 96 1,4-Dichlorobenzene-d4	152	12.918	12.917	(1.000)	757230	12.5000	
$ 40 Dibromofluoromethane	111	5.587	5.586	(0.874)	965866	10.3427	10.3426
$ 44 1,2-Dichloroethane-d4	65	6.000	5.981	(0.938)	408489	9.81359	9.81359
$ 61 Toluene-d8	98	8.300	8.281	(0.825)	1862019	10.6512	10.6512
$ 82 Bromofluorobenzene	95	11.571	11.552	(1.150)	1043720	10.8875	10.8875
M 1 1,2-Dichloroethene (total)	96.00	Compound Not Detected.					
M 2 Xylene (total)	106.00	Compound Not Detected.					
3 dichlorodifluoromethane	85.00	Compound Not Detected.					
4 Chloromethane	50.00	Compound Not Detected.					
5 Vinyl Chloride	62.00	Compound Not Detected.					
6 Ethylene Oxide	43.00	Compound Not Detected.					
117 Dichlorotetrafluoroethane	85.00	Compound Not Detected.					
123 1,2-dichloro-1,1,2-triflourom	117.00	Compound Not Detected.					
124 2,2-dichloro-1,1,1-trifluorom	83.00	Compound Not Detected.					

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/L)
7 Bromomethane	94.00	Compound Not Detected.					
8 Chloroethane	64.00	Compound Not Detected.					
9 Dichlorofluoromethane	67.00	Compound Not Detected.					
10 Trichlorofluoromethane	101.00	Compound Not Detected.					
11 Ethanol	45.00	Compound Not Detected.					
12 Ethyl Ether	59.00	Compound Not Detected.					
13 Acrolein	56.00	Compound Not Detected.					
15 Acetone	43.00	Compound Not Detected.					
14 1,1-Dichloroethene	96.00	Compound Not Detected.					
16 Trichlorotrifluoroethane	151.00	Compound Not Detected.					
17 Iodomethane	142.00	Compound Not Detected.					
19 Acetonitrile	41.00	Compound Not Detected.					
18 Carbon Disulfide	76.00	Compound Not Detected.					
20 Allyl Chloride	41.00	Compound Not Detected.					
119 Methyl Acetate	43.00	Compound Not Detected.					
21 Methylene Chloride	84	3.628	3.627	(0.567)	18475	0.31258	0.312581
125 2-Propanol	45.00	Compound Not Detected.					
22 tert-Butyl alcohol	59.00	Compound Not Detected.					
23 Acrylonitrile	53.00	Compound Not Detected.					
24 trans-1,2-Dichloroethene	96.00	Compound Not Detected.					
25 Methyl t-butyl ether	73.00	Compound Not Detected.					
26 Hexane	57.00	Compound Not Detected.					
27 1,1-Dichloroethane	63.00	Compound Not Detected.					
29 Vinyl acetate	43.00	Compound Not Detected.					
30 Isopropyl ether	87.00	Compound Not Detected.					
28 Chloroprene	53.00	Compound Not Detected.					
120 ETBE	59.00	Compound Not Detected.					
33 2-Butanone	43.00	Compound Not Detected.					
32 cis-1,2-Dichloroethene	96.00	Compound Not Detected.					
31 2,2-Dichloropropane	77.00	Compound Not Detected.					
35 Ethyl Acetate	43.00	Compound Not Detected.					
34 Propionitrile	54.00	Compound Not Detected.					
36 Methacrylonitrile	41.00	Compound Not Detected.					
37 Bromochloromethane	128.00	Compound Not Detected.					
39 Tetrahydrofuran	42.00	Compound Not Detected.					
38 Chloroform	83.00	Compound Not Detected.					
41 1,1,1-Trichloroethane	97.00	Compound Not Detected.					
114 Cyclohexane	56.00	Compound Not Detected.					
42 1,1-Dichloropropene	75.00	Compound Not Detected.					
43 Carbon Tetrachloride	117.00	Compound Not Detected.					
45 Isobutanol	41.00	Compound Not Detected.					
46 Benzene	78.00	Compound Not Detected.					
47 1,2-Dichloroethane	62.00	Compound Not Detected.					
121 TAME	73.00	Compound Not Detected.					
49 n-Butanol	56.00	Compound Not Detected.					
50 Trichloroethene	130.00	Compound Not Detected.					
115 2-Pentanone	43.00	Compound Not Detected.					

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/L)
52 1,2-Dichloropropane	63.00	Compound Not Detected.					
122 Methyl Cyclohexane	55.00	Compound Not Detected.					
53 Dibromomethane	93.00	Compound Not Detected.					
54 Methyl Methacrylate	100.00	Compound Not Detected.					
55 1,4-Dioxane	88.00	Compound Not Detected.					
56 Bromodichloromethane	83.00	Compound Not Detected.					
57 2-nitropropane	41.00	Compound Not Detected.					
113 2-Chloroethyl vinyl ether	63.00	Compound Not Detected.					
59 cis-1,3-Dichloropropene	75.00	Compound Not Detected.					
60 4-Methyl-2-pentanone	43.00	Compound Not Detected.					
62 Toluene	91.00	Compound Not Detected.					
63 trans-1,3-Dichloropropene	75.00	Compound Not Detected.					
64 Ethyl methacrylate	69.00	Compound Not Detected.					
65 1,1,2-Trichloroethane	97.00	Compound Not Detected.					
67 1,3-Dichloropropane	76.00	Compound Not Detected.					
66 Tetrachloroethene	164.00	Compound Not Detected.					
68 2-Hexanone	43.00	Compound Not Detected.					
126 Tetrahydrothiophene	60.00	Compound Not Detected.					
69 Dibromochloromethane	129.00	Compound Not Detected.					
70 1,2-Dibromoethane	107.00	Compound Not Detected.					
71 1-Chlorohexane	91.00	Compound Not Detected.					
73 Chlorobenzene	112.00	Compound Not Detected.					
74 1,1,1,2-Tetrachloroethane	131.00	Compound Not Detected.					
75 Ethylbenzene	106.00	Compound Not Detected.					
76 m and p-Xylene	106.00	Compound Not Detected.					
77 o-Xylene	106.00	Compound Not Detected.					
78 Styrene	104.00	Compound Not Detected.					
79 Bromoform	173.00	Compound Not Detected.					
80 isopropyl benzene	105.00	Compound Not Detected.					
116 cis-1,4-Dichloro-2-butene	53.00	Compound Not Detected.					
81 Cyclohexanone	55.00	Compound Not Detected.					
83 1,1,2,2-Tetrachloroethane	83.00	Compound Not Detected.					
84 Bromobenzene	156.00	Compound Not Detected.					
85 1,2,3-Trichloropropane	110.00	Compound Not Detected.					
86 t-1,4-Dichloro-2-butene	53.00	Compound Not Detected.					
87 n-Propylbenzene	120.00	Compound Not Detected.					
88 2-Chlorotoluene	126.00	Compound Not Detected.					
89 1,3,5-Trimethylbenzene	105.00	Compound Not Detected.					
90 4-Chlorotoluene	126.00	Compound Not Detected.					
91 tert-Butylbenzene	119.00	Compound Not Detected.					
92 1,2,4-Trimethylbenzene	105.00	Compound Not Detected.					
93 sec-Butylbenzene	134.00	Compound Not Detected.					
94 m-Dichlorobenzene	146.00	Compound Not Detected.					
95 4-Isopropyltoluene	119.00	Compound Not Detected.					
97 p-dichlorobenzene	146.00	Compound Not Detected.					
118 1,2,3-Trimethylbenzene	105.00	Compound Not Detected.					
98 n-Butylbenzene	91.00	Compound Not Detected.					

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/L)
99 o-Dichlorobenzene	146.00	Compound Not Detected.					
100 1,2-Dibromo-3-chloropropane	157.00	Compound Not Detected.					
101 1,2,4-Trichlorobenzene	180.00	Compound Not Detected.					
102 Hexachlorobutadiene	225.00	Compound Not Detected.					
127 Naphthalene	128.00	Compound Not Detected.					
104 1,2,3-Trichlorobenzene	180.00	Compound Not Detected.					

Data File: /chem/H.i/022004.b/h1068.d
Report Date: 23-Feb-2004 19:36

STL Denver

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: H.i
Lab File ID: h1068.d
Lab Smp Id: VBLK
Analysis Type: VOA
Quant Type: ISTD
Operator: appelhansd
Method File: /chem/H.i/022004.b/H-20ml-h2o.m
Misc Info:

Calibration Date: 02/20/4
Calibration Time: 1059
Client Smp ID: VBLK
Level: LOW
Sample Type: WATER

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
48 Fluorobenzene	2466684	1233342	4933368	2374023	-3.76
72 Chlorobenzene-d5	459303	229652	918606	457320	-0.43
96 1,4-Dichlorobenze	730993	365496	1461986	757230	3.59

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
48 Fluorobenzene	6.39	5.89	6.89	6.40	0.02
72 Chlorobenzene-d5	10.06	9.56	10.56	10.06	0.01
96 1,4-Dichlorobenze	12.92	12.42	13.42	12.92	0.01

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

STL Denver

VOLATILE REPORT SW-846

Data file : /chem/H.i/022004.b/h1068.d
Lab Smp Id: VBLK Client Smp ID: VBLK
Inj Date : 20-FEB-2004 11:58
Operator : appelhansd Inst ID: H.i
Smp Info : VBLK,,
Misc Info :
Comment : Purge and Trap Analysis
Method : /chem/H.i/022004.b/H-20ml-h2o.m
Meth Date : 23-Feb-2004 19:30 rhoadesw Quant Type: ISTD
Cal Date : 07-JAN-2004 15:24 Cal File: h0014.d
Als bottle: 2 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: H-all.sub
Target Version: 3.40
Processing Host: chemsv02

Concentration Formula: Amt * DF * Vp/Vs

Name	Value	Description
DF	1.000	Dilution Factor
Vp	20.000	Purge Volume (ml)
Vs	20.000	Sample Volume (ml)

ISTD	RT	AREA	AMOUNT
* 96 1,4-Dichlorobenzene-d4	12.918	4728670	12.500

		CONCENTRATIONS			QUANT		
RT	AREA	ON-COL(ug/L)	FINAL(ug/L)	QUAL	LIBRARY	LIB ENTRY	CPND #
Unknown				CAS #:			
13.835	2703796	7.14734799	7.14735	0		0	96
Acetic acid, 2-ethylhexyl ester				CAS #: 103-09-3			
14.266	19168511	50.6709894	50.6710	90	NBS75K.l	15793	96
Unknown				CAS #:			
15.111	11396998	30.1273878	30.1274	0		0	96

Data File: /chem/H.i/022004.b/h1068.d
Report Date: 23-Feb-2004 19:36

RT	AREA	CONCENTRATIONS ON-COL(ug/L)	FINAL(ug/L)	QUAL	QUANT LIBRARY	LIB ENTRY	CPND #
Unknown				CAS #:			
15.506	2275688	6.01566614	6.01567	0		0	96

STL Denver

RECOVERY REPORT

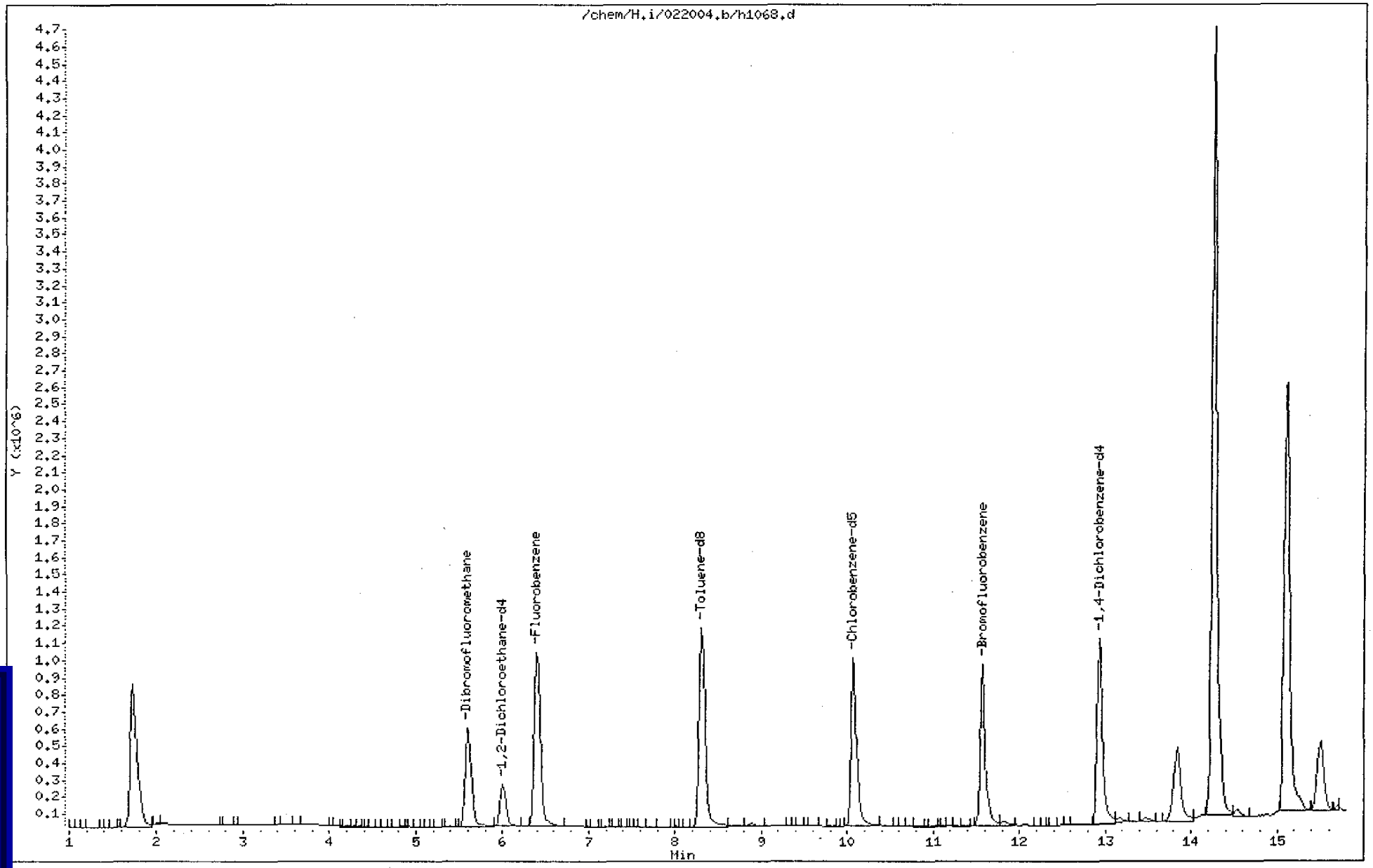
Client Name:
Sample Matrix: LIQUID
Lab Smp Id: VBLK
Level: LOW
Data Type: MS DATA
SpikeList File: dcs-h20.spk
Sublist File: H-all.sub
Method File: /chem/H.i/022004.b/H-20ml-h2o.m
Misc Info:

Client SDG: 022004
Fraction: VOA
Client Smp ID: VBLK
Operator: appelhansd
SampleType: BLANK
Quant Type: ISTD

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 40 Dibromofluorometha	11.5000	10.3426	89.94	76-116
$ 44 1,2-Dichloroethane	11.5000	9.81359	85.34	59-129
$ 61 Toluene-d8	11.5000	10.6512	92.62	76-116
$ 82 Bromofluorobenzene	11.5000	10.8875	94.67	74-114

Data File: /chem/H.i/022004.b/h1068.d
Date : 20-FEB-2004 11:58
Client ID: VBLK
Sample Info: VBLK,,
Purge Volume: 20.0
Column phase: DB624

Instrument: H.i
Operator: appelhansd
Column diameter: 0.53



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Data File: /chem/H.i/022004.b/h1068.d

Date : 20-FEB-2004 11:58

Client ID: VBLK

Instrument: H.i

Sample Info: VBLK,,

Purge Volume: 20.0

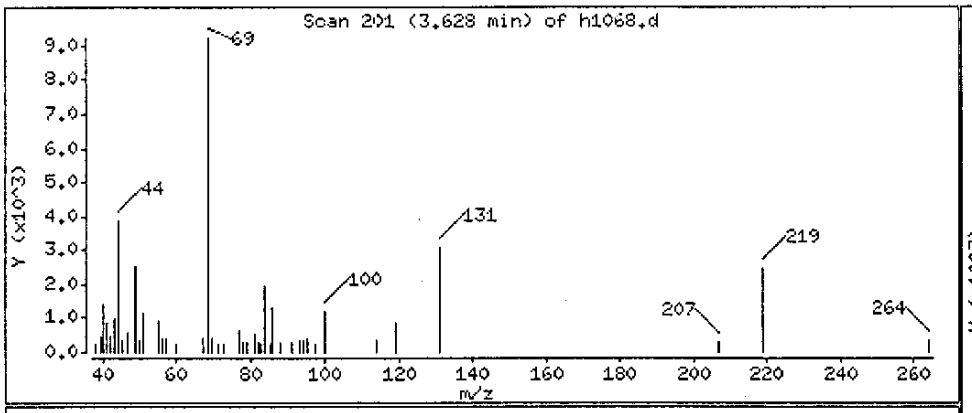
Operator: appelhansd

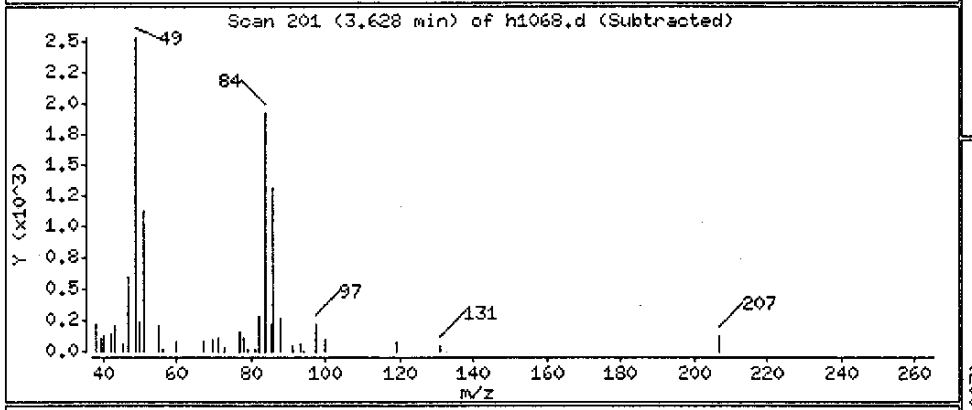
Column phase: DB624

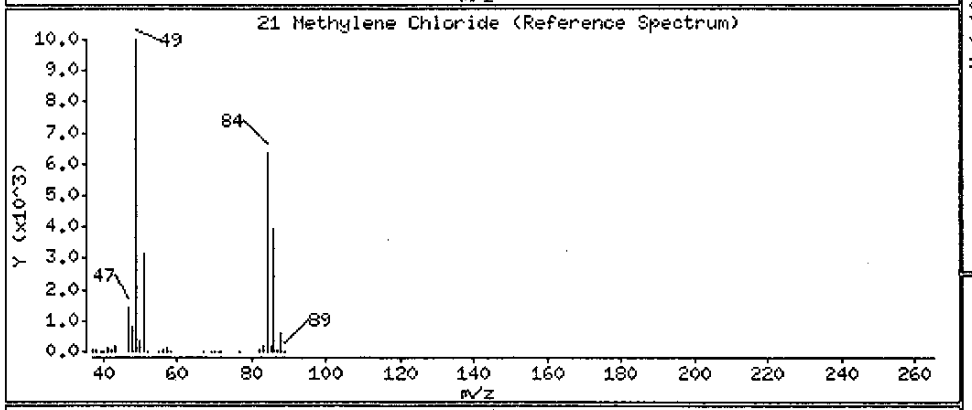
Column diameter: 0.53

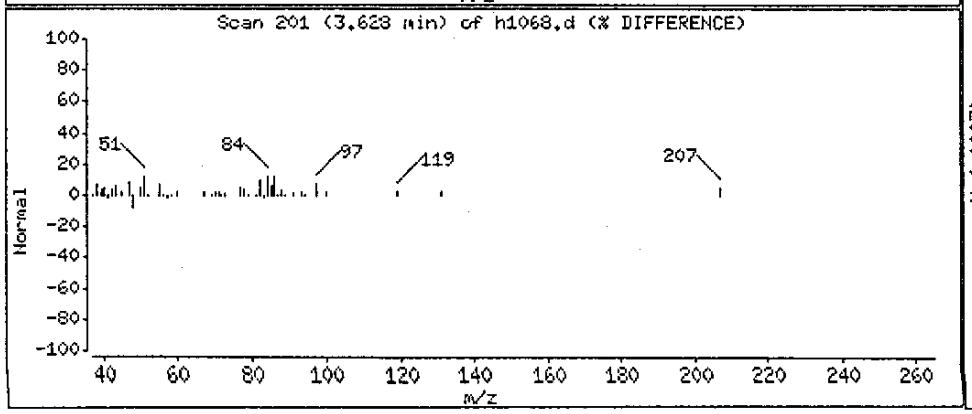
21 Methylene Chloride

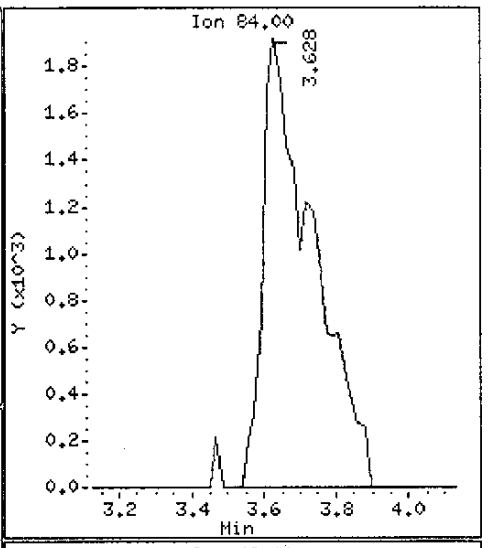
Concentration: 0.312581 ug/L

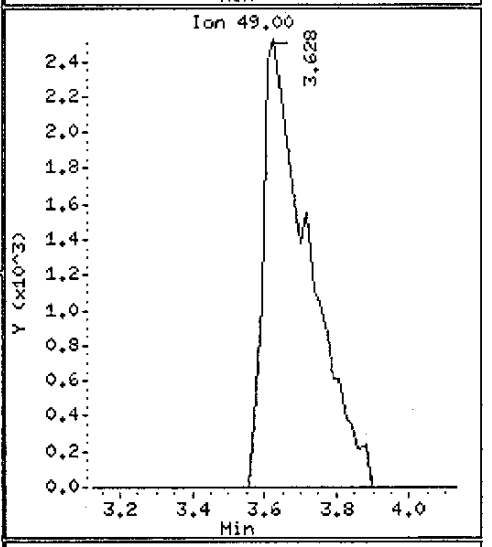


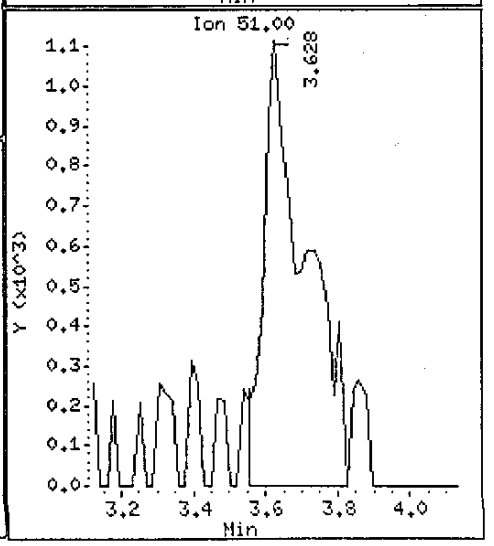












Data File: /chem/H.i/022004.b/h1068.d

Date : 20-FEB-2004 11:58

Client ID: VBLK

Instrument: H.i

Sample Info: VBLK,,

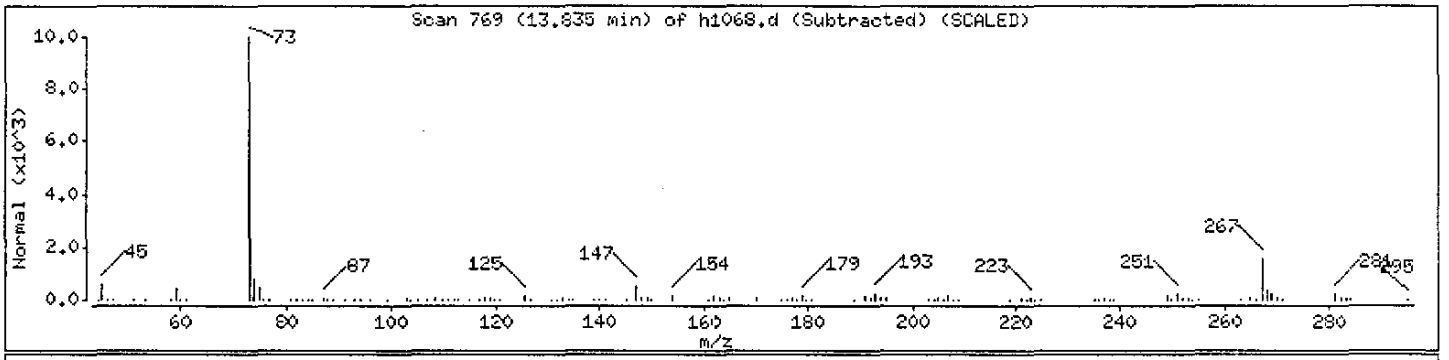
Purge Volume: 20.0

Operator: appelhansd

Column phase: DB624

Column diameter: 0.53

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown			0	0		0



Data File: /chem/H.i/022004.b/h1068.d

Date : 20-FEB-2004 11:58

Client ID: VBLK

Instrument: H.i

Sample Info: VBLK,,

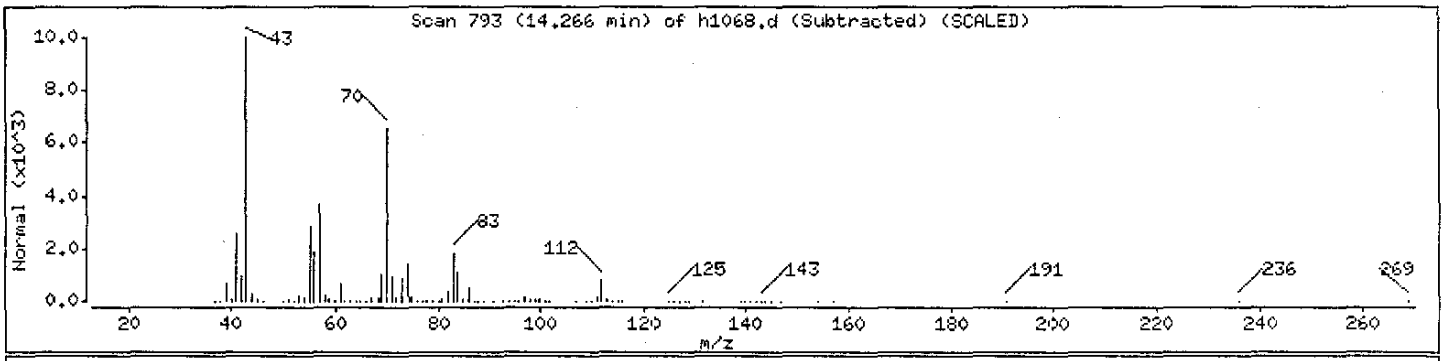
Purge Volume: 20.0

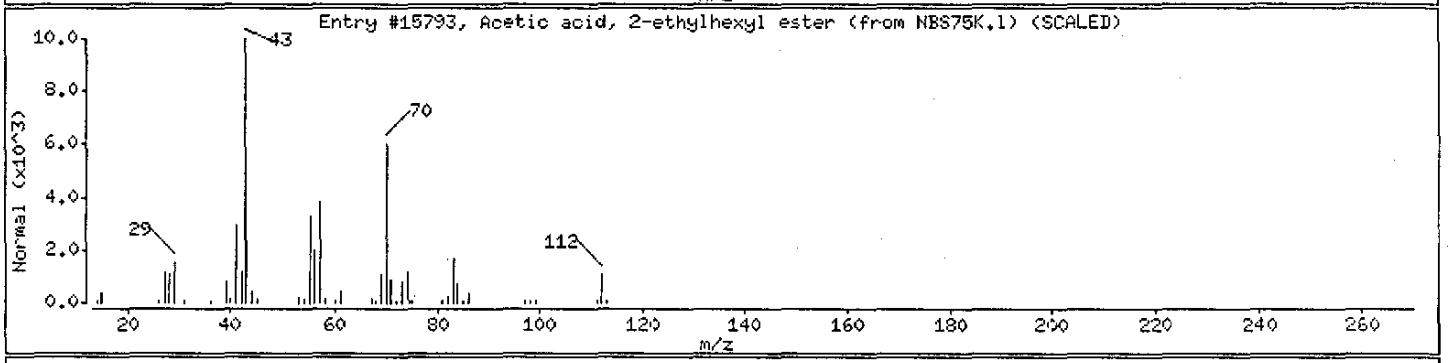
Operator: appelhansd

Column phase: DB624

Column diameter: 0.53

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Acetic acid, 2-ethylhexyl ester	103-09-3	NBS75K.l	15793	90	C10H20O2	172





Data File: /chem/H.i/022004.b/h1068.d

Date : 20-FEB-2004 11:58

Client ID: VBLK

Instrument: H.i

Sample Info: VBLK,,

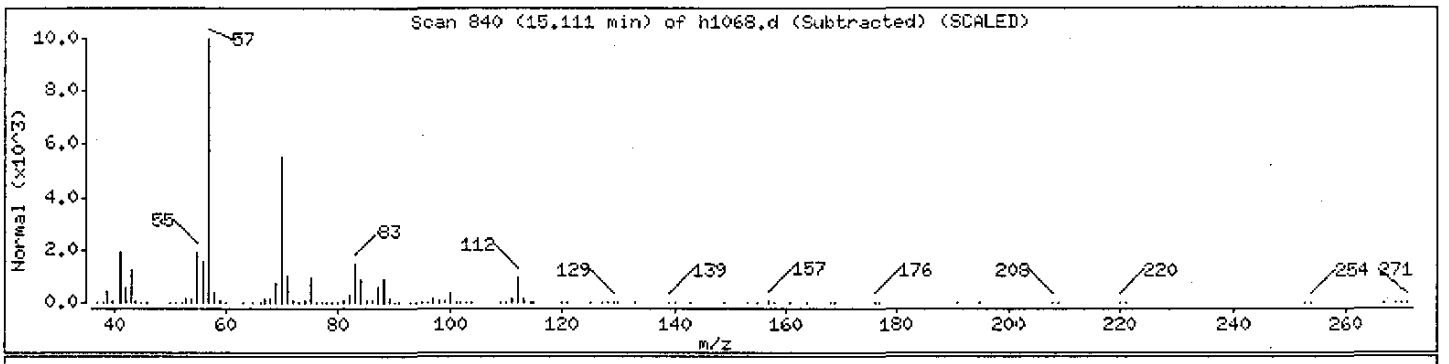
Purge Volume: 20.0

Operator: appelhansd

Column phase: DB624

Column diameter: 0.53

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown			0	0		0



Data File: /chem/H.i/022004.b/h1068.d

Date : 20-FEB-2004 11:58

Client ID: VBLK

Instrument: H.i

Sample Info: VBLK,,

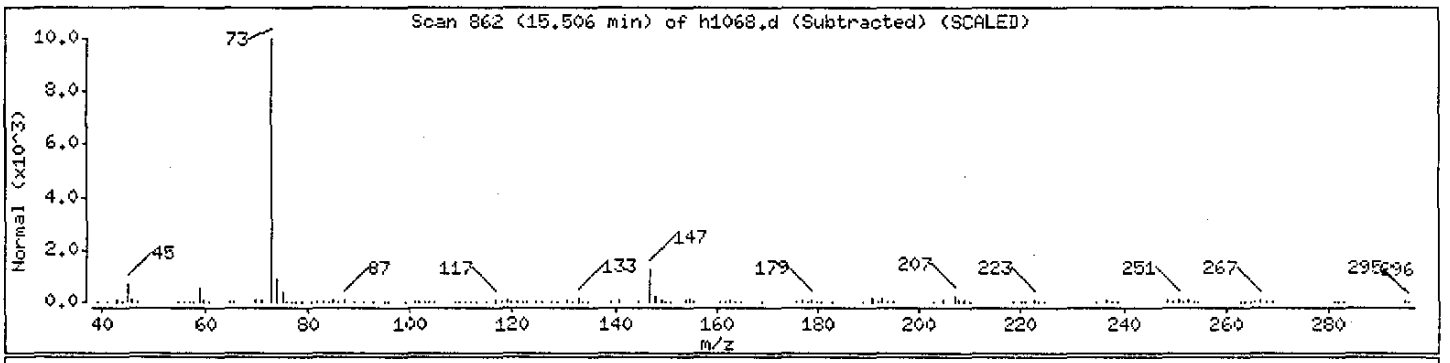
Purge Volume: 20.0

Operator: appelhansd

Column phase: DB624

Column diameter: 0.53

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown			0	0		0



Data File: /chem/H.i/022004.b/h1075.d
Report Date: 20-Feb-2004 15:56

STL Denver

VOLATILE REPORT SW-846

Data file : /chem/H.i/022004.b/h1075.d
Lab Smp Id: F9KD41AA Client Smp ID: MW-1
Inj Date : 20-FEB-2004 14:52
Operator : appelhansd Inst ID: H.i
Smp Info : F9KD41AA,0.003,D4B130209-001
Misc Info :
Comment : Purge and Trap Analysis
Method : /chem/H.i/022004.b/H-20ml-h2o.m
Meth Date : 20-Feb-2004 11:09 appelhad Quant Type: ISTD
Cal Date : 07-JAN-2004 15:24 Cal File: h0014.d
Als bottle: 2
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: H-all.sub
Target Version: 3.40
Processing Host: chemsv02

Concentration Formula: Amt * DF * Vp/Vs

Name	Value	Description
DF	1.000	Dilution Factor
Vp	20.000	Purge Volume (ml)
Vs	0.003	Sample Volume (ml)

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/L)
* 48 Fluorobenzene	96	6.395	6.395	(1.000)	2185411	12.5000	
* 72 Chlorobenzene-d5	119	10.060	10.060	(1.000)	424617	12.5000	
* 96 1,4-Dichlorobenzene-d4	152	12.918	12.917	(1.000)	705035	12.5000	
$ 40 Dibromofluoromethane	111	5.604	5.586	(0.876)	943393	10.9739	73159.1
$ 44 1,2-Dichloroethane-d4	65	5.999	5.981	(0.938)	405999	10.5956	70637.1
$ 61 Toluene-d8	98	8.300	8.281	(0.825)	1850563	11.4009	76006.0
$ 82 Bromofluorobenzene	95	11.570	11.552	(1.150)	1037932	11.6610	77740.2
M 1 1,2-Dichloroethene (total)	96.00	Compound Not Detected.					
M 2 Xylene (total)	106				239504	2.63263	17550.9
3 dichlorodifluoromethane	85.00	Compound Not Detected.					
4 Chloromethane	50.00	Compound Not Detected.					
5 Vinyl Chloride	62.00	Compound Not Detected.					
6 Ethylene Oxide	43.00	Compound Not Detected.					
117 Dichlorotetrafluoroethane	85.00	Compound Not Detected.					
123 1,2-dichloro-1,1,2-triflourom	117.00	Compound Not Detected.					
124 2,2-dichloro-1,1,1-trifluorom	83.00	Compound Not Detected.					

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/L)
7 Bromomethane	94.00	Compound Not Detected.					
8 Chloroethane	64.00	Compound Not Detected.					
9 Dichlorofluoromethane	67.00	Compound Not Detected.					
10 Trichlorofluoromethane	101.00	Compound Not Detected.					
11 Ethanol	45.00	Compound Not Detected.					
12 Ethyl Ether	59.00	Compound Not Detected.					
13 Acrolein	56.00	Compound Not Detected.					
15 Acetone	43.00	Compound Not Detected.					
14 1,1-Dichloroethene	96.00	Compound Not Detected.					
16 Trichlorotrifluoroethane	151.00	Compound Not Detected.					
17 Iodomethane	142.00	Compound Not Detected.					
19 Acetonitrile	41.00	Compound Not Detected.					
18 Carbon Disulfide	76.00	Compound Not Detected.					
20 Allyl Chloride	41.00	Compound Not Detected.					
119 Methyl Acetate	43.00	Compound Not Detected.					
21 Methylene Chloride	84	3.628	3.627	(0.567)	20191	0.37110	2473.98
125 2-Propanol	45.00	Compound Not Detected.					
22 tert-Butyl alcohol	59.00	Compound Not Detected.					
23 Acrylonitrile	53.00	Compound Not Detected.					
24 trans-1,2-Dichloroethene	96.00	Compound Not Detected.					
25 Methyl t-butyl ether	73.00	Compound Not Detected.					
26 Hexane	57.00	Compound Not Detected.					
27 1,1-Dichloroethane	63.00	Compound Not Detected.					
29 Vinyl acetate	43.00	Compound Not Detected.					
30 Isopropyl ether	87.00	Compound Not Detected.					
28 Chloroprene	53.00	Compound Not Detected.					
120 ETBE	59.00	Compound Not Detected.					
33 2-Butanone	43.00	Compound Not Detected.					
32 cis-1,2-Dichloroethene	96.00	Compound Not Detected.					
31 2,2-Dichloropropane	77.00	Compound Not Detected.					
35 Ethyl Acetate	43.00	Compound Not Detected.					
34 Propionitrile	54.00	Compound Not Detected.					
36 Methacrylonitrile	41.00	Compound Not Detected.					
37 Bromochloromethane	128.00	Compound Not Detected.					
39 Tetrahydrofuran	42.00	Compound Not Detected.					
38 Chloroform	83.00	Compound Not Detected.					
41 1,1,1-Trichloroethane	97.00	Compound Not Detected.					
114 Cyclohexane	56.00	Compound Not Detected.					
42 1,1-Dichloropropene	75.00	Compound Not Detected.					
43 Carbon Tetrachloride	117.00	Compound Not Detected.					
45 Isobutanol	41.00	Compound Not Detected.					
46 Benzene	78	6.071	6.071	(0.949)	184366	0.98536	6569.06
47 1,2-Dichloroethane	62.00	Compound Not Detected.					
121 TAME	73.00	Compound Not Detected.					
49 n-Butanol	56.00	Compound Not Detected.					
50 Trichloroethene	130.00	Compound Not Detected.					
115 2-Pentanone	43.00	Compound Not Detected.					

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/L)
52 1,2-Dichloropropane	63.00	Compound Not Detected.					
122 Methyl Cyclohexane	55.00	Compound Not Detected.					
53 Dibromomethane	93.00	Compound Not Detected.					
54 Methyl Methacrylate	100.00	Compound Not Detected.					
55 1,4-Dioxane	88.00	Compound Not Detected.					
56 Bromodichloromethane	83.00	Compound Not Detected.					
57 2-nitropropane	41.00	Compound Not Detected.					
113 2-Chloroethyl vinyl ether	63.00	Compound Not Detected.					
59 cis-1,3-Dichloropropene	75.00	Compound Not Detected.					
60 4-Methyl-2-pentanone	43.00	Compound Not Detected.					
62 Toluene	91	8.371	8.389	(0.832)	7305035	32.6133	217422
63 trans-1,3-Dichloropropene	75.00	Compound Not Detected.					
64 Ethyl methacrylate	69.00	Compound Not Detected.					
65 1,1,2-Trichloroethane	97.00	Compound Not Detected.					
67 1,3-Dichloropropane	76.00	Compound Not Detected.					
66 Tetrachloroethene	164.00	Compound Not Detected.					
68 2-Hexanone	43.00	Compound Not Detected.					
126 Tetrahydrothiophene	60.00	Compound Not Detected.					
69 Dibromochloromethane	129.00	Compound Not Detected.					
70 1,2-Dibromoethane	107.00	Compound Not Detected.					
71 1-Chlorohexane	91.00	Compound Not Detected.					
73 Chlorobenzene	112.00	Compound Not Detected.					
74 1,1,1,2-Tetrachloroethane	131.00	Compound Not Detected.					
75 Ethylbenzene	106	10.240	10.240	(1.018)	31836	0.45886	3059.07
76 m and p-Xylene	106	10.384	10.383	(1.032)	179875	1.92013	12800.8
77 o-Xylene	106	10.887	10.887	(1.082)	59629	0.71251	4750.03
78 Styrene	104.00	Compound Not Detected.					
79 Bromoform	173.00	Compound Not Detected.					
80 isopropyl benzene	105.00	Compound Not Detected.					
116 cis-1,4-Dichloro-2-butene	53.00	Compound Not Detected.					
81 Cyclohexanone	55.00	Compound Not Detected.					
83 1,1,2,2-Tetrachloroethane	83.00	Compound Not Detected.					
84 Bromobenzene	156.00	Compound Not Detected.					
85 1,2,3-Trichloropropane	110.00	Compound Not Detected.					
86 t-1,4-Dichloro-2-butene	53.00	Compound Not Detected.					
87 n-Propylbenzene	120.00	Compound Not Detected.					
88 2-Chlorotoluene	126.00	Compound Not Detected.					
89 1,3,5-Trimethylbenzene	105.00	Compound Not Detected.					
90 4-Chlorotoluene	126.00	Compound Not Detected.					
91 tert-Butylbenzene	119.00	Compound Not Detected.					
92 1,2,4-Trimethylbenzene	105.00	Compound Not Detected.					
93 sec-Butylbenzene	134.00	Compound Not Detected.					
94 m-Dichlorobenzene	146.00	Compound Not Detected.					
95 4-Isopropyltoluene	119.00	Compound Not Detected.					
97 p-dichlorobenzene	146.00	Compound Not Detected.					
118 1,2,3-Trimethylbenzene	105.00	Compound Not Detected.					
98 n-Butylbenzene	91.00	Compound Not Detected.					

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/L)
99 o-Dichlorobenzene	146.00	Compound Not Detected.					
100 1,2-Dibromo-3-chloropropane	157.00	Compound Not Detected.					
101 1,2,4-Trichlorobenzene	180.00	Compound Not Detected.					
102 Hexachlorobutadiene	225.00	Compound Not Detected.					
127 Naphthalene	128.00	Compound Not Detected.					
104 1,2,3-Trichlorobenzene	180.00	Compound Not Detected.					

Data File: /chem/H.i/022004.b/h1075.d
Report Date: 20-Feb-2004 15:56

STL Denver

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: H.i
Lab File ID: h1075.d
Lab Smp Id: F9KD41AA
Analysis Type: VOA
Quant Type: ISTD
Operator: appelhansd
Method File: /chem/H.i/022004.b/H-20ml-h2o.m
Misc Info:

Calibration Date: 02/20/4
Calibration Time: 1059
Client Smp ID: MW-1
Level: LOW
Sample Type: WATER

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
48 Fluorobenzene	2466684	1233342	4933368	2185411	-11.40
72 Chlorobenzene-d5	459303	229652	918606	424617	-7.55
96 1,4-Dichlorobenze	730993	365496	1461986	705035	-3.55

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
48 Fluorobenzene	6.39	5.89	6.89	6.39	0.00
72 Chlorobenzene-d5	10.06	9.56	10.56	10.06	0.00
96 1,4-Dichlorobenze	12.92	12.42	13.42	12.92	0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem/H.i/022004.b/h1075.d Page 6
Report Date: 20-Feb-2004 15:56

STL Denver

RECOVERY REPORT

Client Name: ARCADIS GERAGHTY & M13-FEB-2004 Client SDG: D4B130209
Sample Matrix: LIQUID Fraction: VOA
Lab Smp Id: F9KD41AA Client Smp ID: MW-1
Level: LOW Operator: appelhansd
Data Type: MS DATA SampleType: SAMPLE
SpikeList File: dcs-h20.spk Quant Type: ISTD
Sublist File: H-all.sub
Method File: /chem/H.i/022004.b/H-20ml-h2o.m
Misc Info:

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 40 Dibromofluorometha	76666.7	73159.1	95.42	76-116
$ 44 1,2-Dichloroethane	76666.7	70637.1	92.14	59-129
$ 61 Toluene-d8	76666.7	76006.0	99.14	76-116
$ 82 Bromofluorobenzene	76666.7	77740.2	101.40	74-114

Data File: /chem/H.i/022004.b/h1075.d
Date : 20-FEB-2004 14:52
Client ID: MW-1
Sample Info: F9KD41AA,0.003,D4B130209-001
Purge Volume: 20.0
Column phase: DB624

Page 7

Instrument: H.i

Operator: appelhansd
Column diameter: 0.53

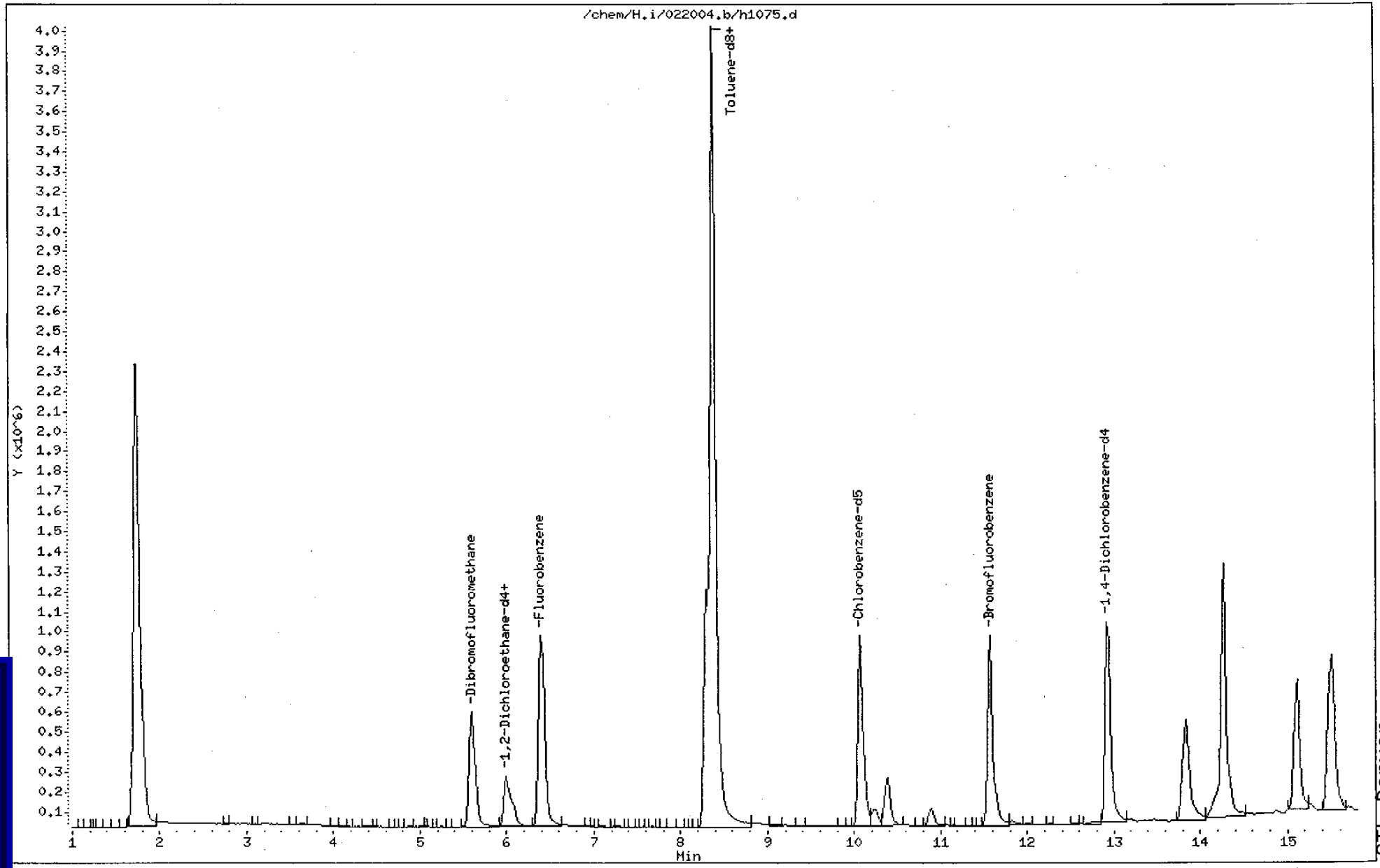


Table of Contents

Data File: /chem/H.i/022004.b/h1075.d

Date : 20-FEB-2004 14:52

Client ID: MW-1

Instrument: H.i

Sample Info: F9KD41AA,0.003,D4B130209-001

Purge Volume: 20.0

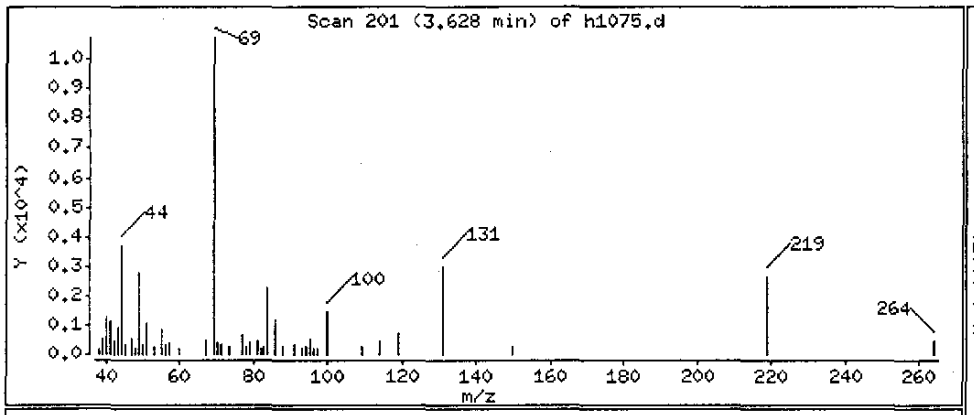
Operator: appelhansd

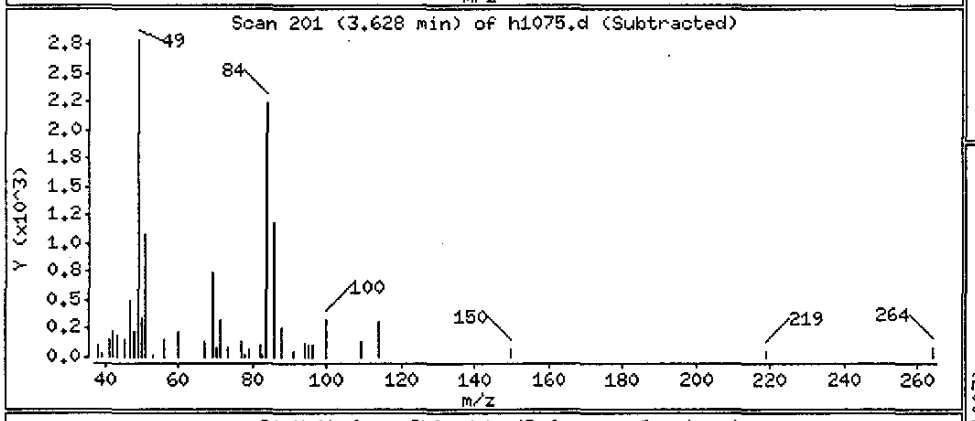
Column phase: DB624

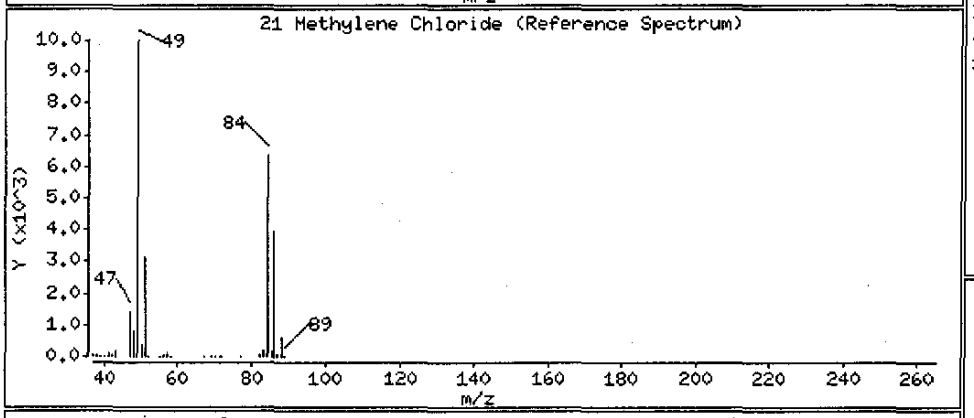
Column diameter: 0.53

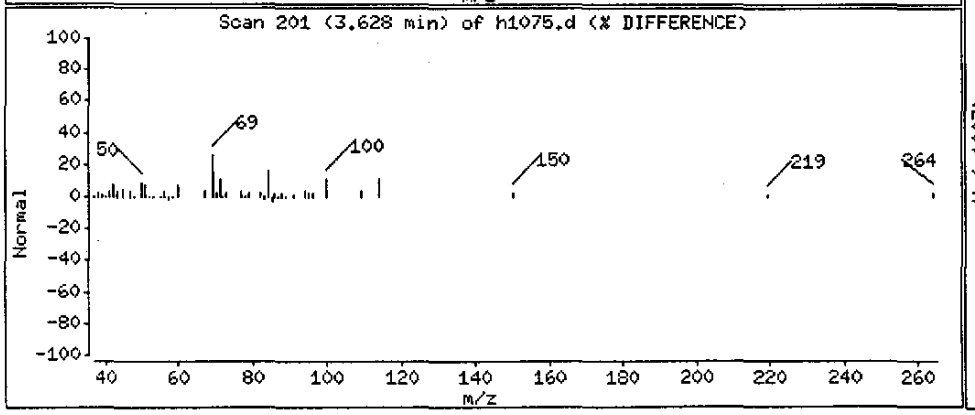
21 Methylene Chloride

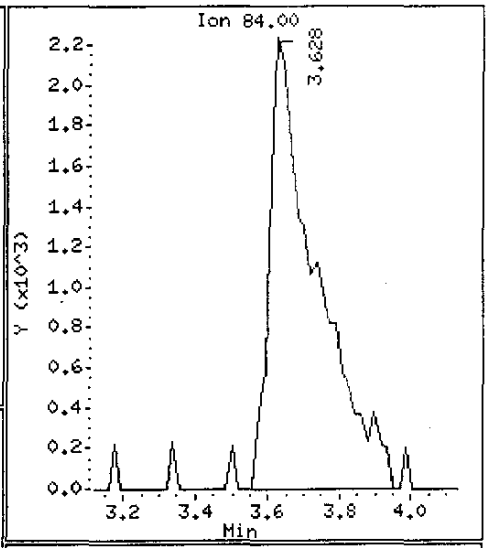
Concentration: 2473.98 ug/L

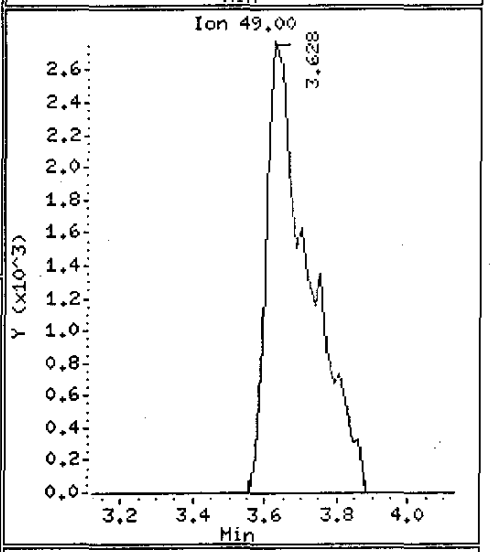


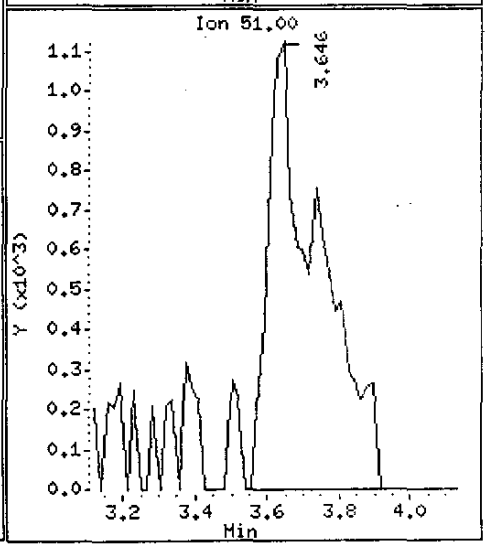












Data File: /chem/H.i/022004.b/h1075.d

Date : 20-FEB-2004 14:52

Client ID: MW-1

Instrument: H.i

Sample Info: F9KD41AA,0.003,D4B130209-001

Purge Volume: 20.0

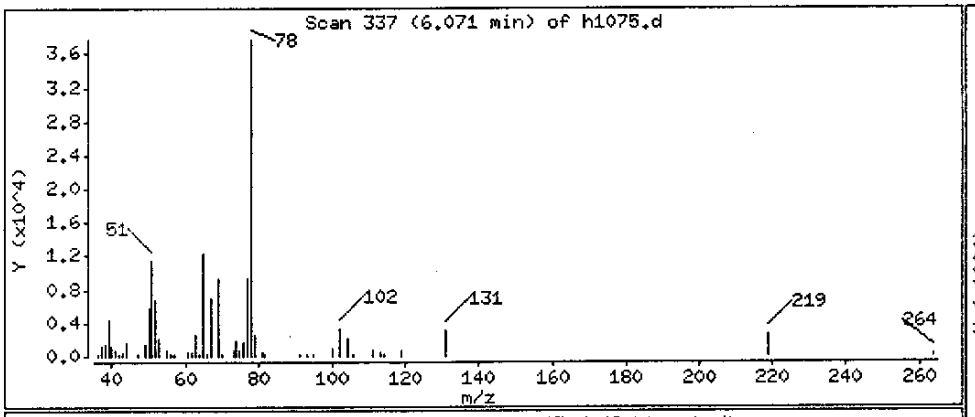
Operator: appelhansd

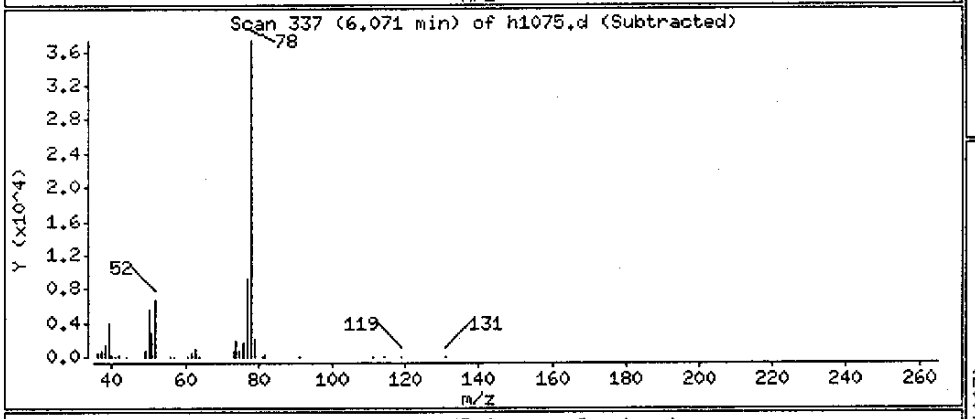
Column phase: DB624

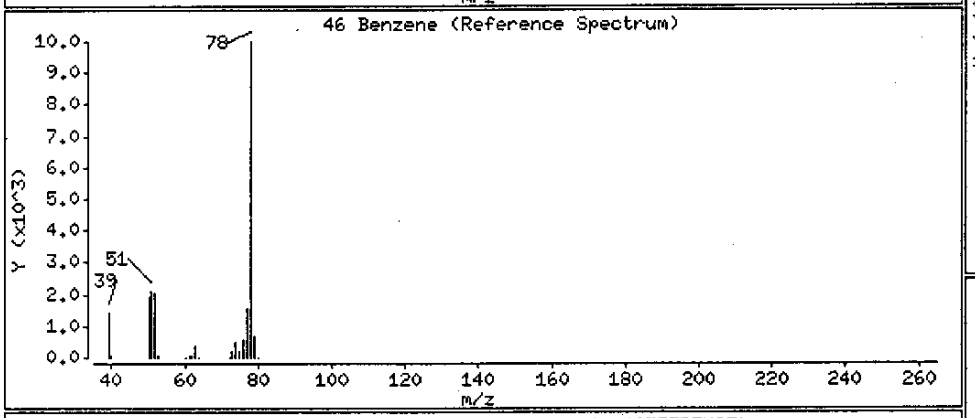
Column diameter: 0.53

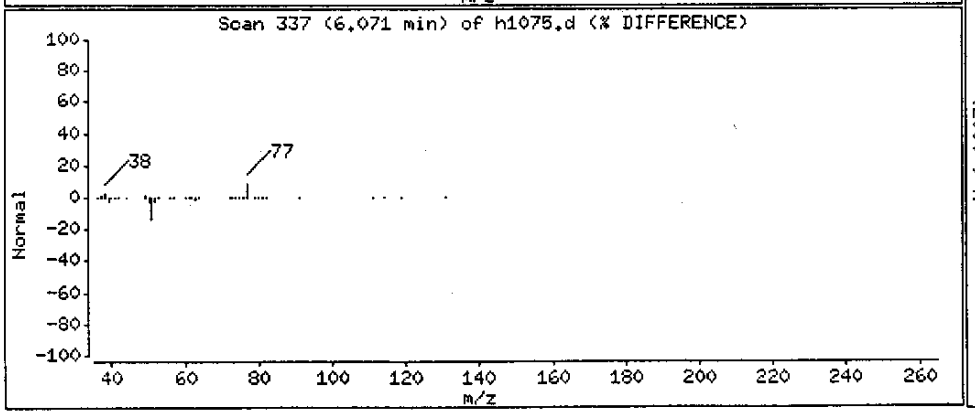
46 Benzene

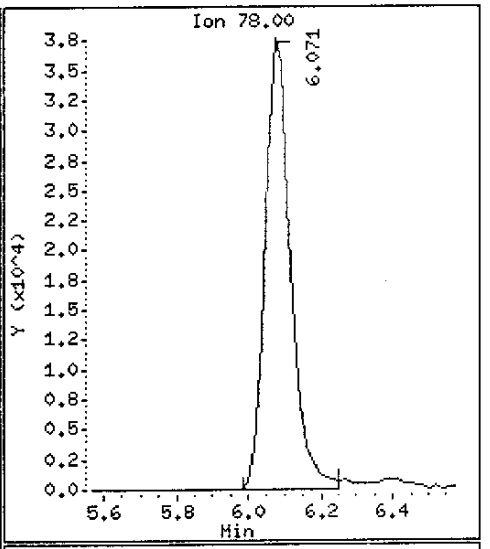
Concentration: 6569.06 ug/L

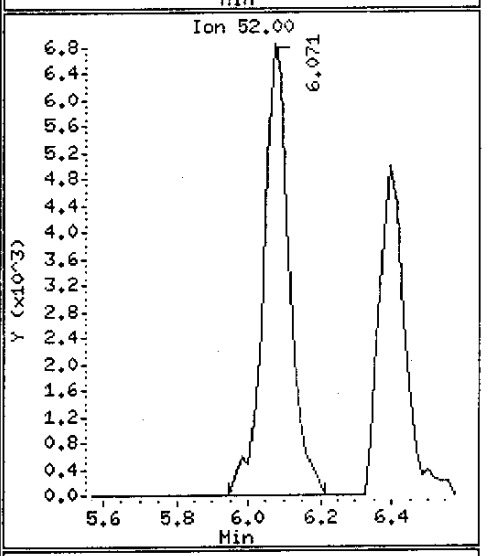


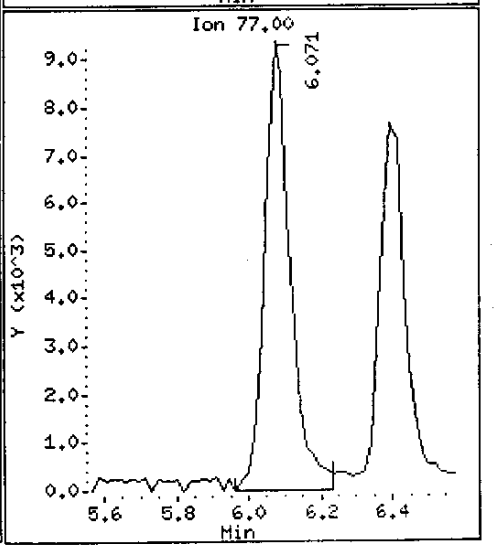












Data File: /chem/H.i/022004.b/h1075.d

Date : 20-FEB-2004 14:52

Client ID: MW-1

Instrument: H.i

Sample Info: F9KD41AA,0.003,D4B130209-001

Purge Volume: 20.0

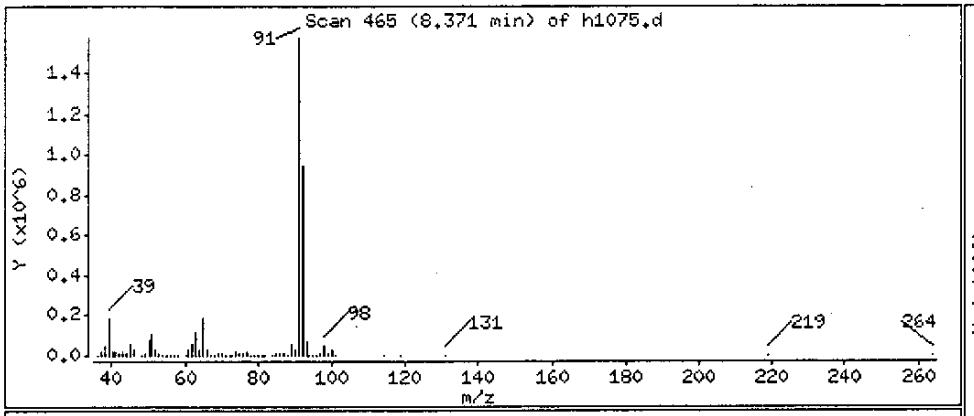
Operator: appelhansd

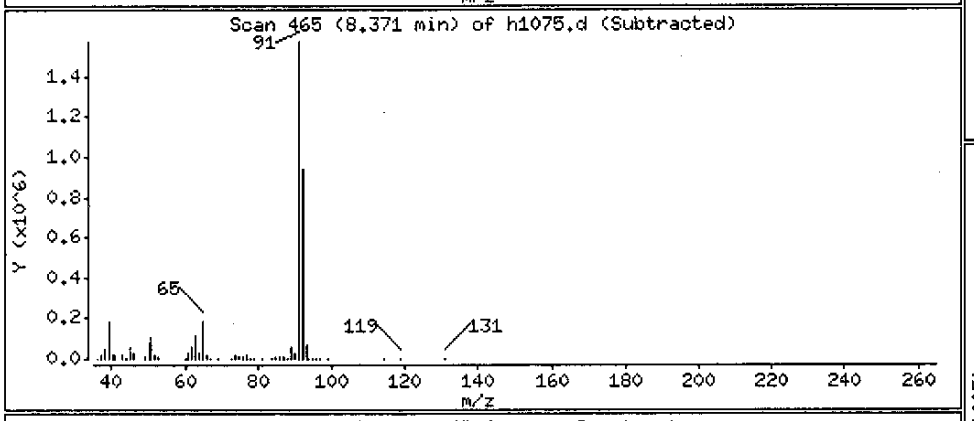
Column phase: DB624

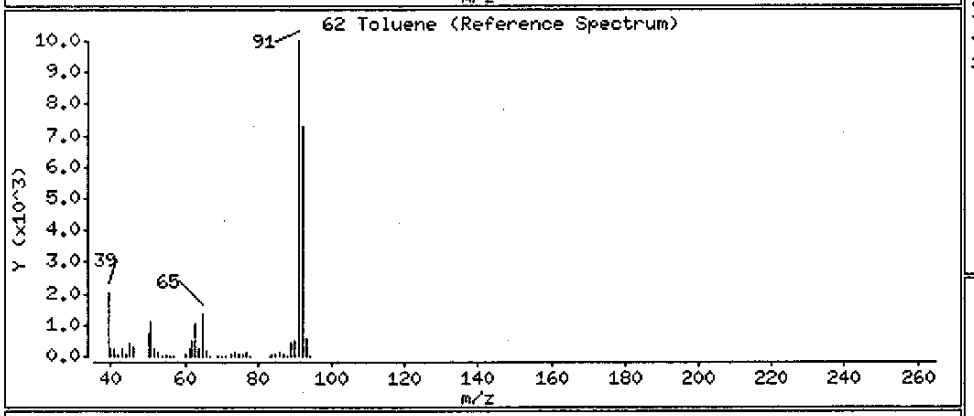
Column diameter: 0.53

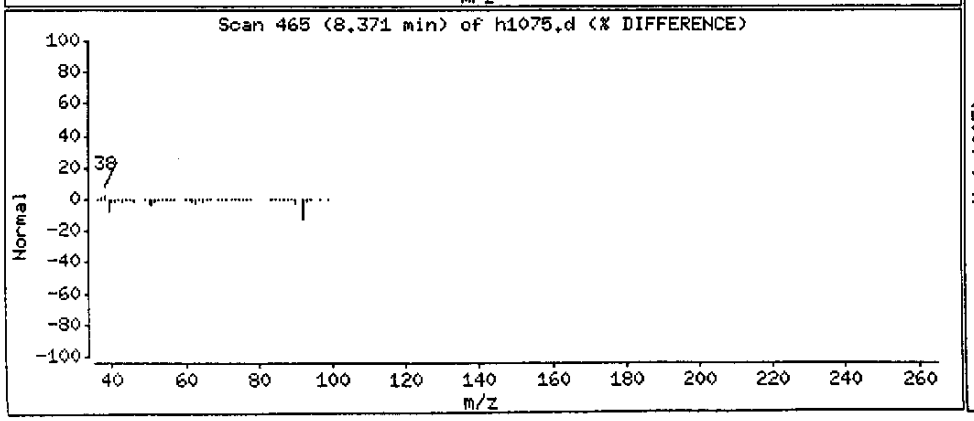
62 Toluene

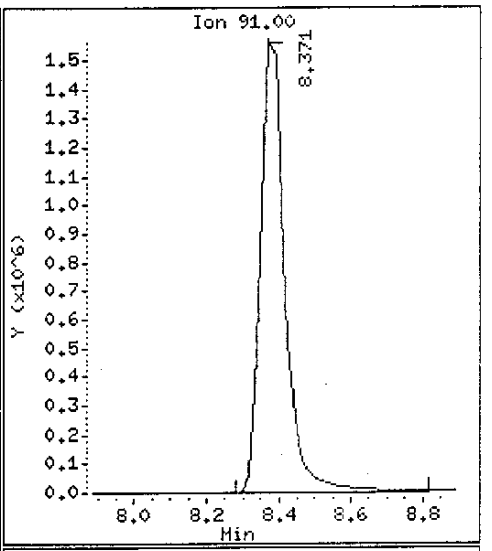
Concentration: 217422 ug/L

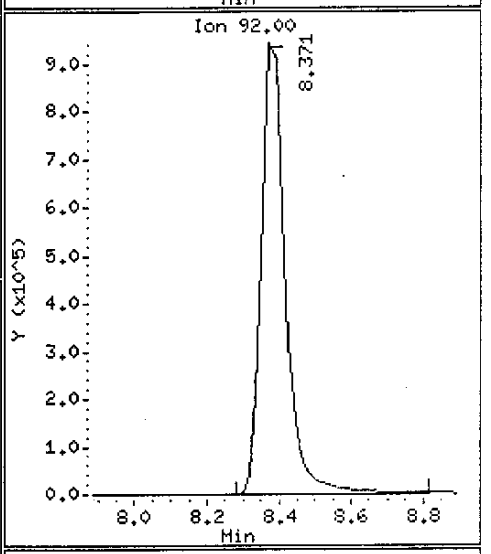


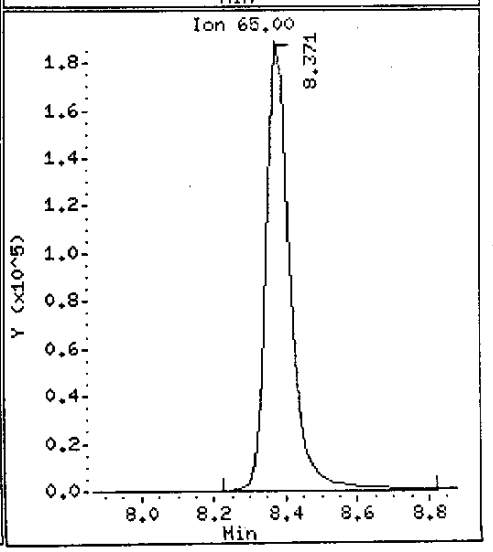












Data File: /chem/H.i/022004.b/h1075.d

Date : 20-FEB-2004 14:52

Client ID: MW-1

Instrument: H.i

Sample Info: F9KD41AA,0.003,D4B130209-001

Purge Volume: 20.0

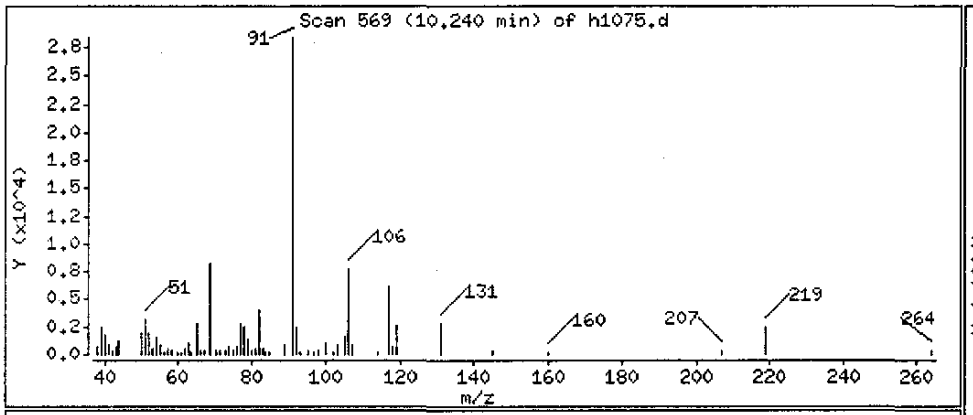
Operator: appelhansd

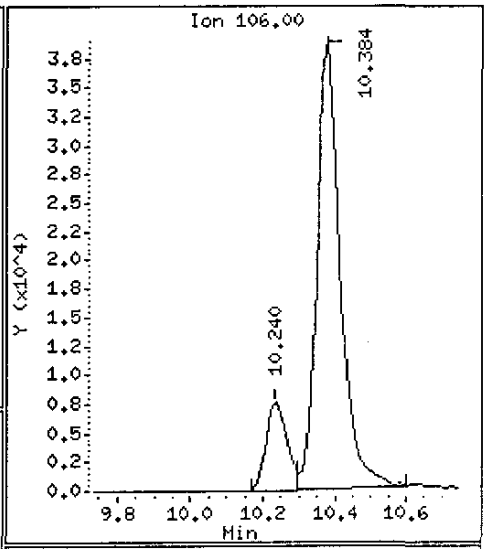
Column phase: DB624

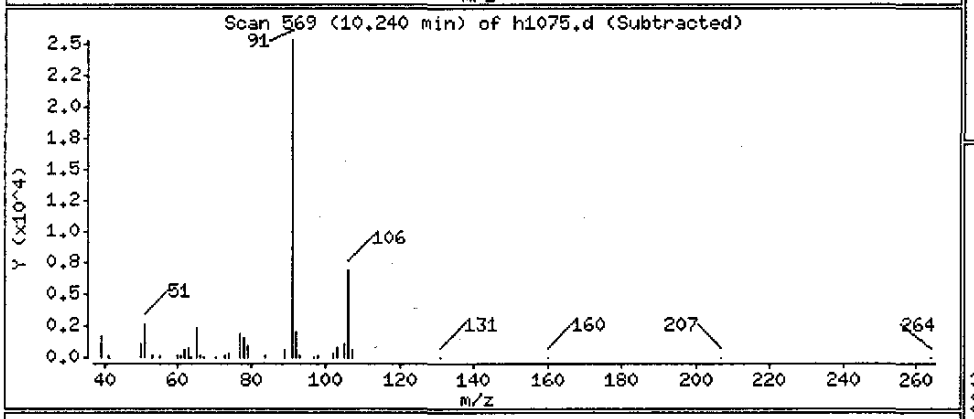
Column diameter: 0.53

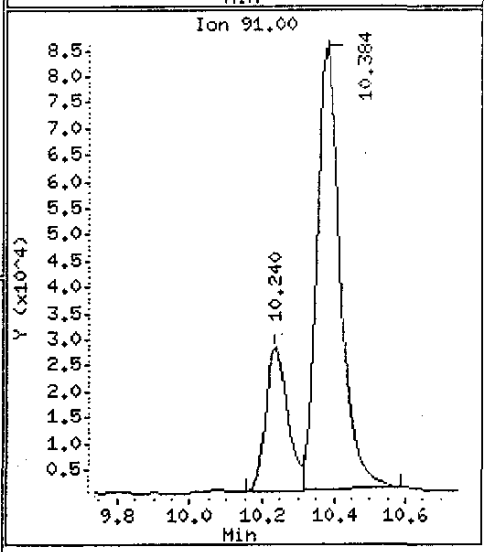
75 Ethylbenzene

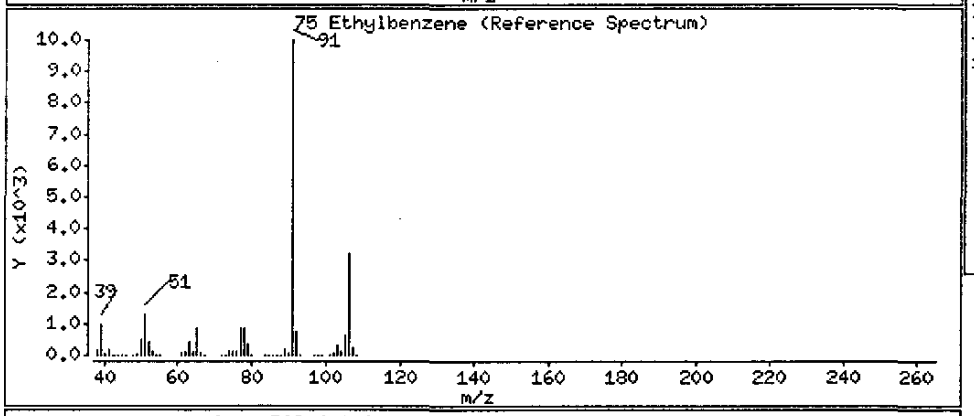
Concentration: 3059.07 ug/L

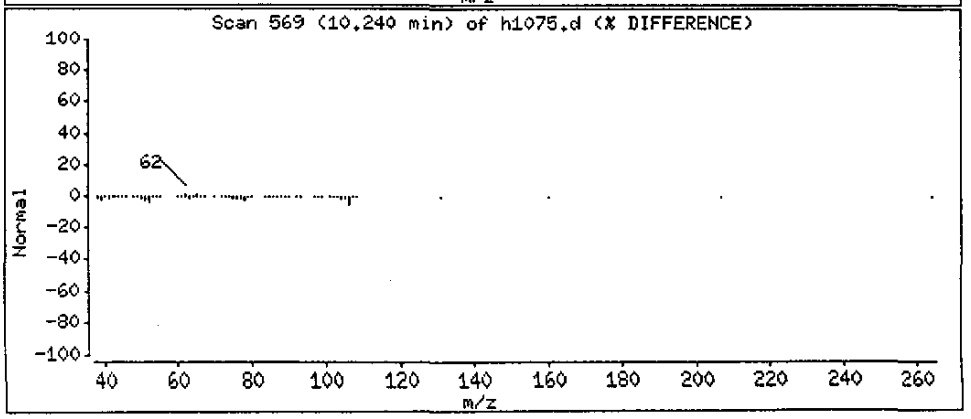












Data File: /chem/H.i/022004.b/h1075.d

Date : 20-FEB-2004 14:52

Client ID: MW-1

Instrument: H.i

Sample Info: F9KD41AA,0.003,D4B130209-001

Purge Volume: 20.0

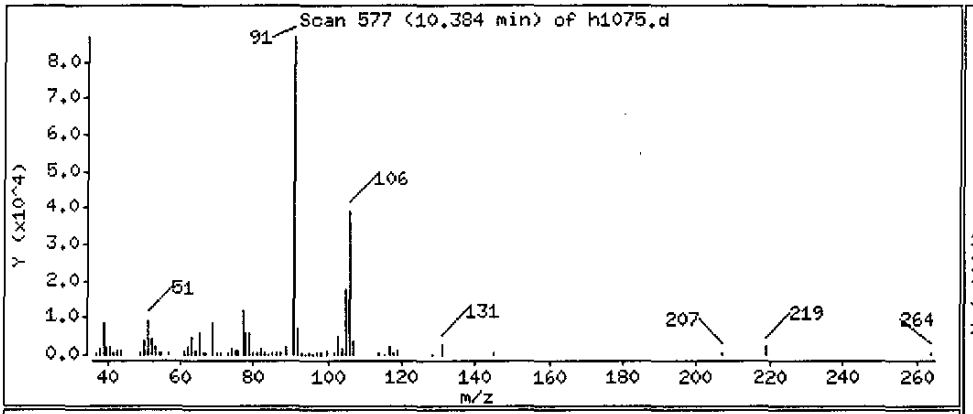
Operator: appelhansd

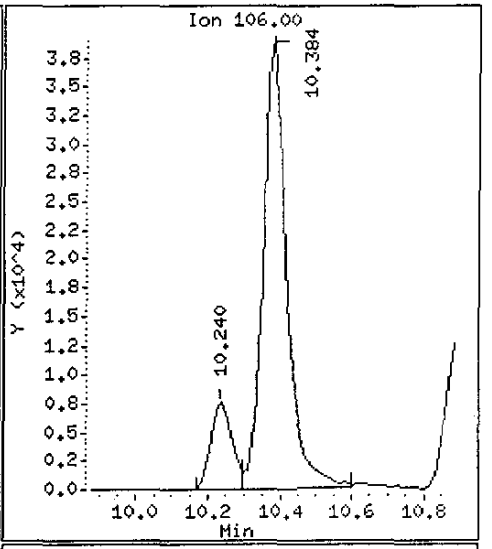
Column phase: DB624

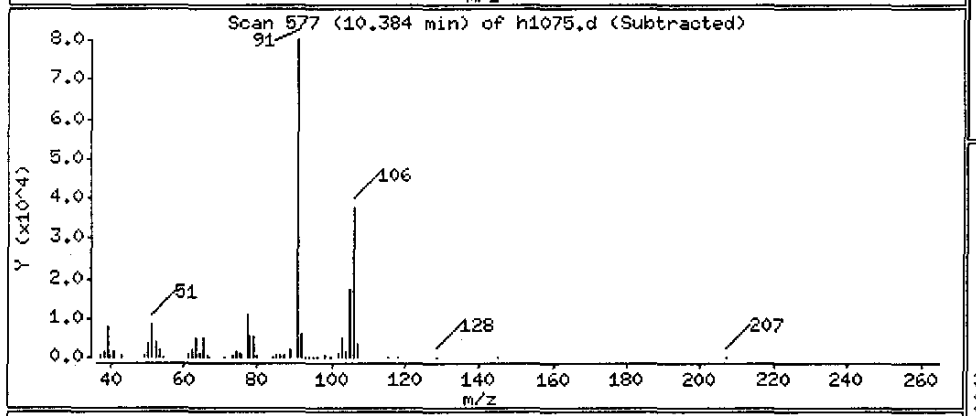
Column diameter: 0.53

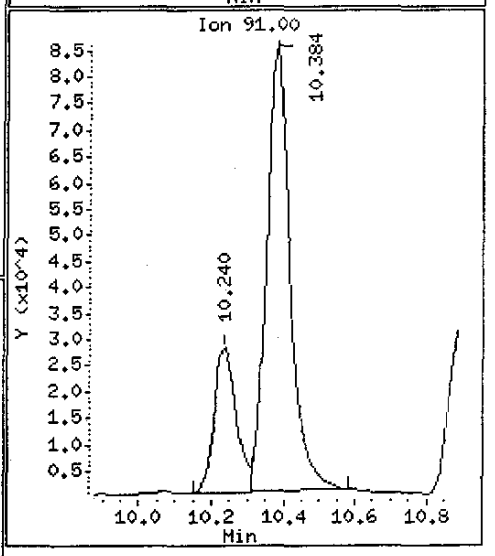
76 m and p-Xylene

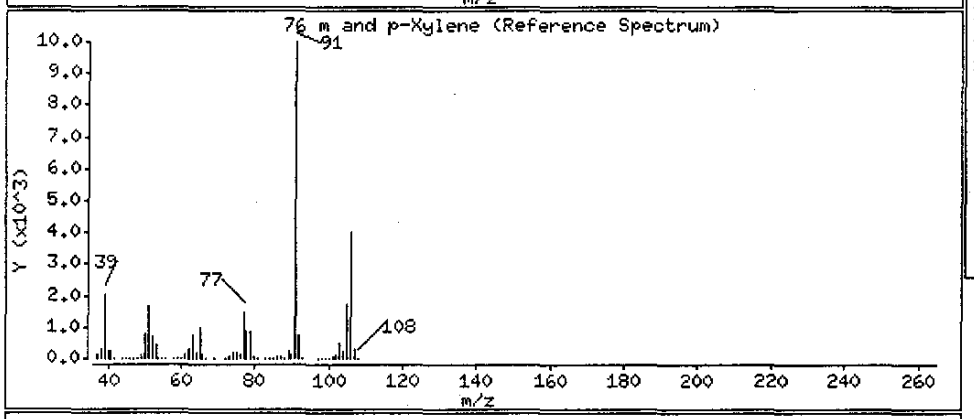
Concentration: 12800.8 ug/L

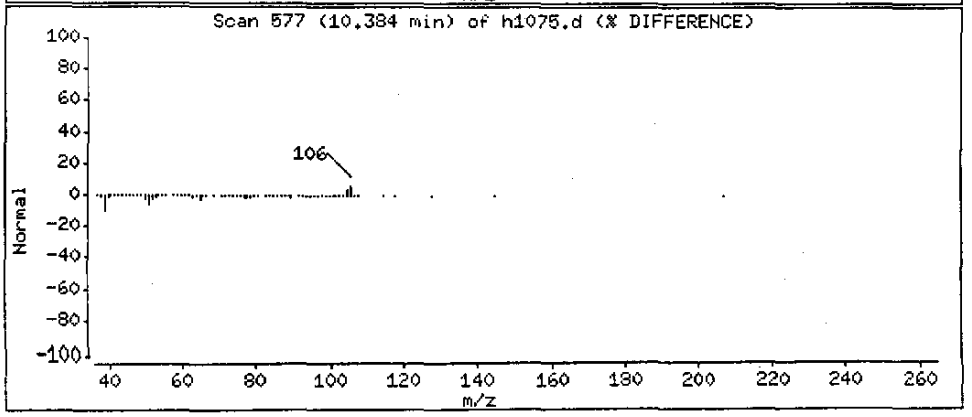












Data File: /chem/H.i/022004.b/h1075.d

Date : 20-FEB-2004 14:52

Client ID: MW-1

Instrument: H.i

Sample Info: F9KD41AA,0.003,D4B130209-001

Purge Volume: 20.0

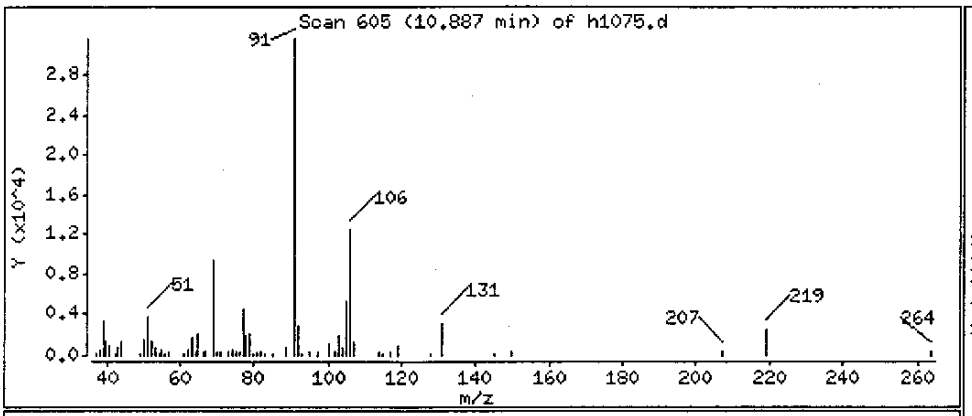
Operator: appelhansd

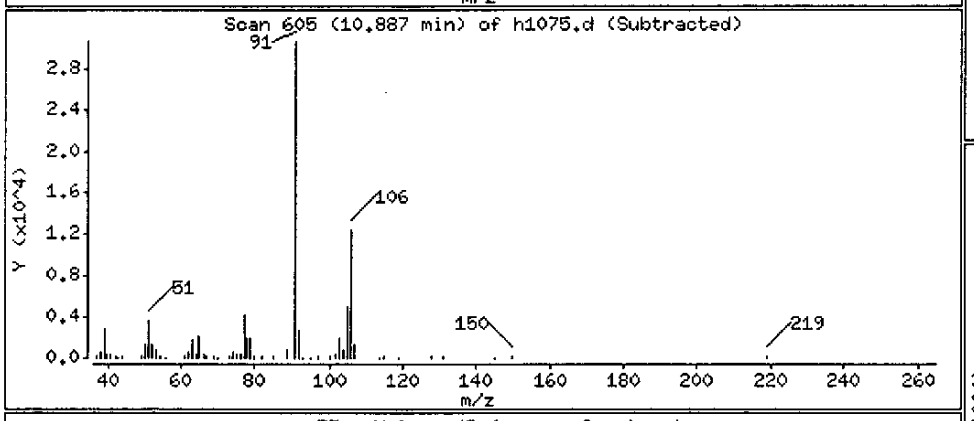
Column phase: DB624

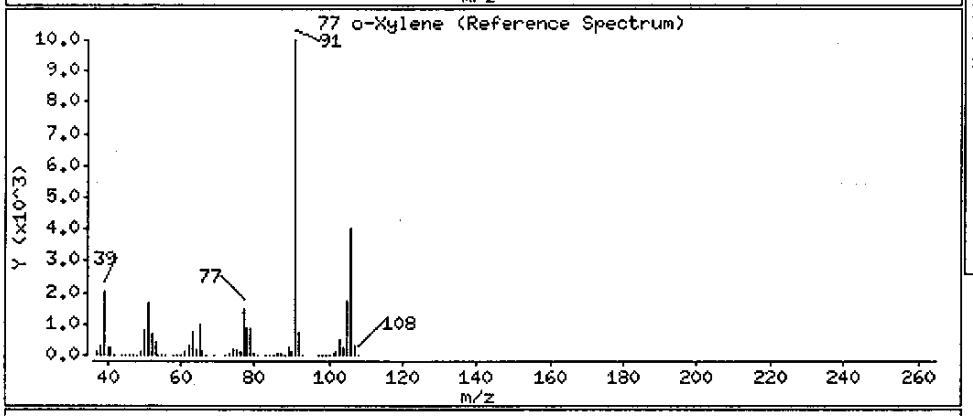
Column diameter: 0.53

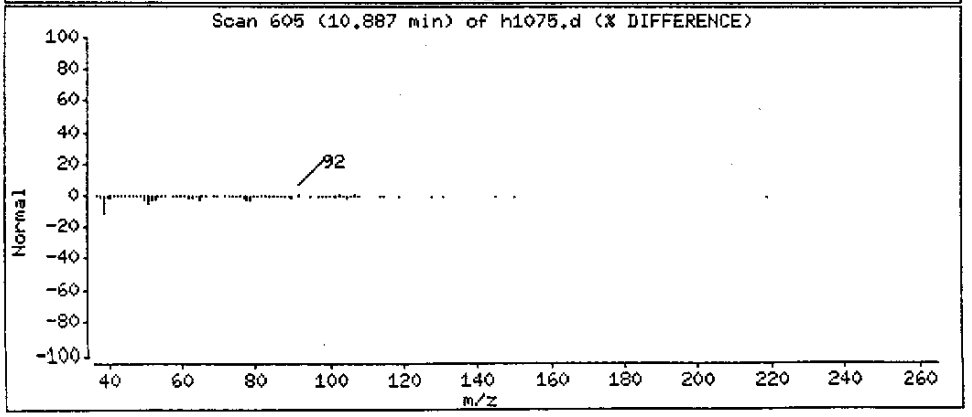
77 o-Xylene

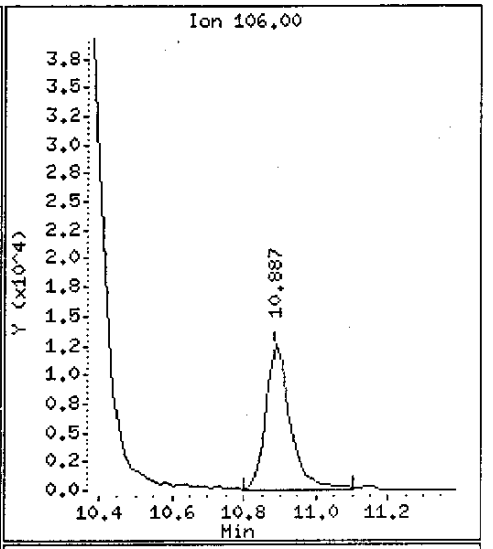
Concentration: 4750.03 ug/L

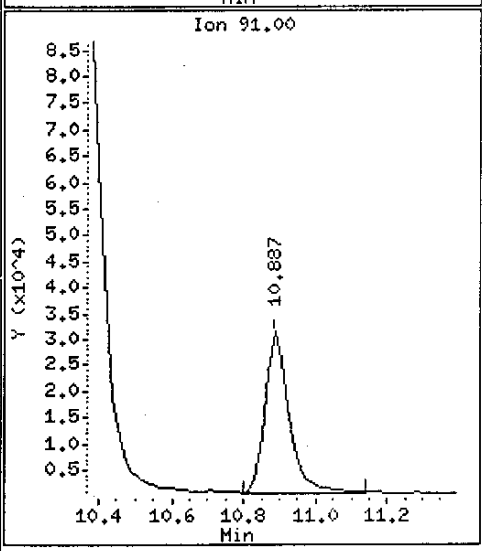












Data File: /chem/H.i/022004.b/h1076.d
Report Date: 20-Feb-2004 15:58

STL Denver

VOLATILE REPORT SW-846

Data file : /chem/H.i/022004.b/h1076.d
Lab Smp Id: F9KEJ1AA Client Smp ID: MW-2
Inj Date : 20-FEB-2004 15:12
Operator : appelhansd Inst ID: H.i
Smp Info : F9KEJ1AA,0.02,D4B130209-002
Misc Info :
Comment : Purge and Trap Analysis
Method : /chem/H.i/022004.b/H-20ml-h2o.m
Meth Date : 20-Feb-2004 11:09 appelhad Quant Type: ISTD
Cal Date : 07-JAN-2004 15:24 Cal File: h0014.d
Als bottle: 2
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: H-all.sub
Target Version: 3.40
Processing Host: chemsv02

Concentration Formula: Amt * DF * Vp/Vs

Name	Value	Description
DF	1.000	Dilution Factor
Vp	20.000	Purge Volume (ml)
Vs	0.020	Sample Volume (ml)

DK 2-27

T.C.

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/L)
* 48 Fluorobenzene	96	6.399	6.395	(1.000)	2050966	12.5000	
* 72 Chlorobenzene-d5	119	10.065	10.060	(1.000)	399426	12.5000	
* 96 1,4-Dichlorobenzene-d4	152	12.922	12.917	(1.000)	659865	12.5000	
$ 40 Dibromofluoromethane	111	5.591	5.586	(0.874)	935466	11.5950	11595.0
$ 44 1,2-Dichloroethane-d4	65	6.004	5.981	(0.938)	400605	11.1401	11140.1
$ 61 Toluene-d8	98	8.304	8.281	(0.825)	1811558	11.8645	11864.5
$ 82 Bromofluorobenzene	95	11.556	11.552	(1.148)	1012146	12.0885	12088.5
M 1 1,2-Dichloroethene (total)	96				447721	7.28035	7280.35
M 2 Xylene (total)	106				535759	6.27612	6276.12
3 dichlorodifluoromethane	85.00	Compound Not Detected.					
4 Chloromethane	50.00	Compound Not Detected.					
5 Vinyl Chloride	62	2.141	2.136	(0.335)	342911	7.51348	7513.48
6 Ethylene Oxide	43.00	Compound Not Detected.					
117 Dichlorotetrafluoroethane	85.00	Compound Not Detected.					
123 1,2-dichloro-1,1,2-triflourom	117.00	Compound Not Detected.					
124 2,2-dichloro-1,1,1-trifluorom	83.00	Compound Not Detected.					

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/L)
7 Bromomethane	94.00	Compound Not Detected.					
8 Chloroethane	64.00	Compound Not Detected.					
9 Dichlorofluoromethane	67.00	Compound Not Detected.					
10 Trichlorofluoromethane	101.00	Compound Not Detected.					
11 Ethanol	45.00	Compound Not Detected.					
12 Ethyl Ether	59.00	Compound Not Detected.					
13 Acrolein	56.00	Compound Not Detected.					
15 Acetone	43	3.201	3.196	(0.500)	82362	17.2072	17207.2
14 1,1-Dichloroethene	96.00	Compound Not Detected.					
16 Trichlorotrifluoroethane	151.00	Compound Not Detected.					
17 Iodomethane	142.00	Compound Not Detected.					
19 Acetonitrile	41.00	Compound Not Detected.					
18 Carbon Disulfide	76.00	Compound Not Detected.					
20 Allyl Chloride	41.00	Compound Not Detected.					
119 Methyl Acetate	43.00	Compound Not Detected.					
21 Methylene Chloride	84	3.632	3.627	(0.568)	28140	0.55110	551.098
125 2-Propanol	45	3.327	3.304	(0.520)	39052	44.5206	44520.6
22 tert-Butyl alcohol	59.00	Compound Not Detected.					
23 Acrylonitrile	53.00	Compound Not Detected.					
24 trans-1,2-Dichloroethene	96.00	Compound Not Detected.					
25 Methyl t-butyl ether	73.00	Compound Not Detected.					
26 Hexane	57.00	Compound Not Detected.					
27 1,1-Dichloroethane	63	4.369	4.364	(0.683)	248672	2.38085	2380.84
29 Vinyl acetate	43.00	Compound Not Detected.					
30 Isopropyl ether	87.00	Compound Not Detected.					
28 Chloroprene	53.00	Compound Not Detected.					
120 ETBE	59.00	Compound Not Detected.					
33 2-Butanone	43.00	Compound Not Detected.					
32 cis-1,2-Dichloroethene	96	5.034	5.029	(0.787)	447721	7.28035	7280.35
31 2,2-Dichloropropane	77.00	Compound Not Detected.					
35 Ethyl Acetate	43.00	Compound Not Detected.					
34 Propionitrile	54.00	Compound Not Detected.					
36 Methacrylonitrile	41.00	Compound Not Detected.					
37 Bromochloromethane	128.00	Compound Not Detected.					
39 Tetrahydrofuran	42.00	Compound Not Detected.					
38 Chloroform	83.00	Compound Not Detected.					
41 1,1,1-Trichloroethane	97.00	Compound Not Detected.					
114 Cyclohexane	56.00	Compound Not Detected.					
42 1,1-Dichloropropene	75.00	Compound Not Detected.					
43 Carbon Tetrachloride	117.00	Compound Not Detected.					
45 Isobutanol	41.00	Compound Not Detected.					
46 Benzene	78	6.076	6.071	(0.949)	181321	1.03261	1032.61
47 1,2-Dichloroethane	62.00	Compound Not Detected.					
121 TAME	73.00	Compound Not Detected.					
49 n-Butanol	56.00	Compound Not Detected.					
50 Trichloroethene	130	6.848	6.844	(1.070)	1253809	18.8288	18828.8
115 2-Pentanone	43.00	Compound Not Detected.					

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/L)
52 1,2-Dichloropropane	63.00	Compound Not Detected.					
122 Methyl Cyclohexane	55.00	Compound Not Detected.					
53 Dibromomethane	93.00	Compound Not Detected.					
54 Methyl Methacrylate	100.00	Compound Not Detected.					
55 1,4-Dioxane	88.00	Compound Not Detected.					
56 Bromodichloromethane	83.00	Compound Not Detected.					
57 2-nitropropane	41.00	Compound Not Detected.					
113 2-Chloroethyl vinyl ether	63.00	Compound Not Detected.					
59 cis-1,3-Dichloropropene	75.00	Compound Not Detected.					
60 4-Methyl-2-pentanone	43	8.160	8.155	(0.811)	37519	1.81678	1816.78
62 Toluene	91	8.376	8.389	(0.832)	7067235	33.5416	33541.6
63 trans-1,3-Dichloropropene	75.00	Compound Not Detected.					
64 Ethyl methacrylate	69.00	Compound Not Detected.					
65 1,1,2-Trichloroethane	97.00	Compound Not Detected.					
67 1,3-Dichloropropane	76.00	Compound Not Detected.					
66 Tetrachloroethene	164	9.059	9.054	(0.900)	31277	0.46427	464.266
68 2-Hexanone	43.00	Compound Not Detected.					
126 Tetrahydrothiophene	60.00	Compound Not Detected.					
69 Dibromochloromethane	129.00	Compound Not Detected.					
70 1,2-Dibromoethane	107.00	Compound Not Detected.					
71 1-Chlorohexane	91.00	Compound Not Detected.					
73 Chlorobenzene	112.00	Compound Not Detected.					
74 1,1,1,2-Tetrachloroethane	131.00	Compound Not Detected.					
75 Ethylbenzene	106	10.227	10.240	(1.016)	73951	1.13310	1133.10
76 m and p-Xylene	106	10.370	10.383	(1.030)	390827	4.43511	4435.11
77 o-Xylene	106	10.891	10.887	(1.082)	144932	1.84101	1841.01
78 Styrene	104.00	Compound Not Detected.					
79 Bromoform	173.00	Compound Not Detected.					
80 isopropyl benzene	105.00	Compound Not Detected.					
116 cis-1,4-Dichloro-2-butene	53.00	Compound Not Detected.					
81 Cyclohexanone	55.00	Compound Not Detected.					
83 1,1,2,2-Tetrachloroethane	83.00	Compound Not Detected.					
84 Bromobenzene	156.00	Compound Not Detected.					
85 1,2,3-Trichloropropane	110.00	Compound Not Detected.					
86 t-1,4-Dichloro-2-butene	53.00	Compound Not Detected.					
87 n-Propylbenzene	120.00	Compound Not Detected.					
88 2-Chlorotoluene	126.00	Compound Not Detected.					
89 1,3,5-Trimethylbenzene	105	12.095	12.091	(0.936)	121529	0.63173	631.731
90 4-Chlorotoluene	126.00	Compound Not Detected.					
91 tert-Butylbenzene	119.00	Compound Not Detected.					
92 1,2,4-Trimethylbenzene	105	12.545	12.540	(0.971)	117283	0.65334	653.344
93 sec-Butylbenzene	134.00	Compound Not Detected.					
94 m-Dichlorobenzene	146.00	Compound Not Detected.					
95 4-Isopropyltoluene	119.00	Compound Not Detected.					
97 p-dichlorobenzene	146.00	Compound Not Detected.					
118 1,2,3-Trimethylbenzene	105	13.012	12.989	(2.033)	78986	0.57199	571.988(a)
98 n-Butylbenzene	91.00	Compound Not Detected.					

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/L)
99 o-Dichlorobenzene	146.00	Compound Not Detected.					
100 1,2-Dibromo-3-chloropropane	157.00	Compound Not Detected.					
101 1,2,4-Trichlorobenzene	180.00	Compound Not Detected.					
102 Hexachlorobutadiene	225.00	Compound Not Detected.					
127 Naphthalene	128.00	Compound Not Detected.					
104 1,2,3-Trichlorobenzene	180.00	Compound Not Detected.					

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

Data File: /chem/H.i/022004.b/h1076.d
Report Date: 20-Feb-2004 15:58

STL Denver

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: H.i
Lab File ID: h1076.d
Lab Smp Id: F9KEJ1AA
Analysis Type: VOA
Quant Type: ISTD
Operator: appelhansd
Method File: /chem/H.i/022004.b/H-20ml-h2o.m
Misc Info:

Calibration Date: 02/20/4
Calibration Time: 1059
Client Smp ID: MW-2
Level: LOW
Sample Type: WATER

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
48 Fluorobenzene	2466684	1233342	4933368	2050966	-16.85
72 Chlorobenzene-d5	459303	229652	918606	399426	-13.04
96 1,4-Dichlorobenze	730993	365496	1461986	659865	-9.73

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
48 Fluorobenzene	6.39	5.89	6.89	6.40	0.07
72 Chlorobenzene-d5	10.06	9.56	10.56	10.06	0.05
96 1,4-Dichlorobenze	12.92	12.42	13.42	12.92	0.04

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem/H.i/022004.b/h1076.d Page 6
Report Date: 20-Feb-2004 15:58

STL Denver

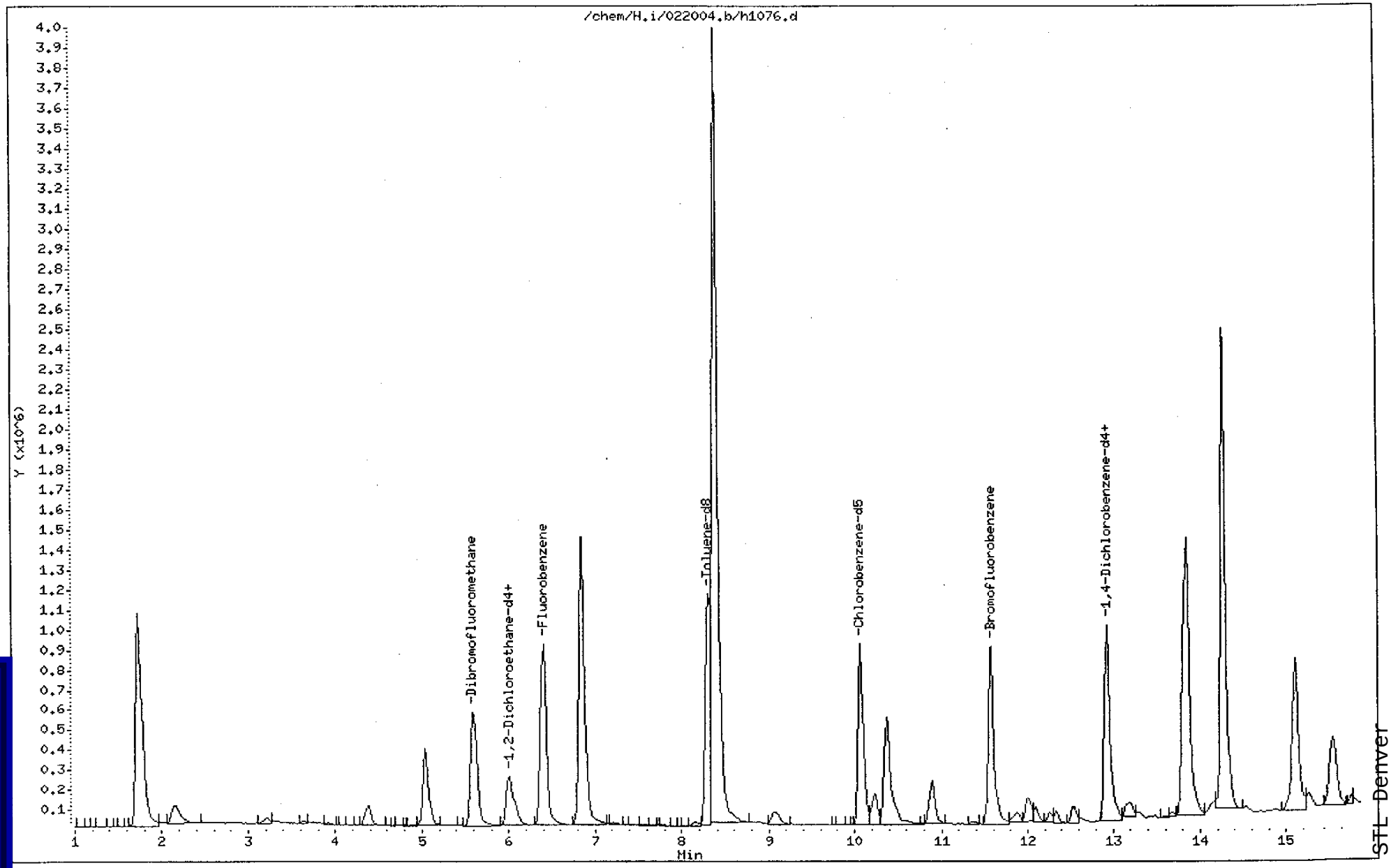
RECOVERY REPORT

Client Name: ARCADIS GERAGHTY & M13-FEB-2004 Client SDG: D4B130209
Sample Matrix: LIQUID Fraction: VOA
Lab Smp Id: F9KEJ1AA Client Smp ID: MW-2
Level: LOW Operator: appelhansd
Data Type: MS DATA SampleType: SAMPLE
SpikeList File: dcs-h20.spk Quant Type: ISTD
Sublist File: H-all.sub
Method File: /chem/H.i/022004.b/H-20ml-h2o.m
Misc Info:

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 40 Dibromofluorometha	11500.0	11595.0	100.83	76-116
$ 44 1,2-Dichloroethane	11500.0	11140.1	96.87	59-129
$ 61 Toluene-d8	11500.0	11864.5	103.17	76-116
$ 82 Bromofluorobenzene	11500.0	12088.5	105.12	74-114

Data File: /chem/H.i/022004.b/h1076.d
Date : 20-FEB-2004 15:12
Client ID: MW-2
Sample Info: F9KEJ1AA,0.02,D4B130209-002
Purge Volume: 20.0
Column phase: DB624

Instrument: H.i
Operator: appelhansd
Column diameter: 0.53



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Data File: /chem/H.i/022004.b/h1076.d

Date : 20-FEB-2004 15:12

Client ID: MW-2

Instrument: H.i

Sample Info: F9KEJ1AA,0.02,D4B130209-002

Purge Volume: 20.0

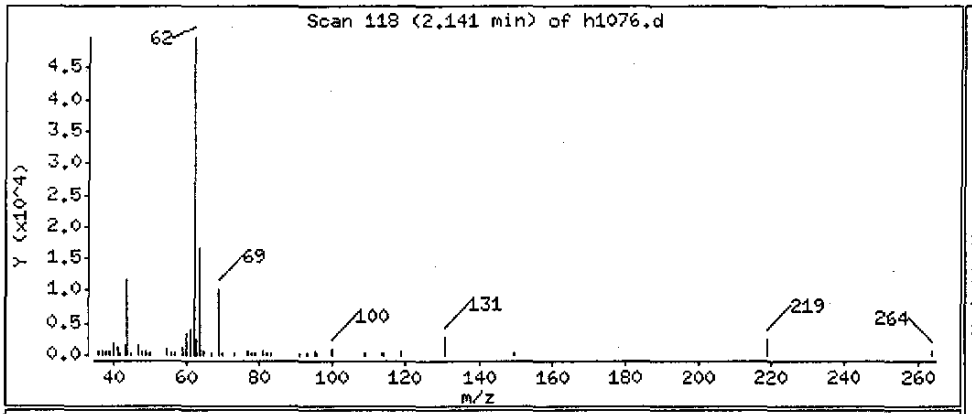
Operator: appelhansd

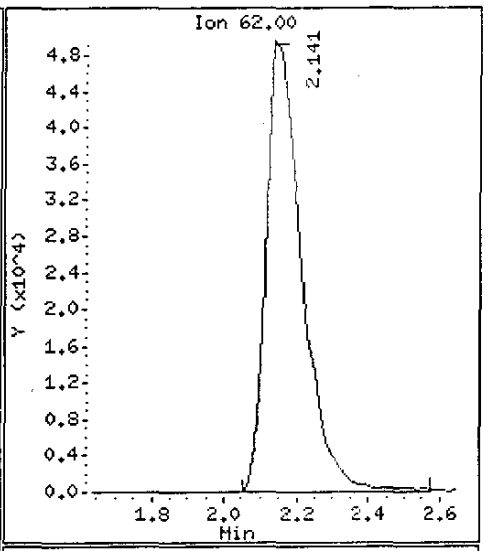
Column phase: DB624

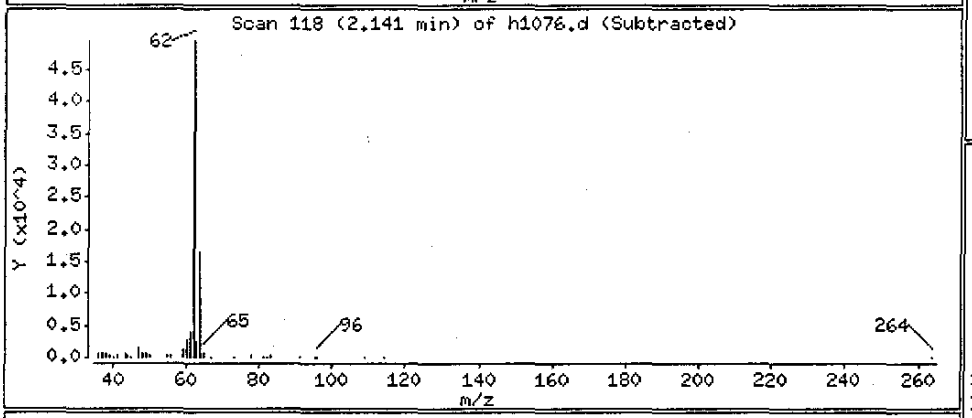
Column diameter: 0.53

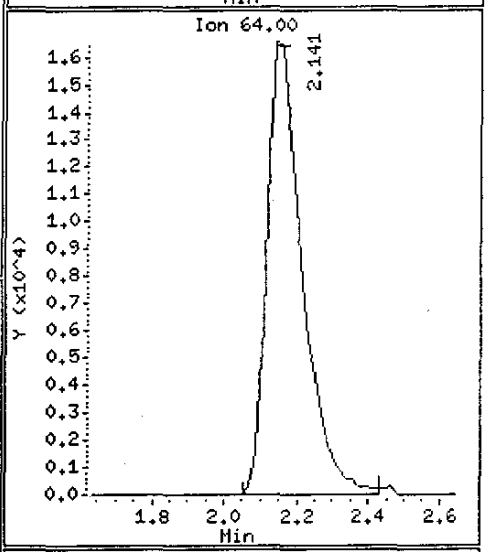
5 Vinyl Chloride

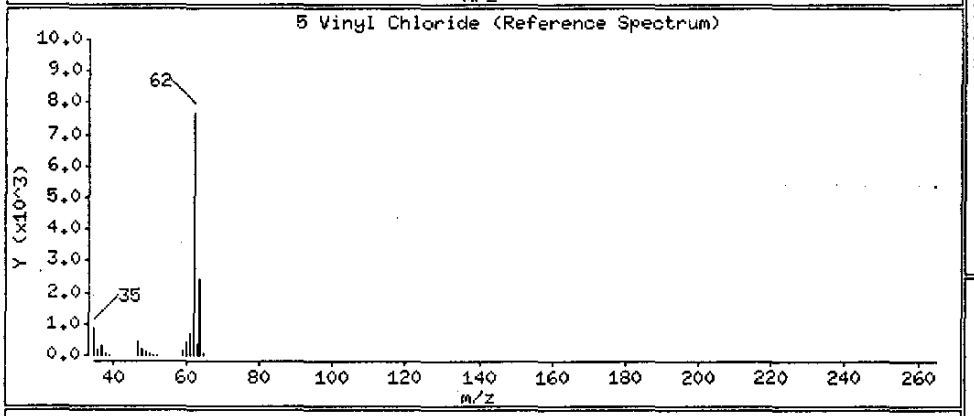
Concentration: 7513.48 ug/L

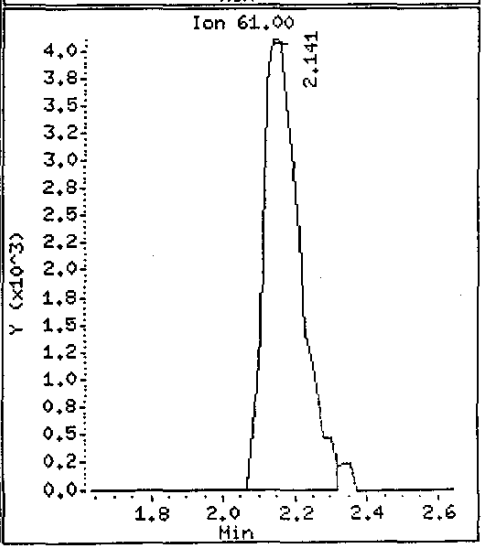


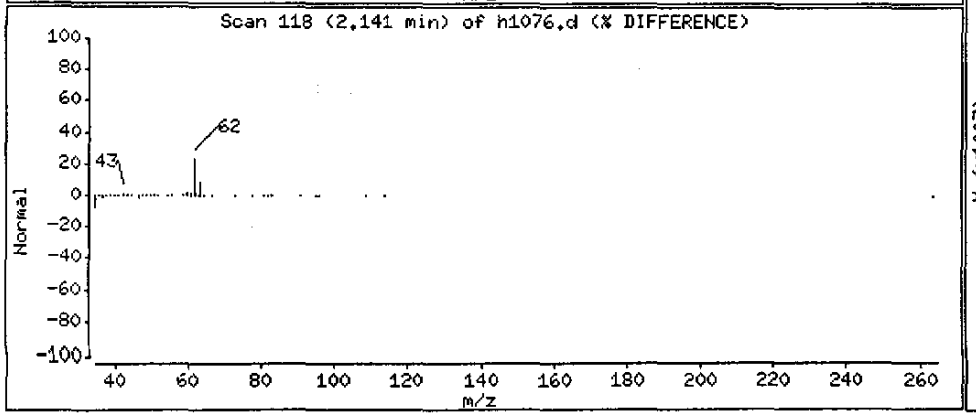












Data File: /chem/H.i/022004.b/h1076.d

Date : 20-FEB-2004 15:12

Client ID: MW-2

Instrument: H.i

Sample Info: F9KEJ1AA,0.02,D4B130209-002

Purge Volume: 20.0

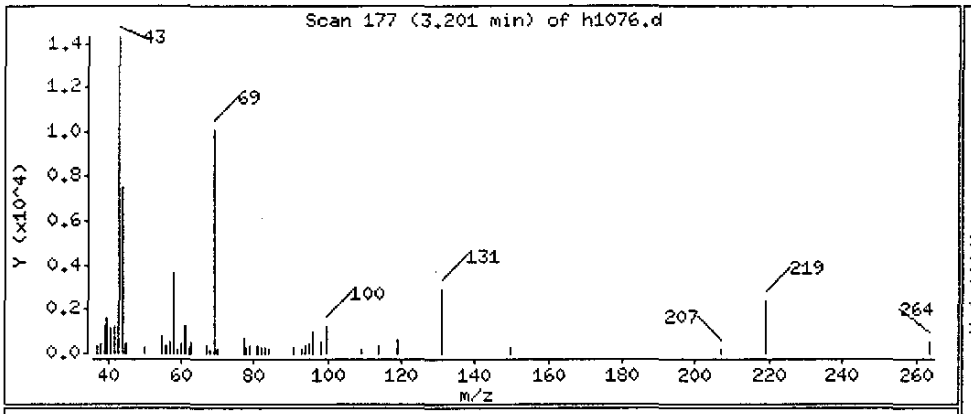
Operator: appelhansd

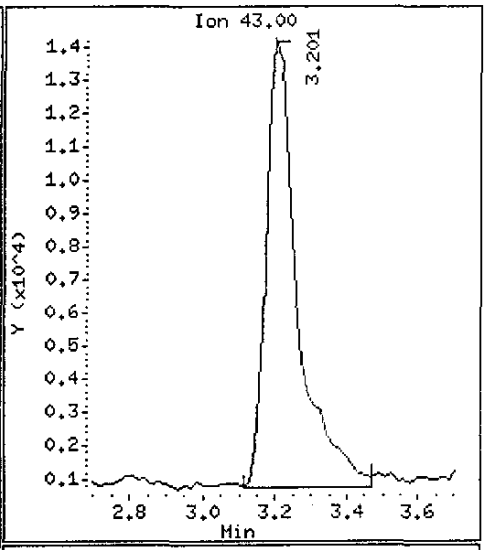
Column phase: DB624

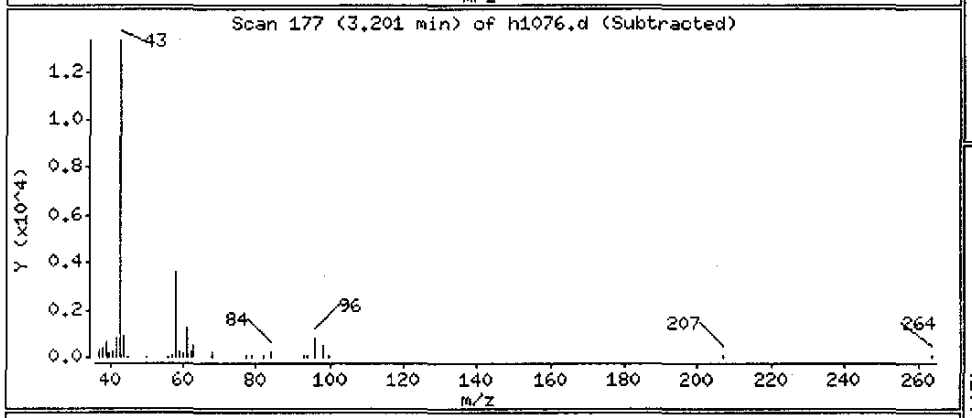
Column diameter: 0.53

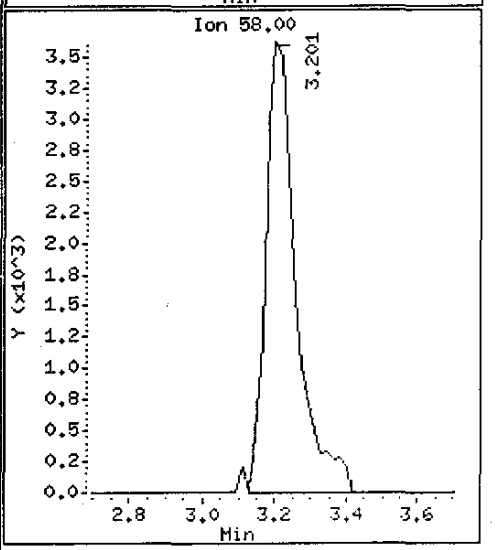
15 Acetone

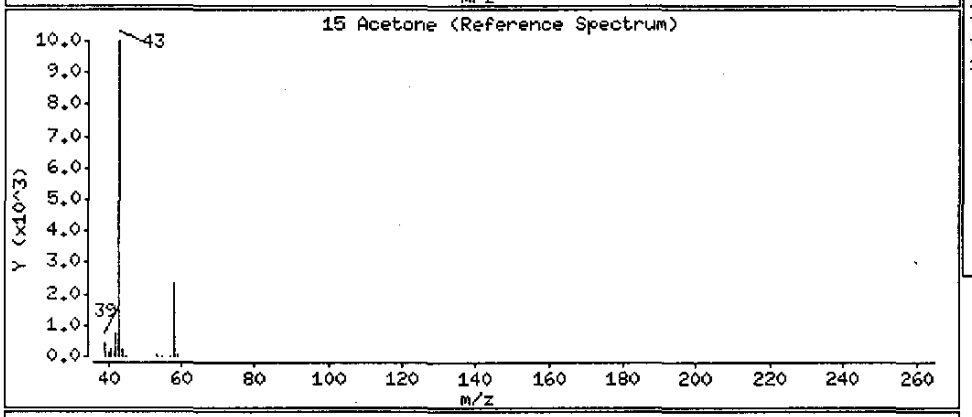
Concentration: 17207.2 ug/L

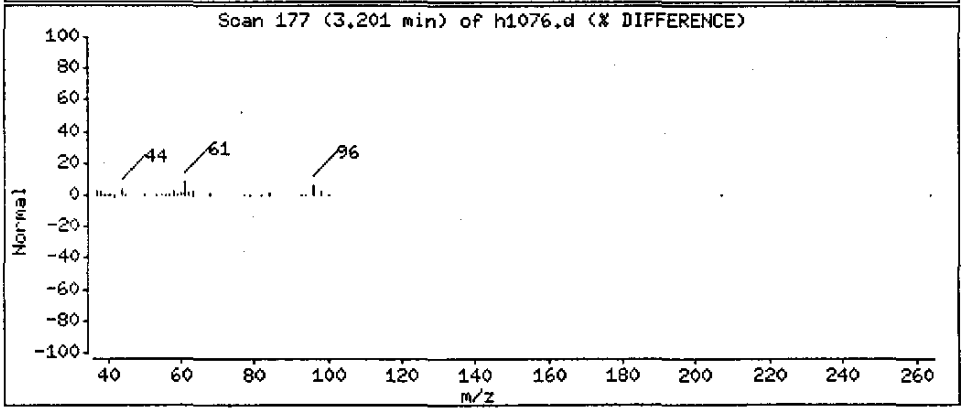












Data File: /chem/H.i/022004.b/h1076.d

Date : 20-FEB-2004 15:12

Client ID: MW-2

Instrument: H.i

Sample Info: F9KEJ1AA,0.02,D4B130209-002

Purge Volume: 20.0

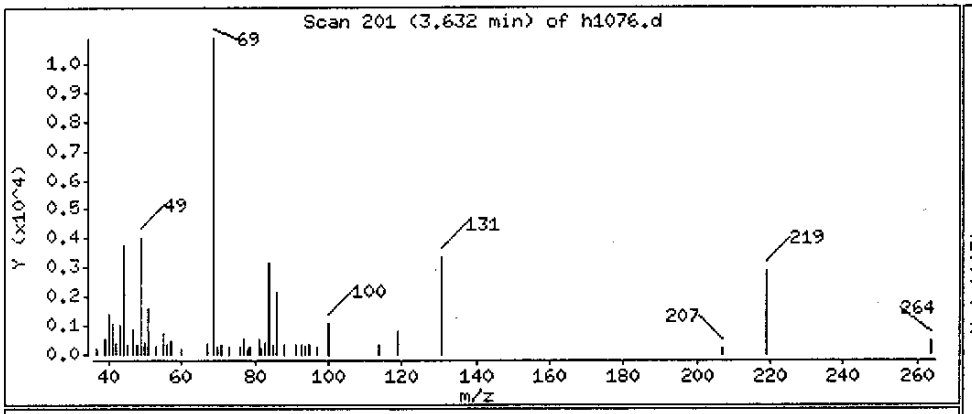
Operator: appelhansd

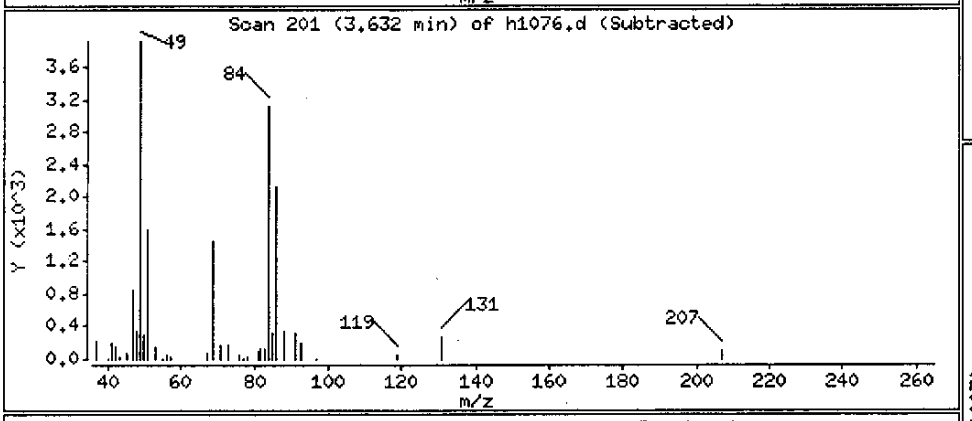
Column phase: DB624

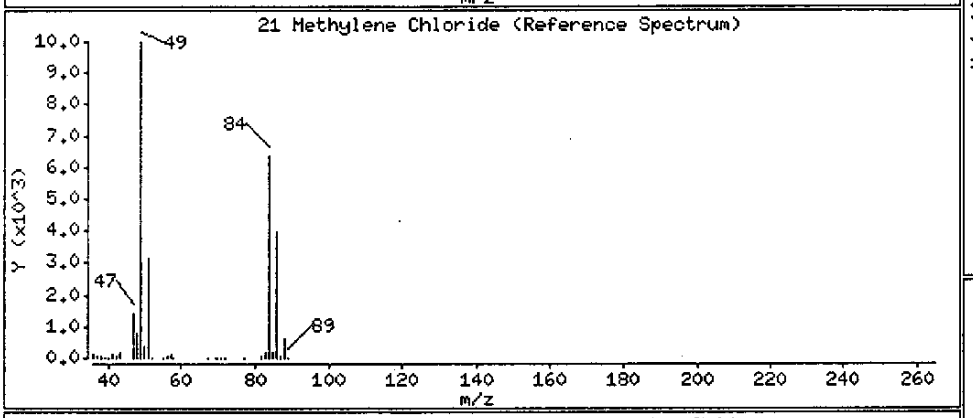
Column diameter: 0.53

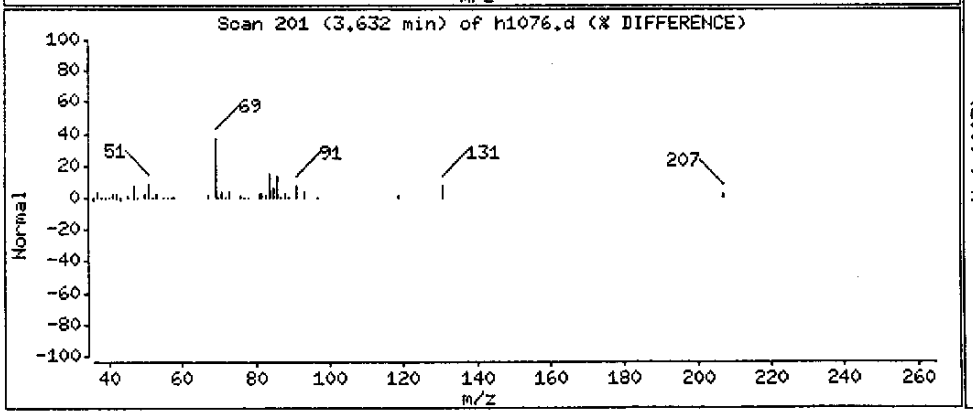
21 Methylene Chloride

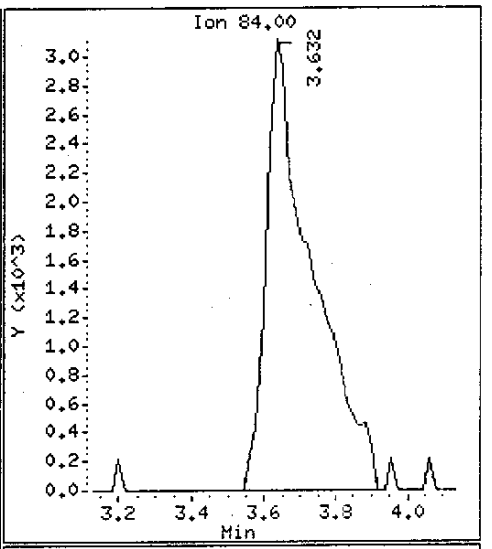
Concentration: 551.098 ug/L

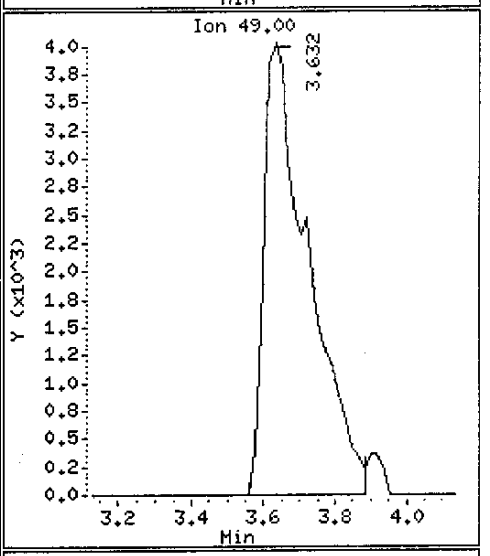


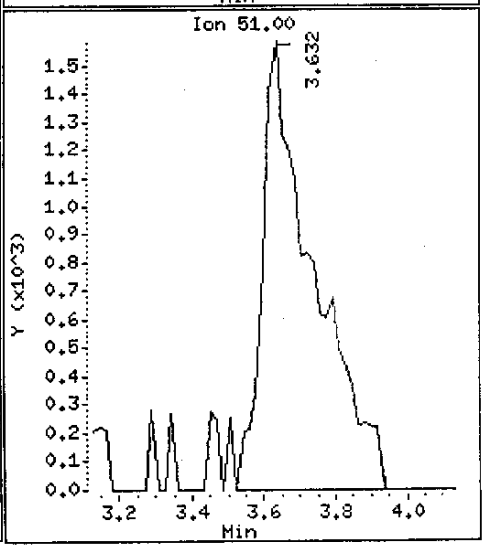












Data File: /chem/H.i/022004.b/h1076.d

Date : 20-FEB-2004 15:12

Client ID: MW-2

Instrument: H.i

Sample Info: F9KEJ1AA,0.02,D4B130209-002

Purge Volume: 20.0

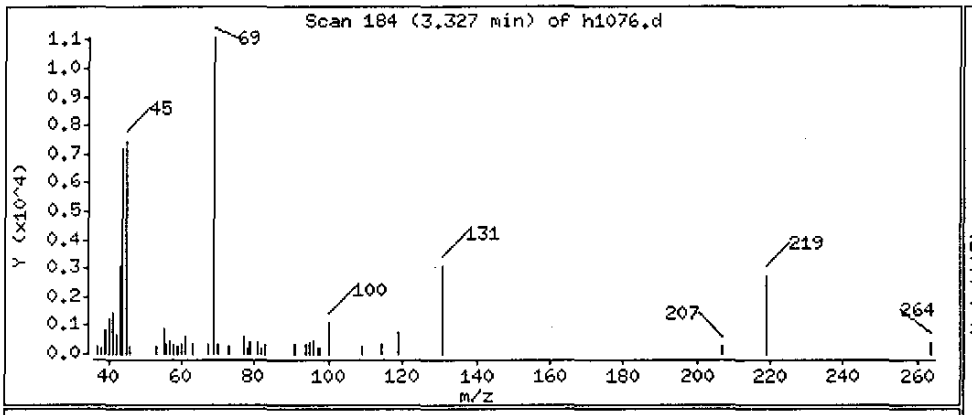
Operator: appelhansd

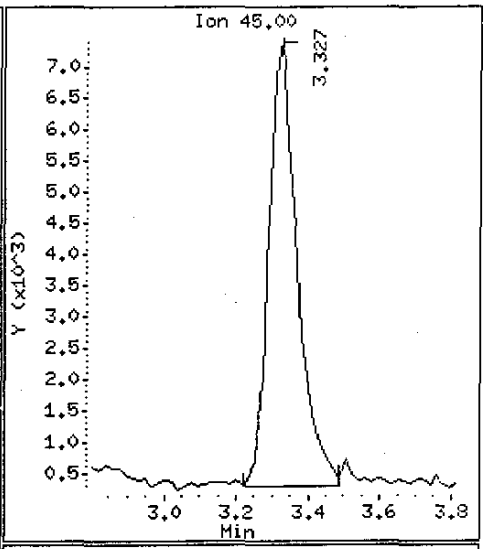
Column phase: DB624

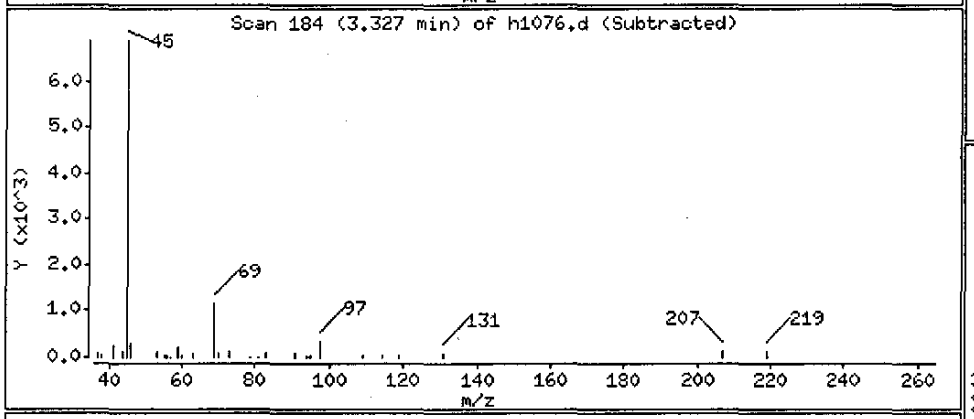
Column diameter: 0.53

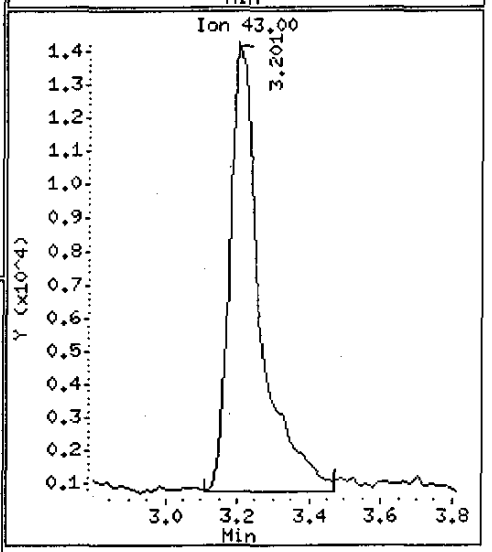
125 2-Propanol

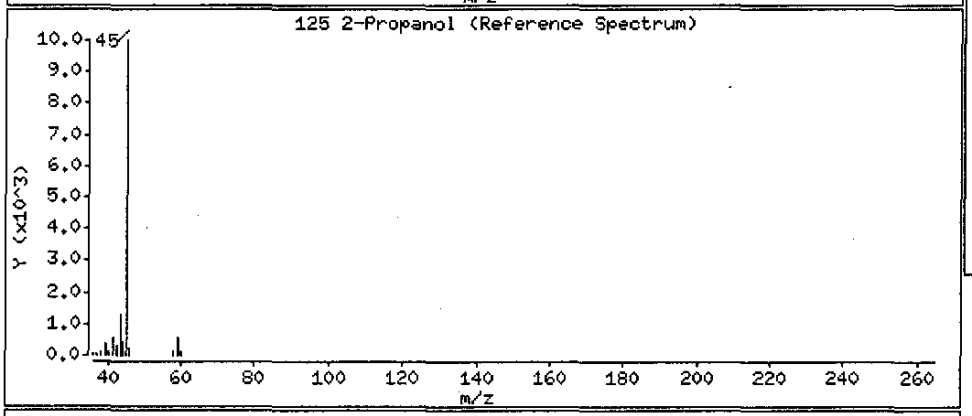
Concentration: 44520.6 ug/L

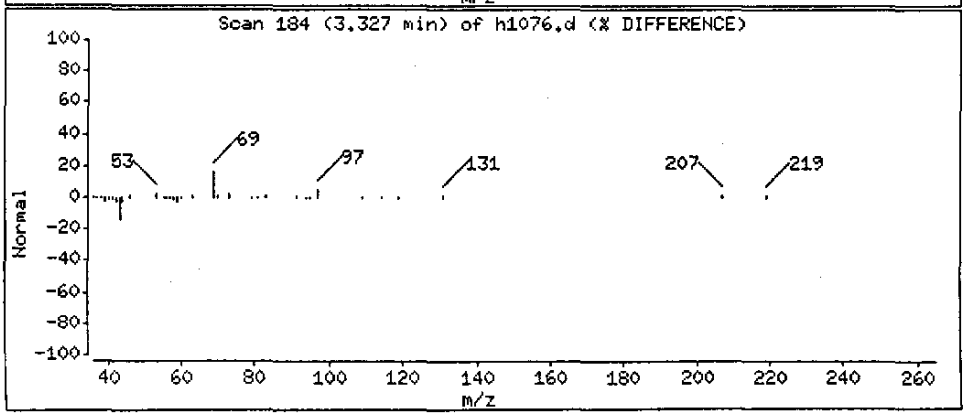












Data File: /chem/H.i/022004.b/h1076.d

Date : 20-FEB-2004 15:12

Client ID: MW-2

Instrument: H.i

Sample Info: F9KEJ1AA,0.02,D4B130209-002

Purge Volume: 20.0

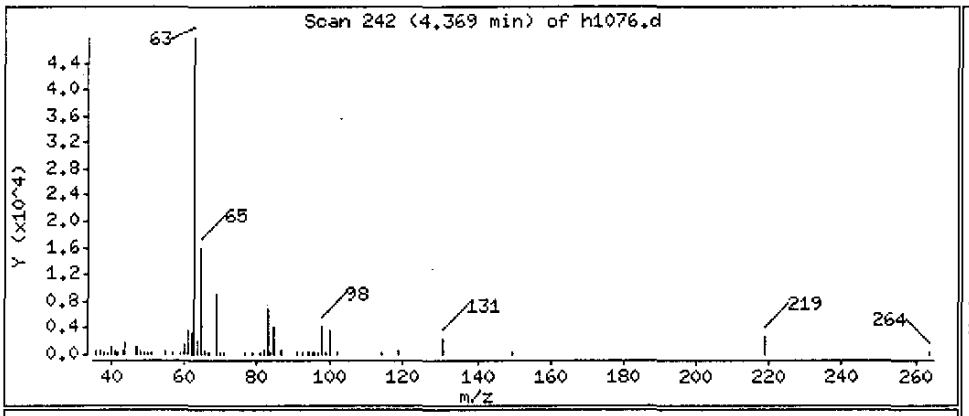
Operator: appelhansd

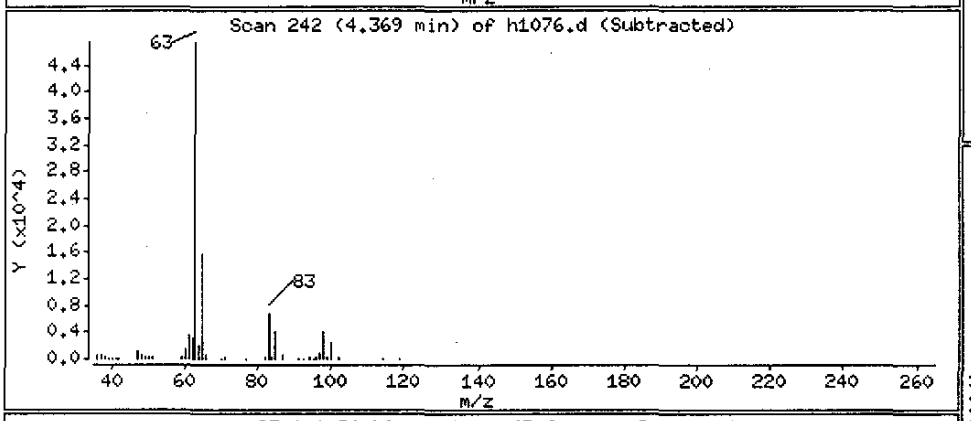
Column phase: DB624

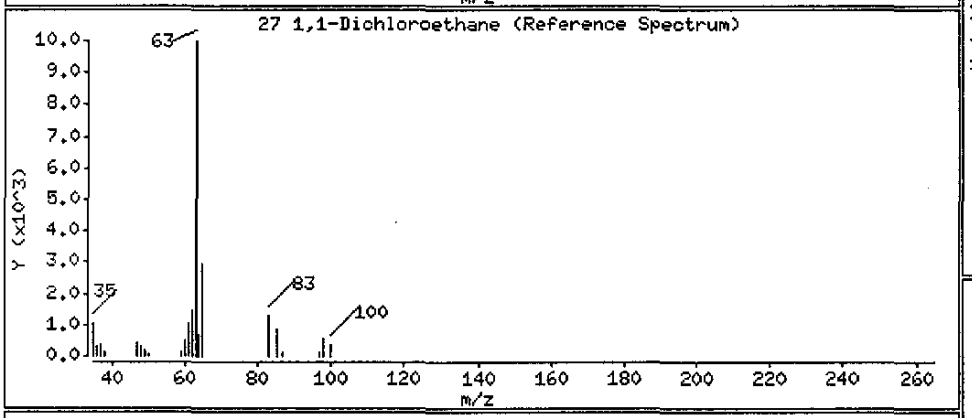
Column diameter: 0.53

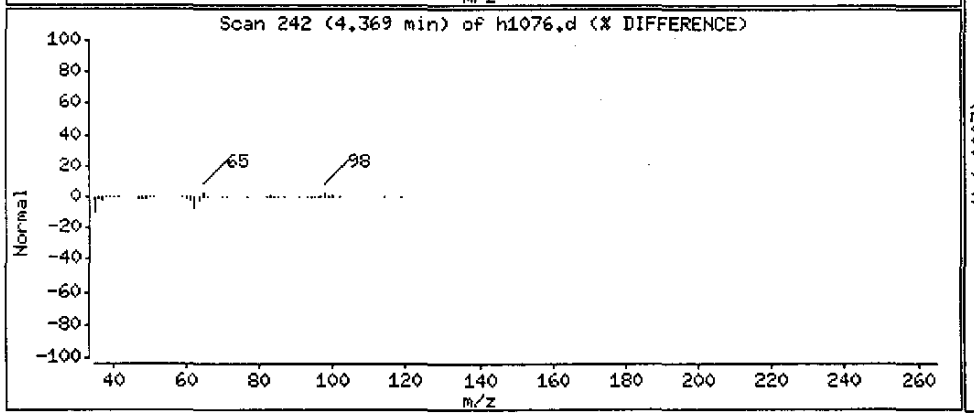
27 1,1-Dichloroethane

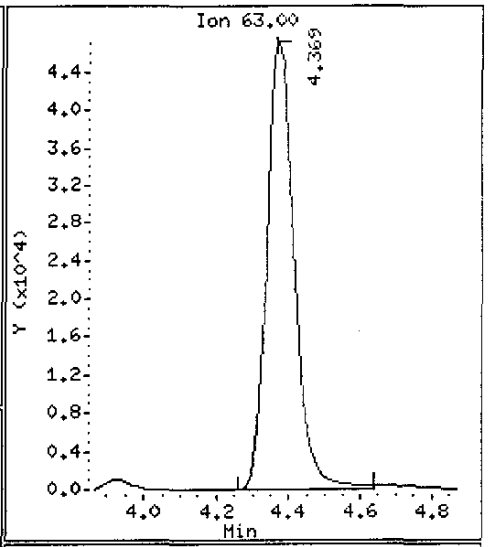
Concentration: 2380.84 ug/L

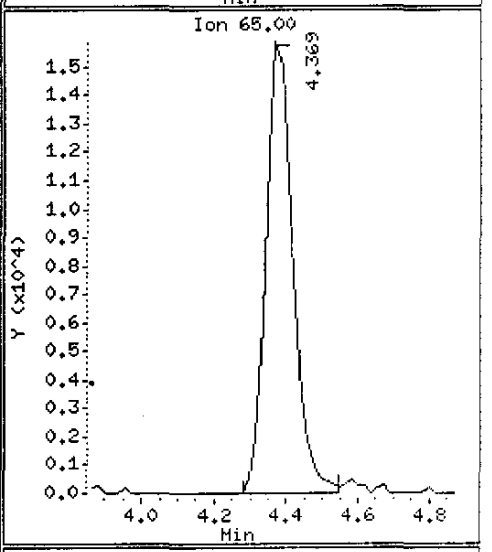


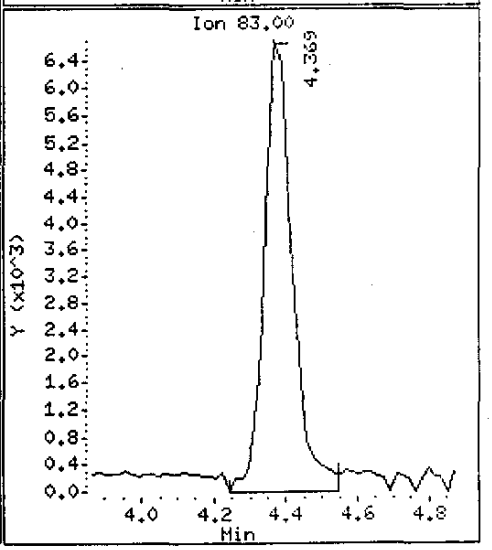












Data File: /chem/H.i/022004.b/h1076.d

Date : 20-FEB-2004 15:12

Client ID: MW-2

Instrument: H.i

Sample Info: F9KEJ1AA,0.02,D4B130209-002

Purge Volume: 20.0

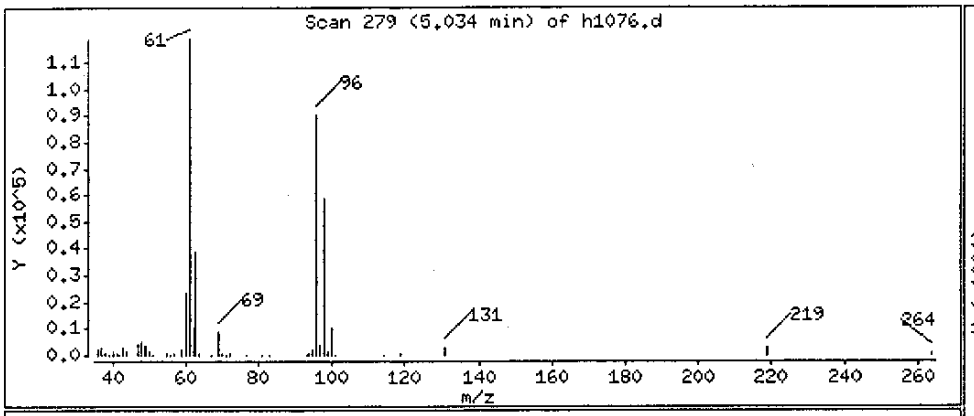
Operator: appelhansd

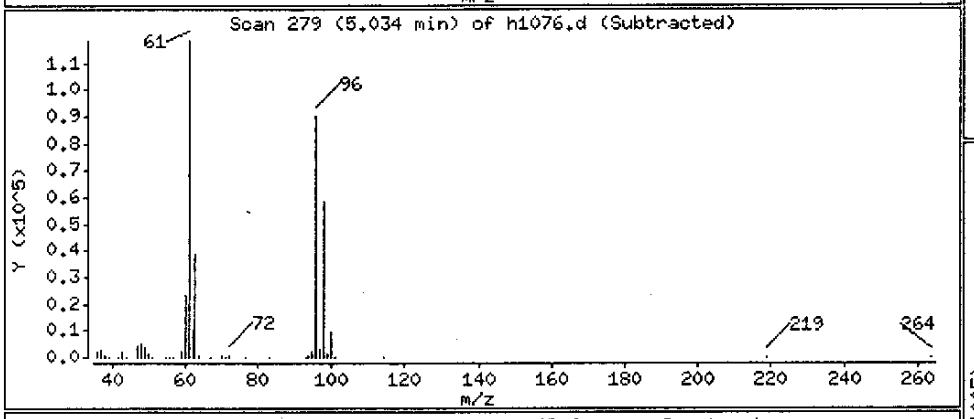
Column phase: DB624

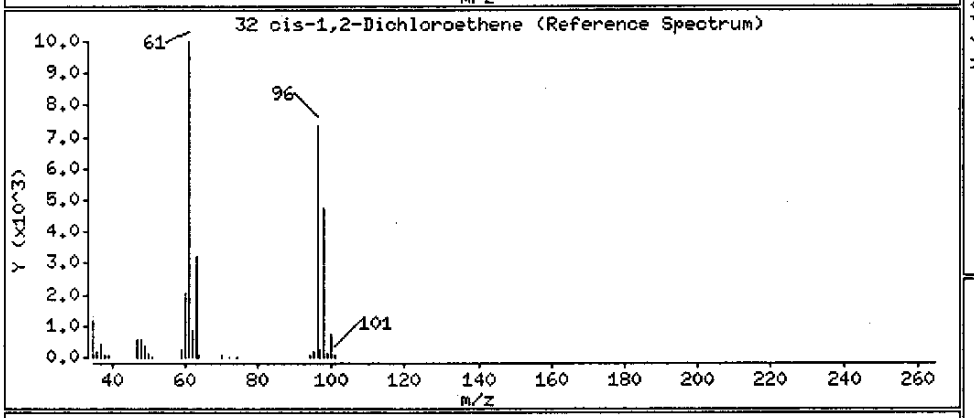
Column diameter: 0.53

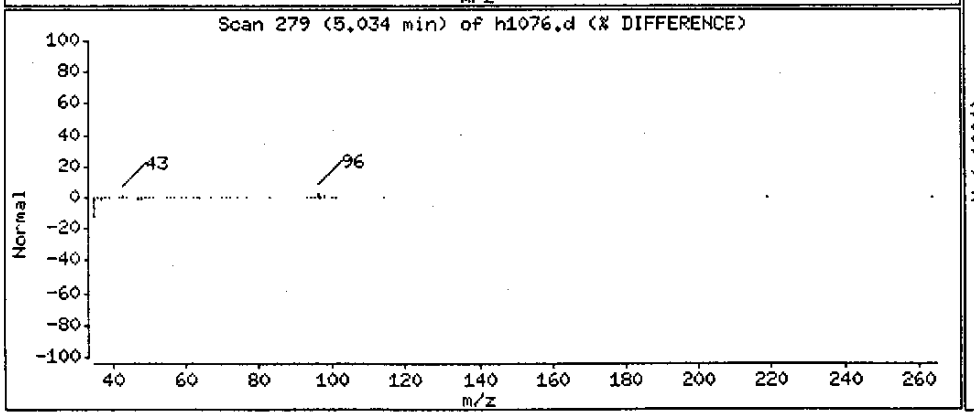
32 cis-1,2-Dichloroethene

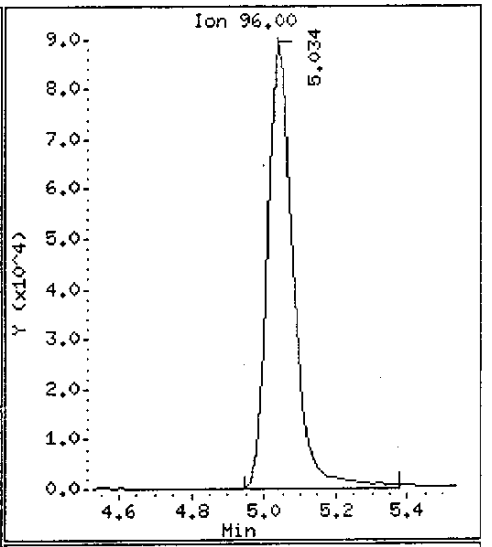
Concentration: 7280.35 ug/L

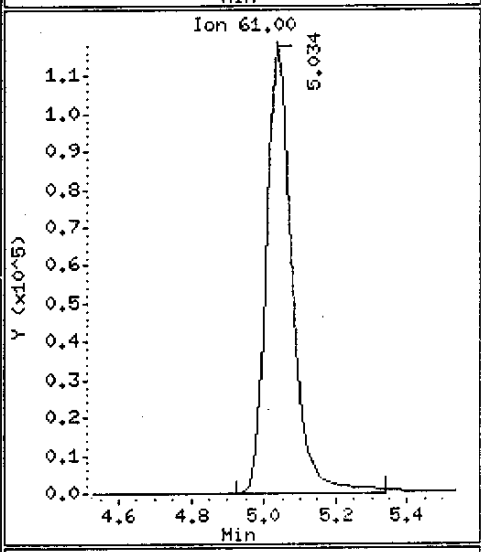


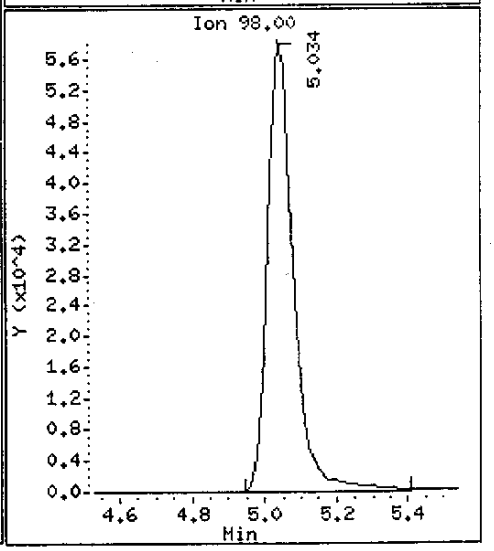












Data File: /chem/H.i/022004.b/h1076.d

Date : 20-FEB-2004 15:12

Client ID: MW-2

Instrument: H.i

Sample Info: F9KEJ1AA,0.02,D4B130209-002

Purge Volume: 20.0

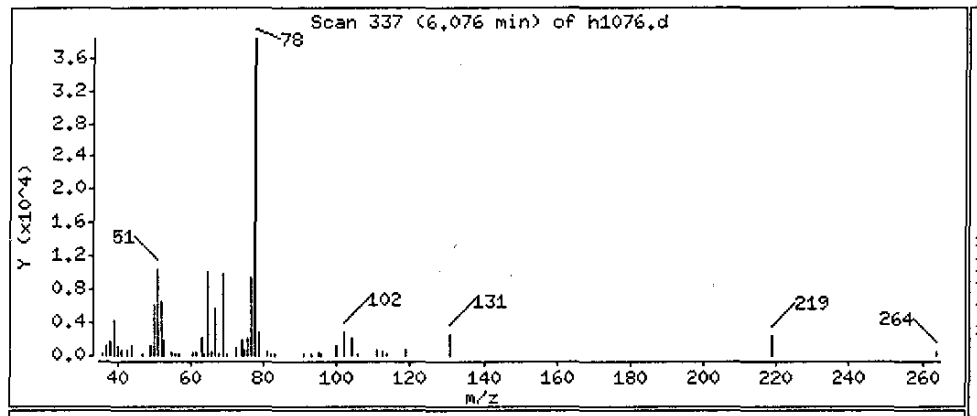
Operator: appelhansd

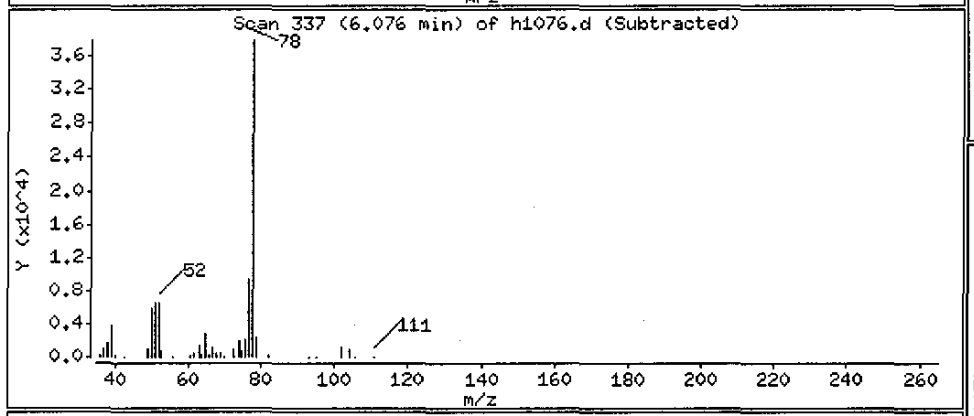
Column phase: DB624

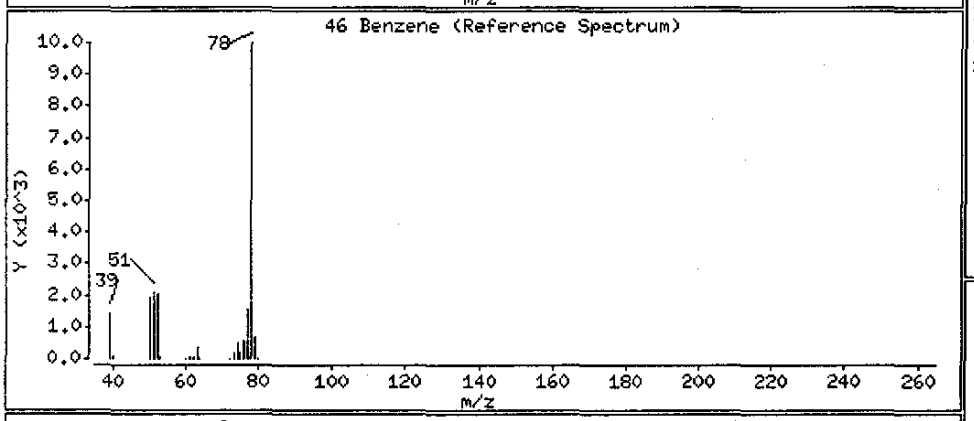
Column diameter: 0.53

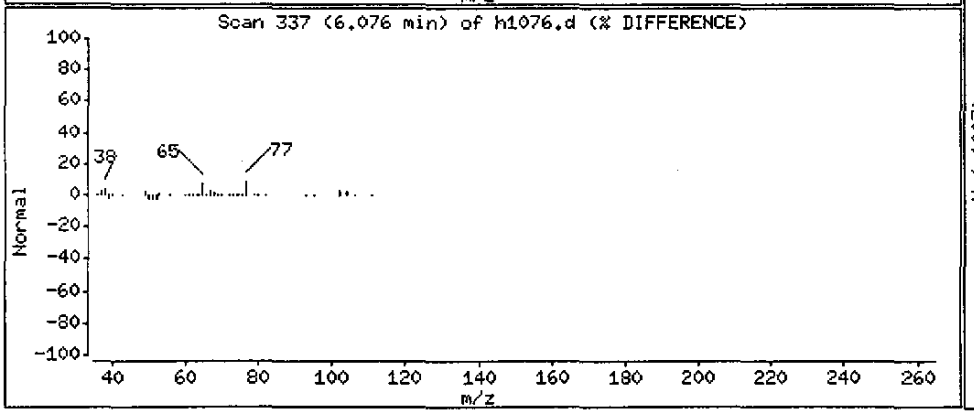
46 Benzene

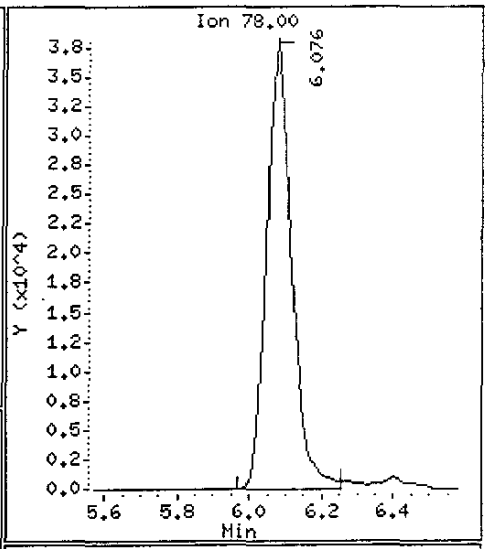
Concentration: 1032.61 ug/L

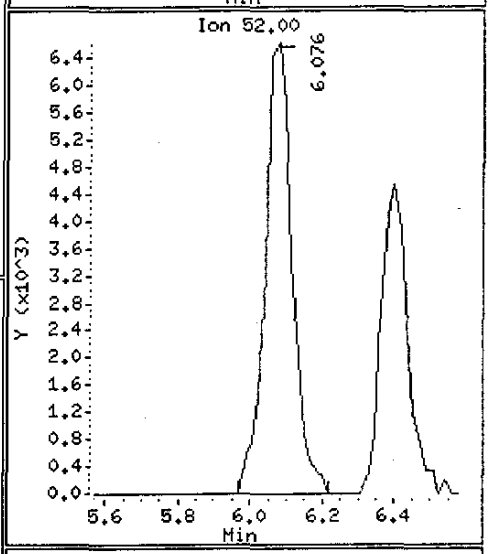


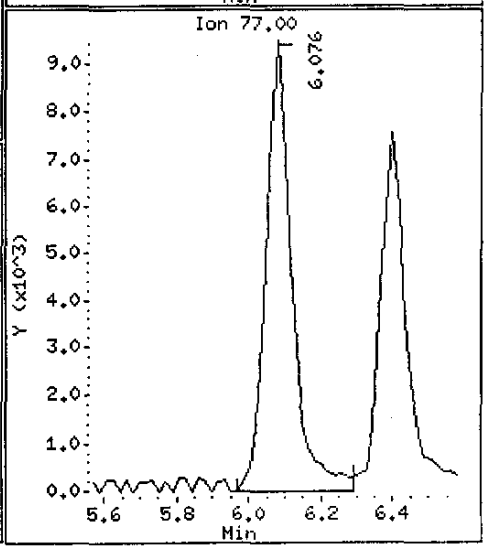












Data File: /chem/H.i/022004.b/h1076.d

Date : 20-FEB-2004 15:12

Client ID: MW-2

Instrument: H.i

Sample Info: F9KEJ1AA,0.02,D4B130209-002

Purge Volume: 20.0

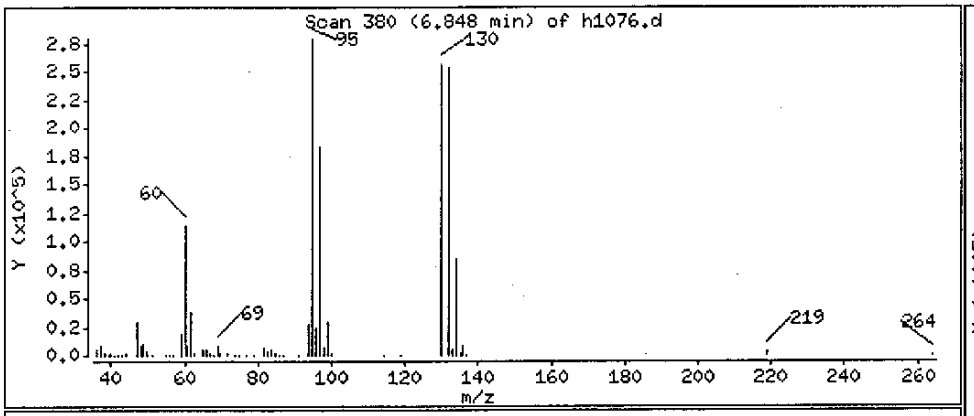
Operator: appelhansd

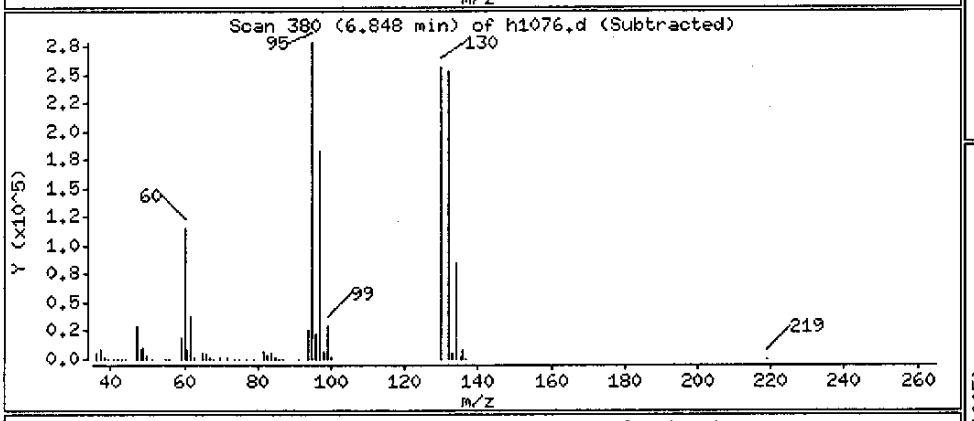
Column phase: DB624

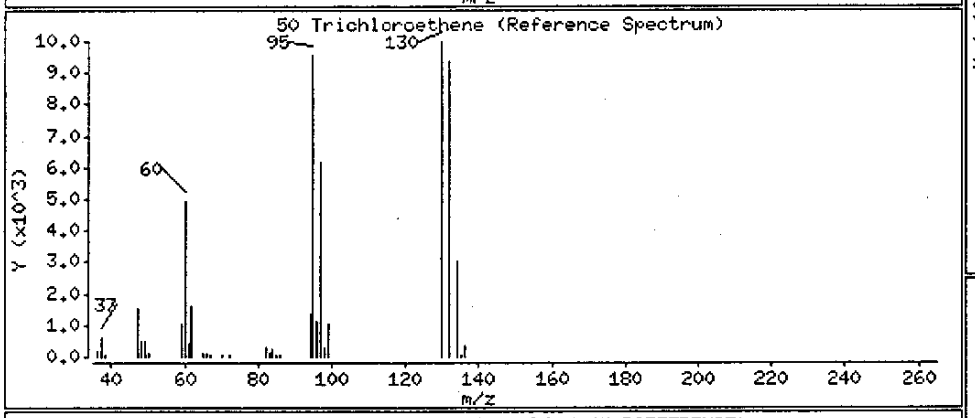
Column diameter: 0.53

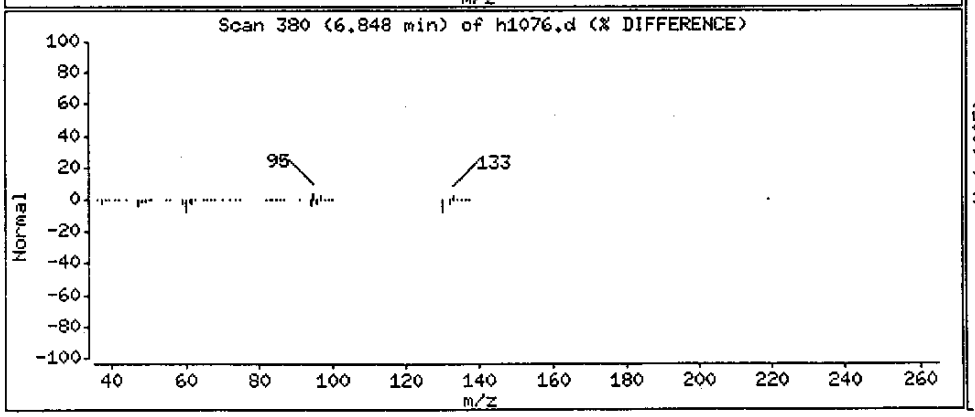
50 Trichloroethene

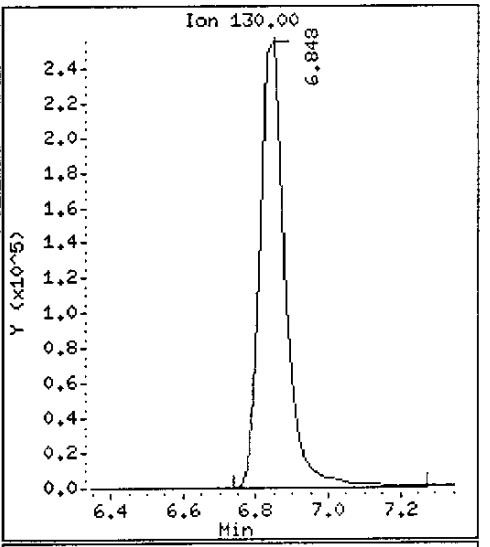
Concentration: 18828.8 ug/L

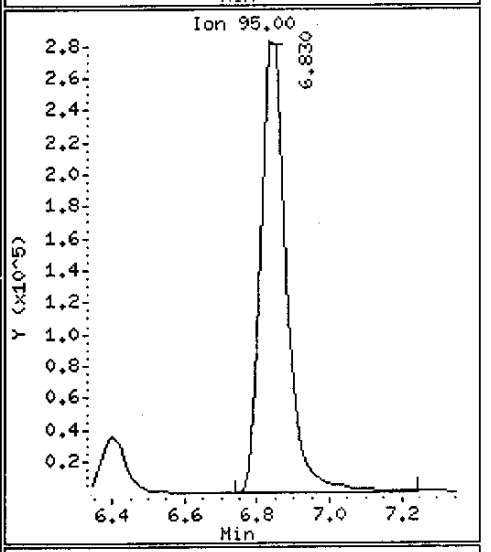


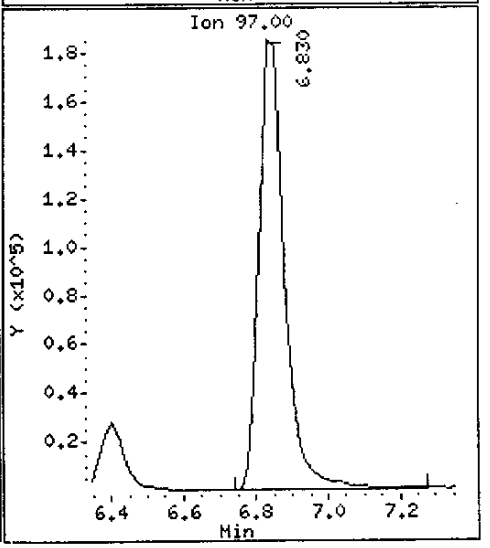












Data File: /chem/H.i/022004.b/h1076.d

Date : 20-FEB-2004 15:12

Client ID: MW-2

Instrument: H.i

Sample Info: F9KEJ1AA,0.02,D4B130209-002

Purge Volume: 20.0

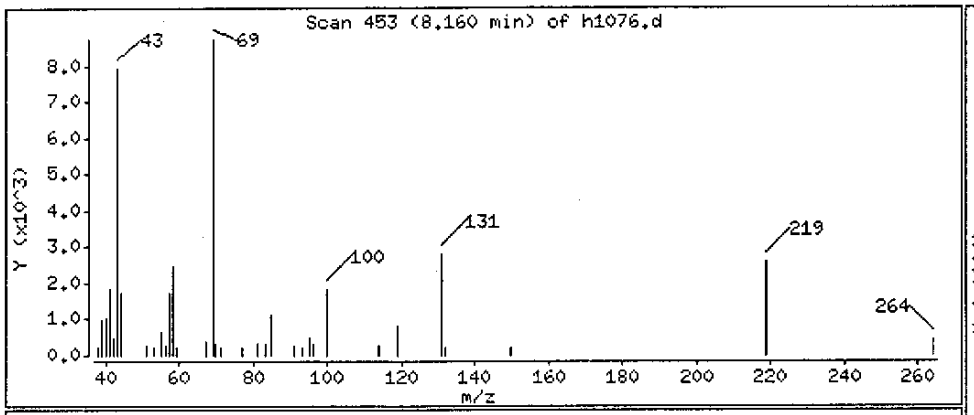
Operator: appelhansd

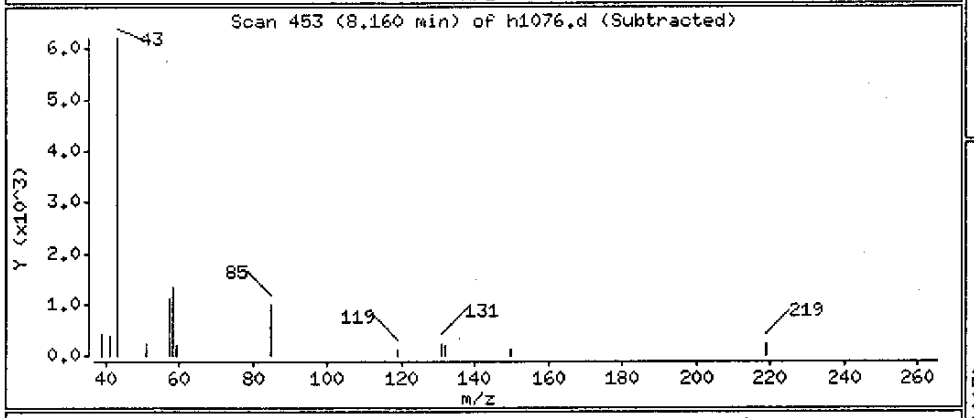
Column phase: DB624

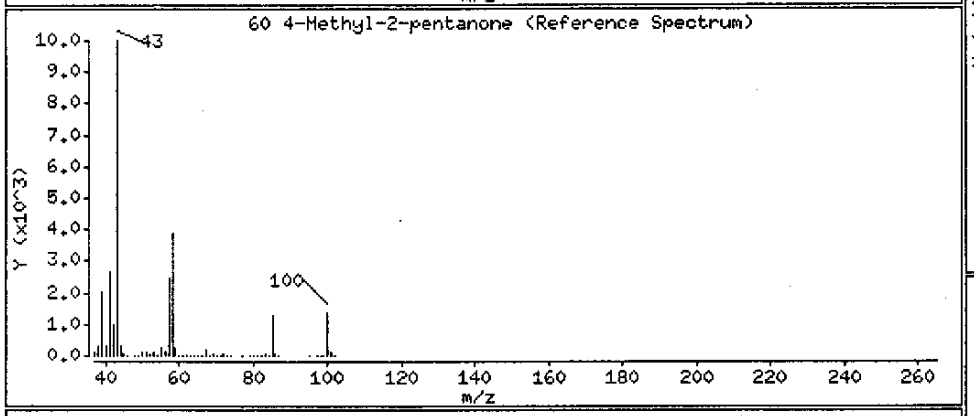
Column diameter: 0.53

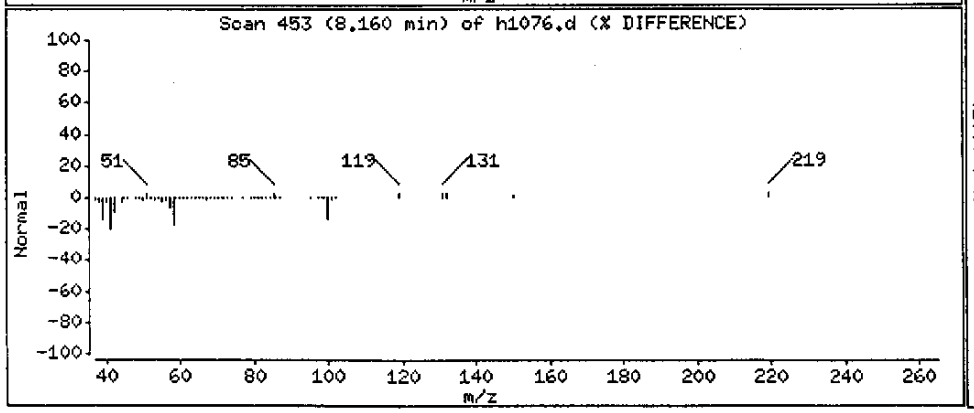
60 4-Methyl-2-pentanone

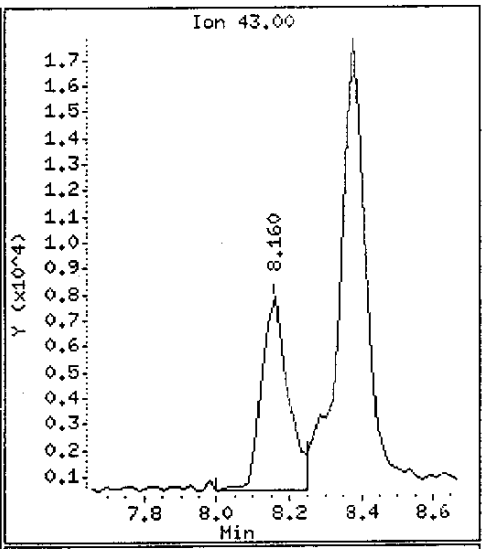
Concentration: 1816.78 ug/L

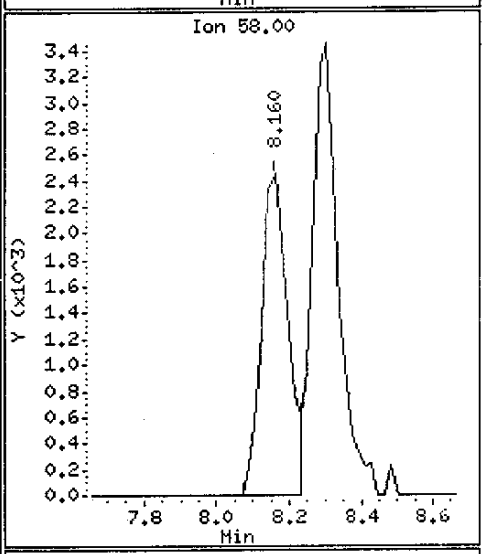


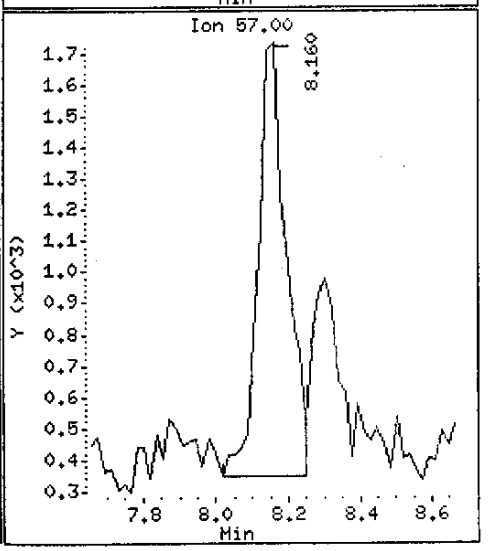












Data File: /chem/H.i/022004.b/h1076.d

Date : 20-FEB-2004 15:12

Client ID: MW-2

Instrument: H.i

Sample Info: F9KEJ1AA,0.02,D4B130209-002

Purge Volume: 20.0

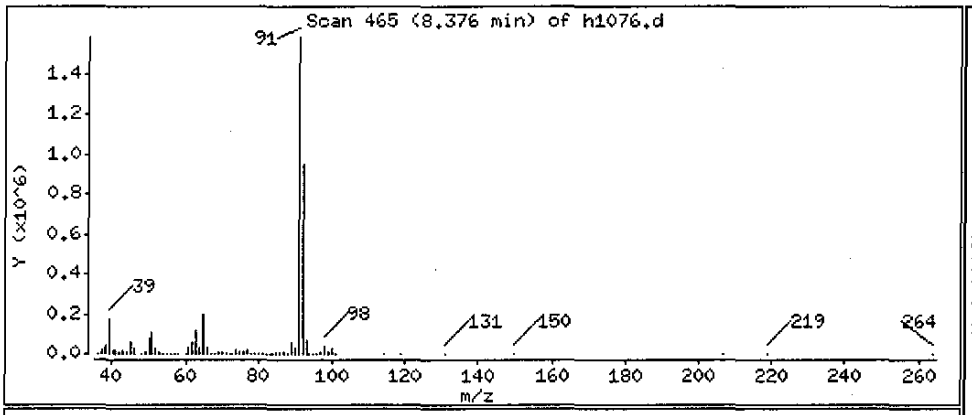
Operator: appelhansd

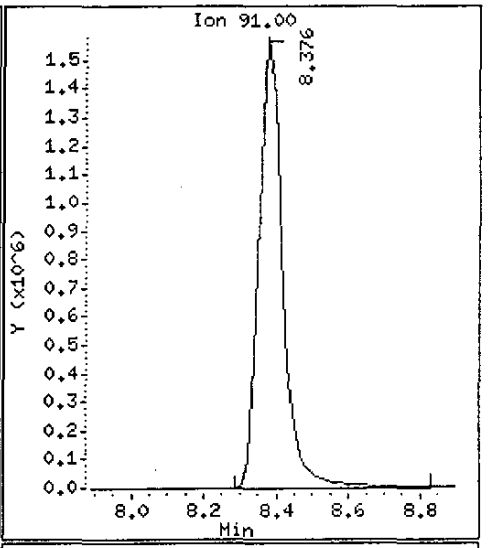
Column phase: DB624

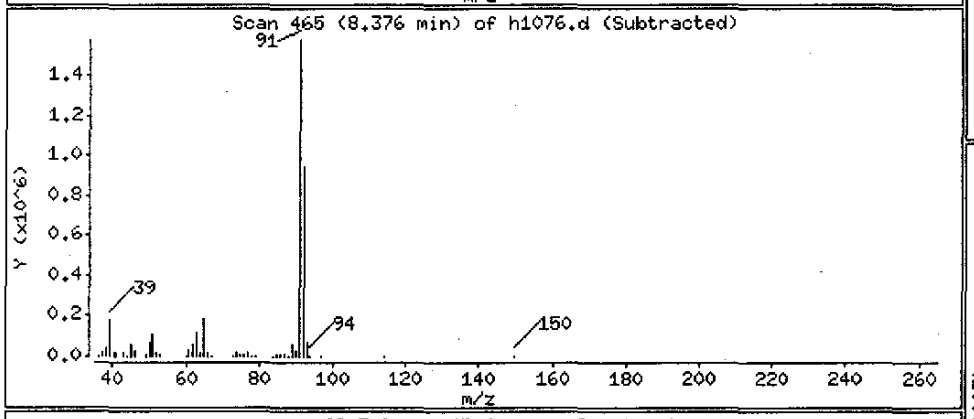
Column diameter: 0.53

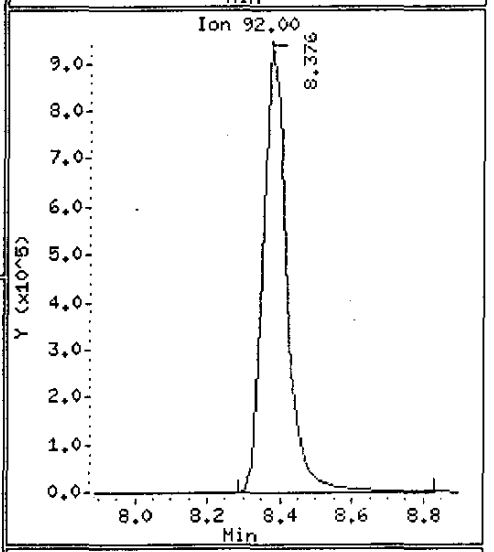
62 Toluene

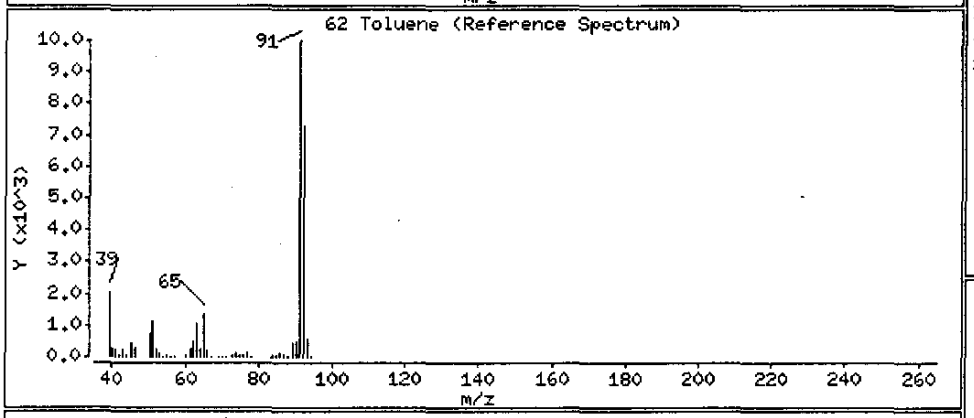
Concentration: 33541.6 ug/L

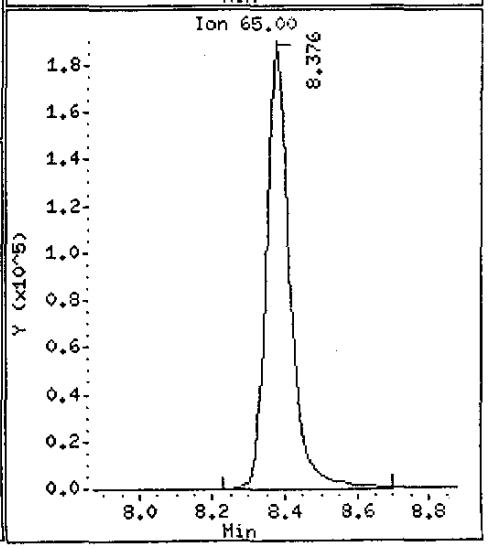


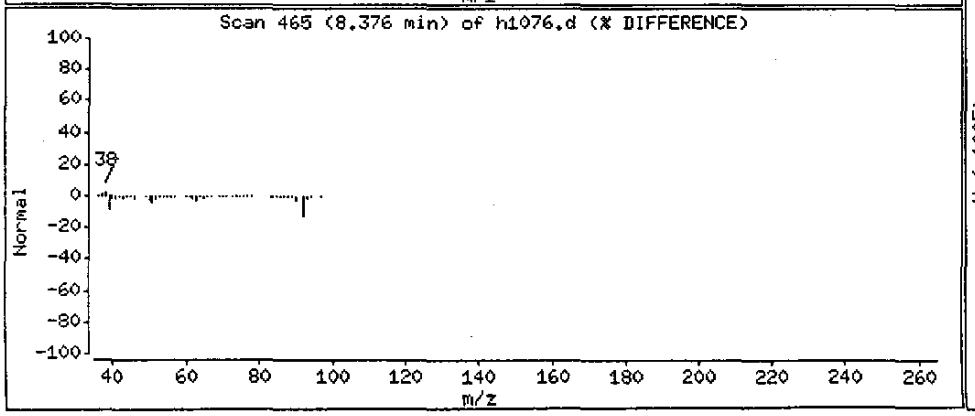












Data File: /chem/H.i/022004.b/h1076.d

Date : 20-FEB-2004 15:12

Client ID: MW-2

Instrument: H.i

Sample Info: F9KEJ1AA,0.02,D4B130209-002

Purge Volume: 20.0

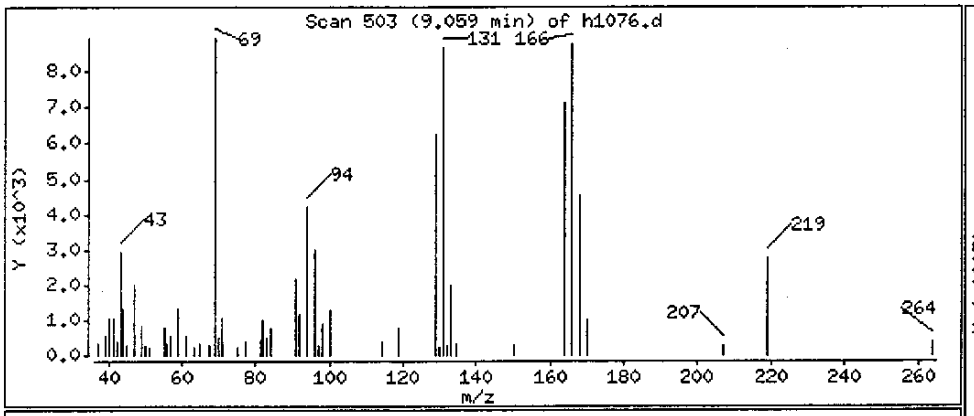
Operator: appelhansd

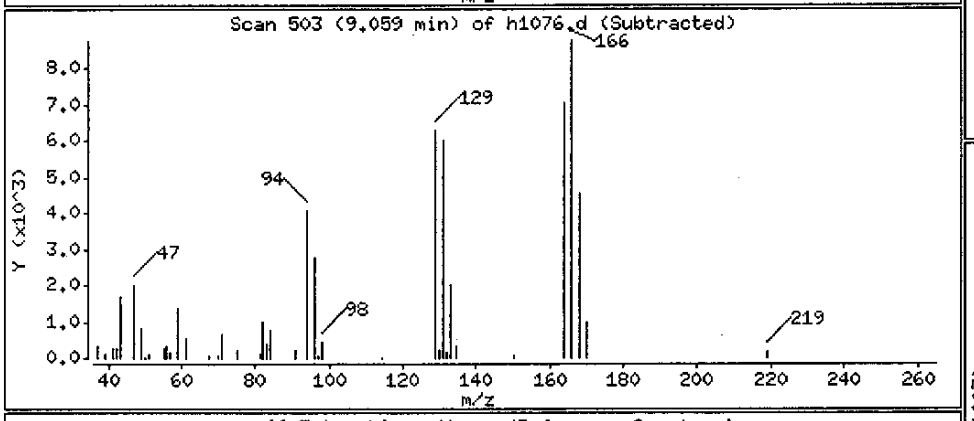
Column phase: DB624

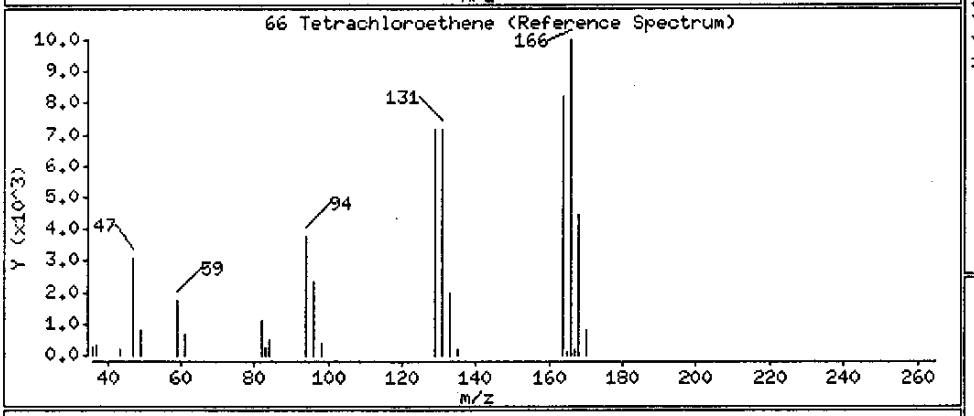
Column diameter: 0.53

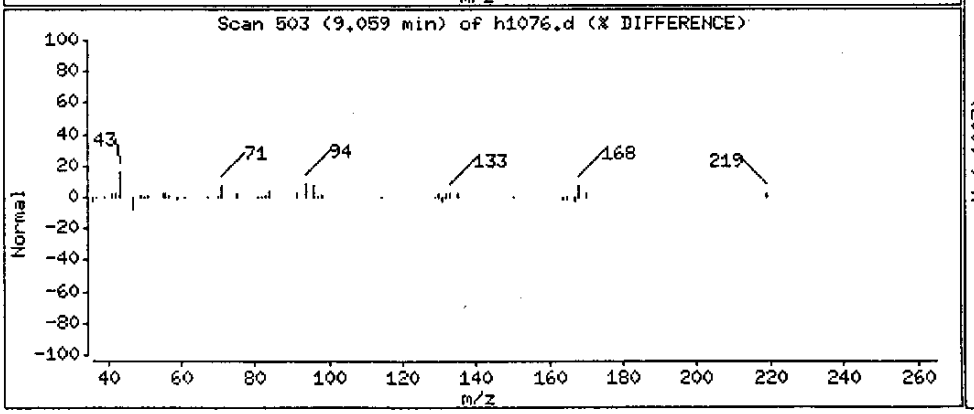
66 Tetrachloroethene

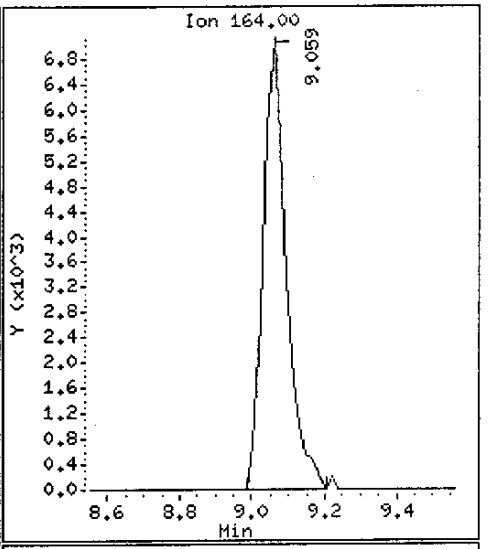
Concentration: 464.266 ug/L

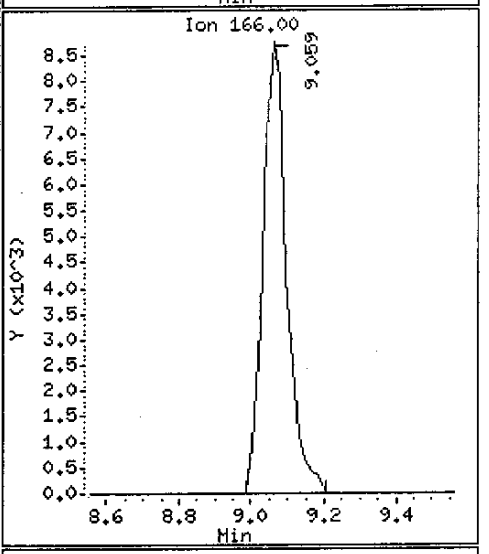


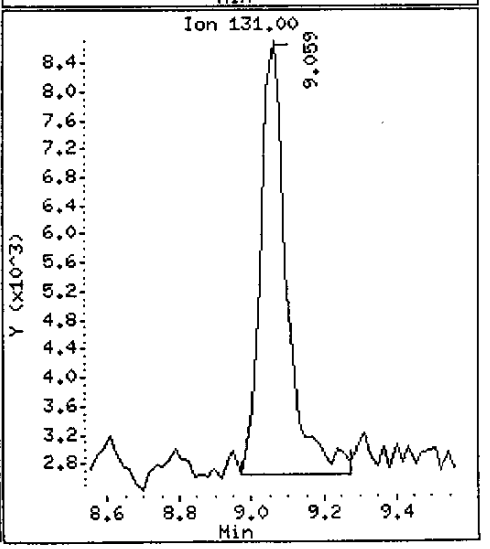












Data File: /chem/H.i/022004.b/h1076.d

Date : 20-FEB-2004 15:12

Client ID: MW-2

Instrument: H.i

Sample Info: F9KEJ1AA,0.02,D4B130209-002

Purge Volume: 20.0

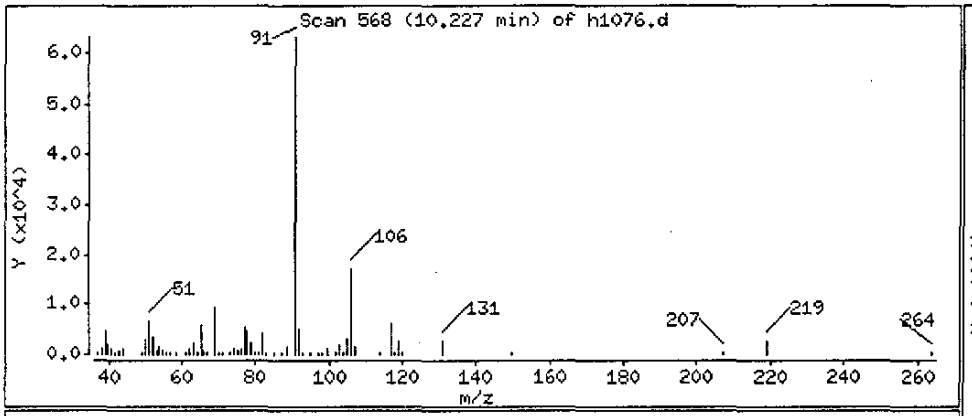
Operator: appelhansd

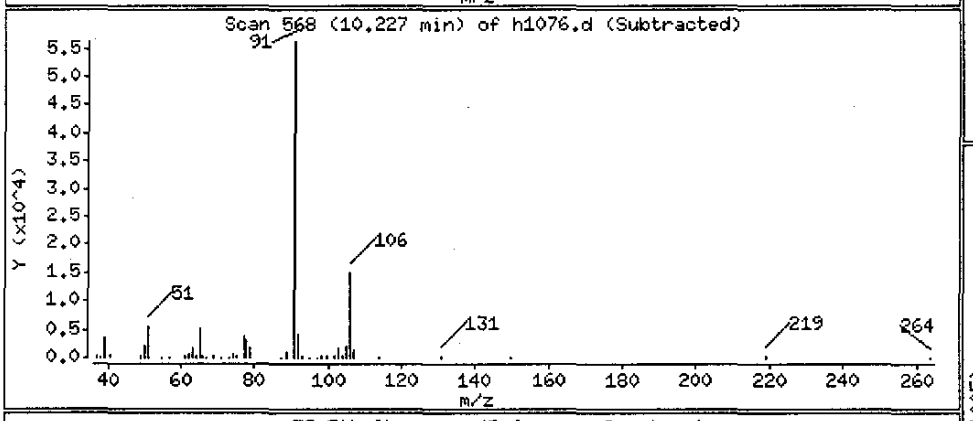
Column phase: DB624

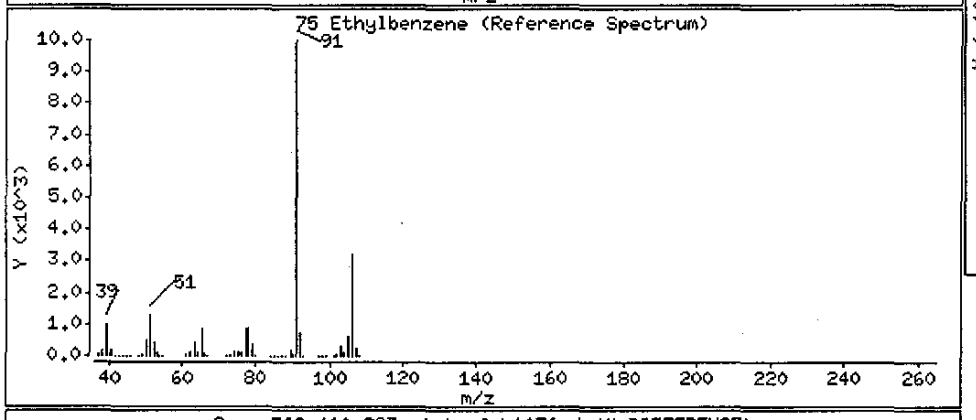
Column diameter: 0.53

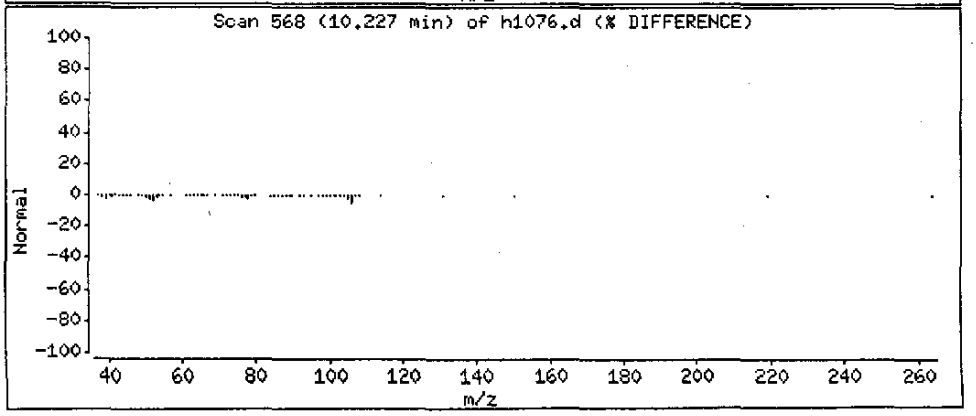
75 Ethylbenzene

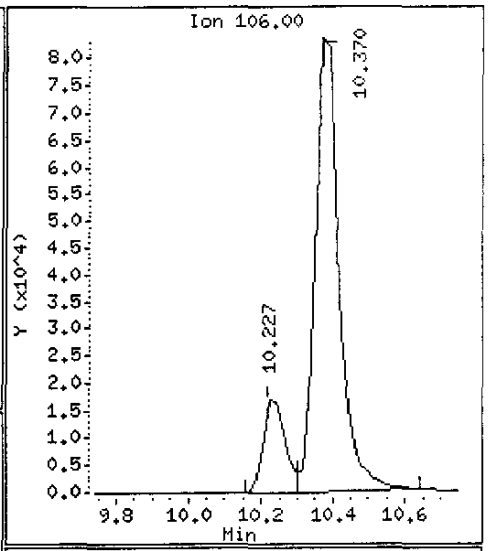
Concentration: 1133.10 ug/L

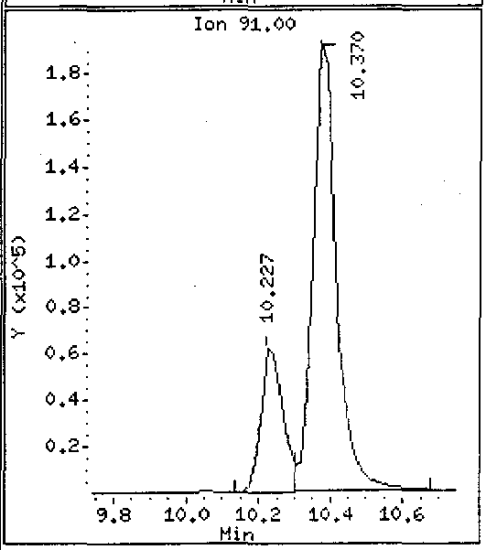












Data File: /chem/H.i/022004.b/h1076.d

Date : 20-FEB-2004 15:12

Client ID: MW-2

Instrument: H.i

Sample Info: F9KEJ1AA,0.02,D4B130209-002

Purge Volume: 20.0

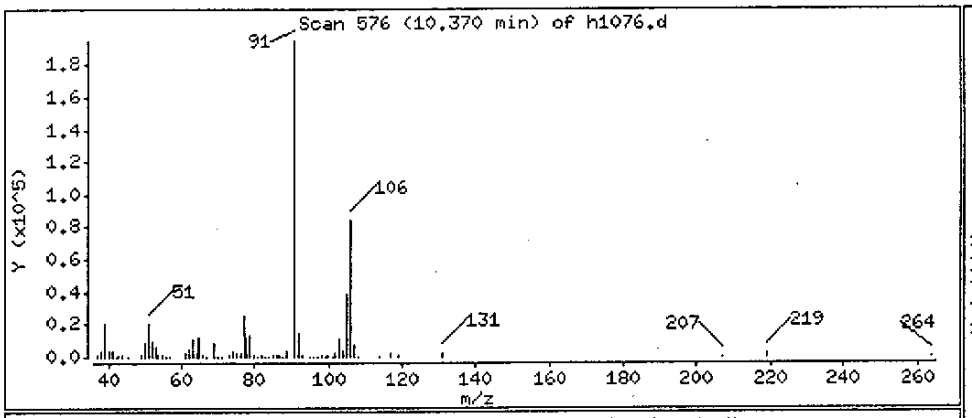
Operator: appelhansd

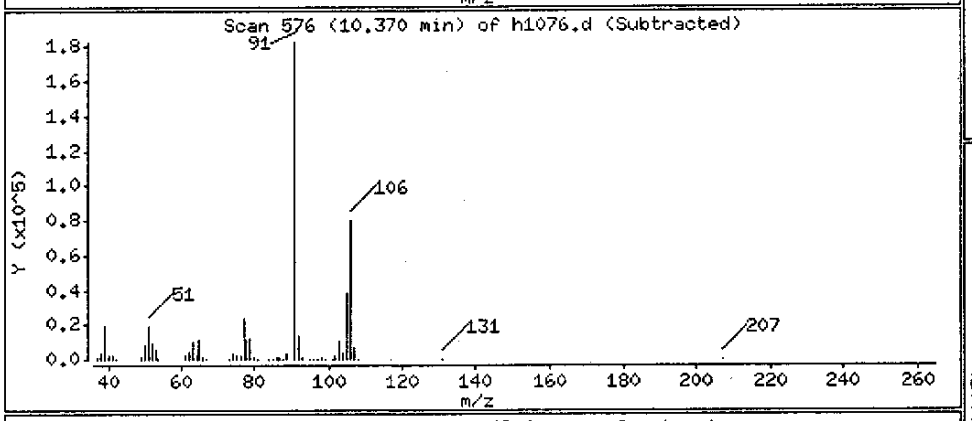
Column phase: DB624

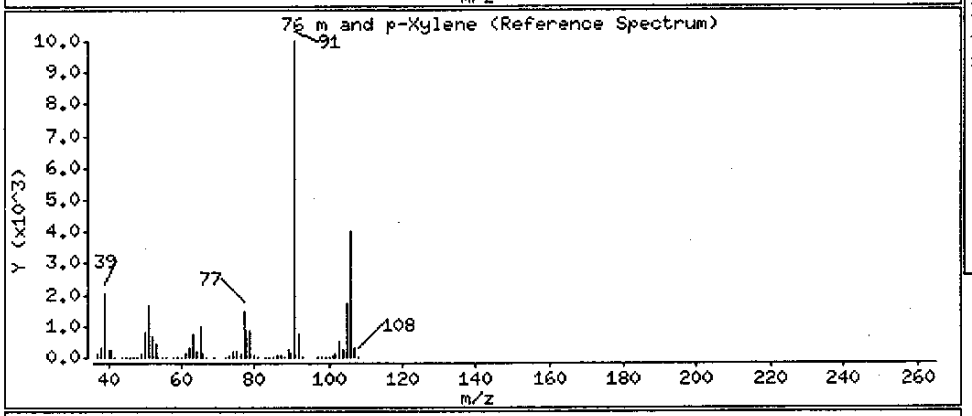
Column diameter: 0.53

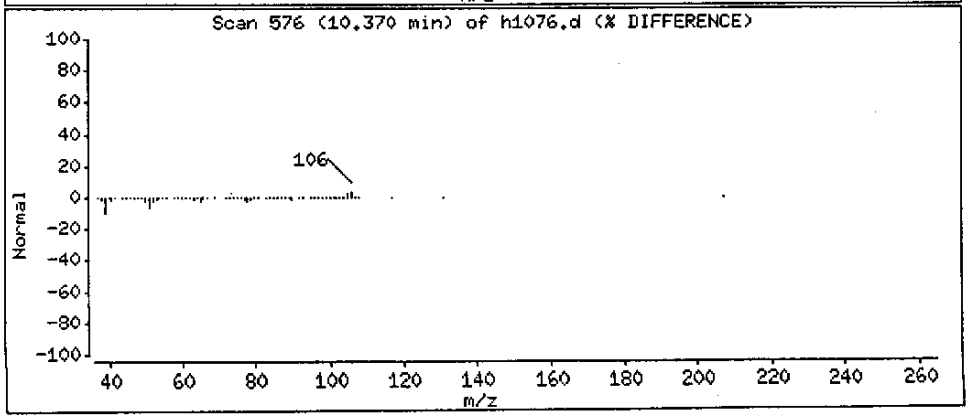
76 m and p-Xylene

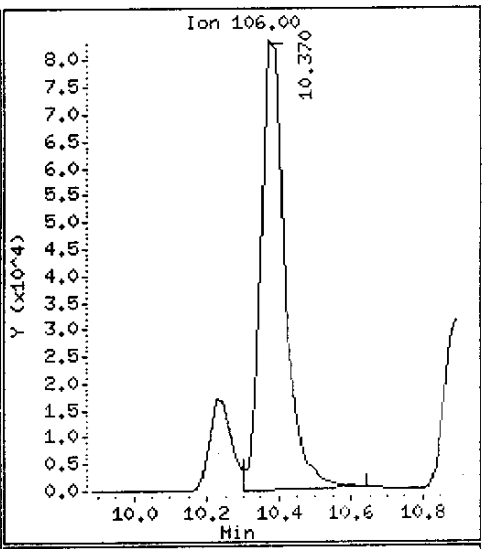
Concentration: 4435.11 ug/L

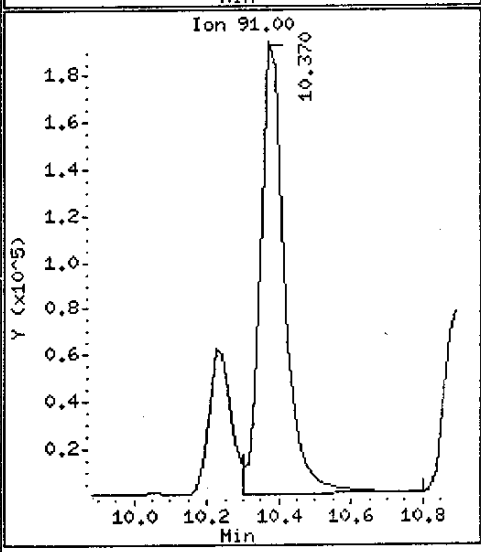












Data File: /chem/H.i/022004.b/h1076.d

Date : 20-FEB-2004 15:12

Client ID: MW-2

Instrument: H.i

Sample Info: F9KEJ1AA,0.02,D4B130209-002

Purge Volume: 20.0

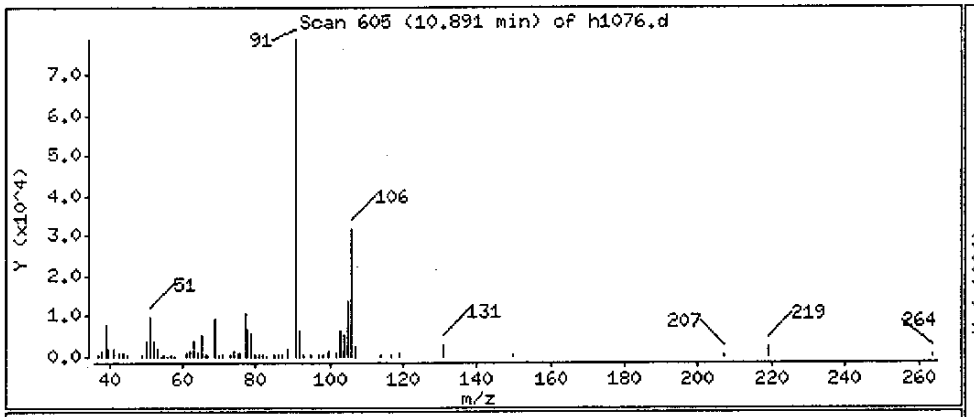
Operator: appelhansd

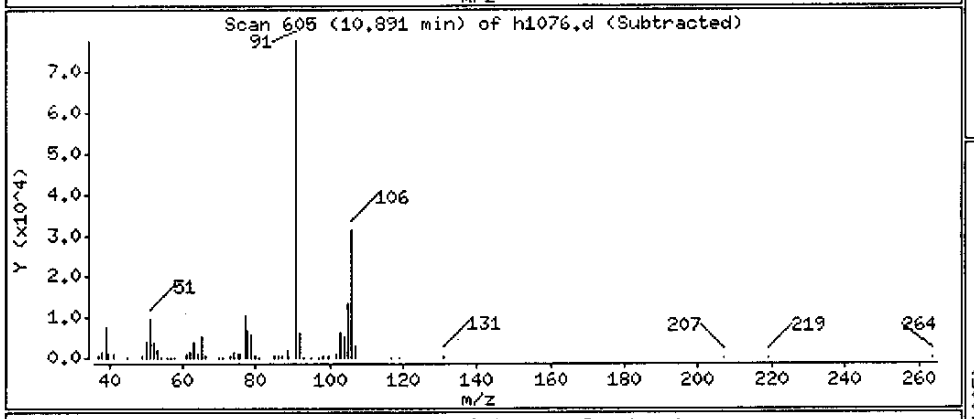
Column phase: DB624

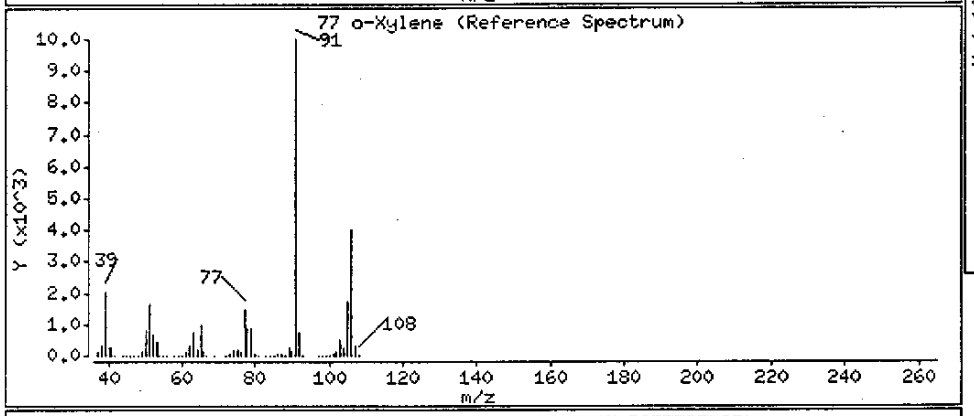
Column diameter: 0.53

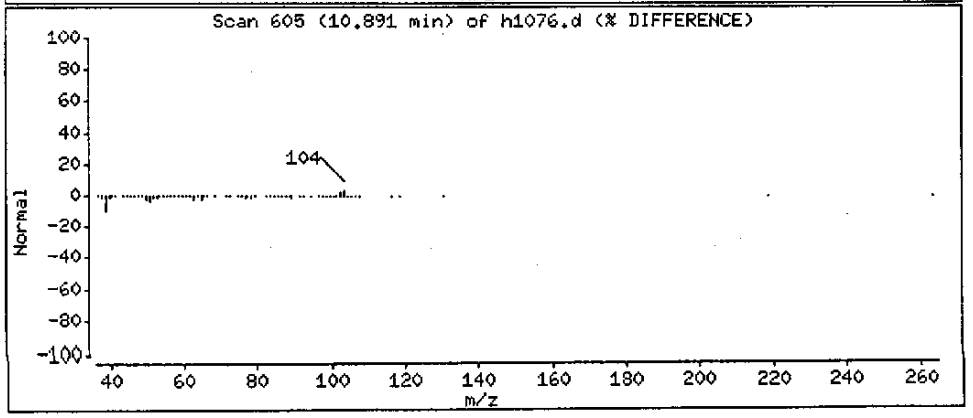
77 o-Xylene

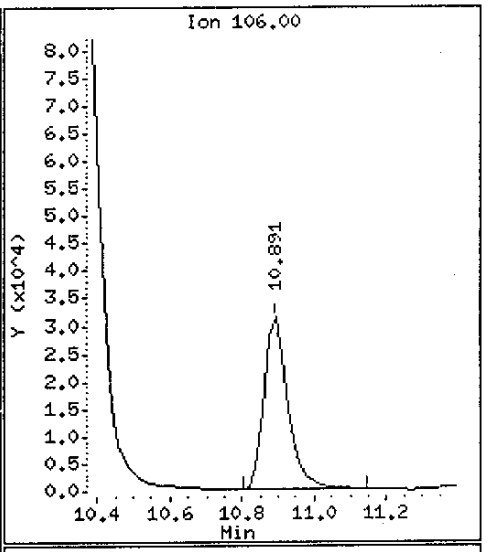
Concentration: 1841.01 ug/L

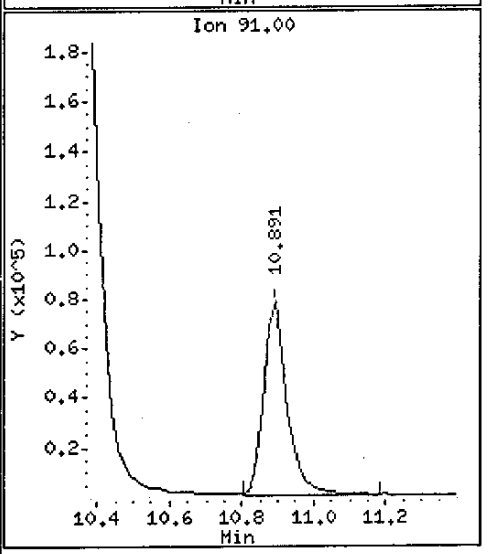












Data File: /chem/H.i/022004.b/h1076.d

Date : 20-FEB-2004 15:12

Client ID: MW-2

Instrument: H.i

Sample Info: F9KEJ1AA,0.02,D4B130209-002

Purge Volume: 20.0

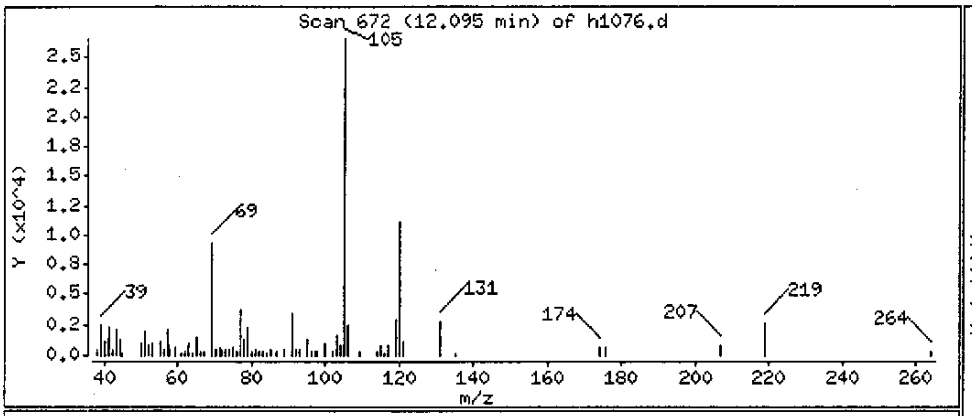
Operator: appelhansd

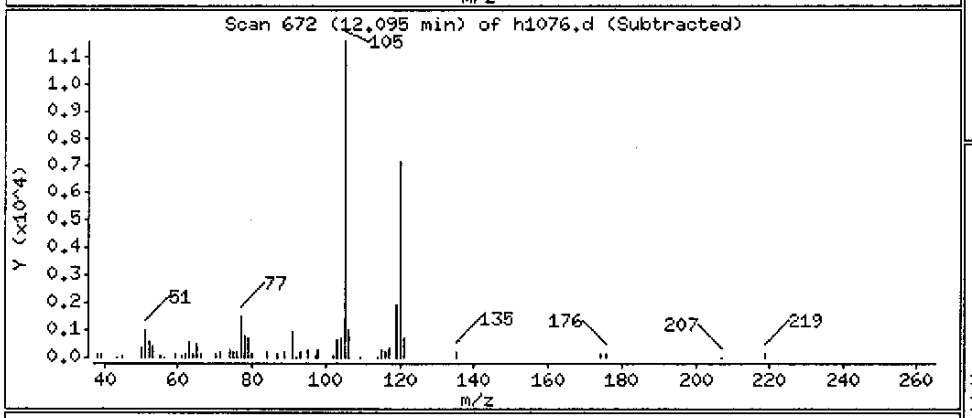
Column phase: DB624

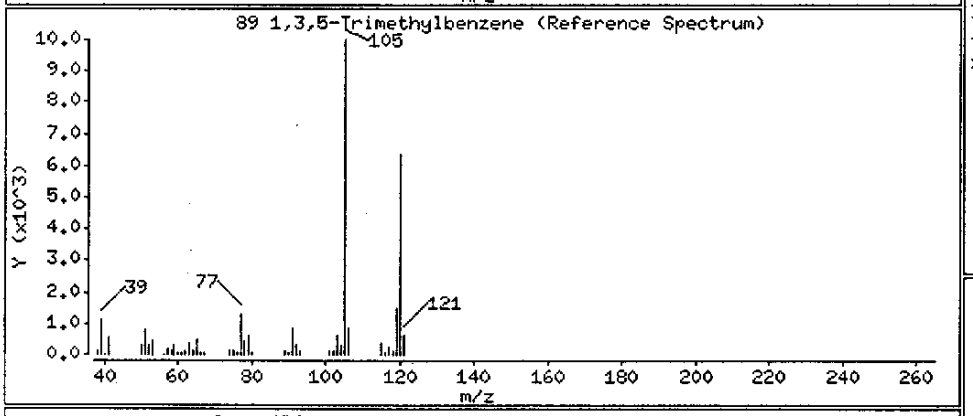
Column diameter: 0.53

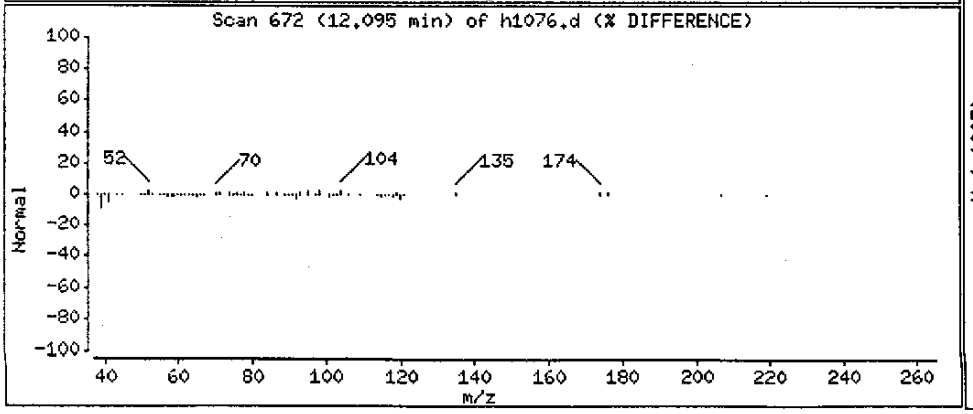
89 1,3,5-Trimethylbenzene

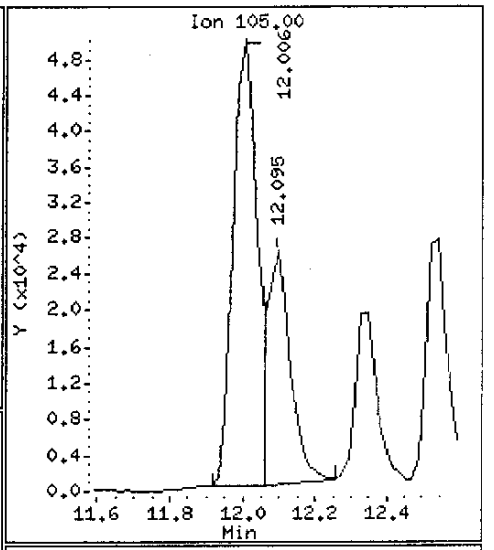
Concentration: 631.731 ug/L

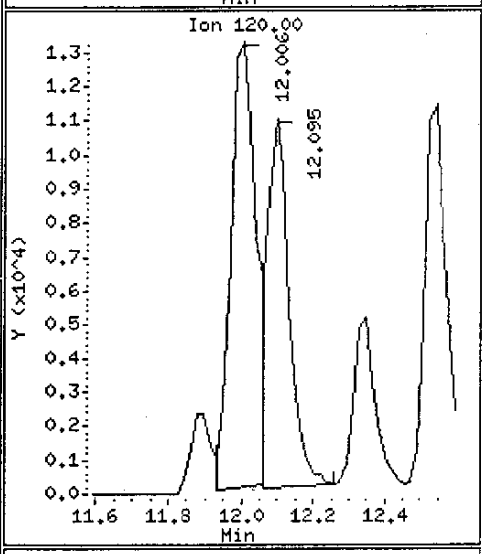


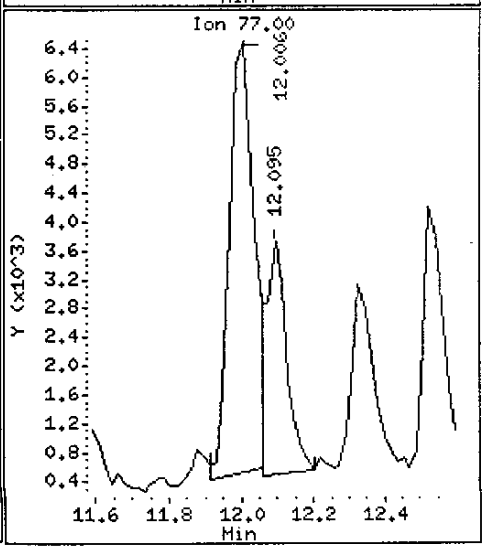












Data File: /chem/H.i/022004.b/h1076.d

Date : 20-FEB-2004 15:12

Client ID: MW-2

Instrument: H.i

Sample Info: F9KEJ1AA,0.02,D4B130209-002

Purge Volume: 20.0

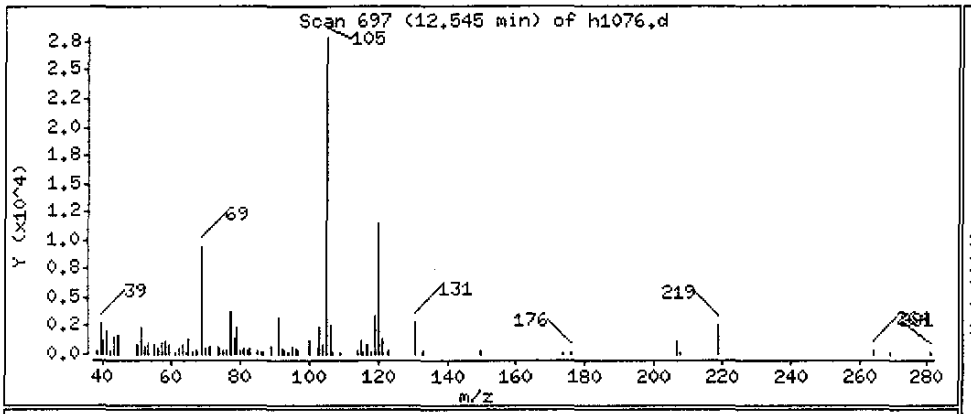
Operator: appelhansd

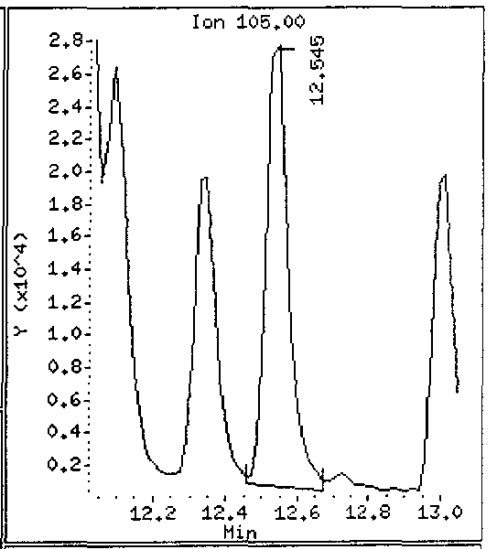
Column phase: DB624

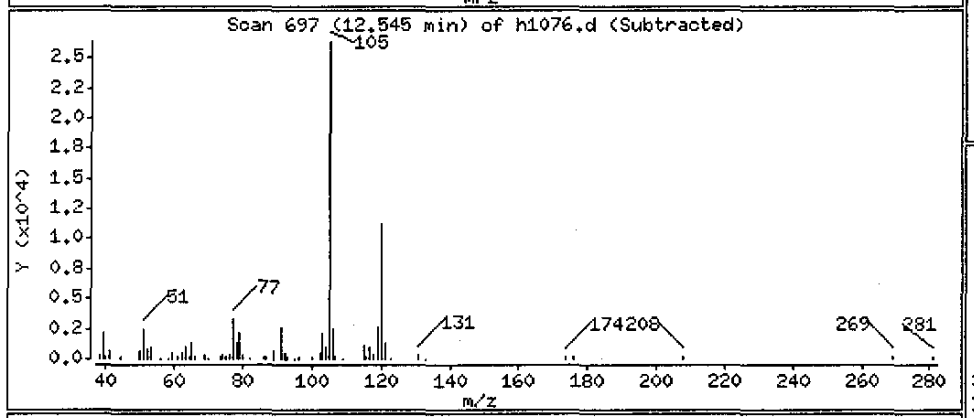
Column diameter: 0.53

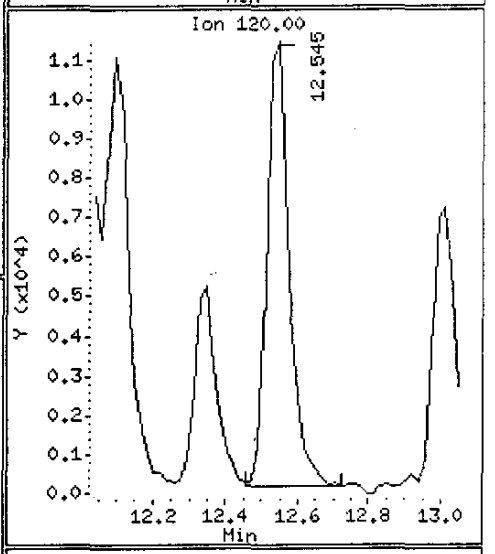
92 1,2,4-Trimethylbenzene

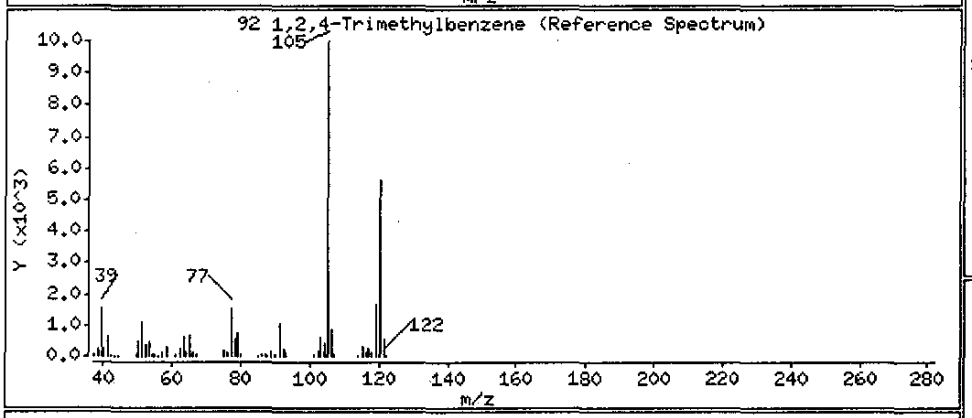
Concentration: 653.344 ug/L

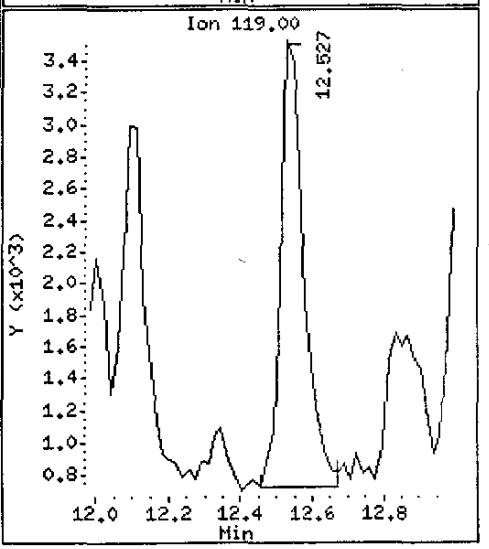


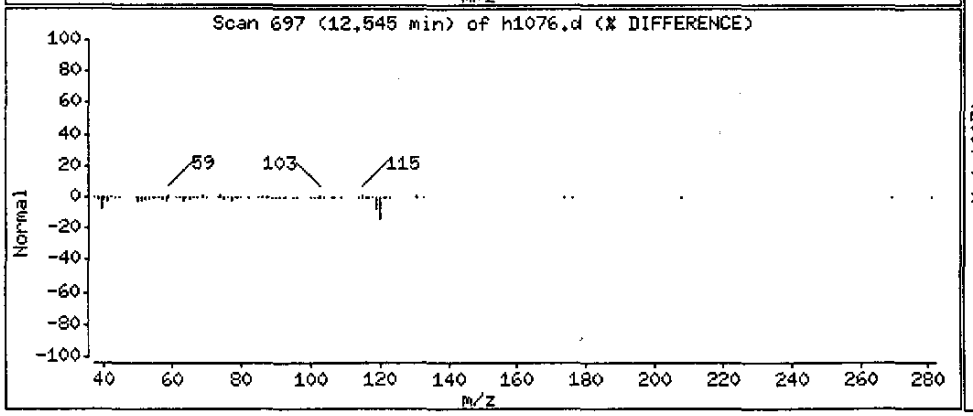












Data File: /chem/H.i/022004.b/h1076.d

Date : 20-FEB-2004 15:12

Client ID: MW-2

Instrument: H.i

Sample Info: F9KEJ1AA,0.02,D4B130209-002

Purge Volume: 20.0

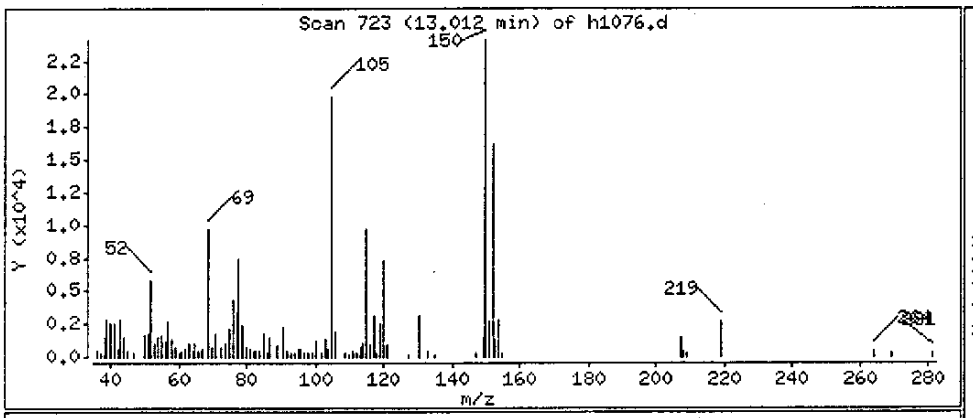
Operator: appelhansd

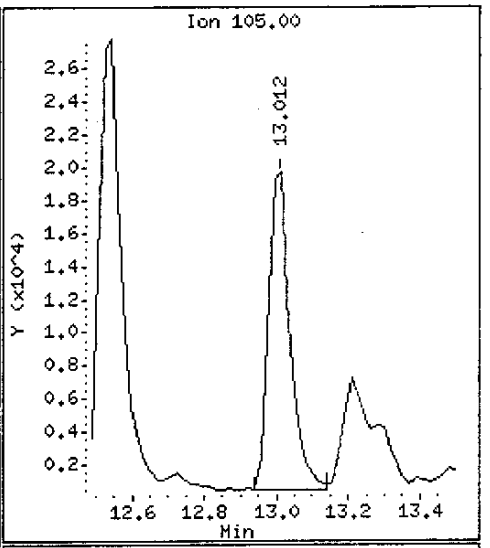
Column phase: DB624

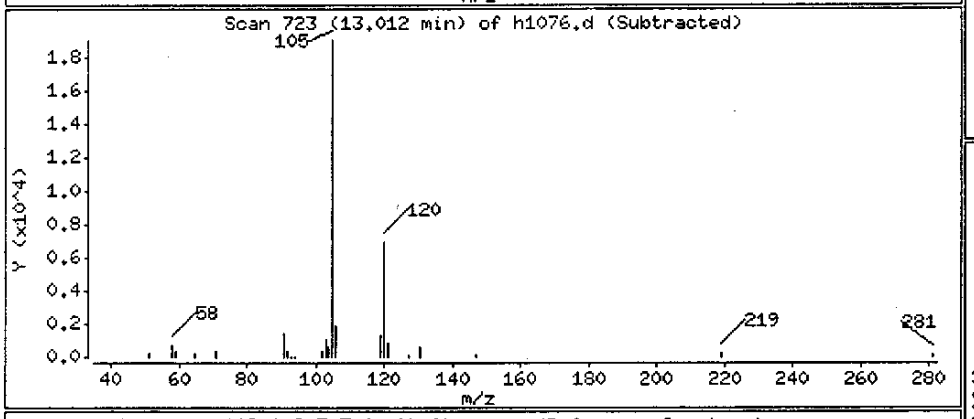
Column diameter: 0.53

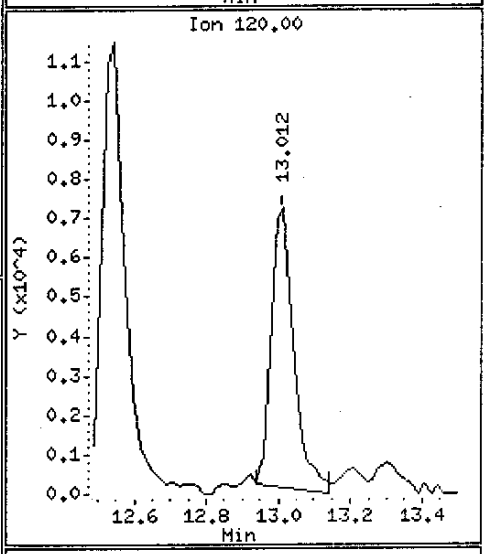
118 1,2,3-Trimethylbenzene

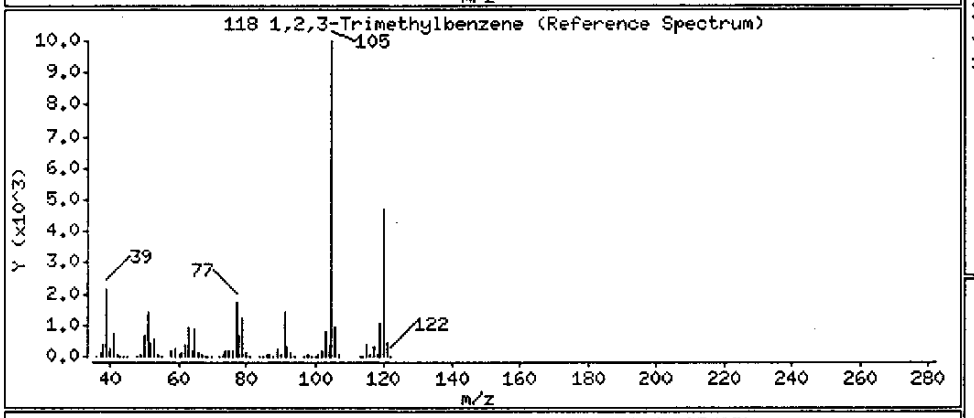
Concentration: 571.988 ug/L

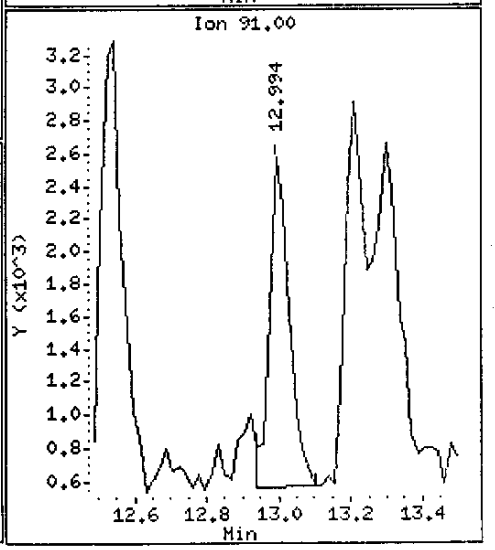


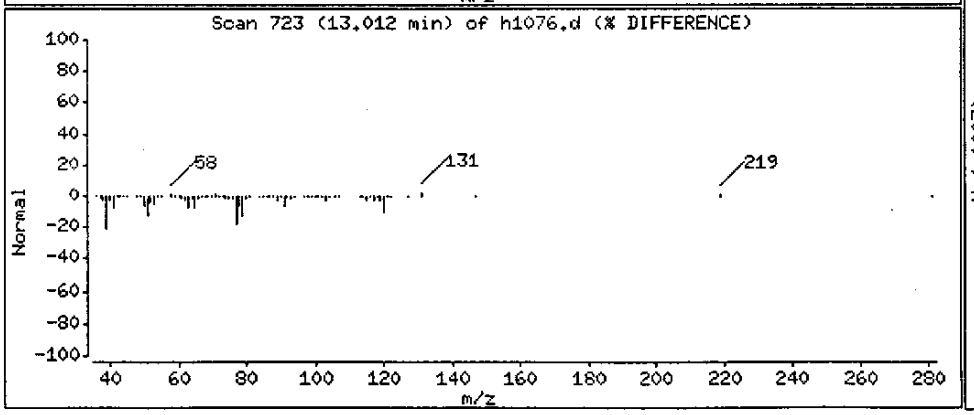












Data File: /chem/H.i/022004.b/h1077.d
Report Date: 20-Feb-2004 15:59

STL Denver

VOLATILE REPORT SW-846

Data file : /chem/H.i/022004.b/h1077.d
Lab Smp Id: F9KEK1AA Client Smp ID: MW-3
Inj Date : 20-FEB-2004 15:32
Operator : appelhansd Inst ID: H.i
Smp Info : F9KEK1AA,,D4B130209-003
Misc Info :
Comment : Purge and Trap Analysis
Method : /chem/H.i/022004.b/H-20ml-h2o.m
Meth Date : 20-Feb-2004 11:09 appelhad Quant Type: ISTD
Cal Date : 07-JAN-2004 15:24 Cal File: h0014.d
Als bottle: 2
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: H-all.sub
Target Version: 3.40
Processing Host: chemsv02

Concentration Formula: Amt * DF * Vp/Vs

Name	Value	Description
DF	1.000	Dilution Factor
Vp	20.000	Purge Volume (ml)
Vs	20.000	Sample Volume (ml)

DA 2-20

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/L)
* 48 Fluorobenzene	96	6.399	6.395	(1.000)	2043469	12.5000	
* 72 Chlorobenzene-d5	119	10.065	10.060	(1.000)	391494	12.5000	
* 96 1,4-Dichlorobenzene-d4	152	12.922	12.917	(1.000)	718658	12.5000	
$ 40 Dibromofluoromethane	111	5.590	5.586	(0.874)	848427	10.5547	10.5547
$ 44 1,2-Dichloroethane-d4	65	6.004	5.981	(0.938)	357326	9.97308	9.97308
$ 61 Toluene-d8	98	8.304	8.281	(0.825)	1545109	10.3244	10.3244
$ 82 Bromofluorobenzene	95	11.574	11.552	(1.150)	912882	11.1238	11.1238
M 1 1,2-Dichloroethene (total)	96.00	Compound Not Detected.					
M 2 Xylene (total)	106				343493	4.21387	4.21386
3 dichlorodifluoromethane	85.00	Compound Not Detected.					
4 Chloromethane	50.00	Compound Not Detected.					
5 Vinyl Chloride	62.00	Compound Not Detected.					
6 Ethylene Oxide	43.00	Compound Not Detected.					
117 Dichlorotetrafluoroethane	85.00	Compound Not Detected.					
123 1,2-dichloro-1,1,2-triflourom	117.00	Compound Not Detected.					
124 2,2-dichloro-1,1,1-trifluorom	83.00	Compound Not Detected.					

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/L)
7 Bromomethane	94.00	Compound Not Detected.					
8 Chloroethane	64.00	Compound Not Detected.					
9 Dichlorofluoromethane	67.00	Compound Not Detected.					
10 Trichlorofluoromethane	101.00	Compound Not Detected.					
11 Ethanol	45.00	Compound Not Detected.					
12 Ethyl Ether	59.00	Compound Not Detected.					
13 Acrolein	56.00	Compound Not Detected.					
15 Acetone	43.00	Compound Not Detected.					
14 1,1-Dichloroethene	96.00	Compound Not Detected.					
16 Trichlorotrifluoroethane	151.00	Compound Not Detected.					
17 Iodomethane	142.00	Compound Not Detected.					
19 Acetonitrile	41.00	Compound Not Detected.					
18 Carbon Disulfide	76.00	Compound Not Detected.					
20 Allyl Chloride	41.00	Compound Not Detected.					
119 Methyl Acetate	43.00	Compound Not Detected.					
21 Methylene Chloride	84	3.632	3.627	(0.568)	18168	0.35711	0.357110
125 2-Propanol	45.00	Compound Not Detected.					
22 tert-Butyl alcohol	59.00	Compound Not Detected.					
23 Acrylonitrile	53.00	Compound Not Detected.					
24 trans-1,2-Dichloroethene	96.00	Compound Not Detected.					
25 Methyl t-butyl ether	73.00	Compound Not Detected.					
26 Hexane	57.00	Compound Not Detected.					
27 1,1-Dichloroethane	63	4.369	4.364	(0.683)	157636	1.51478	1.51478
29 Vinyl acetate	43.00	Compound Not Detected.					
30 Isopropyl ether	87.00	Compound Not Detected.					
28 Chloroprene	53.00	Compound Not Detected.					
120 ETBE	59.00	Compound Not Detected.					
33 2-Butanone	43.00	Compound Not Detected.					
32 cis-1,2-Dichloroethene	96.00	Compound Not Detected.					
31 2,2-Dichloropropane	77.00	Compound Not Detected.					
35 Ethyl Acetate	43.00	Compound Not Detected.					
34 Propionitrile	54.00	Compound Not Detected.					
36 Methacrylonitrile	41.00	Compound Not Detected.					
37 Bromochloromethane	128.00	Compound Not Detected.					
39 Tetrahydrofuran	42.00	Compound Not Detected.					
38 Chloroform	83.00	Compound Not Detected.					
41 1,1,1-Trichloroethane	97	5.644	5.640	(0.882)	32285	0.28308	0.283077
114 Cyclohexane	56.00	Compound Not Detected.					
42 1,1-Dichloropropene	75.00	Compound Not Detected.					
43 Carbon Tetrachloride	117.00	Compound Not Detected.					
45 Isobutanol	41.00	Compound Not Detected.					
46 Benzene	78	6.076	6.071	(0.949)	208252	1.19033	1.19033
47 1,2-Dichloroethane	62.00	Compound Not Detected.					
121 TAME	73.00	Compound Not Detected.					
49 n-Butanol	56.00	Compound Not Detected.					
50 Trichloroethene	130	6.848	6.844	(1.070)	16561	0.24961	0.249614
115 2-Pentanone	43.00	Compound Not Detected.					

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/L)
52 1,2-Dichloropropane	63.00	Compound Not Detected.					
122 Methyl Cyclohexane	55.00	Compound Not Detected.					
53 Dibromomethane	93.00	Compound Not Detected.					
54 Methyl Methacrylate	100.00	Compound Not Detected.					
55 1,4-Dioxane	88.00	Compound Not Detected.					
56 Bromodichloromethane	83.00	Compound Not Detected.					
57 2-nitropropane	41.00	Compound Not Detected.					
113 2-Chloroethyl vinyl ether	63.00	Compound Not Detected.					
59 cis-1,3-Dichloropropene	75.00	Compound Not Detected.					
60 4-Methyl-2-pentanone	43.00	Compound Not Detected.					
62 Toluene	91	8.376	8.389	(0.832)	164635	0.79720	0.797200
63 trans-1,3-Dichloropropene	75.00	Compound Not Detected.					
64 Ethyl methacrylate	69.00	Compound Not Detected.					
65 1,1,2-Trichloroethane	97.00	Compound Not Detected.					
67 1,3-Dichloropropane	76.00	Compound Not Detected.					
66 Tetrachloroethene	164	9.059	9.054	(0.900)	14734	0.22314	0.223138
68 2-Hexanone	43.00	Compound Not Detected.					
126 Tetrahydrothiophene	60.00	Compound Not Detected.					
69 Dibromochloromethane	129.00	Compound Not Detected.					
70 1,2-Dibromoethane	107.00	Compound Not Detected.					
71 1-Chlorohexane	91.00	Compound Not Detected.					
73 Chlorobenzene	112.00	Compound Not Detected.					
74 1,1,1,2-Tetrachloroethane	131.00	Compound Not Detected.					
75 Ethylbenzene	106	10.244	10.240	(1.018)	80131	1.25266	1.25266
76 m and p-Xylene	106	10.388	10.383	(1.032)	172055	1.99204	1.99204
77 o-Xylene	106	10.891	10.887	(1.082)	171438	2.22182	2.22182
78 Styrene	104.00	Compound Not Detected.					
79 Bromoform	173.00	Compound Not Detected.					
80 isopropyl benzene	105	11.377	11.372	(1.130)	136519	0.53679	0.536793
116 cis-1,4-Dichloro-2-butene	53.00	Compound Not Detected.					
81 Cyclohexanone	55.00	Compound Not Detected.					
83 1,1,2,2-Tetrachloroethane	83.00	Compound Not Detected.					
84 Bromobenzene	156.00	Compound Not Detected.					
85 1,2,3-Trichloropropane	110.00	Compound Not Detected.					
86 t-1,4-Dichloro-2-butene	53.00	Compound Not Detected.					
87 n-Propylbenzene	120	11.880	11.893	(0.919)	53048	0.85227	0.852266
88 2-Chlorotoluene	126.00	Compound Not Detected.					
89 1,3,5-Trimethylbenzene	105	12.095	12.091	(0.936)	1268527	6.05459	6.05459
90 4-Chlorotoluene	126.00	Compound Not Detected.					
91 tert-Butylbenzene	119.00	Compound Not Detected.					
92 1,2,4-Trimethylbenzene	105	12.544	12.540	(0.971)	808381	4.13481	4.13481
93 sec-Butylbenzene	134.00	Compound Not Detected.					
94 m-Dichlorobenzene	146.00	Compound Not Detected.					
95 4-Isopropyltoluene	119.00	Compound Not Detected.					
97 p-dichlorobenzene	146.00	Compound Not Detected.					
118 1,2,3-Trimethylbenzene	105	12.994	12.989	(2.031)	521420	3.78979	3.78979(a)
98 n-Butylbenzene	91.00	Compound Not Detected.					

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/L)
99 o-Dichlorobenzene	146.00	Compound Not Detected.					
100 1,2-Dibromo-3-chloropropane	157.00	Compound Not Detected.					
101 1,2,4-Trichlorobenzene	180.00	Compound Not Detected.					
102 Hexachlorobutadiene	225.00	Compound Not Detected.					
127 Naphthalene	128.00	Compound Not Detected.					
104 1,2,3-Trichlorobenzene	180.00	Compound Not Detected.					

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

Data File: /chem/H.i/022004.b/h1077.d
Report Date: 20-Feb-2004 15:59

STL Denver

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: H.i
Lab File ID: h1077.d
Lab Smp Id: F9KEK1AA
Analysis Type: VOA
Quant Type: ISTD
Operator: appelhansd
Method File: /chem/H.i/022004.b/H-20ml-h2o.m
Misc Info:

Calibration Date: 02/20/4
Calibration Time: 1059
Client Smp ID: MW-3
Level: LOW
Sample Type: WATER

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
48 Fluorobenzene	2466684	1233342	4933368	2043469	-17.16
72 Chlorobenzene-d5	459303	229652	918606	391494	-14.76
96 1,4-Dichlorobenze	730993	365496	1461986	718658	-1.69

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
48 Fluorobenzene	6.39	5.89	6.89	6.40	0.07
72 Chlorobenzene-d5	10.06	9.56	10.56	10.06	0.04
96 1,4-Dichlorobenze	12.92	12.42	13.42	12.92	0.03

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem/H.i/022004.b/h1077.d Page 6
Report Date: 20-Feb-2004 15:59

STL Denver

RECOVERY REPORT

Client Name: ARCADIS GERAGHTY & M13-FEB-2004 Client SDG: D4B130209
Sample Matrix: LIQUID Fraction: VOA
Lab Smp Id: F9KEK1AA Client Smp ID: MW-3
Level: LOW Operator: appelhansd
Data Type: MS DATA SampleType: SAMPLE
SpikeList File: dcs-h20.spk Quant Type: ISTD
Sublist File: H-all.sub
Method File: /chem/H.i/022004.b/H-20ml-h2o.m
Misc Info:

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 40 Dibromofluorometha	11.5000	10.5547	91.78	76-116
$ 44 1,2-Dichloroethane	11.5000	9.97308	86.72	59-129
$ 61 Toluene-d8	11.5000	10.3244	89.78	76-116
$ 82 Bromofluorobenzene	11.5000	11.1238	96.73	74-114

Data File: /chem/H.i/022004.b/h1077.d
Date : 20-FEB-2004 15:32
Client ID: MW-3
Sample Info: F9KEK1AA,,D4B130209-003
Purge Volume: 20.0
Column phase: DB624

Instrument: H.i
Operator: appelhansd
Column diameter: 0.53

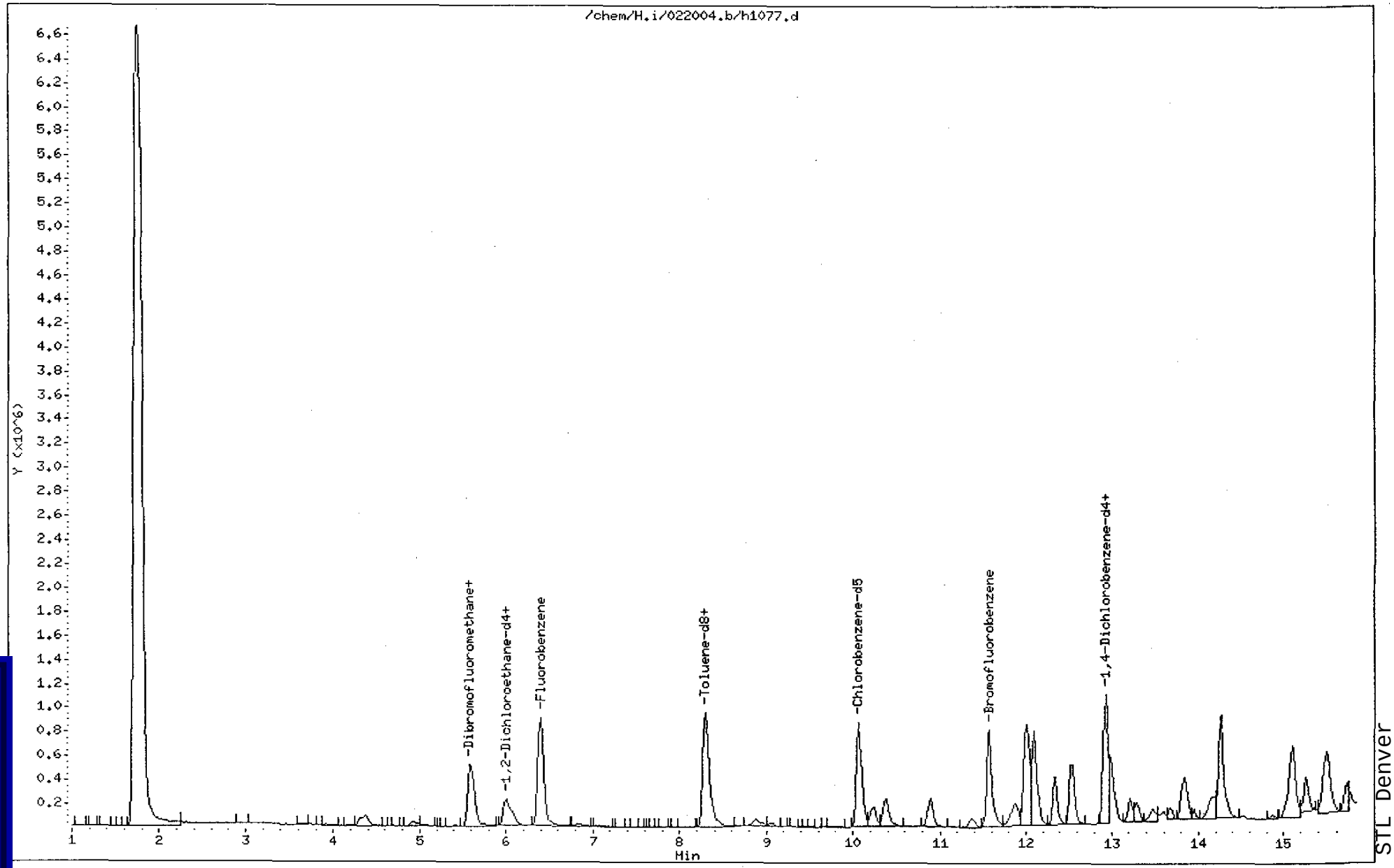


Table of Contents

Data File: /chem/H.i/022004.b/h1077.d

Date : 20-FEB-2004 15:32

Client ID: MW-3

Instrument: H.i

Sample Info: F9KEK1AA,,D4B130209-003

Purge Volume: 20.0

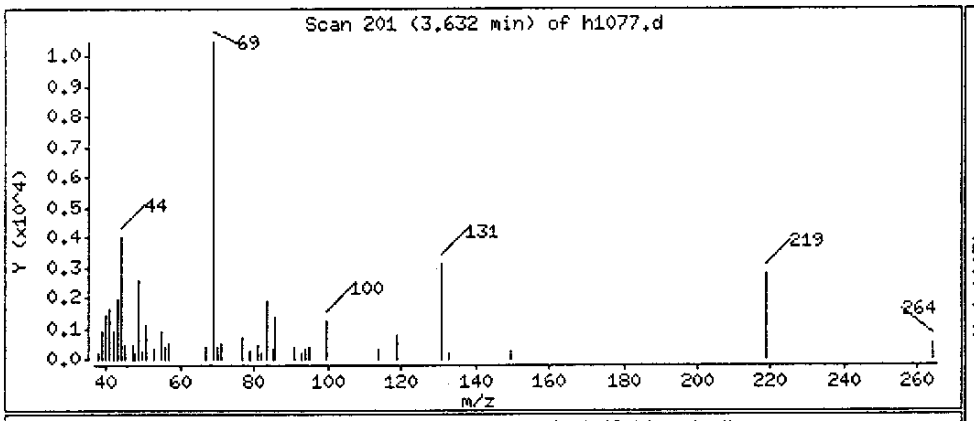
Operator: appelhansd

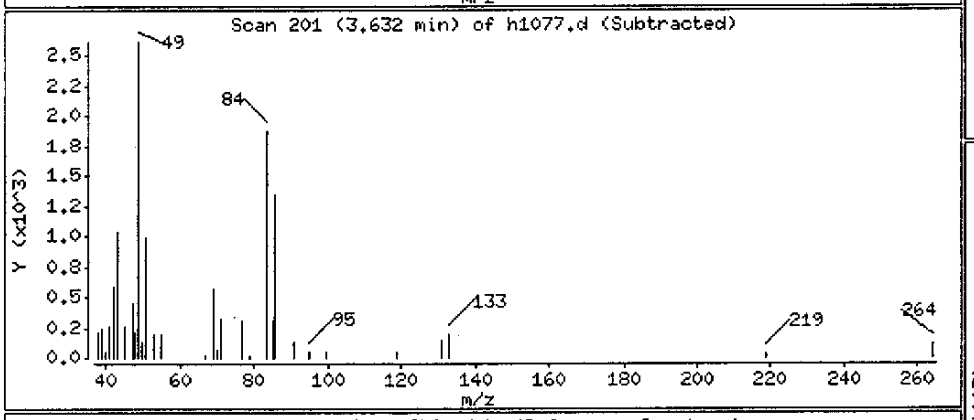
Column phase: DB624

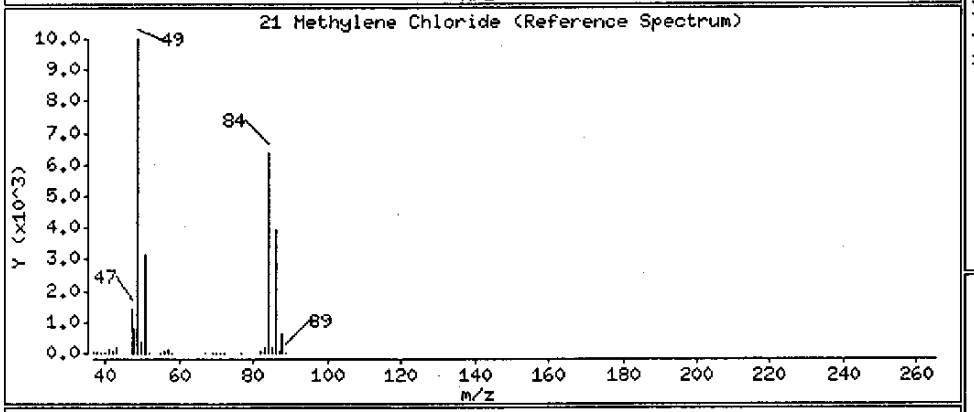
Column diameter: 0.53

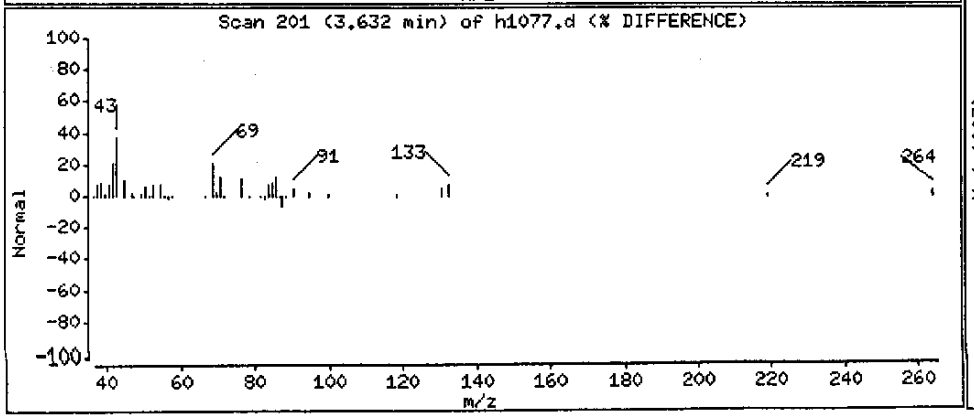
21 Methylene Chloride

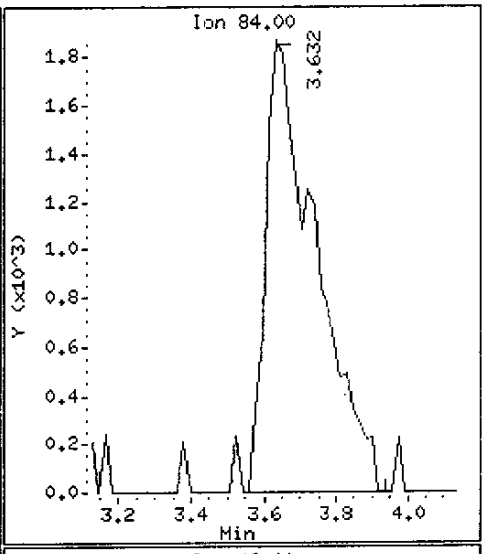
Concentration: 0.357110 ug/L

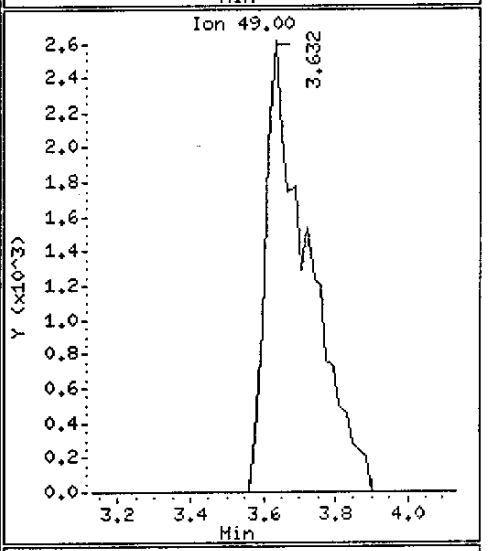


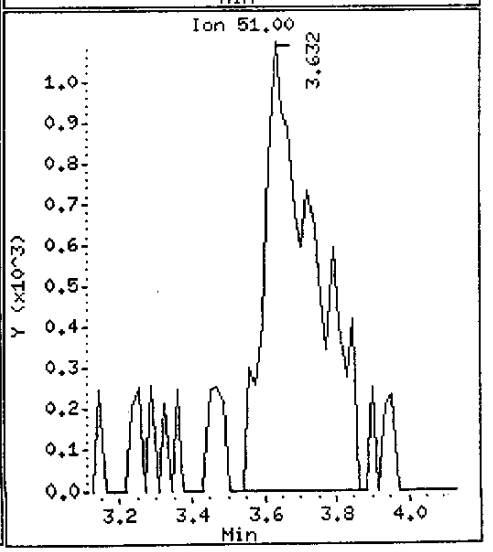












Data File: /chem/H.i/022004.b/h1077.d

Date : 20-FEB-2004 15:32

Client ID: MW-3

Instrument: H.i

Sample Info: F9KEK1AA,,D4B130209-003

Purge Volume: 20.0

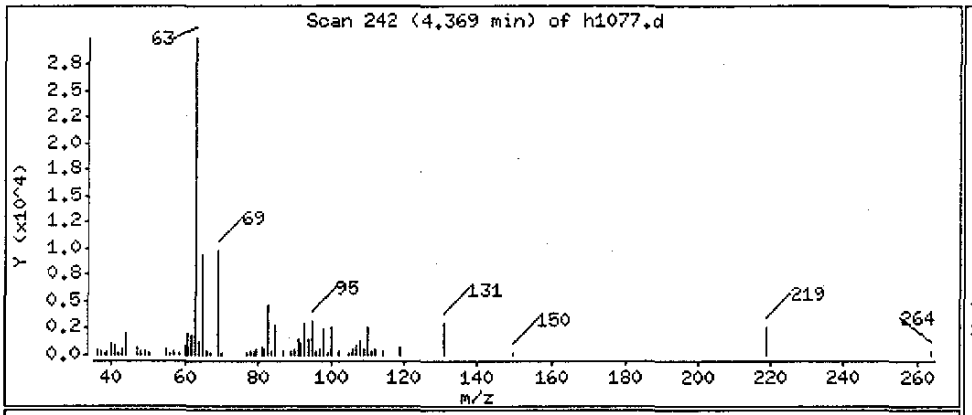
Operator: appelhansd

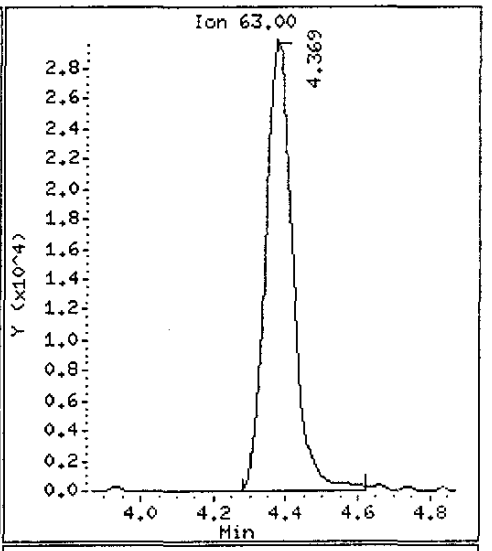
Column phase: DB624

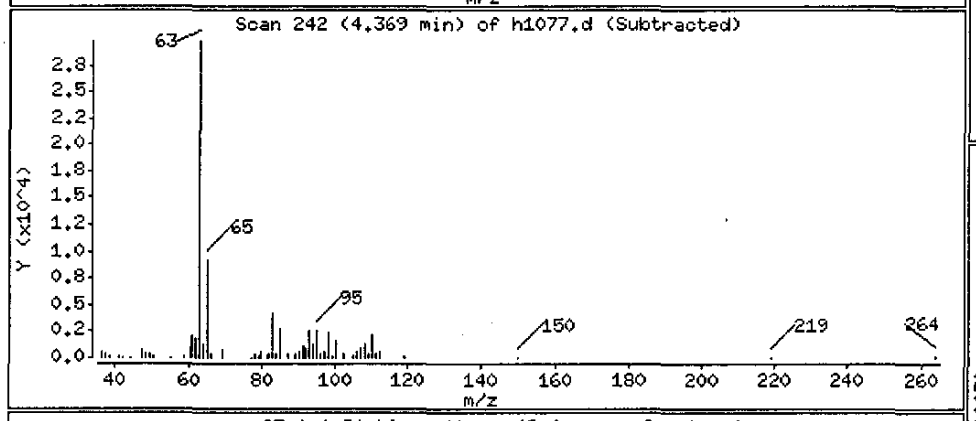
Column diameter: 0.53

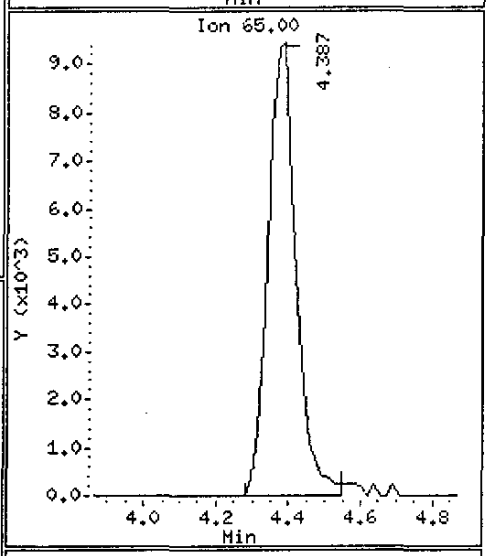
27 1,1-Dichloroethane

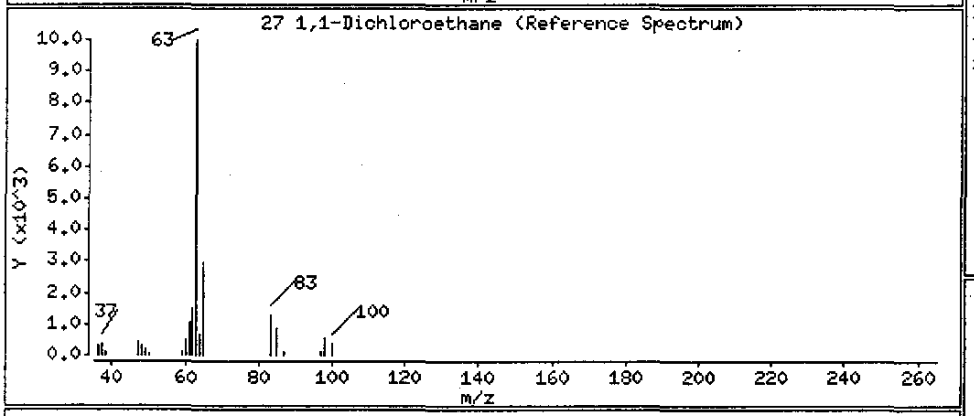
Concentration: 1.51478 ug/L

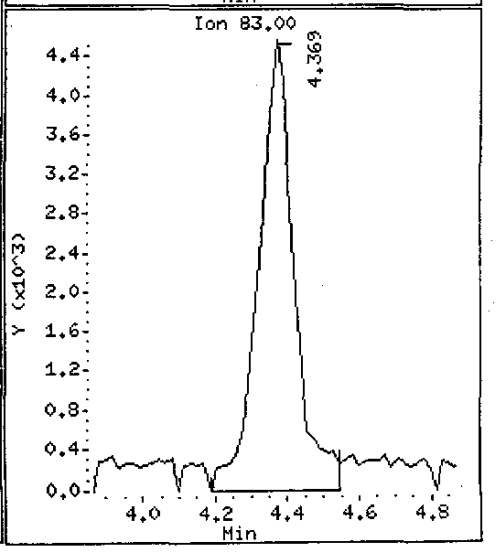


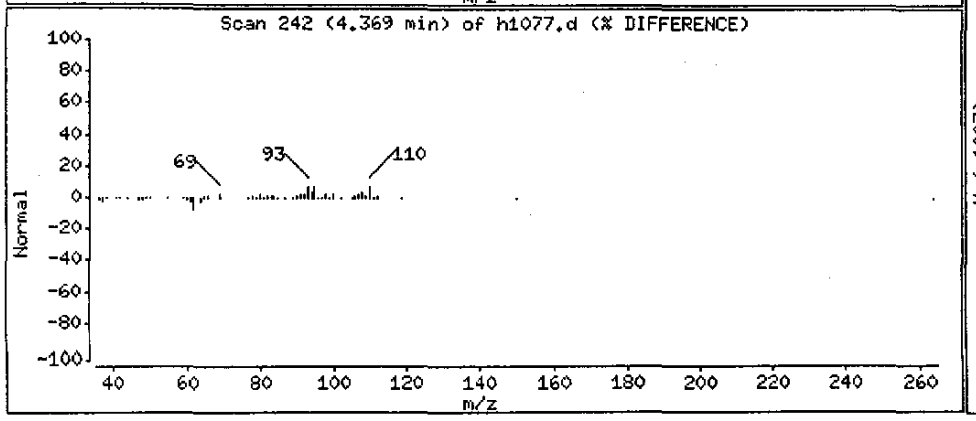












Data File: /chem/H.i/022004.b/h1077.d

Date : 20-FEB-2004 15:32

Client ID: MW-3

Instrument: H.i

Sample Info: F9KEK1AA,,D4B130209-003

Purge Volume: 20.0

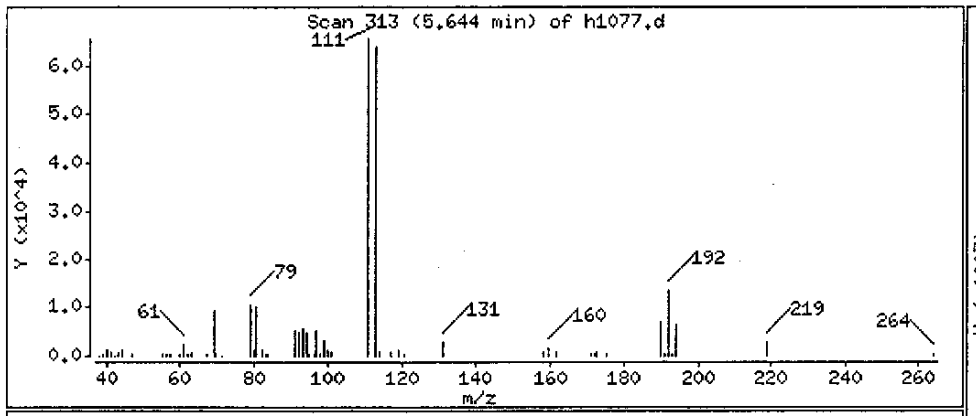
Operator: appelhansd

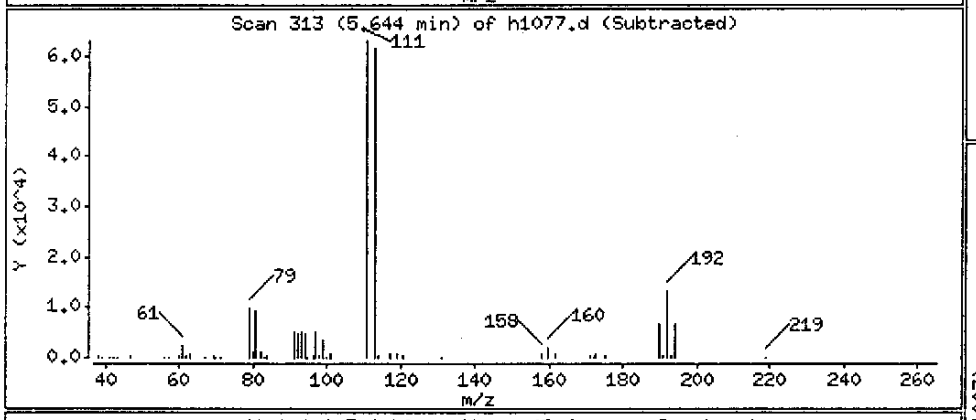
Column phase: DB624

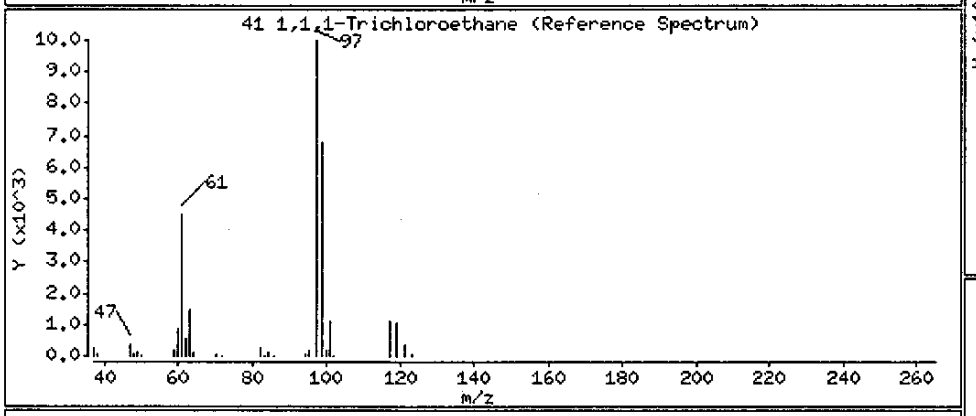
Column diameter: 0.53

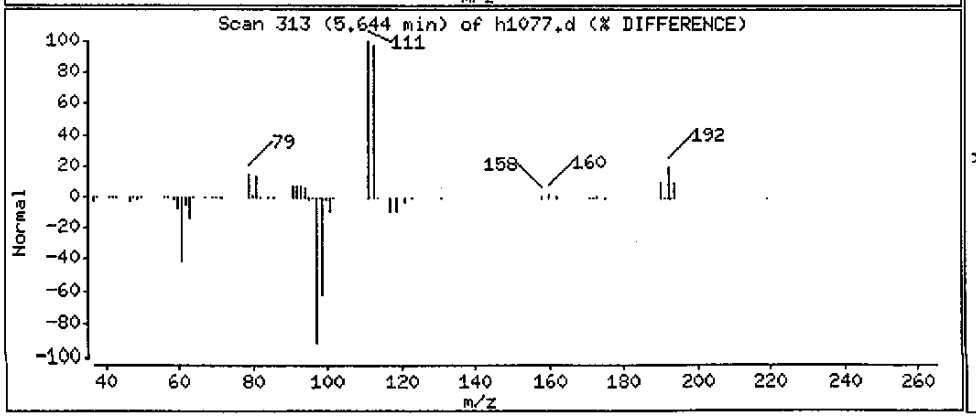
41 1,1,1-Trichloroethane

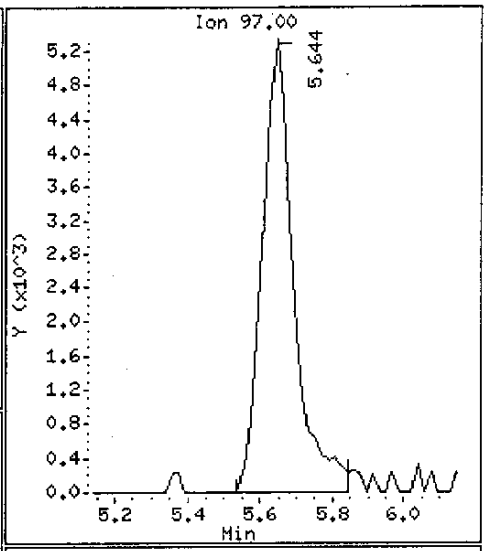
Concentration: 0.283077 ug/L

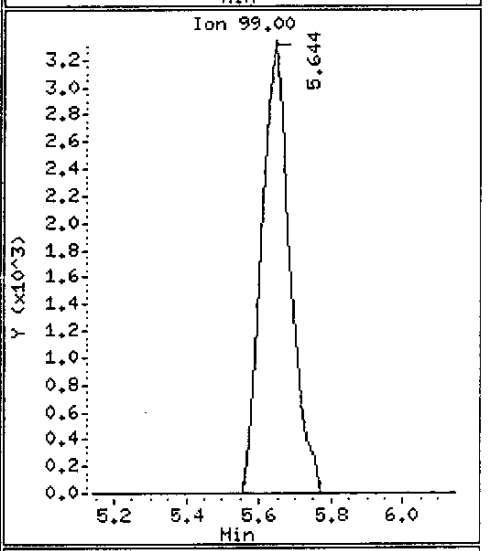


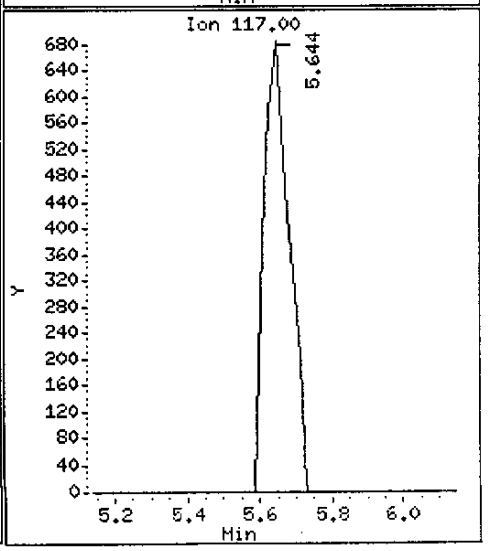












Data File: /chem/H.i/022004.b/h1077.d

Date : 20-FEB-2004 15:32

Client ID: MW-3

Instrument: H.i

Sample Info: F9KEK1AA,,D4B130209-003

Purge Volume: 20.0

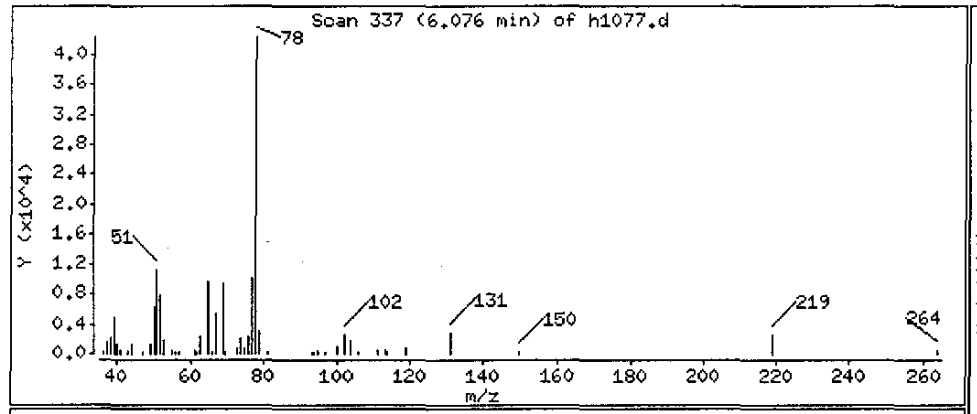
Operator: appelhansd

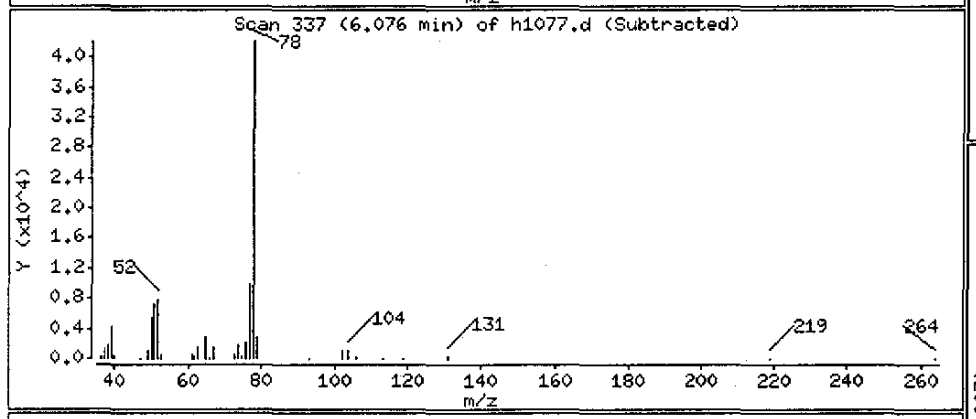
Column phase: DB624

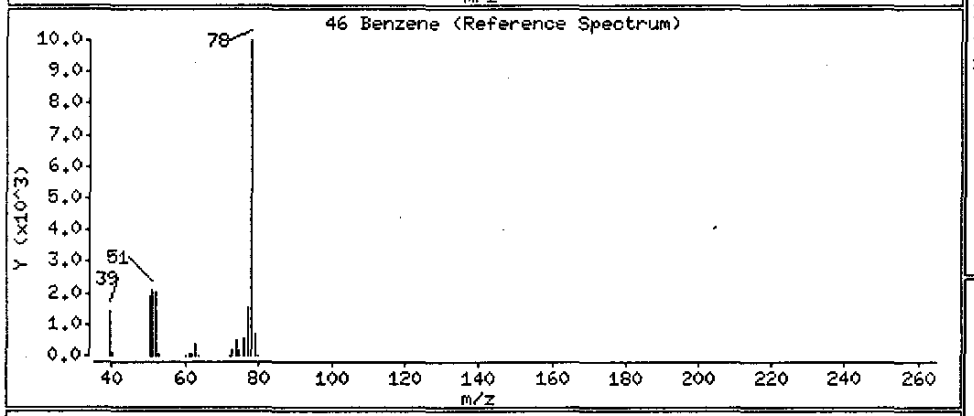
Column diameter: 0.53

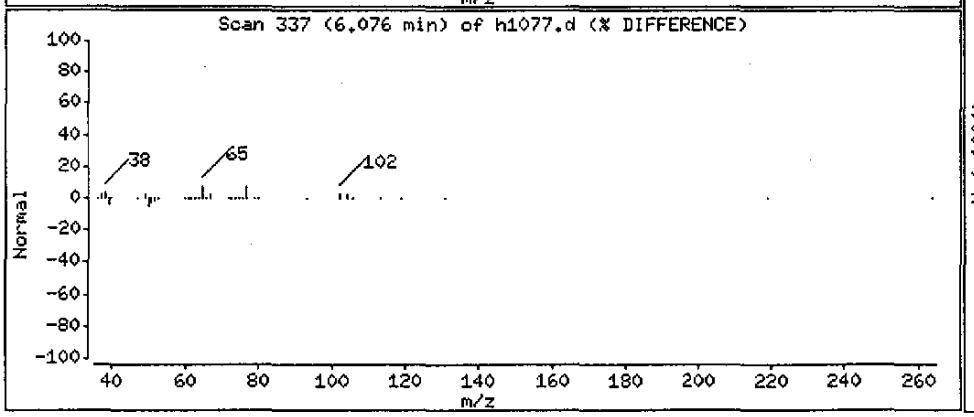
46 Benzene

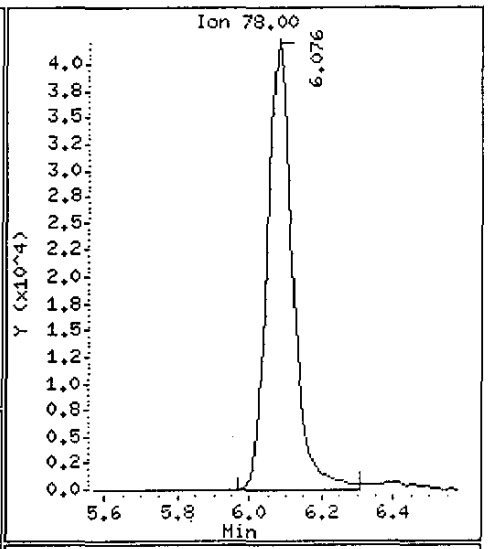
Concentration: 1.19033 ug/L

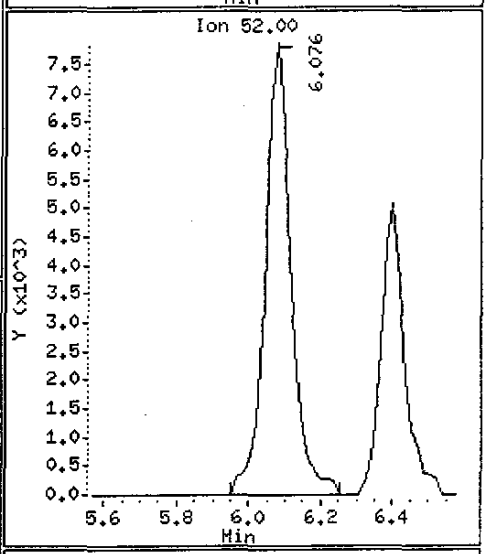


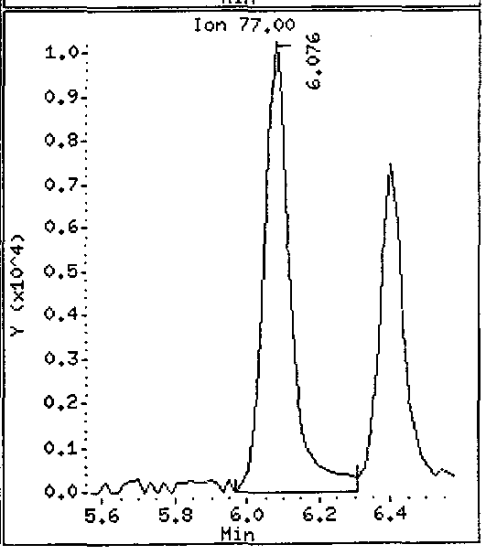












Data File: /chem/H.i/022004.b/h1077.d

Date : 20-FEB-2004 15:32

Client ID: MW-3

Instrument: H.i

Sample Info: F9KEK1AA,,D4B130209-003

Purge Volume: 20.0

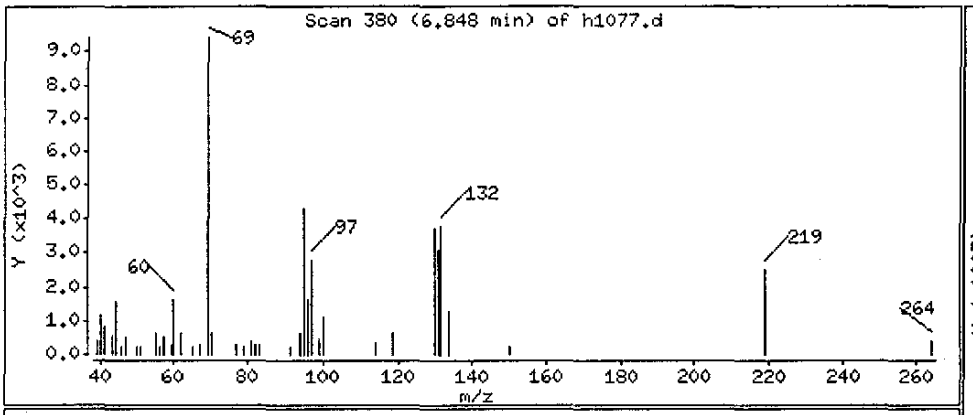
Operator: appelhansd

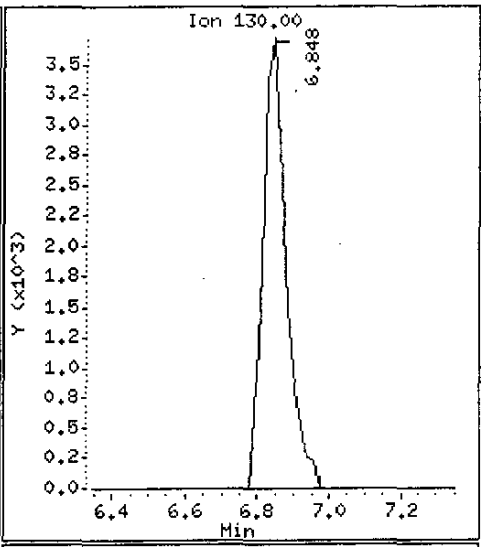
Column phase: DB624

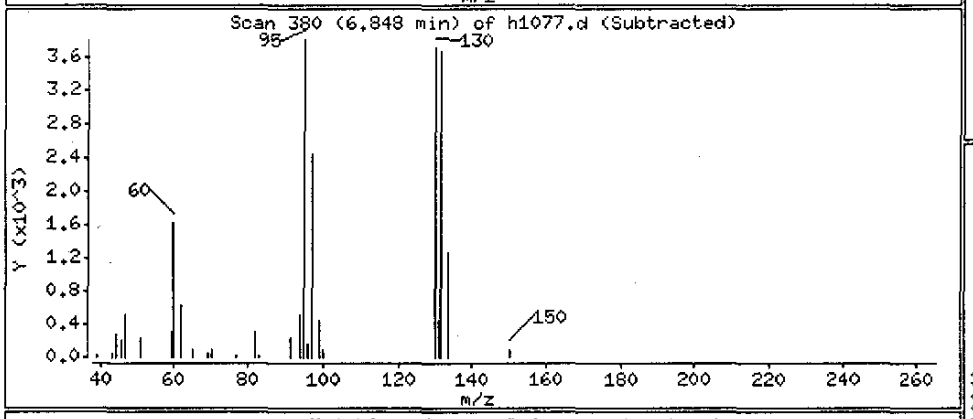
Column diameter: 0.53

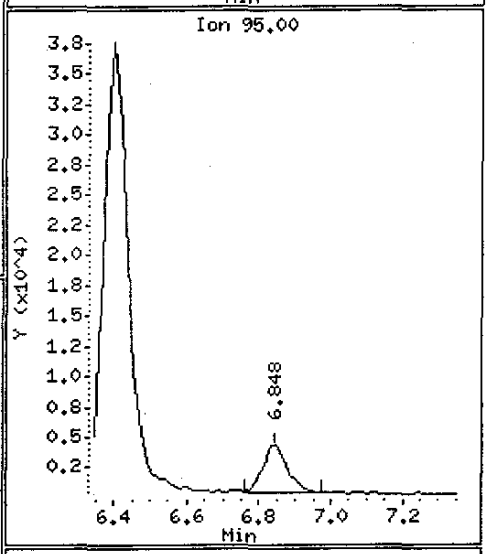
50 Trichloroethene

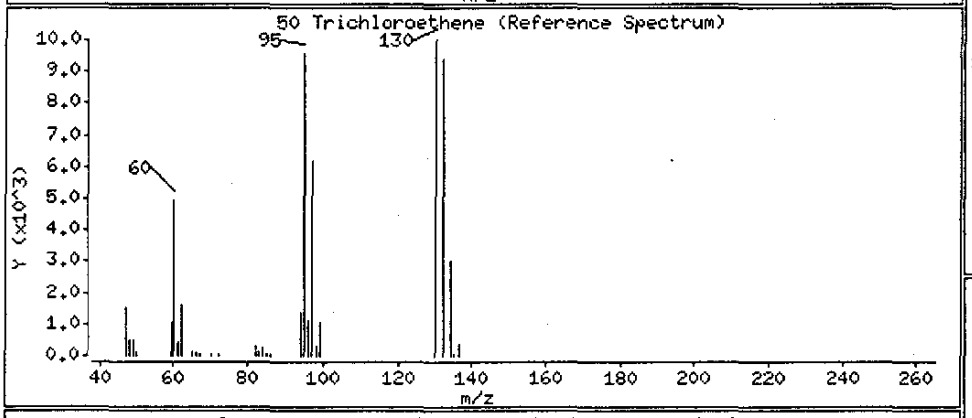
Concentration: 0.249614 ug/L

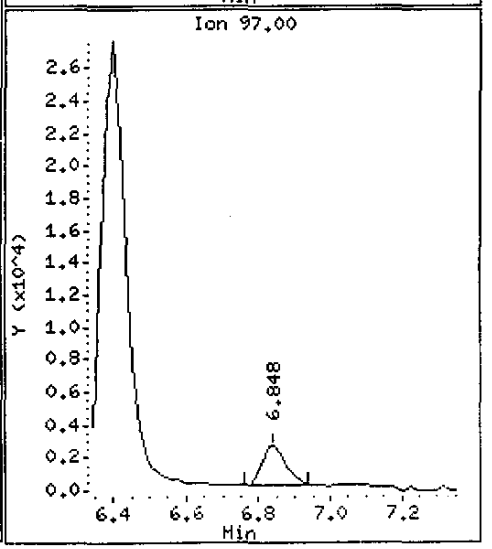


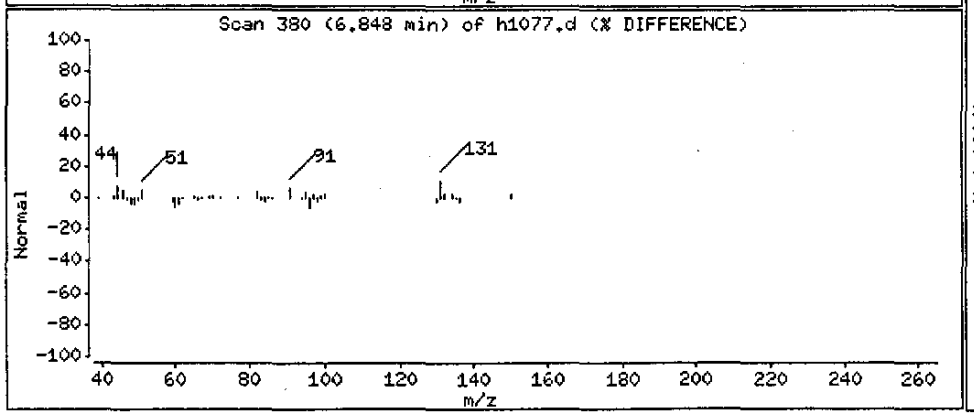












Data File: /chem/H.i/022004.b/h1077.d

Date : 20-FEB-2004 15:32

Client ID: MW-3

Instrument: H.i

Sample Info: F9KEK1AA,,D4B130209-003

Purge Volume: 20.0

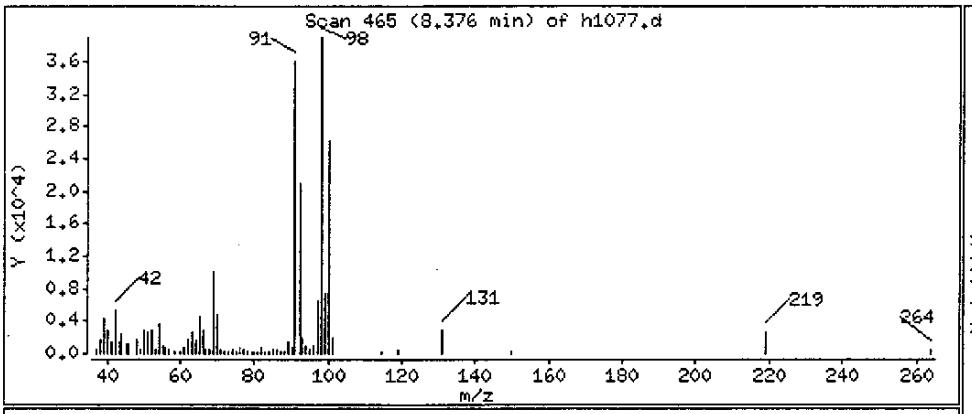
Operator: appelhansd

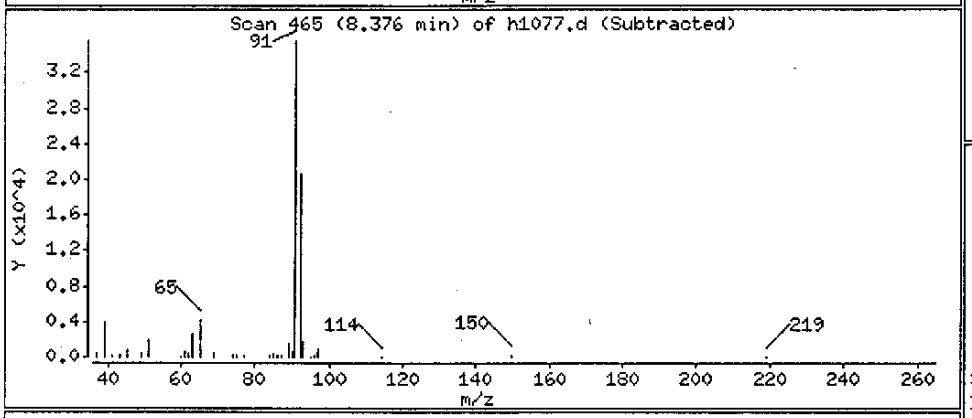
Column phase: DB624

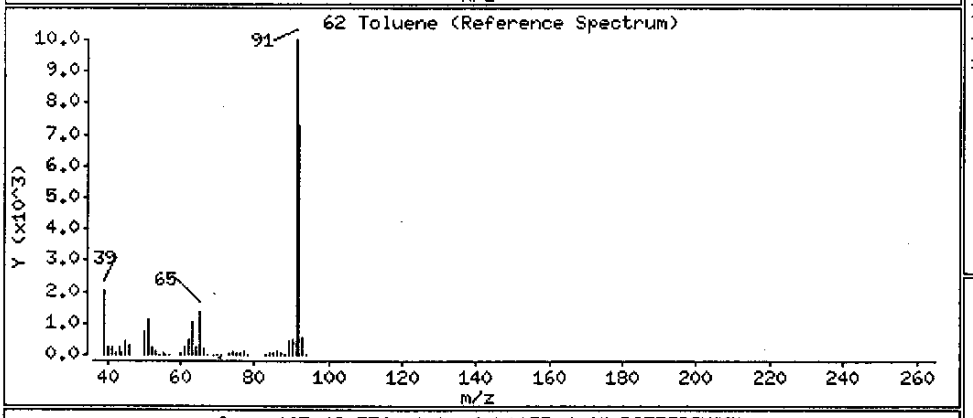
Column diameter: 0.53

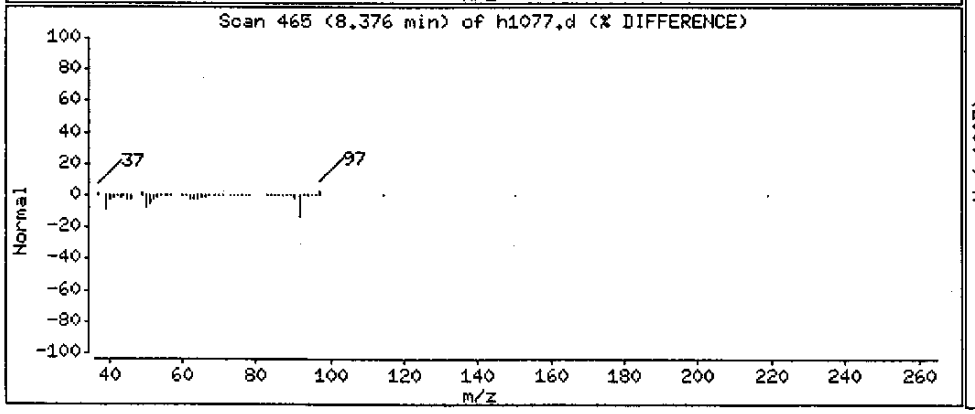
62 Toluene

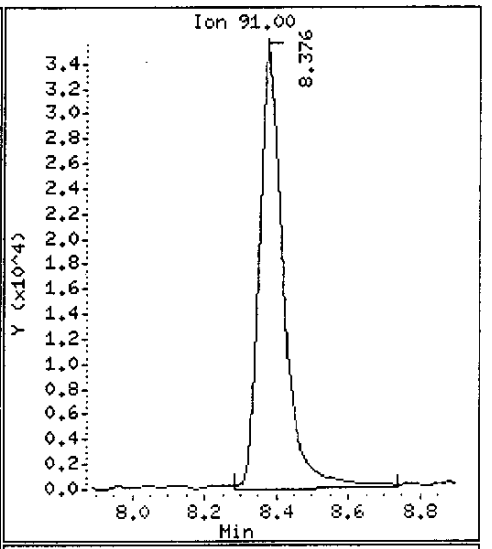
Concentration: 0.797200 ug/L

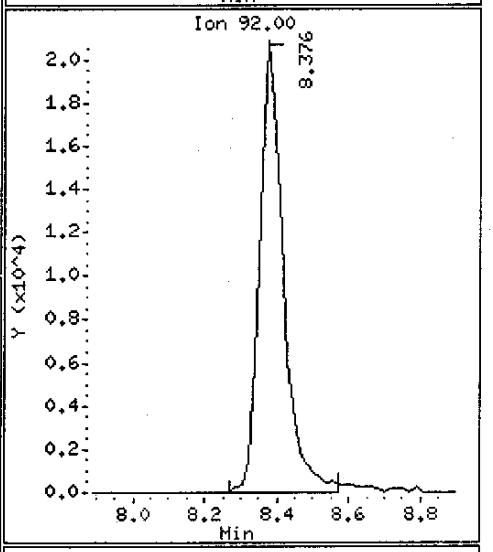


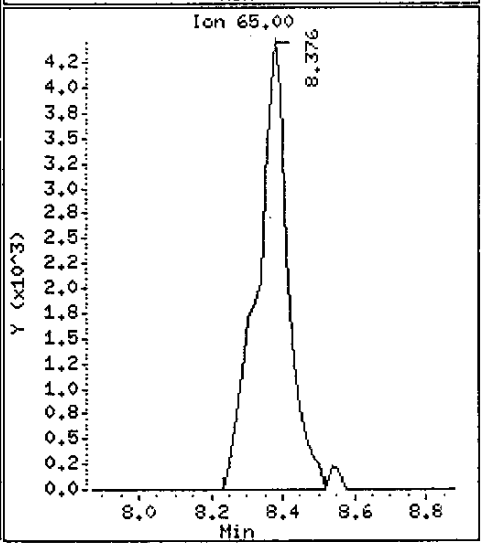












Data File: /chem/H.i/022004.b/h1077.d

Date : 20-FEB-2004 15:32

Client ID: MW-3

Instrument: H.i

Sample Info: F9KEK1AA,,D4B130209-003

Purge Volume: 20.0

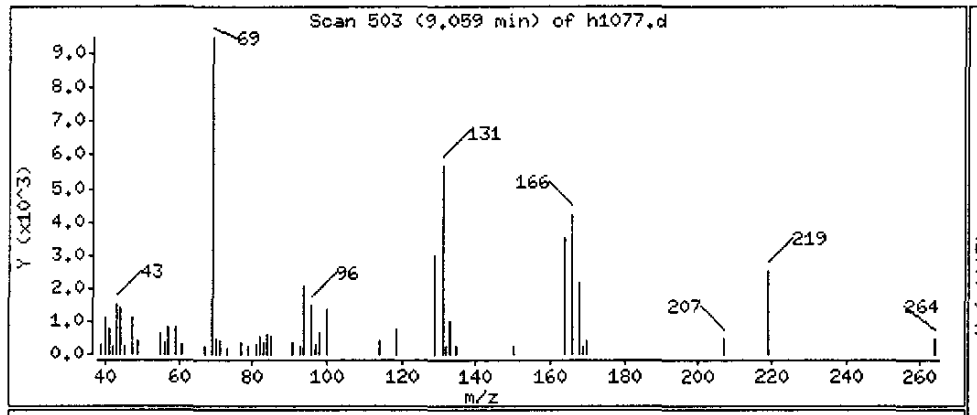
Operator: appelhansd

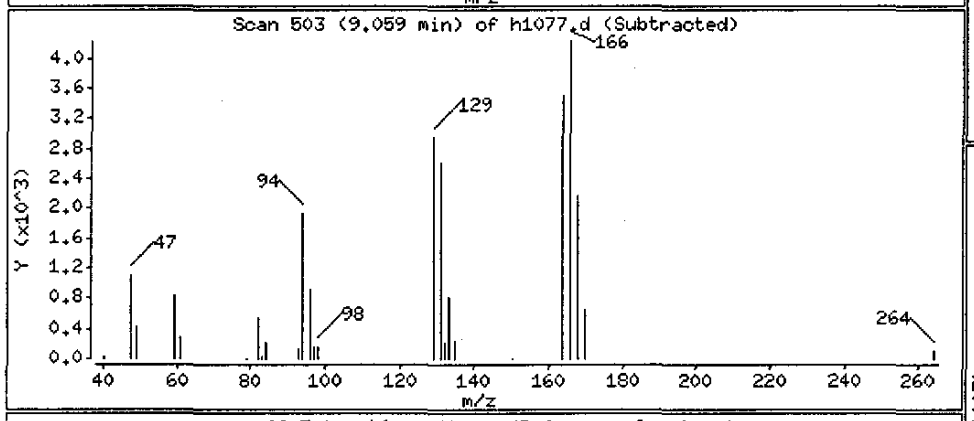
Column phase: DB624

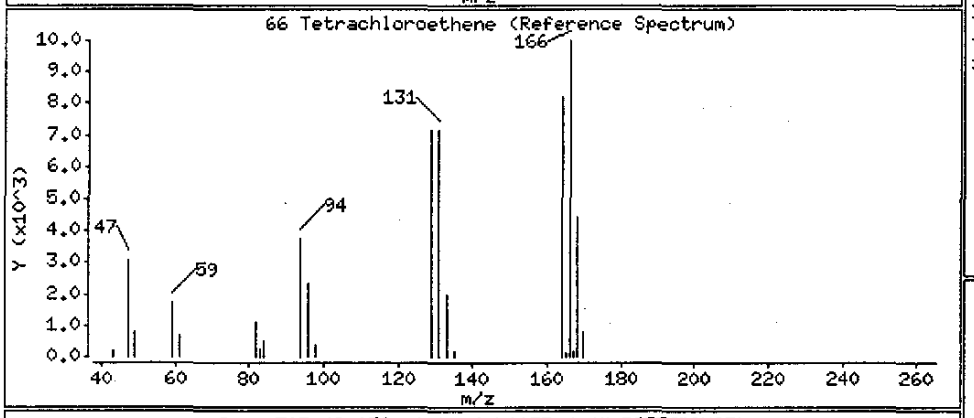
Column diameter: 0.53

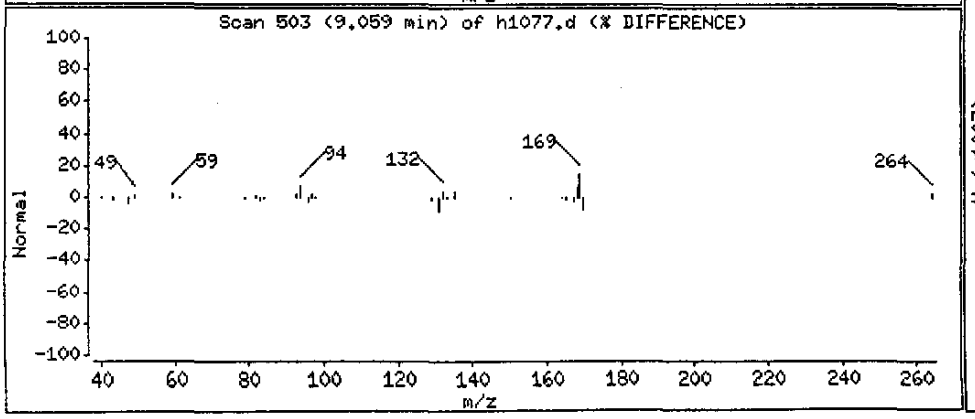
66 Tetrachloroethene

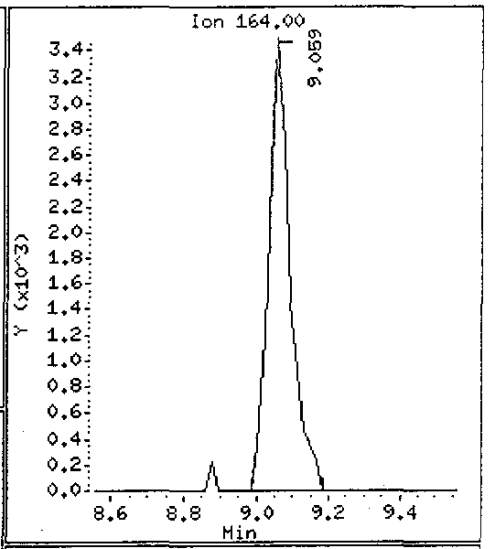
Concentration: 0.223138 ug/L

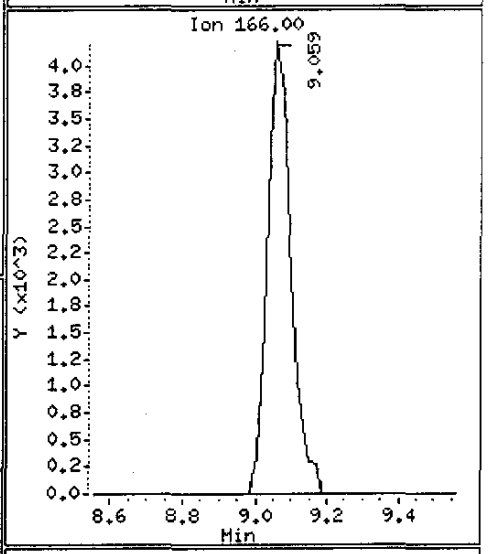


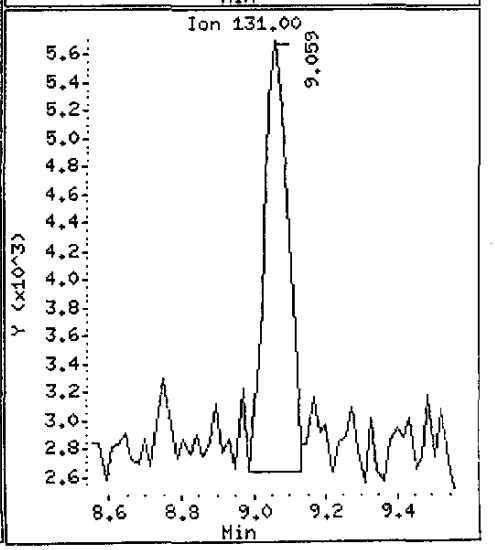












Data File: /chem/H.i/022004.b/h1077.d

Date : 20-FEB-2004 15:32

Client ID: MW-3

Instrument: H.i

Sample Info: F9KEK1AA,,D4B130209-003

Purge Volume: 20.0

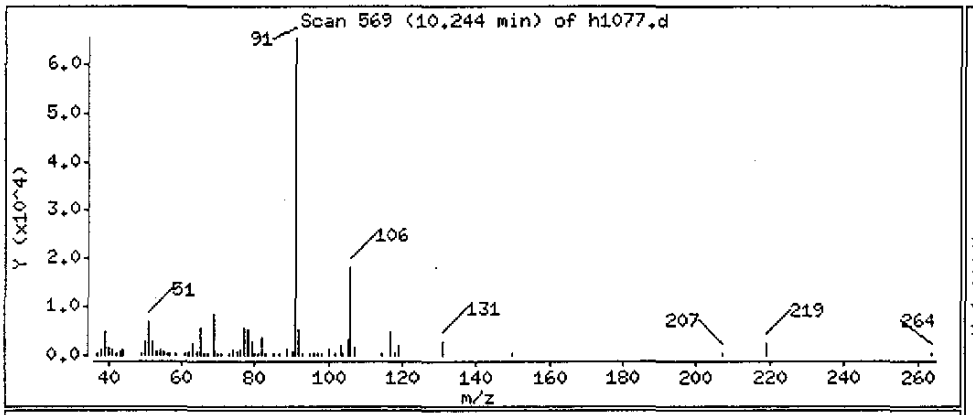
Operator: appelhansd

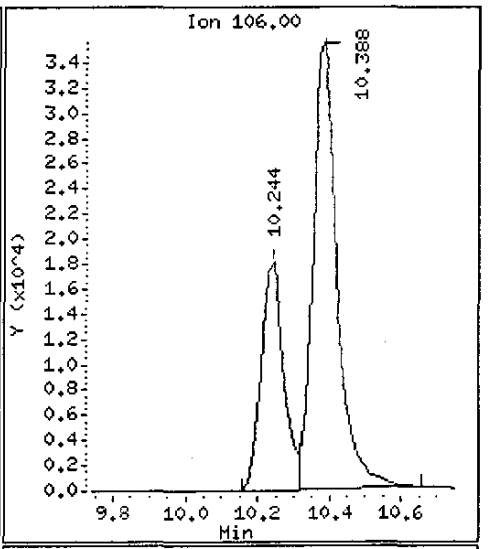
Column phase: DB624

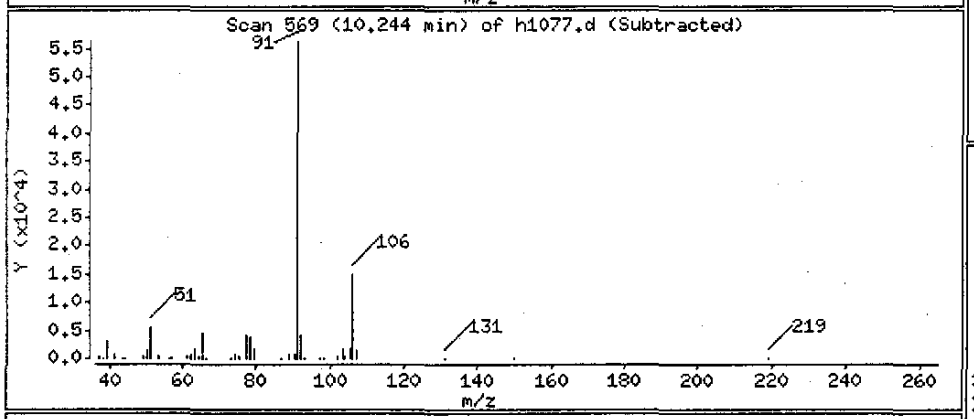
Column diameter: 0.53

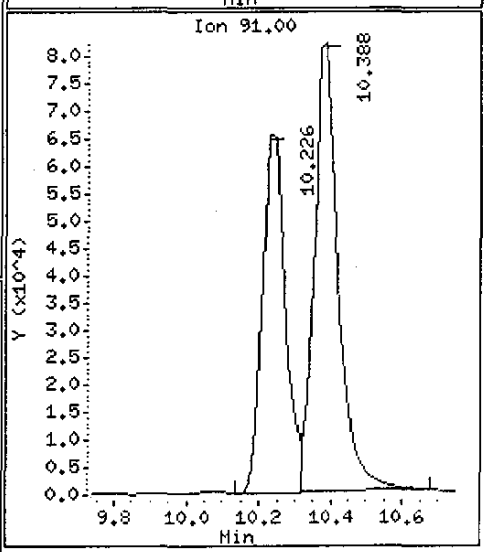
75 Ethylbenzene

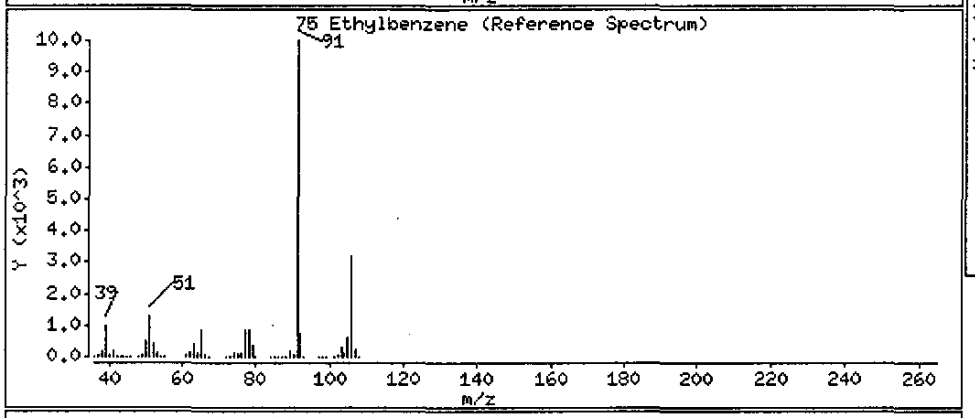
Concentration: 1.25266 ug/L

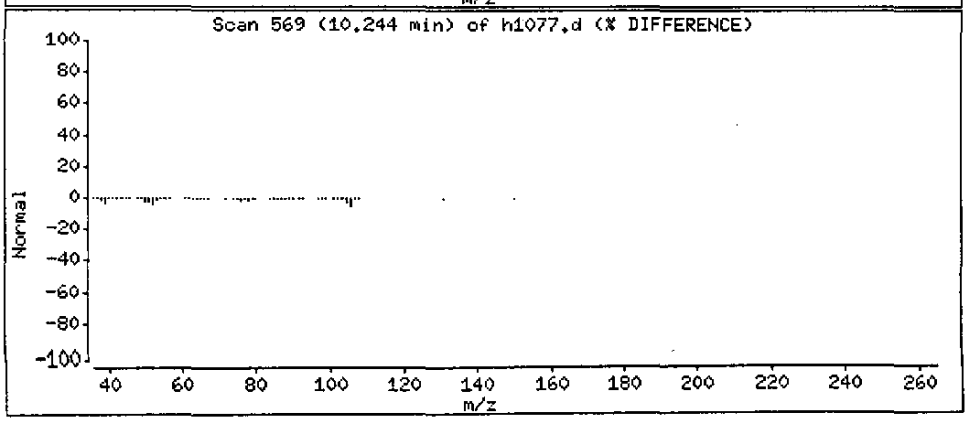












Data File: /chem/H.i/022004.b/h1077.d

Date : 20-FEB-2004 15:32

Client ID: MW-3

Instrument: H.i

Sample Info: F9KEK1AA,,D4B130209-003

Purge Volume: 20.0

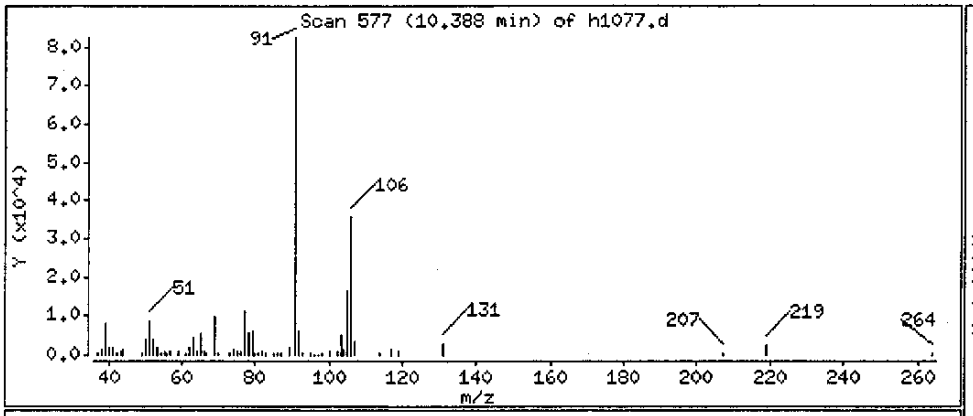
Operator: appelhansd

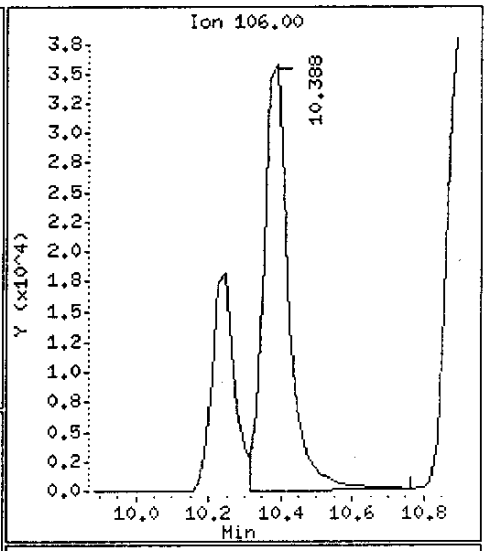
Column phase: DB624

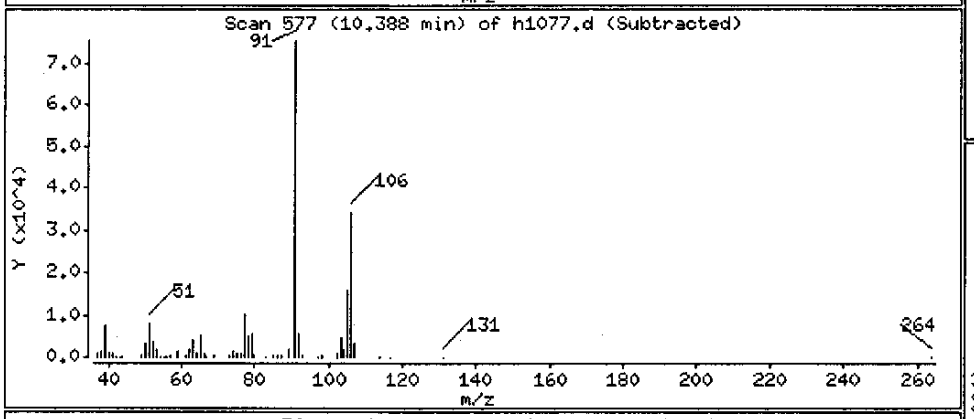
Column diameter: 0.53

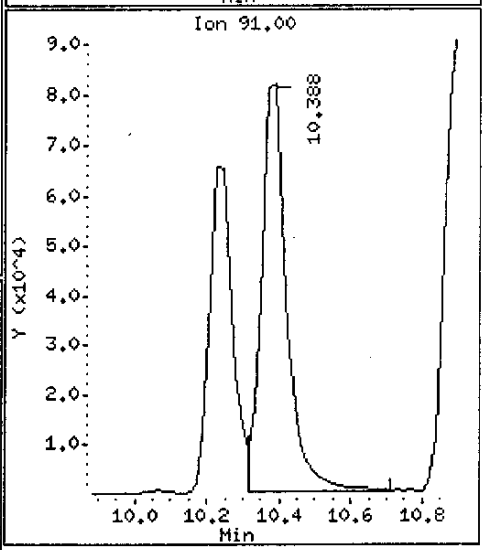
76 m and p-Xylene

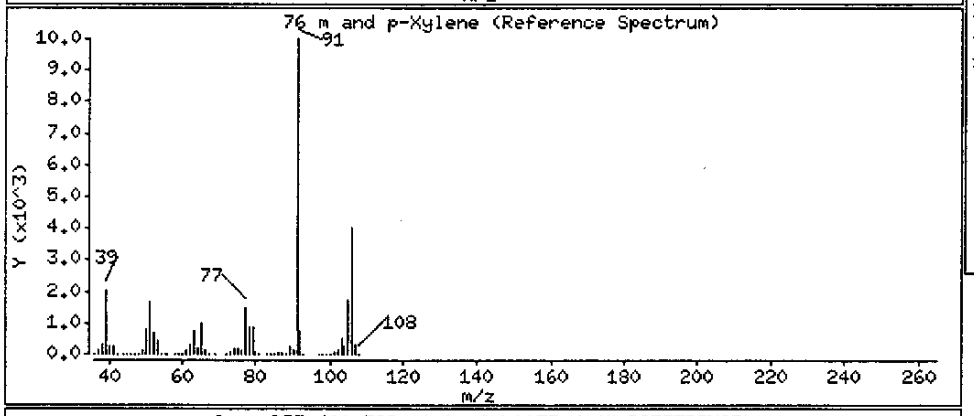
Concentration: 1.99204 ug/L

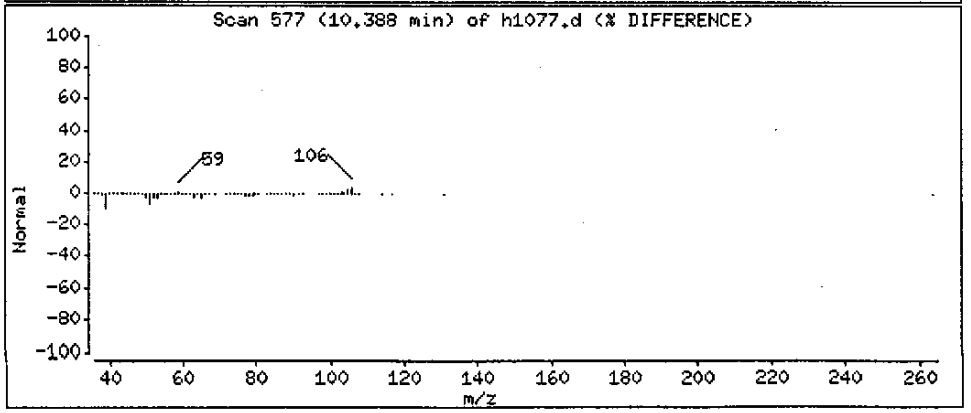












Data File: /chem/H.i/022004.b/h1077.d

Date : 20-FEB-2004 15:32

Client ID: MW-3

Instrument: H.i

Sample Info: F9KEK1AA,,D4B130209-003

Purge Volume: 20.0

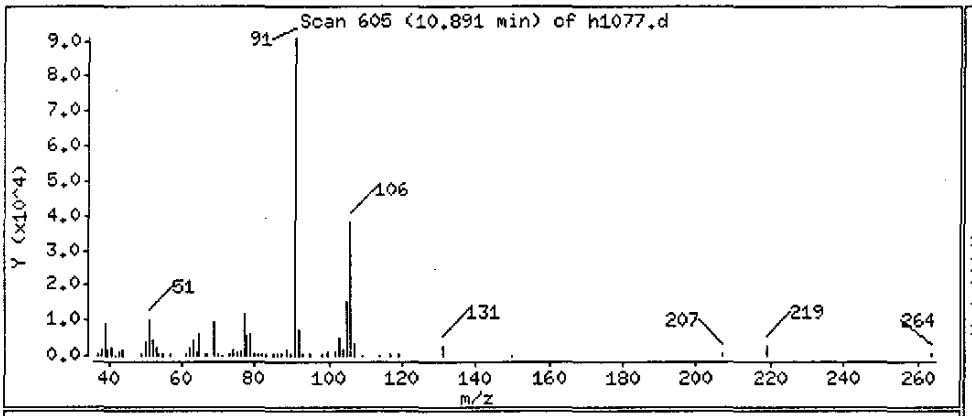
Operator: appelhansd

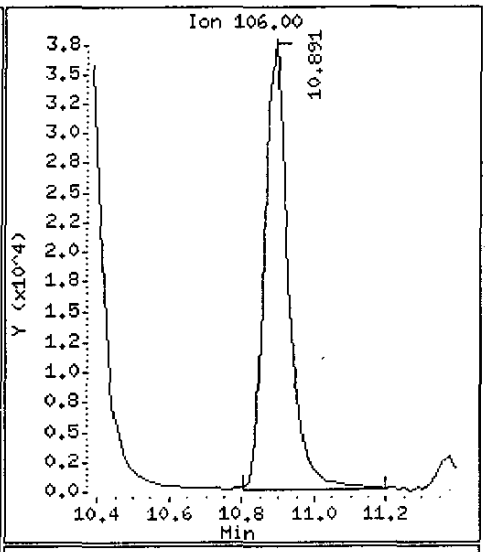
Column phase: DB624

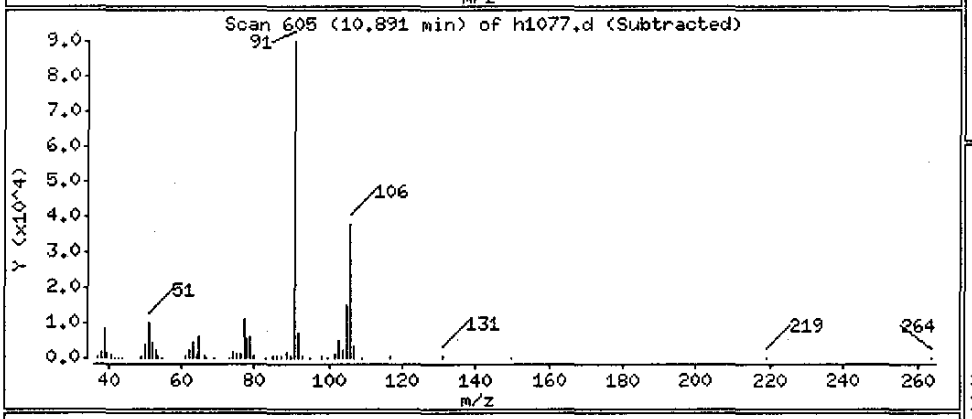
Column diameter: 0.53

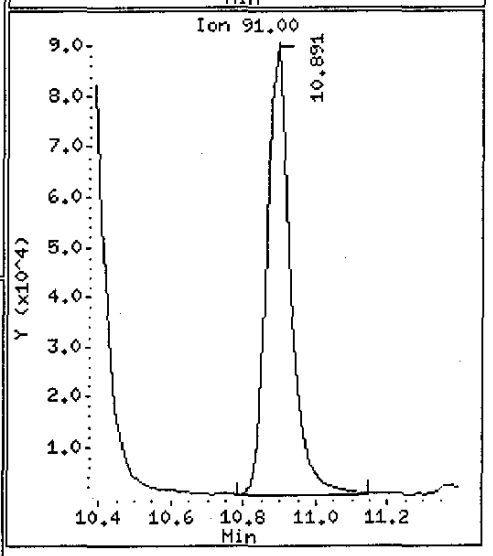
77 o-Xylene

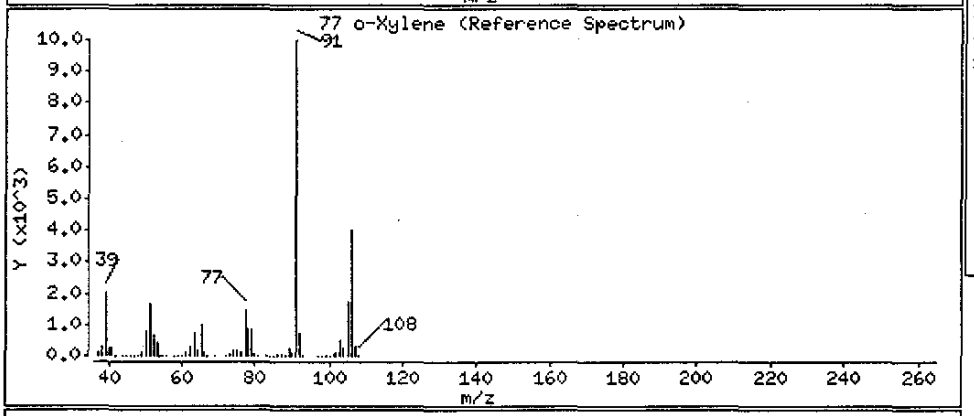
Concentration: 2.22182 ug/L

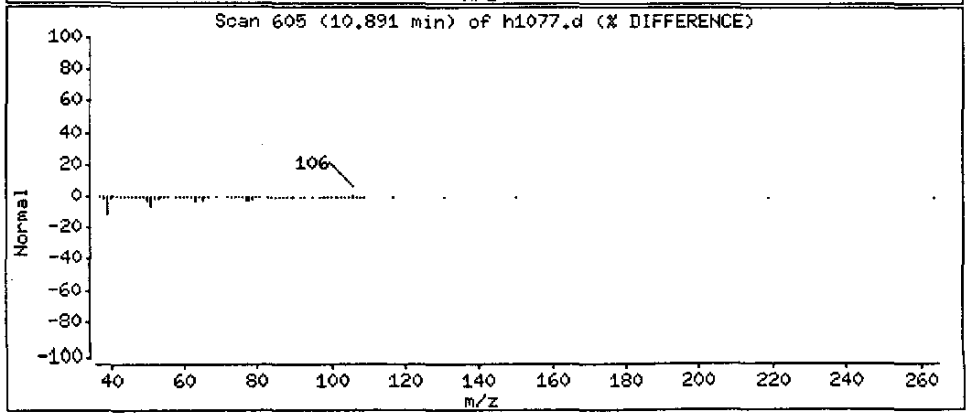












Data File: /chem/H.i/022004.b/h1077.d

Date : 20-FEB-2004 15:32

Client ID: MW-3

Instrument: H.i

Sample Info: F9KEK1AA,,D4B130209-003

Purge Volume: 20.0

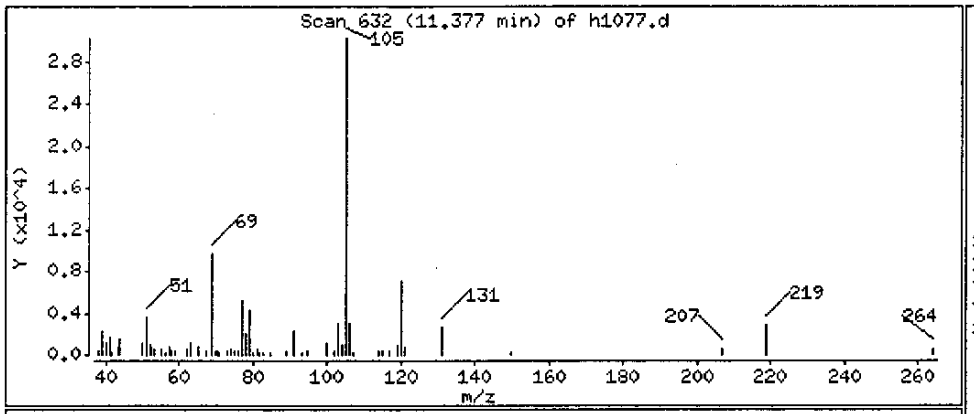
Operator: appelhansd

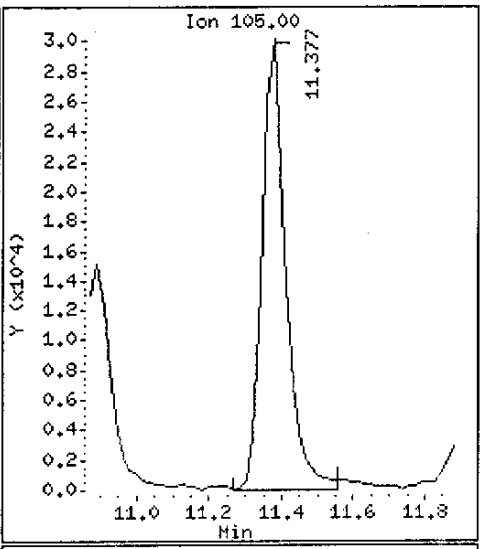
Column phase: DB624

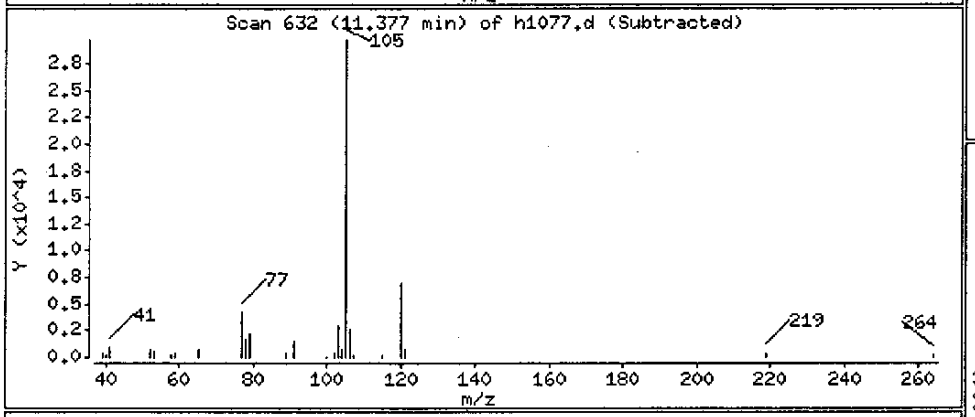
Column diameter: 0.53

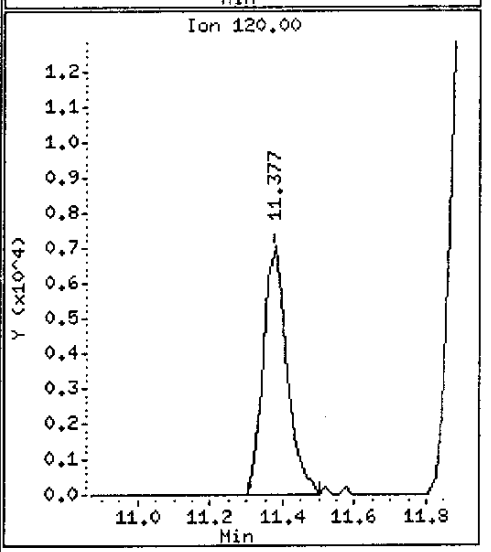
80 isopropyl benzene

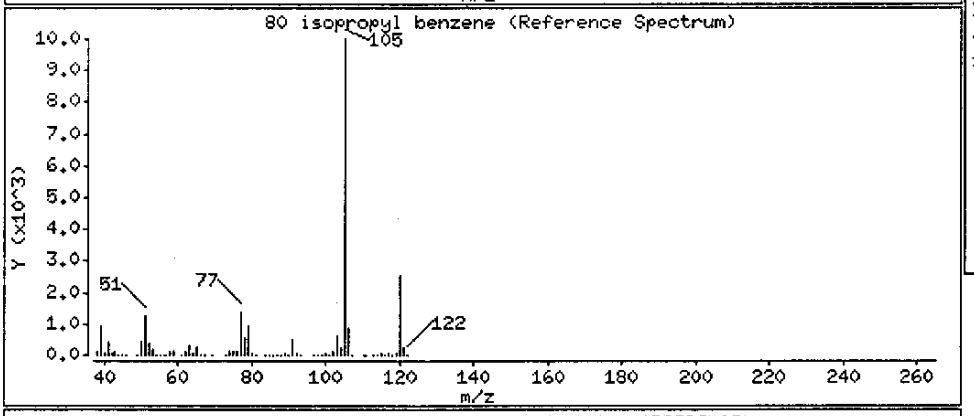
Concentration: 0.536793 ug/L

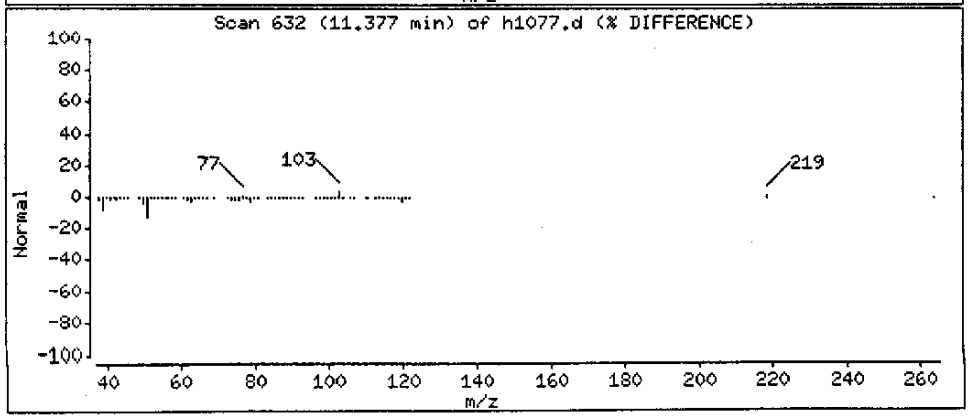












Data File: /chem/H.i/022004.b/h1077.d

Date : 20-FEB-2004 15:32

Client ID: MW-3

Instrument: H.i

Sample Info: F9KEK1AA,,D4B130209-003

Purge Volume: 20.0

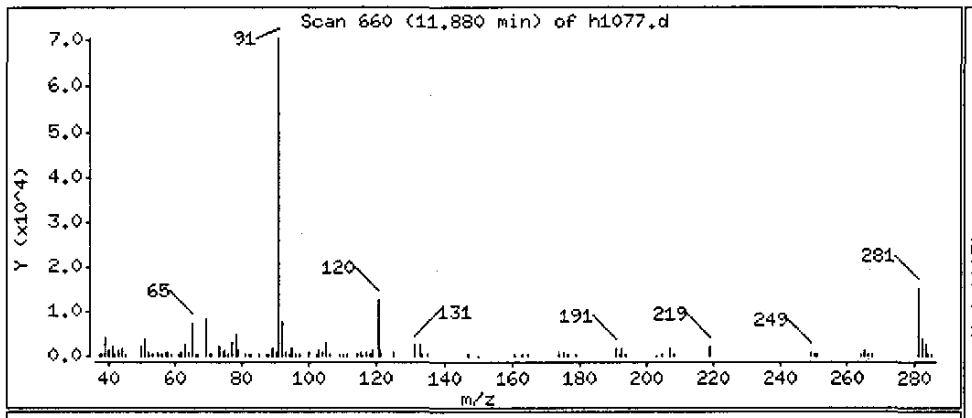
Operator: appelhansd

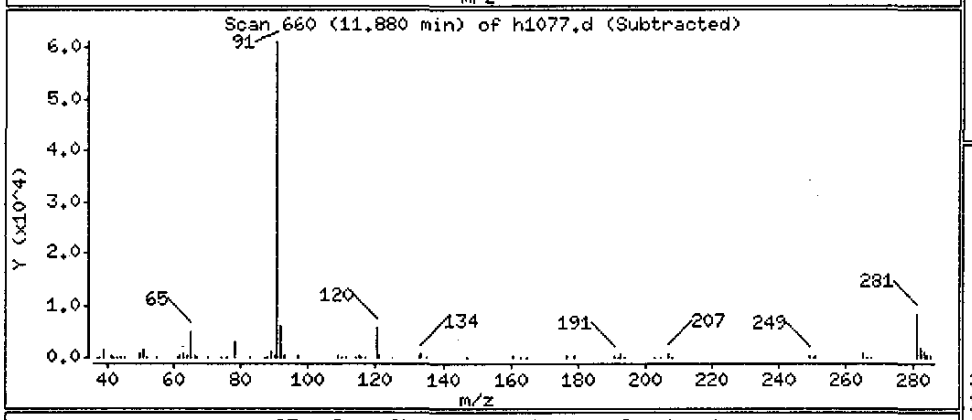
Column phase: DB624

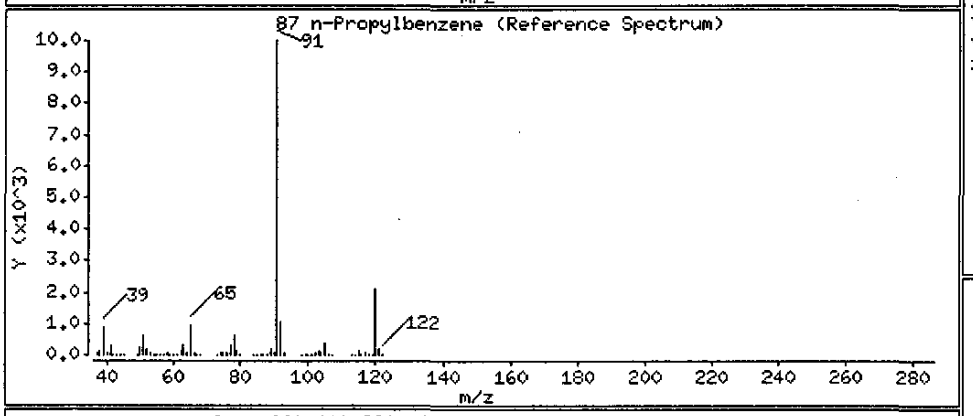
Column diameter: 0.53

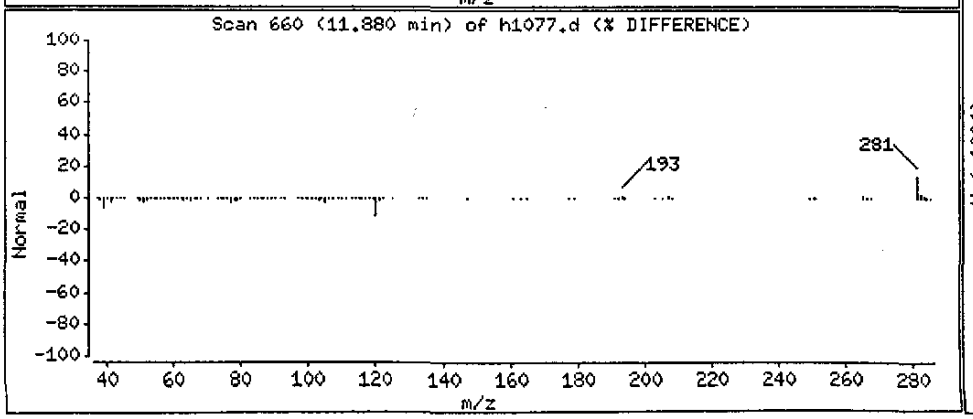
87 n-Propylbenzene

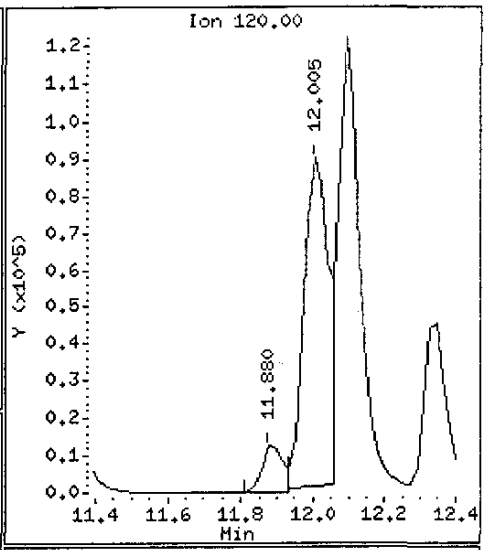
Concentration: 0.852266 ug/L

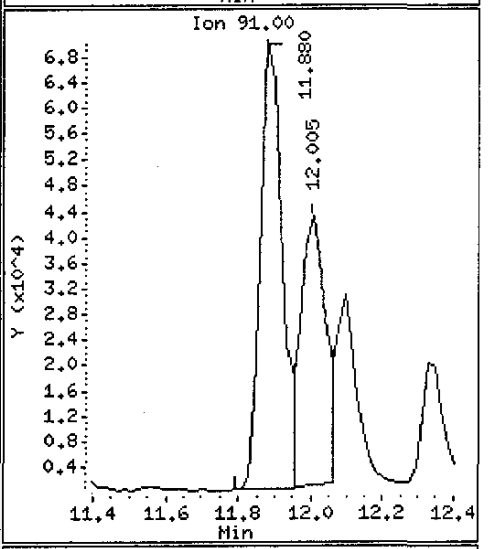


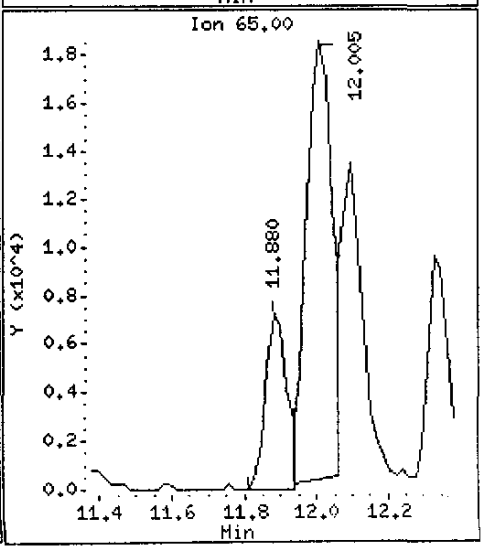












Data File: /chem/H.i/022004.b/h1077.d

Date : 20-FEB-2004 15:32

Client ID: MW-3

Instrument: H.i

Sample Info: F9KEK1AA,,D4B130209-003

Purge Volume: 20.0

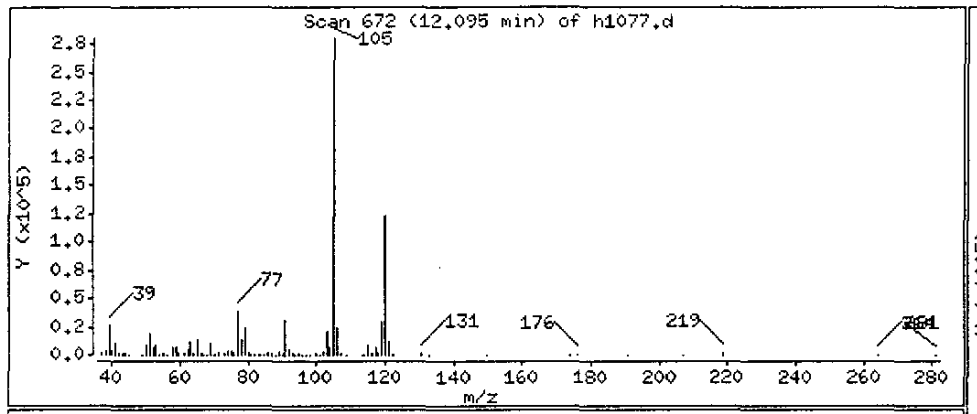
Operator: appelhansd

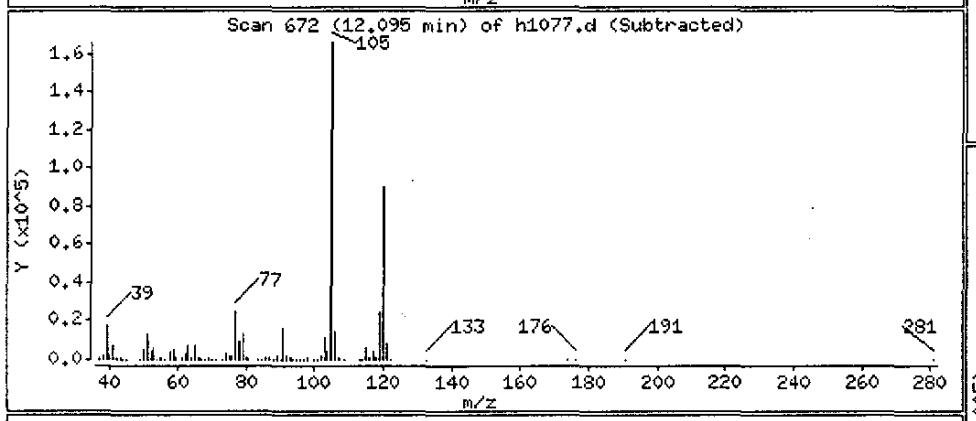
Column phase: DB624

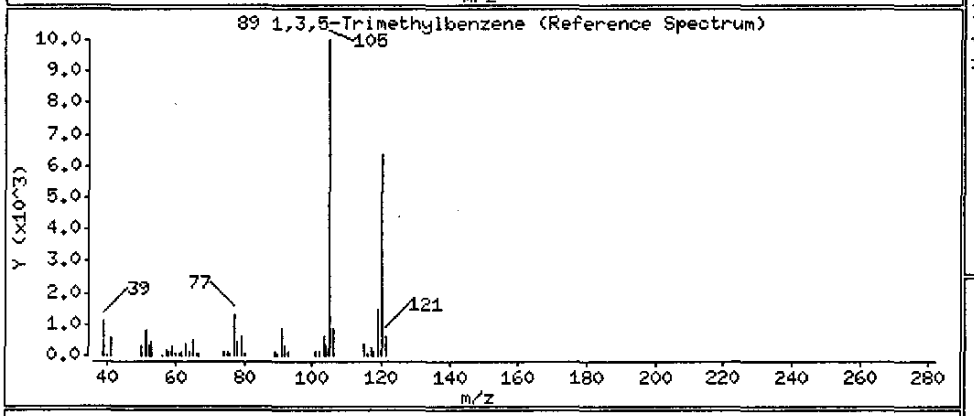
Column diameter: 0.53

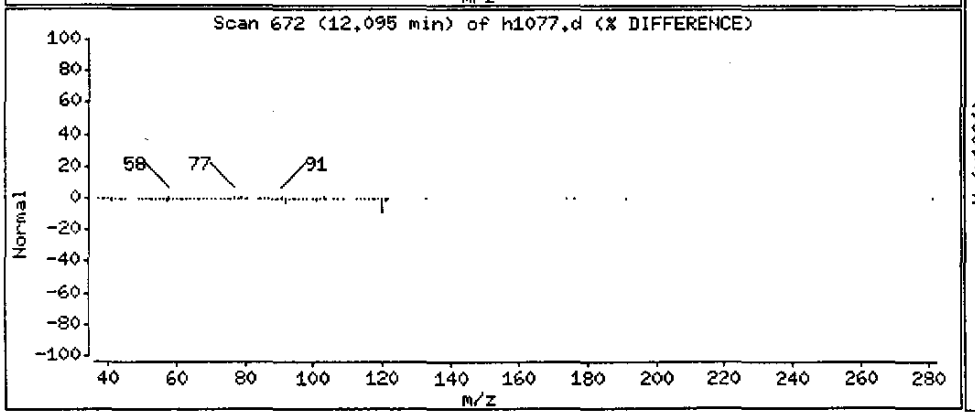
89 1,3,5-Trimethylbenzene

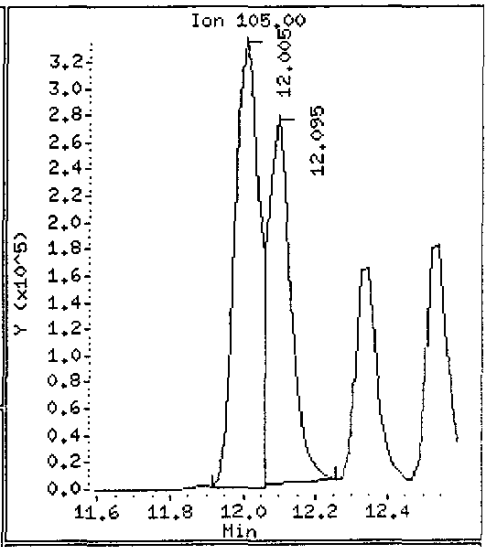
Concentration: 6.05459 ug/L

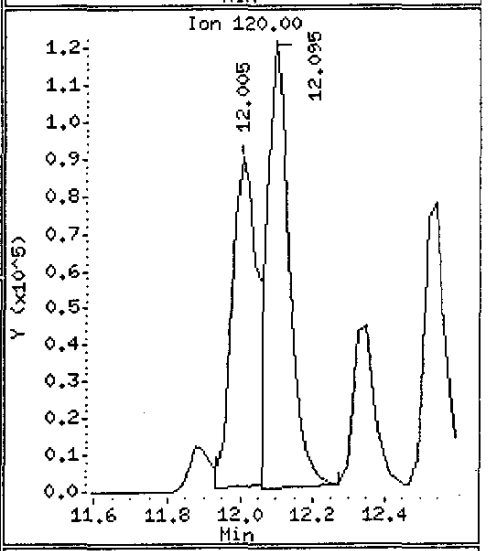


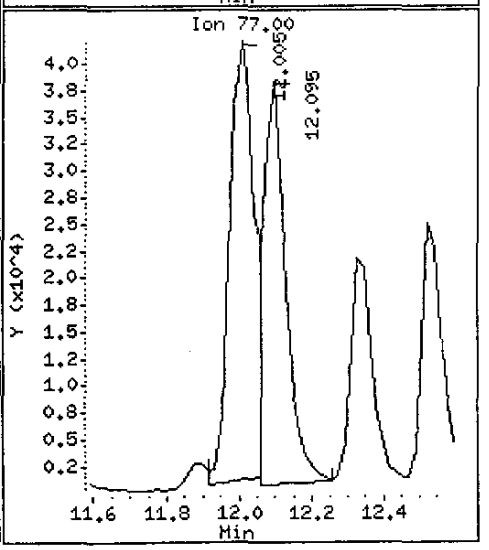












Data File: /chem/H.i/022004.b/h1077.d

Date : 20-FEB-2004 15:32

Client ID: MW-3

Instrument: H.i

Sample Info: F9KEK1AA,,D4B130209-003

Purge Volume: 20.0

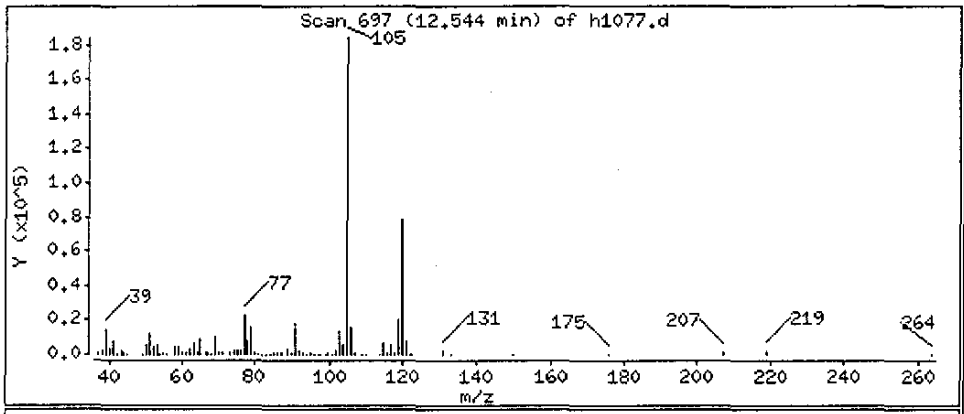
Operator: appelhansd

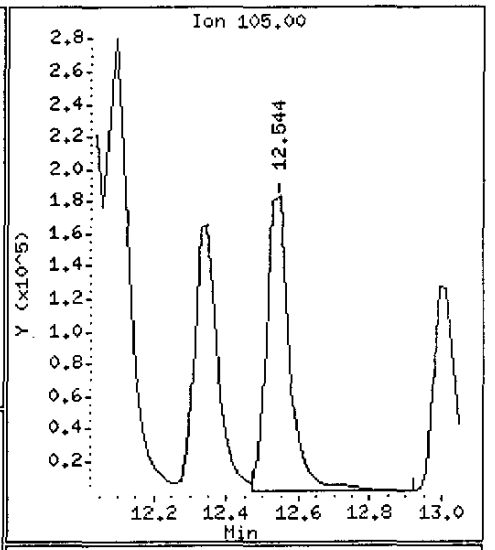
Column phase: DB624

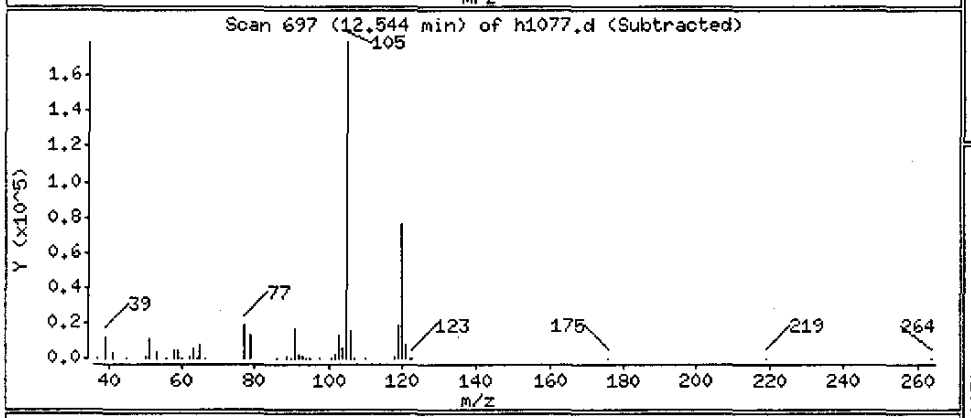
Column diameter: 0.53

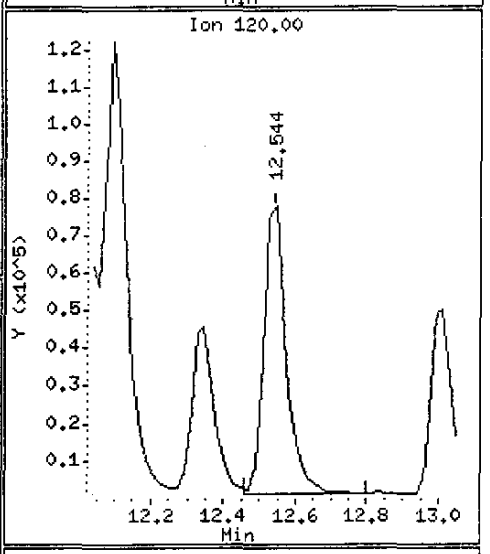
92 1,2,4-Trimethylbenzene

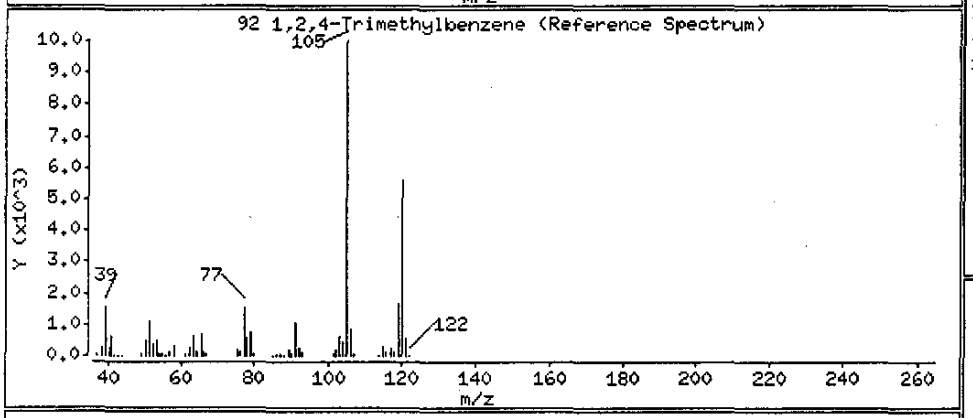
Concentration: 4.13481 ug/L

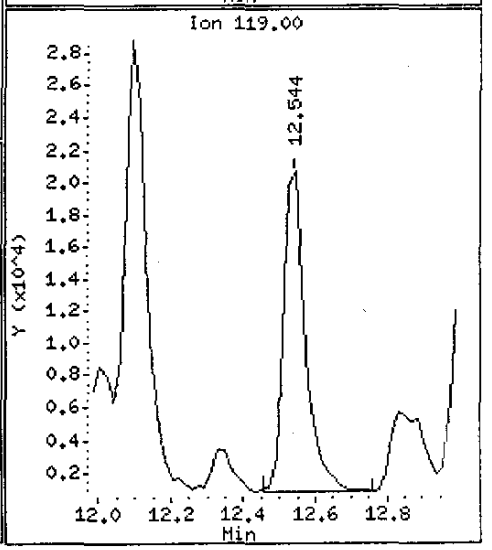


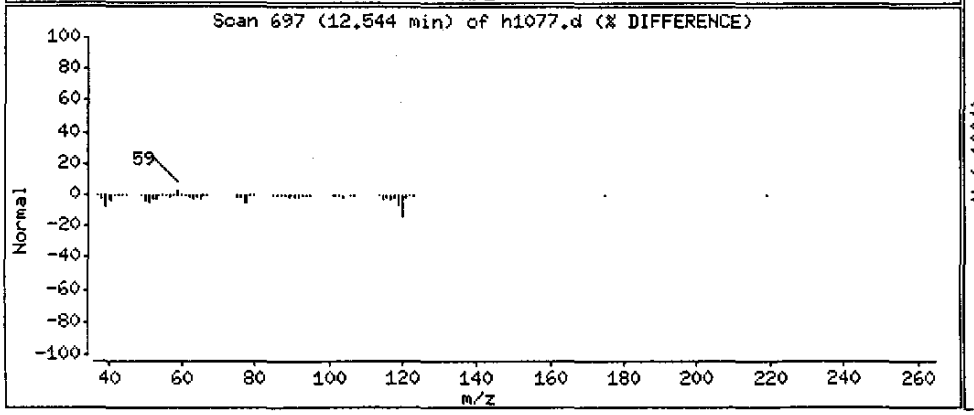












Data File: /chem/H.i/022004.b/h1077.d

Date : 20-FEB-2004 15:32

Client ID: MW-3

Instrument: H.i

Sample Info: F9KEK1AA,,D4B130209-003

Purge Volume: 20.0

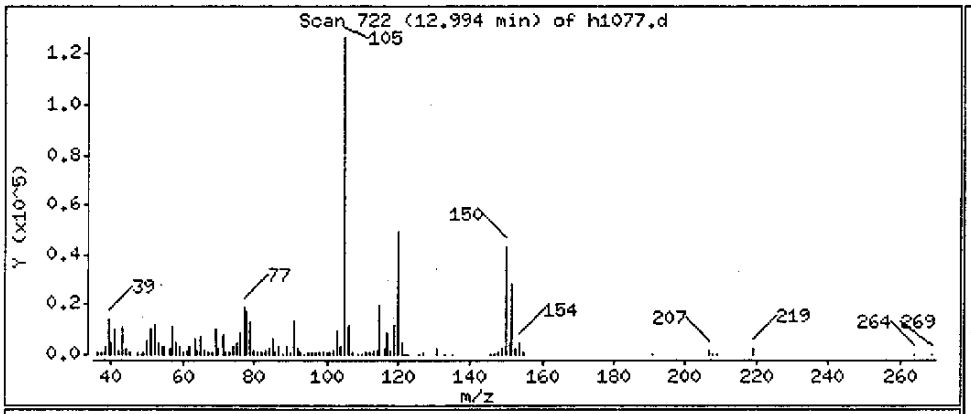
Operator: appelhansd

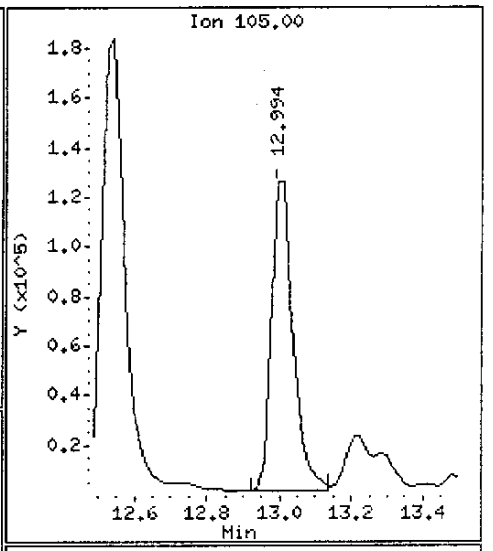
Column phase: DB624

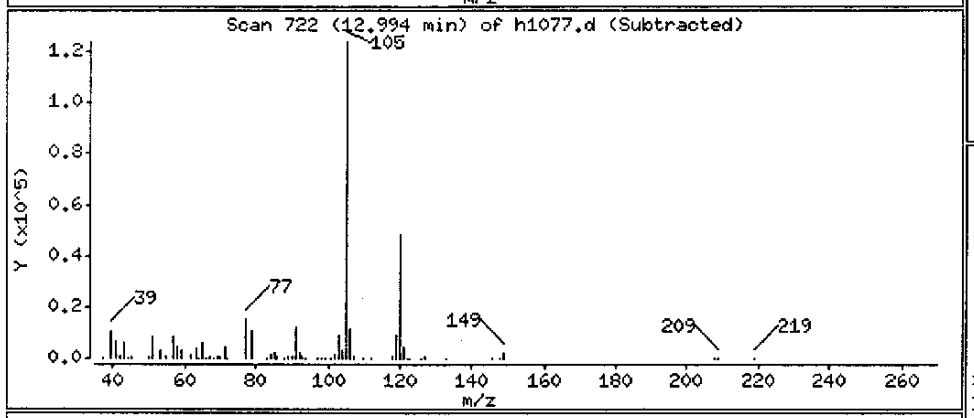
Column diameter: 0.53

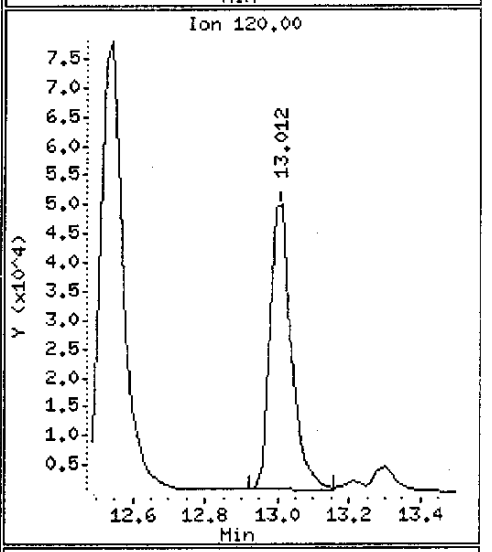
118 1,2,3-Trimethylbenzene

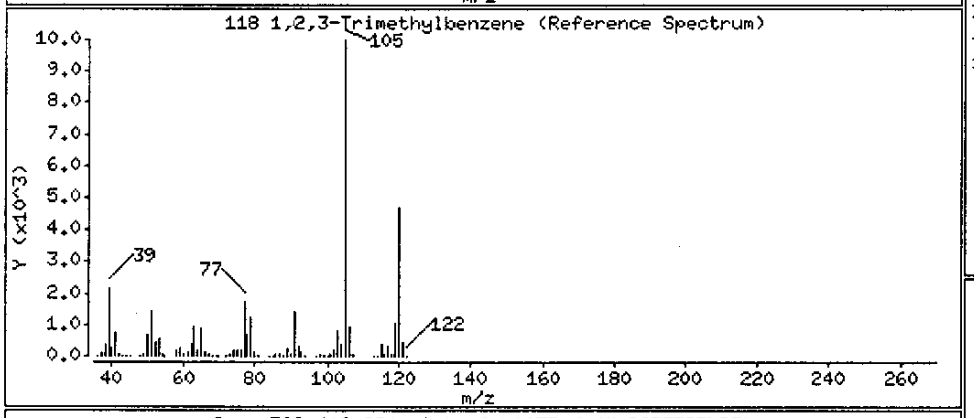
Concentration: 3.78979 ug/L

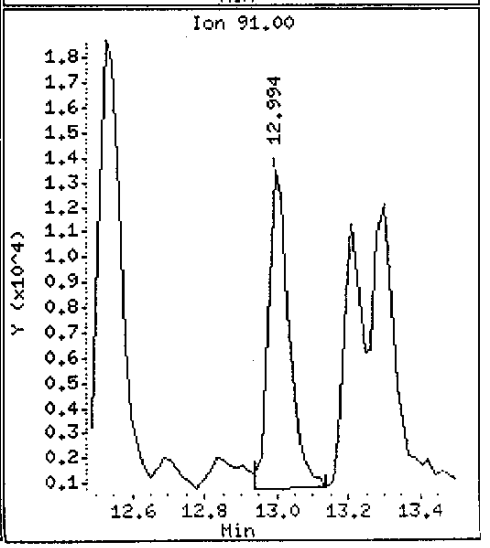


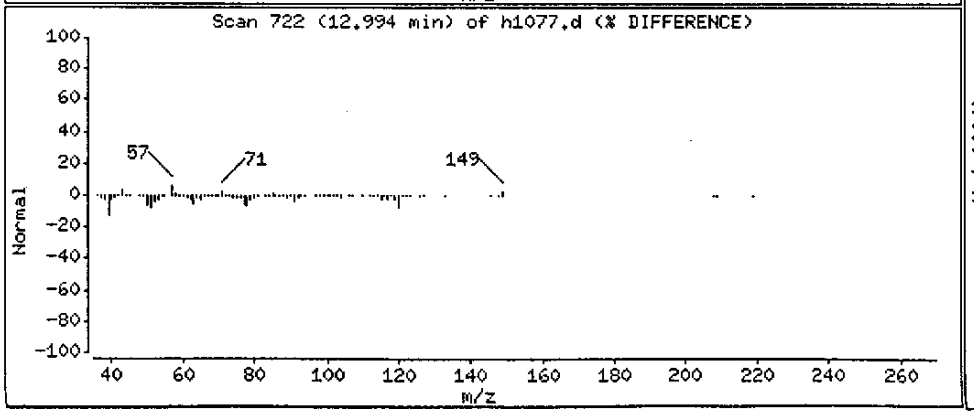












STL Denver

VOLATILE REPORT SW-846

Data file : /chem/H.i/022004.b/h1079.d
Lab Smp Id: F9KEM1AA Client Smp ID: MW-5
Inj Date : 20-FEB-2004 16:12
Operator : appelhansd Inst ID: H.i
Smp Info : F9KEM1AA,1,D4B130209-005
Misc Info :
Comment : Purge and Trap Analysis
Method : /chem/H.i/022004.b/H-20ml-h2o.m
Meth Date : 20-Feb-2004 11:09 appelhad Quant Type: ISTD
Cal Date : 07-JAN-2004 15:24 Cal File: h0014.d
Als bottle: 2
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: H-all.sub
Target Version: 3.40
Processing Host: chemsv02

Concentration Formula: Amt * DF * Vp/Vs

Name	Value	Description
DF	1.000	Dilution Factor
Vp	20.000	Purge Volume (ml)
Vs	1.000	Sample Volume (ml)

DK 2-23

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/L)
* 48 Fluorobenzene	96	6.395	6.395	(1.000)	2042633	12.5000	
* 72 Chlorobenzene-d5	119	10.061	10.060	(1.000)	376846	12.5000	
* 96 1,4-Dichlorobenzene-d4	152	12.918	12.917	(1.000)	661068	12.5000	
$ 40 Dibromofluoromethane	111	5.604	5.586	(0.876)	914750	11.3844	227.689
$ 44 1,2-Dichloroethane-d4	65	6.000	5.981	(0.938)	379623	10.5997	211.994
$ 61 Toluene-d8	98	8.300	8.281	(0.825)	1686958	11.7104	234.209
$ 82 Bromofluorobenzene	95	11.570	11.552	(1.150)	953114	12.0655	241.310
M 1 1,2-Dichloroethene (total)	96				838469	13.6805	273.611
M 2 Xylene (total)	106.00	Compound Not Detected.					
3 dichlorodifluoromethane	85.00	Compound Not Detected.					
4 Chloromethane	50.00	Compound Not Detected.					
5 Vinyl Chloride	62	2.154	2.136	(0.337)	1456696	32.0477	640.954
6 Ethylene Oxide	43.00	Compound Not Detected.					
117 Dichlorotetrafluoroethane	85.00	Compound Not Detected.					
123 1,2-dichloro-1,1,2-triflourom	117.00	Compound Not Detected.					
124 2,2-dichloro-1,1,1-trifluorom	83.00	Compound Not Detected.					

Data File: /chem/H.i/022004.b/h1079.d
Report Date: 20-Feb-2004 16:20

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)
7 Bromomethane	94.00	Compound Not Detected.					
8 Chloroethane	64.00	Compound Not Detected.					
9 Dichlorofluoromethane	67.00	Compound Not Detected.					
10 Trichlorofluoromethane	101.00	Compound Not Detected.					
11 Ethanol	45.00	Compound Not Detected.					
12 Ethyl Ether	59.00	Compound Not Detected.					
13 Acrolein	56.00	Compound Not Detected.					
15 Acetone	43.00	Compound Not Detected.					
14 1,1-Dichloroethene	96.00	Compound Not Detected.					
16 Trichlorotrifluoroethane	151.00	Compound Not Detected.					
17 Iodomethane	142.00	Compound Not Detected.					
19 Acetonitrile	41.00	Compound Not Detected.					
18 Carbon Disulfide	76.00	Compound Not Detected.					
20 Allyl Chloride	41.00	Compound Not Detected.					
119 Methyl Acetate	43.00	Compound Not Detected.					
21 Methylene Chloride	84	3.628	3.627	(0.567)	18145	0.35680	7.13608
125 2-Propanol	45.00	Compound Not Detected.					
22 tert-Butyl alcohol	59.00	Compound Not Detected.					
23 Acrylonitrile	53.00	Compound Not Detected.					
24 trans-1,2-Dichloroethene	96	3.933	3.915	(0.615)	75010	1.21535	24.3070
25 Methyl t-butyl ether	73.00	Compound Not Detected.					
26 Hexane	57.00	Compound Not Detected.					
27 1,1-Dichloroethane	63	4.383	4.364	(0.685)	63112	0.60671	12.1343
29 Vinyl acetate	43.00	Compound Not Detected.					
30 Isopropyl ether	87.00	Compound Not Detected.					
28 Chloroprene	53.00	Compound Not Detected.					
120 ETBE	59.00	Compound Not Detected.					
33 2-Butanone	43.00	Compound Not Detected.					
32 cis-1,2-Dichloroethene	96	5.047	5.029	(0.789)	763459	12.4652	249.304
31 2,2-Dichloropropane	77.00	Compound Not Detected.					
35 Ethyl Acetate	43.00	Compound Not Detected.					
34 Propionitrile	54.00	Compound Not Detected.					
36 Methacrylonitrile	41.00	Compound Not Detected.					
37 Bromochloromethane	128.00	Compound Not Detected.					
39 Tetrahydrofuran	42.00	Compound Not Detected.					
38 Chloroform	83.00	Compound Not Detected.					
41 1,1,1-Trichloroethane	97.00	Compound Not Detected.					
114 Cyclohexane	56.00	Compound Not Detected.					
42 1,1-Dichloropropene	75.00	Compound Not Detected.					
43 Carbon Tetrachloride	117.00	Compound Not Detected.					
45 Isobutanol	41.00	Compound Not Detected.					
46 Benzene	78.00	Compound Not Detected.					
47 1,2-Dichloroethane	62.00	Compound Not Detected.					
121 TAME	73.00	Compound Not Detected.					
49 n-Butanol	56.00	Compound Not Detected.					
50 Trichloroethene	130.00	Compound Not Detected.					
115 2-Pentanone	43.00	Compound Not Detected.					

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)
52 1,2-Dichloropropane	63.00	Compound Not Detected.					
122 Methyl Cyclohexane	55.00	Compound Not Detected.					
53 Dibromomethane	93.00	Compound Not Detected.					
54 Methyl Methacrylate	100.00	Compound Not Detected.					
55 1,4-Dioxane	88.00	Compound Not Detected.					
56 Bromodichloromethane	83.00	Compound Not Detected.					
57 2-nitropropane	41.00	Compound Not Detected.					
113 2-Chloroethyl vinyl ether	63.00	Compound Not Detected.					
59 cis-1,3-Dichloropropene	75.00	Compound Not Detected.					
60 4-Methyl-2-pentanone	43.00	Compound Not Detected.					
62 Toluene	91.00	Compound Not Detected.					
63 trans-1,3-Dichloropropene	75.00	Compound Not Detected.					
64 Ethyl methacrylate	69.00	Compound Not Detected.					
65 1,1,2-Trichloroethane	97.00	Compound Not Detected.					
67 1,3-Dichloropropane	76.00	Compound Not Detected.					
66 Tetrachloroethene	164.00	Compound Not Detected.					
68 2-Hexanone	43.00	Compound Not Detected.					
126 Tetrahydrothiophene	60.00	Compound Not Detected.					
69 Dibromochloromethane	129.00	Compound Not Detected.					
70 1,2-Dibromoethane	107.00	Compound Not Detected.					
71 1-Chlorohexane	91.00	Compound Not Detected.					
73 Chlorobenzene	112.00	Compound Not Detected.					
74 1,1,1,2-Tetrachloroethane	131.00	Compound Not Detected.					
75 Ethylbenzene	106.00	Compound Not Detected.					
76 m and p-Xylene	106.00	Compound Not Detected.					
77 o-Xylene	106.00	Compound Not Detected.					
78 Styrene	104.00	Compound Not Detected.					
79 Bromoform	173.00	Compound Not Detected.					
80 isopropyl benzene	105.00	Compound Not Detected.					
116 cis-1,4-Dichloro-2-butene	53.00	Compound Not Detected.					
81 Cyclohexanone	55.00	Compound Not Detected.					
83 1,1,2,2-Tetrachloroethane	83.00	Compound Not Detected.					
84 Bromobenzene	156.00	Compound Not Detected.					
85 1,2,3-Trichloropropane	110.00	Compound Not Detected.					
86 t-1,4-Dichloro-2-butene	53.00	Compound Not Detected.					
87 n-Propylbenzene	120.00	Compound Not Detected.					
88 2-Chlorotoluene	126.00	Compound Not Detected.					
89 1,3,5-Trimethylbenzene	105.00	Compound Not Detected.					
90 4-Chlorotoluene	126.00	Compound Not Detected.					
91 tert-Butylbenzene	119.00	Compound Not Detected.					
92 1,2,4-Trimethylbenzene	105.00	Compound Not Detected.					
93 sec-Butylbenzene	134.00	Compound Not Detected.					
94 m-Dichlorobenzene	146.00	Compound Not Detected.					
95 4-Isopropyltoluene	119.00	Compound Not Detected.					
97 p-dichlorobenzene	146.00	Compound Not Detected.					
118 1,2,3-Trimethylbenzene	105.00	Compound Not Detected.					
98 n-Butylbenzene	91.00	Compound Not Detected.					

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/L)
99 o-Dichlorobenzene	146.00	Compound Not Detected.					
100 1,2-Dibromo-3-chloropropane	157.00	Compound Not Detected.					
101 1,2,4-Trichlorobenzene	180.00	Compound Not Detected.					
102 Hexachlorobutadiene	225.00	Compound Not Detected.					
127 Naphthalene	128.00	Compound Not Detected.					
104 1,2,3-Trichlorobenzene	180.00	Compound Not Detected.					

Data File: /chem/H.i/022004.b/h1079.d
Report Date: 20-Feb-2004 16:20

STL Denver

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: H.i
Lab File ID: h1079.d
Lab Smp Id: F9KEM1AA
Analysis Type: VOA
Quant Type: ISTD
Operator: appelhansd
Method File: /chem/H.i/022004.b/H-20ml-h2o.m
Misc Info:

Calibration Date: 02/20/4
Calibration Time: 1059
Client Smp ID: MW-5
Level: LOW
Sample Type: WATER

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
48 Fluorobenzene	2466684	1233342	4933368	2042633	-17.19
72 Chlorobenzene-d5	459303	229652	918606	376846	-17.95
96 1,4-Dichlorobenze	730993	365496	1461986	661068	-9.57

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
48 Fluorobenzene	6.39	5.89	6.89	6.40	0.01
72 Chlorobenzene-d5	10.06	9.56	10.56	10.06	0.01
96 1,4-Dichlorobenze	12.92	12.42	13.42	12.92	0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem/H.i/022004.b/h1079.d Page 6
Report Date: 20-Feb-2004 16:20

STL Denver

RECOVERY REPORT

Client Name: ARCADIS GERAGHTY & M13-FEB-2004 Client SDG: D4B130209
Sample Matrix: LIQUID Fraction: VOA
Lab Smp Id: F9KEM1AA Client Smp ID: MW-5
Level: LOW Operator: appelhansd
Data Type: MS DATA SampleType: SAMPLE
SpikeList File: dcs-h20.spk Quant Type: ISTD
Sublist File: H-all.sub
Method File: /chem/H.i/022004.b/H-20ml-h2o.m
Misc Info:

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 40 Dibromofluorometha	230.000	227.689	99.00	76-116
$ 44 1,2-Dichloroethane	230.000	211.994	92.17	59-129
$ 61 Toluene-d8	230.000	234.209	101.83	76-116
$ 82 Bromofluorobenzene	230.000	241.310	104.92	74-114

Data File: /chem/H.i/022004.b/h1079.d
Date : 20-FEB-2004 16:12
Client ID: MW-5
Sample Info: F9KEM1AA,1,D4B130209-005
Purge Volume: 20.0
Column phase: DB624

Instrument: H.i

Operator: appelhansd
Column diameter: 0.53

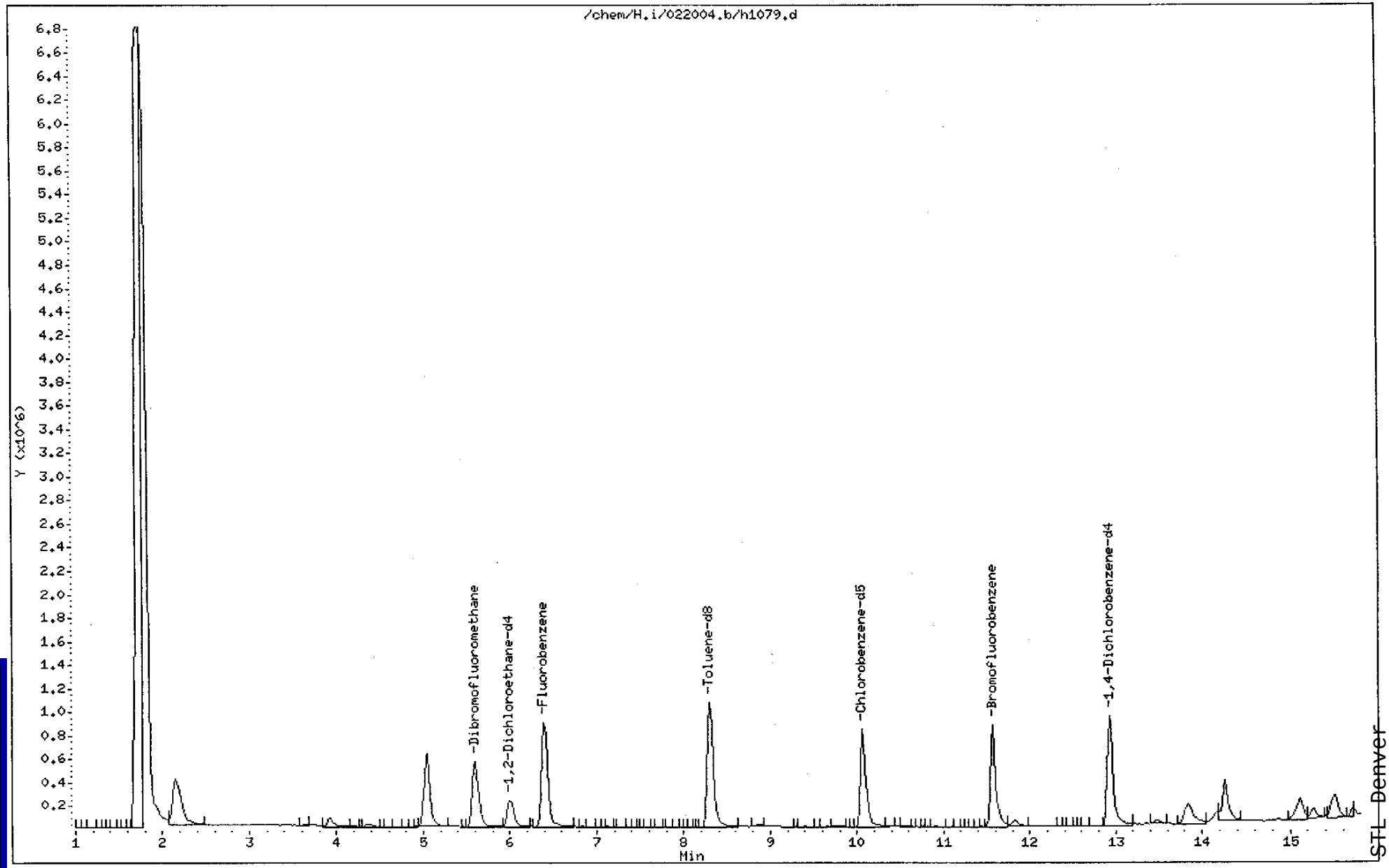


Table of Contents

Data File: /chem/H.i/022004.b/h1079.d

Date : 20-FEB-2004 16:12

Client ID: MW-5

Instrument: H.i

Sample Info: F9KEM1AA,1,D4B130209-005

Purge Volume: 20.0

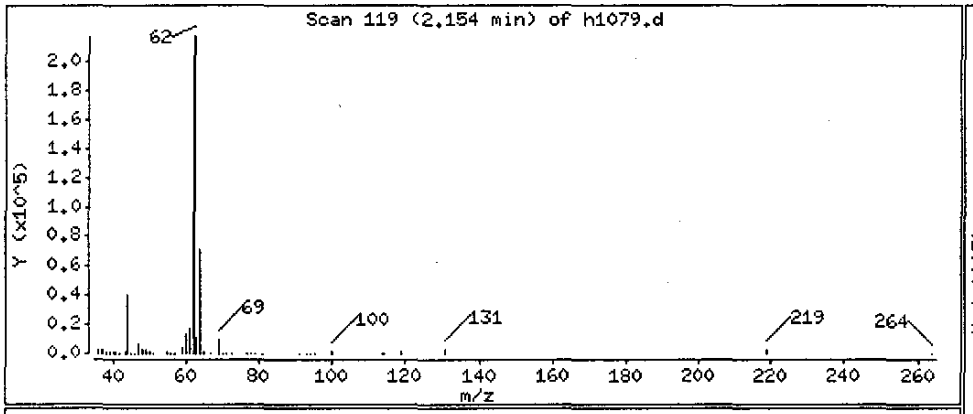
Operator: appelhansd

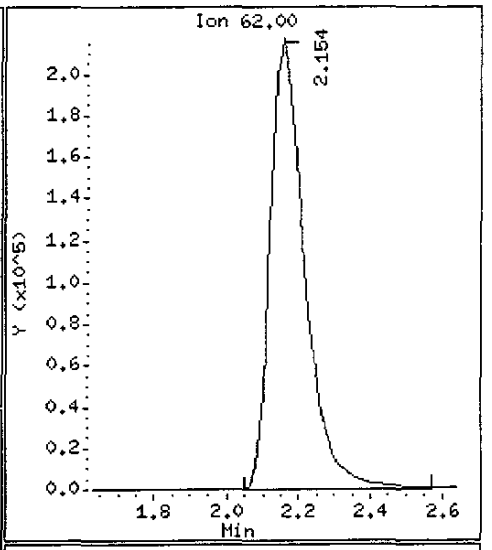
Column phase: DB624

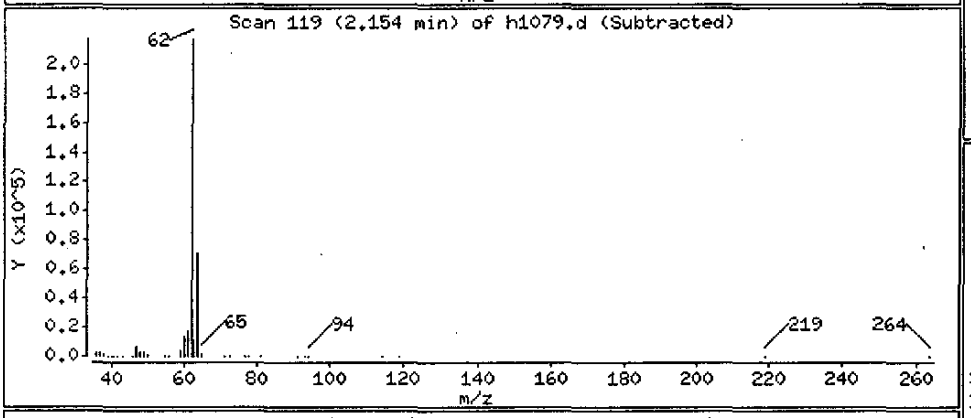
Column diameter: 0.53

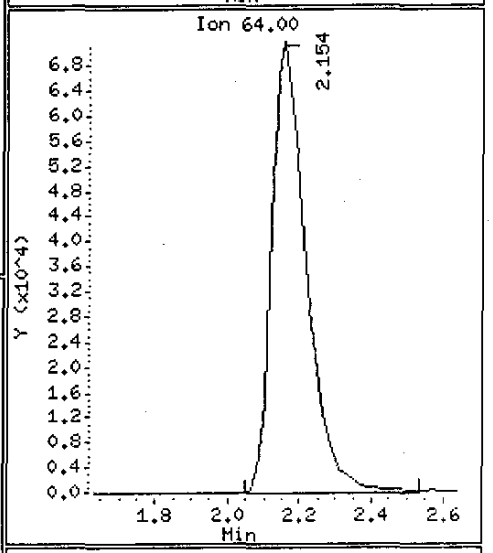
5 Vinyl Chloride

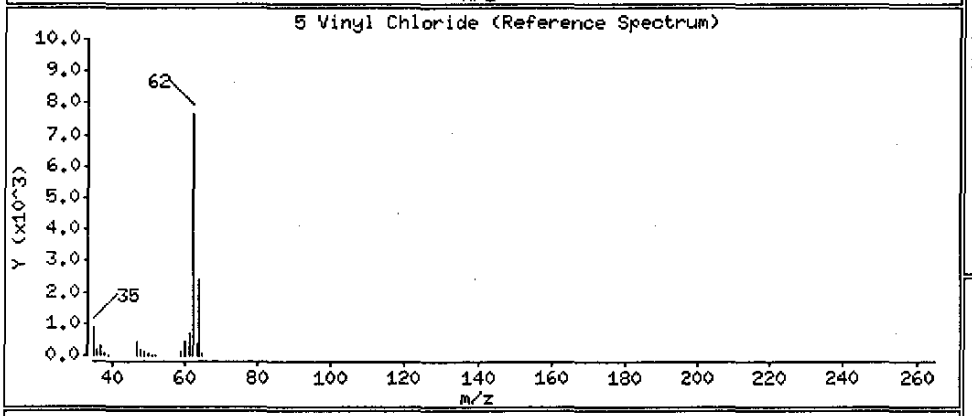
Concentration: 640.954 ug/L

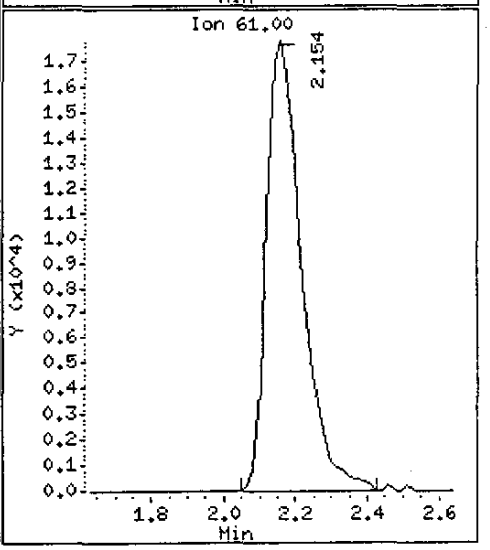


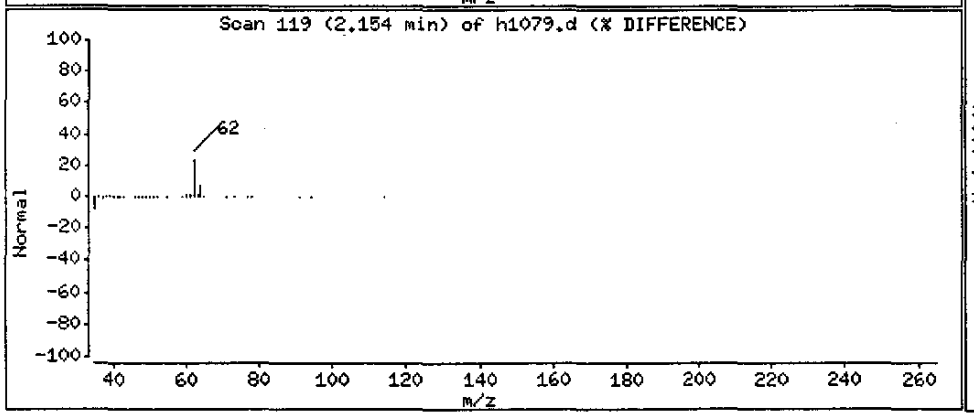












Data File: /chem/H.i/022004.b/h1079.d

Date : 20-FEB-2004 16:12

Client ID: MW-5

Instrument: H.i

Sample Info: F9KEM1AA,1,D4B130209-005

Purge Volume: 20.0

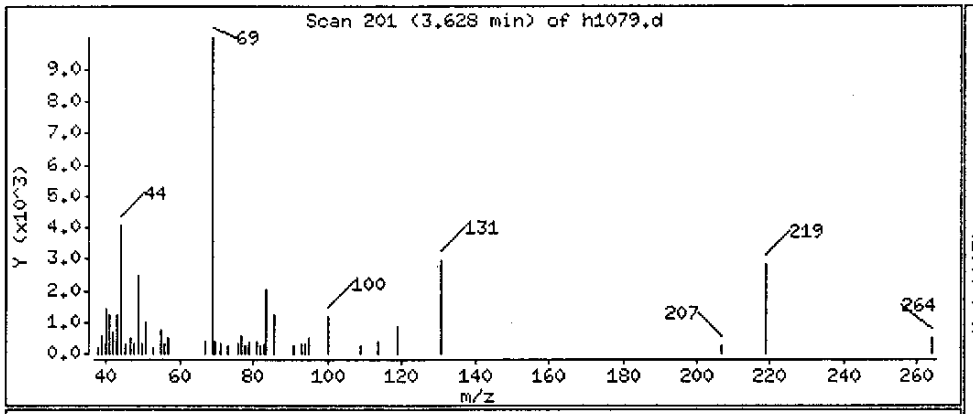
Operator: appelhansd

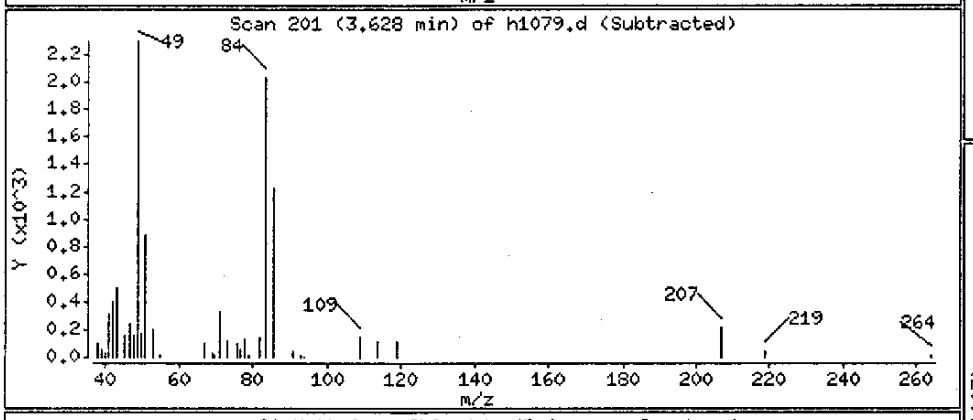
Column phase: DB624

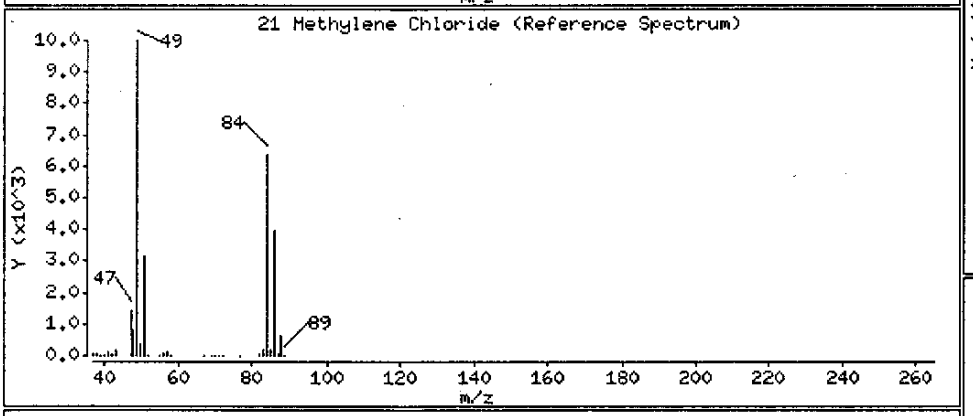
Column diameter: 0.53

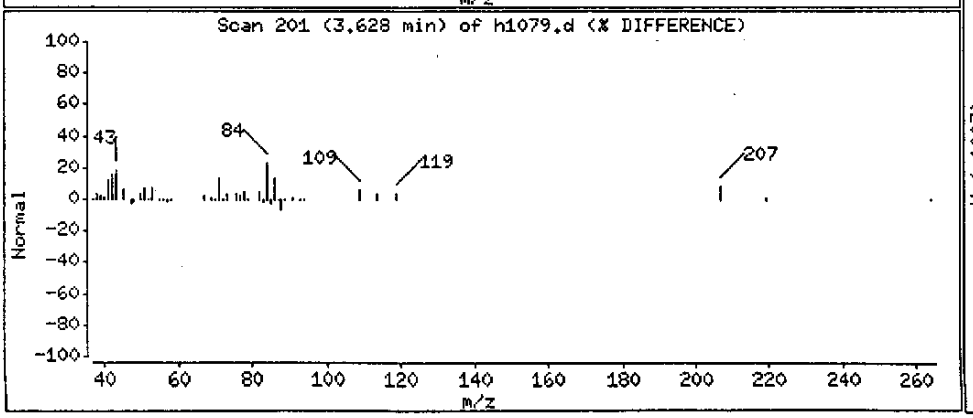
21 Methylene Chloride

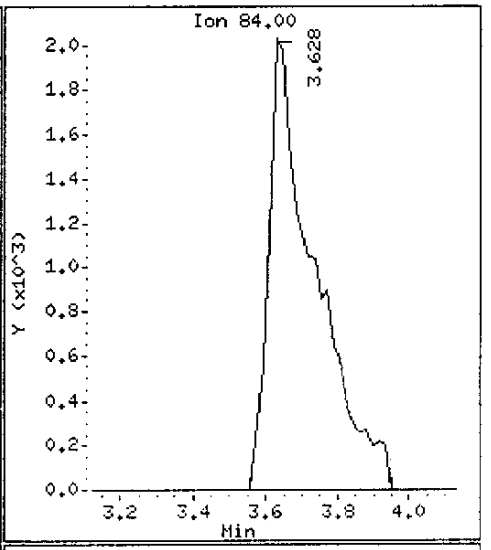
Concentration: 7.13608 ug/L

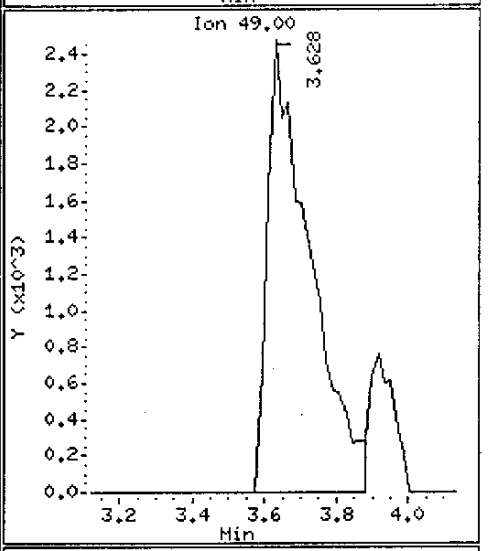


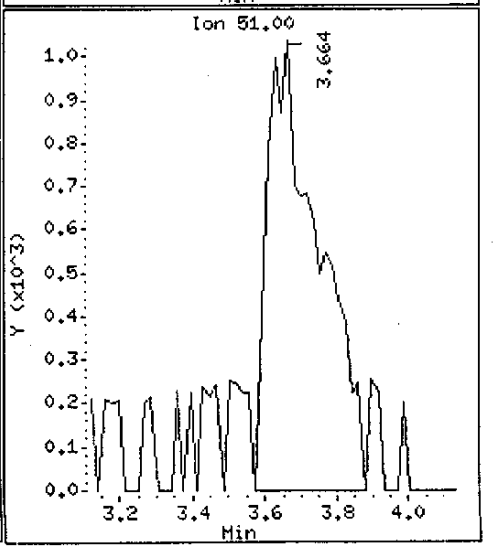












Data File: /chem/H.i/022004.b/h1079.d

Date : 20-FEB-2004 16:12

Client ID: MW-5

Instrument: H.i

Sample Info: F9KEM1AA,1,D4B130209-005

Purge Volume: 20.0

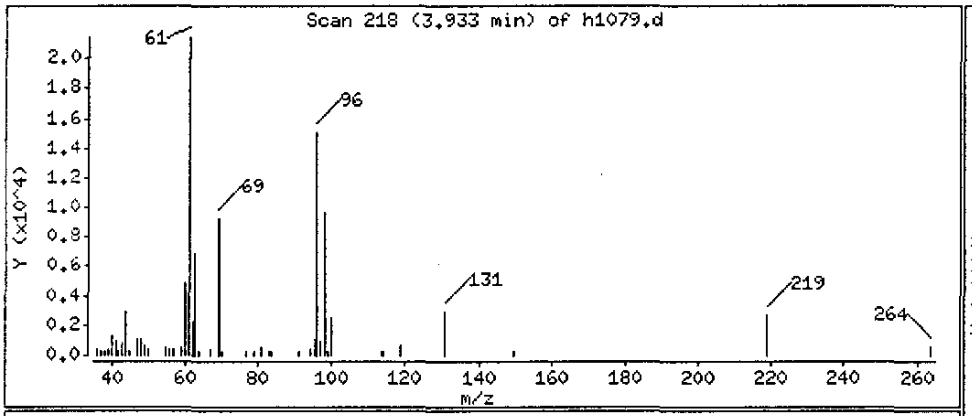
Operator: appelhansd

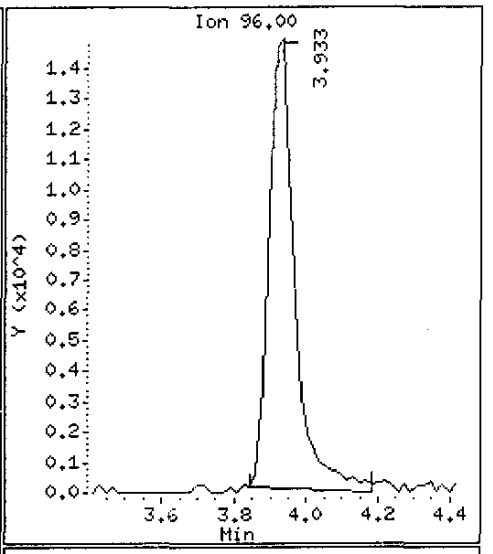
Column phase: DB624

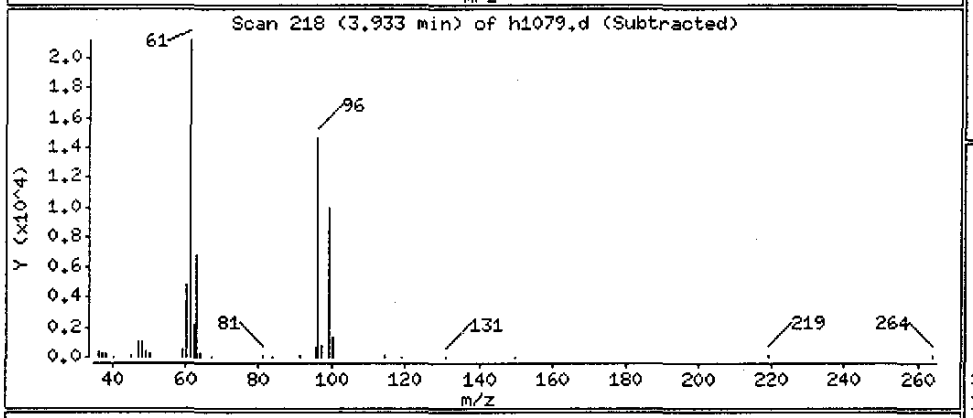
Column diameter: 0.53

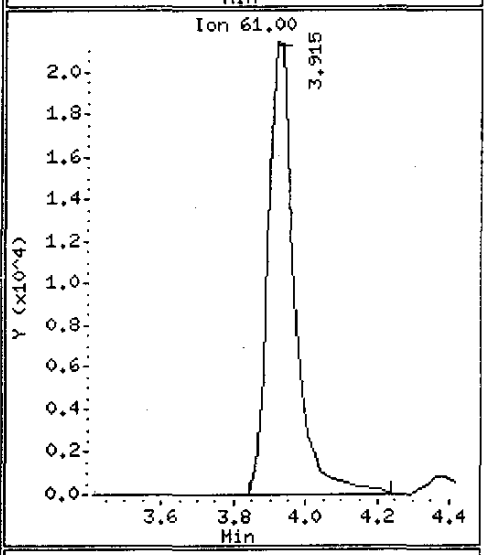
24 trans-1,2-Dichloroethene

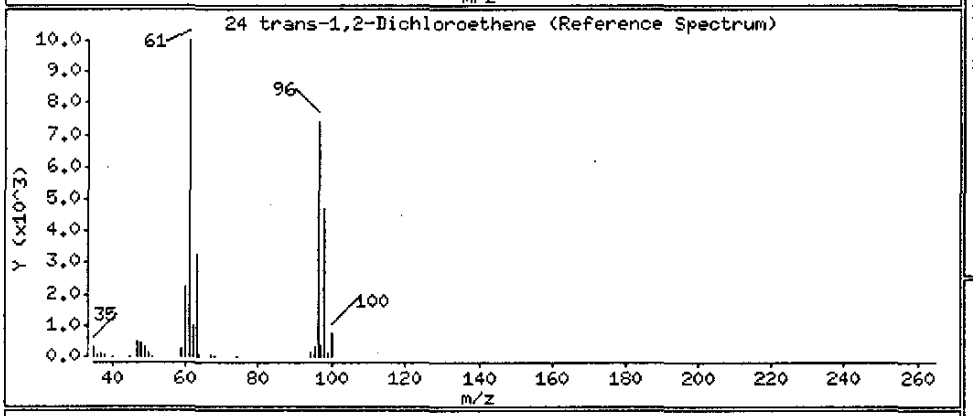
Concentration: 24.3070 ug/L

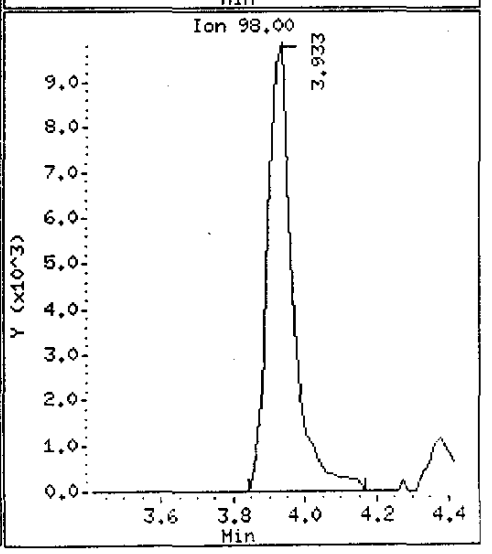


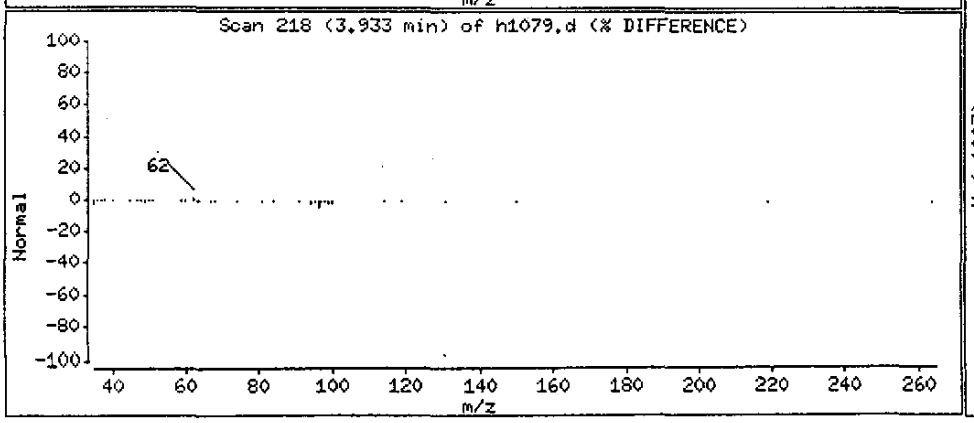












Data File: /chem/H.i/022004.b/h1079.d

Date : 20-FEB-2004 16:12

Client ID: HW-5

Instrument: H.i

Sample Info: F9KEM1AA,1,D4B130209-005

Purge Volume: 20.0

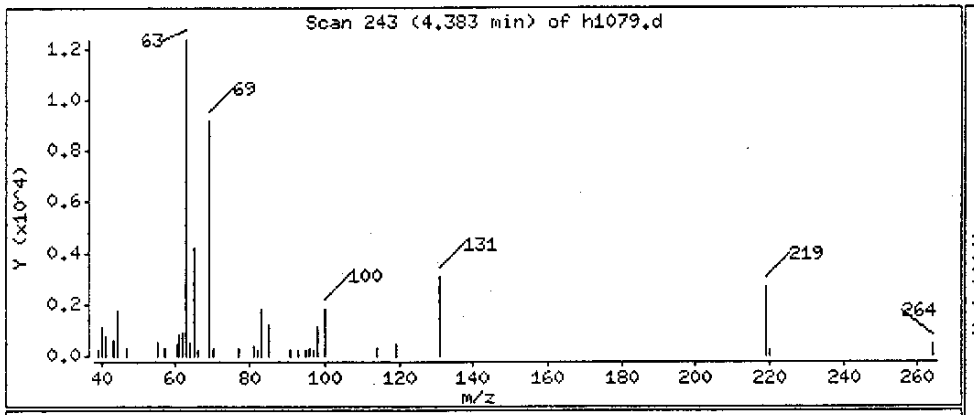
Operator: appelhansd

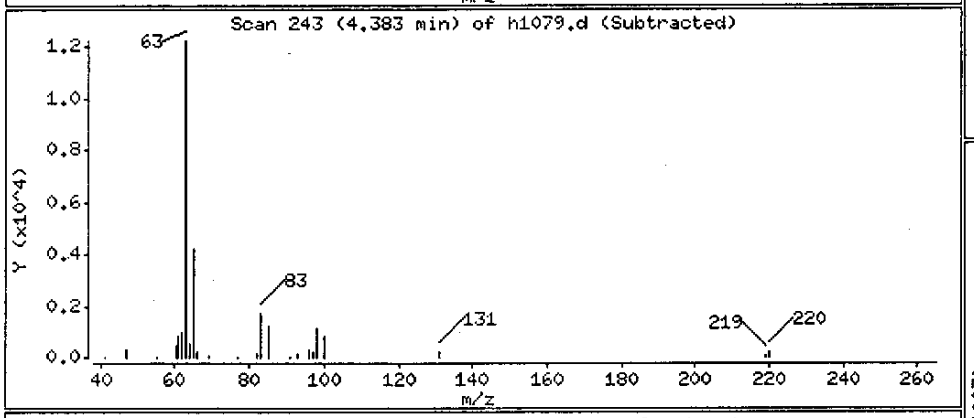
Column phase: DB624

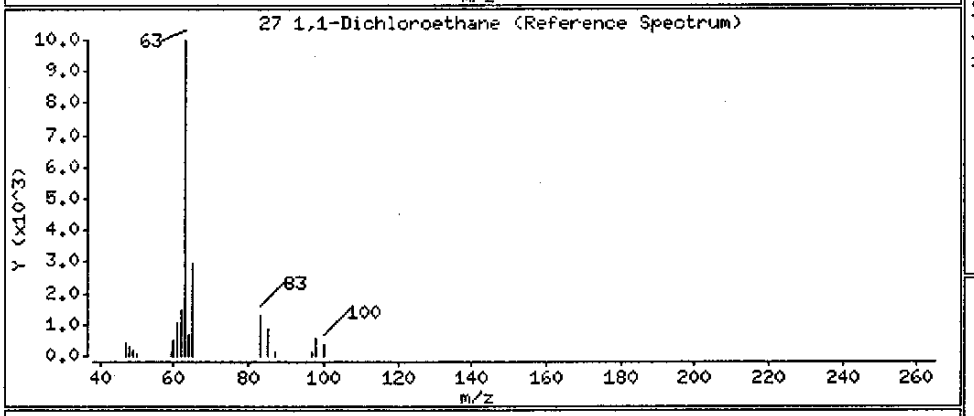
Column diameter: 0.53

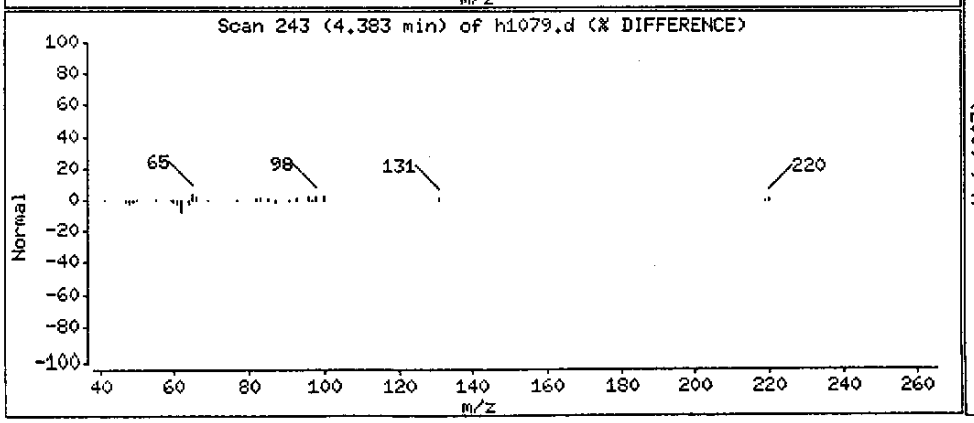
27 1,1-Dichloroethane

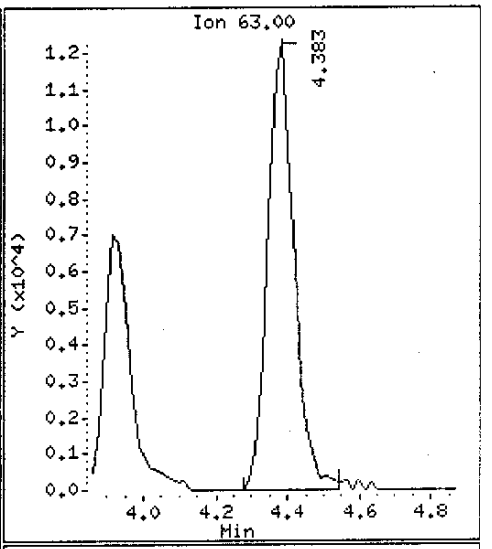
Concentration: 12.1343 ug/L

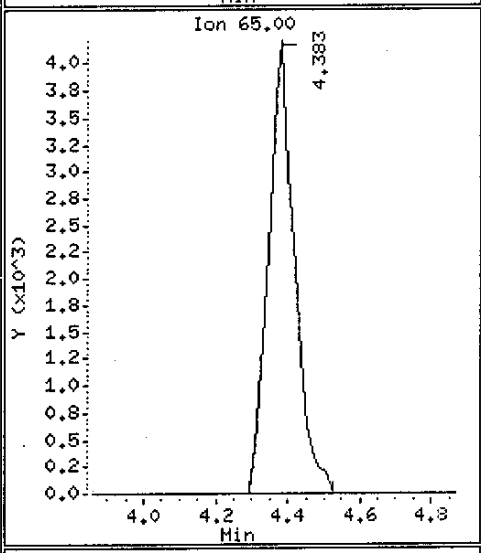


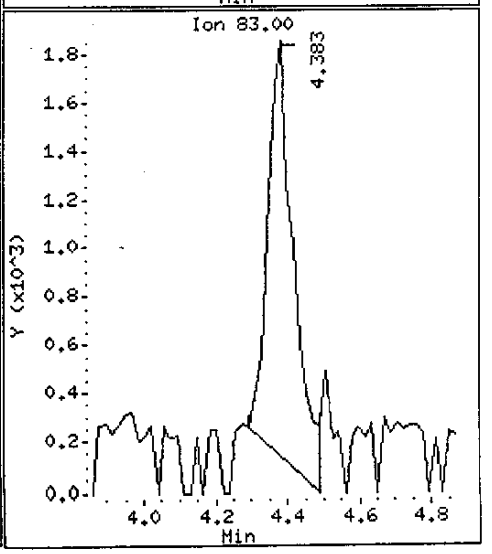












Data File: /chem/H.i/022004.b/h1079.d

Date : 20-FEB-2004 16:12

Client ID: MW-5

Instrument: H.i

Sample Info: F9KEM1AA,1,D4B130209-005

Purge Volume: 20.0

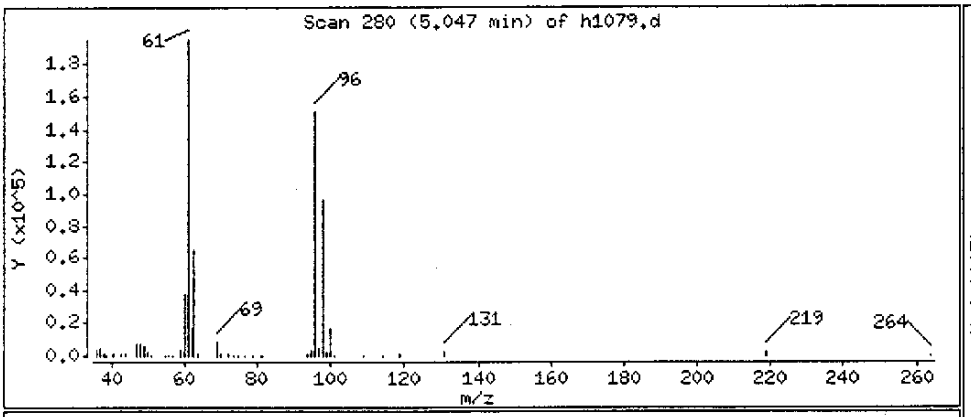
Operator: appelhansd

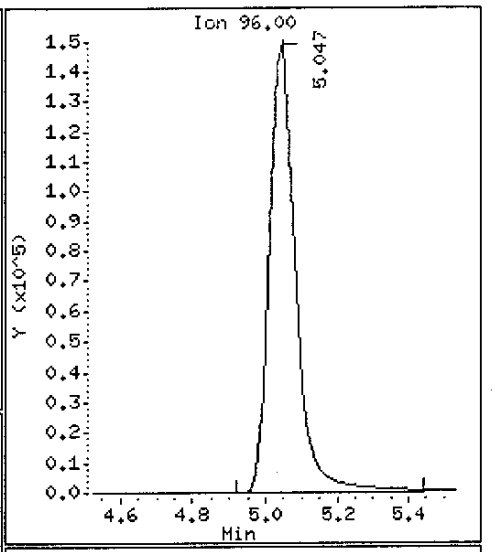
Column phase: DB624

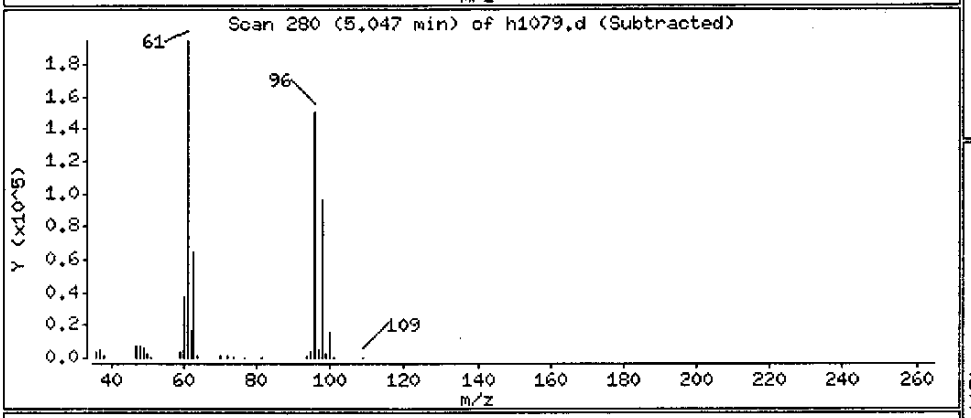
Column diameter: 0.53

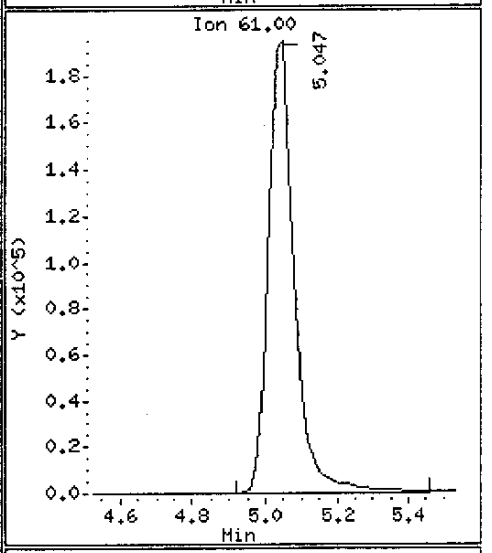
32 cis-1,2-Dichloroethene

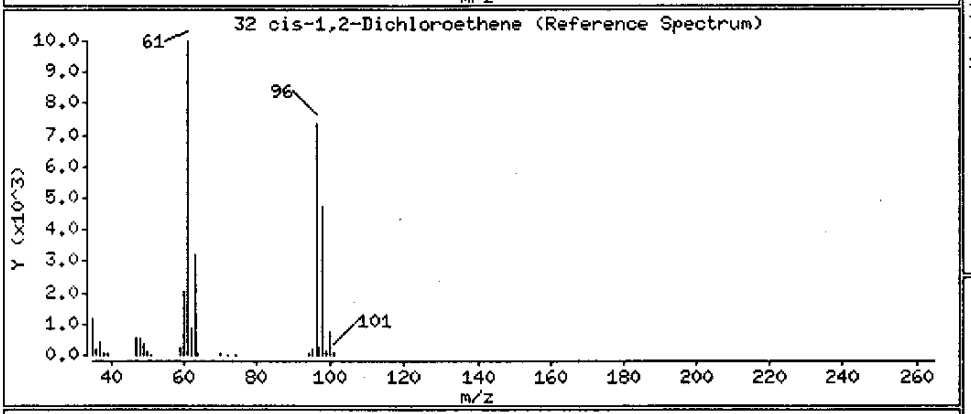
Concentration: 249.304 ug/L

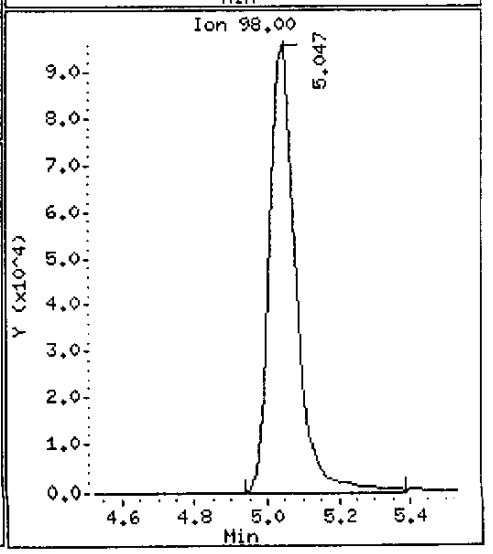


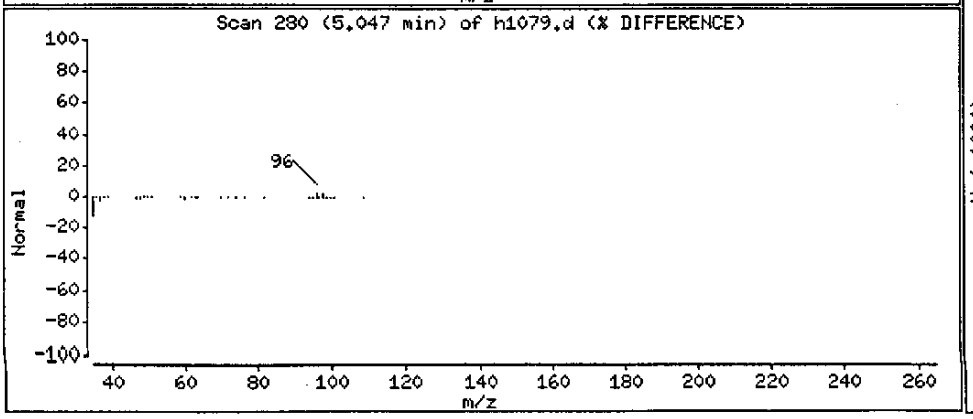












Matrix Spike Report

UNSPIKED SAMPLE
Data File : /chem/H.i/022004.b/h1079.d
Samp Info : F9KEM1AA,1,D4B130209-005
Inj Date : 20-FEB-2004 16:12
Sample Amt : 1mL

SPIKE SAMPLE
Data File : /chem/H.i/022004.b/h1080.d
Samp Info : F9KEM1AC,1,D4B130209-005MS
Inj Date : 20-FEB-2004 16:31
Sample Amt : 1mL

SPIKE DUPLICATE SAMPLE
Data File : /chem/H.i/022004.b/h1081.d
Samp Info : F9KEM1AD,1,D4B130209-005MSD
Inj Date : 20-FEB-2004 16:51
Sample Amt : 1mL

	Concentration					%Recovery					
	Sample	MS		MSD		Measured		Limits		RPD	
	Measured	Spiked	Measured	Spiked	Measured	MS	MSD	Min	Max	Mes	Max
1,1-Dichloroethene											
	0.0000	200.0000	174.8920	200.0000	175.5220	87	88	67	125	0	20
Trichloroethene											
	0.0000	200.0000	227.5790	200.0000	228.1310	114	114	80	123	0	20
Benzene											
	0.0000	200.0000	216.2840	200.0000	213.3860	108	107	75	116	1	20
Toluene											
	0.0000	200.0000	214.5160	200.0000	213.9740	107	107	74	115	0	20
Chlorobenzene											
	0.0000	200.0000	225.6730	200.0000	225.2270	113	113	77	117	0	20

100.0 Percent of recoveries are within control limits.
100.0 Percent of RPD values are within control limits.

Data File: /chem/H.i/022004.b/h1080.d
Report Date: 23-Feb-2004 07:53

STL Denver

VOLATILE REPORT SW-846

Data file : /chem/H.i/022004.b/h1080.d
Lab Smp Id: F9KEM1AC Client Smp ID: MW-5MS
Inj Date : 20-FEB-2004 16:31
Operator : appelhansd Inst ID: H.i
Smp Info : F9KEM1AC,1,D4B130209-005MS
Misc Info : h1079.d
Comment : Purge and Trap Analysis
Method : /chem/H.i/022004.b/H-20ml-h2o.m
Meth Date : 20-Feb-2004 11:09 appelhad Quant Type: ISTD
Cal Date : 07-JAN-2004 15:24 Cal File: h0014.d
Als bottle: 2 QC Sample: MS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: H-all.sub
Target Version: 3.40
Processing Host: chemsv02

Concentration Formula: Amt * DF * Vp/Vs

Name	Value	Description
DF	1.000	Dilution Factor
Vp	20.000	Purge Volume (ml)
Vs	1.000	Sample Volume (ml)

7x2-23

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/L)
* 48 Fluorobenzene	96	6.395	6.395	(1.000)	2107231	12.5000	
* 72 Chlorobenzene-d5	119	10.061	10.060	(1.000)	412820	12.5000	
* 96 1,4-Dichlorobenzene-d4	152	12.936	12.917	(1.000)	679883	12.5000	
$ 40 Dibromofluoromethane	111	5.604	5.586	(0.876)	942794	11.3738	227.475
$ 44 1,2-Dichloroethane-d4	65	6.000	5.981	(0.938)	399059	10.8008	216.017
$ 61 Toluene-d8	98	8.300	8.281	(0.825)	1843460	11.6817	233.634
$ 82 Bromofluorobenzene	95	11.570	11.552	(1.150)	1027959	11.8790	237.580
M 1 1,2-Dichloroethene (total)	96				831088	13.1446	262.892
M 2 Xylene (total)	106.00	Compound Not Detected.					
3 dichlorodifluoromethane	85.00	Compound Not Detected.					
4 Chloromethane	50.00	Compound Not Detected.					
5 Vinyl Chloride	62	2.154	2.136	(0.337)	1433664	30.5741	611.482
6 Ethylene Oxide	43.00	Compound Not Detected.					
117 Dichlorotetrafluoroethane	85.00	Compound Not Detected.					
123 1,2-dichloro-1,1,2-triflourom	117.00	Compound Not Detected.					
124 2,2-dichloro-1,1,1-trifluorom	83.00	Compound Not Detected.					

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/L)
7 Bromomethane	94.00	Compound Not Detected.					
8 Chloroethane	64.00	Compound Not Detected.					
9 Dichlorofluoromethane	67.00	Compound Not Detected.					
10 Trichlorofluoromethane	101.00	Compound Not Detected.					
11 Ethanol	45.00	Compound Not Detected.					
12 Ethyl Ether	59.00	Compound Not Detected.					
13 Acrolein	56.00	Compound Not Detected.					
15 Acetone	43.00	Compound Not Detected.					
14 1,1-Dichloroethene	96	3.196	3.196	(0.500)	520102	8.74461	174.892
16 Trichlorotrifluoroethane	151.00	Compound Not Detected.					
17 Iodomethane	142.00	Compound Not Detected.					
19 Acetonitrile	41.00	Compound Not Detected.					
18 Carbon Disulfide	76.00	Compound Not Detected.					
20 Allyl Chloride	41.00	Compound Not Detected.					
119 Methyl Acetate	43.00	Compound Not Detected.					
21 Methylene Chloride	84	3.646	3.627	(0.570)	20040	0.38199	7.63975
125 2-Propanol	45.00	Compound Not Detected.					
22 tert-Butyl alcohol	59.00	Compound Not Detected.					
23 Acrylonitrile	53.00	Compound Not Detected.					
24 trans-1,2-Dichloroethene	96	3.915	3.915	(0.612)	72657	1.14114	22.8228
25 Methyl t-butyl ether	73.00	Compound Not Detected.					
26 Hexane	57.00	Compound Not Detected.					
27 1,1-Dichloroethane	63	4.382	4.364	(0.685)	63545	0.59215	11.8430
29 Vinyl acetate	43.00	Compound Not Detected.					
30 Isopropyl ether	87.00	Compound Not Detected.					
28 Chloroprene	53.00	Compound Not Detected.					
120 ETBE	59.00	Compound Not Detected.					
33 2-Butanone	43.00	Compound Not Detected.					
32 cis-1,2-Dichloroethene	96	5.047	5.029	(0.789)	758431	12.0035	240.070
31 2,2-Dichloropropane	77.00	Compound Not Detected.					
35 Ethyl Acetate	43.00	Compound Not Detected.					
34 Propionitrile	54.00	Compound Not Detected.					
36 Methacrylonitrile	41.00	Compound Not Detected.					
37 Bromochloromethane	128.00	Compound Not Detected.					
39 Tetrahydrofuran	42.00	Compound Not Detected.					
38 Chloroform	83.00	Compound Not Detected.					
41 1,1,1-Trichloroethane	97.00	Compound Not Detected.					
114 Cyclohexane	56.00	Compound Not Detected.					
42 1,1-Dichloropropene	75.00	Compound Not Detected.					
43 Carbon Tetrachloride	117.00	Compound Not Detected.					
45 Isobutanol	41.00	Compound Not Detected.					
46 Benzene	78	6.072	6.071	(0.949)	1951008	10.8142	216.284
47 1,2-Dichloroethane	62.00	Compound Not Detected.					
121 TAME	73.00	Compound Not Detected.					
49 n-Butanol	56.00	Compound Not Detected.					
50 Trichloroethene	130	6.844	6.844	(1.070)	778511	11.3790	227.579
115 2-Pentanone	43.00	Compound Not Detected.					

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/L)
52 1,2-Dichloropropane	63.00	Compound Not Detected.					
122 Methyl Cyclohexane	55.00	Compound Not Detected.					
53 Dibromomethane	93.00	Compound Not Detected.					
54 Methyl Methacrylate	100.00	Compound Not Detected.					
55 1,4-Dioxane	88.00	Compound Not Detected.					
56 Bromodichloromethane	83.00	Compound Not Detected.					
57 2-nitropropane	41.00	Compound Not Detected.					
113 2-Chloroethyl vinyl ether	63.00	Compound Not Detected.					
59 cis-1,3-Dichloropropene	75.00	Compound Not Detected.					
60 4-Methyl-2-pentanone	43.00	Compound Not Detected.					
62 Toluene	91	8.372	8.389	(0.832)	2335721	10.7258	214.516
63 trans-1,3-Dichloropropene	75.00	Compound Not Detected.					
64 Ethyl methacrylate	69.00	Compound Not Detected.					
65 1,1,2-Trichloroethane	97.00	Compound Not Detected.					
67 1,3-Dichloropropane	76.00	Compound Not Detected.					
66 Tetrachloroethene	164.00	Compound Not Detected.					
68 2-Hexanone	43.00	Compound Not Detected.					
126 Tetrahydrothiophene	60.00	Compound Not Detected.					
69 Dibromochloromethane	129.00	Compound Not Detected.					
70 1,2-Dibromoethane	107.00	Compound Not Detected.					
71 1-Chlorohexane	91.00	Compound Not Detected.					
73 Chlorobenzene	112	10.097	10.096	(1.004)	1483924	11.2836	225.673
74 1,1,1,2-Tetrachloroethane	131.00	Compound Not Detected.					
75 Ethylbenzene	106.00	Compound Not Detected.					
76 m and p-Xylene	106.00	Compound Not Detected.					
77 o-Xylene	106.00	Compound Not Detected.					
78 Styrene	104.00	Compound Not Detected.					
79 Bromoform	173.00	Compound Not Detected.					
80 isopropyl benzene	105.00	Compound Not Detected.					
116 cis-1,4-Dichloro-2-butene	53.00	Compound Not Detected.					
81 Cyclohexanone	55.00	Compound Not Detected.					
83 1,1,2,2-Tetrachloroethane	83.00	Compound Not Detected.					
84 Bromobenzene	156.00	Compound Not Detected.					
85 1,2,3-Trichloropropane	110.00	Compound Not Detected.					
86 t-1,4-Dichloro-2-butene	53.00	Compound Not Detected.					
87 n-Propylbenzene	120.00	Compound Not Detected.					
88 2-Chlorotoluene	126.00	Compound Not Detected.					
89 1,3,5-Trimethylbenzene	105.00	Compound Not Detected.					
90 4-Chlorotoluene	126.00	Compound Not Detected.					
91 tert-Butylbenzene	119.00	Compound Not Detected.					
92 1,2,4-Trimethylbenzene	105.00	Compound Not Detected.					
93 sec-Butylbenzene	134.00	Compound Not Detected.					
94 m-Dichlorobenzene	146.00	Compound Not Detected.					
95 4-Isopropyltoluene	119.00	Compound Not Detected.					
97 p-dichlorobenzene	146.00	Compound Not Detected.					
118 1,2,3-Trimethylbenzene	105.00	Compound Not Detected.					
98 n-Butylbenzene	91.00	Compound Not Detected.					

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)
99 o-Dichlorobenzene	146.00	Compound Not Detected.					
100 1,2-Dibromo-3-chloropropane	157.00	Compound Not Detected.					
101 1,2,4-Trichlorobenzene	180.00	Compound Not Detected.					
102 Hexachlorobutadiene	225.00	Compound Not Detected.					
127 Naphthalene	128.00	Compound Not Detected.					
104 1,2,3-Trichlorobenzene	180.00	Compound Not Detected.					

Data File: /chem/H.i/022004.b/h1080.d
Report Date: 23-Feb-2004 07:53

STL Denver

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: H.i
Lab File ID: h1080.d
Lab Smp Id: F9KEM1AC
Analysis Type: VOA
Quant Type: ISTD
Operator: appelhansd
Method File: /chem/H.i/022004.b/H-20ml-h2o.m
Misc Info: h1079.d

Calibration Date: 02/20/4
Calibration Time: 1059
Client Smp ID: MW-5MS
Level: LOW
Sample Type: WATER

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
48 Fluorobenzene	2466684	1233342	4933368	2107231	-14.57
72 Chlorobenzene-d5	459303	229652	918606	412820	-10.12
96 1,4-Dichlorobenze	730993	365496	1461986	679883	-6.99

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
48 Fluorobenzene	6.39	5.89	6.89	6.39	0.01
72 Chlorobenzene-d5	10.06	9.56	10.56	10.06	0.00
96 1,4-Dichlorobenze	12.92	12.42	13.42	12.94	0.14

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem/H.i/022004.b/h1080.d Page 6
Report Date: 23-Feb-2004 07:53

STL Denver

RECOVERY REPORT

Client Name: ARCADIS GERAGHTY & M13-FEB-2004 Client SDG: D4B130209
Sample Matrix: LIQUID Fraction: VOA
Lab Smp Id: F9KEM1AC Client Smp ID: MW-5MS
Level: LOW Operator: appelhansd
Data Type: MS DATA SampleType: MS
SpikeList File: dcs-h20.spk Quant Type: ISTD
Sublist File: H-all.sub
Method File: /chem/H.i/022004.b/H-20ml-h2o.m
Misc Info: h1079.d

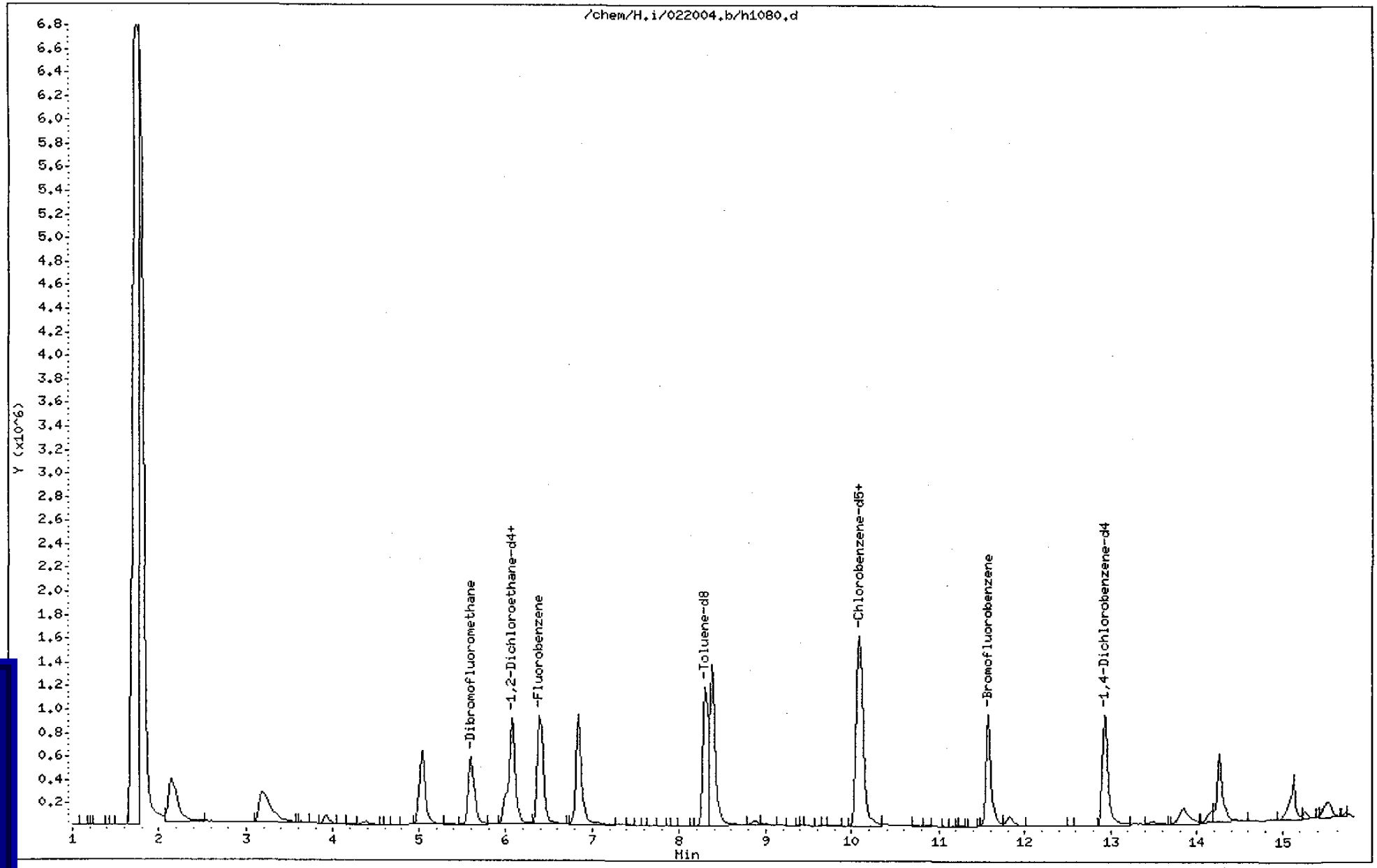
SPIKE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
14 1,1-Dichloroethene	200.000	174.892	87.45	67-125
50 Trichloroethene	200.000	227.579	113.79	80-123
46 Benzene	200.000	216.284	108.14	75-116
62 Toluene	200.000	214.516	107.26	74-115
73 Chlorobenzene	200.000	225.673	112.84	77-117

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 40 Dibromofluorometha	230.000	227.475	98.90	76-116
$ 44 1,2-Dichloroethane	230.000	216.017	93.92	59-129
$ 61 Toluene-d8	230.000	233.634	101.58	76-116
$ 82 Bromofluorobenzene	230.000	237.580	103.30	74-114

Data File: /chem/H.i/022004.b/h1080.d
Date : 20-FEB-2004 16:31
Client ID: MW-5MS
Sample Info: F9KEM1AC,1,D4B130209-005MS
Purge Volume: 20.0
Column phase: DB624

Instrument: H.i

Operator: appelhansd
Column diameter: 0.53



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STL Denver

VOLATILE REPORT SW-846

Data file : /chem/H.i/022004.b/h1081.d
Lab Smp Id: F9KEM1AD Client Smp ID: MW-5MSD
Inj Date : 20-FEB-2004 16:51
Operator : appelhansd Inst ID: H.i
Smp Info : F9KEM1AD,1,D4B130209-005MSD
Misc Info : h1080.d
Comment : Purge and Trap Analysis
Method : /chem/H.i/022004.b/H-20ml-h2o.m
Meth Date : 20-Feb-2004 11:09 appelhad Quant Type: ISTD
Cal Date : 07-JAN-2004 15:24 Cal File: h0014.d
Als bottle: 2 QC Sample: MSD
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: H-all.sub
Target Version: 3.40
Processing Host: chemsv02

Concentration Formula: Amt * DF * Vp/Vs

Name	Value	Description
DF	1.000	Dilution Factor
Vp	20.000	Purge Volume (ml)
Vs	1.000	Sample Volume (ml)

DA 2-23

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/L)
* 48 Fluorobenzene	96	6.399	6.395	(1.000)	2098329	12.5000	
* 72 Chlorobenzene-d5	119	10.064	10.060	(1.000)	407181	12.5000	
* 96 1,4-Dichlorobenzene-d4	152	12.922	12.917	(1.000)	661660	12.5000	
$ 40 Dibromofluoromethane	111	5.590	5.586	(0.874)	924786	11.2039	224.077
$ 44 1,2-Dichloroethane-d4	65	6.003	5.981	(0.938)	383415	10.4214	208.429
$ 61 Toluene-d8	98	8.303	8.281	(0.825)	1784691	11.4659	229.318
$ 82 Bromofluorobenzene	95	11.556	11.552	(1.148)	988100	11.5765	231.531
M 1 1,2-Dichloroethene (total)	96				838140	13.3124	266.249
M 2 Xylene (total)	106.00	Compound Not Detected.					
3 dichlorodifluoromethane	85.00	Compound Not Detected.					
4 Chloromethane	50.00	Compound Not Detected.					
5 Vinyl Chloride	62	2.140	2.136	(0.334)	1438480	30.8069	616.139
6 Ethylene Oxide	43.00	Compound Not Detected.					
117 Dichlorotetrafluoroethane	85.00	Compound Not Detected.					
123 1,2-dichloro-1,1,2-triflourom	117.00	Compound Not Detected.					
124 2,2-dichloro-1,1,1-trifluorom	83.00	Compound Not Detected.					

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/L)
7 Bromomethane	94.00	Compound Not Detected.					
8 Chloroethane	64.00	Compound Not Detected.					
9 Dichlorofluoromethane	67.00	Compound Not Detected.					
10 Trichlorofluoromethane	101.00	Compound Not Detected.					
11 Ethanol	45.00	Compound Not Detected.					
12 Ethyl Ether	59.00	Compound Not Detected.					
13 Acrolein	56.00	Compound Not Detected.					
15 Acetone	43.00	Compound Not Detected.					
14 1,1-Dichloroethene	96	3.182	3.196	(0.497)	519769	8.77609	175.522
16 Trichlorotrifluoroethane	151.00	Compound Not Detected.					
17 Iodomethane	142.00	Compound Not Detected.					
19 Acetonitrile	41.00	Compound Not Detected.					
18 Carbon Disulfide	76.00	Compound Not Detected.					
20 Allyl Chloride	41.00	Compound Not Detected.					
119 Methyl Acetate	43.00	Compound Not Detected.					
21 Methylene Chloride	84	3.614	3.627	(0.565)	18728	0.35849	7.16987
125 2-Propanol	45.00	Compound Not Detected.					
22 tert-Butyl alcohol	59.00	Compound Not Detected.					
23 Acrylonitrile	53.00	Compound Not Detected.					
24 trans-1,2-Dichloroethene	96	3.919	3.915	(0.612)	72862	1.14921	22.9842
25 Methyl t-butyl ether	73.00	Compound Not Detected.					
26 Hexane	57.00	Compound Not Detected.					
27 1,1-Dichloroethane	63	4.368	4.364	(0.683)	63429	0.59358	11.8715
29 Vinyl acetate	43.00	Compound Not Detected.					
30 Isopropyl ether	87.00	Compound Not Detected.					
28 Chloroprene	53.00	Compound Not Detected.					
120 ETBE	59.00	Compound Not Detected.					
33 2-Butanone	43.00	Compound Not Detected.					
32 cis-1,2-Dichloroethene	96	5.033	5.029	(0.787)	765278	12.1632	243.265
31 2,2-Dichloropropane	77.00	Compound Not Detected.					
35 Ethyl Acetate	43.00	Compound Not Detected.					
34 Propionitrile	54.00	Compound Not Detected.					
36 Methacrylonitrile	41.00	Compound Not Detected.					
37 Bromochloromethane	128.00	Compound Not Detected.					
39 Tetrahydrofuran	42.00	Compound Not Detected.					
38 Chloroform	83.00	Compound Not Detected.					
41 1,1,1-Trichloroethane	97.00	Compound Not Detected.					
114 Cyclohexane	56.00	Compound Not Detected.					
42 1,1-Dichloropropene	75.00	Compound Not Detected.					
43 Carbon Tetrachloride	117.00	Compound Not Detected.					
45 Isobutanol	41.00	Compound Not Detected.					
46 Benzene	78	6.075	6.071	(0.949)	1916735	10.6693	213.386
47 1,2-Dichloroethane	62.00	Compound Not Detected.					
121 TAME	73.00	Compound Not Detected.					
49 n-Butanol	56.00	Compound Not Detected.					
50 Trichloroethene	130	6.830	6.844	(1.067)	777102	11.4065	228.131
115 2-Pentanone	43.00	Compound Not Detected.					

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/L)
52 1,2-Dichloropropane	63.00	Compound Not Detected.					
122 Methyl Cyclohexane	55.00	Compound Not Detected.					
53 Dibromomethane	93.00	Compound Not Detected.					
54 Methyl Methacrylate	100.00	Compound Not Detected.					
55 1,4-Dioxane	88.00	Compound Not Detected.					
56 Bromodichloromethane	83.00	Compound Not Detected.					
57 2-nitropropane	41.00	Compound Not Detected.					
113 2-Chloroethyl vinyl ether	63.00	Compound Not Detected.					
59 cis-1,3-Dichloropropene	75.00	Compound Not Detected.					
60 4-Methyl-2-pentanone	43.00	Compound Not Detected.					
62 Toluene	91	8.375	8.389	(0.832)	2297996	10.6987	213.974
63 trans-1,3-Dichloropropene	75.00	Compound Not Detected.					
64 Ethyl methacrylate	69.00	Compound Not Detected.					
65 1,1,2-Trichloroethane	97.00	Compound Not Detected.					
67 1,3-Dichloropropane	76.00	Compound Not Detected.					
66 Tetrachloroethene	164.00	Compound Not Detected.					
68 2-Hexanone	43.00	Compound Not Detected.					
126 Tetrahydrothiophene	60.00	Compound Not Detected.					
69 Dibromochloromethane	129.00	Compound Not Detected.					
70 1,2-Dibromoethane	107.00	Compound Not Detected.					
71 1-Chlorohexane	91.00	Compound Not Detected.					
73 Chlorobenzene	112	10.100	10.096	(1.004)	1460762	11.2613	225.227
74 1,1,1,2-Tetrachloroethane	131.00	Compound Not Detected.					
75 Ethylbenzene	106.00	Compound Not Detected.					
76 m and p-Xylene	106.00	Compound Not Detected.					
77 o-Xylene	106.00	Compound Not Detected.					
78 Styrene	104.00	Compound Not Detected.					
79 Bromoform	173.00	Compound Not Detected.					
80 isopropyl benzene	105.00	Compound Not Detected.					
116 cis-1,4-Dichloro-2-butene	53.00	Compound Not Detected.					
81 Cyclohexanone	55.00	Compound Not Detected.					
83 1,1,2,2-Tetrachloroethane	83.00	Compound Not Detected.					
84 Bromobenzene	156.00	Compound Not Detected.					
85 1,2,3-Trichloropropane	110.00	Compound Not Detected.					
86 t-1,4-Dichloro-2-butene	53.00	Compound Not Detected.					
87 n-Propylbenzene	120.00	Compound Not Detected.					
88 2-Chlorotoluene	126.00	Compound Not Detected.					
89 1,3,5-Trimethylbenzene	105.00	Compound Not Detected.					
90 4-Chlorotoluene	126.00	Compound Not Detected.					
91 tert-Butylbenzene	119.00	Compound Not Detected.					
92 1,2,4-Trimethylbenzene	105.00	Compound Not Detected.					
93 sec-Butylbenzene	134.00	Compound Not Detected.					
94 m-Dichlorobenzene	146.00	Compound Not Detected.					
95 4-Isopropyltoluene	119.00	Compound Not Detected.					
97 p-dichlorobenzene	146.00	Compound Not Detected.					
118 1,2,3-Trimethylbenzene	105.00	Compound Not Detected.					
98 n-Butylbenzene	91.00	Compound Not Detected.					

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/L)
99 o-Dichlorobenzene	146.00	Compound Not Detected.					
100 1,2-Dibromo-3-chloropropane	157.00	Compound Not Detected.					
101 1,2,4-Trichlorobenzene	180.00	Compound Not Detected.					
102 Hexachlorobutadiene	225.00	Compound Not Detected.					
127 Naphthalene	128.00	Compound Not Detected.					
104 1,2,3-Trichlorobenzene	180.00	Compound Not Detected.					

STL Denver

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: H.i
Lab File ID: h1081.d
Lab Smp Id: F9KEM1AD
Analysis Type: VOA
Quant Type: ISTD
Operator: appelhansd
Method File: /chem/H.i/022004.b/H-20ml-h2o.m
Misc Info: h1080.d

Calibration Date: 02/20/4
Calibration Time: 1059
Client Smp ID: MW-5MSD
Level: LOW
Sample Type: WATER

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
48 Fluorobenzene	2466684	1233342	4933368	2098329	-14.93
72 Chlorobenzene-d5	459303	229652	918606	407181	-11.35
96 1,4-Dichlorobenze	730993	365496	1461986	661660	-9.48

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
48 Fluorobenzene	6.39	5.89	6.89	6.40	0.07
72 Chlorobenzene-d5	10.06	9.56	10.56	10.06	0.04
96 1,4-Dichlorobenze	12.92	12.42	13.42	12.92	0.03

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem/H.i/022004.b/h1081.d
Report Date: 23-Feb-2004 07:54

STL Denver

RECOVERY REPORT

Client Name: ARCADIS GERAGHTY & M13-FEB-2004 Client SDG: D4B130209
Sample Matrix: LIQUID Fraction: VOA
Lab Smp Id: F9KEM1AD Client Smp ID: MW-5MSD
Level: LOW Operator: appelhansd
Data Type: MS DATA SampleType: MSD
SpikeList File: dcs-h20.spk Quant Type: ISTD
Sublist File: H-all.sub
Method File: /chem/H.i/022004.b/H-20ml-h2o.m
Misc Info: h1080.d

SPIKE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
14 1,1-Dichloroethene	200.000	175.522	87.76	67-125
50 Trichloroethene	200.000	228.131	114.07	80-123
46 Benzene	200.000	213.386	106.69	75-116
62 Toluene	200.000	213.974	106.99	74-115
73 Chlorobenzene	200.000	225.227	112.61	77-117

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 40 Dibromofluorometha	230.000	224.077	97.42	76-116
$ 44 1,2-Dichloroethane	230.000	208.429	90.62	59-129
$ 61 Toluene-d8	230.000	229.318	99.70	76-116
$ 82 Bromofluorobenzene	230.000	231.531	100.67	74-114

Data File: /chem/H.i/022004.b/h1081.d
Date : 20-FEB-2004 16:51
Client ID: MW-5MSD
Sample Info: F9KEM1AD,1,D4B130209-005MSD
Purge Volume: 20.0
Column phase: DB624

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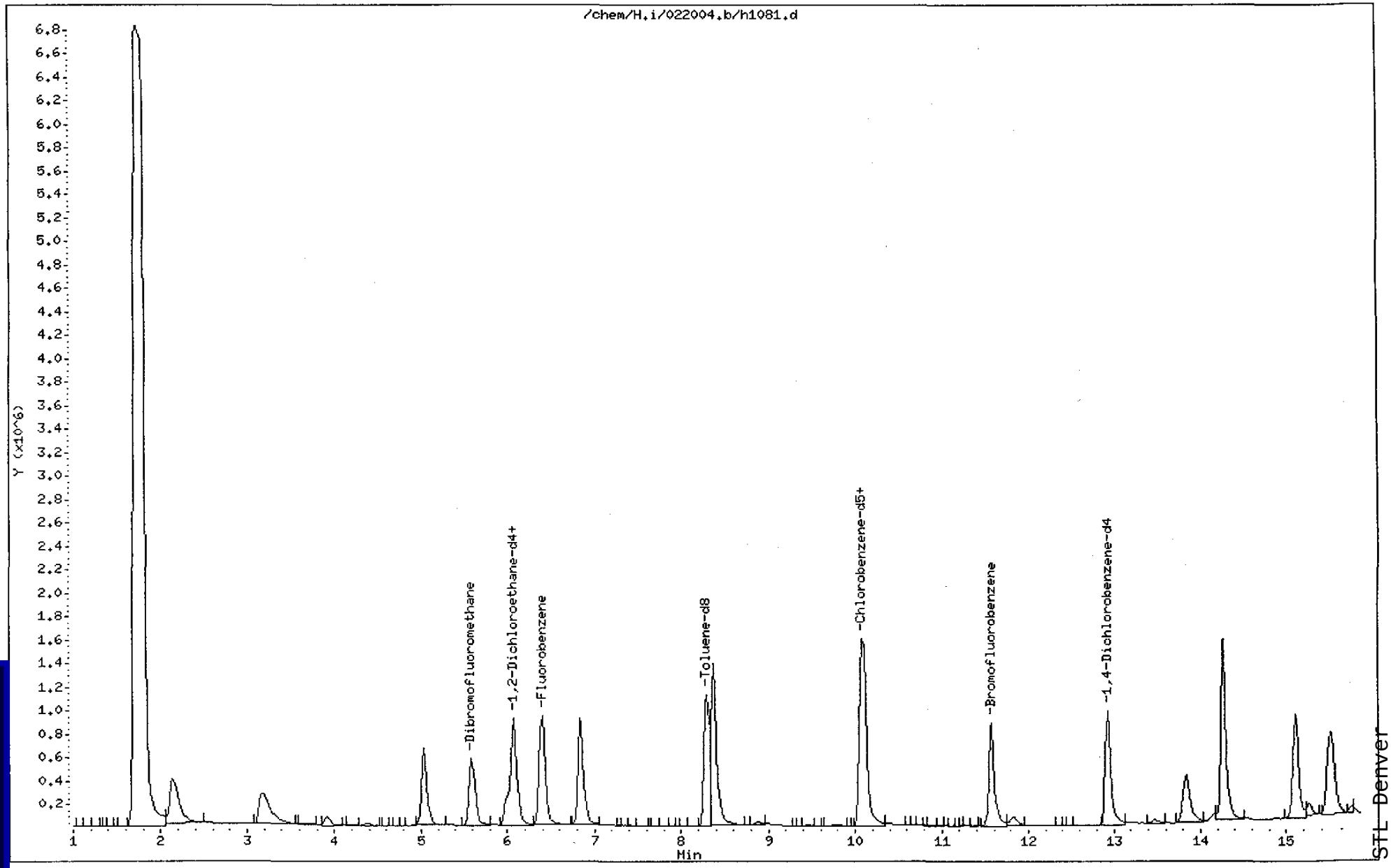
Instrument: H.i

Operator: appelhansd
Column diameter: 0.53



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Data File: /chem/H.i/022004.b/h1082.d
Report Date: 23-Feb-2004 07:54

STL Denver

VOLATILE REPORT SW-846

Data file : /chem/H.i/022004.b/h1082.d
Lab Smp Id: F9KEP1AA Client Smp ID: MW-6
Inj Date : 20-FEB-2004 17:11
Operator : appelhansd Inst ID: H.i
Smp Info : F9KEP1AA,,D4B130209-006
Misc Info :
Comment : Purge and Trap Analysis
Method : /chem/H.i/022004.b/H-20ml-h2o.m
Meth Date : 20-Feb-2004 11:09 appelhad Quant Type: ISTD
Cal Date : 07-JAN-2004 15:24 Cal File: h0014.d
Als bottle: 2
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: H-all.sub
Target Version: 3.40
Processing Host: chemsv02

Concentration Formula: Amt * DF * Vp/Vs

Name	Value	Description
DF	1.000	Dilution Factor
Vp	20.000	Purge Volume (ml)
Vs	20.000	Sample Volume (ml)

2-23

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/L)
* 48 Fluorobenzene	96	6.398	6.395	(1.000)	2354739	12.5000	
* 72 Chlorobenzene-d5	119	10.064	10.060	(1.000)	460361	12.5000	
* 96 1,4-Dichlorobenzene-d4	152	12.921	12.917	(1.000)	761887	12.5000	
$ 40 Dibromofluoromethane	111	5.590	5.586	(0.874)	937427	10.1203	10.1203
$ 44 1,2-Dichloroethane-d4	65	6.003	5.981	(0.938)	397963	9.63901	9.63901
$ 61 Toluene-d8	98	8.303	8.281	(0.825)	1774049	10.0809	10.0809
$ 82 Bromofluorobenzene	95	11.556	11.552	(1.148)	1007286	10.4381	10.4380
M 1 1,2-Dichloroethene (total)	96.00	Compound Not Detected.					
M 2 Xylene (total)	106.00	Compound Not Detected.					
3 dichlorodifluoromethane	85.00	Compound Not Detected.					
4 Chloromethane	50.00	Compound Not Detected.					
5 Vinyl Chloride	62.00	Compound Not Detected.					
6 Ethylene Oxide	43.00	Compound Not Detected.					
117 Dichlorotetrafluoroethane	85.00	Compound Not Detected.					
123 1,2-dichloro-1,1,2-triflourom	117.00	Compound Not Detected.					
124 2,2-dichloro-1,1,1-trifluorom	83.00	Compound Not Detected.					

Data File: /chem/H.i/022004.b/h1082.d
Report Date: 23-Feb-2004 07:54

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/L)
7 Bromomethane	94.00	Compound Not Detected.					
8 Chloroethane	64.00	Compound Not Detected.					
9 Dichlorofluoromethane	67.00	Compound Not Detected.					
10 Trichlorofluoromethane	101.00	Compound Not Detected.					
11 Ethanol	45.00	Compound Not Detected.					
12 Ethyl Ether	59.00	Compound Not Detected.					
13 Acrolein	56.00	Compound Not Detected.					
15 Acetone	43.00	Compound Not Detected.					
14 1,1-Dichloroethene	96.00	Compound Not Detected.					
16 Trichlorotrifluoroethane	151.00	Compound Not Detected.					
17 Iodomethane	142.00	Compound Not Detected.					
19 Acetonitrile	41.00	Compound Not Detected.					
18 Carbon Disulfide	76.00	Compound Not Detected.					
20 Allyl Chloride	41.00	Compound Not Detected.					
119 Methyl Acetate	43.00	Compound Not Detected.					
21 Methylene Chloride	84	3.631	3.627	(0.568)	18640	0.31796	0.317956
125 2-Propanol	45.00	Compound Not Detected.					
22 tert-Butyl alcohol	59.00	Compound Not Detected.					
23 Acrylonitrile	53.00	Compound Not Detected.					
24 trans-1,2-Dichloroethene	96.00	Compound Not Detected.					
25 Methyl t-butyl ether	73.00	Compound Not Detected.					
26 Hexane	57.00	Compound Not Detected.					
27 1,1-Dichloroethane	63.00	Compound Not Detected.					
29 Vinyl acetate	43.00	Compound Not Detected.					
30 Isopropyl ether	87.00	Compound Not Detected.					
28 Chloroprene	53.00	Compound Not Detected.					
120 ETBE	59.00	Compound Not Detected.					
33 2-Butanone	43.00	Compound Not Detected.					
32 cis-1,2-Dichloroethene	96.00	Compound Not Detected.					
31 2,2-Dichloropropane	77.00	Compound Not Detected.					
35 Ethyl Acetate	43.00	Compound Not Detected.					
34 Propionitrile	54.00	Compound Not Detected.					
36 Methacrylonitrile	41.00	Compound Not Detected.					
37 Bromochloromethane	128.00	Compound Not Detected.					
39 Tetrahydrofuran	42.00	Compound Not Detected.					
38 Chloroform	83.00	Compound Not Detected.					
41 1,1,1-Trichloroethane	97.00	Compound Not Detected.					
114 Cyclohexane	56.00	Compound Not Detected.					
42 1,1-Dichloropropene	75.00	Compound Not Detected.					
43 Carbon Tetrachloride	117.00	Compound Not Detected.					
45 Isobutanol	41.00	Compound Not Detected.					
46 Benzene	78.00	Compound Not Detected.					
47 1,2-Dichloroethane	62.00	Compound Not Detected.					
121 TAME	73.00	Compound Not Detected.					
49 n-Butanol	56.00	Compound Not Detected.					
50 Trichloroethene	130.00	Compound Not Detected.					
115 2-Pentanone	43.00	Compound Not Detected.					

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)
52 1,2-Dichloropropane	63.00	Compound Not Detected.					
122 Methyl Cyclohexane	55.00	Compound Not Detected.					
53 Dibromomethane	93.00	Compound Not Detected.					
54 Methyl Methacrylate	100.00	Compound Not Detected.					
55 1,4-Dioxane	88.00	Compound Not Detected.					
56 Bromodichloromethane	83.00	Compound Not Detected.					
57 2-nitropropane	41.00	Compound Not Detected.					
113 2-Chloroethyl vinyl ether	63.00	Compound Not Detected.					
59 cis-1,3-Dichloropropene	75.00	Compound Not Detected.					
60 4-Methyl-2-pentanone	43.00	Compound Not Detected.					
62 Toluene	91	8.375	8.389	(0.832)	120833	0.49757	0.497574
63 trans-1,3-Dichloropropene	75.00	Compound Not Detected.					
64 Ethyl methacrylate	69.00	Compound Not Detected.					
65 1,1,2-Trichloroethane	97.00	Compound Not Detected.					
67 1,3-Dichloropropane	76.00	Compound Not Detected.					
66 Tetrachloroethene	164.00	Compound Not Detected.					
68 2-Hexanone	43.00	Compound Not Detected.					
126 Tetrahydrothiophene	60.00	Compound Not Detected.					
69 Dibromochloromethane	129.00	Compound Not Detected.					
70 1,2-Dibromoethane	107.00	Compound Not Detected.					
71 1-Chlorohexane	91.00	Compound Not Detected.					
73 Chlorobenzene	112.00	Compound Not Detected.					
74 1,1,1,2-Tetrachloroethane	131.00	Compound Not Detected.					
75 Ethylbenzene	106.00	Compound Not Detected.					
76 m and p-Xylene	106.00	Compound Not Detected.					
77 o-Xylene	106.00	Compound Not Detected.					
78 Styrene	104.00	Compound Not Detected.					
79 Bromoform	173.00	Compound Not Detected.					
80 isopropyl benzene	105.00	Compound Not Detected.					
116 cis-1,4-Dichloro-2-butene	53.00	Compound Not Detected.					
81 Cyclohexanone	55.00	Compound Not Detected.					
83 1,1,2,2-Tetrachloroethane	83.00	Compound Not Detected.					
84 Bromobenzene	156.00	Compound Not Detected.					
85 1,2,3-Trichloropropane	110.00	Compound Not Detected.					
86 t-1,4-Dichloro-2-butene	53.00	Compound Not Detected.					
87 n-Propylbenzene	120.00	Compound Not Detected.					
88 2-Chlorotoluene	126.00	Compound Not Detected.					
89 1,3,5-Trimethylbenzene	105.00	Compound Not Detected.					
90 4-Chlorotoluene	126.00	Compound Not Detected.					
91 tert-Butylbenzene	119.00	Compound Not Detected.					
92 1,2,4-Trimethylbenzene	105.00	Compound Not Detected.					
93 sec-Butylbenzene	134.00	Compound Not Detected.					
94 m-Dichlorobenzene	146.00	Compound Not Detected.					
95 4-Isopropyltoluene	119.00	Compound Not Detected.					
97 p-dichlorobenzene	146.00	Compound Not Detected.					
118 1,2,3-Trimethylbenzene	105.00	Compound Not Detected.					
98 n-Butylbenzene	91.00	Compound Not Detected.					

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/L)
99 o-Dichlorobenzene	146.00	Compound Not Detected.					
100 1,2-Dibromo-3-chloropropane	157.00	Compound Not Detected.					
101 1,2,4-Trichlorobenzene	180.00	Compound Not Detected.					
102 Hexachlorobutadiene	225.00	Compound Not Detected.					
127 Naphthalene	128.00	Compound Not Detected.					
104 1,2,3-Trichlorobenzene	180.00	Compound Not Detected.					

Data File: /chem/H.i/022004.b/h1082.d
Report Date: 23-Feb-2004 07:54

STL Denver

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: H.i
Lab File ID: h1082.d
Lab Smp Id: F9KEP1AA
Analysis Type: VOA
Quant Type: ISTD
Operator: appelhansd
Method File: /chem/H.i/022004.b/H-20ml-h2o.m
Misc Info:

Calibration Date: 02/20/4
Calibration Time: 1059
Client Smp ID: MW-6
Level: LOW
Sample Type: WATER

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
48 Fluorobenzene	2466684	1233342	4933368	2354739	-4.54
72 Chlorobenzene-d5	459303	229652	918606	460361	0.23
96 1,4-Dichlorobenze	730993	365496	1461986	761887	4.23

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
48 Fluorobenzene	6.39	5.89	6.89	6.40	0.06
72 Chlorobenzene-d5	10.06	9.56	10.56	10.06	0.04
96 1,4-Dichlorobenze	12.92	12.42	13.42	12.92	0.03

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

STL Denver

RECOVERY REPORT

Client Name: ARCADIS GERAGHTY & M13-FEB-2004 Client SDG: D4B130209
Sample Matrix: LIQUID Fraction: VOA
Lab Smp Id: F9KEP1AA Client Smp ID: MW-6
Level: LOW Operator: appelhansd
Data Type: MS DATA SampleType: SAMPLE
SpikeList File: dcs-h20.spk Quant Type: ISTD
Sublist File: H-all.sub
Method File: /chem/H.i/022004.b/H-20ml-h2o.m
Misc Info:

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 40 Dibromofluorometha	11.5000	10.1203	88.00	76-116
$ 44 1,2-Dichloroethane	11.5000	9.63901	83.82	59-129
$ 61 Toluene-d8	11.5000	10.0809	87.66	76-116
$ 82 Bromofluorobenzene	11.5000	10.4380	90.77	74-114

Data File: /chem/H.i/022004.b/h1082.d
Date : 20-FEB-2004 17:11
Client ID: MW-6
Sample Info: F9KEP1AA,,D4B130209-006
Purge Volume: 20.0
Column phase: DB624

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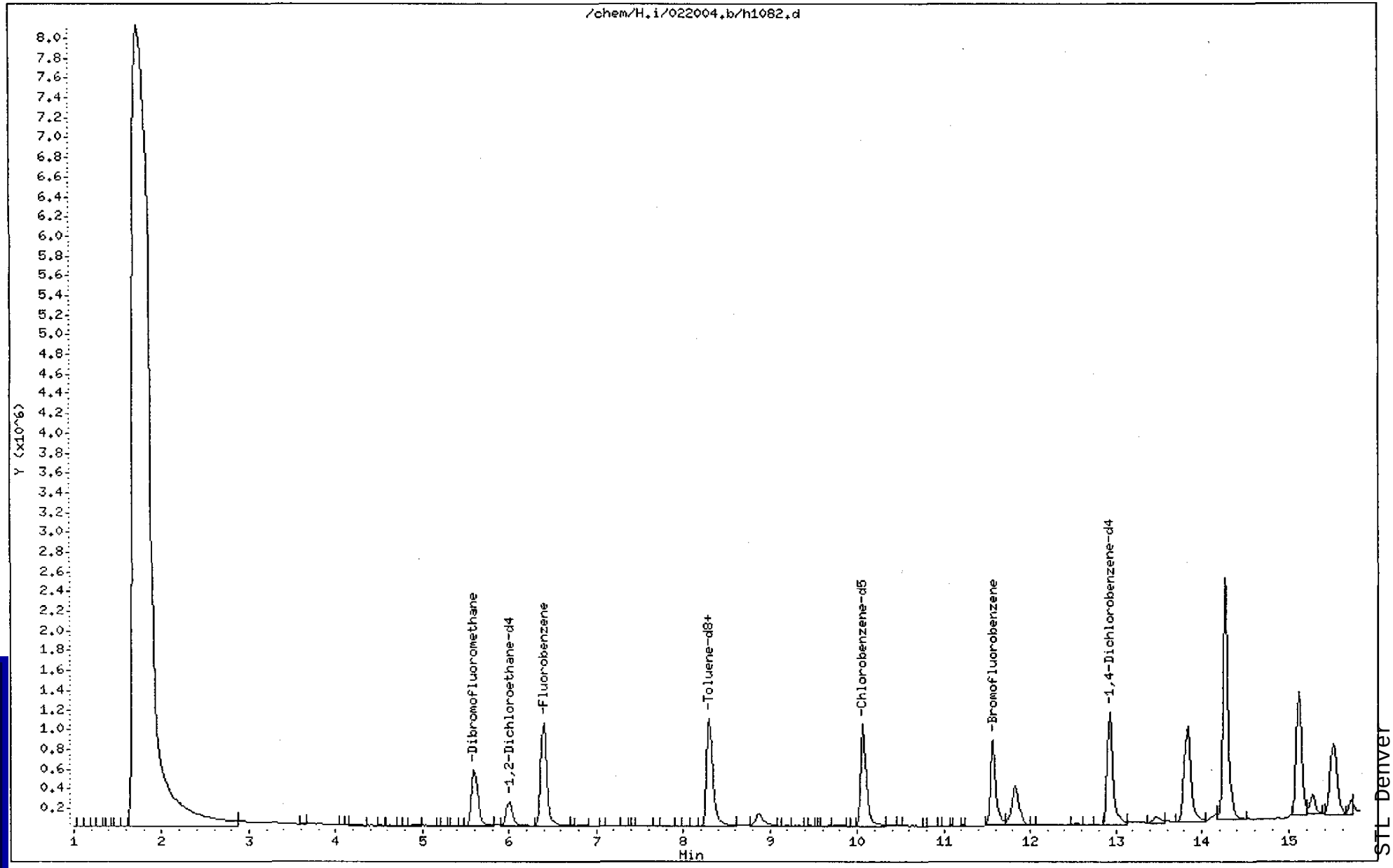
Instrument: H.i

Operator: appelhansd
Column diameter: 0.53



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Data File: /chem/H.i/022004.b/h1082.d

Date : 20-FEB-2004 17:11

Client ID: MW-6

Instrument: H.i

Sample Info: F9KEP1AA,,D4B130209-006

Purge Volume: 20.0

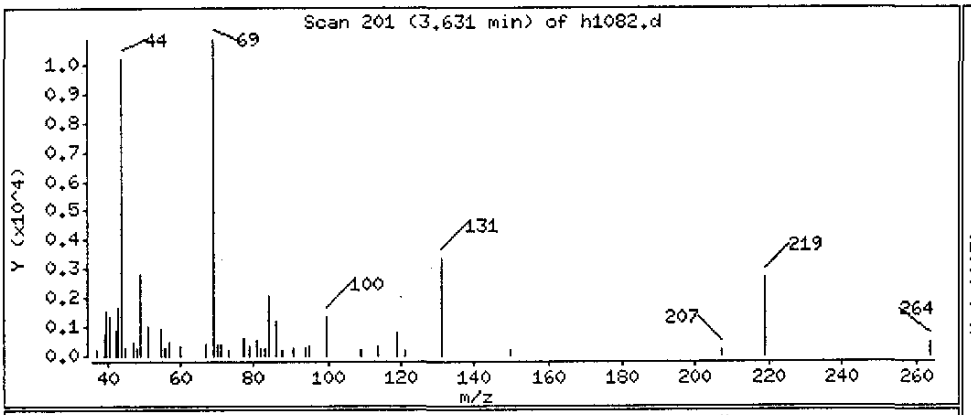
Operator: appelhansd

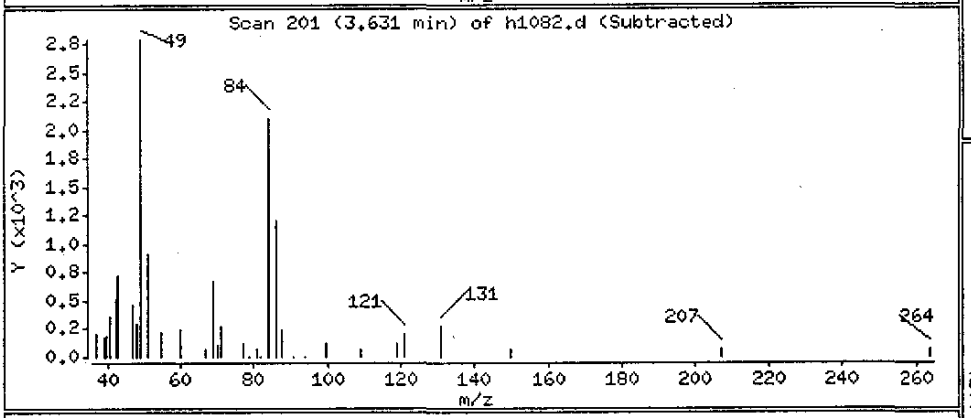
Column phase: DB624

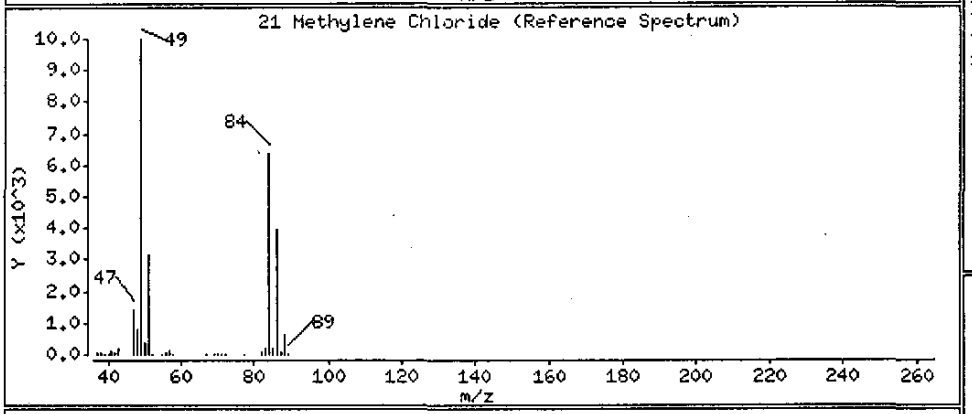
Column diameter: 0.53

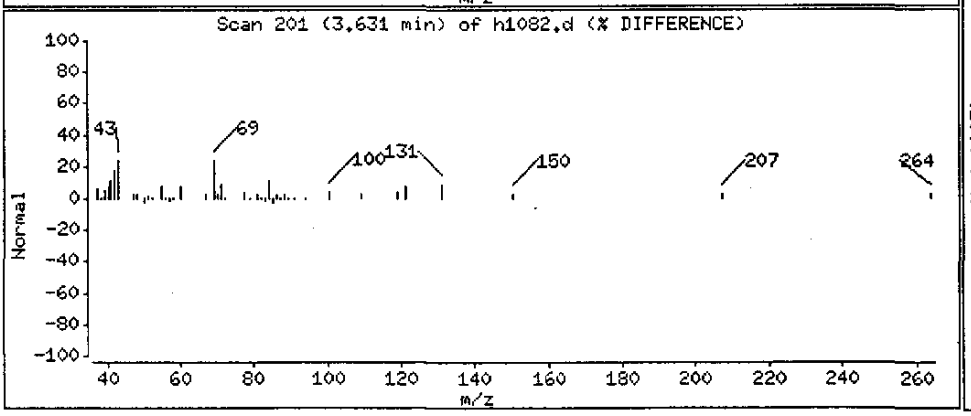
21 Methylene Chloride

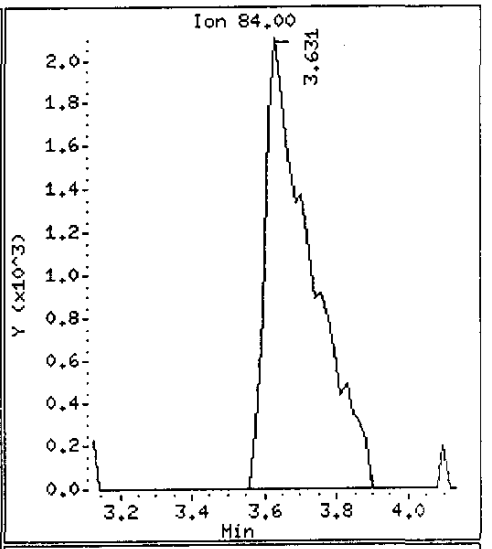
Concentration: 0.317956 ug/L

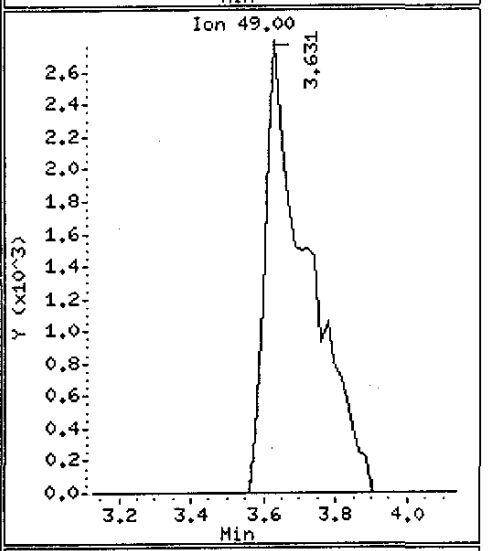


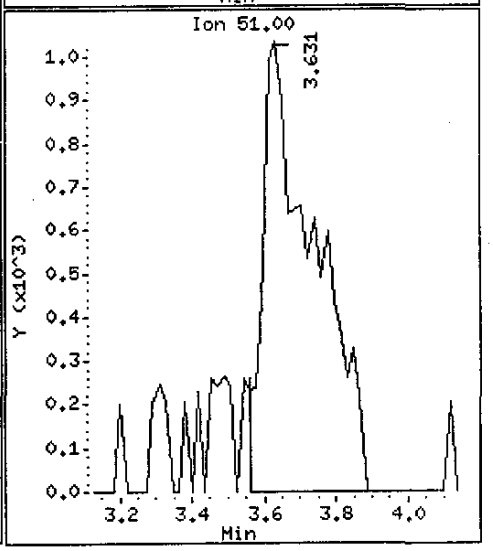












Data File: /chem/H.i/022004.b/h1082.d

Date : 20-FEB-2004 17:11

Client ID: MW-6

Instrument: H.i

Sample Info: F9KEP1AA,,D4B130209-006

Purge Volume: 20.0

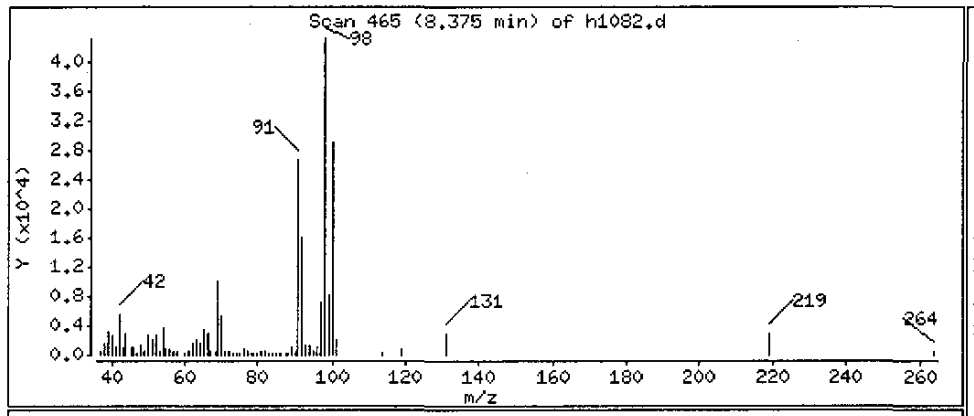
Operator: appelhansd

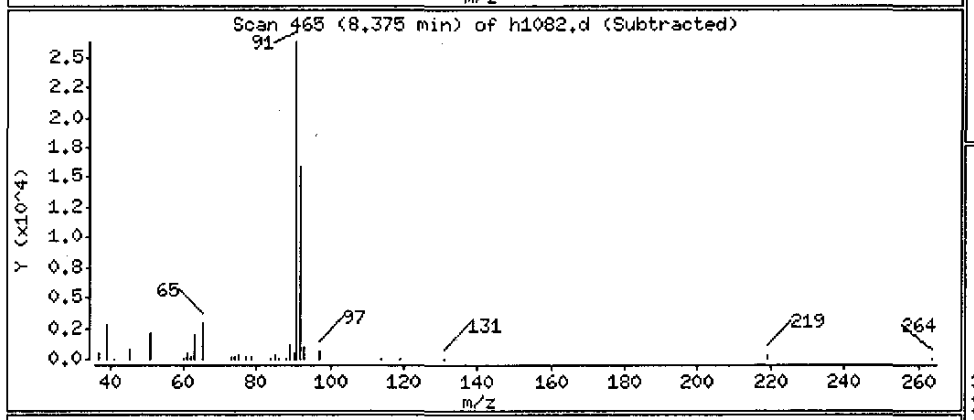
Column phase: DB624

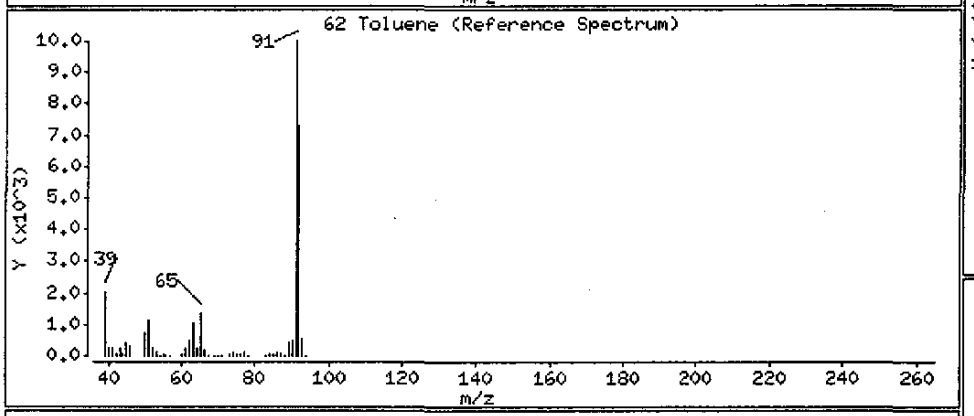
Column diameter: 0.53

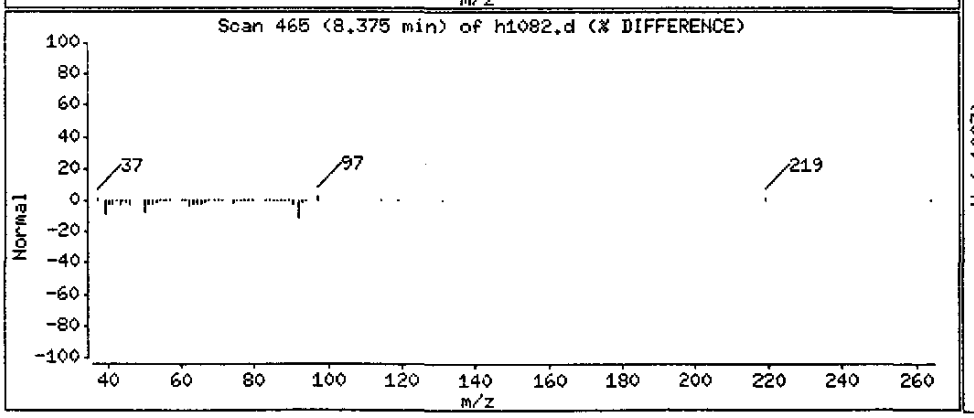
62 Toluene

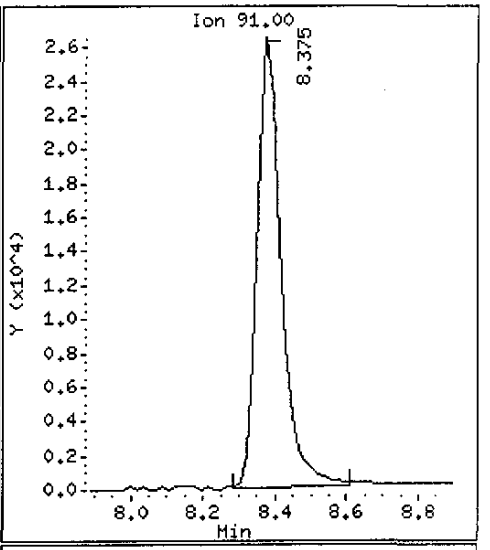
Concentration: 0.497574 ug/L

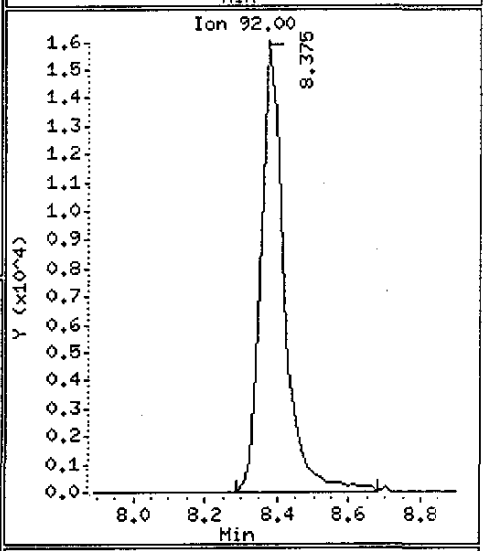


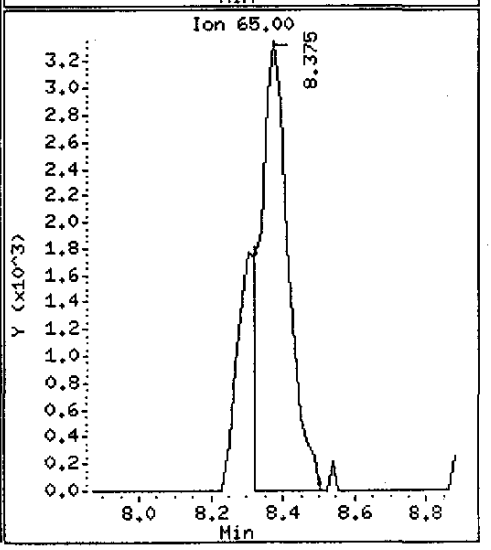












Data File: /chem/H.i/022004.b/h1083.d
Report Date: 23-Feb-2004 07:55

STL Denver

VOLATILE REPORT SW-846

Data file : /chem/H.i/022004.b/h1083.d
Lab Smp Id: F9KEQ1AA Client Smp ID: MW-7
Inj Date : 20-FEB-2004 17:31
Operator : appelhansd Inst ID: H.i
Smp Info : F9KEQ1AA,,D4B130209-007
Misc Info :
Comment : Purge and Trap Analysis
Method : /chem/H.i/022004.b/H-20ml-h2o.m
Meth Date : 20-Feb-2004 11:09 appelhad Quant Type: ISTD
Cal Date : 07-JAN-2004 15:24 Cal File: h0014.d
Als bottle: 2
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: H-all.sub
Target Version: 3.40
Processing Host: chemsv02

Concentration Formula: Amt * DF * Vp/Vs

Name	Value	Description
DF	1.000	Dilution Factor
Vp	20.000	Purge Volume (ml)
Vs	20.000	Sample Volume (ml)

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Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/L)
* 48 Fluorobenzene	96	6.395	6.395	(1.000)	2344199	12.5000	
* 72 Chlorobenzene-d5	119	10.061	10.060	(1.000)	455074	12.5000	
* 96 1,4-Dichlorobenzene-d4	152	12.918	12.917	(1.000)	756154	12.5000	
$ 40 Dibromofluoromethane	111	5.587	5.586	(0.874)	934372	10.1327	10.1327
$ 44 1,2-Dichloroethane-d4	65	6.000	5.981	(0.938)	403864	9.82592	9.82592
$ 61 Toluene-d8	98	8.300	8.281	(0.825)	1779791	10.2310	10.2310
$ 82 Bromofluorobenzene	95	11.570	11.552	(1.150)	1017825	10.6698	10.6698
M 1 1,2-Dichloroethene (total)	96.00	Compound Not Detected.					
M 2 Xylene (total)	106.00	Compound Not Detected.					
3 dichlorodifluoromethane	85.00	Compound Not Detected.					
4 Chloromethane	50.00	Compound Not Detected.					
5 Vinyl Chloride	62.00	Compound Not Detected.					
6 Ethylene Oxide	43.00	Compound Not Detected.					
117 Dichlorotetrafluoroethane	85.00	Compound Not Detected.					
123 1,2-dichloro-1,1,2-triflourom	117.00	Compound Not Detected.					
124 2,2-dichloro-1,1,1-trifluorom	83.00	Compound Not Detected.					

Data File: /chem/H.i/022004.b/h1083.d
Report Date: 23-Feb-2004 07:55

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/L)
7 Bromomethane	94.00	Compound Not Detected.					
8 Chloroethane	64.00	Compound Not Detected.					
9 Dichlorofluoromethane	67.00	Compound Not Detected.					
10 Trichlorofluoromethane	101.00	Compound Not Detected.					
11 Ethanol	45.00	Compound Not Detected.					
12 Ethyl Ether	59.00	Compound Not Detected.					
13 Acrolein	56.00	Compound Not Detected.					
15 Acetone	43.00	Compound Not Detected.					
14 1,1-Dichloroethene	96.00	Compound Not Detected.					
16 Trichlorotrifluoroethane	151.00	Compound Not Detected.					
17 Iodomethane	142.00	Compound Not Detected.					
19 Acetonitrile	41.00	Compound Not Detected.					
18 Carbon Disulfide	76.00	Compound Not Detected.					
20 Allyl Chloride	41.00	Compound Not Detected.					
119 Methyl Acetate	43.00	Compound Not Detected.					
21 Methylene Chloride	84	3.628	3.627	(0.567)	15522	0.26596	0.265960
125 2-Propanol	45.00	Compound Not Detected.					
22 tert-Butyl alcohol	59.00	Compound Not Detected.					
23 Acrylonitrile	53.00	Compound Not Detected.					
24 trans-1,2-Dichloroethene	96.00	Compound Not Detected.					
25 Methyl t-butyl ether	73.00	Compound Not Detected.					
26 Hexane	57.00	Compound Not Detected.					
27 1,1-Dichloroethane	63.00	Compound Not Detected.					
29 Vinyl acetate	43.00	Compound Not Detected.					
30 Isopropyl ether	87.00	Compound Not Detected.					
28 Chloroprene	53.00	Compound Not Detected.					
120 ETBE	59.00	Compound Not Detected.					
33 2-Butanone	43.00	Compound Not Detected.					
32 cis-1,2-Dichloroethene	96.00	Compound Not Detected.					
31 2,2-Dichloropropane	77.00	Compound Not Detected.					
35 Ethyl Acetate	43.00	Compound Not Detected.					
34 Propionitrile	54.00	Compound Not Detected.					
36 Methacrylonitrile	41.00	Compound Not Detected.					
37 Bromochloromethane	128.00	Compound Not Detected.					
39 Tetrahydrofuran	42.00	Compound Not Detected.					
38 Chloroform	83.00	Compound Not Detected.					
41 1,1,1-Trichloroethane	97.00	Compound Not Detected.					
114 Cyclohexane	56.00	Compound Not Detected.					
42 1,1-Dichloropropene	75.00	Compound Not Detected.					
43 Carbon Tetrachloride	117.00	Compound Not Detected.					
45 Isobutanol	41.00	Compound Not Detected.					
46 Benzene	78.00	Compound Not Detected.					
47 1,2-Dichloroethane	62.00	Compound Not Detected.					
121 TAME	73.00	Compound Not Detected.					
49 n-Butanol	56.00	Compound Not Detected.					
50 Trichloroethene	130.00	Compound Not Detected.					
115 2-Pentanone	43.00	Compound Not Detected.					

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/L)
52 1,2-Dichloropropane	63.00	Compound Not Detected.					
122 Methyl Cyclohexane	55.00	Compound Not Detected.					
53 Dibromomethane	93.00	Compound Not Detected.					
54 Methyl Methacrylate	100.00	Compound Not Detected.					
55 1,4-Dioxane	88.00	Compound Not Detected.					
56 Bromodichloromethane	83.00	Compound Not Detected.					
57 2-nitropropane	41.00	Compound Not Detected.					
113 2-Chloroethyl vinyl ether	63.00	Compound Not Detected.					
59 cis-1,3-Dichloropropene	75.00	Compound Not Detected.					
60 4-Methyl-2-pentanone	43.00	Compound Not Detected.					
62 Toluene	91	8.372	8.389	(0.832)	130539	0.54379	0.543787
63 trans-1,3-Dichloropropene	75.00	Compound Not Detected.					
64 Ethyl methacrylate	69.00	Compound Not Detected.					
65 1,1,2-Trichloroethane	97.00	Compound Not Detected.					
67 1,3-Dichloropropane	76.00	Compound Not Detected.					
66 Tetrachloroethene	164.00	Compound Not Detected.					
68 2-Hexanone	43.00	Compound Not Detected.					
126 Tetrahydrothiophene	60.00	Compound Not Detected.					
69 Dibromochloromethane	129.00	Compound Not Detected.					
70 1,2-Dibromoethane	107.00	Compound Not Detected.					
71 1-Chlorohexane	91.00	Compound Not Detected.					
73 Chlorobenzene	112.00	Compound Not Detected.					
74 1,1,1,2-Tetrachloroethane	131.00	Compound Not Detected.					
75 Ethylbenzene	106.00	Compound Not Detected.					
76 m and p-Xylene	106.00	Compound Not Detected.					
77 o-Xylene	106.00	Compound Not Detected.					
78 Styrene	104.00	Compound Not Detected.					
79 Bromoform	173.00	Compound Not Detected.					
80 isopropyl benzene	105.00	Compound Not Detected.					
116 cis-1,4-Dichloro-2-butene	53.00	Compound Not Detected.					
81 Cyclohexanone	55.00	Compound Not Detected.					
83 1,1,2,2-Tetrachloroethane	83.00	Compound Not Detected.					
84 Bromobenzene	156.00	Compound Not Detected.					
85 1,2,3-Trichloropropane	110.00	Compound Not Detected.					
86 t-1,4-Dichloro-2-butene	53.00	Compound Not Detected.					
87 n-Propylbenzene	120.00	Compound Not Detected.					
88 2-Chlorotoluene	126.00	Compound Not Detected.					
89 1,3,5-Trimethylbenzene	105.00	Compound Not Detected.					
90 4-Chlorotoluene	126.00	Compound Not Detected.					
91 tert-Butylbenzene	119.00	Compound Not Detected.					
92 1,2,4-Trimethylbenzene	105.00	Compound Not Detected.					
93 sec-Butylbenzene	134.00	Compound Not Detected.					
94 m-Dichlorobenzene	146.00	Compound Not Detected.					
95 4-Isopropyltoluene	119.00	Compound Not Detected.					
97 p-dichlorobenzene	146.00	Compound Not Detected.					
118 1,2,3-Trimethylbenzene	105.00	Compound Not Detected.					
98 n-Butylbenzene	91.00	Compound Not Detected.					

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/L)
99 o-Dichlorobenzene	146.00	Compound Not Detected.					
100 1,2-Dibromo-3-chloropropane	157.00	Compound Not Detected.					
101 1,2,4-Trichlorobenzene	180.00	Compound Not Detected.					
102 Hexachlorobutadiene	225.00	Compound Not Detected.					
127 Naphthalene	128.00	Compound Not Detected.					
104 1,2,3-Trichlorobenzene	180.00	Compound Not Detected.					

Data File: /chem/H.i/022004.b/h1083.d
Report Date: 23-Feb-2004 07:55

STL Denver

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: H.i
Lab File ID: h1083.d
Lab Smp Id: F9KEQ1AA
Analysis Type: VOA
Quant Type: ISTD
Operator: appelhansd
Method File: /chem/H.i/022004.b/H-20ml-h2o.m
Misc Info:

Calibration Date: 02/20/4
Calibration Time: 1059
Client Smp ID: MW-7
Level: LOW
Sample Type: WATER

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
48 Fluorobenzene	2466684	1233342	4933368	2344199	-4.97
72 Chlorobenzene-d5	459303	229652	918606	455074	-0.92
96 1,4-Dichlorobenze	730993	365496	1461986	756154	3.44

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
48 Fluorobenzene	6.39	5.89	6.89	6.40	0.01
72 Chlorobenzene-d5	10.06	9.56	10.56	10.06	0.01
96 1,4-Dichlorobenze	12.92	12.42	13.42	12.92	0.01

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem/H.i/022004.b/h1083.d Page 6
Report Date: 23-Feb-2004 07:55

STL Denver

RECOVERY REPORT

Client Name: ARCADIS GERAGHTY & M13-FEB-2004 Client SDG: D4B130209
Sample Matrix: LIQUID Fraction: VOA
Lab Smp Id: F9KEQ1AA Client Smp ID: MW-7
Level: LOW Operator: appelhansd
Data Type: MS DATA SampleType: SAMPLE
SpikeList File: dcs-h20.spk Quant Type: ISTD
Sublist File: H-all.sub
Method File: /chem/H.i/022004.b/H-20ml-h2o.m
Misc Info:

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 40 Dibromofluorometha	11.5000	10.1327	88.11	76-116
$ 44 1,2-Dichloroethane	11.5000	9.82592	85.44	59-129
$ 61 Toluene-d8	11.5000	10.2310	88.97	76-116
$ 82 Bromofluorobenzene	11.5000	10.6698	92.78	74-114

Data File: /chem/H.i/022004.b/h1083.d
Date : 20-FEB-2004 17:31
Client ID: MW-7
Sample Info: F9KEQ1AA,,D4B130209-007
Purge Volume: 20.0
Column phase: DB624

Instrument: H.i
Operator: appelhansd
Column diameter: 0.53

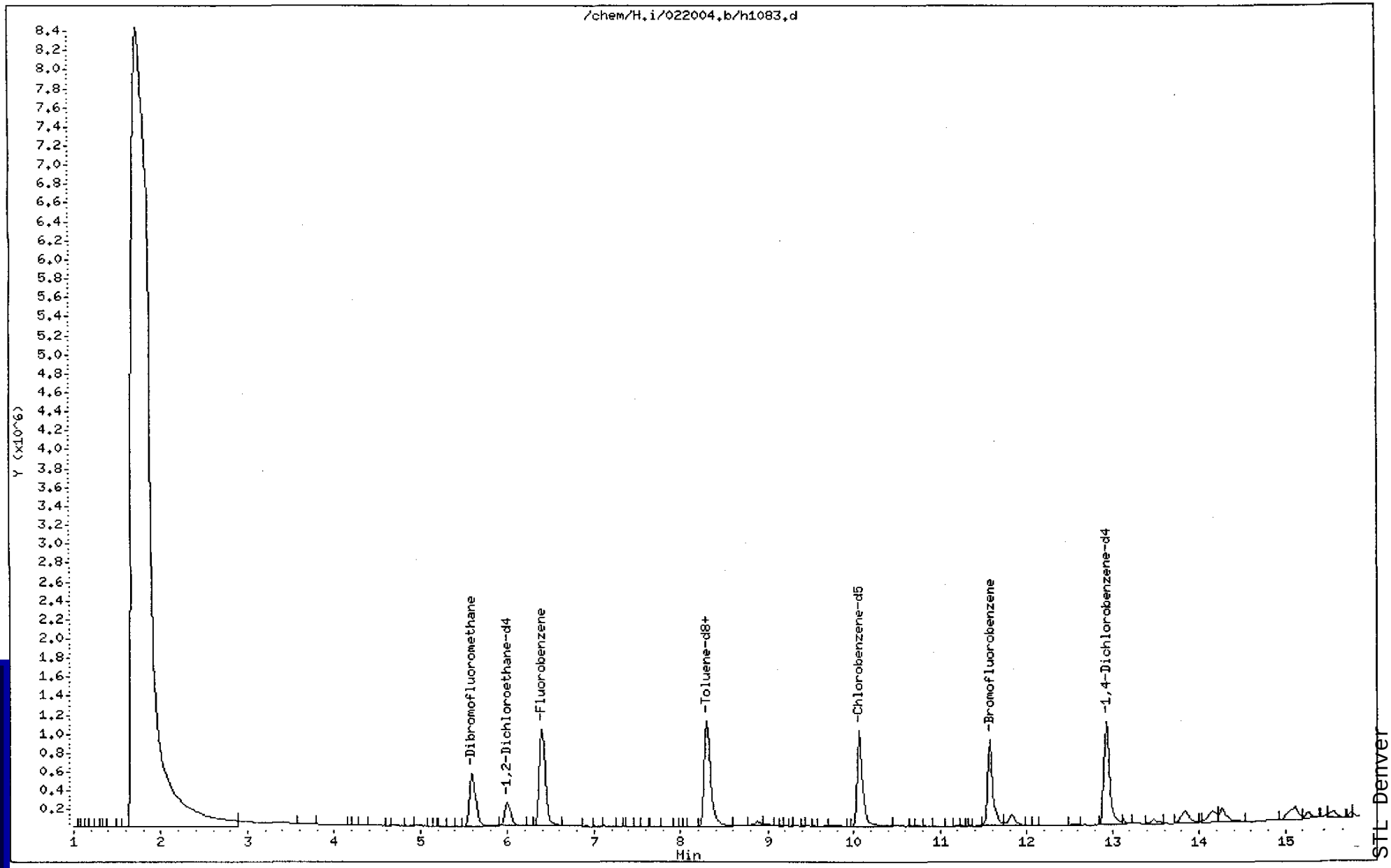


Table of Contents

Data File: /chem/H.i/022004.b/h1083.d

Date : 20-FEB-2004 17:31

Client ID: MW-7

Instrument: H.i

Sample Info: F9KEQ1AA,,D4B130209-007

Purge Volume: 20.0

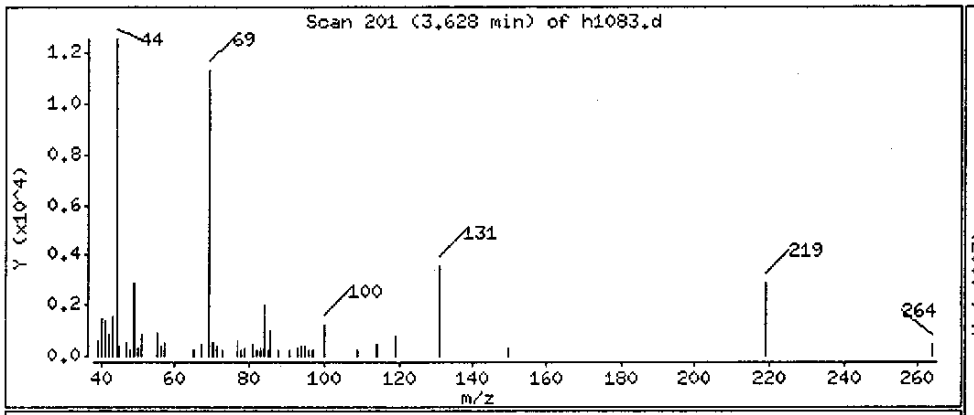
Operator: appelhansd

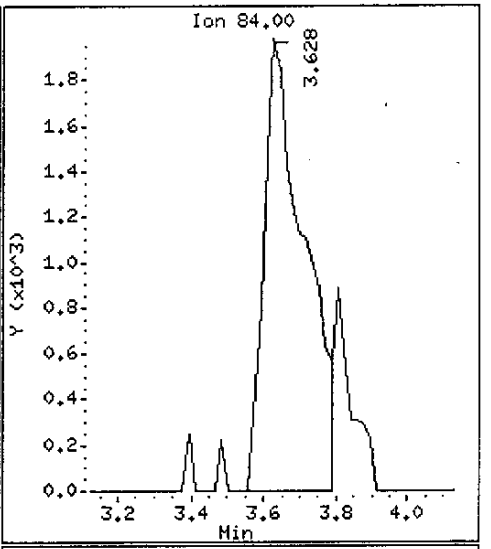
Column phase: DB624

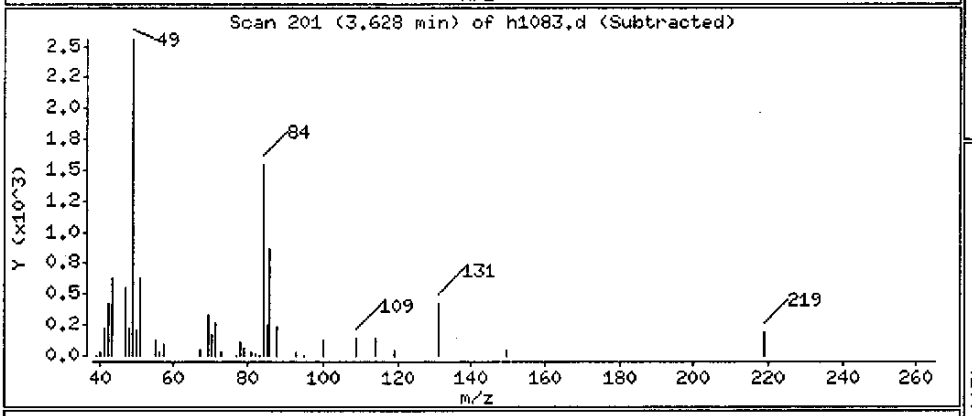
Column diameter: 0.53

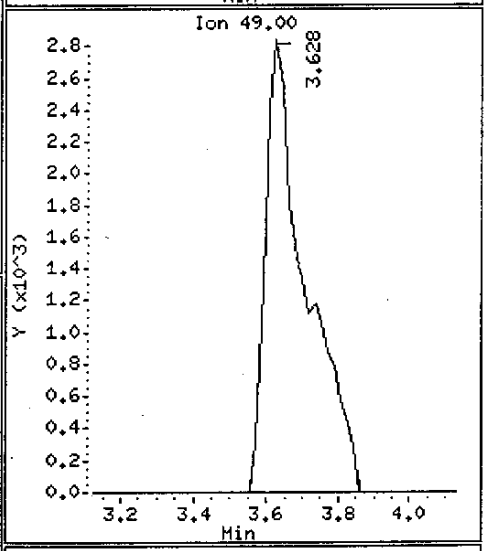
21 Methylene Chloride

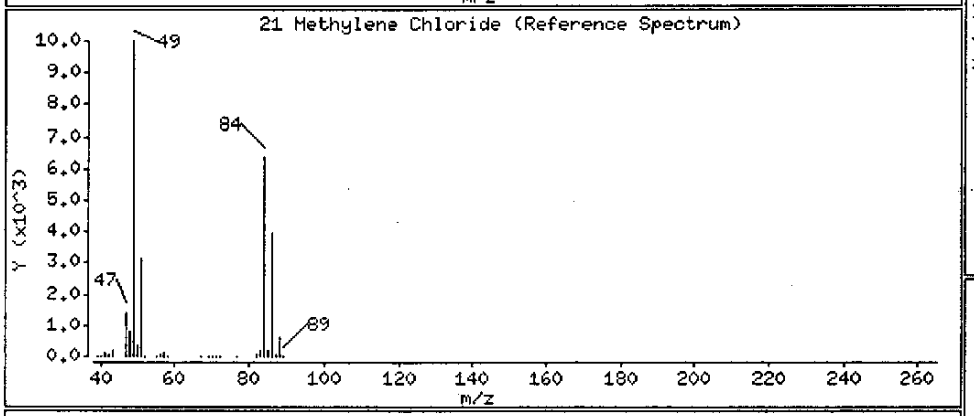
Concentration: 0.265960 ug/L

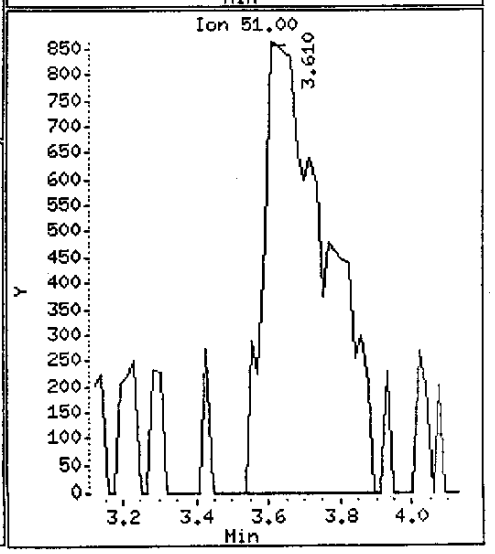


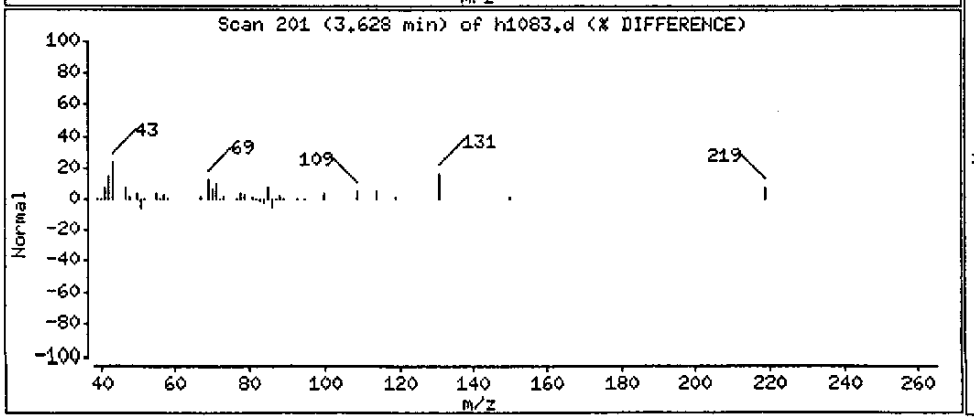












Data File: /chem/H.i/022004.b/h1083.d

Date : 20-FEB-2004 17:31

Client ID: MW-7

Instrument: H.i

Sample Info: F9KEQ1AA,,D4B130209-007

Purge Volume: 20.0

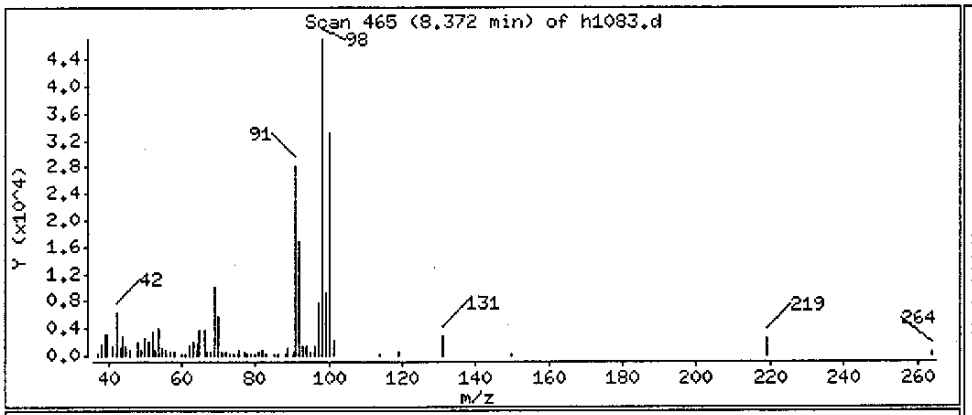
Operator: appelhansd

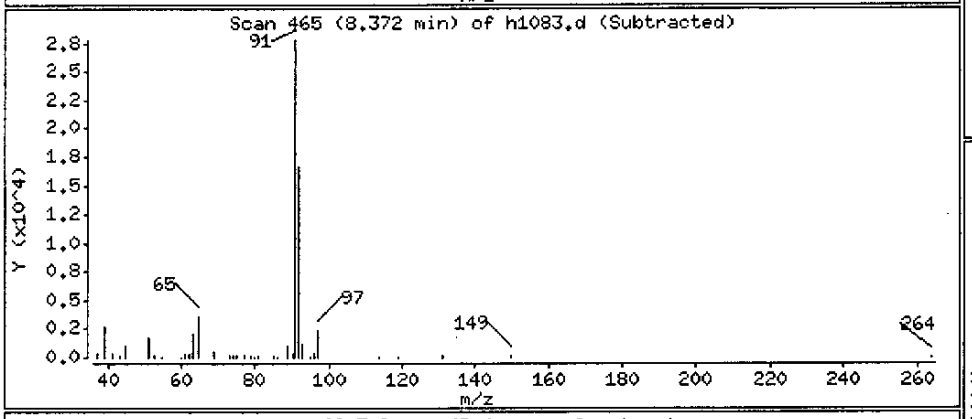
Column phase: DB624

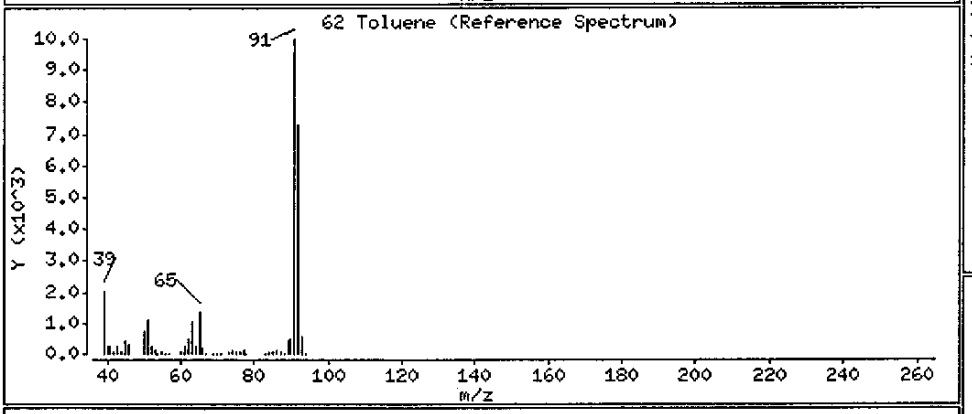
Column diameter: 0.53

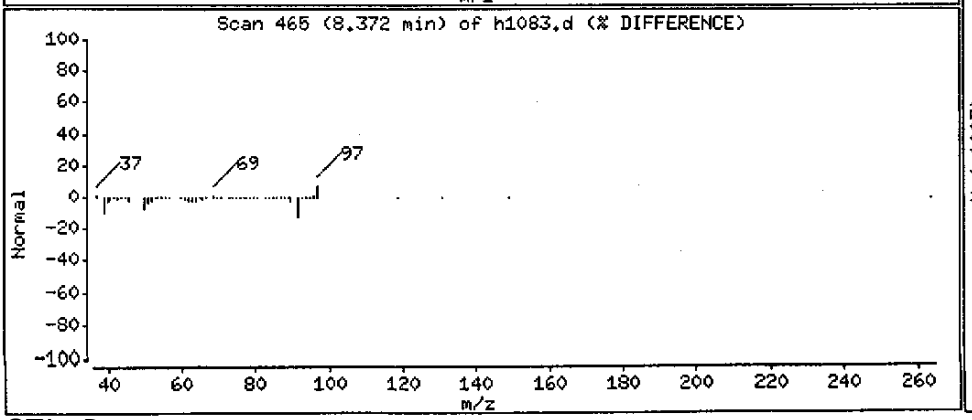
62 Toluene

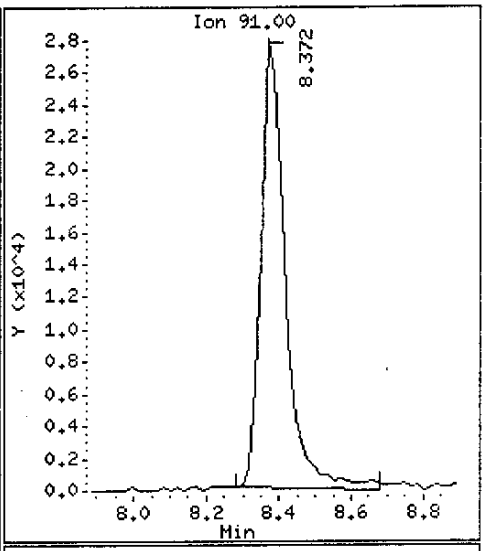
Concentration: 0.543787 ug/L

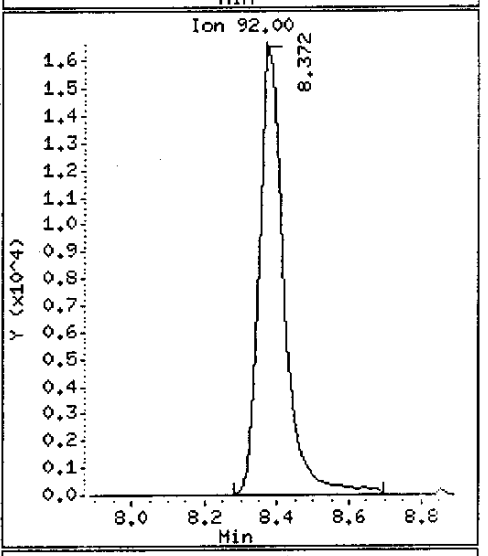


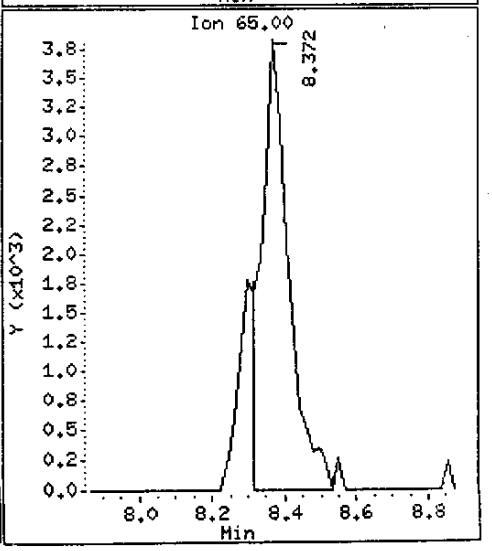












Data File: /chem/H.i/022004.b/h1084.d
Report Date: 23-Feb-2004 07:56

STL Denver

VOLATILE REPORT SW-846

Data file : /chem/H.i/022004.b/h1084.d
Lab Smp Id: F9KET1AA Client Smp ID: MW-8
Inj Date : 20-FEB-2004 17:51
Operator : appelhansd Inst ID: H.i
Smp Info : F9KET1AA,0.2,D4B130209-008
Misc Info :
Comment : Purge and Trap Analysis
Method : /chem/H.i/022004.b/H-20ml-h2o.m
Meth Date : 20-Feb-2004 11:09 appelhad Quant Type: ISTD
Cal Date : 07-JAN-2004 15:24 Cal File: h0014.d
Als bottle: 2
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: H-all.sub
Target Version: 3.40
Processing Host: chemsv02

Concentration Formula: Amt * DF * Vp/Vs

Name	Value	Description
DF	1.000	Dilution Factor
Vp	20.000	Purge Volume (ml)
Vs	0.200	Sample Volume (ml)

DA2-23

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/L)
* 48 Fluorobenzene	96	6.399	6.395	(1.000)	2237999	12.5000	
* 72 Chlorobenzene-d5	119	10.065	10.060	(1.000)	434476	12.5000	
* 96 1,4-Dichlorobenzene-d4	152	12.922	12.917	(1.000)	732093	12.5000	
$ 40 Dibromofluoromethane	111	5.591	5.586	(0.874)	920935	10.4609	1046.09
$ 44 1,2-Dichloroethane-d4	65	6.004	5.981	(0.938)	388660	9.90473	990.473
$ 61 Toluene-d8	98	8.304	8.281	(0.825)	1728701	10.4085	1040.85
$ 82 Bromofluorobenzene	95	11.556	11.552	(1.148)	970344	10.6543	1065.43
M 1 1,2-Dichloroethene (total)	96				273516	4.07593	407.593
M 2 Xylene (total)	106.00	Compound Not Detected.					
3 dichlorodifluoromethane	85.00	Compound Not Detected.					
4 Chloromethane	50.00	Compound Not Detected.					
5 Vinyl Chloride	62	2.159	2.136	(0.337)	388811	7.80723	780.723
6 Ethylene Oxide	43.00	Compound Not Detected.					
117 Dichlorotetrafluoroethane	85.00	Compound Not Detected.					
123 1,2-dichloro-1,1,2-triflourom	117.00	Compound Not Detected.					
124 2,2-dichloro-1,1,1-trifluorom	83.00	Compound Not Detected.					

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/L)
7 Bromomethane	94.00	Compound Not Detected.					
8 Chloroethane	64.00	Compound Not Detected.					
9 Dichlorofluoromethane	67.00	Compound Not Detected.					
10 Trichlorofluoromethane	101.00	Compound Not Detected.					
11 Ethanol	45.00	Compound Not Detected.					
12 Ethyl Ether	59.00	Compound Not Detected.					
13 Acrolein	56.00	Compound Not Detected.					
15 Acetone	43.00	Compound Not Detected.					
14 1,1-Dichloroethene	96.00	Compound Not Detected.					
16 Trichlorotrifluoroethane	151.00	Compound Not Detected.					
17 Iodomethane	142.00	Compound Not Detected.					
19 Acetonitrile	41.00	Compound Not Detected.					
18 Carbon Disulfide	76.00	Compound Not Detected.					
20 Allyl Chloride	41.00	Compound Not Detected.					
119 Methyl Acetate	43.00	Compound Not Detected.					
21 Methylene Chloride	84	3.632	3.627	(0.568)	18791	0.33725	33.7251
125 2-Propanol	45.00	Compound Not Detected.					
22 tert-Butyl alcohol	59.00	Compound Not Detected.					
23 Acrylonitrile	53.00	Compound Not Detected.					
24 trans-1,2-Dichloroethene	96.00	Compound Not Detected.					
25 Methyl t-butyl ether	73.00	Compound Not Detected.					
26 Hexane	57.00	Compound Not Detected.					
27 1,1-Dichloroethane	63	4.369	4.364	(0.683)	73895	0.64836	64.8363
29 Vinyl acetate	43.00	Compound Not Detected.					
30 Isopropyl ether	87.00	Compound Not Detected.					
28 Chloroprene	53.00	Compound Not Detected.					
120 ETBE	59.00	Compound Not Detected.					
33 2-Butanone	43.00	Compound Not Detected.					
32 cis-1,2-Dichloroethene	96	5.034	5.029	(0.787)	273516	4.07593	407.593
31 2,2-Dichloropropane	77.00	Compound Not Detected.					
35 Ethyl Acetate	43.00	Compound Not Detected.					
34 Propionitrile	54.00	Compound Not Detected.					
36 Methacrylonitrile	41.00	Compound Not Detected.					
37 Bromochloromethane	128.00	Compound Not Detected.					
39 Tetrahydrofuran	42.00	Compound Not Detected.					
38 Chloroform	83.00	Compound Not Detected.					
41 1,1,1-Trichloroethane	97.00	Compound Not Detected.					
114 Cyclohexane	56.00	Compound Not Detected.					
42 1,1-Dichloropropene	75.00	Compound Not Detected.					
43 Carbon Tetrachloride	117.00	Compound Not Detected.					
45 Isobutanol	41.00	Compound Not Detected.					
46 Benzene	78	6.076	6.071	(0.949)	72635	0.37908	37.9082
47 1,2-Dichloroethane	62.00	Compound Not Detected.					
121 TAME	73.00	Compound Not Detected.					
49 n-Butanol	56.00	Compound Not Detected.					
50 Trichloroethene	130.00	Compound Not Detected.					
115 2-Pentanone	43.00	Compound Not Detected.					

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/L)
52 1,2-Dichloropropane	63.00	Compound Not Detected.					
122 Methyl Cyclohexane	55.00	Compound Not Detected.					
53 Dibromomethane	93.00	Compound Not Detected.					
54 Methyl Methacrylate	100.00	Compound Not Detected.					
55 1,4-Dioxane	88.00	Compound Not Detected.					
56 Bromodichloromethane	83.00	Compound Not Detected.					
57 2-nitropropane	41.00	Compound Not Detected.					
113 2-Chloroethyl vinyl ether	63.00	Compound Not Detected.					
59 cis-1,3-Dichloropropene	75.00	Compound Not Detected.					
60 4-Methyl-2-pentanone	43.00	Compound Not Detected.					
62 Toluene	91	8.376	8.389	(0.832)	79059	0.34495	34.4950
63 trans-1,3-Dichloropropene	75.00	Compound Not Detected.					
64 Ethyl methacrylate	69.00	Compound Not Detected.					
65 1,1,2-Trichloroethane	97.00	Compound Not Detected.					
67 1,3-Dichloropropane	76.00	Compound Not Detected.					
66 Tetrachloroethene	164.00	Compound Not Detected.					
68 2-Hexanone	43.00	Compound Not Detected.					
126 Tetrahydrothiophene	60.00	Compound Not Detected.					
69 Dibromochloromethane	129.00	Compound Not Detected.					
70 1,2-Dibromoethane	107.00	Compound Not Detected.					
71 1-Chlorohexane	91.00	Compound Not Detected.					
73 Chlorobenzene	112.00	Compound Not Detected.					
74 1,1,1,2-Tetrachloroethane	131.00	Compound Not Detected.					
75 Ethylbenzene	106.00	Compound Not Detected.					
76 m and p-Xylene	106.00	Compound Not Detected.					
77 o-Xylene	106.00	Compound Not Detected.					
78 Styrene	104.00	Compound Not Detected.					
79 Bromoform	173.00	Compound Not Detected.					
80 isopropyl benzene	105.00	Compound Not Detected.					
116 cis-1,4-Dichloro-2-butene	53.00	Compound Not Detected.					
81 Cyclohexanone	55.00	Compound Not Detected.					
83 1,1,2,2-Tetrachloroethane	83.00	Compound Not Detected.					
84 Bromobenzene	156.00	Compound Not Detected.					
85 1,2,3-Trichloropropane	110.00	Compound Not Detected.					
86 t-1,4-Dichloro-2-butene	53.00	Compound Not Detected.					
87 n-Propylbenzene	120.00	Compound Not Detected.					
88 2-Chlorotoluene	126.00	Compound Not Detected.					
89 1,3,5-Trimethylbenzene	105.00	Compound Not Detected.					
90 4-Chlorotoluene	126.00	Compound Not Detected.					
91 tert-Butylbenzene	119.00	Compound Not Detected.					
92 1,2,4-Trimethylbenzene	105.00	Compound Not Detected.					
93 sec-Butylbenzene	134.00	Compound Not Detected.					
94 m-Dichlorobenzene	146.00	Compound Not Detected.					
95 4-Isopropyltoluene	119.00	Compound Not Detected.					
97 p-dichlorobenzene	146	12.958	12.953	(1.003)	2864713	22.4666	2246.66
118 1,2,3-Trimethylbenzene	105.00	Compound Not Detected.					
98 n-Butylbenzene	91.00	Compound Not Detected.					

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/L)
99 o-Dichlorobenzene	146.00	Compound Not Detected.					
100 1,2-Dibromo-3-chloropropane	157.00	Compound Not Detected.					
101 1,2,4-Trichlorobenzene	180.00	Compound Not Detected.					
102 Hexachlorobutadiene	225.00	Compound Not Detected.					
127 Naphthalene	128.00	Compound Not Detected.					
104 1,2,3-Trichlorobenzene	180.00	Compound Not Detected.					

Data File: /chem/H.i/022004.b/h1084.d
Report Date: 23-Feb-2004 07:56

STL Denver

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: H.i
Lab File ID: h1084.d
Lab Smp Id: F9KET1AA
Analysis Type: VOA
Quant Type: ISTD
Operator: appelhansd
Method File: /chem/H.i/022004.b/H-20ml-h2o.m
Misc Info:

Calibration Date: 02/20/4
Calibration Time: 1059
Client Smp ID: MW-8
Level: LOW
Sample Type: WATER

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
48 Fluorobenzene	2466684	1233342	4933368	2237999	-9.27
72 Chlorobenzene-d5	459303	229652	918606	434476	-5.41
96 1,4-Dichlorobenze	730993	365496	1461986	732093	0.15

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
48 Fluorobenzene	6.39	5.89	6.89	6.40	0.07
72 Chlorobenzene-d5	10.06	9.56	10.56	10.06	0.05
96 1,4-Dichlorobenze	12.92	12.42	13.42	12.92	0.04

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

STL Denver

RECOVERY REPORT

Client Name: ARCADIS GERAGHTY & M13-FEB-2004 Client SDG: D4B130209
Sample Matrix: LIQUID Fraction: VOA
Lab Smp Id: F9KET1AA Client Smp ID: MW-8
Level: LOW Operator: appelhansd
Data Type: MS DATA SampleType: SAMPLE
SpikeList File: dcs-h20.spk Quant Type: ISTD
Sublist File: H-all.sub
Method File: /chem/H.i/022004.b/H-20ml-h2o.m
Misc Info:

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 40 Dibromofluorometha	1150.00	1046.09	90.96	76-116
$ 44 1,2-Dichloroethane	1150.00	990.473	86.13	59-129
$ 61 Toluene-d8	1150.00	1040.85	90.51	76-116
$ 82 Bromofluorobenzene	1150.00	1065.43	92.65	74-114

Data File: /chem/H.i/022004.b/h1084.d
Date : 20-FEB-2004 17:51
Client ID: MW-8
Sample Info: F9KET1AA,0.2,D4B130209-008
Purge Volume: 20.0
Column phase: DB624

Instrument: H.i

Operator: appelhansd
Column diameter: 0.53

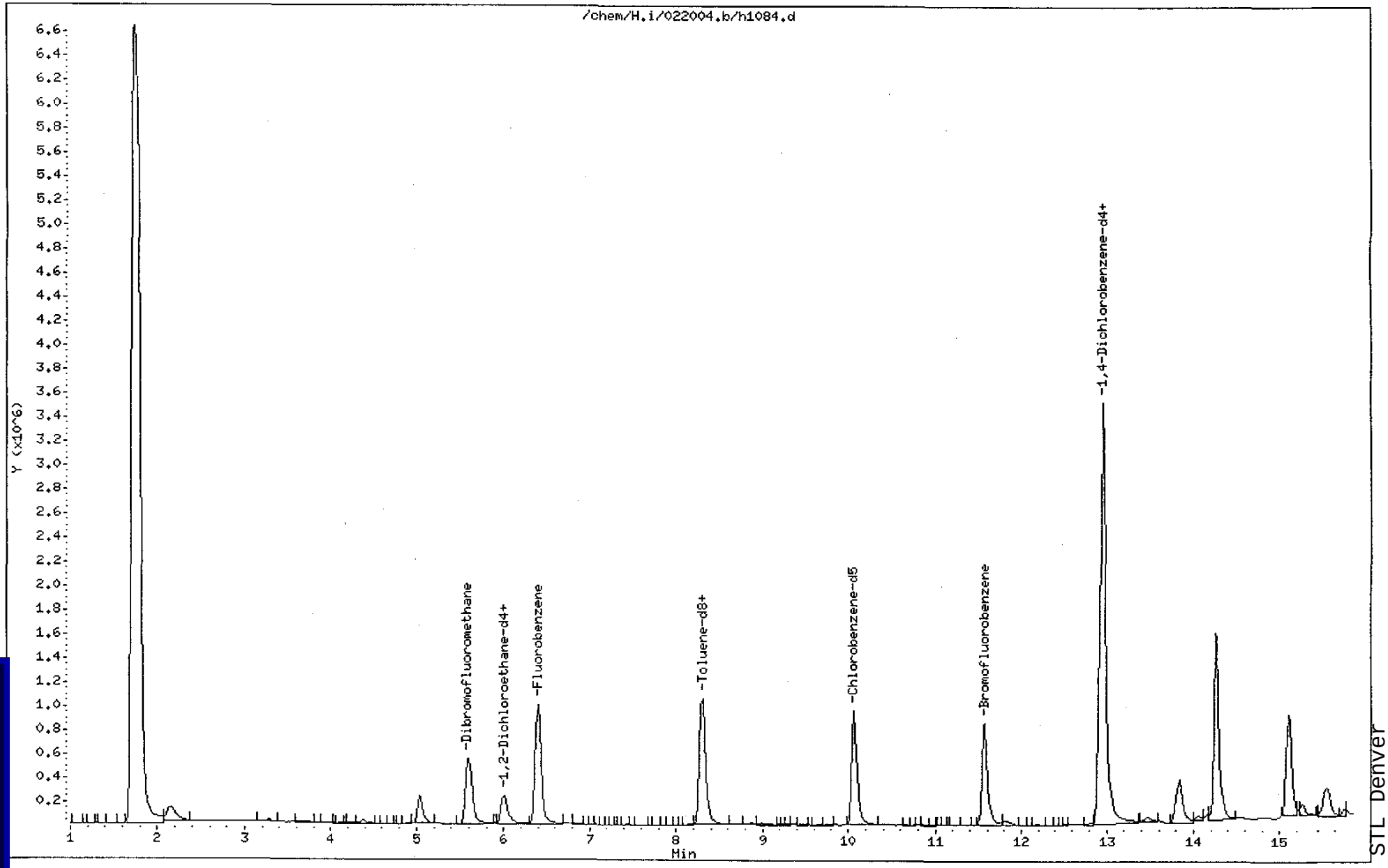


Table of Contents

Data File: /chem/H.i/022004.b/h1084.d

Date : 20-FEB-2004 17:51

Client ID: MW-8

Instrument: H.i

Sample Info: F9KET1AA,0.2,D4B130209-008

Purge Volume: 20.0

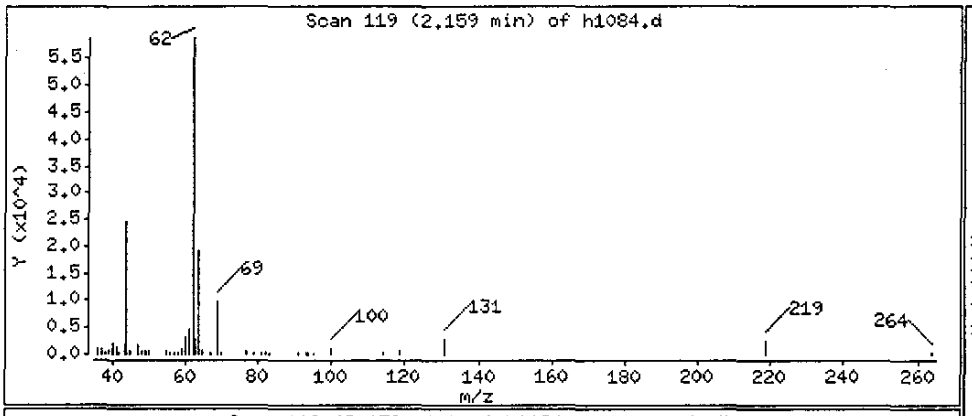
Operator: appelhansd

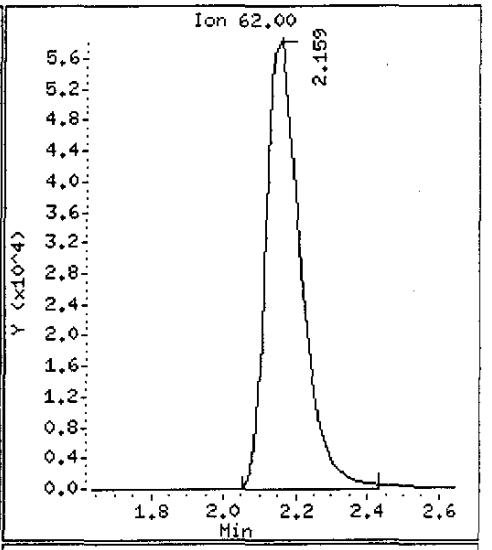
Column phase: DB624

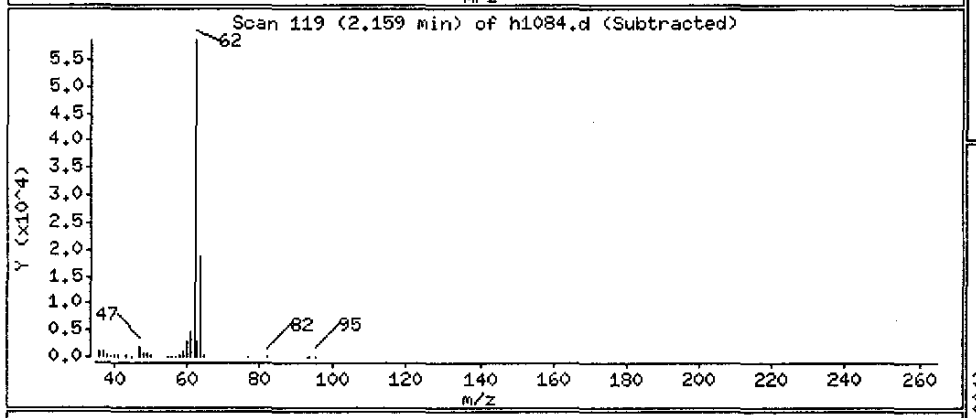
Column diameter: 0.53

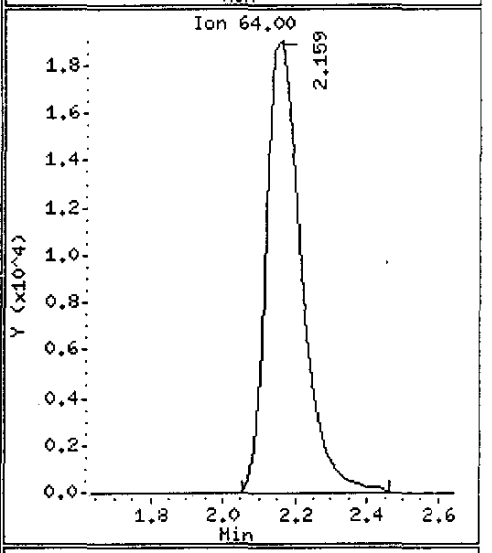
5 Vinyl Chloride

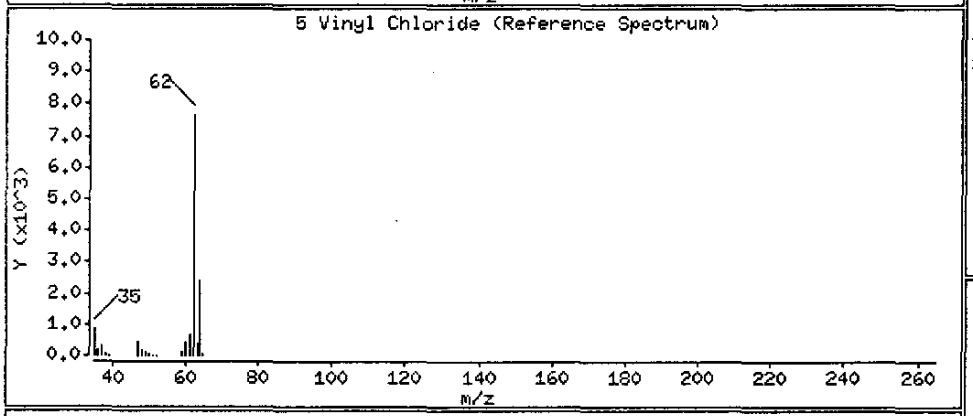
Concentration: 780.723 ug/L

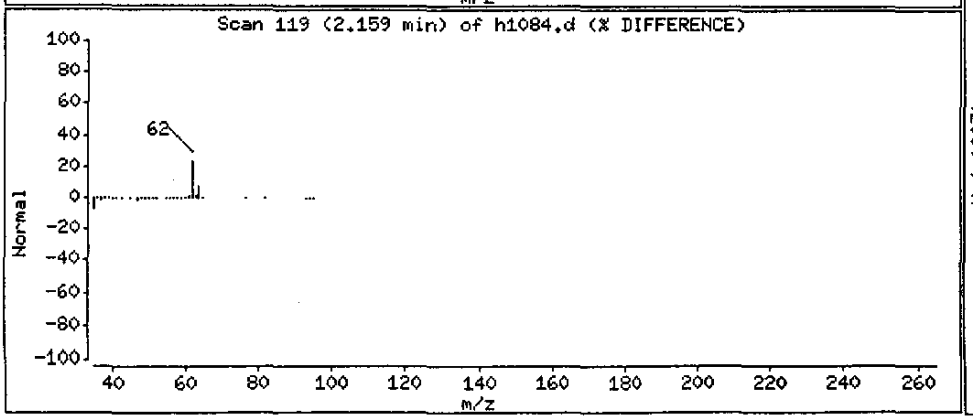


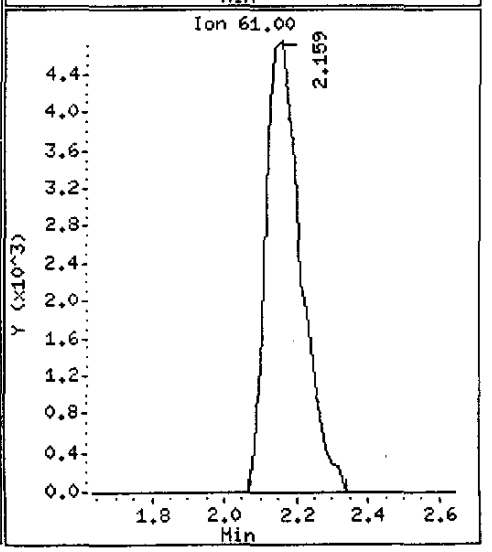












Data File: /chem/H.i/022004.b/h1084.d

Date : 20-FEB-2004 17:51

Client ID: MW-8

Instrument: H.i

Sample Info: F9KET1AA,0.2,D4B130209-008

Purge Volume: 20.0

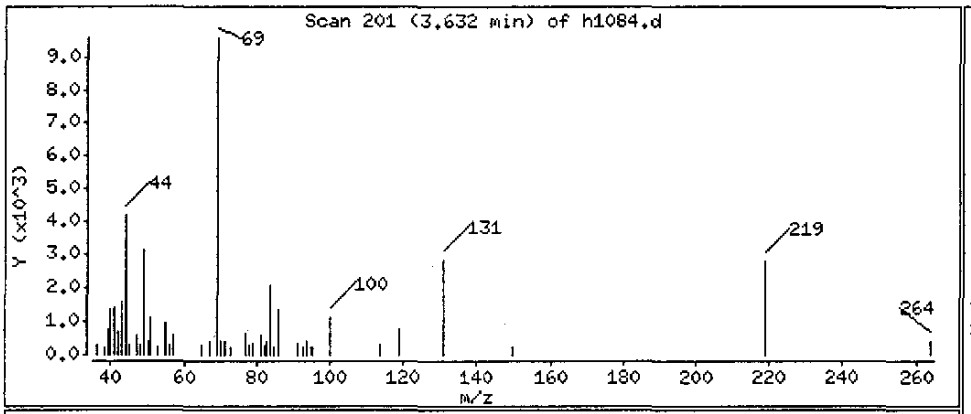
Operator: appelhansd

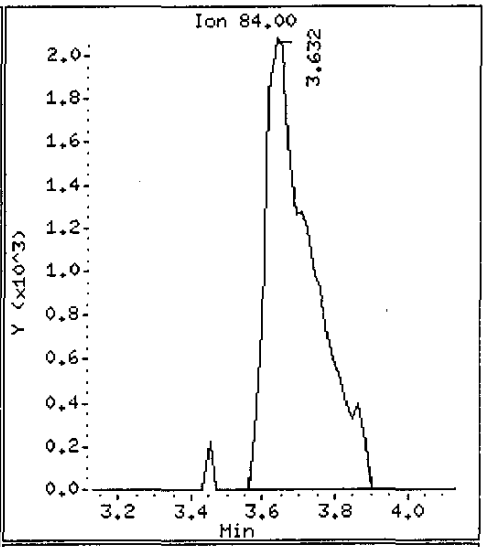
Column phase: DB624

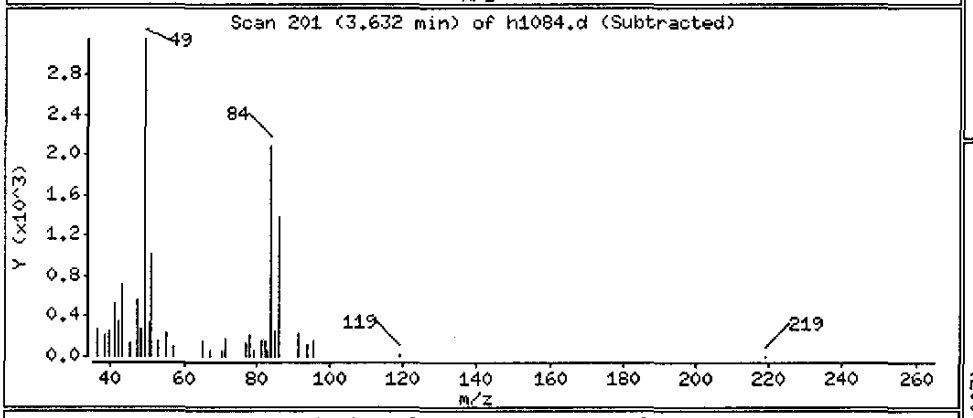
Column diameter: 0.53

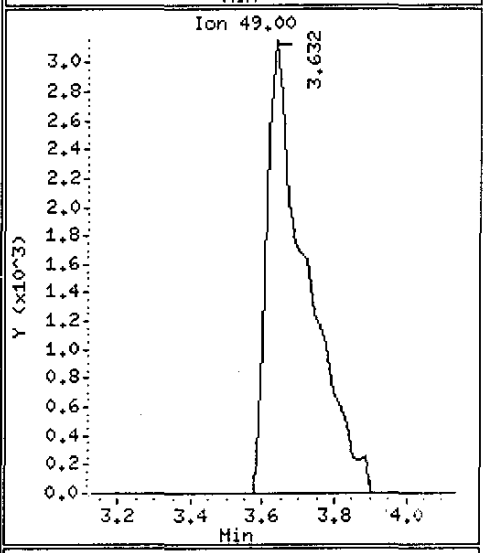
21 Methylene Chloride

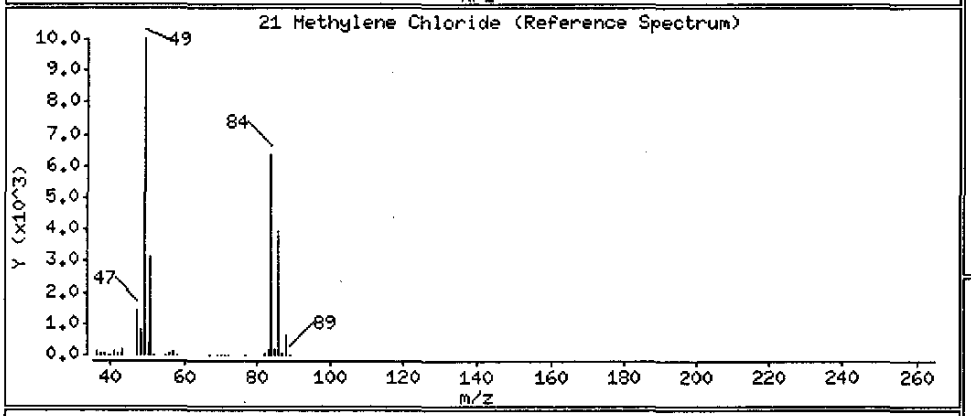
Concentration: 33.7251 ug/L

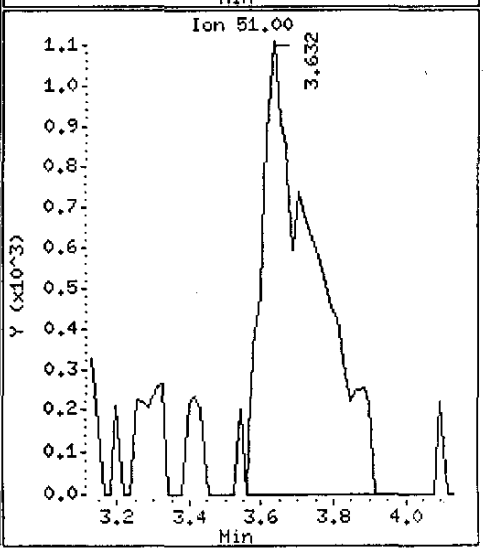


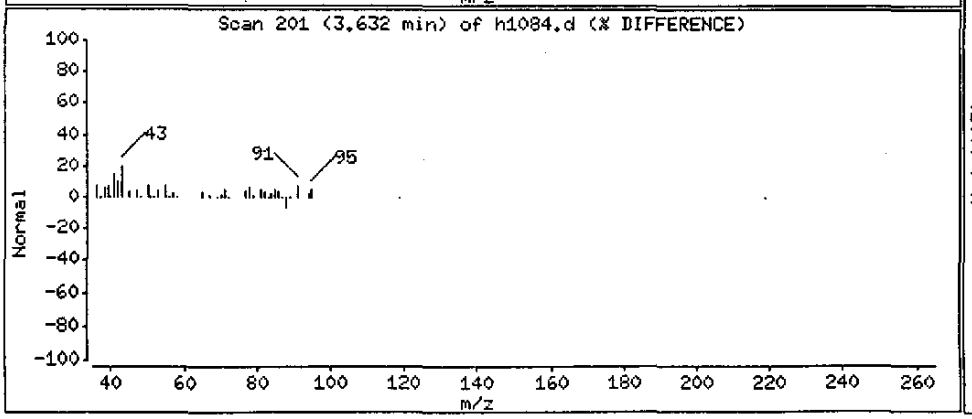












Data File: /chem/H.i/022004.b/h1084.d

Date : 20-FEB-2004 17:51

Client ID: MW-8

Instrument: H.i

Sample Info: F9KET1AA,0.2,D4B130209-008

Purge Volume: 20.0

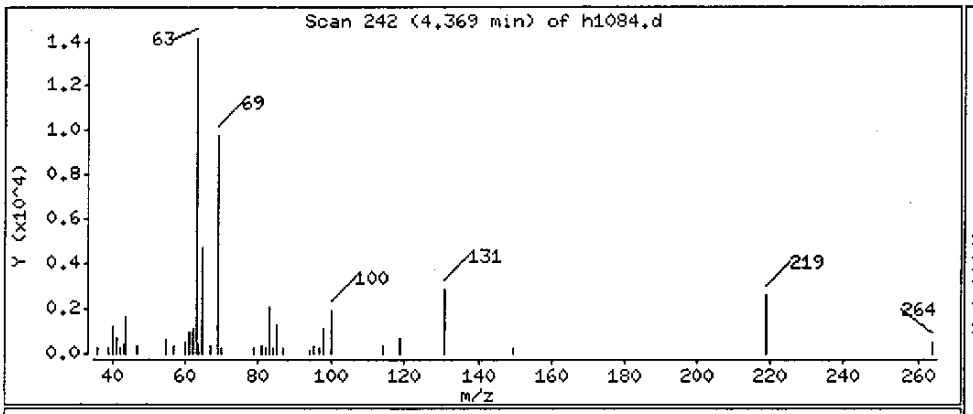
Operator: appelhansd

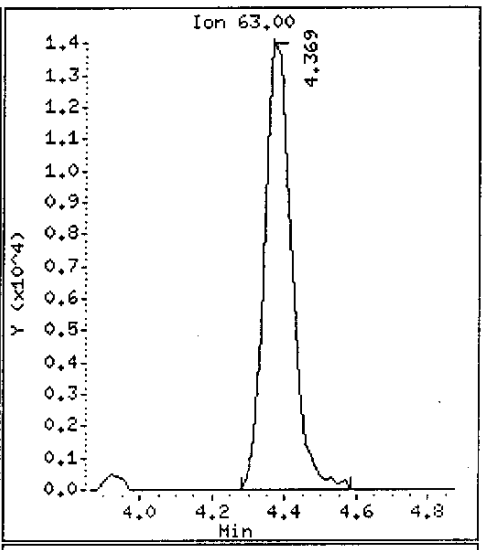
Column phase: DB624

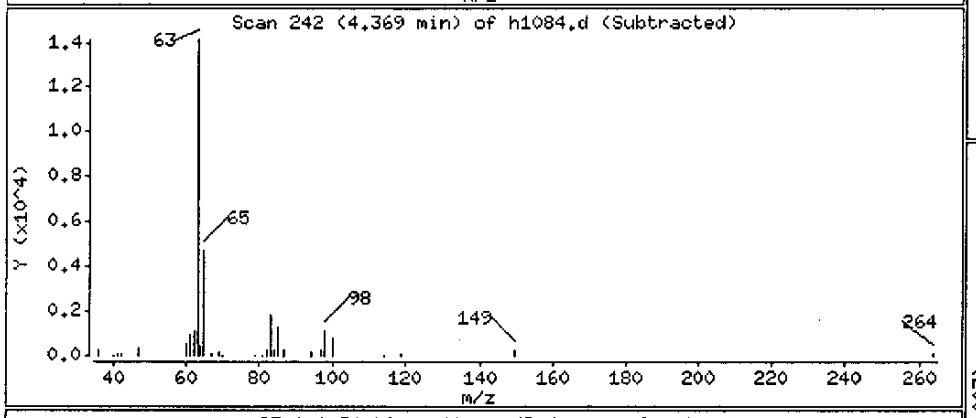
Column diameter: 0.53

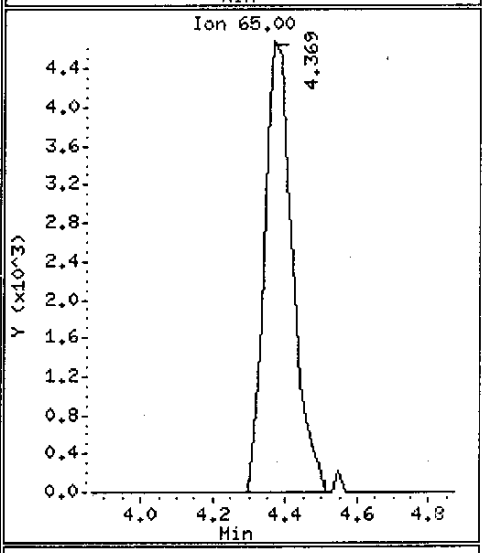
27 1,1-Dichloroethane

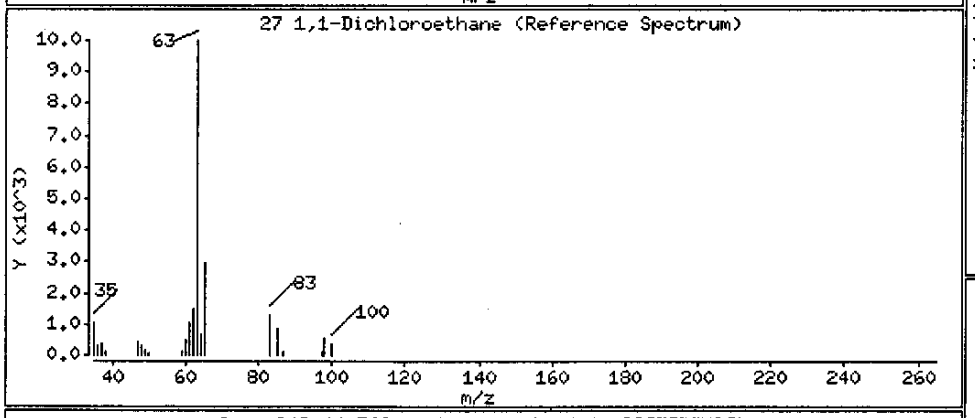
Concentration: 64.8363 ug/L

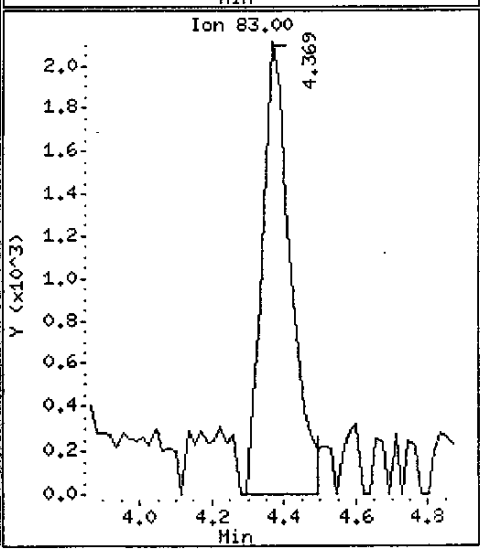


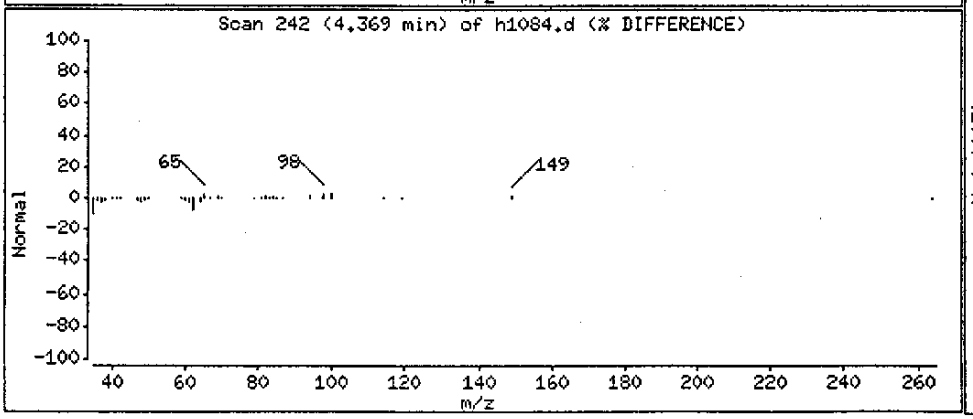












Data File: /chem/H.i/022004.b/h1084.d

Date : 20-FEB-2004 17:51

Client ID: MW-8

Instrument: H.i

Sample Info: F9KET1AA,0.2,D4B130209-008

Purge Volume: 20.0

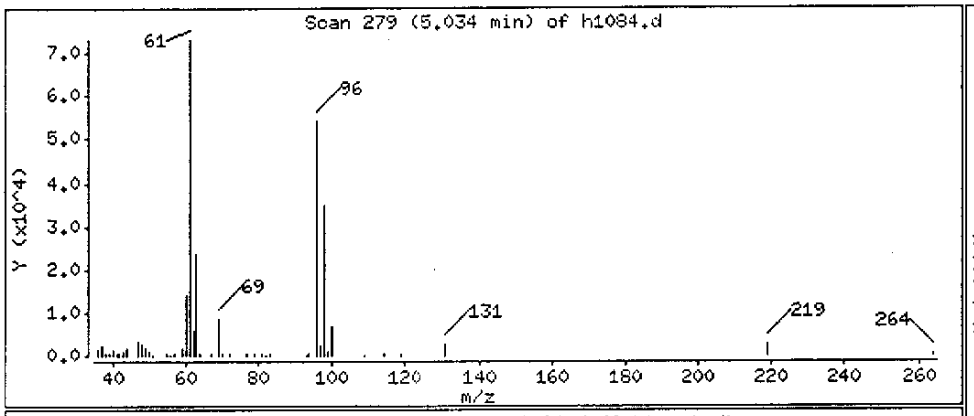
Operator: appelhansd

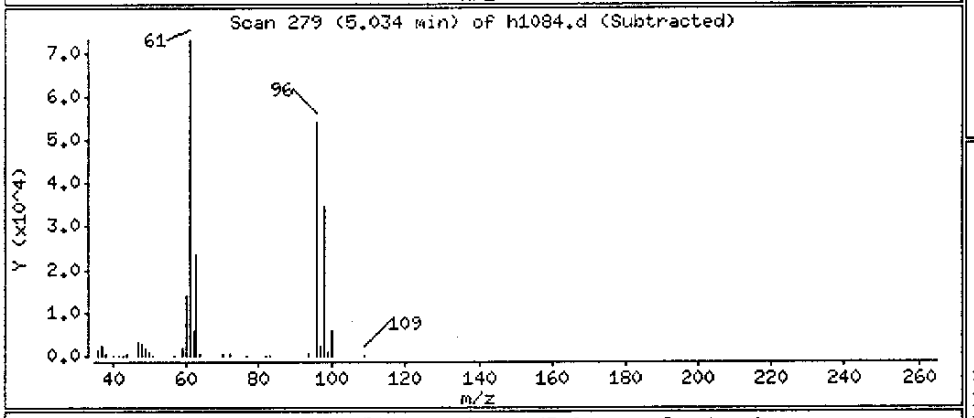
Column phase: DB624

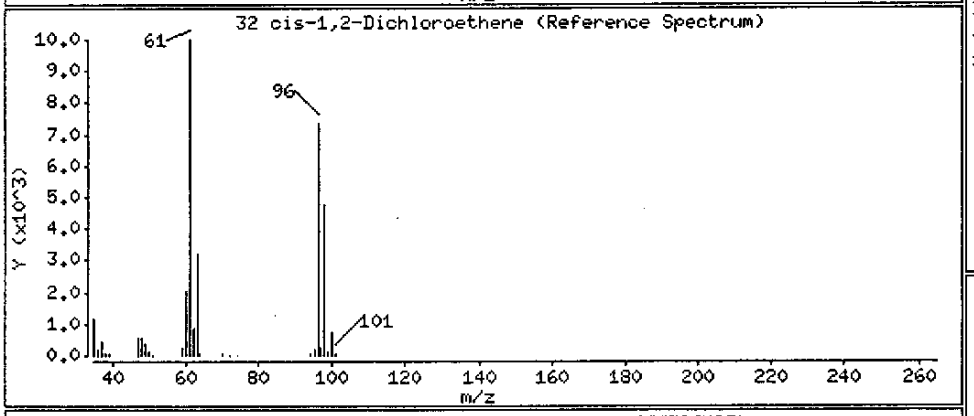
Column diameter: 0.53

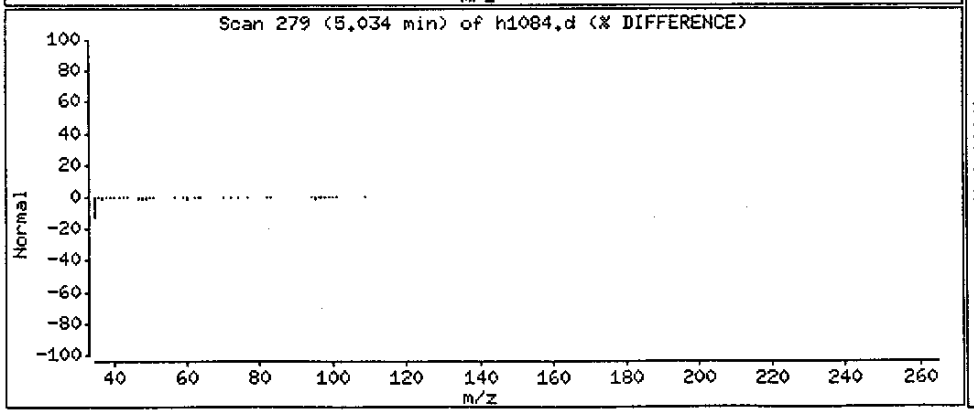
32 cis-1,2-Dichloroethene

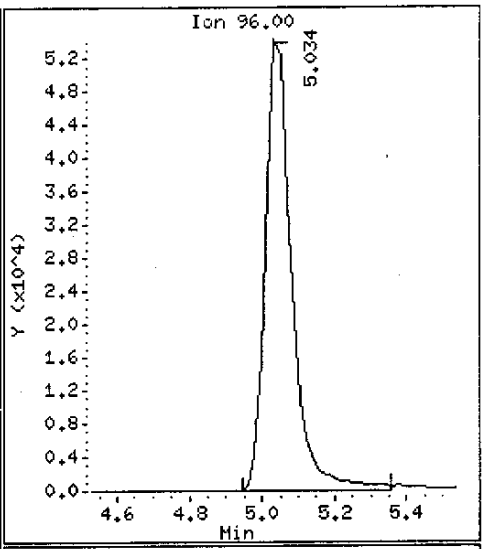
Concentration: 407.593 ug/L

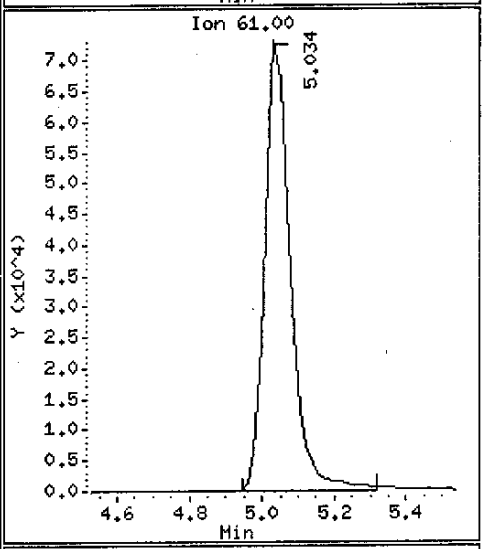


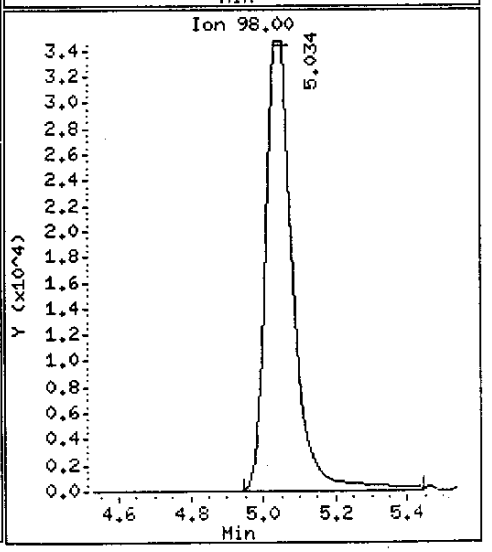












Data File: /chem/H.i/022004.b/h1084.d

Date : 20-FEB-2004 17:51

Client ID: MW-8

Instrument: H.i

Sample Info: F9KET1AA,0.2,D4B130209-008

Purge Volume: 20.0

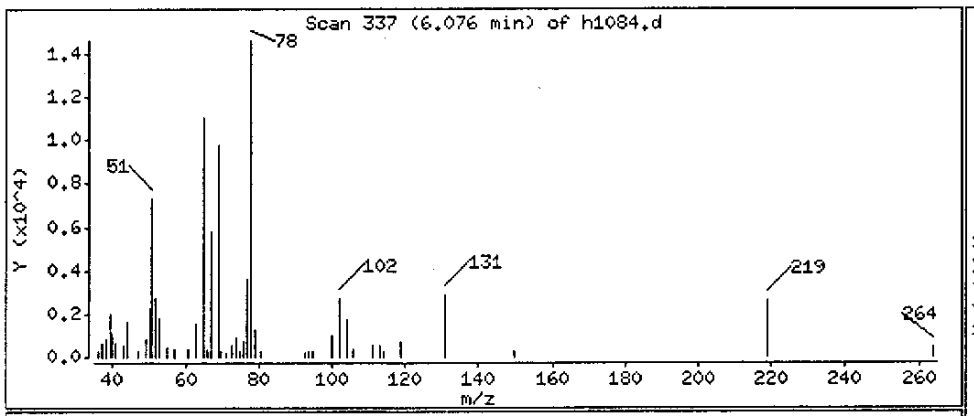
Operator: appelhansd

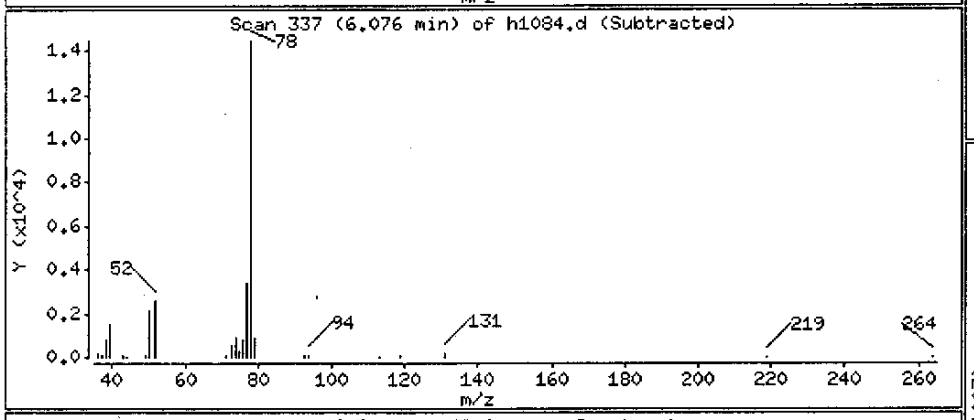
Column phase: DB624

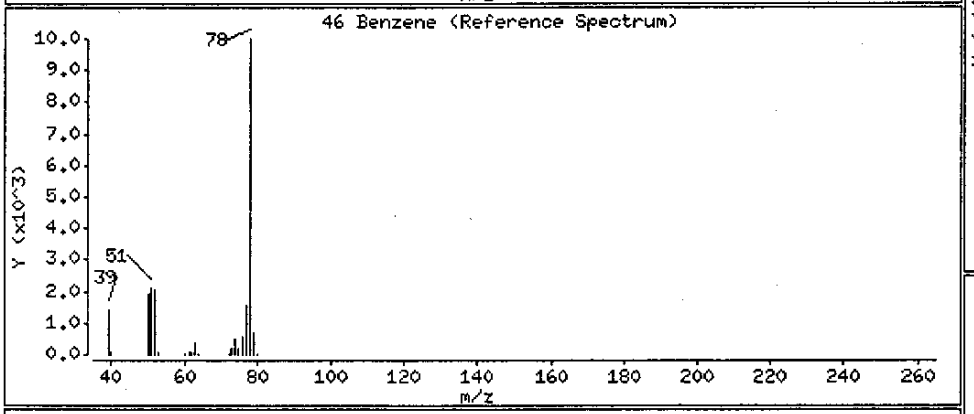
Column diameter: 0.53

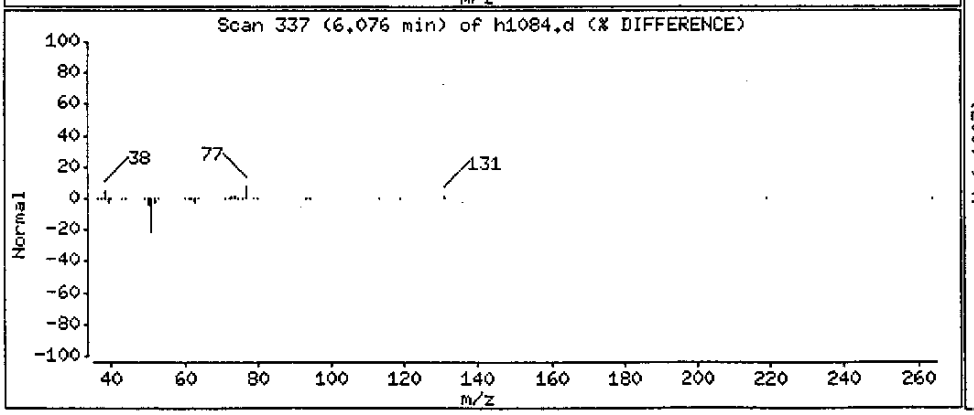
46 Benzene

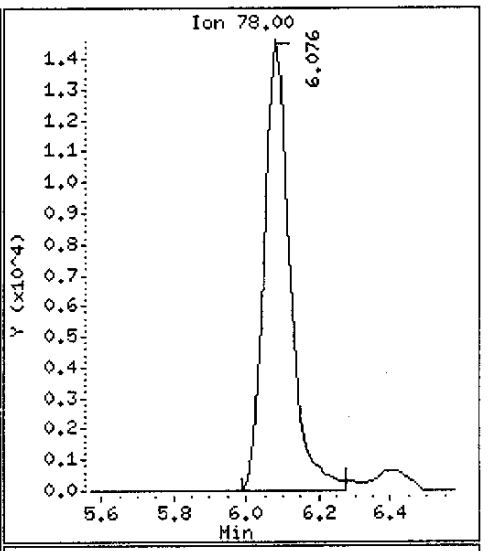
Concentration: 37.9082 ug/L

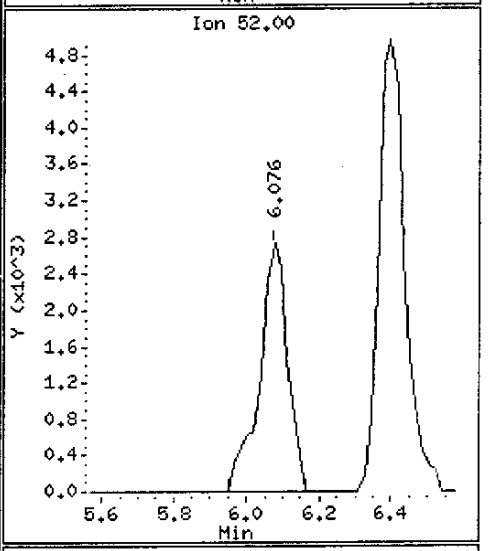


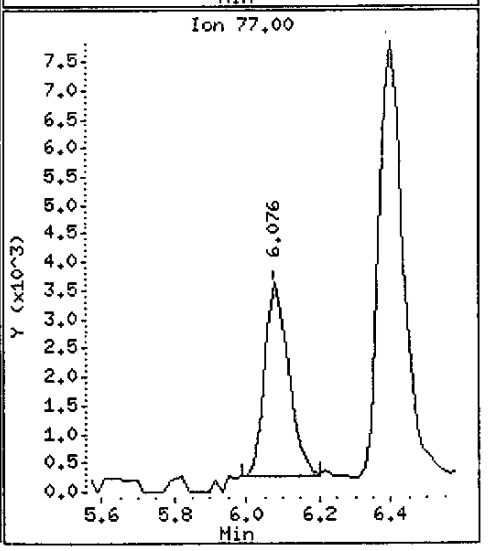












Data File: /chem/H.i/022004.b/h1084.d

Date : 20-FEB-2004 17:51

Client ID: MW-8

Instrument: H.i

Sample Info: F9KET1AA,0.2,D4B130209-008

Purge Volume: 20.0

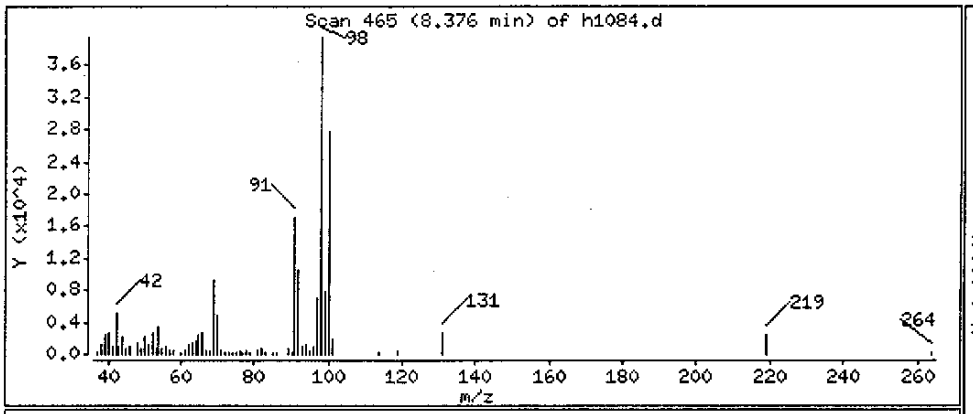
Operator: appelhansd

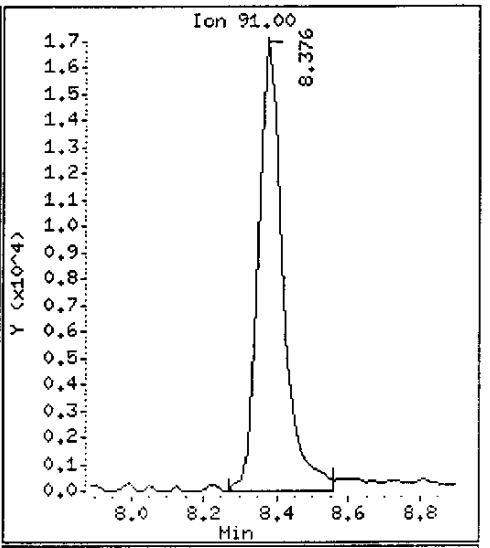
Column phase: DB624

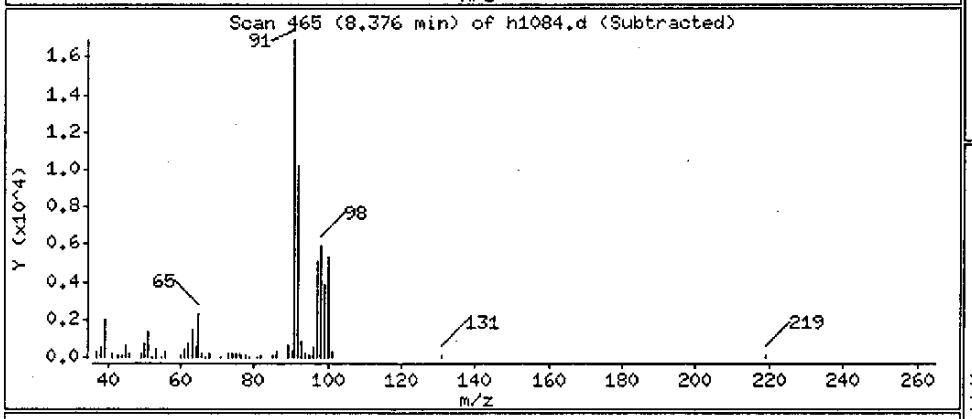
Column diameter: 0.53

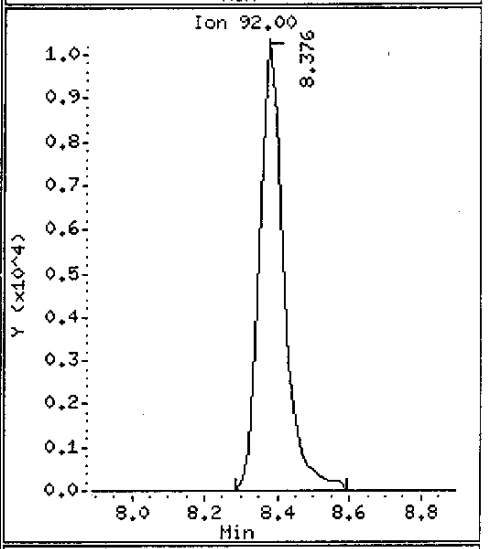
62 Toluene

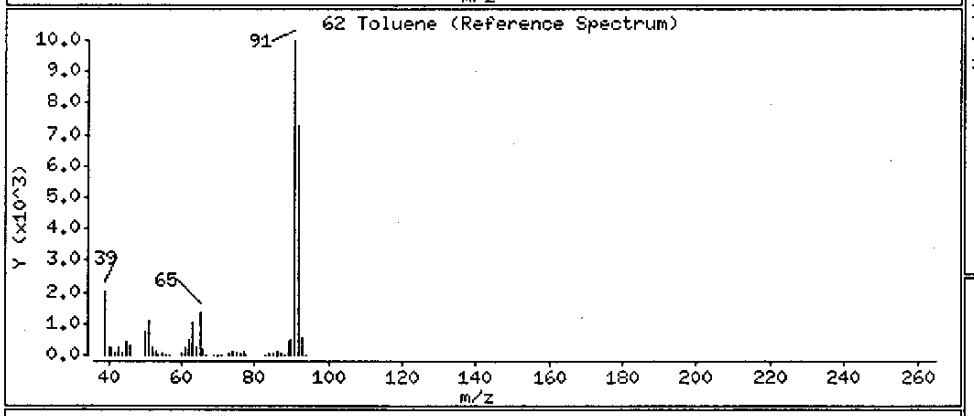
Concentration: 34.4950 ug/L

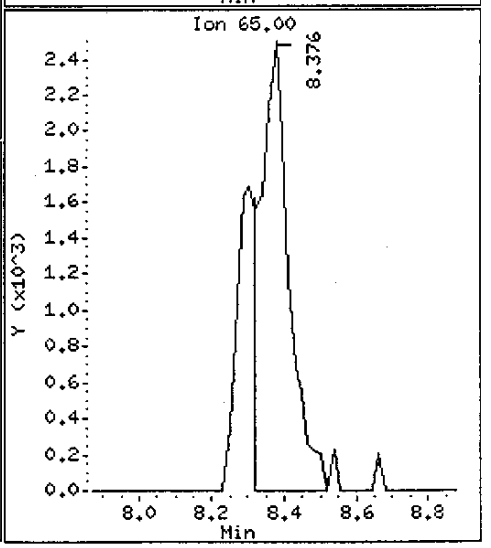


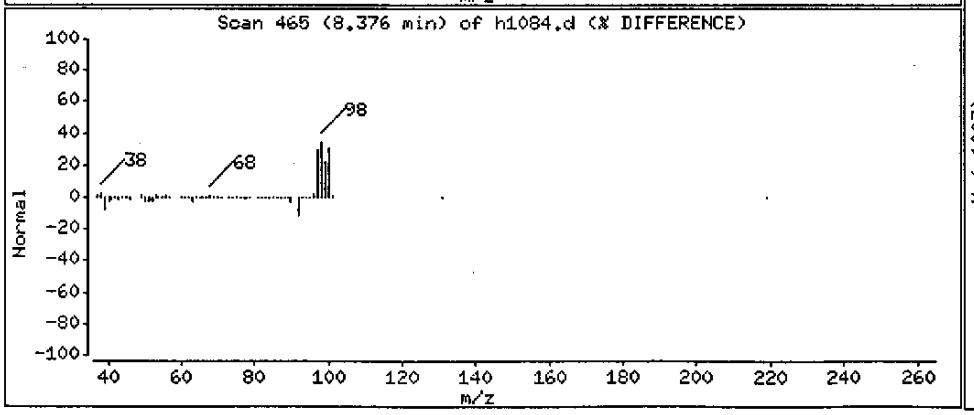












Data File: /chem/H.i/022004.b/h1084.d

Date : 20-FEB-2004 17:51

Client ID: MW-8

Instrument: H.i

Sample Info: F9KET1AA,0.2,D4B130209-008

Purge Volume: 20.0

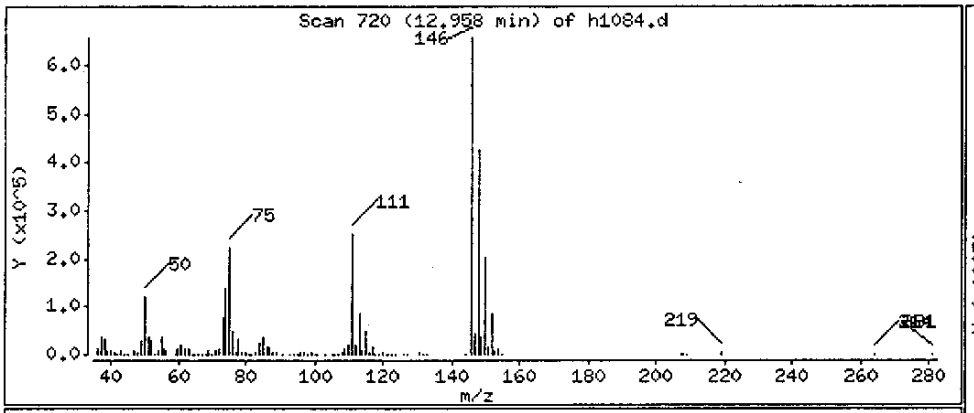
Operator: appelhansd

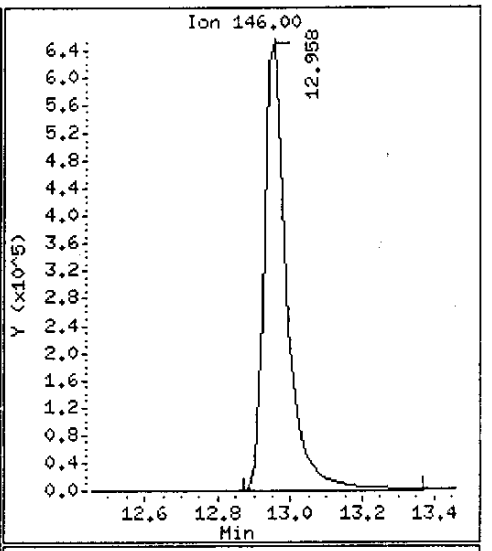
Column phase: DB624

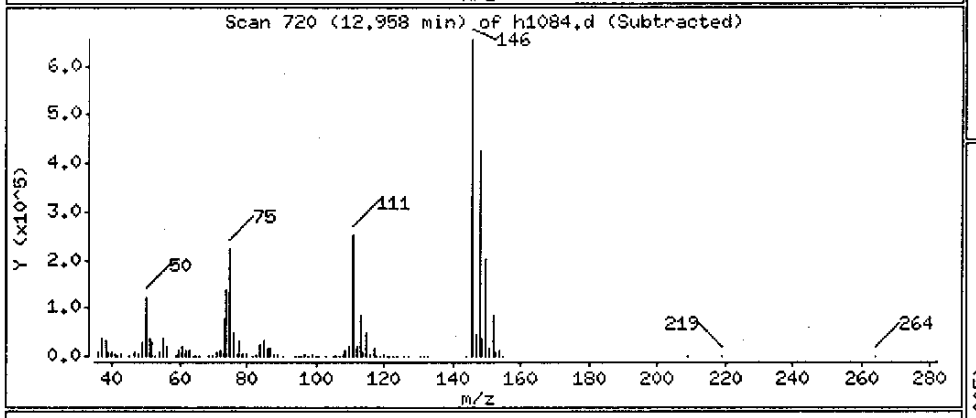
Column diameter: 0.53

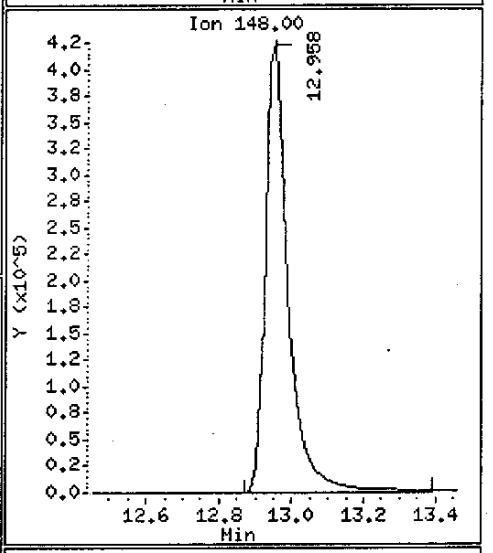
97 p-dichlorobenzene

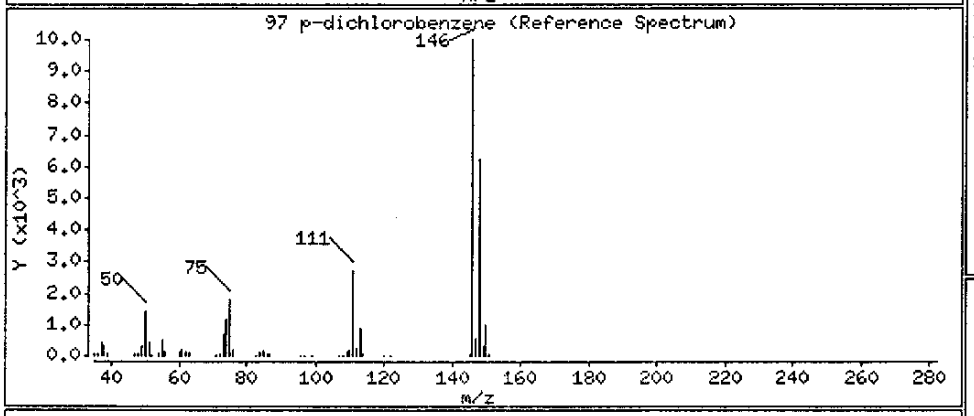
Concentration: 2246.66 ug/L

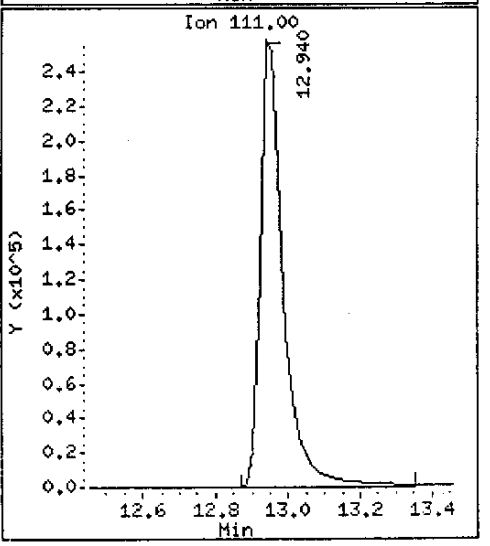


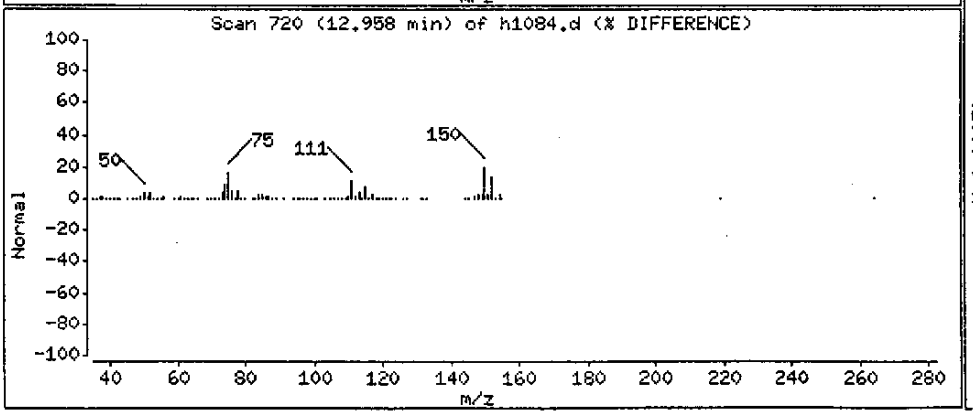












Data File: /chem/H.i/022004.b/h1085.d
Report Date: 23-Feb-2004 07:56

STL Denver

VOLATILE REPORT SW-846

Data file : /chem/H.i/022004.b/h1085.d
Lab Smp Id: F9KEV1AA Client Smp ID: MW-9
Inj Date : 20-FEB-2004 18:11
Operator : appelhansd Inst ID: H.i
Smp Info : F9KEV1AA,,D4B130209-009
Misc Info :
Comment : Purge and Trap Analysis
Method : /chem/H.i/022004.b/H-20ml-h2o.m
Meth Date : 20-Feb-2004 11:09 appelhad Quant Type: ISTD
Cal Date : 07-JAN-2004 15:24 Cal File: h0014.d
Als bottle: 2
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: H-all.sub
Target Version: 3.40
Processing Host: chemsv02

Concentration Formula: Amt * DF * Vp/Vs

Name	Value	Description
DF	1.000	Dilution Factor
Vp	20.000	Purge Volume (ml)
Vs	20.000	Sample Volume (ml)

DA 2-23

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/L)
* 48 Fluorobenzene	96	6.398	6.395	(1.000)	1950794	12.5000	
* 72 Chlorobenzene-d5	119	10.064	10.060	(1.000)	376281	12.5000	
* 96 1,4-Dichlorobenzene-d4	152	12.921	12.917	(1.000)	644732	12.5000	
$ 40 Dibromofluoromethane	111	5.589	5.586	(0.874)	883367	11.5114	11.5114
$ 44 1,2-Dichloroethane-d4	65	6.003	5.981	(0.938)	392464	11.4742	11.4742
$ 61 Toluene-d8	98	8.303	8.281	(0.825)	1648502	11.4607	11.4607
$ 82 Bromofluorobenzene	95	11.573	11.552	(1.150)	940617	11.9252	11.9252
M 1 1,2-Dichloroethene (total)	96				1243267	21.2508	21.2508
M 2 Xylene (total)	106				35057	0.42230	0.422298
3 dichlorodifluoromethane	85.00	Compound Not Detected.					
4 Chloromethane	50.00	Compound Not Detected.					
5 Vinyl Chloride	62	2.139	2.136	(0.334)	633177	14.5859	14.5858
6 Ethylene Oxide	43.00	Compound Not Detected.					
117 Dichlorotetrafluoroethane	85.00	Compound Not Detected.					
123 1,2-dichloro-1,1,2-triflourom	117.00	Compound Not Detected.					
124 2,2-dichloro-1,1,1-trifluorom	83.00	Compound Not Detected.					

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/L)
7 Bromomethane	94.00	Compound Not Detected.					
8 Chloroethane	64.00	Compound Not Detected.					
9 Dichlorofluoromethane	67.00	Compound Not Detected.					
10 Trichlorofluoromethane	101.00	Compound Not Detected.					
11 Ethanol	45.00	Compound Not Detected.					
12 Ethyl Ether	59.00	Compound Not Detected.					
13 Acrolein	56.00	Compound Not Detected.					
15 Acetone	43.00	Compound Not Detected.					
14 1,1-Dichloroethene	96.00	Compound Not Detected.					
16 Trichlorotrifluoroethane	151.00	Compound Not Detected.					
17 Iodomethane	142.00	Compound Not Detected.					
19 Acetonitrile	41.00	Compound Not Detected.					
18 Carbon Disulfide	76	3.433	3.430	(0.537)	52266	0.29616	0.296163
20 Allyl Chloride	41.00	Compound Not Detected.					
119 Methyl Acetate	43.00	Compound Not Detected.					
21 Methylene Chloride	84	3.631	3.627	(0.567)	71913	1.48067	1.48067
125 2-Propanol	45.00	Compound Not Detected.					
22 tert-Butyl alcohol	59.00	Compound Not Detected.					
23 Acrylonitrile	53.00	Compound Not Detected.					
24 trans-1,2-Dichloroethene	96	3.918	3.915	(0.612)	30310	0.51422	0.514218
25 Methyl t-butyl ether	73.00	Compound Not Detected.					
26 Hexane	57.00	Compound Not Detected.					
27 1,1-Dichloroethane	63	4.368	4.364	(0.683)	1037543	10.4438	10.4438
29 Vinyl acetate	43.00	Compound Not Detected.					
30 Isopropyl ether	87.00	Compound Not Detected.					
28 Chloroprene	53.00	Compound Not Detected.					
120 ETBE	59.00	Compound Not Detected.					
33 2-Butanone	43.00	Compound Not Detected.					
32 cis-1,2-Dichloroethene	96	5.032	5.029	(0.787)	1212957	20.7366	20.7366
31 2,2-Dichloropropane	77.00	Compound Not Detected.					
35 Ethyl Acetate	43.00	Compound Not Detected.					
34 Propionitrile	54.00	Compound Not Detected.					
36 Methacrylonitrile	41.00	Compound Not Detected.					
37 Bromochloromethane	128.00	Compound Not Detected.					
39 Tetrahydrofuran	42.00	Compound Not Detected.					
38 Chloroform	83.00	Compound Not Detected.					
41 1,1,1-Trichloroethane	97.00	Compound Not Detected.					
114 Cyclohexane	56.00	Compound Not Detected.					
42 1,1-Dichloropropene	75.00	Compound Not Detected.					
43 Carbon Tetrachloride	117.00	Compound Not Detected.					
45 Isobutanol	41.00	Compound Not Detected.					
46 Benzene	78	6.075	6.071	(0.949)	200540	1.20071	1.20070
47 1,2-Dichloroethane	62.00	Compound Not Detected.					
121 TAME	73.00	Compound Not Detected.					
49 n-Butanol	56.00	Compound Not Detected.					
50 Trichloroethene	130	6.847	6.844	(1.070)	348186	5.49730	5.49730
115 2-Pentanone	43.00	Compound Not Detected.					

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/L)
52 1,2-Dichloropropane	63.00	Compound Not Detected.					
122 Methyl Cyclohexane	55.00	Compound Not Detected.					
53 Dibromomethane	93.00	Compound Not Detected.					
54 Methyl Methacrylate	100.00	Compound Not Detected.					
55 1,4-Dioxane	88.00	Compound Not Detected.					
56 Bromodichloromethane	83.00	Compound Not Detected.					
57 2-nitropropane	41.00	Compound Not Detected.					
113 2-Chloroethyl vinyl ether	63.00	Compound Not Detected.					
59 cis-1,3-Dichloropropene	75.00	Compound Not Detected.					
60 4-Methyl-2-pentanone	43.00	Compound Not Detected.					
62 Toluene	91	8.375	8.389	(0.832)	60846	0.30654	0.306542
63 trans-1,3-Dichloropropene	75.00	Compound Not Detected.					
64 Ethyl methacrylate	69.00	Compound Not Detected.					
65 1,1,2-Trichloroethane	97.00	Compound Not Detected.					
67 1,3-Dichloropropane	76.00	Compound Not Detected.					
66 Tetrachloroethene	164.00	Compound Not Detected.					
68 2-Hexanone	43.00	Compound Not Detected.					
126 Tetrahydrothiophene	60.00	Compound Not Detected.					
69 Dibromochloromethane	129.00	Compound Not Detected.					
70 1,2-Dibromoethane	107.00	Compound Not Detected.					
71 1-Chlorohexane	91.00	Compound Not Detected.					
73 Chlorobenzene	112.00	Compound Not Detected.					
74 1,1,1,2-Tetrachloroethane	131.00	Compound Not Detected.					
75 Ethylbenzene	106	10.243	10.240	(1.018)	23311	0.37915	0.379147
76 m and p-Xylene	106	10.387	10.383	(1.032)	35057	0.42230	0.422298
77 o-Xylene	106.00	Compound Not Detected.					
78 Styrene	104.00	Compound Not Detected.					
79 Bromoform	173.00	Compound Not Detected.					
80 isopropyl benzene	105.00	Compound Not Detected.					
116 cis-1,4-Dichloro-2-butene	53.00	Compound Not Detected.					
81 Cyclohexanone	55	11.501	11.480	(1.143)	27644	38.2394	38.2394
83 1,1,2,2-Tetrachloroethane	83.00	Compound Not Detected.					
84 Bromobenzene	156.00	Compound Not Detected.					
85 1,2,3-Trichloropropane	110.00	Compound Not Detected.					
86 t-1,4-Dichloro-2-butene	53.00	Compound Not Detected.					
87 n-Propylbenzene	120.00	Compound Not Detected.					
88 2-Chlorotoluene	126.00	Compound Not Detected.					
89 1,3,5-Trimethylbenzene	105.00	Compound Not Detected.					
90 4-Chlorotoluene	126.00	Compound Not Detected.					
91 tert-Butylbenzene	119.00	Compound Not Detected.					
92 1,2,4-Trimethylbenzene	105.00	Compound Not Detected.					
93 sec-Butylbenzene	134.00	Compound Not Detected.					
94 m-Dichlorobenzene	146.00	Compound Not Detected.					
95 4-Isopropyltoluene	119.00	Compound Not Detected.					
97 p-dichlorobenzene	146	12.957	12.953	(1.003)	1129706	10.0602	10.0602
118 1,2,3-Trimethylbenzene	105.00	Compound Not Detected.					
98 n-Butylbenzene	91.00	Compound Not Detected.					

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/L)
99 o-Dichlorobenzene	146	13.334	13.330	(1.032)	24296	0.29245	0.292445
100 1,2-Dibromo-3-chloropropane	157.00	Compound Not Detected.					
101 1,2,4-Trichlorobenzene	180.00	Compound Not Detected.					
102 Hexachlorobutadiene	225.00	Compound Not Detected.					
127 Naphthalene	128.00	Compound Not Detected.					
104 1,2,3-Trichlorobenzene	180.00	Compound Not Detected.					

Data File: /chem/H.i/022004.b/h1085.d
Report Date: 23-Feb-2004 07:56

STL Denver

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: H.i
Lab File ID: h1085.d
Lab Smp Id: F9KEV1AA
Analysis Type: VOA
Quant Type: ISTD
Operator: appelhansd
Method File: /chem/H.i/022004.b/H-20ml-h2o.m
Misc Info:

Calibration Date: 02/20/4
Calibration Time: 1059
Client Smp ID: MW-9
Level: LOW
Sample Type: WATER

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
48 Fluorobenzene	2466684	1233342	4933368	1950794	-20.91
72 Chlorobenzene-d5	459303	229652	918606	376281	-18.08
96 1,4-Dichlorobenze	730993	365496	1461986	644732	-11.80

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
48 Fluorobenzene	6.39	5.89	6.89	6.40	0.05
72 Chlorobenzene-d5	10.06	9.56	10.56	10.06	0.03
96 1,4-Dichlorobenze	12.92	12.42	13.42	12.92	0.03

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

STL Denver

RECOVERY REPORT

Client Name: ARCADIS GERAGHTY & M13-FEB-2004 Client SDG: D4B130209
Sample Matrix: LIQUID Fraction: VOA
Lab Smp Id: F9KEV1AA Client Smp ID: MW-9
Level: LOW Operator: appelhansd
Data Type: MS DATA SampleType: SAMPLE
SpikeList File: dcs-h20.spk Quant Type: ISTD
Sublist File: H-all.sub
Method File: /chem/H.i/022004.b/H-20ml-h2o.m
Misc Info:

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 40 Dibromofluorometha	11.5000	11.5114	100.10	76-116
$ 44 1,2-Dichloroethane	11.5000	11.4742	99.78	59-129
$ 61 Toluene-d8	11.5000	11.4607	99.66	76-116
$ 82 Bromofluorobenzene	11.5000	11.9252	103.70	74-114

Data File: /chem/H.i/022004.b/h1085.d
Date : 20-FEB-2004 18:11
Client ID: MW-9
Sample Info: F9KEV1AA,,D4B130209-009
Purge Volume: 20.0
Column phase: DB624

Instrument: H.i
Operator: appelhansd
Column diameter: 0.53

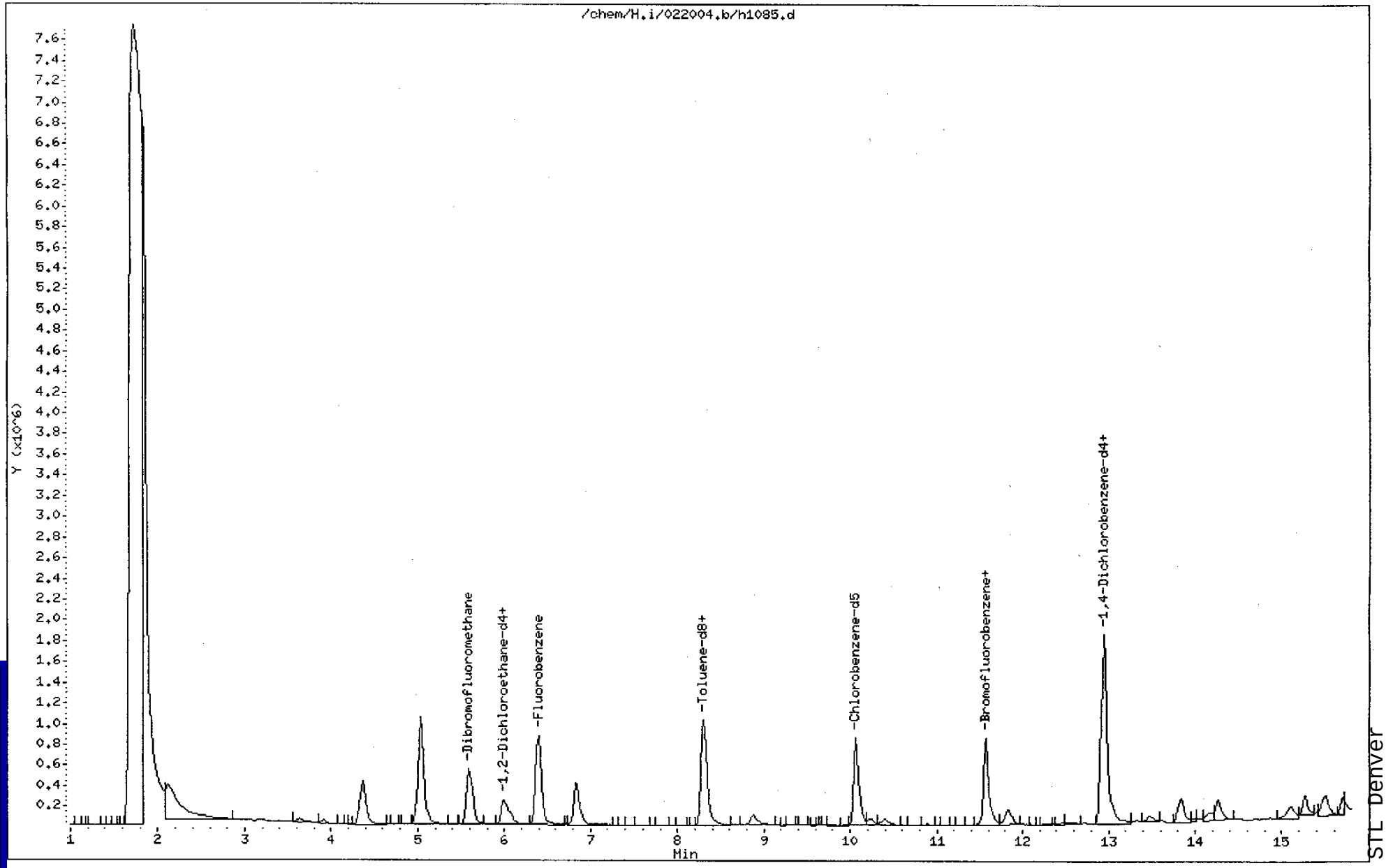


Table of Contents

Data File: /chem/H.i/022004.b/h1085.d

Date : 20-FEB-2004 18:11

Client ID: MW-9

Instrument: H.i

Sample Info: F9KEV1AA,,D4B130209-009

Purge Volume: 20.0

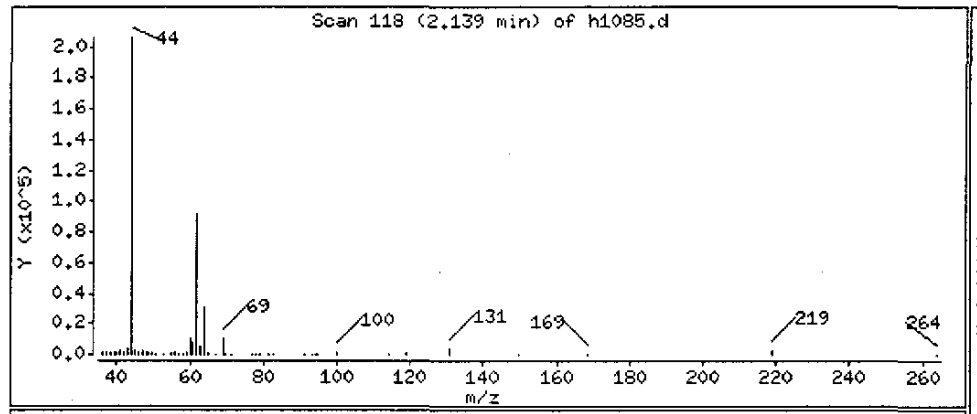
Operator: appelhansd

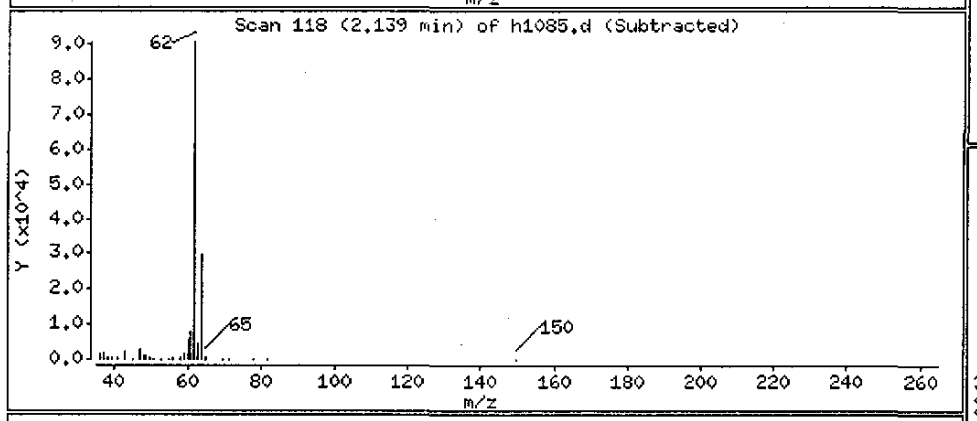
Column phase: DB624

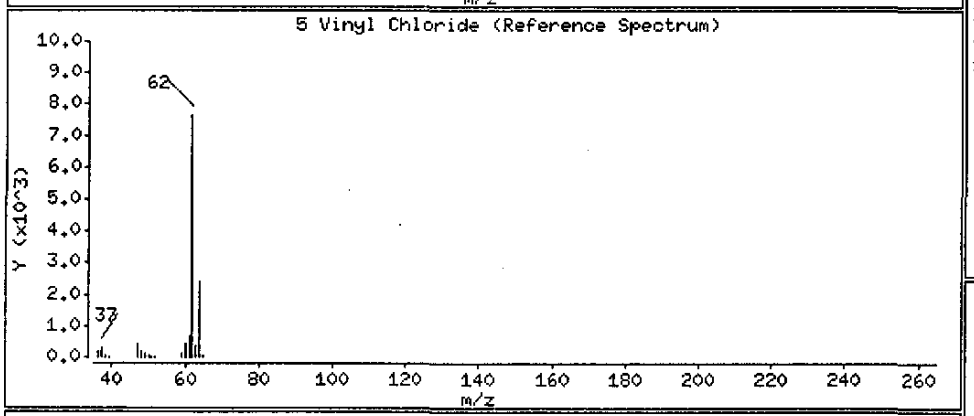
Column diameter: 0.53

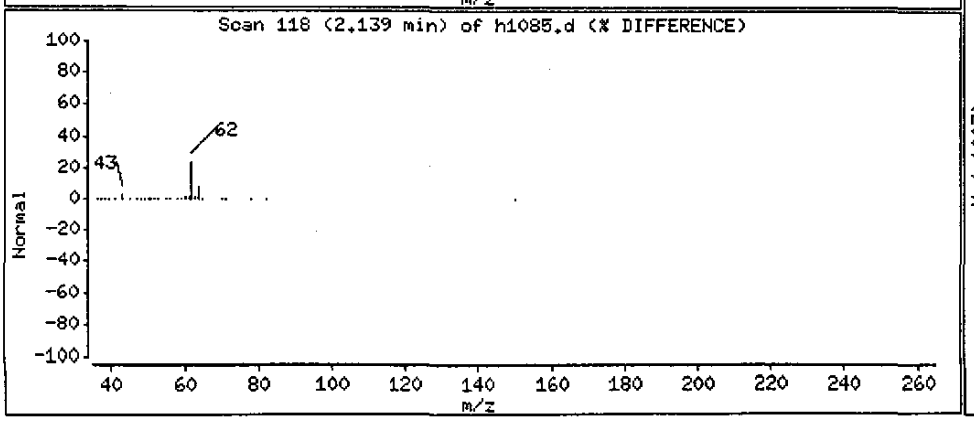
5 Vinyl Chloride

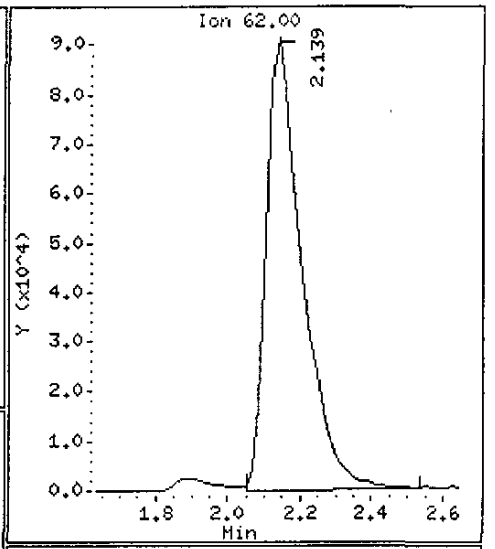
Concentration: 14.5858 ug/L

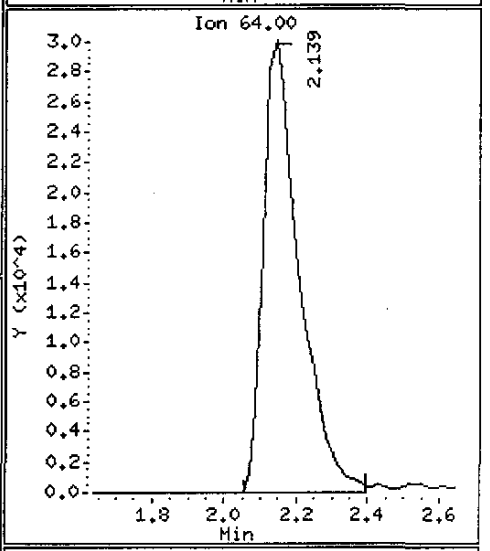


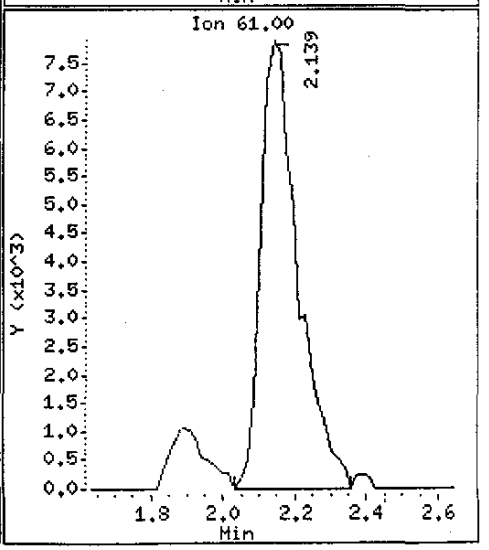












Data File: /chem/H.i/022004.b/h1085.d

Date : 20-FEB-2004 18:11

Client ID: MW-9

Instrument: H.i

Sample Info: F9KEV1AA,,D4B130209-009

Purge Volume: 20.0

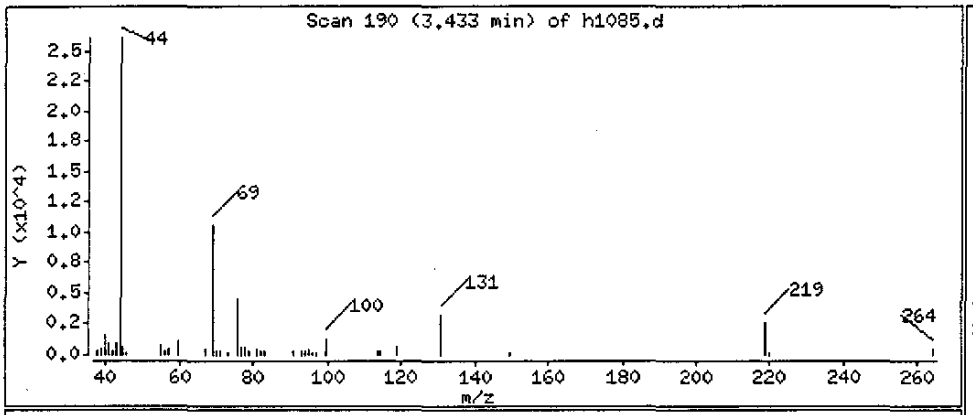
Operator: appelhansd

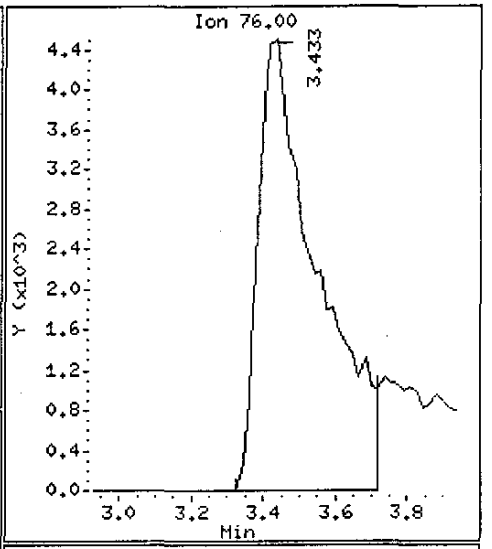
Column phase: DB624

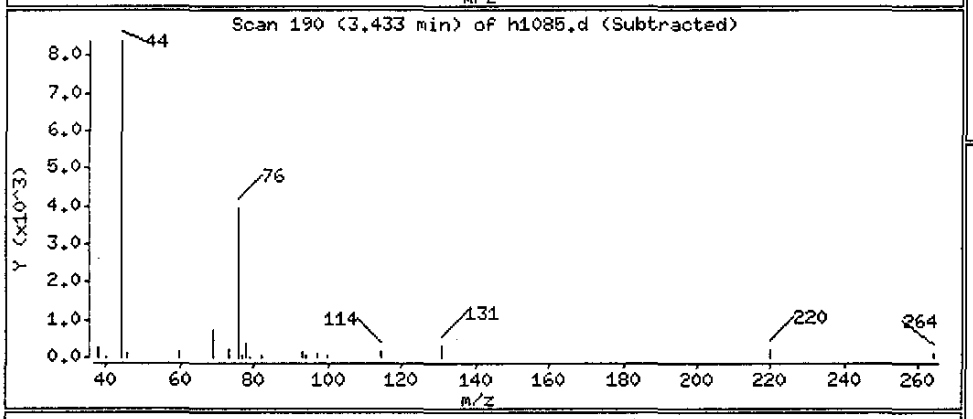
Column diameter: 0.53

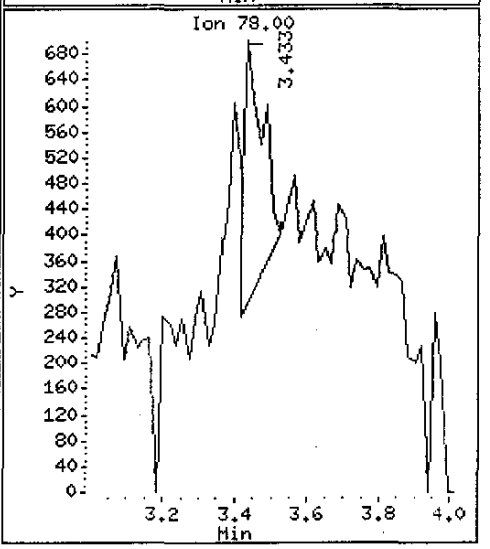
18 Carbon Disulfide

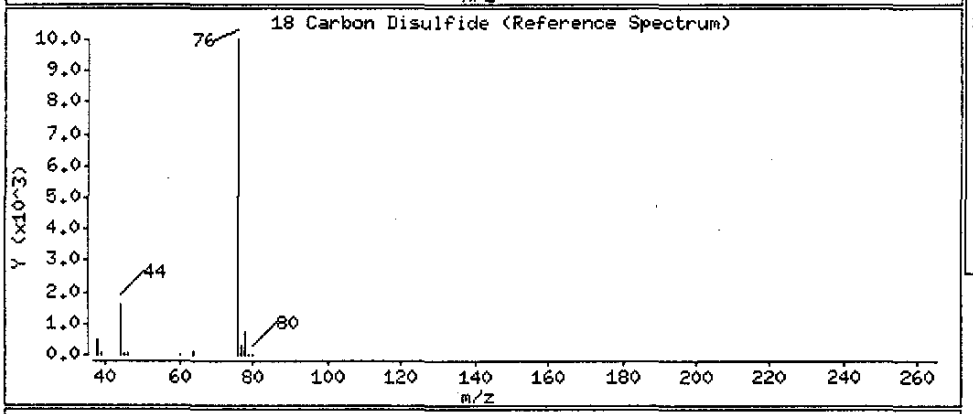
Concentration: 0.296163 ug/L

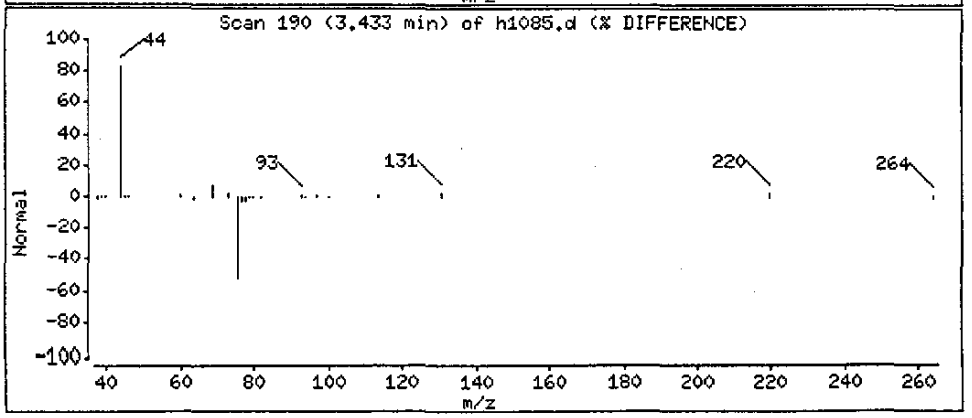












Data File: /chem/H.i/022004.b/h1085.d

Date : 20-FEB-2004 18:11

Client ID: MW-9

Instrument: H.i

Sample Info: F9KEV1AA,,D4B130209-009

Purge Volume: 20.0

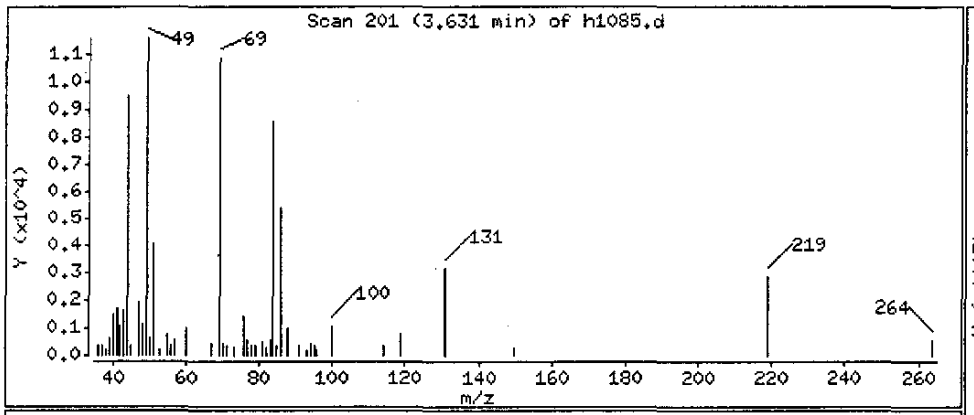
Operator: appelhansd

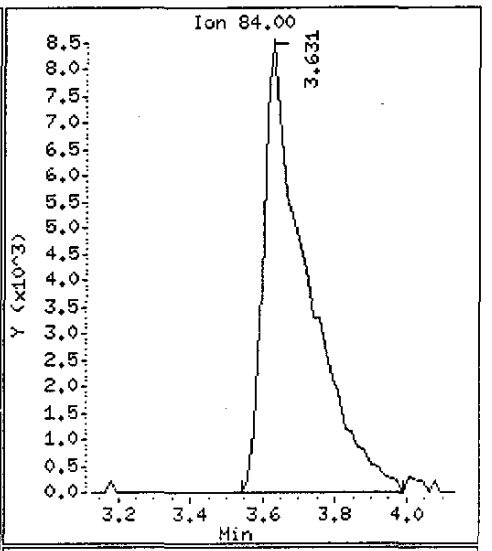
Column phase: DB624

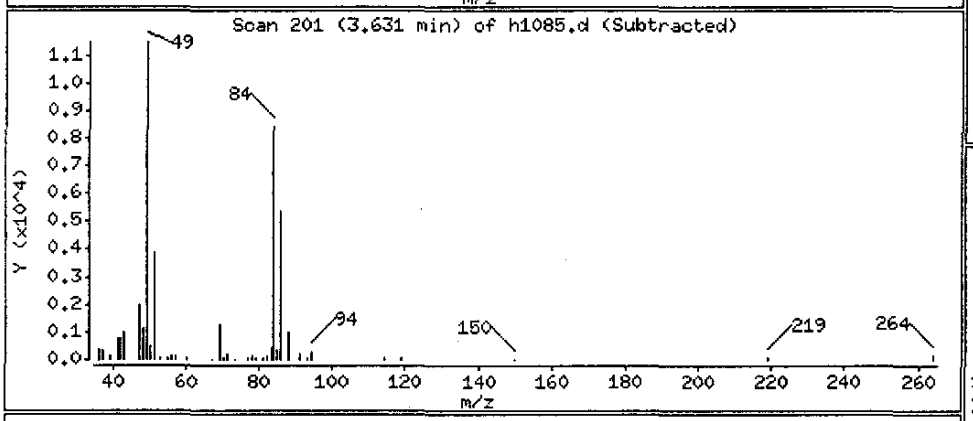
Column diameter: 0.53

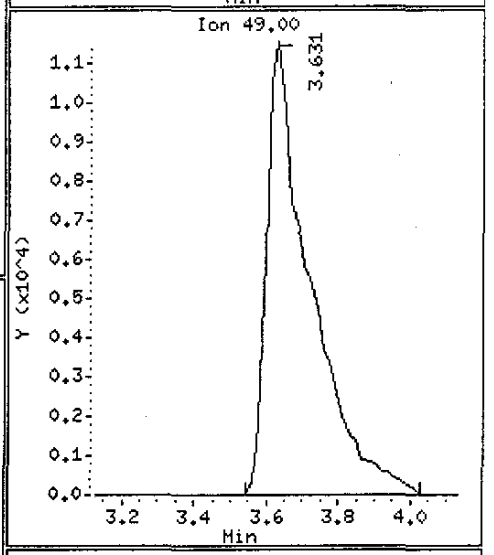
21 Methylene Chloride

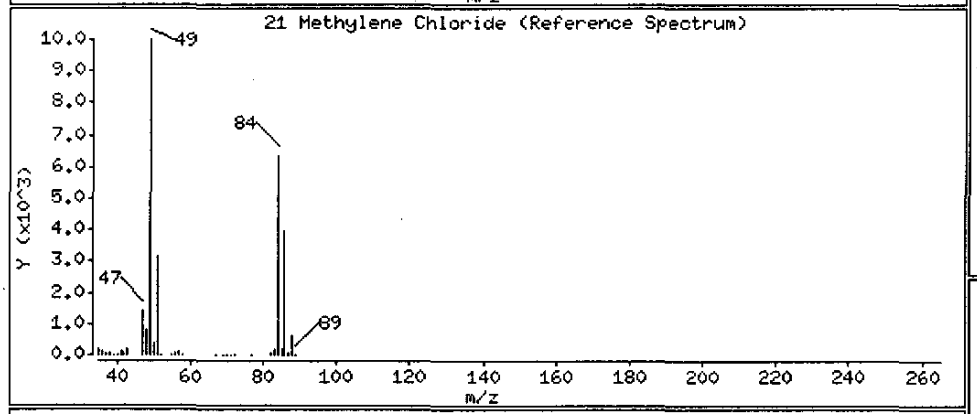
Concentration: 1.48067 ug/L

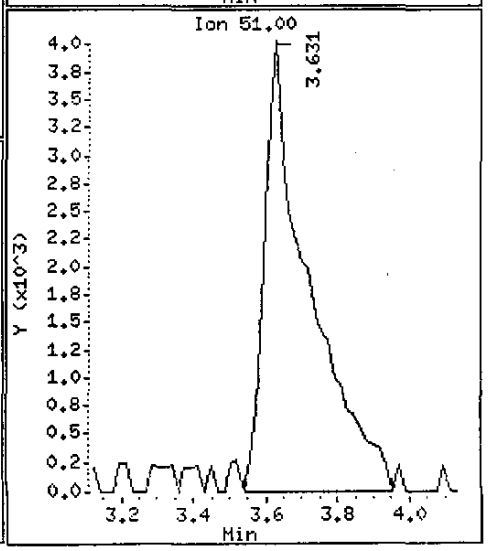


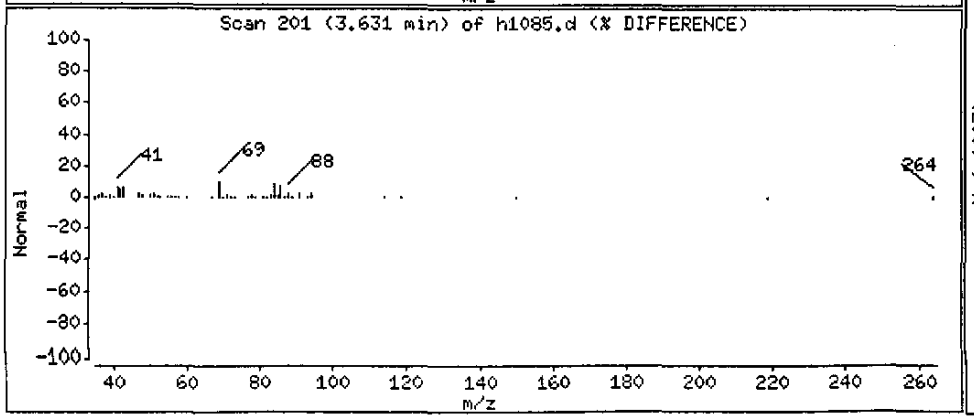












Data File: /chem/H.i/022004.b/h1085.d

Date : 20-FEB-2004 18:11

Client ID: MW-9

Instrument: H.i

Sample Info: F9KEV1AA,,D4B130209-009

Purge Volume: 20.0

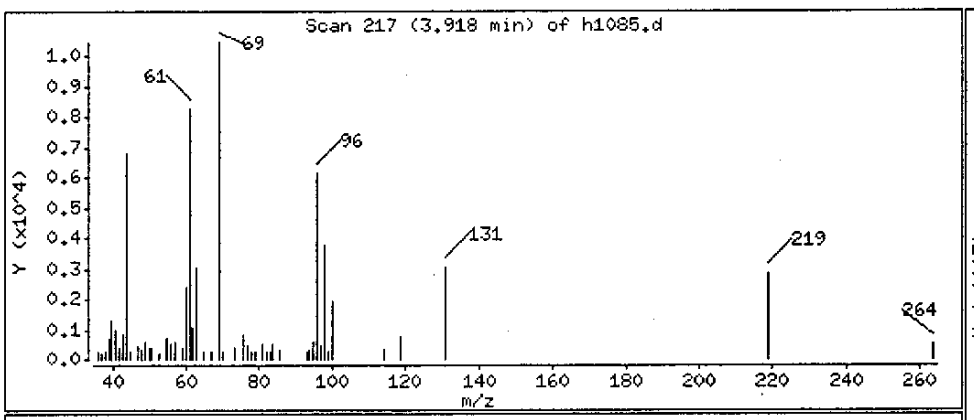
Operator: appelhansd

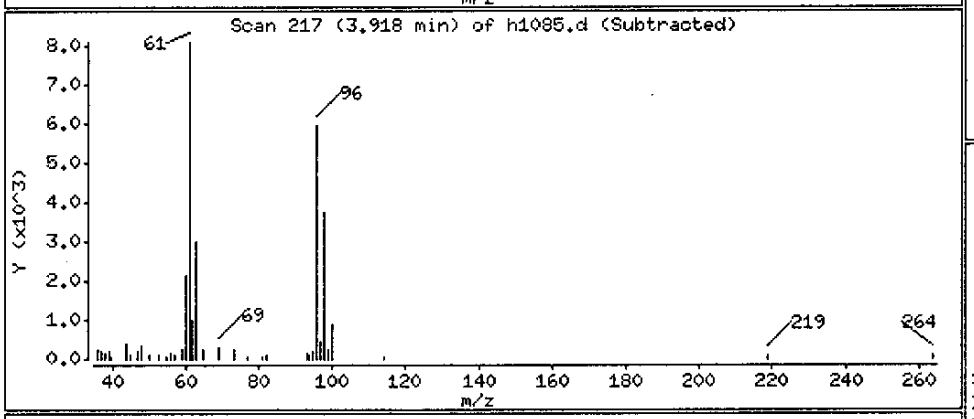
Column phase: DB624

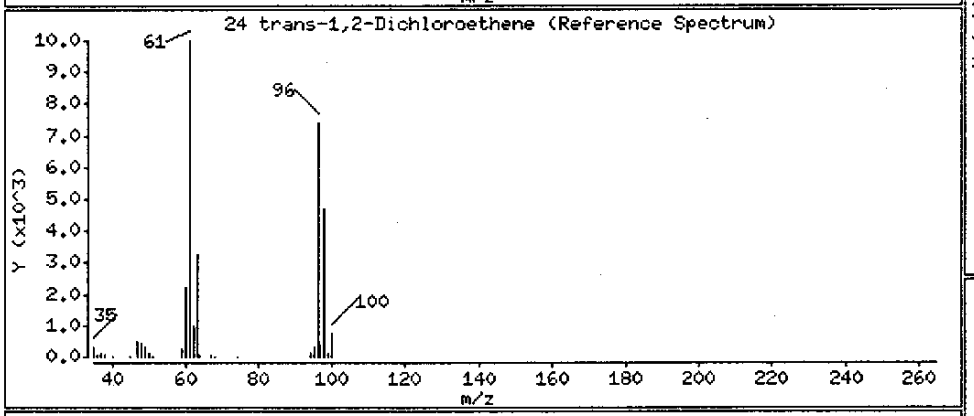
Column diameter: 0.53

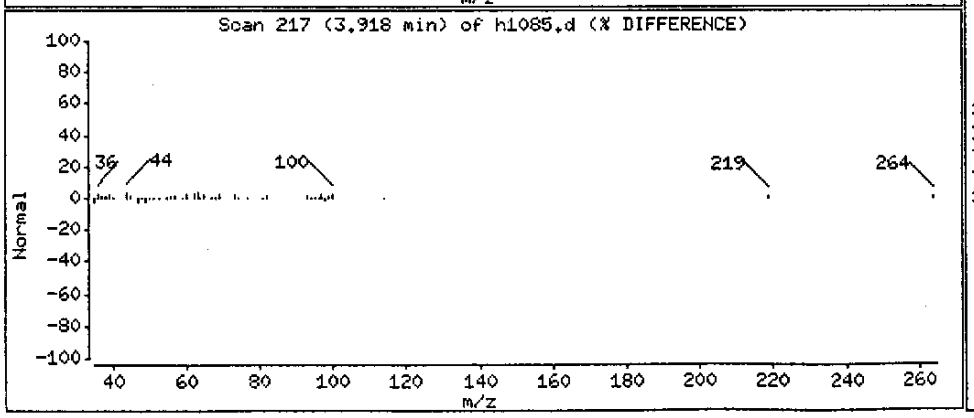
24 trans-1,2-Dichloroethene

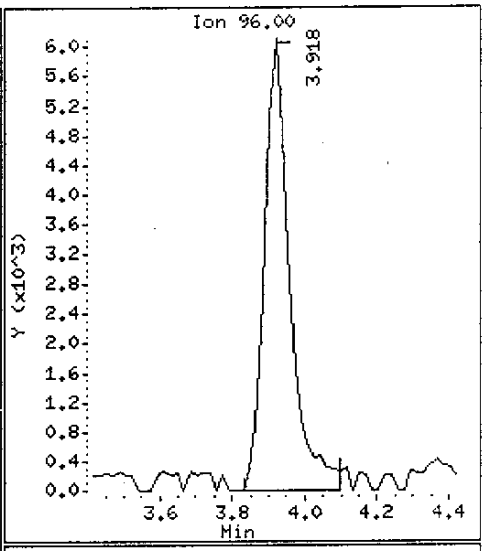
Concentration: 0.514218 ug/L

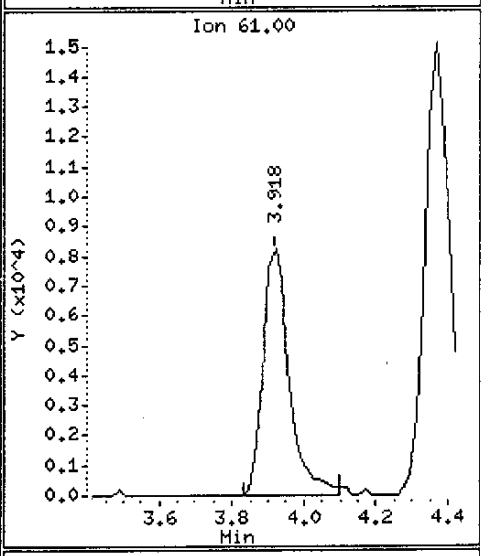


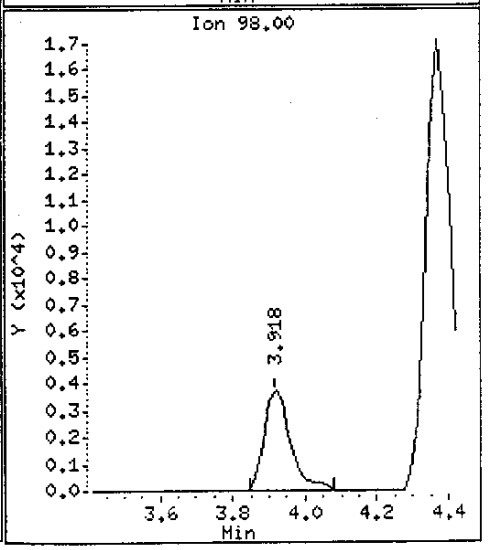












Data File: /chem/H.i/022004.b/h1085.d

Date : 20-FEB-2004 18:11

Client ID: MW-9

Instrument: H.i

Sample Info: F9KEV1AA,,D4B130209-009

Purge Volume: 20.0

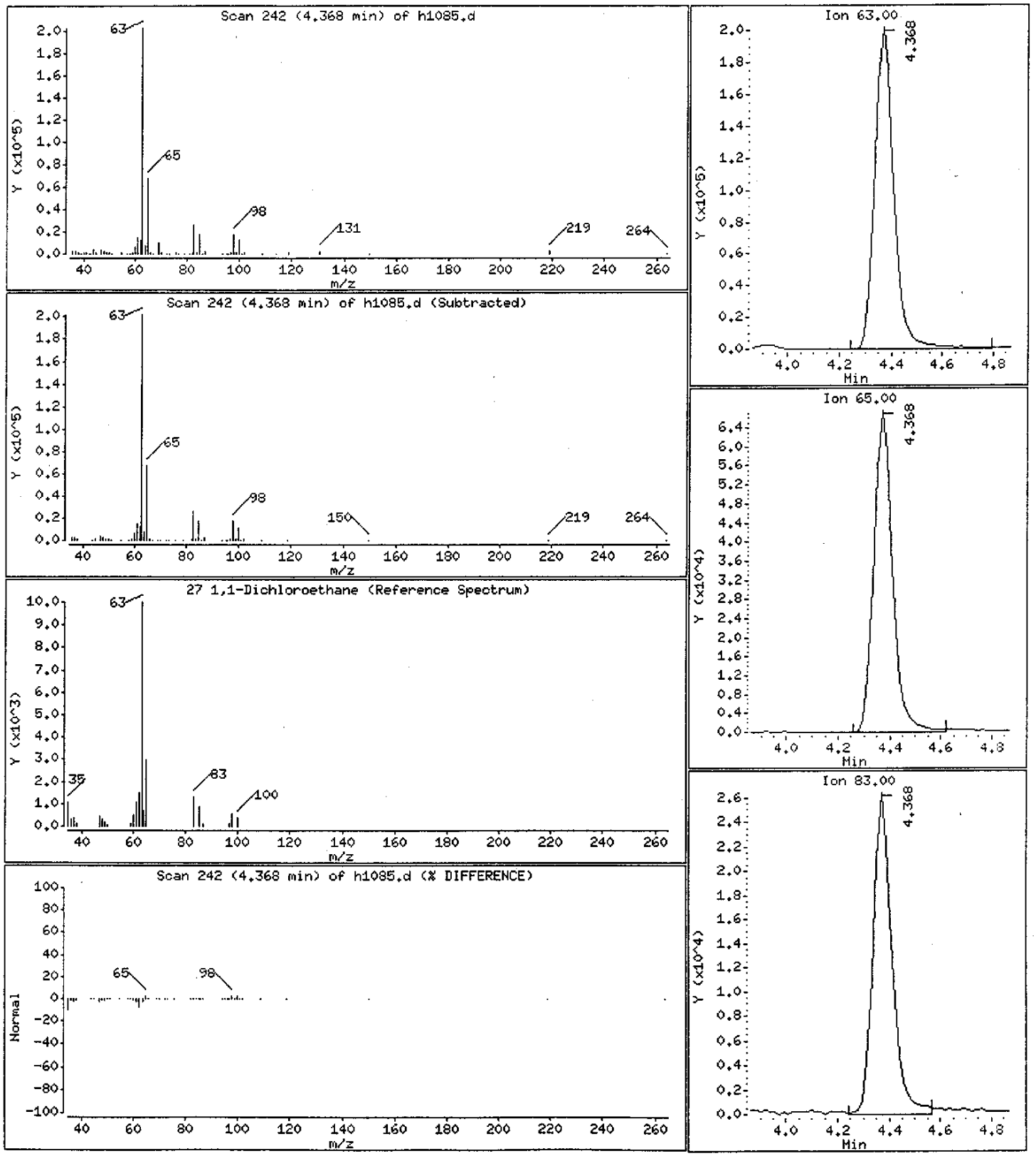
Operator: appelhansd

Column phase: DB624

Column diameter: 0.53

27 1,1-Dichloroethane

Concentration: 10.4438 ug/L



Data File: /chem/H.i/022004.b/h1085.d

Date : 20-FEB-2004 18:11

Client ID: MW-9

Instrument: H.i

Sample Info: F9KEV1AA,,D4B130209-009

Purge Volume: 20.0

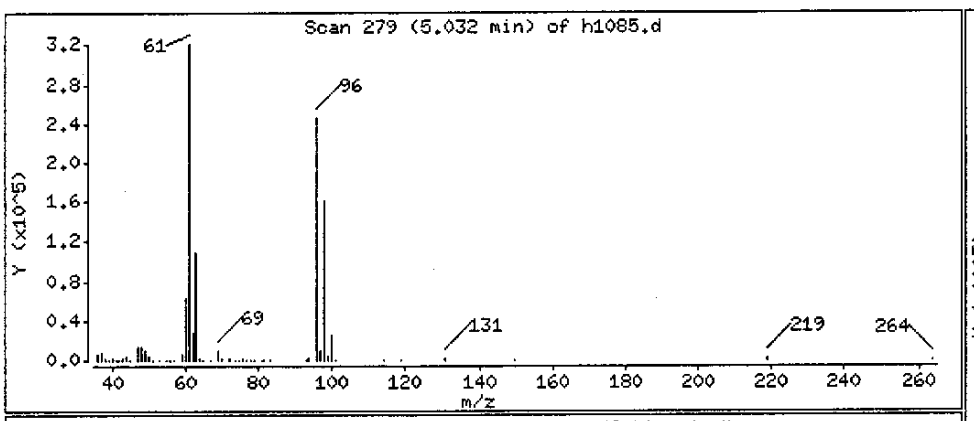
Operator: appelhansd

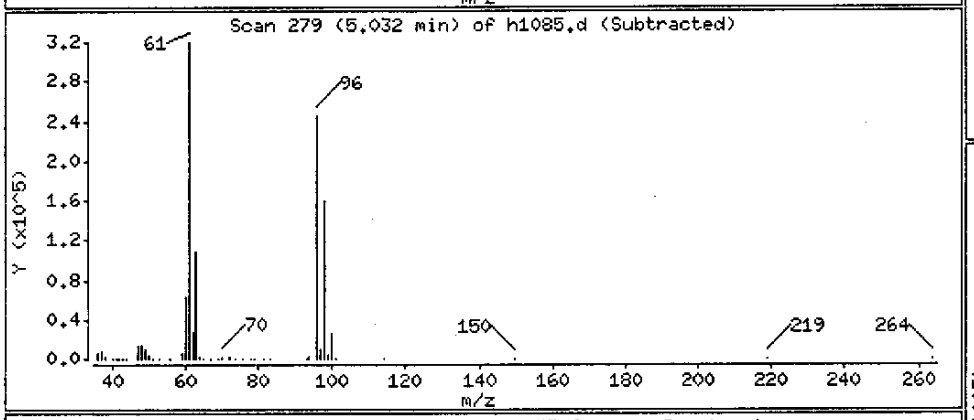
Column phase: DB624

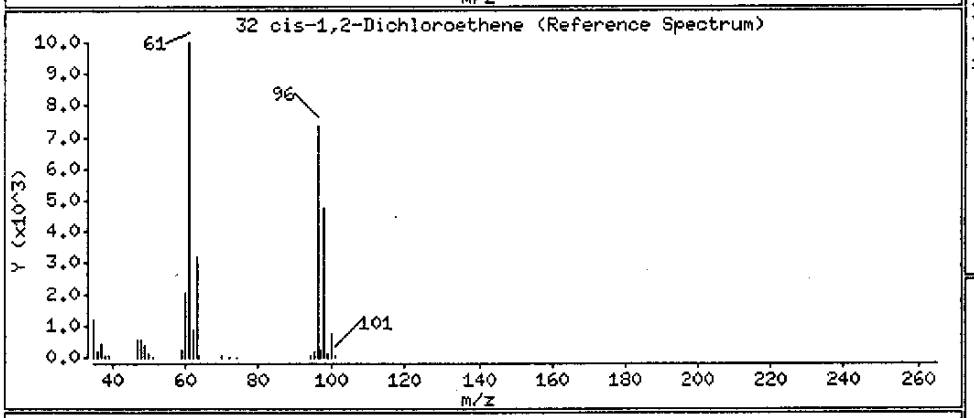
Column diameter: 0.53

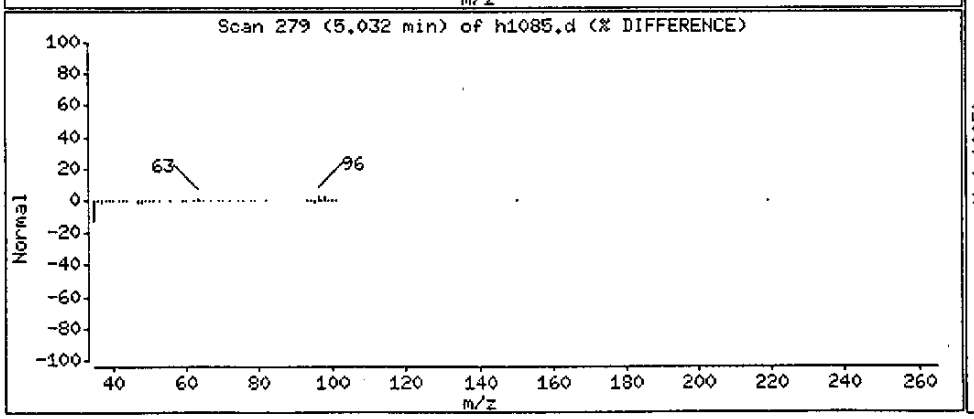
32 cis-1,2-Dichloroethene

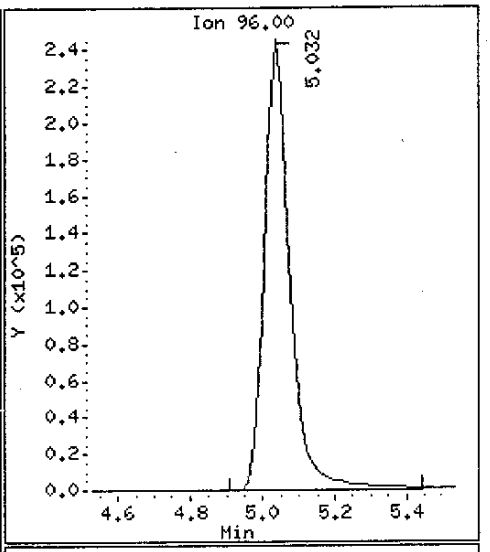
Concentration: 20.7366 ug/L

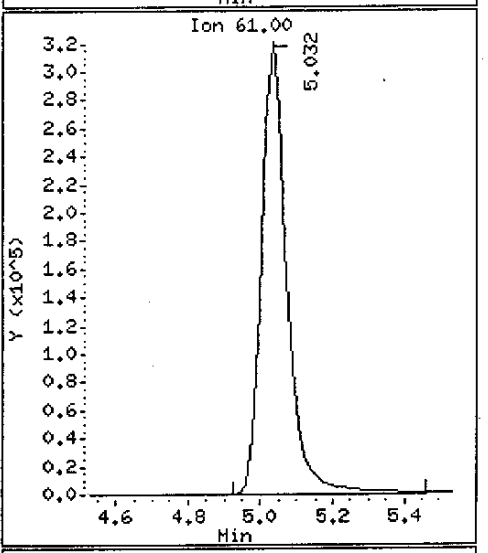


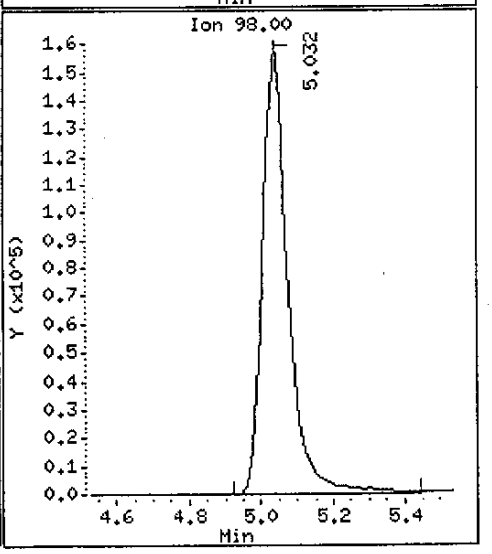












Data File: /chem/H.i/022004.b/h1085.d

Date : 20-FEB-2004 18:11

Client ID: MW-9

Instrument: H.i

Sample Info: F9KEV1AA,,D4B130209-009

Purge Volume: 20.0

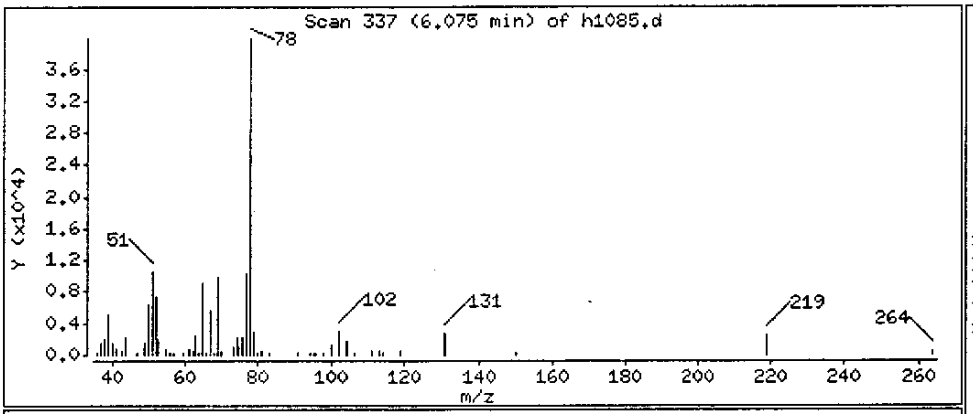
Operator: appelhansd

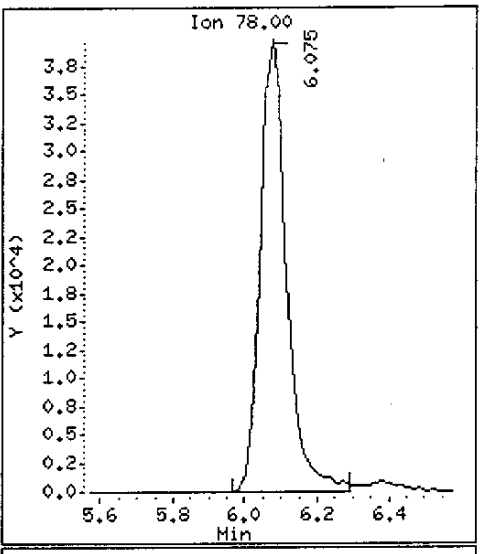
Column phase: DB624

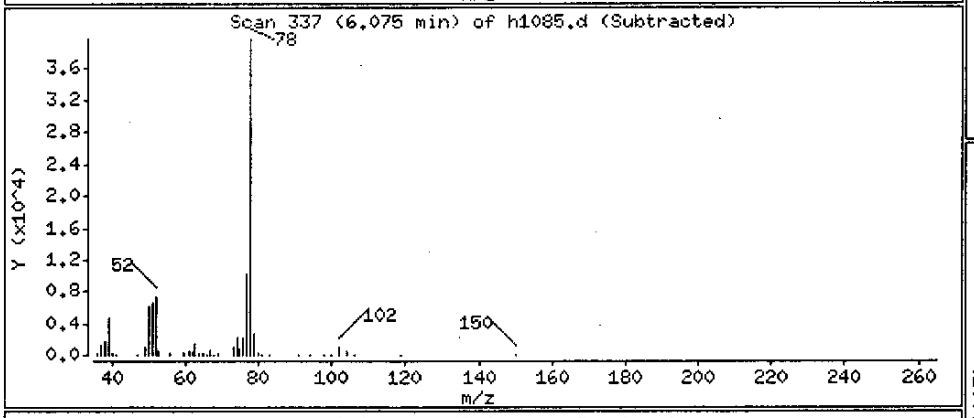
Column diameter: 0.53

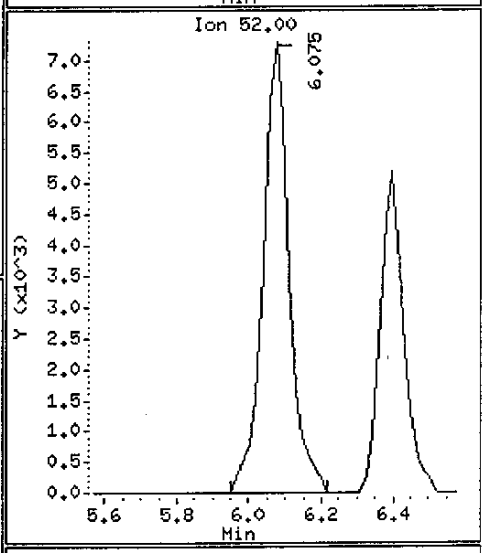
46 Benzene

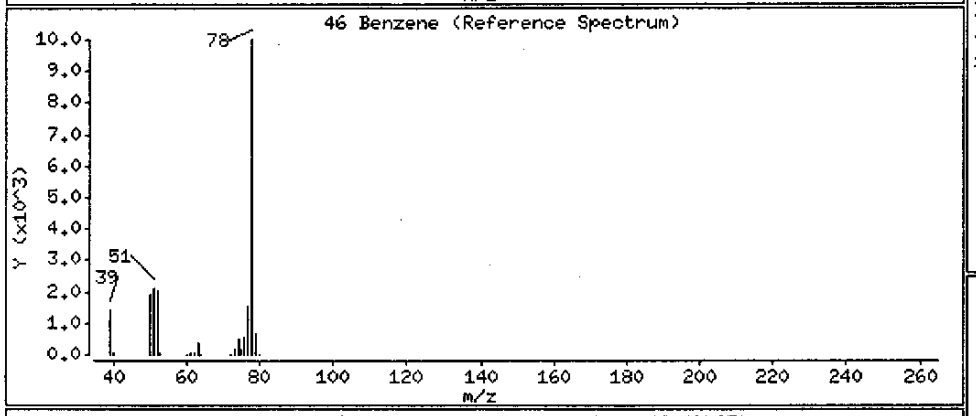
Concentration: 1.20070 ug/L

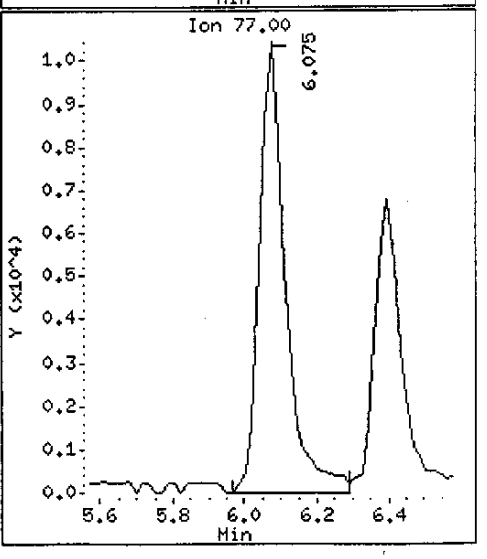


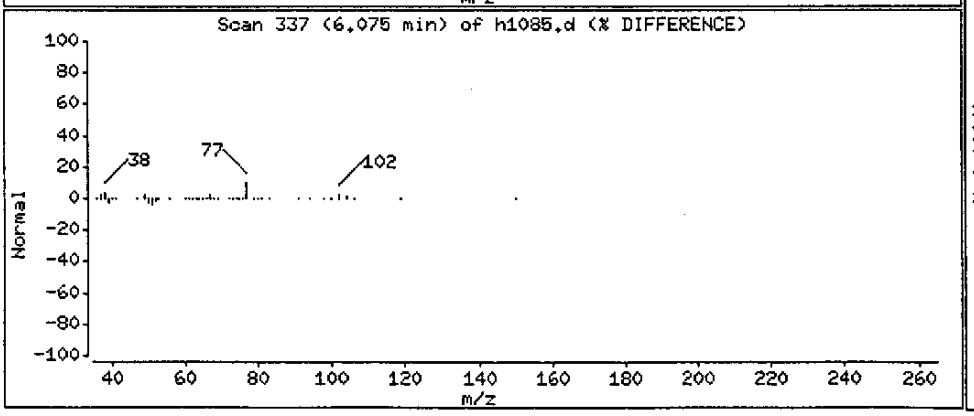












Data File: /chem/H.i/022004.b/h1085.d

Date : 20-FEB-2004 18:11

Client ID: MW-9

Instrument: H.i

Sample Info: F9KEV1AA,,D4B130209-009

Purge Volume: 20.0

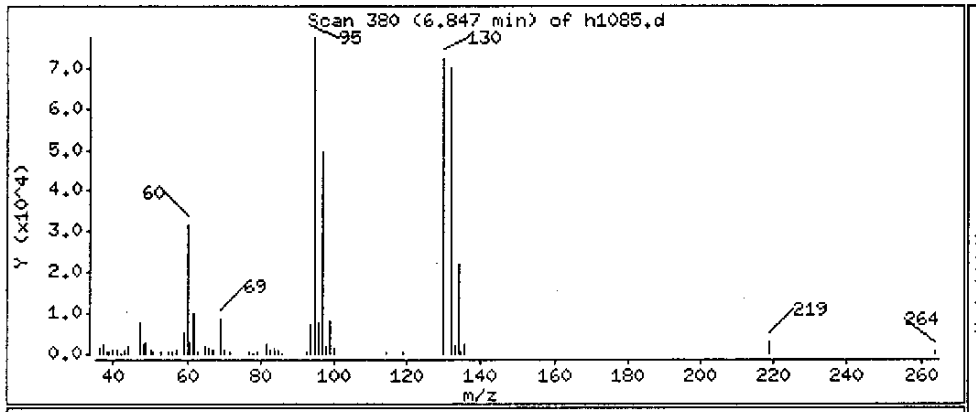
Operator: appelhansd

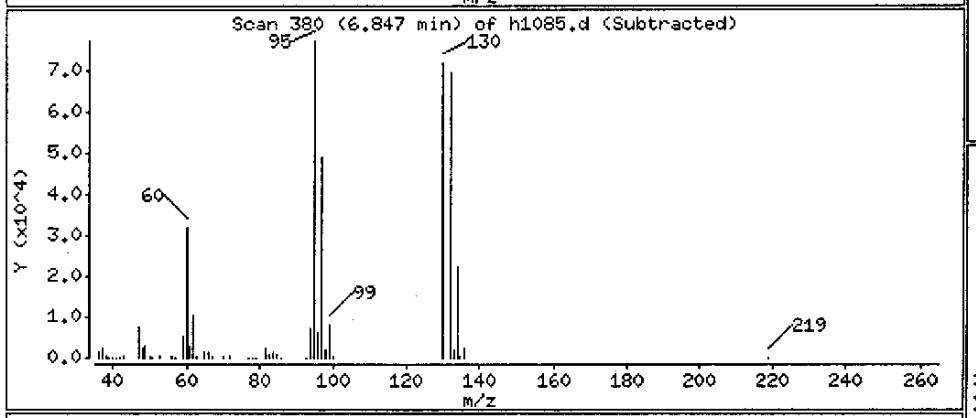
Column phase: DB624

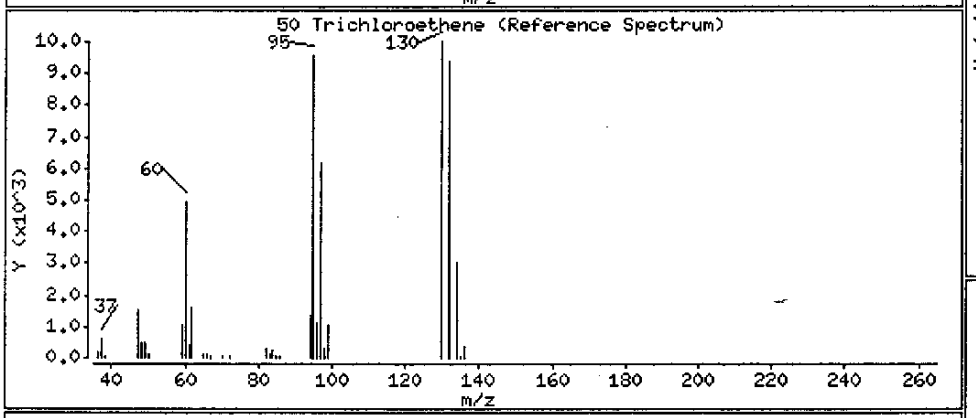
Column diameter: 0.53

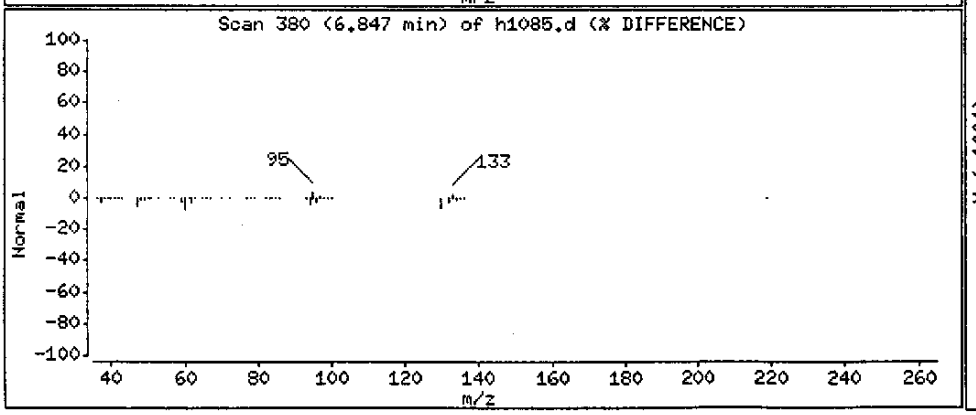
50 Trichloroethene

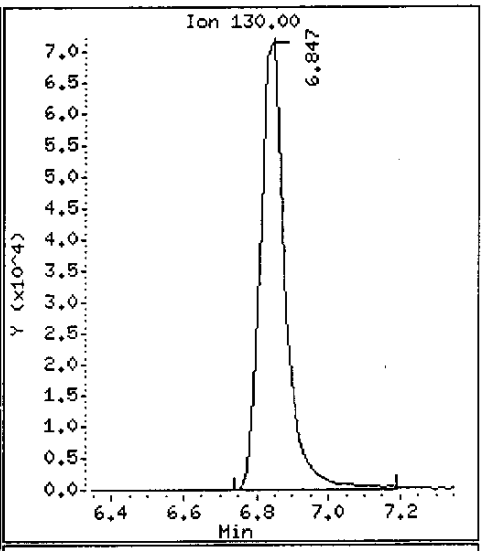
Concentration: 5.49730 ug/L

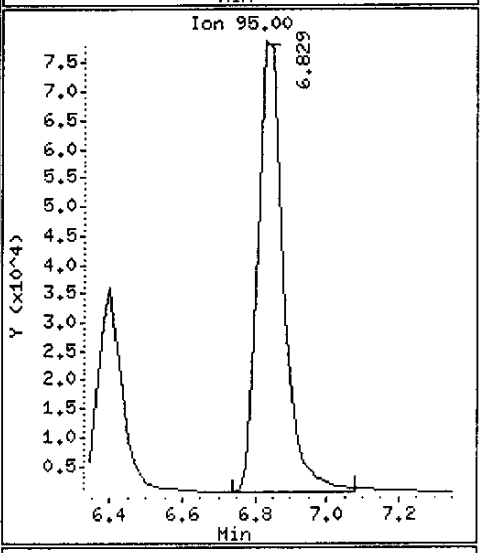


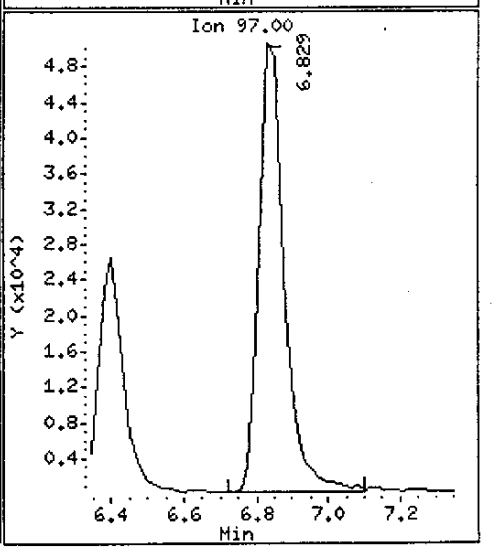












Data File: /chem/H.i/022004.b/h1085.d

Date : 20-FEB-2004 18:11

Client ID: MW-9

Instrument: H.i

Sample Info: F9KEV1AA,,D4B130209-009

Purge Volume: 20.0

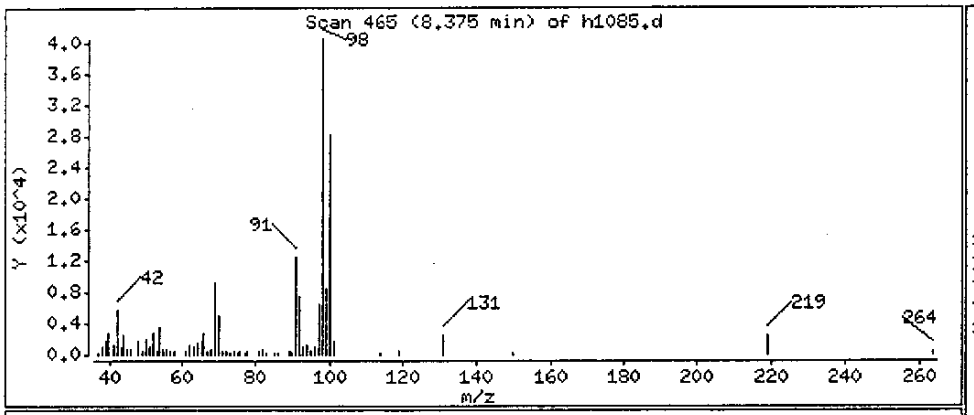
Operator: appelhansd

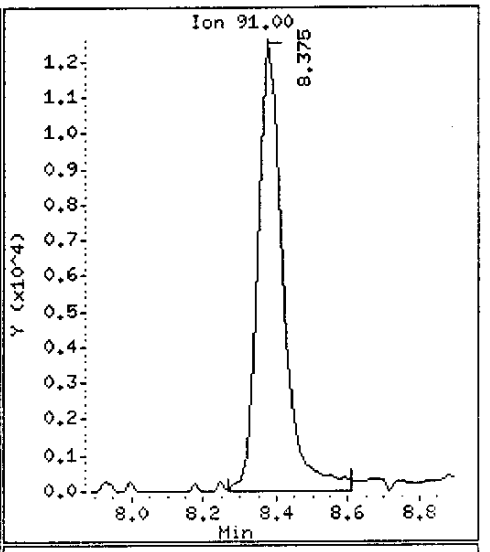
Column phase: DB624

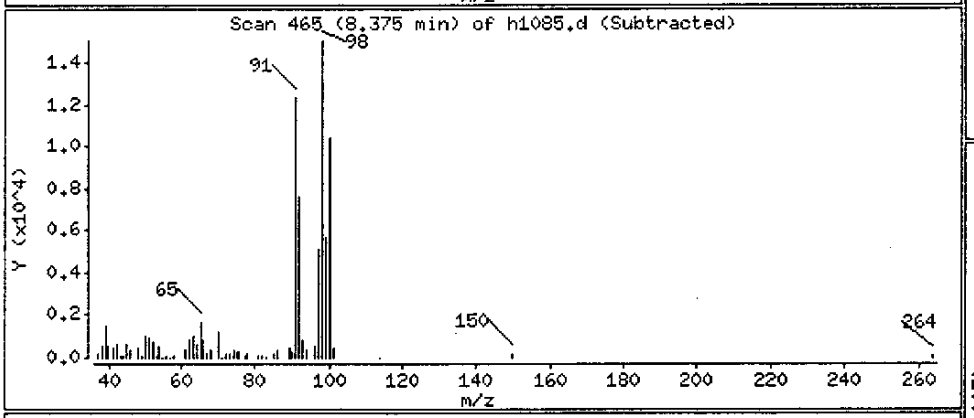
Column diameter: 0.53

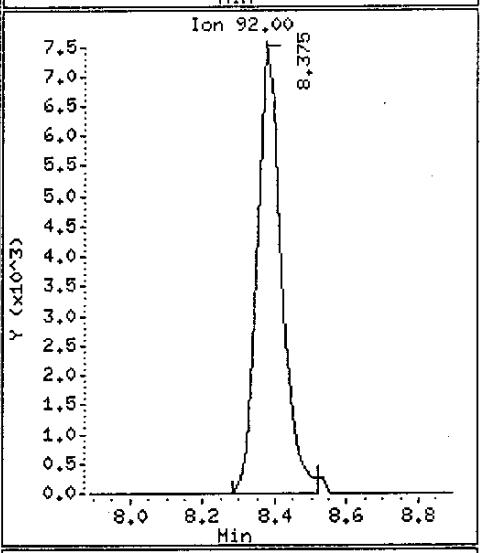
62 Toluene

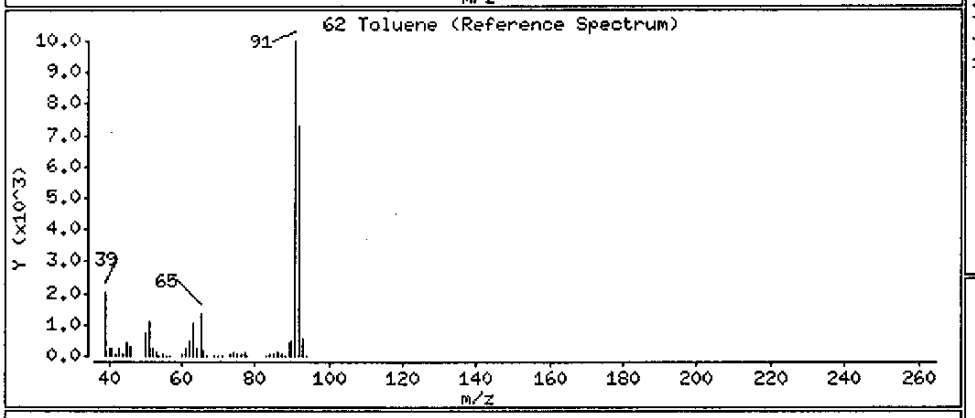
Concentration: 0.306542 ug/L

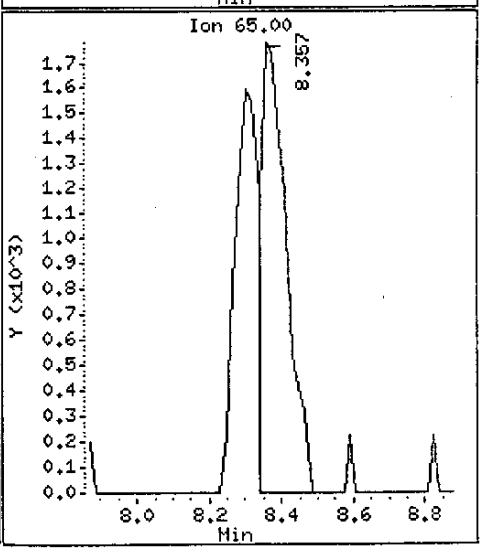


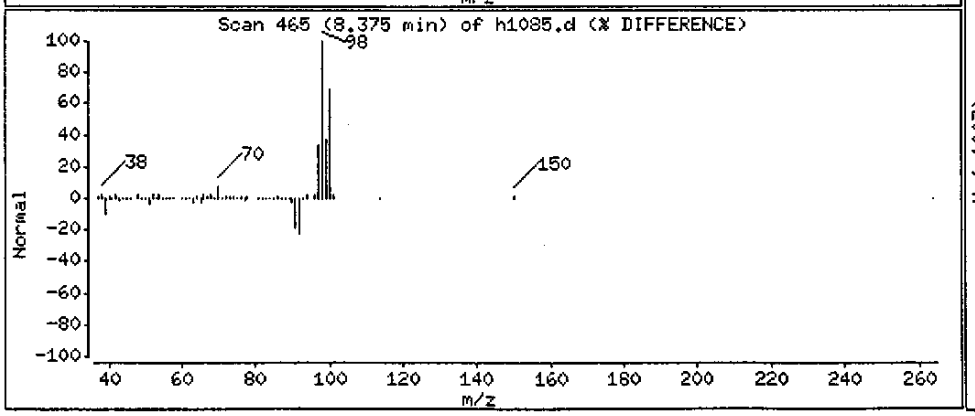












Data File: /chem/H.i/022004.b/h1085.d

Date : 20-FEB-2004 18:11

Client ID: MW-9

Instrument: H.i

Sample Info: F9KEW1AA,,D4B130209-009

Purge Volume: 20.0

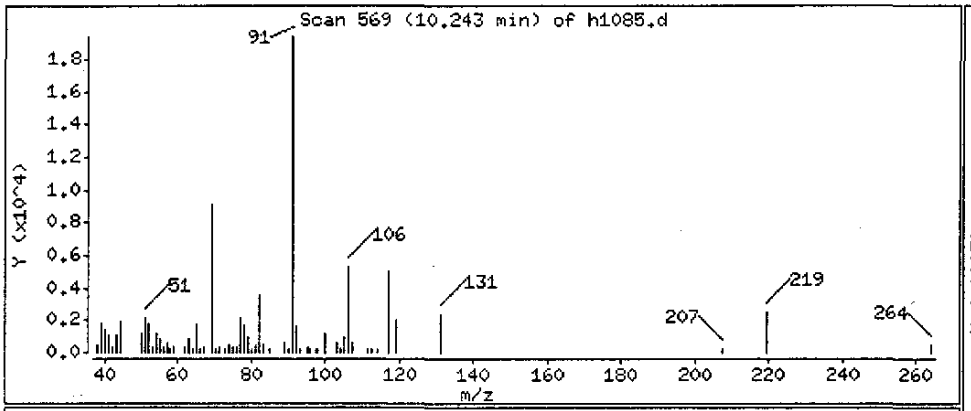
Operator: appelhansd

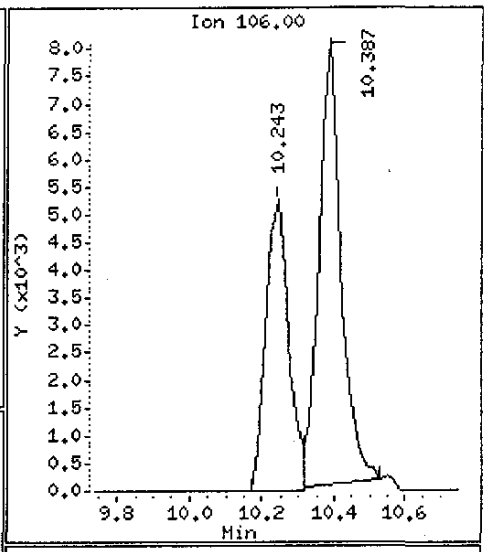
Column phase: DB624

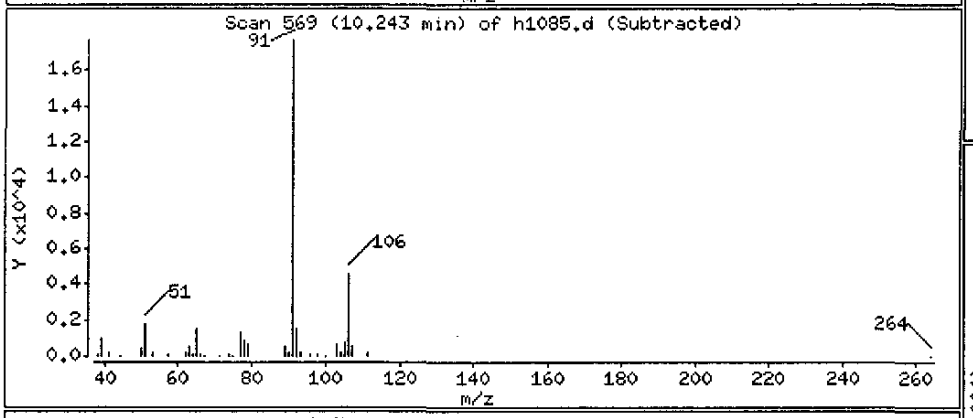
Column diameter: 0.53

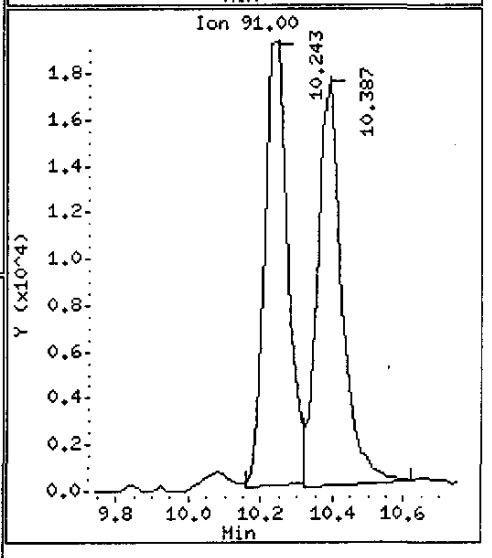
75 Ethylbenzene

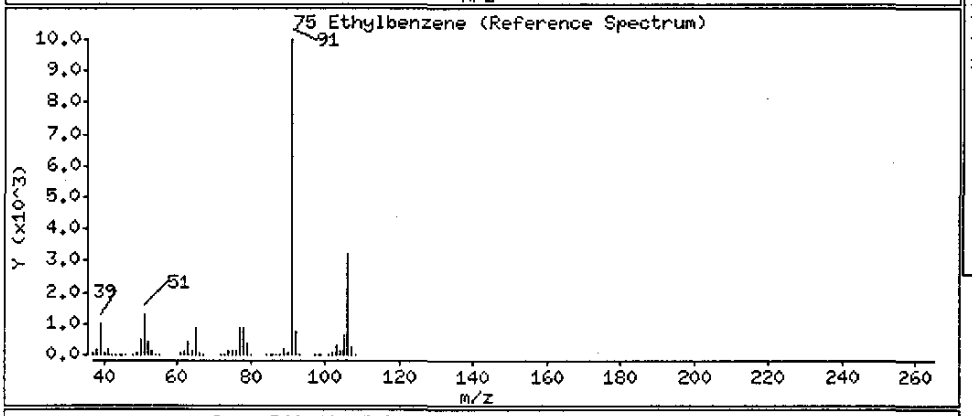
Concentration: 0.379147 ug/L

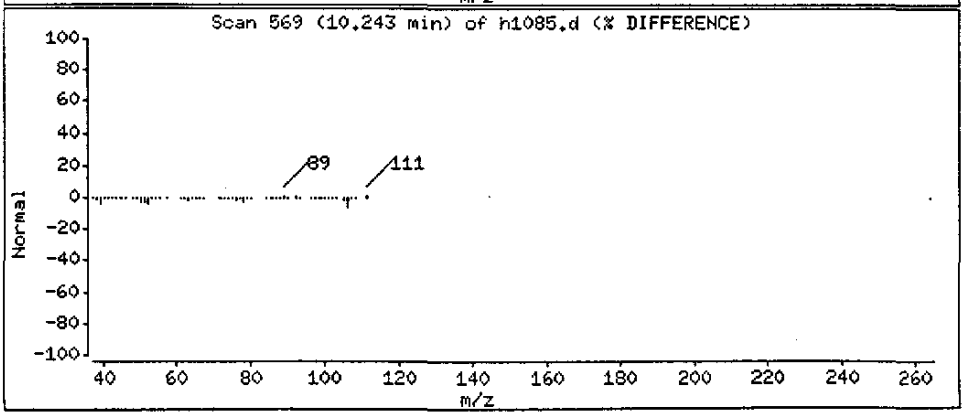












Data File: /chem/H.i/022004.b/h1085.d

Date : 20-FEB-2004 18:11

Client ID: MW-9

Instrument: H.i

Sample Info: F9KEV1AA,,D4B130209-009

Purge Volume: 20.0

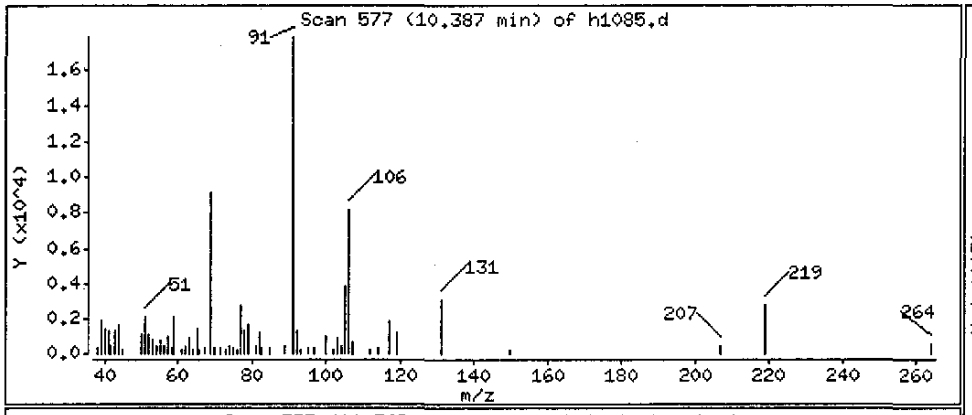
Operator: appelhansd

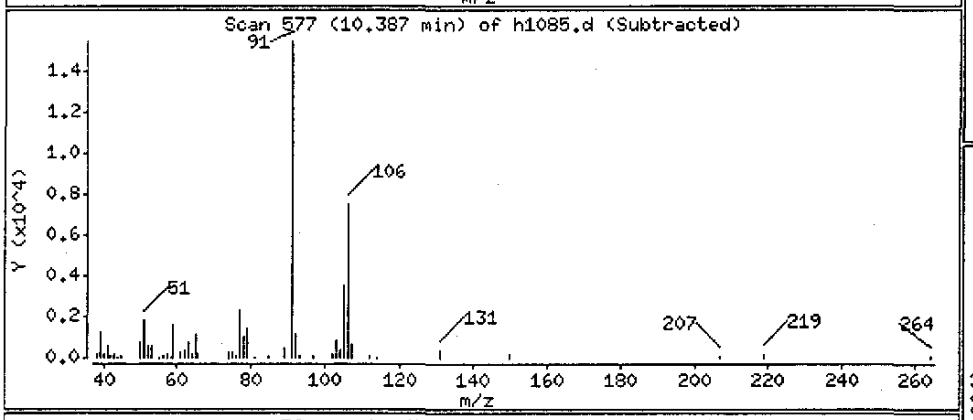
Column phase: DB624

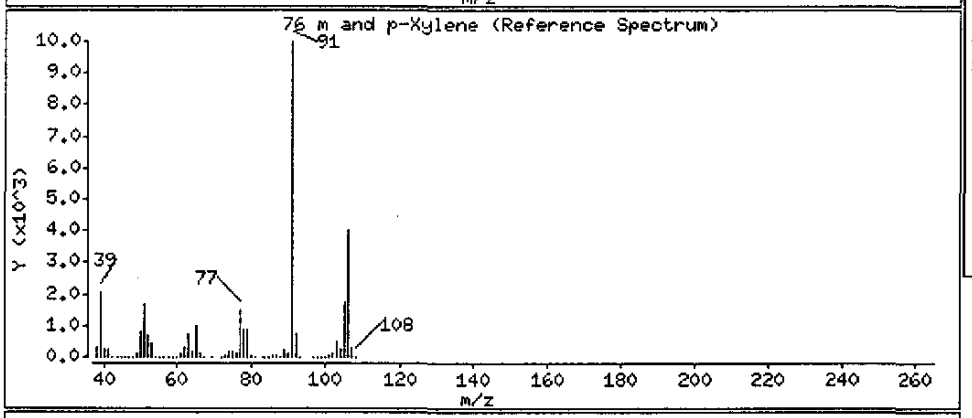
Column diameter: 0.53

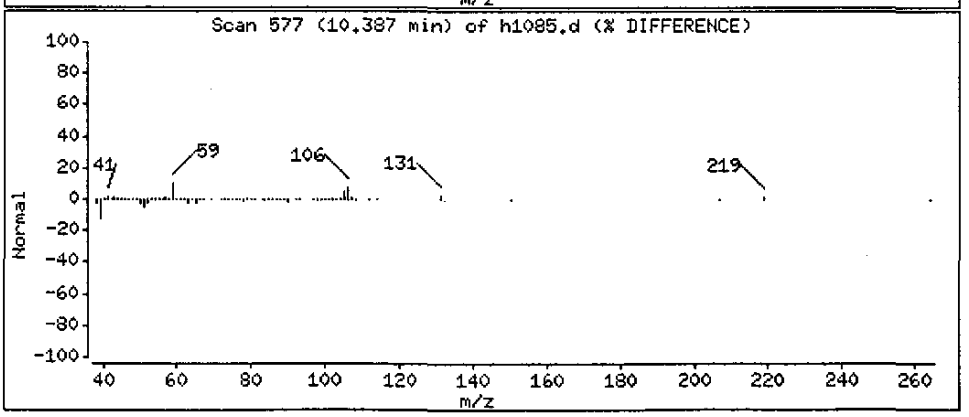
76 m and p-Xylene

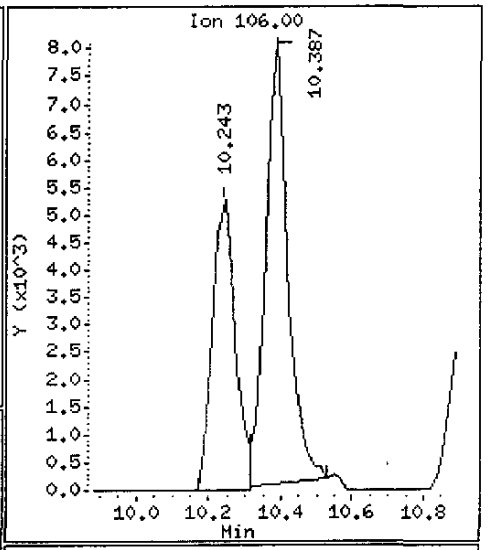
Concentration: 0.422298 ug/L

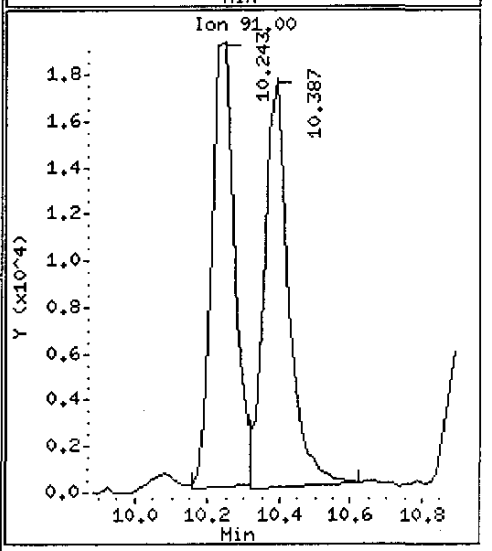












Data File: /chem/H.i/022004.b/h1085.d

Date : 20-FEB-2004 18:11

Client ID: MW-9

Instrument: H.i

Sample Info: F9KEV1AA,,D4B130209-009

Purge Volume: 20.0

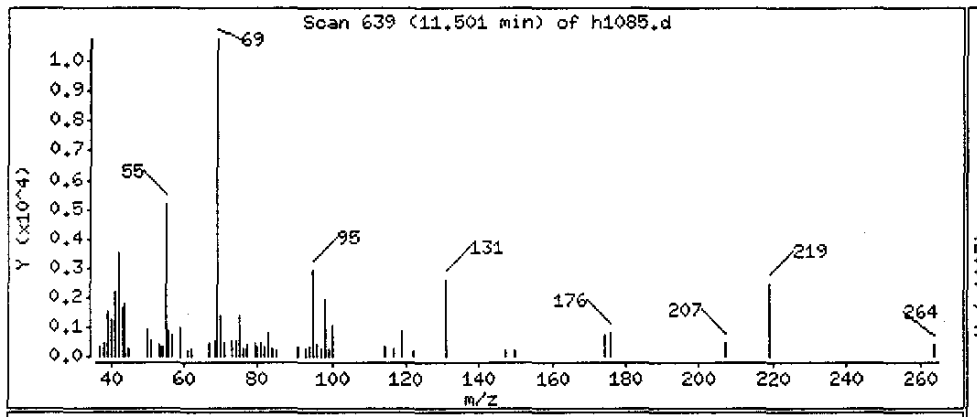
Operator: appelhansd

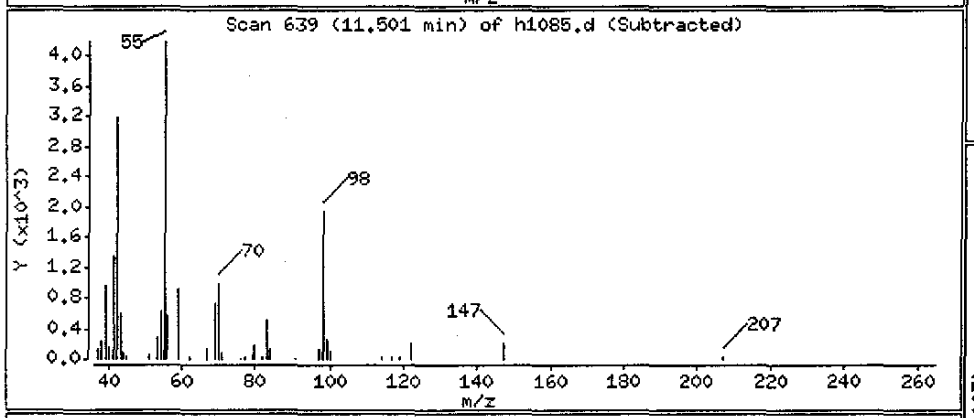
Column phase: DB624

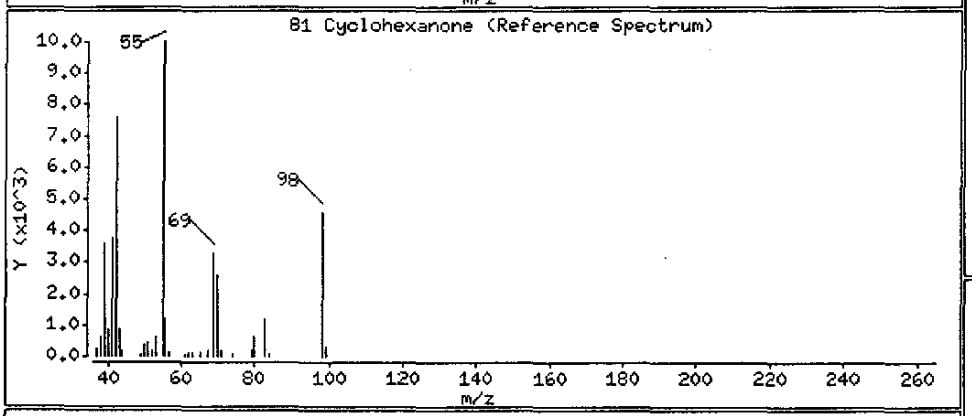
Column diameter: 0.53

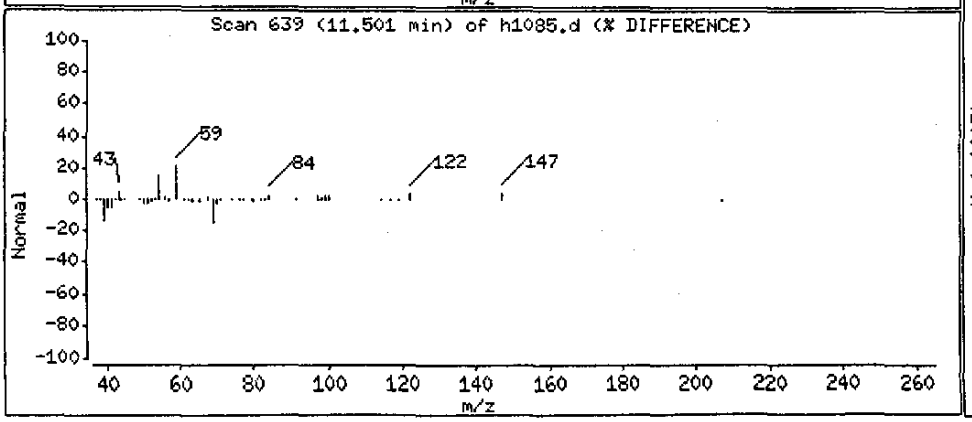
81 Cyclohexanone

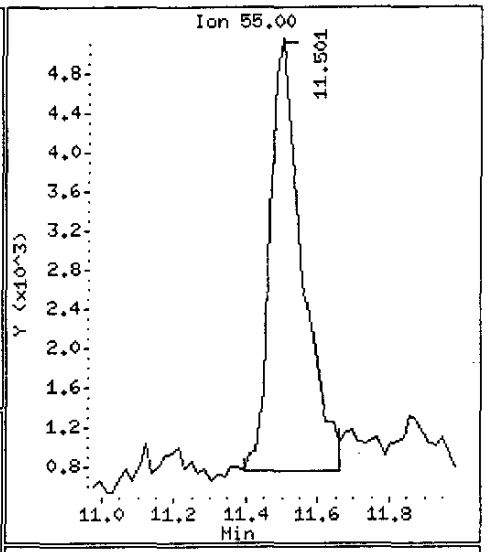
Concentration: 38.2394 ug/L

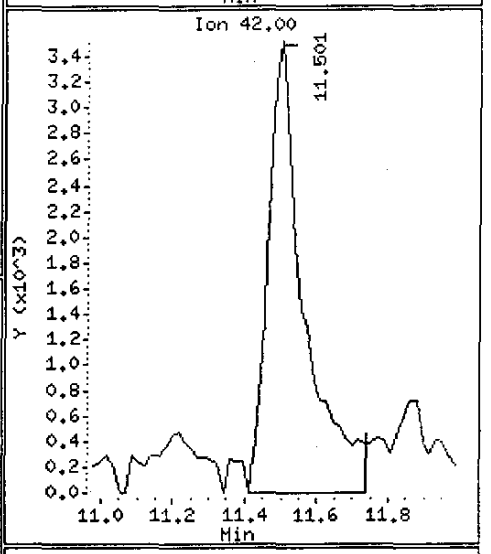


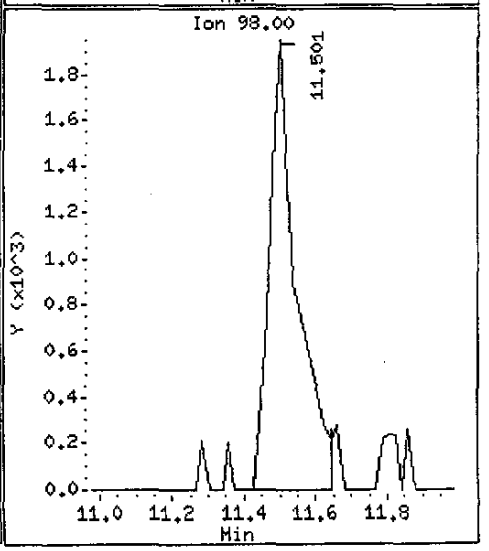












Data File: /chem/H.i/022004.b/h1085.d

Date : 20-FEB-2004 18:11

Client ID: MW-9

Instrument: H.i

Sample Info: F9KEV1AA,,D4B130209-009

Purge Volume: 20.0

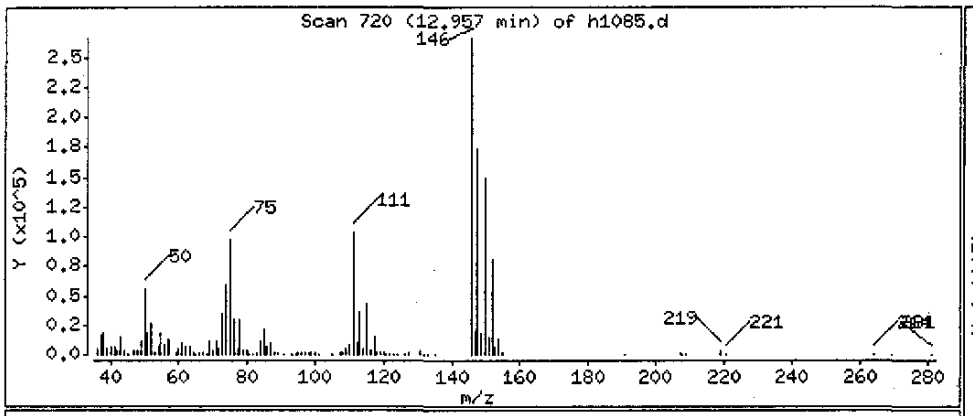
Operator: appelhansd

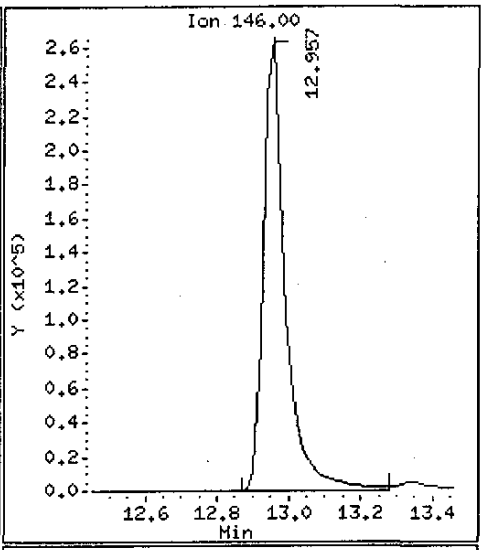
Column phase: DB624

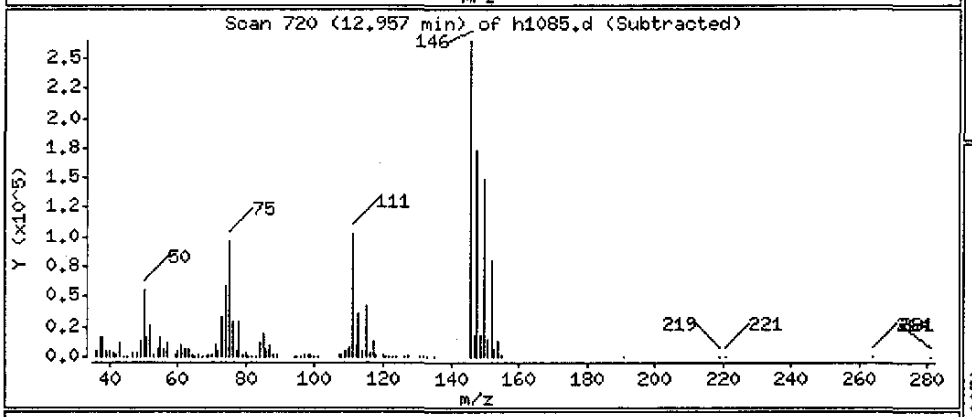
Column diameter: 0.53

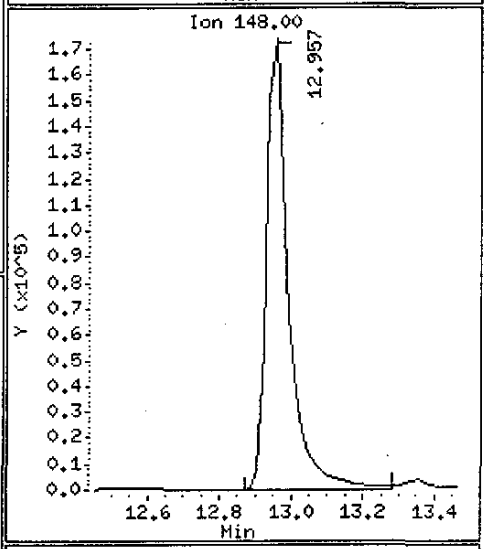
97 p-dichlorobenzene

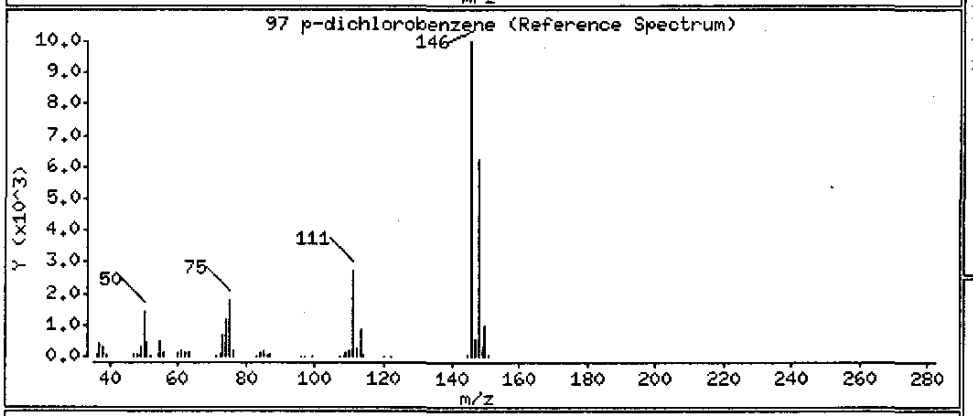
Concentration: 10.0602 ug/L

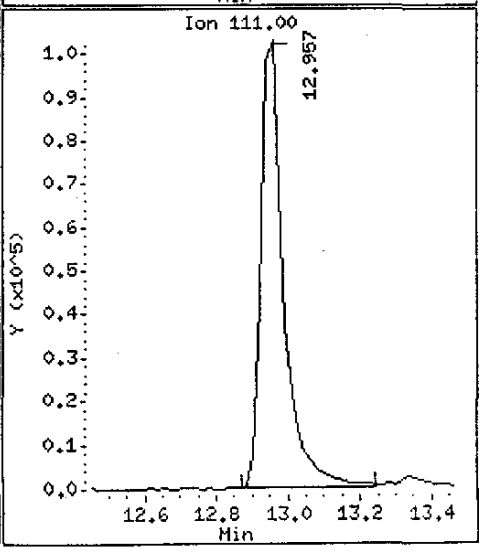


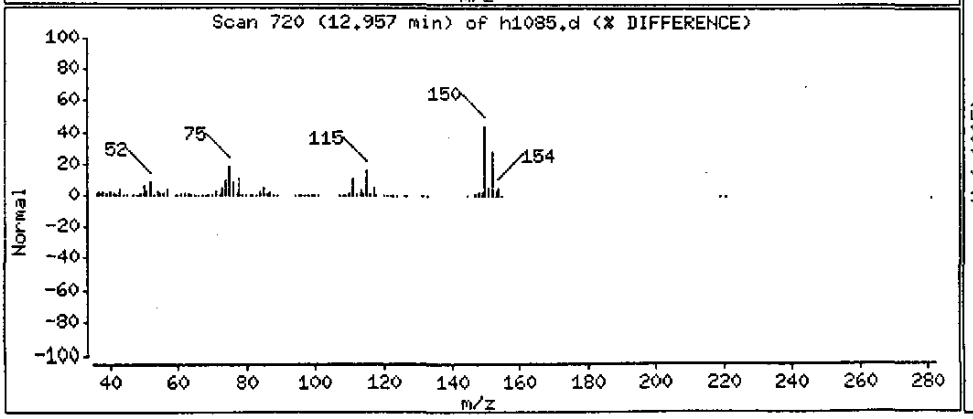












Data File: /chem/H.i/022004.b/h1085.d

Date : 20-FEB-2004 18:11

Client ID: MW-9

Instrument: H.i

Sample Info: F9KEV1AA,,D4B130209-009

Purge Volume: 20.0

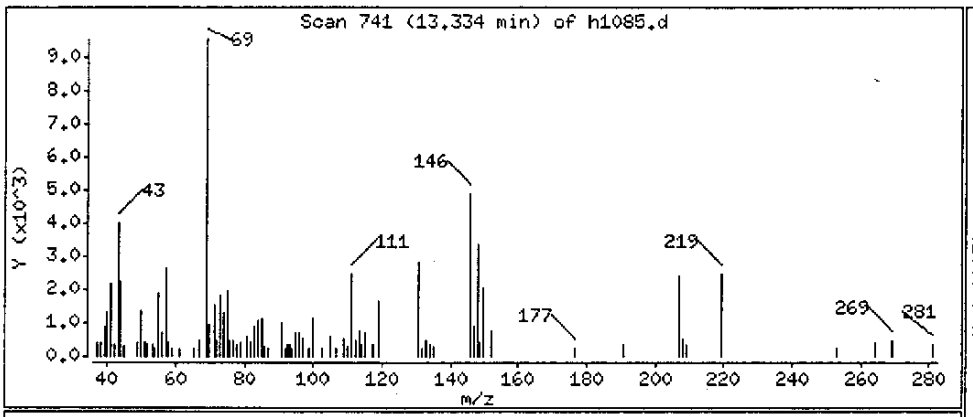
Operator: appelhansd

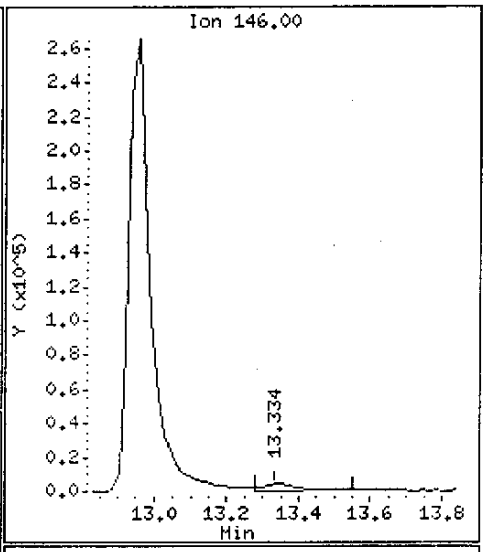
Column phase: DB624

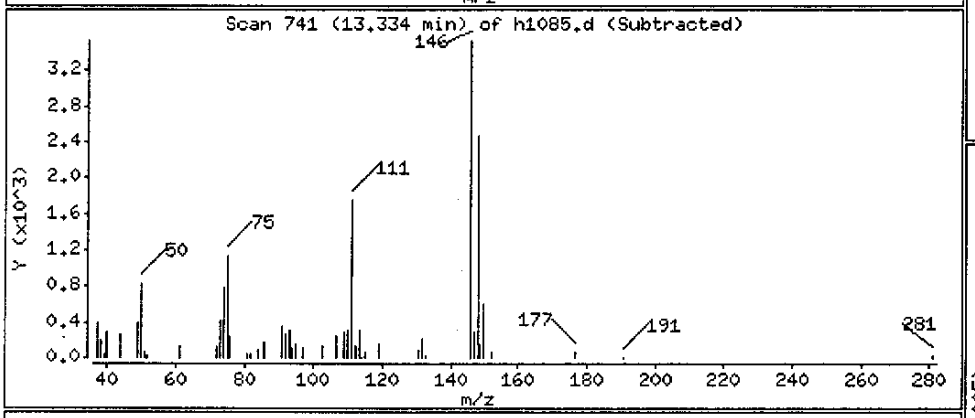
Column diameter: 0.53

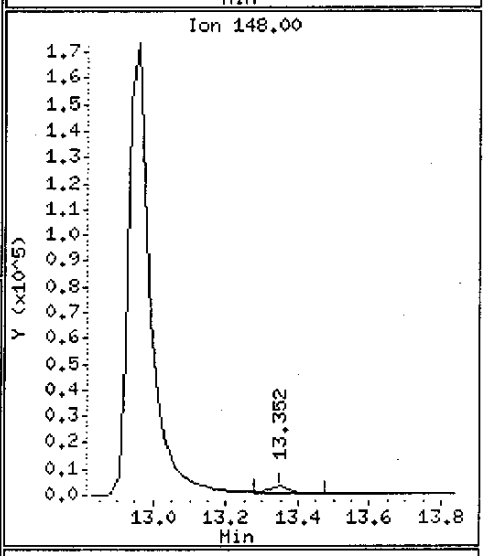
99 o-Dichlorobenzene

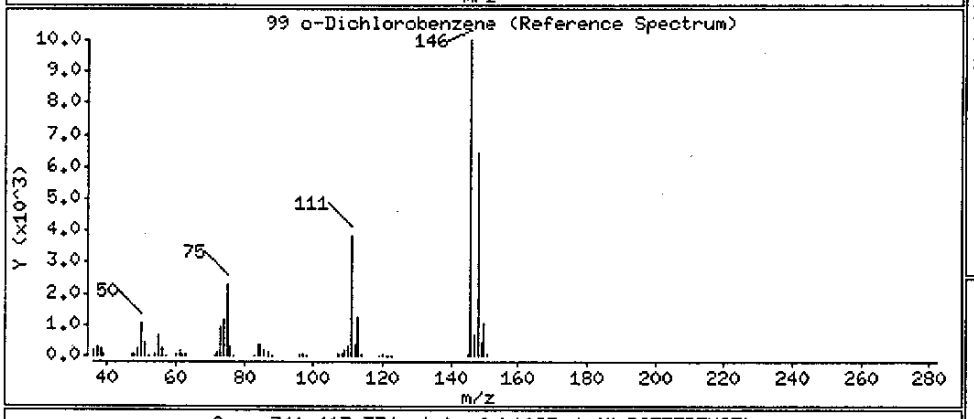
Concentration: 0.292445 ug/L

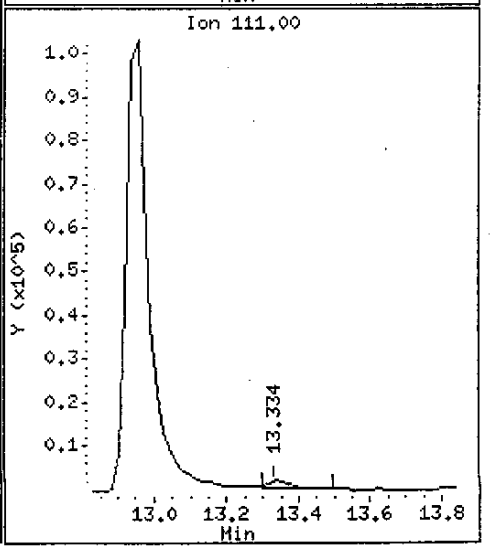


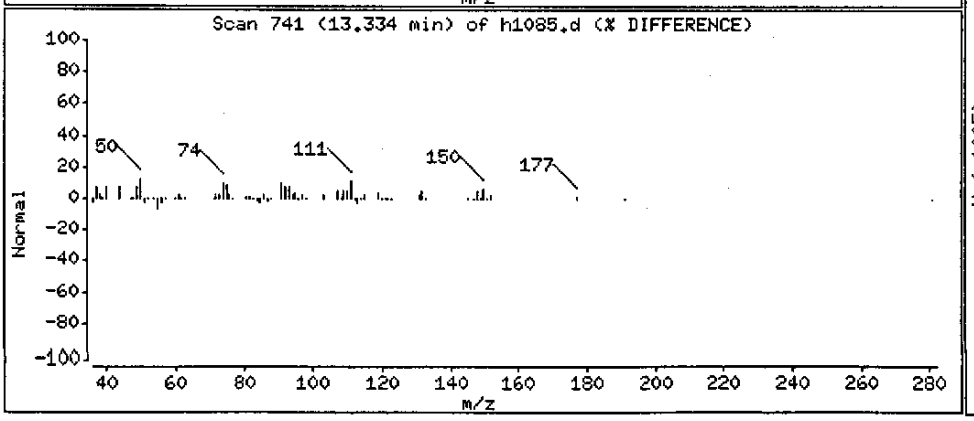












Data File: /chem/H.i/022004.b/h1086.d
Report Date: 23-Feb-2004 07:58

STL Denver

VOLATILE REPORT SW-846

Data file : /chem/H.i/022004.b/h1086.d
Lab Smp Id: F9KEX1AA Client Smp ID: MW-10
Inj Date : 20-FEB-2004 18:31
Operator : appelhansd Inst ID: H.i
Smp Info : F9KEX1AA,0.4,D4B130209-010
Misc Info :
Comment : Purge and Trap Analysis
Method : /chem/H.i/022004.b/H-20ml-h2o.m
Meth Date : 20-Feb-2004 11:09 appelhad Quant Type: ISTD
Cal Date : 07-JAN-2004 15:24 Cal File: h0014.d
Als bottle: 2
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: H-all.sub
Target Version: 3.40
Processing Host: chemsv02

Concentration Formula: Amt * DF * Vp/Vs

Name	Value	Description
DF	1.000	Dilution Factor
Vp	20.000	Purge Volume (ml)
Vs	0.400	Sample Volume (ml)

DAZ-23

T-C

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/L)
* 48 Fluorobenzene	96	6.399	6.395	(1.000)	2015239	12.5000	
* 72 Chlorobenzene-d5	119	10.064	10.060	(1.000)	377253	12.5000	
* 96 1,4-Dichlorobenzene-d4	152	12.921	12.917	(1.000)	709598	12.5000	
$ 40 Dibromofluoromethane	111	5.608	5.586	(0.876)	815313	10.2848	514.242
$ 44 1,2-Dichloroethane-d4	65	6.003	5.981	(0.938)	340073	9.62450	481.225
$ 61 Toluene-d8	98	8.303	8.281	(0.825)	1478795	10.2543	512.717
$ 82 Bromofluorobenzene	95	11.574	11.552	(1.150)	857272	10.8406	542.028
M 1 1,2-Dichloroethene (total)	96				895993	14.8280	741.398
M 2 Xylene (total)	106				1270697	15.7958	789.789
3 dichlorodifluoromethane	85.00	Compound Not Detected.					
4 Chloromethane	50.00	Compound Not Detected.					
5 Vinyl Chloride	62	2.158	2.136	(0.337)	62146	1.38581	69.2907
6 Ethylene Oxide	43.00	Compound Not Detected.					
117 Dichlorotetrafluoroethane	85.00	Compound Not Detected.					
123 1,2-dichloro-1,1,2-triflourom	117.00	Compound Not Detected.					
124 2,2-dichloro-1,1,1-trifluorom	83.00	Compound Not Detected.					

Data File: /chem/H.i/022004.b/h1086.d
Report Date: 23-Feb-2004 07:58

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/L)
7 Bromomethane	94.00	Compound Not Detected.					
8 Chloroethane	64.00	Compound Not Detected.					
9 Dichlorofluoromethane	67.00	Compound Not Detected.					
10 Trichlorofluoromethane	101.00	Compound Not Detected.					
11 Ethanol	45.00	Compound Not Detected.					
12 Ethyl Ether	59.00	Compound Not Detected.					
13 Acrolein	56.00	Compound Not Detected.					
15 Acetone	43	3.200	3.196	(0.500)	365675	99.1029	4955.15
14 1,1-Dichloroethene	96.00	Compound Not Detected.					
16 Trichlorotrifluoroethane	151.00	Compound Not Detected.					
17 Iodomethane	142.00	Compound Not Detected.					
19 Acetonitrile	41.00	Compound Not Detected.					
18 Carbon Disulfide	76.00	Compound Not Detected.					
20 Allyl Chloride	41.00	Compound Not Detected.					
119 Methyl Acetate	43.00	Compound Not Detected.					
21 Methylene Chloride	84	3.631	3.627	(0.568)	23838	0.47512	23.7562
125 2-Propanol	45	3.326	3.304	(0.520)	65644	76.1631	3808.15
22 tert-Butyl alcohol	59.00	Compound Not Detected.					
23 Acrylonitrile	53.00	Compound Not Detected.					
24 trans-1,2-Dichloroethene	96.00	Compound Not Detected.					
25 Methyl t-butyl ether	73.00	Compound Not Detected.					
26 Hexane	57.00	Compound Not Detected.					
27 1,1-Dichloroethane	63	4.368	4.364	(0.683)	432630	4.21554	210.777
29 Vinyl acetate	43.00	Compound Not Detected.					
30 Isopropyl ether	87.00	Compound Not Detected.					
28 Chloroprene	53.00	Compound Not Detected.					
120 ETBE	59.00	Compound Not Detected.					
33 2-Butanone	43	5.051	5.047	(0.789)	96384	12.9382	646.908
32 cis-1,2-Dichloroethene	96	5.033	5.029	(0.787)	895993	14.8280	741.398
31 2,2-Dichloropropane	77.00	Compound Not Detected.					
35 Ethyl Acetate	43.00	Compound Not Detected.					
34 Propionitrile	54.00	Compound Not Detected.					
36 Methacrylonitrile	41.00	Compound Not Detected.					
37 Bromochloromethane	128.00	Compound Not Detected.					
39 Tetrahydrofuran	42.00	Compound Not Detected.					
38 Chloroform	83.00	Compound Not Detected.					
41 1,1,1-Trichloroethane	97.00	Compound Not Detected.					
114 Cyclohexane	56.00	Compound Not Detected.					
42 1,1-Dichloropropene	75.00	Compound Not Detected.					
43 Carbon Tetrachloride	117.00	Compound Not Detected.					
45 Isobutanol	41.00	Compound Not Detected.					
46 Benzene	78	6.075	6.071	(0.949)	243633	1.41207	70.6036
47 1,2-Dichloroethane	62.00	Compound Not Detected.					
121 TAME	73.00	Compound Not Detected.					
49 n-Butanol	56.00	Compound Not Detected.					
50 Trichloroethene	130	6.848	6.844	(1.070)	31430	0.48036	24.0180
115 2-Pentanone	43.00	Compound Not Detected.					

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/L)
52 1,2-Dichloropropane	63.00	Compound Not Detected.					
122 Methyl Cyclohexane	55	7.082	7.059	(1.107)	16982	0.20243	10.1217(a)
53 Dibromomethane	93.00	Compound Not Detected.					
54 Methyl Methacrylate	100.00	Compound Not Detected.					
55 1,4-Dioxane	88.00	Compound Not Detected.					
56 Bromodichloromethane	83.00	Compound Not Detected.					
57 2-nitropropane	41.00	Compound Not Detected.					
113 2-Chloroethyl vinyl ether	63.00	Compound Not Detected.					
59 cis-1,3-Dichloropropene	75.00	Compound Not Detected.					
60 4-Methyl-2-pentanone	43	8.160	8.155	(0.811)	62075	3.18252	159.126
62 Toluene	91	8.375	8.389	(0.832)	2796270	14.0513	702.566
63 trans-1,3-Dichloropropene	75.00	Compound Not Detected.					
64 Ethyl methacrylate	69.00	Compound Not Detected.					
65 1,1,2-Trichloroethane	97.00	Compound Not Detected.					
67 1,3-Dichloropropane	76.00	Compound Not Detected.					
66 Tetrachloroethene	164.00	Compound Not Detected.					
68 2-Hexanone	43.00	Compound Not Detected.					
126 Tetrahydrothiophene	60.00	Compound Not Detected.					
69 Dibromochloromethane	129.00	Compound Not Detected.					
70 1,2-Dibromoethane	107.00	Compound Not Detected.					
71 1-Chlorohexane	91.00	Compound Not Detected.					
73 Chlorobenzene	112	10.100	10.096	(1.004)	55703	0.46349	23.1747
74 1,1,1,2-Tetrachloroethane	131.00	Compound Not Detected.					
75 Ethylbenzene	106	10.244	10.240	(1.018)	203797	3.30616	165.308
76 m and p-Xylene	106	10.388	10.383	(1.032)	902280	10.8409	542.044
77 o-Xylene	106	10.891	10.887	(1.082)	368417	4.95490	247.745
78 Styrene	104.00	Compound Not Detected.					
79 Bromoform	173.00	Compound Not Detected.					
80 isopropyl benzene	105	11.376	11.372	(1.130)	60034	0.24496	12.2482
116 cis-1,4-Dichloro-2-butene	53.00	Compound Not Detected.					
81 Cyclohexanone	55.00	Compound Not Detected.					
83 1,1,2,2-Tetrachloroethane	83.00	Compound Not Detected.					
84 Bromobenzene	156.00	Compound Not Detected.					
85 1,2,3-Trichloropropane	110.00	Compound Not Detected.					
86 t-1,4-Dichloro-2-butene	53.00	Compound Not Detected.					
87 n-Propylbenzene	120	11.897	11.893	(0.921)	14754	0.24006	12.0032
88 2-Chlorotoluene	126.00	Compound Not Detected.					
89 1,3,5-Trimethylbenzene	105	12.095	12.091	(0.936)	143609	0.69419	34.7094
90 4-Chlorotoluene	126.00	Compound Not Detected.					
91 tert-Butylbenzene	119.00	Compound Not Detected.					
92 1,2,4-Trimethylbenzene	105	12.544	12.540	(0.971)	289137	1.49780	74.8899
93 sec-Butylbenzene	134.00	Compound Not Detected.					
94 m-Dichlorobenzene	146.00	Compound Not Detected.					
95 4-Isopropyltoluene	119.00	Compound Not Detected.					
97 p-dichlorobenzene	146.00	Compound Not Detected.					
118 1,2,3-Trimethylbenzene	105	13.011	12.989	(2.033)	149857	1.10445	55.2225(a)
98 n-Butylbenzene	91.00	Compound Not Detected.					

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/L)
99 o-Dichlorobenzene	146	13.353	13.330	(1.033)	32461	0.35501	17.7504
100 1,2-Dibromo-3-chloropropane	157.00	Compound Not Detected.					
101 1,2,4-Trichlorobenzene	180.00	Compound Not Detected.					
102 Hexachlorobutadiene	225.00	Compound Not Detected.					
127 Naphthalene	128	15.132	15.127	(1.171)	51322	0.77313	38.6565(a)
104 1,2,3-Trichlorobenzene	180.00	Compound Not Detected.					

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

Data File: /chem/H.i/022004.b/h1086.d
Report Date: 23-Feb-2004 07:58

STL Denver

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: H.i
Lab File ID: h1086.d
Lab Smp Id: F9KEX1AA
Analysis Type: VOA
Quant Type: ISTD
Operator: appelhansd
Method File: /chem/H.i/022004.b/H-20ml-h2o.m
Misc Info:

Calibration Date: 02/20/4
Calibration Time: 1059
Client Smp ID: MW-10
Level: LOW
Sample Type: WATER

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
48 Fluorobenzene	2466684	1233342	4933368	2015239	-18.30
72 Chlorobenzene-d5	459303	229652	918606	377253	-17.86
96 1,4-Dichlorobenze	730993	365496	1461986	709598	-2.93

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
48 Fluorobenzene	6.39	5.89	6.89	6.40	0.06
72 Chlorobenzene-d5	10.06	9.56	10.56	10.06	0.04
96 1,4-Dichlorobenze	12.92	12.42	13.42	12.92	0.03

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem/H.i/022004.b/h1086.d Page 6
Report Date: 23-Feb-2004 07:58

STL Denver

RECOVERY REPORT

Client Name: ARCADIS GERAGHTY & M13-FEB-2004 Client SDG: D4B130209
Sample Matrix: LIQUID Fraction: VOA
Lab Smp Id: F9KEX1AA Client Smp ID: MW-10
Level: LOW Operator: appelhansd
Data Type: MS DATA SampleType: SAMPLE
SpikeList File: dcs-h20.spk Quant Type: ISTD
Sublist File: H-all.sub
Method File: /chem/H.i/022004.b/H-20ml-h2o.m
Misc Info:

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 40 Dibromofluorometha	575.000	514.242	89.43	76-116
$ 44 1,2-Dichloroethane	575.000	481.225	83.69	59-129
$ 61 Toluene-d8	575.000	512.717	89.17	76-116
$ 82 Bromofluorobenzene	575.000	542.028	94.27	74-114

Data File: /chem/H.i/022004.b/h1086.d
Date : 20-FEB-2004 18:31
Client ID: MW-10
Sample Info: F9KEX1AA,0.4,D4B130209-010
Purge Volume: 20.0
Column phase: DB624

Instrument: H.i
Operator: appelhansd
Column diameter: 0.53

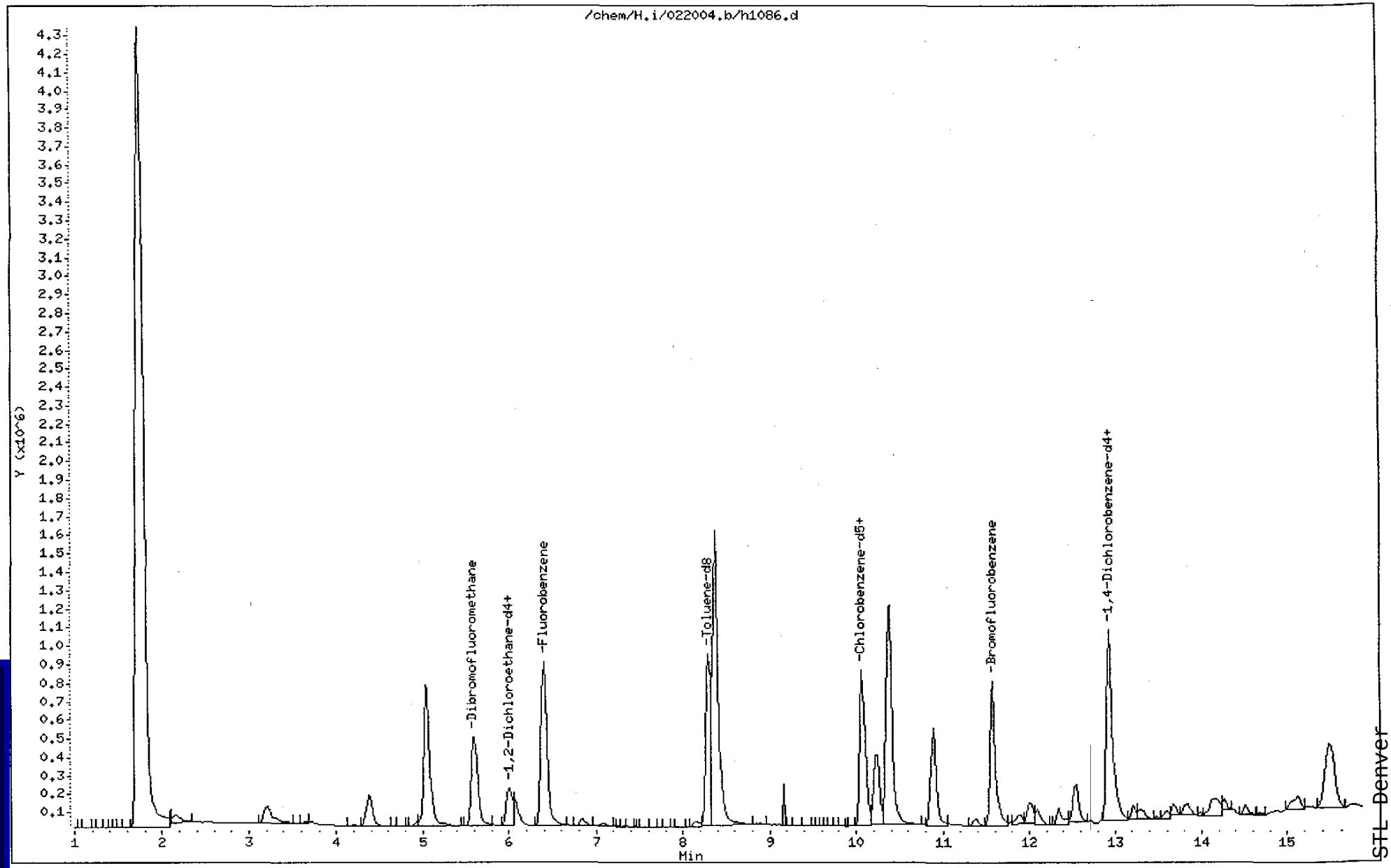


Table of Contents

Data File: /chem/H.i/022004.b/h1086.d

Date : 20-FEB-2004 18:31

Client ID: MW-10

Instrument: H.i

Sample Info: F9KEX1AA,0.4,D4B130209-010

Purge Volume: 20.0

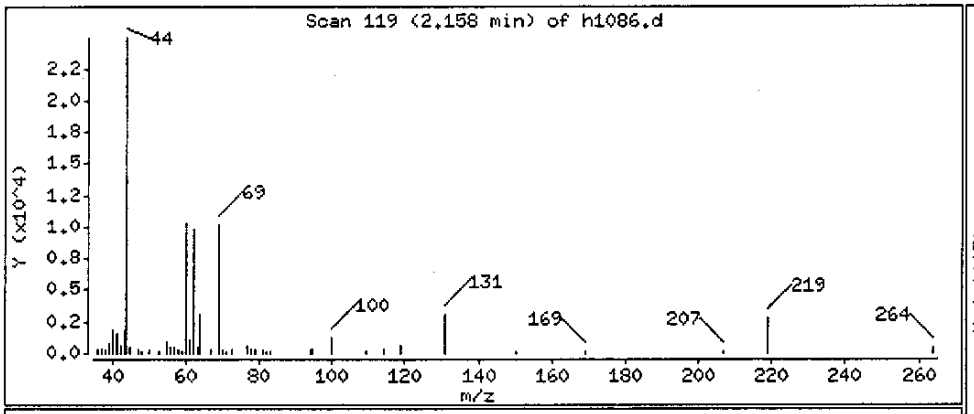
Operator: appelhansd

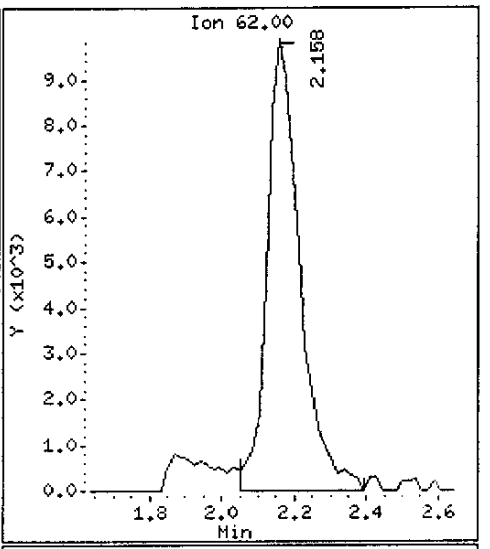
Column phase: DB624

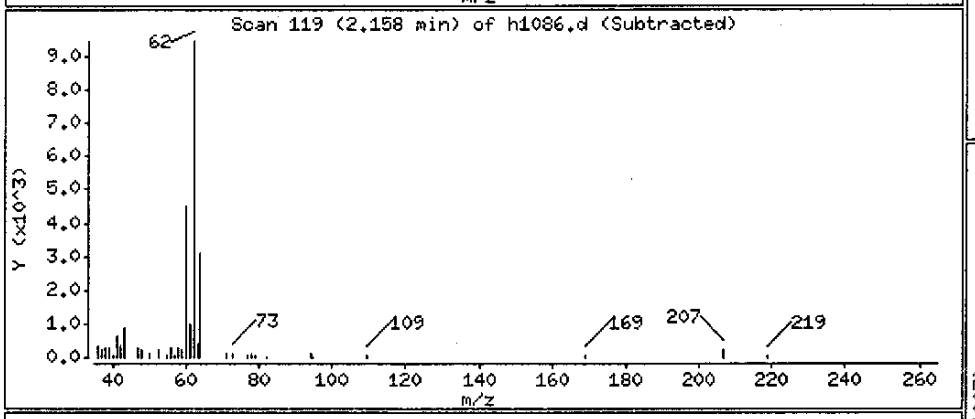
Column diameter: 0.53

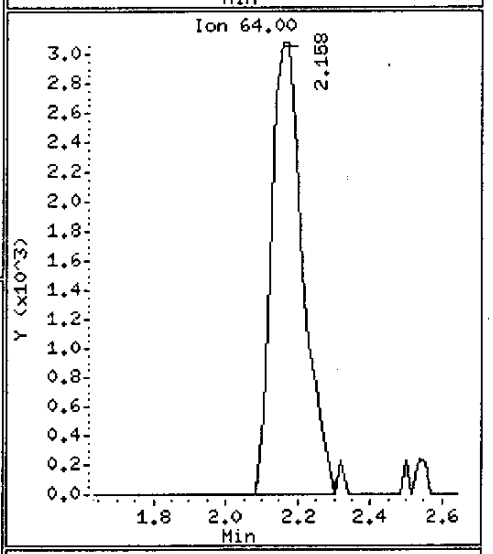
5 Vinyl Chloride

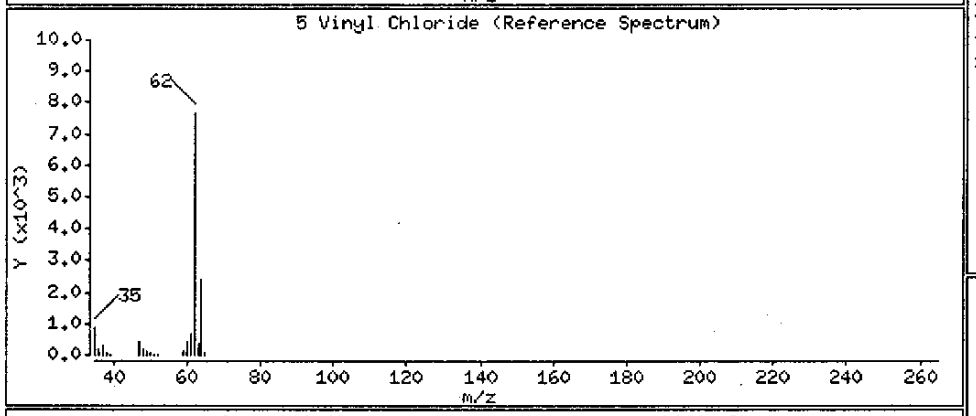
Concentration: 69.2907 ug/L

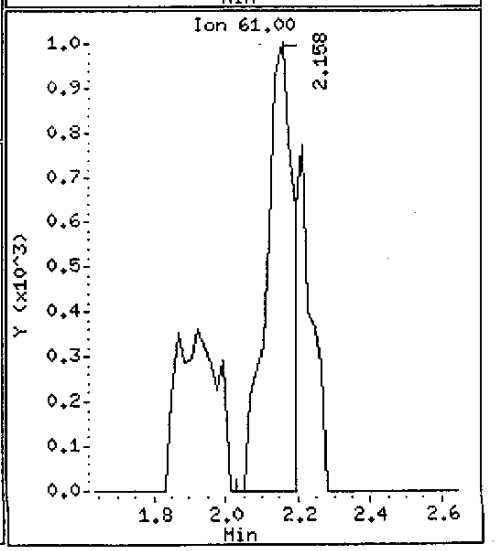


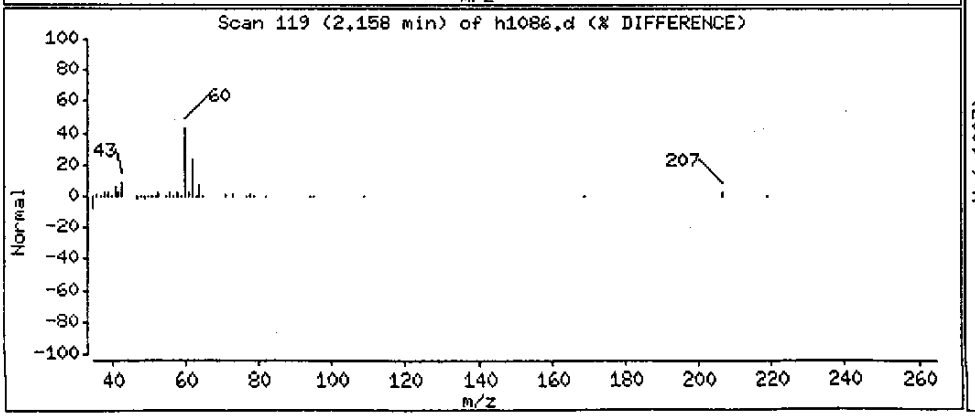












Data File: /chem/H.i/022004.b/h1086.d

Date : 20-FEB-2004 18:31

Client ID: MW-10

Instrument: H.i

Sample Info: F9KEX1AA,0.4,D4B130209-010

Purge Volume: 20.0

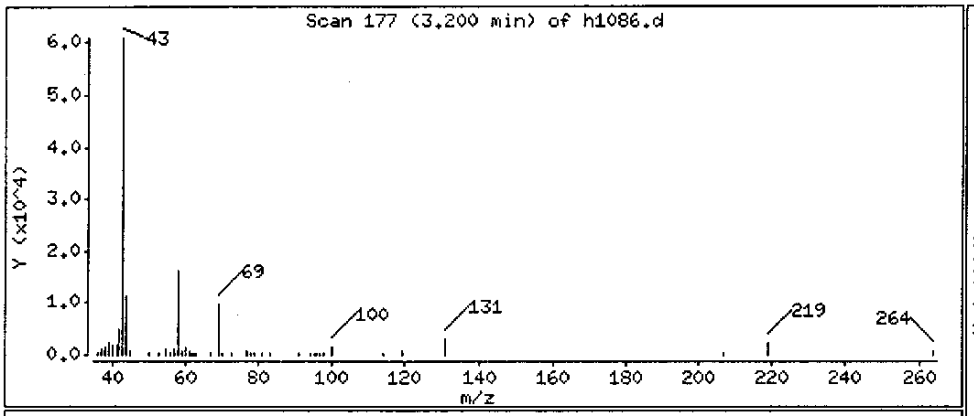
Operator: appelhansd

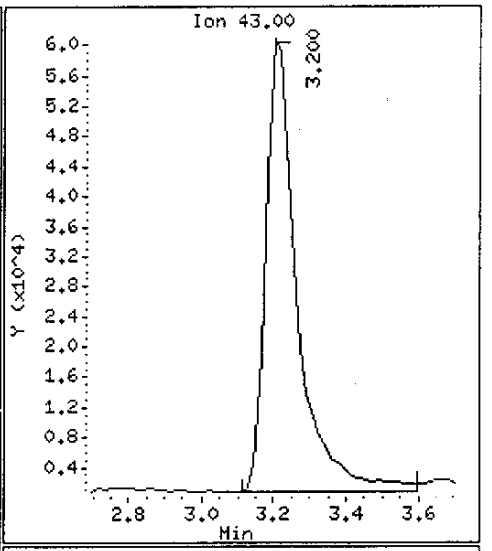
Column phase: DB624

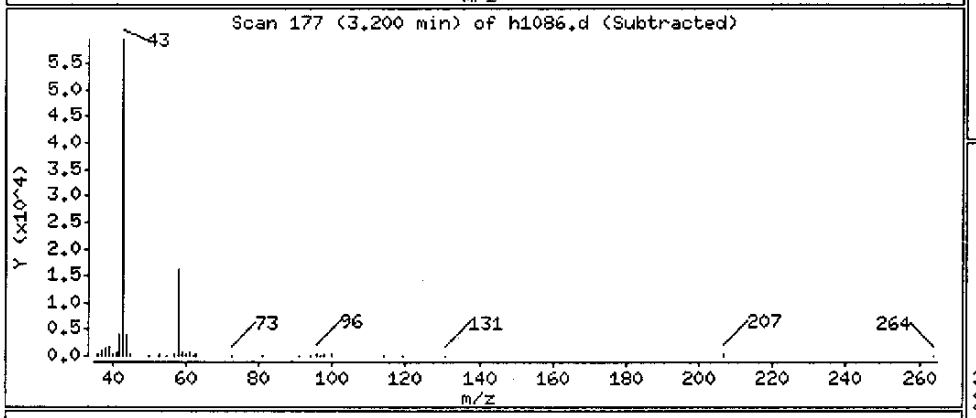
Column diameter: 0.53

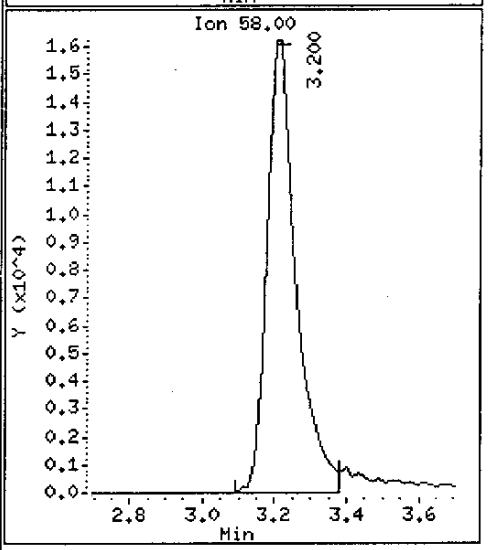
15 Acetone

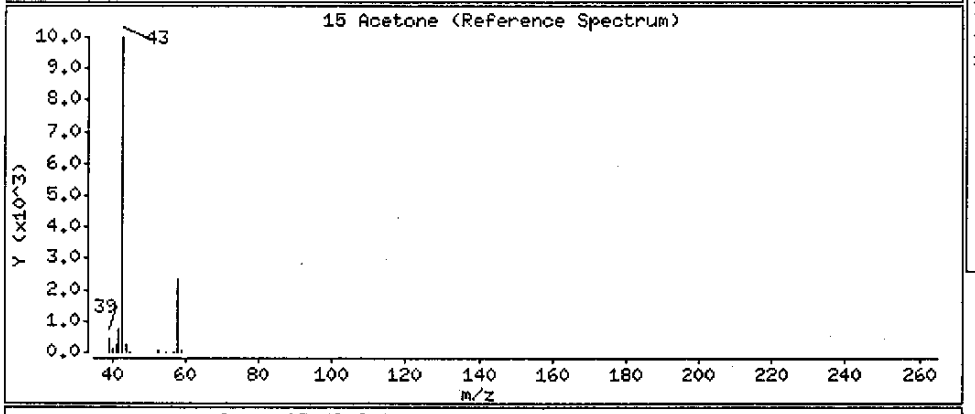
Concentration: 4955.15 ug/L

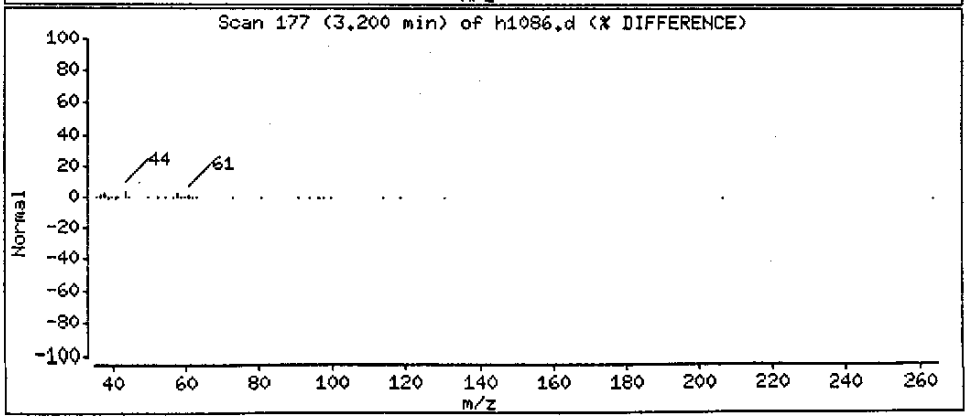












Data File: /chem/H.i/022004.b/h1086.d

Date : 20-FEB-2004 18:31

Client ID: MW-10

Instrument: H.i

Sample Info: F9KEX1AA,0.4,D4B130209-010

Purge Volume: 20.0

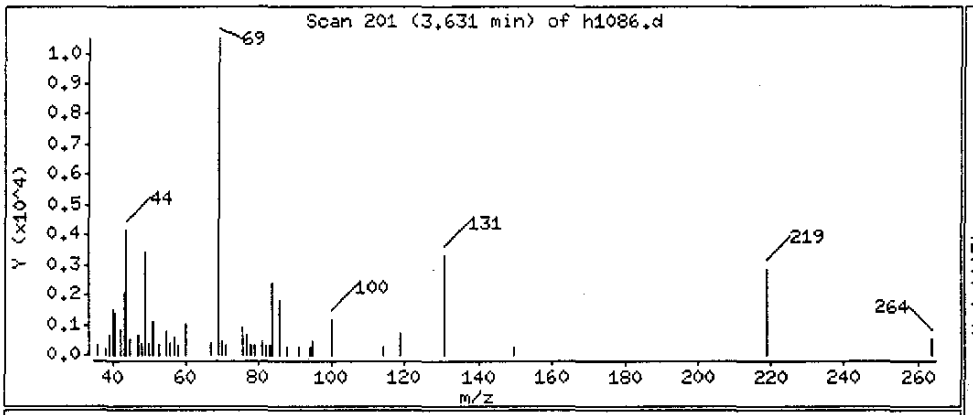
Operator: appelhansd

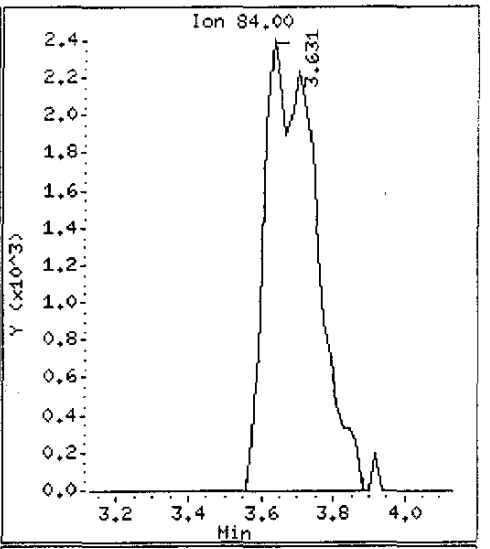
Column phase: DB624

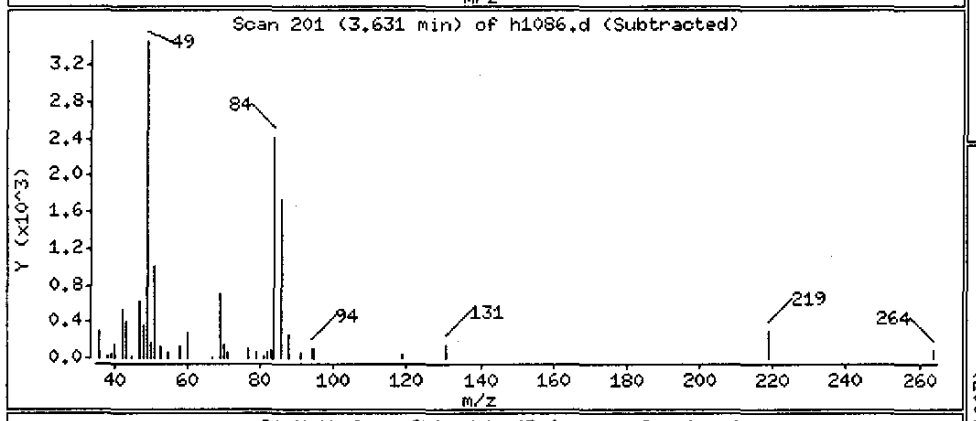
Column diameter: 0.53

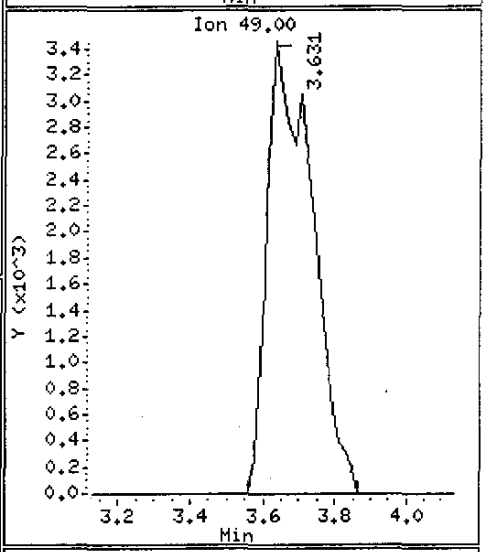
21 Methylene Chloride

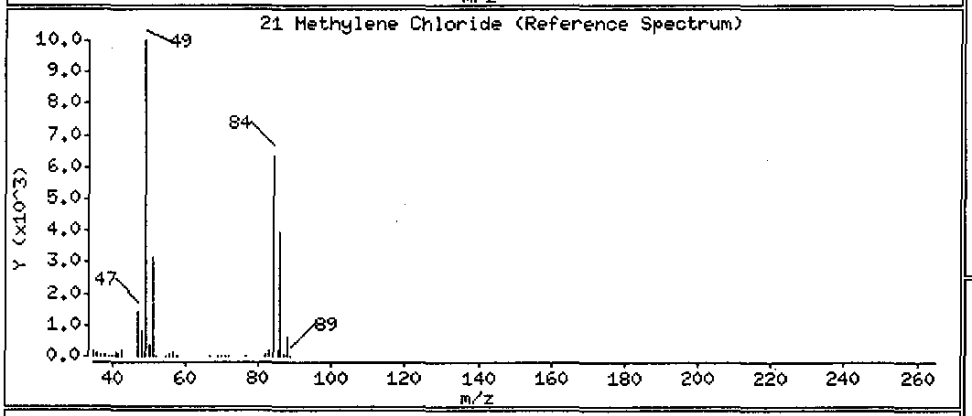
Concentration: 23.7562 ug/L

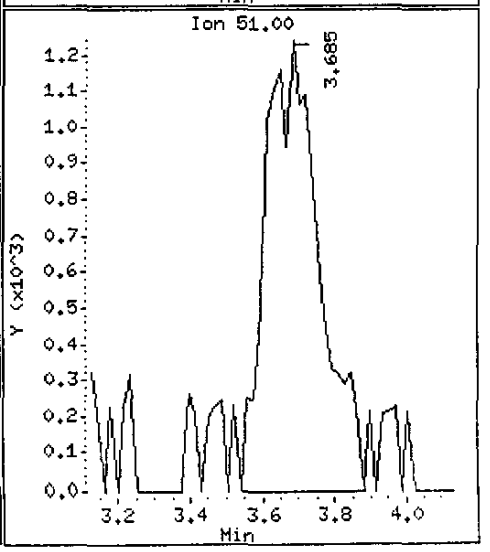


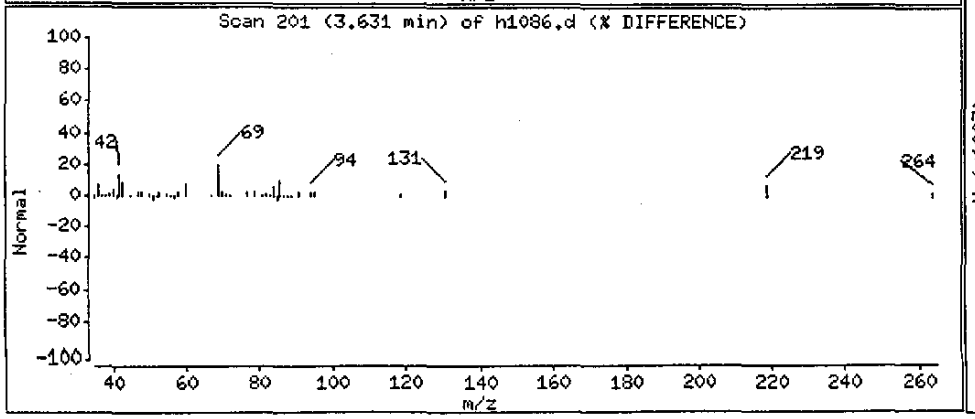












Data File: /chem/H.i/022004.b/h1086.d

Date : 20-FEB-2004 18:31

Client ID: MW-10

Instrument: H.i

Sample Info: F9KEX1AA,0.4,D4B130209-010

Purge Volume: 20.0

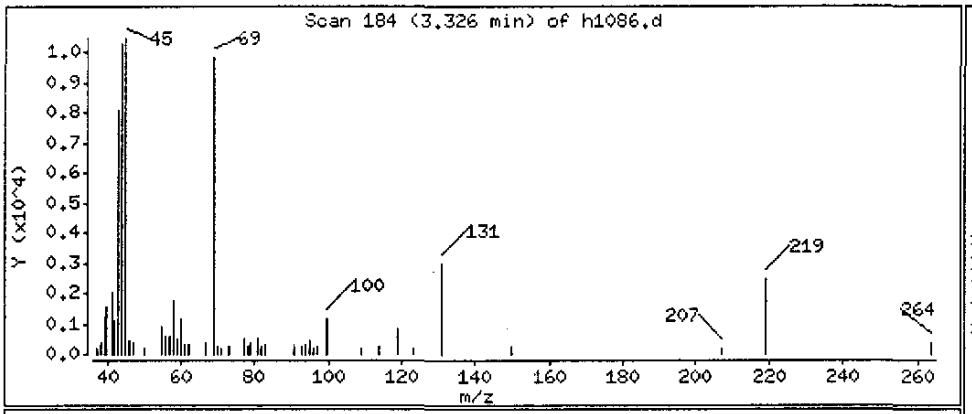
Operator: appelhansd

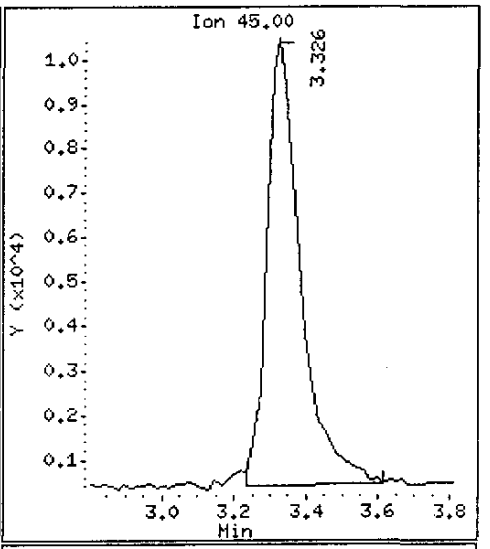
Column phase: DB624

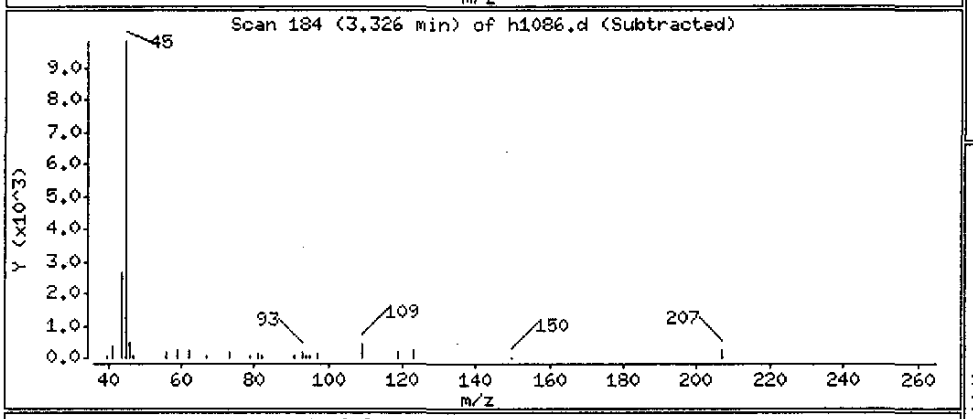
Column diameter: 0.53

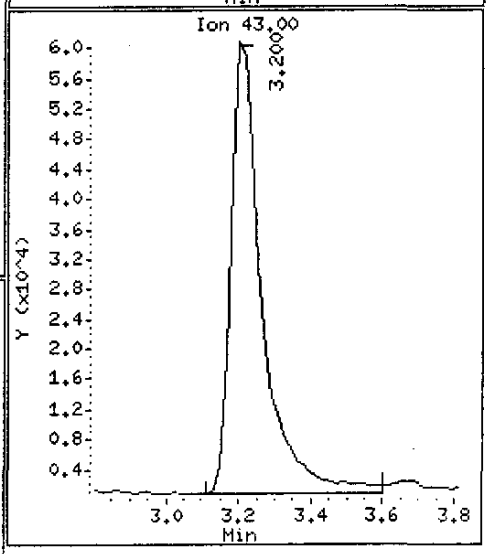
125 2-Propanol

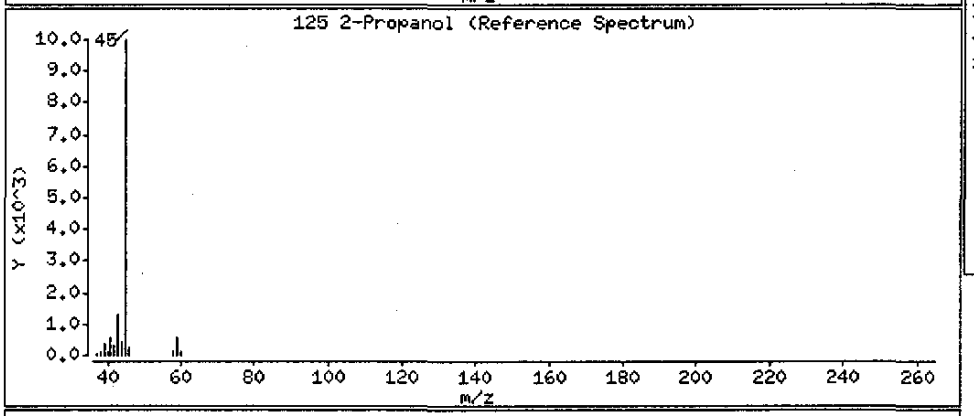
Concentration: 3808.15 ug/L

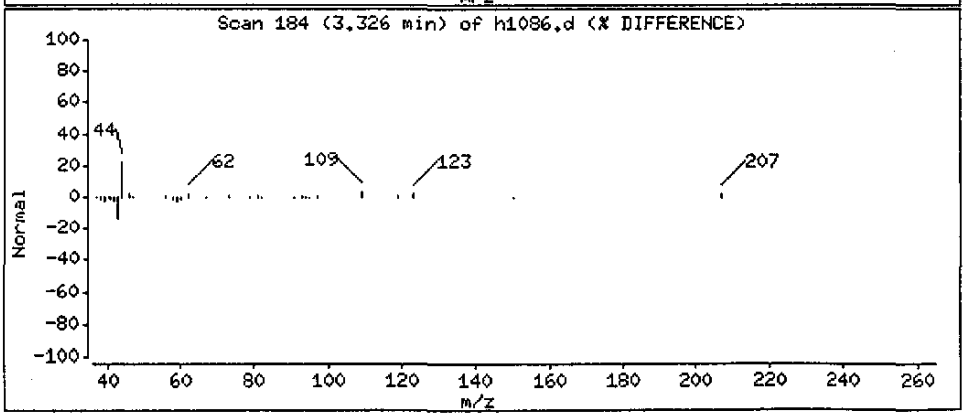












Data File: /chem/H.i/022004.b/h1086.d

Date : 20-FEB-2004 18:31

Client ID: MW-10

Instrument: H.i

Sample Info: F9KEX1AA,0.4,D4B130209-010

Purge Volume: 20.0

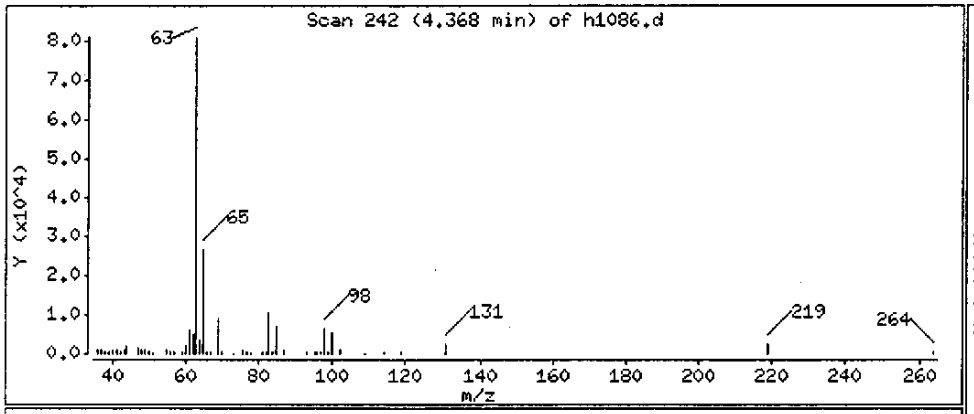
Operator: appelhansd

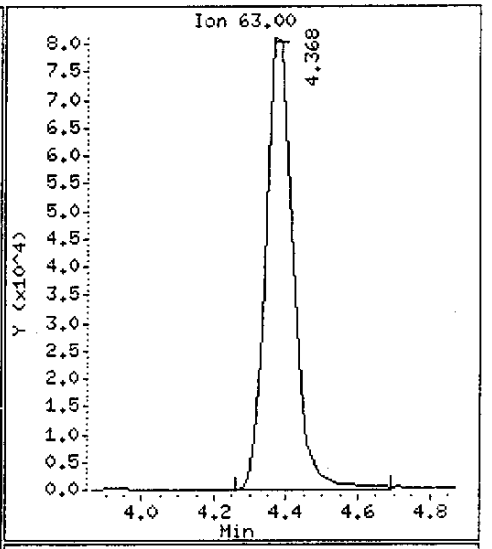
Column phase: DB624

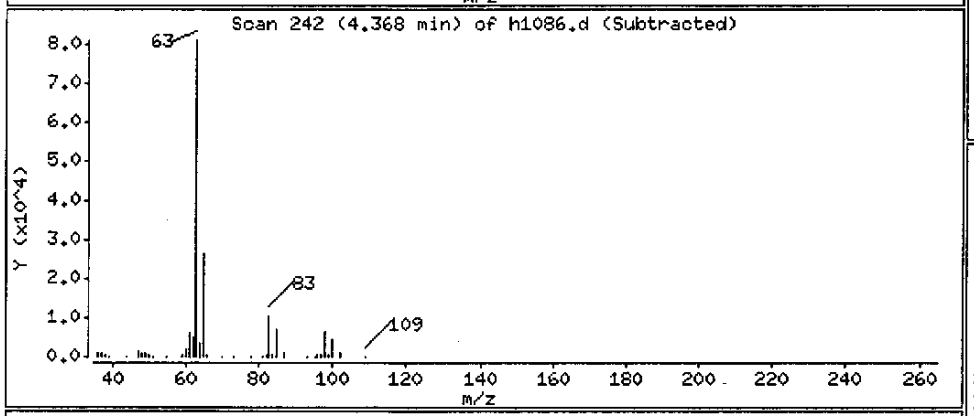
Column diameter: 0.53

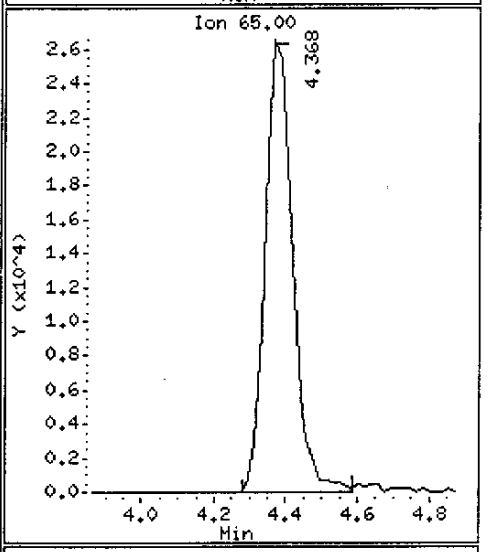
27 1,1-Dichloroethane

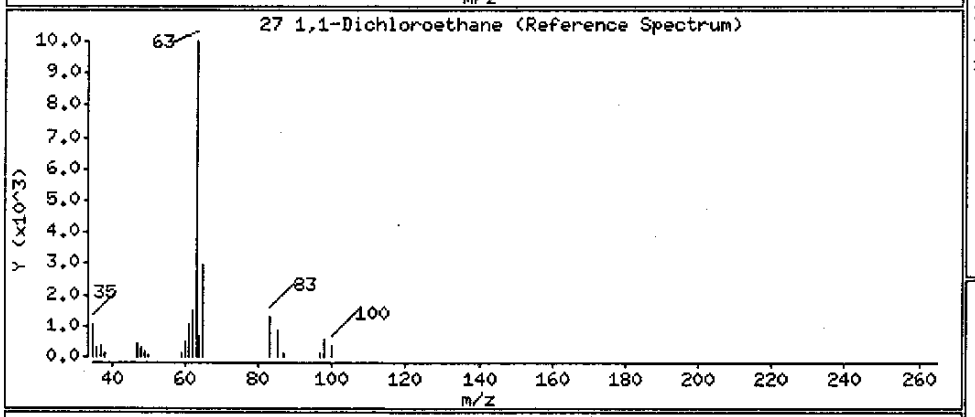
Concentration: 210.777 ug/L

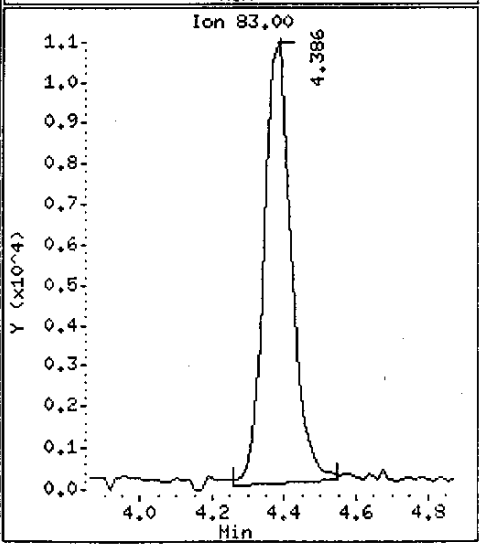


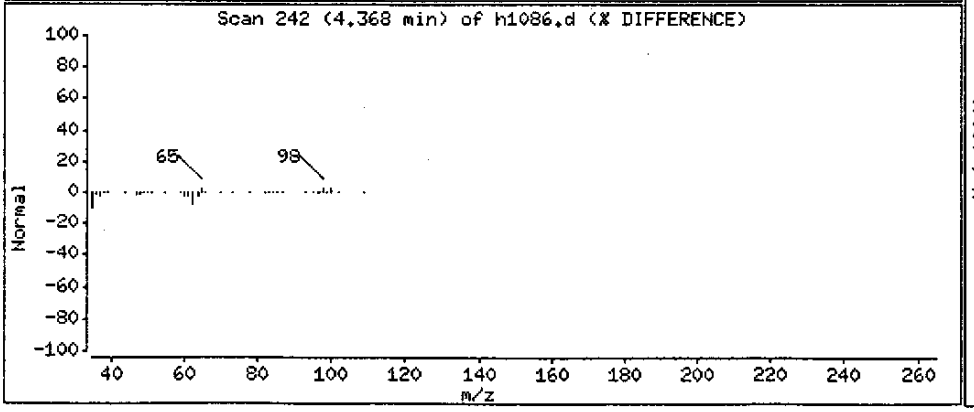












Data File: /chem/H.i/022004.b/h1086.d

Date : 20-FEB-2004 18:31

Client ID: MW-10

Instrument: H.i

Sample Info: F9KEX1AA,0.4,D4B130209-010

Purge Volume: 20.0

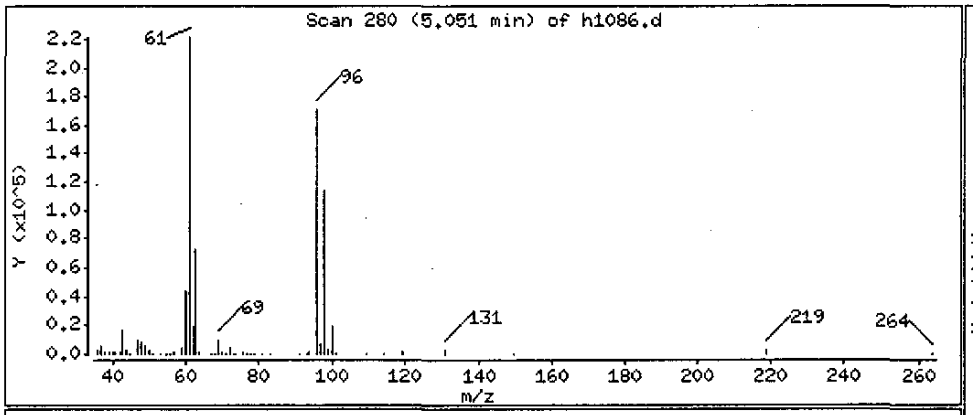
Operator: appelhansd

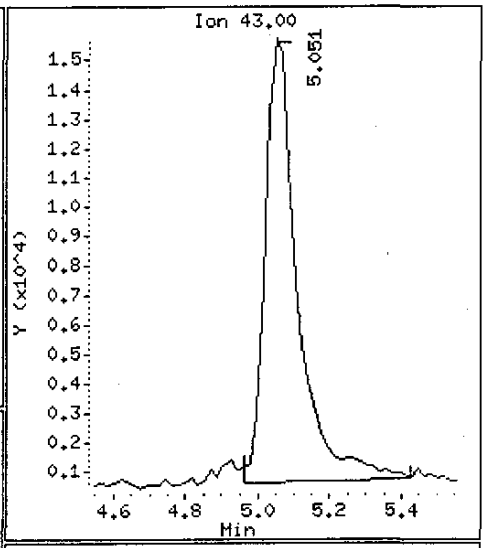
Column phase: DB624

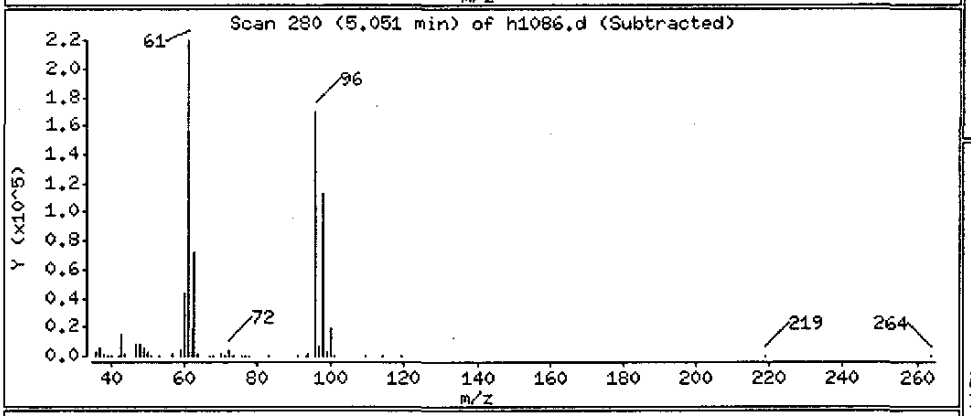
Column diameter: 0.53

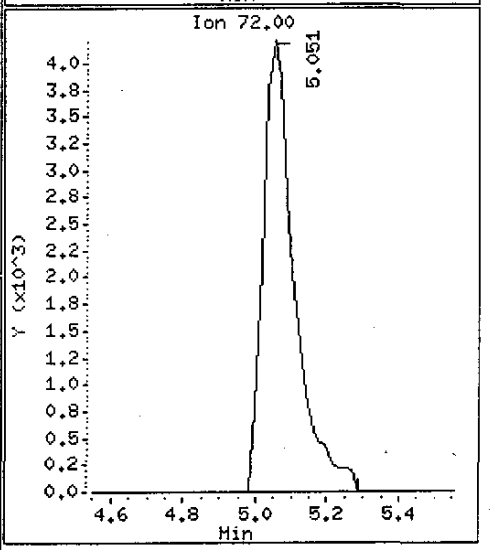
33 2-Butanone

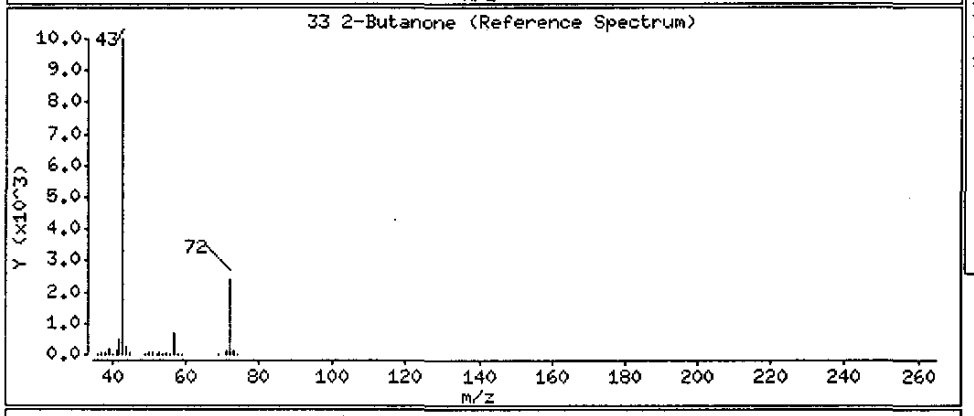
Concentration: 646.908 ug/L

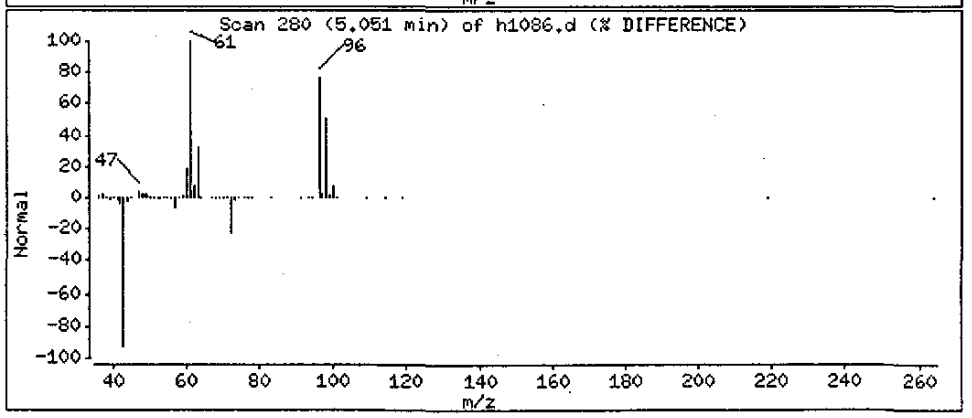












Data File: /chem/H.i/022004.b/h1086.d

Date : 20-FEB-2004 18:31

Client ID: MW-10

Instrument: H.i

Sample Info: F9KEX1AA,0.4,D4B130209-010

Purge Volume: 20.0

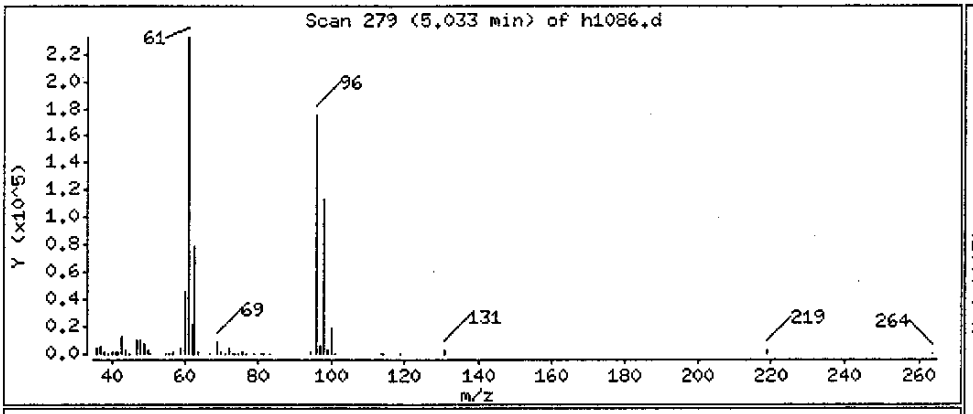
Operator: appelhansd

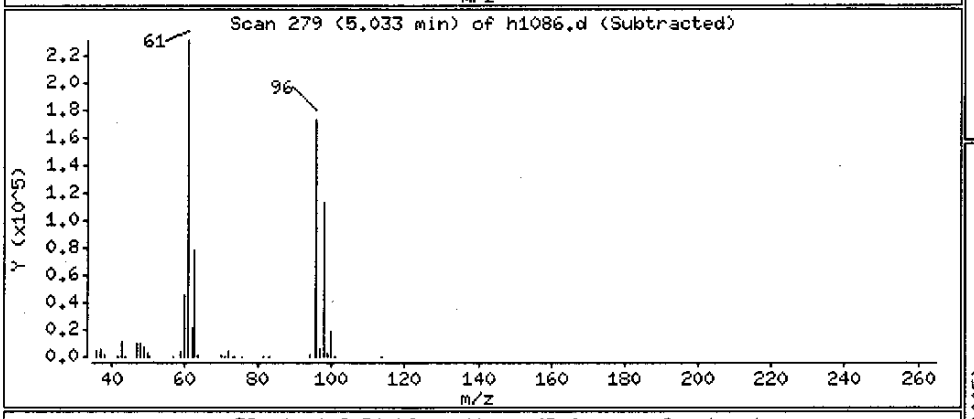
Column phase: DB624

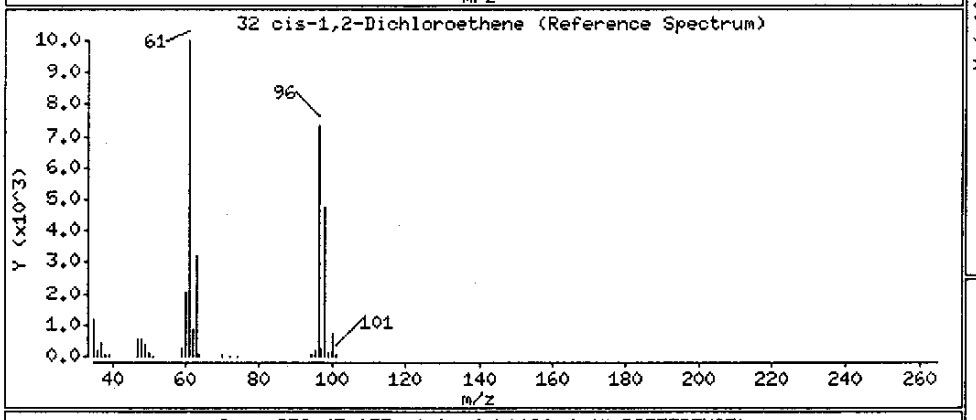
Column diameter: 0.53

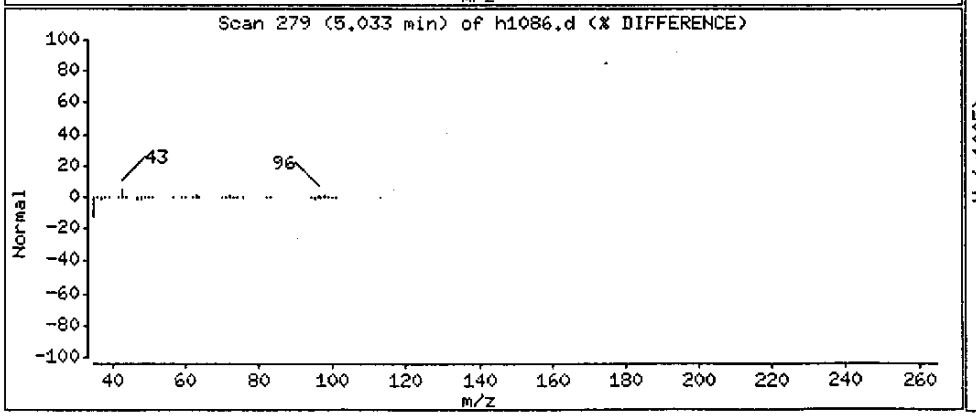
32 cis-1,2-Dichloroethene

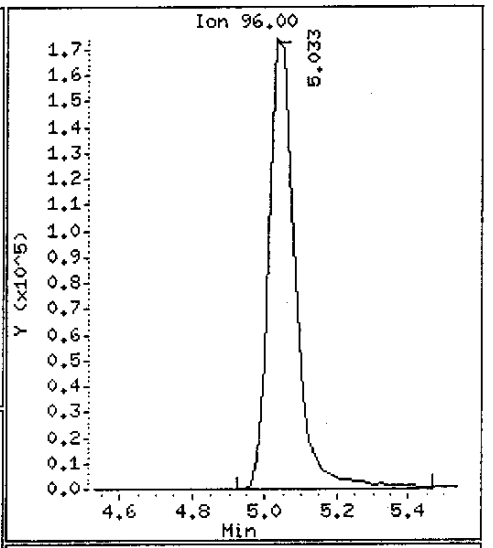
Concentration: 741.398 ug/L

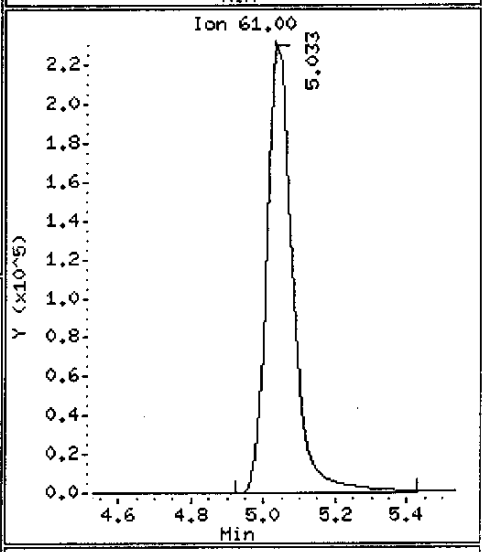


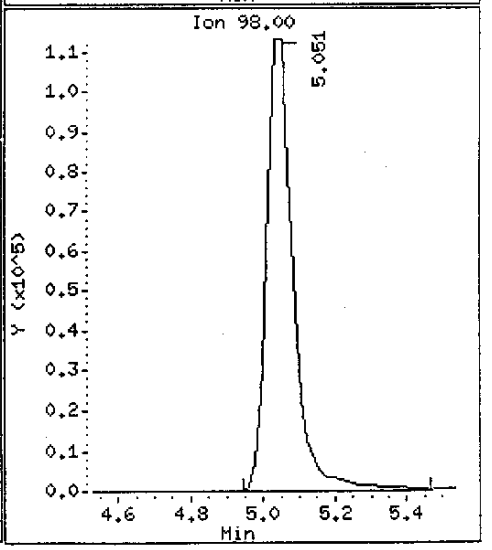












Data File: /chem/H.i/022004.b/h1086.d

Date : 20-FEB-2004 18:31

Client ID: MW-10

Instrument: H.i

Sample Info: F9KEX1AA,0.4,D4B130209-010

Purge Volume: 20.0

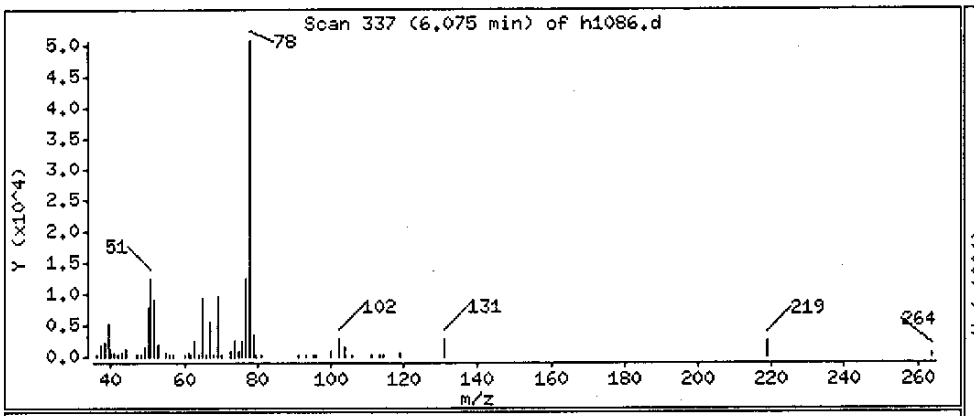
Operator: appelhansd

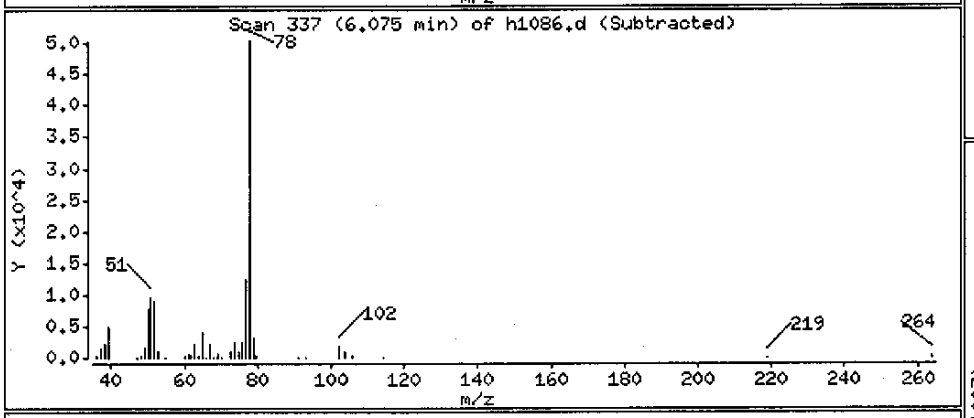
Column phase: DB624

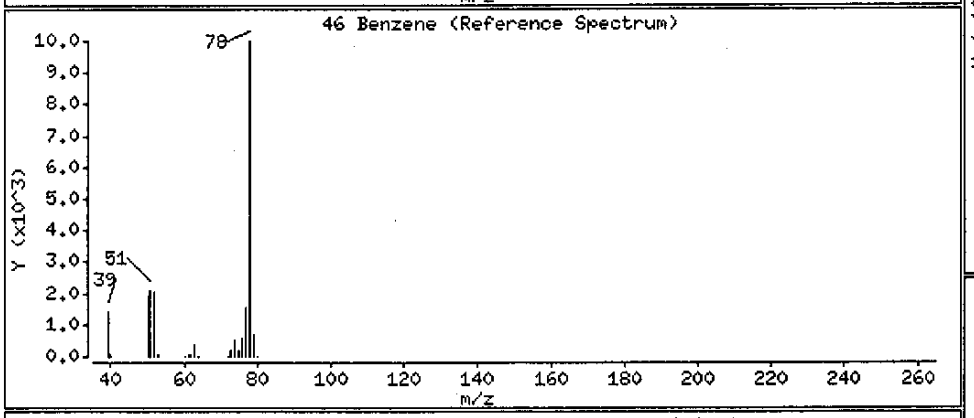
Column diameter: 0.53

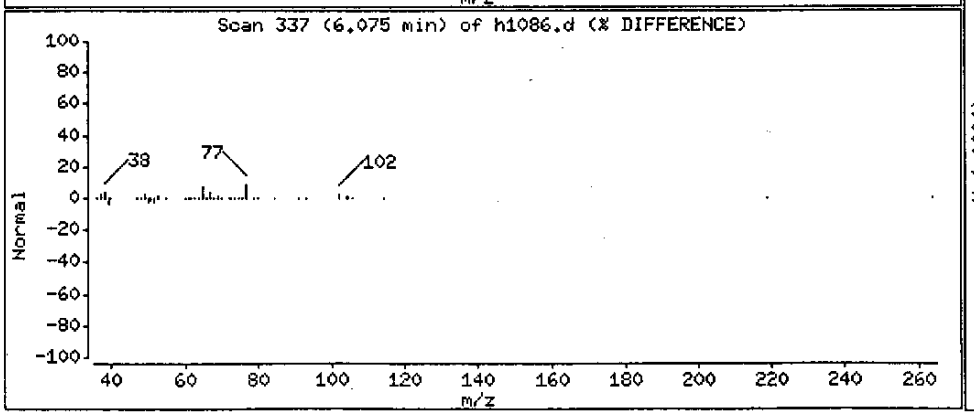
46 Benzene

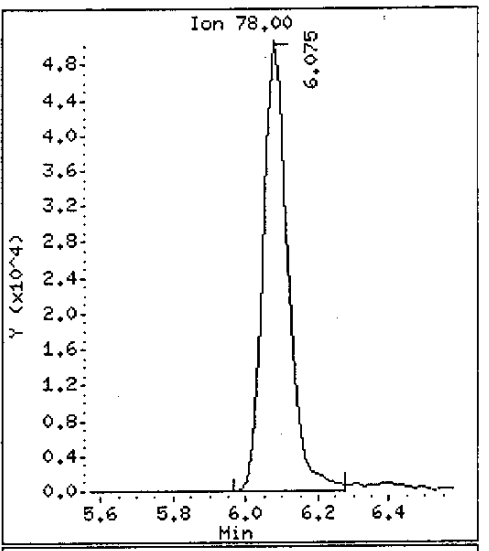
Concentration: 70.6036 ug/L

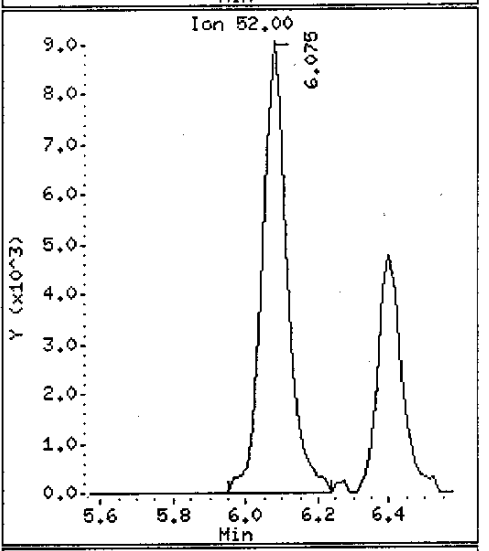


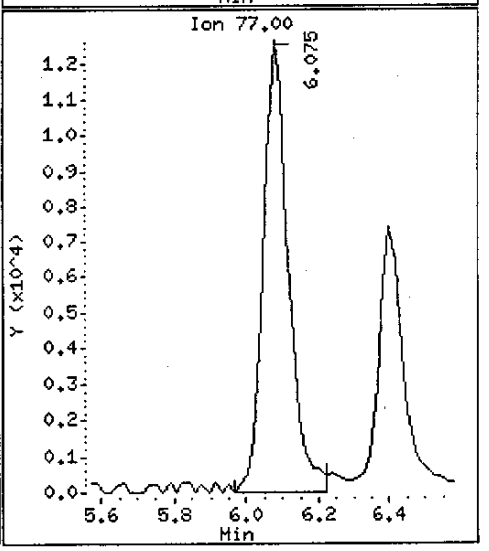












Data File: /chem/H.i/022004.b/h1086.d

Date : 20-FEB-2004 18:31

Client ID: MW-10

Instrument: H.i

Sample Info: F9KEX1AA,0.4,D4B130209-010

Purge Volume: 20.0

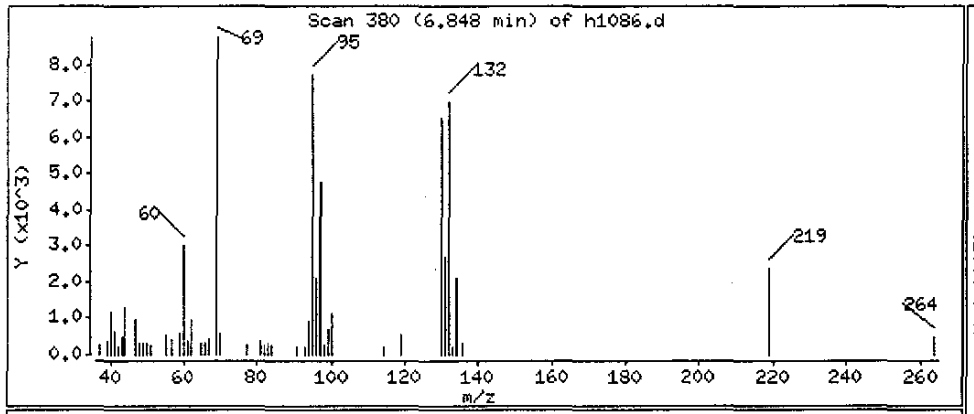
Operator: appelhansd

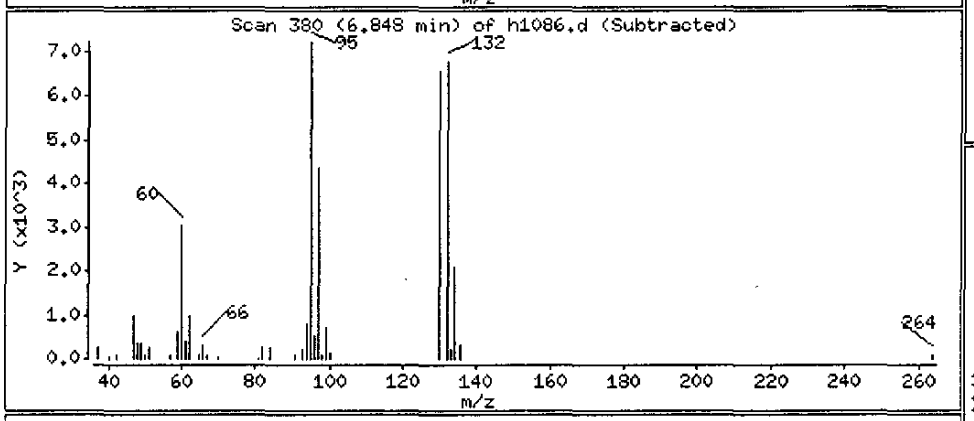
Column phase: DB624

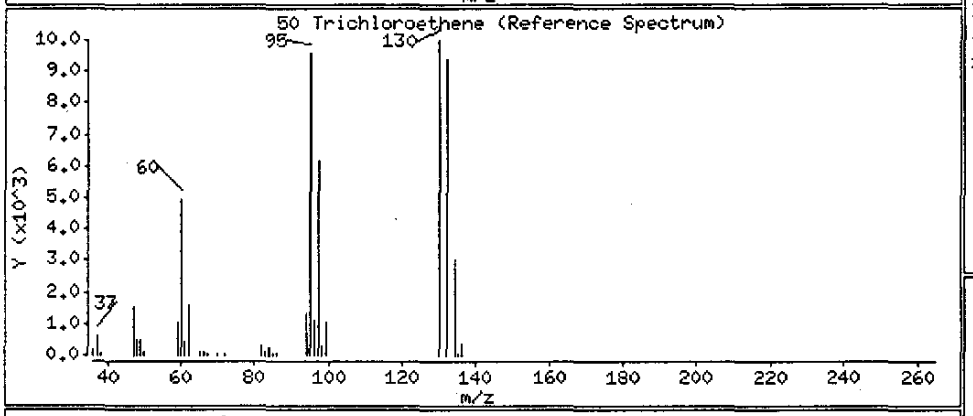
Column diameter: 0.53

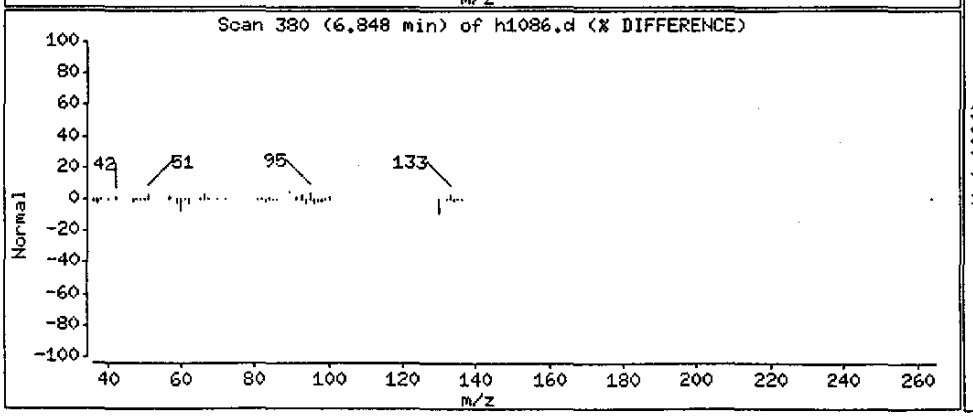
50 Trichloroethene

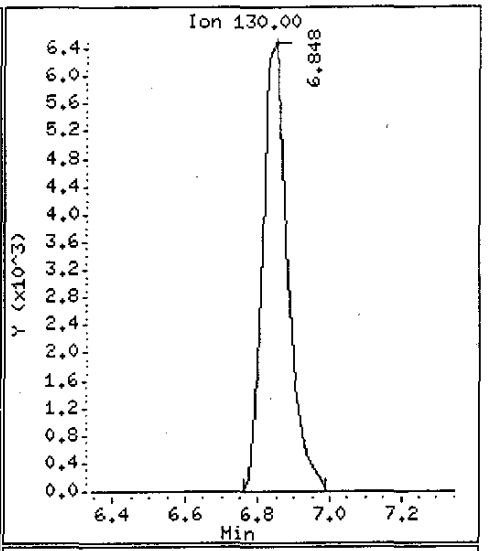
Concentration: 24.0180 ug/L

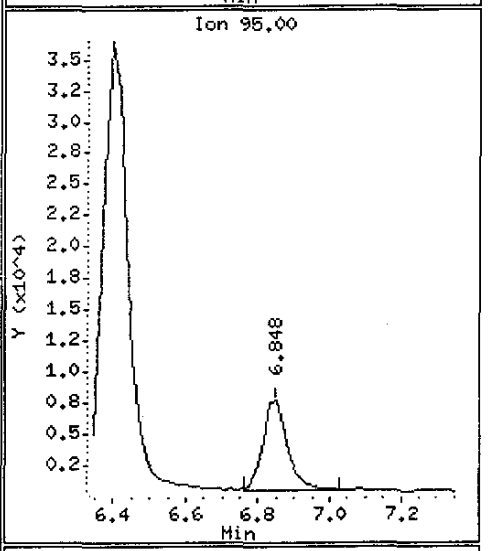


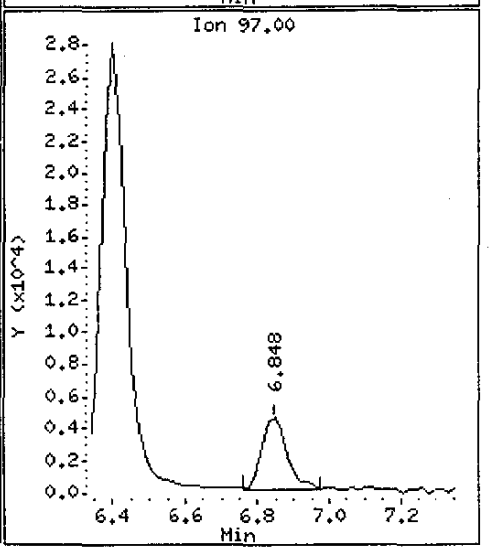












Data File: /chem/H.i/022004.b/h1086.d

Date : 20-FEB-2004 18:31

Client ID: MW-10

Instrument: H.i

Sample Info: F9KEX1AA,0.4,D4B130209-010

Purge Volume: 20.0

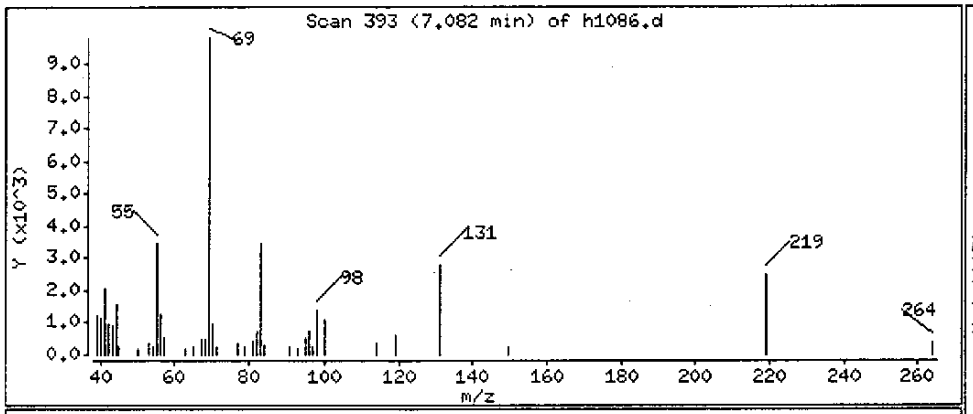
Operator: appelhansd

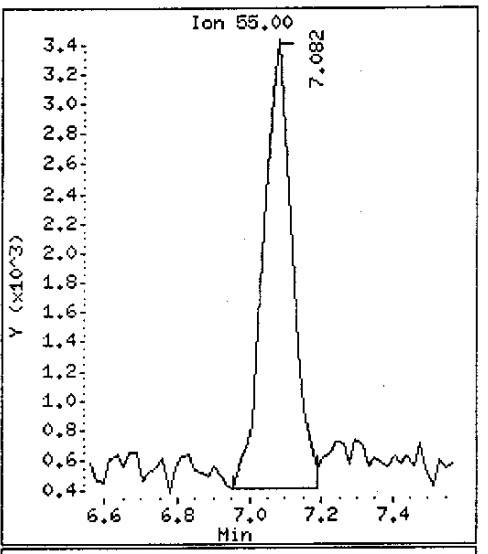
Column phase: DB624

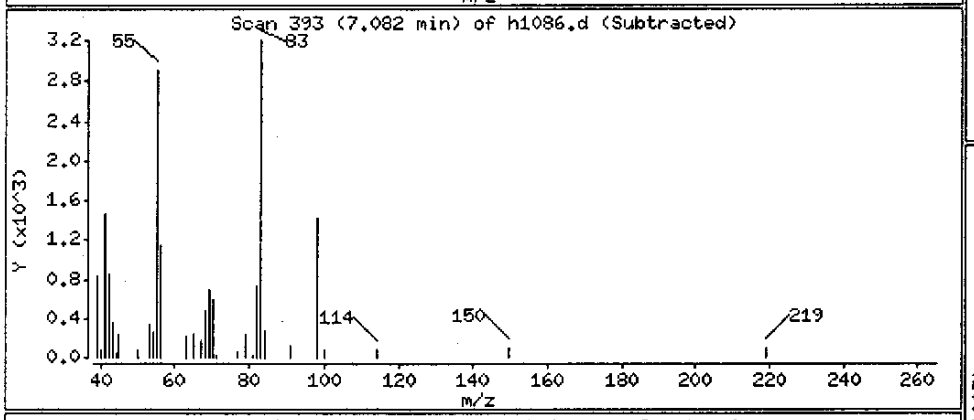
Column diameter: 0.53

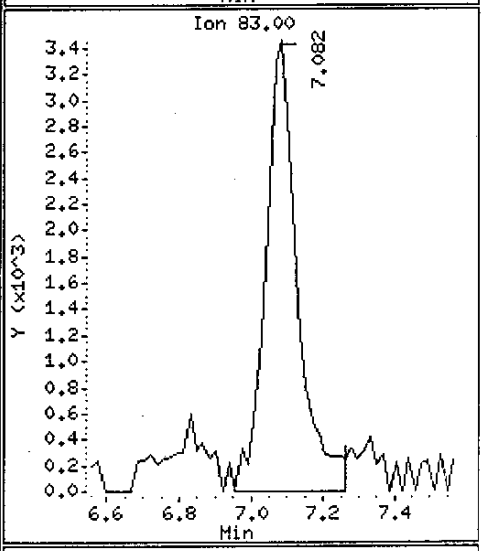
122 Methyl Cyclohexane

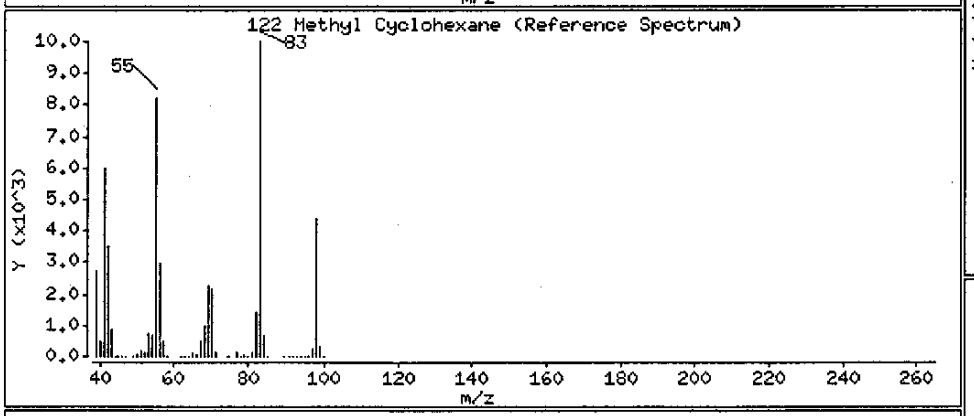
Concentration: 10.1217 ug/L

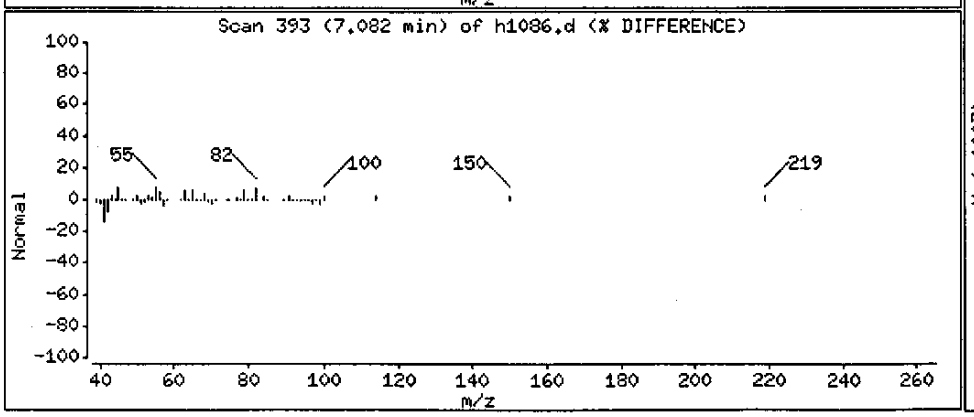


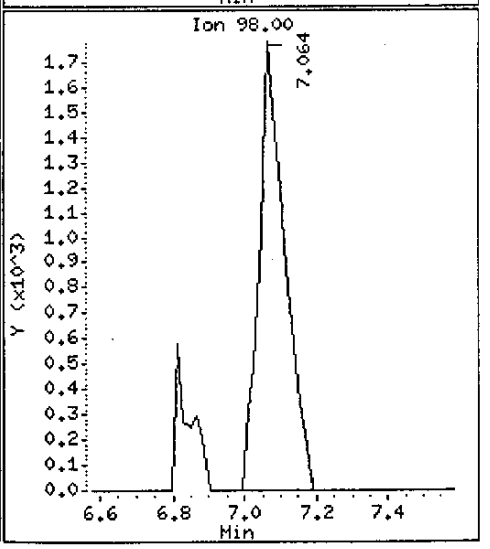












Data File: /chem/H.i/022004.b/h1086.d

Date : 20-FEB-2004 18:31

Client ID: MW-10

Instrument: H.i

Sample Info: F9KEX1AA,0.4,D4B130209-010

Purge Volume: 20.0

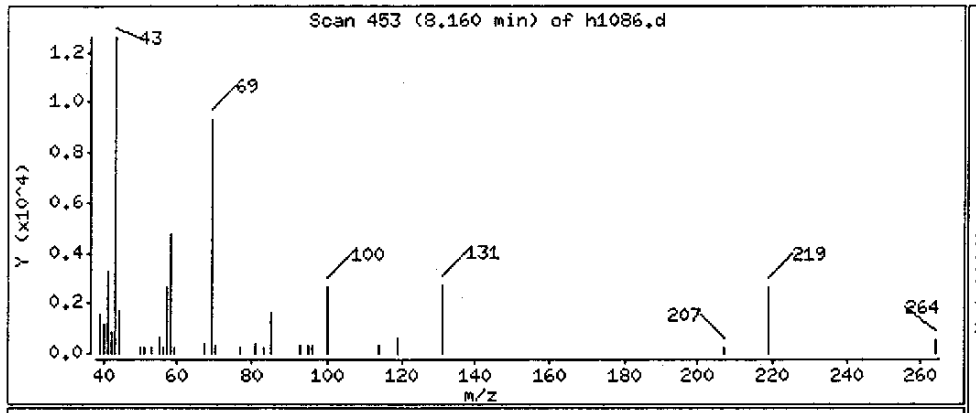
Operator: appelhansd

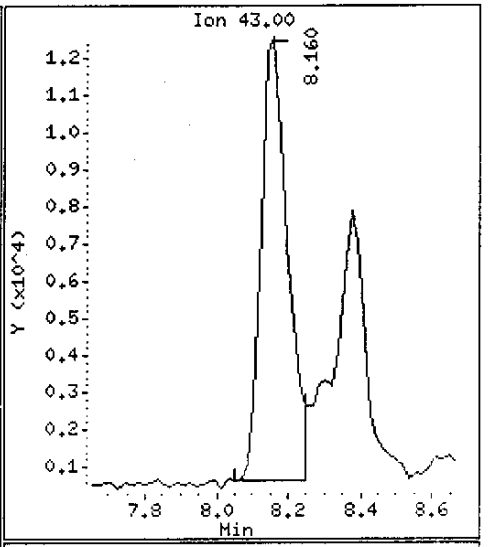
Column phase: DB624

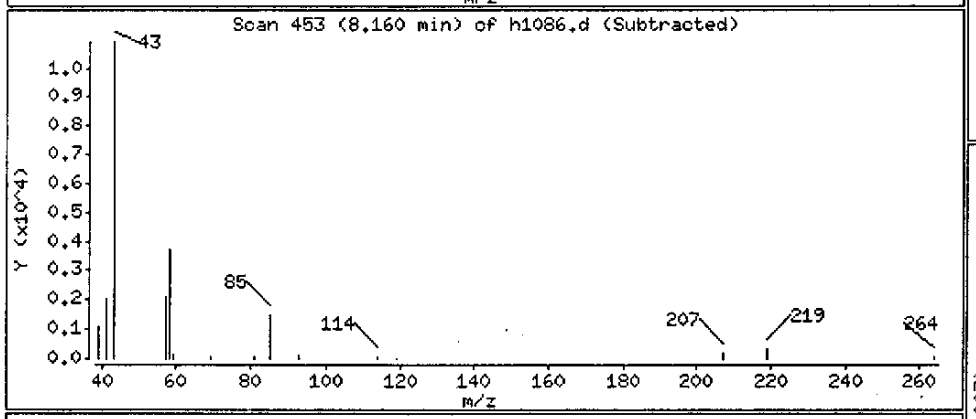
Column diameter: 0.53

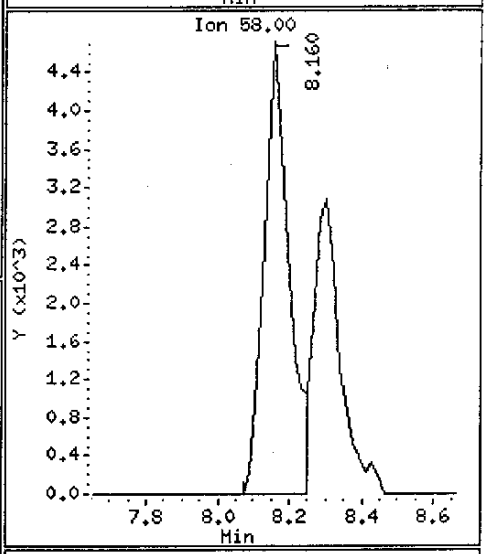
60 4-Methyl-2-pentanone

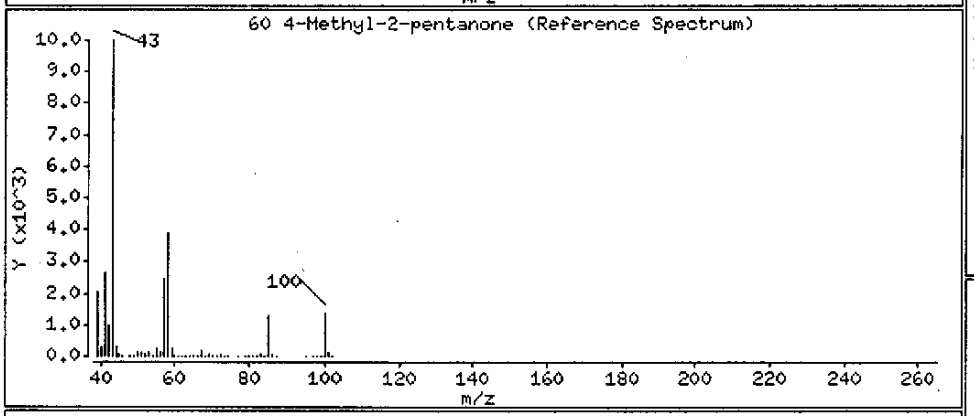
Concentration: 159.126 ug/L

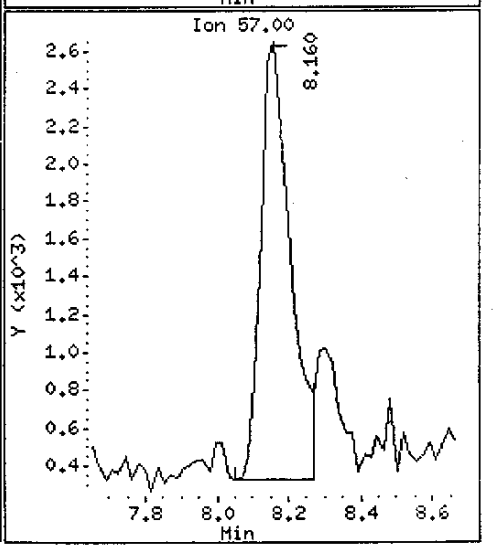


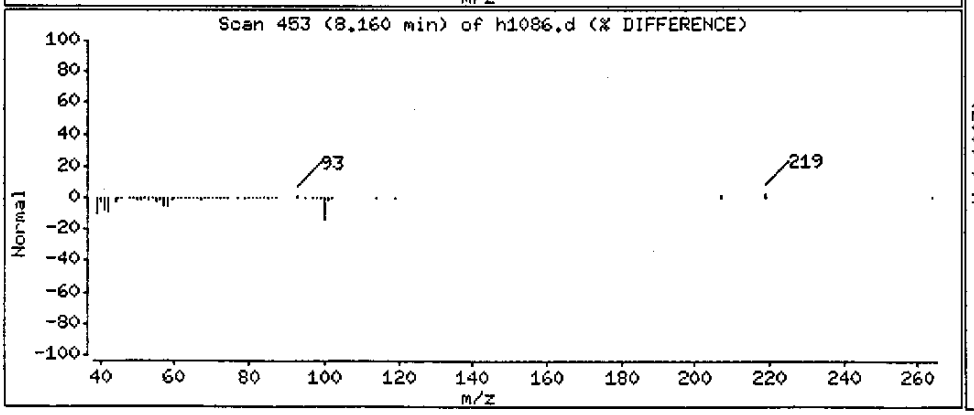












Data File: /chem/H.i/022004.b/h1086.d

Date : 20-FEB-2004 18:31

Client ID: MW-10

Instrument: H.i

Sample Info: F9KEX1AA,0.4,D4B130209-010

Purge Volume: 20.0

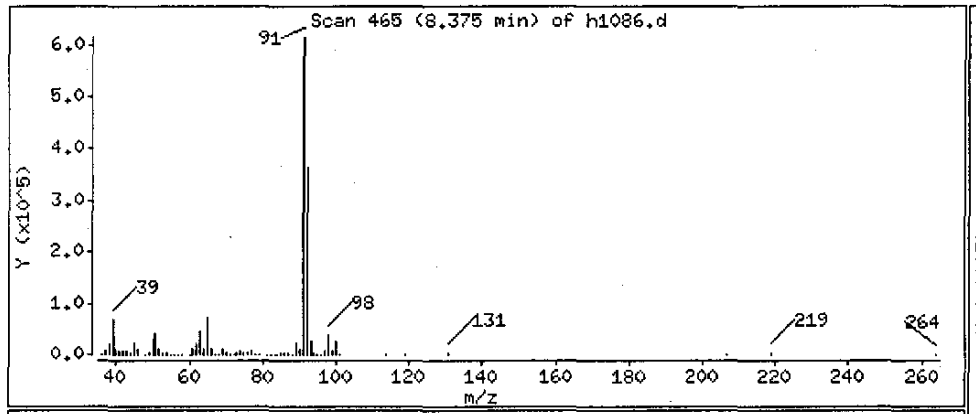
Operator: appelhansd

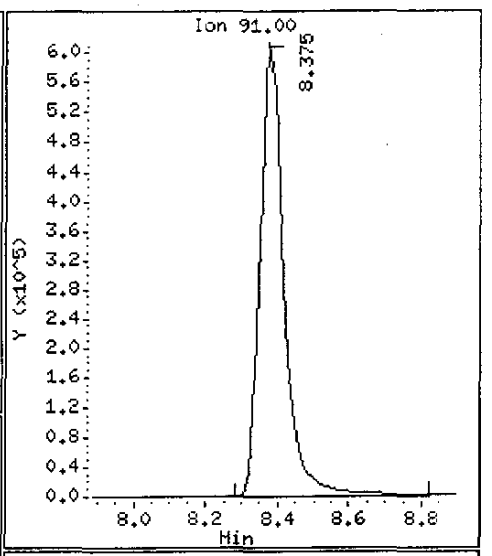
Column phase: DB624

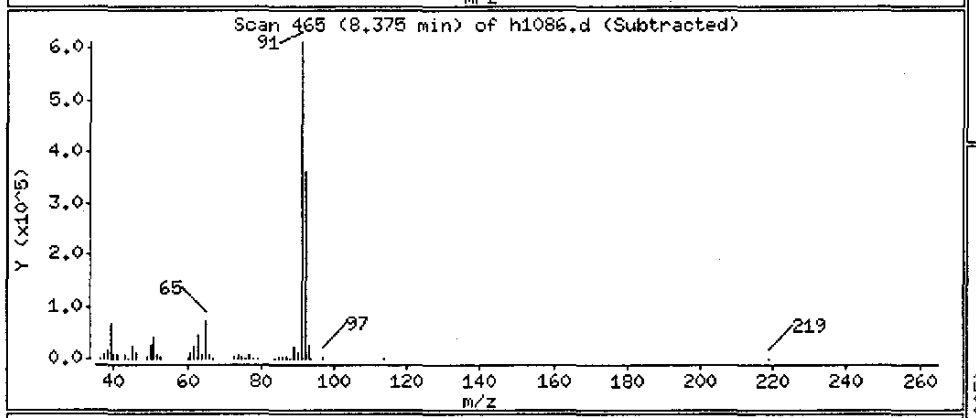
Column diameter: 0.53

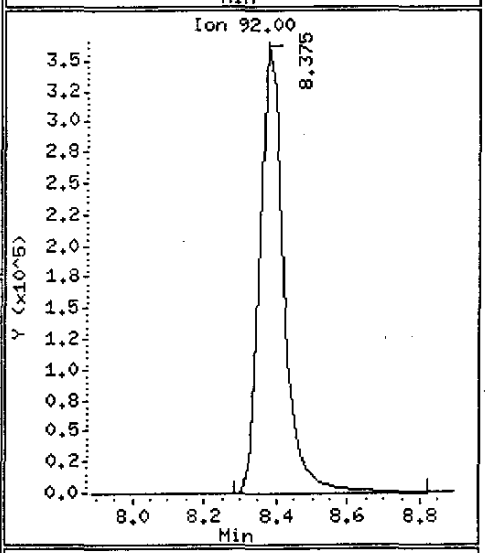
62 Toluene

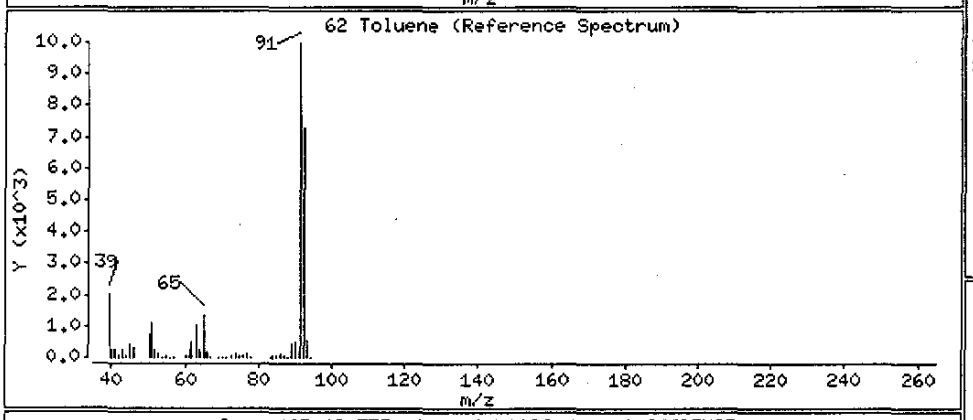
Concentration: 702.566 ug/L

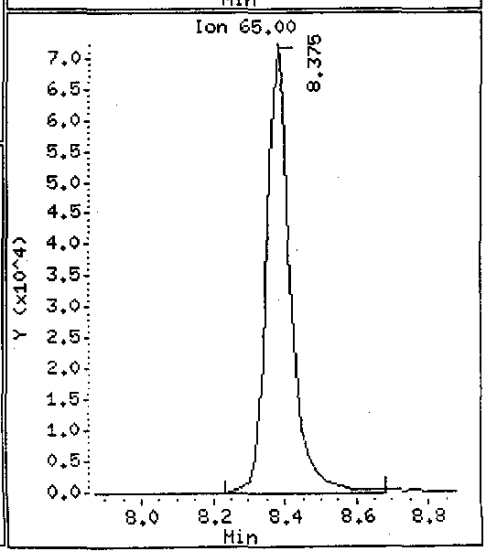


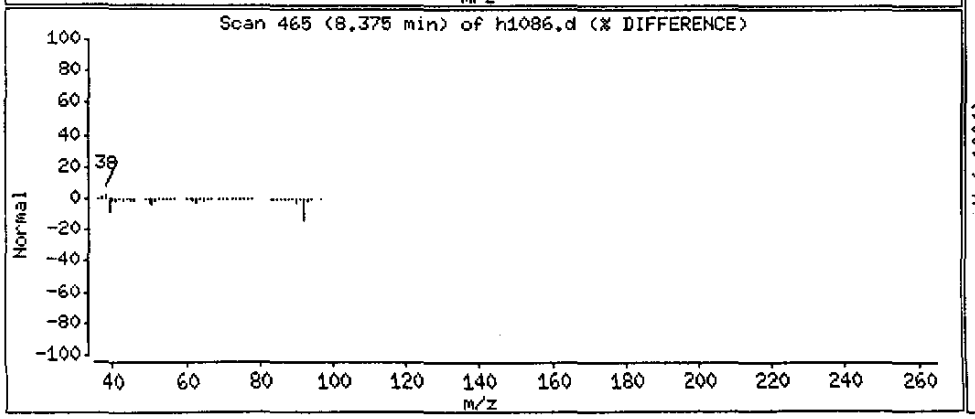












Data File: /chem/H.i/022004.b/h1086.d

Date : 20-FEB-2004 18:31

Client ID: MW-10

Instrument: H.i

Sample Info: F9KEX1AA,0.4,D4B130209-010

Purge Volume: 20.0

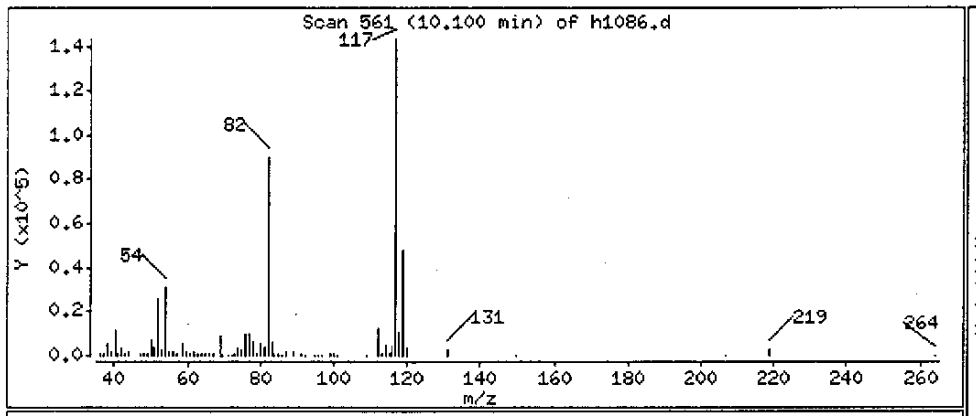
Operator: appelhansd

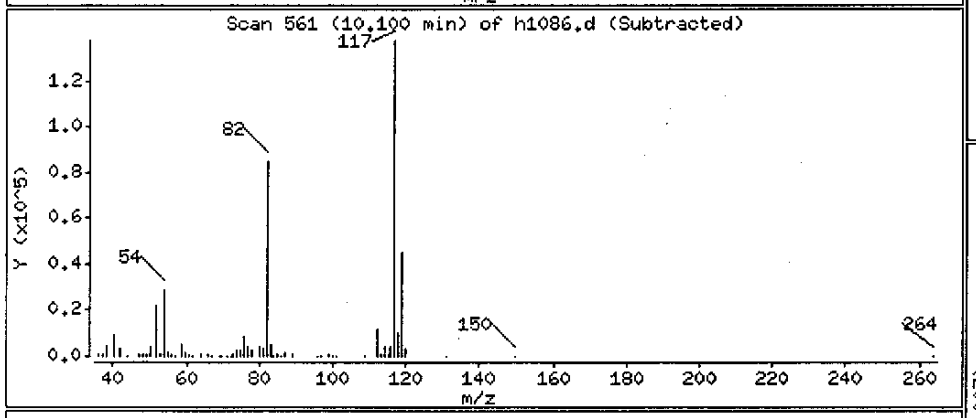
Column phase: DB624

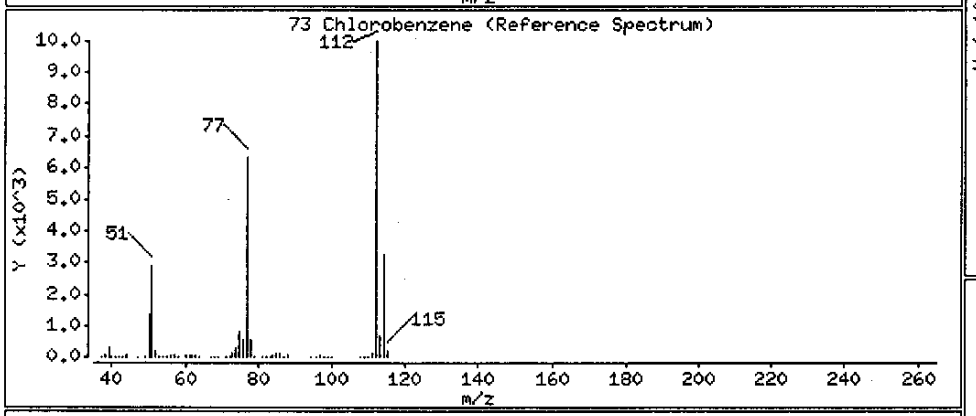
Column diameter: 0.53

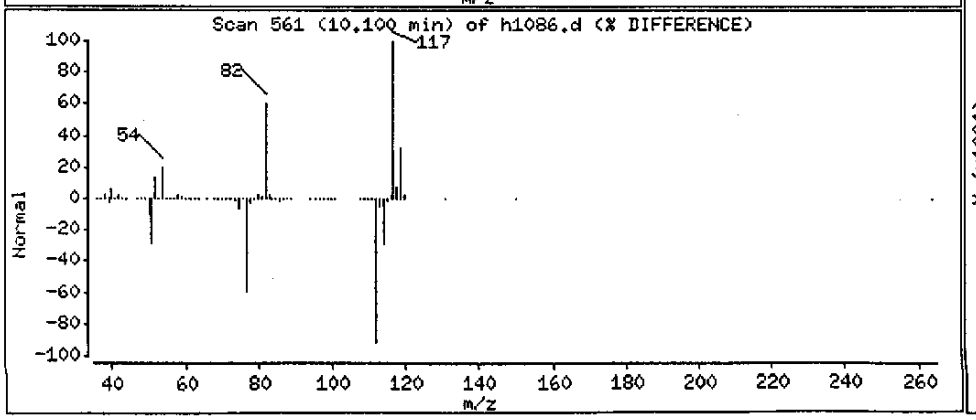
73 Chlorobenzene

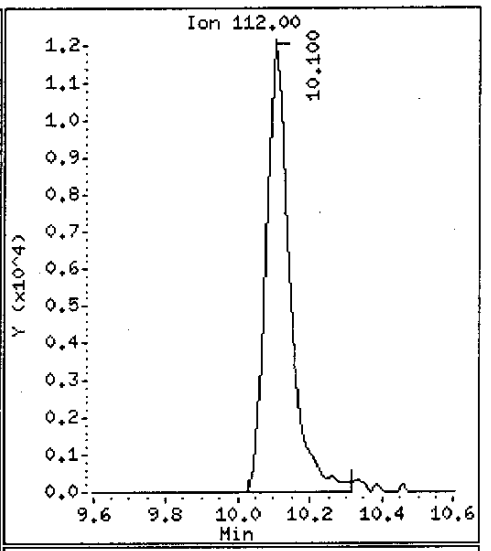
Concentration: 23.1747 ug/L

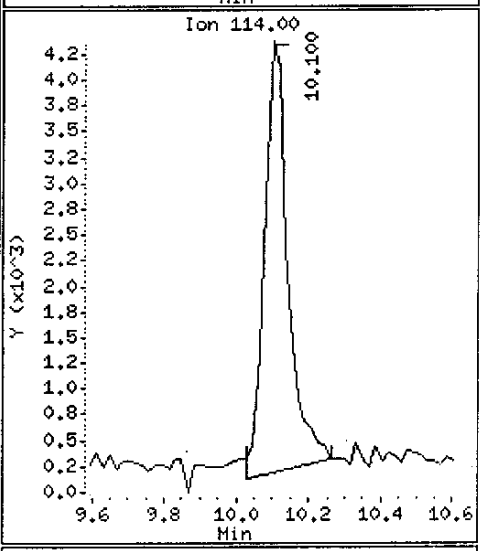


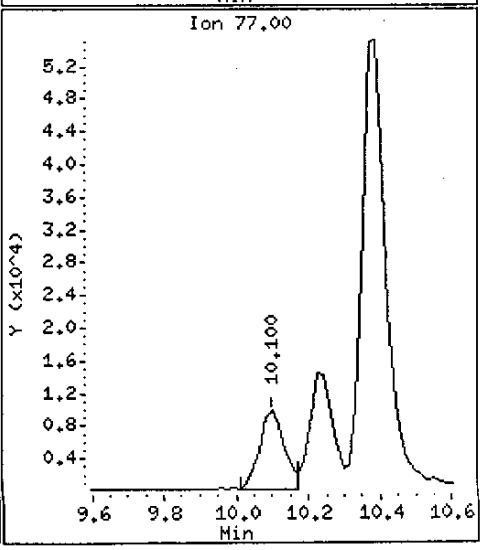












Data File: /chem/H.i/022004.b/h1086.d

Date : 20-FEB-2004 18:31

Client ID: MW-10

Instrument: H.i

Sample Info: F9KEX1AA,0.4,D4B130209-010

Purge Volume: 20.0

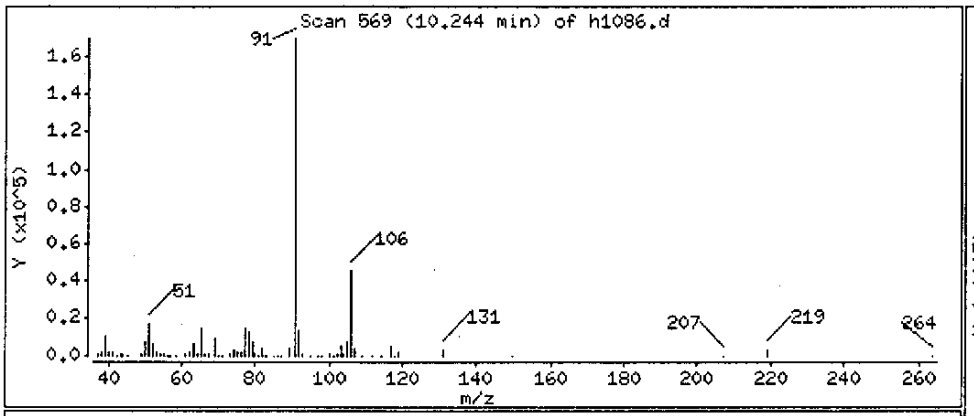
Operator: appelhansd

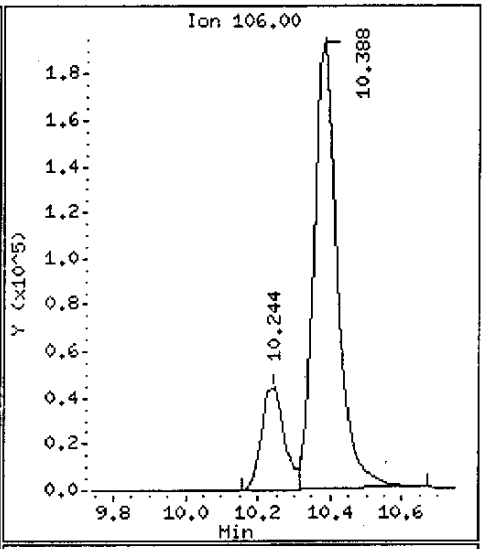
Column phase: DB624

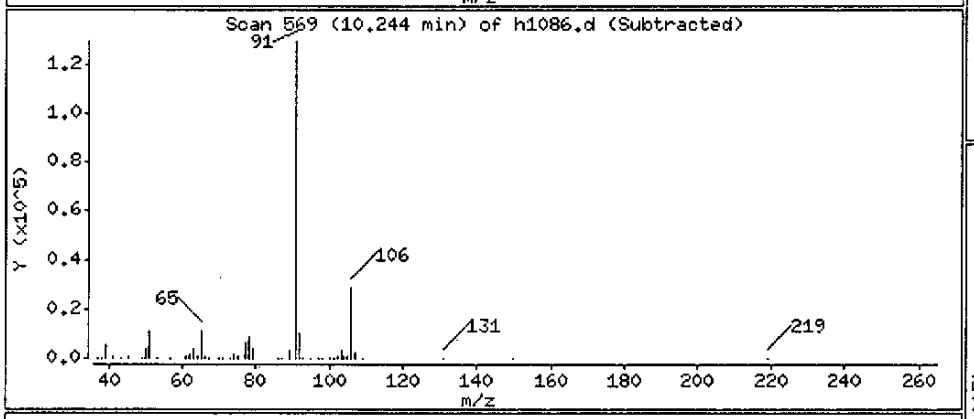
Column diameter: 0.53

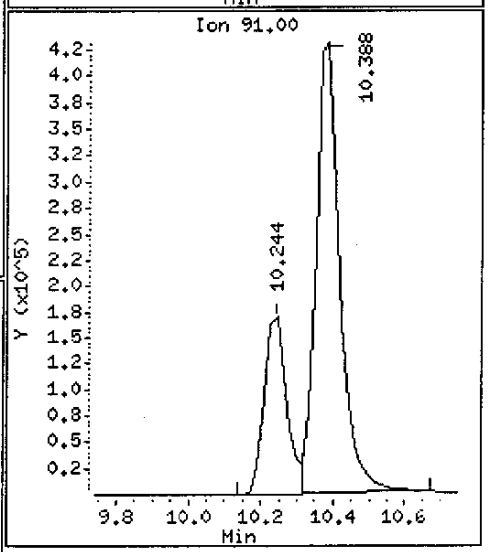
75 Ethylbenzene

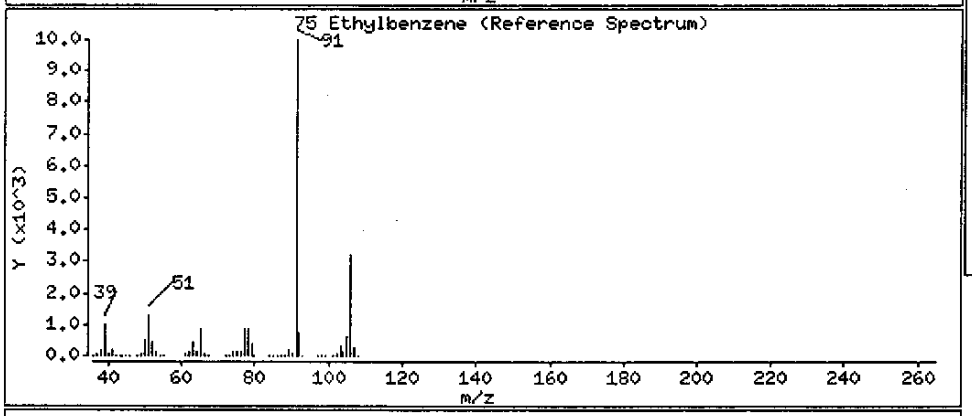
Concentration: 165.308 ug/L

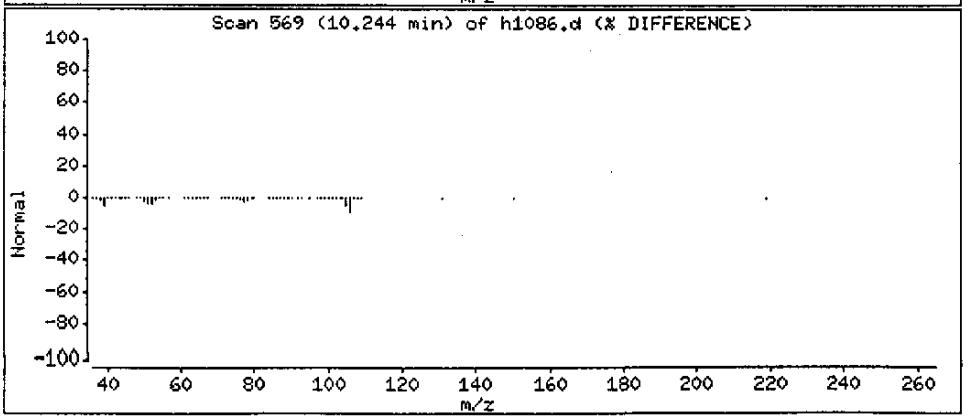












Data File: /chem/H.i/022004.b/h1086.d

Date : 20-FEB-2004 18:31

Client ID: MW-10

Instrument: H.i

Sample Info: F9KEX1AA,0.4,D4B130209-010

Purge Volume: 20.0

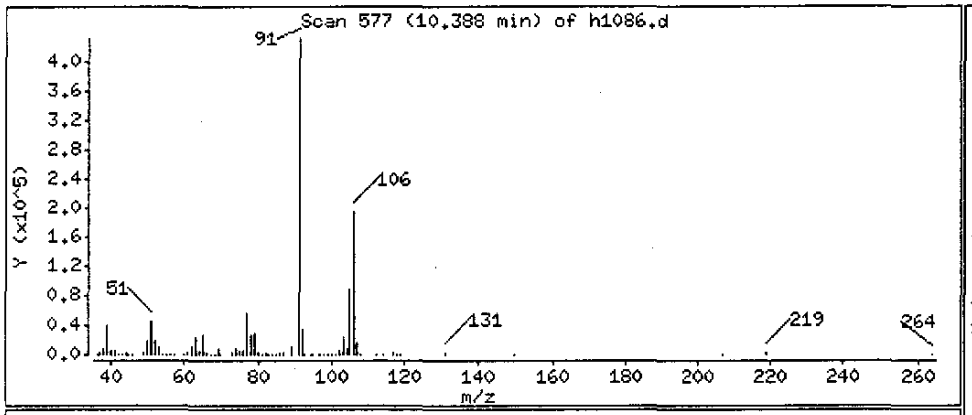
Operator: appelhansd

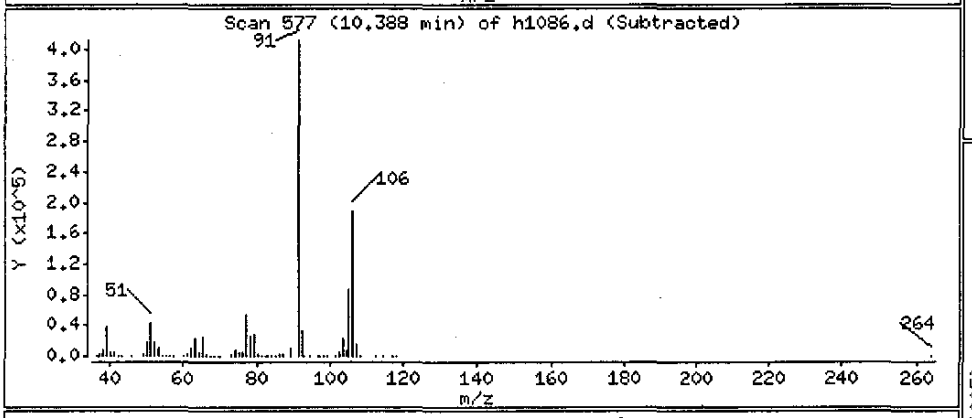
Column phase: DB624

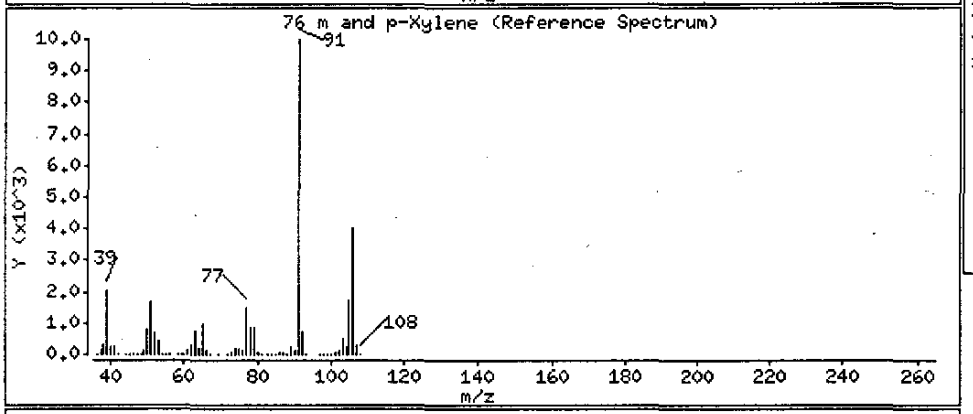
Column diameter: 0.53

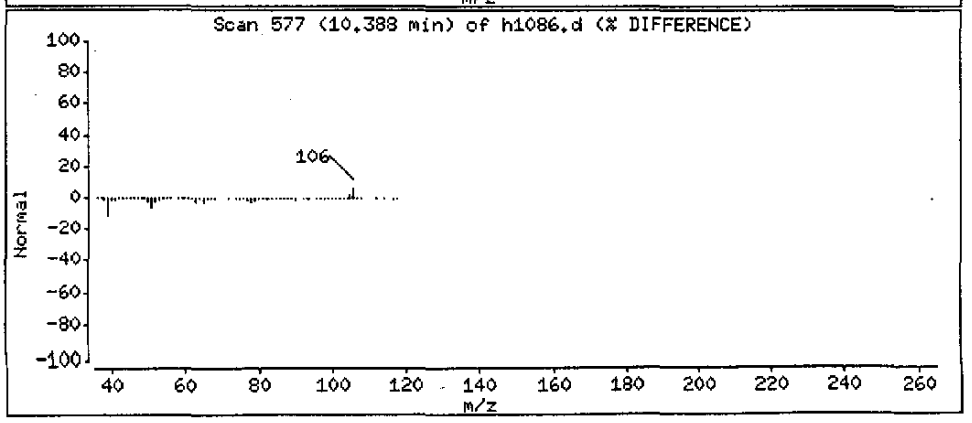
76 m and p-Xylene

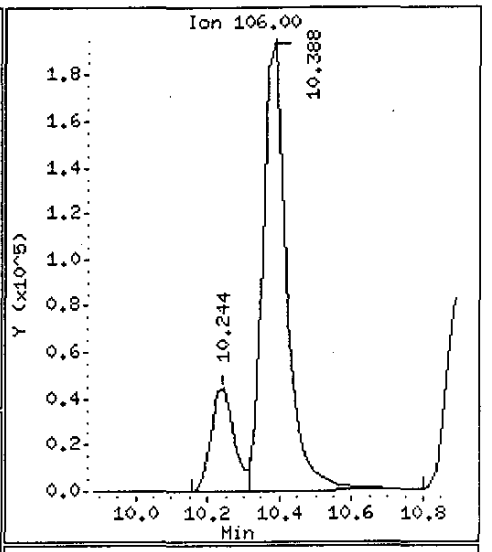
Concentration: 542.044 ug/L

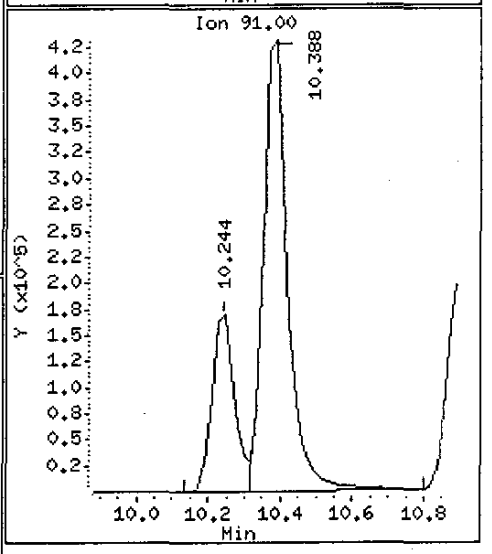












Data File: /chem/H.i/022004.b/h1086.d

Date : 20-FEB-2004 18:31

Client ID: MW-10

Instrument: H.i

Sample Info: F9KEX1AA,0.4,D4B130209-010

Purge Volume: 20.0

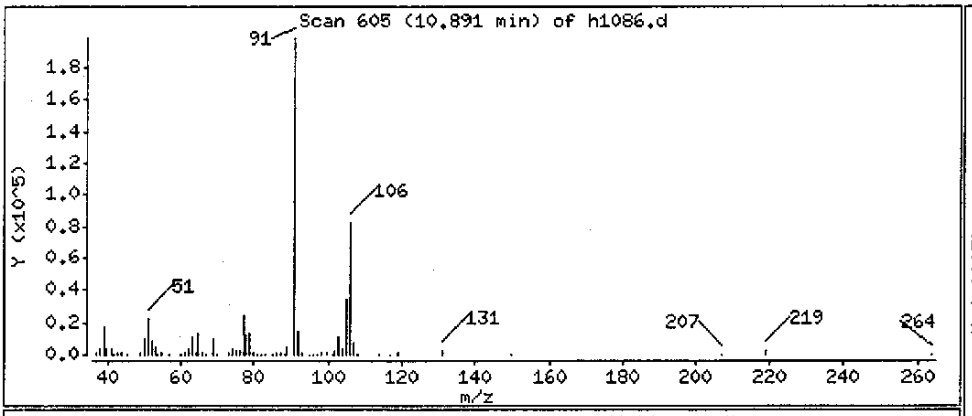
Operator: appelhansd

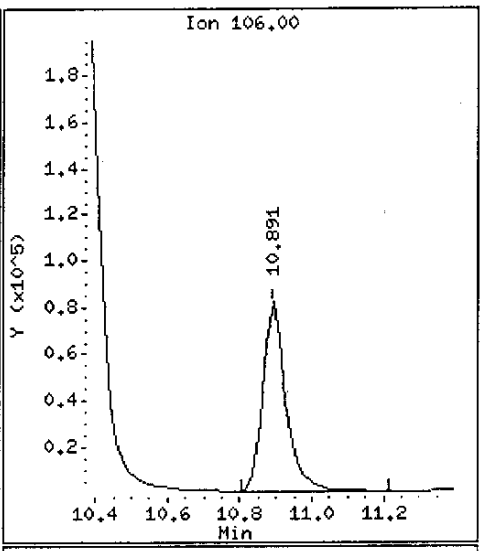
Column phase: DB624

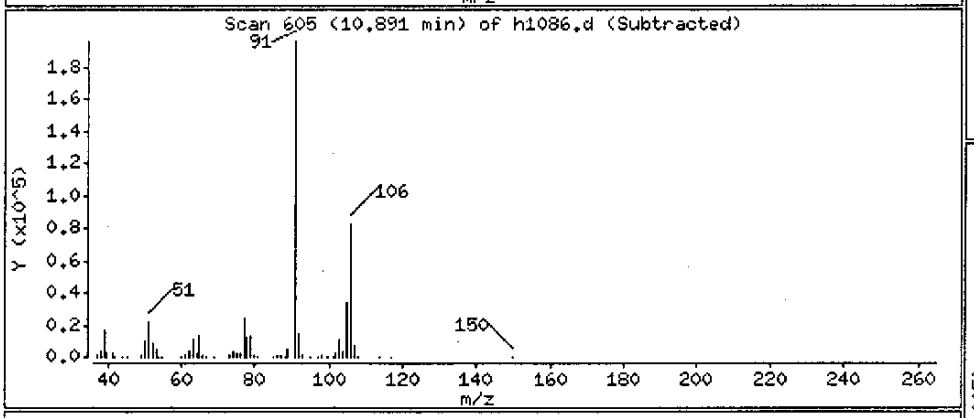
Column diameter: 0.53

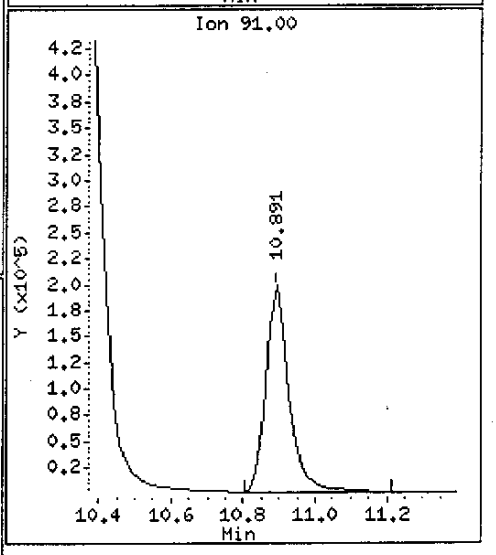
77 o-Xylene

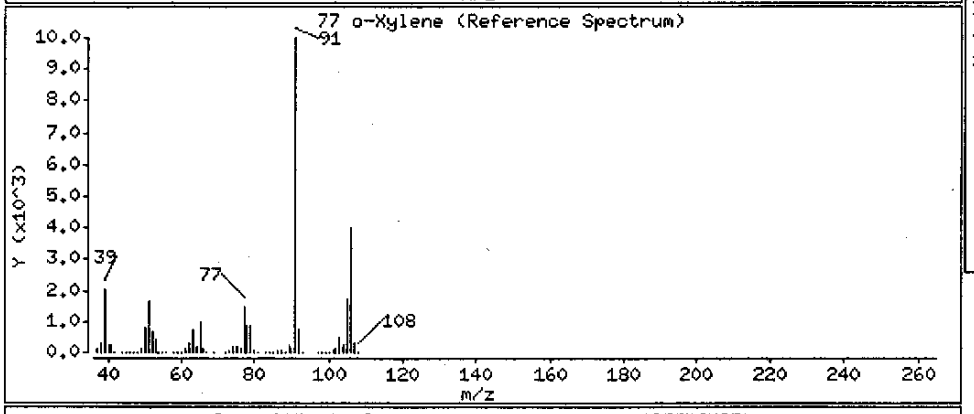
Concentration: 247.745 ug/L

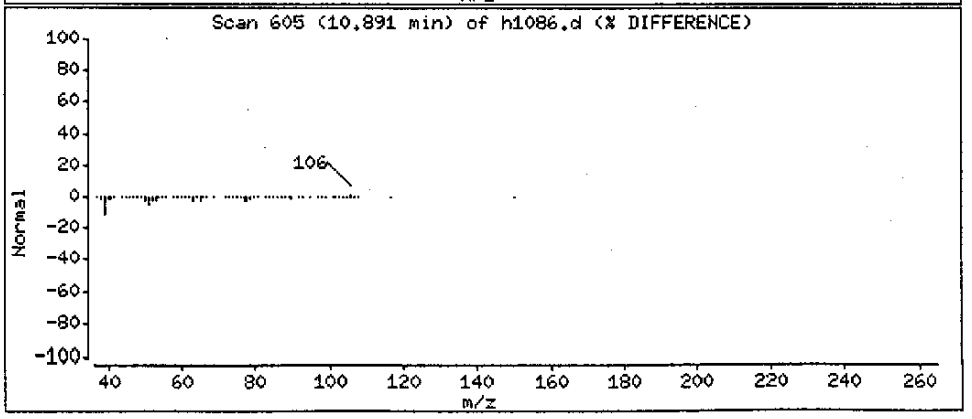












Data File: /chem/H.i/022004.b/h1086.d

Date : 20-FEB-2004 18:31

Client ID: MW-10

Instrument: H.i

Sample Info: F9KEX1AA,0.4,D4B130209-010

Purge Volume: 20.0

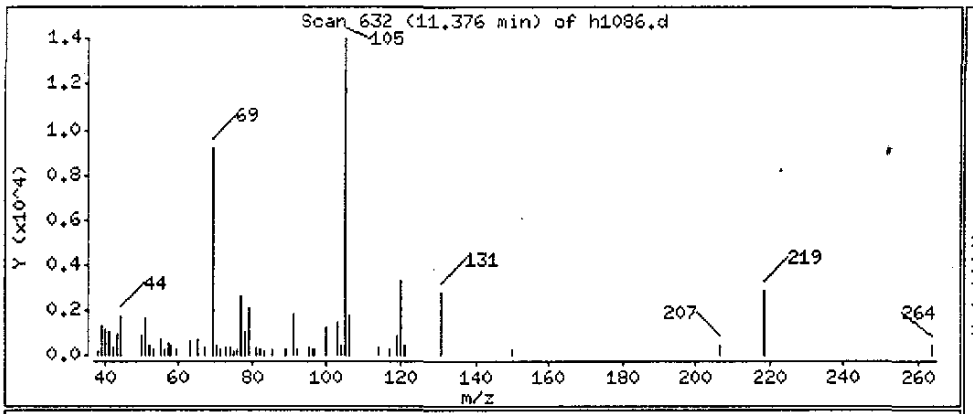
Operator: appelhansd

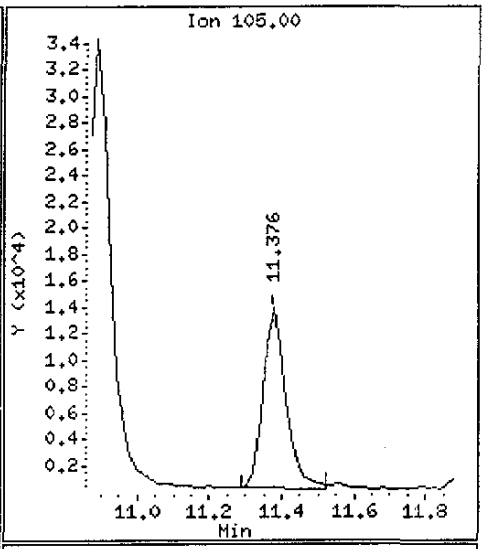
Column phase: DB624

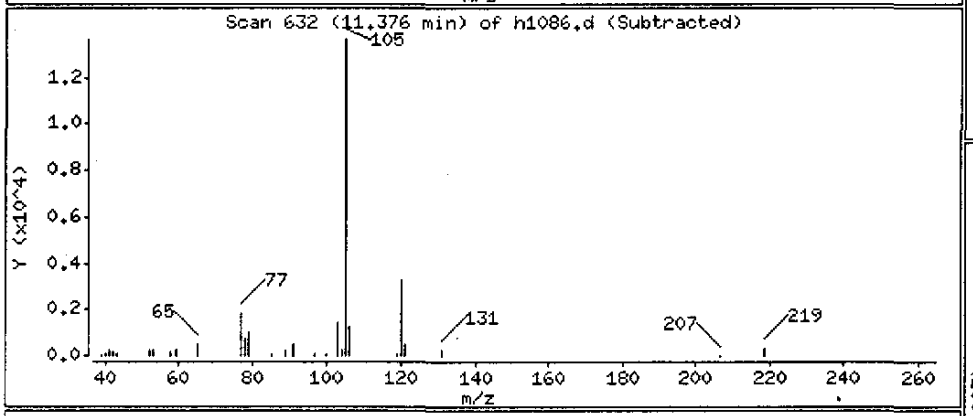
Column diameter: 0.53

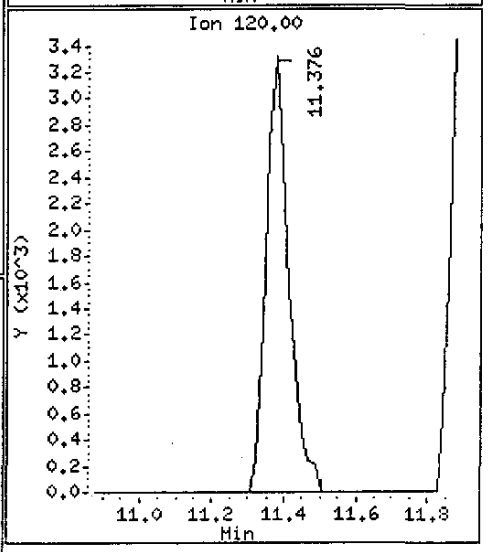
80 isopropyl benzene

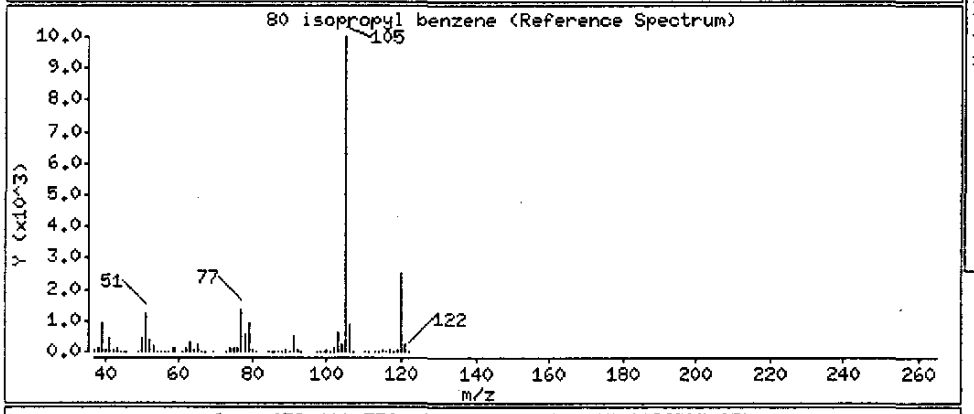
Concentration: 12.2482 ug/L

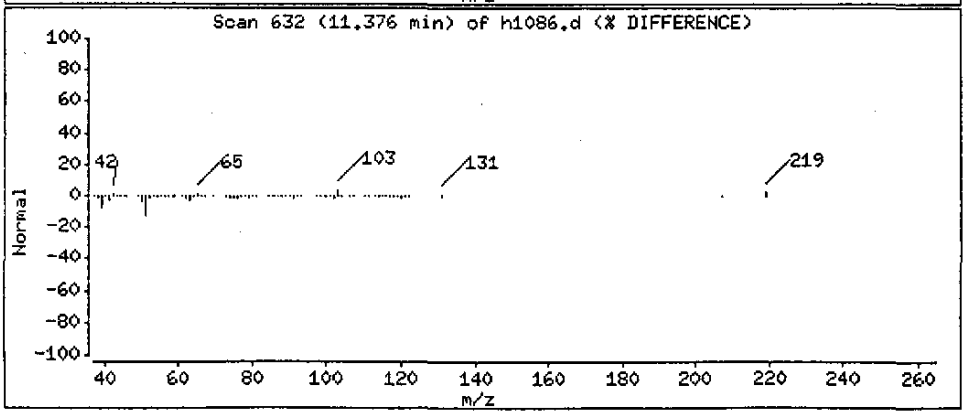












Data File: /chem/H.i/022004.b/h1086.d

Date : 20-FEB-2004 18:31

Client ID: MW-10

Instrument: H.i

Sample Info: F9KEX1AA,0.4,D4B130209-010

Purge Volume: 20.0

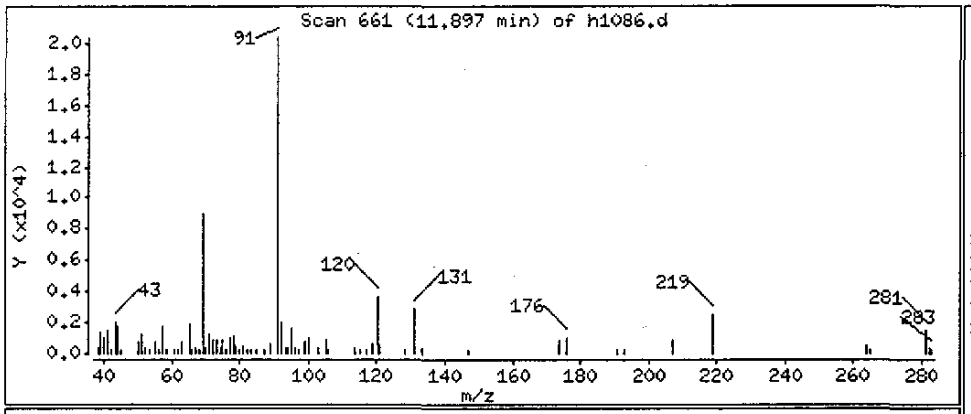
Operator: appelhansd

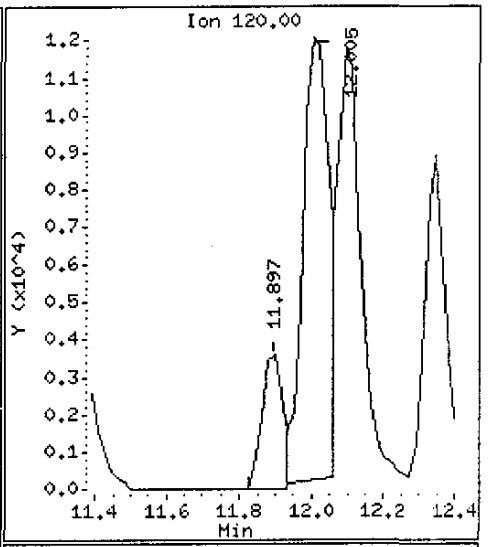
Column phase: DB624

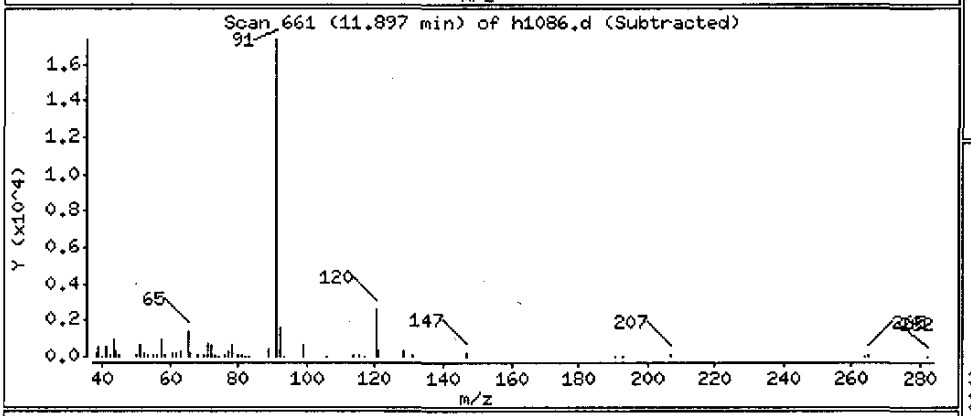
Column diameter: 0.53

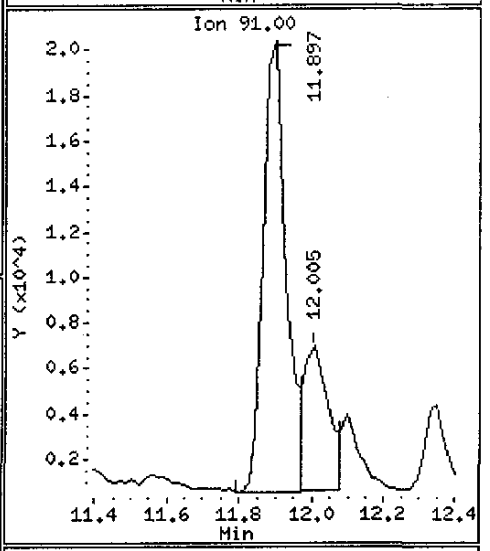
87 n-Propylbenzene

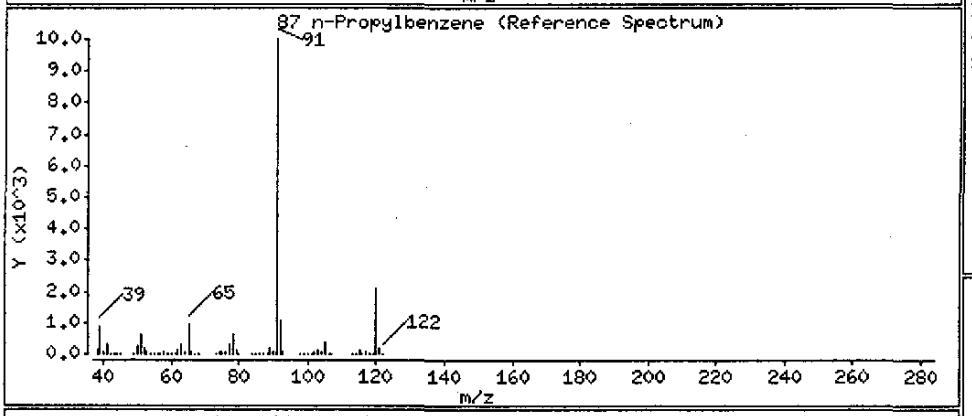
Concentration: 12.0032 ug/L

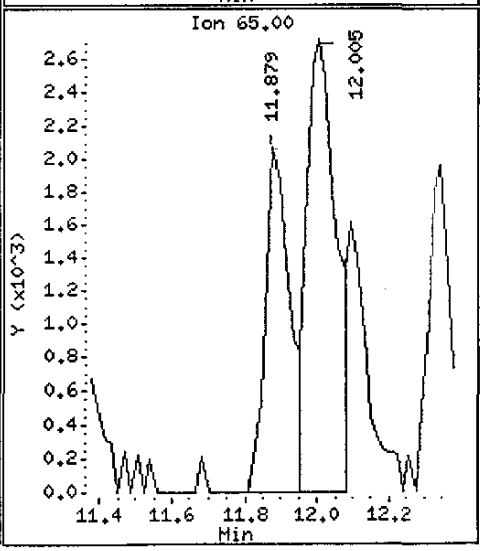


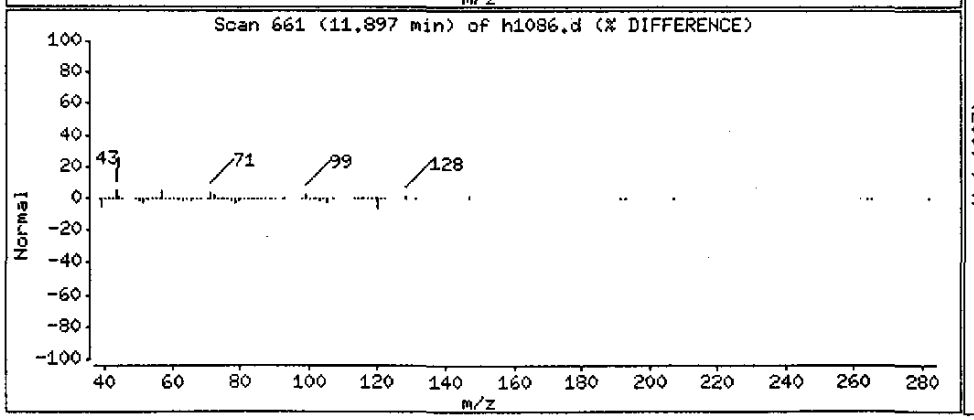












Data File: /chem/H.i/022004.b/h1086.d

Date : 20-FEB-2004 18:31

Client ID: MW-10

Instrument: H.i

Sample Info: F9KEX1AA,0.4,D4B130209-010

Purge Volume: 20.0

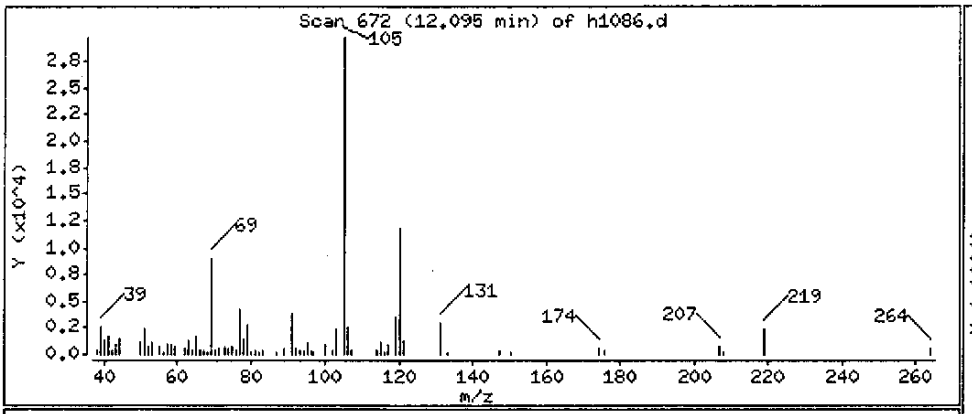
Operator: appelhansd

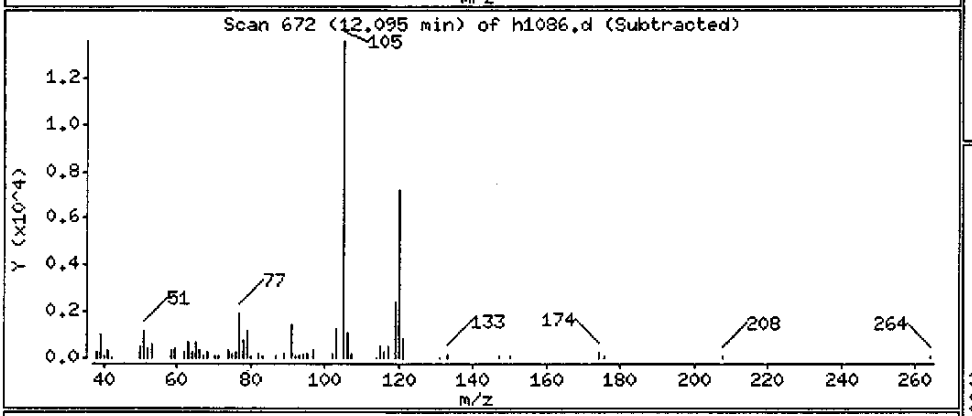
Column phase: DB624

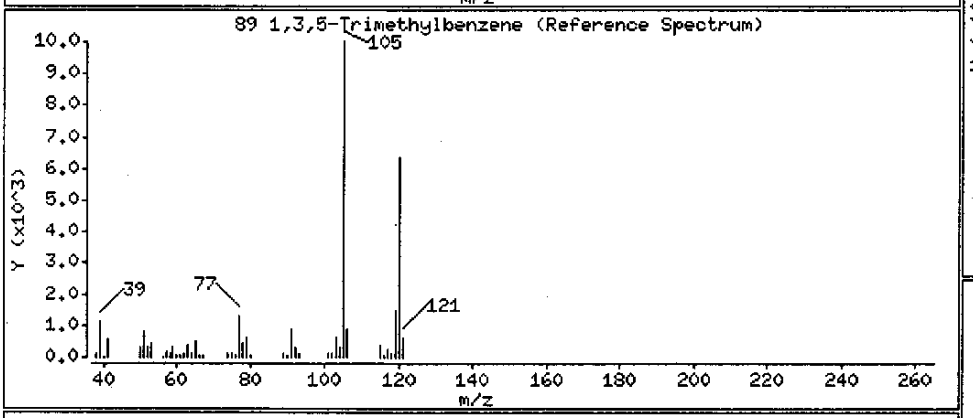
Column diameter: 0.53

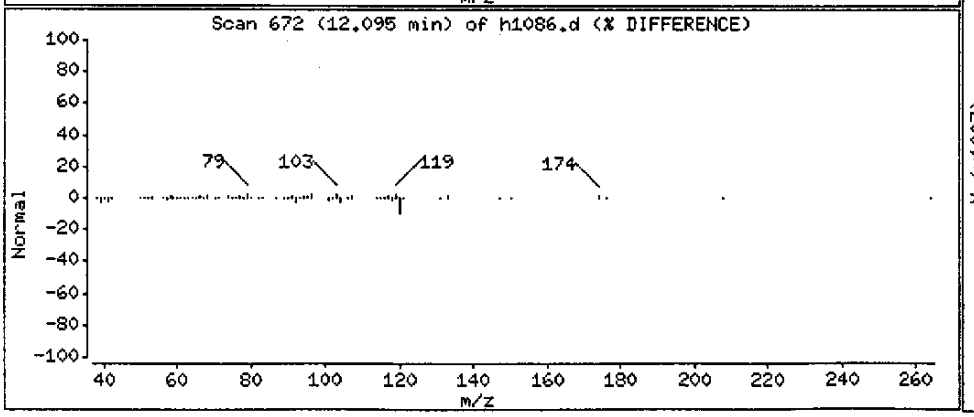
89 1,3,5-Trimethylbenzene

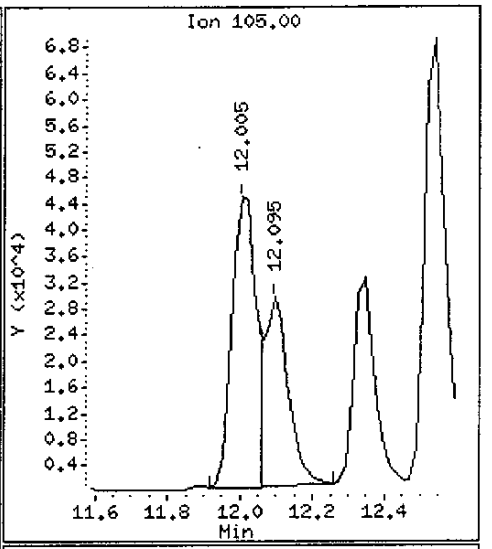
Concentration: 34.7094 ug/L

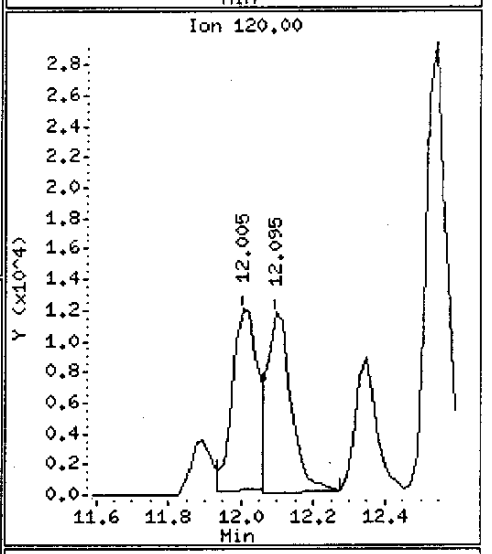


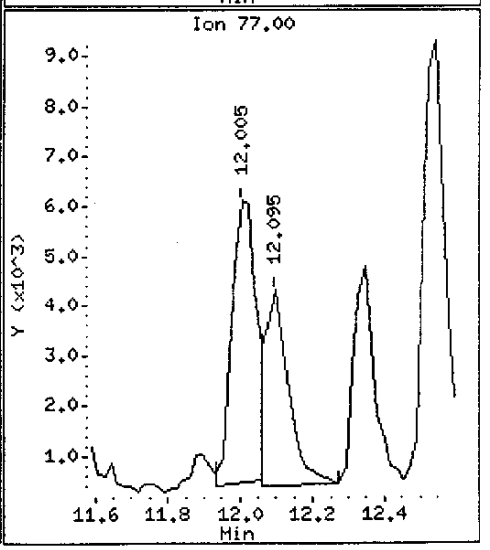












Data File: /chem/H.i/022004.b/h1086.d

Date : 20-FEB-2004 18:31

Client ID: MW-10

Instrument: H.i

Sample Info: F9KEX1AA,0.4,D4B130209-010

Purge Volume: 20.0

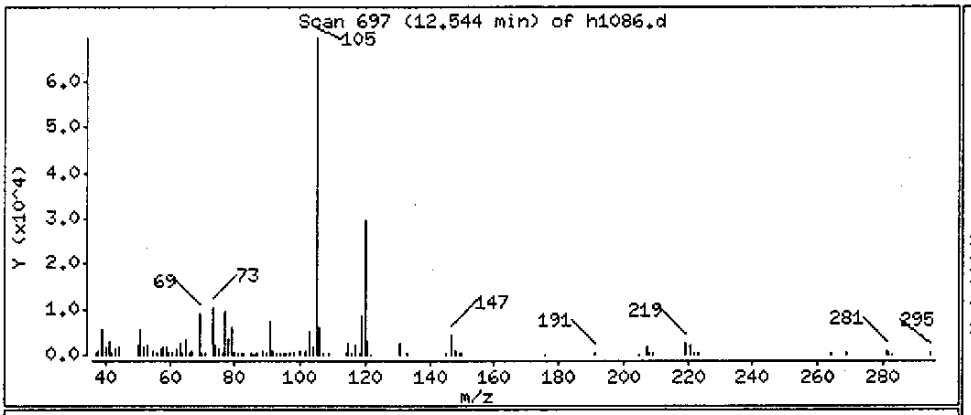
Operator: appelhansd

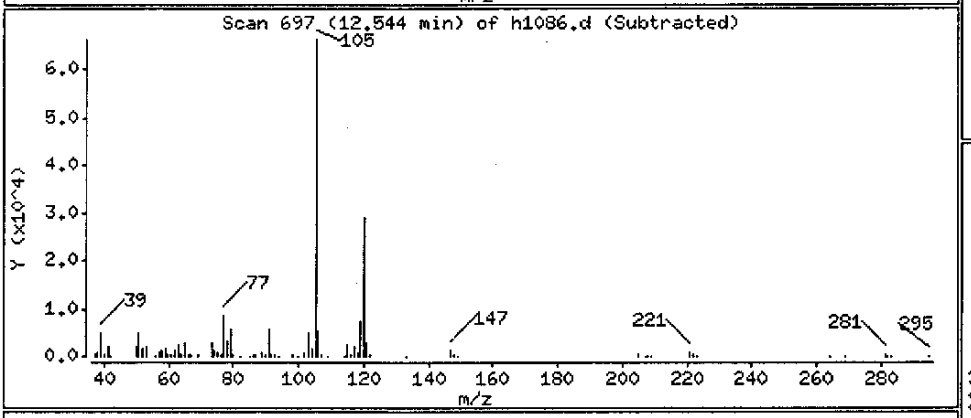
Column phase: DB624

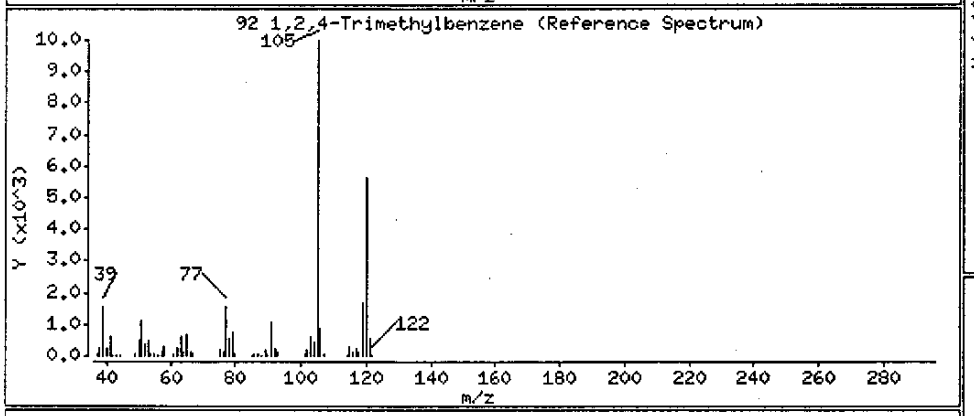
Column diameter: 0.53

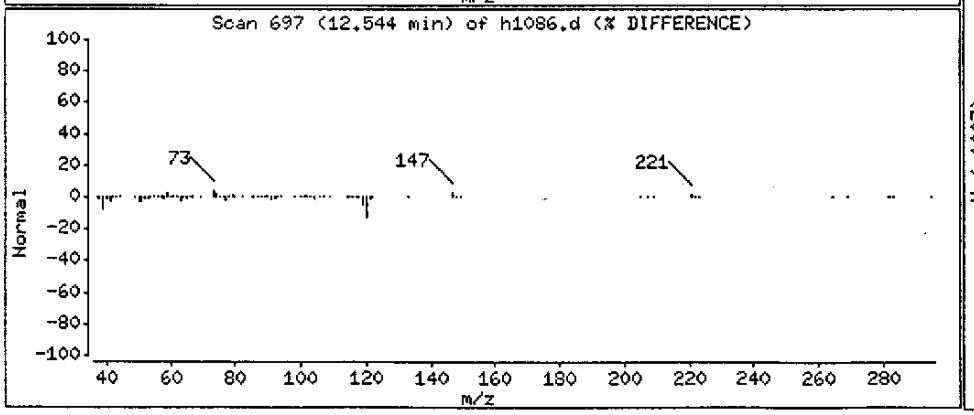
92 1,2,4-Trimethylbenzene

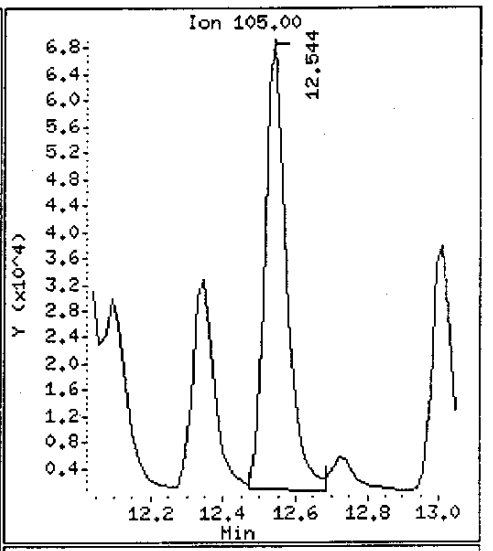
Concentration: 74.8899 ug/L

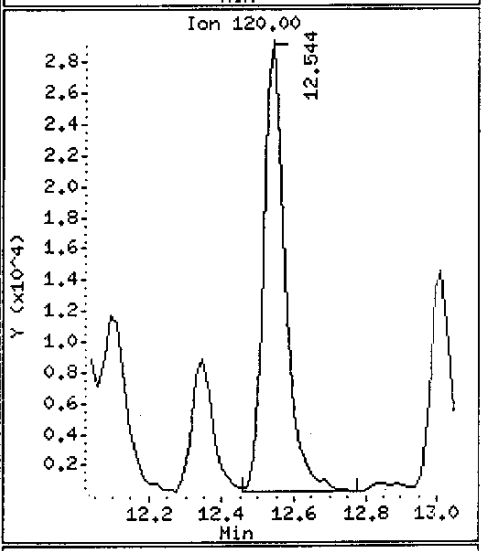


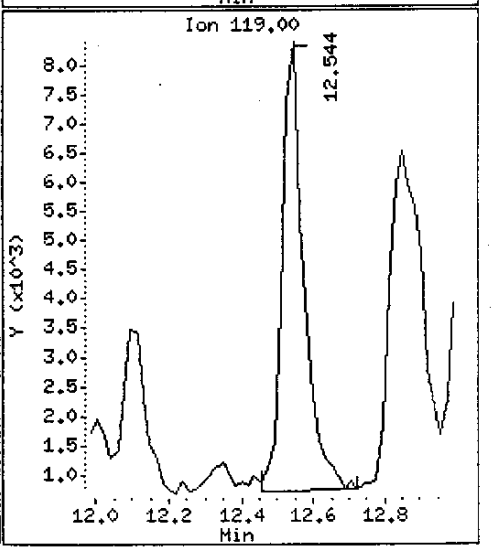












Data File: /chem/H.i/022004.b/h1086.d

Date : 20-FEB-2004 18:31

Client ID: MW-10

Instrument: H.i

Sample Info: F9KEX1AA,0.4,D4B130209-010

Purge Volume: 20.0

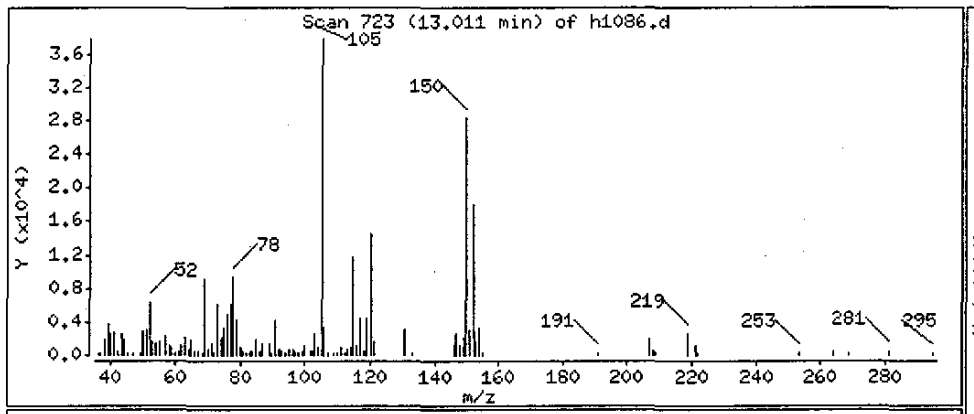
Operator: appelhansd

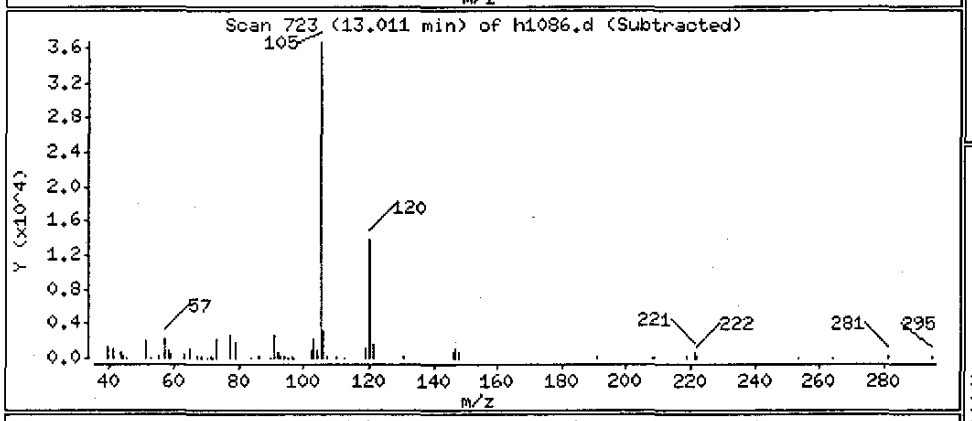
Column phase: DB624

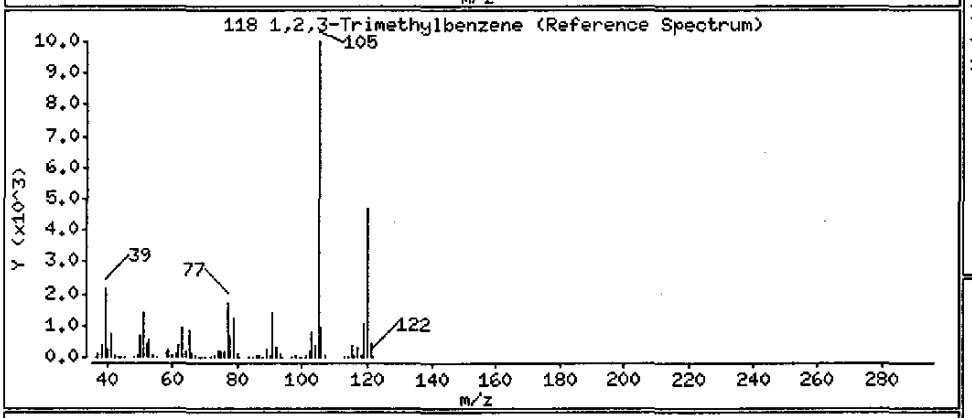
Column diameter: 0.53

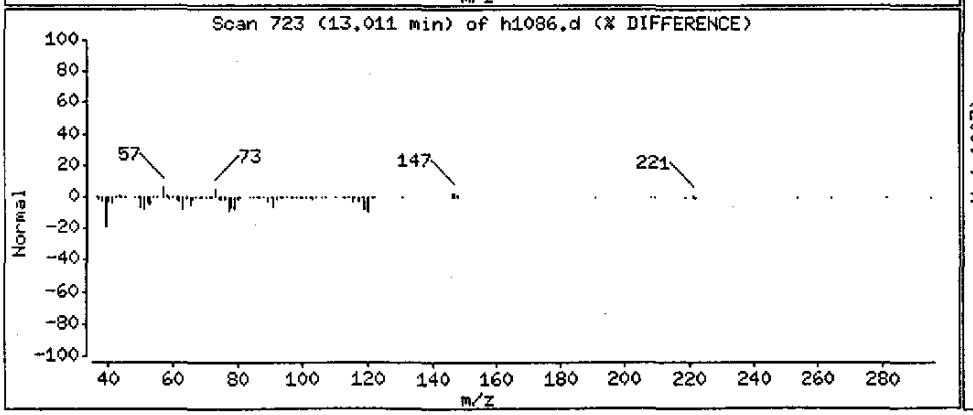
118 1,2,3-Trimethylbenzene

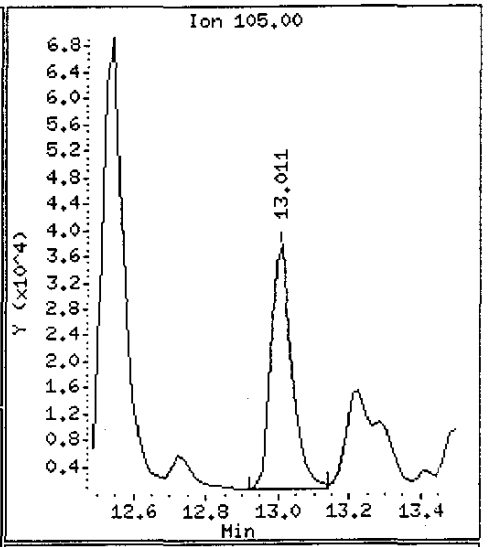
Concentration: 55.2225 ug/L

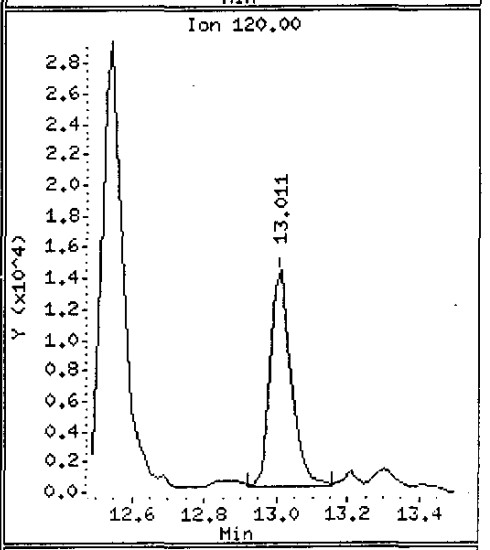


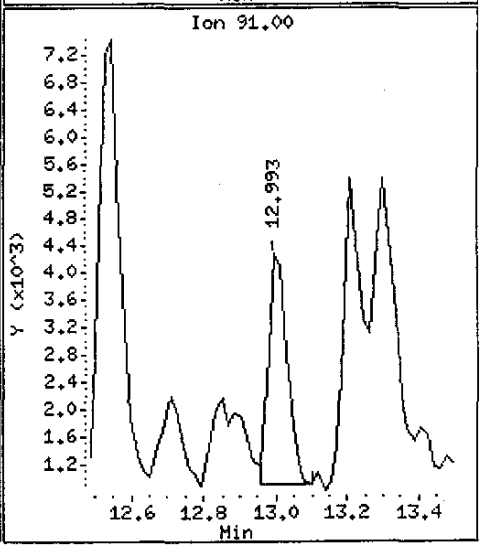












Data File: /chem/H.i/022004.b/h1086.d

Date : 20-FEB-2004 18:31

Client ID: MW-10

Instrument: H.i

Sample Info: F9KEX1AA,0.4,D4B130209-010

Purge Volume: 20.0

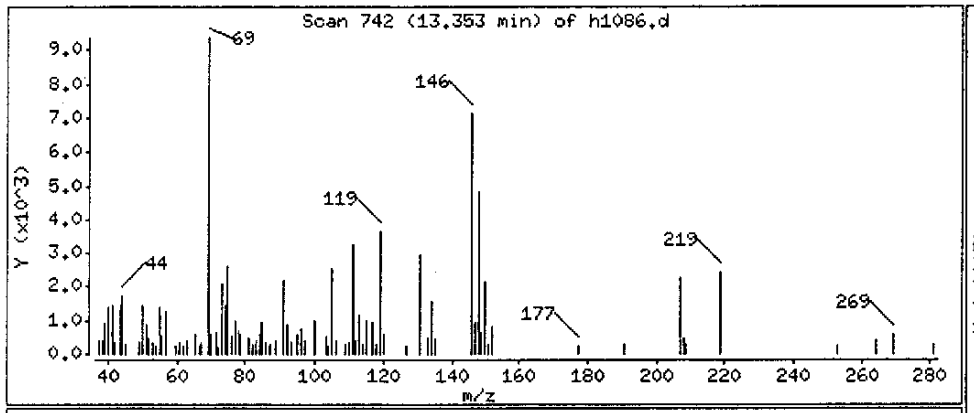
Operator: appelhansd

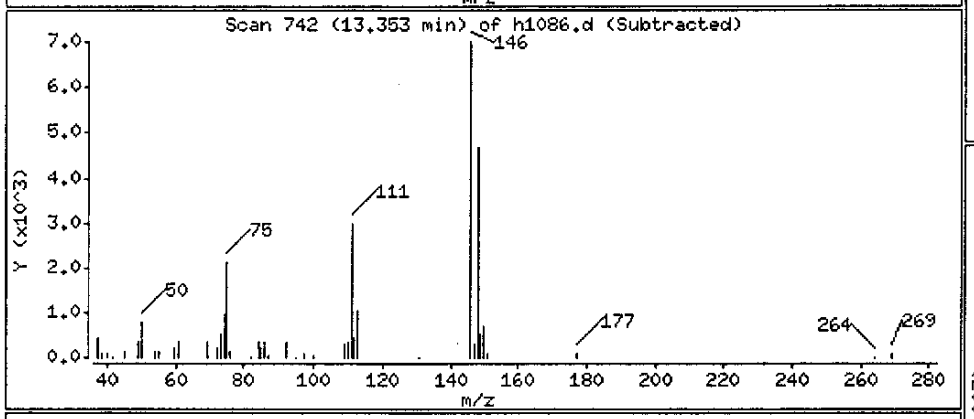
Column phase: DB624

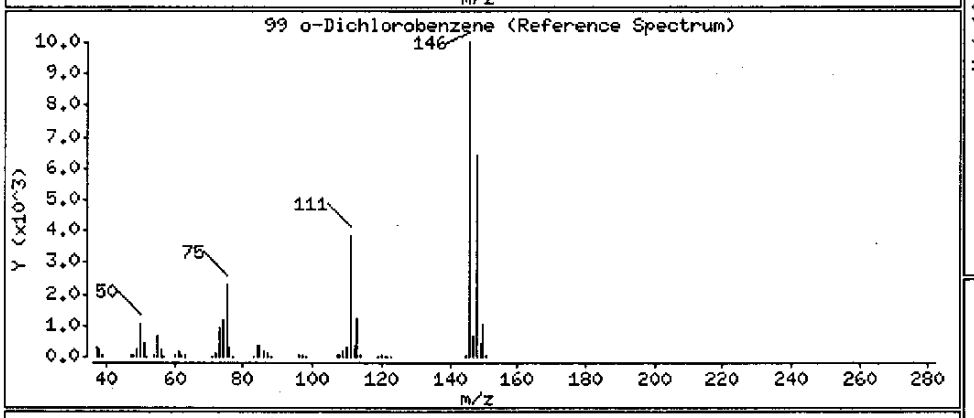
Column diameter: 0.53

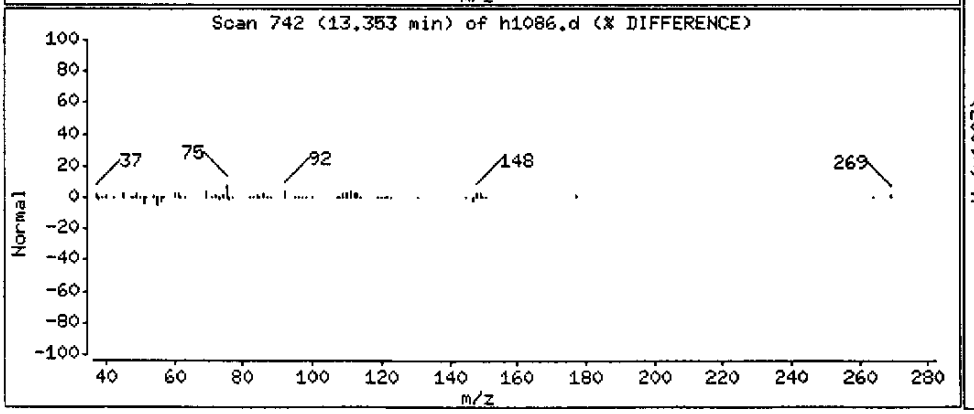
99 o-Dichlorobenzene

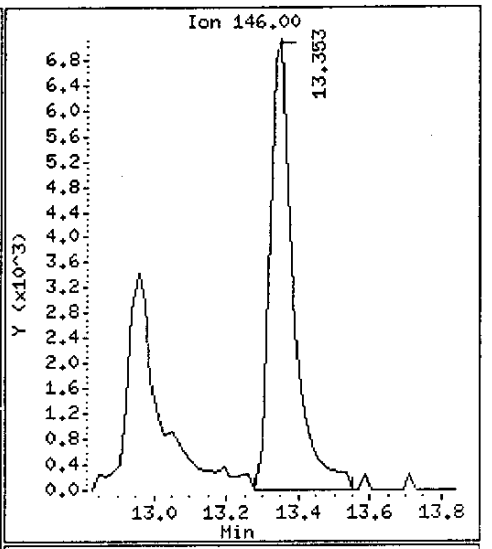
Concentration: 17.7504 ug/L

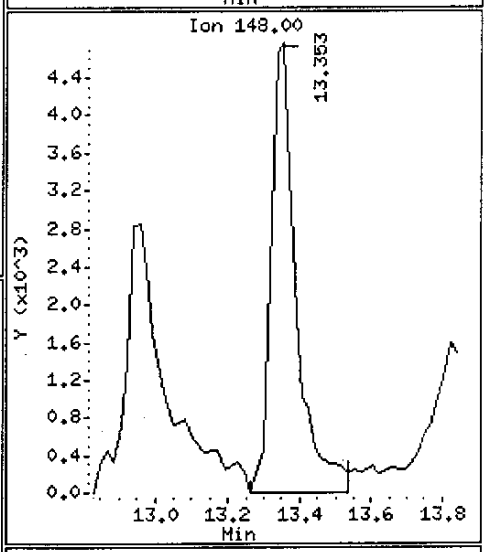


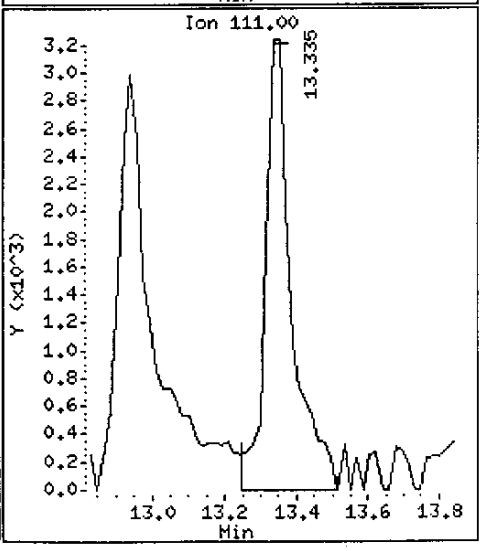












Data File: /chem/H.i/022004.b/h1086.d

Date : 20-FEB-2004 18:31

Client ID: MW-10

Instrument: H.i

Sample Info: F9KEX1AA,0.4,D4B130209-010

Purge Volume: 20.0

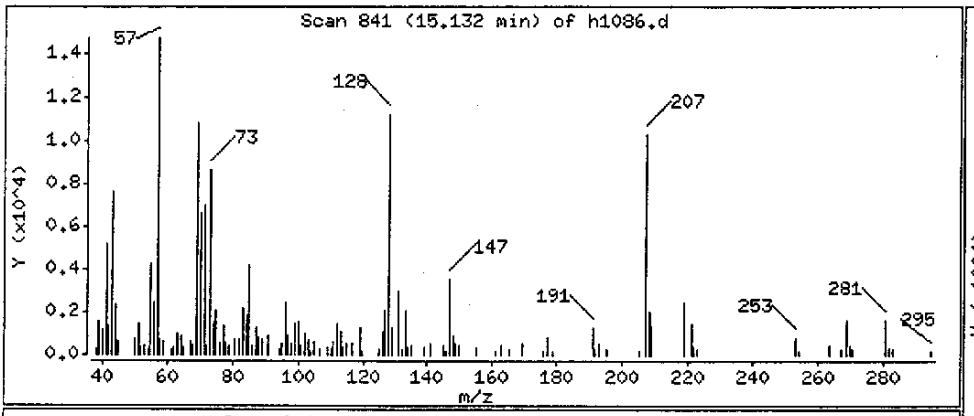
Operator: appelhansd

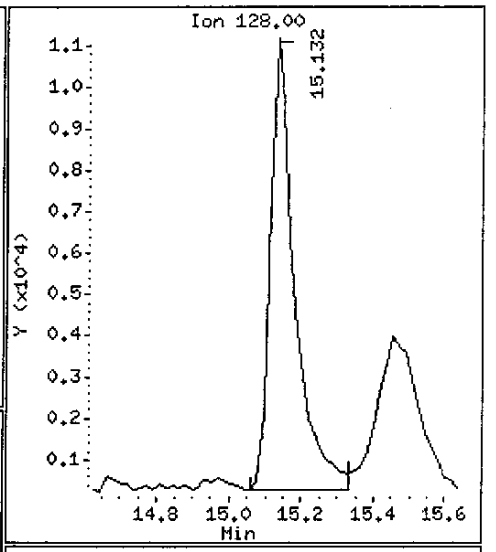
Column phase: DB624

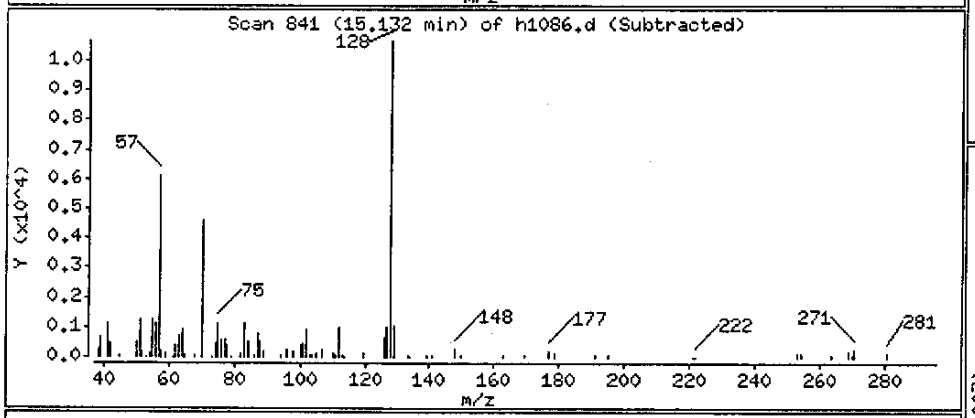
Column diameter: 0.53

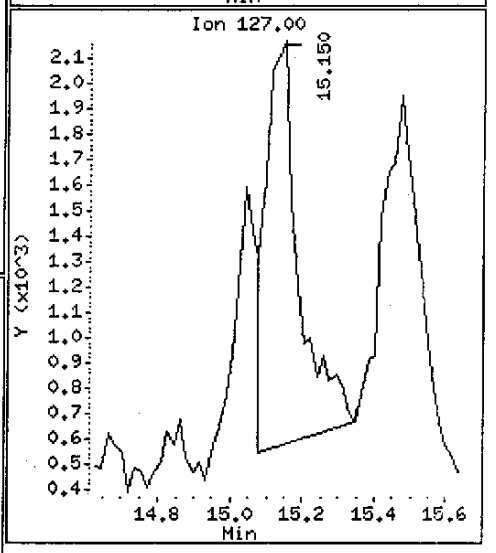
127 Naphthalene

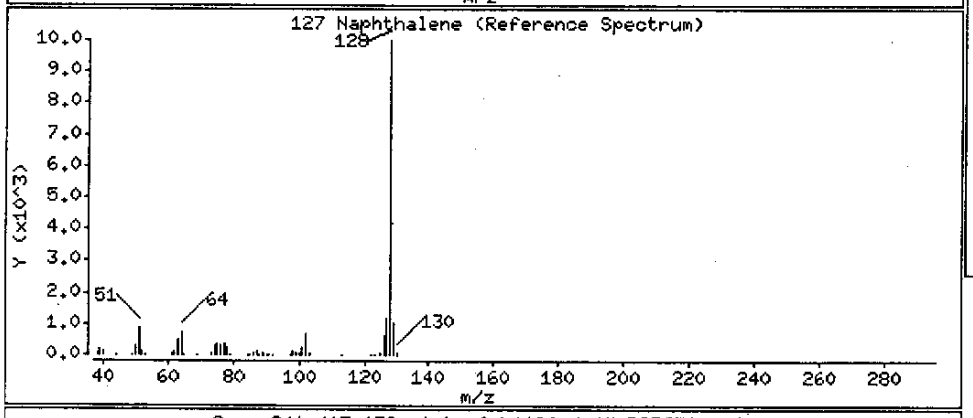
Concentration: 38.6565 ug/L

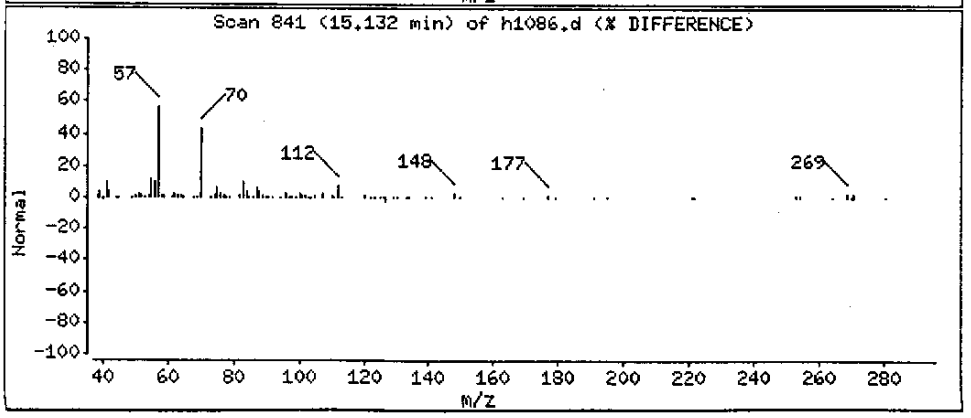












Data File: /chem/H.i/022004.b/h1087.d
Report Date: 23-Feb-2004 07:59

STL Denver

VOLATILE REPORT SW-846

Data file : /chem/H.i/022004.b/h1087.d
Lab Smp Id: F9KE11AA Client Smp ID: MW-11
Inj Date : 20-FEB-2004 18:51
Operator : appelhansd Inst ID: H.i
Smp Info : F9KE11AA,,D4B130209-011
Misc Info :
Comment : Purge and Trap Analysis
Method : /chem/H.i/022004.b/H-20ml-h2o.m
Meth Date : 20-Feb-2004 11:09 appelhad Quant Type: ISTD
Cal Date : 07-JAN-2004 15:24 Cal File: h0014.d
Als bottle: 2
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: H-all.sub
Target Version: 3.40
Processing Host: chemsv02

Concentration Formula: Amt * DF * Vp/Vs

Name	Value	Description
DF	1.000	Dilution Factor
Vp	20.000	Purge Volume (ml)
Vs	20.000	Sample Volume (ml)

DA 2-23

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/L)
* 48 Fluorobenzene	96	6.394	6.395	(1.000)	1800503	12.5000	
* 72 Chlorobenzene-d5	119	10.078	10.060	(1.000)	328238	12.5000	
* 96 1,4-Dichlorobenzene-d4	152	12.935	12.917	(1.000)	617977	12.5000	
$ 40 Dibromofluoromethane	111	5.604	5.586	(0.876)	818025	11.5498	11.5498
$ 44 1,2-Dichloroethane-d4	65	5.999	5.981	(0.938)	340448	10.7842	10.7842
$ 61 Toluene-d8	98	8.299	8.281	(0.823)	1403859	11.1884	11.1884
$ 82 Bromofluorobenzene	95	11.569	11.552	(1.148)	833406	12.1125	12.1125
M 1 1,2-Dichloroethene (total)	96				1746051	32.3395	32.3395
M 2 Xylene (total)	106.00	Compound Not Detected.					
3 dichlorodifluoromethane	85.00	Compound Not Detected.					
4 Chloromethane	50.00	Compound Not Detected.					
5 Vinyl Chloride	62	2.154	2.136	(0.337)	19988	0.49888	0.498877
6 Ethylene Oxide	43.00	Compound Not Detected.					
117 Dichlorotetrafluoroethane	85.00	Compound Not Detected.					
123 1,2-dichloro-1,1,2-triflourom	117.00	Compound Not Detected.					
124 2,2-dichloro-1,1,1-trifluorom	83.00	Compound Not Detected.					

Data File: /chem/H.i/022004.b/h1087.d
Report Date: 23-Feb-2004 07:59

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)
7 Bromomethane	94.00	Compound Not Detected.					
8 Chloroethane	64.00	Compound Not Detected.					
9 Dichlorofluoromethane	67.00	Compound Not Detected.					
10 Trichlorofluoromethane	101.00	Compound Not Detected.					
11 Ethanol	45.00	Compound Not Detected.					
12 Ethyl Ether	59.00	Compound Not Detected.					
13 Acrolein	56.00	Compound Not Detected.					
15 Acetone	43.00	Compound Not Detected.					
14 1,1-Dichloroethene	96.00	Compound Not Detected.					
16 Trichlorotrifluoroethane	151.00	Compound Not Detected.					
17 Iodomethane	142.00	Compound Not Detected.					
19 Acetonitrile	41.00	Compound Not Detected.					
18 Carbon Disulfide	76.00	Compound Not Detected.					
20 Allyl Chloride	41.00	Compound Not Detected.					
119 Methyl Acetate	43.00	Compound Not Detected.					
21 Methylene Chloride	84	3.699	3.627	(0.578)	27488	0.61321	0.613215
125 2-Propanol	45.00	Compound Not Detected.					
22 tert-Butyl alcohol	59.00	Compound Not Detected.					
23 Acrylonitrile	53.00	Compound Not Detected.					
24 trans-1,2-Dichloroethene	96	3.933	3.915	(0.615)	17455	0.32085	0.320848
25 Methyl t-butyl ether	73.00	Compound Not Detected.					
26 Hexane	57.00	Compound Not Detected.					
27 1,1-Dichloroethane	63	4.382	4.364	(0.685)	1349146	14.7139	14.7139
29 Vinyl acetate	43.00	Compound Not Detected.					
30 Isopropyl ether	87.00	Compound Not Detected.					
28 Chloroprene	53.00	Compound Not Detected.					
120 ETBE	59.00	Compound Not Detected.					
33 2-Butanone	43.00	Compound Not Detected.					
32 cis-1,2-Dichloroethene	96	5.047	5.029	(0.789)	1728596	32.0187	32.0186
31 2,2-Dichloropropane	77.00	Compound Not Detected.					
35 Ethyl Acetate	43.00	Compound Not Detected.					
34 Propionitrile	54.00	Compound Not Detected.					
36 Methacrylonitrile	41.00	Compound Not Detected.					
37 Bromochloromethane	128.00	Compound Not Detected.					
39 Tetrahydrofuran	42.00	Compound Not Detected.					
38 Chloroform	83	5.406	5.406	(0.845)	23938	0.23758	0.237575
41 1,1,1-Trichloroethane	97.00	Compound Not Detected.					
114 Cyclohexane	56.00	Compound Not Detected.					
42 1,1-Dichloropropene	75.00	Compound Not Detected.					
43 Carbon Tetrachloride	117.00	Compound Not Detected.					
45 Isobutanol	41.00	Compound Not Detected.					
46 Benzene	78	6.071	6.071	(0.949)	35812	0.23232	0.232317
47 1,2-Dichloroethane	62.00	Compound Not Detected.					
121 TAME	73.00	Compound Not Detected.					
49 n-Butanol	56.00	Compound Not Detected.					
50 Trichloroethene	130	6.844	6.844	(1.070)	98809	1.69026	1.69026
115 2-Pentanone	43.00	Compound Not Detected.					

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/L)
52 1,2-Dichloropropane	63.00	Compound Not Detected.					
122 Methyl Cyclohexane	55.00	Compound Not Detected.					
53 Dibromomethane	93.00	Compound Not Detected.					
54 Methyl Methacrylate	100.00	Compound Not Detected.					
55 1,4-Dioxane	88.00	Compound Not Detected.					
56 Bromodichloromethane	83.00	Compound Not Detected.					
57 2-nitropropane	41.00	Compound Not Detected.					
113 2-Chloroethyl vinyl ether	63.00	Compound Not Detected.					
59 cis-1,3-Dichloropropene	75.00	Compound Not Detected.					
60 4-Methyl-2-pentanone	43.00	Compound Not Detected.					
62 Toluene	91.00	Compound Not Detected.					
63 trans-1,3-Dichloropropene	75.00	Compound Not Detected.					
64 Ethyl methacrylate	69.00	Compound Not Detected.					
65 1,1,2-Trichloroethane	97.00	Compound Not Detected.					
67 1,3-Dichloropropane	76.00	Compound Not Detected.					
66 Tetrachloroethene	164	9.054	9.054	(0.898)	21604	0.39023	0.390232
68 2-Hexanone	43.00	Compound Not Detected.					
126 Tetrahydrothiophene	60.00	Compound Not Detected.					
69 Dibromochloromethane	129.00	Compound Not Detected.					
70 1,2-Dibromoethane	107.00	Compound Not Detected.					
71 1-Chlorohexane	91.00	Compound Not Detected.					
73 Chlorobenzene	112.00	Compound Not Detected.					
74 1,1,1,2-Tetrachloroethane	131.00	Compound Not Detected.					
75 Ethylbenzene	106.00	Compound Not Detected.					
76 m and p-Xylene	106.00	Compound Not Detected.					
77 o-Xylene	106.00	Compound Not Detected.					
78 Styrene	104.00	Compound Not Detected.					
79 Bromoform	173.00	Compound Not Detected.					
80 isopropyl benzene	105.00	Compound Not Detected.					
116 cis-1,4-Dichloro-2-butene	53.00	Compound Not Detected.					
81 Cyclohexanone	55.00	Compound Not Detected.					
83 1,1,2,2-Tetrachloroethane	83.00	Compound Not Detected.					
84 Bromobenzene	156.00	Compound Not Detected.					
85 1,2,3-Trichloropropane	110.00	Compound Not Detected.					
86 t-1,4-Dichloro-2-butene	53.00	Compound Not Detected.					
87 n-Propylbenzene	120.00	Compound Not Detected.					
88 2-Chlorotoluene	126.00	Compound Not Detected.					
89 1,3,5-Trimethylbenzene	105.00	Compound Not Detected.					
90 4-Chlorotoluene	126.00	Compound Not Detected.					
91 tert-Butylbenzene	119.00	Compound Not Detected.					
92 1,2,4-Trimethylbenzene	105.00	Compound Not Detected.					
93 sec-Butylbenzene	134.00	Compound Not Detected.					
94 m-Dichlorobenzene	146.00	Compound Not Detected.					
95 4-Isopropyltoluene	119.00	Compound Not Detected.					
97 p-dichlorobenzene	146.00	Compound Not Detected.					
118 1,2,3-Trimethylbenzene	105.00	Compound Not Detected.					
98 n-Butylbenzene	91.00	Compound Not Detected.					

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)
99 o-Dichlorobenzene	146.00	Compound Not Detected.					
100 1,2-Dibromo-3-chloropropane	157.00	Compound Not Detected.					
101 1,2,4-Trichlorobenzene	180.00	Compound Not Detected.					
102 Hexachlorobutadiene	225.00	Compound Not Detected.					
127 Naphthalene	128.00	Compound Not Detected.					
104 1,2,3-Trichlorobenzene	180.00	Compound Not Detected.					

Data File: /chem/H.i/022004.b/h1087.d
Report Date: 23-Feb-2004 07:59

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INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: H.i
Lab File ID: h1087.d
Lab Smp Id: F9KE11AA
Analysis Type: VOA
Quant Type: ISTD
Operator: appelhansd
Method File: /chem/H.i/022004.b/H-20ml-h2o.m
Misc Info:

Calibration Date: 02/20/4
Calibration Time: 1059
Client Smp ID: MW-11
Level: LOW
Sample Type: WATER

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
48 Fluorobenzene	2466684	1233342	4933368	1800503	-27.01
72 Chlorobenzene-d5	459303	229652	918606	328238	-28.54
96 1,4-Dichlorobenze	730993	365496	1461986	617977	-15.46

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
48 Fluorobenzene	6.39	5.89	6.89	6.39	0.00
72 Chlorobenzene-d5	10.06	9.56	10.56	10.08	0.18
96 1,4-Dichlorobenze	12.92	12.42	13.42	12.94	0.14

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

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RECOVERY REPORT

Client Name: ARCADIS GERAGHTY & M13-FEB-2004 Client SDG: D4B130209
Sample Matrix: LIQUID Fraction: VOA
Lab Smp Id: F9KE11AA Client Smp ID: MW-11
Level: LOW Operator: appelhansd
Data Type: MS DATA SampleType: SAMPLE
SpikeList File: dcs-h20.spk Quant Type: ISTD
Sublist File: H-all.sub
Method File: /chem/H.i/022004.b/H-20ml-h2o.m
Misc Info:

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 40 Dibromofluorometha	11.5000	11.5498	100.43	76-116
$ 44 1,2-Dichloroethane	11.5000	10.7842	93.78	59-129
$ 61 Toluene-d8	11.5000	11.1884	97.29	76-116
$ 82 Bromofluorobenzene	11.5000	12.1125	105.33	74-114

Data File: /chem/H.i/022004.b/h1087.d
Date : 20-FEB-2004 18:51
Client ID: MW-11
Sample Info: F9KE11AA,,D4B130209-011
Purge Volume: 20.0
Column phase: DB624

Instrument: H.i
Operator: appelhansd
Column diameter: 0.53

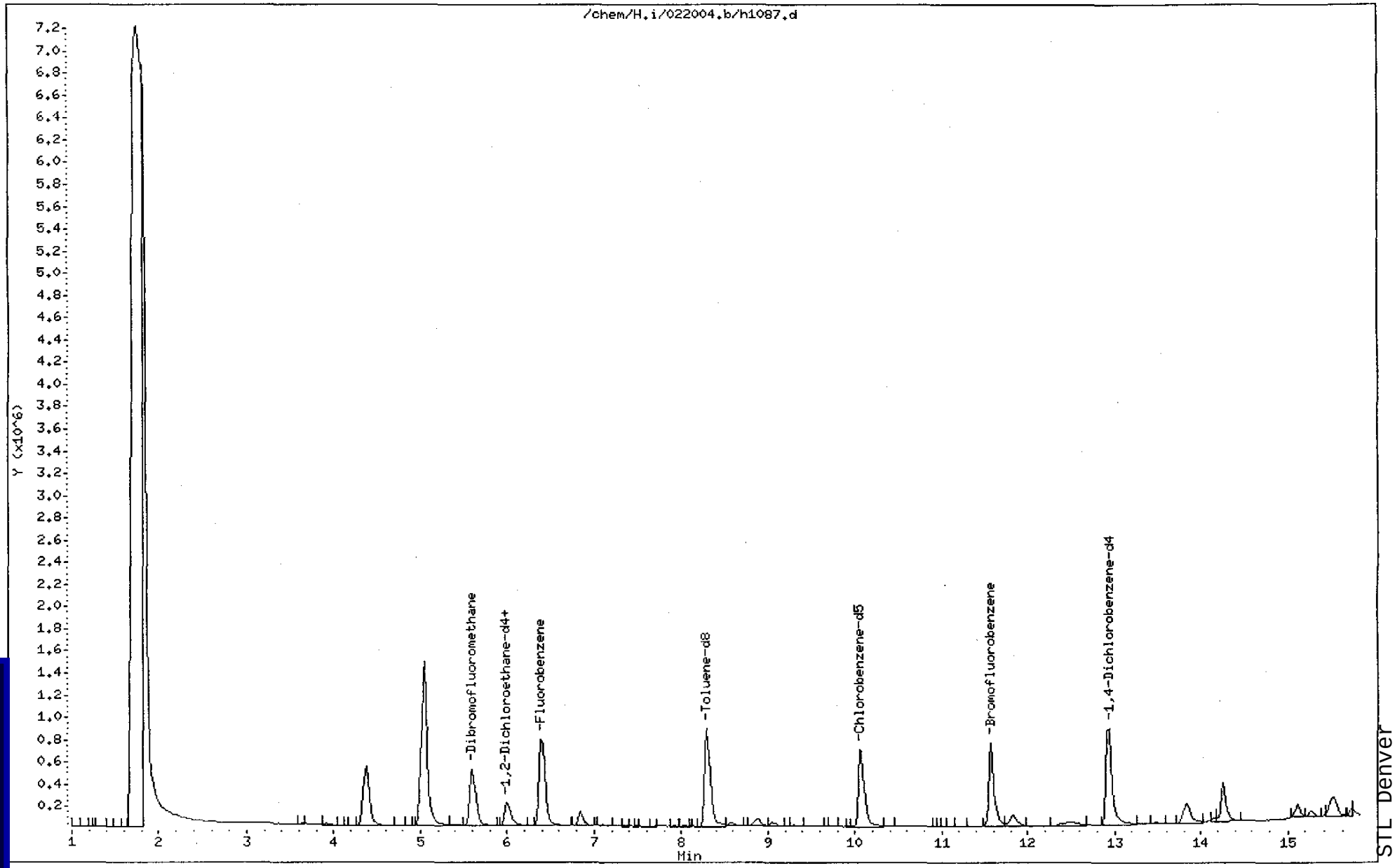


Table of Contents

Data File: /chem/H.i/022004.b/h1087.d

Date : 20-FEB-2004 18:51

Client ID: MW-11

Instrument: H.i

Sample Info: F9KE11AA,,D4B130209-011

Purge Volume: 20.0

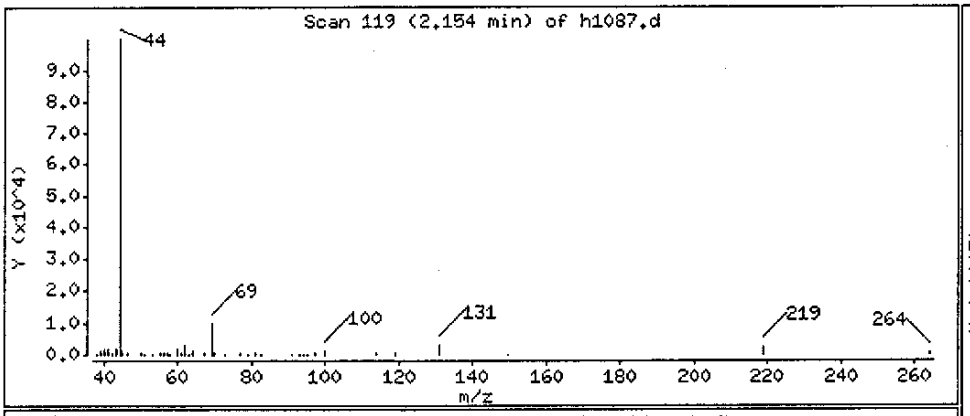
Operator: appelhansd

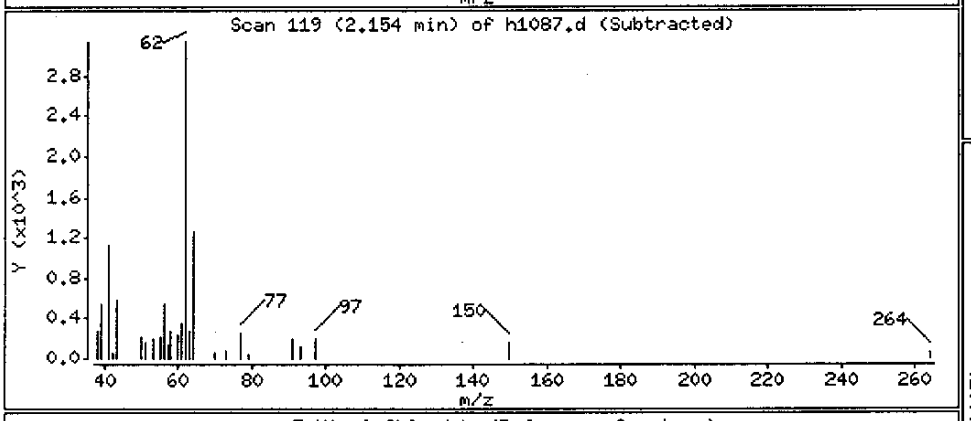
Column phase: DB624

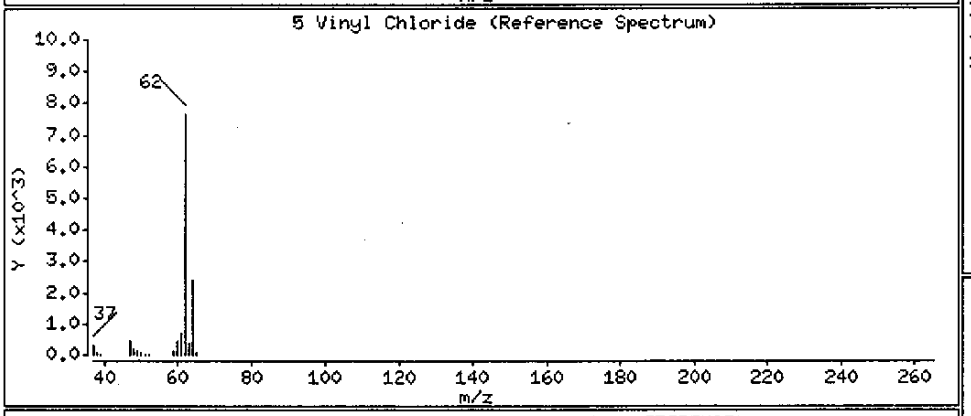
Column diameter: 0.53

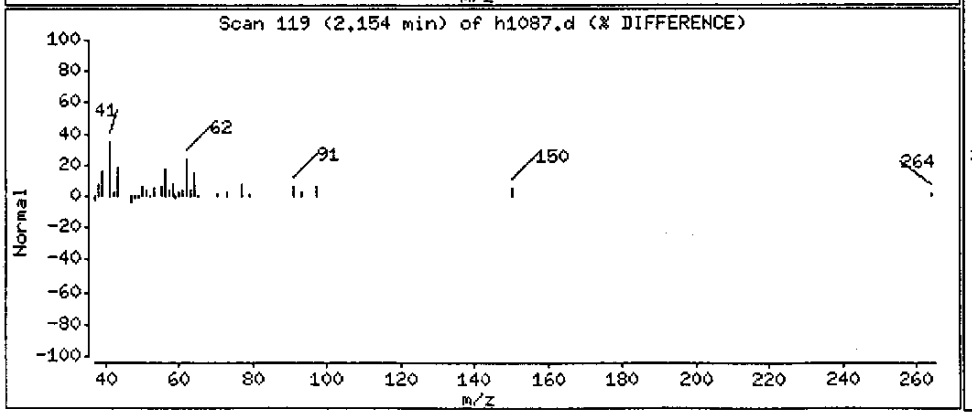
5 Vinyl Chloride

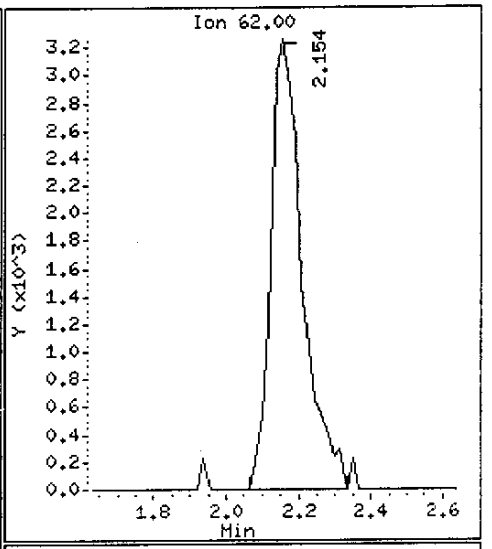
Concentration: 0.498877 ug/L

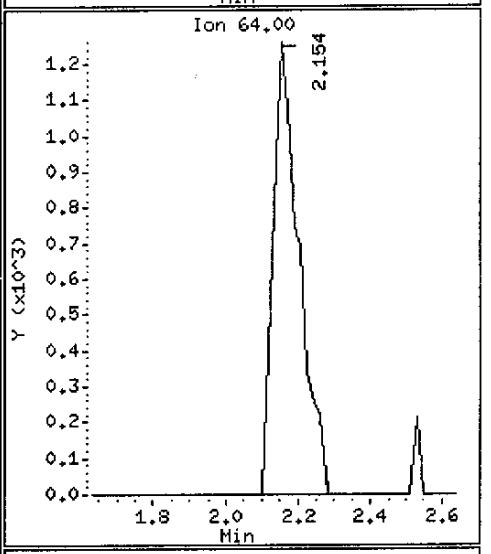


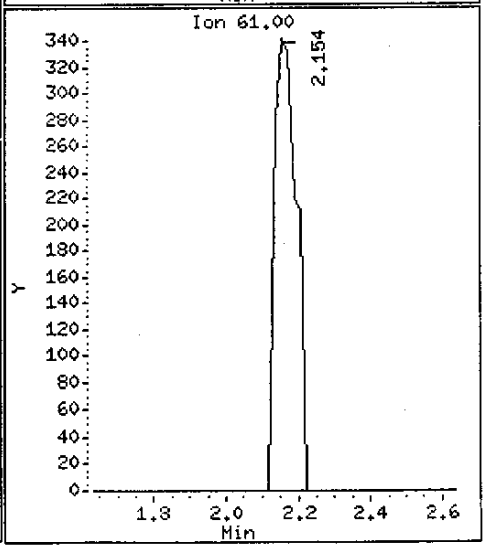












Data File: /chem/H.i/022004.b/h1087.d

Date : 20-FEB-2004 18:51

Client ID: MW-11

Instrument: H.i

Sample Info: F9KE11AA,,D4B130209-011

Purge Volume: 20.0

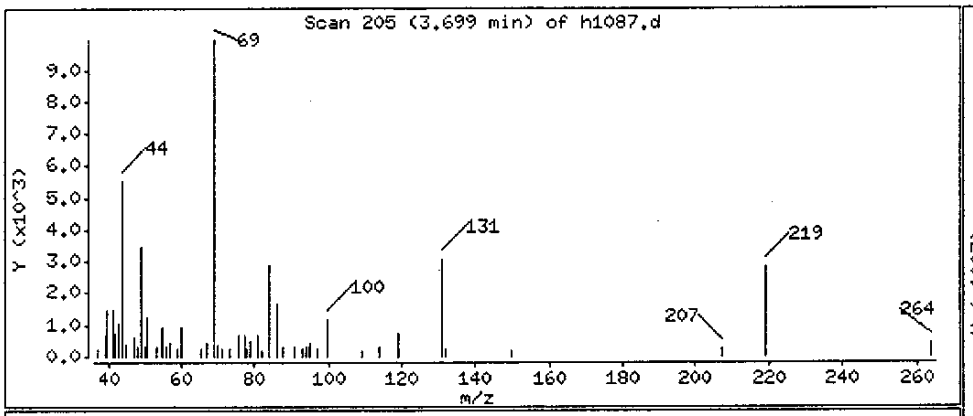
Operator: appelhansd

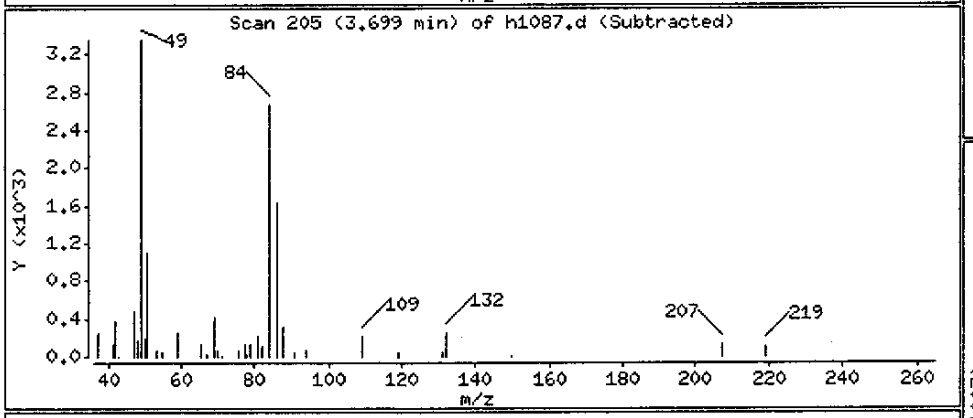
Column phase: DB624

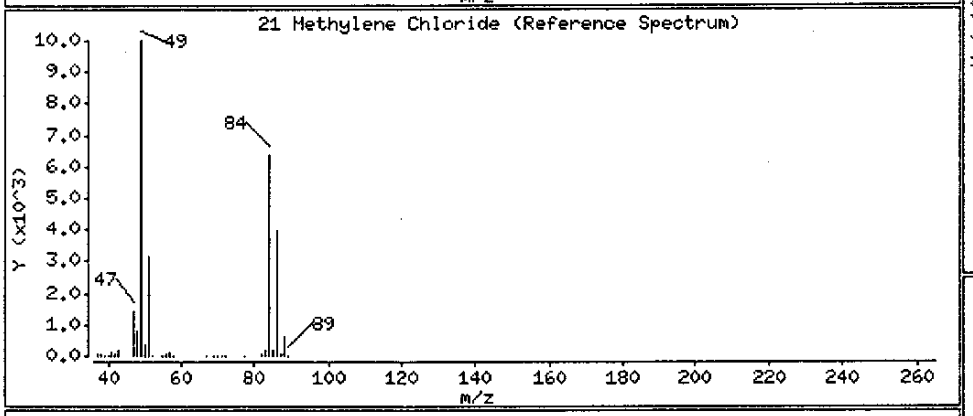
Column diameter: 0.53

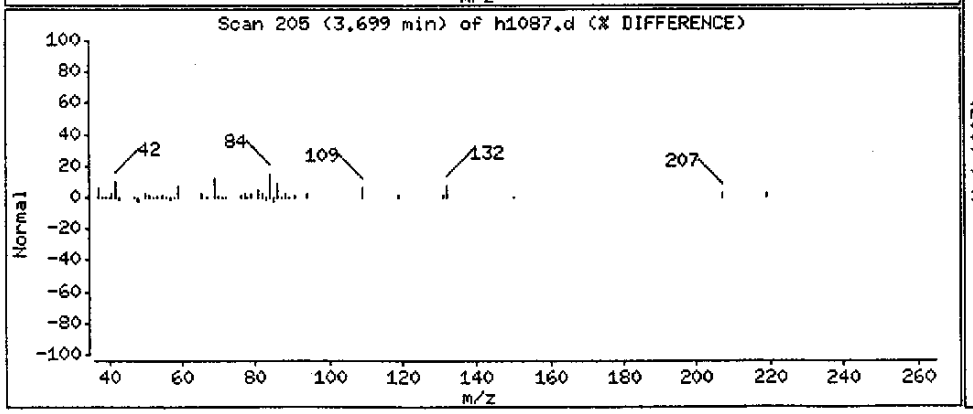
21 Methylene Chloride

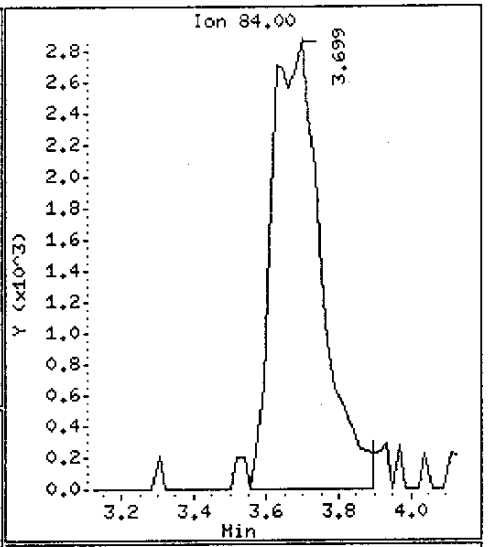
Concentration: 0.613215 ug/L

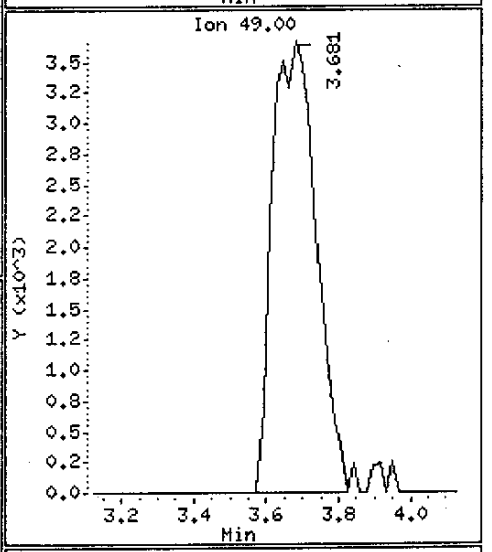


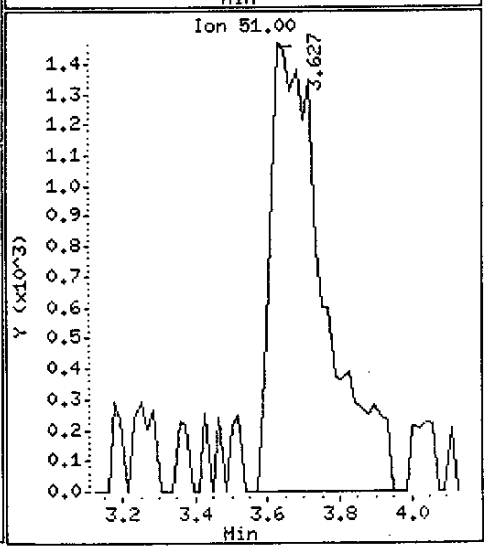












Data File: /chem/H.i/022004.b/h1087.d

Date : 20-FEB-2004 18:51

Client ID: MW-11

Instrument: H.i

Sample Info: F9KE11AA,,D4B130209-011

Purge Volume: 20.0

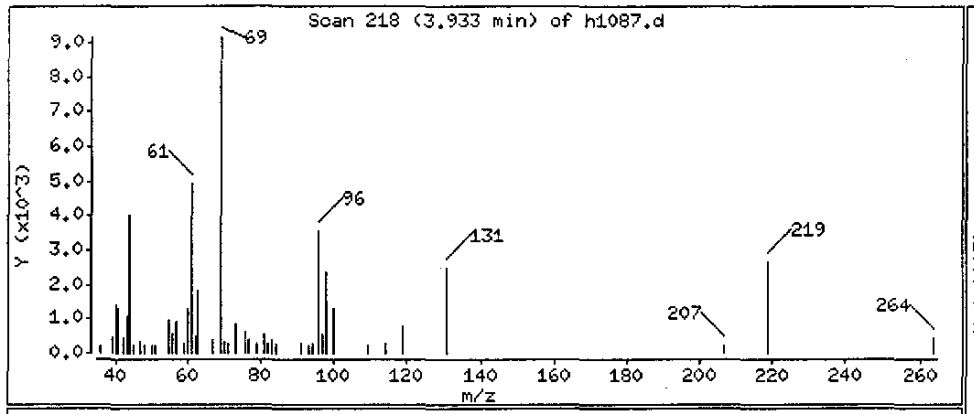
Operator: appelhansd

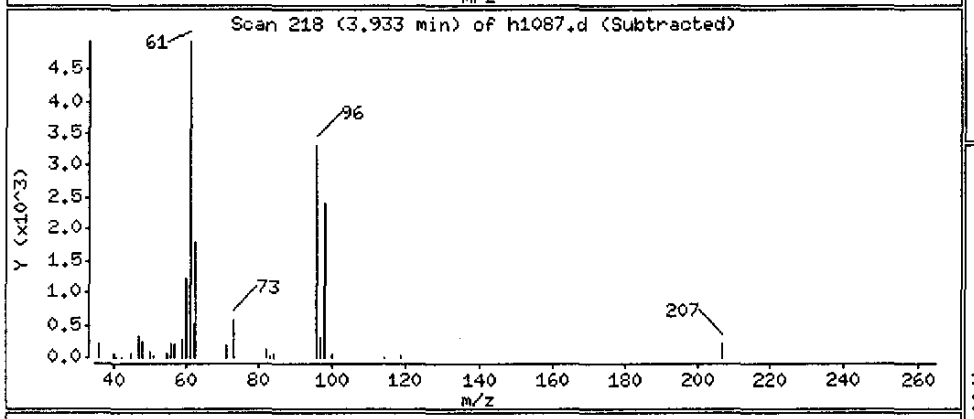
Column phase: DB624

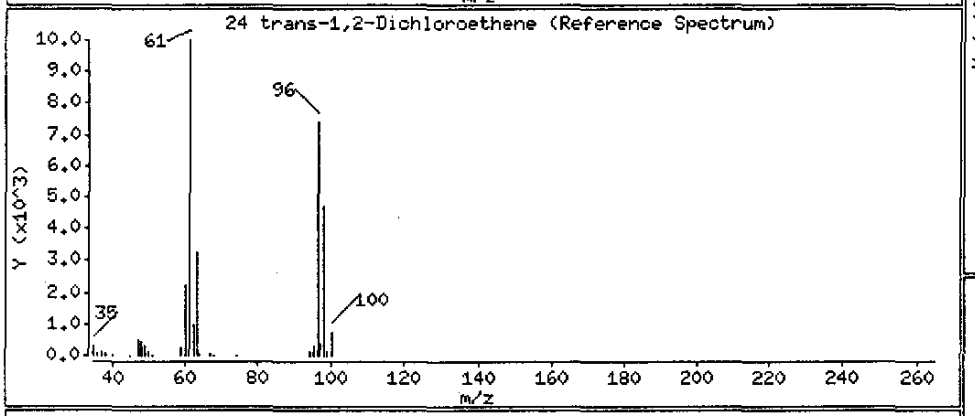
Column diameter: 0.53

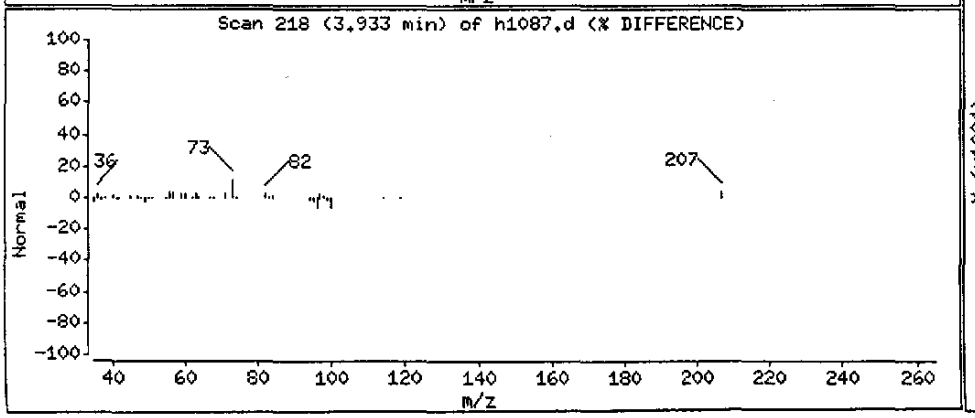
24 trans-1,2-Dichloroethene

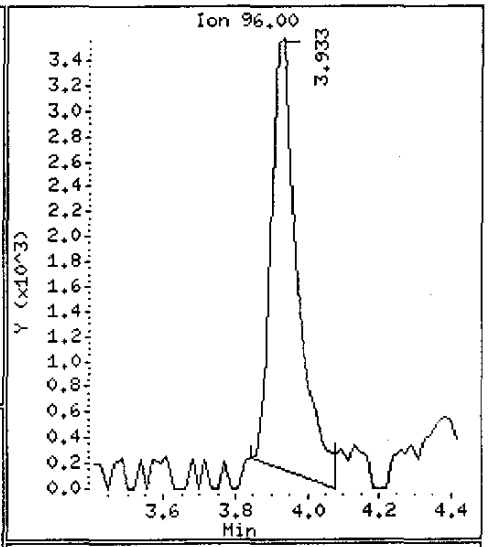
Concentration: 0.320848 ug/L

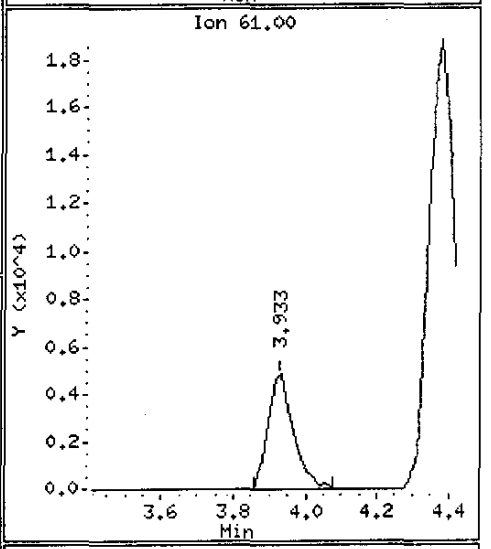


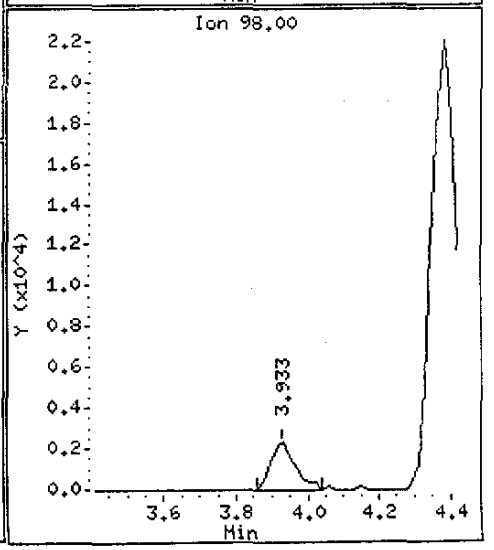












Data File: /chem/H.i/022004.b/h1087.d

Date : 20-FEB-2004 18:51

Client ID: MW-11

Instrument: H.i

Sample Info: F9KE11AA,,D4B130209-011

Purge Volume: 20.0

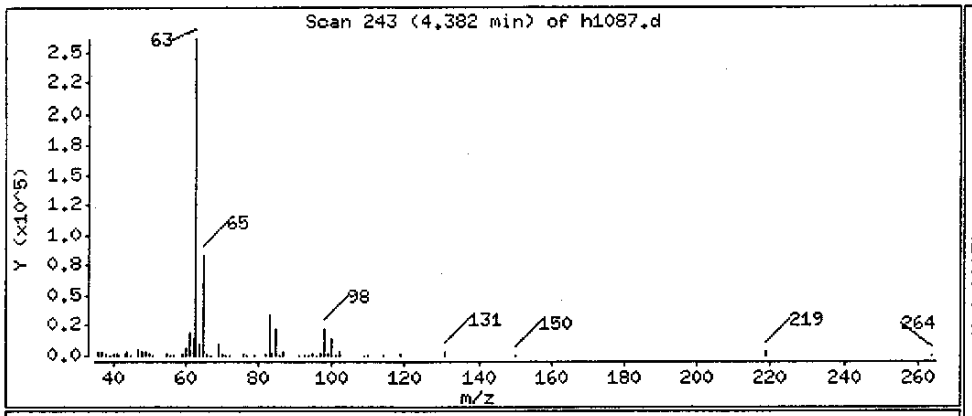
Operator: appelhansd

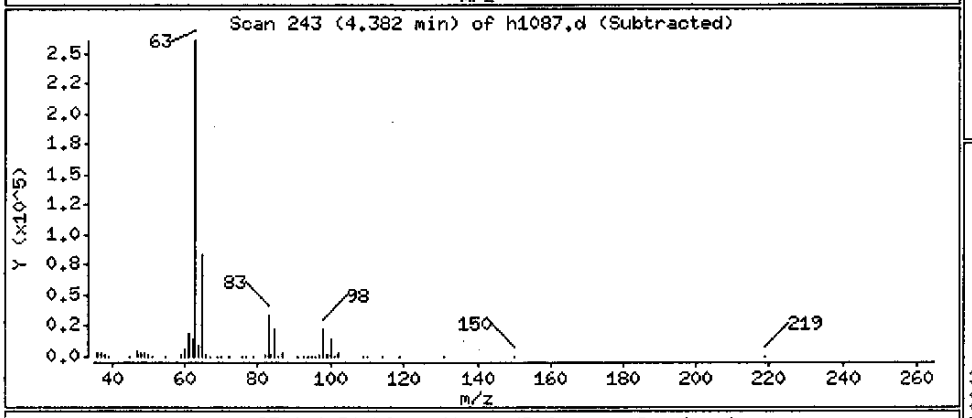
Column phase: DB624

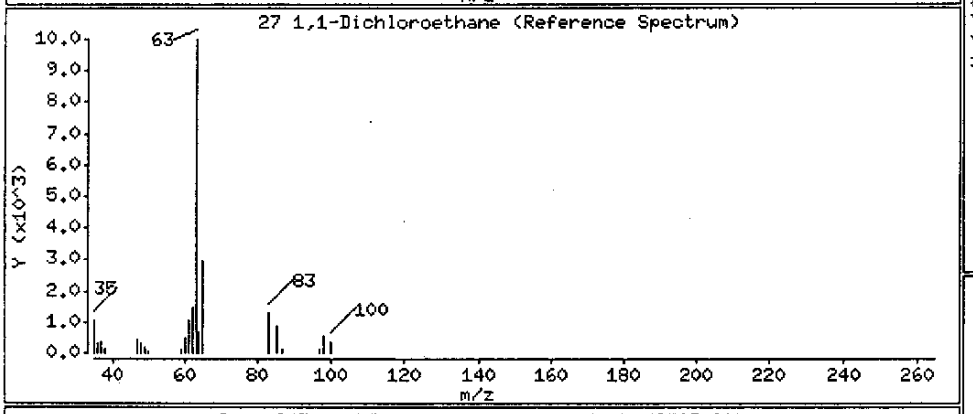
Column diameter: 0.53

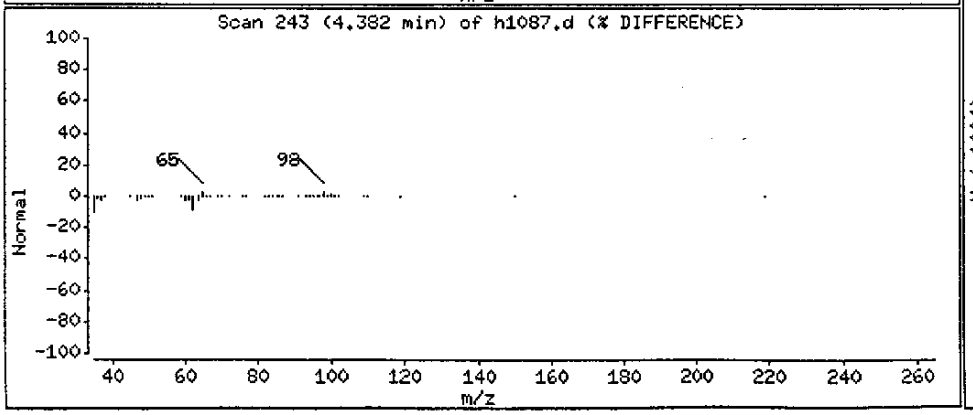
27 1,1-Dichloroethane

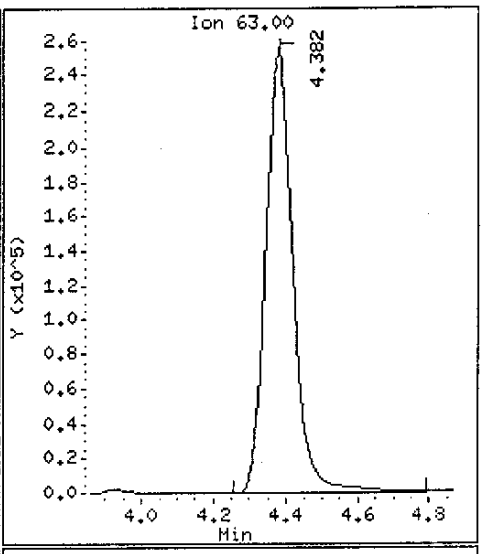
Concentration: 14.7139 ug/L

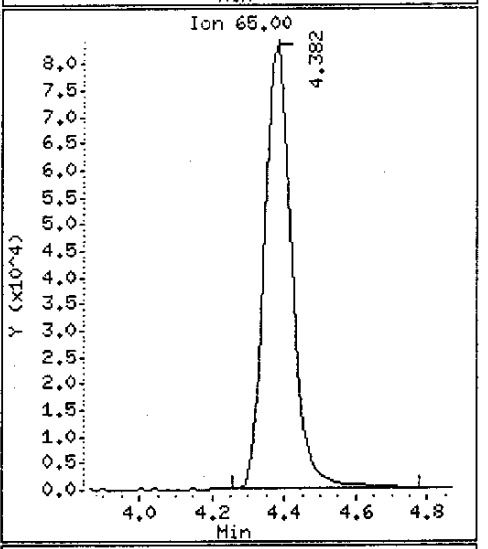


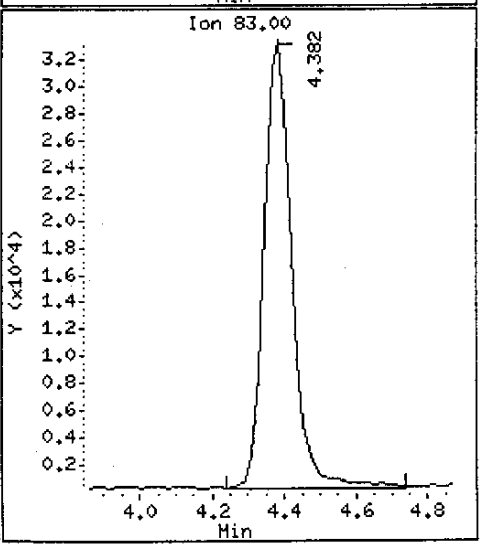












Data File: /chem/H.i/022004.b/h1087.d

Date : 20-FEB-2004 18:51

Client ID: MW-11

Instrument: H.i

Sample Info: F9KE11AA,,D4B130209-011

Purge Volume: 20.0

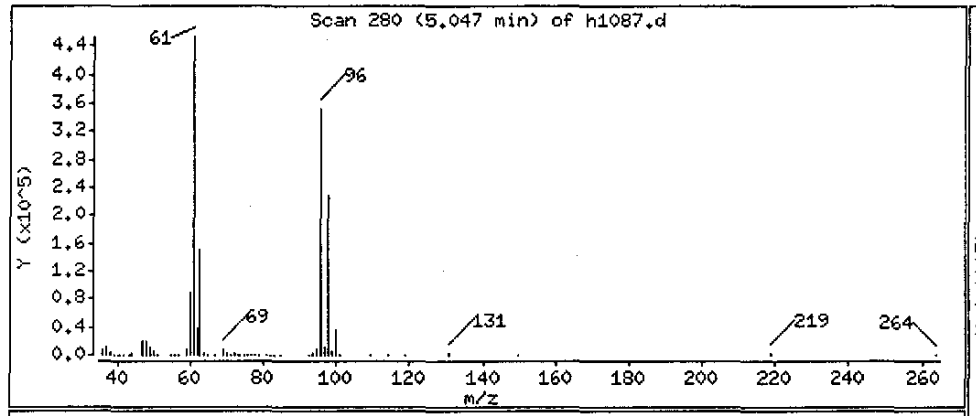
Operator: appelhansd

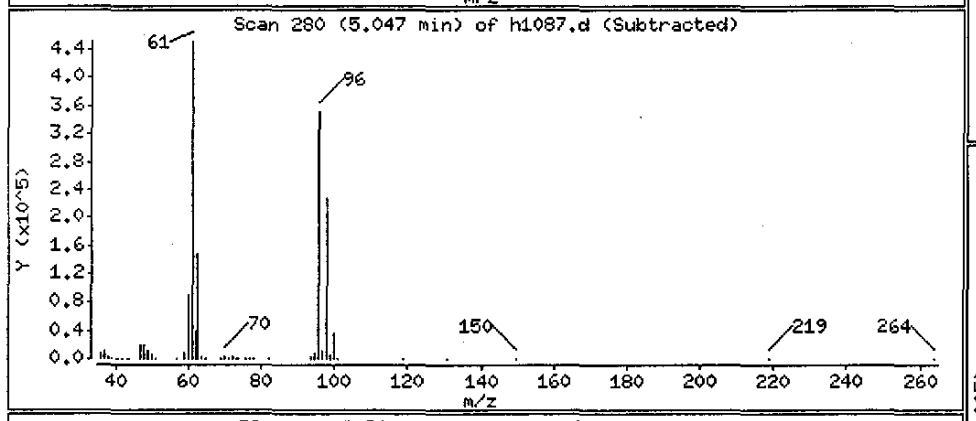
Column phase: DB624

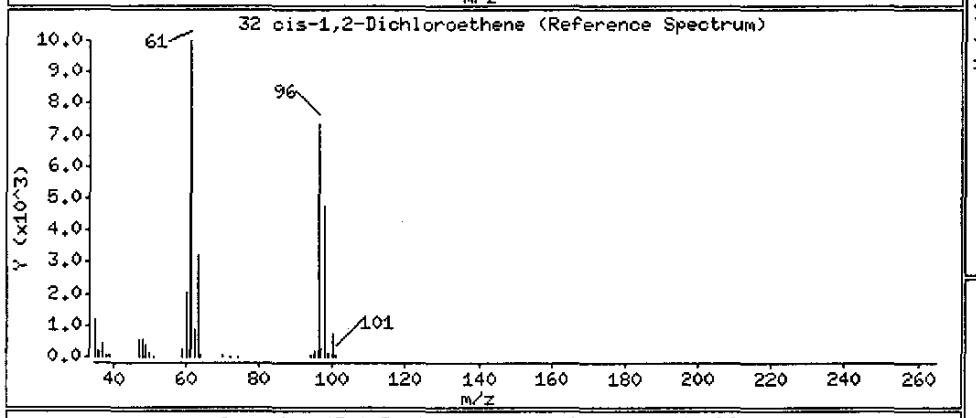
Column diameter: 0.53

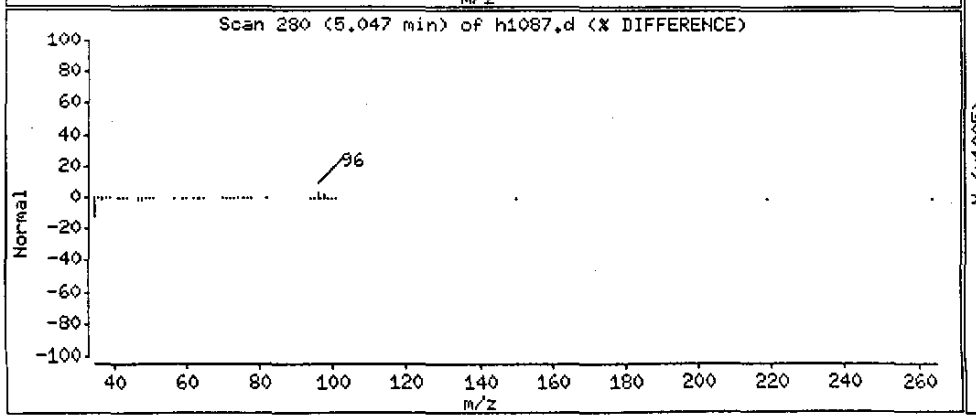
32 cis-1,2-Dichloroethene

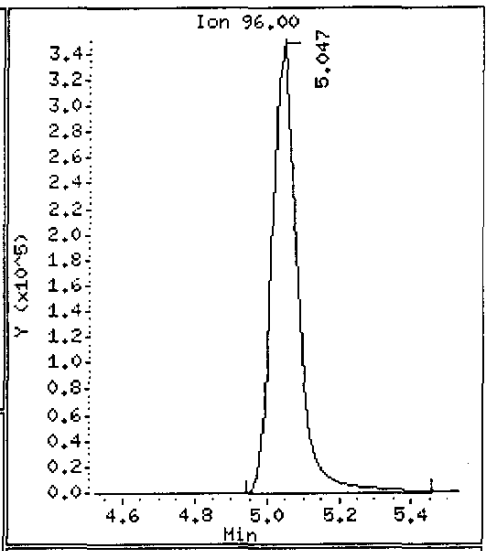
Concentration: 32.0186 ug/L

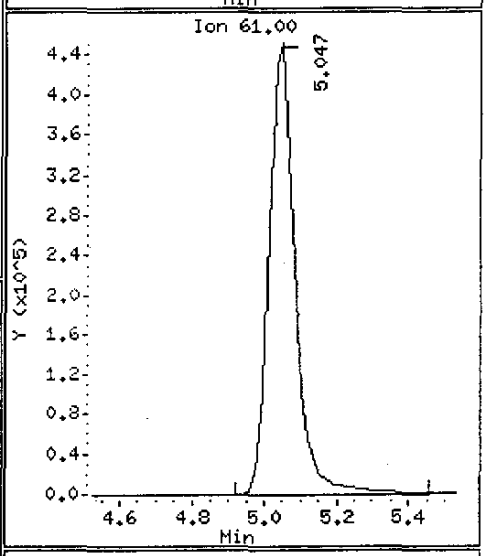


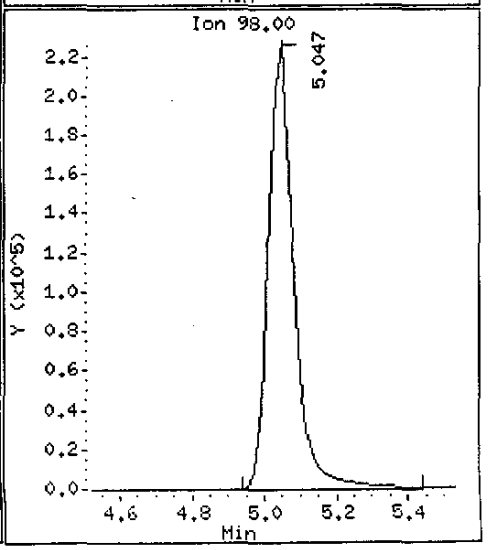












Data File: /chem/H.i/022004.b/h1087.d

Date : 20-FEB-2004 18:51

Client ID: MW-11

Instrument: H.i

Sample Info: F9KE11AA,,D4B130209-011

Purge Volume: 20.0

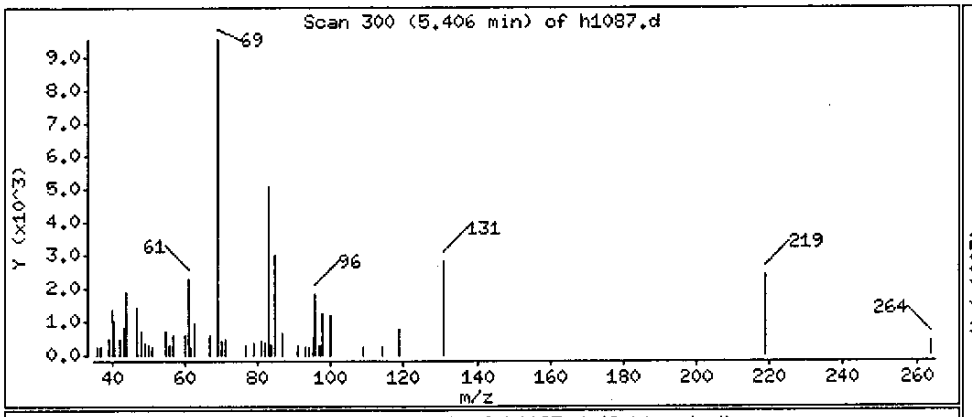
Operator: appelhansd

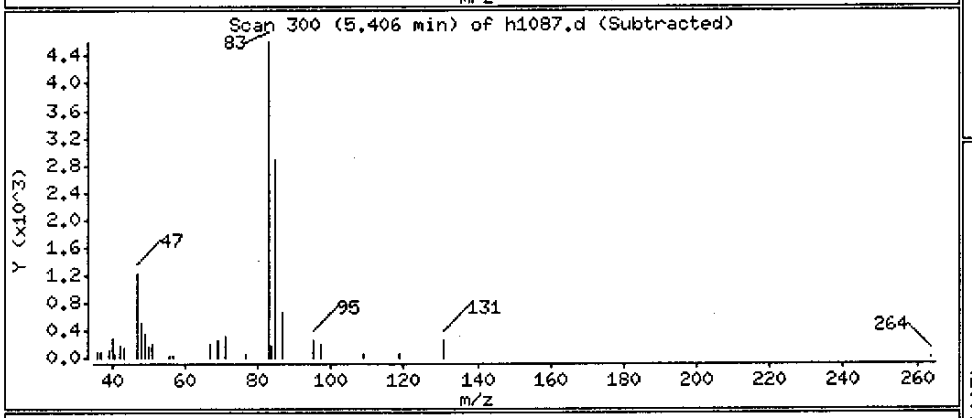
Column phase: DB624

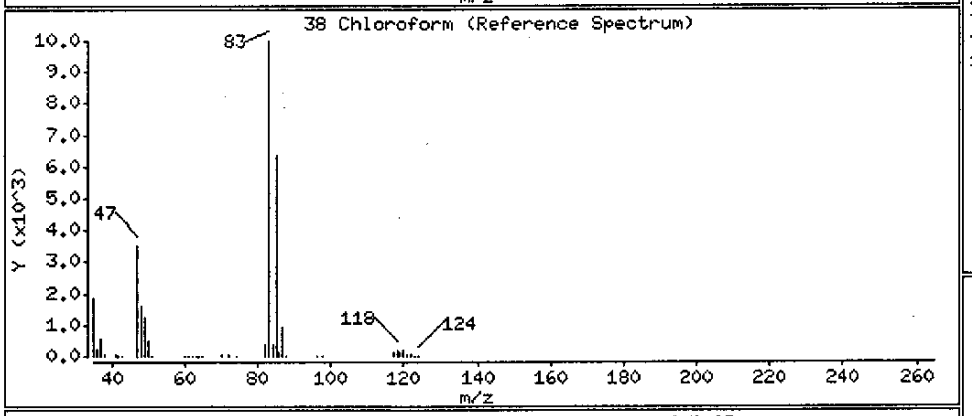
Column diameter: 0.53

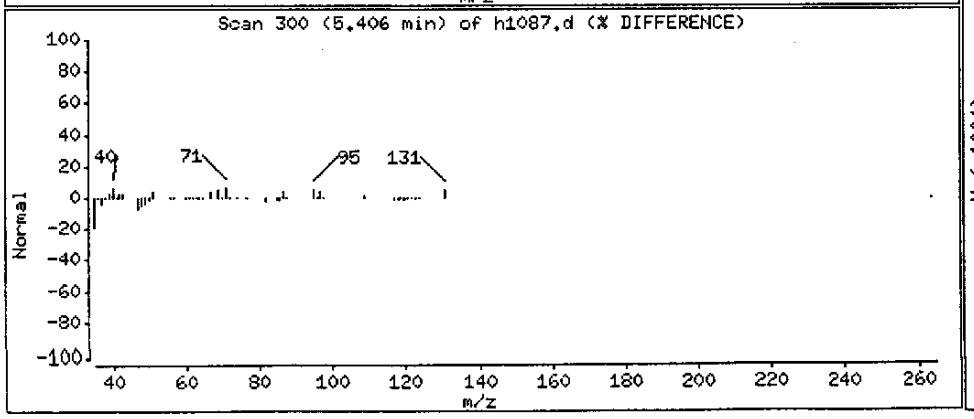
38 Chloroform

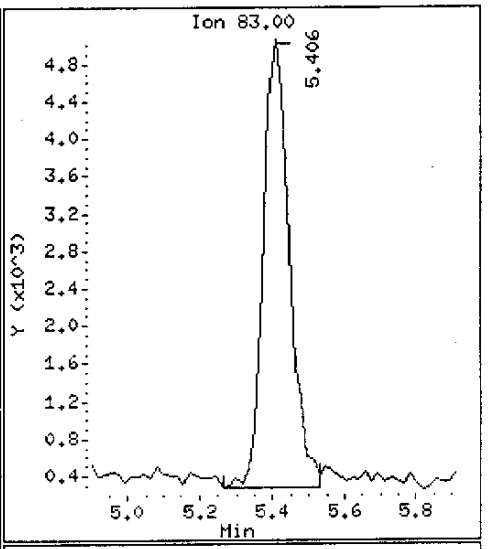
Concentration: 0.237575 ug/L

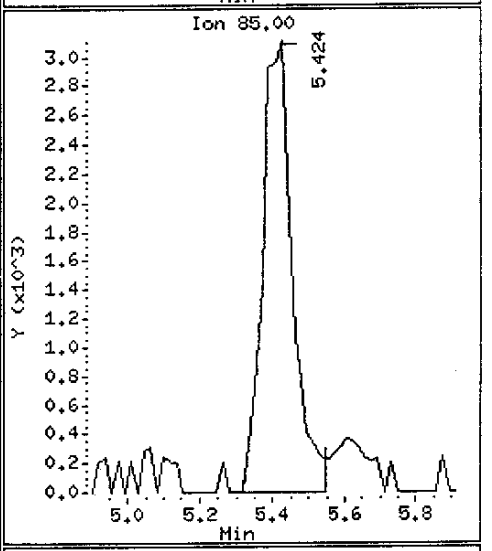


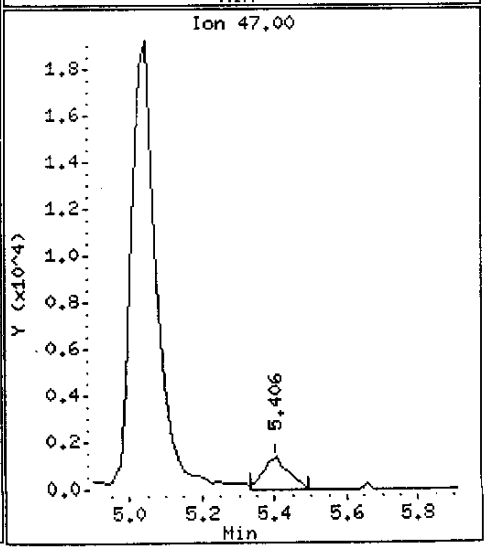












Data File: /chem/H.i/022004.b/h1087.d

Date : 20-FEB-2004 18:51

Client ID: MW-11

Instrument: H.i

Sample Info: F9KE11AA,,D4B130209-011

Purge Volume: 20.0

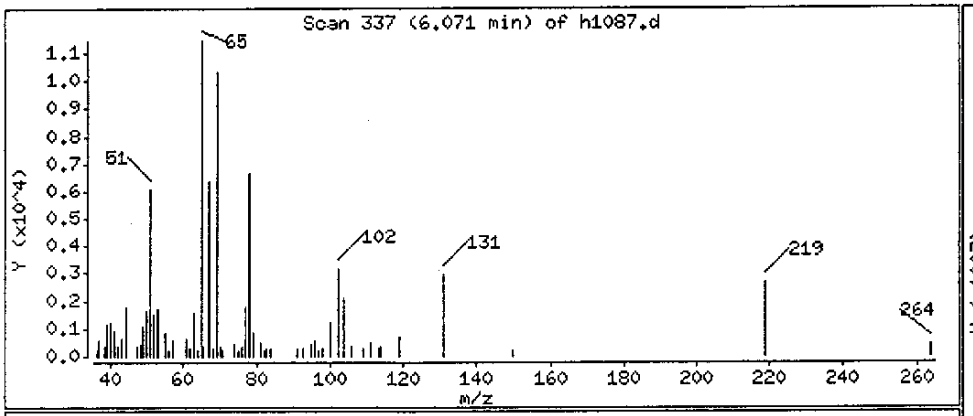
Operator: appelhansd

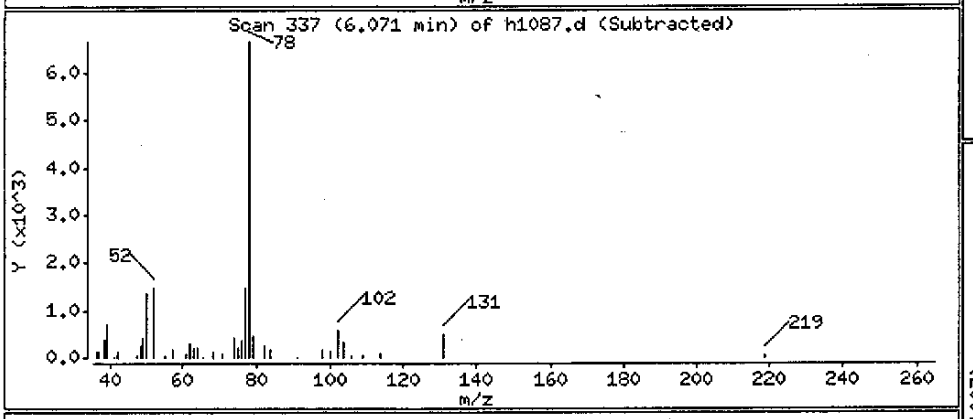
Column phase: DB624

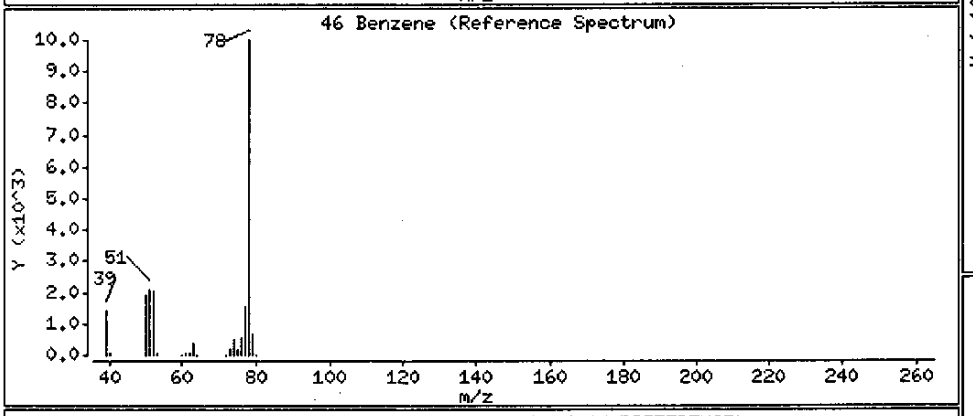
Column diameter: 0.53

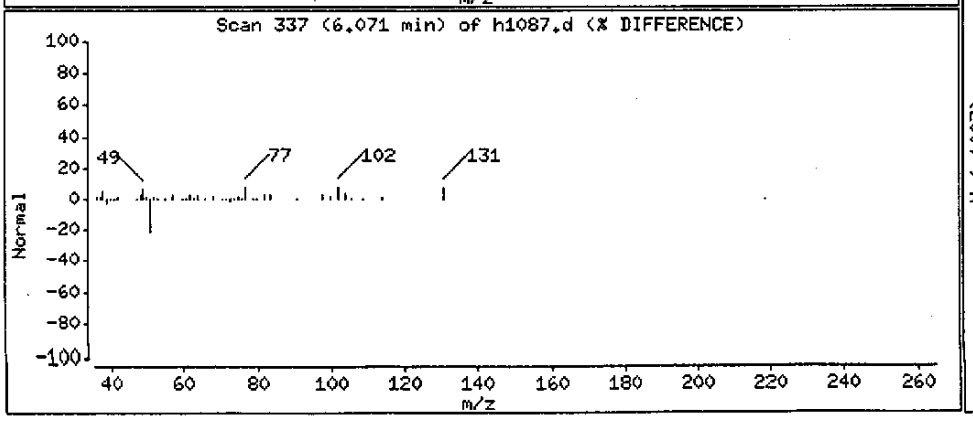
46 Benzene

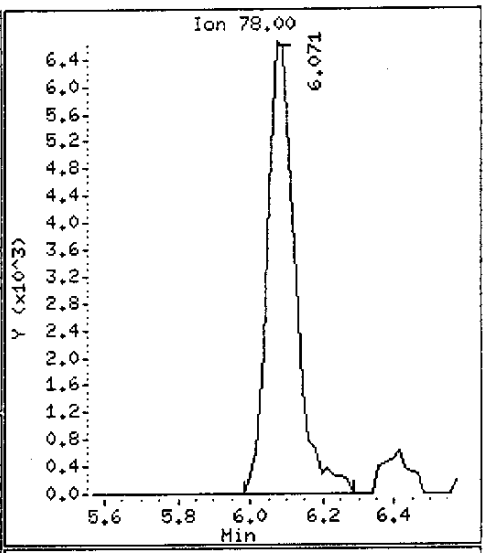
Concentration: 0.232317 ug/L

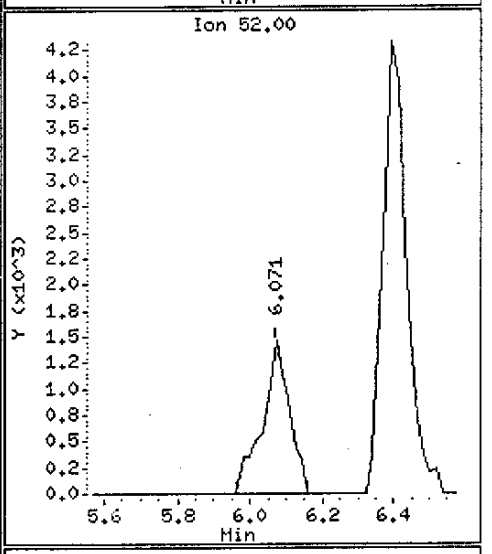


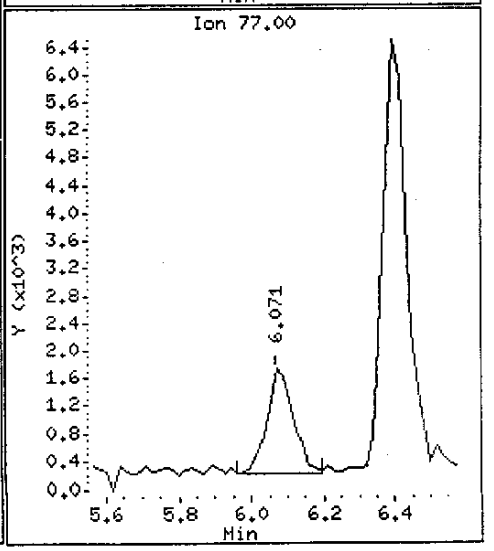












Data File: /chem/H.i/022004.b/h1087.d

Date : 20-FEB-2004 18:51

Client ID: MW-11

Instrument: H.i

Sample Info: F9KE11AA,,D4B130209-011

Purge Volume: 20.0

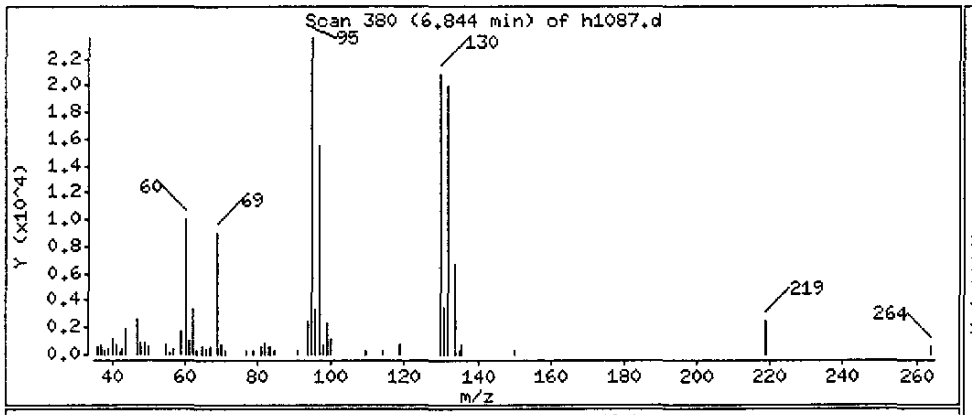
Operator: appelhansd

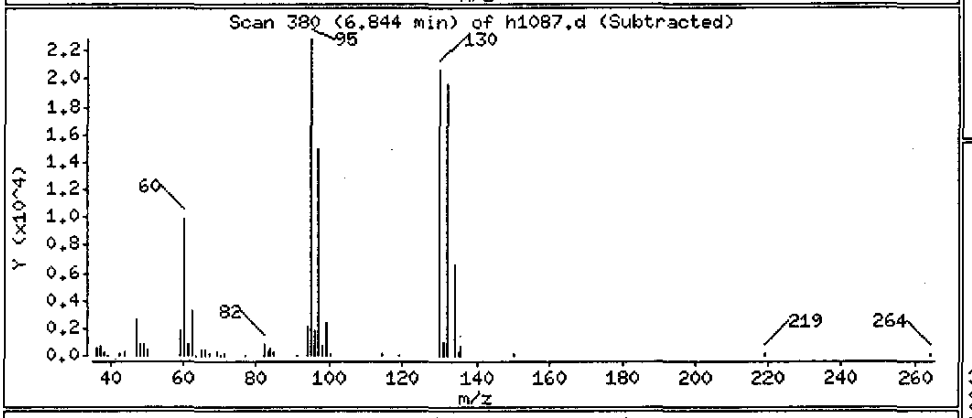
Column phase: DB624

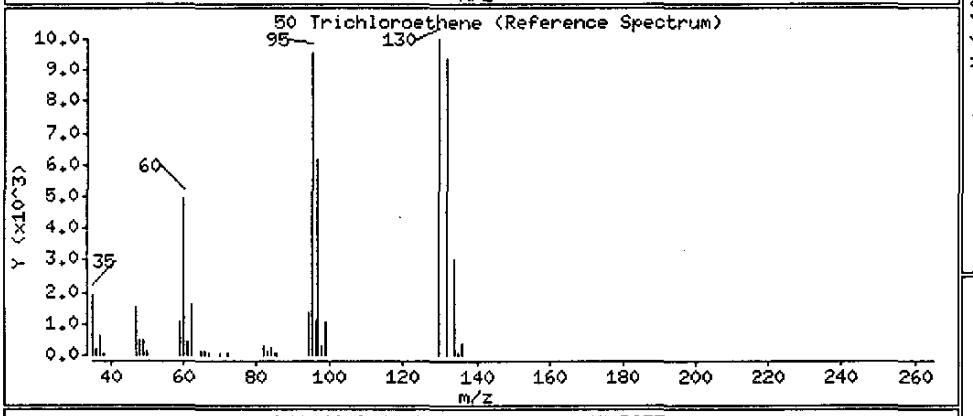
Column diameter: 0.53

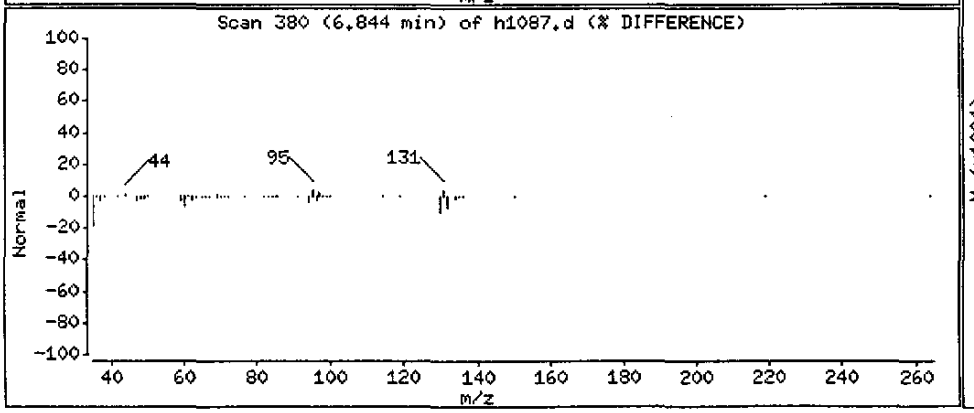
50 Trichloroethene

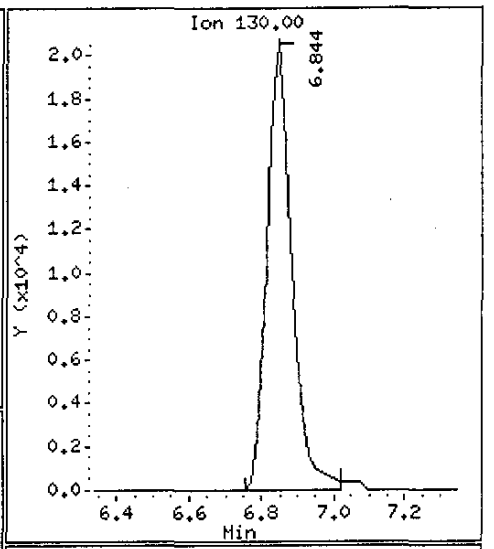
Concentration: 1.69026 ug/L

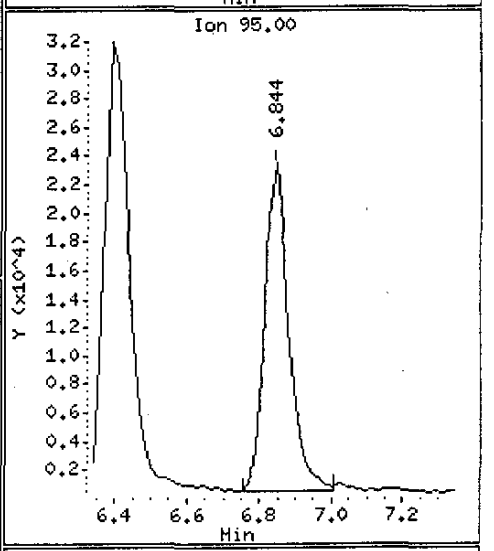


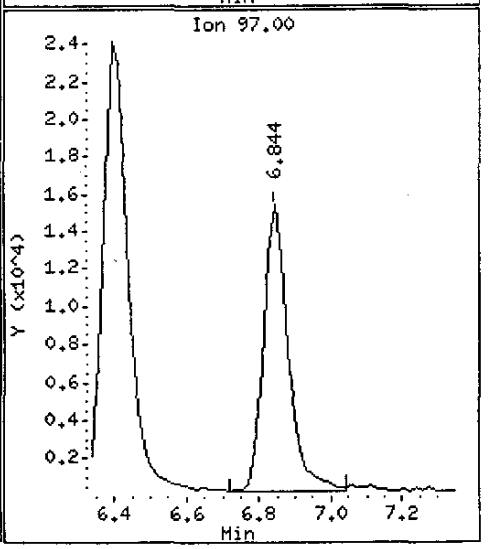












Data File: /chem/H.i/022004.b/h1087.d

Date : 20-FEB-2004 18:51

Client ID: MW-11

Instrument: H.i

Sample Info: F9KE11AA,,D4B130209-011

Purge Volume: 20.0

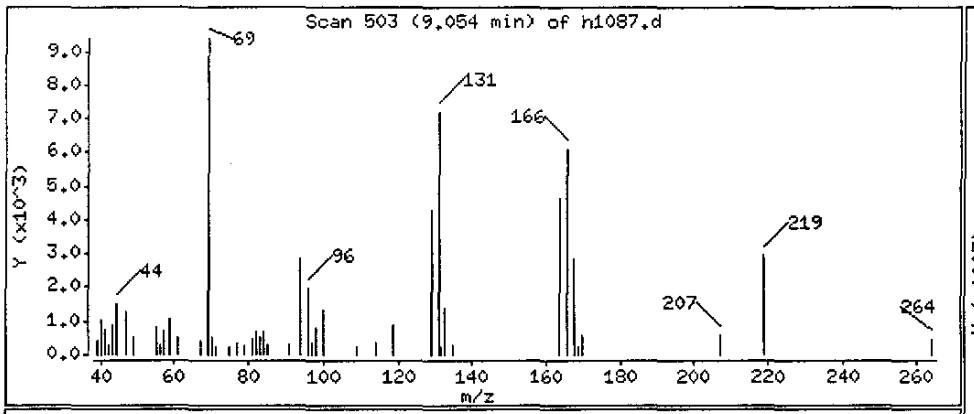
Operator: appelhansd

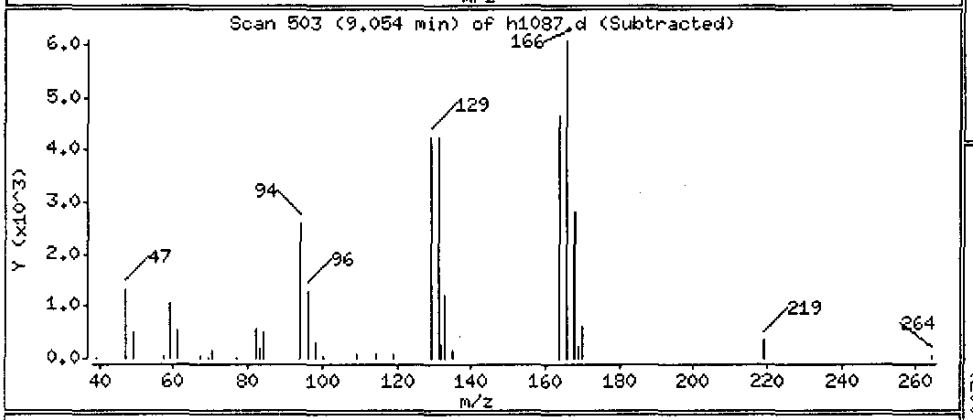
Column phase: DB624

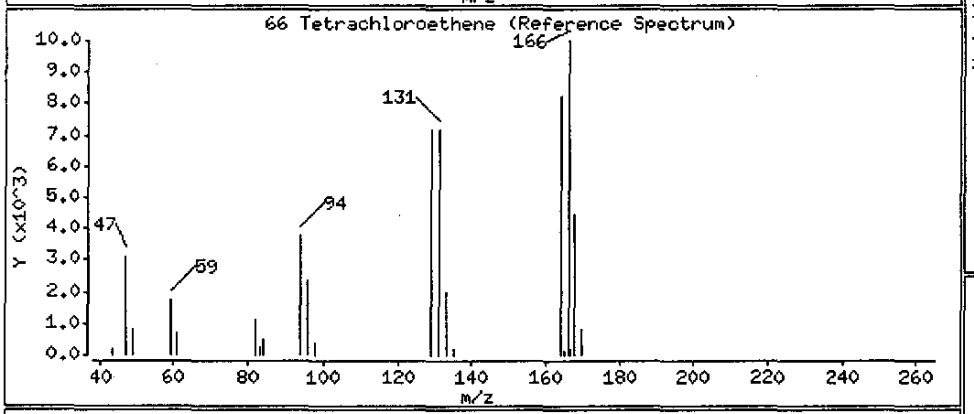
Column diameter: 0.53

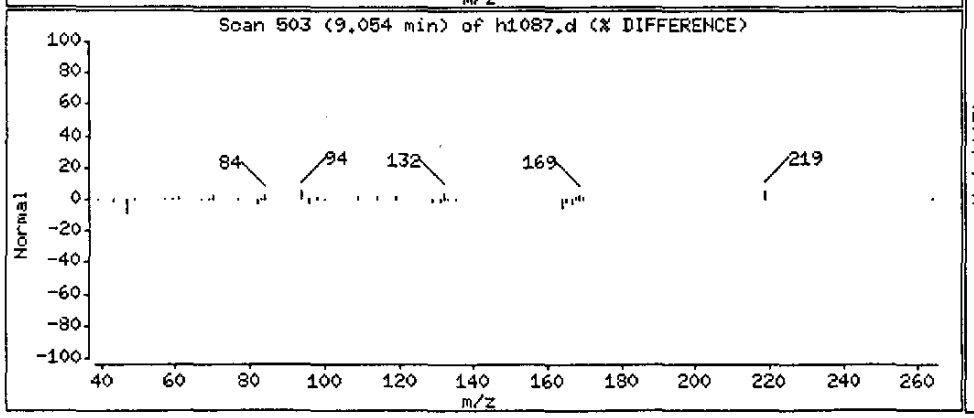
66 Tetrachloroethene

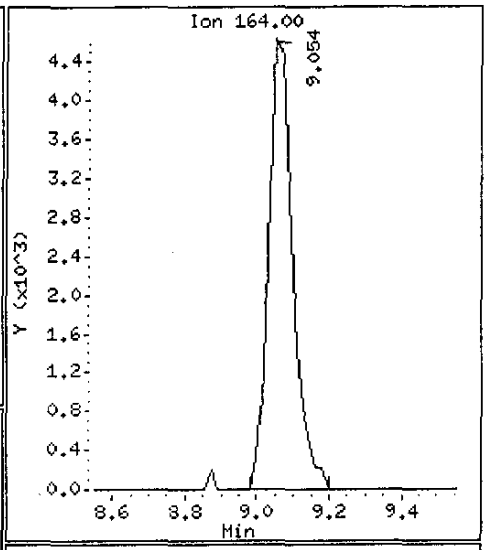
Concentration: 0.390232 ug/L

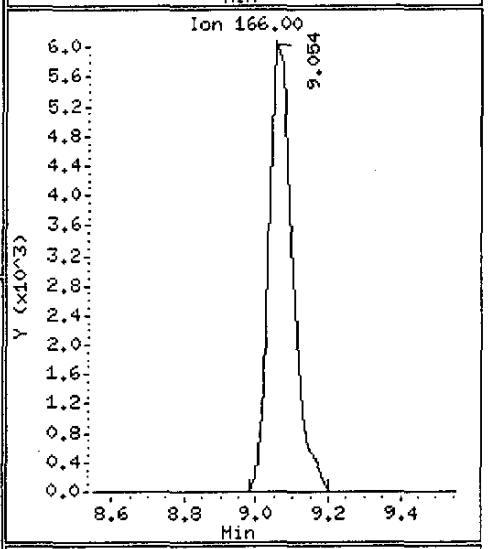


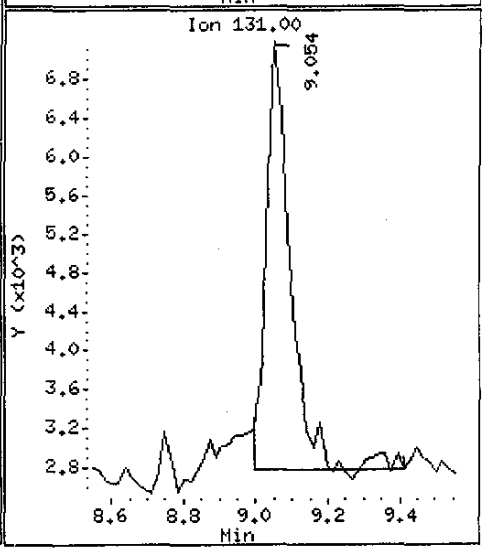












Data File: /chem/H.i/022004.b/h1088.d
Report Date: 23-Feb-2004 08:00

STL Denver

VOLATILE REPORT SW-846

Data file : /chem/H.i/022004.b/h1088.d
Lab Smp Id: F9KE61AA Client Smp ID: MW-12
Inj Date : 20-FEB-2004 19:11
Operator : appelhansd Inst ID: H.i
Smp Info : F9KE61AA,1,D4B130209-012
Misc Info :
Comment : Purge and Trap Analysis
Method : /chem/H.i/022004.b/H-20ml-h2o.m
Meth Date : 20-Feb-2004 11:09 appelhad Quant Type: ISTD
Cal Date : 07-JAN-2004 15:24 Cal File: h0014.d
Als bottle: 2
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: H-all.sub
Target Version: 3.40
Processing Host: chemsv02

Concentration Formula: Amt * DF * Vp/Vs

Name	Value	Description
DF	1.000	Dilution Factor
Vp	20.000	Purge Volume (ml)
Vs	1.000	Sample Volume (ml)

DA 2-23

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/L)
* 48 Fluorobenzene	96	6.414	6.395	(1.000)	1767345	12.5000	
* 72 Chlorobenzene-d5	119	10.079	10.060	(1.000)	270527	12.5000	
* 96 1,4-Dichlorobenzene-d4	152	12.936	12.917	(1.000)	506616	12.5000	
$ 40 Dibromofluoromethane	111	5.605	5.586	(0.874)	835377	12.0160	240.321
$ 44 1,2-Dichloroethane-d4	65	6.000	5.981	(0.936)	337374	10.8874	217.747
$ 61 Toluene-d8	98	8.300	8.281	(0.824)	1164771	11.2632	225.264
$ 82 Bromofluorobenzene	95	11.571	11.552	(1.148)	653740	11.5282	230.563
M 1 1,2-Dichloroethene (total)	96				17422	0.32876	6.57522
M 2 Xylene (total)	106				378176	6.59588	131.918
3 dichlorodifluoromethane	85.00	Compound Not Detected.					
4 Chloromethane	50.00	Compound Not Detected.					
5 Vinyl Chloride	62.00	Compound Not Detected.					
6 Ethylene Oxide	43.00	Compound Not Detected.					
117 Dichlorotetrafluoroethane	85.00	Compound Not Detected.					
123 1,2-dichloro-1,1,2-triflourom	117.00	Compound Not Detected.					
124 2,2-dichloro-1,1,1-trifluorom	83.00	Compound Not Detected.					

Data File: /chem/H.i/022004.b/h1088.d
Report Date: 23-Feb-2004 08:00

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/L)
7 Bromomethane	94.00	Compound Not Detected.					
8 Chloroethane	64.00	Compound Not Detected.					
9 Dichlorofluoromethane	67.00	Compound Not Detected.					
10 Trichlorofluoromethane	101.00	Compound Not Detected.					
11 Ethanol	45.00	Compound Not Detected.					
12 Ethyl Ether	59.00	Compound Not Detected.					
13 Acrolein	56.00	Compound Not Detected.					
15 Acetone	43.00	Compound Not Detected.					
14 1,1-Dichloroethene	96.00	Compound Not Detected.					
16 Trichlorotrifluoroethane	151.00	Compound Not Detected.					
17 Iodomethane	142.00	Compound Not Detected.					
19 Acetonitrile	41.00	Compound Not Detected.					
18 Carbon Disulfide	76.00	Compound Not Detected.					
20 Allyl Chloride	41.00	Compound Not Detected.					
119 Methyl Acetate	43.00	Compound Not Detected.					
21 Methylene Chloride	84	3.646	3.627	(0.569)	26198	0.59540	11.9080
125 2-Propanol	45	3.233	3.304	(0.504)	11467	15.1707	303.413
22 tert-Butyl alcohol	59.00	Compound Not Detected.					
23 Acrylonitrile	53.00	Compound Not Detected.					
24 trans-1,2-Dichloroethene	96.00	Compound Not Detected.					
25 Methyl t-butyl ether	73.00	Compound Not Detected.					
26 Hexane	57.00	Compound Not Detected.					
27 1,1-Dichloroethane	63.00	Compound Not Detected.					
29 Vinyl acetate	43.00	Compound Not Detected.					
30 Isopropyl ether	87.00	Compound Not Detected.					
28 Chloroprene	53.00	Compound Not Detected.					
120 ETBE	59.00	Compound Not Detected.					
33 2-Butanone	43.00	Compound Not Detected.					
32 cis-1,2-Dichloroethene	96	5.048	5.029	(0.787)	17422	0.32876	6.57522
31 2,2-Dichloropropane	77.00	Compound Not Detected.					
35 Ethyl Acetate	43.00	Compound Not Detected.					
34 Propionitrile	54.00	Compound Not Detected.					
36 Methacrylonitrile	41.00	Compound Not Detected.					
37 Bromochloromethane	128.00	Compound Not Detected.					
39 Tetrahydrofuran	42.00	Compound Not Detected.					
38 Chloroform	83.00	Compound Not Detected.					
41 1,1,1-Trichloroethane	97.00	Compound Not Detected.					
114 Cyclohexane	56.00	Compound Not Detected.					
42 1,1-Dichloropropene	75.00	Compound Not Detected.					
43 Carbon Tetrachloride	117.00	Compound Not Detected.					
45 Isobutanol	41.00	Compound Not Detected.					
46 Benzene	78	6.090	6.071	(0.950)	2108530	13.9350	278.699
47 1,2-Dichloroethane	62.00	Compound Not Detected.					
121 TAME	73.00	Compound Not Detected.					
49 n-Butanol	56.00	Compound Not Detected.					
50 Trichloroethene	130.00	Compound Not Detected.					
115 2-Pentanone	43.00	Compound Not Detected.					

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/L)
52 1,2-Dichloropropane	63.00	Compound Not Detected.					
122 Methyl Cyclohexane	55.00	Compound Not Detected.					
53 Dibromomethane	93.00	Compound Not Detected.					
54 Methyl Methacrylate	100.00	Compound Not Detected.					
55 1,4-Dioxane	88.00	Compound Not Detected.					
56 Bromodichloromethane	83.00	Compound Not Detected.					
57 2-nitropropane	41.00	Compound Not Detected.					
113 2-Chloroethyl vinyl ether	63.00	Compound Not Detected.					
59 cis-1,3-Dichloropropene	75.00	Compound Not Detected.					
60 4-Methyl-2-pentanone	43.00	Compound Not Detected.					
62 Toluene	91	8.390	8.389	(0.832)	80927	0.56709	11.3418
63 trans-1,3-Dichloropropene	75.00	Compound Not Detected.					
64 Ethyl methacrylate	69.00	Compound Not Detected.					
65 1,1,2-Trichloroethane	97.00	Compound Not Detected.					
67 1,3-Dichloropropane	76.00	Compound Not Detected.					
66 Tetrachloroethene	164.00	Compound Not Detected.					
68 2-Hexanone	43.00	Compound Not Detected.					
126 Tetrahydrothiophene	60.00	Compound Not Detected.					
69 Dibromochloromethane	129.00	Compound Not Detected.					
70 1,2-Dibromoethane	107.00	Compound Not Detected.					
71 1-Chlorohexane	91.00	Compound Not Detected.					
73 Chlorobenzene	112.00	Compound Not Detected.					
74 1,1,1,2-Tetrachloroethane	131.00	Compound Not Detected.					
75 Ethylbenzene	106	10.241	10.240	(1.016)	107784	2.43839	48.7678
76 m and p-Xylene	106	10.385	10.383	(1.030)	248410	4.16212	83.2424
77 o-Xylene	106	10.888	10.887	(1.080)	129766	2.43376	48.6752
78 Styrene	104.00	Compound Not Detected.					
79 Bromoform	173.00	Compound Not Detected.					
80 isopropyl benzene	105.00	Compound Not Detected.					
116 cis-1,4-Dichloro-2-butene	53.00	Compound Not Detected.					
81 Cyclohexanone	55.00	Compound Not Detected.					
83 1,1,2,2-Tetrachloroethane	83.00	Compound Not Detected.					
84 Bromobenzene	156.00	Compound Not Detected.					
85 1,2,3-Trichloropropane	110.00	Compound Not Detected.					
86 t-1,4-Dichloro-2-butene	53.00	Compound Not Detected.					
87 n-Propylbenzene	120.00	Compound Not Detected.					
88 2-Chlorotoluene	126.00	Compound Not Detected.					
89 1,3,5-Trimethylbenzene	105	12.092	12.091	(0.935)	39053	0.26441	5.28826
90 4-Chlorotoluene	126.00	Compound Not Detected.					
91 tert-Butylbenzene	119.00	Compound Not Detected.					
92 1,2,4-Trimethylbenzene	105	12.541	12.540	(0.969)	120757	0.87618	17.5237
93 sec-Butylbenzene	134.00	Compound Not Detected.					
94 m-Dichlorobenzene	146.00	Compound Not Detected.					
95 4-Isopropyltoluene	119.00	Compound Not Detected.					
97 p-dichlorobenzene	146.00	Compound Not Detected.					
118 1,2,3-Trimethylbenzene	105	13.008	12.989	(2.028)	36608	0.30765	6.15290(a)
98 n-Butylbenzene	91.00	Compound Not Detected.					

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/L)
99 o-Dichlorobenzene	146.00	Compound Not Detected.					
100 1,2-Dibromo-3-chloropropane	157.00	Compound Not Detected.					
101 1,2,4-Trichlorobenzene	180.00	Compound Not Detected.					
102 Hexachlorobutadiene	225.00	Compound Not Detected.					
127 Naphthalene	128.00	Compound Not Detected.					
104 1,2,3-Trichlorobenzene	180.00	Compound Not Detected.					

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

Data File: /chem/H.i/022004.b/h1088.d
Report Date: 23-Feb-2004 08:00

STL Denver

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: H.i
Lab File ID: h1088.d
Lab Smp Id: F9KE61AA
Analysis Type: VOA
Quant Type: ISTD
Operator: appelhansd
Method File: /chem/H.i/022004.b/H-20ml-h2o.m
Misc Info:

Calibration Date: 02/20/4
Calibration Time: 1059
Client Smp ID: MW-12
Level: LOW
Sample Type: WATER

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
48 Fluorobenzene	2466684	1233342	4933368	1767345	-28.35
72 Chlorobenzene-d5	459303	229652	918606	270527	-41.10
96 1,4-Dichlorobenze	730993	365496	1461986	506616	-30.69

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
48 Fluorobenzene	6.39	5.89	6.89	6.41	0.30
72 Chlorobenzene-d5	10.06	9.56	10.56	10.08	0.19
96 1,4-Dichlorobenze	12.92	12.42	13.42	12.94	0.15

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem/H.i/022004.b/h1088.d Page 6
Report Date: 23-Feb-2004 08:00

STL Denver

RECOVERY REPORT

Client Name: ARCADIS GERAGHTY & M13-FEB-2004 Client SDG: D4B130209
Sample Matrix: LIQUID Fraction: VOA
Lab Smp Id: F9KE61AA Client Smp ID: MW-12
Level: LOW Operator: appelhansd
Data Type: MS DATA SampleType: SAMPLE
SpikeList File: dcs-h20.spk Quant Type: ISTD
Sublist File: H-all.sub
Method File: /chem/H.i/022004.b/H-20ml-h2o.m
Misc Info:

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 40 Dibromofluorometha	230.000	240.321	104.49	76-116
$ 44 1,2-Dichloroethane	230.000	217.747	94.67	59-129
$ 61 Toluene-d8	230.000	225.264	97.94	76-116
$ 82 Bromofluorobenzene	230.000	230.563	100.24	74-114

Data File: /chem/H.i/022004.b/h1088.d
Date : 20-FEB-2004 19:11
Client ID: MW-12
Sample Info: F9KE61AA,1,D4B130209-012
Purge Volume: 20.0
Column phase: DB624

Instrument: H.i
Operator: appelhansd
Column diameter: 0.53

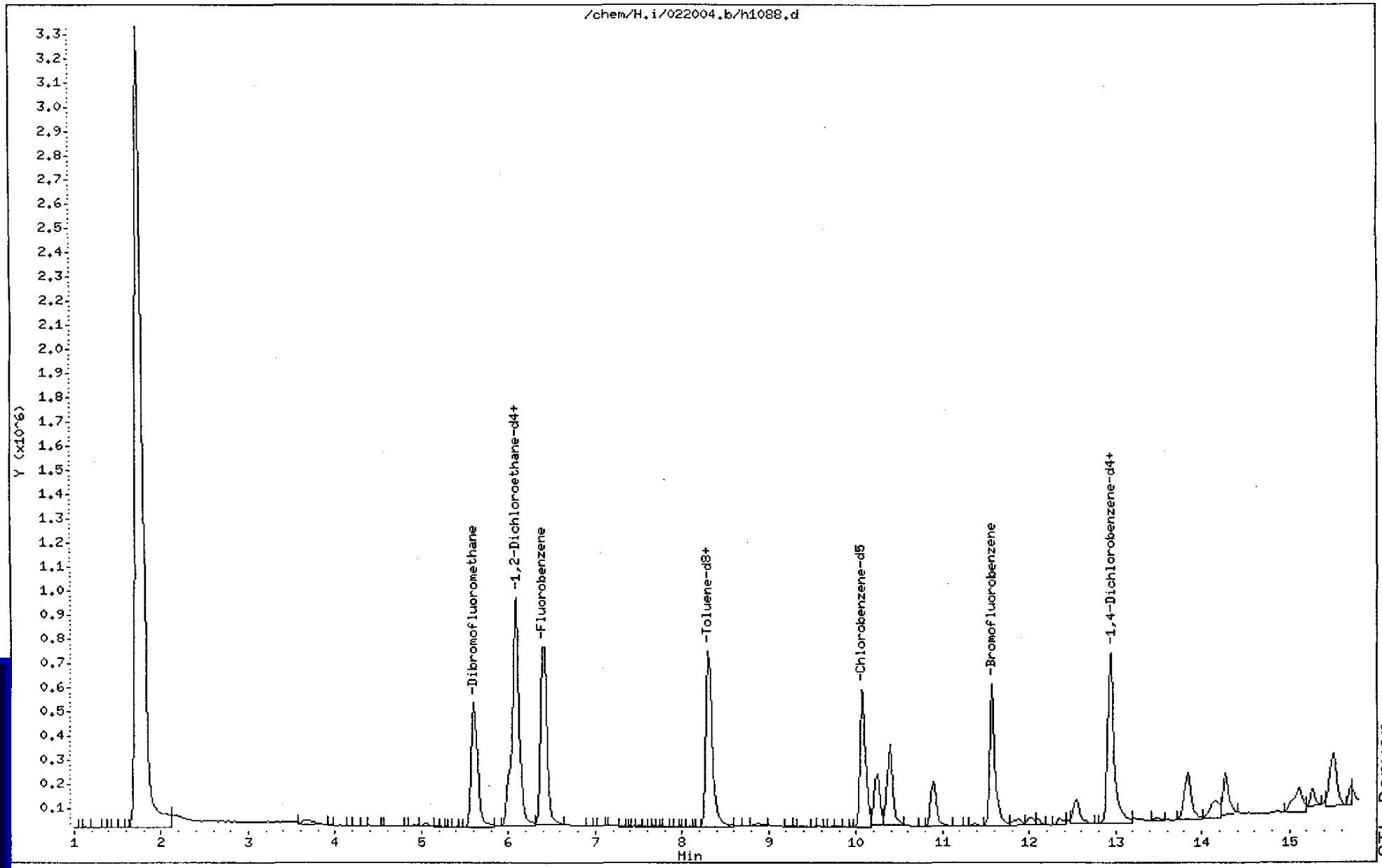


Table of Contents

Data File: /chem/H.i/022004.b/h1088.d

Date : 20-FEB-2004 19:11

Client ID: MW-12

Instrument: H.i

Sample Info: F9KE61AA,1,D4B130209-012

Purge Volume: 20.0

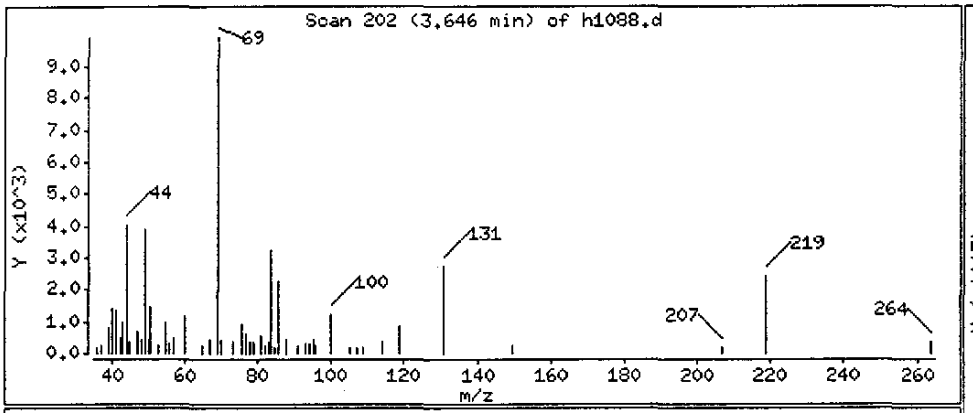
Operator: appelhansd

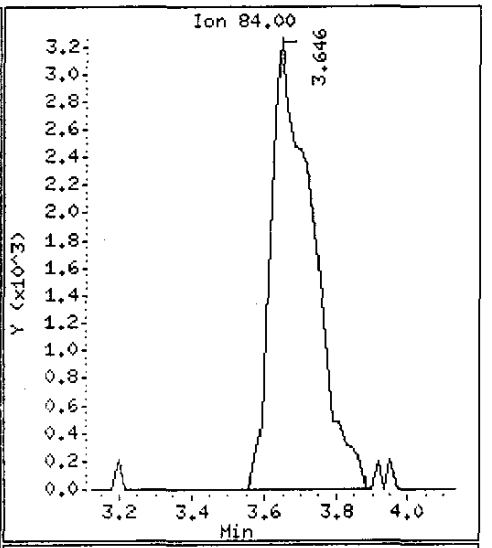
Column phase: DB624

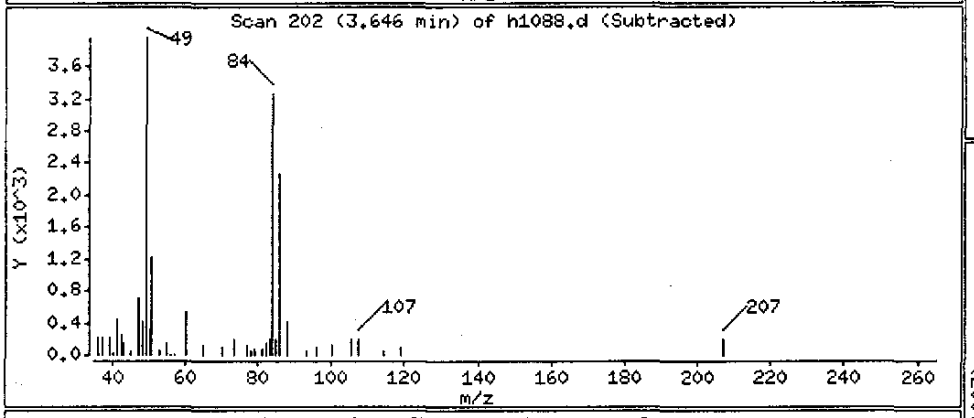
Column diameter: 0.53

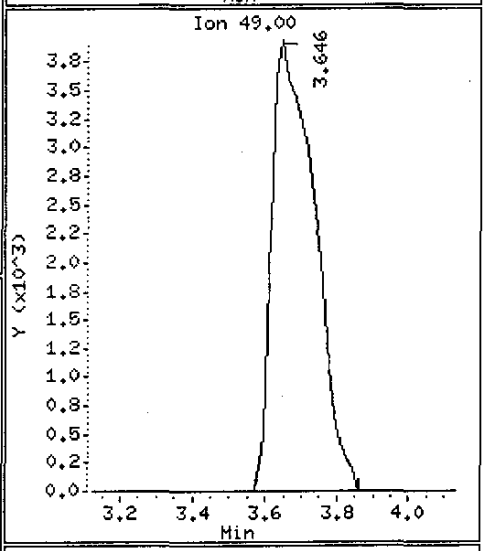
21 Methylene Chloride

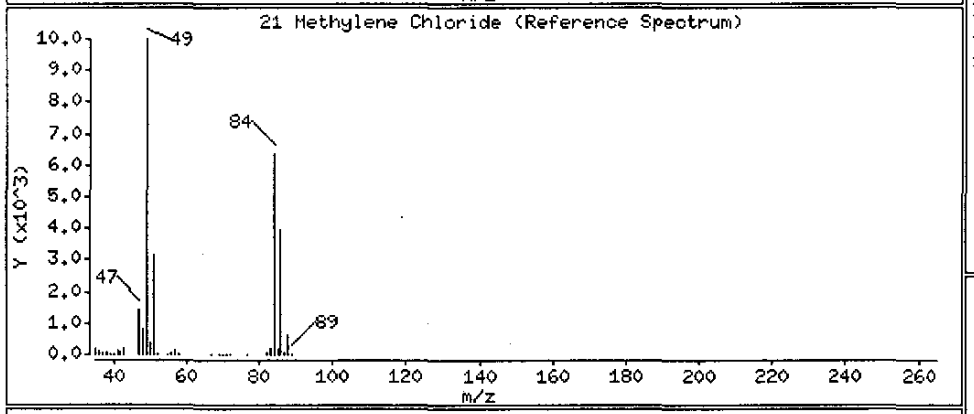
Concentration: 11.9080 ug/L

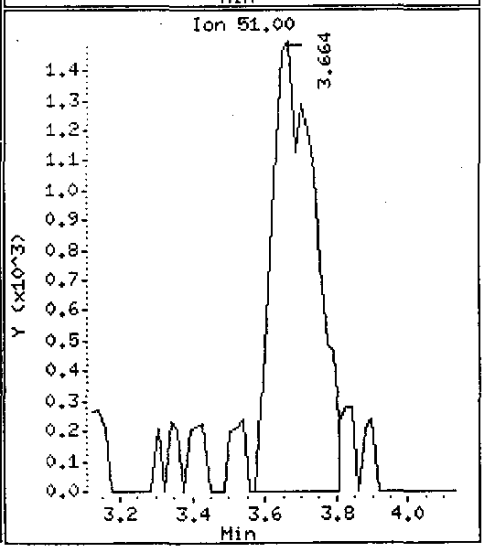


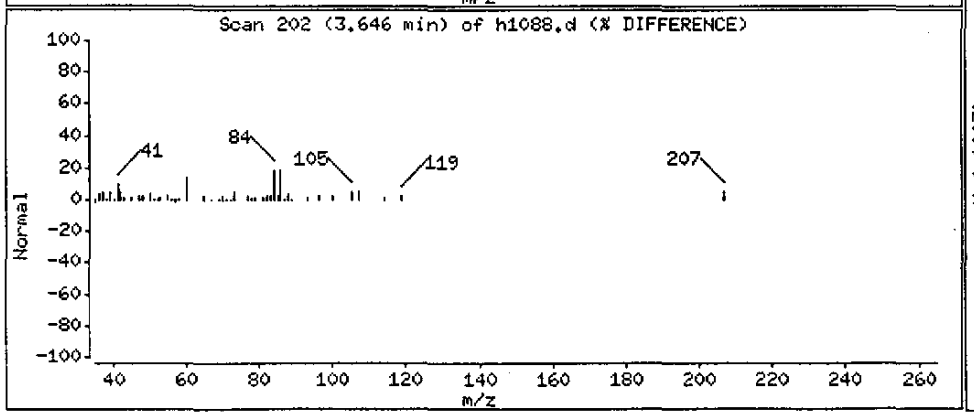












Data File: /chem/H.i/022004.b/h1088.d

Date : 20-FEB-2004 19:11

Client ID: MW-12

Instrument: H.i

Sample Info: F9KE61AA,1,D4B130209-012

Purge Volume: 20.0

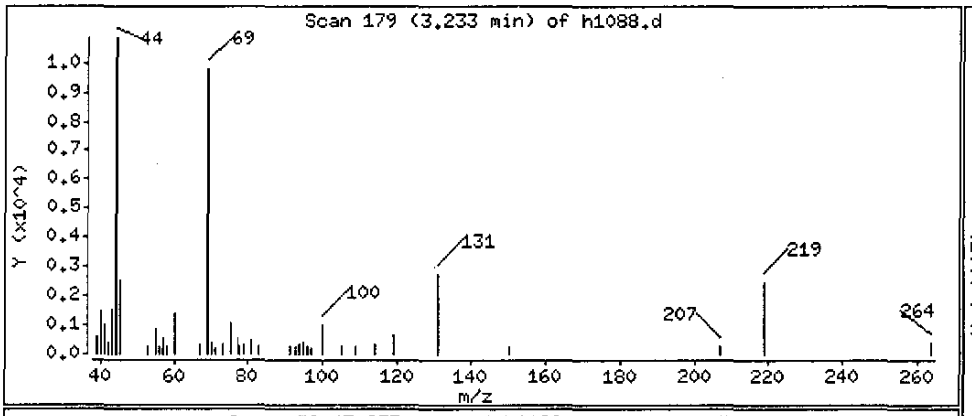
Operator: appelhansd

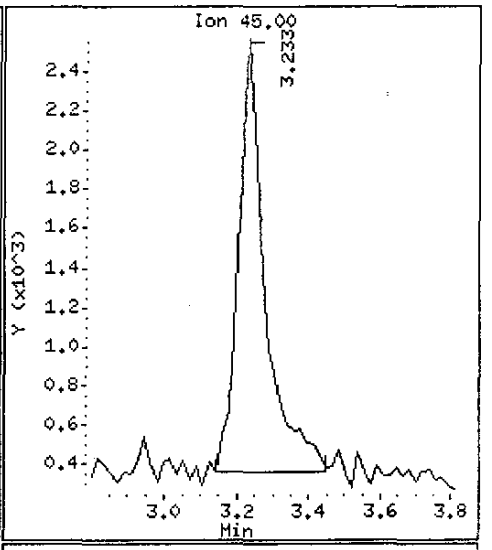
Column phase: DB624

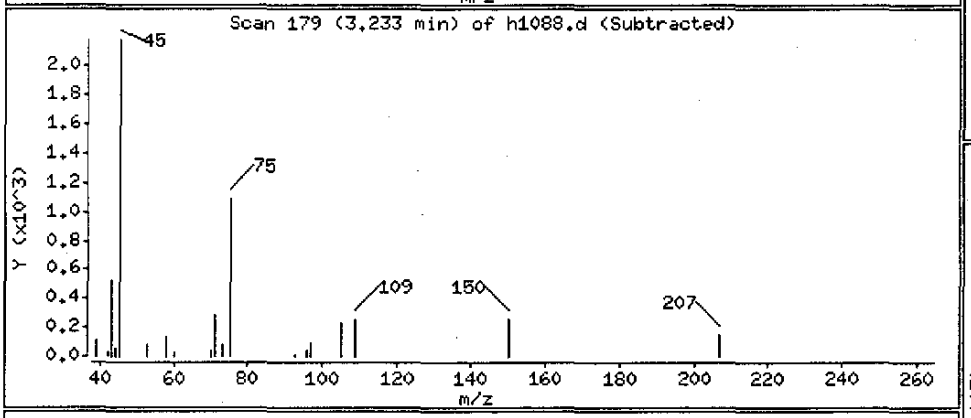
Column diameter: 0.53

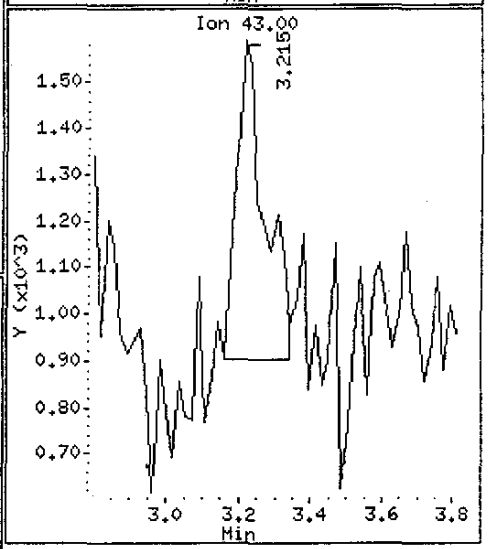
125 2-Propanol

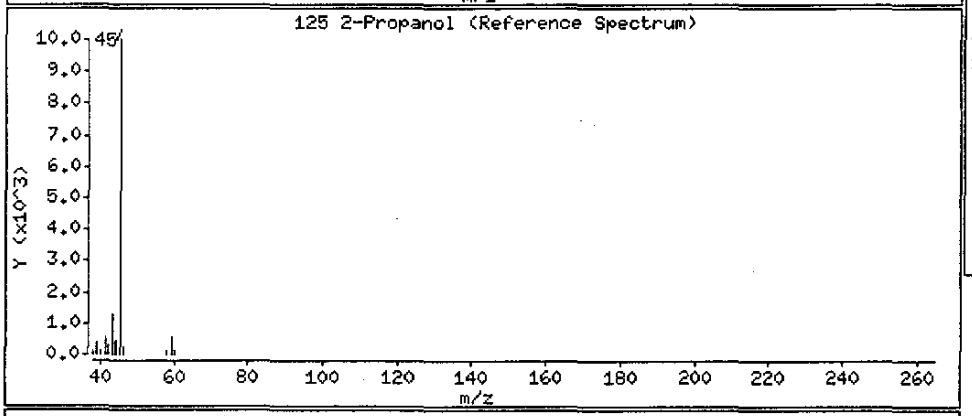
Concentration: 303.413 ug/L

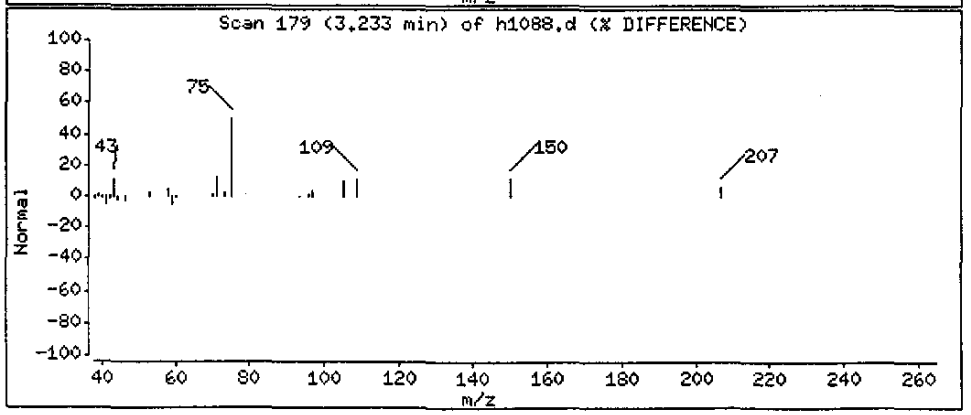












Data File: /chem/H.i/022004.b/h1088.d

Date : 20-FEB-2004 19:11

Client ID: MW-12

Instrument: H.i

Sample Info: F9KE61AA,1,D4B130209-012

Purge Volume: 20.0

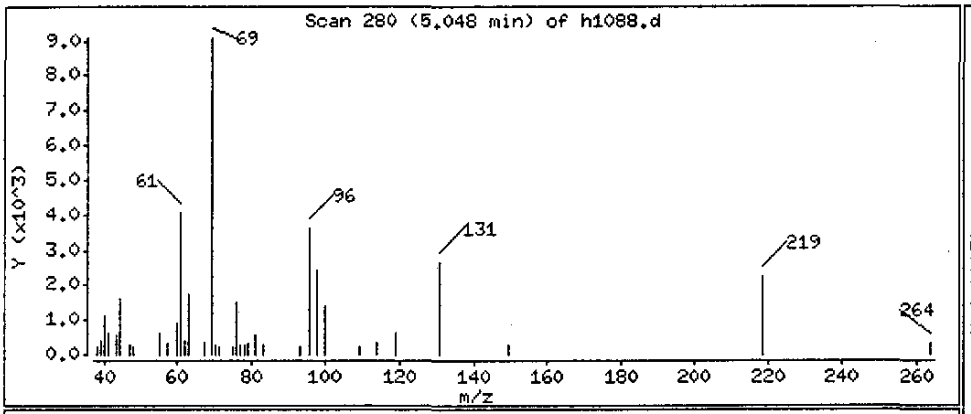
Operator: appelhansd

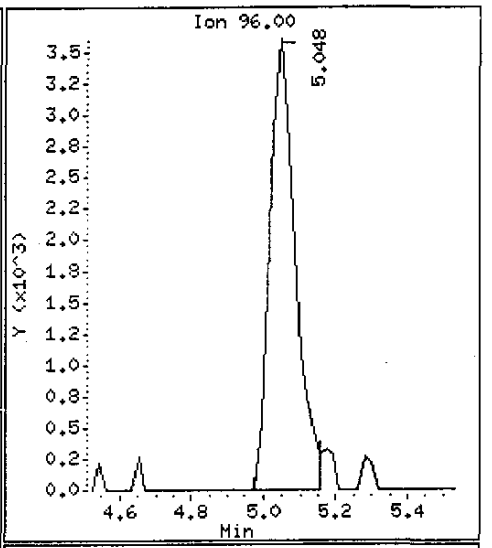
Column phase: DB624

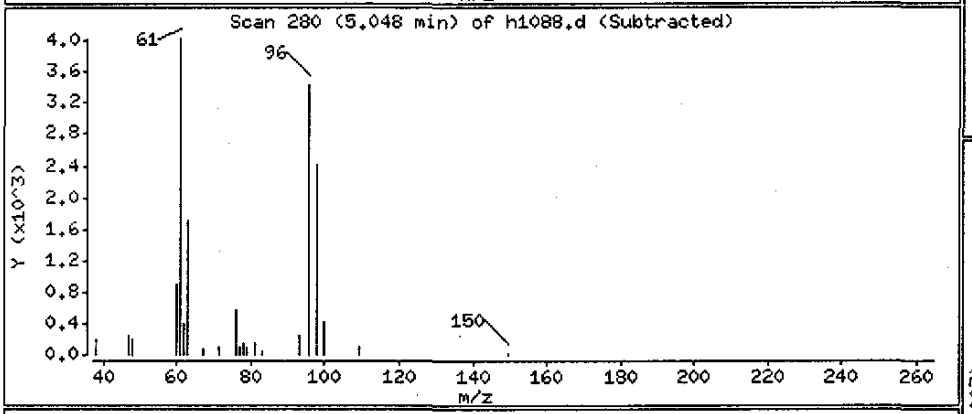
Column diameter: 0.53

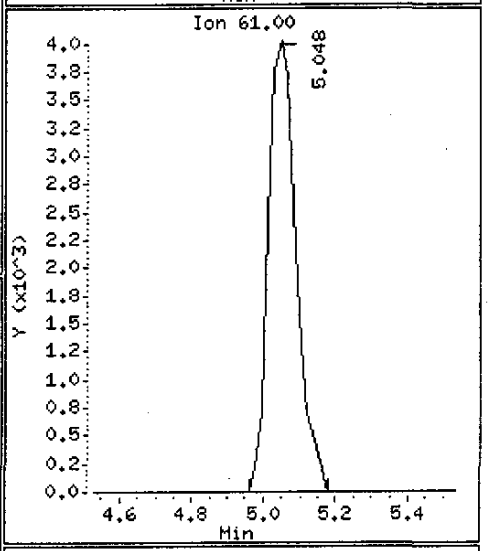
32 cis-1,2-Dichloroethene

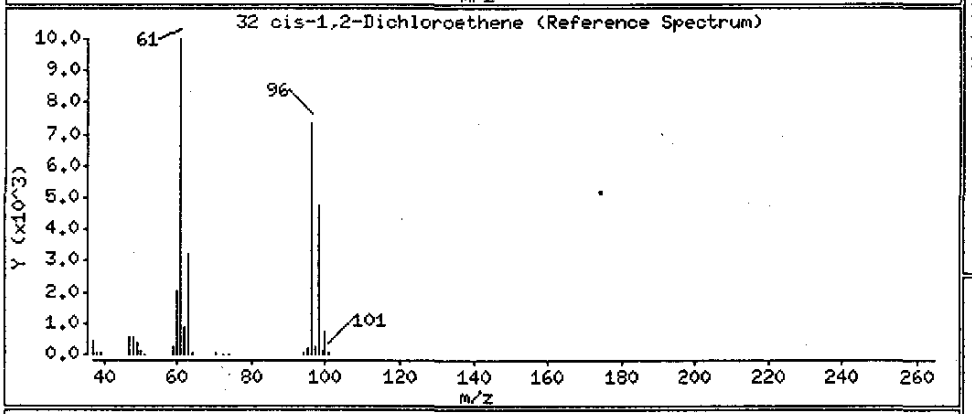
Concentration: 6.57522 ug/L

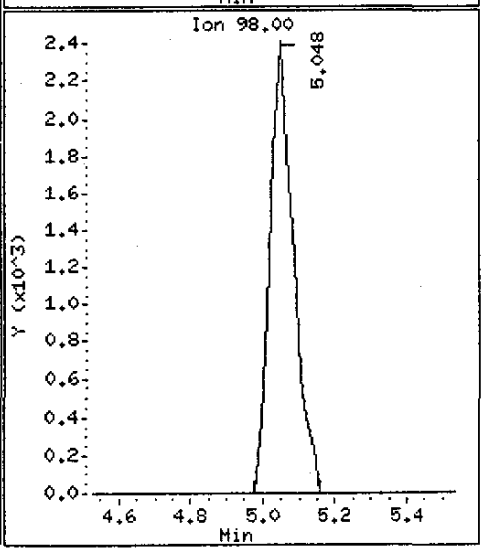


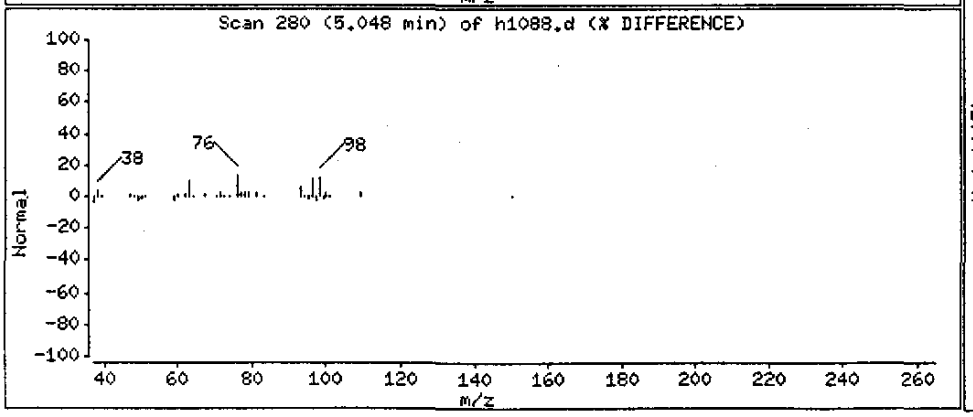












Data File: /chem/H.i/022004.b/h1088.d

Date : 20-FEB-2004 19:11

Client ID: MW-12

Instrument: H.i

Sample Info: F9KE61AA,1,D4B130209-012

Purge Volume: 20.0

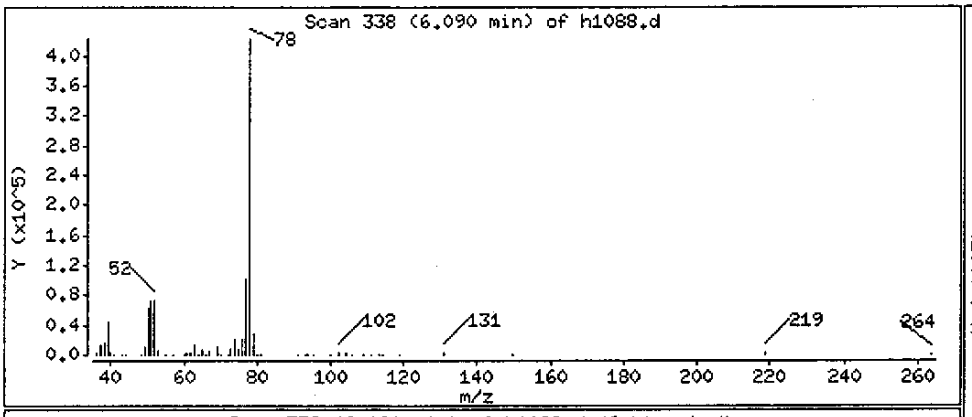
Operator: appelhansd

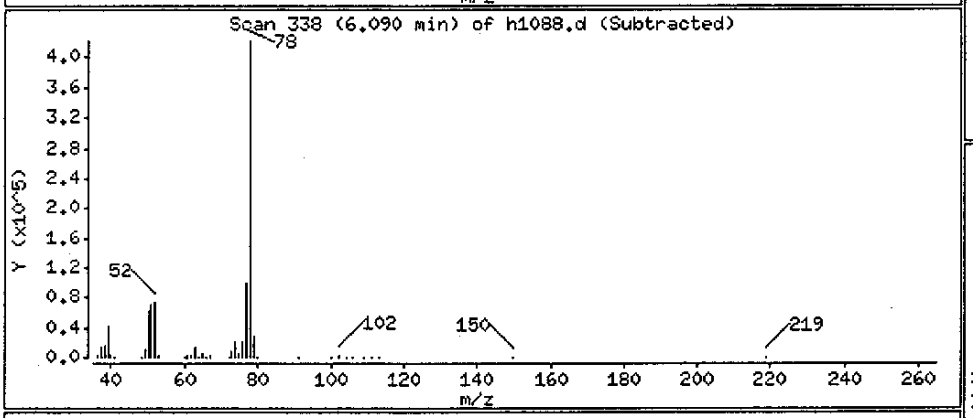
Column phase: DB624

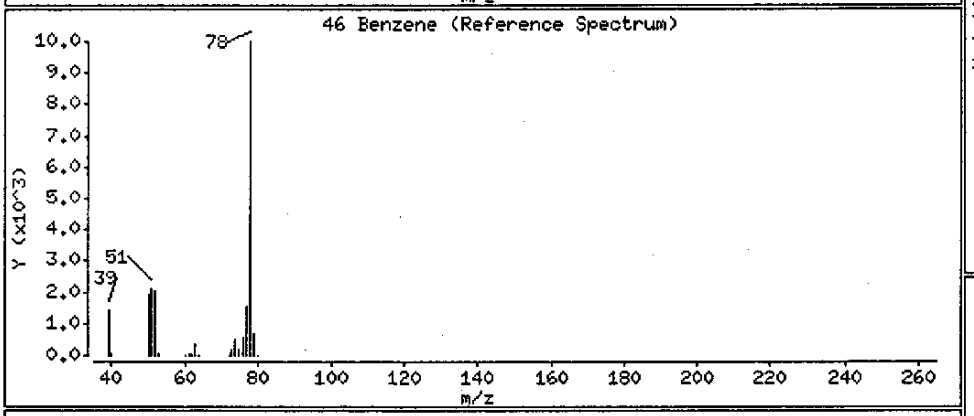
Column diameter: 0.53

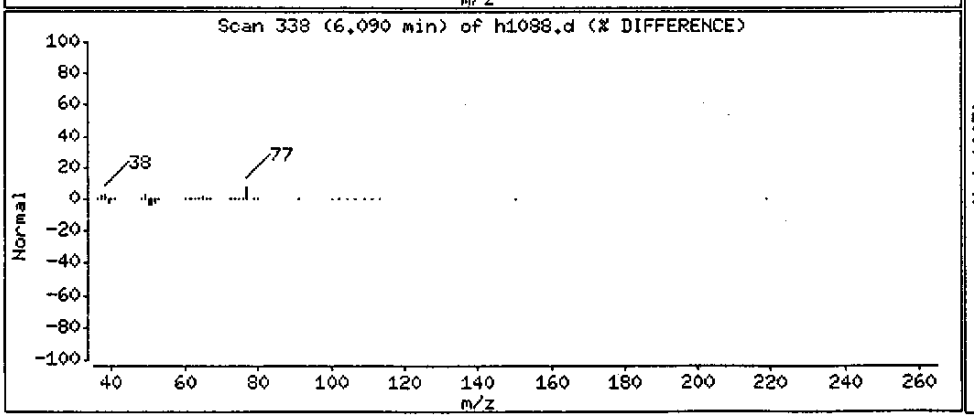
46 Benzene

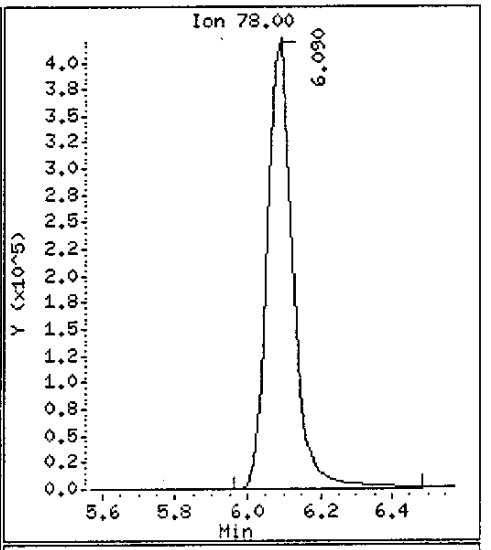
Concentration: 278.699 ug/L

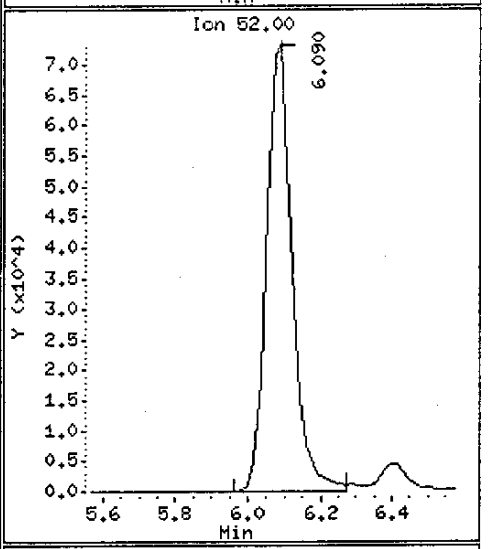


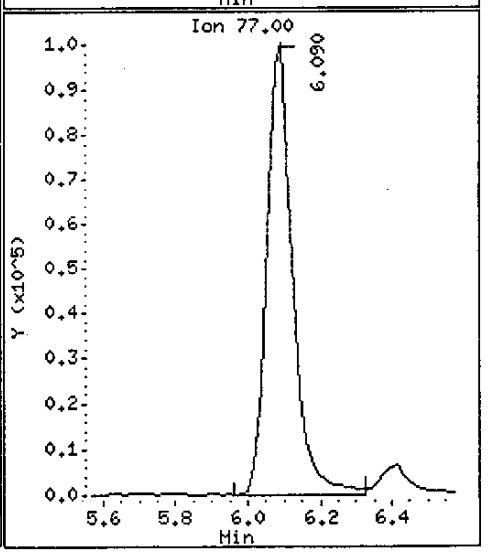












Data File: /chem/H.i/022004.b/h1088.d

Date : 20-FEB-2004 19:11

Client ID: MW-12

Instrument: H.i

Sample Info: F9KE61AA,1,D4B130209-012

Purge Volume: 20.0

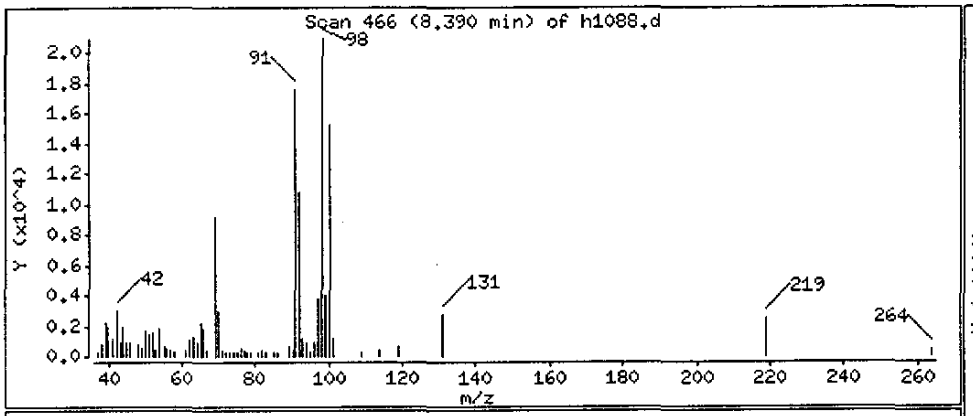
Operator: appelhansd

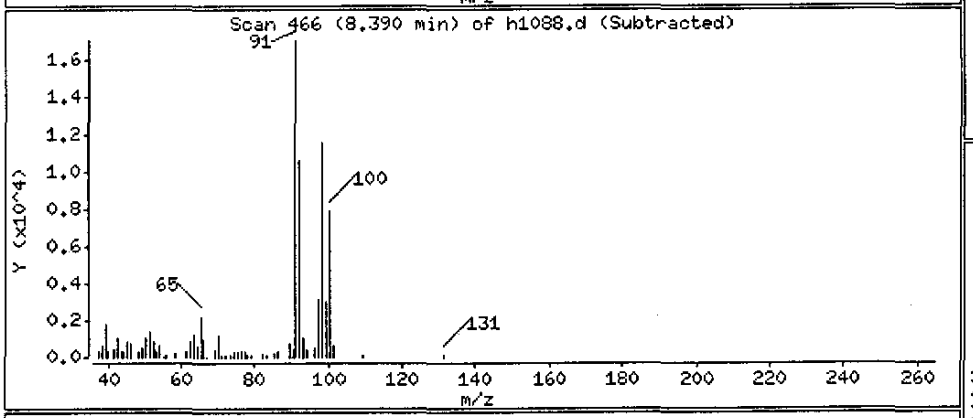
Column phase: DB624

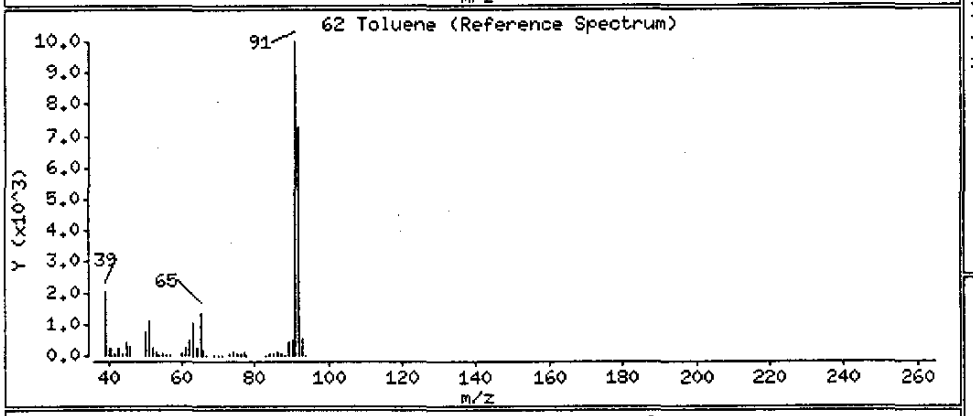
Column diameter: 0.53

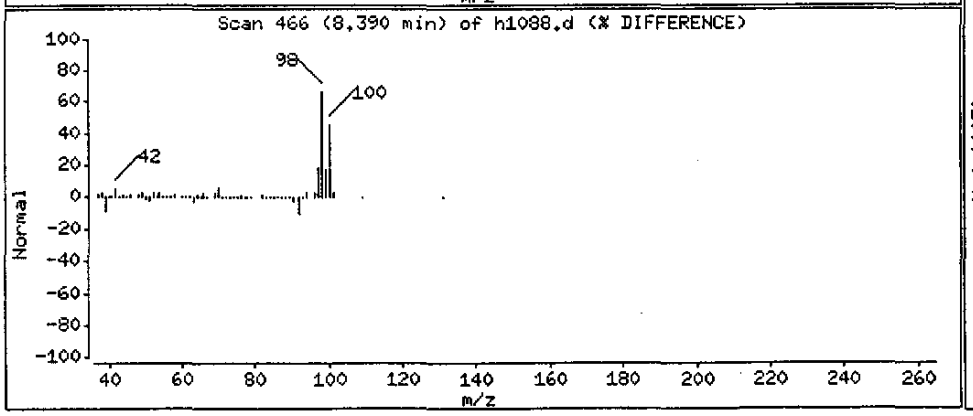
62 Toluene

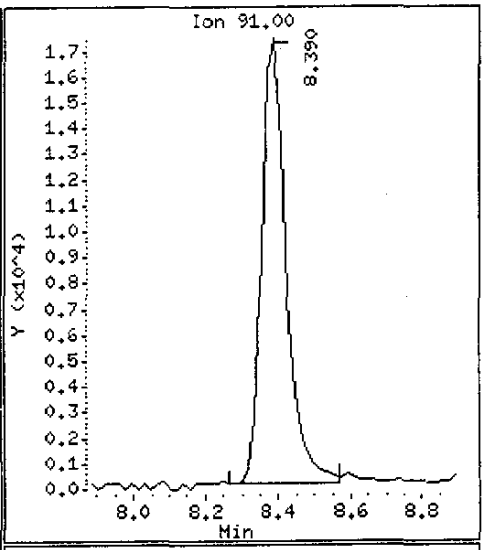
Concentration: 11.3418 ug/L

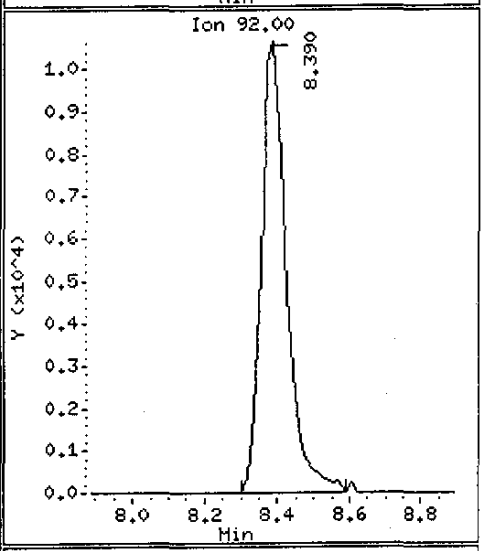


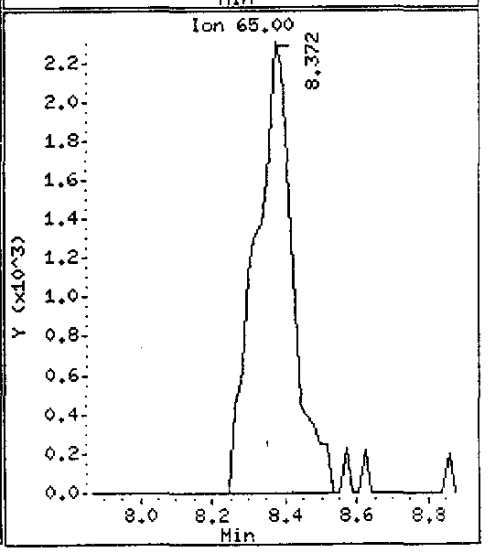












Data File: /chem/H.i/022004.b/h1088.d

Date : 20-FEB-2004 19:11

Client ID: MW-12

Instrument: H.i

Sample Info: F9KE61AA,1,D4B130209-012

Purge Volume: 20.0

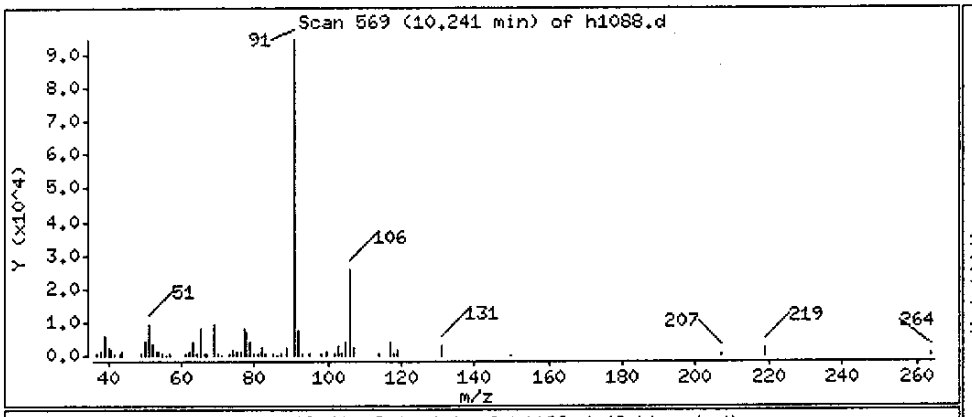
Operator: appelhansd

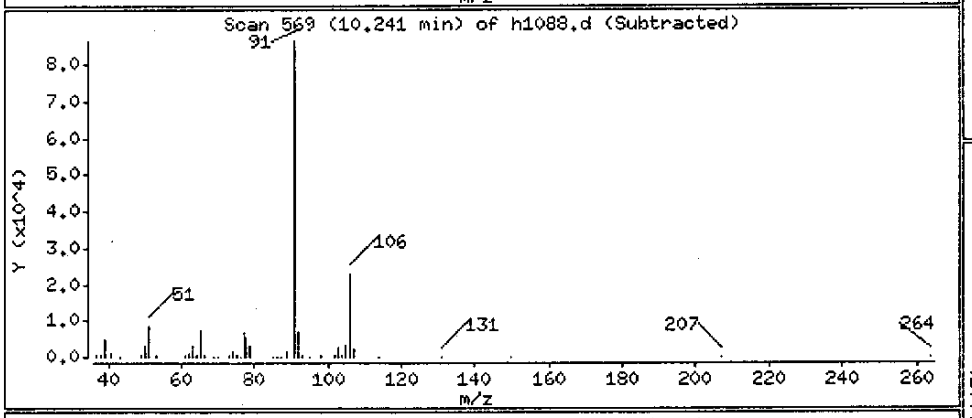
Column phase: DB624

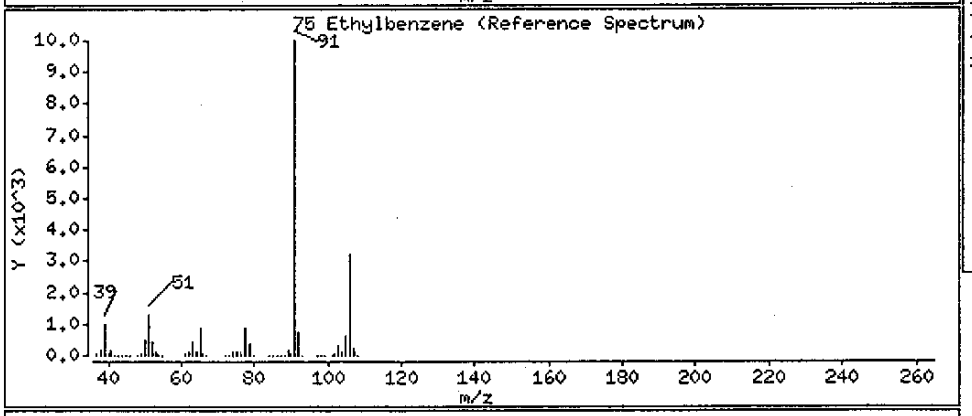
Column diameter: 0.53

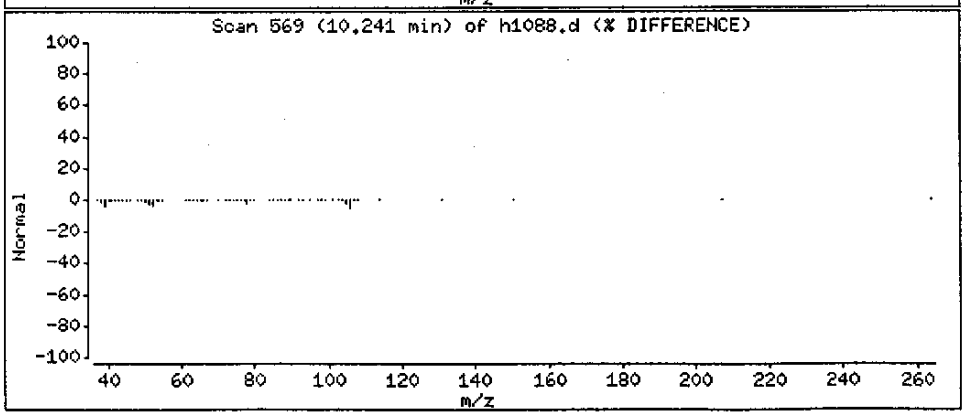
75 Ethylbenzene

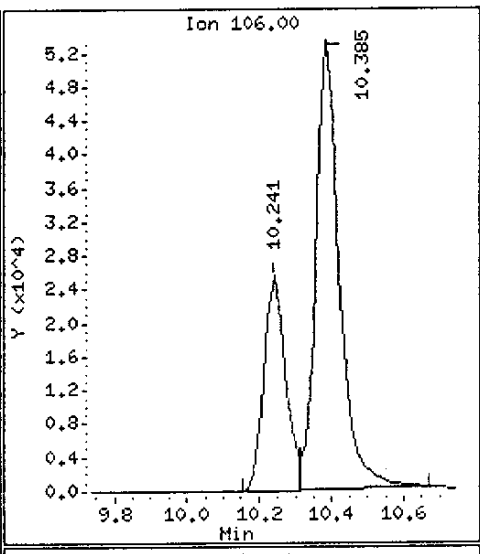
Concentration: 48.7678 ug/L

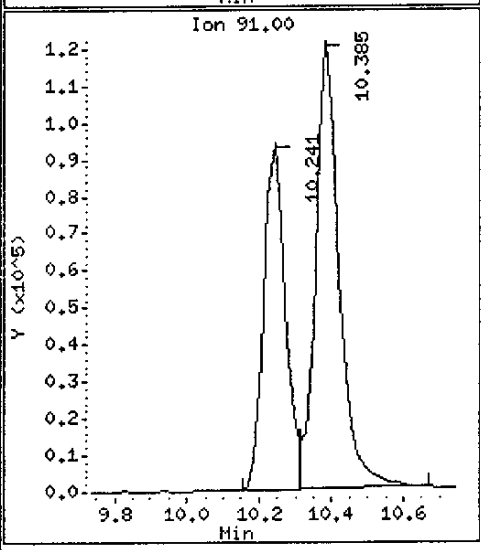












Data File: /chem/H.i/022004.b/h1088.d

Date : 20-FEB-2004 19:11

Client ID: MW-12

Instrument: H.i

Sample Info: F9KE61AA,1,D4B130209-012

Purge Volume: 20.0

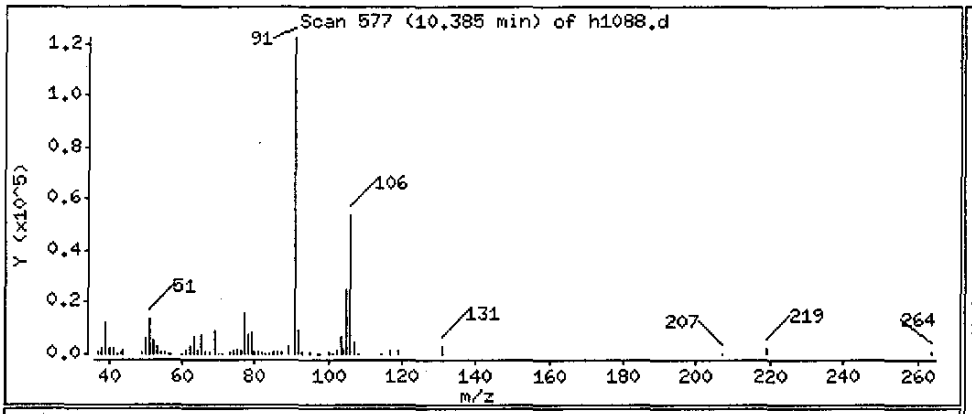
Operator: appelhansd

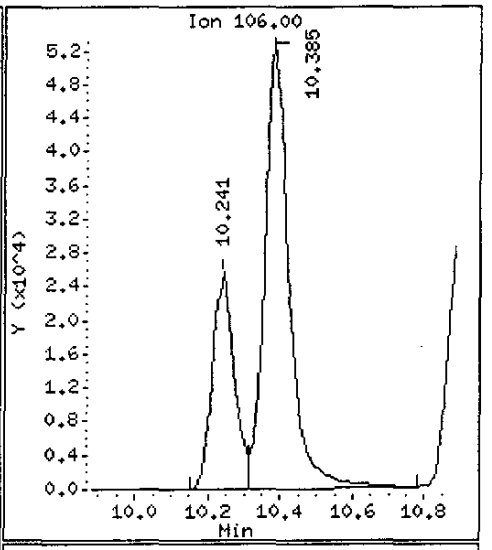
Column phase: DB624

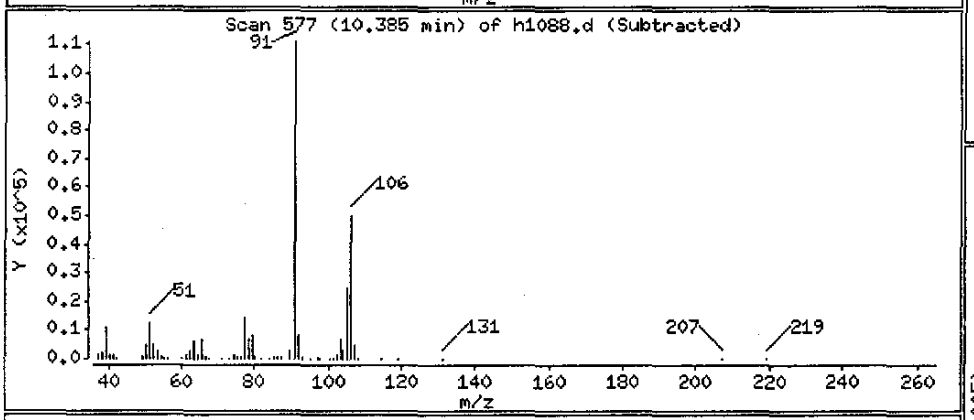
Column diameter: 0.53

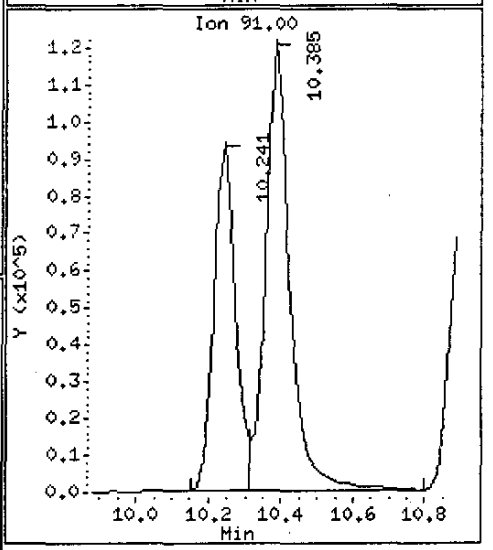
76 m and p-Xylene

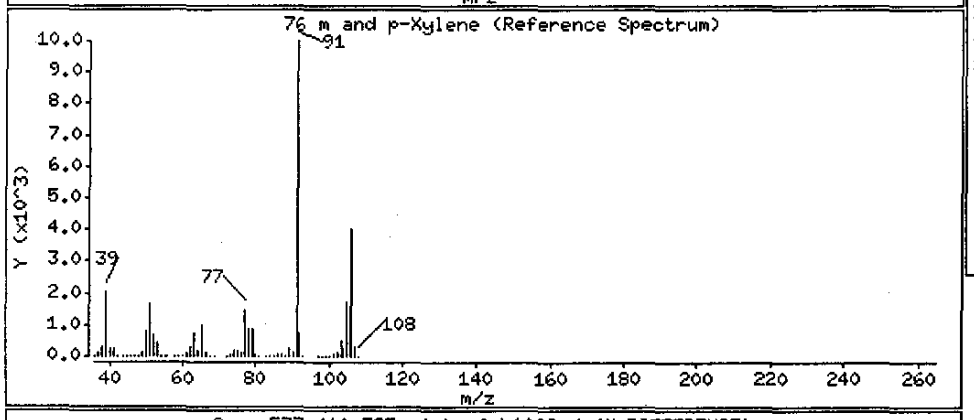
Concentration: 83.2424 ug/L

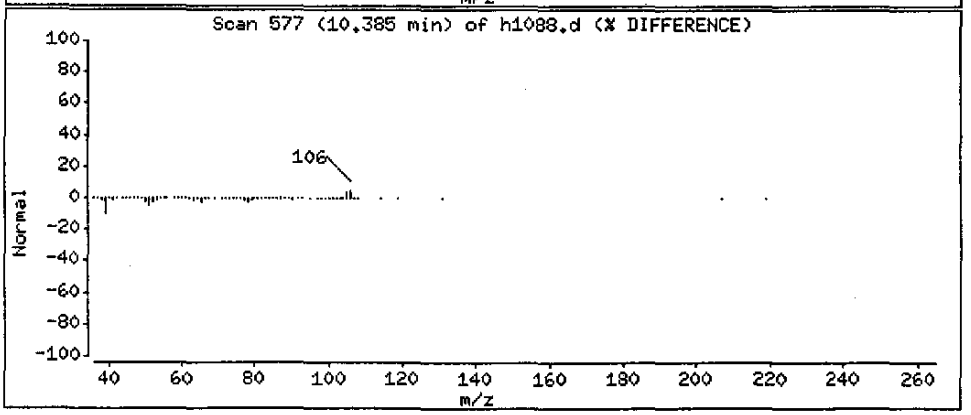












Data File: /chem/H.i/022004.b/h1088.d

Date : 20-FEB-2004 19:11

Client ID: MW-12

Instrument: H.i

Sample Info: F9KE61AA,1,D4B130209-012

Purge Volume: 20.0

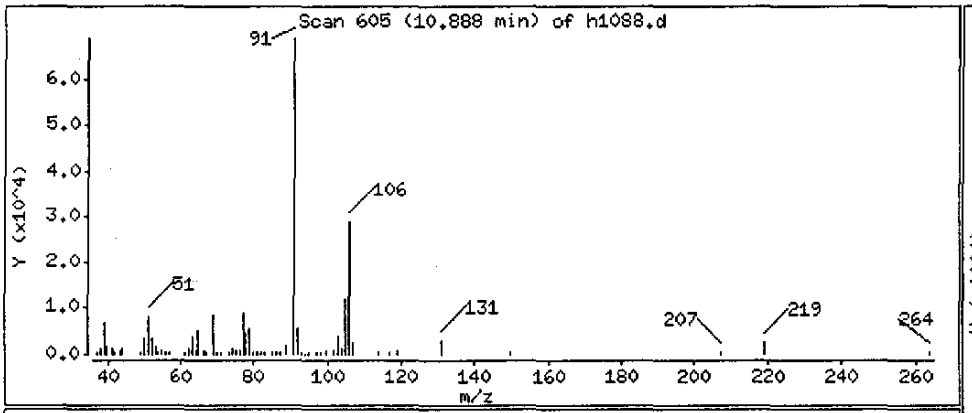
Operator: appelhansd

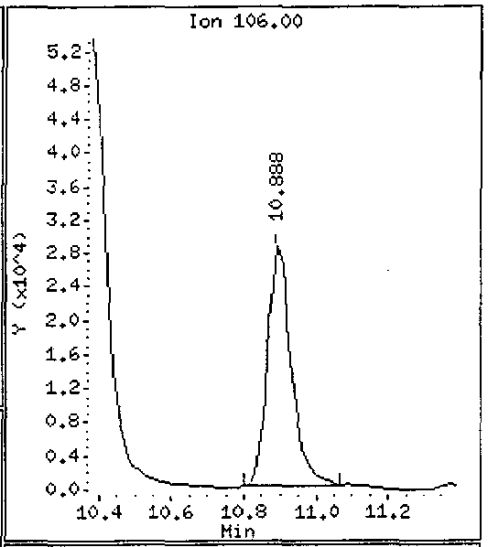
Column phase: DB624

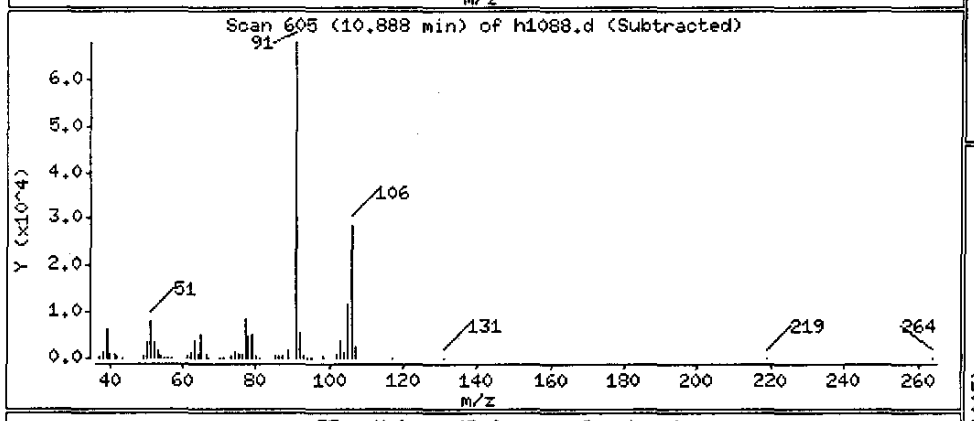
Column diameter: 0.53

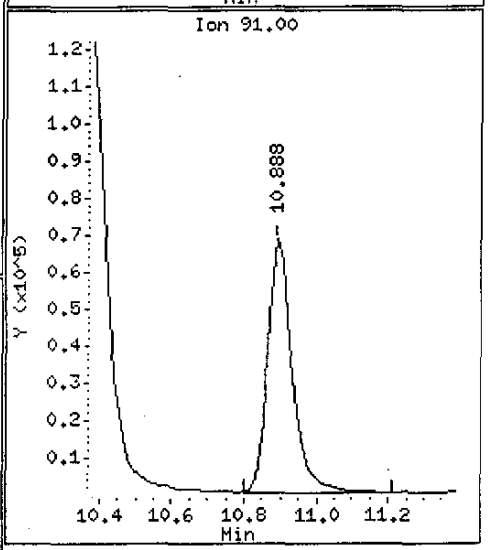
77 o-Xylene

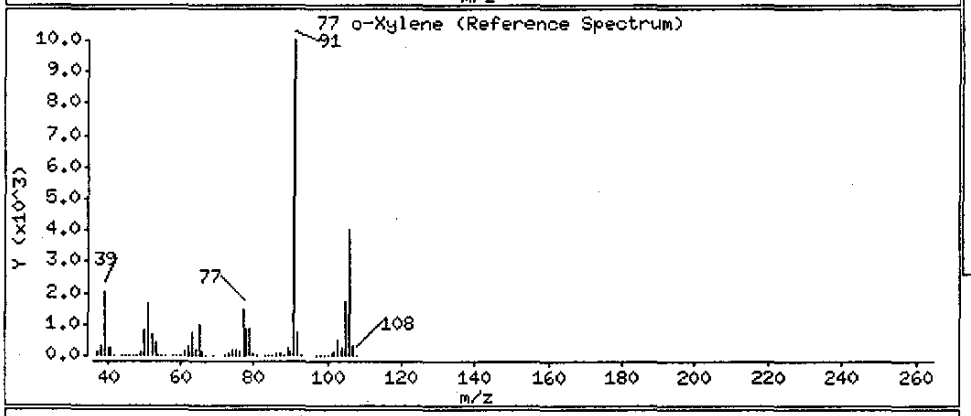
Concentration: 48.6752 ug/L

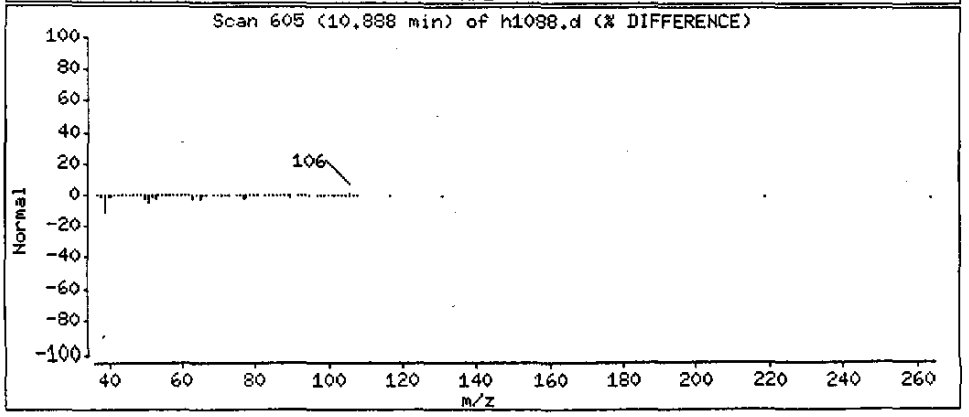












Data File: /chem/H.i/022004.b/h1088.d

Date : 20-FEB-2004 19:11

Client ID: MW-12

Instrument: H.i

Sample Info: F9KE61AA,1,D4B130209-012

Purge Volume: 20.0

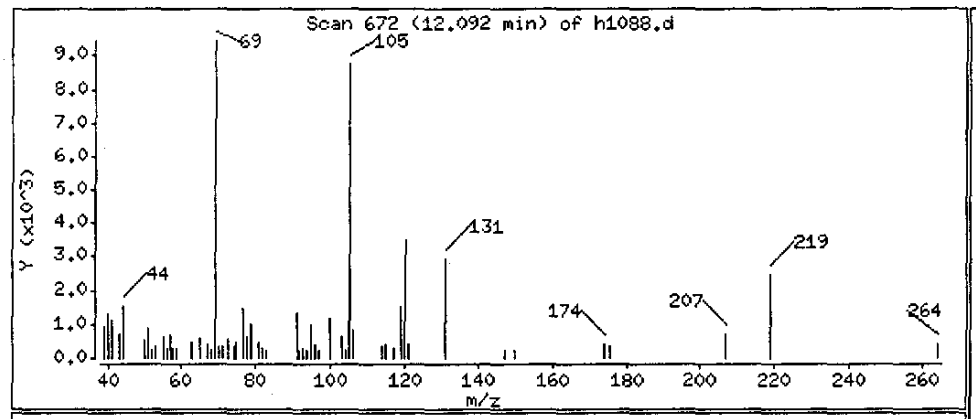
Operator: appelhansd

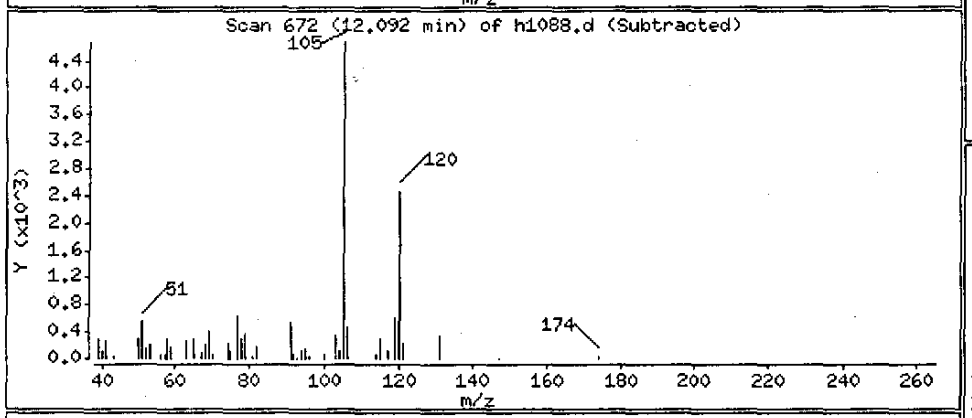
Column phase: DB624

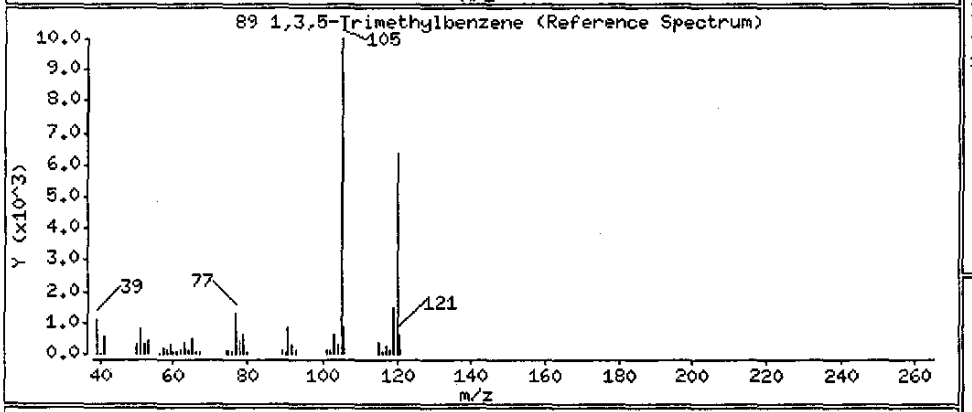
Column diameter: 0.53

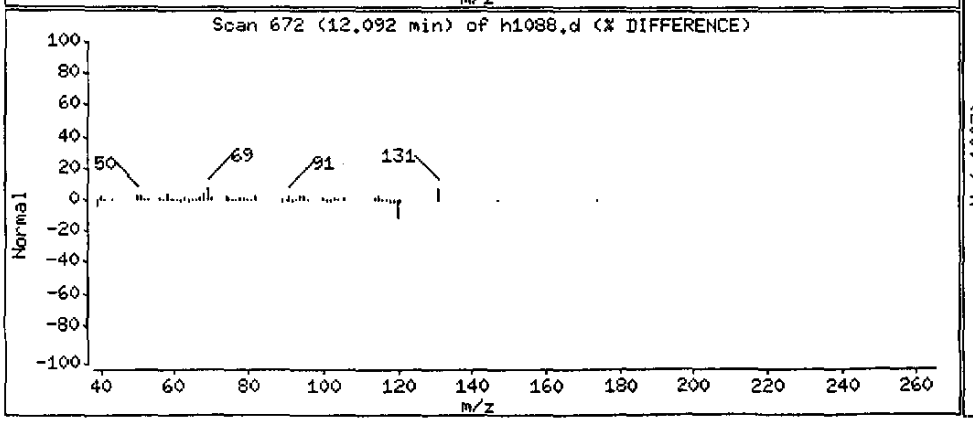
89 1,3,5-Trimethylbenzene

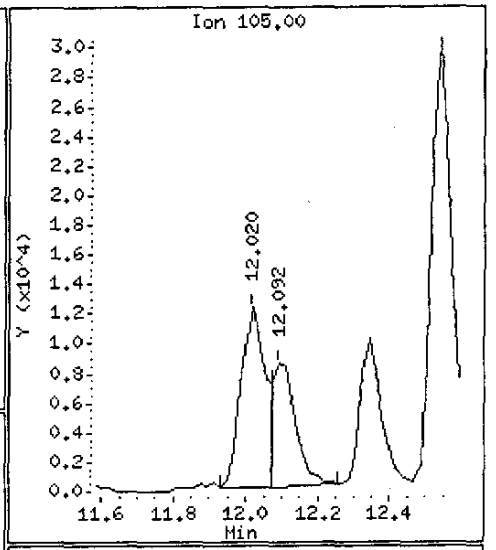
Concentration: 5.28826 ug/L

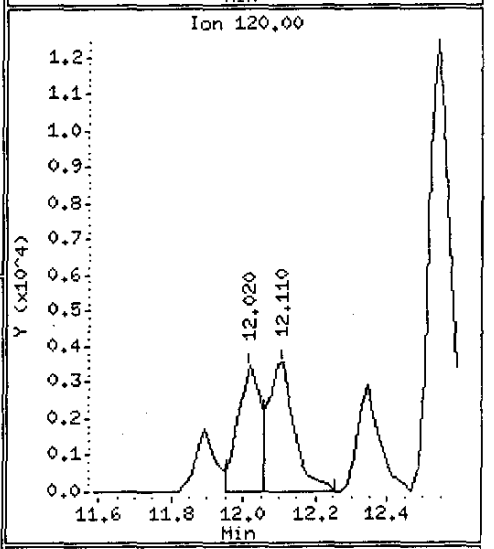


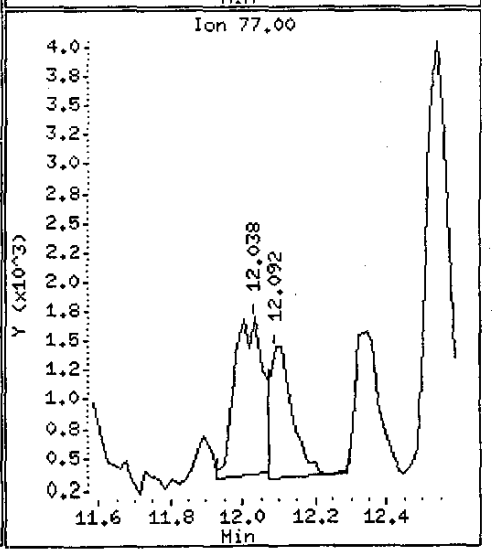












Data File: /chem/H.i/022004.b/h1088.d

Date : 20-FEB-2004 19:11

Client ID: MW-12

Instrument: H.i

Sample Info: F9KE61AA,1,D4B130209-012

Purge Volume: 20.0

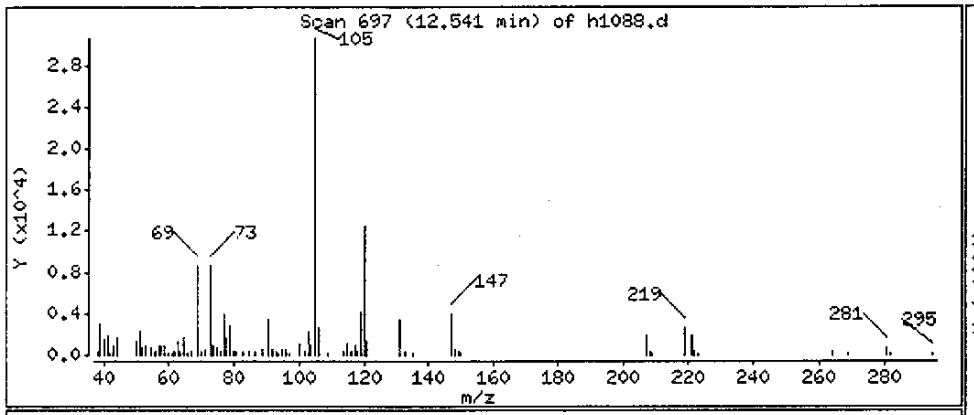
Operator: appelhansd

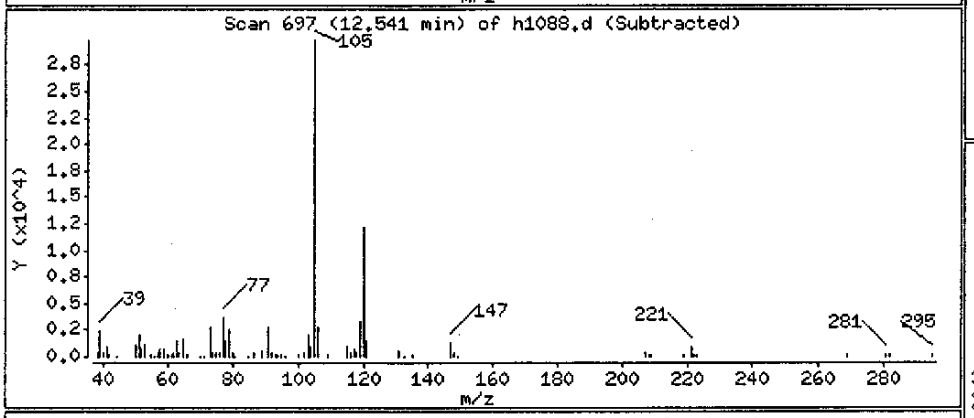
Column phase: DB624

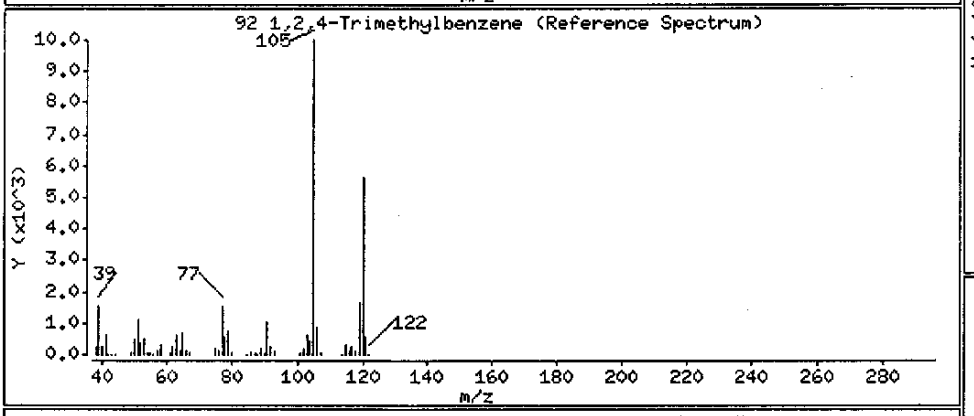
Column diameter: 0.53

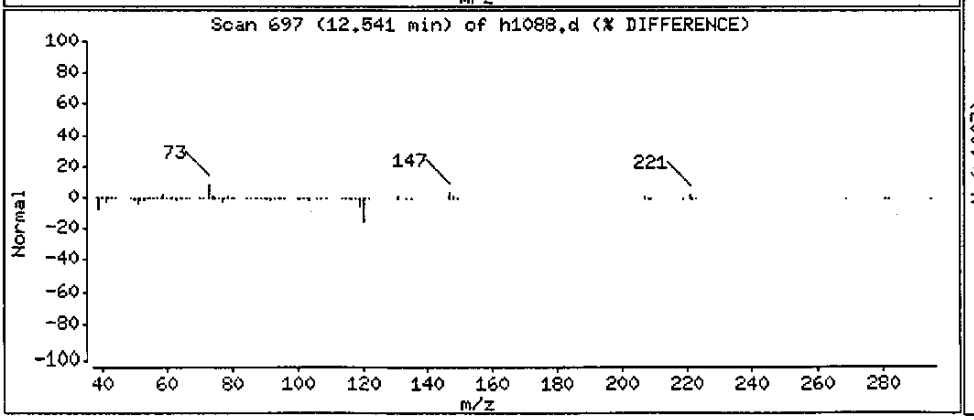
92 1,2,4-Trimethylbenzene

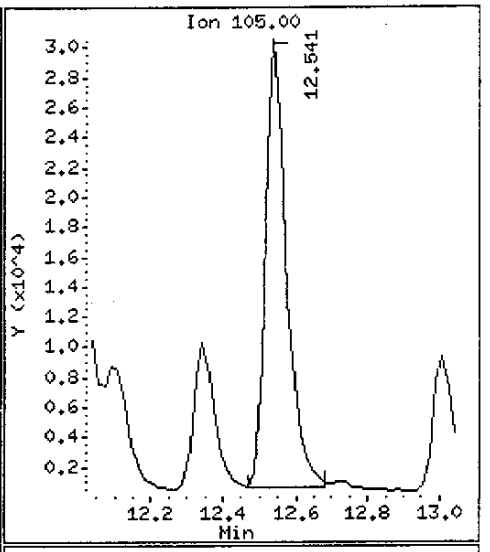
Concentration: 17.5237 ug/L

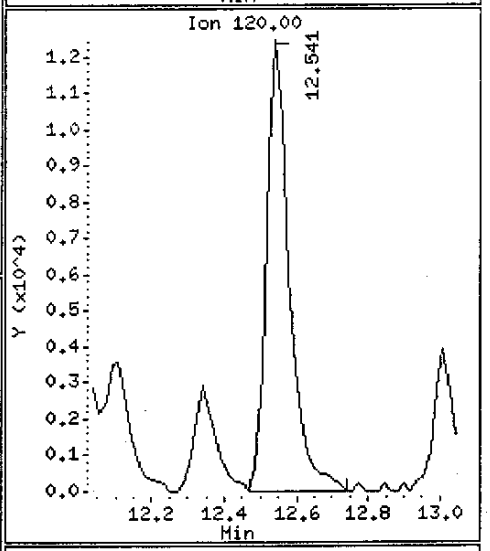


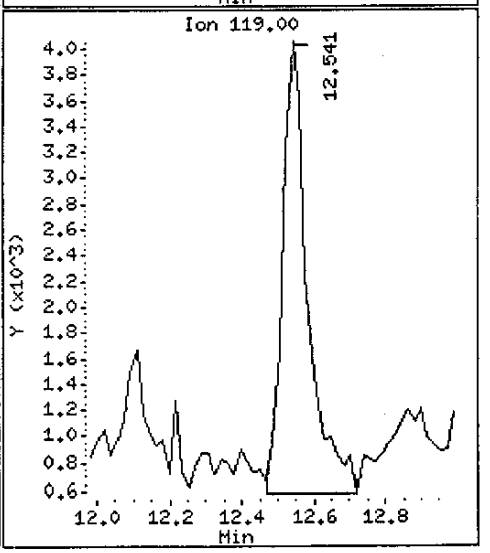












Data File: /chem/H.i/022004.b/h1088.d

Date : 20-FEB-2004 19:11

Client ID: MW-12

Instrument: H.i

Sample Info: F9KE61AA,1,D4B130209-012

Purge Volume: 20.0

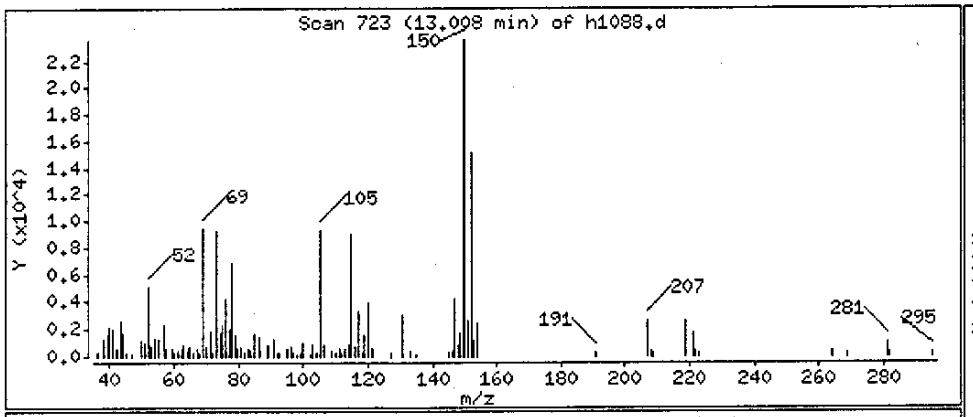
Operator: appelhansd

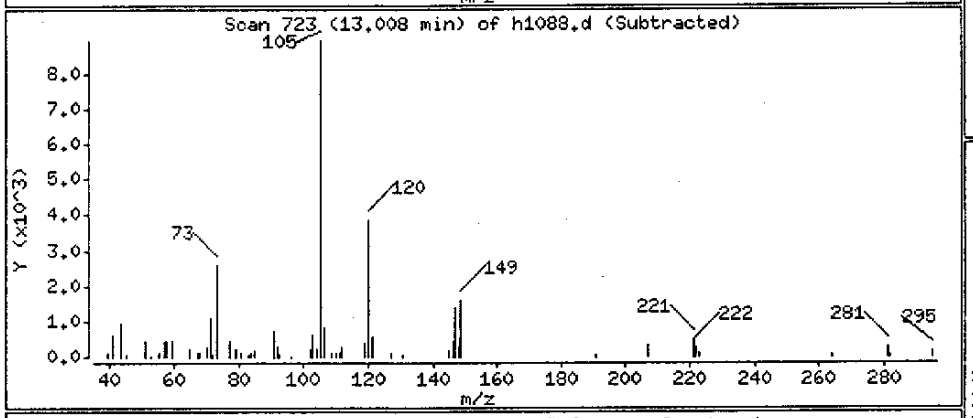
Column phase: DB624

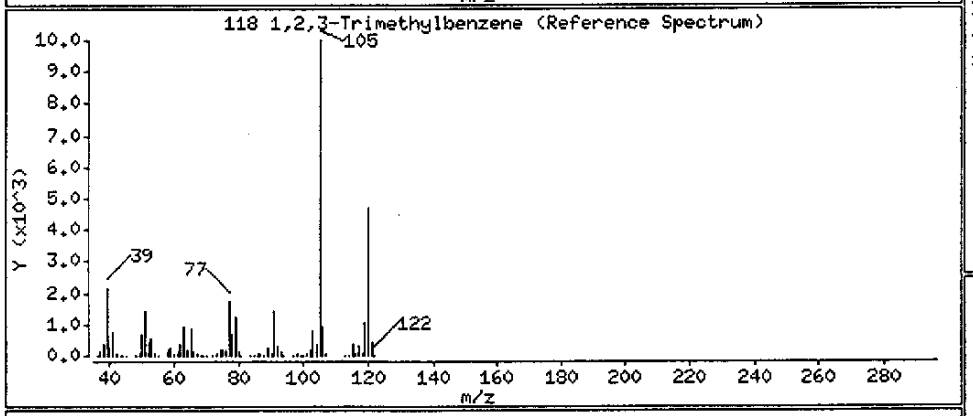
Column diameter: 0.53

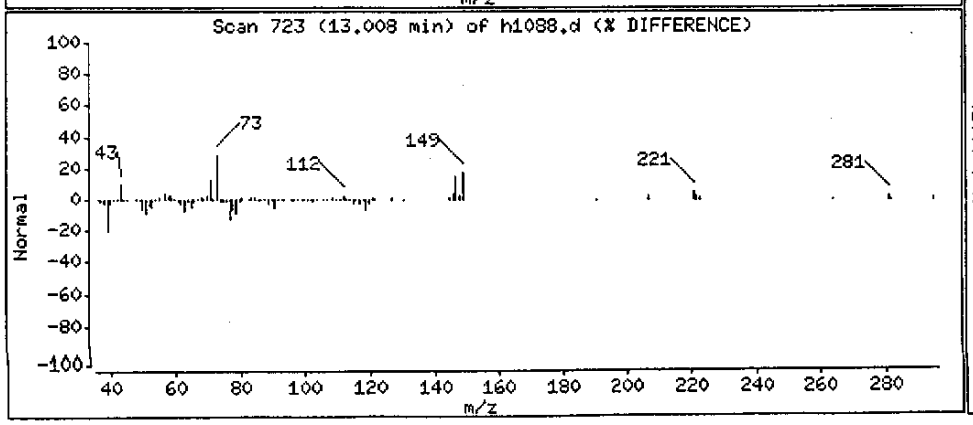
118 1,2,3-Trimethylbenzene

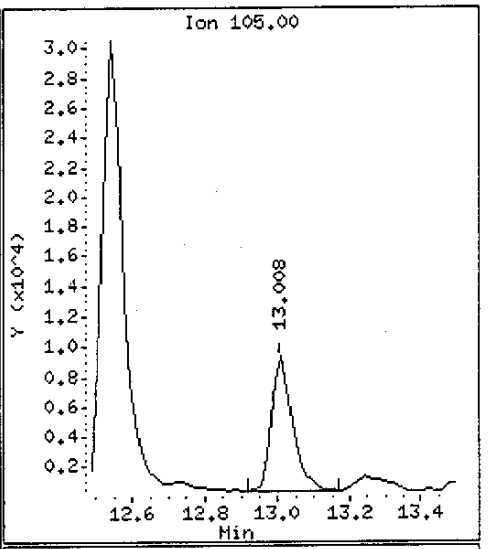
Concentration: 6.15290 ug/L

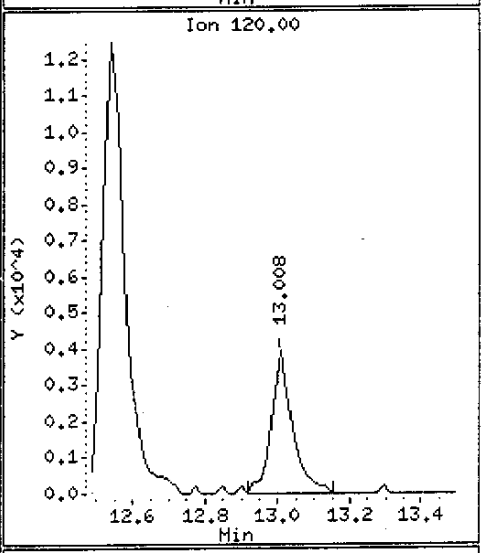


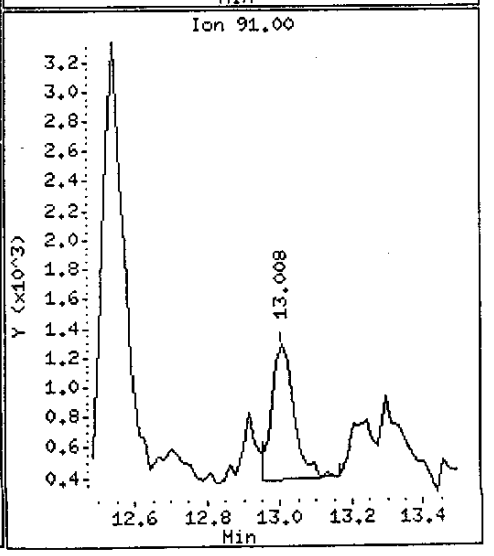












Data File: /chem/H.i/022004.b/h1089.d
Report Date: 23-Feb-2004 08:01

STL Denver

VOLATILE REPORT SW-846

Data file : /chem/H.i/022004.b/h1089.d
Lab Smp Id: F9KE71AA Client Smp ID: MW-13
Inj Date : 20-FEB-2004 19:31
Operator : appelhansd Inst ID: H.i
Smp Info : F9KE71AA,,D4B130209-013
Misc Info :
Comment : Purge and Trap Analysis
Method : /chem/H.i/022004.b/H-20ml-h2o.m
Meth Date : 20-Feb-2004 11:09 appelhad Quant Type: ISTD
Cal Date : 07-JAN-2004 15:24 Cal File: h0014.d
Als bottle: 2
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: H-all.sub
Target Version: 3.40
Processing Host: chemsv02

Concentration Formula: Amt * DF * Vp/Vs

Name	Value	Description
DF	1.000	Dilution Factor
Vp	20.000	Purge Volume (ml)
Vs	20.000	Sample Volume (ml)

A 2-23

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/L)
* 48 Fluorobenzene	96	6.398	6.395	(1.000)	1863232	12.5000	
* 72 Chlorobenzene-d5	119	10.064	10.060	(1.000)	315658	12.5000	
* 96 1,4-Dichlorobenzene-d4	152	12.921	12.917	(1.000)	571133	12.5000	
$ 40 Dibromofluoromethane	111	5.608	5.586	(0.876)	845833	11.5403	11.5403
$ 44 1,2-Dichloroethane-d4	65	6.003	5.981	(0.938)	349731	10.7053	10.7053
$ 61 Toluene-d8	98	8.303	8.281	(0.825)	1371075	11.3626	11.3626
$ 82 Bromofluorobenzene	95	11.573	11.552	(1.150)	760883	11.4992	11.4992
M 1 1,2-Dichloroethene (total)	96				474498	8.49125	8.49125
M 2 Xylene (total)	106				1086789	16.1921	16.1921
3 dichlorodifluoromethane	85.00	Compound Not Detected.					
4 Chloromethane	50.00	Compound Not Detected.					
5 Vinyl Chloride	62	2.158	2.136	(0.337)	38779	0.93529	0.935293
6 Ethylene Oxide	43.00	Compound Not Detected.					
117 Dichlorotetrafluoroethane	85.00	Compound Not Detected.					
123 1,2-dichloro-1,1,2-triflourom	117.00	Compound Not Detected.					
124 2,2-dichloro-1,1,1-trifluorom	83.00	Compound Not Detected.					

Data File: /chem/H.i/022004.b/h1089.d
Report Date: 23-Feb-2004 08:01

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)
7 Bromomethane	94.00	Compound Not Detected.					
8 Chloroethane	64.00	Compound Not Detected.					
9 Dichlorofluoromethane	67.00	Compound Not Detected.					
10 Trichlorofluoromethane	101.00	Compound Not Detected.					
11 Ethanol	45.00	Compound Not Detected.					
12 Ethyl Ether	59.00	Compound Not Detected.					
13 Acrolein	56.00	Compound Not Detected.					
15 Acetone	43.00	Compound Not Detected.					
14 1,1-Dichloroethene	96.00	Compound Not Detected.					
16 Trichlorotrifluoroethane	151.00	Compound Not Detected.					
17 Iodomethane	142.00	Compound Not Detected.					
19 Acetonitrile	41.00	Compound Not Detected.					
18 Carbon Disulfide	76.00	Compound Not Detected.					
20 Allyl Chloride	41.00	Compound Not Detected.					
119 Methyl Acetate	43.00	Compound Not Detected.					
21 Methylene Chloride	84	3.649	3.627	(0.570)	28733	0.61941	0.619409
125 2-Propanol	45.00	Compound Not Detected.					
22 tert-Butyl alcohol	59.00	Compound Not Detected.					
23 Acrylonitrile	53.00	Compound Not Detected.					
24 trans-1,2-Dichloroethene	96	3.919	3.915	(0.612)	14178	0.25184	0.251838
25 Methyl t-butyl ether	73.00	Compound Not Detected.					
26 Hexane	57	4.206	4.202	(0.418)	163998	2.30175	2.30175
27 1,1-Dichloroethane	63	4.386	4.364	(0.685)	305146	3.21591	3.21591
29 Vinyl acetate	43.00	Compound Not Detected.					
30 Isopropyl ether	87.00	Compound Not Detected.					
28 Chloroprene	53.00	Compound Not Detected.					
120 ETBE	59.00	Compound Not Detected.					
33 2-Butanone	43.00	Compound Not Detected.					
32 cis-1,2-Dichloroethene	96	5.051	5.029	(0.789)	460320	8.23942	8.23942
31 2,2-Dichloropropane	77.00	Compound Not Detected.					
35 Ethyl Acetate	43.00	Compound Not Detected.					
34 Propionitrile	54.00	Compound Not Detected.					
36 Methacrylonitrile	41.00	Compound Not Detected.					
37 Bromochloromethane	128.00	Compound Not Detected.					
39 Tetrahydrofuran	42.00	Compound Not Detected.					
38 Chloroform	83	5.410	5.406	(0.846)	299294	2.87037	2.87037
41 1,1,1-Trichloroethane	97.00	Compound Not Detected.					
114 Cyclohexane	56.00	Compound Not Detected.					
42 1,1-Dichloropropene	75.00	Compound Not Detected.					
43 Carbon Tetrachloride	117.00	Compound Not Detected.					
45 Isobutanol	41.00	Compound Not Detected.					
46 Benzene	78	6.075	6.071	(0.949)	165906	1.04002	1.04002
47 1,2-Dichloroethane	62.00	Compound Not Detected.					
121 TAME	73.00	Compound Not Detected.					
49 n-Butanol	56.00	Compound Not Detected.					
50 Trichloroethene	130	6.848	6.844	(1.070)	41740	0.68998	0.689978
115 2-Pentanone	43.00	Compound Not Detected.					

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/L)
52 1,2-Dichloropropane	63.00	Compound Not Detected.					
122 Methyl Cyclohexane	55	7.081	7.059	(1.107)	26438	0.34087	0.340865(a)
53 Dibromomethane	93.00	Compound Not Detected.					
54 Methyl Methacrylate	100.00	Compound Not Detected.					
55 1,4-Dioxane	88.00	Compound Not Detected.					
56 Bromodichloromethane	83	7.441	7.437	(1.163)	109481	1.29306	1.29306
57 2-nitropropane	41.00	Compound Not Detected.					
113 2-Chloroethyl vinyl ether	63.00	Compound Not Detected.					
59 cis-1,3-Dichloropropene	75.00	Compound Not Detected.					
60 4-Methyl-2-pentanone	43	8.177	8.155	(0.813)	23826	1.45989	1.45989
62 Toluene	91	8.375	8.389	(0.832)	1485292	8.92001	8.92001
63 trans-1,3-Dichloropropene	75.00	Compound Not Detected.					
64 Ethyl methacrylate	69.00	Compound Not Detected.					
65 1,1,2-Trichloroethane	97.00	Compound Not Detected.					
67 1,3-Dichloropropane	76.00	Compound Not Detected.					
66 Tetrachloroethene	164	9.058	9.054	(0.900)	13284	0.24951	0.249511
68 2-Hexanone	43.00	Compound Not Detected.					
126 Tetrahydrothiophene	60.00	Compound Not Detected.					
69 Dibromochloromethane	129	9.363	9.359	(0.930)	39415	0.83510	0.835095
70 1,2-Dibromoethane	107.00	Compound Not Detected.					
71 1-Chlorohexane	91.00	Compound Not Detected.					
73 Chlorobenzene	112	10.100	10.096	(1.004)	23240	0.23111	0.231109
74 1,1,1,2-Tetrachloroethane	131.00	Compound Not Detected.					
75 Ethylbenzene	106	10.244	10.240	(1.018)	137871	2.67310	2.67310
76 m and p-Xylene	106	10.387	10.383	(1.032)	744698	10.6935	10.6935
77 o-Xylene	106	10.891	10.887	(1.082)	342091	5.49861	5.49861
78 Styrene	104.00	Compound Not Detected.					
79 Bromoform	173	11.160	11.156	(1.109)	5597	0.21007	0.210069
80 isopropyl benzene	105	11.376	11.372	(1.130)	54074	0.26370	0.263700
116 cis-1,4-Dichloro-2-butene	53.00	Compound Not Detected.					
81 Cyclohexanone	55.00	Compound Not Detected.					
83 1,1,2,2-Tetrachloroethane	83.00	Compound Not Detected.					
84 Bromobenzene	156.00	Compound Not Detected.					
85 1,2,3-Trichloropropane	110.00	Compound Not Detected.					
86 t-1,4-Dichloro-2-butene	53.00	Compound Not Detected.					
87 n-Propylbenzene	120.00	Compound Not Detected.					
88 2-Chlorotoluene	126.00	Compound Not Detected.					
89 1,3,5-Trimethylbenzene	105	12.094	12.091	(0.936)	186943	1.12274	1.12274
90 4-Chlorotoluene	126.00	Compound Not Detected.					
91 tert-Butylbenzene	119.00	Compound Not Detected.					
92 1,2,4-Trimethylbenzene	105	12.544	12.540	(0.971)	252514	1.62521	1.62521
93 sec-Butylbenzene	134.00	Compound Not Detected.					
94 m-Dichlorobenzene	146.00	Compound Not Detected.					
95 4-Isopropyltoluene	119	12.849	12.881	(0.994)	105810	0.56188	0.561883
97 p-dichlorobenzene	146.00	Compound Not Detected.					
118 1,2,3-Trimethylbenzene	105	13.011	12.989	(2.033)	254061	2.02519	2.02519(a)
98 n-Butylbenzene	91	13.298	13.312	(1.029)	44248	0.21123	0.211234

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/L)
99 o-Dichlorobenzene	146	13.334	13.330	(1.032)	48135	0.65405	0.654052
100 1,2-Dibromo-3-chloropropane	157.00	Compound Not Detected.					
101 1,2,4-Trichlorobenzene	180.00	Compound Not Detected.					
102 Hexachlorobutadiene	225.00	Compound Not Detected.					
127 Naphthalene	128	15.131	15.127	(1.171)	67549	1.26428	1.26428(a)
104 1,2,3-Trichlorobenzene	180.00	Compound Not Detected.					

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

Data File: /chem/H.i/022004.b/h1089.d
Report Date: 23-Feb-2004 08:01

STL Denver

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: H.i
Lab File ID: h1089.d
Lab Smp Id: F9KE71AA
Analysis Type: VOA
Quant Type: ISTD
Operator: appelhansd
Method File: /chem/H.i/022004.b/H-20ml-h2o.m
Misc Info:

Calibration Date: 02/20/4
Calibration Time: 1059
Client Smp ID: MW-13
Level: LOW
Sample Type: WATER

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
48 Fluorobenzene	2466684	1233342	4933368	1863232	-24.46
72 Chlorobenzene-d5	459303	229652	918606	315658	-31.27
96 1,4-Dichlorobenze	730993	365496	1461986	571133	-21.87

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
48 Fluorobenzene	6.39	5.89	6.89	6.40	0.06
72 Chlorobenzene-d5	10.06	9.56	10.56	10.06	0.04
96 1,4-Dichlorobenze	12.92	12.42	13.42	12.92	0.03

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem/H.i/022004.b/h1089.d Page 6
Report Date: 23-Feb-2004 08:01

STL Denver

RECOVERY REPORT

Client Name: ARCADIS GERAGHTY & M13-FEB-2004 Client SDG: D4B130209
Sample Matrix: LIQUID Fraction: VOA
Lab Smp Id: F9KE71AA Client Smp ID: MW-13
Level: LOW Operator: appelhansd
Data Type: MS DATA SampleType: SAMPLE
SpikeList File: dcs-h20.spk Quant Type: ISTD
Sublist File: H-all.sub
Method File: /chem/H.i/022004.b/H-20ml-h2o.m
Misc Info:

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 40 Dibromofluorometha	11.5000	11.5403	100.35	76-116
$ 44 1,2-Dichloroethane	11.5000	10.7053	93.09	59-129
$ 61 Toluene-d8	11.5000	11.3626	98.81	76-116
$ 82 Bromofluorobenzene	11.5000	11.4992	99.99	74-114

Data File: /chem/H.i/022004.b/h1089.d
Date : 20-FEB-2004 19:31
Client ID: MW-13
Sample Info: F9KE71AA,,D4B130209-013
Purge Volume: 20.0
Column phase: DB624

Instrument: H.i
Operator: appelhansd
Column diameter: 0.53

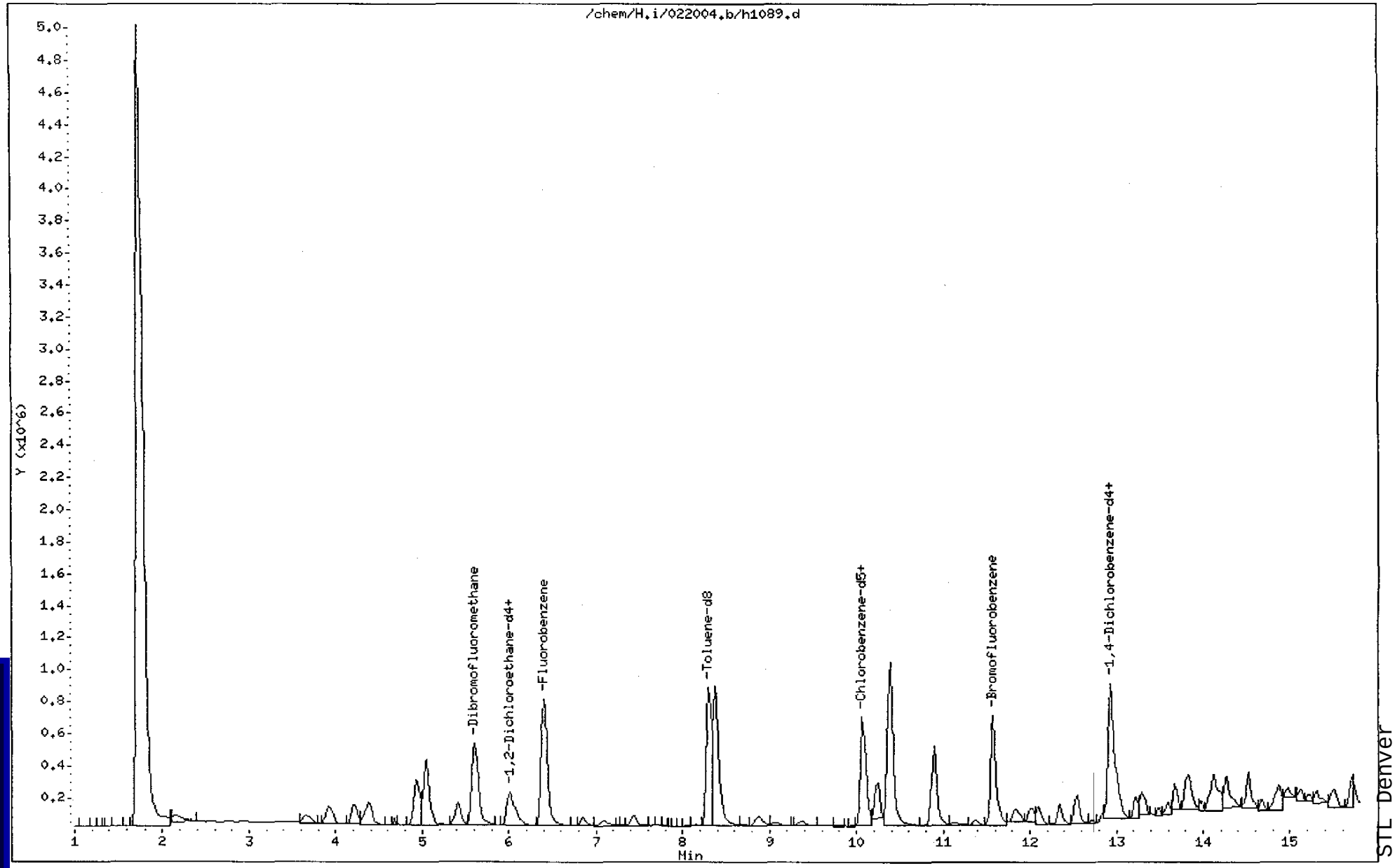


Table of Contents

Data File: /chem/H.i/022004.b/h1089.d

Date : 20-FEB-2004 19:31

Client ID: MW-13

Instrument: H.i

Sample Info: F9KE71AA,,D4B130209-013

Purge Volume: 20.0

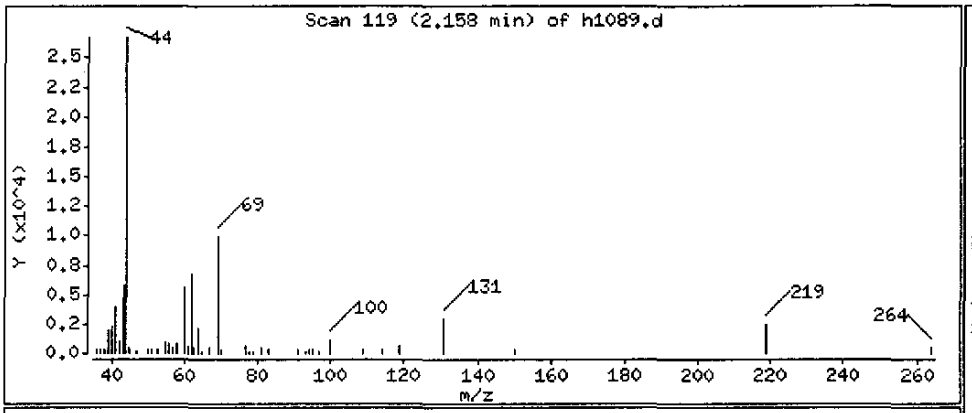
Operator: appelhansd

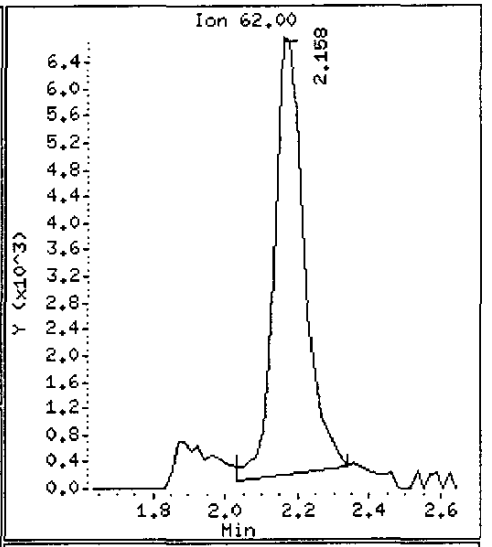
Column phase: DB624

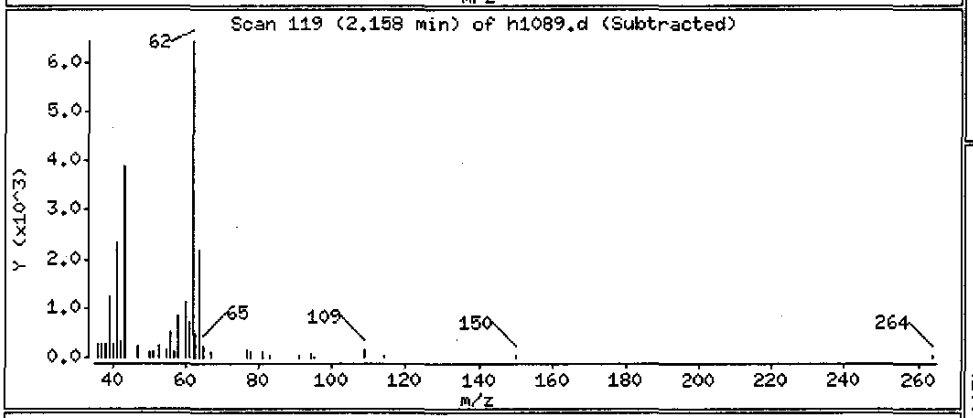
Column diameter: 0.53

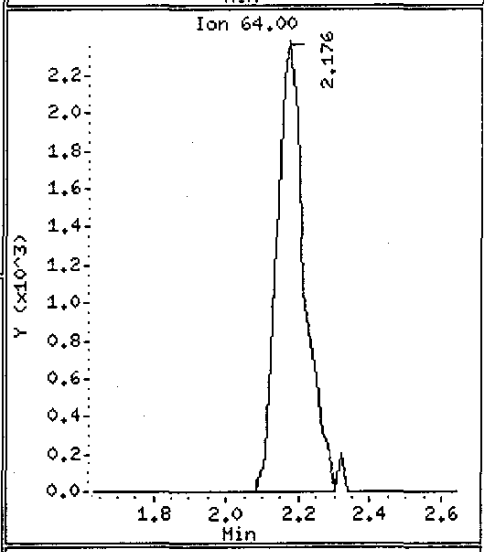
5 Vinyl Chloride

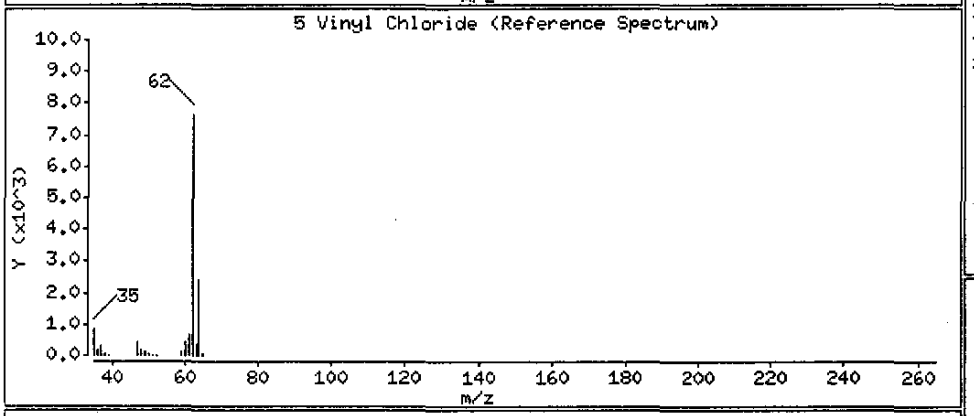
Concentration: 0.935293 ug/L

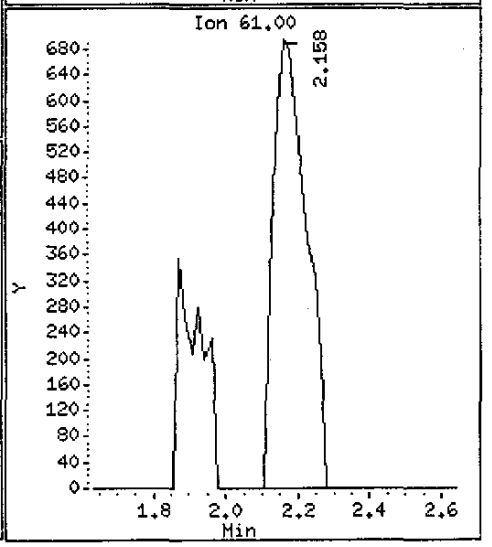


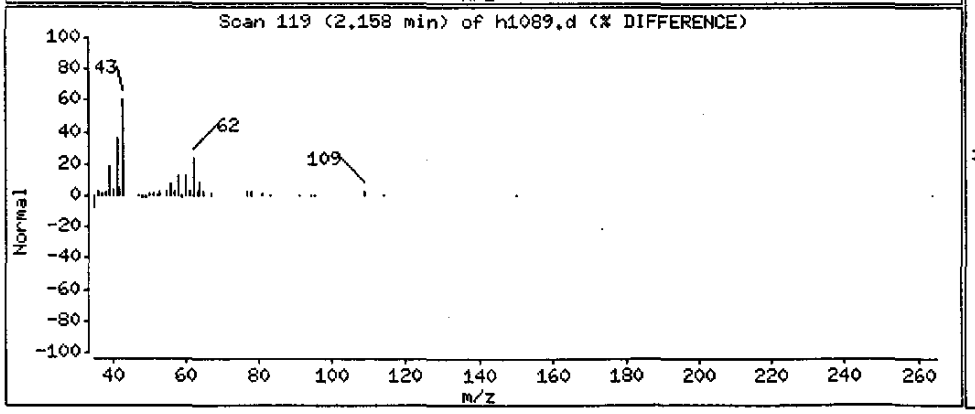












Data File: /chem/H.i/022004.b/h1089.d

Date : 20-FEB-2004 19:31

Client ID: MW-13

Instrument: H.i

Sample Info: F9KE71AA,,D4B130209-013

Purge Volume: 20.0

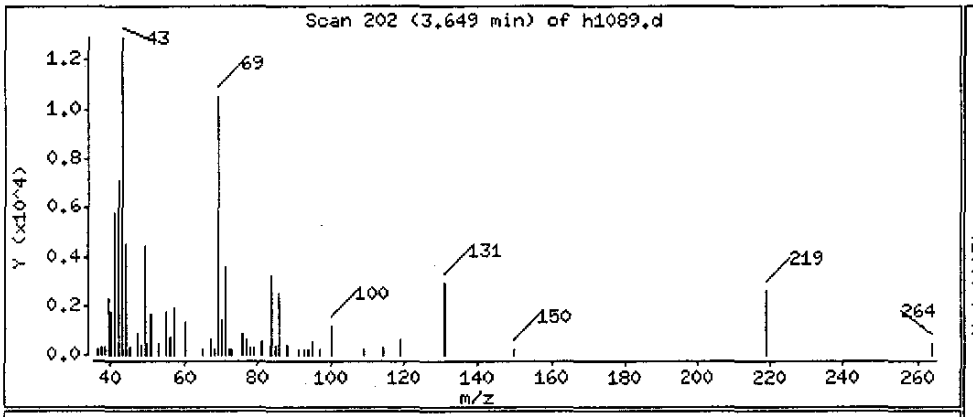
Operator: appelhansd

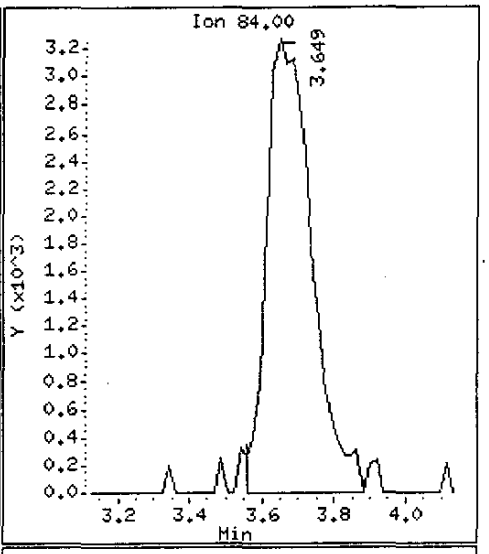
Column phase: DB624

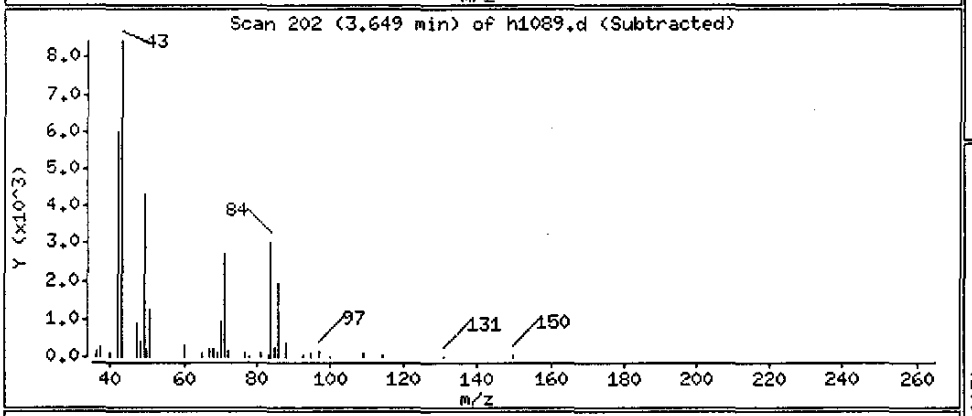
Column diameter: 0.53

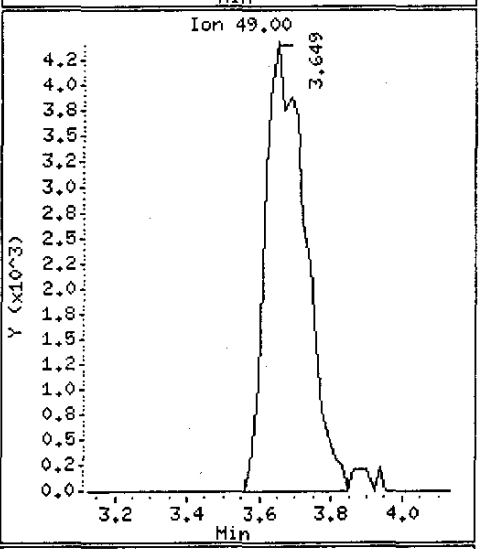
21 Methylene Chloride

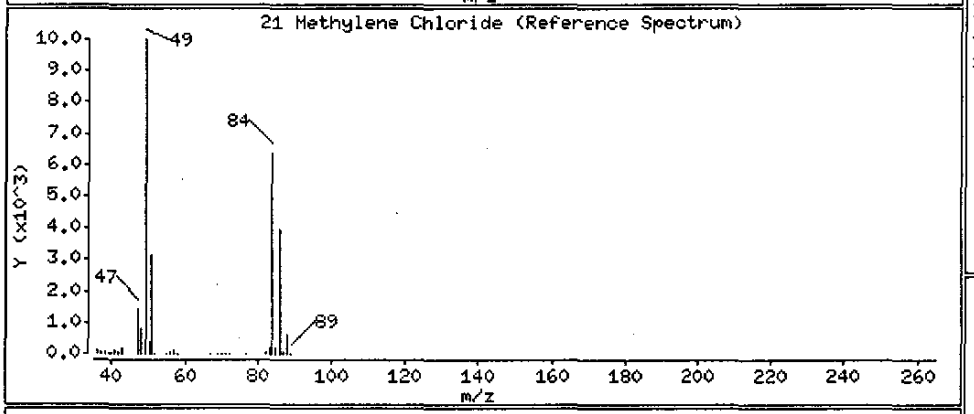
Concentration: 0.619409 ug/L

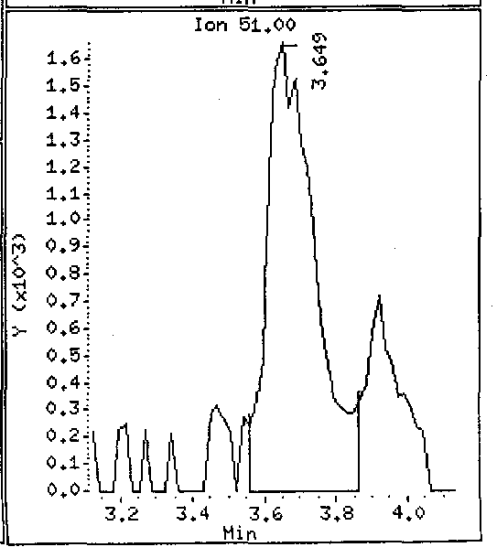


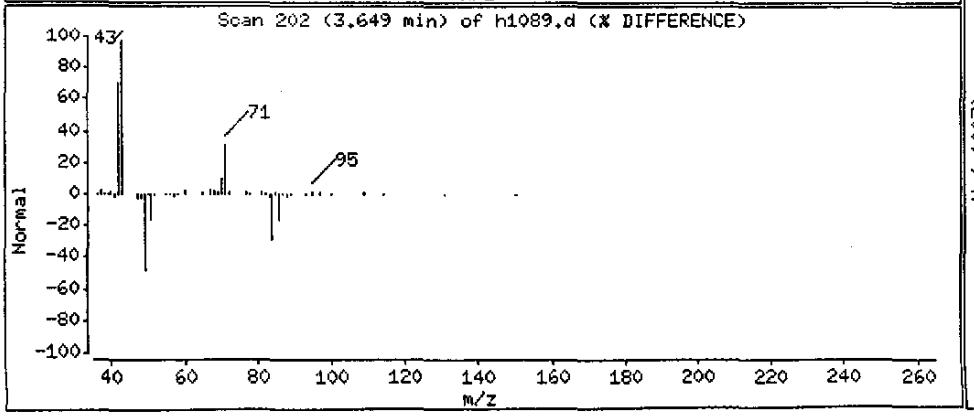












Data File: /chem/H.i/022004.b/h1089.d

Date : 20-FEB-2004 19:31

Client ID: MW-13

Instrument: H.i

Sample Info: F9KE71AA,,D4B130209-013

Purge Volume: 20.0

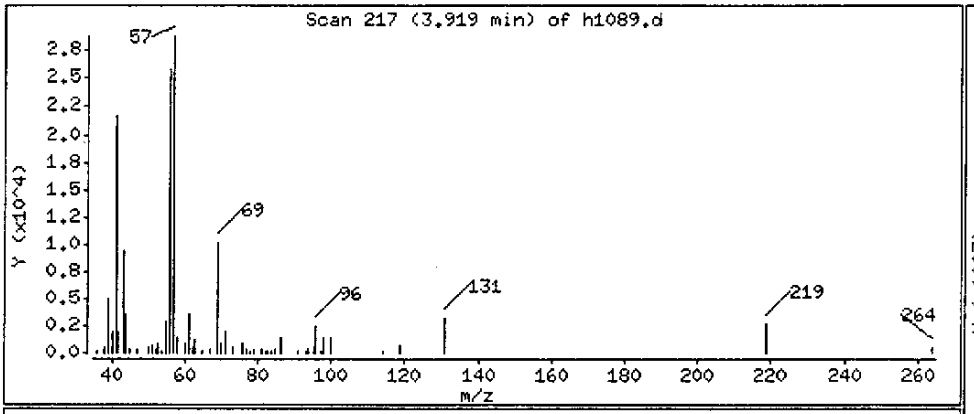
Operator: appelhansd

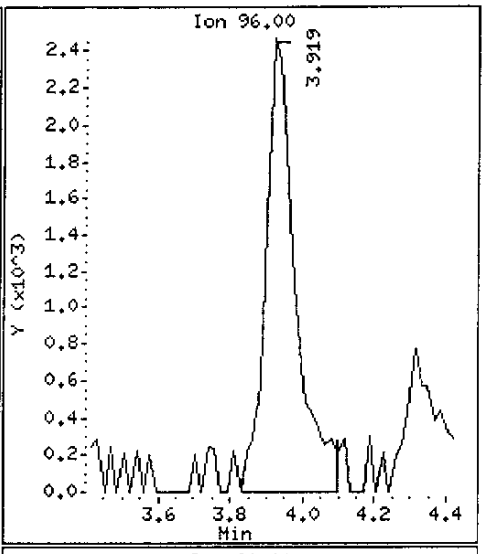
Column phase: DB624

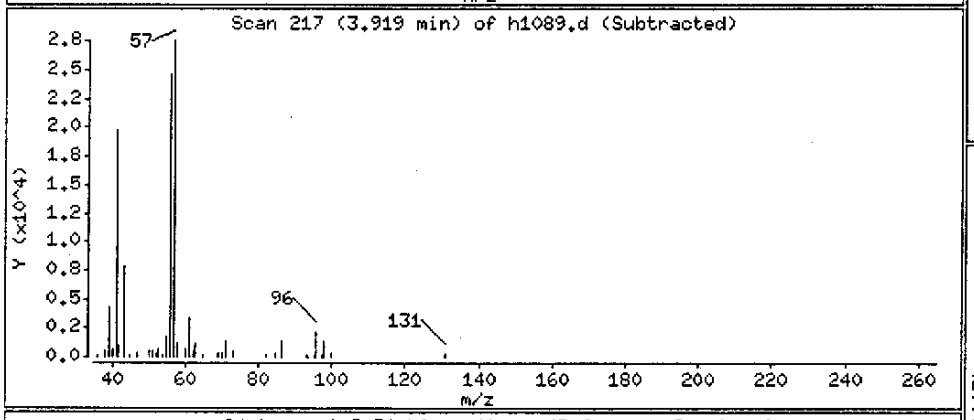
Column diameter: 0.53

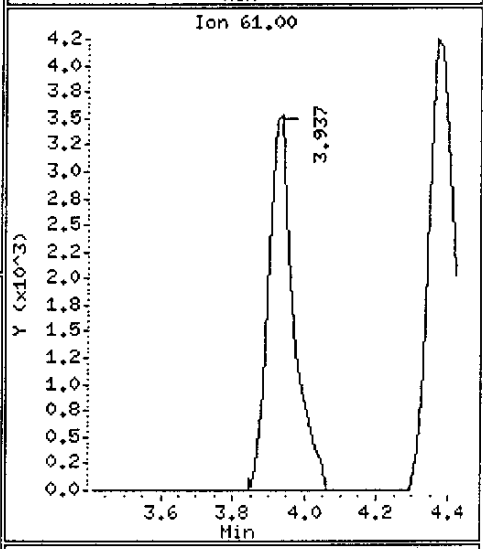
24 trans-1,2-Dichloroethene

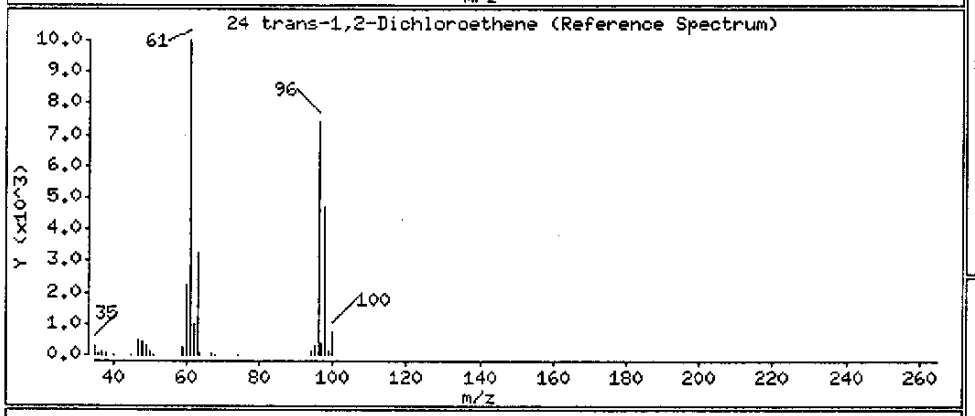
Concentration: 0.251838 ug/L

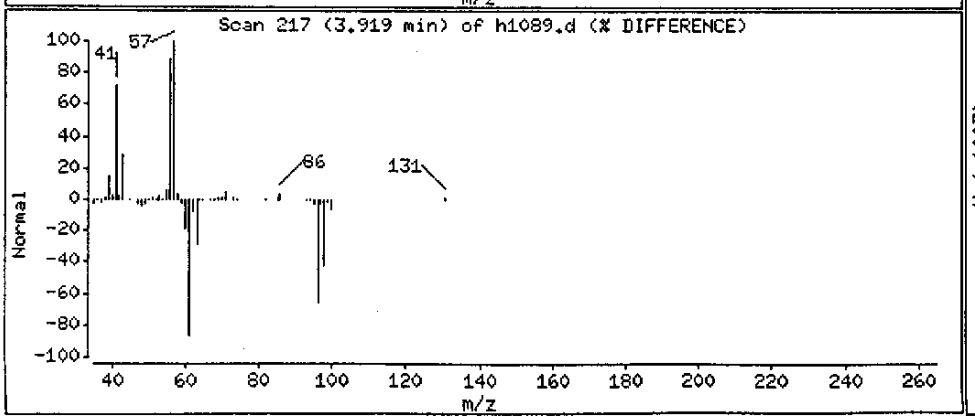


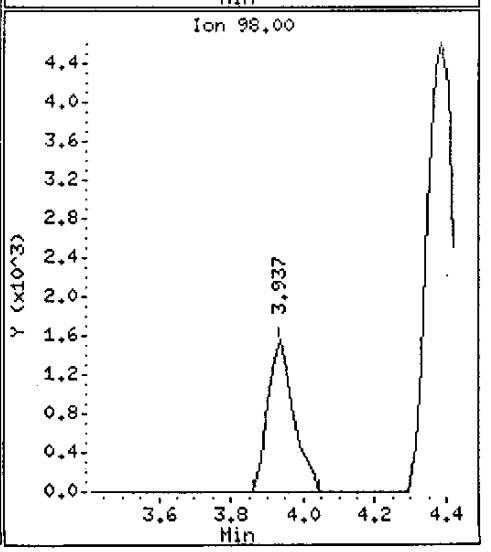












Data File: /chem/H.i/022004.b/h1089.d

Date : 20-FEB-2004 19:31

Client ID: MW-13

Instrument: H.i

Sample Info: F9KE71AA,,D4B130209-013

Purge Volume: 20.0

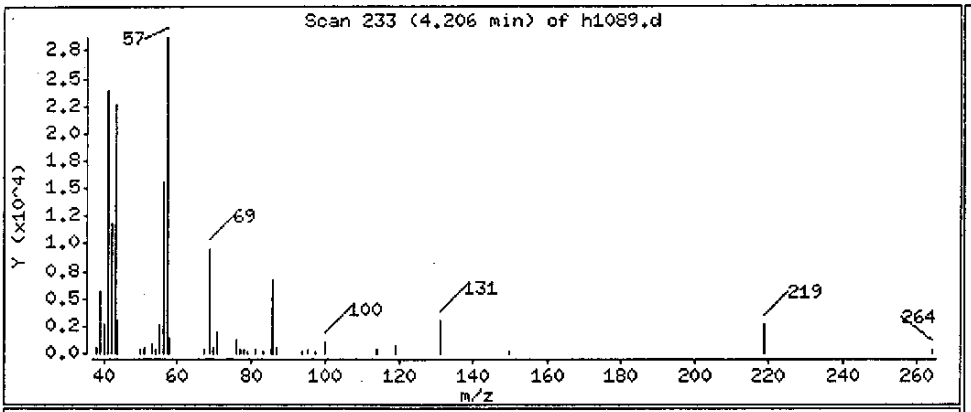
Operator: appelhansd

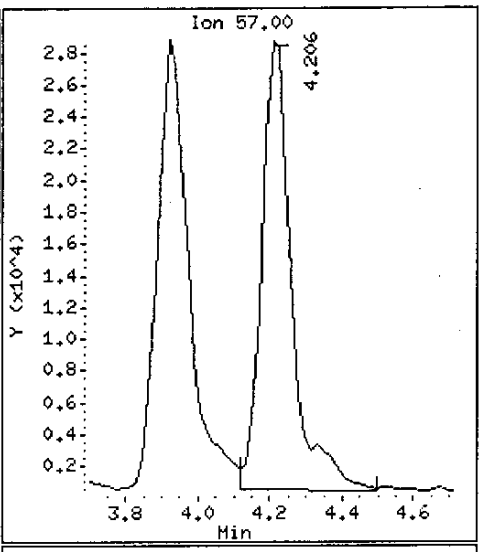
Column phase: DB624

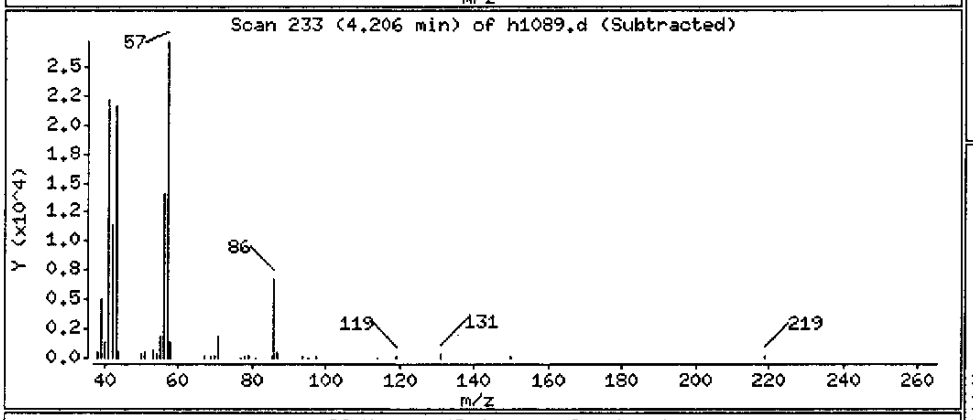
Column diameter: 0.53

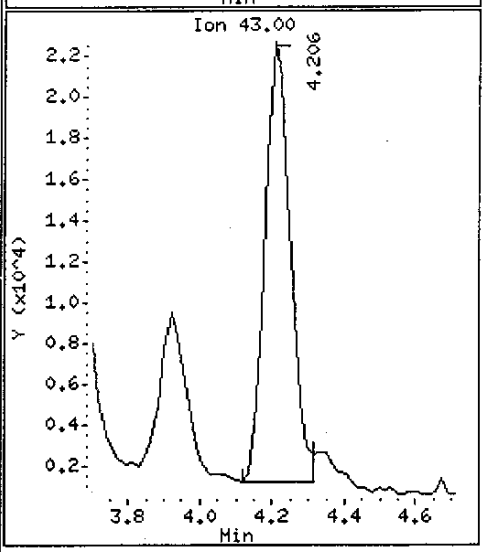
26 Hexane

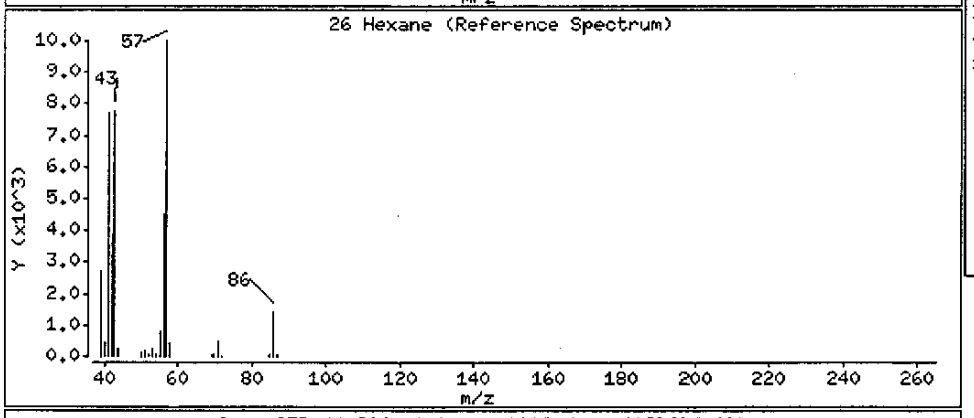
Concentration: 2.30175 ug/L

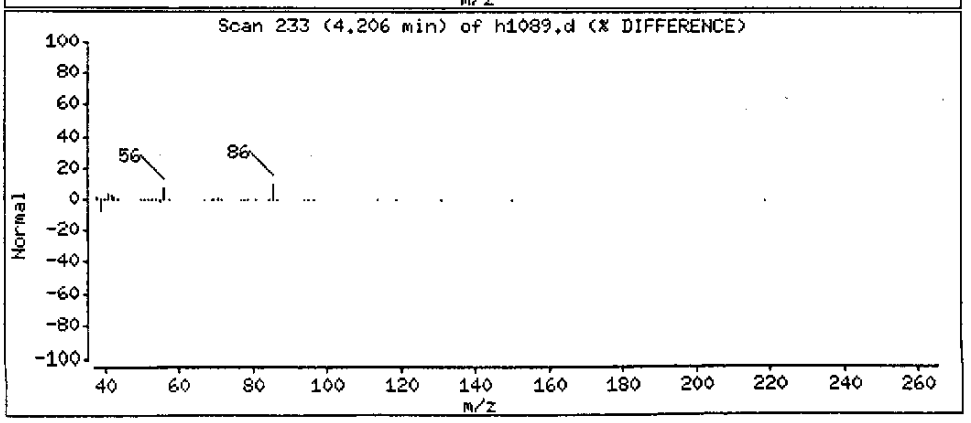












Data File: /chem/H.i/022004.b/h1089.d

Date : 20-FEB-2004 19:31

Client ID: MW-13

Instrument: H.i

Sample Info: F9KE71AA,,D4B130209-013

Purge Volume: 20.0

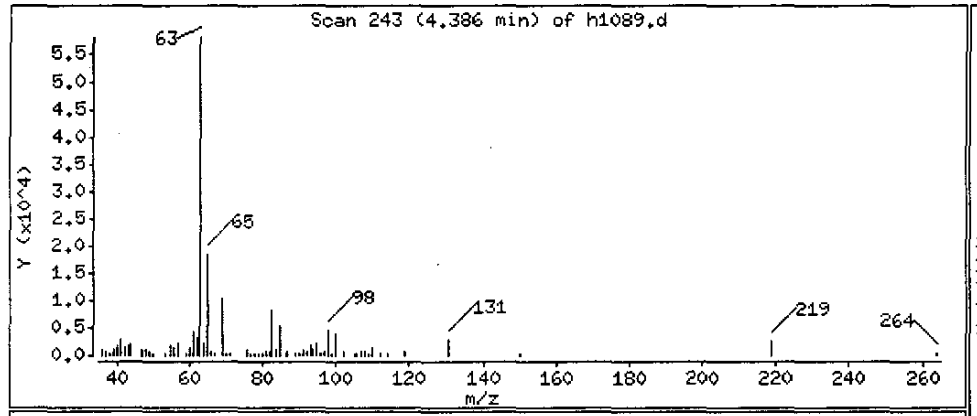
Operator: appelhansd

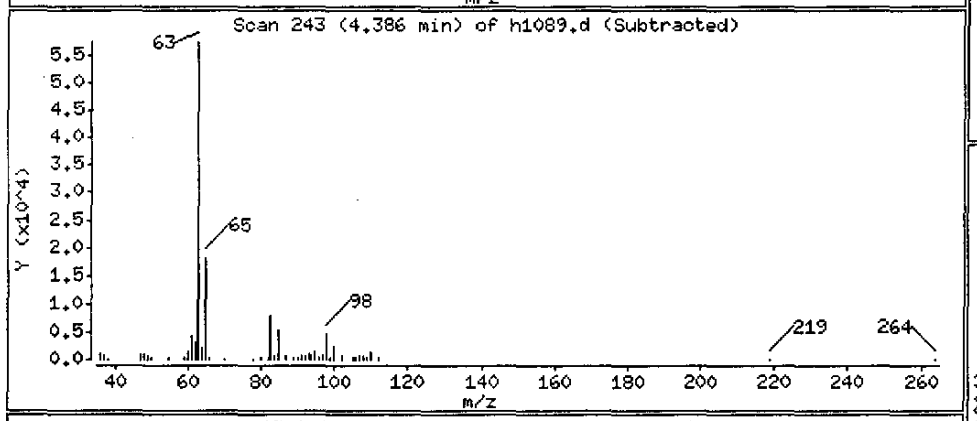
Column phase: DB624

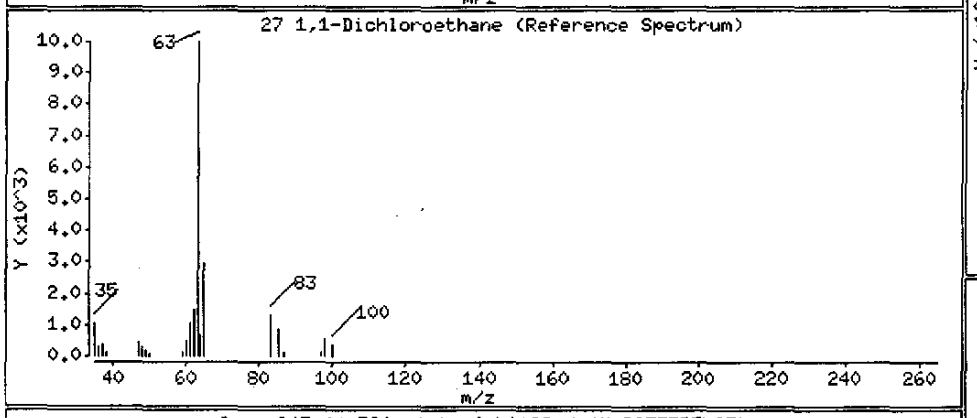
Column diameter: 0.53

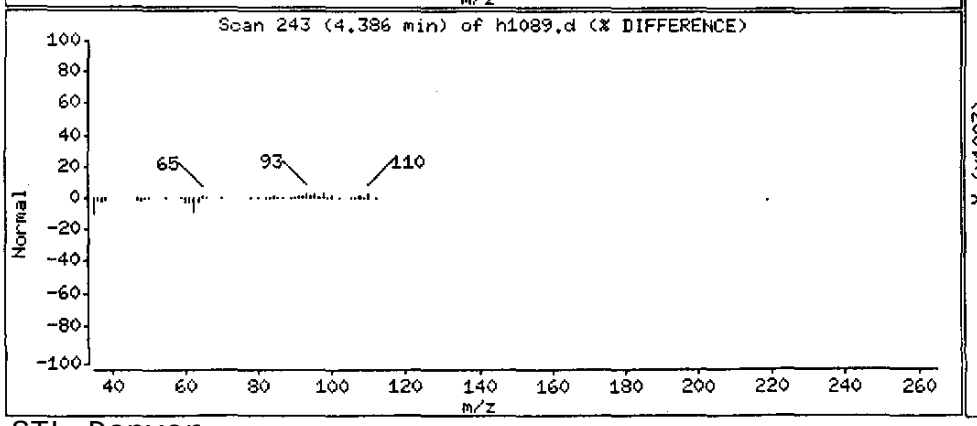
27 1,1-Dichloroethane

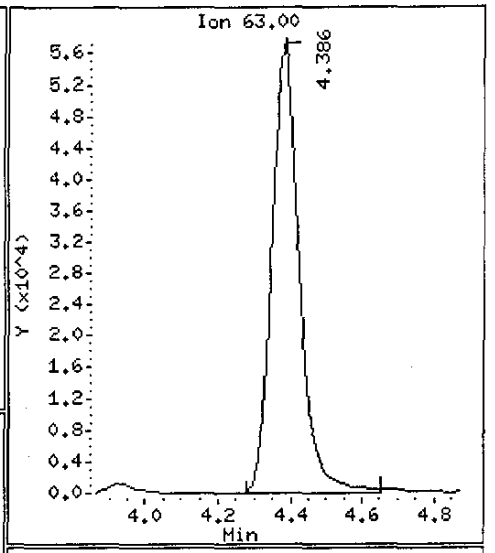
Concentration: 3.21591 ug/L

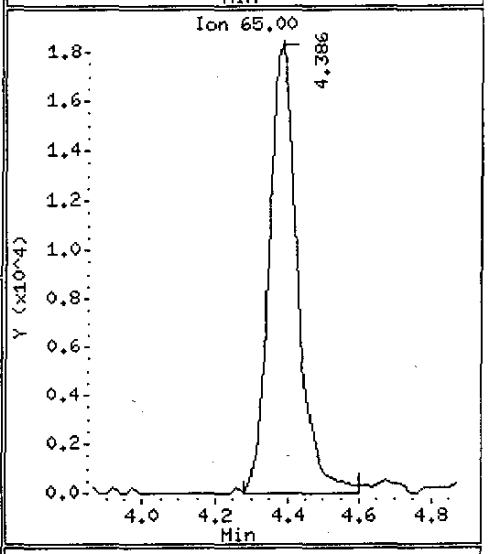


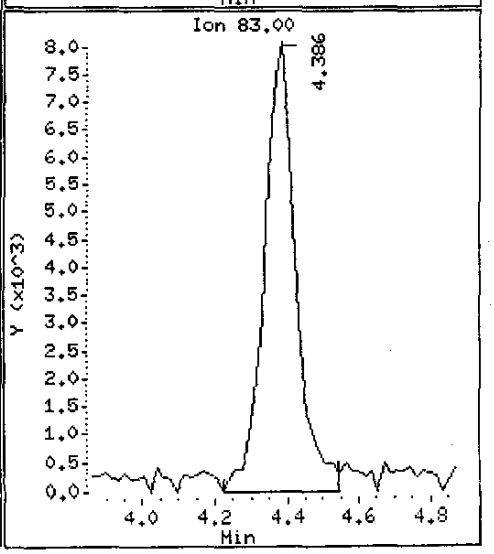












Data File: /chem/H.i/022004.b/h1089.d

Date : 20-FEB-2004 19:31

Client ID: MW-13

Instrument: H.i

Sample Info: F9KE71AA,,D4B130209-013

Purge Volume: 20.0

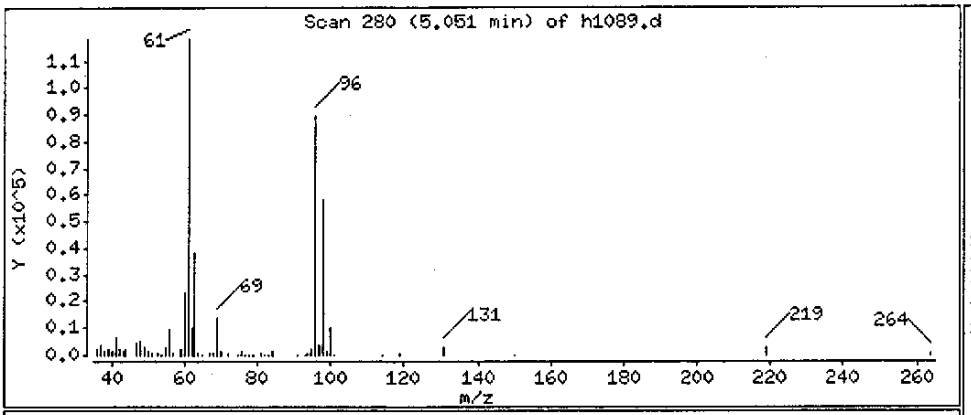
Operator: appelhansd

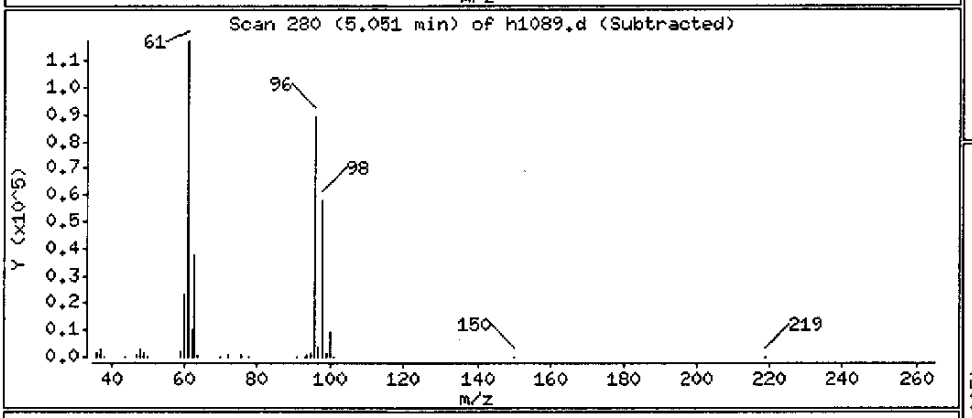
Column phase: DB624

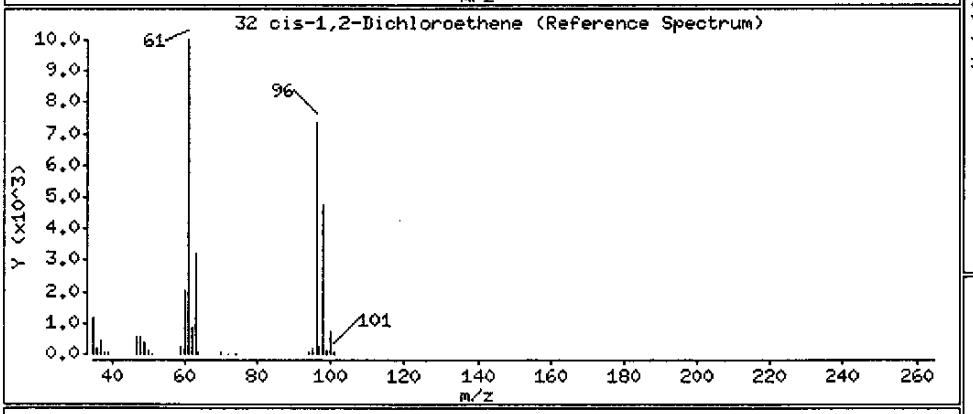
Column diameter: 0.53

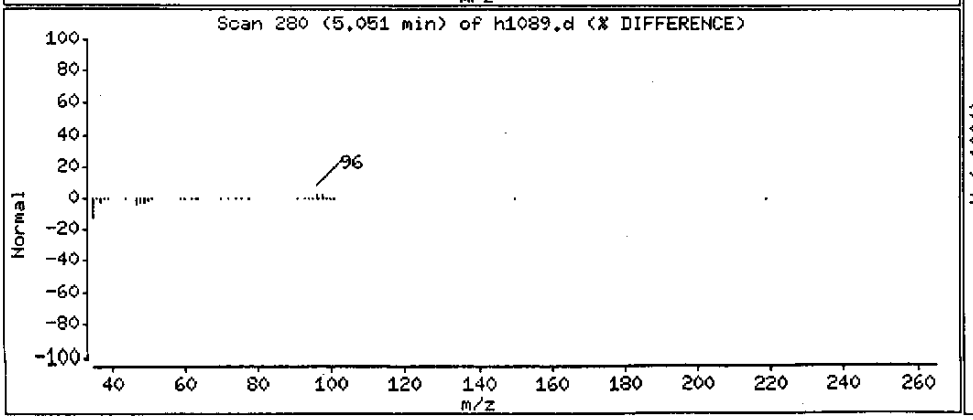
32 cis-1,2-Dichloroethene

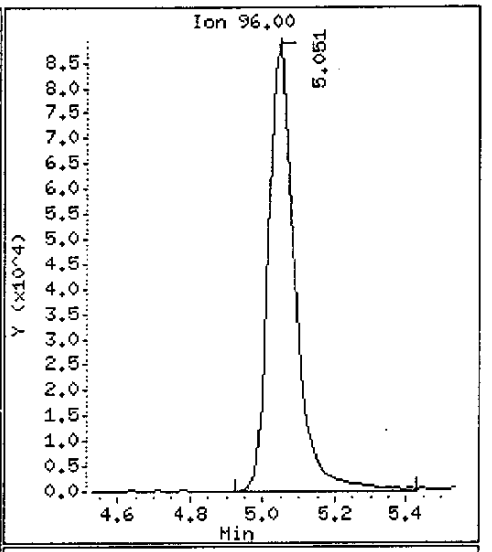
Concentration: 8.23942 ug/L

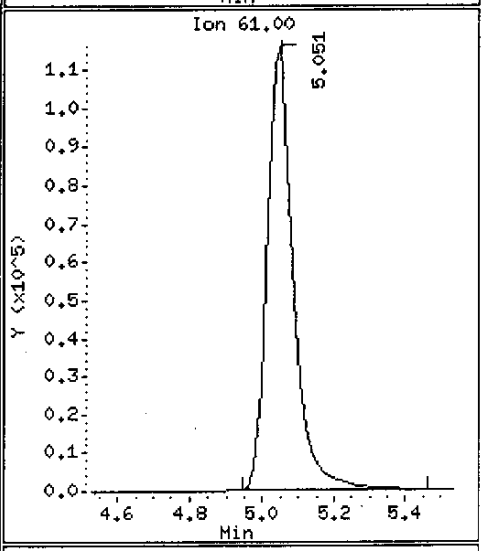


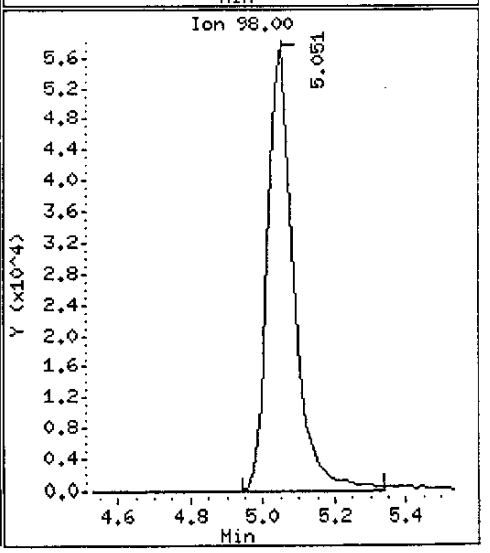












Data File: /chem/H.i/022004.b/h1089.d

Date : 20-FEB-2004 19:31

Client ID: MW-13

Instrument: H.i

Sample Info: F9KE71AA,,D4B130209-013

Purge Volume: 20.0

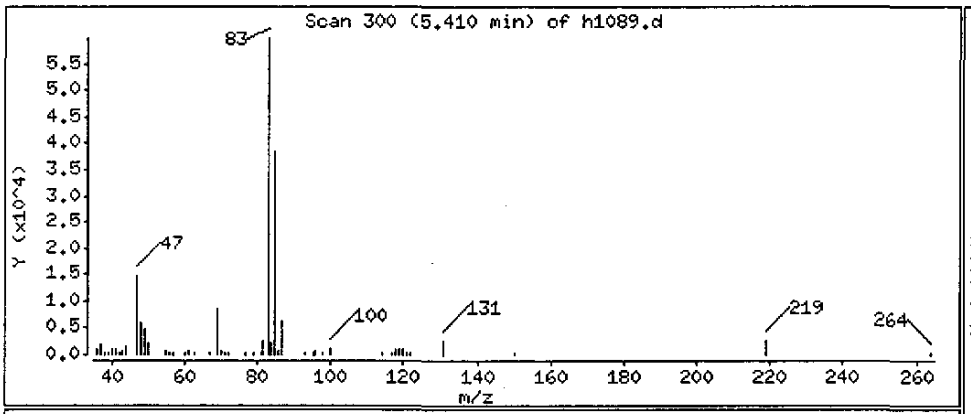
Operator: appelhansd

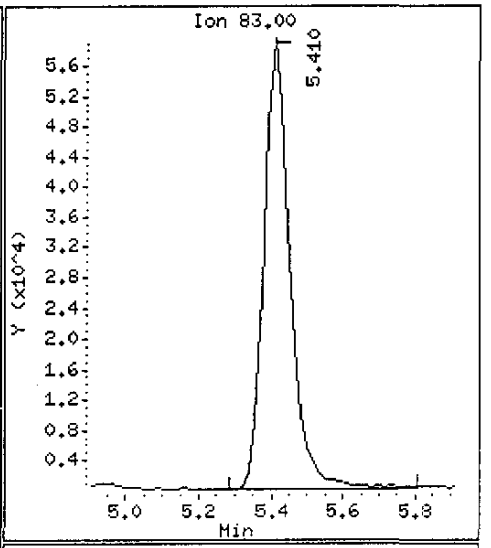
Column phase: DB624

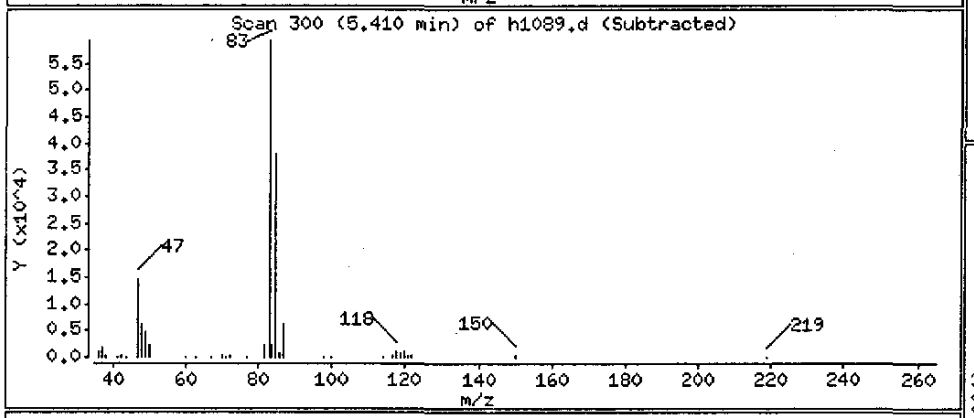
Column diameter: 0.53

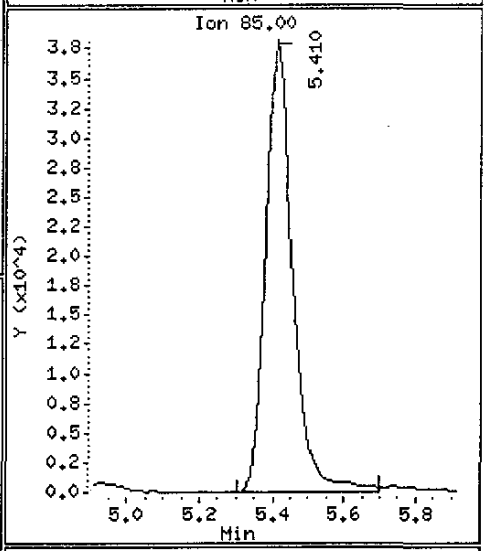
38 Chloroform

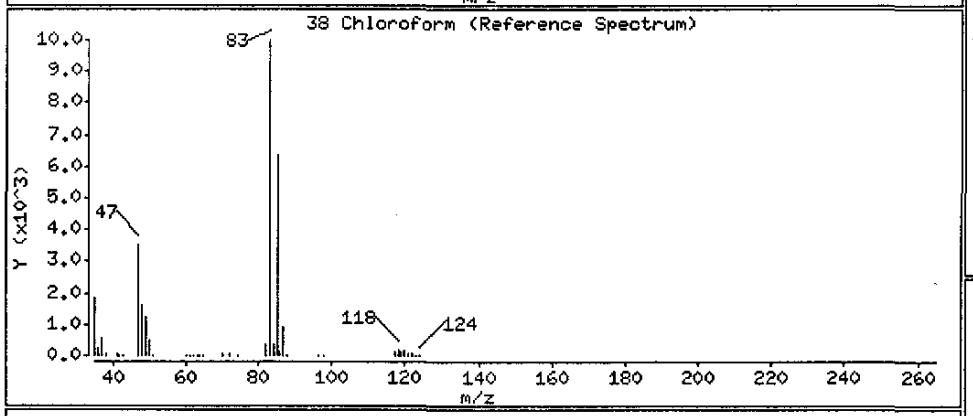
Concentration: 2.87037 ug/L

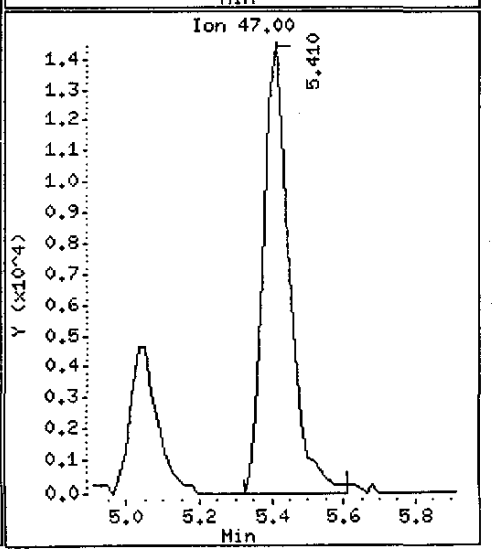


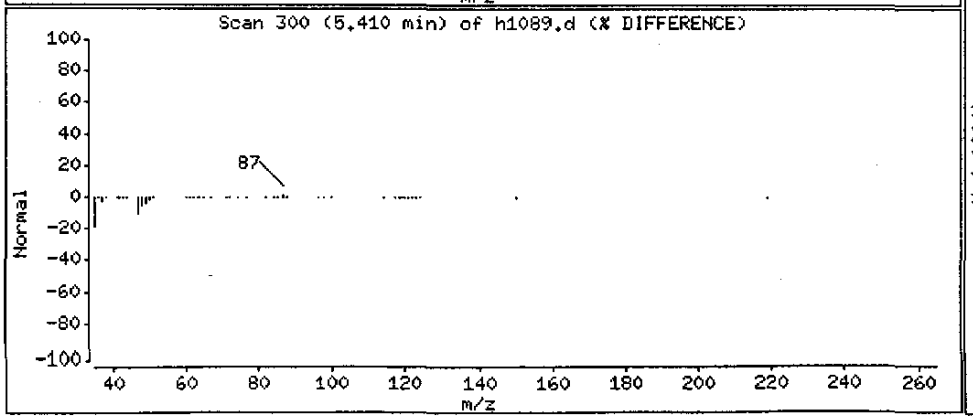












Data File: /chem/H.i/022004.b/h1089.d

Date : 20-FEB-2004 19:31

Client ID: MW-13

Instrument: H.i

Sample Info: F9KE71AA,,D4B130209-013

Purge Volume: 20.0

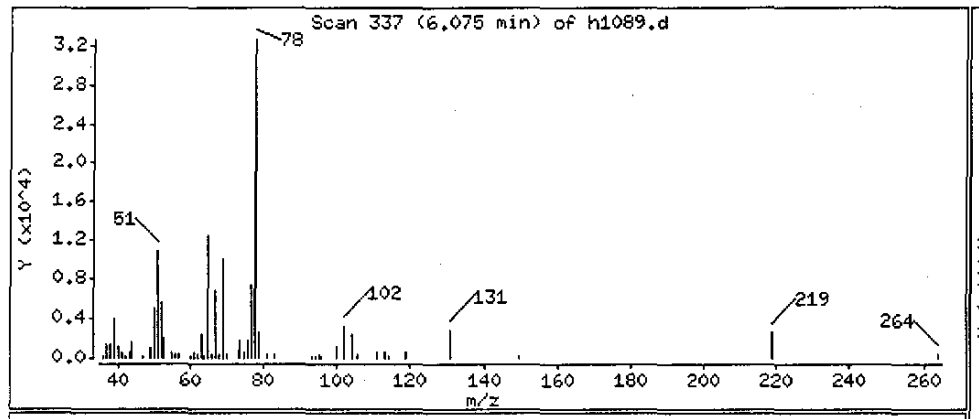
Operator: appelhansd

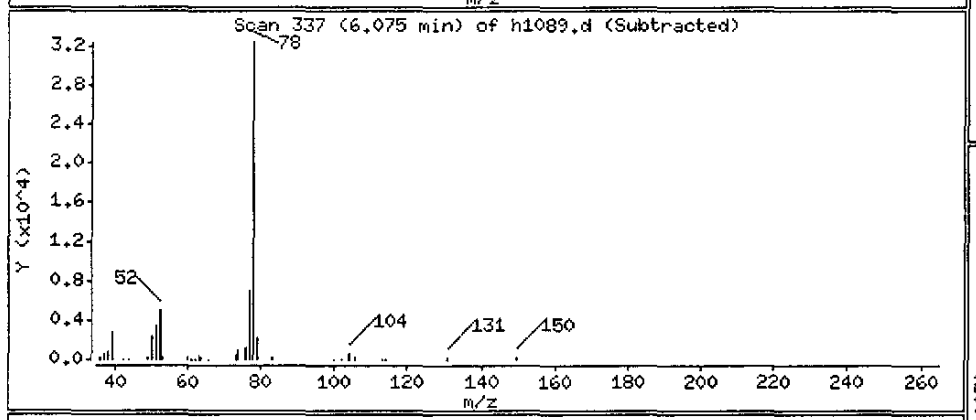
Column phase: DB624

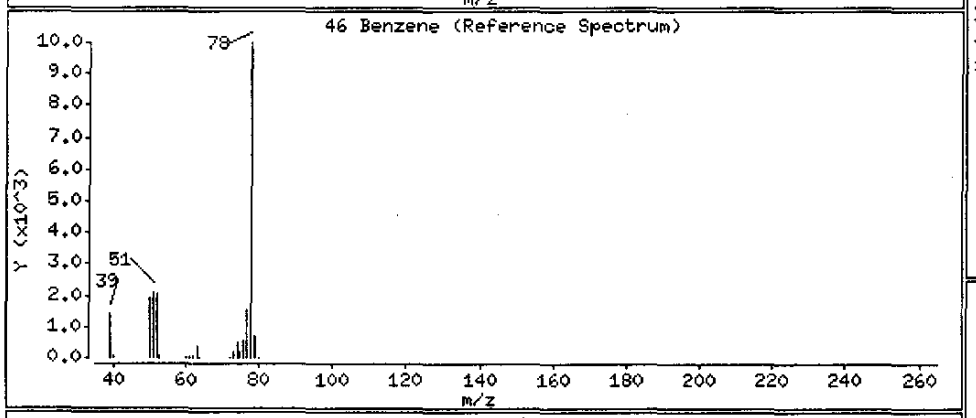
Column diameter: 0.53

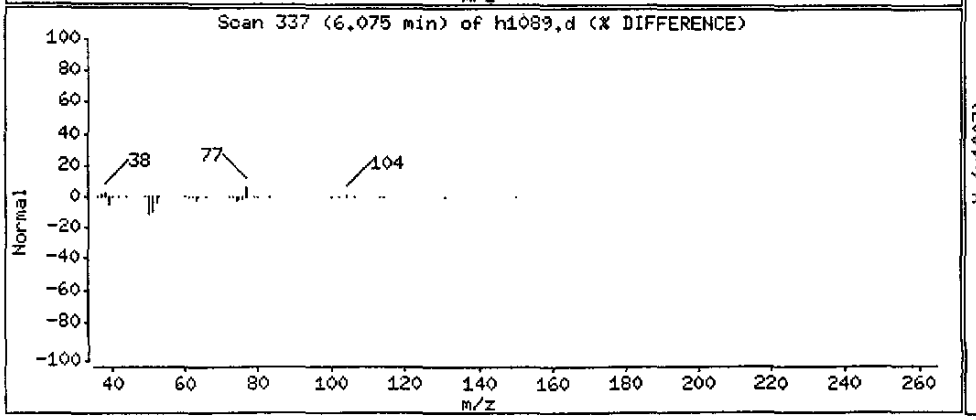
46 Benzene

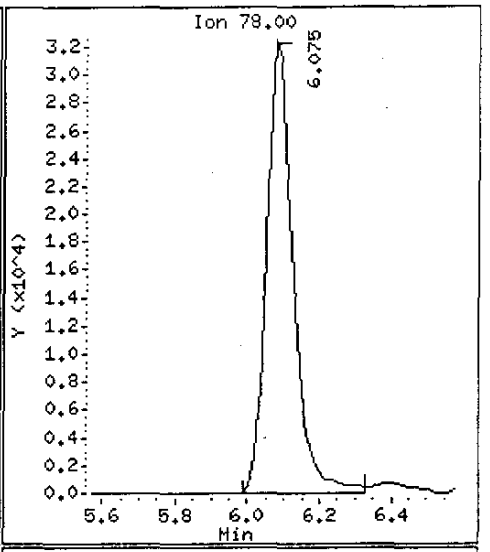
Concentration: 1.04002 ug/L

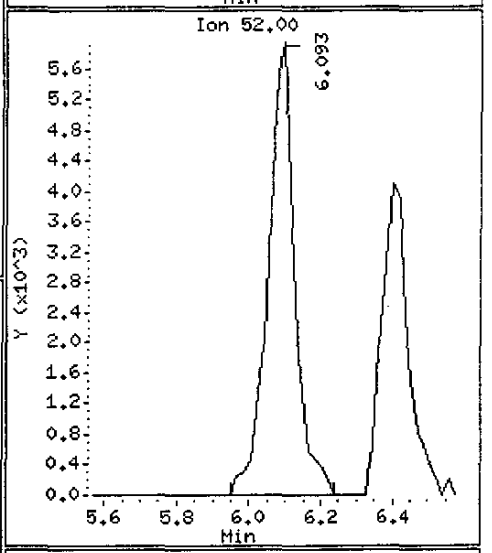


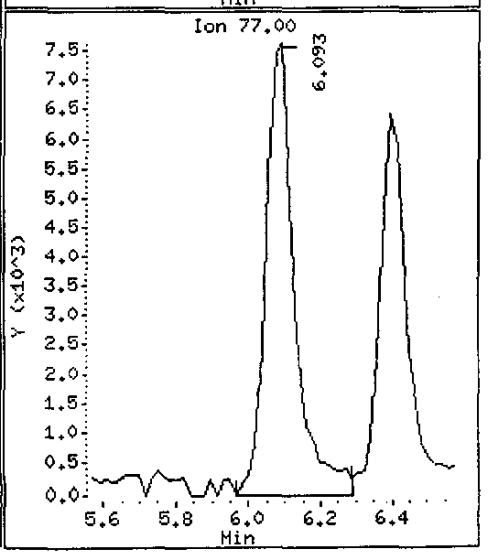












Data File: /chem/H.i/022004.b/h1089.d

Date : 20-FEB-2004 19:31

Client ID: MW-13

Instrument: H.i

Sample Info: F9KE71AA,,D4B130209-013

Purge Volume: 20.0

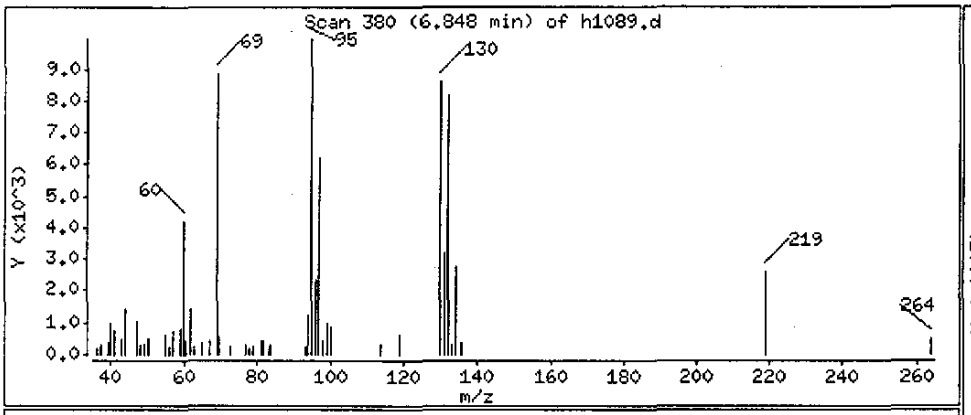
Operator: appelhansd

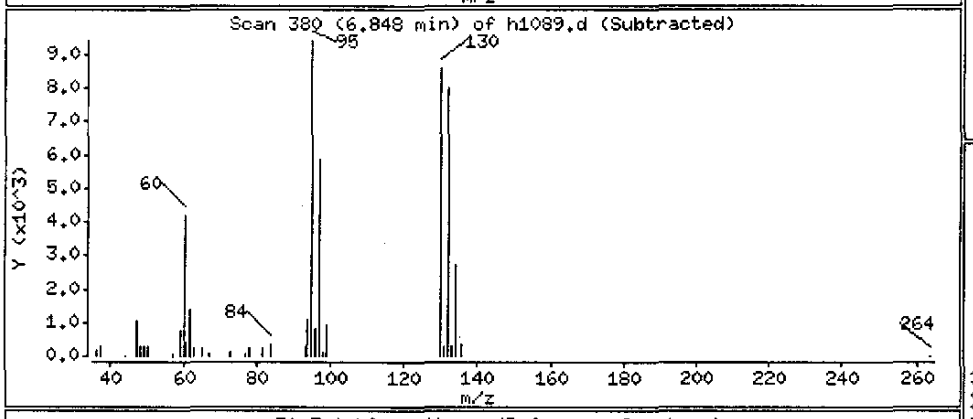
Column phase: DB624

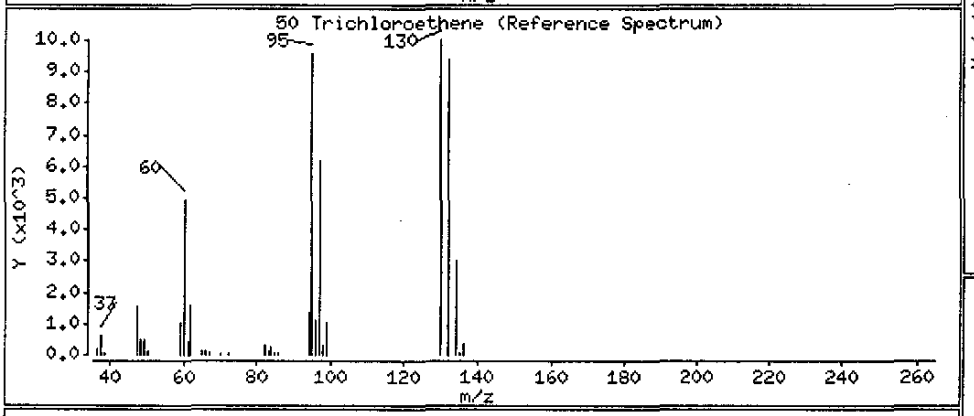
Column diameter: 0.53

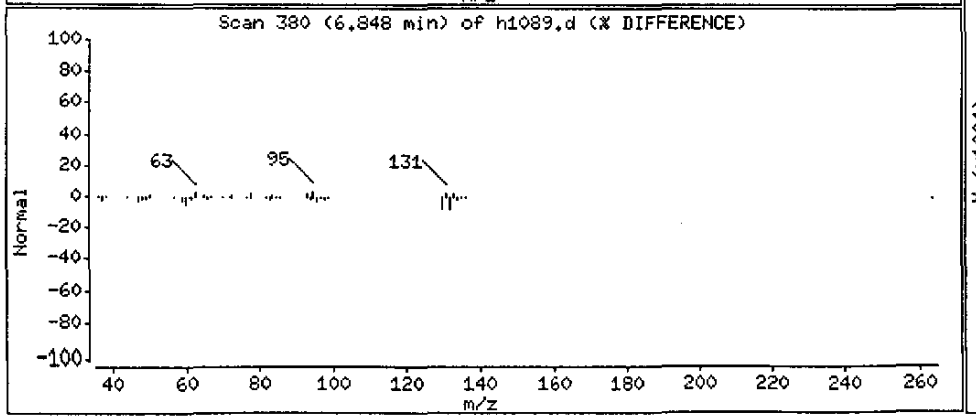
50 Trichloroethene

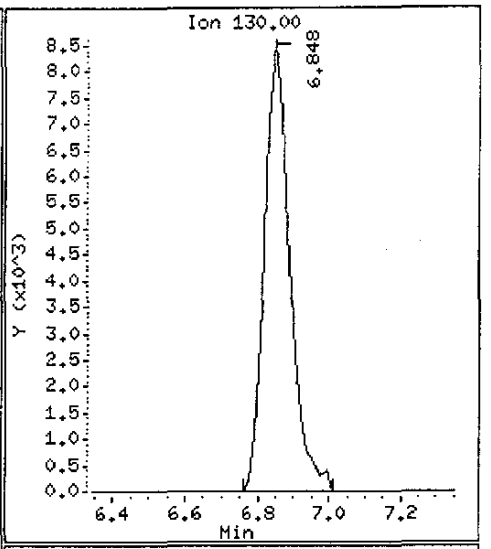
Concentration: 0.689978 ug/L

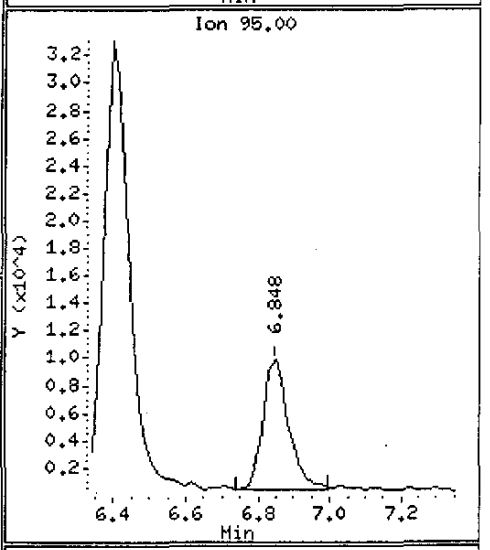


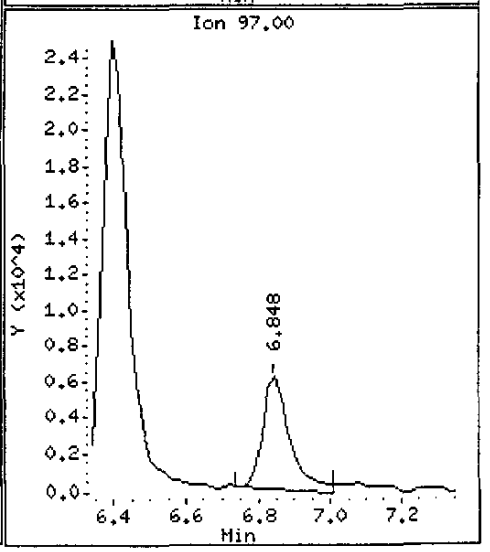












Data File: /chem/H.i/022004.b/h1089.d

Date : 20-FEB-2004 19:31

Client ID: MW-13

Instrument: H.i

Sample Info: F9KE71AA,,D4B130209-013

Purge Volume: 20.0

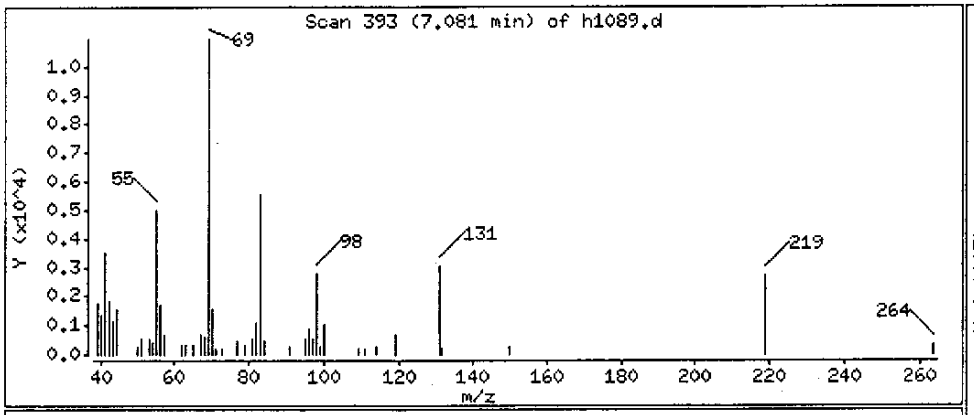
Operator: appelhansd

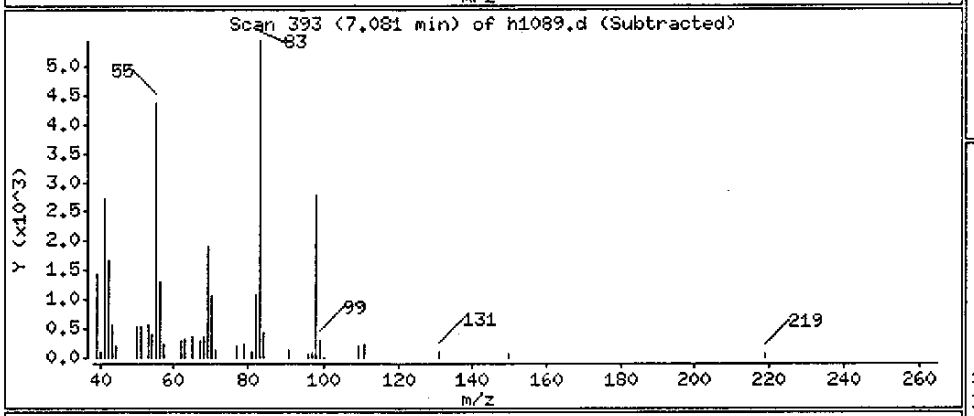
Column phase: DB624

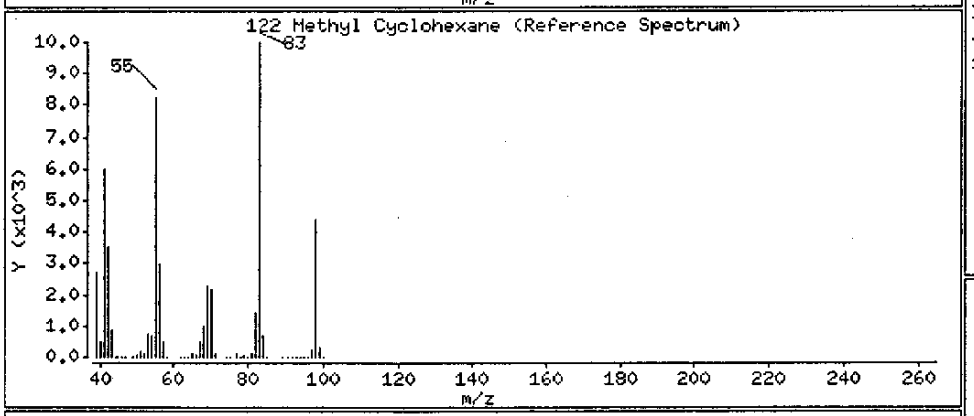
Column diameter: 0.53

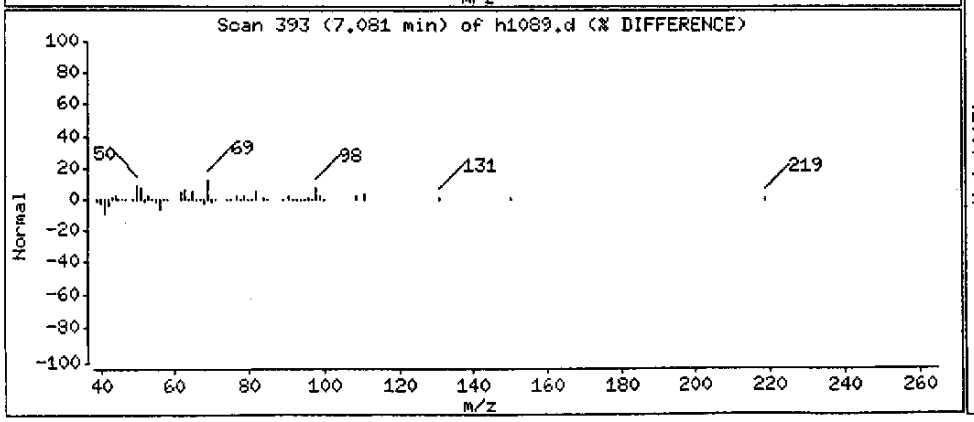
122 Methyl Cyclohexane

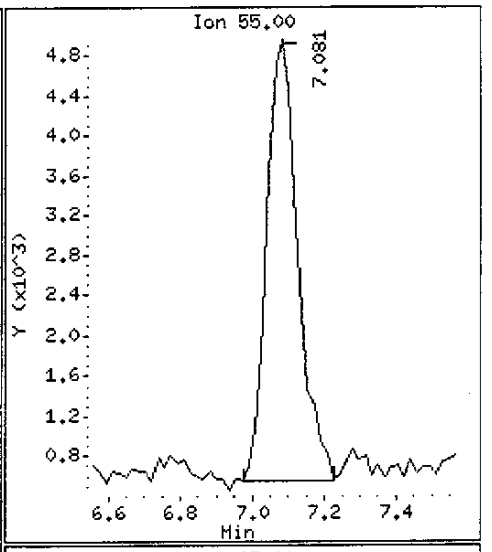
Concentration: 0.340865 ug/L

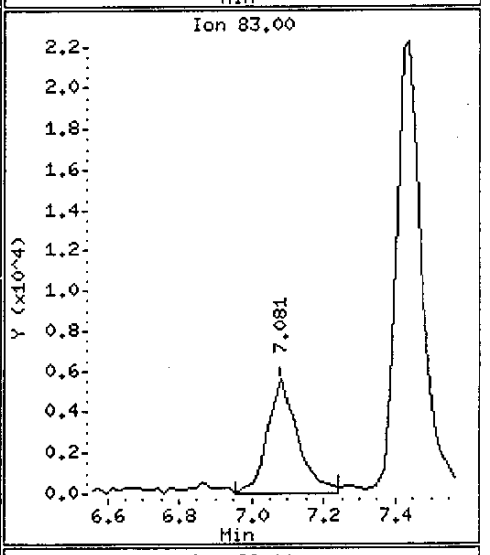


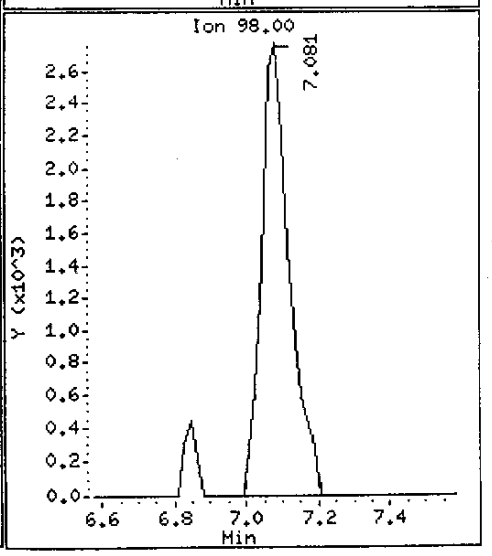












Data File: /chem/H.i/022004.b/h1089.d

Date : 20-FEB-2004 19:31

Client ID: MW-13

Instrument: H.i

Sample Info: F9KE71AA,,D4B130209-013

Purge Volume: 20.0

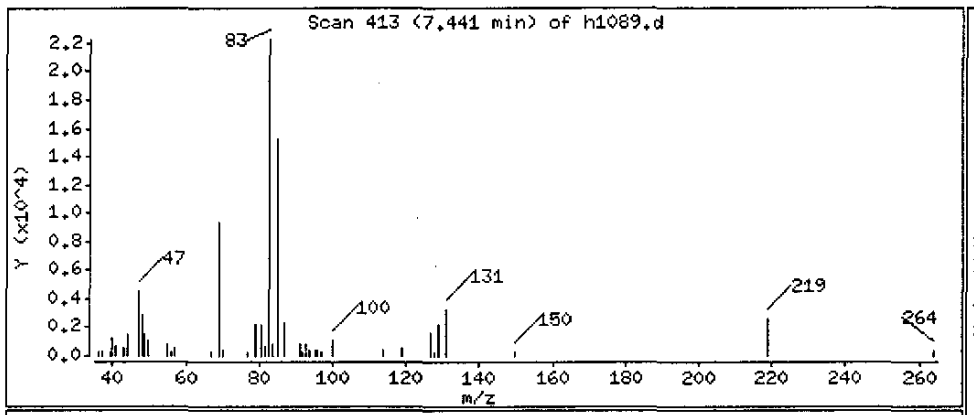
Operator: appelhansd

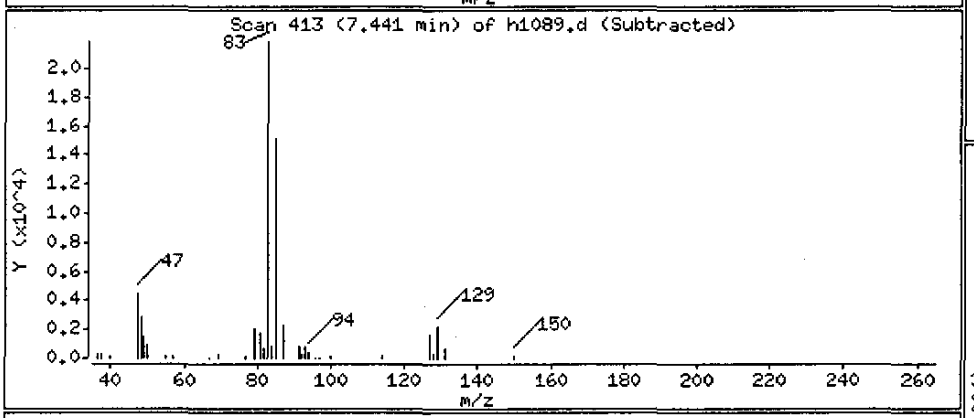
Column phase: DB624

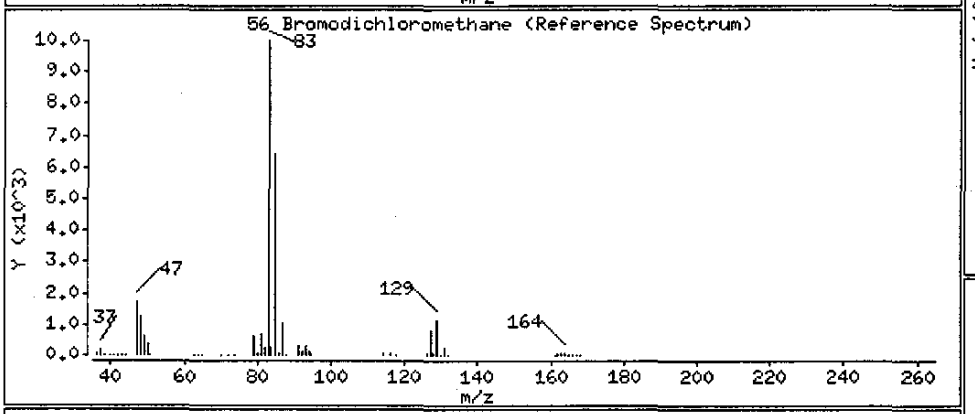
Column diameter: 0.53

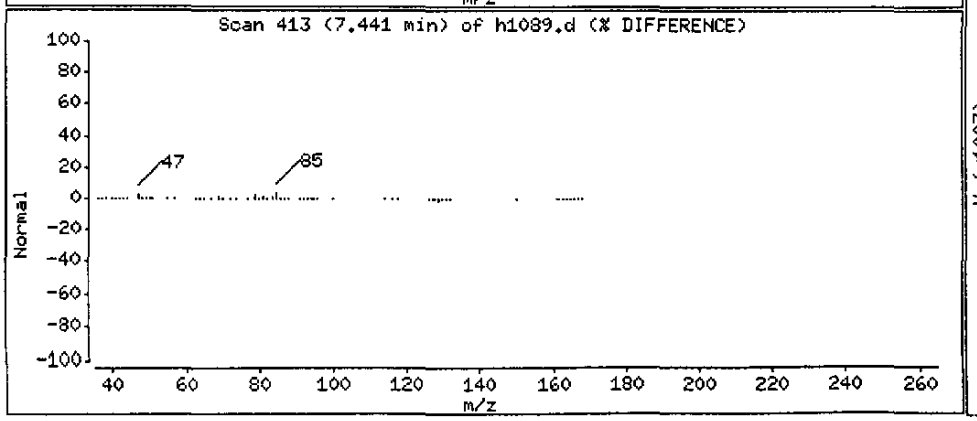
56 Bromodichloromethane

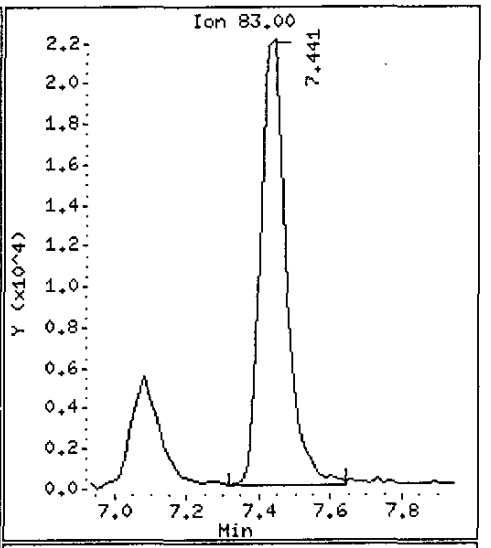
Concentration: 1.29306 ug/L

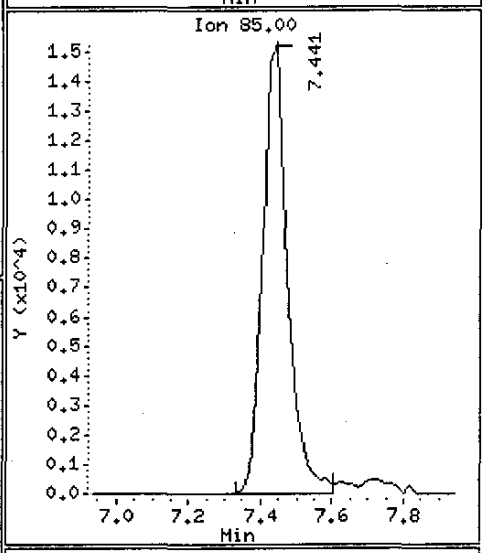


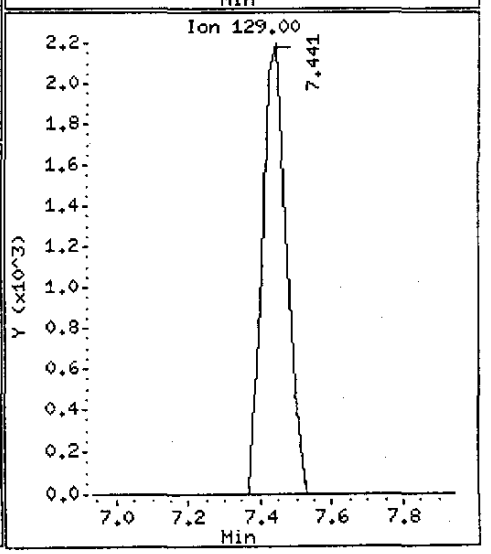












Data File: /chem/H.i/022004.b/h1089.d

Date : 20-FEB-2004 19:31

Client ID: MW-13

Instrument: H.i

Sample Info: F9KE71AA,,D4B130209-013

Purge Volume: 20.0

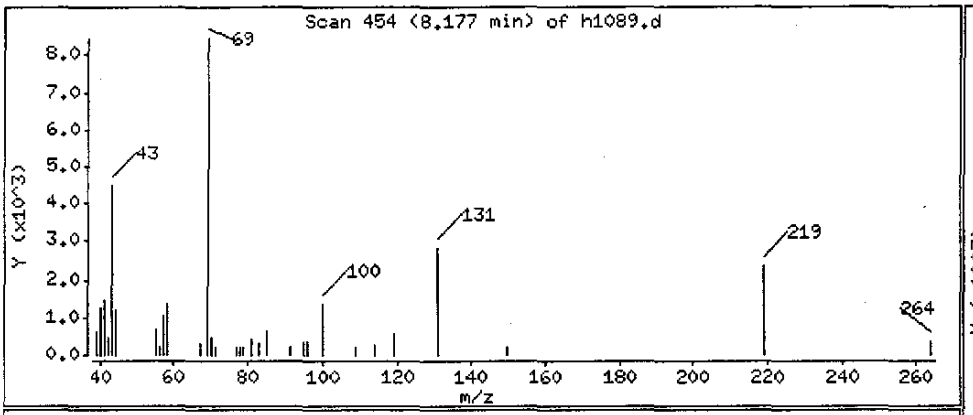
Operator: appelhansd

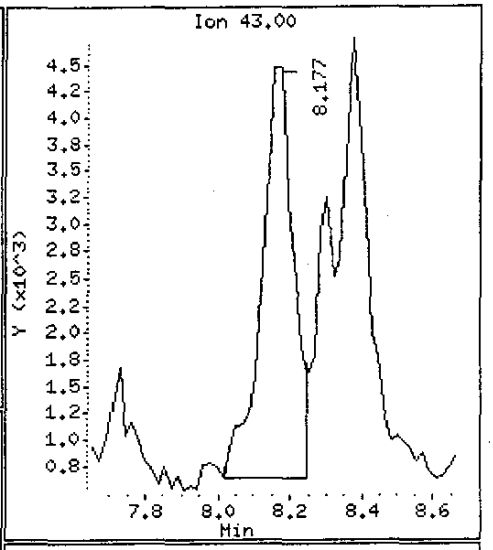
Column phase: DB624

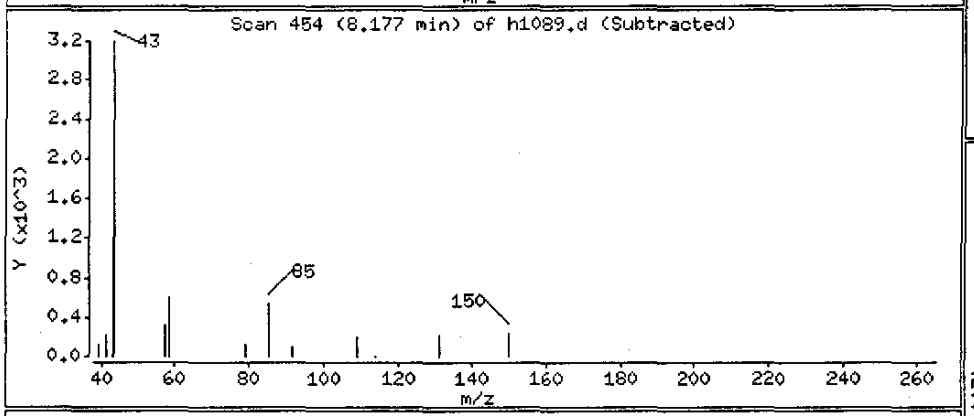
Column diameter: 0.53

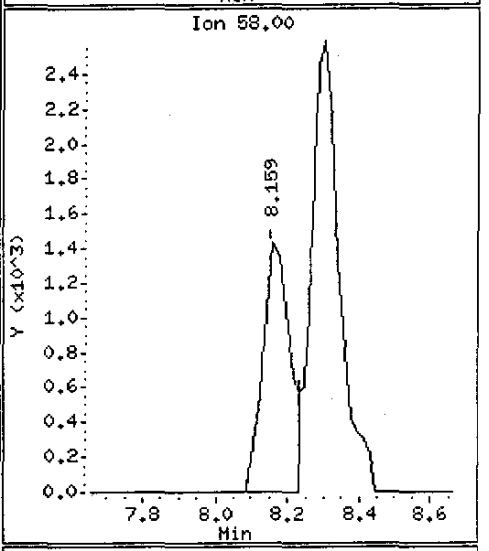
60 4-Methyl-2-pentanone

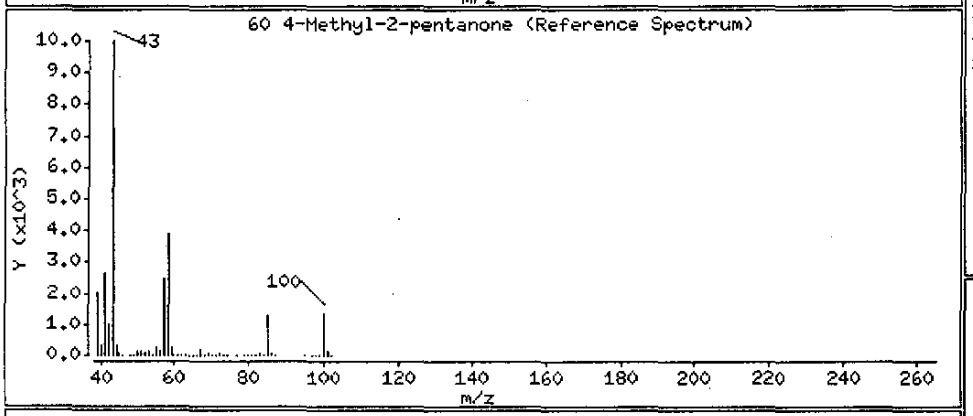
Concentration: 1.45989 ug/L

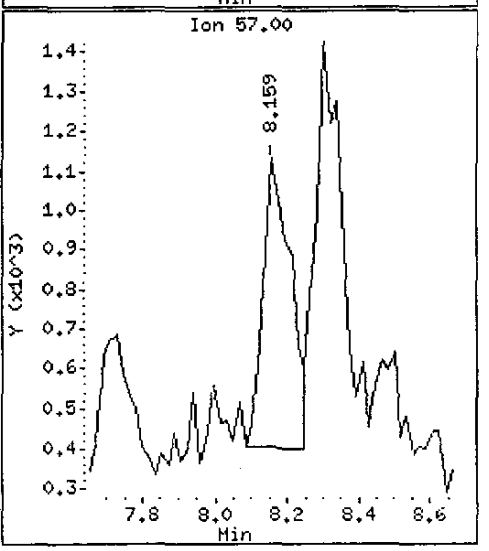


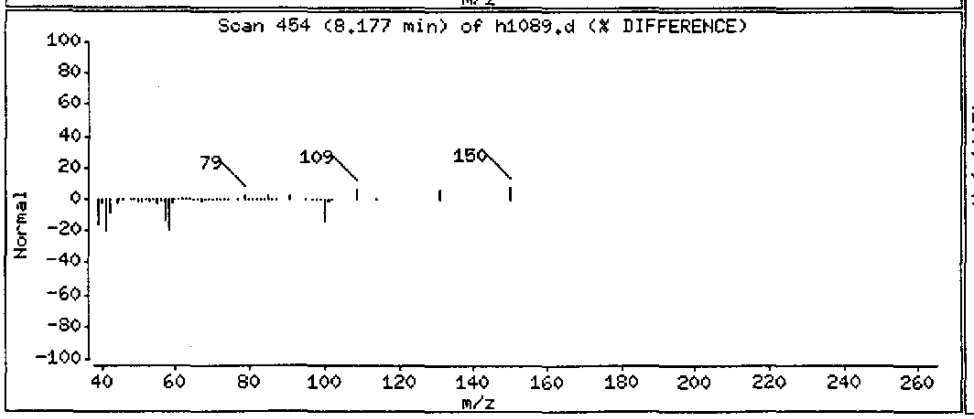












Data File: /chem/H.i/022004.b/h1089.d

Date : 20-FEB-2004 19:31

Client ID: MW-13

Instrument: H.i

Sample Info: F9KE71AA,,D4B130209-013

Purge Volume: 20.0

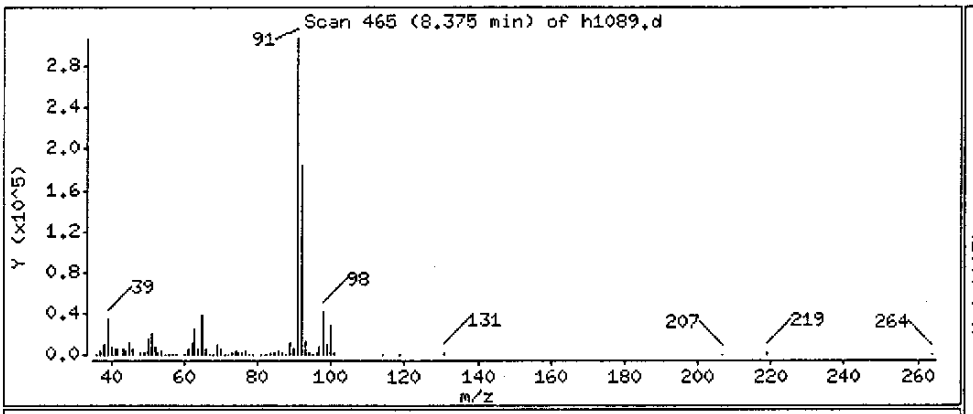
Operator: appelhansd

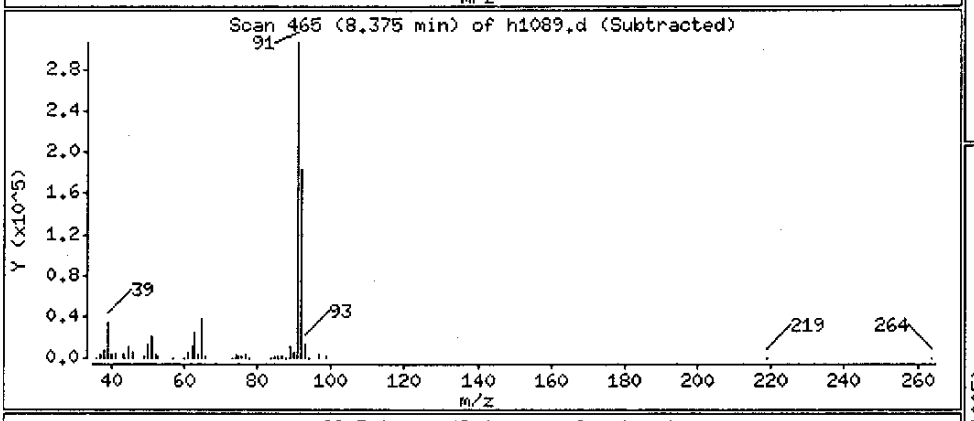
Column phase: DB624

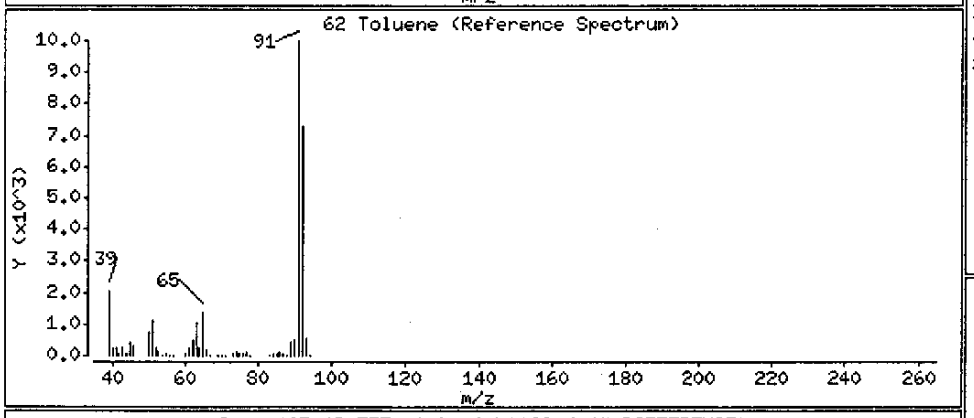
Column diameter: 0.53

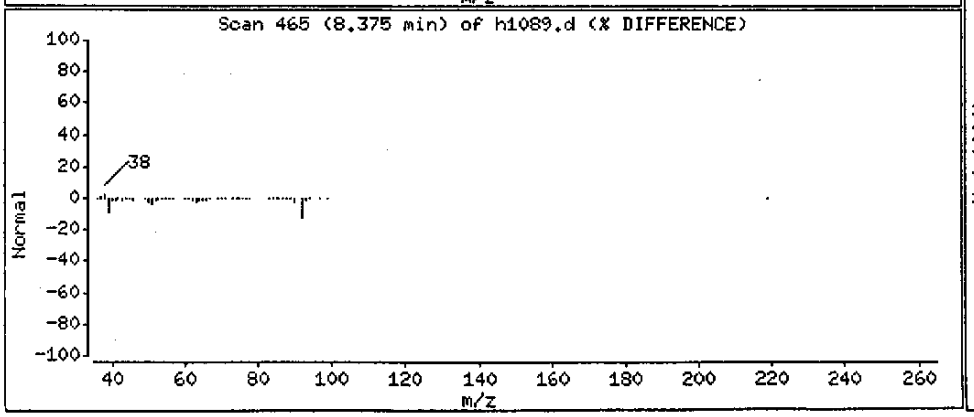
62 Toluene

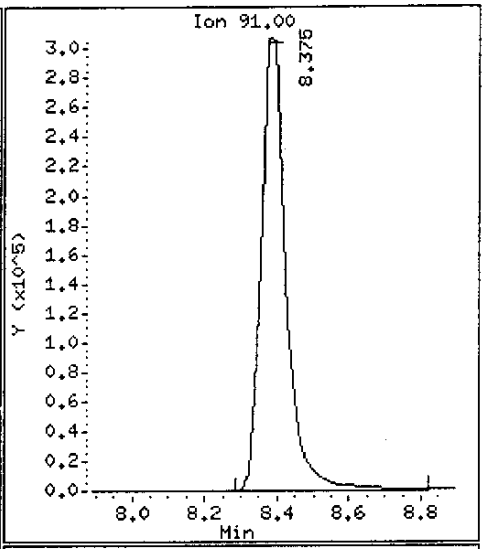
Concentration: 8.92001 ug/L

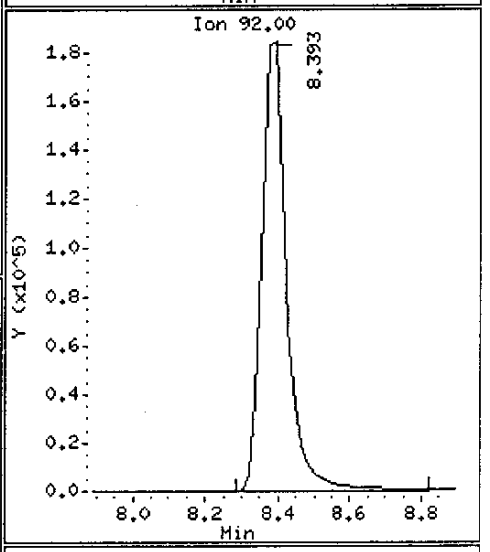


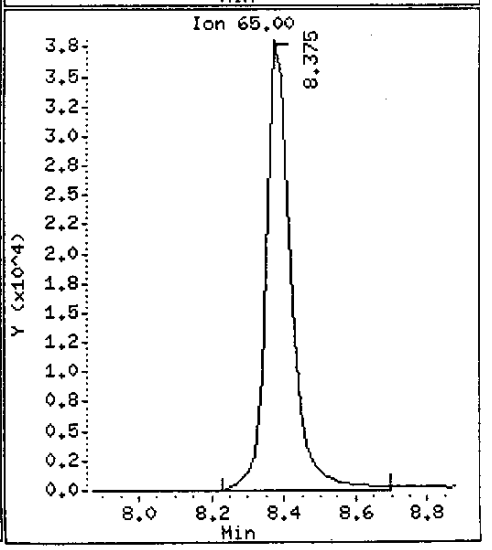












Data File: /chem/H.i/022004.b/h1089.d

Date : 20-FEB-2004 19:31

Client ID: MW-13

Instrument: H.i

Sample Info: F9KE71AA,,D4B130209-013

Purge Volume: 20.0

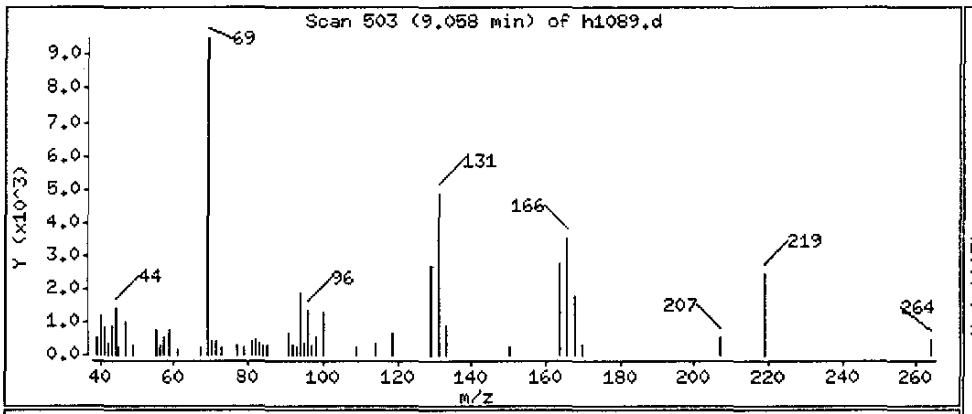
Operator: appelhansd

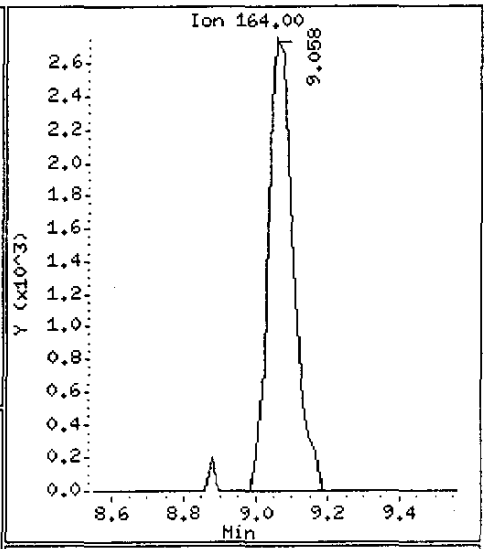
Column phase: DB624

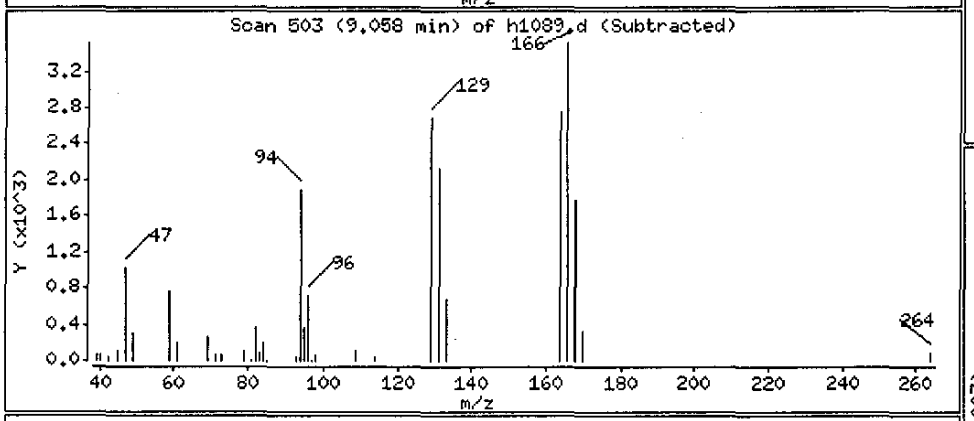
Column diameter: 0.53

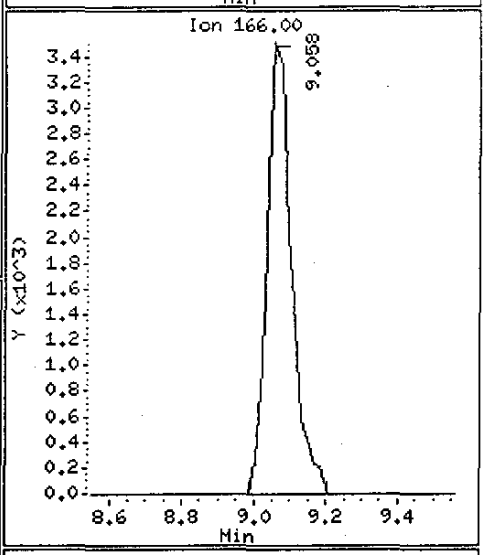
66 Tetrachloroethene

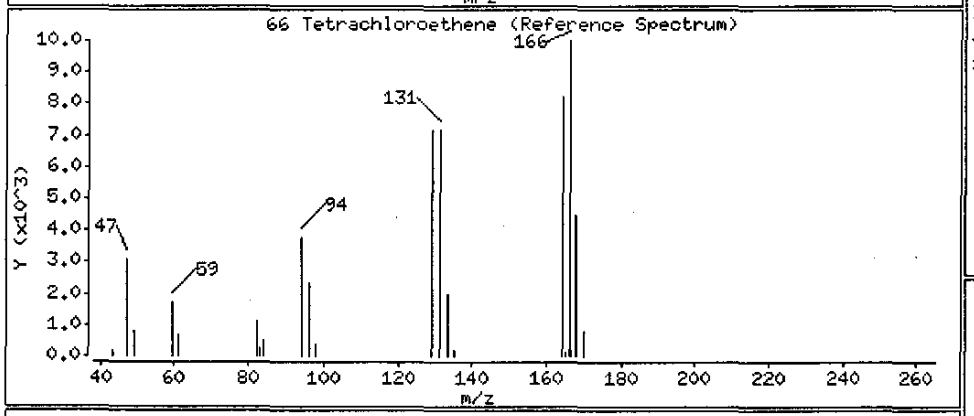
Concentration: 0.249511 ug/L

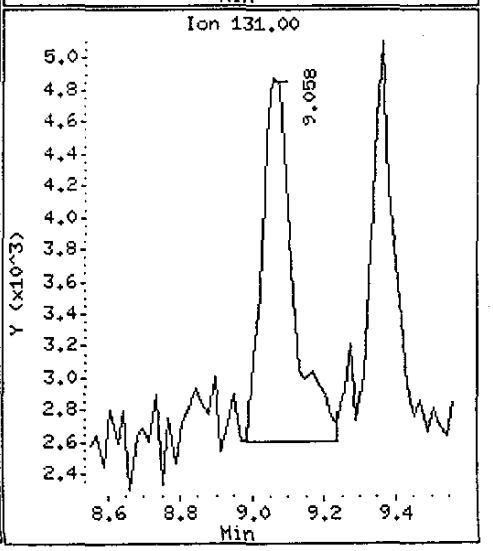


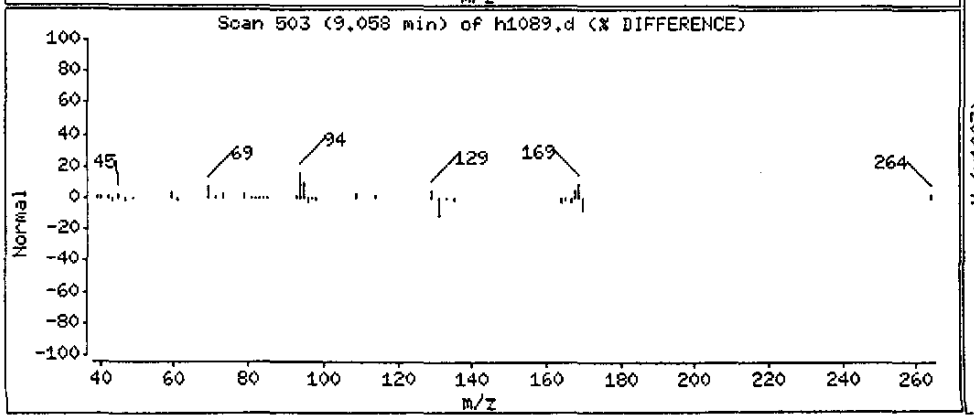












Data File: /chem/H.i/022004.b/h1089.d

Date : 20-FEB-2004 19:31

Client ID: MW-13

Instrument: H.i

Sample Info: F9KE71AA,,D4B130209-013

Purge Volume: 20.0

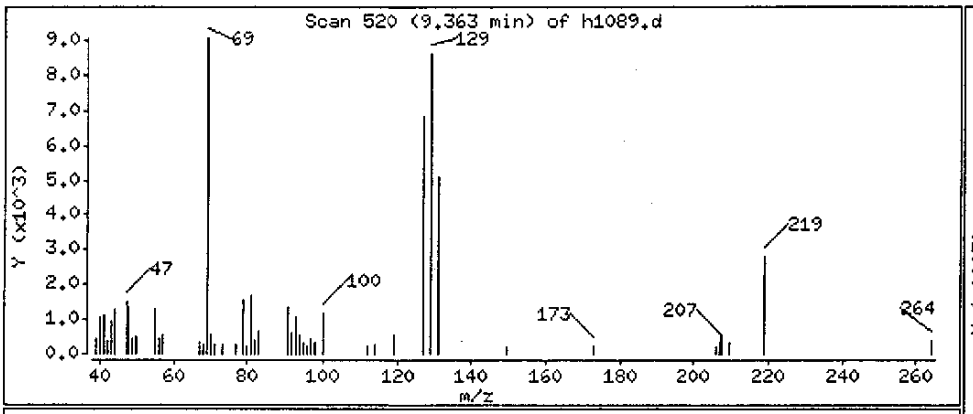
Operator: appelhansd

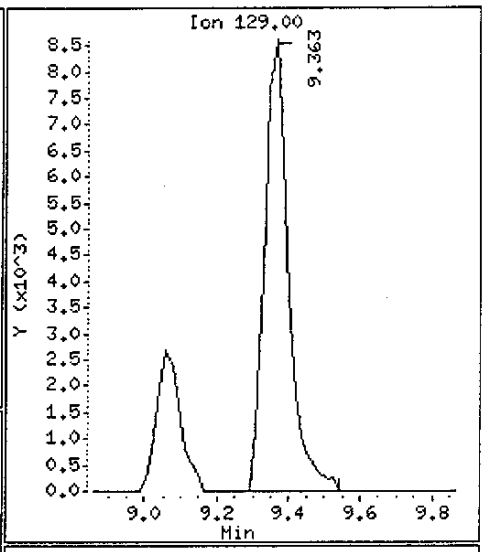
Column phase: DB624

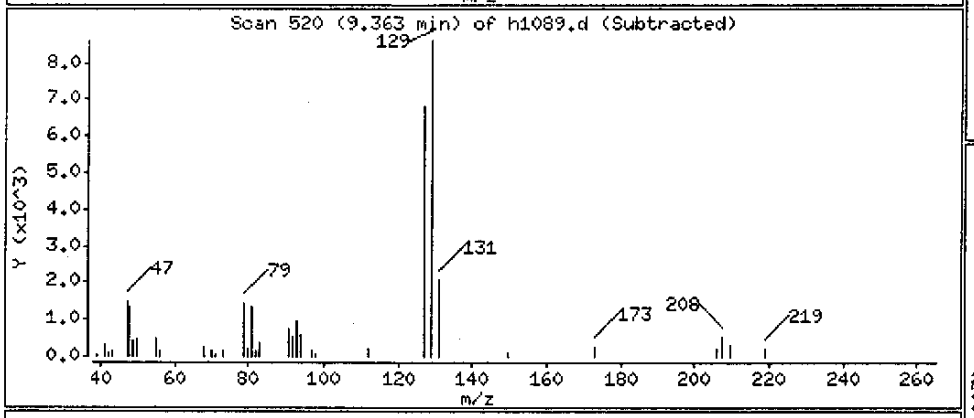
Column diameter: 0.53

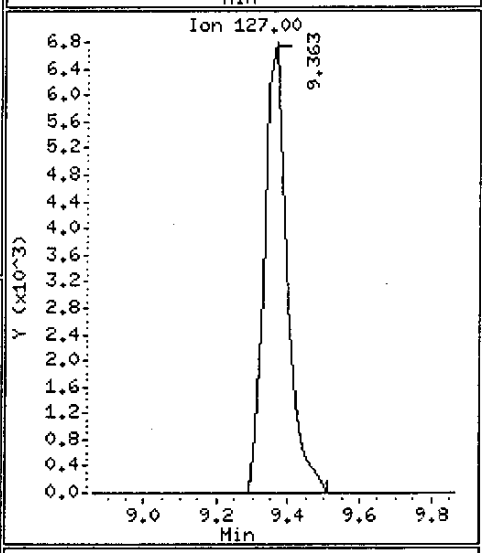
69 Dibromochloromethane

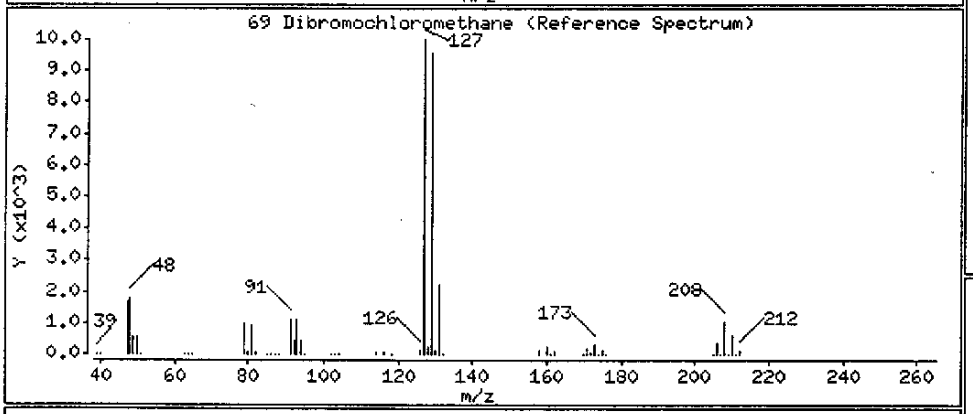
Concentration: 0.835095 ug/L

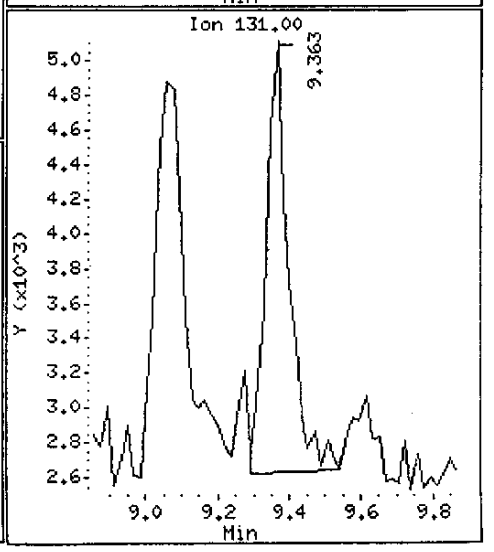


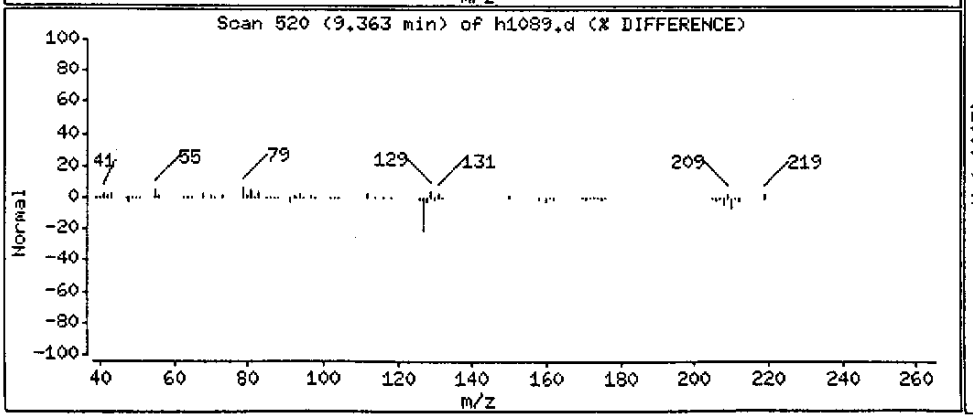












Data File: /chem/H.i/022004.b/h1089.d

Date : 20-FEB-2004 19:31

Client ID: MW-13

Instrument: H.i

Sample Info: F9KE71AA,,D4B130209-013

Purge Volume: 20.0

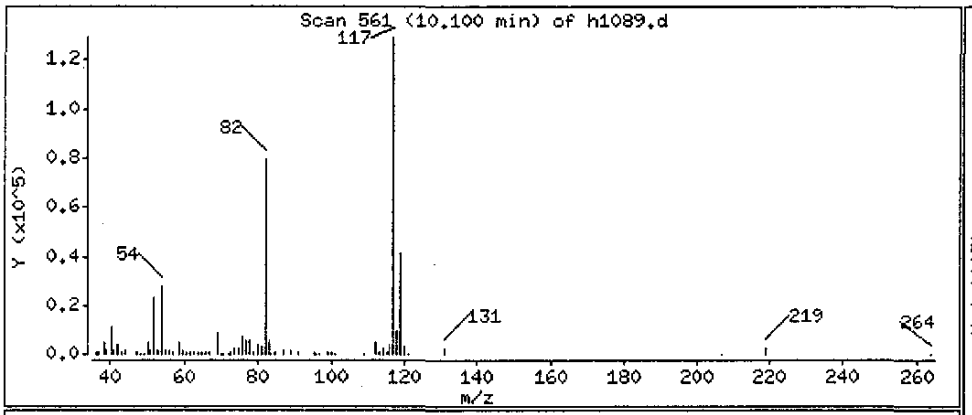
Operator: appelhansd

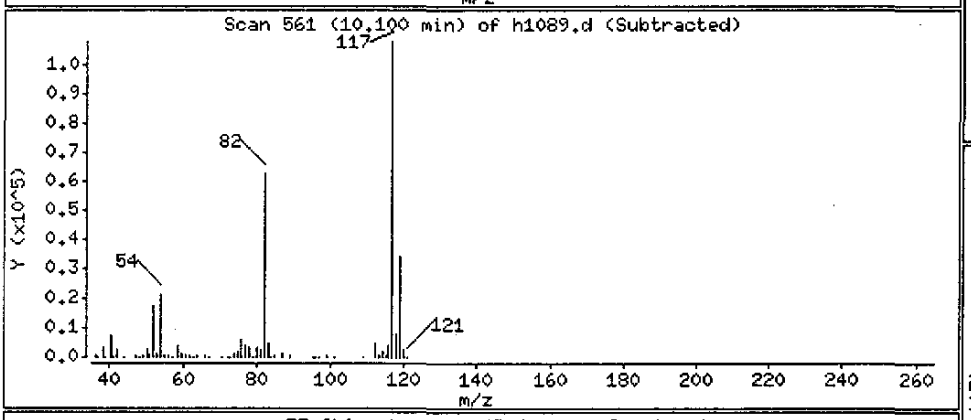
Column phase: DB624

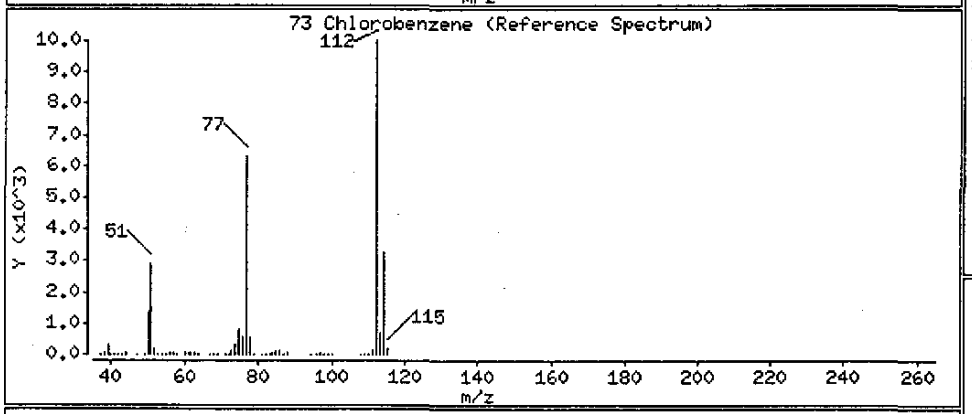
Column diameter: 0.53

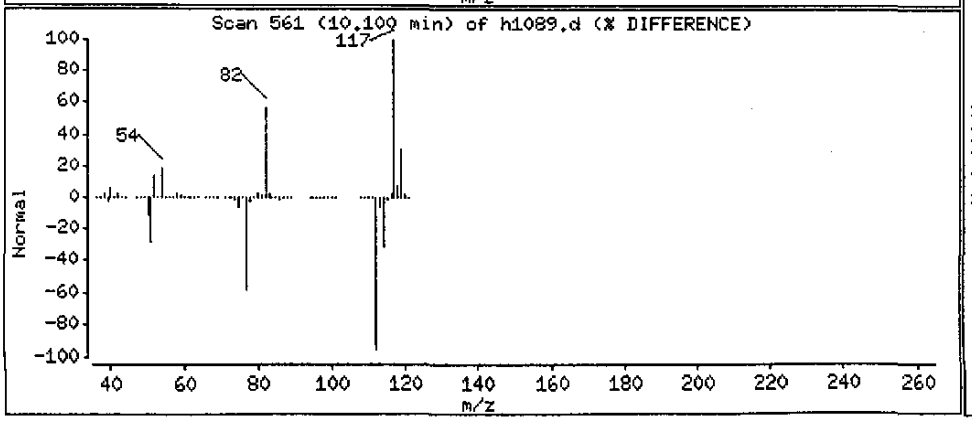
73 Chlorobenzene

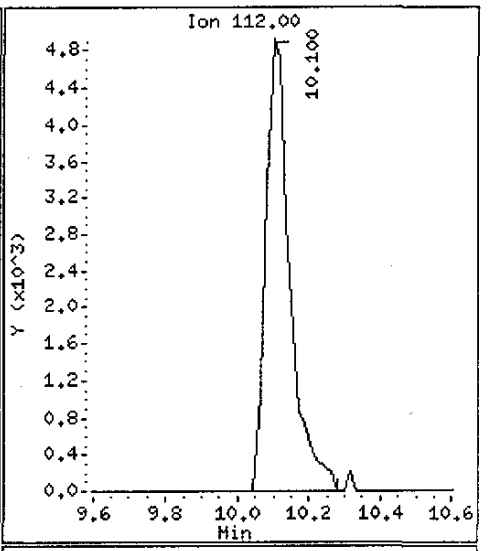
Concentration: 0.231109 ug/L

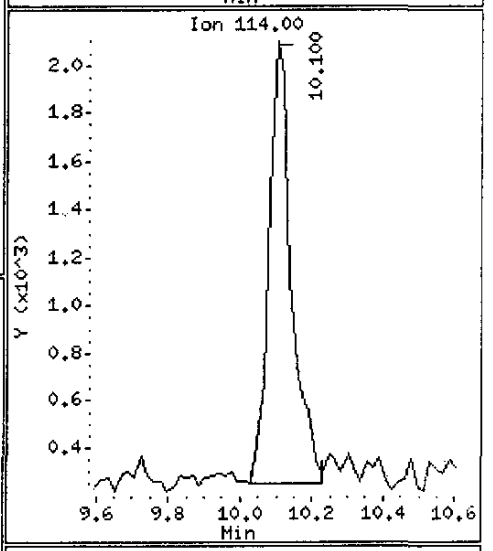


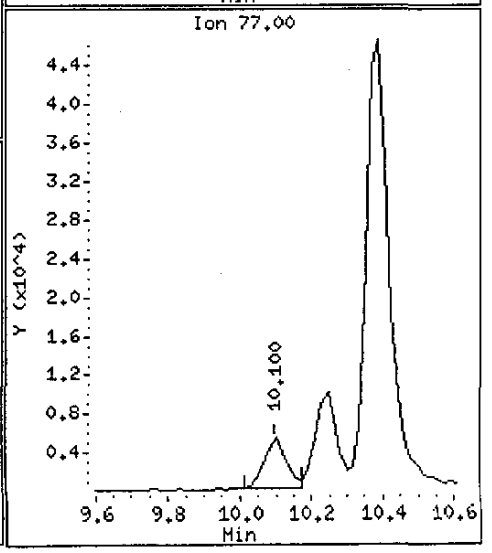












Data File: /chem/H.i/022004.b/h1089.d

Date : 20-FEB-2004 19:31

Client ID: MW-13

Instrument: H.i

Sample Info: F9KE71AA,,D4B130209-013

Purge Volume: 20.0

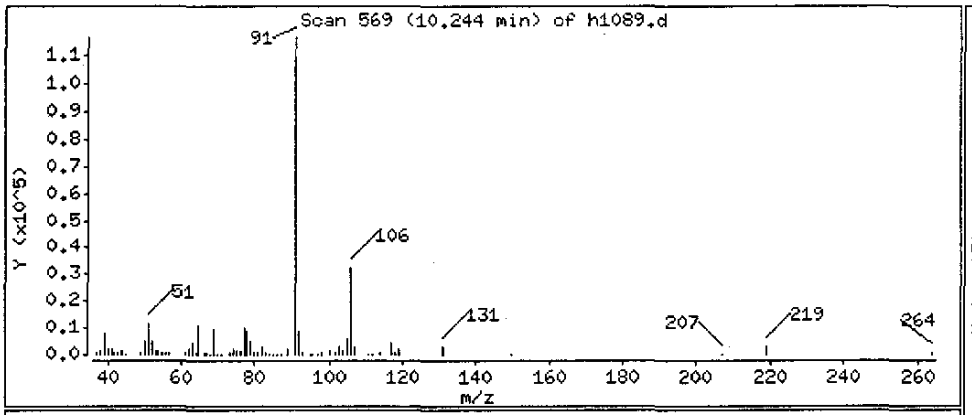
Operator: appelhansd

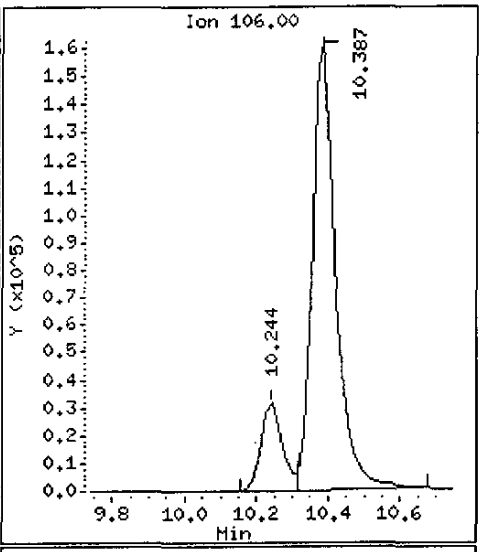
Column phase: DB624

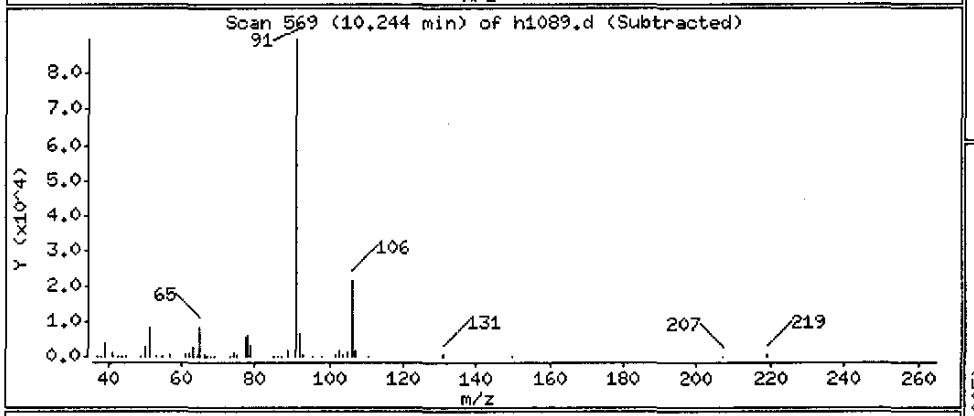
Column diameter: 0.53

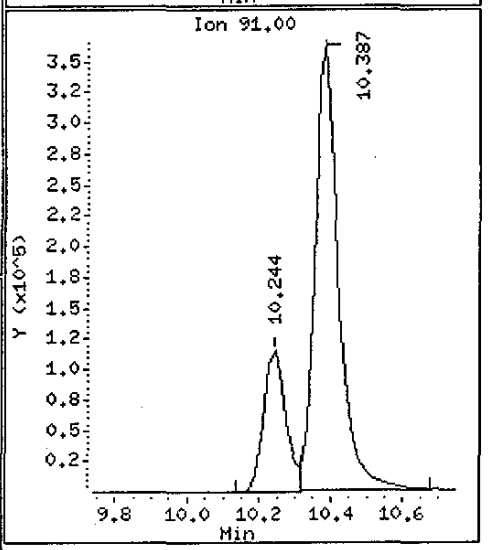
75 Ethylbenzene

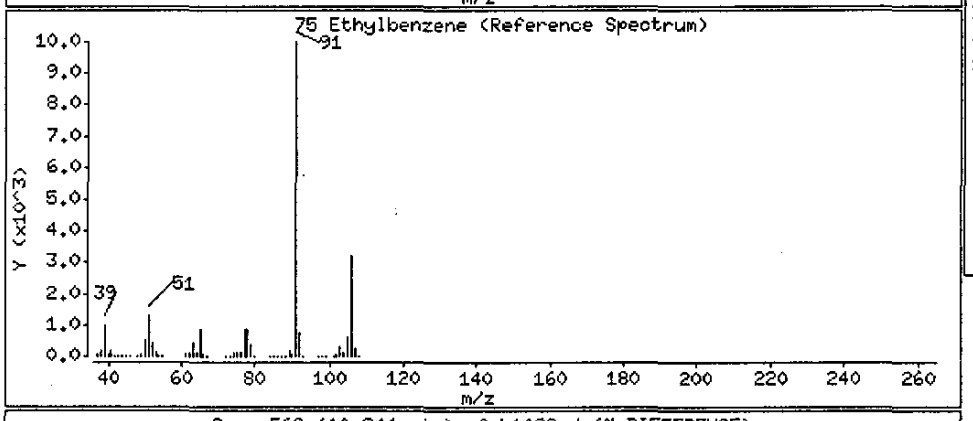
Concentration: 2.67310 ug/L

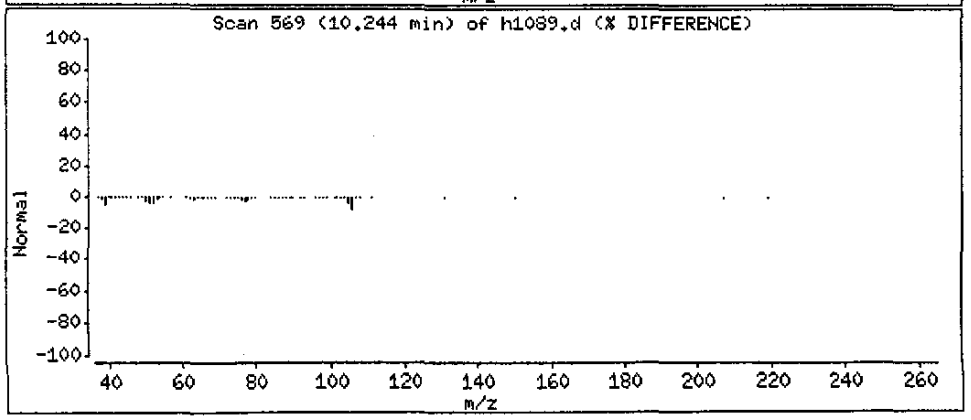












Data File: /chem/H.i/022004.b/h1089.d

Date : 20-FEB-2004 19:31

Client ID: MW-13

Instrument: H.i

Sample Info: F9KE71AA,,D4B130209-013

Purge Volume: 20.0

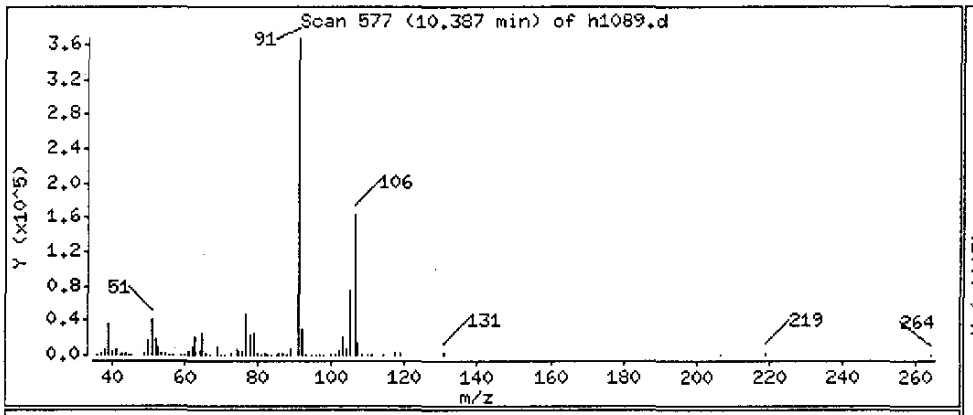
Operator: appelhansd

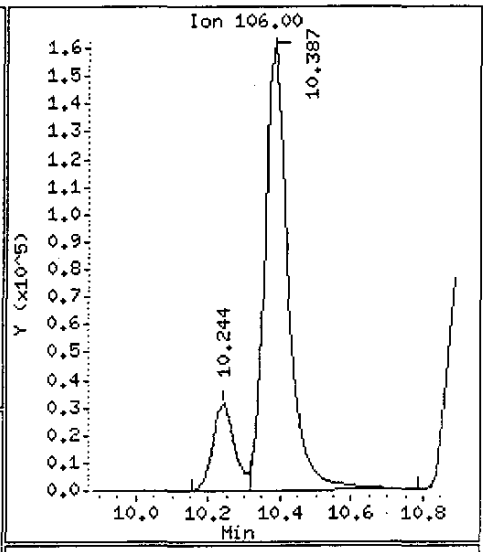
Column phase: DB624

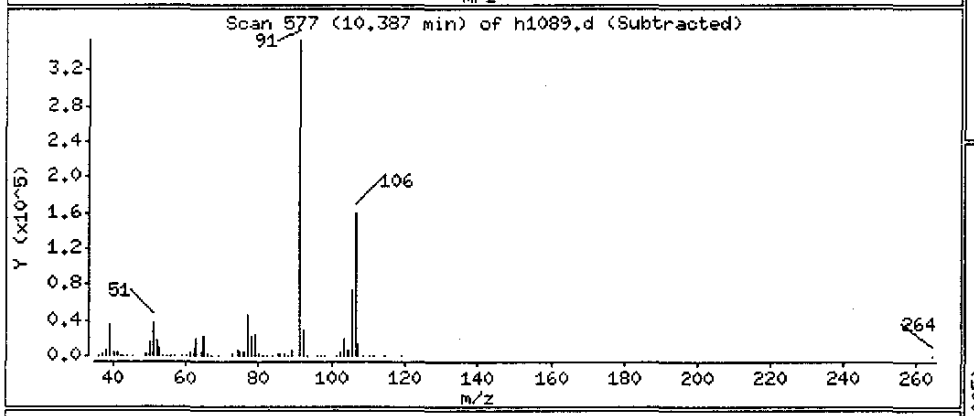
Column diameter: 0.53

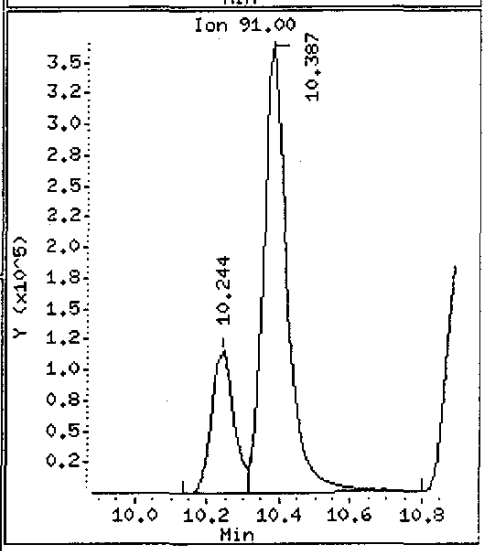
76 m and p-Xylene

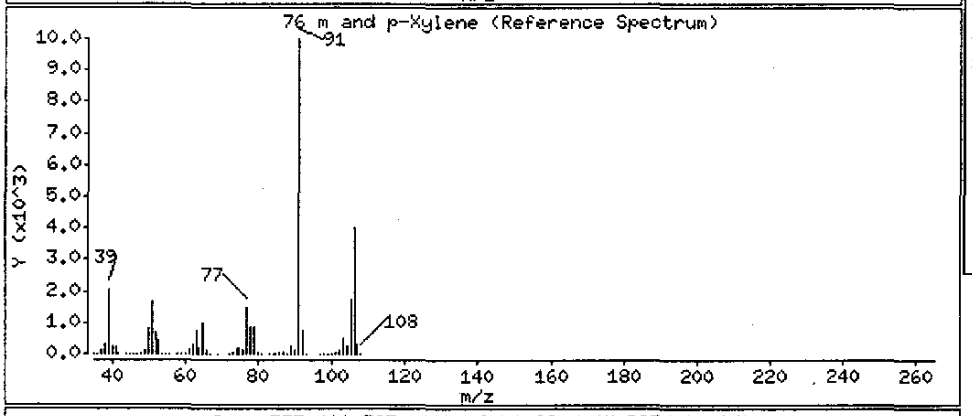
Concentration: 10.6935 ug/L

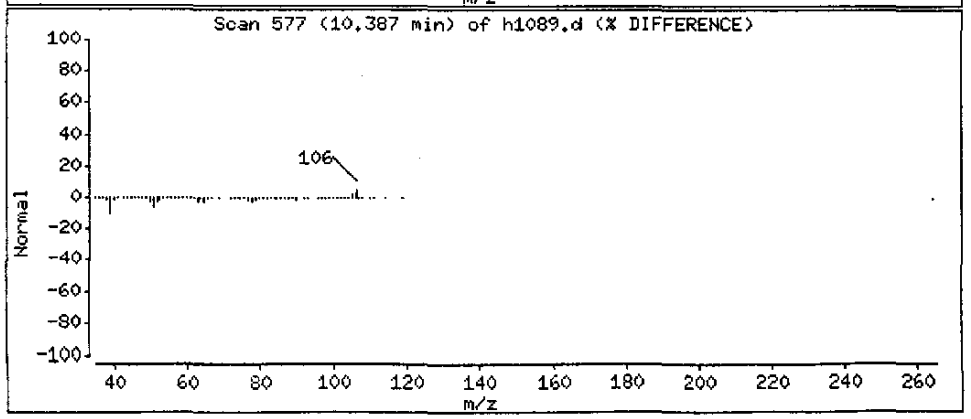












Data File: /chem/H.i/022004.b/h1089.d

Date : 20-FEB-2004 19:31

Client ID: MW-13

Instrument: H.i

Sample Info: F9KE71AA,,D4B130209-013

Purge Volume: 20.0

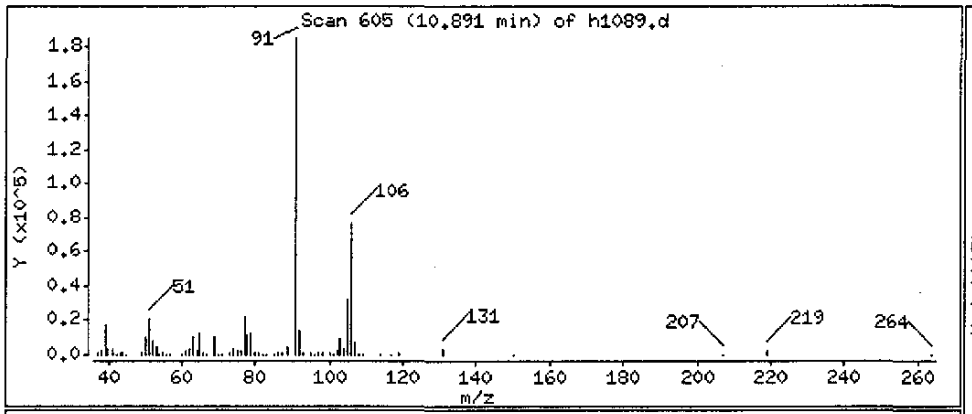
Operator: appelhansd

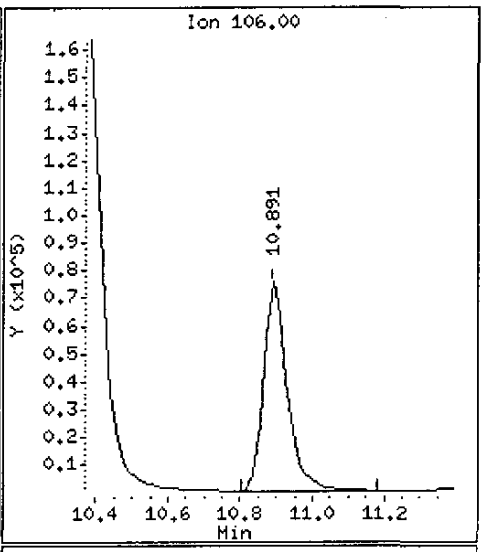
Column phase: DB624

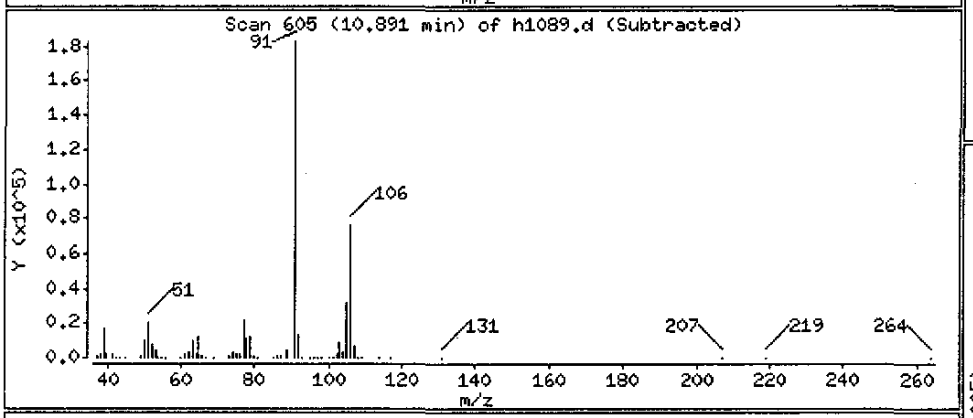
Column diameter: 0.53

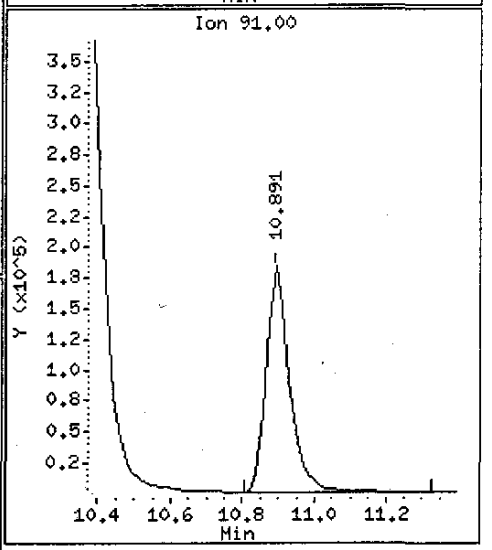
77 o-Xylene

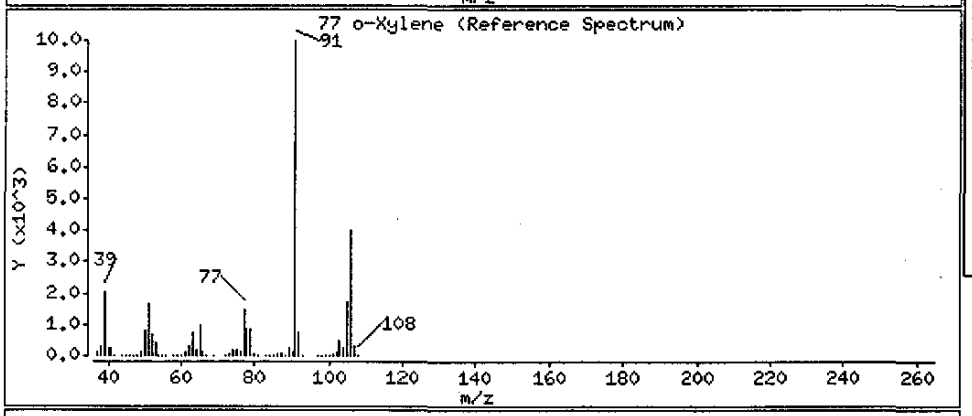
Concentration: 5.49861 ug/L

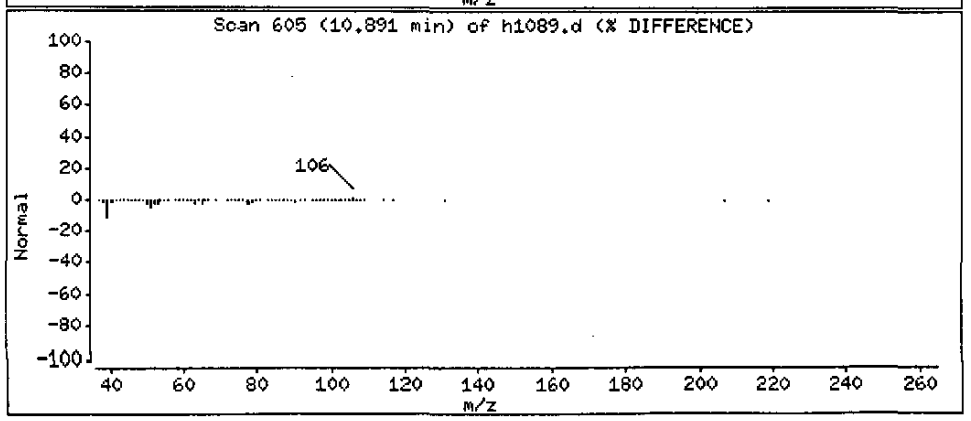












Data File: /chem/H.i/022004.b/h1089.d

Date : 20-FEB-2004 19:31

Client ID: MW-13

Instrument: H.i

Sample Info: F9KE71AA,,D4B130209-013

Purge Volume: 20.0

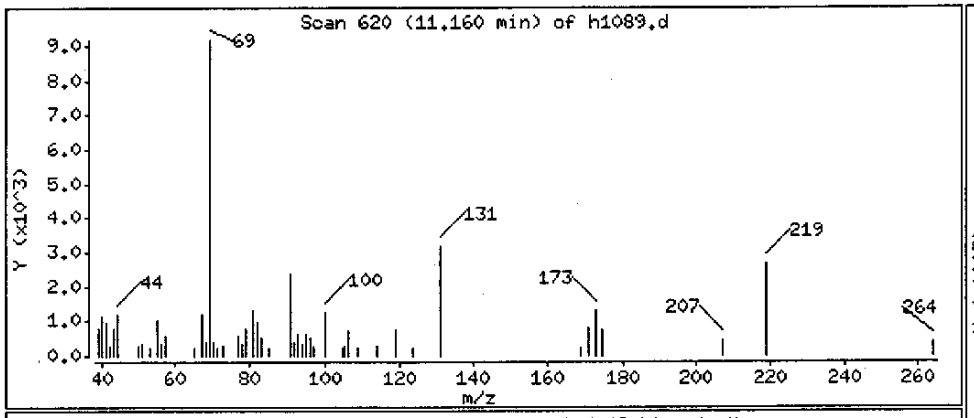
Operator: appelhansd

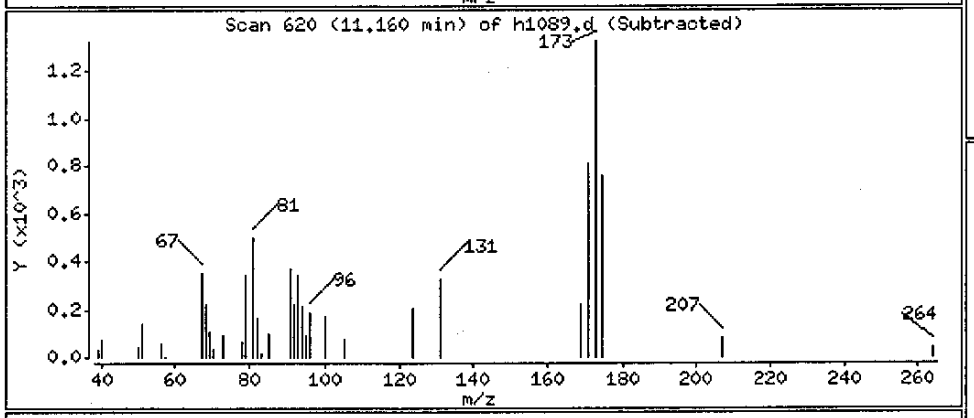
Column phase: DB624

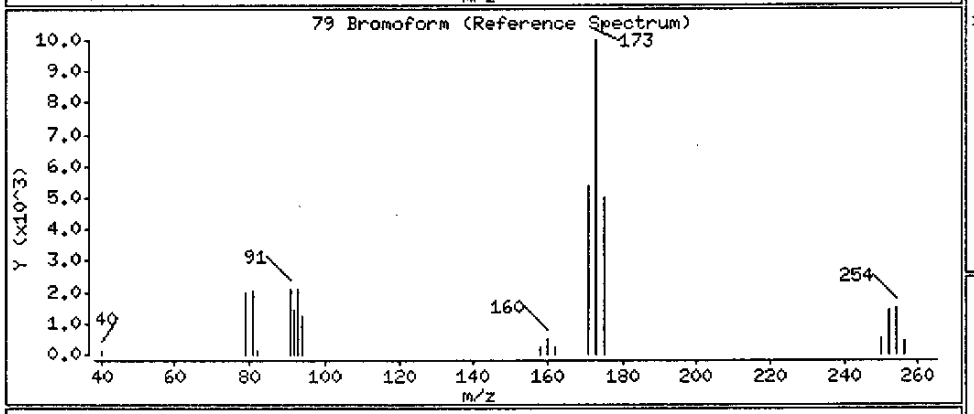
Column diameter: 0.53

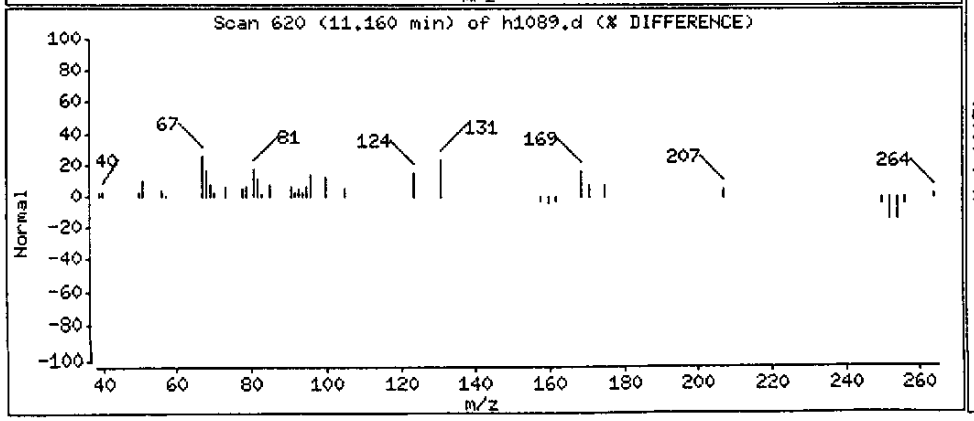
79 Bromoform

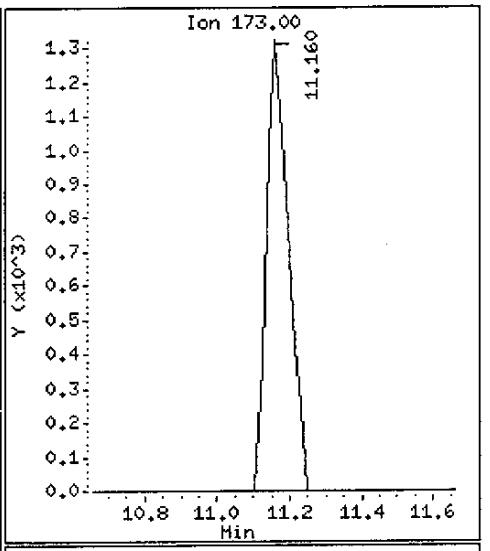
Concentration: 0.210069 ug/L

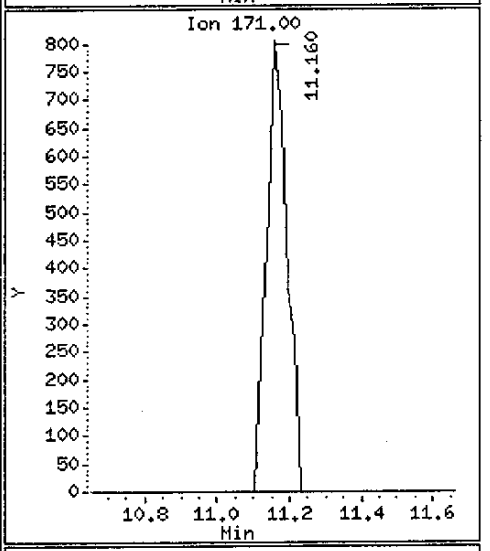


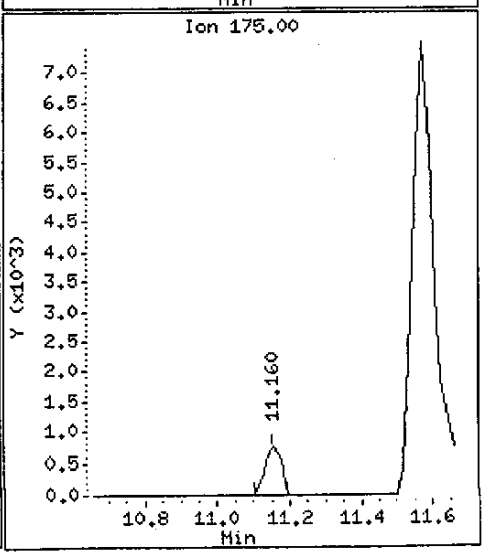












Data File: /chem/H.i/022004.b/h1089.d

Date : 20-FEB-2004 19:31

Client ID: MW-13

Instrument: H.i

Sample Info: F9KE71AA,,D4B130209-013

Purge Volume: 20.0

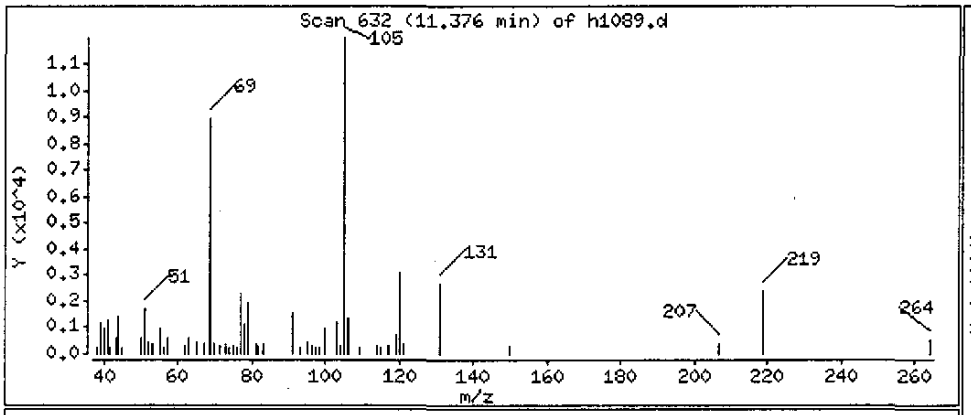
Operator: appelhansd

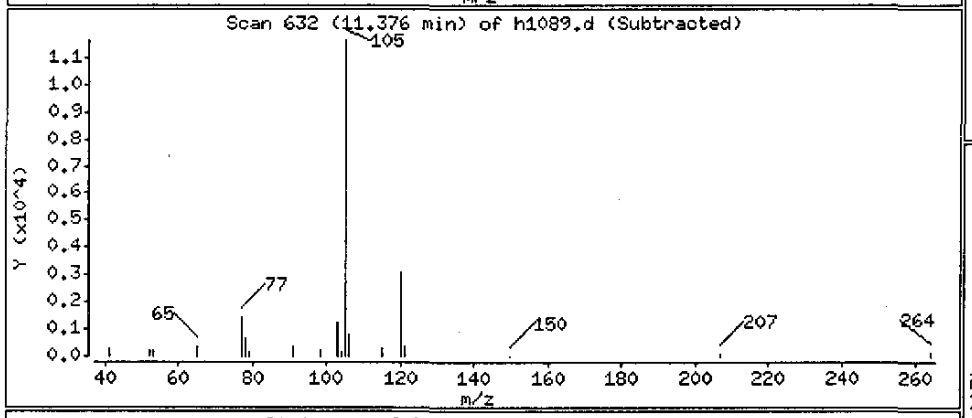
Column phase: DB624

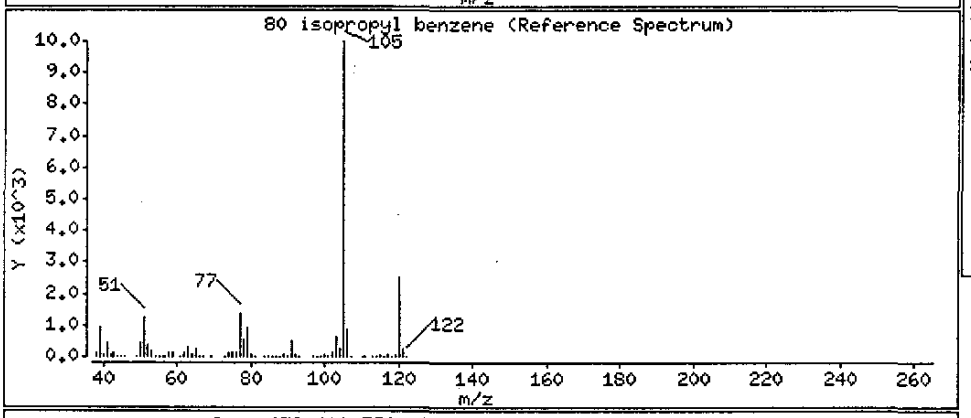
Column diameter: 0.53

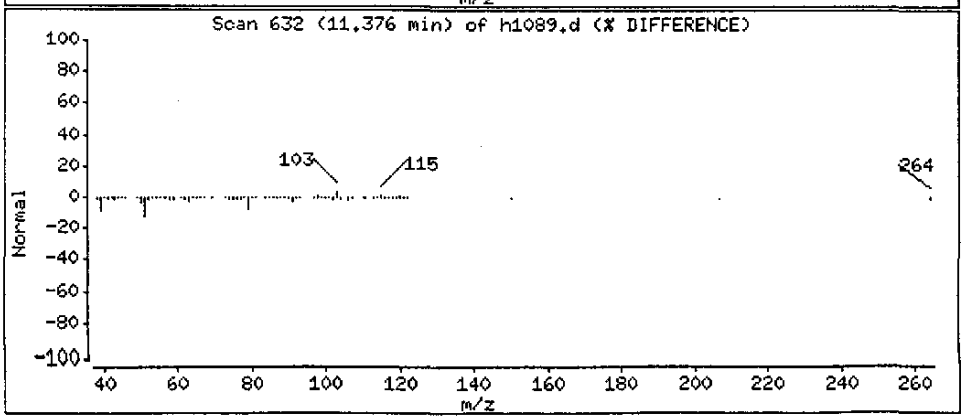
80 isopropyl benzene

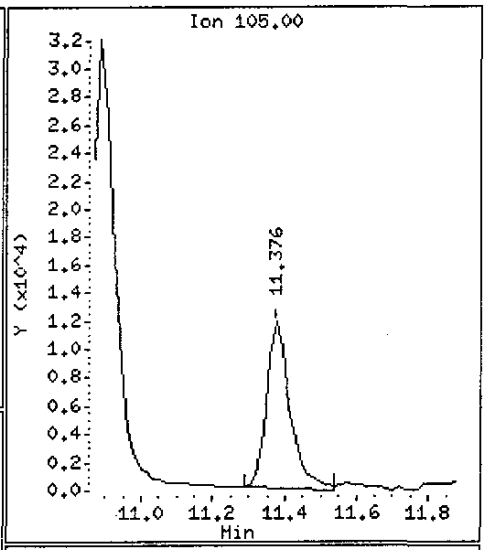
Concentration: 0.263700 ug/L

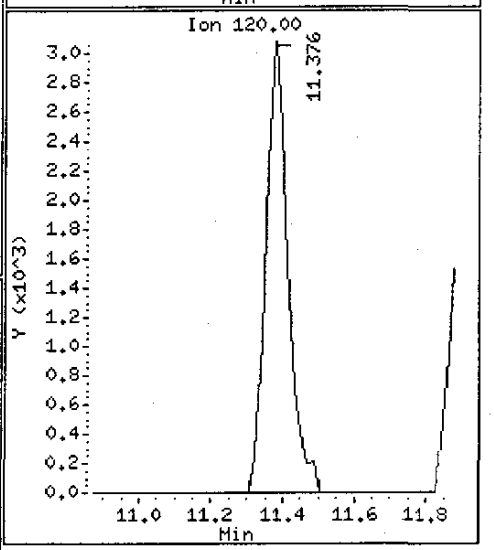












Data File: /chem/H.i/022004.b/h1089.d

Date : 20-FEB-2004 19:31

Client ID: MW-13

Instrument: H.i

Sample Info: F9KE71AA,,D4B130209-013

Purge Volume: 20.0

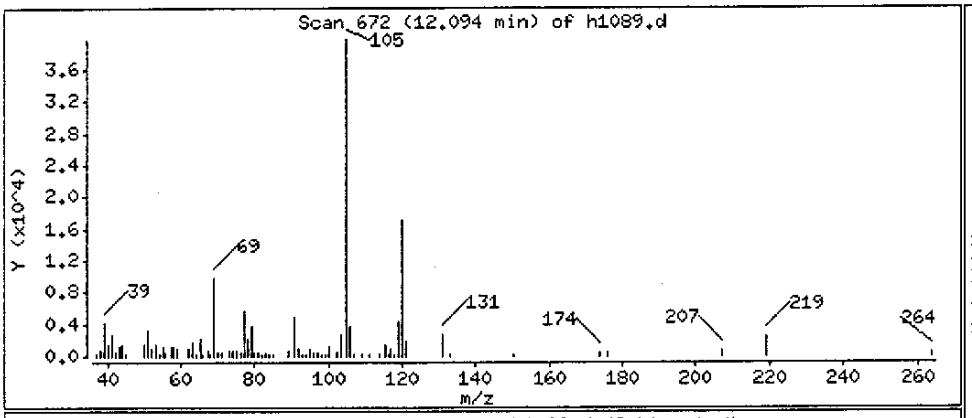
Operator: appelhansd

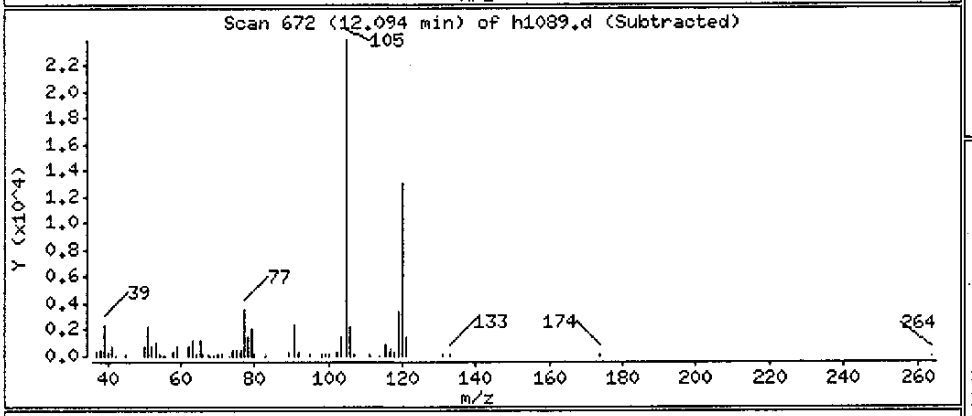
Column phase: DB624

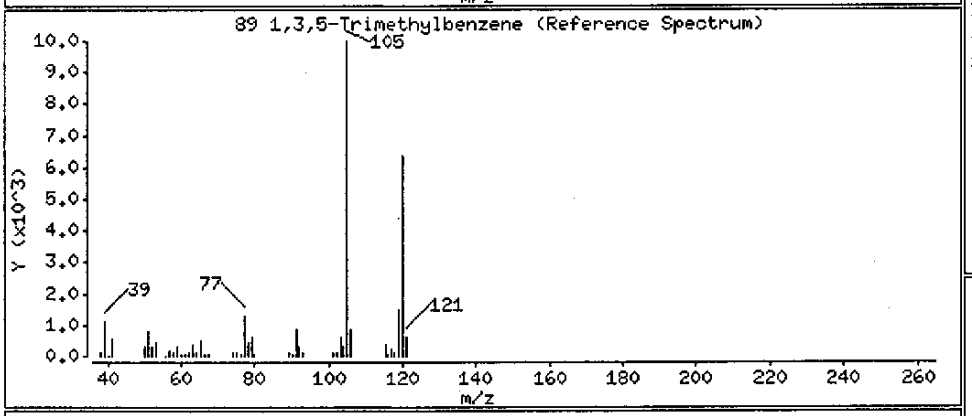
Column diameter: 0.53

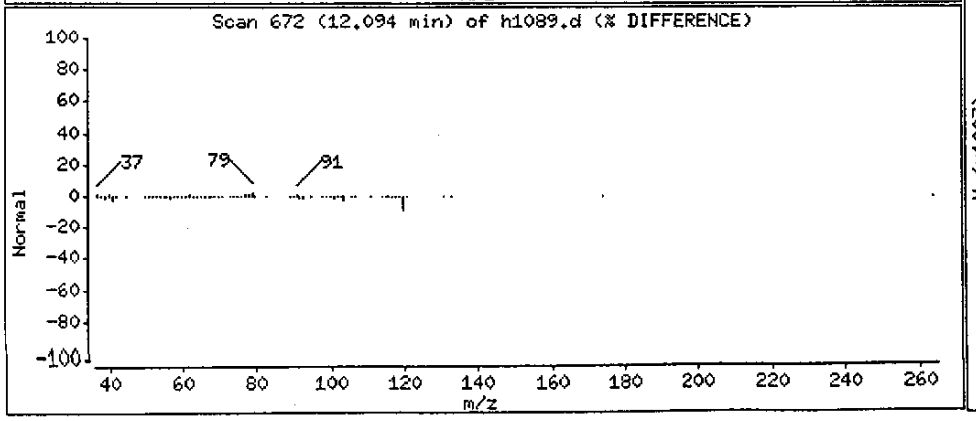
89 1,3,5-Trimethylbenzene

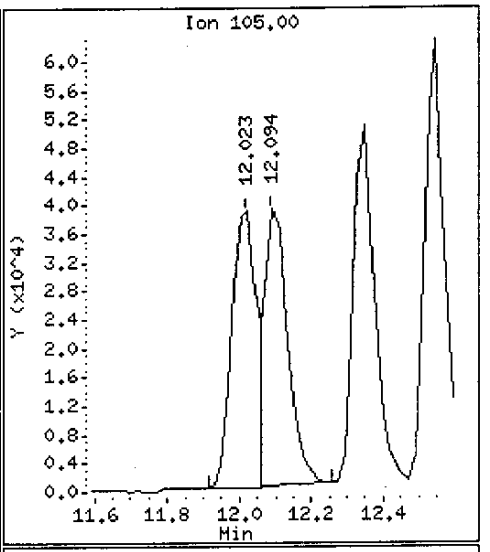
Concentration: 1.12274 ug/L

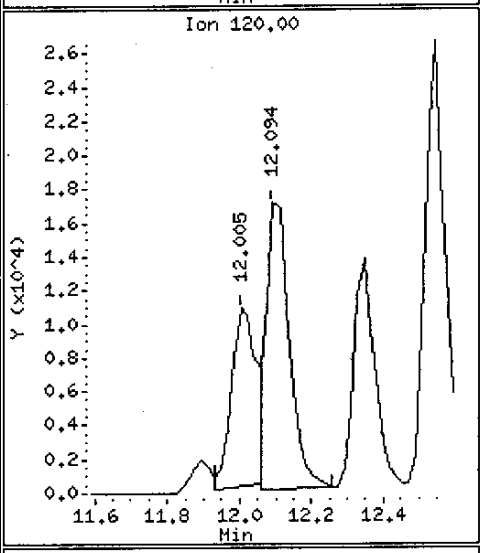


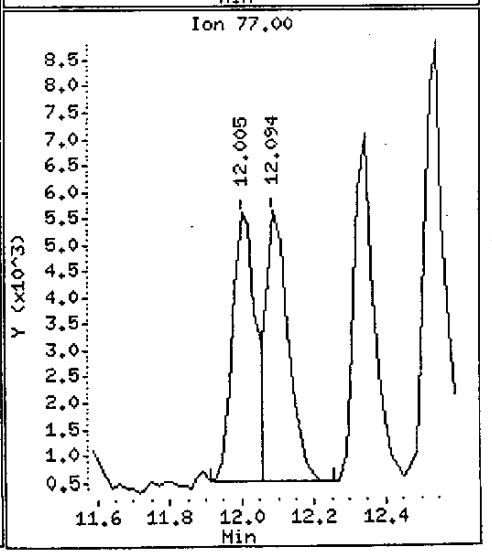












Data File: /chem/H.i/022004.b/h1089.d

Date : 20-FEB-2004 19:31

Client ID: MW-13

Instrument: H.i

Sample Info: F9KE71AA,,D4B130209-013

Purge Volume: 20.0

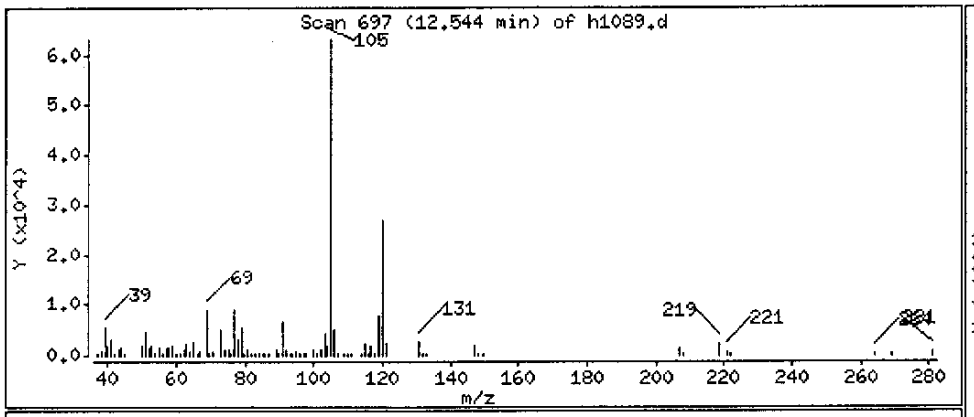
Operator: appelhansd

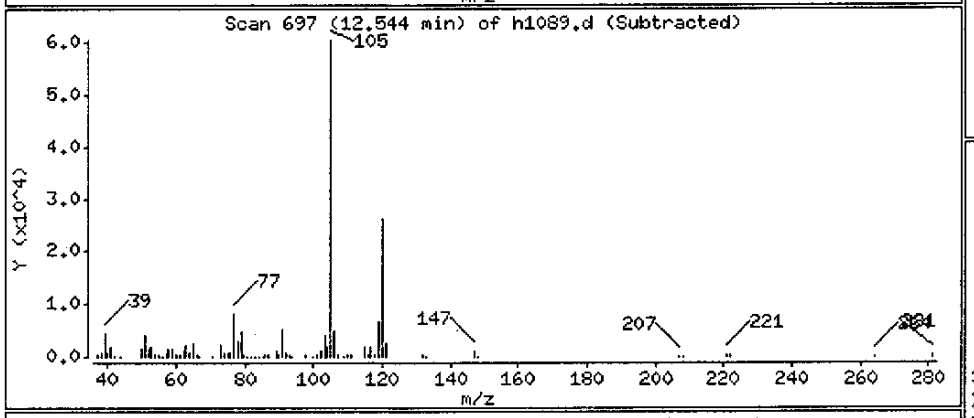
Column phase: DB624

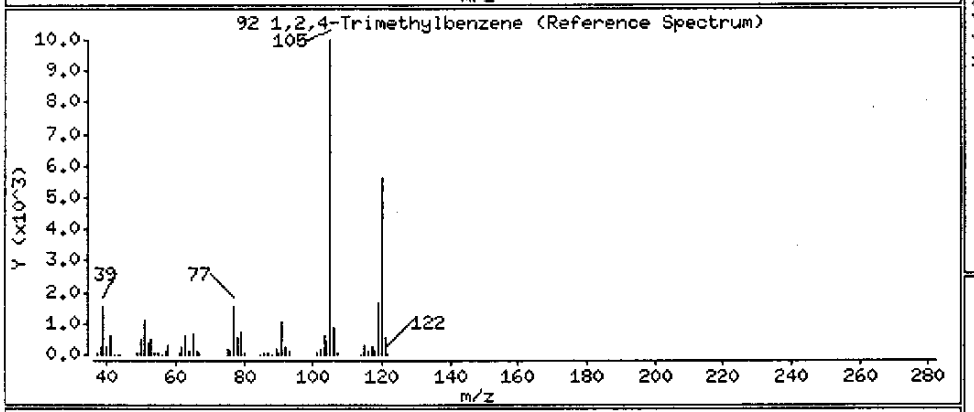
Column diameter: 0.53

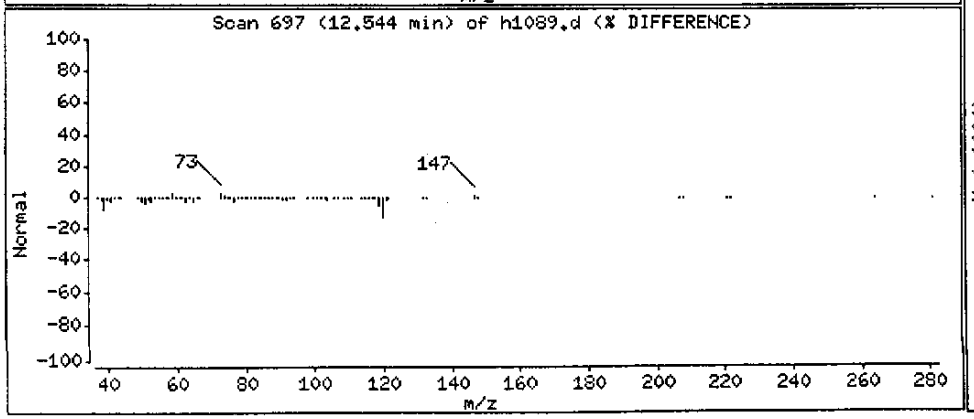
92 1,2,4-Trimethylbenzene

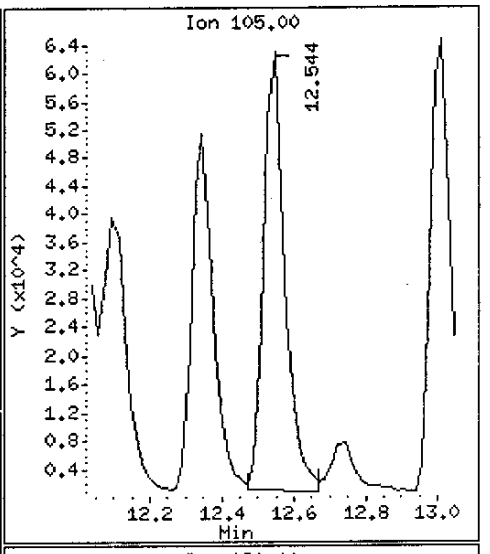
Concentration: 1.62521 ug/L

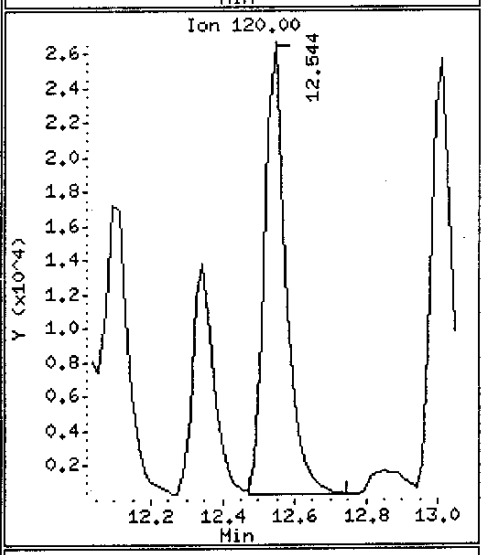


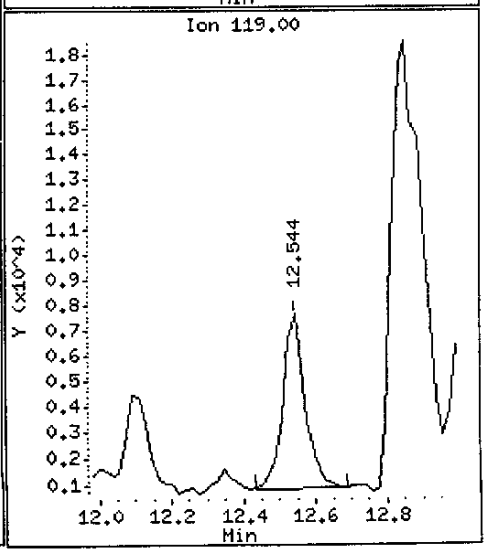












Data File: /chem/H.i/022004.b/h1089.d

Date : 20-FEB-2004 19:31

Client ID: MW-13

Instrument: H.i

Sample Info: F9KE71AA,,D4B130209-013

Purge Volume: 20.0

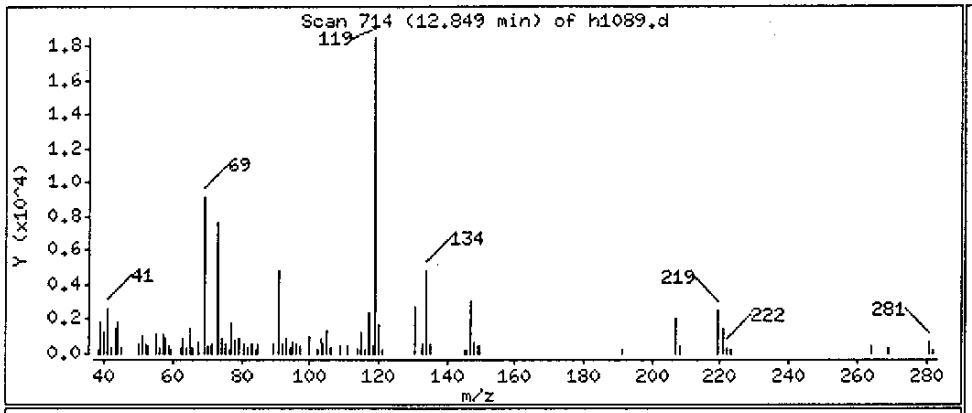
Operator: appelhansd

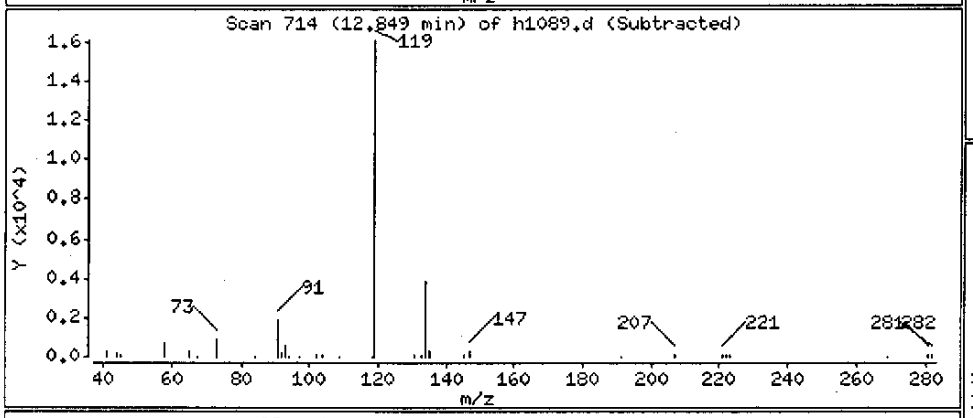
Column phase: DB624

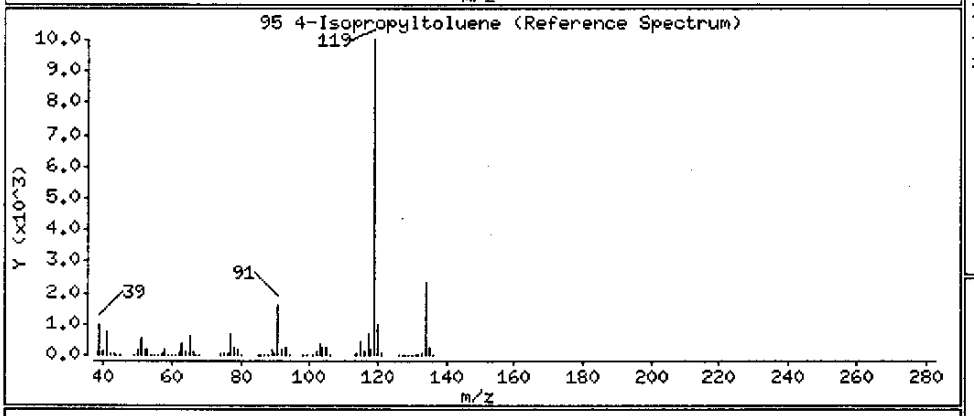
Column diameter: 0.53

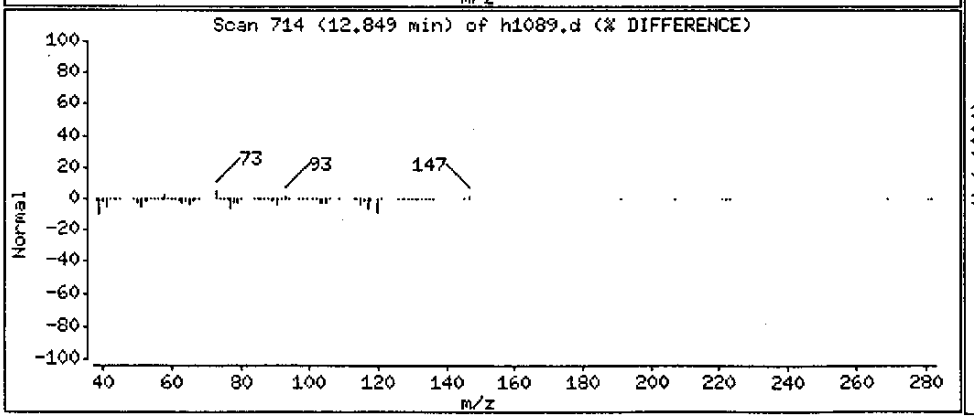
95 4-Isopropyltoluene

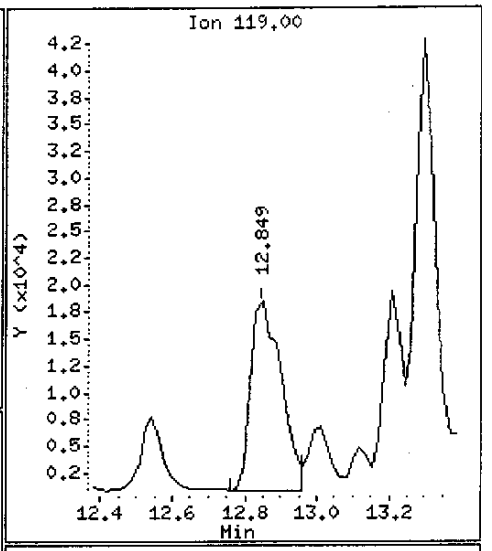
Concentration: 0.561883 ug/L

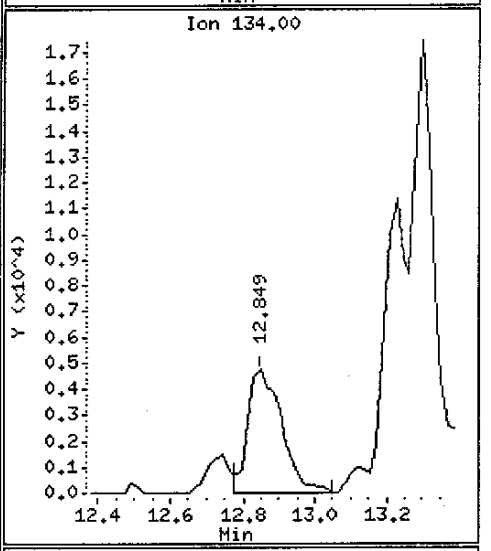


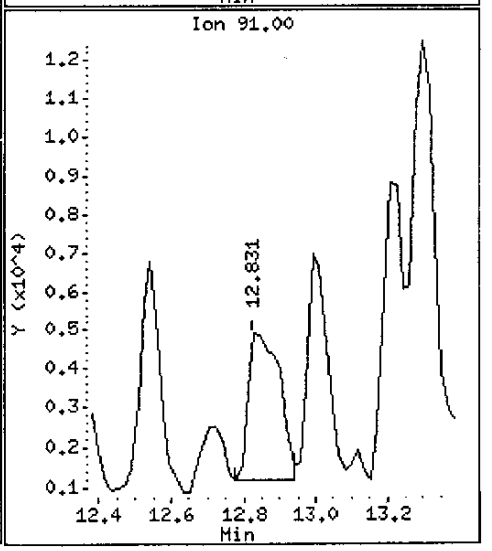












Data File: /chem/H.i/022004.b/h1089.d

Date : 20-FEB-2004 19:31

Client ID: MW-13

Instrument: H.i

Sample Info: F9KE71AA,,D4B130209-013

Purge Volume: 20.0

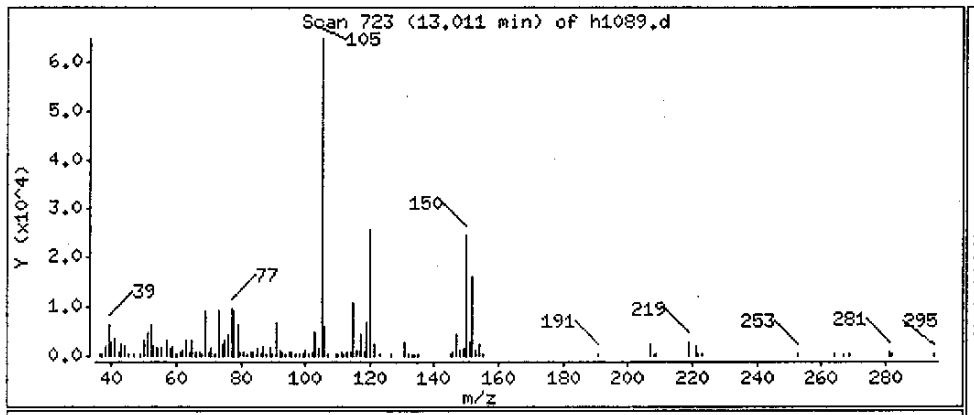
Operator: appelhansd

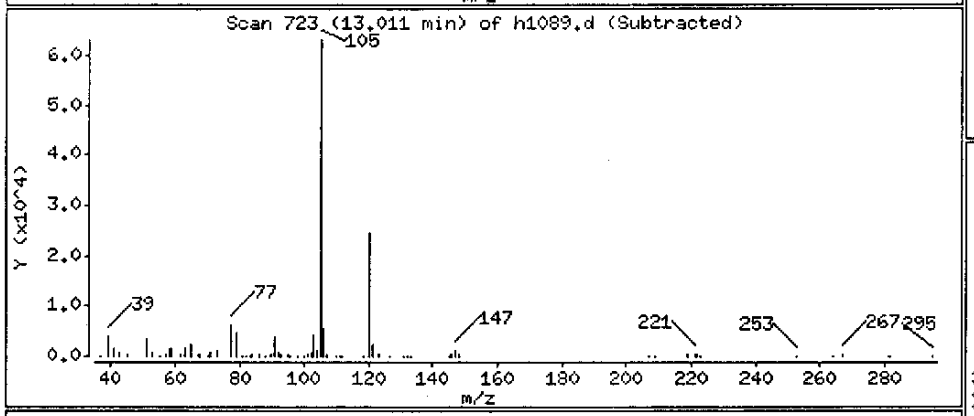
Column phase: DB624

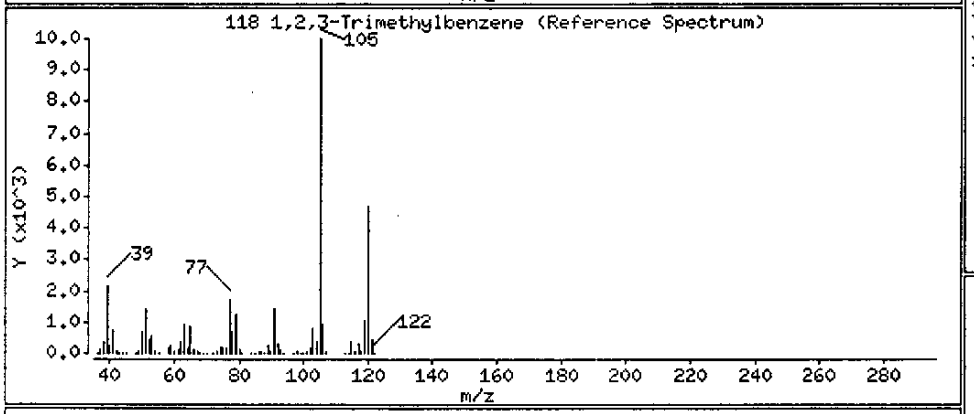
Column diameter: 0.53

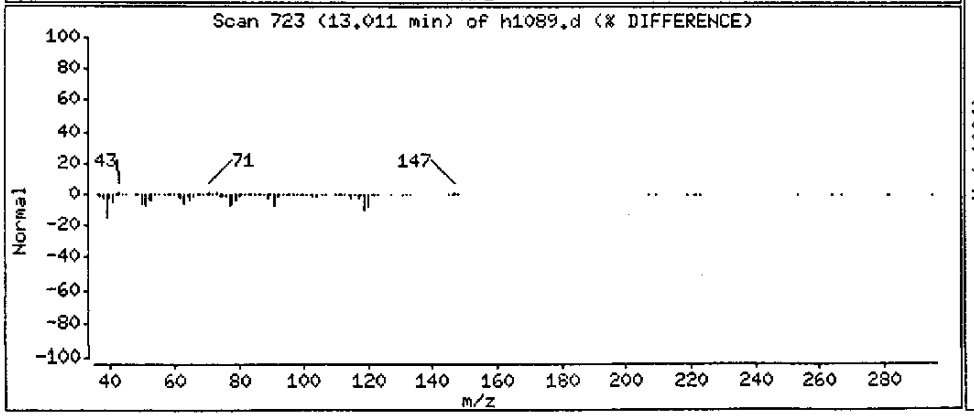
118 1,2,3-Trimethylbenzene

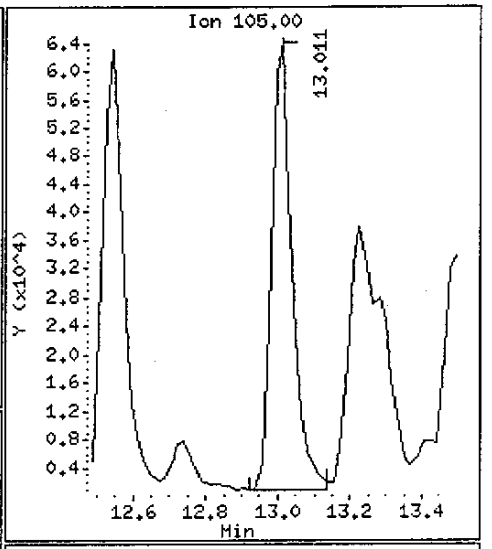
Concentration: 2.02519 ug/L

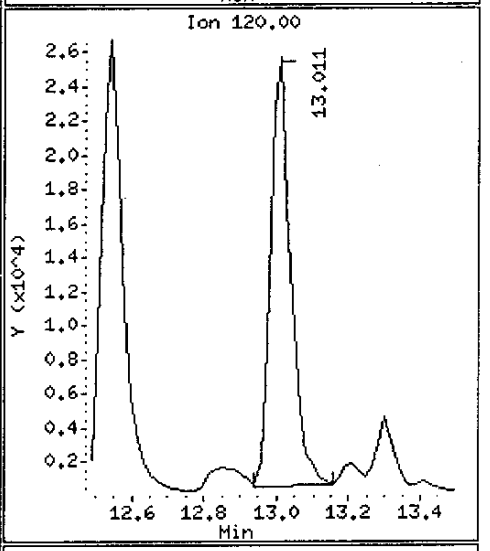


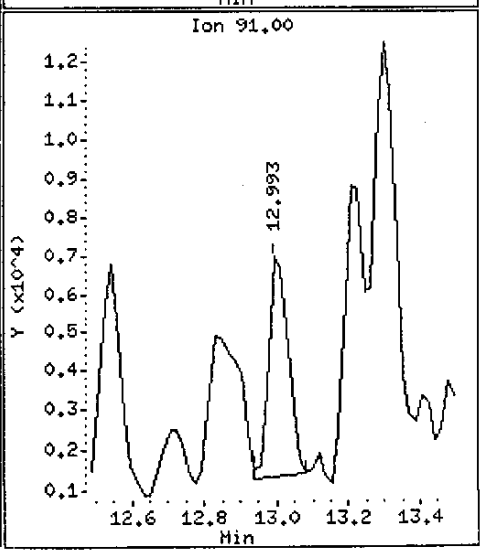












Data File: /chem/H.i/022004.b/h1089.d

Date : 20-FEB-2004 19:31

Client ID: MW-13

Instrument: H.i

Sample Info: F9KE71AA,,D4B130209-013

Purge Volume: 20.0

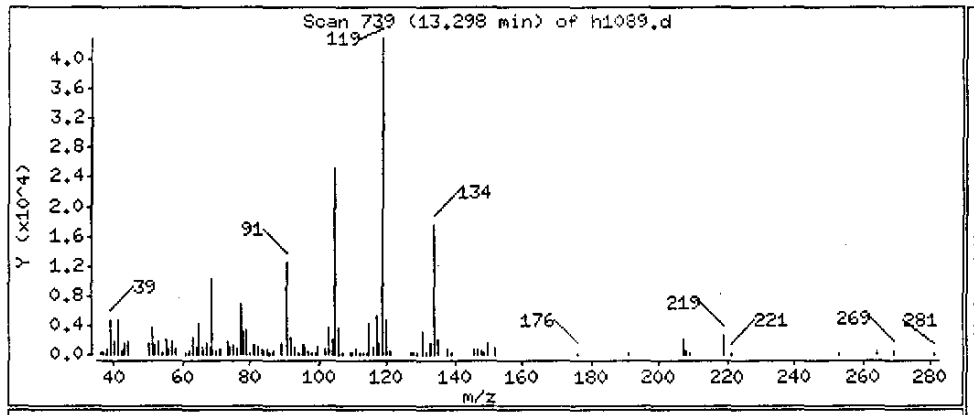
Operator: appelhansd

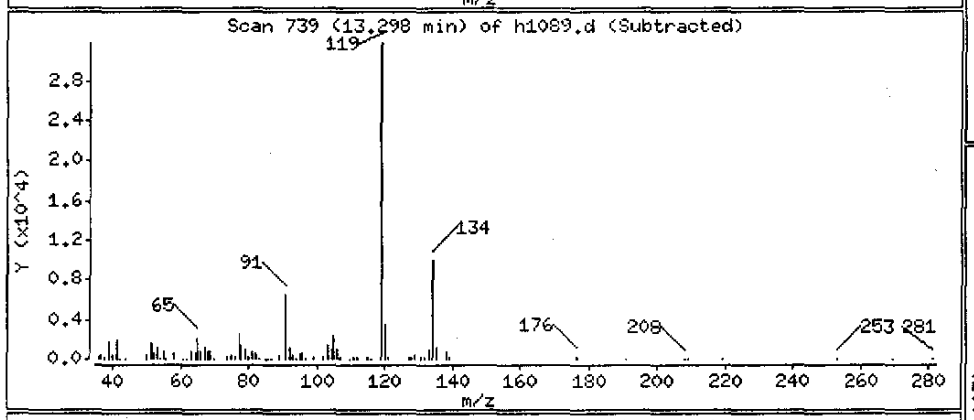
Column phase: DB624

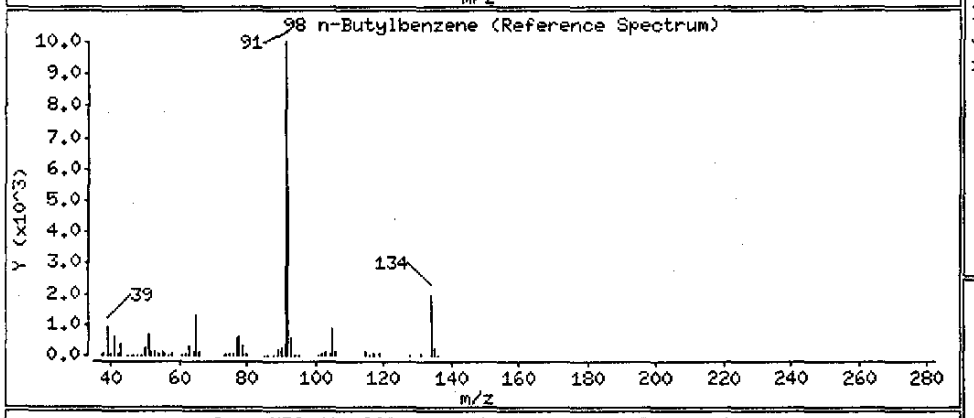
Column diameter: 0.53

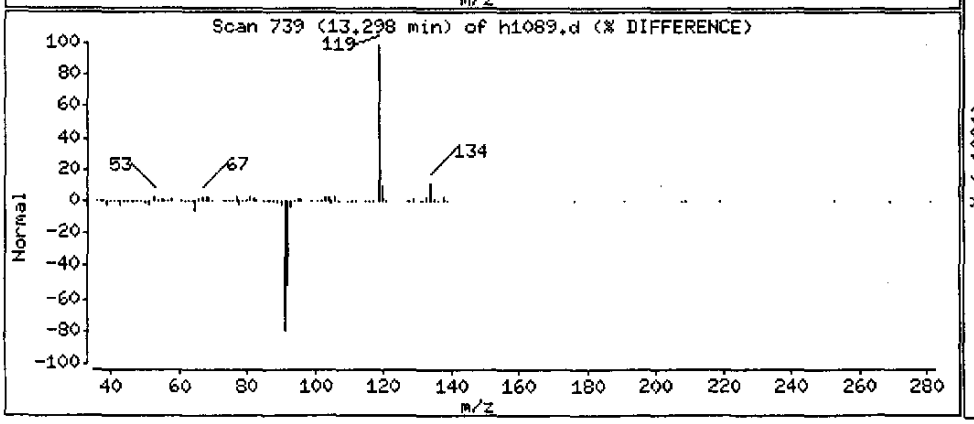
98 n-Butylbenzene

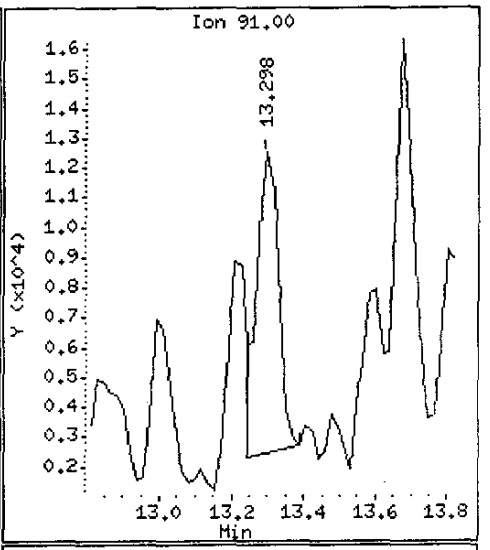
Concentration: 0.211234 ug/L

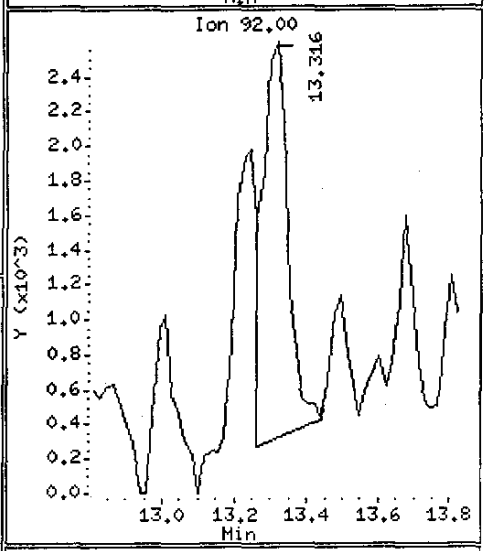


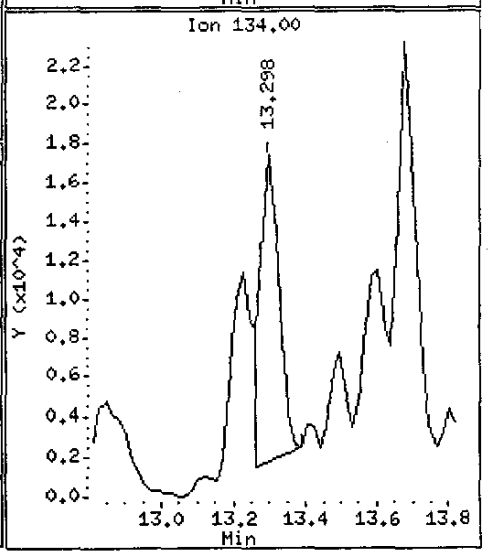












Data File: /chem/H.i/022004.b/h1089.d

Date : 20-FEB-2004 19:31

Client ID: MW-13

Instrument: H.i

Sample Info: F9KE71AA,,D4B130209-013

Purge Volume: 20.0

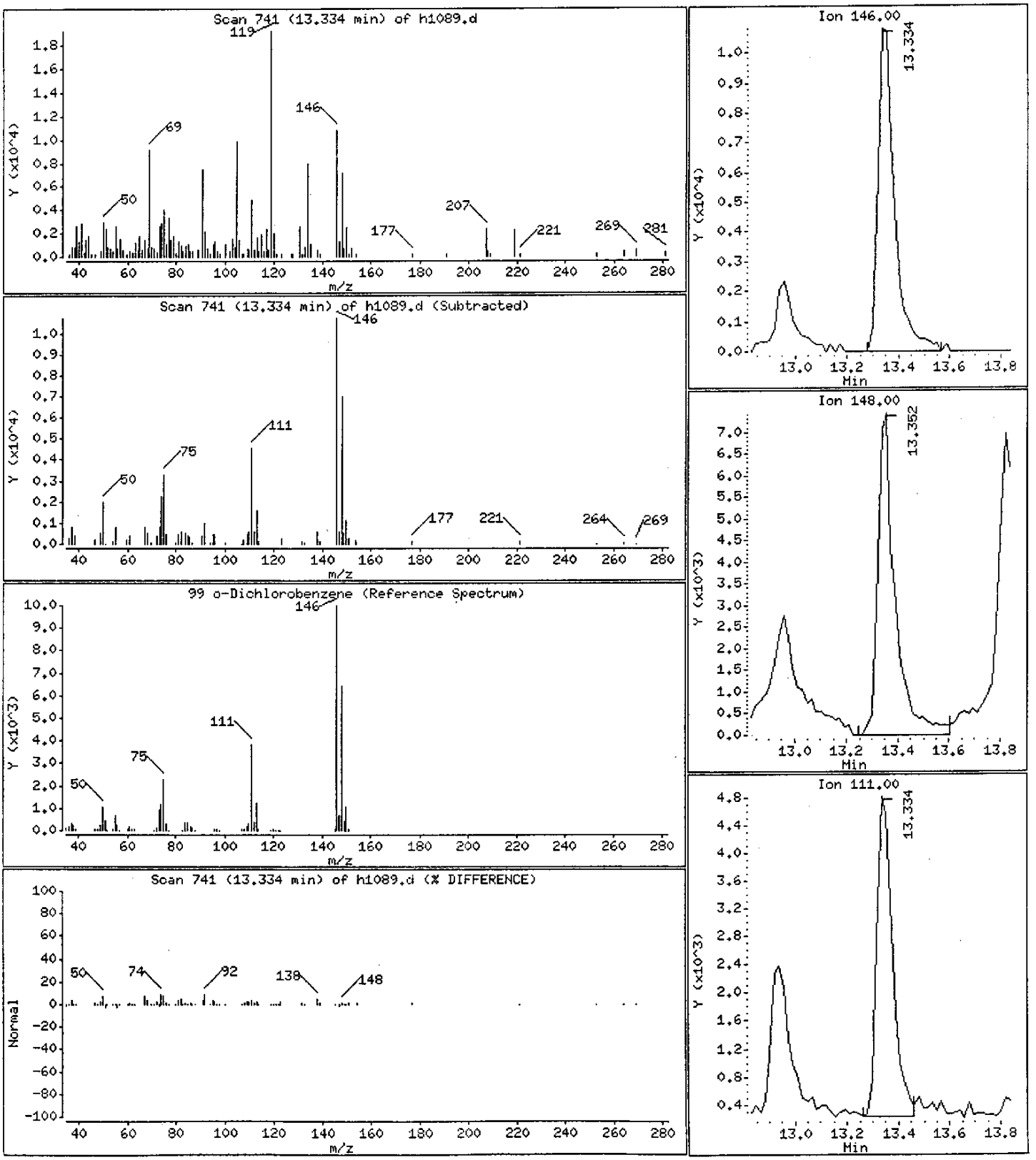
Operator: appelhansd

Column phase: DB624

Column diameter: 0.53

99 o-Dichlorobenzene

Concentration: 0.654052 ug/L



Data File: /chem/H.i/022004.b/h1089.d

Date : 20-FEB-2004 19:31

Client ID: MW-13

Instrument: H.i

Sample Info: F9KE71AA,,D4B130209-013

Purge Volume: 20.0

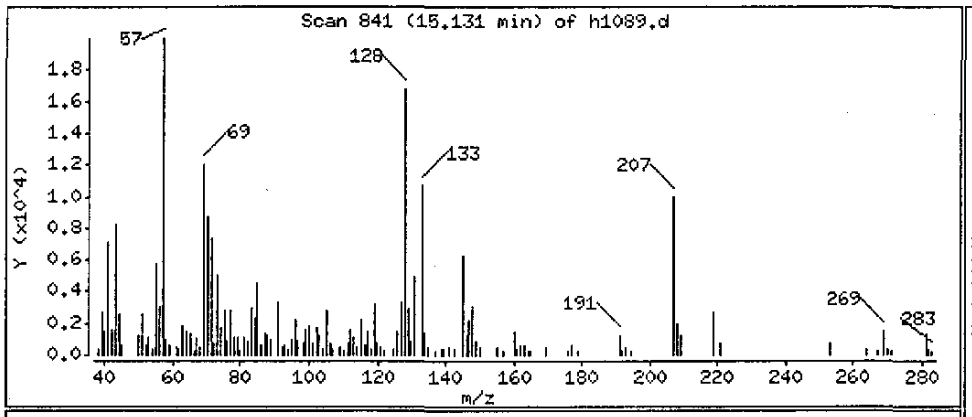
Operator: appelhansd

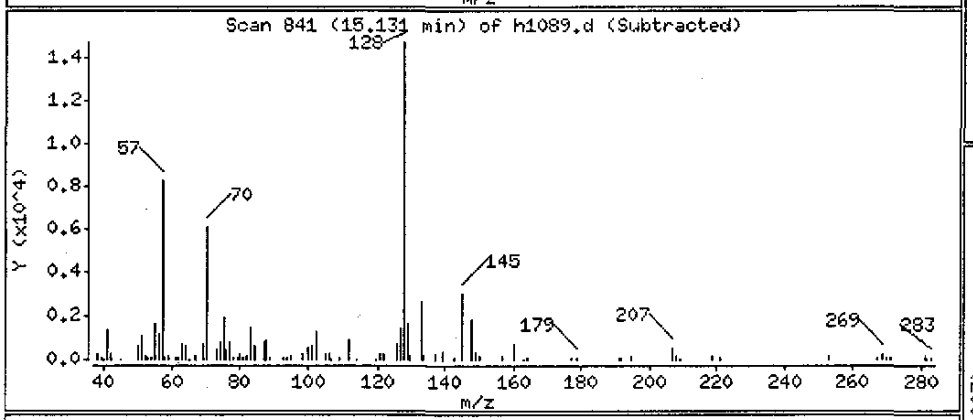
Column phase: DB624

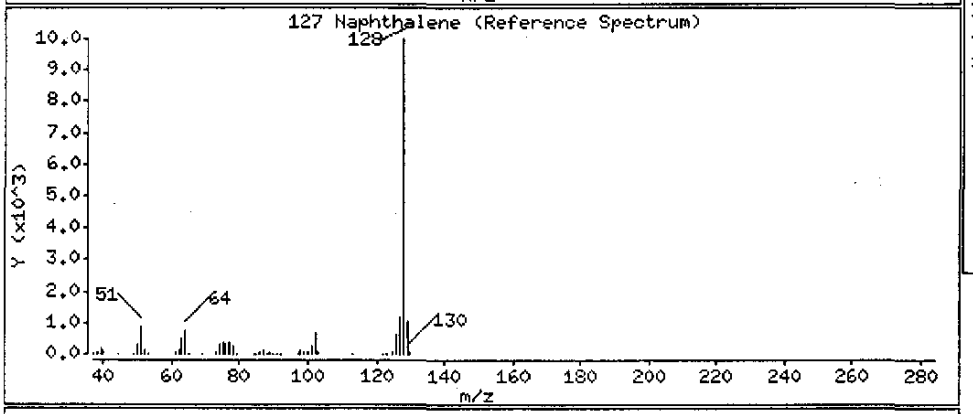
Column diameter: 0.53

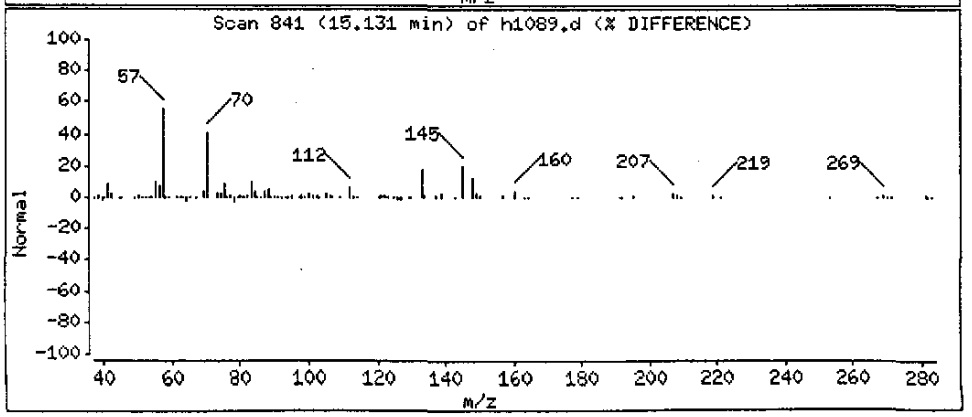
127 Naphthalene

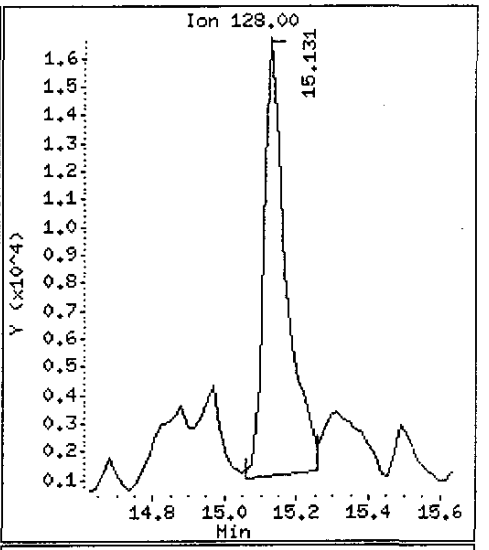
Concentration: 1.26428 ug/L

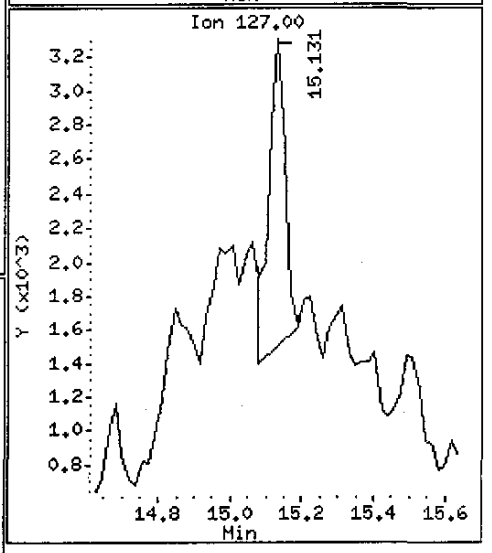












Data File: /chem/H.i/022004.b/h1091.d
Report Date: 23-Feb-2004 08:07

STL Denver

VOLATILE REPORT SW-846

Data file : /chem/H.i/022004.b/h1091.d
Lab Smp Id: F9KEL1AA Client Smp ID: MW-4
Inj Date : 20-FEB-2004 20:11
Operator : appelhansd Inst ID: H.i
Smp Info : F9KEL1AA,,D4B130209-004
Misc Info :
Comment : Purge and Trap Analysis
Method : /chem/H.i/022004.b/H-20ml-h2o.m
Meth Date : 20-Feb-2004 11:09 appelhad Quant Type: ISTD
Cal Date : 07-JAN-2004 15:24 Cal File: h0014.d
Als bottle: 2
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: H-all.sub
Target Version: 3.40
Processing Host: chemsv02

Concentration Formula: Amt * DF * Vp/Vs

Name	Value	Description
DF	1.000	Dilution Factor
Vp	20.000	Purge Volume (ml)
Vs	20.000	Sample Volume (ml)

2-23

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/L)
* 48 Fluorobenzene	96	6.398	6.395	(1.000)	2300554	12.5000	
* 72 Chlorobenzene-d5	119	10.064	10.060	(1.000)	447983	12.5000	
* 96 1,4-Dichlorobenzene-d4	152	12.921	12.917	(1.000)	744412	12.5000	
$ 40 Dibromofluoromethane	111	5.608	5.586	(0.876)	919155	10.1568	10.1568
$ 44 1,2-Dichloroethane-d4	65	6.003	5.981	(0.938)	409844	10.1606	10.1606
$ 61 Toluene-d8	98	8.303	8.281	(0.825)	1713738	10.0073	10.0073
$ 82 Bromofluorobenzene	95	11.573	11.552	(1.150)	980695	10.4433	10.4433
M 1 1,2-Dichloroethene (total)	96				1104509	16.0118	16.0118
M 2 Xylene (total)	106				1729804	18.0143	18.0143
3 dichlorodifluoromethane	85.00	Compound Not Detected.					
4 Chloromethane	50.00	Compound Not Detected.					
5 Vinyl Chloride	62	2.158	2.136	(0.337)	213521	4.17087	4.17087
6 Ethylene Oxide	43.00	Compound Not Detected.					
117 Dichlorotetrafluoroethane	85.00	Compound Not Detected.					
123 1,2-dichloro-1,1,2-triflourom	117.00	Compound Not Detected.					
124 2,2-dichloro-1,1,1-trifluorom	83.00	Compound Not Detected.					

Data File: /chem/H.i/022004.b/h1091.d
Report Date: 23-Feb-2004 08:07

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/L)
7 Bromomethane	94.00	Compound Not Detected.					
8 Chloroethane	64	2.535	2.531	(0.396)	238470	6.66401	6.66401
9 Dichlorofluoromethane	67.00	Compound Not Detected.					
10 Trichlorofluoromethane	101.00	Compound Not Detected.					
11 Ethanol	45.00	Compound Not Detected.					
12 Ethyl Ether	59.00	Compound Not Detected.					
13 Acrolein	56.00	Compound Not Detected.					
15 Acetone	43	3.200	3.196	(0.500)	199186	44.1145	44.1145
14 1,1-Dichloroethene	96.00	Compound Not Detected.					
16 Trichlorotrifluoroethane	151.00	Compound Not Detected.					
17 Iodomethane	142.00	Compound Not Detected.					
19 Acetonitrile	41.00	Compound Not Detected.					
18 Carbon Disulfide	76.00	Compound Not Detected.					
20 Allyl Chloride	41.00	Compound Not Detected.					
119 Methyl Acetate	43.00	Compound Not Detected.					
21 Methylene Chloride	84	3.631	3.627	(0.568)	29694	0.51844	0.518441
125 2-Propanol	45	3.326	3.304	(0.520)	146994	149.397	149.397
22 tert-Butyl alcohol	59	3.739	3.735	(0.584)	34980	22.5710	22.5710
23 Acrylonitrile	53.00	Compound Not Detected.					
24 trans-1,2-Dichloroethene	96.00	Compound Not Detected.					
25 Methyl t-butyl ether	73.00	Compound Not Detected.					
26 Hexane	57	4.206	4.202	(0.418)	37080	0.36670	0.366703
27 1,1-Dichloroethane	63	4.368	4.364	(0.683)	768068	6.55587	6.55586
29 Vinyl acetate	43.00	Compound Not Detected.					
30 Isopropyl ether	87.00	Compound Not Detected.					
28 Chloroprene	53.00	Compound Not Detected.					
120 ETBE	59.00	Compound Not Detected.					
33 2-Butanone	43	5.051	5.047	(0.789)	69835	8.21174	8.21174
32 cis-1,2-Dichloroethene	96	5.033	5.029	(0.787)	1104509	16.0118	16.0118
31 2,2-Dichloropropane	77.00	Compound Not Detected.					
35 Ethyl Acetate	43.00	Compound Not Detected.					
34 Propionitrile	54.00	Compound Not Detected.					
36 Methacrylonitrile	41.00	Compound Not Detected.					
37 Bromochloromethane	128.00	Compound Not Detected.					
39 Tetrahydrofuran	42.00	Compound Not Detected.					
38 Chloroform	83.00	Compound Not Detected.					
41 1,1,1-Trichloroethane	97.00	Compound Not Detected.					
114 Cyclohexane	56	5.715	5.712	(0.893)	265941	2.58249	2.58249(a)
42 1,1-Dichloropropene	75.00	Compound Not Detected.					
43 Carbon Tetrachloride	117.00	Compound Not Detected.					
45 Isobutanol	41.00	Compound Not Detected.					
46 Benzene	78	6.075	6.071	(0.949)	6118835	31.0659	31.0658
47 1,2-Dichloroethane	62.00	Compound Not Detected.					
121 TAME	73.00	Compound Not Detected.					
49 n-Butanol	56.00	Compound Not Detected.					
50 Trichloroethene	130.00	Compound Not Detected.					
115 2-Pentanone	43.00	Compound Not Detected.					

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/L)
52 1,2-Dichloropropane	63.00	Compound Not Detected.					
122 Methyl Cyclohexane	55	7.081	7.059	(1.107)	201558	2.10469	2.10469
53 Dibromomethane	93.00	Compound Not Detected.					
54 Methyl Methacrylate	100.00	Compound Not Detected.					
55 1,4-Dioxane	88.00	Compound Not Detected.					
56 Bromodichloromethane	83.00	Compound Not Detected.					
57 2-nitropropane	41.00	Compound Not Detected.					
113 2-Chloroethyl vinyl ether	63.00	Compound Not Detected.					
59 cis-1,3-Dichloropropene	75.00	Compound Not Detected.					
60 4-Methyl-2-pentanone	43	8.159	8.155	(0.811)	48077	2.07569	2.07569
62 Toluene	91	8.393	8.389	(0.834)	6803615	28.7905	28.7905
63 trans-1,3-Dichloropropene	75.00	Compound Not Detected.					
64 Ethyl methacrylate	69.00	Compound Not Detected.					
65 1,1,2-Trichloroethane	97.00	Compound Not Detected.					
67 1,3-Dichloropropane	76.00	Compound Not Detected.					
66 Tetrachloroethene	164.00	Compound Not Detected.					
68 2-Hexanone	43.00	Compound Not Detected.					
126 Tetrahydrothiophene	60.00	Compound Not Detected.					
69 Dibromochloromethane	129.00	Compound Not Detected.					
70 1,2-Dibromoethane	107.00	Compound Not Detected.					
71 1-Chlorohexane	91.00	Compound Not Detected.					
73 Chlorobenzene	112	10.100	10.096	(1.004)	66714	0.46747	0.467470
74 1,1,1,2-Tetrachloroethane	131.00	Compound Not Detected.					
75 Ethylbenzene	106	10.244	10.240	(1.018)	935865	12.7853	12.7853
76 m and p-Xylene	106	10.387	10.383	(1.032)	1305716	13.2112	13.2112
77 o-Xylene	106	10.891	10.887	(1.082)	424088	4.80311	4.80311
78 Styrene	104.00	Compound Not Detected.					
79 Bromoform	173.00	Compound Not Detected.					
80 isopropyl benzene	105	11.376	11.372	(1.130)	535016	1.83842	1.83842
116 cis-1,4-Dichloro-2-butene	53.00	Compound Not Detected.					
81 Cyclohexanone	55.00	Compound Not Detected.					
83 1,1,2,2-Tetrachloroethane	83.00	Compound Not Detected.					
84 Bromobenzene	156.00	Compound Not Detected.					
85 1,2,3-Trichloropropane	110.00	Compound Not Detected.					
86 t-1,4-Dichloro-2-butene	53.00	Compound Not Detected.					
87 n-Propylbenzene	120	11.897	11.893	(0.921)	34280	0.53169	0.531687
88 2-Chlorotoluene	126.00	Compound Not Detected.					
89 1,3,5-Trimethylbenzene	105	12.094	12.091	(0.936)	127122	0.58575	0.585753
90 4-Chlorotoluene	126.00	Compound Not Detected.					
91 tert-Butylbenzene	119	12.544	12.486	(0.971)	57073	0.25881	0.258806
92 1,2,4-Trimethylbenzene	105	12.544	12.540	(0.971)	372119	1.83751	1.83751
93 sec-Butylbenzene	134	12.723	12.737	(0.985)	11967	0.20684	0.206844
94 m-Dichlorobenzene	146.00	Compound Not Detected.					
95 4-Isopropyltoluene	119.00	Compound Not Detected.					
97 p-dichlorobenzene	146.00	Compound Not Detected.					
118 1,2,3-Trimethylbenzene	105	13.011	12.989	(2.033)	238615	1.54050	1.54050(a)
98 n-Butylbenzene	91.00	Compound Not Detected.					

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/L)
99 o-Dichlorobenzene	146	13.334	13.330	(1.032)	71451	0.74488	0.744876
100 1,2-Dibromo-3-chloropropane	157.00	Compound Not Detected.					
101 1,2,4-Trichlorobenzene	180.00	Compound Not Detected.					
102 Hexachlorobutadiene	225.00	Compound Not Detected.					
127 Naphthalene	128.00	Compound Not Detected.					
104 1,2,3-Trichlorobenzene	180.00	Compound Not Detected.					

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

Data File: /chem/H.i/022004.b/h1091.d
Report Date: 23-Feb-2004 08:07

STL Denver

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: H.i
Lab File ID: h1091.d
Lab Smp Id: F9KEL1AA
Analysis Type: VOA
Quant Type: ISTD
Operator: appelhansd
Method File: /chem/H.i/022004.b/H-20ml-h2o.m
Misc Info:

Calibration Date: 02/20/4
Calibration Time: 1059
Client Smp ID: MW-4
Level: LOW
Sample Type: WATER

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
48 Fluorobenzene	2466684	1233342	4933368	2300554	-6.73
72 Chlorobenzene-d5	459303	229652	918606	447983	-2.46
96 1,4-Dichlorobenze	730993	365496	1461986	744412	1.84

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
48 Fluorobenzene	6.39	5.89	6.89	6.40	0.06
72 Chlorobenzene-d5	10.06	9.56	10.56	10.06	0.04
96 1,4-Dichlorobenze	12.92	12.42	13.42	12.92	0.03

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

STL Denver

RECOVERY REPORT

Client Name: ARCADIS GERAGHTY & M13-FEB-2004 Client SDG: D4B130209
Sample Matrix: LIQUID Fraction: VOA
Lab Smp Id: F9KEL1AA Client Smp ID: MW-4
Level: LOW Operator: appelhansd
Data Type: MS DATA SampleType: SAMPLE
SpikeList File: dcs-h20.spk Quant Type: ISTD
Sublist File: H-all.sub
Method File: /chem/H.i/022004.b/H-20ml-h2o.m
Misc Info:

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 40 Dibromofluorometha	11.5000	10.1568	88.32	76-116
$ 44 1,2-Dichloroethane	11.5000	10.1606	88.35	59-129
$ 61 Toluene-d8	11.5000	10.0073	87.02	76-116
$ 82 Bromofluorobenzene	11.5000	10.4433	90.81	74-114

Data File: /chem/H.i/022004.b/h1091.d
Date : 20-FEB-2004 20:11
Client ID: MW-4
Sample Info: F9KEL1AA,,D4B130209-004
Purge Volume: 20.0
Column phase: DB624

Instrument: H.i
Operator: appelhansd
Column diameter: 0.53

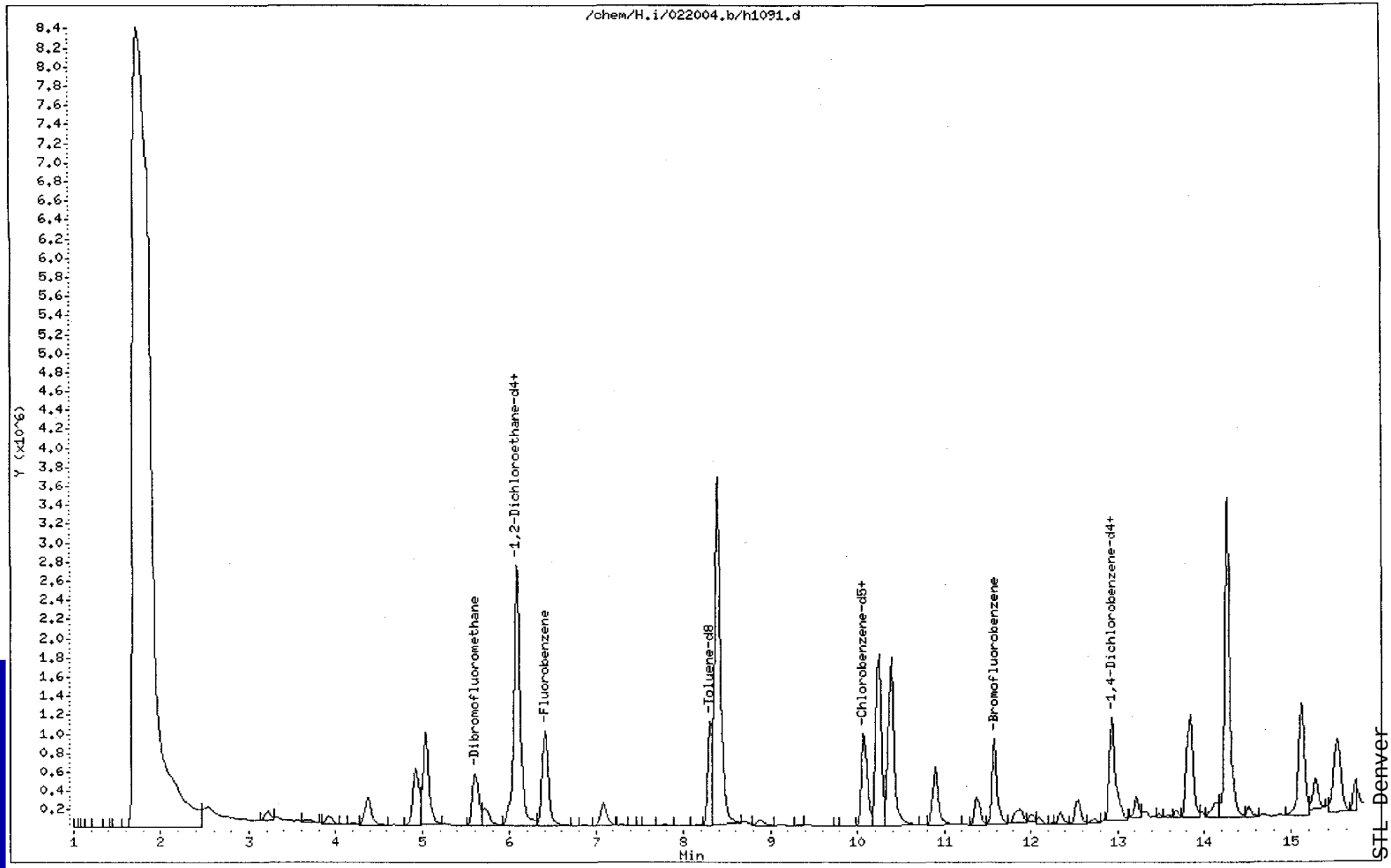


Table of Contents

Data File: /chem/H.i/022004.b/h1091.d

Date : 20-FEB-2004 20:11

Client ID: MW-4

Instrument: H.i

Sample Info: F9KEL1AA,,D4B130209-004

Purge Volume: 20.0

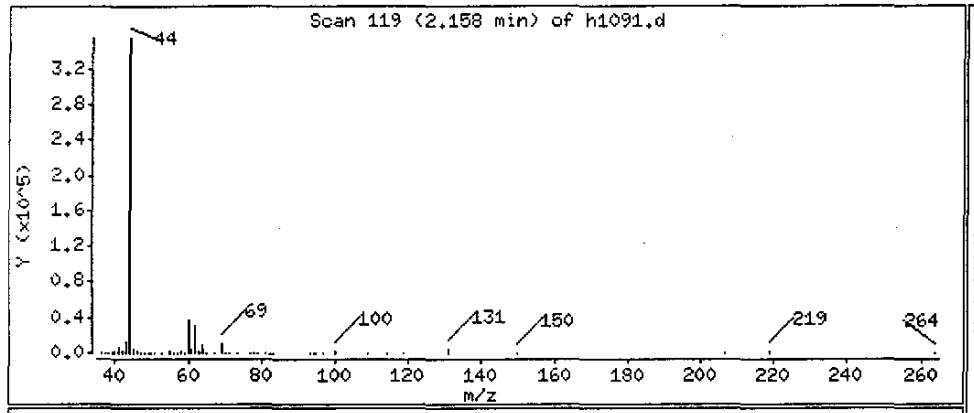
Operator: appelhansd

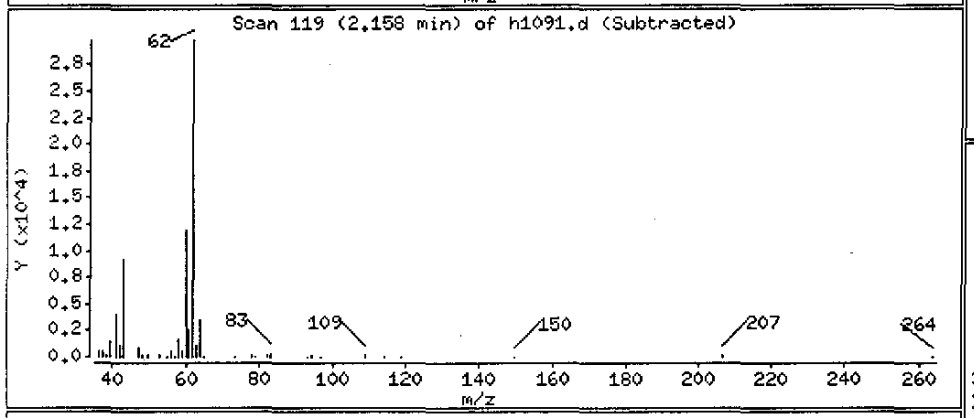
Column phase: DB624

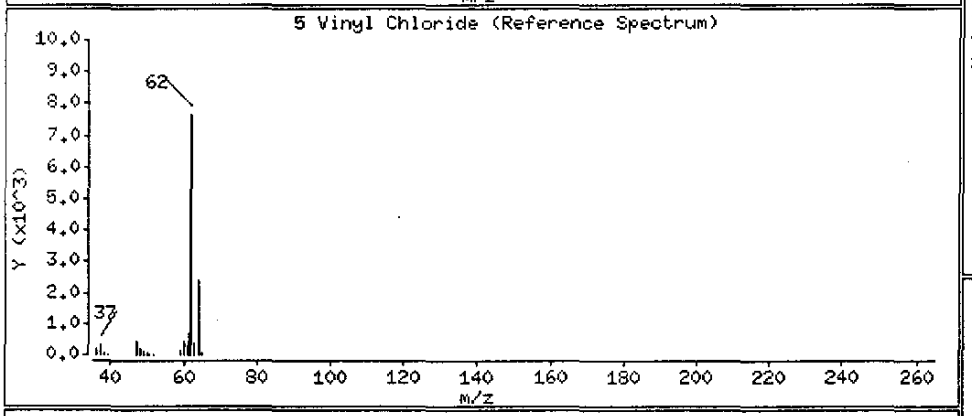
Column diameter: 0.53

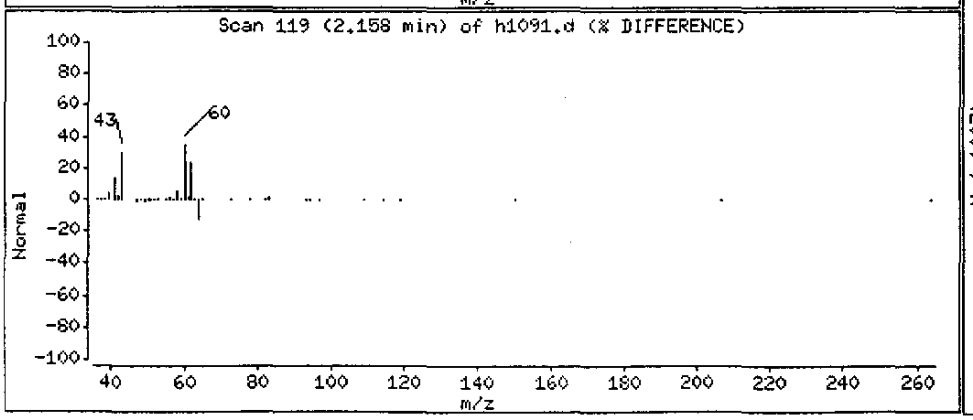
5 Vinyl Chloride

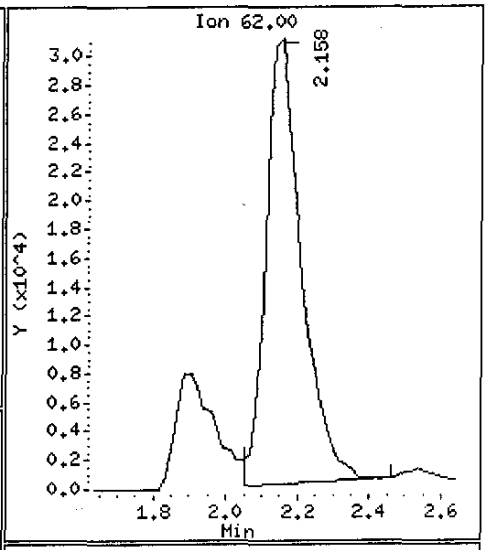
Concentration: 4.17087 ug/L

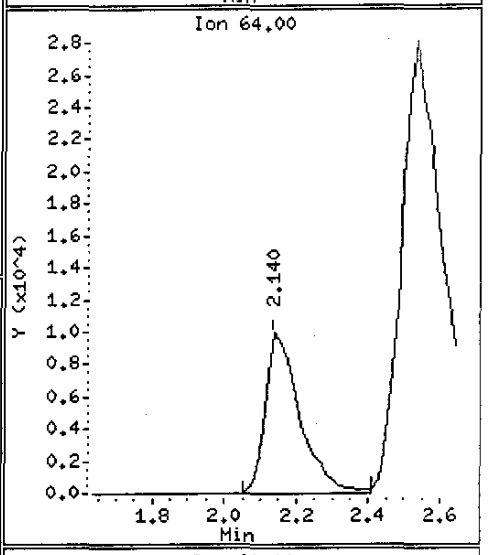


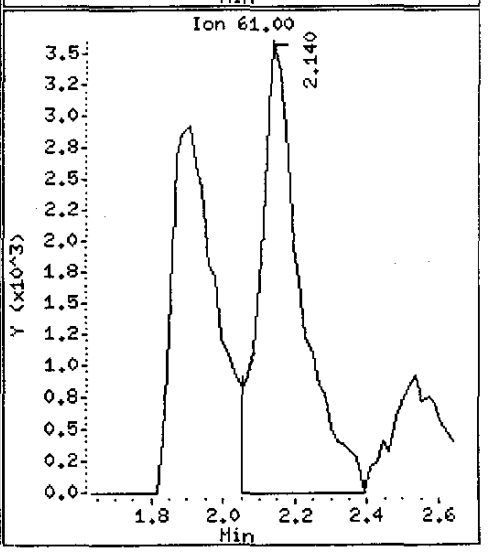












Data File: /chem/H.i/022004.b/h1091.d

Date : 20-FEB-2004 20:11

Client ID: MW-4

Instrument: H.i

Sample Info: F9KEL1AA,,D4B130209-004

Purge Volume: 20.0

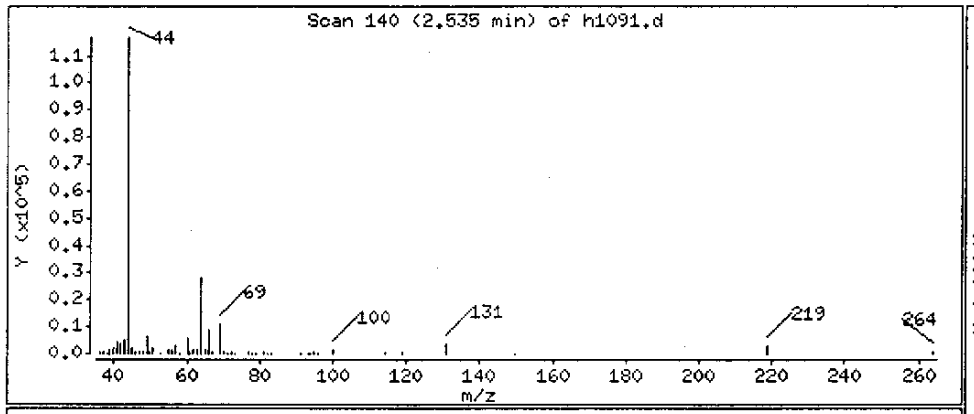
Operator: appelhansd

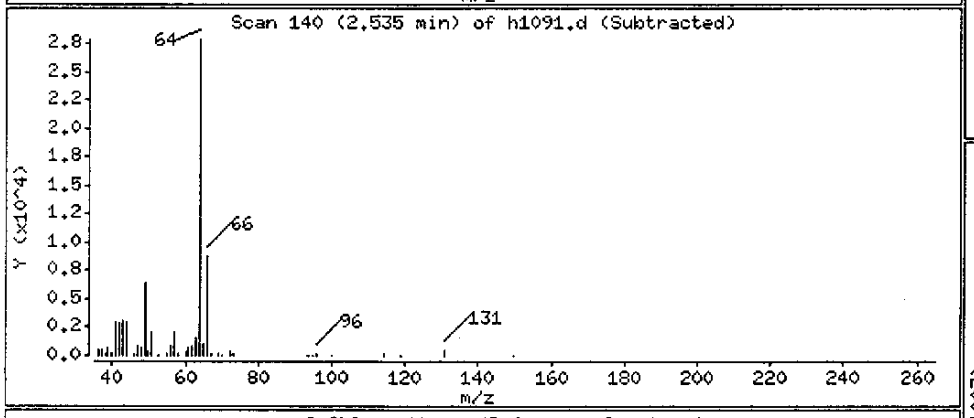
Column phase: DB624

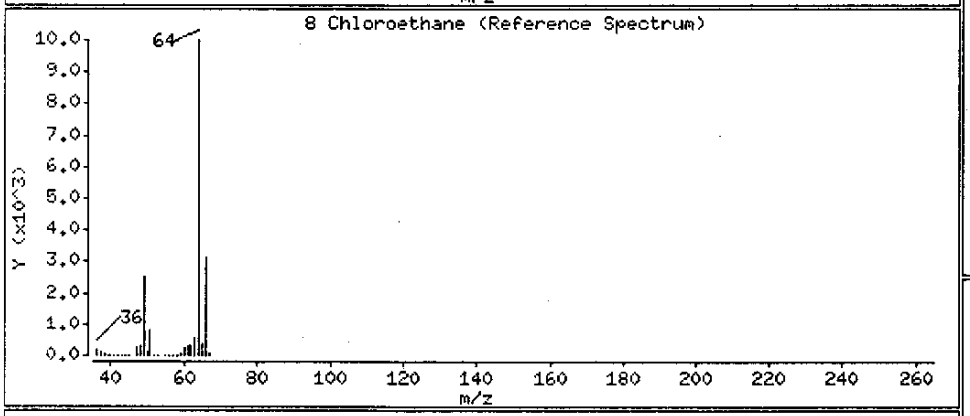
Column diameter: 0.53

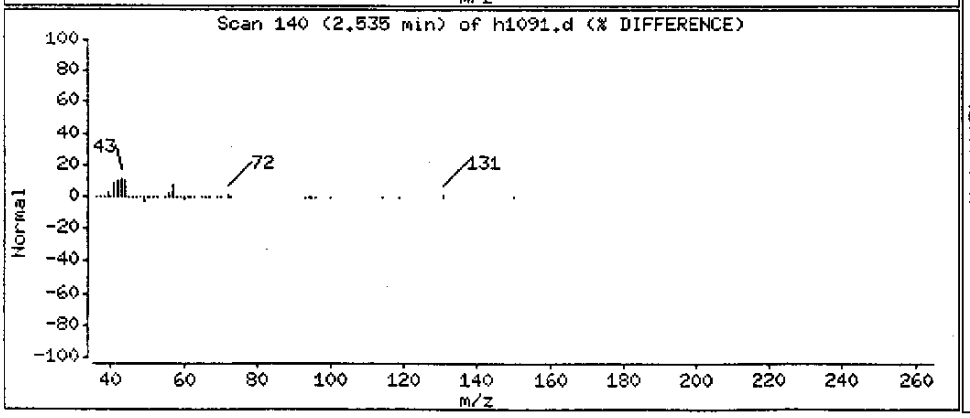
8 Chloroethane

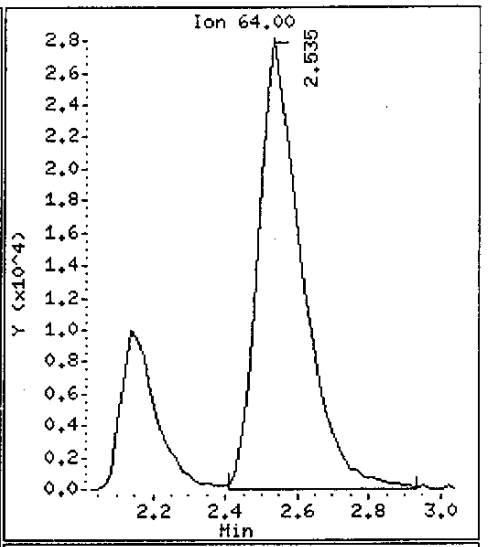
Concentration: 6.66401 ug/L

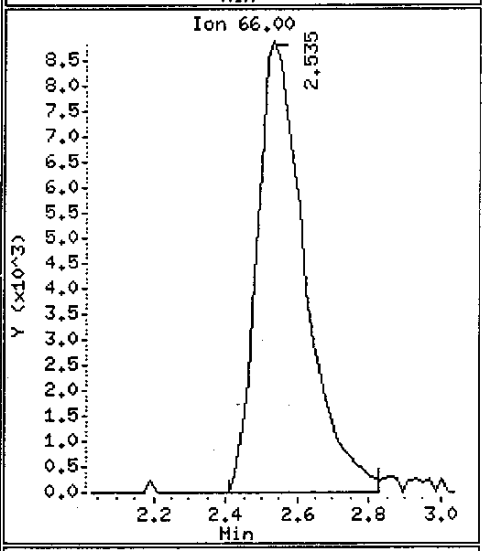


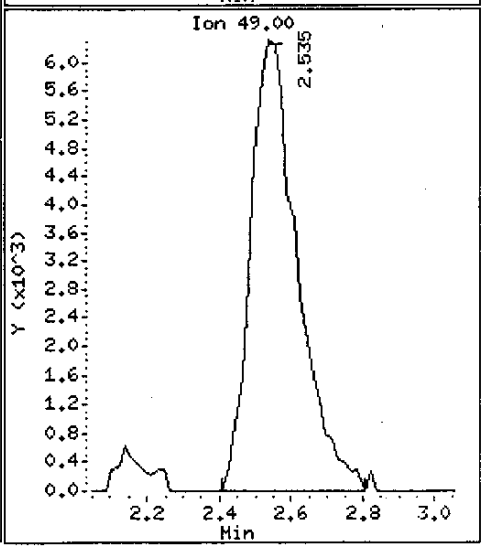












Data File: /chem/H.i/022004.b/h1091.d

Date : 20-FEB-2004 20:11

Client ID: MW-4

Instrument: H.i

Sample Info: F9KEL1AA,,D4B130209-004

Purge Volume: 20.0

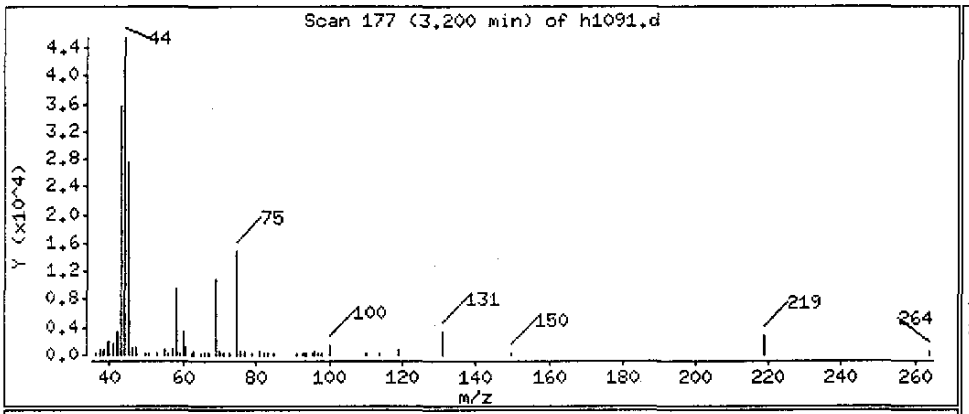
Operator: appelhansd

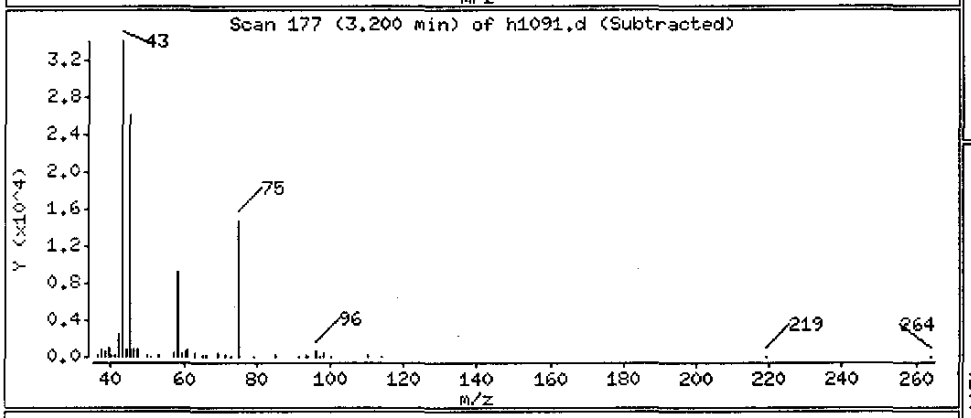
Column phase: DB624

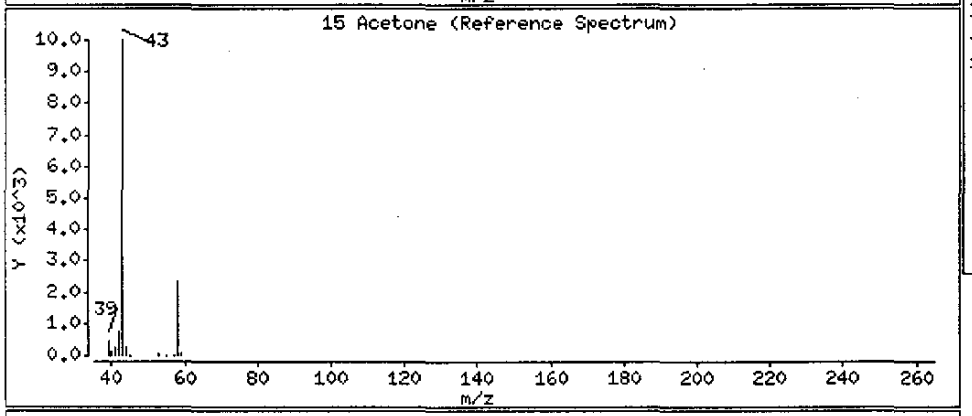
Column diameter: 0.53

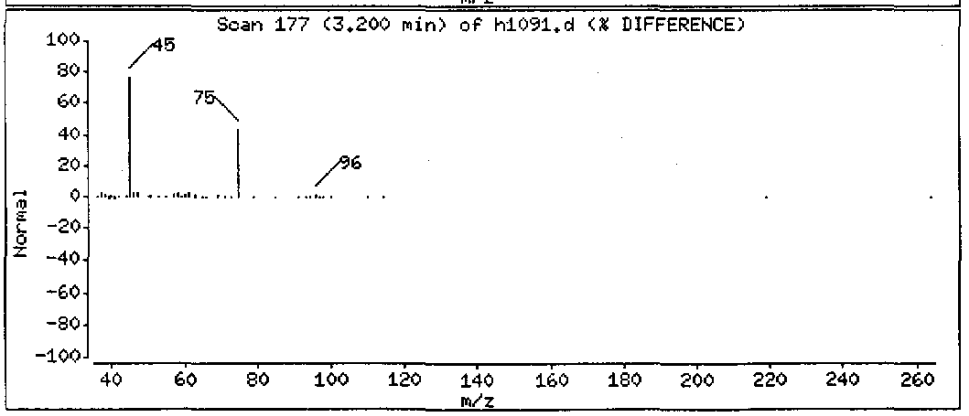
15 Acetone

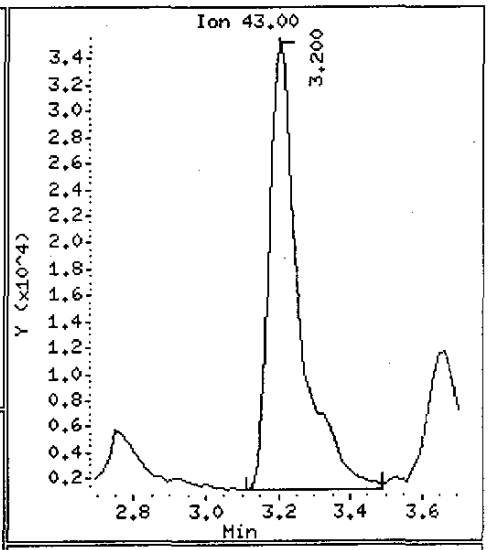
Concentration: 44.1145 ug/L

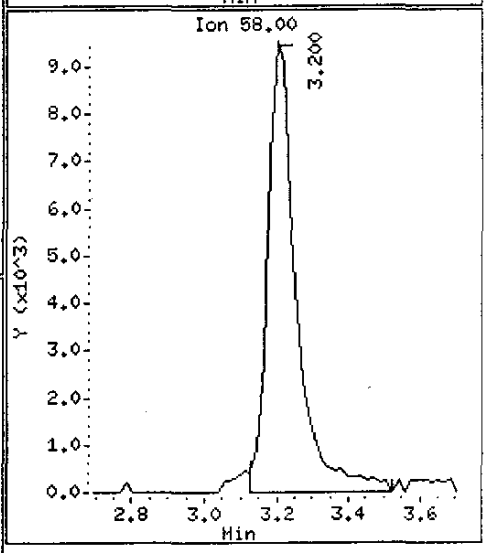












Data File: /chem/H.i/022004.b/h1091.d

Date : 20-FEB-2004 20:11

Client ID: MW-4

Instrument: H.i

Sample Info: F9KEL1AA,,D4B130209-004

Purge Volume: 20.0

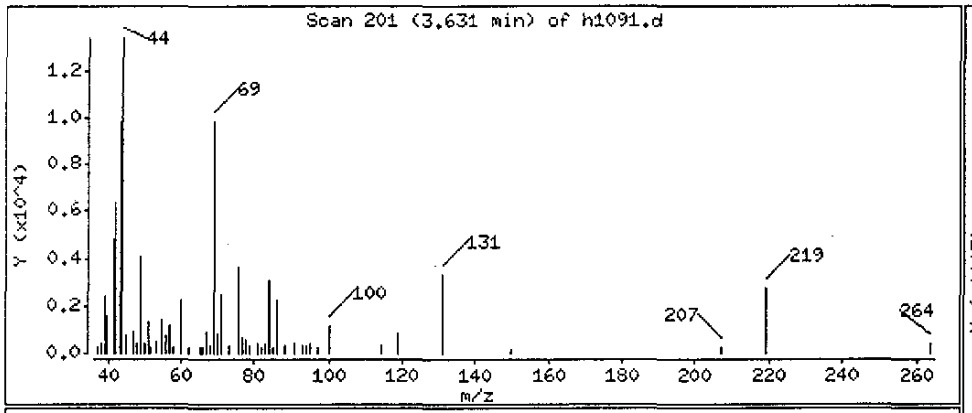
Operator: appelhansd

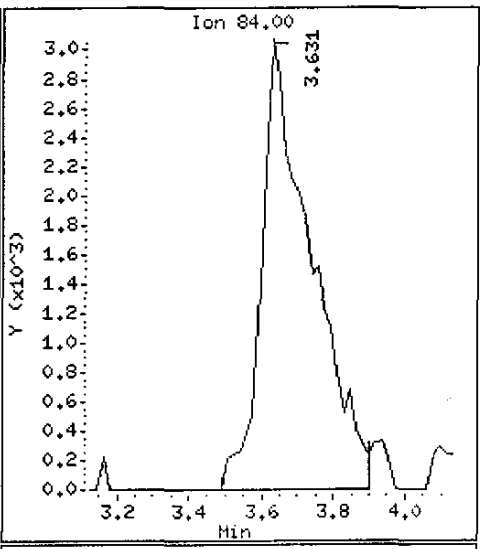
Column phase: DB624

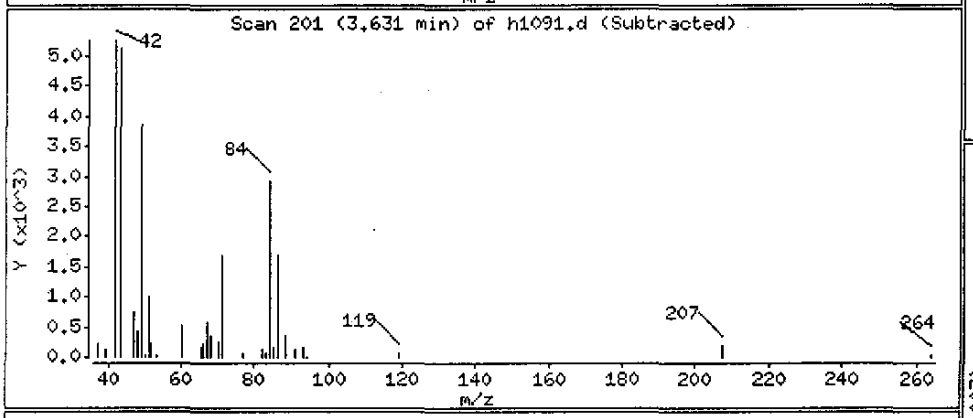
Column diameter: 0.53

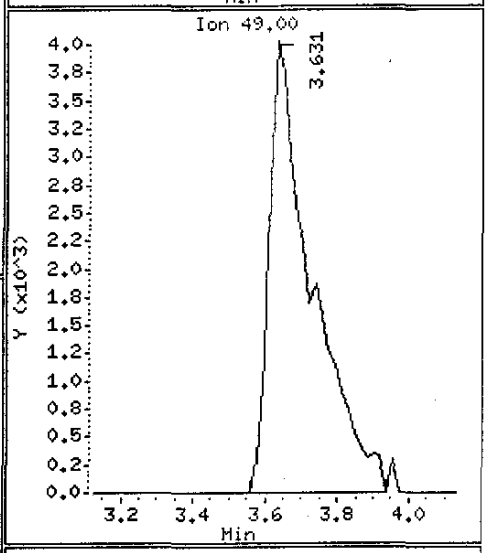
21 Methylene Chloride

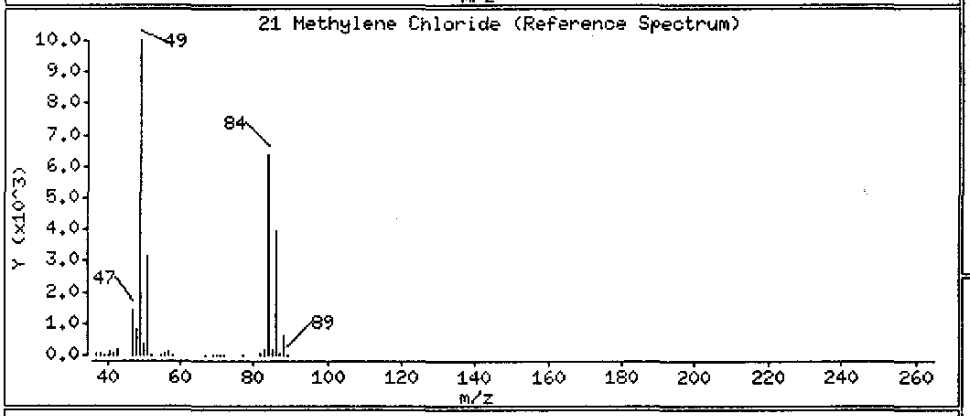
Concentration: 0.518441 ug/L

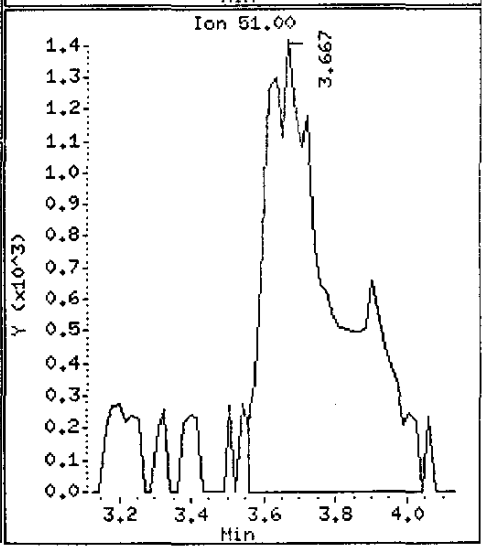


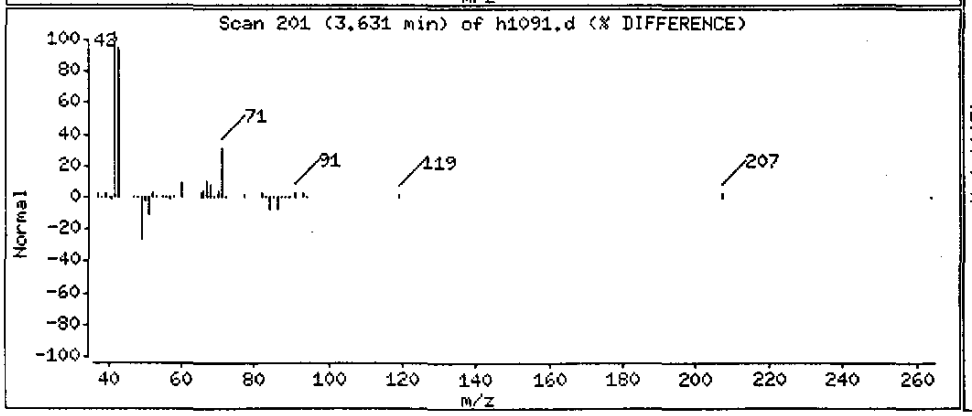












Data File: /chem/H.i/022004.b/h1091.d

Date : 20-FEB-2004 20:11

Client ID: MW-4

Instrument: H.i

Sample Info: F9KEL1AA,,D4B130209-004

Purge Volume: 20.0

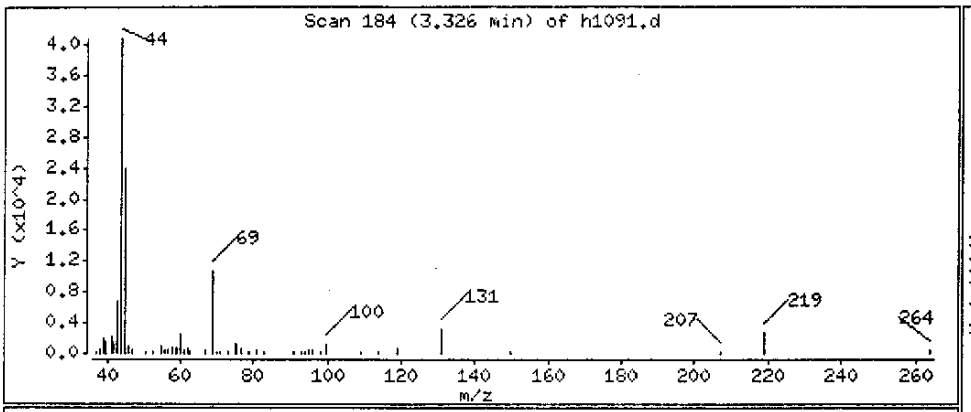
Operator: appelhansd

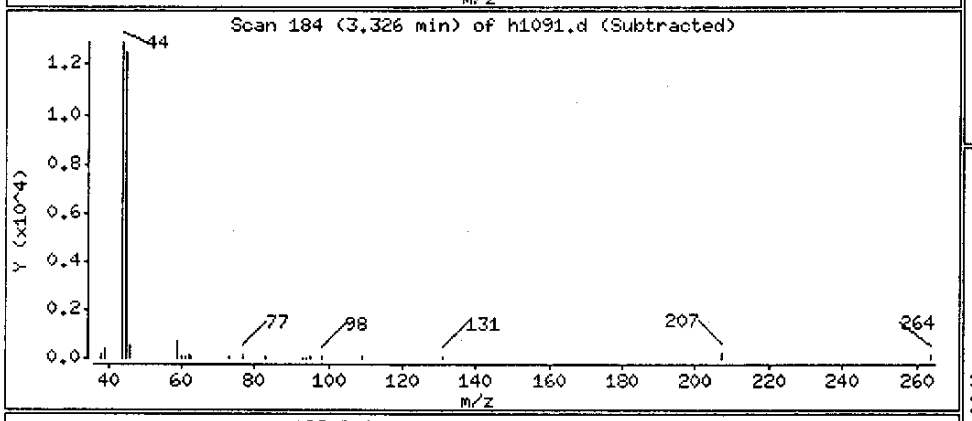
Column phase: DB624

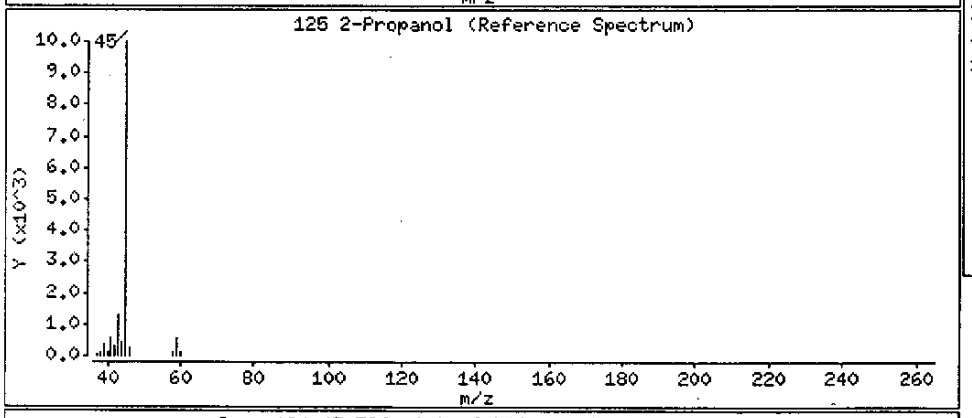
Column diameter: 0.53

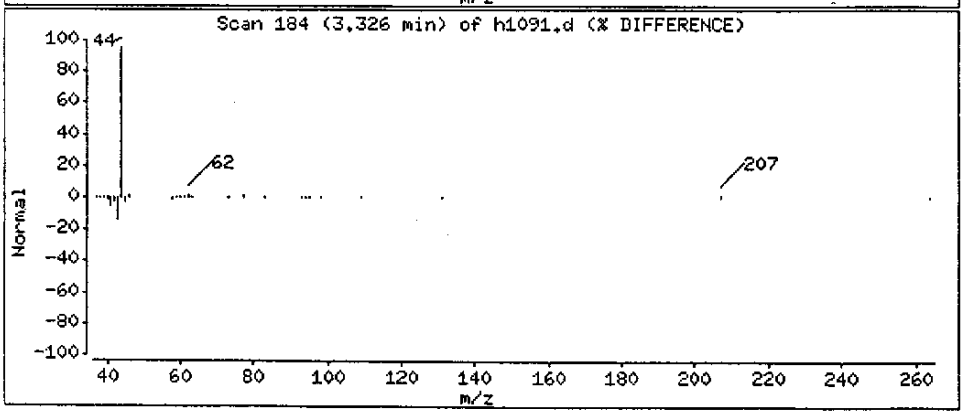
125 2-Propanol

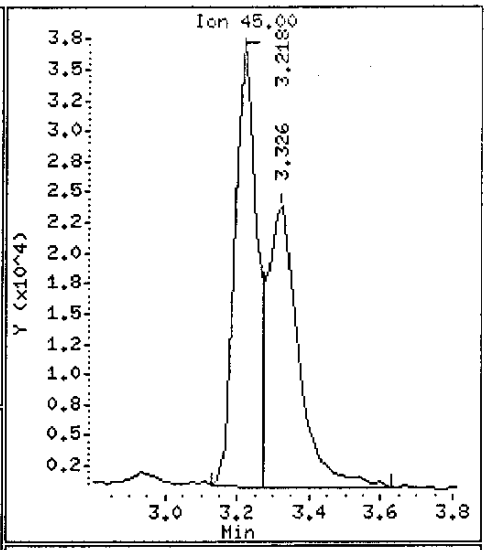
Concentration: 149.397 ug/L

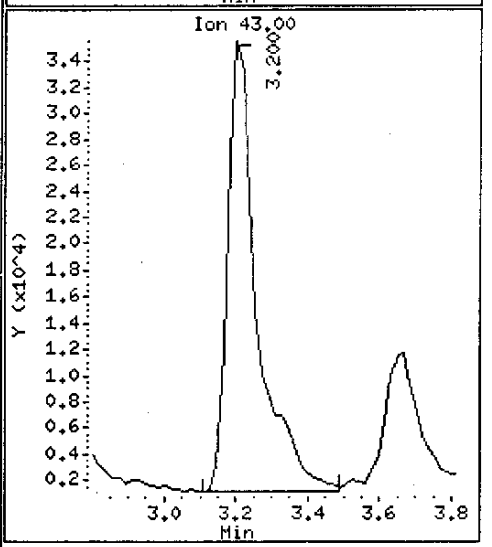












Data File: /chem/H.i/022004.b/h1091.d

Date : 20-FEB-2004 20:11

Client ID: MW-4

Instrument: H.i

Sample Info: F9KEL1AA,,D4B130209-004

Purge Volume: 20.0

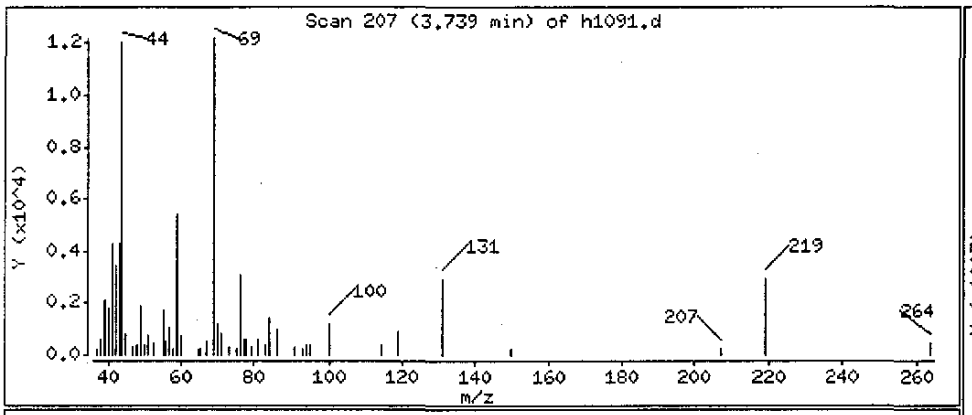
Operator: appelhansd

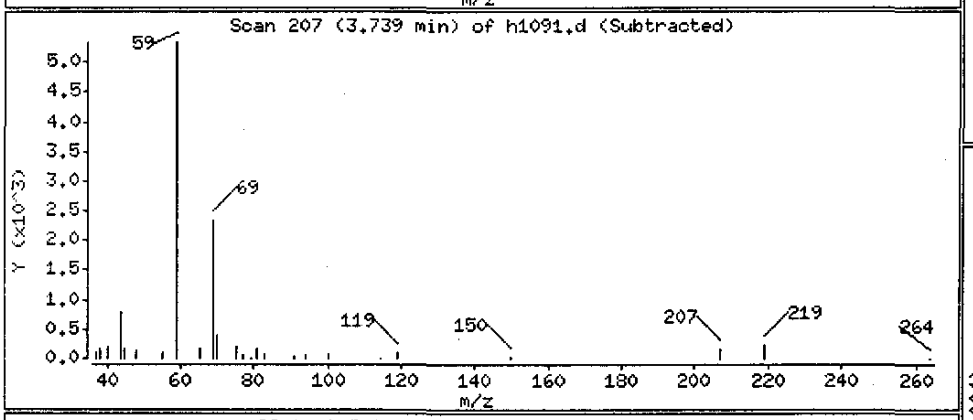
Column phase: DB624

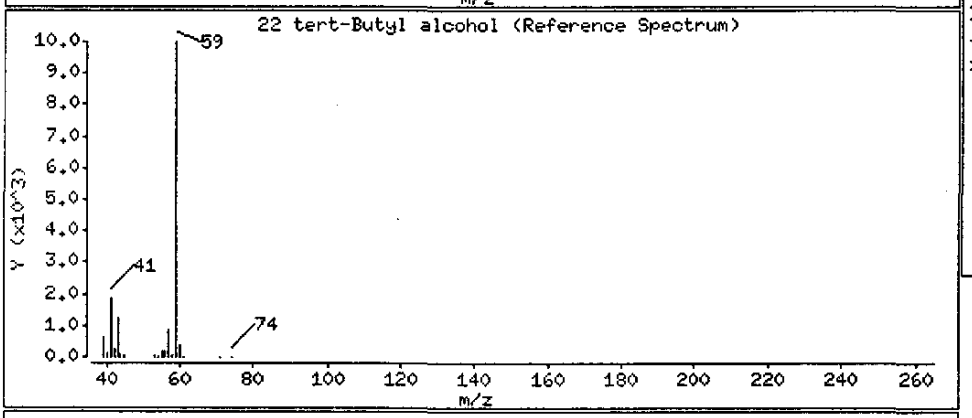
Column diameter: 0.53

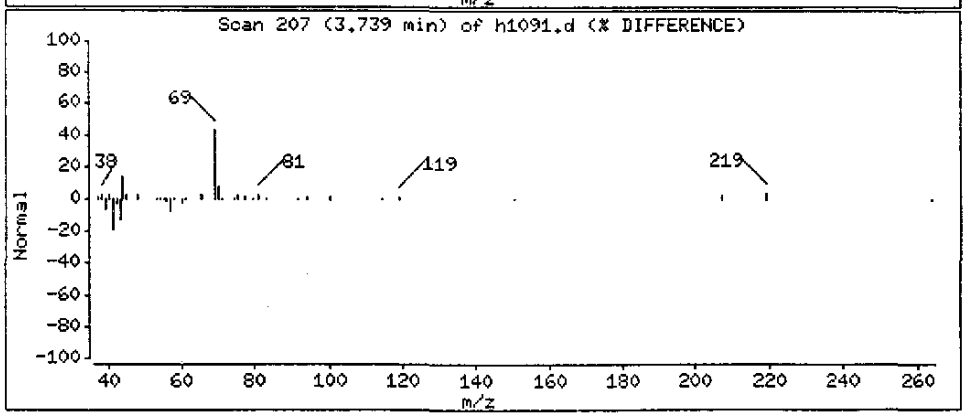
22 tert-Butyl alcohol

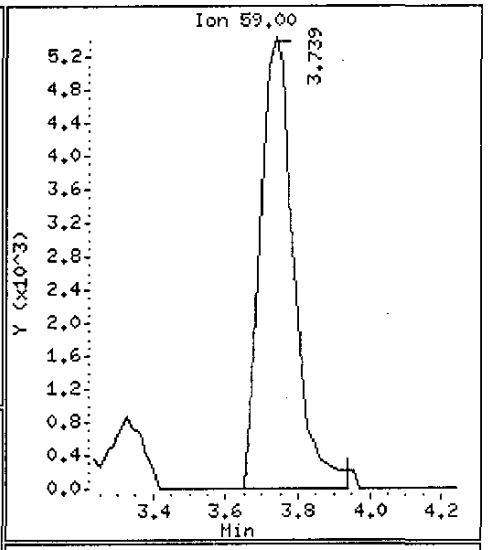
Concentration: 22.5710 ug/L

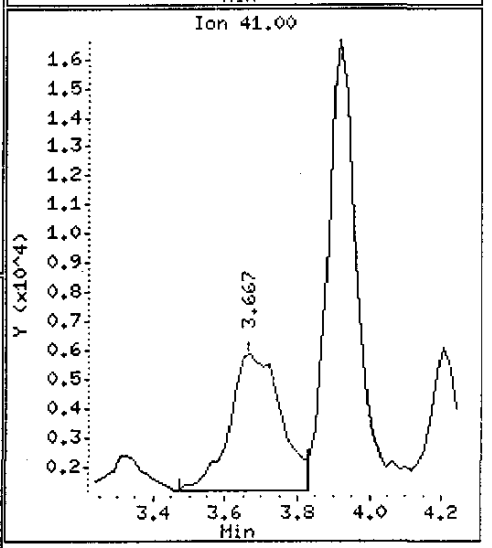












Data File: /chem/H.i/022004.b/h1091.d

Date : 20-FEB-2004 20:11

Client ID: MW-4

Instrument: H.i

Sample Info: F9KEL1AA,,D4B130209-004

Purge Volume: 20.0

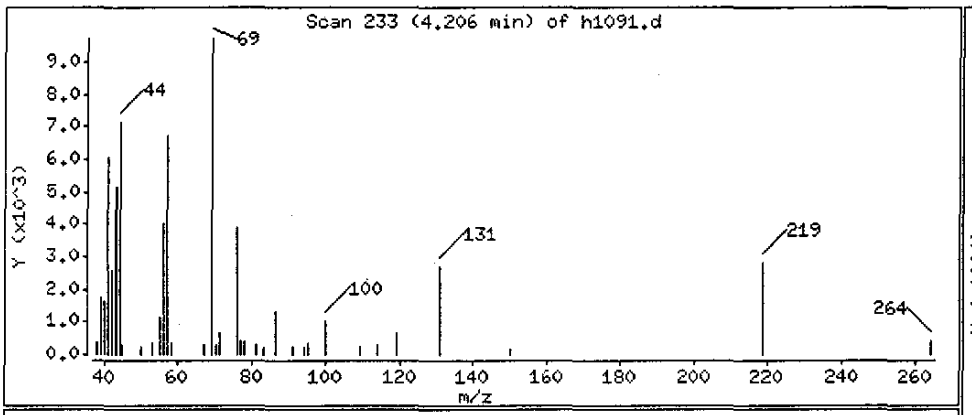
Operator: appelhansd

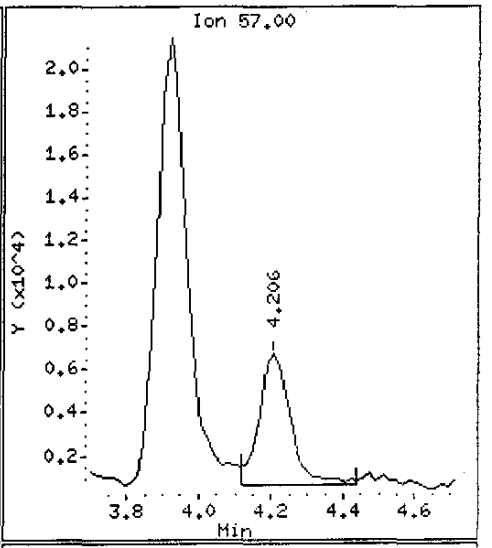
Column phase: DB624

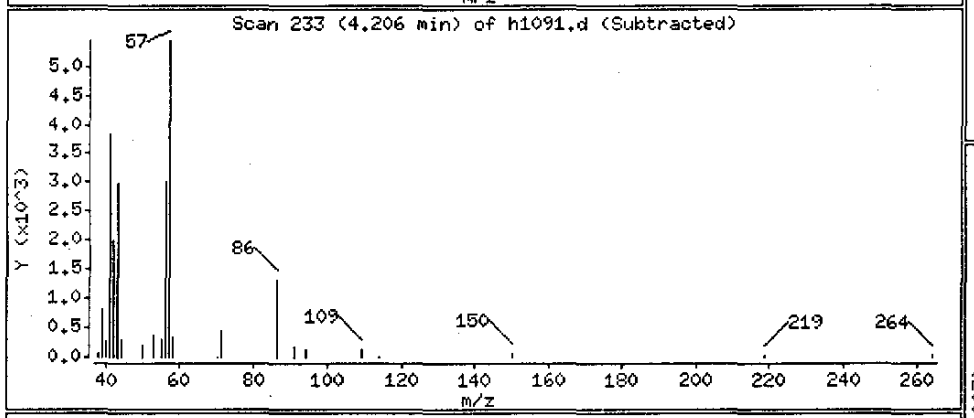
Column diameter: 0.53

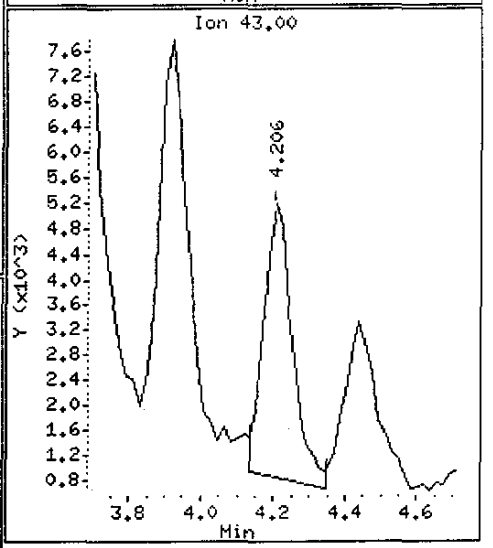
26 Hexane

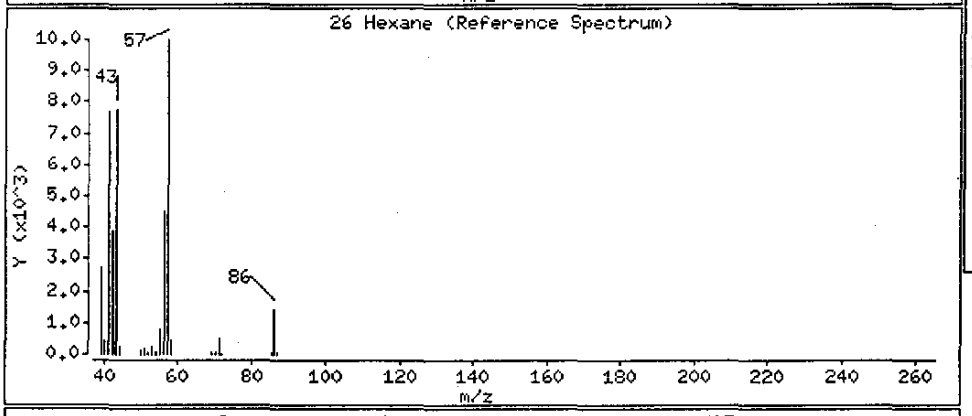
Concentration: 0.366703 ug/L

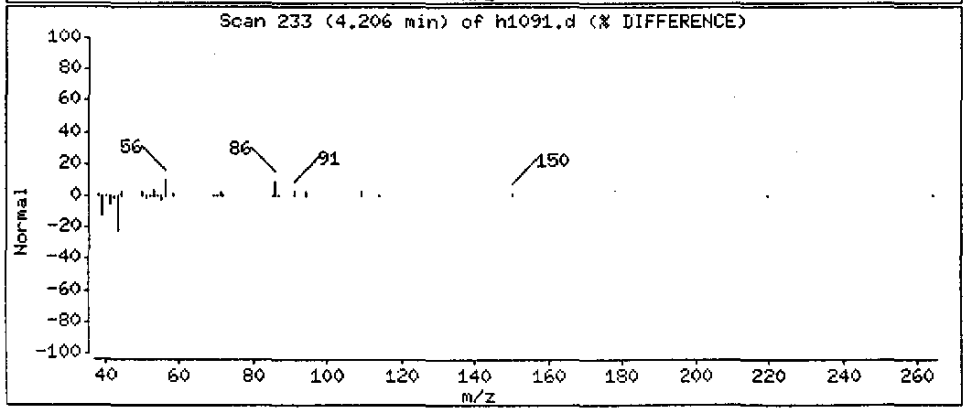












Data File: /chem/H.i/022004.b/h1091.d

Date : 20-FEB-2004 20:11

Client ID: MW-4

Instrument: H.i

Sample Info: F9KEL1AA,,D4B130209-004

Purge Volume: 20.0

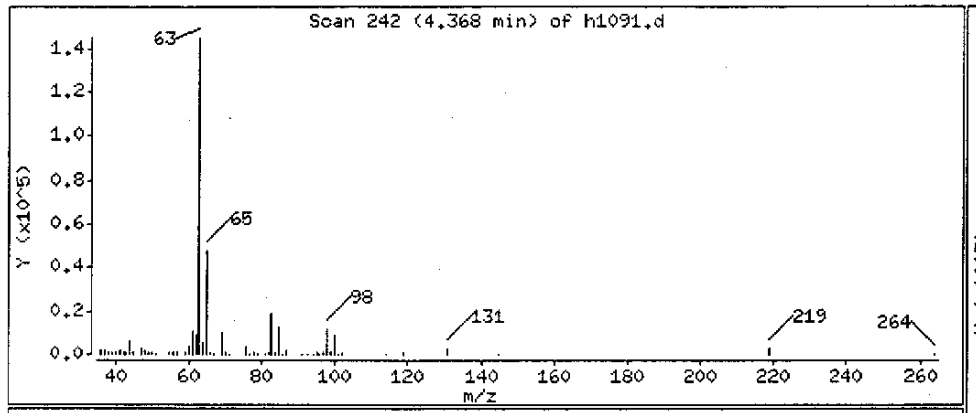
Operator: appelhansd

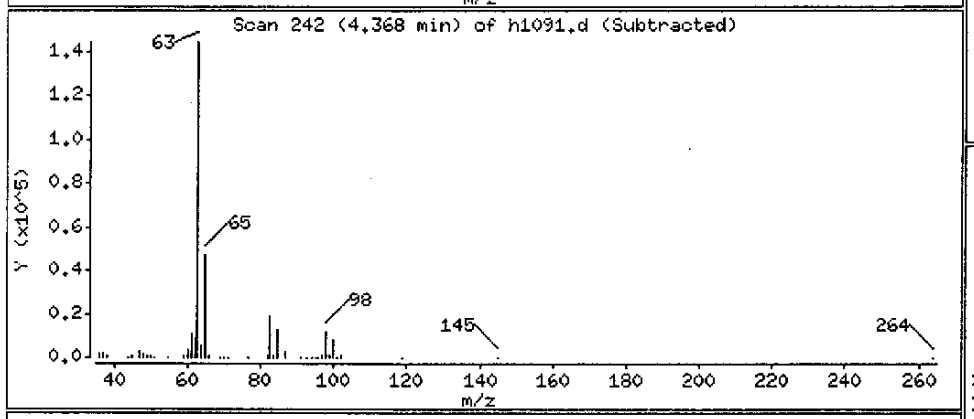
Column phase: DB624

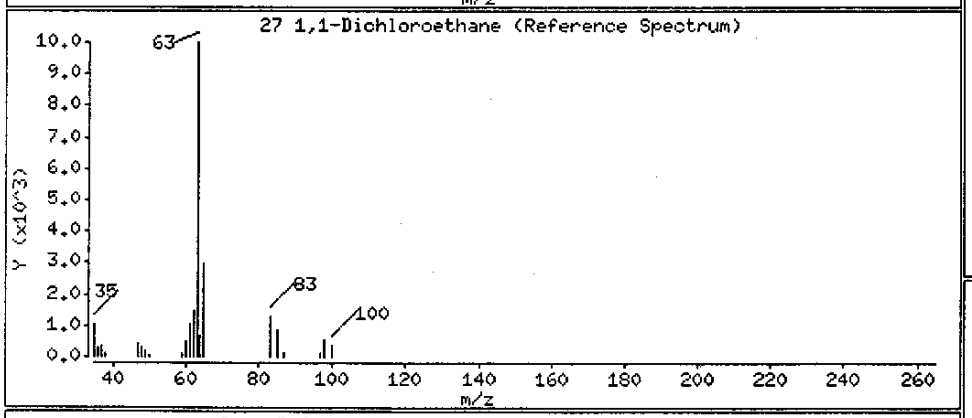
Column diameter: 0.53

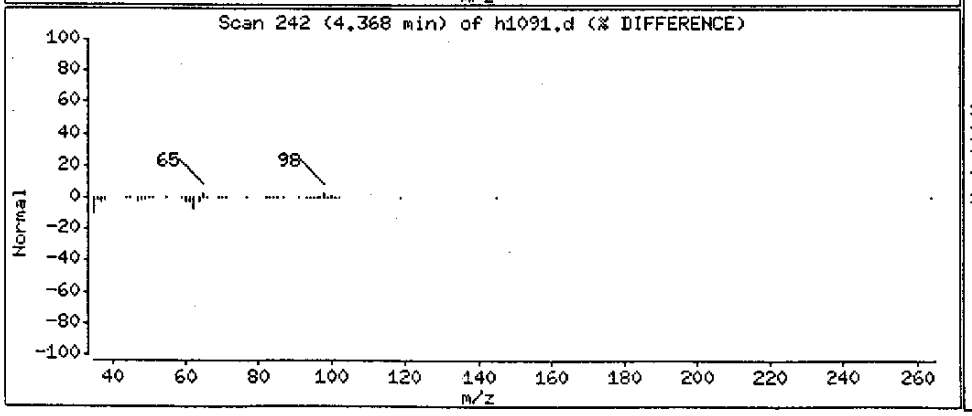
27 1,1-Dichloroethane

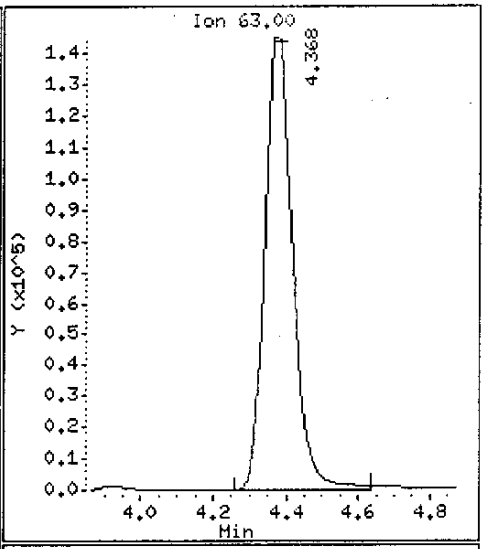
Concentration: 6.55586 ug/L

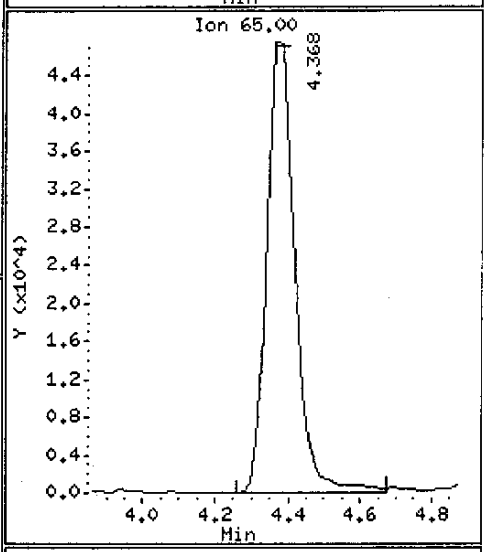


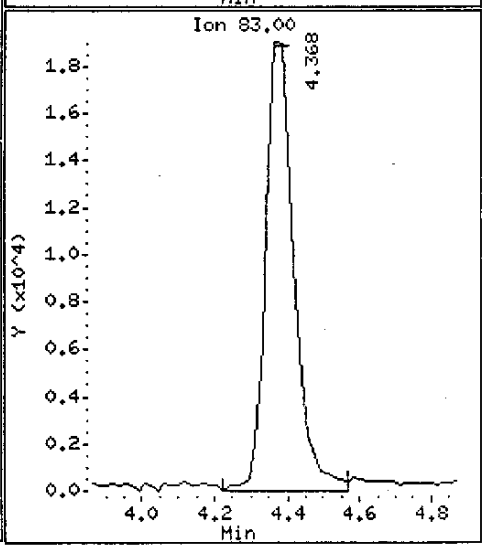












Data File: /chem/H.i/022004.b/h1091.d

Date : 20-FEB-2004 20:11

Client ID: MW-4

Instrument: H.i

Sample Info: F9KEL1AA,,D4B130209-004

Purge Volume: 20.0

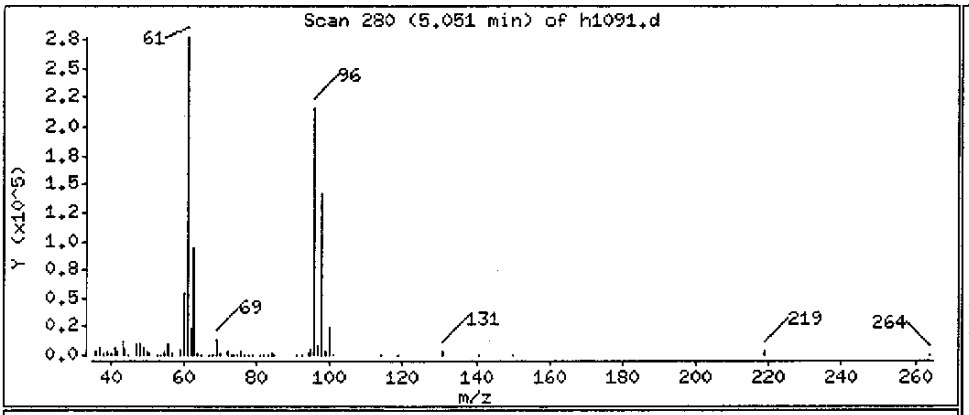
Operator: appelhansd

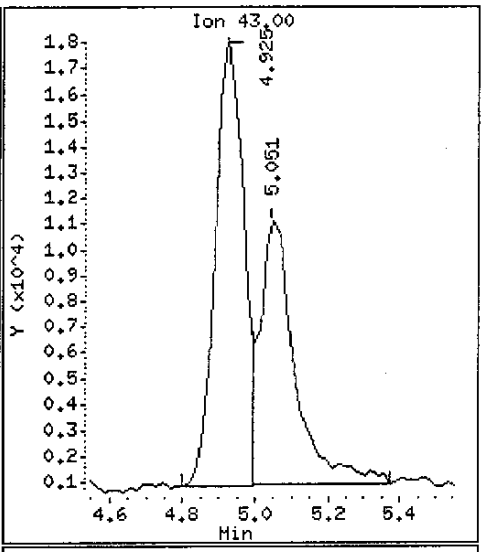
Column phase: DB624

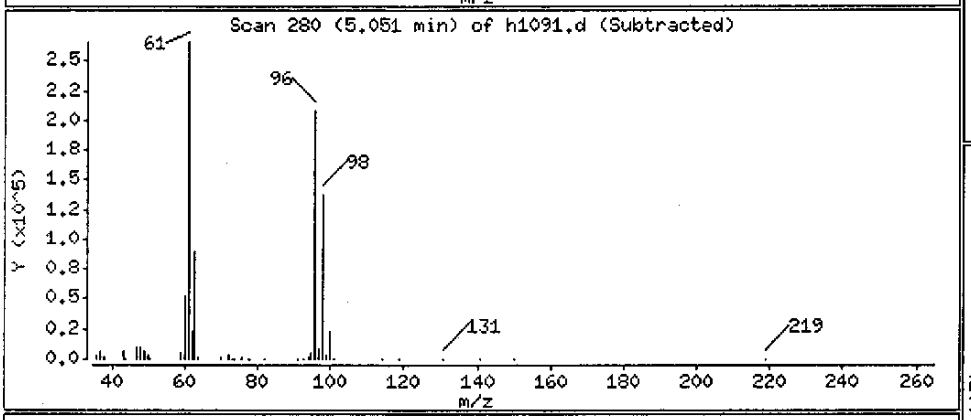
Column diameter: 0.53

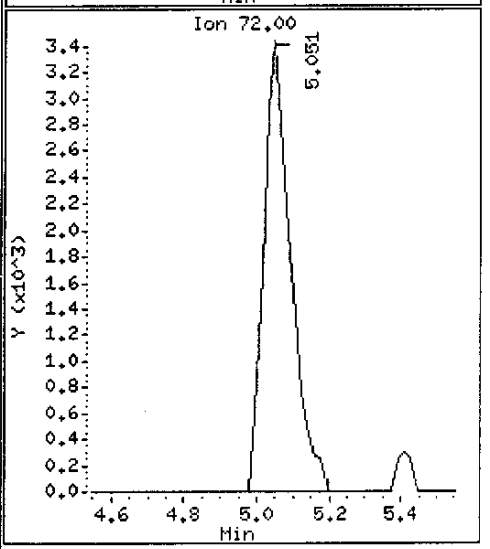
33 2-Butanone

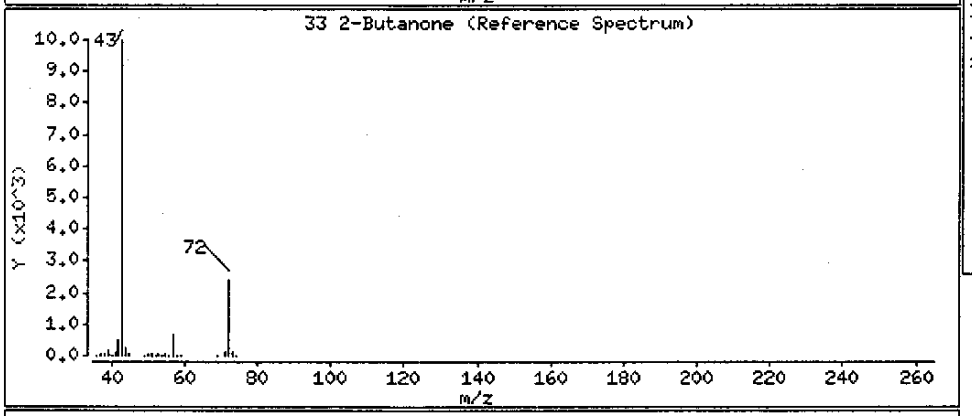
Concentration: 8.21174 ug/L

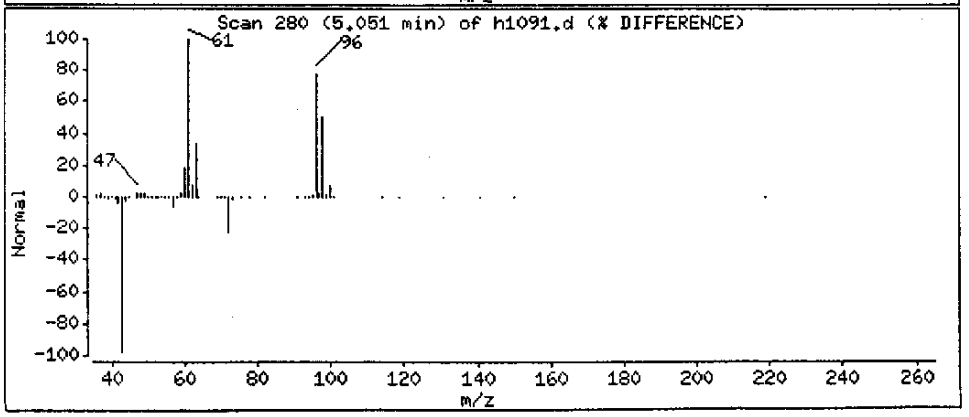












Data File: /chem/H.i/022004.b/h1091.d

Date : 20-FEB-2004 20:11

Client ID: MW-4

Instrument: H.i

Sample Info: F9KEL1AA,,D4B130209-004

Purge Volume: 20.0

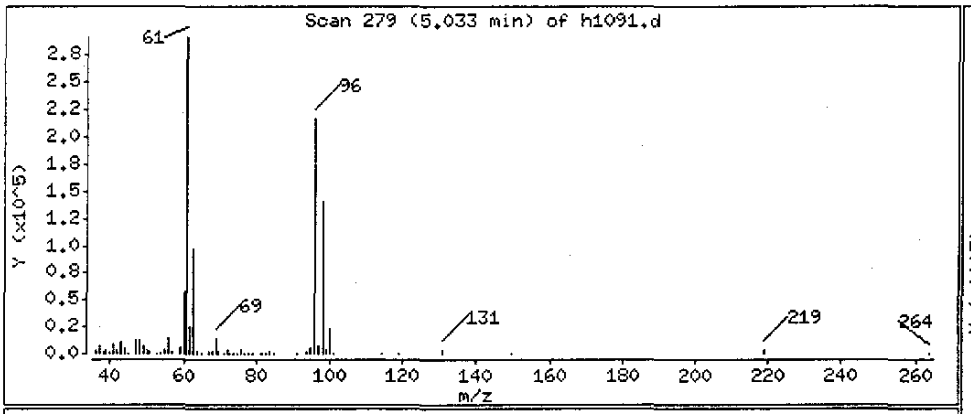
Operator: appelhansd

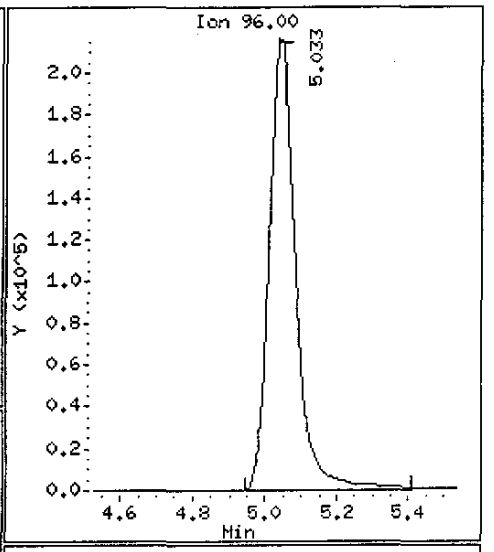
Column phase: DB624

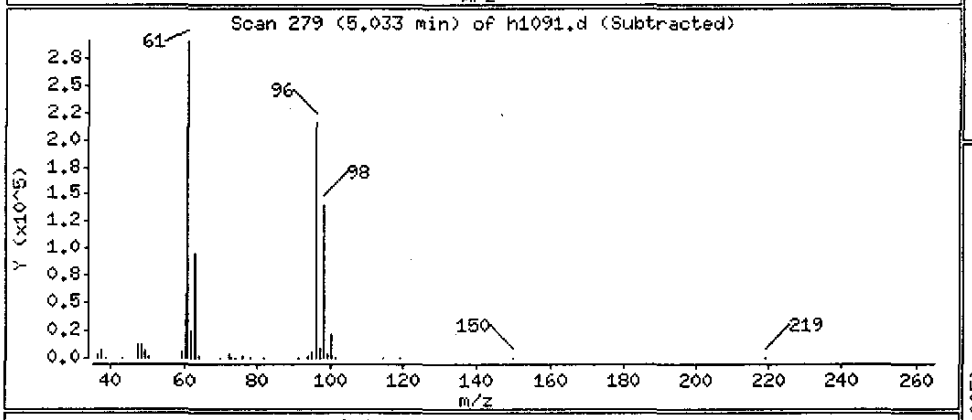
Column diameter: 0.53

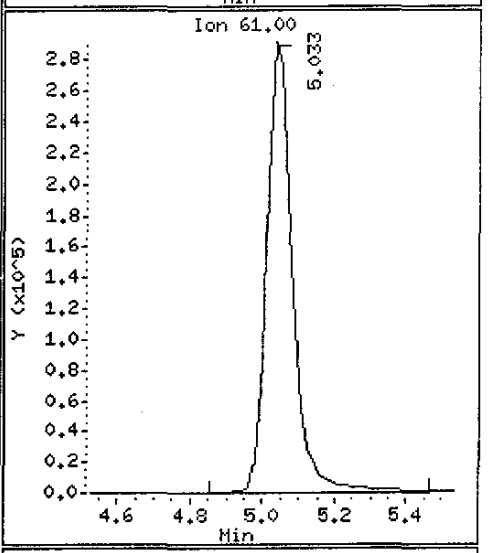
32 cis-1,2-Dichloroethene

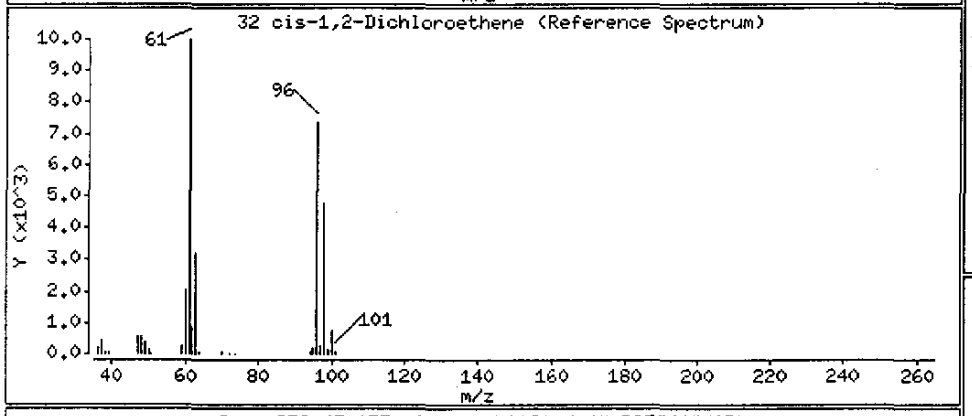
Concentration: 16.0118 ug/L

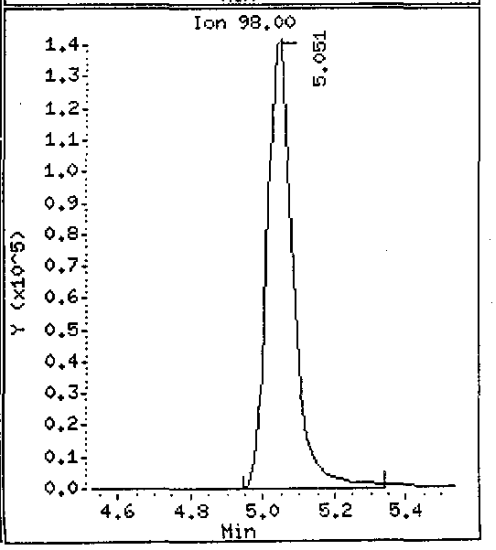


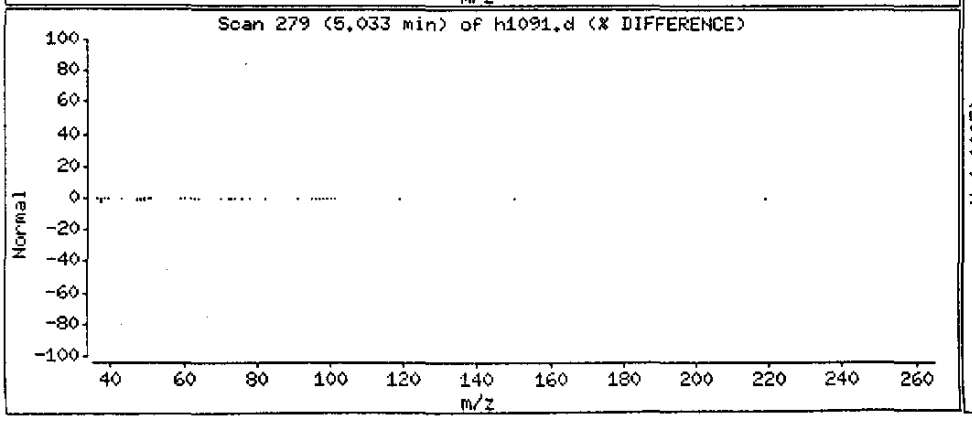












Data File: /chem/H.i/022004.b/h1091.d

Date : 20-FEB-2004 20:11

Client ID: MW-4

Instrument: H.i

Sample Info: F9KEL1AA,,D4B130209-004

Purge Volume: 20.0

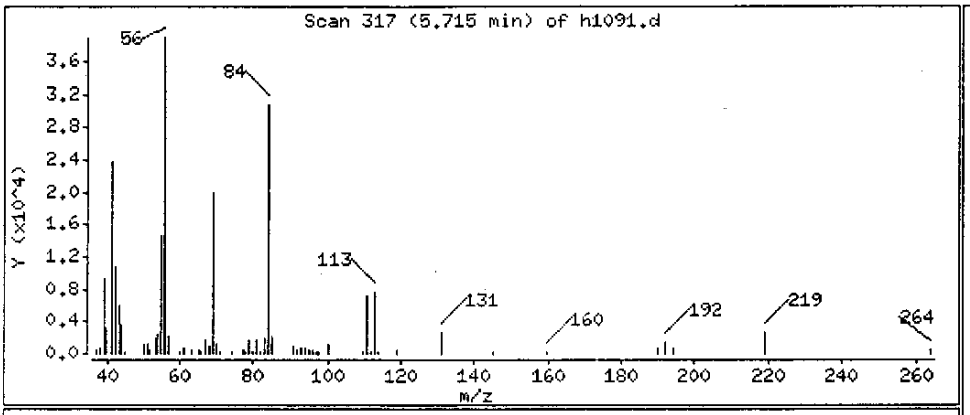
Operator: appelhansd

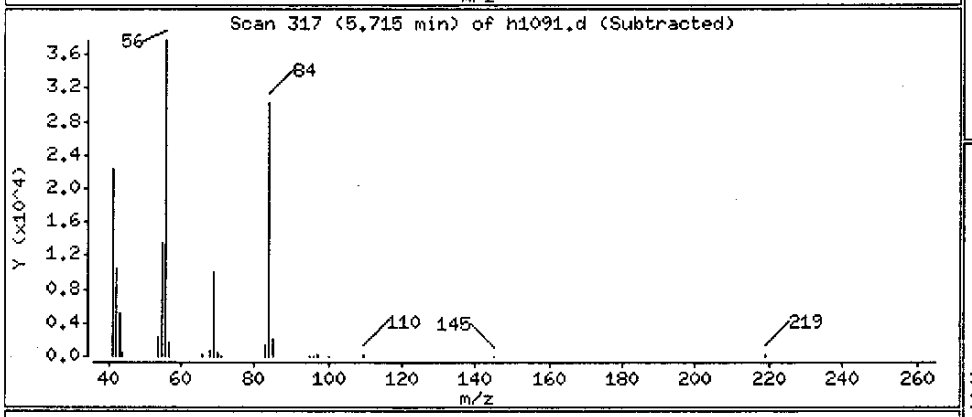
Column phase: DB624

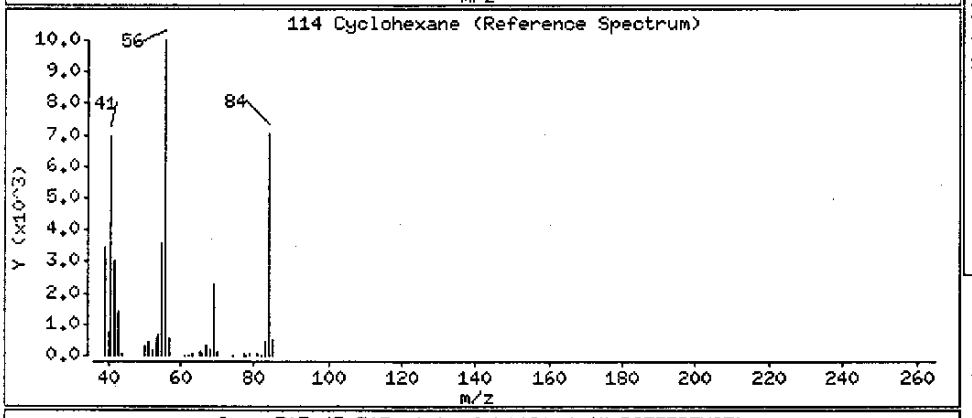
Column diameter: 0.53

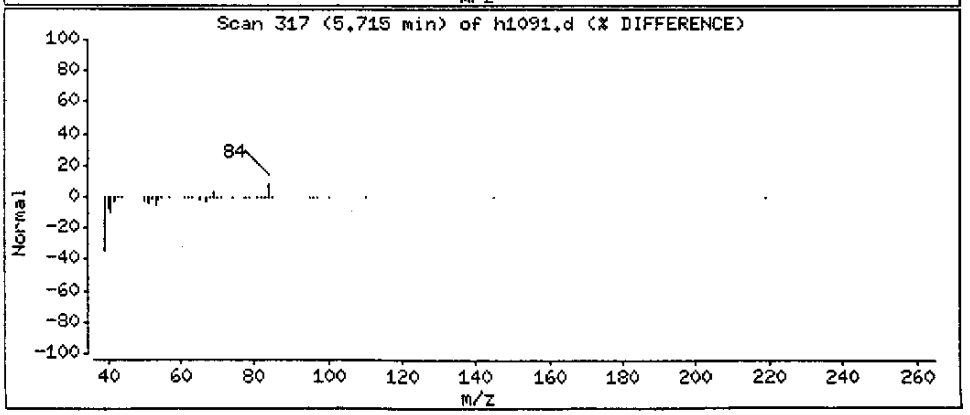
114 Cyclohexane

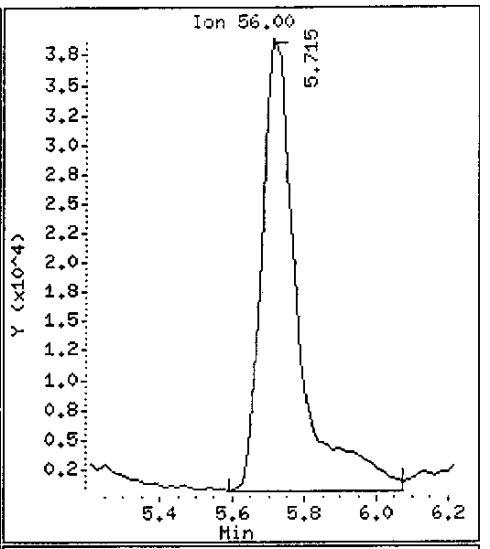
Concentration: 2.58249 ug/L

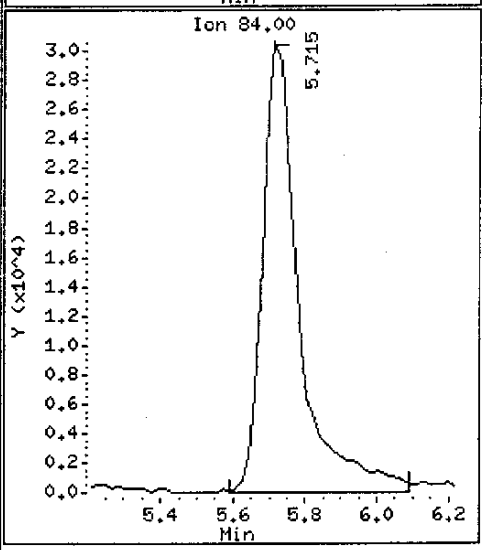












Data File: /chem/H.i/022004.b/h1091.d

Date : 20-FEB-2004 20:11

Client ID: MW-4

Instrument: H.i

Sample Info: F9KEL1AA,,D4B130209-004

Purge Volume: 20.0

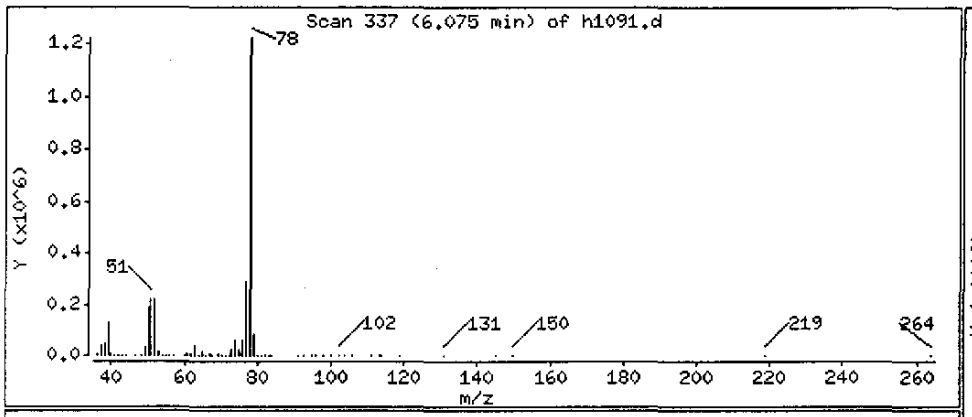
Operator: appelhansd

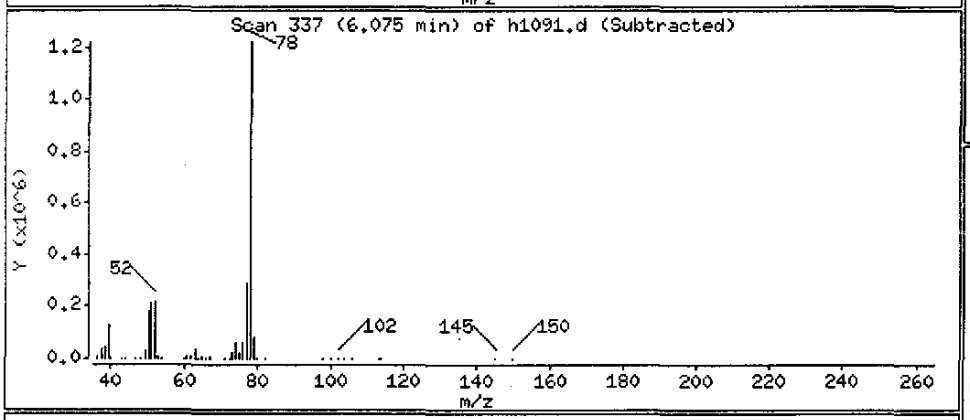
Column phase: DB624

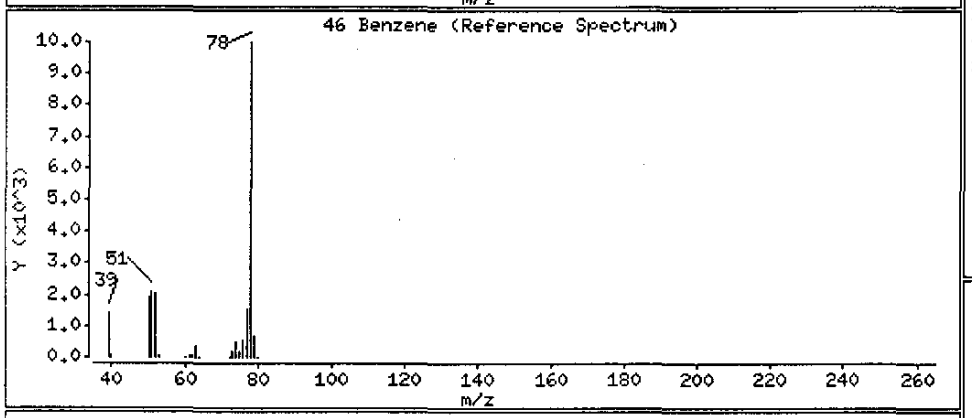
Column diameter: 0.53

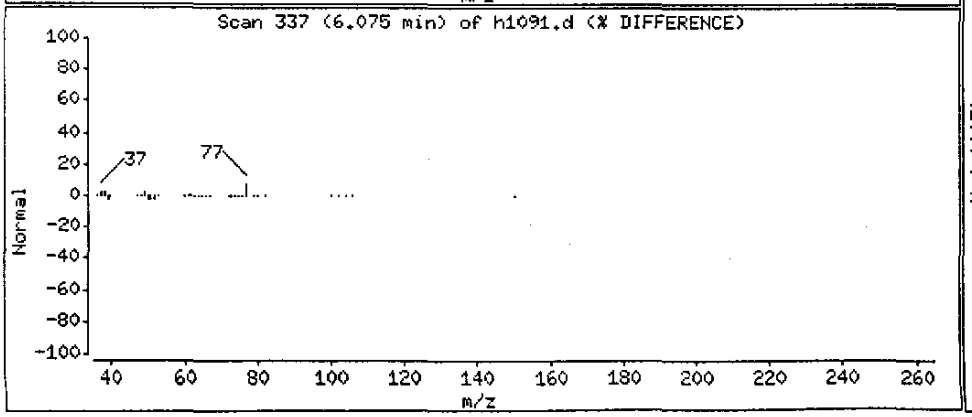
46 Benzene

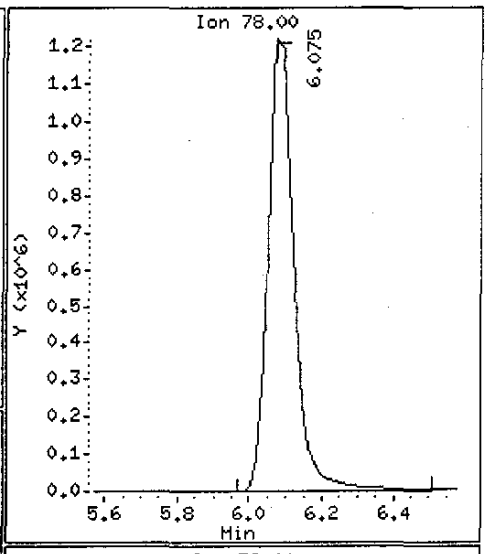
Concentration: 31.0658 ug/L

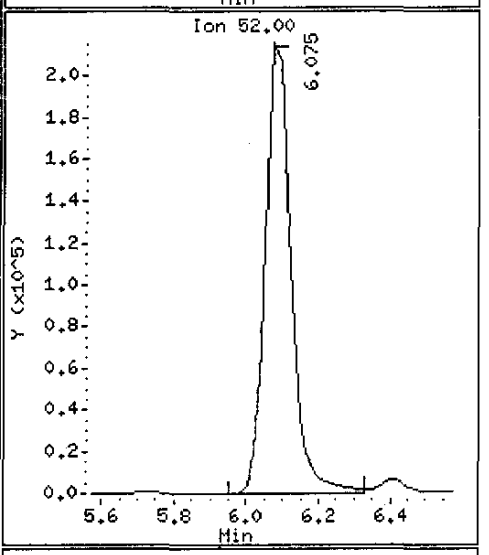


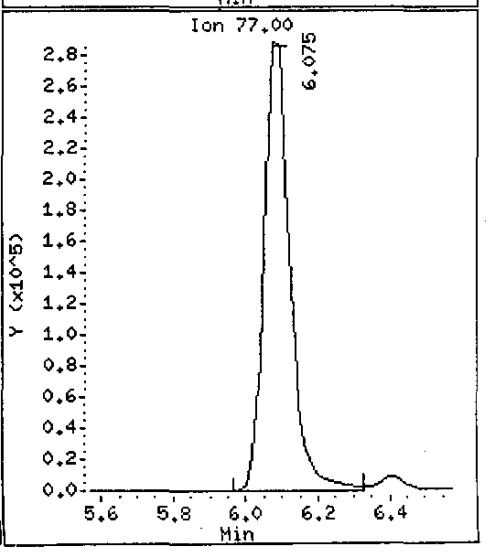












Data File: /chem/H.i/022004.b/h1091.d

Date : 20-FEB-2004 20:11

Client ID: MW-4

Instrument: H.i

Sample Info: F9KEL1AA,,D4B130209-004

Purge Volume: 20.0

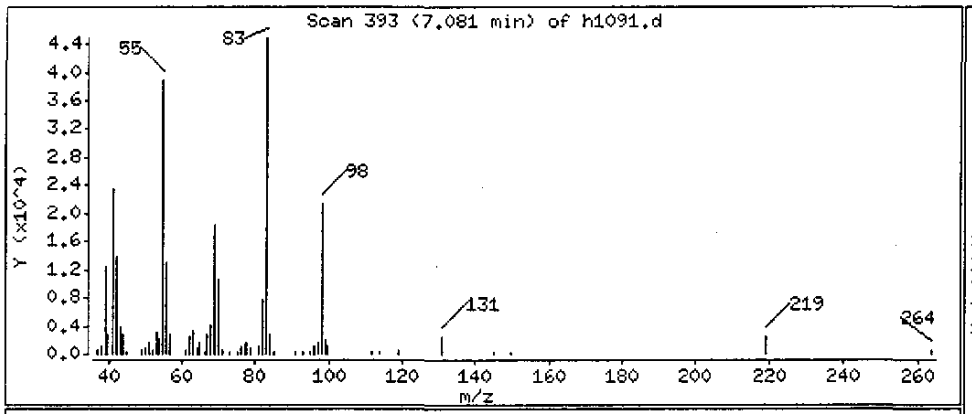
Operator: appelhansd

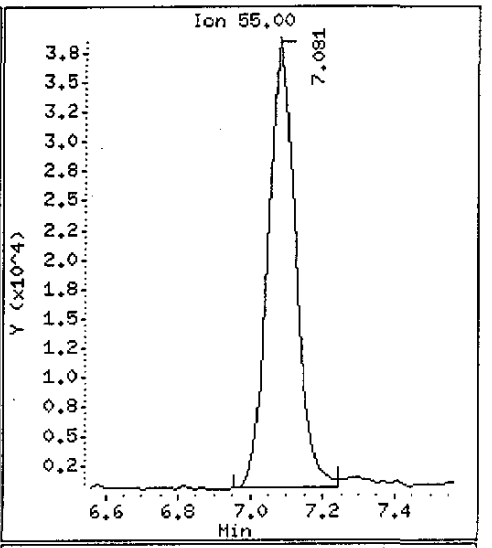
Column phase: DB624

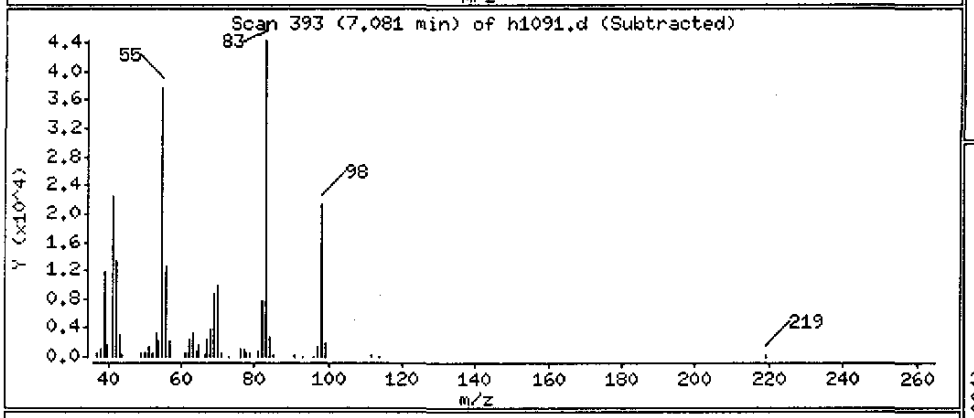
Column diameter: 0.53

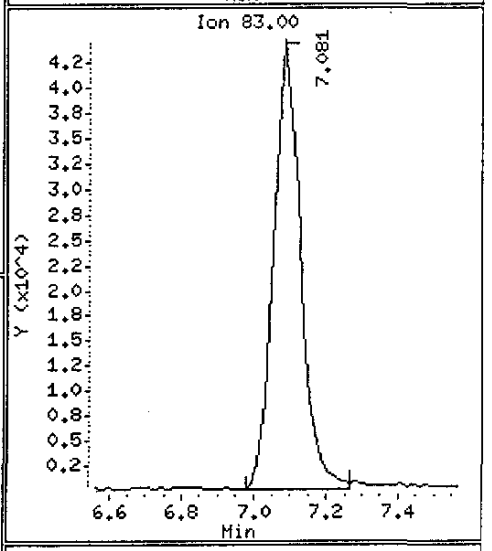
122 Methyl Cyclohexane

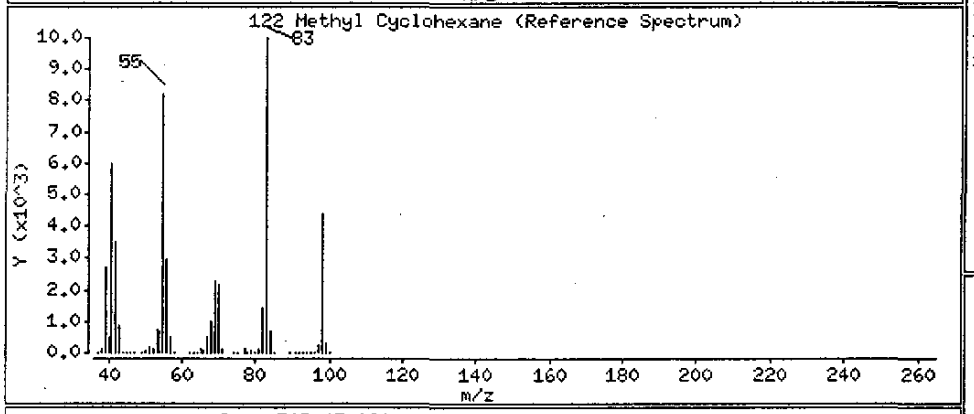
Concentration: 2.10469 ug/L

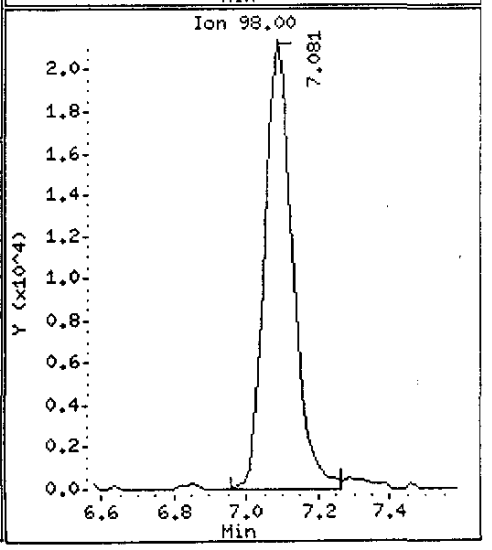


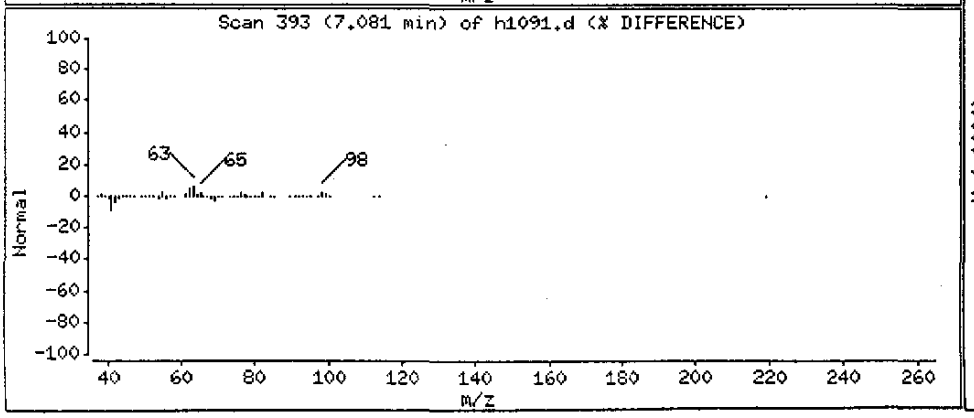












Data File: /chem/H.i/022004.b/h1091.d

Date : 20-FEB-2004 20:11

Client ID: MW-4

Instrument: H.i

Sample Info: F9KEL1AA,,D4B130209-004

Purge Volume: 20.0

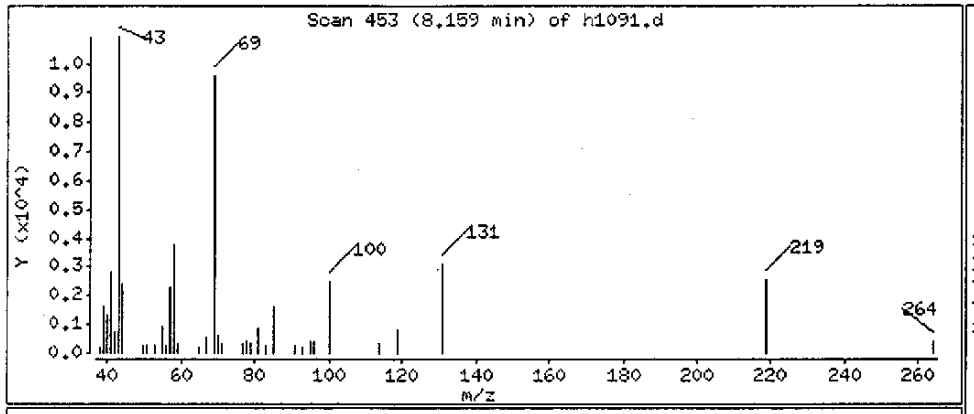
Operator: appelhansd

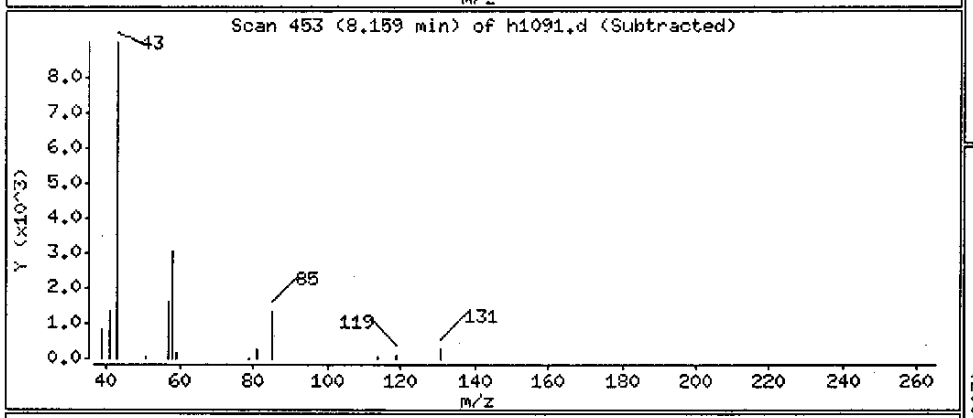
Column phase: DB624

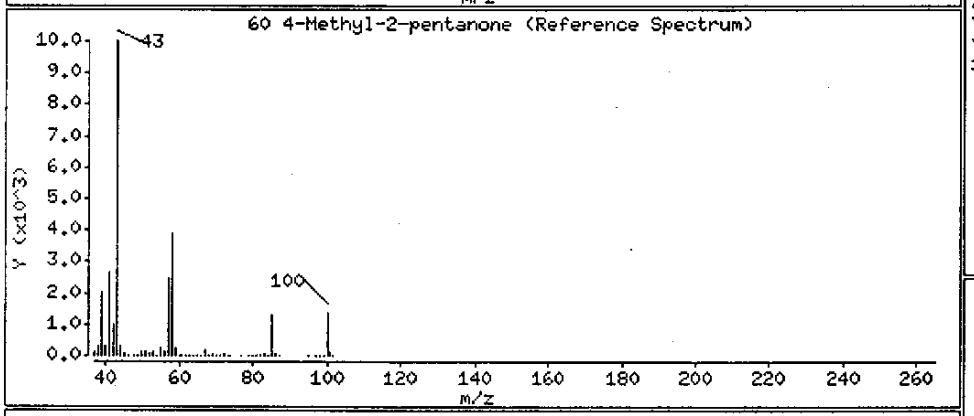
Column diameter: 0.53

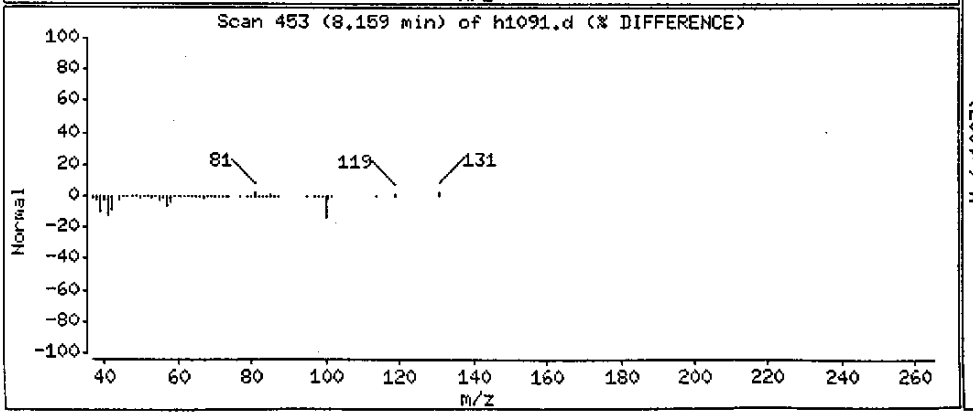
60 4-Methyl-2-pentanone

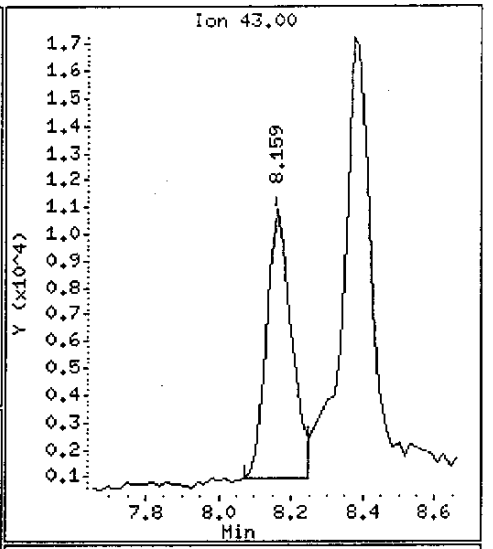
Concentration: 2.07569 ug/L

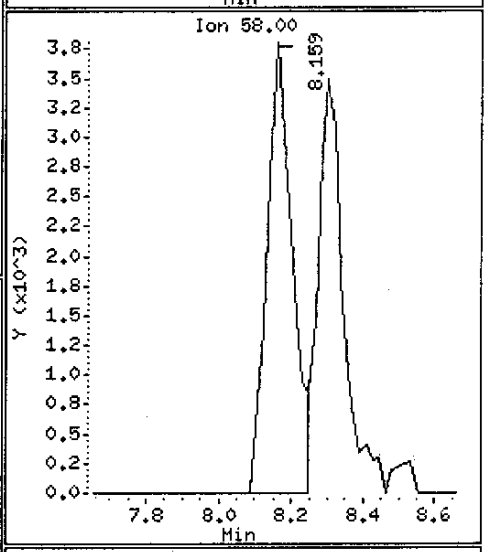


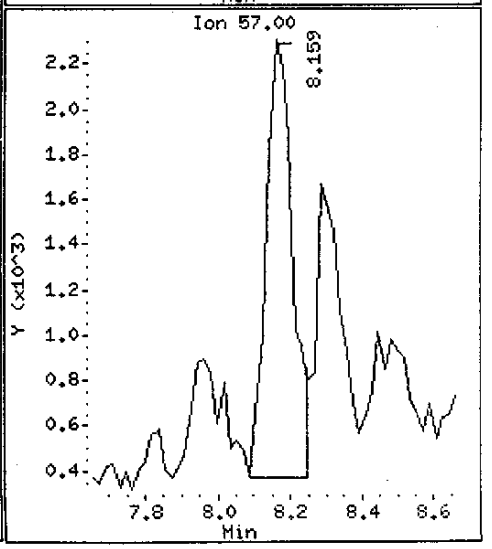












Data File: /chem/H.i/022004.b/h1091.d

Date : 20-FEB-2004 20:11

Client ID: MW-4

Instrument: H.i

Sample Info: F9KEL1AA,,D4B130209-004

Purge Volume: 20.0

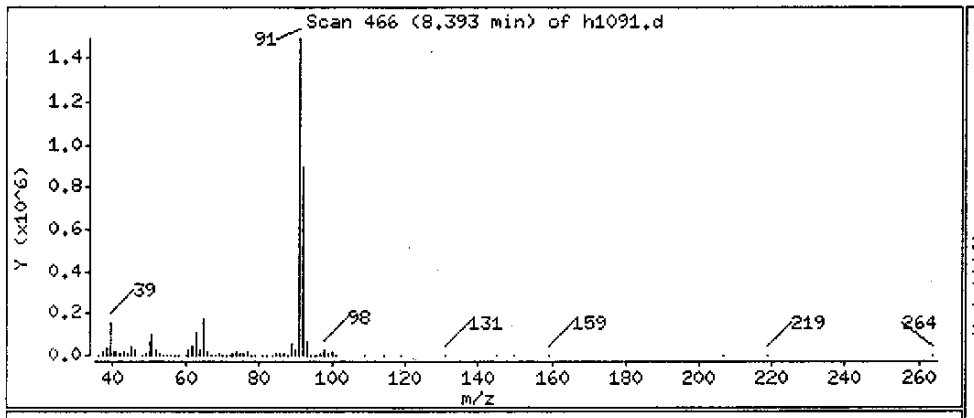
Operator: appelhansd

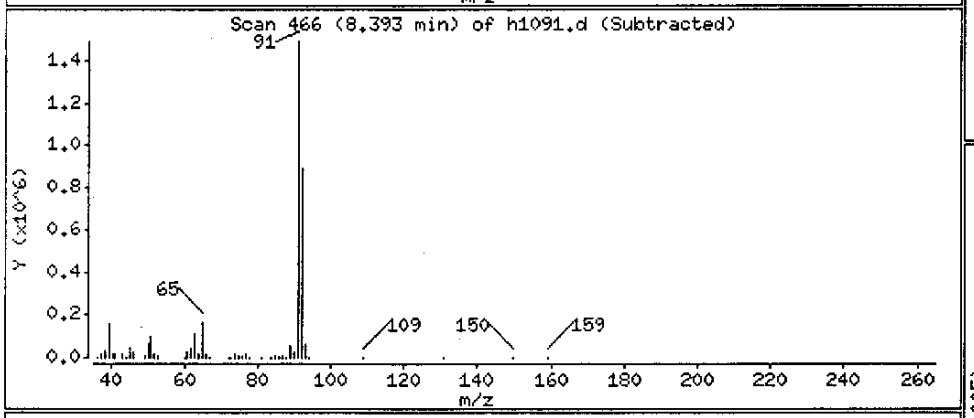
Column phase: DB624

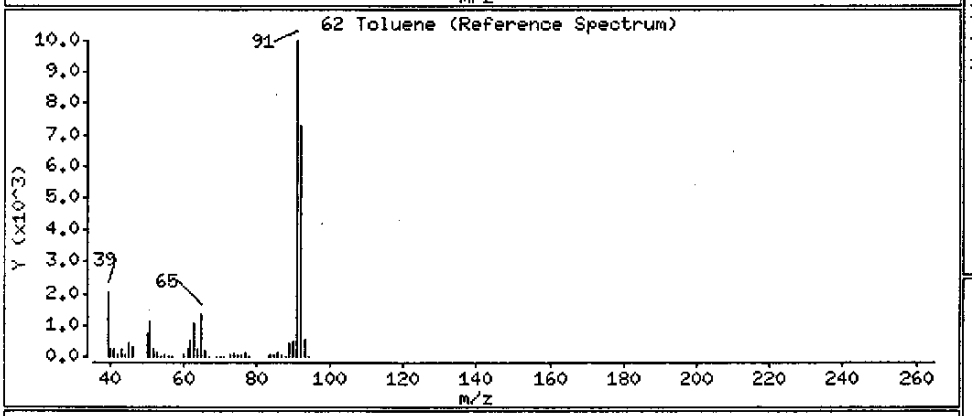
Column diameter: 0.53

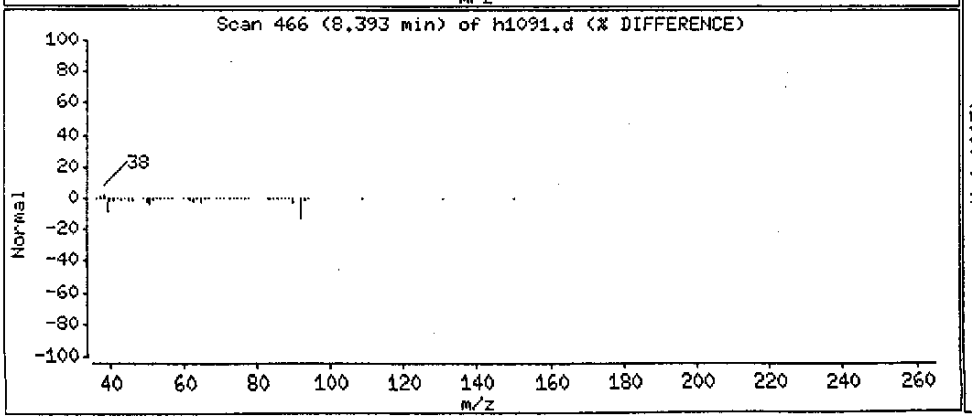
62 Toluene

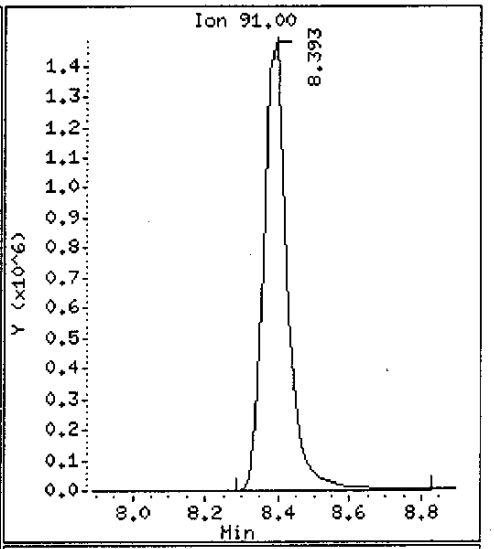
Concentration: 28.7905 ug/L

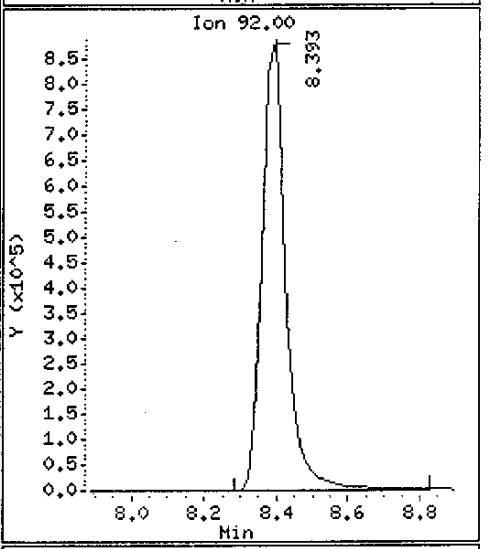


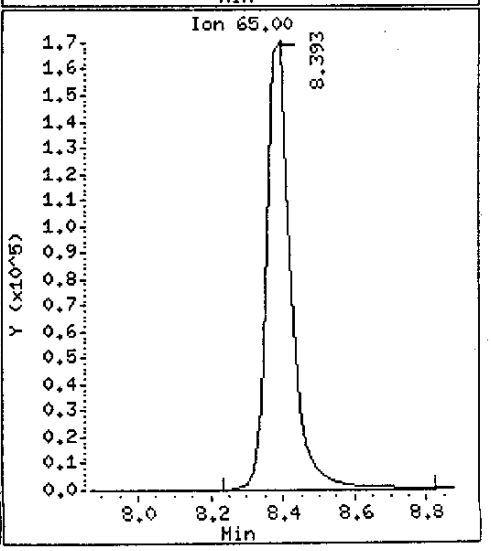












Data File: /chem/H.i/022004.b/h1091.d

Date : 20-FEB-2004 20:11

Client ID: MW-4

Instrument: H.i

Sample Info: F9KEL1AA,,D4B130209-004

Purge Volume: 20.0

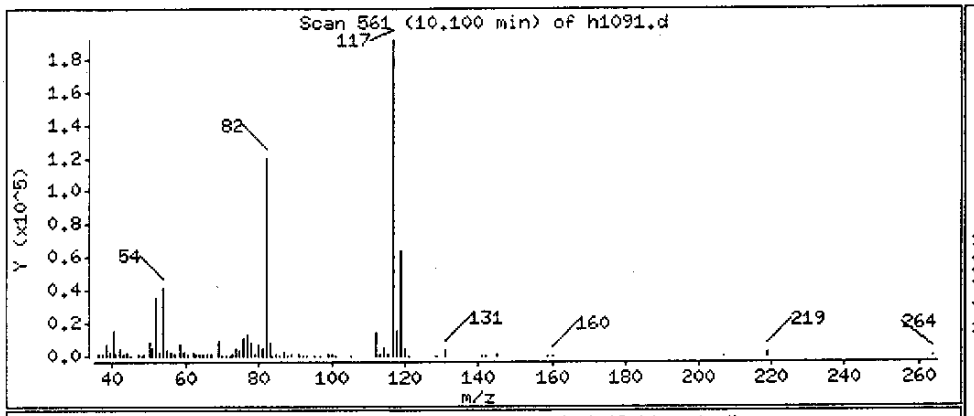
Operator: appelhansd

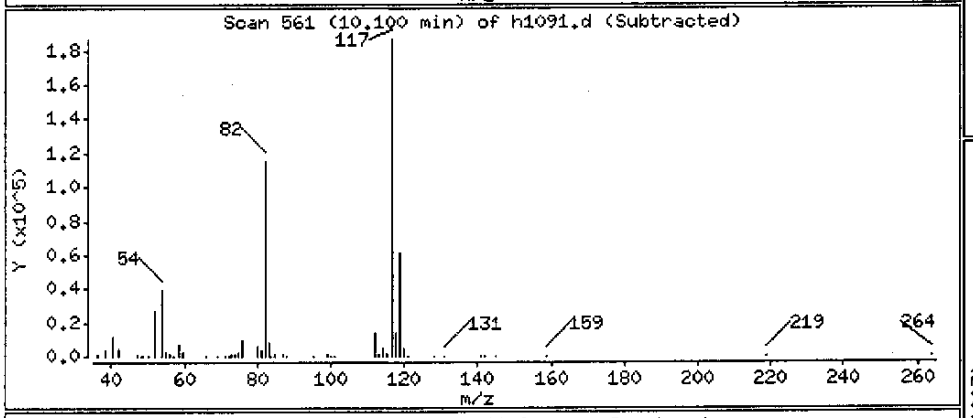
Column phase: DB624

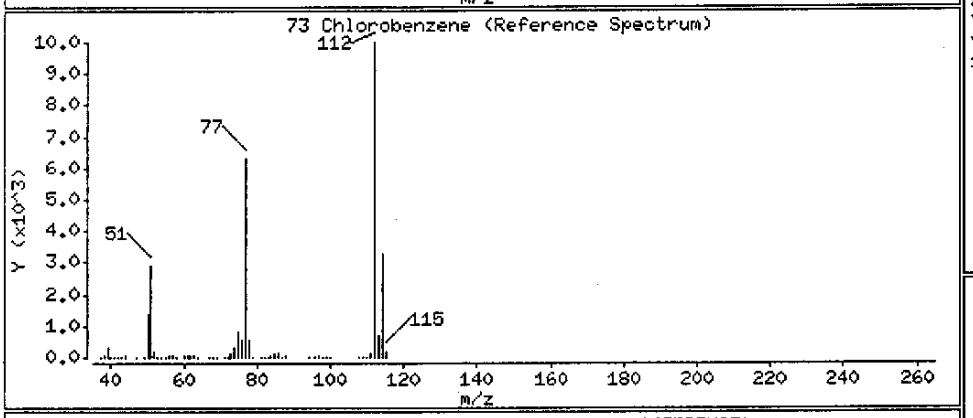
Column diameter: 0.53

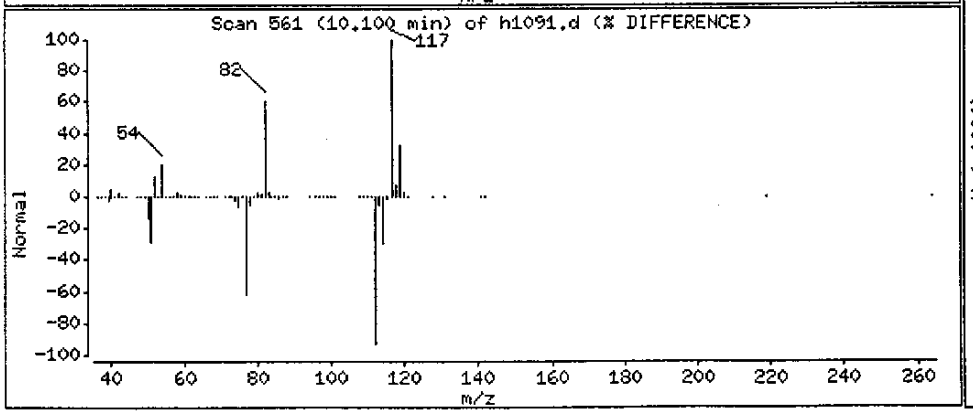
73 Chlorobenzene

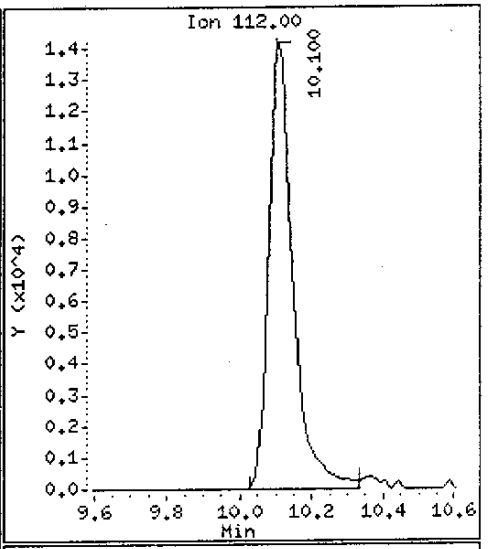
Concentration: 0.467470 ug/L

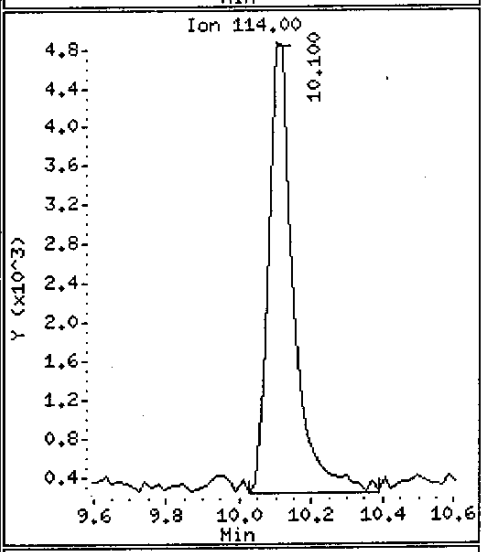


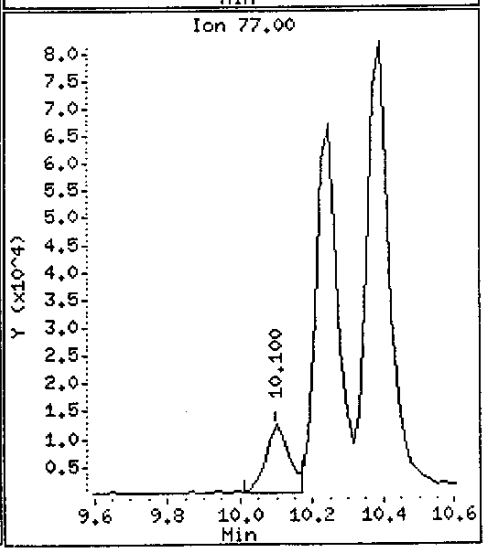












Data File: /chem/H.i/022004.b/h1091.d

Date : 20-FEB-2004 20:11

Client ID: MW-4

Instrument: H.i

Sample Info: F9KEL1AA,,D4B130209-004

Purge Volume: 20.0

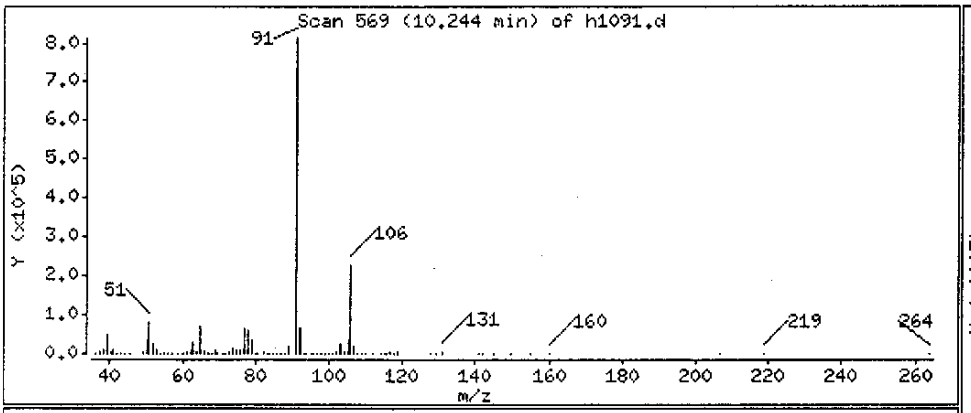
Operator: appelhansd

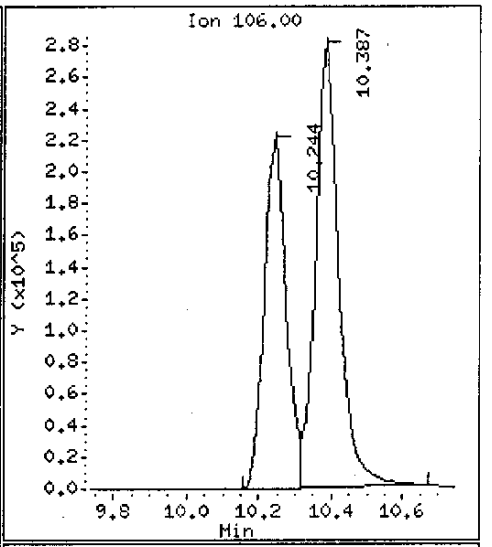
Column phase: DB624

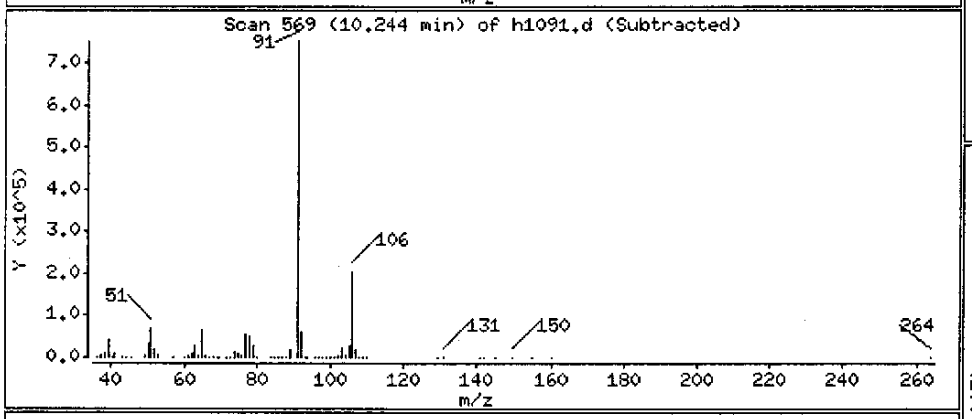
Column diameter: 0.53

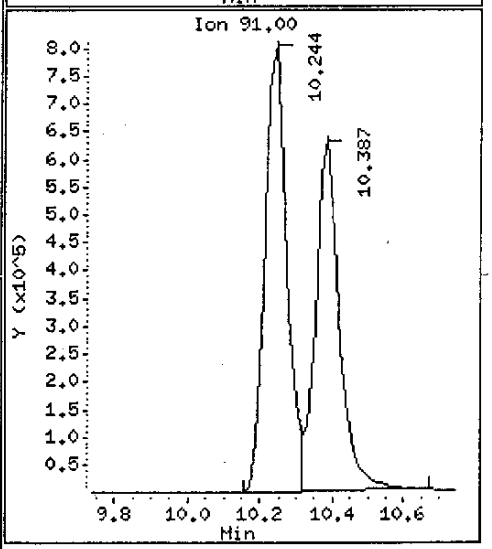
75 Ethylbenzene

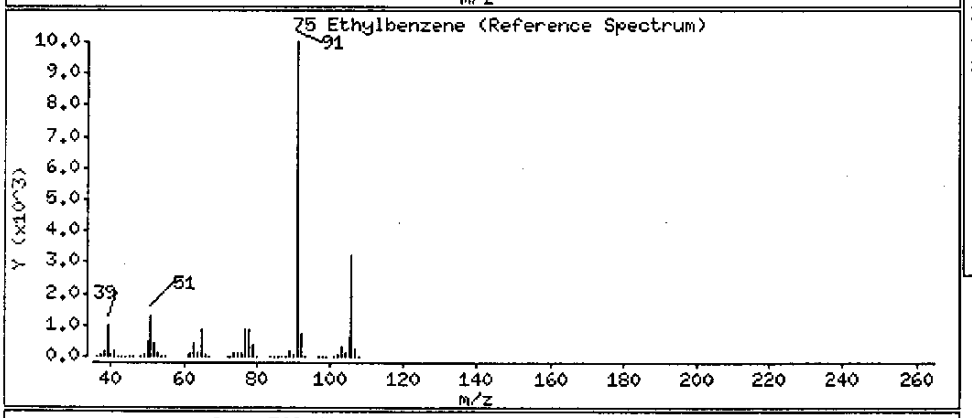
Concentration: 12.7853 ug/L

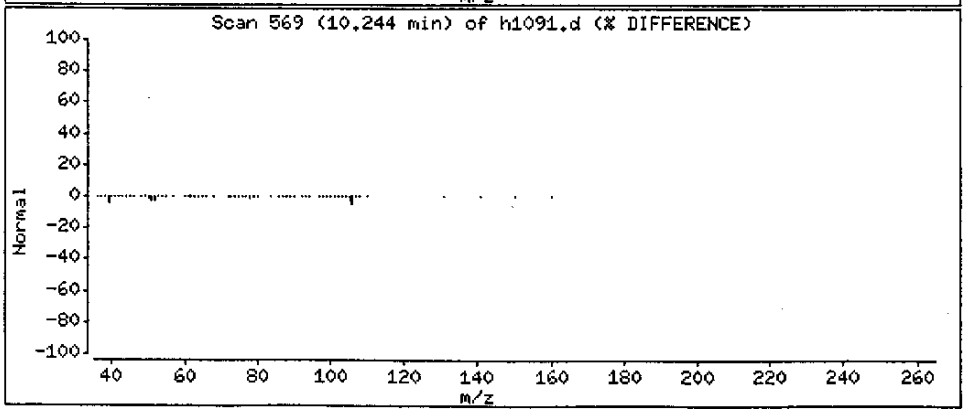












Data File: /chem/H.i/022004.b/h1091.d

Date : 20-FEB-2004 20:11

Client ID: MW-4

Instrument: H.i

Sample Info: F9KEL1AA,,D4B130209-004

Purge Volume: 20.0

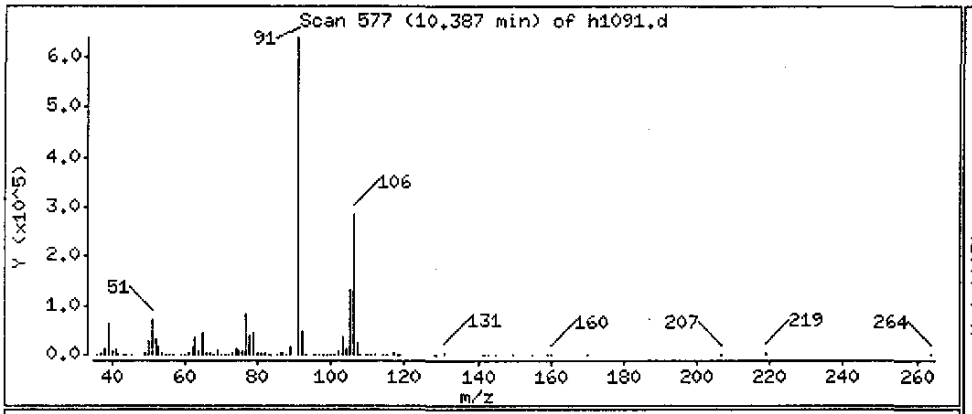
Operator: appelhansd

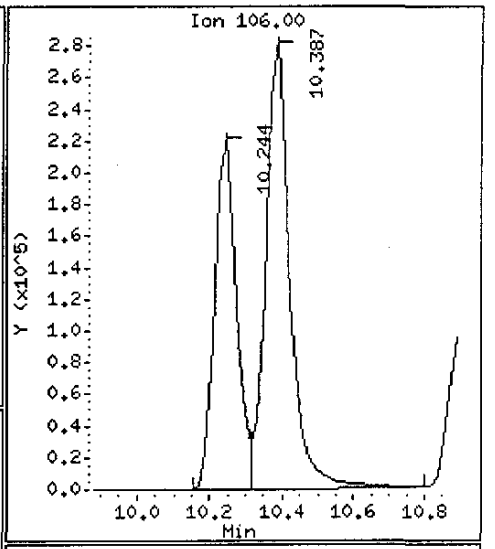
Column phase: DB624

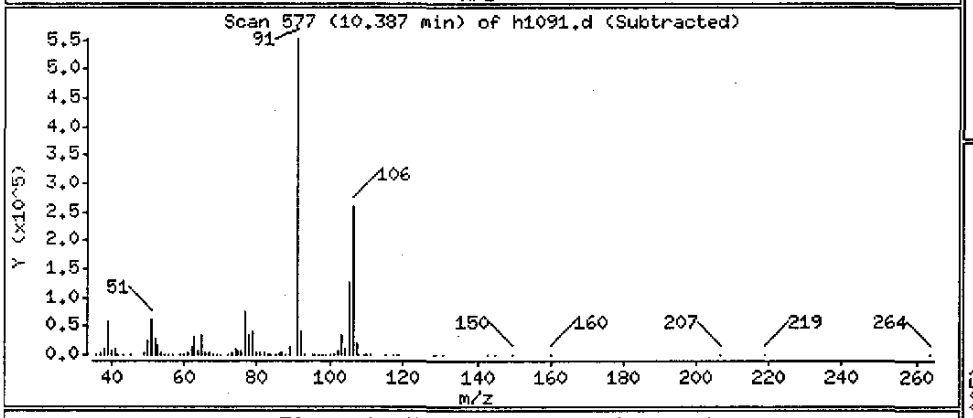
Column diameter: 0.53

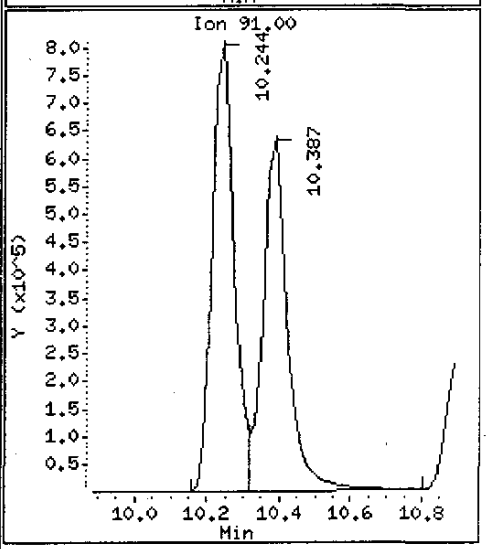
76 m and p-Xylene

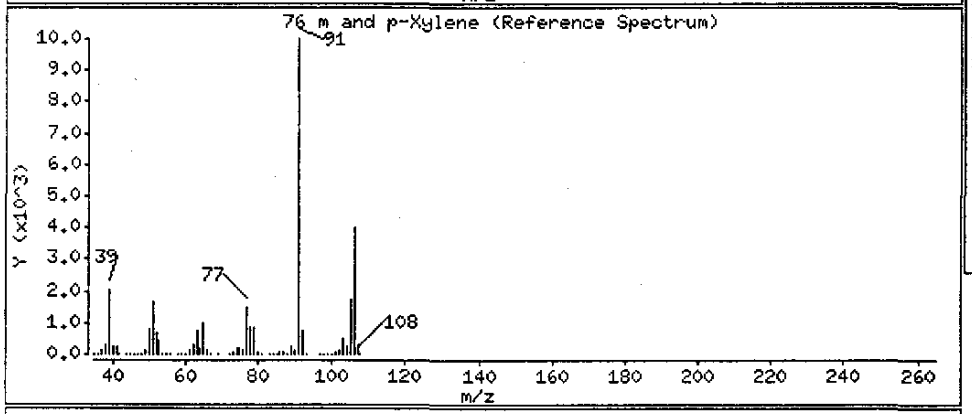
Concentration: 13.2112 ug/L

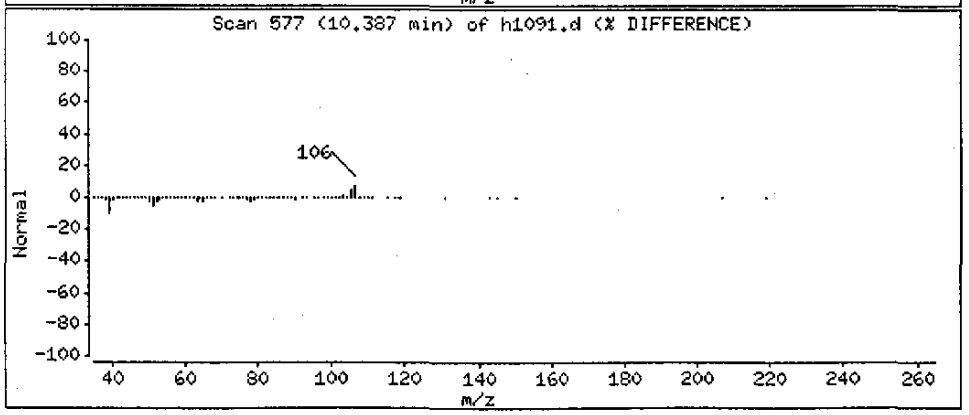












Data File: /chem/H.i/022004.b/h1091.d

Date : 20-FEB-2004 20:11

Client ID: MW-4

Instrument: H.i

Sample Info: F9KEL1AA,,D4B130209-004

Purge Volume: 20.0

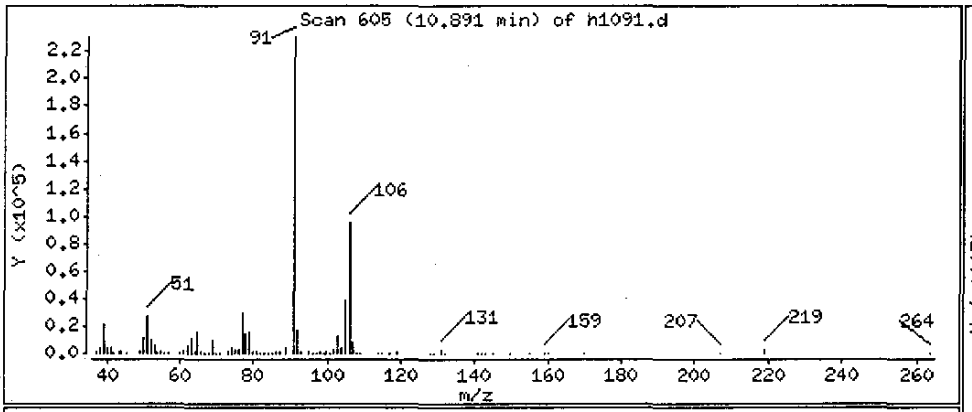
Operator: appelhansd

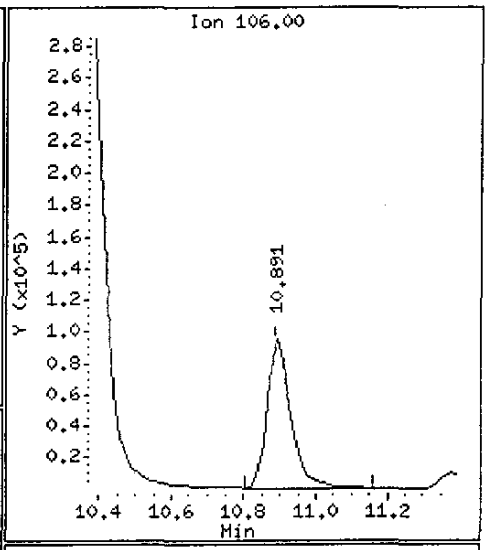
Column phase: DB624

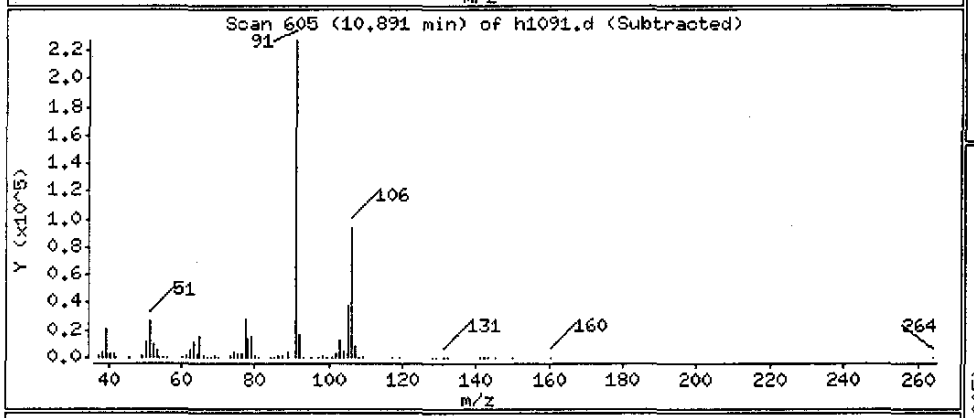
Column diameter: 0.53

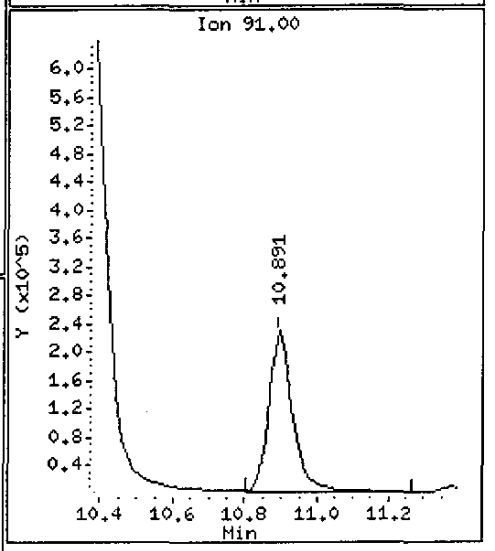
77 o-Xylene

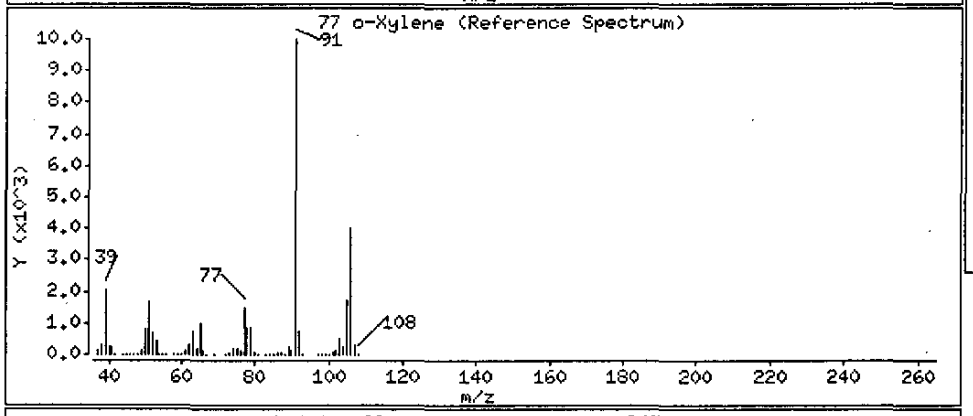
Concentration: 4.80311 ug/L

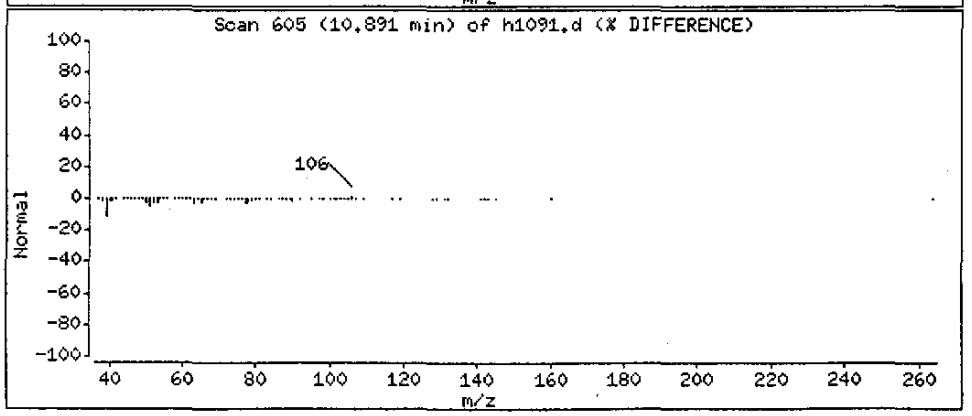












Data File: /chem/H.i/022004.b/h1091.d

Date : 20-FEB-2004 20:11

Client ID: MW-4

Instrument: H.i

Sample Info: F9KEL1AA,,D4B130209-004

Purge Volume: 20.0

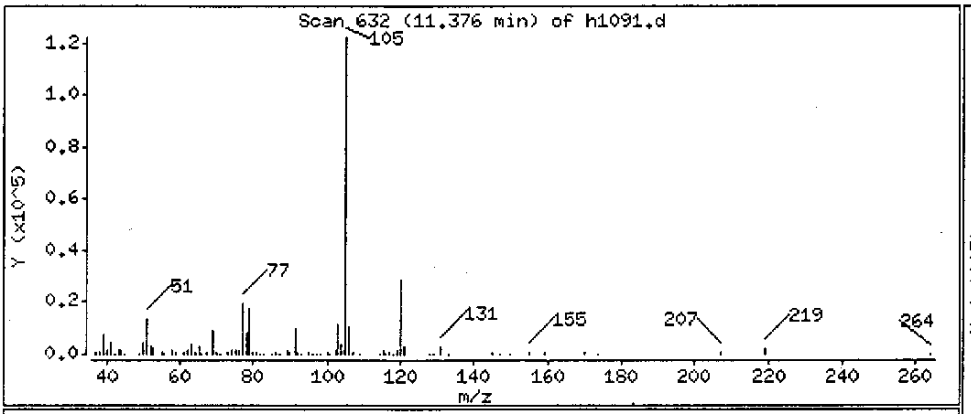
Operator: appelhansd

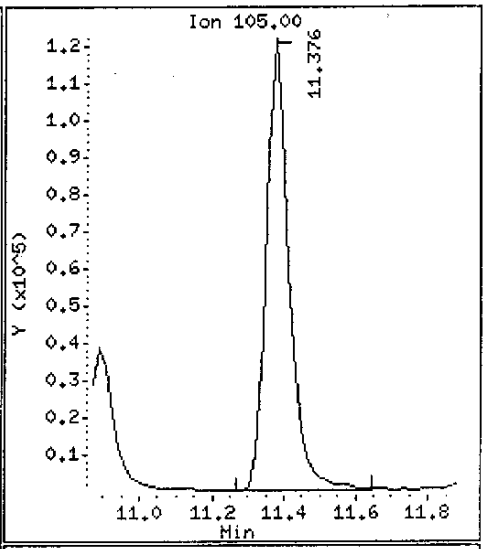
Column phase: DB624

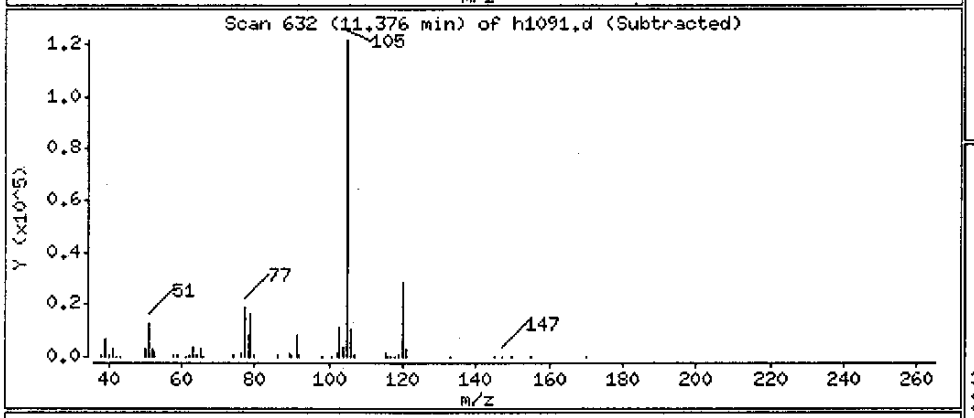
Column diameter: 0.53

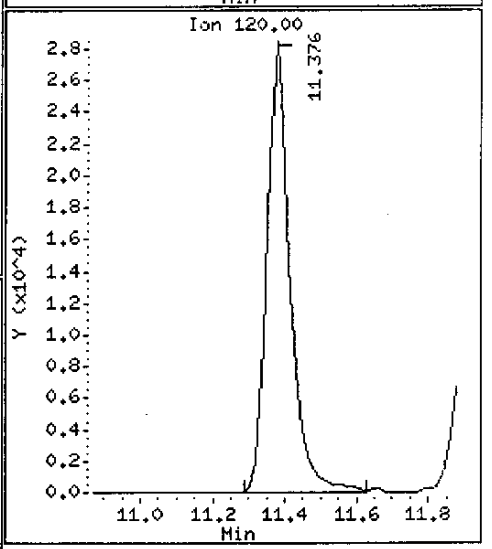
80 isopropyl benzene

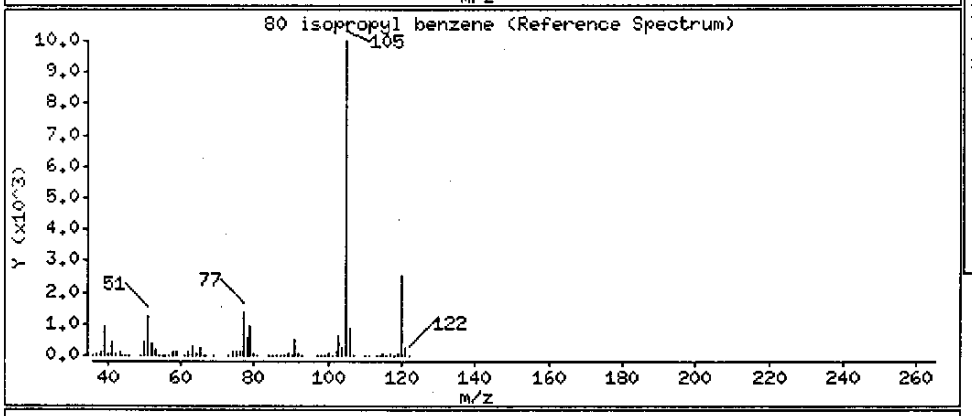
Concentration: 1.83842 ug/L

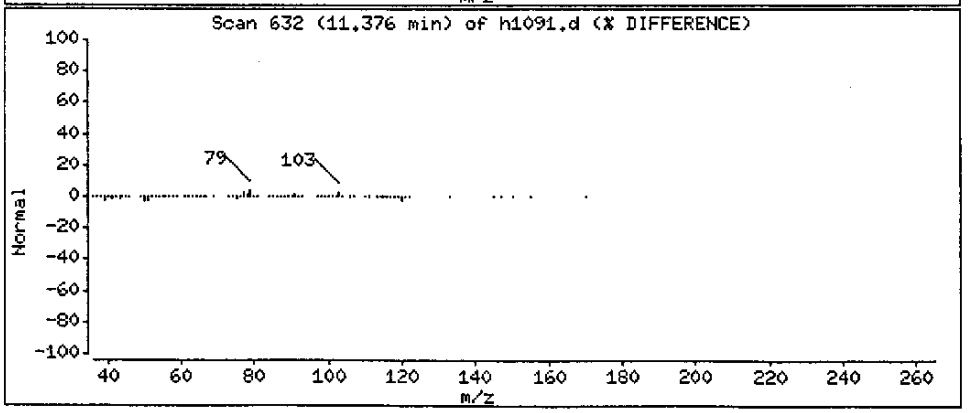












Data File: /chem/H.i/022004.b/h1091.d

Date : 20-FEB-2004 20:11

Client ID: MW-4

Instrument: H.i

Sample Info: F9KEL1AA,,D4B130209-004

Purge Volume: 20.0

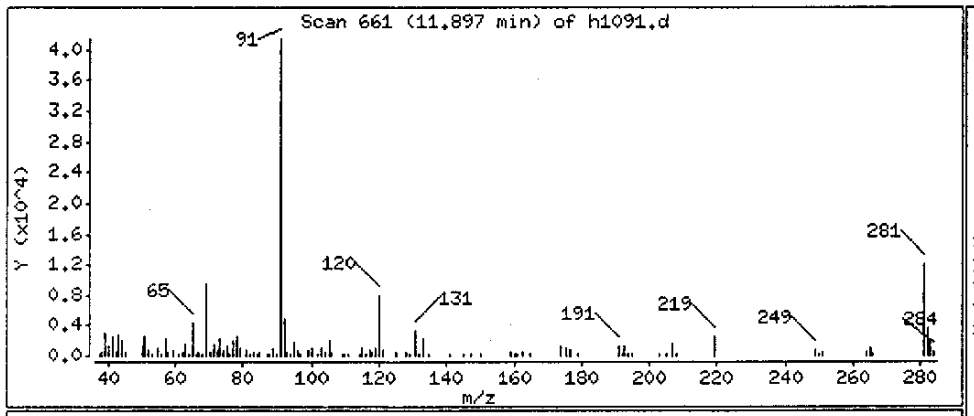
Operator: appelhansd

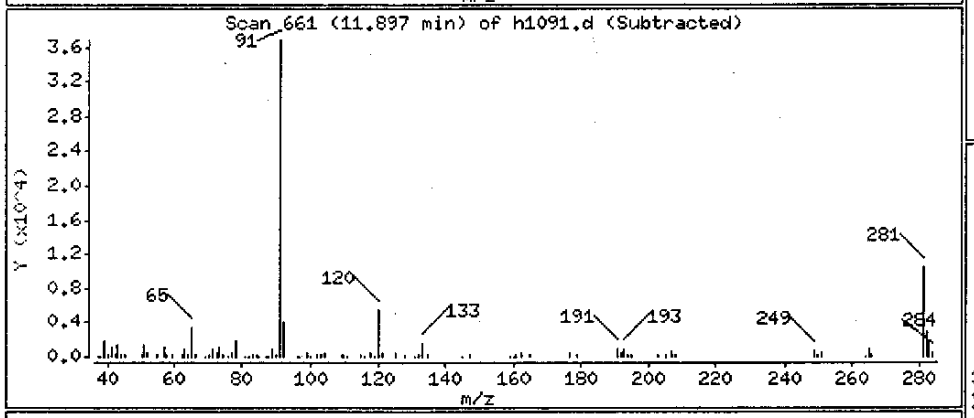
Column phase: DB624

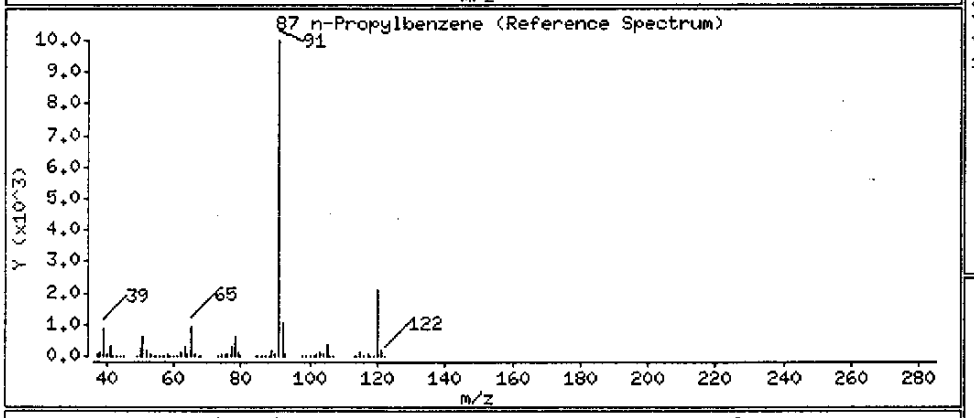
Column diameter: 0.53

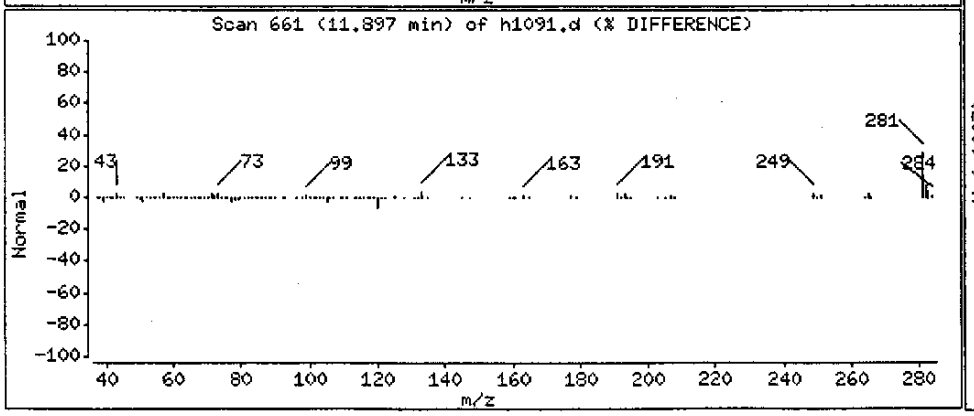
87 n-Propylbenzene

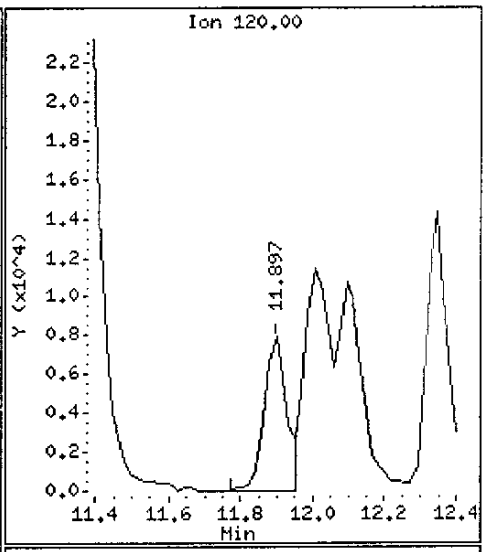
Concentration: 0.531687 ug/L

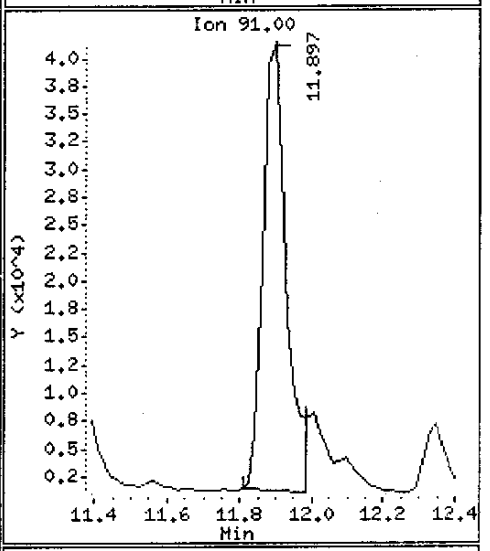


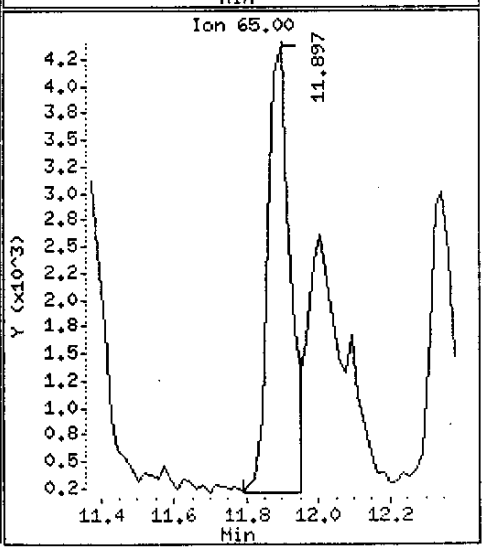












Data File: /chem/H.i/022004.b/h1091.d

Date : 20-FEB-2004 20:11

Client ID: MW-4

Instrument: H.i

Sample Info: F9KEL1AA,,D4B130209-004

Purge Volume: 20.0

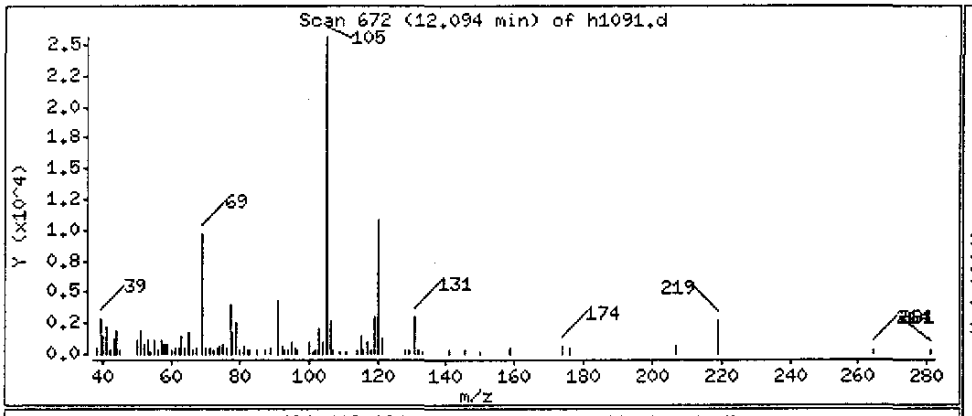
Operator: appelhansd

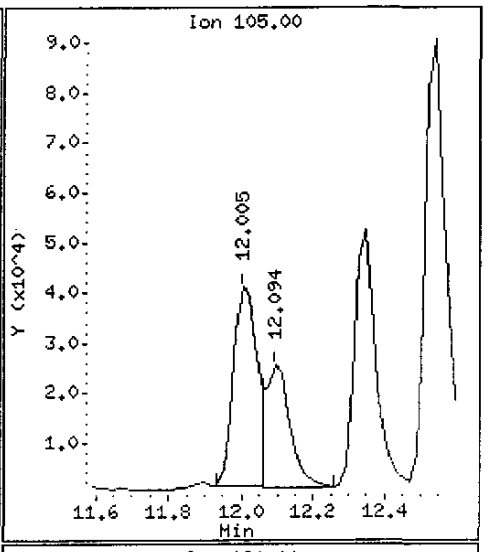
Column phase: DB624

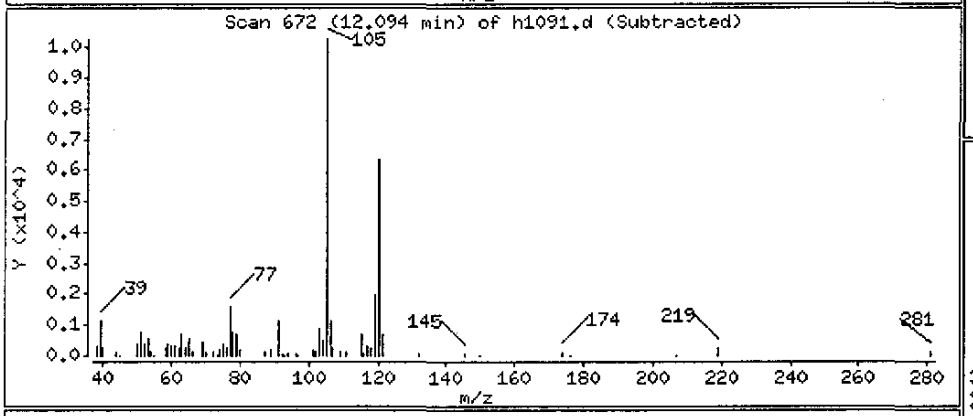
Column diameter: 0.53

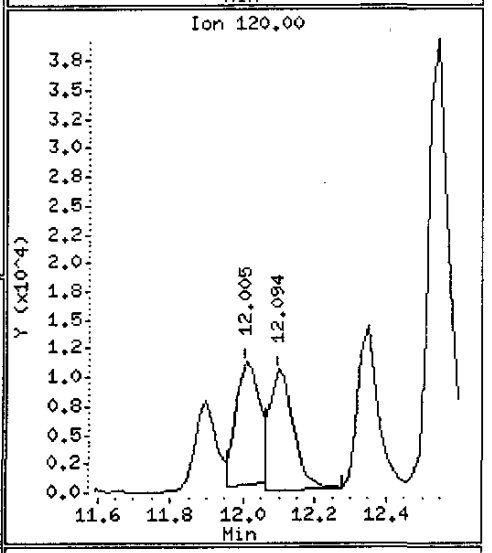
89 1,3,5-Trimethylbenzene

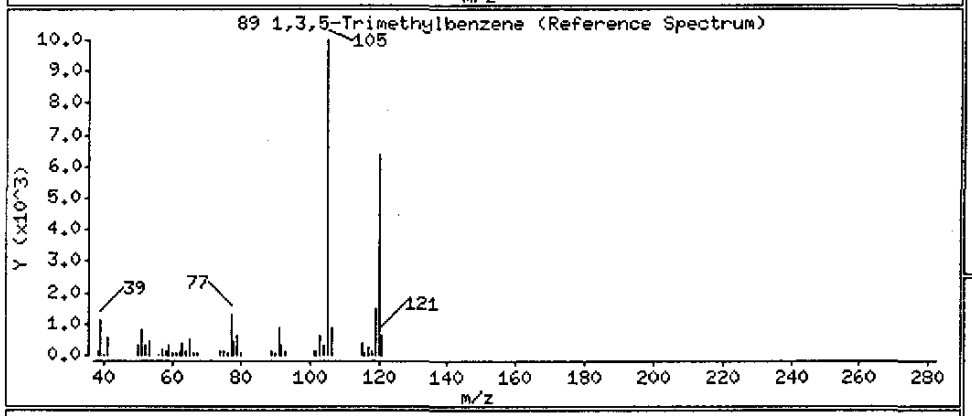
Concentration: 0.585753 ug/L

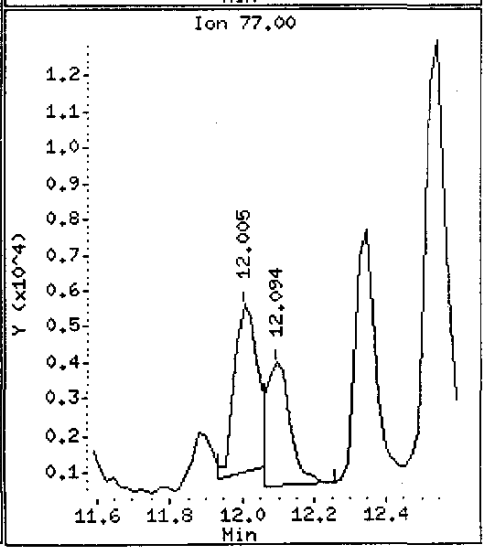


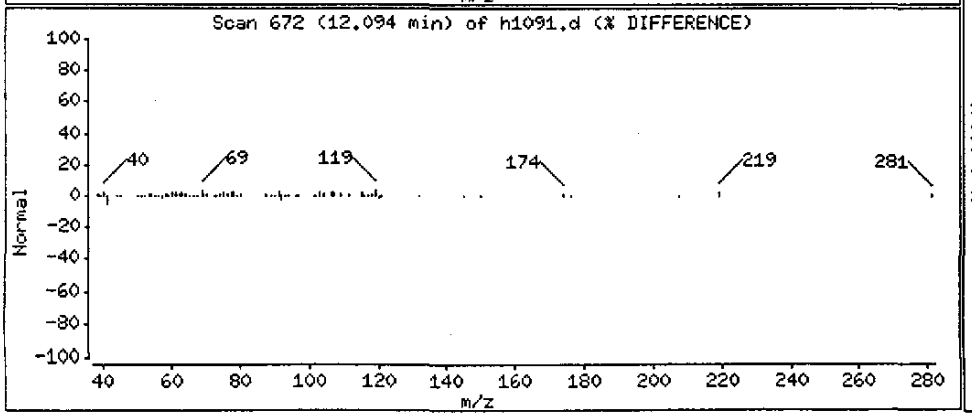












Data File: /chem/H.i/022004.b/h1091.d

Date : 20-FEB-2004 20:11

Client ID: MW-4

Instrument: H.i

Sample Info: F9KEL1AA,,D4B130209-004

Purge Volume: 20.0

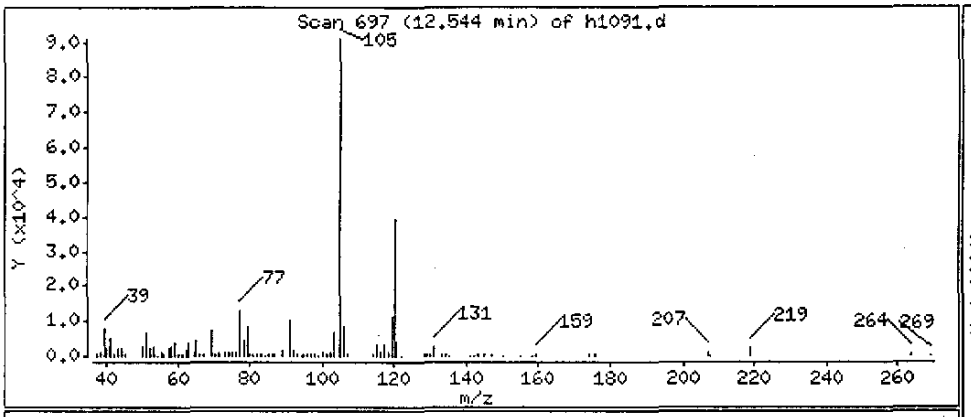
Operator: appelhansd

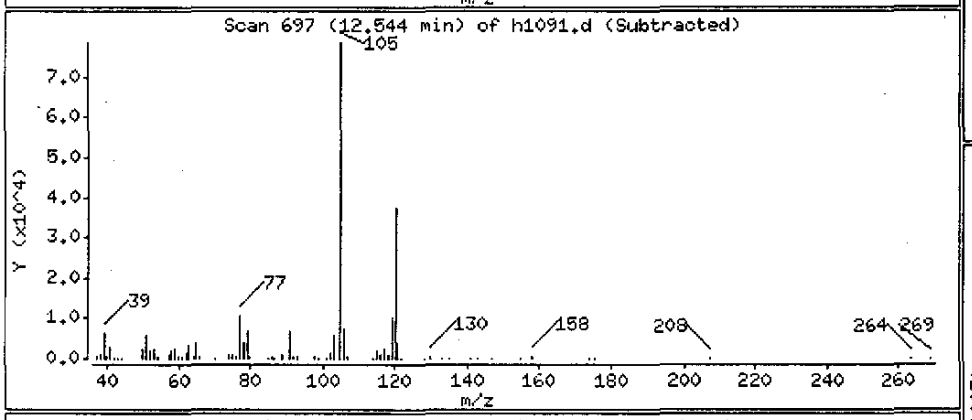
Column phase: DB624

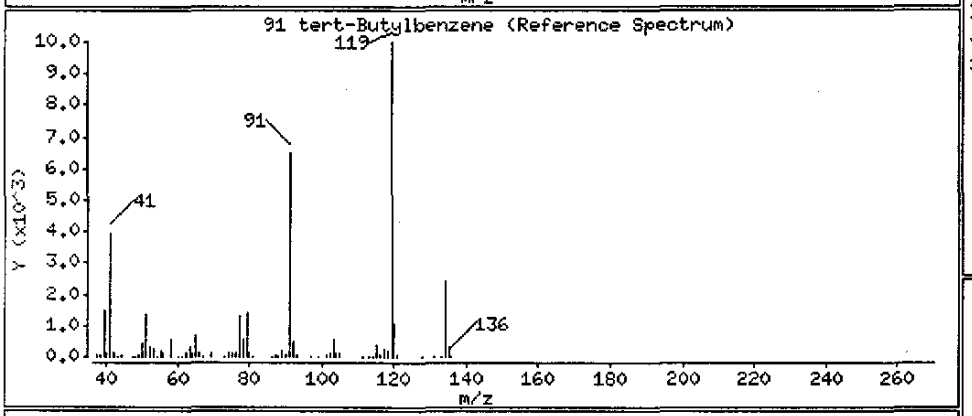
Column diameter: 0.53

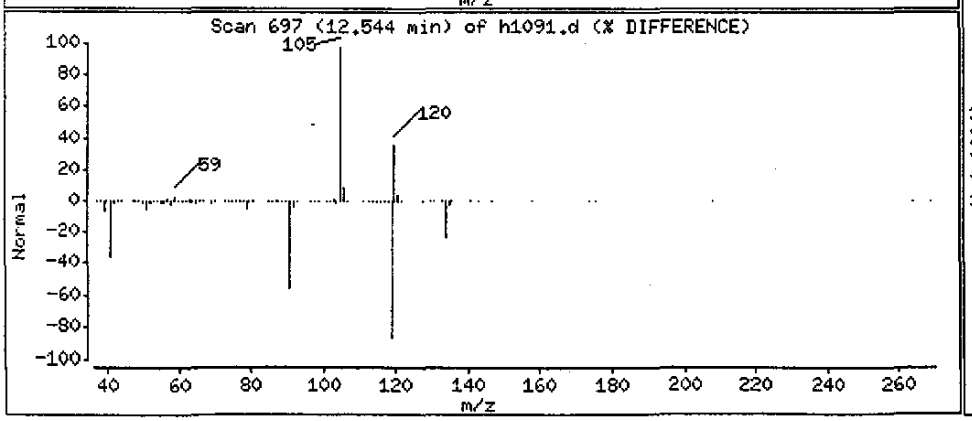
91 tert-Butylbenzene

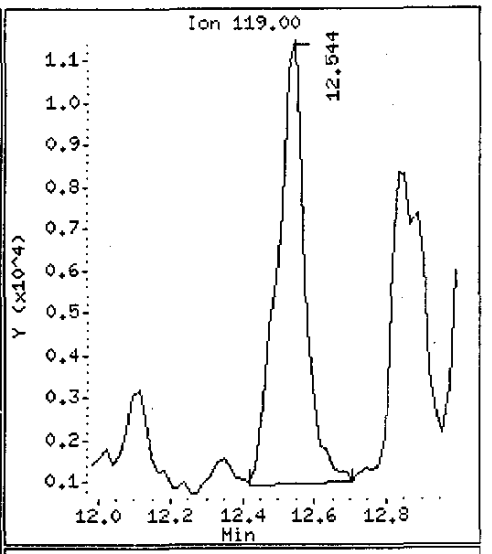
Concentration: 0.258806 ug/L

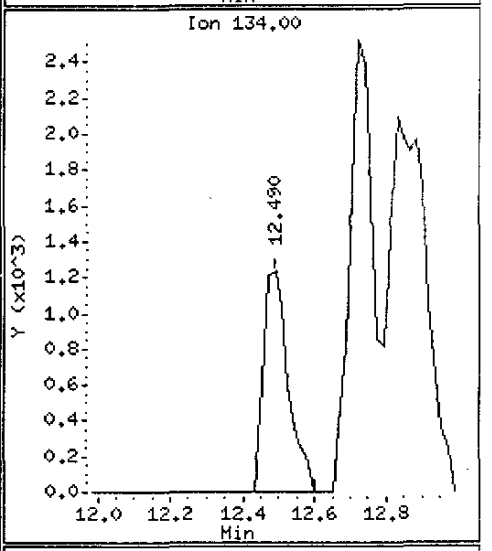


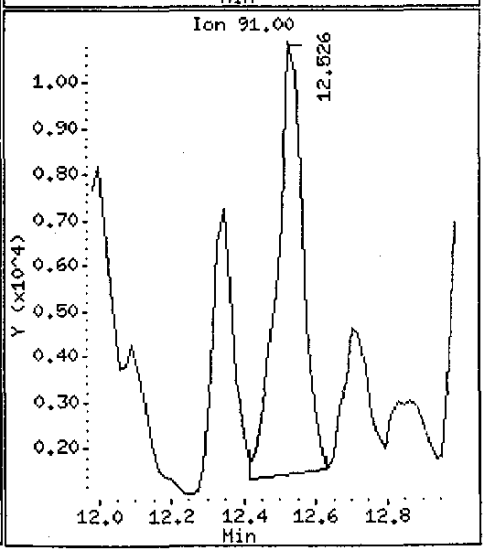












Data File: /chem/H.i/022004.b/h1091.d

Date : 20-FEB-2004 20:11

Client ID: MW-4

Instrument: H.i

Sample Info: F9KEL1AA,,D4B130209-004

Purge Volume: 20.0

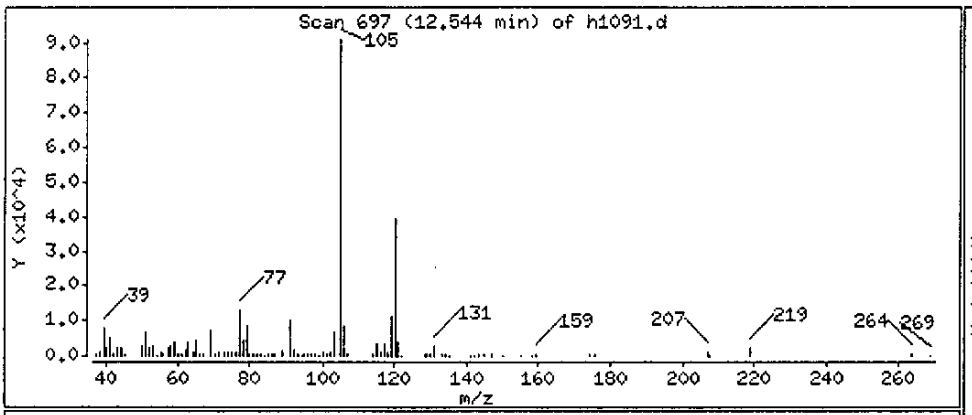
Operator: appelhansd

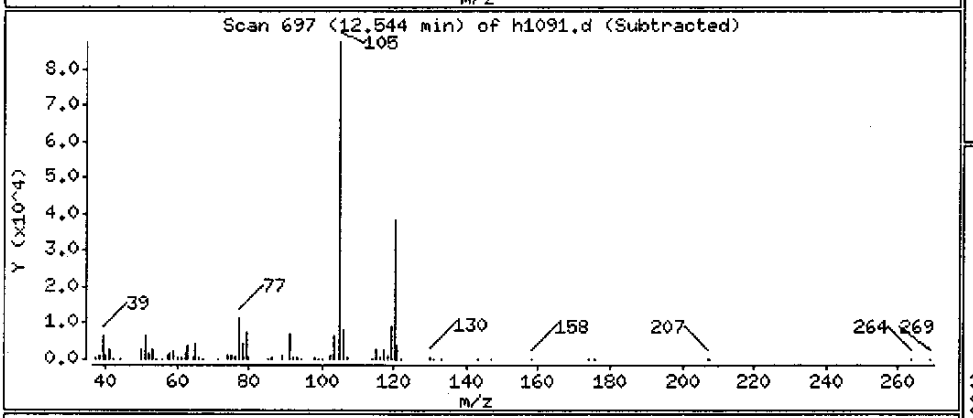
Column phase: DB624

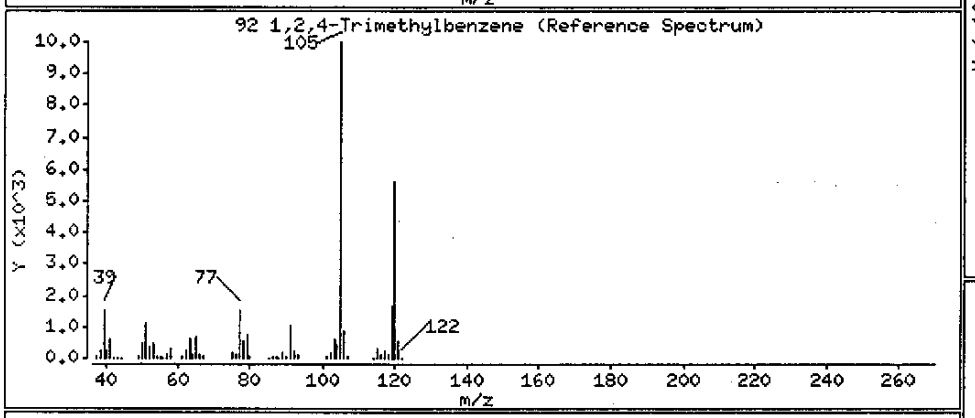
Column diameter: 0.53

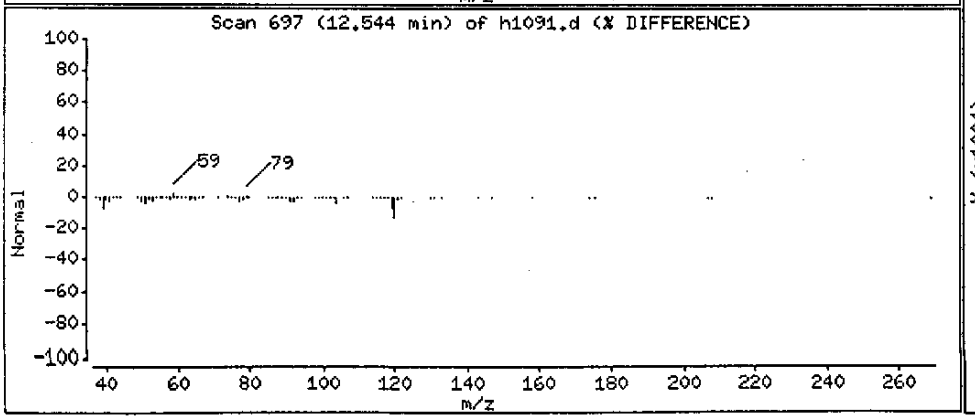
92 1,2,4-Trimethylbenzene

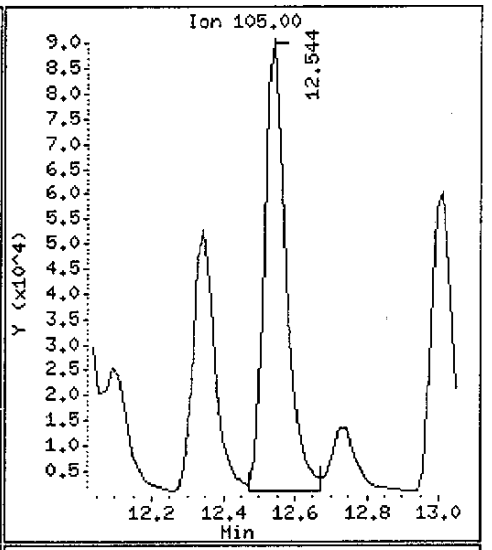
Concentration: 1.83751 ug/L

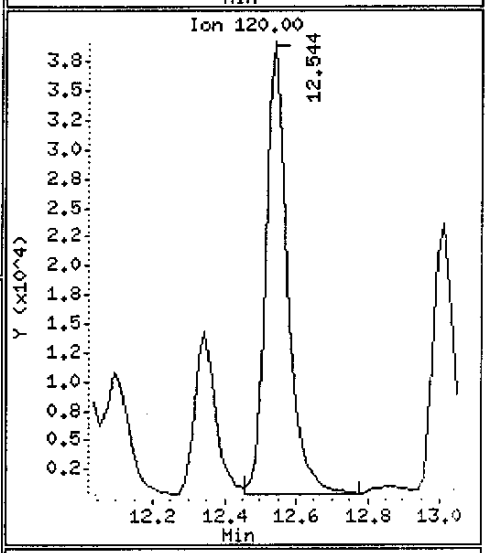


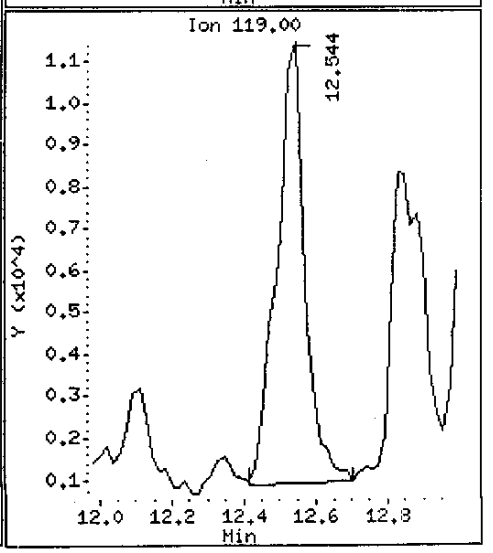












Data File: /chem/H.i/022004.b/h1091.d

Date : 20-FEB-2004 20:11

Client ID: MW-4

Instrument: H.i

Sample Info: F9KEL1AA,,D4B130209-004

Purge Volume: 20.0

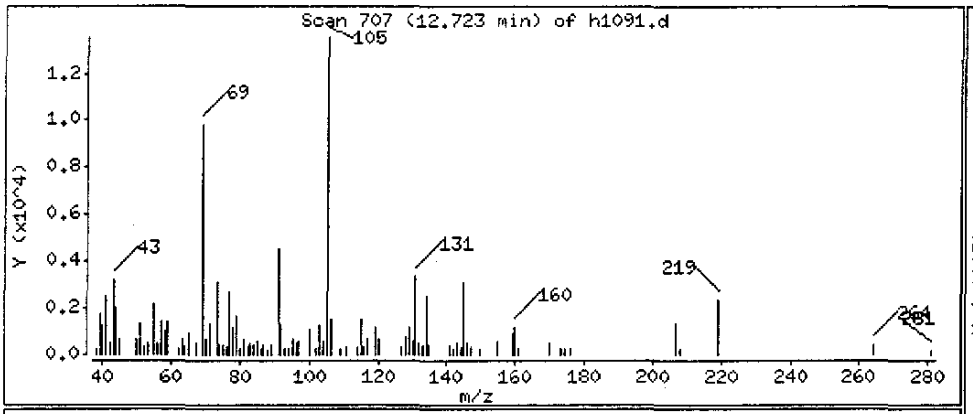
Operator: appelhansd

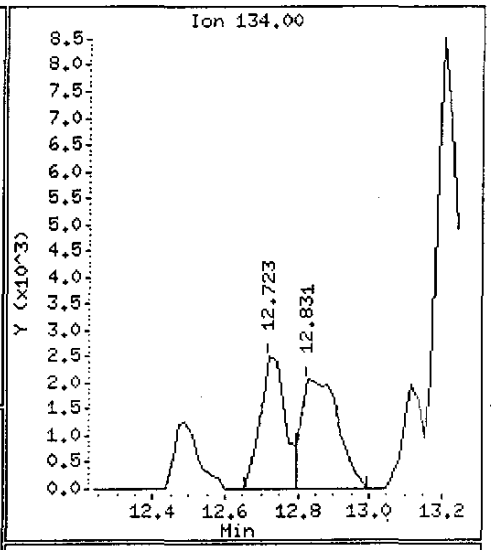
Column phase: DB624

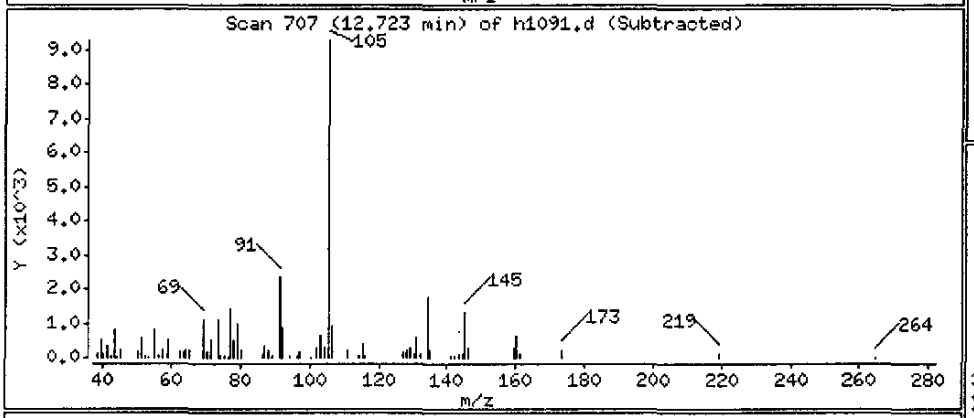
Column diameter: 0.53

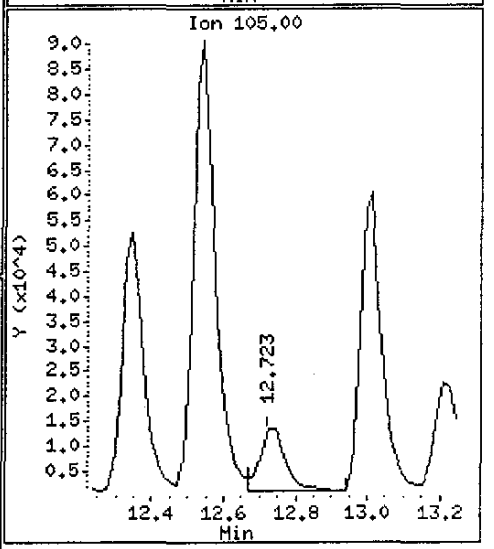
93 sec-Butylbenzene

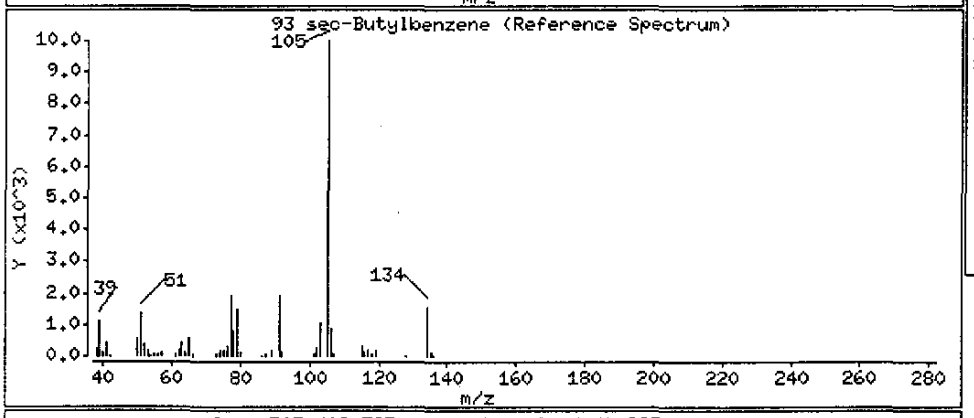
Concentration: 0.206844 ug/L

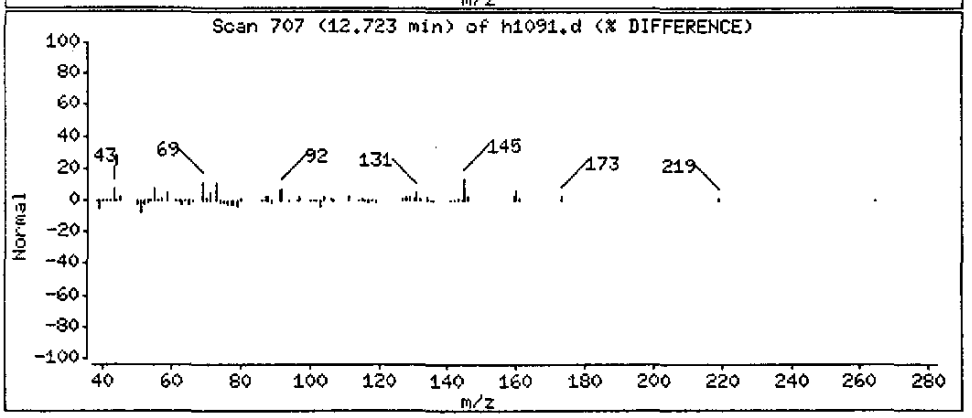












Data File: /chem/H.i/022004.b/h1091.d

Date : 20-FEB-2004 20:11

Client ID: MW-4

Instrument: H.i

Sample Info: F9KEL1AA,,D4B130209-004

Purge Volume: 20.0

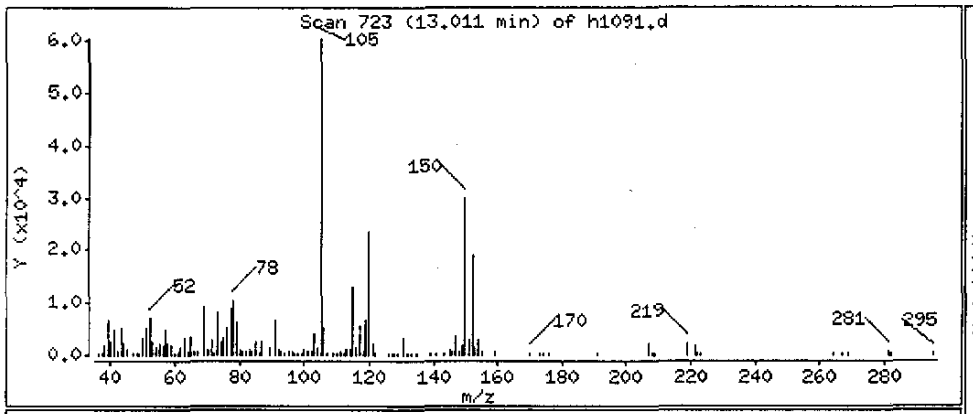
Operator: appelhansd

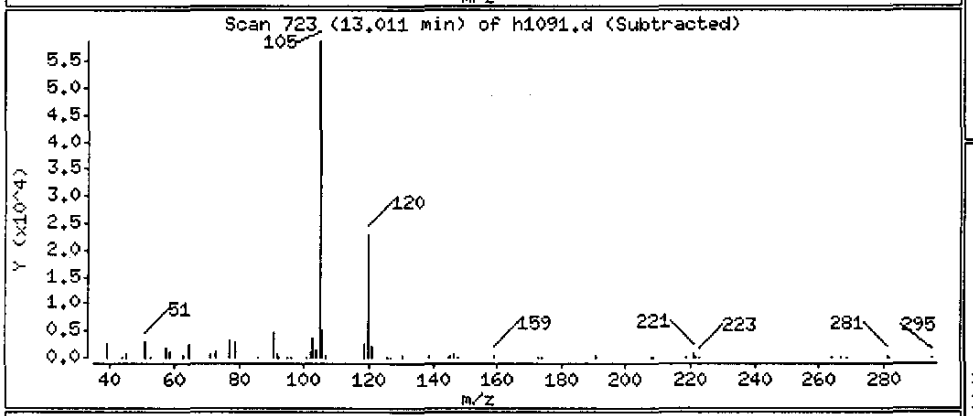
Column phase: DB624

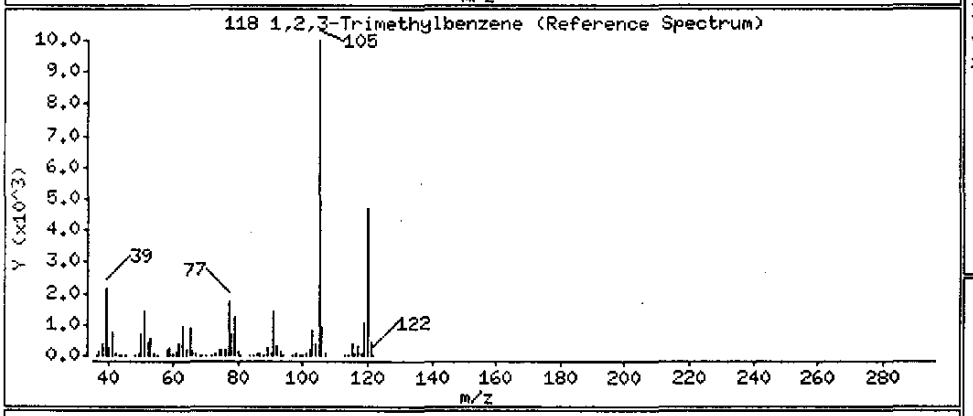
Column diameter: 0.53

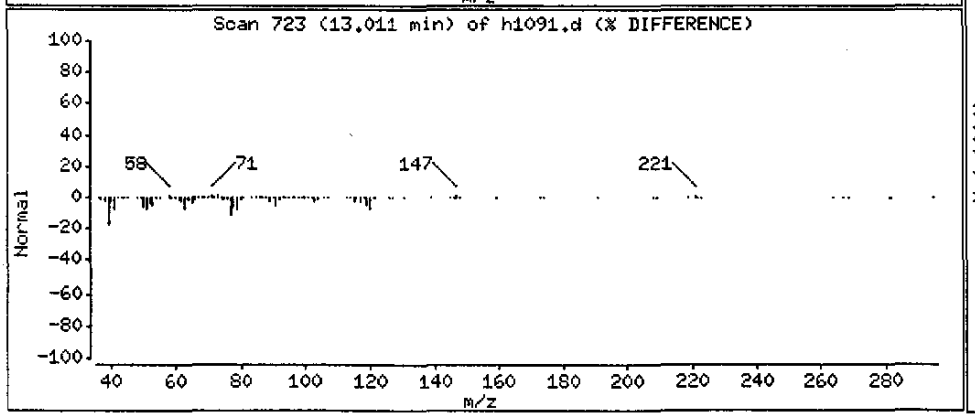
118 1,2,3-Trimethylbenzene

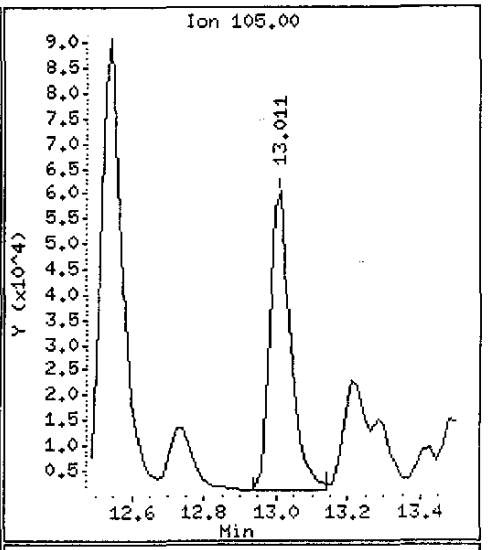
Concentration: 1.54050 ug/L

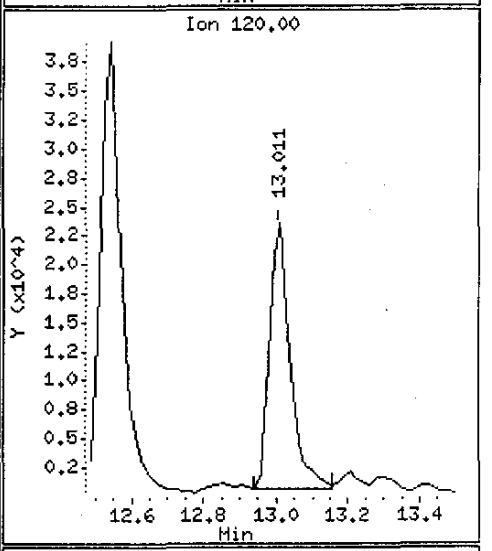


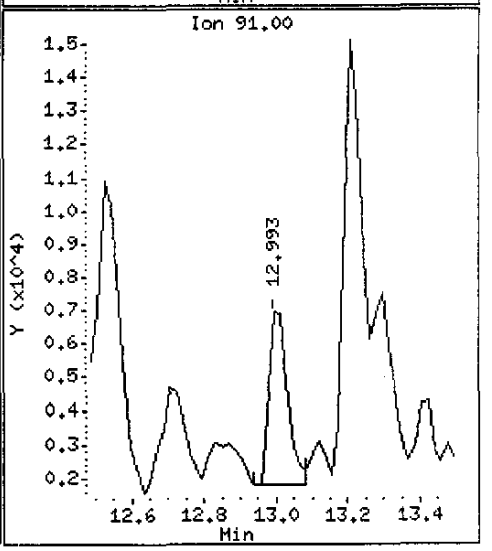












Data File: /chem/H.i/022004.b/h1091.d

Date : 20-FEB-2004 20:11

Client ID: MW-4

Instrument: H.i

Sample Info: F9KEL1AA,,D4B130209-004

Purge Volume: 20.0

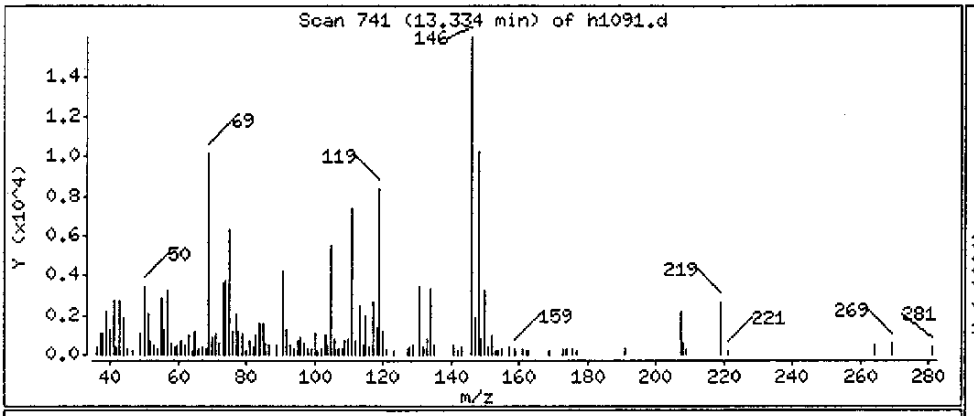
Operator: appelhansd

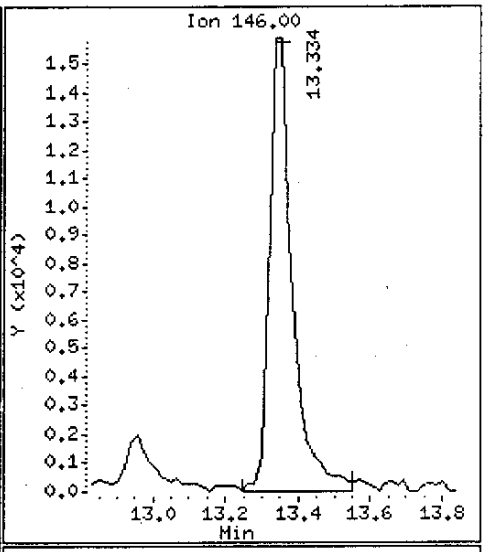
Column phase: DB624

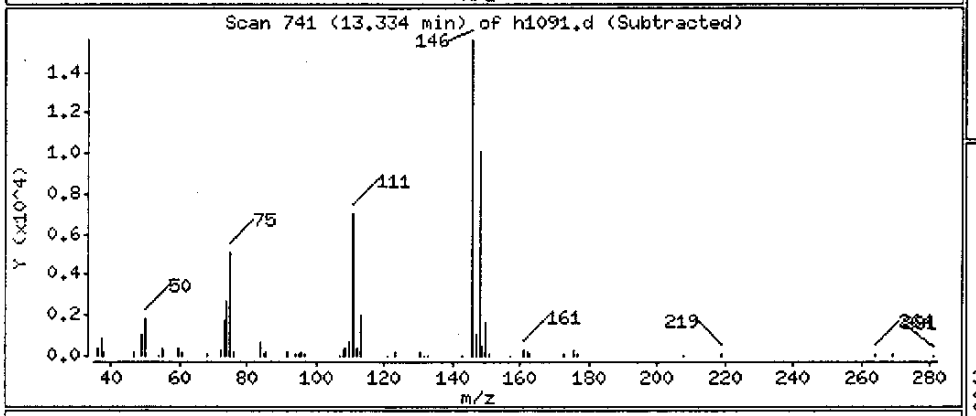
Column diameter: 0.53

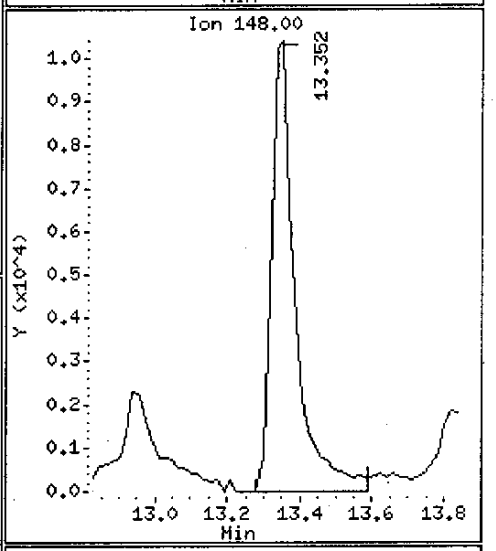
99 o-Dichlorobenzene

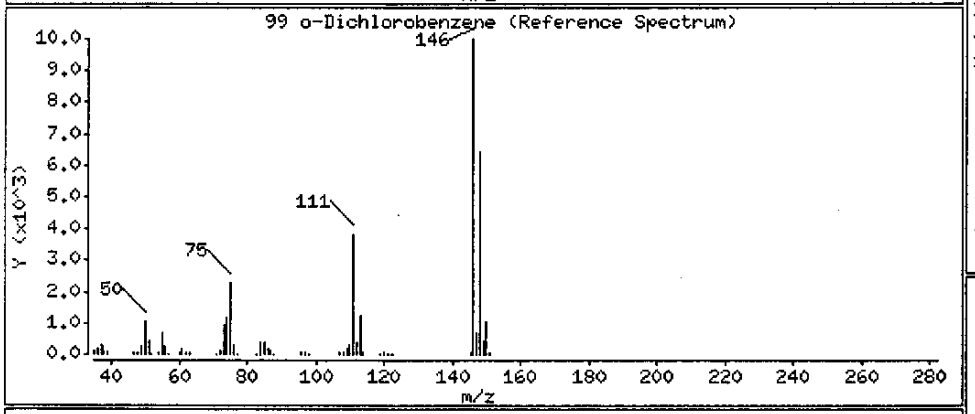
Concentration: 0.744876 ug/L

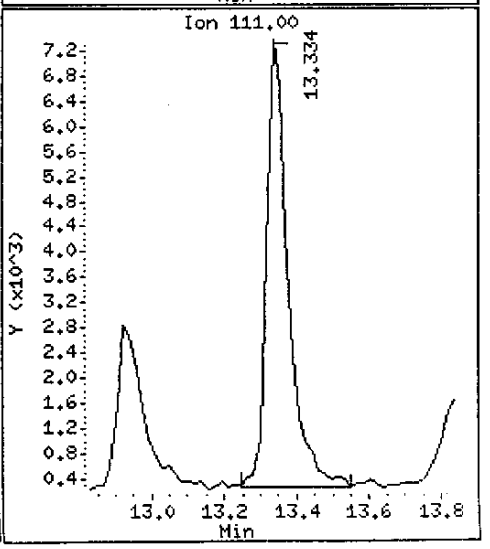


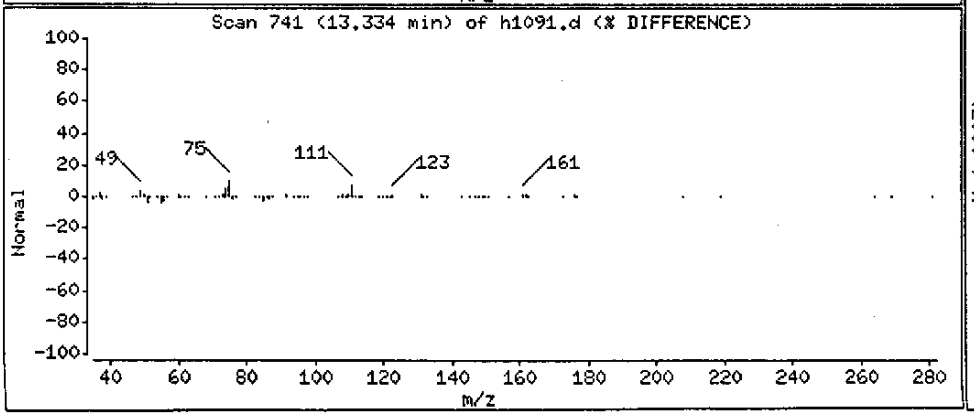












Data File: /chem/H.i/022004.b/h1078.d
Report Date: 20-Feb-2004 15:59

STL Denver

VOLATILE REPORT SW-846

Data file : /chem/H.i/022004.b/h1078.d
Lab Smp Id: F9KEL1AA Client Smp ID: MW-4
Inj Date : 20-FEB-2004 15:52
Operator : appelhansd Inst ID: H.i
Smp Info : F9KEL1AA,0.1,D4B130209-004
Misc Info :
Comment : Purge and Trap Analysis
Method : /chem/H.i/022004.b/H-20ml-h2o.m
Meth Date : 20-Feb-2004 11:09 appelhad Quant Type: ISTD
Cal Date : 07-JAN-2004 15:24 Cal File: h0014.d
Als bottle: 2
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: H-all.sub
Target Version: 3.40
Processing Host: chemsv02

Concentration Formula: Amt * DF * Vp/Vs

Name	Value	Description
DF	1.000	Dilution Factor
Vp	20.000	Purge Volume (ml)
Vs	0.100	Sample Volume (ml)

2-23
ZE 20ml

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/L)
* 48 Fluorobenzene	96	6.398	6.395	(1.000)	2115353	12.5000	
* 72 Chlorobenzene-d5	119	10.064	10.060	(1.000)	414003	12.5000	
* 96 1,4-Dichlorobenzene-d4	152	12.921	12.917	(1.000)	679420	12.5000	
$ 40 Dibromofluoromethane	111	5.590	5.586	(0.874)	940005	11.2966	2259.32
$ 44 1,2-Dichloroethane-d4	65	6.003	5.981	(0.938)	400890	10.8087	2161.75
$ 61 Toluene-d8	98	8.303	8.281	(0.825)	1834442	11.5913	2318.27
$ 82 Bromofluorobenzene	95	11.573	11.552	(1.150)	1021092	11.7659	2353.19
M 1 1,2-Dichloroethene (total)	96.00	Compound Not Detected.					
M 2 Xylene (total)	106.00	Compound Not Detected.					
3 dichlorodifluoromethane	85.00	Compound Not Detected.					
4 Chloromethane	50.00	Compound Not Detected.					
5 Vinyl Chloride	62.00	Compound Not Detected.					
6 Ethylene Oxide	43.00	Compound Not Detected.					
117 Dichlorotetrafluoroethane	85.00	Compound Not Detected.					
123 1,2-dichloro-1,1,2-triflourom	117.00	Compound Not Detected.					
124 2,2-dichloro-1,1,1-trifluorom	83.00	Compound Not Detected.					

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)
7 Bromomethane	94.00	Compound Not Detected.					
8 Chloroethane	64.00	Compound Not Detected.					
9 Dichlorofluoromethane	67.00	Compound Not Detected.					
10 Trichlorofluoromethane	101.00	Compound Not Detected.					
11 Ethanol	45.00	Compound Not Detected.					
12 Ethyl Ether	59.00	Compound Not Detected.					
13 Acrolein	56.00	Compound Not Detected.					
15 Acetone	43.00	Compound Not Detected.					
14 1,1-Dichloroethene	96.00	Compound Not Detected.					
16 Trichlorotrifluoroethane	151.00	Compound Not Detected.					
17 Iodomethane	142.00	Compound Not Detected.					
19 Acetonitrile	41.00	Compound Not Detected.					
18 Carbon Disulfide	76.00	Compound Not Detected.					
20 Allyl Chloride	41.00	Compound Not Detected.					
119 Methyl Acetate	43.00	Compound Not Detected.					
21 Methylene Chloride	84	3.631	3.627	(0.568)	17653	0.33520	67.0392
125 2-Propanol	45.00	Compound Not Detected.					
22 tert-Butyl alcohol	59.00	Compound Not Detected.					
23 Acrylonitrile	53.00	Compound Not Detected.					
24 trans-1,2-Dichloroethene	96.00	Compound Not Detected.					
25 Methyl t-butyl ether	73.00	Compound Not Detected.					
26 Hexane	57.00	Compound Not Detected.					
27 1,1-Dichloroethane	63.00	Compound Not Detected.					
29 Vinyl acetate	43.00	Compound Not Detected.					
30 Isopropyl ether	87.00	Compound Not Detected.					
28 Chloroprene	53.00	Compound Not Detected.					
120 ETBE	59.00	Compound Not Detected.					
33 2-Butanone	43.00	Compound Not Detected.					
32 cis-1,2-Dichloroethene	96.00	Compound Not Detected.					
31 2,2-Dichloropropane	77.00	Compound Not Detected.					
35 Ethyl Acetate	43.00	Compound Not Detected.					
34 Propionitrile	54.00	Compound Not Detected.					
36 Methacrylonitrile	41.00	Compound Not Detected.					
37 Bromochloromethane	128.00	Compound Not Detected.					
39 Tetrahydrofuran	42.00	Compound Not Detected.					
38 Chloroform	83.00	Compound Not Detected.					
41 1,1,1-Trichloroethane	97.00	Compound Not Detected.					
114 Cyclohexane	56.00	Compound Not Detected.					
42 1,1-Dichloropropene	75.00	Compound Not Detected.					
43 Carbon Tetrachloride	117.00	Compound Not Detected.					
45 Isobutanol	41.00	Compound Not Detected.					
46 Benzene	78	6.075	6.071	(0.949)	33955	0.18749	37.4971
47 1,2-Dichloroethane	62.00	Compound Not Detected.					
121 TAME	73.00	Compound Not Detected.					
49 n-Butanol	56.00	Compound Not Detected.					
50 Trichloroethene	130.00	Compound Not Detected.					
115 2-Pentanone	43.00	Compound Not Detected.					

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/L)
52 1,2-Dichloropropane	63.00	Compound Not Detected.					
122 Methyl Cyclohexane	55.00	Compound Not Detected.					
53 Dibromomethane	93.00	Compound Not Detected.					
54 Methyl Methacrylate	100.00	Compound Not Detected.					
55 1,4-Dioxane	88.00	Compound Not Detected.					
56 Bromodichloromethane	83.00	Compound Not Detected.					
57 2-nitropropane	41.00	Compound Not Detected.					
113 2-Chloroethyl vinyl ether	63.00	Compound Not Detected.					
59 cis-1,3-Dichloropropene	75.00	Compound Not Detected.					
60 4-Methyl-2-pentanone	43.00	Compound Not Detected.					
62 Toluene	91.00	Compound Not Detected.					
63 trans-1,3-Dichloropropene	75.00	Compound Not Detected.					
64 Ethyl methacrylate	69.00	Compound Not Detected.					
65 1,1,2-Trichloroethane	97.00	Compound Not Detected.					
67 1,3-Dichloropropane	76.00	Compound Not Detected.					
66 Tetrachloroethene	164.00	Compound Not Detected.					
68 2-Hexanone	43.00	Compound Not Detected.					
126 Tetrahydrothiophene	60.00	Compound Not Detected.					
69 Dibromochloromethane	129.00	Compound Not Detected.					
70 1,2-Dibromoethane	107.00	Compound Not Detected.					
71 1-Chlorohexane	91.00	Compound Not Detected.					
73 Chlorobenzene	112.00	Compound Not Detected.					
74 1,1,1,2-Tetrachloroethane	131.00	Compound Not Detected.					
75 Ethylbenzene	106.00	Compound Not Detected.					
76 m and p-Xylene	106.00	Compound Not Detected.					
77 o-Xylene	106.00	Compound Not Detected.					
78 Styrene	104.00	Compound Not Detected.					
79 Bromoform	173.00	Compound Not Detected.					
80 isopropyl benzene	105.00	Compound Not Detected.					
116 cis-1,4-Dichloro-2-butene	53.00	Compound Not Detected.					
81 Cyclohexanone	55.00	Compound Not Detected.					
83 1,1,2,2-Tetrachloroethane	83.00	Compound Not Detected.					
84 Bromobenzene	156.00	Compound Not Detected.					
85 1,2,3-Trichloropropane	110.00	Compound Not Detected.					
86 t-1,4-Dichloro-2-butene	53.00	Compound Not Detected.					
87 n-Propylbenzene	120.00	Compound Not Detected.					
88 2-Chlorotoluene	126.00	Compound Not Detected.					
89 1,3,5-Trimethylbenzene	105.00	Compound Not Detected.					
90 4-Chlorotoluene	126.00	Compound Not Detected.					
91 tert-Butylbenzene	119.00	Compound Not Detected.					
92 1,2,4-Trimethylbenzene	105.00	Compound Not Detected.					
93 sec-Butylbenzene	134.00	Compound Not Detected.					
94 m-Dichlorobenzene	146.00	Compound Not Detected.					
95 4-Isopropyltoluene	119.00	Compound Not Detected.					
97 p-dichlorobenzene	146.00	Compound Not Detected.					
118 1,2,3-Trimethylbenzene	105.00	Compound Not Detected.					
98 n-Butylbenzene	91.00	Compound Not Detected.					

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/L)
99 o-Dichlorobenzene	146.00	Compound Not Detected.					
100 1,2-Dibromo-3-chloropropane	157.00	Compound Not Detected.					
101 1,2,4-Trichlorobenzene	180.00	Compound Not Detected.					
102 Hexachlorobutadiene	225.00	Compound Not Detected.					
127 Naphthalene	128.00	Compound Not Detected.					
104 1,2,3-Trichlorobenzene	180.00	Compound Not Detected.					

Data File: /chem/H.i/022004.b/h1078.d
Report Date: 20-Feb-2004 15:59

STL Denver

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: H.i
Lab File ID: h1078.d
Lab Smp Id: F9KEL1AA
Analysis Type: VOA
Quant Type: ISTD
Operator: appelhansd
Method File: /chem/H.i/022004.b/H-20ml-h2o.m
Misc Info:

Calibration Date: 02/20/4
Calibration Time: 1059
Client Smp ID: MW-4
Level: LOW
Sample Type: WATER

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
48 Fluorobenzene	2466684	1233342	4933368	2115353	-14.24
72 Chlorobenzene-d5	459303	229652	918606	414003	-9.86
96 1,4-Dichlorobenze	730993	365496	1461986	679420	-7.06

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
48 Fluorobenzene	6.39	5.89	6.89	6.40	0.06
72 Chlorobenzene-d5	10.06	9.56	10.56	10.06	0.04
96 1,4-Dichlorobenze	12.92	12.42	13.42	12.92	0.03

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

STL Denver

RECOVERY REPORT

Client Name: ARCADIS GERAGHTY & M13-FEB-2004 Client SDG: D4B130209
Sample Matrix: LIQUID Fraction: VOA
Lab Smp Id: F9KEL1AA Client Smp ID: MW-4
Level: LOW Operator: appelhansd
Data Type: MS DATA SampleType: SAMPLE
SpikeList File: dcs-h20.spk Quant Type: ISTD
Sublist File: H-all.sub
Method File: /chem/H.i/022004.b/H-20ml-h2o.m
Misc Info:

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 40 Dibromofluorometha	2300.00	2259.32	98.23	76-116
$ 44 1,2-Dichloroethane	2300.00	2161.75	93.99	59-129
$ 61 Toluene-d8	2300.00	2318.27	100.79	76-116
$ 82 Bromofluorobenzene	2300.00	2353.19	102.31	74-114

Data File: /chem/H.i/022004.b/h1078.d
Date : 20-FEB-2004 15:52
Client ID: MW-4
Sample Info: F9KEL1AA,0.1,D4B130209-004
Purge Volume: 20.0
Column phase: DB624

Instrument: H.i
Operator: appelhansd
Column diameter: 0.53

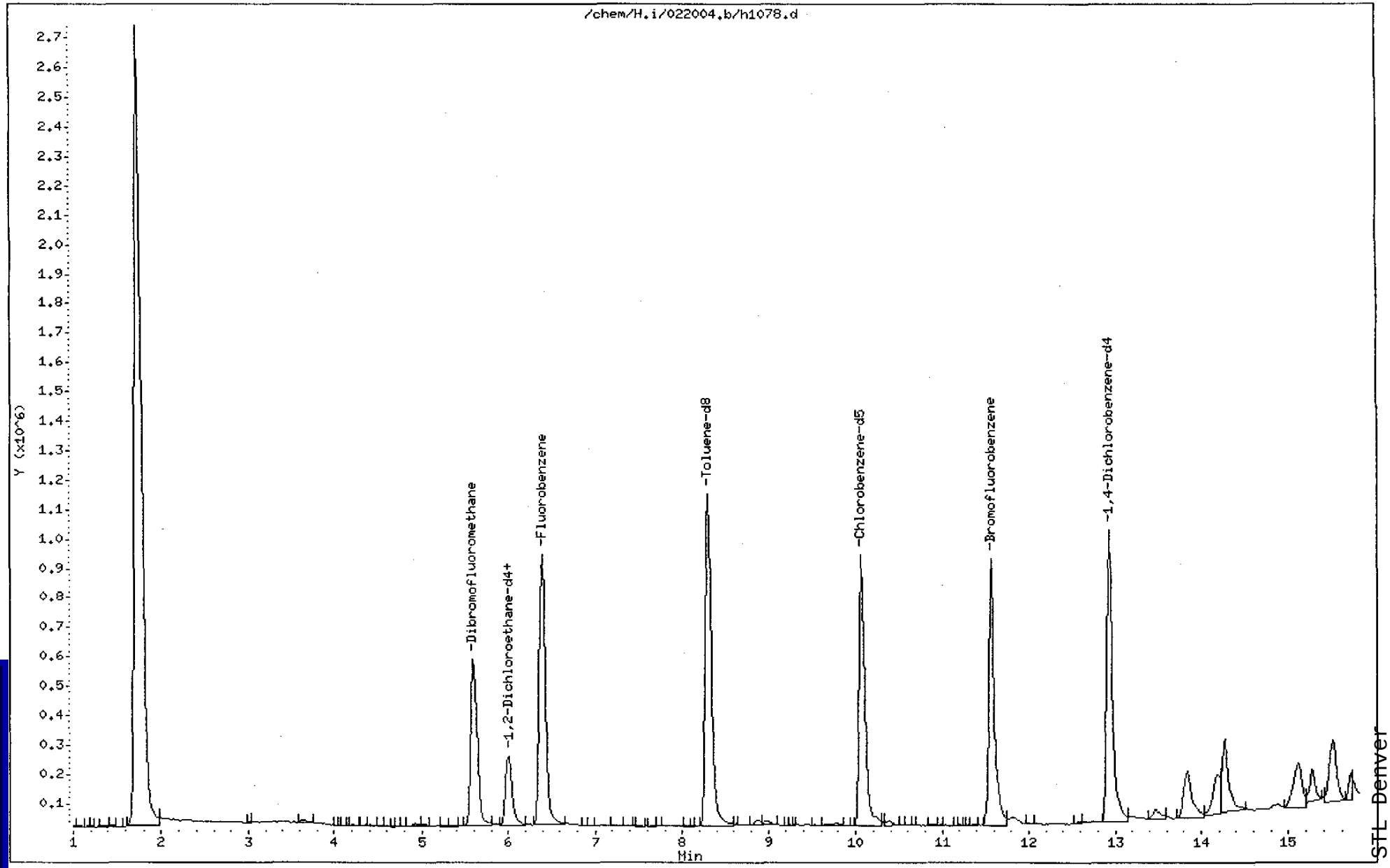


Table of Contents

Data File: /chem/H.i/022004.b/h1078.d

Date : 20-FEB-2004 15:52

Client ID: MW-4

Instrument: H.i

Sample Info: F9KEL1AA,0.1,D4B130209-004

Purge Volume: 20.0

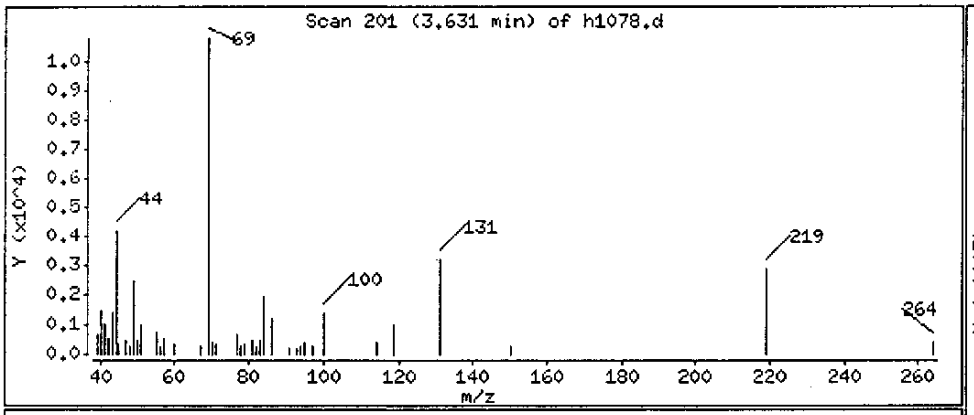
Operator: appelhansd

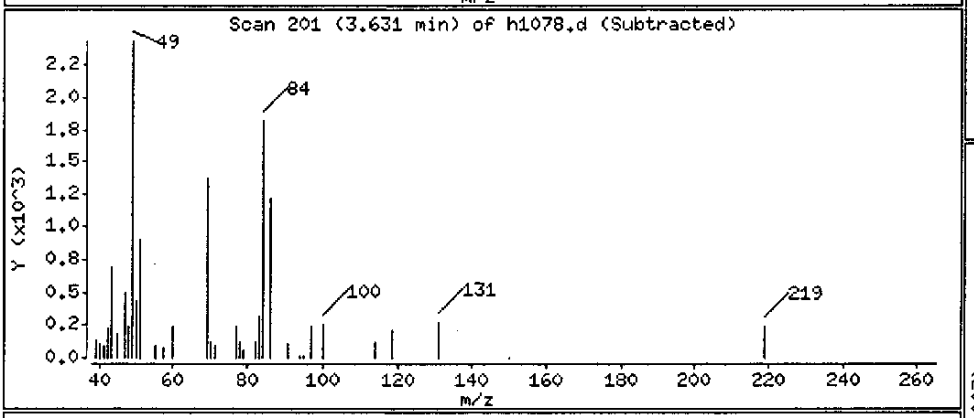
Column phase: DB624

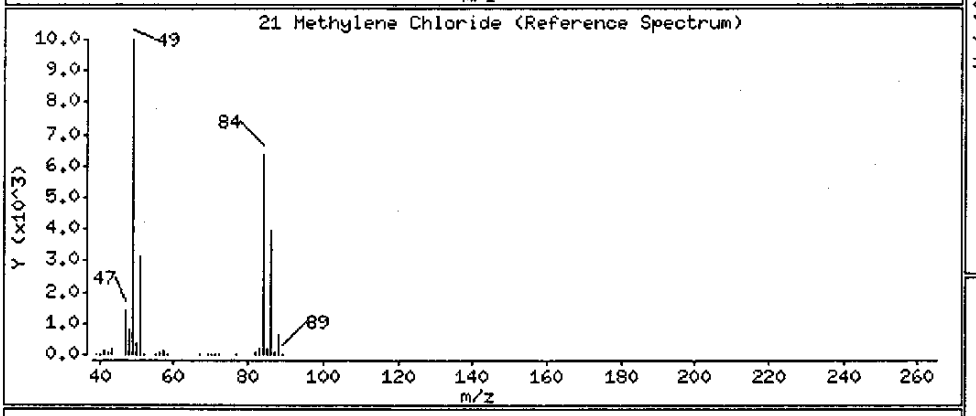
Column diameter: 0.53

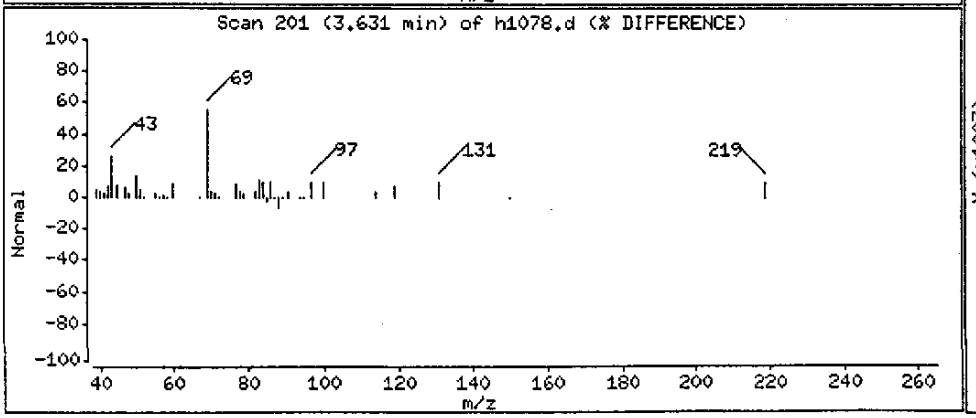
21 Methylene Chloride

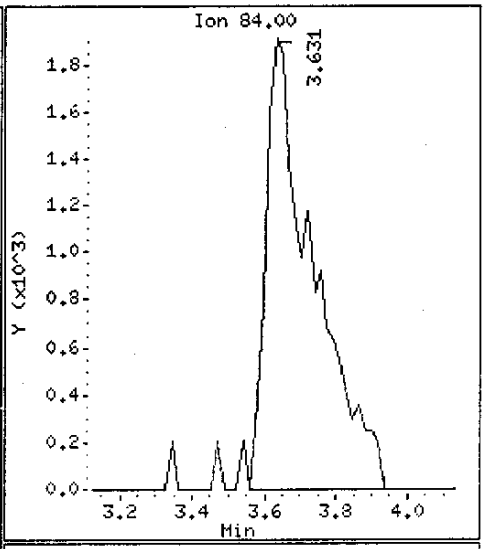
Concentration: 67.0392 ug/L

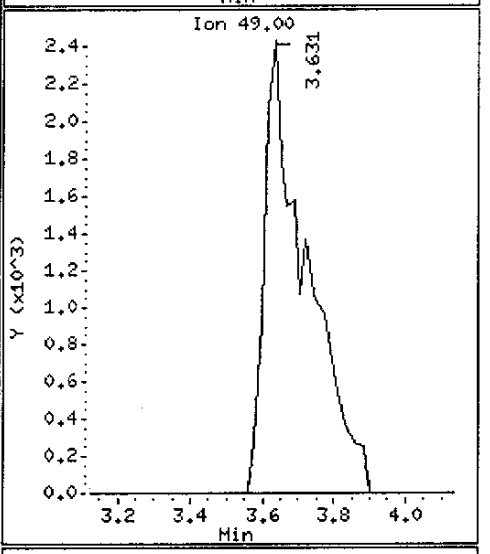


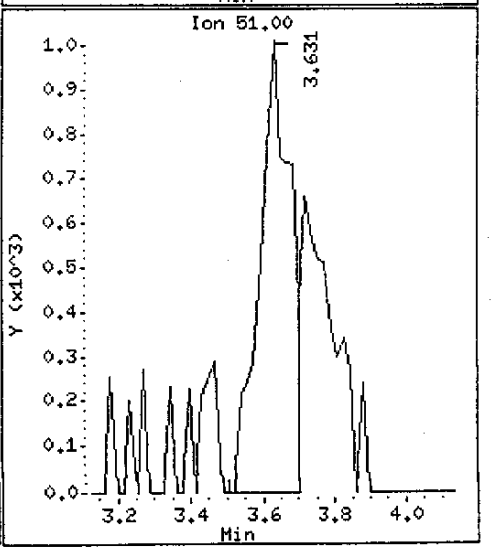












Data File: /chem/H.i/022004.b/h1078.d

Date : 20-FEB-2004 15:52

Client ID: MW-4

Instrument: H.i

Sample Info: F9KEL1AA,0.1,D4B130209-004

Purge Volume: 20.0

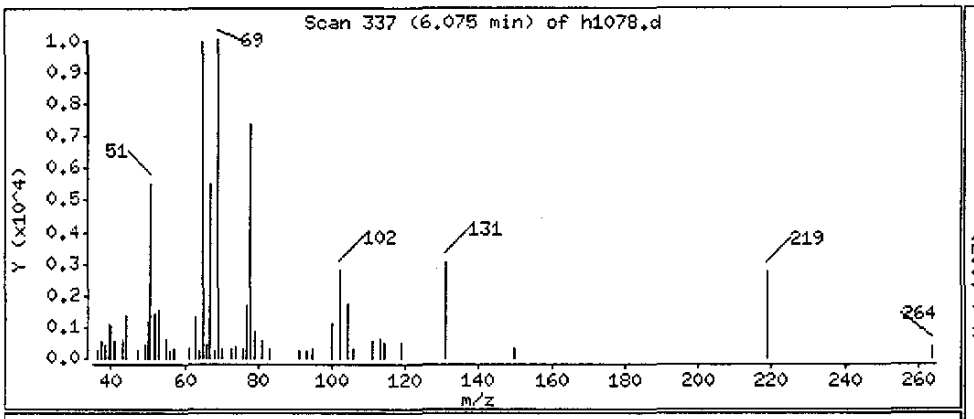
Operator: appelhansd

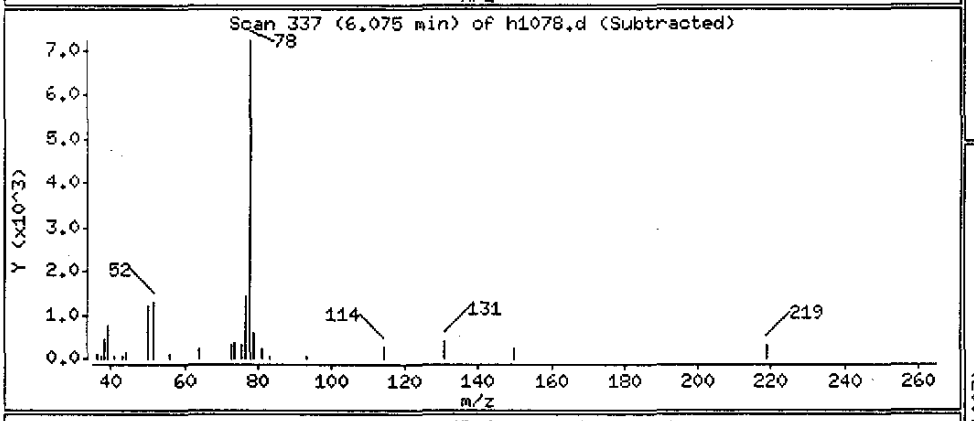
Column phase: DB624

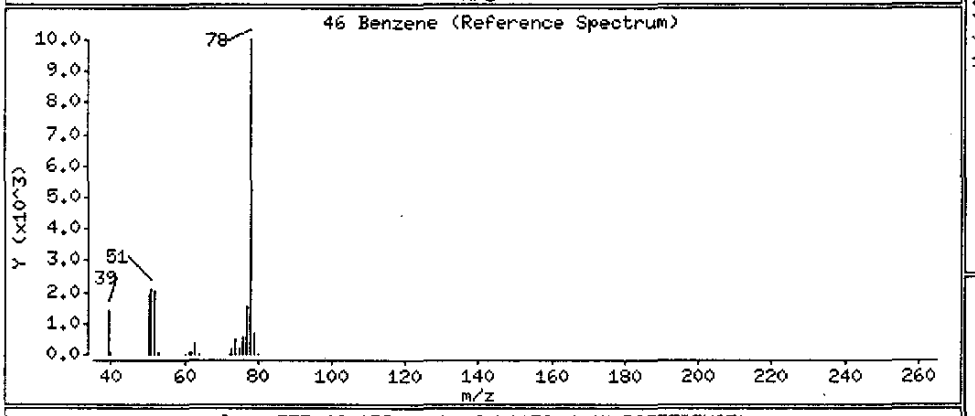
Column diameter: 0.53

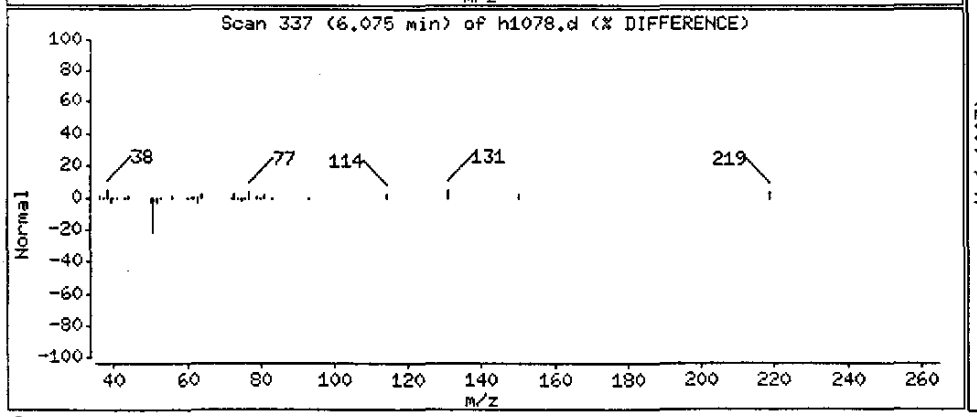
46 Benzene

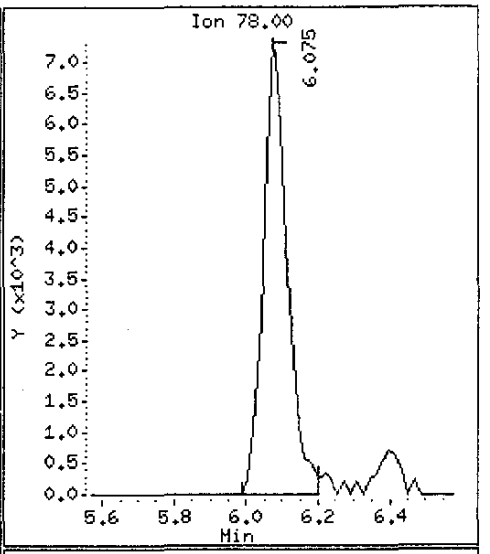
Concentration: 37.4971 ug/L

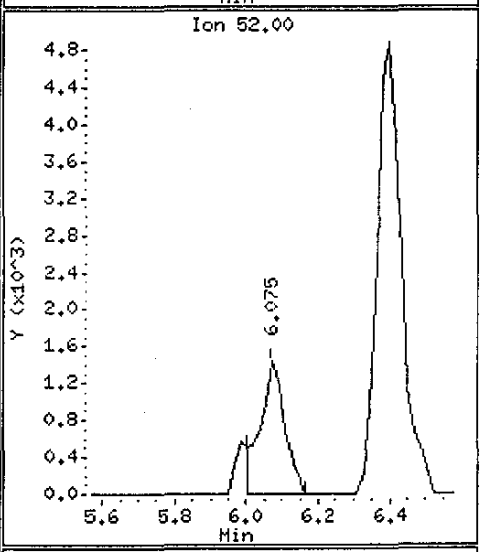


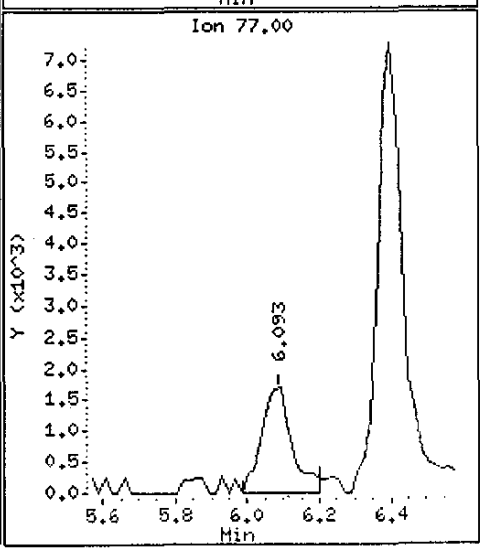








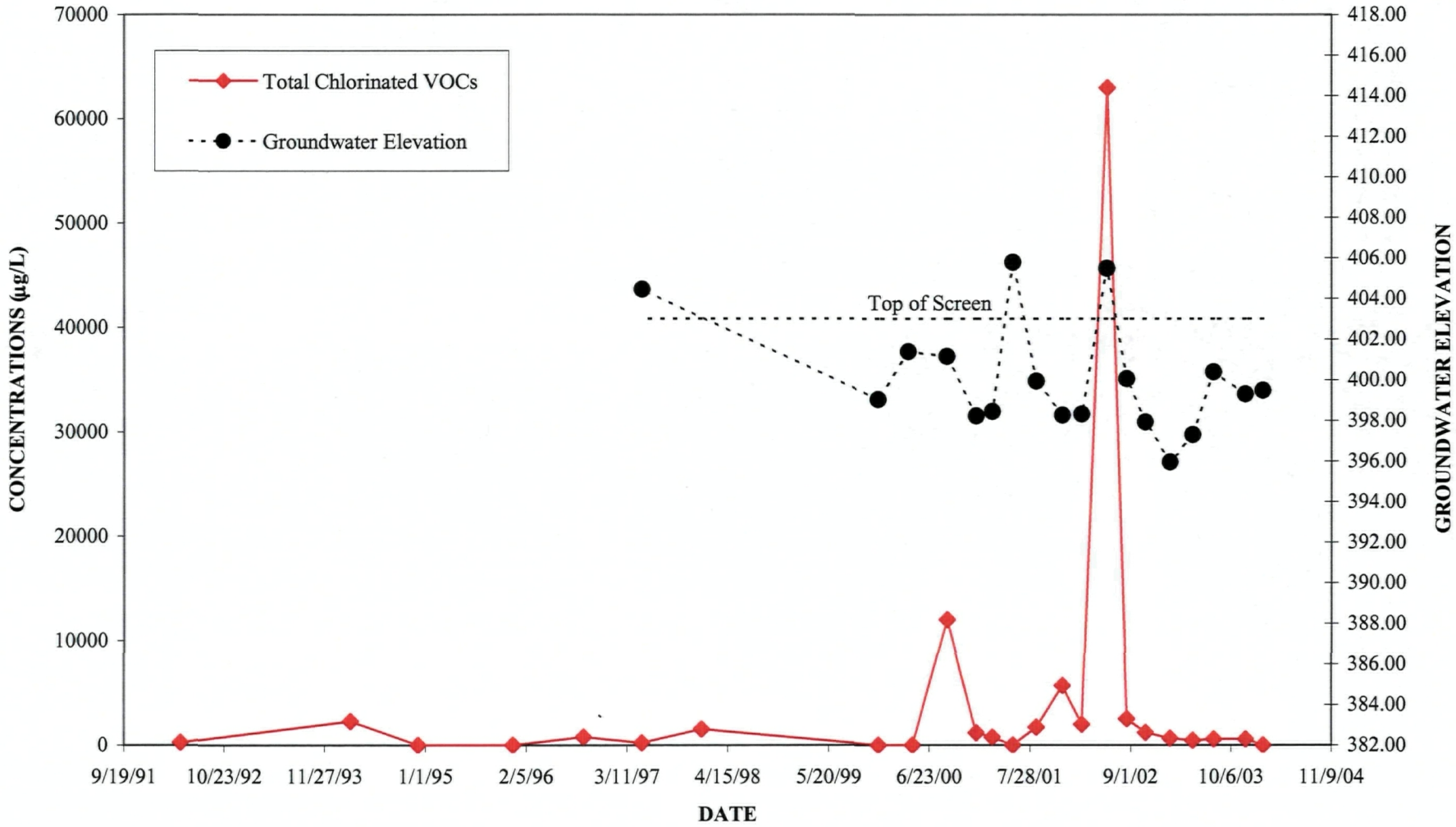




APPENDIX C

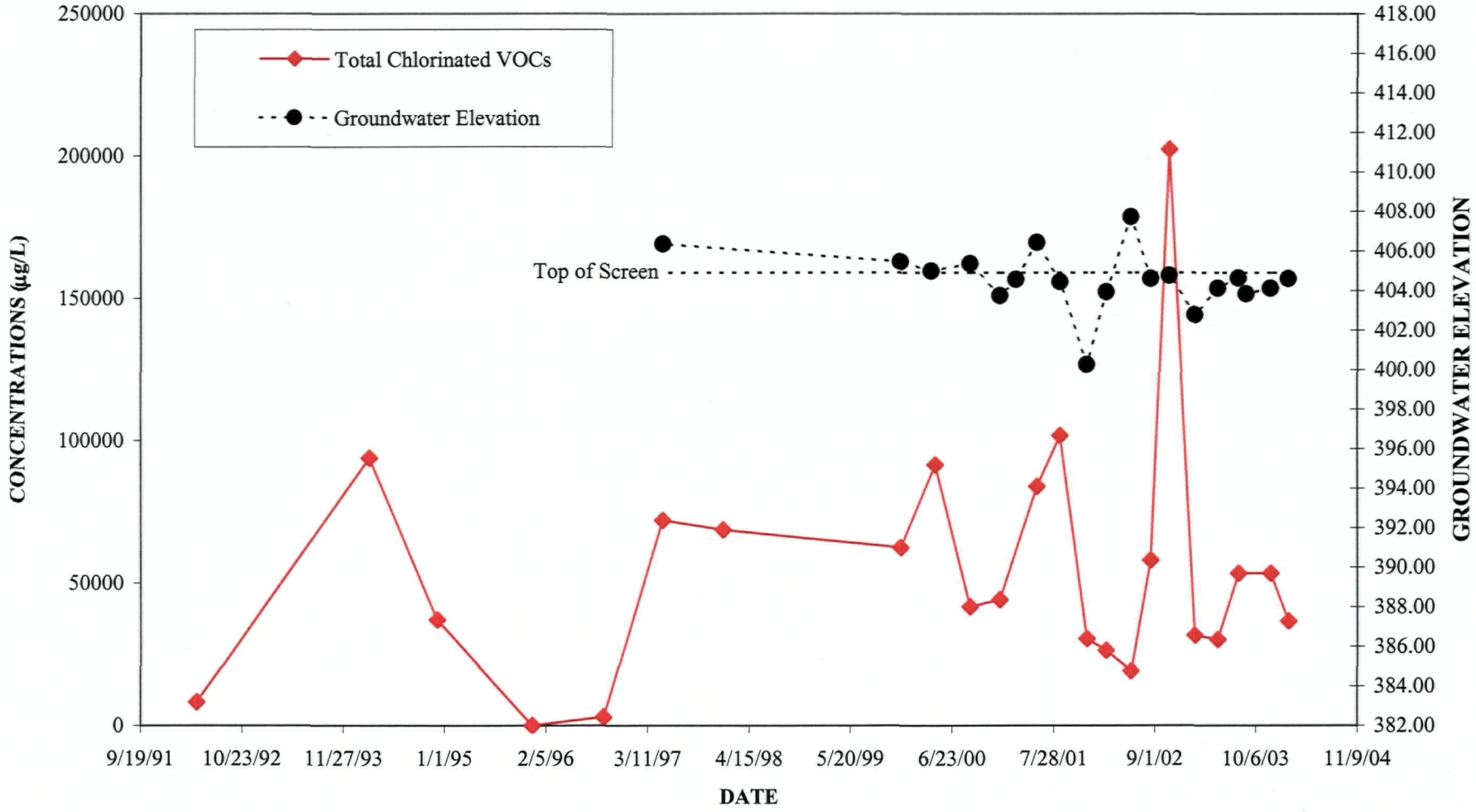
TEMPORAL TRENDS OF TOTAL CHLORINATED VOCs AND GROUNDWATER ELEVATIONS FROM SELECTED MONITORING WELLS

TOTAL CHLORINATED VOCS AND GROUNDWATER ELEVATION (AMSL) VS. TIME
BRENNTAG
ST. LOUIS, MISSOURI
MW-1



G:\Aproject\Brenntag\OK12532003\Tables\4Q03\1Q04 Fldlvs & Graphs\NEW Total Chlorinated MW-1

TOTAL CHLORINATED VOCS AND GROUNDWATER ELEVATION (AMSL) VS. TIME
BRENNTAG
ST. LOUIS, MISSOURI
MW-2



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APPENDIX D

DATA VALIDATION FOR LABORATORY DATA REPORT

APPENDIX D

Brenntag St. Louis - July 2003
Data Validation

The analytical laboratory data reports, including the data packages, quality control results, and chains of custody, were reviewed to determine if any laboratory corrective actions were necessary. Data packages were reviewed for the correct analytical procedures and reporting limits, compliance with holding times, rinsate blanks and trip blanks less than reporting limits, field duplicates within acceptable relative percent difference limits, matrix spike/matrix spike duplicates within control limits, and method blanks less than reporting limits.

Several samples contained selected analytes at concentrations outside the calibration limits of laboratory instruments. STL properly reanalyzed these selected analytes at higher dilutions. The discussion below refers to only one composite analysis created using analytes selected from the run with the lowest method detection limits, except where these data were flagged "E," in which case the composite analysis selected the analyte result from the higher limit run.

July 2003 Data

- During the July 2003 event, the proper method was used for analysis. All of the samples were analyzed within the recommended holding time limit of 14 days. The practical quantitative limit (generally 1.0 µg/L) was elevated due to matrix interference for analyses in wells MW-1, MW-2, MW-5, MW-8, MW-10, the purge water sample and the duplicates to MW-5 and MW-13. The elevated practical quantitative limit (PQL) ranging from 2.0 µg/L to 200 µg/L did not materially affect data analysis for these samples, since concentrations were estimated for analytes detected below the PQL. Analytes detected from samples at concentrations below the PQL were flagged as "J" in the data table.
- The equipment rinsate sample collected during the July 2003 quarterly sampling event detected methylene chloride below the PQL. However, the method blank associated with this sample run also detected the compound at a similar value and the field result is likely due to blank contamination of the run.
- During the July 2003 event, the trip blank detected methylene chloride below the PQL. However, the method blank associated with this sample run also detected the compound at a similar value and the field result is likely due to blank contamination of the run. VOC concentrations in collected samples likely have not affected concentrations in other groundwater samples collected during the event due to common storage and handling of the samples in the field.
- One of the three method blanks associated with the field samples detected a concentration of methylene chloride below the PQL. Field samples associated

with this run also detected this compound and were qualified with "JB" indicating that the detection was below the PQL and that that it likely results from blank contamination of the laboratory run.

- During the July 2003 monitoring event, a field duplicate of sample MW-5 was collected. The analytical results of the duplicate (DUP#1) were within acceptable quality control limits and the sample is a representative duplicate. Concentrations of ten VOCs detected from each sample did not exceed a relative percent difference (RPD) of 42% between the sample and duplicate. The detections of cis-1,2-dichloroethene in sample and duplicate did not agree within 137%. Two other compounds were detected only from the duplicate or sample at concentrations below the PQL.
- During the July 2003 monitoring event, a field duplicate of sample MW-13 was collected. The analytical results of the duplicate (Dup#2) were within acceptable quality control limits and the sample is a representative duplicate. Concentrations of 19 VOCs detected from each sample did not exceed a relative percent difference (RPD) of 20% between the sample and duplicate.
- Surrogate recoveries for each field sample were within control limits. Spike recoveries and relative percent differences (RPD) from the MS and MSD were within control limits. The laboratory control samples (LCS) associated with field samples were all within control limits. No other data required qualification as a result of the data validation review.

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DATA QUALIFIERS

Brenntag - St. Louis - July 2003

Sample Description	Lab I.D.	Analyte	Result (ug/L)	Qualifier
MW-1	D3H020122001	All Volatiles	ND(200)	X
MW-2	D3H020122002	All Volatiles	ND(67)	X
MW-5	D3H020122005	All Volatiles	ND(2.0)	X
MW-8	D3H020122008	All Volatiles	ND(2.8)	X
MW-10	D3H020122010	All Volatiles	ND(4.0)	X
DUP#2	D3H020122015	All Volatiles	ND(2.0)	X
PURGECOMP080103	D3H020122017	All Volatiles	ND(2.0)	X
MW-12	D3H020122012	Methylene chloride	0.46	B
MW-13	D3H020122013	Methylene chloride	0.32	B
DUP#1	D3H020122014	Methylene chloride	0.33	B
DUP#2	D3H020122015	Methylene chloride	0.55	B
FBGW073103	D3H020122016	Methylene chloride	0.4	B
PURGECOMP080103	D3H020122017	Methylene chloride	3.3	B
TB073103	D3H020122018	Methylene chloride	0.34	B
MW-1	D3H020122001	2-Butanone (MEK), 1,1-Dichloroethane, Isopropylbenzene, Methylene chloride, Naphthalene, n-Propylbenzene, Styrene, Tetrachloroethene, Trichloroethene, 1,3,5-Trimethylbenzene	690, 46, 51, 43, 150, 44, 140, 59, 38, 80	J
MW-2	D3H020122002	Isopropylbenzene	63	J
MW-3	D3H020122003	Chlorobenzene, 1,2-Dichlorobenzene, trans-1,2-Dichloroethene, 1,2-Dichloropropane, p-Isopropyltoluene, Trichloroethene, Vinyl Chloride	0.5, 0.17, 0.16, 0.19, 0.31, 0.62, 0.39	J

J Indicates an estimated value. This qualifier is used in organic data evaluation when mass spectral data indicate the presence of a compound that meets the identification criteria, but the result is less than the quantitation limit.

B This qualifier is used when the analyte is found in any associated blank, as well as the sample. This indicates that possible/probable blank contamination exists and warns the data user that this analyte may or may not be present in the sample(s) collected.

M Indicates that duplicate precision (relative percent difference) is not within control limits.

N Indicates that spike recovery is not within control llimits.

E Indicates that the reported value is estimated due to matrix interference.

X Indicates elevated method detection limit due to matrix interference. This qualifier is used for organic data only.

DATA QUALIFIERS

Brenntag - St. Louis - July 2003

Sample Description	Lab I.D.	Analyte	Result (ug/L)	Qualifier
MW-4	D3H020122004	Chlorobenzene, 1,2-Dichlorobenzene, n-Propylbenzene, o-Xylene	0.25, 0.55, 0.36, 0.5	J
MW-5	D3H020122005	Benzene, 1,2-Dichlorobenzene, 1,2-Dichloroethane, 1,1-Dichloroethene, 1,2-Dichloropropane, Toluene	0.61, 0.6, 0.68, 0.6, 1, 0.43	J
MW-8	D3H020122008	1,2-Dichlorobenzene, Ethylbenzene, Methylene chloride, 1,2,4-Trimethylbenzene, Trichloroethene, m-Xylene & p-Xylene, o-Xylene	0.95, 0.56, 1.3, 0.51, 0.69, 1.1, 1.4	J
MW-9	D3H020122009	1,4-Dichlorobenzene, 1,1-Dichloroethane, trans-1,2-Dichloroethene, Toluene, Vinyl chloride	0.46, 0.5, 0.34, 0.57, 0.77	J
MW-10	D3H020122010	sec-Butylbenzene, Chloroethane, 1,4-Dichlorobenzene, 1,1-Dichloroethene, trans-1,2-Dichloroethene, p-Isopropyltoluene	2.2, 0.84, 1.1, 1.2, 1.9, 1.8	J
MW-11	D3H020122011	Chlorobenzene, trans-1,2-Dichloroethene, 1,2-Dichloropropane, Tetrachloroethene, 1,1,1-Trichloroethane,	0.16, 0.46, 0.28, 0.44, 0.21	J
MW-12	D3H020122012	Chloroethane, 1,2-Dichlorobenzene, 1,1-Dichloroethane, Methylene chloride	0.7, 0.37, 0.89, 0.46	J

J Indicates an estimated value. This qualifier is used in organic data evaluation when mass spectral data indicate the presence of a compound that meets the identification criteria, but the result is less than the quantitation limit.

B This qualifier is used when the analyte is found in any associated blank, as well as the sample. This indicates that possible/probable blank contamination exists and warns the data user that this analyte may or may not be present in the sample(s) collected.

M Indicates that duplicate precision (relative percent difference) is not within control limits.

N Indicates that spike recovery is not within control llimits.

E Indicates that the reported value is estimated due to matrix interference.

X Indicates elevated method detection limit due to matrix interference. This qualifier is used for organic data only.

DATA QUALIFIERS

Brenntag - St. Louis - July 2003

Sample Description	Lab I.D.	Analyte	Result (ug/L)	Qualifier
MW-13	D3H020122013	Chlorobenzene, 1,2-Dichlorobenzene, trans-1,2-Dichloroethene, Isopropylbenzene, 4-Methyl-2-pentanone, Methylene chloride, Tetrachloroethene, Trichloroethene	0.51, 0.95, 0.31, 0.36, 2.3, 0.32, 0.27, 0.78	J
DUP#1	D3H020122014	Acetone, Chlorobenzene, trans-1,2-Dichloroethene, Isopropylbenzene, 4-Methyl-2-pentanone, Methylene chloride, n-Propylbenzene, Tetrachloroethene, Trichloroethene	3, 0.51, 0.32, 0.37, 2.5, 0.33, 0.21, 0.27, 0.79	J
DUP#2	D3H020122015	Benzene 1,2- Dichlorobenzene, 1,2-Dichloroethane, 1,1-Dichloroethene, 1,2-Dichloropropane, Methylene chloride	0.63, 0.92, 0.65, 0.69, 1.1, 0.55	J
FBGW073103	D3H020122016	Acetone, Methylene chloride	2.8, 0.4	J
PURGECOMP080103	D3H020122017	1,1-Dichloroethene, Methylene chloride	0.9, 3.3	J
TB073103	D3H020122018	1,1-Dichloroethene, Methylene chloride	0.27, 0.34	J

J Indicates an estimated value. This qualifier is used in organic data evaluation when mass spectral data indicate the presence of a compound that meets the identification criteria, but the result is less than the quantitation limit.

B This qualifier is used when the analyte is found in any associated blank, as well as the sample. This indicates that possible/probable blank contamination exists and warns the data user that this analyte may or may not be present in the sample(s) collected.

M Indicates that duplicate precision (relative percent difference) is not within control limits.
N Indicates that spike recovery is not within control llimits.
E Indicates that the reported value is estimated due to matrix interference.
X Indicates elevated method detection limit due to matrix interference. This qualifier is used for organic data only.

G:\Aproject\BRENNTAG\OK12532003\TABLES\3Q03\DATAVAL\[ST. LOUIS DV 7-03.xls]DATA QUALIFIERS

DATA REVIEW CHECKLIST

Brenntag - St. Louis - May 2003

FIELD DATA

1. Are field records complete?	Y	
2. Are sample labels properly completed?	Y	
3. Were duplicates and rinsate samples prepared and identified?	Y	
4. Were samples properly preserved?		N
5. Was the chain-of-custody (COC) properly filled out?	Y	
6. Are signatures and dates included on the COC?	Y	
7. Were samples received at laboratory with seals intact?	Y	
8. Were samples received at the proper temperature?		N

COMMENTS:

#4 - MW-2 and MW-8 received at lab with ph >2.0. A low bias of BTEX compounds is possible, though not likely due to biodegradation; #8 - Lab received coolers at 4.6 °C, slightly exceeding the target 4° C.

LAB DATA

1. Were holding times violated?		N
2. Are analytical methods the same as specified in the QAPP?	Y	
3. Are method reporting limits the same as specified in the QAPP?		N
4. Do reporting limits reflect the proper matrix?	Y	
5. If no, is the data annotated?		
6. Are sufficient QA/QC summaries provided with report?	Y	
7. Do the field or method blanks have any detections?	Y	
8. If yes, are similar values detected in the field samples?	Y	
9. Are surrogate spikes within acceptable limits?	Y	
10. If no, is the data annotated?		
11. Are LCS or blank spikes used and within limits?	Y	
12. Do matrix spike recoveries indicate matrix interference (Inorganics)?		N
13. Are RPDs for duplicates and spike duplicates within QC limits?	Y	

COMMENTS:

#3 - See attached table.; #5 - NA; #7 The method blank associated with QC batch 3224211 contained methylene chloride; #8 - NA; Field samples MW-12, MW-13, Dup#1, DUP#2, FBGW073103, PURGECOMP080103, and TB073103 each contained methylene chloride below the MDL; #10 - NA